

BIDDING DOCUMENTS
CIVIL HOSPITAL KARACHI
HEALTH DEPARTMENT
GOVERNMENT OF SINDH

Contract NO:- PD-Trauma Centre-CHK/020 (Rev) 2013-14

Tender Documents for
Supplying, Installation, Testing, Commissioning &
Maintenance (during maintenance period) of
Neurosurgery Equipments
at
“Shaheed Mohtarma Benazir Bhutto Accident, Emergency &
Trauma Centre and Ancillary Services Complex at Civil
Hospital Karachi”

VOLUME-I

INSTRUCTIONS TO BIDDERS, SALIENT FEATURES /
TERMS & CONDITION OF THE TENDER,
ESSENTIAL REQUIREMENTS / EVALUATION
CRITERIA, FORM OF AGREEMENT, SCOPE OF
WORK AND SPECIFICATIONS

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INSTRUCTIONS TO BIDDERS

1. **Civil Hospital Karachi** invites sealed bids on single stage two envelopes system as per Sindh Public Procurement Rules 2010 from Manufacturers/Importers/Sole Agents/Contractors for **"Supply, Installation, Testing, Commissioning and Maintenance (during maintenance period) of Neurosurgery Equipments at Shaheed Mohatarma Benazir Bhutto, Accident, Emergency & Trauma Centre and Ancillary Services Complex at Civil Hospital Karachi"**, (Contract No. PD-Trauma Centre-CHK/020 (Rev) 2013-14).
2. Bidders are required to check that Tender Documents issued to them are complete in all respects as per Summary of contents related to Instructions to Bidders, Salient Features, Evaluation Criteria, Form of Tender, Form of Agreement, Specifications (Technical), Scope of Work, Drawings etc.
3. Bidders should examine carefully the Summary of Contents. They should visit and inspect the site at their own expense and responsibility and obtain all necessary information prior to submitting the Tender. Any detail/specification missing in the document should be obtained from the office of the Project Director before bidding. Once the Tender is submitted, it will be assumed that no further clarification was required.
4. The rates to be inserted in the Bill of Quantities shall be deemed to include all costs of whatsoever description and expenses necessary for the Supply, Installation, Testing, Commissioning and Maintenance of the Equipment/system together with all risks, taxes, liabilities and obligations, specific or implied, in the Tender Documents. Arithmetical errors, if any shall be corrected and Tender price amended accordingly.
5. No authorized alteration may be made in the Tender documents. If any such alteration is made, tender may be liable for rejection.
6. Any clarification, revision, addition or deletion, in the Tender documents may be made by the Project Director before the submission and opening of Tender in the form of Addendum/Corrigendum. This will be made only by formal Addendum/Corrigendum issued by the Project Director and will become part of the Contract documents. Each Addendum shall be signed by the Tenderer and returned with other Tender documents.
7. The entire Tender Documents, listed duly priced, signed & stamped on each page and completed must reach at designated place in due time and dates as defined in the salient features of the Tender.
8. The Contractors whose Tender is accepted, by the Procurement Committee, will be required to enter into a Contract agreement as defined in the Form of Agreement.
9. All manufactured and other items should be used in the work in accordance with the instructions, specifications in the Tender Document and also in accordance with generally accepted norms of good workmanship.
10. The Tender documents referred to above constitute a part of this Tender and comprise of the following documents:

- a) Instructions to bidders.
 - b) Salient Features / Terms & Condition of the Tender
Questionnaire / Proforma – Evaluation Criteria.
 - c) Form of Agreement.
 - d) Scope of work / Bill of Quantities / Specification (Technical).
 - e) The Addendum (if any).
 - f) The Drawings (if any).
11. The Contractors are required to submit the site Organization chart, methodology & work schedule along with Tender documents.

ALIENT FEATURES / TERMS & CONDITION OF THE TENDER

1.	Name of Work & Address	:	Supply, Installation, Testing, Commissioning and Maintenance (during maintenance period) of Neurosurgery Equipments at "Shaheed Mohatarma Benazir Bhutto, Accident, Emergency & Trauma Centre and Ancillary Services Complex at Civil Hospital Karachi" (Contract No. PD-Trauma Centre-CHK/020 (Rev) 2013-14).
2	Time & Date of issue of Tenders	:	From the date of publishing to one day before opening of Technical Proposal, during office hours.
3	Place of Issuance of Tender	:	Office of the Project Director, OPD-Block Civil Hospital Karachi.
4	Date of pre-bid meeting	:	In case requested by bidders or informed by Project Director.
5	Method of opening of Tender	:	It will be Single Stage Two Envelope system as per SPPRA-Rules 2010.
6	Date & Time of Submission of Tenders	:	As published in newspapers
7	Date & Time of Opening of Tenders / Technical Proposals	:	As published in newspapers
8	Date of Opening of Financial Proposals	:	As informed by Project Director to all participants
9	Venue of submission & opening of Tenders	:	Board Room situated at Second Floor of the Administration Block of Civil Hospital Karachi.
10.	Validity of Tenders	:	As per SPPRA-Rules 2010.
11.	Amount of Earnest Money/Bid Security	:	2% of the Contract value in shape of pay-order / Call Deposit from schedule Bank to be submitted along with Financial Proposal.
12.	Supply of Equipment	:	Within three months after the opening of LC. However, this period is extendable as per mutual agreement/demand of the situation.
13.	Installation Period	:	It will start after three months of receiving of equipment at site.
14	Maintenance Period		It will start after the satisfactory installation of the equipment and issuance of Installation Certificate from the concerned official. This period will remain functional till two years with replacement of parts.
15	Warranty Period with replacement of Parts and services		The warranty period of parts with Free of cost replacement will be for two years. Two years free service from the date of Installation. Five years tube warranty where applicable.
16 (a)	Contract Agreement	:	The Contract shall enter & execute a formal Agreement as per the "Form" annexed with such modification as may be necessary, by the Project Director.
(b)	Stamp Paper requirement for Agreement.	:	- Rs. 0.30% of the Contract Value or as prescribed by Government Laws.

17 Terms of Payment to Contractors.		
(i)	Payment to Contractors on opening of L.C (Letter of Credit) by Contractor.	: In case items are imported and supply order is placed on C & F basis, L.C. (Letter of Credit) will be opened by Contractors whom Purchase order is awarded, in the name of Medical Superintendent – Civil Hospital Karachi as Consignee. Contractors opening the LC with the Principals of Country of Origin will be paid 80% amount of the confirmed L.C. The LC should be opened within thirty days after receiving of the supply order from the Project Director. PLEASE NOTE THAT THE L.C ON TRANS-SHIPMENT BASIS IS NOT ACCEPTABLE
(ii)	Payment of balance amount	: All balance payments will be released after receiving of equipment at site subject to submission of Performance Security in the following manner; <ul style="list-style-type: none"> • Pay-order equivalent to 5% of the value of Purchase order OR • Bank Guarantee equivalent to 10% of the value of Purchase order The Performance Security will be released after successful installation of equipment and issuance of satisfactory Performance Certificate from the End-user.
18	Release of Earnest Money/Bid Security of 2%	: To un-successful bidders, after work is awarded. Earnest Money will be released to successful bidder after purchase order is released but after 5% Security Deposit is deposited as per item – 19.
19	Security Deposit	: 5% Security Deposit in the shape of two pay orders (2.5% each) will be submitted by Contractor with Project Director which will be released as per item 20. Bank Guarantee of equal amount will also be acceptable.
20	Release of Security Deposit of 5%	: After completion of maintenance or Defect Liability period of two years as under:- After satisfactory completion of maintenance period of Six Months – 2.5% After satisfactory completion of maintenance period of two years – 2.5%
21	VARIATION IN CONTRACT PRICE.	: NO VARIATION IN PRICE SHALL BE ALLOWED ON ANY GROUND INCLUDING CURRENCY FLUCTUATION/VARIATION OR WHATSOEVER.
22	Discrepancy.	: If there is any discrepancy between Salient Features of Tender/Bidding Documents and respective contents mentioned elsewhere, Salient Features / Terms & Conditions and Additional Terms & Conditions of Tender will govern.

23	Taxes.	:	All taxes will be deducted as per prevalent laws of country.
24	Approved makes.	:	As mentioned in items individually.
25	SPECIAL NOTE REGARDING EQUIPMENTS	:	<p>TECHNICAL OFFERS / COMMERCIAL OFFERS FAILING TO DEMONSTRATE BELOW DETAILS WOULD BE REJECTED:</p> <p>a. QUOTED SYSTEM MUST BE OF ADVANCED & LATEST VERSION.</p> <p>b. QUOTATION MUST COVER COMPLETE EQUIPMENT.</p> <p>c. QUOTATION MUST COVER COMPLETE RANGE OF DISPOSABLES / KITS</p> <p>d. QUOTATION MUST PROVIDE ALL TECHNICAL DETAILS UP TO THE SATISFACTION OF THE END USER.</p> <p>e. ITEMS SHOULD BE QUALITY APPROVED FROM THE CONCERNED INTERNATIONAL BODY OF THE RESPECTIVE INDUSTRY.</p>
26	Inspection of Imported equipment manufacturing site by the client.	:	After the award of Purchase Order, Supplier shall take two person to the manufacturing site and bear all expenses of visit in case the cost of Supply Order is 50 million or above.
(b)	Training	:	Supplier will provide on-site successful training to all the personnel working on/operating the said Equipment/machine as long as the need prevail.
27	Maintenance.	:	<ul style="list-style-type: none"> • Maintenance cost for all Equipments for Two years from date of successful Installation shall be undertaken by the Contractor (Maintenance includes all Parts & Labour, etc. with sufficient staff, during maintenance period). • Five years tube warranty where applicable.
28	Default in Preventive Maintenance, Breakdown and Emergency Calls.	:	<ul style="list-style-type: none"> • In case of default by the Contractor with respect to maintenance, break down and emergency calls, the same will be carried out within 24 hours by Department and the cost so incurred will be paid from the Retention Money. • Moreover an additional 10% of the amount spent would be charged from the concerned contractor being defaulter.
29	COST TO BE QUOTED IN BOQ.	:	<ul style="list-style-type: none"> • The Contractors shall quote Both DDP and C&F price of the Equipments including custom clearance etc. and delivering of Equipment at site with Installation & Commissioning cost. • It should also include cost during maintenance period including the parts and maintenance staff.
30	Tax Exemption.	:	In case of purchase on C & F basis, the required certificate will be issued by this office that the import has been made for this hospital, so as to avail the facility of exemption of duties/taxes, as per Government Rules/Policy according to the SPPRA – 2010.

GENERAL CONDITIONS

Note: No tender will be accepted after closing of the Tender box, whatsoever reason may be.

1. As the building is under construction and finishing is underway, the Contractors responsible for "Supply, Installation, Testing, Commissioning and Maintenance (during maintenance period) of Anaesthesia Equipments" will also repair all the damages done to the building while Installing Anaesthesia Equipments at no extra-cost. So the Contractors should take into account all such expenditures while quoting the bid.
2. In **Technical Bid**, the bidder must provide original data sheet, technical brochure, all other relevant documents, alongwith copy of Pay Order / Bank Draft without showing the amount figure otherwise, the bid will be ignored/rejected. The technical evaluation will be done on the basis of criteria given in tender document.
3. A Column is given against the specification of each item, the vendor has to fill up with YES / NO or put value as desired in the column. These specifications must be highlighted in the brochure, else the offer will be rejected.
4. In **Financial Bid**, the vendor should mention financial offer alongwith Pay Order / Bank Draft 2% value of quoted items in favor of Project Director.
5. **In case of purchase on C&F Basis, the bidder will invest money to open Letter of Credit within thirty days after receiving the supply order and will bear all the charges in this regard. The required certificate will be issued by this hospital that the import has been made for this hospital, so as to avail the facility of exemption of duties / taxes, as per Government Rules / Policy according to the SPPRA-2010.**
6. **In case of supply order placed on DDP Basis the bidder should be supplied the quoted item within time as specified in Tender Document i.e. three months. This period is extendable as per mutual agreement/demand of situation.**
7. The disclosure of firm's price at the time of opening of **Technical bid** will result in the rejection of the bid.
8. No tender will be entertained without earnest money. The earnest money will be forfeited to Government Treasury, in case of non-submission of security money within seven (7) days of receipt of the offer letter.
9. **Only Manufacturer and / or Sole Agent (if importer) can quote items.**
10. First scrutiny of **Technical Bids** will be performed by the Procurement Committee. Financial Bids of only those firms will be opened who are qualified technically.
11. Certificate from the Sole Agent / Manufacturer has fully equipped Workshop Trained Personnel / Engineers and Equipment should be provided with technical bid and it can be physically verified by the administration of Civil Hospital Karachi.
12. The warranty period will commence from the date of installation of the Equipment at SMBB Trauma Centre - Civil Hospital Karachi.
13. Firm must provide complete details of their financial standing, listing of similar items supplied in Pakistan, bio-data of engineers with training certificates / test, details of local stock of spare parts for similar furniture and details of office with number of personals.
14. The vendor has to quote only one rate for each item as per tender specifications. Hand written tenders or any over writing, cutting, should be signed.
15. **Vendors should quote the items they intend to supply.**
16. The bidder shall submit with the bid, an **UNDERTAKING** on Non-Judicial stamp paper of Rs. 50/- duly attested by Oath Commissioner, stating that the medical equipment will be supplied brand new, free from defects as per the approved sample and will bind himself for availability of spares for a period of 10 years from the date of supply. In case of winding up of his business, the supplier shall be bound to make an

- ternate arrangement of spares and maintenance of medical equipment. In case of default, depreciated cost of medical equipment will be recoverable from vendor.
17. If it has been found that the information submitted by the bidder regarding his qualification and professional, technical, financial, legal or managerial competence as supplier / contractor is / was false and materially inaccurate or incomplete at any stage, then the bidder will be disqualified.
 18. Suppliers / Contractors will be responsible for supply at consignee end, free of cost and also responsible for free installation work, if required.
 19. Equipments will be handed over to the Project Director / Store officer of Civil Hospital Karachi.
 20. Price escalation will not be allowed.
 21. If vendor doesn't supply medical equipment in accordance with the supply order or fails to supply according to terms and conditions or in case of any other default, the Performance Security and Security Deposit would be forfeited and further action as per SPPRA rule would be taken against such vendor.
 22. If the supplier fails to give supply and install within the stipulated period, Liquidated charges will be imposed.
 23. The decision once taken will be final and will not be challenged in any Court of Law.
 24. A copy of Income Tax and GST Registration Certificate should be attached alongwith **Technical Bid.**
 25. Conditional Tender(s) against the Government rules and non-compliance of instructions mentioned in Tender Form & Hand written tender(s) will not be entertained.
 26. The vendor should submit a Data Sheet according to the Tender Specifications Format mentioned in the tender and highlight the tender specifications in their Technical Data Sheet. Additional Features can be mentioned separately.
 27. In case the information supplied by bidder in Questionnaire / Proforma is incomplete or incorrect, the Tender will be liable for rejection.
 28. The Medical Superintendent – Civil Hospital Karachi / Procurement Committee reserves the right to reject or accept any / all tender(s) as per SPPR-2010.
 29. The offer will remain valid as per SPPRA -2010.
 30. **Criteria for Evaluation of Bid.**
 - a. Specifications compliance.
 - b. After sale service facility.
 - c. Authority letter from Manufacturer.
 - d. Guaranty of Availability of parts of the supply articles for 10 years.
 - e. Compliance of Terms & Conditions and Additional Terms & Condition of the Bid Form.

I / We agreed above mentioned terms & conditions:

Name of Contractor _____ Signature _____

(CNIC NO _____ (Copy must be attached).)

Full Address _____

Rubber Stamp _____

QUESTIONNAIRE / PROFORMA

(To be filled in by the vendor)

1. Name of institutions where the same items supplied with performance report

• In Pakistan

• In Karachi

2. Factory address

3. No. of Employees

4. In case of manufacturer

Yes

No

a. Registration with EOBI (Govt. of Pakistan)

b. Registration with Social Security (Provincial Government)

c. National Income Tax (Income Tax Department)

d. Sales Tax Registration

(Copies must be attached duly attested)

5. Spare parts Availability Guarantee (No. of years):

6. Medical Equipment life period (number of years)

7. On call service charges (After expiry of maintenance period):

• Minimum:

• Per day:

8. In case of in house maintenance by Civil Hospital Karachi are you willing to provide following during post warranty period

Yes

No

• Back up engineer support whenever requested:

• Prompt supply of spares

9. Are you Sole Agent of manufacturer (for importer):

(If Sole Agent, a copy of Income Tax / GST Registration should be attached)
Otherwise the offer will be ignored / rejected.

10. Year of Establishment of manufacturing unit

11. Warranty period (please provide following details):

• Uptime Guarantee:

%

• Response time to maintenance requested:

Hours

12. Briefly state facilities and benefits provided during warranty period:

Supplier's Name: _____

Authorized Signature: _____ Designation _____

_____ Rubber Stamp _____

Contact No. _____ Fax No. _____ Cell No. _____

E. mail address: _____

CRITERIA FOR TECHNICAL EVALUATION OF THE BID :-

Specifications with best quality / features of the quoted item.	Points 50	
Service backup facilities in KARACHI of the quoted item.	Points 30	
According to the Terms & Conditions mentioned in the Bid Form.	Points 20	

FORM OF AGREEMENT

1. THIS AGREEMENT made this _____ day of _____ Between Messrs. Project Director "Shaheed Mohatarma Benazir Bhutto, Accidents, Emergency & Trauma Centre and Ancillary Services Complex at Civil Hospital Karachi" being hereinafter called the "OWNER" which expression shall, wherever the context so permits, mean and include its successors in interest, executors, administrators, liquidators, nominees and assignees of the ONE PART, and Messrs. _____ hereinafter called the "CONTRACTOR", which expression shall, wherever the context so permits, mean and include its heirs, successors in interest, executors, administrators, liquidators, nominees and assignees of the OTHER PART.

WHEREAS:

- a. The Owner had invited tenders from various contractors for **Supply, Installation, Testing, Commissioning and Maintenance (during maintenance period) of Neurosurgery Equipments at Shaheed Mohatarma Benazir Bhutto, Accident, Emergency & Trauma Centre and Ancillary Services Complex at Civil Hospital Karachi (Contract No. PD-Trauma Centre-CHK/020 (Rev) 2013-14)** in accordance with the requirements, drawings, plans and instructions prepared by the owner, and contained in the tender documents issued by the Owners.
- b. In response to the invitation of the Owner, the Contractors have tendered their quotations and rates and have offered to carryout the supply, completion and maintenance of the aforesaid project and facilities in accordance with the requirements, conditions of contract, documents, standard quality, plans, drawings and instructions of the Owner.
- c. The Owner is willing and agreeable to accept the aforesaid quotation, rates and offer of the Contractor on the various terms and conditions specified herein and in the documents listed is Clause-1, below.

NOW THEREFORE, THIS AGREEMENT WITNESSETH and in consideration of the mutual covenant and condition set forth herein, the parties hereto, do hereby agree, undertake and declare as under:-

1. The Following documents, hereinafter called "Contract Documents" shall be deemed to form, read and construed as an integral part of this Agreement:-
 - a. Tender documents including Addendum.
 - b. Contractor's bid letter No. _____ dated _____.
 - c. Relevant Correspondence.
 - d. Letter of Award No. _____ dated _____.

Tender S. No.	Description of Items	Rate on C&F Basis	Quantity Ordered	Total value in figures
1				

2. Notwithstanding anything contained to the contrary or in conflict with the provisions of this agreement in any of the documents mentioned in Clause - 1, above, the provisions of this agreement shall prevail and the documents mentioned above shall be deemed to have been amended to the extent of inconsistency found therein, by the provisions of this Agreement. In case of inconsistency between any of the documents

referred to herein, the later documents shall prevail and the tender documents shall be construed to have been amended to that extent.

3. In consideration of the Contractors supply, completing and maintaining the work, as described heretofore, in conformity in all respects with provisions of this contract to the entire satisfaction of the owner, and the Contractor acting, abiding and performing his duties and obligations strictly in accordance with the terms and conditions herein and documents of the contract mentioned hereinabove, the Owner shall pay to the Contractor amount as per contract documents listed above.
4. This contract shall not be transferable or assignable in whole or part of any of the parties hereto, provided that the Owner may assign his rights and obligations in whole or in part to any other Company which shall be entirely owned Company belonging to the same Group of the Companies as the Owner, In such an event such other Company shall be entitled to act as Owner under this contract.

IN WITNESS WHEREOF the parties hereto, acting through their respective representative, have caused this agreement to be signed, sealed and delivered in their respective names on the day and the year first mentioned hereinabove.

SIGNED, SEALED AND DELIVERED
In the name and for and on
Behalf of the Owner / PROJECT DIRECTOR

NAME: _____

DESIGNATION: _____

WITNESS:

1. NAME: _____

ADDRESS: _____

2. NAME: _____

ADDRESS: _____

SIGNED, SEALED AND DELIVERED
In the name and for and on
Behalf of the CONTRACTOR

NAME: _____

DESIGNATION: _____

WITNESS:

1. NAME: _____

ADDRESS: _____

2. NAME: _____

ADDRESS: _____

SUPPLY ITEMS / SCOPE OF WORK – SPECIFICATIONS (TECHNICAL)
Supply, Installation, Testing, Commissioning and Maintenance (during maintenance period) of
Neurosurgery Equipments at “Shaheed Mohatarma Benazair Bhutto, Accident, Emergency &
Trauma Centre and Ancillary Services Complex at Civil Hospital Karachi”
(Contract No. PD-Trauma Centre-CHK/020 (Rev) 2013-14)

S.No	Specification	Qty	Unit	Yes / No / Put desired value
(1)	(2)	(3)	(4)	(5)
1.	<p><u>DIGITAL MOBILE C-ARM FOR NEUROSURGERY</u></p> <p>Digital Mobile C-arm System with 1k x 1k mobile C-arm.</p> <p>C-arm Features:</p> <ul style="list-style-type: none"> • System should have the following specifications: • Counterbalanced, manual adjustment of orbital rotation, cranial-caudal rotation, wig-wag and horizontal motion • Dual, illuminated C-arm operator control panels • Minimum free space 75 cm or more • Depth in arc 80 cm or more • Should have 360° rotation (270/90°) or more • 145° orbital rotation, up to 55° over-scan or more • Should have 20° wig wag (10/10°) or more • Horizontal travel minimum 20 cm or more • Motorized vertical travel 44 cm or more • Should have Variable friction C-arm locks <p>Generator</p> <ul style="list-style-type: none"> • 15kW power • 60kHz high frequency • Up to 120kVp • Up to 75mA for radiographic film exposure • Continuous high level fluoro (HLF) up to 20mA • Digital spot up to 75mA <p>X-Ray Tube</p> <ul style="list-style-type: none"> • Rotating anode X-ray tube • 0.3mm and 0.6mm focal spots • Anode heat capacity: 300,000 HU <p>Digital Image Rotation</p> <ul style="list-style-type: none"> • Automatic image update <ul style="list-style-type: none"> ○ Image rotation ○ Image reversal (side-to-side) ○ Image invert (top-to-bottom) • Image positioning without additional exposure <p>Preview Collimator</p> <ul style="list-style-type: none"> • Preview iris collimator • Single leaf curved collimator • Adjusts collimators without X-ray exposure <p>Fluoro Mode</p> <ul style="list-style-type: none"> • kVp range: 40 – 120 • mA range: 0.2 – 20 HLF (high level fluoro) 	02	Unit	

Auto and manual fluoro modes
AutoTrak ABS varies mA, kVp,

Pulsed Fluoro Mode

- kVp range: 40 – 120
- mA range: 0.2 – 10
- Pulse rate: 1,2,4,8
- Pulse width: 25 or 50ms
- AutoTrak ABS, mA, kVp, camera gain

Digital Spot Mode

- kVp range: 40 – 120
- mA range: Up to 75
- Automatic exposure termination and automatic image save

Radiographic Mode

- mA range: up to 75
- mAs range: up to 300
- Computer controlled exposure time

9" Image Intensifier

- Tri-mode: 9"/6"/4.5" (23cm/15cm/11cm) image intensifier

Automatic Brightness Stabilization (ABS)

- System should have the capability to automatically seek the subject anatomy and where within the imaging field and selects the optimum imaging technique
- Automatically adjusts to anatomical size and location

Image Collimation

- Dynamically sensing of collimator position and automatically adjusts brightness and contrast to produce high image quality.
- Allows user to adjust automatic brightness and contrast sensitivity levels to metal

Video Camera

- High resolution 1k x 1k CCD camera
- Full frame capture
- Motorized rotation
- On-screen orientation indicator (real-time feedback without fluoro)
- Left-right image reversal
- Top-bottom image invert

Video Display

- Dual 19" (48cm) display anti-glare, LCD flat panel monitors mounted on an articulating arm
- 22" horizontal travel
- Monitors viewable from all four sides of workstation
- Touch screen system control
- 1280 x 1024 high resolution monitors

Digital Image Processing and Workstation

- Dual articulating, high resolution flat screen black & white monitors
- Dynamic Range Management (DRM) controls for image management
- Four pre-set imaging profiles for optimized anatomical capture

<ul style="list-style-type: none"> • Integrated keyboard touchpad – cursor/tap controls • DICOM 3.0 interface with send and query/retrieve • CD/DVD on-board media storage, read/write compatible • 1k x 1k x 16 bit image processing • Noise filter with on-screen indicator • Minimal difference spatiotemporal noise filter (MDST) • Real-time dynamic range management (DRM) • Automatic digital brightness and contrast control • Manual digital brightness and contrast control • Negate mode • Save and auto-save feature • Swap and auto-swap feature • Patient information with Examination list and patient information • DICOM interface set-up • Last image hold • CD/DVD burner with DICOM viewer for displaying images on PC platforms 512 x 512 or 1k x 1k • Integrated DICOM interface (store, print, worklist, and query/retrieve) • Zoom and roam function • Image annotation • Measurement software <p>User Interface</p> <ul style="list-style-type: none"> • Entire system should be computer controlled and software upgradeable • Touchscreen control for simplified operation • Automated system operation requires minimum operator interface • Multi-functional controls with Footswitch and Hand-held control • Simplified keyboard with integrated touchpad ○ Multi-purpose image directory ○ Retrieve and review images ○ Compose hardcopy films ○ Copy images • X-ray dose summary • CE and FDA both certification. <p>▪ For technical bid each vendor is requested to fill up the above mentioned Performa with the desired information in the last column, on the same MS word format in YES or NO form, with verifiable references (alongwith proper pagination, paragraph and line description).</p> <p>Complete Job: Supply, Installation, Testing, Commissioning and Maintenance (during maintenance period)</p> <p>COUNTRY OF ORIGIN: USA, EEC, JAPAN OR EQUIVALENT</p>			
<p>2. <u>NEURO NAVIGATION SYSTEM:</u></p> <ul style="list-style-type: none"> • Navigation System must be of latest model, should ideally support Advanced Navigation in Cranial & Spine Surgeries. Must support intra-operative imaging like iCT, iMRI, C-Arm etc. • System must navigate with precise accuracy through Advanced Optical Navigation Camera with Laser Pointer for easy positioning and Latest Electromagnetic Tracking Technology. 	01	Unit	

The Monitor:

Built in wide & High Resolution Touch Screen Monitor should provides a brilliant display for the navigation.

- **Intra-operative Imaging's Interface:**

- System should accept DICOM format Images from intra-operative MRI, intra-operative CT, and C-Arm.

- **Imaging Interface:**

- System should accept standard DICOM format Images from MRI and CT Scanning Departments via CD/USB enabling surgeon to plan surgery in advance on navigation system.

- **Workflow**

- Every possible aspect to provide a user friendly experience throughout set up, planning, navigation, shut down and transport.

- **Intelligent Design.**

- Compact Design with the smallest possible footprint, to make it easy to fit navigation system into the OR with built-in battery backup to support during frequent power failures.

- **Complete control**

- Surgeon should have control of the navigation system through touch screen and patient frame without compromising the sterility.
- Staff Cart (220-240V @ 50-60 Hz)

- **Including:**

- Navigation visualization screen and camera with extended camera volume & equipped with built-in Laser Pointer for precise & hassle free centering of the camera on the field of surgery.
- Interface for transfer of exams via CD/USB
- Bug Free Operating system
- Computer highest GB Ram
- Highest GB HD
- Highest Graphic Processor with Highest Resolution.
- DICOM query/retrieve compatible
- Advanced Tracking Technology compatible
- Intra Operative Imaging Systems compatible

- **Surgeon Cart:**

- High resolution touch screen. Reflection free for best viewing from all angles. Flexible arm to move close to surgical field to provide control and all information the surgeon needs where he needs it.
- Neuro Applications

- **A) Cranial Software:**

- Planning & Navigation in a single Module & in Main Navigation Station.
- The cranial navigation software offering Planning & Navigation. Customized for the surgeon to simplify and standardize the entire navigation process, while in the Operating Room. Software should support Planning, Registration in prone or any required position of the patient, Navigation, 3D and volumetric visualization engine (volume rendering) to check and avoid vessels and probable bleeding points during surgery. The whole cranial setup should

allow the surgeon to easily register the patient in any position (especially in PRONE).

- **Including:**
- Procedure guided software (next/back buttons) with voice prompt, instruction window and task visualization.
- Personalized equipment set up, instruments and navigation views.
- Choice of different patient registration methods, allowing the end-user to modify any plan or trajectories on the main navigation station intra-operatively.
- Supported surgical procedures like:
 - Frameless Brain Biopsy
 - Pin Less Procedures
 - Tumor resection
 - Shunt Placement
 - Navigated Neuro Endoscopy
 - Adult & Pediatric

B) Spine Software:

- **Spine Software Navigation:**
- The spine navigation product offering software customized for the surgeon to simplify and standardize the entire planning and navigation process.
- Personalized Equipment Setup, Instruments and Navigation Views for each type of CT or Fluoro-Based procedures (Cervical, Thoracic, and Lumbar) including iCT&iMRI
- Allowing seamless interface to a variety of C-arm Images from the C-arm should automatically be imported and be calibrated for navigation use. Real time tool positions overlaid onto previously acquired images.
- Image calibration and navigation, allowing seamless interfacing to a variety of C-arms and Navigation "Real Time Tool Positions". Images from the C-arm are to be automatically imported and can be calibrated for navigation use.
- Compatible with Intra-operative CT, C-arms. Integration with NIOM
- Integration with NIOM

C) Cranial Instruments:

- Quoted Instrument should provide the Freedom of both optical & electromagnetic Navigation.
- Should also include:
 - a) Articulated Arm
 - b) Passive Planar Blunt
 - c) MRI/CT Markers
 - d) Passive Cranial Frame
 - e) Sterile Spheres
 - f) Cranial Navigation Tray
 - g) Equipment Ref. Sheet
 - h) Skull Model with pre-loaded exam

Spine Instruments:

Compatible Interface for C-Arm / An interface for C-Arm 9" or 12".

- Spine Instruments Passive including accessories like:
 - a) Open Spine Clamp
 - b) Open Spine Clamp driver
 - c) Thoracic Clamp
 - d) Reference Frame
 - e) Passive Planer Ball Tip
 - f) Spine model with holder & pre-loaded exam

E) IGS Disposables:

- Disposable Reflective Markers / Spheres= 500pcs
- Registration Markers (compatible with CT / MRI) = 200pcs

Accessories

1. Universal Instrument Adapter System:

Including:

- Small, Medium and Large Passive Trackers
- Small, Medium and Large Mounts
- Mount Driver
- Sterilization Tray

2. Cranial Biopsy Instrument Kit:

Including:

- Articulated Arm
- Mount, Double Star Adapter Mayfield
- Biopsy Guide
- Probe
- All Necessary Accessories

3. Image Merging Software for both Cranial & Spine:

- To merge CT, MRI (T1, T2, flare) and PET
- To merge & visualize multiple data sets on Navigation Station.
- Auto Merge.

4. DICOM Query / Retrieve:

- With DICOM Query / Retrieve, to search, view and download patient exams directly from the hospital network to the Navigation System.
 - Query of PACS systems for patient data
 - Push and pull patient data from PACS or single scanner location, from the main Navigation Station.
 - Conform to industry accepted DICOM standards
 - DICOM receive from any DICOM storage class provider
 - Patient data viewing capability within the navigation application

5. Electromagnetic Tracking System for Pin-Less Cranial Navigation with All Necessary Accessories:

- Quoted Navigation System must facilitate the end-user in pin less cranial procedures.
- Technical & Commercial Offer must be inclusive of all the accessories (Hardware, Software, and Re- Usables& Disposables).
- Procedure Dedicated Kits Pediatric tumor resections as well as shunt replacements = 10 pcs each.

<p>5. Microscope Integration. Interface Only including:</p> <ul style="list-style-type: none"> • Display of the microscope focal point on anatomical images • Display of ROI and Navigation symbols in oculars • Display of Navigation Monitor in oculars 1x Tracking Hardware (cables & bracket) • Tracker allowing sterile draping of the microscope without compromising with sterility <p>NOTE: Technical Offers / Commercial Offers failing to demonstrate below details would be rejected:</p> <ol style="list-style-type: none"> a. Quoted System must be of advanced & Latest version. b. Quotation must cover Complete Equipment. c. Quotation must cover Complete range of disposables / Kits d. Quotation must provide all technical details up to the satisfaction of the end-user. e. CE / FDA Approved f. APPROVED PANEL: USA/Europe/Japan <ul style="list-style-type: none"> • For technical bid each vendor is requested to fill up the above mentioned performa with the desired information in the last column, on the same MS word format in YES or NO form, with verifiable references (along with proper pagination, paragraph and line description). <p>Complete Job: Supply, Installation, Testing, Commissioning and Maintenance (during maintenance period)</p> <p>COUNTRY OF ORIGIN: USA, EEC, JAPAN OR EQUIVALENT</p>			
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<hr/> SIGNATURE	<hr/> CONTRACTOR NAME	<hr/> DATE & SEAL
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BIDDING DOCUMENTS

CIVIL HOSPITAL KARACHI

HEALTH DEPARTMENT

GOVERNMENT OF SINDH

Contract NO:- PD-Trauma Centre-CHK/020 (Rev) 2013-14

Tender Documents for
Supplying, Installation, Testing, Commissioning &
Maintenance (during maintenance period) of
Neurosurgery Equipments
at
“Shaheed Mohtarma Benazir Bhutto Accident, Emergency
& Trauma Centre and Ancillary Services Complex at Civil
Hospital Karachi”

VOLUME-II

FINANCIAL BID DOCUMENTS

SUMMARY OF CONTENTS

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FORM OF BID

The Project Director,
Shaheed Mohatarma Benazair Bhutto,
Accident, Emergency & Trauma Centre,
And Ancillary Services Complex At,
Civil Hospital Karachi.

Sub: Supplying, Installation, Testing, Commissioning and Maintenance (during maintenance period) of Neurosurgery Equipments for the project Shaheed Mohatarma Benazir Bhutto, Accident, Emergency & Trauma Centre and Ancillary Services Complex at Civil Hospital Karachi, (Contract No. PD-Trauma Centre-CHK/020 (Rev) 2013-14).

Dear Sir,

1. Having examined the Tender Documents and the site conditions for the above mentioned Project, we, the undersigned offer to Supply, Installation, Testing, Commissioning and maintenance (during maintenance period) of the whole of the said works in conformity with the said tender Documents (and Addendum if any) for the sum of undermentioned amount on DDP basis:-

Bid Price (In Figure):	
Bid Price (In Words):	

2. The above total sum is based on the quantities shown in the Bill of Quantities and other works as mentioned in Salient Features.
3. We undertake, if our tender is accepted, to sign an agreement within 15 calendar days following receipt of letter of award in the form laid out in annexure to this Tender with such alterations and additions thereto as may be required to adopt, such Agreement to circumstances of this Tender.
4. We undertake, if our Tender is accepted, to mobilize on site within 7 calendar days of receipt of the letter of award and commence the works on the first works comprised in the contract within the time of completion specified in the Salient Features.
5. We agree to abide by the Tender for a period of 90 calendar days from the date of opening of tender and shall remain binding upon us and may be accepted at any time before the expiration of that period.

6. Unless and until a formal Agreement is prepared and executed, this Tender together with your written acceptance thereof and other relevant correspondence subsequent to the Tender shall constitute a binding Contract between us.
7. We understand that you are not bound to accept the lowest or any tender you may receive, and that you will not reimburse any expenses incurred by us in preparing and submitting the Tender or otherwise in connection with the Tender.
8. As a guarantee for the performance of the undertakings and obligations of this Tender, we submit herewith Earnest Money/Bid Security equivalent to 2% of the quoted cost in an amount Rs. _____ (Rupees _____) in form of Pay Order issued by the Bank vide No. _____ dated _____ made in your favor and made payable to you without any reference to us and valid for 90 calendar days from the date of submission of Tender.
9. The Tender Documents referred to above constitute a part of this Tender and comprise of the documents listed hereunder:
 - a. Instructions to bidders.
 - b. Salient Features / Terms & Condition of the Tender.
Questionnaire / Proforma – Evaluation Criteria
 - c. Form of Agreement.
 - d. Scope of work / Bill of Quantities / Specification (Technical).
 - e. The Addendum (if any).
 - f. The Drawings (if any).

Dated this _____ day of _____ 20____

Signature _____ in the capacity of _____ duly
authorized to sign bids for and on behalf of _____

(Name of Bidder in Block Capitals)
(Seal)

Address

Witness:

(Signature) _____

(Name) _____

Address: _____

Occupation _____

BILL OF QUANTITY

**Supply, Installation, Testing, Commissioning and Maintenance (during maintenance period) of
Neurosurgery Equipment at Shaheed Mohatarma Benazair Bhutto, Accident, Emergency & Trauma
Centre and Ancillary Services Complex at Civil Hospital Karachi
(Contract No. PD-Trauma Centre-CHK/020 (Rev) 2013-14)**

S.No	Specification	Qty	Unit	Unit Price	Total Amount
(1)	(2)	(3)	(4)	(5)	(6)
1.	<p><u>DIGITAL MOBILE C-ARM FOR NEUROSURGERY</u></p> <p>Digital Mobile C-arm System with 1k x 1k mobile C-arm.</p> <p>C-arm Features:</p> <ul style="list-style-type: none"> • System should have the following specifications: • Counterbalanced, manual adjustment of orbital rotation, cranial-caudal rotation, wig-wag and horizontal motion • Dual, illuminated C-arm operator control panels • Minimum free space 75 cm or more • Depth in arc 80 cm or more • Should have 360° rotation (270/90°) or more • 145° orbital rotation, up to 55° over-scan or more • Should have 20° wig wag (10/10°) or more • Horizontal travel minimum 20 cm or more • Motorized vertical travel 44 cm or more • Should have Variable friction C-arm locks <p>Generator</p> <ul style="list-style-type: none"> • 15kW power • 60kHz high frequency • Up to 120kVp • Up to 75mA for radiographic film exposure • Continuous high level fluoro (HLF) up to 20mA • Digital spot up to 75mA <p>X-Ray Tube</p> <ul style="list-style-type: none"> • Rotating anode X-ray tube • 0.3mm and 0.6mm focal spots • Anode heat capacity: 300,000 HU <p>Digital Image Rotation</p> <ul style="list-style-type: none"> • Automatic image update ○ Image rotation ○ Image reversal (side-to-side) ○ Image invert (top-to-bottom) • Image positioning without additional exposure <p>Preview Collimator</p> <ul style="list-style-type: none"> • Preview iris collimator 	02	Unit		

<ul style="list-style-type: none"> • Single leaf curved collimator • Adjustable collimators without X-ray exposure <p>Fluoro Mode</p> <ul style="list-style-type: none"> • kVp range: 40 – 120 • mA range: 0.2 – 20 HLF (high level fluoro) • Auto and manual fluoro modes • AutoTrak ABS varies mA, kVp, <p>Pulsed Fluoro Mode</p> <ul style="list-style-type: none"> • kVp range: 40 – 120 • mA range: 0.2 – 10 • Pulse rate: 1,2,4,8 • Pulse width: 25 or 50ms • AutoTrak ABS, mA, kVp, camera gain <p>Digital Spot Mode</p> <ul style="list-style-type: none"> • kVp range: 40 – 120 • mA range: Up to 75 • Automatic exposure termination and automatic image save <p>Radiographic Mode</p> <ul style="list-style-type: none"> • mA range: up to 75 • mAs range: up to 300 • Computer controlled exposure time <p>9" Image Intensifier</p> <ul style="list-style-type: none"> • Tri-mode 9"/6"/4.5" (23cm/15cm/11cm) image intensifier <p>Automatic Brightness Stabilization (ABS)</p> <ul style="list-style-type: none"> • System should have the capability to automatically seek the subject anatomy and where within the imaging field and selects the optimum imaging technique • Automatically adjusts to anatomical size and location <p>Image Collimation</p> <ul style="list-style-type: none"> • Dynamically sensing of collimator position and automatically adjusts brightness and contrast to produce high image quality. • Allows user to adjust automatic brightness and contrast sensitivity levels to metal <p>Video Camera</p> <ul style="list-style-type: none"> • High resolution 1k x 1k CCD camera • Full frame capture • Motorized rotation • On-screen orientation indicator (real-time feedback without fluoro) • Left-right image reversal • Top-bottom image invert <p>Video Display</p> <ul style="list-style-type: none"> • Dual 19" (48cm) display anti-glare, LCD flat panel monitors mounted on an articulating arm 				
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	<ul style="list-style-type: none"> • 22" horizontal travel • Monitors viewable from all four sides of workstation • Touch screen system control • 1280 x 1024 high resolution monitors <p>Digital Image Processing and Workstation</p> <ul style="list-style-type: none"> • Dual articulating, high resolution flat screen black & white monitors • Dynamic Range Management (DRM) controls for image management • Four pre-set imaging profiles for optimized anatomical capture • Integrated keyboard touchpad – cursor/tap controls • DICOM 3.0 interface with send and query/retrieve • CD/DVD on-board media storage, read/write compatible • 1k x 1k x 16 bit image processing • Noise filter with on-screen indicator • Minimal difference spatiotemporal noise filter (MDST) • Real-time dynamic range management (DRM) • Automatic digital brightness and contrast control • Manual digital brightness and contrast control • Negate mode • Save and auto-save feature • Swap and auto-swap feature • Patient information with Examination list and patient information DICOM interface set-up • Last image hold • CD/DVD burner with DICOM viewer for displaying images on PC platforms 512 x 512 or 1k x 1k • Integrated DICOM interface (store, print, worklist, and query/retrieve) • Zoom and roam function • Image annotation • Measurement software <p>User Interface</p> <ul style="list-style-type: none"> • Entire system should be computer controlled and software upgradeable • Touchscreen control for simplified operation • Automated system operation requires minimum operator interface • Multi-functional controls with Footswitch and Hand-held control • Simplified keyboard with integrated touchpad ○ Multi-purpose image directory ○ Retrieve and review images ○ Compose hardcopy films ○ Copy images • X-ray dose summary • CE and FDA both certification. 				
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	<ul style="list-style-type: none"> For technical bid each vendor is requested to fill up the above mentioned Performa with the desired information in the last column, on the same MS word format in YES or NO form, with verifiable references (alongwith proper pagination, paragraph and line description). <p>Complete Job: Supply, Installation, Testing, Commissioning and Maintenance (during maintenance period)</p> <p>COUNTRY OF ORIGIN: USA, EEC, JAPAN OR EQUIVALENT</p>				
2.	<p><u>NEURO NAVIGATION SYSTEM:</u></p> <ul style="list-style-type: none"> Navigation System must be of latest model, should ideally support Advanced Navigation in Cranial & Spine Surgeries. Must support intra-operative imaging like iCT, iMRI, C-Arm etc. System must navigate with precise accuracy through Advanced Optical Navigation Camera with Laser Pointer for easy positioning and Latest Electromagnetic Tracking Technology. The Monitor: Built in wide & High Resolution Touch Screen Monitor should provides a brilliant display for the navigation. Intra-operative Imaging's Interface: System should accept DICOM format Images from intra-operative MRI, intra-operative CT, and C-Arm. Imaging Interface: System should accept standard DICOM format Images from MRI and CT Scanning Departments via CD/USB enabling surgeon to plan surgery in advance on navigation system. Workflow Every possible aspect to provide a user friendly experience throughout set up, planning, navigation, shut down and transport. Intelligent Design. Compact Design with the smallest possible footprint, to make it easy to fit navigation system into the OR with built-in battery backup to support during frequent power failures. Complete control Surgeon should have control of the navigation system through touch screen and patient frame without compromising the sterility. Staff Cart (220-240V @ 50-60 Hz) Including: Navigation visualization screen and camera with extended camera volume & equipped with built-in Laser Pointer for precise & hassle free centering of the camera on the field of surgery. Interface for transfer of exams via CD/USB Bug Free Operating system Computer highest GB Ram Highest GB HD Highest Graphic Processor with Highest Resolution. 	01	Unit		

<ul style="list-style-type: none"> • DICOM query/retrieve compatible • Advanced Tracking Technology compatible • Intra Operative Imaging Systems compatible • Surgeon Cart: • High resolution touch screen. Reflection free for best viewing from all angles. Flexible arm to move close to surgical field to provide control and all information the surgeon needs where he needs it. • Neuro Applications <p>A) Cranial Software:</p> <ul style="list-style-type: none"> • Planning & Navigation in a single Module & in Main Navigation Station • The cranial navigation software offering Planning & Navigation. Customized for the surgeon to simplify and standardize the entire navigation process, while in the Operating Room. Software should support Planning, Registration in prone or any required position of the patient, Navigation, 3D and volumetric visualization engine (volume rendering) to check and avoid vessels and probable bleeding points during surgery. The whole cranial setup should allow the surgeon to easily register the patient in any position (especially in PRONE). • Including: • Procedure guided software (next/back buttons) with voice prompt, instruction window and task visualization. • Personalized equipment set up, instruments and navigation views. • Choice of different patient registration methods, allowing the end-user to modify any plan or trajectories on the main navigation station intra-operatively. • Supported surgical procedures like: <ul style="list-style-type: none"> ○ Frameless Brain Biopsy ○ Pin Less Procedures ○ Tumor resection ○ Shunt Placement ○ Navigated Neuro Endoscopy ○ Adult & Pediatric <p>B) Spine Software:</p> <ul style="list-style-type: none"> • Spine Software Navigation: • The spine navigation product offering software customized for the surgeon to simplify and standardize the entire planning and navigation process. • Personalized Equipment Setup, Instruments and Navigation Views for each type of CT or Fluoro-Based procedures (Cervical, Thoracic, and Lumbar) including iCT&iMRI • Allowing seamless interface to a variety of C-arm Images from the C-arm should automatically be imported and be calibrated for 				
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	<p>navigation use. Real time tool positions overlaid onto previously acquired images.</p> <ul style="list-style-type: none"> • Image calibration and navigation, allowing seamless interfacing to a variety of C-arms and Navigation "Real Time Tool Positions". Images from the C-arm are to be automatically imported and can be calibrated for navigation use. • Compatible with Intra-operative CT, C-arms. Integration with NIOM • Integration with NIOM <p>C) Cranial Instruments:</p> <ul style="list-style-type: none"> • Quoted Instrument should provide the Freedom of both optical & electromagnetic Navigation. • Should also include: <ul style="list-style-type: none"> a) Articulated Arm b) Passive Planar Blunt c) MRI/CT Markers d) Passive Cranial Frame e) Sterile Spheres f) Cranial Navigation Tray g) Equipment Ref. Sheet h) Skull Model with pre-loaded exam <p>D) Spine Instruments:</p> <ul style="list-style-type: none"> • Compatible Interface for C-Arm / An interface for C-Arm 9" or 12". • Spine Instruments Passive including accessories like: <ul style="list-style-type: none"> a) Open Spine Clamp b) Open Spine Clamp driver c) Thoracic Clamp d) Reference Frame e) Passive Planar Ball Tip f) Spine model with holder & pre-loaded exam <p>E) IGS Disposables:</p> <ul style="list-style-type: none"> • Disposable Reflective Markers / Spheres= 500pcs • Registration Markers (compatible with CT / MRI) = 200pcs <p>Accessories</p> <p>1. Universal Instrument Adapter System:</p> <p>Including:</p> <ul style="list-style-type: none"> • Small, Medium and Large Passive Trackers • Small, Medium and Large Mounts • Mount Driver • Sterilization Tray <p>2. Cranial Biopsy Instrument Kit:</p> <p>Including:</p>					
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<ul style="list-style-type: none"> • Articulated Arm • Mount, Double Star Adapter Mayfield • Biopsy Guide • Probe • All Necessary Accessories <p>3. Image Merging Software for both Cranial & Spine:</p> <ul style="list-style-type: none"> • To merge CT, MRI (T1, T2, flare) and PET • To merge & visualize multiple data sets on Navigation Station. • Auto Merge. <p>4. DICOM Query / Retrieve:</p> <ul style="list-style-type: none"> • With DICOM Query / Retrieve, to search, view and download patient exams directly from the hospital network to the Navigation System. ○ Query of PACS systems for patient data ○ Push and pull patient data from PACS or single scanner location, from the main Navigation Station. ○ Conform to industry accepted DICOM standards ○ DICOM receive from any DICOM storage class provider ○ Patient data viewing capability within the navigation application <p>5. Electromagnetic Tracking System for Pin-Less Cranial Navigation with All Necessary Accessories:</p> <ul style="list-style-type: none"> • Quoted Navigation System must facilitate the end-user in pin less crania procedures. • Technical & Commercial Offer must be inclusive of all the accessories (Hardware, Software, and Re- Usables& Disposables). • Procedure Dedicated Kits Pediatric tumor resections as well as shunt replacements = 10 pcs each. <p>6. Microscope Integration.</p> <ul style="list-style-type: none"> • Interface Only including: • Display of the microscope focal point on anatomical images • Display of ROI and Navigation symbols in oculars • Display of Navigation Monitor in oculars 1x Tracking Hardware (cables & bracket) • Tracker allowing sterile draping of the microscope without compromising with sterility <p>NOTE: Technical Offers / Commercial Offers failing to demonstrate below details would be rejected:</p> <ol style="list-style-type: none"> a. Quoted System must be of advanced & Latest version. b. Quotation must cover Complete Equipment. c. Quotation must cover Complete range of disposables / Kits d. Quotation must provide all technical details up to the satisfaction of the end-user. e. CE / FDA Approved f. APPROVED PANEL: USA/Europe/Japan 				
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GRAND TOTAL				

Grand Total in Pak. Rupees, on DDP / C&F basis _____

_____ SIGNATURE	_____ CONTRACTOR NAME	_____ DATE & SEAL
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