Request for Proposal (RFP)

June 2017

TENDER

FOR

CIVIL , INTERIOR & PLUMBING WORKS

FOR

M/s. BIO - INCUBATOR ,DEPT OF BIO TECH ,IITM Research Park, Chennai

Tender due on 28.06.2017 at 2:00 pm
Pre-bid meeting on 23.06.2017 at 3 pm
Technical bid opening meeting on 30.06.2017 at 3:30 pm

ARCHITECTS

M/s. Varsha & Pradeep Architects
No 1/427, Kcg College Road,
Karapakkam,
Chennai - 600097

PROJECT MANAGER

M/s. PROMATT
F-204, 1ST Street
Anna Nagar East
Chennai – 600 102

NOTICE INVITING TENDER

a. OWNER	:	Registrar, IIT Madras.
b. SITE	:	IITM BIO - INCUBATOR , 5th Floor ,IITM Research Park, Madras.
c. DESCRIPTION OF WORK	:	CIVIL , INTERIOR & PLUMBING WORKS (as per annexure)
d. SCHEDULE OF WORK	:	AS PER ENCLOSURE
e. ARCHITECTS	:	M/S. VARSHA & PRADEEP ARCHITECTS Architect will provide all necessary drawings
f. PROJECT MANAGER	:	M/S. PROMATT PM will monitor the work

1. Sealed tenders are invited in TRIPLICATE for Registrar, IIT Madras.

2. **Instructions to the Bidder**

   (i) **Preparation of Bids:** - The tenders should be submitted under two-bid system (i.e.) Technical bid and Financial bid. The Technical bid should consist of all technical details / specifications only. The Financial bid should indicate item-wise price for each item and it should contain all Commercial Terms and Conditions including Taxes, transportation, packing & forwarding, installation, guarantee, payment terms, pricing terms etc. The Technical bid and Financial bid should be put in separate covers and sealed. Both the sealed covers should be put in a bigger cover. The Open Tender for supply of **CIVIL , INTERIOR & PLUMBING WORKS** (BIO/GUHA/008/2017) should be written on the left side of the Outer bigger cover and sealed.

   (ii) **Delivery of the tender:** - The tender shall be sent to the below-mentioned addresses either by post or by courier so as to reach our office before the due date and time specified in our Schedule. The offer/bid can also be dropped in the tender box on or before the due date and time specified in the schedule. The tender box is kept in the office of the

   Senior Manager,
   Project Purchase
   IC & SR Building 2nd floor,
   I.I.T. Madras,
   Chennai – 600 036.

   (iii) **Pre-Bid meeting:** - The bidders are requested to attend the pre-Bid meeting scheduled on 23.06.2017 at 3 pm at BT517, Conference room, Department of Bio Technology, IIT Madras.

   (iv) **Opening of the tender:** - The offer/Bids will be opened by a committee duly constituted for this purpose. The technical bids will be opened first and it will be examined by a technical committee which will decide the suitability of the bid as per our specifications and requirements. The bidders will be invited for opening of Technical bids. In respect of opening of financial bid, those bidders who are technically qualified only will be called for. Technical Tenders will be opened on 30.06.2017 at 3: 30 pm at BT517, Conference room, Dept. of Biotechnology, IIT Madras

3. The time allowed for completion of work shall be 10 Weeks from the issue of the Letter of intent to the successful Tenderer.

4. Tender shall remain firm and valid for a period of 45 days from the due date of the tender.

5. The OWNER do not bind themselves to accept the lowest tender and reserves themselves the right to accept of reject any of all the tenders, either in whole or in part without assigning any reason for doing so.

6. OWNER reserves the option to allot the work partly or wholly to single or different contractors.

7. Tenders not properly submitted and not complying with the conditions may be rejected.

8. Tenderer is expected to visit the site before quoting his rates. He must go through all the drawings and documents and fully acquaint himself with various conditions. No claim at a latter date on account of lack knowledge of the site and working conditions will be entertained.

9. The tender shall be submitted on behalf of the company and signed by the person holding the power of attorney who has the necessary authority on behalf of the company to enter into the proposed contract. A copy of the power of attorney shall be enclosed along with the tender. Otherwise, the tender is liable to be rejected.

10. Tenderer should quote specific rates for each item as per the bill of quantities and the rate should be written both in words and figures. All erasures and alterations made while filling the tender must be attested by initials by the Tenderer. Failure to adhere with this condition will render the tender void.

11. The tender should submit with the tender a certified copy of a current income tax clearance certificate.

12. The OWNER/Architects/Consultants reserve the right to call upon any bidder to furnish explanations regarding the calculations and clarifications on any details. They also have the right to visit the office of the bidder and the various works carried out by him and all reasonable assistance in this regard shall be afforded by the Tenderer.

13. Prices should be for an individual works contract basis and rates quoted shall include all royalties, taxes, duties, octroi, entry tax and any other duties and taxes leviable by the Government or local statutory bodies, and no claim whatsoever will be entertained in this respect.

14. Should a tenderer find discrepancies or omissions in the drawings or tender specifications, or should there be any doubt as to their meaning, the tenderer should address the same to the OWNER/ Architects / Consultants for clarifications. Every endeavor is made to avoid any error which can materially affect the basis of the tender by the successful tenderer shall take upon himself to provide for the risk of any error which may subsequently discovered and shall no claim on account thereof.

15. A bill of quantities accompanies the tender documents. It shall be understood that the quantities in the schedule are only approximate and are liable to alterations at the discretion of the OWNER / Architects / Consultants.

16. The successful contractor shall carry out the work under the direction and supervision or their consultants of their representative at the site who shall guide the OWNER from time to time. The contractor shall intimate the name of his Engineer who would be supervising the construction and would be responsible for taking the instructions and carrying out the work.

17. The contractor is responsible for the due and proper execution of all the works, terms and conditions stipulated under this contract. He must examine the designs and satisfy himself of their feasibility. The responsibility of maintaining the conditions will rest with the contractor.

18. The consultants or their representative at site shall have access to the workshop of the successful contractor so as to assure themselves of the quality of material and workmanship.

19. The Consultants / OWNER decision with regard to the quality of the materials and workmanship will be final and binding and any material rejected and not complying with the specifications shall be immediately removed from the site by the contractor.

20. The tenderer shall include in his rates all material, labor, tools, plant and equipment and transport of that may be required in preparation and entire execution and full completion of the work.

21. In interpreting the specifications the following order of decreasing importance shall apply:

1. Schedule of quantities
2. Particular specifications NIT & special conditions
3. Drawings
4. General specifications

Incase of discrepancy between the bills of quantities, the specifications and / or the drawing, the consultants and their OWNER shall be deciding authority as to which shall prevail and their decision shall be final and conclusive.

22. The contractor shall conform to the provisions and regulations of any statute relating to the work and bylaws of any local authority. The contractor shall be bound to give all notices required by statute regulations or bye-laws as aforesaid and to pay all fees and taxes to any authority in respect thereof.

23. The successful contractor shall employ sufficient number of labor force to maintain the required rate of progress and other quality required to ensure workmanship of the degree as required and to the satisfaction of the OWNER/Architects/Consultants. The contractor shall suspend the execution of the work any part of thereof, whenever called upon in writing by the OWNER or the consultants to do so, and shall not resume work thereon until so directed in writing by the authority suspending the work.

24. The successful contractor shall execute the agreement within 3 days of the award of the work. Expenses for the agreement including cost of stamp paper etc., shall be borne by the contractor. In case of delay, the Earnest money may be forfeited and the tender may stand cancelled or the contract enforced as per the terms of the tender.

25. **EMD: - EMD should be at 2% (two percent) of the tender value quoted by the bidder**. The EMD should be included in the Financial bid which will not be opened for Technical evaluation. Enclosing the EMD in the Technical bid will automatically disqualify the tenderer. EMD should be in the form of DD in favour of "The Registrar, Indian Institute of Technology Madras" and payable at Chennai. The tender without EMD would be considered as UNRESPONSIVE and REJECTED. Photo/FAX copies of the Demand Draft/Banker's pay orders will not be accepted. No interest will be paid for the EMD and the EMD (Bid Security) will be refunded to the successful bidder on receipt of Performance Security.

26. The successful contractor shall submit within 3 days of award of work, a detailed bar chart / PERT chart for the project.

27. The contractor shall be responsible for providing all watchmen necessary for the protection of the site, the work and materials, tools, plant, machinery and equipment and any thing lying on the site during the progress of work. He shall be solely responsible for proper steps for protecting, securing, lighting and watching all places of work and the site that may be dangerous to any person whomsoever.

28. The contractor must take necessary and effective measures and caution to prevent death and injuries to his laborers or to any third party. He is solely responsible for the consequences arising out of deaths or injuries or robbery or any other losses of any sort caused through his carelessness or that of agents, representatives or his laborers. The contractor is bound to pay all compensations including workmen's compensation, ESI, PF, claims etc. in every case for the harm that befalls the OWNER from the demands, claims and expenses which are caused by his execution of the contract.

29. The entire work shall be completed and handed over within the time frame specified from the date of award of work. If the contractors fails to complete the work and clear the site on or before the schedules date of completion or if he has not achieved progress at any stage as set out earlier, he shall without prejudice to any other right or remedy of the OWNER and account of such failure, he shall pay compensation as liquidated damages equivalent to 1% per week of the total contract value per week of delay subject to a maximum of 5% of the total contract value.

30. Any item which is not covered in the schedule of Rates, but required to be carried out on site shall be paid as per the actual cost of materials, labor and tools and plant, plus 5% towards overhead and profit. The rates noted in the schedule of rates will apply for the entire project.

31. The contractor shall guarantee that all equipment shall be free from defect due to defective materials and bad workmanship and that the equipment shall operate satisfactorily and their performance and efficiencies of the equipment shall not be less than the guaranteed values. The guarantee shall be valid for a period of 12 months after taking over and any parts found defective shall be replaced free of all costs by the contractor. This period shall be known as defects liability period and shall be reckoned from the date the consultants certify the plant taking over as laid down in the tender conditions. The services of the contractor's personnel if requested during this period for such work shall be made available free on any cost to the OWNER. If defects are not remedied within a month of their occurrence, the OWNER many proceed to do as to the contractor's expenses, to be mutually agreed upon, without prejudice to any other rights.

32. No alteration shall be made by the tenderer in the form of tender or in the specifications and schedule. The tenderer may however submit alternative proposals embodying any variations which they feel is advantageous. Full details including calculations, salient features and advantages, economics shall be furnished in such case. Acceptance of the alternate proposal rests with the OWNER/Architects/Consultants.

33. The employer shall pay the contractor in the manner as specified in the tender conditions on the contract value unless agreed upon otherwise between the contractor and the employer.

34. Storage space for keeping the materials shall be arranged by the contractor. OWNER will provide only open space. Also power required for work will be provided if required by the client on chargeable basis.

Payment Terms:

Mobilization Advance	-	20% Advance
Running Bills	-	60 % on running bills
Installation & Commissioning	-	15% on Installation, Commissioning and testing. The same will be released along with completion certificate from PMC / Architect / Consultant i.e. after completion of all pending works/ snags as mentioned in the handing over certificate or along with final bill certification which ever is the later.
Retention amount	-	5% of the Gross interim certificate amount will be deducted from each running bill and shall be released on completion of the defect liability period.
Minimum Value of Interim billing	-	30% of the contract sum

Terms and conditions:

Contractor will have to take handing over letter after virtual completion of site along with the final snag / pending list has observed by PMC / Architects / Clients

Architect / PMC / Clients are authorized to add / delete any items of works at any time

GENERAL CONDITIONS OF CONTRACT

DEFINITIONS

The OWNER / Employers shall mean Registrar, IIT Madras..

The Architects shall mean M/s. Varsha & Pradeep Architects

The Project Manager shall mean M/s. Promatt

The consultants shall mean: M/s. Varsha & Pradeep Architects

The contractor shall mean the tenderer whose tender has been accepted by the OWNER and shall include the Tenderers heirs, successors and assigns by the OWNER.

The Specification shall mean the tender documents and specifications issued with these conditions of the contract.

The term Contract Document means the Notice Inviting Tender, Tender Form, Instructions to Tenderers, Special Conditions, and General Conditions of Contract, Specifications, Priced Schedule of Quantities and Drawings.

The term Contract means the written agreement between the Owner & Contractor, the Contract documents, all addenda issued by the Owner and all letters exchanged between the Owner and the Contractor before the agreement, specifications and Drawings modifications and amendments thereto which the Consultant may furnish during the progress of work.

The term Contract Sum means:
(a) The cost of the work arrived at after multiplication of the quantities shown in the Schedule of Quantities by the item rates quoted by the Contractor for the various items, in case of Item Rate Contracts.
(b) The lump sum amount quoted by the Contractor, in case of lump sum Contracts.

The term Site means the land & buildings and/or other places on, under, in or through which the work is to be executed under the Contract, including any adjacent lands or places which may be allotted by the Owner or used for the purpose of this Contract.

The term "DAY" means the day of 24 hours from midnight to midnight irrespective of the number of hours worked in that day.

The term "WEEK" means a period of any consecutive seven days.

The term "WORKING DAY" means any day which is not declared to be holiday or rest day by M/s PSA Fort.

The term Work means the work, which is undertaken by the Contractor pursuant to the Contract. Work includes, unless specifically excluded, the furnishing of all materials, labour, equipment, supplies, plant, tool, scaffolding, tools, scaffolding, temporary construction of every nature, taxes, work contract tax, excise, octroi, insurance, water, electricity and all other services and facilities necessary for the full performance and completion of the requirements of the Contract. The Works shall mean the works in the respect of which the tender by the Contractor has been accepted and which are set out in the conditions of contract specifications schedule of quantities and drawing and including all additions substitutions and variations ordered by the Owner / Architect.

The term Sub-Contractor, includes those who have entered into a direct contract with the Contractor and who furnishes material worked to a special Design as called for in the contract documents but does not include those who merely furnish materials not so worked. Nominated Sub-Contractor refers to those specialists, trade men and others, nominated by the Owner /Architect for executing special works or supplying special equipment or materials, for which provisional sums are included in the contract. Such agencies shall be deemed to have been employed by the Contractor.

CONTRACT AGREEMENT
A formal agreement shall be entered into by the contractor with the OWNER for the proper fulfillment of the contract. Incase the agreement is not executed by the contractor within one month of receipt of the letter of intent, the OWNER may at his option without prejudice to any other price of claims against the contractor within seven days after expiry of the said one

month and before execution of the agreement by the contractor by notice in writing to revoke the letter of intent, and thereupon the OWNER shall not be liable to any claim for the contractor for the work already done.

COMPLETION OF CONTRACT

The contractor is responsible for the due and proper execution of the contract, terms and conditions stipulated under this contract. He must examine the designs and satisfy himself of their feasibility. The responsibility of maintaining conditions will rest with the contract. The contractor shall include in this rates all materials, labour, tools plant, equipment, transport, etc., for completion of the contract. The contractor shall provide without any extra charge all times whether specifically mentioned or not but which are usual or required to make a complete working plant and to ensure safe and satisfactory operation.

BYLAWS

The contractor shall conform to the provisions of any statute relating to the work and regulations and bylaws of any local authority. The contractor shall bound to give all notices required by the statute regulations or by-laws as aforesaid and to pay all fees and taxes payable to any authority in respect thereof. The contractor shall indemnify the employer against all claims in respect of patent rights, design, trade marks or name or other protected rights in respect of any plant, machine or work or material used for or in connection with the works or temporary works and from the against all claims, demands, proceedings. The contractor shall defend all actions arising from such claims and shall himself pay all royalties, license fees, damages and cost and charges of all and every sort that may be legally incurred in respect thereof.

MAINTENANCE MANUAL

The contractor shall submit 3 copies of comprehensive manual pertaining to operation and maintenance of the system / Equipments. This shall include the basis of design, technical data, catalogue, list of spares and test results.

RATES

The rates quoted by the contractor in the tender shall be valid till the currency of the contract. The rates shall remain firm without any variation due to any variation in cost of materials, labour or any other reasons whatsoever till the completion of the contract.

NEGLIGENCE

If the contractor shall neglect to execute the work with diligence, or shall contravene the provisions of the contract, the OWNER may give notice in writing to the contractor calling upon him to make good the neglect or contravention of. If the contractor fails to comply with such notice within a reasonable period, the OWNER shall have the option and be at liberty to determine the contract and to take the work wholly in part out of the contractor's scope and complete it either departmentally or through other contractor. The employer shall then be entitled to retain and apply any balance sum that may otherwise to then due by him to the contractor towards the payment of the cost of execution of such work as aforesaid. If the cost of execution shall exceed the balance due to the contractor, the OWNER shall be at liberty to dispose of any of the contractor's materials at site and apply the proceeds for payment of the difference of such cost or recover the balance by process of law.

VARIATION OF WORK

The OWNER shall have the power to issue notices to the contractor to make alteration, omission, addition or deletion in the work. The difference in cost of such variations shall be added to or deducted from the contract price as the case may be in accordance with the unit rates.

SUBLETTING

The contractor shall not without the consent in writing of the OWNER assign or sublet his contract or major portion of his contract other than for raw materials. Consent for subletting shall not relieve the contractor from any obligations, duty or responsibility of the contract.

REJECTION OF WORK AND MATERIAL

The consultants/architects/OWNER has the right to reject any materials or work or equipment found to be unfit or non-complying with the specifications. The contractor has to remove immediately from the site such materials and has to demolish, dismantle such works and reconstruct to the utmost satisfaction of the OWNER/architects/consultants.

COMPENSATION FOR LIQUIDATED DAMAGES FOR DELAY

If the contractor fails to complete the work and clear the site on or before the scheduled date of completion or if he has not achieved progress at any stage as set out earlier, he shall without prejudice to any other right or remedy of the OWNER and account of such failure, he shall be liable to pay compensation as liquidated damages equivalent to 1% of the contract value

per week subject to a maximum of 5% of the contract value. Such amount shall be adjusted or set off against any sum payable to the contractor under this or any other contract.

EXTENSION OF TIME

If the contract is delayed in the progress of work by changes ordered in the work, or if the delay is due to any reasons not attributable to the contractor, then time of completion shall be extended by a reasonable time. No such extension shall be granted unless a request for extension is made in writing by the contractor within 15 days from the date of occurrence of such delays.

DELAYS

The contractor shall not be entitled to any compensation for any loss suffered by him on account of delays in commencing or executing the work, whatever the cause for such delays may be, including delays in procuring government controlled or other materials and delay in obtaining instructions and decisions from the consultants/architects/OWNER. The contractor shall however, merit extension of time as mentioned above.

CLEARING OF SITE

On or before the scheduled date of completion and in any case not later than the date of completion, the site shall be cleared and shall be handed over in a ship-shape condition. Up to this date, the contractor is liable for all expenses, damages and thefts that might occur on the site. The work destroyed or damaged before finally being taken over by the OWNER either through the negligence of the contractor of carelessness of their parties of representatives shall be rebuilt by the contractor at his own cost or shall be rectified by the OWNER and such costs shall be debited to the contractors.

CONTRACTORS REPRESENTATIVE

The contractor shall employ at least one qualified representative whose name shall have previously been communicated in writing to the OWNER/consultants and approved by them to supervise the erection activities. Any written order or instructions shall be given to the contractor. The consultants/architects/OWNER shall be at liberty to object to any particular representative or any persons employed by the contractor and the contractor shall remove the person objected and shall provide another competent representative acceptable to the consultants/architects/OWNER.

WORKS AT SITE

Access to the works at site shall be allowed to only to the contractor or his duly appointed representatives. The contractor shall not object to the execution of work by other contractors or other labourers and shall afford them every facility for execution of their works. Work at employer's premises shall be carried out at such time the employer may approve but the employer may permit the contractor to work beyond such periods if required. The contractor shall obey central, state and local regulations and enactment pertaining to workmen and labour and the OWNER/consultants shall have the right to enquire into the matter and decide all complaints on all such matters.

TAKING OVER

The works when completed at site shall be deemed to have been taken over by the OWNER when the consultants and the employers have certified in writing that the plant has fulfilled all the conditions of the contract.

GUARANTEE AND DEFECTIVE LIABILITY PERIOD

The contractor shall guarantee that all equipment / works shall be free from defect due to defective materials and bad workmanship and that the equipment shall operate satisfactorily and the performance and efficiencies of the equipment shall not be less than the guaranteed values. The guarantee shall be valid for a period of 12 months from the date of taking over. Any parts found defective shall be replaced free of cost by the contractor

The period shall be known as the defects liability period and during such period the services of the contractors representatives if requisitioned shall be made available free of cost to the OWNER. The contractor shall during the defect liability period carry out without any extra cost all routine and special maintenance of the equipment and attend to break down calls that may arise in the operation of the equipment. If required the contractor shall train OWNER technicians and familiarize them with the operation and maintenance of the air-conditioning system. If the defects for reasons mentioned above are not attended to by the contractor within a reasonable period, the OWNER may proceed with the work at contractors risk and expenses without prejudice to any other rights. If for any reason the system is out of operation due to defects in the system for more than one month during the defect liability period, then the defect liability period would automatically get extended by that period of time for which the plant was out of order.

TERMINATION OF CONTRACT

If the contractor commits any 'Act of Insolvency' or lunatic or death shall be adjudged an insolvent or shall have an order for compulsory winding up made against him or pass effective resolution for winding up voluntarily, or if the contractor shall

suffer any payment under this contract to be attached by or on behalf of any of the creditors of the contractor, or shall assign the contract without the prior consent in writing by the OWNER, or shall charge or encumber this contract or any payments due or which may become tender to the contractor there under, or if the contractor has abandoned the contract, or has failed to commence the works, or has without any lawful excuse under these conditions suspended the progress of the works for several days after receiving from the employer written notice to proceed has failed to proceed with the work with such due diligence and failed to make such due progress as would enable the works to be completed in accordance with the approved program of work, or has failed to remove material from the site or to pull down and replace work for seven days after receiving from the OWNER written notice that the said materials or work were condemned and rejected by the employer under these conditions, etc., or 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 OWNER instructions to the contrary to sublet any part of the work. Then and in any of the said clauses, the OWNER not withstanding any previous waiver, after giving seven days notice in writing under the provisions of this clause to the contractor, determine the contract but without prejudice to the obligations and liabilities of the contract, the whole of which shall continue to be in force as if the contract has not been so determined and as if the work subsequently executed by and / or on behalf of the contractor.

After the issue of such notice, the contractor shall not be at liberty to remove from site any plant, tools and materials belonging to him which shall have been placed thereon for the purpose of the works and the OWNER shall have lien up to such plant, tools or materials to site from the date of such notice shall been complied with.

If the contractor shall fail to comply with the requirements of such notice for seven days after such notice has been given, the employer shall have the power to enter upon and take possession of the works and site and all plant and tools and materials thereof and to engage any other persons, firm or agency to complete the works, utilizing the plant tools and materials to the extent possible.

The employer shall not in anyway be responsible for damage or loss of the tools, equipment and materials and the contractor shall not get and any compensation thereof. Upon completion of the works, the consultants and the employer shall certify the amount of expenditure properly incurred consequent on and incidental to the default of the contractor as aforesaid and such amount shall be deducted from the payments due to the contractor including the security deposit/retention money. If the said amount exceeds the payments due to the contractor, the employer shall be at liberty to dispose any of the contractor's materials, tools or plant and apply the proceeds for the payments due from the contractor and recover the balance by process of law.

After the works have been completed and the amounts due to the contractor have been fully recovered from the contractor, the OWNER shall give notice in writing to the contractor to remove the surplus plant and materials from site. If such plant and materials are not removed within a period of 2 weeks after such notice, the OWNER shall have the power to remove and sell the same holding the proceeds less the cost of removal and sale, to the credit of the contractor. The employer shall not be responsible for any loss sustained by the contractor from the sale of the plant and materials.

SUPERVISION, CONTROL AND INSPECTION BY CONSULTANT

In order to make the supervision of the consultant effective during the progress of work, and to ensure proper execution of the works in accordance with the specifications and drawings, the contractor must extend to the consultant all facilities of that the supervision become complete and through. The contractor must keep the consultant informed of the progress of the work on a regular basis.

INTERIM & FINAL CERTIFICATES

The contractor may at appropriate times and in the manner indicated below apply for interim and final certificates for the plant delivered and work executed on the site. Applications for interim certificates may be made to the OWNER from time to time during the progress of the work, when minimum amount of Rs. 5,00,000.00-(Rupees Five lakhs only) become due to be paid into the contractor. Each such application shall state the amount claimed and shall set forth in detail in the order of the priced
bill of quantities, particulars of the work executed on the site pursuant to the contract to a date named in the application and during the period covered since the last proceeding certificate if any. Every interim certificate shall certify the total value of the work duly executed on the site and of the equipment delivered to the site for the use and the works pursuant to the contract up to the date named in the application for the certificates, less the said total value so certified in the last previous Certificate (if any). A final certificate shall certify the total value of all work done and plant supplied according to contract, subject to each additions thereto or deductions there from as may be authorized. Application of final certificate may be made to the, OWNER at any time after the contractor has ceased to be under any obligation. Please note that all payment claims are to be certified by the Consultant.

TERMS OF PAYMENT

The OWNER shall pay the contractor as per the terms in the special conditions of the contract / NIT unless agreed upon otherwise between the contractor and the OWNER.

EMPLOYERS REPRESENTATIVE

Engineer, if appointed by the OWNER shall be the representative of the OWNER and Architects/consultants. The duties of the Owner's representative are to watch and supervise the works and to test any materials, equipment, plant etc., to be used or workmanship employed in connection with the works. The contractor shall afford the employer's representative every facility and assistance for examining the works and checking and measuring the materials and works.

The OWNER representative shall have power to give notice to the contractor or his representative about the non approval of any work or materials or equipment and such works shall be suspended or the use of such materials and equipment should be discontinued until the decision of the consultants is obtained. The work will from time to time, be examined by the consultants or the employer's representative, but such examination shall not in any way exonerate the contractor from the obligation
to remedy any defects which may be found to exist at any stage of the work or after the same is completed.

DISPUTES

All disputes and differences of any kind whatsoever arising out of or in connection with the contract, whether during the progress of the works or after their completion shall be referred to the OWNER by the contractor and the OWNER shall within a reasonable time after their presentation make and notify decisions thereon in writing.

CONSTRUCTION OF CONTRACT

The contract shall in all respects to be constructed and operate as Indian Contract and in conformity with Indian Law, and all payment there under shall be made in Indian Rupees. The marginal notes hereto shall not effect the construction thereof.

ADMINISTRATION OF THE CONTRACT

Architects will be Owner's Consultant for the complete execution of the works covered under this contract and until final completion of the project and settlement of final accounts & will have authority to act on their behalf to the extent provided for in the contract. Instructions of the Owner / Architect to the Contractor shall be forwarded by them through the Project Manager/ nominated by the Architect.

The Project Manager /Architect will determine in general if the work is being performed in accordance with the Contract documents. The Project Manager / Architect will have the authority to reject the Contractor's work which does not conform to the Contract documents and to require necessary inspection and testing.

The Owner, Architect and Project Manager shall at all responsible times have free access to the work and / or to the Workshops, factories or other work related places and also to any place where the materials are stored or from which they are being obtained.

The Contractor shall give every facility to the Owner and / or their representatives necessary for inspection, examination and test of the materials and workmanship. If the work is to be done at a
Place other than the site of the work; the Contractor shall obtain the written permission of the Architect for doing so.Except the representative of the Public authorities, any person not connected with the Project and any other unauthorized person shall not be allowed on the site at any time without the written permission of the Architect.

The Architect's / Project team will be will visit the site at intervals appropriate to the stage of Construction and as warranted by the Construction schedule to familiarize themselves with the quality of the work and to determine in general if the work is proceeding in accordance with the drawings and the specifications.

Neither the Architect nor the Architect's representative/ Project team will be responsible for the acts, omissions or performance of any Contractor, it being expressly understood that neither the presence not the absence of the Architect on the jobs shall relieve any Contractor from responsibility for compliance with the Contract Documents, nor from responsibility for compliance with the Contract Documents, not from responsibility for removal and replacement of work not in accordance therewith.

The Project Manager /Architect will check and monitor the schedule prepared by the contractor and coordinate the work of all the contractors on the Project including their use of the site. The Architect will keep the contractor informed of the overall project Construction Schedule to enable the Contractor to plan and perform the work properly.

The Owner / Architect's decision in respect of the quality of work and interpretation of drawings and details will be final and binding. Whenever in the opinion, of Architect, it is considered necessary or
advisable, the Architect /Project Manager will authority to require special inspection or testing of the work whether or not such work is then fabricated, installed or completed.

The Project Manager / Architect shall be the interpreter of the requirements of the Contract Documents and along with the Architect, the judge of the performance there under by the Contractor. The Project Manager /Architect shall render interpretations necessary for the proper executions or progress of the work with reasonable promptness, on written request of either the Owner or the Contractor.

Claims, and disputes between the Contractor and the Owner relating to the execution or progress of the work or the interpretation of the Contract Documents shall be referred to the Architect through the Project Manager for decision.

The Contractor shall prepare and submit to the Architect comprehensive lists of the manufacturer's products proposed for the Project. Such lists shall include all information on materials, equipment and fixture as may be required for the preliminary approval of Architect/ Project Manager.

The Contractor shall submit three copies of all Shop Drawings, Product Data and samples to the Project Manager /Architect who will review and coordinate them with information contained in related documents and transmit to the Architect those recommended for approval.

The Architect & Project Manager will review and approve or take other appropriate action upon the Contractor's submittals of such as shop drawings, product Data and samples, but only for conformance with the design concept of the work and the information given in the Contract Documents. The Architects/ Project Manager Approval of the specific item shall not indicate approval of an assembly of which it is component.

The Architect/ Project Manager will record the measurement of works carried out by the Contractor in proper measurement books, preferably jointly with the Contractor, whenever possible. The Contractor shall submit our copies of all their bills, including final bills, to the Project Manager. After checking, verification, and evaluation of the Bill, Architect/ Project Manager will determine the amount due to the Contractor and will issue a Certificate of payment incorporating such amount.

NOMINATED SUB CONTRACTORS

All specialist agencies, manufactures, suppliers, and others executing any work or supplying and fixing any goods for which provisional sums are included in the schedule of quantities and / or specifications, may be nominated or selected by the Architect/ Project Manager in consultation with the Consultants / Architect/ Owner who shall be final authority and shall be declared and referred to as nominated Sub-Contractors. Such agencies shall be deemed to have been employed the Contractor.

No nominated sub-contractor shall be employed on or in connection with the work against whom the contractor shall have employed on or in connection with the work against whom the contractor shall have reasonable objection, or who will not enter into a contractor providing:

That the nominated Sub-Contractor shall indemnify the Contractor against the same obligation in respect of the Sub Contract as the Contractor is under in respect of this contract.
That the nominated Sub-Contractor shall indemnify the Contractor against claims in respect or any negligence by the Sub – Contractor or his servants or agents or any misuse by him or them, of any scaffolding or other plan or the property of the Contractor or under the Workman's Compensation act in force.

The Contractor shall take approval of the Architect/ Project Manager for the Sub-contractor that they intend to employ for plumbing and Electrical installations for temporary works, if any.

CONSTRUCTION PRACTICES AT SITE

Through out the Construction period the Contractor shall nominate a responsible full time Site Engineer who will be their Site-in-charge and also coordinate between Owners, Architect, Consultant, Statutory bodies as may be required. Throughout the Construction period the Contractor shall protect the work and the Owner's property, and the property of

others, from damage, injury or loss arising from or in connection with operations under the Contract. He shall make good any such damage, injury or loss at his own cost.

The Contractor shall at all times provide and maintain adequate protection against weather so as to preserve the work, materials, equipment, installation and fixtures free from damage. The Contractor shall use his best efforts to prevent dust or smoke from interfering with the normal activities of others.
The Contractor shall provide at the site, first aid facilities for minor injuries. All accidents and major injuries shall be immediately brought to notice of the Architect/ Project Manager.

SAFETY CODE, LABOUR CAMPS, SANITARY ARRANGEMENTS
The Contractor shall follow the Safety Code and Model Rules for the Protection of Health and Sanitary Arrangements for workers as prescribed by the CPWD as regards to safety code, first aid facilities, drinking water, washing facilities, latrines and urinals, provision of shelter during rest, crèches, canteens, anti-malarial precautions etc. The Contractor shall get the arrangements made by him for the above approved by the Architect/ Project Manager. In case the contractor fails to make the aforesaid arrangement, the Owner shall be entitled to do so and recover the cost there of from the Contractor.

INSPECTION AND APPROVAL
All works requiring more than one process shall be subject to examination and approval at each process stage. The Contractor shall give due notice to the Project Manager when each process stage is ready for inspection. In default of such notice, the Project Manager shall be entitled to appraise the quality and extent thereof.

No work shall be covered up or put out of view without the approval of the Project Manager and the Contractor shall afford full opportunity for examination and measurement of any work which is about to be covered up or put out of view and for examination of foundation preparations before permanent work is placed thereon.

The Contractor shall give due notice to the Project Manager whenever such work of foundation is ready for examination and the Project Manager, without unreasonable delay, shall examine and / or measure such work or such foundation, unless he considers it unnecessary and advises the Contractor accordingly. In the event of failure of the Contractor to give such notice he shall, if required by the Project Manager, uncover such work at his own expense.

The Project Manager shall have powers at time to inspect and examine any part of the work and the Contractor shall give such facilities as may be required for such inspection and examinations.

CONTRACTOR'S LIABILITY AND INSURANCE
Throughout the Construction period, the Contractor shall take full responsibility for the care of the work and for taking precautions to prevent loss or damage and to minimize the same to the greatest extent possible. He shall be liable for any damage or loss that may happen to the work (including materials supplied by the Owners) or any part thereof and to the Owner's equipment and plant from any cause whatsoever and shall at his own cost repair and make good the same so that at completion of the Work, the Owner's equipment and plant shall be in good order and condition and in conformity in every respect with the requirements of the contract and instructions of the Project Manager.

The Contractor shall be responsible for all injury to persons, animals and things which may arise from carelessness accident or any other cause whatsoever in any way connected with the carrying out of the Contract.The Contractor shall fully indemnify the Owner and hold him harmless in respect of all losses, claims and any expenses arising from such injuries or damage to any person or any property whatsoever which may arise out of or in consequence of carrying out the Contract and against all claims, demands, proceedings, damages, cost charges and expenses whatsoever in respect of or in relation thereto. The insurance policy for third risk shall cover a sum of Rs.5 lakhs for each incidence.

Before commencing execution of the work, the Contractor shall without in any way limiting his obligations and responsibilities under the contract, insure against any damage, loss or injury which may occur to any property at the site or to any person including any employees or the Owner, Consultant and the Project Manager, by or arising out of carrying out of the Contract.

The Contractor shall at all times indemnify the Owner against all claims, damages and compensations under the provision of Payment of Wages Act 1936. Minimum Wages Act 1948, Employer Liability Act 1938, Workmen's Compensation Act 1923. Industrial Disputes Act 1947 and Maternity Benefit act 1961 and Contract Labour Regulation & Abolition act 1970 or any modifications thereof or any other law relating thereto and rules made there under from time to time or as a consequence of any accident or injury to any workmen or other persons in or about the work, whether in the employment of

the Contractor or not, save and except where such accident as injury has resulted from the act of Owner, and / or his representatives.

The Contractor shall also indemnify the Owner against all cost, charges, and expenses of any law suit, action or proceedings arising out of such accident or injury and against all sum or sums which may, with the consent of the Contractor be paid to compromise or compound any claim. Without limiting his obligations and liabilities as above provided, the Contractor shall insure against all claims, damages or compensation payable under the Workmen's Compensation Act 1923 or any modifications thereof or any other law relating thereto.
Soon after placing in order the contractor should take out the following policies:

Workers compensation or social scheme:

Workers' Compensation insurance as required by law or regulation, having jurisdiction over Contractor's /sub-contractors employees.

Employer's Liability insurance in amounts not less than INR 500,000/- (Rupees Five lakhs only)

Where permitted by law, such policies will contain a waiver of the insurer's subrogation rights against OWNER.

In addition to the above, the Contractor shall insure the work and keep them insured throughout the Contract period at his own cost against loss or damage by fire and */* or earthquake with any Nationalized General insurance Company in the Joint names of the Owner and the Contractor for full amount of the contract including full values of Owner supplies.

The Contractor shall deposit the policy and receipts for the premium with the Owner within one month 15 days of Commencement. In the event of any fire and */ or* earthquake the Contractor shall as soon as the claim under the policy is settled or the work is reinstated by the insurance Office should they elect to do so, proceed with all diligence with the completion of the work in the same manner as though the fire and /or earthquake had not occurred and in all respects under the same conditions of the contract. However, in case of re - building or reinstatement after the fire and */* or earthquake, the Contractor be entitled to each extension of time for completion as the Project Manager may deem fit. The aforesaid Insurance policies shall not be cancelled till the Project Manager has agreed to their cancellation. The Contractor shall submit proof to the Project Manager from time to time that he has taken out all the insurance policies as stated above and has paid the necessary premium for keeping the policies alive till the expiry of the Defects liability Period.

The Contractor shall ensure that similar insurance policies are taken out by his Sub-Contractors, if any, and shall be responsible for any claims or losses to the Owner resulting from their failure to obtain adequate insurance protection thereof. The Contractor shall produce or cause to produce by his Sub-Contractors, if any, the relevant policies and premium receipts as and when required by the Project Manager.

If the Contractor and / or the Sub-Contractor, if any, shall fail to effect and keep in force the insurance referred to above or any other insurance which he */* they may be required to effect under the Contract, then the Owner may effect and keep in force any such insurance and pay such premium or premiums as may be necessary for that purpose and from time to time deduct the amount so paid by the Owner from any money due or which may become due to the Contractor or recover the same as a debt due to the Contractor.

Additional Insured. All policies described in this Agreement will name OWNER, its officers, directors and employees as additional insured, and will stipulate that the insurance afforded additional insured will apply as primary insurance and that no other insurance carried by any of them will be called upon to contribute to a loss covered there under. If "claims made" policies are provided, Contractor will maintain such policies without endangering aggregate limits at the above stated minimums, for at 3 months after the handing over of works.

Property. Contractor will carry all-risk property insurance with an endorsement to include coverage for property of others with a sub limit on the property of others coverage of no less than INR 10,000,00/- (Rupees ten lakhs only).

Certificates of Insurance. Certificate of Insurance evidencing the required coverage and limits must be furnished to OWNER prior to the commencement of any Services, and at such other times as requested by OWNER. Contractor will ensure that the contractors provide OWNER thirty (30) days written notice prior to cancellation of such policies. All insurance policies will be written by a company authorized to do business in the territory and jurisdiction where the project is located. Contractor will furnish copies of any endorsements subsequently issued which amend coverage or limits. In no event will the coverage or limits of any insurance maintained by Contractor under this Agreement, or the lack or unavailability of any other insurance, limit or diminish in any way Contractor's obligations or liability to OWNER under this Agreement.

The Contractor shall provide the employer copies of the above insurance policies and premium receipts in respect thereof and should the contractor make default in insuring or continuing to insure as aforesaid the employer may himself insure against any risk with respect of which the default shall have occurred and deduct a sum equivalent to the amount of premium so paid from any amount due or to become due to the Contractor.

CERTIFICATE OF COMPLETION

When the work is virtually completed, the contractor shall give notice of each completion to the Project Manager. Within 10 days of receipt of such notice, the Project Manager shall inspect the work and shall furnish the Contractor with a certificate of virtual completion indicating:-

(a) Date of virtual completion
(b) Defects to be rectified by the Contractor
(c) Items for which payment shall be made at reduced rates
(d) Balance of work, if any, to be done by the Contractor.

No certificate of virtual completion shall be issued, nor shall the work be considered to be completed till the Contractor has removed from the premises on which the work has been executed, all scaffoldings, sheds and surplus materials, (except such as required for rectification of defects) rubbish and all huts and sanitary arrangements required for his workers on Site in connection with the execution of the work, and the Contractor shall have cleaned floors, gutters and drains, eased doors and windows, oiled locks and fastenings, labeled keys and handed them over to the Owner or his representatives and made the whole premises for immediate occupation or sue to the satisfaction of the Project Manager.

On completion of the snags/ pending works mentioned in the certificate of Virtual completion, contractor to be issued final Completion Certificate which will be issued on producing final bill, as built drawings, operation manual, warranty documents and handing over documents. Retention period will start from the date of issuance of completion report.

FINAL BILL

The Contractor shall submit the Final bill to the Project Manager within 4 weeks of the virtual completion of the work to be certified by the Project Manager. No further claims shall be made by the Contractor after submission of the Final Bill. The Final Bill shall be accompanied by the same details as for the interim bills, except for the following additional details:

All written guarantees and warranties required by the Contract Documents

The Architect/ Project Manager shall check the final bill of the Contractor, verify the payment due to him and make the final certificate of payment to the Owner within 3 weeks of receiving the final bill from the Contractor. The Owner shall make the payment to the Contractor within 2 Weeks of receiving the Architect final Certificate of payment.

SETTLEMENT OF DISPUTES

The disputes and difference arising out of or in connection with drawing / design shall be referred to the Architects who shall state his decision in writing. His decision with respect to interpretation to his drawings / design shall be final, conclusive and binding on the parties here to and shall be without appeal.

All other disputes and difference of any kind whatsoever arising out of or in connection with the Contract or the carrying out of the work (whether during the progress of the work or after its completion and whether before or after determination, abandonment or breach of the Contract) shall be referred to the Project Manager who shall state his decision in writing.

ARBITRATON AND LAWS

In case the Contractor is dissatisfied with any decision, other than a decision in respect of matters or any refusal of the Project Manager to give any decision in respect of the matters, then in any such case, the Contractor shall within one month of receiving such decision in writing or within two months of the reference to the Consultant if the Consultant shall not have taken a decision give a written notice to the Owner with a copy to the Consultants requiring that such matters in dispute be arbitrated upon.

Such written notice shall specify the dispute or disputes to be referred to the arbitration under the clause together with the amount or amounts claimed in respect of each dispute.

Such matters in dispute shall be referred to the arbitration and final decision of a single Arbitration, or to the Arbitration of two Arbitrators, one to be appointed by each party, which Arbitrators before taking upon themselves the burden or reference shall appoint an Umpire.

The qualification of the Arbitrator / Arbitrators / Umpire shall be one of the following:

(a) Fellow of the Institution of Engineers
(b) Fellow of the Indian Institute of Architects
(c) Member of the Association of Consulting Engineers (India)

SPECIAL CONDITIONS

GENERAL

The following special conditions shall be read in conditions shall be read in conjunction with General Conditions of Contract. If there are any provisions in these special conditions which are at variance with the provisions in the above mentioned document, the provisions in these special conditions shall take precedence. The work in general shall be carried out as per Technical Specifications unless otherwise specified in the nomenclature of the individual item.

For items not covered under Technical specifications, the work shall be done as per latest relevant IS Code of Practice. Otherwise the work shall be done as per sound engineering practice as directed by the Project Manager whose decision in this regard shall be final and binding on the Contractor.

WATERSUPPLY AND POWER SUPPLY

Water Supply – Owners to supply for general purpose of drinking. Water required for contract works will be the vendors responsibility.

Power Supply – Owners to provide supply at one point. The same will charged to all contractors proportionately.

STANDARD WORKMANSHIP

To determine the acceptable standard of workmanship the Contractor shall execute a portion of the items of work as samples for approval of the Project Manager / Consultants before taking up the actual execution of the particulars items of work.

These samples on approval of Project Manager shall be guiding samples for execution of the particular item of work. Work not conforming to the approved samples shall be rejected. Rates quoted for the items shall include for such preliminary work which shall not be paid for separately. The Contractor shall arrange for testing of material, samples etc. as directed by the Architect for & submit the required report. The cost of such testing will be borne by the Contractor.

CONTRACT COMPLETION TIME

Time is the essence of this contract. An overall time schedule will be prepared by the Architects. The orders are expected to be placed by <<DATE>>, with work at site commencing immediately thereafter. The entire work is to be completed free of snags & defects handed over for occupation by owner by ((DATE)). Individual trade schedule will conform to this overall time schedule.

PROGRAMME OF WORKS AND PROGRESS REPORT

The successful bidder shall within 3 days of the communication of acceptance of tender prepare and submit detailed working integrated net work programme for the execution of work including detailed charts for individual items of work along with the calculation for net work analysis, all activities and event list and details of man power and equipment required for fulfillment of programme from start of work to completion for the approval of Architects / Consultants. The programme chart shall also indicate the scheduling of samples, shop drawing and approvals. This chart shall be in conformance with overall schedule prepared by the Architect.

If the Contractor fails to submit the detailed network programme within the stipulated time, the Project Manager will prepare the same themselves and this programme will be binding on the Contractor.
Ancillary works should be so started that all such work is completed before the specified overall contractual period of completion. Any failure on the part of the Contractor to adhere to the Approved / agreed starting and completion dates of the individual items mentioned in the chart shall attract application of liquidated damages clause in whole or part at the discretion of the Project Manager not withstanding the overall period of completion stated in the Appendix to the condition of Contract.

The Contractor shall assume full responsibility for any delay in delivery of material by merchants or nominated sub-Contractors not having completed the work in accordance with the approval / agreed time and progress chart. Such excuses shall not form any criterion for extension of time or any claims by the Contractor.

The Contractor shall furnish the following reports in the format prescribed by the Project Manager regularly.

Daily - Labour report category and area wise.

Weekly:
Detailed progress report in duplicate giving an accurate record of the progress of the works, the number of men employed in each trade. The Contractor shall impose a similar requirement on all his sub-Contractors and shall incorporate such information in his own report.

CO-0RDINATION
The Contractor shall fully cooperate with Owner, other Contractor and Architects. He shall study the plans, specifications and time schedule of other service Contractors and so plan his work in consultation with the Project Manager that all related activities are dovetailed and coordinated. The Contractor will correspond with other agencies if necessary jointly only through the Project Manager. Failure on the part of the Contractor to check plans of the other service contractors affecting his work will render the Contractor responsible for bearing the cost of any necessary consequent changes.

STORES AND MATERIALS
All the Stores and materials including the safety and security of the same required for the satisfactory completion of the work shall be arranged by the Contractor from his own sources / open market. No claim, whatsoever, shall be entertained by the Owner on account of delay in either providing these materials or non-availability of these materials in the market.

MATERIAL ORDER STATUS/RECEIPT AT SITE
The Contractor shall furnish a daily report to the Project Manager on a prescribed format for each material as regards the quantity and quality of the material received/available on site. The material stock shall be checked for quantity as well as quality by the Project Manager. He may or may not give any prior notice to the Contractor before such a check. The Contractor shall ensure that the Project Manager has full access to his stores at all times.

REVIEW MEETINGS
Co-ordination meetings called daily / weekly will be attended by the Owner, Consultants, Project Manager and the Contractor to review the progress of work and sort out problems, if any, with an idea of ensuring the completion of the project within the stipulated time period. Project Managers & the Architect will chair these meetings & keep records.

MOBILIZATION ADVANCE
A lump sum amount not exceeding 20% of the Contract sums for the work orders placed may be advanced as interest free mobilization advance against an irrevocable Bank Guarantee for the equivalent amount from any Nationalized Bank. The Bank Guarantee shall be in the form approved by the Owner. The advance shall be utilized by the Contractor for the purpose of this contract only and for no other purpose. The amount of advance which may be given to the Contractor shall be at the sole discretion of the Owner. Recovery of the sum advanced above shall be made by a 15% pro-rata deduction from each running bill from the Contractor until full advance is recovered. Provided that if at any time the Contractor fails to execute the Contract to the satisfaction of the Owner for any reason whatsoever the Owner shall be entitled to recall forthwith the entire amount so advanced, and or recover the whole balance amount as the case may be from the bills if any, payable to the Contractor or by enforcing the Bank Guarantee.

BOUGHT OUT ITEMS
Bought out items shall be executed by persons to be nominated by the Owner on the advice of Consultant/Architects/ Project Manager selected in such a way as they may direct.

The Contractor shall be paid the actual prime cost plus 5% in addition to cover all overheads, profits, supervisions, miscellaneous consumables and co- ordination charges.

SECURITY
The Contractor shall provide his own watch and ward staff and site security to ensure that only authorized persons or materials shall enter or leave the work site. The Contractor shall also make his own arrangements for the protection and safety of his material and equipment site.

The Contractor shall issue to all his workers/staff identification cards or passes.

TRESPASS
It shall be the responsibility of the Contractor to ensure that his workmen do not trespass into areas and buildings adjacent to the construction site.

INCOME TAX
Income Tax as applicable will be deducted from all the interim bills and the final bill of the Contractor and remitted to the Government treasury / Reserve Bank in accordance with the prevailing laws of the land.

BUREAU OF INDIAN STANDARD
A reference made to any Indian Standard specifications in the tender documents shall imply reference to the latest version of that standard including such revisions / amendments as may be issued by the Indian Standard institution during the currency of the Contract and corresponding clause therein shall hold valid in place of those referred to.

The Contractor shall furnish guarantees for successful performances of waterproof treatment work, etc. if any executed by the specialist for the minimum period of 10 years from the date of completion as certified by the Architects. The guarantee shall be in the form acceptable to the Owner / Architect.

Where particular makes of material or specialists are indicated in such cases also, the Contractor shall be required to assume full responsibility and liabilities in respect of their performance.

WARRANTY
All materials, equipments and workmanship shall be under guarantee and / or maintenance / replacement warranty for a period of one year from the date of virtual completion.

Contractors who satisfy conditions mentioned above in the Tender document and more importantly the below two conditions ONLY are eligible to quote for this project.

CONTRACT SPECIAL ELIGIBILITY CRITERIA

1. Vendor/Contractor should have executed a wet lab facility in the past, whose standard should satisfy the appointed architect and project manager.
2. Vendor/Contractor should have worked in the past with either IITM Research Park or BIO Incubator
3. Vendor/Contractor should have executed an order value of Rs.1,00,00,000 and above in the last 1year
4. Vendor/Contractor should have executed a contract of similar package i.e. Interior, Civil, False Ceiling and Plumbing together in the last 12 months, of a standard satisfactory to the architect and project manager.

Proof / Testimony compliance for all the above two points to be submitted along with the offer

APPENDIX FOR THE CIVIL, INTERIOR & PLUMBING work

Date of Commencement of Works	Date of Letter Of Intent/issuance of contract whichever is earlier. Specific written instruction to commence works. Later issued document shall supersede all the terms & conditions of previous document
Time for Completion to be reckoned from the date of issue of Letter of Intent / Work Order. (Scheduled period of completion)	10 Weeks from the date of LOI
Compensation for Delay beyond the scheduled period	1% of the contract sum per week or part thereof. The total compensation shall be limited to a maximum of 5% of the contract sum.
Period of Defects Liability	12 months after date of certificate of completion of works or certification of final bill whichever is later.
Time within which payment to be made by the Employer after issue of certificate by the Engineer	10 days
Period of final payment by the Employer after Certification by the Engineer	30 days
Construction Power	Shall be borne by contractor
Commercial Tax, Custom, Excise benefits	Contractor should have the eligibility to pass on the benefit of CT-3 or other exemption benefits as enjoyed by Client who is a 100% EOU under various statutory laws

Payment Terms: - To be Decided

Mobilization Advance - . 20% Advance

Running Bills - 60% on running Bils

Installation & Commissioning - 15% on Installation, Commissioning and testing .The same will be released along with completion certificate from PMC / Architect / Consultant i.e. after completion of all pending works/ snags as mentioned in the handing over certificate or along with final bill certification which ever is the later.

Retention amount - 5% of the Gross interim certificate amount will be deducted from each running bill and shall be released on completion of the defect liability period.

Minimum Value of Interim billing - 30% of the contract sum

Terms and conditions:

Contractor will have to take handing over letter after virtual completion of site along with the final snag / pending list has observed by PMC / Architects / Clients

Architect / PMC / Clients are authorized to add / delete any items of works at any time

Annexure 1

CIVIL , INTERIOR & PLUMBING WORKS Bill of Quantities (BOQ)

PROPOSED INTERIORS OF BIO-INCUBATOR AT IITM RESEARCH PARK PHASE-2 AT TARAMANI, CHENNAI.

BILL OF QUANTITIES FOR PROVIDING & INSTALLATION OF CIVIL & INTERIOR WORKS

Note: 1. For all items to be quoted as Lumpsum (LS), the contractors are expected to visit the site and appraise themsleves of the site conditions, the issues and complete the works right upto the point of connecting to the infrastructure of the existing building where ever necessary.

2. All rates to include all taxes, duties and levies including GST

S.No.	Item Description	QTY	Unit	Rate	
		SQM			TOTAL
PART A	**Civil and related works**				
1	**Vitrified tile flooring in flooring & skirting**				
	Providing and laying in position, line and level anti-skid vetrified tile flooring (basic rate Rs. 85/sft). Rate to include surface preparation, bedding mortar(1:4) 40-50mm thick with all joints complete.	**397.0**	**SQM**		
2	**Granite threshhold(Polished or flammed finish)**				
	Providing and laying in floors 20 mm thick granite slabs over a bed of 40mm - 50 mm thick bedding mortar 1:4 (1 cement : 4 coarse sand) jointed with white cement slurry mixed with pigments as per approved color.	**2.0**	**SQM**		
3	**Stainless Sink with Drain board**				
	Supply and fixing Stainless Steel Sink with drain board supported by CI/MS Brackets duly painted, CP cast brass bottle trap with extension piece, rubber adaptor, wall flange, union, CP brass chain rubber plug & making good. Parryware Make or equivalent)	**QRO**	**NOS**		
4	**Epoxy Paint for floor and coving**				
	Providing and applying 500 microns epoxy floor coating. Rate to include surface preperation, apply epoxy primer & epoxy paint in two or more layers not less than 500 microns ,complete thickness.	**17.5**	**SQM**		
5	**Epoxy for walls**	**35**	**SQM**		
	Same as above but for walls.				
6	**Provisional Sum for dismantalling & minor construction**		**LS**		
7	**Provisional sum for Plumbing works**		**LS**		
8	**Cement Screed**				

	P&Laying cement concrete screed (1:2:4) with RMC of approved brand of average thickness of 60mm. Rate to include power floating, curing, making arrangement for RMC upto 5th floor all complete	**33.0**	**CUM**		
9	**Aerocon wall- 200mm thick**				
	200 mm Thick Aerocon -aerated concrete blocks as per manufacturers standards, finished with cement mortar and cement plaster on the face of the wall on both sides	**45.0**	**CUM**		
10	100 mm thick aerocon wall				
	Same as above but for 100 thick wall	**42.0**	**SQM**		
11	**Plastering**				
	Providing and laying ½"-3/4" thick plaster of 1:4 Cement Mortar (1 Cement : 4 Fine Sand) on all internal vertical surfaces and wherever specified. For surfaces requiring thick plastering (like the uneven side of 4½" thick brick masonry wall) , a preliminary coat may be applied of suitable thickness, allowed to set about 6 hours before application of the final coat.	**594.0**	**SQM**		
	Total of Part A				
PART B	**Partitions**				
1	**Full ht. Gypsum - Gypsumboard Acoustic partition**				
a	Providing and fixing in position double skin partition above finished on both sides with two layers of 12mm thk. gypsum board. Partition to be sound proof. Framework and board fixing strictly as per manufactutres' specifications. All verticals frames are to be taken up to the ceiling level with concealed cleats and anchor fasteners. Rate to include providing Thermorex strip below bottom member to seal any gap along the floor. Rate also to include any making provisions in panels and framework, amking grooves and finishing the same to fix softboard (0.45x1.8m) and whiteboard (1.2mx3.2m) fixed on the partition flushed with the partition. Note softboard and whiteboard panels will be paid for separately. Rate also to include making openings for glass panels and doors by providing concealed frames on all sides, framework above false ceiing and any other provisions reqd. to facilitate the same, all hardware etc. all complete. Rate to include making cut outs etc. to facilitate a/c ducts laying etc. Rate to include finishing the gypsumboard with 2 or more coats of Dulux 3-in-1 plastic emulsion paint as per manufacturer's specifications all complete.	**48.4**	**SQM**		
b	Partition above glass and de- mountable partitions till bottom of true ceiling - Same as item 2 with double board on both sides but with 50 x 50 mm aluminium sections. The partition is to be sturdy enough to take the load and support glass and de mountable aluminium framed glass partitions till 2400mm height.	**28.6**	**SQM**		
2	**Glazed panels in full ht partitions- 12mm TG**				
	Toughened glass partitions till 2400mm ht. - Providing and fixing of 12mm thick toughened glass full height glazed partitions fixed on top with beech wood beading of partition width and 18mm thickness and bottom with embedding in floor.Rate to include template for glass if required,Providing sealant in the joints,levelling and maintaining uniform grooves and levels.Note partition above the glass level would be measured and paid as per the finish in the respective items. Rate to include Al. skirting ,if reqd. at junction of floor and glass.	**58.0**	**SQM**		

3	**SINGLE GLAZED TOUGHENED GLASS PARTITIONS - WITH ALEXA SYSTEM-45 FRAME PROFILES-DE MOUNTABLE PARTITIONS**				
a	Supply and Fixing of Slim Glass partition of 10mm Toughened Glass using DORMA Alexa System-45 Frames to a height of maximum 3m or as per drawing.The Fixed glass to be fixed using DORMA Alexa BP45 Profiles at Top & Bottom & Alexa SP45 at sides. The profile size to be 45x25MM to be fixed on to the floor/wall/ ceiling as per the architect design. DORMA Alexa H Junction profile to be used at all Glass to Glass vertical joints, 90 Deg L Junction Profiles and T Junction profiles necessary as per design.In case of Glass overall panel Alexa MP45 & BP45 Overpanel Profile to be used.In case of Open glass edges EP45 End Profile to be used. The Alexa profiles shall be suitable for Glass thickness of 10/12/13.52mm.The Profile shall be matt natural anodized, the Profile Manufacturer to supply all the necessary clips, seals and fixing accessories for the system. All Profiles to be with 2 mm Gauge thickness Excluding 20 Micron of Anodizing. Approved Manufacturer: Profiles/Frames: DORMA, Glass : Saint Giobain/Asahi	**120.0**	**SQM**		
	SINGLE GLAZED TOUGHENED GLASS PARTITIONS - WITH ALEXA SYSTEM-100 FRAME PROFILES				
b	Supply and Fixing of Single Glazed Glass partition of 10mm Toughened Glass using DORMA Alexa System-100 Frames to a height of maximum 4m or as per drawing.The Fixed glass to be fixed using DORMA Alexa BP100 Profiles at Top & Bottom & Alexa SP100 at sides. The profile size to be 100x25MM to be fixed on to the floor/wall/ ceiling as per the architect design. DORMA Alexa H Junction profile to be used at all Glass to Glass vertical joints, 90 Deg L Junction Profiles and T Junction profiles necessary as per design.In case of Glass overall panel Alexa OHP100 Overpanel Profile to be used.In case of Open glass edges EP100 End Profile to be used. The Alexa profiles shall be suitable for Glass thickness of 10/12/13.52mm.The Profile shall be matt natural anodized, the Profile Manufacturer to supply all the necessary clips, seals and fixing accessories for the system. All Profiles to be with 2 mm Gauge thickness Excluding 20 Micron of Anodizing. Approved Manufacturer: Profiles/Frames: DORMA, Glass : Saint Giobain/Asahi	**40.0**	**SQM**		
	Total of Part B				
PART C	**Doors**				
1	**Frameless Toughened Glass doors - single Leaf**				
a	Size 1000 x 2400 - Providing and fixing glazed door single panel. Rate to include fixing of glass panel, hardwares of approved make; brushed stainless steel door handles **300mm high D type**(Kich or equivalent), locks, Dorma floor spring (Dorma or equivalent) etc. all complete.	**4**	**NOS**		
b	Same as above but double leaf with 1 leaf 1000 wide and the other 500 mm.	**1**	**NOS**		
2	Sliding glass doors (Lockable) suitable for de-mountable parititions. Glass to be fixed with approved hardware Dorma or equivalent. Rate to include lcoks, handles etc as per approved sample (Kich or equivalent)	**9**	**NOS**		

3	**Flush doors with vision panels**				
	Extra over for dorma make glass hinges with door mounted glass door closer and other hardwares for the same, with vision panels of size 200x600 mm of 6 mm clear **toughened** glass fixed with TW beadings melamine polished to desired shade.	**QRO**	**NOS**		
	Total of Part C				
PART D	**Wall finishes**				
1	**Plastic emulsion**				
a	Supply and application of washable Dulux 3-in-1 plastic emulsion paint on walls with 1coat of wall primer and 2 or more coats of plastic emulsion paint as per manufacturers' specifications etc. all complete. All painting final coats to be done after removal of face plates of switch boards in co ordination with the electrical contractor and face plates to be fixed only after satisfactory completion of painting.(Cost includes 2 coats of Birla Putty)	**594.0**	SQM		
b	Same as above , but for ceiling.	**21.0**	SQM		
2	**Providing art work on wall.**				
	Supply & fixing of laminates , MDF /gyp boards on wall as per architect's design.	**5.0**	SQM		
3	Providing and applying of texture paint - Asian royale play or equivelent as per manufacturers specifications.	**36.0**	SQM		
4	Providing of auto body paint quality duco paint on reception logo wall	**QRO**	SQM		
	Total of Part D				
PART E	**False ceiling**				
1	**Plank ceiling with grid system.**				
	Providing and fixing in true horizontal level false ceiling grid of 15mm Suprafine XL grid system manufactured by M/s. Armstrong World Industries (India) Pvt. Ltd using hot dipped galvanized steel section, exposed surface chemically cleaned capping prefinished in backed polyester paint wall angle of size 3000x19x19mm used in periphery of the ceiling fixed to the wall/partition/RCC column/band walls with the heip of screws at 600mm c/c. Main runner of size 3600x15x38mm suspended at 1200mm c/c by using 2.5mm dia G.I. wire hanger securely fixed to the structural soffit of RC slab by using 6mm anchor fastener at every 1200mm(max) and 1200mm long cross tee of size 15x38mm to be interlocked between in main runner at 300mm c/c(max) to form grid of 1200x300mm and finally laying Dune Plank Bev.Tegular tiles of size 1200x300x16mm(RH 99,NRC 0.50) in the Middle portion and Placing Dune Sq.Edge tile of size 300x150x16mm in side Portion	**36.5**	SQM		
2	**Supply & fixing of grid false ceiling.**				
	Supply and installation of modular Grid ceiling as per manufacturers specifications and as per details mentioned below				
	12mm microlook grid				
	Tile thickness - 15mm				
	Edge detail - Straight edge				
	Humidity resistance - 95%				

	NRC - 0.5				
	Light reflectance - 90%				
	Fire performance - Class 0/Class 1 (BS 476)				
	Sound Attenuation - 30 DB	**230.8**	SQM		
3	Same as item no 1 but with vinyl moisture resistant tile for wet areas in the site.	**33.1**	SQM		
4	Gypsum board False ceiling - Seamless gypsum board - leaving a gap of 4" from true ceiling. Providing and fixing in position false ceiling with gypsum board laid as per manufacturers' specifications and as per drawing with gypboard 12.5mm thk.fixed to the underside of suspended grid formed of G.I. Perimeter channel 20x27x30mm fixed along the wall by using wood screws and metal expansion rawl plugs . The G.I. intermediate channel of size 45x15x 0.9mm shall be fixed to the perimeter channel at intervals not more than 1220mm The suspended G.I.ceiling angle is to be connected at G.I soffit cleat of size 37x27x25x1.6mm and it should be fixed on top of roof slab /beam by using metal expansion fasteners. The G.I. ceiling section of size 80x26x0.5mm is to be provided across the intermediate channel at intervals not more than 457mm centres at bottom and the same shall be fixed by G.I. connecting clips 2.64mm dia at the intersection points. The ends of intermediate channel shall be inserted into perimeter channel by adopting an overlap length of minimum 100mm covering with intermediate channel and main supporting section . **NOTE : WE CONSIDER 6" FROM THE TRUE CEILING.**	**33.0**	SQM		
5	Stretch ceiling				
	Stretch fabric ceiling - 'Barisol ' or equivalent.. Rate to include supply and installation.	**26.0**	SQM		
6	Painting on false ceiling tiles				
	Extra over for Applying PE paint on mineral fiber tiles.	**21.0**	SQM		
7	Design ceiling				
	6mm thcik color coated acrylic sheet to be cut into a customised tree shape and fixed to a plain gypsum ceiling with double sided 3 m tape.	**12.0**	SQM		
	Total of Part E				
PART F	**Miscellaneous**				
1	**Paneling on walls & Columns**				
	Paneling on walls - **Laminated finish** - Providing and fixing with 12mm MDF over framework of hard wood or 20mm MDF directly on wall finished with 1m laminate as per design / drawing all complete. Rate to include Aluminum "F"channel to be fixed onall exposed edges.	**17.01**	SQM		
2	**Writing Boards - Planilaque glass**				
	Providing and fixing with 3.5mm ceramic white board mounted over 8 mm commercial plywood. Edges of the board to be finished using aluminium "F" channel on all 4 sides. The white board is to be fixed on 100mm double skin gypsum partition flush with the second gysum board.	**28**	SQM		
3	**Soft boards**				

	Soft boards - Providing and fixing pin up boards with 12mm thick soft board panels with 6mm MDF backing and covered with approved fabric (cost not less than Rs 300/=per mt) Edges of the board to be finished using aluminum "F" channel on all 4 sides. The soft board is to be fixed on 100mm double skin gypsum partition flush with the second gypsum board	**34**	SQM		
4	**Pen and duster holders**				
	P&F in position 50mm deep pen & duster in the double skin gysum partitions. Size of holder to be 450mm x 100 mm made by making a "slot" in the partition and inserting the box. The box to be made with 8mm ply allround but the rear to be 18mm plywood. Insides to be duco painted to desired shade all complete.	**14**	NOS		
5	**Pelmets**				
	Pelmets - Providing and fixing 6"x12" pelmet made of 18mm commercial plywood firmly fixed on the walls .The external surfaces have laminate and the internal surfaces to be painted /polished . The edges shall be fixed with 6mm thick melamine polished TW lippings.	**9**	RM		
6	Blinds - Providing and fixing Black-out Roller blinds as per approved make. (basic rate 110/sft)	12.0	SQM		
7	Same as above but for perforated blinds (Translucent). Specifications same as above.(Roller/Perforated blinds)(basic rate 130/sft)	**11**	SQM		
8	Architectural films - Providing and fixing of 3M dusted crystal film on glass as per design and pattern. Rate to include shape cutting	**25**	SQM		
9	Boxing - Providing and fixing Plywood boxing in locations as per drg. With 6mm plywood over necessary framework of hard wood with 1mm laminate finish. Rate to include providing grooves, shapes all as per drg., hardware all complete. Surface area of panelling around the boxing will be measured for payment.	**12**	SQM		
10	Wall paper - Application of wall paper as per approved sample. Rate to include surface preparation.**(Basic Rate Rs.150/- sqft)**	**QRO**	SQM		
11	Mirrors 6mm - For toilets as per drg. Rate to include 12mm backing ply, fixing with 3m double side tape, laminated or polished wooden frames as reqd.	**QRO**	SQM		
12	Boxing - Providing and fixing 350 mm deep boxing in locations as per drg. With 12mm mdf over necessary framework of Aluminium sections of 50x25mm with 1mm laminate finish. Rate to include providing grooves, shapes all as per drg., hardware all complete. Surface area of panelling around the boxing will be measured for payment.	**QRO**	SQM		
13	Same as above but with paint finish instead of laminate- For stretch ceiling.	**26**	SQM		
14	Same as above but with 12mm com ply and aluminium frame and gyp board on top on both sides	**5**	SQM		
15	Same as above but with 12 water proof ply.	**2**	SQM		

16	Providing and fixing wooden platform with steps of 300 mm tread and 150 risers till 1000mm level from floor finish, The platform is to be made of ply wood over a frame of block wood as per standard spacing in order to achieve a sturdy and rigid platform. The top is ot be finished with vinyl tiles to match with the flooring material. Plan area to be measured and paid for.	**4**	SQM		
	Total of Part F				
PART G	**Storage and display**				
1	**750mm high low ht laminated storage**				
	750mm high, 600 deep and 1200 long Storage - Providing and fixing Low Ht. Storage made with 18 mm MDF, including shutters. The external surfaces of MDF to have 1 mm laminate finish and inside with enamel paint. Rate to include 4" high laminated skirting and all hardware, good quality SS handles, multipurpose lock etc. all complete.	**9.0**	NOS		
2	**Overhead Storage**				
	Over head storage - Waterproof plywood as it for pantry. Same as above but with laminated finish on the shutters also.	**2.0**	SQM		
3	**Pantry counter and storage**				
	Storage in pantry - 600mm depth, 820mm high with granite top - Providing and fixing in position storage made of waterproof ply with 20mm thk. polished granite top with edge as per profile in drawing. storage box construction . Unit to have shutter storage below. Rate to include making skirting, groves, all hardware etc. all complete. Shutters to have laminated finish with pattern as per drg. Elevation area considered for quantity measurement.	**QRO**	SQM		
4	**DB shutters/ battery rack shutters.**				
	P&F laminated shutters tp conceal Elec DB's at various locations made with 19mm thk waterproof plywood. Rate to include providing Aluminium frame all-round and at 450mm C/C vertically to avoid bend in shutter, concealed type hinges and dead lock and recessed handles and concealed tower bolts. Typical shutter width not to exceed 450 mm.	**5.0**	SQM		
	Total of Part G				
PART H	**Furniture**				
1	Reception table - Approx. sixe 1500x 600mm. Table to have curved front vertical panel duco painted with provision for lighting. 2 tier table with top ledge at 4' height , 1' 6" wide made of 12 toughned glass and to rest on 40 dia ss sections . Table to have duco painting, lamination; storage about 2' wide to the height of table, all complete. Table to sit on SS square legs.	**1.0**	NOS		
	Total of Part G				
	GRAND TOTAL				

BILL OF QUANTITIES FOR PROVIDING SANITARY INSTALLATION

				Supply		Fixing	
S.No	**Description of works**	**Quantity**	**Unit**	**Rate**	**Amount**	**Rate**	**Amount**
	PART - I : SANITARY FIXTURES & CP FITTINGS						
1	Approved make **Single bowl Stainless Steel Sink with drain board** with Waste coupling, providing bracket made of 32 x 32mm size and 4mm thick MS angle, applying 3 coats of anticorrosive paint, grouting the bracket in masonry using Cement concrete 1:2:4 mix, fixing the sink and drain board to perfect level to match with cooking platform in Pantry, cutting grooves in masonry, restoring the damaged portions to their original condition etc. complete.	16	Each				
2	Approved make White glazed **Lab Sink** with waste coupling, fixing to match the height worktable, proving suitable brackets to support, making holes in masonery restoring the damaged portions to their original contition, testing etc. complete.	QRO	Each				
3	Following Chromium Plated fittings of approved make (Jaquar, Parryware or equivalent)						
a	**Sink cock** with swinging casted spout.	16	Each				
b	**Elbow tap** for Lab sink.	QRO	Each				
c	**Angular Stopcock** with Wall flange.	QRO	Each				
	TOTAL C/O TO SUMMARY						

BILL OF QUANTITIES FOR PROVIDING INTERNAL WATER SUPPLY AND WASTE WATER SYSTEMS

S.No	Description of works	Quantity	Unit	Rate	Amount
	PART - J : WASTE WATER PIPES: (Internal)				

	Quoted rate shall include labour charges and (a) cost of specified material in the item description for the requirement, Cutting the pipes to required length, Fixing pipe with pipe specials as specified by the manufacturer with required fixing materials, Cutting groove on walls / floor to conceal the pipe work, Restoring damaged portion with required materials , Providing and removing necessary scaffolding, Two coats of bitumen painting, Conducting testing, Storing the materials, lead and lifting charges to all locations and at all floors with in the site, Providing MS angle supports for pipes laid in false ceiling using G.I.hangers fixed to R.C.C slab including providing and fixing necessary anchor fastners and clamps and as directed by the engineer in-charge etc. complete				
1	Supplying and fixing Reliance / equal approved make **HDPE pipes for** Waste Water Supply plumbing pipes **PE-100 - 0913 PN - 16 -** Coil / Straight type suitable for pipe fittings (Butt welded pipe fittings, flanged fittings, SS fittings, electro fusion etc) Pipe sizes are mentioned in OD. - (Pumping main pipe from Tank to connect Existing PHE service)				
a	40mm (32mm ID) dia pipe	QRO	RM		
b	50mm (40mm ID) dia pipe	QRO	RM		
c	63mm (50mm ID) dia pipe	125	RM		
d	75mm (63mm ID) dia pipe	60	RM		
e	90mm (75mm ID) dia pipe	QRO	RM		
2	Supplying and fixing Reliance / equal approved make **HDPE Pipes of R-PE-100-0913 - PE 100 PN - 6** as per the specified size with HPDE Pipe specials like bends, Tee, Y-junction with or without door, Vent cowl as per the specified pipe size, providing and fixing cleaning / rodding eye with endcap wherever required, etc., complete. (Waste water pipe from sink to collection tank)				
a	63mm (50mm ID) dia pipe	65	RM		
2	Supplying and fixing approved make **Spun Cast Iron Pipes** (IS 3989) and pipe special with drip seal joints cutting the pipes, laying to slopes where required fixing to perfect alignment ,testing for joints and the materials, cutting grooves to conceal the pipes, making holes in all surfaces, restoring the damaged portions with required materials, etc. complete.				
a	Using 40mm dia pipe.	QRO	RM		

b	Using 50mm dia pipe.	QRO	RM		
c	Using 65mm dia pipe.	QRO	RM		
d	Using 75mm dia pipe.	QRO	RM		
3	Laying **cement concrete** in 1:3:6 mix using 20mm size stone jelly including plaster with CM 1:5 mix for 15mm thick, providing and removing temporary formwork for sides, curing etc. complete.	QRO	Cu.M		
4	Supplying and fixing **CI Floor Traps** with water seal made out of 100mm dia CI Pipe with single or multiple inlets of size 40mm to 100mm dia plugging the bottom to water tightness, height to suit as per the site condition including using boss tee, fixing in position, laying cement concrete to 75mm alround in 1:3:6 mix using brick jelly to full depth trap supplying and fixing hinged Stainless Steel grating of suitable size and shape, cockroach trap with frame over trap / sump at 4mm below floor level testing to water tightness, including overall finish inlet and outlet etc. complete.	QRO	Each		
5	Supplying and fixing **CI 'P' – Trap** with 100mm dia Outlet, 50mm deep water seal, embedding in cement concrete of 1:3:6 mix with 20mm size stone jelly, forming boss tee above trap up to make up the level of floor level cutting concrete or making holes, Supplying & fixing cockroach trap, restoring the damaged portion to their original condition including providing and fixing cockroach trap, Stainless steel grating and frame, etc. complete.	QRO	Each		
6	Providing and fixing 100mm dia **Cleanout Plug** on CI Pipe, installing to match the floor level height to suit as per site condition, providing necessary fixing materials like plugs, doors, brass threaded ends etc. complete.	QRO	Each		
	TOTAL C/O TO SUMMARY				
	PART - K : WATER SUPPLY: (Internal)				

	Quoted rate shall include labour charges and (a) cost of specified material in the item description,cutting the pipes to required length, making threads alround with teflon joints, fixing pipe with pipe specials as specified by the manufacturer with required fixing materials, cutting groove on walls to conceal the pipe work, restoring damaged portion with required materials like sand cement & jelly, conducting hydraulic test to a pressure of 7 Kg / Sq.cm, storing the materials, lead and lifting charges to all locations and at all floors with in the site, Providing and removing necessary scaffolding, Two coats of bitumen painting, Hot bitumen wrapping if pipe laid below FFL / concealed, Asbestos roping / Providing MS angle supports for pipes laid in false ceiling using G.I.hangers fixed to R.C.C slab including providing and fixing necessary anchor fastners and clamps and as directed by the engineer in-charge etc. complete .(All water supply pipe sizes are mentioned in ID)				
1	Supplying & fixing Astral flow guard / equal approved make **SDR - 13.5 - CPVC Pipe** with CPVC brass threaded fittings. (For Cold water supply system) Domestic				
a	Using 15mm dia (ID) pipe with pipe specials.	QRO	RM		
b	Using 20mm dia (ID) pipe with pipe specials.	70	RM		
c	Using 25mm dia (ID) pipe with pipe specials.	QRO	RM		
d	Using 32mm dia (ID) pipe with pipe specials.	80	RM		
e	Using 40mm dia (ID) pipe with pipe specials.	15	RM		
f	Using 50mm dia (ID) pipe with pipe specials.	50	RM		
g	Using 65mm dia (ID) pipe with pipe specials.	QRO	RM		
2	Supplying & fixing **GI Heavy duty pipe** with pipe specials with threaded fittings				
a	25mm dia ID pipe with pipe specials	QRO	RM		
b	32mm dia ID pipe with pipe specials	QRO	RM		
c	40mm dia ID pipe with pipe specials	QRO	RM		

3	Supplying and fixing Lehry / equal approved make brass **Ball Valve,** fixing to pipe work with required fixing materials, testing etc. complete.				
a	Using 20mm dia Ball Valve.	16	Each		
b	Using 25mm dia Ball Valve.	QRO	Each		
c	Using 32mm dia Ball Valve.	1	Each		
d	Using 40mm dia Ball Valve.	1	Each		
e	Using 50mm dia Ball Valve.	14	Each		
4	Supplying & fixing Aquamet / equal approved make **Water Meter**, including fixing in position with pipe work etc. complete.				
a	32mm dia	QRO	Each		
b	50mm dia	1	Each		
5	Supplying and fixing Lehry / equal approved make **Non return valve**, fixing to threaded ends of pipe work using required fixing materials, testing etc. complete.				
a	Using 40mm dia	QRO	Each		
b	Using 50mm dia	11	Each		
6	Supplying & fixing Lehry / equal approved make **Pressure Reducing valve** with pressure guage, fixing to threaded ends of pipe work using required fixing materials, setting to required pressure, testing for leak proof, etc., complete.				
a	50mm dia	1	Each		

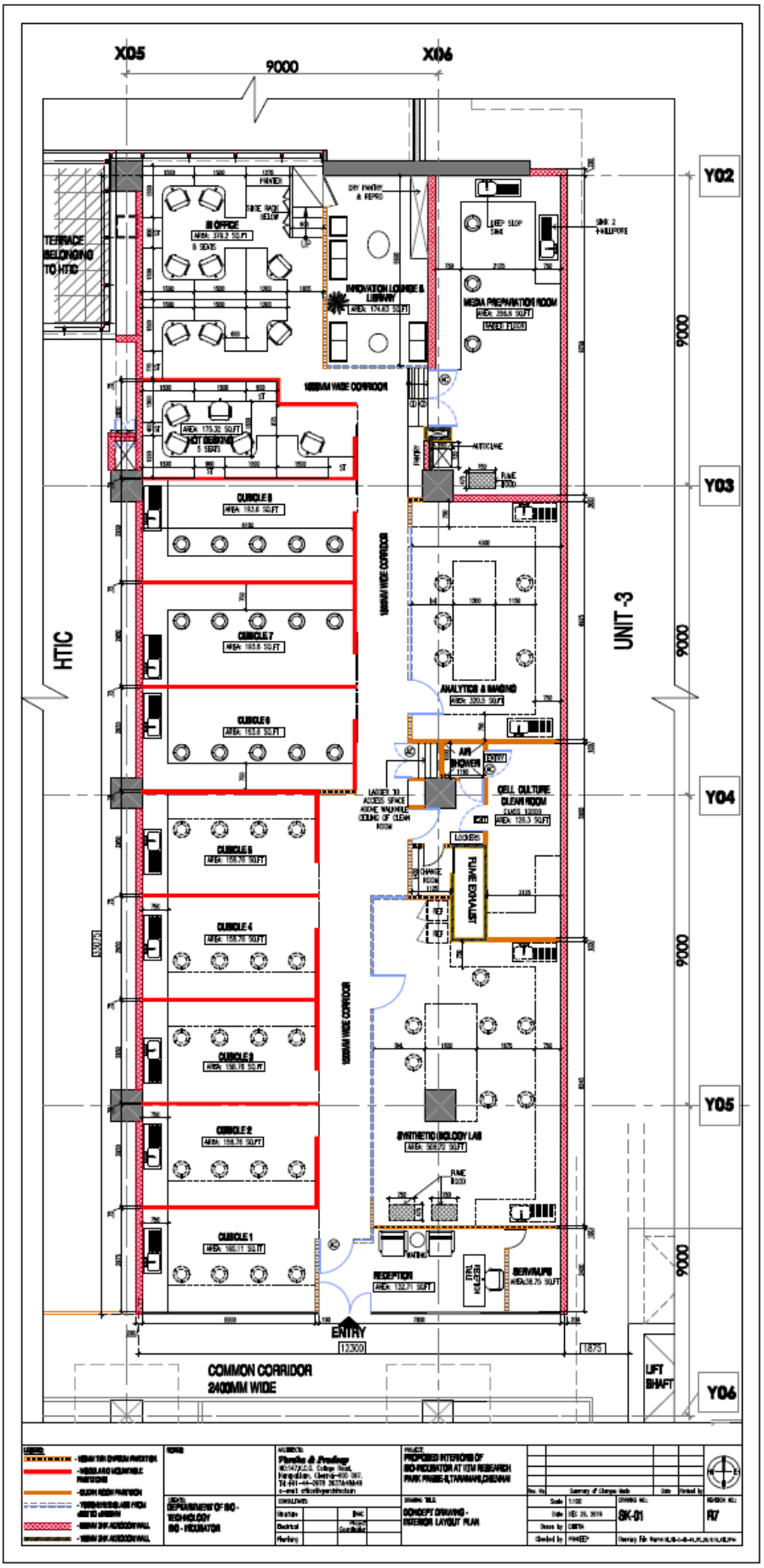
7	Supplying and fixing KSB / Grundfos / equal approved make **submersible type Waste water transfer pumpset** with control panel,auto coupling & chain interconnecting both the pumps, automatic control float, pumpset capable of discharging 1 .5 Lps against a total head of 10M, testing, commissioning, maintain the system for one year etc. complete. (To pump Waste water from collection tank to Existing Downtake pipe in PHE Shaft (5 Working + 1 Spare)	6	Each		
	TOTAL C/O TO SUMMARY				

Project:	**PROPOSED INTERIORS FOR BIO - INCUBATOR Phase 2**
Location:	**5rd FLOOR, C block @ IITMRP Madras.**
Title:	**LIST OF MAKE OF MATERIALS**
Architects:	**VARSHA & PRADEEP ARCHITECTS**

Sl.No.	Material Details	Brands	Remarks
1	Laminates	Greenlam, Formica, Merino or equivalent	All verical and horizontal surfaces are fixed with 1.0 mm laminate.
2	Gyp Board False Ceiling	Gyp Board Or Equivalent with gypsteel sections	
5	Grid Ceiling	Armstrong Or Equivalent	
6	Vertical Blinds	Vista Or Equivalent	
7	Vitrified, Cermaic tiles	Asian, Nitco, Kajaria or equivalent	
9	Granite	Quality as approved	18 mm thick
11	Pin up Boards	Approved Brands	
12	Internal Emulsion	Asian Paints Or Equivalent	
13	Epoxy	Fosroc or equivalent	
14	Glass	St. Gobain, Asahi or equivalent	
15	Plywoods	Centrury, Green. Merino or equivalent	
16	Aluminum	Hindalco, Jindal, Bhoruka	

Additional specifications:

i. Vendor/Contractor should have executed a wet lab facility in the past, whose standard should satisfy the appointed architect and project manager.
ii. Vendor/Contractor should have worked in the past with either IITM Research Park or BIO Incubator
iii. Vendor/Contractor should have executed an order value of Rs.1,00,00,000 and above in the last 1year
iv. Vendor/Contractor should have executed a contract of similar package i.e. Interior, Civil, False Ceiling and Plumbing together in the last 12 months, of a standard satisfactory to the architect and project manager.


X05
X06
9000
Y02
Y03
Y04
Y05
Y06
HTIC
UNIT -3
TERRACE BELONGING TO HTIC
BI OFFICE
INNOVATION LOUNGE & LIBRARY
MEDIA PREPARATION ROOM
1800MM WIDE CORRIDOR
HOT DESKING
CUBICLE 8
CUBICLE 7
CUBICLE 6
CUBICLE 5
CUBICLE 4
CUBICLE 3
CUBICLE 2
CUBICLE 1
ANALYTICS & IMAGING
AIR SHOWER
CELL CULTURE CLEAN ROOM
FUME EXHAUST
SYNTHETIC BIOLOGY LAB
RECEPTION
SERVRUPS
ENTRY
12300
1875
COMMON CORRIDOR
2400MM WIDE
LIFT SHAFT
DEPARTMENT OF BIO - TECHNOLOGY
BIO - INCUBATOR
PROPOSED INTERIORS OF BIO-INCUBATOR AT IITM RESEARCH PARK PHASE-II,TARAMANI,CHENNAI
CONCEPT DRAWING - INTERIOR LAYOUT PLAN
SK-01
R7