



**SBI INFRA MANAGEMENT SOLUTIONS PVT. LTD.**

TENDER DOCUMENT  
FOR  
INTERIOR FURNISHING WORKS  
AT

**3<sup>rd</sup>, 4<sup>th</sup> AND 5<sup>TH</sup> FLOOR OF SBI LHO  
BUILDING, MOTI MAHAL MARG  
LUCKNOW.**

**CLIENT:**

**ARCHITECT:**

**SBI INFRA MGMT. SOL. PVT. LTD. THE GRID**

6<sup>TH</sup> FLOOR, A- BLOCK, E-326, GREATER KAILASH-II SBI LHO BUILDING, MOTI MAHAL MARG NEW DELHI -  
110048 LUCKNOW-226001

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## **Notice Inviting Tender**

SBI Infra Management Solutions Pvt. Ltd. on behalf of State Bank of India invites online Tenders for the **Interior Furnishing Works at 3<sup>rd</sup>,4<sup>th</sup> and 5<sup>th</sup> Floor of SBI LHO Lucknow.**

Details of tenders are as under:

1.	Name of Work	:	<b>Interior Furnishing Works at 3<sup>rd</sup>,4<sup>th</sup> and 5<sup>th</sup> Floor of SBI LHO Lucknow.</b>
2.	Time allowed for completion	:	<b>360days</b> from date of handing over of the site.
3.	Earnest Money Deposit	:	<b>Rs. 4,50,000/- (Rupees Four lac fifty Thousand only)</b> by crossed Bank Draft/ Banker's Cheque drawn in favour of SBI Bank of India, LHO, Lucknow <b>(to be enclosed in sealed envelope as a part of Technical Bid).</b>
4.	Initial Security Deposit	:	2% of the total value of the contract including Earnest Money.
5.	Processing Fee of Tender Documents.	:	<p>Rupees 10,000/- (Ten Thousand Only) (Non-Refundable) amount to paid through SBI collect payment portal available at SBI site <a href="https://www.onlinesbi.com">https://www.onlinesbi.com</a>, The print out of the receipt should be submitted with the technical bid.</p> <p>Process flow for tender fee payment.  Open website <a href="http://www.onlinesbi.com">www.onlinesbi.com</a> &gt; select "SB Collect"&gt; Proceed will lead to next page &gt; select "All India"&gt; Select "Commercial services"&gt; Select "SBI Infra Management Solutions"&gt; select Tender Application fees" &gt; Enter "Tender ID"&gt; Next page will be ready for making payments.</p> <p><b><u>TENDER ID : LUC201906028</u></b></p>
6.	Last date and time of submission of Tenders (Technical Bid and financial bid )	:	<b>27-06-2019 upto 3.00 p.m.</b>
7.	Date Of <b>Pre Bid Meeting</b>	:	<b>21-06-2019 at 03:30 p.m. Please send the clarifications (if any ) in advance through mail at <a href="mailto:headluc.sbiims@sbi.co.in">headluc.sbiims@sbi.co.in</a> before pre bid meeting</b>
8.	Address at which the Tenders are to be submitted	:	<p><b><u>Technical Bid:</u> to be submitted in hard copy at SBI INFRA MANAGEMENT SOLUTIONS PVT. LTD. 6<sup>th</sup> Floor, A- Block, Moti Mahal Marg, Lucknow-226001</b></p> <p><b><u>Price Bid:</u> Price Bid to be uploaded online <a href="http://www.tenderwizard.com/SBIETENDER">www.tenderwizard.com/SBIETENDER</a></b></p>

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9.	Date and time of opening of Tenders (Financial Bid)	:	<b><i>After evaluation and scrutiny of technical bids , successful bidders shall be advised through email for date of opening of financial bid.</i></b>
10.	Place of opening Tenders	:	<b><i>SBI INFRA MANAGEMENT SOLUTIONS PVT. LTD. 6<sup>th</sup> Floor, A- Block, Moti Mahal Marg, Lucknow-226001</i></b>
11.	Defects Liability Period	:	<i>12 months from the date of handing over of the project to the satisfaction of Bank.</i>
12.	Validity of Offer	:	<i>90 days from the date of opening the Tenders.</i>
13.	Liquidated Damages	:	<i>At the rate of 0.5% of the Contract Value per week which subject to a maximum of 5% of the accepted Contract Value.</i>
14.	Note		<i>If the vendor is found to have delayed the running/in hand project beyond the prescribed time limit specified in related tender document, the vendor will not be issued the new tender until completion of the previous delayed work.</i>
15.	Performance guarantee		<i>If the L1 Price quoted is more than 10% below the estimated cost in a item the vendor has to submit the additional security deposit as performance guarantee of the amount of total % value less than the estimated value for the said item. The Performance guarantee will be released after successful completion of the said item.</i>

**Mode of Submission of Tender:** The tender shall be submitted in both physical and online in two cover system in accordance with the procedure detailed herein below. Specified documents shall be sealed in envelopes of appropriate size each of which shall be sealed.

- 1) First Envelope marked **Cover 1** shall contain Earnest Money Deposit along with Covering Letter and Online receipt of Processing Fee of the Tender Document.
- 2) Envelope marked **Cover 2** shall be of adequate size and shall contain envelopes marked **Covers 1 & tender document/Undertaking as in Annexure- I** and shall be properly sealed & signed. This envelope shall be endorsed on the outside face as under:

**"Interior Furnishing Works at 3<sup>rd</sup>,4<sup>th</sup> and 5<sup>th</sup> Floor of SBI LHO Lucknow."**

**The envelope marked Cover 2 containing the tender documents/ Undertaking as in Annexure- I as per instructions mentioned above shall be submitted in the office of VICE PRESIDENT (CIVIL), SBI INFRA MANAGEMENT SOLUTIONS PVT. LTD 6<sup>th</sup> Floor, A- Block, Moti Mahal Marg, Lucknow-226001 ON OR BEFORE up to 3.00 p.m. on 27/06/2019.**

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**Envelope marked Cover 1 & Cover 2 containing Earnest Money Deposit along with Covering Letter and online receipt of the Processing Fee of Tender Document, tender document/Undertaking as in Annexure- I will be opened if the Earnest Money Deposit, Processing Fee of Tender Document, tender document/Undertaking as in Annexure- I is not found as prescribed, the tender shall be rejected.**

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.

State Bank of India has the right to accept / reject any or all tenders without assigning any reasons.

**For E-Tender related queries :- Service Provider E-Procurement Technologies Ltd.** | ProcureTiger  
| [www.auctiontiger.net](http://www.auctiontiger.net) | [www.procuretiger.com](http://www.procuretiger.com)

**ISO 9001:2015, ISO 3601:2013 & CMMI Level-5 Certified Company**

B-705, Wall Street - II, Opp. Orient Club, Ellisbridge, Ahmedabad – 380006, State Gujarat, India

**E:**M/s e-Procurement Technologies Ltd. Ahmedabad. Dinesh Pamwani , Mr. Sujith Nair, Mr. Jaymeet Rathor  
Tel.:- **079 – 6813608 89 / 31 / 35 / 63 / 29/ 57 / 53 / 43 / 52 / 20 / 59 / 22**

For any other queries the vendors may contact Neeraj Sharma, Deputy Manager (Civil) at the office of Circle Head & Vice President, SBIIMS, Lucknow . Phone – 9415015444.

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**ELIGIBILITY CRITERIA (ANNEXURE-I)**

1. The applicant should meet the pre-qualification criteria detailed in the table below:

S. No.	Pre Qualification Criteria	Remarks
i)	<p>Applicant should have experience of having successfully completed similar works in the Period 01.06.2012 to 31.05.2019.</p> <p>Applicant should have following minimum work experience in the period starting 01.06.2012 and ending 31.05.2019</p> <p>a) <b>Three</b> similar completed works of value <b>at least Rs 180 lacs OR</b></p> <p>b) <b>Two</b> similar completed works of value <b>at least Rs 225 lacs OR</b></p> <p>c) <b>One</b> similar completed works of value at least <b>Rs 360 lacs</b></p> <p>(Similar works means any works involving OFFICE INTERIOR &amp; FURNISHING for any Government organization, Public sector, Banks financial institutions only)</p>	Copies of work orders, completion certificates, and client details with phone nos. and TDS certificates for qualifying works should be submitted as documentary evidence.
ii.	Minimum Average Annual Turnover of the last three financial years should be <b>at least 30%</b> of estimated cost of <b>Rs. 135 lacs.</b>	Copies of Audited Balance sheets, Profit Loss Statement, Form 26 AS for each of the three financial years and ITR for the three financial years should be submitted as documentary evidence.
iii.	Vendor should be registered for GST	Copy of GST registration should be submitted.
iv.	Vendor should be holder of a PAN Card	Copy of PAN Card should be

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		submitted.
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2. The application should contain the following documents:

- i. Copies of work orders, completion certificates for qualifying works mentioned in Annexure I should be submitted as documentary evidence.
- ii. Copies of Audited Balance sheets, Profit Loss Statements, Form 26 AS and ITR for the last three financial years should be submitted as documentary evidence for the annual turnover pre- qualification criteria.
- iii. Copy of company/firm registration certificate
- iv. Copy of PAN card
- v. Copy of GST registration certificate
- vi. EMD as per NIT.

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## INSTRUCTIONS TO THE TENDERERS

**NOTE:** IN CASE OF ANY DISPUTE ARISING REGARDING THE JOB CONTRACT, INCLUDING THE INTERPRETATION OR THE SCOPE FOR WORKING THEREOF, THE DECISION OF VICE PRESIDENT SBIIMS LUCKNOW CIRCLE SHALL BE FINAL AND BINDING.

### 1.0 Scope of Work

Sealed tenders are invited by SBI Infra Management Solutions Pvt. Ltd., Lucknow for and on behalf of State Bank of India for the **Interior Furnishing Works at 3<sup>rd</sup>, 4<sup>th</sup> and 5<sup>th</sup> Floor of SBI LHO Lucknow. The work shall to be executed in parts floor wise as per the discretion of the Bank . After satisfactory completion and handing over of one floor , another floor shall be provided to the contractor to execute the work .**

### 1.1 Site and its Location

The proposed work is to be carried out at Interior Furnishing Works at 3rd, 4th and 5th Floor of SBI LHO Lucknow.

### 2.0 Tender Documents

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

Instructions to Tenderers

General Conditions of Contract

Special Conditions of Contract

Additional Specifications

Drawings

Price 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) Additional Specifications
- c) Technical Specifications
- d) Drawings
- e) Special Conditions of Contract
- f) General Condition of Contract

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## g) Instruction to Tenderers

2.3 Complete set of tender documents including relative drawings can be downloaded from e-tendering portal of the e-tendering service provider engaged by SBIIMS.

2.4 The tender documents are not transferable.

3.0 **Site Visit**

3.1 The tenderer must obtain himself on his own responsibility and his own expenses all information and data 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, **liaison requirements with local authorities/ authorities maintaining the campus, security agencies guarding the campus, traffic regulations in and around the site etc.** The rates quoted shall include **working at all heights, cost for provision of nets, barriers and the like as required by SBI /SBIIMS ,NBC and codes to stop any sound, dust and the like from disturbing the precinct. Nothing extra shall be paid in this regard.**

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

4.0 **Earnest Money**

4.1 The tenderers are requested to submit the Earnest Money of **Rs. 4,50,000/- (Rupees Four lac fifty Thousand only)** in the form of Demand Draft or Bankers' Cheque in favour of State Bank of India payable at Lucknow drawn on any Bank in India.

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

4.3 No interest will be paid on the EMD.

4.4 EMD of unsuccessful tenderers will be refunded/ returned within 30 days of award of Contract.

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

5.0 **Initial Security Deposit**

The successful tenderer will have to submit a sum equivalent to 2% of contract value less EMD, by means of Demand Draft drawn in favour of State Bank of India payable at Lucknow within a period of 7 days of acceptance of tender.

6.0 **Security Deposit**

6.1 Total security deposit shall be 5% of contract value. Out of this 2% of contract value is in the form of initial security deposit, which includes the EMD. Balance 3% shall be deducted from the running account bill of the work at the rate of 10% of the respective running account bills i.e., deduction from each running bill account will be 10% till total 3% of contract value is reached. 50% of the total security shall be paid to the contractors on the basis of architect's certifying the virtual completion. The balance 50% would be paid to the contractors after the defects liability period as specified in the contract provided he has carried out all the work and attended to all the defects in accordance with the condition of the contract and clearance, if any, of the observations of the CTE of CVC.

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

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## 7.0 **Signing of Contract Documents**

The successful tenderer shall be bound to implement the contract by signing an agreement and conditions of contract attached herewith within 7 days from the receipt of intimation of acceptance of his tender by the Bank. However, the written acceptance of the tender by the Bank will constitute a binding agreement between the Bank and successful tenderer whether such formal agreement is subsequently entered into or not.

## 8.0 **Completion Period**

Time is essence of the contract. The work should be completed in all respects in accordance with the terms of contract within a period of **360 Days** from the date of handing over of the site.

## 9.0 **Validity of Tender**

Tenders shall remain valid and open for acceptance for a period of ninety days 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 Bank without prejudice to any other right or remedy the Bank 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 accepted Contract Value.

## 11.0 **Rate and Prices:**

- 11.1 The tenderers shall quote their rates for individual items both in words and figures. In case of discrepancy between the rate 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 total amount will be corrected.

- 11.2.1 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.
- 11.2.2 The tenderers shall 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.
- 11.3 The tenderer shall not change or modify or delete the description of the item. If any discrepancy is observed he shall immediately bring to the knowledge of the Architect/Bank.
- 11.4 Each page of the BOQ shall be signed by the authorized person and cutting or over writing shall be duly attested by him.
- 11.5 Each page shall be totaled and the grand total shall be given.
- 11.5.1 The rate quoted shall be firm and shall include all costs, allowances, taxes, levies etc. and deduction at source for Income Tax, Work Contract Tax etc. will be made as per statutory rules.

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11.5.2 The contractor is required to comply with all act of the Government relating to labour and the rules and regulations made there under from time to time and to submit at the proper times all particulars and statements required to be furnished to the appropriate authorities.

**12.0 Nominated Contractor for Allied work, if any.**

The contractor shall get allied works executed only through Specialized Contractors for different categories of works after prior approval from SBIIMS.

**Annexure-I**  
**UNDERTAKING**  
**(To be submitted along with the technical Bid)**

To

VICE PRESIDENT (CIVIL),  
SBI INFRA MANAGEMENT SOLUTIONS PVT LTD,  
6<sup>TH</sup> FLOOR, A-BLOCK,  
MOTI MAHAL MARG  
LUCKNOW-226001

Dear Sir,

**Interior Furnishing Works at 3rd,4th and 5th Floor of SBI LHO Lucknow.**

1. I / We refer to the tender notice issued by you for Interior works and allied works in connection with the above.
2. **I undertake to submit in Hard copy the tender document along with all terms & Conditions, Specifications and subsequent annexure and corrigendum's duly signed and stamped by authorized representative/ signatory on becoming L1. However we accept all the terms and conditions along with the specifications, Drawings, Layouts etc defined in the tender documents.**
3. I/ We hereby offer to perform, provide, execute, complete and maintain the works in conformity with the drawings, designs, conditions of contracts&specifications schedule of quantities relating to the works.
4. I/ We have satisfied myself/ ourselves as to the site conditions, examined the drawings and all aspects of the tender conditions, subject to above, I/ We do hereby agree, should this tender be accepted in whole or in part, to:
  - a. Abide by and fullfill all the terms and provisions of the said conditions annexed here to,
  - b. Complete the works within **360 Days** as per the work program enclosed with the tender in two or three shifts if considered necessary by the Employer / Consultants at no extra cost to the Employer.
2. I / We have deposited a **non-refundable amount of Rs. 10,000/- (Rupees Ten Thousand only)** towards Processing fee of Tender through SBI collect and an **earnest money of Rs. 4,50,000/- (Rupees Four lac fifty Thousand only)** in the form of Demand

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Draft / Banker's Cheque drawn in favour of State Bank of India payable at Lucknow , respectively which, I / We note, will not bear any interest and is liable for forfeiture.

I. If our offer is withdrawn within the validity period of acceptance by the Employer.

Or

II. If the contract agreement is not executed by us within 7 days from the date of receipt of the letter of acceptance.

Or

III. If we fail to pay the initial security deposit as stipulated.

Or

IV. If the work is not commenced within 7 days after issue of work order.

3. I / We understand that you are not bound to accept the lowest or any tender you receive.

The names of **DIRECTORS** of our Firm are:

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

Yours faithfully,

Signature .....

Designation .....

Name of Partner / Director of the Firm, authorized to sign or name of person having power of attorney to sign the contract. (Certified true copy of power of attorney should be attached)

Signature and address of witnesses:

a. Signature .....

Name .....

Address .....

b. Signature.....

Name .....

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Address .....

**AGREEMENT**

This agreement made on the \_\_\_\_\_ day of \_\_\_\_\_ Two Thousand \_\_\_\_\_ BETWEEN State Bank of India a corporation constituted under the State Bank of India Act, 1955 and having its Local Head Office at Lucknow and many other places, (hereinafter called "the Employer") of the one part and M/s \_\_\_\_\_ through its \_\_\_\_\_ having its registered office at \_\_\_\_\_ (hereinafter called "the Contractor") of the other part.

WHEREAS the Employer is desirous of executing Certain Works to be carried out **at Interior Furnishing Works at 3rd, 4th and 5th Floor of SBI LHO Lucknow**, as per Schedule-I, to this agreement and has caused Drawings, Bills of Quantities and Specification describing the work to be done, prepared by **M/s The Grid , E-326, Greater Kailsh-II , New Delhi -110048** (hereinafter called "the Architects").

AND WHEREAS the said Drawings, the Bills of Quantities marked pages \_\_\_\_\_ to \_\_\_\_\_ (inclusive) and the Specifications as stated have been signed by or on behalf of the parties hereto:

AND WHEREAS the Contractor has agreed to execute the work upon the Conditions of Tender and the Conditions of Contract and further subject to the Special Conditions set forth in Schedule-II hereto attached (hereinafter collectively referred to as "the said Conditions") as per the said Drawings and as described in the said Specification and included in the said Bills of Quantities for the sum of Rupees \_\_\_\_\_

**NOW IT IS HEREBY AGREED AS FOLLOWS:**

1. In consideration of the sum of Rupees \_\_\_\_\_ to be paid at the time and in the manner set forth in the said Conditions, the Contractor shall upon and subject to the said Drawings and described in the said Specification and Bills of Quantities.
2. The Employer shall pay to the Contractor the said sum of Rs. \_\_\_\_\_  
\_\_\_\_\_ or such other sum as shall become payable hereunder at the times and in the manner specified hereinafter.
3. The term "The Architects" in the said conditions shall mean **M/s-----** or in the event of their ceasing to be Architects for the purposes of this Contract, such other persons as shall be nominated for that purpose by the Employer, not being a person to whom the contractor shall object for reasons considered to be sufficient by the Employer mentioned in the said Conditions. Provided always that no persons subsequently appointed to be Architects under this Contract shall be entitled to disregard or overrule any decision or

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approval or direction given or expressed by the Architects for the time being.

4. The said Conditions, Specifications and Priced Bills of Quantities shall be read and construed as forming part of this agreement, and the parties hereto shall respectively abide by and submit themselves to the conditions and stipulations and perform the agreement on their parts respectively in such Conditions, Specifications and Priced Bills of Quantities contained.
5. This agreement is subject to jurisdiction of courts in UP only.
6. **The Asstt. General Manager(Premises & Estate Dept ) State Bank Of India , Local Head Office , Lucknow** shall exercise powers on behalf of the said Employer for the purpose of the Contract Agreement.
7. Whereas both the parties agree to sign the following annexure Annexed to this Agreement in token of their acceptance.
  - (i) Agreement
  - (ii) General Conditions of contract.
  - (iii) Special Condition of Contract.
  - (iv) Safety Codes.
  - (v) Specifications.
  - (vi) Material Testing & Their Frequency.
  - (vii) List of Approved Makes/ Brands
  - (viii) Priced Bill of Quantities.
  - (ix) Drawings.
8. The Bank shall pay the contractor such sum as shall become payable hereunder at the times and in the manner specified in the said Conditions mentioned in the General Conditions of Contract.
9. Whereas the Contractor hereby undertakes and agrees to carry out and complete the works within **360 Days** from the date of handing over site or 15 days from the date of issue of letter of acceptances, whichever is later. The Contractor agrees and has deposited the sum of Rs. \_\_\_\_\_ by way of Initial Security Deposit for due fulfillment of this Contract for the Works. It is agreed that the Security Deposit shall be deducted from each running bills and refunded to the contractor as per clause 2 of the General Conditions of the Contract Annexed herewith.
10. Whereas it is agreed that the earnest money amounting to **Rs. 45,0000/- (Rupees Four Lac fifty Thousand only)** deposited by the Contractor in the form of Demand Draft along with the tender shall be forfeited in full in case the Contractor does not remit the Initial Security Deposit within the stipulated period of the start of the works by the stipulated date mentioned in the award letter.
11. Whereas Shri \_\_\_\_\_ is the accredited representative(s) of the Contractor who would be responsible for taking instructions from the Employer in relation to the Works. The Contractor agrees to pay All Taxes on material or finished works like Works Contract Tax, Turnover Tax , LabourCessetc. including Income Tax in respect of this Contract of the Works and the Employer will not entertain any claim whatsoever in this report nor the Employer shall be responsible to pay any Tax as mentioned above. If due to non – payment of any of the aforesaid Tax or other Taxes connected with the Works, the Contractor suffers any loss or damages occurred to the Contractor and the Employer will be entitled to claim damages from the contractor for non completion of the Work within **9 calendar months** stipulated in Para 9, above.

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12. Whereas the Contractor hereby declares the list of all the relative working with the Employer which is annexed herewith.

OR

Whereas the Contractor declares that none of his relative is working with the Employer.

OR

Whereas the Contractor declares that he has associated himself with the agencies of the appropriate classes of person for Sanitary and Water Supply Installation etc. or any other specialized job to complete the works.

The Plans, Drawings, Specifications, Contract Documents and the Documents above mentioned shall form basis of this Contract and the decision of **Vice President (Civil), SBI Infra Management Solutions Pvt. Ltd., 6<sup>th</sup> Floor, A- Block, Moti Mahal Marg, Lucknow-226001** for the time being as mentioned in the Conditions of Contract in reference to all matters of dispute as to material, workmanship or account and as to the intended interpretation of the clauses of the Agreement or any of the document attached hereto shall be final and binding on both parties and may be made rule of the court.

13. The work comprises of the **"Interior Furnishing Works at 3rd,4th and 5th Floor of SBI LHO Lucknow."** as mentioned above and all subsidiary and other works connected therewith on the same site as may be ordered to be done from time to time by **Vice President (Civil), SBI Infra Management Solutions Pvt. Ltd., 6<sup>th</sup> Floor, A- Block, Moti Mahal Marg, Lucknow-226001** for the time being even though such works may not have been shown on the , Plans or described in the said Specifications or Schedule of Quantities of various classes of Work to be done.
14. The Employer through the **Vice President (Civil), SBI Infra Management Solutions Pvt. Ltd., 6<sup>th</sup> Floor, A- Block, Moti Mahal Marg, Lucknow-226001** reserves himself the right of altering the Plans, Drawings and nature of Work of adding to or omitting any items of work or having portions of the same carried out departmentally or otherwise and such alterations or variations shall be carried out without prejudice to this Contract.
15. All disputes arising out of or in any way connected with this agreement shall be deemed to have arisen in UP and only the courts of UP shall have jurisdiction to determine the same.
16. All parts of this Contract have been read to us and fully understood by us.

In Witness whereof the parties above named have executed these presents today and year first hereinabove written.

Signed, Sealed and Delivered by:

**Authorized Representative of Employer**

**Authorized Representative of Contractor**

Signature of Contractor with Seal

**SCHEDULE I**

***Interior Furnishing Works at 3rd,4th and 5th Floor of SBI LHO Lucknow*** as described in Tender and Drawings inclusive hereto as Specifications.

**SCHEDULE II**

The following Letters/ Correspondence form a part of Agreement:

- 1.
- 2.
- 3.

As witness our hands the day and year first written above,

In presence of

Signature:

Name:

Occupation:

Address:

Signature by the said Employer

Name:

Designation:

Address:

In presence of

Signature:

Signature by the said Contractor

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Name:

Name:

Occupation:

Designation:

Address:

Address:

## **GENERAL CONDITIONS OF CONTRACT**

### **1.0 Definitions:**

"Contract means the documents forming the tender and the acceptance thereof and the formal agreement executed between State Bank of India ,Local Head Office , Moti Mahal Marg , Lucknow 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/ Bank and all these documents taken together shall be deemed to form one contract and shall be complementary to one another.

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

1.1.1 'SBI' shall mean State Bank of India (client) having its Corporate Centre at State Bank Bhavan, Madame Cama Road, Mumbai-400 021 and includes the client's representatives, successors and assigns.

'Architects/ Consultants' shall mean **M/s The Grid , E-326, Greater Kailsh-II ,New Delhi -110048** 'Site Engineer' shall mean an Engineer appointed by the Bank as their representative to give instructions to the contractors.

1.1.2 '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.

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.

1.1.3 'Engineer' shall mean the representative of the Architect/Consultant.

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

1.1.5 '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/ Bank Engineer "Month" means calendar month.

1.1.6 "Week" means seven consecutive days.

1.1.7 "Day" means a calendar day beginning and ending at 00 Hrs. and 24 Hrs. respectively.

### **2.0 Total Security Deposit**

Total Security Deposit comprise of

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Earnest Money Deposit

Initial Security Deposit

Retention Money

**a) Earnest Money Deposit:**

The tenderer shall furnish EMD of **Rs. 4,50, 000/- (Rupees Four Lac Fifty Thousand only)** in the form of Demand Draft drawn in favour of State Bank of India payable at **Lucknow** on any Scheduled Bank. No tender shall be considered unless the EMD is so deposited in the required form. No interest shall be paid on this EMD. The EMD of the unsuccessful tenderer shall be refunded after the decision to award the contract is taken without interest. The EMD shall stand absolutely forfeited if the tenderer revokes his tender at any time the period when he is required to keep his tender open acceptance by the SBI or after it is accepted by the SBI the contractor fails to enter into a formal agreement or fails to pay the initial security deposit as stipulated or fails to commence the work within the stipulated time.

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

The amount of ISD shall be 2% of accepted value of tender including the EMD in the form of D/D drawn on any scheduled Bank and shall be deposited within 7 days from the date of acceptance of tender.

**c) Retention Money:**

Besides the ISD as deposited by the contractor in the above said manner the retention money shall be deducted from the running account bill at the rate of 10% of the gross value of work done by the contractor and claimed in each bill provided the total security deposit i.e. the ISD plus Retention Money shall both together not exceed 5% of the contract value. 50% of the total security deposit shall be refunded to the contractor without any interest on issue of Virtual Completion certificate by the Architect / consultant. The balance 50% of the total security deposit shall be refunded to the contractors without interest within fifteen days after the end of defects liability period provided the contractor has satisfactorily attended to all defects in accordance with the conditions of contract including site clearance.

**d) Language**

The language in which the contract documents shall be drawn shall be in English.

**3.0 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 correspondence 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 former shall be adopted.
- a) In case of difference between rates written in figures and words, the rate in words shall prevail.
- b) Between the duplicate / subsequent copies of the tender, the original tender shall be taken as correct.

**4.0 Scope of Work:**

The contractor shall carryout complete and maintain the said work in every respect in strictly accordance with this contract and with the directions of and to the satisfaction of the

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Bank/ SBIIMS to be communicated through the Architect/ Bank Engineer. The Architect/ Bank Engineer 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 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 specifications. The removal from the site of any material brought thereon by the contractor and any substitution of any other materials therefore the removal and / or re-execution of any work executed by him. The dismissal from the work of any person employed / engaged thereupon.

### **3.0 i) Letter of Acceptance:**

Within the validity period of the tender the Bank shall issue a letter of acceptance either directly or through the architect by registered 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.

### **6.0 Ownership of Drawings:**

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

### **7.0 Detailed Drawings and Instructions:**

The SBI/ SBIIMS through its architects/ consultants shall furnish with reasonable promptness additional instructions by means of drawings or otherwise necessary for the proper execution of 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 prepare a detailed programmer schedule 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.

### **8.0 Copies of Agreement**

Two copies of agreement duly signed by both the parties with the drawings shall be handed over to the contractors.

### **9.0 Liquidated Damages:**

If the contractor fails to maintain the required progress in terms of clause 30 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 contract value per week which is subject to a maximum of 5% of the contract value.

### **10.0 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

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materials shall be new and both workmanship and materials shall be of best quality. The contractor shall at all times enforce strict discipline and good order among his employees and shall not employ on the work any unfit person or anyone not skilled in the work assigned to him. Workman whose work or behavior is found to be unsatisfactory with the SBI/ SBIIMS/ Architect/ Bank Engineer, he shall be removed from the site immediately.

#### **11.0 Permits, Laws and Regulations:**

Permits and licenses 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 regulations, laws, and ordinances rules, applicable to the contract. If the contractor observes any discrepancy between the drawings and specifications, he shall promptly notify the SBI/ SBIIMS in writing under intimation of the Architect/ Bank Engineer. 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.

#### **12.0 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/ Bank Engineer 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/ Bank Engineer 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/ SBIIMS.

#### **13.0 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, except due to causes beyond his control and due to his fault or negligence.

He shall take adequate care and steps for protection of the adjacent properties. The contractor shall take all precautions for safety and protections of his employees on the works and shall comply with all applicable provisions of Govt. and local bodies safety laws and building codes to prevent accidents, or injuries to persons or property on, about or adjacent to his place of work. The contractor shall take insurance covers as per clause 26.0 at his own cost. The policy may take in joint names of the contractor and the SBI and the original policy may be lodged with the SBI.

#### **14.0 Inspection of Work:**

The SBI /SBIIMS/ Architect/ Bank Engineer or their representatives shall at all reasonable times 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/ SBIIMS, Architect / consultant and their representatives necessary for inspection and examination and test of the materials and workmanship. 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 construction stage or its completion can also be inspected by the Chief Technical Examiner's organization a wing of Central Vigilance Commission.

#### **15.0 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

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part or share thereof or interest therein without the written consent of the SBI/ SBIIMS 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.

## **16.0 Quality of Materials, Workmanship & Test**

All materials and workmanship shall be best of the respective kinds described in the contract and in accordance with Architect/ Bank Engineer instructions and shall be subject from time to time to such tests as the Architect/ Bank Engineer 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 as are normally required or examining measuring sampling and testing any material or part of work before incorporation in the work before incorporation in the work or testing as may be selected and required by the Architect / Consultant.

### **ii) Samples**

All samples of adequate numbers, size, shades and pattern as per specifications shall be supplied by the contractor with out 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 Architect/ Bank Engineer. Before submitting the sample / literature the contractor shall satisfy himself that the material/ equipment for which he is submitting the sample/ literature meet with the requirement of tender specification. Only when the samples are approved in writing by the architect / consultant the contractor shall proceed with the procurement and installation of the particular material / equipment. The approved samples shall be signed by the Architect / Consultant for identification and shall be kept on record at site office until the completion of the work for inspection / comparison at any time. The Architect / Consultant 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**

The cost / expenditure required for the tests shall be borne by the contractor if such test is intended by or provided for in the specification or BOQ.

### **iv) Costs of Tests not provided for**

If any test is ordered by the Architect / Consultant which is either

If so intended by or provided for or (in the cases above mentioned) is not so particularized, or though so intended or provided for but ordered by the Architect / Consultant 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.

## **17.0 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 fulfillment of contract.

## **18.0 Contractor's Superintendence**

The contractor shall give necessary personal superintendence during the execution of the works and as long, thereafter, as the Architect / consultant may consider necessary until

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the expiry of the defects liability period stated hereto.

## **19.0 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 and quantities. 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, 21 hereof as well as amounts of prime cost and provisional sums, if any, shall be excluded.

**Variation exceeding 25%:** The items of work executed in relation to variation exceeding 25% shall be paid on the basis of actual market rate analysis.

## **20.0 Works to be measured**

The Architect / Consultant 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 Architect in taking such measurements and calculations 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 Architect / Consultant 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 M book by the contractor. The contractor shall depute his representative to take the measurements, thereafter measurement verified by the Architect / Bank shall be considered as final. All authorized extra work, omissions and all variations made shall be included in such measurement.

## **21.0 Variations**

No alteration, omission or variation ordered in writing by the Architect / consultant shall vitiate the contract. In case the SBI / SBIIMS/ Architect / Consultant thinks proper at any time during the progress of works to make any alteration in, or additions to or omissions 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 alterations 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.

## **22.0 Valuation of Variations**

No claim for an extra shall be allowed unless it shall have been executed under the authority of the Architect/ Bank Engineer 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.

- a) 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

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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 Architect / consultant 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 Architect / Consultant shall fix such rate or prices as in the circumstances in his opinion 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 Architect / Consultant) 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 wastage etc. plus 15% towards establishment charges, contractor's overheads and profit. Such items shall not be eligible for escalation.

### **23.0 Final Measurement**

The final measurement, valuation and payment in respect of the contract shall be completed within six months of the virtual completion of the work.

### **24.0 Virtual Completion Certificate (VCC)**

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

- 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 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.
- f) All defects / imperfections have been attended and rectified as pointed out by the SBI/ SBIIMS to the full satisfaction of SBI/ SBIIMS.

Upon the satisfactory fulfillment by the contractor as stated above, the contractor shall be entitled to apply to the Architect / consultant is satisfied of the completion of the work. Relative to which the completion certificate has been sought, the 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.

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This issuance of a VCC shall be without prejudice to the 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.

## **25.0 Work by other Agencies**

The SBI / Architect / Consultant 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/ SBIIMS. Such work shall be carried out in such manner as not to impede the progress of the works included in the contract.

## **26.0 Insurance of Works**

26.1 Without limiting his obligations and responsibilities under the contract, the contractor shall insure in the joint names of the SBI and the contractor against all risk (CAR , Contractor all risk policy) loss of 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 26 of GCC and are also covered during the period of maintenance for loss or damage arising from a cause, occurring prior to 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 Architect / consultant the policy of insurance and the receipts for payment of the current premiums.

## **26.2 Damage to Persons and Property**

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

- a) The permanent use or occupation of land by or any part thereof.
- b) The right of SBI/ SBIIMS 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 their agents, employees or other contractors not being employed by the contractor or for 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

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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/ SBIIMS, their employees, or agents or other employees, or agents or other contractors for the damage or injury.

### **26.3 Contractor to Indemnify SBI**

The contractor shall indemnify the SBI/ SBIIMS against all claims, proceedings, damages, costs, charges and expenses in respect of the matters referred to in the matters referred to in the provision sub-clause 26.2 of this clause.

### **26.4 Contractor's Superintendence**

The contractor shall fully indemnify and keep indemnified the SBI/ SBIIMS 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/ SBIIMS 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/ SBIIMS 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 Architect / Consultant in this behalf.

### **26.5 Third Party Insurance**

**26.5.1** Before commencing the execution of the work the contractor but without limiting his obligations and responsibilities under clause 26.0 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/ SBIIMS, or to any person, including any employee of the SBI/ SBIIMS, 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 26.0 thereof.

#### **26.5.2 Minimum amount of Third Party Insurance**

Such insurance shall be effected with an insurer and in terms approved by the SBI/ SBIIMS which approval shall not be reasonably withheld and for at least the amount stated below. The contractor shall, whenever required. Produce to the Architect / consultant the policy or policies of insurance cover and receipts for payment of the current premiums.

**26.5.3** The minimum insurance cover for physical property, injury, and death is Rs. 5 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.

### **26.6 Accident or Injury to Workman**

The SBI/ SBIIMS 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/ SBIIMS or their agents, or employees. The contractor shall indemnify and keep indemnified SBI/ SBIIMS 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.

#### **26.6.1 Insurance against Accidents etc. to Workmen**

The contractor shall insure against such liability with an insurer approved by the SBI/ SBIIMS during the whole of the time that any persons are 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

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persons employed by any sub-contractor the contractor's obligation to insure as aforesaid under this sub-clause shall be satisfied if the sub contractor shall be insured against the liability in respect of such persons in such manner that SBI/ SBIIMS is indemnified under the policy but the contractor shall require such sub-contractor to produce to the Architect / Consultant when such policy of insurance and the receipt for the payment of the current premium.

#### **26.6.2 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/ SBIIMS 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 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 others rights of the SBI/ SBIIMS against contractors. In respect of such default, the employer 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/ SBIIMS 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.

#### **27.0 Commencement of Works:**

The date of commencement of the work will be reckoned as the date of handing over site or fifteen days from the date of issue of letter of acceptance of the tender by the SBI which ever is later.

#### **28.0 Time for Completion**

Time is essence of the contract and shall be strictly observed by the contractor. The entire work shall be completed within a period of **360 Days** from the date of commencement. If required in the contract or as directed by the Architect / Consultant. 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.

#### **29.0 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/ SBIIMS to grant a fair and reasonable extension of time for completion of work as per the terms of contract. If the contractor needs an extension of time for the completion of work or if the completion of work is likely to be delayed for any reasons beyond the due date of completion as stipulated in the contract, the contractor shall apply to the SBI/ SBIIMS through the Architect / Consultant in writing 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/ SBIIMS the provision of liquidated damages as stated under clause 9.0 (liquidity damage ) General conditions of contract to the Tenderers shall become applicable. Further the contract shall remain in force even for the period beyond the due date of completion irrespective whether the extension is granted or not.

#### **30.0 Rate of Progress**

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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 Architect / Consultant should the rate of progress of the work or any part thereof be at any time be in the opinion of the Architect / consultant too slow to ensure the completion of the whole of the work by the prescribed time or extended time for completion the Architect / Consultant to expedite progress so as to complete the works by the prescribed time or extended time. Such communications from the Architect / Consultant neither shall relieve the contractor from fulfilling obligations under the contract nor will he be entitled to raise any claims arising out of such directions.

### **31.0 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 Architect/ Bank Engineer, 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 Architect/ Bank Engineer. However the provisions 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/ continued with the prior approval of the Architect/ Bank Engineer at no extra cost to the SBI/ SBIIMS.

All work at night after obtaining approval from competent authorities shall be carried out without unreasonable noise and disturbance.

### **32.0 No Compensation or Restriction of Work.**

If at any time after acceptance of the SBI/ SBIIMS shall decide to abandon or reduce the scope of work for any reason whatsoever and hence not required the whole or any part of the work to be carried out. The Architect/ Bank Engineer 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.

### **33.0 Suspension of Work**

- i) The contractor shall, on receipt of the order in writing of the Architect/ Bank Engineer (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 Architect/ Bank Engineer may consider necessary so as not to cause any damage or injury to the work already done or endanger the safety thereof for any of following reasons.
  - a) One account any default on the part of the contractor, or
  - b) for proper execution of the works or part thereof for reasons other than the default of the contractor, or for safety of the works or part thereof.
  - c) 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 Architect/ Bank Engineer.
- ii) If the suspension is ordered for reasons (b) and (c) 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.

### **34.0 Action when the whole Security Deposit is forfeited**

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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/ SBIIMS.

- a) To rescind the contract (of which rescission notice in writing to the contractor by the Architect/ Bank Engineer 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/ SBIIMS.
- b) To employ labour paid by the SBI and to supply materials to carry out the work, or any part of the work, debiting the contractor with the cost of the labour and materials (the cost of such labour and materials as worked out by the Architect /Consultant 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/ Bank Engineer 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, 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/ SBIIMS 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/ SBIIMS 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 rescind 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/ Bank Engineer 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.

### **35.0 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 Govt. 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 Architect/ Bank Engineer that he is able to carry out and fulfil the contract, and to give security therefore if so required by the Architect/ Bank Engineer.

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/ SBIIMS through the Architect / consultant or shall charge or encumber this contract or any payment due to which may become due to the contractor thereunder:

- 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 days after receiving from the SBI through the

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Architect/ Bank Engineer 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/ SBIIMS through the Architect/ Bank Engineer that the said materials were condemned and rejected by the Architect/ Bank Engineer under these conditions; or has neglected or failed persistently to observe and perform all or any 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 be determent of good workmanship or in defiance of the 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/ SBIIMS and or the Architect/ Bank Engineer, 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/ Bank Engineer 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/ SBIIMS through the Architect/ Bank Engineer 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 way 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 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/ SBIIMS 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/ SBIIMS incidental to the sale of the materials etc.

### **36.0 Certificate of Payment**

The contractor shall be entitled under the certificates to be issued by the Architect / Consultant to the contractor within 14 working days from the date of certificate to the payment from SBI/ SBIIMS from time to time. The SBI/ SBIIMS shall recover the statutory recoveries towards Income tax, Work contract tax, Labour Cess as per the prevailing bye laws and other dues including the retention amount from the certificate of payment.

Provided always that the issue of any certificate by the Architect/ Bank Engineer during the progress of works or completion shall not have effect as certificate of satisfaction or relieve the contractor from his liability under clause.

The Architect/ Bank Engineer shall have power to withhold the certificate if the work or any part thereof is not carried out to their satisfaction.

The Architect/ Bank Engineer may by any certificate make any corrections required in previous certificate.

The SBI/ SBIIMS shall modify the certificate of payment as issued by the Architect from time to time while making the payment.

The contractor shall submit interim bills only after taking actual measurements and property recorded in the measurement books

The contractor shall not submit interim bills when the approximate value of work done by him is less than **Rs.50 lacs** and maximum one bill shall be submitted in a month .

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The final bill may be submitted by contractor within a period of one month from the date of virtual completion and Architect/ Bank Engineer shall issue the certificate of payment within a period of two months. The SBI shall pay the amount within a period of three months from the date of issue of certificate provided there is no dispute in respect of rates and quantities.

The contractor shall submit the interim bills in the prescribed format with all details.

### **37.0 Settlement of Disputes and Arbitration**

Except where otherwise provided in the contract all questions and disputes relating 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 those 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.

- ii) If the contractor considers that he is entitled for any extra payment or compensation in respect of the works over and above the amounts admitted as payable by the Architect 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 **Vice President (Civil), SBI Infra Management Solutions Pvt. Ltd., 6<sup>th</sup> Floor, A- Block, Moti Mahal Marg, Lucknow-226001** and endorse a copy of the same to the Architect, within 30 days from the date of disallowance thereof or the date of deduction or recovery. The said notice shall give full particulars of the claim, grounds on which it is based and detailed calculations of the amount claimed and the contractor shall not be entitled to raise any claim nor shall the Bank 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 **Vice President (Civil), SBI Infra Management Solutions Pvt. Ltd., 6<sup>th</sup> Floor, A- Block, Moti Mahal Marg, Lucknow-226001** in the manner and within the time as aforesaid. The contractor shall be deemed to have waived and extinguished all his rights in respect of any claim not notified to the **Vice President (Civil), SBI Infra Management Solutions Pvt. Ltd., 6<sup>th</sup> Floor, A- Block, Moti Mahal Marg, Lucknow-226001** in writing in the manner and within the time aforesaid.
- iii) **Vice President (Civil), SBI Infra Management Solutions Pvt. Ltd., 6<sup>th</sup> Floor, A- Block, Moti Mahal Marg, Lucknow-226001** 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 **Vice President (Civil), SBI Infra Management Solutions Pvt. Ltd., 6<sup>th</sup> Floor, A- Block, Moti Mahal Marg, Lucknow-226001** submit his claims to the conciliating authority namely the **Circle Development Officer, SBI, Lucknow** for conciliation along with all details and copies of correspondence exchanged between him and the VP (SBIIMS).
- iv) If the conciliation proceedings are terminated without settlement of the disputes, the contractor shall, within a period of 30 days of termination thereof shall give a notice to the concerned **Chief General Manager of the Bank** for appointment of an arbitrator to adjudicate the notified claims failing which the claims of the contractor shall be deemed to have been considered absolutely barred and waived.
- v) Except where the decision has become final, binding and conclusive in terms of the contract, all disputes or differences arising out of the notified claims of the differences arising out of the notified claims of the contractor as aforesaid and all claims of the Bank shall be referred for adjudication through arbitration by the Sole Arbitrator appointed by the **Chief General Manager of the Bank**. The contractor shall not have any objection to any such appointment that the Arbitrator so appointed is a Bank Officer and that he had to

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deal with the matters to which the Contract relates in the course of his duties as Bank Officer. If the arbitrator so appointed is unable or unwilling to act or resigns his appointment or vacates his office due to any reason whatsoever another sole arbitrator shall be appointed in the manner aforesaid by the **Chief General Manager of the Bank**, Such person shall be entitled to proceed with the reference from the stage at which it was left by his predecessor.

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

It is also a term of this contract that no person other than a person appointed by **Chief General Manager of the Bank**, as aforesaid should act as arbitrator.

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

It is also a term of the contract that if any fees are payable to the arbitrator these shall be paid equally by both the parties. However, no fees will be payable to the arbitrator if he is a Bank Officer.

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

### **38.0 Water Supply**

The contractor shall be permitted to use the water available in SBI Campus. However contractor shall make his own arrangement for storage of water for their use .

### **39.0 Power Supply**

The contractor shall be permitted to use the power supply available in the bank premises at free of cost. Necessary electrical cables shall be arranged by the contractor for power transmission for their use at their own cost .

### **40.0 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 Bank immediately.

### **41.0 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.

### **42.0 Maintenance of Registers**

The contractor shall maintain the following registers as per the enclosed Performa at site of work and should produce the same for inspection of SBI/ SBIIMS/ Architect/ Bank Engineer whenever desired by them. The contractor shall also maintain the records / registers as

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required by the local authorities / Govt. from time to time.

- i) Register for Cement / Paint / Lead / Specific Materials
- ii) Register for Steel
- iii) Register for Secured Advance
- iv) Register for Bulkage of Sand
- v) Register for Silt Test
- vi) Register for Sieve Analysis for Fine Aggregate
- vii) Register for Sieve Analysis for Course Aggregate
- viii) Register for Slump Test.
- ix) Register for Concrete Cube Test.
- x) Register for Hindrance to Work.
- xi) Register for Consumption of Cement
- xii) Register for Running Account Bill
- xiii) Register for Labour

#### **43.0 Force Majeure**

- 43.1 Neither contractor nor SBI/ SBIIMS shall be considered in default in performance of their obligations if such performance is prevented or delayed by event such as but not to war, hostilities revolution, riots, civil commotion, strikes, lockout, conflagrations, epidemics, accidents, fire, storms, floods, droughts, earthquakes or ordinances or any act of god or for any other cause beyond the reasonable control of the party affected or prevented or delayed. However a notice is required to be given within 30 days from the happening of the even 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.
- 43.2 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 such cessation and the actual delay incurred in such affected activity adducing necessary evidence in support thereof.
- 43.3 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.
- 43.4.1 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 each other to decide regarding the future execution of this Agreement.

#### **44.0 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 19360 (Amended)
- iii) Workmen's compensation Act 1923 (Amended)
- iv) Contact labour regulation and abolition act 1970 and central rules 1971 (Amended)
- v) Apprentice act 1961 (Amended)
- vi) Industrial employed (standing order) Act 1946 (Amended)
- vii) Personal injuries (Compensation insurance) act 1963 and any other modifications
- viii) Employees' provided fund and miscellaneous provisions Act 1952 and amendment

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thereof.

- ix) Shop and establishment act
- x) Any other act or enactment relating thereto and rules framed there under from time to time.

#### 45.0 Accidents

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

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### **SPECIAL CONDITIONS OF CONTRACT**

#### 1.0 Scope of Work

The scope of work is to carry out ***Interior Furnishing Works at 3rd,4th and 5th Floor of SBI LHO Lucknow..***

#### 2.0 Address of Site

The site is located at ***SBI LHO Building,Moti Mahal Marg, Lucknow-226001***

#### 3.0 Dimension and Levels

All dimensions and levels shown on the drawing shall be verified by the contractor on the site and he will be held responsible for the accuracy and maintenance of the entire dimension and the levels. Figured dimensions are in all cases to be accepted and no dimension shall be scaled. Large-scale details shall take precedence over small – scale drawing. In case of discrepancy the contractor shall ask for clarification from the Architect/ Bank Engineer before proceeding with the work.

#### 4.0 Notice of Operation

The contractor shall not carryout any important operation without the consent in writing from the Architect/ Bank Engineer.

#### 5.0 Construction Records

The contractor shall keep and provide to the Architect/ Bank Engineer full and accurate

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records of the dimension and positions of all new work and any other information necessary to prepare complete drawings recording details of the work as constructed.

#### **6.0 Safety of adjacent Structures and Trees**

The contractor shall provide and erect to the approval of the Architect / Consultant such supports as may be required to protect effectively all structures and protective guards to trees which may be endangered by the execution of the works or otherwise take such permanent measures as may be required by the Architect to protect the trees and structures.

#### **7.0 Temporary Works**

Before any temporary works are commenced, the contractor shall submit at least 7 days in advance to the Architect/ Bank Engineer for approval complete drawings of all temporary works he may require for the execution of the works. The contractor shall carry out the modifications relating to strength, if required by the Architect/ Bank Engineer may require in accordance with the conditions of contract at his own cost. The contractor shall be solely responsible for the stability and safety of all temporary works an unfinished works and for the quality of the permanent works resulting from the arrangement eventually adopted for their execution.

#### **8.0 Water, Power and Other Facilities**

The rate quoted by the contractor shall include all expenses that are required for execution of the work and the contractor shall make his own arrangements for storage of good quality water suitable for the construction and good quality drinking water for their workers. The SBI/ SBIIMS will not be liable to pay any charges in connection with the above. The contractor shall be permitted to use the water available in SBI LHO , Campus for his necessary Works .

The rate quoted in the tender shall include the expenses for obtaining and maintaining power connections and shall pay for the consumption charges.

The contractors for other trades directly appointed by the SBI/ SBIIMS shall be entitled to take power and water connections from the temporary water and power supply obtained by the contractor. However, the concerned contractor shall make their own arrangements to draw the supply and pay directly the actual consumption charges at mutually agreed rates between them. All municipal charges for drainage and water connection for construction purposes shall be borne by the contractor and charges payable for permanent connections, if any, shall be initially paid by the contractor and the SBI will reimburse the amount on production of receipts.

a) The SBI/ SBIIMS as well as the Architect / Consultant shall give all possible assistance to the contractors to obtain the requisite.

b) Permission from the various authorities, but the responsibility for obtaining the same in time shall be of the contractor.

#### **9.0 Office Accommodation**

a) The contractor shall provide and maintain all necessary offices, workshops, stores, shelters, sanitary facilities, canteens and other temporary structures for themselves in connection with the work at the site own cost after getting the approval from the architect / consultant.

b) All temporary buildings and facilities as mentioned above shall be removed on completion of the work or at any other earlier date as directed by the architect / consultant.

All the expenses for obtaining statutory approvals and maintenance of the above facilities as well as running expense shall be borne by the contractor at no extra cost. It is also the

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responsibility of the contractor to obtain statutory approvals for providing the above facilities.

#### **10.0 Facilities for Contractors' Employees**

The contractor shall make his own arrangement for the housing and welfare of his staff and workmen including adequate drinking water facilities. The contractor shall also make his arrangements at his own cost for transport where necessary for his staff and workmen to and from site of work at his own cost.

#### **11.0 Lighting of Works**

The contractor shall at all times provide adequate and approved lighting as required for the proper execution and supervision and inspection of works.

#### **12.0 Fire Fighting Arrangements**

- i) The contractor shall at all times provide suitable arrangements for the fighting at his own cost. For this purpose he shall provide requisite number of fire extinguishers and adequate number of buckets, some of which are to be always kept filled with sand and some with water. These equipments shall be provided at suitable prominent and easily accessible places and shall be properly maintained.
- ii) Any deficiency in the fire safety or unsafe conditions shall be corrected by the contractor at his own cost and to the approval of the relevant authorities. The contractor shall make the following arrangements at his own cost but not limited to the following :
  - a) Proper handling, storage and disposal of combustible materials and waste.
  - b) Worked operations which can create fire hazards.
  - c) Access for the firefighting equipment's.
  - d) Types, number and location of containers for the removal of surplus materials and rubbish.
  - e) Type size, number and location of fire extinguishers or other fire fighting equipment.
  - f) General house keeping.

#### **13.0 Site Order Book**

A site order book shall be maintained at site for the purpose of quick communication between the Architect/ Bank Engineer. Any communication relating to the works may be conveyed through Records in the site order book. Such a communication from one party to the other shall be deemed to have been adequately served in terms of contract. Each site order book shall have machine numbered pages in triplicate and shall be carefully maintained and preserved by the contractor and shall be made available to the Architect/ Bank Engineer as and when demanded. Any instruction which the Architect/ Bank Engineer may like to issue to the contractor or the contractor may like to bring to the Architect/ Bank Engineer may like to issue to the Contractor or the Contractor may like to bring to the Architect/ Bank Engineer two copies of such instructions shall be taken from the site order book and one copy will be handed over to the party against proper acknowledgment and the second copy will be retained for their record.

#### **14.0 Site Meetings**

Site meetings will be held to review the progress and quality evaluation. The contractors shall depute a senior representative along with the site representative staff of approved sub-contractors and suppliers as required to the site meetings and ensure all follow up actions. Any additional review meetings shall be held if required by the Architect/ Bank Engineer.

#### **15.0 Disposal of Refuse**

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The contractor shall cart away all debris, refuse etc. arising from the work from the site and deposit the same as directed by the Architect/ Bank Engineer at his own cost. It is the responsibility of the contractor to obtain from the local authorities concerned to the effect that all rubbish arising out of contractor's activities at the construction site or any other off-site activities borrow pits has been properly disposed off.

#### **16.0 Contractor to Verify Site Measurement**

The contractor shall check and verify all site measurements whenever requested by other specialists contractors of other sub contractors to enable them to prepare their own shop drawings and pass on the information with sufficient promptness as will not in any way delay the works.

#### **17.0 Displaying the Name of the Work**

The contractor shall put up a name board of suitable size as directed by the Architect/ Bank Engineer indicating therein the name of the project and other details as given by the Architect/ Bank Engineer at his own cost remove the same on completion of work.

#### **18.0 Bar Bending Schedule**

The contractor shall prepare a detailed bar bending schedule for all reinforced concrete works if required and get them approved by the Architect/ Bank Engineer well in advance.

#### **19.0 As Built Drawings**

- i) For the drawing issued to the contractor by the Architect/Consultant. The Architect / Consultant will issue two sets of drawings to the contractor for the item for which some changes have been made. From the approved drawings as instructed by the SBI / SBIIMS/ Architect / Consultant. The Contractor will make the changes made on these copies and return these copies to the Architect/ Bank Engineer for their approval. In case any revision is required or the corrections are not properly marked the Architect/ Bank Engineer will point out the discrepancies to the contractor. The contractor will have to incorporate these corrections and /or attend to discrepancies either on the copies as directed by the Architect/ Bank Engineer and resubmit to him for approval. The Architect / Consultant will return one copy duly approved by him.
- ii) For the drawings prepared by the Contractor, the Contractor will modify the drawing prepared by him wherever the changes are made by the SBI/ SBIIMS Architect/ Bank Engineer. And submit two copies of such modified drawings to the Architect/ Bank Engineer for approval. The Architect/ Bank Engineer will return one copy of the approved drawing to the Contractor.

#### **20.0 Approved Make**

The Contractor shall provide all materials from the list of approved makes at his own cost. The Architect/ Bank Engineer may approve any make / agency within the approved list as given in the tender after inspection of the sample / mock up.

#### **21.0 Procurement of Materials**

The Contractor shall make his own arrangements to procure all the required materials for the work. All wastage's and losses in weight shall be to the contractors account.

#### **22.0 Excise Duty, Taxes, Levies etc.**

The contractors shall pay and be responsible for payment of all taxes except GST, duties, levies, royalties, fees cess, or charges in respect of the works including but not limited to sales tax, tax on works contract excise duty, and octroi, payable in respect of materials, equipments plant and other things required for the contract. All of the aforesaid taxes except GST, duties, levies, fees and charges shall be to the contractors account and the SBI shall

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not be required to pay any additional or extra amount on this account. Variation of taxes, duty fees, levies etc if any, till completion of work shall be deemed to be included in the quoted in the quoted rates and no extra amount on this account. Variation of taxes, duties, fees, levies, etc if any till completion of work shall be deemed to be included in the quoted rates and no extra claim on this account will in any case be entertained. If a new tax or duty or levy or cess or royalty or octroi is imposed under as statute or law during the currency of contract the same shall be borne by the contractor.

### **23.0 Acceptance of Tender**

The SBI/ SBIIMS shall have the right to reject any or all tenders without assigning any reason. They are not to bound to accept the lowest or any tender and the tenderer shall have no right to question the acts of the SBI/ SBIIMS. However, the adequate transparency would be maintained by the SBI/ SBIIMS.

## **SECTION - A: MATERIALS**

- 1) Material shall be of best approved quality obtaining and they shall comply with the respective Indian Standard Specification.
- 2) Samples of all materials shall be got approved before placing order and the approved sample shall be deposited with the Architect.
- 3) In case of non-availability of materials in metric sizes the nearest size in FPS units shall be provided with prior approval of the Architects for which neither extra will be paid nor shall any rebates be recovered.
- 4) If directed, materials shall be tested in any approved Testing Laboratory and the test certificates in original shall be testing including charges for repeated tests, if ordered, shall be borne by the Contractor.
- 5) It shall be obligatory for the Contractor to furnish certificate, if deemed by the Architects, from manufacturer or the material supplier that the work has been carried out by using their material and as per their recommendations.
- 6) All materials supplied by the Employer / any other Specialist Firms shall be properly stored and the Contractor shall be responsible for its safe custody until they are required on the works and till the completion of the work.
- 7) Unless otherwise shown on the Drawings or mentioned in the "Schedule of Quantities" or special specification, the quality of materials, workmanship, dimensions, etc., shall be as specified as hereunder.
- 8) All equipment and facilities for carrying out field tests on materials shall be provided by the Contractor without any extra cost.

### **a) Cement :**

Cement shall comply in every respect with the requirements of the latest publications of IS: 269 and unless otherwise specified ordinary Portland Cement shall be used.

The weight of ordinary Portland Cement shall be taken as 1440 kg. per cu.m. (90 lbs. per C.Ft.). Cement shall be measured by weight and in whole bags, and each undisturbed and sealed 50 kg. bag

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being considered equivalent to 35 liters (1.2 c.ft.) in volume care should be taken to see that each bag contains full quantity of cement. When part bag is required cement shall be taken by weight or measured in measuring boxes

No other make of cement but that approved by the Architects will be allowed on works and the source of supply will not be changed without approval of Architect in writing. Test certificates to show that cement is fully complying the specifications shall be submitted to the Architects and

notwithstanding this, the Architect may at his discretion, order that the cement brought on site and which he may consider damaged or of doubtful quality for any reason whatsoever, shall be re-tested in an approved testing laboratory and fresh certificates of its soundness shall be produced.

Cement ordered for re-testing shall not be used for any work pending results of re-test.

Cement shall be stored in weather-proof shed with raised wooden plank flooring to prevent deterioration by dampness or intrusion of foreign matter. It shall be stored in such a way as to allow the removal and use of cement in chronological order of receipt i.e., first received being used first used. Cement deteriorated and or clotted shall not be used on the work but shall be removed at once from the site. However, allowing use of warehouse set cement shall be determined by the Architects.

b) **Lime :**

Lime shall comply in every respect with the requirements of IS: 712 and shall be made from approved line stone or Kankar and properly burnt. It shall be free from excess of unburnt Kankars or lime stone ashes or other extraneous materials and shall be stored in weatherproof sheds. Lime which has damaged by rain, moisture, or air slacking shall not be used but shall be removed from the site of work forthwith. Lime shall be slacked with fresh water and screened through appropriate screens and stored and used within 14 days provided it is protected from drying out.

Field tests according to IS: 1624 shall be carried out from time to time to determine the quality of lime.

c) **River Sand :**

River sand shall confirm to IS: 383 and relevant portion of IS: 515. It shall pass through pass through a I.S. sieve 4.75 mm. (3/16 B.S.) test sieve, leaving a residue not more than 5%. It shall be from natural source i.e. only river or crushed stone screenings, if allowed, chemically inert clean, sharp, hard durable, well graded and free from dust, pebbles, clay, shale, salt, organic matter, loam , mica or other deleterious matter. The sum percentages of all deleterious substances to acceptable limits. River sand shall not contain any trace of salt and it shall be tested and river sand containing any trace of salt shall be rejected.

The fine aggregate i.e. river sand for concrete shall be graded within limits as specified in IS: 383 and the fineness Modules may range between 2.60 to 3.20.

The fine aggregate shall be stacked carefully on a clean hard dry surface so that it will not get mixed up with deleterious foreign materials. If such a surface is not available a platform of planks or corrugated iron sheets or brick floor or a thin layer of lean concrete shall be prepared.

d) **Fine & Coarse Aggregate :**

Shall consist of crushed or broken stone 95% of which shall be retained on 4.75 mm. IS tests sieve. It shall be obtained on crushing Granite, Quartzite, Trap, Basalt, or similar approved stones from approved quarry and shall confirm to IS:383 and IS 515. Fine & Coarse aggregate shall be chemically inert when mixed with cement and shall be cubical in shape and be free soft, friable, thin, porous,

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laminated or flaky pieces. It shall be free from dust and any other foreign matter.

Gravel / Shingle of desired grading may be permitted as a substitute in part or full in plain cement concrete if the Architect is otherwise satisfied about the quality of aggregate. For all the R.C.C. works the size of coarse aggregate shall be 20 to 25 mm. and fine aggregate shall be 10 to 15 mm.

e) **Reinforcement :**

Reinforcement shall be of mild steel tested quality confirming to I.S. : 432-1966 and any other I.S. applicable or deformed bar confirming to IS:1786 and Is:1139 or hard drawn Fe 415 (Tor Steel) steel wire fabric confirming to IS:1566;1967.

All finished bars shall be free from cracks, surface flaws, laminations, jagged and imperfect edges.

f) **Bricks :**

Bricks shall generally comply with IS:1077 except in size which shall be classified as 1<sup>st</sup> and 2<sup>nd</sup> class. 1<sup>st</sup> class bricks shall be the best quality locally available table moduled, well burnt but not over burnt, have plain rectangular faces with parallel sides and sharp right angled edges, have a fine compact and uniform texture. The bricks shall be free from cracks, chips, flaws, stones or subsequent to soaking in water. It shall emit a clear ringing sound on being struck and shall not absorb water more than 20% by weight. Common building bricks shall have a compressive strength of 35 kg. / sqm unless otherwise specified for first class bricks.

g) **Neeru :**

Shall be made of Class "C" Lime (i.e. pre fat lime) as mentioned in IS: 712. It shall be slaked with fresh water then sifted and reduced to a thick paste by grinding in a mill. Neeru thus prepared shall be kept moist until used and no more than that can be consumed in 15 days shall be prepared at time.

h) **Surkhi :**

Shall be made by grinding well burnt bricks, brick bats, burnt clay balls, etc., the brick etc., to be used shall be prepared from selected clay. The quality shall confirm to IS:1344.

Bricks bats, etc., shall be ground in mechanical disintegrator to a fine powder passing through IS Sieve No. 9 (2.360 mm.) with a residue not exceeding 10% by weight.

Surkhi for lime surkhi plaster shall be ground to fine powder in a mortar mill to pass through IS Sieve 150 micron (No. 100)

Surkhi shall be stored in a weather-proof shed on a brick paved platform.

i) **Water :**

Water for mixing cement / lime / surkhi mortar or concrete shall not be salty or brackish and shall be clean, reasonably clear and free from objectionable quantities of silt and traces of oil, acid and injurious alkali, salts, organic matter and other deleterious materials which will either weaken the mortar or concrete or cause efflorescence or attack the steel in reinforced cement concrete. Water shall be obtained from sources approved by the Architect. Potable water is generally considered satisfactory for mixing and curing concrete, mortar masonry, etc., where water other than main source is used this shall be tested in an approved testing laboratory to establish its suitability. All charges

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connected therewith shall be borne by the Contractor.

j) **Timber :**

Timber shall be well seasoned and of the best quality Indian Teak of specified species viz., Dandeli, Balarshah, Melabar, C.P.

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

- |    |                                     |     |
|----|-------------------------------------|-----|
| a) | Timber for frames                   | 14% |
| b) | Timber for planking, shutters, etc. | 12% |

The moisture content of timber shall be determined according to method described in paragraphs 4 of IS:287 for Maximum permissible moisture content of timber used for different purpose in different climatic zones.

In measuring cross-sectional dimensions of the frame pieces tolerance upto 1.5 mm. shall be allowed for each planed surface.

k) **Superior quality Indian Teak Wood :**

Superior quality Indian Teakwood means C.P., Dandeli, Balarshah, and Malabar Teak. It shall be of good quality and well seasoned. It shall have uniform colour, reasonably straight grains, and shall be free from large. Loose, dead knots, cracks, shakes, warp, twists, bends, borer holes, sap-wood or defects of any kind. No individual hard and should knot shall be more than 1 cm. in diameter and aggregate areas of all knots shall not exceed ½% of area of the piece. There shall not be less than 6 growth rings per 2.5 cm. width.

l) **Ist Class Indian Teakwood :**

1<sup>st</sup> Class Indian Teakwood means C.P. and Bulsar teak of good quality and well seasoned. It shall have uniform colour, reasonably straight grains and shall be free from large. Loose dead knots, cracks, shakes, warp, twists, bends, sap-wood or defects of any kind. No individual hard and should knot shall be more than 2.5 cm. in diameter and aggregate areas of all the knots exceed 1% areas of the piece. There shall not be less than 5 growth tings per 2.5 cm. width.

m) **IInd Class Indian Teakwood :**

Shall be similar to first class Indian teak wood except that knot upto 4 cm. diameter and aggregate area of all knots upto 1 ½% of the area of the piece shall be allowed. There shall not be sapwood upto 15% is allowed.

n) **Flush Doors :**

All flush doors shall be solid core exterior grade unless otherwise specified and it shall generally

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confirm to IS:2202 and shall be fabricated as described under specification.

o) **Steel Windows and Doors :**

Steel windows and doors shall be fabricated of steel sections conforming to IS:226. They shall conform to IS 1038. Unless otherwise specified the details of construction etc., shall be as described under specification.

p) **Floor Tiles :**

Designer pre-cast concrete tiles and interlocking paver block, plain cement tiles, chequered tiles, mosaic tiles terrazzo tile shall conform to IS:1237. For neutral shade tiles grey cement shall be used. Tiles shall be compacted by mechanical vibration and hydraulically pressed. It shall be of choice shade and shall have desired pattern of chip distribution. The sizes of chips to cement in terrazzo or mosaic floor shall be as specified in IS:1237. The size and thickness of tiles shall be as approved by the Architect.

q) **Ceramic / Vitrified Tiles :**

White or coloured glazed tiles shall comply with IS:777 or relevant or latest I.S. code. It shall be from an approved manufacturer and shall be flat and true to shape. They shall be free cracks, crazing, spots, chipped edges and corners. The glazing and colour shall be uniform shade and unless otherwise specified the tiles shall be 6 mm. thick.

r) **Marbles :**

Marble slabs for flooring, dado veneering etc., shall be of kind specified in the item such as white or pink, Makrana, Chittor black, Bhanslana black, Jaisalmer yellow, Baroda green, Patiala (Pepsu) grey, etc., Marble from which slabs are made shall be selected quality, hard, sound dense and homogenous in texture and free from cracks, weathering, decay and flaws. Before starting the work the contractor shall get the sample of Marble slabs approved by the Architect.

The slabs shall be machine cut and machine polished.

s) **Kotah / Shahbad / Cudappa / Granite :**

Shall be of selected quality, hard, sound, dense, and of homogenous texture, free from cracks decay, weathering and flaws. Stone slabs shall be of uniform colour as approved by the Architect. They shall be machine cut and machine polished where specified and shall confirm to the required size. Thickness shall be specified in the respective items.

t) **Glazing :**

Glass used for glazing shall be float glass of best quality, free from flaws, specks bubbles and shall be 2.9 mm. thick upto 0.60 x 0.60 mm. size and for larger size it shall be 4 mm. thick unless otherwise specified in the Schedule of Quantities.

The following type of glasses shall be used:-

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1) For Office Building ..Clear glass or as specified in the  
Schedule of Quantities.

2) Office (toilets) Clear or frosted

3) Partitions Frosted

u) **Asbestos Roofing & rain Water Pipes :**

All Asbestos pipes and fittings shall comply with IS:459 and shall be free from cracks, chipped edges of corners and other damages.

v) **MPI. Sheets :**

MPI. Sheets shall be of a gauge specified in the description of the item and shall conform to the IS:277. The sheets shall be free from cracks, spilt edges, twists, surface flaws, etc. They shall be clean bright and smooth. Galvanising shall be uninjured and the perfect condition. The sheet shall show no sign of rust or white powdery deposits on the surface. The corrugations shall be uniform in depth and pitch and parallel.

w) **Paints :**

Lime for lime wash, dry distemper, oil bound distemper cement primer, oil paint, enamel paint, flat oil paint, plastic emulsion paint, anti-corrosive primer, red lead, water-proof cement paint and exterior grade Acrylic Emulsion paint, cement paint, sand-tex matt shall be from an approved manufacturer and shall conform to the latest Indian Standard for various paints. Ready mixed paints as received from the manufacturer without any admixture shall be used, except for addition of thinner, if recommended by the manufacturer.

x) **Mortar :**

Lime Surkhi Mortar :

Lime and surkhi shall conform to the specifications. It shall be composed of approved lime and surkhi in proportion of 1 lime to 2 surkhi mixed thoroughly. The ingredients shall be accurately gauged by measure and shall be well and evenly mixed together on a platform and water added to make it homogenous. When large quantities are required the mortar shall be mixed in a mechanical grinder.

**Cement Mortar :**

Cement mortar shall be of proportions specified for each type of work in the schedule. It shall be composed of Portland Cement and sand. The ingredients shall be accurately gauged by measure and shall well and evenly mixed together in a mechanical pan mixer, care being taken not to add more water than is required. No mortar that has begun to set shall be used. River sand shall be used unless

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otherwise specified.

If hand mixing is allowed, then it shall be done on pucca water-proof platform. The gauged materials shall be put on the platform and mixed dry. Water will then be added and the whole mixed again until it is homogenous and of uniform colour. Not more than one bag of cement shall be mixed at one time and which can be consumed within half an hour of its mixing.

### **Composite lime, cement, sand mortar :**

The mortar shall be of proportions specified for each type of work in the schedule of quantities. It shall comprise of Portland cement, lime and sand. Lime shall be measured in gauge boxes similar to one used for measuring cement and sand to the proportion specified and sufficient water then added to it to form a thick slurry thus obtained shall then be added to dry cement and sand mixture and thoroughly mixed to make a workable homogenous mortar of uniform colour by adding more water if necessary. Mechanical mixers shall generally be used for mixing such mortars. If hand mixing is allowed it shall be done on pucca platform.

Note :

In connections with the I.S. Code numbers indicated under Section, Specification, Section A – General Refer to the following I.S. Code numbers and the year and or otherwise latest modified I.S.Code Number.

1) Cement	:	I.S. 269 – 1976
2) Lime	:	I.S. 712 – 1964
		I.S. 1624 – 1960
3) Fine – Aggregate	:	I.S. 383 – 1970
4) Coarse – Aggregate	:	I.S. 515 – 1970
5) Reinforcement	:	I.S. 432 – 1966 Fe 415
		I.S. 1786 – 1966 (Tor Steel)
		I.S. 1139 – 1966
6) Bricks	:	I.S. 1077 – 1970
7) Neeru	:	I.S. 712 – 1964
8) Surkhi	:	I.S. 1344 – 1968
9) Timber	:	I.S. 287 – 1960
10) Flush Doors	:	I.S. 2202 – 1966
11) Floor Tiles	:	I.S. 1237 – 1980
12) Ceramic / Vitrified		
Tiles	:	I.S. 777 – 1970
13) Asbestos Roofing and Rainwater		
pipes	:	I.S. 459 – 1962
14) R.C.C. design mix M-25	:	I.S. 456 – 2000

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## SECTION – B: MODE OF MEASUREMENTS

The method of measurement for various items in the tender shall be generally in accordance with the IS: 1200 subject to the items for which the mode of measurements are not given under or elsewhere in the tender.

### 1) **Excavation** :

- a) **Footings**: Area of excavation for footing shall be measured equal to the area of the lowest concrete as shown on the drawing. Depth shall be measured vertically from ground level to bottom of concrete course or dry rubble packing as the case may be.
- b) **Plinth Beams**: Depth of excavation for plinth beam shall be measured from ground level upto bottom of beam and width equal to width of the beam. If a leveling course is ordered, it shall be measured upto the bottom of the Leveling course.
- c) Where excavation is made in trenches, measurements for cutting shall be taken by means of taps and staff and the width of concrete or rubble packing as shown on the Drawing shall be considered as the width of excavation.
- d) Where excavation is made for leveling the site, levels shall be taken before start and after completion of work and total quantity of excavation computed from these levels in manner approved by the Architect.
- e) Where soil including soft rock and hard rock are mixed, hard rock after excavation shall be stacked separately. Measurement of the entire excavation shall be taken as indicated above. Excavations of hard rocks shall be measured from stacks of excavated hard rock and reduced by 40% for bulking and void. The quantity so arrived at shall be paid for under hard rock. The difference between the quantity of entire excavation and quantity payable under hard rock shall be paid as soil including soft rock.

### 2) **Earth Filling** :

In open spaces Fillings shall be measured from cross sections of embankments, levels of which are recorded by means of levels before start of work and after completion of work. When it is not possible to measure filling from cross sections, it may be measured from loose stacks or lorry measurements with previous written permission from the Architect and 20% deduction shall be made from the measured quantity to arrive at the net quantity payable.

### 3) **Cement Concrete (Plain & Reinforcement)**:

Cement concrete in R.C.C. and P.C.C. items shall be measured exclusive of reinforcement and plaster thickness but shall include necessary costs of shuttering, centering, hire charges of all equipment, curing, hacking and fair finish. Reinforcement and plaster shall be measured and paid separately. Items line R.C.C. precast jalli, R.C.C. pipes and other such items which are normally manufactured in

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factories as well as those items which have been specifically mentioned in the Schedule of Quantities shall be measured inclusive of reinforcement.

No deductions will be made for openings upto 0.1 sq.m. and no extra labour for forming such openings or voids shall be paid.

Columns shall be measured from face to face of columns / beams and shall include haunches, if any. The depth of the beams (other than raft foundations beam) shall be measured from the top of the slab to the bottom of the beam.

In case of combined footings and raft foundations, the exposed, portion of the beam rib shall be measured as beam and remaining portion measured in footing / raft slab.

Slabs (other than in raft foundations) shall be measured in bays (clear of beams) with deductions for columns portions.

**Chajja**: only projected portion shall be measured in Square meter.

**Staircase**: Measurements shall be in Cu.m. Staircase comprising if steps, soffit slab, landing slab shall be measured and paid under this item. Side parapet walls, railings, finishing of raisers and treads, M.S. reinforcement and plastering etc., shall be paid separately under respective items.

#### 4) **Reinforcement**:

Shall be measured in lengths of bars as actually placed in position on standard weight basis; no allowance being made in the weight for rolling margin, Wastage and binding wire shall not be measured, authorized overlaps and spacers shall only be measured.

#### **Standard weight for steel reinforcement bars**

Diameter of the steel bars in mm.	6	8	10	12	16	20	25	32
Weight of steel bars in kg per Rmt.	0.22	0.39	0.62	0.89	1.58	2.47	3.85	6.31

#### 5) **Brick Work** :

Except walls of half-brick thickness or less, all brick work shall be measured in cubic meters.

#### **Thickness of Wall**:

Brick walls upto and including three bricks in thickness shall be measured in multiples of half-brick which shall be deemed to be inclusive of the mortar joints. Where fractions on halfbricks occur due to architectural or other reasons, the measurement shall be taken halfbricks.

For walling, which is more than three bricks in thickness, the actual thickness of the wall be measured to the nearest centimeter.

Honey-combed brick walling shall be given in square meters stating the thickness of wall and the pattern of honey-combing. Honey comb openings shall not be deducted.

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**Deductions:**

No deductions or additions shall be made on any account for

- a) Ends of dissimilar materials (i.e. joists, beams, lintels, lofts, grinders, rafters, purlins, trusses, corbels, steps, etc.) upto 500 square centimeters in section.
- b) Opening upto 0.1 sq. in section.
- c) Wall plates, bed plates and bearing of slabs, chajjas and the like where the thickness does not exceed 10 cm. and the bearing does not extend over the full width of the wall.

6) **Stone Masonry :**

Except where otherwise described, stone work and stone walling generally shall be given in cubic meters and facia work in square meters.

When measuring walls, the thickness shall be measured to the nearest one centimeter.

Deductions shall be made as described under brick work.

7) **Wood Work:**

All work shall be measured net as fixed. No extra measurement will be given for shape, joints, splayed meeting styles of doors and windows and shall be measured in unit of square meters.

Area over the face inclusive of exposed frame thickness (excluding width of cover mould) shall be measured in case of door, windows and ventilators when frames are included in the item. Portions embedded in masonry or flooring shall not be measured. Where frames are measured separately mode of measurement shall be as per C.P.W.D. practice or IS:1200.

8) **Steel doors, windows, ventilators, louvers:**

Clear area over one face inclusive of exposed frame shall be measured. Holdfasts or portions embedded in masonry or flooring shall be measured.

9) **Steel rolling shutters and rolling grilles:**

Clear width between side jambs and clear height between floor and bottom of lintel / beam shall be measured. Hood shall not be measured separately. The rate should be inclusive of the cost of hood.

10) **Flooring, Skirting, Dado:**

Flooring shall be measured from skirting to skirting and where the wall surface are plastered or provided with Dado, it shall be measured from plaster to plaster or dado to dado.

11) **Plastering and Pointing:**

All plastering and pointing shall be measured in square meters unless otherwise described.

Net are of surface plastered shall be measured. No deductions will be made for ends of joints, beams, posts, etc., and opening not exceeding 0.5 sq.m. each and no additions shall be made neither for

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reveals, jambs, soffits, sills, etc. of these openings nor for finishing the plaster around openings, ends, of joists, beam and posts, etc.

Full deductions will be made for door, window and ventilator from each side with adding jambs for door, window and ventilator.

12) **Painting, White washing, colour washing and distempering:**

All painting work shall be measured in square meters.

Net area of surface painted shall be measured. No deductions will be made for unpainted surfaces of ends of joists, beams, posts etc., and opening not exceeding 0.5 sq.m. each and no additions shall be made for reveals, jambs, soffits, sills, etc., of these openings.

Full deductions will be made for door, window and ventilator from each side with adding jambs for door, window and ventilator.

No coefficient will be considered for painting over sponge finished or sandfaced plaster.

The following multiplying factors for obtaining equivalent areas shall be adopted.

No.	Description of works	How measured	Multiplying Factor
a)	Wood paneled framed ledged, braces and battened.	Measured flat (not girthed) including frame, edges, chawkats, cleats, etc., shall be deemed to be included in the item.	1 1/8 (for each side).
b)	Wood flush part paneled and part.	-- do -- glazed or gauzed.	1 (for each side).
c)	Fully glazed or gauzed or glazed louvered ventilators / window / door.	-- do --	¼ (for each side).
d)	Fully venetioned of louvered (not with glazing).	-- do --	1 ½ (for each side).
e)	Weather boarding.	Measured flat (not grithed supporting frame work shall not be measured separately).	1 1/8 (for each side).
f)	Trellis (or Jaffri) work one way or two way.	Measured flat overall, no deduction shall be made for opening (supporting members shall not be measured separately)	1 (for each side).
g)	Guard bars, balustrades, gratings, grille railings, grille partitions, etc.	--- do ---	1 (for painting all over).

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h)	M.S. gates & open palisades fencing, door including standards, braces, rails, stays, etc.	See not below	1 (for painting over all).
i)	Steel rolling / alligator type shutters.	Measured flat over jambs, guides, bottoms, rails and locking arrangement etc. shall be deemed to be included in the item.	1 ¼ (for each side).
j)	Carved or enriched work.	Measured flat.	2 (for each side).
k)	Fully glazed or gauzed steel windows or partitions.	Measured flat.	1 ¼ (for all over).

**Note :**

The height shall be taken from the bottom of the lowest rail, if the palisades do not go below it (or from the lower end of the palisades, if they project below the lowest rail) upto the top of the palisades, but not upto the top of the standards, if they are higher than the palisades. Similarly for the gates, depth of roller shall not be considered while measuring the height.

Area painted over sand cement plaster, sponge finished / sand faced plaster / rough cast plaster area painted without considering any coefficient for painting over sand faced plaster

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## **SECTION – C : WORKMANSHIP**

### **CLEARING OF SITE,**

**Note:** Workmanship for all items related to the construction work should be as per relevant I.S. Code.

### **PLAIN & REINFORCED CEMENT CONCRETE**

#### **A) VOLUMETRIC BASIS:-**

**General** : Except where they are varied by the requirements of this specification due provision of Indian Standard Specification IS-456-1964 for plain and reinforced concrete and IS-432 part I and II for Mild and Medium Tensile steel Bars and hard drawn steel wire for concrete reinforcement and any other relevant ISS applicable together with the latest amendments shall be held to be incorporated this specifications. It shall be intent of these specifications to ensure that all concrete placed at various location of the job should be durable, strong enough to carry design, loads, it should wear well and practically be impervious to water. It should be free from such defects as shrinkage, cracking and honey-combing.

#### **Proportioning the Mix :**

In ordinary concrete, excluding controlled concrete, proportions of cement to fine and coarse aggregate shall be as specified in the respective items and shall be accurately measured as in table “A” below. These proportions are based on assumption that the aggregates are dry. If aggregates are moist allowance shall be made for bulking in accordance with IS:2386/-. Allowance shall also be made for surface water present in aggregate when computing water contents. Surface water present shall be determined by one of the field methods described in IS:2386/- (Part III). In the absence of exact data, the amount of surface water may estimated by the value given in table “B” below (Table “A” and “B” please see on page nos.124 & 125).

#### **Mixing :**

Concrete of 1:2:4 or richer mix shall be mixed in an approved mechanical mixer. The mixer and mixing platform shall be suitably protected from wind and rain. Aggregates shall be accurately measured out in boxes and mixed dry along with cement, water shall be then added in measured quantity and mixing shall be continued until there is a uniform distribution of the materials and the mass is uniform in colour and in consistency but in no case shall he mixing be done for less than 2 minutes.

When hand mixing is permitted with the approval of the Architect it shall be carried out on watertight mixing platform and care shall be taken to ensure that mixing is continued until mass is uniform in colour and consistency.

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**Consistency :**

Quantity of water for making reinforced concrete shall be sufficient so as to ensure that concrete shall surround and properly grip all the reinforcement. The best consistency shall be that, which will flow sluggishly without flattening out and without separation of coarse aggregates from the mortar. The degree of plasticity shall depend on the nature of work and atmospheric temperature and whether the concrete is vibrated or hand compacted. The slumps shown in table "C" obtained by standard slump test carried out in accordance with the procedure laid down in IS:119-1959 shall be adopted for different types of work.

**Admixtures :**

The usage of admixtures are allowed only if approved by the structural consultant and his decision in this regard shall be final.

**Transportation:**

Concrete shall be conveyed from the place of mixing to the place of final deposit as rapidly as practicable by methods which will prevent segregation or loss of any of the ingredients. If segregation does occur during transport, the concrete shall remix before being placed. In no case, more than 30 minutes shall elapse between mixing the consolidation in its position.

**Placing and Compacting :**

Concrete shall be placed in layers of suitable thickness or in strips and compacted before initial setting commences and should not be subsequently disturbed. Method of placing shall be such as to preclude segregation and as far as practicable the placing shall be continuous. Special care shall be taken in accordance with IS:456 while laying concrete under extreme weather.

Concrete shall be thoroughly compacted during the operation of placing and thoroughly working around the reinforcement, embedded fixtures and spaded against corners of the form work and by punning, rodding, mechanically vibrating or by any other approved means. In addition form work shall be tapped lightly by using wooden mallet at the pouring head. The number and type of vibrator to be used shall be subject to the approval of the Architects and in general immersion type vibrators shall be used. External vibrators shall also be used whenever directed.

The intensity and duration (of vibration shall be sufficient to cause complete settlement and compaction without any stratification of successive layers or separation of ingredients or formation of laitance. Vibrator shall be inserted vertically in the concrete at points not more than 45 cm. apart and withdrawn very slowly when air bubbles no longer come on the surface. Over vibration or vibration of very wet mixes is harmful and should be avoided. Care shall be taken to utilize the vibrator only to compact the concrete and not to spread it, sufficient number of reserve vibrator in good working condition shall be kept on hand at all times, so as to ensure that there is no slackening or interruption in compacting.

**Construction Joints :**

Concreting shall be carried out end to end continuously as far as possible and when construction joints are totally unavoidable, it shall be located in a predetermined position approved by the Architect. The

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joints shall be kept at places where the shear force is the minimum and these shall be straight and at right angles to the direction of main reinforcement. When the work has to be resumed, on a surface which has hardened, such surface shall be roughened. It shall be swept clean, thoroughly wetted and covered with a 13 mm. layer of mortar composed of cement and sand in the same ratio as the cement concrete mix. This 13 mm. layer of mortar shall be freshly mixed and placed immediately before the placing of the concrete.

Where the concrete has not fully hardened, all laitance shall be removed by scrubbing the wet surface with wire or bristle brushes, care being taken to avoid dislodgment of particles of aggregate. The surface shall then be coated with neat cement grout. In horizontal joints the first layer of concrete to be placed on this surface shall not exceed 15 cm. thickness and shall be well rammed against old work, particular attention being paid to corners.

### **Expansion Joint:**

Expansion joint shall be provided where required as shown on the drawings or as directed by the Architect / Consultant. The joints shall be filled by the approved quality filler.

### **Curing :**

Concrete shall be carefully protected during first stage of hardening from harmful effects of excessive heat, drying winds, rain or running water. It shall be covered with a layer of sacking, sand canvas, hessian, or similar absorbent materials and kept constantly, wet for ten days from the date of placing of concrete. Alternatively, the concrete being thoroughly wetted and covered by layer of approved water-proof material which should be kept in contact with it for seven days.

### **Form Work :**

The form work shall conform to the shape, lines and dimensions as shown on the plans and be so constructed as to remain sufficiently rigid during the placing and compacting of the concrete and shall be sufficiently watertight to prevent loss of cement slurry from the concrete. Form work or centering shall be constructed of steel or timber and adequately designed to support the full weight of wet concrete without deflection and retain its form during laying, ramming and setting of concrete. Timber used shall be properly seasoned so as to prevent deformation when wetted.

All props shall be straight and of full height and no joints shall be allowed. Props shall be braced with thin bamboos or wooden battens and where additional staging is necessary, extra care shall be taken to use bigger diameter props with bracing at 4 or 5 levels. All props shall be supported on sole plates and double wedges. At the time of removing props these wedges shall be gently eased and not knocked out. All rubbish, chippings, shavings and saw dust shall be removed from the interior of the forms before the concrete is placed and the form work in contact with the concrete shall be cleaned and thoroughly wetted or treated with non-staining mineral oil or any other approved materials is kept out of contact with the reinforcement.

All form work shall be removed without shock or vibration and shall be eased off carefully in order to allow the structure to take up its load gradually. Forms shall not be disturbed until concrete has adequately hardened to take up superimposed load coming on it and in no circumstances shall forms be struck until the concrete may be subjected at the time of striking.

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In the normal circumstances (generally where temperatures are above 21 degrees centigrade) and where ordinary cement is used, forms may be struck after expiry of following periods :

- |  |   |
|--|---|
| a) Walls, Columns and Vertical sides<br>of beam}                                   | 48 hours as may be directly<br>by the Architect |
| b) Bottom of slab upto 4.5 m. span.  | 7 days.   |
| c) Bottom of slab upto 4.5 m. span.<br>bottom of beam and arch rib upto 6 m. span. | 14 days.  |
| d) Bottom of beams and arch rib over 6 m. span.                                    | 21 days.  |

However, this period may be increased or decreased at the discretion of Architects. Special care shall be taken while striking the centering of cantilevered slab canopies, portal frames, folded plate construction and period of striking centering shall be as determined by the Architect.

If directed, form shall be given an upward camber to ensure that the beams do not have any sag. Surface that becomes exposed on removal of forms shall be carefully examined and any fins, burrs, projections etc., that are detected shall be removed. Any honeycombing of minor nature shall be finished neatly with cement mortar 1:2.

Any work showing signs of damage through premature or careless removal of centering or shuttering, shall be reconstructed by the contractor at his own cost.

### **Strength :**

Concrete mixed in the proportion desired shall have compressive strength after placing, not less than the following :

No	Concrete Mix.	Minimum compressive strength @ 7 days	Minimum compressive strength @ 28 days
1	1:1:2	160 Kg. / Sq.m. (2250 Lbs. / Sq. inch).	250 Kg. / Sq.m. (3500 Lbs. / Sq. inch).
2	1:1 1/2:3	132 Kg. / Sq.m. (1875 Lbs. / Sq. inch).	200 Kg. / Sq.m. (2850 Lbs. / Sq. inch).
3	1:2:4	106 Kg. / Sq.m. (1500 Lbs. / Sq. inch).	150 Kg. / Sq.m. (2250 Lbs. / Sq. inch).

**Tests :** Tests on concrete shall be carried out in accordance with IS-456/- and any other is applicable. The frequency of work test shall be at such intervals as ordered by the Architect and subject to that every 150 cu.m. of concrete placed or part thereof and for a day's concrete exceeding 30 cu.m. a batch

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of 6 cubes shall be made for every sample and 3 of them tested after 7 days and the remaining 3 cubes shall be tested after 28 days. The criteria for acceptance of a concrete as confirming to a specified proportion / grade of concrete shall be in accordance with IS:456 and the Contractor shall entirely re-do the rejected work at his own cost. Strength of 28 days shall alone be considered for acceptance.

The Contractor shall arrange to carry out the tests in accordance with the relevant Indian Standards Specifications in an approved laboratory and the test reports in original be submitted to Architect. The entire cost of testing shall be borne by the Contractor.

### **Steel Reinforcement :**

Reinforcement shall be accurately fabricated, placed and adequately maintained in position as shown on the drawings or as directed by the Architect. All finished bars shall be free from cracks, surface flaws, laminations, jagged and imperfect edges. Cement mortar blocks shall be used to give requisite cover as shown be firmly tied with binding wire of 16 to 18 gauge. Reinforcement shall be bent in accordance with the procedure stipulated in IS:2502-1963 and will not be straightened in a manner which will injure the material.

All reinforcement shall immediately before placing in concrete be thoroughly cleaned of loose mill scale, loose rust, oil and grease or other deleterious matter that would destroy or reduce bond.

Reinforcement in reinforced concrete members shall not be connected by welding or coupling except in accordance with relevant ISS and with the previous approval of the Architect. Overlaps and joints shall be staggered and located at points, along the spans where neither shear nor bending moment is maximum.

### **Cover :**

Reinforcement shall have cover as shown on the R.C.C. drawings and where not specified the thickness of cover shall be as follows. Cement mortar blocks in C.M. 1:1 shall be used for making cover blocks.

- a) At each end of reinforcing bar not less than 25 mm. not less than twice the diameter of such rod or bar.
- b) For a longitudinal reinforcing bar in a column not less than the diameter of such rod or bar. In the case of columns of minimum of 20 mm. or under whose reinforcing bars do not exceed 13 mm. the cover of 25 mm. may be used.
- c) For longitudinal reinforcing bar in a column not less than 25 mm. not less than diameter of such rod or bar.
- d) For tensile, compressive, shear or other reinforcement in a slab not less than 13 mm. nor less than diameter of such reinforcement, and
- e) For ant other reinforcement not less than 13 mm. not less than the diameter of such reinforcement.

## **BRICK MASONRY**

### **General :**

All brick work should be carried out as shown on the drawings with setbacks, projections, cuttings, toothings, etc. Wherever the proportion of cement mortar has not been specifically mentioned, cement mortar in the proportion of 1:6 shall be used. Flat bricks arches shall be provided wherever required without any extra cost. Brick work shall be kept wet while in progress, till mortar has properly set. On holidays or when work is topped, top of all unfinished masonry shall be kept wet. Should the mortar

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become dry, white or powdery, for want of curing work shall be pulled down and rebuilt at the Contractor's expenses.

**Brick Work 1<sup>st</sup> Class :**

Bricks shall be thoroughly cleaned, well wetted and soaked for atleast twelve hours in fresh water before being used on the work. Bricks shall be of locally, available best quality.

English bond shall be used throughout in walling. A good bond shall be maintained throughout the work, both laterally and transversely. In walling, the courses shall be kept perfectly horizontal and in plumb with the frogs facing upwards. Vertical joints shall not exceed 10 mm. thickness and shall be full of mortar. No broken bricks shall be used except as closers. After day's work all joints shall be raked to 12 mm. depth to provide for proper key to plastering.

Mortar used shall be as specified in respective items and every third course of brick work shall be flushed with mortar grout.

Whole of the masonry work shall be brought up at one uniform level throughout the structure; but where breaks are unavoidable, joints shall be made in good long steps. All junctions of walls and cross walls shall be carefully bounded into the main walls. The rate of laying masonry may be upto a height of 60 cm. per day if cement mortar is used and 45 cm. per day if lime mortar is used. Greater heights may be built only if permitted by the Architect.

During rains, the work shall be carefully covered to prevent mortar from being washed away. Should any mortar or cement be washed away, the works shall be removed and rebuilt at the Contractor's expenses.

**Bricks Work 2<sup>nd</sup> Class :**

Shall be similar to 1<sup>st</sup> class brick work except that 2<sup>nd</sup> class bricks shall be used and joints shall be 10 mm. to 12 mm. thick.

**Half Brick Masonry :**

Shall be set in cement mortar as specified. Hoop iron bands of 2.5 cm. x 0.16 (1" x 1/16") shall be embedded in every fourth course with thick mortar band or 2 Nos. 6 mm. (1/4") dia. bars shall be used in every sixth course otherwise as specified under item.

**WOOD WORK**

Timber used shall conform to specifications described under Materials, Doors, Windows, Ventilators, walls, Paneling, False Ceiling, etc., shall be in accordance with Architect's drawing in every detail and all joiner's work shall be accurately set out, framed and finished in a proper workman-like manner, frames of doors, windows and ventilators etc. and shutter styles and rails shall be best solid teak of quality specified in the schedule of quantities. The scantlings shall be accurately planed smooth, rebates, rounding and mouldings shall be made as shown on the drawings, patching or plugging of any kind shall not be allowed. Joints shall be simple, neat and strong. Framed joints shall be coated with suitable adhesive like glue or synthetic resin before the frames are put together. All mortice and tenon

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joints shall be fit and fully and accurately without wedging or filling. The joints shall be pinned with hard wood or bamboo pins of 10 mm. to 12 mm. dia. or rust resisting star shaped metal pins 8 mm. after the frames are put together and pressed in position by means of press. The frames are put together and pressed in progress of work by suitable boxing. All portions of timber abutting against or embedded in masonry or concrete shall be treated against termites by giving a coat of any approved wood preservative.

Unless otherwise specified all doors frames shall have six M.S. flat holdfasts and window frames shall have four holdfasts shall be provided to the ventilators, if directed. Size of holdfasts shall be 30 mm. x 40 mm. x 6 mm. M.S. flat bent to shape with fish tail end and it shall be fixed to frame with sufficient number of screws as directed. When door / window frames are to be fixed to R.C.C. column or R.C.C. wall, holdfasts shall be substituted by suitable arrangements such as coach crews, rawl bolts etc., to secure frames to R.C.C. column or R.C.C. wall as directed by the Architect.

Frames and shutter shall not be painted or erected before being approved by Architect/ Bank Engineer.

### **Paneled Shutter :**

Panels shall be of pattern and size as shown on the drawings or as directed by Architect. Solid teak wood panels shall be in one piece wherever possible. Where two or more pieces are permitted, they shall be of equal width. Panels shall be framed into grooves made in styles and rails to the full depth of groove and faces shall be closely fitted to sides of groove.

Where panels specified are block board, it shall be solid core with teak internal lipping and of approved make.

Partly paneled and partly glazed shutter shall be similar to paneled shutters except that such parts as are directed shall be glazed with plain or ground glass as specified. Styles and rails shall be rebated 12 mm. to receive glass. Sash bars shall be moulded and rebated and mitered on sides to receive the glass which shall be fixed with putty and beads.

### **Hardware Fittings :**

Unless otherwise specified all hardware fittings and fixtures shall be supplied by the contractor free of charge. However, the cost of fixing fittings shall be included in the rate quoted. The fixing shall be done in the best workman-like manner in accordance with the manufactures specifications. The Contractor shall be held responsible for working of all moving parts dependent on proper fixing. He will also be responsible for any breakage due to negligence during fixing or lack of protection before the building is handed over. The Contractor shall also take delivery of all hardware fittings etc., as and when supplied and arrange for safe storage etc.

Hardware required for fixing false ceiling, wall paneling etc., shall be arranged by the Contractor at his cost. Apart from the hardware fittings required for the joinery items, the Contractor shall have to fix all other items of hardware fittings to be supplied by the employer viz. coat / picture hooks, numerical, letters to denote buildings, hanging rods etc., as directed by the Architects.

Painting and polishing of wood work shall be as per specifications under respective heads.

### **Flush Doors :**

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

The solid core shall be wood laminae prepared from battens of well seasoned and treated good quality wood having straight grains. The battens shall be of uniform size of about 2.5 cm. width. These shall be properly glued and machine pressed together, with grains of each piece reversed from that of adjoining one. The longitudinal joints of the battens shall be staggered and no piece shall be less than 50 cm. in length. Alternatively, the core shall be of solid teak particle board. Edges of the core shall be lipped internally with 1<sup>st</sup> Class teak wood battens of 4 cm. (1.5") minimum depth, glued and machine pressed along with the core.

The core surface shall then have two or three veneers firmly glued on each face. The first veneer (called cross band) shall be laid with its grains at right angles to those of the core and the second and the third veneers with their grains parallel to those of the core. The under veneers shall be of good quality, durable and well seasoned wood. The face veneers shall be of minimum 1 mm. thickness and of well matched and seasoned 1<sup>st</sup> class teak, laid along with grains of the core battens. The combined thickness of all the veneers on each face shall not be less than 4 mm. Thermosetting synthetic resin conforming to I.S. 303 or moisture-proof plywood grade MPF.I. shall be used in manufacture.

In addition to internal lipping all doors shall have external lipping all round.

#### **STEEL DOORS, WINDOWS, VENTILATORSROLLING SHUTTER, M.S. GRILLES ETC.**

Steel used in the manufacture of rolled steel sections shall not have more than 0.060 per cent of sulphur and 0.065 per cent of phosphorus. The carbon content shall not exceed 0.30 per cent and shall be of weldable quality. In all other respects, the rolled steel sections shall conform to I.S. 226-1955 and I.S. 1977-1962. Frames shall be square and flat. Both the fixed and openable frames shall be constructed of sections which have been cut to length, mitred and electrically welded at corners. Sub-dividing bar units shall be tenoned and rivetted into the frames. All frames shall have the corners welded to a true right angle and welds shall be neatly cleaned off. Couplings, moulding and weather bar shall be provided as directed by the Architects. Outer frames shall be provided with fixing holes centrally in the web of the sections and fixing screws and lugs shall be used for fixing the frame to masonry. Mastic cement shall be used for making the joints watertight.

Hinges shall be strong projecting type. If directed friction type hinges shall be used in which case windows shall not be fitted with peg stays. Projecting type hinged shutter shall be fitted with bronze or brass peg stays, 30 cm. long with peg and brackets welded / riveted to the frame or as stated under item. All windows shall be provided with handles of brass or bronze or otherwise as stated under them.

Top hung ventilators shall be fixed with plain hinges rivetted / welded to the fixed frame. A brass or bronze peg stay 30 cm. long as in windows shall be provided or as stated under item.

Center hung ventilators shall be hung on two pairs of brass or leaded tin bronze cup pivots rivetted to the inner and outer frames of the ventilators to permit the ventilators to swing through an angle of approximately 85. The opening position of the ventilator shall be so balanced to keep it open at any desired angle under normal weather conditions. A bronze spring catch shall be fitted in the center of the top bar of the ventilator for the operation of the ventilator. This spring catch shall be secured to the

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frame with brass screws and shall close into a mild steel malleable iron catch plate rivetted or welded to outside of the outer ventilator frame bar. A brass cord pulley wheel in mild steel or malleable iron brackets shall be provided along with card eye.

The windows and ventilators shall be painted. All the steel surfaces shall be thoroughly cleaned free of rust, scale or dirt and millscale by picking or phosphating and before erection painted with one coat of approved primer and after erection painted with two finishing coats of synthetic enamel paint of approved shade and quality.

Glazing of specified thickness shall be provided on the outside of frames and unless otherwise specified, metal beading of approved shape, and section shall be used for fixing glasses. Special metal sash putty of approved make shall be used, if directed.

### **Rolling Shutters :**

Shall be of approved manufacture suitable for fixing in the position ordered i.e. outside, inside, on or below lintel or between jambs. Shutters upto 12 sqm.(130 Sq.ft.)in area shall be manually operated or Push Up type while bigger sizes shall be of reduction gear type mechanically operated chain or handles. These shall be consist of 8 gauge or as specified with 75 mm. (3") M.S. laths of best quality mild steel strips machine rolled and straightened with an effective bridge depth of 16 mm. (5/8") and shall have convex corrugation. These shall be interlocked together throughout their entire length with end locks. These shall be mounted on specially designed pipe shaft.

The spring shall be of approved make coiled type. These shall be manufacture from tested high tensile spring steel wire or strip of adequate strength to balance the shutters in positions. The spring pipe, shaft etc., shall be supported on strong M.S. or malleable cast iron brackets.

Both the side guides and bottom rail shall be jointless and of single piece of pressed steel.

Top cover of shaft, spring etc., shall be of the same material as that of lath.

For rolling shutter with wicket-gate, night latch shall be provided free of cost.

The shutter and cover etc., shall be painted with one coat of anti-corrosive paint and two coats of synthetic enamel paint of approved quality and shade.

### **Collapsible Steel Gate :**

It shall consist of vertical double channels at 10 cm. centers. The sizes of channels T-Section for top and bottom shall be as approved by the Architects. The gate shall be provided with necessary bolts, nuts, locking arrangements, stoppers and brass handles on both sides. The gate shall be painted with one coat of anti-corrosive paint before erection and two coats of synthetic enamel paint of approved quality and shade.

### **Wrought Iron Grilles :**

Grilles shall be manufactured as per drawings and the welded joints shall be smooth. The grilles shall be painted with one coat of anti-corrosive paint before fixing and two coats of synthetic enamel paint of approved quality and shade.

### **Aluminium Doors, Windows, Ventilators & Partitions etc. :**

These shall be obtained from approved and established manufactures and shall be of Aluminium alloy conforming to I.S. 733 and sections shall generally conform to I.S. 1948. Theses shall be fabricated as per the details drawings,

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Frames for windows, ventilators etc., shall be square and flat. Both fixed and openable frames shall be constructed of section which have been cut to length, mitred and welded at corners. Sub-dividing bars shall be tenoned and rivetted into the frames. All frames shall have corners welded to a true right angle. For side hung shutters, hinges shall normally be of projecting type made of Aluminium alloy and rivetted / welded to frames. Handles, peg stays etc., or approved quality Aluminium or its alloy conforming to IS Specifications.

All types of shutters shall be fabricated, supplied and fixed as specified in the IS:1948. The rate shall include supplying and fixing all fittings and fixtures required for proper and safe operation.

The doors shall be fabricated by using standard aluminium alloy extruded sections as specified in IS:1948. The rate shall include supplying and fixing all fittings and fixtures including approved locking arrangement as directed.

All aluminium fabricated work shall be anodised to the British Standard 1616:1961 to give an anodised film of 25 micorn.

The Contractor shall take to stack the fabricated frames etc., on site under cover. They shall be handled with care, stacked on edge on level bearers and supported evenly. Before erecting, the frames coming in contact with concrete, masonry, plaster of dissimilar metals shall be coated with a coat of Zinc Chromate conforming to IS:104-1950. The Contractor shall cover all anodised finish work with a thick layer of clear transparent lacquer based on methacrylates or cellulose butyrate to protect the surface from wet cement during installation. This coating shall removed on completion. Before handing over, the aluminium work shall be washed with mild solution of non-alkali soap and water.

#### **Glazing :**

Glazing shall be approved specially quality glass of specified thickness and unless otherwise directed it shall be provided the exterior with metal beading.

### **FLOORING, SKIRTING, DADO AND STONE VENEERING**

All flooring, skirting, dado and stone veneering etc., shall be executed strictly as per relevant IS Specification and in workman-like manner.

#### **Indian Patent Stone :**

Selection of materials, method of mixing, placing and compacting shall generally conform to the specifications under plain and reinforced cement concrete described earlier. A stiff mix consistent with workability shall be used.

#### **Preparation of Surface :**

Before the operation for laying topping is started the surface of base concrete shall be thoroughly cleaned of all dirt, loose particles coked mortar droppings and laitance if any, by scrubbing with coir or steel wire brush. Where the concrete has hardened so much that roughening of surface by wire brush is nor possible, the surface shall roughened by chipping or hacking at close intervals. The surface shall then be cleaned with water and kept wet for 12 hours and surplus water shall be removed by mopping before the topping is laid.

#### **Laying :**

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The screed strips shall be fixed over the base concrete dividing it into suitable panels. Before placing the concrete for topping, neat cement slurry shall be thoroughly brushed into the prepared surface of the base concrete just ahead of the finish. Concrete of specified proportion and thickness shall be laid in alternate panels to required level and slope and thoroughly tamped.

### **Finishing the Surface :**

After the concrete has been fully compacted it shall be finished by troweling or floating with neat cement rendering. Finishing operations shall start shortly after the compaction of concrete and the surface shall be troweled three times at intervals so as to produce a uniform and hard surface. The satisfactory resistance of floor to wear depends largely upon the care with trowelling is carried out. The time intervals allowed between successive trowellings is very important. Immediately after placing cement rendering, only just sufficient troweling shall be done to give a level surface. Excessive troweling in the earlier stages shall be avoided as this tends to bring a layer rich in cement to the surface. Sometime, after the first troweling, the duration depending upon the temperature, atmospheric conditions and the rate of the set of cement used, the surface shall be retrowelled to close any pores in the surface and to bring to surface and to scrape off any excess water in concrete or laitance. No dry cement shall be used directly on the surface to absorb moistures or to stiffen the mix. The final troweling shall be done well before the concrete has become too hard but at such time that considerable pressure is required to make any impression on the surface. If directed by the Architect, approved mineral pigment shall be added to the rendering to give desired colour and shade to the flooring at no extra cost. When instead of 1:2:3 or 1:2.5:3.5 mix, 1:2:4 is specified the topping shall be rendered with 1:1 cement mortar with a suitable mineral pigment, if directed, instead of cement only. If specified in the Schedule of Quantities, the flooring shall be machine polished as per the Architect's instructions. Wherever the patent stone flooring is used as finishing on roof the joints shall be filled with an approved bitumastic filler in workman like manner. Plain and Coloured Cement Tiles, Marble Mosaic and Terrazzo Tiles Flooring :

The tiles shall conform to IS : 1237 having the colour approved the Architect and the rate shall include provision of border tiles and tiles of different colours in pattern if directed. The mosaic topping of lighter shade tiles shall be made of White Cement with an approved shade pigment and neutral shade shall be of Grey cement with an approved shade pigment. The type of tiles shall be as specified in respective items.

The sub-grade shall be thoroughly wetted after cleaning of all dirt, laitance, and loose material. A bed of lime mortar consisting of one part of lime and two parts of sand shall be laid and properly leveled to an average thickness of 25 mm. and the surface shall be kept slightly rough to form a satisfactory key for tiles. Neat cement paste of honeylike consistency shall be spread over mortar bed, over such area at a time as would accommodate about 20 tiles. Tiles shall be soaked in water for 15 minutes and allowed to dry for the same duration. Tiles shall then be fixed with a thin coat of cement paste on back of each tile and then each tile being gently tapped with a wooden mallet till it is properly bedded and in level with adjoining tiles. Joints shall be fine and as imperceptible as possible.

After tiles have been laid in a room or a day's fixing work is completed, surplus cement grout that may have come out of the joints may be wiped off gently and joints cleaned. A

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thin slurry of coloured cement matching to the colour of tiles shall be spread over it and rubbed so as to seal even a thinnest joint between the tiles and make it impervious and the flooring cured for 7 days. The tiles shall be polished and finished according to IS:1443.

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**Dado, Skirting and Risers:**

Tiles shall conform to IS:1237 and shall be of approved design. The tiles shall be fixed near cement grout on a blacking coat consisting of 1:4 cement sand plaster of 15 mm. thick. The top and bottom junctions of tiles shall be rounded off neatly as directed. The joints shall be filled with matching shade coloured cement slurry. The surface shall be kept wet for 7 days and then polished with carborundum stone to obtain smooth surface and fine polish.

**Shahabad / Tandur / Kotah / Cuddappa Stone Flooring :**

The flooring shall be either with rough stone or machine cut and machine polished as specified in respective items and shall be of specified thickness and of approved quality and size, free from cracks and flakes and shall be uniform in colour with straight edges. The sides of machine cut and machine polished stone shall have perfect right angles and surface smooth. The stone slabs shall be laid and finished as described under plain cement or colour cement tiles on a bedding of 1:2 lime mortar 25 mm. (Average) thickness. The finished stone surface thus laid shall then be polished to the required degree as approved by the Architect.

**In Dado, Skirting, Risers etc. :**

Stone slabs shall be laid on backing plaster of cement mortar 1:4 of 15 mm. to 20 mm. thick and finished as described under plain and coloured cement tile dado.

**Marble mosaic / Terrazzo in situ work in flooring, dado, skirting etc. :**

The terrazzo / mosaic finish shall be laid on an under layer of thickness as specified in the respective items. The topping shall consist of a layer of marble chips of selected sizes, colour and design approved by Architect, mixed with cement with desired shade of pigment. For lighter shade mosaic .terrazzo white cement shall be used and for neutral shade, grey cement shall be used. The proportion of terrazzo mix shall be three parts of cement one part of marble powder by weight. For every part of cement marble powder mix, the proportion of marble aggregate by volume shall be 1.5 parts unless otherwise specified. The topping shall be mixed and laid in panels as described in IS:2114 and as per decorative designs prepared by Architects. The dividing strips of panels shall be Aluminium or as specified in the Schedule of Quantities. It shall be polished as specified in IS: 2114.

**Broken Mosaic Flooring :**

Broken mosaic finish shall be laid on an underlayer of thickness as specified in the item. Pieces of mosaic tiles shall be obtained from broken marble mosaic tiles of approved shade conforming to IS:1257. The sizes of pieces shall be suitable to obtain the desired pattern of flooring as shown on the drawings or as approved by Architect. Broken pieces shall be thoroughly wetted before fixing them. Ordinary or coloured cement grout shall be spread on the bedding. Mosaic tile pieces shall be fixed piece by piece to the desired pattern. The flooring shall be laid to correct level and slopes and compacted by straight screed tamper. The grout shall cream up to the surface. The junctions of the flooring and the wall shall be rounded and the flooring shall be extended along the wall to about 15 cm. (6"). After the day's work, the surplus cement grout that

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may have come out of the joints shall be cleaned off.

The flooring shall be cured for seven days and then polished with a machine as stipulated in IS:1443.

#### **Broken China Mosaic :**

Broken China Mosaic flooring shall be exactly as per broken mosaic tile flooring except that the broken pieces shall be of China of approved colour and manufacturer and the floor shall not be polished.

#### **Marble Flooring:**

Marble slabs shall be of the best Indian marble of White or other approved colour as specified in the item. They shall be hard, dense, uniform and homogeneous in texture. They shall have even crystalline grain and free from defects and cracks. The surface shall be machine polished to an even and perfectly plane surface and edges machine cut true to square. The rear face shall be rough enough to provide a key for the mortar.

No slab thinner than the specified thickness at its thinnest part. The sizes of the slabs shall be as specified in the respective items.

The slabs shall be paid as described under mosaic tile flooring in every respect.

#### **White Glazed / Ceramic Tiles / Vitrified Tiles in Flooring and Dado :**

White Glazed Tiles from an approved manufacturer conforming to IS:777 shall be used. They shall be of specified size and thickness. All specials viz. coves, internal and external angles, corners, beads etc., shall be used wherever directed. Underlayer of specified thickness and mortar of stipulated proportion shall be laid as described in marble mosaic flooring. Tiles shall be washed clean and set in cement grout and each tile being gently tapped with a wooden mallet till it is properly bedded and in level with the adjoining tiles. The joints shall be kept as thin as possible and in straight lines or to suit the required pattern. After the tiles have been laid, surplus cement grout shall be cleaned off. The joints shall be cleaned off the grey cement grout with a wire brush or trowel to a depth of 5 mm. (3/16") and all dust and loose mortar removed. Joints shall then be flush pointed with white cement. The floor shall then be kept wet for seven days. After curing, the surface shall be washed with mild hydrochloric acid and clean water. The finished floor shall not sound hollow when tapped with a wooden mallet.

### **PLASTERING**

#### **Scaffolding :**

Scaffolding for carrying out plastering work shall be double steel scaffolding having two sets of vertical supports so that the scaffolding is independent of the walls.

#### **Preparation of surface :**

All putlog holes in brick work and junction between concrete and brick work shall be properly filled in advance. Joints in brick work shall be raked about 10 mm. if not raked out while constructing brick masonry work and concrete surface hacked to provide the grip to the plaster, if not hacked earlier projecting burns of mortar formed due to gaps at joints in shuttering shall be removed.

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The surface shall be scrubbed clean with wire brush / coir brush to removed dirt, dust etc., and the surface thoroughly washed with clean water to remove efflorescence, grease and oil etc., and shall be kept wet for a minimum of six hours before application of plaster.

**NeeruPlaster :**

Cement mortar of specified proportion and thickness shall be prepared in small batches and applied to the wall surface / ceiling. The ensure proper thickness, gauged patches shall be made at 1.5 to 2 m. apart and the surface plastered true to line, level and plumb taking special care to finish jambs of windows, doors, wall returns, corners, junctions etc. A thin layer of neeru shall then be applied and rubbed into surface and finished by means of trowel until the surface is even and smooth. The surface shall be kept moist for seven days and then given a coat of white wash.

**Sand-faced Plaster :**

The surface shall be prepared as above.

The coat of cement mortar in proportion of 1:4 or as specified, shall be applied uniformly all over the surface to a thickness of 12 mm. and finished true to level and line and keys shall formed on the surface. The surface shall be kept moist till the finishing coat is applied.

The finishing coat shall be applied a day or two after. The proportion of mortar for finishing coat shall be one part of cement and three parts of selected, well graded and washed sand, or as specified under item and it shall be applied in a uniform thickness of 6 mm. (1/4").

The surface shall be tapped to uniform grained texture by using sponge pads as directed. Curing shall start after 24 hours and the surface kept wet for seven days.

**Rough Cast Plaster:**

Except for the finishing coat the surface shall be prepared and base coat of plaster applied as under sand-faced plaster. Finishing coat mortar shall be in proportion of one part of cement and one part of specially selected and graded sand and one part of gravel of 3 to 6 mm. size. It shall be flung upon the first coat with large trowel to form an even and decorative coat. The work shall generally conform to clause 16.5 of IS:1661-1960. The thickness of the coat shall be about 12 mm. (1/2"). It shall be cured for seven days.

**Rough coat plaster with colourfinish :**

This finish shall be similar to Rough cast plaster above except a high grade mineral pigment of approved shade shall be mixed with white cement instead of ordinary grey cement while preparing the mortar.

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**Water-proofing Treatment :**

Unless otherwise specified, the Contractor shall carry out waterproofing treatment of basements, terrace and water retaining structures through reputed firms having specialisation in the line and approved by the Architects. The Contractor shall also furnish full details of such treatment to the Architects and provide all information / proof etc., regarding the effectiveness of the treatment when called upon to do so. All such treatment shall have to be guaranteed in the form approved by the Employer for a minimum period of ten years. Any defects / leakages noticed during the guarantee period shall have to be rectified free of cost by the Contractor including reinstating the surface to its original condition and finish.

Water-proofing of sunk portions of floor slabs for baths, W.C. and kitchen moities etc., in residential buildings, unless otherwise specified, shall be done as specified in the schedule and shall generally comprise of :

- a) A coat of hot bitumen, min. 6 mm. thick screeded with stone grit.
- b) Min. 20 mm. thick cement plaster in cement mortar 1:3 with approved water-proofing cement compound as per manufactures specifications. The plaster shall be cured by pounding for seven days.

The rate for the above treatment shall include drying and cleaning surfaces free of dust etc., and wiping with kerosene before application of bitumen. The vertical faces and returns shall

also be treated similarly. The actual area treated including vertical faces and returns shall be measured and paid for. The work should be done in such a way that the finished flooring in bath has a minimum slope of 20 to 25 mm.

**PAINTING General:**

Wherever scaffolding is necessary, it shall be double scaffolding. The surface shall be thoroughly brushed free from mortar droppings and foreign matter. All steel work shall be cleaned of loose rust, mill scales etc. so as to expose the original surface. All broken edges, cracks, loose plaster and wavy surface shall be brought up either by patch plaster work or by plaster of paris. All materials viz., dry distemper, oil bound distemper, oil paint, flat oil paint, synthetic enamel paint, plastic emulsion paint, cement primer, red lead and other primers and metallic paints shall conform to respective I.S. specifications and shall be obtained from approved manufactures. All paints shall be brought on site in sealed thins in ready mixed form and shall be applied direct with the addition of thinner, if recommended by the manufacturers.

**White Washing:**

White was shall be prepared from lime slaked on spot, mixed and stirred with sufficient water to make a thin cream. This shall be allowed to stand for 24 hours and shall be screened through clean cloth. Four kg. gum dissolved in hot water shall be added to each cubic meter of the cream (115 gm. per cft.). Blue shall be added to give required whiteness. The approximate quantity of water to be added in making cream shall be five

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liters per kg. of lime. White wash shall be applied in specified coats by using flat brushes or spray pumps. Each coat shall be allowed to dry before next coat is applied. If additional coats than what have been specified, are necessary to obtain uniform and smooth finish, it shall be given at no extra cost. The finished dry surface shall not show any signs of cracking and peeling nor shall it come off readily on the hand when rubbed. If directed by the Architects one coat of chalk and glue shall be applied before application of white / colour wash at no extra cost.

#### **Colour Wash :**

Colour wash shall be prepared by adding mineral colours not affected by lime to white wash. No colour wash shall be done until a sample of the colour wash to the required tint or shade has been got approved from the Architects. Colour wash shall be applied as specified under white wash.

#### **Dry Distemper :**

Shade shall be got approved from the Architects before application of distemper. The surface shall be prepared as specified earlier. A primer coat using approved primer or sizing shall be applied. Distemper prepared as per manufacturer's directions shall be applied and each coat shall be allowed to dry before subsequent coat is applied. The finished surface shall be free from chalking when rubbed, even uniform and shall show not brush marks. If additional coats are necessary, they shall be given at no extra cost.

#### **Oil Bound Distemper:**

The surface shall be prepared as specified above. A primer coat of either cement primer or any approved distemper primer shall be applied. After the primer coat has dried, the surface shall be lightly sand papered and dusted to make it smooth to receive distemper. Distemper shall be prepared as per the directions of the manufacturer and conforming to shade approved. It shall be applied in specified coats, taking care to allow for drying of each coat before subsequent coats are applied.

#### **Water-proof Cement Paint / Sand-tex matt Paint:**

The surface shall be prepared as specified above and thoroughly wetted with clean water before water-proof cement paint is applied. The paint shall be prepared strictly as per manufacturers specifications and in such quantities as can be used up in an hour of its mixing, as otherwise the mixture will set and thicken, affecting flow and finish. The paint thus prepared shall be applied on clean and wetted surface with brush or spraying machine. The solution shall be kept stirred during the period of application. It shall be applied on the surface which is on the shady side of the building so that the direct heat of the sun on the surface is avoided. The completed surface shall be watered after the days work. Number of coats shall be as specified in the item.

#### **Painting – Oil / Enamel / Plastic Emulsion etc. :**

Ready mixed oil paint, flat oil paint, plastic emulsion paint, ready mixed synthetic

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enamel paint, etc., shall be brought in original containers and in sealed tins. If for any reason thinner is necessary, the brand and quantity of thinner recommended by the manufacturer or as instructed by the Architect shall be used. The surface shall be prepared as specified above and a coat of approved primer shall be applied. After 24 hours drying approved or specified quality paint shall be applied evenly and smoothly. A filler putty coating may be given to give a smooth finish. Each coat shall be allowed to dry out thoroughly and then lightly rubbed down with sand paper and cleaned of dust before the next coat is applied. Number of coats shall be as specified in the item and if the finish of the surface is not uniform, additional coats as required shall be applied to get good and uniform finish at no extra cost. After completion no hair marks from the brush or clogging of paint puddles in the corners of panels, angles or mouldings etc., shall be left on the work. The glass panes, floor etc. shall be cleaned of stains. When the final coat is applied, if directed, the surface shall be rolled with a roller or if directed, it shall be stippled with a stippling brush.

## **POLISHING AND VARNISHING**

### **French Polishing :**

French spirit polish shall be of an approved make conforming to IS:348. If it has to be prepared on site, the polish shall be made by dissolving 0.7 kg. of best shellac in 4.5 liters of methylated spirit without heating. To obtain required shade pigment may be added and mixed. Surface shall be cleaned. All unevenness shall be rubbed down smooth with sand paper and well dusted. Knots, if visible, shall be covered with a preparation of red lead and glue. Resinous or loose knots and gaps shall be filled with season timber pieces and make level with rest of the surface. Holes and indentations on surface shall be filled with putty made of whiting and linseed oil. Surface shall be given a coat of filler made of 2.25 kg. of whiting in 1.5 liter of methylated spirit. When it dries, surface shall again be rubbed down perfectly smooth with sand paper and wiped clean.

Piece of clean fine cotton cloth and cotton wool made into shape of pad shall be used to apply polish. The pad shall be moistened with polish and rubbed hard on the surface applying the polish sparingly but uniformly and completely over the entire surface. It shall be allowed to dry and another coat applied in the same way. To give finishing coat, the pad shall be covered with a fresh piece of clean fine cotton cloth, slightly dampened with methylated spirit and rubbed lightly and quickly with a circular motion, till the finish surface attains uniform texture and high gloss.

### **Wax Polishing :**

Wax polish shall either be prepared on site or obtained readymade from market. Polish made on the site shall be prepared from a mixture of pure bees wax, linseed oil, turpentine oil and varnish in the ratio of 2:1.5:1:1/2 by weight. The bees wax and the boiled linseed oil shall be heated over a slow fire. When the wax is completely dissolved the mixture shall be cooled till it is just warm, and turpentine oil and varnish added to it in the required proportions and the entire mixture is well stirred.

Surface shall be prepared as described under French polishing except that the final rubbing shall be done with sand paper which has been slightly moistened with linseed oil. Mixture or polish shall be applied evenly, with a clean cloth pad in such a way that no

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blank patches are left, and rubbed continuously for half an hour. When the surface is quite dry a second coat shall be applied in the same manner and rubbed continuously for an hour or until the surface is dry. Final coat shall then be applied and rubbed for two hours or more if necessary, until the surface has assumed a uniform gloss and is quite dry showing no sign of stickiness when touched. Gloss of the polish depends on the amount of rubbing, therefore rubbing must be continuous and with uniform pressure and frequent change in direction.

#### **Varnishing :**

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

#### **Laying of Pipes :**

No concreting is ordinarily necessary. In cases where the soil is made up is very soft, concreting may be resorted to form the bed of the trench below the pipe, if directed by the Architects at no extra cost.

The pipes shall be carefully laid to levels and gradients shown in the plans and sections. Great care shall be taken to prevent sand etc., from entering the pipes. The pipes between two manholes shall be laid truly in straight lines without vertical or horizontal undulations. The body of the pipe shall for its entire length rest on an even bed in the trench and places shall be excavated to receive the collar for the purpose of jointing.

#### **Jointing :**

A few skeins of spun soaked in neat cement wash shall be inserted in the groove at the end of the pipe and the two adjoining pipes butted against each other. The collar shall then be slipped over the joint, covering equally both the pipes. Spun yarn soaked in neat cement wash shall be passed round the pipes and inserted in the joint by means of caulking tools from ends of the collar. More skeins of yarn shall be added and well rammed above. The object of the yarn is to center the two ends of the pipes within the collar and to prevent the cement mortar of the joint penetrating into the pipes.

Cement mortar with one part of cement and one part of sand shall be slightly moistened and must on no account be soft or sloppy and shall be carefully inserted by hand in to the joint and more cement mortar added until the space of the joint has been filled completely with tightly caulked mortar. The joint shall be finished off neatly outside the collar on both sides at an angle of 45°. Any surplus mortar projecting inside the joint is to be removed and to guard against any such projections sack or gunny bag shall be drawn past each joint after completion.

Cement mortar joint shall be cured at least for seven days.

#### **Testing :**

All joints shall be tested to a head of 60 cm. of water above the top of the highest pipe between two manholes.

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The lowest end of the pipe shall be plugged watertight. Water shall then be filled in manhole at the upper end of the line.

The depth of water in the manhole shall be 60 cm. plus the diameter of the pipe. The joint shall then be examined. Any joint found leaking or sweating shall be remade and embedded into 15 cm. layer of cement concrete (1:2:4) 30 cm. in length and the joint retested without any extra cost.

**Manholes:**

Size of manholes shall be as specified in the item and the sizes specified shall be internal size of the manhole. The work shall be done strictly as per standard drawing and specifications.

**Bed Concrete :**

Shall be in 1:4:8 cement concrete 23 cm. (9") thick.

**Brick Work:**

Shall be with best quality local bricks and proportion of mortar shall be 1:4 unless otherwise specified.

**Plaster:**

Inside of the walls shall be plastered with 12 mm. thick cement plaster 1:3 and finished with floating coat of neat cement. The external face shall be pointed with 1:3 cement mortar.

**Benching:**

Channels and benching shall be done in cement concrete 1:2:4 rendered smooth with neat cement.

**Foot Rests:**

M.S. square rods of 22 mm. (7/8") diameter or C.I. rungs shall be embedded in masonry where the depth of manhole exceeds one meter and they shall be fixed 35 cm. apart and projecting 11 cm. from the wall. Foot rests shall be painted with bitumen as directed.

**Manhole Covers:**

Covers for manhole in the road proper shall not be less than 200 kgs. on footpaths and backyards. Lightweight covers shall be used whose weight for 45 cm. dia. shall not be less than 58 kgs. and that of 90 cm. x 45 cm. or 61 cm. x 45 cm. 90 kgs.

**Drop Connection:**

The case of drop connection C.I. pipes shall be provided with heel rest bend at the bottom and bend with access door at the top for cleaning purposes. The pipe shall be encased in 1:3:6 plain concrete.

**Miscellaneous Items of Work:**

The rates quoted by the Contractor for all miscellaneous items of work viz. cooking platforms, moiries, built-in cupboards, counters, partitions, railings, electrical meter, switchboard cupboards, etc., shall be for the work as described in the schedule of quantities and as shown in detailed drawings and shall be to the entire satisfaction of the Architects.

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## MATERIAL TEST LIST

The Contractors will have to take necessary material test as per I.S. code which is applicable, at their own cost for the following materials or any other material using in construction work periodically or as and when required by the Architects / Consulting Engineer.

The materials should be got tested in an approved Laboratory as per IS standard and test reports in duplicate should be submitted to the Architect's Office.

- 1) Sand : a) Silt Content.  
b) Bulking.  
c) Particle size distribution.  
d) Or as directed.
- 2) Stone aggregate : a) Soft and deleterious material.  
b) Particle size distribution.
- 3) Cement Concrete RCC mix : a) Slump. design b) Cube strength.  
c) Or as per I.S. 456-2000
- 4) Bricks : a) Dimensions  
b) Water absorption and efflorescence.  
c) Compressive strength.
- 5) Timber : Moisture.
- 6) Ceramic/Vitrified Floor Tiles : a) Transverse strength.  
b) Water absorption.  
c) Abrasion test.
- 7) Steel : a) Tensile  
: b) Bend.

**Note:** The Contractor will have to take necessary material test other than above test as per relevant I.S. code, if required and as directed by Architect / Owner.

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### ***MATERIAL TESTING***

A chart showing the recommended time and quantity scheduled for conducting test on various building materials is given. Please ensure that tests are carried out according to the above guidelines. Contractor's rate should include for necessary expenditure for testing including transport of samples of following tests.

No	Material	Test	Test Procedure	Minimum Quantity	Frequency
1	Sand	a) Silt Content	Field	20 Cum	20 Cum or part thereof
		Bulking	Field	20 Cum	--- Do ---
		b) Particle size distribution	Field	20 Cum	--- Do ---
		c)	Field	40 Cum	Every 40 Cum required for RCC work.
		a) Soft and Deleterious	IS - 23360 Part – II		As required. Every 45 Cum part thereof for RC work.
		b) Particle size distribution	Field	45 Cum.	For rest of work as desired.
3	Cement or Concrete RCC	Slump Cube Strength	Field		Once a day or as desired.
			Field		Every 20 Cum of a day's concrete.
			Laboratory	20 Cum slab, beams and connected columns	Every 5 Cum column concrete.
4	Steel	a) Tensile Strength	IS - 1529	20 tonnes	Every 20 tonnes or part.
		b) Bend Strength	---- Do ----	---- Do ----	---- Do ----
				5 Cum columns	

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5	Lime	Chemical and Physical properties of lime.	IS - 6932	5 M.T.	10 M.T. or part thereof
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No	Material	Test	Test Procedure	Minimum Quantity	Frequency
6	Bricks	Dimensions Water absorption Efflorescence compressive strength		Designation 100 75) 50) 1,00,000 35) --- Do --- 100- 50,000 75) 50) 100,000 35)	Every 50,000 or part thereof. Every 100,000 or part thereof one test for source of 50,000 or part thereof. Two tests for 1 <sup>st</sup> lot of 1,00,000 and one test later for every 2,00,000 and part thereof.
7	Brick Tiles	Compressive Strength Efflorescence		50,000 50,000	For 50,000 or part. One test per Source.
8	Marble	Moisture absorption Mohs scale hardness	IS – 1124 – 1974 IS – 1706 – 1972	Rs.10,000/- Value	Rs. 10,000/- or part thereof. (Value)
9	Timber	Moisture	IS – 11215 – 1985	1 Cum.	Every one Cum and part.
10	Aluminium door or window fitting	Thickness of anodic coating.	IS – 5523 – 1969	Rs. 5,000/-	Rs. 10,000/- or part thereof.

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11	Ceramic Tiles / Vitrify Tiles / Designer precast Concrete Tiles and interlocking paver block	a) Transverse Strength b) Water Absorption c) Abrasion test	IS – 1237  --- Do ---  --- Do ---	200 Tiles  --- Do ---  --- Do ---	2000 Tiles or part.  --- Do ---  --- Do ---
12	Flush Door	a) End Immersion b) Knife	IS – 2207	22 – 65 66 – 100 101 – 180	Destructive tests No. of shutters. 1 2 2
		c) Adhesion		181 – 300 301 – 500 501 – above	3 4 5

No	Material	Test	Test Procedure	Minimum Quantity	Frequency
13	Tarfelt Type-3 Grade - I	Conform to I.S. 1322 – 1970			One Test
14	Pig lead	I.S. 782 – 1978			One Test
15	R.C.C. design mix M-25	All test as per I.S.:456-2000		As per directed	As per directed

**Note :** The Contractor will have to take necessary material test other than above test as per I.S. code for above material or other than above material, if required and as directed by the Architect / Owner.

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***SPECIFICATIONS FOR SANITARY, PLUMBING  
AND WATER SUPPLY INSTALLATION  
WORK***

**I. DRAINAGE (INTERNAL AND EXTERNAL)**

**STONEWARE PIPE AND FITTINGS :**

Shall comply IS:651 in every respect and all stoneware pipes, bends, gully traps and sewer traps shall be of the best salt glazed, variety, glazed inside as well as outside, hard, smooth, even, textured, free from fire cracks, blows and blisters. The pipes shall be truly circular in cross section perfectly straight and of standard nominal diameter, length and depth of socket.

**SECTION – B**

**WORKS TO COMPLY LOCAL REGULATIONS AND RATE TO INCLUDE:**

- 1) All sanitary installations, water supply and drainage work shall conform to the Local Municipal Bye-Laws and / or rules and regulations of Local Bodies and the work shall be inspected and passed by the various authorities having jurisdiction.
- 2) The work shall be carried out through a Licensed Plumber.
- 3) The Contractor shall arrange with the Local Municipal and / or Public Authorities for obtaining water and drainage connections and the Employer will reimburse the permanent connection charges on production of receipts.
- 4) The Contractor shall obtain all necessary permission forms from the various authorities having jurisdiction and shall make application and file all plans required for obtaining permission and satisfactory completion of the work.
- 5) The rates quoted shall be for complete items as fixed in position and cover all costs of materials, labour, tools, supervision, cutting of holes, chases, etc., and also for providing, fixing arrangements viz. clamps, brackets, wooden blocks etc. The rates shall also include restoration to original condition of all damage to walls, floors etc., during the process of fixing of sanitary installations, water supply and drainage. All debris of plumbers excavation etc., shall be removed without any extra charge.
- 6) All C.I. pipes, brackets, C.I. cisterns, G.I. pipe and fixtures, M.S. fixtures, A.C. pipes and fittings shall be painted externally with one coat of approved primer and two coats of enamel / flat oil paint. All painting work shall be carried out to the entire satisfaction of the Architects. If directed, additional coats of paint shall be applied to get uniform and matching finish without any extra cost.

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- 7) In the interior of the building all pipe whether of Cast Iron lead or G.I. shall be embedded in an approved manner in chases made in walls or floors if required by the Architects. The plumbers shall make necessary holes in the walls, etc., and restore them to the original condition.
- 8) All water supply and sanitary fixtures, pipes and pipe fittings, traps etc., which are to be embedded into the concrete or masonry work or other building work shall be placed in position and embedded or concealed at the time of casting concrete or erecting brick work. In case where chasing or cutting of concrete, masonry, or other structural or construction work is unavoidable, the locations of such fittings, pipe lines and traps, etc., shall be marked suitably and the cutting, chasing or disturbing of the construction work shall proceed only after due approval of the Architects.
- 9) All cutting, chasing and fixing work shall be completed before commencement of any plastering, tiling or finishing work.
- 10) Unless otherwise specified Galvanised Iron pipes and pipe fittings shall be of medium quality conforming to IS: 1239 and shall be tested if required by the Architects.
- 11) The Contractor shall be responsible for the adequacy and efficiency of the entire plumbing system and if, in his opinion he finds any serious objection to the system shown on the drawing, he shall set forth his objection or his suggestions to ensure adequacy and efficiency of the said system and notify the Architects before proceeding with the work.
- 12) The work in every respect during its progress and till final acceptance by the Employer, including raw materials delivered to the work site to be incorporated for use in construction of the work by the Contractor shall be under the charge and in the care of and under the responsibility of the Contractor and at his risk. Any loss or damage to such materials or work prior to final acceptance of the work by the Employer shall immediately be replaced by the Contractor at his expense.

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## TIMBER

As per IS 1708-1969

-----		-----	
Procedure	Frequency	Test Required & Acceptance Criteria	
-----		-----	
	1		2
	3		
-----		-----	
-----			

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### 1. Moisture Content and Specific Gravity Test preparation and procedure:

- a) **Measurement and weight:** Prior to each test, the dimensions of each test specimen shall be measured correct to 0.01 cm and the specimen shall be weighed correct to 0.001 gm.

For every Ten cum or part thereof.

- b) **Control of moisture content:** Before the preparation of the test specimens for testing in the seasoned condition, the material shall be brought practically to constant weight by storage under controlled conditions at  $27^{\circ}\text{C} \pm 2^{\circ}\text{C}$  temperature and  $65 \pm 5\%$  relative humidity. This is expected to bring the moisture content at 12% but if it is not exactly 12% it is permitted to test in the neighbourhood of 12% and results shall be adjusted to 12% moisture content. The test shall be made under such conditions that large changes in moisture content do not occur.

- c) **Control of temperature:** To avoid significant changes in strength properties all test specimen shall be tested within the temperature range of  $27^{\circ} \pm 2^{\circ}\text{C}$ . The temperature at the time of test shall be recorded.

The loss in weight expressed as a percentage of the oven dry weight shall be taken as the moisture content of the specimen. The formula for calculation shall be as given below:

$$\text{Percentage moisture content} = \frac{\text{WI} - \text{WO}}{\text{WO}} \times 100$$

WI = Weight of sample at test in gms.

WO = Oven dry wt. of sample in gms.

Moisture content shall not exceed following values

- i) Timber for frames = 14%
- ii) Timber for planking shutters etc. = 12%

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Test Required & Procedure	Frequency	Acceptance Criteria
1	2	3

**d) Rate of loading:** The rate of loading of the test machine used shall not vary by more than + 20% from the specified speed for a given test. The load shall be applied continuously without interruption at the required speed throughout the test. The approximate percentage of sapwood if any, by volume, is estimated for all the test specimens and recorded. The number of the growth rings for 3 cm length shall be counted in the radial direction on each of the cross-section of such piece and the average shall be recorded as number of rings/cms for each specimen tested.

The drying shall be considered to be complete when the variation between last two weighing shall

Immediately after each mechanical test, disc approx. 2.5 cm in length and of full section as the test piece, shall be taken normally at the place of failure, failing which, at the central portion of the test specimen. In the case of shear test, the detached portion of the section approximately 5x5 cm shall be taken for determination of moisture content.

The sample shall be weighed and then dried in an oven at a temperature of 103 ± 20 °C.

The weight shall be recorded at regular intervals.

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## WOODEN PANEL DOOR SHUTTERS

Conforming to IS 2202 (Part I) 1983

Test Required & Procedure	Frequency	Acceptance Criteria
1	2	3

### 1. Physical Test

#### Physical Verification-

- i) Name of the manufacturer or trade mark.
- ii) Thickness of door shutter.
- iii) Whether ISI Certification Mark exists.

One from each lot.

### 2. Glue Adhesion Test -

**Procedure-** Two square sections, 150 mm X 150 mm shall be cut from the corners of the door. These corner sections as out from the door, shall be immersed in boiling water at 100° C for four hours, then dried at a temperature of 360° + 20° C and relative humidity of 65 ± 5% for 24 hours. At the end of the drying period the samples shall be examined for de-lamination. Glue lines in all the four exposed edges of the plywood on both faces of a specimen and the glue lines between the plywood faces and the stile and rail shall be examined for de-lamination.

A specimen shall be considered to have passed the test if no de-lamination has occurred in the glue lines in the plywood and if no single de-lamination. More then 50 mm in length and more than 3 mm in depth has occurred in the assembly glue lines between the plywood faces and the stile and rail.

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## READY MIXED PAINTS

Test Required & Procedure	Frequency	Acceptance Criteria
1	2	3

### 1. Drive Time

**Procedure:** The material shall be brushed or sprayed as required on a 150 x 150 mm mild steel panel prepared and allowed to air dry or stored under specified drying conditions.

The material shall be examined after specified intervals, for the following conditions:

i) Surface dry

ii) Hard dry

iii) **Tack free:** The procedure of test on the dried film of the panel after specified period as follows:

Place the panel in one pan of a suitable balance and counterpoise it with weights. Place a further weight of 2.25 kg and press on the dried film surface of the panel with the thumb till the two pans are balanced. Hold for one minute and then slowly release. No sign of stickiness to the thumb shall be apparent and the thumb impression, if produced, shall be such as can be wiped away with dry cotton wool.

On test each lot,  
(All containers of same size and same batch of manufacture constitute a lot)

No sign of stickiness to the thumb shall be apparent.

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Test Required & Procedure	Frequency	Acceptance Criteria
1	2	3
-		
<b>2. Consistency-</b>  <b>Procedure:</b> Insert a clean metal rod or palette knife into the original container and examine the nature of the setting.	using either 20 ml of petroleum hydrocarbon solvent 145/205 (100 aromatic).	The material shall not be cake hard inside the container and shall be in such a condition that stirring easily produces a smooth uniform paint suitable for application.
<b>3. Finish-</b>  <b>Procedure:</b> The material, when applied on an mild steel panel by brushing or spraying, which ever is specified to give a dry film weight commensurate with the weight per 10 liters of the material and allowed to dry in a vertical position under specified conditions, shall dry to hard, firmly adherent, flexible and smooth film, free from sagging and wrinkling with a matt, semi-glossy or glossy surface in accordance with the requirement of the material specification.		The film produced shall be of normal capacity and in no way inferior to a film prepared in the same manner and at the same time from the approved sample, when examined not earlier than 48 hours and not later than 100 hours after application. In case of failure, the test shall be repeated by keeping the painted panel under standard atmospheric condition.
<b>4. Residue on Sieve-</b>  <b>Outline:</b> The material is mixed with a suitable solvent and passed through a 63 micron IS sieve. Not less than 20 gms. of the material taken from under the top skin shall be tested.  <b>Procedure:</b> Accurately weigh the required quantity of the material and transfer to a 250 ml beaker		

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Test Required & Procedure	Frequency	Acceptance Criteria
1	2	3

-  
(Conforming to IS: 1745-1961) or 20 ml of a mixture containing equal parts by volume of petroleum hydrocarbon solvent and benzene. Wet a 63 micron IS sieve on both sides with the solvent. Mix the material and the solvent in the beaker thoroughly, breaking up all lumps without grinding action, with the flattened end of a stirring rod. Transfer the contents of the beaker to the sieve using awash bottle containing the solvent. Remove with the camel-hair brush any small particles of pigment that may be retained on the stirring rod or the walls of the beaker. Wash the residue left on the sieve with the solvent and gently brush with a camel-hair brush until the solvent passing through the sieve is clear and free from solid particles. When the washing is complete, dry the sieve for one hour at  $100 \pm 2^\circ \text{C}$ . Cool and transfer the residue with the help of the camel-hair brush to a weighed watch glass and determine the weight of residue.

## 5. Water Content

**Outline of the method:** The material is heated under reflux with an organic solvent which is immiscible with water. The carrier liquid distils into a graduated receiver carrying with it water which then separates to form the lower layer,

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Test Required & Procedure	Frequency	Acceptance Criteria
1	2	3

-  
the excess carrier liquid overflowing from the trap and returning to the still.

**Procedure:** Weigh 100 g. of the material in the flask, add 100 ml of dry petroleum hydrocarbon solvent (boiling point 75 to 85° C) and IMI of dry ethylacetate (conforming to IS:229-1964) or acetate (conforming to IS:231-1957) and thoroughly mix the contents of the flask. Pour petroleum hydrocarbon solvent into the receiver upto the level of the side tube. Attach the flask to Dean and stark condensing and collecting system and heat the flask at such a rate that the condensate falls from the end of the condenser at a rate of two to five drops per second. Continue the distillation unit condensed water is no longer visible in any part of the apparatus except at the bottom of the graduated tube and until the volume of water collected remains constant. Remove the persistent ring of condensed water in the rate of distillation by a few drops per second.

## 6. Weight per Litre

**Outline of the method:** The calibrated cylinder or CNP is filled with the material and weighed.

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Test Required & Procedure	Frequency	Acceptance Criteria
1	2	3

**Procedure:** Weight the cylinder or cup when empty and then fill to the brim with the material Assuming that the volume of the contents is 50 ml or 100 ml, calculate and express as kg per 10 litres.

## 7. Lead Restriction

**Outline of the method:** Determination of lead in lead restricted paints is carried out by precipitating the lead as sulphide from the separated pigment, which is finally oxidized to lead monoxide.

**Procedure:** Shake about one gram of the ground pigment obtained, accurately weighed, continuously for one hour at room temperature with 1000 times its weight of an aqueous solution of hydrochloric acid containing 0.25 percent by weight of hydrogen chloride.

Allow the mixture to stand for one hour and then filter. Precipitate the lead salt contained in the clear filtrate as lead sulphide, filter, that the lead sulphide in air to convert it into lead sulphate, weigh calculate as lead monoxide (PbO) and express the result as percentage on the dry weight of the material taken for test.

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## PARTICLE BOARDS

Test Required & Procedure	Frequency	Acceptance Criteria
1	2	
<b>Identification (Physical Verification)</b>  Each particle board shall be legibly marked near any of its edge with the following. <ol style="list-style-type: none"> <li>1. Name of the manufacturer or trade mark.</li> <li>2. Designation of particle board.</li> <li>3. Thickness and date of manufacture.</li> <li>4. Whether I.S.I. Certification marks exists.</li> <li>5. Dimensional Tolerance               <ol style="list-style-type: none"> <li>a) Length <math>\pm 8</math> mm</li> <li>b) Width <math>\pm 8</math> mm</li> <li>c) Thickness                   <ol style="list-style-type: none"> <li>i) Boards upto and including 25mm thick <math>\pm 5.0\%</math></li> <li>ii) Boards above 25mm thick <math>\pm 2.5\%</math>.</li> </ol> </li> </ol> </li> </ol> Edges of the board shall be straight with a tolerance of 3 mm. the persistent ring of condensed water in the rate of distillation by a few drops per second.	One from each lot	shall not vary from the mean density by more than + 10%.  <b>Moisture content</b> : The average value of the moisture content shall be between 7 to 16%.  <b>Water absorption</b> : The value of water absorption shall not exceed 25% for two hrs, soaking and 50% for 20 hrs. soaking.  <b>Exterior grade (I)</b> : These particle boards shall not delaminate after 3 hrs. boiling in water at 100°C.  <b>Interior Grade (Gr.II)</b> : These particle boards shall not disintegrate and / or shall not detaminate after 24 hrs. immersion in water at 27°C $\pm 2^\circ\text{C}$ .  <b>Swelling water</b> : Swelling in thickness in % of original thickness for 2 hrs. immersion shall be determined and the same shall not be more than 5%. The Swelling in thickness due to surface absorption in two hours shall not be more than 5%.
<b>Density</b> – The density of each sample		

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## SPECIFICATIONS

1. All the works specified and provided for in the tender/ schedule and drawing or which may be required to be done in order to perform and complete any part there of shall be executed in accordance with the technical specification, workmanship, quality control, as prescribed whether enclosed/ not enclosed in this document, in the specification & codes, with up to date amendments, in the following order:-
  - a) CPWD/ DSR
  - b) IS (BIS) Codes
2. All works under this contract (wherever grey cement is used) have to be executed in OPC.
3. The quantities given in the tender are approximate. However the payment shall be made on the basis of actual measurements taken on site and in conformity with CPWD Specification and BIS Codes. It is clarified that all quantities are subject to change and no claims whatsoever on this behalf shall be entertained.
4. All materials used in the works shall be of their respective kind and quality specified in the tender document or approved by the SBI and/ or Architect and shall comply strictly with the requirements of the latest specifications of CPWD and Indian Standard Codes.
5. The work shall be executed and measured as per metric dimensions given in the Schedule of Quantities, Drawings etc. (FPS units wherever indicated are for guidance only).

### SPECIFICATIONS OF INTERIOR & FURNISHING WORKS

#### 1. **General:**

- 1.1 Without forgoing the requirements of the Conditions of Tender and the Conditions of Contract the works in general shall confirm to the "Latest Specifications" published by CPWD, New Delhi and the "Specifications for Works" stated in this tender. In case of items not covered by the General Specifications referred above, reference shall be made to the appropriate I.S. Code. If there is any difference in the particular specifications of individual item of work and the description of item as given in the Schedule of Quantity, the latter shall prevail. In case of any work for which there is no specification in I.S. Specifications or in the specifications forming part of tender documents or in case there is any variation, such work shall be carried out in all respects in accordance with the instructions to be issued by the Architects. The term Department shall mean the Employer. Any reference to ISI shall also mean reference to its successor Bureau of Indian Standards. All corrections to "Latest Specifications" or revisions of I. S. shall be deemed to apply to this contract.
- 1.2 Materials bearing ISI certification mark shall be given highest preference for use in the works.
- 1.3 Where the Contractor is required to do, perform, execute (etc.) any work or service or the like, it shall be deemed to be at his own cost. Absence of terms providing supplying, installing, fixing, etc. shall not even remotely entitle the Contractor to any additional payment thereof.
- 1.4 The rates accepted in the Schedule of Quantities apply to all floors, heights, depths, leads, lifts, spans, sizes, shapes, locations, etc. unless a distinction has been included in the very Schedule.
- 1.5 The Specifications and the Schedules may have been divided into various sub-heads for convenience only. This does not limit applicability of one to the other nor it absolves the Contractor of his responsibility to complete any trade/item of work as reasonably inferred from one or more of such sub-heads.

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- 1.6 The Schedule of Quantities is not necessarily based on "Schedule of Rates – Delhi 2003 or any of its later/earlier versions. Hence the Schedule of Quantities shall be read and construed according to explanations given herein and intentions gathered therefrom. A mere parallel drawn from the said Schedule of Rates shall therefore not form a basis for a variation and, or additional payment.
- 1.7 All work under this contract is deemed to be performed above subsoil water level. However, removal of water collected from rains and the like shall be treated as part of contractual risk/obligation.
- 1.8 Screws, bolts, nuts, washers, hold fasts, lugs, anchors, clamps, plugs, suspenders, brackets, straps and fasteners of the like are deemed to be included in the rates of various items unless the Schedule of Quantities expressed a different intention.
- 1.9 Resetting any displacements, making good holes/chases and such other incidental jobs are included in rates of respective items for which these are required.

## **2.0 Concrete Work (Plain or Reinforced):**

- 2.1 Centering, shuttering, staging, form work, strutting, propping (their provision and removal) shall not be paid for separately unless exclusion thereof is specifically described in the item.
- 2.2 The rates of concrete work do not include rendering or plastering but hacking and preparing surface for receiving the finishes shall be done as early as possible.
- 2.3 Any chamfers, grooves, drips, etc. which are generally and customarily required shall be provided in the concrete work integrally or otherwise without extra charges as directed by the Architect.

## **3.0 Steel Work:**

- 3.1 The measurement of railing shall be the length of top wood/steel section as per situation along the centre line.
- 3.2 Painting in relation to steel work shall be two or more coats of approved synthetic enamel plus a coat or primer including preparation of surfaces, fillers etc. The priming coat shall be measured & paid separately in the relevant item.
- 3.3 Circular work, bends, stepping are not payable extra.
- 3.4 The steel work in single sections of R.S. Joists, flats, Tees Angles fixed independently with or without connecting plate, is described in these clauses.

### **(a) Fabrication**

The steel section as specified shall be straightened and cut square to correct lengths and measured with a steel tape. The cut ends exposed to view shall be finished smooth. No two pieces shall be welded or otherwise jointed to make up the required length of a member.

All straightening and shaping to form, shall be done by pressure. Bending or cutting shall be carried out in such a manner as not to impair the strength of the metal.

### **(b) Painting**

All surfaces which are to be painted, oiled or otherwise treated shall be dry and thoroughly cleaned to remove all loose rust. Surfaces not in contact but inaccessible after shop assembly, shall receive the full specified protective treatment before assembly. This does not apply to the interior of sealed hollow sections. Part to be encased in concrete shall not be painted or oiled. A priming coat of approved steel primer i.e. Red Oxide Zinc chrome primer conforming to IS: 2074 shall be applied before any member of steel structure are placed in position or taken out of workshop.

### **(c) Welding**

Welding shall generally be done by electric arc process as per IS: 816 and IS: 823. The electric arc method is usually adopted and is economical. Where electricity for public is not available generators shall be arranged by the contractor at his own cost unless otherwise specified. Gas welding shall only be resorted to using oxyacetylene flame with specific approval of the Engineer-in-charge. Gas welding shall not be permitted for structural steel work. Gas welding requires heating of the members to be welded along with the welding rod

and is likely to create temperature stresses in the welded members. Precautions shall therefore be taken to avoid distortion of the members due to these temperatures stresses.

The work shall be done as shown in the shop drawings which should clearly indicate various details of the joints to be welded, type of welds, shop and site welds as well as the types of electrodes to be used. Symbol for welding on plane and shops drawings shall be according to IS: 813.

As far as possible every efforts shall be made to limit the welding that must be done after the structure is erected so as to avoid the improper welding that is likely to be done due to heights and difficult positions on scaffolding etc. apart from the aspect of economy. The maximum dia of electrodes for welding any work shall be as per IS: 814 and appendix B' of IS: 823. Joint surfaces which are to be welded together shall be free from loose mill scale, rust, paint, grease or other foreign matter, which adversely affects the quality of weld and workmanship.

#### **4.0Flooring:**

- 4.1 The rates of cement concrete flooring and marble chips flooring are exclusive of dividing strips for formation of panels.
- 4.2 Borders, margins, bands, nosings, etc. are not payable extra. Treads shall be measured as floors, risers as skirtings. However, areas of returns (finished thickness), nosing shall be added respective items.
- 4.3 No extra shall be paid for cutting of glazed tiles or for wastage thereof.
- 4.4 Marble/ Kota stone slabs shall be of selected quality, hard & sound and shall be approved by the Architects. The thickness of the slabs shall be as specified in the description of the item. Tolerance of 2 mm shall be allowed for the thickness. In respect of length & breadth of slabs (Where flooring to be laid) a tolerance of 5 mm shall be allowed. Every slab shall be cut to the required size and shape, top waviness shall be removed, the sides (edges) shall be removed, the sides (edges) shall be table rubbed with coarse sand or machine rubbed before paving. All angles of the tiles shall be true equal and free from chipping and the surface shall be true and plane.
- 4.5 Marble slab/kota slab shall be cleaned, wetted and mopped before laying.
- 4.6 Polishing shall be done by machine in four different courses. 1<sup>st</sup> course shall be of rubbing with carborundum stone No. 60, the second with No. 120, and the third with No. 320 to get even and smooth surface with out pinholes. Where ever use of machine is not feasible to work, polishing shall be done by hand with No. 60, No. 80 and with No. 120 carborundum stone respectively. Lastly oxalic acid shall be dusted over the surface @ 33 gm per square meter sprinkled with water and rubbed hard with namdah block (pad of wooden rags).
- 4.7 Marble chips, kota stone, marble (all floors, skirting, risers, dado, counter tops, treads) shall finally be polished with approved floor wax polish as directed at no extra cost.
- 4.8 Marble (counter tops) shall be of full width and in single piece upto length of 1.5m. Granite for name-plate shall be in one single piece.

#### **5.0Finishing:**

- 5.1 Items of plastering apply to all locations including rough sides of walls, curved surfaces, all heights, etc. without limiting generally of para 1.4.
- 5.2 Preparation of surfaces including raking out joints, hacking, brushing, watering, etc. is included.
- 5.3 Drip mouldings shall not be payable extra.
- 5.4 Grooves shall be provided in plaster as directed by Architect at corners of ceiling slabs around the columns & beams at no extra cost.
- 5.5 Strips of G.I. chicken mesh 250mm wide shall be provided in plaster at all junctions (which are flush) between masonry/columns, masonry/beams.

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**6.0 Wood Work:**

- 6.1 The areas of doors & windows shutters shall be measured to the nearest cm in closed position covering the rebates of the frame but excluding the gap between the shutter and the frame. Over lap of two shutters shall not be measured. All work shall be measured for finished dimensions. No allowance shall be made for dimensions supplied beyond those specified. Length of each piece shall be measured overall nearest to 1 cm, so as to include projections for tenons, scraves or mitres, width and thickness shall be measured to the nearest mm.
- 6.2 Where painting, polishing has been included in the item the same shall be executed as per Architect's directions. Painting shall be two or more coats of approved synthetic enamel plus a coat of fire resistant primer to wood work as approved by Architect and shall conform to BS-476 part 7 for class I surface spread of flame. Preparations of surfaces, fillers, etc. are included. This primer shall also be applied before polishing (i.e. French Spirit Polish). The fire resistant primer shall be measured & paid separately in the relevant item.
- 6.3 All flush door shutters shall have teak lipping on all edges as directed with extra thickness of lipping of meeting edges of double shutter doors.

Glasses 5.5mm thick or 4mm thick shall respectively weigh not less than 13.75 Kg/sqm. Or 10 Kg/sqm.

Bends, stepping and circular shapes in railings are integral part of the rate.

The widths of various rails & styles shall be as described in the items or shown in the drawing. All aluminum section & fittings used shall be ISI marked. All screws for fixing of fittings/fixtures shall be of matching finish.

In case of composite units (M.S. frame + teak wood shutter) the hold fasts shall be added or fixed with counter sunk machine screws. Also the M.S. frames shall have necessary holes and other arrangement for receiving/fixing of fittings

**7.0 Plaster of Paris Punning (P. O. P.)**

If the plaster surface is to be finished with plaster of paris punning, the surface shall be combed slightly with the wire brushes or nails before it is completely set to form key for plaster of Paris punning. The surface shall be thoroughly cleaned of dust then only damped but not soaked before the application of plaster of paris punning. The Gypsum for preparing punning shall be approved quality. It shall be dry and free from lumps and shall be suitably packed in watertight bags or containers. Paste shall be prepared by adding required quantum of water and it shall be used before it sets. No dropping paste shall be used in the work. Punning shall be applied to the prepared surface with steel trowel to a thickness required to make the surface produce perfectly smooth and even surface working from top to bottom. It shall then be sand papered to give a smooth and even surface. Any unevenness shall be made good by applying putty, made of plaster of paris mixed with water, then sand papering the same after it is dry. Pilling in plaster shall be made good with plaster of paris mixed with colour to be used. The surface shall then be rubbed down again with a fine grade sand paper and made smooth. The surface shall be allowed to dry thoroughly before the regular coat of paint is applied. The measurement shall be in square metre.

**8.0 Plastic Emulsion Paint:**

Plastic emulsion paint shall be of approved manufacturer and shall generally confirm to IS-5411 (Part-I)-1969.

The colour and shade of the emulsion shall be got approved by the Architect. Double scaffolding shall be used, ladden if used shall be tied with old gunny bags at top to prevent damage or scratches to the walls. The instructions of the manufacturer shall be followed, in application of priming and finishing coats. Turpentine or any other solvent shall not be used for thinning the paint.

Minimum 3 coats of paint shall be applied inclusive of primer coat. If a proper and even surface is not obtained to the satisfaction of the Architects in 3 coats, Contract shall carry out additional coats of painting to approval at his expenses. Care shall be taken that dust or

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other foreign material does not settle or disfigure the various coats. The measurement shall be in square metre.

**9.0****Miscellaneous:**

The work of cupboard/cabinets shall be done as per drawings. The depth of cupboards shall be as shown in drawings. The work includes holdfasts and other accessories usually required for complete installation. All inner surfaces shall be painted & outer face polished as per Architects approval.

All exposed cut ends of boards shall be provided with hardwood lippings.

Kail wood to be used shall be of the best available quality.

The joints in cement concrete pavements/roads shall be formed as per design and pattern. The joints shall be cleaned and neatly filled with 'A' grade sealing compound. Side kerbs shall be made in situ to design and volume paid for in the same item. Required side forms shall not be paid separately.

For whitewashing, colour washing, distempering on sand faced plaster or on rough cast plaster with stone aggregate upto 10mm, only flat single surface will be measured and paid.

In the case of R.C.C. Jallies upto 50mm thick only single flat surface will be considered for each side of painting.

## **SPECIFICATIONS FOR SERVICES**

### **1.0 General**

- 1.1 The drawings for services are diagrammatic but shall be followed as closely as actual construction permits. Any deviations from the drawings shall be in conformity with architectural and structural drawings. The dimensions designated by the manufacturers shall take precedence over the drawings.
- 1.2 At completion of work the Contractor shall submit one set of tracings and two sets of prints of "As-Built-Drawings". These drawings shall, among others, include invert levels, pipe runs, diameters, location of valves, access panels, layout of equipment, piping connections and such other information for maintenance & future extensions. Guarantees given by manufacturers shall be assigned to the Employer along with names & addresses of manufacturers, suppliers and information about spare parts.
- 1.3 All site test shall be carried out with prior intimation to the Bank Engineer / Architect. All defects shall be rectified and tests conducted again to the satisfaction of the Bank Engineer / Architect. In addition to the test required by the specifications, the Contractor shall also conduct tests required by the Architect and by the Municipal or other Authorities.
- 1.4 All work shall be executed by competent and licensed persons. The contractor shall maintain liaison with Municipal and other controlling Authorities. He shall obtain their approvals and certificates as required by the bye – laws at appropriate stages.
- 1.5 No cutting / chasing shall be done in load bearing structural members without prior approval of the Bank. Engineer. Sleeves and openings shall be provided during the progress of construction in preference to cutting at later date.
- 1.6 The Architect may require typical mock up(s) to be installed in advance for approval. Undamaged materials from the mock up shall be allowed to be reused in the work.
- 1.7 Unless otherwise described in the item CI / SCI pipes and fittings shall be a spigot and socket type.
- 1.8 G.I. pipe spouts shall be paid as per item of G.I. pipes (internal work). Cutting and making good is included. The free ends may be skew-cut.
- 1.9 Wherever use of G.I. pipes is called for the same shall be medium class (class – B)

### **2.0 Materials :**

- 2.1 The materials shall conform to the specifications and in absence thereof to Indian Standards. The products should bear the ISI Mark.
- 2.2 The makes of materials for use in this work are broadly approved as per list given below. The Contractor shall, however, get particular makes and samples approved before ordering:
- 2.3 Notwithstanding any interim or final approval the Contractor remains responsible for satisfactory performance of all fittings & fixtures. The liability of the Contractor is not limited by any approval of the make of materials.
- 2.4 The item rate of mirror includes extra packing piece of AC plain sheet, where required due to off set between plaster & glazed tiles surface.

### **3.0 Testing**

- 3.1 The sand cast iron soil, waste and vent pipes and fittings including joints shall be tested by pumping smoke into the pipe at the lowest end.
- 3.2 All G.I pipes and fittings including joints shall be tested to hydraulic pressure of 6 kg / cm<sup>2</sup> (60 meters) avoiding water hammer. The test pump having been stopped the test pressure should maintain without loss for at least half an hour. The pipes and fittings shall be tested in sections as the work of laying proceeds keeping the joints exposed for inspection during the testing.
- 3.3 All stone ware pipes shall be tested with water pressure of 1.5m head of water at the highest point of the section under test.

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## SAFETY CODE

1. First aid appliances including adequate supply of sterilised dressing and cotton wool shall be kept in a readily accessible place.
2. An injured person shall be taken to a public hospital without loss of time, in cases where the injury necessitates hospitalization.
3. Suitable and strong scaffolds should be provided for workmen for all works that cannot safely be done from the ground.
4. No portable single ladder shall be over 8 meters in length. The width between the side rails shall not be less than 30 cm (Clear) and the distance between two adjacent rungs shall not be more than 30 cm. When a ladder is used an extra mazdoor shall be engaged for holding ladder.
5. Every opening in the floor of a building or in a working platform be provided with suitable means to prevent to fall of persons or materials by providing suitable fencing or railing whose minimum height shall be one meter.
6. No floor, roof or other part of the structure shall be so overloaded with debris or materials as to render it unsafe.
7. Workers employed on mixing and handling material such as asphalt, cement mortar or concrete and lime mortar shall be provided with protective footwear and rubber hand-gloves.
8. Those engaged in welding works shall be provided with welder's protective eye-shields and gloves.
9. I) No paint containing leads or lead products shall be used except in the form of paste or readymade paint.  
ii) The workers should supply suitable facemasks for use when the paint is applied in the form of spray or surface having lead paint dry rubbed and scrapped.
10. Overalls shall be supplied by the contractor to the painters and adequate facilities shall be provided to enable the working painters to wash during the periods of cessation of work.
11. Hoisting machines and tackle used in the works, including their attachments, anchorage and supports shall be in perfect condition.
12. The ropes used in hoisting or lowering material or as a means of suspension shall be of durable quality and adequate strength and free from defects.

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**PROFORMA FOR RUNNING ACCOUNT BILLS****C E R T I F I C A T E**

The measurements on the basis of which the above entries for the Running Bill \_\_\_\_\_ were made have been taken jointly on \_\_\_\_\_ and are recorded at pages \_\_\_\_\_ of Measurement Book No. \_\_\_\_\_.

Date & Signature of  
Contractor

Date & Signature of  
Architect's Representative  
(Seal)

Date & Signature  
of Site Engineer

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

**ARCHITECT**

**SITE ENGINEER/ BANK's ENGINEER**

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**RUNNING A/C BILL**

Name of Contractor/Agency: \_\_\_\_\_  
 Name of Work: \_\_\_\_\_  
 Sr. No. of this Bill: \_\_\_\_\_  
 No. and Date of Previous Bill. \_\_\_\_\_  
 Reference to Agreement No. \_\_\_\_\_  
 Date of Written Order to Commence. \_\_\_\_\_  
 Date of Completion as per Agreement. \_\_\_\_\_

Sr. No.	Item description	Unit	Rate (Rs.)	As per Tender		Upto Previous R/A Bill		Upto Date (Gross)		Present Bill	
				Qty.	Amt. (Rs.)	Qty.	Amt. (Rs.)	Qty.	Amt. (Rs.)	Qty.	Amt. (Rs.)
1.	2.	3.	4.	5.		6.		7.		8.	

Note: 1. If Part Rate is allowed for any Item, it should be Net value since Indicated with reasons for allowing such a Rate. Previous Bill.  
 2. If Adhoc Payment is made, it should be mentioned specifically.

**Date & Signature of Contractor.**

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**PERFORMA FOR APPLICATION BY CONTRACTOR FOR EXTENSION OF TIME**

1. Name of the Contractor
2. Name of the Work as given in the Agreement
3. Agreement W O
4. Tender Amount
5. Date of Commencement of Work
6. Period allowed for Completion as per Agreement
7. Date of Completion as per Agreement
8. Period for which Extension of Time has been given

**Date      Month      Year**

- a) 1<sup>st</sup> Extension vide Bank's Letter No
- b) 2<sup>nd</sup> Extension vide Bank's Letter No
- c) 3<sup>rd</sup> Extension vide Bank's Letter No

9. Reasons for which extensions have been previously given (Copies of the previous applications should be attached)
10. Period for which extension is applied for and the reasons thereof including hindrances, time for extra work assigned, if any etc.

**Signature of Contractor & Seal**

Signature of Contractor with Seal

**PERFORMA OF HINDERANCE REGISTER**

Name of Work : Date of State of Work :

Name of Contractor : Period of Completion :

Agreement No : Date of Completion :

Sr No	Nature of Hindrance	Date of occurrence of Hindrance	Date of which Hindrance was removed	Period of Hindrance	Signature SE / PE	Remarks
1	2	3	4	5	6	7

**SE = Site Engineer**  
**PE = Project Engineer**

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**ACCOUNT OF SECURED ADVANCE, IF ADMISSIBLE ON  
MATERIALS HELD AT SITE BY THE CONTRACTOR**

No.	Item	Quantity	Unit	Amount	Remarks
1	2	3	4	5	6

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Total Value of Materials at Site

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Secured Advance @.....% of above Value

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B

CERTIFIED (I) That the materials mentioned above have actually been brought by the contractor to the site of the work and no advance on any quantity of any of this item is outstanding on their security, (ii) that the materials are of imperishable nature and are all required by the contractor for use in the work in connection with the items for which rates of finished work have been agreed upon.

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Dated Signature of  
Site Engineer  
preparing the Bill

Designation\_\_\_\_\_

Dated Signature of  
Bank's Architects

(Name of the Architects)

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**Dated signature of Contractor**

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### LIST OF APPROVED BRANDS / MAKES

One of the following make of the material shall be used. The contractor will have to get the sample approved from the Architect/ Bank's Engineer whose decision shall be binding on the contractor. The condition is also applicable for any material, not mentioned in the specification or schedule of work. No deviations are allowed in these even during/ after Tender.

1	Vitrified Tiles	H.R.Johnson/ <b>OrientBell</b> /RAK/Kajaria
2	Ceramic wall Tiles	Kajaria/ Somany/ H.R.Johnson/ <b>OrientBell</b>
3	Ceramic floor Tiles (antiskid)	Kajaria/ Somany/ H.R.Johnson/ <b>OrientBell</b>
4	False Flooring	Unifloor/ Flexi Access Floor/ Armstrong
5	Wooden Laminated Flooring	Pergo Tiles/ Green Panel/ Armstrong/ Vista
6	Aluminum Fittings	Jindal/ Hindalco
7	Aluminum Extrusion Sections	Jindal/ Hindalco
8	Plywood/Board ( BWR)	Archid Assam/Green Panel club/Centuary Premium/ KIT Ply only premium quality
9	Laminates	Greenlam/ Century/ Royal Touch/ Archid
10	Veneer	Century/ Durian/ Archid/ Green
11	Drawer Sliding/ Patch Fittings	Earl Bihari (EBCO)/ Godrej/ Hettich/ Dorma/ Ozone
12	Floor Spring / Door Closer	Dorma/ Ozone
13	Triple Computer Monitor Mount/ Stand Arm	Vivo/ Dell/ HP
14	Flush Door (BWR)	Century/ Archid/ GREEN/KIT Plywood
15	Texture Interior Paint	Sandtex Matt/ Dulux/ Berger/ Asian
16	Readymade Computer Drawer	EBCO/ Hettich/ Blum/ Haffele
17	Paints	Asian/ Nerolac/ Berger/ Dulux/ ICI
a)	Synthetic Enamel Paint	Asian/ Nerolac/ Berger/ Dulux/ ICI
b)	Acrylic Emulsion Paint (Interior and Exterior)	Asian/ Nerolac/ Berger/ Dulux/ ICI
18	Glazing	Modi Tuff Glass/ Triveni Glass Ltd./ Indo Asahi Glass Co. Ltd./ Saint Gobain
19	Cement	Grade 43/53 of L&T/ A.C.C./ Ambuja/ Ultratech
20	Mineral Fibre False Ceiling	Armstrong/ Indian Gypsum Board/ Gypro
21	ACP Panels/ Sheets	Alubond/ ALU Decor/ Alstrong/ Alstone
22	Acrylic Sheets	Sanmati Acrylics/Acrylic Sheet India/ Acry Plus

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23	Vertical/ Roller blinds	Vista/ MAC/ Hunter Douglas
24	Corian	Samsung (First preference) / LG (Second Preference)
25	PU Paint	Asian/ Berger/ ICI
26	Wall Paper	Elemento/ Marshel
27	MDF	Green/ Century/ Action Tesa
28	Lacquered Glass	Modiguard/ Saint Gobain/ Asahi Glass
29	Sanitary Ware	Cera / Jhonson / Parryware
30	CP Fittings	Jaguar
31	Kitchen Sink	Niralli
32	Stainless Steel	Jindal

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

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

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## **BILL OF QUANTITY**

### **PREAMBLE:**

TO BE READ ALONG WITH DRAWINGS.

1. RATES TO BE QUOTED BOTH IN FIGURES AND WORDS.
2. ALL PAGES TO BE SIGNED AND STAMPED BY THE TENDERER.
3. THE RATE OF THE ITEMS SHALL BE APPLICABLE FOR ANY FLOOR LEVEL/ ANY NUMBER OF FLOORS, OR ANY QUANTITY.
4. THE SPECIFICATION OF THE ITEMS SHALL BE AS PER LATEST INDIAN STANDARD CODES UNLESS OTHERWISE SPECIFIED.
5. ALL MATERIALS SHALL BE AS PER APPROVED LIST AND SHOULD BE OF 1st QUALITY UNLESS OTHERWISE SPECIFIED.
6. THE RATES ARE INCLUSIVE OF ALL DUTIES AND TAXES (EXCEPT GST) OF ALL GOVERNMENT, MUNICIPAL OR ANY OTHER STATUTORY BODY APPLICABLE FROM TIME TO TIME.
7. RATES SHALL BE FOR ITEMS COMPLETE IN ALL RESPECTS AS PER DRAWING, INSTRUCTIONS AND APPROVAL OF THE ARCHITECT/ BANK'S ENGINEER.
8. THE QUANTITIES ARE APPROXIMATE AND TENTATIVE WHICH MAY VARY DURING COURSE OF EXECUTION. THE RATES QUOTED AGAINST PARTICULAR ITEM SHALL NOT BE CHANGED WITH VARIATION IN QUANTITIES.
9. MAKING OF ANY CUTOUT / OPENING FOR ELECTRICAL / AIR – CONDITIONING WIRING / FITTING IN ANY OF THE ITEM OF FALSE CEILING, PARTITIONS, PANELING MASONRY WORK ETC. AND FINISHING EDGES JAMBS / CILLS / SOFFITS OF THE OPENING SHALL NOT BE PAID EXTRA.
10. THE TENDERER SHALL VISIT THE SITE AND SHALL SATISFY HIMSELF AS TO CONDITIONS UNDER WHICH THE WORK IS TO BE PERFORMED. HE SHALL ALSO CHECK, ASCERTAIN THE LOCATIONS OF ANY EXISTING STRUCTURES OR EQUIPMENT OR ANY OTHER SITUATION WHICH MAY AFFECT THE WORK. NO EXTRA CLAIM AS A CONSEQUENCE OF IGNORANCE OR ON GROUND OF INSUFFICIENT DESCRIPTION WILL BE ALLOWED AT A LATER DATE.
11. THE QUOTED PRICE FOR ITEMS SHALL INCLUDE ALL ACCESSORIES, CONSUMMABLES ETC. AS REQUIRED TO MAKE THE ITEM COMPLETE IN ALL RESPECTS, COMPATIBLE WITH OTHER RELATED / ASSOCIATED ITEMS AND FULLY FUNCTIONAL.
12. CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY ERROR, DIFFICULTY IN EXECUTION / DAMAGES INCURRED OWING TO DISCREPANCY IN DRAWINGS WHICH HAS BEEN OVERLOOKED BY HIM AND HAS NOT BEEN BROUGHT TO THE NOTICE OF THE ARCHITECT.
13. THERE ARE NUMBER OF ITEMS GIVEN IN THE TENDER WHERE IN BASIC RATES INCLUDING ALL TAXES EXPECTED HAS BEEN MENTIONED IN THE TENDER. THESE ITEMS SHALL BE PURCHASED BY THE CONTRACTOR FROM THE MARKET ONLY AFTER THE APPROVAL OF QUALITY AND RATES BY THE ARCHITECT.
14. ALL HIDDEN SURFACES OF BOARD / PLY / WOOD WORK TO BE PAINTED WITH ANTI BACTERIAL PAINT FROM NAV AIR INTERNATIONAL FR 881 (VIPER) (WHITE COLOUR AS PER MANUFACTURER'S SPECIFICATIONS ON WOOD / BOARD).
15. CONTRACTOR SHALL APPOINT TECHNICALLY QUALIFIED FULL TIME SITE ENGINEER TO MONITORING THE DAY TO DAY PROGRESS OF WORK AT SITE ON THEIR OWN COST.

Signature of Contractor with Seal

**AGREED AND ACCEPTED ALL THE TERMS & CONDITIONS.**

**SIGNATURE OF CONTRACTOR**

**DATE:**

**SEAL:**

**(Refer annexed file/section in e-tender portal for detailed Bill of Quantities)**

Signature of Contractor with Seal