STATE BANK OF INDIA , RBO-2, BOKARO

Part – I
(Technical Bid)

TENDER FOR ELECTRICAL WORKS OF PHUSRO BAZAR BRANCH (01235) UNDER RBO-2, BOKARO

Tender ID: AO/DHN/RBO2/2026-27/004

Note: Bank's (LHO, Patna) approved Electrical contractor under category- B and above only eligible to participate in this tender. Vendor/Contractor should possess valid digital signature for this e-tender**.**

TENDER SUBMITTED BY:

NAME : _____

ADDRESS : _____

_____

GSTIN NO : _____

DATE : _____

E-TENDER NOTICE

SBI RBO, BOKARO invites item rate tender in two bid system from interested SBI approved empanelled **Electrical contractors (Category B and above)** under Patna Circle **for Interior electrical work of PHUSRO BAZAR BRANCH** through two bid on line tendering mode System portal https://www.tenderwizard.com/SBIETENDER. Details of tenders are as under:

1.	Name of Work	:	Interior electrical work of PHUSRO BAZAR BRANCH (01235)
2	Cost of Tender document	:	Nil
3	Tenders shall remain valid for	:	For a period of 90 days from the date of opening of price bid of tender.
4	Earnest Money Deposit (EMD)	:	Rs.14,960/- in the form of DD from any Nationalised Bank drawn in favour of SBI, RBO, BOKARO
5	Time allowed for completion	:	**30 days from the date of issue of work order.**
6	Estimated cost		Rs.14,96,000/-
7	Interim Payment	:	No interim payment will be made. Payment will be made after completion of work and to the satisfaction of Bank only.
8	Additional security deposit (ASD)/Additional Performance guarantee(APG)		i) ASD/APG shall be applicable if the bid price is below 10% of the estimated cost. ii) The amount of such ASD/APG shall be the difference between 90% of the estimated cost put to tender and the quoted price iii) Vendor will submit Bank guarantee or FDR receipt favouring SBI but drawn on any other nationalized Bank may also be accepted as ASD/APG
9	Availability of Tender Documents	:	Tender documents to be downloaded from the SBI e-tender portal **https://www.tenderwizard.com/SBIETENDER**
10	Tender document downloading **Start Date**	:	From 02:00 P.M on **29.09.2026**
11	Tender document downloading **End Date**	:	Upto 02:00 P.M (1400 hrs) on 05.10.2026
12	Last date and time of submission of Tender	:	Upto 3.00 P.M (1500 hrs) on **05.10.2026**
13	Date and time of opening of tender		**05.10.2026 at** 3.30 **P.M**
14	Agency for arranging online bidding.	:	**Service provider:** **M/s Antares Systems Limited.** 1st floor, Old Bank of India compound, M/22 Building, Road No. 25, S.K. Nagar, Patna-800001 Mobile : Rakesh kumar 9771414548, Email:r.rakeshkumar@antaressystems.com
a)	The SBI reserves the right to reject any or all the tenders without assigning any reason.		
b)	Electronically Sealed e-tenders are invited from the **Bank's Empanelled Contractors as mentioned in NIT** in two parts, i.e. **Cover – I and Cover –II separately** Sealed tenders in two parts i.e. cover-I and cover- II are to be submitted online on the website **:** **https://www.tenderwizard.com/SBIETENDER** **** No bid shall be accepted offline.** **(a) Cover-I (Technical Bid)**: Technical bid envelope called "Electronic Format of Technical Bid" shall contain the following documents:		

	(i) Details of EMD : Scan copy of Demand Draft must be uploaded in e-tender website along with technical bid (ii) Electronic form of Technical Bid Cover-I will be opened as per above mentioned date & time in the presence of Tenderers who desire to attend. The tenderers can view the Tender opening details through their respective log in Ids on the above-mentioned e-tender portal (Website). **(b) Cover-II (Price Bid)**: Shall contain the Electronic format of Price Bid item rate. • In case, the lowest Tendered Amount of two or more contractors is same, such lowest contractors will again be asked to submit sealed/online "Revised offers" on the original Estimated cost of the Tender including all sub sections/sub heads as the case may be, The lowest tender shall be decided on the basis of revised offers. • The process of online re-bidding amongst two or more contractors offering same rates shall continue till L-1 bidder is discovered. • In case, any of such contractor(s)(quoted same tender amount during initial bidding or subsequent re-bidding) refuses to submit revised offer, it shall be treated as "withdrawal of tender" by the contractor before acceptance. The earnest money of such contractors shall be forefeited. • In case all the lowest contractors those have quoted same amount, refuse to participate in online revised bidding process for the project, the EMD of such contractors shall be forefeited and the tender shall be re-invited afresh for the project.The contractor(s), whose earnest money is forefeited because of non-submission of revised offer, shall not be allowed to participate in the re-tendering process of the work. • No condition/ stipulation in Cover-II other than unconditional general rebate shall be accepted. Cover-II (Price Bid) will be opened only of those bidders who are successful in Technical Bid (Cover- I) after through scrutiny. **The contractor/ vendor can view the Tender opening details through their respective log in Ids on the above-mentioned e-tender portal (Website).**
c)	The Bidder is expected to examine all instructions, forms, terms and specifications in the bid documents. Failure to furnish all information required as per the Bid Documents or submission of bids not substantially responsive to the Bid Documents in every respect will be at the bidder's risk and shall result in rejection of the bid.
d)	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 REGIONAL MANAGER

STATE BANK OF INDIA

RBO-BOKARO

	E-TENDERING INSTRUCTIONS TO BIDDERS

General
SBI hereby publish the TENDER on e-tendering Portal (Website) **:**
https://www.tenderwizard.com/SBIETENDER in Electronic mode hereinafter referred as "e Tendering" and TENDER will be hereunder called as "e-Tender". The e-tender published online through above portal (website) consisting of standard tender conditions, specifications, schedule of quantities, drawings (if any) for above referred work. Please note that copy of the above e-tender can be downloaded from above portal (website) and should be mandatorily submitted in Online Electronic Mode hereinafter referred as "Online Offer". The submission of Online offer duly Encrypted & Digitally signed on above portal should be in prescribed Electronic Forms (Online) available on above portal for respective tender in Online Envelope(s) on or before As per the key Dates mentioned in the Tender Notice in this document and online portal for above tender .

Instructions
1. Tender Bidding Methodology:

Electronically Sealed Bid System – Two Stage - Two Envelopes'
2. Broad outline of activities from Bidders prospective
1. Procure a Digital Signing Certificate (DSC)
2. Register on the e-Procurement portal **:** **https://www.tenderwizard.com/SBIETENDER** (The contractors need to upload scan copy of their valid empanelment letter in the portal otherwise their registration would be cancelled)

3. Create Users and assign roles on the above portal
4. View Notice Inviting Tender (NIT) on the above portal
5. Download Official Copy of Tender Documents from the above portal
6. Clarification to Tender Documents on the above portal
7. Bid-Submission on the above portal
8. Attend Public/Limited Online Tender Opening Event (TOE) on the above portal
– Opening of Technical-Part
9. Post-TOE Clarification on the above portal (Optional)
– Respond to SBIMS's Post-TOE queries
10. Attend Public/Limited Online Tender Opening Event (TOE) on the above portal
– Opening of Financial-Part (Only for Technical Responsive Bidders)

For participating in this tender online, the following instructions are to be read carefully. These instructions are supplemented with more detailed guidelines on the relevant screens of the above portal.

3. Digital Certificates
For integrity of data and authenticity/ non-repudiation of electronic records, and to be complaint with IT Act 2000, it is necessary for each user to have a Digital Certificate (DC). also referred to as Digital Signature Certificate (DSC), of Class II or above, issued by a Certifying Authority (CA) licensed by Controller of Certifying Authorities (CCA) [refer http://www.cca.gov.in].
4. Registration

To use the Electronic Tender portal **:** **https://www.tenderwizard.com/SBIETENDER** vendors need to register on the portal. Registration of each organization is to be done by one of its senior persons vis-a-vis Authorized Signatory who will be the main person coordinating for the e-tendering activities. In the above portal terminology, this person will be referred to as the Super User (SU) of that organization. For further details, please visit the website/portal, and follow further instructions as given on the site.
Note: After successful submission of Registration details please contact to the Helpdesk of the portal to get your registration accepted/activated.

Help Desk:
Contact Person: Mr. Rakesh Kumar Tel. No.9771414548, Email ID – r.rakeshkumar@antaressystems.com

5. Bidding related Information for this Tender (Sealed Bid)
The entire bid-submission would be online on the portal. Broad outline of submissions are as fol

lows:
· Submission of Bid Security/ Earnest Money Deposit (EMD) & Cost of Bid Document
· Submission of digitally signed copy of Tender Documents/ Addendum
· Power of Attorney, · Two Envelopes,- Technical-Part, Each of the above electronic envelopes consists of Main bid and Electronic form (both mandatory) and bid Annexure (Optional).
NOTE: Please note that above e-Tendering system is an automatically time locked system which will be locked immediately as soon as due date and time is over and will not accept any offer after that. So, the tenderers are strictly advised to do their process well before the due date and time to avoid any such instances.

6. Tender Opening Event (TOE)
The e-Procurement portal offers a unique facility for 'Public/Limited Online Tender Opening Event (TOE)'. Tender Opening Officers as well as authorized representatives of bidders can attend the Public/Limited Online Tender Opening Event (TOE) from the comfort of their offices. For this purpose, representatives of bidders (i.e. Supplier organization) dully authorized are requested to carry a Laptop and Wireless Connectivity to Internet. Every legal requirement for a transparent and secure 'Public/Limited Online Tender Opening Event (TOE)' has been implemented on the portal. As soon as a Bid is decrypted with the corresponding 'Pass-Phrase' as submitted online by the bidder himself (during the TOE itself), salient points of the Bids are simultaneously made available for downloading by all participating bidders. The tedium of taking notes during a manual 'Tender Opening Event' is therefore replaced with this superior and convenient form of 'Public/Limited Online Tender Opening Event (TOE)'. The portal has a unique facility of 'Online Comparison Chart' which is dynamically updated as each online bid is opened. The format of the chart is based on inputs provided by the Buyer for each Tender. The information in the Comparison Chart is based on the data submitted by the Bidders. A detailed Technical and/ or Financial Comparison Chart enhance Transparency. Detailed instructions are given on relevant screens. The portal has a unique facility of a detailed report titled 'Minutes of Online Tender Opening Event (TOE)' covering all important activities of 'Online Tender Opening Event (TOE)'. This is available to all participating bidders for'Viewing/ Downloading'. There are many more facilities and features on the portal. For a particular tender, the screens viewed by a Supplier will depend upon the options selected by the concerned Buyer.

IMPORTANT NOTE: In case of internet related problem at a bidder's end, especially during 'critical events' such as – a short period before bid-submission deadline, during online public/limited tender opening event, during e-auction, it is the bidder's responsibility to have backup internet connections. In case there is a problem at the e-procurement/ e-auction service-provider's end (in the server, leased line, etc) due to which all the bidders face a problem during critical events, and this is brought to the notice of SBI by the bidders in time, then SBI will promptly re-schedule the affected event(s).

7. Minimum Requirements at Bidders end
In order to operate on the electronic tender management system, the user's machine is required to be set up. The machine must have running XP service Pack 3 or higher version of Windows like Vista or Window 7. Also need to install Mozilla Fire fox web browser and latest Version of Java.

THE REGIONAL MANAGER

STATE BANK OF INDIA

RBO-BOKARO

ARTICLES OF AGREEMENT

This AGREEMENT is made at …… on this ……. day of …… between SBI, a body Corporate created under SBI Act 1955, having its Corporate Centre at State Bank Bhavan, Madame Cama Road, Mumbai 400 021 and one of the circle office at SBI Local Head Office, Patna

represented by authorized officer of SBI. (hereinafter called "the Employer") on the one part and M/s _____ (proprietorship/partnership firm/Company), incorporated under the provisions of the Companies Act and having its registered office at _____ (hereinafter called "the Vendor") represented by Shri …… who is authorized to enter this agreement by its Board of Directors on the other part.

AND WHEREAS the Employer has intention of engaging an empanelled electrical Contractor under SBI, LHO, Patna for execution of " Electrical and allied works of SBI ……. branch under RBO ……

AND WHEREAS the Employer had called for tenders from empanelled vendors for the proposed work as indicated in the scope of work and other documents attached to the tender.

AND WHEREAS the Vendor and others submitted the tenders and the Employer has awarded the contract relating to "**Electrical works of SBI PHUSRO BAZAR BRANCH** '' as stated in the scope of work attached to the Tender Document to the Vendor.

AND WHEREAS both the parties to this agreement are desirous of recording the terms and conditions upon which the said services are to be rendered by the Vendor.

NOW IT IS HEREBY AGREED AS FOLLOWS:

1.In consideration of the said Contract Amount to be paid at the times and in the manner set forth in the said Conditions, the Contractor shall upon and subject to the said Conditions execute and complete the work shown upon the said Drawings and described in the said Specifications and the priced Schedule of Quantities.

2.The Employer shall pay to the Contractor the said Contract Amount, or such other sum as shall become payable, at the times and in the manner specified in the said Conditions.

3.The said Conditions and Appendix thereto shall be read and construed as forming part of this Agreement, and the parties hereto shall respectively abide by submit themselves to the said Conditions and perform the Agreements on their part respectively in the said Conditions contained.

4.The Plans, Agreements and Documents mentioned herein shall form the basis of this Contract.

5.This Contract is neither a fixed lump-sum contract nor a piece work contract but a contract to carry out the work as per enclosed schedule of Items and to be paid for according to actual measured quantities at the rates contained in the Schedule of Quantities or as provided in the said Conditions and approved by the SBI.

6.The Contractor shall afford every reasonable facility for the carrying out of all works relating to Electrical works of **Electrical works of SBI PHUSRO BAZAR BRANCH** in the manner laid down in the said Conditions, and shall make good any damages done to walls, floors, etc. after the completion of his work.

7. The Employer reserves to itself the right of altering the drawings and nature of the work by adding to or omitting any items of work or having portions of the same carried out without prejudice to this Contract.



8. Time shall be considered as the essence of this Contract and the Contractor hereby agrees to commence the work soon after the Site is handed over to him or from 7th day after the date of issue of formal work order as provided for in the said Conditions whichever is later and to complete the entire work within 1 months subject to nevertheless the provisions for extension of time.

9. All payments by the Employer under this Contract will be made by State Bank of India.

10. All disputes arising out of or in any way connected with this Agreement shall be deemed to have arisen at Patna and only the Courts in Patna shall have jurisdiction to determine the same.

11. That the several parts of this Contract have been read by the Contractor and fully understood by the Contractor.

IN WITNESS WHEREOF THE EMPLOYER and the Contractor have set their respective hands to these presents and two duplicates hereof the day and year first herein above written.

SIGNATURE CLAUSE

SIGNED AND DELIVERED by the

_____ By the

(Employer)

hand of Shri _____

_____ (Signature of Employer)

(Name and Designation)

In the presence of :

Shri / Smt. _____ (Signature of Witness)

Address _____

_____

(Witness)

INSTRUCTIONS TO THE TENDERERS:

1.0 Scope of Work

Online Tenders are invited by SBI for "**Electrical works of SBI PHUSRO BAZAR BRANCH**

1.1 Site and Its Location.

The proposed work is to be carried out at PHUSRO

2.0 Tender Documents

2.1 The work has to be carried out strictly according to the specifications and conditions stipulated in tender consisting the following documents and the most workman like manner,

2.1 (a) Instructions to tenderers

2.1 (b) General Conditions of Contract

2.1 (c) Special Conditions of Contract

2.1 (d) Additional Conditions for Electrical Installation

2.1 (e) Technical Specifications

2.1 (f) 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. Additional Conditions for Electrical Installation

d. Special Conditions of Contract

e. General Conditions of Contract

f. Instructions to Tenderers

2.3 Complete set of tender documents including relative drawings can be downloaded from www.sbi.co.in (link) <Procurement News>

3.0 SITE VISIT

The tenderer must obtain himself on his own responsibility and his own expenses all information and data which 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 AS SPECIFIED to be deposited in the form as mentioned in NIT.

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 After identifying the L1 vendor EMD of unsuccessful tenderers will be refunded personally to the vendor against their acknowledgement or shall be sent to their given address within 30 days by post/courier on request from tenderers.

4.5 EMD of successful tenderer will be retained as a part of security deposit.

5.0 INITIAL SECURITY DEPOSIT.

L1 vendor shall submit, 2% of awarded value of work in the form of DD/BC favouring " State Bank of India" within a period of 15 days from the date of receipt of confirmation regarding acceptance of tender and EMD obtained in the name of **State Bank of India** shall be returned to them.

6.0 SECURITY DEPOSIT

6.1 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). 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. SBI/Bank also may deduct total 5% of the final value of the work from Final/running bill and the ISD shall be returned to the L1 vendor. 5% of the retention money shall be paid after the defects liability period of 1 Year as specified in the contract. The retention money will be interest free.

6.2 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 with SBI by signing an agreement and conditions of contract attached herewith within **7 days** from the receipt of intimation of acceptance of his tender by the SBI. However, the written acceptance of the tender by the SBI will constitute a binding agreement between the SBI and successful tenderer whether such formal agreement is subsequently entered into or not.

8.0 COMPLETION PERIOD: Time is the essence of the contract; the work should be completed in all respect and in accordance with the terms of contract within a **period of 30DAYS** from the date of commencement of work.

9.0 VALIDITY OF TENDER : 3 Months

Tenders shall remain valid and open for acceptance for a period of 3 (Three) months from the date of opening price bid. If the tenderer withdraws his/her offer during the validity period or makes modifications in his/her original offer which are not acceptable to the SBI without prejudice to any other right or remedy the SBI shall be at liberty to forfeit the EMD.

10.0 LIQUIDATED DAMAGES

The liquidated damages shall be 0.5% per week subject to a maximum of 5% of the actual value of work.

11.0 RATES 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 figures in case of discrepancy between the rates quoted in words and figures the unit rate quoted 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 SBI/Architect.

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, etc.

GENERAL CONDITIONS OF CONTRACT

1.0 Definitions

"Contract" means the documents forming the tender and the acceptance thereof and the formal agreement executed between SBI 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/SBI 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 / Bank'** shall mean State Bank of India (client) a body Corporate created under SBI Act 1955, having one of its Circle Office at State Bank of India, LHO Patna and includes the client's representatives, successors and assigns.

1.1.2 " **SBI**" shall means **State Bank of India**. (SBI), its wholly owned subsidiary having Head Office at Mumbai and One of its Circle office at 2nd Floor, SBI, Patna Main Branch, West Gandhi Maidan, Patna-800 001 Bihar and includes the client's representatives, successors and assigns.

1.1.3 'Architects/Consultants' shall mean **M/s.** _____

1.1.4 **'Site Engineer'** shall mean an Engineer appointed by SBI as their representative to give instructions to the contractors.

1.1.5 **'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.

1.1.6 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.

1.1.7 **'Engineer'** shall mean the representative of the SBI/Architect/consultant.

1.1.8 **'Drawings'** shall mean the drawings prepared by the SBI/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.

1.1.9 **'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.

1.1.10 **"Week"** means seven consecutive days.

1.1.11 **"Day"** means a calendar day beginning and ending at 00 Hrs and 24 hrs respectively.

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 SBI /architect/consultant. The SBI/ 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 SBI/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 SBI 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 SBI and the contractor.

ii) Contract Agreement

On receipt of intimation of the acceptance of tender from the SBI/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 SBI.

5.0 Ownership of drawings

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

6.0 Detailed drawings and instructions



The SBI 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 SBI 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 SBI 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 SBI /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 SBI 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 SBI 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 SBI.

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 SBI and the original policy may be lodged with the SBI.

13.0 Inspection of Work

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 SBI /SBI/Architect/Consultant and their representatives necessary for inspection and examination and test of the materials and work-manship. No person unless authorized by the SBI/Architect/Consultant except the representative of Public authorities shall be allowed on the work at any time. The proposed work either during its con-struction 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 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 SBI/Architect's instructions and shall be subject from time to time to such tests as the SBI /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 alumin-ium extrusions etc. can be done, Contractor should also make available a 3.00 meters, 15.00 meters



& a 50.00 meters tape, a Vernier Caliper & Micrometer 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 SBI/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 SBI /Architect the contractor shall proceed with the procurement and installation of the particular material/equipment.

The approved samples shall be signed by the SBI. /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 SBI/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 SBI/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 SBI/ 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 SBI/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 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 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 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 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 SBI /Architect shall vitiate the contract.

In case the 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 SBI/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 SBI/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 SBI/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 SBI /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 SBI, the contractor shall ensure that the following works have been completed to the satisfaction of the SBI /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 SBI /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 SBI /SBI.

f) All defects/imperfections have been attended and rectified as pointed out by the SBI /SBI to the full satisfaction of SBI /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 SBI/Architect/Consultant is satisfied of the completion of the work, relative to which the completion certificate has been sought, the SBI/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 SBI /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 SBI 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 SBI /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 SBI /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 SBI 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 SBI 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 effected with an insurer and in terms approved by the SBI which approval shall not be unreasonably withheld and the contractor shall whenever required produce to the SBI/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 SBI 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 SBI /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 SBI /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 SBI /SBI, their employees, or agents or other employees, or agents or other contractors for the damage or injury.

25.3 Contractor to indemnify SBI

The contractor shall indemnify the SBI /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 SBI/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 SBI /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 SBI /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 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 SBI/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 SBI /SBI which approval shall not be reasonably withheld and for at least the amount stated below. The contractor shall, whenever required, produce to the 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 SBI/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 SBI/SBI or their agents, or employees. The contractor shall indemnify and keep indemnified SBI/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 <u>Insurance against accidents etc to workmen</u>

The contractor shall insure against such liability with an insurer approved by the SBI /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 subclause shall be satisfied if the sub-contractor shall have insured against the liability in respect of such persons in such manner that SBI/SBI is indemnified under the policy but the contractor shall require such sub-contractor to produce to the SBI /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 SBI/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 SBI/SBI or **7 days** from the date of receipt of Letter of Acceptance/work order from SBI, 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 **30 days from the date of commencement.** If required in the contract or as directed by the SBI/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 SBI 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 SBI 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 SBI 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 SBI 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 SBI/SBI/Architect. Should the rate of progress of the work or any part thereof be at any time be in the opinion of the SBI /SBI/Architect too slow to ensure the completion of the whole of the work by the prescribed time or extended time for completion the SBI /SBI/Architect shall thereupon take such steps as considered necessary to expedite progress so as to complete the woks by the prescribed time or extended time. Such communications from the SBI /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.

60.0 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 SBI/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 SBI/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 SBI /SBI/Architect at no extra cost to the SBI/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 SBI 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 SBI 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 SBI /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 SBI /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 SBI /SBI/Architect shall be final.

32.0 Suspension of work

i) The contractor shall, on receipt of the order in writing of the 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 SBI /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.

a) On account of any default on the part of the contractor, or

b) For proper execution of the works or part thereof for reasons other than the default of the con tractor, 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 SBI /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 SBI /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 SBI.

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(the cost of such labour and materials as worked out by the SBI/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 manner and at the same rates as if it had been carried out by the contractor under the terms of this contract the certificate of Architect/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 above courses being adopted by the SBI the contractor shall have no claim to compensation for any loss sustained by him by reasons of his having purchased or procured any material or entered into any 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/SBI 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 SBI /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 SBI 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 SBI 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 SBI /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 SBI /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 SBI /SBI and or the Architect/Consultant, may not withstanding 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 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 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 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 SBI incidental to the sale of the materials etc.

35.0 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 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, SBI , of respective Circle Office, within 30DAYS 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 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 R.M of, SBI, of respective RBO, 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 RM, of respective RBO, in writing in the manner and within the time aforesaid.

ii) The RM, SBI, of respective RBO, 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/RM, SBI of respective Circle Office, submit his claims to the conciliating authority namely the Circle Development Officer of respective Circle. SBI, for conciliation along with all details and copies of correspondence exchanged between him and the SBI.

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

36.0 Water Supply (Not Applicable)

37.0 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.

38.0 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 SBI immediately.

39.0 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.

40.0 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 SBI ./ 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.

41.0 Force Majeure

41.1 Neither contractor nor SBI 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 30DAYS 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.

41.2 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 adducing necessary evidence in support thereof.

41.3 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.

41.4 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.

42.0 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.

i) Minimum Wages Act, 1948 (Amended)

ii) Payment of Wages Act 1936 (Amended)

iii) Workmen's Compensation Act 1923 (Amended)

iv) Contract Labour Regulation and Abolition Act 1970 and Central Rules 1971(Amended)

v) Apprentice Act 1961 (Amended)

vi) Industrial Employment (Standing Order) Act 1946 (Amended)

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.

43.0 SAFETY CODE:

Safety as per annexure given should be followed.

44.0 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.

APPROVED LIST OF MATERIALS FOR LT ELECTRICAL WORKS

S. N.	MATERIALS	APPROVED MANUFACTURERS
1	Moulded Case Circuit Breaker (MCCB), MCB, RCCB & RCBO, Isolator	L&T/SIEMENS/GE/LEGRAND/ABB(T MAX)/Equivalent as approved by E-I-C.
2	Switch Fuse Unit (SFU)	L&T/SEIMENS/ABB
3	Power Contactors	L&T/SEIMENS/SCHNEI-DER/LEGRAND
4	Meters	HPL/IMP/L&T/TELEMACANIQUE/ EQUIVALENT
5	Armoured LT cable	POLYCAB/ RR/MESCAB/FI-NOLEX/Equivalent as approved by E-I-C.
6	Cable Termination	Dowells/Comet/Equivalent
7	Cable Tray	Profab/Metalemms/Asian Ancillary Cor-poration
8	FR/FRLS PVC Conduit, Casing & Ac-cessories	Precisions/Modi/AKG/Equivalent
9	Wires (FRLS/FRLS-H)	Polycab/RR/Mescab/Equivalent as ap-proved by E-I-C.
10	Modular Switches & Sockets with PVC Box	Legrand myrius/Mk(blenz)/North west stylus/Crabatree(Verona)
11	Distribution Board	MAKE :-ABB/SIE-MENS//LEGRAND/L&T/EQUIVALENT
12	Changeover switch	L&T/ABB/SOCOMEC/HPL
13	LED Light Fixtures/LED tube lights	(Havells /Philips/Syska/cromp-ton/Equivalent)
14	Tubes, PL's & CFL's	Havells/philips/Osram/Bajaj/Equivalent
15	Ceiling Fan	crompton/polar/Bajaj/Equivalent

APPROVED LIST OF MATERIALS FOR LT ELECTRICAL WORKS

16	Wall fan	Crompton/havells/Almonard/ Polar/Equivalent as approved by project in charge
17	Exhaust Fan	Crompton/polar/almonard/Equivalent
18	Speakers	Bosch/Ahuja
19	Amplifier	Bosch/Ahuja
20	Electrical LT Panel	Drawing to be approved from Client/Consultant and as per BOQ
21	Capacitors	i) Siemens/L& T/GE/ABB
22	CT'S / PT'S	AE/Cuppa/Ricco/Rishabh
23	APFC Relay.	i) HPL/Emercon/Alstom/Beluk/L & T
24	Contactor / Timer	Schneider/Hager/L&T/Seimens/ Legrand
25	Energy Meters	HPL/Schneider/L & T/Tecnic/AE
26	Data / Voice Cable & Accessories	i) D-Link
		ii) AMP
		iii) DigiSol
26	MS CONDUIT	I) Gupta
		II) Bharat III) AKG IV) BEC/equivaent
27	CEILING ROSE	i) Anchor
		ii) Cona
28	HRC FUSE	i) Hager
		ii) L&T
		iii) Legrand
29	CALL BELL/BUZZER	i) Cona
		ii) GM

APPROVED LIST OF MATERIALS FOR LT ELECTRICAL WORKS

		iii)	Anchor

Note: - 1) The contractor should obtain prior approval from SBI/ Consultants before placing order for any specific materials SBI may / delete any of the makes or brands out of the above list. The makes have also been mentioned against certain items in respective rows in the price bid/BOQ. Those makes will be given priority.

2) All materials should conform to relevant standards and codes of BIS. Materials with I.S.I. mark shall be used duly approved by the SBI Engineer/Architect.

3) 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 authorized Distributor for authenticity and genuineness of the material for consideration and as per make approved by the SBI. The same will not be considered for payment.

4) Any additional item as per BOQ specifications or as per the instructions of the bank / Consultants. Any of the above items / other items if any will be as approved by the Consultants & Engineer-in-charge.

5) All Light Fixtures, Modular Switches & Sockets, Fans, Exhaust Fans & other fittings samples shall be approved by the Client / Architect / Consultant before placing order to the Light Fixture Vendor / Supplier.

Signature of contractor With Seal

LETTER OF UNDERTAKING

To,
Regional Manager,
Regional Business Office,
State Bank of India,
BOKARO

Dear Sir,

TENDER FOR ELECTRICAL WORKS OF SBI ……

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, conditions of contract and with such conditions so far as they may be applicable.

MEMORANDUM

(a)	Description of work	Electrical works of SBI ……..
(c)	Time allowed for completion of work from the date of issue of work order.	**30 DAYS** from the date of commencement as per tender.

Should this tender be accepted, I/we hereby agree to abide by and fulfill 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 SBI, the amount mentioned in the said conditions.

We understand that as per terms of this tender, the SBI may consider accepting our tender in part or whole or may entrust the work of various buildings/branches/items proposed (i.e. Electrical works of SBI …… branch under RBO……. in phases. We, therefore, undertake that we shall not raise any claim / compensation in the eventuality of Bank/SBI deciding to drop any of the Branch /items from the scope of work of this tender at any stage during the contract/execution 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.

As when ask by the SBI/Bank, I/we shall submit the supporting technical data sheet, specification and make of the items as per the BOQ.

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.

I / We have not made any modification / corrections / additions /deletions etc. in the PQ/Tender documents downloaded from web by me / us. In case at any stage later, it is found there is difference in our downloaded PQ/Tender documents from the original and / or any documentation, SBI Pvt. Ltd. on behalf of SBI shall have the absolute right to disqualify / reject our Tender and also debar me / us in participating in any future tenders of SBI/SBI without any prior intimation to me / us.

I/We hereby undertake and confirm that all the information furnished in this tender is correct and true to the best of our knowledge and belief and we own full responsibility for its correctness and authenticity

I / We hereby understood and accordingly confirm that all Tender documents along supporting documents/annexures etc. are required to be submitted by us strictly in the prescribed format only. In case, the Bid/documents submitted by us along with this tender is found in any other formats and not complying this condition, we hereby authorize the SBI/SBI to summarily reject our tender for which we shall not make any protest.

Yours faithfully,

Signature of contractor
With Seal

CERTIFICATE



The measurements on the basis of which the above entries for the bill No. _____ were made have been taken jointly on (date)_____ and are recorded at pages _____ to _____ of measurement /sheet book No. _____._____ _____ _____

Dated

Signature of Contractor

_____

The work recorded in the above mentioned measurements has been verified at the site satisfactorily as per tender drawings, conditions and specifications.

Signature of Project Engineer SBI
Designation:
Dated:

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 60cms for ladder upto and including Meters in length. For longer ladders this width should be increased at least 6mm for each additional 60 cms. Uniform step spacing shall not exceed 60 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 60 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 pro tected;

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 Asphaltic 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:-

13.

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:

TECHNICAL SPECIFICATION (ELECTRICAL LT & ALLIED SERVICES)

SECTION-A
ELECTRICAL LT WORKS

A - GENERAL SPECIFICATION FOR ELECTRICAL INSTALLATION

Complete Installation will be done complying with the requirements of the followings:

a) Indian Electricity Act, 1910.

b) Indian Electricity Rules (1956) amended upto date.

c) Code of practice for Electrical wiring installations (system voltage not exceeding 650v) IS 732-1963 Revised

d) Code of practice for Electrical wiring installations (system voltage exceeding 650v) IS 2274-1963.

e) Rules and Regulations, Regional Council of Fire Insurance Association of India for Electrical wiring.

RULES AND REGULATION
ISI SPECIFICATIONS

I.S. NO	I.S. TITLE	MATERIAL EQUIPMENTS
694	PVC Insulated Cables	PVC Cables
1293/3854	Switch socket outlet	5A/15A/Switch sockets.
6043	Code of practice for earthing.	Earthing.
3646	Interior illumination	Luminaries/Fittings.
5216	Guide for safety of installation	Procedure & practices.
1248	Electrical Indicating	Instrument.
1534	Ballast for fluorescent Luminaries.	Tubes.
1653/266	P.V.C. conduit	
2667/3837	Code of practice for electrical wiring installation	Wiring
371	Ceiling Roses	Luminaries
1567	Metal clad switches.	
2268	Electric call bells/Buzzers	Call bells.
37A	Fans & Regulators	Fans

1 **Earthing :**

1.1 16 SWG bare copper conductor or 1.5 sq.mm. pvc insulated (1.1KV) grade Cu. wire shall be provided as earthing for all light fittings from local control box to individual fittings through the conduits and junction boxes.

1.2 14 SWG bare copper conductor or 1.5 sq.mm. pvc insulated (1.1KV) grade Cu. wire shall be provided as earthing for socket outlets of 5/15A/20A.

1.3 The flexible metallic tubing is not a reliable earth continuity conductor and hence will not be used for earthing.

2. **POINT WIRING :**

2.1 Point wiring shall be in MS conduits (heavy gauge) as mentioned in Bill of Quantity. It shall be on surface in case of false ceiling and false wall, and concealed in absence of false walls, false ceilings or as per direction of site incharge.

2.2 The wiring throughout the installations shall be such that there is no break in the neutral wire, in the form of a Switch or Fuse Unit.

2.3 All runs of wiring and the exact positions of all points shall be according to the layout or the specifications given by the Consultant and in the absence of same, the Contractor shall mark the same on the plan and approve it from the Consultant/ Site Engineer before actual commencement of work.

2.4. In any system of wiring no bare or twist joints shall be made at intermediate points in the run of cables unless the length of Final sub-circuit, sub-main or main is more than the length of standard coil as given by the manufacturer of the cable. If any jointing becomes unavoidable such joint shall be made through proper cut-outs or through proper junction boxes open to easy inspections.

2.5 Where 4 wire 3 phase wiring is done the neutral shall be in one color and the other three wires in another colour.(R,Y,B)

3. **DEFINITION** :- Wiring from local switch board through control switches shall be considered as one point. Wiring from the first fitting to the next fitting in the same circuit shall be considered as half point, or as group of two /three / four / five/ six etc.

The number of points shall generally be measured as under:

3.1 From individual control switch to first light/fan fitting shall be one point subsequent fitting in the same circuit shall be considered as given above & Bill Of Quantity.

3.2 If a socket outlet is tapped from the same lighting circuit it shall be treated as half point.

3.3 If a separate circuit is used for a socket outlet it will be considered as one point.

4. **Each point wiring shall comprise the following :**

4.1 Supply and installation of 20/25 mm PVC with accessories such as bends, inspection tees, elbows, two ways, 3 ways, 4 ways, junction box etc.

4.2 Supply and pulling of wires from the local board to single various points.

4.3 Supply and fixing of control switch boards, switches, socket outlets, lamp holders etc. for individual points.

4.4 Supply and Installation of multiway enclosed PVC junction boxes and 3 way/10 Amps. terminal blocks for light and fan fitting.

4.5 Supply and fitting/fixing of hardware such as clamps, saddles, screws, bolts, nuts, frame work as required.

4.6 Supply, laying and termination of earthing conductors for socket outlets, fittings and installations etc.

5. **WIRES & CABLES :-**

Colour Identification of Cores of Non-flexible cables and Bare Conductors for Fixed Wiring.

	Function	Colour Identification of core of rubber or p.v.c. insulated non-flexible cable, or of sleeve or disc to be applied to conductor or cable core.
	Earthing Live of a.c. single or three-phase Circuit Phase R of 3-phase a.c. Circuit Phase Y of 3-phase a.c. Circuit. Phase B of 3-phase a.c. Circuit. Positive of d.c.2-wire Circuit Negative of d.c. 2-wire Circuit	Green-and-Yellow or Green Red Yellow. Blue Red Black

6. All the conductors of the wires/cables shall be of copper unless/otherwise mentioned.

6.1 Single core armoured cable shall not be used any where.

6.2 1.5 sq. mm. (3/0.8 mm) P.V.C. insulated wires 1.1 KV grade shall be used upto maximum load current of 3A Amps.

6.3 2.5 sqmm (3/1.04 mm) P.V.C. insulated wires 1.1 KV grade shall be used upto maximum load current of 10 Amps.

6.4 4 sq.mm. (7/0.85 mm) P.V.C. insulated wires 1.1 KV grade shall be used upto maximum load current of 20 Amps

6.5 Wires and cables of the sizes including and above 4 mm**2 for aluminium and 7/.036 SWG for copper will be terminated; copper solder less crimped sockets and copper soldered sockets respectively.

6.6 Looping of conductors and tee-joints in power wiring shall not be employed. Power and heating sub-circuits shall be kept separate and distinct from fan and lighting sub-circuits.

7. **CONDUIT INSTALLATION :-**

7.1 MS / PVC conduit system shall be mechanically and electrically continuous across joints.

7.2 Conduit installation shall be of surface type in case of False ceiling or false walls and shall be of concealed type in absence of false wall or false ceiling.

7.3 In case of false wall/ceiling where sufficient space or false covering is not available the conduits are to be concealed.

7.4 All conduit pipes shall be confirming to I.S: 1653

7.5 The routing of conduits shall be marked on ceiling, walls or structures in accordance with the drawings; as per layout approved by the Consultant. The installation shall be undertaken after approval of the same by Consultant. Any changes suggested by the Consultant shall be followed by the Contractor.

7.6 All bare threaded portions shall be treated with anticorrosive preservative or covered with approved plastic compound.

7.7 The conduit shall be of 16 gauge or MMS upto 25 mm dia and 14 gauge or HMS above 32 mm dia, reputed and approved make conforming to IS specification.

7.8 Conduits shall be supported on walls, ceiling or structure by means of distance saddles at a spacing not exceeding 1.75 M horizontally and 2.0 metre vertically for conduits of 20 mm size.

7.9 All conduits shall however be supported within a distance of 225 mm at either end of junction boxes, lighting fittings, switches or equipment enclosures. In case of right angle bends and offsets, conduits shall be supported within 150 mm at either end. The distance saddle shall maintain a minimum clearance of 3 mm. between the conduits and the surface on which conduit is being installed.

7.10 Inspection boxes, elbows or tees shall be used as specified or specifically approved by the Consultant. Solid bends shall be provided as far as possible.

7.11 All conduits installation shall be carried out accurately and neatly. All conduit runs shall be truly horizontally or vertically, threading of conduits shall be done to close tolerance.

7.12 When conduits are to be concealed the conduit pipes shall be firmly tied to the steel reinforcement with steel wires at intervals not greater than 1 meter and on both sides of accessories like junction boxes, beds, coupling etc.

7.13 For concealed conduits uses of Tees, elbows and sharp bends shall be avoided as far as possible. And no length of conduit shall have more than two bends from outlet to outlet. (Use 2-way/3- way Junction Box if possible)

7.14 All conduit runs shall be thoroughly cleaned of dust, moisture etc. by blowing compressed air or by any other suitable means.

8. **CONDUIT WIRING :-**

i) The No. of wires to be drawn through conduit shall be as given in the below table.

	CONDUCTOR OF CABLE Nominal cross Number and sectorial area dia in mm area mm**2 of wires	SIZE OF CONDUIT (mm) 20	25	60
	1.0 1/1.12	5	10	14
	1.25 3/0.75	5	10	14
	1.5 1/1.40	5	10	14
	2.0 3/0.925	4	8	12
	2.5 1/1.80	5	8	12
	3.0 7/.75	4	6	10
	4.0 1/2.24	3	6	10

ii) Conduit wiring shall generally be carried out with single core P.V.C. insulated wire.

iii) The conduit installation with Tie wire shall be complete in all respects before the cables are drawn in conduits.

iv) An approved unbricating compound (such as soap, stone powder, flakes or talc) shall be applied to the insulated wires before they are drawn in conduits. The wire shall be neatly bunched together to prevent twisting or kinks.

v) The number of wires run in one conduit shall be such that it permits easy drawing in of wires.

vi) The wires passing through the conduits shall be of opposite polarity or conductors of opposite polarity should be bunched together.

9. **CONCEALED CONDUIT WIRING:-**

9.1 Concealed point wiring shall be provided through 20/25 mm dia. Conduits concealed 1" to 1.5" deep inside the walls, beams, columns, slabs etc.

9.2 The control boxes and distribution boxes shall be flush type concealed deep in the wall with only operating switch levers emerging out on the wall.

9.3 All the control boards shall be at an height of 1500 mm. from floor level (or refer HT. mentioned in drawings.).



9.4 Chipping and digging walls, beams, columns, slabs etc. for concealing conduits and replastering with necessary material to form even surface will be under Contractors scope of work.

10. **INSTALLATION OF CABLES :-**

10.1. All the cables shall be conforming to IS 1554, with PVC insulation, PVC sheathed, 1100V grade steel armoured with stranded copper/Aluminum conductors.

10.2 Cable supplied shall be of reputed make having ISI mark.

10.3 No cable joints are allowed, unless it is absolutely essential and will be carried out only after.

10.4 The cable shall be tied with Nylon ties at regular intervals of 1 meter for horizontal length. In case of vertical run cable shall be tied at every 500 mm width with metallic cable ties. At the cable bend ties shall be provided at 150 mm interval from the centre of bending radius to avoid any sharp bends.

10.5 Cable entry and exit of distribution boards shall be done by appropriate glands and lock-nuts.

10.6 All cables shall be terminated with crimped soldered copper lugs of proper sizes.

10.7 Armouring of cables shall be terminated at earthing stud provided on each distribution boards.

10.8 The cable to be laid in the ground shall be laid at 750 mm depth from ground level and sandbed of 75 mm shall be provided. Width of trench will be approved by Corporation/Consultant depending upon no. of cables to be laid. Bricks are to be laid on the cables and then the back filling with screened soil.

10.9 Trench excavation, supply of sand bricks back filling and all associated necessary work and supply of material for same shall form Contractor's scope of work.

10.10 For cables laid in the ground, cable markers are to be provided on the cable route at every bend at every 15 metres for straight run.

10.11 The cables crossing through floors, walls etc. should be through G.I. pipe and sealed with fire barrier material and bushes.

10.12 Where groups of H.V., L.V. control and telephone cables are to be laid along the same route suitable barriers to segregate them physically shall be employed.

10.13 The communication cable shall be at least 300 mm away from power cable.

11 **CABLE TERMINATION :-**

11.1 P.V.C. insulated steel armoured 1100 V Grade cables are to be terminated with help of Siemens glands for larger size cables and flange type glands (brass) for 2.5 mm**2 cables. Crimping type copper lugs are to be used for end terminations. All standard practices to be followed and anti corrosive inhibiting flux is to be used. Brass nuts bolts with plain and spring washers are to be used.

11.2 Any accessories other than above such as cable and box, jumpers etc. for cable terminations shall be included in the scope of termination of cables.

11.3 Spliced ends of cable shall be immediately crimped with lugs. Base conductor shall not be left open to atmosphere.

11.4 All the strands of a conductor must be fitted in the lugs and no cutting of strands will be allowed under any circumstances.

11.5 He appropriate size of holes shall be drilled on the cable gland plate so that the gland after lightening is firmly secured with the gland plate. Any additional holes in the gland plate shall be plugged to make it vermin proof.

12 **SOCKET OUTLETS & PLUGS:-**

i) The socket shall be so wired that the phase or the line is connected to one of the pins through the switch controlling the socket and not directly.

ii) Three pin socket outlets of 5A shall be earthed with 16 SWG bare copper conductor or 1.5 sq.mm. pvc insulated wire (1.1 KV grade).

iii) Three pin socket outlets of 15/20A shall be earthed with 14 SWG bare copper conduct or 2.5 sq.mm. pvc insulated wire(1.1 KV grade).

iv) 20 A socket outlet shall be industrial type (MDS-make) with provision of circuit breaker.

v) The isolated socket outlets shall be installed at distance mentioned in layout or as specified by the Consultant. However, the socket outlet shall be installed at a distance not less than 23 cms. from the floor level and shall be away from danger of mechanical injury.

vi) A socket outlet shall not embody fuse terminals as an integral part of it but the fuse may be embodied in plug.

vii) Every plug containing a fuse shall be non-reversible and shall be pulled through separate conduit system (not to be mixed with light, fan point etc.)