



भारतीय प्रबंध संस्थान इंदौर

INDIAN INSTITUTE OF MANAGEMENT INDORE

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इ-टेंडर नोटिस न. **E-Tender Notice No.**
आईआईएमआई/एस्टेट/06/2021/82 फाइल नंबर 425
IIMI/Estate/06/2021/82 File No. 425

तकनीकी व्यावसायिक प्रक्रिया

TECHNO COMMERCIAL PROPOSAL

(E-TENDERING MODE ONLY)

भारतीय प्रबंधन संस्थान इंदौर (आईआईएम इंदौर) के लिए दो बोली प्रणालियों में ऑनलाइन बोलियां (ई-निविदा) आमंत्रित करता है।

Indian Institute of Management Indore (IIM Indore) invites online bids (e-tender) in two bid systems for

कार्य का नाम: "निष्क्रिय ट्रांसफार्मर (स्टैंड-बाय) को चालू करके 33/11 केवी मुख्य उप-स्टेशन और उपकरण (उपयोगिता- I) का सुधार"

Name of work: "Revamping of 33/11 KV main sub-station & equipment (Utility-I) by operationalizing idle transformer (stand-by)"

प्रमाणित किया जाता है कि एनआईटी दस्तावेज़ में 1 से 120 तक क्रमानुसार 120 पृष्ठ हैं
Certified that the NIT Document contains 120 pages serially numbered from 1 to 120

भारतीय प्रबंध संस्थान इंदौर
INDIAN INSTITUTE OF MANAGEMENT INDORE

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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: August 27, 2021

ई - निविदा आमंत्रण सूचना NOTICE INVITING E-TENDER

संदर्भ: ई-निविदा सूचना संख्या आई. आई. एम. आई. /इस्टेट /06/2021/82 फ़ाइल न. 425

Ref: E-Tender Notice No. IIMI/Estate/06/2021/82 File No. 425

आईआईएम इंदौर एमएचआरडी के ई-प्रोक्योरमेंट पोर्टल यानी <https://mhrd.euniwizarde.com> के माध्यम से ऑनलाइन आइटम रेट टेंडर आमंत्रित करता है। विवरण नीचे दिया गया है:

IIM Indore invites online item rate tender through e-procurement portal of MHRD i.e. <https://mhrd.euniwizarde.com>. The details are given below:

A. Schedule of Important Events / Activities

A.1 बोली से संबंधित जानकारी/Information Related to Bid

A.1.1	एनआईटी नंबर: आईआईएमआई/एस्टेट/06/2021/82 फाइल नंबर 425 NIT No.: IIMI/Estate/06/2021/82 File No. 425	
A.1.2	कार्य का नाम Name of Work	"निष्क्रिय ट्रांसफार्मर (स्टैंड-बाय) को चालू करके 33/11 केवी मुख्य उप-स्टेशन और उपकरण (उपयोगिता- I) का सुधार" "Revamping of 33/11 KV main sub-station & equipment (Utility-I) by operationalizing idle transformer(stand-by)"
A.1.3	निविदा की प्राकल्पित राशि (गुड्स एंड सर्विस टैक्स हित) Estimated Cost Put to Tender (Excluding Goods & Service Tax)	Rs.71,13,952/- (Rs. Seventy-One Lakh Thirteen Thousand Nine Hundred and Fifty-Two Only) (Excl. GST)
A.1.4	अग्रिम जमा राशि Earnest Money Deposit	The EMD Payment shall be payable as under: 1. 50% amount of the EMD (i.e. Rs. 71,140/-) may be deposited through online mode. 2. Remaining 50% of the EMD Payment (i.e. Rs. 71,140/-) through Bank Guarantee. 3. 100% amount of EMD payment online is also accepted. Name of beneficiary: Indian Institute of Management Indore Account No.: 53018623445 Name of the Bank: State Bank of India IFSC Code: SBIN0030525
A.1.5	Stamp duty for agreement (to be borne by the bidder)	The contractor will have to execute an agreement on non-judicial stamp paper as under - 0.1 percent of contract value subject to a maximum of rupees 5 lacs as per the Indian stamp (Madhya Pradesh)

		Amendment) Act, 2015 or its amendment from time to time (copy enclosed)
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A.1.6	Stamp duty for Integrity Pact	On non-judicial stamp paper of Rs.500
A.1.7	समापन की अवधि Completion period	90 (Ninety) Days / ९० दिन
A.1.8	निविदा जमा करने की विधि Mode of submission of tender	केवल ऑन-लाइन मोड On-Line mode only

A.2 प्रमुख घटनाएँ और तिथियाँ/Key Events and Dates

A.2.1	प्रकाशित करने का दिनांक Publishing Date	August 27, 2021
A.2.2	Online pre bid meeting (All interested bidders may share their e-mail id of the concerned person who will attend the pre bid meeting through zoom)	Online Pre bid meeting scheduled on September 7, 2021, at 3:30 pm (Zoom ID will be shared half an hour before the meeting). Bidders are requested to submit their queries by September 5, 2021, through e-mail. Clarification to pre bid query will be uploaded in the e-wizard/IIMI website by September 10, 2021. (Mailing Address: estateelect@iimidr.ac.in) No queries will be entertained after September 5, 2021.
A.2.3	टेंडर जमा करने की अंतिम तिथि और समय निर्दिष्ट Last date and time of closing of uploading/online submission of tender	Up to 03:00 PM on September 17, 2021
A.2.4	तकनीकी बोली के खोलने की तिथि और समय Date & Time of online opening of technical bid	03:30 PM on September 17, 2021, in IIM Indore M.P. 453556
A.2.5	Date and Time of opening of financial bid of qualified bidders	Will be notified at a later date

A.3 बोली से संबंधित अन्य महत्वपूर्ण जानकारी/Other Important Information Related to Bid

A.3.1	प्रतिभूति जमा Security Deposit	निविदा मूल्य का २.५% चल बिल और अंतिम बिल से वसूल की जावेगी 2.5 % of tendered value to be recovered from running bills & final bills
A.3.2	परफॉर्मन्स गारंटी Performance Guarantee	बोली की स्वीकृति पर निविदा मूल्य का ५ (पाँच)% 5 (Five) % of tendered value on acceptance of bid

A.3.3	बोली की वैधता Bid Validity	निविदा खोलने की तिथि से 75 दिन 75 Days from the date of opening of price bid of tender
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B. Guidelines for e-Tendering

Instructions for Online Bid Submission:

Instructions for Online Bid Submission through MHRD e-Bidding Portal:

The bidders are required to submit soft copies of their bids electronically on the e-wizard Portal, using valid Digital Signature Certificates. The instructions given below are meant to assist the bidders in registering on the e-Procurement Portal <https://mhrd.euniwizarde.com>, prepare their bids in accordance with the requirements and submitting their bids online on the e- Procurement Portal.

More information useful for submitting online bids on the e-Procurement Portal may be obtained at: <https://mhrd.euniwizarde.com>

REGISTRATION

1. Bidders are required to enroll on the e-Procurement Portal (<https://mhrd.euniwizarde.com>) by clicking on the link “Bidder Enrollment” on the e-wizard Portal by paying the Registration fee of Rs.2360/- per year charge.
2. As part of the enrolment process, the bidders will be required to choose a unique user name and assign a password for their accounts.
3. Bidders are advised to register their valid email address and mobile numbers as part of the registration process. These would be used for any communication with the bidder.
4. Upon enrolment, the bidders will be required to register their valid Digital Signature Certificate (Only Class III Certificates with signing + encryption key usage) issued by any Certifying Authority recognized by CCA India (e.g. Capricorn / Sify / TCS / nCode / eMudhra etc.), with their profile.
5. Only one valid DSC should be registered by a bidder. Please note that the bidders are responsible to ensure that they do not lend their DSC"s to others which may lead to misuse.
6. Bidder then logs in to the site through the secured log-in by entering their user ID/password and the password of the DSC / e-Token.
7. The scanned copies of all original documents should be uploaded on portal.

For any Query contact to our helpdesk Number 011-49606060, Email: helpdeskeuniwizarde@gmail.com, Mr. Siddharth Ghosh 09355030604.

SEARCHING FOR BIDDING DOCUMENTS

8. There are various search options built in the e-bid Portal, to facilitate bidders to search active bids by several parameters. These parameters could include Bid ID, Item/work id, Title, Date, etc
9. Once the bidders have selected the bids they are interested in, the bidder can pay the processing fee by net-banking / Debit / Credit card and then download the required documents / bid schedules, Bid documents etc as mentioned on website. Once processing fee is paid, it will be moved to the respective “requested” Tab. This would enable the e-bid Portal to intimate the bidders through e-mail in case there is any addendum and corrigendum issued to the bidding document.

PREPARATION OF BIDS

10. Bidder should take into account any addendum and corrigendum published on the bid document before submitting their bids only on e-procurement portal (<https://mhrd.euniwizarde.com>).
11. Please go through the bid advertisement and the bid document carefully to understand the documents required to be submitted as part of the bid. Please note the number of covers in which the bid documents have to be submitted, the number of documents - including the names and content of each of the document that need to be submitted. Any deviations from these may lead to rejection of the bid.
12. Bidder, in advance, should get ready the bid documents to be submitted as indicated in the bid document / schedule and generally, they can be in PDF / JPEG formats. Bid Original documents may be scanned with 100 dpi with Colored option which helps in reducing size of the scanned document.
13. To avoid the time and effort required in uploading the same set of standard documents which are required to be submitted as a part of every bid, a provision of uploading such standard documents (e.g. PAN card copy, annual reports, auditor certificates etc.) has been provided to the bidders. Bidders can use “My Documents” available to them to upload such documents.
14. These documents may be directly submitted from the “My Documents” area while submitting a bid, and need not be uploaded again and again. This will lead to a reduction in the time required for bid submission process.

SUBMISSION OF BIDS

15. Bidder should log into the website well in advance for the submission of the bid so that it gets uploaded well in time i.e. on or before the bid submission time. Bidder will be responsible for any delay due to other issues.
16. The bidder has to digitally sign and upload the required bid documents one by one as indicated in the bidding document.
17. *Bidders are requested to note that they should necessarily submit their financial bids in the format provided and no other format is acceptable. If the price bid has been given as a standard BoQ format with the bid document, then the same is to be downloaded and to be filled by all the bidders. Bidders are required to download the BoQ file, open it and complete (unprotected) cells with their respective financial quotes and other details (such as name of the bidder). No other cells should be changed. Once the details have been completed, the bidder should save it and submit it online, without changing the filename. If the BoQ file is found to be modified by the bidder, the bid will be rejected.
18. The server time (which is displayed on the bidders dashboard) will be considered as the standard time for referencing the deadlines for submission of the bids by the bidders, opening of bids etc. The bidders should follow this time during bid submission.
19. All the documents being submitted by the bidders would be encrypted using PKI encryption techniques to ensure the secrecy of the data. The data entered cannot be viewed by unauthorized persons until the time of bid opening. Data storage encryption of sensitive fields is done. Any bid document that is uploaded to the server is subjected to symmetric encryption using a system generated symmetric key. Further this key is subjected to asymmetric encryption using buyers/bid opener public keys. Overall, the uploaded bid documents become readable only after the bid opening by the authorized bid openers.
20. The uploaded bid documents become readable only after the bid opening by the authorized bid openers.

21. Upon the successful and timely submission of bid click “Complete“(i.e. after Clicking “Submit” in the portal), the portal will give a successful Bid submission acknowledgement & a bid summary will be displayed with the unique id and date & time of submission of the bid with all other relevant details.
22. The bid summary has to be printed and kept as an acknowledgement of bid submission.

ASSISTANCE TO BIDDERS

For any Query contact to our helpdesk Number 011-49606060, Email ewizardhelpdesk@gmail.com ,Mr. siddharth 09355030604

C. Bidder Qualification Criteria

Contractors who fulfil the following requirements shall ONLY be qualified for financial bid opening (Joint Ventures are not accepted):

1. **Work Experience:** The bidders having experience of successfully completed works during the last 5 years ending last day of the month previous to the one in which applications are invited. *The works completed up to previous day of last date of submission of tenders shall also be considered.*

One similar work of value not less than Rs. 56,91,162/-,

OR

Two similar works, each of value not less than Rs.42,68,371/-,

OR

Three similar works, each of value not less than Rs. 28,45,581/- all amounts rounded off to a convenient full figure.

Note:

1.1 Similar work shall mean Supply, Installation, Testing & Commissioning of 33/11 KV Transformer, HT/LT Breakers, HT/LT Cabling, CT, PT and other associated works etc.

1.2 The completion certificate issued from clients.

2. **Annual Financial Turnover and Profit/Loss:** Average annual financial turnover should be at least 50% of the estimated cost put to tender during the immediate last three consecutive financial years, ending on March 31, 2020 and the bidder should not have incurred any loss in more than two years of **last five consecutive in Profit and Loss Account**. (Please provide the same as per standard format enclosed at Annexure-2)
3. The bidder should have valid GST registration certificate.
4. **Disqualification:**

Bidders whose past performance in jobs carried out in IIM Indore, is found to be not satisfactory, will be disqualified technically even though they may meet the other technical/eligibility criteria.

D. List of Documents to be scanned and uploaded

While submitting bid, the Scanned copies of the following documents are to be uploaded:

- (i) NIT Document and corrigendum's (if published) duly signed on each page. (The original of the same to be submitted before award of contract)
- (ii) The work completion certificate should be furnished as per point C 1.2 of eligibility criteria
- (iii) Certificate by practicing CA with UDIN as per **Annexure-2**
- (iv) Certification of Incorporation/ Registration of firm / company
- (v) IT Returns for the AY 2018-19, 2019-20, 2020-21
- (vi) PAN (Permanent Account Number)
- (vii) Valid GST Registration certificate
- (viii) E-payment details towards cost of EMD
- (ix) Bank Account Detail for EMD refund
- (x) EPF & ESIC registration certificates
- (xi) Letter of Transmittal as per **Annexure-5**
- (xii) Undertaking having gone through the documents as per the **Annexure-1**.
- (xiii) All other annexures as mentioned in **Heading R- Formats for Different Forms/Certificates/Annexures**.

E. General Instructions to Tenderers

Scope of Work:

1. The scope of work shall include the following:

1.1 Reconditioning of existing Power Transformer (Make-Voltam 33/11 kV- 3.15 MVA) which includes opening X-mer cover, under tanking core & coil assembly, cleaning, washing of dust & dirt etc. from all parts including core tank, radiators, removal of parts need replacement providing identical silica gel breather, oil level gauge, drain/filter valve, air release plug & any other parts required replacement, minor repair of radiator, tank & conservator(if required), painting from inside & outside to make transformer as good as new.

Routine Tests of Transformer:

Transformer routine tests shall include tests stated in latest issue of IS: 2026 (Part -1). These tests shall also include but shall not be limited to the following:

- (i) Measurement of winding DC resistance.
- (ii) Voltage ratio on each tapping and check of voltage vector relationship.
- (iii) Impedance voltage at all tapings.
- (iv) Magnetic circuit test as per relevant ISS or CBIP manual or latest standard being followed.
- (v) Measurement of Load losses at normal tap and extreme taps.
- (vi) No load losses and no load current at rated voltage and rated frequency, also at rated voltage in steps.
- (vii) Absorption index i.e insulation resistance for 15 seconds and 60 seconds (R 60/ R 15) and polarization index i.e Insulation Resistance for 10 minutes and one minute (R 10 mt / R 1 mt).
- (viii) Induced over voltage withstand test.
- (ix) Separate source voltage withstand test.
- (x) Measurement of zero sequence impedance
- (xi) Tests on on- load tap changer (fully assembled on transformer) as per IEC: 214/ 1976 and BS: 4571/ 1970.
- (xii) Auxiliary circuit tests
- (xiii) Oil BDV tests
- (xiv) Measurement of neutral unbalance current which shall not exceed 2% of the full rated current of the transformer.
- (xv) Magnetic balance test
- (xvi) Leakage test

1.2 Supply Installation testing and commissioning of 33 kV HT Breaker & 11 kV HT Breaker with accessories and other associated works.

2. TAXES: -

- i. This works comes under Works' contract. The taxes as applicable shall be deducted from each bill paid to the contractor.
- ii. Item rate should be without GST, GST shall be reimbursed on submission of proof.

- iii. The contractor should also get registered under any other tax as applicable as per the extent order on the subject work and same shall be paid by the contractor to concerned department and the same should be considered in his quoted rates.
 - iv. Labor Welfare cess @ 1 % of gross value of work done shall be recovered from each bill paid to the contractor.
 - v. Income Tax and TDS(GST) as applicable shall be deducted from each bill paid to the contractor.
 - vi. Any other taxes/cess as per Government directives shall be deducted from each bill paid to the contractor from time to time.
3. For any queries regarding e-tendering process, the bidders are requested to contact e-wizard as provided in the tender document.
4. The specifications, Terms & Conditions, other regulations which are not herein mentioned will be guided by relevant CPWD guidelines, manual, specifications / BIS / IS/ Other Central / State Govt. norms applicable for IIM Indore & as prescribed by the OEM and 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.
5. Tender documents may be downloaded from e-wizard Portal <https://mhrd.euniwizarde.com> Aspiring Bidders/ Suppliers who have not enrolled / registered in e-wizard should enroll/register before participating through the website <https://mhrd.euniwizarde.com>.
6. 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://mhrd.euniwizarde.com>.
7. Tenders and supporting documents should be uploaded through e-wizard.
8. In the event of acceptance of a tender, the documents submitted by the successful bidder shall be verified with the originals before the award of work.
9. On acceptance of the tender, the tenderer has to furnish a bar chart showing work completion schedule and submit it along with the Performance Guarantee.

F. Terms of Payment and Milestone(s)

1. Terms of Payment for the work:

The following terms of payment shall be applicable. No variation in the terms of payment will be acceptable. Further, as per Indian laws, income tax, any other tax as applicable shall be deducted at source from the bills and a certificate for the same will be issued to the contractor.

Release of payment:

Payment shall be made by IIM Indore to the contractor upon submission of RA bill, based on progress of works and acceptance by IIM Indore. The contractor shall prepare computerized bills. The Contractor shall submit three numbers of hard copies and one soft copy of pen drive (not returnable) for all bills. All running payments shall be regarded as payments by way of advance against the final payment only.

Each Running Bills should be accompanied with Joint Measurement Records, Test/Inspection reports(if any), compliance of EPF/ESIC, Security deposit to be deducted including applicable taxes & duties as per govt. norms.

G. Time of completion:

Time of completion for the job will be regarded as 90 days from the date of start.

H. Security Deposit and Performance Guarantee

1 Security deposit:

- a. *The security deposit will be collected by deductions from the running bill of the contractor at the rate mentioned below.*
- b. A sum @ 2.5% of the gross amount of the bill will be deducted from each running bill *as well as final bill* of the contractor. Such deductions will be made unless the contractor has deposited the amount of security at the rate mentioned in cash or Government securities or Fixed Deposit Receipts.

This is in addition to the performance guarantee that the contractor is required to deposit as per clause mentioned in the tender document.

- c. The security Deposit shall be refunded to the contractor after the completion of defect liability period of 01 (ONE) year as per clause 41 of the GCC of CPWD.

2. Performance Guarantee:

The contractor whose bid is accepted will be required to furnish performance guarantee of 5% (Five Percent) of the bid amount within Seven days of issue of LOI. This guarantee may be in the form of Banker's cheque of any nationalized bank/Demand Draft of any nationalized bank/ Fixed Deposit Receipts or Guarantee Bonds of any nationalized Bank or the State Bank of India in accordance with the prescribed form in CPWD manual. In case the contractor fails to deposit the said performance guarantee within the period as indicated above, including the extended period (Maximum allowable extension with another 07 days with late fee @ 0.1% per day of Performance Guarantee amount), the Earnest Money deposited by the contractor shall be forfeited automatically without any notice to the contractor. The earnest money deposited along with bid shall be returned after receiving the aforesaid performance guarantee.

The Performance Guarantee shall be initially valid up to the stipulated date of completion plus 60 days beyond that.

I.**Safety Codes**

1. First-aid appliances, including adequate supply of sterilized dressings and cotton wool, shall be maintained in a readily accessible place.
2. The injured person shall be taken to a public hospital without loss of time, in cases where the injury necessitates hospitalization.
3. Suitable and strong scaffolds should be provided for workmen for all works that cannot safely be done from ground.
4. No portable single ladder shall be over 8 meters in length, the width between the side rails not less than 30 cm (clear) and the distance between two adjacent rungs shall not be more than 30 cm. When a ladder is used, an extra labour shall be engaged for holding the ladder.
5. The excavated material shall not be placed within 1.5 meters of the edge of the trench or half of the depth of the trench, whichever is more. All trenches and excavations shall be provided with necessary protection of minimum height of one meter.
6. Every opening in the floor of a Building or a working platform shall be provided with suitable means to prevent the fall of persons or materials by providing suitable fencing or railing whose minimum height shall be one meter.
7. No floor, roof or other part of the structure shall be so over-loaded with debris or materials as to render it unsafe.
8. Workers employed on mixing and handling material such as asphalt, cement, mortar or concrete and lime mortar shall be provided with protective footwear and rubber hand-gloves.
9. Those engaged in welding works shall be provided with welder's protective eye-shields and gloves.
10. No paint containing lead or lead products shall be used except in the form of paste or readymade paint.
11. Suitable face masks should be supplied for use by the workers when the paint is applied in the form of spray or surface having lead paint dry rubbed and scrapped.
12. Hoisting machines and tackles used in the work, including their attachments, anchorage and supports shall be in perfect condition.
13. The ropes used in hoisting or lowering material or as a means of suspension shall be of durable quality and adequate strength and free from defects.

J. Fire Safety

1. Cutting / drilling machine and other electrically operated equipments used at site shall be plugged into correctly rated electrical outlets.
2. Only ISI marked 3 pin plug and other appliances and equipments shall be used.
3. Electrical power cables/wires used shall not have any joints and shall be properly rated.
4. All electrical appliances i.e. welding, drilling, cutting machine etc. shall be safely and securely earthed to prevent leakage current while in operation.
5. Before commencing the welding work for the first time on any day, fire section shall be informed and only after the site inspection by the Fire officers/Personnel, work shall be started.
6. Two buckets of water and sand shall be kept in an easily accessible area on the site.
7. Fire extinguishers recommended and issued by fire officers shall be kept on the site.
8. Used paint drums shall be stored in specified store only after closing them properly.
9. Personal protective equipments such as safety shoes, hand gloves, welder's mask, ear plug etc. depending upon the requirement of the work shall be provided by the contractor to the workmen to prevent occupational health hazards.
10. The safety belt shall be provided by the contractor and used by the workmen while working from height for more than 10" from Ground level.
11. None of the fire extinguishers shall be removed/shifted from its designated location.
12. Power supply shall be switched off from the mains when equipment is not in use.
13. Wood-shavings and saw-dust generated from the work shall be collected on daily basis, removed from site and stored at the designated place in proper manner.
14. Any debris generated from the work shall be collected on daily basis, removed from site and stored at the designated place in proper manner.
15. Battery operated emergency light/torches shall be provided by the contractor to the workmen while working beyond office hours.

K. General Conditions of Contract

CLAUSES OF CONTRACT

CLAUSE 1

- i) The contractor shall submit an irrevocable Performance Guarantee of 3 % (FIVE) 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 period specified in Schedule 'F' from the date of issue of letter of acceptance. This period can be further extended by the Engineer-in-Charge up to a maximum period as specified in schedule 'F' on written request of the contractor stating the reason for delays in procuring the Performance Guarantee, to the satisfaction of the Engineer-in-Charge. This guarantee shall be in the form of Cash (in case guarantee amount is less than Rs. 10,000/-) or Deposit at Call receipt of any scheduled public sector bank/Banker's Cheque of any scheduled public sector bank /Demand Draft of any scheduled public sector bank/Pay Order of any scheduled public sector bank (in case guarantee amount is less than Rs. 1,00,000/-) or Government Securities or Fixed Deposit Receipts or Guarantee Bonds of any scheduled public sector bank or the State Bank of India in accordance with the form annexed hereto. In case a fixed deposit receipt of any Bank is furnished by the contractor to the IIM Indore as part of the performance guarantee and the Bank is unable to make payment against the said fixed deposit receipt, the loss caused thereby shall fall on the contractor and the contractor shall forthwith on demand furnish additional security to the IIM Indore to make good the deficit. (Modified OM No. No. F.9/4/2020-PPD dt. 12th November 2020)
- ii) The Performance Guarantee shall be initially valid up to the stipulated date of completion plus 60 days beyond that. In case the time for completion of work gets enlarged, the contractor shall get the validity of Performance Guarantee extended to cover such enlarged time for completion of work. After recording of the completion certificate for the work by the competent authority, the performance guarantee shall be returned to the contractor, without any interest. However, in case of contracts involving maintenance of building and services/any other work after construction of same building and services/other work, then 50% of Performance Guarantee shall be retained as Security Deposit. The same shall be returned year wise proportionately.
- iii) The Engineer-in-Charge shall not make a claim under the performance guarantee except 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:
 - a) Failure by the contractor to extend the validity of the Performance Guarantee as described herein above, in which event the Engineer-in-Charge may claim the full amount of the Performance Guarantee.
 - b) Failure by the contractor to pay Director, IIM Indore any amount due, either as agreed by the contractor or determined under any of the Clauses/Conditions of the agreement, within 30 days of the service of notice to this effect by Engineer-in-Charge.

- iv) In the event of the contract being determined or rescinded under provision of any of the Clause/Condition of the agreement, the performance guarantee shall stand forfeited in full and shall be absolutely at the disposal of the Director, IIM Indore.
- v) On substantial Completion of any work which has been completed to such an extent that the intended purpose of the work is met and ready to use, then a provisional Completion certificate shall be recorded by the Engineer-in-Charge. The provisional certificate shall have appended with a list of outstanding balance item of work that need to be completed in accordance with the provisions of the contract.

This provisional completion certificate shall be recorded by the concerned Engineer-in-charge with the approval of competent authority. After recording of the provisional Completion Certificate for the work by the competent authority, the 80 % of performance guarantee shall be returned to the contractor, without any interest.

However in case of contracts involving Maintenance of building and services / any other work after construction of same building and services/ other work, then 40% of performance guarantee shall be returned to the contractor, without any interest after recording the provisional Completion certificate.

CLAUSE 1 A

Recovery of Security Deposit

The person/persons whose tender(s) may be accepted (hereinafter called the contractor) shall permit IIM Indore 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 and final bill till the sum deducted will amount to security deposit of 2.5% of the tendered value of the work. Such deductions will be made and held by IIM Indore by way of Security Deposit unless he/they has/have deposited the amount of Security at the rate mentioned above in cash or in the form of Government Securities or fixed deposit receipts. In case a fixed deposit receipt of any Bank is furnished by the contractor to the IIM Indore as part of the security deposit and the Bank is unable to make payment against the said fixed deposit receipt, the loss caused thereby shall fall on the contractor and the contractor shall forthwith on demand furnish additional security to the IIM Indore to make good the deficit.

All compensations or the other sums of money payable by the contractor under the terms of this contract may be deducted from, or paid by the sale of a sufficient part of his security deposit or from the interest arising therefrom, or from any sums which may be due to or may become due to the contractor by IIM Indore on any account whatsoever and in the event of his Security Deposit being reduced by reason of any such deductions or sale as aforesaid, the contractor shall within 10 days make good in cash or fixed deposit receipt tendered by the State Bank of India or by scheduled public sector banks or Government Securities (if deposited for more than 12 months) endorsed in favour of the competent authority, any sum or sums which may have been deducted from, or raised by sale of his security deposit or any part thereof. The security deposit shall be collected from the running bills and the final bill of the contractor at the rates mentioned above.

The security deposit as deducted above can be released against bank guarantee issued by a scheduled bank, on its accumulations to a minimum of Rs. 5 lac subject to the condition that amount of such bank guarantee, except last one, shall not be less than Rs. 5 lac. Provided further that the validity of bank guarantee including the one given

against the earnest money shall be in conformity with provisions contained in clause 17 which shall be extended from time to time depending upon extension of contract granted under provisions of clause 2 and clause 5.

In case of contracts involving maintenance of building and services/any other work after construction of same building and services/other work, then 50% of Performance Guarantee shall be retained as Security Deposit. The same shall be returned year wise proportionately.

Note-1: Government papers tendered as security will be taken at 5% (five per cent) below its market price or at its face value, whichever is less. The market price of Government paper would be ascertained by the competent authority at the time of collection of interest and the amount of interest to the extent of deficiency in value of the government paper will be withheld if necessary.

Note-2: Government Securities will include all forms of Securities mentioned in Rule No. 274 of the G.F. Rules except fidelity bond. This will be subject to the observance of the condition mentioned under the rule against each form of security.

Note-3: Note 1 & 2 above shall be applicable for both clause 1 and 1A

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 justified extended date of completion, as per clause 5 (excluding any extension under clause 5.5) as well as any extension granted under clauses 12 and 15, he shall, without prejudice to any other right or remedy available under the law to the IIM Indore on account of such breach, pay as compensation the amount calculated at the rates stipulated below as the authority specified in schedule 'F' may decide on the amount of accepted tendered value of the work for every completed day/month (as determined) that the progress remains below that specified in Clause 5 or that the work remains incomplete.

i) Compensation for delay of work with maximum rate @ 1.0 % (One percent) per month of delay to be computed on per day basis based on quantum of damage suffered due to stated delay on the part of contractor

Provided always that the total amount of compensation for delay to be paid under this Condition shall not exceed 10% (ten percent) of the accepted Tendered Value of work or of the accepted Tendered Value of the Sectional part of work as mentioned in Schedule 'F' for which a separate period of completion is originally given.

In case no compensation has been decided by the authority in Schedule 'F' during the progress of work, this shall be no waiver of right to levy compensation by the said authority if the work remains incomplete on final justified extended date of completion. If the Engineer in Charge decides to give further extension of time allowing performance of work beyond the justified extended date, the contractor shall be liable to pay compensation for such extended period. If any variation in amount of contract takes place during such extended period beyond justified extended date and the contractor becomes entitled to additional time under clause 12, the net period for such variation shall be accounted for while deciding the period for levy of compensation. However, during such further extended period beyond the justified extended period, if any delay

occurs by events under sub clause 5.2, the contractor shall be liable to pay compensation for such delay.

Provided that compensation during the progress of work before the justified extended date of completion for delay under this clause shall be for non-achievement of sectional completion or part handing over of work on stipulated/justified extended date for such part work or if delay affects any other works/services. This is without prejudice to right of action by the Engineer in Charge under clause 3 for delay in performance and claim of compensation under that clause.

In case action under clause 2 has not been finalized and the work has been determined under clause 3, the right of action under this clause shall remain post determination of contract but levy of compensation shall be for days the progress is behind the schedule on date of determination, as assessed by the authority in Schedule F, after due consideration of justified extension. The compensation for delay, if not decided before the determination of contract, shall be decided after of determination of contract.

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 IIM Indore. In case, the contractor does not achieve a particular milestone mentioned in schedule F, 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 as above. 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 for the delay in subsequent milestone(s), amount mentioned against each milestone missed subsequently also shall be withheld. However, no interest, whatsoever, shall be payable on such withheld amount. **(Modified OM No. DG/CON/306 dt. 04.10.2019)**

CLAUSE 3

When Contract can be Determined

Subject to other provisions contained in this clause, the Engineer-in-Charge may, without prejudice to any other rights or remedy against the contractor in respect of any delay, not following safety norms, inferior workmanship, any claims for damages and/or any other provisions of this contract or otherwise, and whether the date of completion has or has not elapsed, 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 un-workman 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 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 or section of work with individual date of completion on or before the stipulated or justified extended date, on or before such date of completion; and the Engineer in Charge without any prejudice to any other right or remedy under any other provision in the contract has given further reasonable time in a notice given in writing in that behalf as either mutually agreed or in absence of such

mutual agreement by his own assessment making such time essence of contract and in the opinion of Engineer-in-Charge the contractor will be unable to complete the same or does not complete the same within the period specified.

- iv) If the contractor persistently neglects to carry out his obligations under the contract and/ or commits default in complying with any of the terms and conditions 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 IIM Indore 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 for IIM Indore.
- vi) If the contractor shall enter into a contract with IIM Indore in connection with which commission has been paid or agreed to be paid by him or to his knowledge, unless the particulars of any such commission and the terms of payment thereof have been previously disclosed in writing to the Engineer-in-Charge.
- vii) If the contractor had secured the contract with IIM Indore as a result of wrong tendering or other non-bonafide methods of competitive tendering or commits breach of Integrity Agreement.
- viii) 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.
- ix) 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.
- x) If the contractor shall suffer an execution being levied on his goods and allow it to be continued for a period of 21 days.
- xi) If the contractor assigns, (excluding part(s) of work assigned to other agency(s) by the contractor as per terms of contract), 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 works 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 cases aforesaid, the Engineer-in-Charge on behalf of the Director, IIM Indore shall have powers:

a) To determine the contract as aforesaid so far as performance of work by the Contractor is concerned (of which termination notice in writing to the contractor under the hand of the Engineer-in-Charge shall be conclusive evidence). Upon such determination, Security Deposit already recovered, Security deposit payable and Performance Guarantee under the contract shall be liable to be forfeited and shall be absolutely at the disposal of the IIM Indore.

b) After giving notice to the contractor 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. The contractor, whose contract is determined as above, shall not be allowed to participate in the tendering process for the balance work **including any new items needed to complete the 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 materials or entered into any engagements or made any advances on account or with a view to the execution 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 3A

In case, the work cannot be started due to reasons not within the control of the contractor within 1/8th of the stipulated time for completion of work or one month whichever is higher, either party may close the contract by giving notice to the other party stating reasons. In such eventuality, the Performance Guarantee of the contractor shall be refunded within following time limits:

- (i) If the Tendered value of work is up to Rs.1 Crore: 15 days.
- (ii) If the Tendered value of work is more than Rs. 1 Crore and up to Rs. 10 Crore: 21 days.
- (iii) If the Tendered value of work exceeds Rs. 10 Crore: 30 days.

Neither party shall claim any compensation for such eventuality. This clause is not applicable for any breach of the contract by either party.

CLAUSE 4

Contractor liable to pay Compensation even if action not taken under Clause 3

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 powers vested in him under the preceding clause he may, if he so desires after giving a notice in writing to the contractor, take possession of (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 in the final determination of the Engineer-in-Charge) all or any tools, plant, materials and stores, 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, clerk of the works, foreman or other authorized agent to remove such tools, plant, materials, or stores from the premises (within a time to be 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

Time and Extension for Delay

The time allowed for execution of the Works as specified in the Schedule 'F' or the extended time in accordance with these conditions shall be the essence of the Contract. The execution of the works shall commence from such time period as mentioned in schedule 'F' or from the date of handing over of the site notified by Engineer-in-Charge, whichever is later. If the Contractor commits default in commencing the execution of the work as aforesaid, the performance guarantee shall be forfeited by the Engineer in Charge and shall be absolutely at the disposal of the IIM Indore shall without prejudice to any other right or remedy available in law.

5.1 i) As soon as possible but within 7 (Seven) working days of award of work and in consideration of

- a) Schedule of handing over of site as specified in the Schedule 'F'
- b) Schedule of issue of designs as specified in the Schedule 'F'

The Contractor shall submit a Time and Progress Chart for each mile stone. The Engineer-in-Charge may within 7 (Seven) working days thereafter, if required modify, and communicate the program approved to the contractor failing which the program submitted by the contractor shall be deemed to be approved by the Engineer-in-Charge. The work programme shall include all details of balance drawings and decisions required to complete the contract with specific dates by which these details are required by contractor without causing any delay in execution of the work. The Chart shall be prepared in direct relation to the time stated in the Contract documents for completion of items of the works. It shall indicate the forecast of the dates of commencement and completion of various trades of sections of the work and 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

- i) In case of non submission of construction programme by the contractor the program approved by the Engineer-in-Charge shall be deemed to be final.
- ii) The approval by the Engineer-in-Charge of such programme shall not relieve the contractor of any of the obligations under the contract.
- iii) The contractor shall submit the Time and Progress Chart and progress report using the mutually agreed software or in other format decided by Engineer-in-Charge for the work done during previous month to the Engineer-in-charge on or before 5th day of each month failing which a recovery as per schedule F to be decided by the NIT approving

authority shall be made on per week or part basis in case of delay in submission of the monthly progress report.

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 trades 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. any other cause like above which, in the reasoned opinion 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 endeavours 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.

The contractor shall have no claim of damages for extension of time granted or rescheduling of milestone/s for events listed in sub clause 5.2. (Modified OM DG/CON/305 dt. 19.02.2019)

5.3 In case the work is hindered by the Department or for any reason / event for which the Department is responsible, the authority as indicated in Schedule 'F' shall, if justified, give a fair and reasonable extension of time and reschedule the mile stones for completion of work such extension of time or rescheduling of milestone/s shall be without prejudice to any other right or remedy of the parties in contract or in law; provided further that for concurrent delays under this sub clause and sub clause 5.2 to the extent the delay is covered under sub clause 5.2 the contractor shall be entitled to only extension of time and no damages.

5.4 Request for rescheduling of Mile stones or 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 forms i.e. Form of application by the contractor for seeking rescheduling of milestones or forms i.e. Form of application by the contractor for seeking extension of time (Appendix-XVI) respectively to the authority as indicated in Schedule 'F'. The Contractor shall indicate in such a request the period by which rescheduling of milestone/s or extension of time is desired. With every request for rescheduling of milestones, or if at any time the actual progress of work falls behind the approved programme by more than 10% of the stipulated period of completion of contract, the contractor shall produce a revised programme which shall include all details of pending drawings and decisions required to complete the contract and also the target dates by which these details should be available without causing any delay in execution of the work. A

recovery as specified in Schedule 'F' shall be made on per day basis in case of delay in submission of the revised programme.

5.4.1 In any such case the authority as indicated in Schedule 'F' may give a fair and reasonable extension of time for completion of work or reschedule the mile stones. Such extension or rescheduling of the milestones. Engineer-in-charge shall finalize / reschedule of particular mile stone before taking an action against subsequent mile stone. Such extension or rescheduling of the milestones shall be communicated to the Contractor by the authority as indicated in Schedule 'F' in writing, within 21 days of the date of receipt of such request from the contractor in prescribed form. In event of non application by the contractor for extension of time E-in-C after affording opportunity to the contractor, may give, supported with a programme (as specified under 5.4 above), a fair and reasonable extension within a reasonable period of occurrence of the event.

5.4.2 In case the work is delayed by any reasons, in the opinion of the Engineer-in-Charge, by the contractor for reasons beyond the events mentioned in clause 5.2 or clause 5.3 or clause 5.4 and beyond the justified extended date; without prejudice to right to take action under Clause 3, the Engineer-in-Charge may grant extension of time required for completion of work without rescheduling of milestones. The contractor shall be liable for levy of compensation for delay for such extension of time.

CLAUSE 6

Computerized Measurement Book

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

All measurements of all items having financial value shall be entered by the contractor and compiled in the shape of the Computerized Measurement Book having pages of A-4 size as per the format of the department so that a complete record is obtained of all the items of works performed under the contract.

All such measurements and levels recorded by the contractor or his authorized representative from time to time, during the progress of the work, shall be got checked by the contractor from the Engineer-in-Charge or his authorized representative as per interval or program fixed in consultation with Engineer-in-Charge or his authorized representative. After the necessary corrections made by the Engineer-in-Charge, the measurement sheets shall be returned to the contractor for incorporating the corrections and for resubmission to the Engineer-in-Charge for the dated signatures by the Engineer-in- Charge and the contractor or their representatives in token of their acceptance.

Whenever bill is due for payment, the contractor would initially submit draft computerized measurement sheets and these measurements would be got checked/test checked from the Engineer-in-Charge and/or his authorized representative. The contractor will, thereafter, incorporate such changes as may be done during these checks/test checks in his draft computerized measurements, and submit to the department a computerized measurement book, duly bound, and with its pages machine numbered. The Engineer-in- Charge and/or his authorized

representative would thereafter check this MB, and record the necessary certificates for their checks/test checks.

The final, fair, computerized measurement book given by the contractor, duly bound, with its pages machine numbered, should be 100% correct, and no cutting or over-writing in the measurements would thereafter be allowed. If at all any error is noticed, the contractor shall have to submit a fresh computerized MB with its pages duly machine numbered and bound, after getting the earlier MB cancelled by the department. Thereafter, the MB shall be taken in the department records, and allotted a number as per the Register of Computerized MBs. This should be done before the corresponding bill is submitted to the Department for payment. The contractor shall submit two spare copies of such computerized MB's for the purpose of reference and record by the various officers of the department.

The contractor shall also submit to the department separately his computerized Abstract of Cost and the bill based on these measurements, duly bound, and its pages machine numbered along with two spare copies of the "bill. Thereafter, this bill will be processed by the Department and allotted a number as per the computerized record in the same way as done for the measurement book meant for measurements.

The contractor shall, without extra charge, provide all assistance with every appliance, labour and other things necessary for checking of measurements/levels by the Engineer-in- Charge or his representative.

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 checking and/or test checking the measurement of any work in order that the same may be checked and/or test checked and correct dimensions thereof be taken before the same is covered up or placed beyond the reach of checking and/or test checking 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 Checking and/or test checking measurements 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 department to check the measurements recorded by contractor and all provisions stipulated herein above shall be applicable to such checking of measurements or levels.

It is also a term of this contract that checking and/or test checking the measurements of any item of work in the measurement book and/or its payment in the interim, on account of 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 from any over measurement or defects noticed till completion of the defects liability period.

CLAUSE 7

Payment on Intermediate Certificate to be regarded as Advances

No payment shall be made for work, estimated to cost Rs. two Lac 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. two Lac, 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 Department 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 the amount specified in Schedule 'F', 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, 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 10th working day after the day of presentation of the bill by the Contractor to the Engineer-in-Charge or his Asstt. Engineer together with the account of the material issued by the department, or dismantled materials, if any. In the case of works outside the headquarters of the Engineer- in-Charge, the period of ten working days will be extended to fifteen working days. In case of delay in payment of intermediate bills after 45 days of submission of bill by the contractor provided the bill submitted by the contractor found to be in order, a simple interest @ 5% (five percent) per annum shall be paid to the contractor from the date of expiry of prescribed time limit which will be

compounded on yearly basis.

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 department 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 competent authority.

The Engineer-in-Charge in his sole discretion on the basis of a certificate from the Asstt. Engineer to the effect that the work has been completed up to the level in question make interim advance payments without detailed measurements for work done (other than foundations, items to be covered under finishing items) up to lintel level (including sunshade etc.) and slab level, for each floor working out at 75% of the assessed value. The advance payments so allowed shall be adjusted in the subsequent interim bill to be submitted by the contractor within 10 days of the interim payment. In case of delay in submission of bill by the contractor a simple interest @ 10% per annum shall be paid to the IIM Indore from the date of expiry of prescribed time limit which will be compounded on yearly basis.

Payments in composite Contracts

In case of composite tenders, running payment for the major component shall be made by EE of major discipline to the main contractor. Running payment for minor component shall be made by the Engineer-in-Charge of the discipline of minor component directly to the main contractor.

CLAUSE 8

Completion Certificate and Completion Plans

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 shall be 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 8A

Completion Plans to be submitted by the Contractor

The contractor shall submit completion plan for internal and external Civil, Electrical and Mechanical Services within thirty days of the completion of the work, provided that the service plans having been issued for execution by the Engineer-in-Charge, unless the contractor, by virtue of any other provision in the contract, is required to prepare such plans

In case, the contractor fails to submit the completion plan as aforesaid, he shall be liable to pay a sum of 0.1 % (zero point one percent) of Tendered Value or limit prescribed in Schedule F whichever is more as may be fixed by the Competent Authority as mentioned in schedule F and in this respect the decision of the Chief Engineer shall be final and binding on the contractor.

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 hereinunder, the period being reckoned from the date of receipt of the bill by the Engineer-in-Charge or his authorized Asstt. Engineer, complete with account of materials issued by the Department and dismantled materials.

- a) If the Tendered value of work is up to Rs. 1 Crore : 2 months
- b) If the Tendered value of work is more than Rs.1 Crore and up to Rs. 10 Crore : 3 months
- c) If the Tendered value of work exceeds Rs. 10 Crore : 6 months

If the final bill is submitted by the contractor with in the period specified above and payment of final bills is made by the dept. after prescribed time limit, a simple interest @ 5 % per annum shall be paid to the contractor from the date of expiry of prescribed time limit which will be compounded on yearly basis, provided the final bill submitted by the contractor found to be in order.

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 IIM Indore or his signature on the bill or other claim preferred against IIM Indore 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, IIM Indore.

CLAUSE 10A

Materials to be provided by the Contractor

The contractor shall, at his own expense, provide all materials, required for the works other than those which are stipulated to be supplied by the IIM Indore.

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. 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 accepted 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 work is being prepared or from where materials, manufactured articles or machinery are being obtained for the works 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 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 at least with the testing equipment as specified in schedule F.

CLAUSE 10B
Secured Advance on Materials

The contractor shall be entitled to be paid during the progress of the execution of the work up to 75% of the value (on submission of original invoice & Material Test Certificate) 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 RA Bill.

Note- If the payment of the material is claimed against the schedule of payment, the amount of the same shall be deducted from the secured advance if paid.

Mobilization Advance - 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 CC

Payment due to Increase/Decrease in Prices/Wages (excluding materials covered under clause 10 CA) after Receipt of Tender for Works - Deleted.

CLAUSE 10 D

Dismantled Material IIM Indore Property

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

CLAUSE 11

Work to be executed in Accordance with Specifications, Drawings, 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 Engineer-in-Charge and the contractor shall be furnished free of charge one copy of the contract documents together with specifications, designs, drawings and instructions as are not included in the standard specifications of Central Public Works Department specified in Schedule F or in any Bureau of Indian Standard or any other, published standard or code or, Schedule of Rates or any other printed publication referred to elsewhere in the contract.

The contractor shall comply with the provisions of the contract and with the 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:

Deviations/Variations Extent and Pricing

The Engineer-in-Charge shall have power:

(i) to make alteration in, omissions from, additions 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

(ii) to omit a part of the works in case of non-availability of a portion of the site or for any other reasons and the contractor shall be bound to carry out the works in accordance with any instructions given to him in writing signed 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.

12.1 The time for completion of the works shall, in the event of any deviations resulting in additional cost over the tendered value sum 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 value plus

ii) 25% of the time calculated in (i) above or such further additional time as may be considered reasonable by the Engineer-in-Charge.

Deviation, Extra Items and Pricing

12.2. In the case of extra item(s) (items that are completely new, and are in addition to the items contained in the contract), the contractor may within fifteen days of receipt of order or occurrence of the item(s) submit market rate, claim rates, supported by proper analysis, which shall include invoices, vouchers etc. and Manufacturer's specification for the work failing which the rate approved later by the Engineer-in-charge shall be binding and the Engineer-in-Charge shall within prescribed time limit 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, failing which it will be deemed to have been approved.

Deviation, Substituted Items, Pricing

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 in the following para.

a) 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 rates of substituted item and the agreement item (to be substituted).

b) 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 rates of substituted item and the agreement item (to be substituted).

Deviation, Deviated Quantities, Pricing

In the case of contract items, substituted items, contract cum substituted items, which exceed the limits laid down in schedule F, the contractor may within fifteen 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 prescribed time limit 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 (as per invoice vouchers from the manufacturers or suppliers submitted by the agency and duly verified by Engineer-In-Charge or his representative) and the contractor shall be paid in accordance with the rates so determined.

The prescribed time limits for finalising rates for Extra Item(s), Substitute Item(s) and Deviated Quantities of contract items is within 45 days after submission of proposal by the contractor without observation of the Engineer-in-Charge.

12.3 The provisions of the preceding paragraph shall also apply to the decrease in the rates of items for the work in excess of the limits laid down in Schedule F, and the Engineer-in-Charge shall after giving notice to the contractor within one month of occurrence of the excess and after taking into consideration any reply received from him within fifteen days of the receipt of the notice, revise the rates for the work in question within one month of the expiry of the said period of fifteen days having regard to the market rates.

12.4 For the purpose of operation of Schedule “F”, the following works shall be treated as works relating to foundation unless & otherwise defined in the contract:

- (i) For Buildings : All works up to 1.2 metres above ground level or up to floor 1 level whichever is lower.
- (ii) For abutments, piers and well staining: All works up to 1.2 m above the bed level.
- (iii) For retaining walls, wing walls, compound walls, chimneys, over head reservoirs/ tanks and other elevated structures: All works up to 1.2 metres above the ground level.
- (iv) For reservoirs/tanks (other than overhead reservoirs/tanks): All works up to 1.2 metres above the ground level.
- (v) For basement: All works up to 1.2 m above ground level or up to floor 1 level whichever is lower.
- (vi) For Roads, all items of excavation and filling including treatment of sub base.

12.5 Any operation incidental to or necessarily has to be in contemplation of tenderer while quoting tender, 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 tenderer 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 or during the progress of work, the purpose or object for which the work is being done changes due to any supervening cause and as a result of which the work has to be abandoned or reduced in scope the Engineer-in-Charge shall give notice in writing to that effect to the contractor stating the decision as well as the cause for such decision 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.

The contractor shall be paid at contract rates, full amount for works executed at site and, in addition, a reasonable amount as certified by the Engineer-in-Charge for the items hereunder mentioned which could not be utilized on the work to the full extent in view of the foreclosure;

- i) Any expenditure incurred on preliminary site work, e.g. temporary access roads, temporary labour huts, staff quarters and site office; storage accommodation and water storage tanks.
- ii) IIM Indore shall have the option to take over contractor's materials or any part thereof either brought to site or of which the contractor is legally bound to accept delivery from suppliers (for incorporation in or incidental to the work) provided, however IIM Indore shall be bound to take over the materials or such portions thereof as the contractor does not desire to retain. For materials taken over or to be taken over by IIM Indore, cost of such materials as detailed by Engineer-in-Charge shall be paid. The cost shall, however, take into account purchase price, cost of transportation and deterioration or damage which may have been caused to materials whilst in the custody of the contractor.
- iii) Reasonable compensation for transfer of T & P from site to contractor's permanent stores or to his other works, whichever is less. If T & P are not transported to either of the said places, no cost of transportation shall be payable.
- iv) Reasonable compensation for repatriation of contractor's site staff and imported labour to the extent necessary.

The contractor shall, if required by the Engineer- in-Charge, furnish to him, books of account, wage books, time sheets and other relevant documents and evidence as may be necessary to enable him to certify the reasonable amount payable under this condition.

The reasonable amount of items on (i), (iii) and (iv) above shall not be in excess of 2% of the cost of the work remaining incomplete on the date of closure, i.e. total

stipulated cost of the work as per accepted tender less the cost of work actually executed under the contract and less the cost of contractor's materials at site taken over by the IIM Indore as per item (ii) above. Provided always that against any payments due to the contractor on this account or otherwise, the Engineer-in-Charge shall be entitled to recover or be credited with any outstanding balances due from the contractor for advance paid in respect of any tool, plants and materials and any other sums which at the date of termination were recoverable by the IIM Indore from the contractor under the terms of the contract.

In the event of action being taken under Clause 13 to reduce the scope of work, the contractor may furnish fresh Performance Guarantee on the same conditions, in the same manner and at the same rate for the balance tendered amount and initially valid up to the extended date of completion or stipulated date of completion if no extension has been granted plus 60 days beyond that. Wherever such a fresh Performance Guarantee is furnished by the contractor the Engineer-in-Charge may return the previous Performance Guarantee.

Clause 14

Carrying out part work at risk & cost of contractor

If contractor:

- i) 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 of 7 working days in this respect from the Engineer-in-Charge; or
- ii) Commits default in complying with any of the terms and conditions of the contract and does not remedy it or takes effective steps to remedy it within working 7 days even after a 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.
- iii) 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 IIM Indore, 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 materials, constructional plant, implements, stores, 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, is 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 IIM Indore because of action under this clause shall not exceed 10% of the tendered value 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 department 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 IIM Indore in completing the part work/ part incomplete work of any item(s) or the excess loss of damages suffered or may be suffered by IIM Indore as aforesaid after allowing such credit shall without prejudice to any other right or remedy available to IIM Indore in law or per as 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 materials or entered into any engagements 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

- i) 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.

- ii) If the suspension is ordered for reasons (b) and (c) in sub-para (i) above:
 - a) the contractor shall be entitled to an extension of time equal to the period of every such suspension PLUS 25%, for completion of the item or group of items of work for which a separate period of completion is specified in the contract and of which the suspended work forms a part, and;
 - b) If the total period of all such suspensions in respect of an item or group of items or work for which a separate period of completion is specified in the contract exceeds thirty days, the contractor shall, in addition, be entitled to such compensation as the Engineer-in- Charge may consider reasonable in respect of salaries and/or wages paid by the contractor to his employees and labour at site, remaining idle during the period of suspension, adding thereto 2% to cover indirect expenses of the contractor provided the contractor submits his claim supported by details to the Engineer-in-Charge within fifteen days of the expiry of the period of 30 days.
- iii) If the works or part thereof is suspended on the orders of the Engineer-in-Charge for more than three months at a time, except when suspension is ordered for reason (a) in sub para (i) above, the contractor may after receipt of such order serve a written notice on the Engineer-in-Charge requiring permission within fifteen days from receipt by the Engineer-in-Charge of the said notice, to proceed with the work or part thereof in regard to which progress has been suspended and if such permission is not granted within that time, the contractor, if he intends to treat the suspension, where it affects only a part of the works as an omission of such part by IIM Indore or where it affects whole of the works, as an abandonment of the works by IIM Indore, shall within ten days of expiry of such period of 15 days give notice in writing of his intention to the Engineer-in-Charge. In the event of the contractor treating the suspension as an abandonment of the contract by IIM Indore, he shall have no claim to payment of any compensation on account of any profit or advantage which he might have derived from the execution of the work in full but which he could not derive in consequence of the abandonment. He shall, however, be entitled to such compensation, as the Engineer-in-Charge may consider reasonable, in respect of salaries and/or wages paid by him to his employees and labour at site, remaining idle in consequence adding to the total thereof 2% to cover indirect expenses of the contractor provided the contractor submits his claim supported by details to the Engineer-in-Charge within 30 days of the expiry of the period of 3 months.

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 Department or any organization engaged by the Department for Quality Assurance and of the Chief Technical Examiner's Office, 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 Chief Engineer in charge of Quality Assurance or his subordinate officers or the officers of the organization engaged by the Department for Quality Assurance or to the Chief Technical Examiner or his subordinate officers, 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 (six months in the case of work costing Rs. 10 Lac and below except road work) 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 a 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 the authority specified in schedule 'F' may consider reasonable during the preparation of on account bills or final bill 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 and 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 defect 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 is being executed, or if any damage shall happen to

the work while in progress, from any cause whatever or if any defect, shrinkage or other faults appear in the work within twelve months (six months in the case of work costing Rs. Ten lacs and below except road work) 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 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 sums that may be due or at any time thereafter may become due to the contractor, or from his security deposit or the proceeds of sale thereof or of a sufficient portion thereof. The security deposit of the contractor shall not be refunded before the expiry of twelve months (six months in the case of work costing Rs. Ten lakhs and below except road work) 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. Provided that in the case of road work, if in the opinion of the Engineer-in-Charge, half of the security deposit is sufficient, to meet all liabilities of the contractor under this contract, half of the security deposit will be refundable after six months and the remaining half after twelve months of the issue of the said certificate of completion 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 (except such special materials, if any, as may in accordance with the contract be supplied from the Engineer-in-Charge's stores), machinery, tools & plants as specified in schedule F. In addition to this, appliances, implements, other plants, 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 therefore 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 for 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 security deposit or the proceeds of sale thereof, or of a sufficient portions thereof.

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, IIM Indore is obliged to pay compensation to a workman employed by the contractor, in execution of the works, IIM Indore will recover from the contractor, the amount of the compensation so paid; and, without prejudice to the rights of the IIM Indore under sub-section (2) of Section 12, of the said Act, IIM Indore 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 IIM Indore to the contractor whether under this contract or otherwise. IIM Indore shall not be bound to contest any claim made against it under sub-section (1) of Section 12, of the said Act, except on the written request of the contractor and upon his giving to IIM Indore full security for all costs for which IIM Indore might become liable in consequence of contesting such claim.

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, IIM Indore 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 C.P.W.D. 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 C.P.W.D. Contractors, IIM Indore 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 IIM Indore under sub-section(2) of Section 20, and sub-section (4) of Section 21, of the Contract Labour (Regulation and Abolition) Act, 1970, IIM Indore 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 IIM Indore to the contractor whether under this contract or otherwise IIM Indore 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 IIM Indore full security for all costs for which IIM Indore might become liable in contesting such claim.

CLAUSE 19

Labour Laws to be complied by the Contractor

The contractor shall obtain a valid licence under the Contract Labour (R&A) Act, 1970, and the Contract Labour (Regulation and Abolition) Central Rules, 1971, before the commencement of the work, and continue to have a valid license until the completion of the work. The contractor shall also comply with provisions of the Inter-State Migrant Workmen (Regulation of Employment and Conditions of Service) Act, 1979.

The contractor shall also abide by the provisions of the Child Labour (Prohibition and Regulation) Act, 1986.

The contractor shall also comply with the provisions of the building and other Construction Workers (Regulation of Employment & Conditions of Service) Act, 1996 and the building and other Construction Workers Welfare Cess Act, 1996.

Any failure to fulfil these requirements shall attract the penal provisions of this contract arising out of the resultant non-execution of the work.

CLAUSE 19A

No labour below the age of fourteen years shall be employed on the work.

CLAUSE 19 B

Payment of Wages

Payment of wages:

- i) The contractor shall pay to labour employed by him either directly or through subcontractors, wages not less than fair wages as defined in the C.P.W.D. Contractor's Labour Regulations or as per the provisions of the Contract Labour (Regulation and Abolition) Act, 1970 and the contract Labour (Regulation and Abolition) Central Rules, 1971, wherever applicable.
- ii) The contractor shall, notwithstanding the provisions of any contract to the contrary, cause to be paid fair wage to labour indirectly engaged on the work, including any labour engaged by his sub-contractors in connection with the said work, as if the labour had been immediately employed by him.
- iii) In respect of all labour directly or indirectly employed in the works for performance of the contractor's part of this contract, the contractor shall comply with or cause to be complied with the Central Public Works Department contractor's Labour Regulations made by Government from time to time in regard to payment of wages, wage period, deductions from wages recovery of wages not paid and deductions unauthorisedly made, maintenance of wage books or wage slips, publication of scale of wages and other terms of employment, inspection and submission of periodical returns and all other matters of the like nature or as per the provisions of the Contract Labour (Regulation and Abolition) Act, 1970, and the Contract Labour (Regulation and Abolition) Central Rules, 1971, wherever applicable.
- iv) a) The Engineer-in-Charge concerned shall have the right to deduct from the moneys due to the contractor any sum required or estimated to be required for making good the loss suffered by a worker or workers by reason of non-fulfilment of the conditions of the contract for the benefit of the workers, non-payment of wages or of deductions made from his or their wages which are not justified by their terms of the contract or non-observance of the Regulations.
b) Under the provision of Minimum Wages (Central) Rules, 1950, the contractor is bound to allow to the labours directly or indirectly employed in the works one

day rest for 6 days continuous work and pay wages at the same rate as for duty. In the event of default, the Engineer-in-Charge shall have the right to deduct the sum or sums not paid on account of wages for weekly holidays to any labours and pay the same to the persons entitled thereto from any money due to the contractor by the Engineer-in-Charge concerned.

In the case of Union Territory of Delhi, however, as the all-inclusive minimum daily wages fixed under Notification of the Delhi Administration No.F.12(162)MWO/DAB/43884-91, dated 31-12-1979 as amended from time to time are inclusive of wages for the weekly day of rest, the question of extra payment for weekly holiday would not arise.

- v) The contractor shall comply with the provisions of the Payment of Wages Act, 1936, Minimum Wages Act, 1948, Employees Liability Act, 1938, Workmen's Compensation Act, 1923, Industrial Disputes Act, 1947, Maternity Benefits Act, 1961, and the Contractor's Labour (Regulation and Abolition) Act 1970, or the modifications thereof or any other laws relating thereto and the rules made thereunder from time to time.
- vi) The contractor shall indemnify and keep indemnified IIM Indore against payments to be made under and for the observance of the laws aforesaid and the C.P.W.D. Contractor's Labour Regulations without prejudice to his right to claim indemnity from his sub-contractors.
- vii) The laws aforesaid shall be deemed to be a part of this contract and any breach thereof shall be deemed to be a breach of this contract.
- viii) Whatever is the minimum wage for the time being, or if the wage payable is higher than such wage, such wage shall be paid by the contractor to the workmen directly without the intervention of Jamadar and that Jamadar shall not be entitled to deduct or recover any amount from the minimum wage payable to the workmen as and by way of commission or otherwise.
- ix) The contractor shall ensure that no amount by way of commission or otherwise is deducted or recovered by the Jamadar from the wage of workmen.

CLAUSE 19C

In respect of all labour directly or indirectly employed in the work for the performance of the contractor's part of this contract, the contractor shall at his own expense arrange for the safety provisions as per C.P.W.D. Safety Code framed from time to time and shall at his own expense provide for all facilities in connection therewith. In case the contractor fails to make arrangement and provide necessary facilities as aforesaid, he shall be liable to pay a penalty as decided by the authority mentioned in Schedule F for each default and in addition, the Engineer-in-Charge shall be at liberty to make arrangement and provide facilities as aforesaid and recover the costs incurred in that behalf from the contractor.

CLAUSE 19 D

The contractor shall submit by the 4th and 19th of every month, to the Engineer-in-Charge, a true statement showing in respect of the second half of the preceding month and the first half of the current month respectively:-

- (1) the number of labourers employed by him on the work,
- (2) their working hours,
- (3) the wages paid to them,
- (4) the accidents that occurred during the said fortnight showing the circumstances under which they happened and the extent of damage and injury caused by them, and
- (5) the number of female workers who have been allowed maternity benefit according to Clause 19F and the amount paid to them.

Failing which the contractor shall be liable to pay to IIM Indore, a sum as decided by the authority mentioned in Schedule F for each default or materially incorrect statement. The decision of the Competent Authority shall be final in deducting from any bill due to the contractor, the amount levied as fine and be binding on the contractor.

CLAUSE 19 E

In respect of all labour directly or indirectly employed in the works for the performance of the contractor's part of this contract, the contractor shall comply with or cause to be complied with all the rules framed by Government from time to time for the protection of health and sanitary arrangements for workers employed by the Central Public Works Department and its contractors.

CLAUSE 19 F

Leave and pay during leave shall be regulated as per law/ rule stipulated.

CLAUSE 19 G

In the event of the contractor(s) committing a default or breach of any of the provisions of the Central Public Works Department, Contractor's Labour Regulations and Model Rules for the protection of health and sanitary arrangements for the workers as amended from time to time or furnishing any information or submitting or filing any statement under the provisions of the above Regulations and' Rules which is materially incorrect, he/they shall, without prejudice to any other liability, pay to the IIM Indore a sum as decided by the authority mentioned in Schedule F for every default, breach or furnishing, making, submitting, filing such materially incorrect statements and in the event of the contractor(s) defaulting continuously in this respect, the penalty may be enhanced to as decided by the authority mentioned in Schedule F per day for each day of default subject to a maximum of 5 per cent of the estimated cost of the work put to tender. The decision of the Engineer-in-Charge shall be final and binding on the parties. Should it appear to the Engineer-in-Charge that the contractor(s) is/are not properly observing and complying with the provisions of the C.P.W.D. Contractor's Labour Regulations and Model Rules and the provisions of the Contract

Labour (Regulation and Abolition) Act 1970, and the Contract Labour (R&A) Central Rules 1971, for the protection of health and sanitary arrangements for work-people employed by the contractor(s) (hereinafter referred as “the said Rules”) the Engineer-in-Charge shall have power to give notice in writing to the contractor(s) requiring that the said Rules be complied with and the amenities prescribed therein be provided to the work-people within a reasonable time to be specified in the notice. If the contractor(s) shall fail within the period specified in the notice to comply with and/observe the said Rules and to provide the amenities to the work-people as aforesaid, the Engineer-in-Charge shall have the power to provide the amenities hereinbefore mentioned at the cost of the contractor(s). The contractor(s) shall erect, make and maintain at his/their own expense and to approved standards all necessary huts and sanitary arrangements required for his/their work-people on the site in connection with the execution of the works, and if the same shall not have been erected or constructed, according to approved standards, the Engineer-in-Charge shall have power to give notice in writing to the contractor(s) requiring that the said huts and sanitary arrangements be remodelled and/or reconstructed according to approved standards, and if the contractor(s) shall fail to remodel or reconstruct such huts and sanitary arrangements according to approved standards within the period specified in the notice, the Engineer-in-Charge shall have the power to remodel or reconstruct such huts and sanitary arrangements according to approved standards at the cost of the contractor(s).

CLAUSE 19 H

The contractor(s) shall at his/their own cost provide his/their labour with a sufficient number of huts (hereinafter referred to as the camp) of the following specifications on a suitable plot of land to be approved by the Engineer-in-Charge.

- i)
 - (a) The minimum height of each hut at the eaves level shall be 2.10m (7 ft.) and the floor area to be provided will be at the rate of 2.7 sq.m. (30 sq.ft.) for each member of the worker’s family staying with the labourer.
 - (b) The contractor(s) shall in addition construct suitable cooking places having a minimum area of 1.80m x 1.50m (6’x5’) adjacent to the hut for each family.
 - (c) The contractor(s) shall also construct temporary latrines and urinals for the use of the labourers each on the scale of not less than four per each one hundred of the total strength, separate latrines and urinals being provided for women.
 - (d) The contractor(s) shall construct sufficient number of bathing and washing places, one unit for every 25 persons residing in the camp. These bathing and washing places shall be suitably screened.
- ii)
 - a) All the huts shall have walls of sun-dried or burnt-bricks laid in mud mortar or other suitable local materials as may be approved by the Engineer-in-Charge. In case of sun-dried bricks, the walls should be plastered with mud

gobri on both sides. The floor may be kutcha but plastered with mud gobri and shall be at least 15 cm (6") above the surrounding ground. The roofs shall be laid with thatch or any other materials as may be approved by the Engineer-in-Charge and the contractor shall ensure that throughout the period of their occupation, the roofs remain water-tight.

b) The contractor(s) shall provide each hut with proper ventilation.

c) All doors, windows, and ventilators shall be provided with suitable leaves for security purposes.

d) There shall be kept an open space of at least 7.2m (8 yards) between the rows of huts which may be reduced to 6m (20 ft.) according to the availability of site with the approval of the Engineer-in-Charge. Back to back construction will be allowed.

iii) **Water Supply** - The contractor(s) shall provide adequate supply of water for the use of labourers. The provisions shall not be less than two gallons of pure and wholesome water per head per day for drinking purposes and three gallons of clean water per head per day for bathing and washing purposes. Where piped water supply is available, supply shall be at stand posts and where the supply is from wells or river, tanks which may be of metal or masonry, shall be provided. The contractor(s) shall also at his/ their own cost make arrangements for laying pipe lines for water supply to his/ their labour camp from the existing mains wherever available, and shall pay all fees and charges therefore.

iv) The site selected for the camp shall be high ground, removed from jungle.

v) **Disposal of Excreta** - The contractor(s) shall make necessary arrangements for the disposal of excreta from the latrines by trenching or incineration which shall be according to the requirements laid down by the Local Health Authorities. If trenching or incineration is not allowed, the contractor(s) shall make arrangements for the removal of the excreta through the Municipal Committee/authority and inform it about the number of labourers employed so that arrangements may be made by such Committee/authority for the removal of the excreta. All charges on this account shall be borne by the contractor and paid direct by him to the Municipality/authority. The contractor shall provide one sweeper for every eight seats in case of dry system.

vi) **Drainage** - The contractor(s) shall provide efficient arrangements for draining away sullage water so as to keep the camp neat and tidy.

vii) The contractor(s) shall make necessary arrangements for keeping the camp area sufficiently lighted to avoid accidents to the workers.

viii) **Sanitation** - The contractor(s) shall make arrangements for conservancy and sanitation in the labour camps according to the rules of the Local Public Health and Medical Authorities.

The Engineer-in-Charge may require the contractor to dismiss or remove from the site of the work any person or persons in the contractors' employ upon the work who may be incompetent or misconduct himself and the contractor shall forthwith comply with such requirements. In respect of maintenance/repair or renovation works etc. where the labour have an easy access to the individual houses, the contractor shall issue identity cards to the labourers, whether temporary or permanent and he shall be responsible for any untoward action on the part of such labour. AE/ JE will display a list of contractors working in the colony/Blocks on the notice board in the colony and also at the service centre, to apprise the residents about the same.

CLAUSE 19J

It shall be the responsibility of the contractor to see that the building under construction is not occupied by anybody unauthorizedly during construction, and is handed over to the Engineer-in-Charge with vacant possession of complete building. If such building though completed is occupied illegally, then the Engineer-in-Charge shall have the option to refuse to accept the said building/buildings in that position. Any delay in acceptance on this account will be treated as the delay in completion and for such delay, a levy upto 5% of tendered value of work may be imposed by the Chief Engineer whose decision shall be final both with regard to the justification and quantum and be binding on the contractor.

However, the Chief Engineer, through a notice, may require the contractor to remove the illegal occupation any time on or before construction and delivery.

CLAUSE 19K

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 CPWD Training Institute/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 a compensation to be paid by contractor at the rate specified in Schedule 'F' 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 crores.

For work costing more than Rs. 10 Crores, and upto Rs. 50 Crores, the contractor shall arrange on site training as per National Skill Development Corporation (NSDC) norms for at least 20% of the unskilled workers engaged in the project in co-ordination with the CPWD Regional Training Institute & National Skill Development Corporation (NSDC) for certification at the level of skilled/semi skilled tradesmen.

For work costing more than Rs. 50Crores, the contractor shall arrange on site training as per National Skill Development Corporation (NSDC) norms for at least 30% of the unskilled worker engaged in the project in co-ordination with the CPWD Regional Training Institute & National Skill Development Corporation (NSDC) for certification at the level of skilled/semi skilled tradesmen. The cost of such training as stated above shall be born by the IIM Indore. The necessary space and workers shall be provided by the contractor and no claim what so ever shall be entertained.

CLAUSE 19L- - Deleted.

CLAUSE 20

Minimum Wages Act to be complied with

The contractor shall comply with all the provisions of the Minimum Wages Act, 1948, and Contract Labour (Regulation and Abolition) Act, 1970, amended from time to time and rules framed there under and other labour laws affecting contract labour that may be brought into force from time to time.

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. And 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 IIM Indore 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 IIM Indore and in the event of such course being adopted, the consequences specified in the said Clause 3 shall ensue.

CLAUSE 22

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 IIM Indore 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 to be intimated

Where the contractor is a partnership firm, the previous approval in writing of the Engineer-in-Charge 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

Life Cycle Cost - Deleted

CLAUSE 25

Settlement of Disputes & Arbitration

Except where otherwise provided in the contract, all questions and disputes relating to the meaning of the specifications, design, 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:

- i) 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 or if the Engineer-in-Charge considers any act or decision of the contractor on any matter in connection with or arising out of the contract or carrying out of the work, to be unacceptable and is disputed, such party shall promptly within 15 days of the arising of the disputes request the Chief Engineer who shall refer the dispute to the Director IIM Indore for constitution of Dispute Redressal Committee (DRC) within 15 days along with a list of disputes with amounts claimed if any in respect of each such dispute. The Dispute Redressal Committee (DRC) shall give its decision within a period of 60 days extendable by 30 days by consent of both the parties from the receipt of reference from CE. The constitution of Dispute Redressal Committee (DRC) shall be as indicated as under, provided that no party shall be represented before the Dispute Redressal Committee by an advocate/legal counsel etc.

Constitution of DRC -

1. Competent Authority to appoint DRC -
Director, IIM Indore

Note: DRC shall consist of one Chairman and two members.

The DRC will submit its decision addressed to the Director of the institute for acceptance. The acceptance will be conveyed in a time limit of 30 days from receipt of DRC decision. If the Dispute Redressal Committee (DRC) fails to give its decision within the aforesaid period or the decision of the institute is delayed or any party is dissatisfied with the decision of Dispute Redressal Committee (DRC) then either party may within a period of 30 days from the receipt of the decision of Dispute Redressal Committee (DRC) or expiry of the aforesaid the time limit available to DRC, give notice to the other party invoking arbitration in terms of the arbitration clause set out in herein below, under intimation to the other party in writing.

However, it is a term of contract that each party invoking arbitration must exhaust the aforesaid mechanism of settlement of claims/disputes prior to invoking arbitration.

ii) Arbitration clause

Any dispute or difference whatsoever arising between the parties out of or relating to the construction, meaning, scope, operation or effect of this contract or the validity or the breach thereof shall be settled by arbitration in accordance with the Rules of Domestic Commercial Arbitration of the Indian Council of Arbitration and the award made in pursuance thereof shall be binding on the parties.

ii) The arbitration shall be by a Tribunal having a sole arbitrator. The requirements of the Arbitration and Conciliation Act, 1996 and any amendments, statutory modifications or re-enactment thereof and the rules made there under and for the time being in force shall be applicable.

Qualifications of sole arbitrator The sole arbitrator shall be a Graduate Engineer, preferably with experience in handling public works engineering contracts and preferably having worked at a level not lower than Chief Engineer / equivalent (i.e. Joint Secretary level of Government of India).

Seat and place of arbitration The seat of arbitration shall be Indore, Madhya Pradesh. The venue of the arbitration shall be Indore or such other place as may be fixed by the Arbitral Tribunal in consultation with both the parties. Failing any such agreement, the Arbitral Tribunal shall decide the venue.

Notice invoking arbitration It is a term of this contract that the party invoking

arbitration shall give a statement of the disputes with amounts claimed, if any, in respect of each such dispute along with the notice invoking arbitration and shall give reference to the decision/recommendation of DRC. The notice invoking arbitration shall state the following details:

1. Name of applicant
2. Whether applicant is Individual/Prop. Firm/Partnership Firm/Ltd. Co.
3. Full address of the applicant
4. Name of the work and contract number in which arbitration sought
5. Contract amount in the work
6. Date of contract
7. Date of initiation of work
8. Stipulated date of completion of work
9. Actual date of completion of work (if completed)
10. Total number of claims made
11. Total amount claimed
12. Date of intimation of final bill (if work is completed)
13. Date of payment of final bill (if work is completed)
14. Amount of final bill (if work is completed)
15. Date of receipt of decision of the DRC.
16. We certify that we have exhausted provision of DRC of this agreement.

Yours faithfully,

(Signature)

[Party invoking arbitration]

JURIDICTION

The Courts at Indore, M.P. alone will have jurisdiction to deal with all matters arising from the contract, to the exclusion of all other courts.

CLAUSE 26

The contractor shall fully indemnify and keep indemnified the Director, IIM Indore 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 royalties which may be payable in respect of any article or part thereof included in the contract. In the event of any claims made under or action brought against IIM Indore 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 Indore 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 Provisions in Tender - Deleted

CLAUSE 28

Action where no Specifications are specified

In the case of any class of work for which there is no such specifications 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, if not available then as per state / District 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 or the IIM Indore shall be entitled to withhold and also have a lien to retain such sum or sums in whole or in part from the security, if any deposited by the contractor and for the purpose aforesaid, the Engineer in- Charge or the IIM Indore shall be entitled to withhold the security deposit, if any, furnished as the case may be and also have a lien over the same pending finalisation or adjudication of any such claim. In the event of the security being insufficient to cover the claimed amount or amounts or if no security has been taken from the contractor, the Engineer-in-Charge or the IIM Indore 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 of the IIM Indore or any contracting person through 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 or IIM Indore will be kept withheld or retained as such by the Engineer-in-Charge or IIM Indore till the claim arising out of or under the contract is determined by the arbitrator (if the contract is governed by the arbitration clause) 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 or the IIM Indore 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)

IIM Indore 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 IIM Indore to recover the same from him in the manner prescribed in sub-clause (i) of this clause or in any other manner legally permissible; and if it is found that the contractor was paid less than what was due to him under the contract in respect of any work executed by him under it, the amount of such under payment shall be duly paid by IIM Indore to the contractor, without any interest thereon whatsoever.

Provided that the IIM Indore shall not be entitled to recover any sum overpaid, nor the contractor shall be entitled to payment of any sum paid short where such payment has been agreed upon between the Chief Engineer or Executive Engineer on the one hand and the contractor on the other under any term of the contract permitting payment for work after assessment by the Chief Engineer or the Executive Engineer.

CLAUSE 29A

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 or the IIM Indore or any other contracting person or persons through Engineer-in-Charge against any claim of the Engineer-in-Charge or IIM Indore or such other person or persons in respect of payment of a sum of money arising out of or under any other contract made by the contractor with the Engineer- in-Charge or the IIM Indore or with such other person or persons.

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 or the IIM Indore will be kept withheld or retained as such by the Engineer-in-Charge or the IIM Indore or 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 29 B - Deleted.

CLAUSE 30

Unfiltered water Supply

The contractor(s) shall make his/their 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.

- (i) That the water used by the contractor(s) shall be fit for construction purposes to the satisfaction of the Engineer-in-Charge.
- (ii) The Engineer-in-Charge shall make alternative arrangements for supply of water at the risk and cost of contractor(s) if the arrangements made by the contractor(s) for procurement of water are in the opinion of the Engineer-in-Charge, unsatisfactory.

CLAUSE 30A

Alternate water arrangements - Deleted

CLAUSE 31

Hire of Plant & Machinery - The contractor shall arrange at his own expense all tools, plant, machinery and equipment (hereinafter referred to as T&P) required for execution of the work.

CLAUSE 32

Employment of Technical Staff and employees

Contractors Superintendence, Supervision, Technical Staff & Employees

- (i) The contractor shall provide all 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(s) who will be supervising the work. Minimum requirement of such technical representative(s) and their qualifications and experience shall not be lower than specified in Schedule 'F'. Even of the contractor (or partner (s) in case of firm / company) is himself / herself an Engineers, it is necessary on the part of the contractor to Employ Principal technical representative / technical representative (s) as per stipulation in Schedule 'F'.

The Engineer-in-Charge shall within 3 days of receipt of such communication intimate in writing his approval or otherwise of such a representative(s) to the contractor. 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(s) 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(s) The principal technical representative and other technical representative(s) 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 designated representative to take instructions. Instructions given to the principal technical representative or other technical representative(s) 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(s) shall be actually available at site fully 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 designated representative(s) in the site order book and shall affix his/their signature in token of noting down the instructions and in token of acceptance of measurements/ checked measurements/ test checked measurements. The representative(s) shall not look after any other work. Substitutes, duly approved by Engineer-in-Charge of the work in similar manner as aforesaid shall be provided in event of absence of any of the representative(s) by more than two days.

If the Engineer-in-Charge, whose decision in this respect is final and binding on the contractor, is convinced that no such technical representative(s) is/are effectively appointed or is/are effectively attending or fulfilling the provision of this clause, a recovery (non refundable) shall be effected from the contractor as specified in Schedule 'F' and the decision of the Engineer-In-Charge as recorded in the site order book and measurement recorded checked/test checked in Measurement Books shall be final and binding on the contractor. Further if the contractor fails to appoint suitable technical Principal technical representative and/or other technical representative(s) 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(s) is/are 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) (in the form of copy of Form-16 or CPF deduction issued to the Engineers employed by him) alongwith every on account bill final bill and shall produce evidence if at any time so required by the Engineer-in-Charge.

- (ii) The contractor shall provide and employ on the site only such technical assistants as are skilled and experienced in their respective fields and such foremen and supervisory staff as are competent to give proper supervision to the work. The contractor shall provide and employ skilled, semiskilled and unskilled labour as is necessary for proper and timely execution of the work. The Engineer-in-Charge shall be at liberty to object to and require the contractor to remove from the works any person who in his opinion misconducts himself, or is incompetent or negligent in the performance of his duties or whose employment is otherwise considered by the Engineer-in-Charge to be undesirable. Such person shall not be employed again at works

site without the written permission of the Engineer-in-Charge and the persons so removed shall be replaced as soon as possible by competent substitutes.

**CLAUSE 33 -
Levy/Taxes Payable by Contractors: -**

GST, Building and other Construction Workers Welfare Cess or any other tax, levy or Cess in respect of input for or output by this contract shall be payable by the contractor and IIM Indore shall not entertain any claim whatsoever in this respect except as provided under Clause 34. The contractor shall deposit royalty and obtain necessary permit for supply of the red bajri, stone, kankar, etc. from local authorities.

If pursuant to or under any law, notification or order any royalty, cess or the like becomes payable by the IIM Indore and does not any time become payable by the contractor to the State Government, Local authorities in respect of any material used by the contractor in the works, then in such a case, it shall be lawful to the Government of India and it will have the right and be entitled to recover the amount paid in the circumstances as aforesaid from dues of the contractor.

CLAUSE 34: Conditions for reimbursement of levy/taxes if levied after receipt of tenders - Deleted.

CLAUSE 35: Termination of Contract on death of contractor

Without prejudice to any of the rights or remedies under this contract, if the contractor dies, the Engineer-In-charge on behalf of the Director, IIM Indore shall have the option of terminating the contract without compensation to the contractor.

CLAUSE 36: If relative working in IIM INDORE then the contractor not allowed to tender
The contractor shall not be permitted to tender for works in the IIM Indore responsible for award and execution of contracts if his near relative is posted in IIM Indore as any capacity. 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 any Officer in the IIMI. Any breach of this condition by the contractor would render him liable to be removed from the approved list of contractors of this Department. If however the contractor is registered in any other department, he shall be debarred from tendering in IIMI 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 37
No Gazetted Engineer to work as Contractor within one year of retirement**

No engineer of gazetted rank or other gazetted officer employed in engineering or administrative duties in an engineering department of the IIM Indore shall work as a contractor or employee of a contractor for a period of one year after his retirement from IIM Indore service without the previous permission of IIM Indore in writing. This contract is liable to be cancelled if either the contractor or any of his employees is found at any time

to be such a person who had not obtained the permission of IIM Indore as aforesaid, before submission of the tender or engagement in the contractor's service, as the case may be.

CLAUSE 38

Theoretical Conception of Material- Deleted.

CLAUSE 39

Compensation during warlike situations

The work (whether fully constructed or not) and all materials, machines, tools and plants, scaffolding, temporary buildings and other things connected therewith shall be at the risk of the contractor until the work has been delivered to the Engineer-in-Charge and a certificate from him to that effect obtained. In the event of the work or any materials properly brought to the site for incorporation in the work being damaged or destroyed in consequence of hostilities or warlike operation, the contractor shall when ordered (in writing) by the Engineer-in-Charge to remove any debris from the site, collect and properly stack or remove in store all serviceable materials salvaged from the damaged work and shall be paid at the contract rates in accordance with the provision of this agreement for the work of clearing the site of debris, stacking or removal of serviceable material and for reconstruction of all works ordered by the Engineer-in-Charge, such payments being in addition to compensation upto the value of the work originally executed before being damaged or destroyed and not paid for. In case of works damaged or destroyed but not already measured and paid for, the compensation shall be assessed by the Executive Engineer upto Rs.2,00,000/- and by the Chief Engineer concerned for a higher amount. The contractor shall be paid for the damages/destruction suffered and for restoring the material at the rate based on analysis of rates tendered for in accordance with the provision of the contract. The certificate of the Engineer-in-Charge regarding the quality and quantity of materials and the purpose for which they were collected shall be final and binding on all parties to this contract.

Provided always that no compensation shall be payable for any loss in consequence of hostilities or warlike operations (a) unless the contractor had taken all such precautions against air raid as are deemed necessary by the A.R.P. Officers or the Engineer-in-Charge (b) for any material etc. not on the site of the work or for any tools, plant, machinery, scaffolding, temporary building and other things not intended for the work.

In the event of the contractor having to carry out reconstruction as aforesaid, he shall be allowed such extension of time for its completion as is considered reasonable by the Executive Engineer.

CLAUSE 40

Apprentices Act provisions to be complied with

The contractor shall comply with the provisions of the Apprentices Act, 1961 and the rules and orders issued thereunder from time to time. If he fails to do so, his failure will be a breach of the contract and the Chief Engineer may, in his discretion, cancel the contract. The contractor shall also be liable for any pecuniary liability arising on account of any

violation by him of the provisions of the said Act.

CLAUSE 41

Release of Security deposit after labour clearance

Release of Security Deposit of the work shall not be refunded till the contractor produces a clearance deposit after labour certificate from the Labour Officer. As soon as the work is virtually complete the contractor shall apply for the clearance certificate to the Labour Officer under intimation to the Engineer-in-Charge. The Engineer-in-Charge, on receipt of the said communication, shall write to the Labour Officer to intimate if any complaint is pending against the contractor in respect of the work. If no complaint is pending, on record till after 3 months after completion of the work and/or no communication is received from the Labour Officer to this effect till six months after the date of completion, it will be deemed to have received the clearance certificate and the Security Deposit will be released if otherwise due.

L. Proforma of Schedules

SCHEDULE 'A'

Schedule of quantities (as per Financial Bid).

SCHEDULE 'D'

Extra schedule for specific requirements/document for the work, if any. - To be intimated later if required.

SCHEDULE 'E'

Reference to General Conditions of contract laid down in the tender document.

Name of Work	“Revamping of 33/11 KV main sub-station & equipment (Utility-I) by operationalizing idle transformer (stand-by) at IIM Indore”
Estimated cost of work	Rs. 71,13,952/- (Rs. Seventy-One Lakh Thirteen Thousand Nine Hundred and Fifty-Two Only) (Excl. GST)
Earnest money deposit	The EMD Payment shall be payable as under: 1. 50% amount of the EMD (i.e. Rs. 71,140/-) may be deposited through online mode. 2. Remaining 50% of the EMD Payment (i.e. Rs. 71,140/-) through Bank Guarantee. 3. 100% amount of EMD payment online is also accepted. Name of beneficiary: Indian Institute of Management Indore Account No.: 53018623445 Name of the Bank: State Bank of India IFSC Code: SBIN0030525
Performance Guarantee	5 (Five) % of tendered value
Security Deposit	2.5 % of tendered value to be recovered from running bills & final bills

SCHEDULE 'F'

General Rules & Directions

- Officer inviting tender: The Chief Engineer, IIM Indore on behalf of the Director IIM Indore
- Maximum percentage for quantity of items of work to be executed beyond which rates are to be determined in accordance with Clauses 12.2 & 12.3.

Definitions:

2(v)	Engineer-in-Charge	Chief Engineer, IIM Indore
2(viii)	Accepting Authority	Director, IIM Indore
2(x)	Contractor Profit including all overheads	15%
2(xi)	Standard Schedule of Rates	DSR 2021 & Market Rates
2(xii)	Department	Estate Department, IIM Indore

9(ii)	Standard CPWD contract Form GCC 2020, CPWD Form 7/ 8 as modified & corrected	Up to date
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Clause 1

Time allowed for submission of Performance Guarantee, programme chart (Time and progress): **07 Days**

Clause 2

Authority applicable for fixing compensation: Director, IIM Indore

Clause 5

Number of days from the date of issue of letter of acceptance for reckoning date of start: **10 Days or date of letter of commencement whichever is earlier.**

Program Schedule: - Bidder to submit the program schedule

Time allowed for execution of work: 90 days

Authority to decide:

- (i) Extension of time: Director, IIM Indore
- (ii) Re-scheduling of program: Chief Engineer, IIM Indore
- (iii) Shifting of date of start in case of delay in handing over of site: Chief Engineer, IIM Indore

Clause 10B (ii)

Whether Clause 10 B (ii) shall be applicable: **Yes**

Clause 11

Specifications to be followed for execution of work: As per enclosure

Clause 12

Authority to decide deviation up to 1.3 times of tendered amount: The Director, IIM Indore

12.2 & 12.3

Deviation Limit beyond which clauses 12.2 & 12.3 shall apply for work: 130% for which payment will be made after carrying out rate analysis based on prevailing market rate.

Clause 25

Constitution of Dispute Redressal Committee (DRC): Applicable

Clause 32

Requirement of Technical Representative(s) and recovery Rate

Sl no .	Minimum Qualification of Technical Representative	Discipline	Designation (Principal Technical /Technical representative)	Minimum Experience	Number	Rate at which recovery shall be made from the contractor in the event of not fulfilling provision of clause 36(i)	
						Figures	Words
1	B. Tech / Diploma	Mechanical /Electrical/ or equivalent	Principal Technical Representative	2 / 5 year respectively	1	Rs. 15,000/-	Rupees Fifteen thousand only

M. Special Conditions of Contract

1. The tenderer shall acquaint himself with the proposed site of work.
2. If for any reasons, any part of the site is not available temporarily for some time for part of the work under the contract, the agreed construction schedule shall be suitably modified and contractor shall diligently divert his men and materials to utilize them appropriately, profitably and no claim of damages whatsoever shall be entertained on this account. However, the contractor shall be allowed extension of time for completing the work as deemed fit by the competent authority. The contractor shall also not be entitled to any compensation for any loss suffered by him and revision in the rates quoted by him.
 - a. On account of delay in commencing the work by the contractor.
 - b. On account of reduction in the scope of work.
 - c. On account of suspension of work or abandoned after award of work.
3. The contractor shall make his own arrangement for water & Electricity supply suitable for construction.
4. The contractor shall provide, at his own cost instruments for surveying, weighing and measuring purpose at the site of work as may be necessary for execution of the work.
5. The contractor shall take care of all safety precautions pertaining to construction of work, such as scaffolding, ladder, working platforms, gangways, electric arc/ gas welding, use of hoist and construction machinery.
6. On account of security consideration, some restrictions may be imposed by the security staff on the working and/ movement of men and materials etc. The contractor shall be bound to follow all such restrictions/ instructions and he shall organize his work accordingly. No claim on this account, whatsoever, shall be payable.
7. The contractor shall take all precautions to avoid accidents by exhibiting necessary caution boards day and night, speed limit boards, red flags, red lights and providing barriers. He shall be responsible for all damages and accidents caused to existing/ new work due to negligence on his part. No hindrance shall be caused to traffic during the execution of the work.
8. The contractor shall be responsible for the watch and ward of all materials brought by the contractor to site against pilferage and breakage during the period of installation and thereafter till the works are physically handed over to the department.
9. The contractor shall take all preventive measures against any damage caused by rain, snowfall, floods or any other natural calamity, whatsoever during the execution of the work. The contractor shall be fully responsible for any damage to the Owners property and to the work for which the payment has been advanced to him under the contract. However, the contractor shall maintain an equal to the payment received against the work done, at his own cost. This will also cover the defect liability period. This shall be favouring the Director, Indian Institute of Management Indore. Nothing extra on this account shall be payable to the contractor for maintaining such insurance Policy.

10. All materials to be incorporated in the work shall be arranged by the contractor and shall be in accordance with the specifications laid down.
11. The tenderer shall use materials bearing ISI Certification Mark unless otherwise specified or allowed in writing by the Engineer-in-Charge. Any material banned by the department shall not be used in the work.
12. The contractor shall submit to the Engineer-in-charge, samples of all materials for approval. Such samples of materials which affect aesthetics of the work shall also be got approved from the Engineer-in-charge of the project before procuring bulk supplies. These approved samples shall be preserved and retained in the custody of the Engineer-in-charge as standards of materials till the completion of the work. The cost of such samples shall be borne by the Contractor and nothing shall be payable on this account over the Agreement rates.
13. The contractor shall be required to get all the necessary mandatory and other tests as per the specifications/ IS codes, carried out on materials/ work from an approved laboratory as per the direction of the Engineer-in-charge. The testing charges and conveyance from the site shall be borne by the contractor.
14. In case any material / work is found sub-standard the same shall be rejected by the Engineer-in-charge and the same shall be removed from the site of work within 48 hours, failing which the same shall be got removed by the Engineer-in-charge at the risk and cost of the contractor without giving any further notice and time.
15. In order to ensure quality of work during its execution, the Engineer-in-charge may require samples for mandatory or routine testing of materials. All costs of these samples, their packaging, conveyance from the site to the testing laboratory and return, shall be borne by the contractor.
16. Even ISI marked materials may be subjected to quality test at the discretion of the Engineer-in-charge. Whenever ISI marked materials are brought to the site of work the contractor shall, if required by the Engineer-in-charge, furnish manufacturer's test certificate or test certificate from approved testing laboratory to establish that the materials procured by the contractor, satisfy the provisions of relevant ISI codes. The testing charges shall be borne by the contractor. However cement/steel will be necessarily tested before start of work and also during the execution of work as per the requirements of specifications and will not be used till test certificates are obtained and approved by Engineer-in-Charge.
17. The contractor shall be responsible for completing the work and for satisfying all terms and conditions of the Contract without any extra payment over his quoted rates unless otherwise specified. The contractor shall quote his rate for various items of work accordingly and no claim whatsoever shall be entertained for any incidental or extra work involved in the execution of the work as per nomenclature of the item and the specifications indicated in the tender documents.
18. Subject to the nomenclature of the item as per schedule of quantities, the specification indicated in the tender documents, the rates quoted shall include cost of all materials including royalty and taxes if any, labour, sundry inputs,

execution of work at all heights, levels, pattern and design for all leads, lifts and depths including overhead charges and contractor's profit. Nothing extra shall be paid on this account.

19. The rates shall be inclusive of making any holes in walls/ RCC work for fixing any fixture/ frame work and making good the structure to its original shape and finish.
20. The contractor shall leave necessary holes, opening, etc. as may be directed by the Engineer-in-charge for laying, burying or fixing, conduits, pipes, boxes, hooks, fans etc. Conduits for electrical wiring/cables will be laid in a way that they leave enough space for concreting and do no adversely affect structural members.
21. The contractor shall give a satisfactory performance test of installations individually and as a whole to ensure their proper functioning before the work is finally declared and completed and accepted.
22. The contractor shall continue to maintain watch and ward to safeguard the Owner's property in his possession until the same is formally handed over as per directions of the Engineer-in-charge. Nothing extra over agreement rates shall be paid on this account.
23. All tools, plants and measuring or weighing equipment shall be arranged by the contractor himself and nothing extra shall be paid to the contractor on this account.
24. The quantities of various items incorporated in the tender are approximate. However, the payments shall be made to the contractors on the basis of actual measurements taken at site.
25. The contractor shall protect the adjoining buildings or works and the work under execution from fire and shall make adequate arrangements for fire protection and firefighting and if any property is damaged, by fire due to the negligence of the contractor, the same shall be made good by the contractor at his own cost, to the entire satisfaction of Engineer-in-charge.
26. The contractor shall provide adequate lighting arrangements as approved by the Engineer-in-charge for carrying out the work during night time, if so required and also provide all other facilities for the labour employed to carry out the work as per direction of Engineer-in-Charge.
27. In order to achieve the targeted date of completion the contractor may have to work in multiple shifts, round the clock including public and gazetted holidays and nothing extra shall be paid on this account.
28. The contractor shall get the samples of all the materials to be used, in the work approved from Engineer-in-Charge before going for bulk procurement. Bulk procurement shall be taken up only after obtaining approval from the Engineer-in-charge. Any delay in getting the samples approved shall be contractor's responsibility.
29. All materials, articles and workmanship shall be of respective best quality and kind for the class described in the schedule of quantities and specifications. All materials, so used in different items of work shall be subject to the approval of the Engineer-in-charge.

30. The contractor shall be responsible for all statutory provisions and deductions towards ESI, PF or any other, as the case may be or any other levies and taxes shall be borne by the contractors. The TDS and Contract Tax or any other statutory levels/taxes incorporated from time to time shall be deducted progressively from the running account bills, as applicable at the time of payment. No claim in this regard shall be entertained.
31. The contractor is supposed to abide the minimum wages act, and shall produce all records to the Engineer-in-charge or any other statutory authority as and when called for. The Engineer-in-charge does not hold any responsibility on account of any lapses in this regard.
32. For any clarification/ doubt, the Institute may organize regular meetings with Contractor. The contractor shall attend such meetings invariably as and when required.
33. In respect of the work of other agencies, where the commencement or progress of such work of any other agency is dependent upon the completion of particular portions of the contractor's work or generally upon the contractor maintaining progress in accordance with the approved coordinated construction programme, it shall be the responsibility of the Contractor to complete such portions and maintain such progress.
34. Should any difference arise between the contractor and the other agencies, these shall immediately be brought to the attention of the Engineer-in-Charge who after reviewing the matters causing the differences will give their decision which shall be final and binding on the contractor.
35. The contractor shall have to do all drilling of holes and cutting of walls, chases or other elements of the building for the complete and proper installation of the pipe lines/ ducts and other equipment's by using electrically operated tools such as drills/ chases cutting machine etc. Manual drilling or chiseling or cutting shall be permitted on special request only.
36. No chiseling or cutting or drilling of RCC columns, beams, girders and other principal structural members shall be done unless prior permission has been granted by the Engineer-in charge in writing.
37. All chases and openings made by the contractor for his pipe lines shall be filled/ covered over with cement plaster in reasonable manner. Before rough plastering on the pipe surfaces the concealed pipes shall be secured to the wall by using proper supports/ clamps.
38. After completion of work and before issuance of certificate of virtual completion the contractor shall submit as built drawings in four (4) sets along with soft copy to the department.
39. 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 (2) copy at the time of handing over. The same should be generally consist of the following:
 - (i) Description of the project
 - (ii) Operating instructions

- (iii) Maintenance instructions including procedures for preventive maintenance
 - (iv) Manufacturer's catalogues.
 - (v) Spare parts list
 - (vi) Trouble shooting charts
 - (vii) Type and routine test certificates for major items.
40. The contractor shall be provided adequate storage/ office space for his use. The space has to be maintained/ constructed by the contractor as per his usage requirements.
 41. All spaces allotted to the contractor as described above shall be vacated and all structures removed from site at any time as and when required and directed by the Engineer-in-charge, unconditionally and without any reservation. The Engineer-in-charge will not be obliged to give any reason for such removal. Upon receiving instructions to vacate the space, the contractor shall immediately remove all his structures, materials, etc. from the sources and clear and clean-up the site to the satisfaction of the Engineer-in-charge.
 42. It shall be the responsibility of the Contractor to safeguard the site and ensure that no illegal encroachments are made by outside elements within the area allotted to the contractor. Upon completion of the work or earlier as required by Engineer-in-Charge, the contractor shall vacate the land totally without any reservation.
 43. The contractor will arrange to erect, at his own cost, barbed wire or other appropriate fence around the infrastructure site, with entry/exit gates at suitable points. The contractor shall, at his own cost, provide and erect suitable fencing around the spaces allotted to him at the infrastructure sites to ensure the security of his men. Materials and equipment within the sites and in relation to other contractors who will also be allotted spaces at above sites.
 44. The security of workmen, materials, equipment stores etc. within the area allotted to the contractor shall be the responsibility of the contractor.
 45. The site of work shall have required equipment's for various tests at site by the contractor at his own cost and nothing extra shall be payable on this account.
 46. The contractor shall arrange minimum plant and equipment's at site for the execution of work. These may have to be increased depending on the requirement site.
 47. The owner reserves to reduce the scope of work of any item if the contractor fails to deliver the works in time and the contractor shall not ask for any financial consideration for such deletion of scope of the work.
 48. Any item which is not available in the BOQ shall be paid as per DSR 2018 rates for Electrical items. If it is not available in BOQ & DSR rates as above then extra item shall be worked out as actual cost of the materials and actual cost of the lab our plus 15% as overhead and profit. The decision of Engineer-in-charge will be conclusive and final binding on the contractor.
 49. The contractor shall take photographs of site prior to commencement of work, during construction and after completion of work as suggested and shall submit the photographs in soft and hard copies to IIM for which no extra payment will be made.

50. If required and directed by Engineer-In-Charge, contractor shall arrange visits of his personnel comprising of Engineer-In-Charges to various places/ plants in or outside Indore to check and verify the quality of material at manufacturer's places. No extra cost shall be given for this to contractor.
51. Layout of works shall be got checked by Engineer-in -charge & only then further work shall be taken by after approval.

52. CONTRACT AGREEMENT

The Contractor shall enter into a Contract Agreement with the IIMI within 20 days from the date of receipt of Letter of Intent or within such extended time, as may be granted by the IIMI. The cost of stamp papers, stamp duty, registration, if applicable on the contract, shall be borne by the Contractor. Incase, the contractor does not sign the agreement as above or start the work within 10 days of the receipt of letter of intent, his earnest money is liable to be forfeited and letter of intent consequently will stand withdrawn.

The contractor will have to execute an agreement on non-judicial stamp paper as under

- (i) If contract value is upto Rupees 50 lacs - Rupees 500.
- (ii) **If contract value exceeds Rupees 50 lacs - 0.1 percent of contract value subject to a maximum of rupees 5 lacs** as per the indian stamp (Madhya Pradesh Amendment) Act, 2015 or its amendment from time to time (copy enclosed), immediately after the issue of LOI on furnishing the performance guarantee in the format prescribed by IIM Indore and sign on all contract documents published on the website of the tender.

N. Technical Specifications

1. 11 KV Indoor H.T. Vacuum Circuit Breaker:

Make: BHEL/ABB/CG/Schneider

This specification covers the technical requirements of three phase, 11 KV, 3 pole, front operative switchboard. The panel board shall be integrated indoor metal clad floor mounted, dead front free standing extensible sheet enclosed as per specifications.

1.1 Scope:

The scope covers the design, manufacture, testing, inspection & testing at manufacturer's works, supply, delivery, unloading at site (IIM, Indore), supervision of installation, testing and commissioning, of the metal clad, floor mounted, free standing, extendable, indoor, 11 KV vacuum circuit breaker type panel (Single Panel Board for incomer) complete with all accessories for efficient & trouble free operation as per the specifications. 11KV indoor Vacuum Breakers for use the 33/11KV primary substations under the distribution networks of IIM, Indore. The Panel will be retrofitted with the existing panel (Alstom make) of IIM Indore.

1.2 Climate Conditions:

(i)	Maximum temperature of air in shed	45°C
(ii)	Minimum temperature of air in shed	4°C
(iii)	Maximum relative humidity	95 % (The humidity some time approaches saturation point)
(iv)	Minimum relative humidity	10 %
(v)	Average number of dust-storm days per annum	40 days
(vi)	Average number of rainy days per annum	90 days
(vii)	Number of months of tropical monsoon conditions per annum	3 months
(viii)	Average annual rainfall	1250 mm
(ix)	Maximum wind pressure	150 Kg / Sq. mm
(x)	Altitude not exceeding	1000 metres
(The limit of ambient temperature shall be 45°C peak and 35°C average over a period of 24 hours)		

1.3 Codes and Standards:

The design, construction, manufacture, inspection, testing and performance of the VCB Panel shall comply all the currently applicable statutes, safety codes, provisions of the latest Indian Electricity act, Indian Electricity Rules and Regulation of statutory authorities (Chief electrical inspectorate to state government), and shall comply with latest revisions of the relevant Indian and international standards, some of which are listed below.

1. IS : 2516 - Circuit Breakers
2. IEC: 60694 - Common specifications for high-voltage switchgear and control gear standards
3. IEC: 62271 -100 - High Voltage A.C. Circuit Breakers.
4. IEC: 62271- 200 - Type Testing Of Switchgears.
5. IS : 2705 - Current Transformers
6. IS : 3705 - Voltage Transformers
7. IS: 1248, 83 - Direct acting indicating analogue electrical measuring instruments and their accessories.
8. IS:13118-1991/IEC56 - High Voltage Alternating current circuit Breaker
9. IS:12729/2004 - High-Voltage Switchgear and Control gear Standards

1.4 Technical Requirements:

1.4.1 Basic Technical Requirements:

The vacuum circuit breakers are required to meet the following basic technical requirements. (Reference standards IEC:62271 - 100 & 200 and associated standards listed in this specification.

Basic Technical Requirements

Sr. No.	Particulars	Requirements
1	Service type	Indoor
2	No. of Poles	3
3	Nominal system voltage	11 KV
4	Highest system voltage	12 KV
5	Rated short circuit breaking current (rms)	25KA
6	Rated short circuit making current (peak)	62.5KA

Sr. No.	Particulars	Requirements
7	Rated short time current withstand capability for 3 sec.	25KA(Panel)/25KA (Interrupter)
8	Rated insulation level:	
i)	One minute power frequency withstand voltage to earth (wet and dry) rms	28KV
ii)	Impulse withstand voltage to earth with 1.2/50 μ sec, wave of +ve and -ve polarity (Peak)	75KV
9	First - pole - to clear factor	1.5
10	Rated operating sequence (for auto reclosing)	0-0.3 Sec- CO-3 min-CO
11	Maximum break time	3 cycles
12	Rated out of phase breaking current	25% of the symmetrical

		short circuit breaking current
13	Maximum pole scatter	10 mili seconds
14	Rated Auxiliary supply for spring charge motor, lamp & heater circuit.	230V A.C
15	Rated supply voltage for trip/close coil	24V D.C
16	Minimum creepage distance (mm)	As Per IS
17	Minimum protected creepage distance (mm)	As Per IS

1.4.2 General Technical Requirements

The VCB to be supplied against this specification shall be required to control the secondary side of 33/11 KV power transformers in the primary sub-stations or the incoming 11KV feeders or the outgoing feeders in these sub-stations. The circuit breakers shall be suitable for 3 phase 50 Hz solidly grounded neutral system and shall have normal current carrying capacity and symmetrical short circuit breaking capability as mentioned hereunder.

- a. The VCB Panel shall be of the indoor, metal clad self-supported, floor mounting, drawout truck type. The cubicle shall be dust, damp and vermin proof type and should be fully interlocked. The frame-work of the cubicle shall be of bolted/welded construction. The doors shall be provided with concealed hinges. The panel shall be suitable for extension on either side.
- b. The VCB shall be three pole with stored energy, spring charged operating mechanism, re-strike free operation suitable for very low value of chopping currents under all duty conditions. Metal oxide gap less surge arresters shall be provided with pressure relieving vents and mechanical indication for the arrester failure. Parts of the breaker requiring inspection, maintenance or replacement shall be easily accessible. Circuit breakers shall be fully withdraw able type and interrupting medium shall be vacuum. VCB shall be fitted with withdraw able trolley which can be set in the following positions:
 - Plugged in
 - Withdrawn, in test
 - Withdrawn, fully isolated
- c. In test position, auxiliary circuit are connected, but power contacts are disconnected.
- d. VCB shall be motor operated, spring charged, manual independent closing and shunt trip mechanism. Breakers shall be trip free and shall have anti pumping device. The shunt trip coil, closing coil and spring charger motor shall be suitable for DC control supply. A maintenance free battery of suitable rating along with Battery charging unit shall be part of VCB panel. Alternatively, VCB panel shall be provided with a built in adequately rated power pack for the complete DC control supply.

e. Panel shall comprise essentially two portions:-

- The fixed portion housing bus bar, current transformers, relays and instruments and other accessories.
 - The fixed portion comprising the circuit breaker with the integral carriage.
- i. The switchgear cubicle shall have structural sheet steel frame work enclosed on all the sides and top by CRCA sheet steel of minimum thickness of 2.5 mm.
 - ii. Panel shall be provided with a front access door with handle, lock and key and a removable back cover/door. The back cover/door shall be interlocked with the breaker such that the cover/door cannot be opened unless associated breaker is in 'OFF' position. Alternatively, a red colour indication lamp should be provided to glow at the back of the panel when it is in test position.
 - iii. The circuit breaker, bus bars, instrument transformers and cables shall be installed in separate compartment within the cubicle. Failure of one equipment should not affect the equipment in the adjacent compartment.
 - iv. Each cubicle shall be separated from the adjacent one by grounded sheet-steel barrier and bus sealing arrangement. Bus connection from the bus compartment to breaker compartment or bus bar compartment to cable compartment or bus compartment of adjacent panel shall be through sealed porcelain bushing with semi-conducting neoprene rubber ring. (If Applicable)
 - v. Non-deteriorating synthetic rubber gaskets preferably neoprene, without any discontinuous joints shall be provided on all mating surfaces. Sufficient number of bolts, where necessary, shall be provided so that a uniform pressure is maintained on the gasket. Switch and lamps shall be flush/semiflush mounted on hinged front door of the cubicle. The relays and meters shall be flush/semiflush mounted on the front portion of the cubicle.
 - vi. The protection devices, control components and all the other parts used on the boards shall be carefully chosen to meet the system requirements and duly standardized to permit the interchangeability, minimization of the spares and easy maintenance. The switchgear shall be designed throughout to ensure safety during operation, inspection, cleaning & maintenance. Necessary mechanical interlocks shall be provided for this purpose.
 - vii. The degree of protection to be provided by the enclosure shall be IP-4x. In case louvers are provided, they shall have brass wire mesh and filters. Pressure relief flaps shall be covered with perforated sheet having 1mm dia holes.
 - viii. Panel shall be provided with thermostat controlled space heater of adequate rating and single phase plug point with switch operated at 230 V AC, 50 Hz. Heaters shall have individual 'ON/OFF' switches, wired together & brought to easily accessible terminals in a common panel for the connection to the external supply.
 - ix. All the external bolts and nuts shall be made of steel and shall be cadmium plated or zinc passivated. Zinc plated high tensile bolts shall be used for bus bar joint.

1.5 Bus bars & Connections:

- i. The bus bar and connection shall be made of hard drawn electrolytic copper of rectangular cross section, liberally sized for specified current ratings. The

complete lantern carriage assembly shall be hot dip galvanized after fabrication. It shall have perfect self balance arrangement so as to avoid swing and to prevent damage to mast surface or other installed parts, during lowering/ raising operation of carriage.

- ii. The horizontal bus-bars shall run the entire length of the board & shall be of the same cross section. Stepped bus-bars are not acceptable.
- iii. The bus bars shall be sized to carry the rated continuous current under site ambient without exceeding the temperature rise specified in B.S. 159 or equivalent International Standards.
- iv. The bus bars shall be suitably supported and adequately secured to withstand the stresses developed during the system short circuit conditions.
- v. The bus bars shall have the marking, colour coding and arrangement according to the relevant IS or International Standard and shall run in a separate bus bar chamber.
- vi. Connection between the vertical bus bars and circuit breaker terminals shall preferably be fully insulated and so enclosed as not to leave any exposed live parts. It shall be possible to work on the circuit breaker outgoing connections without any danger of accidental contacts with the live connections between the vertical bus bars and the circuit breaker.
- vii. Three-phase bus bar shall be adequately insulated for unearthed system with 10% tolerance. For air-insulated switchgear, the buses & jumpers shall be provided with heat shrinkable insulating sleeves of fluidized red epoxy powder coating. All joints shall be provided with detachable cast resin fiber glass shrouds.
- viii. Fixed disconnects shall be shrouded with cast resin fibre glass mould. Bus insulation at joints shall be easily removable during periodic inspection at joints. In case of copper bus, all bus connections, joints and laps shall be silver plated. For aluminium-bus, Beleville washers shall be provided at the joints. All the connections shall be as straight as possible.
- ix. Bus bars and feeder/ jumper connection shall be sleeved with heat shrinkable raychem sleeves with adequate phase/ground clearances.

1.6 **Insulation:**

The insulation used shall be non-hygroscopic and shall be of adequate electrical and mechanical strength to give trouble free service during the normal operation and short circuit conditions. The insulation shall be treated suitably to withstand the tropical conditions.

1.7 **Circuit Breaker:**

- i. The circuit breaker shall be of 3 phase single/double break, horizontal drawout, vertical/horizontal isolation as mentioned in spec. sheet suitable for LOCAL/REMOTE operation with rupturing capacity and continuous current carrying capacity as given in the specification. The breaker shall be mounted on withdrawable truck in the single tier formation.
- ii. Circuit breakers controlling motors, if any, shall have provision to limit over voltage to the value safe for motor insulation. Over- voltage factor should be limited to 2.5, preferably by suitable breaker design. Alternatively, suitable surge diverter shall be used.

- iii. The closing coils and other auxiliary devices shall operate satisfactorily at all the voltages between 85% and 110% of the rated control voltage.
- iv. When the breaker is in closed position, a closing operation of an initiating control device shall neither result in further operation of the breaker closing mechanism nor endanger the operator.
- v. An emergency handle shall be supplied for manual operation of the breaker in case of failure of closing power. The 'CLOSE' push button provided for this purpose shall be accessible after opening the door.
- vi. Provision shall be made for the manual closing. A suitable operating handle shall be supplied, one for each board, for this purpose.
- vii. VCB shall have three positions - SERVICE, TEST & DISCONNECTED with mechanical indications. The design of breaker should be such that without opening the front access door it should be possible to pull out the breaker in disconnected position. Panel door shall remain closed even when the breaker is drawn to test position.
- viii. The breakers shall be provided with motor-operated power closing mechanism and shall include trip free (electrically and mechanically) and anti-pumping features. Motor operating mechanism shall be complete with universal motor, opening spring, closing spring and all necessary accessories to make the mechanism complete operating unit.
- ix. The motor shall be suitable for operation with voltage variation from 80% to 110% for rated voltage. Spring charging time shall be indicated in the offer. As long as the power is available to the motor, a continuous sequence of closing and opening shall be possible. After the failure of power supply to motor, at least one 'OPEN-CLOSE-OPEN' operation of the circuit breaker shall be possible. Motor shall be solely used for compressing the closing spring.
- x. Closing action of the circuit breaker shall compress the opening spring ready for tripping.
- xi. Soon after the closing spring is discharged after closing a breaker, the closing spring shall automatically be charged for the next operation.
- xii. The breaker shall be provided with shunt trip coil. Provision shall be made for mechanically tripping the breaker in case of emergency. The trip coil and other associated auxiliary devices shall be operated reliably and satisfactorily at all voltages between 70% & 110% of its rated voltage.
- xiii. Mechanical 'Test', 'Service' position and spring 'CHARGED- DISCHARGED' indicators appropriately marked shall be provided on the front of the breaker. The breaker shall also be provided with an operation counter.
- xiv. The local breaker switch with sequence interlocking device shall be mounted on the switchgear. This switch shall be a three positions spring returned to 'Normal' position switch with pistol- grip handle and with the positions marked 'OPEN-NORMAL- CLOSE'. Wherever the breaker is to be controlled from remote 'LOCAL/REMOTE', selector switch with locking device shall be provided on the switchgear.
- xv. Mechanical interlocks shall be provided to prevent:
 - A closed C.B. being isolated from inserted position into the service position.
 - Closing and opening of the C.B. in an intermediate position between 'SERVICE AND TEST'.
 - The C.B. can be racked into the service position only with the front door closed.
 - Any other interlocking feature required for safe operation.

- xvi. Automatic safety shutters shall be provided to completely cover the primary disconnects when the breaker is withdrawn. The safety shutter shall be arc resistant polyester type. It is preferable to have this transparent and of stronger design than the pressure relief flap.
- xvii. Positive earthing of the circuit breaker frame shall be maintained when it is in connected position and in all the other positions in which the safety shutter is in the open position.
- xviii. Cable earthing facility should be provided in the circuit breaker for discharging the power cable through the circuit breaker contacts in the circuit breaker drawn-out position. An integral earthing arrangement shall be preferred with necessary safety interlock both for cable side and bus side. Earthing carriage shall have the necessary P.T. and alarm device to detect the live condition before the insertion in case the integral earthing switch is not provided.
- xix. A maintenance truck/device for raising, lowering and withdrawal of the circuit breakers, when necessary shall be provided.

1.8 VCB Auxiliary Switch Contacts & Racking Switch Contacts:

- i. The circuit breaker shall be provided with six numbers of the normally open and six nos. of normally closed contacts, with the spare contacts wired to the terminal board.
- ii. The auxiliary contacts shall be suitable for inductive breaking (not less than 5 amps) at the control voltage specified. Necessary number of racking switch contacts shall also be included.

1.9 Arc Interrupting Devices:

- i. Offered panels are Internal Arc Tested for 25 kA 1 sec. The offered switchgear panel should be one which is successfully type tested for Inclination and Vibration and Seismic conditions.
- ii. The arc-interrupting devices shall be capable of interrupting satisfactorily current from zero to the rated interrupting current when used on predominantly capacitive or inductive circuits.

1.10 Current Transformers:

- i. The current transformers offered shall be as per the relevant IS/IEC standard and shall have the accuracies and outputs adequate for the protection, instrument and metering duties involved. The output shall preferably be 15VA per phase and in any case it shall not be less than that required for relaying, instruments and metering involved with sufficient margin for future additions. Tenderer shall clearly specify the output of the current transformers offered, after thorough checking and shall confirm these requirements.
- ii. The CTs for earth fault relay shall be so designed that when residually connected for earth fault protection, they are closely matched so that the spill current under full load/overload and through fault current conditions, shall be small though enough so as not to operate the earth fault relay.
- iii. The current transformers shall have a short time thermal current rating adequate for the short circuit level of the system in which they are to be used

and their short time withstand time shall match the short time rating of the associated switchgear. The short time dynamic current rating must not be less than 2.5 times the short time thermal current.

- iv. The C.T. shall be capable of withstanding a momentary open circuit on the secondary side without injurious effects.
- v. The temperature rise of the winding of the CTs when carrying rated continuous current shall not exceed the values given in the relevant standard and shall be limited by the lowest class of the insulation of either the windings itself or the surrounding medium in which it is embedded.
- vi. The C.T. shall also be secured in the position that no undue strain comes on the windings/terminals. All C.Ts shall be provided with shorting terminals and links. The test terminals with eye lugs and links shall be provided. All C.T. secondaries shall be earthed through a separate earth link on the terminal block.

1.11 Voltage Transformers:

- i. The voltage transformers (VT) shall preferably be of cast resin design and shall comply with the relevant standards. The V.T. shall be of the plug-in type, and withdraw able for isolation or maintenance. The primary and secondary disconnects shall have the pressure type contacts. It shall be mounted preferably in the breaker panel.
- ii. The secondary voltage of the V.T. shall be 110 volts. The accuracy class of the V.T. shall be 1.0. The V.T. shall preferably be of 100VA output per phase and in any case, the output shall not be less than that required for the relaying, instruments and metering duties involved with sufficient margins for future additions. The tenderer shall clearly specify the output of the V.T. offered and confirm after thorough checking.
- iii. Shutter shall be provided in the V.T. chamber so arranged that the V.T. orifices are automatically closed when the V.T. is withdrawn.
- iv. The V.T. shall be provided with fuses both on the H.V. and L.V. sides. H.V. winding shall be protected by current limiting fuses & low voltage fuses, sized to prevent the harmful effect of overload, shall be installed in all ungrounded secondary leads of the V.T.
- v. Mechanical interlocking arrangements shall be provided so that access to the high voltage fuses is gained only when the V.T. is fully isolated.
- vi. Voltage transformer shall be withdrawable type mounted in a separate compartment below the circuit breaker in the same panel. The VT shall be mounted on the separate trolley and not on the breaker trolley. Voltage transformer shall be accessible from front of panel & shall be independent of breaker position/ operation. However, due to design constraints if Line PT & Bus PT cannot be offered in separate compartment in same panel, then separate Line PT & Bus PT panel shall be offered by bidder.

1.12 Relays:

- i. The vendor shall furnish, install and co-ordinate all the relays to suit the requirements of the protection, operation and inter-lock of the equipment connected to the switchgear. All relays shall be provided in draw out and dust proof cases and shall be flush mounted type. They shall be fully tropicalized. IDMTL current relay shall generally have adjustable plug settings ranging from

- 50% to 200% in steps of 25% and time multiplier ranging from 0 to 1 (settings) in steps of 0.05.
- ii. Earth fault relay shall have a setting range of 20% to 80%. IDMTL relay shall have a characteristic with DMT of 2.2 sec. and an operating time of 3 seconds at 10 times the plug setting with multiplier of 1.
 - iii. All protective relays shall be provided with flag indicators and all relays directly tripping the breakers shall be provided with hand reset contacts in addition to the flag indicator. The flag indicators shall be suitable for external hand resetting and be mechanically interlocked to prevent from falling when the relay is subject to vibration. Hand reset relays shall be arranged for external hand resetting.
 - iv. All relays and other protective devices shall be properly graded, set and co-ordination chart showing the exact relay time and current settings etc., shall be supplied. All the calculations involved in the selection, protection and relay co-ordination shall be furnished to the purchaser for approval. Any data required in this respect will be furnished by the purchaser.
 - v. Only major relays, meters and controls have been indicated in the SLD/ Data Sheet. Any auxiliary relay, timers, switches etc as required while developing the control schematic and required for safe operation, even if these are not specifically mentioned shall be supplied by the party without any price implication.
 - vi. An exclusive Emergency Push Button (to be located in the Control room) to trip the VCB shall be wired up in the control circuit.
 - vii. Numerical under voltage relays with time delay relay including VT fuse failure relay shall be provided for Bus VTs.
 - viii. The vendor shall be solely responsible for coordinating the relay characteristics with suppliers for the proper selection of all CTs.

1.13 Instruments & Meters:

The instruments shall be of Digital type and suitable for flush mounting of 96 sq.mm. They shall be fully tropicalized and dust- tight and shall conform to the relevant standards.

1.14 Internal Wiring:

- i. The internal wiring shall be of PVC insulated cable of 1100V grade of minimum size 2.5 sq. mm copper.
- ii. All the wiring shall be marked in accordance with the relevant standard. The insulation on the conductors shall be fire- resisting numbered ferrules, reading from the terminals outwards shall be provided at both ends of all the wiring for easy identification. Interlocking type plastic ferrules shall be used.

1.15 Terminal Block:

- i. Terminal block shall be provided with means for terminating the outgoing ends of cubicle wiring and corresponding incoming tail ends of the control cables. They shall be shrouded, preferably by a transparent acrylic sheet.

- ii. The provision shall be made for accommodating 20% extra connections after wiring all the contacts, whether used or not at the terminal block.

1.16 Control Cable Termination:

Provision for termination arrangement for the control cables shall include a suitable clamp-type terminal block, removable gland plates, cable supporting arrangements, cable glands and crimping-type lugs.

1.17 Power Cable Termination:

The vendor shall supervise the termination activity which shall be carried out by other agency.

1.18 Annunciator & Alarms:

- i. The following shall be provided to indicate the various circuit conditions and these shall be placed at a suitable height. The various functions shall be as follows:
 - Circuit breaker closed.
 - Circuit breaker open.
 - Trip circuit healthy.
 - Alarm and auto trip.
 - Transformer non-trip.
 - Circuit breaker in test.
- ii. There shall be three types of alarm annunciation for switchboard as described in the following paragraphs.
 - -Auto-trip alarm scheme, which shall operate whenever any of the breakers trips on fault.
 - -Trip circuit supervision schemes, which shall operate whenever
 - there is a discontinuity in the trip coil circuit or
 - Complete disappearance of the trip supply in any of the breaker panels.
 - -Non-trip alarm scheme which will operate whenever there is a non-trip fault (e.g. Buchholz, oil temp, alarm etc.) in any of the panels.
- iii. Breaker position ON/OFF/spring Charged/Test position/Service Position shall be indicated mechanically. Following indications shall also be provided on the front of the panel
 - Breaker ‘ON’ : Red Lamp
 - Breaker “OFF” : Green Lamp
 - Breaker “Auto Trip” : Amber Lamp
 - Trip Circuit healthy : White Lamp
 - DC Supply Fail : Blue Lamp

1.19 Earth Bus:

- i. VCB Panel shall be provided with a continuous earth bus of copper with two end terminals to provide a high conductive path to the earth. The earth bus shall be rated to carry the 3 phase fault current for a period of 10 sec.
- ii. VCB Panel shall be earthed directly to this earth bus of copper with two end terminals to provide a high conductive path to earth.
- iii. The earthing terminal connectors including the hardware shall be provided at either end for the connection to external earth conductor.

1.20 Accessories:

- i. Secondary plug and socket assembly for testing breaker outside the housing.
- ii. Handle for manual spring charging.
- iii. Earthing truck.

1.21 Auxiliary Supply:

The bus coupler panel should be provided with one DC supply for closing and indication, one AC supply for tripping and one AC supply for space heater, indication and alarm.

1.22 Miscellaneous:

- i. The breaker shall not have any de-rating at the site ambient specified.
- ii. Five (5) no. auxiliary relays shall be included for Buchholz alarm and trip, winding temperature alarm and trip and oil temperature alarm.

1.23 Inspection & Testing:

After completion of manufacturing and prior shipment, the VCB Panel shall be inspected and tested by the representatives of Owner or Third Party Inspection Agency.

1.24 Quality Assurance:

Manufacture shall follow his standard procedures for quality assurance and control. However, said standard procedure shall be submitted to the Owner in event of order. The procedure shall be in such a form as to clearly delineate the manufacturing sequence and major inspection points and to reference manufacture's test and inspection procedures.

The Owner will inform the manufactures as to which of the inspection points and tests will be witnessed.

1.25 Painting:

Only doors and end covers shall be painted with RAL 7035 shade. All other sheets shall be pre-galvanized.

1.26 Tests

Switchgear Unit

The switchgear unit shall be completely assembled, wired, adjusted and tested for operation under similar conditions to ensure accuracy of wiring, correctness of control schemes and proper functioning of all equipment.

a) Routine test comprising of :

- i. Mechanical operation tests
- ii. Power frequency voltage test
- iii. Tests on auxiliary & control circuits
- iv. Measurement of resistance of the main circuit

Each of the following equipment shall be subjected to standard routine tests as per applicable clauses of relevant IS Specifications:

- Circuit breakers
- Bus bar assembly
- Instrument transformers
- Auxiliary relays
- Control switches and indication lamps

b) Design test

The type test certificate of similar type breaker panel with bus bar should be furnished for the following tests:

- Impulse test
- One minute power frequency voltage withstand test
- Temperature rise test
- Short time current test
- Short circuit test duties on circuit breaker
- Offered panels are Internal Arc Tested for 26.3kA 1 sec.
- The offered switchgear panel should be one which is successfully type tested for Inclination and Vibration and Seismic conditions.
- Mechanical endurance test
- Degree of protection test

1.27 Field Tests:

After installation at site, the switchgear shall be subjected but not limited to the following tests:

- i. Construction inspection
- ii. Measurement of insulation resistance
- iii. Calibration test for meters

- iv. Characteristic test for relays
- v. Electrical control, interlock and sequential operation tests.

1.28 Test Certificates:

Test certificate shall be furnished in Three (3) sets of copies.

The routine and type test certificates shall be furnished to the IIM, Indore for approval before dispatch of the equipment from the works. The approval in writing shall be required to affect the dispatch of the equipment.

The routine and type test certificates of the miscellaneous components shall also be furnished to the IIM, Indore for approval.

The report shall furnish complete identification of data including serial number of each equipment.

The routine and field test shall be arranged by the Supplier and carried out in presence of engineers of IIM, Indore or the representative of IIM, Indore.

1.29 Drawings, Data and Manuals:

After award of the contract, the successful Bidder shall submit the Three (3) sets of the following drawings for approval of the IIM, Indore.

- a) Confirmed outline dimensional drawing of the various switchgears showing the general arrangement and indicating the following:
 - Space required in the front for breaker withdrawal.
 - Control cable entry points and termination arrangement.
 - Power cable entry points and termination arrangement
 - Bus bar clearance phase to phase and phase to ground.
 - Configuration of bus bar
 - Technical detail of supporting insulator and their spacing
 - Location of instrument transformers
 - Control panel details with equipment layout
 - Terminal block details
- b) Single line diagrams of all switchgears showing instrument transformers control switches, instruments and indication, etc.
- c) Control schematic diagram of breaker showing all safety and operation interlocks, annunciation, etc.
- d) Transport/shipping dimensions with weights.
- e) Foundation and anchor bolt details including dead load and impact load.
- f) Cross-section with parts list.
- g) Cubicle wiring diagram with terminal board disposition.
- h) Technical leaflets on:

- Circuit breaker
 - Instrument transformers
 - Control switches, instruments and indicating lamps
- i) Typical type test and routine test results on identical equipment offered in the Tender.
- j) Characteristics curves of all equipment.

Any other relevant data, drawing and information necessary for review of items whether specifically mentioned or not, shall be furnished by the Bidder along with those information.

The responsibility of correctness of wiring diagram shall be with Bidder. The Employer will check the final schematic after submission. If any modification, addition or alteration is considered necessary to comply with the approved schematic drawing as stated herein above, the said modification, addition or alteration shall be carried out by the Bidder either in their works if it is before delivery, or at Site after delivery at no cost to the Institute.

Before starting manufacture of the equipment, the Bidder shall have to take approval of these design drawings from the Institute in writing. Any manufacturing done prior to approval of drawings shall be rectified in accordance with the approved drawing by the Bidder at his own cost and the equipment shall be supplied within the stipulated period. Before dispatch, the breaker panel would be inspected and tested by the IIM's representative.

SCHEDULE OF REQUIRMENTS

Switchboard-H.T. Vacuum Circuit Breakers:

The New H.T. Vacuum Circuit Breaker panel for Utility-I shall comprise of **one incomer panel**, indoor type 11 KV metal clad switchboard to the following specification:

1	System	11,000 Volts, 3 phase, 3 wire, 50 Hz neutral earthed.
2	Breaking Capacity	25 kA at 11 KV
3	Situation	Indoor
4	Control	Spring Operated
5	Sequence of Panels	Left to right looking at the front of the Panel No.1 : Outgoing Feeder (11KV, 630A) to Utility-II (Existing Panel of Alstom make) Panel No. 2 : Outgoing Feeder (11KV, 630A) to Utility-I (Existing Panel of Alstom make) Panel No. 3 : Incoming Supply (11KV, 630A) at Utility-I (Existing Panel of Alstom make) Panel No. 4 : Bus coupler (11KV, 630A) (Existing Panel of Alstom make)

		Panel No. 5 : Incoming Supply (11KV, 630A) (New Proposed as per above tender)
6	General finish	Tropical
7	Painting	Switch gear- approved shade. Instruments & Relay - Matt. Black
8	Indicating Lamps	1- Breaker 'ON' - RED (1 No.) 1- Breaker 'OFF' -GREEN (1 No.) 1- Breaker tripped due to abnormal condition, to be provided on each panel-AMBER (1 No.) 1- Circuit Healthy Lamp (1 No.) 1- Yellow, Blue Phase lamp (1 Set) (8) Window Annunciator Panel with required wiring & protective devices for Incomer (1 Set)
9	Panel No. 5	Panel of incoming supply
10	Rating	630 Amp
11	Label reading	Incomer - Utility-I
12	Circuit Breaker	Rated Vacuum Circuit Breaker
13	Trip Coils	240V D.C.
14	Current Transformers: (for Incomer-Panel No.5)	<ul style="list-style-type: none"> • Silica filled epoxy resin insulated, in air insulated chambers • 3- CTs 300-150A/5 + 5 Amps, 15 VA, Class 1.0 and 5 P 10 accuracy for protection and meter operation.
15	Voltage Transformer (for Incomer-Panel No.5)	1- Three phase, ratio 11 kV/ $\sqrt{3}$ /110V/ $\sqrt{3}$ cast resin insulated 100 VA per phase, Class 1.0 accuracy, withdrawable, complete with H.T. and L.T. MCB, circuit wiring.
16	Relays	<p>1- Triple Pole Numeric IDMT Type Relay similar to SPAJ-140C of ABB/Alstom/Schneider/L&T make with the 2 outer elements connected for non-directional over current and the inner element connected for non-directional earth fault protection with setting for:</p> <p>Over Current : 50 - 200% Earth fault : 20 - 80%</p> <p>1- Numeric Relay for Under voltage Protection / Over voltage Protection</p> <p>2- Numbers triple pole hand reset auxiliary check alarm numeric relay (one for annunciation and other for tripping) of Alstom/ABB/Schneider//L&T make type 'VAA-33' with associated lamp</p>
17	Instruments	<p>1- 2pole, 3 way and off Voltmeter selector switch.</p> <p>1- 96mm x 96mm digital Voltmeter scaled 0-12 kV</p> <p>1- Electronic Load Manager Instrument with communication port</p>
18	Cable Particulars	Incomer cable is 11 kV, Aluminum XLPE - 2 runs of 3 cores x 300 mm ² . Provision should be available for epoxy end

		sealing kit for end termination inside the cubical itself. Suitable double compression brass cable glands shall be provided. The cable entry will be from bottom to suit the site conditions.
Additional Equipment for the Switchboard		
19	Alarm Bell	One alarm bell each to be mounted for audible alarm purpose for AC & DC failure indication.
20	Switch	One push button switch for the cancellation of audible alarm.
21	Padlock and Keys	Provision for padlock shall be made for each panel.
22	Drawings	Drawings giving full and complete physical and electrical details shall be submitted for approval to IIM, Indore in 4 sets prior to take-up of production. The IIM, Indore will return two sets of approved drawings to the supplier. Full set of test results shall be provided to the IIM, Indore in 4 sets prior to dispatch. The IIM, Indore, after studying the furnished test data, shall decide whether inspection visit to the manufacture's factory is necessary or not. Only after receiving written permission from IIM, Indore, the switchboard shall be dispatched to the project site.
23	Commissioning	The commissioning of the H.T. switchboard will be done after all the site tests are carried out. The supplier will also have to arrange for site visit (s) by their engineers at the time of commissioning at no extra cost to the owner.

2. 33KV Outdoor H.T. Vacuum Circuit Breaker:

Make: BHEL/ABB/CG/Schneider

1. Scope:

This specification covers design, manufacture, assembly, testing at manufacturer's works, packing and forwarding of 36KV Vacuum Circuit Breakers with all accessories and galvanized supporting structures for breaker mounting.

2. Standards:

The Circuit Breakers shall comply in all respect with the requirements of latest issue of IEC62271-100.

3. Specific Technical Requirement:

The equipment to be supplied under this specification is outdoor type Vacuum power circuit breakers for use in 36 kV system.

The Circuit Breaker shall have identical pole units, operated through a common shaft (gang operated) and interlinked mechanically to the common operating mechanism unit and complete with all devices including galvanized breaker supporting structures.

The circuit breaker shall have vacuum interrupters as interrupting medium, designed to provide a long contact life at all currents upto rated making and breaking current during switching operation. The vacuum interrupters should be sealed for life and shall be encapsulated by porcelain insulators for outdoor installation requirement of the circuit breakers. The offered breakers shall be suitable for outdoor operation under climatic conditions specified without

any protection from sun, rain and dust storm.

The vacuum interrupters of each phase shall be housed in a separate porcelain insulator. The three identical poles shall be mounted on a common base frame and the contact system of three poles should be mechanically linked to provide three pole gang opening/closing for all type of faults.

- i. The offered equipment shall be practically maintenance free over a long period.
- ii. All mechanical parts and linkages shall be robust in construction and maintenance free, over at least 10,000 switching operations, except for lubrication of pins/articulated joints.
- iii. Similar parts shall be strictly interchangeable without special adjustment of individual fittings. Parts requiring maintenance shall be easily accessible, without requiring extensive dismantling of adjacent parts.
- iv. The circuit breaker shall be supplied complete with all auxiliary equipment, meant necessary for the safe operation, routine and periodic maintenance. All internal wiring including those of spare auxiliary contacts shall be complete and wired upto terminal blocks.
- v. The breaker shall be totally re-strike free under all duty conditions. The details of any device incorporated to limit or control the rate of rise of re-striking voltage across the circuit breaker contacts shall be stated.
- vi. The breaker shall be suitable for three phase re -closing operation.
- vii. An operation counter, visible from the ground level even with the mechanism housing closed shall be provided.

4. Temperature Rise:

The maximum temperature attained by any part of the equipment when in service at side and under continuous full load conditions and exposed to the direct rays of the sun shall not exceed the permissible limits fixed by IEC.

5. Support Insulator:

The support insulator shall conform to IEC-60137. Minimum clearance between phases, between live parts and grounded objects shall be as per relevant standard and also should conform to local Electricity Rules of the user country. The minimum creepage distance for severely polluted atmosphere shall be 25 mm/KV as per IEC-815-1985.

Sharp contours in conducting parts should be avoided for breakdown of insulation. The insulators shall be capable to withstand the seismic acceleration of 0.6 g in horizontal direction and 0.6g in vertical direction.

6. Operating Mechanism and control cubicle:

The operating mechanism shall be stored energy type and capable of giving specified duty of the breaker (sequence of opening and closing) as specified under O-0.3 sec-CO-3 min-CO. The breaker shall also pass the operational test which ascertains the capabilities of operating mechanism.

The operating mechanism shall be capable to perform 10,000 operations at rated current efficiently. Operating mechanism should also be suitable for three phase auto re-close duty. The closing spring shall be automatically charged by motor immediately after closing operation. In case of failure of supply to the spring charging motor, the spring shall be chargeable by

spring charging handle.

The spring charging handle shall be an integral part of the mechanism. Separate spring charging handle is not allowed since it could get misplaced at site.

The operating mechanism should have mechanical anti-pumping feature.

a) Tripping/Closing Coils:

The circuit breakers shall be provided with one trip coils and one closing coil per breaker. The trip coils should be of continuous rating to improve reliability and reduce the possibility of burning of the coils during service.

b) Trip Free Features:

The trip free mechanism shall permit the circuit breaker to be tripped by the protective relay even if it is under the process of closing. An anti-pumping device to prevent the circuit breaker from reclosing after an automatic opening shall be provided to avoid the breaker from pumping i.e., anti pumping relay should interrupt the closing coil circuit.

c) Controls:

The circuit breaker shall be controlled by a control switch located in the control cabinet. The control arrangement shall be such as to disconnect the remote control circuits of the breaker, when it is under test. Local control devices, selector switch and position indicator shall be located in weather and vermin-proof cabinet with degree of protection not less than IP-55. Local/remote selector switch shall be provided for all breakers for selection of "Local" control/remote control.

Provision shall be made for local manual, electrical and spring controls. Necessary equipment's for local controls shall be housed in the circuit breaker cabinet of weather-proof construction.

Each circuit breaker shall have a mechanical open/closed and spring charge indicator. Mechanically ON/OFF indicator, spring charged indicator and operation counter shall be provided on the front of the control cubicle.

Closing coil shall operate correctly at all value of voltage between 85 % and 110% of the rated voltage. Shunt trip coils shall operate correctly under all operating conditions of the circuit breaker upto the rated breaking capacity and at all values of supply voltage between 70% and 110% of rated voltage. The variation in A.C. supply voltage shall be -15% to +10% while variation in frequency shall be +/- 3%. Working parts of the mechanism shall be noncorrosive material. Bearings which require grease shall be equipped with pressure type fillings. Bearing pins, bolts, nuts and other parts shall be adequately pinned or locked to prevent loosening or changing adjustment with repeated operation of the circuit breaker. It shall be possible to trip the circuit breaker even in the event of failure of power supply.

Operating mechanism and all accessories shall be enclosed in control cabinet.

d) Enclosure:

The enclosure shall be made out of MS sheet metal not less than 2.5 mm thick and of light section structural steel. It should be weather proof as well as vermin proof.

The enclosure shall provide protection against dust and foreign objects. Each cabinet section shall have full width and full length hinged doors mounted on the front that swing fully open. The doors shall be provided with latches to securely hold it with the cabinet.

Doors shall be of sturdy construction, with resilient material covering, fully parametrically contacting the cabinet frame to provide dust protection and prevent metal to metal contact except at the latch points.

All screws and bolts used for assembling and mounting wire and cable termination, supports, devices and other equipment shall be provided with lock washers or other locking devices. All metal parts shall be clean and free of weld splatter, rust and mill scale prior to painting. The mounting structure shall be galvanized.

e) Wiring and Cabling:

- i. Control wire shall be stranded tinned copper switchboard wire with 1.1 kV PVC insulation conforming to the requirements of relevant IEC standards.
- ii. All the control circuit and secondary wiring shall be wired completely and brought out to terminal block ready for external connections in the control cabinet. The cross-section of control wire shall not be less than 2.5 mm² copper.

7. Supporting structure:

The circuit breakers shall be supplied complete with necessary galvanized steel supporting structures, foundation and fixing bolts, etc., the galvanizing shall be as per IS. The mounting of the breaker shall be such as to ensure the safety of the operating staff and should conform to Indian Electricity Rules, 1956. Minimum ground clearance of live part from ground level shall be 3400 mm from finished ground level.

8. Vacuum Interrupter:

Each pole of the circuit breaker shall be provided with vacuum interrupter, one for each phase, hermetically sealed for life and encapsulated by ceramic insulators.

The vacuum interrupter shall be encapsulated with silicone material for long service life and avoid moisture condensation which may lead to flashover from VI's external surface. The interrupter should be such that contact gap setting is not required to be done during service life. VI with contrite cup arrangement of main contacts are not allowed.

The VI should be capable of C2 class operations and should be capable of handling fault currents upto 31.5kA for 3 secs.

9. Tests:

Type Tests:

Each circuit breaker shall comply with requirements of type tests prescribed in 62271-100

- i. Short time and peak withstand current test.
- ii. Short circuit breaking capacity and making capacity.
- iii. Capacitive current switching test: Line charging, cable charging and capacitor bank current breaking test
- iv. Dielectric test i.e., power frequency withstand and impulse withstand test
- v. Temperature rise test.
- vi. Extended Mechanical Endurance Test at ambient temperature.
- vii. Measurement of resistance of the main circuit.

Routine Tests:

Routine Tests as per IEC-62271-100 shall be carried out on each breaker in presence of purchaser's representative at manufacturer's works.

Design Rating:

Sr. No.	Description	Particulars
1	Type	Outdoor
2	Reference Standard	IEC 62271-100
3	Rated Voltage	33kV
4	Maximum (continuous) rated service voltage	36KV
5	Nominal current rating	1250A
6	Frequency	50 Hz
7	Short Time current rating	26.3kA for 3sec
8	Breaking capacity	26.3kA
9	Making capacity	65kA peak
10	Maximum Temperature rise over ambient	Within limits as per EC 62271-100
11	Dry - 1 minute power frequency withstand voltage	
	a between line terminal and grounded objects	70KV rms
	b between terminals with breaker contacts open	70KV rms
12	1.2/50 micro second full wave impulse withstand test voltage for the two cases above	
	a Between line terminals and grounded objects	170KV peak
	b between terminals with breaker contacts open	170KV peak
13	The rating of the circuit breaker for capacitor switching	400A
14	Opening Time	45 (+15/-10) ms
15	Closing Time	65 (±15) ms
16	Total creepage distance	900mm
17	Number of poles of circuit breaker	3
18	Number of breaks per phase	1
19	Number of spare auxiliary contacts provided	
	a Those closed when breaker is closed	6
	b Those open when breaker is closed	6
20	Type of operating mechanism	Spring operated mechanism
21	Control circuit voltage	24V DC
	a Operating voltage of tripping coil	70% to 110% of the Control voltage

	b	Operating voltage of closing coil	85% to 110% of the Control voltage
22		Voltage of spring charging motor	230V AC
23		Time required for motor to charge the spring fully.	15 sec (Max)
24		Auxiliary Power Supply	230 VAC - Heater/Illumination/Socket
25	Paint	Shade IP Assy./ Control Cubicle	Synthetic Enamel Spray Paint Light Grey to Shade No. 631 of IS:5.
26		Structure	Hot Dip Galvanized

Standards Applicable:

Switchgear	IEC:62271-100/IS:13118-1991/ IS:3427-1969
Statutory regulations	Meets Indian Electricity Rules 1956(Pub.1989) Clause Nos. 29, 35, 48, 51, 64A, 67 & 120.
Seismic level	Upto Zone-V as per IS:1893

Fitment Details of Vacuum Circuit Breaker:

IT.NO.	BRIEF DESCRIPTION	QTY.
1.0	VACUUM CIRCUIT BREAKER RATED: 800A, TYPE PVN-36 or equivalent Comprising:	1
1.1	Vacuum Interrupters Rating: 36kV, 25kA, 1250A.	3
1.2	Set of Porcelain Insulators for housing Vacuum interrupters & glass fiber drive rod.	3
1.3	Galvanized steel support structure complete with foundation bolts (For VCB, CT & PT)	1
1.4	Galvanized steel support structure for CTs/PTs Complete with foundation bolts & CT mounting brackets	2
1.5	3 Phase Inter-phase Assembly.	1
1.6	Motor/Manually charged, independent spring closing mechanism comprising:	1
	1.6.1 Mechanical ON/OFF indicator.	1
	1.6.2 Manual trip/close device.	1
	1.6.3 Operation counter.	1
	1.6.4 Spring charging motor & rectifier, 230VAC	1
	1.6.5 Spring charging limit switch	1
	1.6.6 Spring charged indicator.	1
	1.6.7 Auxiliary switch with 6NO+6NC contacts.	1
	1.6.8 Shunt trip coil. (Connected in parallel) - 275 W	2
	1.6.9 Spring release coil. - 275 W	1
1.7	Local control panel, comprising:	1
	1.7.1 Padlocks and duplicating keys	1
	1.7.2 Trip/ Neutral / Close Control Switch	1
	1.7.3 Space heater equipped with industrial grade switch.	1
	1.7.4 Cable gland	1
	1.7.5 Industrial Grade receipt able type 3 pin 15 Amps,	1

		power plug & socket with switch.	
	1.7.6	Local Remote changeover switch.	1
	1.7.7	Manually operated tripping push button / lever (mechanical device convenient located to trip all three phases simultaneously)	1
	1.7.8	Pistol grip circuit breaker control switch having trip/ normal close position.	1
	1.7.9	Terminal boards	1
	1.7.10	Spring charged indicator.	1
	1.7.11	Operation counter.	1
	1.7.12	Fuses /MCBs are required for AC & DC supply	1
	1.7.13	The no. of terminal provided shall be adequate enough to wire out all contacts and control circuits plus 20% spare terminal for owner's use	1
	1.7.14	Manual charging spring operating handle for maintenance	1

IT.NO.	BRIEF DESCRIPTION		QTY.
	1.7.15	Cubicle lamp with cage & switch	1
	1.7.16	Anti-Pumping Contactor/Plug-in Relay	1
	1.7.17	Gas pressure monitoring device for each pole with suitable glass window to monitor the pressure without opening of CB	1
1.8		Terminal Connectors for Dog ACSR conductor.	6
1.9		Spring charging handle.	1
1.10		MCB for AC supply	1
1.11		MCB for DC supply	1

3. 33kV oil Immersed Outdoor Type Current Transformer, class 1.0:

Make: Laxmi Engineering/Apoorv Electricals/Universal Isolator (Indore)

1.1 Scope:

This specification covers design, manufacturing, testing, and inspection during manufacturing and before dispatch at manufacturer`s works of 33 KV Outdoor Single Phase, Tape/Paper Insulated, Oil Cooled Current Transformers for relaying and metering purpose for 33 KV solidly grounded system complete with Bimetallic Terminal Connectors.

1.2 General Requirement:

- The 33 KV current transformers shall be of outdoor type, single phase, oil immersed self cooled dead tank design. These CTs shall also be suitable for operation in humid atmosphere and in the tropical direct sunlight with temperature up to 50°C.
- The above 33 KV CTs meant for outdoor application should be suitable for use in areas prone to heavy lightning strokes. The CTs should be suitable for satisfactory operation under all types of adverse climatic conditions, prevailing in the State of M.P.

- c. Further, the above CTs are required to be mounted on a cantilever support provided on outdoor structure of circuit breaker in the switchyard. The CTs will therefore, have suitable mounting holes in the base channel, for clamping on the structure.
- d. The offered CTs will be dead tank design. Live tank designs CTs are not acceptable.
- e. The current transformers shall have the following specifications: -

33KV Outdoor Oil Immersed Dead Tank Single Phase CT. Details as under:-

Ratio	: 150-75/5-5A
Core-I	: 15VA, CL 1.0
Core-II	: 15VA 5P10
STC	: 26.4KA / 3 Sec.
Insulation Level	: 36KV/ 70KV/ 170KVp
Terminal Connector	: 2 No. ACSR DOG
Standard	: IS 2705-1992

1.3 Design:

As stated above, the 33 KV CTs shall be of Tape / Paper insulated, Oil Cooled type housed in steel tank. The steel tank thickness for 33 KV CTs shall not be less than 3mm. Welded joints have to be minimized to avoid possibility of oil leakage in CTs. In any case welding in horizontal plane shall be avoided.

Adequate slop shall be provided on top of the tank to avoid collection of rain water. Besides marking on the name plate, serial number and make shall be additionally engraved on the sides of the CT Units.

1.4 Standards:

The current transformers shall fully comply with the latest issue of Indian Standard 2705 (Part-I, II, III & IV) with latest amendment thereof up to the date of issue of this tender.

1.5 Design and Manufacturing Requirement:

- a. The 33 KV current transformers shall be outdoor single phase, oil cooled type, suitable for the services indicated, complete in all respect conforming to the modern practices of design and manufacturing.
- b. The core shall be of high grade, non-ageing electrical silicon laminated steel of low hysteresis loss and high permeability to ensure high accuracy at both normal and with 25 % over load current.
- c. The current transformers shall be properly sealed to eliminate and prevent entry of air and moisture in the tank. For gasket ted joints, wherever used, **joint less nitrite butyl rubber gaskets, minimum thickness 3 mm** neoprene or any other improved material shall be used. The gasket shall be fitted in properly with adequate space for accommodating the gasket under compression. The bidder has to submit complete details, drawings of gaskets for 33 KV CTs, which they have provided between joints and

the gasket shall be durable and of proper quality to avoid leakage of oil used for mounting oil level indicator.

- d. The CTs shall be provided with a pressure-relieving device and an explosion vent with diaphragm having a rupture pressure of 0.98 Kg/sq.cm. at suitable places with proper clearances capable of releasing abnormal internal pressures. Design and arrangement of mounting of pressure release device and adequate size of oil level gauge should clearly be indicated in drawing.
- e. The maximum temperature attained by any part of the equipment, when in service, under continuous full load conditions and exposed to direct sun rays, shall not exceed 45 degree centigrade above ambient temperature of 50 °C reached in summer.
- f. The primary winding, terminals, terminal connectors clamps etc. are required to be designed considering the continuous over loading of 25 percent. For continuous over loading, the ratio and phase angle error shall be maintained within the specified limit as per relevant ISS.
- g. The primary terminal to winding joints shall be made by using silver brazing/hydraulically crimp.

1.6 Windings:

- a. The current transformer's **First core to be used for metering** and instrument shall be of accuracy class 1.0 specified in Clause 1.2 above. The primary winding shall be designed considering current density not exceeding 2.2 Amps/Sq.mm. The saturation factor of this core shall be low enough not to cause any damage to measuring instruments in the event of maximum short circuit current.
- b. Current transformer's **Second cores to be used for protective relaying** purposes shall be of accuracy class specified or appropriate class suitable for over current protection. The cores shall be designed for a minimum saturation factor of 10 for the highest setting. The magnetization curves for these cores shall be furnished along with the drawings of CTs.
- c. The winding should be placed inside the transformer tank at least 25mm above the tank floor to protect it, as far as possible, from the moisture(water) that may gradually accumulate at the bottom over a period of time.
- d. The rating of the secondary windings shall be 5A for secondary connections, threaded studs terminal shall be provided and brought out in a compartment on one side of current transformer for easy access. Further, the secondary terminals shall be provided with short-circuiting arrangement. The secondary taps shall be adequately re-enforced to withstand normal handling without damage.
- e. Secondary terminal studs shall be provided with at least three nuts and adequate plain and spring washers for fixing the leads. The studs, nuts and washers shall be brass nickel plated. The minimum outside diameter of the studs should not be less than 6 mm. The length of at least 15 mm shall be available on the stud for inserting the leads.

- f. The secondary terminals shall be invariably marked as follows:
 - i) 1S1 and 1S2 for metering core (ii) 2S1 and 2S2 for protection core
- g. The CTs secondary terminals shall be brought out to a suitable weather proof sheet metal terminal box on side wall of the tank adjacent to the primary outgoing (P2) terminal for termination of multi-core cables. The terminal box shall be provided with one cable gland for each core, which shall be suitable for 4 core 1100 Volt grade PVC/XLPE Insulated 2.5 sq.mm. Copper control cable. The dimension of terminal box and its opening shall be adequate to enable easy access and working space with use of normal tools. The outer cover of the secondary terminal box shall have proper arrangement of sealing.

1.7 Insulation:

- a. The insulating oil filling in each CT shall be in the scope of supplier. Best quality of new EHV Grade Transformer Oil should be used with the equipment with minimum BDV of 70 KV. The test certificate of the transformer oil shall be produced at the time of inspection. The oil shall comply in all respect with the latest version of IS-335:1983.
- b. The CTs shall be single phase, multi core, and separately mounted, freestanding, type for outdoor installation.
- c. All porcelain insulators shall be prepared from wet process porcelain with arrangement for hermetically sealing of the metallic tank containing the core and the secondary winding.
- d. Adequate insulation shall be provided on primary winding to achieve maximum dielectric strength. Also adequate clearances shall be provided between the primary conductor and the metal body.
- e. The terminals of primary and secondary winding shall be clearly marked according to relevant standards.

1.8 Insulation Withstand Characteristics:-

- a. Insulation withstand characteristics of 33 KV CTs shall be as per IS:2705 as shown in the table below :-

Nominal system voltage	Highest system voltage	Power frequency withstand Voltage (for 1 minute)	Lightning Impulse withstand Voltage (for 1 minute)
33 KV (rms)	36 KV(rms)	70 KV(rms)	170 KV (peak)

- b. The exterior of the CTs tank shall be thoroughly cleaned, scraped and giving a primary coat and two coats of durable oil and weather resisting enamel paint or hot dip galvanized. All steel bolts, nuts and fasteners exposed to atmosphere, shall be hot dip galvanized conforming to IS: 2633.
- c. Change in CTs ratio will be obtained by providing tapings in the secondary windings, while the primary will have only one winding.

- d. The CTs are required for outdoor application fitted with outdoor type porcelain bushings. Compound filled bushings are not acceptable. The CTs will be dead tank design. Live tank designs CTs are not acceptable.

1.9 Type of mounting:

The CTs shall be mounted on CT bracket, provided on Circuit Breaker's structure. Suitable sized MS channel/angles welded to the bottom of the tank must be provided for facilitating mounting of the CTs.

1.10 Terminal Connectors:

- a. The terminals of primary and secondary winding shall be clearly marked according to relevant standards and shall conform to latest version of IS: 5561 or equivalent International Standard. In respect of the terminal connector following shall be ensured:-

The primary terminals of 33 KV, CTs for transformer and line protection shall be of non-ferrous corrosion-proof material and shall be provided with suitable **pad type terminals connectors** to receive Dog Conductor.

- b. All above terminal clamps shall be designed adequately to take care of any bimetallic effect. Terminal connectors shall be tested for short circuit current capability, and temperature rise. The terminal connector shall also meet the following requirements :-
 - i. Terminal connectors shall be manufactured by pressure die casting & tested as per IS:5561.
 - ii. All castings shall be free from blow-holes, surface blisters, cracks and cavities. All sharp edges and corners shall be blurred and rounded off.
 - iii. No part of the clamp shall be less than 12 mm thick.
 - iv. The nuts, bolts & washers used in the current path shall be hot dipped galvanized
 - v. The bimetallic strips/ sleeve liner of minimum thickness of 2 mm shall be made by electroplating process.
 - vi. All current carrying parts shall be designed and manufactured to have minimum contact resistance.
 - vii. Size of terminal connector for which the clamp is designed and also rated current under site conditions shall be embossed/ punched on each part of clamps, except hardware.
 - viii. The conductor shall be tightened by at least six bolts of 8/10mm diameter. Conductor hold length must not be less than 100 mm.
 - ix. The surface of clamps to be tightened by the bolts should be flat in shape, so that it may be possible to open the nuts and bolts by normal spanners. Therefore, any type of groove in the clamp body for fixing of nuts should be avoided.
 - x. The portion of clamp to hold the conductor should be flat and straight and not zig-zag in construction, at both the sides, so that heating of clamp by throttling action of current may be avoided.
 - xi. Space of at least 50% of diameter of nuts should be available after each hole at both the sides of conductor holding portion for better mechanical strength.

- c. The Tank of each CT shall be provided with two separate GI earthing terminals, which shall have **non painted** surface for making bolted connection to **50x10 mm**. MS flat to be provided by the purchaser for connection to station earth mat. Suitable drawing should be submitted after award of contract for approval.

1.11 Studs:

The stud provided on the primary should invariably be made of brass which is tough and durable. Stud should have adequate cross section/diameter for carrying the rated primary current, as well as the rated short time current. The minimum required diameter of the brass studs are -

S.No.	Current Rating	Diameter of Primary stud (Min)
1	150-75/5-5A	16 mm.

The length of the primary studs available for clamping the terminals shall not be less than 50 mm. Minimum 2 nuts with a check nut and washer should be provided on upper side of stud.

1.12 Bushing:

The basic insulation level of the bushing shall be as specified and porcelain shall be homogenous and free from cavities and other flaws. This shall be so designed as to have ample insulation and mechanical strength. All insulators of identical ratings shall be interchangeable. Only type tested insulators shall be provided in the CTs. The bidder is required to furnish type test reports of all bushings after award of contract.

1.13 Routine Tests:

The following Routine Tests shall be witnessed.

- Verification of terminal markings.
- Power-frequency withstand tests on secondary windings.
- Power-frequency withstand tests between sections.
- Inter-turn over voltage test.
- Power-frequency withstand tests on primary winding.
- Partial discharge measurement.
- Determination of errors.

4. 33kV oil Immersed Outdoor Type Potential Transformer, class 1.0:

Make: Laxmi Engineering/Apoorv Electricals/Universal Isolator (Indore)

1.1 General Requirement:

33 KV Single Phase Potential Transformer shall conform to IS-3156:92 with its latest amendments if any.

The oil filled PT complete with core, H.V. Coil & LV Coil housed in a full weather proof outdoor pole mounting type steel tank with one number of 33 KV weather proof porcelain bushing on

the primary side for incoming connections.

Secondary terminals of the potential transformers shall be brought-out on the side of the tank to a separate terminal box. Box shall be made suitable for taking out secondary connections through armoured XLPE Insulated PVC Cables. Entry of the cables into the box of the unit shall be through glands and check nuts to be supplied along with epoxy compound.

The transformer tank shall be given three coats of rust preventing paint and finished with light gray no. 631-IS-S on all external surfaces. The tank shall be provided with lifting hooks properly welded on the side or top cover plate of the tank.

The dimensions and electrical characteristics of the 33 KV bushing shall be in accordance with IS: 2099 and its subsequent amendments, if any.

The minimum electrical clearance between phases and phase to earth shall be as per IS.

The top of the tank will have slope to drain the rain water and avoid collecting pockets. For indication of oil level, suitable oil level indicator should be provided.

To prevent moisture entry in the bushing chamber, the nuts on the top of the stem would be sealed with araldite. Further, the angular space between the stem and the bushing will be filled with epoxy cast compound or with araldite to prevent ingress of moisture.

The insulating materials for winding between HV and LV between interlayer of the winding for end turns shall be as per relevant IS. However, end turns have to be provided with enforced insulation and lead connecting to the bushing shall be provided extra insulation of fiber glass sleeves.

Voltage rating, PT ratio, class of accuracy, burden of 33 KV Single Phase PTs shall be engraved/painted on the body of main tank as well as on name plate.

The potential transformer will be connected phase to neutral with neutral point solidly earthed. The neutral of the system is also solidly earthed.

The potential transformers shall be designed to limit the temperature of winding and other parts as specified in the standards, when corrected for the difference between the temp. prevailing at site and temperature specified by the standards. The temperature rise at 1.2 times rated primary voltage when applied continuously at rated frequency and at rated burden shall not exceed the limits specified above and the temperature rise at 1.5 times rated primary voltage when applied for 30 seconds starting from previous stable operating conditions at the rated frequency and rated burden shall not exceed the above temperature limits by more than 10°C.

1.2 Type Tests:

The Single Phase PT shall be type tested, as per IS-3156/1992 with latest amendment, if any from NABL accredited testing laboratory. The type test comprises of following:-

- i. Temperature Rise Test
- ii. Lightning Impulse Test

- iii. Determination of errors or other characteristics according to requirement of the appropriate designation or accuracy class.
- iv. HV Power frequency wet withstand voltage test.

1.3 Routine Test:

Each 33 KV Single Phase PT shall be subject to routine tests in accordance with IS-3156 (with it latest amendment if any) at manufacturer’s works and shall be witnessed in the presence of IIM’s representatives, if so, desired by the IIM, Indore. The routine test comprises of following:-

- i. Verification of terminal marking and polarity test
- ii. Power Frequency Dry withstand voltage test on Primary winding
- iii. Induced over voltage withstand test
- iv. Power Frequency Dry withstand test on Secondary winding
- v. Partial Discharge Tests in accordance with IS-11322/1985
- vi. Determination of errors or other characteristics according to requirement of the appropriate designation or accuracy class.

Routine tests indicating results of all the required tests should be submitted in duplicate by the manufacturer along with the inspection offer or with inspection report.

1.4 Particulars of 33 KV Outdoor Potential Transformer, cast resin insulated

Sr. No.	Description	Particulars
1	Equipment	33 KV, Out Door, Single Phase, Oil Cooled Potential Transformer
2	Reference Standard	IS : 3156
3	Type	Dead tank
4	Rated voltage	33 KV
5	Highest voltage	36 KV
6	Frequency	50 Hz.
7	Basic Insulation Level	Primary : 36 KV / 70 KV / 170 KV(p) Secondary : 3 KV for 1 minute
8	Class of insulation	Class A
9	Creepage distance	900 mm (minimum)
10	Ratio	33000/√3 : 110/√3
11	Class of accuracy	1
12	Burden	30 VA
13	Voltage factor	1.2 Continuous, 1.5 times for 30 Sec.
14	Core identification	Instrumentation, Metering & Protection
15	Place of installation	Out Door, Structure mounted
16	Primary terminal connector	Rigid type suitable for PT Stud to Dog ACSR

R. Formats for Different Forms/Certificates/Annexures

Annexure-1

Undertaking having gone through the documents as per the Technical bid

Sub.: “Revamping of 33/11 KV main sub-station & equipment (Utility-I) by operationalizing idle transformer(stand-by)” NIT No.: IIMI/Estate/06/2021/82 File No. 425

Dated: /...../2021

To,
The Chief Engineer,
Indian Institute of Management, Indore
Prabandh Shikhar, Rau-Pithampur Road,
Rau, Indore-453556

Dear Sir,

We have carefully examined the specifications, design and schedule of quantities relating to the work specified in the memorandum hereinafter set out in the said memorandum and have acquired the requisite information relating thereto as affecting the tender. We hereby offer to execute the works specified in the said memorandum within the time specified in the said memorandum at the rates mentioned in the Schedule of Quantities and in accordance in all respects with specifications, designs and instructions in writing referred to in articles of agreement, general instructions to the tenderers and special conditions, General Conditions of Contract, conditions hereinbefore referred to, specifications, schedule of works, data sheet and schedule of quantities and with such materials as are provided for, by and in all other respects, in accordance with such conditions so far as they may be applicable.

Memorandum

A.1.1	NIT No. : IIMI/Estate/06/2021/82 File No. 425	
A.1.2	Name of Work	“Revamping of 33/11 KV main sub-station & equipment (Utility-I) by operationalizing idle transformer(stand-by) at IIM Indore”
A.1.3	Estimated Cost Put to Tender	Rs.71,13,952/- (Rs. Seventy-One Lakh Thirteen Thousand Nine Hundred and Fifty-Two Only) (Excl. GST)
A.1.4	Earnest Money Deposit	The EMD Payment shall be payable as under: 1. 50% amount of the EMD (i.e. Rs. 71,140/-) may be deposited through online mode. 2. Remaining 50% of the EMD Payment (i.e. Rs. 71,140/-) through Bank Guarantee. 3. 100% amount of EMD payment online is also accepted.

A.1.6	Completion period	90 days
A.1.7	Mode of submission of tender	On-Line mode only

2. We also agree that our tender will remain **valid for acceptance by the IIM Indore for 75 days** from the date of opening of price bid of the tender and this period of validity can be extended for such period as may be mutually agreed between the IIM Indore and us in writing. We also agree to keep the **Bank Guarantee towards performance guarantee** valid during the entire period of validity of tender as per enclosed proforma. Should this tender be accepted, we hereby agree to abide by and fulfil all the terms and conditions of the contract.

3. Should this tender be accepted, we hereby agree to abide by and fulfil all the terms and conditions of the contract.

4. We understand that you reserve the right to accept or reject any or all the tenders either in full or in part without assigning any reason therefor.

Dated this ..._day of ___2021.

For and on behalf of M/s _____

(Signature with seal) _____
Name _____

Designation _____

Place _____

Annexure-2 : Letter head of the practicing CA

Financial Information (As per Point C2 of the tender document)

This is to certify that, on the basis of the audited financial statement and the books & records produced before us of the Company (Name of the Company), the Total Turnover & Profit after Tax of (Name & address of the Company) for the following financial years are as under: -

Financial Year	Gross Annual Turnover (for 3 years) (in Rs)	Profit After Tax (for 5 years) (Profit and Loss Account) (in Rs)
2019-2020		
2018-2019		
2017-2018		
2016-2017	Not required	
2015-2016	Not required	

For, Name of the CA Firm
Chartered Accountants
FRN :

Name of the Practicing CA
UDIN :
Dated :

Affix Seal of
the Firm

Annexure-3 : Form of Performance Security

<p style="text-align: center;">Form of Performance Security (Guarantee) Bank Guarantee Bond</p>
--

In consideration of the Director, IIM Indore (hereinafter called “The IIM Indore”) having offered to accept the terms and conditions of the proposed agreement between.....and (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 pay to the IIM Indore an amount not exceeding Rs. (Rupees..... Only) on demand by the IIM Indore.

2. We,(indicate the name of the Bank) do hereby undertake to pay the amounts due and payable under this guarantee without any demure, merely on a demand from the IIM Indore stating that the amount claimed as 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. (Rupeesonly)

3. We, the said bank further undertake to pay the IIM Indore any money so demanded notwithstanding 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 thereunder and the Contractor(s) shall have no claim against us for making such payment.

4. We, (indicate the name of the Bank) further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said agreement and that it shall continue to be enforceable till all the dues of the IIM Indore under or by virtue of the said agreement have been fully paid and its claims satisfied or discharged or till Engineer-in- Charge on behalf of the IIM Indore certified 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, (indicate the name of the Bank) further agree with the IIM Indore that the IIM Indore shall have the fullest liberty without our consent and without affecting in any manner our obligation 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 IIM Indore 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 IIM Indore or any indulgence by the IIM Indore 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. We, (indicate the name of the Bank) lastly undertake not to revoke this guarantee except with the previous consent of the IIM Indore in writing.

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

Annexure-4 : Integrity Pact

INTEGRITY PACT

To,
.....,
.....,
.....

Sub: NIT No.: IIMI/Estate/06/2021/82 File No. 425 for the work of “Revamping of 33/11 KV main sub-station & equipment (Utility-I) by operationalizing idle transformer (stand-by) at IIM Indore”

Dear Sir,

It is here by declared that IIM Indore 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

Annexure-5 : Letter of Transmittal

**(To be submitted on Company's letterhead)
Letter of Transmittal**

To,
The Chief Engineer,
IIM Indore (M.P.)

Sub: NIT No. IIMI/Estate/06/2021/82 File No. 425 for the work of "Revamping of 33/11 KV main sub-station & equipment (Utility-I) by operationalizing idle transformer (stand-by) at IIM Indore"

Dear Sir,

I/We acknowledge that IIM Indore 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 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, IIM Indore 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)

Annexure-6 : Integrity Agreement

INTEGRITY AGREEMENT

This Integrity Agreement is made at on this day of 2021

BETWEEN

The Director, IIM Indore represented through Chief Engineer, IIM Indore, (Hereinafter referred as the IIM Indore, Prabandh Shikhar, Rau-Pithampur Road, Indore ‘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 (**Sub: NIT No. IIMI/Estate/06/2021/82 File No. 425**) (hereinafter referred to as “Tender/Bid”) and intends to award, under laid down organizational procedure, contract for “**Revamping of 33/11 KV main sub-station & equipment (Utility-I) by operationalizing idle transformer (stand-by) at IIM Indore**”

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:

(a) 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.

(b) 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.

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

(2) 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:

(a) 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.

(c) 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. (d) 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.

(d) The Bidder(s)/Contractor(s) will, when presenting his bid, disclose 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.

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

(4) 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 IIM Indore interests.

(5) 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 IPC 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/holiday listing of the Bidder/Contractor as deemed fit by the Principal/ Owner.

(3) 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

(1) 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.

(2) The Principal/Owner will enter into Pacts on identical terms as this one with all Bidders and Contractors.

(3) 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/Contact 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:

Annexure-7 : Agreement

Format for Agreement

THIS AGREEMENT made at Indore on the _____ day of _____ 2021 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 **“Revamping of 33/11 KV main sub-station & equipment (Utility-I) by operationalizing idle transformer (stand-by) at IIM Indore”**

The Works are to be executed as per the schedules mentioned in tender document 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 & technical specifications 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 specifications, drawings & other conditions and 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, specifications 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: Name:
Designation:

IN THE PRESENCE OF

(1) Signature:
Name: Address:

(2) Signature:
Name: Address:

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

Signature: Name:
Designation:

IN THE PRESENCE OF

(3) Signature:
Name: Address:

(4) Signature:
Name: Address:

FINANCIAL BID

Name of Work: “Revamping of 33/11 KV main sub-station & equipment (Utility-I) by operationalizing idle transformer (stand-by) at IIM Indore”

NIT No. : NIT No.: IIMI/Estate/06/2021/82 File No. 425

The Financial Bid is available on the e- procurement website
<https://mhrd.euniwizarde.com>



INDIAN INSTITUTE OF MANAGEMENT INDORE
Prabandh Shikhar, Rau-Pithampur Road, Indore – 453556 (M.P.), India

Tender No. IIMI/Estate/06/2021/82 File No. 425

Name of work: “Revamping of 33/11 KV main sub-station & equipment (Utility-I) by operationalizing idle transformer(stand-by)”

Financial Bid

Name of the Firm						
Address of the Firm						
Phone/Mobile no.						
E-Mail ID						
Item No.	Item Description	Qty.	Unit	Rate Quoted by Bidder		
				Unit Rate Excluding GST (Rs.)	Total Amount (Rs.)	
1	<p>11 KV Indoor H.T. Vacuum Circuit Breaker Switch board: Supply, Installation, Testing & Commissioning of H.V air insulated distribution switchgear one panel H.T Panel Board (One incomer) extendable and suitable for indoor installation for use on 11 KV, 50 cycles earthed system having a rated short circuit breaking capacity 25kA comprising drawout triple pole vaccum circuit breaker of rating 630A. Panels shall be equipped with the accessories as per technical specifications/Schedule of requirement of tender. Each panel rating is as given below and shall be as per technical specifications of the tender. (Scope of work also includes the following as per detailed hereunder:)</p> <p>a. Dismantling the cu. bus bars with enclosure & one no. outgoing VCB panel from the existing system & connecting the new aforesaid HT panel board (1 Incomer) in place of the above and supply & fixing the new HT cu. bus bar suitable to the system and connecting one no. Bus Coupler outgoing feeder (HT Panel Board) & connecting the dismantled cu. bus bars with enclosure & one no. outgoing VCB panel as per sr.no. (a) including other associated works complete as required and as directed by the Engineer-in-Charge.</p> <p>b. Dismantling of 01 No. 11KV HT panel board from Utility-II & Shifting & connecting the same in the HT Panel Board at Utlity-I.</p> <p>c. After Dismantling 11KV Panel Board from Utlity-II, Supply & fixing one no. HT cable Box & connecting the dimantled aforesaid cable.</p> <p>(One no. outgoing feeder HT panel Areva make will be supplied by IIM , Indore)</p> <p>Incoming Panel : 1 No. Panel having 630 Amps. VCB with relays and metering arrangement as detailed in the technical specifications</p>	1	Set			

Item No.	Item Description	Qty.	Unit	Rate Quoted by Bidder	
				Unit Rate Excluding GST (Rs.)	Total Amount (Rs.)
2	33 KV Outdoor H.T. Vacuum Circuit Breaker: Supply, installation, testing & commissioning of Outdoor type 33 kV Porcelain Clad Vacuum Circuit Breaker, Type PVN 36 or Equivalent, rated 800 Amps. including fitments as detailed in technical specifications.	2	Set		
3	Low Voltage Distribution Board: Supplying and fixing of 6 way (4 + 18), Double door, horizontal type three pole and neutral, sheet steel, MCB distribution board, 415 V, on surface/ recess, complete with tinned copper bus bar, neutral bus bar, earth bar, din bar, interconnections, powder painted including earthing etc. as required. (But without MCB/RCCB/Isolator) (AC DB for 33/11 KV (1 X 3.15) MVA grid substation)	2	Each		
4	Low Voltage Distribution Board: Supplying and fixing of 8 way , Double door way, single pole and neutral, sheet steel, MCB distribution board, 240 V, on surface/ recess, complete with tinned copper bus bar, neutral bus bar, earth bar, din bar, interconnections, powder painted including earthing etc. as required. (But without MCB/RCCB/Isolator) (DC DB for 33/11 KV (1 X 3.15) MVA grid substation)	2	Each		
5	Modular Case Circuit Breaker(MCBs) Supplying and fixing 5 A to 32 A rating, 240/415 V, 10 kA, "C" curve, miniature circuit breaker suitable for inductive load of following poles in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
5.1	Single pole	48	Each		
5.2	Double pole	2	Each		
5.3	Triple pole and neutral	2	Each		
6	Battery charger with battery: Supply, Installation, Testing and Commissioning of 24 Volts 180 Ah SMF Battery with charger, required stand and all necessary arrangement of clamp, connector, interconnection, earthing as required and as directed by the Engineer-in-Charge.	1	Job		
7	Outdoor Current Transformer: Supply, Installation, Testing and Commissioning of outdoor type 33KV oil immersed Current Transformer having ratio 150-75/5-5A with class 1.0 accuracy as detailed in technical specifications including control cable and mounting structures and all necessary arrangement of clamp, connector ,interconnection , earthing required.	6	Nos.		

Item No.	Item Description	Qty.	Unit	Rate Quoted by Bidder	
				Unit Rate Excluding GST (Rs.)	Total Amount (Rs.)
8	Control Panel: Supply, Installation, Testing and Commissioning of 33KV Indoor Control & Relay Panel as detailed in technical specifications including control & relay cable and all necessary arrangement of clamp, connector, interconnection, earthing required.	2	Set		
9	Outdoor Potential Transformer: Supply, Installation, Testing and Commissioning of Outdoor type 33 kV//3/110V//3 cast resin insulated 30 VA per phase potential transformer (PT) for all three phase as detailed in technical specifications including mounting structure and all necessary arrangement of clamp, connector, interconnection, earthing, as required.	6	Nos.		
10	GI Earthing Plate: Earthing with G.I. earth plate 600 mm X 600 mm X 6 mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 meter long etc. with charcoal/ coke and salt as required.	20	Set		
11	Copper Earthing Plate: Earthing with copper earth plate 600 mm X 600 mm X 3 mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 meter long etc. with charcoal/ coke and salt as required.	4	Set		
12	GI Strip: Supplying and laying 50 mm x 6 mm Hot Dipped Galvanised Iron strip with zinc coating of 120 micron at a) 0.50 meter below ground level as strip earth electrode to construct an earth grid and/or b) on panel surface / H-Beam surface to run the earth strip supported on insulators with hardware at a distance of 1.5 mtr each and/or c) on surface / cable tray / Hume Pipe / Cable Trench from Earth Bus Bar and/or Earth Grid upto HT Panels, Transformers body etc. including bolting with 4 Nos SS Bolts, Nuts & 2 Nos washers of M-6 size etc. as required.	400	Metre		
13	Copper Strip: Supplying and laying 50 mm x 6 mm EC Grade Copper strip at a) 0.50 meter below ground level as strip earth electrode to construct an earth grid and/or b) on surface to construct an earth bus bar supported on insulators with anchor fasteners and/or c) on surface / cable tray / Hume Pipe / Cable Trench from Earth Bus Bar and/or Earth Grid upto HT/LT Panels, Transformers body etc. including complete brazing run on all the 4 sides for the over lap joint and/or bolting with 4 Nos SS Bolts, Nuts & 8 Nos washers of M-6 size etc. as required.	100	Metre		

Item No.	Item Description	Qty.	Unit	Rate Quoted by Bidder	
				Unit Rate Excluding GST (Rs.)	Total Amount (Rs.)
14	H.T. Danger Notice Plate: Providing and fixing H.T. danger notice plate of 250 mm X 200 mm, made of mild steel, at least 2 mm thick, and vitreous enameled white on both sides, and with inscription in single red colour on front side as required.	10	Nos.		
15	H.T. Cable: Supply, drawing, connecting and termination of 3 Core 300 Sqmm size of 33 KV grade armoured cable with electrolytic grade Aluminium conductor as per IS:8130, conductor screen of semi-conducting compound, XLPE insulation, insulation screen of semi-conducting compound, copper tape screen, colour coded, cores laid up with Polypropylene [PP] fillers, with binder tape and extruded PVC inner sheath as per IS:5831, armoured as per IS:3975, overall ST2 FRLS PVC sheath as per IS:5831, conforming to IS:7098/ Part-II/1985 with up-to-date amendments of approved make complete with saddles/ clamps supports and other accessories as required. The cable shall be laid in air, in existing pipe/on existing cable tray clamped with 40x3 mm MS flat clamp-400mm long with nut, bolts & washers, duly painted as required as per specifications including providing of metal cable identification tags as per the specifications at every 5 meters of cable length with inscription thereon. The drawing for the metal identification tags with inscription thereon shall be submitted for approval.(Make Polycab/Finolex/Havells/RR Kabel)	100	Metre		
16	Cable Termination: Supply, drawing, connecting and termination of 3 Core 300 Sqmm size of 11 KV grade armoured cable with electrolytic grade Aluminium conductor as per IS:8130, conductor screen of semi-conducting compound, XLPE insulation, insulation screen of semi-conducting compound, copper tape screen, colour coded, cores laid up with Polypropylene [PP] fillers, with binder tape and extruded PVC inner sheath as per IS:5831, armoured as per IS:3975, overall ST2 FRLS PVC sheath as per IS:5831, conforming to IS:7098/ Part-II/1985 with up-to-date amendments of approved make complete with saddles/ clamps supports and other accessories as required. The cable shall be laid in air, in existing pipe/on existing cable tray clamped with 40x3 mm MS flat clamp-400mm long with nut, bolts & washers, duly painted as required as per specifications including providing of metal cable identification tags as per the specifications at every 5 meters of cable length with inscription thereon. The drawing for the metal identification tags with inscription thereon shall be submitted for approval.(Make Polycab/Finolex/Havells/RR Kabel)	300	Metre		

Item No.	Item Description	Qty.	Unit	Rate Quoted by Bidder	
				Unit Rate Excluding GST (Rs.)	Total Amount (Rs.)
17	<p>Control Cable: Supply, drawing, connecting and termination of 2C x 2.5 sq. mm sizes of 1100 Volts grade armoured heavy duty control cable with solid/stranded annealed copper conductor, XLPE insulated, colour coded as per I.S. for easy identification, cores laid up & provided with PVC inner sheath and extruded outer sheath. The extruded outer sheath shall be of Type ST 2 as per IS: 5831 -1984 and cable shall be conforming to IS: 7098/ Part-I / 88 with latest amendments and bearing ISI mark. The cable shall be laid in the existing surface/ recessed steel/ PVC Conduit / on the cable tray with necessary binding arrangement with suitable size of Nylon Cable Ties at an interval of 1000 mm as required including ferruling at both ends as required.(Make-Polycab/Finolex/Havells/RR Kabel)</p>	250	Metre		
18	<p>Control Cable: Supply, drawing, connecting and termination of 4C x 2.5 sq. mm sizes of 1100 Volts grade armoured heavy duty control cable with solid/stranded annealed copper conductor, XLPE insulated, colour coded as per I.S. for easy identification, cores laid up & provided with PVC inner sheath and extruded outer sheath. The extruded outer sheath shall be of Type ST 2 as per IS: 5831 -1984 and cable shall be conforming to IS: 7098/ Part-I / 88 with latest amendments and bearing ISI mark. The cable shall be laid in the existing surface/ recessed steel/ PVC Conduit / on the cable tray with necessary binding arrangement with suitable size of Nylon Cable Ties at an interval of 1000 mm as required including ferruling at both ends as required.(Make-Polycab/Finolex/Havells/RR Kabel)</p>	100	Metre		
19	<p>Control Cable: Supply, drawing, connecting and termination of 12C x 2.5 sq. mm sizes of 1100 Volts grade armoured heavy duty control cable with solid/stranded annealed copper conductor, XLPE insulated, colour coded as per I.S. for easy identification, cores laid up & provided with PVC inner sheath and extruded outer sheath. The extruded outer sheath shall be of Type ST 2 as per IS: 5831 -1984 and cable shall be conforming to IS: 7098/ Part-I / 88 with latest amendments and bearing ISI mark. The cable shall be laid in the existing surface/ recessed steel/ PVC Conduit / on the cable tray with necessary binding arrangement with suitable size of Nylon Cable Ties at an interval of 1000 mm as required including ferruling at both ends as required.(Make-Polycab/Finolex/Havells/RR Kabel)</p>	300	Metre		
20	<p>Indoor Type Cable Termination: Supplying and making indoor cable end termination with heat shrinkable jointing kit complete with all accessories including lugs suitable for 3 core 300 Sq.mm. XLPE aluminium conductor cable of 11 kV grade as required.(Make-Raychem, 3M)</p>	12	Set		

Item No.	Item Description	Qty.	Unit	Rate Quoted by Bidder	
				Unit Rate Excluding GST (Rs.)	Total Amount (Rs.)
21	Indoor Type Cable Termination: Supplying and making indoor cable end termination with heat shrinkable jointing kit complete with all accessories including lugs suitable for 3 core 300 Sq.mm. XLPE aluminium conductor cable of 33 kV grade as required. (Make-Raychem, 3M)	8	Set		
22	Outdoor Type Cable Termination: Supplying and making outdoor cable end termination with heat shrinkable jointing kit complete with all accessories including lugs suitable for 3 core 300 Sq.mm. XLPE aluminium conductor cable of 33 kV grade as required. (Make-Raychem, 3M)	2	Set		
23	Rubber Mat: Supplying and erection of the Rubber Mat checkered suitable for system voltage of 11 KV confirming to latest relevant IS complete as required placed in the sub station building. Size (1 mtr x 2 mtr) (Make-Raychem, 3M)	8	Nos.		
24	Steel Fabrication Works: Steel work welded in built up sections/ framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer using structural steel etc. as required. (Make TATA/Jindall/Apollo)				
24.1	In gratings, frames, guard bar, ladder, railings, brackets, gates and similar works (Make-TATA/Jindall/Apollo)	2500	Kg		
25	Painting: Painting with synthetic enamel paint of approved brand and manufacture to give an even shade :				
25.1	Two coats on one coat of primer zinc chromate (Make-Asian paints/Berger/ICI/Deluxe)	100	Sqm.		
26	Painting: Painting with aluminium paint of approved brand and manufacture to give an even shade:				
26.1	Two coats on one coat of primer zinc chromate (Make-Asian paints/Berger/ICI/Deluxe)	100	Sqm.		

Item No.	Item Description	Qty.	Unit	Rate Quoted by Bidder	
				Unit Rate Excluding GST (Rs.)	Total Amount (Rs.)
27	<p>Sand Bucket Stand: Fabrication of Bucket stand made of M.S. Angle 50x50x6mm of size 6'x5'x3' with bucket hanging arrangement of 06 Nos. 18" buckets. 3 Nos for Local sand and 3 Nos. for water. Fabrication of canopy of 18 SWG MS sheet for protecting it from rain. The base will be 0.6 Mtr. wide including painting of one coat zinc chromate primer paint and two coats of P.O. red enamel ISI mark paint. (Make-Asian Paints/Berger/ICI/Deluxe)</p>	2	Set		
28	<p>Miscellaneous Works: SITC of 33KV Top Clamps 75x75x6 angle type + Back clamp for H-Beam Size + H-Beam 13 Meter 152x152 mm 37.1 kg/meter(Hot Dipped Galvanised angle/clamp with zinc coating of 120 micron)</p>	4	Set		
29	SITC of Drop Out Fuse (50 Ampere)	1	Set		
	<p>Existing Transformer Reconditioning: Lump-sum reconditioning charges for existing Power Transformer(Make-Voltam 33/11 KV- 3.15 MVA) which includes opening X-mer cover, under tanking core & coil assembly, cleaning, washing of dust & dirt etc. from all parts including core tank, radiators, removal of parts need replacement providing identical silica gel breather, oil level gauge, drain/filter valve, air release plug & any other parts required replacement, minor repair of radiator, tank & conservator(if required), painting from inside & outside to make transformer as good as new. Testing of Transformer: Transformer routine tests shall include tests stated in latest issue of IS: 2026 (Part -1). These tests shall also include but shall not be limited to the following: (i)Measurement of winding DC resistance. (ii) Voltage ratio on each tapping and check of voltage vector relationship. (iii)Impedance voltage at all tapings. (iv) Magnetic circuit test as per relevant ISS or CBIP manual or latest standard being followed.</p>				

Item No.	Item Description	Qty.	Unit	Rate Quoted by Bidder	
				Unit Rate Excluding GST (Rs.)	Total Amount (Rs.)
30	(v) Measurement of Load losses at normal tap and extreme taps. (vi) No load losses and no load current at rated voltage and rated frequency, also at rated voltage in steps. (vii) Absorption index i.e insulation resistance for 15 seconds and 60 seconds (R 60/ R 15) and polarization index i.e Insulation Resistance for 10 minutes and one minute (R 10 mt / R 1 mt). (viii) Induced over voltage withstand test. (ix) Separate source voltage withstand test. (x) Measurement of zero sequence impedance (xi) Tests on on- load tap changer (fully assembled on transformer) as per IEC: 214/ 1976 and BS: 4571/ 1970. (xii) Auxiliary circuit tests (xiii) Oil BDV tests (xiv) Measurement of neutral unbalance current which shall not exceed 2% of the full rated current of the transformer. (xv) Magnetic balance test (xvi) Leakage test The transportation charges including loading/unloading of the existing transformer to and fro from IIM Indore to the factory for repair is to be included in the cost.	1	No		
31	Laision job: For preparation of SLD, obtaining approval and NOC to operationalize the electrical system consisting of transformer, breaker, panel etc from the Chief Electrical Inspector (Safety).	1	Job		
Total Amount excluding GST (in Rs.)					