



**iHub Anubhuti-  
IIITD Foundation**

**TENDER NO: iHub-Anubhuti/13/MCC/2023-24 Dated 20.07.2023  
INVITATION OF TENDERS FOR  
WORKS OF INTERIORS (INCLUDING ELECTRICALS, HVAC)  
FOR  
THE IHUB ANUBHUTI-IIITD FOUNDATION, A SECTION (8) COMPANY  
PROMOTED  
BY IIT DELHI, OKHLA INDUSTRIAL AREA,  
PHASE III, NEW DELHI 110020.**

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## iHub Anubhuti-IIITD Foundation

Dated: 20.7.2023

### TENDER NOTICE

1. Last Date & Time of issue of tender documents from: **20.07.2023**
2. Last Date & Time of receipt of tender: **10.08.2023 up to 3.00 p.m**

CEO, iHub Anubhuti-IIITD Foundation invites sealed item rate tenders from eligible Contractor s for similar works.

Name of work: **Works of interiors including Electrical and HVAC works for the iHub Anubhuti-IIITD Foundation, A Section (8) company promoted by IIIT Delhi, Okhla Industrial Area, Phase III, New Delhi 110020.**

Location:	4 <sup>th</sup> floor of Lecture Hall Complex
Estimated cost of work put to tender:	Rs1.80 Cr.
Time of completion:	4.0 Months
Area Under consideration	~ 10000 sqft

Earnest Money Deposit: **Rs. 3,60,000/- (Rupees Three lac sixty thousand only)** is to be submitted with tender document as earnest money. The above payment shall be made in the shape of deposit or pay order/ demand draft of a scheduled bank /BG issued in favour of **iHub Anubhuti-IIITD Foundation** payable at New Delhi.

Works to be completed in coordination with the other agencies/ Contractor s. No extra for non-availability of fronts or coordination with other agencies shall be payable on account of the same.

Tender documents can be downloaded from IIITD website ([www.iiitd.ac.in](http://www.iiitd.ac.in)) and submitted with non- refundable DD of Rs. 1180/- in favour of **iHub Anubhuti-IIITD Foundation** as cost of tender.

1. The tenders shall be placed in sealed envelopes with a name of work and due date written on the envelope and addressed to CEO, iHub Anubhuti-IIITD Foundation. Complete tender documents shall be submitted by the approved Contractor s in two envelopes. First envelope shall contain the earnest money in the shape of Demand Draft / Pay Order of a scheduled Bank requisite shape as per condition & eligibility criteria and cost of tender as stated above in case of the downloaded version.
2. The eligible Contractor s who have carried out similar works in IIIT-D/ Govt Deptts/ PSU/ Reputed Pvt sector / MNCs are to submit the experience certificates for the works and registration certificates with Govt. Depts. if any. The said certificates along with the EMD be enclosed in Envelope-1.
3. Experience of having successfully completed similar works during last seven years ending on 30<sup>th</sup> June 2023. The similar works are defined as works of **interiors with electrical and HVAC works** etc.. The value of executed works shall be brought to current costing level by enhancing the actual value of work at simple rate of 7% per annum calculated from date of completion to last date of receipt of tenders.

Three similar works not less than 40% of estimate cost	Rs 72.00 lacs each Or
Two similar works not less than 60% of estimate cost	Rs 108.00 lacs each Or
One similar work not less than 80% of estimate cost	Rs 144.00 lacs each

4. One completed works of any nature either part of 3) or separate one costing not less than 40% of estimated cost ie Rs 72.00 lacs with some Central/ State/ Autonomous/ Central PSU/ State PSU/ local authority formed under any Act published in Central/State Gazette.
5. The applications not supported with requisite experience certificates, GST registration certificate, TIN no. and ITCC in Envelope-1 shall not be entertained.
6. Average Annual Turnover over Interior and electrical works should be at least Rs 200 lacs during immediate last 3 consecutive financial years ending 31st March 2023.
7. Should not have incurred any loss in the more than two years in the last five years ending 31st Mar 2023.
8. Shall have a solvency of Rs. 72.00 Lakhs. The applicant shall submit the solvency certificate, not older than six months prior to 30th June 2023, issued by any scheduled bank, in original
9. Performance certificates must be submitted by the vendors for the works.
10. A pre-bid conference will be held on the **28<sup>th</sup> of July 2023** at 3.00 PM at the 5<sup>th</sup> floor in the Boardroom of the Old Academic Block, IIIT-D Campus Okhla Phase-III, New Delhi-110020.

11. The second envelope shall contain the financial bids including Priced Schedule of Quantities, Form of Tender, Conditions of Tender, Articles of Agreement, Brief Specifications, Condition of contract, Drawings all duly signed by the authorized signatory of the firms.
12. All these envelopes are to be put in a single envelope duly super-scribed the name of work, and addressed to CEO, iHub Anubhuti-IIITD Foundation and with their address. In case the tenderer does not fulfill the laid down eligibility criteria or fails to deposit the earnest money in prescribed form, financial bid shall not be opened.
13. Tenderers shall seal the tender affix their initials and put stamp on each and every page of tender document before submission. The tender of the Contractor, who submits in-complete tender document or submits more than one tender for one work, shall not be considered at all.
14. Tenders will be received by the Sr. Manager (Room No B 503, 5<sup>th</sup> Floor Academic Block) up to 3.00 P.M on **10.08.2023** and will be opened by him or his authorized representative in the office of CEO, iHub Anubhuti-IIITD Foundation on the same day at 3.30 P.M.
15. First the Technical Bids will be opened and screened. The bids shall be examined whether the EMD is in order and the bidder meets the minimum eligibility criteria specified above. Those bidders whose EMD is in order, meets the minimum eligibility criteria, has submitted all the required documents and meet the technical requirements shall be considered for opening of financial bid. Conditional tenders would not be accepted. Financial bids in respect of Contractor s who do not fulfill above criterion shall not be opened.
16. No Xerox / certified copies of tenders shall be accepted, if submitted these tenders shall be rejected.

**CEO, iHub Anubhuti-IIITD Foundation**

## CONDITIONS

1. The time allowed for carrying out the construction work will be 4 months from the 3rd day after the date of written orders to commence the work.
2. The site for the work is available.
3. During execution of works, because of some unforeseen circumstances to enable him to complete the work as per terms of the contract, shall not relieve the Contractor from any liability or obligations under the contract and he shall be responsible for the acts, defaults and neglects of any sub-Contractor, his agents or workmen as fully as if they were the acts, defaults or neglects of the Contractor, his agents or workmen.
4. The Contractor shall be required to deposit an amount equal to 3% of the tendered value of the work as performance guarantee in the form of an irrevocable bank guarantee bond of any scheduled bank or State Bank of India in accordance with the form prescribed or in the form of fixed deposit receipt etc. within 4 days of the issue of letter of acceptance. The performance guarantee shall have the validity up to 31st Jan 2024.
5. Tenderers are advised to inspect and examine the site and its surrounding at their own cost and satisfy themselves before submitting their tenders as to the nature of the ground and sub-soil (so far as is practicable), the form and nature of the site, means of access to the site, the accommodation they may require and in general shall themselves obtain all necessary information as to risk, contingencies and other circumstances which may influence or affect their tender. A tenderer shall be deemed to have full knowledge of the site whether he inspects it or not and no extra charges consequent on any misunderstanding or otherwise shall be allowed. The tenderer shall be responsible for arranging and maintaining at own cost all materials, tools and plants, water, electricity, access, facilities for workers and all other services required for executing the work unless otherwise specifically provided for in the contract documents. Submission of a tender by a tenderer implies that he has read this notice and all other contract documents and has made himself aware of the scope and specification of the work to be done, local condition and other factors having a bearing on the execution of the work.
6. The Accepting Authority (iHub Anubhuti-IIITD Foundation) does not bind himself to accept the lowest or any other tender and reserves to him/herself the authority to reject in whole or part, any or all of the tenders received without the assignment of any reason. All tenders in which any of the prescribed conditions are not fulfilled or for any condition including that of conditional rebate is put forth by the tenderer shall be summarily rejected.
7. Canvassing, whether directly or indirectly, in connection with tenders is strictly prohibited and the tenders submitted by the Contractor who resort to canvassing will be liable to rejection.
8. The Accepting Authority reserves to himself the right of accepting the whole or any part of the tender and the tender shall be bound to perform the same at the rates quoted.
9. Tenders shall remain open for acceptance for a period of 60 days from the date of opening of the tenders. If any tenderer withdraws his tender before the said period for issue of letter of acceptance, whichever is earlier or makes any modification in the terms and condition of the tender which are not acceptable to the iHub Anubhuti-IIITD Foundation, then iHub Anubhuti-IIITD Foundation shall, without prejudice to any other right or remedy, be at liberty to forfeit 50% of the said earnest money absolutely besides black listing of the tenderer.
10. The notice inviting tender shall form a part of the contract document. The successful tenderer/Contractor shall, sign the necessary contract documents consisting of the notice inviting tender, all the documents including additional conditions, specification and drawings, if any forming the tender as issued at the time of invitation of tender and acceptance thereof with any correspondence leading thereto within the time specified in the letter communicating the acceptance of the tender. In case of delay, the earnest money may be forfeited and the tender cancelled or the contract enforced as per the terms of the tender and the invitation to tender and the tenderer shall thus be bound by the condition of contract even though the formal agreement has not been executed and signed within the specified time by the tenderer.
11. The work shall be carried out as per general conditions of contract for central PWD works 7/8 (Tender Contract) and form part of the agreement/document.
12. Contract is liable to be terminated by the iHub Anubhuti-IIITD Foundation without payment of any compensation, if subsequent to the acceptance of tender the Contractor is black-listed by, or enters into partnership or employs any black listed Contractor of the iHub Anubhuti-IIITD Foundation or any other department, or Govt. or its, undertakings.
13. **Cost of Bidding:** The bidder shall bear all costs associated with the preparation and submission of his Bid, and the Employer will in no case be responsible and liable for those costs.
14. **Clarification of Bidding Documents:** A prospective bidder requiring any clarification of the bidding documents may notify the Employer in writing/mail at the Employer's address indicated in the invitation to bid not later than 5 days before the Date of Submission of Tenders.

Email: [info@ihub-anubhuti-iiitd.org](mailto:info@ihub-anubhuti-iiitd.org), +911126907335

15. **Currencies of Bid and Payment:** The unit rates and the prices shall be quoted by the bidder entirely in Indian Rupees. All payments will be invariably made in Indian Currency (Indian Rupees.)
16. **Protection of Environment and Other Laws:** The Contractor shall take all reasonable steps to protect the environment on and off the Site and to avoid damage or nuisance to persons or to property of the public or others resulting from pollution, noise or other causes arising as a consequence of his methods of operation.
17. During continuance of the contract, the Contractor and his sub-Contractors shall abide at all times by all existing enactments on environmental protection and other local Acts/ Laws/ rules made there under, regulations, notifications and bye-laws of local authorities or any other law, bye-laws, regulations that may be passed or notification that may be issued in this respect in future by the State/ Local authority.

For and on behalf of

iHub Anubhuti-IIITD Foundation, New Delhi

## TENDER

I/We have read and examined and understood the notice inviting tender, schedule, A, B, C, D, E & F, Specifications applicable, drawings & Designs, General Rules and Directions, Conditions of Contract, clauses of contract, special conditions, Schedule of Rate & other documents and Rules referred to in the conditions of contract and all other contents in the tender document for the work.

I / We hereby tender for the execution of the work specified for the iHub Anubhuti-IIITD Foundation within the time specified in Schedule ' F ', viz., schedule of quantities and in accordance in all respects with the specifications, designs, drawings and instructions in writing referred to in Rule-1 of General Rules and Directions and in Clause 11 of the Conditions of contract and with such materials as are provided for, by, and in respect in accordance with, such conditions so far as applicable.

We agree to keep the tender open for sixty (60) days from the due date of its opening and not to make any modifications in its terms and condition.

A sum of Rs..... Rupees (.....) has been deposited in demand draft of a scheduled bank issued by a scheduled bank as earnest money. If I / we, fail to furnish the prescribed performance guarantee within prescribed period, I / we agree that the said Chairman, iHub Anubhuti-IIITD Foundation or his successors in office shall without prejudice to any other right or remedy, be at liberty to forfeit the said earnest money absolutely. Further, if I / we fail to commence work as specified, I / we agree that Chairman, iHub Anubhuti-IIITD Foundation or his successors in office shall without prejudice to any other right or remedy available in law, be at liberty to forfeit the said earnest money and the performance guarantee absolutely, otherwise the said earnest money shall be retained by him towards security deposit to execute all the works referred to in the tender documents upon the terms and conditions contained or referred to therein and to carry out such deviations as may be ordered, up to maximum of the percentage mentioned in Schedule ' F' and those in excess of that limit at the rates to be determined in accordance with the provision contained in Clause 12.2 and 12.3 of the tender form. Further, I / We agree that in case of forfeiture of earnest money or both Earnest Money & Performance Guarantee as aforesaid, I / We shall be debarred for participation in the re-tendering process of the work.

I / We hereby declare that I / we shall treat the tender documents drawings and other records connected with the work as secret / confidential documents and shall no 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. ....

Witness:

Signatures of Contractor

Address:

Occupation:

## LETTER OF SUBMISSION

The CEO  
iHub Anubhuti-IIITD Foundation  
5<sup>th</sup> Floor, Academic Block  
Indraprastha Institute of Information Technology, Delhi  
Okhla Phase-III  
New Delhi-110020.

I/We, the undersigned, have read and examined in detail, the specifications and all bidding documents and hereby declare that:

1. All the rates quoted in our proposal are in accordance with the terms and conditions as specified in the bid document. All the prices and other terms and conditions of this proposal are valid for a period of 60 calendar days from the date of opening of bid.
2. We do hereby confirm that our bid prices include all taxes/levies/however GST is indicated separately.
3. We hereby declare that if any tax law is altered, we shall pay the same.
4. The quoted rates are inclusive of ESI, PF and Green Tax no extra on such heads would be payable on such account.

### **Earnest Money**

We have enclosed EMD in the form of demand draft no....., dated.....favoring iHub Anubhuti-IIITD Foundation, Delhi payable at New Delhi issued / drawn on .....Bank for Rs.\_\_\_\_\_/ - (Rupees \_\_\_\_\_ Thousand only), as desired.

### **Deviations**

We declare that all the works shall be performed strictly in accordance with the technical specifications and other tender conditions with no deviations.

### **Qualifying Data**

We confirm that all information/data have been submitted as required in tender document.

We hereby declare that our proposal is made in good faith, without collusion for fraud and the information contained in the proposal is true and correct to the best of our knowledge and belief. I/We agree that in case any information is found to be incorrect the tender is liable to be rejected at any point of tendering process.

Bid submitted by us is properly sealed and prepared so as to prevent any subsequent alteration and replacement.

We understand that you are not bound to accept the lowest or any bid you may receive.

Thanking you,  
Yours faithfully,  
(Signature and seal of Tenderer with name, designation and contact no.)



## ACCEPTANCE

The above tender (as modified by you as provided in the letters mentioned hereunder) is accepted by me for and on behalf of CEO, iHub Anubhuti-IIITD Foundation for a sum of

Rs. ----- (Rupees -----)

The documents referred to below shall form part of this contract Agreement:-

- NIT
- Performa for Agreement
- Additional conditions.
- Special conditions
- Schedule of Quantities &
- Drawings
- General conditions of contract for CPWD Works with up to date correction slip

For & on behalf of  
CEO  
iHub Anubhuti-IIITD Foundation

Signature. ....

Dated.....

Designation.....

## SCHEDULES

<b>SCHEDULE 'A'</b> Schedule of quantities (Enclosed)	Enclosed
<b>SCHEDULE 'B'</b> Schedule of materials to be issued to the Contractor	NIL
<b>SCHEDULE 'C'</b> Tools and plants to be hired to the Contractor	NIL
<b>SCHEDULE 'D'</b> Extra schedule for specific requirements/documents for the work, if any,	NIL
<b>SCHEDULE 'E'</b> Schedule of component of Cement, Steel, other materials, Labour etc. for price escalation.	NIL
<b>CLAUSE 10 CC</b> Component of Cement - expressed as percent of total value work,	N/A
Component of Steel-expressed as percent of total work.	N/A
Component of civil (except cement & steel) / Electrical construction Materials-expressed as percent of total value of work.	N/A
Component of labour-expressed as per cent of total value of work.	N / A
Component of P.O.L. - expressed as percent of total value work.	N / A
<b>SCHEDULE 'F'</b> Reference to General Conditions of contract.	

**Name of Work: Works of Interiors including Electrical and HVAC works for iHub Anubhuti-IIITD Foundation Indraprastha Institute of Information Technology (IIIT-Delhi) Campus, at 4<sup>th</sup> Floor of Lecture Hall Complex, Okhla Phase III , New Delhi.**

Estimated cost of work: Rs 180 lacs

i. Earnest money: Rs. 3,60,000/-

ii. Performance Guarantee: The Contractor , for due and faithful performance of the Contract, shall obtain and submit to the Owner such security of 3% of the Contract Value within 7 days after the receipt of the Letter of Acceptance, in the form of BG Performa as appendix to tender from a scheduled Bank /FD providing such security shall be subject to the approval of the Owner. The cost of complying with the requirement of this Clause shall be borne by the Contractor .

**Period of Validity of performance Bond:** The performance bond shall be valid as at Conditions Cl 4 and till the Contractor has executed and completed the Works in accordance with the Contract. This security shall be returned to the Contractor within 14 days of the issue of the said Completion Certificate.

**Claim under Performance Security:** Prior to making a claim under the performance security the Owner shall, in every case, notify the Contractor stating the nature of the default in respect of which the claim is to be made.

**Security Deposit/ Retention money** shall be Two and Half percent (2.5%) of the value of executed works and will be deducted from each and every payment made to the Contractor against running account bill submitted for the work done at site. Retention money will be released along with the payments of final bill with Employer until the Defects Liability period is successfully over.

iii. Defect Liability period 12 months from date of completion.

iv. **Liquidated damages:** In case of delay on account of reasons attributable to the Contractor Liquidated Damages shall be levied .The amount of Liquidated Damages payable by the Contractor to the Employer would be 0.25% of the value of order for each calendar day of delay subject to a maximum of 5% of the value of order after which Employer reserves the right to terminate the contract without prejudice to the rights of the Employer.

General Rules & Direction:

Officer inviting tender: CEO, iHub Anubhuti-IIITD Foundation

**Definitions**

2(v) Engineer-in-Charge	To be assigned on award of work
2(viii) Accepting Authority	Chairman, iHub Anubhuti-IIITD Foundation
2(x) Percentage on cost of materials and labour to cover all overheads and profits.	15%
2(xi) Standard Schedule of Rates (Civil and Electrical)	DSR-2021 ( Civil ) and DSR -22 (Electrical)
2(xii) Department	iHub Anubhuti-IIITD Foundation
9(ii) Standard CPWD contract Form	CPWD form 8 - with up to date correction slips.

**Clause 1**

(i) Time allowed for submission of Performance Guarantee From the date of issue of letter of acceptance	4 days
(ii) Maximum allowable extension beyond the period (Provided in (I) above	7days

**Clause 2**

Authority for fixing compensation under clause 2. Chairman, iHub Anubhuti-IIITD Foundation

**Clause 2A**

Whether clause 2A shall applicable No

**Clause 5**

Number of days from the date of issue of letter Acceptance for reckoning date of start 7 days

Time allowed for construction	4.0 months
<b>Clause 6, 6A</b> Clause applicable - (6 or 6A)	Clause 6A
<b>Clause 7</b> Gross work to be done together with net payment /adjustment or advance for material collected, if any since the last such payment for being eligible to interim payment.	Rs 45 Lakhs.
<b>Clause 10A</b> List of testing equipment to be provided by the Contractor at site lab.	As required
<b>Clause 10 B (ii)</b> Whether Clauses 10B (ii) (iv) shall be applicable -----do-----10B(iii) -----	Yes No
<b>Clause 10CA Escalation</b>	<b>Not Applicable</b>
<b>Clause 10CC Escalation</b>	<b>Not Applicable</b>
<b>Clause 11</b> Specification to be followed for execution of work	CPWD Specifications 2019, Part I & II with Up-to-date correction slips
<b>Clause 12</b> Deviation limit beyond which clauses 12.2 & 12.3 shall Apply for building work	100%
<b>Clause 16</b> Competent Authority for deciding reduced rates.	Chairman, iHub Anubhuti-IIITD Foundation
<b>Clause 17</b> Contractor liable for Damages defects during maintenance period	Applicable
<b>Clause 18</b> List of mandatory machinery, tools & plants to be deployed by the Contractor at site	As per the site requirement.
<b>Clause 36(i)</b> Requirement of Technical Representative (s)	As per requirement.
<b>Clause 25</b> Arbitration Clause	As per special conditions

## SPECIAL CONDITIONS

1. In the event of the tender being submitted by a firm, it must be signed by a person duly authorized through a power of attorney issued by all the partners and a certified copy of the power of attorney should be enclosed with the forwarding letter or separately by each member thereof, or in the event of the absence of any partner, it must be signed on his behalf by a person holding a power of attorney authorizing him to do so and such power of attorney shall be produced with the tender and it must disclose that the firm is registered under the Indian partnership Act.  
  
Each and every signature given shall be separately witnessed. A Contractor or a Contractor who himself / themselves has/have tendered or who may tender for the work shall not witness the tender of another person for the same work. Failure to observe this condition would render tenders of the Contractor tendering as well as witnessing the tenders liable for summary rejection.
2. The conditions for item rate tender only will be applicable as given in general conditions of contract for central PWD works 2020. As mentioned there in also, in event no rate has been quoted for any items leaving space bolts in figure (s), word(s) and amount blank, it will be presumed that the Contractor has included the cost of this/these item(s) in other item(s) and rate for such items will be considered as zero and work will be required to be executed accordingly.
3. Rates quoted as percentage below/above in the tender will be summarily rejected.
4. It must be understood that the work has to be completed as per the time provided in the contract and as such time is the essence of the contract.
5. The quantities furnished in the bills of quantities are only probable quantities liable to alternation by omission, deduction or addition, and it would be clearly understood that the contract is **not a lump sum contract** and the iHub Anubhuti-IIITD Foundation do not, in any way, assure the tenderer or guarantee that the said probable quantities are correct or that the work would correspond thereto. Payments will be regulated on the actual quantities of work authorizedly done and measured at the accepted rates. No claims due to change in quantities (+ or -) will be entertained. The drawings, forming parts of complementary installations work specifications and the bills of quantities, of the contract, are explanatory of and are to one another, representing together the works / to be carried out. If neither the drawings nor the specifications nor the accepted bills of quantities include any part/parts the intention to include which is nevertheless clearly inferred and which are obviously necessary for the proper completion of the works/ installations, all such parts shall be supplied and executed by the Contractor at no extra charge. Anything contained in one or another of (a) the drawings, (b) the specifications and (c) the accepted bills of quantities and not found in the others will be equally binding as if it were contained in each of them.
6. No alterations, which are made by the tenderer in the drawings, specifications, conditions or probable quantities accompanying this notice will be recognized and if any such alterations are made the tender, will be invalid. Conditional tenders will however be liable for rejection.
7. The tenderer must obtain for himself on his own responsibility and at his own expense all the information necessary, including risks, contingencies and other circumstances to enable him to make a proper tender and to enter into a contract with the iHub Anubhuti-IIITD Foundation. He must examine the drawings, specifications, conditions and so on and must inspect the site of work, examine the nature of the ground and the subsoil (so far as is practicable) and acquaint himself with local conditions, means of access to the work, storage facilities or areas for staff colony, the nature of the work, in fact all matters pertaining thereto before he submits his tender.
8. The tenderer shall also bear all expenses in connection with the preparation and submission of his tender and attendance for subsequent negotiations/clarifications.
  - (I) Omission, neglect or failure on the part of the tenderer to obtain requisite and reliable information on any matter affecting his tender, the contract and the construction, completion, maintenance, (dismantling and disposal) of the work shall not relieve the tenderer whose tender is accepted from any liability in respect of the contract.
  - (II) The tenderer whose tender is accepted shall not be entitled to make any claim for increase in the rates quoted and accepted excepting in pursuance of any specific provision in the contract.
9. The Contractor, upon award of work, shall furnish the following details for the approval of the Engineer in charge:
  - 9.1. The names of manufacturers of specialized items such as patented water proofing systems / materials, doors, flooring tiles, false ceilings, insulating materials, wind mill, cement, steel, glazing, and any other materials etc. which he proposes to use in the work.
  - 9.2. The makes and types of fittings, materials, subject to the makes and type stipulated in the specifications, which he proposes to use in the work.
  - 9.3. The details of licenses granted to him and/or to professional qualified and/or licensed technical personnel on his staff who will be engaged on the work (and submit, if called for, the licenses for inspection by the Officer in charge in consultation with Engineer in charge).
  - 9.4. Only approved agencies/ skilled workers shall be deployed to carry out requisite specialized items of work. The Officer/ Engineer in charge's decision in consultation with Architect's/ in this regard shall be

binding to all the parties concerned.

10. The rates quoted in the bills of quantities shall unless specified otherwise will be for all heights, depths deemed to be for finished work in-situ/ item by item as provided for, and shall include cost for all necessary material and labours, all necessary tools and plants and machinery, sheds, marking out, clearing site, etc. and for all taxes, octroi, excise, VAT works contract and any other tax or duty levied by Government, Central or Local, Green Tax, ESI and PF. or Local Authority if any as applicable. The GST indicated separately, if any as applicable.
  - 10.1. The rates shall be firm and not be subject to any variations in exchange rates, in taxes, duties etc. in railway freight and the like including labour conditions, etc. The rates are not subject to escalation.
11. It will be the sole responsibility of the Contractor to procure all the equipments/ materials and other materials required for the work.
12. The iHub Anubhuti-IIITD Foundation further reserves the right to delete or reduce at any time, any section of the bills of quantities without assigning any reasons whatsoever there for and no claim will be entertained in this regard.
13. The tenderer whose tender is accepted is bound to execute formal agreement with the iHub Anubhuti-IIITD Foundation within one week of the date of intimation of award of work in accordance with the draft agreement which will include conditions of tender, form of tender (general conditions of contract for central PWD works 2010), Articles of Agreement, Bills of quantities, Conditions of contract, Special conditions if any, the drawings and specifications, but his liability under the contract shall commence from the date of written order to commence work whether the formal agreement is drawn or not.
14. The Contractor shall bear all expenses in connection with the execution of the said agreement including fees for stamping and registration of documents as required.
15. The Security Deposit will bear no interest whatsoever until the date of release.
16.
  - a) The Contractor, upon award of work, shall submit a memorandum of procedure giving the outline of his general scheme, programme and time table, in the form of a chart that shall be scrutinized and approved (with modifications as necessary), which shall become the approved programme for execution. The approved programme shall be the basis for assessment of comparative progress under the relevant conditions of contract.
  - (b). Over and above, the Contractor has to supply programme chalked out showing important milestones to be achieved and the progress actually achieved compared with, the target of the same in the programme and shortfall, if any planned for being made up in the programme for next month.
17.
  - (a) The work in general shall conform to the CPWD Specifications 2007 with up to date correction slips & any other latest civil specification published by CPWD, New Delhi and the "Specifications for works".
  - (b) In case items not covered by the general specifications referred above, reference shall be made to the appropriate I.S. Code.
  - (c) Should there be any difference in the particular specifications of individual item of work and the description of item as given in the Schedule of quantity, the latter shall prevail, which will be as per the relevant drawing.
  - (d), In case of any work for which there is no specification in I.S. specifications or in the specifications forming part of tender documents or in case there is any variation, such work shall be carried out in all respects in accordance with the instructions to be issued by the Engineer in charge.
18. On acceptance of the tender the Contractor shall in writing and at once inform the iHub Anubhuti-IIITD Foundation and the Architects the name of his accredited representative(s) who will be responsible to take instructions from the Architects / Officer in Charge.  
The work of any part of it shall not be transferred, assigned or sublet without the written consent of the iHub Anubhuti-IIITD Foundation.
19. The Contractor shall be required to co-operate and work in co-ordination with and afford reasonable facilities for such other agencies / specialists / interior designers / consultants as may be employed by the Architects / Project Management Consultant/ Officer in Charge on other works / sub-works in connection with the project/scheme of which this work forms a part.
20. The Contractor shall get the necessary insurance done for their personal employed/ company insurance, third party insurance, marine insurance, all risk insurance or any other insurance as required.
21. **The Contractor shall make arrangements of carrying water and electricity beyond one point where same shall be provided and recovery @1% of the cost of works shall be effected accordingly.**
22. The Contractor is required to comply with all Acts of Government relating to labour, safety, environment and other Rules and Regulations made there under from time to time and to submit at the proper times all particulars and statements required to be furnished to the appropriate Authorities.

**23. Delay and extension of time**

If in the opinion of the Architect/PMC/Owner the Work is delayed:

- a. By force majeure, or
  - b. By reason of any exceptionally inclement weather, or
  - c. By reason of proceedings taken or threatened by or dispute with adjoining or neighboring owners or public authorities arising otherwise than through the Contractor's own default, or
  - d. By the works or delays of other Contractor or tradesmen engaged or nominated by the Owner or the Architect/PMC and not referred to in the Schedule of Quantities and/or Specification, or
  - e. By reason of Architect's/PMC/Owner Instructions to delay work, or
  - f. By reason of civil commotion, local combination of workmen or strike or lock-out affecting any of the building traders, or
  - g. In consequence of the Contractor not having received in due time necessary Instructions from the Architect/PMC/Owner for which he shall have specifically applied in writing,
- b) Then the Architect/PMC/Owner shall make a fair and reasonable extension of time for completion of the Contract Work; in case of such strike or lock-out the Contractor shall, as soon as may be, give written notice thereof to the Architect/PMC/Owner, but the Contractor shall nevertheless constantly use his endeavors to prevent delay and shall do all that may reasonably be required to the satisfaction of the Architect to proceed with the work.

**24. Failure by Contractor to comply with Architect's Instructions**

If the Contractor after receipt of written notice from the Architect requiring compliance fails within ten days to comply with such further drawings and/ or Architect's Instructions the Owner with the consent of the Architect may employ and pay other persons to execute any such work whatsoever that may be necessary to give effect thereto, and all costs incurred in connection therewith shall be recoverable from the Contractor.

**25. Termination or Abridgment of Contract by the Owner**

- a) If the Contractor being an individual or a Firm commit any 'Act or Insolvency' or shall be adjudged an Insolvent or being an Incorporated Company or Society shall have an order for compulsory winding up made against it or pass an effective resolution for winding up voluntarily or subject to the supervision of the Court and of the Official Assignee of the Liquidator in such acts of insolvency or winding up shall be unable within seven days after notice to him requiring him to do so, to show to the reasonable satisfaction of the Architect that he is able to carry out and fulfill the Contract, and to give security therefore, if so required by the Architect, or
- b) If the Contractor (whether an individual, Firm, Incorporated Company or Society) shall suffer execution to be issued, or
- c) Shall suffer any payment under this Contract to be attached by or on behalf of any or the creditors of the Contractor, or
- d) Shall assign or sublet this Contract without the consent in writing of the Architect/PMC first obtained, or
- e) Shall charge or encumber this Contract or any payments due or which may become due to the Contractor there under, or
- f) If the Architect/PMC shall certify in writing to the Owner that the Contractor:
  - i. Has abandoned the Contract, or
  - ii. Has failed to commence the works, or has without any lawful excuse under these Conditions suspended the progress of the works for 14 days after receiving from the Architect/PMC/Owner written notice to proceed, or
  - iii. Has failed to proceed with the works with such due diligence and failed to make such due progress as would enable the works to be completed within the time agreed upon, or
  - iv. Has failed to remove materials from the site or to pull down and replace work for seven days after receiving from the Architect written notice the said materials or work were condemned and rejected by the Architect under these conditions, or
  - v. Has neglected or failed persistently to observe and perform all or any of the acts, matters or things by this Contract to be observed and performed by the Contractor for seven days after written notice shall have been given to the Contractor requiring the Contractor to observe or perform the same, or
  - vi. Has to the detriment of good workmanship or in defiance of the Architect's/PMC Instructions to the contrary sublet any part of the Contract,

26. Then and in any of the said cases the Owner with the written consent of the Architect/PMC may, notwithstanding any previous waiver, after giving seven days' notice in writing to the Contractor, determine the Contract, but without hereby affecting the powers of the Architect or the obligations and liabilities of the Contract the whole of which shall continue in force as fully as if the Contract had not been so determined and as if the works subsequently executed had been executed by or on behalf of the Contractor. The costs of these works are therefore recoverable from the Contractor. And further, the Owner under instructions of the Architect, by his Agents or servants may enter upon and take possession of the works and all plants, tools, scaffolding, sheds, machinery, steam and other power utensils and materials lying upon the premises or the adjoining lands or roads, and use the same as his own property or may employ the same by means of his own servants and workmen in carrying on and completing the works or by employing any other Contractor or other person or persons to complete the Work, and the Contractor shall not in any way interrupt or do any act, matter or thing to prevent or hinder such other Contractor or other person or persons employed for completing and finishing or using the materials and plant for the Work. When the Work shall be completed or as soon thereafter as convenient the Architect shall give a notice in writing to the Contractor to remove his surplus materials and plant, and should the Contractor fail to do so within a period of 14 days after receipt thereof by him, Owner shall sell the same, and shall give credit to the Contractor for the amount realized. The Architect shall thereafter ascertain and certify in writing

what (if anything) shall be due or payable to or by the Owner for the value of the said plant and materials so taken possession of by the Owner and the expense or loss which the Owner shall have been put to in procuring the works to be completed, and the amount, if any, owing to the Contractor and the amount which shall be so certified shall thereupon be paid by the Owner to the Contractor or by the Contractor to the Owner, as the case may be, and the certificate of the Architect shall be final and conclusive between the parties.

27. If at any time after the commencement of the work the Owner shall for any reason whatsoever not require the whole thereof, as specified in the tender, to be carried out, but need to abridge the Contract, the Owner shall give notice in writing of the fact to the Contractor who shall have no claim to any payment or compensation which he might have derived from the execution of the work in full, but which he did not derive in consequence of the whole amount of the work not having been carried out. The Contractor shall in this case, however, be entitled to payment for the work already executed by him in accordance with the agreed rates. The Owner shall also take over all building materials as might have been ordered for the work, but orders for which cannot be canceled, if delivered within a reasonable time, and shall pay for them at cost price. The Contractor shall also be allowed to remove his tools and plants from the site.
- 28. Termination of Contract by Contractor**
- a) If payment of the amount payable by the Owner under Certificate of the Architect /PMC for beyond two months from date of issue of certificate due to reason not attributable to the Contractor.
  - b) The Owner commits any 'Act of Insolvency', or
  - c) If the Owner (being an individual, or firm) shall be adjudged an Insolvent, or (being an Incorporated Company or Society) shall have an order made against him or pass an effective resolution for winding up, either compulsorily or subject to the supervision of the Court or voluntarily, or if the Officials Assignee or the Owner shall repudiate the contract, or if the Official Assignee or the Liquidator in any such winding up shall be unable within fifteen days after notice to him requiring him so to do, to show to the reasonable satisfaction of the Contractor that he is able to carry out and fulfill the Contract and to make all payments due, and to become due there under and, if required by the Contractor, to give security of the same, or
  - d) If the works be stopped for three months or more under a continuous spell under the order of the Architect /PMC or the Owner or by any injunction or other order of any Court of Law,
29. Then and in any of the above said (Clause 28) cases the Contractor shall be at liberty to determine the Contract by notice in writing to the Owner, through the Architect, and he shall be entitled to recover from the Owner payment for all works executed and cost of the material supplied and lying at site for the purpose of the Contract as on the said day of the termination. No other claim for idle labour, loss of overheads, profits shall be entertained nor shall any other claim on account of the delay in completion of the work /availability of site/ unwarranted conditions whatsoever shall be tenable, even if it is caused by circumstances beyond the Contractor's control.

### **30. Procedure for Settlement of Disputes**

#### **30.1 Engineer's Decision**

If a dispute of any kind whatsoever arises between iHub Anubhuti-IIITD Foundation IIIT-Delhi and the Contractor in connection with, or arising out of, the contract or the execution of the works, whether during the execution of the works or after their completion and whether before or after any repudiation or other termination of the contract, including any dispute as to any opinion, instruction, determination, certificate or valuation of the engineer, the matter in dispute shall, in the first place, be referred in writing to the engineer, with a copy to all parties. Such reference shall be made within one (1) month of arising of any such dispute and state that it is made pursuant to this clause. No later than one (1) month after the day on which he received such reference the engineer shall give notice of his decision to IIIT-Delhi and the Contractor. Such decision shall state that it is made pursuant to the reference under this clause.

Unless the contract has already been repudiated or terminated, the Contractor shall in every case, continue to proceed with the works with all due diligence and the Contractor and IIIT-Delhi shall give effect forthwith to any / every such decision of the engineer unless and until the same shall be revised, as hereinafter provided, in an amicable settlement or an arbitral award. If either IIIT-Delhi or the Contractor be dissatisfied with any decision of the engineer, or if the engineer fails to give notice of his decision on or before one (1) month after the day on which he received the reference, then either IIIT-Delhi or the Contractor may within a further period of one (1) month from the day on which it / they receive(s) the notice of such decision, or on the day on which the said period of notice of / for decision expired, as the case may be, give notice to the other party, with copy for information to the engineer, of its / their intention to commence arbitration. Such notice shall establish the entitlement of the party giving the same to commence arbitration, as hereinafter provided, as to such dispute and no arbitration in respect thereof may be commenced unless such notice is given. If the engineer has given notice of his decision as to a matter in dispute to IIIT-Delhi and the Contractor and no notification of intention to commence arbitration as to such dispute has been given by either IIIT-Delhi or the Contractor as herein provided, the said decision shall become final and binding upon IIIT-Delhi and the Contractor.

#### **30.2. Amicable Settlement**



Where notice of intention to commence arbitration as to a dispute has been given in accordance with sub-clause 22.1, arbitration of such dispute shall not be commenced unless an attempt has first been made by the parties to settle such dispute amicably. Provided that, unless the parties otherwise agree, arbitration may be commenced on or after one (1) month from the day on which notice of intention to commence arbitration of such dispute was given, whether or not any attempt at amicable settlement thereof has been made or result achieved.

**30.3. Arbitration**

Any dispute in respect of which:

- a) the decision, if any, of the engineer has not become final and binding pursuant to the first sub-clause above,
- b) amicable settlement has not been reached within the period stated in the second sub-clause above, shall be finally settled, unless otherwise specified in the contract, by arbitration to be held in New Delhi in English, under the provisions of the Arbitration and Conciliation Act 1996, including any statutory reenactment(s) / amendment(s) thereof and Rules made thereunder, by the arbitrator. The Director of the Institute shall appoint one person as the sole arbitrator. Either party shall be limited in the proceeding before such arbitrator to evidence or arguments put before the engineer for the purposes of obtaining the said decision pursuant to the first sub-clause herein. No such decision shall disqualify the engineer from being called as a witness and giving evidence before the arbitrator on any matter whatsoever relevant to the dispute. Arbitration proceedings shall not be commenced prior to the completion of the works, unless any major pre-requisite criticality is discerned by the arbitrator, and the obligations of IIIT-Delhi, the engineer and the Contractor shall not be altered by reason of the arbitration. The works shall not be stopped on account of the said process of arbitration and the Contractor shall not be relieved of his responsibilities for the completion of the work under any circumstances whatsoever.

**31.2. Contractor to provide everything necessary**

The Contractor shall provide everything necessary for the proper execution of the Work according to the intent and meaning of the Drawings, Schedule of Quantities and Specifications taken together whether the same may or may not be particularly shown or described therein provided that the same can reasonably be inferred there from, and if the Contractor finds any discrepancy in the Drawings or between the Drawings, Schedule of Quantities and Specification he shall immediately and in writing refer the same to the Architect who shall decide which is to be followed.

**31.3. Materials and Workmanship to conform to Descriptions**

All materials and workmanship shall so far as procurable be of the respective kinds described in the Schedule of Quantities and/or Specification and in accordance with the Architect's Instructions, and the Contractor shall upon the request of the Architect furnish him with all invoices, accounts, receipts and other vouchers to prove that the materials comply therewith. The Contractor shall at his own cost arrange for and/or carry out any test of any materials which the Architect may require.

**31.4. Assignment and Sub-letting**

The whole of the works included in the Contract shall be executed by the Contractor and the Contractor shall not directly or indirectly transfer, assign or underlet the Contract or any part share thereof or interest therein without the written consent of the Architect, and no undertaking shall relieve the Contractor from the full and entire responsibility of the Contract or from active superintendence of the Work during its progress.

**31.5. Removal of improper work**

The Architect shall, during the progress of the Work, have the power to order the removal, from the Site or works within such reasonable time or times as may be specified in the order, of any materials which in the opinion of the Architect are not in accordance with the Specification or the Instructions of the Architect, the substitution of proper materials, and the removal and proper re-execution of any works executed with materials or workmanship not in accordance with the Drawings, Specifications or Instructions and the Contractor shall forthwith carry out such order at his own cost. In case of default on the part of the Contractor to carry out such order, the Owner shall have the power to employ and pay other persons to carry out the same, and all expenses consumed thereon or incidental thereto as certified by the Architect shall be borne by the Contractor, or may be deducted by the Owner from any moneys due or that may become due to the Contractor.

## 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 Tender 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 CONTRACTOR S-** The Contractor shall, in accordance with the requirements of the PROJECT MANAGER and the ARCHITECTS, afford all reasonable facilities to other Contractor s 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 Sub Contractor 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 Contractor s, 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 itemized 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 CONTRACTOR S, 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-Contractor s. 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**

#### **1. 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.

#### **2. 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.

#### **3. 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.

#### **4. 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.

- 5. 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.
- 6. 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.
- 7. 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.
- 8. 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.
- 9. 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.
- 10. 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.
- 11. 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.
- 12. 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.
- 13. 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.
- 14. TESTING OF MATERIALS**

If at any time before finalization 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.

**15. 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.

**16. SITE STORAGE OF MATERIALS**

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

**17. 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.

**18. COORDINATING WORK AND APPROVALS**

Structural services and architectural drawings shall be properly coordinated 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.

**19. 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 Contractor's own cost and within the time specified by the Project Manager.

**20. 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.

**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.

- a. 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".

- b. 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-Contractor s in connection with the said work as if the labourers had been immediately employed by him.
- c. 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-Contractor s 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.



### ADDITIONAL CONDITIONS

1. General conditions of contract for Central PWD Works 7/8 (Tender of Form) shall be part of the agreement.
2. The work shall be carried out strictly as per CPWD specifications 2007, Part I & II with up to date correction slips. Wherever no specification is available in the above said document, drawings and specifications supplied with bill of quantities shall be applicable.
3. The Contractor shall have to clear the site for the work of all overlying rubbish /garbage/dumped refuse material prior to commencement of the work in case required at no extra cost. The Contractor shall take approval from the Engineer /Officer in Charge in writing for collection and stacking of materials.
4. The Contractor must follow CPWD Safety Code as provided in general conditions of contract for CPWD Works.
5. Any damage done by the Contractor or his workmen to any existing work during the course of execution of the work shall be made good by him at his own cost.
6. Contractor shall clear the site thoroughly of all rubbish etc. left out of his materials immediately on completion of the work and properly keep the site clean around the building to the satisfaction of the Engineer- in-Charge.
7. The preference of the codes will be IS codes.
8. The rates are inclusive of all staging, material and labour as required for the works. The items in the bill of quantities include all the materials, labour, and installation, complete as a finish items unless otherwise stated.
9. Unless specifically mentioned otherwise, quoted Rates shall be deemed to include work to be carried out at all curvatures, heights, depths, inclinations and locations, and in wet/foul locations, as and when they are encountered. The rates quoted for the various works as specified in the Priced Schedule of Quantities are work in all types of soils/rock and prevailing Site conditions including earth work, excavation, shoring, execution of various other items of work, i.e., laying of pipes, joining, concreting, masonry, plastering, etc. in and under water and dewatering as required. Nothing extra is payable on this account.
10. All security precautions shall be taken during dismantling work. The site shall be fenced /barricaded with suitable material during construction period. No payment shall be made for fencing/barricading work. Fencing/barricading shall be done immediately after possession of site and shall be removed after completion of construction period
11. No space on site/otherwise for labour huts shall be provided by iHub Anubhuti-IIITD Foundation, cost of same shall be borne by Contractor.
12. The general condition of contract for Central P.W.D. Works has reference of various laws /acts /rules. The settlement of any disputes and arbitration, only Indian arbitration and conciliation act 1996 shall be applicable.
13. In case any specific brand of material has been specified either the same brand or of approved make of same specifications shall be used. The Contractor shall take approval in advance for all such materials.
14. Costs for all materials and labour for the preparation of samples, market research, etc. shall be borne by the Contractor within his quoted Rates and nothing extra shall be payable for this. The works shall not be proceeded with without approval of the sample. In case sample is rejected and works cannot be proceeded with the IIITD shall be at liberty to terminate the contract and the Contractor shall have no claim for the works under such circumstances whatsoever.
15. The Contractor should take utmost care to avoid any damage to the existing flooring, electrical works/cables, telephone cables, false ceiling, sprinkler system, fire alarm etc. in place. In case of any damage, it would be the responsibility of the Contractor to restore the same immediately.

#### CORRIGENDUM TO FORM 7/ 8 / 9 (CPWD) MUST BE READ ALONG WITH THE PAMPHLET

S.No	FOR	READ
1	Government of India/Owner	iHub Anubhuti-IIITD Foundation
2	C.P.W.D. or Government or Department	iHub Anubhuti-IIITD Foundation
3	CPWD -7/8/9	CPWD 7/8/9
4	President / President of India	Chairman, iHub Anubhuti-IIITD Foundation
5	Chief-Engineer	CEO, iHub Anubhuti-IIITD Foundation
6	Superintending Engineer	Engineer-in-Charge
7	Administration Head	CEO, iHub Anubhuti-IIITD Foundation
8	CPWD Code, Paragraph '90	Shall be applicable to iHub Anubhuti-IIITD Foundation works
9	DSR'2007	Shall be applicable to iHub Anubhuti-IIITD Foundation works

iHub Anubhuti-IIITD Foundation, Delhi

10	CPWD specifications 2007 part - I & II	Shall be applicable to iHub Anubhuti-IIITD Foundation works
11	DSR (Internal) 2007 for Electrical works	Shall be applicable to iHub Anubhuti-IIITD Foundation works
12	CPWD specifications (Internal) 2007 for Electrical works	Shall be applicable to iHub Anubhuti-IIITD Foundation works
13	DSR External 2007 for Electrical works and specifications	Shall be applicable to iHub Anubhuti-IIITD Foundation works
14	Provision of Section 12 Sub-Section (i) of the works man compensation	Shall be applicable to iHub Anubhuti-IIITD Foundation works
15	CPWD safety Code framed from time to time	Shall be applicable to iHub Anubhuti-IIITD Foundation works
16	CPWD maternity benefits to labour	Shall be applicable to iHub Anubhuti-IIITD Foundation works
17	Model Rules of the protection of health and sanitary appointment for workers employed by CPWD	Shall be applicable to iHub Anubhuti-IIITD Foundation works
18	CPWD Contractor labour Regulations	Shall be applicable to iHub Anubhuti-IIITD Foundation works

## SPECIFICATIONS

### 1. GENERAL

1.1. Without forgoing the requirements of the conditions of Tender and the Conditions of Contract the works in general shall conform to the "Specifications 2007" published by CPWD, New Delhi and the "Specifications for works" stated in this tender. In case items not covered by the general specifications referred above, reference shall be made to the appropriate I.S. Codes. If there is any difference in the particular specifications of individual item of work and the description of item as given in the Schedule of quantity, the latter shall prevail. In case of any work for which there is no specification in I.S. specifications in the specifications forming part of tender documents or in case there is any variation, such work shall be carried out in all respects in accordance with the instructions to be issued by the Engineer-in-charge. The term Officer in Charge appearing in the specifications shall mean supervisor and be in Charge of the work or his authorized representative as the context may demand. All corrections to "Specifications 2007" or latest revisions of I.S. Code/ Specification shall be deemed to apply to this contract.

- 1.1.1. Materials bearing ISI certification mark certification shall be given highest preference for use in the works. Where the Contractor is required to do, perform, execute (etc.) any work or service or the like, it shall be deemed to be at his own cost. Absence of terms providing, Supplying, installing, fixing, etc. shall not even remotely entitle the Contractor to any additional payment there for
- 1.1.2. The rates accepted in the Schedule of Quantities apply to all floors, heights, depths, leads, lifts, spans, sizes, shapes, locations, etc. unless a distinction has been included in the very Schedule.
- 1.1.3. The Specifications and the Schedules may have been divided into various sub-heads for convenience only. This does not limit applicability of one to the other nor does it absolve the Contractor of his responsibility to complete any trade / item of work as reasonably inferred from one or more of such sub-heads.
- 1.1.4. The Schedule of Quantities is not necessarily based on "Schedule of Rates - Delhi 2007 or any of its later/ earlier versions. Hence the Schedule of Quantities shall be read and construed according to explanations given herein and intentions gathered there from. A mere parallel drawn from the said Schedule of Rates shall therefore not form a basis for a variation and, or additional payment.
- 1.1.5. All work under this contract is deemed to be performed above subs soil water level. However, removal of water collected from rains and the like shall be treated as part of contractual risk/obligation.
- 1.1.6. Screws, bolts, nuts, washers, hold fasts, lugs, anchors, clamps, plugs, suspenders, brackets, straps and fasteners of the like are deemed to be included in the rates of various items unless the Schedule of Quantities expressed a different intention.
- 1.1.7. Resetting any displacements, making good holes/chases and such other incidental jobs are included in rates of respective items for which these are required.

### 2. DRAWINGS, SPECIFICATIONS, INTERPRETATIONS ETC.

In general, drawings shall indicate the dimensions, positions and type of construction, the specifications shall stipulate the qualities and the methods and performance criteria, and the schedule of quantities shall indicate the provisional quantities and the rates for each item of work. However, the above documents being complementary, what is called for by any one shall be as binding as if called for by all. In case of contradictory requirements between specifications and schedule of quantities, the requirements given in the schedule of quantities shall prevail.

Special conditions being mainly an amplification of General Conditions, they shall be read in conjunction with each other.

Work indicated on the drawings and not mentioned in the schedule of quantities or specifications or vice versa, shall be deemed as though fully set forth in each. Work not specifically detailed, called for, marked or specified, shall be the same as similar parts that are detailed, marked or specified.

#### Special Note

**Though every care is taken while preparing this document to cover all necessary matters, specifications, general conditions, special conditions, provisions for smooth and complete execution of work, however in case of any omission in the tender/ contract document, latest correction slips of general conditions of contract for CPWD Works 2020 will be the reference manual but not in supersession to aforesaid conditions.**

**AGREEMENT**

AN AGREEMENT is made this -----BETWEEN the  
\_\_\_\_\_, and with its registered office at  
\_\_\_\_\_, which expression shall include its successor, unless repugnant to or  
Excluded by the contract here of and assignees of and represented by its CEO, iHub Anubhuti-IIITD  
Foundation the first party (hereinafter called the Authority) and by its  
sole proprietor/partners/Director.of M/s -----and having registered  
office at ----- (which expression shall be including his / its successor's heirs, executors,  
representative and or assignees of the second party (hereinafter called the contractor}).

WHEREAS the Authority has, under tender Notification No. -----

WHEREAS the contractor has submitted tender for carrying out the work as above as per the tender  
document page ---- to ----- and has represented that in conformity with his / its obligation contained in the  
tender as modified by the correction slips and corrigendum contained he / it shall carryout the same truly,  
faithfully and honestly.

THE SAME has been accepted by both the parties on the terms and conditions, corrections, corrigendum  
contained in the tender as modified as well as the letter of acceptance Issued party No.1 annexed here to as.

The same shall be binding on both the parties.

IN WITNESS WHEREOF, the parties have signed the deed of agreement on the date, month and year  
referred to above.

Date: At New Delhi.

Signed by

Party No.1 Party No.2

WITNESS

1. Party No.1

2. Party No.2

**GENERAL INSTRUCTIONS FOR THE SELF ATTESTED DECLARATION:**

I, \_\_\_\_\_, aged \_\_\_ years, son/daughter of \_\_\_\_\_, presently residing at \_\_\_\_\_ and authorized by \_\_\_\_\_ (name of tenderer) (“Tenderer”) to solemn this affidavit on behalf of the Tenderer, solemnly affirm on oath as hereunder:

1. The Tenderer confirms that eligible similar works(s) have not been got executed through another contractor on back to back basis.
2. The Tenderer confirms and agrees that, if any such violation comes to the notice of CEO, iHub Anubhuti-IIITD Foundation (“Owner”), then the Owner shall be at liberty to initiate appropriate penal and legal action against the Tenderer.
3. The Tenderer confirms and agrees that if such a violation comes to the notice of the Owner at any time before the date of start of Work, the engineer-in-charge shall be free to forfeit the entire amount of Earnest Money Deposit/Performance Guarantee.

DEPONE  
NT  
VERIFIC  
ATION

I, \_\_\_\_\_, aged \_\_\_ years, son/daughter of \_\_\_\_\_, presently residing at \_\_\_\_\_ and authorized by Tenderer verify that the information mentioned above is true and correct to the best of my knowledge and belief.

DEPONENT

FORM

GENERAL INSTRUCTIONS FOR THE SELF ATTESTED DECLARATION FOR SITE VISIT

I, \_\_\_\_\_, aged \_\_\_ years, son/daughter of \_\_\_\_\_, presently residing at \_\_\_\_\_ and authorized by \_\_\_\_\_ (name of tenderer) (“Tenderer”) to solemn this affidavit on behalf of the Tenderer, solemnly affirm on oath as hereunder:

1. The Tenderer confirms that the Tenderer has duly undertaken the visit of the proposed project site of Indraprastha Institute of Information Technology Delhi located at Okhla-III, Delhi.
2. The Tenderer has inspected and examined its surroundings and has satisfied itself about the site conditions and site logistics. The Tenderer confirms that it is aware of the ground conditions and nature of the site, means of access to the site and the accommodation area required for establishing the labour camp. The Tenderer agrees and confirms it shall be solely responsible for arranging and maintaining the afore-mentioned at its own cost including all materials, tools & plants, water, electricity, access, facilities for workers and all other services required for executing the Work unless otherwise specifically provided for in the contract documents.
3. The Tenderer confirms and agrees that the submission of the tender implies that the requisite site visit has already been undertaken and that the Tenderer has acquainted itself with the local conditions and other factors having a bearing on the execution of the Work.

DEPONENT

VERIFICATION

I, \_\_\_\_\_, aged \_\_\_ years, son/daughter of \_\_\_\_\_, presently residing at \_\_\_\_\_ and authorized by Tenderer verify that the information mentioned above is true and correct to the best of my knowledge and belief.

DEPONENT

**LIST OF APPROVED MAKES****CIVIL FINISHES**

1	Cement 43 / 53 Grade	ACC/ Birla / Ultratech/or approved equivalent
2	Sand	Good quality M sand & P.sand.
3	Red Brick	Good quality wire-cut bricks.
4	Reinforcement Steel - Fe550	TATA/ Sail/ JSW
5	Structural Steel	TATA/ Sail/ VISL
6	Marble	First quality imported type or approved equivalent
7	Granite Slab (Gang Saw Cut)	First quality, Water-cut type or approved equivalent
8	Engineered Stone	AGL/as Slection
9	Vitrified Tiles	RAK/ Kajaria/Orient or approved equivalent
10	Imported Solid Acrylic Surfaces	Du-Pont LG/Marino/ Rheau/or approved equivalent
11	Water Proofing Compound	Roffe/ Fosroc/ Ardex Endura/ Pidilite/ Basf or approved equivalent
12	Water Repellant Sealer Chemicals	Laticrete/ Adrex Endura/ Hi-tech or approved equivalent
13	Tile Grout (Epoxy/ Polymer)	Laticrete/ Adrex Endura/ Kerakoll
14	PVC Spacers/ Corner Beadings	Arpitha Exports/ Catex Specialities Building/ BOSS/or approved equivalent
15	Putty for All Painting works	JK/ Birla/or approved equivalent
16	Paints, Primers & Emulsions	Asian/ Jotun/ Berger/ Nerolac
17	Epoxy based Paint	Jotun/ Asian/ Berger/ or approved equivalent make
18	White Cement	JK White/ Birla Super white
19	Self-Levelling Compound	Roffe/ Fosroc/ Ardex Endura/ Basif/ Pidilite/or approved equivalent
20	Vinyl/ Antistatic Floor	Gerflor/ Tarkett/ LG/or approved equivalent
21	Plywood	Centuryply/ Greenply/ Archid or approved equivalent
22	Pre-laminated Plywood	Centuryply/ Greenply or approved equivalent
23	MDF/ HDF - External Grade (HMR)	Action Tesa/ Asia/ Dura Tuff/ Green Panelex or approved equivalent
24	Pre-laminated MDF (External Grade)	Action Tesa/ Asia/ Dura Tuff/ Green Panelex or approved equivalent
25	Fluted Panels	Action Tesa/ Polywood or equivalent make
26	Laminate	Century Laminates/ Merino/ Greenlam/ or approved equivalent
27	Laminate (0.8/1.0mm thk) Internal & Under side of counter applications	Century Laminates/ Merino/ Greenlam/ Archid/ Stylam
28	Anchor Fasteners/ PVC & Metal Plugs	Hilti/ Fischer/ Wourth Group or approved equivalent

29	Aluminium Sections	Jindal/ Bhoruka/ Hindalco
30	MS Frame Sections	Jindal/ TATA
31	Stainless Steel Hinges - Storages	Kich/Hettich/Ozone or approved equivalent
32	Stainless Steel Telescopic Channels - Storages	Kich/Hettich/Ozone or approved equivalent
33	Locks - Storages	Kich/Hettich/Ozone or approved equivalent
34	Handles - Storages	Kich/Hettich/Ozone or approved equivalent
35	Glass/ Mirror	Saint Gobain/ Asahi/ Modi or approved equivalent
36	Etching, Frosting Film, Vinyl sheets/ Graphics	3M/ Avery or approved equivalent
37	PVC Edge Lipping	REHAU or approved equivalent
38	Slotted Angle Racks/ Modular Lockers	Godrej/ Svil/ Pan Office system/ Steelage
39	Adhesives	Fevicol/ Araldite or approved equivalent
40	Screws	Nettle fold (GKW)/ Patta make or approved equivalent
41	Silicone Sealant	Dowcorning
42	Indian Fabric	Response/ Seasons/ D'Décor/ Atmosphere/ Petals/ Sarom or approved equivalent
43	Leatherette	Sarom/ Stanley/ D'Décor/ Bently/ Jindal or approved equivalent
44	Stainless Steel Sink	AMC/ Nirali/ Diamond/Jayna or approved equivalent
45	Modular Aluminium Door Sections	Jeb/ Apton/ Likos or approved equivalent
46	Gypsum Board Partition Framing Sections	Saint Gobain/ Knauf India
47	Gypsum Board for Partition	Saint Gobain/ Knauf India
48	Wood Wool Board	Anutone/ Knauf/ Nishabad or approved equivalent make
49	Modular Toilet Cubicles	Marino or approved equivalent
50	Glass Manet Fittings	Dorma/ Geze or approved equivalent
51	Door Closures/ Floor Springs	Kich/Dorma/ Geze/ Hafele/ Assa Abloy or approved equivalent
52	Flush Doors	Marino/ Greenply/ Archid or approved equivalent



53	Stainless Steel Hinges - Doors	Kich / Hafele/ Dorma/ Geze/ Assa Abloy or approved equivalent
54	Locks - Doors	Kich/Dorma/ Geze/ Hettich/ Blum/ Lockwood/ Assa Abloy/ Europa
55	Handles - Doors	Kich/Dorma/ Geze/ Assa Abloy/ Hafele
56	UPVC Windows	Kommerling /Fenesta/ NCL Veka or approved equivalent
57	304/316 Grade Brushed Stainless Steel	Salem Steel or approved equivalent
58	Powder Coating Paint/ Vapour Cure powder	MRF/ Marpol/ Berger
59	Gypsum Board - False Ceiling Suspension Systems	Saint Gobain - Gyproc/ Knauf India
60	Gypsum Board for False Ceiling	Saint Gobain - Gyproc/ Knauf India
61	Calcium Silicate Board - False Ceiling Suspension Systems	Hilux - Ramco Industries Ltd/ USG Boral
62	Calcium Silicate Board for False Ceiling	Hilux - Ramco Industries Ltd/ USG Boral
63	Grid Ceiling	Saint Gobain - Gyproc/ Knauf India/ Armstrong
64	Imported Wallpaper	Mayaramanoff/ Muraspec/ Newmor/ Lintex/ Vescom or approved equivalent make
65	Digital Printed Vinyl	3M/ Avery
66	Pre-printed Vinyl Film	3M/ Dinoc/ LG or
67	Acrylic Board	Acrylite/ Lucite/ Perspex
68	UPVC Wall Guard	Inpro/ RD Plast/Caredle/ Gradus/ Acrovyn or approved make
69	Curtain Tracks	RD Plast /Caredle/Walltracts, Grorich Horivert, Hunter Douglas
70	Blind Fabric	Fifer/Sunrise or approved make
71	Blinds	Vista/Livin or approved make
72	Felt	Buzzi/ Ekos(Bene)/ Echopanel/ Tranquil
73	Ceramic Writing Board	Whitemark/ Alkosign or approved make
74	Floor Mat	3M or approved make
75	Rug	Hands/ Soulcraft or approved make
76	PVC Wall Guard	Inpro/ RD Plast/ Pinger or approved make
77	Medical Curtain	RD Plast

<b>Structural</b>		
<b>S. No.</b>	<b>Material</b>	<b>Makes</b>
1	Chlorpyriphios	DE-NOCIL, Cynamide
2	TMT Fe 500	SAIL, TISCO, RINL, JINDAL, TATA
3	RMC	RMC India, Birla ready mix, Lafarge, Ultratech
4	Structural Sealant	Wacker, Dow Corning, GE
5	Structural steel	SAIL, TISCO, RINL, JINDAL, TATA
6	M.S. Pipe, Tubes, Bar, Flats, Angle, Tee Sections	SAIL, TISCO, Avon, Apollo, Surya, Jindal, RINL
7	Concrete Admixture / Micro Materials	Alccofine / Fosroc / CICO / Micro Silica
8	Polysulphide sealant	Pidilite, Chemetall-Rai
9	Cement (OPC) - 43 grade	Ambuja, Birla, Ultratech, L&T, Lafarge, ACC
10	Polyethylene back up rod	Supreme Ind. Ltd., or approved equivalent
11	PVC water stoper	Fixopan, Sintex, Sikka or approved equivalent
12	White Cement	Birla, J.K., Asian
13	Water proofing cement paint	CICO, Pidilite, Laticrete, Dr. Chougule, Penetron or approved equivalent
14	Fire Retardant paint	Viper or approved equivalent
15	Wax polish	Mansion or approved equivalent
16	Epoxy	Fosroc, STP, CICO
17	APP Polymeric Polyethylene Felt	Texsa, BITUMAT, STP or approved equivalent
18	Expanded Polystyrene (Thermocole)	Beardshell or approved equivalent
19	Extruded Polystyrene	Sikka, Iso board ND or approved equivalent
20	Hessian Based Felt	Texsa, BITUMAT, STP or approved equivalent
21	Chequered Precast Cement concrete tile	Nitco, Unitile or approved equivalent
22	Commercial Quality White Glazed Ceramic tiles	Orient or approved equivalent
23	PVC Strips	Fixopan or approved equivalent
24	Geotextile Fabric	Texa, Netlon, Ca Polyteck Pvt. Ltd or approved equivalent
25	UPVC Pipe	Finolex Industries Ltd, or approved equivalent
27	Welding rod	Adani or approved equivalent
28	MS Black enameled / galvanized ERW conduits	AKG, BEC, Steelkraft
30	AAC Block works	Ultratech, J.K., ACC or approved equivalent
31	Steel Fire Door	Shakti Met, Promat or approved equivalent
32	Non Metallic Fire Door	Navir, Promat or approved equivalent
34	Fire Door Hardware	Viper or approved equivalent

## **ELECTRICAL**

<b>S.No.</b>	<b>Items Description</b>	<b>Approved Makes</b>
	Electrical Works	
<b>1</b>	<b>Wiring</b>	
1.1	MS conduits ISI embossed black enameled /galvanized (G.I)	AKG, BEC, NIC
1.2	Galvanized steel flexible PVC conduit	Finolex, BEC, Trinity Touch, AKG
1.3	MS/GI Conduit accessories superior type as per approved samples	Sharma Sales Corpn., Super Sales Corpn, Rama Sales Corp
1.4	PVC flexible conduit and accessories	Finolex, BEC, Trinity Touch
1.5	PVC rigid conduit and accessories ISI embossed	AKG, BEC
1.6	PVC insulated FRLS stranded copper conductor wires	Finolex, Polycab, RR Cables, KEI

S.No.	Items Description	Approved Makes
1.7	PVC insulated FRLS copper conductor Low leakage wires	Fusion Polymer
1.8	MS/G.I Raceways and its accessories.	Aditya, BEC, Pilco, Slotco, MEM, Indeana Engineering
<b>2</b>	<b>Wiring accessories</b>	
2.1	Modular grid plate wiring accessories (switches, socket outlets bells etc.) with boxes.	For Switches/Sockets on UPS Supply, ' UPS ' to be engraved ABB Classiq Lumina , MK, Legrand, North West
2.2	Metal clad Socket Outlets with boxes	ABB/Legrand/Schneider
2.3	Under floor junction boxes and cable management system	Legrand
2.4	Weather proof Industrial plugs and sockets (IP 65 / 66)	Legrand, Neptune, Clipsal, Schneider
2.5	Extension Power strip with universal sockets Desk mounted outlet boxes	-
2.6	Rack mounted outlet PDV's	-
2.7	Polycarbonate Junction Boxes	Hensel , Clipsal
2.8	Ceiling Fan	Orient, Usha, Havells
2.9	Light Fixtures	Philips, Wipro, Havells
<b>3</b>	<b>LT Distribution equipments</b>	
3.1	MCB's/RCCB's	ABB, Schneider, Hager, L&T, Legrand
3.2	Earth leakage circuit breaker	ABB, Schneider, Hager
3.3	Timers in Distribution Boards	-
3.4	Distribution Boards	ABB, Schneider, Hager
3.5	Moulded Case Circuit Breakers, Motor protection circuit breaker	ABB, Schneider, Hager
3.6	Switch Fuse units and Isolator	ABB, Schneider, Siemens
3.7	Change over switch / Isolators	HPL Socomec
3.8	Power/auxiliary, Capacitor control Contactors, overload relays	ABB,L&T
3.9	Single phase preventer, overload relays	ABB,L&T,Schneider
3.10	Air Circuit Breaker	ABB Emax,Schneider MG Master Pact NW
3.11	Protection relays electromechanical	ABB,Siemens, L&T, Legrand
3.12	Protection Relays Numeric	ABB,Siemens
3.13	APFC relay 3 phase	ABB,L&T,Siemens
3.14	MPP heavy duty Capacitors	L&T,Mehar,Schneider
3.15	Current Transformer	Gillbert & Maxwell, Precise, AE, Kappa,
3.16	Control / Potential Transformer	Gillbert & Maxwell, Precise, AE, Kappa,
3.17	Push Buttons, Indicating lamps LED	L & T (Esbee), Vaishno, Teknik,Scneider Electric ( MG)
3.18	Selector switches`	L & T Salzer, Kaycee
3.19	Instruments – analogue	L&T (Rishab), AE
3.20	Digital energy meter	Conzerv, Neptune,
3.21	Power and harmonic analyzer	Conzerv, Neptune
3.22	Programmable Logic Controller (PLC)	Allen Bradley, Siemens
3.23	Components for non compartmentalized LT Switch Board	Tricolite,adlec / Milestone / Neptune/ Conquerent Control System Pvt. Ltd./ Application Control Pvt Ltd./ Control Wel Switchgear Pvt Ltd.
3.24	LT switchboards , Feeder pilar panel	Tricolite,adlec / Milestone / Neptune/ Conquerent Control System Pvt. Ltd./ Application Control Pvt Ltd./ Control Wel Switchgear Pvt Ltd.
3.25	Main LT Switch boards,PLC Panels,Capacitor Panel	Tricolite,adlec / Milestone / Neptune/ Conquerent Control System Pvt. Ltd./ Application Control Pvt Ltd./ Control Wel Switchgear Pvt Ltd.
3.26	Dry type CO2 flooding system for Main L.T. Panels.	Fire Pro, SVS Buildwell, Pyroguard, Southern Electronics, Firemech

S.No.	Items Description	Approved Makes
<b>4</b>	<b>Low Tension System</b>	
4.1	Telephone wires	Delton,Beldon, Polycab, Fusion
4.2	CAT 5 Telephone wires, Coaxial (RG -11, RG-6) wires	Amp,Beldan, Polycab, Polymer
4.3	PA (2C X 1.5)	Excle
4.4	Telephone Tag Blocks	Krone, Pouyet
4.5	Cat 6 Data cable	Beldan, Amp, Polycab, Fusion Polymer
4.6	Cat 6 Data Wire	Beldan, Amp
4.7	Splitter/Tap off Box ( MATV)	
4.8	Line extended amplifier ( MATV)	
4.9	Telephone outlet ( RJ-11, RJ-6)	
4.10	Computer data outlet ( RJ-45)	
4.11	Main distribution frame (MDF)	
4.12	IDC - Patch Panel	
<b>5</b>	<b>Cables</b>	
5.1	1100 volt grade XLPE Insulated Aluminium Conductor cables	Gloster, Polycab, RPG, Havells, KEI, RR Cable
5.2	1100 volts grade FRLS PVC control cables	RPG,Polycab,Nicco
5.3	Double compression brass cable glands	Dowells, Comet
5.4	Cable lugs	Dowells
5.5	M.S /G.I Cable trays & its accessories	Aditya, MEM, BEC
5.6	RCC Hume Pipe	K K / Pranali
<b>6</b>	<b>Bus Duct</b>	
6.1	Sandwich type Bus Ducts	Control & Switchgear
6.2	Sandwich Rising Mains	Control & Switchgear
<b>7</b>	<b>11 kv Substation equipment</b>	
7.1	11 kV Vacuum Switchgear	ABB,Siemens
7.2	Potential Transformer	Gillbert & Maxwell, Precise, AE, Kappa,
7.3	11 kV/ 433 volt, , OLTC Dry type Transformer	Voltamp, Crompton, Kirloskar Electric
7.4	Isolation Transformer	Omega Powertech
7.5	11000 volt grade XLPE insulated, FRLS aluminium conductor armoured cables	Polycab,NICCO,RPG
7.6	11000 volts cable termination kits	Raychem, 3M
7.7	Rubber mats	Electromat
7.8	CO2 Fire extinguishers	Ceasefire, Kalbex, Kanex, Fire mech
7.9	Battery banks maintenance free VRLA	Amaron (Amara raja),Excide
7.10	Battery charger	Voltstat (Voltron),AE,Chabbi
<b>8</b>	<b>Lighting and Surge Protection</b>	
8.1	Lighting Protection	Duval Messien , Erico
8.2	Maintenance Free Earthing	Dual Messien,Erico
8.3	Transient voltage surge suppressors (TVSS)	-
<b>9</b>	<b>Miscellaneous</b>	
9.1	Anchor Fastener	Hilti
9.2	Microprocessor based Nurse Call system	System tek
9.3	Fire sealing material	Hilti,3M
9.4	Paints	Asian,Shalimar
9.5	Ceiling Fans	Crompton Greaves, Havells, Orient

S.No.	Items Description	Approved Makes
9.6	Welding rods	Advani
9.7	PVC Heat shrinkable sleeve	

**HVAC**

S.No.	Items Description	Makes
1	Water Chilling Machine – Screw Chillers	YORK/Trane ( China)
2	Secondary pumps	ITT Bell & Gossett/ Armstrong
3	Pumps ( Primary, Hot & condensor water)	Kirloskar / Crompton Greaves
4	Vibrators Isolators	Resistoflex /Kanwal
5	Cooling Tower	Bell /Flowtech/Advance
6	Heat Exchanger	Alfa Laval , GEA
7	Air Handling Units-Casing	Systemair /Waves / Zeco
8	Cooling/Heating Coils	Systemair /Waves / Zeco
9	Centrifugal fans for AHUs	Kruger /Nicotra
10	Prefilters/Fine Filters/HEPA Filters	Thermadyne
11	Inline Fans	Kruger
12	Propeller Fan	GEC (Marathon)/ Crompton
13	Axial Fans	Kruger /Nicotra/ Greentech
14	Differential Pressure sensors	Siemens
15	Ventilation fan section for Exhaust & Fresh air	Systemair /Waves / Zeco
16	Fan Coil Units	Waves / Zeco/ Hitech/ Midea
17	Canvas connection fire proof for FCUs	Navair / ATCO
18	Expansion tank	Sandhu
19	Evaporative cooling unit	
20	Air Washer (Wetting Pads)	Systemair /Waves / Zeco
21	Kitchen Scrubber (Dry Type)	Trion
22	Condensing units/ air cooled split units	Carrier/ Blue star
23	Fan Filter Module	Thermadyne
24	Water Flow Switch	Danfoss/Honeywell/Siemens/rapidcool
25	Piping (Condensor/Chilled/Drain) Up to 200 MM Dia	Jindal (Hissar)
26	Piping (Condensor/Chilled/Drain) Above 200 MM Dia	Jindal (Hissar) /Jindal Gbd
27	<b>Butterfly Valves(Water Duty)</b>	Advance / Castle
28	Motorised butterfly valves	Honeyweel/Siemens/Balemo/ Castle
29	<b>Balancing Valves(Water Duty)</b>	Advance / Castle
30	Automatic balancing valves	Flowcon/Tour & Enderson/ Honeywell/Danfoss
31	<b>Check Valves(Water Duty)</b>	Advance/ Castle
32	Y- Strainers	Flowel/Sandhu/ Emerald
33	Pot Strainers	Flowel/Sandhu/ Emerald
34	Ball Valves (with & without strainer)	Rapid cool / Castle
35	Gate Valves(Water Duty)	Leader/Zoloto

36	Globe Valves	
37	Two Way / Three Way Valves	Siemens ( For FCU - 3way Valve- Siemens and For FCU - 2way Valve - Flowcon)
38	Polyurethane foam ( PUF)	Malanpur
39	Expanded Polystyrene Insulation ( EPS)	Beardsell / Styrene Packings
40	Nitrile rubber insulation for pipe	Armaflex/Kflex/Aflex
41	Alluminium Cladding Sheet	Balco/Hindalco
42	Pre moulded PUF section for Pipe support	Malanpur
43	Pressure Gauges	H.Guru /Feibig
44	Thermometers	H.Guru
45	Auto air vent	rapidcontrol/Anergy
46	Modulating Motor / proportional thermostat /Snap acting thermostat	Honeywell/Siemens
47	Pan Humidifier	Rapidcontrol
48	Air Distribution/Ducting GI Sheets	Jindal/Sail
49	Factory made duct	Ductofab/Rolarstar/Zeco/ GP Shipra
50	Aluminum sheets	Balco/Hindalco
51	Flexible Duct	Atco
52	Extruded Aluminum Grills/Diffusers/fresh air louvers	Ravistar / Mapro/Opella/ Conare
53	Extruded Aluminum Sections	Mahavir Jindal
54	Fire/Smoke Dampers	Mapro / Ravistar/caryaire
55	Closed cell polyethylene Insulation for duct	Paramount / Supreme
56	Fiberglass insulation for duct/Accoustic lining	UP Twiga/Owens Corning
57	RP Tissue	UP Twiga
58	Electric Motors	ABB (Energy efficient)
59	Red Oxide, Zinc Chromate Primer	ICI / Berger
60	CPRX	Shalimar
61	Dash Fasteners	Hilti/Fischer
62	Hot Water Generator	Rapid cool / KEPL
63	<b>Electrical Items</b>	
a	Electrical A/C panel	Advance / Adlec
b	Motors (EEF)	ABB
c	Electrical AHU Panel	Advance / Adlec/ Conquerent Control System Pvt. Ltd/ Application Control Pvt Ltd./ Control Wel Switchgear Pvt Ltd. ( All AHU Panel Should have Single Phase Preventor)
d	Air Circuit Breaker 3&4 pole	ABB Emax,Schneider MG Master Pact NW
e	MCCB with rotary operating mechanism	ABB,Schneider,Hager
f	ELCB & EL+MCB	ABB,Schneider,Hager
g	Power/Aux Contactor	ABB
h	Change Over Switch	HPL Socomec

i	Control Transformer/Potential Transformer	Kappa/Gilbert & Maxwell / Precise/AE
j	Current Transformer	Kappa/Gilbert & Maxwell / Precise/AE
k	Electronic Digital Meters	Conzerv, Neptune, Enercon
l	Single phase preventer	ABB/L&T/Schneider
m	Aluminium armaoured cable	Polycab/ Gloster/ RPG
n	Double compression Cable Gland	Comet/ Dowells
o	Lugs/ Thimbles	Comet/ Dowells
64	Variable Speed drives	ABB
65	Heat recovery wheel	BryAir/Flakt wood
66	Motorized Actuator	Siemens/Belimo

### PLUMBING

S.NO.	DESCRIPTION	MANUFACTURER'S NAME
1	Vitreous China Sanitary wares	Hindware/Cera/
2	EEC Plastic Seat Covers	Prince / Supreme
3	WC Connector	Astral/ Ashirwad / Supreme
4	S.S. Floor Grating / Floor Clean Out	Chilly / Neer / GMGR ACO
5	Manhole covers and frames as per IS:1729	NECO / Raj Iron Foundry Agra
6	D.I. Manhole Covers & Frames	Kartar valves & fittings / NECO
7	Fire Clay Sink	Sanfire / Johnson Pedder
8	Pipe clamp & supports	Chilly / Euroclamp /
9	UPVC Rain Water Pipes And Fittings - IS:13592	Astral / Ajay / Ashirwad
10	CPVC Water Supply Pipes And Fittings	Astral / Ajay / Ashirwad
11	Polypropylene Soil, Waste Pipes And Fittings	Astral / Rahau / huliot
12	RCC Pipe	K K / Indian Hume Pipe or Local & Approved
13	S.W.Pipes / Gully Traps - Is : 651	Burn / Perfect Or I. S. I. Marked
14	GM / Forged Brass Valves / Air Release Valve	Zoloto / Advance / Castle / Audco
15	Sluice / Butterfly / Non Return Valves	Danfoss / SKS / Audco / Advance / Jayhiwa / Castle
16	Pressure Reducing Valve	Honeywell / Zoloto / RB / Audco / Advance
17	Anti-Vibration Mounting & Flexible Connection	Dunlop / Kanwal Industrial Corporation / Resistoflex
18	Pressure Gauge	Forbes Marshall/ Kent / Emerald / H Guru
19	Electronic Flow Meter	Forbes Marshall / Rockwine
20	Water Level Indicator / Level Controller	Tecnika / Techrol / Auto Pump
21	Fastner	Fisher / Hilti
22	Paints	Asian Paints / Berger
23	Insulation for Hot Water Pipes	Aflex / Armacell – Armaflex / Eurobatex – Union Foam / K-Flex ST / Thermaflex

24	Pressure Reducing Station & PRV	J N Marshall, Thermax
25	Any Other Items	On Approval Of Architect / Consultant Or Engineer-In-Charge

**Firefighting**

S.No	DESCRIPTION	MANUFACTURER'S NAME
1	Hydrant Valves / Fire Brigade Inlet / Draw out / Fire Mans Axe	Newage mumbai / Minimax / Safex/ Kalpex
2	Branch Pipe and Nozzle	Newage mumbai / Minimax / Safex/ Kalpex
3	Fire Hose Pipe, Hose Reel	Newage mumbai / Minimax / Safex/ Kalpex
4	Fire Extinguishers	Minimax / Cease Fire / Newage mumbai / Kanex/ Kalpex/ Firemech
5	Sluice Valves / Butterfly valves / Non Return Valves	Danfoss / SKS / Audco / Advance / Jayhiwa/ Castle
6	Ball Valves	Zoloto / Advance / Castle / Audco
7	Y strainer	Emerald / Zoloto
8	Air Release Valve	Zoloto / Advance / Castle / Audco
9	Galvanized Iron Pipe / MS Pipe - IS : 1239	Jindal (Hissar) / Prakash Surya / Tata Steel
10	G.I./ MS / M.I. Fittings	Unik / Jainsons
11	MS Forged Fittings	VS / B M / True forge
12	Ductile Iron Grooved Fittings and coupling (above 50mm) (UL Listed, FM approved)	Victaulic / smith cooper / Viking
15.	G. I. Pipe Sealant	Henkel - Loctite 55
13	Pipe Clamp & Supports	Chily / Euroclamp
14	Pump Control Panel	Tricolite / Advance (Delhi) / Ambit / Adlec / Milestone / ASES (Agni Suraksha) / Vidyut control / RST / Dynamic
15	Fire Fighting Pumps	Kirlosker / Mather+Platt / Lubi
16	Diesel Engine	Kirlosker / Cummins
17	Electric Motors	Kirlosker / Crompton / Siemens
18	Pressure Switches	Danfoss / Indfoss
19	Pressure Gauge	H Guru / FIBIG
20	Anchor Fastner / U clamp / Celvis / sprinkler hangers	Hilti / Intello tech / Hightech / Fisher / Easyflex
21	Anti-Vibration Mounting / Expansion Joint	Easyflex / Resistoflex / Kanwal / Precise
	<b><u>OFFICE Furniture</u></b>	
1	Chairs	Geeken, Godrej, equivalent
2	Office furniture	Geeken, equivalent

**NOTE: In case of Unavailability of the above mentioned makes. Approval from the consultant/ direction of the Engineer in Charge is a must.**



**PART-I SCHEDULE OF QUANTITY - CIVIL AND INTERIORS**

S.No	DESCRIPTION OF ITEM	Unit	QTY.	Rates	Amount
<b>A</b>	<b>Dismantling Works</b>				
1	Demolishing brick work manually/ by mechanical means including stacking of serviceable material and disposal of unserviceable material within 50 metres lead as per direction of Engineer-in-charge. (In cement Mortar)	Cum	9		
2	Disposal of building rubbish / malba / similar unserviceable, dismantled or waste materials by mechanical means, including loading, transporting, unloading to approved municipal dumping ground or as approved by Engineer-in-charge, beyond 50 m initial lead, for all leads including all lifts involved.	Cum	10		
<b>B</b>	<b>Temporary Utilities</b>				
1	<b>Site Clearance &amp; Preparation</b> Before beginning the project, vendor is required to do site clearance & preparation in terms of the existing/works in progress debris removal, moving the client items to be re-used in the safe and area allocated by the PMC/ Client within the building or outside at any distance. Vendor has to mobilize the manpower as per the site requirement instructed by Project Manager. This also includes carting away the debris from the site to the nearest Municipal dump yard as and when required as per the Project Manager instruction. Vendor to include all the house keeping equipment's required for cleaning and all the safety equipment's. Vendor is expected to visit the site to understand the nature and amount of work.	LS	1		
2	<b>Pest Control</b> 'Providing Pest control and Anti-termite treatment by appointing a specialised agency as per the specifications mentioned by the Bureau of Indian Standards and Agencies specifications (whichever is higher),the treatment is carried out at wall and floor junction, utility pipes and conduits, expansion /construction joints before start of fitout works. The surface will be sprayed with chemicals having odourless petroleum base. All timber (if any) bought to site will be treated with wood preservative chemical injected into these tiny short holes with the help of syringe to kill larvae present in the timber.The surface is also sprayed with chemicals having odourless petroleum base. The treatment to include a 5-year guarantee under suitable undertaking on stamp paper etc, complete as directed.	sqm	878		
3	<b>DEEP CLEANING</b> Vendor to do 2 times of Deep cleaning ( 1 During the construction stage & other handing over the time ) with the necessary equipments /tools required for Housekeeping till the completion & Handing over of the project as per the PM's instructions. This cost to be inclusive of carpet covering with 1 layers of polythene till handing over , 2 round of vacuuming & 1 round of shampooing as per the instructions of the Project manager.	sqm	878		

	Special/ Professional agency for deep cleaning to be engaged at the time of virtual completion and handover to client at all floor levels,Upto satisfaction of Site Incharge or PMC. Cost should include the cleaning and making good all floor area, lifts, lift lobbies, existing toilets, services rooms, basement areas, loading and unloading areas, material storage, landscape areas and any other area which has been used for construction activity upto satisfaction of Site encharge or PMC.				
	NOTE: COST OF ALL Lifting, Shifting loading & unloading of all materials upto all floors heights levels locations from Ground Floor in the tender for all items to be included in the item rates.No extra shall be payable for such works				
<b>C</b>	<b>POP / Paint Works</b>				
1	Providing and applying plaster of paris putty of 2 mm thickness over plastered surface to prepare the surface even and smooth complete.	Sqm	485		
2	Wall painting with premium acrylic emulsion paint of interior grade, having VOC (Volatile Organic Compound ) content less than 50 grams/ litre of approved brand and manufacture, including applying additional coats wherever required to achieve even shade and colour.				
2.1	Two coats	Sqm	1980		
3	Applying priming coats with primer of approved brand and manufacture, having low VOC (Volatile Organic Compound ) content.				
3.1	With water thinnable cement primer on wall surface having VOC content less than 50 grams/litre	Sqm	1048		
4	Painting with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade :				
4.1	Two or more coats on new work over an under coat of suitable shade with ordinary paint of approved brand and manufacture	Sqm	225		
5	Painting with synthetic enamel paint of approved brand and manufacture to give an even shade :				
5.1	Two or more coats on new work	Sqm	450		
6	Rubbing cleaning and Grinding of slab and beams as required for smooth surface before surface preparation for Painting/POP.	Sqm	550		
<b>D</b>	<b>Ceiling</b>				
1	Providing and fixing 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 openings for light fittings, grills, diffusers, cutouts made with frame of perimeter channels suitably fixed, all complete as per drawings, specification and direction of the Engineer in Charge but excluding the cost of painting with :				
1.1	12.5 mm thick tapered edge gypsum plain board conforming to IS: 2095- (Part I) :2011 (Board with BIS certification marks)	sqm	350		
1.2	Providing and fixing tiled false ceiling of specified materials of size 595x595 mm in true horizontal level, suspended on inter locking metal grid of hot dipped galvanized steel sections ( galvanized @ 120 grams/ sqm, both side inclusive) consisting of main "T" runner with suitably spaced joints to get required length and of size 24x38 mm made from 0.30 mm thick (minimum) sheet, spaced at 1200 mm center to center and cross "T" of size 24x25 mm made of 0.30 mm thick (minimum) sheet, 1200 mm long spaced between main "T" at 600 mm center to center to form a grid of 1200x600 mm and secondary cross "T" of length 600 mm and size 24x25 mm made of 0.30 mm thick (minimum) sheet to be interlocked at middle of the 1200x600 mm panel to form grids of 600x600 mm and wall angle of size 24x24x0.3 mm and laying false ceiling tiles of approved texture in the grid including, required cutting/making, opening for services like diffusers, grills, light fittings, fixtures, smoke detectors etc. Main "T" runners to be suspended from ceiling using GI slotted cleats of size 27 x 37 x 25 x1.6 mm fixed to ceiling with 12.5 mm dia and 50 mm long dash fasteners, 4 mm GI adjustable rods with galvanised butterfly level clips of size 85 x 30 x 0.8 mm spaced at 1200 mm center to center along main T, bottom exposed width of 24 mm of all T-sections shall be pre-painted with polyester paint, all complete for all heights as per specifications, drawings and as directed by Engineer-in-charge.				
1.2.1	GI Metal Ceiling Lay in plain Tegular edge Global white color tiles of size 595x595 mm, and 0.5 mm thick with 8 mm drop; made of G I sheet having galvanizing of 100 gms/sqm (both	Sqm	7.5		

	sides inclusive) and electro statically polyester powder coated of thickness 60 microns (minimum), including factory painted after bending.				
1.3	<b>OPEN CELL CEILING</b> : Providing and fixing METALWORKS - ARMSTRONG 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	40		
<b>E</b>	<b>Flooring Works &amp; Tile/Stone Works</b>				
1	Mirror polishing on marble work/Granite work/stone work where ever required to give high gloss finish complete.	Sqm	880		
2	Providing and laying Vitrified tiles in different sizes (thickness to be specified by manufacturer), with water absorption less than 0.08 % and conforming to I.S. 15622, of approved make, in all colours & shade, in skirting, riser of steps, over 12 mm thick bed of cement mortar 1:3 (1cement: 3 coarse sand), jointing with grey cement slurry @ 3.3 kg/ sqm including grouting the joint with white cement & matching pigments etc. complete.	Sqm	27		
2.1	Size of Tile 600x600 mm				
3	Providing and fixing 18 mm thick gang saw cut, mirror polished, premoulded and prepolished, machine cut for kitchen platforms, vanity counters, window sills, facias and similar locations of required size, approved shade, colour and texture laid over 20 mm thick base cement mortar 1:4 (1 cement : 4 coarse sand), joints treated with white cement, mixed with matching pigment, epoxy touch ups, including rubbing, curing, moulding and polishing of edges to give high gloss finish etc. complete at all levels.				
3.1	Granite stone slab of colour black, Cherry/Ruby red- Area of slab over 0.50 sqm	Sqm	2.6		
4	Providing and fixing partition upto ceiling height consisting of G.I. frame and required board, including providing and fixing of frame work made of special section power pressed/ roll form G.I. sheet with zinc coating of 120 gms/sqm(both side inclusive), consisting of floor and ceiling channel 50mm wide having equal flanges of 32 mm and 0.50 mm thick, fixed to the floor and ceiling at the spacing of 610 mm centre to centre with dash fastener of 12.5 mm dia meter 50 mm length or suitable anchor fastener or metal screws with nylon plugs and the studs 48 mm wide having one flange of 34 mm and other flange 36 mm and 0.50 mm thick fixed vertically within flanges of floor and ceiling channel and placed at a spacing of 610 mm centre to centre by 6 mm dia bolts and nuts, including fixing of studs along both ends of partition fixed flush to wall with suitable anchor fastener or metal screws with nylon plugs at spacing of 450 mm centre to centre, and fixing of boards to both side of frame work by 25 mm long dry wall screws on				

	studs, floor and ceiling channels at the spacing of 300 mm centre to centre. The boards are to be fixed to the frame work with joints staggered to avoid through cracks, M.S. fixing channel of 99 mm width (0.9 mm thick having two flanges of 9.5 mm each) to be provided at the horizontal joints of two boards, fixed to the studs using metal to metal flat head screws, including jointing and finishing to a flush finish with recommended jointing compound, jointing tape, angle beads at corners (25 mm x 25 mm x 0.5 mm), joint finisher and two coats of primer suitable for board as per manufacture's specification and direction of engineer in charge all complete.				
4.1	75mm overall thickness partition with 12.5 mm thick double skin tapered edged plain Gypsum plaster board conforming to IS: 2095: (part I): 2011 (Board with BIS certification marks)	Sqm	495		
5	Providing and fixing thermal insulation with Resin Bonded rock wool conforming to IS: 8183, having density 48 kg/m <sup>3</sup> , 50 mm thick, wrapped in 200 G Virgin Polythene Bags fixed to wall with screw, rawel plug & washers and held in position by criss crossing GI wire etc. complete as per directions of Engineer-in-Charge.	Sqm	495		
6	<b>M.S BOX SECTION FOR INSIDE FRAMING IN PARTITIONS</b>				
6.1	Providing and fixing MS Framing for partition with Steel work welded in built up sections/ framed work including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer using structural steel etc. as required. Include cost of cutting and making good walls/floor / false ceiling to continue framework till RCC slab/members for anchorage. Include cost of anchoring frameworks to floor /wall/ ceiling using suitable anchoring arrangements. All complete as per drawing and specifications and direction of the Engineer-in-Charge. (MAKE : SAIL, TATA STEEL, RINL, JINDAL)				
6.1.1	M.S. TUBE 50 X 50 X 2.6 mm	Kg	1500		
6.2	<b>BISON BOARD M.S. PARTITION</b> : Providing and fixing 12.5mm thick Regular BISON board on one side and 12.5mm thk Gypsum board other side, confirming to IS -2095 - 1982 and 2543-1981) paneling work 50x50x1.6 mm hollow MS tube, placed along the walls, ceiling and floor in a grid pattern with spacing @ 60 cm centre to centre both ways (vertically & horizontally) or at required spacing near opening, with necessary welding at junctions and fixing the frame to wall/ ceiling/ floors with steel dash fasteners of 8 mm dia, 75 mm long bolt, including making provision for opening for doors, windows, electrical conduits, switch boards etc., including providing with two coats of approved steel primer etc. complete, all as per direction of Engineer-in-charge	Sqm	18.5		
6.3	<b>GPYSUM BOARD BULKHEAD (Both side Gypsum)</b> : Providing and fixing 12.5mm thick Regular Gyp board (cladding on both side, confirming to IS -2095 - 1982 and 2543-1981) paneling work with 50x50x1.6 mm hollow MS tube, placed along the walls, ceiling and floor in a grid pattern	Sqm	50		

	with spacing @ 60 cm centre to centre both ways (vertically & horizontally) or at required spacing near opening, with necessary welding at junctions and fixing the frame to wall/ ceiling/ floors with steel dash fasteners of 8 mm dia, 75 mm long bolt, including making provision for opening for doors, windows, electrical conduits, switch boards etc., including providing with two coats of approved steel primer etc. complete, all as per direction of Engineer-in-charge				
6.4	<b>SINGLE GLAZED PARTITIONS</b> : - Supply & Installation of Full Height demountable Glazed Partitions using Black Anodised Aluminium Single Glazed Series Straight Partitions systems of Matt anodized finish of 45x25 thk section and 'T' Section, corner Section & 'T' between glass to glass joint from FFL upto 2400 mm or equivalent & having 10mm thick glass mounted in the middle of the frame or offset on either side of the frame. The height of these Partitions would be 2400 mm from FFL. Section to be provided with all appropriate beading & glazing rubber.	Sqm	260		
6.5	<b>RECEPTION WALL BACKDROP</b> : Supply and installation of full height Euro Pratik <sup>TM</sup> FLUTED PANELS fixed on 50mm thk GI frame fixed with dry wall screws of 25mm at 300mm c/c or additional frames as required in curve profiles, Non Visible (Back side ) to receive 12.5mm Gypsum Board, 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. <b>General:</b> Rates shall be inclusive of supply and installation of all materials mentioned above, including, all necessary fixing components, like, screws, plugs, etc. (confirming to manufacturer's specifications and installation recommendations), jointing compound, taping, etc; complete in all respects and made ready to receive appropriate finishes. Rates shall be inclusive of all cut outs / fenestrations & provisions required on the dry wall partition including, but not limited to, HVAC ducting & grills, electrical conduiting, cable trays, sprinkler pipes, power points / switch boards, lighting sockets, speakers, etc. complete in all respects. Rates shall be inclusive of acoustic & fire sealer to seal all joints around cut outs for building services. Contractor shall provide fire rating certificate / relevant undertaking document from the manufacturer to support fire rating of the assembly.	Sqm	30		
<b>G</b>	<b>Door/Windows</b>				
1	<b>DOUBLE LEAF GLAZED DOOR</b> : Providing & Fixing fully glazed door. The Item includes fixing of 12 mm thk Toughened 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. Door frame section size - 70x50mm. The entire door shall be erected in complete line &				

	level. The door will have S.S brush finish Signage for pull & push. door size 2000/1800/1500/ x 2100mm				
1.1	door size 2000 x 2100mm	Each	RO		
1.2	door size 1800 x 2100mm	Each	1		
1.3	door size 1500 x 2100mm	Each	2		
2	<b>SINGLE LEAF GLAZED DOOR</b> : Providing & Fixing single leaf 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. Door frame section size - 70x50mm. The entire door shall be erected in complete line & level. The door will have S.S brush finish Signage for pull & push. door size 1050/900/750 x 2100mm				
2.1	door size 1050 x 2100mm	Each	11		
2.2	door size 900 x 2100mm	Each	15		
2.3	door size 750 x 2100mm	Each	RO		
3	Providing and fixing <b>Single Leaf Laminated Flush Door</b> (38 mm thick) finished with 1mm thick laminte on both sides. Cost to be inclusive of anodized aluminium door frame, 450mm long handles, door closer, floor buffer and all other necessary hardware. Geze/ Dorma Make. as per architect dwg. (approx. size of vision panel 200*1800). (Aluminium door frame make: Otic, Kubik, Alloy, Jeb)				
3.1	door size 750 x 2100mm	Each	2		
4	<b>ROLLER BLINDS</b> : 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 SD, Weft : 300 Den Roto Material & Color shade will be as per sample approved.	SQM	108		
<b>H</b>	<b>Wall finish/Graphics</b>				
1	Providing and fixing <b>3M dusted/Frosted sparkle</b> 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.				
1.1	Designer (Machine cut)	SQM	65		
<b>I</b>	<b>Mill Work</b>				

1	<p>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 facia 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.</p>	Sqm	3.6		
2	<p>Under Counter Storages 850 mm high and 600 mm deep:- Providing &amp; fixing Under counter storages for pantry &amp; basin as per drawing . The overall Structure made in 19mm thick BWP ply. Storages finished in 1 mm thick laminate from everywhere except outer back side of storages and also including all SS snap hinges, handles, locks etc &amp; all necessary hardware as required. PVC lipping on all edges with matching shade, including laminated skirting in approved shade with all hardware, magnetic catchers, tower bolts, etc complete as per detailed drawings. The quoted rate should be including the cost of granite (Base Rate of stone Rs 1800/smt). All hinge, drawer channels etc to be soft closing from standard make list</p>	Sqm	3.75		
3	<p>Over Head Storages (400 mm deep) : Providing &amp; fixing Over Head Laminated storage as per drawing . The overall Structure made in 18 mm thick MDF board . Storages finished in 1 mm thick textured laminate from everywhere except outer back side of storages and also including all SS snap hinges, handles, locks etc &amp; all necessary hardware as required. Shutter size varies between 375-450mm wide as required with reverse bull nose edge on top &amp; bottom of shutter (for files, folders coats etc) with select shelves duly adjustable as required on metal stud supports with sleeves set. PVC lipping on all edges of matching shade , including laminated skirting in approved shade with all hardware, magnetic catchers, tower bolts, etc complete as per detailed drawings. (Front elevation area to be measured) All hinge, drawer channels etc to be soft closing from standard make list</p>	Sqm	3		
4	<p>Providing and fixing in position Trap Doors in False Ceiling suspended from RCC slab with dash fasteners, hangers and</p>	Sqm	6		



	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.				
<b>A</b>	<b>TOTAL AMOUNT OF CIVIL AND INTERIORS</b>				
<b>B</b>	<b>GST</b>				
<b>C</b>	<b>TOTAL AMOUNT WITH GST OF PART-I (A+B)</b>				

**PART-II - SCHEDULE OF QUANTITY - INTERNAL ELECTRICAL**

S.No	Description	Unit	QTY.	Rate	Amount
<b>A</b>	<b><u>MAIN DISTRIBUTION BOARDS</u></b>				
<b>1</b>	<b><u>DISTRIBUTION BOARDS</u></b>				
1.1	Supplying and fixing following way, horizontal type three pole and neutral, sheet steel, MCB distribution board, 415 V, on surface/ recess, complete with tinned copper bus bar, neutral bus bar, earth bar, din bar, interconnections, powder painted including earthing etc. as required. (But without MCB/RCCB/Isolator)				
1.1.1	6 way (4 + 18), Double door	Each	1		
1.2.2	8 way (4 + 24), Double door	Each	6		
1.2	Supplying and fixing of following ways surface/ recess mounting, vertical type, 415 V, TPN MCB distribution board of sheet steel, dust protected, duly powder painted, inclusive of 200 A tinned copper bus bar, common neutral link, earth bar, din bar for mounting MCBs (but without MCBs and incomer ) as required . (Note : Vertical type MCB TPDB is normally used where 3 phase outlets are required.)				
1.2.1	4 way (4 + 12), Double door	Each	3		
1.2.2	8 Way (4+24 )Double door (A/C DB -4th Floor)	Each	1		
1.3	Supplying and fixing 5 amps to 32 amps rating, 240 volts, 'C' series, miniature circuit breaker suitable for inductive load of following poles in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
1.3.1	Single pole	Each	134		
1.3.2	Triple pole	Each	3		
1.4	Supplying and fixing following rating, double pole, (single phase and neutral), 240 V, residual current circuit breaker (RCCB), having a sensitivity current 30 mA in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
1.4.1	40 amps	Each	18		
1.5	Supplying and fixing following rating, four pole, , 415 volts, Isolator in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
1.5.1	40 amps	Each	15		

1.6	Supplying, fixing, connecting, testing and commissioning of following rating, ISI marked (IS 8828) 240 / 415 volts, 10 KA, Miniature Circuit Breaker (MCB) of single / double / three / four poles in the existing MCB DB or in existing MS enclosure complete in all respects.				
1.6.1	32 Amp. 3P MCB	Each	4		
1.6.2	40 Amp. 3P MCB	Each	8		
1.7	Supplying and fixing following rating MCCB in MS powder coated enclosure complete with connections, testing and commissioning etc. as required.				
1.7.1	100A 4 Pole MCCB	Each	1		
1.7.2	63A 4 Pole MCCB	Each	2		
1.8	Supplying and fixing single pole blanking plate in the existing MCB DB complete etc. as required.	Each	30		
<b>A</b>	<b>TOTAL AMOUNT - MAIN DISTRIBUTION BOARDS</b>				
<b>B</b>	<b><u>LT CABLES</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, with brass compression gland and aluminium lugs glands, saddles fixing bolts including connecting testing and commissioning.				
1.1	4 core, 16 Sq.mm.	Mtr	150		
1.2	4 core, 10 Sq.mm.	Mtr	175		
1.3	2 core, 10 Sq.mm.	Mtr	25		
1.4	3.5 core, 25 Sq.mm.	Mtr	150		
<b>B</b>	<b>TOTAL AMOUNT - <u>LT CABLES</u></b>				
<b>C.</b>	<b><u>HOT DEEP GI CABLE TRAYS</u></b>				
1	Supplying and installing following size of perforated Hot Dipped Galvanised Iron cable tray (galvanisation thickness not less than 50 microns) with perforation not more than 17.5%, in convenient sections, joined with connectors, suspended from the ceiling with G.I. suspenders including G.I. bolts & nuts, etc. as required.				
1.1	100 mm width X 50 mm depth X 1.6 mm thickness	Metre	65		
1.2	150 mm width X 50 mm depth X 1.6 mm thickness	Metre	65		
1.3	MS Cable tray Cover of matching color in 24 swg thickness duly fitted to MS cable tray as directed. (For item No-1.2)	Metre	25		
<b>C</b>	<b>TOTAL AMOUNT - <u>HOT DEEP GI CABLE TRAYS</u></b>				

D.	<b>INTERNAL WIRING:</b>				
1	Wiring for light point/ fan point/ exhaust fan point/ call bell point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable in surface / recessed steel conduit, with modular switch, modular plate, suitable GI box and earthing the point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable etc. as required.				
1.1	Group C	Point	50		
1A	Wiring for light point/ fan point/ exhaust fan point/ call bell point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable in surface / recessed medium class PVC conduit, with modular switch, modular plate, suitable GI box and earthing the point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable etc. as required.				
1.1	Group C	Point	100		
2	Wiring for group controlled (looped) light point/fan point/exhaust fan point/ call bell point (without independent switch etc.) with 1.5 sq. mm FRLS PVC insulated copper conductor single core cable in surface/ recessed steel conduit, and earthing the point with 1.5 sq. mm FRLS PVC insulated copper conductor single core cable etc. as required.				
2.1	Group C	Point	24		
2A	Wiring for group controlled (looped) light point/fan point/exhaust fan point/ call bell point ( without independent switch etc.) with 1.5 sq. mm FRLS PVC insulated copper conductor single core cable in surface/ recessed PVC conduit, and earthing the point with 1.5 sq. mm FRLS PVC insulated copper conductor single core cable etc. as required.	Point	40		
3	Wiring for circuit/ submain wiring alongwith earth wire with the following sizes of FRLS PVC insulated copper conductor, single core cable in surface/ recessed steel conduit as required.				
3.1	2 X 1.5 sq. mm + 1 X 1.5 sq. mm earth wire	meter	100		
3.2	2 X 2.5 sq. mm + 1 X 2.5 sq. mm earth wire	meter	500		
3.3	2 X 6 sq. mm + 1 X 6 sq. mm earth wire	meter	25		
3A	Wiring for circuit/ submain wiring alongwith earth wire with the following sizes of FRLS PVC insulated copper conductor, single core cable in surface/ recessed medium class PVC conduit as required.				
3.1	2 X 1.5 sq. mm + 1 X 1.5 sq. mm earth wire	meter	400		
3.2	2 X 2.5 sq. mm + 1 X 2.5 sq. mm earth wire	meter	1000		
3.3	2 X 6 sq. mm + 1 X 6 sq. mm earth wire	meter	25		

4	Wiring for light/ power plug with 2X4 sq. mm FRLS PVC insulated copper conductor single core cable in surface/ recessed steel conduit alongwith 1 No. 4 sq. mm FRLS PVC insulated copper conductor single core cable for loop earthing as required.	meter	500		
4A	Wiring for light/ power plug with 2X4 sq. mm FRLS PVC insulated copper conductor single core cable in surface/ recessed medium class PVC conduit alongwith 1 No. 4 sq. mm FRLS PVC insulated copper conductor single core cable for loop earthing as required.	meter	1000		
5	Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing 3 Nos. 3 pin 5/6 A modular socket outlet and 5/6 A modular switch, connections etc. as required.	Each	142		
6	Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing 3 pin 5/6 A modular socket outlet and 5/6 A modular switch, connections etc. as required.	Each	15		
7	Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing 6 pin 5/6 A & 15/16 A modular socket outlet and 15/16 A modular switch, connections etc. as required.	Each	41		
8	Supplying and fixing <b>modular blanking plate</b> on the existing modular plate & switch box excluding modular plate as required.	Each	5		
9	Supplying and fixing <b>two module</b> stepped type electronic fan regulator on the existing modular plate switch box including connections but excluding modular plate etc. as required as required as per specifications.	Each	49		
10	Providing and fixing circular/hexagonal Fan box cast iron /metal sheet Box for ceiling fan clamp of internal dia 140mm , 73 mm height, Top id of 1.5mm thick MS sheet with its Top surface hacked of proper bonding top lid shall be screwed into cast iron /metal sheet Box by mean of 3.3mm dia round headed screw one lock at the corners. Clamp shall be made of 12mm dia ms Bar band to shape as per standard drawing.	Each	49		
11	Extra for additional length per Meter of down rod	meter	10		
<b>D</b>	<b>TOTAL AMOUMT - INTERNAL WIRING</b>				
<b>E.</b>	<b>LIGHTING FIXTURE AND FANS</b>				
	Supply, Installation, testing and commissioning of following type Fluorescent/ Compact fluorescent/LED light fixtures on wall/ Ceiling including all fixing accessories such as leads, etc				

	complete as required. The Fluorescent /CFL fixtures shall be complete with Low loss copper ballast PF improvement capacitor, Bipin Rotor type lamp holder, starter, starter base, all pre wired upto the terminal block. All fixtures shall be supplied with lamps.				
1	Surface mounted 12W LED light with die cast aluminium housing with inbuilt controller and robust consction complete as required.	Nos	4		
2	18w LED Recessed/Surface mounted Downlighter with a nominal system lumen output of 1800 lumens and a minimum system efficacy of 110 lm/W. The luminaire shall have a rated system lifetime of 50,000 burning hours at L70. The luminaire should have a color temperature of 6500K and CRI>80. The luminaire shall meet IP20 rating with THD<10% and PF > 0.9. The luminaire housing should made of pressure die cast aluminium and the luminaire optics shall have a high efficiency diffuser with more than 85% transmittance. The total power consumption should not exceed 13.5W (including driver).	Nos	58		
3	Supply and fixing LED luminaire 600 mm x 600 mm, 35/36 watt, 220 V AC recessed/surface mounted type with high efficiency PMMA diffuser soft glare free light complete with driver, holders & LED lamp suitable for roof ceiling including connecting up with driver three core flexible copper conductor cases of suitable size complete.	Nos	103		
4	Supply and fixing ceiling fans complete with blades, down rods, electronic regulator and accessories, 230 V, 1200mm sweep. Min air delivery 210 CFM with service value 6.00 BEE. Five star rated with brushless direct current motor (BLDC)	Nos	49		
5	Supply and Installation of of double sided 3 watt LED signage with bulit in battery backup for 2 hours.	Nos	3		
6.1	Supply, Installation, Testing & commissioning of Energy Meter with RS485 port, class 1.0. Schneider/, Enersol,/ ElMeasure (with Class 1.0 accuracy and giving Voltage, current, power, energy and power factor). Complete with Panel Cutting, Wiring, lugs, Thimbling, Termination, dressing etc. as required.	Nos	3		
6.2	Supply & Installation (placing) of Current Transformer complete with connections, testing and commissioning etc. as required at different Rating				
a	40/5A	Nos	6		
b	63/5A	Nos	3		

6.3	Supplying and fixing 5 amps to 32 amps rating, 240 volts, 'C' series, miniature circuit breaker suitable for inductive load of following poles in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
6.3.1	Single pole	Each	9		
6.4	Supplying and drawing of Data Cable (2Cx0.5, Shielded,) in the existing surface/ recessed / PVC conduit as required.	Mtr	20		
6.5	Designing, fabricating, supplying, erecting, testing and commissioning the following sheet steel cubicle type panels fabricated from CRCA sheet- meter box for Three/Four meter	Nos	1		
<b>E</b>	<b>TOTAL AMOUNT - LIGHTING FIXTURE AND FANS</b>				
<b>F</b>	<b>TOTAL AMOUNT OF INTERNAL ELECTRICAL (A to E)</b>				
<b>G</b>	<b>GST</b>				
<b>H</b>	<b>TOTAL AMOUNT WITH GST OF PART-II (F+G)</b>				

**PART-III- SCHEDULE OF QUANTITY - HVAC WORKS (LOW SIDE)**

Sl.No.	Description	Unit	Qty.	Rate	Amount
	<b>Chilled Water Piping, Valves &amp; Other Accessories</b>				
<b>1</b>	<b><u>CHILLED WATER PIPING</u></b>				
	Supplying, laying/ fixing, testing and commissioning of following condenser water pipe of following size of MS Class C along with necessary clamps, vibration isolators and fittings but excluding valves, strainers, gauges etc. adequately supported on rigid supports duly painted/buried in ground excavation & refilling etc as per specification & as required complete in all respects. 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 up to 350 mm dia. and from minimum 8 mm thick MS sheet for pipes of 400 mm dia and above.				
1.1	100mm dia MS Pipes	Metre	20		
1.2	80mm dia MS Pipes	Metre	30		
1.3	65mm dia MS Pipes	Metre	40		
1.4	50mm dia MS Pipes	Metre	50		
1.5	40mm dia MS Pipes	Metre	60		
1.6	32mm dia MS Pipes	Metre	50		
1.7	25mm dia MS Pipes	Metre	100		
	<b><u>PRE-INSULATED VALVES WITH EPS MATERIAL</u></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><u>PRE-INSULATED BUTTERFLY VALVE (MANUAL) with C I body SS Disc, Nitrile Rubber Seal &amp; O- Ring PN 16 pressure rating for chilled water/hot water circulation as specified</u></b>				
2.1	100 mm dia MS Pipes	Nos	2		
2.2	80 mm dia MS Pipes	Nos.	R/O		
2.3	65 mm dia MS Pipes	Nos.	R/O		
2.4	50 mm dia MS Pipes	Nos	4		
<b>3</b>	<b><u>PICB VALVE (PRESSURE INDEPENDENT CONTROL &amp; BALANCING VALVE)/HIGH RANGABILITRY VALVES</u></b>				



	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 able to give logarithmic control characteristics to achieve linear control.				
3.1	50 mm dia	Nos.	2		
3.2	40 mm dia	Nos.	1		
3.3	32 mm dia FCU Valves ON/OFF Type & AHU Valves are Modulating Type	Nos.	3		
3.4	25 mm dia FCU Valves ON/OFF Type & AHU Valves are Modulating Type	Nos.	27		
4	Supply, Installation Testing and Commissioning of the following <b>Ball Valves with Strainer</b> 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.				
4.1	32 mm dia	Nos.	3		
4.2	25 mm dia	Nos.	27		
5	Supply, Installation Testing and Commissioning of the following <b>Ball Valves without strainer</b> 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.				
5.1	32 mm dia	Nos.	3		
5.2	25 mm dia	Nos.	27		
6	Supply, installation, testing and commissioning of cooling/Heating <b>Thermostats</b> 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).				
6.1	Proportional thermostats for Air Handling Units	Nos.	3		
6.2	Snap acting thermostats for Fan Coil Units	Nos.	29		
7	Supply, installation, testing and commissioning of the following <b>Drain (Ball) Valves</b> (full way) of brass construction with PTFE seat, screwed female ends duly insulated as per specifications and drawings.				
7.1	32 mm dia	Nos.	3		
7.2	20 mm dia	Nos.	29		

<b>8</b>	Supply, installation, testing and commissioning of <b>Auto Purge Valves</b> of brass construction with screwed ends duly insulated as per specifications and drawings complete in all respect.				
8.1	20 mm dia	Nos.	4		
<b>9</b>	Providing and fixing in position the industrial type <b>pressure gauges</b> with gun metal/brass valves complete as required.	Nos.	6		
<b>10</b>	Providing & fixing in position the mercury in glass industrial type thermometer complete as required.	Nos.	32		
<b>11</b>	<b>DRAIN PIPE</b>				
	Supplying, installing, testing and commissioning, rigid PVC (Drain) heavy duty piping complete with fittings, supports as per specifications and duly insulated with 6 mm thick closed cell nitrile rubber insulation.				
11.1	40 mm dia	Metre	30		
11.2	32 mm dia	Metre	100		
11.3	25 mm dia	Metre	100		
<b>12</b>	<b>AIR DISTRIBUTION</b>				
<b>A</b>	AIR DISTRIBUTION (FOR AIR CONDITIONING AREAS) 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 etc. as per approved drawings and specifications of following sheet thickness complete as required. (It shall be as per SMACNA standards)				
12.1	Thickness 0.63 MM Galvanized Sheet Steel Ducting (24 Gauge)	Sqm.	300		
12.2	Thickness 0.80 MM Galvanized Sheet Steel Ducting (22 Gauge)	Sqm.	200		
12.3	Thickness 1.0 MM Galvanized Sheet Steel Ducting (20 Gauge)	Sqm.	30		
12.4	Thickness 1.25 MM Galvanized Sheet Steel Ducting (18 Gauge)	Sqm.	20		
<b>B</b>	AIR DISTRIBUTION (FOR AIR CONDITIONING AREAS) Supply, installation, balancing and commissioning fabricated at site GSS sheet metal rectangular/round ducting complete with neoprene rubber gaskets, elbows, splitter dampers, vanes, hangers, supports etc. as per approved drawings and specifications of following sheet thickness complete as required. (It shall be as per BIS standards)				
12.1	Thickness 0.63 MM Galvanized Sheet Steel Ducting (24 Gauge)	Sqm.	300		
12.2	Thickness 0.80 MM Galvanized Sheet Steel Ducting (22 Gauge)	Sqm.	200		
12.3	Thickness 1.0 MM Galvanized Sheet Steel Ducting (20 Gauge)	Sqm.	30		
12.4	Thickness 1.25 MM Galvanized Sheet Steel Ducting (18 Gauge)	Sqm.	20		
<b>13</b>	Supply, installation, testing and commissioning of GI <b>Volume control</b>	Sqm.	4		

	<b>duct damper</b> (The damper blade shall not be less than 1.25 mm (18) Gauge, reinforced with 25 mm angles 3 mm thick ) complete with neoprene rubber gaskets, nuts, bolts, screws linkages, flanges etc, as per specifications.				
<b>14</b>	<b><u>SUPPLY / RETURN AIR DIFFUSERS</u></b>				
14.1	Supplying, fixing testing commissioning of <b>supply air diffusers</b> of powder coated aluminium with (The damper blade shall not be less than 1.25 mm (18) Gauge, reinforced with 25 mm angles 3 mm thick ) aluminium volume control dampers with anti smudge ring & removable core.	Sqm.	5		
14.2	Supplying, fixing testing commissioning of <b>Return air diffusers</b> of powder coated aluminium without volume control dampers with anti smudge ring & removable core.	Sqm.	5		
<b>15</b>	<b><u>SUPPLY / RETURN AIR GRILLES</u></b>				
15.1	Supplying & fixing of powder coated extruded aluminium Supply Air Grills with (The damper blade shall not be less than 1.25 mm (18) Gauge, reinforced with 25 mm angles 3 mm thick ) aluminium volume control dampers as per specifications.	Sqm.	8		
15.2	Supplying & fixing of powder coated extruded aluminium return air grill with louvers but without volume control dampers complete as required.	Sqm.	10		
<b>16</b>	<b><u>INSULATION</u></b>				
	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/m <sup>3</sup> and shall be single layer up to 18mm thickness. The insulation material shall be fire rated for Class O as per BS-476 Part 6&7 with non-toxic smoke. Quoted price shall be inclusive of adhesive, tapes as per specification.				
16.1	18 mm thick- For Supply Duct	Sqm.	500		
16.2	12 mm thick- For Return Duct	Sqm.	50		
<b>17</b>	Supplying, installation, testing & commissioning of <b>Acoustic lining</b> 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. 140-180 kg/cum for AHU rooms/DG room/Duct . It should be complete in all respect & as per directions of engineer-in-charge. Class O Acoustic required.				

17.1	10 mm thick acoustic lining for duct	Sqm.	10		
<b>18</b>	<b><u>AIR HANDLING UNIT-1 Stage Filtration- With VFD</u></b>				
	Supply, Installation, testing and commissioning of factory fabricated double skin type Air Handling Units (BMS compatible) as per specifications given below:-				
	<b>AHU Construction:-</b> It shall be made out of 0.8 mm pre-plasticized/pre-coated Galvanised steel sheet outside & 0.8 mm plain GSS sheet 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 thick closed cell insulation(Nitrile/XLPE) & thermal break profile. Necessary foundation required & anti vibration pads shall be provided & cost for the same shall be included in this item.				
	Supply Air Stream:- 1) Filter section consisting of pre filter. Pre-filter section shall be with non woven synthetic media of 10 micron particle size with an efficiency of 90%. 2) Plug type centrifugal Fan (with min. 70% efficiency) with blower motor, drive and flexible duct connection both inside & outside the AHU & Duct. The supply fan shall be provided with variable frequency drive (for motor H.P equal to or greater than 5 H.P)and input / output signal compatible to BMS system. 3) 6 row deep cooling coil 4) Discharge plenum section. 5) Mixing Box comprising of damper & filter section for Floor mounted AHUs.				
	<b>COIL-</b> Copper tubes and Aluminium fins 12-13 fin./inch, Coil size shall be selected for air velocity of 500 ft/minute & velocity across filters at 500 ft/minute. Motors shall be suitable for $415 \pm 10\%$ 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.				
	<b>VFD:-</b> VFD designed for HVAC applications with built-in PID controller, control panel (keypad & display) , <b>IP-54</b> enclosure (for outdoor applications) & IP-55 enclosure (for indoor applications) for use on standard centrifugal plug fans. The display should be in alpha-numeric characters and programming facility should be in user-friendly HVAC terminology. VFD's shall have built-in harmonic filters. Each VFD panel to be provided with digital display showing electrical parameters like voltage, current and power consumption. Each VFD shall be installed in a dedicated external enclosure and the inter connecting wires between driver and MCC shall be included.				
	Sound level 65 db at the distance of 2 mtr.(maximum)				
	Squirrel cage induction motors suitable for $415 \pm 10\%$ 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.				

	Supply, installing, testing and commissioning The AOP cells to be installed preferably in the supply air stream/ plenum of AHU in accordance with the AHU capacity to take care off in respect of air borne contamination (bacteria, virus and spores), Gaseous contamination (VoC's & Odors) along with particulate matter with-in built pest repellent to drive away the rodents away. Unit selection sheet and load calculation to be submitted.				
	<b>Floor Space &amp; Type (Floor Mounted /Ceiling Suspended)</b>				
18.1	AHU-1 & 2- 4000 CFM , 10 TR , Static Pressure 40 mm, Stage of Filtration-1, Rating-3 HP	No.	2		
18.2	AHU-3- 2000 CFM , 5 TR , Static Pressure 40 mm, Stage of Filtration-1, Rating - 1.5 HP	Nos.	1		
<b>19</b>	<b><u>FAN COILS UNITS (CEILING SUSPENDED TYPE)</u></b>				
	Supply, installation, testing and commissioning of GI powder coated horizontal ceiling suspended fan coil units complete with fan, 3 speed motor, 3 row deep cooling coil, 5 mm external static, aluminium filters with filter box, double sandwiched insulated tray, ball valve with strainer, copper connection, rotary switch, supporting arrangement, electrical wiring etc.The thickness of GSS sheet should be 1.25 mm & thickness of filter 15 mm. The fan shall be selected for 5 mm external static pressure. The complete fan coil unit shall be in line with the standard specification. The capacity of fan coil units shall be as follows. Proper supporting system for FCU to be provided & will be in contractor's scope.				
19.1	1600 CFM (4.0 TR)	Nos.	2		
19.2	1200 CFM (3.0 TR)	Nos.	R/O		
19.3	1000 CFM (2.5 TR)	Nos.	2		
19.4	800 CFM (2.0 TR)	Nos.	5		
19.5	600 CFM (1.5 TR)	Nos.	5		
19.6	400 CFM (1.0 TR)	Nos.	15		
<b>20</b>	Supply, Installation & testing Ultrasonic type Inline <b>BTU Meter</b> for measuring the total Ac consumption. consumed by a tenant. The unit shall be complete with flanged type water flow meter with Low pressure drop complete with temperature sensors, LCD display panel, temperature sensor, With no moving parts The meter should be supplied with a built-in battery with backup of minimum 15 years life. Capable of displaying energy consumed, Flow rate and Temperature.				
20.1	100mm dia MS Pipes	Nos.	1		
21.0	<b><u>ASSOCIATED ELECTRICAL WORKS WITH HVAC SYSTEM</u></b>				
<b>21.1</b>	<b>CONTROL PANEL IN AIR HANDLING UNIT</b>				

	Design, manufacture, supply, installation, testing and commissioning of the following cubicle type, wall mounted control panels including anchoring into the wall, wiring and earthing terminating into MPCB in each panel shall be provided by the electrical contractor.				
	All outgoing shall be provided with Stop / Manual /Auto selector switch to facilitate operation through BAS. All starters shall be provided with potential free Contact for Connections to Building Automation System.				
	single phase preventer (Electronics type) as per the ratings given below.				
	Terminal block for power distribution.				
	Power Contactor.				
	Phase indicating lights and indicating light for ON/OFF/TRIP status phase sequence relay shall also be provided.				
	96 mm x 96 mm digital voltmeter and ammeter with selector switches.				
	Suitable rating starter required as a bypass arrangement in case of VFD failure.				
	Time delay relay for delayed automatic restart of air handling unit motor.(0-180 Sec).				
	Wiring for microswitch for starting / stopping the fan when fire damper closes / Power supply for fire damper control panel.				
	For on/off/remote and local operation, 3 pole single throw switch shall be provided in each AHU panel to facilitate override of the automatic operation.				
	The number of AHU control panels shall be as follows.				
21.1.1	32A TPN MCB with 3.0 HP Three phase Motor with VFD. Each of these compartment shall contain indicating lamp with ON/ OFF/ TRIP status of motors.	No.	2		
21.1.2	25A TPN MCB with 2.0 HP Three phase Motor with VFD. Each of these compartment shall contain indicating lamp with ON/ OFF/ TRIP status of motors.	No.	1		
<b>A</b>	<b>TOTAL AMOUNT OF - HVAC WORKS (LOW SIDE)</b>				
<b>B</b>	<b>GST</b>				
<b>C</b>	<b>TOTAL AMOUNT WITH GST OF PART-III (A+B)</b>				

**Note:- • All interfacing with BMS and Fire Alarm System shall be HVAC contractor's responsibility.**

**All power and control cabling shall be FRLS.**

**PART-IV - SCHEDULE OF QUANTITY - INTERNAL FIRE SPRINKLER SYSTEM**

S.No.	Description Of Items	Unit	QTY	Rate	Amount
<b>A</b>	<b>SUB HEAD - I - INTERNAL FIRE SPRINKLER SYSTEM</b>				
1	Providing and fixing 15 mm dia. quartzoid type Sprinkler Head with quartzoid bulb and set to operate at specified temperature. UL/FM Approved				
1.1	Pendent, 68° C, Chrome plated (Power coated adjustable rosette)	Each	127		
1.1	upright, 68° C, Chrome plated	Each	127		
2	Supplying, laying, fixing, testing and commissioning of following sizes (NB) of class 'C' M.S. pipes confirming to IS 1239 and 3589 including cutting, threading (upto50mm Dia above shall be welded) , welding etc. and providing all fittings e.g. elbows, reducers, clamps, hangers, flanges, gaskets, nuts, bolts and washers etc. including painting of pipes and fittings with red paint over a coat of ready mixed primer, both of approved quality and shade including cutting holes and chases in brick or RCC walls/slabs and making good the same etc. complete in all respect as required. <b>(The Welding shall not be done for piping less than 50 mm dia.) (heavy duty pipe).</b> Providing two coats of synthetic enamel paint of approved shade over a coat of primer. Prior to application of primer the surface should be cleaned for any dirt, rusts, rough substance etc. Including painting of legends both direction arrow as per the approval of the Project Manager.				
2.1	25 mm dia	Meter	240		
2.2	32 mm dia	Meter	25		
2.3	40 mm dia	Meter	72		
2.4	50 mm dia	Meter	64		
2.5	65 mm dia	Meter	52		
2.6	80 mm dia	Meter	14		
2.7	100 mm dia	Meter	22		
2.8	150 mm dia	Meter	18		
3	Providing and fixing of <b>corrugated stainless steel (AISI 304) unbraided flexible sprinkler pipe drops</b> of 25 mm dia of following length and maximum working pressure of 175 psi with all accessories and clamps as required. The flexible pipe drop shall be UL approved. The pipe drop shall be of following sizes:				
3.1	1.0 M length	No.	90		
3.2	1.5 M length	No.	37		
<b>A</b>	<b>TOTAL AMOUNT OF INTERNAL FIRE SPRINKLER SYSTEM</b>				
<b>B</b>	<b>GST</b>				
<b>C</b>	<b>TOTAL AMOUNT WITH GST OF PART-IV (A+B)</b>				

**PART- V SCHEDULE OF QUANTITY - LOW VOLTAGE**

S. No	Description	Unit	Qty.	Rate	Amount
A	<b><u>FAPA SYSTEM</u></b>				
	<b><u>FIRE ALARM SYSTEM</u></b>				
1	Supplying, installation, testing and commissioning of micro processor based intelligent addressable main fire alarm panel, central processing unit with the following loop modules and capable of supporting not less than 240 devices (including detectors) and minimum 120 detectors per loop and loop length up to 2 km, network communication card, minimum 320 character graphics/ LCD display with touch screen or other keypad and minimum 4000 events history log in the non volatile memory (EPROM), power supply unit (230 ± 5% V, 50 hz), 48 hrs back-up with 24 volt sealed maintenance free batteries with automatic charger. The panel shall have facility to connect printer to printout log and facility to have seamless integration with analog/digital voice evacuation system (which is part of the schedule of work under SH: PA System) and shall be complete with all accessories. The panel shall be compatible for IBMS system with open protocol BACnet/ Modbus over IP complete as per specifications				
1.1	Two Loop Panel	No.	1		
2	Supply of Loop Card which will have 254 devices of both detectors and modules in a single line circuit, SLC supports both Class A and Class B wiring Approval: UL Listed	Set	1		
3	Supply of Addressable Multi Sensor - Heat Cum Smoke detector with base with Binary coded address setting. Dual LED's for 360° visibility. Sleek low-profile housing design. Regular 100mm base. IP Rating : IP - 42. Approval: UL Listed	No.	1		
4	Supplying, installation, testing & commissioning of intelligent analog addressable photothermal detector complete with mounting base complete as required & cpwd specifications.	No.	104		
5	Supplying, installation, testing & commissioning of intelligent addressable thermal detector with rate of rise cum fixed temperature thermistor complete with base as required.	No.	1		



6	Supplying, installation, testing & commissioning of fault isolator complete with base as required.	Nos.	5		
7	Supply of Addressable Control Module for monitoring the field devices. Binary Coding Setting - Approval: UL Listed, . Note: Need to connect with Sounder as External Power Supply required.	Nos.	2		
8	Supply of Addressable Monitor Module for monitoring the field NO/NC devices. Binary Coding Setting - Approval: UL Listed.	No.	RO		
9	Supplying, installation, testing & commissioning of addressable manual call point complete as required.	No.	5		
10	Supplying, installation, testing & commissioning of addressable horn cum strobe complete as required.	Nos.	5		
11	Supply of Addressable Duct Detector with 2ft. Sampling tubes Note: The Sampling Tubes prices are extra depending on the length of the Tube.	Nos.	RO		
12	Supply and fixing of Electronic response indicator in aluminium housing complete with connections etc. as required.	Nos.	RO		
13	Supplying, installation, testing & commissioning of fire fighter phone jack complete as required.	Nos.	5		
14	Supplying, installation, testing & commissioning of fire fighter telephone handset complete as required.	Nos.	5		
14	Supplying & laying of 2x1.5 sqmm fire survival armoured cable, 600/1000V rated with annealed copper conductor having glass mica fire barrier tape covered by an extruded layer of Cross Linkable Ethylene Propylene Rubber (EPR) insulation and LSZH inner bedding, steel wire armouring & LSZH outer sheath complete as required.	RM	1300		
15	Supply of 5 Amps External Power Supply panel (Self Power)	Nos.	1		
16	Supply of Addressable Relay Module. Approval: UL Listed.	Nos.	RO		
17	Supply of Fire Fighter Telephone System - comprising of	Nos.	1		

	Master Control Panel with 8 Zone Location Alarm Indication, 8 nodes - Each Node shall cover 8 Station - Maximum of 64 Telephone Station - Audio, Visual Indication to alert the operators - Group or All Call facility - full Duplex Audio conversations - Master to remote, Remote to Master Calling facility - Operating Voltage: 230V Input and DC Output 24V @ 100 mAmps Max. - Flush Mounted/Wall Mounted with suitable Back Box, etc. - Operating Temperature: 0 - 49° C - Humidity: 93 + 2% RH - it complies with BS 5839 PT 92002.				
	<b><u>PUBLIC ADDRESS SYSTEM</u></b>				
1	Supplying, installation, testing & commissioning of 1.5/3/6W ceiling speaker complete as required.	No.	5		
2	Supplying, installation, testing & commissioning of 1.5/3/6W metal box ceiling/wall speakers complete as required.	No.	10		
3	Supply of Digital Amplifier of 250 watts output, Class D amplifier - Low Heat dissipation - integrated with Slave console - Power ON LED indications - 19" RACK Mountable.	No.	2		
4	Supply of Digital Signal Processing Based Voice Alarm Controller - 4 inputs, supports Paging unit thru RS485 - Digital Amplifier inbuilt of 250 watts - 8 zones inbuilt, each zone shall support maximum of 250 watts - Zones are expandable in the multiplication of 8 maximum of upto 64 zones - support Remote Paging Unit, integrated with Fire Alarm system, Emergency Inputs, supports 12 nos of Built in Programmable Digital Voice Alert message - 160 characters LCD display - USB connectivity - PC based Router Configuration - 3 levels of password protection - Event log facility - Overriding facility for Emergency Condition, ALL CALL facility - Zone paging facility - inbuilt MIC - 19" Rack Mountable. Works on 230 VAC - Volume control features for all the zones - Supports maximum of 7 slaves with each of 8 zones.	Nos.	1		
<b>A</b>	<b><u>TOTAL AMOUNT - FAPA SYSTEM</u></b>				
<b>B</b>	<b><u>CCTV (IP VIDEO SURVEILLANCE) SYSTEM</u></b>				
1	SITC of IP CCTV Dome Camera 4 MP (2592x1520), Metal + Plastic Housing, Smart IR Range: Up to 30M, Support tripwire and perimeter, Built-in Mic, Reset Button, Operating Conditions -35°~65°, 0~95% RH, 120dB WDR, POE, IP67, Min. Illumination Color: 0.002Lux@ (F1.6, ACG ON), B/W: 0Lux with IR, Alarm Trigger Motion	Nos.	5		

	Detection, Mask Alarm, IP Address Conflict, Video Analytics Tripwire, Perimeter, Protocols TCP/IP, HTTP, FTP, DHCP, DNS, DDNS, MULTICAST, IPV4, NTP, UDP, Up to 2592x1520@25fps, Telnet, Communication Interface 1 RJ45 10M/ 100M self adaptive Ethernet port, On-board storage Built-in MicroSD card slot, up to 512 GB, Protection IP67, Lightning protection, surge protection and voltage transient protection.				
2	SITC OF 8 CHANNEL NVR WITH RECODING FACILITY UPTO 8 CAMERA OF 30DAYS.	Nos.	1		
4	Supply, Installation, Testing & Commissioning of <b>8TB Surveillance Hard Disk</b> .	Nos.	2		
5	8 PORT POE SWITCH FOR CAMERA	Nos.	1		
6	SITC OF 2X 1.5 SQ. MM POWER CABLE ARMOUR	Metre	60		
7	Supplying and drawing of UTP 4 pair <b>CAT 6 LAN Cable</b> as per EIA in the existing surface/ recessed Steel/PVC Conduit as required.				
7.1	4 Pair	Metre	180		
<b>B</b>	<b>TOTAL AMOUNT - <u>CCTV</u></b>				
<b>C</b>	<b><u>DATA , VOICE &amp; Wi-Fi SYSTEMS</u></b>				
	LOCAL AREA NETWORK ( LAN )				
1	Supplying and fixing following modular switch/ socket on the existing modular plate & switch box including connections but excluding modular plate etc. as required.				
1.1	Telephone socket outlet	Each	142		
1.2	DATA/Wi-Fi socket outlet	Each	142		
2	Supplying and fixing following size/ modules, GI box alongwith modular base & cover plate for modular switches in recess etc. as required.				
2.1	1 or 2 Module (75 mmX75 mm)	Each	284		
3	Supplying and fixing following Modular base & cover plate on existing modular metal boxes etc. as required.				
3.1	1 or 2 Module	Each	284		
4	Supplying and drawing of UTP 4 pair <b>CAT 6 LAN Cable</b> as per EIA in the existing surface/ recessed Steel/PVC Conduit as required.				

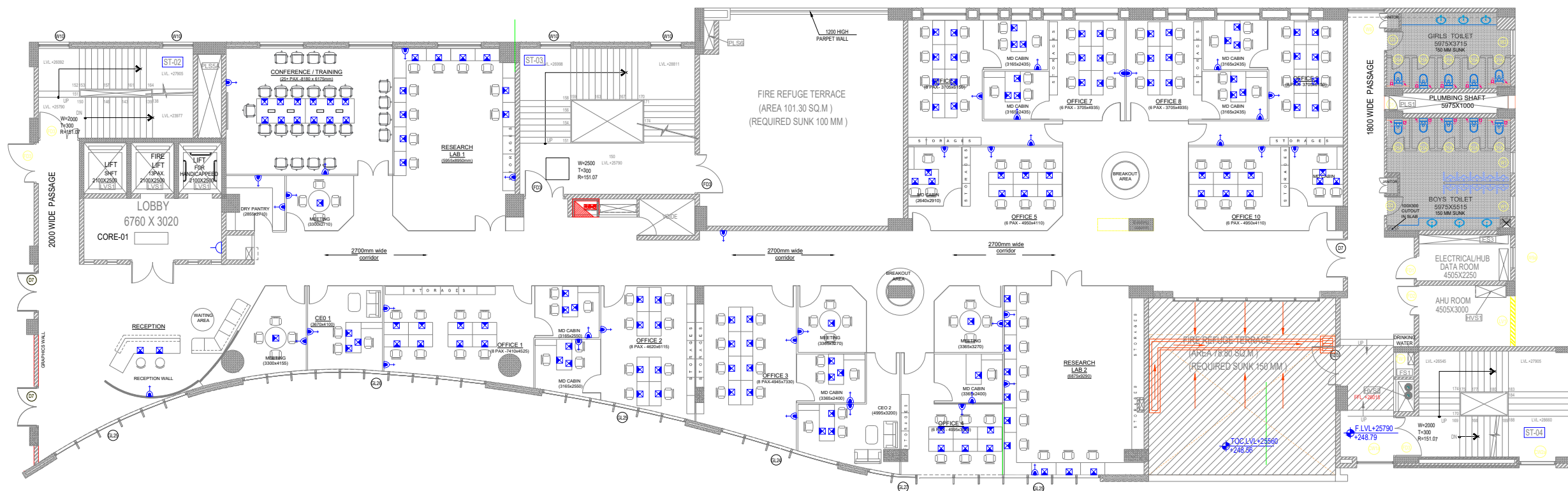
4.1	4 Pair	Metre	3000		
5	Supply, Installation, Testing & Commissioning of <b>15U wall mount rack</b> with fans , 2 cable managers , stationary shelf , 2 Nos. of hardware pkts.	No.	6		
6	Supply, Installation, Testing & Commissioning of <b>loaded 48 port CAT 6 UTP, Transparent shutter jack panel</b> , 1U height, UL-94V-0, Black with cable support bar, clear label marks and earthing plug for CAT6A cable termination at rack end.	No.	6		
7	Supplying and fixing of following sizes of PVC conduit along with accessories in surface/recess including cutting the wall and making good the same in case of recessed conduit as required.				
7.1	20 mm	Metre	500		
7.2	25 mm	Metre	1800		
<b>C</b>	<b>TOTAL AMOUNT - DATA, VOICE &amp; Wi-Fi SYSTEMS</b>				
<b>D</b>	<b>TOTAL AMOUNT OF LOW VOLTAGE PART-V ( A+B+C)</b>				
<b>E</b>	<b>GST</b>				
<b>F=D+E</b>	<b>TOTAL AMOUNT WITH GST OF PART-V</b>				

## SUMMARY

S. NO.	DESCRIPTION	TOTAL AMOUNT WITH GST
PART-I	<b>CIVIL AND INTERIORS</b>	
PART-II	<b>INTERNAL ELECTRICAL</b>	
PART-III	<b>LOW SIDE AC &amp; ELECTRICAL</b>	
PART-IV	<b>INTERNAL FIRE SPRINKLER SYSTEM</b>	
PART-V	<b>LOW VOLTAGE (LV)</b>	
	<b>TOTAL AMOUNT WITH GST</b>	

**Note: All rate to be inclusive cost of Transportation, Labour, Materials, loading, unloading etc. as required for satisfactory completion of work.**

In words (Rs) ( \_\_\_\_\_ )



ELECTRICAL LEGEND	
	6A SWITCH SOCKET
	16 A SWITCH SOCKET

PROJECT: **INCUBATION CENTER**

CLIENT: **I - HUB ANUBHUTI**

ADDRESS: **IIIT DELHI, OKHLA, NEW DELHI**

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A  
M  
P**

TITLE: **TENDER DRAWING**  
ELECTRICAL POWER LAYOUT

**01** DWG NO: ID-01  
SCALE: NTS  
SH. NO. DATE: 22-06-23

**NOTE :- All Dimensions are in millimeters**

## 4TH FLOOR PLAN ELECTRICAL POWER LAYOUT

APPROVED BY: **ALOK SHARMA**

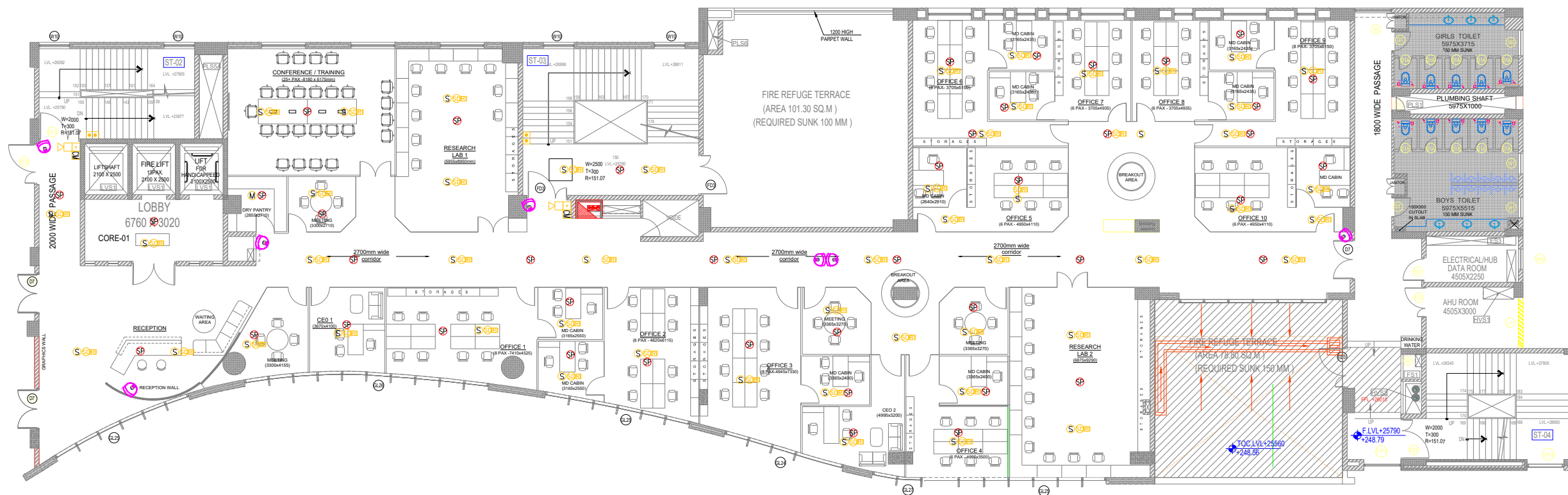
CHECKED BY: **AR. HADIYA SABIR**

DRAWN BY: **AR. ABHISHEK YADAV**

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† All dimension shall be read and not to be measured  
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**TANDEM**  
HEALTHCARE

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New Delhi - 110076.  
www.tandemhealthcare.in



## 4TH FLOOR PLAN FIRE ALARM SYSTEM LAYOUT

NOTE :- All Dimensions are in millimeters

FIRE FIGHTING LEGEND	
	SMOKE DETECTOR
	MULTI DETECTOR
	CEILING SPEAKER
	SMOKE DETECTOR ABOVE FALSE CEILING
	HOOTER
	MANUAL CALL POINT
	CONTROL MODULE
	TELEPHONE FIRE JACK OUTLET
	FIX CCTV CAMERA

PROJECT: **INCUBATION CENTER**

CLIENT: **I - HUB ANUBHUTI**

ADDRESS: **IIIT DELHI, OKHLA, NEW DELHI**

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TITLE: **TENDER DRAWING  
FIRE ALARM SYSTEM LAYOUT**

DWG NO: ID-01

SCALE: NTS

SH. NO. DATE: 22-06-23

APPROVED BY: **ALOK SHARMA**

CHECKED BY: **AR. HADIYA SABIR**

DRAWN BY: **AR. ABHISHEK YADAV**

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## 4TH FLOOR PLAN FIRE FIGHTING LAYOUT

NOTE :- All Dimensions are in millimeters

### FIRE FIGHTING LEGEND

1.		MS MAIN HEADER PIPE
2.		MS BRANCH PIPE
3.		PENDENT SPRINKLER
4.		UPRIGHT SPRINKLER

PROJECT: **INCUBATION CENTER**

CLIENT: **I - HUB ANUBHUTI**

ADDRESS: **IIIT DELHI, OKHLA, NEW DELHI**

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TITLE: **TENDER DRAWING**  
FIRE FIGHTING LAYOUT

01

DWG NO: ID-01  
SCALE: NTS

SH. NO. DATE: 22-06-23

APPROVED BY: **ALOK SHARMA**

CHECKED BY: **AR. HADIYA SABIR**

DRAWN BY: **AR. ABHISHEK YADAV**

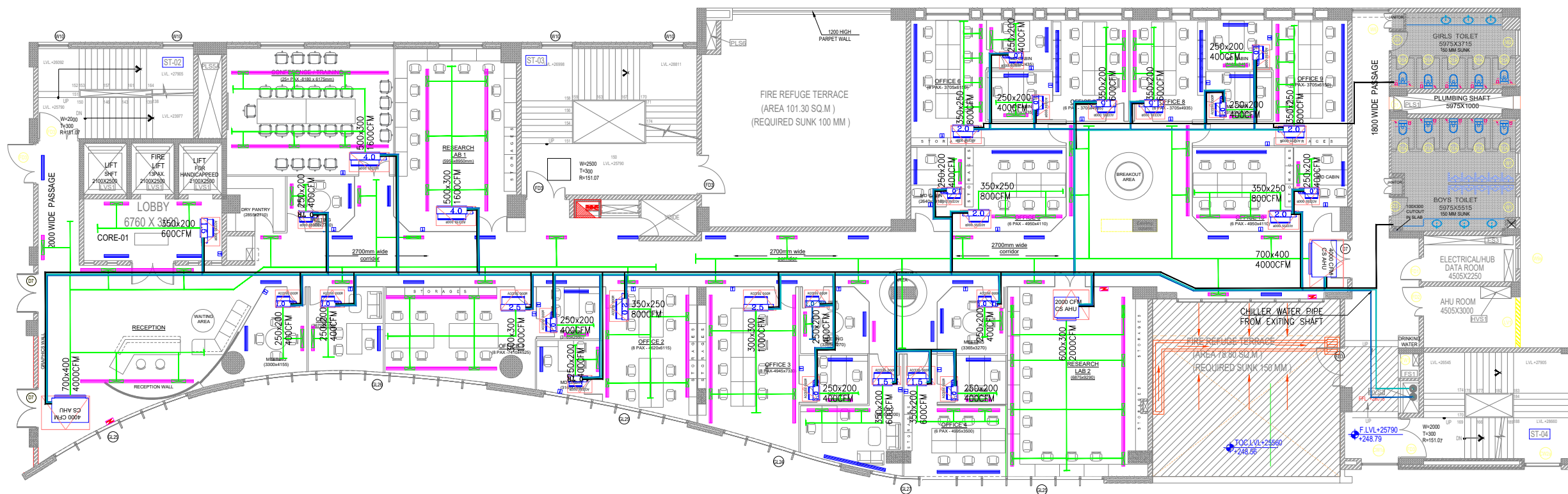
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NOTE :- All Dimensions are in millimeters

## 4TH FLOOR PLAN - H.V.A.C LAYOUT

PROJECT:  
INCUBATION CENTER

CLIENT:  
I - HUB ANUBHUTI

ADDRESS:  
IIIT DELHI, OKHLA, NEW DELHI

S  
T  
A  
M  
P

TITLE:  
TENDER DRAWING  
HVAC LAYOUT

01

SH. NO. DATE: 22-06-23

APPROVED BY: ALOK SHARMA

CHECKED BY: AR. HADIYA SABIR

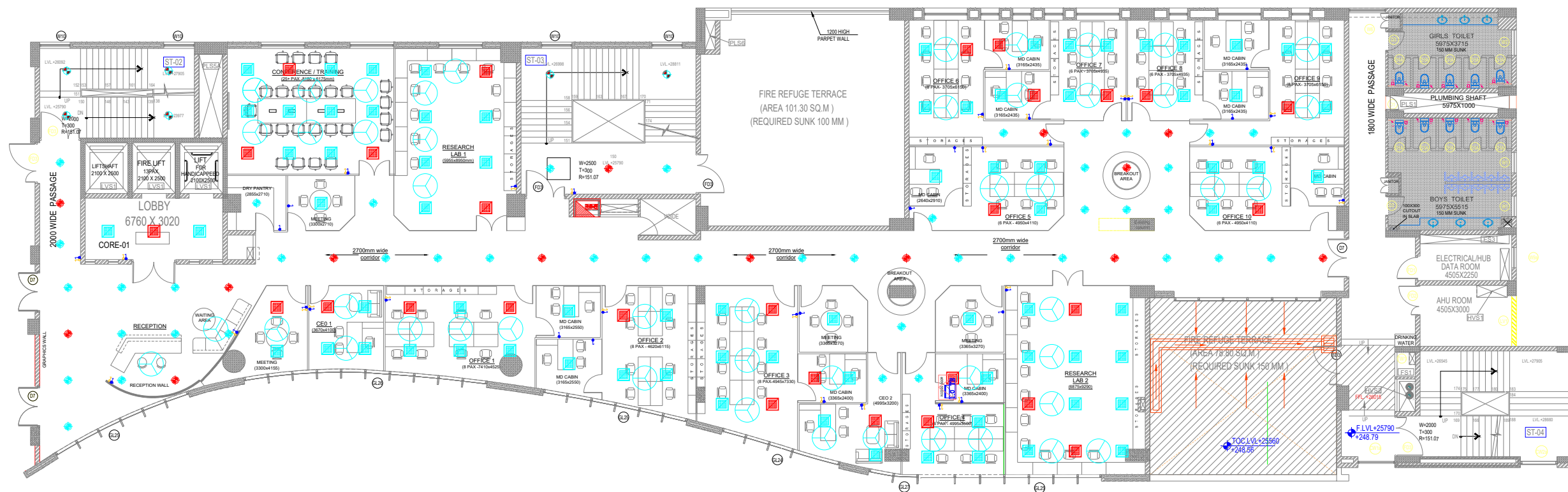
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**NOTE :- All Dimensions are in millimeters**

# 4TH FLOOR PLAN - LIGHTING LAYOUT

LIGHTING LAYOUT	
	EMERGENCY SWITCH BOARD
	NORMAL SWITCH BOARD
	36 2x2 LED CEILING (RECESS) LIGHT
	36 2x2 EMER LED CEILING (RECESS) LIGHT
	1200 DIA CEILING FAN
	18W DOWN LIGHT RECESS MOUNTED
	18W DOWN LIGHT RECESS MOUNTED (EM)
	12W SM251C LED20S-6500 PSU (SURFACE)

PROJECT:	INCUBATION CENTER
CLIENT:	I - HUB ANUBHUTI
ADDRESS:	IIIT DELHI, OKHLA, NEW DELHI

S T A M P	

TITLE:	TENDER DRAWING
	LIGHTING LAYOUT
01	DWG NO: ID-01
	SCALE: NTS
SH. NO.	DATE: 22-06-23

APPROVED BY:	ALOK SHARMA
CHECKED BY:	AR. HADIYA SABIR
DRAWN BY:	AR. ABHISHEK YADAV

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