

**MILITARY ENGINEER SERVICES**  
**GARRISON ENGINEER (NORTH) KOLKATA**

**NAME OF WORK : SPECIAL REPAIR TO JCOS/ORS MD ACCN BLDG NO- 25/2, 25/4, 26/1, 26/4,**  
**27/2, 27/4, 36/2, 36/3, 37/4 & 39/4 AT MU CAMP OF ESD KANKINARA**  
**UNDER GE (NORTH) KOLKATA**

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\_\_\_\_\_  
SIGNATURE OF CONTRACTOR  
DATE: \_\_\_\_\_

\_\_\_\_\_  
AGE (CONTRACTS)  
FOR ACCEPTING OFFICER

Tele :033- 25314068

Fax : 033-25311580

Garrison Engineer(North),  
Military Engineer Services,  
46, B. T. Road  
Kolkata – 700 050

8409/24-25/ 09 /E8

15 Oct 2024

M/s \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**NAME OF WORK : SPECIAL REPAIR TO JCOS/ORS MD ACCN BLDG NO- 25/2, 25/4, 26/1, 26/4,  
27/2, 27/4, 36/2, 36/3, 37/4 & 39/4 AT MU CAMP OF ESD KANKINARA  
UNDER GE (NORTH) KOLKATA**

Dear Sir (s)

1. Tender documents for the subject work are uploaded to [www.defproc.gov.in](http://www.defproc.gov.in). The following documents which form part of the tender documents are not enclosed :-

- (a) IAFW-2249 (1989 Print) General Conditions of Contract.
- (b) Schedule of Minimum Fair Wages.
- (c) SSR Part –I (2009).
- (d) SSR Part-II (2020).

2. Documents at Serial No 1 (a) & (b) above can be seen in any of the MES office during working hours on any working days. The tenderers are deemed to have made themselves acquainted and fully conversant with contents of the above mentioned documents before submission of tender and no claims whatsoever on this account shall be entertained.

3. The tender is on single stage two cover e-tendering system. The contents of Cover1 & Cover 2 are specified in NOTICE OF TENDER.

“Cover 1” shall contain application with complete supporting documents /affidavit required for satisfying the eligibility criteria as specified in NIT including proof for cost of tender and EMD as applicable excluding the Quotation/price bid (BOQ). Bidder shall upload copy of Provident Fund Code and GST registration number which is mandatory. Bidders not in possession of Provident Fund Code and GST registration number shall be disqualified in “Technical Bid” evaluation and their finance bid shall not be opened”.

“Cover 2” shall contain only “Bill of Quantity (BOQ) duly quoted by the bidders ” i.e (Schedule duly quoted). The bids of established eligible contractors only shall be opened in the process on the date specified for opening of commercial bids i.e Cover 2.

4. Bid will be received online by ACCEPTING OFFICER upto the date and time mentioned in the NOTICE INVITING TENDER (NIT). No tender / bid will be received in physical form and any tender/bid received in such manner will be treated as non bonafide tender/bid.

5. Bids will be opened on due date and time fixed for opening in the presence of tenders/bidders or their authorised representatives, who have uploaded their bid and who wish to be present at the time of opening the bids.

6. Your attention is also drawn to instruction on filling and submission of tender attached herewith. You may forward your points on tender documents and / or depute your technical representative for discussion on tender and to clarify doubts, if any, on or before clarification end date. You are not to write piecemeal points and forward your points duly consolidated before clarification end date.

Contd..

7. Un-enlisted contractors are required to submit the scanned copies (in pdf file) of documents required as per eligibility criteria mentioned in instructions for filling the tender documents and Appendix- 'A' to NIT alongwith EARNEST MONEY DEPOSIT (EMD) and tender fee on defproc portal and submit the physical documents in the office of the "GARRISON ENGINEER (NORTH) KOLKATA, WEST BENGAL –700 050" within time limit specified in NIT. Inadequacy/deficiency of documents shall make the bid liable for rejection resulting in disqualification for opening of finance bid.

8. Contractor having not executed Standing Security Bond and Standing Security Deposit in any MES formation shall upload scanned copy of EARNEST MONEY DEPOSIT (EMD) mentioned in Notice of Tender and shall ensure receipt of hard copy of EMD in the office of tender issuing authority before date and time fixed for this purpose. In case of failure to abide by any of these two requirements, the finance bid will not be opened.

9. Enlisted contractors of MES shall submit the scanned copies (pdf file) of enlistment letter, tender fee and such other documents as mentioned in Appendix-'A' to NIT on defproc portal and submit physical documents in the office of the "GARRISON ENGINEER (NORTH) KOLKATA, WEST BENGAL – 700 050" before date & time fixed for this purpose.

10. The contractor must ensure that the tender/bid on the proper form is uploaded in time as the Accepting Officer will take no cognizance of any quotations/offer received in any other electronic or physical form like email/fax/by hand /through post from tenderer/bidder even if they are received in time.

11. In view of delays due to system failure or other communication related failures, it is suggested that the tender/bid be uploaded, if necessary, sufficient in advance of the last due date and time fixed.

12. ANY TENDERER, WHICH PROPOSES ALTERATIONS TO ANY OF THE CONDITION, SPECIFICATIONS LAID DOWN IN THE TENDER DOCUMENTS OR ANY NEW CONDITION, WHATSOEVER, IS LIABLE TO BE REJECTED.

13. (a) Any grievance concerning this contract agreement on which contractor is not satisfied with decision of Accepting officer shall be referred by him only to the Next Higher Engineer Authority (NHEA). The contractor shall under no circumstances communicate with any authority other than NHEA, unless he has exhausted the options to represent to all Engineer authorities upto NHEA. While representing his case to authorities above NHEA, copies of correspondence exchanged with all authorities shall be enclosed clearly bringing out his grievance on them. Any breach of this stipulation shall be treated as default on the part of the contractor and his grievance will not be entertained. In addition he shall be liable for disciplinary action as deemed fit by Registering Authority.

(b) Any complaint against the contractor received from a third party like suppliers of contractor, other contractor, his engineer, labour etc shall be referred to him by the GE. The contractor will be required to obtain settlement of the complaints from the originator and/or concerned authority and submit settlement letter to GE within 15 days of receipt of referral from GE. Any failure in this regard will invite disciplinary action against the contractor by the Registering Authority.

14. This letter alongwith instructions to tenderer and other tender documents shall form part of the contract.

**THE PRESIDENT OF INDIA DOES NOT BIND HIMSELF TO ACCEPT THE  
LOWEST OR ANY OTHER BID**

Your's faithfully,

Signature of the Contractor

AGE (CONTRACTS)  
For Accepting Officer

Date : \_\_\_\_\_

**INSTRUCTIONS FOR COMPLETION OF TENDER DOCUMENTS TO BE COMPLETED WITH BY  
THE TENDERER(S)**

**1. EARNEST MONEY**

1.1 Contractor(s) who are not enlisted with MES/who are enlisted but have not executed the Standing Security Bond shall submit Earnest Money Deposit as detailed in Notice of Tender in one of the following forms, along with their tender/bid :-

- (a) Deposit at Call Receipt from a Scheduled Bank in favour of Garrison Engineer (North) Kolkata
- (b) Receipted Treasury Challan for the amount being credited to the Revenue Deposit of Garrison Engineer (North) Kolkata

1.2 It is advisable that Earnest Money is deposited in the form of **Insurance Surety Bonds, Account Payee Demand Draft, Fixed Deposit Receipt, Banker's Cheque, Bank Guarantee** from any of the Commercial Banks or payment online in an acceptable form safeguarding the purchaser's interest. In case the tenderer/bidder wants to lodge 'EARNEST MONEY DEPOSIT' in any other form allowed by MES, a confirmation about its acceptability will be obtained from the Accepting Officer well in advance of the bid submission end date and time. Earnest Money Deposit shall be submitted in the name of concerned GE.

**Notes:** Earnest Money Deposit (EMD) in the form of cheque etc will not be accepted. NON-SUBMISSION OF EARNEST MONEY DEPOSIT (EMD) (scanned copy along with Technical Bid & hard copy before the date & time fixed for opening of BOQ) WILL RENDER THE BID DISQUALIFIED FOR OPENING OF COVER II (FINANCE BID).

**2. PERFORMANCE SECURITY DEPOSIT (APPLICABLE FOR BOTH UNENLISTED AS WELL AS ENLISTED CONTRACTORS):**

2.1 In case, the tender submitted by contractor is accepted, the contractor will be required to lodge 'Performance Security Deposit' for an amount equivalent to **5% (Five Percent) of the Contract sum/lumpsum** in favour of the Accepting Officer within **28 (Twenty Eight) days** of the receipt by the contractor of notification of acceptance of his tender/bid in the form of **Insurance Surety Bonds, Account Payee Demand Draft, Fixed Deposit Receipt, Bank Guarantee** from any of the Commercial Banks or payment online in an acceptable form safeguarding the purchaser's interest. Failure of the contractor to comply with the requirements of performance Security, shall constitute sufficient grounds for cancellation of the award and forfeiture of the Earnest Money. In case of MES enlisted contractor, amount equal to the Earnest money stipulated in the Notice Inviting Tender, shall be notified to the tenderer for depositing the amount through MRO. Issue of tender to such tenderers shall remain suspended till the aforesaid amount equal to the Earnest Money is deposited in Government Treasury. (See Condition 19 of General Conditions of Contract (IAFW-2249)).

**3. GENERAL INSTRUCTIONS FOR COMPLIANCE**

3.1 The bids received only in the electronic form will be considered. All bids shall be submitted on "eprocuremes.gov.in" portal. Documents should be scanned and forwarded in „pdf“ form and „xls“ form as indicated.

3.2 Bids shall be uploaded on "eprocuremes.gov.in" portal on or before the bid closing date mentioned in the tender. No tender/bid in any other electronic or physical form like email/fax/by hand /through post will be considered.

3.3 Bid shall be DIGITALLY signed using valid DSC. All pages of tender documents corrections/alterations shall be signed/initialed by the lowest bidder after acceptance.

3.4 Drawings, if issued in physical form, must be returned duly initialed by the tenderer/bidder in separate envelope indicating his name and address.

3.5 The tender shall be signed, dated and witnessed at all places provided for in the documents after acceptance. All corrections shall be initialed. The contractor shall initial every page of tender and shall sign all drawings forming part of the tender. Any tender/bid, which proposes alterations to any of the conditions whatsoever, is liable to be rejected.

Contd..

**INSTRUCTIONS FOR COMPLETION OF TENDER DOCUMENTS TO BE COMPLETED WITH BY  
THE TENDERER(S) (Contd...)**

3.6 In the technical bid, a scanned copy of Power of Attorney in favour of the person uploading the bid using his/her DSC shall be uploaded. In case the digital signatory himself is the sole proprietor, scanned copy of an affidavit on stamp paper of appropriate value to this effect stating that he has authority to bind the firm in all matters pertaining to contract including the Arbitration Clause, shall be attached in „pdf“ form. In case of partnership concern or a limited company, digital signatory of the bid/tender shall ensure that he is competent to bind the contractor (through Partnership Deed, General Power of Attorney or Memorandum and Articles of Association of the Company) in all the matters pertaining to the contracts with Union of India including arbitration clause. A scanned copy of the documents confirming of such authority shall be attached with the tender/bid in „pdf“ form, if not submitted earlier. The person uploading the bid on behalf of another partner(s) or on behalf of a firm or company using his DSC shall upload with the tender/bid a scanned copy (in „pdf“ form) of Power of Attorney duly executed in favour of such other or all of the Partner(s) or in accordance with constitution of the company in case of company, stating that he has authority to bind such other person of the firm or the Company, as the case may be, in all matters pertaining to the contract including the Arbitration Clause.

3.7 Even in case of Firms or Companies which have already given Power of Attorney to an individual authorising him to sign tender in pursuance of which bids are being uploaded by such person as a routine, fresh Power of Attorney duly executed in his favour stating specifically that the said person has authority to bind such partners of the Firm, or the Company as the case may be, including the condition relating to Arbitration Clause, should be uploaded in „pdf“ form with the tender/bid; unless such authority has already been given to him by the Firm or the Company. It shall be ensured that power of attorney shall be executed in accordance with the constitution of the company as laid down in its Memorandum & Article of Association.

3.8 Hard of copies of all above documents should be sent by the contractor to the Tender issuing authority well in advance to be received before the date & time fixed for the same.

3.9 Bid (Cover 1 & 2) shall be uploaded online well in time.

3.10 The contractor shall employ Indian Nationals after verifying their antecedents and loyalty. Attention is also drawn to special condition 3 referred hereinafter and also conditions 24 & 25 of IAFW 2249 (General conditions of contract)

3.11 Tenderers/bidders who uploaded their priced tenders/bids and are desirous of being present at the time of opening the tenders/bids, may do so at the appointed time.

3.12 The tenderer/bidder shall quote his rate on the BOQ file only. No alteration to the format will be accepted, else the bid will be disqualified and summarily rejected.

3.13 In case the tender/bidder has to revise/modify the rates quoted in the BOQ (excel sheet) he can do so only in the BOQ, through eprocuremes.gov.in site only before the bid closing time and date.

**4. REVOCATION/REVISION OF OFFER UPWARD/OFFERING VOLUNTARY REDUCTION,  
AFTER OPENING FINANCIAL BIDS BY LOWEST BIDDER**

In the event of lowest tenderer/bidder revoking his offer or revising his rates upward/offering voluntary reduction, after closing of bid submission date & time, his offer will be treated as revoked and the Earnest Money deposited by him shall be forfeited. In case of MES enlisted contractors, the amount equal to the Earnest Money stipulated in the notice of tender, shall be notified to the tenderer/bidder for depositing the amount through MRO. Bids of such contractors/bidders shall not be opened till the aforesaid amount equal to the earnest money is deposited by him in Govt Treasury. In addition, bids of such tenderer/bidder and his related firm shall not be opened in second call or subsequent calls. Reduction offered by the tenderer/bidder on the freak high rates referred for review shall not be treated as voluntary reduction.

**5. CPM (Critical Path Method)**

5.1 The project planning of work covered in the scope of tender is based on CPM.

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**INSTRUCTIONS FOR COMPLETION OF TENDER DOCUMENTS TO BE COMPLETED WITH BY  
THE TENDERER(S) (Contd...)**

5.2 The tenderer/bidder is expected to be fully conversant with the CPM technique and employ technical staff who can use the technique in sufficient details. Sufficient books and other literature on the subject are widely available in the market which the tenderer/bidder may make use of.

5.3 The tenderer's/ bidder's attention is drawn to special condition of the tender regarding preparation of the detailed network analysis and time schedule for the work and his liability for employing sufficient resources to adhere to this schedule. Any inability on the part of the tenderer/bidder in using the technique will be taken as his technical inefficiency and will affect his class of enlistment and future prospect/invitation to tenders for future works.

5.4 Department may issue amendments/errata in the form of CORRIGENDUM to tender/revised BOQ to the tender documents. The tenderer/bidder is requested to read the tender documents in conjunction with all the errata / amendments/corrigendum, if any, issued by the department.

6. In case bidder fails to upload the modified/revised BOQ and opened by the portal, shall be rejected. Further in case his bid is shown by deproc portal as L1 with pre-revised BOQ, though revised BOQ is not uploaded by the bidder, then his bid shall be rejected.

7. A hard copy of contract agreement will be prepared on the basis of all the documents uploaded by the department and the quoted BOQ uploaded by the bidder and will be signed by the authorized person(s).

8. No out of pocket expenditure incurred by bidder for quoting the bid will be reimbursed.

9. Tenderer's attention is invited to employee's provident fund and miscellaneous provision Act 1952. As per this act, the contractor/authorized agents shall have provident fund code number (Temporary/Permanent). The contractor, before releasing the work order after finalization/ acceptance of the tender, it shall be ensured that the contractors shall submit the provident fund code Number to GE and shall also to be ensure the compliance of the EPF& MP Act by the sub contractors/ nominated agency if any engaged by the contractors for the said work.

10. It is the responsibility of the contractor to ensure that all the workers engaged by him/them are having universal account number (UAN) duly allotted by the Provident fund Dept and their contributions are properly credited into their account. A certificate to this effect shall be furnished by the contractor while claiming the Final Bill.

**11 Tenderers attention is invited to Ser Page No \_\_\_\_ to \_\_\_\_ since the contents of these pages are common to all tenderers and are available and are deemed to be available with the tenderers. These have not been attached with the tender documents and in lieu of "02 (Two)" sheet only has been attached. These documents, if required can be seen in this office during working hours on any working day.**

12 The tenderers shall ensure that the "in lieu" sheet referred to above is returned alongwith the tender duly signed.

13. These instructions shall form part of the tender documents.

THE PRESIDENT OF INDIA DOES NOT BIND HIMSELF TO ACCEPT THE LOWEST OR ANY OTHER BID

SIGNATURE OF CONTRACTOR  
DATED :

AGE (CONTRACTS)  
FOR ACCEPTING OFFICER

**MILITARY ENGINEER SERVICES**  
**NOTICE OF TENDER IAFW-2162**

1. A TENDER IS INVITED FOR THE WORK AS MENTIONED IN Appendix 'A' to this (NOTICE INVITING TENDER (NIT))
2. E-tender is invited for the work as mentioned in Appendix 'A' to Notice of Tender. The work is estimated to cost as given in Appendix 'A' to Notice of Tender. This estimate, however, is not a guarantee and is merely given as a rough guide and if the work costs more or less, tenderer will have no claim on that account.
3. The work is to be completed within the period given in Appx 'A' to Notice of Tender ( in accordance with phasing, if any, indicated in the tender) from the date of handing over of site, which will be within 30 days after the date of acceptance of the tender.
4. Normally contractors whose names are on the MES approved list for the area in which the work lies and within whose financial category the estimated amount would fall may tender, but in case of term contracts, contractors of categories 'S' and 'A' to 'E' may tender.
5. In case, the tender submitted by enlisted as well as unenlisted contractor is accepted, the contractor will be required to lodge '**Performance Security Deposit**' for an amount equivalent to **5%(Five Percent) of the Contract sum/lumpsum** in favour of the Accepting Officer within **28 (Twenty Eight) days** of the receipt by the contractor of notification of acceptance of his tender/bid in the form **Insurance Surety Bonds, Account Payee Demand Draft, Fixed Deposit Receipt, Bank Guarantee** from any of the Commercial Banks or payment online in an acceptable form safeguarding the purchaser's interest. Failure of the contractor to comply with the requirements of performance Security, shall constitute sufficient grounds for cancellation of the award and forfeiture of the Earnest Money. In case of MES enlisted contractor, amount equal to the Earnest money stipulated in the Notice Inviting Tender, shall be notified to the tenderer for depositing the amount through MRO. Issue of tender to such tenderers shall remain suspended till the aforesaid amount equal to the Earnest Money is deposited in Government Treasury. (See Condition 19 of General Conditions of Contract (IAFW-2249))
6. No more than one tender/bid shall be submitted/uploaded by one contractor or one for of contractors. Under no circumstances will a father and his son(s) or other close relations who have business dealing with one another be allowed to tender/bid for the same contract as separate competitors. A breach of this condition will render the tender/bids of both the parties liable for rejection
7. **Garrison Engineer (North) Kolkata** will be the Accepting Officer here-in-after referred to as such for purpose of the contract.
8. Tenderers shall submit E-tender in two covers in online mode only on website [www.defproc.gov.in](http://www.defproc.gov.in). The Technical Bid and financial Bid (Cover 1 and Cover 2) shall be uploaded by the tenderer/bidder on or before the date & time mentioned in NIT. A scanned copy of DD with enlistment details/documents shall be uploaded as packet 1/cover-1 ('T' bid) of the tender/bid on e-tendering portal. DD is refundable in case T bid is not accepted resulting in non-opening of 'Q' bid. The applicant contractor shall bear the cost of bank charges for procurement and encashing the DD and shall not have any claim from Government whatsoever on this account
9. Tender form and conditions of contract and other necessary documents shall be available on [defproc.gov.in](http://defproc.gov.in) site for download and shall form part of contract agreement in case the tender/bid is accepted.
10. In case of contractor who has not executed the Standing Security Bond, the tender shall be accompanied by Earnest Money amounting to a sum as given in Appx 'A' to Notice of Tender in the form of deposit at call receipt in favour of GE(N) Kolkata, by a Scheduled Bank or in receipted treasury challan, the amount being credited to the revenue deposit of the GE.
11. The Earnest Money will be returned, wherever applicable, to all unsuccessful tenderers by endorsing authority on the deposit receipt for its refund on production by the tenderer a certificate of the Accepting Officer that a bonafide tender (vide Para-12, here-in-after) was received and all documents were returned.

**NOTICE OF TENDER (CONTD.....)**

12. The earnest Money to the successful tenderer/bidder will be returned on receipt of an appropriate amount of Performance Security Deposit as stipulated
13. Copies of the drawings and other document pertaining to the work (signed for the purpose of identification by the Accepting Officer or his accredited representative) and sample of materials and stores to be supplied by the contractor will be open for inspection by the tenderer at the office of GE during working hours.
14. The tenderers are advised to visit site by making prior appointment with the GE by giving sufficient time. The tender/bidder are deemed to have full knowledge of all relevant documents, samples, site etc, whether they have inspected them or not
15. Various critical dates are available on web site [www.defproc.gov.in](http://www.defproc.gov.in).
16. Any tender/bid which proposes any alteration to any of the conditions laid down or which proposes any other condition or description, whatsoever is liable to be rejected.
17. The uploading of tender by a tenderer implies that he has read this Notice and the Conditions of Contracts and has made himself aware of the scope and specifications of the work to be done and of the conditions and rates at which stores, tools and plants etc will be issued to him and local conditions and other factors bearing on the execution of the work.
18. Tenderers must be in possession of a copy of the MES Standard Schedule of Rates 2009, Part-I Specifications) and 2020 Part-II (Rates) including errata/amendments thereto.
19. The accepting Officer does not bind himself to accept the lowest or any tender or to give any reasons for not doing so.
20. Invitation for e-tender does not constitute any guarantee for validation of 'T' bid and subsequent opening of finance bid of any applicant/bidder, even of enlisted contractors of appropriate class, merely by virtue of enclosing DD. Accepting Officer reserves the right to reject the 'T' bid and not open the finance bid of any applicant/bidder. 'T' bid validation shall be decided by the Accepting officer based on, inter alia, capability of the firm as per criteria given in Appx 'A' to this NIT. The applicant contractor/bidder will be informed regarding non-validation of his 'T' bid assigning reasons thereof through the defproc website. The applicant contractor/bidder if he so desires may appeal to the next higher Engineer authority with copy to the Accepting Officer on email before the scheduled date of opening of Finance Bid. The decision of the Next Higher Engineer Authority (NHEA) shall be final and binding. The contractor/bidder shall not be entitled for any compensation whatsoever for rejection of his bid.
21. The Accepting Officer reserves his right to accept a tender submitted by a Public Undertaking, giving a purchase preference over other tender(s) which may be lower, as are admissible under the Government Policy. No claim for any compensation or otherwise shall be admissible from such tenderers whose tenders may be rejected on account of the said policy.
22. Court of the place where tender has been issued shall alone have jurisdiction to decide any dispute out of or in respect of this tender. After acceptance of tender Condition 72 (Jurisdiction of Courts) of IAFW-2249 shall be applicable
23. This Notice of tender including Appendix 'A' shall form part of the tender.

\_\_\_\_\_  
(SIGNATURE OF CONTRACTOR)  
DATE :

**AGE (Contracts)**  
**FOR ACCEPTING OFFICER**



**MILITARY ENGINEER SERVICES**  
**APPENDIX 'A' TO NOTICE INVITING e-TENDER**

1. Garrison Engineer (North) Kolkata (WB) on behalf of the President of India invites E-tenders (**on line in two cover system**) from eligible enlisted Contractors of MES and contractors working with other Government Departments meeting eligibility criteria for under mentioned work :-

1	Name of work	<b>SPECIAL REPAIR TO JCOS/ORS MD ACCN BLDG NO- 25/2, 25/4, 26/1, 26/4, 27/2, 27/4, 36/2, 36/3, 37/4 &amp; 39/4 AT MU CAMP OF ESD KANKINARA UNDER GE (NORTH) KOLKATA</b>																
2	Estimated Cost	Rs. 48.69 Lakhs																
3	Period of Completion	07 (Seven) Months																
4	Cost of tender documents	Rs. 500.00 in the form of DD/Bankers cheque from any Scheduled Bank in favour of GE (N) Kolkata and payable at Kolkata.  ( <b>Note</b> : In case of retendering, the contractor who had quoted in the previous call is not required to submit the cost of tender.)																
5	Website/portal address	<a href="http://www.defproc.gov.in">www.defproc.gov.in</a>																
6	Type of contract	The tender shall be based on IAFW-2249 and IAFW-1779A with Schedule ‘A’, list of items of works to be priced by the tenderers electronically in BOQ.																
7	Timeline details																	
	(a) Bid submission start date	Refer critical dates on the website.																
	(b) Bid submission end date																	
	(c) Date of bid opening																	
8	Eligibility Criteria																	
	(a) For MES enlisted contractors	Contractor shall be enlisted with MES in Class ‘D’ and above and category <b>a (i) &amp; b (i)</b> subject to satisfactory remarks wrt performance in respect of works in hand as reflected in Work Load return (WLR) or any other report circulated by competent engineer authority.																
	(b) For contractors not enlisted with MES	(i) Contractor not enlisted with MES should meet the enlistment criteria of Class ‘D’ and <b>a(i) &amp; b(i)</b> category contractor with regard to satisfactorily completion of requisite value works with Central/State Government/ Central/State PSUs/AWHO/AFNHB/CGEWHO/DGMAP, annual turnover, bank solvency, working capital and other requirements given in Para 1.4 & 1.5 of Section 1 of MES Manual on Contracts 2020 as available in all MES formations as well as MES website ( <a href="http://www.mes.gov.in">www.mes.gov.in</a> ). (ii) Not carrying adverse remarks in Work Load Report (WLR) or any other similar report circulated by any competent authority, if already working in MES. (iii) Not suspended/debarred/blacklisted (either permanently or temporarily) from participating in any bid or for business dealings by any Central/State Government Department or any Central/State Government PSU or any Autonomous Body under Central/State Government or any Local Body as on the bid submission end date.  (iv) Details of works completed and under progress I MES be submitted in the following format :- <table border="1"><tr><th>Srl No</th><th>CA No &amp; Name of Work</th><th>Value of CA</th><th>Date of Commencement</th><th>Date of Completion</th><th>Extended Date of Completion</th></tr><tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr></table> (v) Un-enlisted Contractor who have secured two works in MES should get themselves registered I the appropriate designated Class with any Registering Authority, else the firm will bot be eligible for participation in the tender unless until the firm is enlisted with the MES”.					Srl No	CA No & Name of Work	Value of CA	Date of Commencement	Date of Completion	Extended Date of Completion						
Srl No	CA No & Name of Work	Value of CA	Date of Commencement	Date of Completion	Extended Date of Completion													

Contd/..

**APPENDIX 'A' TO NOTICE INVITING e-TENDER**

	Tender issuing and Accepting Officer	Name : Maj Rahul Rai Address : GE(North) Kolkata, Office, 46 BT Road, Kolkata 700 050. West Bengal. Contract Detail (Phone No. 033-25314068 Email Id <a href="mailto:nkolk4-mes@gov.in">nkolk4-mes@gov.in</a> of concerned officer.
10	Executing agency	GE (N) Kolkata
11	Earnest Money	Rs. 97,380.00 in favour of GE (N) Kolkata in the form of deposit at call receipt, FDR not acceptable.

**NOTES :**

1. After opening of Cover 1. If the number of MES enlisted contractors of eligible class as well as un-enlisted contractors. If any. Fulfilling the other eligibility criteria given in NIT are less than 8 (Eight), applications in respect of contractors one class or two classes (in case of remote and difficult areas to be decided as per list circulated by CE command/ADG) below the eligible class shall also be considered subject to fulfillment of other eligibility criteria given in the NIT. Therefore MES contractor's one class below (two classes below in case of remote and difficult areas) may also bid for this tender. However contractors of one/two classes below the eligible class shall not be considered in case their present residual work in hand is more than twice their present tendering limit. Such bidders shall upload in their Cover-1 bid details of works in hand showing name of work. Names of Accepting Officers. Contract amounts. Dates of commencement and completion (stipulated) and progress as on bid submission date. These details shall be verified by the Tender issuing Authority from concerned formations in case bid of such contractors are considered for evaluation.

2. In case after opening of Cover 1. the number of MES enlisted contractors of eligible class as well as un-enlisted contractors, If any, fulfilling the other eligibility criteria given in NIT is less than 7(Seven), applications in respect of MES contractors of one class or two classes (in case of remote and difficult areas to be decided as per list circulated by CE command/ADG) below the eligible class shall also be considered subject to fulfillment of other eligibility criteria given in the NIT. Therefore MES contractor's one class below(two classes below in case of remote and difficult areas) may also bid for this tender. Such contractors (contractors of one/two classes below the eligible class) shall not be considered in case their present residual work in hand is more than FIVE TIMES their present tendering limit. However in case such contractors fulfill the criteria of upgradation to the stipulated eligible class based on past experience of completed works (individual work experience and/or average annual turnover, as applicable) and financial soundness and working capital), the ceiling of present residual work will not apply and they will be considered for issue of tender. Such bidders shall upload in their Cover-1 bid details related to residual work in hand like details of works in hand showing names of work, names of Accepting Officers, Contract amounts, dates of commencement and completion (stipulated) and progress as on bid submission date. Such contractors, if claim to fulfill the criteria of upgradation shall also upload the requisite information/documents in support of upgradation. These details shall be verified by the Tender Issuing Authority from concerned formations in case bids of such contractors are considered for evaluation.

3. Un enlisted contractor shall be considered provided he meets the criteria. Foreign firms shall not be eligible for this tender. However Indian Firms having foreign national /Indian nationals staying abroad/ Indian national having taken foreign citizenship, as director(s) shall be considered subject to security clearance from the concerned authorities.

4. Contractor's enlisted with MES will upload following documents in Cover-1 for checking eligibility :-

- Application for tender on Firm's letterhead.
- Enlistment letter issued by the Registering Authority duly renewed for the cycle period in vogue.
- Scanned copy of DD/Bankers Cheque toward cost of tender and EMD instrument in case SSD bond is not signed at the time of registration.
- Any other document required as described in this Appendix.

Contd/..

5. Contractors not enlisted with MES will be required to upload following documents in Cover-1 for checking eligibility.
  - (a) Application for tender on Firm's letterhead.
  - (b) Scanned copy of DD/ Bankers cheque toward cost of tender and Earnest Money Deposit (EMD) instrument.
  - (c) Copy of Police Verification Report/Police Clearance Certificate/ Character Certificate from the Police Authority of the area where the registered office of the firm is located/ notarized copy of valid passport of Proprietor/ each Partner/ each Director.
  - (d) All documents required for enlistment in MES for the class mentioned in Para 8(b) above as per para 1.5 of section 1 of MES Manual on Contracts 2020.
  - (e) Details of works being executed in MES, if any.
  - (f) Any other document required as described in this Appendix.
6. Tenders not accompanied by scanned copies of requisite DD/Bankers cheque towards cost of tender and earnest money (as applicable) in Cover-1 shall not be considered for validation of 'T' bid and their Financial Bids will not be opened.
7. Contractor's should ensure that their original physical DDs and Earnest Money Deposit (EMD) instruments (as applicable) reach the office of Accepting Officer within 05 days of bid submission end date failing which following action shall be taken.
  - (a) In case of tender from an enlisted contractor of MES, where scanned copies of requisite DD/ Bankers Cheque towards cost of tender have been uploaded in Cover-1 but physical copies are not received within the stipulated period, their financial bids (Cover 2) will be opened. However non-submission of physical copies of cost of tender shall be considered as willful negligence of the tenderer with ulterior motives and such tenderer shall be banned from bidding for a period of six months commencing from the date of opening of Financial Bid (Cover 2).
  - (b) In case of tender from un-enlisted contractor where scanned copies of requisite DD/Bankers Cheque towards cost of tender have been uploaded in Cover 1 but physical copies are not received within the stipulated period, their financial bids (Cover 2) will not be opened. Name of such contractors along with complete address shall be circulated for not opening of their bids for a period of six months commencing from the date of opening of Financial bid (Cover 2).
  - (c) In case of tender from enlisted and un enlisted contractors. where scanned copies of instruments for Earnest Money Deposit (as applicable) have been uploaded in Cover 1 but the same are not received in physical form within stipulated period, such tenders shall not qualify for opening of financial bid (Cover 2).
8. Contractor will not be allowed to execute the work by subletting or through power of attorney to a third party/another firm on his behalf. However a contractor can execute the work through power of attorney to sons/daughters/spouse of Proprietor/Partner/Director and firm's own employees, director, project manager **provided they are not having a separate enlisted firm in MES in their name as Proprietor/Partner/Director.**
9. After opening of Cover 1 and during its technical evaluation, in case any deficiency is noticed in the documents required to be uploaded by the tenderers as per NIT, a communication in the form of e-mail/SMS/Speed Post etc shall be sent to the contractor to rectify the deficiency within a period of seven days from date of communication failing which their financial bid (Cover 2) shall not be opened and contractor shall not have any claim on the same.

Contd/..

10. Invitation for e- tender does not constitute any guarantee for validation of Technical bid and subsequent opening of financial bid of any applicant/bidder merely by virtue of enclosing DD. Accepting Officer reserves the right to reject the Technical bid and not to open the financial bid of any applicant/bidder. Technical bid validation shall be decided by the Accepting Officer based on eligibility of the firm as per criteria given in this Appendix. Tenderer/bidder will be informed regarding non-validation of this Technical bid assigning reasons therefore through tender evaluation report which shall be uploaded on the website. Such tenderer, if desires, may appeal to the next higher Engineer Authority (NHEA) viz CWE(S) Barrackpore, on email id [subbrack3-mes@gov.in](mailto:subbrack3-mes@gov.in) with copy to the Accepting Officer on email before the scheduled date of opening of Cover 2. NHEA shall decide the matter within a period of seven working days from the date of receipt of appeal. The decision of the NHEA shall be final and binding. The tenderer/bidder shall not be entitled for any compensation whatsoever for rejection of his bid.

11. In case an unenlisted contractor is already executing works in MES, he shall not be considered eligible for the subject tender if the total value of such works is more than twice the tendering limit of the MES Class of contractor for which it is eligible. For this purpose details of the works being executed by such a contractor shall be uploaded in the Cover-1 of the bid and shall be checked/verified by the Accepting Officer.

12. In case the BOQ is revised through the corrigendum and the bidder has failed to quote on revised BOQ (ie he has quoted on pre revised BOQ), such bid shall be treated as willful negligence by the bidder and his quotation shall be considered non - bonafide. In such cases the lowest tender shall be determined from amongst the valid/bonafide bids only. Accepting Officer may decide whether to re-tender or consider the lowest bonafide tender for acceptance.

13. Revoking the offer or revising the rates upward or offering voluntary reduction by the lowest tenderer after opening of Cover 2 shall be considered as a willful default. For this default a penalty of an amount equal to Earnest Money shall be levied. In case of an unenlisted tenderer, Earnest Money deposited by him shall be forfeited. In case of MES enlisted tenderer having deposited the Standing Security Bond, an amount equal to the earnest money stipulated in the NIT shall be notified to the tenderer for depositing through MRO and consideration of such tenderer in tender evaluation for future works shall remain suspended till the aforementioned amount is deposited in the Government Treasury. No other disciplinary/administrative action shall be taken against such tenderers. In such a situation, the next lowest offer shall not be considered for acceptance. Instead, retendering shall be resorted to in a transparent and fair manner and the defaulting tenderer and his related firm if any, shall not be eligible for this tender in second call or subsequent calls.

14. Tender to related firms shall not be issued simultaneously. Firms shall be termed as related if Proprietor/one or more Partners/Directors are common. Decision of Accepting Officer on issue/deny the tender to any one of the related firms shall be final and binding.

**SIGNATURE OF CONTRACTOR**

**DATE:** \_\_\_\_\_

**AGE (Contracts)**

**For Accepting Officer**

IN LIEU OF IAFW-1779 A (REVISED-1955)  
(To be used in conjunction with General Condition of  
Contracts IAFW-2249)

**MILITARY ENGINEER SERVICES**

Tele :033- 25314068  
Fax : 033-25311580

Garrison Engineer(North),  
Military Engineer Services,  
46, B. T. Road  
Kolkata – 700 050

8409/24-25/ 09 /E8

15 Oct 2024

**TENDER FOR ITEM RATE CONTRACTS FOR SPECIAL REPAIR TO JCOS/ORS MD ACCN BLDG  
NO- 25/2, 25/4, 26/1, 26/4, 27/2, 27/4, 36/2, 36/3, 37/4 & 39/4 AT MU CAMP OF ESD KANKINARA  
UNDER GE (NORTH) KOLKATA**

S'Shri/Shri/M/s \_\_\_\_\_ of \_\_\_\_\_  
is/are hereby authorized to tender for the above work. The tender is uploaded in the web site [www.defproc.gov.in](http://www.defproc.gov.in)  
on 15 Oct 2024. The online bid only is to be submitted on website [www.defproc.gov.in](http://www.defproc.gov.in) before the bid submission  
end date as shown in NIT.

Any correspondence concerning this tender should be addressed quoting the reference as given above to  
GARRISON ENGINEER (NORTH) KOLKATA, 46 BT ROAD, KOLKATA, PIN -700 050.

**THE PRESIDENT OF INDIA DOES NOT BIND HIMSELF TO ACCEPT THE LOWEST OR ANY  
OTHER TENDER**

-----  
(SIGNATURE OF OFFICER ISSUING THE DOCUMENTS)

APPOINTMENT: Assistant Garrison Engineer (Contracts)  
**FOR AND ON BEHALF OF THE PRESIDENT OF INDIA**

\_\_\_\_\_  
SIGNATURE OF CONTRACTOR  
DATED: \_\_\_\_\_

**SCHEDULE 'A' (BOQ) NOTES**

1. The entire work under this contract shall be completed within a period of **07 (Seven) Months** from the date of commencement of work as mentioned in work order No 1. Site for execution of work will be available on the date of handing over site as mentioned on work Order No.1. In case, it is not possible for the Department, to make the entire site available on the date of handing over of site, the contractor shall have to arrange his programme accordingly. No claim whatsoever for not giving the entire site on the date of handing over of site and for giving the site gradually will be tenable.
2. Unit Rates:-
  - (a) The contractor shall calculate his own details and insert his unit rates in Sch 'A' (BOQ) under respective column.
  - (b) Unit rates shall be deemed to include for materials and labour, supply and fix, supplying and bringing, etc and all the connected works required for carrying out the work as mentioned in Sch 'A' (BOQ) unless otherwise mentioned in the Sch 'A' (BOQ).
  - (c) The unit rate(s) quoted shall be deemed to be inclusive of all types of Taxes and other levies payable under the respective statues including GST, Labour Welfare Tax etc.
  - (d) Tenderers attention is invited to deduction of Labour Welfare Cess at sources @ 1% of construction cost as enforced by Govt. of West Bengal under building and other construction workers Act 1996 and building and other construction workers welfare Cess Act 1996. This shall deemed to be included in rates quoted by the Contractor.
  - (e) Consequent upon to implementation of Goods and Service Tax (GST) by the Govt of India with effect from 01 Jul 2017, certain taxes such as central excise duty, service tax, additional custom duty, state level value added tax, octroi and other levies which were applicable on interstate transportation of goods are subsumed by GST, thus special condition 33 for "Reimbursement/refund on variation in prices in taxes directly related to contract value of tender shall be deemed to be amended incorporating GST in lieu of taxes mentioned in the condition but subsumed by GST. The contractor shall deem to have been considered the above provision while quoting their rate. No dispute in this regard shall be entertained later on.
3. **ENFORCEMENT OF RIGHTS CONFERRED TO LABOR UNDER VARIOUS ACTS & LAWS:**
  - 3.1 The contractor shall strictly follow the various Statutory Provisions for enforcement of rights conferred to Labour under various Acts & laws such as:-
    - (a) Contract Labour (Regulation & Abolition) Act 1970
    - (b) Minimum Wages Act 1948 and Fair Wages
    - (c) The Employees Provident Funds & Miscellaneous Provision (EPF & MP) Act 1952
    - (d) The Building and Other Construction Workers Welfare Cess Act 1996
    - (e) Payment of Wages Act 1936

The contractor shall keep themselves abreast of the latest instructions issued time to time by the respective Ministry/Legal bodies/Legislation Authorities.

- 3.2 **Mode of Payment:** The payments will be made into AADHAAR linked bank account of the employees by the contractor. In case payments are made in current coin or currency notes, certificate will be submitted by the contractors/firms alongwith undertaking by the concerned workmen asking of payment other than by cheque or by crediting in the bank account of the employee/workman. Payment to the contractor under this contract will be made only after producing proof of payment of wages through AADHAAR linked bank account or above certificate/undertaking from the workmen.

Contd...../-

**SCHEDULE 'A' (BOQ) NOTES (Contd..)**

4. The total amount in column 6 is not firm but will be treated as contract sum as referred to in IAFW-2249.
5. The quantities shown in column 3 are approximate and are inserted for guidance only. These shall, however, not be varied beyond the limit laid down in Condition 7 of IAFW-2249 (General Conditions of contracts).
6. Method of measurement of all works shall be as described in MES Schedule, unless otherwise specified in these documents.
7. Unit rate quoted by the contractor against respective items of Schedule 'A' shall be deemed to allow for all minor constructional details which are not specifically, or given in the particular specifications or mentioned in the description of item in Sch 'A' but are essential for the execution of work in a workman like manner and sound engineering practice. In case of difference of opinion between the contractor and the GE, as to whether or not certain item of work constitutes "Minor Construction Details" which are deemed to have been included in the contractor's quoted unit rate, the decision of the Accepting Officer shall be final, conclusive and binding.
8. The description of items given in Schedule 'A' is in brief. These shall be deemed to be amplified and read in conjunction with special conditions, particular specification, drawings (including notes thereof), specifications for materials and workmanship given in MES Schedule Part – I, special conditions and preambles given in relevant trade sections of MES Schedule Part – II.
9. All materials to be incorporated in Sch 'A' items shall be tested in accordance with relevant IS and/or as specified. Manufacturer's test certificate shall be produced alongwith all paid vouchers for each consignment wherever applicable and as decided by GE.
10. Retrieved materials (due to dismantling/demolition/ taking down etc) for which credit has been offered to tenderer under Sch of credit shall be removed from site and rate for the same is deemed to be included in the unit rate quoted for dismantling/demolition/taking down etc. Retrieved materials for which credit has not been offered in the Sch of credit shall be stacked to decide the serviceable and unserviceable items ; serviceable items (as directed by the Engr-in-Charge) shall be removed to MES store yard and unserviceable materials (as directed by the Engr-in-Charge) shall be removed off the site, unit rate quoted for the dismantling/demolition/taking down etc shall be deemed to be inclusive for above provision.
11. **INSPECTION OF THE WORKS (DEFECT LIABILITY PERIOD) (REFER CONDITION 46 OF IAFW-2249 (GENERAL CONDITIONS OF CONTRACTS))**
- 11.1 The Defect Liability Period for the scope of work(s) covered under the contract is **24 (TWENTY FOUR) CALANDER** months. Any defects in the work noticed during this period shall be rectified by the contractor forthwith, on demand in writing from the GE specifying the area affected notwithstanding that the work executed might have been inadvertently passed, certified and paid. The contractor shall carry out the rectification of the defects notified at his own expense during defect liability period and in event of his failure to do within a period to be specified by the GE in his demand, the GE shall undertake such rectification work at the risk and expense of the contractor.
12. **EXECUTION OF ELECTRIC WORKS/ELECTRICAL COMPONENT OF WORKS**
- 12.1 For execution of electrical works/electrical component of works and other works requiring Electrical license in accordance with Rule 29 under Part-III of Central Electricity Authority (Measures Relating to Safety and Electric supply) Regulation, 2010 as mentioned here-in-below, the contractor shall have valid Electrical License issued by the concerned State/Union Territory in the name of the Firm or get the work executed through an agency having valid Electrical License.

Contd...../-

**SCHEDULE 'A' (BOQ) NOTES (Contd..)**

- 12.2 Prior to commencement of electrical works/electrical component of works and other works requiring Electrical license in accordance with Rule 29 as mentioned here-in-below, copy of valid electrical License in the name of the contractor or copy of agreement with agency having valid Electrical License alongwith agency's Electrical License shall be submitted by the contractor to the Accepting Officer. In case contractor does not possess valid Electrical License and he intends to get such work executed through agency having valid Electrical License and with whom he has agreement, prior approval of such agency shall be got done from CWE (S) Barrackpore.
- 12.3 Concerned AGE/Engr-in-Charge shall ensure that electrical works/electrical component of works and other works required to be executed in accordance with Rule 29 as mentioned here-in-below are executed by contractor/agency having valid Electrical License as applicable. In addition, Supervisor for execution of electrical works/electrical component of works employed by the contractor shall possess Supervisor Certificate of Competency issued by concerned State Government/Union Territory and the worker/tradesmen for execution of electrical works/electrical component of works shall hold necessary Permit issued by concerned State Government/Union Territory.
- 12.4 Reference of Electrical License and details of Supervisor's Certificate of Competency and permit of Tradesmen employed for execution of electrical works/electrical component of works shall be duly incorporated in the Works Diary and relevant site documents respectively for the whole period during such work is executed.
- 12.5 Rule 29 under Part-III of Central Electricity Authority (Measures Relating to Safety and Electric Supply) Regulation, 2010 reads as under:-

“No electrical installation work including additions, alterations, repairs and adjustments to existing installations except such replacement of lamps, fans, fuses, switches, low voltage domestic appliances and fittings as in no way alters its capacity or character shall be carried out upon the premises of or on behalf of any consumer, owner or occupier, for the purpose of supply to such consumer, owner or occupier except by an electrical contractor licensed in this behalf by the State Government and under the direct supervision of a person holding a certificate of competency and by a person holding a permit issued and recognized by the State Government.”

13. The subject work comprises of following jobs:

Sr No	JOB No	JOB DESCRIPTION
1	STA/KKA/SRW (BLDG)/02/2024-25	Special Repair TO JCOs/OR MD Accn Bldg No- 25/2, 25/4, 26/1, 26/4, 27/2, 27/4, 36/2, 36/3, 37/4 & 39/4 at MU Camp Of ESD Kankinara

Contd...../



**SCHEDULE OF CREDIT**

**NAME OF WORK : SPECIAL REPAIR TO JCOS/ORS MD ACCN BLDG NO- 25/2, 25/4, 26/1, 26/4,  
27/2, 27/4, 36/2, 36/3, 37/4 & 39/4 AT MU CAMP OF ESD KANKINARA  
UNDER GE (NORTH) KOLKATA**

**NOTES:-**

- (a) Unit rate of recovery has been inserted by the department in Col 5. Recovery shall be affected accordingly.  
Overall amount of credit shown under shall be deducted from the total amount quoted by the tenderer in "Q Bid" and AOC (Award of Contract) shall be made accordingly.
- (b) The quantity given is provisional and shall be measured as per actual execution of work.
- (c) The old materials shall not be reused in the work unless otherwise specifically mentioned in the tender documents.
- (d) Old materials (except reused materials) listed in credit schedule shall become contractor's property and shall be removed from site at his own cost only after recovery is effected and written permission of Engineer-in-Charge.
- (e) Old serviceable materials other than listed in credit schedule/re-used materials shall become Govt. property and shall be removed to MES stores without any extra cost to the department.
- (f) The variation in quantity, during execution of the works if any shall be priced as per the unit rate given in this schedule. No claim what so ever on this account shall be entertained.

**SCHEDULE OF CREDIT**

Ser No.	Description	Unit	Qty	Rate	Total Amount
1	2	3	4	5	6
1	Old unserviceable scrap iron	Kg	5.00	18.00	90.00
2	Old unserviceable upvc pipe any size including fittings	Rm	30.00	18.00	540.00
3	Old unserviceable PTMT stop cock/bib tap/shower rose/Pillar Tap/grating doom	Each	104.00	10.00	1040.00
4	Old unserviceable CP stop cock 15mm,bib cock 15mm & piller cock	Each	2.00	60.00	120.00
5	Old unservieable flushing cistern	Each	13.00	90.00	1170.00
6	Old unserviceable stainless steel kitchen sink/kitchen plate rack	Each	26.00	150.00	3900.00
7	Old unservieable towel rail	Each	13.00	15.00	195.00
8	Old unserviceable stainless steel wire cloth	Sqm	18.24	12.00	218.88
9	Old unserviceable mirror	Each	13.00	25.00	325.00
10	Old unserviceable CI nahani trap	Each	13.00	50.00	650.00
11	Old unserviceable fancy type curtain rod bracket	Pair	104.00	10.00	1040.00
12	Old unserviceable brass CP curtain rod	Rm	104.00	50.00	5200.00
13	Old Unserviceable chowkats with shutters n. exc.1.5 sqm each including builder hardware's	Each	52.00	250.00	13000.00
14	Old unserviceable chowkhats / steel frames with single or double shutter with shutters exc. 1.5 sqm but n.exc. 4 sqm each including builder hardware's	Each	52.00	425.00	22100.00

Contd/-

**SCHEDULE OF CREDIT (CONTD...)**

Ser No.	Description	Unit	Qty	Rate	Total Amount
1	2	3	4	5	6
15	Old unserviceable wooden shutters exceeding 1 Sqm but not exceeding 2 Sqm including all fittings	Per Leaf	26.00	150.00	3900.00
16	Old unserviceable wall/frame and ceiling boards including cover fillets	Sqm	293.42	10.00	2934.15
17	Aluminium Scrap	Kg	5.00	80.00	400.00
18	Old unserviceable brick bat	Cum	1.79	550.00	982.91
19	Old unserviceable PVC tank 500 ltrs capacity	Each	2.00	225.00	450.00
20	Old unserviceable GI tube 15mm bore	Rm	91.00	22.00	2002.00
21	Old unserviceable GI tube 20mm bore	Rm	78.00	28.00	2184.00
23	Old unserviceable point wiring 1.5/ 2.5 sqmm w/o fittings and fixtures	Point	330	40.00	13200.00
24	Old unserviceable switch/socket 5/6 Amp any type	Each	240	3.00	720.00
25	Old unserviceable switch socket combination 5/6/15/16 Amp any type	Each	65	5.00	325.00
26	Old unserviceable fan regulator any type	Each	30	3.00	90.00
27	Old unserviceable bell push any type	Each	10	3.00	30.00
28	Old unserviceable ceiling rose any type	Each	180	2.00	360.00
29	Old unserviceable call bell any type	Each	10	10.00	100.00
30	Old unserviceable lamp holder any type	Each	45	3.00	135.00
31	Old unserviceable tube light fittings any type	Each	65	75.00	4875.00
32	Old unserviceable bulk head fitting any type	Each	10	30.00	300.00
33	Old unserviceable street light fitting any type/Aviation It	Each	10	50.00	500.00
34	Old unserviceable sub main wiring 2.5/4 Sqmm any type	RM	180	45.00	8100.00
35	Old unserviceable TPN DB 4 way with fittings and fixtures	Each	1	200.00	200.00

Contd/-

**SCHEDULE OF CREDIT (CONTD...)**

Ser No.	Description	Unit	Qty	Rate	Total Amount
1	2	3	4	5	6
36	Old unserviceable MCB DB 8 way with fittings and fixtures	Each	10.00	70.00	700.00
37	Old unserviceable MCB DB 4 way/FP/DP with fittings and fixtures	Each	6.00	45.00	270.00
38	Old unserviceable MCB TPN any size	Each	1	55.00	55.00
39	Old unserviceable MCB SPN any size	Each	20	35.00	700.00
40	Old unserviceable MCB SP any size	Each	80	20.00	1600.00
41	Old unserviceable Cable size 16 Sqmm 2/4 core	RM	50	35.00	1750.00
42	Old unserviceable earthing material	Each	4	600.00	2400.00
<b>Total</b>					<b>98,851.94</b>

(Signature of the Contractor)

AGE (Contracts)  
For Accepting officer

**NAME OF WORK : SPECIAL REPAIR TO JCOS/ORS MD ACCN BLDG NO- 25/2, 25/4, 26/1, 26/4,  
27/2, 27/4, 36/2, 36/3, 37/4 & 39/4 AT MU CAMP OF ESD KANKINARA  
UNDER GE (NORTH) KOLKATA**

**General summary**

- |                              |                     |
|------------------------------|---------------------|
| 1. Amount quoted in BOQ      | Rs. _____           |
| 2. Deduct schedule of credit | (-) Rs. - 98,851.94 |
| 3. Net Contract Sum          | Rs. _____           |

(Rupees \_\_\_\_\_

\_\_\_\_\_ )

(Signature of the Contractor)

AGE (Contracts)  
For Accepting officer

**SCHEDULE 'B'**  
**ISSUE OF MATERIALS TO THE CONTRACTOR**  
**(SEE CONDITION 10 OF IAFW – 2249)**

Sl No	Particulars	Rate of which materials will be issued to the contractor		Place of issue	Remarks
		Unit	Rate		

----- NIL -----

**SCHEDULE 'C'**  
**LIST OF TOOLS AND PLANTS (OTHER THAN TRANSPORT)**  
**WHICH WILL BE HIRED TO THE CONTRACTOR**

(See Condition 15, 34 and 35 of IAFW-2249)

Sl No	Quantity	Particulars	Details of MES crew supplied	Hire charges per unit per working day	Stand by charges per unit per off day	Place of issue (by name)	Remarks
1	2	3	4	5	6	7	8

----- NIL -----

**SCHEDULE 'D'**

**(TRANSPORT TO BE HIRED TO THE CONTRACTOR)**

(See Conditions 16 and 35 of IAFW-2249)

Sl No	Quantity	Particulars	Rate per unit per working day	Place of issue (by name)	Remarks
1	2	3	4	5	6

----- NIL -----

**SIGNATURE OF CONTRACTOR**  
**DATED: \_\_\_\_\_**

**AGE (CONTRACTS)**  
**FOR ACCEPTING OFFICER**

**TENDER****THE PRESIDENT OF INDIA**

Having examined and perused the following documents: -

1. Particular specifications signed by AGE (Contracts).
2. Drawings detailed in the list of Drawings.
3. Schedule 'A', 'B', 'C' and 'D' attached hereto.
4. MES Standard Schedule of Rates **2009 (Part-I)** Specifications and **2020 (Part-II)** Rates (here-in-after and in IAFW-2249 referred to as the MES Schedule) alongwith amendment Nos 1 to 3 against Part-I, 2009.
5. General Conditions of Contracts IAFW-2249 (1989 print) together with errata **1 to 20** and amendments **1 to 49**.
6. **Water** :Conditions 31 of IAFW-2249 (General Conditions of Contracts):  
\*(a) Water will be supplied by the MES and shall be paid for by the contractor @ Rs. 3.75 for every Rs. 1000.00 worth of work done priced at contract rates .

**Should this tender be accepted, I/We agree.**

\*\* (a) That the sum of Rs. \_\_\_\_\_ (Rupees \_\_\_\_\_)  
forwarded as Earnest Money shall either be retained as part of Security Deposit or refunded by the Government on receipt of the appropriate amount of Security Deposit, all as per Condition 22 of IAFW-2249.

(b) To execute all the works referred to in the said documents upon the terms and conditions contained or referred to therein and as detailed in the General summary below or at such other rates as may be fixed under the provision of Condition 62 of IAFW-2249 and to carry out such deviations as may be ordered vide Condition 7 of IAFW-2249 upto a maximum of 10% (TEN PERCENT) and further agree to refer all disputes, as required by Condition 70 & 71 of IAFW-2249 to the Sole Arbitration/conciliation of a Serving Officer having degree in Engineering or equivalent or having passed final/direct final examination of Sub-division II of the Institution of Surveyors (India) recognized by the Govt. of India or Dispute Resolution Board (DRB) to be appointed by the Chief Engineer Kolkata Zone or in his absence the Officer officiating as Chief Engineer Kolkata Zone in writing, whose decision shall be final, conclusive and binding.

\*\* To be deleted where NOT applicable.

contd....

**TENDER (CONTD)**

Signature..... dated.....

Name of Signatory.....

(IN BLOCK CAPITALS)

in the capacity of .....duly authorized to sign the tender for

and on behalf of .....

(IN BLOCK CAPITALS)

Postal address.....

.....

.....

Signature of witness

Name .....

Address.....

Telegraphic Address.....

.....

Telephone No.....

**ACCEPTANCE**

..... Alterations have been made in these documents and as evidence that these alterations were made before the execution of the Contract Agreement .They have been initialed by the contractor and **Shri Sanjib Banik, AE (QS&C), AGE (Contracts)**.

The said officer is hereby authorised to sign and initial on my behalf of the documents forming part of this contract.

The above tender is/was accepted by me on.....day of .....2024  
on behalf of President of India at the item Rates contained in Schedule 'A' for the contract sum of  
Rs.....

(Rupees.....only)

.....

Signature \_\_\_\_\_ dated this \_\_\_\_\_ day of \_\_\_\_\_ 2024

Appointment: **GARRISON ENGINEER (NORTH) KOLKATA**  
**ACCEPTING OFFICER**  
**(FOR AND ON BEHALF OF THE PRESIDENT OF INDIA**

**GENERAL CONDITIONS OF CONTRACTS (IAFW-2249-1989 PRINT)****FOR****ITEM RATE CONTRACTS (IAFW-1779A)**

A copy of the General Conditions of Contracts (IAFW-2249-1989 print) with errata 1 to 20 and amendments No 1 to 49 has been supplied to me/us and is in my/our possession. I/we have read and understood the provisions contained in the aforesaid General Conditions of Contracts before submission of this tender and I/we agree that I/we shall abide by the terms and conditions thereof, as modified, if any, else where in these tender documents.

It is hereby further agreed and declared by me/us that the General Conditions of Contracts (IAFW-2249-1989 print) including Condition 70 thereof pertaining to settlement of disputes by arbitration, containing 33 pages (serial page Nos 36 to 68) with errata 1 to 20 and amendments No 1 to 49 (serial page Nos 69 to 83) form part of these tender documents.

It also agreed by me/us that in case of any discrepancy in the interpretation of the contents between English and Hindi version, English version will take precedence over Hindi version.

\_\_\_\_\_  
**AGE (CONTRACTS)  
FOR ACCEPTING OFFICER**

\_\_\_\_\_  
**SIGNATURE OF CONTRACTOR  
DATED: \_\_\_\_\_**



**ERRATA TO MES GENERAL CONDITIONS OF CONTRACTS IAFW-2249**  
**(1989-PRINT)**

ERRATA NO	PAGE NO	PARTICULARS
<b>1</b>	<b>2</b>	<b>3</b>
1	4	<u>CONDITION 3, PARA 3, LINE-1</u>
		FOR : 'an' READ : 'and'
2	7	<u>CONDITION 7, LAST PARA, LINE-9</u>
		FOR : 'Objection' READ : 'objection'
3	7	<u>CONDITION 7, LAST PARA, LINE-11</u>
		FOR : " thetein " READ : " therein"
4	8	<u>CONDITION 8, LINE-7</u>
		Delete ')' after the word 'necessary'
5	10	<u>CONDITION 10 © GENERAL, SUB PARA 2, LINE-3</u>
		FOR : " actory " READ : " Factory "
6	11	<u>CONDITION 15, PARA 2, LINE-6</u>
		FOR : " escept " READ : " except"
7	11	<u>CONDITION 15, PARA 2, LINE-6</u>
		FOR : " authorise " READ : "authorised"
8	11	<u>CONDITION 15, PARA 5, LINE-1</u>
		FOR : " Maintence " READ : " Maintenance"
9	16	<u>CONDITION 32, PARA 1, LINE-4</u>
		FOR : " sitting " READ : " siting"
10	16	<u>CONDITION 32, PARA 2, LINE-2</u>
		FOR : " reinstead " READ : " reinstated"
11	16	<u>CONDITION 34, LINE-6</u>
		FOR : " revese " READ : " revest"
12	16 & 17	<u>CONDITION 36, PARA 2, LINE-6</u>
		FOR : " combusitble" " READ : " combustible"
13	17	<u>CONDITION 37, LINE-3</u>
		FOR : " whese " READ : " whose"
14	17	<u>CONDITION 43, LINE-1</u>
		FOR : " shal " READ : " shall"
15	17	<u>CONDITION 44, PARA 2, LINE-4</u>
		FOR : " vist this " READ : " visit his"
16	18	<u>CONDITION 48, PARA (a), LINE-5</u>
		FOR : " airising " READ : " arising"
17	20	<u>CONDITION 54, LINE 1 AND 2</u>
		Illegible word is 'Contractor'
18	20	<u>CONDITION 54, PARA BELOW (a)</u> Insert 'b' in the existing bracket '( )'
19	30	<u>ANNEXURE 'B' CLAUSE 6, LINE-2</u> delete the word 'after'
20	30	<u>ANNEXURE 'B' CLAUSE 6 BUT LINE-3</u>
		Insert full stop '(.)' after the word 'thereof' and
		FOR : " lodder " READ : " Ladder"

SIGNATURE OF CONTRACTOR  
DATED: \_\_\_\_\_

AGE (CONTRACTS)  
FOR ACCEPTING OFFICER

**MILITARY ENGINEER SERVICES: GENERAL CONDITIONS OF CONTRACTS**  
**IAFW-2249 (1989-PRINT)**

**AMENDMENT**

AMENDMENT NO	PAGE NO	PARTICULARS
1	2	3
1	28 and 29 (a)	<u>ANNEXURE 'A' MILITARY ENGINEER SERVICES CONTRACTOR'S LABOUR REGULATIONS</u> <u>PARA 2 (a), LINE-3</u> FOR : "not Exceeding Rs. 400 per month" READ : "not exceeding 500 per months"
	(b)	<u>PARA 11, LINE- 5</u> Add the following after the words " labourers concerned" :- "The Garrison Engineer shall arrange payments to the labour concerned within 45 days from the receipt of the report from the Labour Welfare Officer or other person authorised as aforesaid, as the case may be".
2	9	<u>CONDITION 10(B), LINES 2 TO 6</u> FOR : "Materials which ..... as aforesaid" READ : "Materials which Govt. shall supply are shown in Schedule 'B' which also stipulates place of issue and rate(s) to be charged in respect thereof"
3	19	<u>CONDITION 50, SUB PARA 4(b) (iii)</u> Delete the existing description against sub Para 4(b) (iii) and insert as under :-
	(iii)	Where the Contract Sum exceeds Rs. 20 Lakhs but does not exceed Rs. 150 Lakhs Seven and a half percent of the Contract value of the item or group of items of Work for which a separate period of completion is given or Rupees Seven and half Lakhs whichever is less.
	(iv)	Where the Contract Sum exceeds Rs. 150 Lakhs but does not exceed Rs. 300 Lakhs. Five percent of the Contract value of the item or group of items of the Work for which a separate period of completion is given or Rupees Twelve and half Lakhs whichever is less.
	(v)	Where the Contract Sum exceeds Rs. 300 Lakhs Four percent of the Contract value of the item or group of the items of Work for which a separate period of completion is given subject to a maximum of Rupees Twenty five Lakhs.
4	27	<u>CONDITION 70, SUB PARA 9</u> Add the following at the end of the Sub-para :- "If the value of the claims or counter claims in an arbitration reference exceeds Rs. 1.00 Lakh, the arbitrator shall give reasons for the award."
5	14 and 15	<u>CONDITION 25</u> Delete paras 2 and 3 of the above condition and substitute the following :-  "Where the Contractor is not a qualified Engineer or even if he is so qualified, he cannot, in the opinion of the GE, give his full personal attention to the works, he shall at his own expense, employ a person/person(s) possessing the following qualifications and/or experience as his accredited Agent (s) to supervise the Works and to receive instructions from the Engineer-in-Charge :-

Contd..

**AMENDMENT (CONTD..)**

<b>1</b>	<b>2</b>	<b>3</b>
	(a) For Works costing over Rs. 300 Lakhs other than those covered in (g) below	Two Degree holders in Engineering from a Government recognised Institution or equivalent with at least 5 years practical experience of works. AND Adequate numbers of Diploma holders in Engineering from a Government recognised Institution with at least 8 years practical experience of works. (NOTE : The above provision shall be applicable irrespective of the fact whether contractor himself is a qualified Engineer or not).
	(b) For Works costing between Rs.100 Lakhs and Rs. 300 Lakhs other than those covered in (g) below	A Degree holder in Engineering from a Government recognised Institution or equivalent with at least 4 years practical experience of works. OR Two Diploma holders in Engineering from a Government recognised Institution with at least 6 years practical experience of works.
	(c) For Works costing between Rs. 60 Lakhs and Rs. 100 Lakhs other than those covered in (g) below	A Degree holder in Engineering from a Government recognised Institution or equivalent with at least 3 years practical experience of works. OR A Diploma holder in Engineering from a Government recognised Institution with at least 5 years practical experience of works.
	(d) For Works costing between Rs. 7.5 Lakhs and Rs. 60 Lakhs other than those covered in (g) below	A Degree holder in Engineering from a Government recognised Institution or equivalent with at least 2 years practical experience of works. OR A Diploma holder in Engineering from a Government recognised Institution with at least 4 years practical experience of works.
	(e) For Works costing between Rs. 2 Lakhs and Rs.7.5 Lakhs other than those covered in (g) below	A Degree or Diploma holder in Engineering from a Government recognised Institution with adequate practical experience of works.
	(f) For Works costing upto Rs. 2 Lakhs other than those covered in (g) below	A competent person with adequate practical experience of works.

Contd..

**AMENDMENT (CONTD..)**

1	2	3
	(g)	For Works of any value for repairs to buildings and roads, periodical services to building, term contract, grass cutting and fencing.
		A competent person with adequate practical experience of works.
		The employment of Agent(s) as aforesaid shall be to the approval of the GE who may verify his/their qualifications and experience by referring to original Degree/ Diploma/ Testimonials which shall be made available to him by the Contractor or by the individual employed or proposed to be employed.”
6	27	CONDITION 70, SUB PARA 9  Delete the description added at the end of SUB-PARA 9 vide AMENDMENT No. 4 and insert as under :- “ The arbitrator shall give reasons for the award in each and every case irrespective of the value of claim or counter claims.”
7	24	CONDITION 64  Delete para 4 viz. “ Provided the amount of the retention money recovered from the Contractor under the contract shall not exceed Rs. 1. 5 Lakhs” in toto and read ‘Blank’.
8	26	CONDITION 70 ARBITRATION PARA 1, LINE 4 Amend the words “Engineer Officer” to read “Serving Officer having degree in Engineering or equivalent or having passed Final/Direct Final Examination of Sub-Division II of Institution of Surveyor (India) recognised by the Govt. of India”.
9	2	Add the following new Condition under Chapter IV :- “71. Jurisdiction of Courts”.
	27	Add the following new Condition :- Jurisdiction of Courts –Irrespective of the place of issue of tenders, the place of acceptance of tenders, the place of execution of contract or the place of payment under the Contract, the contract shall be deemed to have been made at the place from where the acceptance of tenders has been issued and the work is executed/ executable. The Courts of the place from where the acceptance of the tender has been issued or the place where the work is executed/under execution shall alone have jurisdiction to decide any dispute arising out of or in respect of the Contract”
10	14 and 15	CONDITION 25 AS AMENDED VIDE AMENDMENT NO 5  FOR : “Degree holders in Engineering from a Government recognised Institution or equivalent” wherever occurring. READ : “Degree holders in Engineering from a Government recognised Institution or equivalent/Final or Direct Final pass of Sub-Division II of the Institution of Surveyors (India)”

Contd..

**AMENDMENT (CONTD..)**

1	2	3
11	27	<u>CONDITION 70 'ARBITRATION' PARA 8</u> FOR : "The arbitrator may, from time to time with the consent of the parties, enlarge, the time upto but not exceeding one year from the date of his entering on the reference of making and publishing the award". READ : "The Arbitrator may, from time to time with the consent of the parties, enlarge the time for making and publishing the award."
12	24	<u>CONDITION 64</u> Add the following Para after Para (c) :- "The amount so retained from the contractor shall be called retention money and shall be released to the contractor alongwith the final bill. However, in case the amount of retention money is more than Rs. 1.50 Lakhs then after retaining of amount of Rs. 1.50 lakhs or 1% of the contract amount as executed which ever is more the balance amount of retention money will be refunded to the contractor on satisfactory completion of works as certified by the GE.
13	23	<u>CONDITION 62(G), VALUATION OF DEVIATIONS, PARA 1, LINE-3</u> FOR : "Plus 10%" READ : "Plus 15%"
14	5 (a)	<u>CONDITION 4A (a), LINE-4</u> FOR : "Rs. 2,500/-" READ : "Rs. 5,000/-"
	(b)	<u>CONDITION 4A (d), LINE 2 AND 3</u> FOR : "Rs. 5000/-" READ : "Rs. 10,000/-"
15	13	<u>CONDITION 22, SUB PARA 3, LINE 3 AND 4</u> FOR : "Controller of Defence Accounts concerned" READ : "Accepting Officer"
16	24	<u>CONDITION 64, SUB PARA 7, LINE 4 AND 5</u> FOR : "Controller of Defence Accounts " READ : "Accepting Officer"
17	19	<u>CONDITION 50</u> (a) Sub para 2, line 2 FOR : "Deviation orders on the contractor" READ : "Deviation orders, escalation amount"  (b) Delete existing sub para 4(b)(i) to 4(b)(v) in toto and insert as under:- "Ten percent of the contract value of the item or group of items of work for which a separate period of completion is given."  (c) Add Sub para 5 as under: "Amount of retention money plus compensation during currency of contract shall not exceed ten percent of contract value. Contractor shall furnish BGB or Fixed Deposit Receipt in lieu of retention money and it compensation amount is not fully met from retention money, the difference if any shall be recovered from the payments due to the contractor."

Contd..

**AMENDMENT (CONTD..)**

1	2	3
18	3 and 4	<p>(a) Condition 1(a), line 4 For : “ the M.E.S. Schedule, the Specifications” Read : “the M.E.S. Schedule, the Special Conditions, the Specifications”</p> <p>(b) Condition 1(b), line 2 For : “ these conditions, and the Specifications” Read : “these conditions, the Special Conditions and the Specifications”</p> <p>(c) Condition 1(b), line 3 For : “ loaned” Read : “sold”</p> <p>(d) Condition 1(g), line 3 For : “ Garrison Engineer” who administers” Read : “Garrison Engineer” (or Assistant Garrison Engineer (Independent) if applicable) who administers”</p> <p>(e) Condition 1(g), line 3 In the end, add the following:- “ Where the office of the CWE does not exist and the GE is directly under theChief Engineer, the authority of the CWE stipulated in these conditions shall vest in the concerned Chief Engineer.”</p> <p>(f) Condition 1(h), line 3 For : “the Superintendent Grade I” Read: “ the Junior Engineer (JE)”</p> <p>(g) Condition 1(i), line 1 For : “Indian Standards Institution.” Read: “ Bureau of Indian Standards.”</p> <p>(h) Condition 1(p), line 4 For : “air craft and acts of God” Read: “air craft and natural calamities”</p> <p>(j) Condition 1(p), line 5 For : “floods and tornado.” Read: “floods, tornado and Tsunami.”</p>
19	5	<p>(a) Condition 4A, line 7 For : “Rs. 60,000/-” Read: “Rs. 1,50,000/-”</p> <p>(b) Condition 4A(a), line 4 For : “Rs. 2,500/-” Read: “Rs. 10,000/-”</p> <p>(c) Condition 4A(c), line 4 For : “Rs. 2,500/-” Read: “Rs. 10,000/-”</p> <p>(d) Condition 4A(d), lines 2 and 3 For : “Rs. 5,000/-” Read: “Rs. 20,000/-”</p> <p>(e) Condition 4A(f), line 1 For : “Rs. 60,000/-” Read: “Rs. 1,50,000/-”</p>

Contd..

**AMENDMENT (CONTD..)**

1	2	3						
20	5	<p>(a) Condition 6, subpara 1 The existing contents shall be substituted as under:- “6. Provisional Items- The amount pertaining to provisional items need not be deducted from the Contract Sum. The Engineer-in-Charge and Contractor shall set out the works covered under provisional items and provisional lump sum based on the description of items, drawings forming part of contract agreement and considering the ground conditions as encountered at site of works. The statement of variation in quantities, new items or deletion of items from the contract agreement as required will be worked out for approval of Engineer-in-Charge who will convey approval of such changes through site order book. For the purpose of payment the variation in value of work executed under these items shall be ascertained by measurement or valuation as for deviation. The variations shall be regularized as per condition 7.”</p>						
21	6 and 7	<p>(a) Condition 6A, line 6 Add following after the words ‘preference to scale.’:- “However the provisions of any drawing of a later date shall take precedence over that of a drawing of previous date further subject to the condition that working drawing will take precedence over a Typical Detail Drawing.” (a) Condition 6A, line 6 Add following after the words ‘preference to scale.’:- “However the provisions of any drawing of a later date shall take precedence over that of a drawing of previous date further subject to the condition that working drawing will take precedence over a Typical Detail Drawing.” (b) Condition 6 A(a), line 1 For: “Quantities.” Read: “Quantities, Schedule ‘B’, ‘C’, ‘D’,” (c) Condition 6 A(a), subpara 3, line 1 For: “one document forming” Read: “one document as defined hereinabove forming” (d) Condition 6 A(A) (i) Existing subpara (b) to (f) shall be enumerated as subpara (c) to (g) (ii) Add new subpara (b) after existing subpara (a) as under:- “(b). Items and their quantities for which no rates or prices have been quoted shall be deemed to have been covered by the rates and prices quoted for the other items of Schedule ‘A’ or bill of quantities.” (e) Condition 6 A(C) (iii) The existing contents shall be substituted as under:-</p> <table border="1"> <tr> <td>(iii)</td><td>Contract sum exceeding Rs. 10 lakh but not exceeding Rs. 100 lakh</td><td>: Rs. 20,000 plus 2% of Contract Sum exceeding Rs. 10 lakh subject to a maximum of Rs. 1,00,000/-</td></tr> <tr> <td>(iv)</td><td>Contract sum exceeding Rs. 100 lakh</td><td>: 1% of Contract Sum subject to a maximum of Rs. 5 lakh</td></tr> </table>	(iii)	Contract sum exceeding Rs. 10 lakh but not exceeding Rs. 100 lakh	: Rs. 20,000 plus 2% of Contract Sum exceeding Rs. 10 lakh subject to a maximum of Rs. 1,00,000/-	(iv)	Contract sum exceeding Rs. 100 lakh	: 1% of Contract Sum subject to a maximum of Rs. 5 lakh
(iii)	Contract sum exceeding Rs. 10 lakh but not exceeding Rs. 100 lakh	: Rs. 20,000 plus 2% of Contract Sum exceeding Rs. 10 lakh subject to a maximum of Rs. 1,00,000/-						
(iv)	Contract sum exceeding Rs. 100 lakh	: 1% of Contract Sum subject to a maximum of Rs. 5 lakh						
22	8	<p>(a) Condition 9 (c), line 19 For: “labour at Site” Read: “labour and tools and plants at Site” (b) Condition 9(c), line 19 Add following at the end of para (c) viz line 21:- “The contractor shall give the details of idle labour, workmen, employees, tools and plants and such other details as asked by the GE, within seven days of issue of order of suspension and the GE shall verify the necessity and correctness thereof. Proper record of these details shall be maintained duly signed by the GE and the contractor.”</p>						

Contd..

**AMENDMENT (CONTD..)**

1	2	3
23	8, 9 and 10	<p>(a) Condition 10 A, subpara 2 Add in the end after the word “comply” following:- “However if the cost of particular item of material in a contract exceed Rs. 1 lakh, these materials shall be procured only from the manufactures or from their authorised dealers/ stockist (except in case of material of local origin) and the contractor shall furnish proof thereof to the satisfaction of the GE that the material so comply.”</p> <p>(b) Condition 10 A, subpara 2 Add in the end after the word “in the Contract.” following:- “The approved samples of materials which loose their identity after incorporation in the work shall be preserved with the GE till completion of work. Thereafter the same shall be removed in ‘as is where is’ condition by the contractor with prior permission of the GE without any extra cost to the Government. However, the approved samples of material which do not loose their identity after incorporation and which can be incorporated in the work as decided by the Engineer-in-Charge shall be allowed to be used in the sample quarter/ block/ work.”</p>
23(Cont d..)		<p>(c) Condition 10 B, line 1 of last subpara of page 9 For: “cost of loading,” Read: “cost of carriage, loading,”</p> <p>(d) Condition 10 B, line 3 of subpara 3 of page 10 For: “the Engineer-in-Charge may,” Read: “the GE may,”</p> <p>(e) Condition 10 B, line 5 of subpara 3 of page 10 For: “as decided by the GE.” Read: “on the date of notifying to the contractor by GE (after technical check of final bill in CWE’s Office) as decided by the GE or the stock book rate as fixed by the department, whichever is higher.”</p> <p>(f) Condition 10 B, line 6 of subpara 3 of page 10 For: “the market rate,” Read: “the recovery rate,”</p>
24	10 and 11	<p>(a) Condition 11(A), subpara (i) to (vii) Existing contents of subpara (i) to (vii) shall be replaced as under with sub para (i) to (iv):- “(i) by reason of civil commotion, local combination of workmen, strike or lockout, affecting any of the trades employed on the work, or (ii) by reason of delay on part of nominated sub contractors, or nominated suppliers which the Contractor has , in the opinion of G.E., taken all practicable steps to avoid, or reduce, or (iii) by reason of delay on the part of Contractors or tradesmen engaged by Government in executing works not forming part of the contract, or (iv) by reason of any other cause (except force majeure) which in the absolute discretion of the Accepting Officer is beyond the Contractor’s control;”</p> <p>(b) Condition 11(A), last subpara, line 2 For: “G.E.” Read: “Accepting Officer”</p> <p>(c) Condition 11(B), last but 3rd line from end For: “G.E.” Read: “Accepting Officer”</p> <p>(d) Condition 11(C) The existing contents shall be substituted as under:-</p>

Contd..



**AMENDMENT (CONTD..)**

1	2	3									
24 (Contd.)		<p>“(C) Extension of time if due shall be granted within 45 days of receipt of request from the contractor along with supporting documents, but before expiry of original/ extended period of completion.</p> <p>(D) No claim in respect of compensation or otherwise, for idle labour and/ or idle machinery etc. and/ or business loss or any such loss, howsoever arising, as a result of extensions granted under Conditions (A) and (B) above shall be admissible. The decision on reason and quantum of extension shall be final binding.</p> <p>(E) DELAY ON ACCOUNT OF FORCE MAJEURE –</p> <p>Should any force majeure circumstances arise, each of the contracting party will be excused for the non fulfillment or for the delayed fulfillment of any of its contractual obligations, if the affected party within 15 days of its occurrence informs the other party in writing.</p> <p>Force majeure shall mean fires, floods, natural calamities such as earth quakes, lightning or other acts such as war, turmoils, strikes (otherwise than contractor’s employees), invasion, act of foreign enemies, hostilities, civil war, rebellion, revolution, insurrection, military or usurped power, damage from aircraft, sabotage, explosions, quarantine restrictions, beyond the control of either party. It is understood and agreed between the parties here to that the rights and obligations of the parties shall be deemed to be in suspension during the continuance of the force majeure even as aforesaid and the said rights and obligation shall automatically revive upon cessation of the intervening force majeure event. The period within which the rights and obligations of the parties shall be in suspension due to force majeure event, shall not be considered as a delay with respect of the period of completion and/ or taking over work under the contract or otherwise to the detriment of either party. Notwithstanding the provision of the immediately foregoing clauses, it is further understood and agreed between the parties hereto that in the event of any force majeure persisting for an uninterrupted period exceeding 6 (Six) months, either party hereto reserves the right to terminate this contract upon giving prior written notice of 30 (thirty) days to the other party of the intention to terminate without any liability other than agreement for the completed work and/ or contractor’s materials lying at site.”</p>									
25	12	<p>(a) Condition 17, line 1</p> <p>For: “The Contractor shall not”</p> <p>Read: “The Contractor including Public Sector undertaking/ Government agency shall not”</p>									
26	13	<p>(a) Condition 18, line 1</p> <p>For: “The Contractor shall not”</p> <p>Read: “The Contractor including Public Sector undertaking/ Government agency shall not”</p>									
27	14 and 15	<p>(a) Condition 25, the contents of subpara 2 after line 5 shall be substituted as under:</p> <table border="1"> <tr> <td>(a)</td><td>For works costing between Rs. 50 lakh to 1000 lakh</td><td>A Degree holder in Engineering from a Govt recognized Institution or equivalent, with final or direct final passed of Sub Division II of the Institution of Surveyors (India) with at least 4 years practical experience of works.</td></tr> <tr> <td>(b)</td><td>For works costing between Rs. 7.5 lakh to 50 lakh</td><td>A Degree holder in Engineering from a Govt recognized Institution or equivalent, with final or direct final passed of Sub Division II of the Institution of Surveyors (India) with at least 2 years practical experience of works.</td></tr> <tr> <td>(c)</td><td>For works costing below Rs. 7.5 lakh</td><td>A Diploma holder in Engineering from a Govt recognized Institution with adequate practical experience of works.</td></tr> </table> <p>Notes:-</p> <p>(1) Engineers (Degree/ Diploma holders) employed should be of the relevant discipline to which nature of work pertains.</p>	(a)	For works costing between Rs. 50 lakh to 1000 lakh	A Degree holder in Engineering from a Govt recognized Institution or equivalent, with final or direct final passed of Sub Division II of the Institution of Surveyors (India) with at least 4 years practical experience of works.	(b)	For works costing between Rs. 7.5 lakh to 50 lakh	A Degree holder in Engineering from a Govt recognized Institution or equivalent, with final or direct final passed of Sub Division II of the Institution of Surveyors (India) with at least 2 years practical experience of works.	(c)	For works costing below Rs. 7.5 lakh	A Diploma holder in Engineering from a Govt recognized Institution with adequate practical experience of works.
(a)	For works costing between Rs. 50 lakh to 1000 lakh	A Degree holder in Engineering from a Govt recognized Institution or equivalent, with final or direct final passed of Sub Division II of the Institution of Surveyors (India) with at least 4 years practical experience of works.									
(b)	For works costing between Rs. 7.5 lakh to 50 lakh	A Degree holder in Engineering from a Govt recognized Institution or equivalent, with final or direct final passed of Sub Division II of the Institution of Surveyors (India) with at least 2 years practical experience of works.									
(c)	For works costing below Rs. 7.5 lakh	A Diploma holder in Engineering from a Govt recognized Institution with adequate practical experience of works.									

Contd..

**AMENDMENT (CONTD..)**

1	2	3
27 (Contd.)		<p>(2) The provision at Serial (b) &amp; (c) above shall be applicable irrespective of the fact whether contractor himself is a Qualified Engineer or not.</p> <p>(3) Contractor shall employ additional Engineers as directed by GE where there are scattered sites.</p> <p>(4) For works costing more than Rs. 10 crore, the requirement of Engineering staff shall be as given in the tender documents.</p> <p>(5) For specialist works/ services Accepting Officer may vary requirement of supervisory staff in tender documents.</p> <p>(b) Condition 25, last subpara on page 15: The contents of last subpara on page 15 shall be substituted as under:- “ The G.E. shall have full powers, to put the contractor on notice on account of default either for non-employment of Engineer(s) or absence of Engineer(s) from site and levy penalty @ Rs. 500/- per day per vacancy upto 30 days period. Thereafter GE shall have the option to either suspend the work or employ Engineer(s) at contractor's cost and recover the amount from contractor's dues.”</p>
28	15	<p>(a) Condition 26, last subpara, last line For: “Rs. 50/-” Read: “Rs. 5,000/- (Rupees five thousand only)”</p>
29	16	<p>(a) Condition 31, third subpara, line 2 For: “at the *All India Flat Rate per 1,000 gallons which” Read: “at the *All in cost Rate per 1,000 gallons subject to a minimum of Rs. 3.75 per every Rs. 1000/- worth of work done priced at contract rates which”</p>
30	17	<p>(a) Condition 36, last subpara Add the following at the end:- “ Fencing be provided wherever necessary as decided by GE to isolate the working area to make the area unrestricted from restricted”</p>
31	17	<p>(a) Condition 44, subpara 3, line 1 For: “rupees one lakh” Read: “rupees two lakh” (b) Condition 44, subpara 3, line 2 For: “rupees five lakh” Read: “rupees ten lakh”</p>
32	18	<p>(a) Condition 46, subpara 2, line 11 to 14 For: “Provided always that the liability of the Contractor under this Condition shall not extend beyond the defects liability period except as regards workmanship which the G.E. shall have previously given notice to the contractor to rectify.” Read: “Alternatively, such work, if technically/ structurally acceptable, without detriment to the safety and utility of the item and the structure may be permitted to be accepted as devalued and recovery shall be decided by competent authority (CWE in respect of contract concluded by himself and GE's and AGE(I) and CE in respect of contract concluded by him) or he may reject the work outright without any payment and/ or get it and other connected and incidental items rectified, or removed and re-executed at the risk and cost of the contractor. Whether any particular defect is due to unsound, imperfect or unskillful workmanship or due to normal wear &amp; tear or user's negligence, decision of GE shall be final and binding. Provided always that the liability of the contractor under this Condition shall not extend beyond the defects liability period except as regards workmanship which the G.E. shall have previously given notice to the contractor to rectify. Govt. further reserves the right to get the work technically inspected during currency of the contract and also during defects liability period by the Additional Director General of Technical Examination and/ or his Officers or any other agency.</p>

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**AMENDMENT (CONTD..)**

1	2	3
32 (Contd..)	18	The defects observed as a result of such technical examination shall be rectified by the contractor as notified by the GE. However, if the defects are not rectified, the devaluation of the work shall be carried out and recovery thereon shall be affected. ”
33	19	(a) Condition 49, subpara 2, line 2,3 and 4 For: “within such period as may be notified by the Engineer-in-Charge, to the place of issue against written receipt from the Engineer-in-Charge.” Read: “to the place of issue as stipulated in Condition 10(B) here-in-before against written receipts from the Engineer-in-Charge.” (b) Condition 49, subpara 5, line 3,4 and 5 For: “before the completion of entire group, but for all purposes of the contract except for compensation for delay, the completion of the entire group shall be taken into account.” Read: “before the completion of the entire group. In such event, the grouping (phasing) of items as cateredfor in the contract shall be deemed to have been amended accordingly.” (c) Condition 49, subpara 7 Existing contents shall be substituted as under:- “On receipt of notice from the Contractor that the work has been completed, the G.E. shall within seven days certify to the Contractor the Date(s) on which the items or group of items of works are completed and taken over and the state thereof or shall notify the details of incomplete itemsof work to the contractor. In case of dispute between G.E. and the Contractor over completion of work, the decision of Accepting Officer or CWE in case of G.E.’scontract shall be final and binding.”
34	21	(a) Condition 55 Existing contents shall be substituted as under:- “55. Termination of Contract for Death—Without prejudice to any of the rights or remedies under this contract, if the Contractor dies, the Accepting Officer shall have the option of terminating the Contract without compensation to the Contractor. If proprietor has nominated a person during his lifetime, the nominee will be allowed by the GE to complete the balance work. However if the nominee is not willing or in the opinion of Accepting Officer is not capable of completing the work as contracted for, he shall terminate the contract withoutany compensation to the nominee. The decision of the Accepting Officer whether the nominee is capable or not shall be final and binding.”
35	21 and 22	(a) On page 2 against Sl 59, Blank, add following in description “Determination of contract in the event of Force Majeure_” (b) On page 22, against SL 59, Blank Insert new condition 59 in lieu of Blanks under:- “59. Determination of Contract in the event of Force Majeure— The contract may be determined at the option of either party by giving 30 days notice in writing to the other party should any event of ‘Force Majeure’ continue to prevail for an uninterrupted period of six months and no progress of work is achieved owing to such circumstances during theses six months.On receipt of notice from one party to other explaining circumstances of ‘Force majeure’ the Garrison Engineer and contractor will carry out joint inspection of works and an inventory of completed, incomplete works and the materials collected for incorporation in the work shall be prepared for processing of final bill. The contractor shall have no claim to payment of any compensation on account of any profit or advantage which he may have derived from the execution of work in full but which he could not derive due to determination of contract on account of ‘Force Majeure.”

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**AMENDMENT (CONTD..)**

1	2	3
36	22	(a) Condition 61, Last but one para, line 6 For: “Rs. 500/-” Read: “Rs. 5,000/-”
37	24	(a) Condition 64, subpara 1 and 2 Substitute existing contents with following:- “64. Advances on Account-- The contractor may at intervals of not less than 30 days for contracts of value less than Rs. 50 lakhs and 15 days in case of contracts more than 50 lakhs submit claims on I.A.F.W. – 2263 provided the payment due is not less than Rs. 50,000/- and for Term Contracts, contractor may prefer not more than two claims for payment of advances on account of work done and of materials delivered in connection with Measurement and Lump Sum Contracts. However such claim for work done, which are required to be measured, shall be submitted only after recording joint measurements in the MES Measurement Book IAFW-2261.” (b) Condition 64, subpara 3, line 3 For: “Engineer-in-Charge:-” Read: “Garrison Engineer:-” (c) Condition 64, subpara 8 and 9 Insert a new subpara between subpara 8 and 9 as follows:- “ Provided further, the contractor may be paid advance on account to the full value of materials such as fittings and fixtures and other manufactured items as decided by the GE which do not lose their identity, brought on the site, on his furnishing Guarantee Bond(s) or Fixed Deposit Receipt(s) from Schedule Bank for the amount of retention money which should otherwise be recoverable from him under the contract. The Guarantee Bond and Fixed Deposit Receipt shall be executed and kept valid in a manner as described here-in-before.”
38	25	(a) Condition 66, line 2 For: “the period being”                      Read: “the period to be” (b) Condition 66, line 3 For: “by the G.E.”                              Read: “by the Engineer-in-Charge” (c) Condition 66(a) For: “Four months”                              Read: “Six months” (d) Condition 66(b) For: “Six months”                              Read: “Nine months”
39	27	Existing Condition 71 Jurisdiction of Courts shall be renumbered as Condition 72
40	27	Add a new Condition 71 Conciliator as under:- “71. Conciliator—If a dispute (other than those for which the decision of the CWE or any person is by the contract expressed to be final and binding) of any kind whatsoever arises between the parties to the contract during the execution of the works, or after completion or after determination cancellation/ termination of the contract, including any disagreement by either party with any action, inaction, opinion, instruction, certificate or valuation by the Accepting Officer or his nominee, the matter in dispute shall, in the first place be referred to the Disputes Resolution Board (DRB) in case of contracts valuing Rs. 10 crore or more and to conciliation, by a sole conciliator, in case of contracts valuing less than Rs. 10 crore. In case of disagreement with the decision of such DRB or conciliator, any party may invoke arbitration clause. Procedure for the constitution/ appointment of DRB/ Conciliator shall be as laid down in the Contract Agreement.”

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**AMENDMENT (CONTD..)**

1	2	3
41	22	Condition 22, Security Deposit including all its sub para: “Delete the existing descriptions in toto and insert as “BLANK””
42	53	<p>Condition 53, three paragraph after para 53(c): Delete the existing descriptions from “Whenever the Accepting Officer----- shall be final and binding” in toto and insert the following: “Whenever the Accepting Officer exercises his authority to cancel the contract under this Condition, he may complete the works by any means independently without risk and cost of the original contractor.</p> <p>On cancellation of contract, the performance security and retention money upto last paid RAR shall be forfeited. All T &amp; P and material of contractor lying at site shall be confiscated by Government and shall be absolutely at the disposal of the President of India and no compensation whatsoever shall be allowed by department.</p> <p>If the failed contractor is a company, or a Firm then every member/partner/Director of Company, or Firm shall be barred from participating in the tender for the balance work either in his/her individual capacity or as partner of any other Company/Firm.”</p>
43	54	<p>Condition 54, Paras after para 54(d): Delete the existing descriptions from “The Accepting Officer may-----shall be final and binding” in toto and insert the following: “The Accepting Officer may without prejudice to any other right or remedy which shall have accrued or shall accrue thereafter to the Government, cancel contract as a whole or only such work order (s) or items of work in default from the contract. Whenever the Accepting Officer exercises his authority to cancel the contract under this condition, he may complete the works by any means independently without risk and cost of the original contractor</p> <p>On cancellation of contract, the performance security and retention money upto last paid RAR shall be forfeited. All T &amp; P and material of contractor lying at site shall be confiscated by Government and shall be absolutely at the disposal of the President of India and no compensation whatsoever shall be allowed by department.</p> <p>If the failed contractor is a company, or a Firm then every member/partner/Director of Company, or Firm shall be barred from participating in the tender for the balance work either in his/her individual capacity or as partner of any other Company/Firm.”</p>
44	67	<p>Condition 67, Recovery from contractor: (i) Para 67(a), Line-10: FOR: “Security Deposit or Security Bond amount” READ: “Performance Security amount (or from the Contractor’s Standing Security Deposit amount or Security Bond if Performance Security amount is not adequate”</p> <p>(ii) Para 67(g), Line-05 FOR: “Security Deposit or Security Bond amount” READ: “Performance Security amount (or from the Contractor’s Standing Security Deposit amount or Security Bond if Performance Security amount is not adequate”</p>

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**AMENDMENT (CONTD..)**

1	2	3
45	68	Condition 68, Refund of Security Deposit including all sub paras: Delete the existing descriptions in toto and insert the following: “ <b>Refund of Performance Security:</b> The Performance Security Deposit mentioned in Condition 19 above may be refunded to the contractor after the expiration of the defects liability period (vide Condition 46) by the GE provided always that the contractor shall first have been paid the final bill and have rendered a No-Demand Certificate (I.A.F.W-451)”
46	70	Condition 70, Para 3: Delete the existing descriptions in toto and insert ‘BLANK’ in lieu thereon”
47	19	Condition 19, New Condition: Insert the following new Condition in lieu of “BLANK” “19. <b><u>Performance Security</u></b> 19.1 Within 28 days of receipt of the letter of Acceptance, the successful contractor shall deliver to the Accepting Officer a Performance Security in any of the forms given below for an amount equivalent to 5% of the contract sum  (a) A Bank Guarantee in the prescribed form.  (b) Government Securities, FDR or any other Government Instrument stipulated by the Accepting Officer.  19.2 If the performance security is provided by the successful contractor in the form of Bank Guarantee, it shall be issued by Nationalized/Scheduled Indian Bank but its confirmation shall be done only from the Head Office of the Bank.  19.3 Failure of the successful contractor to comply with the requirements of sub-clause 19.1 shall constitute sufficient grounds for cancellation of the award of work and forfeiture of the Earnest Money. In case of MES enlisted contractor, amount equal to the Earnest Money stipulated in the Notice Inviting Tender, shall be notified to the tenderer for depositing the amount through MRO. Issue of tender to such tenderers shall remain suspended till the aforesaid amount equal to the Earnest Money is deposited in Government Treasury.  19.4 All compensation or other sums of money payable by the contractor to the Government under the terms of this contract or under any other contract with Government may be deducted from, or paid by the sale of a sufficient part of the Performance Security or from the interest arising there from or from any sums which may be due or become due to the contractor by the Government on any account whatsoever and in the event of his Performance Security being reduced by reason of any such deduction, or sale as aforesaid, the contractor shall within ten days thereafter make good in cash or securities, endorsed as aforesaid, any sum or sums which may have been deducted from or realized by the sale of his Performance Security or any part thereof.  Government shall not be responsible for any loss of security or any depreciation in the value of securities while in their charge nor for loss of interest thereon.

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**AMENDMENT (CONTD..)**

1	2	3
47 (Contd..)	19 (Contd.)	19.5 In the event of contract being cancelled, under Condition 52, 53 & 54 of General Conditions of Contract, the performance Security shall be forfeited in full and shall be credited into Consolidated Fund of India.”
48	46	<p>Condition 46, Inspection of the Works, Second Para, Lines 01 to 05: Delete the existing descriptions from “Should the G.E consider-----in accordance with the Contract....” and insert the following in lieu thereon: “Should the G.E consider at any time during the construction or reconstruction or prior to the expiration of period of:-</p> <p>(a) Thirty six calendar months after the works have been handed over to Government (hereinafter referred to as the “defects liability period”) for Runway works, Marine &amp; Harbour works, High altitude works &amp; Specialist work of Hospitals &amp; Medical Equipment/Medical Gas.</p> <p>(b) Twenty four calendar months after the works have been handed over to Government (hereinafter referred to as the “defect liability period”) for works other than mentioned in sub para (a) above.</p> <p>That any work has been executed with unsound, imperfect or unskillful workmanship or of a quality inferior to that contracted for or not otherwise in accordance with the Contract....”</p>
49	46	<p>Condition 46, Inspection of the Works, second sub Should the GE consider, at any time during the construction or reconstruction or prior to the expiration of period of:-</p> <p>(a) Thirty six calendar months after the works have been handed over to the Government (hereinafter referred to as the “ defects liability period”) for Runway works, Marine &amp; Harbour works, High Altitude works &amp; Specialist works of Hospitals &amp; Medical Equipment/ Medical Gas.</p> <p>(b) Twelve calendar months after the works have been handed over to the Government (hereinafter referred to as the “defect liability period”) for works of Periodical Services and Welcome Maintenance, minor works and Revenue Works and works for ‘Maintenance &amp; Operation’ including Repairs and Works for Maintenance &amp; Repair/ Replacement’.</p> <p>(c) Thirty days or date of taking over of the installation by MES, whichever is earlier, for works of ‘Manning &amp; Operation’ &amp; ‘Maintenance &amp; Operation’ involving Predominantly Outsourcing of Service through Deployment of Manpower/Work force and not involving Repair/ Replacement.</p> <p>(d) Twenty four calendar months after the works have been handed over to the Government (hereinafter referred to as the “defects liability period”) for works other than mentioned in sub para (a) to (c) above.</p>

**SIGNATURE OF CONTRACTOR**  
**DATED:** \_\_\_\_\_

**AGE (CONTRACTS)**  
**FOR ACCEPTING OFFICER**

**SCHEDULE OF MINIMUM FARE WAGES**

1. It is hereby agreed that the 'Schedule of Minimum Fare Wages' as published vide Govt of India/State Govt/local authorities which is highest and which specifies minimum rates of wages for various categories of work man as applicable on the last due date of receipt of this tender and shall form part of this tender documents. The minimum rates of wages shall consist of all inclusive rates and include also the wages for weekly day of rest.
2. My/our signature here under accounts to my/our having read and understood the provisions contained therein and I/We agree that I/We shall abide by the same and that aforesaid documents form part of this tender.

Note:- "Schedule of Minimum Fair Wages" referred to above is available for reference, in the office of the Accepting Officer".

\_\_\_\_\_  
**AGE (CONTRACTS)**  
**FOR ACCEPTING OFFICER**

\_\_\_\_\_  
**SIGNATURE OF CONTRACTOR**  
**DATED: \_\_\_\_\_**



**SPECIAL CONDITIONS****1. GENERAL**

- 1.1 The following Special conditions shall be read in conjunction with General Condition of Contracts, IAFW-2249(1989 Print) including errata and amendments thereto and IAFW-1779A (Revised 1947) including all errata and amendments thereto. If any provision in this Special Conditions is at variance with the provisions in the above mentioned documents the former shall take precedence there over.

**2. GENERAL SPECIFICATION**

- 2.1 The term General Specification used in any of the documents forming part of this contract refers to the specifications contained in MES Schedule.

**3. ADMISSION TO SITE BY CONTRACTOR AND RESPONSIBILITY TO ASCERTAIN HIS OWN INFORMATION**

- 3.1 Refer conditions 7 and 10 of Notice of Tender (IAFW-2162) and Condition 4 of IAFW-2249. The tenderer shall be deemed to have satisfied himself before submitting his tender as to the nature of the ground and sub-soil (so far as it is practicable), the climatic conditions, the form and nature of the site, nature of work and the means of access to the site(s), the accommodation he may require and in general tenderer shall be deemed to have himself obtained all necessary information on inspection of site as to risk, contingencies and other circumstances which may influence or effect his tender whether he actually inspect the site(s) or not. No extra payment consequent on any mistake or misunderstanding or otherwise on this account shall be allowed.
- 3.2 The tenderer shall be deemed to have visited the site(s) before quoting rate and made themselves familiar with the working conditions, whether he actually inspect the site(s) or not.

**4. AVAILABILITY OF LAND FOR STORAGE OF MATERIALS, ACCOMMODATION FOR LABOURETC**

- 4.1 Delete the following in para 1 of Condition 24 of IAFW-2249(1989 Print) General Conditions of Contracts "In the event of the areas of land ..... allotted to him" and the following shall be read in conjunction with Condition 24 of IAFW-2249:-

"The contractor shall be permitted to store his materials including erecting temporary sheds thereof, temporary workshops and the like at the area of land, marked for this purpose on the site plan shown by the GE free of rent, if it is in class A-1 land, for other types of land he shall be charged license fee of Re 1/- per year or part of year for each and every separate area of land allotted to him. Land shall not be allotted to the contractor for construction of huts for accommodation of labouretc inside the Army area."

- 4.2 The contractor will not be allowed to make quarter in MD land.

**5. CONDITIONS OF WORKING**

- 5.1 The work under this contract lies in UNRESTRICTED AREA. However, the contractor, his agents, employees, work people and vehicles may pass through the unit lines in which case the Engineer-in-Charge shall at his discretion have the right to issue passes, control their admission to the site of work or any part thereof. The contractor shall on demand by the Engineer-in-Charge submit a list of personnel, etc. concerned and shall satisfy the Engineer-in-Charge as to the bonafides of such people. Passes shall be returned at any time on demand by the Engineer-in-Charge and in any case on completion of work.
- 5.2 The contractor and his agents, employees and work people shall observe all the rules promulgated by the authority controlling the area in which the work is to be carried out e.g. prohibition of smoking, lighting and fire precaution, search of persons at entry and exit keeping to specified routes, restricted hours of working etc. Any person found violating the security rules laid down by the authority, shall be immediately expelled from the area without assigning any reasons whatsoever and the contractor shall have no claim on this account. Nothing shall be admissible for any man hours lost on this account.

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**SPECIAL CONDITIONS (CONTD.)**

- 5.3 The contractor shall, on demand by the Engineer-in-Charge, submit list of his agents, employees and work people concerned and shall satisfy the Engineer-in-Charge as to the bonafides of such people.
- 5.4 The Engineer-in-Charge shall at his discretion have the right to issue passes as per rules and regulations of the installation/Area in force to control the admission of the contractor, his agents, employees and work people to the site of the work or any part thereof. Passes should be returned at any time on demand by the Engineer-in-Charge or the authorities concerned and in any case on completion of work.
6. **CONTRACTOR'S REPRESENTATIVES AGENT AND WORKMAN**
- 6.1 Refer Condition 25 of IAFW-2249. The contractor shall employ only Indian Nationals as his representative, agent and workman after verifying their antecedents and loyalty before employing them for the works. He shall ensure that no person of doubtful antecedent and Nationality is in any way associated with the works. If for reasons of technical collaboration or other considerations the employment of foreign National is unavoidable, the contractor shall furnish the particulars to his effect to the Accepting Officer at the time of submission of the tender. The GE shall order the contractor to cease to employment in connection with the contract any representatives agents servant and workman or employee whose continued employment in his opinion is undesirable. The contractor shall not be entitled for any compensation on this account.
- 6.2 **Female Searches:** If the contractor desires to employ female labours on works to be carried out inside the area of a Factory, Depot, Part etc. and a female searcher is not borne on the authorized strength of the Factory, Depot, Part etc, at the time of submission of the tender, he shall be deemed to have allowed in his tender for pay and allowances etc. for a Female Searcher (Class IV servant/Gp 'D' servant) calculated for the period, female labour is employed by him inside that area. If more than one contractor has have to employ female searcher in addition to the authorized strength of the Factory, Depot, Part etc. the salary and allowances paid to the additional female searcher(s) shall be distributed on and equitable basis between the contractors employing female labour taking into consideration the value and period of completion of their contracts. The GE's decision in regard to the amount recoverable on this account from any contractor shall be final and binding.
7. **WORKING HOURS:**
- 7.1 The units controlling restricted area, usually work during six days in the week and remain closed on the 7<sup>th</sup> day. The working hours available to contractor's labour and staff however accordingly get reduced because of the time taken in security checks observed at the time of entry, exit and during working hours.
- 7.2 The exact working hours, days and non-working days observed for the restricted area, where works are to be carried out shall be deemed to have been ascertained by the contractor before submitting his tender. The tenderer's attention is invited to the fact that the total number of working hours for a unit are prescribed in regulations and they cannot be increased by the Garrison Engineer.
- 7.3 Contractor's materials, transport etc. shall normally be permitted to come in/go out of the area between 5 AM to 6 PM only.
- 7.4 Contractor may also be allowed to carry out the work beyond 6 PM and upto 6 AM only (day and night) with prior approval of GE but no movement of materials and transport to/out of site of works shall be permitted during night unless special permission is obtained from the factory/unit authority.
8. **WORK ON HOLIDAYS**
- 8.1 The contractor shall not carryout any work on gazetted holidays, weekly holidays and other non-working days except when he is specially authorized in writing to do so by the GE. The GE may at his sole discretion declare any day as holiday or non working day without assigning any reason for such declaration.

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**SPECIAL CONDITIONS (CONTD.)**

9. **Access to Restricted Area after completion of works:** After the works are completed and surplus stores etc removed, the contractor, his agents, representatives or workmen etc may not be allowed to have access to the restricted area except for attending any rectification of defects pointed out to him by the GE.
10. **FIRE PRECAUTIONS**
- 10.1 The contractor, his agents, representatives, workmen etc shall strictly observe the orders pertaining to fire precautions prevailing within the restricted area.
- 10.2 Motor transport vehicles, if any allowed by authorities to enter the restricted area, must be fitted with serviceable fire extinguishers.
11. **ROYALTIES**
- 11.1 Reference condition 14 of General Conditions of Contracts (IAFW-2249). No quarries on defence land are available.
12. **OFFICIAL SECRET ACT**
- 12.1 Refer condition 2A of General Conditions of Contracts IAFW-2249. The Contractor's attention is invited to the Indian Official Secret Act 1923 (XIX of 1923), particularly Section 5 thereof. The contractor shall be bound by the provisions of this Act.
13. **SECURITY OF CLASSIFIED DOCUMENTS**
- 13.1 Contractor's special attention is drawn to Condition 2A and 3 of IAFW-2249 (General Conditions of Contracts). The contractor shall not communicate any classified information regarding the work either to Sub-contractors or others without the prior approval of the Engineer-in-Charge. The contractor shall also not make copies of the design/drawings and other documents forwarded to him in respect of the work and shall return all documents on completion of the work or earlier on termination of the contract. The contractor shall alongwith the final bill attaches a receipt of his having returned the classified documents as per Condition 3 of IAFW-2249 (General Conditions of Contracts).
14. **MINIMUM WAGES PAYABLE**
- 14.1 Refer Condition 58 of IAFW-2249. The contractor shall not pay wages lower than minimum wages for labour as fixed by the Government of India/State Govt/Union Territory from time to time under Minimum Wages Act or Contract labour Abolition and Regulation Act, whichever is higher.
- 14.2 The fair wages referred to in Condition 58 of IAFW-2249 will be deemed to be the same as the minimum wages payable as referred to above.
- 14.3 The contractor shall have no claim whatsoever, if on account of local factor and/or regulations he is required to pay the wages in excess of minimum wages as described above during the execution of work except under condition referred in clause No.23 here-in-after.
15. **CO-OPERATION WITH OTHER AGENCIES AT SITE OF WORK**
- 15.1 The contractor shall permit free access and generally afford reasonable facilities and usual conveniences to other agencies or department workman to carry out their part of the work, if any, under separate arrangements. The contractor shall not be allowed any extra payments on this account.
16. **WATER**
- 16.1 Refer Condition 31 of General Condition of contracts (IAFW-2249) and clause No. 4.9, 5.17 & 14.11 of MES Schedule of Rates Part-I. If contractor desires to buy water from Govt. the same will be supplied by the department at the cost as mentioned in tender page. The supply of water may however not be continuous, the contractor shall deem to have ascertained the hours of availability of water before submitting his tender. MES do not guarantee the output of water supply or breakdown in the system or supply if insufficient.

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**SPECIAL CONDITIONS (CONTD.)**

- 16.2 The contractor if he so desires, will be allowed to drive bore well (s) at his own cost at site approved by the GE. On completion of the work, the contractor shall remove pipe etc., installed and make good the site as directed by the Engineer-in-Charge without any extra cost to the Govt. The contractor shall, however ensure that the water drawn from such sources is clear and free from all impurities and is suitable for mixing mortar, washing aggregate and mixing of concrete as specified in IS-456. The contractor shall produce test certificate(s) to the GE from recognized Govt laboratory at his own cost about the potability of water procured from approved source(s) separately. As directed by GE if required water is to be treated by contractor to meet the requirements specified in IS at his own cost.

17. **SUPPLY OF ELECTRICITY**

- 17.1 Electricity shall be provided by MES only for labour site camp and contractor shall organize own arrangement of DG supply etc for operation of all T & P items.
- 17.2 If the contractor desires to buy electricity, the electric supply will be made available by the MES and shall be charged for the electric energy consumed for execution of works at the following rates :-
- (i) At Rs 7.89 per unit for lighting and power.
- 17.3 Electric supply required for works shall be made available by MES at the point(s) as shown on site plan/near site of work (exact location to be ascertained from the GE before tendering). The main switch and meters to register the electric energy supplied shall be provided and installed by MES. The contractor shall provide all necessary connections, cables, fittings etc from the main switch in order to ensure a proper and suitable supply of electricity for the execution of work. Contractor's all installation shall conform to and be strictly in accordance with Indian Electricity Act and moreover the layout of cable etc. shall be as per plan approved by the Engineer-in-Charge. Any risk either for materials or personnel will be the contractor's responsibility.
- 17.4 GE or his representative shall be free to inspect the power consuming devices or any electrical line provided by the contractor. Any devices or electrical lines provided by the contractor which is not to the satisfaction of the GE, shall be disconnected from the supply, if so required by him.
- 17.5 MES do not guarantee for continuity of supply and no compensation whatsoever shall be allowed for supply becoming intermittent or for break down in the system.

18. **SAMPLES OF MATERIALS**

- 18.1 Refer Condition 10 of IAFW-2249 and clause 1.6 and 1.7 of MES Schedule Part-I.
- 18.2 The tenderer is advised to inspect samples of the materials which are displayed in the office of the GE, before submitting his tender. The tenderer shall be deemed to have inspected the samples and satisfied himself as to the nature and quality of materials, he is required to incorporate in the work, irrespective of whether he had actually inspected them or not. The materials to be incorporated in the work by the contractor shall be ISI marked or shall be equal or superior in quality to the samples displayed and shall comply with the specifications given here-in-after.
- 18.3 The contractor shall not procure materials unless the samples are first got approved by the Garrison Engineer.
- 18.4 Materials provided by the contractor for incorporation in the work shall unless otherwise specified in the particular specifications, be ISI marked. IS means Indian Standards as issued by the Bureau of Indian Standard. Wherever in the specifications 'IS' is referred to, it means the edition with all amendments current on the due date of receipt of the tender documents. The contractor may however, at his own discretion provide and incorporate in the works such materials complying with the requirements of any corresponding subsequently amended or revised edition of Indian Standard without any price adjustment.

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**SPECIAL CONDITIONS (CONTD.)**

- 18.5 The materials other than materials of local origins shall comply with the requirement of the latest IS.
- 18.6 The cost of testing of materials shall be borne by the contractor while quoting their rates. This aspect shall be kept in mind and nothing extra shall be admissible on this account.

**19. RECORD OF MATERIALS**

- 19.1 The quantity of materials such as WPC, paints, bitumen primer, paving bitumen, and the like, as directed by the Engineer-in-Charge (The quantity of which cannot be checked after incorporation in the works), shall be recorded in measurement books and signed by the contractor and the Engineer-in-Charge as a check to ensure that the required quantity has been brought to site for incorporation in the work.
- 19.2 Materials brought to site shall be stored as directed by the Engineer-in-Charge and those already recorded in measurement book shall be suitably marked for identification.
- 19.3 Contractor shall produce to the GE receipted vouchers/invoices for the items as mentioned below in original in respect of the supplies. Vouchers/invoices so produced and verified shall be stamped receipted by the Engr-in-Charge indicating CA No. & name of work under his dated signature. The contractor shall ensure that the materials are brought to site in original sealed containers/packing bearing manufacturer's marking except in the case of the requirement of materials being less than smallest packing. The materials for which purchase vouchers/invoices are to be submitted invariably are:-
- (a) Cement
  - (b) Steel
  - (c) Major E/M equipments like transformers, DG Sets, Pumps, Motor, AC & Lift equipments. However contractor shall produce CST/AGST/VAT number bearing vouchers of all the items for which payment is claimed in RAR as "Materials laying at site".

**20. RECORD OF CONSUMPTION OF CEMENT**

- 20.1 The contractor shall maintain a pucca bound register with serially numbered pages with all pages initialed by the Engineer-in-Charge against numbering, showing quantities of cement received, used in work and balance at the end of each day. The form of record shall be as approved by the Engineer-in-Charge. The register shall be signed daily by representatives of MES and the contractor in token of verification of its correctness and will be checked by the Engineer-in-Charge, at least once in a week.
- 20.2 The register shall be kept at site in the safe custody of the contractor's representative during the progress of the work and shall on demand be produced for verification to the inspecting officer(s).
- 20.3 On completion of the work the contractor shall deposit cement register with the Engineer-in-Charge for record.

**21. VALIDITY OF TENDER**

- 21.1 The tender shall remain open for acceptance for a period of **60 (sixty) days** from the date of its submission.

**22. TIME AND PROGRESS CHART**

- 22.1 The time and progress chart, to be prepared as per Condition 11 of IAFW-2249. (General Conditions of Contracts), shall consist of detailed net work analysis and a time schedule. The critical path net work shall be drawn jointly by the GE and contractor soon after acceptance of the tender. The time scheduling of the activities will be done by the contractors as to finish the work within the stipulated time. The contractor is advised to use the facility of computerization available with any organization who affords such facility in doing the same. On completion of the time schedule a firm calendar date schedule will be prepared and submitted by the contractor to GE who will approve after due scrutiny. The schedule will be submitted in four copies within two weeks from the date of handing over the site. In case the contractor fails to submit the CPMnet work diagram, the net work prepared by the GE will be binding on him.

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**SPECIAL CONDITIONS (CONTD.)**

- 22.2 During the currency of the work, the contractor is expected to adhere to the time schedule and this adherence will be a part of the contractor's performance under the contract. During the execution of the work, contractor is expected to participate in the reviews and up dating of the net work under taken by the GE. These reviews may be under taken at the discretion of the Garrison Engineer, either as a periodical appraisal measure or when the quantum of work ordered on the contractor is substantially changed through deviation orders or amendments. Any revision of the time schedule as a result of review will be submitted within a week, by the contractor to the GE who will approve after due scrutiny. The contractor will adhere the revised time schedule thereafter. In case of contractor not agreeing to revised schedule, the same will be referred to the Accepting Officer whose decision will be final, conclusive and binding. GE's approval to the revised schedule resulting in a completion date beyond the stipulated date of completion shall not automatically amount to grant of extension of time. Extension of time shall be considered and decided by the appropriate authority mentioned in Condition 11 of IAFW-2249 and separately regulated.
- 22.3 Contractor is expected to mobilise and employ sufficient resources to achieve the detailed schedule within the broad frame work of the accepted methods of working and safety.
- 22.4 No additional payment will be made to the contractor for any multiple shift work or other intensive methods contemplated by him in his work schedule even though the time schedule is approved by the department.
23. **BLANK**
24. **TAXES**
- 24.1 Tenderer's rates are inclusive of all taxes and levies payable under the respective statutes as enforced by State Govt/Central Govt/Union Territory and nothing extra shall be payable to the contractor on this account. The tenderer's rates shall also be inclusive of GST on works contracts fixed under GST Act Rule amended to date entry tax, excise duty, tool tax, workers welfare tax/cess, etc as applicable to the concerned State(s).
25. **DAMAGE TO EXISTING STRUCTURE/BUILDING AND CLEANING DOWN**
- 25.1 Any damage caused to the existing structure during the execution of work shall be made good by the contractor at his own cost. The contractor shall clean all floors, walls, remove cement/lime/paint marks/drops etc., clean the joinery/glass panes etc., touch up all paint work and carryout all other necessary items of work in connection therewith and leave the site of work clean and tidy on completion. Rectification/making good etc. shall conform to the standard of materials and workmanship originally used in the work and finished work shall match with existing work in all respects to the entire satisfaction of the Engineer-in-Charge. In case of any dispute on this account, the matter shall be referred to the GE whose decision in writing shall be final, conclusive and binding.
26. **ROCK MET IN EXCAVATION**
- 26.1 If during excavation, rock is met with, GE will be informed of this in writing by the contractor. The nature/type of rock met with, will be decided by the GE whose decision is final and binding. If the nature of rock met with is "Hard Rock", the same will be priced and paid as excavation in hard rock as per Condition 62 of IAFW-2249. Hard rock obtained from excavation shall be properly stacked, measured and recorded in Measurement Book and will become the property of the Government. The measurement shall be signed by Engineer-in-Charge and contractor.

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**SPECIAL CONDITIONS (CONTD.)****27. CONTRACTOR'S PLANT / EQUIPMENT AT SITE**

27.1 (a) The contractor shall furnish to the Engineer-in-Charge every morning distribution return of his plants / equipments on the site of work stating the following particulars.

(i) Particulars of plants / equipment's, their make, manufacturer's model No. if any, Registration No., if any, capacity, year of manufacture and year of purchase.

(ii) Total No. (Quantity) on site of work.

(iii) Location indicating No. (Quantity) at each location on the site of work.

(iv) For the purpose of this condition, purchase value on the date of purchase for plant / equipment and vehicle No. of trucks and lorries shall be furnished. However neither the workman's tools nor manually operated tools / equipment shall be given. The Engineer-in-Charge shall record the particulars supplied by the contractor in the works dairy and sent the return to the GE for record in his office.

**27.2 Loss or damage on account of enemy action:-**

If as a result of enemy action the contractor suffers any loss or damage the Government shall reimburse to the contractor such loss or damage to the extent and in the manner here-in-after provided :-

a) The loss suffered by him on account of any damage of destruction of his plant/equipment (as defined in special condition herein before or materials or any part or parts thereof. (The amount of loss assessed by the Accepting Officer of the contract or the CWE in case of Contracts accepted by GE, on this account shall be final and binding,).

b) The compensation paid by him under any law for the time being in force to any workmen employed by him for any injury caused to him or to the workman's legal successors for loss of the Workman's life.

c) Payment of compensation for loss or damage to any work or part of work carried out (The amount of compensation shall be determined in accordance with condition 48 of General Conditions of contracts IAFW-2249). No reimbursement shall be made nor shall any compensation be payable under the above provision unless the Contractor had taken his defence precautions ordered in writing by GE/OC concerned or in the absence of such orders, reasonable precautions. Neither reimbursement shall be payable nor shall any compensation be payable for any plant/equipment or material not lying on site of work at the time of enemy action.

**28. CLEANING DOWN**

28.1 Refer condition 49 of IAFW-2249 General Conditions of contracts.

28.2 The contractor shall clean all surrounding area and leave the whole premises clean and tidy before handing over the site.

**29. BLANK****30. SITE FOR EXECUTION OF WORK**

30.1 Site for execution of work shall be available as soon as the work is commenced on the date as mentioned in the Work Order No. 01. However, in case due to unavoidable circumstances it is not possible to make the entire site available on the date of the commencement, the contractor shall have to arrange his programme accordingly. No claim whatsoever for not getting the entire site on the date of commencement of work and for giving the site gradually shall be tenable

**31. SAFETY PRECAUTION**

31.1 The contractor shall take every precaution to control traffic on road keeping danger boards, necessary lighting arrangements, fence and watchman to avoid any damages in case due to excavation or others, the road is to be blocked, the contractor shall without any extra cost to the Govt provide separate bypass to that normal traffic is not disturbed.

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**SPECIAL CONDITIONS (CONTD.)**

- 31.2 Any damages to the existing structures/roads/building etc shall be made good by the contractor with the same specifications as per the existing work, without any extra cost to the Govt. in event of contractor not fully complying with the above provisions to the satisfaction of the GE, the GE may provide the same for which the expenses incurred will be recovered from the contractor.

32. **RETENTION MONEY/COMPENSATION FOR DELAY**

- 32.1 Refer Condition 64 of IAFW-2249 (advance on Account) and Condition 50 of IAFW-2249 (Compensation for delay)

- 32.2 For the purpose of calculating retention money and liquidated damages under Condition 64 of IAFW-2249 and compensation for delay in completion of work under Condition 50 of IAFW-2249, the value of contract as revised including price variation under modified Condition 63 of IAFW-2249 (if any) shall be taken into account.

33. **REIMBURSEMENT/REFUND ON VARIATION IN "TAXES DIRECTLY RELATED TO CONTRACT VALUE":**

(a) The rates quoted by the Contractor shall be deemed to be inclusive of all taxes (including GST on materials, GST on works contracts, Turnover Tax, Labour Welfare cess/tax etc.), duties, royalties, Octroi & other levies payable under the respective Statutes. No re-imbursement/refund for variation in rates of taxes, duties, Royalties, Octroi & other levies, and/or imposition/abolition of any new/existing taxes, duties Royalties, Octroi & other levies shall be made except as provided in sub para (b) here-in-after.

(b) (i) The taxes which are levied by Govt at certain percentage rates of Contract Sum/Amount shall be termed as "taxes directly related to Contract value" such as GST on works Contracts, Turnover Tax, GST, Labour Welfare Cess/tax and like but excluding income Tax. The tenderer's rates shall be deemed to be inclusive of all "taxes directly related to Contract value" with existing percentage rates prevailing on last due date for receipt of tenders. Any increase in percentage rates of "Taxes directly related to Contract value" with reference to prevailing rates on last due date for receipt of tenders shall be re-imbursed to the Contractor and any decrease in percentage rates of "taxes directly related to Contract value" with reference to prevailing rates on last due date for receipt of tender shall be refunded by the Contractor to the Govt/deducted by the Govt from any payments due to the Contractor. Similarly imposition of any new "taxes directly related to Contract value" after the last due date of receipt of tenders shall be reimbursed to the Contractor and abolition of any "taxes directly related to contract value" prevailing on last due date for receipt of tenders shall be refunded by the Contractor to the Govt/deducted by the Govt from the payments due to the Contractor.

(ii) The contractor shall, within a reasonable time of his becoming aware of variation in percentage rates and/or imposition of any further "taxes directly related to Contract value" give written notice thereof to the GE stating that the same is given pursuant to this Special Condition together with all information relating there to which he may be in a position to supply. The Contractors shall also submit the other documentary proof/information as the GE may require.

(iii) The Contractor shall, for the purpose of this condition keep such books of account and other documents as are necessary and shall allow inspection of the same by a duly authorized representative of Govt, and shall further, at the request of the GE furnish, verified in such a manner as the GE may require, any documents so kept and such other information as the GE may require.

(iv) Reimbursement for increase in percentage rates/imposition of "taxes directly related to Contract value" shall be made only if the Contractor necessarily & properly pays additional "taxes directly to Contract value" to the Govt, without getting the same adjusted against any other tax liability or without getting the same refunded from the concerned Govt Authority and submits documentary proof for the same as the GE may require".



**SPECIAL CONDITIONS (CONTD.)****34. Testing of Materials**

34.1 **A Level Tests for Works Costing 100 Lakhs and above:** The contractor shall set up site laboratory for testing of materials (except Sch 'B' materials) for 'A' level tests as listed in Appx 'A'. The contractor shall arrange all equipment/ machines for the tests specified in Appx 'A' as A level tests at his own cost with prior approval of GE/AGE(I). This cost shall be included in the lump-sum costs quoted by the contractor. The contractor shall employ a competent technical representative as approved by the GE/AGE(I) for the purpose of testing and all such tests shall be carried out in the presence of Eng-in-charge. The successful tests result thereof shall be recorded and signed jointly by the contractor and the Eng-in-charge. The charges for these test i.e. A level tests carried out in site laboratory of the contractor shall not be recovered. In case, the contractor has not set up the site laboratory and the tests are carried out in zonal or any other laboratory set up/approved by GE/AGE(I), the recovery shall be made at rates applicable i.e. as given in Appx 'A'.

34.1.1 **A Level Tests for Works Costing upto 100 Lakhs:** The contractor may set up site laboratory at his option for works costing upto 100 lakhs. The other stipulations will be same as specified in preceding para 30.1. However in case the contractor has not set up the site laboratory and tests are carried out in zonal or any other laboratory approved/set up by GE/AGE(I), the recovery shall be made at rates applicable ie as given in Appx 'A'.

34.2 **B & C Level Tests:** For tests of 'B' & 'C' level as indicated in Appx 'A', the contractor shall provide all facilities for testing of materials at zonal laboratory/Govt. approved laboratories or test house/Engg. Colleges at his own cost. The lump sum/rates quoted by the contractor shall deemed to be inclusive of these tests. The rates of various tests conducted in laboratory of MES are indicated in Appx 'A'. The contractor shall bear the actual charges of 'C' level tests (to be done in labs other than MES labs) irrespective of rates indicated in Appx 'A'. Wherever it is convenient to get 'B' level test done at approved test house/Engg. College, the same can be done at the cost of the contractor and no separate recoveries will be made by the Department for the same.

34.3 The recoveries on account of testing charges wherever applicable shall be effected from the running account payments due to the contractor payable after completion of the respective tests or whenever the test is due whichever is earlier.

**SIGNATURE OF CONTRACTOR**

**DATED:** \_\_\_\_\_

**AGE (CONTRACTS)**

**FOR ACCEPTING OFFICER**

**PARTICULAR SPECIFICATIONS****NAME OF WORK : SPECIAL REPAIR TO JCOS/ORS MD ACCN BLDG NO- 25/2, 25/4, 26/1, 26/4, 27/2, 27/4, 36/2, 36/3, 37/4 & 39/4 AT MU CAMP OF ESD KANKINARA UNDER GE (NORTH) KOLKATA****1. GENERAL:**

1.1 General Rules, Specification for materials, workmanship and standard specification referred to the MES standard Schedule of rates 2009 Part I and 2020 Part II here-in-after referred to as MES schedule or SSR shall be deemed to apply to this contract unless mentioned otherwise in these tender documents. Where these are at variance, the later shall take precedence.

1.2 Materials to be provided by the contractor for incorporation in the work shall unless otherwise specified in the particular specification comply with their requirements of the relevant Indian Standard (IS) of the year of publication (Edition/Revision) as specified in MES schedule 2009 (Part I) or published on a date prior to issue of tender whichever is later. The contractor may, however, at his own discretion provide and incorporate in the works such materials complying with the requirement of any subsequently amended or revised edition of the corresponding IS without any price adjustment of the lump sum or while pricing deviation.

1.3 Particular specifications given here-in-after are in brief and intended only to particularise, amend and emphasise the specification given in MES Schedule which are not repeated here-in-after.

1.4 Specification of materials and workmanship shall be all as described in MES Schedule except where specifically mentioned otherwise in these documents. General rules, preambles to various section/rates, special condition and method of measurement given in MES Schedule shall also apply to the contract unless otherwise mentioned in the tender documents.

1.5 Specification of materials and workmanship shall be all as described in MES Schedule except where specifically mentioned otherwise in these documents. General rules, preambles to various section/rates, special condition, and method of measurement given in MES Schedule shall also apply to the contract unless otherwise mentioned in the tender documents.

1.6 The rates quoted by the contractor shall be deemed to include for any minor details of construction which are obviously and fairly intended which may not have been included in these documents but which are essential for the execution and entire completion of work.

1.7 The rates quoted for supplying and fixing sub main wire and other equipments shall be deemed to include for necessary dismantling of walls/floors etc and making them good to match with the adjoining surfaces.

1.8 The contractor shall submit the test certificates from the manufacturers/authorised dealers for the equipments being incorporated in the work.

**2. SCOPE OF WORK**

2.1 The work under this contract comprises of entire completion of the work described in BOQ and as specified in these particular specifications. Tenderer are advised to visit the Site(S)/Building(S) and ascertain themselves the exact scope of work and its working conditions, viz. working hours, availability of site(s)/Building(s), etc. and quote their tenders (Unit Rate) accordingly. Any claim whatsoever will not be entertained by the Government at a later date.

**PARTICULAR SPECIFICATIONS(Contd.....)****3 CODE OF PRACTICE**

- 3.01 Materials and workmanship of all fittings, appliance equipments etc., used in the work shall be of the best quality available, shall be suitable in every way for services required and shall generally comply to the latest IS codes where they exist and in case no IS exists, the item shall be approved by the GE before its incorporation in the work.

**3.1 MATERIALS**

- 3.1.1 All materials to be supplied by the contractor for incorporation in the work shall conform to relevant specification and shall be got approved in writing from GE. In case specification for any materials needed for incorporation in the work is not contained in any of the contract documents, the specification of such materials proposed to be incorporated in work shall be got approved in writing from GE before incorporation in the work.
- 3.2 All manufactured materials/articles other than those manufactured in contractor's workshop at site of work shall bear IS certification mark. In case any such articles do not bear the IS certification marks but conform to relevant specifications and be proposed to be incorporated in the works, samples of the same shall be got approved in writing from the GE before their incorporation in the works, The contractor shall submit sufficient evidence to Engineer-in-Charge to show that such articles conform to the relevant specification.
- 3.3 The contractor shall supply samples of materials taking into account delivery period (s) after placing from order and allowing samples time for their testing and approval in order that if the samples supplied fail to comply with the specified requirements there will be sufficient time for him to submit fresh samples and for Engineer-in-Charge to receive, and approve samples well before the materials are required to be used.
- 3.4 All manufactured materials/articles shall be brought at site in original sealed container/packing bearing manufacturer's marking unless the quantity required in a fraction of smallest container packing, sealed container shall be opened in the presence of Engineer-in-Charge as and when required and empty container shall be kept in contractor's store till the completion of the project for inspection by GE/other inspecting officer.
- 3.5 Materials of proprietary nature such as paint, water proofing compound, bitumen for water proofing treatment, chemical for anti-termite treatment etc and the like, quantity which cannot be ascertained after their incorporation in the works shall be measured and recorded in the measurement books under heading "**NOT TO BE ABSTRACTED**" as soon as same is/are brought to site and approved for use. Such measurement shall be signed by Engineer-in-Charge and the authorize representative of the contractor. The contractor is required to obtained all such materials direct from the manufacturers/or their authorized dealers (if any) and to submit to Engineer-in-Charge original stamped receipted bills along with relevant invoices in support of having brought the full quantity required for incorporation in the work and get this documents duly endorsed by the Engineer-in-Charge to the effect that the same materials and quantity have been used of in the works. A record of their use shall be kept date wise in works diary. The contractor shall comply with such instructions as are given to him time to time by the Engineer-in-Charge.

**PARTICULAR SPECIFICATIONS(Contd.....)**

3.6 The sources of some of the materials are indicated below :-

<b><u>Materials</u></b>	<b><u>Sources</u></b>
(a) Sand	Pandua/Tarakeshwar/Mogra
(b) Bricks sub class 'B' bricks ((old size bricks)	Locally available best quality
(c) Broken/crushed stone aggregate	Pakur/Asansol

3.7 **TESTING OF MATERIALS**

3.7.1 Before incorporation in the work, the building materials etc are required to be tested for quality control in material testing laboratory.

3.7.2 The various tests (as applicable) and frequency thereof shall be as given in relevant IS/SSR . The type of test to be carried out shall be as directed by GE. Contractor shall be deemed to have quoted accordingly. The requisite tests shall either be carried out in MES Zonal Laboratory (if such facility exists). If no such tests facility exists in Zonal Laboratory, the same shall be carried out at the following Laboratories/Institutions at the contractors own arrangement and expenses :-

- (a) National Test House, Kolkata
- (b) Regional Testing Laboratory, 110/111 BT Road, Kolkata
- (c) SEMT Pune
- (d) Bengal Engineer College, Shibput, Howrah
- (e) Govt Approved Laboratories having NABL certification / Accreditation.
- (f) Established Engineering College in the area

The contractor shall supply all the materials, moulds etc required for testing including transportation of materials without any extra cost of the Govt. The unit rate quoted by the tender shall deemed to be included the cost of testing charges.

3.8 **STANDARD AND QUALITY OF WORK:**

3.8.1 The entire electrical work under this contract shall be carried out in conformity with the provisions contain edinthelatest edition (including amendments) of Indian Electricity Act 1940 , Indian Electricity Supply Act 1948, IS Rules 1942 and relevant IS specification and the rules enforced by the State Government.

3.8.2 Allelectricalwork shallbecarriedoutby properly skilledelectriciansunderthesupervisionofsuitably qualifi edelectricalsupervisorsandthecontractorsandondemandbyEngineer-in-Chargeshallproduce such evidenc eeitherat the commencementofthe workoratanytime thereafter.

3.9 **EQUIPMENT AND MATERIALS**

3.9.1 All equipments and materials to be incorporated in the work have ISI certifications mark on them, wherever available. However, if equipments and materials with ISI mark are not available the equipments and materials supplied by the contractor shall comply with relevant IS, issued and if relevant IS has not been issued these shall comply with current relevant IS unless otherwise specified in these tender documents.

**PARTICULAR SPECIFICATIONS(Contd.....)**

- 3.9.2 In case tenderer offer conforms to the standard specifications other than ISI/BIS copies of such standard Specification with English translation and salient point so comparison between two standards shall be submitted along with the tender.
- 3.9.3 Approval of GE as referred to in clause 19.2.1 of MES Schedule Part- I, 1991 shall be in writing. Approved samples shall be labeled as such and signed by both the contractor and GE. The samples shall be kept in the custody by the GE till the final completion of the work.
- 3.9.4 The materials shall be brought to the site by the contractor in the maker's original packing with seal in tact with maker's wrapper and shall not be installed unless approved by the Engineer-in-Charge.

**4. CONCRETE WORK****4.1 CEMENT:**

4.1.1 Cement will be procured by the contractor at his own arrangements. The cost of cement, its transportation, storage, testing charges, its accounting and preservation etc till consumed in work shall be borne by the contractor.

**4.2 TYPE OF CEMENT**

TYPE OF CEMENT: Cement shall be Ordinary Portland Cement Grade 43 conforming to IS 8112-1989 (Latest revision) or Portland Pozzollana Cement, conforming to IS 1489-1991 and shall not be more than 3 months old on the date it is received / brought at site work. For this purpose the date of manufacture printed on the cement bag and as mentioned in the purchase voucher shall be considered for calculating the period of 3 months.

**4.3 PROCUREMENT.**

- 4.3.1 Cement supplied by the contractor shall be procured from main producers of cement
- 4.3.2 The following are the approved main cement manufacturers company of OPC and PPC.

**PARTICULAR SPECIFICATIONS(Contd.....)**

Srl no	Company Name	Address	Approved grade of cement
1.	M/s Cement Manufacturing Company Ltd	Mayur Graden, 2nd Floor, opp- Rajuv , Bhawan, GS Road, Guwhati-781005 , Ph- 0361- 2462215/216/513 , Fax: 0361-2462217 , Email: <a href="mailto:cmclghy@cml.co.in">cmclghy@cml.co.in</a>	OPC-43, 53 Grade & PPC
2.	Ultra Tech Cement	'B' Wing . 2n Floor, Mahakali Caves Road, Andheri (East), Mumbai- 400093	OPC-43 Grade, PSC & PPC
3.	OCL India Ltd	Rajgangpur, Dist- Sundargarh, Orissa, Pin- 770017, Ph- 0361-2668504 , Fax-2662131	OPC-43 Grade & PPC
4.	Dalmia Cement (Bharat) Ltd	Dalmiapuram, Disttiruchirappalli, Tamil Nadu – 621651	OPC-43 Grade & PPC
5.	Mls Chettinad Cement Corporation Ltd	4 Floor, Rani Seethai Hall Building, 603, Anna Salai Hall, Chennai-600006, Tel No. 044- 42951800, Fax No. 044-28291558, EMail: - <a href="mailto:info@chettinadcement.com">info@chettinadcement.com</a> Website- <a href="http://www.chettinadcement.com">www.chettinadcement.com</a>	OPC-43 Grade, PSC & PPC

**PARTICULAR SPECIFICATION (CONTD)**

Srl no	Company Name	Address	Approved grade of cement
6.	M/S Heidelberg Cement India Ltd	9th Floor, Infinity Tower "C", DLF Cyber City, Gurgaon, Haryana - 122002, Ph- 0124- 4503700, Fax- 0124-4147698	PPC
7.	M/S My Home Industries I Ltd	9 Floor, Block-3, My Home Hub, I Madhapur, Hyderabad- 500081, Ph- 040-66929696, Fax- 040-66929797198	OPC-43 Grade & PPC
8.	M/S Parasakti Cements Ltd	REGD OFFICE:-123/3 RT, Plot # 8-3-214/21 , Srinivasa Nagar Colony(West), Tel- 040- 44119100 /200, Fax- 040-23747562	OPC-43 Grade & PPC
9.	M/S Zuari Cement Ltd	No. 6, MC Nichols Road, Chetpet Chennai - 600031 Ph. 044-28363958, 28365047	OPC-43 Grade & PPC
10.	M/S Toshati Cements Pvt Ltd	123/13RT, 2nd Floor Sanjeeva Reddy Nagar, Hyderabad -500038, Ph 040-2300675 CORPORATE OFFICE 9-14-13, C.B.M Compound, Near Mehar Apartments, Visakhapatnam-530003	OPC-43 Grade, PSC & PPC
11.	MIS Saifco Cement Pyt	Opposite Post Office, Batwara, Srinagar - 190004(J&K) Ph 0194-2466061	OPC-43 Grade
12.	MIS Prism Cement Ltd Prism	3/113, Vivek Khand, Gornto Nagar, Lucknow - 226010 Ph. 0522- 2396847, 2397589	OPC-43 Grade & PPC
13.	MIS Shree Guru Kripa cement (Pvt) Ltd	4/4 Trikuta Nagar Jammu, Phone no-0191- 2472043	OPC-43 Grade & PPC
14.	M/S Barak Valley Cements Ltd	Debendra Nagar, Badarpur Ghat, Distt :- Karimganj Assam -788803, Ph. 03845-269258	OPC-43 Grade
15.	M/s Dhruv Industrial Company Ltd.	49/27 Sinha Market General Ganj, Kanpur- 208001	OPC-43 Grade

<b><u>PARTICULAR SPECIFICATIONS(Contd.....)</u></b>			
<b>Srl no</b>	<b>Company Name</b>	<b>Address</b>	<b>Approved grade of cement</b>
16.	Madras Cement	Auras Corporate Centre, 98-A, Dr., Radhakrishnan Salai, Mylapore, Chennai – 600004, Ph-044 28478666	OPC-43 Grade & PPC
17.	Saurashtra Cemen-t	Gala No A-1, Ground Floor. Udhog, Sadan No 3 MIDC, Central Road, Andheri (East), Mumbai- 400093	OPC-43 Grade & PPC
18.	Lafarge Cement	Crescenzo, 1004, 8-wing , 10 Floor, C-38/39, G Block, Bandra Kurla, complex, Bandra (East) . Mumba-400051	OPC-43 Grade & PPC
19.	The Associated Cement Companies Ltd	414-421 , Splendor Forum (4th Floor} , 3, District Centre, Jasola, New Delhi – 110044, Ph- 011 46583600	OPC-43 Grade & PPC
20.	Grasim Industries ltd	Birlagram. Nagda, Madhya, Pradesh, Pin- 456331 Phone- 07366-246760/246766	OPC-43 Grade & PPC
21.	The India Cement	Building, 827,. Anna Salai, Chennai- 600002	OPC-43 Grade & PPC
22.	The India Cement	Dhun Building, 827, Anna Salai, Chennai- 600002	OPC-43 Grade & PPC
23.	Andhra Cement Ltd	Durga Cement Works, Durgapuram, Dechepalli Guntur, Andhra Pradesh, Pin-522414 , Ph-0863 257429	OPC-43 Grade & PPC
24.	Century Cements	Industry House, 159 Church gate Reclamation, Mumbai -400020 , Ph-22-22023936	OPC-43 Grade & PPC
25.	Binan Cement Ltd	Mercantile. Chambers. 12, J.N Heredia Marg, Ballard Estate, Mumbai -400001 Ph-022- 22690506/10	OPC-43 Grade & PPC
26.	Mangalam Cement Ltd	PO Adityanagar, Morak, DistKota, Rajasthan- 326520 Ph-9351468076	OPC-43 Grade & PPC



**PARTICULAR SPECIFICATION (CONTD)**

Srl no	Company Name	Address	Approved grade of cement
27.	Birla Corporation Ltd	Birla Building (3rd & 4th Floor) -9/1, R.N Mukherjee Road, Kolkata -700001, Ph-033-30573700	OPC-43 Grade & PPC
28.	Orient Cement	5-9-22/57/0, 2nd and 3rd Floor, GP Birla Centre, Adarsh Nagar, Hyderabad-500063, Pin-044 23688600	OPC-43 Grade & PPC
29.	Shree Cement	Bangur Nagar, Beawar, Dist:-Ajmer, Rajasthan-305901 Ph -01462 228101-06	OPC-43 Grade & PPC
30.	J K Cement		OPC-43 Grade & PPC
31.	J K Lakshmi Cement Ltd	Jaykaypuram, Dist-Sirohi, Rajasth) aQ .. Ph-02971 244409/10	OPC-43 Grade & PPC
32.	Jaypee Rewa Cement		OPC-43 Grade & PPC
33.	Ambuja Cement Ltd	Kodinar, PO-Ambujanagar, Taluka-Kodinar, DistJunagadh, Gujarat-362715 Ph-02795 237000	OPC-43 Grade & PPC
34.	M/s Calcom Cement India Ltd (NE region only)	Silpukhuri South Bank, Guwahati, Assam, Pin-781003 Ph-0361-2668504, Fax-2692131, Website: www.calcom.co.in	OPC-43 Grade & PPC
35.	M/S Meghalaya Cements Ltd	Lohia House, M. G Road Factory Bazar, Guwahati-781001. Tel 0361 -260367/671	OPC-43 Grade
36.	M/S Narayan Kar & Associates Pvt Ltd	Bodhjunnagar Ind, Growth Centre, P.O Khayerpur-799008 West Tripura Ph. 0381-2514927/4786	OPC-43 Grade & PPC
37.	Star Cement Manghalaya	Lumshnong, PO-Khaliehriat, Dist-Jantia Hills, Meghalaya, Ph-03655 278215/16/18	OPC-43 Grade & PPC

**4.3.3 Blank****4.3.4 While using PPC, the following requirements shall be met with:-**

- PPC shall meet the strength criteria of 43 grade OPC as laid down in IS 8112 - 1989.
- The minimum period before striking formwork given in Clause 11.3.1 of IS-456 shall be suitably modified at site by the GE. The contractor shall not claim any extra cost on this account.
- Mixing of OPC and PPC shall not be allowed in a work.
- While procuring PPC, the following requirements are to be ensured and certificate to that effect from the manufacturer shall be submitted by the contractor for Each batch:-

**PARTICULAR SPECIFICATIONS(Contd.....)**

- (i) The quality of fly ash used is strictly as per IS-1489 (Part-I)-1991.
- (ii) The fly ash is inter ground with clinker and not mixed with clinker.
- (iii) The dry fly ash is transported in closed containers and started in silos. Only pneumatic pumping has been used.
- (iv) The fly ash has been received from thermal power plants using high temperature combustion above 1000 Degree Centigrade.
- (v) The fly ash content in PPC is less than 25% to achieve desired consistency.

4.3.5 Cement brought by the contractor at site(s) of work shall be in jute/polythene/paper bags containing 50Kg cement in Each bag originally sealed by manufacturer. Before allowing any on account payment for materials at site, test check shall be carried out to ascertain average weight of cement per bag.

4.3.6 Contractor shall produce purchase vouchers, test certificates and other valid documentary proof to the entire satisfaction of the GE for entire quantity of Each consignment to prove that cement has been purchased from the main producers as in para 3.2.2.1 above. The contractor shall also submit particulars of the manufacturer of cement for every lot for verification by the site staff and GE.

**4.4 TESTING OF CEMENT**

4.4.1 The contractor shall submit the manufacturer's test certificate in original along with the test sheets giving the result of Each physical test as applicable and the chemical composition of the cement or authenticated copy thereof, in accordance with BIS provisions duly signed by the manufacturer or his authorised representative with Each consignment. The Engineer-in-Charge shall record these particulars in the Cement Acceptance Register (Format given in Appx 'B' attached herewith).

4.4.2 Cement brought to site of work shall remain the property of Govt. Contractor shall in no case, remove any bag of cement unless permitted in writing by the GE. In addition to manufacturer's test certificate, the GE shall also take random samples of cement drawn from various lots of Each consignment as specified in IS Codes and get them tested from any one of the Govt. approved laboratories at his discretion or from SEMT CME, Regional Research Laboratory or Zonal Laboratory, all as per IS-3535(Method of Sampling Hydraulic Cement), IS-4031 (Method of Physical Test of Hydraulic Cement)1985 and IS-4032 (Method of Chemical Analysis of Hydraulic Cement). Irrespective of results, cost of materials for such samples, cost of requisite handling & conveyance etc shall be borne by the contractor. Cement from Each consignment shall be allowed to be incorporated in the work only after the GE is satisfied with the quality of cement brought by contractor.

4.4.3 It shall be ensured that tested and untested cement is segregated and stored separately with distinct identification. Cement of different brands shall be stacked separately by the contractor. The stacking of cement shall not be more than 10 bags high.

4.4.4 Cost of testing undertaken as per provision in Clause 4.3.1 of SSR Part-I shall also be borne by the contractor.

4.4.5 If the test results on samples of a particular consignment are not within acceptable limits, the matter shall be referred to the Accepting Officer, whose decision regarding acceptability of such cement with price adjustment or removal from the site shall be final and binding. Cement so rejected or any bag of cement in godown showing indication of any setting shall be segregated and removed by contractor from the site within a week's time, with due permission of the GE for their removal.

Contd....

**PARTICULAR SPECIFICATION (CONTD)****4.5 STORAGE/CONSUMPTION OF CEMENT**

4.5.1 Cement in bags shall be stored in proper leak proof/damp proof storage godown, over at least a 20cm high platform, away from walls in such manner as to prevent deterioration due to moisture or intrusion of foreign matter, all as specified in Clause 4.3.1 of SSR Part-I.

4.5.2 For the purpose of keeping a record of cement procured and consumed in works, the contractor shall maintain a properly bound register in the form approved by the Engineer-in-Charge showing all procurements, quantity used in the work and balance in hand, at the end of Each day and such other information as may be required to control the consumption of cement. Pages of the register shall be numbered and initialled by Engineer-in-Charge. This register shall be signed daily by the contractor or his representative as token of correctness of the entries made. In token to check, it shall be signed by MES representative also as follows :-

a) Daily by JE(Civil) in-charge of works.

b) Twice in a week by the Engineer-in-Charge.

4.5.3 The said register shall remain at site of work, in the safe custody of the contractor and on demand same shall be produced for verification of Inspecting Officer. On completion of the work, the register shall be returned to MES. The cement godown shall be provided with two locks on Each door. The key of one lock on Each door shall remain with the Engineer-in-Charge or his authorised representative and that of the other lock with the contractor's authorised agent at site of work so that cement is removed from the godown according to daily requirements and with the knowledge of both the parties.

4.5.4 Foregoing provisions shall not, however absolve the contractor of his responsibility of incorporating required quantity of cement in various items of works as per contract provisions.

4.5.5 Cement shall be used in order of which it is received. It shall be ensured that only one type/make of cement is used in any structural member.

4.5.6 Cement shall not be more than 02 months old and shall be consumed within next 02 months of its packing.

**4.6 DOCUMENTATION**

4.6.1 The contractor shall submit original purchase vouchers from the main producer for the total quantity of cement supplied under Each consignment to be incorporated in the work. All consignment received at the work site shall be inspected by the GE along with the relevant documents before acceptance. The original vouchers and the test certificates shall be defaced by the Engineer-in-Charge and kept on record in the office of the GE duly authenticated and with cross reference to the control number recorded in the Cement Acceptance Register. The cement Acceptance Register will be signed by the JE(Civil), Engineer-in-Charge, GE and the contractor. The Accepting Officer may order a Board of Officers for random check of cement and verification of connected documents. The entire quantity of cement shall be suitably recorded in the Measurement Book also for record purposes before incorporation in the work, as "Not to be abstracted" indicating the voucher number with dates, quantity, date of manufacture/expiry date etc. It shall form the basis to allow advance on account through RARs.

**4.7 SCHEDULE OF SUPPLY**

4.7.1 The Contractor shall ensure that procurement action is taken immediately after acceptance of the contract so as to adhere to schedule of activities as per CPM Net Work.

4.7.2 The periodicity of striking the form work and curing for works with ordinary Portland cement, shall be as stipulated in Clause 11.3 and 13.5 of IS 456 of 2000 and the same shall be suitably modified by the GE when PPC is used. No claim, whatsoever on his account shall be admissible.

**PARTICULAR SPECIFICATION (CONTD)****5.0 CONCRETE WORK:**

- 5.1 **FINEAGGREGATE(SAND):** Fine Aggregate i.e. Sand shall be naturally occurring River Bed and conforming to sample kept in GE office and/or as approved by GE. Sand shall be stored at Site(s) in Bin(s) or in Dump(s) on the Brick Platform or by using any other approved method so as to avoid contamination or shovelling all as directed by Engineer-in-Charge. Sand shall not be contains any type of harmful materials and shall be free from all type of Impurities, Dust, Silts, etc. and all as specified in Para 4.4.1 to 4.4.3 of MES Schedule Part-I, 2009 (as applicable).
- 5.2. **GRADING**– Grading of Fine Aggregate i.e. Sand shall be all as specified in Para 4.4.7.2 of MES Schedule Part-I for Grading Zone II/III.
- 5.3 **COURSEAGGREGATE(STONE):**– Coarse Aggregate shall be crushed/broken Stone Aggregate, conforming to sample kept in GE office and/or as approved by GE. Aggregate shall not be contains any type of harmful materials, shall be free from all type of Impurities, Dust, Silts, etc. and all as specified in Para 4.4.1 to 4.4.3 of MES Schedule Part-I, 2009 (as applicable).
- 5.4 **GRADING:**– Grading of Coarse Aggregate i.e. Stone Aggregate shall be all as specified in Para 4.4.7.1 of MES Schedule Part-I, 2009.
- 5.5 **WATER:**– Refer to Para 4.9 and 4.9.2 of MES Schedule Part-I, 2009.
- 5.6 **WORKMANSHIP IN GENERAL:**– Refer to Para 4.11.1, 4.11.2 and 4.11.2.4 of MES Schedule Part-I, 2009.
- 5.7 **WORKABILITY OFCONCRETE:**– Refer to Para 4.11.4 of MES Schedule Part-I, 2009.
- 5.7.1 **MIXING OF CONCRETE:**– Refer to Para 4.11.5 and 4.11.5.1 of MES Schedule Part-I, 2009. All Cement Concrete (Plain/ Reinforced) shall be mixed in Concrete Mixers of approved type except that Hand Mixing for small quantities may be done with prior written permission of Engineer-in-Charge all as specified in Para 4.11.5.1 of MES Schedule Part-I, 2009. Wherever the Concrete is specified/ ordered in Volumetric Proportion, the same shall be provided by Volumetric Mix. Volumetric Mix shall be done all as specified in Para 4.11.2.4 of MES Schedule Part-I, 2009.
- 5.8 **Volumetric Mix Concrete:** Concrete shall be Volumetric Mix concrete except design as specified in BOQ) shall be proportioned as per Table – 9 of IS- 456.
- 5.9 **CONSOLIDATION OF CONCRTE** : All reinforced cement concrete shall be consolidated by mechanical vibrators. Consolidation by tampering may be resorted to with the prior permission of GE in writing in locations where it is not practicable in the opinion of GE to operate the vibrator or where quantity of concrete is small. Care shall be taken to ensure that concrete is not over vibrated so as to cause segregation.
- 5.10 **CURINGOFCONCRETE** – Refer to Para 4.11.13 of MES Schedule Part-I, 2009.
- 5.11 **FORM WORK:** – Refer to Para 4.11.6.1 of MES Schedule Part-I, 2009 as applicable. Form Work (as required) for Concrete Surface where exposed to view shall be for fair finished surfaces or as specified in BOQ .
- 5.12 **DEPOSITING OF COMPACTING** : Depositing and compacting shall be carried out as mentioned in clause 4.11.10 to 4.11.1 of SSR 2009 Part – 1.

**PARTICULAR SPECIFICATIONS(Contd.....)****6. BRICK MASONRY****6.1 MATERIALS**

- 6.1.1 **BRICKS**: Bricks shall be kiln burnt Fly ash Bricks best quality conforming to the samples kept in GE office. Unless specified otherwise in BOQ notes of drawings, bricks shall have minimum crushing strength of 75 Kg per Sq cm, water absorption of bricks shall not exceed 20% when tested in accordance with IS-3495-1966. Sampling and testing of bricks shall be carried out as per IS 5454 (1978) and IS-3495-1966. The size of bricks shall be 250 x 125 x 75 mm. The tolerance in the dimensions shall be  $\pm 8\%$ . The entire workmanship shall conform to relevant clauses in SSR Part I, 2010, section 4, as applicable.

**7. STEEL & IRON WORK****7.1. GENERAL**

7.1.1. Refer relevant Clause No. of MES Schedule Part-I and as approved by GE. All Steels require to Incorporate in the Work shall be Contractor's Supply.

**7.2. TYPES OF STEEL****7.2.1. REINFORCEMENT STEEL FOR ALL LOCATIONS AND:-**Steel bars for concrete

reinforcement wherever shown on drawings shall be TMT bars produced by Thermo Mechanical Treatment Process and grade of steel shall be mention on structural drawing, unless other wise the grade of steel is not specified on drawing, the grade of steel shall be (Grade 500D) and meeting all requirement of IS-1786-2008. Where ever mild steel reinforcement bars are shown on drawings these shall be amended to read as TMT bars of same dia or nearest higher dia and accordingly to be provided.

**7.2.2. STRUCTURAL STEEL**

**7.2.2.1. STANDARD QUALITY** : Structural steel except hollow steel sections shall be conform to IS-2062-2006, E-250 (FE 410W). This steel shall be provided in the location mentioned in the drawings and as specified in Clause 10.4.1 of MES Schedule Part-I. In case the quality of structural steel i.e. A, B or C is not mentioned in drawings then quality A shall be used and same shall be followed for deviation if any

**7.2.2.2. ORDINARY QUALITY** : Unless otherwise specified, Mild Steel Members in Grills/Guard Bars, Holdfasts, Door and Window, Frames, Railing, Steel Windows, Steel Doors and the like shall be ordinary quality of Steel conforming to IS-2062-2006, E-165 (Fe 290).

**7.2.2.3. HOLLOW STEEL SECTIONS FOR STRUCTURAL USE** : Hollow steel sections for structural steel section shall be conform to IS-4923-1997 and grade of steel shall be YSt 310. This steel shall be provided in the location mentioned in the drawings.

**PARTICULAR SPECIFICATION (CONTD)****7.2.3. SOURCE OF PROCUREMENT**

**7.2.3.1. REINFORCEMENT STEEL (TMT STEEL Fe- 500D):-** TMT steel bars of all sizes shall be procured directly from following primary producer.

1.	Rashtriya Ispat Nigam Limited (RINL) Visakhapatnam Steel Plant Visakhapatnam- 530 031, India Tel: (91 891) 518226. 518376 Fax: (91 891) 518316 Email: cmdvsp@itpvis.ap.nic.in	2.	Tata Iron & Steel Company (TISCO, or Tata Steel) Bombay House. 2. 4 Homi Modi Street Mumbai - 400 001. India Tel: (91 22) 204 9131 Fax: (91 22) 204 9522. 287 0840 Email: corpcomm@isr.tatasteel.com ( Br office for North : Jeevan Tara Bldg. Patel Chowk . New Delhi)
3.	Steel Authority of India Limited Central Marketing Organization. Northern Region 17th Floor, scope Minar, Laxmi Nagar Distt. Centre. Delhi- 110092	4.	M/S Jai Balaji Industries Ltd Registered Office 5 Bentek street, Kolkata- 700001, Delhi Office 510, Block-b, Navraung House 21 Kasturba Gandhi Marg, New Delhi- 110001, 011-43620219, 43620220 Mob: 7838272772/9958936103 E-mail- 1info@jaibalajigroup.com
5.	M/S Shyam Steel Industries Ltd, Shyam Towers EN-32, Sector-V, Salt Lake. Kolkata-700091, Tel.:033-40074007, Fax-033- 40074010, E-mailmarketing@ shyamsteel.com	6.	M/S SPS Steel Rolling Mills Ltd., 68, Ballygunge Circular Road, Kolkata- 700019 Ph- 033- 2895160/67 Fax- 033- 22894386 E-mail- spsdelhi@spsgroup.co.in
7.	M/S Steel Exchange India Ltd, My Home Laxminivas Apartments. A.Am.Pe.erpet, Hyderabad-500016, Tel-040-23403725, Fax-040-23413267, E-mail-info@seil.co.in	8.	M/S Jindal Steels and Power Ltd. (TMT) Plot No 2, Sector- 32, Gurgaon-1 22001 , Haryana Tel- +91 1662 222471-84 Fax- +91 1662 220476.
9.	M/S SRMB Srijan Ltd Srmb House, 7, khetra das lane Kolkata-700012 Tel : 033- 6600 6600, Fax: 033- 2211 0483	10	BLANK

<b><u>PARTICULAR SPECIFICATION (CONTD)</u></b>			
11.	M/S Adhunik Metaliks Ltd,  Orissa Lansdowne Towers. 2/1A  Sarat Bose Road. Kolkata - 700  020  Tel: 033 3051 7100  Fax: 91 33 2289 0285  Email: mfo@adhunikgroup.com	12.	M/S Shri Bajrang Power & Ispat Ltd,  Raipur, Chhattisgarh  VIII - Borjara, Urla Industrial Area.  Raipur- 493 221, Chhattisgarh.  Tel : 0771 4288019/29 / 39
13.	M/S JSW Steel Ltd, Karnataka  Jindal Mansion,  5A Dr G Deshmukh Marg.  Mumbai- 400026	14.	M/S Electrosteel Steels Ltd, Bokaro,  Jharkhand G K Tower, 2"d & 3'd Floor.  19 Camac Street. Kolkata, WB- 700017  Board No: 91-33-2283-9990

7.2.3.2. STRUCTURAL STEEL (EXCEPT HOLLOW STEEL SECTIONS):- Structural steel any section/plate (except hollow steel sections) shall be procured from main producers like SAIL, Rashtriya Ispat Nigam Ltd, IISCO, TISCO and M/S Jindal Steels and Power Ltd. However in case of its non availability with above mentioned primary producers, the same can be procured from approved secondary producers with a reduction of 5% (Five percent) of the accepted rates of structural steel. In case the desired section of structural steel is not rolled/manufactured by above mentioned primary producers, there shall be no price adjustment in use of structural steel procured from approved secondary producers for such sections of structural steel. In case the quality of structural steel i.e. A, B or C is not mentioned in drawings then quality A shall be used and same shall be followed for deviation if any.

7.2.3.3. Steel section for railings, gate, fencing, guard bars, grills, steel chowkhat, holdfasts etc which do not constitute structural members, can be procured from main producers/ secondary producer/BIS marked manufacturers or their authorized dealers at the option of contractor without any price adjustment. Tests will not be insisted upon for such steel sections.

7.2.3.4. STRUCTURAL STEEL (HOLLOW STEEL SECTIONS):- Structural hollow steel sections shall be directly procured from TATA (STRUCTURAL)/JINDAL STAR/ ISI Marked.

#### 7.2.4. TESTING OF STEEL

7.2.4.1. The manufacturer is to carry out inspections and testing of steel in accordance with the relevant BIS provisions. The contractor shall submit the manufacturer's test Certificate in original along with the test sheet giving the results of each mechanical test as applicable and the chemical composition of the steel or authenticated copy thereof, fully signed by the manufacturer with each consignment. The Engineer-in-Charge shall record these details in Steel Acceptance Register, as given at Appendix 'F' after due verification and send a certified true copy of test sheet to GE for his records. The GE/CWE shall also organize independent testing of random samples of steel drawn from various lots from National Test House, SEMT Wing CME, Regional Research labs, IITs, National Institutes of Technology, NABL Approved laboratories, Command Testing Laboratory, Govt Engineering College or Any Govt laboratories as per the recommended minimum frequency shown in para here-in-after. Samples from each lot should be tested for quality and elongation. The elongation shall not be less than 18%. Cost of samples, transportation and testing shall be borne by the Contractor. The records of such checks would be maintained in the steel test register.

**PARTICULAR SPECIFICATION (CONTD)**

7.2.4.2. Nominal mass of any size of finished bar/section of steel shall be checked as specified in relevant IS code. The nominal mass so determined shall be recorded in steel testing register giving crossreference to consignment number. Nominal mass of any size of finished bar/section of steel if found to be beyond the tolerance limits on minus side as specified in relevant IS code, the same shall be rejected and the contractor shall remove the same at his own cost without any extra cost to the Government. However, if the weight of steel section is beyond the tolerance limit on high side the same can be provided with approval of the GE but without any extra cost to the Government.

7.2.4.3. If any Test Result of any particular size of Bar/Section of steel of any consignment is not found satisfactory as specified in relevant IS, the contractor shall remove the same at his own cost and no claim of contractor shall be entertained on this account

**7.2.4.4. TYPE OF TESTING****7.2.4.4.1. REINFORCEMENT STEEL**

- |     |                                   |   |   |
|-----|-----------------------------------|---|---|
| (a) | High Strength Deformed Steel Bars | - | Nominal Mass Test, Tensile Test, Bend Test and Re-bend Test shall be carried out as per Clause No. 8 of IS-1786-1985 and Test Specimens shall be as per Clause No. 10 of IS-1786-1985 |
| (b) | Mild Steel Bars                   | - | Nominal Mass Test, Tensile Test and Bend Test shall be carried out as per Clause No. 9 of IS-432 (Part-I)-1982. Re-bend Test is not required to be carried out for Mild Steel Bars.   |

**7.2.4.4.2. STRUCTURAL STEEL**

- |     |  |   |  |
|-----|--|---|--|
| (a) | Structural Steel (Standard Quality)      | - | Tensile Test and Bend Test shall be carried out as per Clause No. 6, 7 and 8 of IS-226-1975 for Standard Quality of Steel Sections   |
| (b) | Structural Steel (Ordinary Quality)      | - | Tensile Test and Bend Test shall be carried out as per Clause No. 6, 7 and 8 of IS-1977-1975 for Ordinary Quality of Steel Sections. |
| (c) | Structural Steel (hollow steel sections) | - | Tensile Test shall be carried out as per IS-4923-1997 for Standard Quality (Hollow Steel Section) of Steel Sections.                 |

**7.2.4.4.3. FREQUENCY OF TESTING**

7.2.4.4.4. REINFORCEMENT STEEL:- Normal Mass Test, Tensile Test, Bend and Re-bend Test shall be carried out as per Minimum Frequency given below :-

	NOMINAL SIZE OF BARS	FREQUENCY
(a)	Bars size less than 10mm	- 1 SAMPLE (3 SPECIMENS) for Each Test for Every 25 TONNES or Part thereof
(b)	Bar size 10mm to 16mm	- 1 SAMPLE (3 SPECIMENS) for Each Test for Every 35 TONNES of Part thereof
(c)	Bar size over 16mm	- 1 SAMPLE (3 SPECIMENS) for Each Test for Every 45 TONNES of Part thereof



**PARTICULAR SPECIFICATION (CONTD)**

7.2.4.4.5. STRUCTURAL STEEL(FOR ALL GRADE):- Tensile Test and Bend Test shall be carried out

as per Minimum Frequency given below :-

	NOMINAL SIZE OF BARS	FREQUENCY
(a)	TENSILE TEST	- 1 SAMPLE (3 SPECIMENS) for Each Test for Each Individual Section for Every 25 TONNES of Steel or Part thereof
(b)	BEND TEST	- 1 SAMPLE (3 SPECIMENS) for Each Test for Each Individual Section for Every 25 TONNES of Steel or Part thereof

7.2.4.5. TESTING CHARGES:-The Unit Rate/Amount quoted by the Contractor in the Tender shall be inclusive of Cost of all sorts of Testing to the extent as specified here in before and in relevant Indian Standards.

7.2.5. DOCUMENTATION:- The contractor shall submit Original Purchase Vouchers and Test Certificate from the Main Producer/ Secondary Producer/BIS marked manufacturer/authorized dealer as applicable for the total quantity of steel supplied under each consignment to be incorporated in the work. All consignments received at the work site shall be inspected by the GE along with the relevant documents before acceptance. The Original Purchase Vouchers and Test Certificates shall be defaced by the Engineer in Charge and kept on record in the office of the GE duly authenticated and with cross reference to the consignment number recorded in the Steel Acceptance Register. The steel Acceptance Register will be signed by the JE (Civil), Engineer in Charge, GE and the Contractor. The Accepting Officer may order a Board of Officers for random check of steel and verification of connected documents. The entire quantity of steel items shall also be suitably recorded in the measurement book for record purposes as "Not to be abstracted" before incorporation in the work and shall be signed by the Engineer in Charge and the contractor.

7.2.6. STORAGE, ACCOUNTING, PRESERVATION & MAINTENANCE OF STEEL: The storage, accounting, preservation and maintenance of steel supplied by the contractor shall be done as per standard engineering practice till the same is consumed in the work and the cost of the same shall be deemed to be included in the unit amount quoted by the tenderer. The GE shall inspect at regular interval to verify that steel lying at site are stored, accounted, preserved and maintained as per the norms. The steel shall be stored so as to differentiate each consignment separately. If the GE is not satisfied with the storage/preservation of any size of bar/section of steel, he may order for any test (s) of steel as applicable for that size of bar/section of steel and as specified in tender documents and relevant Indian Standard to recheck the acceptability criteria for the same. The contractor shall bear the cost of necessary testing(s) in this regard and no claim whatsoever shall be entertained by the Govt.

7.2.7. MEASUREMENTS AND PAYMENT OF STEEL:-

7.2.7.1. The entire quantity of all steel items shall also be suitably recorded in the Measurement Book for record purposes as "Not to be abstracted" before incorporation in the work and shall be signed by the Engineer in Charge and the contractor.

7.2.7.2. The nominal mass conversion factor for various steel sections/size of finished bars as given in relevant IS codes shall be considered standard for measurement.

7.2.7.3. The payment of steel shall only be allowed after production of Original Purchase Vouchers, Test Certificates by the contractor for each consignment of steel and results of testing carried out by the Department are found satisfactory after testing.

**PARTICULAR SPECIFICATION (CONTD)****7.2.8. CORNER REINFORCEMENT/SUPPORT BARS/CHAIRS, ETC.**

7.2.8.1. These shall be provided all as shown in TD & STD drawing. In case these provision have been modified in main drawings specifically, then the provision of main drawing shall be followed.

7.2.8.2. Reinforcement bars shall be TMT bars and shall be provided as indicated in drawings. For the purpose of pricing deviation involving reinforcement bars, the length of each bar shall be considered as 10 (Ten) meters for calculating laps unless otherwise shown on drawings.

7.2.8.3. In case of pricing deviations 10mm and over dia TMT bars as stirrups shall be priced at the rate of TMT bar stirrups of 5 to 10 mm in MES Schedule Part-II subject to contractor's percentage.

7.2.9. Mild Steel guard bars shall be of 12 mm x12mm square bars of Fe-310-0 or Fe-410-0 quality. Guard bars shall be provided to all windows & vents as shown on drawings. The guard bars including window shall be painted with 2 coats of synthetic enamel paints over a coat of red oxide zinc chrome primer.

7.2.10. Other steel items like steel door with PGI sheet covering, railing in balconies and stair case, watermeter and switch board boxes etc shall be fabricated to the dimensions as shown on drawings as directed by Engineer-in-Charge. Welding, bolting, drilling holes etc shall be as specified in MES Schedule. NOTE : For various Tests, Acceptance Criteria, Tolerance, etc. refer to STEEL SUPPLY & ACCEPTANCE REGISTER given in relevant BIS Codes.

**7.3. STEEL WINDOWS/VENTILATOR**

7.3.1. Refer Clause No. 10.25 of MES Schedule Part-I.

**Note :** All items of steel and iron work including steel for reinforcement required for incorporation in this contract shall not be issued under Schedule 'B'. Contractor shall make his own arrangements to procure steel and iron all as specified hereinafter.

**7.4 GENERAL**

7.4.1 Items of steel and iron brought to site by the contractor for incorporation in the work shall be free from defects all as specified in Clause 10.4.3 and 10.17.6 of SSR Part-I and shall be conforming to IS specifications as given below :-

- |       |  |   |   |
|-------|--|---|---|
| (i)   | Structural steel standard quality              | : | Conforming to IS-2062   |
| (ii)  | Structural steel ordinary quality              | : | Conforming to IS : 1977   |
| (iii) | Reinforcement steel                            | : | High strength deformed steel bars produced by Thermo Mechanical Treatment Process (TMT steel bars of grades Fe 500) meeting all requirements of IS : 1786 |
| (iii) | Galvanised Steel Sheets (Plain and corrugated) | : | Conforming to IS-277  |
| (iv)  | Fabric Reinforcement for concrete              | : | Conforming to IS-1566   |

**7.5 MATERIALS**

7.5.1 The Galvanised Iron Sheets and Fabric Reinforcement for concrete to be supplied by the contractor shall be ISI marked and shall be procured from Main manufacturers.

**PARTICULAR SPECIFICATION (CONTD)**

7.5.2 The Structural steel supplied by the contractor will only be procured from SAIL / RashtriyaIspat Nigam Ltd/ TISCO. Also in case of non availability of Structure steel with SAIL/ RashtriyaIspat Nigam Ltd/ TISCO, the same shall be procured from Secondary producers with a reduction of 5% (five percent) of the accepted rates of structural steel.

7.2.3 Reinforcement steel (TMT steel) supplied by the contractor will be procured only from SAIL / Rashtriyaspat Nigam Ltd/ TISCO/M/s Shyam Steel Industries Ltd Durgapur (WB)/ M/s SPS rolling Mills Ltd Durgapur (WB)/ M/sJai Balaji Industries Ltd Durgapur (WB).

7.2.4 Steel sections for railing, gates, fencing including angle iron posts/horns, guard bars, guard bars, grills, steel chowkhats, holdfasts etc which do not constitute structural members, can be procured from main producers/secondary producers/ BIS marked manufacturers or their authorized dealers at the option of contractor without anyminus price adjustment. The requirement of production of Test certificates and Testing will not be insisted upon for such steel sections.

**7.3 PROCUREMENT**

7.3.1 The GE for every lot of steel shall obtain the particulars of the manufacturer/supplier of steel from the contractor separately.

7.3.2 The Engineer-in-Charge and GE shall verify the original documents in support of the purchase of steel and will retain certified true copy of the results in GE's office.

7.3.3 The GEs will ensure that contractors place their demand/requisition of steel with adequate lead-time. The reinforcement steel will be procured from the storage depots of the main producers and not from their authorized agents/dealers. Similarly Structural steel will be procured from the storage depots of the main producers/approvedSecondary producers and not from their authorised agents/dealers.

**7.4 DOCUMENTATION**

7.4.1 The contractor shall submit original purchase vouchers from the manufacturer for the total quantity of steel supplied under Each consignment to be incorporated in the work. The GE alongwith the relevant documents before acceptance shall inspect all consignment received at the work site. The original vouchers and the Test Certificate shall be defaced by the Engineer-in-Charge and kept on record in the office of the GE duly authenticated and with cross Reference to the control number recorded in the Steel Acceptance Register. The Steel Acceptance Register will be signed by JE, Engineer-in-Charge, GE and contractor. The entire quantity of all steel items shall be suitably recorded in the Measurement Book as not to be abstracted, before incorporation in the work and shall be signed by the Engineer-in-Charge and the Contractor.

**7.5 TOLERANCE**

7.5.1 Rolling and cutting tolerance of structural steel products shall be as specified in IS-1852 of 1985. Tolerance on sizeand weight of reinforcement bars shall be as specified in Clause 10.17.4 and 10.17.5 of SSR part-I. Steel with lessweight than permissible shall not be used.

**7.6 SCHEDULE OF SUPPLY**

7.6.1 The contractor shall ensure that procurement action is taken immediately after acceptance of contract so as to adhere to schedule of activity as per CPM network.

**7.7 STORAGE, ACCOUNTING, PRESERVATION AND MAINTENANCE**

7.7.1 Structural steel/bars of different classification, sections, sizes and lengths shall be stacked separately. Steel shall be marked with distinct painting marks for easy identification. Steel shall be recorded in MB for record purpose only.

**PARTICULAR SPECIFICATION (CONTD)**

7.7.2 All steel shall be stored on dunnage at least 15cm above ground level. Steel reinforcement shall be stored properly to prevent deterioration and corrosion. In case of long time storage, suitable protective measures like cement coating, provision of temporary shelter etc to save it from rusting/deterioration etc shall be taken. Any item of steel that has deteriorated or corroded or considered defective by Engineer-in-Charge shall not be used in the work and shall be removed from the site of work.

7.7.3 Reinforcement shall be fabricated and placed in position all as shown on drawings and specified in Clause 10.17 to 10.22 of MES Schedule (Part-I) without application of heat.

7.7.4 **STRUCTURAL STEEL(EXCEPT HOLLOW STEEL SECTIONS):-** Structural steel anysection/plate (except hollow steel sections) shall be procured from main producers like SAIL,Rashtriya Ispat Nigam Ltd, IISCO, TISCO and M/S Jindal Steels and Power Ltd. Howeverin case of its non availability with above mentioned primary producers, the same can be procuredfrom approved secondary producers with a reduction of 5% (Five percent) of the accepted rates ofstructural steel. In case the desired section of structural steel is not rolled/manufactured by abovementioned primary producers, there shall be no price adjustment in use of structural steelprocured from approved secondary producers for such sections of structural steel. In case thequality of structural steel i.e. A, B or C is not mentioned in drawings then quality A shall be usedand same shall be followed for deviation if any.

7.7.5. Steel section for railings, gate, fencing, guard bars, grills, steel chowkhat, holdfasts etc which donot constitute structural members, can be procured from main producers/ secondary producer/BIS marked manufacturers or their authorized dealers at the option of contractor without anyprice adjustment. Tests will not be insisted upon for such steel sections.

7.7.6 **STRUCTURAL STEEL( HOLLOW STEEL SECTIONS):-** Structural hollow steel sectionshall be directly procured from TATA (STRUCTURA)/JINDAL STAR/ ISI Marked .

**7.8 WELDING**

7.8.1 Welding wherever shown on drawings shall be by metal arc process in accordance with IS-816 and IS-823.

**7.9 GUARD BARS**

7.9.1 Mild steel guard bars shall be provided to all steel windows and steel ventilators The Guard bars shall be provided as per details shown in drawing and unit rate of buildings shall include for the aforesaid provision.

**7.10 HOLD FASTS/LUGS**

7.10.1 Flat iron hold fasts/lugs shall be provided by welding as and where shown on drgs, except those, to be provided to wooden chowkats which shall be fixed with bolts/nuts as per details shown on drawings. Holes in wooden chowkats shall be plugged with hard wood plugs.The hold fasts/lugs shall be embedded in PCC 1:2:4 blocks of size 230x230x150mm for doors and 100x100x100mm for windows/ventilators respectively.

**7.11 EXPANDED METAL SHEET (XPM)**

7.11.1 Irrespective of what is shown on drawing the expanded metal sheet (XPM) shall be of following size:-

a) SIZE OF MESH (NOMINAL) :

i) Short way of mesh (SWM) = 12.5mm

ii) Long way of mesh (LWM) = 50mm

b) DIMENSIONS OF STRANDS :

i) Width = 2.50mm

ii) Thickness = 1.25mm

**PARTICULAR SPECIFICATIONS(Contd.....)****8. WOODWORK & JOINERY**

8.1 Unless otherwise specified in Sch A, all timber for wood work and joinery (except particle boards, block boards and ply wood unless otherwise specified hereinafter) shall be of first class hard wood „TEAK“ (Tectona grandis), well seasoned and shall conform or superior to the sample kept in the office of GE.

8.2 Maximum permissible moisture contents in timber for various purposes is stipulated in Para 7.7 of SSR, Part-I. For clarification of zones for moisture content, this contract shall be deemed to fall under climatic Zone-II.

8.3 Use of nails in joinery work unless otherwise specified is prohibited. Wooden screws of appropriate size shall be used.

8.4 All woodwork & Joinery work shall be carried out as specified in MES SSR Part-I.

**8.5 WOODEN SHUTTERS FOR DOORS.**

(a) Shutters shall be factory made second-class hard wood (Non coniferous) Bonsum (Phoebe species)/ Chaplash (Artocarpus chaplash)/Hollock (Terminalia myrio-capra) kiln seasoned and chemically treated.

**8.6 FACTORY MADE PANELLED DOORS.** Factory made panelled door shutters shall be made of kiln seasoned as per IS 1141 and chemically treated as per IS-401 second-class hard wood (Non coniferous) Bonsum (Phoebe species)/ Chaplash (Artocarpus chaplash)/ Hollock (Terminalia myrio-capra) for styles and rails. Panels shall be of 12 mm thick particle board veneered commercial (both faces) BWP grade bonded with liquid phenol formaldehyde synthetic resin adhesive conforming to IS-3097 (ISI marked) for all type of doors except in case of external doors directly exposed to weather. Panels for external doors directly exposed to weather shall be 9 mm thick BWP marine grade ply wood bonded with high quality liquid phenol formaldehyde conforming to IS : 710 (ISI marked)

**8.7 FACTORY MADE FLY PROOF DOORS.** Factory made fly proof door shutters shall be made of kiln seasoned and chemically treated second class hard wood (Non coniferous) Bonsum (Phoebe species)/ Chaplash (Artocarpus chaplash)/Hollock (Terminalia myrio-capra) fixed with galvanised wire cloth as specified in Sch A. The overall sizes and dimensions of door shall be as per requirement and as directed by Engineer-in-Charge at site. The overall door shutters shall conform to the IS-1003

Factory made wooden doors shutter shall be obtained from one of the manufacturer given in Appendix C. Contractor will produce manufacturers test certificate as per BIS code along with each consignment.

**8.8 PVC SOLID PANEL DOOR SHUTTER.**

Factory made solid panel PVC door shutter 30mm thick (style) consisting of frame made out of MS tubes for top and bottom rails. MS frame shall be covered with heat moulded plain colour PVC 'C' channel having a PVC sheet strip of 20mm width stuck inside with solvent cement for stiles and plain colour PVC sheets for top rail, lock rail and bottom rail on either side and as gap insert for top rail and bottom rail; Panelling of plain colour PVC sheet to be fitted in the MS frame welded/sealed to the stiles and rails with suitable PVC sheet beading and jointed together with solvent cement and supplying and fixing in the frame at site.

**8.9 PVC SOLID FRAME FOR DOOR SHUTTER.**

PVC Solid door frame shall be of size 50mmx47mm made out of 5mm plain colour PVC sheet reinforced with MS square tube all as specified in MES SSR Part-I. PVC frame and shutter shall be of make as specified in Appendix C.

**8.10 FLUSH DOOR SHUTTERS**

Flush door shutter shall be 30mm thick. Flush door shutters shall be solid core construction with block board core and plywood face panels, exterior grade, bonded with phenol formaldehyde BWP grade conforming to IS-3087-1985 Type I. Flush door shutters shall be factory made and shall be procured from manufacturer specified in Appendix 'C'.

**PARTICULAR SPECIFICATIONS(Contd.....)****9. BUILDERS HARDWARE.**

9.1 All articles of builders hardware shall confirm to the specifications given in Section 9 of MES Schedule Part-I. The contractor shall produce the samples of each articles of builders hardware and get approved in writing. The articles of builders hardware shall bear ISI mark wherever available.

9.2 Butt hinges shall be as per Clause 9.7.2 and 9.7.9 of SSR Part I and shall be of naturally bright finish with smooth surfaces.

9.3 TOWER BOLTS. Aluminium Tower bolts shall be of Aluminium anodized (extruded section) conforming to specifications given in Clauses 9.3.1 & 9.3.3 of SSR Part-I. The dia of bolt shall be 10mm for all sizes.

**9.4 SLIDING DOOR BOLTS**

Aluminium sliding door bolt shall be of aluminium anodized all as per clause 9.5 of SSR Part -I. The dia of bolt unless otherwise shown shall be 16mm.

**9.5 HANDLES**

Aluminium handles shall be aluminum anodized as specified in SSR Part-I, clause 9.11 and 9.11.1

**9.6 MS BUTT HINGES**

MS Butt hinges shall be of cold rolled mild steel, medium weight all as specified in clause 9.7.2 of MES SSR Part-I.

**9.7 STAINLESS STEEL BUTT HINGES.**

Stainless Steel but hinges shall be of stainless steel and shall comply with IS-12817-1997, Specification stainless steel butt hinges. Hinges shall be of medium weight, unless otherwise indicated. Grade of stainless steel for flap and pin shall be as per IS. Unless otherwise indicated, hinges shall be naturally finished bright with smooth surface without chemical coating. The stainless steel hinges shall be rust proof and especially useful in high moisture area.

**10. STEEL WINDOWS /VENTILATORS.**

Steel windows (glazed) shall be provided with horizontal glazing bars. Fixing and glazing of windows shall be in accordance with IS 1081 and shall be tennoned and riveted to the frame. Glazed shutters shall be provided with projecting type hinges, peg stay, pressed handle and all as specified in Sch A and specified in SSR. Peg stays and handles for steel windows shall be of steel and painted with corrosion resistant paint. Handle to fly proof windows shall be pressed type. Various sections for Steel windows shall be ISI marked and steel windows shall confirm to IS-1038. Factory made steel windows and ventilators shall be procured from the firm specified in Appendix C.

**10.1 ANODISED ALUMINIUM DOORS, WINDOWS, VENTS, FIXED GLAZING AND GRILLS**

Aluminium doors, windows, vents and fixed glazing shall be provided all as specified in MES SSR Part-I, clause 10.37 and all as specified in Sch A. The size and section of profile shall be all as directed by Engineer-in-charge. Make of aluminium section for doors/windows/ventilators shall be as given in appendix 'C'. Thickness of glass panes if not shown in Sch A, shall be 4mm thick. Glass shall be black tinted glass of selected quality. Glass panes shall be provided with standard glazing clips & rubber gasket as per manufacturer's instructions.

**11. ROOFING****11.1 RCC ROOF**

11.1.1 RCC roof slabs shall be laid to the slope as directed. Slab surfaces shall be roughened and 10 mm thick plaster in CM 1:4 mixed with water proofing admixture shall be applied on roof slab when the concrete is still green to bring it to level and grade as specified.

**PARTICULAR SPECIFICATIONS(Contd.....)**

11.1.2 After RCC slab is laid, plastered as above and fully cured and set, pending shall be done over RCC slab by filling water which shall be kept there for 48 hours. In case a slightest indication of seepage/ leakage is noticed, the same shall be rectified by grouting the affected portion at no extra cost. Thereafter pending test shall be repeated till there is no indication of seepage/leakage. A proper record for pending Test of RCC slabs shall be maintained by GE.

**11.2. WATER PROOFING TREATMENT TO RCC ROOF SLAB** (Except sloped roof portion ie Hip roof)

11.2.1 The water Proofing treatment to RCC roof shall be provided as specified in Schedule 'A'.

**11.3 WATERPROOFING TREATMENT TO SLOPED PORTION OF ROOF SLAB (HIP ROOF) :**

RCC roof slabs shall be laid to the slope as shown in drawings. Slab surfaces shall be roughened and 10 mm thick plaster in CM 1:4 mixed with water proofing admixture shall be applied on roof slab when the concrete is still green to bring it to level and grade as specified. Thereafter earthen clay tiles as approved by GE shall be fixed over 10mm thick screed in CM 1:4.

11.3.1 Procurement: - Membrane shall be of Make IWL India Ltd. (HYPERPLAS)/STP Ltd. (STP Super Thermo lay 'APP Modified')/ M/S Texsa India Ltd. MOPLY-FP.

11.3.2 Bitumen Primer: - Refer para 11.44.2.1 of MES Schedule Part-I.

11.3.3 Atactic Polypropylene Polymer Modified Pre Fabricated Membrane: - Refer para 11.44.2.1 of MES Schedule Part-I. Polymeric water proofing membrane shall be of type 3 mm thick with non-woven polyester matt.

11.3.4 Preparation of Surface:- Refer para 11.44.3 of MES Schedule Part-I.

11.3.5 Treatment: - Refer para 11.44.4 of MES Schedule Part-I.

11.3.6 Laying: - Refer para 11.44.5 of MES Schedule Part-I.

11.3.7 The Contractor shall produce Manufacturers test certificate for the membrane. The membrane shall have name of manufacturer printed on it and sticker, which shall specify the name and details of original product i.e. the firm importing membrane and re-branding with their own name, original product name of manufacturing company.

11.3.8 In addition to the production of test certificate as mentioned above the contractor shall carry out independent testing of random samples of membrane drawn from various lots from a National Test House at Guwahati/ Kolkata/ Shriram Institute for Industrial Research, 19, University Road, Delhi-110007 (where the facility for the all tests are available) as per the direction of GE. The GE shall approve the random samples before carrying out any testing.

11.3.9 The membrane application shall be done by authorized applicators that are certified by the firms for quality application.

11.3.10 The period of guarantee for the water proofing treatment shall be Ten years from the certified date of completion. The Contractor shall be responsible for effectiveness of the water proofing treatment during this period and any leakage noticed therein during this period shall be made good by him at his own cost.

**11.4 GUARANTEE**

11.4.1. The defects liability period of water proofing treatment shall be 8 years and the contractor shall be responsible to keep the entire buildings free from leakage/ seepage for a period of 8 years after the certified date of completion for the work by the GE. The contractor may obtain a similar guarantee from the specialist firm engaged by him for the purpose.

**PARTICULAR SPECIFICATIONS(Contd.....)**

11.4.2 A sum equal to 2.5% of the quoted lump sum against buildings covered as per Schedule 'A' Part-I for which water proofing treatment has been specified, will be held back out of the contractor's bill as security deposit for the guarantee period of 8 years which shall be refunded to him after expiry of this period. Alternatively, the contractor may give a separate interest bearing security deposit or bank guarantee bond to GE valid for eight years for sum mentioned above.

11.4.3 Should the GE at any time during the construction or prior to the expiry of said Guarantee period of 8 years finds that there is seepage/ leakage in the buildings wherein water proofing treatment has been given under the contract, the contractor shall on demand in writing from the GE specifying the bldgs complained of, notwithstanding that the same may have been inadvertently passed, certified and paid for, forthwith undertake to carry out such treatment which may be necessary to render the buildings free from leakage/ seepage at his own expenses, till expiry of the Guarantee period of eight years.

11.4.4. In the event of contractor's failure to comply with GE's directions within the stipulated period, the work shall be carried out at the risk and cost of the contractor. The liability of the contractor under this condition shall not, however, extend beyond the period of the 8 years as elaborated in Para 8.5.1 here in before unless the notice was served on the contractor previously to rectify such defects.

11.4.5. Security deposit/ Bank guarantee shall be released to the contractor after the expiry of the period of eight years from the certified date of completion by the GE, provided always that the contractor shall first have been paid the final bill and have rendered a No Demand Certificate.

**12 to 18 BLANK****19. PVC SWR PIPES**

- 19.01 Rain water pipes and fittings shall be of cast iron, asbestos cement and UPVC and of diameter, size and type as indicated. The pipes shall be fixed in full length, unless shorter lengths are required at junction with fittings.
- 19.02 Joints shall be water tight
- 19.03 The pipes and fittings shall be fixed in vertical alignment, unless otherwise indicated
- 19.04 UPVC (SWR) pipes shall conform to IS 13592-1992 as under :
- (i) Type 'A' Pipe : For use in ventilation pipe work and rain water application.
  - (ii) Type 'B' Pipe : For use in soil and waste discharge system.
  - (iii) The size and type, of pipes shall be indicated IN boq.
- 19.05 Rubber rings for pipes and fittings shall conform to IS 5382-1985.
- 19.06 UPVC (SWR) fittings shall be used as per recommendations of the manufacturer of the pipes. In case there is no IS code for the fittings, these shall generally conform to the requirements of BS 4515 DIN 19531 and DIN 19534.
- 19.07 UPVC (SWR) pipes and fittings shall be strong, dimensionally stable and shall be free from cracks, etc
- 19.08 The entire workmanship shall conform to the relevant clauses of ssr part i, section 18, as applicable.



**PARTICULAR SPECIFICATIONS(Contd.....)****20. FLOORING****20.01 GENERAL**

20.01.1 Workmanship shall be all as specified in Clause 13.25 of MES Schedule Part -I unless otherwise specified hereinafter.

20.02. Floor shall be laid to level and/or to falls as directed by Engineer-in-Charge. Floors shall be sunk where directed to the required depth. The exposed edges of floors shall be finished to match the top surface finish of floor.

20.03 PCC floor/sub base/sub floor shall be laid all as specified in clause 13.25 and 13.32 of SSR Part- I 2010. The concrete floor surfaces shall be trowelled (with a trowel) to a smooth and even finish using extra cement where indicated in BOQ..

20.03.2 The entire workmanship shall conform to relevant clauses of SSR Part I, 2009, section 13, as applicable. And as specified in BOQ

**20.04 NON SKID AND CERAMIC GLAZED TILE IN FLOORING / SKIRTING / DADO:**

20.04.1 Non skid ceramic and Glazed ceramic tiles shall be matt finish, first quality, grade BIIA for floor tiles and grade BIII for wall tiles, coloured as approved by GE. Size and thickness shall be all as indicated in Schedule 'A'. The thickness indicated in Sch 'A' is minimum thickness and contractor shall have no claim if the thickness of tiles is more according to size of tiles available in the market. Tiles shall be any one of the makes as given in BOQ. Sample and make of tiles shall be got approved by GE before incorporation in the work. Tiles shall be all as specified in clause 13.14 of MES Sch Part I. Work shall be carried out all as specified in clause 13.40 of MES Schedule part, I as applicable

**20.05 CERAMIC GLAZED TILES( WALL TILE)**

20.05.1 Ceramic Glazed wall tiles shall be of Ist quality and shall conform to IS :13753. The surface of tiles and components can be smooth, profiled, decorated or finished, glossy, matt or semi-matt as indicated. The tiles shall be flat true to shape, sound and free from flaws and other manufacturing defects. The top surface of the tiles shall be glazed. The underside of the tiles shall be free from glaze in order that the tiles may adhere properly to the base. The glaze shall be uniform in quality and shall be free from welts, chips, craze, crawling or other imperfections, detracting from appearance when viewed at a distance of one meter. The texture and colour of tiles shall be as indicated. Tiles shall be of sizes as indicated. If not indicated size of tile shall be 200mm x 300 mm. The thickness shall be as specified by the manufacturer but in no case it shall be less than 6mm.

**20.06 VITRIFIED PORCELAIN TILES FLOORING**

20.06.1 Vitrified polished porcelain floor tiles shall be of Ist quality. These vitrified tiles are classified under group B1a of the International Standard for ceramic tiles ISO: 13006. Tiles shall be hard, dense, pervious and frost resistant. Water absorption of tiles shall be less than 0.5% and flexural strength (Modulus of Rupture) shall be more than 35 N/Sqmm. Vitrified polished porcelain floor tiles shall be provided of sizes, colour, shades, texture and designs as indicated and if size not indicated it shall be 600mm x 600 mm/ 605 x 605 mm. The thickness shall be as specified by the manufacturer but not less than 10mm.

**PARTICULAR SPECIFICATIONS(Contd.....)**

20.06.2 Heavy duty vitrified unpolished porcelain floor tiles for exterior use shall be of Istquality.Heavy duty vitrified tiles shall be acid and alkali resistant, weather proof, anti skid and abrasionresistant as per International Standard for ceramic tiles ISO :13006 and EN 176 requirement.

These tiles shall comply with the following requirements:-

- (a) Water absorption<2%
- (b) Flexural Strength>35 N/Sqmm
- (c) Moh's Hardness>6
- (d) Abrasion resistance<204mm.

Heavy duty vitrified tiles shall be of sizes, colour, texture and designs as indicated but size ifnot indicated it shall be of 300mm x 300 mm . The thickness shall be as specified by the anufacturer.

20.06.3 **BEDDING**

The screed bed for laying Vitrified Porcelain Tiles shall be of cement and sand mortar :4.Bedding over which the tiles shall be laid shall not be less than 10mm at any place.

20.06.4 **LAYING**

Base concrete or RCC slab shall be cleaned and wetted. The bedding shall then be laidevenly over the surface, tamped and corrected to desired levels and allowed to harden enough to offer a rigid cushion to tiles. Before laying the tiles , tiles shall be washed and then appliedfine cement slurry on the back of the tile to ensure full and proper bedding. Tiles shall then beplaced on bedding, each tile being gently tapped with rubber hammer in its position till it isproperly bedded and in level and line with adjoining tiles. Use of spacers is recommended foruniformity in joints and better finish. Remove the residual cement or jointing material immediatelyby a wet sponge. After 24 hours when the tiles are properly set and cured, fill the joint gapswith joint filler as per recommendation of manufacturer. The joint gap shall be filled by spreadingjoint filler paste in the spaces between the tiles with the help of rubber trowel. Clean the tilessurface immediately with the help of wet sponge .Vitrified Porcelain Tiles can be laid in flooring over Base concrete or RCC slab.

20.06.5 The entire workmanship shall conform to relevant clauses of SSR Part I, 2009, section 13, as applicable. And as specified in BOQ

20.06.6 **CHEQUERED CEMENT CONCRETE TILES / DESIGNER TILES**

20.06.6.1 Chequered cement concrete tiles, colouredchequered cement concrete tiles and chequered terrazzo tiles / designer tiles,shall conform to IS 13801-1993 specification for Chequered cement concrete tiles. Chequered tiles / designer tiles shall be with the centre to centre distance of chequers not less than 25mm and not more than 50mm, the groove in chequers being uniform and straight with the depth of grooves not less than 3mm. Tiles shall be manufactured by pressure process. Thickness of wearing layer measured from top of the chequers shall not be less than 6mm.

**PARTICULAR SPECIFICATIONS(Contd.....)**

20.06.6.2 Unless otherwise directed, the tiles shall be supplied with initial grinding and grouting of the upper layer. The upper layer of the tiles shall be free from projections, depressions and cracks, holes, cavities and other blemishes. The edges of the tiles may be rounded. All angles shall be right angles and all arises shall be sharp and true. The colour and texture of the wearing layer shall be uniform throughout its thickness. The size of Chequered Tiles / designer tiles shall be as indicated in BOQ / or 200mm x 200mm x 22mm thick or 250mm x 250mm x 22mm thick or 300 x 300mm x 25mm thick if not indicated. The tolerance on length or breadth of tiles shall be +1mm and tolerance on thickness of tiles shall be +5mm. In addition the difference in thickness between the thickest and thinnest tile in the sample shall not exceed 3mm.

20.06.6.3 The entire workmanship shall conform to relevant clauses of SSR Part I, 2009, section 13, as applicable and as specified in BOQ

**21. CEILING AND LINING**

21.1 Plywood: Refer para 12.10 and 12.10.1 of MES Schedule Part I.

21.2 Particle boards: Refer para 12.13 to 12.13.5 of MES Schedule Part I.

21.3 Asbestos cement building boards: - Refer Para 12.2,12.2.1 and 12.2.2 of MES Schedule Part-I.

21.4 High pressure steam cured (HPSC) Non asbestos fibre cement reinforced multipurpose board: - The board shall be as per IS-14862 and shall be manufactured from homogeneous mixture of cement, quartz and cellulose and shall be cured with high pressure steam using auto claving process. Everest Designer Ceiling 4 mm Formerly E-BOARD CLASSIC) of Make “ Eternit Everest Ltd.” or equivalent as approved by GE in writing.

21.5 Gypsum Hard Board: - Refer Para 12.31 of MES Schedule Part-I.

21.6 Nails and Screws: Refer 12.17 of MES Schedule Part I.

21.7 Workmanship:

21.7.1 Material: The type of boarding etc in ceiling and lining, their thickness and finish shall be as indicated in Schedule ‘A’.

21.7.2 Fixing Generally: Refer 12.20.1 to 12.20.8. of MES Schedule Part I.

21.7.3 Finishing: Refer para 12.20.9 of MES Schedule Part I.

21.8 Fixing of Plywood, Particleboard and veneered particle board: Refer para 12.24.1 to 12.24.4 of MES Schedule Part I.

**PARTICULAR SPECIFICATIONS(Contd.....)**

21.9. Fixing of AC building boards: Refer para 12.21.1 and 12.21.2 of MES Schedule Part I.

**22. ROOFING****22.1 GALVALUME SHEET ROOFING**

(a) The galvalume steel sheet shall be of thickness as given in Schedule A (total minimum thickness of base metal sheet) and shall have 550 Mpa minimum yield strength. The base metal steel plate shall be coated with minimum 150 gram/sqm (total on both sides) coating of hot dip alloy consisting of 55% Aluminium, 43.5% Zinc and 1.5% Silicon confirming to ASTM792M or AS1397.

The sheet shall then be factory finished with corrosion resistant paint system on both surfaces as per manufacturers instructions and literature. The sheets shall be fixed using hot dip galvanized, self drilling and self tapping screws neoprene and EPDM washers and as per manufacturers instructions and literature. The profile of the sheet shall be trapezoidal as defined in SSR Part I, Clause No. 10.39.4 or similar profile as commercially available and approved by GE. The end laps shall be provided as per manufacturers guidelines to eliminate any possibility of leakage of roof. Penetrations and laps in sheet shall be sealed as per manufacturers instructions and literature. HDPE fillers shall be provided wherever required to close voids between sheets, sheet & fasteners etc. The color of the sheets shall be as approved by GE.

(b) Fixing system shall be as per manufacturers instructions and shall be safe against effects of wind velocity. The work shall be executed completely as per manufacturers instructions and literature. The work shall be executed as per the specifications given in clause 11.3 of SSR Part-I.

**22.2 GALVANISED STEEL SHEET ROOFING**

Galvanized steel sheet, plain or corrugated shall comply with the requirement of IS 227-2003. The zinc coating shall be minimum 120 gm/Sqm (Grade O). The corrugation of CGI sheet shall be Grade B. The corrugated sheet shall be fixed as per clause 11.22 of SSR Part-I.

(a) Corrugated galvanized iron sheet shall be as mentioned in Sch-A. Sheet shall be laid with two corrugation side laps and 150 mm minimum end laps. Sheet shall be fixed to purlins with 8mm dia galvanized hook/ crank bolts and nuts including embossed curved galvanized washers along with bitumen washers. Riveting together of sheet along with side and end laps though specified in MES Schedule is not required to be executed. The CGI Sheet shall be as specified in Para 10.29 of MES Schedule Part-I as per IS-277, 1992 (New addition 2003).

(b) PGI SHEET: PGI sheet for ridge, hip, valley gutters etc. shall be as mentioned in Sch-A and girth shall be 500 mm irrespective of what is shown on drawings. The PGI sheet shall be as specified in Para 10.29 of MES Schedule Part-I for class as mentioned in Sch-A.

(c) WORKMANSHIP Refer para 11.21 and sub paras 11.21.1, 11.21.2, 11.22.1, 11.22.2 and 11.22.3 of MES schedule Part-I

**22.3 ASBESTOS CEMENT SHEET ROOFING**

The asbestos cement sheet shall be of thickness as given in Schedule A. The AC corrugated and semi-corrugated sheets shall be IS-459 marked and shall not be pigmented. The make shall be as specified in Appendix C. The fixing of AC Sheets shall be all as specified in clause 11.24 of MES SSR Part-I.

**23. PLASTERING**

23.01. Sand shall be fine and conform to requirements of IS-1542 and free from deleterious materials.

23.02 Water used for mixing and curing shall be clean free from deleterious matter, and fit for drinking.

**23.03. PREPARATION OF BACK GROUND FOR APPLICATION OF PLASTER.**

23.03.1 All dust, dirt and foreign matter on surfaces of masonry and laitance on the concrete surface shall be removed by watering or brushing as required. In case back ground contain soluble salts particularly sulphates, plastering shall not be done until the efflorescence of the salts is completed.

**PARTICULAR SPECIFICATIONS(Contd.....)**

23.03.2 Joints of masonry shall be raked to depth of 10 mm as the work proceeds. Local projections beyond general wall face shall be trimmed off to avoid variance in thickness of plaster.

23.03.3 For smooth surfaces of concrete it shall be roughened by wire brushing or hacking and hammering if surface is hard. All projections, burrs shall be removed.

23.03.4 Adequate drying intervals shall be allowed between erection and plastering to bring the surface suitable for suction adjustment. High rate of suction cause plaster weak porous and friable. The wall surface shall be damped evenly before plastering dry spots shall be moistened. Excess water will lead to failure of bond between plaster and back ground.

23.03.5 Dubbing out and rendering coat shall be same type and mix and dubbing coat shall be executed along with rendering coat.

24. **WHITE WASH / COLOUR WASH**

24.01 Lime used for white washing shall be freshly burnt fat lime( Class “C” ) or magnesium siliceous dolomitic lime ( Class “D” or “F” ), white in colour, conforming to IS 712-1984.

24.02 Yellow or red ochre pigment for making colour wash shall conform to IS 44-1991. The solid lumps shall be crushed to powder.

24.03 Fresh crystals of hydrous copper ( blue vitriol ) shall conform to IS 261-1982. Sulphate shall be ground to fine powder.

24.04 The workmanship shall conform to clause No. 15.12 of MES schedule part I, 2009 as applicable

25. **DISTEMPERING OIL EMULSION**

25.1 Distemper of required colour and shade shall be obtained ready mixed conforming to IS 428 – 2000. The material shall be in a form of homogeneous paste, free from odour of putrefaction as such and when mixed with water.

25.2 The workmanship shall conform to clause No. 15.13 & 15.14 of MES schedule part I, 2009 as applicable. Putting shall conform to clause No. 15.19 of SSR Part I, 2009 as applicable and as per manufacturers instructions.

26. **White Cement Based Putty**

26.01 Material White cement based putty shall be obtained ready mixed from the approved manufacture as approved by GE. White cement based putty shall be in the form of fine dry homogeneous powder free from odors of putrefaction and when mixed with water shall have the following properties.

**26.02 White Washing, Colour Washing And Distempering SECTION 15**

(a) Tensile Adhesion strength at 28 days > 1.0 N/mm<sup>2</sup>

(b) Compressive strength at 28 days > 9.0 N/mm<sup>2</sup>

(c) Initial setting time > 100 minutes

(d) Final setting time > 500 minutes

(e) Water retentivity > 98%.

**PARTICULAR SPECIFICATIONS(Contd.....)****26.03 Preparation of White Cement based putty**

White cement based putty shall be made by adding 30 to 35% of water by volume strictly as per manufacturer instructions, and the mix stirred to obtain a thick uniform paste. The water mixed putty shall be kept well stirred during use and shall be applied within 2 to 3 hours of preparation.

**26.04 Preparation of Surfaces**

The surface shall be prepared as specified under white washing and colour washing.

**26.05 Wetting of Surface**

Before applying white cement based putty, the surface shall be thoroughly wetted to ensure proper covering capacity, workmanship and better sticking properties of putty.

**26.06 Application of Putty**

(a) Unless otherwise indicated, the surfaces shall be treated with two coats of putty. First coat of putty shall be applied on wet surfaces starting from the bottom of surfaces towards top and shall be applied

with putty blade to maintain homogeneity of application of putty. The surface so prepared shall be allowed to dry for atleast 3 hours. After the surface becomes dry, the surface shall be gently rubbed with wet sponge or putty blade so as to remove the loose particles. Then the second coat of putty shall be applied as like first coat and the surface shall be allowed to dry completely for minimum 12 hours.

(b) After ensuring that the surface is completely dry, the surface shall be rubbed gently with waterproof emery paper greater than 500.

**26.07 Precautions during application**

26.08 Mixing of the “White Cement Putty” is very important activity and hence extreme care is required to be taken for proper and thorough mixing with hand or mechanical stirrer in order to get best results. Mixing is to be continued till a uniform paste is formed. It is important that during mixing, the required amount of water is added incrementally to “White Cement Putty” and not vice versa (do not add putty into water).

26.08 . The “White Cement Putty” shall be applied over wet surface.

26.09 It is recommended not to rub the “White Cement Putty” strongly and harshly with rough emery paper. This breaks the film formed over the “White Cement Putty”, which decreases the water repellency properties.

26.10 In case of fresh concrete/mortar surface, it is recommended that two coats of white cement wash be done before application of white cement putty.

**26A. CEMENT BASE PAINT**

26A.1 Cement base paint shall conform to IS-5410-1992, all as specified in clause 15.7 of MES Schedule Part-I (2009). Preparation and application of cement base paint shall be carried out all as specified in relevant clause 15.15 of MES Schedule Part-I as applicable.

**26B PAINTING.( As applicable )**

26B.01 GENERAL: General requirement for paints and workmanship of painting shall be as specified in section 17 of MES Sch. Part I and shall be complied with unless specifically stated otherwise hereinafter.

**PARTICULAR SPECIFICATIONS(Contd.....)**

26B.02 Members specified to be painted shall first be passed by the Engineer-in-Charge and marked as such before commencement of painting work. Each coat of paint shall be passed by the Engineer-in-Charge before the next coat is applied.

26B.03 If the under coat of paint is not executed within six months after applying priming coat of paint. The painting shall be re-done by the contractor at no extra cost to the Government.

26B.04 The exact tint shall be decided by the GE.

26B.05. Surface which are inaccessible for painting after execution shall be painted before execution.

26B.06. Paint shall be approved by the Garrison Engineer before their bulk procurement. Paint shall be any one of the makes as listed in list of Manufacturers.

26B.07. Primer for wood surfaces shall be pink primer and for that of steel surfaces shall be red oxide primer. Colour and shade shall be as decided by the GE.

**27. PAINTING TIMBER SURFACES/STEEL SURFACES:**

**27.01** Where painting to timber/steel surfaces is indicated on drawings prepare surfaces and apply two coats of synthetic enamel paint over one coat of primer as specified here –in-before. Preparation of surfaces for all locations except gantry girders shall be all as specified in MES Schedule Part – I. The steel surfaces of gantry girder shall be prepared by sandblasting. The prepared surface shall be got passed by the GE before applying paint, gantry girders shall be painted with primer and under coat before erection. Painting shall be carried out by spray painting.

**27.02. WORKMANSHIP:**

27.02.1. All wood work required to be painted shall be smoothened, sized and knotted and then applied with priming coat. Stopping and filling [filler coat] shall be done after priming coat and surfaces rubbed down to a level and smooth surface and thereafter under coat and finishing coat applied, all as specified in clause 17.6 of MES Schedule Part – I.

27.02.2. The steel surfaces which are required to be painted shall be given two coats of paint, priming coat and undercoat after fabrication but before assembly and erection and finishing coat after assembly and erection

27.02.3. Unless otherwise indicated on drawings and/or specified in these particular specifications all surfaces of iron and steel work shall be prepared and treated with two coats [one undercoat and one finishing coat] of synthetic enamel paint over a coat of primer all as specified here-in-before. Reinforcement bars, tinned or galvanized iron surfaces and steel-work embedded in concrete/plaster shall however not to be painted.

27.02.4. Bottom of door shutters shall be given one coat of primer only.

27.02.5. Irrespective of what is indicated on drawings and specified elsewhere, finishing coat and undercoat shall be with the same paint.

**28 CAST IRON RAIN WATER PIPES**

28.01 Pipes shall conform to IS : 1230 -1979 Specification for cast iron rain water pipes and fittings. Pipes and fittings shall be true, smooth and cylindrical, their inner and outer surfaces being as nearly as practicable concentric. These shall be sound and uniform castings, free from laps, pin holes or other imperfections and shall be neatly finished and carefully fitted both inside and outside. The ends of pipes shall be reasonably square to their axes.

**PARTICULAR SPECIFICATIONS(Contd.....)**

- 28.02 C.I rain water pipes shall be of the dia specified in the description of the item and shall be in full length of 1.8 metre including socket ends of the pipes, unless shorter lengths are required at junctions with fittings. The pipe lengths shall be in each case be with socket. The pipes shall be supplied without ears unless otherwise indicated.
- 28.03 The pipes supplied shall be factory painted (with a tar base composition) both inside and outside which shall be smooth and tenacious.
- 28.04 Every pipes shall ring clearly when struck all over with a light hand hammer. When shorter pipes are cut from full length they shall be cut with a hacksaw. The sizes, weights, sockets and tolerances of pipes shall be as shown in Table 1 of clause No. 11.18.1.3 of SSR part I, 2009.
- 28.05 C.I fittings such as bends of various degrees, heads, offsets of different projections, branches and shoes shall conform to IS : 1230.. The fittings shall be of the diameter as specified in BOQ. Fixing and jointing shall be as specified in 11.18.2 of SSR Part I, 2009, as applicable..
- 28.06 The entire workmanship shall conform to relevant clauses of SSR Part I, 2009, section 11, as applicable

**28A GLAZING:****28A.01 SHEET GLASS**

28A.01.1 Sheet Glass for glazing shall conform to IS 2835-1987 Specification for that transparent sheet glass and shall be of the following qualities:

- (a) 'A' quality or selected quality (SQ) for selected glazing, where indicated.
- (b) 'B' quality or ordinary quality (OQ) for glazing purposes.
- (c) 'C' quality or greenhouse quality (GQ) for strips for flooring.

28A.02 Sheet glass shall be flat transparent and clear as judged by the naked eye. It may, however, possess a light tint when viewed edgewise. It shall be free from any cracks and other defects

28A.03 Thickness of glass shall be as indicated in respective items of Schedule 'A'. Work shall be carried out as specified in section 16 of MES Schedule Part-I as applicable.

**29. WATER SUPPLY, PLUMBING AND SANITARY APPLIANCES****29.01 GI PIPES AND FITTINGS**

29.01.1 GI pipes shall be mild steel galvanised of grade as indicated in Sch. 'A'. GI pipes shall conform to IS-1239 (Part-I) – 1979 and shall bear IS certification mark. Fittings shall conform to IS – 239 (Part – II) 1982 and shall bear IS certification mark. Laying and jointing of GI pipes shall be carried out all as specified in clause 18.50 and 18.51 of MES Schedule Part I as applicable.

29.02 The entire workmanship shall conform to the relevant clauses of SSR Part I, 2009, section 18 as applicable and as directed by the engineer- In – Charge.



**PARTICULAR SPECIFICATIONS(Contd.....)**

29.03 Bib taps and stop valves shall be screwed down type and shall conform to IS-781-1984. The spindles, glands, crutches (handles), washer plates, nuts etc., should be of brass rod. The handle shall be crutch or butterfly type as directed. Bib taps shall be polished bright, stop valves shall be polished bright or they may be un polished 'as cast' finish as directed. Minimum finished mass of bib taps and stop valve shall be all as specified in clause 18.14.1 of SSR-1991, Part-

29.04 All plumbing items i.e. bib taps, pillar taps, stop cocks, gate valves etc shall be of size and type as indicated in respective items of BOQ. These shall bear IS certification mark. Items conforming to IS specifications will be accepted only in case items bearing IS certification mark are not available. Bib taps shall be polished bright, stop valves shall be polished bright or they may be un polished 'as cast' finish.

29.05 **WORKMANSHIP**

The entire workmanship shall conform to the relevant clauses of respective items of SSR part I, 2010,, SECTION 18, as applicable.

**30. PVC LOW LEVELFLUSHING CISTERN**

30.01 PVC Flushing Cistern for water closets and urinals shall be built and conforming to IS 7231-1994(Specifications of PVC high level and low level flushing cistern for water closets and urinals) . It shall be solid moulded with valveless syphonic fitting. Manually operated with one PVC ball valve.Horizontally plugged type and with inbuilt polyethylene of float. Flushing pipe of required length for cistern including coupling and bend shall be as per manufacturer. The PVC flushing cistern shall be high level or low level of capacity 3, 5, 6 &10 litres single flush / dual flush type as indicated. The parts of single/dual flush system in a cistern shall be as per IS.The cistern shall be manufactured from high density polyethylene (HDPE) IS 7328-1992 or polystyrene high impact IS 2267-1972 or polypropylene or Acrylonitrile-butadiene-styrene (ABS) or Glass fibre reinforced plastic (GRP) as indicated.

30.02 The entire workmanship shall conform to the relevant clauses of SSR Part I, 2009, section 18 as applicable and as directed by the engineer - In – Charge.

31. **SANITARY APPLIANCES:-** shall be vitreous china and shall conform to IS 2556( Part – I ),-1994 and shall be of any one of the make approved by the GE. Appliance shall be strong, of high grade and shall be coated on all exposed face with an impervious white vitreous glaze.The glaze shall be uniform, free from craze and discolouration and shall possess an impervious surface. It shall be of one piece construction. Water closets and urinals shall have an integral flushing rim.

**31.01. WASH BASIN**

31.01.1 Wash basin shall conform to IS 2556 (Part 4)-2004, Specification for vitreous sanitary appliances (Vitreous China) (Part-4) Specific requirements for wash basins. The basins shall be of flat back pattern, size 660x460mm (surgeons basin), 630x450mm, 550x 400mm or 450x300mm ,or angle back pattern 600x480mm or 400x400mm, or as indicated. Wash basin to be installed in surgeon's room and operation theater shall not be provided with soap holder recess and combined overflow.Basins shall be provided with a single or double tap holes as indicated. A suitable tap hole button shall be supplied if the tap is not required in installation. The waste hole shall be either rebated or beveled internally with an overall dia of 65 mm and a depth of 10mm. Each basin shall be provided with 32 mm brass, chromium plated waste fitting. A slot type overflow having an area of not less than 5 sq cm shall be provided at the back of the bowl. Every basin shall have an integral soap holder recess or recesses, which shall fully drain into the bowl.The basin or sink shall be supported on a pair of cast iron brackets set in cement mortar 1:3 for

**PARTICULAR SPECIFICATIONS(Contd.....)**

lighter appliances or embedded in cement concrete 1:2:4 type B1, blocks 100 x 75 x 150 mm in size. The wall plaster on the rear shall be cut to rest over the top edge of the basin wheredirected. After fixing the basin, the plaster shall be made good and surface finished as directed.

31.01.2 The chromium plated trap and union where not indicated, shall be connected to 32 mm dia waste pipe in case of wash basins and 50 mm waste pipe in case of sinks, which shall be suitably bent towards the wall. Waste pipe shall discharge directly on to a floor or nahani trap or gully trap or into an open channel leading to floor trap, or shall be connected to a waste pipe stack through a floor trap. CP brass union shall not be provided when a surface channel, drain or floor trap is placed directly under the wash basin and the waste discharges into it vertically. The height of front edge of wash basin or sink from the floor level shall be 80 cm unless otherwise indicated.

31.01.03 The entire workmanship shall conform to the relevant clauses of SSR Part I, , section 18 as applicable and as directed by the engineer- In – Charge.

32. **SANITARY APPLIANCES:-** shall be vitreous china and shall conform to IS 2556( Part – I ),-1994 and shall be of any one of the make approved by the GE. Appliance shall be strong, of high grade and shall be coated on all exposed face with an impervious white vitreous glaze. The glaze shall be uniform, free from craze and discolouration and shall possess an impervious surface. It shall be of one piece construction. Water closets and urinals shall have an integral flushing rim.

**32.01 WASH DOWN WATER CLOSET**

32.01.1 Water Closet shall conform to IS 2556 (Part 2)-2004. Specification for vitreous sanitary appliances (vitreous china), part II, specific requirements for wash down water closets, and shall be of pattern 1 or 2 as indicated, and of height 390 mm and 410 mm respectively. Each closet shall have an integral trap either with P or S outlet; trap inlet depth shall be at least 75mm. Where required the closet shall have an anti-syphonage 50 mm dia vent horn on the outlet side of the trap. The serrated part of the outlet shall not be glazed externally. Each closet shall have not less than two holes for fixing to floor.

32.01.2 The entire workmanship shall conform to the relevant clauses of SSR Part I, 2009, section 18 as applicable and as directed by the engineer - In – Charge 24.02

**32.02. SQUATTING PANS**

32.02.1 Squatting Pans shall conform to IS 2556 (Part 3)-2004. Specification for sanitary vitreous appliances (vitreous china), part III, specific requirements for Squatting Pans. These shall be of long pattern size 580 or 630mm or Orrisa pattern size 580x440 mm or 630x540mm as indicated. The flushing inlet shall be at the narrow end unless indicated to be provided at both the ends. Each pan shall be provided with a 100 mm dia P or S trap with or without inspection vent as directed. The trap shall be glazed inside. The inside of the pans shall be regular and smooth to ensure an efficient flush.

32.02.2 The entire workmanship shall conform to relevant clauses of SSR Part I, 2009, section 18, as applicable. and as specified in BOQ. and as directed by the engineer - In – Charge.

**33. HDPE WATER TANK**

Water tanks shall be of capacity as specified in Sch A. Water tank shall be single piece rotational moulded polyethylene, (cylindrical vertical with top closed) double layer (ISI marked). The quoted rate of water tank shall include for making arrangement for inlet/outlet/over flow and vent pipe with standard size of GI medium grade fittings. Water tank shall be of any of make specified in Appendix C.

**34. HDPE/ PVC/ UPVC PIPE AND FITTINGS**

These shall be shall be confirming to relevant IS and make shall be as per Appendix C. Laying/fixing shall be carried out all as specified in Sch A and in Section 18 of MES SSR Part-I.

**PARTICULAR SPECIFICATIONS(Contd.....)****35. STEEL SINK AND DRAINAGE BOARD**

35.01 It shall be manufactured from Salem Stainless Steel Sheets grade A1 S1 305. Thickness of Sheet shall be 1 mm. Size of sink shall be as indicated. The surface of the sink shall be plastic coated to make it safe and scratch free installation.

35.02 The entire workmanship shall conform to the relevant clauses of SSR Part I, 2010, section 18 as applicable and as directed by the engineer- In – Charge.

**36. POINT WIRING**

36.01 Type of wiring shall be all as described in Schedule 'A' and as directed by the Engineer-in-Charge and as specified in MES Schedule Part I.

36.02 Point wiring shall be all as described in Schedule 'A' and at locations directed by the Engineer-in-Charge.

36.03 SCREWS, NAILS. All screws used in the work shall be brass nettle fold or sun brand. Cover of MS boxes be fixed with brass screws.

36.04 All MS boxes for mounting switches, sockets, regulators etc shall be fixed flush with the finished surface of the wall. All switches and socket outlets are to be mounted on laminated sheet of white colour complying with IS-2046-1989 and fitted to the sunken switch box. The rates for point wiring shall include the cost of MS box and laminated sheet cover.

36.05 All cables (except flexible cable) to be used in the works shall conform to IS-694-1977 All cables used in the work shall have ISI marking. The cable shall be from any one of the makes mentioned hereinafter.

36.06 CASING CAPING. All casing &casing shall be rigid non metallic PVC medium grade and shall conform to relevant and accessories conform to relevant. . Casing &casing shall be any one of the following make as specified in schedule "A" and duly approved by GE.PVC casing and capping shall be from any one of the makes mentioned IN BOQ

**36.07. SWITCHES:**

36.07.1.Piano flush type switches shall be provided all as per Clause 19.114.1 of MES Schedule Part I of 2009 and as directed by Engineer-in-Charge

**36.08. CEILING ROSE:**

36.08.1 Ceiling rose shall be surface type and shall comply with IS-371-1979, specification for ceiling rose having 3 terminal plates and outside diameter not less than 65 mm. Ceiling rose shall be provided with means for gripping flexible cord which shall not damage the insulation and/or sheath of the cord as shall be such that the load on the cord is not transmitted to the terminals.

36.09 THE MAXIMUM CONTINUITY RESISTANCE. The maximum continuity resistance from any point in the installation including the earth continuity conductor and earth pipe shall not exceed one ohm.

**36.10 TESTING**

36.10.1 On completion of wiring the following tests shall be carried out:-

- (a) (i) Insulation test. (ii) Testing of earth continuity (iii) Polarity test
- (b) The test result shall be recorded and signed by Engineer-in-Charge and the contractor

**37 SUBMAIN WIRING :-**

37.01 Submain wiring shall be carried out with single core PVC insulated FRLS cable 1100 volts grade, multistranded copper conductor cable drawn through and including conduit of required size / dia, type as specified, medium grade ISI marked and conduit accessories conforming to IS and all as specified in 'BOQ' along with single core PVC insulated FRLS cable 1100 volts grade, multistranded copper conductor cable as earth continuity conductor. The joints and looping back system of wiring shall be specified in 19.109 & 19.109.1

**PARTICULAR SPECIFICATIONS(Contd.....)**

of MES Schedule Part I 2009. Conduit pipes shall be fixed all as specified in clause 19.128 of MES Schedule Part I 2009. The saddles comply with the requirements of IS-3837-197

**38. MCBS, ISOLATORS AND MCB DB:-**

- a) MCBs ( C Series), isolators and MCB DB shall be one of the makes from any one of the makes mentioned hereinafter.
- b) Sufficient length of cables shall be kept inside control boards for connections between MCBs, MCB, DB Sub main wiring shall be measured upto the top of board only. The unit rate of distribution boards shall include cost of these provisions and also cost of cable used in the DBs.
- c) All cable terminals inside main switches / main control board / Isolators / bus bar chamber / MCB DB, etc shall be provided with suitable lugs for connection / inter connections.
- (i) The sheet MCB distribution boards shall be provided with electrolytic quality copper bus bar for phase neutral.
- (ii) Factory made enclosures shall be fabricated out of 1.6 mm thick CRCA sheet steel and treated with anticorrosive epoxy paint as base and finished with synthetic enamel paint 2 coats.
- (iii) Detachable conduit entry plate shall be provided for both top and bottom sides to enable for drilling of conduit holes at site.
- (iv) All the miniature circuit breakers (MCBs) shall comply with IS-8828-1978.
- (v) The MCBs shall be designed for operation on hammer trip principle for effectively limiting the fault current within shortest period.
- (vi) The MCBs inside DBs shall be direct rail mounted.

38.01. All MCB DBs MCBs shall be provided with suitable compression lugs / glands for various PVC cables as specified in Schedule 'A' and the cost of such MCBs / DBs main boards deemed to include the above provisions.

38.02 All the items provided in the works shall be IS marked. If IS mark is not available in India the same shall be procured from the best available in market with prior approval of GE. No sub standard item shall be allowed.

**39. MCCB's**

39.1 MCCB's shall be suitable for operational voltage of 415 V, 50HZ, 3 phase, 4 wire system for rated current and ultimate breaking capacity as specified in the BOQ. It shall conform to IS 13947 ( Part 3 -1993 ) and IEC-60947 ( part 2). It shall comply to the requirements of clause No. 19.100.14 to 10.100.14.7 of SSR part I, 2009. As applicable. The contractor shall procure the MCCB of any one of the make specified in BOE, duly approved by the GE.

**40. LIGHT FITTINGS**

40.01 The repair work shall be carried out as required at site and as directed by the Engineer-In- Charge. Provide light fittings with its fittings and fixtures and lamp all as specified in BOQ and as per the Cat No. Specified. **In case of difference in description in item of BOQ and cat No. the work shall be executed as per CAT No. The light fitting shall be any one of the make as specified in schedule "A", duly approved by the GE.** Light fittings shall be provided all as per Clause 19.35 of MES Schedule Part I of 2009 and as directed by the Engineer In Charge. **The manufacturers warranty certificate for LED light fittings shall be submitted before claiming the payment**

**PARTICULAR SPECIFICATIONS(Contd.....)****41. GENERAL / OVERHAULING REPAIRS OF PART**

- a. The entire repair shall be carried out in workmanship manner and in accordance of the work.
- b. Special attention shall be paid to the finish and general appearance of the work. Painting as required shall be done to the entire satisfaction of the Engineer-in-Charge.
- c. The rate offered should be deemed to include any minor detailed of work which are obviously and fairly intended and which Jun not have been referred to in these documents, but are essential to work.

**42. REPAIRS TO GEYSER, CEILING FANS & EXHAUST FANS**

42.01 The work under this contract shall comprise of repairs of geysers, ceiling fan/ exhaust fans installed different locations. The work includes replacement of defectives parts as required. The contractor shall quote unit rates for repair charges and cost of repair parts as given in Schedule of works.

42.02 The Contractor shall depute qualified and experienced mechanic for repair of equipment.

Work shall be carried out in a work man like manner.

42.03 Most of spares normally required for repair of geyser, ceiling/ exhaust fans are included in Schedule of work items.

42.04 However if any minor repair or spares// fittings required to make functional the appliances the same shall be replaced by the contractor and the replacement of these spares shall be deemed to included in unit rate quoted by contractor. No additional payment shall be admissible to the contractor for such replacement.

42.05 Cost of PVC insulation tape, lugs and small nuts/ bolts and screws required for repair shall be deemed to be included in the unit rate quoted by the contractor.

42.06 The unserviceable materials (except those credits offered) shall be returned to MES store without any extra cost to the Government.

42.07 **WINDING WIRES** – Rewinding of fan shall be done with approved copper wire conforming to relevant IS as approved by GE.

42.07.1 Loss due to inadequate skill – The contractor shall be responsible for making good the damage occurred to the geysers due to bad workmanship by deputing experienced staff. The decision of the accepting officer regarding damages shall be final and binding with respect to a particular defect in the event of bad workmanship

42.07.2 Spares/ Component – All spares/ component shall be as per the existing make / type/ model of the geyser as approved by GE. All spares/ components shall be brought at site with original manufactures sealed packing bearing manufactures marking/ hologram and shall be opened in presence of Engineer-in-Charge.

**42.08 MAINTENANCE OF GEYSERS**

42.08.1 Installation and maintenance of geysers shall be carried out in accordance with the guidelines laid down in the following Indian standards:- IS-2065-1983 (Second revision) code of proactive for water supply in buildings. I S -2082-1978 (Second revision) specification for static storage type electric heaters.

42.08.2 IS-302-1979 General and safety requirements for house hold and similar appliances National Building Code of India 1982 Part-IX Section water Supply. IS 7558-1974 Code of practice hot water installations.

42.08.3 After repair and reinstallation of geyser, it shall be carefully charged with water so that all air is expelled from the system. The entire system shall then be tested to a pressure of 45 N / Sqcm or twice the working pressure whichever is greater, for a period of at least half an hour after a steady state is reached, The entire system shall be rectified by removing and remarking the particular section chalking of threads, hammering and welding of leaking joint shall be allowed.

**PARTICULAR SPECIFICATIONS(Contd.....)**

42.08.4 After the system is proven to be water tight, the hot water heaters shall be commissioned by connecting the same to the electric supply. The system shall then be observed for leakage in pipe due to expansion or overheating. The temperature of water at outlets shall be recorded. The thermostat of the geyser shall be checked and adjusted to give maximum water temperature of 700 C.

**43. REPAIR OR REPLACEMENT GENERALLY:**

43.01 Repair/replacement shall generally include,(a) disconnecting (b) dismantling of parts,(c) carrying out repairs specified ,and / or replacement, (d) overhauling by cleaning and oiling or greasing, re-assembling of units,(e) initial testing before fixing,(f) refixing of equipments at the position including cleaning and necessary repairs to base / position,(g) replacement of bolts, nuts as required,(h) any all other petty works essential for smooth working of equipment and (j) testing of equipment at full load. All these operation shall be carried out as directed by EIC and to his entire satisfaction.

43.02 Taking out and dismantling of parts of equipment should be done using proper tools and with special care. Any damage caused due to mishandling of the equipment will be made good by the contractor without any extra payment.

43.03 The rate quoted by the tenderer in BOQ be deemed to included minor repairs such as fixing of screws (any type),welding of sheet polishing, denting etc. If required to be carried out to complete the work.

**44. SPARE PARTS**

44.01 Contractor shall note that all spare parts required to replace under this contract shall of same make of Geyser, in case any spare part(s) are not being manufacture by the manufacturers of Geyser, the same spare part (s) shall be as per manufacturer's recommendation

**45. BALL BEARING:**

45.01 Ball bearing shall be of Make-SKF / NBC / TATA asapproved.

**46. VARNISH:**

46.01 Varnish incorporated in the work shall be of make Dr BRECK or equivalents as approved by the GE.

46.02 The Contractor and the executives will ensure that the materials also incorporated in the work are identical with the approved samples.

46.03 **REWINDING OF MOTORS:**The motors which need re-winding shall be examined by the EIC and handed over to the contractor for rewinding of motors with super enameled copper winding wire (any approved Make) after rewinding the motors shall be tested properly before fixing with fan.

**47. BLANK****48. EARTHING**

48.1 Earthing shall be carried out by Earth Electrodes as shown in Electrical Plate No. 3 of MES Schedule Part-I and as specified in IS-3043 including upto date amendments thereto. The Earth Electrodes shall be placed all as specified and as directed by Engineer-in-Charge and 2.0 Metre away from the Main Structure. The surplus soil obtained from the excavation shall be removed to distance not exc. 50 Metre. The Concrete for Chamber shall be PCC 1:3:6 (using 20 mm graded stone aggregate) and exposed surfaces need to be finished fair. Funnel shall be prepared out 3.15mm thick PGI Sheet by welding and shall be leak proof. It shall be provided with wire gauge with 1.18mm average width of aperture and 0.45mm average dia of wire soldered to Funnel Cover. Dust shall be used for Medium Grade 20mm with 12mmdia holes drilled staggered @ 300mm C/C through out Pipe. The

**PARTICULAR SPECIFICATIONS(Contd.....)**

bottom of Pipe shall be layed at an angle of 45°. Earthing shall be interconnected with strip as per directed by the Engineer-in- Charge.

48.2 The following Tests shall be carried out to the entire satisfaction of the Engineer-in-Charge :-

(a) Earth Resistance Test : Resistance of each Earthing shall be measured individually and shall not exceed 0.5 Ohm in ordinary soil and 3 Ohm in Rocky situation.

(b) In case the Resistance is more than as specified, the Contractor shall increase the depth of the Bore hole, quantity of Charcoal, Salt and length of Electrodes to bring the Resistance of Earth to the Value specified above, without any Extra Cost to the Government.

**49. STEEL TUBULAR SWAGED POLES.**

The poles shall conform to the specifications given in Clause 19.3 of MES SSR Part-I and shall be of make specified in Appendix „C“. Size of the pole shall be as specified in Schedule „A“. The pole shall be erected as specified in clause 19.50, 19.51 & 19.52 of MES SSR Part-I. The poles shall be erected with due care so that they are truly vertical and shall be suitably stayed till the concrete in foundation is set. The contractor shall produce certificate from the manufacturer to establish that the poles conform to and have been produced as per the IS specifications. The plinth blocks/muffs shall be finished even and smooth without using extra cement. Location of poles and strut shall be decided by Engineer-in-Charge.

**50. WATER SUPPLY, PLUMBING****50.1 GI PIPES AND FITTINGS**

50.1.1 GI pipes shall be mild steel galvanised of grade as indicated in Sch. 'A'. GI pipes shall conform to IS-1239 (Part-I) – 1979 and shall bear IS certification mark. Fittings shall conform to IS – 239 (Part – II) 1982 and shall bear IS certification mark. Laying and jointing of GI pipes shall be carried out all as specified in clause 18.50 and 18.51 of MES Schedule Part I as applicable.

50.2 Bib taps and stop valves shall be screwed down type and shall conform to IS-781-1984. The spindles, glands, crutches (handles), washer plates, nuts etc., should be of brass rod. The handle shall be crutch or butterfly type as directed. Bib taps shall be polished bright, stop valves shall be polished bright or they may be un polished 'as cast' finish as directed. Minimum finished mass of bib taps and stop valve shall be all as specified in clause 18.14.1 of SSR-1991, Part-

50.3 All plumbing items i.e. bib taps, pillar taps, stop cocks, gate valves etc shall be of size and type as indicated in respective items of BOQ. These shall bear IS certification mark. Items conforming to IS specifications will be accepted only in case items bearing IS certification mark are not available. Bib taps shall be polished bright, stop valves shall be polished bright or they may be un polished 'as cast' finish.

**50.4 WORKMANSHIP**

The entire workmanship shall conform to the relevant clauses of respective items of SSR part I, 2010,, SECTION 18, as applicable.

**51. RUN LEAD JOINT:**

51.1 The caulking lead shall conform to Is 782-1978. The entire work of lead jointing shall conform to clause No. 18.48.2 of SSR part I, 2009.

**51.2 RUBBER GASKET JOINT:**

51.3 The entire work shall conform to clause no. 18.48.4 of SSR part I, 2009.

**51.4 FLANGED JOINT:**

51.5 The jointing material used between flanges of pipes shall be compressed fiber board or rubber of thickness 3 mm. The fiber board shall be impregnated with chemically natural mineral oil and shall have smooth and hard surface. Its weight per Sqm shall not be less than 112 gm / mm thickness.

**PARTICULAR SPECIFICATIONS(Contd.....)****52. MS / ERW PIPES AND FITTINGS :**

52.01 The use of M.S. Pipes in the execution shall be as follows :

Buried and Overground Pipes :

Mild steel ERW Pipes as per IS:1239 (Part-I) medium grade (for pipes of sizes 150 mm NB and below) or IS:3589 (for pipes of sizes 200 mm. and above) with IS mark in both the cases. Minimum thickness of steel pipes shall be as per IS: 3589. All fittings to be used in connection with steel pipelines upto a size of 80 mm. shall be as per IS: 1239, Part - 2, 'Mild Steel tubulars and other wrought steel pipe fittings. Heavy grade conforming to IS:1239 (Part-1) having thickness not less than those of IS: 1239 (Part-2) heavy grade pipes. Fitting with sizes above 150 mm shall be fabricated from pipes conforming to IS:3589 or steel plates having thickness not less than those specified in the IS:3589. All fittings shall be of forged steel Welded construction shall be adopted for steel pipelines unless specified otherwise Hangers and supports shall be capable of carrying the sum of all concurrently acting loads. They shall be designed to provide the required supporting effects and allow pipelines movement as necessary. All guides, anchors, braces, dampers, expansion joint and structural steel to be attached to the building / structure / trenches etc., shall be provided where required. All piping system shall be capable of withstanding the maximum pressure arising from any condition of testing (as stipulated) and operation, including water hammer effects

52.02 The entire workmanship shall conform to the relevant clauses of SSR Part I, 2010, Section 18, as applicable and as directed by the Engineer-In-Charge.

**53. REPAIRS TO PUMPS AND MOTORS**

53.1 The repairs shall be carried all as specified in BOQ and as directed by the Engineer\_ In\_ Charge. The repairs shall be carried out in a standard manner by any rep of the Dealer of OEM. The spares incorporated shall be of the existing make. The equipment shall be reinstalled, tested and commissioned to the satisfactory of the Engineer- In- Charge.

**54. POWER CABLES**

Power cables suitable for LT and HT supply shall conform to the following Indian Standards as indicated. The characteristics of the cables viz. the size of the conductors, single core, twincore, three core or multi-core, whether armoured or unarmoured, type of insulation and sheathing and the rated voltage of the cables shall be as indicated :

- (a) IS 692-1994, Specification for paper insulated lead-sheathed cables for electric supply.
- (b) IS 1554-(Part 1)-1988, Specification for PVC insulated (heavy duty) electric cables, Part 1 for working voltage upto and including 1100 volts.
- (c) IS 1554-(Part 2)-1988, Specification for PVC insulated (heavy duty) electric cables. Part 2, for working voltages from 3.3 KV upto and including 11 KV.
- (d) IS 7098 (Part 1)-1977 and Part 2-1985 (XLPE) insulated PVC sheathed cables.

54.1 The XLPE cables shall be suitable to with stand maximum conductor temperature of 900 C and 2500 C during operation and short circuit respectively and these cables shall be manufactured by triple extrusion using single ( Common ) cross head extrusion technique and dry cure inert gas cured cross linking process. 19.19.2 LT Cables 19.19.2.1 All LT cables shall be of 2/3/3 ½ or 4 core aluminium conductors, XLPE insulated heavy duty and suitable for 1100 volts grade and conforming to IS-7098 (Part-1 - 1988). 19.19.2.2 The aluminium conductors used shall be stranded, compacted and circular/shaped and the main insulation shall be of cross linked polyethylene (XLPE) with inner sheathing PVC extruded and each core of the cable shall have colour identification all as specified in IS.

54.2 Armour over the inner sheath shall be either of strip or wire type and outer sheath shall be of Extruded PVC conforming to ISS.

54.3 The cables shall be suitable to withstand maximum conductor temperature of 900 C and 2500 C during operation and short circuit respectively.

54.4 The entire workmanship shall conform to the relevant clauses of SSR part I, section 1\*, as applicable .



**PARTICULAR SPECIFICATIONS(Contd.....)**

55. **GUARANTEE** The contractor shall give guarantee for efficient trouble free functioning/performance of ceiling fans , exhaust fan/electric meter & Gyser and solar water heaters srepaired by him under this contract for a period of 24 month (ie, within defect liability period as per condition of IAFW-2249 forming part of the contract) from the certified date of completion of the work. Any defect developed during this period shall be rectified by the contractor without any extra cost to Govt.

56. **SHUT DOWN.**

56.01 Before starting work, the contractor shall inform the Engineer-in-Charge for necessary shut down and work shall start only after shut down from the Department. During execution of the work, the contractor has to take all necessary precautions as mentioned in the IE Rules. If any accident occur due to not observing the above precautions, the Department will not be held responsible for the same.

57. **SAFETY PRECAUTIONS.**

57.01 All the necessary safety precautions as per IE Rule/IE Act shall be taken by the contractor and his work people during execution of work and Govt will not be held responsible for any accident due to negligence on the part of the contractor and his work people in this respect.

58. **WORKMANSHIP**

The entire workmanship shall conform to the relevant clauses of respective items of SSR part I, 2010., SECTION 18, as applicable.

59. **MINOR DETAILS:-** The rates quoted by the contractor shall be deemed to include for any minor items of repairs required for the satisfactory execution and entire completion and requirement of which are obviously and fairly intended, which may not have been referred to in these documents, but which are required for completion of repair works.

60. **LABOUR WELFARE TAX**

60.1 The rates quoted by the contractor shall include for labour welfare tax as per Govt. policy and it will be deducted at source if ordered by the Govt. Contractor will have no claim on this account at a later stage .

61. **TAKINGDOWN/DISMANTLING/DEMOLITION:**

61.01 Taking down/dismantling/demolition (as applicable) shall be carried out all as described in relevant Para of MES Schedule and as directed by Engineer-In-Charge. Unless otherwise specified in BOQ for reuse and/or specified in Schedule of credit, all materials obtained during taking down/dismantling/demolition, shall be remove from the site and depositing to MES Store Yard properly or disposed off all as per direction of Engineer-In-Charge. No extra payment shall be allowed to the Contractor on this account. In the event of any loss or damage caused to the existing Structure/Equipments /Installation/accessories during taking down/ dismantling/ demolition due to carelessness and negligence of Contractor and/or their Labours, the same shall be Made good or operative by the Contractor at their own arrangement and expenses, for which Government shall not made any extra payment to the Contractor on this account. The decision of the GE in this regard shall be final, conclusive and binding.

62. **TRANSPORT**

62.01 The contractor has to make their won arrangement for transporting the unserviceable material at his own risk and cost if necessary. The contractor shall take care to avoid any damage to the equipment/parts of its items listed in BOQ while carrying out the above mentioned work. He shall be responsible for replacing the same damaged parts equipment during execution of work with similarparts of same specification as originally exists. The rate quoted by the contractor shall be deemed to including for this provision and no extra claim or whatsoever on this account will be entertained.

63. **REMOVAL/SITE CLEARANCE:** - Old derbies generates during preparation of surfaces of wall, ceiling, wood & steel and other materials if any the property of the contractor and will remove/ disposed off and sites shall have to be cleared to the satisfaction of the Engineer-in-charge.

**PARTICULAR SPECIFICATIONS(Contd.....)****64. MAKES.**

64.1 The makes specified in BOQ shall be taken precedence in all cases, However in case of make mentioned in the BOQ are not available, the other Makes shall be considered only and for that the contractor shall produce non availability certificate for all the makes specified in the BOQ from the original manufacturers, All materials incorporated in the work shall be ISI marked. No claim whatsoever arising in this aspect is admissible. The decision of GE shall be final and binding.

**MAKES OF MATERIALS**

S No	Description of item	Makes
1	2	3
<b><u>Building Materials</u></b>		
1	ATT Chemical.	Chlorpyrifos 20% EC M/s Dadson Associates, M/s ABJ Pest Control, Room No.14, Kancharapara, WB
2	Water proofing compound	Hindcon/ Sika /Pidilite / CICO No 1 / ACCRO No 1 /FOSROC
3	Second class hard wood species	Species: - Sal/ Bijasal/ Benteak/ Laurel/ Hollock/ Chikrassy/ Gamari/ Badam / Kalasiris.
4	Factory made door and Windows	M/s Ambika timber Works, Bikna (Patel Nagar), P.O. Keshlakole, Bankura, W.B./ M/s Premier Wood Craft (P) Ltd., Jessore road, P.O. Ganganagar, Dist – 24 Parganas( West Bengal) / Door kings, Kolkata / Jain Doors PVT Ltd / M/s Supreme Doors and allied products.
5	Block Board & Flush Door	M/S Sylvan Plyboard( India) Pvt Ltd.
6	PVC Door frames and Doors	Polyline / M/s Rajshri Plastiwood,/ Kumar Arch Tech Pvt Ltd, M/s Sintex India Ltd,/ HINDOPAN,/ Marino / Duroplast
7	FRP Door	Krafto Door/ M/S Fibreways technology, M/S Sintex Ind. Ltd, M/S Deelux Poly Fab Pvt Ltd, M/S S M Fibre, M/S Ashoo Model Arts/M/s Jain Wood Industries (Brand: JAYNA)
8	Pressed steel door frames.	AE Enterprise / Multiwyn industrial corporation / Doorwyn industries / Madhu industries / Ajanta Ispat / Alusys. / M/s GS Udyog / M/S Ashish Industries
9	Steel windows and ventilators.	Make:- M/s Modern Fabricators, 23E, Radha Madhab Dutta Garden Lane, Kolkata -10./M/s BA Enterprises, south Stn Road, Agarpara (Salpatabagan), Kolkata – 109. /M/s Sen Harvic, Vora Building, 1st Floor, 50 Nakhoda Street Bombay. /M/s Multiwyn Industrial corporation 3-B, Camac Street, Kolkata – 16 /M/s Agew Steel Manufactures PVT Ltv 522/1, Outside Pachkuva, ahmedabad – 380002 /M/s Doorwyn Industries, 55 Dharmatala Road, Salkia, Howrah ( WB) /M/s Hopes Metal Industries Ltd., P-23 Transport Depot Road, Kolkata – 27 /M/s Ankur Industries, 726 Andul Road (Podra), P.O. Denesh sheikh Lane, Howrah – 711109./M/s Steel Engineers, 203 KabigururabindraNath, Kanchrapara, 24 Parganas(N) WB /M/s NCL Altek and Seccolour Ltd, Hyderabad /M/s Bihar Boddin&Engg work, Katihar (Bihar) / M/S GS Udyog / BA Industries.
10	Safety Locks	Godrej / Harrison / Link
11	MS Butt Hinges	Crown / Everlite / Godrej / Harrison / Mowjee/ Hardwin / Doorset
12	Aluminium hinges / Builders hard ware	Crown/ Classic / Asian / Alans / KR / Ajanta / Argent / Alans / Bharat / Heitich / Prayag
13	MS Door Springs	Crown /Ajanta / Ashish / Crimco / Prestige / Mowjee

**MAKES OF MATERIALS AS APPLICABLE (Contd/-)**

S No	Description of item	Makes
1	2	3
14	Stainless steel butt Hinges	Crown / Everlite / Godrej / Harrison / Mowjee/ Hardwin / Doorset/ Prayag.
15	Bitumen	STP / Tikitar / IWL Chennai/ Choskychemicals.
16	APP Modified Water Proofing Membranes	Hindcon Chemicals Ltd./ Moply-FP (M/S Texsa India Ltd.) / Super thermolay ( M / S STP limited) / Torchshield APP by Pidilite Industries / Hyperplas Polyster (M/s IWL India Ltd.)/ Berger (Proshield membrane)
17	Reinforcement / Structural Steel.	Rinl / Sail / Tisco/JAI Balaji industries ltd / Shyam Steel industries Ltd. / SPS stell rolling mills ltd / SRMB Srijan Pvt Ltd / Electrosteel steels ltd / Shyammetallics and energy ltd / Jindal.
18	Galvalume sheet	M/S Tata Bluescope steel ltd. (colorbond steel) or equivalent in M/S JSW Steel Ltd / M/S Ispat Industries Ltd./ M/S Bhusan Power & Steel Ltd. ) /Sshivshakti Fibre Udyog (Roofitt) / M/S Prestar Infrastructures projects LTD./ Jindal/MS Stellar Buildtech Pvt. Ltd.
19	Colour coated roof sheeting	M/S Dura roof PVT Ltd / M/S Prestar Infrastructures projects LTD
20	Steel Rolling Shutters	M/s Modern Fabricators, 23E , Radha Madhab Dutta Garden Lane, Kolkata -10./ M/s BA Enterprises, south Stn Road, Agarpara (Salpatabagan), Kolkata – 109./ M/s Multiwyn Industrial corporation 3-B, Camac Street, Kolkata – 16 / M/s Agew Steel Manufactures PVT Ltv 522/1, Outside Pachkuva, ahmedabad – 380002. / M/s Doorwyn Industries, 55 Dharmatala Road, Salkia, Howrah ( WB). / M/s Hopes Metal Industries Ltd., P-23 Transport Depot Road , Kolkata – 27. / M/s Ankur Industries, 726 Andul Road (Podra), P.O. Denesh sheikh Lane, Howrah – 711109./ M/s Steel Engineers, 203 KabigururabindraNath, Kanchrapara , 24 Parganas(N) WB.
21	Peg Stay MS / Steel handkes	Ajanta / Ashish / Crimco / Prestige / Mowjee/ Crown
22	MS and Stainless Steel Butt hinges,Tower Bolt/Handles/Sliding door bolts/Hasp and staple	Crown / Everlite/ Godrej/ Harrison/ Mowjee/ Hardwin / Doorset
23	Aluminium Doors , windows and ventilators	Materials:-Hindalco, Indal, Ajit India, Jindal.  Fabricators:- M/s aluminium Pvt Ltd Bombay, M/s Alumilite Pvt Lt Dhiraj / M/s Ajit India Pvt Ltd, M/s Ajay Industries Bombay / M/s Ranniklal S Raste Jabalpur, Argent Industries / M/s Aluminium Tech Industries, I-2249 DSIDC Narela / M/S Ashis Industries.
24	Prelaminated Particle Board	Kitply,/ Bhutan board / Ecoboard / Nepal board / Archid ply / Merinova / M/s Green Ply Industries Ltd / Eco-board / Archid Lam / Century Lam / Shirdi Industries Ltd (ASIS).
25	Plywood	Sudarshan Plywood Industries, white House, 119 Park Street, Kolkata – 700 019. /National Plywood Inds Pvt Ltd, S Fancy Lane, 8th Floor, Kolkata – 700 001./ M/s Alishan Veneer & Plywood Ltd., 46 BB Ganguly Street , Kolkaya – 12 / M/s Green Ply Industries Ltd., / Century Ply / Sylvan Ply.
26	False Ceiling Product	M/S RR Ceiling Product / Armstrong / India Gypsum / Lafarge / Gypstone / Saint Gobain / Everest.

**MAKES OF MATERIALS AS APPLICABLE ( Contd...)**

<b>S No</b>	<b>Description of item</b>	<b>Makes</b>
<b>1</b>	<b>2</b>	<b>3</b>
27	AC Sheets	Everest / Charminar / Rhino
28	High Pressure Steam Cured Non Asbestos Fibre Cement Board/ Gypsum Board as per IS 14862	Armstrong / Saint Gobain (Gyproc) / Everest
29	Ceramic / Glazed Ceramic / Non skid tiles	Kajaria / Asian Granito / Somany / Vamora Granito / Nitco / Orient / Jhonson
30	Vitrified tiles	Somany / Asian Granito / Nitco / Orient / Kajaria / varmoraGranito Pvt Ltd / Jhonson.
31	Machine pressed tiles / Paver block.	Ultra tile / Anjali tiles / Nitco / Mehatab / Terra firma / Ecco scope./ M/S Stylish Precast Pvt Ltd.
32	Lime	Suryacem / Lovelycem / Birla white
33	Paints/ Primer	Asian / Berger / Shalimar / Jenson & Nicholson.
34	PVC Low level Flushing cistern	M/S Johnson Padder / Hindustan sanitary ware / Millennium / Cera / Blue Star Polymers (Speed Flow) / Commander (Water Bird) / Hindware(Sleek) / Parryware(Slimline) / Prayag / Shakti Enterprises.
35	Vitreous China sanitary items	Neycer Kermag (standard) / Hindusthan Sanitary Ware (1st quality) / Parryware (superfine) / Cera (1st quality) / classica 1st /Standard) / Johnson Pedder. / Prayag
36	GI Tubing	Prakash / Utkarsh Tubes Ltd / Jindal / Zenith / Bansal /Nezone/ M/S BST Infratech Ltd.
37	MS Pipes	M/S BST Infratech Ltd / Jindal / Tata
38	CI Pipes& Fittings for W/S	Electro steel / Kesoram / TiscoJayaswalNeco Industries LTD (Hubless centrifugal cast)
39	PTMT fittings	M/S Prayag / Polytuf / M/S Sak Plast Pvt Ltd / Shakti Enterprises
40	PPR Pipes	Savior faire Mfgh CoPvt. ltd / Reliance / Vectus / Finolex / Supreme/ M/S Fusion Industries Ltd
41	DI pipes	Electro casting steel / Jindal / Sri pipes / NecoCentri / BIC / AIC / PIC / Jai balaji Industries / Tata Matliks / Tata Kabuto./ M/S KiswokIndustreies Pvt Ltd
42	Cast iron sand cast pipes	AMC / ICC / Hepco / PIC / BIC / SON/ Jayaswal Neco Industries LTD
43	CI Gratings	Electro steel / Kesoram / Tisco
44	Cast iron sluice valve flanged.	KALPANA /Upadyaya/ RMCO/ Venus / Zoloto / Leader / Audco.
45	PPR pipes.	Savior faire Mfgh Co. ltd / Reliance / Vectus / Finolex / Supreme
46	Mirror cabinet.	Coronet /Prayag / Polytuf / Parryware / Shakti Enterprises
47	CP Towel Rail	Coronet /Kohler / Parryware / Grohe / Bluestar silver line / Shakti Entp

**MAKES OF MATERIALS AS APPLICABLE ( Contd...)**

<b>S No</b>	<b>Description of item</b>	<b>Makes</b>
<b>1</b>	<b>2</b>	<b>3</b>
48	Drapery rod / Decorative curtain Rod	Unique Décor Marvel / Vista /Lavolor / Mac Decor.
49	SS Plate Rack size 24"x36"x10	(Model No.KPR-312 of Blue Star or P-336 of Prayag / equivalent in Nirali / Suyog / Shakti Enterprises.
50	Pillar Taps/ Bib Taps/ Stop Cock	Coronet/ Parryware / Essco / Hindware / MarcRoca / Marc / Cera / Crabtree / BluestarMarc / Kohler / Grohe / Gem / Parko / ESS ESS / Lauret / Zoloto / M/S Plastocraft Sanitary ( India) Pvt Ltd ( Brand:- AGRANI/ M/S Somany ceramic Ltd. ( Ether) / Prayag / Shakti Enterprises.
51	UPVC SWR Pipes	Prayag /Polytuf / Supreme / Prince / Reliance / Jain pipes / Finolex. / Kisan / M/S Fusion Industries LTd
52	Gate valve / Ball Valve	Zoloto / Leader / Kirloskar / veenus / Upadhayay / Shakti Enterprises.
53	RCC Pipes	Indian Hume Pipes / any make confirming to IS as approved by he GE
54	SS Plate rack	(Model No.KPR-317 of Blue Star or P-348 of Prayag. / equivalent in Amol / Hindustan / Joyna / Shakti Enterprises .
55	HDPE Pipes.	Prince / Supreme / Jain pipes / Kisan / Reliance Finolex.
56	PTMT fittings.	M/S Prayag / Polytuf / M/S SakPlast Pvt Ltd./ Shakti Enterprises.
57	Mirror / Glazing	Saint Gobain, Modi Float, Triveni Float Glass, Crown, Prayag polymers / Atul / Golden fish / Kohinoor / Pilkington Glass.
58	PVC Tanks	Rotex /Sintex, Polywel / SPL /Polycon /Diplast /Nilkand / Oriplast/ Jindal Jaipur
59	SS Sink with or without Drainage Board	Blue Star or SBSD 05 of Joyna.) / Equivalent in Nirali, M/S Plastocraft Sanitary ( India) Pvt Ltd ( Brand:- AGRANI / Shakti Enterprises/ Prayag
60	Construction / Dummy Joints	STP / Tikitar / Choksy Chemicals.
61	Aluminium Snap Grid	JINDAL/ INDALCO/ HINDALCO
62	Epoxy Bonding Agent	NITOBOND EP OF FOSROC/ CARBODUR OF SIKA/ EQUIVALENT OF PIDILITE
63	Epoxy Primer	NITAZINC PRIMER OF FOSROC/ FRIAZINC R OF SIKA/ EQUIVALENT OF PIDILITE
64	Wall Care Putty	ASIAN/ BERGER/ JK WALL CARE PUTTY/ BIRLA WHITE/ JENSON & NICHOLSON/ SHALIMAR
65	Health Faucets	JAQUAR/ PARRYWARE/ ESSCO/ HINDWARE/ MARC ROCA/ MARC/ CERA/ KOHLER/ GROHE/ PARKO/ ESS ESS/ PRAYAG

(Signature of the Contractor)

AGE (Contracts)  
For Accepting officer

**MAKES OF MATERIALS AS APPLICABLE ( Contd...)**

S No	Description of item	Makes
1	2	3
<b>Electrical Items</b>		
1	GI Tubing	Prakash / Utkarsh Tubes Ltd / Jindal / Zenith / Bansal /Nezone/ M/S BST Infratech Ltd.
2	Wiring cable & casing Caping	Make of cable:-Polycab / Finolex / Havells / / KEI / HPL / Plaza / Standard / RR Kabel/Mescab/ Gold Medal /Gemscab Industrial Ltd/ Shalabh (India) Industries Ltd Make of casing- caping:- Plaza / Presto Plast / Precision / M/S AGK Industries/ Gold Medal/ Anchor
3	Switches /Sockets/ SS Comb/ Ceiling Rose/ Lamp Holder any type	Anchor / Cona / Bajaj/ Crabtree/ Havells/ HPL/ C&S/ Standard/ Gold Medal/ Legrand/ Orient
4	Conduit pipe	Plaza / Presto Plast / Precision/ M/S AGK Industries/ Anchor/ Gold Medal
5	MCB / MCCB / DB/ Change over Switch	Standard / L&T/ Indo Asian / C&S / Havells / HPL / Legrand./ Hager/ Gold Medal/ Bentec India/ Shalabh (India) Industries Ltd / Orient
6	Stove enameled steel conduit	Tata / Jindal / Kalinga BEC
7	LT cable	M/s Havells / M/s Nicco / M/s KEI / M/s Polycab / Gloster / Universal) / HPL/ Dynamic cables / Finolex / RR kabel/ Mescab/ Gold Medal /Gemscab Industrial Ltd/ Syska LED
8	Steel Poles	Calcutta Poles & Tubes / Jindal Steel Poles / National Tubing Co./ Bansal Poles./ Subham poles.
9	LED lights all types	Orient/ Surya / Halonix /Century LED / Havells / C&S / HPL / Bajaj / Jaquar / Simoco / Panasonic/ Crompton/ Eveready/ Syska LED/ Gold Medal
10	Bell Push/ Calling Bell	Anchor / Cona / Bajaj / Crabtree / Havells / HPL/ C&S / Standard/ Legrand/ Gold Medal
11	Ceiling Fans/ Exhaust Fans/ Wall Mounted Fans/ Pedestal Fans	Orient/ Crompton/ Bajaj/ Usha/ Havells/ Standard/ Gold Medal

(Signature of the Contractor)

AGE (Contracts)

For Accepting officer