

**INDIAN INSTITUTE OF TROPICAL METEOROLOGY
PASHAN, PUNE-411 008**

Tender No. CE/Interior/ConfHall/IITM/2011

TENDER NOTICE

Director, Indian Institute of Tropical Meteorology, Dr. Homi Bhabha Road, Pashan, Pune-411 008 (India) invites sealed separate tenders for following work (Part-I – Technical Bid, Part-II – Commercial Bid) in separate sealed covers from Contractors registered in the approved list of contractors of PWD/ MES/ CPWD/ Railways/P&T/Experienced industrial contractors and any other government departments in appropriate class for following work.

Name of work:- Interior Work for Multi Training facility building at IITM, Pune

Tender documents with BOQ can be obtained from Office of Civil Wing, of this Institute and also can be downloaded from the Institutes' website.

Date of issue of tender documents	21/11/2011
Pre - Bid Meeting	28/11/2011 at 1100 hrs
Last date of receipt of Tender at IITM, Pune:	05.12.2011 at 1230 hrs
Opening of Tenders (Technical Bids only) :	5.12.2011 at 1500 hrs

The Institute reserves the right to reject any or all tenders without assigning any reason thereof. For further details please visit our Website: www.tropmet.res.in

Civil Engineer
For Director
Email : anupam@tropmet.res.in

**TENDER FOR INTERIOR WORKS
OF
MULTI TRAINING FACILITY BUILDING AT
INDIAN INSTITUTE OF TROPICAL METROLOGY, PUNE**

**Volume 1
(TECHNICAL BID)**

**INDIAN INSTITUTE OF TROPICAL METROLOGY,
DR.HOMI BHABA ROAD, PASHAN, PUNE-411008**

**TENDER FOR INTERIOR WORK
OF
MULTI TRAINING FACILITY BUILDING AT
INDIAN INSTITUTE OF TROPICAL METROLOGY,
DR.HOMI BHABA ROAD, PASHAN, PUNE-411008**

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BID NO

NAME OF WORK	: TENDER FOR INTERIOR WORK OF MULTI TRAINING FACILITY BUILDING AT INDIAN INSTITUTE OF TROPICAL METROLOGY, DR.HOMI BHABA ROAD, PASHAN, PUNE-411008
PERIOD OF SALE OF BIDDING DOCUMENT	: FROM 21-11-2011 TO 05-12-2011
TIME AND DATE OF PRE-BID CONFERENCE	: 28-11-2011 TIME 11.00 HOURS
LAST DATE AND TIME FOR RECEIPT OF BIDS	: DATE.05-12-2011 TIME 12.30 HOURS
TIME AND DATE OF OPENING OF TECHNICAL BIDS	: DATE.05-12-2011 TIME 15.00 HOURS
PLACE OF OPENING OF TECHNICAL BIDS	: INDIAN INSTITUTE OF TROPICAL METROLOGY, DR.HOMI BHABA ROAD, PASHAN, PUNE-411008
OFFICER INVITING BIDS	: INDIAN INSTITUTE OF TROPICAL METROLOGY
COMPLICATION PERIOD	: 45 DAYS from THE DATE OF RECEIPT OF L.O.I.

INVITATION FOR BID
(IFB)

**NOTICE INVITING TENDER FOR
INTERIOR WORK
OF
MULTI TRAINING FACILITY BUILDING AT
INDIAN INSTITUTE OF TROPICAL METROLOGY,
TWO COVER SYSTEM**

Tender Notice No.

Indian Institute of Tropical Meteorology, Pune, and Maharashtra is setting up a Multi Training Facility building at existing building Pashan, Pune, Maharashtra. Director Indian Institute of Tropical Meteorology, Pune. invites bid for Interior works under the **Two Cover System** from the contractors who meet the following criteria.

The BIDDER should be a well established and reputed Interior Contractor, registered as a legal entity in India for a minimum period of five years, and having experience of minimum ten years and capacity in the interiors of office buildings/ Auditorium /Recreation hall.

The BIDDER should have an annual turnover of Rs.1.00 Crores (Rupees One Crores) in all kinds of interior works or Interior and electromechanical works during any two of the past five financial years, ending on 31st March 2011.

The bidder should have satisfactorily completed as a prime contractor at least one single project of Acoustic and interior work not less than Rs.1.00 Crores (Rupees One Crores).

The bidder should produce Banker's Solvency Certificate or Revenue Solvency Certificate of the value of Rs.50.00 Lakhs. Solvency Certificate must have been obtained not earlier than 1st July 2011.

The successful bidder shall ensure that, the direct subcontractors engaged in the works, complies with all conditions as specified in the Agreement between the employer and the successful bidder.

Other details can be seen in the bidding document

1. Salient Features

Name of Work	INTERIOR WORK OF MULTI TRAINING FACILITY BUILDING AT INDIAN INSTITUTE OF TROPICAL METROLOGY
Period of Completion	45 Days from the date of receipt of LOI

- 2.** Tender documents can be purchased from the office of Director, Indian Institute of Tropical Meteorology, Dr. Homi Bhabha Road, NCL post, Pashan Pune – 411008 .INDIA

a	Cost of Tender Documents (Non – Refundable)	Rs. 5000/-(Rupees Five Thousand only) by Demand Draft drawn from any Nationalized or Scheduled Banks in India payable at Pune in favour of Director, Indian Institute of Tropical Meteorology, Dr. Homi Bhabha Road, NCL post, Pashan Pune – 411008 .INDIA
b	Period of Issue of Tender Documents	21-11-2011 to 05-12-2011 (During office hours)
c	Earnest Money Deposit	Rs 2,80,000/-(Rupees Two Lakhs Eighty Thousand

	(EMD)	Only) by Demand Draft, drawn from any Nationalized or Scheduled Banks in India payable at Pune in favour of The (or) By Irrevocable Bank Guarantee from any Nationalized or Scheduled Banks in India.
d	Pre-Bid Meeting	28-11-2011 TIME 11.00 HOURS
e	Last date for submission of bids	05-12-2011 TIME 12.30 HOURS <ul style="list-style-type: none"> Bids to be submitted on or before the mentioned time and date at "DISPATCH SECTION" Indian Institute of Tropical Meteorology, Dr. Homi Bhabha Road, NCL post, Pashan Pune - 411008 .INDIA
f	Opening of Technical bid	05-12-2011 TIME 15.00 HOURS

*Only one set of document will be issued. Contractors have to take additional copies.

1. The Director, Indian Institute of Tropical Meteorology, reserves the right to accept/reject any one /all the tenders without assigning any reason thereof.

DIRECTOR,
INDIAN INSTITUTE OF
TROPICAL METEOROLOGY,
DR. HOMI BHABHA ROAD,
NCL POST, PASHAN PUNE
- 411008 .INDIA

Definitions

Terms which are defined in the Contract Data are not defined in the Conditions of Contract but keep their defined meanings. Capital initials are used to identify defined terms.

The **Adjudicator** is the person appointed jointly by the Employer and the Contractor to resolve disputes in the first instance. The name of the Adjudicator is defined in the Contract Data.

Bill of Quantities means the priced and completed **Bill of Quantities** forming part of the Bid.

Compensation Events are those defined in Clause 44 of Conditions of Contract (Vol-II).

The **Completion Date** is the date of completion of the Works as certified by the Architect and IITM Authorities in accordance with Sub Clause 55.1 of Conditions of Contract (Vol-II).

The **Contract** is the contract between the Employer and the Contractor to execute, complete and maintain the Works. It consists of the documents listed in Clause 2.3 of Conditions of Contract (Vol-II).

The **Contract Data** defines the documents and other information which comprise the Contract.

The **Contractor** is a person or corporate body who's Bid to carry out the Works has been accepted by the Employer.

The **Contractor's Bid** is the completed Bidding document submitted by the Contractor to the Employer.

The **Contract Price** is the price stated in the Letter of Acceptance and thereafter as adjusted in accordance with the provisions of the Contract.

Days are calendar days; **months** are calendar months.

A Defect is any part of the Works not completed in accordance with the Contract.

Defects Liability Period is the period named in the Contract Data and calculated from the Date of handing over of site to the Institute.

The **Employer** is the party who will employ the Contractor to carry out the Works. In this contract The Managing Director, Indian Institute of Tropical Meteorology, Dr. Homi Bhabha Road, NCL post, Pashan, Pune. is the Employer

The **Architect** shall mean the Consultants engaged by the Employer.

Contractor's Equipment is the Contractor's machinery and vehicles brought temporarily to the Site to construct the Works.

The Initial Contract Price is the Contract Price listed in the Employer's Letter of Acceptance.

Drawings mean the employer's drawings of the works included in the contract and any variations to such drawings given by an Architect.

Party means either employer or contractor.

Country means the country in which the site is located.

Employer's Liabilities means those mentioned in sub clause 11.1 of Conditions of Contract (Vol-II).

Force Majeure means an exceptional events or circumstance which is beyond a Party's control, which such Party could not reasonably have provided against before entering in to the contract; which, having arisen, such party could not reasonably have avoided or overcome; and, which is not substantially attributable to the other party.

The **Intended Completion Date** is the date on which it is intended that the Contractor shall complete the Works. The Intended Completion Date is specified in the Contract Data. H

Materials are all supplies, including consumables, used by the contractor for incorporation in the Works.

Plant is any integral part of the Works which is to have a mechanical, electrical, electronic or chemical or biological function.

The **Site** is the area defined as such in the Contract Data.

Specification means the Specification of the Works included in the Contract and any modification or addition made or approved by the Architect.

The **Start Date** it is the date from the date of receipt of LOI.

A **Subcontractor** is a person or corporate body who has a Contract with the Contractor to carry out a part of the work in the Contract which includes work on the Site.

Temporary Works are works designed, constructed, installed, and removed by the Contractor which are needed for construction or installation of the Works.

A **Variation** is an instruction given by the Architect with the approval of IITM authorities which varies the Works.

The **Works** are what the Contract requires the Contractor to construct, install, and turn over to the Employer, as defined in the Contract Data.

SECTION 1: INSTRUCTIONS TO BIDDERS
(ITB)

Section 1: Instructions to Bidders

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A. General

1. Scope of Bid

1.1 On behalf INDIAN INSTITUTE OF TROPICALMETROLOGY., The Director, INDIAN INSTITUTE OF TROPICALMETROLOGY,DR.HOMI BHABA ROAD,PASHAN,PUNE-411008 , India invites bids for the interior works of Multi Training Facility Building at Indian Institute of Tropical Meteorology, Dr. Homi Bhabha Road, NCL post, Pashan Pune – 411008 .INDIA

1.2 The successful bidder will be expected to complete the works by the intended completion date specified in the Contract data.

2. Source of Fund: INSTITUTE OF TROPICAL METROLOGY.

3. Eligible Bidders

3.1 This Invitation for Bids is open to all reputed well established and experienced contractors, who satisfy the qualifying criteria stipulated in Clause 4

3.2 All bidders shall provide in Section 2, Forms of Bid and Qualification Information, a statement that the Bidder is not associated, nor has been associated in the past, directly or indirectly, with the Consultant or any other entity that has prepared the design, specifications, and other documents for the Project or being proposed as Project Manager for the Contract. A firm that has been engaged by the Employer to provide consulting services for the preparation of tender documents, supervision and certification of the works, and any of its affiliates, shall not be eligible to bid.

3.3 Bidders shall not be under a declaration of ineligibility for corrupt and fraudulent practices issued by Government in accordance with sub-clause 34.1.

4 Qualification of the Bidder

4.1 All bidders shall be provided in Section 2 Forms of Bid and Qualification Information, a preliminary description of the proposed work method and schedule, including drawings and charts, as necessary.

4.2 Since the Employer has not undertaken pre-qualification of potential bidders, all bidders shall include the following information and documents with their bids in Section 2

- (a) Copies of original documents defining the constitution or legal status, place of registration and principal place of business.
- (b) Written power of attorney of the signatory of the Bid to commit the Bidder.
- (c) Total monetary value of construction work performed for each of the last five years.
- (d) Experience in works of a similar nature and size for each of the last five years, and details of works under way or contractually committed; and clients who may be contacted for further information on those contracts;
- (e) Major items of construction equipment proposed to carry out the Contract;

- (f) Qualifications and experience of key site management and technical personnel proposed for the Contract;
- (g) Reports on the financial standing of the Bidder, such as profit and loss statements and auditor's reports for the past five years;
- (h) Evidence of adequacy of working capital for this contract (access to line (s) of credit and availability of other financial resources);
- (i) Information regarding any litigation or arbitration resulting from contracts executed by the Bidder in the last five years or currently under execution. The information shall include the names of the parties concerned, the disputed amount, cause of litigation, and matter in dispute;
- (j) Proposals for subcontracting components of the Works which in aggregate add to more than 20 percent of the Bid Price (*for each, the qualifications and experience of the identified sub-contractor in the relevant field should be annexed; no vertical splitting of work for sub-contracting is acceptable*); and
- (k) The proposed methodology and program of construction including Environmental Management Plan backed with equipment, materials and manpower planning and deployment, duly supported with broad calculations and quality control procedures proposed to be adopted, justifying their capability of execution and completion of the work as per technical specifications within the stipulated period of completion as per milestones.

4.3 'Bids from Joint ventures are not acceptable'.

4.4 A. To qualify for award of the contract, each bidder in its name should have in the last five years i.e. 2006-07, 2007-08, 2008-09, 2009-10, and 2010-11.

- (a) The BIDDER should be a well established and reputed Interior Contractor, registered as a legal entity in India for a minimum period of five years, and having experience of minimum ten years and capacity in the interiors of office buildings/ Auditorium /Recreation hall.
- (b) The BIDDER should have an annual turnover of Rs.1.00 Crores (Rupees One Crores) in all kinds of interior works or Interior and electromechanical works during any two of the past five financial years, ending on 31st March 2011.
- (c) Satisfactorily completed as a prime contractor at least one single project of Acoustic and interior involving not less than 1500 sq.m in India.
- (d) Executed in any one year, the following minimum quantities of work.

Wall Paneling	400 Sqm
False Ceiling	1800 Sqm
Carpet	400 Sqm

(@) *at 2010-11 price level*. Financial turnover and cost of completed works of previous years shall be given weight age of 5% per year based on rupee value to bring them to 2010-11 price level*.*

** The financial year in which bids are received.*

4.4 B The bidder should produce Banker's Solvency Certificate or Revenue Solvency Certificate of the value of Rs.50.00 Lakhs. Solvency Certificate must have been obtained not earlier than 1st July 2011.

4.4 C. Each bidder should further demonstrate:

- (a) Availability (either owned or leased or by procurement against mobilization advances) of the following key and critical equipment for this work:

NOTE: Based on the studies, carried out by the Engineer the minimum suggested major equipment to attain the completion of works in accordance with the prescribed construction schedule are shown in the above list. The bidders should, however, undertake their own studies and furnish with their bid, with addition if any a detailed construction planning and methodology supported with layout and necessary drawings and calculations (detailed) as stated in clause 4.2 (k) above to allow the employer to review their proposals. The numbers, types and capacities of each plant/equipment shall be shown in the proposals along with the cycle time for each operation for the given production capacity to match the requirements.

- (b) availability for this work of 1 Project Manager with not less than FIVE years' experience in construction of similar civil engineering, Mechanical, Electrical and allied works and other key personnel with adequate experience as required. The bidders are to produce organization chart for the execution of the project with responsibilities included.

4.5 Sub-contractors experience and resources shall not be taken into account in determining the bidder's compliance with the qualifying criteria except to the extent stated in 4.4 (A) (e to h) above.

4.6 Even though the bidders meet the above qualifying criteria, they are subject to be disqualified if they have:

- made misleading or false representations in the forms, statements and attachments submitted in proof of the qualification requirements; and/or
- Record of poor performance such as abandoning the works, not properly completing the contract, inordinate delays in completion, litigation history, or financial failures etc.; and/or
- participated in the previous bidding for the same work and had quoted unreasonably high bid prices and could not furnish rational justification to the employer.

4.7 Each bidder shall submit only one bid for one contract.

5. Cost of Bidding

5.1 The bidder shall bear all costs associated with the preparation and submission of his Bid, and the Employer will in no case be responsible and liable for those costs.

6. Site visit

6.1 The Bidder, at the Bidder's own responsibility and risk is encouraged to visit and examine the Site of Works and its surroundings and obtain all information that may be

necessary for preparing the Bid and entering into a contract for construction of the Works. The costs of visiting the Site shall be at the Bidder's own expense.

B. Bidding Documents

7. Content of Bidding Documents

7.1 The set of bidding documents comprises the documents listed in the table below and addenda issued in accordance with Clause 10:

Invitation for Bids	Section	
	1	Instructions to Bidders
	2	Forms of Bid and Qualification information
	3	Conditions of Contract
	4	Contract Data
	5	Specifications
	6	Drawings
	7	Bills of Quantities
	8	Forms of Securities

7.2 Bidding documents supplied should be completed and returned with the bid.

8. Clarification of Bidding Documents

8.1 A prospective bidder requiring any clarification of the bidding documents may notify the Employer in writing at the employers address indicated in invitation to Bid.

8.2 Pre-bid meeting

8.2.1 The bidder or his official representative is invited to attend a pre-bid meeting,

8.2.2 The purpose of the meeting will be to clarify issues and to answer questions on any matter that may be raised at that stage.

8.2.3 The bidder is requested to submit any questions in writing or by cable to reach the Employer not later than one day before the pre bid meeting.

8.2.4 Minutes of the meeting, including the text of the questions raised (without identifying the source of enquiry) and the responses given, will be transmitted without delay to all purchasers of the bidding documents. Any modification of the bidding documents listed in Sub-Clause 8.1 which may become necessary as a result of the pre-bid meeting shall be made by the Employer exclusively through the issue of an Addendum pursuant to Clause 10 and not through the minutes of the pre-bid meeting.

8.2.5 Non-attendance at the pre-bid meeting will not be a cause for disqualification of a bidder. However bidder must attend the pre-bid meeting to get the clear understanding about the project requirements.

9. Amendment of Bidding Documents

9.1 Before the deadline for submission of bids, the Employer may modify the bidding documents by issuing addenda.

9.2 Any addendum thus issued shall be part of the bidding documents and shall be communicated in writing to all the purchasers of the bidding documents. Prospective bidders shall acknowledge receipt of each addendum in writing to the Employer.

- 9.3** To give prospective bidders reasonable time in which to take an addendum into account in preparing their bids, the Employer shall extend as necessary the deadline for submission of bids, in accordance with Sub-Clause 19.2 below.

C. Preparation of Bids

10. Language of the Bid

- 10.1** All documents relating to the bid shall be in the English language.

11. Documents comprising the Bid

- 11.1** The bid submitted by the bidder shall comprise the following:

A. Technical Bid.

- (a) Technical Bid documents duly signed on each page with company seal.
- (b) EMD, Tender fee;
- (c) Priced Bill of Quantities, duly signed on each page with company seal.
- (d) Qualification Information Form Documents and company profile.
- (e) Copy of pre bid m.O.M. duly signed on each page with company seal.
- (f) Bar chart of 45 days to complete the work and handing over of completed work site to the IITM.

And any other materials required be completing and submitting by bidders in accordance with these instructions. The documents listed under Sections 2, 4 and 7 of Sub-Clause 8.1 shall be filled in without exception.

B. Commercial Bid.

Commercial Quote hard copy in duplicate and one soft copy in the form of C.D.

12. Bid Prices

- 12.1** The contract shall be for the whole works as described in Sub-Clause 1.1, based on the priced Bill Quantities submitted by the Bidder.
- 12.2** The bidder shall fill in rates and prices and line item total (both in figures and words) for all items of the Works described in the **Bill of Quantities** along with total bid price (both in figures and words). *Items for which no rate or price is entered by the bidder will not be paid for by the Employer when executed and shall be deemed covered by the other rates and prices in the Bill of Quantities.* Corrections, if any, shall be made by crossing out, initialing, dating and rewriting.
- 12.3** All duties, taxes, and other levies payable by the contractor under the contract, or for any other cause shall be included in the rates, prices and total Bid Price submitted by the Bidder.
- 12.4** The rates and prices quoted by the bidder are subject to adjustment during the performance of the Contract in accordance with the provisions of Clause 47 of the Conditions of Contract.
- 12.5** The rates of electrical part of the work shall include guarantee for 2 years for spares and labour, as specified by manufacturer.

13. Currencies of Bid and Payment

- 13.1** The unit rates and the prices shall be quoted by the bidder entirely in Indian Rupees.

14. Bid Validity

14.1 Bids shall remain valid for a period not less than ninety days after the deadline date for bid submission specified in Clause 19. A bid valid for a shorter period shall be rejected by the Employer as non-responsive.

14.2 In exceptional circumstances, prior to expiry of the original time limit, the Employer may request that the bidders may extend the period of validity for a specified additional period. The request and the bidders' responses shall be made in writing or by cable. A bidder may refuse the request without forfeiting his bid security.

14.3 Bid evaluation will be based on the bid prices only.

15. Bid Security

15.1 The Bidder shall furnish, as part of his Bid, a Bid security in the amount as shown in column 4 of the table of IFB for this particular work. This bid security shall be in favour of the **DIRECTOR INDIAN INSTITUTE OF TROPICALMETROLOGY, DR.HOMI BHABA ROAD, PASHAN, PUNE-411008.** and may be in one of the following forms:

- Demand draft/Bank Guarantee from nationalized / scheduled bank located in India in favour of. **DIRECTOR INDIAN INSTITUTE OF TROPICALMETROLOGY, DR. HOMI BHABA ROAD, PASHAN, PUNE-411008.**

16.2 Bank guarantees issued as surety for the bid shall be valid for 60 days beyond the validity of the bid.

16.3 Any bid not accompanied by an acceptable Bid Security and not secured as indicated in Sub-Clauses 16.1 and 16.2 above shall be rejected by the Employer as non-responsive.

16.4 The Bid Security of unsuccessful bidders will be returned after award of work to successful bidder.

16.5 The Bid Security of the successful bidder will be discharged when the bidder has signed the Agreement and furnished the required Performance Security.

16.6 The Bid Security may be forfeited

- (a) If the Bidder withdraws the Bid after Bid opening during the period of Bid validity;
- (b) If the Bidder does not accept the correction of the Bid Price, pursuant to Clause 26; or
- (c) In the case of a successful Bidder, if the Bidder fails within the specified time limit to
 - (i) sign the Agreement; or
 - (ii) furnish the required Performance Security.

17. Format and Signing of Bid

17.1 The Bidder shall prepare one original and one copy of the documents comprising the bid as described in Clause 12 of these *Instructions to Bidders*, bound with the volume containing the Form of Bid, and clearly marked "**ORIGINAL**" and "**COPY**" as appropriate. In the event of discrepancy between them, the original shall prevail.

17.2 The original and copy of the Bid shall be typed or written in indelible ink and shall be signed by a person or persons duly authorized to sign on behalf of the Bidder, pursuant to Sub-Clauses 4.2. All pages of the bid where entries or amendments have been made shall be initialed by the person or persons signing the bid.

- 17.3** The Bid shall contain no alterations or additions, except those to comply with instructions issued by the Employer, or as necessary to correct errors made by the bidder, in which case such corrections shall be initialed by the person or persons signing the bid.

D. Submission of Bids

18. Sealing and Marking of Bids

- 18.1** The bid shall be two cover / two part Bid system. Part-I Technical Bid (Volume-1) and Conditions of contract, Contract Data and Forms of Securities (Volume-2) and Part-II Price Bid. Both the parts each in separate sealed cover duly marked Part-I (Cover-1) and Part-II (Cover-2). Both the sealed covers have to be submitted together in a common third sealed cover.

Part-I: - Technical Bid (Volume-1) and Conditions of contract, Contract Data and Forms of Securities (Volume-2).

Part-II:-The Price bid along with Bill of Quantities (Volume-3), Drawings (Volume-4) and Technical specifications (Volume-5).

18.2 The inner and outer envelopes / cover shall

- (a) be addressed to the Employer at the following address:

The Director,
Indian Institute of Tropical Meteorology, Dr. Homi Bhabha Road, NCL post,
Pashan, Pune- 411008 .INDIA so as to reach on or before 05-12-2011 Time 12.30
Hours.

- (b) bear the following identification:

- Bid for[name of contract]
- Bid Reference No.....[insert number]
- DO NOT OPEN BEFORE.....[time and date for bid opening, per Clause 22]

- 18.3** In addition to the identification required in Sub-Clause 18.2, the inner envelopes shall indicate the name and address of the bidder to enable the bid to be returned unopened in case it is declared late, pursuant to Clause 20.

- 18.4** If the outer envelope is not sealed and marked as above, the Employer will assume no responsibility for the misplacement or premature opening of the bid.

- 18.5** Bidder will be supplied with one set of Bid Document the Bidder should treat this as **Original**. One additional copy of the Bid Document will be taken by the Bidder and make this copy as duplicate. The Duplicate copy will also contain one inner and outer cover like the Original.

19 Deadline for Submission of the Bids

- 19.1** Bids must be received by the Employer at the address specified above. In the event of the specified date for the submission of bids declared a holiday for the Employer, the Bids will be received upto the appointed time on the next working day.

- 19.2** The Employer may extend the deadline for submission of bids by issuing an amendment in accordance with Clause 10, in which case all rights and obligations of the Employer and the bidders previously subject to the original deadline will then be subject to the new deadline.

20. Late Bids

20.1 Any Bid received by the Employer after the deadline prescribed in Clause 20 will be returned unopened to the bidder.

21. Modification and Withdrawal of Bids

21.1 Bidders may modify or withdraw their bids by giving notice in writing before the deadline prescribed in Clause 19.

21.2 Each Bidder's modification or withdrawal notice shall be prepared, sealed, marked, and delivered in accordance with Clause 17 & 18, with the outer and inner envelopes additionally marked "**MODIFICATION**" or "**WITHDRAWAL**", as appropriate.

21.3 No bid may be modified after the deadline for submission of Bids.

21.4 Withdrawal or modification of a Bid between the deadline for submission of bids and the expiration of the original period of bid validity specified in Clause 15.1 above or as extended pursuant to Clause 15.2 may result in the forfeiture of the Bid security pursuant to Clause 16

21.5 Bidders may offer discounts to, or modify the prices of their Bids only by submitting Bid modifications in accordance with this clause, or included in the original Bid submission.

E. Bid Opening and Evaluation

22. Bid Opening

22.1 The Employer will open all the technical Bids received (except those received late), including modifications made pursuant to Clause 21, in the presence of the Bidders or their representatives who choose to attend on 05-12-2011 at 15.00 hours. at Indian Institute of Tropical Metrology, Dr.Homi Bhaba Road, Pashan, Pune-411008 In the event of the specified date of Bid opening being declared a holiday for the Employer, the Bids will be opened at the appointed time and location on the next working day.

22.2 Envelopes marked "**WITHDRAWAL**" shall be opened and read out first. Bids for which an acceptable notice of withdrawal has been submitted pursuant to Clause 21 shall not be opened. Subsequently all envelopes marked "Modification" shall be opened and the submissions therein read out in appropriate detail.

22.3 The Bidders' names, the Bid prices, the total amount of Bid, any discounts, Bid modifications and withdrawals, the presence or absence of Bid security, and such other details as the Employer may consider appropriate, will be announced by the Employer at the opening. No bid shall be rejected at bid opening except for the late bids pursuant to Clause 20. Bids [and modifications] sent pursuant to Clause 21 that are not opened and read out at bid opening will not be considered for further evaluation regardless of the circumstances. Late and withdrawn bids will be returned un-opened to bidders.

22.4 The Employer shall prepare minutes of the Bid opening, including the information disclosed to those present in accordance with Sub-Clause 22.3.

23. Process to Be Confidential

23.1 Information relating to the examination, clarification, evaluation, and comparison of Bids and recommendations for the award of a contract shall not be disclosed to Bidders or any other persons not officially concerned with such process until the award to the successful Bidder has been announced. Any effort by a Bidder to influence the Employer's processing of Bids or award decisions may result in the rejection of his Bid.

24. Clarification of Bids

- 24.1** To assist in the examination, evaluation, and comparison of Bids, the Employer may, at his discretion, ask any Bidder for clarification of his Bid, including breakdowns of the unit rates. The request for clarification and the response shall be in writing or by cable, but no change in the price or substance of the Bid shall be sought, offered, or permitted except as required to confirm the correction of arithmetic errors discovered by the Employer in the evaluation of the Bids in accordance with Clause 26.
- 24.2** Subject to sub-clause 24.1, no Bidder shall contact the Employer on any matter relating to its bid from the time of the bid opening to the time the contract is awarded. If the Bidder wishes to bring additional information to the notice of the Employer, it should do so in writing.
- 24.3** Any effort by the Bidder to influence the Employer in the Employer's bid evaluation, bid comparison or contract award decisions may result in the rejection of the Bidders' bid.

25. Examination of Bids and Determination of Responsiveness

- 25.1** Prior to the detailed evaluation of Bids, the Employer will determine whether each Bid (a) meets the eligibility criteria defined in Clause 3; and 4.4 A, (b) has been properly signed; (c) is accompanied by the required securities and; (d) is substantially responsive to the requirements of the Bidding documents.
- 25.2** A substantially responsive Bid is one which conforms to all the terms, conditions, and specifications of the Bidding documents, without material deviation or reservation. A material deviation or reservation is one (a) which affects in any substantial way the scope, quality, or performance of the Works; (b) which limits in any substantial way, inconsistent with the Bidding documents, the Employer's rights or the Bidder's obligations under the Contract; or (c) whose rectification would affect unfairly the competitive position of other Bidders presenting substantially responsive Bids.
- 25.3** If a Bid is not substantially responsive, it will be rejected by the Employer, and may not subsequently be made responsive by correction or withdrawal of the non-conforming deviation or reservation.

26. Correction of Errors

- 26.1** Bids determined to be substantially responsive will be checked by the Employer for any arithmetic errors. Errors will be corrected by the Employer **as follows**:
- (a) where there is a discrepancy between the rates in figures and in words, the rate in words will govern; and
 - (b) where there is a discrepancy between the unit and the line item total resulting from multiplying the unit rate by the quantity, the unit rate as quoted will govern.
- 26.2** The amount stated in the Bid will be adjusted by the Employer in accordance with the above procedure for the correction of errors and, with the concurrence of the Bidder, shall be considered as binding upon the Bidder. If the Bidder does not accept the corrected amount the Bid will be rejected, and the Bid security may be forfeited in accordance with Sub-Clause 16.6 (b).

27. Evaluation and Comparison of Bids

- 27.1** The Employer will evaluate and compare only the Bids determined to be substantially responsive in accordance with Clause 25.

- 27.2** In evaluating the Bids, the Employer will determine for each Bid the evaluated Bid Price by adjusting the Bid Price as follows:
- (a) making any correction for errors pursuant to Clause 26; or
 - (b) making an appropriate adjustments for any other acceptable variations, deviations; and
 - (c) making appropriate adjustments to reflect discounts or other price modifications offered in accordance with Sub Clause 21.5.
- 27.3** The Employer reserves the right to accept or reject any variation, deviation, or alternative offer. Variations, deviations, and alternative offers and other factors which are in excess of the requirements of the Bidding documents or otherwise result in unsolicited benefits for the Employer shall not be taken into account in Bid evaluation.
- 27.4** The estimated effect of the price adjustment conditions under Clause 47 of the *Conditions of Contract*, during the period of implementation of the Contract, will not be taken into account in Bid evaluation.
- 27.5** If the Bid of the successful Bidder is seriously unbalanced in relation to the Architect's estimate of the cost of work to be performed under the contract, the Employer may require the Bidder to produce detailed price analysis for any or all items of the Bill of Quantities, to demonstrate the internal consistency of those prices with the construction methods and schedule proposed. After evaluation of the price analysis, the Employer may require that the amount of the performance security set forth in Clause 31 be increased at the expense of the successful Bidder to a level sufficient to protect the Employer against financial loss in the event of default of the successful Bidder under the Contract.

F. Award of Contract

28. Award Criteria

- 28.1** Subject to Clause 29, the Employer will award the Contract to the Bidder whose Bid has been determined to be substantially responsive to the Bidding documents and who has offered the lowest evaluated Bid Price, provided that such Bidder has been determined to be (a) eligible in accordance with the provisions of Clause 3, and (b) qualified in accordance with the provisions of Clause 4.

29. Employer's Right to Accept any Bid and to Reject any or all Bids

- 29.1** Notwithstanding Clause 28, the Employer reserves the right to accept or reject any Bid, and to cancel the Bidding process and reject all Bids, at any time prior to the award of Contract, without thereby incurring any liability to the affected Bidder or Bidders or any obligation to inform the affected Bidder or Bidders of the grounds for the Employer's action.

30. Notification of Award and Signing of Agreement

- 30.1** The Bidder whose Bid has been accepted will be notified of the award by the Employer prior to expiration of the Bid validity period by cable, telex or facsimile confirmed by registered letter. This letter (hereinafter and in the *Conditions of Contract* called the "Letter of Acceptance") will state the sum that the Employer will pay the Contractor in consideration of the execution, completion, and maintenance of the Works by the Contractor as prescribed by the Contract (hereinafter and in the Contract called the "Contract Price").

30.2 The notification of award will constitute the formation of the Contract, subject only to the furnishing of a performance security in accordance with the provisions of Clause 31.

30.3 The Agreement will incorporate all agreements between the Employer and the successful Bidder. It will be signed by the successful within 28 days following the notification of award along with the Letter of Acceptance.

30.4 Upon the furnishing by the successful Bidder of the Performance Security, the Employer will promptly notify the other Bidders that their Bids have been unsuccessful.

31. Performance Security

31.1 Within 7 days of receipt of the Letter of Acceptance, the successful Bidder shall deliver to the Employer a Performance Security in any of the forms given below for an amount equivalent to 5% of the Contract price plus additional security for unbalanced Bids in accordance with Clause 27.5 of ITB and Clause 52 of Conditions of Contract:

- a bank guarantee in the form given in Section 8; or

Demand draft/Bank Guarantee, from nationalized / scheduled bank located in India in favour of **DIRECTOR**, INDIAN INSTITUTE OF TROPICAL METROLOGY, DR.HOMI BHABA ROAD, PASHAN, PUNE-411008.

31.2 Failure of the successful bidder to comply with the requirements of sub-clause 31.1 shall constitute a breach of contract, cause for annulment of the award, forfeiture of the bid security and any such other remedy the Employer may take under the contract, and the Employer may resort to awarding the contract to the next ranked bidder.

32 Advance Payment and Security

32.1 No advance payment will be made.

32.2 Running payment will be made towards completed work.

33. Corrupt or Fraudulent Practices

33.1 The Employer requires that Bidders, Suppliers, Contractors, and Consultants observe the highest standard of ethics during the procurement and execution of such contracts. In pursuit of this policy, the Employer

- (a) Defines, for the purposes of this provision, the terms set forth below as follows:
 - (i) "Corrupt practice" means the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence the action of a public official in the procurement process or in contract execution;
 - (ii) "Fraudulent practice" means a misrepresentation or omission of facts in order to influence a procurement process or the execution of a contract;
 - (iii) "Collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of the employer, designed to establish bid prices at artificial, non competitive levels.

- (iv) "Coercive practice" means harming or threatening to harm, directly or indirectly persons or their property to influence their participation in the procurement process or affect the execution of a contract;
- (b) will reject a proposal for award if it determines that the Bidder recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive or coercive practices in competing for the Contract in question;
- (c) will have the right to require that a provision be included in Bidding Documents and in contracts requiring Bidders, Suppliers, Contractors to permit the Employer to inspect their accounts and records and other documents relating to the bid submission and contract performance and to have them audited by auditors appointed by the Employer

34. Penalty Clause:

If the work is not completed within the aforesaid period the contractor shall pay liquidated damage of 1% per week subject to a maximum 10% of value of work order in case of delays beyond the accepted completion period for reasons solely attributed to him.

35. Extra Items

The rate of extra items shall be worked out in accordance with the following rules-

- a. The rates for the extra items shall be derived from the rate of an appropriate item of the similar class for which the rate has already been accepted, where same can be directly derived.
- b. The contractor shall be bound to carry out any extra items of work as per site requirement. The rate for extra items shall be derived from the rate already quoted. Where the items are not specified in the BOQ the rate shall be worked out at cost of material+labour+10% overheads, wastage and transportation & profit.
- c. Wherever applicable the basic rate difference in materials (mentioned in tender) shall be payable plus-minus without any profits, overheads etc., on said rate difference.
- d. Variation and Non- Tendered items, if any, shall be carried out under specific written instruction by architects and prior sanction by the Institute. Sanction for all extra items shall be sought by the contractor within seven days from the occurrence of such necessity.

SECTION 2:
FORMS OF BID, QUALIFICATION INFORMATION AND LETTER
OF ACCEPTANCE

Table of Forms:

- **CONTRACTOR'S BID**
- **QUALIFICATION INFORMATION**
- **LETTER OF ACCEPTANCE**
- **NOTICE TO PROCEED WITH THE WORK**
- **AGREEMENT FORM**

Contractor's Bid

NAME OF WORK: INTERIOR WORK FOR MULTI TRAINING FACILITY BUILDING AT
INDIAN INSTITUTE OF TROPICAL METROLOGY, DR.HOMI BHABA ROAD,
PASHAN, PUNE-411008.

To : **The Director,**
Address : INDIAN INSTITUTE OF TROPICAL METROLOGY, DR.HOMI BHABA
ROAD, PASHAN, PUNE-411008.

Sir,

Having examined the bidding documents including addendum, we offer to execute the Works described above in accordance with the Conditions of Contract, Specifications, Drawings and Bill of Quantities accompanying this Bid.

This Bid and your written acceptance of it shall constitute a binding contract between us. We understand that you are not bound to accept the lowest or any Bid you receive.

We hereby certify that we have taken steps to ensure that no person acting for us or on our behalf will engage in bribery.

We also undertake that, in competing for (and, if the award is made to us, in executing) the above contract, we will strictly observe the laws against fraud and corruption in force in India namely "Prevention of Corruption Act 1988".

We hereby confirm that this Bid complies with the Eligibility, Bid Validity and Bid Security required by the Bidding documents.

Yours faithfully,

Authorized Signature:

Name & Title of Signatory:

Name of Bidder:

Qualification Information

The information to be filled in by the Bidder in the following pages will be used for purposes of qualification criteria as provided for in Clause 4 of the Instructions to Bidders. This information will not be incorporated in the Contract.

To be eligible for Qualification, BIDDERS shall provide evidence to suitability of their meeting the Criteria indicated in Clause 4.0 and furnish details giving their full bio-data, organizational set up, technical experience, availability of plant and equipments etc. to establish their capacity and competence, and possession of adequate resources to carry out the contracts effectively and for this, the BIDS submitted shall include the following: (●)

1 Letter of tender ; as in Appendix A

2. For Individual Bidders

2.1 Constitution or legal status of Bidder
Information shall be submitted in the **Statement –A attached** separately

2.2 Total value of Interior Engineering construction work executed and payments received in the last five years (in Rs. Crores) σ

2006-2007	_____
2007-2008	_____
2008-2009	_____
2009-2010	_____
2010-2011	_____

2.3.1 Year wise work performed as prime contractor (in the same name) on works of a similar nature over the last five years. ●● Information shall be submitted in the **Statement –D attached** separately

Quantities of work executed as prime contractor (in the same name and style) in the last five years:

<u>Year</u>	<u>Name of the Work</u>	<u>Name of the Employer</u>	<u>Quantity of work performed</u>			<u>Remarks ●</u>	
			<u>False ceiling both gypsum and grid. (sq.mt)</u>	<u>Gypsum and Glass partitions Sq.mt</u>		<u>Electrification K.V.A & Networking</u>	<u>Work station installations</u>
2006-2007							
2007-2008							
2008-2009							
2009-2010							
2010-2011							

●● Attach certificate(s) from the Employer

@The item of work for which data is requested should tally with that specified in ITB clause 4.4A(b).

●● Immediately preceding the financial year in which bids are received.
Attach certificate from Chartered Accountant.

2.4 Information on Bid Capacity (works for which bids have been submitted and works which are yet to be completed) as on the date of this bid.

(A) Existing commitments and on-going works:

Information shall be submitted in the **Statement–E** attached separately.

(B) Works for which bids already submitted but yet to be finalized. Information to be given in the statement given below.

Description of Work (1)	Place & State (2)	Name and Address of Employer* (3)	Estimated value of works (Rs. Crores) (4)	Stipulated period of completion (5)	Date when decision is expected (6)	Remarks if any (7)
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* *Attach certificate(s) from the Employer.*

2.5 Information of Contractor's Equipment, available Plant and Machinery is essential for carrying out the Works. The Bidder should list all the information requested below. Refer also to Sub Clause 4.2 (d) of the Instructions to Bidders. Information shall be submitted in the **Statement –F** attached separately

2.6 Qualifications and experience of key personnel proposed for administration and execution of the Contract. Attach biographical data. Refer also to Sub Clause 4.2 (e) and 4.4 (B) (b) of instructions to Bidders and Sub Clause 9.1 of the Conditions of Contract. Information shall be submitted in the **Statement –B** attached separately

2.7 Proposed subcontracts and firms involved. [Refer ITB Clause 4.2 (j)] Information to be given in the statement given below.

Sr. No.	Sections of the works	Value of Sub-contract	Sub-contractor (name and address)	Experience in similar work
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2.8 Financial reports for the last five years: balance sheets, profit and loss statements, auditors' reports (in case of companies/corporation), etc

Information shall be submitted in the **Statement –C** attached separately

2.9 Evidence of access to financial resources to meet the qualification requirements: cash in hand, lines of credit, etc. List them below and attach copies of support documents [sample format attached].

2.10. Name, address, and telephone, telex, and fax numbers of the Bidders' bankers who may provide references if contacted by the Employer.

2.11 Information on litigation history in which the Bidder is involved. Information shall be submitted in the **Statement –H attached** separately

2.12 Details of termination of contract by previous client if any in last five years Information shall be submitted in the **Statement –G attached** separately

2.13 Statement of compliance under the requirements of Sub Clause 3.2 of the Instructions to Bidders.

2.14 Proposed work method and schedule. The Bidder should attach descriptions, drawings and charts as necessary to comply with the requirements of the Bidding documents. [Refer ITB Clause 4.1 and 4.2 (k)].

3.0 Additional Requirements

3.1 Bidders should provide any additional information required to fulfill the requirements of Clause 4 of the Instructions to the Bidders, if applicable.

3.2 Certificates in support of suitability, technical know-how and capability for having successfully completed the works during the last five years under Annexure 'A'.

3.3 A detailed description on the approach, methodology to the construction technology proposed, schedule and type of equipment to be used, names and responsibilities and detailed qualifications of the proposed subcontractors, if any etc.

3.4. A detailed description of any method of approach specially devised by the contractor to speed up the work.

3.5 Current solvency certificate or letter of support from the BIDDER'S Banker for an amount of Rs **50 Lakhs**, not older than three months from the last date of submission of Bid.

3.6 Details of cases of having been barred or black listed from the Bidding process, if any. Black-listed Agencies' Tender is liable to be rejected.

3.7 The tender should be submitted in English only. Supporting documents such as Annual accounts, Balance sheets, Client's certifications, Testimonials etc., if attached in any other language, should be translated in English.

4.0 The BIDDERS must provide evidence of having adequate experience. This should include supporting certificates of reports relating to financial, technical and other capability of the BIDDERS. At least three certificates to be produced.

5.0 The BIDDERS for qualification shall provide all facilities to **THE DIRECTOR, INDIAN INSTITUTE OF TROPICAL METROLOGY, DR. HOMI BHABA ROAD, PASHAN, PUNE-411008.** for verification of the information / details furnished by them and also for inspection of their works carried out / in progress if requested.

6.0 Nature of Submissions:

1. The submissions from the BIDDER in response to the Clause-4 shall be in the form of a statement signed by the authorized signatory on behalf of the BIDDER, who shall hold the Power of Attorney to sign such documents. The Power of Attorney documents shall also be attached.

Note : 1) **The DIRECTOR, INDIAN INSTITUTE OF TROPICAL METROLOGY, DR. HOMI BHABA ROAD, PASHAN, PUNE-411008** or his authorised representatives reserves the right to verify any part of the information furnished by the BIDDER in the above statements without any prejudice to the terms and conditions of the Contract. The BIDDER is deemed to have given his consent for the right of verification by the **The DIRECTOR, INDIAN INSTITUTE OF TROPICAL METROLOGY, DR. HOMI BHABA ROAD, PASHAN, PUNE-411008** or his authorised representative when the BIDDER submits the above statements.

If it comes to the notice of **The DIRECTOR, INDIAN INSTITUTE OF TROPICAL METROLOGY, DR. HOMI BHABA ROAD, PASHAN, PUNE-411008** that the BIDDER has suppressed any information or furnished misleading or inaccurate information, or in case whether any litigation currently in progress at the time of submission of BIDS lead to the decree by the Court of Law against the BIDDER, the **The DIRECTOR, INDIAN INSTITUTE OF TROPICAL METROLOGY, DR. HOMI BHABA ROAD, PASHAN, PUNE-411008** reserves the right to nullify the Qualification and to disqualify the BIDDER. If such information

becomes available to **The DIRECTOR**, INDIAN INSTITUTE OF TROPICAL METROLOGY,DR.HOMI BHABA ROAD,PASHAN,PUNE-411008 prior to issue of Letter of Intent, the BIDDER will be disqualified and will not be considered for award of work. If such information comes to the knowledge of the Client after the award of work, **The DIRECTOR**, INDIAN INSTITUTE OF TROPICAL METROLOGY,DR.HOMI BHABA ROAD,PASHAN,PUNE-411008 of the BIDDER and such action would include but not Ltd to forfeiture of all deposits, guarantees etc. furnished in any form. **The DIRECTOR**, INDIAN INSTITUTE OF TROPICAL METROLOGY,DR.HOMI BHABA ROAD,PASHAN,PUNE-411008 will also reserve the right to recover any Retention Money, Mobilisation Advance paid by invoking of Bank Guarantees submitted, including invoking of the Performance Bond.

The entire work executed upto the stage of such termination including materials procured and delivered at site will be taken over by **The DIRECTOR**, INDIAN INSTITUTE OF TROPICAL METROLOGY,DR.HOMI BHABA ROAD,PASHAN,PUNE-411008 and adjusted towards any payment due, as per contract conditions **The DIRECTOR**, INDIAN INSTITUTE OF TROPICAL METROLOGY,DR.HOMI BHABA ROAD,PASHAN,PUNE-411008 can thereafter arrange for a bidding process for completion of the balance works, for which any additional financial burden to be met by **The DIRECTOR**, INDIAN INSTITUTE OF TROPICAL METROLOGY,DR.HOMI BHABA ROAD,PASHAN,PUNE-411008 will also be recovered from the Contractor, who has been terminated, without prejudice to the other rights of **The DIRECTOR**, INDIAN INSTITUTE OF TROPICAL METROLOGY,DR.HOMI BHABA ROAD,PASHAN,PUNE-411008 under the Contract.

7.0 PARTICULAR ATTENTION

7.1 Employer reserves its rights to disqualify any BIDDER if:

- The BIDDERS have made untrue or false representation in the forms, statements and attachments submitted in proof of the qualification and requirements ;
- The BIDDER's track record of poor performance such as abandoning the work, not properly completing the contract, inordinate delays in completion or financial failures etc.
- The BIDDERS have suits lodged / admitted / pending against it in a Court of Law for proceedings for declaration of Bankruptcy, etc or any suit which challenges the basic existence of the BIDDER and substantially influences its capacity to implement the **Works** satisfactorily. Information on the legal matters is to be submitted as per Statement-I.
- The BIDDER shall unconditionally waive all rights in respect of challenging in any court any matter concerning this BID evaluation and award/termination of Contract. The aggrieved bidder can approach **The DIRECTOR**, INDIAN INSTITUTE OF TROPICAL METROLOGY,DR.HOMI BHABA ROAD,PASHAN,PUNE-411008 for their appeal against any order.

8.0 FINAL DECISION MAKING AUTHORITY

8.1 The main criteria for the selection of Contractors for the work will be on the consideration of their ability to fulfill their obligations under the contract. and competence to do good quality works within specified time schedule resources committed, evaluation of technical submission etc. in addition to consideration given for competitiveness of bid price.

8.2 Selection for qualification will be made by a Tender evaluation committee on the basis of competence of individual bidders.

8.3 The DIRECTOR, INDIAN INSTITUTE OF TROPICAL METROLOGY,DR.HOMI BHABA ROAD,PASHAN,PUNE-411008 reserves the right to accept or reject any Bid or to reduce the scope/ cancel the exercise without having to incur any cost or to assign any reason for its decision to any party whatsoever and **The DIRECTOR,** INDIAN INSTITUTE OF TROPICAL METROLOGY,DR.HOMI BHABA ROAD,PASHAN,PUNE-411008 decision on qualifying contractors will be final and binding on all the contractors.

APENDIX – A

LETTER OF TENDER

Date :

To

The Director,
Indian Institute of Tropical Metrology,
Dr.Homi Bhaba Road,
Pashan, Pune.

Sir,

Sub: Submission of Bid For INTERIOR WORK FOR MULTI TRAINING FACILITY BUILDING AT INDIAN INSTITUTE OF TROPICAL METROLOGY,DR.HOMI BHABA ROAD,PASHAN,PUNE-411008

- 1 I / Wehaving examined the details given in the Invitation to BIDDERS, we hereby submit the following information and relevant documents.
 - a I/We hereby certify that all the statements, information and data provided in the enclosed Statements A to G. and accompanying sheets are true and correct to the best of my / our knowledge.
 - b I/We have read the instructions appended with the qualification document and I/We understand that any contract made between ourselves and **THE DIRECTOR,** INDIAN INSTITUTE OF TROPICAL METROLOGY,DR.HOMI BHABA ROAD,PASHAN,PUNE-411008 on the basis of the information given by me / us is liable to be cancelled if any false information is detected at a later date.
 - c I/Wehave also no objection if enquiries are made on all the projects and works listed by me / us in the accompanying sheets or any other enquiry on the information furnished herewith in the accompanying sheets.
 - d I/We have furnished all information and details as asked for and have no further pertinent information to provide.
 - e I/We submit the requisite certified solvency certificate and authorize **THE DIRECTOR,** INDIAN INSTITUTE OF TROPICAL METROLOGY,DR.HOMI BHABA ROAD,PASHAN,PUNE-411008 to approach the Bank issuing the solvency certificate to verify the correctness thereof. I/We also authorize **THE DIRECTOR,** INDIAN INSTITUTE OF TROPICAL METROLOGY,DR.HOMI BHABA ROAD,PASHAN,PUNE-411008 to approach individuals, employers, companies, and corporation to verify my / our competency and general reputation.
 - f I/We submit in Annexure 'A' the certificates in support of my / our suitability, technical know-how and capability for having successfully completed the works during the last five years.

- g I/We also agree that the decision of **THE DIRECTOR**, INDIAN INSTITUTE OF TROPICAL METROLOGY, DR. HOMI BHABA ROAD, PASHAN, PUNE-411008 in the Qualification and selection of Contractors will be final and binding upon me / us.
- h I/We agree that **THE DIRECTOR**, INDIAN INSTITUTE OF TROPICAL METROLOGY, DR. HOMI BHABA ROAD, PASHAN, PUNE-411008 reserves the right to qualify any contractor or to cancel the exercise without assigning any reason for doing so or to incur any liability to any party whatsoever.
- i I/We agree not to withdraw from the contract after issue of LOI and before signing the agreement. If so we abide by the condition that liquidated damages shall be claimed against us by THE DIRECTOR, INDIAN INSTITUTE OF TROPICAL METROLOGY, DR. HOMI BHABA ROAD, PASHAN, PUNE-411008
- j The following are enclosed as enclosures to the letter of tender
1. Certificate of Incorporation from Registrar of Companies
 2. Memorandum of Association
 - 3 Annual Report / Audited Balance Sheet & Profit and Loss Statement for the past 5 years
 4. Solvency Certificate from Bankers for the value of Rs ----- LAKHS, current and dated not earlier than three months from the last date of submission of bid.
 6. Support Certificate from Bankers for Credit facilities available and cash flow of Rs ----- LAKHS per month.
 7. Proof of filing Income Tax returns for the previous three years.
 8. Sales Tax / Works Contract Tax / VAT / PAN Registration and Clearance certificate.
 9. PERT/BAR Charts and quality Formats used at site such as pour card for Concrete etc.,
 10. Testimonials from Clients / Consultants for completion of works included in Statement -D
 - 11 LOI / Work Order issued by the Clients for ongoing works included in Statement 'E'
 12. Organization Chart of Company showing the Officer in-Charge who will have direct link with and control of, site organization.
 13. Organization Chart and Curriculum Vitae of top two officers, viz, .Project Manager and Coordinator.
 14. Method Statement : Programming & Planning and Progress monitoring plan, weekly and monthly ; Management of direct subcontractors from selection through execution of work; Coordination with Specialist contractors like Electrical, Air conditioning, lifts etc. ; Quality control & quality Assurance at site; Safety Plan;
 15. Statements 'A' to 'H' with complete details., and any certificates other than that listed above.

I / we hereby agree to abide by the decisions of The Director, INDIAN INSTITUTE OF TROPICAL METROLOGY, DR. HOMI BHABA ROAD, PASHAN, PUNE-411008. in all matters relating to this Qualification.

Date of Submission

Signature of BIDDER with Official Seal

**SAMPLE FORMAT FOR EVIDENCE OF ACCESS TO OR AVAILABILITY OF CREDIT
FACILITIES –CLAUSE 4.5 [B] [c] OF ITB**

BANK CERTIFICATE

This is to certify that M/s. is a reputed company with a good financial standing.

If the contract for the work, namely is awarded to the above firm, we shall be able to provide overdraft/credit facilities to the extent of Rs. to meet their working capital requirements for executing the above contract.

__ Sd. __

Name of Bank

Senior Bank Manager

Address of the Bank

STATEMENT – A

ORGANISATION STRUCTURE (BIDDER)

S.No	Details required	To be filled by the Bidder
1	Name of the Bidder's Company	
2	Nationality of Bidder	
3	Establishment of the Company	
	i) Year	
	ii) Location	
4.	The Bidder is a company (Please enclose attested copy of registration / incorporation under appropriate laws of the Bidder's country)	Yes / No Enclosed/ Not enclosed
5	Address of the Bidder :	
i)	Registered Office Address Telephone Number Fax Number E-mail Address Web site	
ii)	Local office address: Telephone Number Fax Number E-mail Address	
iii)	Office address through which this work will be handled and name of officer in-charge. Telephone Number Fax Number E-mail Address	
d)	The Bidder has to furnish a detailed note on how it will handle the project in India, if successful bidder, in terms of (i) Finance,(ii) Manpower,(iii) Tools & equipment,(iv) Use of local agencies and labour, (v) Project control and management plan	
6	Details of the Board of Directors	
	i) Name of the Director ii) Qualification	
	iii) Organization iv) Office address v) Telephone Number vi) Fax Number vii) E-mail Address	

7	Enclose Company's Organization Chart showing the structure of the organization including the names of the Directors / Chief Executive Officer and position of Officers.	Enclosed / Not Enclosed
8	Number of years of experience and other Details.	
a.	As a Principal Contractor (Contractor shouldering major responsibility)	Yes / No
	i. In own country	Yes / No No. of Years :
	ii. Other countries (If yes, pl. specify country)	Yes / No No. of Years : Country :
9	Average number of permanent employees in the last 12 months.	
	i) Managerial	Nos.
	ii) Technical	Nos.
	iii) Administration	Nos.
	iv) Financial	Nos.
	v) Quality Control and Quality Assurance Engineer	Nos.
	vi) Safety Officer	Nos.
	vii) Industrial Relations Officer	Nos.
	viii) Supervisors	Nos.
	ix) Foreman	Nos.
	x) Skilled Labours	Nos.
	xi) Un Skilled Labours	Nos.
	xiii) Others (to specify)	1. Nos. 2. Nos. 3. Nos.
10	i) How many years has your Company been in business of similar work under its present name & address.Years
	ii) What were your fields of activities from when your Company was established?	1. 2. 3.
	iii) Whether any new fields were added in your Company? and if so, when and in what fields?	1. 2. 3.

11	Area of business activities other than construction works, if any. (If yes please furnish specific information).	Yes / No
12	In which fields of Interior engineering works do you claim specialisation and interest?	1. 2. 3.
13	Whether registered with any Government / Public Sector Undertaking / Local bodies like CPWD / MES / PWD or equivalent applicable in the Bidder's country. If yes, please furnish details class and type of Registration.	Yes / No. 1. 2. 3.
14	Registration Details : i) Sales Tax Registration No or equivalent applicable in the Bidder's country & Valid upto ii) PF Registration No or equivalent applicable in the Bidder's country & Valid upto iii) ESI Registration No or equivalent applicable in the Bidder's country & Valid upto iv) Service Tax registration No or equivalent applicable in the Bidder's country & Valid upto	
15	Whether adequate and satisfactory evidence to indicate financial capacity of the organisation to undertake the said construction work is enclosed.	Yes / No
16	Do you have plans for sub-contracting the work including specialised nature of building / infrastructure works? If yes, pl specify the quantum of contract in terms of percentage of works. Also, pl furnish the value of work sub-contracted in various works. Details of credentials of the subcontractors proving their ability to handle the component of this project.	Yes / No % Rs.....
17	Peak Quantities executed in a single day in any one year in the last five years in respect of the following items of work (Information only) mention the project name and cost.	
	i - a) Gypsum False Ceiling	sqm
	i - b) Grid ceiling	sqm
	ii) Gypsum partitions	sqm
	iii) fully glazed partitions	sqm
	iv - a) Furniture manufacturing	Cum
	iv - b) workstations assembling	nos
	iv - c) Electrical, data and voice cabling	Sqm
	v) carpet Flooring works	Sqm
	vi) audio visual works	Sqm
	vii) LAN networking	Sqm
	x) Wooden Flooring	Sqm
	xi) HVAC	Tonnes

18	Do you have Latest Survey instruments and Equipment to set out levels at any heights and all type of Special structures?	Yes / No If yes mention the name of equipment and the quantity possess.
19	Do you have your own furniture manufacturing facility? If yes, pl. give details of location and its production capability in terms of quantity per day.	Yes / No. Location : Production : Cum/Day
20	Do you material in stock? If yes, pl. furnish details of your own plant. If no, please specify name of manufacturer for sourcing and the dependency of the manufacture by the Bidder.	Yes / No
21	Do you have R & D department?. If yes, give details.	Yes / No
22	i) Do you have and adopt Quality Control and Quality Assurance Manual?	Yes / No Enclose QA Plan
	ii) Is your company an ISO certified Company? If yes, please furnish the ISO certification no.	Yes / No
	iii) Do you follow Quality Assurance System as per the appropriate ISO series of standards?	Yes / No
23	i) Do you have and follow Safety Manual? If yes, please give details of health and safety facilities available with you.	Yes / No Enclose Environmental Health and Safety Plan.
	ii) Was there any major, fatal accident during execution in the last five years? If yes, furnish Details.	Yes / No
	iii) Whether corrective action taken immediately and first-aid facilities provided in the site?	Yes / No
24	Propose Methodology:	Enclose Statement
	i) Whether the Programming and planning plan will be prepared in the form of Pert Chart or Bar Chart?	Yes / No
	ii) Whether the coordination plan & report plan will be prepared in the standard format?	Yes / No
	iii) Whether the technically qualified Sub-Contractors are engaged to carryout the work?	Yes / No
	iv) Please specify method for control and management of Sub-Contractors.	
25	Were you ever required to suspend work for a period of more than three months continuously after you started? If yes, Please furnish the name of project and reasons thereof.	Yes / No. 1. Name of Project : Reasons 2. Name of Project : Reasons

26	<p>Have you ever left the work awarded to you incomplete? If yes, Please furnish the name of project and reasons thereof.</p>	<p style="text-align: right;">Yes / No.</p> <p>1. Name of Project : Reasons</p> <p>2. Name of Project : Reasons</p>
27	<p>Were any penalties imposed for delays on the completion of the project? If yes, Please furnish the name of project and reasons thereof.</p>	<p style="text-align: right;">Yes / No.</p> <p>1. Name of Project : Reasons</p> <p>2. Name of Project : Reasons</p>
28	<p>Were there any termination of Contracts by the Employer? If yes, please furnish the details.</p>	<p style="text-align: right;">Yes / No.</p> <p>1. Name of Project : Reasons</p> <p>2. Name of Project : Reasons.</p>
29	<p>Litigation initiated by the Company and against the Company if any?</p>	
	<p>i) Whether cases of litigation proceedings have arisen in your projects during the last three financial years?</p>	<p style="text-align: center;">Yes / No</p>
	<p>ii) If Yes, How many cases of litigation arisen during the last three financial years?</p>	<p style="text-align: center;">Nos.</p>
	<p>iii) Furnish the details of the highest claim of Litigation during the last three financial years. iv) If the Bidder is a multinational company, please furnish the litigation history initiated by the Company and against the company in India, if any</p>	<p style="text-align: center;">Rs.</p>
30	<p>Arbitration :</p>	
	<p>i) Whether cases of arbitration proceedings have arisen in your projects during the last three years?</p>	<p style="text-align: center;">Yes / No</p>
	<p>ii) If Yes, How many cases of arbitration arisen during the last three years. Furnish name of work, name of the Client, cost of work, amount of claim.</p>	<p style="text-align: center;">Nos.</p>
	<p>iii) Furnish the details of the highest claim of arbitration during the last three years.</p>	<p style="text-align: center;">Rs.</p>
31	<p>Details of the Banker</p>	
	<p>Name of the Banker</p>	
	<p>Contact person</p>	
	<p>Office Address</p>	
	<p>Telephone Number</p>	
	<p>Fax Number</p>	

32	Are you a Recipient of any Award in appreciation of your work? If yes, please furnish the details	Yes / No
33	Please give atleast three references of Clients (Engineers, Architects or top Officials of Organisation) for whom you may have executed construction works of importance and similar nature from whom Superintending, Engineer, P.W.D, Building (Construction & Maintenance)Circle can verify	1) Name : Designation : Company : 2) Name : Designation : Company : 3) Name : Designation : Company :
34	Any special information, which you may like to provide.	

Place :
Bidder

Signature of the

Date :
Company

Common seal of the

STATEMENT-B

PERSONNEL TO BE DEPLOYED FOR THE PROJECT

S.No.	Details required	To be filled by Bidder
A	Managerial Level – General	
1	Individual's Name	
2	Age	
3	Qualification	
4	Present position	
5	Professional experience in the similar nature of works.	
6	Years with the Bidder	
7	Language known	
8	Name two recent works and nature of involvement of the person	
B	Managerial Level – Technical	
1	Individual's Name	
2	Age	
3	Qualification	
4	Present position	
5	Professional experience in the similar nature of works.	
6	Years with the Bidder	
7	Language known	
8	Name two recent works and nature of involvement of the person	
C	Managerial Level - Administration & Finance	
1	Individual's Name	
2	Age	
3	Qualification	
4	Present position	

5	Professional experience in the similar nature of works.	
6	Years with the Bidder	
7	Language known	
8	Name two recent works and nature of involvement of the person	
D	Managerial Level - Quality Control and Quality Assurance	
1	Individual's Name	
2	Age	
3	Qualification	
4	Present position	
5	Professional experience in the similar nature of works.	
6	Years with the Bidder	
7	Language known	
8	Name two recent works and nature of involvement of the person	
E	Managerial Level - Safety Officer & Industrial Relation Officer	
1	Individual's Name	
2	Age	
3	Qualification	
4	Present position	
5	Professional experience in the similar nature of works.	
6	Years with the Bidder	
7	Language known	
8	Name two recent works and nature of involvement of the person	
F	Managerial Level - Planning	
1	Individual's Name	
2	Age	
3	Qualification	
4	Present position	

5	Professional experience in the similar nature of works.	
6	Years with the Bidder	
7	Language known	
8	Name two recent works and nature of involvement of the person	

Note 1) CV of each of the above key personnel and details of their experience should be included in the submission.

2) Organisation Chart (both office and site) specific for this project for all the divisions of work (Main works & Direct Sub works) as an Annexure to this format must be attached.

Place :

Signature of the Bidder

Date :

Common seal of the Company

STATEMENT-C

Financial Information

Sl.No	Description	Details to be filled in by Bidder
A	Annual Turnover in the last five financial years (In INR crores)	
1	Year : April 2006 - to March 2007	
2	Year : April 2007 - to March 2008	
3	Year : April 2008 - to March 2009	
4	Year : April 2009 - to March 2010	
5	Year : April 2010 - to March 2011	
B	Financial Information (In INR Crores)	
I	Year : April 2006 - to March 2007	
	a. Total assets	
	b. Current assets	
	c. Total Liabilities	
	d. Current Liabilities	
	e. Profits before taxes	
	f. Profits after taxes	
	g. Net worth	
	h. Working Capital	
II	Year : April 2007 - to March 2008	
	a. Total assets	
	b. Current assets	
	c. Total Liabilities	
	d. Current Liabilities	
	e. Profits before taxes	
	f. Profits after taxes	
	g. Net worth	
	h. Working Capital	
III	Year : April 2008 - to March 2009	
	a. Total assets	
	b. Current assets	
	c. Total Liabilities	
	d. Current Liabilities	
	e. Profits before taxes	
	f. Profits after taxes	
	g. Net worth	

	h. Working Capital	
IV	Year : April 2009 - to March 2010	
	a. Total assets	
	b. Current assets	
	c. Total Liabilities	
	d. Current Liabilities	
	e. Profits before taxes	
	f. Profits after taxes	
	g. Net worth	
	h. Working Capital	
V	Year : April 2010 - to March 2011	
	a. Total assets	
	b. Current assets	
	c. Total Liabilities	
	d. Current Liabilities	
	e. Profits before taxes	
	f. Profits after taxes	
	g. Net worth	
	h. Working Capital	
C	Solvency Certificate (in INR Crores)	
	a. Name of Banker with address	
	b. Date of Certificate	
	c. Amount	
D	Credit facilities available to Bidder – Fund and non-fund based such as Cash Credit, Working capital term loans, LCs and Bank Guarantees – Banker's or Bankers' Letter must be produced - (In INR Crores)	
	a. Name of Banker with address	
	b. Date of Letter of Support	
	c. Amount	
E.	Bidder's Financial resources for this project	
	a. Own resources	
	b. Banker's or Bankers' credits	

F.	a. Approximate total value of on-going works	
	b. Total Value of works to be completed as of now Note: 1) The Bidder should furnish the value of work to be completed as of now along with break-up details of each work. 2) The Bidder has to ensure that the list of works covered in this Proforma should be same as the ones listed in STATEMENT - E (List & details of Ongoing works) with Proforma of each work.	
G.	Anticipated total value of new works for the next financial year.	

Place :

Signature of Bidder

Official Seal

Date :

Note: Balance sheet, Profit and loss statement, auditor's report etc. duly signed by Chartered Accountant is required to be attached separately

STATEMENT-D**Details of completed works in last five years**

S.No.	Details required	To be filled by the Bidder
1	Name of work	
2	Country and location	
3	Client's name and address	Name: Address :
4	Consultants name and address.	Name : Address :
5	Total tendered cost of work Agreement No. Date	INR Crores Agreement No: Date :
6	Total actual cost of work after completion.	INR Crores
7	Excess / less in percentage.%
8	Explain if Excess / less is higher by 20% of the tendered cost of work.	
9	Date of commencement	
10	Period of completion	
11	Stipulated date of completion	
12	Actual date of completion	
13	Extended by the contractor, if any. Reason for non-completion of work in stipulated time limit / extended time limit, if so furnish details	Yes / No
14	Extension of time granted by the Client, if any. If yes, please specify the reason for extension of time.	Yes / No
15	Brief description of works including principal features and quantities of main items of the work.	

16	Name of Contractor's Engineer in-charge of the Project & Qualifications.	Name : Qualification :
17	Details of specialised work executed under this Contract.	
18	Details of specialised work executed by their own divisions under the Contract	
20	Whether the Programming and planning plan was followed in the form of Pert Chart or Bar Chart?	Yes / No
21	Whether the Quality Control and Quality Assurance function was carried out? If yes, Please give details and copies of quality formats used in anyone project	Yes / No
22	Whether the safety measures were followed? If yes, Please give details.	Yes / No
23	i) Were there any labour strikes? If yes, Please give details.	Yes / No
	ii) Whether corrective action taken immediately?	Yes / No
24	Were there any penalties / fines / stop notice / compensation / liquidated damages imposed during execution of the project? If Yes, Please give amount, details and reason.	Yes / No Amount : Reason :
25	Whether the contract of the work was terminated? If Yes, furnish the details.	Yes / No Name of the Project : Reason :
26	Please specify the details of litigation / arbitration cases, if any, pertaining to works completed. If Yes, furnish the details i.e. Nature of litigation / arbitration. Please furnish whether the litigation is initiated by the Company or against the Company.	Yes / No
27	Attach client's certificate, as may be available (Not below the rank of Director or equivalent)	Yes / No

Date:

Signature of Bidder

Place :

Official Seal

STATEMENT-E

Details of On-Going works

S.No.	Details required	To Be filled by the Bidder
1	Name of work	
2	Country and location	
3	Client's name and address	Name : Address :
4	Consultants name and address.	Name : Address :
5	Total tendered cost of work (Agreement No. and Date)	INR Crores
6	(a) Brief description of works including principal features and quantities of main items of the work.	
7	i) Percentage of physical completion	
	ii) Amount billed for the work completed.	
	iii) Cost of work remaining to be executed as on the date of submission.	
	iv) Stipulated date of completion	
	v) Anticipated date of completion	
8	Name of Contractor's Engineer in-charge of the Project & Qualifications.	Name : Qualification :
9	Details of specialised works under this Contract	
10	Specialised works being executed by their own divisions	

11.a.	Details of the sub-contracted specialised works by the Bidder	
	i) Total value of work sub-contracted.	INR Crores
	ii) Trade-wise value of work sub-contracted.	1.INR..... Crores 2.INR..... Crores. 3.INR..... Crores. 4.INR Crores.
	iii) Trade-wise Name of sub-contractors Use separate sheet for details of such sub-contractors experience, capability, testimonial.	1. 2. 3. 4.
15	i) Were there any labour strikes? If yes, Please give details.	Yes / No
	ii) Whether corrective action taken immediately?	Yes / No
16	Were there any penalties / fines / stopnotice / compensation / liquidated damages imposed? If Yes, Please give amount, details and reason.	Yes / No Amount : Reason :
17	Please specify the details of litigation / arbitration cases, if any, pertaining to works ongoing.	Yes / No
18	Attach client's certificate, as may be available (Not below the rank of Director or equivalent)	Yes / No

Place :

Signature of the Bidder

Date :

Official seal

STATEMENT- F

A - PLANT, MACHINERY & EQUIPMENT

S.No.	Item of Equipment	Qty	Equipment Information				Current Position			Source of the equipment. Pl. mention Owned / Leased / Rental
			Name of Manufacturer	Make & Model	Capacity	Year of Manufacture	Location	Present Condition	Availability for this Project	
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										

B – Details of manpower like carpenters, false ceiling agency, Electrical agency, etc. If the Machinery, Equipments, Plants etc are leased or rental attach copy of agreement

Place :

Signature of the Bidder

Date :

Common seal of the Company

STATEMENT-G

Details of Termination of contract by previous Client in the past, if any

S.No.	Particulars	To Be filled by the Bidder
1	Name of works	
2	Name of the Client	
3	Value of Contract in INR Crores	
4	Period of Contract	
5	Terminated at what stage	
6	Reasons / grounds for termination	
7	Approx. value of work completed at the time of termination in INR Crores	
8	Approx. value of balance work not completed in INR Crores	
9	Remarks	

Place :

Date :

The BIDDERS shall furnish the percentage of the total sum of disputes / litigations / claim, currently under litigation in proportion to the average net worth of the Company for the last three years.

STATEMENT-I

IV. BIDDER'S Legal Status on account of the Litigation :

The BIDDERS shall furnish information whether the litigation in question affects / threatens the fundamental existence / operation of the company (For E.g.: insolvency, decree of criminal nature etc.)

ANNEXURE - 'A'

CERTIFICATES

Enclose Certificates in support of suitability, technical know how and capability for having successfully completed similar nature of works in the last five years.

Also furnish the following details in the enclosed certificate.

S.No.	Name of Works	Period of Construction	Name of Client / Owner.

Place :

Signature of the Bidder

Date :

Common seal of the Company

Letter of Acceptance

(letterhead paper of the Employer)

_____ [date]

To: _____
[name and address of the Contractor]

Dear Sirs,

This is to notify you that your Bid dated _____ for execution of the _____ [name of the contract and identification number, as given in the Instructions to Bidders] for the Contract Price of Rupees _____ (_____) [amount in words and figures], as corrected and modified in accordance with the Instructions to Bidders¹ is hereby accepted by our Agency.

We accept/do not accept that _____ be appointed as the Adjudicator².

We note that as per bid, you do not intend to subcontract any component of work.

[OR]

We note that as per bid, you propose to employ M/s. _____ as sub-contractor for executing _____

[Delete whichever is not applicable]

You are hereby requested to furnish Performance Security, plus additional security for unbalanced bids in terms of ITB clause 27.5, in the form detailed in Para 31.1 of ITB for an amount of Rs. _____ within 21 days of the receipt of this letter of acceptance valid upto 28 days from the date of expiry of Defects Liability Period i.e. upto and sign the contract, failing which action as stated in Para 31.2 of ITB will be taken.

We have reviewed the construction methodology submitted by you along with the bid in response to ITB Clause 4.2[k] and our comments are given in the attachment. You are requested to submit a revised Program including environmental management plan as per Clause 27 of General Conditions of Contract within 14 days of receipt of this letter.

Yours faithfully,

Authorized Signature

Name and Title of Signatory

Name of Agency

1 Delete "corrected and" or "and modified" if only one of these actions applies. Delete "as corrected and modified in accordance with the Instructions to Bidders" if corrections or modifications have not been effected.

2 To be used only if the Contractor disagrees in his Bid with the Adjudicator proposed by the Employer in the "Instructions to Bidders."

Issue of Notice to proceed with the work

(letterhead of the Employer)

----- (date)

To

----- (name and address of the Contractor)

Dear Sirs:

Pursuant to your furnishing the requisite security as stipulated in ITB clause 31.1 and signing of the contract agreement for the construction of ----- @ a Bid Price of Rs.-----, you are hereby instructed to proceed with the execution of the said works in accordance with the contract documents.

Yours faithfully,

(Signature, name and title of signatory authorized to sign on behalf of Employer).

Agreement Form

Agreement

This agreement, made the _____ day of _____ 19_____,
between _____ [name and address of Employer]
(hereinafter called "the Employer") of the one part and
_____ [name and address of contractor] (hereinafter called
"the Contractor") of the other part.

Whereas the Employer is desirous that the Contractor execute Interior Work of Multi Training Facility Buliding For **INDIAN INSTITUTE OF TROPICAL METROLOGY, DR. HOMI BHABA ROAD, PASHAN, PUNE-411008**. [name and identification number of Contract] (Hereinafter called "the Works") and the Employer has accepted the Bid by the Contractor for the execution and completion of such Works and the remedying of any defects therein, at a contract price of Rs.....

NOW THIS AGREEMENT WITNESSETH as follows:

1. In this Agreement, words and expression shall have the same meanings as are respectively assigned to them in the Conditions of Contract hereinafter referred to, and they shall be deemed to form and be read and construed as part of this Agreement.
2. In consideration of the payments to be made by the Employer to the Contractor as hereinafter mentioned, the Contractor hereby covenants with the Employer to execute and complete the Works and remedy any defects therein in conformity in all aspects with the provisions of the Contract.
3. The Employer hereby covenants to pay the Contractor in consideration of the execution and completion of the Works and the remedying the defects wherein the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.
4. The following documents shall be deemed to form and be read and construed as part of this Agreement, viz.:
 - i) Letter of Acceptance;
 - ii) Notice to proceed with the works;
 - iii) Contractor's Bid;
 - iv) Contract Data;
 - v) Conditions of contract (including Special Conditions of Contract);
 - vi) Specifications;

- vii) Drawings;
- viii) Bill of Quantities; and
- ix) Any other document listed in the Contract Data as forming part of the contract.

In witness whereof the parties thereto have caused this Agreement to be executed the day and year first before written.

The Common Seal of

was hereunto affixed in the presence of:

Signed, Sealed and Delivered by the said

in the presence of:

Binding Signature of Employer

Binding Signature of Contractor

Conditions of Contract & Contract Data

Conditions of Contract

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Conditions of Contract

A. General

1. Definitions

- 1.1** Terms which are defined in the Contract Data are not defined in the Conditions of Contract but keep their defined meanings. Capital initials are used to identify defined terms.

The **Adjudicator** is the person appointed jointly by the Employer and the Contractor to resolve disputes in the first instance, as provided for in Clauses 24 and 25. The name of the Adjudicator is defined in the Contract Data.

Bill of Quantities means the priced and completed **Bill of Quantities** forming part of the Bid.

Compensation Events are those defined in Clause 44 hereunder.

The **Completion Date** is the date of completion of the Works as certified by the Engineer in accordance with Sub Clause 55.1.

The **Contract** is the contract between the Employer and the Contractor to execute, complete and maintain the Works. It consists of the documents listed in Clause 2.3 below.

The **Contract Data** defines the documents and other information which comprise the Contract.

The **Contractor** is a person or corporate body who's Bid to carry out the Works has been accepted by the Employer.

The **Contractor's Bid** is the completed Bidding document submitted by the Contractor to the Employer.

The **Contract Price** is the price stated in the Letter of Acceptance and thereafter as adjusted in accordance with the provisions of the Contract.

Days are calendar days; **months** are calendar months.

A Defect is any part of the Works not completed in accordance with the Contract.

Defects Liability Period is the period named in the Contract Data and calculated from the Completion Date.

The **Employer** is the party who will employ the Contractor to carry out the Works. In this contract The Managing Director, Indian Institute of Tropical Meteorology, Dr. Homi Bhabha Road, NCL post, Pashan ,Pune. is the Employer

The **Architect** shall mean the Consultants engaged by the Employer. In this case
Archivista Engineering Projects Pvt. Ltd. 201/202 Sai Empire Baner Pune. 45.

Contractor's Equipment is the Contractor's machinery and vehicles brought temporarily to the Site to construct the Works.

The Initial Contract Price is the Contract Price listed in the Employer's Letter of Acceptance.

Drawings means the employer's drawings of the works included in the contract and any variations to such drawings given by an Architect.

Party means either employer or contractor.

Country means the country in which the site is located.

Employer's Liabilities means those mentioned in sub clause 11.1.

Force Majeure means an exceptional events or circumstance which is beyond a Party's control, which such Party could not reasonably have provided against before entering in to the contract; which, having arisen, such party could not reasonably have avoided or overcome; and, which is not substantially attributable to the other party.

The **Intended Completion Date** is the date on which it is intended that the Contractor shall complete the Works. The Intended Completion Date is specified in the Contract Data. The Intended Completion Date may be revised only by the Engineer by issuing an extension of time.

Materials are all supplies, including consumables, used by the contractor for incorporation in the Works.

Plant is any integral part of the Works which is to have a mechanical, electrical, electronic or chemical or biological function.

The **Site** is the area defined as such in the Contract Data.

Specification means the Specification of the Works included in the Contract and any modification or addition made or approved by the Architect.

The **Start Date** It is the date when Issue of notice to proceed with the work is given to the Contractor shall commence execution of the works.

A **Subcontractor** is a person or corporate body who has a Contract with the Contractor to carry out a part of the work in the Contract which includes work on the Site.

Temporary Works are works designed, constructed, installed, and removed by the Contractor which are needed for construction or installation of the Works.

A **Variation** is an instruction given by the Architect which varies the Works.

The **Works** are what the Contract requires the Contractor to construct, install, and turn over to the Employer, as defined in the Contract Data.

2. Interpretation

2.1 In interpreting these Conditions of Contract, singular also means plural, male also means female or neuter, and the other way around. Headings have no significance. Words have their normal meaning under the language of the Contract unless specifically defined. The Architect will provide instructions clarifying queries about the Conditions of Contract.

2.2 If sectional completion is specified in the Contract Data, references in the Conditions of Contract to the Works, the Completion Date, and the Intended Completion Date apply to any Section of the Works (other than references to the Completion Date and Intended Completion date for the whole of the Works).

2.3 The documents forming the Contract shall be interpreted in the following order of priority:

- (1) Agreement
- (2) Letter of Acceptance, notice to proceed with the works
- (3) Contractor's Bid
- (4) Contract Data
- (5) Conditions of Contract including Special Conditions of Contract
- (6) Specifications
- (7) Drawings
- (8) Bill of Quantities and
- (9) any other document listed in the Contract Data as forming part of the Contract.

3. Language and Law

- 3.1** The language of the Contract and the law governing the Contract are stated in the Contract Data.

4. Engineer's Decisions

- 4.1** Except where otherwise specifically stated, the Engineer will decide contractual matters between the Employer and the Contractor in the role representing the Employer.

5. Delegation

- 5.1** The Architect/Employer may delegate any of his duties and responsibilities to other people except to the Adjudicator after notifying the Contractor and may cancel any delegation after notifying the Contractor.

6. Communications

- 6.1** Communications between parties which are referred to in the conditions are effective only when in writing. A notice shall be effective only when it is delivered (in terms of Indian Contract Act).

7. Subcontracting

- 7.1** The Contractor may subcontract with the approval of the Architect but may not assign the Contract without the approval of the Employer in writing. Subcontracting does not alter the Contractor's obligations.

- 7.2** The contractor shall not be required to obtain any consent from the employer for:
- a) the sub-contracting of any part of the Works for which the Sub-contractor is named in the contract;
 - b) the provision of labour; and
 - c) the purchase of materials which are in accordance with the standards specified in the Contract.

Beyond this if the contractor proposes sub-contracting any part of the work during execution of works, because of some unforeseen circumstances to enable him to complete the work as per terms of the contract, the Engineer will consider the following before according approval:

- The contractor shall not sub-contract the whole of the Works.
- The contractor shall not sub-contract any part of the Work without prior consent of the Engineer. Any such consent shall not relieve the contractor from any liability or obligations under the contract and he shall be responsible for the acts, defaults and neglects of any sub-contractor, his agents or workmen as fully as if they were the acts, defaults or neglects of the contractor, his agents or workmen.
- The Architect should satisfy whether (a) the circumstances warrant such sub-contracting; and (b) the sub-contractors so proposed for the Work possess the

experience, qualifications and equipment necessary for the job proposed to be entrusted to them in proportion to the quantum of work to be sub-contracted.

- If payments are proposed to be made directly to that sub-contractor, this should be subject to specific authorization by the prime contractor so that this arrangement does not alter the contractor's liability or obligations under the contract.

(Note: 1. All bidders are expected to indicate clearly in the bid, if they propose sub-contracting elements of the works amounting to more than 20 percent of the Bid Price. For each such proposal the qualification and the experience of the identified sub-contractor in the relevant field should be furnished along with the bid to enable the employer to satisfy himself about their qualifications before agreeing for such sub-contracting and include it in the contract. In view of the above, normally no additional sub-contracting should arise during execution of the contract.

2. However, [a] sub contracting for certain specialized elements of the work is not unusual and acceptable for carrying out the works more effectively; but vertical splitting of the works for subcontracting is not acceptable. [b] In any case, proposal for sub-contracting in addition to what was specified in bid and stated in contract agreement will not be acceptable if the value of such additional sub-contracting exceeds 25% of value of work which was to be executed by Contractor without sub-contracting.

3 Assignment of the contract may be acceptable only under exceptional circumstances such as insolvencies/liquidation or merger of companies etc.

8. Other Contractors

The Contractor should employ only the approved sub contractors.

9. Personnel

9.1 The Contractor shall employ the key personnel named in the STATEMENT – B in Instruction and Information to Bidders (Volume-1).The **Engineer** will approve any proposed replacement of key personnel only if their qualifications, abilities, and relevant experience are substantially equal to or better than those of the personnel listed in the Schedule.

9.2 If the Architect/Employer asks the Contractor to remove a person who is a member of the Contractor's staff or his work force stating the reasons the Contractor shall ensure that the person leaves the Site within seven days and has no further connection with the work in the Contract.

10. Employer's and Contractor's Risks

10.1 The Employer carries the risks which this Contract states are Employer's risks, and the Contractor carries the risks which this Contract states are Contractor's risks.

11. Employer's Risks

11.1 The Employer is responsible for the excepted risks which are (a) in so far as they directly affect the execution of the Works in the Employer's country, the risks of war, hostilities, invasion, act of foreign enemies, rebellion, revolution, insurrection or military or usurped power, interior war, riot commotion or disorder (unless restricted to the Contractor's employees), and contamination from any nuclear fuel or nuclear waste or radioactive toxic explosive, or (b) a cause due solely to the design of the Works, other than the Contractor's design.

12. Contractor's Risks

12.1 All risks of loss of or damage to physical property and of personal injury and death which arise during and in consequence of the performance of the Contract other than the excepted risks are the responsibility of the Contractor.

13. Insurance

13.1 The Contractor shall provide, in the joint names of the Employer and the Contractor, insurance cover from the Start Date to the end of the Defects Liability Period, for the following events which are due to the Contractor's risks:

- (a) loss of or damage to the Works, Plant and Materials;
- (b) loss of or damage to Equipment;
- (c) loss of or damage of property (except the Works, Plant, Materials and Equipment) in connection with the Contract; and
- (d) Injury or death of a person working on the site of work. This also includes the supervisory staff employed by the Employer.

13.2 Policies and certificates for insurance shall be delivered by the Contractor to the Employer for the Architects approval before the Start Date. All such insurance shall provide for compensation to be payable in the types and proportions of currencies required to rectify the loss or damage incurred.

13.3 If the Contractor does not provide any of the policies and certificates required, the Employer may effect the insurance which the Contractor should have provided and recover the premiums the Employer has paid from payments otherwise due to the Contractor or, if no payment is due, the payment of the premiums shall be a debt due.

13.4 Alterations to the terms of an insurance shall not be made without the approval of the Architect/Employer

13.5 Both parties shall comply with any conditions of the insurance policies.

14. Site Investigation Reports

14.1 The Contractor, in preparing the Bid, shall rely on any site Investigation Reports referred to in the Contract Data, supplemented by any information available to the Bidder.(Site Investigation Report is enclosed as Annexure in Technical Specifications- Volume 5)

15. Queries about the Contract Data

15.1 The Engineer will clarify queries on the Contract Data.

16. Contractor to Construct the Works

16.1 The Contractor shall construct and install the Works in accordance with the Specification and Drawings, and as per instructions of an Architect

17. The Works to Be Completed by the Intended Completion Date

17.1 The Contractor may commence execution of the Works after fulfilling the contract conditions and shall carry out the Works in accordance with the program submitted by the Contractor, as updated with the approval of the Engineer, and complete them by the Intended Completion Date.

18. Approval by the Architect

18.1 The Contractor shall submit Specifications and Drawings showing the proposed Temporary Works to the Architect and Institute authorities and take approval from the Architect /Institute authorities who are to approve them if they comply with the Specifications and Drawings.

18.2 The Contractor shall be responsible for design of Temporary Works.

18.3 The Architects approval shall not alter the Contractor's responsibility for design of the Temporary Works.

18.4 The Contractor shall obtain approval of third parties to the design of the Temporary Works where required.

18.5 All Drawings prepared by the Contractor for the execution of the temporary Works, are subject to prior approval by the Architect before their use.

19. Safety

19.1 The Contractor shall be responsible for the safety of all activities on the Site ,as per safety norms and Building **Code No:.....**

20. Discoveries

20.1 Anything of historical or other interest or of significant value unexpectedly discovered on the Site is the property of the Employer. The Contractor is to notify the Engineer of such discoveries and carry out the Engineer's instructions for dealing with them.

21. Possession of the Site

21.1 The Employer shall give possession of all parts of the Site to the Contractor. If possession of a part is not given by the date stated in the Contract Data the Employer is deemed to have delayed the start of the relevant activities and this will be Compensation Event.

22. Access to the Site

2. The Contractor shall allow the Employer / Engineer / Architect and his / their authorized representative access to the Site, to any place where work in connection with the Contract is being carried out or is intended to be carried out and to any place where materials or plant are being manufactured / fabricated / assembled for the works.

23. Instructions

23.1 The Contractor shall forthwith comply with and duly execute any work as instructed by the Employer / Engineer / Architect. All instructions will be in writing. Instructions if orally given then contractor shall confirm them within seven days from the date of such instructions.

24. Disputes

24.1 If the Contractor believes that a decision taken by the Engineer /Architect was either outside the authority given to the them by the Contract or that the decision was wrongly taken, the decision shall be referred to the Adjudicator within 14 days of the notification of the Engineer's / Architect's decision.

25. Procedure for Disputes

25.1 The Adjudicator shall give a decision in writing within **28** days of receipt of a notification of a dispute.

25.2 The Adjudicator shall be paid daily at the rate specified in the Contract Data together with reimbursable expenses of the types specified in the Contract Data and the cost shall be divided equally between the Employer and the Contractor, whatever decision is reached by the Adjudicator. Either party may refer a decision of the Adjudicator to an Arbitrator within **28** days of the Adjudicator's written decision. If neither party refers the dispute to arbitration within the above **28** days, the Adjudicator's decision will be final and binding.

25.3 The arbitration shall be conducted in accordance with the arbitration procedure stated in the Special Conditions of Contract in page 21.

26. Replacement of Adjudicator

- 26.1** Should the Adjudicator resign or die, or should the Employer and the Contractor agree that the Adjudicator is not fulfilling his functions in accordance with the provisions of the Contract, a new Adjudicator will be jointly appointed by the Employer and the Contractor. In case of disagreement between the Employer and the Contractor, within 30 days, the Adjudicator shall be designated by the Appointing Authority designated in the Contract Data at the request of either party, within 14 days of receipt of such request.

B. Time Control

27. Program

- 27.1** Within the time stated in the Contract Data the Contractor shall submit to the Architect for approval a Program including Environmental Management Plan showing the general methods, arrangements, order, and timing for all the activities in the Works along with monthly cash flow forecast.
- 27.2** An update of the Program shall be a program showing the actual progress achieved on each activity and the effect of the progress achieved on the timing of the remaining work including any changes to the sequence of the activities.
- 27.3** The Contractor shall submit to the Architect /Engineer, for approval, an updated Program at intervals no longer than the period stated in the Contract Data. If the Contractor does not submit an updated Program within this period, the Employer may withhold the amount stated in the Contract Data from the next payment certificate and continue to withhold this amount until the next payment after the date on which the overdue Program has been submitted.
- 27.4** The Architect's approval of the Program shall not alter the Contractor's obligations. The Contractor may revise the Program and submit it to the Architect again at any time. A revised Program is to show the effect of Variations and Compensation Events.

28. Extension of the Intended Completion Date

- 28.1** The Employer / Architect shall extend the Intended Completion Date if a Compensation Event occurs or a Variation is issued which makes it impossible for Completion to be achieved by the Intended Completion Date without the Contractor taking steps to accelerate the remaining work and which would cause the Contractor to incur additional cost.
- 29** The Employer / Architect shall decide whether and by how much to extend the Intended Completion Date within 21 days of the Contractor asking the Employer for a decision upon the effect of a Compensation Event or Variation and submitting full supporting information. If the Contractor has failed to give early warning of a delay or has failed to cooperate in dealing with a delay, the delay by this failure shall not be considered in assessing the new Intended Completion Date.

30. Delays Ordered by the Engineer

- 30.1** The Employer may instruct the Contractor to delay the start or progress of any activity within the Works.

31. Management Meetings

- 31.1** Either the Employer / Architect or the Contractor may require the other to attend a management meeting. The business of a management meeting shall be to review the plans for remaining work and to deal with matters raised in accordance with the early warning procedure.
- 31.2** The Employer / Architect shall record the business of management meetings and is to provide copies of his record to those attending the meeting and to the Employer. The responsibility of the parties for actions to be taken is to be decided by the Employer either at the management meeting or after the management meeting and stated in writing to all who attended the meeting.

32. Early Warning

- 32.1** The Contractor is to warn the Employer / Architect at the earliest opportunity of specific likely future events or circumstances that may adversely affect the quality of the work, increase the Contract Price or delay the execution of works. The Employer /Architect may require the Contractor to provide an estimate of the expected effect of the future event or circumstance on the Contract Price and Completion Date. The estimate is to be provided by the Contractor as soon as reasonably possible.
- 32.2** The Contractor shall cooperate with the Employer / Architect in making and considering proposals for how the effect of such an event or circumstance can be avoided or reduced by anyone involved in the work and in carrying out any resulting instruction of the Engineer.

C. Quality Control

33. Identifying Defects

- 33.1** The Architect/Employer shall check the Contractor's work and notify the Contractor of any Defects that are found. Such checking shall not affect the Contractor's responsibilities. The Architect may instruct the Contractor to search for a Defect and to uncover and test any work that the Architect considers may have a Defect.
- 33.2** The contractor shall permit the Employer's Technical auditor to check the contractor's work and notify the Employer/ Architect and Contractor of any defects that are found. Such a check shall not affect the Contractor's or the Architect's responsibility as defined in the Contract Agreement.

34. Tests

- 34.1** The testing of materials shall be carried out by approved laboratories at Contractor's cost and the results will be binding. The test results in original will be sent to the Employer by the laboratory and a copy of the same sent to the Contractor
- If the Architect instructs the Contractor to carry out a test not specified in the Specification to check whether any work has a Defect and the test shows that it does, the Contractor shall pay for the test and any samples.

- 34.3** All construction material is required to be tested according to the frequency and record to be maintained by the contractor

35. Correction of Defects

- 35.1** The Employer/ Architect shall give notice to the Contractor of any Defects before the end of the Defects Liability Period, which begins at Completion and is defined in

the Contract Data. The Defects Liability Period shall be extended for as long as Defects remain to be corrected.

35.2 Every time notice of a Defect is given, the Contractor shall correct the notified Defect within the length of time specified in the Employer/ Architect's notice.

36. Uncorrected Defects

36.1 If the Contractor has not corrected a Defect within the time specified in the Engineer's notice, the Engineer will assess the cost of having the Defect corrected, and the Contractor will pay this amount.

Note: Where in certain cases, the technical specifications provide for acceptance of works within specified tolerance limits at reduced rates Architect will certify payments to Contractor accordingly.

D. Cost Control

37. Bill of Quantities

37.1 The Bill of Quantities shall contain items for the construction, installation, testing, and commissioning work to be done by the contractor.

37.2 The Bill of Quantities is used to calculate the Contract Price. The Contractor is paid for the quantity of the work done at the rate in the Bill of Quantities for each item.

38. Changes in the Quantities

38.1 If the final quantity of the work done differs from the quantity in the Bill of Quantities for the particular item by more than 10 percent, Architect shall give proper justification to get approval of institute authorities

38.3 If requested by the Architect / Employer, the Contractor shall provide the Architect / Employer with a detailed cost breakdown of any rate in the Bill of Quantities.

39. Variations

39.1 All Variations shall be included in updated Programs produced by the Contractor.

40. Payments for Variations

40.1 The Contractor shall provide the Architect / Employer with a quotation (with breakdown of unit rates) for carrying out the Variation when requested to do so by the Architect / Employer. The Architect shall assess the quotation, which shall be given within seven days of the request or within any longer period stated by the Employer and before the Variation is ordered.

40.2 If the work in the Variation corresponds with an item description in the Bill of Quantities and if, in the opinion of the Architect / Employer, the quantity of work above the limit stated in Sub Clause 38.1 or the timing of its execution do not cause the cost per unit of quantity to change, the rate in the bill of Quantities shall be used to calculate the value of the Variation. If the cost per unit of quantity changes, or if the nature or timing of the work in the Variation does not correspond with items in the Bill of Quantities, the quotation by the Contractor shall be in form of new rates for the relevant items of work.

40.3 If the Contractor's quotation is unreasonable (or if the contractor fails to provide the Architect /Employer with a quotation within a reasonable time specified by the Architect in accordance with Clause 40.1), the Employer may order the Variation and make a change to the Contract Price which shall be based on Architect's own forecast of the effects of the Variation on the Contractor's costs.

40.4 If the Architect / Employer decides that the urgency of varying the work would prevent a quotation being given and considered without delaying the work, no quotation shall be given and will be decided on mutually agreed rates.

40.5 The Contractor shall not be entitled to additional payment for costs that could have been avoided by giving early warning.

41. Cash flow forecasts

41.1 When the Program is updated, the contractor is to provide the Architect / Employer with an updated cash flow forecast.

42. Payment Certificates

2.8 The detailed measurements will be taken for all the works executed by the authorized representatives of the architect and recorded in the measurement books and acceptance for these measurements will be obtained from the contractor. Due check measurement of these measurements will be done as per the procedure in practice.

2.9 Contract bills will be prepared by the contractors engineers at frequent intervals and submitted to the Employer for making payment.

42.3 The value of work executed shall be determined by the Architect after due check measurement of the quantities claimed as executed by the contractor.

42.4 The value of work executed shall comprise the value of the quantities of the items in the Bill of Quantities completed..

3. The value of work executed shall include the valuation of Variations and Compensation Events as specified in clause 44.

4.

42.6 The Architect/Employer may exclude any item certified in a previous certificate or reduce the proportion of any item previously certified in any certificate in the light of later information.

43. Payments

43.1 Payments shall be adjusted for deductions for advance payments, retention, other recoveries in terms of the contract and taxes, at source, as applicable under the law.

2.10 The contractor shall submit his running bills not less than 45 lakhs towards completed work.5% amount will be retain from each running bill, retention amount will be released after defect liability period after certified the work by the PMC, Architect and Institute authorities.

43.3 Items of the Works for which no rate or price has been entered in will not be paid for by the Employer and shall be deemed covered by other rates and prices in the Contract.

44. Compensation Events

44.1 The following are Compensation Events unless they are caused by the Contractor:

(a) The Employer does not give access to a part of the Site by the Site Possession Date stated in the Contract Data.

(b) The Architect / Employer orders a delay or does not issue drawings, specifications or instructions required for execution of works on time.

- (c) The effect on the Contractor of any of the Employer's Risks.
- (d) The Architect / Employer unreasonably delays issuing a Certificate of Completion.

44.2 If a Compensation Event would cause additional cost or would prevent the work being completed before the Intended Completion Date, the Contract Price shall be increased and/or the Intended Completion Date is extended. The Architect / Engineer shall decide whether and by how much the Contract Price shall be increased and whether and by how much the Intended Completion Date shall be extended.

44.3 As soon as information demonstrating the effect of each Compensation Event upon the Contractor's forecast cost has been provided by the Contractor, it is to be assessed by the Architect / Employer and the Contract Price shall be adjusted accordingly. If the Contractor's forecast is deemed unreasonable, the Architect / Employer shall adjust the Contract Price based on Architect's own forecast. The Engineer will assume that the Contractor will react competently and promptly to the event.

44.4 The Contractor shall not be entitled to compensation to the extent that the Employer's interests are adversely affected by the Contractor not having given early warning or not having cooperated with the Engineer.

45. Tax

45.1 The rates quoted by the Contractor shall be deemed to be inclusive of all taxes and duties that the Contractor will have to pay for the performance of this Contract.

46. Currencies

46.1 All payments shall be made in Indian Rupees.

47. Price Adjustment

47.1 To the extent that full compensation for any rise or fall in costs to the contractor is not covered by the provisions of this or other clauses in the contract, the unit rates and prices included in the contract shall be deemed to include amounts to cover the contingency of such other rise or fall in costs.

48. Retention

48.1 5% of value of total work done which will be released after defect liability period of twelve month from the date of handover of site with clearance of institute.

49. Time is the essence of the work. All the works shall have to be completed within the stipulate time from the date of LOI (Appendix-A).If the work is not completed within the aforesaid period the contractor shall pay the owners liquidated damages of 1.0% of the balance work value per week subject to a maximum of 10% of value of work order in case of delays beyond the accepted completion period for reasons solely attributed to him.

50. Works during Night

50.1 The Performance Security shall be provided to the Employer not later than the date specified in the Letter of Acceptance and shall be issued in an amount and form and by a bank or surety acceptable to the Employer, and denominated in Indian Rupees. The Performance Security shall be valid until the date 7 days from the date of expiry of Defects Liability Period and the additional security for unbalanced bids shall be valid until the date 7 days from the date of issue of the certificate of completion.

51. Works during Night

If it is essential to execute the work during night hours prior approval of the Employer has to be obtained.

52. Cost of Repairs

52.1 Loss or damage to the Works or Materials to be incorporated in the Works between the Start Date and the end of the Defects Correction periods shall be remedied by the Contractor at the Contractor's cost if the loss or damage arises from the Contractor's acts or omissions.

E. Finishing the Contract

53. Completion

53.1 The Contractor shall request the Architect /Employer to issue a Certificate of Completion of the Works and the Employer / Architect will do so upon deciding that the Work is completed.

54. Taking Over

54.1 The Employer shall take over the Site and the Works within seven days of the Architect issuing a certificate of Completion.

55. Final Account

55.1 The final bill will be settled after Testing and commissioning of all the items of work contemplated in the agreement to the satisfaction of the engineer and taking over of the building by the Architect/Employer.

56. Operating and Maintenance Manuals

56.1 If "as built" Drawings and/or operating and maintenance manuals are required, the Contractor shall supply them by the dates stated in the Contract Data.

56.2 If the Contractor does not supply the Drawings and/or manuals by the dates stated in the Contract Data, or they do not receive the Architect's approval, the Architect shall withhold the amount stated in the Contract Data from payments due to the Contractor.

57. Termination

57.1 The Employer or the Contractor may terminate the Contract if the other party causes a fundamental breach of the Contract.

57.2 Fundamental breaches of Contract include, but shall not be limited to the following:

- (a) the Contractor stops work for 14 days when no stoppage of work is shown on the current program and the stoppage has not been authorized by the Architect;
- (b) the Employer or the Contractor is made bankrupt or goes into liquidation other than for a reconstruction or amalgamation;
- (c) the Architect/Employer gives Notice that failure to correct a particular Defect is a fundamental breach of Contract and the Contractor fails to correct it within a reasonable period of time determined by the Architect/Employer;
- (d) the Contractor has delayed the completion of works by the number of days for which the maximum amount of liquidated damages can be paid as defined in the Contract data; and
- (e) if the Contractor, in the judgment of the employer has engaged in fraud and corruption, as defined in GCC Clause 63, in competing for or in executing the Contract.

57.3 When either party to the Contract gives notice of a breach of contract to the Architect for a cause other than those listed under Sub Clause 59.2 above, the Architect shall decide whether the breach is fundamental or not.

57.4 Notwithstanding the above, the Employer may terminate the Contract for convenience.

57.5 If the Contract is terminated the Contractor shall stop work immediately, make the Site safe and secure and leave the Site as soon as reasonably possible.

58. Payment upon Termination

58.1 If the Contract is terminated because of a fundamental breach of Contract by the Contractor, the Architect/Employer shall issue a certificate for the value of the work done less advance payments received up to the date of the issue of the certificate, less other recoveries due in terms of the contract, less taxes due to be deducted at source as per applicable law and less the percentage to apply to the work not completed as indicated in the Contract Data. Additional Liquidated Damages shall not apply. If the total amount due to the Employer exceeds any payment due to the Contractor the difference shall be a debt payable to the Employer.

58.2 If the Contract is terminated at the Employer's convenience or because of a fundamental breach of Contract by the Employer, the Architect shall issue a certificate for the value of the work done, the reasonable cost of removal of Equipment, repatriation of the Contractor's personnel employed solely on the Works, and the Contractor's costs of protecting and securing the Works and less advance payments received up to the date of the certificate, less other recoveries due in terms of the contract and less taxes due to be deducted at source as per applicable law.

59. Property

59.1 All materials on the Site, Plant, Equipment, Temporary Works and Works are deemed to be the property of the Employer, if the Contract is terminated because of a Contractor's default.

60. Release from Performance

60.1 If the Contract is frustrated by the outbreak of war or by any other event entirely outside the control of either the Employer or the Contractor the Engineer shall certify that the Contract has been frustrated. The Contractor shall make the Site safe and stop work as quickly as possible after receiving this certificate and shall be paid for all work carried out before receiving it and for any work carried out afterwards to which commitment was made.

61. Fraud and Corruption

61.1 The Employer requires the Contractors and suppliers observe the highest standard of ethics during the procurement and execution of such contracts. In pursuit of this policy, the Employer:

- (a) defines, for the purposes of this provision, the terms set forth below as follows:
 - (i) "corrupt practice" means the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence the action of a public official in the procurement process or in contract execution;
 - (ii) "fraudulent practice" means a misrepresentation or omission of facts in order to influence a procurement process or the execution of a contract;
 - (iii) "collusive practice" means a scheme or arrangement between two or more Bidders, with employer designed to establish bid prices at artificial, non competitive levels; and
 - (iv) "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the procurement process or affect the execution of a contract;
- (b) will cancel the contract if it determines at any time that representatives of the contractors engaged in corrupt, fraudulent, collusive or coercive practices during the procurement or the execution of that contract, without the taken timely and appropriate action satisfactory to the satisfaction of the Employer to remedy the situation;
- (d) will sanction a firm or individual, including declaring them ineligible, either indefinitely or for a stated period of time, to be awarded a contract if it at any time they have, directly or through an agent, engaged, in corrupt, fraudulent, collusive or coercive practices in competing for, or in executing, contract; and
- (e) will have the right to require that Contractors to permit the Employer to inspect their accounts and records and other documents relating to the bid submission and contract performance and to have them audited by auditors appointed by the Employer.

F. Special Conditions of Contract

1. **LABOUR :**

The Contractor shall, unless otherwise provided in the Contract, make his own arrangements for the engagement of all staff and labour, local or other, and for their payment, housing, feeding and transport.

The Contractor shall, if required by the Architect/Employer, deliver to the Architect/Employer a return in detail, in such form and at such intervals as the Architect/Employer may prescribe, showing the staff and the numbers of the several classes of labour from time to time employed by the Contractor on the Site and such other information as the Architect/Employer may require.

2. **COMPLIANCE WITH LABOUR REGULATIONS :**

During continuance of the contract, the Contractor and his sub contractors shall abide at all times by all existing labour enactments and rules made thereunder, regulations, notifications and bye laws of the State or Central Government or local authority and any other labour law (including rules), regulations, bye laws that may be passed or notification that may be issued under any labour law in future either by the State or the Central Government or the local authority. Salient features of some of the major labour laws that are applicable to construction industry are given below. The Contractor shall keep the Employer indemnified in case any action is taken against the Employer by the competent authority on account of contravention of any of the provisions of any Act or rules made thereunder, regulations or notifications including amendments. If the Employer is caused to pay or reimburse, such amounts as may be necessary to cause or observe, or for non-observance of the provisions stipulated in the notifications/bye laws/Acts/Rules/regulations including amendments, if any, on the part of the Contractor, the Architect/Employer shall have the right to deduct any money due to the Contractor including his amount of performance security. The Architect/Employer shall also have right to recover from the Contractor any sum required or estimated to be required for making good the loss or damage suffered by the Employer.

The employees of the Contractor and the Sub-Contractor in no case shall be treated as the employees of the Employer at any point of time.

SALIENT FEATURES OF SOME MAJOR LABOUR LAWS APPLICABLE TO ESTABLISHMENTS ENGAGED IN BUILDING AND OTHER CONSTRUCTION WORK

(The law as current on the date of bid opening will apply)

- a) Workmen Compensation Act 1923: The Act provides for compensation in case of injury by accident arising out of and during the course of employment.
- b) Payment of Gratuity Act 1972: Gratuity is payable to an employee under the Act on satisfaction of certain conditions on separation if an employee has completed 5 years service or more or on death the rate of 15 days wages for every completed year of service. The Act is applicable to all establishments employing 10 or more employees.
- c) Employees P.F. and Miscellaneous Provision Act 1952 (since amended): The Act Provides for monthly contributions by the employer plus workers @ 10% or 8.33%. The benefits payable under the Act are :
 - (i) Pension or family pension on retirement or death, as the case may be.
 - (ii) Deposit linked insurance on the death in harness of the worker.
 - (iii) payment of P.F. accumulation on retirement/death etc.

- d) Maternity Benefit Act 1951: The Act provides for leave and some other benefits to women employees in case of confinement or miscarriage etc.
- e) Contract Labour (Regulation & Abolition) Act 1970: The Act provides for certain welfare measures to be provided by the Contractor to contract labour and in case the Contractor fails to provide, the same are required to be provided, by the Principal Employer by Law. The Principal Employer is required to take Certificate of Registration and the Contractor is required to take license from the designated Officer. The Act is applicable to the establishments or Contractor of Principal Employer if they employ 20 or more contract labour.
- f) Minimum Wages Act 1948: The Employer is supposed to pay not less than the Minimum Wages fixed by appropriate Government as per provisions of the Act if the employment is a scheduled employment. Construction of Buildings, Roads, Runways are scheduled employments.
- g) Payment of Wages Act 1936: It lays down as to by what date the wages are to be paid, when it will be paid and what deductions can be made from the wages of the workers.
- h) Equal Remuneration Act 1979: The Act provides for payment of equal wages for work of equal nature to Male and Female workers and for not making discrimination against Female employees in the matters of transfers, training and promotions etc.
- i) Payment of Bonus Act 1965: The Act is applicable to all establishments employing 20 or more employees. The Act provides for payments of annual bonus subject to a minimum of 8.33% of wages and maximum of 20% of wages to employees drawing Rs.3500/-per month or less. The bonus to be paid to employees getting Rs.2500/- per month or above upto Rs.3500/- per month shall be worked out by taking wages as Rs.2500/-per month only. The Act does not apply to certain establishments. The newly set-up establishments are exempted for five years in certain circumstances. Some of the State Governments have reduced the employment size from 20 to 10 for the purpose of applicability of this Act.
- j) Industrial Disputes Act 1947: The Act lays down the machinery and procedure for resolution of Industrial disputes, in what situations a strike or lock-out becomes illegal and what are the requirements for laying off or retrenching the employees or closing down the establishment.
- k) Industrial Employment (Standing Orders) Act 1946: It is applicable to all establishments employing 100 or more workmen (employment size reduced by some of the States and Central Government to 50). The Act provides for laying down rules governing the conditions of employment by the Employer on matters provided in the Act and get the same certified by the designated Authority.
- l) Trade Unions Act 1926: The Act lays down the procedure for registration of trade unions of workmen and employers. The Trade Unions registered under the Act have been given certain immunities from interior and criminal liabilities.
- m) Child Labour (Prohibition & Regulation) Act 1986: The Act prohibits employment of children below 14 years of age in certain occupations and processes and provides for regulation of employment of children in all other occupations and processes. Employment of Child Labour is prohibited in Building and Construction Industry.
- n) Inter-State Migrant workmen's (Regulation of Employment & Conditions of Service) Act 1979: The Act is applicable to an establishment which employs 5 or more inter-state migrant workmen through an intermediary (who has recruited workmen in one state for employment in the establishment situated in another state). The Inter-State migrant workmen, in an establishment to which this Act becomes applicable, are required to be provided certain facilities such as housing, medical aid, traveling expenses from home upto the establishment and back, etc.

- o) The Building and Other Construction workers (Regulation of Employment and Conditions of Service) Act 1996 and the Cess Act of 1996: All the establishments who carry on any building or other construction work and employs 10 or more workers are covered under this Act. All such establishments are required to pay cess at the rate not exceeding 2% of the cost of construction as may be modified by the Government. The Employer of the establishment is required to provide safety measures at the Building or construction work and other welfare measures, such as Canteens, First-Aid facilities, Ambulance, Housing accommodations for workers near the work place etc. The Employer to whom the Act applies has to obtain a registration certificate from the Registering Officer appointed by the Government.
- p) Factories Act 1948: The Act lays down the procedure for approval at plans before setting up a factory, health and safety provisions, welfare provisions, working hours, annual earned leave and rendering information regarding accidents or dangerous occurrences to designated authorities. It is applicable to premises employing 10 persons or more with aid of power or 20 or more persons without the aid of power engaged in manufacturing process.

(iv) ARBITRATION (GCC Clause 25.3)

If the decision of the Adjudicator as described in clause 25 is not acceptable , then the disputes can be referred to the Arbitrator.

The procedure for arbitration will be as follows :

- 25.3 (a) In case of Dispute or difference arising between the Employer and a domestic contractor relating to any matter arising out of or connected with this agreement, such disputes or difference shall be settled in accordance with the Arbitration and Conciliation Act, 1996. The arbitral tribunal shall consist of 3 arbitrators one each to be appointed by the Employer and the Contractor. The third Arbitrator shall be chosen by the two Arbitrators so appointed by the Parties and shall act as Presiding arbitrator. In case of failure of the two arbitrators appointed by the parties to reach upon a consensus within a period of 30 days from the appointment of the arbitrator appointed subsequently, the Presiding Arbitrator shall be appointed by the * Indian Council of Arbitration/President of the Institution of Engineers (India)/The International Centre for Alternative Dispute Resolution (India).
- (b) If one of the parties fails to appoint its arbitrator in pursuance of sub-clause (a) above within 30 days after receipt of the notice of the appointment of its arbitrator by the other party, then the * Indian Council of Arbitration/President of the Institution of Engineers (India) shall appoint the arbitrator. A certified copy of the order of the *Indian Council of Arbitration /President of the Institution of Engineers (India), making such an appointment shall be furnished to each of the parties.
 - (c) Arbitration proceedings shall be held at **Pune**, India, and the language of the arbitration proceedings and that of all documents and communications between the parties shall be English.
 - (d) The decision of the majority of arbitrators shall be final and binding upon both parties. The cost and expenses of Arbitration proceedings will be paid as determined by the arbitral tribunal. However, the expenses incurred by each party in connection with the preparation, presentation, etc. of its proceedings as also the fees and expenses paid to the arbitrator appointed by such party or on its behalf shall be borne by each party itself.
- Performance under the contract shall continue during the arbitration proceedings and payments due to the contractor by the owners shall not be withheld, unless they are the subject matter of the arbitration proceedings.

5. PROTECTION OF ENVIRONMENT:

Add the following as GCC Clause 16.2:

The contractor shall take all reasonable steps to protect the environment on and off the Site and to avoid damage or nuisance to persons or to property of the public or others resulting from pollution, noise or other causes arising as a consequence of his methods of operation.

During continuance of the contract, the contractor and his sub-contractors shall abide at all times by all existing enactments on environmental protection and rules made thereunder, regulations, notifications and bye-laws of the State or Central Government, or local authorities and any other law, bye-law, regulations that may be passed or notification that may be issued in this respect in future by the State or Central Government or the local authority.

Salient features of some of the major laws that are applicable are given below :

The Water (Prevention and Control of Pollution) Act, 1974, This provides for the prevention and control of water pollution and the maintaining and restoring of wholesomeness of water. 'Pollution' means such contamination of water or such alteration of the physical, chemical or biological properties of water or such discharge of any sewage or trade effluent or of any other liquid, gaseous or solid substance into water (whether directly or indirectly) as may, or is likely to, create a nuisance or render such water harmful or injurious to public health or safety, or to domestic, commercial, industrial, agricultural or other legitimate uses, or to the life and health of animals or plants or of aquatic organisms.

The Air (Prevention and Control of Pollution) Act, 1981, This provides for prevention, control and abatement of air pollution. 'Air Pollution' means the presence in the atmosphere of any 'air pollutant', which means any solid, liquid or gaseous substance (including noise) present in the atmosphere in such concentration as may be or tend to be injurious to human beings or other living creatures or plants or property or environment.

The Environment (Protection) Act, 1986, This provides for the protection and improvement of environment and for matters connected therewith, and the prevention of hazards to human beings, other living creatures, plants and property. 'Environment' includes water, air and land and the inter-relationship which exists among and between water, air and land, and human beings, other living creatures, plants, micro-organism and property.

The Public Liability Insurance Act, 1991, This provides for public liability insurance for the purpose of providing immediate relief to the persons affected by accident occurring while handling hazardous substances and for matters connected herewith or incidental thereto. Hazardous substance means any substance or preparation which is defined as hazardous substance under the Environment (Protection) Act 1986, and exceeding such quantity as may be specified by notification by the Central Government.

6) Supply of materials:

- a) The successful Bidder should make his own arrangement to obtain / import all materials required for the work.
- b) The Work shall be carried out using high quality materials and products from good source and reputed manufacturer respectively. The tenderer / contractor shall furnish the details of sources and manufacturers of materials and products, which they intend to use in the Work if their tender is acceptable.

- c) Quality assurance should be strictly adhered to. All materials are subject to inspection and approval of the Employer/Architect before use in the Work. All Work carried out and materials supplied shall conform to relevant latest Indian Standard Specification.
- d) The Contractor shall furnish the Employer for approval adequate samples of all materials to be used in Work and to permit tests and examinations thereof. All materials used in the Work shall be strictly as per approved samples and approved make.
- e) All mock ups / finishes / quality shall be approved by Employer/Architect.
- f) All materials which are rejected shall be forthwith removed from the site.

7) Water & Power:

- The rate quoted by the Contractor shall include expenditure for providing all the water required for the Interior construction work as well as that of Direct Sub Contractors and the Contractor shall make his own arrangements for the supply of good quality water, including obtaining Municipal connection for his labour as well as for construction purpose, and all charges for water shall be borne by him. If Municipal water is not available and should it become necessary for the Contractor to bring acceptable quality water from outside by tankers, the Employer shall not be liable to pay any charges in connection therewith including charges for periodic testing of the water of such sources for its suitability before use on works.
- The rate quoted in the tender shall also include electric consumption charges for power required for the Interior construction work as well as that of Sub-Contractor and the Contractor shall have to make his own arrangements to obtain power connections and maintain at his own expense an efficient service of electric light and power and shall pay for the electricity consumed. . The Employer, as well as the Architect, shall give all possible assistance to the Contractor to obtain the requisite permission from the various Authorities, but the responsibility for obtaining the same shall be that of the Contractor. Any shortfall in quantum of electric power from local electric company's supply shall be made up by necessary captive generators at site which the Contractor shall install at site. All charges connected with installing, running and maintaining of the generators, including all statutory approvals shall be borne by the Contractor.
- The Contractor shall also be responsible to supply water and electricity to all other agencies directly engaged by him such as Direct Sub-contractors etc. free and without levying any charge.
- If no such facility is available at the site of work and if available and found inadequate, it shall be the responsibility of the Contractor to make his own arrangement for obtaining water and power at his cost. The Contractor's responsibility also cover supply of adequate quantity of water and power for testing and commissioning of all his Direct sub-Contractors' works..
- e) All Municipal service charges or fees, for drainage and water connection for construction purposes shall be borne by the Contractor and if any, payable for permanent connections shall be initially paid by the Contractor and the Employer will reimburse the amount on production of official receipts.
- f) Electric supply connection deposits, improvement or development charges for the permanent supply will be paid by the Employer to the Electric supply authority. It is the responsibility of the Contractor to apply in time and follow up with respective authorities to obtain all permanent service connections.

10) RECORD DRAWINGS

The Interior Contractor shall make accurate records of those parts of the Works which will become hidden by further progress, as may be directed by the Architect. Such records shall be checked and verified by the Architect while the work is open for inspection. Records shall be entered by the Interior Contractor on prints of drawings which will be made available to him for this purpose, amplified by him with supplementary dimensioned sketches and handed to the Architect as soon as practicable. All costs and expenses in connection therewith shall be borne by the Contractor.

11) Permission from Statutory Body :

Permission required to be obtained from local Government and connected bodies for establishing the site office and executing the work shall be Bidder's responsibility.

12) Insurance:

The Contractor shall be responsible for any injury to persons, animals or things and for all structural damage to property which may arise from the operation or neglect of himself and or any nominated Direct Sub-Contractors, or Direct Sub-Contractors / Contractor's Employees and or third party whether such injury or damage arising from carelessness, accident or any other cause whatsoever, in any way connected with the execution of work.

The cover taken by the Contractor towards Third Party Liability shall be for a value of Rs. 5 Lakhs (Rupees Five Lakhs only) for a single event and there shall be no upper limit on the number of such events. The Bidders are expected to include all the charges towards taking all insurance cover, charges towards premia etc., in the quoted rates and no extras / claims shall be entertained on account of the Bidders' failure to comply with this requirement.

The Contractor shall take required insurance cover with an approved insurance company and deposit the policy with the Owner well before commencement of work

13) Joint Inspection

Employer's / Architect representatives' shall conduct a joint inspection with the Contractors' authorised representative at every stage of the work, immediately upon completion of such stage of works. The purpose of the joint inspection is to observe and record any deviations from the specified tolerances / levels, plumb or any quality defects or any such issues which require immediate attention / action from the Interior Contractor to make good or rectify such defects or observations jointly recorded. Such joint inspections can be held at any time as deemed fit and shall be binding on the Contractor to act upon and implement without any extra cost the directions arising out of such joint inspections. Failure / delay in holding such joint inspections shall not absolve the Interior Contractor from his responsibilities to rectify any defects which may be subsequently noticed at any time after the respective stages of work.

14) Photographs and Video Cassettes:

The Contractor shall take photos and video from the locations approved by the / Architect to show the progress of work at weekly intervals throughout the construction period and furnish photographs and video cassettes of required duration duly indicating therein the specified number of negative / prints affixed in albums. Each photograph shall be marked with the description of the photograph and location from which it was taken.

The ownership and copy right of all photographs and negatives shall be vested in the Employer and are not to be used without his permission under any circumstances. Negatives and prints shall be handed over to the Architect monthly.

15) Fire Protection during Construction

Provide and keep in working order adequate fire fighting equipment for emergency use.

16) Schedule Of Quantities and Technical Specifications

In case of conflict between item description in "Bill of Quantities" and "Technical specifications" the following priority shall govern:

Bill of Quantities & Preamble
Technical Specifications
IS Code
Equivalent BS Codes
Other codes

17) DOCUMENTATION :

The contractor shall submit the All guarantee certificates and documents applicable to any item before submission of Final Bill :

- a)As - built drawings for all buildings and structures.
- b) Guarantee for Anti-termite treatment work

Any other Material and work inspection reports called for by Employer /Architects as found necessary.

Additional Special Conditions

- 3** CONTRACTOR to provide supervisor for each work group / area.
- 4** All Employees of the CONTRACTOR shall wear badge showing name, profession, date of training, work order no., work description, valid from _____ to _____ , name of the Contractor, name of supervisor.
- 5** Welding transformer, if any brought to the site, shall have a valid test certificate
- 6** CONTRACTOR should provide detailed plan of material handling during time of contract. Material - manual handling shall conform to State Regulations.
- 7** Pre-commissioning test report shall be provided for all electrical systems. Including cables, wire, motors, transformers, voltage stabilizers.
- 8** All rotating and moving parts with a nip must be guarded, such that even a little finger cannot come in contact with any moving part.
- 9** Section 32 of the Factory Act regarding ladders, platforms/stairs and scaffolding to be followed strictly. (For e.g. Ladders should have uniform step height of not over 300mm. All fixed ladders to have railings at a height of 910-1050mm. Ladders over 3m height to be roped.)
- 10** All portable ladders shall be of aluminium with rubber shoes and flat treads as per IS3696 part 2 (1991) except where these could come in contact with live electrical. In such situations, only carbon fiber or insulated ladders to be used. Wooden and Bamboo ladders are not to be used. Portable ladders to be stored in a place where it is easily accessible.

- 11** All platforms, walkways to have toe-boards of 100 to 150mm and hand rails at a height of 910mm to 1150mm. A spring return bar gate to be provided at every access to the ladder.
- 12** All scaffolds to be of metallic construction and conform to IS2750-1964. Safe access by means of stairway to be provided if the height is more than 4m. Working platform with handrails at a height of 910mm to 1150mm and toe boards of 100-150mm to be provided.
- 13** Methods statement to be produced for all high risk activities (including risk assessment of critical activities). Approximate PPE usage for all critical activities to be compiled with.
- 14** Lifting gears, tools and tackles and equipment like cranes shall conform to requirements of section 28 and 29 of the Factory Act.
- 15** Noise level at 1 Mtr. distance from the equipment should not exceed the level indicated elsewhere in the specification.

Any further clarification on Environment, Health and Safety guidelines can be sought from unit, Environment Health and Safety Manager and Employer's guidelines on EHS.

**Signature of Tenderer
With Date and Seal**

.

CONTRACT DATA

Contract Data

Items marked "N/A" do not apply in this Contract.

The following documents are also part of the Contract:	Clause Reference
· The Schedule of Operating and Maintenance Manuals	[58]
· The Schedule of Sub Contractors	[7]
· The Schedule of Key Personnel	[9]
· The Methodology and Program of Construction & Environmental Management Plan	[27]
· The Schedule of Key and Critical equipment to be deployed on the work as per agreed program of construction	[27]
· Site Investigation reports	[14]

The Employer is

Name: **The Director,
Indian Institute of Tropical Meteorology** (1.1)
Address: **Dr. Homi Bhabha Road, NCL post, Pashan ,Pune.**

Name of authorized Representative: Mr. Anupam Saxena,Civil Engineer, Indian Institute of Tropical Meteorology.

The Architect is (1.1)

Name: Archivista Engineering Projects Pvt. Ltd.
Address: 201/202 Sai Empire Baner Pune-45

Name of Authorized Representative: Mr.Aniket Narke.

The Adjudicator appointed jointly by the Employer and Contractor is:

Name (1.1)

Address :

The name and identification number of the Contract is

The Works consist of-Interior Work for Multi Training Facility Building for Indian Institute of Tropical Meteorology. Dr. Homi Bhabha Road, NCL post, Pashan ,Pune. The work consists of Interior Work for Multi Training Facility Buildingfrom their own organization.

The Start Date shall be the date of receipt of L.O.I. (1.1)

The Intended Completion period for the work is 45 days from the receipt date of L.O.I. [17, 28]

The following documents also form part of the Contract:

[2.3]

9. Agreement

10. Letter of Acceptance, notice to proceed with the works

(3) Contractor's Bid

(4) Contract Data

(5) Conditions of Contract including Special Conditions of Contract .

(6) Specifications

(7) Drawings

(8) Bill of Quantities

The Contractor shall submit a revised Program including Environmental Management Plan for the Works (in such form and detail as the engineer shall reasonably prescribe) within 15 days of delivery of the Letter of Acceptance. [27]

The Site Possession Dates shall be: 7 days from signing of agreement [21]

The Site is located at Indian Institute of Tropical Meteorology, Dr. Homi Bhabha Road, NCL post, Pashan ,Pune.

The Defects Liability Period is 365 days from the date of certification of completion of works. (where sectional completion certificate is issued this will apply from those dates for those sections). [35]

The period between Program updates shall be 15 days.

[27]

The language of the Contract documents is English

[3]

The law which applies to the Contract is the laws of Union of India

[3]

The currency of the Contract is Indian Rupees.

[46]

Fees and types of reimbursable expenses to be paid to the Adjudicator [25]

Rs. 2000/- per day plus conveyance of Rs. 250/- per day.

Appointing Authority for the Adjudicator :- THE DIRECTOR

Indian Institute of Tropical Meteorology

Dr. Homi Bhabha Road, NCL post, Pashan

,Pune.

The proportion of payments retained (retention money) shall be 5 % from each bill subject to a maximum of 5% of final contract price [48]

The liquidity damages.-clause 49

The amounts of the advance payment are:

[51]

<u>Nature of Advance</u>	<u>Amount (Rs.)</u>	<u>Conditions to be fulfilled</u>
1. Mobilization advance for Plant Machinery and Equipment	No Mobilization advance.	
2. Secured advance for non- perishable materials brought to site	No secured advance.	

The Securities shall be for the following minimum amounts equivalent as a percentage of the Contract Price: [52]

Performance Security for 5 per cent of contract price [*in terms of ITB Clause 27.5*].

The standard form of Performance Security acceptable to the Employer shall be an unconditional Bank Guarantee of the type as presented in Section 8 of the Bidding Documents.

The date by which operating and maintenance manuals are required is within 14 days of issue of certificate of completion of whole or section of the work, as the case may be. [58]

The date by which "as-built" drawings (in scale ...) in 2 sets are required is within 14 days of issue of certificate of completion of whole or section of the work, as the case may be. [58]

The amount to be withheld for failing to supply "as built" drawings and/or operating and maintenance manuals [58]

The following events shall also be fundamental breach of contract: [59.2]

The Contractor has contravened Sub-clause 7 of GCC read with SCC and Clause 9.0 of GCC

The contractor does not adhere to the agreed construction program and agreed environmental management plan (Clause 27 of GCC) and also fails to take satisfactory remedial action as per agreements reached in the management meetings (Clause 31) for a period of 60 days.

3 The contractor fails to carry out of the instructions of Engineer Within a reasonable time determined by the Engineer in accordance with GCC Clause 16.1 and 23.1.

The percentage to apply to the value of the work not completed representing the Employer's additional cost for completing the Works shall be 20%. [60]

FORMS OF SECURITIES

Forms of Securities

Acceptable forms of securities are annexed. Bidders should not complete the Performance and Advance Payment Security forms at this time. Only the successful Bidder will be required to provide Performance and Advance Payment Securities in accordance with one of the forms, or in a similar form acceptable to the Employer.

Annex A: Bid Security (Bank Guarantee)

Annex B: Performance Bank Guarantee

Annex C: Performance Bank Guarantee for Unbalanced Items

Annex D: Bank Guarantee for Advance Payment

Annexure A

BID SECURITY (BANK GUARANTEE)

WHEREAS, _____ [name of Bidder] (hereinafter called "the Bidder") has submitted his Bid dated _____ [date] for the furnishing of A New Building office building for Indian Institute of Tropical Meteorology, Dr. Homi Bhabha Road, NCL post, Pashan ,Pune.(hereinafter called "the Bid").

KNOW ALL PEOPLE by these presents that We _____ [name of bank] having our registered office at _____ (hereinafter called "the Bank") are bound unto The Director Indian Institute of Tropical Meteorology, Dr. Homi Bhabha Road, NCL post, Pashan ,Pune, India.* (hereinafter called "the Employer") in the sum of _____¹ for which payment well and truly to be made to the said Employer the Bank binds itself, his successors and assigns by these presents.

SEALED with the Common Seal of the said Bank this _____ day of _____ 2008_____.

THE CONDITIONS of this obligation are:

- (1) If after Bid opening the Bidder withdraws his bid during the period of Bid validity specified in the Form of Bid;
- or
- (2) If the Bidder having been notified of the acceptance of his bid by the Employer during the period of Bid validity:
 - (a) fails or refuses to execute the Form of Agreement in accordance with the Instructions to Bidders, if required; or
 - (b) fails or refuses to furnish the Performance Security, in accordance with the Instruction to Bidders; or
 - (c) does not accept the correction of the Bid Price pursuant to Clause 27 of Instruction to Bidders;

we undertake to pay to the Employer up to the above amount upon receipt of his first written demand, without the Employer having to substantiate his demand, provided that in his demand the Employer will note that the amount claimed by him is due to him owing to the occurrence of one or any of the three conditions, specifying the occurred condition or conditions.

This Guarantee will remain in force up to and including the date _____² days after the deadline for submission of Bids as such deadline is stated in the Instructions to Bidders or as it may be extended by the Employer, notice of which extension(s) to the Bank is hereby waived. Any demand in respect of this guarantee should reach the Bank not later than the above date.

DATE _____ SIGNATURE OF THE BANK _____

WITNESS _____ SEAL _____

[signature, name, and address]

1 The Bidder should insert the amount of the guarantee in words and figures denominated in Indian Rupees. This figure should be the same as shown in Clause 16.1 of the Instructions to Bidders.245 days after the end of the validity period of the Bid.

Annexure B

PERFORMANCE BANK GUARANTEE

To:

The Director Indian Institute of Tropical Meteorology, Dr. Homi Bhabha Road, NCL post, Pashan ,Pune, India.

WHEREAS _____ [*name and address of Contractor*] (hereinafter called "the Contractor") has undertaken, in pursuance of Contract No. _____ dated _____ to execute Interior Work for Multi Training Facility Building for Indian Institute of Tropical Meteorology, Dr. Homi Bhabha Road, NCL post, Pashan ,Pune (hereinafter called "the Contract");

AND WHEREAS it has been stipulated by you in the said Contract that the Contractor shall furnish you with a Bank Guarantee by a recognized bank for the sum specified therein as security for compliance with his obligations in accordance with the Contract;

AND WHEREAS we have agreed to give the Contractor such a Bank Guarantee;

NOW THEREFORE we hereby affirm that we are the Guarantor and responsible to you, on behalf of the Contractor, up to a total of _____ [*amount of guarantee*]¹ _____ [*in words*], such sum being payable in the types and proportions of currencies in which the Contract Price is payable, and we undertake to pay you, upon your first written demand and without cavil or argument, any sum or sums within the limits of _____ [*amount of guarantee*]¹ as aforesaid without your needing to prove or to show grounds or reasons for your demand for the sum specified therein.

We hereby waive the necessity of your demanding the said debt from the Contractor before presenting us with the demand.

We further agree that no change or addition to or other modification of the terms of the Contract or of the Works to be performed thereunder or of any of the Contract documents which may be made between you and the Contractor shall in any way release us from any liability under this guarantee, and we hereby waive notice of any such change, addition or modification.

This guarantee shall be valid until (i.e.) 28 days from the date of expiry of the Defects Liability Period.

Signature and seal of the guarantor _____
Name of Bank _____
Address _____
Date _____

- An amount shall be inserted by the Guarantor, representing the percentage of the Contract Price specified in the Contract and denominated in Indian Rupees.

Annexure C

PERFORMANCE BANK GUARANTEE (for unbalanced items)

To:

THE DIRECTOR, Indian Institute of Tropical Meteorology, Dr. Homi Bhabha Road, NCL post, Pashan ,Pune, India.

WHEREAS _____ [*name and address of Contractor*] (hereinafter called "the Contractor") has undertaken, in pursuance of Contract No. _____ dated _____ to execute Interior Work For Multi Training Facility Building For Indian Institute of Tropical Meteorology, Dr. Homi Bhabha Road, NCL post, Pashan ,Pune, (hereinafter called "the Contract");

AND WHEREAS it has been stipulated by you in the said Contract that the Contractor shall furnish you with a Bank Guarantee by a recognized bank for the sum specified therein as security for compliance with his obligations in accordance with the Contract;

AND WHEREAS we have agreed to give the Contractor such a Bank Guarantee;

NOW THEREFORE we hereby affirm that we are the Guarantor and responsible to you, on behalf of the Contractor, up to a total of _____ [*amount of guarantee*]¹ _____ [*in words*], such sum being payable in the types and proportions of currencies in which the Contract Price is payable, and we undertake to pay you, upon your first written demand and without cavil or argument, any sum or sums within the limits of _____ [*amount of guarantee*]¹ as aforesaid without your needing to prove or to show grounds or reasons for your demand for the sum specified therein.

We hereby waive the necessity of your demanding the said debt from the Contractor before presenting us with the demand.

We further agree that no change or addition to or other modification of the terms of the Contract or of the Works to be performed thereunder or of any of the Contract documents which may be made between you and the Contractor shall in any way release us from any liability under this guarantee, and we hereby waive notice of any such change, addition or modification.

This guarantee shall be valid until (i.e.) 28 days from the date of issue of the certificate of completion of works.

Signature and seal of the guarantor _____
Name of Bank _____
Address _____
Date _____

1 An amount shall be inserted by the Guarantor, representing additional security for unbalanced Bids, if any and denominated in Indian Rupees.

Annexure D

BANK GUARANTEE FOR ADVANCE PAYMENT

To:

The Director ,Indian Institute of Tropical Meteorology, Dr. Homi Bhabha Road, NCL post, Pashan ,Pune,India.

Interior Work For Multi Training Facility Building for Indian Institute of Tropical Meteorology, Dr. Homi Bhabha Road, NCL post, Pashan ,Pune,India

Gentlemen:

In accordance with the provisions of the Conditions of Contract, sub clause 51.1 ("Advance Payment") of the above-mentioned Contract, _____ [*name and address of Contractor*] (hereinafter called "the Contractor") shall deposit with The Director, Indian Institute of Tropical Meteorology, Dr. Homi Bhabha Road, NCL post, Pashan ,Pune,India , Maharashtra, India. a bank guarantee to guarantee his proper and faithful performance under the said Clause of the Contract in an amount of _____ [*amount of guarantee*]¹ _____ [*in words*].

We, the _____ [*bank or financial institution*], as instructed by the Contractor, agree unconditionally and irrevocably to guarantee as primary obligator and not as Surety merely, the payment to The Director Indian Institute of Tropical Meteorology, Dr. Homi Bhabha Road, NCL post, Pashan ,Pune,Maharashtra, India. on his first demand without whatsoever right of objection on our part and without his first claim to the Contractor, in the amount not exceeding _____ [*amount of guarantee*]¹ _____ [*in words*].

We further agree that no change or addition to or other modification of the terms of the Contract or of Works to be performed thereunder or of any of the Contract documents which may be made between The Director Indian Institute of Tropical Meteorology, Dr. Homi Bhabha Road, NCL post, Pashan ,Pune,Maharashtra, India. and the Contractor, shall in any way release us from any liability under this guarantee, and we hereby waive notice of any such change, addition or modification.

This guarantee shall remain valid and in full effect from the date of the advance payment under the Contract until The Director Indian Institute of Tropical Meteorology, Dr. Homi Bhabha Road, NCL post, Pashan ,Pune,Maharashtra, India. receives full repayment of the same amount from the Contractor.

Yours truly,

Signature and seal: _____

Name of Bank/Financial Institution: _____

Address: _____

Date: _____

1 An amount shall be inserted by the bank representing the amount of the Advance Payment, and denominated in Indian Rupees.

TECHNICAL SPECIFICATIONS

TECHNICAL SPECIFICATIONS

A. INTERIOR & CIVIL WORKS

The scope of work covers execution and completion of the work consisting of Interior furnishing and Minor Civil works for **INTERIOR WORK OF MULTI TRAINING FACILITY BUILDING AT INDIAN INSTITUTE OF TROPICAL METROLOGY, DR.HOMI BHABA ROAD, PASHAN, PUNE - 411008** in accordance with the drawings and specifications given along with the tender document:

1. GENERAL

This Specification is for work to be done, item to be supplied and materials to be used in the works as shown and defined on the drawings and described herein, all under supervision and to the satisfaction of the IITM/Architects.

The workmanship is to be the best available and of a high standard, use must be made of a special trades men in all aspect of the work and allowance must be made in the rates for so doing.

The materials and items to be provided by the Contractor shall be approved by the IITM/Architects in accordance with any samples which will be submitted for approval by Contractor and generally in accordance with the Specifications. Also if products are specified in the Specification and/or bill of brand, trade name or catalogue reference, the Contractor will be required to obtain the approval of the Architects before using the materials. The Contractor shall produce all in voices, Vouchers or receipts for any material if called upon to do so by the IITM/Architects.

Samples of all materials are to be submitted to the Architects for approval before the Contractor orders or deliver the materials at site. Samples together with their packing are to be provided free of charge by the Contractor and should any materials be rejected, they will be removed from the site at the Contractor's expense. All samples will be retained by the IITM/Architects for comparison with materials which will be delivered at the site. Also, the Contractor will be required to submit specimen finishes of colours, fabrics etc. for the approval of the Architects before proceeding with the work.

The contractor shall be responsible for providing and maintaining and boxing or other temporary coverage's required for the protection of dresses or finished work if left unprotected. He is also to clean out all shelving, out ends and other waste from all pairs of the works before coverings or in-fillings are constructed.

Templates, boxes and moulds shall be accurately set out and rigidly constructed so as to remain accurate during the time they are in use.

All unexposed surface of timber e.g. false ceiling, backing fillets, backs of door frames, cupboard framing, grounds, etc. are to be treated with two coats of approved timber preservative before fixing or converging.

Only first class workmanship will be accepted. Contractor shall maintain uniform quality and consistency in workmanship throughout.

If directed, materials shall be tested in any approved Testing Laboratory and the Test Certificate in original shall be submitted to the Architects and the entire charges of testing including charges for repeated tests if ordered shall be borne by the Contractor.

It shall be obligatory for the Contractor to furnish Certificate, if demanded by the IITM / Architects, from manufacturer or the material supplier that the work has been carried out by using their material and as per their recommendation.

All materials supplied by the IITM, if any/ other specialised firms shall be properly stored and the Contractor shall be responsible for its safe custody until they are required on the works and till the completion of work.

Unless otherwise shown on the drawings or mentioned in the Schedule of Quantities or Special Specifications the quality of materials, workmanship, dimensions, etc., shall be as specified here-in-under.

All Equipment and facilities for carrying out field tests on materials shall be provided without any extra cost

2. PLYWOOD

Marine plywood shall generally conform to I.S.710-1980 or latest, bonded with phenol formaldehyde, treated with wood preservative.

3. TEAK WOOD

Timber shall be well seasoned and of the best quality, Indian Teak of specified (viz). **Bandeli, Ballarshah, Malabar, etc.**

Timber shall be considered as well seasoned, if its moisture content does not exceed the following limits.

- | | | | |
|------|-------------------------------------|-----|-----|
| (i) | Timber for frames | ... | 14% |
| (ii) | Timber for planking, Shutters, etc. | ... | 12% |

The moisture content of timber shall be determined according to method described in Paragraph 4 of IS: 287 for 'Maximum Permissible Moisture content of Timber used for different purposes in different climatic zones'.

First Class Indian Teakwood means locally available best quality and well seasoned. It shall have uniform colour, reasonably straight grains and shall be free from large loose dead knots, or defects of any kind. No individual hard and sound knot shall be more than 2.5 cm. in diameter and aggregate area of all knots shall not exceed 1% of the area of the piece. There shall not be less than growth rings per 2.5 cm. width.

All the wood shall be properly seasoned, natural growth and shall be free from worm holes, loose or dead knots cracks, shakes, twists, bends, sapwood or other defects, saw die square and shall not suffer warping, ting or other defects. All internal frame work shall be treated with approved wood preservative. All wood brought to site should be clean shall not have any preservative. All rejected decayed, bad quality wood shall be immediately removed from site. All wood brought to site must be stacked-stored properly as per instructions.

4. ALUMINIUM BOX FRAMES

The Aluminium Box frames for the Solid partitions shall be made out of Aluminium sections of 50 x 25mm size with 1.5mm thickness. The Aluminium sections shall conform to IS: 9833.

5. GLAZING:

Glass used for glazing shall be float glass of best approved quality free from flaw, specks, bubbles and shall be of thickness specified in the Schedule of Quantities.

All glass to be of approved manufacturer complying with I.S. 3548-1966 as per approved quality and sample to be of the selective qualities specified and free from bubbles, smoke, air holes and other defects.

Polished plate glass shall be "glazing glass" (G.G.) conforming to IS 3438-1965 or as per approved sample and quality.

The compound for glazing to metal is to be a special non-hardening compound manufactured for the purpose and of a brand and quality approved by the IITM/Architects.

While cutting glass, proper allowance be made for expansion. Each square of glazing to be in one whole sheet. On completion of work clean all glass inside and out, replace all cracked scratched and broken panes and leave in good condition.

6. **WOOD WORK:**

Timber used shall conform to specifications described under materials, shall be in accordance with the drawing in every detail and all joiner's work shall be accurately set out, framed and finished in a proper workman like manner. Frames of partitions and opening, etc., shall be of accurately planned smooth and rebates, rounding and mouldings shall be made as shown on the drawings. Patching or Plugging of any kind shall not be allowed. Joints shall be simple, neat and strong. Framed joints shall be coated with suitable adhesive like glue or synthetic resin before the frames put together. All mortise and tenon joints shall fit in fully and accurately without wedging or filling. The joints shall be pinned with hardwood or rust resisting star shaped metal pins of 8 mm dia., after the frames are put together and pressed in position by means of a press. The frames shall be protected during the progress of work by providing suitable boxing. All portions of timber abutting against or embedded in masonry or concrete shall be treated against termites by giving a coat of any approved wood preservative. All T.W.work should be painted with a coat of approved wood primer.

Frames and Shutters shall not be painted or erected before being approved by the IITM / Architects.

7. **Joinery:**

Joinery is to be prepared immediately after the placing of the Contract framed up, bonded and waged up. Any portions that are warped or found with other defects are to be replaced before wedging up. The whole of the work is to be framed and finished in a workmen-like manner in accordance with the detailed drawings wrought and whenever required, fitted with all necessary metal ties. Straps, belts, screws, glue etc. Running beaded joints are to be cross-tongued with teak tongues wherever 1(1/2) thk. Double cross tongued. Joiners work generally to be finished with fine sand/glass paper.

Joints:

All joints shall be standard mortise and tenon, dowel, dovetail, and cross halved. Nailed or glued but joints will not be permitted, screws, nails etc. will be standard iron or wire of oxidized Nettle fold tenons should fit the mortises exactly.

Nailed or glued butt joints will not be permitted, exceptional cases with approval of Architects/IITM.

Where screws shown on a finished surface, those will be sunk and the whole plugged with a wood plug of the same wood and grain of the finished surfaces will be neatly punched and the hole filled with wood filler to match the colour.

Should joints in joiner's work open, or other defects arise within the period stated for defect liability in the contract and the clause thereof be deemed by the Architects to be due to such defective joinery shall be taken down, and refilled, redecorated and/or replaced if necessary and any work disturbed shall be made good at the Contractor's expense.

Nails, spikes and bolts shall be of lengths and weights approved by the IITM/Architects. Nails shall comply with IS 1959-1960. Brass headed nails are to comply with B.S.1210. Wire staples shall comply with B.S.1494 or equivalent.

The contact surface of dowels, tennons, wedges etc., shall be glued with an approved adhesive.

Where glued, joinery and carpentry work is likely to come into contact with moisture; the glue shall be waterproof grade.

8. GYPSUM BOARD PARTITION:

Metal Stud Partition which includes two layers of tapered edge 15.0mm thick Fire line board screw fixed with drywall screw of 25mm for first layer and 45mm for second layer at 300mm centers to either side of 70mm studs (0.55mm thick having one flange of 34mm and another flange of 36mm made of G.I.Steel) placed at 610mm centre to centre in 70mm floor and ceiling channel (0.55mm thick having equal flanges of 32mm made of G.I. Steel) with joints staggered on each layer to avoid leakage through joints. Finally square and tapered edges of the boards are to be jointed and finished so as to have a flush look which includes filling and finishing with jointing compound, Joint paper tape and two coats of Drywall Top coat suitable for Gypboard (as per recommended practices of India Gypsum).

Note:

- Angle bead to be used at external angles to get straight line finish & protection from normal impacts. It should be charged extra.
- Edge bead to be used to protect the exposed Gypsum core of gypboard specially at cut edges of the openings for doors / windows / glazing or any other unprotected core. It should be charged extra.
- Control joints to be used in excess of 10 Mtr. Long partitions / walls for which no extra will be payable

9. FLUSH DOORS:

All flush doors shall be solid core unless otherwise specified. It shall conform to the relevant specifications of I.S.2202 and shall be obtained from approved manufacturers. The finished thickness of the shutter shall be as mentioned in the item. Face veneers shall be of the pattern and colour approved by the IITM / Architects and an approved sample shall be deposited with the IITM / Architects for reference.

The solid core shall be of Wood Laminate prepared from battens of well seasoned and treated good quality wood having straight grains. The battens shall be of uniform size of about 2.5 cm width. These shall be properly glued and machine pressed together with grains of each piece reversed from that of adjoining one. The longitudinal joints of the battens shall be staggered and no piece shall be less than 50 cm in length. Alternatively, the core shall be of solid teak particle board. Edges of the core shall be lipped with first class teakwood battens of 4 cm. (1 ½") minimum depth, glued and machine pressed along the core.

The core surface shall then have two or three veneers firmly glued on each face. The first veneer (called cross Bond) shall be laid with its grains at right angles to those of the core and the second the third veneer with their grains parallel to these of the core. The under veneers shall be of good quality, durable and well seasoned wood. The face veneer shall be of minimum one mm thickness and of well matched and seasoned first class teak, laid along with grains of the core battens. The combined thickness of all the veneers on each face shall not be less than 4 mm. Thermo setting synthetic resin conforming to IS 303 for moisture proof plywood grade M.P.F.I. shall be used in manufacture. In addition all doors shall have external lipping all round 8 mm thick.

10 HOLLOW METAL FIRE DOOR WITH HONEYCOMB CORE:

(FIRE RATED STEEL DOOR)

I. GENERAL:

Fire door shall be 2 hour fire rated and door quality shall be approved by TAC/CBRI and tested conformed to IS: 3614 Code or its Equivalent British Standard. The door should meet the requirements of Tariff Advisory Committee (TAC).

Size of the door shall be as per size mentioned in BOQ / Drawings.

- a) **A man operation door of size above 2049 mm height shall be provided with a removable panel / fixed panel on top with glazing or without glazing as required.**
- b) **The construction of above panel shall be designed similar to that of a shutter in case of flush panel to match the exteriors. In the case of glazing a 6 mm thick toughened glass with clipping arrangement on top shall be provided which shall be mounted on a transom of approved design.**

II **Frame**

- a) **Material** - Frame to be manufactured from 1.60 mm (16 gauge) galvanised steel sheets complying with latest IS 277 Code or its Equivalent British Standard coating class zinc coating mill phosphatized.
- b) **Profile** - Door frame profile to be double rebated of dimensions 143 mm x 57 mm (+/- 0.3) with bending radius of 1.4 mm.
- c) **Fabrication** - Frame to be fabricated from 1.60 mm thick galvanised steel sheet to the specified profile and dimensions. Frames fabricated at factory shall be in knock down form with butt joints for bolted assembly at site.
- d) **Door frame preparations** - Frames to be provided with a 3 mm thick back plates on all jambs with provision for anchor bolt fixing to wall openings. All frames to have reinforcement pads for fixing of door closer, at appropriate location as per manufacturer's details.
- e) Frames to have factory finish-pre-punched cut outs to receive specific hardware and iron mongery.
- f) Frames to be provided with hinge plates 3 mm thick pre-drilled to receive hinges for screw mounted fixing. All cut outs including hinge plates, strike plates to have mortar guard covers from inside to prevent cement, dust ingress into cut outs at the time of grouting.
- g) Frames to have rubber shutter silencer on strike jambs for single shutter frames and on the head jambs for double shutter frames.
- h) **Finish**

Door frames to be suitably cleaned with solvents and etch primered for receiving primer and top coats.

Door frames to be primered in zinc phosphate stoving primer (35 microns DFT).

Door frames to be finished in thermo setting paint (35 microns DFT) of approved colour and make as specified by Client / Architect.

III. **Fire door shutter**

- a) **Material** - Fire door shutter to be manufactured from 1.25 mm (18 gauge) galvanized sheets conforming to latest IS : 277 Code or its Equivalent British Standard coating class zinc coating, mill phosphatized.

- b) **Fabrication** - Shutters to be press formed to 46 mm thick double skin hollow door with lock seam joints at stile edges. Shutters to have no visible screws or fasteners on either face. Internal reinforcement to be provided at top, bottom and stile edges for desired fire rating.
- c) **Door shutter cores** - Shutters to be provided with honeycomb paper core to be bounded to the inner faces of the shutter.
- d) **Door shutter preparations** - Shutters to be factory prepared with pre-punched cut outs and reinforcements to receive iron mongery as per final finish hardware schedule. The shutter should have an interlocking arrangement at this stile edges for flat surface on either side.

Shutters to have pre-drilled hinge plates with hinge guard covers. Shutters with locks to have concealed lock box with lock fixing brackets with pre-tapped holes.

- e) For shutter with door closer reinforcement pads to be provided at appropriate location as per manufacturer's design.

All iron mongery preparation to have adequate reinforcement for flushes fixing at site.

- f) **Vision panel for Fire rated door**

Vision panel to be provided with Borosilicate clear float glass of the thickness 6 mm for up to two hours fire rating. Glass to be fixed with clip on frames for square and rectangular vision panels and with spin turned rings for circular vision panels. Unless otherwise specified, standard sizes are 130 mm x 270 mm, 200 mm x 300 mm and 360 mm diameter.

- g) **Finish**

Shutters to be suitably cleaned with solvents and etch primed for receiving primer and top coats.

Shutters to be primed in zinc phosphate stoving primer (35 microns DFT).

Shutters to be finished in thermo setting paint (35 microns DFT) of approved colour and make as specified by Client / Architect.

11 **HARDWARE:**

All hardware fittings and fixtures shall be made with structural properties to sustain safety and withstand strains and stresses to which they are normally subjected to such as opening and closing, wind pressure etc. The fittings shall generally conform to relevant specifications.

They shall be made true, clear, and straight with sharply defined profiles and unless otherwise shown or specified with true smooth surfaces and edges, free from defects. Screw holes shall be counter sunk to suit the head of wood screws.

The metal shall be treated with finish as specified in the Schedule of quantities.

The hardware throughout shall be of approved manufacture or supplier well made and equal to in every respect to the samples to be deposited with the Architects. The Contractor may be required to produce and provide samples from many different sources before the IITM/Architects take decision and he should allow his rates for doing so.

Fittings generally shall be brass polished & lacquered/stainless steel unless otherwise specified and shall be suitable for their intended purpose. In any case, it will

have to be approved by IITM and Architects before the Contractor procures it at site of work.

Screws are to match the finish of the article to be fixed, and to be round or flat headed or counter sunk as required.

The contractor should cover up and protect the brass and bronze surfaces with thick grease or other suitable protective material, renew as necessary and subsequently clean off away on completion.

Aluminum and stainless steel shall be of approved manufacture and suitable for its particular application. Generally the surface of aluminum shall have an anodized finish and both shall comply with the samples approved by the IITM/Architects. All stainless steel sheets shall be 304 SS Japan or equivalent with gauge as specified but not thinner than 16 G.

All steel, brass, bronze, aluminum and stainless steel articles shall be subjected to a reasonable test for strength, if so, required by the IITM/Consultants at the Contractor's expense.

All brazing and welds are to be executed in a clean and smooth manner rubbed down and left in the flattest and tidiest way, particularly where exposed.

Chromium plating shall be in accordance with xx I.S. Standard or as per approved specification for normal outdoor conditions and shall be on a base material of copper or brass.

12. **BUTT HINGES:**

These shall be of stainless steel (14 gauge) of sizes specified in the schedule of quantities / drawing of approved make.

13. **DOOR CLOSER:**

These shall be of approved quality conforming to IS : 3562 as specified in the schedule of quantities.

14. **PAINTS:**

All material required for the works like Lime for lime wash, dry distemper, oil bound distemper, cement, primer, oil paint, enamel paint, flat oil paint, plastic emulsion paint, anti-corrosive primer, red lead, water proof cement paint shall be of specified and approved manufacturer, delivered to the site in the manufacturer's containers with the seals etc., unbroken and clearly marked with the manufacturer's name or trade mark with a description of the contents and colour shall conform to the latest Indian Standards for various paints. All materials are to be stored on the site of the work.

Spray painting with approved machines will be permitted only if written approval has been obtained from the IITM/Architects prior to painting. No spraying will be limited in the case of priming coats nor where the soiling of adjacent surfaces is likely to occur. The nozzle and pressure to be so operated as to give an even coating throughout to the satisfaction of the IITM/Architects. The paint used for spraying is to comply generally with the specification concerned and is to be specially prepared by the manufacturer for spraying. Thinning of paint made for brushing will not be allowed.

Wood preservative shall be Bison or other equal and approved impregnating wood preservative and all concealed wood work shall be treated with wood preservative.

All brushes, tools, pots, kettles etc. used in carrying out the work shall be clean and free from foreign matter and are to be thoroughly cleaned out before being used with a different type of class of materials.

All iron or steel surfaces shall be thoroughly scraped and rubbed with wire brushes and shall be entirely free from rust, mill scale etc. before applying the priming coat.

Surfaces of new wood work which to be painted are to be rubbed down, cleaned, down to the approval of the Architects.

Surfaces of previously painted woodwork which are to be cleaned down with soap and water, detergent solution or approved solvent to remove dirt, grease etc. While wet the surfaces shall be flatted down with a suitable abrasive and then rinsed down and allowed to dry. Minor areas of defective paint shall be removed by scraping back to a firm edge and the exposed surface touched in with primer as described and stopped with putty. Where wood work has been previously painted or polished and is to be newly polished, scrapping, burning off or rubbing down.

Surfaces of previously painted metal which shall be painted are to be cleaned down and flattened down as described in surfaces of any rust and loose scale shall be removed completely by chipping, scrapping and wire brushing back to the bare metal and touched in with primer as described.

15. **PAINTING OIL/ENAMEL / PLASTIC EMULSION ETC:**

Ready mixed oil paint, plastic emulsion paint, ready mixed synthetic enamel paint, Aluminium paint, etc., shall be brought in original containers and in sealed tins. If for any reason thinner is necessary the brand and quantity of thinner recommended by the manufacturer or as instructed by the IITM / Architects shall be used.

The surface shall be prepared as recommended by the manufacturers and as instructed by the IITM / Architects and cost of approved primer shall be applied. After 24 hours drying, approved of specified quality paint shall be applied evenly and smoothly. If required filler putty coating may be given to give smooth finish. Each coat shall be allowed to dry out thoroughly and then lightly rubbed down with sand paper and cleaned of dust before, the next coat is applied. Number of coats shall be as specified in the item and if however the finish of the surface is not uniform additional coats as required shall be applied to get good and uniform finish at no extra cost. After completion no hair marks from the brush or clogging of paint puddles in the corners of panel angles of mouldings shall be left on the work. The glass panes floor etc. shall be cleaned of stains.

When the final coat is applied, if directed, the surface shall be rolled with a roller or if directed it shall be stippled with a stippling brush.

16. **MELAMINE FINISHES:**

a) **GLOSSY:**

As specified in the Approved make of materials Natural Wood finish clear glossy is a premium quality melaminised coating specially formulated as a protective and decorative finishing clear coating for wood.

TECHNICAL DATA

Method of application : Brushing at 25-30 seconds by Ford Cup B4 at 30 degree C. Spraying at 20-25 seconds by ford Cup at 30 degree C.

Thinner recommended : Brushing - Thinner 106
Spraying - Thinner 124

Thinner intake : 20-25% by volume

Mixing ratio	: Base to hardener in 10:1 by volume
Drying Time	: 8 hours Surface dry - less than 30 minutes Hard dry - 16 - 20 hours Recoating period - Overnight
Finish	: 25 microns film thickness smooth and glossy
Flash point	: Above 14 degree C (57 degree F)

Sand the surface along the grains with Emery Paper No. 180 or with a suitable grade sand paper. Brush the surface free of loose dust. Fill the wood using Wood Filler of approved make. Remove excess filler immediately after applications. Allow 2-3 hours of drying, before sanding with Emery Paper No. 240 or 280. If desired, apply wood Stains by ragging after filling step or mix it in Natural Wood Finish of approved make up to 20% by volume and apply by spraying after Sealer Coat. In application by ragging allow a drying time of 5-10 minutes in between coats and 30-60 minutes before over coating with finish coats. Apply a coat of Natural Wood Finish Clear Sealer. After overnight drying, smooth sand with Emery Paper No. 320 and wipe the surface free of loose dust. Apply Natural Wood Finish Clear Glossy of approved make as follows. Ensure that the surface to be coated is free from loose matter. Natural Wood Finish Clear Glossy of approved make is a two component system consisting of base and hardener. These should be mixed in the recommended ratio. The two components should be mixed in a glass, plastic or enamelled container. Allow the mixture to stand for 30 minutes and then apply by brushing or spraying using the recommended thinner for consistency adjustment. The mixture of base and hardener should be used within 8 hours. To enhance gloss and decorative value Natural Wood Finish Clear Glossy of approved make can be buffed using suitable buffing mops but only after 48 hours of application.

b) MATT:

Natural Wood finish clear matt of approved make is a premium quality melaminised coating specially formulated as a protective and decorative finishing clear coating for wood.

TECHNICAL DATA

Method of application	: Brushing at 25-30 seconds by Ford Cup B4 at 30 degree C. Spraying at 20-25 seconds by ford Cup at 30 degree C.
Thinner recommended	: Brushing - Thinner 106 Spraying - Thinner 124
Thinner intake	: 20-25% by volume
Mixing ratio	: Base to hardener in 10:1 by volume
Drying Time	: 8 hours Surface dry - less than 30 minutes Hard dry - 16 - 20 hours Recoating period – Overnight
Finish	: 25 microns film thickness smooth and matt
Flash point	: Above 14 degree C (57 degree F)

Sand the surface along the grains with Emery Paper No. 180 or with a suitable grade sand paper. Brush the surface free of loose dust. Fill the wood using Wood Filler of approved make. Remove excess filler immediately after applications. Allow 2-3 hours of drying, before sanding with Emery Paper No. 240 or 280. If desired, apply Wood Stains of approved make by ragging after filling step or mix it in Natural Wood Finish

of approved make upto 20% by volume and apply by spraying after Sealer Coat. In application by ragging allow a drying time of 5-10 minutes in between coats and 30-60 minutes before over coating with finish coats. Apply a coat of Natural Wood Finish Clear Sealer of approved make. After overnight drying, smooth sand with Emery Paper No. 320 and wipe the surface free of loose dust. Apply Natural Wood Finish Clear matt of approved make as follows. Ensure that the surface to be coated is free from loose matter. Natural Wood Finish Clear Matt is approved make is a two component system consisting of base and hardener. These should be mixed in the recommended ratio. The two components should be mixed in a glass, plastic or enamelled container. Allow the mixture to stand for 30 minutes and then apply by brushing or spraying using the recommended thinner for consistency adjustment. The mixture of base and hardener should be used within 8 hours.

c) VARNISHING:

Surface shall be cleaned. All unevenness shall be rubbed down smooth with sand paper and well dusted. Knots is visible shall be covered with a preparation of redlead and Glue. Resinous or loose knots and gaps filled with seasoned timber pieces made level with rest of the surface. Holes and indentations on surface shall be filled with putty made of whiting and linseed oil. Surface shall be given a coat of filler made of 2.25 kg of whiting of 1.5 litre of methylated spirit. When it dries surface shall again be rubbed down perfectly smooth and sand paper and wiped clean.

After preparation or surface, two coats of clean boiled linseed oil shall be applied at sufficient interval of time. After the linseed oil has dried two coats of varnish obtained from approved manufacturer shall be applied at sufficient interval of time. If the surface fails to produce the required gloss an additional coat shall be applied without any extra cost.

17. LIGHT WEIGHT CALCIUM SILICATE GRID CEILINGS:

The true horizontal level imported false ceiling grid using hot dipped galvanized steel section exposed surface chemically cleaned capping pre-finished in baked polyester paint main tee size of 24 x 38 x 033mm at every 1200mm c/c maximum and rotary stitched cross `T` of size 24 x 30 x 0.284mm at every size of 600mm c/c max and 22 x 22 x 0457mm Wall angle all round the wall to form a grid of size 600mm x 600mm and suspending the grid using suitable support system at every 1200mm intervals at the main T and laying Light Weight Calcium Silicate Ceilings as per the manufactures specification. The calcium silicate boards shall confirm to BS 476 Part 4 1970

TECHNICAL DATA

- | | |
|--------------------------------|---------------------|
| a. Humidity Resistance | : 100% RH |
| b. Noise Reduction coefficient | : 0.10 to 0.50 |
| c. Fire Resistance | : Class O / Class 1 |
| d. Light Reflectance | : >85% |
| e. Lightweight | : 5 Kg/Sq.mt. |
| f. Size | : 600 x 600mm |

18. PLAIN ACOUSTIC PANEL CEILING CLIP IN SYSTEM

Acoustic Panel tile size: 600 x 600mm

Grid size: 600 x 600mm

Surface of the tile: Plain / perforated steel tiles (perforation 2.5 mm dia at 5.5 mm cc staggered)

The tile shall be made out of 0.6 mm thick polyester coil coated stove enamelled galvanized steel in approved colour with bevelled edges or 90 degree turned edges. coil coating to be 20 microns on exposed side and 5 microns primer on the back side. two sides of each tile to be raised and piped and stopped to ensure positive

engagement with spring clip in profile. Tiles shall be suspended by means of 0.5 mm galvanized steel clip in carrier profile top width of 24 mm bottom width of 10 mm and height of 29 mm. These carriers are fixed at 600 mm centre to centre spacing on the intermediate runner of top width of 19mm, bottom width of 27mm and a height of 40mm.

The intermediate runners shall be provided at every 1200mm centre to centre. Suspension profiles suspended from roof grid structure by GI suspension angle @1200mm c/c, ceiling brackets expansion fasteners etc; of suitable size as per requirements and hold wall angle of size not less than 19x19x0.5 mm thickness perimeter angle shall be polyester coil coated as per manufacturers' s specification. on clamp wall angle of size not less than 19x19x0.5 mm thickness perimeter angle shall be polyester coil coated as per manufacturers' specification.

19. **ACOUSTIC MINERAL FIBRE GRID FALSE CEILING:**

The true horizontal level false ceiling grid of Prelude Supraframe XL system Approved manufactured using hot dipped galvanized steel section, exposed surface chemically cleaned capping pre-finished in baked polyester paint wall angle of size 3000 x 19 x 19mm used in the periphery of the ceiling fixed to the wall partition R.C column band walls with the help of screws at 600 mm c/c. Main runner of size 3000 x 15 x 32mm suspended at a 1200 mm c/c by using 2mm dia. G.I wire hanger securely fixed to the structural soffit of RC slab by using 6mm nylon rawl plug at every 1200 mm (max) and 1200 mm long cross tee of size 15 x 32mm to be interlocked between in Main runner at 600 mm c/c (max) to form a grid of 1200 x 600 mm. 600 mm long cross tee of size 15 x 32mm fixed in between 1200 mm long cross tee for forming a grid of 600 x 600mm. Finally laying Approved manufactured 15mm thick MICROLOOK EDGE MINERAL FIBRE ACOUSTIC CEILING TILES approved manufactured having fire rating of 60 minutes as per BS 476/23 of 1987, Noise Reduction Co-efficient (NRC) of 0.50 to 0.55, sound attention of 34 dB, Thermal Conductivity K-0.052-0.057 W/m°K, weight of 3.5kg/m2 and Humidity Resistance of RH-95.

20. **METAL FLASE CEILING**

False ceiling with lay in tile system with G.I. Coil coated tiles - Boxer type VT -15 mm box type panels with **Non - Metallic finish** as Approved manufactured as per the details given below :

Frame Work: Suspension System consists of parametrical channel of 24mm x 24mm, which is fixed on to the wall and main tees of 24 x 38mm height and cross tees of 24mm x 38mm high forms a pattern of 600 x 600mm grid and further this grid work is supported by G.I Rod of 4mm and height adjustable steel clips or 'J' Bolt system.

Tiles : G.I Coil coated false ceiling perforated / Plain tile of size 600mm x 600mm 35H - non combustible fire proof - class "MO", humidity proof, Aseptic, fabricated from imported enamelled finish aluminium of Grade 3003(Al.Mn) and having a thickness of 0.50mm, painted by coil coating process with one coat of primer, two coats of polyester paint and one coat of primer at the back of the aluminium boxer type panel and this panel shall facilitate for fabricating in different solutions/ models, such as the panels drop down by 35mm, the panels goes up by 35mm etc complete, as directed. Rate shall include for providing the tile covered with non woven "SOUNDTEX" fabric inside of the panels as enhancing the acoustic properties etc complete as directed.

All framework & accessories, spring steel clips, hanger, tee Runner, Ultra Look Tee. Runner and edge trim, anchor fasteners to fix suspension rod etc.complete as directed. Rate shall include to make suitable provisions for providing openings for light fittings, diffusers and cut-outs in any shape & profile , all materials, scaffolding, tools and plants, work at all levels etc.complete and as directed.

21. **CARPET**

Approved make 100% Optimum SD / Wear On Nylon Tufted, Textured Loop Pile carpet tiles of 20 oz/ sq.yd of size 609x609mm permanent static control solution dyed, pile

height to a maximum of 0.101 inches with synthetic non-woven Glasbac backing of Vinyl cushion with glass reinforcement / PVC free underscore cushion including colourfastness > or = 4 after 100 hours, moth proof, stain resistant etc. complete, over existing flooring as per Manufacturer's specification. The rate shall be inclusive of the PVC free under score cushion backing for entire area to be covered by carpet. (Note: Volatile organic compound free adhesive of approved make shall be used for laying the carpet.)

22. **ANTI - STATIC VINYL FLOORING**

PVC based vinyl Tiles and Rolls / Tiles set with adhesive on to a concrete or masonry base shall conform to latest IS:3462 or its Equivalent British Standard.

Materials

a) **Tiles**

The tiles should be calendared laminated solid resilient unbreakable and homogeneous flexible quartz reinforced PVC Vinyl tiles composed of 100% vinyl from face to back with alkaline resisting colour pigments and other plastic compounds in different shades and designs and in different sizes and thickness and shall conform to IS : 3462 or its Equivalent British Standard. Unless otherwise mentioned the tiles shall be squares of approved dimensions. Tiles shall have properties of a high wear resistance and resilience, designed to withstand high traffic and abrasion. The face of these tiles shall be free from porosity, blisters, cracks, embedded foreign matter, or other physical defects, which affect the appearance or impair the service ability of the tiles. All edges shall be cut true and square. The colour shall be non-fading and uniform in appearance, insoluble in water and resistant to alkalies cleaning agents and usual floor polishes.

Cove base shall be extruded PVC (100% putty) with moulded top set cove colour and the height of the base shall be as indicated on the drawings, scheduling and / or as approved by Client / Architect.

Samples of tile and cove base shall be submitted to the Client / Architect along with test certificate for approval.

b) **Rolls**

It should be calendared laminated solid resilient unbreakable and homogeneous quartz reinforced flexible PVC Vinyl Flooring in different shades and designs and in different width and thickness with inherent characteristics of wear resistance, dimensional stability, elegance etc and shall conform to IS : 3462 or its Equivalent British Standard.

Each packet of tile or roll shall be legibly and indelibly marked with the manufacturer's trade mark, thickness, size batch number and date of manufacture.

Tiles shall be delivered securely packed and store in clean, dry, well ventilated places.

c) **Adhesive**

Synthetic rubber based adhesive to be used for fixing tiles shall be Dunlop S-758 or Fevicol SR-998 or equivalent or as recommended by the manufacturer. The adhesive shall have a short drying time and long life. Each container shall show the self life, date of manufacture and over age container shall be immediately removed from the site.

d) **Sub-floor**

The surface of sub-floor to receive this finish shall be firm, hard, smooth even textured, without undulations and other deficiencies.

The surface shall be thoroughly cleaned. All loose dust particles shall be removed. Oil grit and grease, if any shall be removed completely by the use of detergent and sub-floor should be carefully dried prior to laying.

e) **Laying**

The tiles shall be stored in the room to be tiled for at least 24 hours to bring them to the same temperature as the room. In air conditioning spaces, the air conditioning shall be fully operational before the tiling is laid.

The adhesive shall be applied uniformly at the rate recommended by the Manufacturer to the fully dry surface in the desired thickness. The adhesive shall also be applied to the backs and edges of the tiles and surface shall be allowed to "touch dry" before fixing. The tiles shall then be placed neatly on the surface exactly to the approved pattern and set firmly with a suitable tool. After it has adhered, vinyl tiles shall be rolled in two directions with a roller weighing 45 Kg. or more. If the edges tend to curl up, weights are to be applied to keep the edges down. Special care shall be taken to avoid the formation of air pockets under the tiles. The joints shall be very fine. Any adhesive squeezed out through the joints shall be removed and cleaned immediately.

Rolls are to be stacked on the sub-floor following the grain directions of the rolls.

Joint welding can be provided where ever the PVC Rolls are installed in order to avoid dust accumulation leakage of water and prevention from wear and tear in joints. In this, a PVC cord is put into the joint after making grooves with machine and is welded with hot thermo welding machine.

Adhesives and other materials used must have resistance against the corrosive chemicals. Any defective surface must be capable of easy replacement. Joints shall be finished smooth and will not be a source of accumulation of dust, pool of liquid etc.

Tile shall be fitted to and around all permanent fixtures. Borders shall be fitted accurately. Exposed edges or tile at door sills etc. shall be protected with metal moulding.

Cove base shall be firmly cemented to the walls and accurately scribed to trim and plinth.

f) **Finishing**

Any adhesive marks on the surface shall be removed by wiping with a soft cloth soaked in solvent. The surface shall be cleaned with soft soap, dried and then polished with approved type of acrylic base emulsion polish using a soft cloth. A time interval of at least 60 minutes must be given between the applications of each coat of polish. After the polishing is done duration of eight hours must be provided for the adhesive and polish to set before the area is put into regular use.

Protection – The surface shall be protected by covering with a plastic sheet over which, Gypsum powder / POP shall be provided. The same shall be removed before handing over the area for use of work.

23. ACCESS FLOOR SYSTEMS

System: Access floor system to be installed shall provide a maximum finished floor height of 600mm from the existing floor level. The system shall provide for suitable pedestal and under-structure designed to withstand various static loads and rolling loads subjected to it in an office / server / DCS / panel / rack area. The entire Access floor system shall provide for adequate fire resistance, acoustic barrier and air leakage resistance.

Panels: Panels shall be made from steel. The bottom of the panel shall be embossed in 49 hemispherical shape of 60mm dia and 12 reverse conical of 25mm dia to give strength and flexural rigidity. The top sheet shall be plain and resistant welded at various locations after the top and bottom sheets have been degreased and phosphated. The

above hollow panel shall have an infill of light weight cementations material. The entire panel shall be coated with epoxy coating on the exposed surface. Panels shall remain flat through and stable unaffected by humidity or fluctuation in temperature throughout its normal working life.

Panels shall provide for impact resistance top surfaces minimal deflection, corrosion resistance properties and shall not be combustible or aid surface spread of flame. Panels shall be insulated against heat and noise transfer. Panels shall be 600 x 600mm fully interchangeable with each other within the range of a specified layout. Panels shall rest on the grid formed by the stringers which are bolted on to the pedestals. Panels shall be finished with anti-static Laminate of colour and PVC beading / trimming along the edges.

Pedestals: Pedestal installed to support the panel shall be suitable to achieve a finished floor height of 75 to 600mm. Pedestal design shall confirm speedy assembly and removal for relocation and maintenance. Pedestal base to be permanently secured to position on the sub floor. Pedestal assembly shall provide for easy adjustment of levelling and accurately align panels to ensure lateral restrain. Pedestals shall support an axial load of 2000 Kgs, without permanent deflection and an ultimate load of 3500 Kgs. Pedestal head shall be designed to avoid any rattle or squeaks

Pedestal Assembly: Consisting of 100 x 100 x 2mm thick galvanized epoxy polyester coated MS Base plate die-pressed orbit ally riveted to a 21mm. O.D. 2.5mm thick epoxy coated MS pipe to engage the pedestal head assembly. The pedestal head assembly consists of an embossed steel plate having 4 holes with ¼ th tapping for fastening and locating of tile; orbit ally riveted to a corresponding threaded stud 16mmdia. (O.D), length 100mm which is designed to engage the pedestal base assembly. The assembly shall provide a range of height adjustment up to 25mm, with the help of check nuts.

Under structure: Under structure system consists of stringers of size 575 x 30x 20 x 1.5mm to form a grid of 600 x 600mm. These stringers are locked into the pedestal head and run both ways. The US system shall provide adequate solid, rigid and quiet support for access floor panels. The US system shall provide a minimum clear, uninterrupted height of 550 mm between the bottom of the floor and bottom of the access floor for electrical conduiting and wiring.

Stringers: Stringer system is all steel construction, rectangular channels 30 x 20 x 1.6mm thick with pre-punched counter sunk holes at both ends for securing the stringers onto the pedestal head ensuring maximum lateral stability in all directions. The grid formed by the pedestal and stringer assembly shall receive the floor panel.

Lifting hook - 2 Nos shall be given to IITM free of cost and necessary cutting for supply/return Air Grills and for Grommet of required size, of for electrical supply wires wastages, lead & lift, grouting the system with anchor fastener, removing all debris from the premises etc. complete, as directed shall be in the scope of the work.

**WORKMANSHIP
&
QUALITY STANDARDS**

LIST OF I.S. CODE FOR THE REFERENCE

Materials used shall conform to appropriate standards specified by the Indian standards institution/Bureau of Indian standards and unless other wise specified, these standards will form a part of these specifications in particular.

AEPL herein clarifies that the IS codes mentioned in the technical specifications & in the list given below are for reference only.

The following or latest standards should be referred to-

AGGREGATES

IS :	383-1970	Coarse and fine aggregate from natural sources for concrete
IS :	515-1959	natural and manufactured aggregates for use in mass concrete
IS ;	1607-1960	Sand for plaster
IS :	2386	Methods of test for aggregate for concrete.
	Part-I-1963	Particle size and shape.
	Part-II-1963	Estimation of deleterious materials and organic impurities.
	Part-III-1963	Specific gravity, density, voids, absorption and bulking.
	Part-IV-1963	Mechanical properties.
	Part-V-1963	Soundness.
	Part-VI-1963	Measuring mortar making properties of fine aggregates.
	Part-VII-1963	Alkali aggregate reactivity.
	Part-VIII-1963	Pétrographique examinateur.

CEMENT :

IS :	8112-1976	High strength ordinary Portland cement.
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CONCRETE :

IS :	516-1959	Methods of tests for strength of concrete.
IS :	1199-1959	Methods of sampling and analysis of concrete.

REINFORCEMENT CONCRETE :

IS :	456-1978	Code of practice for plain and reinforcement concrete for general building Construction.
IS :	432	Mild steel and medium tensile steel bars and
IS :	1786-1985	High strength Deformed steel bars and wires for concrete reinforcement.

BRICK MASONRY

IS :	1077-1076	Common burnt clay building bricks.
IS :	2212-1962	Code for practice of brick work.

DOORS & WINDOWS

IS :	1003	Timber panelled and glazed shutters.
	Part-I-1977	Doors shutters.
	Part-II-1966	Windows and ventilators and shut.
IS:	1948-1961	Aluminium doors, windows and ventilators.
IS:	2191	Wooden flush door shutters (Cellular and hollow core type).
	Part-I-1973	Plywood face panels.
IS:	2202 Part-I-1991	Wooden flush door BWP type (solid core).

FLOOR AND FLOOR FINISHING

IS :	777-1970	Glazed Earthenware tiles.
IS :	1443-1972	Code of practice for laying and finishing of cement concrete (Flooring tiles)
IS :	3365-1956	Floor polishing machines.

WATER SUPPLY PIPES AND DRAINAGE

- IS : 651-1971 Specification for salt glazed stoneware pipes and fittings.
- IS : 778-1971 Gunmetal gate, globe and check valves for general purpose.
- IS : 780-1969 Sluice valves for water work purpose.
- IS : 781-1977 Cast copper alloy screw-down bib taps and stop valves for water service
- IS : 172-1971 Code of basic requirements for water supply, drainage and sanitation.
- IS : 1726- Cast iron manhole covers and frames.
- Part-I-1974 General requirements.
- Part-IV-1974 Specific requirements for MD circular type.
- Part-V-1974 Specific requirements for MD rectangular type
- Part-VI-1974 Specific requirements for LD rectangular type
- Sec 1 : Single seal
- Sec 2 : Double seal
- Part-VII-1974 Specific requirements for LD square type
- Sec 1 : Single seal
- Sec 2 : Double seal
- IS : 1742-1972 Code of practice for doubling drainage.
- IS : 2065-1972 Code of practice for water supply in buildings.
- IS : 2556- Vitreous sanitary appliances (Vitreous Chin)
- Part-I-1974 General requirements.
- Part-II-1973 Specific requirements of wash down water closets.
- Part-III-1972 Specific requirements of squatting pans.
- Part-IV-1974 Specific requirements of wash basins.
- Part-VIII-XV Wash down water-closets, bibs foot rests, shower-rose, foot traps for squatting pans, integrated squatting pans. Universal water closets.
- IS : 2963-1964 Non-ferrous waste fittings for wash basins and sinks.
- IS : 311-1965 Waste plug and its accessories for sinks and wash basins.
- IS : 4127-1967 Code of practice for laying of glazed stoneware pipes.
- IS : 5531 Specification of cast iron special for asbestos cement for water, gas and Sewage

STRUCTURAL STEEL:

- IS: 2062-1992 Steel for general structural purpose.

MISCELLANEOUS :

- IS : 1020-1963 Conversion tables for ordinary use.

APPROVED MAKES

LIST OF APPROVED MAKES/SUPPLIERS		
SL NO	MATERIALS	APPROVED MANUFACTURER/SUPPLIER
1	Fire retardant paint/primer	Firetard industrial grade of Noble/Viper/Approved equivalent
2	Marine Ply wood	Anchor-72/Multiply/Century Greenply / Uniply
3	Laminate	Formica / Decolam/ Greenlam / Uro
4	Veneer	Jacsons /Anchor/Durian/Century/Decowood/Uro
5	Wood Preservative	STP Pentaphene pale /P C I/Wood guard / Termisil
6	Gypsum Board	Gypsum India/Approved equivalent
7	Tempered/Toughened Glass	Insotherm/Sejal Glass/Gurian Glass/Goldplus/Glaverbal/approved equivalent
8	Float Glass	Modigaurd/Saint Goban/Emirates / Hindustan Pilkington
9	Adhesive	Fevicol, Araldite, Pidilite Fevimate (TL)
10	Door Closer	Dorma /approved equivalent
11	Floor Spring	Dorma/approved equivalent
12	Cup board Locks	Godrej /CIEF/Vijayan/Efficient Gadget
13	Cylindrical Lock	Europa, Godrej, Acme/Neki
14	Door Handles	Dorma/D-Line/approved equivalent -
15	Screws	GKW Nettlefold/Janatha/App. Equivalent
16	Glass/Mirrors	Modigaurd,Saintgoban/Thaiwan/Float glass India
17	Ceramic Tiles	Nitco / Kajaria/ MCL/Johnson & Johnson
18	Hinges	Dorma/App. Equivalent(Heavy Duty)
19	Telescopic sliding drawer channels	Efficient Gadget, Earl Bihari ,Jyoti,Shalimar/Hettich
20	Carpet	Transasia/Shalimar/Jupitar/Milliken /

		Interface / Shaw
21	Vertical Blinds	Hounter douglas or app. equivalent
22	Sun Control Film	Garware, Birla 3M
23	Polishes	ICI, Asian, Goodlas Nerolac/berger
24	False Ceiling	
25	G.I Powder coated false ceiling	Hunter Douglas or Approved equivalent
26	Gypsum Board	Gypsum India or Approved equivalent
27	Cement	L&T, Ambuja,ACC
28	White cement	Birla,JK
29	Vitrified Porcelain tiles	MCL,Johnson,Nitco or approved equivalent
30	Water Proofing Compound	MC Bavucom, Roffe Chemicals, Pidilite
31	G.I. Pipe	TATA /Zenith or App Equivalent
32	SS sink	Nirali or App Equivalent
33	Soft Board	Jolly Board or App Equivalent
34	Paints	ICI/Asian/Goodlac Nerolac/Jenson & Nicolson
35	Fabric Soft board	Seasons/Jagdeesh fabric/Classic Fabric or App Equivalent
36	Curtains	Raymonds / Sham-Ahuja / Eden
37	Panic Device	Dorma / Ingersoll -Rand
38	Fabric protection coating for upholstery	Scotchgard of Birla 3 M Ltd
	Foams in Chairs / Sofas	MM Foam / Foam products/ Latex
39	Rolling Shutter	Indo Germa / Dyna
40	White board	White mark/Altop/Alko-sign.
41	Texture paint	Orient, Sterling
42	Adhesive for Tiles	Roff, PAL, Pidilite,BAL
43	Multipurpose lock	Efficient Gadgets, Jyoti, Godrej
44	Storage Locks/Handles/Hinges etc	Efficient gadget/Argent/Jyothi/CIEF

**BOQ FOR INTERIOR WORKS OF MULTI TRAINING FACILITY BUILDING AT
INDIAN INSTITUTE OF TROPICAL METROLOGY, PUNE**

SNO	DESCRIPTION	QTY	UNIT	RATE(Rs.)	AMOUNT(Rs.)
	(False ceiling)				
1	Providing & fixing mineral fiber ceiling prima fine fissured or approved type with Tegular edge of Armstrong make with normal powder coated grid , as per manufacturers specification, including cut-outs for light fixtures / AC grills, diffusers & necessary framework / support required from the ceiling.	62	Sqm		
2	Providing & fixing seamless ceiling with gypboard of 12.5mm thk.fixed to the underside of the suspended grid formed of GI perimeter channel of size 20x27x30mm (MF 6A) fixed along the wall by wooden screws and metal expansion rawl plugs. The GI intermediate channel of size 45x15x0.90 mm (MF7) shall be fixed to the suspended strap hanger /GI ceiling angle at intervals not more than 1220mm. The suspended GI ceiling angle / strap hanger is to be connected with GI soffit cleat of size 37x27x25x1.6mm and it should be fixed on the roof slab/beam by using metal expansion fasteners (Wt.Type) of 12.5mm dia to a length of 35mm with 6mm dia.bolt / screw at top ends .The GI ceiling section of size 80x26x0.5mm (MF5) is to be provided across the intermediate channel at intervals not more than 600mm centers at bottom and the same shall be fixed by GI connection clips 2.64mm dia at the intersection points. The ends of ceiling section (MF5) channel by adopting an overlap length of minimum 150mm connected with intermediate channel shall be fixed to perimeter channel in insertion.	150	Sqm		
3	Acoustic Falseceiling				
	Ecophon SOMBRA A or equi. with 20 mm natural square edge ,easily demountable tile , manufactured from High density glass wool ,with the visible surface is a matt black batch painted glass tissue and the back of the tile should be covered with glass tissue . The glass wool core of the tiles should be tested and classified as non combustible according to prEN ISO 1182 . The system should have Sound Absorption NRC value of 0.9(according to EN ISO 11654) . Tiles should withstand a permanent ambient RH upto 95% at 30 * C without sagging , warping or delaminating (ISO 4611) . The light reflectance of the tiles should not be more than 3- 4 %	425	Sqm		
	Ecophon ADVANTAGE E or equi.with 15 mm tegular edge ,easily demountable tile , manufactured from High density glass wool ,with the visible surface be batch painted glass tissue in white and the back of the tile should be covered with glass tissue . The glass wool core of the tiles should be tested and classified as non combustible according to prEN ISO 1182 . The system should have Sound Absorption NRC value of 0.9 (according to EN ISO 11654). Tiles should withstand a permanent ambient RH upto 95% at 30 * C without sagging , warping or delaminating(ISO 4611) . The light reflectance of the tiles should not be less than 83%				

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INDIAN INSTITUTE OF TROPICAL METROLOGY, PUNE**

SNO	DESCRIPTION	QTY	UNIT	RATE(Rs.)	AMOUNT(Rs.)
4	Providing and fixing aluminium plain ceiling panel tile of approved make at a desired height above floor level comprising of 600 x 600 mm plain metal tiles manufactured out of 0.7 mm thick polyester protective coated in approved colour with beveled edges or 90 degree turned edges. Polyester coating to be 20 microns on exposed side and 5 microns primer on back side. Suspension profiles suspended from roof grid structure by GI suspension angle @ 1200 mm C/C , ceiling brackets expansion fasteners etc., of suitable size as per requirements and hold on clamp wall angle of size not less than 19 x 19 x 0.50 mm thickness perimeter angle to be polyester coil coated to required colour. The ceiling tile module will be 600 x 600 mm.as per manufacturer's instructions, by approved installer, all scaffolding, all support accessories as approved of GI & Al. sections, making cut-outs to design for lighting fixtures and other installations, cleaning etc.complete.	100	Sqm		
5	Providing and fixing suspended gypsum board 12.5mm thick M/s Saint Gobain 'Gyptone Quattro' or equivalent (Confirming to IS 2095) False ceiling (straight,vertical,curved) with board density of 8 KG/m2 and NRC upto 0.75 having Class O(Euro Class B) fire rating and light reflectance of 75%, suspended with grid consisting of perimeter channel, main runners at 1200mm c/c, intermediate channels at 600mm c/c, knurled wedged ceiling sections, connecting clips, hangers etc all section to be galvanised & not less than 0.55mm thick and to be fixed with 25mm long self-tapping dry screws at avg. 230mm c/c finishing the whole, smooth with one coat of primer, two coats of putty, three coats of acrylic emulsion paint, Boards to have back lining of "non-woven micron wadding" AW 10 x 50 mm with density of 20 Kg/m3 meeting Fire class BS 476, work to include making and finishing of recesses for lighting fixture,	425	Sqm		
	(Flooring)				
6	Clear melamine Polished good grade solid TW Parquet flooring 15mm Thk., avg. Size 75X150mm planks, TW as approved without knots, cusps, shakes etc. laid on foam/PVC matt as approved. Item to be inclusive of	40	Sqm		
7	Providing and executing coloured Marble Terrazo flooring, in approved mix of good grade white cement,fine sand corresponding to approved sieve size and avg. 12 mm size broken coloured marble chips, wet poured, laid and cured in ready flooring troughs with expansion/filler/separator joint avg. 8 mm wide of SS 306 grade 8 flats, all as perapproved specimen min. 4sq.mt. spread a sapproved by the Architect/engineer-in-charge. Item to be inclusive of laying, with necessary avg. 15 mm expansion gap on 2 adjoining wall sides, neat butt	10	Sqm		

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SNO	DESCRIPTION	QTY	UNIT	RATE(Rs.)	AMOUNT(Rs.)
8	Providing and laying avg. 300 x 300 x 2 mm thick unless otherwise specified the flooring an approved colour (to be specified by the Engineer/Department's representative). Vinyl floor tiles or sheets shall be laid with an adhesive recommended by the manufacturer. All the preparation and work in connection with the laying and fixing of the specified flooring and vinyl skirtings shall be done and to the satisfaction of the Engineer/Department's representative The flooring shall, where necessary, be cut and neatly fitted against adjoining floors, thresholds, etc. including preparation and cleaning of base surface, removal of laitance, rubbing, cleaning etc. all complete as per Particular	75	Sqm		
9	Supplying and laying precast concrete hydraulically pressed uniregular machine made interlocking paving tiles of approved design - avg. 8 mm thick (To give a compressive strength of not less than 50 N/Sqm or 500 Kg/Sqm) transportation of the tiles to the site preparation of surface including supplying and filling with dry river sand to 50 mm thick, levelling and compacting with plate vibrator and laying of the paving tiles with sand binding and final compaction with plate vibrator of 3 tonne capacity finishing the surface including cutting of tiles at the peripheral edges including all labour and materials etc. complete, as directed. Tiles of colour and pattern as approved.	15.00	Sqm		
10	Providing and laying "Extrawave" rolled carpet "JR1000-04 Jute medium boucle natural " 5 mm thick of approved finish in specified area over a plain cement tile surface, such as to make the complete floor, in one uniform layer including laying and fixing edge and transition accessories, preparing the hard underfloor with cement tiles laid in c.m 1:6, neat cement jointed, all curing, laying the tiled carpet treating the carpet surface with appropriate "Scotch guard" protection, keeping the surface protected until handover, preparing the mock-up for approval, cleaning etc complete.	210	Sqm		
11	Providing and laying washable woven synthetic fibre carpet, avg. 4-5 mm thick of approved pattern & shade, of carpet roll width range 4-5 mt. & length range 15-25 mt. in specified area over smooth cement surface, such as to make the complete floor, in one uniform layer including laying and fixing edge and transition accessories including edge and threshold trims as approved, preparing the hard underfloor with smooth cement screed laid in C.M. 1:6, neat cement jointed, all curing, laying the carpet, keeping the surface protected until handover, preparing the mock-up for approval and ensuring same approved from Architect/Engineer-in-charge, item installed cleaned complete. Carpet fibre to be synthetic of DUPONT SORONA type and grade, pile 1400/4 ply air twisted, weft Bonoweft 850 & 440 tex, pile weight avg. 1500 gm/sqm, weave type flat weave jacquard. backing of Acrylic based glue/ATH.	210	Sqm		

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SNO	DESCRIPTION	QTY	UNIT	RATE(Rs.)	AMOUNT(Rs.)
12	Providing and laying in panels not more than 20 sqm. in plan granolithic flooring with cement concrete 1:1.5:3 by using coarse graded aggregate of 6 to 12 mm size laid monolithic with floor concrete and finished smooth with power trowel including preparation of concrete surface and form work. The screed shall be laid for effective separation of panels not exceeding 20 sqm. in plan etc. complete as per Specifications and as directed. Unevenness in floor finish shall not exceed +2mm in one square metre area. Rate to include lead , lift at all levels, pumping, placing, necessary formwork, curing etc., complete	300	Sqm		
13	Providing and laying in panels not more than 20 sqm. in plan granolithic flooring with cement concrete 1:1.5:3 by using coarse graded aggregate of 6 to 12 mm size laid monolithic with floor concrete and finished smooth with power trowel including preparation of concrete surface and form work & setting prepolished avg. 5 mm thk. brass inlays as per design drawing. The screed shall be laid for effective separation of panels not exceeding 20 sqm. in plan etc. complete as per Specifications and as directed. Unevenness in floor finish shall not exceed +2mm in one square metre area. Rate to include lead , lift at all levels, pumping, placing, necessary formwork, curing etc., complete	10	Sqm		
14	Providing, fixing and polishing laminated & TW edge lipped MDF board panelling as shown in architectural drawing, (premium Grade) board max. 16 mm thick with 75 x 50 mm Aluminium Channel / GI cold rolled section frame -work behind as per manufacturers specifications, fixing glass wool slab of 75mm thick with 48 kg/m ³ density, polyethylene wrapped, all scaffolding , making the cutouts for HVAC grills/diffusers/service access doors, electrical appliances etc. wherever necessary, cleaning, protecting and preparing the mock up for approval, protecting the surface till the handover of the premises, melamine matt polishing to lipping with approved stain etc. complete. (1 mm thick laminate as per approval). Panel board to be with avg. 4 mm thk. Acoustic felt as approved applied on backside with recommended adhesive: item installed cleaned complete.	175	Sqm		
15	Providing, fixing and installing Fire rated Fabric as approved over a PVC composite backer Clipper grip support system screwed onto wall as per detail drawings. The fabric to be stretched with mechanical tools and tackle and clipped into backer appropriately to ensure that no creases, slackening occurs. Item to be inclusive of avg. 12 sq.mt. mock-up for Architect's approval, all tools and tackle, material and lift etc. finished complete. Avg. 15 mm thk. Acoustic synth held within GI chicken mesh size as approved applied on backside with recommended adhesive; item installed cleaned complete with avg. 12 mm air-gap maintained from the wall.	175	Sqm		

**BOQ FOR INTERIOR WORKS OF MULTI TRAINING FACILITY BUILDING AT
INDIAN INSTITUTE OF TROPICAL METROLOGY, PUNE**

SNO	DESCRIPTION	QTY	UNIT	RATE(Rs.)	AMOUNT(Rs.)
	Furniture				
	Rectangular Table				
16	Providing, carpentering and fixing on location fully finished table/desk-top made of select laminate over 19 thk avg. BWR grade plyboard, Vertical sides and supports of select laminate over avg. 25 thk. Ply-skinned blockboard, TW lipped at edges with all specified salwood hidden joining cleats & details as per Execution drawings, cleaned finished complete with all application of adhesives, tinted melamine polish in 2 coats as approved, complete.	1.20	Sqm		
	1. Hardware- all 'butler/brushed steel' finish SS min. avg. 306 grade of DORMA or HAFELE or equi. Make as per Execution dwg. & specifications.				
	2 Lipping- Good grade TW,tinted melaminie Polishedin two coats				
	Circular Center Table				
17	Providing and fixing in position circular table of 900 diameter with 12 mm thick toughened clear float glass top with edge bevel as per design drawing. The glass to be fixed to chrome finished supporting frame as per design with designed joinery. The vertical support should be of 50 mm and chrome plated pipe with 600 mm dia. chrome plated base plate for support. the cost include all necessary hardware, preparation of mock up, etc. complete.	1.00	No		
	1. Hardware- all 'butler/brushed steel' finish SS min. avg. 306 grade of DORMA or HAFELE or equi. Make as per Execution dwg. & specifications.				
	2 Lipping- Good grade TW,tinted melaminie Polishedin two coats				
	Dressing Table with Mirror				
18	Providing, carpentering and fixing on location fully finished table/desk-top made of select laminate over 19 thk avg. BWR grade plyboard, Vertical sides and supports of select laminate over avg. 25 thk. Ply-skinned blockboard, TW lipped at edges with all specified salwood hidden joining cleats & details as per Execution drawings, cleaned finished complete with all application of adhesives, tinted melamine polish in 2 coats as approved, complete.	6.00	Sqm		
	1. Hardware- all 'butler/brushed steel' finish SS min. avg. 306 grade of DORMA or HAFELE or equi. Make as per Execution dwg. & specifications.				
	2 Lipping- Good grade TW,tinted melaminie Polishedin two coats				
	3 Mirror- Avg 8mm thk float glass mirror of SAINTGOBIN or ASAHI or equivalent brand mounted on BWR grade 12mm thk ply board backer fixed carpentered desk as per detailed execution drawing & fixed with SS stud screws as approved				

**BOQ FOR INTERIOR WORKS OF MULTI TRAINING FACILITY BUILDING AT
INDIAN INSTITUTE OF TROPICAL METROLOGY, PUNE**

SNO	DESCRIPTION	QTY	UNIT	RATE(Rs.)	AMOUNT(Rs.)
	Activity Table				
19	Providing & fixing in position table of width 600 mm ,height 750 mm and length ,with construction members using block board, MDF and Plywood members joined with TW of size and quantity as per drawing,1.5mm thk select laminate pasted over & melamine polish only to all unexposed surfaces. The cost of the table includes all necessary hardware, preparation of mock ups etc. complete. The size/model/ design/make should be approved from consultant and client before supply.	10.50	Sqm		
	Low Height Storage				
20	Providing and constructing low height storage of width 450mm, with 25/38 mm block board member of approved make along with necessary MDF and plywood member joined with TW frame as per drawing. All external surfaces to be finished in approved laminate, with balancing laminate on the interior surface. All exposed edges to be finished in approved PVC edge binding. Rate to include hardware such as approved locks, auto closing hinges for shutters, approved handles, door stop, tower bolt, etc. complete.The size/model/ design/make should be approved from consultant and client before supply.	1.30	Sqm		
	Admin & Security counter table				
21	Providing & fixing in position table of width 600 mm ,height 750 mm and length ,with construction members using block board, MDF and Plywood members joined with TW of size and quantity as per drawing,1.5mm thk select laminate pasted over & melamine polish only to all unexposed surfaces. The cost of the table includes all necessary hardware, preparation of mock ups etc. complete. The size/model/ design/make should be approved from consultant and client before supply.	3.60	Sqm		
	Display Board				
22	Providing & fixing in position table of width 600 mm ,height 750 mm and length ,with construction members using block board, MDF and Plywood members joined with TW of size and quantity as per drawing,1.5mm thk select laminate pasted over & melamine polish only to all unexposed surfaces. The cost of the table includes all necessary hardware, preparation of mock ups etc. complete. The size/model/ design/make should be approved from consultant and client before supply.	2.40	Sqm		
	Glazed Shutters :- Avg 10mm thk clear float toughened & edge polished shutters on SS 'Butter' finished patch fittings & patch hinges as per detail drawings.				

**BOQ FOR INTERIOR WORKS OF MULTI TRAINING FACILITY BUILDING AT
INDIAN INSTITUTE OF TROPICAL METROLOGY, PUNE**

SNO	DESCRIPTION	QTY	UNIT	RATE(Rs.)	AMOUNT(Rs.)
	Sofa - Curve shape				
23	Providing & supplying as per drawing made up of TW Frame of size 38X75 mm for Seating & Back, seating should have the horizontal TW support of size 38X75mm at regular intervals, the frame should have 12mm thk MDF on all sides with necessary hardware fasteners. The sofa should have Foam of approved quality & make all around with fabric of approved texture & colour. Seat to be 12 thk. BWP Grade, anti-termite treated plyboard over TW Battens as per design, TW perforated 12mm panels should be provided for sides & back with melamine polish of approved quality & shade on it, as per design drawing. The base should have nylon struts, the cost includes all necessary fittings & fixtures, necessary hardware etc. complete.(Density of foam=65Kg/m3) Inside dimensions=620 X 4400mm.The size is as per drawing.The upholstery material to be got approved from the client and consultant before execution.	1	No		
	Sofa - Single seater				
24	Providing & supplying Sofa Chairs as per drawing made up of TW Frame of size 38X75 mm for Seating & Back, seating should have the horizontal TW support of size 38 X 75mm at regular intervals, the frame should have 12mm thk MDF on all sides with necessary hardware fasteners. The Chair should have Foam of approved quality & make all around with fabric of approved texture & colour. Seat to be 12 thk. BWP Grade, anti-termite treated plyboard over TW Battens as per design, TW perforated 12mm panels should be provided for sides & back with melamine polish of approved quality & shade on it. the base should have nylon struts, the cost includes all necessary fittings & fixtures, with necessary hardware etc. complete.(Density of foam=65Kg/m3) Inside dimensions=520X620mm.The size is as per drawing.The upholstery material to be got approved from the client and consultant before execution.	3	Nos		
	Sofa - Three seater				
25	Providing & supplying Three Seater Sofa as per drawing made up of TW Frame of size 38X75 mm for Seating & Back, seating should have the horizontal TW support of size 38X75mm at regular intervals, the frame should have 12mm thk MDF on all sides with necessary hardware fasteners. The sofa should have Foam of approved quality & make all around with fabric of approved texture & colour. Seat to be 12 thk. BWP Grade, anti-termite treated plyboard over TW Battens as per design, TW perforated 12mm panels should be provided for sides & back with melamine polish of approved quality & shade on it, as per design drawing. The base should have nylon struts, the cost includes all necessary fittings & fixtures, necessary hardware etc. complete.(Density of foam=65Kg/m3) Inside dimensions=620 X 1800mm.The size is as per drawing.The upholstery material to be got approved from the client and consultant before execution.	3	Nos		

**BOQ FOR INTERIOR WORKS OF MULTI TRAINING FACILITY BUILDING AT
INDIAN INSTITUTE OF TROPICAL METROLOGY, PUNE**

SNO	DESCRIPTION	QTY	UNIT	RATE(Rs.)	AMOUNT(Rs.)
	Chair for Auditorium				
26	1 Seats Description: i. Push back reclined/fix chair ii. Auto Tip-up cushion iii. Sliding mechanism. With metal ball and roller cage. iv. Arm-rest to Arm-rest (center dist.): 50 to 60 mm v. PPCP-injection moulded/Thermofoamplastic. Housing for Cushion & Backrest. vi. All sheet metal parts with powder coated vii. Arm-rest with cup-holder of PPCP injection molded.with skin integral pad/or skin integral Armrest. viii. Seat numbering on back and tip-up portion. ix. Row numbering for seats along the aisles. x. Provision for lights on sides for seats along the aisles	400	Nos		
	2 Fabric : as per Approved				
	3 Frame : Back and cushion frame of ERW Tube / IS :307 1976 GRADE ,				
	4 Polyurethane Foams : i. Density: 50 + 5 Kg/M3 / JIS K 6401 , ii. Constant Compression Set: (Max. 13%) JIS K 6401.				
	5 Spring : i. For Auto Tip-up – Torsion Spring / Spring Steel IS : 4454 1981 GRADE 3 (part i) ii. For Push Back mechanism – Coil Spring / Spring Steel IS : 4454 1981 GRADE 2				
	6 WING COMPONENTS : HRCA / CRCA Sheet Metal / IS :1079 1994 Type O a) Wing frame ' C 'Channel or Rectangular Frame. b) Side wing frame with plywood. with upholstery. b)Slider – Proprietary item.55m travels.with metal ball and roller cage.				
	7 Back & Cushion Housing : PPCP IS: 10915 1994./ Injection Moulded/Thermoform Plastic				
	Chair for Lecture Hall				
27	Providing and fixing in position Lecture Hall chairs with SS 316 grade and gloss finish for integrated handel and frame with SS studs. The frame should be made up of 25mm Φ pipe. The seat and back should be made up of injection moulding PU foam with 12mm thk double ply backing fully upholstered with fabric or leather of approved quality and texture and color. The arms for the chair should be having leather/fabric pads of approved quality, texture and color. The back rest shell should be of propylene. The seat should be fixed to the frame with screws. The cost of the chair includes all necessary hardware, preparation of mock up, etc. complete. (The density of the foam should be 45 Kg/m3).The size/model/ design/make should be approved from consultant and client before supply.	80	Nos		

**BOQ FOR INTERIOR WORKS OF MULTI TRAINING FACILITY BUILDING AT
INDIAN INSTITUTE OF TROPICAL METROLOGY, PUNE**

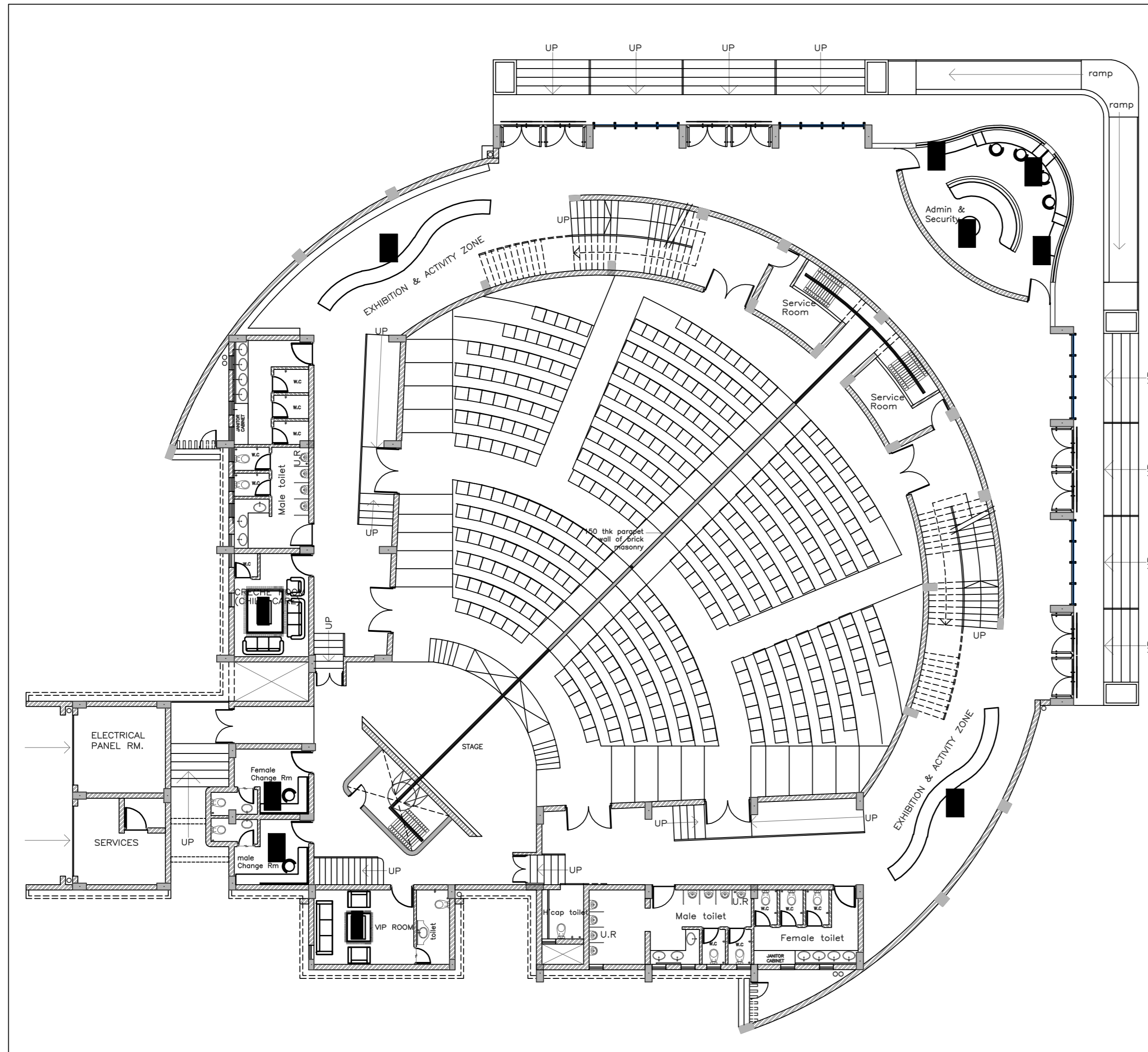
SNO	DESCRIPTION	QTY	UNIT	RATE(Rs.)	AMOUNT(Rs.)
28	Chair for Admin & Security				
	Providing and supplying in position mid-back revolving chairs of following specification	4	Nos		
	a)Frames :- The back Frames are made of 12mm Single piece neck to knee hot pressed plywood without any joints that may give way at the vertex of the seat and back the arms are also hot pressed. The arms are again single piece of 12mm hotpressed plywood without any joints.				
	b)Cushion :- The seat and back cushion comprises of a 2" Dunlop sandwiched on either side by 1" PU Foam of 32 density and 35 mm thickness which is further finished with leather upholstery. The foam being porous in nature also allows the passage of air. PU foam of 15 mm and 18 density is used below and behind the chair. The arms are further enhanced with brass pins which give an exclusive and ethnic look to the chair. A choice of leather upholstery is available to suit the interior.				
	c)STAND: The stand is five pronged dome shaped with a 26" dia which provides stability and prevents the chair from toppling over at any tilt angle.				
	d)Gaslift :- A gas-lift is provided for easier height adjustment. These Gaslift have been impact load tested for more than one lakh cycle as per BIFMA and DIN standards.				
	e)Tilt Mechanism :- The centre pivot full tilt mechanism is mounted on a 10BG m.s. plate which is machine cut, embossed and punched. A M.T. 3 tapered bush is CO2 welded on to the mechanism in which the tapered height adjustment shaft fits. To prevent squeaking while tilting special virgin nylon 6 washers are used on the pivot to prevent metal to metal contact between				
	moving parts of the tilt mechanism. These oil and grease free washers are tested upto 120000 movements as per BIFMA Standards.				
	The tilting tension is controlled by a vertically mounted user friendly spring which is easy to adjust by rotating in clockwise or anticlockwise direction. The spring is made of IS4454GR2 material and has a 7mm wire diameter and is possible to tilt the chair between 3 degree to 21 degrees.				
	f)Castors :- The twin wheels of these castors are made up of nylon - 6, which being softer gives smoother movements while the casing is made of glass reinforced nylon. These castors have been tested for a load bearing of 110 kgs per castor.				
	The shape of chair, quality of material and finish should conform to the model photo /details enclosed.				
29	Chair for Change room				
	Providing and supplying in position mid-back revolving chairs of following specification	4	Nos		
	a)Frames :- The back Frames are made of 12mm Single piece neck to knee hot pressed plywood without any joints that may give way at the vertex of the seat and back the arms are also hot pressed. The arms are again single piece of 12mm hotpressed plywood without any joints.				

**BOQ FOR INTERIOR WORKS OF MULTI TRAINING FACILITY BUILDING AT
INDIAN INSTITUTE OF TROPICAL METROLOGY, PUNE**

SNO	DESCRIPTION	QTY	UNIT	RATE(Rs.)	AMOUNT(Rs.)
	b)Cushion :- The seat and back cushion comprises of a 2" Dunlop sandwiched on either side by 1" PU Foam of 32 density and 35 mm thickness which is further finished with leather upholstery. The foam being porous in nature also allows the passage of air. PU foam of 15 mm and 18 density is used below and behind the chair. The arms are further enhanced with brass pins which give an exclusive and ethnic look to the chair. A choice of leather upholstery is available to suit the interior.				
	c)STAND: The stand is five pronged dome shaped with a 26" dia which provides stability and prevents the chair from toppling over at any tilt angle.				
	d)Gaslift :- A gas-lift is provided for easier height adjustment. These Gaslift have been impact load tested for more than one lakh cycle as per BIFMA and DIN standards.				
	e)Tilt Mechanism :- The centre pivot full tilt mechanism is mounted on a 10BG m.s. plate which is machine cut, embossed and punched. A M.T. 3 tapered bush is CO2 welded on to the mechanism in which the tapered height adjustment shaft fits. To prevent squeaking while tilting special virgin nylon 6 washers are used on the pivot to prevent metal to metal contact between				
	moving parts of the tilt mechanism. These oil and grease free washers are tested upto 120000 movements as per BIFMA Standards.				
	The tilting tension is controlled by a vertically mounted user friendly spring which is easy to adjust by rotating in clockwise or anticlockwise direction. The spring is made of IS4454GR2 material and has a 7mm wire diameter and is possible to tilt the chair between 3 degree to 21 degrees.				
	f)Castors :- The twin wheels of these castors are made up of nylon - 6, which being softer gives smoother movements while the casing is made of glass reinforced nylon. These castors have been tested for a load bearing of 110 kgs per castor.				
	The shape of chair, quality of material and finish should conform to the model photo /details enclosed.				
30	Cafeteria				
	Providing and constructing low height storage of width 450mm and upto 1200mm height, with 25/38 mm block board member of approved make along with necessary MDF and plywood member joined with TW frame as per drawing. All external surfaces to be finished in approved laminate, with balancing laminate on the interior surface. All exposed edges to be finished in approved PVC edge binding. Rate to include hardware such as approved locks, auto closing hinges for shutters, approved handles, door stop, tower bolt, etc. complete.The size/model/ design/make should be approved from consultant and client before supply.	13.00	Sqm		

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INDIAN INSTITUTE OF TROPICAL METROLOGY, PUNE**

SNO	DESCRIPTION	QTY	UNIT	RATE(Rs.)	AMOUNT(Rs.)
31	Cafeteria counter				
	Cafeteria counter Top in select polished granite Kashmir pink over avg 32 thk cuddapah backer natural stone, system mounted on ply board & block board frame as per design drawing and fixed with GI cleats	6.00	Sqm		
	Total				



FURNITURE LEGEND

1	RECTANGULAR CENTER TABLE
2	CIRCULAR CENTER TABLE
3	DRESSING TABLE
4	ACTIVITY TABLE
5	LOW HEIGHT STORAGE
6	ADMIN AND SECURITY COUNTER TABLE
7	DISPLAY BOARD

GROUND FLOOR FURNITURE LAYOUT

REV.	MODIFICATION	DATE



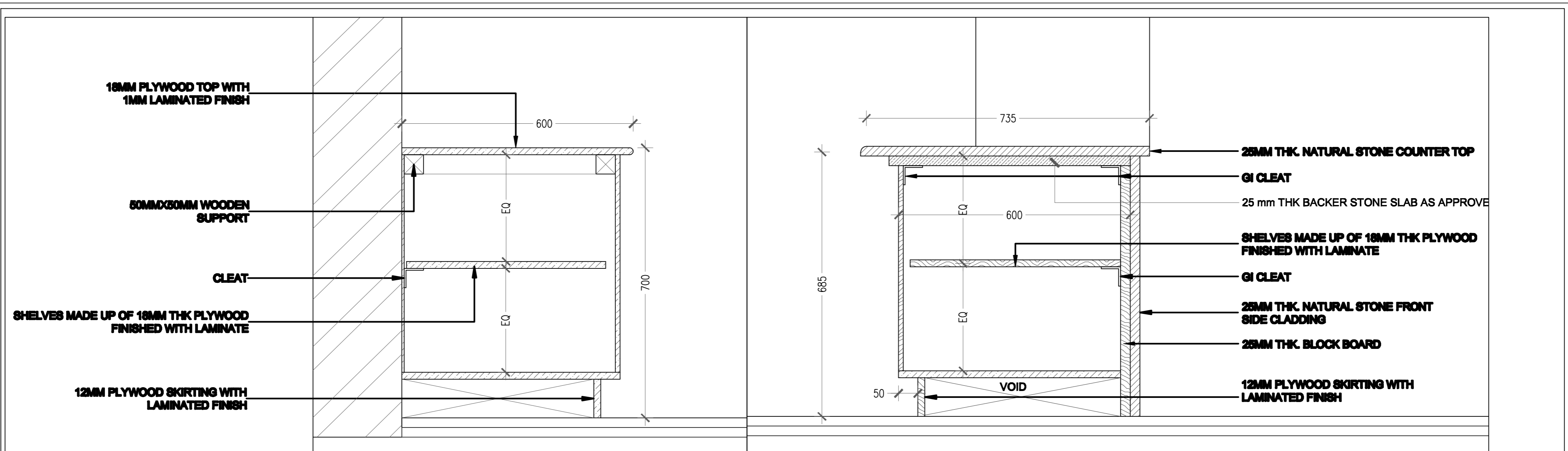
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PROPOSED COMPLEX FOR CONFERENCE
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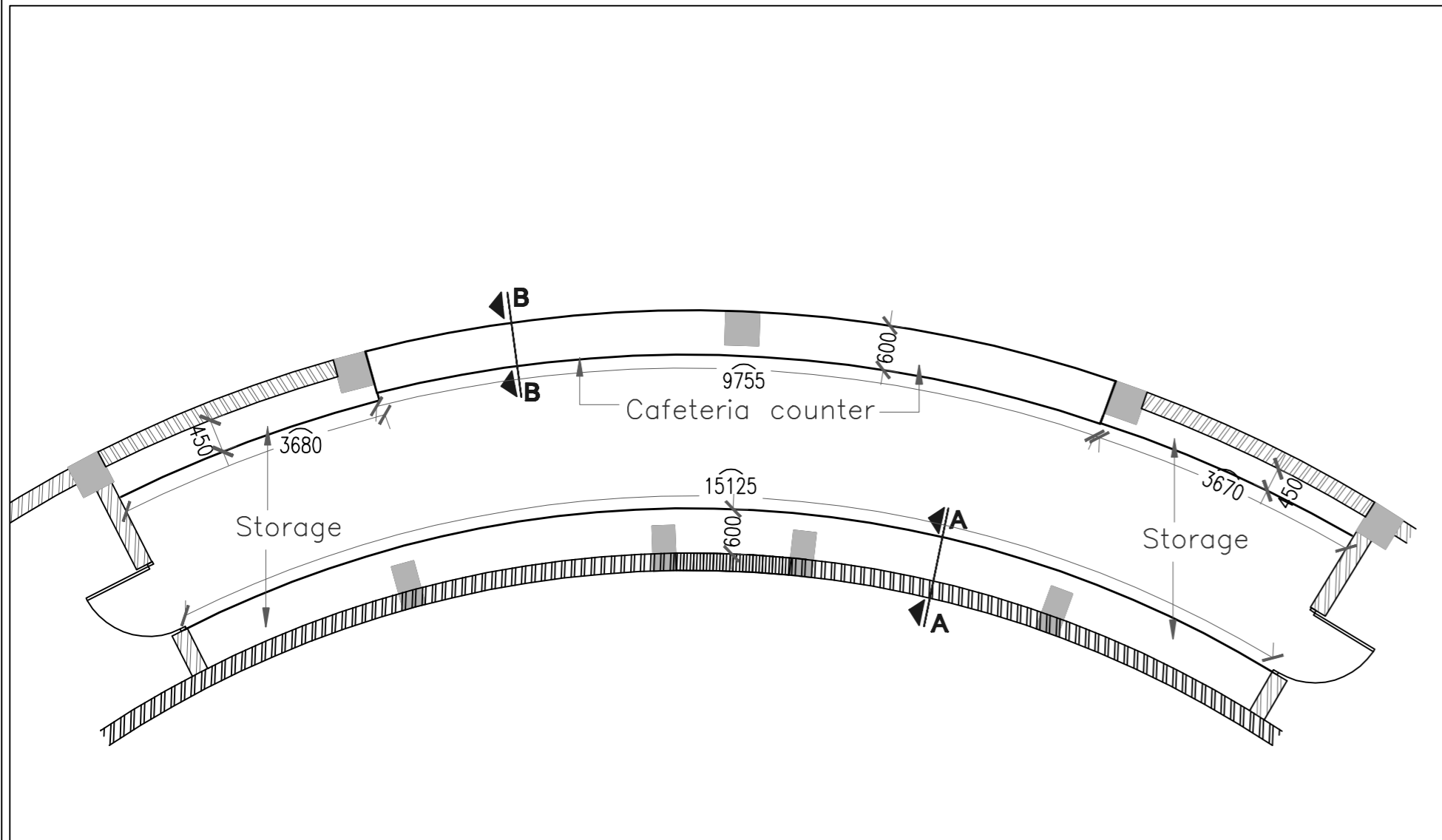
stage T- Tender Drawing

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GROUND FLOOR-FURNITURE LAYOUT			
SCALE	FORMAT	DRAWN BY	DD FILE
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DRAWING NUMBER			
AR-001-IITM-FU-01			
DATE OF FIRST ISSUE	REFERENCE DRAWING NUMBER (S)	DATE OF REVISION	REVISION
First Issue	*****	-	-

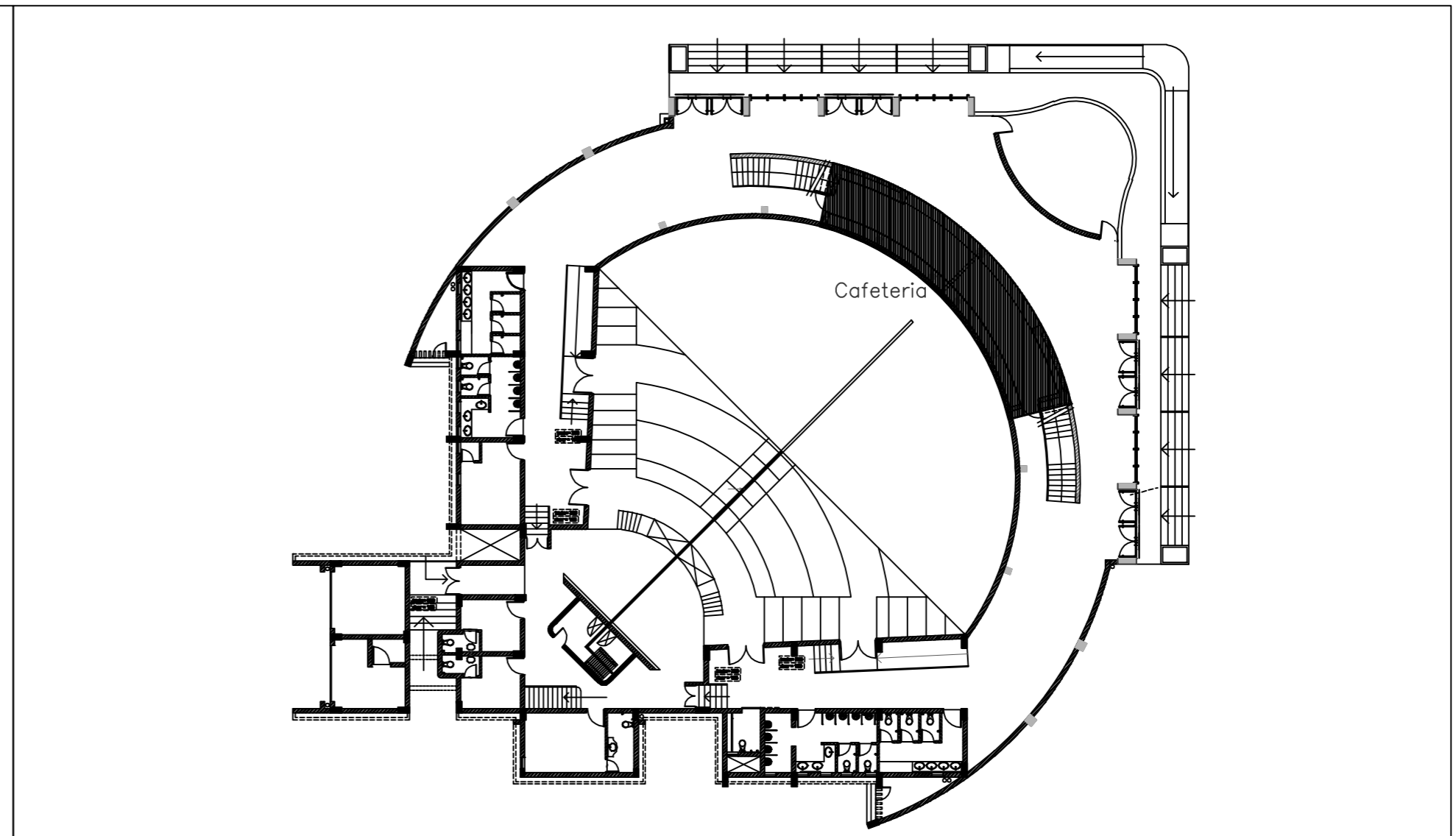


SECTION A - Scale 1:10

SECTION B - Scale 1:10



CAFETERIA PLAN - Scale 1:100



KEYPLAN

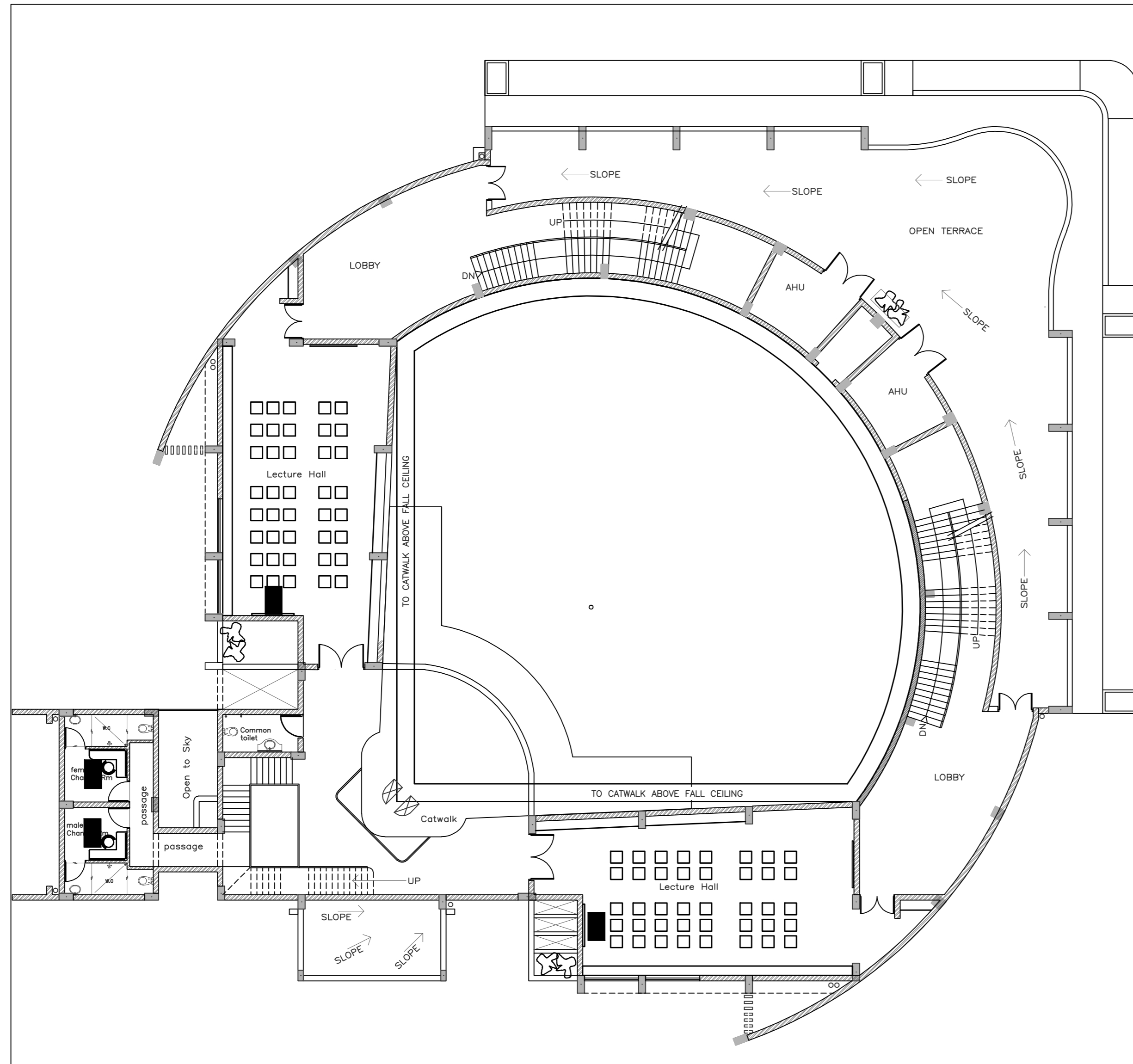
REV.	MODIFICATION	DATE

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stage T- Tender Drawing

DRAWING TITLE			
Cafeteria furniture layout & furniture details			
SCALE	FORMAT	DRAWN BY	GRID FILE
As shown	A3	Rathna	AR-001-IITM-FU-00
DRAWING NUMBER			
AR-001-IITM-FU-02			
DATE OF FIRST ISSUE	REFERENCE DRAWING NUMBER (S)	DATE OF REVISION	REVISION
First Issue	-	-



FURNITURE LEGEND

1	RECTANGULAR CENTER TABLE
2	CIRCULAR CENTER TABLE
3	DRESSING TABLE
4	ACTIVITY TABLE
5	LOW HEIGHT STORAGE
6	ADMIN AND SECURITY COUNTER TABLE
7	DISPLAY BOARD

FIRST FLOOR FURNITURE LAYOUT

REV.	MODIFICATION	DATE



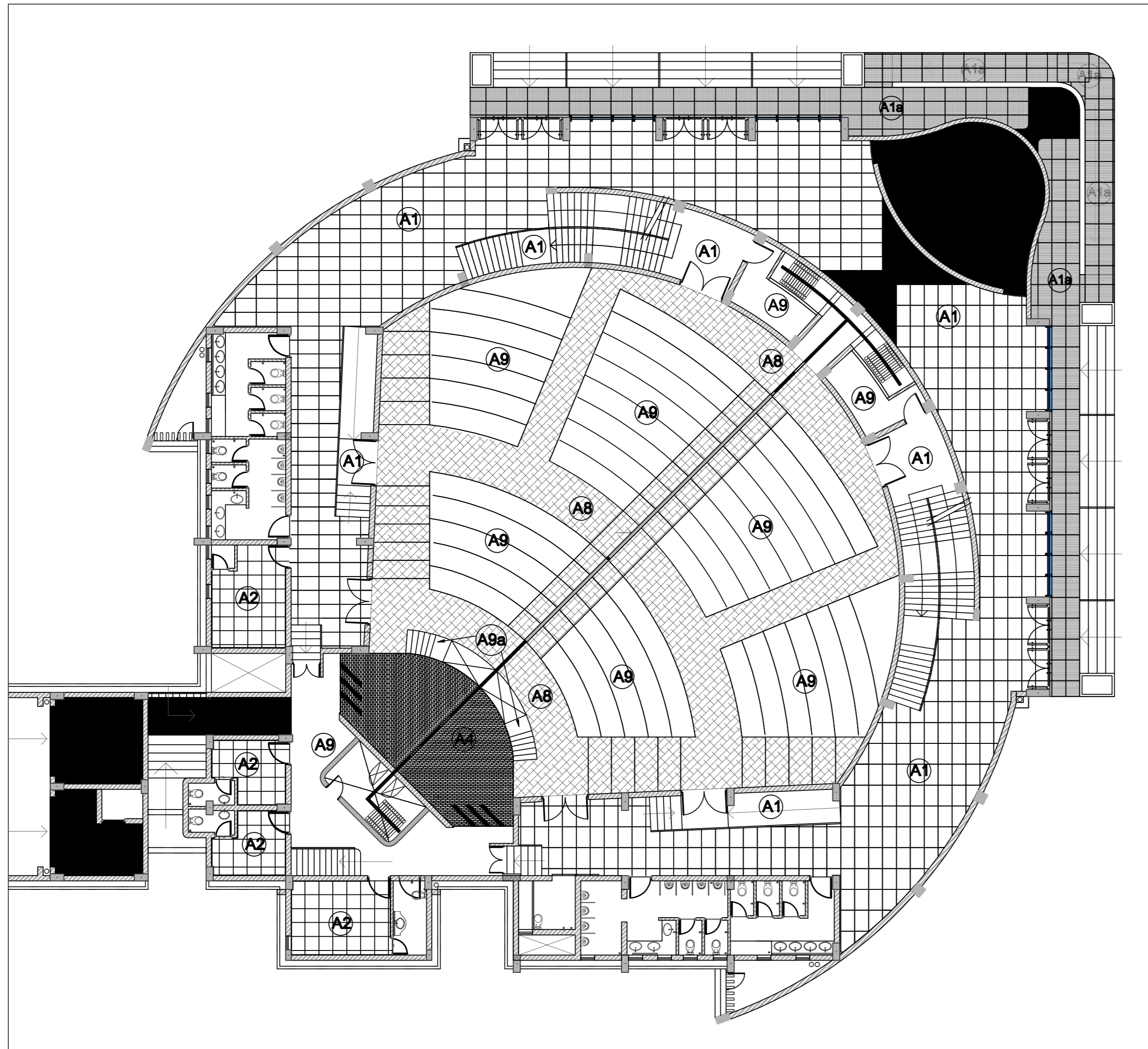
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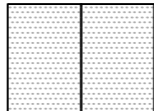
stage T- Tender Drawing


DRAWING TITLE			
FIRST FLOOR-FURNITURE LAYOUT			
SCALE	FORMAT	DRAWN BY	DD FILE
1:200	A3	Rathna	AR-001-IITM-FU-00
DRAWING NUMBER			
AR-001-IITM-FU-03			
DATE OF FIRST ISSUE	REFERENCE DRAWING NUMBER (S)	DATE OF REVISION	REVISION
First Issue	*****	-	-

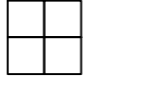



GROUND FLOOR FLOORING LAYOUT


- 


A1- 900x600 PRE-POLISHED
avg.20 thk GRANITE
FLOORING-INDIAN JUPARANA
- 


A1a- 900x600 BUSH
HAMMERED avg.20 thk GRANITE
FLOORING-INDIAN JUPARANA
- 

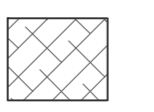
A2- 600x600 avg. 6MM thk
VITRIFIED TILE FLOORING AS
APPROVED
- 


A3- 300x300 AVG. 6MM THK ANTI-SKID
CERAMIC TILE FLOORING AS APPROVED
- 


A4- CLEAR MELAMINE POLISHED GOOD GRADE
SOLID TW PARQUET FLOORING ,avg. 15mm
thk,avg,SIZE 75mm x150mm
- 

A5- WHITE MARBLE TERRAZO &
COLOUR FLOORING
CAST-IN-SITU,PATTERN,STAINED
AS APPROVED
- 

A6-Avg. 3MM thk APPROVED
VINYL FLOORING,MERGED SEAM
SHEET TYPE OF SELECT PATTERN
OVER avg. 50 thk IPS BASE
- 

A7-300x300 Avg. 9-12MM thk
COLOURED PATTERNED, EXTERIOR
GRADE CONCRETE PAVER TILE
- 

A8-Avg. 8MM thk DYED WOVEN
JUTE FABRIC CARPET AS PER
SELECTION OVER STAINED
TREMIX CONCRETE FLOORING
- 

A9-STAINED TREMIX CONCRETE
FLOORING
- 

A9a-STAINED TREMIX CONCRETE
FLOORING WITH BRASS INLAY

REV.	MODIFICATION	DATE



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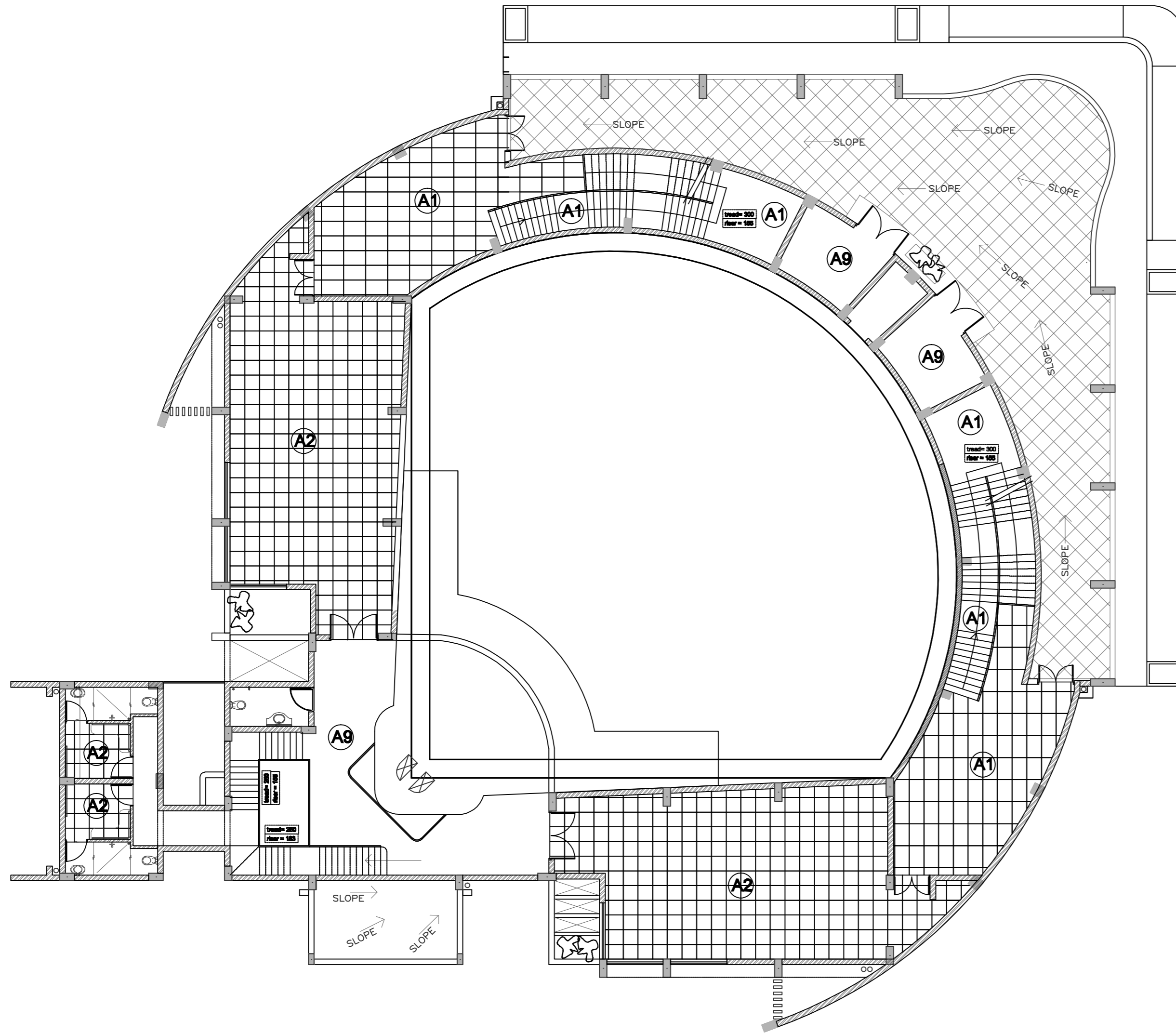
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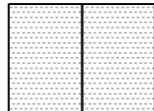
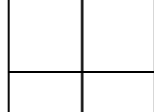
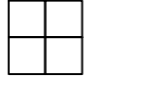




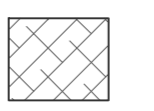




**PROPOSED COMPLEX FOR CONFERENCE
AND LECTURES HALLS - IITM PUNE**

stage T- Tender Drawing

DRAWING TITLE			
GROUND FLOOR-FLOORING LAYOUT			
SCALE	FORMAT	DRAWN BY	CDD FILE
1:200	A3	Rathna	AR-001-IITM-FL-00
DRAWING NUMBER			
AR-001-IITM-FL-02			
DATE OF FIRST ISSUE	REFERENCE DRAWING NUMBER (S)	DATE OF REVISION	REVISION
First Issue	*****	-	-



- 
A1- 900x600 PRE-POLISHED
avg.20 thk GRANITE
FLOORING-INDIAN JUPARANA
- 
A1a- 900x600 BUSH
HAMMERED avg.20 thk GRANITE
FLOORING-INDIAN JUPARANA
- 
A2- 600x600 avg. 6MM thk
VITRIFIED TILE FLOORING AS
APPROVED
- 
A3- 300x300 AVG. 6MM THK ANTI-SKID
CERAMIC TILE FLOORING AS APPROVED
- 
A4- CLEAR MELAMINE POLISHED GOOD GRADE
SOLID TW PARQUET FLOORING ,avg. 15mm
thk,avg,SIZE 75mm x150mm
- 
A5- WHITE MARBLE TERRAZO &
COLOUR FLOORING
CAST-IN-SITU,PATTERN,STAINED
AS APPROVED
- 
A6-Avg. 3MM thk APPROVED
VINYL FLOORING,MERGED SEAM
SHEET TYPE OF SELECT PATTERN
OVER avg. 50 thk IPS BASE
- 
A7-300x300 Avg. 9-12MM thk
COLOURED PATTERNED, EXTERIOR
GRADE CONCRETE PAVER TILE
- 
A8-Avg. 8MM thk DYED WOVEN
JUTE FABRIC CARPET AS PER
SELECTION OVER STAINED
TREMIX CONCRETE FLOORING
- 
A9-STAINED TREMIX CONCRETE
FLOORING
- 
A9a-STAINED TREMIX CONCRETE
FLOORING WITH BRASS INLAY

FIRST FLOOR FLOORING LAYOUT

REV.	MODIFICATION	DATE

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DRAWING TITLE
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