



भारतीय प्रबंध संस्थान इंदौर

INDIAN INSTITUTE OF MANAGEMENT INDORE

Prabandh Shikhar, Rau-Pithampur Road, Indore - 453556 (M.P.), India

Phone No. 0731-2439620 / 2439447

Re-Tender Notice

NOTICE INVITING e-TENDER

NIT No.: NIT/PROJECT/07/2016/30 FILE No.304

Name of Work: -

Manufacture/Construction, Supply, installation, testing & commissioning of instruments panel at existing 11KV HT panel and Renovation & preventive maintenance of HT & LT Electrical installations, Laying of U/G Cables, trench work etc.at IIM Indore.

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Certified that this Bid documents contains pages serially numbered from 01 to 100



भारतीय प्रबंध संस्थान इन्दौर

प्रबंध शिखर, राऊ-पीथमपुर रोड, इन्दौर - 453 556 (म.प्र.), भारत

INDIAN INSTITUTE OF MANAGEMENT INDORE

Prabandh Shikhar, Rau-Pithampur Road, Indore - 453 556 (M.P.), India

Dated: July 14, 2016

Re-Tender Notice **NOTICE INVITING e-TENDER**

Ref: e-Tender Notice No. NIT/Project/07/2016/30 File No.304

IIM Indore invites online item rate tender through e-procurement portal for the under mentioned work at IIM Indore from the bidders eligible as per the eligibility criteria mentioned in the tender document. The details are given below:

Part "A" : NIT Details

1	NIT No. NIT/Project/07/2016/30 File No.304	
2	Name of Work	Manufacture/Construction, Supply, installation, testing & commissioning of instruments panel at existing 11KV HT panel and Renovation & preventive maintenance of HT & LT Electrical installations, Laying of U/G Cables, trench work etc.at IIM Indore.
3	Estimated Cost Put to Tender	Rs. 16,13,410/- (Rupees Sixteen Lakh Thirteen Thousand Four Hundred Ten only).
4	Earnest Money Deposit (Rs.)	Rs.32,268/- (Rupees Thirty two Thousand Two hundred sixty eight only) by e-payment through electronic mode (Those bidders who had already submitted their bids in first call will have to submit their bid afresh however they can make use of the previous payment details of EMD & Tender Processing Fee for uploading)
5	Tender Processing Fee (Rs.)	Rs.1,000/- (Rupees One Thousand only), by e-payment through electronic mode (Non-Refundable) (Those bidders who had already submitted their bids in first call will have to submit their bid afresh

		however they can make use of the previous payment details of EMD & Tender Processing Fee for uploading)
6	Completion period	60 (Sixty) Days including monsoon period.
7	Mode of submission of tender	On-Line mode only
8	Pre-Bid Meeting	Not Applicable
9	Last date and time of availability of tender in the portal	Upto 02:00 PM on July 26, 2016 on website https://eprocure.gov.in/eprocure/app NIT is also available on website www.iimidr.ac.in/tenders/ for view only.
10	Last date and time of closing of uploading/online submission of tender including scanned copy of EMD and tender Processing Fee details/receipts and other documents as specified	Upto 02:00 PM on July 26, 2016
11	Date & Time of online opening of technical bid	04:30 PM on July 26, 2016 in the Office of the Chief Engineer, Administrative Block, IIM Indore M.P. - 453556
12	Date and Time of opening of financial bid of qualified bidders	Will be notified at a later date
13	Security Deposit	2.5% of tendered value from bills
14	Performance Guarantee	5% of tendered value on acceptance of bid
15	Working hours	Normal working hours at the institute is 09:00 AM to 05:30 PM on five days. Works are allowed generally only during working hours on working days.

Part “B” : Guidelines for e-Tendering

1. It is mandatory for all the applicants to have class II or III digital signature certification from licensed certifying agency like NIC, MTNL, e-mudra, TCS, safescrypt, GNFC etc.
2. The tender shall be submitted online in the prescribed format before the date and time as mentioned in NIT. No other mode of submission is acceptable.
3. The applicant have to upload the details of e-payment of processing fee & EMD before the last date & time and download the tender documents form the e-tendering portal <https://eprocure.gov.in/eprocure/app>.
4. Tenderer are advised to upload their documents well in time to avoid last minute rush on the server or complication in uploading. IIM Indore will not be responsible for any type of problem in uploading the documents. No hard copies for tender submission shall be entertained.
5. Detailed NIT can be viewed free of cost on IIM Indore website. Schedule of quantities (Financial bid form) can be uploaded only from e-procure.gov.in after making payment for tender processing fee. Uploading of tender will be possible only after making payment of EMD.
6. **Mode of payment of Tender processing fee and EMD:**
 - 6.1 Tender processing fee and EMD can be remitted online using online payment gateway of State Bank of India. For this Please Go to <https://www.onlinesbi.com> >> Click/select [State Bank Collect](#) >> click on [PROCEED](#) button >> Select [STATE OF CORPORATE INSTITUTION](#) as [Madhya Pradesh](#) >> then Select Type of Corporate Institution as [Educational Institutions](#) >>then click on [Go](#) button >> then select [IIM INDORE - FEES COLLECTION A/C](#) >> then select [TENDER PROCESSING FEE AND EMD](#).
 - 6.2 Bidders may deposit the Tender Processing Fee and EMD through NEFT or RTGS also. Details for the same are as below:

Name of beneficiary	: Indian Institute of Management Indore
Address	: Rau-Pithampur Road, Indore -453556, M.P.
Account No.	: 53018623445
Name of the Bank	: State Bank of India
Address of the bank	: IIM Indore Campus
IFSC Code	: SBIN0030525

Bidders will have to upload scanned copy of Payment details towards cost of tender processing fee & EMD during the submission of tender and the same will be accepted only on verification & confirmation by our Finance & Accounts Department. Any delay in credit will not be entertained by the Institute.

(Those bidders who had already submitted their bids in the earlier tender call will have to submit again but they can make use of the previous payment details of EMD & Tender Processing Fee).

Part “C” : Tender Requirements for Eligibility

1. Contractors who fulfil the following requirements shall ONLY be eligible to apply (Joint Ventures are not accepted):

1.1 Criteria of eligibility for submission of bid documents:

i) The bidders having experience of successfully completed works during the last 7 years ending last day of the month previous to the one in which applications are invited. *The works completed upto previous day of last date of submission of tenders shall also be considered.*

Three similar completed works costing not less than the amount equal to 40% of estimated cost put to tender,

OR

Two similar completed works, costing not less than the amount equal to 60% of the estimated cost put to tender

OR

One similar completed work of aggregate cost not less than the amount equal to 80% of the estimated cost.

AND

ii) *One completed work of any nature (either part of (i) or a separate one) costing not less than the amount equal to 40% of the estimated cost put to tender with some Central Government Department/State Government Department/ Central Autonomous Body/ State Autonomous Body/ Central Public Sector Undertaking/ State Public Sector Undertaking/City Development Authority/Municipal Corporation of City formed under any Act by Central/ State Government and published in Central/State Gazette.*

iii) The bidder should have Valid ‘A’ Class electrical contract license or should associate with an electrical contractor having the above license.

Important Note: Similar work shall mean: Any engineering contractor having experience of carrying out the similar nature of works like repair & maintenance of HT/LT Panels, Air circuit Breakers, Vacuum circuit breakers, Transformers, relays, laying of HT/LT cables, SITC of Panels etc.

1.2 **Annual Financial Turnover:** Should have had average annual financial turnover at least 100% of the estimated cost put to tender during last three years ending March 31, 2016. (Scanned copy of certificate from chartered accountant to be uploaded)

- 1.3 **Performance / Work Experience:** Certificates of work experience and other documents as specified in the tender document shall be scanned and uploaded to the e-Tendering website.
- 1.4 **Plant & Machinery:** List of plant, machinery, equipments, accessories & infrastructure facilities possessed by the agency to be uploaded.
- 1.5 **Technical Staff:** List of technical staff they possess and proposed to deploy for the work
- 1.6 **Certificates:** (scanned copy of original certificates to be uploaded)
 - 1.6.1 Latest IT returns
 - 1.6.2 PAN (Permanent Account Number)
 - 1.6.3 Service Tax Registration Certificate
 - 1.6.4 'A' Class electrical contract license
2. The bid submitted shall become invalid and e-tender processing fee shall not be refunded if:
 - (i) If the bidder is found ineligible.
 - (ii) If the documents submitted by the successful bidder does not match with the originals before the award of work.
3. However, certified copy of all the scanned and uploaded documents as specified in NIT shall have to be submitted by the lowest bidder only within a week physically in the office of the “ Chief Engineer, Indian Institute of Management Indore, Prabandh Shikhar, Rau - Pithampur Road, Indore 453556 (M.P.).
4. Online bid documents submitted by intending bidders shall be opened only of those bidders, **who has deposited e-Tender Processing Fee and Earnest Money Deposit and other documents scanned and uploaded are found in order.**
5. Information and Instructions for bidders posted on website shall form part of bid document.
6. The bid document consisting of plans, specifications, the schedule of quantities of various types of items to be executed and the set of terms and conditions of the contract to be complied with and other necessary documents can be seen and downloaded from website <https://eprocure.gov.in/eprocure/app> free of cost.
7. Those contractors not registered on the website mentioned above, are required to get registered beforehand. If needed the intending bidders may get acquainted with the process online from the www.eprocure.gov.in site itself.

8. The intending bidder must have valid class-II or III digital signature to submit the bid.
9. On opening date, the contractor can login and see the bid opening process. After opening of bids he will receive the competitor bid sheets.
10. Contractor can upload documents in the form of JPG format and PDF format.
11. Contractor must ensure to quote rate of each item. The column meant for quoting rate in figures appears in **YELLOW** colour and the moment rate is entered, it turns **SKY BLUE**. In addition to this, while selecting any of the cells a warning appears that **if any cell is left blank the same shall be treated as "0"**. Therefore, if any cell is left blank and no rate is quoted by the bidder, rate of such item shall be treated as "0" (ZERO).
12. The technical bid will be opened online first on due date and time as mentioned above. The time and date of opening of financial bid of contractors qualifying the technical bid shall be communicated to them at a later date.
13. Completed Tenders containing technical bid and price bid will be received ONLINE only on CPP Portal website <https://eprocure.gov.in/eprocure/app> at the fixed time and date indicted in the NIT. The Tenderer will be at liberty to be present either in person or through an authorized representative at the time of opening of the Technical Bid with the Bid Acknowledgement Receipt or they can view the bid opening event online at their remote end.
14. The competent authority on behalf of the Director IIM Indore does not bind itself to accept the lowest or any other bid and reserves to itself the authority to reject any or all the bids received without the assignment of any reason. All bids in which any of the prescribed condition is not fulfilled or any condition including that of conditional rebate is put forth by the bidders shall be summarily rejected.
15. Canvassing whether directly or indirectly, in connection with bidders is strictly prohibited and the bids submitted by the contractors who resort to canvassing will be liable for rejection.
16. The competent authority on behalf of the Director, IIM Indore reserves to himself the right of accepting the whole or any part of the bid and the bidders shall be bound to perform the same at the rate quoted.
17. *The bid for the works shall remain open for acceptance for a period of ninety (90) days.* If any bidders withdraws his bid before the said period or issue of letter of acceptance, whichever is earlier, or makes any modifications in the terms and conditions of the bid which are not acceptable to the department, then the IIM Indore shall, without prejudice to any other right or remedy, be at liberty to forfeit 50% of the said earnest money as aforesaid. Further the bidders shall not be allowed to participate in the rebidding process of the work.

18. This notice inviting Bid shall form a part of the contract document. The successful bidders/contractor, on acceptance of his bid by the Accepting Authority shall within 15 days from the stipulated date of start of the work, sign the contract consisting of:-
 - i) The Notice Inviting Bid, all the documents including additional conditions, specifications and drawings, if any, forming part of the bid as uploaded at the time of invitation of bid and the rates quoted online at the time of submission of bid and acceptance thereof together with any correspondence leading thereto.
 - ii) Any other Standard C.P.W.D. Form / other forms as applicable/mentioned.
19. If there are any clarifications, this may be obtained online through the tender site, or thro' the contact details. Bidder should take into account the corrigendum published before submitting the bids online.
20. It is construed that the bidder has read all the terms and conditions before submitting their offer. Bidder should go through the tender schedules carefully and upload the documents as asked; otherwise, the bid will be rejected.
21. The bidder has to digitally sign and upload the required bid documents one by one as indicated. Bidders to note that the very act of using DSC for downloading the bids and uploading their offers shall be deemed to be a confirmation that they have read all sections and pages of the bid document including General conditions of contract without any exception and have understood the entire document and are clear about the requirements of the tender requirements.
22. **The price bid format is provided in a spread sheet file like BoQ_price bid.xls, the rates offered should be entered in the allotted space only and uploaded after filling the relevant columns. The Price Bid/BOQ template must not be modified/replaced by the bidder; else the bid submitted is liable to be rejected for this tender.**
23. The bidders are requested to submit the bids through online e-tendering system to the Tender Inviting Authority (TIA) well before the bid submission end date & time (as per Server System Clock). The TIA will not be held responsible for any sort of delay or the difficulties faced during the submission of bids online by the bidders at the eleventh hour. Tenderers are advised to upload their documents well in time to avoid last minute rush on the server.
24. The time settings fixed in the server side & displayed at the top of the tender site, will be valid for all actions of requesting, bid submission, bid opening etc., in the e-tender system. The bidders should follow this time during bid submission.
25. Certificate of financial turn over: At the time of submission of bid, contractor may upload Undertaking / certificate from CA mentioning Financial Turnover of last 3 Year or for the period as specified in the bid document.

26. IF ANY INFORMATION FURNISHED by the applicant is found to be incorrect at a later stage, they shall be liable to be debarred from tendering/ taking up works in IIM INDORE.
27. Canvassing in connection with tenders is strictly prohibited and the tenders submitted by the contractors who resort to canvassing will be liable to rejection.
28. Short listing of the agencies shall be subject to through verification of their credentials and inspection of works carried out by them, through a Technical Evaluation committee of experts, constituted by IIM Indore.
29. TAXES :
- i) This works comes under Works contract. Works contract Tax/MPVAT as applicable shall be deducted from each bill paid to the contractor.
 - ii) Sales tax or any other tax on material in respect of this contract shall be payable by the contractor and IIM Indore will not entertain any claim whatsoever in this respect.
 - iii) Contractor should get registered under SERVICE TAX and service tax as applicable as per the extant order on the subject work shall be paid by the contractor to concerned department and the same will be reimbursed by the Institute after satisfying that it has been actually and genuinely paid by the contractor. The bidder should not consider Service Tax in his rates.
 - iv) Labour Welfare cess @ 1 % of gross value of work done shall be recovered from each bill paid to the contractor.
 - v) Income Tax and cess as applicable shall be deducted from each bill paid to the contractor.
 - vi) Contractor, should be registered under EPF & ESIC and as per law, shall pay EPF & ESIC of contract workers to concerned Department from time to time.
 - vii) Any other taxes/cess as per government directives shall be deducted from each bill paid to the contractor from time to time.
30. The specifications, Terms & Conditions, other regulations which are not herein mentioned will be guided by relevant CPWD specifications for maintenance work or any other specifications as applicable for IIM Indore & the decision in this regard will be guided by the decision of the respective authority of IIM Indore which shall be final and binding to the contractor.
31. For any queries regarding e-tendering process, the bidders are requested to contact as provided in the tender document. Parallely for any further queries, the bidders are asked to contact over phone: 0120-4200462, 0120-4001002, 91 8826246593 or send a mail over to cphp-nic@nic.in

Part “D” : List of Documents to be scanned and uploaded

Scanned copies of the following original certificates are to be uploaded:

- i) Certificates of Work Experience issued by officer of the Department not below the rank of an Executive Engineer.
- ii) Copy of ‘A’ Class electrical contract license
- iii) Certificate of Registration for Sales Tax / VAT and acknowledgement of up to date filed return (If required), WCT etc.
- iv) Certificate of Registration for Service Tax and acknowledgement of up to date filed return (If required)
- v) Copy of audited balance sheet from chartered accountant to be uploaded
- vi) Latest IT returns
- vii) Bar chart for the execution of project with in the stipulated period of completion.
- viii) EPF/ESI registration certificates
- ix) Permanent Account Number (PAN)
- x) WCT registration certificate (If applicable)
- xi) List of plant and machinery
- xii) List of Technical Staff
- xiii) Registration certificate of firm (If any)
- xiv) E-payment details towards cost of tender processing fee & EMD
- xv) Undertaking having gone through the documents as per the Technical bid.
- xvi) Any other document that bidder felt necessary in support of his candidature.
- xvii) Schedule of Price Bid in the form of BoQ.xls

IMPORTANT NOTE:

1. Tender documents may be downloaded from Central Public Procurement Portal <https://eprocure.gov.in/eprocure/app> . Aspiring Bidders/ Suppliers who have not enrolled / registered in e-procurement should enroll /register before participating through the website <https://eprocure.gov.in/eprocure/app> . The portal enrolment is free of cost.
2. Tenderers can access tender documents on the website, fill them with all relevant information and submit the completed tender document into electronic tender on the website <https://eprocure.gov.in/eprocure/app>.
3. Tenders and supporting documents should be uploaded through e-procurement. Hard copy of the tender documents will not be accepted.

4. In the event of work award, the documents submitted by the successful bidder shall be verified with the originals before the award of work.

5. Those bidders who had already submitted their bids in first call will have to submit their bid afresh again however they can make use of the previous payment details of EMD & Tender Processing Fee for uploading the fresh bid and they don't have to submit these fees again.

Dated: July 14, 2016

Place: Indore (M.P.)

**Sd/-
(V.P. Thomas)
Chief Engineer**

Evaluation criteria /scoring method:

1	Financial strength	-Maximum 20 marks
2	Experience of similar nature of work	-Maximum 20 Marks
3	Performance on work TOR	-Maximum 20 marks
4	Performance on work quality	-Maximum 20 marks
5	Personnel of the establishment	-Maximum 20 Marks

To qualify, the contractor shall score minimum 60 Marks in total

SCORING SYSTEM

Weightage and Scores

The criteria for evaluation of the performance of contractors for eligibility shall be assessed by assignee scores over as follows:

	Attributes	Evaluation
(a)	Financial strength (20 marks)	
	(i) Average annual Turn over 20 marks	i) 60% marks for minimum eligibility criteria ii) 100% marks for twice the minimum eligibility criteria or more in between (i) & (ii) - on pro-rata basis
(b)	Experience in similar (20 marks)	
	class of works	i) 60% marks for minimum eligibility criteria ii) 100% marks for twice the minimum eligibility criteria or more in between (i) & (ii) - on pro-rata basis
(c)	Performance on works (time over run) (20 marks)	
	Parameter Calculation For points	Score (Maximum Marks 20)

	If TOR = $\frac{AT}{ST}$	1.00	2.00	3.00	>3.50
	(i) Without levy of compensation	20	15	10	10
	(ii) With levy of compensation	20	5	0	-5
	(iii) Levy of compensation not decided	20	10	0	0
<p>TOR = AT/ST, where AT=Actual Time; ST=Stipulated Time.</p> <p>Note: Marks for value in between the stages indicated above is to be determined by straight line variation basis.</p>					
(d)	Performance of works (Quality) (20 marks)				
	(i) Very Good	20			
	(ii) Good	15			
	(ii) Fair	10			
	(iii) Satisfactory	05			
	(iv) poor	00			
(e)	Personnel and Establishment (Max. 20 marks)				
	i) Graduate Engineer	3 marks for each			
	ii) Diploma holder Engineer	2 marks for each upto Max.4 marks			
	iii) supervisory	1 mark for each upto Max. 3 marks			

To qualify, the Contractor shall score minimum 60 marks in total.

FORM 'A'
FINANCIAL INFORMATION

I. Financial Analysis - Details to be furnished duly supported by figures in balance sheet/ profit & loss account for the last five years duly certified by the Chartered Accountant, as submitted by the applicant to the Income Tax Department (Copies to be attached).

Years

2011-12	2012-13	2013-14	2014-15	2015-16
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(i) Gross Annual turn over.

(ii) Profit/Loss.

I. Financial arrangements for carrying out the proposed work.

Signature of Chartered Accountant with Seal

Signature of Bidder(s).

Form 'B'

**DETAILS OF ALL WORKS OF SIMILAR CLASS COMPLETED DURING THE LAST SEVEN YEARS
ENDING LAST DAY OF THE MONTH**

Sl.No	Name of Work/ Project And Location	Owner or Sponsoring Organization	Cost of Work (In Rs.)	Date of Commencement As Per Contract	Stipulated Date of Completion	Actual Date of Completion	Litigation / Arbitration Cases Pending/ in Progress With Details*	Name and Address/ Telephone of The Officers to Whom Reference may be made	Remarks
1	2	3	4	5	6	7	8	9	10

Signature of Bidder(s)

Form 'C'

PROJECTS UNDER EXECUTION OR AWARDED

Sl.n o.	Name of work/ project and location	Owner or sponsori ng organizat ion	Cost of work (in Rs.)	Date of commen t as per contrac t	Stipulat ed date of complet ion	Upto date percentag e progress of work	Slow progres s if any and reason thereof	Name and address/ telephone of the officers to whom reference may be made	Remarks
1	2	3	4	5	6	7	8	9	10

Certified that the above list of works is complete and no work has been left out and that the information given is correct to my knowledge and belief.

Signature of Bidder(s)

Form 'D'

PERFORMANCE REPORT OF WORKS REFERRED TO IN FORMS "B" & "C"

1. Name of Work/Project & Location
2. Agreement No.
3. Estimated Cost
4. Tendered Cost
5. Date of Start
6. Date of Completion
 - (i) Stipulated Date of Completion
 - (ii) Actual Date of Completion
7. Amount of Compensation Levied For Delayed Completion, If Any
8. Amount of Reduced Rate Items, If Any
9. Performance Report

(1) Quality of Work	Very Good/Good/Fair/Poor
(2) Financial Soundness	Very Good/Good/Fair/Poor
(3) Technical Proficiency	Very Good/Good/Fair/Poor
(4) Resourcefulness	Very Good/Good/Fair/Poor
(5) General Behavior	Very Good/Good/Fair/Poor

Dated: Executive Engineer or Equivalent

FORM "E"
STRUCTURE & ORGANISATION

1. Name & address of the bidder
2. Telephone no./Telex no./Fax no.
3. Legal status of the bidder (attach copies of original document defining the legal status)
 - (a) An Individual
 - (b) A proprietary firm
 - (c) A firm in partnership
 - (d) A limited company or Corporation
4. Particulars of registration with various Government Bodies (attach attested photocopy) Organization/Place of registration No.
 - 1.
 - 2.
 - 3.
5. Names and titles of Directors & Officers with designation to be concerned with this work.
6. Designation of individuals authorized to act for the organization.
7. Was the bidder ever required to suspend construction for a period of more than six months continuously after he commenced the construction? If so, give the name of the project and reasons of suspension of work.
8. Has the bidder, or any constituent partner in case of partnership firm, ever abandoned the awarded work before its completion? If so, give name of the project and reasons for abandonment.
9. Has the bidder, or any constituent partner in case of partnership firm, ever been debarred/black listed for tendering in any organization at any time? If so, give details.
10. Has the bidder, or any constituent partner in case of partnership firm, ever been convicted by the court of law? If so, give details.
11. In which field of Electrical works the bidder has specialization and interest?
12. Any other information considered necessary but not included above.

Signature of Bidder(s)

FORM 'F'

DETAILS OF TECHNICAL & ADMINISTRATIVE PERSONNEL TO BE EMPLOYED FOR THE WORK

Sl No .	Designation	Total number	Number available for this work	Name	Qualifications	Professional experience and details of work carried out	How this would be involved in this work	Remark
1	2	3	4	5	6	7	8	9

Signature of Bidder(s)

INTEGRITY PACT

To,

Sub: NIT No. for the work Manufacture/Construction, Supply, installation, testing & commissioning of instruments panel at existing 11KV HT panel and Renovation & preventive maintenance of HT & LT Electrical installations, Laying of U/G Cables, trench work etc.at IIM Indore.

Dear Sir,

It is here by declared that IIM is committed to follow the principle of transparency, equity and competitiveness in public procurement.

The subject Notice Inviting Tender (NIT) is an invitation to offer made on the condition that the Bidder will sign the integrity Agreement, which is an integral part of tender / bid documents, failing which the tenderer / bidder will stand disqualified from the tendering process and the bid of the bidder would be summarily rejected.

This declaration shall form part and parcel of the Integrity Agreement and signing of the same shall be deemed as acceptance and signing of the Integrity Agreement on behalf of the IIM Indore.

Yours faithfully,

Chief Engineer

To,

The Chief Engineer,

IIM Indore

Sub: Submission of Tender for the work Of: Manufacture/Construction, Supply, installation, testing & commissioning of instruments panel at existing 11KV HT panel and Renovation & preventive maintenance of HT & LT Electrical installations, Laying of U/G Cables, trench work etc.at IIM Indore.

Dear Sir,

I / We acknowledge that IIMI is committed to follow the principles thereof as enumerated in the Integrity Agreement enclosed with the tender/bid document.

I / We agree that the Notice Inviting e-Tender (NIT) is an invitation to offer made on the condition that I/We will sign the enclosed integrity Agreement, which is an integral part of tender documents, failing which I/We will stand disqualified from the tendering process. I/We acknowledge that THE MAKING OF THE BID SHALL BE REGARDED AS AN UNCONDITIONAL AND ABSOLUTE ACCEPTANCE of this condition of the NIT.

I/We confirm acceptance and compliance with the Integrity Agreement in letter and spirit and further agree that execution of the said Integrity Agreement shall be separate and distinct from the main contract, which will come into existence when tender/bid is finally accepted by IIM Indore. I/We acknowledge and accept the duration of the Integrity Agreement, which shall be in the line with Article 1 of the enclosed Integrity Agreement.

I/We acknowledge that in the event of my/our failure to sign and accept the Integrity Agreement, while submitting the tender/bid, IIMI shall have unqualified, absolute and unfettered right to disqualify the tenderer/ bidder and reject the tender/bid in accordance with terms and conditions of the tender/bid.

Yours faithfully,

(Duly authorized signatory of the Bidder)

**To be signed by the bidder and same signatory competent / authorised to sign
the relevant contract on behalf of IIMI.**

INTEGRITY AGREEMENT

This Integrity Agreement is made at..... on this day of 2016

BETWEEN

Director, IIM Indore through Chief Engineer, IIM Indore (Hereinafter referred as the 'Principal / Owner', which expression shall unless repugnant to the meaning or context hereof include its successors and permitted assigns)

AND

(Name and Address of the Individual/firm/Company)

Through (hereinafter referred to as the

(Details of duly authorized signatory)

"Bidder/Contractor" and which expression shall unless repugnant to the meaning or context

hereof include its successors and permitted assigns)

Preamble

WHEREAS the Principal /Owner has floated the Tender (No.) (hereinafter referred to as "e-Tender/Bid") and intends to award, under laid down Organizational procedure, contract for (Name of work) hereinafter referred to as the "Contract".

AND WHEREAS the Principal / Owner values full compliance with all relevant laws of the land, rules, regulations, economic use of resources and of fairness/transparency in its relation with its Bidder(s) and Contractor(s).

AND WHEREAS to meet the purpose aforesaid both the parties have agreed to enter into this Integrity Agreement (hereinafter referred to as "Integrity Pact" or "Pact"), the terms and conditions of which shall also be read as integral part and parcel of the Tender/Bid documents and Contract between the parties.

NOW, THEREFORE, in consideration of mutual covenants contained in this Pact, the parties hereby agree as follows and this Pact witnesses as under:

Article 1: Commitment of the Principal / Owner

- 1) The Principal/Owner commits itself to take all measures necessary to prevent corruption and to observe the following principles:

No employee of the Principal/Owner, personally or through any of his/her family members, will in connection with the Tender, or the execution of the Contract, demand, take a promise for or accept, for self or third person, any material or immaterial benefit which the person is not legally entitled to.

The Principal/Owner will, during the Tender process, treat all Bidder(s) with equity and reason. The Principal/Owner will, in particular, before and during the Tender process, provide to all Bidder(s) the same information and will not provide to any Bidder(s) confidential / additional information through which the Bidder(s) could obtain an advantage in relation to the Tender process or the Contract execution.

The Principal / Owner shall endeavour to exclude from the Tender process any person, whose conduct in the past has been of biased nature.

If the Principal/Owner obtains information on the conduct of any of its employees which is a criminal offence under the Indian Penal code (IPC) / Prevention of Corruption Act, 1988 (PC Act) or is in violation of the principles herein mentioned or

if there be a substantive suspicion in this regard, the Principal / Owner will inform the Chief Vigilance Officer and in addition can also initiate disciplinary actions as per its internal laid down policies and procedures.

Article 2: Commitment of the Bidder(s)/Contractor(s)

- 1) It is required that each Bidder/Contractor (including their respective officers, employees and agents) adhere to the highest ethical standards, and report to the IIM Indore/Department all suspected acts of fraud or corruption or Coercion or Collusion of which it has knowledge or becomes aware, during the tendering process and throughout the negotiation or award of a contract.
- 2) The Bidder(s)/Contractor(s) commits himself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the Tender Process and during the Contract execution:

The Bidder(s) / Contractor(s) will not, directly or through any other person or firm, offer, promise or give to any of the Principal / Owner's employees involved in the Tender process or execution of the Contract or to any third person any material or other benefit which he/she is not legally entitled to, in order to obtain in exchange

any advantage of any kind whatsoever during the Tender process or during the execution of the Contract.

b) The Bidder(s) / Contractor (s) will not enter with other Bidder (s) into any undisclosed agreement or understanding, Whether formal or informal. This applies in particular to prices, Specifications, certifications, subsidiary contracts, submission or Non-submission of bids or any other actions to restrict Competitiveness or to cartelize in the bidding process.

The Bidder(s) / Contractor(s) will not commit any offence under the relevant IPC/PC Act. Further the Bidder(s) / Contractor(s) will not use improperly, (for the purpose of competition or personal gain), or pass on to others, any information or documents provided by the Principal/Owner as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.

The Bidder(s)/ Contractor(s) of foreign origin shall disclose the names and addresses of agents / representatives in India, if any. Similarly Bidder(s)/Contractor(s) of Indian Nationality shall disclose names and addresses of foreign agents/representatives, if any. Either the Indian agent on behalf of the foreign principal or the foreign principal directly could bid in a tender but not both. Further, in cases where an agent participate in a tender on behalf of one manufacturer, he shall not be allowed to quote on behalf of another manufacturer along with the first manufacturer in a subsequent/parallel tender for the same item.

The Bidder(s)/ Contractor(s) will, when presenting his bid, disclose (with each tender as per performa enclosed) any and all payments he has made, is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the Contract

The Bidder(s)/Contractor(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.

The Bidder(s)/Contractor(s) will not, directly or through any other person or firm indulge in fraudulent practice means a willful misrepresentation or omission of facts or submission of fake/forged documents in order to induce public official to act in reliance thereof, with the purpose of obtaining unjust advantage by or causing damage to justified interest of others and/or to influence the procurement process to the detriment of the Government interests.

- 2) The Bidder(s)/Contractor(s) will not, directly or through any other person or firm use Coercive Practices (means the act of obtaining something, compelling an action or influencing a decision through intimidation, threat or the use of force directly or

indirectly, where potential or actual injury may befall upon a person, his/ her reputation or property to influence their participation in the tendering process

Article 3: Consequences of Breach

Without prejudice to any rights that may be available to the Principal/Owner under law or the Contract or its established policies and laid down procedures, the Principal / Owner shall have the following rights in case of breach of this Integrity Pact by the Bidder(s)/Contractor(s) and the Bidder / Contractor accepts and undertakes to respect and uphold the Principal / Owner's absolute right:

- 1) If the Bidder (s) / Contractor(s), either before award or during execution of Contract has committed a transgression through a violation of Article 2 above or in any other form, such as to put his reliability or credibility in question, the Principal/Owner after giving 14 days notice to the contractor shall have powers to disqualify the Bidder(s)/Contractor(s) from the Tender process or terminate /determine the Contract, if already executed or exclude the Bidder/Contractor from future contract award processes. The imposition and duration of the exclusion will be determined by the severity of transgression and determined by the Principal/Owner. Such exclusion may be forever or for a limited period as decided by the Principal/Owner.
- 2) Forfeiture of EMD/Performance Guarantee/Security Deposit: If the Principal/Owner has disqualified the Bidder(s) from the Tender process prior to the award of the Contract or terminated/determined the Contract or has accrued the right to terminate/determine the Contract according to Article 3(1), the Principal/Owner apart from exercising any legal rights that may have accrued to the Principal/Owner, may in its considered opinion forfeit the entire amount of Earnest Money Deposit, Performance Guarantee and Security Deposit of the Bidder/Contractor.
- 3) Criminal Liability: If the Principal/Owner obtains knowledge of conduct of a Bidder or Contractor, or of an employee or a representative or an associate of a Bidder or Contractor which constitutes corruption within the meaning of Indian Penal code (IPC)/Prevention of Corruption Act, or if the Principal/Owner has substantive suspicion in this regard, the Principal/Owner will inform the same to law enforcing agencies for further investigation.

Article 4: Previous Transgression

- 1) The Bidder declares that no previous transgressions occurred in the last 5 years with any other Company in any country confirming to the anticorruption approach or with Central Government or State Government or any other

Central/State Public Sector Enterprises in India that could justify his exclusion from the Tender process.

- 2) If the Bidder makes incorrect statement on this subject, he can be disqualified from the Tender process or action can be taken for banning of business dealings/ holding listing of the Bidder/Contractor as deemed fit by the Principal/ Owner.

If the Bidder/Contractor can prove that he has resorted / recouped the damage caused by him and has installed a suitable corruption prevention system, the Principal/Owner may, at its own discretion, revoke the exclusion prematurely.

Article 5: Equal Treatment of all Bidders/Contractors/Subcontractors

- (a) The Bidder(s)/Contractor(s) undertake(s) to demand from all Subcontractors a commitment in conformity with this Integrity Pact.

The Bidder/Contractor shall be responsible for any violation(s) of the Principles laid down in this agreement/Pact by any of its Subcontractors/sub-vendors.

- (b) The Principal / Owner will enter into Pacts on identical terms as this one with all Bidders and Contractors.
- (c) The Principal / Owner will disqualify Bidders, who do not submit, the duly signed Pact between the Principal/Owner and the bidder, along with the Tender or violate its provisions at any stage of the Tender process, from the Tender process.

Article 6- Duration of the Pact

This Pact begins when both the parties have legally signed it. It expires for the Contractor / Vendor 12 months after the completion of work under the contract or till the continuation of defect liability period, whichever is more and for all other bidders, till the Contract has been awarded.

If any claim is made/lodged during the time, the same shall be binding and continue to be valid despite the lapse of this Pacts as specified above, unless it is discharged/determined by the Competent Authority, IIM Indore.

Article 7- Other Provisions

- 1) This Pact is subject to Indian Law, place of performance and jurisdiction is the

Headquarters of the Division of the Principal / Owner, who has floated the Tender.

- 2) Changes and supplements need to be made in writing. Side agreements have not been made.
- 3) If the Contractor is a partnership or a consortium, this Pact must be signed by all the partners or by one or more partner holding power of attorney signed by all partners and consortium members. In case of a Company, the Pact must be signed by a representative duly authorized by board resolution.
- 4) Should one or several provisions of this Pact turn out to be invalid; the remainder of this Pact remains valid. In this case, the parties will strive to come to an agreement to their original intentions.
- 5) It is agreed term and condition that any dispute or difference arising between the parties with regard to the terms of this Integrity Agreement / Pact, any action taken by the Owner/Principal in accordance with this Integrity Agreement/ Pact or interpretation thereof shall not be subject to arbitration.

Article 8- LEGAL AND PRIOR RIGHTS

All rights and remedies of the parties hereto shall be in addition to all the other legal rights and remedies belonging to such parties under the Contract and/or law and the same shall be deemed to be cumulative and not alternative to such legal rights and remedies aforesaid. For the sake of brevity, both the Parties agree that this Integrity Pact will have precedence over the Tender / Contract documents with regard any of the provisions covered under this Integrity Pact.

IN WITNESS WHEREOF the parties have signed and executed this Integrity Pact at the place and date first above mentioned in the presence of following witnesses:

(For and on behalf of Principal/Owner)
(For and on behalf of Bidder/Contractor)

WITNESSES:

- 1. (Signature, name and address)
- 2. (Signature, name and address)

Place: -

Dated: -

Terms and Conditions

Part A.

1. The intending bidder must read the terms and conditions carefully. He should only submit his bid if he considers himself eligible and he is in possession of all the documents required.
2. Information and Instructions for bidders mentioned in NIT shall form part of bid document.
1. The tender document consisting of plans, specifications, the schedule of quantities of various types of items to be executed and the set of terms and conditions of the contract to be complied with and other necessary documents can be seen from website <https://eprocure.gov.in/eprocure/app> or <http://www.iimidr.ac.in/iimi/index.php/tenders>.
2. Agreement shall be drawn with the successful tenderer on prescribed format.
3. The time allowed for carrying out the work will be 60 days from the date of start as defined in schedule 'F' or from the first date of handing over of the site, whichever is later, in accordance with the phasing, if any, indicated in the tender documents.
4. The contractor whose bid is accepted will be required to furnish performance guarantee of 5% (Five Percent) of the bid amount within 15 days. This guarantee shall be in the form of banker's cheque of any scheduled bank/Demand Draft of any scheduled bank. In case the contractor fails to deposit the said performance guarantee within the period as indicated in Schedule 'F' including the extended period if any, the Earnest Money deposited by the contractor shall be forfeited automatically without any notice to the contractor.
5. Intending Firm/ agencies are advised to inspect and examine the site and its surroundings and satisfy themselves before submitting their tenders as to the nature of the ground and sub-soil (so far as is practicable), the form and nature of the site, the means of access to the site, the accommodation they may require and in general shall themselves obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect their tender. A firm/ agency shall be deemed to have full knowledge of the site whether he inspects it or not and no extra charge consequent on any misunderstanding or otherwise shall be allowed. The firm/ agency shall be responsible for arranging and maintaining at his own cost all materials, tools & plants, water, electricity access, facilities for workers and all other services required for executing the work unless otherwise specifically provided for in the

contract documents. Submission of a tender by a firm/ agency implies that he has read this notice and all other contract documents and has made himself aware of the scope and specifications of the work to be done and of conditions and rates at which stores, tools and plant, etc. will be issued to him by the Government and local conditions and other factors having a bearing on the execution of the work.

6. The competent authority on behalf of the Director, IIM Indore does not bind itself to accept the lowest or any other tender and reserves to itself the authority to reject any or all the tenders received without the assignment of any reason. All tenders in which any of the prescribed condition is not fulfilled or any condition including that of conditional rebate is put forth by the firm/ agency shall be summarily rejected.
7. Canvassing whether directly or indirectly, in connection with firm/ agency is strictly prohibited and the tenders submitted by the contractors who resort to canvassing will be liable to rejection.
8. The competent authority on behalf of the Director IIM Indore reserves to himself the right of accepting the whole or any part of the tender and the firm/ agency shall be bound to perform the same at the rate quoted.
9. No Engineer of gazetted rank or other Gazetted Officer employed in Engineering or Administrative duties in an Engineering Department of the Government of India is allowed to work as a contractor for a period of one year after his retirement from Government service, without the previous permission of the Government of India in writing. This contract is liable to be cancelled if either the contractor or any of his employees is found any time to be such a person who had not obtained the permission of the Government of India as aforesaid before submission of the tender or engagement in the contractor's service.
10. The bid for the works shall remain open for acceptance for a period of Ninety (90) days from the date of opening of technical bid. If any bidder withdraws his tender before the said period or issue of letter of acceptance, whichever is earlier, or makes any modifications in the terms and conditions of the bid which are not acceptable to the department, then the Government shall, without prejudice to any other right or remedy, be at liberty to forfeit 50% of the said earnest money as aforesaid. Further the bidders shall not be allowed to participate in the re-bidding process of the work.
11. This notice inviting e-Tender shall form a part of the contract document. The successful firm/ agency, on acceptance of his tender by the Accepting Authority shall within 15 days from the stipulated date of start of the work, sign the contract agreement consisting of:-The Notice Inviting Tender, all the documents including additional conditions, specifications and drawings, if any, forming part of the tender as submitted at the time of invitation of tender and the rates quoted online at the

time of submission of bid and acceptance thereof together with any correspondence leading thereto.

12. In case any discrepancy is noticed between the documents submitted with the NIT then the bid submitted shall become invalid and the IIM Indore shall, without prejudice to any other right or remedy, be at liberty to forfeit 50% of the said earnest money as aforesaid. Further the firm/ agency shall not be allowed to participate in the re-tendering process of the work.

Part B.

1. All the work will be undertaken in coordination and supervision with the IIMI engineers.
2. Contractor should take care of workers safety and discipline while carrying out the job. All the required safety equipments have to be provided to workers by the contractor during the work. Institute will not be responsible for any casualty or incidents.
3. Contractor must comply all the statutory provisions as per the Govt. of India rules and acts applicable for executing such jobs.
4. Proper electrical safety will be exercised during the work and all the personnel protective equipment and tools like helmets, gloves, safety belts, shoes etc. will be provided by the contractor during the work at his own cost.
5. Contractor will ensure proper cleaning of site and hygiene during the work on regular basis.
6. In case of any damage to the property of IIMI/ site of work by workers/personnel of contractor, the contractor will be solely responsible and appropriate damage cost along with penalty will be recovered from the contractor's bill/payment/SD etc.
7. The work quality should be high and the workmanship must be in accordance with the best engineering practice to ensure the satisfactory performance of the system throughout the service life. On a later stage at any point of time if it is found or established that the performance of the system is deteriorate due to poor workmanship or quality of material or mistake of contractor then he will be liable for sufficient amount of penalty including the damage or loss to the Institute by the same.
8. The contractor will furnish the list of tools as his disposal to execute the work before starting the work and the IIMI officials will verify the same and these will be available all time during execution of the work.

9. The contractor should make his own arrangement to work properly under all climatic conditions without affecting the quality and speed of work. The safety of all the materials used in executing the job will also be the responsibility of the contractor.
10. Contractor has to submit the completion certificate with all the required reports and approvals at the end of work, which will be certified by IIMI officials.
11. Payment will be made as per the payment clauses specified in the tender and to the satisfaction and certification of IIMI officials. No advance payment will be made before or during the job.
12. Quantity of material required may exceed in special case depending upon the work & site condition and in such case the required material to complete the work will be used as per best standard practices, safety and aesthetics.
13. All legal and other statutory responsibilities regarding securities of materials, labour, payments, accident, insurance and law suits during the work will be solely borne by contracting agency and IIM Indore shall not be responsible in any manner whatsoever. The contracting agency will ensure proper and disciplined behavior of the workman. If any damages are caused by the contracting agency to the property to the Institute, the same shall be recovered from contracting agency's bill.
14. All the values of any tests as required will be recorded in front of IIM Engineers and it will be verified by them.
15. Certificate regarding the quality of material used will be required to be furnished from the Contractor necessarily. All the material should be of high quality and according to proper applicable Indian Standard. Contractor will have to use materials of leading brands as approved by Engineer-in-Charge wherever required.
16. Competency of Electrical / mechanical Staff

An accepted norm of good workmanship is required. The related electrical/mechanical works shall be done by qualified and trained staff having sufficient competency in electrical works.

17. Sample, Maintenance Manual, etc.

On the award of the work the Contractor shall immediately submission of sample with complete data sheet & test certificate shall be submitted to the Engineer for his approval to ensure that the works will be carried out in accordance with the specifications, including such changes as may have been mutually agreed upon. Prior to the completion of the work the contractor shall furnish to the IIM Indore

four (4) sets comprehensive manuals, describing all components and furnishing a list of instructions for the operation and maintenance of the plant.

18. Erection Programme to Match with Other Contractor

Time is the essence of the Contract. The Contract shall co-ordinate with other agencies working in the site. If so required the contractor shall suitably modify his program and methodology of work as required and approved by the Engineer to suit the overall program of construction. In case, for whatever reason, it is required by the Owner/Engineer that the contractor delay affecting the delivery of their equipment and/or the program of installation at the site the same shall be done by the contractor and he shall not be entitled to any compensation in terms of time and cost due to idle labour or any other reason due to such delay.

19. Existing Services

Drains, pipes, cables, overhead wires and similar services encountered in the course of the works shall be guarded from injury by the Contractor at his own cost so that they may continue in full and uninterrupted use to the satisfaction of the owners thereof and the Contractor shall not store materials or otherwise occupy any part of the site in a manner likely to hinder the operation of such services.

20. Any damage by the Contractor, to any mains, pipes, cables or lines (whether above or below ground) whether or not shown on the drawings and the Contractor must make good or bear the cost of making good the same without delay to the satisfaction of the Engineer and of the owners.

21. Keeping Site Clean

The Contractor shall at all times keep the Site clean and shall dispose of all the rubbish and offensive material in a manner approved by the Engineer.

22. Prevention of Fire

Contractor shall provide at all time adequate portable fire extinguishers in his work area and take all adequate precautions against fire hazard.

23. Quality Certificate of Materials

A The Contractor shall be required to produce manufacturer's quality certificates for the materials supplied by the Contractor. Notwithstanding the manufacturer's certificates, the Engineer may ask for testing of materials in approved test houses. The test result shall satisfy the requirements of the relevant Indian Standards.

- B Whenever quality certificates are missing or incomplete or when material quality differs from standard specifications, the contractor shall conduct all appropriate tests as directed by the Engineer at no extra cost.
- C Materials for which test certificates are not available or for which test results do not tally with relevant standard specifications, shall not be used.

24. Material Samples

Samples of the materials wherever applicable are to be submitted to the Engineer in charge or Representative for testing and approval before use on works.

Sampling of materials for approval and testing as called for under appropriate Indian Standard/International standard or other relevant standard specification, and sampling and testing referred to later in this specification is to be done without charge.

Samples once approved will remain with the Engineer till the completion of works. Samples rejected will have to be replaced for fresh approval.

Samples provided to the Engineer or the Engineer's Representative for the retention are to be in labelled boxes suitable for storage.

Materials and workmanship not corresponding in character and quality with approved samples will be rejected.

Special Conditions of Contract:

1. The quoted rate shall be for finished items and shall be complete in all respects including the cost of all materials, labour, loading, unloading and transportation, electricity charges, tools & plants, machinery etc. The client/OWNER/Employer shall not be supplying any material, labour, plant etc. unless explicitly mentioned so. The contractor has to ensure co-ordination with Institute authorities to maintain the smooth functioning / operation of existing Institute timing without disruption during the execution of work. This may require working rescheduling the normal working hours, working in restricted period etc. Nothing extra shall be payable on this account.
2. The contractor shall also ensure that all work sites within the Institute complex/ site of work are properly cordoned off by means of barricades.
3. All the items covered in the schedule of the requirements, shall carry minimum one years onsite Comprehensive guarantee, and commence from the date of completion of entire job. The after - sales service support / warranty services has to be provided at IIM Indore. The repairing / rectification, if any of the items under warranty must be done at site only within 24 hours. The bidder should submit along with the technical bid, the detailed plan for providing installation and warranty services at site. Prompt and efficient after sales service must be free within the warranty period.
4. Wherever required, the contractor shall prepare and produce instruction, operation and maintenance manuals in English for the use, operation and the maintenance of the supplied equipment and installations, and submit to the Engineer-in-Charge in TWO copies (i.e. hard & soft copies for each equipment) at the time of handing over.

AGREEMENT

THIS AGREEMENT made at Indore on the _____ day of _____ 2016 between Indian Institute of Management Indore Rau- Pithampur Road, Indore (hereinafter called "The IIM INDORE" which expression shall, unless repugnant to the context or meaning thereof, include its administrators, successors and assigns) of the one part AND _____ (herein after called "The Contractor" which expression shall, unless repugnant to the context or meaning thereof, include its successors and permitted assigns) of the other part.

WHEREAS

The IIM INDORE is desirous of carrying out the work of "Manufacture/Construction, Supply, installation, testing & commissioning of instruments panel at existing 11KV HT panel and Renovation & preventive maintenance of HT & LT Electrical installations, Laying of U/G Cables, trench work etc.at IIM Indore."

The Works are to be executed as per the scope of work mentioned at scope of work, technical specification, drawings and specifications describing the works to be done.

The Contractor has agreed to execute the said works subject to the provisions hereinafter contained and subject also to General Conditions of Contract, Special conditions of contract, Safety Code, Model Rules for the protection of health and Sanitary arrangements for workers, Specifications, Preambles and Schedule of Quantities and installation schedule (all of which are hereinafter collectively referred to as the 'said tender conditions') and strictly in accordance with the Scope of work annexed hereto at or for the respective rates set out in the Schedule of Quantities amounting to the sum as there under arrived at or such other sums as shall become payable there under (hereinafter referred to as the said tendered amount).

NOW IT IS HEREBY AGREED AS FOLLOWS: -

1. In consideration of the said tendered amount to be paid by The IIM INDORE to the Contractor at the time and in the manner set forth in the said tender conditions and in accordance with the Schedule of Payments to execute and complete the work shown upon the said Drawings strictly in accordance with the specifications and Schedule of Quantities.
2. The said tender conditions, scope of work and the annexures hereto shall be read and considered as forming part of this contract and the parties hereto shall respectfully abide by to the said conditions and perform the agreement on their part respectively contained in the said conditions.

3. The approved drawings if any, notice inviting tenders technical specification etc. shall also form the basis of this contract.
4. This contract is neither a Lump sum Contract, nor a piece work contract, but is a contract on item rate basis to be carried out and to be paid for according to the Schedule of Payments at the rates contained in the Schedule of Quantities.
5. The contract herein contained shall comprise not only the works mentioned above but all subsidiary works connected therewith within the same site as may be ordered to be done from time to time by the said Engineer In charge for the time being, even if such work may not be shown on the said Drawings or described in the said Specifications and Schedule of Quantities.
6. The IIM INDORE reserves to themselves the right of altering the drawings and the nature of the work by adding to or omitting from the scope of work any item of work or portions of the same without prejudice to this contract.
7. Time shall be considered as the essence of this contract and the Contractor hereby agrees to commence the work within 10 days from the date of work order or from the date of handing over of the site, as provided for in the said terms and conditions, whichever is later, and shall complete the entire work within the specified period, subject nevertheless the provisions for extension of time as may be agreed to by the IIM INDORE and as contained in the said conditions.
8. All payments by the IIM INDORE under this contract shall be made only at Indore.
9. All disputes arising out of or in any way connected with this contract shall be deemed to have arisen at Indore and courts in Indore only shall have jurisdiction to determine the same.
10. That the contract and several parts of this contract have been read by the contractor and fully understood by him. The contractor shall not be entitled for payment beyond tendered quantities unless ordered specifically by written instructions of Director IIM INDORE.
11. This contract shall be signed in duplicate, the original whereof shall be kept in the custody of the IIM INDORE, and the duplicate with the Contractor.

IN WITNESS WHEREOF the IIM INDORE has set his hands hereunto and two duplicates hereof through his duly authorized official and the Contractor has caused these presents and two duplicates hereof under his common seal by his duly authorized representative at the place and on the date month and year first herein above written.

SIGNED, SEALED AND DELIVERED by IIM INDORE, by the hand of

Signature:

IN THE PRESENCE OF

Name:
Designation:

(1) Signature:
Name:
Address:

(2) Signature:
Name:
Address:

SIGNED, SEALED AND DELIVERED BY the Contractor M/s. _____
_____.

Signature:
Name:
Designation:

IN THE PRESENCE OF

(1) Signature:
Name:
Address:

(2) Signature:
Name:
Address:

FORM OF PERFORMANCE GUARANTEE / BANK GUARANTEE BOND

1. In consideration of the Indian Institute of Management, Prabandh Shikhar, Rau, Indore(hereinafter called –The Institute) having offered to accept the terms and conditions of the proposed agreement betweenand (hereinafter called –the said contractor(s)) for the work (hereinafter called –the said agreement} having agreed to production of an irrevocable Bank Guarantee for Rs.....(Rupees.....only) as a security/guarantee from the contractor(s) for compliance of his obligations in accordance with the terms and conditions in the said agreement. 1. We(hereinafter referred to as the –Bank)) hereby undertake to (indicate the name of the Bank) pay to the Institute an amount not exceeding Rs (Rupees.....only) on demand by the Government.

2. We do hereby undertake to pay the amounts due and payable (indicate the name of the Bank) under this Guarantee without any demur, merely on a demand from the Institute stating that the amount claimed is required to meet the recoveries due or likely to be due from the said contractor(s). Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this Guarantee. However, our liability under this Guarantee shall be restricted to an amount not exceeding Rs.....(Rupees.....only).

3. We, the said Bank, further undertake to pay to the Institute any money so demanded not with standing any dispute or disputes raised by the contractor(s) in any suit or proceeding pending before any Court or Tribunal relating thereto, our liability under this present being absolute and unequivocal. The payment so made by us under this bond shall be a valid discharge of our liability for payment there under, and the contractor(s) shall have no claim against us for making such payment.

4. We further agree that the Guarantee herein contained shall (indicate the name of the Bank) remain in full force and effect during the period that 212 would be taken for the performance of the said agreement, and it shall continue to be enforceable till all the dues of the Institute under or by virtue of the said agreement have been fully paid, and its claims satisfied or discharged, or till the Engineer-in-charge, on behalf of the Institute, certifies that the terms and conditions of the said agreement have been fully and properly carried out by the said contractor(s), and accordingly discharges this guarantee.

5. We further agree with the Institute that the Institute (indicate the name of the Bank) shall have the fullest liberty without our consent, and without effecting in any manner our obligations hereunder, to vary any of the terms and conditions of the said agreement or to extend time of performance by the said contractor(s) from time to time or

to postpone for any time or from time to time any of the powers exercisable by the Institute against the said contractor(s), and to forbear or enforce any of the terms and conditions relating to the said agreement, and we shall not be relieved from our liability by reason of any such variation or extension

being granted to the said contractor(s) or for any forbearance, act of omission on the part of the Institute or any indulgence by the Institute to the said contractor(s) or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provision, have effect of so relieving us.

6. This Guarantee will not be discharged due to the change in the constitution of the Bank or the contractor(s).

7. Welastly undertake not to revoke this Guarantee except with (indicate the name of the Bank) the previous consent of the Institute in writing.

8. This Guarantee shall be valid up tounless extended on demand by the Institute. Notwithstanding anything mentioned above, our liability against this Guarantee is restricted to Rs (Rupees.....only), and unless a claim in writing is lodged with us within six months of the date of expiry or extended date of expiry of this Guarantee all our liabilities under this Guarantee shall stand discharged. Dated theday of..... For (Indicate the name of the Bank)

GENERAL CONDITIONS OF CONTRACT

DEFINITIONS

In the contract, the following expressions shall, unless the context otherwise requires, have the meanings hereby respectively assigned to them:

The CONTRACT shall mean the documents forming the tender and acceptance thereof together with the documents referred to therein including conditions, specifications, designs, drawings and instructions issued from time to time by the Engineer-in-Charge and all these documents taken together shall be deemed to form one contract and shall be complementary to one another.

The works or work shall, unless there be something either in the subject or context repugnant to such construction, be construed and taken to mean the works, by virtue of the contract contracted, to be executed whether temporary or permanent, and whether original, altered, substituted or additional.

The Site shall mean the land/or other places on, into or through which work is to be executed under the contract or any adjacent land, path or street through which work is to be executed under the contract or any adjacent land, path or street which may be allotted or used for the purpose of carrying out the contract.

The Contractor shall mean the individual, firm or company, whether incorporated or not, undertaking the works and shall include the legal personal representative of such individual or the persons composing such firm or company, or the successors of such firm or company and the permitted assignees of such individual, firm or company.

The Board of Governors of IIM Indore shall mean its successors also.

The Engineer In-charge shall mean the Chief Engineer IIM Indore.

The Institute shall mean the 'Indian Institute of Management Indore' or his nominee as notified

The Accepting Authority shall mean the Board of Governors IIM Indore.

The Expected Risks shall mean risks due to riots (other than those on account of contractor's employees), war (whether declared or not) invasion, act of foreign enemies, hostilities, civil war, rebellion revolution, insurrection, military or usurped power, damages from aircraft, acts of God, such as earthquake, lightening and unprecedented floods, and other causes

over which the contractor has no control and accepted as such by the Accepting Authority.

The Market Rate shall mean the rate as decided by the Engineer-in-Charge on the basis of the cost of material and labour at the site where the work is to be executed plus 15% to cover all the overheads and profits.

The Schedule(s) referred to in these conditions shall mean the relevant schedule(s) annexed to the tender document and the Standard Schedule of Rates of the Institute with the amendments thereto issued upto the date of issue of notice inviting tenders.

The Tendered Amount shall mean the amount of the work as stipulated in the letter of award.

Where the context so requires, words imparting the singular only also include the plural and vice versa. Any reference to masculine gender shall, whenever required, include feminine gender and vice versa. Headings to the General Conditions of Contract shall not be deemed to form part thereof or be taken into consideration in the interpretation or construction thereof or of the contract.

The contractor shall be furnished, free of cost one certified copy of the contract except standard specifications, Schedule of Rates and such other printed and published documents, together with all the drawings as may be forming part of the contract. None of these documents shall be used for any purpose other than that of this contract.

WORKS TO BE CARRIED OUT

The work to be carried out under the Contract shall, except as otherwise provided in these conditions, include all labour, materials, tools, plants, equipment and transport which may be required in preparation of and in the full and entire execution and completion of the works. The descriptions given in the Schedule of Quantities shall, unless otherwise stated, be held to include wastage on materials, carriage and cartage, carrying and return of empties, hoisting, setting, fitting and fixing in position and all other labour necessary in and for the execution and completion of the work as aforesaid in accordance with good practice and recognized principles.

SUFFICIENCY OF TENDER

The contractor shall be deemed to have satisfied himself before tendering as to the correctness and sufficiency of his tender for the works and of the rates and prices quoted in the Schedule of Quantities, which rates and prices shall, except as otherwise provided, cover all his obligations under the Contract and all the matters and things necessary for the proper completion and maintenance of the works.

DISCREPANCIES AND ADJUSTMENT OF ERRORS

The several documents forming the Contract are to be taken as mutually explanatory of one another, detailed drawings being followed in preference to small-scale drawings and figured dimensions in preference to scale and special conditions in preference to General Conditions.

In the case of discrepancy between the Schedule of Quantities, the Specifications and/ or the Drawings, the following order of preference shall be observed: -

- Description of Schedule of Quantities.
- Particular Specification and Special Condition, if any.
- CPWD Specifications.
- Indian Standard Specifications of BIS.
- International standard
- Manufacturer standard

If there are varying or conflicting provisions made in any one document forming part of the contract, the Accepting Authority shall be the deciding authority with regard to the intention of the document and his decision shall be final and binding on the contractor.

Any error in description, quantity or rate in the Schedule of Quantities or any omission there from shall not vitiate the contract or release the contractor from the execution of the whole or any part of the work comprised therein according to drawings and specifications or from any of his obligations under the contract.

CLAUSES OF CONTRACT

Clause 1

Performance Security

The contractor shall submit Performance Security 5% (Five percent) of the tendered amount in addition to other deposits mentioned elsewhere in the contract for his proper performance of the contract agreement, (not withstanding and/or without prejudice to any other provisions in the contract) within Ten days from the date of issue of letter of acceptance. This period can be further extended by the Engineer In-charge on written request of the contractor stating the reasons for delays in procuring the Performance Security, to the satisfaction of the Engineer In-charge. This security shall be in the form of Demand Draft /Pay Order/FDR or Bank Guarantee of any Scheduled Bank issued in favour of Indian Institute of Management, payable at Indore.

- II. The Engineer In-charge shall make claim(s) under the Performance Security for amounts to which the Director IIM Indore is entitled under the contract (not withstanding and/or without prejudice to any other provisions in the contract agreement) in the event of failure by the contractor to pay the Director IIM any amount due, either as agreed by the contractor or determined under any of the Clause/Condition of the agreement, within 30 days of the service of notice to this effect by the Engineer In-charge.
- III. In the event of the contract being determined or rescinded under provisions of any of the Clause/Condition of the agreement, the Performance Security shall stand forfeited in full and shall be absolutely at the disposal of the Director IIM Indore.
- IV. **Refund of performance guarantee:** The performance guarantee shall be refunded to the contractor soon after the completion of the work and recording of the completion certificate as above.

CLAUSE 1 A

Security Deposit

The contractor shall permit the Institute at the time of making any payment to him for work done under the contract to deduct a sum at the rate of 2.5% of the gross amount of each running bill till the sum along with the sum already deposited as earnest money will amount to security deposit of 2.5% of the tendered amount of the work or value of work actually executed whichever is more. Such deductions will be made and held by Institute by way of Security Deposit. Bank Guarantee may also be accepted against 2.5% of the Tender

value security deposit to be deducted from the running bills.

All compensations or the other sums of money payable by the contractor under the terms of this contract may be deducted from his security deposit or from any sums, which may be due to or may become due to the contractor by the Institute on any account, whatsoever, and in the event of his Security Deposit being reduced by reason of any such deduction, as aforesaid, the contractor shall within 10 days make good the same in cash.

CLAUSE 2

Compensation for Delay

If the contractor fails to maintain the required progress in terms of clause 5 or to complete the work and clear the site on or before the contract or extended date of completion as per mile stones given in Annexure B he shall, without prejudice to any other right or remedy available under the law to the Institute on account of such breach, pay as agreed compensation @ 0.5 % percent (Zero point five) of the tendered amount per day of delay to be computed on per day basis for the delay of work.

This will also apply to items or group of items for which a separate period of completion has been specified.

Provided always that the total amount of compensation for delay to be paid under this clause shall not exceed 10% of the Tendered Amount of work or of the Tendered Amount of the item or group of items of work for which a separate period of completion is originally given.

The amount of compensation may be adjusted or set-off against any sum payable to the Contractor under this or any other contract with the Institute. In case, the contractor does not achieve a particular milestone or the re-scheduled milestone(s) in terms of Clause 5.4 the amount shown against that milestone shall be withheld, to be adjusted against the compensation levied at the final grant of Extension of Time. With holding of this amount on failure to achieve a milestone shall be automatic without any notice to the contractor.

However, if the contractor catches up with the progress of work on the subsequent milestone(s), the withheld amount shall be released. In case the contractor fails to make up the delay in subsequent milestone(s), amount mentioned against each milestone missed subsequently shall also be withheld. However, no interest, whatsoever, shall be payable on such withheld amount.

The decision of the Director IIM in this regard shall be final and binding.

CLAUSE 2A

Incentive for early completion - DELETED

CLAUSE 3

When Contract can be Determined

Subject to other provisions contained in this clause, the Engineer In-charge may, without prejudice to his any other right or remedy against the contractor in respect of any delay, inferior workmanship, any claims for damages and/or any other provision of this contract or otherwise, by notice in writing absolutely determine the contract in any of the following cases:

- i. If the contractor having been given by the Engineer In-charge a notice in writing to rectify, reconstruct or replace any defective work or that the work is being performed in an inefficient or otherwise improper or unworkman like manner shall omit to comply with the requirement of such notice for a period of seven days thereafter.
- ii. If the contractor has, without reasonable cause, suspended the progress of the work or has failed to proceed with the work with due diligence so that in the opinion of the Engineer In charge (which shall be final and binding) he will be unable to secure completion of the work by the date for completion and continues to do so after a notice in writing of seven days from the Engineer In charge.
- iii. If the contractor fails to complete the work within the stipulated date or items of work with individual date of completion, if any stipulated, on or before such date(s) of completion and does not complete them within the period specified in the notice given in writing in that behalf by the Engineer In charge.
- iv. If the contractor persistently neglects to carry out his obligations under the contract and/ or commits default in complying with any of the term and condition of the contract and does not remedy it or take effective steps to remedy it within 7 days after a notice in writing is given to him in that behalf by the Engineer In charge.
- v. If the contractor shall offer or give or agree to give to any person in the Institute service or to any other person on his behalf any gift or consideration of any kind as an inducement or reward for doing or forbearing to do or for having done or forborne to do any act in relation to the obtaining or execution of this or any other contract of the Institute.
- vi. If the contractor shall obtain a contract with Institute as a result of wrong tendering

or other non-bonafide methods of competitive tendering or commits breach of integrity pact.

- vii. If the contractor being an individual, or if a firm, any partner thereof shall at any time be adjudged insolvent or have a receiving order or order for administration of his estate made against him or shall take any proceedings for liquidation or composition (other than a voluntary liquidation for the purpose of amalgamation or reconstruction) under any Insolvency Act for the time being in force or make any conveyance or assignment of his effects or composition or arrangement for the benefit of his creditors or purport so to do, or if any application be made under any Insolvency Act for the time being in force for the sequestration of his estate or if a trust deed be executed by him for benefit of his creditors.
- viii. If the contractor being a company shall pass a resolution or the court shall make an order that the company shall be wound up or if a receiver or a manager on behalf of a creditor shall be appointed or if circumstances shall arise which entitle the court or the creditor to appoint a receiver or a manager or which entitle the court to make a winding up order.
- ix. If the contractor shall suffer an execution being levied on his goods and allow it to be continued for a period of 21 days.
- x. If the contractor assigns, transfers, sublets (engagement of labour on a piece-work basis or of labour with materials not to be incorporated in the work, shall not be deemed to be subletting) or otherwise parts with or attempts to assign, transfer, sublet or otherwise parts with the entire work or any portion thereof without the prior written approval of the Engineer -in-Charge.

When the contractor has made himself liable for action under any of the case aforesaid, the Engineer In charge on behalf of the Director IIM shall have powers:

- a) To determine the contract as aforesaid (of which termination notice in writing to the contractor under the hand of the Engineer In charge shall be conclusive evidence). Upon such determination, the Security Deposit already recovered including Earnest Money Deposit and Performance Security under the contract shall be liable to be forfeited and shall be absolutely at the disposal of the Institute
- b) To measure up the work of the contractor and to take such whole, or the balance or part thereof, as shall be un-executed out of his hands and to give it to another contractor to complete the work in which case any expenses which may be incurred in excess of the sum, which would have been paid to the original contractor if the whole work had been executed by him, shall be borne and paid by the original contractor and may be deducted from any money due or any become due to him by the Institute. The contractor, whose contract is determined as above, shall not be

allowed to participate in the tendering process for the balance work.

In the event of above courses being adopted by the Engineer In-charge, the contractor shall have no claim to compensation for any loss sustained by him by reasons of his having purchased or procured any material or entered into any engagement or made any advance on account with a view to the executing of the work or the performance of the contract. And in case action is taken under any of the provision aforesaid, the contractor shall not be entitled to recover or be paid any sum for any work thereof or actually performed under this contract unless and until the Engineer In charge has certified in writing the performance of such work and the value payable in respect thereof and he shall only be entitled to be paid the value so certified.

CLAUSE 4

Contractor remains liable to pay Compensation if action not taken under Clause - 3 Power to take Possession of or require Removal of or Sell Contractor's Plants.

In any case in which any of the powers conferred upon the Engineer In-charge by Clause-3 thereof, shall have become exercisable and the same are not exercised, the non-exercise thereof shall not constitute a waiver of any of the conditions hereof and such powers shall, notwithstanding, be exercisable in the event of any future case of default by the contractor and the liability of the contractor for compensation shall remain unaffected. In the event of the Engineer In charge putting in force all or any of the power vested in him under the preceding clause he may, if he so desires after giving a notice in writing to the contractor, take possession (or at the sole discretion of the Engineer In charge which shall be final and binding on the contractor), use as on hire (the amount of the hire money being also be the final determination of the Engineer In-charge) all or any tool, plant, material and store in or upon the works, or the site thereof belonging to the contractor, or procured by the contractor and intended to be used for the execution of the work/or any part thereof, paying or allowing for the same in account at the contract rates, or, in the case of these not being applicable at current market rates to be certified by the Engineer In-charge, whose certificate thereof shall be final and binding on the contractor. The Engineer In-charge by notice in writing to the contractor require him to remove such tools, plant, materials, or stores from the premises (within the time specified in such notice). In the event of the contractor failing to comply with any such requisition, the Engineer In-charge may remove them at the contractor's expense or sell them by auction or private sale on account of the contractor and his risk in all respects and the certificate of the Engineer In-charge as to the expenses of any such removal and the amount of the proceeds and expenses of any such sale shall be final and conclusive against the contractor.

CLAUSE 5

Extension of time

The time allowed for execution of the work or the extended time in accordance with these conditions shall be the essence of the Contract. The execution of the works shall commence within 10 days from the date of work order or from the date of handing over of the site whichever is later. If the contractor commits default in commencing the execution of the work as aforesaid, the Engineer In-charge shall without prejudice to any other rights or remedy available in law, be at liberty to forfeit the Earnest Money and Performance Security absolutely.

- 5.1 As soon as possible after the Contract is concluded, the Contractor shall submit a Time and Progress Chart for each mile stone and get it approved by the Engineer In-charge. The Chart shall be prepared in direct relation to the time stated in the Contract documents for completion of items of the work. It shall indicate the forecast of the dates of commencement and completion of various trades of sections of the work. This may be amended as necessary by agreement between the Engineer In-charge and the Contractor within the limitations of time imposed in the Contract documents, and further to ensure good progress during the execution of the work. The contractor shall in all cases in which the time allowed for any work, exceeds one month (save for special jobs for which a separate program has been agreed upon) complete the work as per approved milestones.
- 5.2 If the work(s) be delayed by:
- (i) Force majeure, or
 - (ii) Abnormally bad weather, or
 - (iii) Serious loss or damage by fire, or
 - (iv) Civil commotion, local commotion of workmen, strike or lockout, affecting any of the trade employed on the work, or
 - (v) Delay on the part of other contractors or tradesmen engaged by Engineer In-charge in executing work not forming part of the Contract, or
 - (vi) Non-availability of stores, which are the responsibility of the Institute to supply, or
 - (vii) Non-availability or break down of tools and plant to be supplied or supplied by the Institute, or

- (viii) Any other cause which, in the absolute discretion of the Engineer In-charge, is beyond the Contractor's control then upon the happening of any such event causing delay, the Contractor shall immediately give notice thereof in writing to the Engineer In-charge but shall nevertheless use constantly his best endeavor's to prevent or make good the delay and shall do all that may be reasonably required to the satisfaction of the Engineer In-charge to proceed with the works.
- 5.3 Request for rescheduling of mile stones and extension of time, to be eligible for consideration, shall be made by the Contractor in writing within fourteen days of the happening of the event causing delay on the prescribed form to the Director IIM through the Engineer In-charge. The Contractor shall indicate in such request the period for which extension is desired.
- 5.4 In any such case the Director IIM may give a fair and reasonable extension of time and reschedule the milestones for completion of work. Such extension shall be communicated to the Contractor by the Director IIM in writing, within 3 months of the date of receipt of such request. Non-application by the contractor for extension of time shall not be a bar for giving a fair and reasonable extension by the Director IIM and this shall be binding on the contractor.

CLAUSE 6

Measurements of Work Done

Engineer In-charge shall, except as otherwise provided, ascertain and determine by measurement, the value of work done in accordance with the contract.

All measurement of all items having financial value shall be entered in the Measurement Book and/or level field book so that a complete record is obtained of all the works performed under the contract.

All measurements and levels shall be taken jointly by the Engineer In-charge or his authorized representative and by the contractor or his authorized representative from time to time during the progress of the work and such measurements shall be signed and dated by the Engineer In-charge and the contractor or their authorized representative in token of their acceptance. If the contractor objects to any of the measurement recorded, a note shall be made to that effect with reasons and signed by both the parties.

If for any reason the contractor or his authorized representative is not available and the work of recording measurements is suspended by the Engineer In-charge or his authorized representative, the Engineer In-charge shall not entertain any claim from contractor for any loss or damage on this account. If the contractor or his authorized representative does not remain present at the time of such measurements after the

contractor or his authorized representative has been given a notice in writing three (3) days in advance or fails to countersign or to record objection within a week from the date of the measurement, then such measurements recorded in his absence by the Engineer In-charge or his authorized representative shall be deemed to be accepted by the Contractor.

The contractor shall, without extra charge, provide all assistance with every appliance, labour and other things necessary for measurements and recording levels.

Except where any general or detailed description of the work expressly shows to the contrary, measurements shall be taken in accordance with the procedure set forth in the specifications notwithstanding any provision in the relevant standard method of measurement or any general or local custom. In the case of items which are not covered by specifications, measurements shall be taken in accordance with the relevant standard method of measurement issued by the Bureau of Indian Standards and if for any item no such standard is available, then a mutually agreed method shall be followed.

The contractor shall give, not less than seven days' notice to the Engineer In-charge or his authorized representative in charge of the work, before covering up or otherwise placing beyond the reach of measurement any work in order that the same may be measured and correct dimensions thereof be taken before the same is covered up or placed beyond the reach of measurement and shall not cover up and place beyond reach of measurement any work without consent in writing of the Engineer In-charge or his authorized representative in charge of the work who shall within the aforesaid period of seven days inspect the work, and if any work shall be covered up or placed beyond the reach of measurement without such notice having been given or the Engineer In-charge's consent being obtained in writing, the same shall be uncovered at the Contractor's expense, or in default thereof no payment or allowance shall be made for such work or the materials with which the same was executed.

Engineer In-charge or his authorized representative may cause either themselves or through another officer of the Institute to check the measurements recorded jointly or otherwise as aforesaid and all the provisions stipulated herein above shall be applicable to such checking of measurements or levels.

It is also a term of this contract that recording of measurements of any item of work in the measurement book and/or its payment in the interim, on running account or final bill shall not be considered as conclusive evidence as to the sufficiency of any work or material to which it relates nor shall it relieve the contractor from liabilities for any over measurement or defects noticed till completion of the defects liability period.

As per clause 6A of general condition of contract of CPWD properly bound computerized measurements to be furnished by the contractor, duly machine numbered for the pages, and with an MB number given by the Project Office. The pages of these

Measurement Books shall be of A-4 size. Every page should have signature of contractors engineer and department in-charge engineer.

CLAUSE 7

Payment on Intermediate Certificates to be regarded as Advances

No payment shall be made for work, estimated to cost Rs. Twenty Thousand or less, till after the whole of the work shall have been completed and certificate of completion given. For works estimated to cost over Rs. Twenty thousand, the interim or running account bills shall be submitted by the contractor for the work executed on the basis of such recorded measurements on the format of the Institute in triplicate on or before the date of every month fixed for the same by the Engineer In-charge. The contractor shall not be entitled to be paid any such interim payment if the gross work done together with net payment/ adjustment of advances for material collected, if any, since the last such payment is less than Rs. Fifty thousand in which case the interim bill shall be prepared on the appointed date of the month after the requisite progress is achieved. Engineer In-charge shall arrange to have the bill verified by taking or causing to be taken, where necessary, the requisite measurements of the work. In the event of the failure of the contractor to submit the bills, Engineer In-charge shall prepare or cause to be prepared such bills in which event no claim whatsoever due to delays on payment including that of interest shall be payable to the contractor. Payment on account of amount admissible shall be made by the Engineer In-charge certifying the sum to which the contractor is considered entitled by way of interim payment at such rates as decided by the Engineer In-charge. The amount admissible shall be paid by 30th working day after the day of presentation of the bill by the Contractor to the Engineer In-charge together with the recovery/account of the material issued by the Institute and dismantled materials, if any.

All such interim payments shall be regarded as payment by way of advances against final payment only and shall not preclude the requiring of bad, unsound and imperfect or unskilled work to be rejected, removed, taken away and reconstructed or re-erected. Any certificate given by the Engineer In-charge relating to the work done or materials delivered forming part of such payment, may be modified or corrected by any subsequent such certificate(s) or by the final certificate and shall not by itself be conclusive evidence that any work or materials to which it relates is/are in accordance with the contract and specifications. Any such interim payment, or any part thereof shall not in any respect conclude, determine or affect in any way powers of the Engineer In-charge under the contract or any of such payments be treated as final settlement and adjustment of accounts or in any way vary or affect the contract.

Pending consideration of extension of date of completion, interim payments shall continue to be made as herein provided without prejudice to the right of the Institute to take action under the terms of this contract for delay in the completion of work, if the

extension of date of completion is not granted by the Director IIM.

CLAUSE 8

Completion Certificate

Within ten days of the completion of the work, the contractor shall give notice of such completion to the Engineer In-charge and within thirty days of the receipt of such notice, the Engineer In-charge shall inspect the work and if there is no defect in the work, shall furnish the contractor with a final certificate of completion, otherwise a provisional certificate of physical completion indicating defects (a) to be rectified by the contractor and/or (b) for which payment will be made at reduced rates, shall be issued. But no final certificate of completion shall be issued, nor shall the work be considered to be complete until the contractor shall have removed from the premises on which the work has been executed all scaffolding, surplus materials, rubbish and all huts and sanitary arrangements required for his/their work people on the site in connection with the execution of the works as shall have been erected or constructed by the contractor(s) and cleaned off the dirt from all wood work, doors, windows, walls, floor or other parts of the building, in, upon, or about which the work is to be executed or of which he may have had possession for the purpose of the execution; thereof, and not until the work shall have been measured by the Engineer In-charge. If the contractor shall fail to comply with the requirements of this Clause as to removal of scaffolding, surplus materials and rubbish and all huts and sanitary arrangements as aforesaid and cleaning off dirt on or before the date fixed for the completion of work, the Engineer In-charge may at the expense of the contractor remove such scaffolding, surplus materials and rubbish etc., and dispose of the same as he thinks fit and clean off such dirt as aforesaid, and the contractor shall have no claim in respect of scaffolding or surplus materials as aforesaid except for any sum actually realized by the sale thereof.

CLAUSE 9

Payment of Final Bill

The final bill shall be submitted by the contractor in the same manner as specified in interim bills within three months of physical completion of the work or within one month of the date of the final certificate of completion furnished by the Engineer In-charge whichever is earlier. No further claims shall be made by the contractor after submission of the final bill and these shall be deemed to have been waived and extinguished. Payments of those items of the bill in respect of which there is no dispute and of items in dispute, for quantities and rates as approved by Engineer In-charge, will, as far as possible be made within the period specified herein under, the period being reckoned from the date of receipt of the bill by the Engineer In-charge or his authorized representative complete with account of materials issued by the Institute and dismantled materials.

- i). If the tendered amount of work is up to Rs. 15 lakh: 1 months

ii). If the tendered amount of work exceeds Rs. 15 lakh: 3 months

CLAUSE 9A

Payment of Contractor's Bills to Banks -

Payments due to the contractor may, if so desired by him, be made to his bank, registered financial, co-operative or thrift societies or recognized financial institutions instead of direct to him provided that the contractor furnishes to the Engineer-in-Charge (1) an authorization in the form of a legally valid document such as a power of attorney conferring authority on the bank; registered financial, co-operative or thrift societies or recognized financial institutions to receive payments and (2) his own acceptance of the correctness of the amount made out as being due to him by Institute or his signature on the bill or other claim preferred against Government before settlement by the Engineer-in-Charge of the account or claim by payment to the bank, registered financial, co-operative or thrift societies or recognized financial institutions. While the receipt given by such banks; registered financial, co-operative or thrift societies or recognized financial institutions shall constitute a full and sufficient discharge for the payment, the contractor shall whenever possible present his bills duly receipted and discharged through his bank, registered financial, co-operative or thrift societies or recognized financial institutions.

Nothing herein contained shall operate to create in favour of the bank; registered financial, co-operative or thrift societies or recognized financial institutions any rights or equities vis-a-vis the Director.

CLAUSE 10

Materials supplied by Institute:-Deleted

CLAUSE 10A

Material to be provided by the Contractor

The contractor shall, at his own expense, provide all materials, required for the works. The contractor shall, at his own expense and without delay, supply to the Engineer In-charge samples of materials to be used on the work and shall get these approved in advance. All such materials to be provided by the Contractor shall be in conformity with the specifications laid down or referred to in the contract. The contractor shall, if requested by the Engineer In-charge furnish proof, to the satisfaction of the Engineer In-charge, that the materials so comply with the specifications. The Engineer In-charge shall within thirty days of supply of samples or within such further period as he may require intimate to the Contractor in writing whether samples are approved by him or not. If samples are not approved, the Contractor shall forthwith arrange to supply to the Engineer In-charge for his approval, fresh samples complying with the specifications laid down in the contract. When

materials are required to be tested in accordance with specifications, approval of the Engineer In-charge shall be issued after the test results are received.

The Contractor shall at his risk and cost submit the samples of materials to be tested or analyzed and shall not make use of or incorporate in the work any materials represented by the samples until the required tests or analysis have been made and materials finally approved by the Engineer In-charge. The Contractor shall not be eligible for any claim or compensation either arising out of any delay in the work or due to any corrective measures required to be taken on account of and as a result of testing of materials.

The contractor shall, at his risk and cost, make all arrangements and shall provide all facilities as the Engineer In-charge may require for collecting, and preparing the required number of samples for such tests at such time and to such place or places as may be directed by the Engineer In-charge and bear all charges and cost of testing unless specifically provided for otherwise elsewhere in the contract or specifications. The Engineer In-charge or his authorized representative shall at all times have access to the works and to all workshops and places where manufacturing is being done.

Manufactured articles or machinery are being obtained for the works shall be subject to inspections at workshop and the contractor shall afford every facility and every assistance in obtaining the right to such access.

The Engineer In-charge shall have full powers to require the removal from the premises of all materials which in his opinion are not in accordance with the specifications and in case of default, the Engineer In-charge shall be at liberty to employ at the expense of the contractor, other persons to remove the same without being answerable or accountable for any loss or damage that may happen or arise to such materials. The Engineer In-charge shall also have full powers to require other proper materials to be substituted thereof and in case of default, the Engineer In-charge may cause the same to be supplied and all costs of which may attend such removal and substitution shall be borne by the Contractor.

The contractor shall at his own expense, provide a material-testing lab at the site for conducting routine field tests. The lab shall be equipped with the essential testing equipments.

CLAUSE 10B

Secured Advance on Non-perishable Material -

The contractor, on signing an indenture in the form to be specified by the Engineer - in-charge shall be entitled to be paid during the progress of the execution of the work UP TO 75% OF THE ASSESSEED VALUE of any materials which are in the opinion of the Engineer— in-charge non-perishable, non-fragile and non-combustible and are in accordance with the

Contract and which have been brought on the site in connection therewith and are adequately stored and/ or protected against damage by weather or other causes but which have not at the time of advance been incorporated in the works. When materials on account of which an advance has been made under this sub-clause are incorporated in the work the amount of such advance shall be recovered/deducted from the next payment made under any of the clause of clauses of this Contract.

Such secured advance shall also be payable on other items of perishable nature, fragile and combustible with the approval of the Engineer-in-Charge provided the Contractor provides a comprehensive insurance cover for the full cost of such materials. The decision of the Engineer-in-Charge

Mobilization Advance - i) Mobilization advance not exceeding 10% (Ten percent) of the tendered value may be given, if requested by the contractor in writing within one month of the order to commence the work. Such advance shall be in two or more installments to be determined by Engineer-in- Charge at his sole discretion. The first installment of such advance shall be released by the Engineer to the contractor on the request made by the contractor to the Engineer in this behalf. The second and subsequent installments shall be released by the Engineer-in- Charge only after the contractor furnishes a proof of the satisfactory utilization of the earlier installment to the entire satisfaction of the Engineer.

Before any installment of advance payment is released, the contractor shall execute a Bank guarantee Bond from schedule Bank for the amount of advance and valid for the contract period. This shall be kept renewed from time to time to cover the balance amount and likely period of complete recovery, together with interest.

Interest and Recovery.(ii) The mobilization advance in (i) above bears simple interest at the rate of Ten percent per annum and shall be calculated from the date of payment to the date of recovery, both days inclusive, on the outstanding amount of advance. Recovery of such advance shall be made by the deduction from the contractors bills commencing after first ten percent of the gross value of the work is executed and paid, on pro rata percentage basis to the gross value of the work billed beyond 10% in such a way that the entire advance is recovered by the time eighty percent of the gross value of the contract is executed and paid, together with interest due on entire outstanding amount upto the date of recovery of the installment.

Recovery at any intermediate stage shall be effected if necessary, by encashment of part Bank Guarantee if the appropriate prorata amount of advance is not available from the work done by the contractor.

If the circumstances are considering reasonable by the Engineer-in-charge , the period mentioned in (I, ii) for request by the contractor in writing for grant of mobilization advance may be extended in the discretion of the Engineer-in-charge.

The said Bank guarantee for advance shall initially be made for the full amount plus 10% interest for one year i.e. 120% and valid for the contract period and be kept renewed from the time to time to recover the balance amount and likely period of complete recovery together with interest.

Plants, Machinery and Shuttering Material - Deleted

Interest & Recovery - Deleted

CLAUSE 10C

Payment on Account of Increase in Prices/Wages due to Statutory Order (S) -Deleted

CLAUSE 10 CA

Payment due to variation in prices of materials after receipt of tender -Deleted

CLAUSE 10 CB

Payment due to increase/decrease in prices/wages (excluding materials covered under clause 10C after receipt of tender) - Deleted

CLAUSE 10 D

Dismantled Material - Institute Property

The contractor shall treat all materials obtained during dismantling of a structure, excavation of the site for a work, etc. as Institute's property and such materials shall be disposed off to the best advantage of Institute according to the instructions in writing issued by the Engineer In charge.

CLAUSE 11

Work to be executed in Accordance with Specifications, Drawings, and Orders etc.

The contractor shall execute the whole and every part of the work in the most substantial and workmanlike manner both as regards materials and otherwise in every respect in strict accordance with the specifications. The contractor shall also conform exactly, fully and faithfully to the design, drawings and instructions in writing in respect of the work signed by the Chief Administrative Officer and the contractor shall be furnished free of charge one copy of the contract documents together with specifications, designs, drawings.

The contractor shall comply with the provisions of the contract and with due care and diligence execute and maintain the works and provide all labour and materials, tools and plants including for measurements and supervision of all works, structural plans and other things of temporary or permanent nature required for such execution and maintenance in so

far as the necessity for providing these, is specified or is reasonably inferred from the contract. The Contractor shall take full responsibility for adequacy, suitability and safety of all the works and methods of construction.

CLAUSE 12:

Alterations in specifications and designs

The Engineer In charge shall have power to make alteration in, omissions from, additions variations to, or substitutions for the original specifications, drawings, designs and instructions that may appear to him to be necessary or advisable during the progress of the work and the contractor shall be bound to carry out the works in accordance with any instruction given to him in writing by the Engineer In charge and such alterations, omissions,

additions or substitutions shall form part of the contract as if originally provided therein and any altered, additional or substituted work which the contractor may be directed to do in the manner specified above as part of the works, shall be carried out by the contractor on the same conditions in all respects including price on which he agreed to do the main work except as hereafter provided.

The time for completion of the works shall, in the event of any deviations resulting in additional cost over the tendered amount being ordered be extended, if requested by the contractor, as follows:

- (i) In the proportion which the additional cost of the altered, additional or substituted work, bears to the original tendered amount plus
- (ii) 25% of the time calculated in (i) above or such further additional time as may be considered reasonable by the Director IIM.

Deviation, Extra Item and Pricing

In the case of extra item(s) the contractor may within seven days of receipt of order shall submit to the Engineer In-charge rates of such items duly supported by proper analysis, for the work and the Engineer In-charge shall within fifteen days of the receipt of the claims supported by analysis, after giving consideration to the analysis of the rates submitted by the contractor, determine the rates on the basis of the market rates and the contractor shall be paid in accordance with the rates so determined.

In the case of substituted items (items that are taken up with partial substitution or in lieu of items of work in the contract), the rate for the agreement item (to be substituted) and substituted item shall also be determined in the manner as mentioned below.

Deviation, Substituted Item and Pricing

If the market rate for the substituted item so determined is more than the market rate of the agreement item (to be substituted), the rate payable to the contractor for the substituted item shall be the rate for the agreement item (to be substituted) so increased to the extent of the difference between the market rate of substituted item and the agreement item (to be substituted).

If the market rate for the substituted item so determined is less than the market rate of the agreement item (to be substituted), the rate payable to the contractor for the substituted item shall be the rate for the agreement item (to be substituted) so decreased to the extent of the difference between the market rate of substituted item and the agreement item (to be substituted).

Deviation, Deviated Quantities and Pricing

In the case of contract items, substituted items, contract cum substituted items, which exceed the limit as per schedule F of the tendered amount, the contractor may within seven days of receipt of order or occurrence of the excess, claim revision of the rates, supported by proper analysis for the work in excess of the above mentioned limits, provided that if the rates so claimed are in excess of the rates specified in the schedule of quantities, the Engineer-in-Charge shall within Fifteen days of receipt of the claims supported by analysis, after giving consideration to the analysis of the rates submitted by the contractor, determine the rates on the basis of the market rates and the contractor shall be paid in accordance with the rates so determined.

The provisions of the clause 12.2 shall also apply to the decrease in the rates of items for the work in excess of the limit as per schedule F of the tendered amount and the Engineer-in-Charge shall after giving notice to the contractor within fifteen days of occurrence of the excess and after taking into consideration any reply received from him within seven days of the receipt of the notice, revise the rates for the work in question within Fifteen days of the expiry of the said period of Seven days having regard to the market rates.

The contractor shall send to the Engineer-in-Charge once every months, an up to date account giving complete details of all claims for additional payments to which the contractor may consider himself entitled and of all additional work ordered by the Engineer-in-Charge which he has executed during the preceding quarter failing which the contractor shall be deemed to have waived his right. However, the Engineer In-charge may authorize consideration of such claims on merits.

Any operation incidental to or necessary for proper execution of the item included in the Schedule of quantities or in the schedule of rates mentioned above, whether or not, specifically indicated in the description of the item and the relevant specifications, shall be deemed to be included in the rates quoted by the contractor or the rate given in the said schedule of rates, as the case may be. Nothing extra shall be admissible for such operations.

CLAUSE 13

Foreclosure of contract due to Abandonment or Reduction in Scope of Work

If at any time after acceptance of the tender, Institute decide to abandon or reduce the scope of the works for any reason, whatsoever, and hence not require the whole or any part of the work to be carried out, the Engineer In-charge shall give notice in writing to that effect to the contractor and the contractor shall act accordingly in the matter. The contractor shall have no claim to any payment of compensation or otherwise, whatsoever, on account of any profit or advantage which he might have derived from the execution of the works in full but which he did not derive in consequence of the foreclosure of the whole or part of the works. He shall have no claim for compensation by reason of any alteration having been made in the original specifications, drawings, designs and instructions which shall involve any curtailment of work as originally contemplated.

CLAUSE 14

Action and Compensation Payable in case of Bad Work

If the contractor:

At any time makes default during currency of work or does not execute any part of the work with due diligence and continues to do so even after a notice in writing from the Engineer In-charge;

OR

Commits default in complying with any of the term and condition of the contract and does not remedy it or takes effective steps to remedy it within 7 days even after notice in writing is given in that behalf by the Engineer In-charge;

OR

fails to complete the work(s) or items of work with individual dates of completion, on or before the date(s) so determined, and does not complete them within the period specified in the notice given in writing in that behalf by the Engineer In-charge.

The Engineer In-charge without invoking action under clause 3 may, without prejudice to any other right or remedy against the contractor which have either accrued or accrue thereafter to the Institute, by a notice in writing to take the part work / part incomplete work of any item(s) out of his hands and shall have powers to:

- (a) take possession of the site and any material, constructional plant, implement, store, etc., thereon; and/or

- (b) Carry out the part work / part incomplete work of any item(s) by any means at the risk and cost of the contractor.

The Engineer In-charge shall determine the amount, if any, recoverable from the Contractor for completion of the part work/ part incomplete work of any item(s) taken out of his hands and execute at the risk and cost of the contractor. The liability of contractor on account of loss or damage suffered by the Institute because of action under this clause shall not exceed 10% of the tendered amount of the work.

In determining the amount, credit shall be given to the contractor with the value of work done in all respect in the same manner and at the same rate as if it had been carried out by the original contractor under the terms of his contract, the value of contractor's materials taken over and incorporated in the work and use of plant and machinery belonging to the contractor. The certificate of the Engineer In-charge as to the value of work done shall be final and conclusive against the contractor provided always that action under this clause shall only be taken after giving notice in writing to the contractor. Provided also that if the expenses incurred by the Institute are less than the amount payable to the contractor at his agreement rates, the difference shall not be payable to the contractor.

Any excess expenditure incurred or to be incurred by Institute in completing the part work/ part incomplete work of any item(s) or the excess, loss, damages suffered or may be suffered by Institute as aforesaid after allowing such credit shall, without prejudice to any other right or remedy available to the Institute in law or as per agreement, be recovered from any money due to the contractor on any account, and if such money is insufficient, the contractor shall be called upon in writing and shall be liable to pay the same within 30 days.

If the contractor fails to pay the required sum within the aforesaid period of 30 days, the Engineer In-charge shall have the right to sell any or all of the contractors' unused materials, constructional plant, implements, temporary building at site etc. and adjust the proceeds of sale thereof towards the dues recoverable from the contractor under the contract and if thereafter there remains any balance outstanding, it shall be recovered in accordance with the provisions of the contract.

In the event of above course being adopted by the Engineer In-charge, the contractor shall have no claim to compensation for any loss sustained by him by reason of his having purchased or procured any material or entered into any engagement or made any advance on any account or with a view to the execution of the work or the performance of the contract.

CLAUSE 15

Suspension of Work

The contractor shall, on receipt of the order in writing of the Engineer In-charge,

(whose decision shall be final and binding on the contractor) suspend the progress of the works or any part thereof for such time and in such manner as the Engineer In-charge may consider necessary so as not to cause any damage or injury to the work already done or endanger the safety thereof for any of the following reasons:

- (a) on account of any default on the part of the contractor; or
- (b) for proper execution of the works or part thereof for reasons other than the default of the contractor; or
- (c) for safety of the works or part thereof.

The contractor shall, during such suspension, properly protect and secure the works to the extent necessary and carry out the instructions given in that behalf by the Engineer In-charge.

CLAUSE 16

Action in case Work not done as per Specifications

All works under or in course of execution or executed in pursuance of the contract shall at all times be open and accessible to the inspection and supervision of the Engineer In-charge, his authorized subordinates in charge of the work and all the superior officers, officer of the Quality Assurance Unit of the Institute or any organization engaged by the Institute for Quality Assurance and the contractor shall, at all times, during the usual working hours and at all other times at which reasonable notice of the visit of such officers has been given to the contractor, either himself be present to receive orders and instructions or have a responsible agent duly accredited in writing, present for that purpose. Orders given to the Contractor's agent shall be considered to have the same force as if they had been given to the contractor himself.

If it shall appear to the Engineer In-charge or his authorized subordinates in-charge of the work or to the officer in charge of Quality Assurance Unit or his subordinate officers or the officers of the organization engaged by the Institute for Quality Assurance that any work has been executed with unsound, imperfect, or unskillful workmanship, or with materials or articles provided by him for the execution of the work which are unsound or of a quality inferior to that contracted or otherwise not in accordance with the contract, the contractor shall, on demand in writing which shall be made within twelve months of the completion of the work from the Engineer In-charge specifying the work, materials or articles complained of notwithstanding that the same may have been passed, certified and paid for, forthwith rectify, or remove and reconstruct the work so specified in whole or in part, as the case may require or as the case may be, remove the materials or articles so specified and provide other proper and suitable materials or articles at his own charge and cost. In the event of the failing to do so within the period specified by the Engineer In-charge in his demand

aforesaid, then the contractor shall be liable to pay compensation at the same rate as under clause 2 of the contract (for non-completion of the work in time) for this default. In such case the Engineer In-charge may not accept the item of work at the rates applicable under the contract but may accept such items at reduced rates as he may consider reasonable, if the item is so acceptable without detriment to the safety and utility of the item and the structure or he may reject the work outright without any payment and/or get it with other connected and incidental items rectified, or removed and re-executed at the risk and cost of the contractor. Decision of the Engineer In-charge to be conveyed in writing in respect of the same will be final and binding on the contractor.

CLAUSE 17

Contractor Liable for Damages, Defects during 12 months of Defects Liability Period:

If the contractor or his working people or servants shall break, deface, injure or destroy any part of building in which they may be working, or any building, road, road kerb, fence, enclosure, water pipe, cables, drains, electric or telephone post or wires, trees, grass or grassland, or cultivated ground contiguous to the premises on which the work or any part thereof is being executed, or if any damage shall happen to the work while in progress, from any cause whatever or if any defect or other faults appear in the work within twelve months after a certificate final or otherwise of its completion shall have been given by the Engineer

In-charge as aforesaid arising out of defect or improper materials or workmanship the contractor shall upon receipt of a notice in writing from the Engineer In-charge on that behalf make the same good at his own expense or in default the Engineer In-charge cause the same to be made good by other workmen and deduct the expense from any sum that may be due or at any time thereafter may become due to the contractor, or from his performance security or security deposit. The security deposit of the contractor shall not be refunded before the expiry of twelve months after the issue of the certificate, final or otherwise, of completion of work, or till the final bill has been prepared and passed whichever is later.

CLAUSE 18

Contractor to Supply Tools & Plants etc

The contractor shall provide at his own cost all materials, tools, plant, appliances, implements, ladders, cordage, tackle, scaffolding and temporary works required for the proper execution of the work, whether original, altered or substituted and whether included in the specifications or other documents forming part of the contract or referred to in these conditions or not, or which may be necessary for the purpose of satisfying or complying with the requirements of the Engineer In-charge as to any matter as to which under these conditions he is entitled to be satisfied, or which he is entitled to require together with

carriage therefor to and from the work. The contractor shall also supply without charge the requisite number of persons with the means and materials, necessary for the purpose of setting out works, and counting, weighing and assisting the measurement or examination at any time and from time to time of the work or materials. Failing his so doing, the same may be provided by the Engineer In-charge at the expense of the contractor and the expenses may be deducted, from any money due to the contractor, under this contract or otherwise and/or from his performance security and security deposit.

CLAUSE 18 A

Recovery of Compensation paid to Workmen

In every case in which by virtue of the provisions sub-section (1) of Section 12, of the Workmen's Compensation Act, 1923, Institute is obliged to pay compensation to a workman employed by the contractor in execution of the works, the Institute shall recover from the contractor the amount of the compensation so paid; and, without prejudice to the rights of the Institute under sub-section (2) of Section 12, of the said Act, the Institute shall be at liberty to recover such amount or any part thereof by deducting it from the performance security and security deposit or from any sum due by Institute to the contractor whether under this contract or otherwise.

Clause 18 B

Ensuring Payment and Amenities to Workers if Contractor fails :- In every case in which by virtue of the provisions of the Contract Labour (Regulation and Abolition) Act, 1970 and of the Contract Labour (Regulation and Abolition) Central Rules, 1971, Government is obliged to pay any amounts of wages to a workman employed by the contractor in execution of the works, or to incur any expenditure in providing welfare and health amenities required to be provided under the above said Act and the rules under clause 19H or under the CPWD Contractor's Labour Regulations, or under the Rules framed by Government from time to time for the protection of health and sanitary arrangements for workers employed by Institute Contractors, Government will recover from the contractor the amount of wages so paid or the amount of expenditure so incurred, and without prejudice to the rights of the Government under sub-section (2) of Section 20 and sub-section (4) of Section 21, of the Contract Labour (Regulation and Abolition) Act, 1970, Government shall be at liberty to recover such amount or any part thereof by deducting it from the security deposit or from any sum due by Government to the contractor whether under this contract or otherwise Government shall not be bound to contest any claim made against it under sub-section (1) of Section 20, sub-section (4) of Section 21, of the said Act, except on the written request of the contractor and upon his giving to the Government full security for all costs for which Government might become liable in contesting such claim.

CLAUSE 19

Labour Laws and Minimum Wages Act to be complied with:

The contractor shall comply with all the provisions of all the labour laws and Minimum Wages Act, 1948 amended from time to time and rules and regulations made hereunder. List of labour laws and minimum wages act is given below

- a) Contract labour (Regulation and Abolition) Act 1970
- b) Contract labour (Regulation and Abolition) Central Rules 1971
- c) CPWD Contractor's Labour Regulations
- d) Child Labour (Prohibition and Regulation) Act 1986
- e) Building and other Construction workers (Regulation of Employment and Conditions of Service) Act 1966
- f) Building and other Construction Workers Welfare Cess Act 1966
- g) Payment of Wages Act 1936
- h) Minimum Wages Act 1948
- i) Minimum Wages (Central) Rules 1950
- j) Employees Liability Act 1938
- k) Workmen's Compensation Act 1923
- l) Industrial Disputes Act 1947
- m) Maternity Benefits Act 1961
- n) CPWD Safety Code
- o) All the Rules for the Protection of Health and Sanitary arrangement for workers framed by the Government from time to time
- p) Rules of the Local Public Health and Medical Authority for the Sanitation of Labour Huts

The Contractor shall also comply with any other labour law affecting contract labour that may be brought into force from time to time.

CLAUSE 20 -

Employment of skilled/semi skilled workers

The contractor shall, at all stages of work, deploy skilled/semi skilled tradesmen who are qualified and possess certificate in particular trade from IIM INDORE/Industrial Training Institute/National Institute of Construction Management And Research (NICMAR)/ National Academy of Construction, CIDC or any similar reputed and recognized Institute managed/ certified by State/Central Government. The number of such qualified tradesmen shall not be less than 20% of total skilled/semi skilled workers required in each trade at any stage of work. The contractor shall submit number of man days required in respect of each trade, its scheduling and the list of qualified tradesmen along with requisite certificate from recognized Institute to Engineer in charge for approval. Notwithstanding such approval, if the tradesmen are found to have inadequate skill to execute the work of respective trade, the contractor shall substitute such tradesmen within two days of written notice from Engineer-in-Charge. Failure on the part of contractor to obtain approval of Engineer-in-Charge or failure to deploy qualified tradesmen will attract compensation to be paid by contractor at the rate of Rs. 100 per such tradesman per day. Decision of Engineer in Charge as to whether particular tradesman possesses requisite skill and amount of compensation in case of default shall be final and binding.

Provided always, that the provisions of this clause shall not be applicable for works with estimated cost put to tender being less than Rs. 5 crore

CLAUSE 21

Work not to be sublet. Action in case of insolvency

The contract shall not be assigned or sublet without the written approval of the Engineer In-charge. If the contractor shall assign or sublet his contract, or attempt to do so, or become insolvent or commence any insolvency proceedings or make any composition with his creditors or attempt to do so, or if any bribe, gratuity, gift, loan, perquisite, reward or advantage pecuniary or otherwise, shall either directly or indirectly, be given, promised or offered by the contractor, or any of his servants or agent to any public officer or person in the employ of Institute in any way relating to his office or employment, or if any such officer or person shall become in any way directly or indirectly interested in the contract, the Engineer In-charge on behalf of the Director IIM Indore shall have power to adopt the course specified in Clause 3 hereof in the interest of Institute and in the event of such course being adopted, the consequences specified in the said Clause 3 shall ensue.

CLAUSE 22

Sum payable by way of compensation to be considered as reasonable compensation without reference to actual loss

All sums payable by way of compensation under any of these conditions shall be considered as reasonable compensation to be applied to the use of Institute without reference to the actual loss or damage sustained and whether or not any damage shall have

been sustained.

CLAUSE 23

Changes in firm's Constitution

Where the contractor is a partnership firm, the previous approval in writing of the Chief Administrative Officer shall be obtained before any change is made in the constitution of the firm. Where the contractor is an individual or a Hindu undivided family business concern, such approval as aforesaid shall likewise be obtained before the contractor enters into any partnership agreement where under the partnership firm would have the right to carry out the works hereby undertaken by the contractor. If previous approval as aforesaid is not obtained, the contract shall be deemed to have been assigned in contravention of Clause 21 hereof and the same action may be taken, and the same consequences shall ensue as provided in the said Clause 21.

CLAUSE 24

Works to be under direction of Engineer In-charge

All works to be executed under the contract shall be executed under the directions and subject to the approval in all respects of the Engineer In-charge who shall be entitled to direct at what point or points and in what manner they are to be commenced, and from time to time carried on.

CLAUSE 25

Settlement of Disputes & Arbitration

Except where otherwise provided in the contract, all questions and disputes relating to the meaning of the specifications, designs, drawings and instructions here-in before mentioned and as to the quality of workmanship or materials used on the work or as to any other question, claim, right, matter or thing whatsoever in any way arising out of or relating to the contract, designs, drawings, specifications, estimates, instructions, orders or these conditions or otherwise concerning the works or the execution or failure to execute the same whether arising during the progress of the work or after the cancellation, termination, completion or abandonment thereof shall be dealt with as mentioned hereinafter:

If the contractor considers any work demanded of him to be outside the requirements of the contract, or disputes any drawings, record or decision given in writing by the Engineer In-charge on any matter in connection with or arising out of the contract or carrying out of the work, to be unacceptable, he shall promptly within 15 days request the Engineer In-charge in writing for written instruction or decision. Thereupon, the Engineer In-charge shall give his written instructions or decision within a period of one month from the

receipt of the contractor's letter.

If the Engineer In-charge fails to give his instructions or decision in writing within the aforesaid period or if the contractor is dissatisfied with the instructions or decision of the Engineer In-charge, the contractor may, within 15 days of the receipt of Engineer In-charge's decision, appeal to the Director IIM who shall afford an opportunity to the contractor to be heard, if the latter so desires, and to offer evidence in support of his appeal. The Director IIM shall give his decision within 30 days of receipt of contractor's appeal.

If the contractor is dissatisfied with the decision of the Director IIM, he may within 30 days from the receipt of the Director IIM decision demand appointment of sole arbitrator, failing which the said decision shall be final, binding and conducive and shall not be preferable to adjudication by arbitrator.

On receipt of demand the Director IIM shall appoint sole arbitrator.

- i) If the arbitrator so appointed is unable or unwilling to act or resigns his appointment or vacates his office due to any reason, whatsoever, another sole arbitrator shall be appointed in the manner aforesaid. Such person shall be entitled to proceed with the reference from the stage at which it was left by his predecessor.

It is a term of this contract that the party invoking arbitration shall give a list of disputes with amounts claimed in respect of each such dispute along with the notice for appointment of arbitrator and giving reference to the rejection of the appeal by the Director IIM.

It is also a term of this contract that if the contractor does not make any demand for appointment of arbitrator in respect of any claims in writing as aforesaid within 120 days of receiving the intimation from the Engineer In-charge that the final bill is ready for payment, the claim of the contractor shall be deemed to have been waived and absolutely barred and the Institute shall be discharged and released of all the liabilities under the contract in respect of these claims.

The arbitration shall be conducted in accordance with the provisions of the Arbitration and Conciliation Act, 1996 (26 of 1996) or any statutory modifications or re-enactment thereof and the rules made there under and for the time being in force shall apply to the arbitration proceeding under this clause.

It is also a term of this contract that the arbitrator shall adjudicate on only such disputes as are referred to him by the appointing authority and give separate award against each dispute and claim referred to him.

It is also a term of the contract that if any fee is payable to the arbitrator, these shall be paid equally by both the parties.

It is also a term of the contract that the arbitrator shall be deemed to have entered on the reference on the date he issues notice to both the parties calling them to submit their statement of claims and counter statement of claims. The venue of the arbitration shall be such place as may be fixed by the arbitrator in his sole discretion. The fees, if any, of the arbitrator shall, if required to be paid before the award is made and published, be paid half and half by each of the parties. The cost of the reference and of the award (including the fees, if any, of the arbitrator) shall be in the discretion of the arbitrator who may direct to any by whom and in what manner, such costs or any part thereof shall be paid and fix or settle the amount of costs to be so paid.

CLAUSE 26

Contractor to indemnify Institute against Patent Rights

The contractor shall fully indemnify and keep indemnified the Director IIM against any action, claim or proceeding relating to infringement or use of any patent or design or any alleged patent or design rights and shall pay any royalty which may be payable in respect of any article or part thereof included in the contract. In the event of any claim made under or action brought against Institute in respect of any such matters as aforesaid, the contractor shall be immediately notified thereof and the contractor shall be at liberty, at his own expense, to settle any dispute or to conduct any litigation that may arise there from, provided that the contractor shall not be liable to indemnify the Director IIM if the infringement of the patent or design or any alleged patent or design right is the direct result of an order passed by the Engineer In-charge in this behalf.

CLAUSE 27

Lump sum Provision in Tender

When the estimate on which a tender is made includes lump sum in respect of parts of the work, the contractor shall be entitled to payment in respect of the items of work involved or the part of the work in question at the same rates as are payable under this contract for such items, or if the part of the work in question is not, in the opinion of the Engineer-in-Charge payable of measurement, the Engineer-in-Charge may at his discretion pay the lump-sum amount entered in the estimate, and the certificate in writing of the Engineer-in-Charge shall be final and conclusive against the contractor with regard to any sum or sums payable to him under the provisions of the clause.

CLAUSE 28

Action where no Specifications are specified

In the case of any class of work for which there is no such specification as referred to in Clause 11, such work shall be carried out in accordance with the Bureau of Indian Standards Specifications. In case there are no such specifications in Bureau of Indian Standards, the work shall be carried out as per manufacturers' specifications. In case there are no such specifications as required above, the work shall be carried out in all respects in accordance with the instructions and requirements of the Engineer In-charge.

CLAUSE 29

Withholding and Lien in respect of sum due from contractor

- i. Whenever any claim or claims for payment of a sum of money arises out of or under the contract or against the contractor, the Engineer In-charge shall be entitled to withhold and also have a lien to retain such sum or sums in whole or in part from the security deposit, and also have a lien over the same pending finalization or adjudication of any such claim. In the event of the security deposit being insufficient to cover the claimed amount or amounts the Engineer In-charge shall be entitled to withhold and have a lien to retain to the extent of such claimed amount or amounts referred to above, from any sum or sums found payable or which may at any time thereafter become payable to the contractor under the same contract or any other contract with the Engineer In-charge pending finalization of adjudication of any such claim.

It is an agreed term of the contract that the sum of money or moneys so withheld or retained under the lien referred to above by the Engineer In-charge will be kept withheld or retained as such by the Engineer In-charge till the claim arising out of or under the contract is determined by the arbitrator (if the contract is governed by the arbitration clause) or by the competent court, as the case may be, and that the contractor will have no claim for interest or damages whatsoever on any account in respect of such withholding or retention under the lien referred to above and duly notified as such to the contractor. For the purpose of this clause, where the contractor is a partnership firm or a limited company, the Engineer In-charge shall be entitled to withhold and also have a lien to retain towards such claimed amount or amounts in whole or in part from any sum found payable to any partner/limited company as the case may be, whether in his individual capacity or otherwise.

- ii. Institute shall have the right to cause an audit and technical examination of the works and the final bills of the contractor including all supporting vouchers, abstract, etc., to be made after payment of the final bill and if as a result of such audit and technical examination any sum is found to have been overpaid in respect of any work done by the contractor under the contract or any work claimed to have been done by him under the contract and found not to have been executed, the contractor shall be liable to refund the amount of over-payment and it shall be lawful for the Engineer In-charge to recover the same from him in the manner prescribed in sub-clause (i) of

this clause or in any other manner legally permissible.

CLAUSE 29 A

Lien in respect of claims in other contracts

Any sum of money due and payable to the contractor (including the security deposit returnable to him) under the contract may be withheld or retained by way of lien by the Engineer In-charge.

It is an agreed term of the contract that the sum of money so withheld or retained under this clause by the Engineer In-charge will be kept withheld or retained as such by the Engineer In-charge till his claim arising out of the same contract or any other contract is either mutually settled or determined by the arbitration clause or by the competent court, as the case may be, and that the contractor shall have no claim for interest or damages whatsoever on this account or on any other ground in respect of any sum of money withheld or retained under this clause and duly notified as such to the contractor.

CLAUSE 30

Employment of Coal Mining or Controlled Area Labour not permissible - Deleted

CLAUSE 31

Unfiltered water supply

The contractor shall make his own arrangements for water required for the work and nothing extra will be paid for the same. This will be subject to the following conditions.

CLAUSE 31 A

Water Supply by the Institute -Deleted

CLAUSE 32

Alternate water arrangements - Deleted

CLAUSE 33

Return of Surplus Material - Deleted

CLAUSE 34

Hire of Plant & Machinery - Deleted

CLAUSE 35

Condition relating to use of Asphaltic Materials - Deleted

CLAUSE 36

Employment of Technical Staff and employees

Contractors Superintendence, Supervision, Technical Staff and Employees:

The contractor shall provide all the necessary superintendence during execution of the work and all along thereafter as may be necessary for proper fulfilling of the obligations under the contract.

The contractor shall immediately after receiving letter of acceptance of the tender and before commencement of the work, intimate in writing to the Engineer In-charge, the name(s), qualifications, experience, age, address(s) and other particulars along with certificates, of the principal technical representative to be in charge of the work and other technical representative who will be supervising the work. Minimum requirement of technical representative shall be one having degree/diploma in Electrical Engineering and minimum 3 years' relevant experiences in similar works. The Engineer In-charge shall within 3 days of receipt of such communication intimate in writing his approval to the contractor or otherwise to such representative(s). Any such approval may at any time be withdrawn and in case of such withdrawal, the contractor shall appoint another such representative(s) according to the provisions of this clause. Decision of the tender accepting authority shall be final and binding on the contractor in this respect. Such a principal technical representative and other technical representative shall be appointed by the contractor soon after receipt of the approval from Engineer In-charge and shall be available at site before start of work.

All the provisions applicable to the principal technical representative under the Clause will also be applicable to other technical representative. The principal technical representative and other technical representative shall be present at the site of work for supervision at all times when any construction activity is in progress and also present himself/themselves, as required, to the Engineer In-charge and/or his authorized representative to take instructions. Instructions given to the principal technical representative or other technical representative shall be deemed to have the same force as if these have been given to the contractor. The principal technical representative and other technical representative shall be actually available at the site. The decision of the Engineer In-charge as recorded in the site order book and measurements recorded/checked/test checked in Measurement Books shall be final and binding on the contractor. Further if the contractor fails to appoint suitable principal technical representative and/or other technical representative and if such appointed persons are not effectively present or are absent by more than two days without duly approved substitute or do not discharge their

responsibilities satisfactorily, the Engineer In-charge shall have full powers to suspend the execution of the work until such date as suitable other technical representative is appointed and the contractor shall be held responsible for the delay so caused to the work. The contractor shall submit a certificate of employment of the technical representative(s) along with every on account bill/ final bill and shall produce evidence if at any time so required by the Engineer In-charge at site during all stages of execution of work, during recording/ checking/test checking of measurements of works and whenever so required by the Engineer In-charge and shall also note down instructions conveyed by the Engineer In-charge or his authorized representative in the site order book and shall affix his signature in token of noting down the instructions and in token of acceptance of measurements/ checked measurements/test checked measurements.

Recovery @ of 15,000 per month shall be affected by the Engineer In-charge from the contractor if he fails to appoint the technical representative.

CLAUSE 37

Levy/Taxes payable by Contractor

- (i) Commercial Tax/VAT, Service Tax, Building and other Construction Workers Welfare Cess or any other tax or Cess in respect of this contract shall be payable by the contractor and the Institute shall not entertain any claim whatsoever in this respect.
- (ii) The contractor shall deposit royalty and obtain necessary permit for supply of the minor minerals.

CLAUSE 38

Conditions for reimbursement of Levy/Taxes if levied after receipt of tenders - Deleted

CLAUSE 39

Termination of Contract on death of contractor

Without prejudice to any of the right or remedy under this contract, if the contractor dies, the Engineer In-charge on behalf of the Director IIM shall have the option of terminating the contract.

CLAUSE 40

If relative working in the Institute then the contractor not allowed to tender

The contractor shall not be permitted to tender for works in the Institute in case his near relative is posted in capacity of the Engineer In-charge. He shall also intimate the names of persons who are working with him in any capacity or are subsequently employed

by him and who are near relatives to Officers in the Institute. Any breach of this condition by the contractor would render him liable to be removed from the approved list of contractors of the Institute. If however the contractor is registered in any other department, he shall be debarred from tendering in Institute for any breach of this condition.

NOTE: By the term “near relatives” is meant wife, husband, parents and grandparents, children and grandchildren, brothers and sisters, uncles, aunts and cousins and their corresponding in-laws.

CLAUSE 41

No Gazette Engineer work as Contractor within one year of retirement- Deleted

CLAUSE 42

Return of material and recovery for excess material - Deleted

CLAUSE 43

Compensation during warlike situations - Deleted

SCHEDULE 'A' TO 'F'

PROFORMA OF SCHEDULES

(Operative schedules to be supplied separately to each intending tenderer)

SCHEDULE 'A'

Schedule of quantities enclosed.

SCHEDULE 'B'

No material shall be issued to the Contractor by the Institute

SCHEDULE 'C'

Tools and Plants to be hired by the contractor

No tools & plants shall be hired to the contractor by the Institute

SCHEDULE 'D'

Extra schedule for specific requirements/ document for the work, if any. - Nil -

SCHEDULE 'E'

Nil

SCHEDULE - 'F'

Name of work: “Manufacture/Construction, Supply, installation, testing & commissioning of instruments panel at existing 11KV HT panel and Renovation & preventive maintenance of HT & LT Electrical installations, Laying of U/G Cables, trench work etc.at IIM Indore.”

Definitions

2(v)	Engineer-in-Charge	Chief Engineer, IIM Indore.
2(viii)	Accepting Authority	Director, Indian Institute of Management, Indore.
2(x)	Percentage on cost of materials and labour to cover all overheads and profits	15% (Fifteen)
2(xi)	Standard Schedule of Rates	(i) CPWD Delhi Schedule of Rates 2013 with up to date correction slips issued up to date of receipt of tenders, (ii) CPWD Delhi Schedule of Rates 2013 for internal & External electrification with up to date correction slips issued up to date of receipt of tender.
2(xii)	Department	Indian Institute of Management Indore
2(xiii)	Standard CPWD Contract Form	CPWD Form 7/8 as modified & corrected upto date
Clause 1	Time allowed for submission of Performance Guarantee from the date of issue of letter of acceptance/LOI in days	15 days (Ten)
Clause 2	Maximum allowable extension beyond the period in I) above, in days	7 days (Seven)
Clause 5	No. Of days from the date of letter of acceptance for reckoning date to start Milestone(s) as per table	10 days

	Time allowed for execution of work	60 Days
	Authority to give fair and reasonable extension of time for completion of work	Director, Indian Institute of Management Indore
Clause 11	Specifications to be followed for execution of work	(i) CPWD Specifications upto date for internal and external electrical works, maintenance manual works and other specifications as applicable.
Clause 12 12.1.2(iii)	Schedule of rates for determining rates for additional, altered or substituted items that cannot be determined under 12.1.2 (i) & (ii)	(i) CPWD Delhi Schedule of Rate 2013 with up to date correction slips issued upto the date of receipt of tenders for civil works. Plus/ minus the % over the rate entered in the schedule of rates. (ii) CPWD Delhi Schedule of Rate 2013 for internal & external electrification with upto date correction slips
12.1.2(iii)A	Deviation Limit beyond which sub-clauses (I) to (v) shall not apply and clauses 12.2 & 12.3 shall apply	50%
Clause 16	Competent Authority for deciding reduced rates	Director, Indian Institute of Management, Indore.
Clause 21	Competent authority for permitting Final billing	Director, Indian Institute of Management, Indore.
Clause 36 (I)	(a) Details of technical staff to be employed with their minimum qualifications and experience.	Engineers - (a) Electrical Engineer (B.E.) Degree with 2 years of experience/ Diploma in Electrical Engineering having 5 yrs. Relevant Experience.
	b) Recovery to be effected from the contractor in the event of not fulfilling provision of clause 36(1)	(a) Rs. 15,000/- for each per month for engineer.

MILE STONE

Name of Work:

Manufacture/Construction, Supply, installation, testing & commissioning of instruments panel at existing 11KV HT panel and Renovation & preventive maintenance of HT & LT Electrical installations, Laying of U/G Cables, trench work etc.at IIM Indore.

Mile	Description	Target Period
1	Manufacture/Construction, Supply, installation, testing & commissioning of instruments panel at existing 11KV HT panel and Renovation & preventive maintenance of HT & LT Electrical installations, Laying of U/G Cables, trench work etc.at IIM Indore.	60 Days
	Total period for completion of work	60 Days

Payment Schedule

Intermediate payments shall be made as under:

S. No.	Description	Running Account bill
1.	On 50 % completion of work of Manufacture/Construction, Supply, installation, testing & commissioning of instruments panel at existing 11KV HT panel and Renovation & preventive maintenance of HT & LT Electrical installations, Laying of U/G Cables, trench work etc.at IIM Indore.	First Running account Bill may be raised
2.	On 100 % satisfactory completion of work	Second & Final Running account Bill may be raised

TECHNICAL SPECIFICATIONS

1. SCOPE:

This scope shall cover Manufacture/Construction, Supply, installation, testing & commissioning of instruments panel at existing 11KV HT panel and Renovation & preventive maintenance of HT & LT Electrical installations, Laying of U/G Cables, trench work etc. as described in this specification as per schedule of quantities & Technical specifications.

1250 Ampere, 33 KV, 3 phase VCB HT Panel:

Scope of Work :

Maintenance, servicing and overhauling of 1250 Ampere, 33 KV, 3 phase, 50 Hz, ALSTOM make Type VMX HT VCB by drawing out the draw-out module of the breaker, carrying out complete cleaning with clean cloth & cleaning agent, lubrication of the mechanism & greasing with high temperature molly grease, testing for smoother ON/OFF operation, carrying out relay calibration of protection relays by secondary current injection methods to check trip time characteristic of relays, checking of healthiness of CTs & PTs. Checking of IR value of Interrupter, healthiness of Protection Tripping of Circuit breaker etc. Checking and servicing switchgear interlocks and safety like Mechanical:-

1. Positive interlock
2. Negative interlock
3. Spring discharge interlocks
4. Padlocks
5. Key interlocking
6. Safety roll in stop
7. Safety roll-out stop
8. Rating interference interlock. Electrical-Interlock switches.
9. Checking of Electrical operations of the breaker for ON/OFF & Trip operation including submission of service & test reports.

Cleaning and servicing including re-varnishing of Insulators and other work as detailed below:

- a) Flashover carbon cleaning with CRC gas kit remover and CRC lectra clean.
- b) Moisture removing cum protection with CRC 226 and lectra clean.
- c) Insulation rebuilding of 33KV, Indoor bus Bar spouts with CRC Urethana Red.

- d) Insulation of 33 KV bus bar naked joint with EPR (Self-fusing Insulation Tape)
- e) Duct Sealing and Vermin proofing of 33 KV Panel with Polyurethane foam.
- f) Insulation painting of Internal Area of 33 KV VCB Panel with CRC Urethane Red.
- g) Complete greasing and lubrication of components of complete VCB Panel as required

NOTE: The Maintenance shall include following:

Primary-power path checks, Cleanliness check, Inspection of primary disconnects, Maintenance and lubrication, Stored-energy operator-mechanism checks, Fastener check, Manual-spring charging check, Contact-erosion check

Electrical-control checks: Wiring and terminals checks, Secondary-disconnect check, Automatic spring-charging check, Electrical close and trip check.

Vacuum-integrity check, High-potential test, Insulation test, Contact-resistance test, Inspection and cleaning of circuit-breaker insulation, Functional tests etc.

630 Ampere, 11 KV, 3 phase VCB HT Panels:

Scope of work:

Maintenance, servicing and overhauling of 630 Ampere, 11 KV, 3 phase, 50 Hz, ALSTOM make Type VMX HT VCB by drawing out the draw-out module of the breaker, carrying out complete cleaning with clean cloth & cleaning agent, lubrication of the mechanism & greasing with high temperature molly grease, testing for smoother ON/OFF operation, carrying out relay calibration of protection relays by secondary current injection

Methods to check trip time characteristic of relays, checking of healthiness of CTs & PTs. Checking of IR value of Interrupter, healthiness of Protection Tripping of Circuit breaker etc.

Checking and servicing switchgear interlocks and safety like Mechanical:-

1. Positive interlock
2. Negative interlock
3. Spring discharge interlocks
4. Padlocks
5. Key interlocking
6. Safety roll in stop
7. Safety roll-out stop

8. Rating interference interlock. Electrical-Interlock switches. Checking of Electrical operations of the breaker for ON/OFF & Trip operation for including submission of service & test reports.

The servicing to be done by authorized service provider of Alstom.

The Details are placed at 'Scope of work- Annexure-B'

Cleaning and servicing including re-varnishing of Insulators and other work as detail below:

- a) Flashover carbon cleaning with CRC gas kit remover and CRC lectra clean.
- b) Moisture removing cum protection with CRC 226 and lectra clean.
- c) Insulation rebuilding of 11 KV, Indoor bus Bar spouts with CRC Urethana Red.
- d) Insulation of 11 KV bus bar naked joint with EPR (Self-fusing Insulation Tape)
- e) Duct Sealing and Vermin proofing of 11 KV Panel with Polyurethane foam.
- f) Insulation painting of Internal Area of 11 KV VCB Panel with CRC Urethane Red.
- g) Complete greasing and lubrication of components of complete VCB Panel as required

NOTE: The maintenance shall include following:

Primary-power path checks, Cleanliness check, Inspection of primary disconnects, Maintenance and lubrication, Stored-energy operator-mechanism checks, Fastener check, Manual-spring charging check, Contact-erosion check

Electrical-control checks: Wiring and terminals checks, Secondary-disconnect check, Automatic spring-charging check, Electrical close and trip check.

Vaccum-integrity check, High-potential test, Insulation test, Contact-resistance test, Inspection and cleaning of circuit-breaker insulation, Functional tests etc.

400 Ampere, 11 KV, 3 phase VCB HT panel:

Maintenance, servicing and overhauling of 400 Ampere, 11 KV, 3 phase, 50 Hz, CG make Type VMX HT VCB by drawing out the draw-out module of the breaker, carrying out complete cleaning with clean cloth & cleaning agent, lubrication of the mechanism & greasing with high temperature molly grease, testing for smoother ON/OFF operation, carrying out relay calibration of protection relays by secondary current injection

Methods to check trip time characteristic of relays, checking of healthiness of CTs & PTs. Checking of IR value of Interrupter, healthiness of Protection Tripping of Circuit breaker etc.

Checking and servicing switchgear interlocks and safety like Mechanical:-

1. Positive interlock

2. Negative interlock
3. Spring discharge interlocks
4. Padlocks
5. Key interlocking
6. Safety roll in stop
7. Safety roll-out stop
8. Rating interference interlock. Electrical-Interlock switches.

Checking of Electrical operations of the breaker for ON/OFF & Trip operation for including submission of service & test reports.

The servicing to be done by authorized service provider of Crompton Greaves.

Cleaning and servicing including re-varnishing of Insulators and other work as detail below:

- a) Flashover carbon cleaning with CRC gas kit remover and CRC lectra clean.
- b) Moisture removing cum protection with CRC 226 and lectra clean.
- c) Insulation rebuilding of 11 KV, Indoor bus Bar spouts with CRC Urethana Red.
- d) Insulation of 11 KV bus bar naked joint with EPR (Self-fusing Insulation Tape)
- e) Duct Sealing and Vermin proofing of 11 KV Panel with Polyurethane foam.
- f) Insulation painting of Internal Area of 11 KV VCB Panel with CRC Urethane Red.
- g) Complete greasing and lubrication of components of complete VCB Panel as required

NOTE: The maintenance shall include following:

Primary-power path checks, Cleanliness check, Inspection of primary disconnects, Maintenance and lubrication, Stored-energy operator-mechanism checks, Fastener check, Manual-spring charging check, Contact-erosion check

Electrical-control checks: Wiring and terminals checks, Secondary-disconnect check, Automatic spring-charging check, Electrical close and trip check.

Vaccum-integrity check, High-potential test, Insulation test, Contact-resistance test, Inspection and cleaning of circuit-breaker insulation, Functional tests etc.

Air Circuit Breakers (ACBs)

Scope of work:

Maintenance, servicing, overhauling, repairing, cleaning and oiling with setting of tripping mechanism of following Air Circuit Breakers (ACBs) including submission of service & test reports.

The servicing to be done by authorized service provider of GE/L&T make only.

The complete servicing Comprising of the following:

1. Clean the latch of the mechanism and tripping mechanism with CRC 2-26 & grease them.
2. Adjust the connecting linkage of releases correctly and Fix the spring correctly.
3. Check control wiring of shunt release & ensure that shunt release gets supply.
4. Tighten the terminals of C.T. in case of open circuit.
5. Make the overload setting of ACB as per actual load current.
6. If required, Connect the linkage of magneto thermal release to trip bar properly & ensure its tripping operation.
7. Clean the pole assembly mechanism with CRC 2-26. Remove grease and dust with brush & apply fresh grease.
8. Clean the nylon rollers with CRC2-26 and relubricate them. Clean the deion plates and side insulating strips of arc chutes on arcing contacts with CRC2-26.
9. Pitting on main contacts: Adjust the gap of arcing contacts, it should be 0.9 + or -0.1 mm
10. Racking in the Cradle freely: Fixing the shutter assembly properly in the cradle and Match the fixed and moving secondary isolation contacts properly. Replace the dovetail pin if required. Clean the telescopic rail with CRC 2-26. Remove dust, grease & relubricate it.
11. In case of Poor termination (High Milli-Volt drop across termination on ACB.), Clean the terminals with CRC 2-26 and do proper termination. Ensure that Milli volt drop within specified limits.
12. Checking and maintenance of Interlock, Interlocking configuration as required.
13. Fix the secondary isolating contacts properly if found loose.

In addition to above, greasing of the components like pins, roller assembly, pole latch spring retainer, stainless steel profile, slotted guide, pole latch nylon roller, crank and plates is also to be done.

NOTE: All rubbing surfaces in the mechanism, poles etc. are to be greased except the contacts (copper on copper) and sintered bearings. Prior to greasing, these surfaces should be thoroughly cleaned. Excess grease must be wiped out.

Recommended grade of grease:

1. Lithon 2 of Hindustan Petroleum (Yellow) for pole parts FRCD gears in electrical breakers or Equivalent.
2. Balmerol Moly grease ML (Black) of Balmer Lawire & Co. for mechanism in mechanical & electrical breakers or equivalent.

Power/Distribution Transformers

Complete servicing of Oil-filled Transformers

- 1) The contractor has to attend the oil leakage of power/distribution transformer by replacing Gasket etc. replacement of gaskets to prevent oil leakage as per requirement.
- 2) Replacement of Silica Gel in the Breather-unit.
- 3) testing of buchholz relay operation & other safety operations,
- 4) insulation resistance
- 5) marshalling boxes to be cleaned from inside, All illumination, space heaters, to be checked whether they are functioning properly or not. If not, required maintenance action to be taken.
- 6) All the terminal connections of control and relay wiring to be checked and tightened, All the relays, alarms and control switches along with their circuit, in R&C panel (Relay and Control Panel),
- 7) Insulation resistance and polarization index of transformer must be checked with battery operated megger of 5 KV range complete.
- 8) Work should be carried out as per instruction of Engineer in charge.
- 9) Obtaining work permit issued by the IIM Indore and getting confirmed that the transformer has been correctly isolated and properly earthed from both sides (HT & LT).
- 10) Cleaning the main transformer body and its associated parts properly with cotton waste and blower.
- 11) Measuring and recording resistance of both the windings with respects to earth and between the windings.
- 12) Ensuring that the protection circuits of the concerned transformer provided for tripping of other associated electrical equipments are disconnected.
- 13) Replacing oil in OTI and WTI pockets and doing their calibration to ensure that they give correct readings during the oil filtration work.
- 14) Checking and setting right the oil level indicator to give reliable indications of oil level in the conservator.
- 15) Making connection of HV, EHV and neutral terminals as per the markings after doing proper cleaning of the connectors.
- 16) Charging of the transformers and observing the improvement attained in its performance as a result of successful completion of the oil filtration work.
- 17) In case of any doubt or contradiction, the decision of Engineer in-charge will be final.

- 18) All safety appliances and personnel protection equipments are to be provided by the contractor to his men at his own cost. The contractor's men must use the safety equipments as per the requirement without fail.
- 19) As the adjacent equipments are in charged conditions, the work-area is hazardous. The responsible supervisor of the contractor must take a proper work-permit and other instructions from the Engineer in-charge on regular basis.
- 20) In the event of any work-accident, the contractor will be fully responsible for it. The contractor's representatives will immediately take care of the injured person and provide him the required treatment as suggested by the attending doctor.
- 21) The contractor will have to comply with all the necessary safety rules, electricity rules, labour laws, EPF rules, workmen compensation act and even other acts, rules and statues as applicable in the institute area as well as in the present job.
- 22) All incidental items of work, not shown or specified but reasonably implied in the scope of work of the contractor at no extra cost to IIM Indore.
- 23) The contractor will have to attend to any type of leakage / seepage taking place from any part of the transformer which has developed due to activities pertaining to the ongoing filtration job.
- 24) If any accessory or part of the transformer gets damaged at any stage of carrying out of the filtration work, the contractor will have to replace it free of cost.
- 25) The contractor will perform the subject work in accordance with the guidelines contained in the work-order and the instructions of the Engineer in-charge.
- 26) The contractor will have to follow the technical norms pertaining to preventative maintenance of transformers as per the relevant IS specifications, IE rules and Suppliers recommendations, if any.
- 27) The contractor will have to take full precaution against fire hazards by ensuring availability of the suitable fire extinguisher in adequate numbers near the site as oil filtration work involves heating of oil, which is liable to become inflammable.

CABLING WORKS

Scope of work

L.T. CABLES

1.1 GENERAL

L.T. Cables shall be laid tested and commissioned in accordance with drawings,

specifications, relevant Indian Standards specifications and cable manufacturer's instructions. The LT cable shall be supplied by the IIM Indore at site in original drums.

1.2 CABLE LAYING

Cables shall be laid directly in ground, pipes, masonry ducts, on cable tray, surface of wall / ceiling etc. as indicated on drawings and / or per the direction of Engineer-in-Charge. Cable laying shall be carried out as per CPWD specifications.

1.3 LAYING CABLES IN GROUND

Cables shall be laid by skilled experienced workmen as per CPWD specifications.

1.4 PROTECTION OF CABLES

The cables shall be protected as per CPWD specifications

1.5 EXCAVATION & BACK FILL

The cable of 1.1 KV grade shall be laid not less than 750 mm below ground level and All excavation and back fill required for the installation of the cables shall be carried out by the Contractor in accordance with the drawings and requirements laid down elsewhere. Trenches shall be dug true to line and grades. Back fill for trenches shall be filled in layer not exceeding 150 mm. each layer shall be properly rammed and consolidated before laying the next layer. L T Cables laid in trenches in single tier formation, 17cms in total sand cushioning be provided below and above the cable

The Contractor shall restore all surfaces, roadways, sidewalks, Krebs wall or the works cut by excavation to their original condition to the satisfaction of the Engineer-in-Charge.

1.6 LAYING OF CABLES ON CABLE TRAY/SURFACE OF WALL/CEILING

Cable shall be laid on perforated M.S. Cable tray. Cables shall be properly dressed before cable ties / clamps are fixed. Wherever cable tray is not proposed, cables shall be fixed on surface of wall or ceiling slab by suitable MS clamps / saddles. Care shall be taken to avoid crossing of cable.

1.7 CABLES ON HANGERS ON RACKS

The Contractor shall provide and install all iron hangers racks or racks with die cast cleats with all fixings, rag bolts or girder clamps or other specialist fixing

as required.

Where hangers or racks are to be fixed to wall sides, ceiling and other concrete structures, the Contractor shall be responsible for cutting away, fixing and grouting in rag bolts and making good.

1.8 CABLES TAGS

Cable tags shall be made out of 2 mm thick aluminium sheets, each tag 1-1/2 inch in dia with on hole of 2.5 mm dia, 6 mm below the periphery. Cable designations are to be punched with letter / number punches and the tags are to be tied inside the panels beyond the glanding as well as below the glands at cable entries. Trays tags are to be tied at all bends. On straight lengths, tags shall be provided at every 5 meters.

1.9 TESTING OF CABLES

Prior to installation, following tests shall be carried out. Insulation test between phases, phase & neutral, phase & earth for each length of cable.

A) Before laying.

B) After laying.

C) After jointing.

On completion of cable laying work, the following tests shall be conducted in the presence of the Engineer-in Charge.

- a. Insulation Resistance Test (Sectional and overall).
- b. Continuity Resistance Test.
- c. Earth Test.

All tests shall be carried out in accordance with relevant Indian Standard code of practice and Indian Electricity Rules. The Contractor shall provide necessary instruments, equipments and labour for conducting the above tests & shall bear all expenses of conducting such tests.

1.10 CABLE TERMINATION

Cable termination shall be done in terminal box or cable end box or distribution boards, or apparatus/equipments. Terminations are to be made with mechanical gland and of the tinned nickel plated, anti-corrosive, three piece improved pattern, which is to grip inner and outer PVC sheaths as well as the armour of the cable. The cable ends or the core conductor are to be connected by solder less lugs or sockets using crimping tool of approved make for all cables.

- 1.11 All underground cables and cable joints shall be marked on the surface by markers generally manufactured and tested to requirements of relevant ISS. Approved CI cable markers shall be provided at every 30m along the route of the cables and at both ends of road crossing, indicating cable joints and cables as applicable. Special CI markers shall be provided at all buried cable joints indicating “Electrical Cable Joints”. CI plates duly engraved with the size of the cable and the place it serves shall be tied to the cable at regular intervals of 5m for easy identification of cables.
- 1.12 Cable tags shall be made out of 2 mm thick aluminium sheets, each tag 32 mm dia with one hole of 2.5 mm dia. 6 mm below the periphery shall be provided for clamping the same with cables.

Cable designation is to be punched with letter/number punches and the tags are to be tied to cables with piano wires of approved quality and size.

After the cables are laid, shall be tested as per IS and the results submitted to the Engineer-in-Charge and in case the results found unsatisfactory, all the repairing/replacing of cables will be done by the contractor free of charge.

HT CABLE TRENCH WORK

General

HT cable trench work includes only the Excavation, protective covering and backfilling of the same in the scope of tenderer. Laying work of the HT cable is not included in this tender. (The other contractor shall do the laying of the HT Cables.)

EXCAVATION

11 KV grade cable not less than 1200 mm below ground level in a 350 mm wide trench or as per site requirement (throughout), where more than one cable is to be laid in the same trench, the width of the trench shall be increased such that the inter-axial spacing between the cables except where otherwise specified shall at least be 150mm or as per site requirements or as approved by the Engineer-in-charge.

In case the cables are laid in vertical formation due to unavoidable circumstance the depth per-tier shall be increased by 200mm (minimum). The depth of trench shall increase by 250mm for 11 KV as per IS, cable shall be laid in reasonably straight line, where a change in direction takes place a suitable

curvature shall be i.e. either 20 times the diameter of the cable or the radius of the bend shall not be less than twice the diameter of the cable drum or whichever is less.

PROTECTION OF CABLES

HT cable a layer of clean dry sand of not less than 80 mm in depth before laying the cable and then covering it with 80mm sand cushioning above the cable before a protective cover is to be laid. For every additional vertical tier. The cable shall be protected by 1st class bricks of size not less than 230 x 115 x 75mm stone tiles/R.C.C. Curved channel be placed on top of the sand breadth wise for the full length of the cable and where more than one cable is to be laid in the same trench the brick or tiles shall cover all cables and project at least 80 mm over the outer sides of the end cables.

BACK FILL

Filling of trenches shall be done after the sand cushioning and laying of tiles or bricks are carried out to the satisfaction of the Engineer -in-charge.

SCOPE:

This scope shall cover design, manufacture, check test, and supply, installation, testing and commissioning of electrical control panel as described in this specification as per drawings and schedule of quantities.

Panels shall be supplied with the following:

- a) Complete switchgears as per approved drawing, BOQ, bus bar, enclosure and metering and controlling accessories.
- b) The base channel frame with hardware, nuts, bolts, washers etc.
- c) Commissioning spares.
- d) All relevant drawings, data and instruction manuals.

1.2 GENERAL SPECIFICATIONS:

1.2.1 The Panels shall be metal clad, totally enclosed, rigid, floor mounting, air insulated, cubicle type suitable for operation on three phase, 415 V, 50 Hz., and short circuit level as mentioned in the drawings. The indoor panel shall have IP55 protection class construction. The painting of all the metal part shall be as per the painting specification defined in specification.

1.2.2 Panels shall be designed to withstand heaviest condition at site, with maximum expected ambient temperature of 50° c., 100% humidity and salty, dusty weather.

1.3 STANDARDS AND CODES:

The Panels shall comply with the latest edition of relevant Indian Standards and Indian Electricity Rules and Regulations. The following Indian standards shall be complied with:

- IS: 4237 - General requirements for switchgear and control gear for Voltages not exceeding 1000 V AC or 1200 V D.C.
- IS: 375 - Switchgear bus bars, main connection and auxiliary wiring, marking etc.
- IS: 2147 - Degree of protection provided by enclosures for Low voltage switchgear and control gear.
- IS: 8197 - Terminal marking for electrical measuring instrument and their accessories. IS: 2551 - Danger notice plates
- IS: 10118 - Code of Practice for selection, installation and maintenance of switchgear and control gear.
- IS: 8623 - Specification for factory built assemblies of switchgear and control gear for voltage up to and including 1000 V AC and 1200 V D.C.
- IS: 8828 - Miniature circuit breakers.
- IS: 2705 - Current transformers
- IS: 3155 - Voltage transformer
- IS: 3231 - Electrical relay
- IS: 1248 - Indicating instruments
- IS: 722 - Integrating instruments
- IS: 6875 - Control switches and push buttons
- IS: 1822 - AC motor starters of voltage not exceeding 1000 V Indian Electricity Act and Rules (as amended up to date) and approval of FIA of India.

1.4 DESIGN CRITERIA:

The electrical control Panel shall be installed at 11KV HT Panel of Utility-II at IIM Indore.

For continuous operation at specified ratings, the temperature rise of various equipment / components shall be limited to the permissible values stipulated in relevant standards and/or this specification.

All equipment and components thereof shall be capable of withstanding the mechanical forces and thermal stresses of the short circuit currents listed in the Appendices without any damage or deterioration of the materials. If required, surge protective devices shall be included in the scope of supply to limit over voltage.

1.5 CONSTRUCTION: CUBICLE TYPE PANELS:

a) STRUCTURE:

The Panel shall be metal clad enclosed and be fabricated out of high quality CRCA sheet, suitable for indoor installation having dead front operated and floor mounting type. The design construction shall be such as to allow extension at either end.

All CRCA sheet steel used in the construction of Panels shall be 2 mm. thick and shall be folded and braced as necessary to provide a rigid support for all components. Joints of any kind in sheet steel shall be seam welded, all welding slag grounded off and welding pits wiped smooth with plumber metal.

The Panels shall be totally enclosed, completely dust and vermin proof, conforming to degree of protection IP-55. Gaskets between all adjacent units and beneath all covers shall be provided to render the joints dust proof. All doors and covers shall be fully gasketed with neoprene rubber in single piece, joint less and shall be lockable.

All panels and covers shall be properly fitted and secured with the frame and holds in the panel correctly positioned. Fixing screws shall enter into holes, taped into an adequate thickness of metal or provided with bolts and nuts. Self-threading screws shall not be used in the construction of Panels.

A base channel of 75 mm x 40 mm. shall be provided at the bottom. A clearance of 300 mm. between the floor of the Panels and the bottom of the lower most units shall be provided.

Panels shall be preferably arranged in multi-tier formation. The Panels shall be of adequate size with 20% space to accommodate possible future additional switchgear. The size of the Panels shall be designed in such a way that the internal space is sufficient for hot air movement and the electrical component does not attain temperature more than 45°C. All the electrical component shall be rated for 50°C.

Knock out holes of appropriate size and number shall be provided in the Panels in conformity with the number, and the size of incoming and outgoing cables.

Alternately, the Panels shall be provided with removable sheet steel plates at top and bottom to drill holes for cable entry at site.

The Panels shall be designed to facilitate easy inspection, maintenance and repair. The panels shall be sufficiently rigid to support the equipment without distortion under normal and under short circuit condition. They shall be suitably braced for short circuit duty.

1.6 PROTECTION CLASS:

The Panel shall have protection class of IP 55 or IP65 as mentioned in BoQ..

1.7 PAINTING

The painting shall be with powder coated after proper cleaning, seven tank process Siemens gray (RAL-7032) colour Paint shade powder coated. The thickness of painting shall be between 70-80 microns.

1.8 CIRCUIT COMPARTMENTS:

Each circuit breaker and switch fuse unit shall be housed in separate compartments and shall be enclosed on all sides. Sheet steel hinged lockable door shall be duly interlocked with the breaker / switch fuse unit in `ON` and `OFF` position. Safety interlocks shall be provided for air circuit breaker to prevent the breaker from being drawn out when the breaker is in `ON` position.

The door shall not form an integral part of draw out position of the circuit breaker. All instruments and indicating lamp shall be mounted on the compartment door. Sheet steel barriers shall be provided between the tiers in a vertical section.

1.9 INSTRUMENT COMPARTMENTS:

Separate adequate compartment shall be provided for accommodating instruments, indicating lamps, control contactors / relays and control fuses etc. These components shall be accessible for testing and maintenance without any danger of accidental contact with live parts of the circuit breaker / switch fuse unit, busbar and connections.

1.10 BUSBARS:

The busbar shall be air insulated and made of high quality, high conductivity, high strength Aluminium. The busbar shall be of 3 phases and neutral system with separate neutral and earth bar. The bus bar and interconnection between bus bars and various components shall be of high conductivity Aluminium. The busbar shall be of rectangular cross-section designed to withstand full load current for phase bus bars and half rated current for neutral bus bars and shall be extensible on either side. The busbar size shall be as per drawing. The busbar shall have uniform cross-section throughout the length.

The bus bars and interconnections shall be insulated with heat shrinkable PVC sleeve and be colour coded in red, yellow, blue and black to identify the 3 phases and neutral of the system if specified in datasheet. The busbar shall be supported on unbreakable, non-hygroscopic SMC insulated supports at sufficiently close intervals to prevent bus bars sag and shall effectively withstand electromagnetic stresses in the

event of fault level of 50KA.

The bus bar shall be housed in a separate compartment. The bus bar shall be isolated with 3 mm thick Bakelite sheet to avoid any accidental contact. The bus bar shall be arranged such that minimum clearance between the bus bars to be maintained as below:

Between phases	: 25 mm minimum
Between phase and neutral	: 25 mm minimum
Between phases and earth	: 25 mm minimum
Between neutral and earth	: 20 mm minimum

Minimum current rating for vertical bus-bars shall not be less than 2000A.

All bus bar connections shall be done by drilling holes in bus bars and connecting by chromium plated or tinned plated brass bolts and nuts. Additional cross-section of bus bar shall be provided in all Panels to cover up the holes drilled in the bus bar. Spring and flat washers shall be used for tightening the bolts.

All connections between bus bars and circuit breakers / switches and cable terminals shall be through Aluminium strips of proper size to carry full rated current. These strips shall be insulated with insulating tapes.

1.11 ELECTRICAL POWER AND CONTROL WIRING CONNECTION:

- i. Terminal for both incoming and outgoing cable connections shall be suitable for 1100 V grade, Aluminium / copper conductor PVC insulated and sheathed, armoured cable and shall be suitable for connections of solderless sockets for the cable size as indicated on the relevant drawings of the Panels.
- ii. Power connections for incoming feeders of the main Panels shall be suitable for 1100 V grade Aluminium conductor (LT XLPE/PVC) cables.
- iii. Both control and power wiring shall be brought out in cable alley for ease of external connections, operation and maintenance.
- iv. Both control and power terminals shall be properly shrouded.
- v. 10% spare terminals shall be provided on each terminal block. Sufficient terminals shall be provided on each terminal block, so that not more than one outgoing wire is connected per terminal.

Terminal strips for power and control shall preferably be separated from each other by suitable barriers of enclosures.

- vi. Wiring inside the modules for power, control, protection and

instruments etc. shall be done with use of 660 / 1100 V grade, PVC insulated copper conductor cables conforming to IS : 694 and IS : 8130. Power wiring inside the starter module shall be rated for full current rating of respective contactor, but not less than 4.0 sq.mm. Cross-section area. For current transformer circuits, 2.5 sq.mm. Copper conductor wire shall be used. Other control wiring shall be done with 1.5 sq.mm. copper conductor wires. Wires for connections to the door shall be flexible. All conductors shall be crimped with solderless sockets at the ends before connections are made to the terminals.

vii. Control power wiring and indicating lamps shall be protected by MCB.

viii. Particular care shall be taken to ensure that the layout of wiring is neat and orderly. Identification ferrules shall be fitted to all the wire termination for ease of identification and to facilitate checking and testing.

ix. Spring type washers shall be used for all copper and aluminium connections.

x. Final wiring diagram of the Panels power and control circuit with ferrules numbers shall be submitted along with the Panels as one of the documents against the contract.

1.12 TERMINALS:

The outgoing terminals and neutral link shall be brought out to a cable alley suitably located and accessible from the panel front. The current transformers for instruments metering shall be mounted on the disconnecting type terminal blocks. No direct connection of incoming or outgoing cables to internal components of the distribution board is permitted; only one conductor may be connected in one terminal.

1.13 WIREWAYS:

Horizontal PVC wire way with screwed covers shall be provided at the bottom/top to take interconnecting control wiring between different vertical sections.

1.14 CABLE COMPARTMENTS:

Cable compartments of adequate size shall be provided in the Panels for easy termination of all incoming and outgoing cables entering from bottom or top. Adequate supports shall be provided in the cable compartments to support cables. All outgoing and incoming feeder terminals shall be brought out to terminal blocks in the cable compartment.

1.15 EARTHING:

i) GI earth bus of adequate size shall be provided in the Panels for the entire length of the panel. The framework of the Panels shall be connected to this earth bar. Provisions shall be made for connection from this earth bar on both sides of the panels to the main earthing bar coming from the earth pit. Door earthing shall be provided for all the compartments.

ii) The earth continuity conductor of each incoming and outgoing feeder shall be connected to this earth bar. The armoured shall be properly connected with earthing clamp, and the clamp shall be made for connection from this earth pit on both sides of the Panels.

iii) The earth continuity conductor of each incoming and outgoing feeder shall be connected to this earth bar. The armour shall be properly connected with earthing clamp, and the clamp shall be ultimately bonded with the earth bar.

1.16 LABELS:

Engraved metal labels shall be provided on all incoming and outgoing feeders. Single line circuit diagram showing the arrangements of circuit inside the distribution board shall be pasted on inside of the panel door and covered with transparent laminated plastic sheet.

1.17 NAME PLATE:

A name plate with the Panel's designation in bold letters shall be fixed at top of the central panel. A separate name plate giving feeder details shall be provided for each feeder module door.

Inside the feeder compartments, the electrical components, equipment, accessories like switchgear, control gear, lamps, relays etc. shall suitably be identified by providing stickers.

Engraved name plates shall preferably be of 3 ply, (Red-White-Red or Black-White-Black) lamicald sheet. However, black engraved Perspex sheet nameplates shall also be acceptable. Engraving shall be done with square groove cutters.

Name plate shall be fastened by counter sunk screws and not by adhesives.

1.18 DANGER NOTICE PLATES:

The danger notice plate shall be affixed in a permanent manner on operating side of the Panels.

The danger notice plate shall indicate danger notice both in Hindi and English and with a sign of skull and bones.

The danger notice plate, in general, shall meet the requirements of local inspecting authorities.

Overall dimensions of the danger notice plate shall be 200 mm. wide x 150 mm. high.

The danger notice plate shall be made from minimum 1.6 mm. thick mild steel sheet and after due pre-treatment to the plate, the same shall be painted white with vitreous enamel paint on both front and rear surface of the plate.

The letters, the figures, the conventional skull and bones etc. shall be positioned on plate as per recommendation of IS: 2551-1982.

The said letters, the figures and the sign of skull and bones shall be painted in signal red colour as per IS: 5-1978.

The danger plate shall have rounded corners. Location of fixing holes for the plate shall be decided to suit design of the Panels.

The danger notice plate, if possible, should be of ISI certification mark.

Suitable Voltage rated rubber mats to be provided.

1.19 INTERNAL COMPONENTS:

- a) The Panels shall be equipped complete with all types of required number of Air circuit breaker, MCCB, MCB, contactors, relays, fuses, meters, instruments, indicating lamps, push buttons, equipment, fittings, bus bars, cable boxes, cable glands etc. and all the necessary internal connections / wiring as required and as indicated on relevant drawings. Components necessary for the proper and complete functioning of the Panels but not indicated on the drawings shall be supplied and installed on the Panels.
- b) All parts of the Panels carrying current including the components, connections, joints and instruments shall be capable of carrying their specified rated current continuously, without temperature rise exceeding the acceptable values of the relevant specifications at the part of the Panels.
- c) All units of the same rating and specifications shall be fully interchangeable.

1.20 COMPONENTS:

GENERAL:

The type, size and rating of the components shall be as indicated on the relevant

drawings. While selection of the capacity of the components resulting from the prevailing conditions like ambient temperature shall be allowed for. The thermal and magnetic triprating shall be compensated for the ambient temperature. The ratings indicated on the drawing are ratings anticipated at prevailing site conditions.

MINIATURE CIRCUIT BREAKERS:

Miniature Circuit breakers shall be current limiting type conformed with British standard BS: 3871 (Part I) 1965 and IS: 8825. The housing of MCBs shall be heat resistant and having high impact strength. The fault current of MCBs shall not be less than 10 KA at 240 V. The MCBs shall be flush mounted and shall be provided with trip free manual operating mechanism with mechanical `ON' and `OFF' indications.

The circuit breaker dollies shall be of the trip free pattern to prevent closing the breaker on a faulty circuit.

The MCB contacts shall be silver nickel and silver graphite alloy and tip coated with silver. Proper arc chutes shall be provided to quench the arc immediately. MCBs shall be provided with magnetic fluid plunger release for over current and short circuit protection. The overload or short circuit device shall have a common trip bar in the case of DP,TP and TPN miniature circuit breakers. All the MCBs shall be tested and certified as per Indian Standards, prior to installation.

FUSE:

Fuses shall be of high rupturing capacity (HRC) fuse links and shall be in accordance with IS: 2000-1962 and having high rupturing capacity of not less than 35 MVA at 415 V. The back-up fuse rating for each motor / equipment shall be so chosen that the fuse does not operate on starting of motors / equipment. HRC fuses shall be of the make as specified in Make of Material.

CURRENT TRANSFORMER:

Where ammeters are called for C.T.s shall be provided for current measuring. Each phase shall be provided with separate current transformer of accuracy Class 1 and suitable VA burden for operation of associated metering and controls. Current transformer shall be in accordance with IS: 2705 - 1964 as amended upto date.

Accuracy class of the current transformers shall be:

- Class PS for differential protection.
- Class 5P20 for other protection
- Class 1.0 ISP < 5 for metering

PUSH BUTTONS:

Push button shall be heavy duty, push to actuate type with integral escutcheon plate marked with its function. The contacts shall be of silver alloy and rated at 10 Amps. continuous current rating. The actuator shall of standard type and colour as per its usage for ON, OFF and TRIP.

INDICATING LAMPS:

Indicating lamps shall be of LED type, low voltage rated and shall be supplied complete with translucent covers to diffuse the lamplight.

Colour shade for the indicating lamps shall be as below - the LED shall be 22.5 mm and self coloured:

ON indicating lamp	:	Red
OFF indicating lamp	:	Green
TRIP indicating lamp	:	Amber
		Red, Yellow, and
PHASE indicating lamp	:	Blue

Digital Multi Function Meter:

The meter shall be of digital type with RS485 port. It should measure KW, KVA, KVAR, V, I, PF, Hz etc.

1.21 SHOP DRAWINGS:

Prior to fabrication of the Panels, the supplier / contractor shall submit the shop drawings in three sets for approval. The shop / vendor drawing consisting of G.A. drawing, sectional elevation, single line diagram, bill of material etc. and design calculations indicating type, size, short circuit rating of all the electrical components used, busbar size, internal wiring size, Panels dimension, colour, mounting details etc. The contractor shall submit manufacturer's catalogues of the electrical components installed in the Panels.

1.22 INSPECTION:

At all reasonable times during production and prior to transport of the Panels to site, the supplier / contractor shall arrange and provide all the facilities at their plant for inspection.

1.23 TEST CERTIFICATES:

Testing of Panels shall be carried out at factory and at site as specified in Indian standards in the presence of Client. The test results shall be recorded on a prescribed form and to be submitted to IIM Indore.

LIST OF APPROVED MAKES

S.No.	ITEMS	APPROVED MAKES
1.	PVC pipes/trunking and accessories	Precision/Avonplast/Grand/AKG/Kundan cab/Modi
2.	FRLS Copper multi-strand wires	Polycab/Finolex/KEI/RR KABEL
3.	Air circuit breaker (ACB)	Schneider/L&T/ Legrand/Siemens/ABB/GE
4.	MCB/MCCB/RCCB/ELCB	Schneider/L&T/ Legrand/ Siemens /ABB/GE
5.	Industrial sockets	Legrand/Schneider/L&T
6.	Cable jointing lugs	Raychem/CCI-Xicom/Cabseal/Mseal/Denson
7.	U.G. Cables	Polycab/Finolex/KEI/RR KABEL
8.	Cable glands	Dowels/Braco/Siemens/Comet/Jainco
9.	Capacitor	Schneider/L&T/ ABB/ Siemens
10.	CT's/PT's	AE/Kappa/Pragati/Megavin/Reco