SBI INFRA MANAGEMENT SOLUTIONS PVT. LTD.
(A Wholly Owned Subsidiary of SBI)

HEAD OFFICE

Ground Floor, Raheja Chamber, Free press Journal Marg, Nariman Point, Mumbai 400 021

Part – I

(Technical Bid)

TENDER FOR (1) SUPPLY OF SPARES FOR 33 KV SF6 BREAKER IN HT PANEL OF 33KV KV SUBSTATION (2) SPARES LT BREAKERS (3) SITC OF CAPACITORS AND APFC RELAY (4) SERVICING OF 1000 A BREAKERS AND MISC WORKS AT CDC

THROUGH E-TENDER

RETENDER

Tender ID No: GIT201904035

Note: SBIIMS empanelled Contractors under category for Electrical work are only eligible. Vendor/Contractor should possess valid digital signature for this e-tender.

TENDER SUBMITTED BY:

NAME : ____________________________

ADDRESS : ____________________________

GSTIN NO : ____________________________

DATE : ____________________________

SBI INFRA MANAGEMENT SOLUTIONS PVT.LTD.
Circle Office, 1st Floor, ‘C’ wing State Bank Global IT Center, Plot no.8, 9, 10, Sector 11, CBD Belapur, Navi Mumbai 400614. Telephone:- 022 27537416
NOTICE INVITING TENDERS

SBI Infra Management Solutions Pvt. Ltd. (hereinafter mentioned SBIIMS), SBI INFRA MANAGEMENT SOLUTIONS PVT.LTD. Circle Office, 1st Floor, ‘C’ wing State Bank Global IT Center, Plot no.8, 9, 10, Sector 11, CBD Belapur, Navi Mumbai 400614.on behalf of State Bank of India Invites TENDER FOR (1) SUPPLY OF SPARES FOR 33 KV SF6 BREAKER IN HT PANEL OF 33KV KV SUBSTATION (2) SPARES LT BREAKERS (3) SITC OF CAPACITORS AND APFC RELAY (4) SERVICING OF 1000 A BREAKERS AND MISC WORKS AT CDC from SBIIMS empanelled Contractors. SBIIMS empaneled Contractors under category for Electrical work are only eligible

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<th>1.</th>
<th>Name of Work</th>
<th>TENDER FOR (1) SUPPLY OF SPARES FOR 33 KV SF6 BREAKER IN HT PANEL OF 33KV KV SUBSTATION (2) SPARES LT BREAKERS (3) SITC OF CAPACITORS AND APFC RELAY (4) SERVICING OF 1000 A BREAKERS AND MISC WORKS AT CDC</th>
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| 3. | Cost of Tender Documents | Rs. 3000/- (Rupees Three Thousand Only) This Non-Refundable amount to be paid only through SB Collect Payment Portal available in SBI’s online Banking site i.e. https://www.onlinesbi.com
After successful payment, submit a print of the receipt carrying a Reference no. along with the tender application. For further details, refer annexure-A enclosed. Tender Id is GIT201904035 |
| 4. | Earnest Money Deposit (EMD) | Rs. 12,500/- (Rupees Twelve Thousand Five Hundred Only) in the Form of Demand Draft/Banker’s Cheque issued by any Nationalised/Scheduled Bank Drawn in favour of “SBI Infra Management Solutions Pvt. Ltd.” Payable at Mumbai, which is to be submitted along with the Technical Bid in a separate envelope super scribing “EMD” EMD shall be converted into Retention Money for successful Contractor, whose tender is accepted. |
| 5. | Initial Security Deposit (ISD) | 2% of awarded value of work including EMD |
| 6. | Retention Money | 5 % (Including EMD+ISD) |
| 7. | Last date, time and Mode of submission of Technical Bid document along with Authorization Letter, Tender fees and EMD. | The signed and stamped copy of Technical bid along with following documents in sealed envelope should reach to us on or before 28th Nov 2019 up to 03:00 PM
1) Signed and stamped copies of complete Tender Document.
2) EMD
3) Authorization letter mentioning the name of the representative having Digital Certificate Signature (DSC) valid for 3 months for participation in e-tender. |
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| 8 | **Address at which the Technical bid are to be submitted** | The sealed envelope comprising all documents as stated above in Sr. No. 7 to be submitted to the following address and it should reach us on or before 28 Nov **2019 up to 03:00 PM**  
Vice President & Circle Head, SBI INFRA MANAGEMENT SOLUTIONS PVT.LTD., Circle Office, 1st Floor, ‘C’ wing State Bank Global IT Centre, Plot no.8, 9, 10, Sector 11, CBD Belapur, Navi Mumbai 400614.  
Tenders received without any one or more documents mentioned above shall be rejected and such bidders shall not have allowed to participate in online bidding note. |
| 9 | **Last date, time and Mode of submission of Price Bid (Part-2)** | The Price Bid to be submitted online through E-tendering Process. The bidder (Vendor/Authorized Dealer) should have valid digital signature for this e-tender. Will be informed to qualified bidders.  
**E-Tender Agency:**  
M/s. E Procurement Technologies Ltd, Ahmedabad, Mr. Samjad Khan  
Phone: +91-79-68136868/6805/6857  
Email: samjad@auctiontiger.net |
| 10 | **Date, Time and Place of opening of Online Price Bid.** | Will be informed to successful Price Bid Submission through Online at Service Provider  
M/s E-Procurement Technologies Ltd portal https://etender.sbi |
| 11 | **Completion period** | 8 weeks |
| 12 | **Validity for Offer** | 3 (Three) Months from The Date of Opening of Price-Bid |
| 13 | **Commencement of Work** | immediate |
| 14 | **Defects Liability Period** | 12 Months (Twelve months) |
| 15 | **Payments terms** | No advance payment shall be made. |
| 16 | **Period of Honouring Payment Certificate** | 15 Days from the date of receipt of bill. |
| 17 | **Insurance** | As per Insurance clause of the Tender Document. |
| 18 | **Working Schedule for Commercial Buildings** | In Co-ordination with all the other agencies without disturbing the functioning of the Bank. |
| 19 | **Liquidated Damages for Delay** | 0.5 % Per week subject to total amount of 5% of Contract Value. |
| 20 | **Contact Person, Phone No and Mail Id for any clarifications** | Contact person Flt Lt Suresh,022 27537416, or Email headgitc.sbiims@sbi.co.in |
In case the date of opening of tenders is declared as a holiday, the tenders will be opened on the next working day at the same time.

The bidder, who is the authorized representative and participating on behalf of company/Dealer/vendor, should have a valid digital signature certificate (DSC) for this e-tender. The validity of the DSC should be at least 3 months.

The signed copies of technical Bid documents, tender fees, authorization Letter, Technical Specification sheet and EMD should be submitted in sealed envelope, failing which tender summarily rejected.

The price bid (Part-2) to be submitted only online.

Payments towards the above work shall be made by SBI.

SBIIMS reserves the right to increase or decrease the quantum of services, manpower to be provided and also reserves the right to reject, cancel or revise or accept any or all the tenders or part of tenders without giving any reasons thereto.

SBIIMS reserves its rights to accept/reject any/all tender without assigning any reasons whatsoever and to increase or decrease the quantities of any item and contractor has to execute the same at the rate quoted and no correspondence shall be entertained in this regard.

Conditional tenders are liable for rejection.

**SAMPLE BUSINESS RULE DOCUMENT**

**BUSINESS RULE DOCUMENT OF ONLINE TENDER FOR (1) SUPPLY OF SPARES FOR 33 KV SF6 BREAKER IN HT PANEL OF 33KV KV SUBSTATION (2) SPARES LT BREAKERS (3) SITC OF CAPACITORS AND APFC RELAY (4) SERVICING OF 1000 A BREAKERS AND MISC WORKS AT CDC.**

**Business rules for E-tendering:**

Against this Enquiry for the subject item/system with detailed scope of work as per our specification, SBIIMS ON BEHALF OF SBI may resort to “E-TENDERING” i.e. ON LINE on INTERNET.

1. All the bidders are requested to ensure that they have a valid digital signature certificate well in advance to participate in the online event.
2. For the proposed e-tendering, only empanelled Contractors/ vendors with SBIIMS,Head Office in Mumbai under category for Electrical and Allied work up to 25 Lakh.
3. SBIIMS will engage the services of a service provider who will provide all necessary training and assistance before commencement of on line bidding on Internet.
4. Business rules like event date, closing and opening time etc. also will be communicated through service provider for compliance.
5. Vendors have to send the mail the compliance form in the prescribed format (provided by service provider) before start of E-tendering. Without this the vendor will not be eligible to participate in the event.
6. E-tendering will be conducted on schedule date & time.
7. At the end of E-tendering, the lowest bidder value will be known on the network.
9. The lowest bidder has to send through email the duly signed filled-in prescribed format as provided on case-to-case basis to SBIIMS. through service provider within 24 hours of E-tendering/E-Reverse Auction without fail.

10. In case SBIIMS decides not to go for E-tendering/E-Reverse Auction procedure for this tender enquiry, the price bids and price impacts, if any already submitted and available with SBIIMS shall be opened as per SBIIMS standard practice.

11. The E-tendering will be treated as closed only when the bidding process gets closed in all respects for the item listed in the tender.

(B) Terms & conditions of E-tendering:

SBIIMS shall finalize the Tender through e-tendering. SBIIMS has made arrangement with M/s. Antares Systems Limited. who shall be SBIIMS’s authorized service provider for the same. Please go through the guidelines given below and submit your acceptance to the same along with your Commercial Bid:-

1. Computerized E-tendering shall be conducted by SBIIMS through M/s E-Procurement Technologies Ltd

2. M/s E-Procurement Technologies Ltd shall arrange to train your nominated person(s), without any cost to you. They shall also explain you all the Rules related to the Etendering. You are required to give your compliance on it.

3. BIDDING CURRENCY AND UNIT OF MEASUREMENT: Bidding will be conducted in Indian currency & Unit of Measurement will be displayed in Online E-tendering.

4. BID PRICE: The Bidder has to quote the rate online in the SBIIMS specified format only.

5. VALIDITY OF BIDS: The Bid price shall be firm for a period specified in the tender document and shall not be subjected to any change whatsoever.

6. If no bid is received within the specified date & time, SBIIMS, at its discretion, may decide to / scrap the e-tendering process / proceed with conventional mode of tendering.

7. LOG IN NAME & PASSWORD: Each Bidder is assigned a Unique User Name & Password by M/s E-Procurement Technologies Ltd . The Bidders are requested to change the Password after the receipt of initial Password from M/s. Antares Systems Limited. All bids made from the Login ID given to the bidder will be deemed to have been made by the bidder.

8. BIDS PLACED BY BIDDER: Bids will be taken as an offer to execute the work as specified. Bids once made, cannot be cancelled / withdrawn and the Bidder shall be bound to execute the work as per scope of work mentioned in the tender and at the quoted bid price. In case either backs out from their quote or failed to execute the work within the specified or leave the job incomplete, SBIIMS/SBI shall be free to take action against the bidder as deemed fit including forfeiting their EMD/ISD/ASD and to de-panel such contractor from the panel of SBIIMS.

9. At the end of the E-tendering, the decision of SBIIMS regarding award of Contract shall be final and binding to all the Bidders.

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Signature and stamp of contractor
10. SBIIMS shall be at liberty to cancel the E-tendering process / tender at any time, before ordering, without assigning any reason.

11. SBIIMS M/s E-Procurement Technologies Ltd shall not have any liability to bidders for any interruption or delay in access to the site irrespective of the cause.

12. Other terms and conditions shall be as per techno-commercial offers and other correspondences till date.

13. Bidders are required to submit their acceptance to the terms &conditions / modality (Technical bid) given above before participating in the e-tendering.

14. E-TENDERING WINNER: At the end of the E-tendering then, SBIIMS will evaluate all the bids submitted and will decide upon the winner.

15. OTHER TERMS & CONDITIONS:
   - The Bidder shall not involve himself or any of his representatives in Price manipulation of any kind directly or indirectly by communicating with other suppliers / bidders.
   - The Bidder shall not divulge either his Bids or any other exclusive details of SBIIMS to any other party.
   - SBIIMS decision on award of Contract shall be final and binding on all the Bidders.
   - SBIIMS along with M/s E-Procurement Technologies Ltd can decide to extend, reschedule or cancel any E-tendering.
   - M/s E-Procurement Technologies Ltd shall not have any liability to Bidders for any interruption or delay in access to the site irrespective of the cause.
   - M/s E-Procurement Technologies Ltd is not responsible for any damages, including damages that result from, but are not limited to negligence. M/s E-Procurement Technologies Ltd will not be held responsible for consequential damages, including but not limited to systems problems, inability to use the system, loss of electronic information etc. N.B.
   - All the Bidders are required to submit the Process Compliance Statement (Annexure II) duly signed to M/s E-Procurement Technologies Ltd

**PROCESS COMPLIANCE STATEMENT (ANNEXURE II)**

*(The bidders are required to print this on their company’s letter head and sign, stamp before emailing)*

To,
M/s E-Procurement Technologies Ltd

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AGREEMENT TO THE PROCESS RELATED TERMS AND CONDITIONS FOR THE ONLINE TENDER FOR (1) SUPPLY OF SPARES FOR 33 KV SF6 BREAKER IN HT PANEL OF 33KV KV SUBSTATION (2) SPARES LT BREAKERS (3) SITC OF CAPACITORS AND APFC RELAY (4) SERVICING OF 1000 A BREAKERS AND MISC WORKS AT CDC

Dear Sir,

This has reference to the Terms & Conditions for the E-tendering mentioned in the Tender document.

This letter is to confirm that:

1) The undersigned is authorized representative of the company.
2) We have studied the Commercial Terms and the Business rules governing the E-tendering as mentioned in RFP of SBIIMS as well as this document and confirm our agreement to them.
3) We also confirm that we have taken the training on the E-tendering tool and have understood the functionality of the same thoroughly.
4) We confirm that SBIIMS and M/s E-Procurement Technologies Ltd shall not be liable & responsible in any manner whatsoever for my/our failure to access & bid on the E-tendering platform due to loss of internet connectivity, electricity failure, virus attack, problems with the PC, any other unforeseen circumstances etc. before or during the E-tendering and E-reverse auction event.
5) We also confirm that we have a valid digital signature certificate issued by a valid Certifying Authority.
6) We, hereby confirm that we will honour the Bids placed by us during the E-tendering process.

With regards, Date:

Signature with company seal Name:

Company / Organization:

Designation within Company / Organization:

Address of Company / Organization:

Scan it and send to this Document on ---------------------------

DRAFT ARTICLES OF AGREEMENT.

(THIS IS A SAMPLE ONLY: - AS ENTERED WITH INTERIOR CONTRACTOR) (Site specific draft agreement shall be approved by the SBI prior to its execution)

AGREEMENT

Signature and stamp of contractor
This Agreement for Structural Repairing, State Bank Of India, 4th floor, GITC building, CBD Belapur, Navi Mumbai (hereinafter “the agreement”) made on —— day of July 2019.

Between the

State Bank Of India, a body Constitution under the State Bank of India Act, 1955 having its corporate office and central office at the State Bank Bhavan, Madame Cama Road, Nariman Point, Mumbai -400021, Global IT Centre at plot no. 8,9,10 Sector-11, CBD, Belapur, Navi Mumbai-400614 and 1st floor, (Estate Department) GITC Sector no-11 CBD Belapur Navi Mumbai office at Navi Mumbai hereinafter to as “the Bank” which expression shall unless repugnant to the context or meaning thereof shall include its successors and assigns of First Part.

AND

M/s _________________ Constructions, (Proprietorship) incorporated under the provisions of the companies Act, 1956 having its registered office at __________ADDRESS, Mumbai – 400070. (hereafter called “the contractor”) as “Agency” or “THE CONTRACTOR” which expression shall unless repugnant to the context or meaning thereof shall include its successors, executor and permitted assigns of Second Part.

WHEREAS the SBI INFRA MANAGEMENT SOLUTIONS PVT. LTD. (SBIIMS), (a wholly owned subsidiaries of State Bank of India) invited tender for providing integrated facility management service for the State Bank of India (party of the first part) Railway Station Premises and Balaji Bhawan Premises, Belapur, Navi Mumbai and the party of the second part was selected for the tender process and the party of the second part has offered to provide the above mentioned services. HENCE, the present Agreement.

RECITALS

WHEREAS

1) The Bank is desirous of availing Proposed Structural Repairing for State Bank of India, 4th floor GITC Bldg., CBD Belapur, Navi Mumbai.

2) The Agency has agreed to provide the services as may be required by the Bank.

NOW THEREFORE, in consideration of the mutual covenants, undertakings and conditions set forth below, and for other valid consideration the acceptability and sufficiency of which are hereby acknowledge, the parties hereby agree as follows:

DEFINITIONS & INTERPRETATIONS

: The following capitalized terms, unless the context otherwise requires, shall have the meaning set forth below for all purposes of this Agreement:

‘The Contractor’ shall mean the individual or firm or company whether incorporate not, undertaking the works and shall include legal personal representative of individual or the composing the firm or company and the permitted assignees of individual or firms of company.

The expression ‘works’ or ‘work’ shall mean the permanent or temporary work description in the “Scope of work” and / or to be executed in accordance with the contract includes materials, apparatus, equipment, temporary supports, fittings and things of kinds to be provided, the obligations of the contractor hereunder and work to be done by the contractor under the contract.

“The Bank” means State Bank of India (including its domestic branches), its subsidiaries and joint ventures.

Interpretations:
Reference to a person includes any individual, firm, body corporate, association (whether incorporated or not) and authority or agency (where government, semi government or local)

The singular includes the plural and vice versa.

Reference to any gender includes each other gender.

The provisions of the contents table, headings, clause numbers, italics, bold print and underlining is for ease of reference only and shall not affect the interpretation of this Agreement.

The schedules, Annexure and Appendices to this Agreement shall form part of this Agreement.

A reference to any documents or arguments (and, where applicable, any of their respective provisions) mean those documents or agreements as amended, supplemented or replaced from time to time provided they are amended, supplemented or replaced in the manner envisaged in the relevant documents or agreements.

A reference to any statute, regulation, rule or other legislative provision includes any amendment to the statutory modification or re-enactment or, legislative provisions substituted for, and any statutory instrument issued under that statute, regulation, rule or other legislative provision.
Any agreement, notice, consent, approval, disclosure or communication under or pursuant to this Agreement is to be in writing.

* COMMENCEMENT & TERM

2.1 This Agreement shall commence from its date of execution mentioned above/ deemed to have commenced from 3rd July, 2019.
2.2 This Agreement shall be in force for a period of 2 months, unless terminates by the bank by notice in writing in accordance with the termination clauses of this Agreement.

2.3 Unless terminated earlier in accordance with this Agreement, the Agreement shall come to an end on completion of the term specified in the Agreement or on expiration of the renewed of the renewed term.

* SCOPE OF SERVICES:

* The scope and nature of the work which the service provider has to provide to the Bank (Services) is as per Technical bid and Price bid.

3.2 Powers to Vary or Omit Work

No alterations, amendments, omissions, additions, suspensions or variations of the work (hereinafter referred to as variation) under the contract shall be made by the successful bidder except as directed in writing by bank. The bank shall have full powers, subject to the provision herein after contained, from time to time during the execution of the contract, by notice in writing to instruct the successful bidder to make any variation without prejudice to the contract. The finally selected bidders shall carry out such variation and be bound by the same conditions as far as applicable as though the said variations occurred in the contract documents. If any suggested variations would, in the opinion of the finally selected bidders, if carried out, prevent him from fulfilling any of his obligations under the contract, he shall notify bank thereof in writing with reasons for holding such opinion and bank shall instruct the successful finally selected bidders shall carry out such variation and be bound by the same conditions as far as applicable as though the said variations occurred in the contract documents. If bank confirms his instructions, the successful bidder’s obligations shall be modified to such an extent as may be mutually agreed, if such variation is substantial by such variation shall be added to or deducted from the contract price as the case may be.

In any case in which the successful bidder has received instructions from bank as to the requirement of carrying out the altered or additional substituted work which either then or later on, will in the opinion of the finally selected bidders, involve a claim for additional payments, such additional payments shall be mutually agreed in line with the terms and conditions of the order.

If any change in the work is likely to result in reduction in cost, the parties shall agree in writing so as to the extent of such reduction. If any suggested variation would, in the opinion of the finally selected bidders, if carried out, prevent him from fulfilling any of his obligations under the contract, he shall notify bank thereof in writing with reasons for holding such opinion and bank shall instruct the successful finally selected bidders shall carry out such variation and be bound by the same conditions as far as applicable as though the said variations occurred in the contract documents. If bank confirms his instructions, the successful bidder’s obligations shall be modified to such an extent as may be mutually agreed, if such variation is substantial by such variation shall be added to or deducted from the contract price as the case may be.

The decision of bank shall prevail.

The contractor has to provide first aid kits at site. The contractor has to ensure that all items in the kit are within the valid usable date.

Recommend termination of the contract if the performance of the contractor is found to be unsatisfactory.

REPRESENTATIONS AND WARRANTIES

1 Each of the parties represents and warrants and warrants in relation to itself to the other that:

It has all requisite corporate power and authority to execute, deliver and perform its obligations under this Agreement and has been fully authorized through applicable corporate process to do so.

The person(s) signing this agreement on behalf of the parties have the necessary authority and approval for execution of this document and to bind his / their respective organization for due performance as set out in this Agreement. If has all necessary statutory and regulatory permissions, approvals and permits for the running and operation of its business.

If will provide such cooperation as the other party reasonably requests in order to give full effect to the provisions of this Agreement.

The execution and performance of this Agreement by either of the parties does not and shall not violate any provision of any of the existing agreement with any of the party and any other third party.

2 ADDITIONAL REPRESENTATION AND WARRANTIES BY CONTRACTOR

The contractor shall perform the contract and carry out its obligations under the agreement with due diligence, efficiency and economy, in accordance with generally accepted techniques and practices used in the industry.

The contractor shall duly intimate to the bank immediately, the changes, if any in the constitution of the contract provider.

3. The contractor shall ensure that all persons, employees, workers and other individuals engaged by or sub-contracted by the contractor in rendering the contract under this agreement have undergone proper background check, police verification and other necessary due diligence checks to examine their antecedence and ensure their suitability for such engagement. No person shall be engaged by the contractor unless such person is found to be suitable in such verification and the contractor shall retain the records of such verification and shall produce the same to the bank as when requested.

CONFIDENTIALITY

For the purpose of this Agreement, Confidential Information shall mean (i) information of all kinds, whether oral, written or otherwise recorded including, without limitation, any analyses, compilations, forecasts, data, studies or other documents, regarding the past, current or future affairs,
business, plans or operations of a Party to which the other Party will have access, (ii) the existence of the contemplated terms and the fact that discussions or negotiations are taking place or have taken place between the Parties concerning the contemplated terms, (iii) any and all information regarding the contemplated terms and any agreements that may be entered into in relation thereto and (iv) any customer details or other data received by a Party from the other Party or its customer(s) or otherwise shared between the Parties in connection with the Service.

Each Party shall keep confidential and shall not, directly or indirectly, disclose, except as provided in sub-clauses below, in any manner whatsoever, in whole or in part, the Confidential Information without the other Party’s prior written consent.

Contractor agrees to indemnify and hereby keeps the bank indemnified against all actions, claims, loss, damages, costs, charges, expenses (including Attorney/Advocate fees and legal expenses) which bank may suffer or incur on account of breach of confidentiality obligations as per this agreement by contractor or its employees, agent, representatives, sub-contractors. Contractor further agrees to make good the loss suffered by the Bank upon first demand by the Bank which shall be final, conclusive and binding on contractor.

RELATIONSHIP BETWEEN THE PARTIES.

It is specifically agreed that the Service Provider shall act as independent service provider and shall not be deemed to be the Agent of the Bank except in respect of the transactions/services which give rise to Principal - Agent relationship by express agreement between the Parties.

Neither the Service Provider nor its employees, agents, representatives, Sub-Contractors shall hold out or represent as agents of the Bank.

* None of the employees, representatives or agents of Service Provider shall be entitled to claim permanent absorption or any other claim or benefit against the Bank.

* This Agreement shall not be construed as joint venture. Each Party shall be responsible for all its obligations towards its respective employees. No employee of any of the two Parties shall claim to be employee of other Party.

* All the obligations towards the employees of a Party including that an account of personal accidents occurred while working in the premises of the other Party shall be with the respective employer and not on the Party in whose premises the accident occurred.

SUB-CONTRACTING

No sub-contracting of any part of the contract by the contractor shall be allowed other than those specifically mentioned in this agreement or agreed by the bank in writing.

PERFORMANCE GUARANTEE & PENALTY

1 Performance of the obligations under the agreement shall be made by the contractor in accordance with the time schedule specified in this agreement.

2. Any unexcused delay by the contractor in the performance of its contract obligations shall render the contractor liable to termination of the contract for default.

3. If at any time during performance of the contract, the contractor should encounter unexpected conditions impending timely completion of the contract under the agreement and performance of the contract, the contractor shall promptly notify the bank in writing of the fact of the delay, its likely duration and its cause(s). As soon as practicable, after receipt of the contractor’s notice, the Bank shall evaluate the situation and may at its discretion extend the contractor’s time for performance, in which case the extension shall be ratified by the parties by amendment to the agreement.

4 LIQUIDATED DAMAGES

If vendor fails to perform contract in the technical specifications and scope of work with the requisite quality, minimum qualification of the manpower and within stipulated time schedule, the Bank shall, without prejudice to its other remedies under the contract, deduct from the contract price, as liquidated damages, a sum equipment upto 10% of the running bill.

FORCE MAJEURE:

1 Notwithstanding anything else contained in the agreement, neither party shall be liable for any delay in performing its obligations herein if and to the extent that such delay is the result of an event of Force Majeure.

2 For the purpose of this clause. "Force Majeure" means and includes wars, insurrections, revolution, civil disturbance, riots, terrorist acts, public strikes, herbal, bundh, fires, epidemic, quarantine restrictions, freight embargoes, declared general strikes in revealent industries, is Major Act of Government impeding reasonable performance of the contractor and/or sub-contractor but does not include any foreseeable events, commercial considerations or those involving fault or negligence on the part of the party claiming Force Majeure.

3 If a Force Majeure situation arises, the contractor shall promptly notify the Bank in writing of such conditions, the cause thereof and the likely duration of the delay. Unless otherwise directed by the bank in writing, the contractor shall continue to perform its obligations under the agreement as far as reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.

4 If the event of Force Majeure continues for a period more than 30 days, the bank shall be entitled to terminate the agreement at any time thereafter. Neither party shall have any penal liability to the other in respect of the termination of this contract as a result of an event of Force Majeure. However, contractor shall be entitled to receive payments for all services actually rendered up to the date of the termination of this agreement.
1 Contractor hereby agrees and declares that it shall be the sole responsibility of contractor to comply with the provisions of all the applicable laws, concerning or in relation to rendering of services by contractor as envisaged under this agreement.

2 Contractor shall be solely liable and responsible for compliance of applicable central labour laws in respect of its employees agents, representatives and subcontractors and in particular laws relating to terminal benefits such as pension, Gratuity, Provident fund, Bonus, or other benefit to which they may be entitled and the laws relating to contract labour, minimum wages etc., and the bank shall have no liability in these regards. Further, the contractor would indemnify / make good for the losses to the Bank for non-compliance or any claims against the Bank arising out of any non-compliance as above.

3 Contractor confirms that it has full authority to enter into this agreement and render the contract as envisaged under this agreement and all corporate or other necessary approvals have been obtained for entering into this agreement with the Bank. Further, the persons executing this agreement on behalf of the contractor have full authority and power to execute this agreement and bind contractor.

4 The Contractor shall arrange and pay for policy under the public liability Insurance Act, 1991 and insure and keep insured all materials which are or have been declared to be hazardous under the notifications issued or that may be issued from time to time under the above said act or any rules framed there under and which substances are used by the contractor during the course of the housekeeping services under these presents.

5 The Contractor shall obtain adequate insurance policy in respect of the personnel engaged for the service, towards meeting the liability of compensation arising out of death, injury/disability at work etc. and shall regularly and punctually pay each and every premium as and when the same shall become due during the currency of these presents.

6 The contractor should possess, for the entire duration of these presents, all licenses and registrations as may be required under any law and shall be responsible to register himself and obtain a valid license under contract labour (regulation and Abolition) Act.1950 and rules these under. The contractor shall comply with all rules and regulations in force under the said act and rules. Contractor shall also comply with all applicable laws, rules and regulations relating to provident fund. Payment of Bonus, Minimum wages or any other statutory/ Regulatory requirements. Any dispute regarding such dues shall and be dealt with and settled by the contractor solely.

7 The contractor shall in terms of the provisions of sections 16, 17 and 18 of the contract labour (Regulation & Abolition) Act, 1970 and the rules framed under the said act provide the prescribed amenities to its personnel. In case of failure of contractor in comply with the said provisions, the Bank may provide the same when called upon to do so by the competent Authorities and deduct the expenses incurred thereof from the bills of the contractor without prejudice to its other rights and remedies under these presents. The contractor shall be responsible for proper maintenance of all registers, records and accounts so far these relate to the compliance of any and all statutory provisions/obligations.

8 Payment of wages to all workers engaged by the contractor should be through an account maintained with any scheduled commercial Bank.

9 The Contractor shall arrange for ESIC/ Workmen’s Compensation Insurance as required by Law and undertake to indemnify and keep indemnified the SBIIMS/SBI from against all manner of claims and demands and losses and damages and cost (including between Attorney and SBIIMS/SBI) and charges and expenses that may be in regard to the same or that the SBIIMS/SBI may suffer or incur with respect to and / or incidental to the same.

10 TERMINATION/CANCELLATION OF CONTRACT

* The Bank may, without prejudice to any other remedy, for breach of contract or for any reason send written notice not less than 30 (thirty) days to the contractor, to terminate the agreement in whole or in part.

* In the event of the termination of the Agreement, Service Provider shall be liable and responsible to return to the Bank all records, documents, data and information including Confidential information pertains to or relating to the Bank in its possession.

* In the event of termination of the Agreement for any reason, Bank shall have the right to give suitable publicity to the same including advising the Indian Bank’s Association.

* In the event of termination of the Agreement or on the expiry of the term/ renewed term of this Agreement, the Service Provider shall render all reasonable assistance and help to the Bank and any new contractor engaged by the Bank for the smooth switch over and continuity of the Services or if so required by the Bank take all necessary steps to bring the Services to a close in a prompt and orderly manner.

* Upon termination or expiration of this Agreement, all rights and obligations of the Parties hereunder shall cease, except:

* such rights and obligations as may have accrued on the date of termination or expiration;

* the obligation of confidentiality; and

* Any right which a Party may have under the Application Law.

12. RIGHT TO AUDIT:

12.1 It is agreed by and between the parties that the Bank shall have the right to audit the site and repair works at any time during the term of this agreement. All costs for such audit shall be borne by the Bank.

12.2 The Bank shall have the right to conduct audits on the contractor whether by its internal or external auditors, or by agents appointed to act on its behalf and to obtain copies of any audit or review reports and findings made on the contractor in conjunction with the services performed for the bank.

12.3 It is agreed that the Bank shall have the access to all books, records and information relevant to the works available with the contractor.
12.4 The parties agree that the Bank shall have the right, but without any obligation to monitor and assess, the services to enable the Bank to take necessary corrective measures, provided any such monitoring shall not amount to supervision of any jobs of the contractor or the employees of the contractor.

12.5 The Bank should have right to conduct surprise check of the contractor’s activities in respect of the repair works.

12.6 The contractor agrees that the Bank shall have the right to disclose the details of this agreement and the details of contract covered herein to the Reserve Bank of India and Indian Banks Association.

12.7 The contractor agrees to allow the Reserve Bank of India or persons authorized by it to access the documents, records of transactions, and other necessary information stored or processed by the contractor in respect of this agreement.

12.8 The contractor agrees the documents and data in respect of the contract for such period in accordance with the legal/regulatory obligation of the bank in this regard.

12.9 The contractor agrees that the complaints/feedback, if any received from the employees/Guest of the bank in respect of the repairs by the contractor shall be recorded and Bank/Reserve Bank of India shall have access to such records and redressal of customer complaints by the contractor.

12.10 Where any deficiency has been observed during audit of the service provider in its processing facilities and operating practices, the Service Provider shall correct/resolve the same at the earliest, and shall provide all necessary documents related to resolution thereof and shall further certify in respect with resolution of the deficiencies.

13. FEES, TAXES DUTIES & PAYMENTS

13.1 Contractor shall be paid fees and charges in the manner detailed in hereunder written subject to deduction of income tax thereon wherever required under the provisions of the Income Tax Act by the bank.

13.2 All other taxes including service tax, duties and other charges which may levied shall be borne by the contractor and the bank shall not be liable for the same.

14. GENERAL INDEMNITY

14.1 Contractor agrees and hereby keeps the Bank indemnified against all claims, actions, loss, damages, reputation loss, costs, expenses, charges, including legal expenses (Attorney, Advocates fees included) which the bank may suffer or incur on account of any deficiency in repairs rendered by contractor or any act of commission/omission on the part of employees, agents, representatives or sub-contractors of contractor. Contractor agrees to make good the loss suffered by the bank on first demand made by the bank in this regards which shall be final conclusive and binding on the contractor.

14.2 Contractor further undertakes to promptly notify the bank in writing any breach of obligation of the agreement by its employees or representatives including confidentiality obligation and in such an event, the Bank will in addition to and without prejudice to any other available remedies to entitled to immediate equitable relief in a court of competent jurisdiction to protect its interest including injunctive relief.

14.3 The contractor shall be directly and vicariously liable to indemnify the Bank in case of any misuse of data/information of the Bank by the Contractor deliberate or otherwise.

14.4 The contractor shall indemnify and keep fully and effectively indemnified the Bank against all costs, claims, damages, demands, expenses and liabilities of whatsoever nature arising out of or in connection with all claims of infringement of trade mark, patent, copyright, industrial design or any other intellectual property rights of any third party arising from the repair or use of any product under this agreement, subject to the following condition:

14.5 The Bank shall promptly notify the contractor in writing of any allegations of infringement of which it has notice.

16. CONTINUANCY PLANS & CONTINUITY ARRANGEMENTS:

16.1 The contractor shall arrange and ensure proper contingency plans to meet any unexpected obstruction to the contractor or any employees in rendering the repair or any part of the same under this agreement to the Bank.

In the event of this agreement comes to end on account of termination or by the expiry of the term/renewed term of the agreement or otherwise, the contractor shall render all reasonable assistance and help to the bank and to any, new contractor engaged by the Bank, for smooth switch over and continuity of the repair work.
In the event of failure of the contractor to render the repair work without prejudice to any other right the bank shall have as per this agreement, the Bank at its sole discretion may make alternative arrangements for getting the repair works from any other source. And if the Bank gives a prior notice to the contractor before availing such services from any other alternative source, the contractor shall liable to reimburse the expenses, if any incurred by the Bank in availing such repairs from the alternative source.

Vendor’s Obligation

The Vendor is obliged to work closely with SBI’s staff, act within its own authority and abide by directives issued by SBI from time to time.

The vendor is responsible for managing the activities of its personal and will hold itself responsible for any misdemeanors on the part of its personnel.

The vendor will treat as confidential all data and information about SBI, obtained in the process of executing its responsibilities, in strict confidence and will not reveal such information to any party without prior written approval of SBI.

17. ARBITRATION:

17.1 Any dispute and items of disagreement arising between the Contractor and Bank, shall be referred to the Chief General Manager or in his absence, the General Manager of SBI and his decision on those matters will be final and binding on the Contractor and bank.

17.2 If any dispute, difference, or question shall at any time arise between the Contractor and the Bank as to the interpretation of this agreement or concerning anything herein contained or arising out of this agreement except that stated in (i) above or as to the rights, liabilities and duties of the said parties hereunder, or as to the execution of the said works, except in respect of the matters for which it is provided herein, that the decision of the Bank is final and binding, the same shall be referred to the Arbitration.

17.2 The place of Arbitration shall be at Mumbai and the language used in the arbitral proceedings shall be English. Arbitration shall be conducted by a mutually appointed sole arbitrator. If the parties are unable to agree upon a sole Arbitrator, each party shall appoint one Arbitrator and the two Arbitrators so appointed by the parties shall appoint the third Arbitrator, who shall be the chairman of the Arbitral Tribunal.

The Arbitral award shall be in writing and subject to the provisions of the Arbitration and conciliation Act, 1996 Act shall be enforceable in any court of competent jurisdiction.

Pending the submission to Arbitration and thereafter, till the Arbitrator or the Arbitral Tribunal renders the award of decision, the parties shall, except in the event of termination of this agreement or in the event of any interim order/ award is granted under the afore stated act, continue to perform their obligations under this agreement.

GOVERNING LAW & JURISDICTION:

18.1 The agreement shall be governed and constructed in accordance with the laws of Republic of India.

18.2 The parties agrees to submit to the exclusive jurisdiction of the appropriate court in Mumbai in connection with any dispute between the parties under the Agreement.

ENTIRE AGREEMENT:

19.1 This Agreement constitutes the entire agreement between the parties with respect to the subject matter hereof and supplement all prior written agreements, undertakings, understandings and negotiations, both written and oral, between the parties with respect to the subject matter of the agreement, except which are expressly annexed or attached to this agreement and saved by this agreement. No representation, inducement, promise, understanding, condition or warranty not set forth herein has been made or relied upon by any party hereto.

19.2 This agreement comprises this agreement and all provisions/ terms/ conditions/ Appendices/ Addendums / Annexure, Schedule, Appendix, Tender documents ref. No. GIT201905038 dated 23/05/2019 and all amendments therein agreed by the Parties in writing. Parties shall be bound by the terms and conditions contained therein.

20. SEVERABILITY:

20.1 If any part or provisions of this agreement is or becomes illegal invalid or unenforceable, that part or provision shall be ineffective to the extent of such invalidity or unenforceability only. Without in any way affecting the validity or enforceability of the remaining parts of said provision or the remaining provisions of this agreement. The parties hereby agrees to attempt to substitute any invalid or unenforceable provision with a valid or enforceable provision, which achieves to the greatest extent possible the economic, legal and commercial objectives of the invalid or unenforceable provision.

21 NOTICES:

21.1 Any notice, invoice, approval, advice, report or any other communication required to be given under this agreement shall be in writing and may be given by delivering the same by hand or sending the same by prepaid registered mail or email to the relevant address set forth below or such other address as each party may notify in writing to the other party from time to time. Any such notice given as aforesaid shall be deemed to be served or received at the time upon delivery (if Delivered by hand) or upon actual receipt (given by email or if sent by post) after duly service of such notice on either party.

A notice shall be effective when it is delivered on or on the effective date of the notice, whichever is later.
21.3 Address for communication to the parties are as under:

21.3.1 To the Bank,
Vice President & Circle Head,
SBIIMS GITC Circle Office
1st Floor, C Wing, State Bank Global IT Center,
Sector-11, CBD Belapur,
Navi Mumbai.

21.3.2 To Contractor
M/s MONALISA CONSTRUCTIONS
6- B/4, KAPADIAN NAGAR
CST ROAD, KURLA WEST
MUMBAI-400070

22. MISCELLANEOUS:
Any provision of this agreement may be amended or waived, if, and only if such amendment or waiver is in writing and signed, in the case of an amendment by each party, or in this case of a waiver, by the party against whom the waiver is to be effective.

No failure or delay by any party in exercising any right, power or privilege hereunder shall operate as a waiver thereof nor shall any single or partial exercise of any other right, power of privilege. The rights and remedies herein provided shall be cumulative and not exclusive of any rights or remedies provided by law.

Neither this agreement nor any provision hereof is intended to confer upon any person/s other than the parties to this agreement any rights or remedies hereunder.

The contractor shall execute and deliver such additional documents and perform such additional actions, as may be necessary, appropriate or reasonably requested to carry out or evidence the transactions contemplated hereby.

In case of any change in applicable laws that has an effect on the terms of the agreement, the parties agree that the agreement may be reviewed, and if deemed necessary by the parties, make necessary amendments to the agreement by mutual agreement in good faith.

If this agreement is signed in counterparts, each counterpart shall be deemed to be an original.

The contractor shall not assign or transfer all or any of its rights, benefits or obligations under this agreement without the approval of the Bank. The Bank may, at any time, assign, or transfer all or any of its rights, benefits and obligations under this agreement.

The contractor agrees that they shall not use logo, trademark, copy rights or other proprietary rights of the bank in any advertisement or publicity materials or any other written communication with any other party, without the prior written consent of the bank.

IN WITNESS WHEREOF, the parties hereto have caused this agreement to be executed by their duly authorized representatives as of the date and day first mentioned above.

State Bank of India

Contractor

Name: -

Name:-

Designation:-

Designation:- PROPRIETOR

Date: - 08/08/2019

WITNESS:

(1) Name:
Address:

(2) Name:
Address:

SECTION – 1
INSTRUCTIONS TO THE TENDERERS

1.0 Scope of work

Sealed Tenders are invited M/s. SBIIMS, on behalf of SBI GITC FOR (1) SUPPLY OF SPARES FOR 33 KV SF6 BREAKER IN HT PANEL OF 33KV KV SUBSTATION (2) SPARES LT BREAKERS (3) SITC OF CAPACITORS AND APFC RELAY (4) SERVICING OF 1000 A BREAKERS AND MISC WORKS AT CDC

1.1 Site and its location

The proposed work is to be carried out at SBI GITC, CBD Belapur.

2.0 Tender documents

2.1 The work has to be carried out strictly according to the conditions stipulated in the tender consisting of the following documents and the most workmen like manner.

Instructions to tenderers General conditions of Contract Special conditions of Contract Priced bid

2.2 The above documents shall be taken as complementary and mutually explanatory of one another but in case of ambiguities or discrepancies, shall take precedence in the order given below; a) Price Bid

b) Technical specifications
c) Special conditions of contract
d) General conditions of contract
e) Instructions to Tenderers

2.3 Complete set of tender documents including relative drawings can be downloaded from the website www.sbi.co.in

2.4 The tender documents are not transferable.

3.0 Site Visit

3.1 The tenderer must obtain himself on his own responsibility and his own expenses all information and data that may be required for the purpose of filling this tender document and enter into a contract for the satisfactory performance of the work. The tenderer is requested satisfy himself regarding the availability of water, power, transport and communication facilities, the character quality and quantity of the materials, labour, the law and order situation, climatic conditions local authorities requirement, traffic regulations etc;

The tenderer will be fully responsible for considering the financial effect of any or all the factors while submitting his tender.

4.0 Earnest Money

4.1 The tenderers are requested to submit the Earnest Money of Rs. 12,500/- (Rupees Twelve Thousand Five Hundred Only) by means of Demand Draft / Pay Order (Valid for a period of 180 Days from the last date of submission of the tender) from any scheduled Nationalized Bank drawn in favour of SBI Infra Management Solutions Pvt. Ltd. and payable in Mumbai.

4.2 EMD in any other form other than as specified above will not be accepted. Tender not accompanied by the EMD in accordance with clause 4.1 above shall be rejected.

4.3 No interest will be paid on the EMD.
4.4 EMD of unsuccessful tenderer will be refunded within 30 days of award of Contract.
4.5 EMD of successful tenderer will be retained as a part of security deposit.

5.0 Initial/ Security Deposit

The successful tenderer will have to submit a sum equivalent to 2% of accepted tender value less EMD by means of DD drawn in favour of SBIIMS Pvt. Ltd. within a period of 15 days of acceptance of tender.

6.0 Security Deposit

6.1 Total security deposit shall be 5% of contract value. Out of this 2% of contract value is in the form of Initial Security Deposit (ISD) which includes the EMD. Balance 3% shall be deducted from the running account bill of the work at the rate of 10% of the respective running account bill i.e., deduction from each running bill account will be @10% till Total Security Deposit (TSD) including ISD reaches to 5% of contract value. The 50% of the Total Security Deposit shall be paid to the contract on the basis of architect’s certifying the virtual completion. The balance 50% would be paid to the contractors after the defects liability period as specified in the contract.

6.2 Additional Security Deposit

In case L-1 bidder quotes abnormally low rates (i.e. 10% or more, below estimated project cost), the bank may ask such bidder to deposit additional security deposit (ASD) equivalent to difference of estimated cost vis-à-vis L-1 quoted amount for due fulfilment of contract. Such ASD could be in the form of FDR / Bank’s guarantee in the Bank’s name as per format approved by the Bank. On successful completion of work ASD will be returned to the contractor. In case contractor fails to complete the work in time or as per tender specification or leave the job incomplete, the bank will be at liberty to recover the dues from ASD or to forfeit such ASD as the case may be within its sole discretion.

6.3 No interest shall be paid to the amount retained by the Bank as Security Deposit.

7.0 Signing of contract Documents

The successful tenderer shall be bound to implement the contract by signing an agreement and conditions of contract attached herewith within 15 days from the receipt of intimation of acceptance of the tender by the Bank. However, the written acceptance of the tenders by the Bank will constitute a binding agreement between the Bank and successful tenderer whether such formal agreement is subsequently entered into or not.

8.0 Completion Period

Time is essence of the contract. The work should be completed in all respect accordance with the terms of contract within a period of 8 weeks days from the date of award of work.

9.0 Validity of tender

Tenders shall remain valid and open for acceptance for a period of 90 days from the date of opening price bid. If the tenderer withdraws his/her offer during the value period or makes modifications in his/her original offer which are not acceptable to Bank without prejudice to any other right or remedy the Bank shall be at liberty forfeit the EMD.

10.0 Liquidated Damages

The liquidated damages shall be 0.50% per week subject to a maximum of 5% of contract value.

11.0 Rate and prices:
11.1 **In case of item rate tender**

11.1.1 The tenderers shall quote their rates for individual items both in words and figure. In case of discrepancy between the rate quoted in words and figures, the unit rate quantity in words will prevail. If no rate is quoted for a particular item the contractor shall not be paid for that item when it is executed.

The amount of each item shall be calculated and the requisite total is given. In case of discrepancy between the unit rate and the total amount calculated from multiplication of unit rate and the quantity the unit rate quoted will govern and the amount will be corrected.

11.1.2 The tenderers need not quote their rates for which no quantities have been given. In case the tenderers quote their rates for such items those rates will be ignored and will not be considered during execution.

11.1.3 The tenderers should not change the units as specified in the tender. If any unit is changed the tenders would be evaluated as per the original unit and the contractor would be paid accordingly.

The tenderer should not change or modify or delete the description of the item. If any discrepancy is observed he should immediately bring to the knowledge of the Architect/ SBIIMS Pvt. Ltd.

11.1.4 Each page of the BOQ shall be signed by the authorized person and cutting or overwriting shall be duly attested by him.

11.1.5 Each page shall be totalled and the grand total shall be given.

11.1.6 The rate quoted shall be firm and shall include all costs, allowances, taxes, levies.

11.1.7 The SBIIMS Pvt. Ltd. reserve their rights to accept any tenders, either in whole or in part or may entrust the work in phases or may drop the part scope of work at any stage of the project within its sole discretion without assigning any reason(s) for doing so and no claim / correspondence shall be entertained in this regard.

11.1.8 In case it is decided by the SBIIMS Pvt. Ltd. to drop one or more buildings from the scope of work at any stage of the project, the contractor shall not be entitled to raise any claim / compensation for such deleted scope of work. Also, the SBIIMS Pvt. Ltd. may consider issuing work order for various buildings in phases but within a reasonable time interval and the contractor shall be bound to execute the same within the stipulated time period and as per rates quoted by them in this tender without any claim for price escalation.

**SIGNATURE OF THE CONTRACTOR**

**WITH SEAL**

**GENERAL CONDITIONS OF CONTRACT**

1.0 **Definitions**

“**Contract**” means the documents forming the tender and the acceptance thereof and the formal agreement executed between SBIIMS and the contractor, together with the documents referred therein including these conditions, the specifications, designs, drawings and instructions issued from time to time by the
Architects/SBIIMSI and all these, documents taken together shall be deemed to form one contract and shall be, complementary to one another.

1.1 In the contract the following expressions shall, unless the context otherwise requires, have the meaning hereby respectively assigned to them.

1.1.1 ‘SBI’ shall mean State Bank of India (client) a body Corporate created under SBI Act 1955, having its Corporate Centre at State Bank Bhavan, Madame Cama Road, Mumbai 400 021 and SBI Infra Management Solutions Pvt. Ltd. (SBIIMS), its wholly owned subsidiary having Head Office at Raheja Chambers, Free press Journal Marg, Nariman Point Mumbai 21 and includes the client’s representatives, successors and assigns.

1.1.2 ‘Architects/Consultants’ shall mean M/s. SBIIMS

1.1.3 ‘Site Engineer’ shall mean an Engineer appointed by the Bank as their representative to give instructions to the contractors.

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

1.1.5 The expression ‘works’ or ‘work’ shall mean the permanent or temporary work described in the ‘Scope of Work’ and/or to be executed in accordance with the contract and includes materials, apparatus, equipment, temporary supports, fittings and things of all kinds to be provided, the obligations of the contractor hereunder and work to be done by the contractor under the contract.

1.1.6 ‘Engineer’ shall mean the representative of the SBIIMS/Architect/consultant.

1.1.7 ‘Drawings’ shall mean the drawings prepared by the Architects and issued by the Engineer and referred to in the specifications and any modifications of such drawings as may be issued by the Engineer from time to time. ‘Contract value shall mean the value of the entire work as stipulated in the letter of acceptance of tender subject to such additions thereto or deductions there from as may be made under the provision herein after contained.

1.1.8 ‘Specifications’ shall mean the specifications referred to in the tender and any modifications thereof as may time to time be furnished or approved by the architect/consultant.

“Month” means calendar month.

1.1.9 “Week” means seven consecutive days.

1.1.10 “Day” means a calendar day beginning and ending at 00 Hrs and 24 hrs respectively.

CLAUSES:

1.0 Total Security Deposit

Total Security deposit comprise of:

- Earnest Money Deposit
- Initial Security Deposit
- Retention Money

a) Earnest Money Deposit:
The tenderer shall furnish EMD of **Rs. 12,500/- (Rupees Twelve Thousand Five Hundred Only)** in the form of Demand draft or bankers cheque drawn in favour of SBI Infra Management Solutions Pvt. Ltd., payable at “Mumbai” on any Scheduled Bank. No tender shall be considered unless the EMD is so deposited in the required form. No interest shall be paid on this EMD. The EMD of the unsuccessful tenderer shall be refunded within 30 days after the decision to award the contract is taken without interest. The EMD shall stand absolutely forfeited if the tenderer revokes his tender at any time during the period when he is required to keep his tender open for acceptance by the SBI or after it is accepted by the SBI the contractor fails to enter into a formal agreement or fails to pay the initial security deposit as stipulated or fails to commence the work within the stipulated time.

**b) Initial Security Deposit (ISD):**

The amount of ISD shall be 2% of accepted value of tender including the EMD. Balance of ISD (i.e. excluding EMD) is to be submitted in the form of D/D drawn on any scheduled Bank and shall be deposited within 15 days from the date of letter of acceptance of tender.

**SECURITY DEPOSIT**

Total security deposit shall be 5% of the final value of the work. Out of this 2% of tender value (i.e. tender amount) is in the form of initial security deposit(ISD) which includes the EMD. Balance security deposit (i.e. 5% of final value of work less 2% of tender value already deposited as ISD) towards the work shall be deducted from the final bill of the work as Retention money. 5% of the retention money shall be paid after the defects liability period of 1 Year as specified in the contract. 50% of the total security i.e.2.5% of the final value of work shall be paid to the contractors on the basis of Project engineer-in-charge certifying the virtual completion and its approval by SBIIMS. The balance 50% i.e. 2.5% of final value of work would be returned to the contractors after the defects liability period as specified in the contract. The retention money will be interest free.

**ADDITIONAL SECURITY DEPOSIT**

In case L-1 bidder quotes abnormally low rates (i.e. 10% or more, below estimated project cost), the bank may ask such bidder to deposit additional security deposit (ASD) equivalent to difference of estimated cost vis-à-vis L-1 quoted amount for due fulfilment of contract. Such ASD could be in the form of FDR / Bank’s guarantee in the Bank’s name as per format approved by the Bank. On successful completion of work ASD will returned to the contractor. In case contractor fails to complete the work in time or as per tender specification or leave the job incomplete, the bank will be at liberty to recover the dues from ASD or to forfeit such ASD as the case may be within its sole discretion.

No interest shall be paid to the amount retained by the Bank as Security Deposit.

**c) Retention Money**

Total security deposit shall be 5% of the final value of the work. Out of this 2% of tender value (i.e. tender amount) is in the form of initial security deposit(ISD) which includes the EMD. Balance security deposit (i.e. 5% of final value of work less 2% of tender value already deposited as ISD) towards the work shall be deducted from the running account bill of the work as Retention money at the rate of 10% of the respective running account bill i.e. deduction from each running bill account will be 10% till total 5% of final value of work as per final bill is reached. 50% of the total security i.e.2.5% of the final value of work shall be paid to the contractors on the basis of Project Engineer-in-Charge certifying the virtual completion and its approval by SBIIMS. The balance 50% i.e. 2.5% of final value of work would be paid to the contractors after the defects liability period as specified in the contract and after satisfactory completion of CVC Audit. In case CVC Audit is not conducted, 1.25% of final value of work will be retained for a maximum period of further one year (w.e.f. completion of defect liability period).
2.0 Language Errors, Omissions and Discrepancies
In case of errors, omissions and/or disagreement between written and scaled dimensions on the drawings or between the drawings and specifications etc, the following order shall apply.
i) Between scaled and written dimension(or description) on a drawing, the latter shall be adopted. ii) Between the written or shown description or dimensions in the drawings and the corresponding one in the specification the former shall be taken as correct. iii) Between written description of the item in the specifications and descriptions in bills of quantities of the same item, the latter shall be adopted. iv) In case of difference between rates written in figures and words, the rate in words shall prevail. v) Between the duplicate/subsequent copies of the tender, the original tender shall be taken as correct.

3.0 Scope of Work
The contractor shall carry out, complete and maintain the said work in every respect strictly in accordance with this contract and with the directions of and to the satisfaction of the SBIIMS /architect/consultant. The SBIIMS/ architect/consultant at the directions of the Bank from time to time issue further drawings and/or written instructions, details directions and explanations which are hereafter collectively referred to as SBIIMS/Architect’s/Consultant’s instructions in regard to: the variation or modification of the design, quality or quantity of work or the addition or omission or substitution of any work, any discrepancy in the drawings or between the BOQ and/or drawings and/or specifications, the removal from the site of any material brought thereon by the contractor and the substitution of any other materials thereof, the demolition, removal and/or re-execution of any work executed by him, the dismissal from the work of any person employed/engaged thereupon.

4.0 (i) Letter of Acceptance
Within the validity period of the tender the SBIIMS shall issue a letter of acceptance either directly or through the architect by registered post/e-mail/speed post or otherwise depositing at the address of the contractor as given in the tender to enter into a Contract for the execution of the work as per the terms of the tender. The letter of acceptance shall constitute a binding contract between the SBIIMS and the contractor.

ii) Contract Agreement
On receipt of intimation of the acceptance of tender from the SBIIMS/Architect the successful tenderer shall be bound to implement the contract and within fifteen days thereof, he shall sign an agreement in a non-judicial stamp paper of appropriate value (as per the Article of Agreement format earlier given in this document) with SBIIMS.

5.0 Ownership of drawings
All drawings, specifications and copies thereof furnished by the SBIIMS, through its architect/consultants are the properties of the SBIIMS. They are not to be used on other work.

6.0 Detailed drawings and instructions
The SBIIMS through its architects/consultants shall furnish with reasonable promptness additional instructions by means of drawings or otherwise necessary for the proper execution of the work. All such drawings and instructions shall be consistent with the contract documents, true developments thereof and reasonably inferable there from.

The work shall be executed in conformity therewith and the contractor shall prepare a detailed programme schedule (i.e. BAR/PERT Chart) indicating therein the date of start and completion of various activities on receipt of the work order and submit the same to the SBIIMS through the Architect/Consultant.
7.0 Copies of Agreement

Out of Six copies, two copies of agreement/tender document duly signed by both the parties with the drawings shall be handed over to the contractors, two copies to SBI and one copy each shall be for the use of SBIIMS and Architect.

8.0 Liquidated Damages

If the contractor fails to maintain the required progress in terms of clause 29 of GCC or to complete the work and clear the site including vacating their office on or before the contracted or extended date or completion without justification in support of the cause of delay, he may be called upon without prejudice to any other right of remedy available under the law to the SBI on account of such breach to pay a liquidated damages at the rate of 0.5% of the final value of work per week subject to a maximum of 5% of the final value of work.

9.0 Materials, Appliances and Employees

Unless or otherwise specified the contractor shall provide and pay for all materials, labour, water, power, tools, equipment transportation and any other facilities that are required for the satisfactory execution and completion of the work. Unless or otherwise specified all materials shall be new and both workmanship and materials shall be best quality. The contractor shall at all times enforce strict discipline and good order among his employees/workers and shall not employ on the work any unfit person/worker or anyone not skilled in the work assigned to him. Workman whose work or behaviour is found to be unsatisfactory by the SBIIMS /Architect, he shall be removed from the site immediately.

10.0 Permits, Laws and Regulations

Permits and licences required for the execution of the work shall be obtained by the contractor at his own expenses. The contractor shall give notices and comply with the regulations, laws/ labour laws, and ordinances rules, applicable to the contractor. If the contractor observes any discrepancy between the drawings and specifications, he shall promptly notify the SBIIMS in writing under intimation of the Architect/Consultant. If the contractor performs any act which is against the law, rules and regulations he shall meet all the costs arising there from and shall indemnify the SBIIMS any legal actions arising there from.

11.0 Setting out Work

The contractor shall set out the work and shall be responsible for the true and perfect setting out of the same and for the correctness of the positions, levels, dimensions, and alignment of all parts thereof and get it approved by the architect/consultant before proceeding with the work. If at any time any error in this respect shall appear during the progress of the works, irrespective of the fact that the layout had been approved by the architect/consultant the contractor shall be responsible for the same and shall at his own expenses rectify such error, if so, required to satisfaction of the SBIIMS.

12.0 Protection of works and property

The contractor shall continuously maintain adequate protection, of all his work from damage and shall protect the SBI’s properties from injury or loss arising in connection with contract. He shall make good any such damage, injury, loss due to his fault or negligence except which are due to causes beyond his control.

He shall take adequate care and steps for protection of the adjacent properties. The contractor shall take all precautions for safety and protection of his employees on the works and shall comply with all applicable provisions of Government and local bodies’ safety laws and relevant building codes to prevent accidents, or injuries to persons or property of about or adjacent to his place of work. The contractor shall take insurance covers as per clause 25.0 at his own cost. The policy may be taken in joint names of the contractors and the SBIIMS and the original policy may be lodged with the SBIIMS.
13.0 Inspection of Work

SBIIMS/SBI/Architect/Consultant or their representatives shall at all reasonable time have free access to the work site and/or to the workshop, factories or other places where materials are lying or from where they are obtained and the contractor shall give every facility to the SBIIMS /SBI/Architect/Consultant and their representatives necessary for inspection and examination and test of the materials and workmanship. No person unless authorized by the SBIIMS /SBI/Architect/Consultant except the representative of Public authorities shall be allowed on the work at any time. The proposed work either during its construction stage or its completion can also be inspected by the Chief Technical Examiner’s organization a wing of Central Vigilance Commission.

14.0 Assignment and subletting

The whole of work included in the contract shall be executed by the contractor and he shall not directly entrust and engage or indirectly transfer assign or underlet the contract or any part or share thereof or interest therein without the written consent of the SBIIMS /SBI through the architect and no undertaking shall relieve the contractor from the responsibility of the contractor from active superintendence of the work during its progress.

15.0 Quality of Materials, Workmanship & Test

All materials and workmanship shall be best of the respective kinds described in the contract and in accordance with SBIIMS/Architect’s instructions and shall be subject from time to time to such tests as the SBIIMS /Architect may direct at the place of manufacture or fabrication or on the site or an approved testing laboratory.

The contractor shall provide such assistance, instruments, machinery, labour and materials.

Contractor to made arrangement of laboratory on site, where weight of various materials like aluminium extrusions etc. can be done, Contractor should also make available a 3.00 meter, 15.00 meters & a 50.00 meters tape, a Vernier Calliper & Micrometre so any measurements/ tests can be taken on sites itself.

(ii) Samples

All samples of adequate numbers, size, shades & pattern as per specifications shall be supplied by the contractor without any extra charges. If certain items proposed to be used are of such nature that samples cannot be presented or prepared at the site detailed literature/test certificate of the same shall be provided to the satisfaction of the SBIIMS/Architect. Before submitting the sample/literature the contractor shall satisfy himself that the material/equipment for which he is submitting the samples/literature meet with the requirement of tender specification. Only when the samples are approved in writing by the SBIIMS /Architect the contractor shall proceed with the procurement and installation of the particular material/equipment.

The approved samples shall be signed by the SBIIMS. /Architect for identification and shall be kept on record at site office until the completion of the work for inspection/comparison at any time. The SBIIMS/Architect shall take reasonable time to approve the sample. Any delay that might occur in approving the samples for reasons of its not meeting the specifications or other discrepancies inadequacy in furnishing samples of best qualities from various manufacturers and such other aspects causing delay on the approval of the materials/equipment etc. shall be to the account of the contractor.

(iii) Cost of tests

a) The cost of making any test shall be borne by the contractor if such test is intended by or provided for in the specifications or BOQ.

(iv) Cost of test not provided for

If any test is ordered by the SBIIMS/Architect which is either:
(a) If so intended by or provided for or (in the cases above mentioned) is not so particularized or through so intended or provided for but ordered by the SBIIMS/Architect which is either to be carried out by an independent person at any place other than the site or the place of manufacture or fabrication of the materials tested or any Government/approved laboratory, then the cost of such test shall be borne by the contractor.

16.0 Obtaining Information related to execution of work

No claim by the contractor for additional payment shall be entertained which is consequent upon failure on his part to obtain correct information as to any matter affecting the execution of the work nor any misunderstanding or the obtaining incorrect information or the failure to obtain correct information relieve him from any risks or from the entire responsibility for the fulfilment of contract.

17.0 Contractor’s superintendence

The contractor shall give necessary personal superintendence during the execution of the works and as long, thereafter, as the SBIIMS/Architect may consider necessary until the expiry of the defects liability period, stated hereto.

18.0 Quantities

i) The bill of quantities (BOQ) unless or otherwise stated shall be deemed to have been prepared in accordance with the Indian Standard Method of Measurements

The rate quoted shall remain valid for variation of quantity against individual item to any extent subject to maximum variation of the contract value by 25%. The entire amount paid under Clause 20 hereof as well as amounts of prime cost and provisional sums, if any, shall be excluded.

ii) Variation exceeding 25%: The items of work executed in relation to variation exceeding 25% shall be paid on the basis of provisions of clause 21(e) hereof.

19.0 Works to be measured

The SBIIMS/SBI/Architect may from time to time intimate to the contractor that he required the work to be measured and the contractor shall forthwith attend or send a qualified representative to assist the SBIIMS/SBI/Architect in taking such measurements and calculation and to furnish all particulars or to give all assistance required by any of them. Such measurements shall be taken in accordance with the Mode of measurements detailed in the specifications. The representative of the SBIIMS/SBI/Architect shall take joint measurements with the contractor’s representative and the measurements shall be entered in the measurement book.

The contractor or his authorized representative shall sign all the pages of the measurement book in which the measurements have been recorded in token of his acceptance. All the corrections shall be duly attested by both representatives. No over writings shall be made in the measurement book. Should the contractor not attend or neglect or omit to depute his representative to take measurements then the measurements recorded by the representative of the SBIIMS/SBI/Architect shall be final. All authorized extra work, omissions and all variations made shall be included in such measurements.

20.0 Variations:

No alteration, omission or variation ordered in writing by the SBIIMS/SBI/Architect shall vitiate the contract.

In case the SBIIMS/SBI/Architect thinks proper at any time during the progress of works to make any alteration in, or additions to or omission from the works or any alteration in the kind or quality of the materials to be used therein, the Architect/Consultant shall give notice thereof in writing to the contractor or shall confirm in writing within seven days of giving such oral instructions the contractor shall alter to, add
to, or omit from as the case may be in accordance with such notice but the contractor shall not do any work extra to or make any alteration or additions to or omissions from the works or any deviation from any of the provisions of the contract, stipulations, specifications or contract drawings without previous consent in writing of the Architect/Consultant and the value of such extras, alterations, additions or omissions shall in all cases be determined by the Architect/Consultant and the same shall be added to or deducted from the contract value, as the case may be.

21.0 Valuation of Variations

No claim for an extra shall be allowed unless it shall have been executed under the authority of the SBIIMS/Architect with the concurrence of the SBI as herein mentioned. Any such extra is herein referred to as authorized extra and shall be made in accordance with the following provisions.

i) The net rates or prices in the contract shall determine the valuation of the extra work where such extra work is of similar character and executed under similar conditions as the work priced herein.

ii) Rates for all items, wherever possible should be derived out of the rates given in the priced BOQ.

b) The net prices of the original tender shall determine the value of the items omitted, provided if omissions do not vary the conditions under which any remaining items of works are carried out, otherwise the prices for the same shall be valued under sub clause (c) hereunder.

c) Where the extra works are not of similar character and/or executed under similar conditions as aforesaid or where the omissions vary the conditions under which any remaining items or works are carried out, then the contractor shall within 7 days of the receipt of the letter of acceptance inform the SBIIMS/Architect of the rate which he intends to charge for such items of work, duly supported by analysis of the rate or rates claimed and the SBIIMS/Architect shall fix such rate or prices as in the circumstances in his opinion are reasonable and proper, based on the market rate.

d) Where extra work cannot be properly measured or valued the contractor shall be allowed day work prices at the net rates stated in the tender of the BOQ or, if not, so stated then in accordance with the local day work rates and wages for the district; provided that in either case, vouchers specifying the daily time (and if required by the SBIIMS/SBI/Architect) the workman’s name and materials employed be delivered for verifications to the Architect/Consultant at or before the end of the week following that in which the work has been executed.

e) It is further clarified that for all such authorized extra items where rates cannot be derived from the tender, the contractor shall submit rates duly supported by rate analysis worked on the “market rate basis” for material, labour, hire/running charges of equipment and wastages etc. plus 15% towards establishment charges, contractor’s overheads and profit. Such items shall not be eligible for escalation.

22.0 Final Measurement

The measurement and valuation in respect of the contract shall be completed within one month of the virtual completion of the work.

23.0 Virtual Completion Certificate (VCC)

On successful completion of entire works covered by the contract to the full satisfaction of the SBIIMS/SBI, the contractor shall ensure that the following works have been completed to the satisfaction of the SBIIMS/SBI-

a) Clear the site of all scaffolding, wiring, pipes, surplus materials, contractor’s labour, equipment and machinery.
b) Demolish, dismantle and remove the contractor’s site office, temporary works, structures including labour sheds/camps and constructions and other items and things whatsoever brought upon or erected at the site or any land allotted to the contractor by the SBI and not incorporated in the permanent works.

c) Remove all rubbish, debris etc from the site and the land allotted to the contractor by the SBI and shall clear, level and dress, compact the site as required by the SBI.

d) Shall put the SBIIMS /SBI in undisputed custody and possession of the site and all land allotted by the SBI.

e) Shall hand over the work in a peaceful manner to the SBIIMS /SBI.

f) All defects/imperfections have been attended and rectified as pointed out by the SBIIMS /SBI to the full satisfaction of SBIIMS /SBI. Upon the satisfactory fulfilment by the contractor as stated above, the contractor shall be entitled to apply to the Architect/Consultant for the certificate. If the SBIIMS/Architect/Consultant is satisfied of the completion of the work, relative to which the completion certificate has been sought, the SBIIMS/Architect/Consultant shall within fourteen (14) days of the receipt of the application for virtual completion certificate, issue a VCC in respect of the work for which the VCC has been applied. This issuance of a VCC shall be without prejudice to the SBIIMS /SBI’s rights and contractor’s liabilities under the contract including the contractor’s liability for defects liability period nor shall the issuance of VCC in respect of the works or work at any site be construed as a waiver of any right or claim of the SBIIMS against the contractor in respect of works or work at the site and in respect of which the VCC has been issued.

24.0 Work by other agencies

The SBIIMS /SBI/Architect reserves the rights to use premises and any portion of the site for execution of any work not included in the scope of this contract which it may desire to have carried out by other persons simultaneously and the contractor shall not only allow but also extend reasonable facilities for the execution of such work. The contractor however shall not be required to provide any plant or material for the execution of such work except by special arrangement with the SBIIMS /SBI. Such work shall be carried out in such manners not to impede the progress of the works included in the contract.

25.0 Insurance of Works

25.1 Without limiting his obligations and responsibilities under the contract the contractor shall ensure in the joint names of the SBIIMS and the contractor against all loss or damages from whatever cause arising other than the excepted risks, for which he is responsible under the terms of contract and in such a manner that the SBIIMS and contractor are covered for the period stipulated in clause 27 & 28 of GCC and are also covered during the period of maintenance for loss or damage arising from a cause, occurring prior to the commencement of the period of maintenance and for any loss or damage occasioned by

the contractor in the course of any operations carried out by him for the purpose of complying with his obligations under clause.

a) The works for the time being executed to the estimated current Contract value thereof, or such additional sum as may be specified together with the materials for incorporation in the works at their replacement value.

b) The constructional plant and other things brought on to the site by the contractor to the replacement value of such constructional plant and other things.

c) Such insurance shall be affected with an insurer and in terms approved by the SBIIMS which approval shall not be unreasonably withheld and the contractor shall whenever required produce to the SBIIMS/Architect the policy of insurance and the receipts for payment of the current premiums.
25.2 Damage to persons and property

The contractor shall, except if and so far as the contract provides otherwise indemnify the SBIIMS against all losses and claims in respect of injuries or damages to any person or material or physical damage to any property whatsoever which may arise out of or in consequence of the execution and maintenance of the works and against all claims proceedings, damages, costs, charges and expenses whatsoever in respect of or in relation thereto except any compensation of damages for or with respect to:

a) The permanent use or occupation of land by or any part thereof.

b) The right of SBIIMS/SBI to execute the works or any part thereof, on, over, under, in or through any lands.

c) Injuries or damages to persons or properties which are unavoidable result of the execution or maintenance of the works in accordance with the contract.

d) Injuries or damage to persons or property resulting from any act or neglect of the SBIIMS/SBI, their agents, employees or other contractors not being employed by the contractor or in respect of any claims, proceedings, damages, costs, charges and expenses in respect thereof or in relation thereto or where the injury or damage was contributed to by the contractor, his servants or agents such part of the compensation as may be just and equitable having regard to the extent of the responsibility of the SBIIMS/SBI, their employees, or agents or other employees, or agents or other contractors for the damage or injury.

25.3 Contractor to indemnify SBIIMS/SBI

The contractor shall indemnify the SBIIMS/SBI against all claims, proceedings, damages, costs, charges and expenses in respect of the matters referred to in the provision sub clause 25.2 of this clause.

25.4 Contractor’s superintendence

The contractor shall fully indemnify and keep indemnified the SBIIMS/SBI 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 claim made under or action brought against SBIIMS/SBI in respect of such matters as aforesaid the contractor shall be immediately notified thereof and the contractor shall be at liberty, at his own expenses 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 SBIIMS/SBI 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 SBIIMS/SBI/Architect in this behalf.

25.5 Third Party Insurance

25.5.1 Before commencing the execution of the work the contractor but without limiting his obligations and responsibilities under clause 25 of GCC shall insure against his liability for any material or physical damage, loss, or injury which may occur to any property including that of SBI, or to any person, including any employee of the SBIIMS/SBI, by or arising out of the execution of the works or in the carrying out of the contract, otherwise than due to the matters referred to in the provision to clause 25 thereof.

25.5.2 Minimum Amount of Third Party Insurance

Such insurance shall be affected with an insurer and in terms approved by the SBIIMS/SBI which approval shall not be reasonably withheld and for at least the amount stated below. The contractor shall, whenever required, produce to the SBIIMS/SBI/Architect the policy or policies of insurance cover and receipts for payment of the current premiums.
The minimum insurance cover for physical property, injury, and death is Rs. 5.0 lacs per occurrence with the number of occurrences limited to four. After each occurrence contractor will pay additional premium necessary to make insurance valid for four occurrences always.

25.7 Accident or Injury to Workmen

25.7.1 The SBIIMS/SBI shall not be liable for or in respect of any damages or compensation payable at law in respect or in consequence of any accident or injury to any workmen or other person in the employment of the contractor or any sub-contractor, save and except an accident or injury resulting from any act or default of the SBIIMS/SBI or their agents, or employees. The contractor shall indemnify and keep indemnified SBIIMS/SBI against all such damages and compensation, save and except as aforesaid and against all claims, proceedings, costs, charges and expenses whatsoever in respect thereof or in relation thereto.

25.7.2 Insurance against accidents etc to workmen

The contractor shall insure against such liability with an insurer approved by the SBIIMS/SBI during the whole of the time any person employed by him on the works and shall, when required, produce to the architect/consultant such policy of insurance and receipt for payment of the current premium. Provided always that, in respect of any persons employed by any sub-contractor the contractor’s obligation to insure as aforesaid under this sub-clause shall be satisfied if the sub-contractor shall have insured against the liability in respect of such persons in such manner that SBIIMS/SBI is indemnified under the policy but the contractor shall require such sub-contractor to produce to the SBIIMS/SBI/Architect when required such policy of insurance and the receipt for the payment of the current premium.

25.7.3 Remedy on Contractor’s failure to insure

If the contractor fails to effect and keep in force the insurance referred to above or any other insurance which he may be required to effect under the terms of contract, then and in any such case the SBI may effect and keep in force any such insurance and pay such premium or premiums as may be necessary for that purpose and from time to time deduct the amount so paid by the SBI as aforesaid and also deduct 15% of contract value from any amount due or which may become due to the contractor, or recover the same as debt from the contractor.

Without prejudice to the other rights of the SBIIMS/SBI against contractors, in respect of such default, the SBI shall be entitled to deduct from any sums payable to the contractor the amount of any damages costs, charges, and other expenses paid by the SBI and which are payable by the contractors under this clause. The contractor shall upon settlement by the insurer of any claim made against the insurer pursuant to a policy taken under this clause, proceed with due diligence to rebuild or repair the works destroyed or damaged. In this event all the monies received from the insurer in respect of such damage shall be paid to the contractor and the contractor shall not be entitled to any further payment in respect of the expenditure incurred for rebuilding or repairing of the materials or goods destroyed or damaged.

26.0 Commencement of Works

The date of commencement of the work will be reckoned as the recorded date of handing over site by the SBIIMS/SBI or 7 days from the date of receipt of Letter of Acceptance from SBIIMS, whichever is later.

27.0 Time for completion

Time is the essence of the contract and shall be strictly observed by the contractor. The entire work shall be completed within a period of 8 weeks from the date of commencement. If required in the contract or as directed by the SBIIMS/Architect, the contractor shall complete certain portions of work before completion.
of the entire work. However, the completion date shall be reckoned as the date by which the whole work is completed as per the terms of the contract.

28.0 Extension of Time

If, in the opinion of the Architect/Consultant, the work be delayed for reasons beyond the control of the contractor, the Architect/Consultant may submit a recommendation to the SBIIMS to grant a fair and reasonable extension of time for completion of work as per the terms of contract. If the contractor needs an extension of time for the completion of work or if the completion of work is likely to be delayed for any reasons beyond the due date of completion as stipulated in the contract, the contractor shall apply to the SBIIMS through the Architect/Consultant in writing at least 15 days before the expiry of the scheduled time and while applying for extension of time he shall furnish the reasons in detail and his justification if any, for the delays. The architect/consultant shall submit their recommendations to the SBIIMS in the prescribed format for granting extension of time. While granting extension of time the contractor shall be informed the period extended time which will qualify for levy of liquidated damages. For the balance period in excess of original stipulated period and duly sanctioned extension of time by the SBIIMS the provision of liquidated damages as stated under clause 8 of GCC shall become applicable. Further contract shall remain in force even for the period beyond the due date of completion irrespective whether the extension is granted or not.

29.0 Rate of progress

Whole of the materials, plant and labour to be provided by the contractor and the mode, manner and speed of execution and maintenance of the works are to be of a kind and conducted in a manner to the satisfaction of the SBIIMS/SBI/Architect. Should the rate of progress of the work or any part thereof be at any time be in the opinion of the SBIIMS/SBI/Architect too slow to ensure the completion of the whole of the work by the prescribed time or extended time for completion the SBIIMS/SBI/Architect shall thereupon take such steps as considered necessary to expedite progress so as to complete the works by the prescribed time or extended time. Such communications from the SBIIMS/SBI/Architect neither shall relieve the contractor from fulfilling obligations under the contract nor he shall be entitled to raise any claims arising out of such directions.

30.0 Work during nights and holidays

Subject to any provision to the contrary contained in the contract no permanent work shall save as herein provided be carried on during the night or on holidays without the permission in writing of the SBIIMS/SBI/Architect, save when the work is unavoidable or absolutely necessary for the saving of life or property or for the safety of the work in which case the contractor shall immediately advise the SBIIMS/SBI/Architect. However the provision of the clause shall not be applicable in the case of any work which becomes essential to carry by rotary or double shifts in order to achieve the progress and quality of the part of the works being technically required and continued with the prior approval of the SBIIMS/SBI/Architect at no extra cost to the SBIIMS/SBI.

All work at night after obtaining approval from competent authorities shall be carried out without unreasonable noise and disturbance so as to avoid disputes with the neighbours.

31.0 No compensation for restrictions of work

If at any time after acceptance of the tender SBIIMS shall decide to abandon or reduce the scope of work for any reason whatsoever and hence not require the whole or any part of the work to be carried out, the SBIIMS Architect shall give notice in writing to that effect to the contractor and the contractor shall act accordingly in the matter. The contractor shall have no claim to any payment of compensation or otherwise whatsoever, on account of any profit or advantage which he might have derived from the execution of the work fully but which he did not derive in consequence of the foreclosure of the whole or part of the work. Provided that the contractor shall be paid the charges on the cartage only of materials actually and bona fide brought to the site of the work by the contractor and rendered surplus
as a result of the abandonment, curtailment of the work or any portion thereof and then taken back by the contractor, provided however that the SBIIMS /SBI/Architect shall have in such cases the option of taking over all or any such materials at their purchase price or a local current rate whichever is less. In case of such stores having been issued from SBIIMS /SBI stores and returned by the contractor to stores, credit shall be given to him at the rates not exceeding those at which were originally issued to the contractor after taking into consideration and deduction for claims on account of any deterioration or damage while in the custody of the contractor and in this respect the decision of SBIIMS /SBI/Architect shall be final.

32.0 Suspension of work

i) The contractor shall, on receipt of the order in writing of the SBIIMS/SBI/Architect (whose decision shall be final and binding on the contractor) suspend the progress of works or any part thereof for such time and in such manner as SBIIMS /SBI/Architect may consider necessary so as not cause any damage or injury to the work already done or endanger the safety thereof for any of following reasons.

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 SBIIMS /SBI/Architect.

ii) If the suspension is ordered for reasons (b) and (c) in sub-Para (i) above:

The contractor shall be entitled to an extension of time equal to the period of every such suspension. No compensation whatsoever shall be paid on this account.

33.0 Action when the whole security deposit is forfeited

In any case in which under any clause or clauses of this contract, the Contractor shall have rendered himself liable to pay compensation amounting to the whole of his security deposit the Architect/Consultant shall have the power to adopt any of the following course as they may deem best suited to the interest of the SBIIMS /SBI.

a) To rescind the contract (of which rescission notice in writing to the contractor by the Architect/Consultant shall be conclusive evidence) and in which case the security deposit of the contractor shall be forfeited and be absolutely at the disposal of SBIIMS.

b) To employ labour paid by the SBI and to supply materials to carry out the work, or any part of the work, debiting the contractor with the cost of the labour and materials as worked out by the SBIIMS/Architect shall be final and conclusive against the contractor) and crediting him with the value of the work done, in all respects in the same manner and at the same rates as if it had been carried out by the contractor under the terms of this contract the certificates in writing of the Architects/Consultant as to the value of work done shall be final and conclusive against the contractor.

c) To measure up the work of the contractor, and to take such part thereof as shall be unexecuted, out of his hands, and to give it to another contractor to complete in which case any expenses which may be incurred in excess of the sum which would have been paid to the original contractor, if the whole work had been executed by him (of the amount of which excess the certificates in writing of the Architects/Consultant shall be final and conclusive) shall be borne by original contractor and may be deducted from any money due to him by SBI under the contract or otherwise, or from his security deposit or the proceeds of sale thereof, or sufficient part thereof.
In the event of any of the above courses being adopted by the SBIIMS the contractor shall have no claim to compensation for any loss sustained by him by reason of his having purchased or procured any material or entered into any engagements or make any advances on account of, or with a view to the execution of the work or the performance of the contract and in case the contract shall be rescinded under the provision aforesaid, the contractor shall not be entitled to recover or to be paid any sum or any work thereto for actually performed under this contract, unless, and until the Architect/Consultant/SBIIMS will have 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.

34.0 Owner's Right to Terminate the Contract

If the contractor being an individual or a firm commit any 'Act of Insolvency' or shall be adjusted an insolvent or being an incorporated company shall have an order for compulsory winding up voluntarily or subject to the supervision of Government and of the Official Assignee of the liquidator in such acts of insolvency or winding up shall be unable within seven days after notice to him to do so, to show to the reasonable satisfaction of the SBIIMS /Architect that he is able to carry out and fulfil the contract, and to give security therefore if so required by the SBI.

Or if the contractor (whether an individual firm or incorporated Company) shall suffer execution to be issued or shall suffer any payment under this contract to be attached by or on behalf of any of the creditors of the contractor.

Or shall assign or sublet this contract without the consent in writing of the SBIIMS through the Architect/Consultant or shall charge or encumber this contract or any payment due to which may become due to the contractor there under. a) Has abandoned the contract; or

b) Has failed to commence the works, or has without any lawful excuse under these conditions suspended the progress of the works for 14 days after receiving from the SBIIMS through the Architect/Consultant written notice to proceed, or

c) Has failed to proceed with the works with such diligence and failed to make such due progress as would enable the works to be completed within the time agreed upon, or has failed to remove the materials from the site or to pull down and replace work within seven days after written notice from the SBIIMS /SBI through the Architect/ Consultant that the said materials were condemned and rejected by the Architect/ Consultant under these conditions; or has neglected or failed persistently to observe and perform all or any of the acts, matters or things by this contract to be observed and performed by the contractor for seven days after written notice shall have been given to the contractor to observe or perform the same or has to the detriment of good workmanship or in defiance of the SBIIMS /SBI's or Architect's/Consultant's instructions to the contrary subject any part of the contract. Then and in any of said cases the SBIIMS /SBI and or the Architect/Consultant, may notwithstanding any previous waiver, after giving seven days' notice in writing to the contractor, determine the contract, but without thereby affecting the powers of the SBI or the Architect/Consultant or the obligation and liabilities of the contractor the whole of which shall continue in force as fully as if the contract had not been so determined and as if the works subsequently had been executed by or on behalf of the contractor. And, further the SBIIMS /SBI through the Architect/Consultant, their agents or employees may enter upon and take possession of the work and all plants, tools, scaffoldings, materials, sheds, machineries lying upon the premises or on the adjoining lands or roads, use the same by means of their own employees or workmen in carrying on and completing the work or by engaging any other contractors or persons to complete the work and the contractor shall not in any was interrupt or do any act, matter or thing to prevent or hinder such other contractor or other persons employed for completing and finishing or using the materials and plant for the works. When the works shall be completed or as soon thereafter as convenient to the SBIIMS /SBI or the Architect/Consultant shall give a notice in writing to the contractor to remove his surplus materials and plants and should the contractor fail to do so within 14 days after receipt thereof.
by him the SBIIMS. /SBI sell the same by public auction after due publication and shall adjust the amount realized by such auction. The contractor shall have no right to question any of the act of the SBIIMS /SBI incidental to the sale of the materials etc.

35.0 Certificate of Payment

Payment will be made as per terms mentioned in the NIT.

- The prices in the Price Schedule shall be exclusive of GST or any other applicable taxes as may be levied by the Government from time-to-time and the same shall be charged in addition to the applicable rate.
- The SBIIMS/SBI shall make all endeavour to make payments within 20-30 days from the date of the receipt of the invoice, to the Contractor.
- All payments shall be made in Indian Currency by means of an Account Payee Cheques/ RTGS/ NEFT only.
- SBIIMS/SBI shall be entitled to deduct in accordance with Applicable Law, Income Tax or withholding tax or other deductions (as the case may be), from any payments made to the Contractor, and the amount so deducted shall be deemed to be a payment made to the Contractor. SBIIMS/SBI shall provide a certificate certifying the deduction so made.
- No payment shall be made in advance nor will any loan from any bank or financial institution be recommended on the basis of the order of award of work.
- Payment will be made as per the actual work done at site based on final measurement. The measurement will be taken in presence of representatives from both SBI/SBIIMS and contractor.

36.0 Settlement of Disputes and Arbitration

Except where otherwise provided in the contract all questions and disputes to the meaning of the specifications, design, drawings and instructions herein 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 work 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 that he is entitled to any extra payment or compensation in respect of the works over and above the amounts admitted as payable by the authorized person of SBI/SBIIMS or in case the Contractor wants to dispute the validity of any deductions or recoveries made or proposed to be made from the contract or raise any dispute, the Contractor shall forthwith give notice in writing of his claim, or dispute to the respective Circle/Vice President, SBIIMS , of respective Circle Office, within 30 days from the date of disallowance thereof or the date of deduction or recovery. The said notice shall give full particulars of the claim, grounds on which it is based and detailed calculations of the amount claimed and the Vendor shall not be entitled to raise any claim nor shall the SBI/SBIIMS be in any way liable in respect of any claim by the Contractor unless notice of such claim shall have been given by the Contractor to the V.P of respective Circle, SBIIMS, of respective Circle Office, in the manner and within the time as aforesaid. The Vendor shall be deemed to have waived and extinguished all his rights in respect of any claim not notified to the respective Circle/Vice President, SBIIMS, of respective Circle Office, in writing in the manner of the order of award of work.

ii) The Circle/Vice President, SBIIMS, of respective Circle Office, shall give his decision in writing on the claims notified by the Contractor. The Contractor may within 30 days of the receipt of the decision of the Circle/Vice President, SBIIMS of respective Circle Office, submit his claims to theconciliating authority namely the Circle Development Officer of respective Circle /C.O.O. SBIIMS, Head Office, Raheja Chambers, Free Press Journal Marg, Mumbai. for conciliation along with all details and copies of correspondence exchanged between him and the SBIIMS.
iii) If the conciliation proceedings are terminated without settlement of the disputes, the Contractor shall, within a period of 30 days of termination thereof shall give a notice to the concerned Chief General Manager/M.D. & C.E.O. of the SBIIMS for appointment of an arbitrator to adjudicate the notified claims falling which the claims of the Contractor shall be deemed to have been considered absolutely barred and waived.

iv) Except where the decision has become final, binding and conclusive in terms of the contract, all disputes or differences arising out of the notified claims of the Contractor as aforesaid and all claims of the SBI/SBIIMS shall be referred for adjudication through arbitration to the Sole Arbitrator appointed by the Chief General Manager/ M.D. & C.E.O. and who will be an officer not less than the rank of Deputy General Manager of SBI/SBIIMS. If the arbitrator so appointed is unable or unwilling to act or resigns his appointment or vacates his office due to any reason whatsoever another sole arbitrator shall be appointed in the manner aforesaid by the said Chief General Manager /M.D. & C.E.O. of the SBIIMS Such person shall be entitled to proceed with the reference from the stage at which it was let by his predecessor.

It is a term of this contract that the party invoking arbitration shall give a list of disputes with amounts claimed in respect of each dispute along with the notice for appointment of arbitrator.

It is also a term of this contract that no person other than a person appointed by such Chief General Manager/M.D. & C.E.O. of the SBIIMS as aforesaid should act as arbitrator.

The conciliation and arbitration shall be conducted in accordance with the provisions of the Arbitration & Conciliation Act 1996 or any or any accordance modification or re-enactment thereof and the rules made there under.

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

37.0 Water Supply (Not Applicable) 38.0 Power supply

The contractor shall make his own arrangements for power and supply/distribution system for driving plant or machinery for the work and for lighting purpose at his own cost. The cost of running and maintenance of the plants are to be included in his tender prices. He shall pay all fees and charges required for the power supply and include the same in his tendered rates and hold the owner free from all such costs. He has to obtain necessary approvals from the appropriate authorities, if required.

39.0 Treasure Trove etc.

Any treasure trove, coin or object antique which may be found on the site shall be the property of SBI and shall be handed over to the SBIIMS immediately.

40.0 Method of Measurement

Unless otherwise mentioned in the schedule of quantities or in mode of measurement, the measurement will be on the net quantities or work produced in accordance with up to date. Rules laid down by the Bureau of Indian Standards. In the event any dispute/disagreement the decision of the Architect/Consultant shall be final and binding on the contractor.
41.0 Maintenance of Registers

The contractor shall maintain the following registers as per the enclosed format at site of work and should produce the same for inspection of SBIIMS./ SBI/Architect/Consultant whenever desired by them. The contractor shall also maintain the records/registers as required by the local authorities/Government from time to time.

42.0 Force Majeure

42.1 Neither contractor nor SBIIMS shall be considered in default in performance of their obligations if such performance is prevented or delayed by events such as war, hostilities revolution, riots, civil commotion, strikes, lockout, conflagrations, epidemics, accidents, fire, storms, floods, droughts, earthquakes or ordinances or any act of god or for any other cause beyond the reasonable control of the party affected or prevented or delayed. However, a notice is required to be given within 30 days from the happening of the event with complete details, to the other party to the contract, if it is not possible to serve a notice, within the shortest possible period without delay.

42.2 As soon as the cause of force majeure has been removed the party whose ability to perform its obligations has been affected, shall notify the other of such cessation and the actual delay incurred in such affected activity adding necessary evidence in support thereof.

42.3 From the date of occurrence of a case of force majeure obligations of the party affected shall be suspended during the continuance of any inability so caused. With the cause itself and inability resulting there from having been removed, the agreed time of completion of the respective obligations under this agreement shall stand extended by a period equal to the period of delay occasioned by such events.

42.4 Should one or both parties be prevented from fulfilling the contractual obligations by a state of force majeure lasting to a period of 6 months or more the two parties shall mutually decide regarding the future execution of this agreement.

43.0 Local Laws, Acts, Regulations

The contractor shall strictly adhere to all prevailing labour laws inclusive of contract labour (regulation and abolition act of 1970) and other safety regulations. The contractor shall comply with the provision of all labour legislation including the latest requirements of all the Acts, laws, any other regulations that are applicable to the execution of the project.


vii) Personal Injuries (Compensation Insurance) Act 1963 and any other modifications

viii) Employees’ Provident Fund and Miscellaneous Provisions Act 1952 and amendment thereof
ix) Shop and Establishment Act ix) Any other Act or enactment relating thereto and rules framed there under from

time to time.

44.0 SAFETY CODE:

Safety as per annexure given should be followed.
45.0 Accidents

The contractor shall immediately on occurrence of any accident at or about the site or in connection with the execution of the work report such accident to the Architect/Consultant. The contractor shall also report immediately to the competent authority whenever such report is required to be lodged by the law and take appropriate actions thereof.

SPECIAL CONDITION OF CONTRACT

The required shutdown for executing the above works shall be obtained from the CDC in charge and all precautionary measures have to be taken to avoid shutdowns and mishaps as the panels are very critical and live. Further in view of the criticality of the CDC power, shutdown may be given only in the nights and holidays and the contractor shall plan and mobilize the men and material accordingly for smooth execution of the work in coordination with the other agencies.

LETTER OF DECLARATION

To,

SBI INFRA MANAGEMENT SOLUTIONS PVT LTD.
Circle Office, 1st Floor, ‘C’ wing State Bank Global IT Center,
Plot no.8, 9, 10, Sector 11, CBD Belapur, Navi Mumbai 400614.

Dear Sir,

TENDER FOR (1) SUPPLY OF SPARES FOR 33 KV SF6 BREAKER IN HT PANEL OF 33KV KV SUBSTATION (2) SPARES LT BREAKERS (3) SITC OF CAPACITORS AND APFC RELAY (4) SERVICING OF 1000 A BREAKERS AND MISC WORKS AT CDC

Having examined the terms & conditions, drawings, specifications, design relating to the works specified in the memorandum hereinafter set out and having visited and examined the site of the works specified in the said memorandum and having acquired the requisite information relating thereto and affecting the quotation, I/We hereby offer to execute the works specified in the said memorandum within the time specified in the said memorandum on the item rate basis mentioned in the attached schedule and in accordance in all respect with the specifications, design, drawings and instructions in writing referred to in conditions of Tender, the articles of agreement, conditions of contract and with such conditions so far as they may be applicable.

MEMORANDUM

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<tr>
<th>(a)</th>
<th>Description of work</th>
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<td>TENDER FOR (1) SUPPLY OF SPARES FOR 33 KV SF6 BREAKER IN HT PANEL OF 33KV KV SUBSTATION (2) SPARES LT BREAKERS (3) SITC OF CAPACITORS AND APFC RELAY (4) SERVICING OF 1000 A BREAKERS AND MISC WORKS AT CDC</td>
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<th>(b)</th>
<th>Earnest Money</th>
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<tr>
<td></td>
<td>Rs. 12,500/- (Rupees Twelve Thousand Five Hundred Only) by means of Demand Draft / Pay Order from any scheduled Nationalized Bank drawn in favour of “SBI Infra Management Solutions Pvt. Ltd.” and payable in “Mumbai”</td>
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<th>Time allowed for completion of work from the date of issue of work order.</th>
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<td>As per NIT from the date of commencement as per tender.</td>
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Should this tender be accepted, I/we hereby agree to abide by and fulfil the terms and provisions of the said conditions of Contract annexed hereto so far as they may be applicable or in default thereof to forfeit and pay to SBIIM, the amount mentioned in the said conditions.

I/we have deposited Demand Draft / Banker’s Cheque / FDR for a sum of **Rs. 12,500/- (Rupees Twelve Thousand Five Hundred Only)** as Earnest money deposit with the SBI Infra Management Solutions Pvt. Ltd. Should I/we do fail to execute the contract when called upon to do so, I/we hereby agree that this sum shall be forfeited by me/us to SBI Infra Management Solutions Pvt. Ltd.

We understand that as per terms of this tender, the SBIIMS may consider accepting our tender in part or whole or may entrust the work of various buildings proposed (i.e. Institute Building, Staff Qtrs. And Director’s Bungalow) in phases. We, therefore, undertake that we shall not raise any claim / compensation in the eventuality of Bank deciding to drop any of the building / buildings from the scope of work of this tender at any stage during the contract period. Further, we also undertake to execute the work entrusted to us in phases on our approved rates and within the stipulated time limit without any extra claim for price escalation.

We, hereby, also undertake that, we will not raise any claim for any escalation in the prices of any of the material during the currency of contract/execution/completion period.

Yours faithfully,

Signature of contractor

With Seal

**SAFETY CODE SAFETY MEASURES**

**AT SITE:**

1. All personnel at site should be provided with Helmets and Safety Boots with some Identification Mark. Visitors also should be provided with Helmets. It should be ensured that these are used properly.

2. First Aid Box should be kept at site with all requisite materials.

3. No one should be allowed to inspect / work at a height without Safety Belt.

4. Suitable scaffolds should be provided for workmen for all Works that cannot safely be done from the ground, or from solid construction except such short period Work as can be done safely from ladders. When a ladder is used an extra Mazdoor shall be engaged for holding the ladder and if the ladder is used for carrying materials as well as suitable footholds and handholds shall be provided on the ladder and the ladder shall be given an inclination not steeper than ¼ to 1 (¼ horizontal and 1 vertical).

5. Scaffolding or staging more than 3.5 meters above the ground or floors, swung or suspended from an overhead support or erected with stationary support shall have a guard rail properly attached, bolted, braced and otherwise secured at least 1 Meter high above the floor or platform of such scaffolding or staging and extending along the entire length of the outside and ends thereof with only such openings as may be necessary for the delivery of materials. Such scaffolding or staging shall be so fastened as to prevent it from swaying from the building or structure.

6. Working platforms, Gangways, and Stairways should be so constructed that they do not sag unduly or unequally, and if the height of the platform or the Gangway or the Stairway is more than 3-5 Meters
above ground level or floor level they should be closely boarded, should have adequate width and should be suitably fenced, as described.

7. Every opening in the floor of a building or in a working platform be provided with suitable means to prevent the fall of persons or materials by providing suitable fencing or railing whose minimum height shall be 1 Meter.

8. Safe means of access shall be provided to all working platforms and other working places. Every ladder shall be securely fixed. No portable single ladder shall be over 9 Meters in length while the width between side rails in rung ladder shall in no case be less than 30cms for ladder upto and including Meters in length. For longer ladders this width should be increased at least 6mm for each additional 30 cms. Uniform step spacing shall not exceed 30 cms.

9. Adequate precautions shall be taken to prevent danger from electrical equipment. For electrical on line works gloves, rubber mats, and rubber shoes shall be used.

10. All trenches 1.2 Meters or more in depth shall at all times be supplied with at least one ladder for each 30 Meters length or fraction thereof. Ladder shall be extended from bottom of the trench to at least 1 Meter above the surface of the ground. The sides of the trenches, which are 1.5 Meters or more in depth shall be stepped back to give suitable slope, or securely held by timber bracing, so as to avoid the danger of sides collapsing. The excavated materials 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 cuttings shall be done from top to bottom. Under no circumstances undermining or under cutting shall be done.

11. Before any demolition work is commenced and also during the process of the work:-

a) All roads and open areas adjacent to the Work Site shall either be closed or suitably protected;

b) No electrical cable or apparatus which is liable to be a source of danger over a cable or apparatus used by the operator shall remain electrically charged.

c) All practical steps shall be taken to prevent danger to persons employed from risk or fire or explosion or flooding. No floor, roof or other part of the building shall be so over-loaded with debris or materials as to render it unsafe.

d) All necessary personal safety equipment as considered adequate by the Site Engineer should be kept available for the use of the persons employed on the Site and maintained in a condition suitable for immediate use; and the Contractor should take adequate steps to ensure proper use of equipment by those concerned.

e) Workers employed on mixing Asphal tic materials, cement and lime mortars shall be provided with protective footwear and protective goggles.

f) Those engaged in white washing and mixing or stacking of cement bags or any materials which is injurious to the eyes shall be provided with protective goggles.

g) Those engaged in welding works shall be provided with Welder’s protective eye-shields.

h) Stone breakers shall be provided with protective goggles and protective clothing and seated at sufficiently safe intervals.

i) When workers are employed in sewers and manholes, which are in use, the Contractor shall ensure that the manhole covers are opened and are ventilated at least for an hour before the workers are allowed to get into the manholes and the manholes so opened shall be cordoned off with suitable railing and provided with warning signals and boards to prevent accident to the Public.
12. Use of hoisting machines and tackle including their attachments, anchorage and support shall conform to the following standard or conditions:

a) These shall be of good mechanical construction, sound material and adequate strength and free from patent defect and shall be kept in good repairs and in good working order.

b) Every rope used in hoisting or lowering materials or as a means of suspension shall be of durable quality and adequate strength, and free from patent defects.

c) Every crane driver or hoisting appliance operator shall be properly qualified and no person under the age of 21 years should be in-charge of any hoisting machine including any scaffold, winch or give signals to the operator.

d) In case of every hoisting machine and of every chain ring hook, shackle swivel and pulley block used in hoisting or lowering or as means of suspension the safe working load shall be ascertained by adequate means.

e) Every hoisting machine and all gear referred to above shall be plainly marked with the safe working load. In case of hoisting machine having a variable safe working load, each safe working load of the conditions under which it is applicable shall be clearly indicated. No part of any machine or of any gear referred to above in this paragraph shall be loaded beyond the safe working load except for the purpose of testing.

f) Motor, Gearing, Transmission, Electric wiring and other dangerous parts of hoisting appliances should be provided with efficient safeguards, hoisting appliances should be provided with such means as will reduce to the minimum the risk of accidental descent of the load, adequate precautions should be taken to reduce to the minimum the risk of any part of a suspended load becoming accidentally displaced.

g) When workers are employed on electrical installation, which are already energized, insulating mats, wearing apparel such as gloves, rubber footwear etc.

Address: _________________________

Signature of Tenderer: _________________________

Date: _________________________

FIRE SAFETY

I. Cutting / drilling machine and other electrically operated equipment used at site shall be plugged into correctly rated electrical outlets.

ii. Only ISI marked 3 pin plug and other appliances and equipment shall be used.

iii. Electrical power cables/wires used shall not have any joints and shall be properly rated.

iv. All electrical appliances i.e. welding, drilling, cutting machine etc. shall be safely and securely earthed to prevent leakage current while in operation.

v. Before commencing the welding work, fire section shall be informed and required precautions should be taken.

vi. Two buckets of water, sand and a fire cloth of suitable size shall be kept in an easily accessible area on the site.

vii. Fire extinguishers recommended by fire officers shall be kept on the site.

viii. Used paint drums shall be stored in specified store only after closing them properly.

ix. Personal protective equipment 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.

x. 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.
xi. None of the passages near lift lobby and staircases shall be used for stacking / dumping any kind of materials/waste.

xii. Any debris/ waste generated from the work shall be collected on daily basis, removed from site and stored at the designated place in proper manner.

xiii. Battery operated emergency light/torches shall be provided by the contractor to the workmen while working beyond office hours.

Place: 
Date: 
SIGNATURE AND SEAL 
OF THE CONTRACTOR

TECHNICAL SPECIFICATIONS FOR ELECTRICAL INSTALLATION WORK

SCOPE OF WORK:

The Electrical Contractor’s scope of work covers the following:

Supply, testing prior to installation, testing after installation of electric meter/s and other installation and commissioning the complete Electrical Installation work associated with power supply system, lighting and domestic appliances, concealed wiring network as directed, earthing and lightning protection system, installing Heavy Gauge PVC / Black enamelled H.G. threaded conduits suitable for heavy mechanical stresses, concealed / open in slabs, walls / shafts, as required for Electrical wiring, telephones network and TV cable system for distribution in flats, basement, stilts etc., installing telephone and T.V. outlet boxes as required including fish wire. Telephone wires and co-axial cable for T.V. outlets from the shafts as directed, alternate Emergency Power Panel including stand-by Diesel Generator Set and power supply network from this alternate stand-by D.G.Set, installation of fixtures and fittings issued by the Client or as ordered in B.O.Q. after testing, including holding their safe custody until handing over of the installation to the Clients, power supply to Domestic water pumps, fire pumps and any other related works for completion of the Building for its occupancy, Liaising with Electric Supply Company and / or Concerned Authorities and getting the installation approved by them and installation of electric meter/s is also included in the scope of Contractors work.

DRAWINGS, SPECIFICATION AND DEVIATIONS:

The drawings and specification lay down minimum standards of equipment and workmanship. Should the tenderer wish to depart from the provision of the specification and drawings either on account of manufacturing practice or for any other reasons, he should clearly draw attention in his tender to the proposed points of departure and submit such information, drawings and specifications as will enable the relative merits of the deviations to be fully appreciated. In the absence of such information on the deviations, it will be deemed that the tenderer is fully satisfied with intents of the specification and drawings and their compliance with the statutory requirements, all the relevant I.S.Codes, I.E. Rules, Local Codes as governed by the Concerned Electric Supply Company, N.E.C. Electrical Inspector, etc.

The Contractor shall prepare fabrication and working drawings as well as concealed / open conduits layout drawings which will be got approved from the Architect / Clients / Consultants prior to execution and all work shall be to the approved working drawings. Approval of these drawings does not relieve the Contractor of his responsibility to meet the intents of specifications. All such drawings for approval are to be submitted in triplicate to the Owner / Consultants / Architects.

After virtually completing the work, the Contractors should submit AS BUILT drawings of all systems in triplicate along with his Final Bill.
**SCOPE**: -

The Scope of work shall cover the supply, installation and commissioning of all the power panels, incorporating circuit breakers, switch fuse units, busbars, interconnections, earthing etc., meeting the requirements shown in equipment schedule and the drawings.

Entire works shall comply with the latest issue of following standards, rules, codes of practice, unless specified otherwise in the specific requirements.

**STANDARDS**: -

The following standards and rules shall be applicable:-

**IS : 2516**: Specification for A.C. circuit breakers.

**IS : 4047**: Specification for heavy duty air breaker switch gear and fuses for Voltage not exceeding 1000 V.

**IS : 3072**: Code of practice for installation and Maintenance of Switch gear.

**IS : 3106**: Code of practice for selection, installation and maintenance of fuses (Voltage not exceeding 650 V).

**IS : 4237**: General requirements for switch gear and control gear for voltage not exceeding 1000 V.

**IS : 2607**: Air break isolators for voltage not exceeding 1000 V.

**IS : 8623**: Specification for factory built assemblies of switch gear and Control gear for voltage upto and including 1000 V. A.C. and 1200 V. D.C.

**IS : 375**: Marking arrangement of switch gear bus-bars main connections and auxiliary wiring.

**IS : 694**: PVC insulated copper wires for 650 / 1100 Volts grade.

**IS : 1554**: PVC insulated (heavy duty) electric cables for working voltages upto and including 1100 Volts.

**IS : 3961**: Recommended current rating for cables.

**IS : 732**: Codes of practice for electrical wiring.

**IS : 2274**: Installation (system voltage not exceeding 650 Volts).

**IS : 12360**: Voltage bands for electrical installation.

**IS : 2309**: Protection of building and allied structures against lighting.

**IS : 4648**: Guide for electrical layout in Residential Building.

**IS : 1646**: Fire Safety of Buildings.

IS : 3202 :

IS : 4047 :
Climate proofing of electrical equipment.

IS : 2147 :
Heavy duty air-break switches and

IS : 4064 :
Composite units of air-break switches.
and fuses for voltages not exceeding
IS : 4237 :
1000 Volts.

IS : 6875 :

IS : 2208 :
HRC cartridge fuse domestic and similar purpose.

IS : 5133(I) :
Boxes for enclosures of electrical accessories.

IS : 3854 :
Heavy duty air-break switches and

IS : 3452 :
Switches for domestic and similar purpose.

IS : 371 :
Three terminals ceiling roses.

IS : 4615 :

IS : 1293 :
Switch socket outlet.

IS : 4160 :

IS : 4343 :

IS : 8828 :
Miniature air-break circuit breaker for A.C. circuits.

IS : 2312 :
Exhaust Fans.

IS : 374 :
Ceiling fans and regulators.
IS : 2082 :

IS : 3725 :
Storage types electrical water heaters.

IS : 2266 :
Call bells and buzzers for indoor use.

IS : 1534 :

IS : 1717 :

IS : 1913 :
Luminaires, ballasts, maintenance and safety requirements.

IS : 10322 :

IS : 2713 :
Tubular poles for overhead power lines & street lights.
IS : 2551 : Danger notice plates.
IS : 2509 : Rigid PVC conduits for electrical wiring. IS : 3419 :
IS : 9537, Part II : Rigid M.S. conduits.
IS : 3480 : Flexible steel conduits for electrical wiring.
TD-S-113-18 Code of practice by India Telephone – Department.
ITD-S/WS- 144C, ) Insulation and conductor resistance of telephone BS : 6746 :
) wires and cables.
IS : 4984 : HDPE pipe and fittings.
ITD-S/WS- 113B, ) PVC insulated, colour coded, twisted into pairs, BS : 6746 :
) laid-up taped and overall.
CBL : 7000 :
BS : 6746 : PVC sheathed telephone cables.
IS : 1554 :
Codes of practise of Indian Standards or relevant British Standards in the absence of Indian Electricity Act and Rules National Electrical Code, Local Regulation prevalent in Maharashtra or the state which work-site exists, Regulations of Fire Insurance – Tariff Advisory Committee, Regulations and Standards of Mahanagar Telephone Nigam Ltd., etc.

SYSTEM DETAILS:

Entire electrification work and its associated accessories shall be designed for the system data given hereunder.

Rated System Voltage : 415 Volts (+/−) 10%, 3 – Phase, 4 Wire.
Rated System Frequency : 50 Hz (+/−) 3%
Rated System Fault level : 35 MVA at 415 Volts symmetrical.
Highest System Voltage : 456 Volts r.m.s. line to line at 415 Volts.
Rated Lighting Control System Voltage : 250 Volts, 1 – Phase, 2 Wire and earth, 50 Hz
System Earthing : Effectively earthed neutral.
All material and its associated accessories shall also be designed to withstand for the desired services due to fluctuations in supply voltage and variation in frequency as permissible under Indian Electricity Act and Rules.

**Meter Room Works:**

150 mm. dia. R.C.C. pipe/s shall be provided for laying of Electric Supply Company’s power cables from outside of plinth protection up to a chamber in the meter room. In case the distance from the outer edge of the plinth protection up to the chamber in meter room is more than 2 meters additional pipes shall be laid and all the pipes shall be properly laid and jointed with collars etc. the pipe at the end of the plinth protection shall at the level of 600 mm. below the ground level.

One end of the R.C.C. pipe inside the meter room shall open in a brick masonry chamber of size 300 mm. x 600 mm. and 300 mm. deep.

One no. 8 SWG G.I. Wire shall be laid in the R.C.C. pipe for pulling the power cables.

One / two / three / four light point/s shall be provided in the meter room, the control switches for which shall be near the door but inside, from the wiring provided for the staircase lights. A teak wood plank of 20 mm. thick and varnished (with two coats) on all sides shall be provided in the meter room for fixing of Electric Supply Co’s Bus System, Cutouts, I.C. cutouts for individual meters and ELMCBs for flats, cable end box to terminate main incoming supply cables shall be provided for the S.F. unit with suitable cable glands. On the outgoing side of S.F. unit a 3 phase and neutral busbar chamber shall be provided. The busbars rating shall be 50% more than the capacity of the S.F.U. controlling it.

The lead wired to individual meters and cutouts shall be taken out from this busbar chamber. Each load distribution on all phases and the proper colour code is to be observed for lead wire. Lugs shall be crimped at both ends of these lead wires for termination.

Wherever the energy meters are to be fixed in the wooden meter box / cabinet, the same shall be made out of 50 mm. x 25 mm. wooden frame and 20 mm. thick wooden planks on all sides and metal grill shall be fixed on the front door (side). The door shall have locking arrangement and lock with keys shall be provided. The meter box shall be fixed to the wall and before polishing / painting, anti-termite treatment shall be given to it. Polishing / painting, has to be done to all the sides of the box / cabinet.

The meter box shall accommodate main S.F.U. for terminating incoming cable, T.P.N. Bus chamber and other switch gears like I.C. cut-outs main switches, ELMCBs energy meters etc. All meters, switches etc., shall be interconnected with wires of size suitable for the connected load / meter capacities as directed.

All wiring in the meter room related to metering etc. shall be carried out with single core PVC stranded copper wires of adequate size, fixed on the T.W. Plank with brass clips and brass takes. Earth wire shall be provided with the lead wires for connecting earth terminates of meters, main switches etc.

The Contractor shall submit the layout drawing of the meter room wherein all the above items shall be shown. This layout shall be got approved by the Contractor from the Clients as well as from the Electric Supply Co. In the meter room, outgoing from the meters will be taken to the main switch, ELMCB, the outgoing from which either cables or copper wires, as specified, will lead to the respective destinations as specified.

All codes and standards mean the latest, wherever not specified otherwise, the installation shall generally follow the I.S. codes of practice of the relevant Standard Codes of Practice in the absence of corresponding Indian Standard.

**Switch fuse units and disconnects:**

Switch fuse units shall have quick-make, quick-break silver plated preferable double break contacts, with operating mechanism suitable for rotary operation in the case of cubical mounting. All switches shall be rated according to equipment schedule or drawings, and shall withstand the system prospective fault current let through. Cam operated rotary switches with higher rating S.F. units shall be heavy duty type conforming to IS : 4047.
Fuses shall be HRC cartridge type conforming to IS:2208 with a breaking capacity corresponding to system fault level. Fuses shall be line type with visible indication. Screw type dazed fuses are not acceptable for any rating.

All disconnects shall consist of switch units quick-make, quake-break type with silver plated contacts. The switches shall preferably have double breaks. All switches shall be mounted in sheet steel enclosures, which in turn is mounted on suitable angle iron frame work. In wet location switches shall have cast iron enclosures. Disconnects shall have minimum breaking capacity.

**Cubical Boards**:

All boards shall be combination of 14 & 16 SWG sheet steel, free standing, extensible totally enclosed. Dust-tight, vermin-proof cubical, flush dead front and modular construction suitable for 3 phase, 415 V, 4 Wire, 50 Hz system. All boards shall be accessible from the front for the maintenance of switches, Bus-bars, cable terminations, meters etc. Cables shall be capable of entering the board both from top as well as from bottom. All panels shall be machine pressed, with punched openings for meters etc. All sheet steel shall be rust inhibited through a process of degreasing, acid pickling, phosphating etc. The panels shall be finished with two coats of synthetic enamel paint of approved colour over one coat of red oxide primer. Engraved plastic labels shall be provided indicating the feeder details including the size of the incoming / outgoing cables, capacity and danger signs.

**Earthing**:

All switches panels shall be provided with an earth bar as specified earthing of the switch boards shall be through the equipment earthing system provided in the building.

All meters shall be calibrated and tested through secondary injection tests.

All field tests shall be witnessed by Clients representatives, lost certificates shall be furnished by the Contractors.

**Installation**:

All panels shall be supported on MS Channels incorporated in the panel during the fabricating. All such supports shall be coated with primer followed by two coats of approved synthetic enamel colour paint. After completion of the work, all panels shall be touched up for damaged painting. All work shall be carried out as per IS: codes, I.E. Rules, NEC.

All panels shall be meggred at phase and phase to Neutral using 1000 V megger with all outgoing feeders in closed position. The megger value should not be less than 2.50 mega ohms between phases and 1.50 mega ohms between phase and neutral.

Fabrication drawings of all panels shall be submitted by the Contractor to the Clients in triplicate and they shall proceed for fabrication after Clients approval.

**Testing and Inspection**:

All switch boards shall be factory inspected before finishing and dispatch, with the Clients representatives.

Certificate for all routine and type tests for circuit-breakers in accordance with IS:25161963 shall be furnished from the manufactures. In addition, all panels shall be meggred phase to phase and phase to Neutral, using 1000 V megger with all the switchgear in closed position. The megger value should not be less than 2.50 mega ohms between phases and 1.50 mega ohms between phase and Neutral.

**Distribution Board**:

**Scope**:
The scope of work shall cover supply, installation, testing and commissioning of lighting and power distribution boards. Associated civil work required for the erection of the D.B.S. is also included in the scope of this contract.

**Standards**

The following standards and rules shall be applicable:

1. **IS : 2675 – 1983**: Enclosed distribution fuse boards and cut-outs for Voltage not exceeding 1000 V
4. **IS : 2607 – 1976**: Air-break isolators for Voltage not exceeding 1000 V.
5. **IS : 9926 – 1981**: Fuse wire used in rewirable type Elec. fuses up to 650 V.
6. Indian Electricity Act 1910 and Amendments issued there under.

All codes and standard mean the latest, where not specified otherwise, the installation shall generally follow Indian Standards Codes of Practice and the relevant British Codes of Practice in the absence of Indian Standard.

Distribution boards along with the controlling M.C.B.s, Fuse or Isolator as shown be fixed in an M.S. Box, suitable for recessed mounting and in wall. **D.B.S. should be factory made from the standard “approved” manufactures and not fabricated by the tenderer. D.B.S. shall be made of 16 SWG sheet duly rust inhibited through a process of degreasing, acid pickling, phosphating and spray painted or powder coated to an approved colour over a coat of red oxide primer. Three phase boards shall have phase barriers and wire channel on three sides. Neutral bars shall be solid tinned copper bars with tapped holes and chase headed screws. For three phase D.B.S. 3 Nos. independent neutral bars shall be provided.**

There shall be earth busbar of adequate size provided separately to terminate all outgoing circuit earth wire conduit knockouts shall be provided as required / shown on drawings and entire board shall be rendered dust and vermin proof and shall have conduit knockout entry.

MCBs shall have quick make and break non-welding self-wiping alloy contacts both on the manual and automatic operation. Each pole of the breaker shall be provided with inverse time thermal overload and instantaneous over current tripping elements, with tripping must be on all the poles and operating handle must be common. Breakers must conform to MBS 3871 with facility for locking in off position. Pressure clamp terminals for stranded / solid conductor insertion are acceptable upto 4 sq.mm. aluminium of 2.5 sq.m.. copper conductors and for higher conductor sizes the terminal shall be suitably shrouded. Wherever MCB isolators are specified they are without tripping elements.

Distribution Boards shall have MCBs as shown on the drawing / schedule. **D.B.S. shall meet with the requirements of IS:2675 and marking arrangement of Bus-bars shall be accordance with IS: 375, Bus-bars shall be suitable for incomer switch rating and sized for a temperature rise of 35 Centigrade over the ambient temp. circuit diagram indicating the distribution shall be pasted on the inside of the DB s instructed. One earthing terminal for single phase and two terminals for 3 phase D.B.S. shall be provided with an earth strip connecting these earthing studs / terminals and the outgoing ECC earth bar. All MCBs shall be with a minimum short circuit rating of 10 Kamps. All outgoing feeders shall terminate or by means of insulated single conductor copper wires.**

All termination shall be carried out by using crimping type ferrules or reducer type terminal lugs.
**Installation and Testing:**

All distribution boards shall be mounted as directed either recessed or on adequate size of angle iron frame work in case they are to surface mounted. All mounting frames shall be coated with one coat of red oxide primer followed by two coats of synthetic enamel paint of approved colour, after installation. All D.B.S. shall be touched up for damaged painting. All work shall be carried out as per NEC.

All boards shall be meggered phase to phase and neutral, using 1000 V meggger with all switchgear in close position. The megger value should be not less than 2.50 mega ohms between and 1.50 mega ohms between phase and neutral.

**E.L.C.B. (Earth Leakage Circuit Breaker):**

The E.L.C.B.s shall have leakage sensitivity of 30 ma / 30 Secs and shall have a short circuit current rating equal to that of MCB i.e. mini. of 10 KA. Current rating and No. of poles shall be as described in the B.O.Q. / Drawing. A test push knob facility shall be provided to periodically test the operation of E.L.C.B.s.

**Medium Voltage Cabling:**

**Scope:**

The scope of work shall be cover supply, laying, connecting, testing and commissioning of medium voltage power cables inclusive of all labour.

**Standards:**

The following standards and rules shall be applicable:

1) IS : 1554 (P-I) : PVC insulated electric cables (heavy duty)
2) IS : 1753 : Aluminium conductors electric cables (heavy duty)
3) IS : 3961 : Recommended current ratings for cables.
4) Indian Electricity Act and Rules.
5) NEC.

All codes and standards mean the latest. Whereas not specified otherwise, the installation shall generally follow Indian Standard Codes of Practice and the relevant British Codes of Practice in the absence of Indian Standard.

**Cables:**

All cables shall be 1100 Volt Grade, PVC insulated and extruded inner sheath with or without steel armouring as specified and with an outer PVC Protective sheet. Cables shall have high conductivity stranded aluminium or copper conductor as specified. Cores shall be colour coded as per Indian Standard.

All cables shall be new without any kind of visible damages. The manufactures name, insulating material, conductor size, voltage class and ISI mark shall be embossed on the surface of the cable at every 600 mm. centres.

**Installation:**

Cables shall be laid in the routes marked in the drawings, where the route is not marked, the Contractor shall mark it out on the drawing and also on the sire and obtain the approval of the Architect / Consultant before laying the cable. Procurement of cables shall be on the basis of actual site measurements and the quantities.
shown on the schedule of work shall be regarded as a guide. Payment shall be restricted to the quantity of cable installed (and measured jointly as per unit stated) at site. Cables rising indoors shall laid on walls, ceiling, shafts or trenches. Cables shall be fixed to walls or ceiling with supports saddles. Cables trays will be used wherever directed / necessary. All supports shall be at not more than 500 mm. apart. Plastic identification tags shall be provided at every 20 M in general at every floor in the rising shaft in particulars. Oversize M.S. Sleeves shall be used for cables passing through the walls. Cables shall be bent to a radius not less than 12 times the recommendations, whichever is higher, in case of direct buried cables the cable route shall be parallel or perpendicular to roadways, walls cushion to provide cushion against abrasion. Width of excavated trenches over sand cushion shall be covered with a mini. of excavated trenches will be as per drawings or as directed. The laid cables in protective layer of bricks on both sides and top. Backfill of the trench shall be with a minimum earth cover of 600 mm. to be properly rammed and consolidated. At road / pathway crossings cables have a pulled through R.C.C. pipe of 150 mm. dia. to be laid for each cable by the Electrical Contractor. A minimum of 100 mm. thick concrete bed has to be spread before laying the RCC pipes, topped by 150 mm. thick concrete to avoid any damage to the RCC pipe.

The cables shall be provided with cable route markers at every 20 meters and also at every in the direction of the route.

All cables shall be full runs from panel to panel without any joints or splices. A minimum of Eight (8) M loop shall be provided at each end of every cable. Cables shall be identified at end terminations indicating the feeder number and the Panel / Distribution Board from where it is being laid. All cable terminations shall have tinned copper compression lugs. Cable terminations shall have necessary Brass glands. The Brass glands and armouring shall be earthed at both the ends of the cable. The end terminations shall insulated with a minimum of six half lapped layers of PVC taps.

**Testing:**

MV cables shall be tested before and upon installations with a 1000 V meggar and the following established.

1) Continuity on all phases.
2) Insulation Resistance
   a) Between conductors.
   b) Between all conductors and ground.

All test reading shall be recorded. Cables will be charges only after the above reading are found to be satisfactory.

**Mode of Measurement:**

Cables will be measured on the basis of unit length and shall include the following :

1) Cables, clamps, supports and spacers.
2) Installation, testing and commissioning.
3) Cable marking.

Each cable termination will be measured as one unit for payment.

1) Cable glands, lugs, bolts, nuts.
2) All joining materials.
3) Installation, testing and commissioning.
4) Earthing of glands and armour.

Cables buried underground will be measured on the basis of unit length and paid for unit rates and shall includes.

1) Excavated and backfilling as described above.
2) Sand for cushioning and protective bricks.
3) Cable route markers.
**C.T.S. Wiring:**

**Scope:**

The scope of work shall cover supply, installation, testing and commissioning of all C.T.S. wiring work. All size of teak-wood battens should be varnished before fixing on the wall. The batten should be from good teakwood battens and should not have any knot in between, varnishing of batten is to be done on all sides. As far as possible overlapping of the battens should be avoided by providing the bridge. The wires should be fixed with appropriate types of tinned brass joint clips at every 2” to 2.5 distance. The teak-wood wires shall be fixed nettle fold screws and not by nails. Earthing wires shall be stranded copper conductor with Green / Yellow – Green colour insulation of 440 V Grade.

**Conduits Wiring:**

**Scope:**

The scope of work shall cover supply, installation, testing and commissioning of all conduit wiring. All works shall be carried out as per NEC.

**Standards:**

The following standards and rules shall be applicable:

1) IS : 732 : Code of Practice for Electrical Wiring installation (System voltage not exceeding 650 V)
2) IS : 1646 : Code of Practice for fire safety of buildings (General Electrical installation (Part II)).
3) IS : 9537 : Rigid steel conducts for Electrical wiring (Part II)
4) IS : 2667 : Fittings for rigid steel conducts for Electrical Wiring.
5) IS : 3480 : Flexible steel conduits for Electrical Wiring.
6) IS : 3837 : Accessories for rigid steel conduit for Electrical Wiring.
7) IS : 694 : PVC insulated cables.
8) IS : 9537 : Rigid non-metallic conduits for Electrical Wiring.
9) IS : 6946 : Flexible (pliable) non-metallic conduits for Electrical Wiring.
10) IS : 1293 : 3 – Pin plugs and sockets.
11) IS : 8130 : Conductors for insulated electric cables and flexible cords.
12) IS : 5133 : For switch boxes and other conduit accessories.
13) IS : 6946 : Indian Electricity Act 1910 and Amendments issued thereunder.

*Signature and stamp of contractor*
14) Regulations for the electrical equipment in buildings issued by the Mumbai Regional Council of Insurance Association of India.

15) NEC.

Rigid and Flexible conduits.

All conduits shall be heavy gauge black enamelled mild steel or galvanised steel or as specified in schedule of works. Conduits shall be with ISI mark.

Flexible conduits shall be formed from a conditions length of spirally wound inter locked strip steel with a fused zinc coating on both sides. The conduit shall be terminated in brass adaptors.

**Accessories**

Conduit fittings such as bends, elbows, reducers, chase, nipples, split couplings, plug, etc., shall be specifically designed and manufactured for their particular application. All conduit fittings shall conform to IS : 2667 – 1964 and IS : 3887 – 1966. **Conduit bends and elbows shall not be used.** Instead, wherever bending is required, the conduit shall be properly bent using the bending machine. Only in unavoidable conditions, use of bends and elbows may be permitted.

Cast iron round junction boxes used for light and fan points shall be normally 75 mm. deep in case of slabs and 50 mm. deep in case of walls. Bottom of the junction boxes shall be flush with wall / bottom of the slab. The fabricated junction boxes shall be 1.60 mm. thick and of suitable dimension and minimum 75 mm. deep. Other dimensions shall be as per IS:5133. These boxes may be used for light / bell point in walls. Theses boxes shall be galvanised M.S. boxes. Checkouts shall be used on either side of the box for conduits. At conduit entry, bushes shall be provided to avoid cutting of insulation of wires.

**Notes of Concealed Conduiting:**

1) Routing of concealed conduits Location of conduit drop or rise in walls, location of junction boxes, vertical surface conduit runs in shafts etc. Wherever shown on the drawing is schematic only. Adjustments / Re-routing of the same shall be carried out by the Contractor to suit layout of lighting fixtures, ceiling fans, receptacles, telephone outlets, TV outlets room switch boards etc., shown on relevant drawings and to suit site conditions.

2) Passing of embedded conduit through columns for any reason whatsoever is totally prohibited, except in any of the really unavoidable situation, where Structural Consultants express permission in wiring will be a must before so doing.

3) Cross over of embedded conduit in slab, except at locations unavoidable should not be done, in case of cross-over of conduits where it is a must, the contractor shall obtain the specific permission for the location of cross-overs from the Consultant prior to concerning the slab.

4) Conduits droppers in columns shall not be permitted.

5) Concealed conduit running along the length of beam is to be avoided. Suitable conduit sleeves shall be provided in lintel beams where conduit droppers are required to be extended through such beams.

6) Standard typical details shall be referred for concealed conduit routing through sunk slab through staircase, walls, etc., and for provision of junction boxes, wherever required.

7) Conduit routing at Lift Machine Rooms and at Lift Wells shall be installed in consultation with Elevator Contractor.
8) The Contractor shall select the routes of surface conducting in such a way that embedded conduits laid during civil works need not be punctured. In case embedded conduits get damaged, it shall be the responsibility of the Contractor to rectify the defective work at his own cost.

9) All conduit shall be of 25 mm. nominal bore except specified otherwise.

10) Bending radius of concealed conduit shall not be less than ten times the outside diameter of the conduit. Maximum distance between two junction boxes shall not be more than four meters.

11) Cast iron junction box for fan hooks shall be at appropriate location so as to avoid interference.

12) Conduit sleeves with threaded projections (50 mm.) shall be provided at suitable locations in Auxiliary Beams, Lintel Beams to facilitate extension of conduits in walls.

13) Junction boxes, conduits etc., shall be suitably tied to reinforcing bars in slabs to avoid displacement and misalignment. Minimum 25 mm. thick concrete cover around conduit / junction box shall be ensured.

14) To facilities pulling of wires / cables, pull-out wires shall be provided in each length of conduit to be concealed. Also all open faces of junction boxes and open ends of conduits shall be suitably plugged or covered by the Contractor with care to avoid ingress of stones / sand / concrete mix etc. into junction boxes / conduits during pouring of concrete. Similar care must be taken at the locations where couplers etc., are used for extension of conduit.

15) During civil works, Contractor shall arrange to provide conduit sleeves (of adequate size and adequate in number) at ceiling level or walls for the passage of surface – conduits so as to avoid routing of conduits along the beam contours at a later stage. Co-ordination in this regard shall be Contractor’s responsibility.

16) Supply and installation of 150 mm. / 250 mm. dia. Hume pipes for main power cable, for earthing conductors and for direct line telephone cables shall be in Contractor’s scope. These pipes shall be laid in typical standard details as directed to avoid damage to these pipes.

17) Two Nos. earth electrode stations shall be provided for general earthing system of the buildings to be located to suit site conditions. Distance between two earth electrode stations shall not be less than 3.5 meters and that between the outer edge of plinth protection of the building and earth electrodes shall not be less than 2.00 meters.

Wiring:

All wires shall be single core stranded copper PVC insulated to IS: 694 and shall be 1100 V Grade. All wires including earth wire shall be terminated using crimping type ferrules or lugs. Earthing shall be of stranded copper conductor with Green or Yellow Green insulation of 440 V Grade with ISI Mark.

All wires shall be colour coded as follows:

<table>
<thead>
<tr>
<th>Phase</th>
<th>Colour of Wires</th>
</tr>
</thead>
<tbody>
<tr>
<td>R</td>
<td>Red</td>
</tr>
<tr>
<td>Y</td>
<td>Yellow</td>
</tr>
<tr>
<td>B</td>
<td>Blue</td>
</tr>
<tr>
<td>N</td>
<td>Black</td>
</tr>
<tr>
<td>Earth</td>
<td>Green (insulated) (if any) Grey.</td>
</tr>
</tbody>
</table>

All wires shall be with ISI Mark.

Installation:

All works shall be carried out as per National Electrical Code. The size of conduits shall selected in accordance with the number of wires permitted table given below:
Note: Even though 20 mm. dia. conduit is indicated in the table. Contractor has to use minimum size of the conduit of 25 mm. dia. unless otherwise indicated. Size of wires shall be not less than 1.5 sq.mm.

<table>
<thead>
<tr>
<th>Nominal Cross Section &amp; Area (Sq.mm.) of wire.</th>
<th>20 mm.</th>
<th>25 mm.</th>
<th>32 mm.</th>
<th>40 mm.</th>
<th>No. of Strands Dia. in mm.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.50</td>
<td>6</td>
<td>10</td>
<td>14</td>
<td>---</td>
<td>3/0.80</td>
</tr>
<tr>
<td>2.50</td>
<td>5</td>
<td>10</td>
<td>14</td>
<td>---</td>
<td>3/1.04</td>
</tr>
<tr>
<td>4.00</td>
<td>3</td>
<td>6</td>
<td>10</td>
<td>14</td>
<td>7/0.85</td>
</tr>
<tr>
<td>6.00</td>
<td>2</td>
<td>5</td>
<td>9</td>
<td>11</td>
<td>7/0.04</td>
</tr>
<tr>
<td>10.00</td>
<td>---</td>
<td>4</td>
<td>7</td>
<td>9</td>
<td>7/1.35</td>
</tr>
<tr>
<td>16.00</td>
<td>---</td>
<td>2</td>
<td>4</td>
<td>5</td>
<td>7/1.70</td>
</tr>
</tbody>
</table>

The above table is applicable for both straight as well as deviated runs.

Conduits shall be kept at a minimum of 100 mm. from the pipes of other Services such as T.V., Telephones etc., Pull / Junction Boxes shall be provided for straight conduit runs of more than 10 meters and also for deviated runs with more than 3 Nos. of 90 bends.

Separate conduits / raceways shall be used for

1) Normal lights, and 5 A – 3 pin sockets on lighting circuits.
2) Power outlets : 15 A – 3, 20/A 30 A 2 pin + scraping earth metal clad socket.
3) Separate conduit runs shall be used for incoming and outgoing circuits. 4) Wires of various circuits but of different phases.

Conduits runs in the slab shall be properly laid, fixed to the reinforcement bars, before concerning of the slab all conduit entries shall be properly blocked or sealed to avoid ingress of concrete slurry.

For vertical conduits drops in the wall proper chasing shall be carried out and conduit laid and fixed, chase restoration shall be done after installing the 24 SWG G.I. wire mesh over the chase and after which plastering shall be carried out to give a neat smooth finish.

As far as possible horizontal chase in the wall shall be avoided. If unavoidable, it shall not exceed 300 mm.

All final branch circuits for lighting and appliances shall be single core stranded copper conductor cable run inside conduits. The conduits shall be properly threaded and screwed into sockets junction boxes etc. or fixed properly, using epoxy so in, in case of PVC pipe. The exposed threading shall be given a coat of rust inhibiting chemical / paint.

Branch circuit conductor sizes shall be as shown in schedule of quantities and / or drawings.

Final branch circuits shall preferably be kept in a separate conduit up to cct. Branch distribution boards. No other wiring shall be bunched in the conduit except those belonging to the same phase. Each lighting branch circuit shall not having more than ten (10) outlets or 800 watts whichever is lower.

Flexible cords for connections to appliance, fans and pendants shall be 650 / 1100 V Grade (three or four cores i.e. with insulated neutral and earth wires of the same size) with stranded copper wires insulated twisted and sheathed. Colour of the sheath shall be subject to Architect’s approval.

Looping system of wiring shall be used. Wires shall not be jointed. Where joints are unavoidable they shall be made through approved mechanical connection. Earth wire shall be provided for all light, fan, bell and socket points, control switches having marking for light or fan as required shall be connected in the phase conductors only and shall be ON when knob is down. Unless otherwise stated, switches shall be fixed in 3 mm. white colour
Hylam sheet on M.S. Boxes with cover plate as specified. Chromium plated brass screws shall be used. M.S. switch boxes for switch board shall be of sufficient dimensions to accommodate required no. of choke type fan regulators for flush mounting or electronics regulators as the case may be.

M.S. Boxes shall be fabricated from 1.6 mm. thick M.S. sheet and shall be galvanized. Switch boards accommodating 3 or more than 3 switches shall be provided with slide-in fuse holder of 10 Amps. Rating and proper rating fuse-wire.

Power wiring shall be distinctly separate from lighting circuit. M.S. conduits not less than 2.5 mm. and wires not less than 2.5 sq.mm. shall be used for power wiring. Wire size for circuits will be as per schedule of quantity.

**Testing:**

The entire installation shall be tested for:

A) Insulation resistance.
B) Earth continuity.
C) Polarity of single pole switches.

A test certificate shall be submitted in the Format, in triplicate as required / specified by the Electric Supply Company / M.S.E.B.

Point wiring rates shall include, but not limited to supply and installation of the following items.

PVC heavy gauge or M.S. conduiting embedded CONCEALED type or exposed SURFACE type as called for, branch and sub-circuit wiring with all items such as fabricated junction boxes, conduit fittings and accessories such as couplers, bends, tees, nipples, spacers, saddles, pull-out wires (2 mm. G.I. Wire), hardware, ceiling fan boxes to be embedded in the ceiling etc. Supports for exposed surface conduits shall be at an interval of 750 mm. for vertical run and at the interval of 450 mm. for horizontal run.

Recessed type M.S. covers as specified for various items such as room switch boards, receptacle board or light switch board etc. Housing with knock outs shall be tailor made or as specified to accommodate all switches, sockets, outlets, fan regulators, etc., as necessary for a particular location.

PVC insulated, unsheathed, stranded copper wires for phase, neutral and earth for branch circuits, for sub-circuits and for point wiring, cable, / wire upto lamp holder.

SP or DP or TPN / MCBs / ELCBs individual switches and accessories.

All consumables such as insulation tape, hardware, pipe sleeves and any other item not specified but required for completion of point wiring.

All work in complete wiring of a switch circuit of any length from the D.B. to the following via the switch board.

1) 3 Plate ceiling rose.
2) Connector.
3) Blank Plate.
4) Socket.
5) Lamp holder – Angle / Straight.
6) Fan boxes, hooks.
7) Any other terminal outlet.

All metal boards and boxes sunk or surface mounted.
Supply and installation of this item of work shall comply with all above requirements in co-ordination with the construction of civil works for provision of sleeves in walls / beams / slab and for laying embedded junction boxes / inspection boxes / pull out boxes / pull out wire etc. as required.

**Earthing:**

**Scope:**

This item of work is required for providing the earth-pits for electrical power network and also for lighting protection network. Earth pits for power network and lighting protection network shall be separate from each other without any interconnection. However, all Earth pits for power supply shall be interconnected with each other through buried earth conductors, similarly all earth pits for lighting protection shall be connected with each other through buried earth conductors. Spike earthing for St. Light poles is also covered. Each down common conductor of lighting protection network shall be terminated to a separate earth electrode pit through test-link.

**Standards:**

The following Standards and rules shall be applicable

2) Indian Electricity Act and Rules Electric Supply Co.’s Rules.
3) NEC.
4) IS : 2309 – Protection of building and allied structures against lighting.

All codes and standards mean the latest. Where not specified otherwise, the installation shall generally follow the Indian Standard Code of Practice. In the absence of Indian Standards, the relevant British Standard Codes shall be followed.

**General Requirements:**

1) The earthing shall generally carried out in accordance with the requirements of I.E. Rules as amended from time to time and relevant regulations of B.E.S.T / Electric Supply Company, If Rules No. 32, 51, 61, 62, 67, 69, 88(2) and 90 are particularly applicable.

2) All earth connections shall be carefully made visible for inspection and testing of individual earth electrode shall be possible.

3) The earthing electrode shall be away at a minimum distance of 2 mt. From the outer surface of plinth protection / Diaphragm wall in case of basements. A minimum clearance of twice the depth of electrode shall be maintained between two earth stations. Wherever adequate distance cannot be maintained due to site constraints. The decision of the Architect / Consultant will be final and binding.

4) A brick masonry chamber cement plastered from both inside and outside shall be provided on the top of the each earth station to house the funnel for watering and the earth connection. The size of this chamber will be 300 mm. x 300 mm. deep. The chamber will be provided with a lockable cast iron cover hinged to the C.I. frame embedded in the top portion of the masonry wall, by providing spikes for grouting. Lock with key shall be supplied for each pit. The top of the masonry chamber shall be 50 mm. above the surrounding G.L.

5) The earth conductor from electrode shall be taken out of the masonry chamber through a protecting pipe embedded in the masonry laid atleast 250 mm. below the ground level.

6) Earthing system shall be mechanically robust and the joints shall be capable of retaining low resistance even after passage of fault currents / strockes.

7) Joints shall be welded / soldered / tinned and double rivetted. All the joints shall be mechanically, electrically continuous and effective, joints shall be protected against corrosion by giving suitable treatment duly approved by Architect.
8) Contractor shall use the layout drawing issued by the Architect / Consultant for guidance only. He shall submit working drawings for approval of the Architect prior to execution of the work. He will thereafter submit as built drawings for conductor route showing locations of earth pits etc., for final records and reference after executing the work.

9) Contractor shall use the schematic layout drawings for the quantity and route of the conductor issued by Architect / Consultant for guidance only. He shall work out the exact quantity of earth conductors with its associated accessories required for the job.

**Earth Electrodes:**

1) The materials of earth electrode and earth conductors shall be galvanised iron unless specified otherwise in the bill if quantities, specifications or drawings.

2) The earth electrode shall be free from paint, enamel, grease etc.

3) The earth electrode shall be embedded as far as possible in the moist soil and below permanent moist level.

4) Earth electrode shall not be installed in the proximity of a metal fence.

**Types of Earth Electrodes:**

The earth electrode shall be either a pipe electrode or plat electrode, as detailed in schedule of quantities. Plate electrodes shall be used for sub-stations and large medium voltage network and pipe electrodes for small medium voltage network and installations.

**Pipe Electrode:**

1) Pipe Electrode shall consist of 2.50 meter long single piece heavy duty G.I. pipe of minimum 40 mm. N.B. and shall be cut tapered at the bottom. 12 mm. dia. holes in a staggered manner shall be frilled on the pipe as per IS : 3034.

2) This Electrode shall be buried vertically in a specially prepared earth pit of size 30 cm. x 30 cm. and the earth pit shall be filled with alternate layers of charcoal, salt and fine washed sand with a minimum thickness of 150 mm. for each layer. A funnel with wiremesh inside shall be fixed to the top of G.I. pipe for watering purpose.

3) The earth conductor of 50 mm. x 6 mm. G.I. strips shall be connected to the electrode just below the funnel with proper terminal lugs, check nuts the other end of this 50 mm. x 6 mm. strip shall be terminated through a removable test-link, on the earth bus at meter room. Test link is to be provided in masonry chamber.

4) Details of chamber etc., have been already given below.

**Plate Electrode:**

1) The plate electrode shall consist of G.I. Plate of size 600 mm. x 600 mm. x 6.3 mm. as per B.O.Q. or drawings.

2) The electrode plate shall be buried vertically in a specially prepared earth pit which shall be dug up 2.50 M. deep from the ground level. The earth plate shall be placed in the earth pit with its faces vertical and embedded in the alternate layers of coal fine washed sand and salt with a minimum thickness of 150 mm.

3) The earth conductor of 50 mm. x 6 mm. G.I. strip shall be connected to the earth electrode plate with terminal lugs, the other end of this 50 mm. x 6 mm. G.I. strip shall be terminated through a removable test link provided in the masonry chamber, on the earth bus at meter room.
4) A 20 mm. G.I. pipe heavy gauge, shall be provided from the masonry chamber upto the top earth late for watering purpose. The G.I. pipe shall be provided with a funnel having wiremesh inside for watering.

5) Details of masonry chamber etc. have been already give above.

**Simple Pipe Electrode for earthing individual Street Light Poles etc. with chamber**

1) Pipe Electrode shall consist of 2.50 meter long single piece heavy duty G.I. pipe of minimum 40 mm. N.B. and shall be cut tapered at the bottom. 12 mm. dia. holes in a staggered manner shall be frilled on the pipe as per IS : 3034.

2) This Electrode shall be buried vertically in a specially prepared earth pit of size 300 mm. x 300 mm. and 3 M. deep. The pit shall be filled with alternate layers of salt, charcoal, salt and fine washed sand, with a minimum thickness of 150 mm. for each layer.

3) The earth conductor of 25 mm. x 5 mm. G.I. strips shall be connected to the electrode just below the top with G.I. nuts and bolts and spring and flat washers with check-nuts. Other end of this earth strip shall be connected to the equipment to be earthed using suitable lugs for termination at both ends, etc.

**Sub-Station Earthing**

In case of Sub-Stations, large installations and wherever specified earth electrode shall be 600 mm. x 600 mm. x 3.15 mm. copper plate. The earth lead shall be connected to earth plate, using termination lugs and brass nuts, bolts and washers, masonry chamber details being as given above, including heavy duty 40 N.B. G.I. Pipe, funnel for watering etc.

**Earth leads and connections**

Earth lead shall be either bare copper or aluminium or galvanized steel as specified with sizes in the B.O.Q. Copper lead shall have a phosphor content of not over 0.15% aluminium and galvanized steel buried in ground shall be protected with bitumen and hessian wrap or polythene faced hessian and bitumen coating. At road crossings necessary hume pipes shall be laid. Earth lead run on surface of wall or ceilings, columns, beams etc., using G.I. spacers of minimum 6 mm. thick and saddles. The complete earthing system shall be mechanically and electrically continuous and robust and should provide an independent return path to the earthing source.

**Testing of Earth- Stations / Pits**

After the erection of Earth-Stations is complete, Contractor should arrange for an earthtester, carry out earth-resistance test (- average of 4 – readings -) in the presence of the Clients representative and records the results.

For substation earth-stations, the resistance of each earth station should not exceed 0.5 ohms. For other earth-station, it shall be less than 0.2 ohms.

In case of higher resistance values, either the electrode shall be driven of more depth or to construct additional earth-pit assebles at a distance minimum three meter apart to achieve the combined resistance less than or equal to the desired results as stated above.

**Sizes of the G.I. Strips to be used**

1) 50 mm. x 6 mm. G.I. earth strip shall be used for connecting the earth-bus at meter room / meter box of chamber to be earth electrode pit.

2) 40 mm. x 6 mm. G.I. strip shall be used for interconnection of earth pits by directly buried underground system to a minimum depth of 600 mm. to form an earth grid.

3) 20 mm. x 3 mm. G.I. earth strip shall be used for connections between earth-bus and S.F. / M.C.B. / M.C.C.B. / E.L.C.B. units at meter room. Two pole units shall be connected with one such earth strip and three or four pole units shall be connected by two such earth strips.

Signature and stamp of contractor
4) 32 mm. x 6 mm. G.I. strip shall be used for horizontal air-termination network at terrace / roof level and for down covers to bond with earth-electrode pit through test-link.

5) The overlapping of strips at joints where necessary, shall be 75 mm. (minimum). The joints will be double riveted and then welded and painted with silver paint.

**Equipment Earthing:**

All apparatus and equipment transmitting or utilizing electric power shall be earthed in the following manner. Copper earth wires / strips shall be used where specified in B.O.Q.

1) **Power transmission apparatus**:

   Metallic conduits shall not be accepted as an earth continuity conductor. A separate insulated earth continuity conductor or bar of the size 50% of the size of the phase conductor subject to the maximum as given below shall be provided.

<table>
<thead>
<tr>
<th>Copper</th>
<th>Galvanized Iron</th>
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<tbody>
<tr>
<td>Minimum 2.5 Sq.mm.</td>
<td>6 Sq.mm.</td>
</tr>
<tr>
<td>Minimum 6.5 Sq.mm.</td>
<td>200 Sq.mm.</td>
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</tbody>
</table>

   The earth continuity conductor may be drawn inside the conduit in which case it should be insulated.

   a) Armour of the cables shall be earthed by two distinct earth connections at both the ends to the armouring, the size of the connection being as for the metallic conduit.

   b) In case of unarmoured cable, an earth continuity conductor shall either be run outside along the cable or should form a separate core of the cable.

   c) 3 phase power panels and distribution boards shall have two distinct earth connections of the size correlated to the incoming cable size. In case of single phase D.B.’s and isolating switches 1 earth connection and in case of 3 phase, two distinct earth connections shall be provided, sizes being correlated to the sizes of incoming cables.

**Testing:**

The following earth resistance shall be measured with an approved earth-tester and recorded.

1) Earth resistance of each earth station.
2) Earthing system as a whole.
3) Earth continuity conductors.

**Prohibited Connections**:

Use of following as earth conductor is strictly prohibited for earthing an installation or ever as a link in the earthing system.

Neutral conductor, sprinkler pipes, gas pipes, water pipes, structural steel work, metallic enclosures or armour of cables and conductors, metallic conduits lighting protection system conductors are all prohibited to be used earth conductor.

Mode of measurement – as per schedule of quantity. However, the cost of earthing the following items shall become part of the item itself and no separate payment / rate of earthing these items shall be made.

a) Motors – earthing forming part of cabling / wiring for the motors.
b) Isolating switches and starters shall form part of mounting frame, switch starter etc.

c) Fan lightings, Exhaust fan fittings Light fittings – These shall form part of installation of these fittings only.

d) Conduit wiring cabling – shall form part of the wiring or cabling.

e) Street Lighting – should form that of the street light pole.

**External Lighting:**

The scope of the work covered the supply, installation and testing and commissioning of lighting poles, wiring to the fixtures, cable laying as specified and shown on drawings / B.O.Q. etc. All work shall be carried out as per NEC.

**Standards:**

The following standards and rules shall be applicable:

1) **IS : 1913 – 1969**: General and safety requirements for light fittings.


3) **IS : 3528 – 1966**: Water Proof Electric Lighting fitting.

4) **IS : 2713 – 1978**: Swaged type tubular poles.

5) **IS : 2149 – 1970**: Luminaries for street lighting.

6) Indian Electricity Act & Rules.

7) **N.E.C.**

All codes and standards mean the latest. Where not specified otherwise, the installation shall generally follow the Indian Standards Codes of Practice or the British Standard Codes of Practice in the absence of Indian Standards.

**Lighting Poles:**

The lighting poles shall be fabricated from heavy duty cold rolled street tubes to IS:2713 and hot dip galvanized of painted as specified. The pole shall have M.S. base plate and Junction Box a large access panel shall provide easy access to multiway porcelain connector and fuse board to be mounted inside the Junction Box. The access shall be specially fabricated with adequate reinforcement and weather gasket to prevent ingress of moisture and vermin proofed. Poles shall have large diameter entries for incoming and outgoing cables and two earth studs. The contractor shall make a drawing and have it approved before fabricated.

**Cable Laying:**

Cable shall be generally laid as specified in section “Cabling” cable shall be terminated in a 4-way terminal block inside the pole of attached therewith. Contractor shall mark out the cable route and got it approved before laying the cables.

**Earthing:**

All street lighting fixtures and poles shall be earth as specified under section “Earthing”
Mode of Measurement:

Each light fitting with lamp, control gear, earthing etc., shall be considered as one unit for measurement and payment. Each lighting pole, concreting, coping, base plate, earthing etc., shall be considered as one unit for measurement and payment. Wiring from terminal block to the light fitting shall be considered as one unit for measurement and payment. All cabling work shall be measured on the basis of unit length for supply and installation. The excavation and backfilling of cable trench, cable-termination in Junction Boxes or Terminal Box of the pole etc., shall not be measured separately.

Power Panel Boards:

The salient features of construction of power panel boards shall be as follows:

1) Construction: Totally enclosed, dust and vermin proof conforming to IP-54 of IS:2147, free standing, floor mounting, single front compartment, cubicle extensible type at both ends.

2) Welded shall be fabricated with shipping sections bolted together. All such joints to be gaskets. Lifting lugs shall be provided.

3) Panel shall be fabricated out of CRCA Sheets 1.6 mm. thick for front and rear doors and cover. Bottom and top of the panel for cable glands and component, mounting plates shall be fabricated out of 2 mm. thick CRCA Sheets. Frame work – 2 mm. thick.

4) All doors to be hinged type except bus-bar chamber which shall be bolted type. Panel shall be flush door design suitable for access from front.

5) Fabricated panel shall undergo seven tank process and two coats of primer before giving Epoxy resin paint finish. Final colour shall be Shade No. 631 of IS:5. No welding or drilling shall be done on the panel after final painting.

6) Vertical bus-bars will be red from main horizontal bus-bars located at top. Panel compartment, bus-bar chamber and cable alley will be operated from, front. Depth of MCCB panel shall be 1000 mm. and the width of it shall be 7000 mm. The depth of the other section shall be minimum 500 mm. and width shall be 500 mm. vertical bus-bar chamber and cable alley width shall be 300 mm. Height of earth bus-bar chamber at the bottom shall not be less than 150 mm. Total height of the panel shall not exceed 2400 mm. Foundation channel shall be provided at the bottom and shall be of type MC 1000.

7) Bus-bars shall be electrolytic grade aluminium suitable for the current capacity as per BOQ and shall be supported by high quality FRP insulator of SMC type, to withstand short circuit of 500 KA at 415 Volts. Bus-bars shall be provided with heat shrinkable PVC sleeving with R, Y, B and neutral colour coding for identification. All bus-bar connections (huts and bolts) shall be accessible so that they can be checked with normal tools.

8) In a blank compartment provided at the bottom, G.I. earth bus-bar of 50 mm. x 6 mm. run through entire length shall be provided and project outside in vertical. Formation with facility for connection earth strip at either terminals on opposite sides to connect external earth conductor. All accessible live terminals / portion of components shall be provided with shoruds.

9) Separate compartment shall be provided for each three phase feeder. Each feeder compartment shall be provided with three pilot lamps with red lens on each for indication of power supply.

10) Indicating lamps shall be panel mounting type with filament or Neon lamps. Filament type lamps shall be provided with series resistors to prevent short circuiting of control supplies on fusing of lamps filaments. The lens shall be easily replaceable from the front.

11) Indication Instruments and Meters:
These shall be provided as per BOQ and shall be 96 mm. square size suitable for flush mounting and zero adjustment from outside. All meters except KWN meter shall be AE make. KWN meter shall be GEC / IMP make.

12) Current transformers shall be bar primary cast type or dry type, and shall have short circuit-time withstand rating equal to that of associated switchgear for 1 sec.

13) **Push Buttons** : The push buttons shall be of the momentary contract to actuate for 10 Amp. At 240 V AC and 2200 V D.C., provided with integral inscription plates engraved with their functions. They shall have required “NO” ass “NC” contacts. Only “Siemens” or E.E. Push Buttons shall be used.

14) All HRC switch Fuse Units, Contactors, single phase preventive and O/L relays, indicating lamps will be only “Siemens”, “English Electric” or “Havells” Brands only.

15) **Control and Selector Switches** :

The control switches and selector switches shall be of rotary type having enclosed contacts, adequately rated for application but with a minimum rating of 10 Amps, at 2400 V AC and at 220 V D.C. the plates shall have clear position markings, control switches shall have momentary contacts, spring return to centre, with pistol grip handles, instrument and selector switches shall have stay-out contacts with oval knurled handles.

16) **Name Plates** : Main name plate shall be fixed at the top centre, name plate giving feeder details shall be provided and are to be fixed by screws. All labels / name plates shall be black plastic with white engravings of letters or minimum 6 mm. size.

17) **Internal Wiring** : All internal power wiring shall be done either stranded PVC Copper wire 2.5 sq.mm. size 1000 V Grade or strips of insulated copper conductor of adequate size.

Small wiring for control circuit shall be done with stranded Copper wire PVC conductor 1100 V Grade. Each end of control cable shall be provided with identification Ferrules Yellow in colour with black letters. All wiring shall be terminated on stud type terminal blocks through crimping sockets. Not more than 2 connection shall be made on any one terminal block. All spare auxiliar contacts of contactors shall be wired to terminal block.

18) **Terminal Blocks** :

Terminal blocks for power and control wiring shall be of reputed make stud type, with washers, nuts, and lock nuts, and identification mark. All adjacent terminals shall have insulating barriers. All power terminal blocks shall be rated for a minimum current of 300 Amps. Terminal blocks for controls and instrument circuit shall be rated for minimum 115 Amps., and shall be suitable to receive 100 Sq.mm. conductor. All sets of power control power terminal blocks shall be identified with engraved plastic labels, black background and white letters.

19) **Cable Terminators** :

Dublic compression type of brass cable glands mounted on gland plates shall be provided to receive and support all power and control cables entering the switchgear. Size of the cable gland shall be suitable for cables entering the switchgear. Cable gland shall have earthing facilities for earthing armour of the cable.

20) **Tariff Advisory Committee and CPRI Tested** :

The switchgear shall be approved by the TAC for fire insurance and CPRI tested for short-circuit test and enclosures test.

21) **Tests** :

Following tests shall be performed before shipped the switchgear panels to Site:

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Signature and stamp of contractor
1) high Voltage Test at 2.5 KV.
2) Insulation Resistance test before and after H.V. test, using 1000 V Meggar.
3) Operational Test.
4) Three sets of Test Certificates to be submitted.

22) **Documentation**:

Contractor shall arrange to get from Manufacturers and shall supply following drawings in quadruplicate for approval before starting manufacturing operations within 4 weeks from the LOI / date of order.

a) General Agreement Drawings.
b) Scheme and Wiring Diagram Drawings.
c) Instructions and Service manual for all the Components.

Approval of drawings by Clients / Consultant does not relieve the contractor of the “Performance” of the panels.

After supply and installation and commissioning of the panels and switches Contractor shall submit 6 sets of the above documents of as built in panels.

23) **Air-Break Switches**:

For all places in this project : Metal Clad.

1) The air-break switches shall be of AC 23, heavy duty, quick make-quick break type as per IS : 4047.

2) Switches shall be capable of withstanding the mechanical and thermal stresses produced by overloads and short-circuits.

3) All switches of all rating shall have interlocks with the compartment doors. Switches 250 A and above shall be lockable in “OFF” position. All live parts shall shrouded. It shall be possible to intentionally defeat the interlocks if required.

4) Red indicating lamps shall be provided for “ON” indication.

5) Brands : Only L & T, Siemensm English Electric, Hevells, controls and switchgear brands to be used.

The switches shall have the following standards rating:
32, 63, 100, 125, 200, 250, 300, 400 and 600 Amps.

24) **Fuses**:

The fuses shall comply with the following:

1) HRC Cartridge Fuse : Link type with carriers.

2) Certified reputeing capacity not less than 46 KA at 415 Volts A.C. as per IS : 2000.

3) All fuses shall have visible indication to indicate “Blown” condition.

4) Pressure clamp terminals for wires upto 4 sq.mm. and bolted lugs for higher ratings.


6) Fuse Puller: Contractor shall supply 3 sets of Fuse Pullers.

25) **Moulded case circuit breakers**:
M.C.C.B.

1) The M.C.C.B.’s shall be 4 pole construction wherever specified and shall have independent Manual opening and closing mechanism of quick make, quick break type and they shall be trip free in operation. “ON”, “OFF” and “TRIP” mechanism shall be clearly indicated.

2) They shall conform to IS : 2516.

3) Bolted type neutral link will be provided with T.P. M.C.C.B. only.

4) It shall be possible to mount accessories on the M.C.C.B’s like shunt trip, U.V. release, alarm contacts etc.

5) The M.C.C.B.’s shall have adjustable thermal / static trip devices.

26) Contactors :

1) The Motor starter contactors shall be of electro-magnetic type double break, nongravity type rated for uninterrupted duty suitable for operation under AC – 3 utilization category of as per IS : 2959. The contacts shall be silver plated.

2) 2 Nos. and 2 NC auxiliary contacts shall be included.

3) The operating coils shall have Class “E” insulation of wire and shall be suitable for operation of any specified control supply systems.

27) Thermal overload Relays :

1) These shall be 3 elements, positive action, ambient, temperature compensated with a time lag and adjustable settings.

2) The setting range shall be selected according to the ratings of the motor.

3) The relay shall be self – reset type / hand reset type. The reset button in case of hand reset type – shall be fixed on the compartment door.

4) The relay shall have atleast on “NO” and one “NC” or changeover contact or as per requirements.

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<th>S.N.</th>
<th>MATERIALS</th>
<th>APPROVED MANUFACTURERS</th>
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<td>Moulded Case Circuit Breaker (MCCB)</td>
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<td>ii) Schneider</td>
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<td>iv) Siemens</td>
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<td>v) Havells</td>
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<td>2</td>
<td>Switch Fuse Unit (SFU)</td>
<td>i) L &amp; T</td>
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|      |                                         | ii) Siemens
## Spares for SF6 Breaker at SBI GITC

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<td>Cable Termination</td>
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<td>7</td>
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<td>8</td>
<td>PVC Conduit &amp; Accessories</td>
<td>i) Allied Conduits</td>
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<td>MS Conduit &amp; Accessories (ISI Mark).</td>
<td>i) BEC</td>
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<td>Medium - 1.6 mm thick.</td>
<td>ii) AKG</td>
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<td>Heavy - 2 mm thick.</td>
<td>iii) NIC</td>
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<td>Modular Switches &amp; Sockets with PVC Box</td>
<td>i) Legrand - (Arteor model)</td>
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<td>iv) Elleys - (Fotolia model)</td>
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<td>11</td>
<td>Distribution Board, MCB, RCCB &amp; RCBO</td>
<td>i) Legrand</td>
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<td>MATERIALS</td>
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| 12   | Data/ Voice Cable & accessories | i) D-Link  
<p>|      |                            | ii) AMP                                     |
| 13   | Light Fixtures            | i) CG                                       |
|      |                            | ii) Philips                                 |
|      |                            | iii) CGL                                    |
|      |                            | iv) Osram                                   |
|      |                            | iv) Bajaj                                   |
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| 14   | Tubes, PL's &amp; CFL's       | i) Philips                                  |
|      |                            | ii) Osram                                   |
| 15   | Ceiling Fan               | i) CG                                       |
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| 17   | Speakers                  | i) BOSCH                                    |
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| 18   | Amplifier                 | i) BOSCH                                    |
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| 19   | Electrical LT Panel       | CPRI Approved Panel Manufacturer Only.       |
| 20   | Capacitors                | i) Siemens                                  |
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<th>Description</th>
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<td>vi) HPL</td>
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NB. 1) The contractor should obtain prior approval from Employer / Consultants before placing order for any specific materials. Employer may / delete any of the makes or brands out of the above list.

2). All materials should conform to relevant standards and codes of BIS.

3) Materials with I.S.I. mark shall be used duly approved by the SBIIMS Engineer / Architect.

Note: - If any material is found to be not up to the mark, the contractor will have to produce original bills/certificate from the manufacturer or his authorised Distributor for authenticity and genuineness of the material for consideration and as per make approved by the SBIIMS. The same will not be considered for payment.

**IMPORTANT POINTS TO BE NOTED**

1. Rates for light, Fan, Exhaust Fan, Call bell, Raw power etc. points includes the cost of main wires and pvc pipes from LDB-Raw Power DB to different switchboards with required circuits.

2. Rates for computer power points include the cost of wires and pvc pipes from UPS DB to Computer Power Points.

3. Rates for Computer I/O includes the cost of DATA cables and pvc pipes from server switch to computer nodes.

4. Rates for telephone points include cost of telephone wires and pvc pipes from EPABX/Crone Box to telephone points.

5. Rates for A.C./Power Points include the cost of wires and pvc pipes from A.C. DB to Different A.C. and Power Points with required circuits.

6. The contractor should submit built up SLD of panel, SLD of different DB’s to different switch boards with numbering, Telephone crone box to different telephone points with numbering. After execution of work the contractor should submit 2 sets of copies with 1 lamination.

7. The contractor should use maximum circuits in one conduit for UPS and RAW Power Points as per conduit capacity.

**Signature and stamp of contractor**
8. The contractor should use Maximum wires of Data & telephone in one conduit as per conduit capacity.

9. Every conduit for UPS, RAW Power, Data & Telephone, power points, A.C. Points, Lighting Points SB should be separate as far as possible.

10. For Data & Telephone points Big/Small junction Box must be required.

11. For UPS and Raw Power Big/Small junction Box must be required.

12. Empty Conduits must be laid for security system.

13. PVC conduits must be clamped with saddles in ceiling only.


15. Contractor should submit test report.

16. Contractor

NB. 1) The contractor should obtain prior approval from Employer / Consultants before placing order for any specific materials. Employer may / delete any of the makes or brands out of the above list. 2) All materials should conform to relevant standards and codes of BIS. 3) Materials with I.S.I. mark shall be used duly approved by the SBIIMS Engineer / Architect.

Note: - If any material is found to be not up to the mark, the contractor will have to produce original bills/certificate from the manufacturer or his authorised Distributor for authenticity and genuineness of the material for consideration and as per make approved by the SBIIMS. The same will not be considered for payment.

Annexure “A”.

The steps involved in the payment through SB Collect towards Cost of Tender are as under:-

1. The Vendor needs to use SBI internet banking site https://www.onlinesbi.com/.

2. Select "SB Collect" from Top Menu, that will lead to the next page:

3. “Proceed” will lead to the next page:

4. Select "All India" in "State of Corporate / Institution" & Select "Commercial Services" in "Type of Corporate / Institution".

5. “Go” will lead to the next page:

6. Select "SBI Infra Management Solutions" in Commercial Services Name and “Submit”

7. Select “Tender Application Fee” in “Payment Category” and enter the “Tender ID” exactly as we preloaded with characters in Uppercase only in place of Circle Codes.

8. The next Page will be ready with few of the Preloaded Tender Details:

9. The Vendor will have to fill up the fields properly and upon making the payment a receipt will be generated with a Reference No.

Signature and stamp of contractor
NOTE: Any type of vendor, whether dealing with SBI or other bank can use this SB Collect facility. Even a contractor not dealing with any bank can use this portal and generate challan and deposit by cash in any SBI branch. The bank charges for cash deposit will be also borne by the vendor himself.

Procedure for payment of Tender Fee through SB Collect payment portal:
The portal link is available in SBI online banking site https://www.onlinesbi.com/

Select "SB Collect" from Top Menu, that will lead to the next page:

"Proceed" will lead to the next page:
Select "All India" in "State of Corporate / Institution" & Select "Commercial Services" in "Type of Corporate / Institution". “Go” will lead to the next page:

Select "SBI Infra Management Solutions" in Commercial Services Name and “Submit”
Select “Tender Application Fee” in “Payment Category” and enter the “Tender ID” exactly as we preloaded with characters in Uppercase only in place of Circle Codes. The next Page will be ready with few of the Preloaded Tender Details:

The Vendor will have to fill up the fields properly and upon making the payment a receipt will be generated with a Reference No. Submit the printout of the Receipt, along with the Tender Application.
SBI INFRA MANAGEMENT SOLUTIONS PVT. LTD.
(A Wholly Owned Subsidiary of SBI)

HEAD OFFICE
Ground Floor, Raheja Chamber, Free press Journal Marg, Nariman Point, Mumbai 400 021

THROUGH E-TENDER / E-REVERSE AUCTION

PRICE BID (Part-2)
TENDER FOR (1) SUPPLY OF SPARES FOR 33 KV SF6 BREAKER IN HT PANEL OF 33KV KV SUBSTATION (2) SPARES LT BREAKERS (3) SITC OF CAPACITORS AND APFC RELAY (4) SERVICING OF 1000 A BREAKERS AND MISC WORKS AT CDC

Vice President & Circle Head,
SBIIMS, GITC, Circle office,
1st Floor, C wing, SBI GITC Office, Sector 11,
CBD Belapur, Navi Mumbai 400 614
headgitc.sbiims@sbi.co.in
022-27537416
## BILL OF QUANTITIES
### ONLINE PRICE BID

### PART -A

**REPAIR OF AUTOMATIC POWER FACTOR CORRECTION PANEL INSTALLED AT SBI RAILWAY BUILDING SUBSTATION**

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Description</th>
<th>Qty</th>
<th>Unit</th>
<th>Unit Rate</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>i)</td>
<td>Supply of 3 phase 25 KVAR, Heavy Duty Cylindrical Capacitor suitable of existing panel.</td>
<td>12</td>
<td>Nos.</td>
<td>To be submitted online</td>
<td>To be submitted online</td>
</tr>
<tr>
<td>ii)</td>
<td>Supply of etaSMART, 16 Stage APFC Relay suitable of existing panel.</td>
<td>2</td>
<td>Nos.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>iii)</td>
<td>Supply of 1 core 16 Sq.mm. Copper flexible cable.</td>
<td>95</td>
<td>Mtr.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>iv)</td>
<td>Supply of MNX 70, 3P, Power Contractor along with 2NO + 2NC add on block Coil Vltage-240 V AC suitable for existing panel</td>
<td>3</td>
<td>Nos.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>v)</td>
<td>Installation and hardware accessories charges.</td>
<td>1</td>
<td>Job</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### PART B

**SUPPLY OF SPARES FOR 33 KV SF6 BREAKER IN HT PANEL OF 33KV KV SUBSTATION-KIRLOSKAR MAKE MODEL: FP 72D**

<table>
<thead>
<tr>
<th>Sr No</th>
<th>Description</th>
<th>Qty</th>
<th>Unit</th>
<th>Rate / each</th>
<th>Amount (Rs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Supply of barrier Sheet</td>
<td>3</td>
<td>nos</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Supply of Trip &amp; Close Snap Action Switch</td>
<td>3</td>
<td>nos</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Supply of Finger contacts</td>
<td>18</td>
<td>nos</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Supply of PT fuse 33kv/3.15 amps</td>
<td>3</td>
<td>nos</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### PART C

**PRICE BID FOR SPARES REQUIRED FOR LT DISTRIBUTION PANELS, CIRCUIT BREAKERS, CAPACITOR PANELS ETC, INSTALLED AT 1ST FLOOR 33 KV SUBSTATION FOR CDC AND GITC, CBD BELAPUR**

(A) **L & T MAKE SPARES : CIRCUIT BREAKERS PROTECTION RELEASES AND CURRENT TRANSFORMERS:**

<table>
<thead>
<tr>
<th>Sr no</th>
<th>Description</th>
<th>Switch gear details</th>
<th>Qty</th>
<th>Rate</th>
<th>Amt</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Supply of L&amp;T make SR 18G + Display Protection release</td>
<td>Common for all ACB</td>
<td>13</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>CT for protection release</td>
<td>CN-CS 5000C, 4P, EDO</td>
<td>4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### (B) L & T MAKE OTHER CIRCUIT BREAKER SPARES:

<table>
<thead>
<tr>
<th>Sr no</th>
<th>Description</th>
<th>Switch gear details</th>
<th>Qty</th>
<th>Rate</th>
<th>Amt</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Shunt Coil (240v)</td>
<td>Common for All ACB's</td>
<td>3</td>
<td>4</td>
<td>12</td>
</tr>
<tr>
<td>2</td>
<td>Closing Coil (240v)</td>
<td>Do</td>
<td>3</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>3</td>
<td>Under voltage coil (415 volt)</td>
<td>Do</td>
<td>3</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>4</td>
<td>Spring charging motor</td>
<td>Do</td>
<td>2</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>SiC contact block</td>
<td>Do</td>
<td>2</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>6</td>
<td>Hardware Kit</td>
<td>Do</td>
<td>2</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>7</td>
<td>Spring Kit</td>
<td>Do</td>
<td>2</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>8</td>
<td>Roller assembly</td>
<td>Do</td>
<td>2</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>9</td>
<td>Auxiliary contact block 6 No + 6NC</td>
<td>630-3200 S1, 800-2500 C/H &amp; 3200/4000 H/H0/H1</td>
<td>2</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>10</td>
<td>Auxiliary contact block 6 No + 6NC</td>
<td>4000 – 6300 C</td>
<td>2</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>11</td>
<td>Trip rod assembly</td>
<td>Common for all ACBs</td>
<td>2</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>12</td>
<td>Trip Latch assembly</td>
<td>Do</td>
<td>2</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>13</td>
<td>FRCD</td>
<td>FRCD 400-3200 S1 (3P&amp;49), 800-3200C (3P&amp;4P), 800-2500 H(3P&amp;4P), 3200 H1/H2 (3P), 4000H/H2 (3P)</td>
<td>1</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>14</td>
<td>FRCD</td>
<td>FRCD 3200H1/H2(4P), 4000H/H2(4P), 4000-6300 C (3P &amp; 4P)</td>
<td>1</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>15</td>
<td>Jaw contact assembly</td>
<td>CN-CS 1000 S1,3P, EDO</td>
<td>1</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>16</td>
<td>Do</td>
<td>CN-CS 1600 C, 3P, EDO</td>
<td>1</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>17</td>
<td>Do</td>
<td>CN-CS 1600 H, 3P, EDO</td>
<td>1</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>18</td>
<td>Do</td>
<td>CN-CS 2500 C, 3P, EDO</td>
<td>1</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>19</td>
<td>Do</td>
<td>CN-CS 3200 HO, 4P, EDO</td>
<td>1</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>20</td>
<td>Do</td>
<td>CN-CS 5000 C, 4P, EDO</td>
<td>1</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>21</td>
<td>Cradle Terminal</td>
<td>CN-CS 1000 S1, 3P, EDO</td>
<td>1</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>22</td>
<td>Do</td>
<td>CN-CS 1600 C, 3P, EDO</td>
<td>1</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>23</td>
<td>Do</td>
<td>CN-CS 1600H, 3P, EDO</td>
<td>1</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>24</td>
<td>Do</td>
<td>CN-CS 2500 C, 3P, EDO</td>
<td>1</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>25</td>
<td>Do</td>
<td>CN-CS 3200 HO, 4P, EDO</td>
<td>1</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>26</td>
<td>Do</td>
<td>CN-CS 5000 C, 4P, EDO</td>
<td>1</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>27</td>
<td>Cradle Terminal support</td>
<td>CN-CS 1000 S1, 3P, EDO</td>
<td>1</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>28</td>
<td>Do</td>
<td>CN-CS 1600 C, 3P, EDO</td>
<td>1</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>29</td>
<td>Do</td>
<td>CN-CS 1600 H, 3P, EDO</td>
<td>1</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>30</td>
<td>Do</td>
<td>CN-CS 2500 C, 3P, EDO</td>
<td>1</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>31</td>
<td>Do</td>
<td>CN-CS 5000 C, 4P, EDO</td>
<td>1</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>32</td>
<td>Moving &amp; Fix Arching contact</td>
<td>CN-CS 1000 S1, 3P, EDO</td>
<td>1</td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>
**PART D**

**SERVICING OF BREAKERS AND SEPARATE PLATE EARTHING FOR BSNL DC EQUIPMENT IN GITC DAT CENTRE**

**a) BREAKER SERVICING:**

<table>
<thead>
<tr>
<th>Sr no</th>
<th>Description</th>
<th>Qty</th>
<th>Unit</th>
<th>Rate</th>
<th>Amt</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Servicing by OEM /OEM approved agency of Schneider make 1000 A ACB (2\textsuperscript{nd} floor CDC) Electric Panel A &amp; B</td>
<td>2</td>
<td>Nos</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Servicing by OEM /OEM approved agency of Schneider make 1250 A ACB (2\textsuperscript{nd} floor CDC) Electric Panels 1</td>
<td>2</td>
<td>Nos</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Servicing by OEM /OEM approved agency of Schneider make 1250 A ACB (2\textsuperscript{nd} floor CDC) Electric Panels 2</td>
<td>2</td>
<td>Nos</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Servicing by OEM /OEM approved agency of 630 AMP MCCB at (2\textsuperscript{nd} Floor CDC) Electric Panels 1</td>
<td>2</td>
<td>Nos</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Servicing by OEM /OEM approved agency of 630 AMP MCCB at (2\textsuperscript{nd} Floor CDC) Electric Panels 2</td>
<td>2</td>
<td>Nos</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**b) DEDICATED EARTHING AT 3\textsuperscript{rd} FLOOR FOR DC EQUIPMENT OF BSNL:**

<table>
<thead>
<tr>
<th>Sr no</th>
<th>Description</th>
<th>Qty</th>
<th>Unit</th>
<th>Rate</th>
<th>Qty</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>SITC of dedicated earth pit comprising of 600 mm x 600 mm x 3 mm thick copper plate buried at a minimum depth 5 to 6 feet including necessary materials like charcoal, salt etc as per standard having brick masonry chamber with hinged cover &amp; watering (funnel system arrangement) at ground floor. The DC earth should be &lt; 0.5 Ohms at the earth distribution box</td>
<td>1</td>
<td>No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>SITC of 6 Sq mm single core multi stranded copper flexible wire through PVC conduit pipes from above said (Sr no1) copper earth pit to 3\textsuperscript{rd} floor CDC BSNL DC Equipment</td>
<td>70</td>
<td>meter</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**GRAND TOTAL = PART A + PART B+ PART C+ PART D**

The rate quoted will be inclusive of all cost towards labour, transportation, levies, all other duties exclusive of GST. GST will be paid extra as applicable.