

**HSCC (I) Ltd.**  
**E-6(A), Sector-1, Noida**  
**U.P.-201301**

“Tenders in sealed envelope are invited for Complete Electrical Design Work for the State of Art Laboratory at Regional Medical Research Centre Dibrugarh of approximate 5440 Sq. Mtr. area. Tender document may be downloaded from the HSCC website [www.hsccltd.com](http://www.hsccltd.com) and submitted by 5PM of 10/04/2007 in the above office of HSCC.”

GM (Electrical)

### **Annexure 'A': Scope Of Work**

Specification, Bill of quantities, Tender drawings, estimate with backup, rate & quantity backups for State of Art Laboratory and Animal House at Regional Medical Research Centre at Dibrugarh.

**E1.01** The scope of works covers preparation of concept report, design and preparation of tender drawings, bill of quantities, cost estimate and technical specification for the internal & external electrification works.

#### **GENERAL**

Before finalizing any electrical scheme/design/specification/drawing, the same shall be discussed with HSCC (Electrical Engineer). The same can only be finalized after incorporating HSCC's comment(s).

The details of the work will be as under:

#### **a) Substation Equipments :**

- Substation work including VCB Panels, Transformers, LT Busduct, LT Panel, Capacitor Panels, Battery Charger Panels etc.

#### **b) Electrification :**

- Internal illumination.
- Telephone facilities with EPABX System.
- Power supply to Equipment and to power plugs sockets.
- Power supply to Air-conditioning/ventilation Plant and other Services envisaged like Water Supply and Treatment Plant, Sewerage Treatment Plant, Incinerator, fire fighting system, etc.
- Fire alarm and detection System.
- Public Address System.
- Conduits for Computer networking.
- Cable TV/Dish Antenna System.
- Passenger/Bed/Good Lifts.
- Cables for incoming supply.
- Any other electrical works required to make the electrical systems complete & functional.
- Load detail/ Calculation for the entire building

The points to be observed regarding BOQs, design & drawing preparation are below:

**c) CODES AND STANDARDS.**

The design, drawings, bill of quantities, cost estimate and specification shall be prepared taking into account the following latest revisions applicable to the region in which the project is located.

- Indian Electricity Rules as specified.
- Local by-laws and factory Act.
- Indian Standard Specifications.
- National Building Code
- National Electric Code.
- Manufacturers Instructions and guidelines.
- CPWD Specifications – Internal & External

**d) DESIGN CRITERIA AND SELECTION OF EQUIPMENT/ FITTINGS/ MATERIALS ETC.**

This scope covers estimation of total connected load of each block/building and maximum demand. Design calculations (DB Schedule, Lux level Calculations, Load Statement, Cable Schedule, inventory details, etc.), criteria for selection of switchgear/fittings/materials, will be prepared by the detailer and submitted for approval. The design and selection shall also take into account the following aspects.

- Preferred ratings are as per I.S. specifications.
- Power design and distribution taking into account normal and standby supply.
- Fully meets the functional needs and provide for future expansion.
- Energy efficient and economical
- Optimum power factor.
- Voltage drop and energy losses within limits.

**e) DRAWINGS :**

The detailed tender drawing for internal and external works shall be prepared/drawn to a large scale, preferably on A1 size so that details and information given are clear as specified in subsequent clauses. Information and details given on each drawing should be sufficient to enable the contractor to carry out the erection/installation and commissioning work. Each drawing should be self-contained and should include details of symbols used, notes giving features and erection requirement, bill of quantity of materials, references to other related drawings, exploded details at critical areas etc. All the drawings are to be made on computer (Auto-CAD R-14) including every revision and the same should also be submitted to HSCC in floppies / compact disc along with the tracing and ammonia prints as required.

The drawings to be prepared for internal/external electrification work shall generally cover the following:

- Plan showing the position of light fittings, ceiling fans, exhaust fan, switches and plugs, distribution/sub-station boards, main power board etc.
- Drawing and fixing details for main power board, distribution boards, switch boards, plug/socket boxes and junction boxes showing locations of air diffuser integrated with other electrical fittings given in control plan mentioned above wherever required.
- Single line diagram for Main power board, and distribution boards etc. Details like design features, current rating, short circuit rating, current transformers, meters/ instruments, protection with relays fuses, as rating and type of bus-bars, size of cables etc. shall be given. Connected load and power demand on each feeder circuit will also be indicated.
- Plan showing the physical features of light fittings and fans along with their fixing/supporting details.
- Plan showing the location of tag block and EPABX for telephone system and the route and size of conduit from EPABX to tag block .
- DB Schedule with load on each DB, incomer, outgoing details & sub main size.
- Plan showing lift well size, layout of machine room and all other details regarding installation of lifts.
- Plan showing internal/external earth grid, earth electrodes and lightning Protection with size of conductors and details of each electrical and lightning arrestors along with details of earthing pits.
- Plan showing position of fire alarm sensors, response indicators, manual call points, FDA Panels etc. and location/details of control panel.
- Plan showing position of speakers, central console etc. including block diagram of PA system.
- Plan showing the, position of computer networking station hubs, computer points etc.
- Plan showing all integrated services i.e. main cables of FDA system, PA System, Telephone System, TV Cable System, Sound System, main power and control cables etc.

- Cables from Sub Station to main LT panel in trench/cable tray details with cable no., size, route, road crossing pipes with number & size, co-ordinates, destination etc. as required and cables from LT Panel to services/ floor panels etc.
- Road lighting/Building Lighting with circuiting details, typical pole detail with type of fixture, cabling with above mentioned details, earthing, etc. as required.
- Single Line Diagram of Main Receiving Station and all other substations with interlocking scheme. Layout of substation showing position of electrical equipments. Earthing details of all substation equipments with auxiliaries.
- Plan showing the earth grid and earth connections as required.
- Any other electrical drawing required for the Project.

**f) BILLS OF QUANTITY (BOQ)**

The bills of quantity will be prepared as per the technical specifications and detailed drawings of the tender document. Items of BOQ will be generally in line with CPWD schedule/HSCC standards. Each item of work should convey clearly the details of the works to be executed and shall include all minor/misc. items of work requiring to complete the installation as required.

Consolidated BOQ shall be prepared separately for internal electrification and other facilities as mentioned. However statement giving BOQ of individual buildings /establishments/Area shall be prepared and submitted for each item (break-up of each BOQ item).

**g) ESTIMATED COST OF WORKS.**

For the preparation of the estimated cost of work, the item rates available as per the latest CPWD schedule of rates and/or market rates shall be taken into account. Wherever the rates are not available, market rates will be taken. While arriving at the market rate, the rate analysis as per the CPWD guidelines shall be prepared for all non-schedule items. All supporting documents and details in arriving at item rates shall be submitted for approval.

**h) TECHNICAL SPECIFICATIONS**

Detailed technical specifications for lighting, telephone system, fire alarm/detection, P.A. system, Road Lighting, Cable TV system, computer networking, Goods/Bed/Passenger lifts, MRS for enhanced load & substation equipments etc.

**The specifications shall be prepared in accordance with CPWD specifications (Internal & External), Latest IS Codes, Guidelines of statutory bodies etc.**

## **ANNEXURE-'B':TIME SCHEDULE & LIQUIDATED DAMAGES**

**1. Completion time Schedule: Time being the essence of this contract, the consultant shall ensure strictly the completion schedule. This includes all the four stages as per the time schedule mentioned in the covering letter.**

**2. LD for delay in completion:**

- Penalty shall be levied upon the consultant in case of delay in fulfilling the obligations under this agreement for causes solely attributable to the agency at 1% (one percent only) of the contract fee per week of delay subject to a maximum of 5% of the total contract fee. For the delay in respective items of work the contract fee for the stipulated item shall be applicable. The split of prices for the stipulated items has been listed in Annexure-II. No further sub division of prices shall be considered for the purpose of computing penalties.
- For computing the penalty amount, the period of delay on the part of the consultant shall be worked out by HSCC going strictly by the time schedule mentioned in this order. The agency shall be liable to pay this compensation to HSCC.
- Co-ordination as and when required at HSCC office.
- However, no penalty shall be levied in case the delay is on account of release of design input to the consultant from HSCC side. In such cases the time schedule shall be reworked & a suitable extension of in time granted for work completion. **NO EXTRA PRICE SHALL BE PAYABLE BY HSCC TO THE CONSULTANT FOR THE DELAYED PERIOD.**

## **ANNEXURE- 'C': GENERAL CONDITIONS OF CONTRACT**

### **Preamble**

M/s Hospital Services Consultancy Corporation (India) Limited i.e.. HSCC is a turnkey consultant in the field of Medical Facilities. Due to capacity and time restraints, detailing of design and drawing work is often sublet to detailer agency as and when required. The General conditions of Contract are as under :-

#### **1. Delay And Extension:**

If the work is delayed by force majeure or any other cause which in the absolute discretion of the employer is beyond the agency's control, they shall immediately upon the happening of such event contributing to delays give notice thereof in writing to the employer but shall nevertheless use constantly their best endeavors to prevent or make good the delay and shall do all that may be reasonably required to the satisfaction of HSCC to proceed with the work.

Request for extension of time shall be made by the agency in writing within 7 days of the happening of the event causing delay. The agency shall also indicate with any such request, the period for which extension is required. In any such case HSCC may give a fair and reasonable extension of time for completion of individual items of groups and items of work for which separate period of completion are specified in the contract as a whole, but it shall be the sole discretion of the employer to grant or refuse such extension.

The decision of HSCC in regard to the extension will be communicated to the agency in writing within a reasonable time but no compensation or any extra amount shall be paid for such extensions granted by HSCC.

### **RISK PREJUDICE CLAUSES**

#### **2. Arbitration:**

If at any time any doubt, question, dispute or difference whatsoever, shall arise between the agency and HSCC upon or in relating to or in connection with this contract, either of the parties may give the other notice in writing of the existence of such doubt, question, dispute or difference and the same shall be referred to the Chairman- cum-Managing Director, HSCC or his nominee as Sole Arbitrator in accordance with the latest Indian Arbitration Act, later amendments, if, any. The decision of the sole arbitrator thereon shall be final, conclusive and binding upon the parties to dispute.

The party invoking arbitration shall specify the dispute or disputes to be referred to the arbitration under the clause together with the amount or amounts claimed in respect of each of dispute.

### 3. Jurisdiction Of Court:

All disputes arising out of the contract shall have the jurisdiction of courts of the Union Territory of Delhi only.

### 4. Termination Of Contract :

HSCC reserves the right to terminate, or postpone the work for good and sufficient cause and shall give 30 days prior notice in writing to the agency (HSCC being sole judge for the same). The agency shall be paid for the useful work done up to the date of termination. HSCC shall determine the credit to be given to the agency for the value of the work executed by the agency. The agency shall give HSCC all the data, compiled report, drawings etc. prepared by them till the date of termination before the final dues are paid to the agency. Even after the termination of agreement, the agency shall continue to cooperate with HSCC to such a reasonable extent as may be necessary to clarify or explain any reports or recommendations in documents or detailing made by them.

### 5. Breach Of Trust:

Unless otherwise directed by HSCC specifically, the agency shall not contact directly or indirectly the client or any other authorities connected with the project. Non compliance of this clause shall be treated as breach of trust resulting in the termination of contract between HSCC and the agency forthwith without any prior notice to him. In such event, no job will be entrusted to him in future by HSCC.

### 6. Discussions With HSCC And Approvals:

- **AVAILABILITY:** The agency shall make themselves available at reasonable notice to be present for discussion with HSCC. The agency shall also provide assistance, advice and information to HSCC as may be required from time to time for discussions with other agencies or HSCC officials connected with the work without any extra claim.
- **WEEKLY MEETINGS:** The design detailer with his associates will regularly attend the HSCC office for weekly meetings on the date specified by HSCC till the completion of the design job in which the progress made in the works will be discussed and clarifications required if any will be given. All cost incidental to such interaction for meetings shall be to the detailer's account and no claim shall be entertained by HSCC on this account.
- **APPROVAL OF WORK:** The agency shall get approved the work done by him at every stage throughout the period from HSCC. However, such approval by HSCC shall not be deemed

to absolve the agency of the total responsibility of the correctness and soundness of the work and other obligations under this contract.

#### **7. Guarantee And Liability Of The Agency:**

- **LIABILITY:** The Agency shall be liable for all consequence of errors and omissions arising from errors solely attributable to agency or on the part of their employees to the extent and with the limitation specified by HSCC.
- **ASSOCIATED NECESSARY WORK:** Any other items of work not mentioned specifically in the scope of work but required/felt necessary for the completion of the project as a whole in all respects shall be deemed to be included in the scope as well as in the fee quoted by the detailer and no extra claim shall be admissible on this account.

#### **8. Ownership Of Documents & Copy Rights:**

- The copy right of all drawings, reports, calculations, BOQs, Tender papers and other similar documents provided by the agency in connection with project / work shall remain vested in HSCC.
- The agency shall not publish without the written consent of employer or use for purpose other than those for this work, the articles, designs, photographs or illustrations, related to this work / project.

#### **9. Changes Or Alteration Of Drawings/Designs/ Arrangement / Scheme Etc.**

Changes or alterations as desired by HSCC due to site considerations or otherwise as required during the pendency of the contract will be done by the agency under their scope of work within the Lump Sum fee already quoted and agreed upon.

#### **10. Correctness And Accuracy Of Data :**

The agency shall be full responsible for the correctness and accuracy of the data, planning, designs, drawings, specifications, bills of quantities and documents furnished by them. If any inadequacy is observed in the work performed by them, they shall at their own initiative and at no extra cost to HSCC take all steps necessary to remedy/rectify the said defects or inadequacies. The Detailer shall incorporate all the modification or

changes as desired by the HSCC in the drawings, plans and reports, design etc. at no extra cost to HSCC.

**11. Safety Of Design:**

The agency shall be fully responsible for the safe designs as per national standards and requirements. In the absence of National Standards, the requirement would of International standard.

**12. Performance Guarantee:**

The agency shall fully stand guarantee and indemnity the HSCC for the design and detailing done by them as also performance and detailing etc. of the works. agency shall submit guarantee to HSCC on proforma approved by HSCC.

**13. Code Of Practice:**

The report, design and drawings for all works shall conform to local building bye-laws and other state regulation as well as to relevant latest Indian Standard Specifications and/or Standard Code of Practice. Where Indian Standards are not available, equivalent International Standards and/or generally accepted sound engineering practices shall be followed. Deviation from BIS recommendations and adoption of other code of practice will require prior approval of HSCC in writing. All reports, computations, drawings, shall be submitted in English language and in metric/SI units.

**14. Payment Terms:**

Payment will be released on completion and verification of electrical design work.

**15. Above work Completion Date:**

Complete Tender document to be submitted on the 15<sup>th</sup> day of award of work.