

Amendment No. 2

Date: 30/10/2014

Sub: Technical amendment to the tender enquiry

**Ref: NIT no. HLL/PCD/GNCTD/15/JSSH/14-15 dated 19/09/2014 read with its
Amendment no. 1 dated 22/10/2014**

The following changes are incorporated to the technical specification of the referred tender enquiry. The due date for submission and opening of tenders will be as per Amendment no. 1 dated 22/10/2014 only.

Section – VII

Technical Specification

Item No.01

3T MRI Machine

6. Computer System/Image Processor Operator Console

Existing:

d. Patient monitoring devices for ECG, respiratory rate, pulse rate, O2 saturation at console.

Read as:

d. Deleted

8. Coil System

Existing:

xii. 8 Channel or more coil for Neonatal Head and Neck imaging. Or any coil capable of neonatal head and Neck imaging.

Read as:

xxii. Deleted.

Existing:

xiv. Dedicated carotid coil capable of assessing of lumen wall & plaque (**RAPID or Matchnet**) – Optional - price to be offered separately.

Read as:

xiv. Dedicated carotid coil capable of assessing of lumen wall & plaque – Optional - price to be offered separately.

Existing:

xv. Eye ear/TMJ **circular** coil.

Read as:

xv. Eye ear/TMJ coil.

Special application packages:

Existing:

- a) Neuro Applications
 - ii. Complete fMRI solution including audio-visual projection (**3D capable**) system
 - iii. The audio-video projection system should have the capability to project 3D images/ movies to the subject, and should be compatible with the 32 channel head coil, and should include all attachments that may be required for complete integration
 - iv. The system should be integrated with stimulus presentation/ paradigm generator along with licensed software (like superlab, eprime, presentation, etc.) which is capable of presenting audio-visual, audio, video (multiple formats), etc.
 - v. The paradigm presentation should be synchronised with the scanner (for starting and ending along with measurements)
 - vi. Integration and provision near the console for external trigger (of the sequence) for synchronising fMRI acquisition with paradigm
 - vii. Provision of serial ports and DB15 ports in the penetration panel for routing SVGA/EEG connections (one each for customer use) fMRI console should have all relevant functions to develop and integrate the paradigm, to deliver the paradigm and also, to monitor the task being presented. The volume control option should also be available with the operator (at a convenient place at the console)
 - viii. Post-processing work station / server with post-processing software and hardware associated, with licences for processing the BOLD data (with required licensed operating platform required like MATLAB, IDL, etc.)

Read as:

- a) Neuro Applications (**point ii to viii Optional – Price to be offered separately**)
 - ii. Complete fMRI solution including audio-visual projection system
 - iii. The audio-video projection system should have the capability to project 3D images/ movies to the subject, and should be compatible with the 32 channel head coil, and should include all attachments that may be required for complete integration
 - iv. The system should be integrated with stimulus presentation/ paradigm generator along with licensed software (like superlab, eprime, presentation, etc.) which is capable of presenting audio-visual, audio, video (multiple formats), etc.
 - v. The paradigm presentation should be synchronised with the scanner (for starting and ending along with measurements)
 - vi. Integration and provision near the console for external trigger (of the sequence) for synchronising fMRI acquisition with paradigm

- vii. Provision of serial ports and DB15 ports in the penetration panel for routing SVGA/EEG connections (one each for customer use) fMRI console should have all relevant functions to develop and integrate the paradigm, to deliver the paradigm and also, to monitor the task being presented. The volume control option should also be available with the operator (at a convenient place at the console)
- viii Post-processing work station / server with post-processing software and hardware associated, with licences for processing the BOLD data (with required licensed operating platform required like MATLAB, IDL, etc.).

Existing:

f) Breast Imaging:

"Advance package including diffusion, spectroscopy and perfusion with time intensity curve.

MR breast imaging with simultaneous view of both breast fat suppression SPAIR & visualization of rapid contrast uptake: 4D bliss/Views/Vibrant **XV**.

Read as:

f) Breast Imaging:

"Advance package including diffusion, spectroscopy and perfusion with time intensity curve.

MR breast imaging with simultaneous view of both breast fat suppression SPAIR & visualization of rapid contrast uptake: 4D bliss/Views/Vibrant.

Note:

A corrigendum detailing the turnkey area for this item shall be published shortly.

Item No.02

256 slice CT Scanner System

7. Computer Section:

Existing:

- j. CT should be with dual monitor console with two workstations (thin client server architecture based solution) comprising of medical grade monitors (2 mega pixel resolution) with at least 8GB RAM. The server should have image storage capacity of 3 tera bytes, minimum 40000 concurrent slice processing power and at least 64 GB RAM. It can be single/dual server configuration. The workstation should have following processing capabilities.

Read as:

- j. CT should be with dual monitor console with two workstations (thin client server architecture based solution) comprising of medical grade monitors (2 mega pixel resolution) with at least 8GB RAM. The server should have image storage capacity of 3 tera bytes, **minimum 20000 or more** concurrent slice processing power and at least 64 GB RAM. It can be single/dual server configuration. The workstation should have following processing capabilities.

9. Dual Energy Applications:

Existing:

- a. DUAL ENERGY APPLICATIONS to be provided as standard: Renal Calculi Characterisation & Gout.
- b. All other dual energy applications available with vendor should be listed as optional with price of each quoted separately.
- c. Proof of availability of dual energy application must be supported with original datasheet.
- d. Dual energy application must be possible on all workstation and all fields of view with minimum FOV 33cm.
- e. DUAL ENERGY APPLICATIONS like Metal Artifact Correction / Beam Hardening Artifact Correction, Brain Haemorrhage to be provided with the system. Any other application for dual energy if present in future upgrades should be part of the system.

Read as:

9. Dual Energy Applications (Optional - price to be quoted separately) :

- a. DUAL ENERGY APPLICATIONS to be provided as standard: Renal Calculi Characterisation & Gout.
- b. All other dual energy applications available with vendor should be listed as optional with price of each quoted separately.
- c. Proof of availability of dual energy application must be supported with original datasheet.
- d. Dual energy application must be possible on all workstation and all fields of view with minimum FOV 33cm.
- e. DUAL ENERGY APPLICATIONS like Metal Artifact Correction / Beam Hardening artifact Correction, Brain Haemorrhage to be provided with the system. Any other application for dual energy if present in future upgrades should be part of the system

Note:

A corrigendum detailing the turnkey area for this item shall be published shortly.

Item No 03

Digital X-Ray Unit (1000 mA)

2. X-Ray Tube

Existing:

- d. Tube loading should be at least 30 KW for small and at least 80 KW for large focus

Read As:

- d. Tube loading should be at least **25 KW** for small and at least **70 KW** for large focus

Existing:

h. Field size programming should be possible.

Read as:

Deleted

4. Vertical Bucky

Existing:

e. Patient display.

Read as:

e. **Deleted**

5. Detector System.

Existing:

d. Pixels size to be 145 micron or less.

Read as:

d. Pixels size to be **150** micron or less.

Added Para:

j. II Detector Panel should be made of amorphous Silicon with scintillator material as CsI (Cesium Iodide).

k. DQE of the detector should be atleast 65% at 0lp/mm.

10. Certificates to be submitted

Existing:

b. The unit should be AERB type approved. The AERB certification for site and licensing of the equipment will be the responsibility of the supplier.

Read as:

b. The unit should be AERB type approved. **The bidder shall assist the user for AERB certification for site and licensing of the equipment. NOC will not be accepted.**

Note:

A corrigendum detailing the turnkey area for this item shall be published shortly.

Item No. 04
High end 3D Colour Doppler System

1. Existing:

Para 1.6: The system shall have minimum Four or more active probe Ports in a convenient, easy to access location to maximize the availability of needed probes.

Read as:

The system shall have minimum **Three or more** active probe Ports in a convenient, easy to access location to maximize the availability of needed probes.

2. Existing

Para 2.3 : System shall support the ability to store digital data in, that allows to optimize imaging parameters such as B Gain, TGC, Color Gain, Dynamic Range, Speckle Reduction levels, Doppler Gain, Doppler Base Line on old Images & old loops recalled from the image archive.

Read as:

System should have image post processing facility.

3. Existing:

Para 5:

Elastography should be available in **convex**, Linear and **whole body convex Probe**.

Read as:

Elastography should be available in convex and Linear.

4. Existing:

Para 7: Data Processing.

- a. Overall B-Mode gain, dynamic range and gray scale maps.
- b. Overall Doppler gain, dase line shift, sweep speed and inverted spectral waveform.
- c. Anatomical M-Mode.

Read as: Deleted.

Added to Para 7

d. Dynamic Range should be more than 200 Decibels to achieve good grey scale imaging for Radiology applications.

5. Existing

Para 9: B-Mode / M-mode Imaging

The system shall provide the capability for coded tissue harmonic imaging on all offered transducers.

Read as:

The system shall provide the capability of tissue harmonic imaging on all the offered transducers.

6. Existing

Para 15: Transducers.

- a. Convex, with biopsy attachment. Operating Frequency: 2 - 5 MHz
- b. Linear, with biopsy attachment. Operating Frequency: 5 – 10 MHz
- d. Trans-vaginal Probe with Biopsy attachment, Frequency 3-9 MH.

Read as:

- a. Convex, with biopsy attachment. Operating Frequency: 2 - 5 MHz(+/- **1Mhz**)
- b. Linear, with biopsy attachment. Operating Frequency: 5 – 10 MHz(+/- **1Mhz**)
- d. Trans-vaginal Probe with Biopsy attachment, Frequency 3-9 MH. (+/- **1Mhz**)

Item No.05
Colour Doppler Machine

1. Existing:

Para 5:

The system should be able to support all type of transducers (Convex, Endocavitary, Linear, Phased array and **Intraoperative Transducers**).Frequency range of all transducers should be 2-14Mhz.

Read as:

The system should be able to support all type of transducers (Convex, Endocavitary, Linear, Phased array).Frequency range of all transducers should be 2-14Mhz.

2. Existing:

Para 7:

The system should an integrated high resolution TFT/LCD of 19 inches or more with facility of tilt and swivel facility along with convenient grip.

Read as: The system should an integrated high resolution TFT/LCD of **18 inches or more** with facility of tilt and swivel facility along with convenient grip.

3. Existing:

Para 8:

The system should have minimum three active universal ports & two parking ports. Active ports can be directly selectable from the control panel.

Read as:

The system should have minimum three active universal ports & **one parking ports**. Active ports can be directly selectable from the control panel.

4. Existing:

Para 10:

The system should have a very high capacity of Hard Disc Drive min.80GB or 1000 images for storage of images.

Read as:

The system should have a very high capacity of Hard Disc Drive min. 80GB or more for storage of images.

Added Para - The system should have minimum Dynamic range of 200 decibels or more.

5. Existing:

Para 24:

System should be offered with the following probes and accessories:

- (a) Convex probe with frequency range of 3.0-6.0 Mhz.
- (b) TV/TR probe with frequency range of 5.0-7.5 Mhz. And minimum field of view of 140 degree.
- (c) Linear probe with frequency range of 6.0-11.0 Mhz.

Read as:

System should be offered with the following probes and accessories:

- (a) Convex probe with frequency range of 3.0-6.0 Mhz.(+/- **1Mhz**)
- (b) TV/TR probe with frequency range of 5.0-7.5 Mhz. And minimum field of view of **120 degree**.
- (c) Linear probe with frequency range of 6.0-11.0 Mhz. (+/- **1Mhz**)

Item No.06

Flat Panel Single panel Cardiac Cath- Lab along with accessories

Existing

Para 1.1:

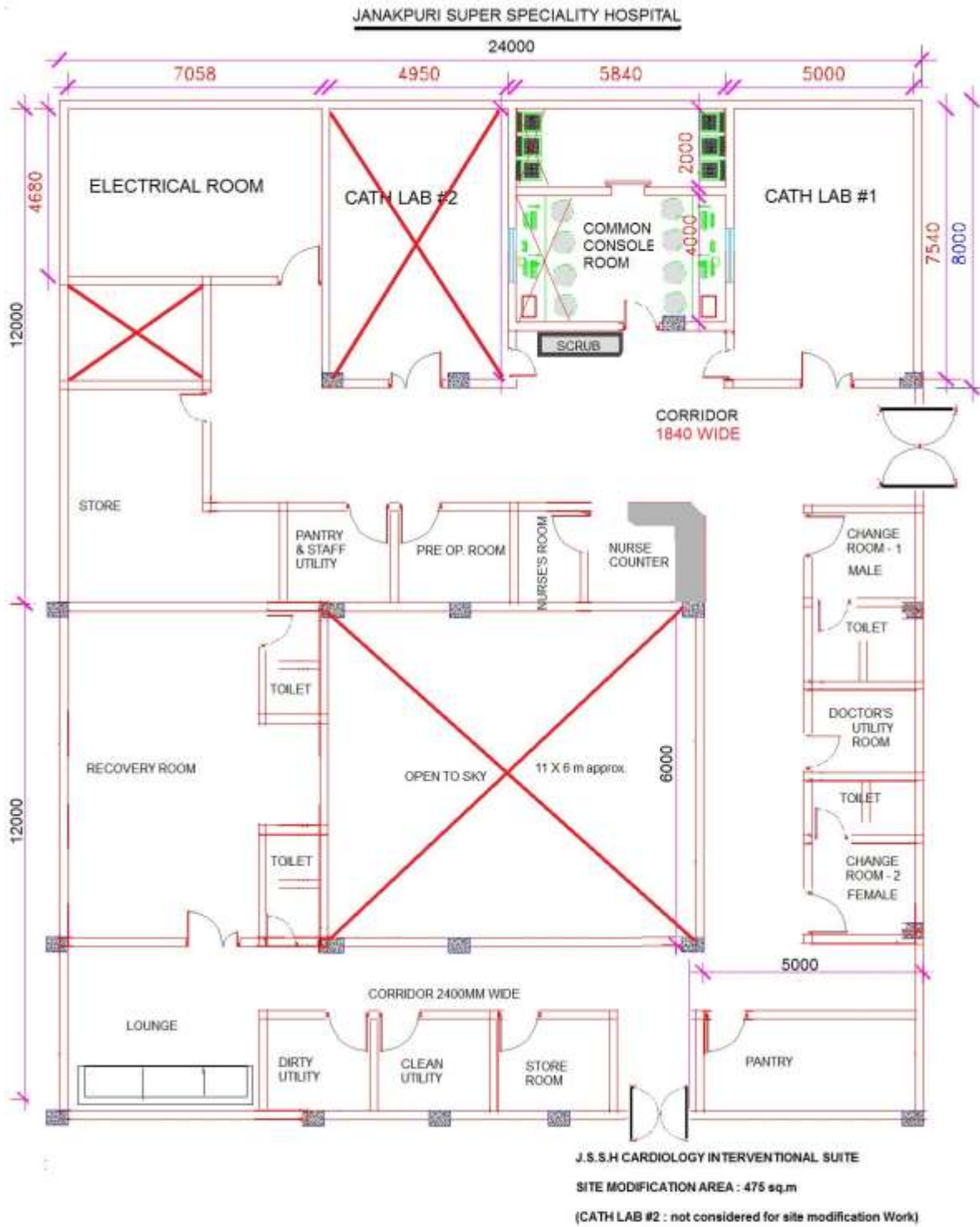
All movements should be motorized with C-Arm angulations of minimum RAO/LAO +110 deg/-110 deg.

Read as:

All movements should be motorized with C-Arm angulations of minimum **RAO/LAO +105 deg/-105 deg.**

Turnkey Details

Turnkey details as shown in the following pages are also to be taken into consideration in the specification of Flat Panel Single panel Cardiac Cath- Lab with along with the Annexure 1 of Tender Enquiry Document (at page nos. 85 & 86).



SITE MODIFICATION WORK – SCOPE OF WORK : CARDIAC SUITE, JSSH**Civil work**

- a) Civil construction / modification work including construction of brick wall and / or steel structure if any, wall plastering, flooring as per the approved plan and equipment layout plan.
- b) Floor / Ceiling modification for installing the Cath Lab system.
- c) Platform for unloading and shifting the Cath Lab system; if necessary.
- d) Cable tray, trench & channel – necessary trenches, cable tray and channels at required locations.
- e) All the construction work to be done as per the final plan approved by the Consignee & HLL.
- f) The schedule of finish is given below:

Sl.No	ROOM	FLOORING	WALLS	CEILING
1.	Electrical Room & Technical Room	Existing flooring	Two coats Plastic Emulsion Paint over 2 coats of wall putty including primer	Acoustical tile for ceiling with light weight insulating material of high quality supported on grid or finished seamless with support above ceiling. Finished with white paint or powder coated with white paint, if metallic. Ceiling height to suit the equipment mount and clearances.
2.	Store	400 x 400 x 8.5mm Polished Vitrified ceramic tiles.	Antimicrobial coat Paint over 2 coats of wall putty including primer.	
3.	Cath Lab Room , Console room, Recovery Room & Scrub area	400 x 400 x 8.5mm Polished Vitrified ceramic tiles.	200 x 200 mm glazed tiles dado up to false-ceiling line.	
4.	All other rooms and corridor	400 x 400 x 8.5mm Polished Vitrified ceramic tiles.	Two coats Plastic Emulsion Paint over 2 coats of wall putty including primer.	

AIR CONDITIONING (QUOTE THE PRICE FOR AIR-CONDITIONING SEPARATELY):

It is proposed that the entire area be centrally air conditioned, with separate AHU for the Cath Lab & equipment room and separate AHU/s for the rest of the rooms.

Duct-able Package air-conditioning system(s) of suitable capacity to be installed to operate the Cardiac Suite on a 24 x 7 basis with adequate backup.

Humidity control should be effective to eliminate moisture condensation on equipment surface. The Air conditioning should be designed with standby provision to run the Cath Lab 24 hours a day.

Environment specifications:

- a) Humidity range: Relative humidity 60% and 80% in all areas except equipment room which shall be as per requirement of the equipment.
- b) Temperature ranges: 22 + 2° C in all areas except equipment room which shall be as per requirement of the equipment.
- c) Air conditioning load: The heat load calculations and maintaining the desired temperature and humidity shall be the responsibility of the bidder.

The outdoor units of AC should have grill coverings to prevent theft and damage.

Ventilation is required in toilet.

Plumbing work

1. All water pipes and fittings shall be of high density polythene of standard make. The gratings shall be brass chrome plated. All plumbing accessories should be of standard make.

Electrical work

1. The supplier shall be required to specify the total load requirements for the Cath Lab Suite area including the load of air conditioning , room lighting and for the accessories if any. The supply line will be provided by the Institute at one point. The distribution panel shall be provided by the vendor. Lights in Cath Lab room shall be connected to the UPS to provide emergency lighting.
2. The electrical work shall include the following:
 - a. Wiring – All interior electrical wiring- with main distribution panel board, necessary MCBs, DB, joint box, switch box etc. the wires shall be of copper of different capacity as per the load and should be renowned make as listed below.
 - b. Switches light and power points should be of modular type and of standard make as listed below.

General lights – Mirror optical type 1X28 W or 2X28 W/CFL fittings 2X36, 3X36 W with electronic ballasts

Furniture:

1. Revolving chairs height adjustable, medium-back with hand-rest – **5 NO.S**
2. Chairs for patient waiting area – Three seater with arm rest (chrome plated). - **4 NO.S**
3. Cupboard with glass shutters for storage of catheters and accessories within the Cath lab room. – **3 NO.S**
4. Patient bed, 4 section manually operated Fowler type, with swivel Castor wheels , with twin IV rods for Pre Op Room & Recovery room - **6 NO.S**
5. Drug trolleys for Cath lab Room – **2 NO.S**
6. Bedside cabinets for Post & Pre Op Rooms – **4 NO.S**
7. Patient trolley with rubber foam mattress to be kept in the Pre & Post op room. - **2 NO.S**
8. Steel cupboards to store linen, consumables, medicines should be provided.- **8 NO.S**
9. Office table with three row of Drawers for Store room - **1 NO.**
10. Name boards for all rooms
11. Table/s for Console / workstation in Console room. - **1 set**
12. Changing rooms should be provided with change lockers, shoe rack and dressing table.
13. Three seater sofa for Doctors room - **1 NO.**
14. Cupboard for storage of CDs & DVDs. - **1 NO.**
15. Dustbins (plastic with lid) - **12 NO.**

LIST OF ITEMS AND SUGGESTED MANUFACTURERS.

SL NO	ITEMS	PREFERRED MAKES
A	Flooring : tiles	Somany, Kajaria , H&R Johnson, RAK india
B	Paint	Dulux, Asian paints , Nerolac
C	Plumbing	Kohler, Jaguar , Grohe , Roca
D	Sanitary items	Cera, Hindware, Parryware , Roca
E	Electrical	
1	CABLES	Finolex, Havells ,V-Guard
2	SWITCHES	Legrand, L&T, Crabtree , Roma
3	DISTRIBUTION BOX , MCB	Legrand, L&T, Siemens, Havels
4	LIGHT FITTINGS	Philips / Crompton / Kesselec-Schreder / Wipro.
F	Air conditioning	Daikin, Hitachi, Blue Star, Voltas,
G	Furniture	Hermen miller , Godrej , Featherlite

Item No.07**Endoscope system****1. Side viewing endoscope:****Existing:**

Para: It should preferably have a locking mechanism for holding guide wires during ERCP.

Read as:

Para: Deleted

Existing:

Para: It should be compatible with a processor capable of optical chromoendoscopy such as NBI, FICE etc.

Read as:

Para:

It should be compatible with a processor capable of optical chromoendoscopy such as NBI, FICE, **Iscan** etc.

3. Colonoscope - One in number**Existing:**

Para: The colonoscope should have a facility of external monitoring to show the position of the endoscope during the procedure without the need for fluoroscopy.

Read as: Deleted.

Existing:

Para : It should preferably have a mechanism for variable stiffness.

Read as: Deleted

Existing:**Para 5:**

Light Source: Xenon Lamp of 150 - 400 watts.

Read as:

Light Source: Xenon Lamp of **100 - 400 watts.**

Existing:

Para 6:

High definition LCD monitor to provide high resolution images - at least 24" in size.

Read as:

Full HD LCD/LED monitor of 21" or more.

Existing:

Para 7:

Compact Suitable Original Trolley.

Read as:

Trolley should be medical grade & manufactured from same equipment manufactures company.

Added: - Discontinued product should not be quoted

General Technical specification (Ref. page 89 of the TED)

(Applicable for all the items)

General Points:

Existing:

Point 1 b) 98% up time Warranty of complete equipment with extension of Warranty period by double the downtime period on 24 (hrs) X 7 (days) X 365 (days) basis.

Read as: 95% up time Warranty of complete equipment with extension of Warranty period by double the downtime period (excluding Govt. Holidays and custom clearance).

All other contents of the tender enquiry including terms & conditions remain unaltered.

Note:

1. Prospective bidders are advised to ensure the validity of their EMD as per the schedule for opening of tenders.
2. Prospective Bidders are also advised to check the website regularly prior to the closing date and time of online submission of tenders.