

## Invitation for “**Expression of Interest**”(EOI)

***I-Hub Foundation for Cobotics (IHFC) Technology Innovation Hub( TIH) of IIT Delhi is inviting EOI, for Supply and installation of civil and Electrical material for fabrication work at our Medical Cobotics Center (MCC) ) to be developed at Indraprastha Institute of Information Technology (IIIT) Delhi, Okhla Campus. Kindly refer further details and scope as per details below and annexures.***

<b>EOI Version</b>	IHFC/EOI /MCC/ 08122022
<b>Document Date:</b>	08 Dec 2022 (3 PM)
<b>Request Closure date</b>	01 Jan 2023 (5 PM)
<b>Area Under consideration</b>	~ 10000 sqft
<b>Estimated cost of Project</b>	~ 4.2 Cr
<b>Security Classification:</b>	Restricted
<b>Author:</b>	IHFC



**I-Hub Foundation for Cobotics  
Indian Institute of Technology  
Hauz Khas, New Delhi-110 016  
Contact: 011-2654 8493, 7042654553**

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## **1. COMPANY PROFILE**

### **I-Hub Foundation for Cobotics (IHFC), Technology Innovation Hub (TIH) of IIT Delhi,**

IHFC is a Section 8 company, registered under The Companies Act, 2013 having registered office at MZ-122 IIT Room No. Hauz Khas, Delhi, India-110016, established under the mandate of the Govt. of India through the Department of Science and Technology (Ministry of Science and Technology), under its NM-ICPS (National Mission on Interdisciplinary Cyber-Physical Systems) mission for promoting research and development, incubating/promoting individuals/start-ups, entrepreneurs, organizations and corporations individually or in collaboration with faculty and other parties for harnessing the new wave of technological innovation in India. Medical Cobotics Center (MCC) shall be a multi-purpose facility for enhancing the research and development capabilities in technologies associated with Medical Simulators, Digital Health, Healthcare Robotics, and associated areas to provide best-in-class infrastructure for the same. And it is projected with following facilities

1. High and Mid fidelity simulators
2. Innovation and Research facility
3. Incubation Center for STARTUPS.
4. A Med Device Test center
5. A display Center

## **2. ABOUT EOI**

This **Expression of Interest** is for “Supply and installation of civil and Electrical material for fabrication work” at Medical Cobotics Center (MCC) ) to be developed at IIIT Delhi, Okhla Campus, New Delhi from experienced Professionals. Pls refer the flow of document and Annexures with BOQ details

1	Amount of Project	~Rs.4.2 Cr
2	Earnest money	Nil
3	Completion time	2.5 months
4	Area	~10000 sqft

## **3. DEFINITIONS**

**“Participant/Contractor/Bidder”** is a company that is participating in the proposal or willing to express its interest to offer its services.

**“BID”** is the proposal submitted by the Participant/Contractor with commercial rates and terms and conditions.

**“Project Manager”**, A person assigned by the Company/Owner for taking all decision in this matter related to site development.

**“Owner”** is the company who is allocating the work to “Contractor/Participant/Bidder”.

#### 4. SCHEDULE

Name of Organization	I-Hub Foundation for Cobotics, Delhi
Tender Type (Open/Limited/EOI/Auction/Single/Global)	EOI
Tender Category (Services/Goods/works)	Goods and Services
Type/Form of Contract (Work/Supply/ Auction/ Service/ Buy/ Empanelment/ Sell)	Goods and Services
Product Category (Civil Works/Electrical Works/Fleet Management/ Computer Systems)	Civil/Electrical and Others
Date of Issue/Publishing	08/12/2022 (15:00 Hrs.)
Last Date and Time for Uploading of Bids	01/01/2023 (15:00 Hrs.)
Date and Time of Opening of Technical Bids	02/01/2023
Address for Communication	IHFC, 2 <sup>nd</sup> Floor,A Block, R&I Park IIT Delhi, Hauz Khas, New Delhi 110016, India Or IHFC, MZ-122, IIT Delhi, Hauz Khas, New Delhi 110016, India
Contact No.	011-2654-8493 / <b>7042654553</b>
EOI to be download from	<a href="http://www.ihfc.co.in">www.ihfc.co.in</a>
Email Address	<a href="mailto:mcc@ihfc.co.in">mcc@ihfc.co.in</a>

**Note:**

- PARTICIPANTS are advised to seek clarifications over the email at <mcc@ihfc.co.in> within three (3) days after issuance of the Invitation for EOI.
- All received questions will be clarified over email or in an online/offline meeting with the individual PARTICIPANT.
- All the question received and their responses will become part of the Invitation for the EOI document.

- The EOI submission date is 2 weeks after the issue date of Invitation for EOI. In no circumstances, EOI submission date will be extended further.
- After receiving all the EOI responses, all PARTICIPANTS will be asked to make presentations on their offer

Important dates are summaries as:

i) Issue of EOI	:	T0
ii) Submission of written queries	:	T0 +3days
iii) Online meeting to clarifying questions	:	T0 +7days
iv) Submission of EOI	:	T0 +2Weeks
v) Presentation of EOI Proposal	:	T0 +2W+2days
vi) Selective Subsequent Interactions if required:	:	During further evaluation
vii) Completion of Evaluation	:	January'23

Any further clarification on the EOI, you may connect on details given above

## 5. **SCOPE OF WORK**

Interests/Applications are invited for following **Scope of Work** and participating in fabrication work on one of the floor of already constructed building located at IIID delhi , Okhla Campus, for development of MCC lab which includes following major work

- Supply and Installation of interior, Electrical, HVAC low side, FAS, MGPS, Audio Visual system as per the drawings given by the architect.
- Supply and Installation of Civil work wherever required for development as per the Layout map.
- Submission of DPR with Architect and inclusion of changes wherever applicable.
- Participants need to provide the rates /Quotations for the line items given in BOQ and submit it by or before closer date of this EOI.
- Getting Fire Compliance Certification for the area post completion of work

The “PARTICIPANT” are required to submit soft copies of their Interest electronically on the [mcc@ihfc.co.in](mailto:mcc@ihfc.co.in). The instructions given below are meant to assist the bidders in understanding the document and, prepare their bids in accordance with the requirements and submitting their bids online.

## 6. **Qualification Criteria**

### A. Incorporation

- PARTICIPANT (incl. all members of the consortium, if any) should be registered under the Indian Companies Act 2013.
- PARTICIPANT needs to submit their certificate of incorporation.
- PARTICIPANT should be in the active business in a related field for at least the last three years.

### B. Experience

- PARTICIPANT should have substantial experience and expertise in the supply and commissioning of fabrication material mainly into civil, Interiors, Electrical, HVAC and MGPS work.

- ii) PARTICIPANT should have a demonstrable track record of successful execution of such projects in India. Necessary proof of the project execution needs to be submitted to establish that the company/consortium is actively into execution of such kind of work.
- iii) PARTICIPANT should describe expertise available with their organization/consortium with specific experience of related exercise as mentioned in “Scope of Work”

### **C. Eligibility**

The bid submitted shall become invalid, if:

- a) The bidder is found ineligible.
- b) The bidder does not upload all the documents including the undertaking / declaration.
- c) If he does not have good track record

## **7. Evaluation Criteria**

- i) Screening of EOIs will be carried out as per eligibility conditions mentioned in this document and based on verification of testimonials submitted.
- ii) EOI will be further evaluated based on the submitted response on the aspects of:
  - a. Relevant technical expertise of the team.
  - b. Commercial rates submission on items as per BOQ.
- iii) All the PARTICIPANTS will be asked to make a presentation of their offer immediately after the EOI closure date.
- v) EOI exercise will be terminated if none of the EOI responses are found suitable.

## **8. How to Apply**

- 1) Participants are required to submit their applications/Interests on email to us as per the instructions and details of scope of work.
- 2) Please note that Participants are responsible to ensure that they do not lend their work to others which may lead to misuse.
- 3) Participants need to provide the rates /Quotations for the line items given in BOQ and submit it by or before closer date of this EOI.
- 4) Project is explained as per following matrix:

## 9. SCHEDULE OF FISCAL ASPECTS OF CONTRACT

<b>SCOPE OF WORK:</b>	<p>The detailed Scope for execution shall conform to the BOQ, design criteria of the CONSULTANTS, technical specification and drawings for the below sections summarized as briefly below;</p> <ol style="list-style-type: none"> <li>1. Supply and installation of civil and Electrical material for fabrication work at our Medical Cobotics Center (MCC)</li> </ol> <p>The above scope of Works shall be in relation to construction as per standards. This contract is Item rate contract to execute complete work with all its contingencies in accordance with the drawings and specification for agreed value.</p> <p>The quoted price hold firm for the entire Work plus the period up to the settlement of Final Bill. No escalation will be entertained towards labor, materials, petrol, diesel, cartage and or any such account.</p>
<b>OWNER ADDRESS</b>	<p><b>I-Hub Foundation for Cobotics</b>  2<sup>nd</sup> Floor ,A block , R&amp;I Park,  Indian Institute of Technology  Hauz Khas, New Delhi-110 016  Contact: 011-2654 8493, 7042654553</p>
<b>PROJECT SITE ADDRESS</b>	<p>IIIT-Delhi, Okhla, New Delhi</p>
<b>COMMENCEMENT DATE</b>	<p>The Day PO issued</p>
<b>CONTRACT MANUFACTURING &amp; SHIPPING PERIOD</b>	<p>Commencement of Works: From the date of PO Issue  Completion of all Works: 75 days</p> <p>The Contractor shall submit a detailed Construction program in the form of bar-chart.</p>
<b>TERMS OF PAYMENT</b>	<p>The terms of payment shall be as follows:</p> <ol style="list-style-type: none"> <li>1. 10 % against Mobilization advance against Bank guarantee (Recoverable in every running bill).</li> <li>2. Balance against running Bills.</li> <li>3. 05% cash retention valid till DLP of 12 months.</li> <li>4. 05% contract value will be towards additional PBG as security deposit for performance for the contract period.</li> </ol> <p>All other terms and conditions shall be as per conditions</p>
<b>TAXES &amp; DUTIES</b>	<p>Final Price inclusive all Taxes &amp; Duties &amp; Octroi.</p>
<b>ESCALATION</b>	<p>The quoted rates hold firm for the entire Work plus the period up to the settlement of Final Bill. No escalation will be entertained towards labor, materials, petrol, on fluctuation in foreign currency diesel or any other account.</p>
<b>DEFECTS LAIBILITY PERIOD/WARRANTY</b>	<p>12 months from date of Handing Over of successful work completion.</p>

<b>PAYMENT CYCLE</b>	The OWNER, after submission of bill from CONTRACTOR and recommendation from the PROJECT MANAGER, shall pay 100% of the bill amount to the CONTRACTOR. This payment shall be
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	released within thirty days (30) from the date of application for payment from CONTRACTOR; if the PROJECT MANAGER disputes any items shown on the application for payment or the OWNER disputes on the certificate for payment, the PROJECT MANAGER shall bring the disputed items to the attention of the CONTRACTOR, and within said time period, the OWNER shall pay the amount of such application for payment that is not in dispute.
<b>LIQUIDATED DAMAGES:</b>	0. 5% per week up to a maximum of 5% of the Contract value for delay in completion of the Works beyond the stipulated completion date and nonconformance of milestones.
<b>MOBILIZATION ADVANCE:</b>	10% will be paid against the submission of Bank Guarantee
<b>RECOVERY OF MOBILISATION</b>	Advance will be recovered in every running bill.
<b>RETENTION CLAUSE:</b>	5% of contract value valid till DLP of 12 months. Cash Retention will be released after DLP Period. Which is Interest free.
<b>WARRANTY / GUARANTEE</b>	The installation shall be guaranteed against faulty workmanship / materials, etc. for a minimum period of One year from date of practical completion. All faulty materials/workmanship shall be replaced and restored to full operation at no cost to Owner within the guarantee period.
<b>SCAFFOLDING</b>	Contractor should arrange the scaffolding on his own cost, No extra will be charged. Only steel scaffolding is allowed for the installation works.
<b>SANITARY FACILITIES</b>	The CONTRACTOR shall make all arrangements for obtaining all sanitary and storm sewer connections as required and shall make all necessary payments directly to the appropriate departments.
<b>STATUTORY COMPLIANCES</b>	Shall be arranged and coordinated by the CONTRACTOR.
<b>STORAGE, SAFE CUSTODY AND PROTECTION OF FINISHED ITEMS</b>	By CONTRACTOR, till issuance of Final Completion Certificate.
<b>ADHERENCE TO EHS CONDITIONS:</b>	CONTRACTOR shall adhere to all Health and Safety standards as issued by the Bureau of Indian Standards, National Building Code, 1983 as required by Project Management Consultant / Owner regulations of local Authorities. (Refer Document E).
<b>INSURANCE TO BE AVAILED BY THE CONTRACTOR:</b>	As per General Conditions of the Contract
<b>WORKERS COMPENSATION INSURANCE</b>	Minimum limit of at least 3% of Contract Value
<b>ENDORSEMENT FOR COMPREHENSIVE GENERAL LIABILITY INSURANCE</b>	Minimum limit of at least 7% of Contract Value
<b>CONTRACTORS 'ALL RISK' INSURANCE INCLUDING THIRD PARTY LIABILITY</b>	CONTRACTORS 'ALL RISK' INSURANCE INCLUDING THIRD PARTY LIABILITY is to be taken by Vendors for the entire contract period
<b>Fright, Insurance, Taxes (Including works contract tax), Levies and duties</b>	All-inclusive including GST and all other prevalent taxes. Any changes in taxation policies of the Central or State governments before completion of project and final bills shall be considered for any tax reimbursement from / to the Owner. The Contractors shall be reimbursed for these taxes only upon

	Providing sufficient evidence of paying such taxes.
<b>SHOP DRAWINGS</b>	CONTRACTOR shall submit the detailed shop drawings to CONSULTANTS for their comments and approval. All the works shall be carried as out as per final 'Good for Construction drawings' only.
<b>MAKES OF MATERIAL</b>	Makes of material shall be as per approved list of makes / suppliers as indicated in technical specifications / BOQ.
<b>MOCK UPS / SAMPLES</b>	The Contractor shall supply and install full size specimens of the materials as called for by the Owner/Project Manager/ Consultants. The CONTRACTOR also shall arrange all the material Specified for sample approval.
<b>CORRECTNESS OF MEASUREMENT SHEETS:</b>	In case measurements submitted with bills are found to contain incorrect information, the bill would be returned and would be admissible only with the next bill after correction of all measurements. The correct information shall be as per defined norms of measurement or generally accepted practices; any queries shall be discussed and clarified during project pre commencement meeting.
<b>EXTRA / NON-TENDERED ITEMS</b>	Item rates for Extra or Non-Tendered items shall include basic cost-plus applicable taxes and Ten (10%) overhead and profit.
<b>SITE VISITS / AUDIT</b>	CONTRACTOR shall make periodic visits /as informed by PROJECT MANAGER during the site activities.
<b>WEEKLY MEEETINGS</b>	The PROJECT MANAGER will hold and preside over weekly progress meetings at the Site. The scheduling of such meetings will be arranged by the PROJECT MANAGER in advance or set up on a Regular basis at a set time.

## **10. SPECIAL CONDITIONS OF THE CONTRACT**

The following special conditions complement, modify, change, delete from or add to the general conditions. Where any provision of the general conditions is modified, deleted or added to by these special conditions, the unaltered and undeleted provisions shall remain in effect. In case of any conflict between the general conditions and these special conditions, the general conditions shall be deemed amended, but only to the extent necessary to make these special conditions effective.

### **ADMINISTRATIVE REQUIREMENTS**

#### **1 POSSESSION OF SITE**

The CONTRACTOR shall not be permitted to enter on (other than for inspection purpose) or take possession of the site until instructed to do so by the OWNER in writing. The portion of the site to be occupied by the CONTRACTOR shall be defined and/or marked on the site use plan, failing which these shall be indicated by the OWNER at Site and the CONTRACTOR shall on no account be allowed to extend his operations beyond these areas. With respect to or in connection with the Contract, such use or occupation shall not confer any right of tenancy of the land to the CONTRACTOR and the CONTRACTOR shall be liable to vacate the land on demand by the OWNER.

#### **2 SITE CONDITIONS**

The CONTRACTOR shall thoroughly acquaint himself with the working conditions, soil conditions, specifications and other conditions and facilities available at Site. No extra charge made as a result of any misunderstanding or incorrect information on any of the points or on the ground of insufficient information or description shall be allowed. Should the CONTRACTOR find any discrepancies, omissions, ambiguities and conflicts in or among the Contract documents or be in doubt as to their meaning, he shall bring the question to the notice of the OWNER before submitting the EOI documents.

#### **3 RATES**

Unless otherwise provided in the description of various items of the work, the rates tendered by the CONTRACTOR shall be for completed items of Work covering all materials, labour, carriage royalties, fees, rents, taxes and levies sales tax, octroi, wastage, tools plant, equipment transport, temporary constructions overhead charges and profits, as well as general liabilities, obligations and risks arising out of the conditions of contract and carrying the work in part(s) or under/across/along pipes, cables, drains, etc. Complete and shall apply to all levels heights, depths, leads, and lifts, no extra charges, whatsoever arising due to any misunderstanding or otherwise shall be allowed.

Item rates for non-tendered items shall include basic cost- plus overhead costs, Ten per cent (10%) Contractor's profit, applicable taxes.

#### **4 WORKING DAYS/ SUNDAYS / HOLIDAYS**

Working time and days will be briefed to Contractor before commencement of work. There is a possibility of permission of work only in Evening time. No work shall be carried out without the prior approval of the PROJECT MANAGER and the relevant local authorities. The period allowed for the completion of the Work includes Sundays and authorized holidays.

## **5 WORK NOT DONE IN ORDINARY WORKING HOURS**

If the CONTRACTOR shall execute any work, in hours other than permissible working hours and in the absence of the PROJECT MANAGER, the CONTRACTOR shall remove and reconstruct any work executed in violation of this clause at his own expense if ordered to do so ,preferably in written ,by the PROJECT MANAGER.

## **6 FACILITIES TO OTHER CONTRACTORS**

The CONTRACTOR shall, in accordance with the requirements of the PROJECT MANAGER and the ARCHITECTS, afford all reasonable facilities to other contractors engaged simultaneously on separate contracts in connection with the work, for departmental labour or labour of any other properly authorized agency which may be employed at the site to execute any work not included in this Contract or of any contract which the owner may enter into in connection with or ancillary to work.

## **7 PROGRESS MEETINGS**

The PROJECT MANAGER will hold and preside over weekly progress meetings at the Site. The scheduling of such meetings will be arranged by the PROJECT MANAGER in advance or set up on a regular basis at a set time. In addition to the PROJECT MANAGER and the ARCHITECT, the said meetings shall be attended by the OWNER'S representative advisor, the CONTRACTOR, the responsible on site manager of each Subcontractor and other parties as may be required by the ARCHITECT/ PROJECT MANAGER or the OWNER to review the progress of the works. The agenda of these progress meetings will include but not be limited to:

- (I) Review and Scheduling of the Works.
- (II) Identifications of problems affecting the progress of the works. Reasons thereof and details of efforts being made.
- (III) Coordination of operations for the ensuing period to maximize progress and minimize delays.

Progress meetings shall be distinct from and in addition to routine visits to the site by the ARCHITECT. The PROJECT MANAGER will prepare written minutes of each meeting for the record with copies distributed to all attendees and to the OWNER.

## **8 CONFLICTS AMONG THE ELEMENTS COMPRISING THE CONTRACT**

It is the intent of this Contract to provide for complete installation of all portions of the works, except where the works, or a portion thereof, is specifically noted as not-being-in-Contract (n.i.c.), it is understood that all items, materials and equipment are to be furnished and installed, complete and ready for operation or use. Where additional or supplemental details

or instructions are required to complete an item or items, the PROJECT MANAGER shall furnish the necessary information to the CONTRACTOR. No work shall be installed or fabricated which depends upon the furnishing of such information. The furnishing of such data shall not be grounds for a claim to extra work by the CONTRACTOR. the CONTRACTOR shall be deemed to have based his bid on a complete installation; where additional details or instructions are required to complete the Work, the CONTRACTOR is deemed to have made allowance in his bid for the completion of such work, in accordance with such additional or similar details and/or the best accepted practices of the trade, whichever is more expensive, unless such additional information clearly constitutes a material change in the scope of the works, which shall be decided by the OWNER, whose decision shall be final and binding on the CONTRACTOR.

In case of conflicts among the elements comprising the Contract documents, the CONTRACTOR is obligated to have based his bid on the more expensive method, material, finish, system etc. unless such conflict is clarified in an addendum to the documents on which he based his bid. The execution of the works by the CONTRACTOR shall be governed at all times by the following order of precedence:

- (I) Larger scale details and plans shall take precedence over smaller scale details and plans;
- (II) The written word shall take precedence over the drawn line;
- (III) Schedules shall take precedence over details;
- (IV) Addenda shall take precedence over the original documents in so far as the definition, interpretation and intent of the works are concerned.

All Contract Documents and subsequently issued Change Orders and Amendments are essential parts of this Contract and a requirement occurring in one is binding as though occurring in all. In resolving conflicts, discrepancies, errors or omissions the following order of precedence shall be used:

- 1. Contract Form of Agreement & Schedule of Fiscal Aspects
- 2. Bill of Quantities, Pricing and Data
- 3. Special Conditions
- 4. General Conditions
- 5. Technical Specifications
- 6. Drawings

The CONTRACTOR is deemed to have examined the Contract documents to ascertain the full scope of his work, including but not limited to connections, supports and installation of equipment furnished by other trades or the owner under separate contracts.

## **9 STANDARDS**

Where the words "or an approved equal" or other synonymous terms are used, it is expressly understood that they shall mean that the approval of any such submission is vested in the PROJECT MANAGER, whose decision upon approval by the OWNER shall be final and binding on the CONTRACTOR. All submissions are subject to such approval.

The intent of this clause is to encourage and permit competition on qualified products by reputable and qualified contractors, suppliers, and manufacturers, whose products, reputation performance and local service facilities warrant approval for the conditions, intent of design and performance considerations.

When descriptive catalogue designations including manufacturer's name, product brand name or model number are referred to in the Contract, such designations shall be considered as being those found in industry publications of current issue at the date of the first invitation to bid.

When standards of trade societies or trade associations are referred to in the Contract by specific date of issue, these shall be considered a part of this Contract. When such references do not bear a date of issue, the current published edition on the date of the first invitation to bid shall be considered as part of this Contract. Suppliers are not required to be members of trade societies or associations referred to in the specifications.

Whenever any product is specified or shown by describing proprietary items, model numbers, catalogue numbers, manufacturers' trade names or similar reference, the bidder obligates himself to submit proposals and accept awards of contract based upon the use of such products. Use of such reference is intended to establish the measure of quality which the architect has determined as requisite and necessary for this project. Where two or more products are shown or specified, the Contractor has the option of which to use, provided the product used meets all requirements of specifications and design criteria. The right is reserved to approve or disapprove proposed deviations of design, function, construction or similar differences which will affect the design intent.

## **10 SUBSTITUTIONS**

During the execution of the works by the CONTRACTOR, the CONTRACTOR may pass on to the ARCHITECT and the OWNER through PROJECT MANAGER for his evaluation, formal requests for the substitution of products in place of those specified, under the following conditions:

- (I) The request is accompanied by complete data on the proposed substitution substantiating compliance with the Contract including product identification and description, performance and test data references and samples where applicable, and itemised comparison of the proposed substitution with the products named in the specifications or addenda, with data relating to Contract Time schedule, design and artistic effect where applicable.
- (II) The request is accompanied by accurate cost data of the proposed substitution in comparison with the product specified, whether or not modification of the contract sums is to be a consideration.
- (III) Requests for substitution based on subparagraphs (i) and (ii) above, when forwarded by the CONTRACTOR to the ARCHITECT and to the OWNER through PROJECT MANAGER for consideration are understood to mean that the CONTRACTOR:
  - a. represents that he has personally investigated the proposed substitute product and

determined that it is equal or superior in all respects to that specified;

- b. will provide the same guarantee for the substitution that he would for that specified;
- c. certifies that the cost data presented is complete and includes all related costs under this Contract, including any required ARCHITECT redesign costs to be borne by the CONTRACTOR, and that he waives all claims for additional costs related to the substitution which subsequently become apparent; and
- d. will coordinate the installation of the accepted substitute, making such changes as may be required for the work to be complete in all respects, as on date of contract completion.

#### **SUBSTITUTIONS WILL NOT BE CONSIDERED IF:**

- (I) they are indicated or implied on shop drawings submissions without the formal request required herein above; OR
- (II) For their implementation, they require a substantial revision of the Contract in order to accommodate their use.

The OWNER and the ARCHITECT will examine, with reasonable promptness, such submittals, and return of submittals to the CONTRACTOR within fourteen (14) working days. The CONTRACTOR shall not be relieved from responsibility for deviations and alternatives from the Contract, nor shall the CONTRACTOR be relieved from the responsibility for errors in the submittals. A failure by the CONTRACTOR to identify in his letter of transmittal material deviations from the Contract shall void the submittal and any action taken thereon by the OWNER or the ARCHITECT. When specifically requested by the ARCHITECT or PROJECT MANAGER, the CONTRACTOR shall resubmit shop drawings, descriptive data and samples as may be required.

If any mechanical, electrical, structural or other changes are required for the proper installation and fit of alternative materials, articles, or equipment, or because of deviations from the Contract, such changes shall not be made without the consent of the ARCHITECT, PROJECT MANAGER or the OWNER and shall be made without additional cost to the OWNER. The final approval of such substitutions shall be at the sole discretion of the OWNER.

#### **11 RECORD DRAWINGS (AS-BUILT DRAWINGS)**

Prior to the final acceptance by the OWNER, the CONTRACTOR shall prepare at his expense and deliver to the PROJECT MANAGER two complete new record sets of computer auto-cad drawings clearly delineating the Work as actually installed, incorporating all of the changes and added data noted on the marked-up prints maintained throughout the progress of the Work. Each record drawing sheet shall be labelled "project record", and shall contain the issuing date, the CONTRACTOR'S and Sub-contractor's name and address, and the signature of the CONTRACTOR or his authorised representative certifying that each document as submitted is complete and accurate. In addition to the above, the CONTRACTOR shall deliver to the PROJECT MANAGER one record copy (field office copies) of all specifications, addenda, change orders, modifications, field orders, etc. all drawings, certificates, etc. issued to the

CONTRACTOR by governmental authorities with respect to the works shall be turned over to the OWNER upon final completion of the Work.

## **12 OPERATING AND MAINTENANCE INSTRUCTIONS**

The CONTRACTOR shall prepare & submit an operating & maintenance instruction manual which will include

- Brief write up on the system installed.
- Operating instruction for equipment
- List of recommended spares for 2 years maintenance.
- Schedule of recommended maintenance for various periods, daily, weekly, monthly etc.

A soft copy in CD of the O&M Manual can be submitted.

Practical completion will be certified only after the receipt of the above operating manual by the PROJECT MANAGER.

## **13 GUARANTEES AND WARRANTIES**

In addition to the CONTRACTOR'S warranties and guarantees, the CONTRACTOR shall submit manufacturer's guarantees and warranties (along with invoices for the purchase of the items in respect of which they are given, when required by the OWNER) and service or maintenance and similar contracts, where required by the Contract, with direct obligations running from the manufacturer to the OWNER. Such guarantees or warranties, as applicable, shall be subject to the approval of the OWNER. Guarantees, service policies and warranties for individual pieces of equipment or portions of the works shall date from final completion, provided that where the OWNER requests and obtains temporary use of such facilities prior to final completion, the earlier date shall apply.

Certain guarantees longer than one (1) year duration are required under various sections of the specifications. at the completion of the works, all such guarantees covering material, workmanship, maintenance, etc. as specified, shall be procured by the CONTRACTORS, who shall forward them in duplicate to the owner together with a letter addressed to the OWNER giving a summary of guarantees attached, stating:

- a. Character of work
- b. Name of contractor
- c. Period of guarantee
- d. Conditions of guarantee

The guarantees shall cover all work done under this Contract, either by the CONTRACTOR or Sub-contractors. All guarantees to be submitted by the CONTRACTOR under this clause shall specify the OWNER as the beneficiary.



## **14 KEYS AND MAINTENANCE KITS**

All keys, maintenance kits or stock, replacement parts of materials, spare construction material and equipment required under the Contract shall be stored in the completed building in specific areas as designated by the OWNER. A pre-manufactured metal key cabinet shall be provided and installed in a size adequate to house all extra keys for each lockable door in the building in a location designated by the OWNER.

## **15 SITE USE PLAN**

The bidders shall provide with their bid a Site use plan sketch indicating their proposed arrangements including storage stockpiling, temporary buildings, Site offices, sanitary facilities, equipment location, etc. the CONTRACTOR shall submit during the mobilisation period a final plan of site arrangements showing the above items in addition to dates of installation and removal as well as any proposed changes during the construction phase. The plan must be approved by the ARCHITECT.

## **16 SECURITY AND LIGHTING**

The CONTRACTOR shall in connection with the Work provide and maintain until final completion and handing over at his own cost all lights, guards, fencing and watching when and where necessary or required/directed by the OWNER, PROJECT MANAGER and the ARCHITECT or by a duly constituted authority for the protection of the Work or for the safety and convenience of the public or others if the property of the OWNER i.e. furnishings, equipment, etc. is moved onto the site or within the buildings, it will be protected and held safe by the CONTRACTOR in the same manner as the CONTRACTOR'S materials and equipment.

## **17 SECURITY RULES**

The OWNER shall, at its discretion, have the right to issue passes to control admission of the CONTRACTOR, his staff, work people and agents to the site of the works or any part thereof, and the PROJECT MANAGER shall on demand by the OWNER order the CONTRACTOR to submit a list of work people etc. employed on the works and to satisfy the OWNER as to the trustworthiness of such personnel. Passes shall be the property of the OWNER and shall be returned at any time on demand by the OWNER and in all cases on the completion of the work, or termination of the Contract or services of any of the employees of the CONTRACTOR.

## **18 WITHHOLDING PAYMENTS FOR SUBSTANDARD WORK**

The OWNER reserves the right to make only partial payment or no payment for any item of work whose performance and functionality is not acceptable to the PROJECT MANAGER during the payment of running bills. Regardless of whether the payment for a specific item has been made in a previous payment, that payment can be completely withdrawn and adjusted in any subsequent payment if the item is found unacceptable by the PROJECT MANAGER.

## **SITE REQUIREMENT**

### **19. CLEARING OF SITE**

The CONTRACTOR shall clear the site of work simultaneously as the work proceeds. Failing to do so, it shall be cleared by the PROJECT MANAGER at all risk and cost to the CONTRACTOR upon giving the CONTRACTOR one day's written notice.

### **20. DISPOSAL OF MATERIAL OF OFFENSIVE NATURE**

All night soil, filth or other materials of an offensive nature shall be removed from trenches, sewers, drains, cesspools, or any other place and shall not be deposited on the surface of any street, road or any other area where it is likely to be nuisance or passed into any sewer or drain. It shall at once be removed by the contractor from the site at his own cost to a suitable and approved dumping ground.

### **21. WORK TO BE EXECUTED AS PER PROGRAM APPROVED BY THE PROJECT MANAGER AND THE ARCHITECTS**

The Work shall be executed as per the program approved by the PROJECT MANAGER, the ARCHITECT and the OWNER, and no claim for any additional compensation whatsoever, shall be entertained on this account.

### **22. WORK IN DIFFERENT PARTS TO BE EXECUTED SIMULTANEOUSLY**

The CONTRACTOR shall progress in the different parts of the Work simultaneously as far as possible so that minimum breakage and repairs are involved. The entire work shall be handed over in satisfactory finished state within the specified time period agreed by the CONTRACTOR and the OWNER.

### **23. COMPENSATION FOR DAMAGE BY RAINS, FLOODS OR OTHER NATURAL CALAMITIES**

No compensation for any damage caused to the Work or materials by rains, floods or other natural calamities shall be paid to the CONTRACTOR. The CONTRACTOR shall make good all such damages at his own risk and cost as per the direction of the PROJECT MANAGER and the ARCHITECTS. Failing to correct the damages within a reasonable time, the PROJECT MANAGER will arrange for required corrective work at all risk and cost to the CONTRACTOR.

### **24. PARTNERSHIP WITH OR EMPLOYMENT OF UNACCEPTABLE CONTRACTOR**

The CONTRACTOR shall not have partnership with or employ any unacceptable contractor identified by the OWNER or any other department of the government in its undertakings in case of default, the owner shall be at liberty, without prejudice to any other right or remedy,

to terminate the contract at any stage, arrange for the remaining work to be completed through the project manager at all risks and costs to the contractor.

**25. INCOME TAX AND OTHER DEDUCTIONS**

Income tax and other taxes as applicable under the income-tax rules framed from time to time by the competent authority of government of India and Delhi at the prescribed rates shall be recovered from each bill of the CONTRACTOR necessary certificate of deductions will be issued.

**26. WORK SITE ORDER BOOK**

A Work Site order book shall be maintained in which all the instructions issued to the CONTRACTOR or his authorized agent in respect of the execution of work shall be recorded by the PROJECT MANAGER or his representative. The CONTRACTOR or his authorized agent shall be bound to carry out the instructions and sign the relevant entries in this work.

**27 DAMAGES**

The CONTRACTOR shall also pay for all damages caused by or incidental to the Work in whatever manner occasioned and shall indemnify the OWNER from any liability in respect thereof. The amount of any claim made upon OWNER in consequence of such damages by the CONTRACTOR, which OWNER may have to pay, shall be deducted from any money due to or which may become due to the CONTRACTOR.

**28. ARRANGEMENT FOR FIRE CERTIFICATION**

The CONTRACTOR shall make all arrangements for obtaining all Certification related to approval from Fire department to commence the seamless operation before handing over the site to OWNER with proper documents and approvals. Requisite fees will be paid by the owner as per the Invoice /Demand note by the concerned department.

**29. NO REVISION IN RATES DUE TO CHANGE/CLOSURE OF SOURCES OF MATERIALS**

Closure or change of any particular quarry or source shall not entitle the CONTRACTOR to claim any revision in rates. All material changes must be approved by the PROJECT MANAGER.

**30. SAMPLES OF MATERIALS TO BE SUPPLIED TO THE PROJECT MANAGER AND THE ARCHITECT FOR THEIR APPROVAL**

The CONTRACTOR shall, at his own expense and without delay before signing the OWNER CONTRACTOR Agreement, supply to the ARCHITECT through PROJECT MANAGER the samples of materials proposed to be used in the Work. The ARCHITECT shall, within fourteen (14) days of receiving the samples or within such further period as he may require, shall inform the CONTRACTOR in writing of his approval or rejection of the samples. If the submitted

samples are not approved, the CONTRACTOR shall immediately arrange to supply new samples complying with the specifications for the ARCHITECT's, approval.

The CONTRACTOR shall submit, upon request, samples, shop drawings, manufacturer's drawings, equipment characteristics, capacity data, etc. of all equipment, accessories, devices, etc. which he proposes to use in the installations (if any) to the project manager and the architects for approval.

### **31. INSPECTION OF MATERIALS**

The PROJECT MANAGER, the ARCHITECTS or their authorised representatives shall be entitled, at any time, to inspect and examine any materials intended to be used in or on the works either on the Site, at the factory, workshop or any other place where materials are assembled, fabricated, or manufactured or at any place where the CONTRACTOR shall provide such facilities as may be required for such inspection and examination.

### **32. TESTING OF MATERIALS**

If at any time before finalisation of the final bill of the CONTRACTOR, it is found, as a result of technical examination or otherwise, that the materials, goods or articles used in the actual execution of the Work do not conform to the prescribed specifications, the PROJECT MANAGER and the ARCHITECT may arrange for the samples of the substituted materials, goods, or articles used to be tested in an approved testing laboratory. The number of samples to be tested shall be decided by the PROJECT MANAGER in accordance with specifications or otherwise. the cost of the samples, incidental charges, such as handling and carriage to the testing laboratory, and cost of testing (if any) shall be borne by the CONTRACTOR regardless of whether the substituted material samples meet the requirements of prescribed specifications or not.

In the event the result does not meet with the requirements of the prescribed specifications, the relevant clauses of the Contract shall be enforced.

### **33. TEMPORARY ACCESS TO THE SITE**

The CONTRACTOR shall provide, as requested on site, all temporary access to the site. He shall alter, adapt and maintain the same as required from time to time and shall remove the same when ordered by the project manager and make good all damages to the site.

### **34. SITE STORAGE OF MATERIALS**

The CONTRACTOR shall store all materials, whether those provided by the CONTRACTOR or those supplied by the OWNER,

### **35. QUALITY OF MATERIAL INSTALLED**

Only materials or articles bearing ISI certificate mark (top quality) shall be used on the work. In case materials or articles bearing ISI certificate mark are not available in the market, the quality of the materials or articles brought by the CONTRACTOR shall be judged by the relevant ISI certificate material specification, if available. In case of disputes as to the interpretation of the specifications or as to whether or not an article or item of the work conforms to the specifications the decision of the ARCHITECT shall be final and binding on the CONTRACTOR.

### **36. COORDINATING WORK AND APPROVALS**

Structural services and architectural drawings shall be properly co-ordinated at all times when executing any work. Architectural requirements shall be fully satisfied in this Work where specific mention is made to "architect's drawing", "architect's design", "architect's approval", etc. in addition, for finishing items samples shall be prepared for approval by the PROJECT MANAGER and the ARCHITECT prior to starting the Work incorporating these items.

### **37. QUALITY OF WORKMANSHIP**

Quality of workmanship is the essence of this Contract and shall conform to the highest international standards. The CONTRACTOR shall prepare a quality assurance programme containing the overall management and procedure which is required to be adhered to during the execution of the Work. The CONTRACTOR shall, within thirty (30) days, after the award of work, prepare the detailed quality assurance programme to be followed for the execution of the Contract under various divisions of work. The CONTRACTOR shall establish the quality assurance system plans/ procedures and submit it to the owner for approval. This document shall indicate the names of the personnel responsible for the quality assurance, plans or procedures to be followed for quality control. This programme should be of a practical nature and should be able to be implemented on the site. The CONTRACTOR shall indicate in his quality assurance programme regarding setting up of quality lab and list of instruments to be used for testing samples in the lab.

Any work or part of the Work which in the opinion of the PROJECT MANAGER does not conform to the highest quality of workmanship shall be dismantled and corrected, rectified or reconstructed at the contractors own cost and within the time specified by the Project Manager.

### **38. TESTING AND COMMISSIONING**

The CONTRACTOR shall test and commission, continuously, all the equipments and machines for a minimum period of 15 days before handing over the Work to the OWNER.

## **11. SUPPLEMENTARY CONDITIONS OF THE CONTRACT FOR CONSTRUCTION**

### **A: COMPENSATION OF WORKMEN**

The CONTRACTOR shall at all times indemnify and keep indemnified owner against all claims for compensation under the provisions of Workmen's Compensation Act 1923 or any other law in force from time to time by or in respect of any workmen employed by the CONTRACTOR or his sub-contractor. The CONTRACTOR shall be solely responsible to pay the compensation and to follow the provisions of the Workmen's Compensation Act 1923, the contract labour act 1970 and the contract labour central rules 1971 and rules framed there under and other laws affecting the contract labour.

### **B: OBSERVANCE OF FAIR WAGE CLAUSE**

The CONTRACTOR shall be bound to observe the terms and conditions incorporated in the fair wage clause as below:

The CONTRACTOR shall pay not less than fair wages to labourers engaged by him on the work.

1. Explanation "fair wage" means wages whether for time or piece work notified at the time of inviting tenders for the Work. However, the rate of fair wages will not be less than the minimum rates of wages fixed by the government for that class of employee engaged on the same type of work in "Delhi".
2. The CONTRACTOR shall, notwithstanding the provisions of any Contract to the contrary, cause to be paid fair wages to labourers indirectly engaged on the Work including any labour engaged by his Sub-contractors in connection with the said work as if the labourers had been immediately employed by him.
3. In respect of all labour directly or indirectly employed in the Work for performance of the CONTRACTOR'S part of this Contract, the CONTRACTOR shall comply with or cause to be complied with CONTRACTOR'S labour regulations made by government from time to time in regard to payment of wages, wage period deductions from wages, recovery of wages, not paid and deductions made in an unauthorised manner, maintenance of wage books, wage slips, publication of scale of wages and other terms of employment inspection and submission of periodical returns and all other matters of a like nature and report to the owner in writing that all the provision are complied with the monthly running account (R.A) bill.

### **C: COMPLIANCE TO MINIMUM WAGES ACT 1948**

The CONTRACTOR shall comply with all the provisions of the minimum wages act 1948/contract labour act 1970 and rules framed there under and other labour laws, affecting Contract labour that may be brought into force from time to time and also ensure that his sub-contractors pay the same. In the event Owner suffers any cost, loss or damage due to non-payment of such minimum wages by the Contractor or its Subcontractor, the Contractor shall indemnify Owner against such cost, loss or damage including legal fees if any.

**D: COMPLIANCE OF APPRENTICES ACT, 1961**

The CONTRACTOR and his sub-contractor if any shall comply with the provisions of the Apprentices Act, 1961 and the rules and the orders issued there under from time to time. If he fails to do so, his failure will be a breach of the Contract and the OWNER may at his discretion cancel the Contract. The CONTRACTOR shall also be liable for any pecuniary liability arising on account of any violation by him of the provisions of this act.

## 12. SCHEDULE OF QUANTITIES

Annexure-I						
Civil and Interior						
S.No.	Description	Unit	Quantity	Rate	Amount	Remarks
<b>A</b>	<b>Dismantling Works</b>					
1	Dismantling of brick work in cement mortar, 230mm with plaster on both sides stacking of serviceable material	Cum	RO			
2	Dismantling of brick work in cement mortar, 115mm with plaster on both sides stacking of serviceable material	Sqm	RO			
3	Dismantling of RCC works in beams, columns, slabs etc. including sub-base, cutting and removal of reinforcement, stacking of serviceable material	Sqm	RO			
4	Dismantling of existing all types of flooring/ subbase and stacking the removed material in proper way	Sqm	RO			
5	Dismantling of existing all types of wall finish/ subbase and stacking the removed material in proper way	Sqm	RO			
6	Dismantling of existing all types of False Ceiling / Partitions and stacking the removed material in proper way	Sqm	RO			
7	Dismantling of existing all types of Doors/Windows with frame and stacking the removed material in proper way	Each	RO			
8	Dismantling of existing all electrical works/fixtures and stacking the removed material in proper way	Sft	RO			
9	Dismantling of existing all HVAC works/fixtures and stacking the removed material in proper way	Sft	RO			
10	Dismantling of existing all Plumbing works/fixtures and stacking the removed material in proper way	LS	RO			
11	Dismantling of existing all Fire Fighting works/fixtures and stacking the removed material in proper way	Sft	RO			
12	Carting away Debris from all floors to Ground Floor before disposal	Trip	RO			
13	Disposal of all Debris from Ground floor to Municipal Dumping ground	Trip	RO			
<b>B</b>	<b>Civil Works</b>					
1	Providing and laying 50mm thk plain cement concrete of specified grade as bed concrete under floor, screening to required slope. complete as per specification and drawing including the cost of centering and shuttering.	Sqm	RO			
2	Providing and laying 230mm thick brick work using bricks of class designation 75 in Basement/ Super structure in cement mortar 1:6 ( 1 cement : 6 coarse sand ) including, curing, joints finished flush/raked to 12 mm depth, etc. complete as directed, cleaning and soaking the bricks atleast for 6 hours before use, curing for 7 days etc. complete at all heights/depth and for all leads.	Cum	RO			
3	Providing and laying 115mm thick brick work using bricks of class designation 75 in Basement/ Super structure in cement mortar 1:6 ( 1 cement : 6 coarse sand ) including, curing, joints finished flush/raked to 12 mm depth, etc. complete as directed, cleaning and soaking the bricks atleast for 6 hours before use, curing for 7 days etc. complete at all heights/depth and for all leads.	Sqm	12		0	
4	Providing and applying 12 to 15mm thick plaster to masonry and RCC walls, columns etc. in cement mortar 1:5 ( 1 cement : 5 fine and coarse sand in equal proportion) finished smooth including hacking the surfaces, scaffolding, curing, making grooves, corner profile etc at desired location etc. complete as per drawing.	Sqm	30		0	
5	Providing and laying water proofing treatment for wet areas by applying 3 coats of "Tapecrete" of approved make applied too surfaces where called for, 1st coat in proportion of 2:1 (2 parts of white cement & 1 part of tapecrete), 2nd coat in proportion of 2:1:1.5 (2 parts of white cement : 1 part of tapecrete : 1.5 parts of silica sand) and 3rd coat in the proportion of 2:1 ( 2 parts of white cement : 1 part of tapecrete) to a total thickness of not less than 4 mm after preparation of surface etc. including application of epoxy base putty at junctions and corners around pipes and other outlets etc. prior to application of final coat of tapecrete. allow for necessary curing and drying time for each coat, providing proper bonding keys in the coats where required and necessary curing	Sqm	RO			
6	Providing and fixing of Lintel beams (12" ht X Wall width) if required, including formwork and Steel	Rmt	2		0	
7	Providing and laying water proofing treatment on roofs of slabs by applying cement slurry mixed with water proofing cement compound.	Sqm.	RO			
8	Providing and fixing trench in HPS room for passing cables of Simulators. The size of the trench will be 200mm wide and 100mm deep and will covered with 2mm thick Stainless steel cover.	Rmt	7.6			
9	Lifting, Shifting & unloading of all materials on all floors from Ground Floor	Trips			0	
<b>C</b>	<b>POP / Paint Works</b>					
1	Providing and applying plaster of paris (super fine quality) punning with minimum thickness of 6mm and finish the surface smooth in line and level to the entire satisfaction of Project Manager including scraping and hacking the existing finished surfaces, scaffolding etc. complete as per drawing.	Sqm	95		0	
2	Providing and applying three or more coats of washable anti-bacterial/Royal acrylic emulsion paint ( equivalent of Asian Royal) of approved brand, manufacturer and shade to give a smooth finish on new plastered surfaces over a coat of approved primer, additive including the cost of preparing the surfaces with filling materials (putty), along with sand papering wherever required scaffolding etc. complete with all aspects.	Sqm	354		0	
3	Providing and applying three or more coats of oil bound distemper of approved brand, manufacturer and shade to give a smooth finish on new plastered surfaces over a coat of approved primer, additive including the cost of preparing the surfaces with filling materials (putty), along with sand papering wherever required, scaffolding etc. complete with all aspects.	Sqm	RO			
4	Filling of all joints and Cavities with Metallic Epoxy filler and sanded flush to provide a jointless finish and then sprayed with a water based aseptic and self-sterilizing wall coating system to a d.f.t. of 300 micron with primer.	Sqm	76		0	Make:- Liquid Plastics- Jotun Japan
5	Providing & applying DUCO paint Finish					
	PVC surface	Sqm	6			
6	Providing and applying Melamine polish on door frames & other areas	Rmt	218		0	
<b>D</b>	<b>Ceiling</b>					



1	Providing and fixing 12.5mm thick gypsum board false ceiling at all height including providing and fixing of frame work made of special sections, power pressed from M.S. sheets and galvanized with zinc coating of 120 gms/sqm (both side inclusive) as per IS : 277 and consisting of angle cleats of size 25 mm wide x 1.6 mm thick with flanges of 27 mm and 37mm, at 1200 mm centre to centre, one flange fixed to the ceiling with dash fastener 12.5 mm dia x 50mm long with 6mm dia bolts, other flange of cleat fixed to the angle hangers of 25x10x0.50 mm of required length with nuts & bolts of required size and other end of angle hanger fixed with intermediate G.I. channels 45x15x0.9 mm running at the spacing of 1200 mm centre to centre, to which the ceiling section 0.5 mm thick bottom wedge of 80 mm with tapered flanges of 26 mm each having lips of 10.5 mm, at 450 mm centre to centre, shall be fixed in a direction perpendicular to G.I. intermediate channel with connecting clips made out of 2.64 mm dia x 230 mm long G.I. wire at every junction, including fixing perimeter channels 0.5 mm thick 27 mm high having flanges of 20 mm and 30 mm long, the perimeter of ceiling fixed to wall/partition with the help of rawl plugs at 450 mm centre, with 25mm long dry wall screws @ 230 mm interval, including fixing of gypsum board to ceiling section and perimeter channel with the help of dry wall screws of size 3.5 x 25 mm at 230 mm c/c, including jointing and finishing to a flush finish of tapered and square edges of the board with recommended jointing compound, jointing tapes, finishing with jointing compound in 3 layers covering upto 150 mm on both sides of joint and two coats of primer suitable for board, all as per manufacturer's specification and also including the cost of making provision for trap doors, openings for light fittings, grills, diffusers, cutouts made with frame of perimeter channels suitably fixed, all complete excluding the cost of two or more coats of acrylic emulsion paint on gypsum ceiling as per drawings, specification and direction of the Engineer in Charge.	Sqm	729	0	
2	Providing and fixing of suspended false ceiling 8mm thick tapered edge Calcium Silicate Board painted with Anti-Microbial Paint with GI perimeter channels (having minimum thickness 0.50 mm, size 20mmx30mmx26mm and galvanising of 120 GSM), GI intermediate channels (having minimum thickness 0.80mm, size 15mmx15mmx45mm and galvanising of 120 GSM) and ceiling section (having minimum thickness 0.50mm, size 26mmx26mmx50mm and galvanising of 120 GSM) as per drawing and as per requirement of site including P/F the additional GI framing for fixing commercial ply behind air conditioning louver only, the cost shall include all hardware as specified by the manufacturer, including filling and finishing the tapered and square edges of the board with jointing compound, paper tapes but excluding two coats of antibacterial acrylic emulsion paint with one coat primer complete as per pattern shown in drawing at all floor levels and locations to the satisfaction of Project Manager. Approved make for Board RAMCO HILUX.	Sqm	RO		
3	Providing and fixing in true horizontal level false ceiling grid of 15mm Suprafine XL grid system manufactured by M/s. Armstrong World Industries (India) Pvt. Ltd or equivalent using hot dipped galvanized steel section, exposed surface chemically cleaned capping prefinished in baked polyester paint wall angle of size 3000x19x19mm used in periphery of the ceiling fixed to the wall/partition/RCC column/band walls with the help of screws at 600mm c/c. Main runner of size 3000x15x32mm suspended at 1200mm c/c by using 2.5mm dia G.I. wire hanger securely fixed to the structural soffit of RC slab by using 6mm anchor fastener at every 1200mm(max) and 1200mm long cross tee of size 15x32mm to be interlocked between in main runner at 600mm c/c(max) to form grid of 1200x600mm. 600mm long cross tee size 15x32mm fixed in between 1200mm long cross tee for forming a grid of 600x600mm and finally laying Classic Lite Bev. Tegular tiles of size 600x600x16mm(RH 99, NRC 0.50)	Sqm	RO		
6	Providing and fixing open cell ceiling made in Aluminum, 0.016" thick Dimensions Panel: Nominal 24 x 24 x 1-1/2" blade height x 9/16" blade width (matches 9/16" suspension system) lay in panels on size 8"x8". The panels will be powder coated and painted with fire proof paint as per the selection	Sqm	58		
<b>E Flooring Works</b>					
1	Providing and laying self levelling compound 2-3 mm make below wooden flooring / vinyl flooring, to achieve perfect level as per the requirements of the Wooden / vinyl flooring vendor.	Sqm	858	0	
2	Providing & Fixing 2 mm thick homogeneous PVC Vinyl flooring (imported) with a single layer of PVC, total weight is 3000 g/m2, XR PUR (polyurethane reinforced, Abrasion group T: ≤2.00 mm, residual indentation approx 0.03 mm, castor wheel test qualified, dimensional stability ≤0.40%, static electrical charge < 2kv, impact sound reduction approx +4db, good resistance of scratch, slip, chemical and fire, doesn't favor in growth of fungi & bacteria. Clean Room class A certified. 100% recyclable. Low VOC emissions after 28 days of installation (lower than ≤10µg/m3). Phthalate Free. Multicolor welding rods. Non Directional in Design. Type Squarefoot (Eclipse Premium).	Sqm	156		
3	Providing and fixing Highly resistant 2.6 mm thick (as per ISO 24346[EN 428]) and wayer layer 0.55 mm thick (as per ISO 24340[EN 429]); heterogeneous with Homogeneous backing and wooden textured product in rolls; Protecrol® surface treatment with matt finish that does not require wax for life and it makes it resistant to all strong chemicals like IODINE, Betadine, EOSIN Oil, Antibacterial Gel etc. Weight ≤ 2800 g / m2 as per ISO 23997[EN 430], width of sheet 200 cm and length of sheet 20 lm as per ISO 24341 [EN 426]; product specified as per ISO 10581[EN 649]; abrasion value according to EN 660.2 ≤ 2.0 mm3, Castor chair test passed according to ISO 4918[EN 425], Chemical product resistance test passed according to ISO 26987[EN 423], Dimensional stability ≤ 0.4% as per ISO 23999[EN 434], Residual indentation ≤ 0.03 mm as per ISO 24343-1[EN 433], binder type I as per ISO 10581, class load 34/43 as ISO 10874[EN 685], Static electrical propensity < 2 KV as per EN 1815, Slip resistance dry ≥ 0.3 as per EN 13893, Slip Resistance Wet is R <sub>s</sub> as DIN 51130; thermal conductivity 0.25 W/(Mk) as per ISO 10456[EN 12524]; Anti-Bacterial activity (E.coli – S. aureus) > 99% inhibits growth according to ISO 22196; Antiviral activity (human coronavirus 229E) is 99.7% after 5 hours as per ISO 21702 Color fastness ≥ 6 degree as per ISO 105-B02; TVOC after 28 days < 10µg/m³ as per ISO 16000-6; CE certified as per EN 14041; Floorscore® certified as per; Fire classification Bfl-s1 as per EN 13501-1; TVOC after 28 days < 10 ppm / m3 according to ISO 16000-6; REACH compliant With 20% RECYCLED CONTENT; 100% RECYCLABILITY; Eco-designed be according to a product specific Life Cycle Analysis (LCA) with property of WELLNESS (walking comfort) < 75Db	Sqm	702	0	
4	Providing & fixing of coving for above Vinyl	Rmt	378	0	Gerflor
5	Providing and laying of tile flooring of approved make, shade and pattern as approved by Architect with grooves using 3/ 2mm PVC spacers and cement grouted with the tile grout of matching shade of tile including cutting, etc. complete in all respects as per pattern and drawing.				
	Vitrified tile (Basic rate of tiles Rs.50/- per Sqft) ( Tile size 600mm X 600mm)	Sqm	364	0	
	With Anti-skid Ceramic/Vitrified tile (Basic rate of tiles Rs.50/- per Sqft) ( Tile size 300mm X 300mm)	Sqm	RO		
6	Providing and laying of tile dado of approved make, shade and pattern as approved by Architect with grooves using 3/ 2mm PVC spacers and epoxy/cement grouted with the tile grout of matching shade of tile including cutting, etc. complete in all respects as per pattern and drawing.				
	Vitrified tile (Basic rate of tiles Rs.45/- per Sqft) ( Tile size 300/600mm X 300/600mm)	Sqm	27	0	
7	Providing & laying of tile skirting with Vitrified tile (Basic rate of tiles Rs.50/- per Sqft) ( Tile size 600mm X 600mm)	Rmt	298	0	

8	Providing and fixing Tufted low level loop pile carpet tile of size 500mmx500mm of thickness 5.5mm composed of 100% ECONYL®/Altochroma regenerated polyamide 6, weight 3815 gsm having polyester backing	Sqm	115	0	
9	IPS flooring-providing and laying 40mm average thick Cement Concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate of 12.5mm nominal size) including surface preparation and finished with a floating coat of neat cement of 2 mm including cement slurry, 40mm wide and 4mm thick glass strip etc with slope.	Sqm	RO		
10	Providing and fixing wooden vinyl of thickness 3mm with wear layer of .30mm suitable for heavy duty area with plank size 6"x36", density 5250 g/m <sup>3</sup> , should be slip resistance and have fire rating of BFI-S1. Colour fastness should be of Class 6 and should have sound absorption of ≥6 db.	Sqm	187		
11	Counter Tops and Ledge and Facia Providing and fixing 18mm thick Granite counter top, back splash and fascia, ledges, bands on walls complete laid over 19mm water proof ply (bwp) with synthetic resin as approved including 37mm x 37mm granite moulding including openings for sinks, providing grooves, polishing, chamfering, nosing as required etc. wherever required all complete. (Basic rate of Stone Rs. 120/- per sqft)	Sqm	2.6		
<b>F Wall Partition/Paneling</b>					
1	Providing and fixing 12.5mm thick Regular Gyp board (cladding on one side, conforming to IS - 2095 - 1982 and 2543-1981) paneling work with 50mm thk GI frame fixed with dry wall screws of 25mm at 300mm centre, square and tapered edges of the boards are to be jointed and finished so as to have a flush look which includes filling and finishing with jointing compound, paper tape as per detail drawing.	Sqm			
2	Providing and fixing 12.5mm thick Regular Gyp board (cladding on both side, conforming to IS - 2095 - 1982 and 2543-1981) paneling work with 50mm thk GI frame fixed with dry wall screws of 25mm at 300mm centre, square and tapered edges of the boards are to be jointed and finished so as to have a flush look which includes filling and finishing with jointing compound, paper tape as per detail drawing.	Sqm	445		
3	Providing and fixing Full height solid partitions as per specification, complete as per drawings and instructions. The rate shall be inclusive of the necessary hardware etc. Main frame - 50mm x 25mm Aluminium section of 1.5mm thk vertical and horizontals at 2' - 0" x 2' - 0" Centre spacing approx extra frame below slab soffit for conduit to run above. All verticals secured to ceiling. Both side with 12mm thk Commercial ply screwed to frame work on one side with joints as shown or directed. The rate shall be inclusive of Patta with grooves, borders, bottom, middle & top as advised by site supervisor.	Sqm	RO		
4	Providing and fixing Full height solid partitions as per specification, complete as per drawings and instructions. The rate shall be inclusive of the necessary hardware etc. Main frame - 50mm x 25mm Aluminium section of 1.5mm thk vertical and horizontals at 2' - 0" x 2' - 0" Centre spacing approx extra frame below slab soffit for conduit to run above. All verticals secured to ceiling. Both side with 12mm thk Commercial ply screwed to frame work on both sides with joints as shown or directed. The rate shall be inclusive of Patta with grooves, borders, bottom, middle & top as advised by site supervisor.	Sqm	72	0	
5	Cladding of above mentioned GI channel framework & BWP Plywood surface with 1mm laminate, as required/ directed by site engineer	Sqm	72	0	
6	Cladding of above mentioned GI channel framework & BWP Plywood surface with lacquered glass, as required/ directed by site engineer	Sqm	8.5	0	
7	FULL HEIGHT PARTLY GLAZED/ SOLID PARTITION Providing and fixing Full height Partly Glazed & Partly solid partitions as per specification, complete as per drawings and instructions. The rate shall be inclusive of the necessary hardware etc. Main frame - 50mm x 25mm Aluminium section of 1.5mm thk vertical and horizontals at 2' - 0" x 2' - 0" Centre spacing approx extra frame below slab soffit for conduit to run above. All verticals secured to ceiling. Both side with 12mm thk Commercial ply screwed to frame work on both sides with joints as shown or directed. The rate shall be inclusive of Patta with grooves, borders, bottom, middle & top as advised by site supervisor. For glazing Skin:- 12mm thick toughened glass fixed with 32x10mm thk. T. W. moulding and 3'- 0" high solid portion as shown in the drawing or as directed by Architect.	Sqm	28	0	
6	Providing and fixing Full height solid partitions as per specification, complete as per drawings and instructions. The rate shall be inclusive of the necessary hardware etc. Main frame - 50mm x 25mm Aluminium section of 1.5mm thk vertical and horizontals at 2' - 0" x 2' - 0" Centre spacing approx extra frame below slab soffit for conduit to run above. All verticals secured to ceiling. Both side with 12mm thk cement bonded board to frame work on both sides with joints as shown or directed. The rate shall be inclusive of Patta with grooves, borders, bottom, middle & top as advised by site supervisor.	Sqm	19	0	
9	Providing and fixing of corner guards as per design & specs corner guard superior wall mounted impact resistance from carts, luggage, beds and trolly stretchers and wheelchairs with 1.5 mm aluminium retainers with thk. 2 mm vinyl top cover with width of 52 mm x 52 mm of length 8'/10' (feet) and 10 mm offset along with continuous outside corner	RMT	43	0	
10	Supply and installation of full height Single glazed partition using 12mm thick toughened Glass fixed with proprietary black powder-coated aluminium sections of size 26x30mm (H) on top, bottom, horizontal & vertical for Straight partitions & 26x30mm (H) MS Steel powder coated profiles for curved partitions. Rate to include required accessories as per the manufacturer's specifications and shall be inclusive of all accessories like Gaskets. Glass to glass joints to be sealed with Double sided 2mm Thick transparent tape. The glasses to be butt jointed with 2 to 3mm edge chamfer & edge polishing all around. Achieving value of 31 dB. (Rate is not included for door frames) Finish - Black Powder coated Partition Height - 3000mm System - Micra I Make - Libco	Sqm	143	0	
<b>G Door/Windows</b>					
1	Providing & fixing wood frames of size as approved for doors, windows, clerestory windows & other frames and fixed in position by means of 40x3mm flat iron hold fast, 25cm long and embedding in cement concrete block 30x10x15 cm 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20mm nominal size) or with dash fasteners, providing and applying anti-termite paint on unexposed surface and melamine polish on exposed surface.				
	Meranti wood	Cum	20		
2	Providing and fixing wooden moulding (Architrave) to door and window frames with G.I. screws, plugs and priming coat on exposed surface including melamine polish/paint etc. complete				
	Teak Wood 50mmx12mm	Rmt	201		



3	Flush Doors : Providing and fixing 35mm thick flush door shutter of approved manufacture (Approved make) both side commercial, finished with 1mm thick laminate of approved manufacturer and shade fixed in pattern to both faces (to make overall thickness of shutter as 38mm) with 6 mm teak wood lipping all around complete as per drawings including lippings/ margins, melamine polishing on all exposed surfaces of wood of approved shade, necessary hardware fittings like stainless steel Hinges(125mm Ball Bearing 4nos approved make), magnetic door stopper etc(approved make). as approved. counter sunk screws would be used, with rotor cut in frames etc. complete in all respects as per details shown in design and drawings. Rate shall be applicable for Single and Double door.	Sqm	8.5			
4	Extra for cutting and providing vision panel in flush door with vision panel of size as per design and drawing having 6mm thick toughened glass finished with polished beech wood beading complete as per drawings.	Sqm	4.2			
5	Providing & Fixing fully glazed door. The item includes fixing of 12 mm thk Toughned glass with the help of top patch & bottom patch fittings. The door will have patch lock, pti pivot, floor spring & 600 mm long handles (Approved Make), fixed with the glass by making necessary cutouts & holes. The glass edges shall be polish on all sides. The entire door shall be erected in complete line & level. The door will have 5.5 brush finish Signage for pull & push. door size 1800/1500/1200 x 2100mm	Each	13		0	
6	Providing & Fixing fully glazed door. The item includes fixing of 12 mm thk Toughned glass with the help of top patch & bottom patch fittings. The door will have patch lock, pti pivot, floor spring & 600 mm long handles (Approved Make), fixed with the glass by making necessary cutouts & holes. The glass edges shall be polish on all sides. The entire door shall be erected in complete line & level. The door will have 5.5 brush finish Signage for pull & push. door size 1050/900/750 x 2100mm	Each	5		0	
7	Providing and fixing of Roller blinds (Blackout type) on the windows at all heights, all materials and labour etc., complete in all respects as per directions of Engineer having following specifications: Construction : 100% Polyester, Coating : Blackout 3 pass Foam Coating, Fabric Thickness : 0.60 mm, Fabric Weight +_5% : 390 Gsm, Fabric Width : 230 Cms, EPI/PPI 176/164, Wrap : 80 Den Twisted 5D, Weft : 300 Den Roto Material & Color shade will be as per sample approved.	SQM	108		0	
<b>H Wall finish</b>						
1	Providing and fixing vinyl wall covering having silk look ton-sur-ton stripe with a subtle sheen in a rich colour palette of composition vinyl finishing coat on a woven cotton backing of width as per approved make & sample on POP/ Gypboard surfaces with suitable adhesive to be executed by specialist agency as per manufacturers specification. Minimum of 10yrs gaurantee required. (Base rate 175 Rs /sqft)	SQM	42		0	
2	Providing and fixing 3M dusted/Frosted sparkle film of 50 microns thickness of approved shade and design over glass doors, glass partitions and wherever required s per drawing and as directed by Architect/ Engineer-in-Charge to the complete satisfaction. Film shall be fixed to the glazing with proper tools and arrangements with zero air bubble trapped in.				0	
	Designer (Machine cut)	SQM	65			
<b>I Mill Work</b>						
1	Providing, making and placing in position over head storage units upto 750mm height or height as directed and depth 450mm made with 18/19mm BWP Plywood front sides and middle shell and back side with 8mm ply covered with 1mm laminate (as per approved) at all exposed surfaces. Inner/unexposed surfaces to be finished with internally finished in 0.8mm thk. white laminate (matte) as shown in the drawings or directed. Including melamine spray polish finish for all wooden members. The rate to include cost of all necessary hardware viz., cabinets hinges, locks, handles, tower bolts etc., The unit should have been wood beading 40 x 40mm at top and edge lipping 20 x 6mm complete. all complete as per the architectural drawings and as specified and as directed by the Engineer-in-charge. Make: HAFELE, HETTICH or Godrej	Sqm	13.9		0	Make: Century/Green
2	Providing and fixing full height storage of height 2100/2400 mm /Low height storage of 600 mm and depth as specified in the drawings as per specified below. 1. Skeleton - made out of 19 mm thk. BWP ply at end verticals, top and bottom and vertical 450mm to 600mm centers as shown in the drawings and 6 mm thk. back ply. Shelves - 19 mm thk. BWP Plywood top and edges finished in 1 mm thk. laminate to accommodate file height removable and supported on pins. Shutters - made out of 19 mm thk BWP ply externally finished in 1.0 mm thk. laminate of approved texture and internally finished in 0.8mm thk. white laminate (matte) as shown or directed. The rate to include cost of all necessary hardware viz., cabinets hinges, locks, handles, tower bolts etc., all complete as per the architectural drawings and as specified and as directed by the Engineer-in-charge Make: HAFELE, HETTICH or Godrej					Make: Century/Green
	450mm depth	Sqm	18		0	
	600mm depth	Sqm	26		0	
	750mm depth	Sqm	RO			
	1250mm depth	Sqm	RO			
3	Providing and fixing a working counter of size (1500x600)mm made in 18 mm thick Commercial BWP Plywood for top, side support, drawer unit, drawer fascia. To use 12 mm thk. commercial BWP Plywood for table apron, drawer sides and back, 6 mm thk. commercial BWP Plywood for drawer bottoms with working table space ht. 750 mm and with finished ht. 1200 mm upto customer top. All internal surfaces of table, apron, drawers, (all sides, bottom and top ) drawer box to be finished with 0.8 mm thk. approved white colour laminate (or as approved). All external surfaces of Table including sides, drawer box, drawer fascia to be finished with 1 mm thk. approved colour laminate. Arrangement for CPU, wire manager for computer and 100 mm x 38 mm teak wood foot rest with melamine polishing as per design/ drawing and instructions by Architect.	Sqm	2		0	Make: Century/Green
4	Providing and fixing of storages upto height 1200mm and width 800mm made in 18 mm thick Commercial BWP Plywood, side support, drawer unit, drawer fascia. to be made as per the detail drawings and instruction given by the project manager. All internal surfaces of table, apron, drawers, (all sides, bottom and top ) drawer box to be finished with 0.8 mm thk. approved white colour laminate (or as approved). All external surfaces of Table including sides, drawer box, drawer fascia to be finished with 1 mm thk. approved colour laminate. All drawers to run on approved quality telescopic drawer channels of HAFELE, HETTICH or Godrej, Complete in all respects including approved quality metal keyboard with telescopic channel, Godrej/ ENOX drawer locks, 'D' shape .5.5. brass bush finished handles for drawers. The top of the storages to be covered in 6mm thick toughened glass fixed as per the details given by the architect.	Sqm	11			

5	Providing and fixing in position laminate finished ledge made in 19 mm thick BWP Plywood to profile and shape as per the detail drawing. The BWP Plywood surface shall be finished in 12mm thick acrylic of approved shade with edges finished as per detail and dwgs. All complete as per the architectural drawings and specified and as directed by the Engineer-in-charge. All drawers to run on approved quality telescopic drawer channels of HAFELE, HETTICH or Godrej, Complete in all respects including approved quality metal keyboard with telescopic channel, Godrej/ ENOX drawer locks, 'D' shape .S.S. brass bush finished handles for drawers. Arrangement for CPU, wire manager for computer and 100 mm x 38 mm teak wood foot rest with melamine polishing as per design/ drawing and instructions by Architect.	Sqm	12	0	Make : Century/Green
6	Providing ,making and placing reception counter made in 18 mm thick Commercial BWP Plywood for top,side support, drawer unit, drawer fascia. To use 12 mm thk. BWP Plywood for table apron, drawer sides and back, 6 mm thk. BWP Plywood for drawer bottoms with working table space ht. 750 mm and with finished ht. 1200 mm upto customer top. All internal surfaces of table, apron, drawers, (all sides, bottom and top) drawer box to be finished with 0.8 mm thk. approved white colour laminate (or as approved). All external surfaces of Table including sides, drawer box, drawer fascia to be finished with 1 mm thk. approved colour laminate except customer top including sides and and working top to be finished with acrylic solid surface 12 mm thk (as per approved shade). All drawers to run on approved quality telescopic drawer channels of HAFELE, HETTICH or Godrej, Complete in all respects including approved quality metal keyboard with telescopic channel, Godrej/ ENOX drawer locks, 'D' shape .S.S. brass bush finished handles for drawers. Arrangement for CPU, wire manager for computer and 100 mm x 38 mm teak wood foot rest with melamine polishing as per design/ drawing and instructions by Architect.	Sqm	5.4	0	Make : Century/Green
7	P/F Conference table of size (4500x1500x750) 19mm thick Bwp plywood for top, Side support. All external surfaces of the table will be finished with 1mm thick laminate as per the selection whereas all internal will be finished in .8mm thick laminate. Provision for sockets, mike will be taken into consideration on table surface along with wire manager with footrest of 100mm X 38mm teak wood with melamine polishing. The details will be done as per the detail drawings issued and instruction of project manager in charge.	Each	1	0	Make : Century/Green
8	Providing and fixing in position Trap Doors in False Ceiling suspended from RCC slab with dash fasteners, hangers and necessary hanging arrangements, 2nd class teak wooden framework 2" x 2" etc. made out of 16mm thick BWP ply finished with both side laminate approved shade on all exposed surfaces with all necessary hardwares and fittings etc., trap door to be in level with the surrounding ceiling all complete.	Sqm	10		
9	Providing and fixing Pin-up board made of 12mm thick cellotex board over 6mm thick commercial ply backing covered with MAX green fabric as approved, fixed to wall with screws & surrounded with steam beech wood moulding of size 30mm x 19mm with melamine polishing etc all complete as per approved design and drawing. (Basic cost of fabric to be taken as Rs. 150/ per Rmtr. for width of 1.2mtrs.)	Sqm	10		
<b>Furniture Items</b>					
1	Providing and fixing managers table of size 1500X600X750 with side unit of size 900x450x750 made of 19mm thick plywood with 1 mm thick laminate of approved shade(as per specification)on all external surface and .8mm thick on all internal surface. The side unit will have drawers as per the details and drawings given by the architect. including all necessary fittings.All drawers to run on approved quality telescopic drawer channels of HAFELE, HETTICH or Godrej, Complete in all respects including approved quality metal keyboard with telescopic channel, Godrej/ ENOX drawer locks, 'D' shape .S.S. brass bush finished handles for drawers.	Each	4		
2	Providing and fixing discussion table of size 2400x1000x1000 made of 19mm thick plywood with 1 mm thick laminate of approved shade(as per specification)on all external surface and 100 mm x 38 mm teak wood foot rest with melamine polishing as per design/ drawing and instructions by Architect.	Each	5		
3	Providing and fixing discussion table of size 1800x800x1000 made of 19mm thick plywood with 1 mm thick laminate of approved shade(as per specification)on all external surface and 100 mm x 38 mm teak wood foot rest with melamine polishing as per design/ drawing and instructions by Architect.	Each	2		
4	Providing and fixing sofa set				
4.1	3 seater	Each	3		
4.2	2 seater	Each	7		
4.3	Single seater	Each	1		
5	Providing and fixing couches				
5.1	Type-1	Each	2		
5.2	Type-2	Each	2		
6	Providing and fixing café table made in glass and ss section	Each	3		
7	Providing Chairs				
7.1	Lounge Chair	Each	6		
7.2	Visitor's Chair	Each	44		
7.3	Executive Chair	Each	4		
7.4	Lecture Chair	Each	12		
8	Providing and Fixing center table made in clear glass supported on ss sections	Each	2		
<b>Furniture Items</b>					
<b>Total</b>					

Annexure-II					
Electrical and Fire					
Item	Description	Unit	Qty	Rate	Amount
<b>A.</b>	<b><u>CIRCUIT CUM POINT WIRING</u></b>				
1	Wiring for the following light points with 1.5 sq.mm PVC insulated FRLS-H copper conductor 1100 volts grade stranded flexible wires of approved make in concealed or surface mounted 25 mm dia 2mm thick "FRLS" PVC conduits including fixing of 6 amps single pole rocker operated flush mounted switch of approved quality colour make & design in 1.2 mm thick GI box and earthing of fixtures & the outlet box with 1.5 sq.mm PVC insulated FRLS-H copper conductor stranded flexible wire. Wiring from DB to switch board shall be done with 3x2.5sqmm PVC insulated FRLS-H copper conductor stranded flexible wire				
1.1	MCB controlled Primary point (from DB to switch board - cost of switch & board <b>NOT</b> included)	Pts.	19		
1.2	Secondary point with switch ( from switch board to switch Board - cost of switch & board included)	Pts.	RO		
1.3	Primery point with switch ( from switch board to first point - cost of switch & board included)	Pts.	19		
1.4	Secondary point <b>without</b> switch ( from light point to light point - cost of switch & board <b>NOT</b> included)	Pts.	132		
2	Wiring for light point as in item No. 1 above but controlled by SPMCB provided in the DB. (Cost of MCB not to be included here).				
2.1	<b>Primary point</b> controlled by one MCB.	Pt.	RO		
2.2	Same as item no. 1.6 above but <b>Secondary point</b> . i.e. Points to be looped with <b>Primary point</b> .	Pt.	RO		
3	Wiring for ceiling fan point with 1.5 sq.mm PVC insulated copper conductor 1100 volts grade stranded flexible FRLS-H wires in concealed or surface mounted 2mm thhick "FRLS-H " PVC conduits, including providing fan hook box, 6 Amps switch and 120 watts electronic fan regulator of approved make in GI box and earthing the fan and outlet box with 1.5 sq. mm. PVC insulated copper conductor stranded flexible FRLS-H wire, complete in all respect excluding circuit wiring.	Pt.	RO		
4	Wiring for 250 volts single phase and neutral 6 / 16 Amps switched socket outlet with 4 sq.mm PVC insulated copper conductor 1100 volts grade stranded flexible FRLS-H wires in concealed or surface mounted 25 mm dia 2mm thick "FRLS-H " PVC conduits including providing and fixing of 6 / 16 Amps 5 pin switched sockets of approved make and design in 1.2 mm thick GI box with grid plates and earthing the third pin of each socket outlet with 4 Sq mm PVC insulated copper conductor stranded flexible FRLS-H wire , complete in all respect. (Cost not to include wiring & conducting)				
4.1	Primary point for 16 amps switched socket outlet	Pt	48		
4.2	Same as item no. 4.1 above but secondary point looped with primary point	Pt	47		
5	Wiring for 250 volts single phase and neutral 6 Amps switched socket outlet with 2.5 sq.mm PVC insulated copper conductor 1100 volts grade stranded flexible FRLS-H wires in concealed or surface mounted 25 mm dia 2mm thick "FRLS-H " PVC conduits including providing and fixing of 6 Amps 3 pin switch socket outlet of approved make and design in 1.2 mm thick GI box with grid plate and earthing of third pin of the socket with 2.5 Sq. mm PVC insulated copper conductor stranded flexible FRLS-H wire , complete in all respect.				
5.1	Primary point for 6 amps switched socket outlet	Pt	26		
5.2	Same as item no. 5.1 above but secondary point looped with primary point	Pt	114		
	<b>TOTAL CARRIED TO SUMMARY</b>				



Item	Description	Unit	Qty	Rate	Amount
<b>B.</b>	<b><u>CABLES, MAINS AND SUB MAINS</u></b>				
	The rate shall also include the following :				
a.	Providing and fixing junction boxes with covers including painting.				
b.	Effecting adequate and proper connections at terminations.				
c.	Providing all fixing accessories such as clamping devices nuts, bolts and screws.				
d.	Excavation laying of cable filling of sand, brick protection, back filling of earth, watering.				
e.	Wherever the cables are of aluminium and bus bars of copper bimetallic lugs shall be used.				
f.	All cable shall be laid with one diameter gap.				
g.	All cables shall be IS approved.				
h.	Fire retardant paint one meter on both side of wall penetration and at termination as per				
i.	Buried LT cables to be laid atleast 750 mm below ground.				
j.	All cutouts / Sleeves shall be sealed with fire retardant sealent as per specification.				
<b>B.</b>	<b><u>CABLES, MAINS AND SUB MAINS</u></b>				
1	Supplying & laying of following 1100 volt grade XLPE insulated PVC sheathed aluminium conductor armoured cables as per specification in existing trenches, cable trays, ducts over bed of sand, clamped includes anchor fastners wall with suitable clamps, saddles fixing bolts including connecting testing and commissioning.				
	(Incoming cable qty not considred)				
1.01	4 core 10 sq.mm	RM	150		
1.02	4 core 16 sq.mm	RM	RO		
1.03	2 core 10 sq mm	RM	RO		
2	Cable end termination of the following PVC insulated sheathed XLPE aluminium conductor armoured cables of 1100 volt grade including supplying and fixing of crimping aluminium lugs, double compression glands with earthing facility at both ends of cables etc. complete as required.				
2.01	4 core 10 sq.mm	No.	8		
2.02	4 core 16 sq.mm	No.	RO		

Item	Description	Unit	Qty	Rate	Amount
2.03	2 core 10 sq mm	No.	RO		
	<b>TOTAL CARRIED TO SUMMARY</b>				
<b>C.</b>	<b>CABLE TRAYS, RACEWAY &amp; JUNCTION BOXES :</b>				
	The cable management system shall comprise:				
a.	Ladder cable trays and supports.				
b.	Perforated cable trays and supports.				
c.	Surface mounted wire ducts with brackets / supports.				
d.	Floor mounted raceways / trunking :				
	It shall be as a system with floor also laid under floor supports, junction boxes, bends, and risers, access boxes and tap off boxes with switch mounting arrangement.				
	Materials for all the items shall be galvanized sheets except for junction boxes or fabricated products where CRCA sheets of minimum 2.00 thickness or (more adequate to bear the load of cables) shall be used with zinc plated / painted surface protection as specified.				
e.	All cuts/perforations/folded sections where contact with wires/cables in expected shall be burr				
f.	Zinc coating shall be 120 gm / square meter or more. The materials shall conform to relevant IS / BS standards for the category / application specified.				
g.	The cable tray / raceways / ducts / trunking shall be factory built. Only cutting to achieve assembly system length shall be permitted at site.				
h.	Accurate fabrication formed section with tolerances of + 2 mm on width and + 5 mm on length				
i.	Dimensional and general arrangement drawing of the system are expected to be provided by tenderer / cable tray / duct supplier.				
j.	The system shall be designed for installation with a temperature classification of + 60 deg.C.				
k.	The cable tray/duct systems shall be suitable for against corrosion.				
l.	Details of fixing supports etc. shall be submitted for approval.				
<b>C.</b>	<b>CABLE TRAYS, RACEWAY &amp; JUNCTION BOXES:</b>				
1	Supply and fixing of pregalvanized factory fabricated GI ladder type cable trays, with radial bends, supports and fixing hardware etc. with of the following sizes as per specification.				
1.1	150 mm x 40 x 40 x 2 mm thick	RM	RO		
1.2	100 mm x 40 x 40 x 2 mm thick	RM	40		

Item	Description	Unit	Qty	Rate	Amount
	<b>TOTAL CARRIED TO SUMMARY</b>				
<b>D</b>	<b><u>VERTICAL TPN DISTRIBUTION BOARDS</u></b>				
1	Raw Power & Lighting: 4 Way Dopuble Door VTPN DB with 1 No. 100A 3P 16kA MCCB Incoming and 4 No.s 40A 3P 10kA C Curve MCBs as Outgoings	No.s	1		
2	UPS Distribution: 4 Way Dopuble Door VTPN DB with 1 No. 63A 3P 16kA MCCB Incoming and 4 No.s 40A 3P 10kA D Curve MCBs as Outgoings	No.s	1		
3	HVAC: 4 Way Dopuble Door VTPN DB with 1 No. 63A 3P 16kA MCCB Incoming and 4 No.s 32A 3P 10kA C Curve MCBs as Outgoings	No.s	1		
<b>E</b>	<b><u>FINAL DISTRIBUTION BOARDS</u></b>				
	Supply, installation, testing and commissioning of the following seven segment FDB's fabricated out of 1.6 mm thick, CRCA sheet steel in dust and vermin proof, double door construction, powder coated with approved shade and segregate phases. Approved covers with padlocking arrangement, recessed in wall or surface mounted final distribution boards of the following				
1	<u>Type A (Power)</u>				
	TPN DB, 24 Nos.10/16 Amps SP MCB's as outgoing with 3 Nos. 40 amps. DP RCCB's of 100 mA leakage current and 1No. 40 Amps 4 pole MCB isolator as incomer with separate neutral link for each phase. (All MCB shall be "C" Curve.)	No.	1		
	TPN DB, 18 Nos.10/16 Amps SP MCB's as outgoing with 3 Nos. 32 amps. DP RCCB's of 100 mA leakage current and 1No. 32 Amps 4 pole MCB isolator as incomer with separate neutral link for each phase. (All MCB shall be "C" Curve.)	No.	1		
2	<u>Type B (Lighting)</u>				
	TPN DB, 24 Nos.10/16 Amps SP MCB's as outgoing with 3 Nos. 40 amps. DP RCCB's of 100 mA leakage current and 1No. 40 Amps 4 pole MCB isolator as incomer with separate neutral link for each phase. (All MCB shall be "C" Curve.)	No.	1		
3	<u>Type C (UPS power and Emergency Lighting)</u>				
	TPN DB, 24 Nos.10/16 Amps SP MCB's as outgoing with 3 Nos. 40 amps. DP RCCB's of 100 mA leakage current and 1No. 40 Amps 4 pole MCB isolator as incomer with separate neutral link for each phase. (All MCB shall be "D" Curve.)	No.	1		
4	<u>Type D (ACDB)</u>				
	TPN DB 12 No. 10/16 Amps SP MCB as outgoing with 3 No.s 32 Amps DP RCCBs of 30 mA leakage current and 40 Amps 4 pole MCB isolator as incomer with separate neutral link for each phase. (All MCB shall be "C" Curve.)	No.	1		
	<b>TOTAL CARRIED TO SUMMARY</b>				



Item	Description	Unit	Qty	Rate	Amount
<b>F</b>	<b>SUPPLY AND INSTALLATION OF LIGHTING FIXTURES</b>				
a.	The rates shall include all components that may be required to make the installation complete in				
*	Suitable length of GI down rod, hanger and connecting wires where called for.				
*	Internal wiring between accessories.				
*	Wires for connecting the fixtures to the point through connector block.				
*	All metal blocks to serve as base of fixtures.				
*	Bonding with earth wires.				
b.	Drilling holes in supports wherever required.				
c.	Fixing clamps, GI bolts and nuts, brass screws, saddles, rawl bolts and other fixing accessories				
d.	Testing of all fixtures & fans before and after installation.				
	<b>SUPPLY AND INSTALLATION OF LIGHTING FIXTURES</b>				
1	P/f of 600X300 LED recessed light panels	Each	20		
2	P/f of 300X300 LED recessed light panels	Each	55		
3	P/F of 18W round recessed light fittings	Each	34		
4	P/F of 12/15W round recessed light fittings	Each	14		
5	P/F Mirror Light	Each	6		
6	P/F of Linear Light complete with fitting	Each	22		
7	P/F OT light Mach LED 3sc + LED 2sc (160000 Lux + 130000 Lux) Dr. Mach Double Arm Ceiling mount Ot Lamp Combination on Central Axis with standard accessories	Each	2		
	<b>TOTAL CARRIED TO SUMMARY</b>				

Item	Description	Unit	Qty	Rate	Amount
<b>E</b>	<b>EARTHING CONDUCTORS</b>				
	Rates shall also include the following :				
a.	All fixing accessories such as brass saddles, brass screws rawl plugs etc.				
b.	Jointing by rivetting and brazing after rivetting in case of copper and welding / bolting in case of				
c.	Cutting chases holes and making good the same wherever required.				
d.	Effecting adequate and proper interconnections.				
e.	Use of copper thimbles.				
f.	Earthing system shall comply to IS 3043-1987.				
g.	All earthing pits shall be interconnected.				
h.	All equipment motors, DB's, panels to be connected on either ends (double earthing) with				
	<b>EARTHING CONDUCTOR</b>				
1	Supply, Testing & Commissioning, fixing of following bare GI tapes / wires including all necessary fixing accessories and effecting connections as per specifications.				
1.1	25 x 3 mm thick GI tape.	RM	30		
1.2	8 SWG GI wire	RM	40		
2	Providing, laying, testing and commissioning of following 1100 volts grade PVC insulated sheathed copper conductor unarmoured cable including copper thimbles, fixing hardware as required.				
2.1	Single core 10 sq mm Green colour cable	RM	10		
2.2	Single core 6 sq mm Green colour cable	RM	15		
	<b>TOTAL CARRIED TO SUMMARY</b>				

Item	Description	Unit	Qty	Rate	Amount
<b>G</b>	<b>CONDUITING WIRING AND CABLING FOR TELEPHONE/DATA SYSTEM</b>				
	Supply, installation, testing and commissioning of all conduiting and cabling for telephone system including providing and fixing of the following:				
a.	All necessary specials and fittings, brass bushes etc.				
b.	Approved cover plates for inspection, junction and outlet boxes.				
c.	1.6 mm thick outlet boxes and junction boxes.				
d.	All fixing accessories such as clips, nails, screws etc.				
e.	Providing and fixing approved saddles, hooks and grouting the same as required, in the case of				
f.	Embedding conduits and accessories in wall, floors etc. during construction and / or cutting chases and making good as necessary in the case of all concealed conduit work.				
g.	Providing 14 SWG GI pull wire in all conduit work.				
h.	Repainting of MS conduit, outlet boxes and junction boxes when ever damaged.				
	<b>CONDUITING WIRING AND CABLING FOR TELEPHONE/DATA</b>				
1	Supply and fixing of 2mm thick "FRLS-H " PVC conduits in following sizes including cost of junction boxes, bends, elbows, sockets, tees etc. laying in slab cutting chasis and making good or surface mounted including all fixing hardware.				
1.1	32 mm dia conduit	RM	0		
1.2	25 mm dia conduit	RM	3551		
1.3	20 mm dia conduit	RM	0		
2	Supply, installation, testing and commissioning of 4 pair Category 6 LAN cable consisting of 24 AWG solid copper conductors and as per the specification.				
2.1	The cable should have flexible Jacket and ripcord for easy stripability	RM	11314		
3	Supply, fixing, cable termination, testing and commissioning of krone type Tag Blocks and boxes with lockable door etc. as required.				
3.1	10-30 pair tag box	No.	RO		
4	Wiring for telephone junction with PVC insulated tinned copper conductor cables / wires of in existing conduits / trays / raceways.				
4.1	20 pair cable cat-5E with 24 SWG tinned copper conductor cable	RM	RO		
5	Supply, installation, testing and commissioning of following Category 6 IDC patch panel prepackaged with wiring block with legs insert labels, label holders, jumper troughs, metal back panel, duct assembly, screws, washers and an instruction sheet for termination of incoming pairs. Quoted price shall include suitable lockable enclosure etc. as required.				
5.1	48 port jack panel	No.	4		
6	Supply, installation, testing and commissioning of flush mounted outlets wired to T 568 A or B with British style faceplate. The plastic shall be high impact, flame-retardant, UL rate thermoplastic. Dust cover/ blank shall be provided to protect unused faceplate openings. Termination caps and plastic over should be provided to protect jack wiring. Quoted price shall be inclusive of 1.6 mm thick GI Boxes.				
6.1	Single outlet faceplate with RJ-45 jack	No.	165		
7	Supply and fixing telephone outlets with grid plate and RJ-11 jack in 1.6 mm thick GI box complete including cutting, chases, fixing of GI boxes and making good (Cover plate shall match the colour size and make of wiring accessories to be used in the project).	No.	RO		
<b>H</b>	<b>RE-ROUTING OF EXISTING FIRE ALARM AND FIRE PROTECTION SYSTEM AND CONNECTIONS</b>				
1	Refurbishment and Cleaning of existing existing toilets and fittings	Lot	1		

Item	Description	Unit	Qty	Rate	Amount
2	Re-routing of existing fire fighting/ sprinkler system as per final layout, complying to NBC-2016/ NFPA	Lot	1		
	<b>TOTAL CARRIED TO SUMMARY</b>				
	<b>TOTAL OF ALL HEADS</b>				<b>#REF!</b>

HVAC WORKS(LOW SIDE)					
S.No.	Description	Unit	Qty.	Rate	Amount
	<b>Chilled Water Piping, Valves &amp; Other Accessories</b>				
<b>1</b>	<b>CHILLED WATER PIPING</b>				
	Supplying, laying/ fixing, testing and commissioning of following nominal sizes of chilled water piping plumbing inside the building (with necessary clamps, vibration isolators and fittings but excluding valves, strainers, gauges etc.) duly insulated with following closed cell elastomeric nitrile rubber of class O Insulation applied by adhesives conforming to standard specifications & finally applying 0.63 mm Aluminium sheet cladding complete with type 3 grade 1 roofing feltstrip (As per IS 1322 as amended upto date) at joints & repairing of damages to the building etc. as per specifications and as required complete in all respect. Note : The Pipes of sizes 150mm & below shall be M.S. 'C' class as per IS : 1239 and pipes size above 150mm shall be welded black steel pipe heavy class as per IS: 3589, from minimum 6 mm thick M.S. Sheet for pipes upto 350 mm dia. and from minimum 8 mm thick MS sheet for pipes of 400 mm dia and above. For Cooling System pipework: R value should be min. 0.35 sqmK/W below 15 degree Celsius For Heating System pipework: R value should be min. 0.74 sqmK/W for 60 degree Celsius & above &				
1.1	20 mm dia MS Pipes (25mm thick insulation)	Metre	40		
1.2	25 mm dia MS Pipes (25mm thick insulation)	Metre	100		
1.3	32 mm dia MS Pipes (32mm thick insulation)	Metre	80		
1.4	40 mm dia MS Pipes (32mm thick insulation)	Metre	30		
1.5	50 mm dia MS Pipes (32mm thick insulation)	Metre	80		
1.6	65 mm dia MS Pipes (32mm thick insulation)	Metre	45		
1.7	80 mm dia MS Pipes (32mm thick insulation)	Metre	40		
1.8	Connections to existing header	Lot	1		
	<b>INSULATED VALVE</b>				
	Supplying, fixing, testing and commissioning of following valves, strainers, gauges in the chilled/hot water plumbing duly insulated to the same specifications as the connected piping and adequately supported as per specifications				
<b>2</b>	<b>BUTTERFLY VALVE (MANUAL)</b> with C I body SS Disc, Nitrile Rubber Seal & O- Ring PN 16 pressure rating for chilled water water circulation as specified				
2.7	40 mm dia	Nos	RO		
2.8	65 mm dia	Nos	RO		
2.8	80 mm dia	Nos	2		
<b>3</b>	<b>Y - STRAINER</b> of Ductile CI Body flanged ends with stainless steel strainer for chilled circulation including insulation as specified.				
3.1	40 mm dia	Nos.	1		
3.2	65 mm dia	Nos.	RO		
	<b>AIR DISTRIBUTION</b>				
<b>4</b>	<b>AIR DISTRIBUTION (FOR AIR CONDITIONING AREAS)</b> Supply, installation, balancing and commissioning of factory fabricated GSS sheet metal rectangular/round ducting complete with neoprene rubber gaskets, elbows, splitter dampers, vanes, hangers, supports (GI Channel) etc. as per approved drawings and specifications of following sheet thickness complete as required. (It shall be as per SMACNA standards) Note - UV coating & Mechanical protection shall be considered for exposed ducting insulation. GSS Duct with Soldersewing shall be provided for Critical area having 0.3 micron Filter in AHU.				
4.1	Thickness 0.63 MM Galvanized Sheet Steel Ducting	Sqm.	350		
4.2	Thickness 0.80 MM Galvanized Sheet Steel Ducting	Sqm.	40		
4.3	Thickness 1.0 MM Galvanized Sheet Steel Ducting	Sqm.	RO		
4.4	Thickness 1.25 MM Galvanized Sheet Steel Ducting	Sqm.	RO		
<b>5</b>	<b>SUPPLY / RETURN AIR DIFFUSERS</b>				
5.1	Supplying, fixing testing commissioning of supply air diffusers of powder coated aluminium with aluminium volume control dampers with anti smudge ring & removable core.	Sqm.	8		
5.2	Supplying, fixing testing commissioning of Return air diffusers of powder coated aluminium without volume control dampers with anti smudge ring & removable core.	Sqm.	8		
<b>6</b>	<b>SUPPLY / RETURN AIR GRILLES</b>				
6.1	Supplying & fixing of powder coated extruded aluminium Supply Air Grills with aluminium volume control dampers (18 Gauge) as per specifications.	Sqm.	4		

S.No.	Description	Unit	Qty.	Rate	Amount
6.2	Supplying & fixing of powder coated extruded aluminium return air grill with louvers but without volume control dampers complete as required.	Sqm.	4		
<b>7</b>	<b>FIRE DAMPERS</b>				
	Supplying, Fixing, testing and commissioning of fire dampers in supply air duct/main branch and return air path as and where required of required sizes i/c control wiring, the damper shall be motorized and spring return so as to close the damper in the event of power failure automatically and open the same in case of power being restored. The spring return action shall be inbuilt mechanism and not externally mounted. The damper shall also be closed in the event of fire signal complete as				
7.1	Fire damper	Sqm.	10		
7.2	Actuator	Each	20		
<b>8</b>	<b>INSULATION FOR OTHER AREA</b>				

S.No.	Description	Unit	Qty.	Rate	Amount
	Supply and installation of external thermal insulation on ducts. Insulation shall be closed cell chemically cross linked polyethylene foam with thermal conductivity not exceeding 0.032 W/moK at an average temperature of 250 C. Density of the material shall be 25-30 Kg/m3 and shall be single layer up to 18mm thickness. The insulation material shall be fire rated for Class o as per BS-476 Part 7 with non-toxic smoke. Quoted price shall be inclusive of adhesive, tapes as per specification.				
8.1	13 mm thick (In Conditioned Space)	Sqm.	350		
8.2	25 mm thick (In Non - Conditioned Space) for Exposed Area	Sqm.	RO		
9	Supplying, installation, testing & commissioning of acoustic lining within supply and return air ducts as per the specifications. All ducts shown cross hatched on the approved shop drawings shall be provided with acoustic lining of Open Cell Engineered Nitrile Rubber foam (Antimicrobial) tested as per ISO 354:2003, ISO 11654:1997 & ASTM C 423. Class-o Insulation. 140-180 kg/cum for AHU rooms/DG room/Duct . It should be complete in all respect & as per directions of engineer-in-charge.				
9.1	15 mm thick acoustic lining for duct	Sqm.	40		
9.2	32 mm thick acoustic lining for AHU room etc	Sqm.	RO		
10	<b>CEILING SUSPENDED UNIT (CSU)</b>				
	Supply, Installation, testing and commissioning of factory fabricated double skin type Air Handling Units (BMS compatible) including by-pass starter as per specifications given below:-				
	<b>AHU Construction:-</b> It shall be made out of min.0.8 mm pre-plasticized/pre-coated Galvanised steel sheet outside & 0.8 mm inside with 43 mm thick PUF insulation factory injected between them by injection moulding m/c, with density not less than 38 kg/Cum between them. Drain pan (made out of 1.25 mm stainless steel (SS Grade 304) sheet insulated with 19 mm think closed cell insulation(Nitrile/XLPE) & thermal break profile. Necessary supports required & vibration isolators shall be provided & cost for the same shall be included in this item (excluding civil work)				
	Supply Air Stream:- 1) Filter section consisting of pre filter and microvee/fine filter . Pre-filter section shall be with non woven synthetic media of 10 micron particle size with an efficiency of 90%, 2) Belt type centrifugal Fan (with min. 70% efficiency) with blower motor, drive and flexible duct connection. The supply fan shall be provided with variable frequency drive and input / output signal compatible to BMS system. 3) 6/8 row deep cooling coil 5) Discharge plenum section. 6) Mixing Box comprising of damper & filter section.				
	<b>COIL-</b> Copper tubes and Aluminium fins 12-13 fin /inch. Coil size shall be selected for air velocity of 350 ft/minute & velocity across filters at 350 ft/minute. Motors shall be suitable for 415 ± 10% volts, 50 Hz, 3 phase AC supply & high efficiency(EFF-1/IE-2). Vibration isolation shall be as per specifications and as shown on the drawings.				
	Sound level 65 db at the distance of 2 mtr (maximum)				
	Squirrel cage induction motors suitable for 415 ± 10% volts, 50 Hz, AC supply & high efficiency (IE-2/EFF-1 Efficiency), H.P of motor shall be as per actual selection meeting other technical requirements.				

S.No.	Description					Unit	Qty.	Rate	Amount
	Floor Space & Type (Floor Mounted )	Tonnage (TR)	CFM	Static Pressure (in mm)	Stage of Filtration				
10.1		7	1800	40	2	Nos.	1		
		6	2500	40	2	Nos.	2		
		9	3000	40	2	Nos.	2		
		12	4000	40	2	Nos.	1		
11	INLINE FANS								
	Supplying, installing, testing and commissioning of INLINE FANS suitable for installing in any position in vertical or horizontal ducts. The casing shall be double skin, internally acoustically lined and constructed of galvanised steel. The fan shall be DIDW with forward curve impeller fitted with maintenance free external rotor motor. The motor shall be suitable for 220±5% /415±10% volt single phase /three phase 50 cycles AC supply & meeting criterion as per ASHRAE standard 90.1-2010 and high efficiency (IS 12615). Quoted price shall be inclusive of electronic speed regulator and wiring between fan & speed regulator for single phase fans. In case of 3 phase fans quoted price shall be inclusive of DOL starter panel (As per motor HP meeting our parameters) with cabling between starter panel and fan. The incoming power supply to speed regulator / starter panel shall be provided by electrical contractor. Fan along with cabinet should be AMCA certified. Noise level should not exceed 65 DB at 3 meter in room condition. PCC/RCC foundation with plaster, other mounting arrangement, Antivibration arrangement of cushy foot mountings etc. complete in all respect shall be in contractor's scope.								
11.1	Duty- For Toilet & PANTRY Exhaust Air								
	Air Quantity : 1200 CFM								
	Static Pressure : 20 mm wg								
	Fan Motor H.P: As per actual selection meeting other technical parameters	No.				No.	2		
11.2	Air Quantity : 500 CFM					No.	1		
	Static Pressure : 20 mm wg								
	Fan Motor H.P: As per actual selection meeting other technical parameters								
12	SPLIT UNITS-DUCTABLE/HI WALL TYPE								
	HI WALL SPLIT UNITS- INVERTER DRIVEN COMPRESSOR								
	Supply, Installation, testing and commissioning of Air-cooled Hi-wall/Cassette split air conditioners each comprising an outdoor unit(s) consisting of inverter driven compressor, air cooled condenser, condenser fan along with Cooling thermostats etc. with outer casing and indoor fan coil unit consisting of centrifugal fans, fan motor, DX cooling coil, outer casing, filter, control and power panel with remote etc. entire cabling and wiring from indoor to outdoor, insulation and with full charge of refrigerant gas and oil, supports, canvas connection etc. complete as per drawings. The indoor and outdoor units shall be with structural steel supports, angles, rods etc. The quoted price shall also include 24 G soft copper refrigerant piping with 13mm "O" class factory backed nitrile rubber with aluminium foil from outdoor unit to indoor unit complete with insulation, refrigerant charging, PVC drain piping with 6mm thick nitrile rubber insulation, supports, clamps, fittings.								
12.1	2.0 TR					Nos.	RO		
12.2	1.5 TR					Nos.	1		
13	PICB VALVE (PRESSURE INDEPENDENT CONTROL & BALANCING VALVE)/HIGH								
	Supply, Installation Testing and Commissioning of PICBV (pressure independent valves (PN-16 rated) with modulating, 2- way control device. The Valve should have self-Dynamic Flow Control Valves that are pressure independent, Modulating to accept digital/analog input BMS/Controller signals and should provide position feedback signal to the control system. It should be diaphragm type & pressure balancing valve. Pressure Drop across the valve must not exceed 20 kpa up to DN 32 and 30 Kpa in bigger Sizes. Actuator should be Gear type only shall be rated to IP54. Valve shall be of Brass Construction up to DN32 and Cast Iron up to DN150. Valve & Actuator combination should be								
13.1	20 mm dia AHU Valves are Modulating Type					Nos.	1		
13.2	25 mm dia AHU Valves are Modulating Type					Nos.	4		
13.3	32 mm dia AHU Valves are Modulating Type					Nos.	5		
13.4	40 mm dia AHU Valves are Modulating Type					Nos.	1		
13.5	50 mm dia AHU Valves are Modulating Type					Nos.	RO		
13.6	65 mm dia AHU Valves are Modulating Type					Nos.	RO		
14	Supply, Installation Testing and Commissioning of the following Ball Valves with Strainer duly insulated as per specifications and drawings. It shall be bronze forged body construction with chrome plated bronze ball and handle of stainless steel constructions.								
14.1	40 mm dia					Nos.	6		
14.2	32 mm dia					Nos.	1		
14.3	25 mm dia					Nos.	4		
14.4	20 mm dia					Nos.	1		

S.No.	Description	Unit	Qty.	Rate	Amount
15	Supply, Installation Testing and Commissioning of the following Ball Valves without strainer duly insulated as per specifications and drawings. It shall be bronze forged body construction with chrome plated bronze ball and handle of stainless steel constructions.				
15.1	40 mm dia	Nos.	10		
15.2	32 mm dia	Nos.	2		
15.3	25 mm dia	Nos.	6		
15.4	20 mm dia	Nos.	2		
16	Supply, installation, testing and commissioning of cooling/Heating thermostats for various Air Handling Units and Fan Coil Units as per specifications including all accessories ,mountings,wiring between thermostat & unit, terminations etc.(BMS Compatibility to be provided).				
16.1	Proportional thermostats for Air Handling Units	Nos.	6		
17	Supply, installation, testing and commissioning of the following Drain (Ball) Valves (full way) of brass construction with PTFE seat, screwed female ends duly insulated as per specifications and				
17.1	25 mm dia	Nos.	6		
17.2	20 mm dia	Nos.	RO		
18	Supply, installation, testing and commissioning of Auto Purge Valves of brass construction with screwed ends duly insulated as per specifications and drawings complete in all respect.				
18.1	25 mm dia	Nos.	RO		
18.2	20 mm dia	Nos.	6		
19	Providing and fixing in position the industrial type pressure gauges with gun metal/brass valves complete as required.	Nos.	6		
20	Providing & fixing in position the mercury in glass industrial type thermometer complete as required.	Nos.	6		
21	Supply, installation, testing & commissioning of Fan Coil unit with Fan, Aluminium filter, 3-speed motor, 3 / 4 row deep cooling Coil, ball valve with strainer for inlet & without strainer at outlet, flexible connection, airvent, with auxiliary extended insulated stainless steel sandwiched drain pan, FCU Analogue type thermostat with on/off /3-speed switch,2 way dynamic control valve along with control cabling including conduits & all accessories etc. Refer Equipment schedule for details. (All FCU airflow should be selected at medium speed)				
21.1	1 TR	Nos	1		
21.2	1.5 TR	Nos	RO		
21.3	2 TR	Nos	RO		
21.4	2.5 TR	Nos	4		
21.5	3 TR	Nos	RO		
21.6	3.5 TR	Nos	RO		
22	Supply, installation, testing & commissioning of DUCTABLE UNIT with Fan, Aluminium filter, 3- speed motor, 3 / 4 row deep cooling Coil, ball valve with strainer for inlet & without strainer at outlet, flexible connection, airvent, with auxiliary extended insulated stainless steel sandwiched drain pan, FCU Analogue type thermostat with on/off /3-speed switch,2 way dynamic control valve along with control cabling including conduits & all accessories etc. Refer Equipment schedule for details. (All FCU airflow should be selected at medium speed)				
22.1	6.36 TR / 2295 CFM Ductable IDU with 20mm ESP.	Nos	RO		
23.0	<b>Tube Axial Flow ( AMCA Certified)</b>				
	Supply, installation,testing and commissioning of tube axial flow fans as shown in drawings, Each fan shall be direct driven. Fan motor shall be suitable for 3 Phase, 415+/- 10% V, 50Hz AC supply with IP 55 protection, class 'F' insulation and IE-3 efficiency class and suitable for continuous duty. Fan shall be complete with gravity louvers, vibration isolators, safety guards ( wire mesh). The efficiency of the fan shall not be less than 70 %. Noise level at 3 m should be below 70 dB( if any acoustic treat ment required shall be done by the equipment supplier.				
	Duty: Fresh Air Supply-				
23.1	Air Quantity : 11000 CFM, 35 mm st. pr.	Nos	2		
24.0	<b>Tube Axial Fans (Fire rated &amp; AMCA Certified)</b>				
	Supply, installation,testing and commissioning of tube axial flow fans as shown in drawings, Each fan shall be direct driven. Fan motor shall be suitable for 3 Phase, 415+/- 10% V, 50Hz AC supply with IP 55 protection, class 'H' insulation and IE-3 class. Fan shall be complete with gravity louvers, vibration isolators, safety guards ( wire mesh). Fan shall be 250 deg C, 2hrs fire rated.The efficiency of the fan shall not be less than 70 %. Noise level at 3 m should be below 70 dB( if any acoustic treat ment required shall be done by the equipment supplier.				
	duty: smoke extraction				
24.1	Air Quantity : 11000 CFM, 35 mm st. pr.	Nos	2		



Annexure-IV					
Integrated Fire Alarm, Voice Evacuation & Telephone Talkback System					
Sl. No	Description	Qty	Unit	Rate	Amount
1	SITC of Microprocessor based Multi-loop, True Peer-to-Peer Networkable Addressable Fire Alarm Control Panel with minimum 600 characters LCD display, 3000 event plus 800 alarm log history events, QWERTY keypad for programming. The panel should be equipped with sufficient numbers of loops considering 20% spare capacity in each loop. Each loop shall have a capacity of minimum 250 analog addressable devices. The panel shall work in degrade mode in case of CPU failure, 240 volts AC power supply, automatic battery charger, 24 volts sealed lead acid batteries sufficient for 24 hours normal working and 30 mins in alarm condition. UL 864, 10th Edition Listed & FM Approved				
a	1-loop - ADDRESSABLE PANEL WITH DVC AND AMPLIFIER	1	Nos.		0
2	SITC Addressable Multi-criteria Photo-Thermal Detector with sensitivity range of 0.5 to 4.0% obs/ft. The detector shall have twin bi-colour LED for 360 deg viewing. Designed to meet UL268, 7th Edition	41	Nos.		0
3	SITC Addressable Thermal Detector . The detector shall have twin bi-colour LED for 360 deg viewing. Designed to meet UL268, 7th Edition	1	Nos.		0
4	SITC of Addressable Duct Smoke Detector. The duct detector shall have an air velocity rating from 100 to 4000 ft/min. The detector shall have twin bi-colour LED for 360 deg viewing with sampling tube and photoelectric smoke detector. Designed to meet UL268, 7th Edition	r/o	Nos.		
5	SITC of Addressable High Sensitivity Photo Detector/ Very Early Warning Detector with sensitivity level of 0.02% to 2% Obs/Foot. The detector shall have twin bi-colour LED for 360 deg viewing. Designed to meet UL268, 7th Edition	2	Nos.		0
6					0
7	SITC of Addressable Manual Call Point (Pull down / Break Glass Type). The device shall have an LED which shall blink in normal state & get steady on activation to monitor the health status of the device. UL and FM Approved	4	Nos.		0
8	SITC of Addressable Control Module The control module shall provide DPDT contact rated at 24V DC, 2A. The device shall have an LED which shall blink in normal state & get steady on activation to monitor the health status of the device. UL and FM Approved	4	Nos.		0
9	SITC of Addressable Relay Module. The relay module shall provide DPDT contact rated at 24V DC, 2A. The device shall have an LED which shall blink in normal state & get steady on activation to monitor the health status of the device. UL and FM Approved	1	Nos.		0
10	SITC of Addressable Monitor Module The monitor module shall provide SPDT contact rated at 24V DC, 2A. The device shall have an LED which shall blink in normal state & get steady on activation to monitor the health status of the device. UL and FM Approved	R/O	Nos.		
11	Sitc of Addressable Isolator Module for Isolating short / desired / loose circuits with a automatic resetting arrangement. Isolator Base can also be proposed, however in that case needs to be considered with each detector & module. The device shall have an LED which shall blink in normal state & get steady on activation to monitor the health status of the device. UL and FM Approved	4	Nos.		0
12	Sitc of Sounder cum Strobe rated at 75 dBA @ 3m for Audible annunciation and 75cd flashintg at 1 Hz for visual indication	4	Nos.		0
13	2W Multi-Tap (0.25W; 0.5W; 1W; 2W), Ceiling Mount Speakers. The speakers shall be of same make as that of the Control Panel & Amplifiers. They shall be compatible with supplied Amplifiers and shall work on 70.7Vrms. UL and FM Approved	35	Nos.		0
14	2W Multi-Tap (0.25W; 0.5W; 1W; 2W), Wall Mount Speakers. The speakers shall be of same make as that of the Control Panel & Amplifiers. They shall be compatible with supplied Amplifiers and shall work on 70.7Vrms. UL and FM Approved	4	Nos.		0
15	SITC of Fire Fighter's Telephone Jack for two way communication between Remote Fire Fighter & Fire Command Center. UL and FM Approved	4	Nos.		0
16	Fire Fighter's Telephone Handset for two way communication between Remote Fire Fighter & Fire Command Center. UL and FM Approved	2	Nos.		0
17	SITC OF FIRE SERVIVAL CABLE 2X1.5 SQ. MM ARMoured	950	MTRS		0
	TOTAL				0

Annexure-V					
CCTV					
S. No.	Description - Tender BOQ	Make	Qty	Rate	Amount
A.	Camera				
1	SITC of IP CCTV Dome Camera 5 MP (2560x1920) , 1~25/30fps image with a 5 Megapixel progressive scan CMOS sensor. with triple streams support. 22°F to 140°F ( 30°C to 60°C) working Profile S/Gsupport.Security features include self-signed signed certificates and data encryption.Cyber Security :- User account and password protection, HTTPS, IP Filter, Digest authentication, TLS1.2 only, Stream encryption, AES-128/256, SSH/ Telnet closed, PCIDSS compliance. Non China & NDAA Compliant	Honeywell,	5		0
2	SITC OF 8 CHANEL NVR WITH RECODING FACILITY UPTO 8 CAMERA OF 30DAYS.	Honeywell,	1		0
3	8PORT POE SWITCH FOR CAMERA	D-LINK	1		0
4	32INCH MONITER	SAMSONG/LG	1		0
5	8TB HARD DISC	W.D	2		0
6	SITC OF CAT 6 CABLE ARMOUR	D-LINK	120		0
7	SITC OF 2X 1.5 SQ. MM POWER CABLE ARMOUR	POLICABE/EXC ELLETC	50		0
	<b>TOTAL</b>				<b>0</b>



Annexure-VI-A						
Name Of Work:- SITC of Conference Hall - 12 Pax						
AUDIO VIDEO SYSTEM						
S. No.	Item Description	Approved Makes	Offered make/Model	Qty	Price	Amount
1	Supply, Installation, Testing and commissioning of Interactive flat panel display having display size as 86 inches or bigger, Backlit type- D (LED), lifetime of 50000 Hrs or higher. The resolution of the display should be 3840 x 2160(4K UHD) and contrast ratio should be 1200:1 or better, with minimum brightness as 350 cd/m2, the minimum connectivity should be Front: 1xUSB(PC)   1xUSB(Android)   1xHDMI 2.0- IN Side: 1xHDMI-OUT   1xSPDIF-OUT   1xUSB(Touch)   2xUSB(Android) 1xDP-IN   2xHDMI 2.0-IN Bottom: 1xLAN   1xRS232-IN   1xAUDIO-OUT   1xPC AUDIO, The display should also have minimum 10 Wx 2 Built in speakers, touch response time as 6 ms or less. Frame/ Structure of IFPD should have magnetic mechanism or other mechanism to hold up to two numbers of Stylus/Pen, The touch accuracy should be ± 1 mm or better, Touch method should be Finger or touch pen or other solid(soft tip) object, Tempered glass should be 4T antiglare, Should have 1 OPS slot, Data from Mini PC should be shared wirelessly on multiple Phones/Tablets without any other hardware requirement. IFPD should allow user to share/mirror the content of Laptop/Desktop (Mac, Windows) and mobile device(ios,Android wirelessly, Wireless presentation should allow user to access their Laptop/Desktop through IFPD, Should have file download feature in smart phone just by scanning the QR code, 4 GB DDR, 16/32 GB internal storage, Android version 11 etc.	Samsung/ LG/ Provac	86" IFPD	1		-
2	SITC of Cable Manager with wireless charging spot, table mount modular multi-Connection Solution with retractable Lid with pass-through for 1 HDMI 2 LAN, 2 Universal AC Power Outlet, etc.	Kramer	TBUS-1-KWC + T1AF-26 + TS-2U + WCP-2	1		-
3	SITC of HDMI Transmitter over Cat 6 ( HDBaseT) up to 70m with Input 1 HDMI, Cat6 (HDBaseT) Output 4K@60 4:4:4 support HDTV Compatible, HDCP 2.2 Compliant with CEC, IR and RS-232, Compliance : CE, ISO 9001, ISO 14001, OHSAS 18001, etc complete as required.	Kramer	TP-583T	2		-
4	SITC of HDMI Receiver over Cat 6 ( HDBaseT) up to 70m with Input 1 Cat6 (HDBaseT), 1 HDMI Output, 1080p, 2K and 4K@60 4:4:4 support, HDTV Compatible, HDCP 2.2 Compliant with IR and RS-232, Compliance : CE, ISO 9001, ISO 14001, OHSAS 18001, etc complete as required.	Kramer	TP-583R	2		-
5	Supply, installation, testing & commissioning Video bar Conferencing Device with 6 microphones and 4k camera; Amplifier Power 20 W per channel, < 0.3% distortion over frequency range; Frequency Response (-10 dB) 85 - 20,000 Hz; Maximum SPL @ 1 m 89 dB ; frequency response of microphone Frequency Response (±3 dB) 20 - 15,000 Hz; Pickup Range 6.0 m (19.7 ft); Field of View (FOV) 123° diagonal × 115° horizontal × 81° vertical; Lens Up to 5x digital zoom, detachable camera privacy cover (included); complete as reqd.	Kramer	KBAR	1		-
6	Supply Installation Testing Commissioning of a Video Conference Server with the below specifications:- Max. Conference Microphones: 800, Frequency Response: 20 - 20kHz, Dynamic Range: >85 dB, Auto PC Software for a controlled meeting, Anti-feedback control, Audio Inputs & Outputs to connect to the amplifier, speaker and microphone systems"	OSL	BSC CONTROL	1		-
7	Supply Installation Testing & Commissioning of a Chairman Unit with the below specifications:- Press to Speak & Priority Functions, Commence Vote Option, Built-in Speaker system & headphone output. Includes (1) 18" Gooseneck Microphone (true condenser, super-cardioid)	OSL	BSC C1	2		-
8	Supply Installation Testing & Commissioning of a Delegate Unit with the below specifications:- 3-button Voting Options, Built-in Speaker system & headphone output Includes (1) 18" Gooseneck Microphone (true condenser, super-cardioid)	OSL	BSC D1	10		-
9	SITC of ceiling Fullrange 5" Driver Speaker, 130° Conical, with 100v Transformer New, 140° Conical, with 100v Transformer Frequency Range 72 Hz - 20 kHz, with Sound pressure level at rated power peak / 1 W (1 kHz, 1 m) 107 dB (SPL) or better ,Rated Power Continuous 20W Nominal Impedance - 8 Ohms - 100/70 V - 5W, 10W, 20W" including molding arrangement and custom ABS / metal / wooden box for Fire proof system etc as required.	British acoustics	CL-4	6		-
10	SITC of Power Amplifier, 1 x 350W @ 70/100V, Audio Power Amplifier, 70 V / 100 V and 8 ohm outputs Dual inputs with priority switching 100 V input for slave operation on 100 V speaker line with Min 5 input -aux, 3 mic line input Yes all required accessories etc. all complete etc as reqd.	British acoustics	Q350i	1		-
11	Supply and Laying of 1.8 Meters USB Type-A to A patch cord in existing conduit.	Kramer	C-USB/AA-6	1		-
12	Supply and Laying of 1.8 Meters USB Type-A to B patch cord in existing conduit.	Kramer	C-USB/AB-6	1		-
13	Supply and Laying of 1.8 Meters 4K HDMI patch cord in existing conduit.	Kramer	C-HM/HM-6	2		-
14	Supply and Laying of HDBaseT recommended 23 AWG shielded CAT6A Cable with appropriate connectors in existing conduit.	Kramer	BC-UNIKAT/LSHF-100M	100		-
15	Supply and Laying of sheilded connector for 23 AWG shielded CAT6A Cable.	Kramer	CON-RJ45-3	5		-
16	"Supply Installation Testing Commissioning of 2.5 SQMM 2 CORE Speaker Cable	NETMAS		100		-
17	"Supply Installation Testing Commissioning of 2 CORE 18AWG Microphone Cable	NETMAS		100		-
TOTAL WITHOUT TAXES						-

Annexure-VI-B						
Name Of Work:- SITC of SCENARIO ROOM- AUDIO VIDEO SYSTEM						
S. No.	Item Description	Approved Makes	Offered make/Model	Qty	Price	Amount
1	SITC of DLP, SSL WUXGA, 5300 ISO lm, 91.5lbs, no lens, White High-efficiency, contrast ratio 3000000, display type 0.64" 3 LCD, Resolution WUXGA (1920x1200), Solid State Laser Phosphor etc. complete as required.	christie	LWU530-APS	1		-
2	SITC of HDMI Transmitter over Cat 6 (HDBaseT) up to 70m with Input 1 HDMI, 1 Cat6 (HDBaseT) Output, 2K and 4K support, HDTV Compatible, HDCP 2.2 Compliant with IR and RS-232 etc complete as required. (Make:- Kramer)	Kramer	TP-583R	6		-
3	SITC of HDMI Receiver over Cat 6 (HDBaseT) upto 70 meter with Inputs 1 Cat6 (HDBaseT), 1 HDMI Output, 2K and 4K support, HDTV Compatible, HDCP Compliant with IR and RS-232 etc complete as required. (Make:- Kramer)	Kramer	TP-583T	6		-
4	SITC of Motorized Projection Screen matte white surface in 1.1 gain of dimension 108" x 144" having 4 side black masking best for ultra HD/4K movie radio frequency control motorised system etc. complete with installation as per site requirement.	DA TUNE		1		-
5	SITC of heavy duty projector mount etc. complete as required.	CUSTOM		1		-
6	SITC of 4K PTZ Camera with 12x Optical Zoom and 16x digital zoom, 4K 60fps clear video, 8.51 megapixel CMOS image sensor, Ultra-low CMOS image sensors plus 2D and 3D DNR technology, 255 presets views, Plug and play connection with a USB cable, USB 3.0: On a USB type B connector, HDMI output on HDMI connector, 3G-SDI output on BNC connector, Audio Line In: On a 3.5mm mini jack, RJ-45: 10/100/1000M Adaptive Ethernet Port RS-232 IN & Out: On 8 pin Min DIN connectors, RS-485: On a 2-pin phoenix connector, Video resolutions: 1080P60, 1080P50, 1080i60, 1080i50, 1080P30, 1080P25, 720P60, 720P50, 4KP25, 4KP30, Lens: 12x, f = 4.4mm ~ 52.8mm, F1.8 ~ F2.6, Backlight Compensation: Support, Video S/N: ≥55dB, Horizontal Angle of View: 71° ~ 8.2°, Vertical Angle of View: 42.7° ~ 4.5°, Horizontal Rotation Range: ±170°, Vertical Rotation Range: ±30°, Pan Speed Range: 1.6°/s ~ 76°/s, Tilt Speed Range: 0.5°/s ~ 15°/s, H & V Flip: Support, Control options: Embedded web pages, RS-232 protocol and IR transmitter remote included, Certification: Safety: CE, FCC & Environmental: RoHS, Reach etc.	Kramer		4		-
7	SITC of Multiviewer with quad view, dual view (PIP & PnP), matrix view, 2x2 video wall view outputs, 4 HDMI inputs and 4 scaled HDMI outputs, HDTV and HDCP compliant, bezel correction options, Multiple Aspect Ratio Selections — Full, 4:3, 16:9 and best fit, 4 Preset Memory Locations, supports video resolution up to 1080p@60Hz, Flexible Control Options - Front panel buttons, IR remote control with OSD (On-Screen Display), RS-232, Ethernet with built-in Web browser, Should have Multiple Output Aspect Ratios, Certification: CE, ISO 9001, Reach etc.	Kramer		1		-
8	SITC of 4K@60Hz 4-4+4 6X2 HDMI Switcher, 6 HDMI inputs, 2 HDMI Outputs, audio embedding for each HDMI inputs & audio de-embedding for each HDMI output, 8 balanced audio stereo audio outputs, 2K and 4K support, HDCP Compliant 1.4 & 2.2 both, data rate 18Gbps, supports HDR10, 24x24 audio matrix (8 embedded digital inputs + 8 analog inputs + 8 ARC inputs and 8 digital outputs + 8 analog outputs + 8 ARC outputs), Save up to 16 preset configurations, Automatic input selection based on priority selection or last connected input, Embedded Pattern Generator, Controllable through Ethernet and RS-232, Certification: CE, ISO 9001, ISO 14001, OHSAS 18001 etc complete as required.	Kramer		1		-
9	Supplying, Installation, Testing and Commissioning of 6 X4" or better columns two-Way Speaker with a Frequency Response (-3dB/-10dB): 85Hz-20KHz; Long Term Program Power Handling of ≥60W (at Nominal Impedance of 8 ohms). The Loudspeaker should have a Sensitivity (1W/1m) >86dB or better with a Max. SPL (Peak) >116dB. The Sound Dispersion should be 90° x 60° or better; including SITC of OEM speaker bracket complete etc. as required.	British acoustics	C6	2		-
10	SITC of Power Amplifier, 1 x 350W @ 70/100V, Audio Power Amplifier, 70 V / 100 V and 8 ohm outputs Dual inputs with priority switching 100 V input for slave operation on 100 V speaker line with Min 5 input -aux, 3 mic line input Yes all required accessories etc. all complete etc. as required.	British acoustics	Q350i	1		-
11	Supply and Laying of 1.8 Meters USB Type-A to A patch cord in existing conduit.	Kramer	C-USB/AA-6	4		-
12	Supply and Laying of 1.8 Meters USB Type-A to B patch cord in existing conduit.	Kramer	C-USB/AB-6	4		-
13	Supply and Laying of 1.8 Meters 4K HDMI patch cord in existing conduit.	Kramer	C-HM/HM-6	12		-
14	Supply and Laying of HDBaseT recommended 23 AWG shielded CAT6A Cable with appropriate connectors in existing conduit.	Kramer	BC-UNIKAT/LSHF-100M	100		-
15	Supply and Laying of sheilded connector for 23 AWG shielded CAT6A Cable.	Kramer	CON-RJ45-3	5		-
16	Supply Installation Testing Commissioning of 2-5 90MM 2 CORE Speaker Cable	NETMAS		100		-
17	Supply Installation Testing Commissioning of 2 CORE 18AWG Microphone Cable	NETMAS		100		-
TOTAL WITHOUT TAXES						-





#### **4. Appendix-A**

*[Declaration –from Bidder To be duly SIGNED and SUBMITTED by the bidder with EOI-BID Document]*

Date: 08-12-2022

VP – Operations  
IHFC, R&I Park,  
IIT Delhi, Hauz Khas, New Delhi – 110016

**Subject: Declaration for the work of “Fabrication work at MCC at IITD Okhla Campus”**

Dear Sir,

I agree that this EOI is an invitation made on the condition that I / We will comply integrity Agreement, if any, with IHFC which can be integral part of EOI documents, failing which I / We will stand disqualified from the EOI process.

I confirm acceptance and compliance with the Integrity Agreement, if any with IHFC, in letter and spirit and further agree that execution of the said Integrity Agreement shall be separate and distinct from the main contract, which will come into existence when EOI is finally accepted by IHFC.

I / We have read and examined the EOI, Designs, General Rules and Directions, Conditions of Contract, Clauses of Contract, & other documents and Rules referred and all other contents in the EOI document for the work.

I agree to apply in EOI, open for 2 weeks, for submission of financial bid via email at [mcc@ihfc.co.in](mailto:mcc@ihfc.co.in) or in close envelope for physical submission at IHFC office at 2<sup>nd</sup> Floor, A block, R&I Park, IIT Delhi, Hauz Khas, New Delhi-110016.

I / We undertake and confirm that eligible similar work(s) has/have not been got executed through another contractor on back to back basis. Further that, if such a violation comes to the notice of Department, then I / We shall be debarred for tendering in future by IHFC.

I / We hereby declare that I / We shall treat the EOI documents drawings and other records connected with the work as secret/confidential documents and shall not communicate information/derived there from to any person other than a person to whom I / We am/are authorized to communicate the same or use the information in any manner prejudicial to the safety of the State.

Dated:  
Signature of Contractor

Postal Address

Appendix-B  
<< Organization Letter Head >>

Declaration of Details

I / We, \_\_\_\_\_ hereby declare that all the information and data furnished by our organization with regard to this EOI specification are true and complete to the best of our knowledge. I / we have gone through the specification, conditions and stipulations in details and agree to comply with the requirements and intent of specification.

<b>1</b>	Name & Address of the bidder	:	
<b>2</b>	Phone	:	
<b>3</b>	E-mail	:	
<b>4</b>	Contact person name	:	
<b>5</b>	Mobile number	:	
<b>6</b>	GST number	:	
<b>7</b>	PAN number	:	
<b>8</b>	UTR no. [for payment of EMD] / D.D. No. & Bank Details	:	
	<b>BANK DETAILS</b>		
<b>9</b>	Bank name	:	
<b>10</b>	Branch address	:	
<b>11</b>	Branch telephone no.	:	
<b>12</b>	MICR Code of the bank	:	
<b>13</b>	IFSC code	:	
<b>14</b>	Bank Account no.	:	
<b>15</b>	Type of account	:	

FORMAT-1: CONSORTIUM DETAILS:

CONTACT INFORMATION	
<i>Contact details of all member companies of the consortium are to be furnished here</i>	
<b>Member-1 of the Consortium</b>	
Name	
Designation	
Phone	
Email	
<b>Member-2 of the Consortium</b>	
Name	
Designation	
Phone	
Email	
CONSORTIUM DESCRIPTION (SPECIFIC VALUE PROPOSITION BY DIFFERENT MEMBER COMPANIES)	
AUTHORISED SIGNATORY OF ALL MEMBER COMPANIES	
Signature	
Name	
Company	

Stamp & Date	
-----------------	--

**FORMAT-2: EXPERIENCE OF THE ORGANISATION**

Relevant experience of the organization is to be submitted in any format but clearly addressing all the requirements mentioned in the experience part of qualification criteria and the specific requirements as mentioned in the Scope of Work section of the document. To be signed by the authorised signatory of the company/consortium

**15. BID SUBMISSION**

1. Schedule of quantities along with rates should be submitted in pdf format on or before the last submission date.
2. All declaration form, Appendix and Qualification Annexure to be duly signed filled and uploaded with the schedule of quantities.
3. Consortium Details to be filled and uploaded as per “format 1”.
4. Company’s experience of project of similar nature shall be submitted in any format of past 3 years.