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AT NAMS

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(Signature of Contractor)  
Dated: \_\_\_\_\_

DCWE(Contracts)  
For Accepting officer

Tele : 0183-2401146

Headquarters  
Commander Works Engineer  
Amritsar Cantt  
PIN – 900257  
C/o 56 APO

82425/CWE/ASR-32/ /E8

Oct 2024

**PROVN OF INFRA FOR MERGING TO TOP-I TO 66 KV MRS AND ALLIED WORKS**  
**AT NAMS**

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

Dear Sir,

1. Tender documents in respect of above work are uploaded on the site <https://defproc.gov.in> . The tender is on single stage two cover e-tendering system. The contents of Cover I & Cover II are specified in NOTICE OF TENDER.

2. Bids will be received online by Accepting Officer up to 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 no bonafide tender/bid.

3. Bid will be opened on due date and time fixed for opening in the presence of tenderers/bidders or their authorized representatives, who have uploaded their quotation bid and who wish to be present at the time of opening the bids.

4. 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/drawings and to clarify doubts, if any, on or before critical dates mentioned in NIT. You are requested not to write piece meal points and forward your points duly consolidated before critical dates.

5. 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 e-procurement portal. **The physical documents shall be submitted within 05 working days from Bid submission end date in the office of CWE AMRTISAR CANTT.** Inadequacy/deficiency of documents shall make the bid liable for rejection resulting in disqualification for opening of finance bid.

6. Contractor enlisted with MES but 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.

7. Enlisted contractors of MES shall submit the scanned copies (pdf file) of enlistment letter, tender fee and such other documents as mentioned in Appx 'A' to NIT on Defence eProcurement portal and submit physical documents in the office of **HQ Commander Works Engineer Amritsar** before date and time fixed for this purpose.

8. 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.

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

10 General conditions of Contracts (IAFW-2249)(1989 Print) and errata and amendments thereto, Schedule of minimum fair wages and MES SSR (Part-I and Part-II) are not enclosed with these documents. These are available for perusal in the office of GE concerned and this office.

11. ANY TENDER, 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.

12. Tenderer shall note that information technology Act, cyber Act along with other Act as relevant shall be applicable.

13. Instruction for participating & filling of tender and all documents referred along with this letter shall be forming part of tender documents and shall be complied with.

Yours faithfully

Encls : (As above)

(DCWE Contracts)  
For Accepting officer

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Signature of contractor

**ANNEXURE TO FORWARDING LETTER****INSTRUCTIONS ON FILLING AND SUBMISSION OF TENDER****1. EARNEST MONEY DEPOSIT (EMD)**

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, alongwith their tender/bid:-

- (a) Deposit at Call receipt from a Scheduled Bank in favour of Garrison Engineer concerned.
- (b) Receipted Treasury Challan, the amount being credited to the Revenue Deposit of Garrison Engineer.

It is advisable that Earnest Money is deposited in the form of deposit call receipt from an approved Schedule Bank for easy refund. 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/Bank Guarantee etc will not be accepted. NON-SUBMISSION OF EARNEST MONEY DEPOSIT (EMD) (scanned copy alongwith Technical bid and hard copy before the date and time fixed for opening of BOQ) WILL RENDER THE BID DISQUALIFIED FOR OPENING OF COVER II (FINANCE BID).

**2. GENERAL INSTURCTIONS FOR COMPLIANCE**

2.1 The bids received only in the electronic form will be considered. All bids shall be submitted on <https://defproc.gov.in> portal. Documents should be scanned and forwarded in 'pdf' form and 'xls' form as indicated.

2.2 Bids shall be uploaded on <https://defproc.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.

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

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

2.5 The tender shall be signed, date 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.

2.6 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

**ANNEXURE TO FORWARDING LETTER (Contd/...)**

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 his favour by 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.

2.7 Even in case of Firms or Companies which have already given Power of Attorney to an individual authorizing him to sign tender in pursuance of which bids are being uploaded by such person as s 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.

2.8 Hard copies of all above document 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.

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

2.10 The contractor shall employ Indian National 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).

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

2.12 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 summary rejected.

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

**3. PERFORMANCE SECURITY**

In case the tender/ bid submitted by any contractor whether enlisted or not-enlisted with MES is accepted, the Contractor will be required to lodge with the Accepting Officer the PERFORMANCE SECURITY DEPOSIT calculated @ 5% (Five Percent) of the contract amount of the contract as notified by the Accepting Officer. The amount is required to be lodged within 28 (Twenty Eight) days of the receipt by the letter of the acceptance (See Condition 19 of General Conditions of Contracts (IAFW-2249)). The condition-19 of IAFW-2249 is reproduced here for ready reference.

“19 **Performance Security**

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 Instruments stipulated by the Accepting Officer.

19.2. If the performance security is provided by the successful Contractor in the form of a 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 made 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 securities or any depreciation in the value of securities while in their charge nor for loss of interest thereon.

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.”

**4. REVOCATION / REVISION OF OFFER UPWARD / OFFERING VOLUNTARY REDUCTION, AFTER CLOSING OF BID SUBMISSION DATE & TIME**

In the event of lowest tenderer / bidder revoking his offer or revising his rates upwards/offering voluntary reduction, after closing of the 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

**ANNEXURE TO FORWARDING LETTER (Contd/...)**

second calls 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 for work covered in the scope of tender is based on CPM.

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 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. These instructions shall form part of the contract documents.

(Signature of Contractor)

(DCWE Contracts)  
For Accepting officer

**MILITARY ENGINEER SERVICES**  
**NOTICE INVITING TENDER (NIT)**

1. A tender is invited for the work as mentioned in Appendix 'A' to this NOTICE INVITING TENDER (NIT).
2. The work is estimated to cost as indicated in aforesaid Appendix 'A'. This estimate, however, is not a guarantee and is merely given as a rough guide and if the work costs more or less, a tenderer/bidder will have no claim on that account.
3. The work is to be completed within the period as indicated in aforesaid Appendix 'A' in accordance with the phasing, if any, indicated in the tender from the date of handing over site, which will be on or about two weeks after the date of acceptance of tender.
4. Contractors whose names are on the MES approved list and within whose financial category the estimated amount would fall and un enlisted contractors may submit tender/bid subject to other criteria mentioned in Appendix A. However in case of term contracts, enlisted contractors of Class SS to E may submit tender. Not more than one tender shall be submitted/uploaded by one contractor/ firm. 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. Two firms shall be deemed to have business dealing if any of the partners/proprietor/director is common among both of them. A breach of this condition will render the tenders/bids of both the parties liable for rejection.
5. The Office of HQ CWE Amritsar Cantt will be the Accepting Officer here-in-after referred to as such for the purpose of this contract.
6. Not more than one tender/bid shall be submitted/uploaded by one bidder firm. 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 tender as separate competitors. A breach of this condition will render the tenders/bids of both the parties liable for rejection.
7. The Technical Bid and Financial Bid (Cover-1 and Cover-2) shall be uploaded by the contractor on or before the date & time mentioned in NIT. A scanned copy of DD with enlistment details and other documents as specified in Appendix A shall be uploaded as Cover-1 (Technical bid) of the tender on e-tendering portal. DD is refundable in case the contractor is not considered eligible in technical evaluation of Cover 1 resulting in non-opening of Cover1. The applicant contractor shall bear the cost of bank charges for procuring and encashing the DD including revalidation of DDs and shall not have any claim from Government whatsoever on this account.
8. Tender form and conditions of contract and other necessary documents shall be available on website [defproc.gov.in](http://defproc.gov.in) for download and shall form part of contract agreement in case the tender/bid is accepted.
9. In case of MES enlisted contractor who has not executed the Standing Security Bond and un enlisted contractor, the Cover-I shall be accompanied by Earnest Money for the amount mentioned in Appendix 'A' in the form of deposit at call receipt in favour of concerned CCE/GE/GE (I)/AGE (I) (see Appendix 'A') by a Scheduled Bank or in received treasury Challan the amount being credited to the revenue deposit of the concerned CCE/GE/GE(I)/AGE(I) (see Appendix 'A'). The CCE/GE/GE (I)/AGE (I) will return the Earnest Money, wherever applicable, to all unsuccessful tenderers/bidders by endorsing an authority on the deposit at call receipt for it's refund, on receipt of intimation from the Accepting Officer to do that.
10. In case of successful contractor i e the lowest contractor having submitted EMD, he shall have the option of converting the EMD instrument into part of the Performance Security to be



deposited by him within 28 days from the receipt of intimation of acceptance of tender from Accepting Officer.

11. Sample of materials and stores to be supplied by the contractor will also be available for inspection by the bidder at the office of concerned GE/GE (I)/AGE (I)/Project Manager during working hours. The bidder is advised to visit the site of work by making prior appointment with GE/GE (I)/AGE (I)/CCE/Project Manager, who is the Executing Agency of the work (see Appendix 'A'). The bidder shall be deemed to have full knowledge of all relevant documents, samples, site etc whether he has inspected them or not.

12. Any bid which proposes any alteration to any of the conditions laid down or proposes any other new condition whatsoever, is liable to be rejected.

13. The uploading of bid by a bidder implies that bidder has read this notice and the conditions of contract and has made himself aware of the scope and specification of work to be done and of the conditions and rates at which stores (as applicable) etc will be issued to him and local conditions and other factors having bearing on the execution of the work.

14. The bidder must be in possession of a copy of the MES Schedule (SSR) (Part-I & Part-II of latest edition) including amendments and errata thereto.

15. Accepting Officer does not bind himself to accept the lowest or any tender/bid or to give any reason for not doing so.

16. The Accepting Officer reserves the right to accept a tender submitted by a Public Undertaking/Small & Medium Enterprises (SMEs), giving a price preference/purchase preference over other tender(s)/bids which may be lower, as are admissible under the Government Policy. No claim for any compensation or otherwise shall be admissible for such tenderer/bidder whose tender/bid is rejected.

17. The Notice Inviting Tender (NIT) including Appendix 'A' and Annexure thereto, if any, shall form part of the contract agreement.

(Signature of Contractor)

DCWE (Contracts)  
For Accepting officer

**APPENDIX 'A' TO NOTICE INVITING TENDER (NIT)**

1.	Name Of Work	<b>PROVN OF INFRA FOR MERGING TO TOP-I TO 66 KV MRS AND ALLIED WORKS AT NAMS</b>
2.	Estimated Cost	<b>Rs 12.60 Lakhs</b>
3.	Period Of Completion	<b>06 Months.</b>
4.	Cost of tender document	<b>Rs 500</b> in the form of DD/Bankers cheque from any Scheduled Bank in favour of GE NAMS and payable at Amritsar (Note : 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 item rate based on IAFW-1779A and GCC (IAFW-2249) with Schedule 'A' (list of items of work) to be priced by Contractor.
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 <b>class 'E'</b> and above and <b>category 'a (i) &amp; b(ii)'</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.	<p>(i) Contractor not enlisted with MES should meet the enlisted criteria of <b>'E' Class &amp; 'a (i) &amp; b(ii)'</b> category Contractor with regard to satisfactory 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 &amp; 1.5 of Section 1 of MES Manual of 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>)</p> <p>(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.</p> <p>(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.</p>

**APPENDIX 'A' TO NOTICE INVITING TENDER (NIT)**

		(iv) Details of works completed and under progress in MES be submitted in the following format :-					
		Srl No	CA No & Name of Work	Value of CA	Date of commencement	Date of completion	Extended date of completion
		(v) Un-enlisted contractor who have secured two works in MES should get themselves registered in the appropriate designated class with any registering authority, else the firm will not be eligible for participation in the tender unless until the firm is enlisted with the MES.					
9.	Tender issuing and Accepting Officer	Name : <b>CWE Amritsar</b> Address : Gulat Road, Old Cantt, Amritsar Contact Detail (Phone no.& Email Id) of concerned officer : Ph : 0183-2923308					
10.	Executing agency	<b>GE NAMS.</b>					
11.	Earnest Money	<b>Rs 25,200.00</b> in favour of <u>GE NAMS</u> in the form of Deposit at call receipt, FDR not acceptable.					

**NOTES :-**

1. In case after opening of Cover 1, the number of MES enlisted contractors of eligible class as well as eligible 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 contractor fulfill the criteria of up gradation 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 (solvency/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 work in hand showing names of work, names of Accepting Officer, Contract amounts, dates of commencement and completion (stipulated) and progress as on bid submission date. Such contractors, if claim to fulfill the criteria of up gradation shall also upload the requisite information/documents in support of up gradation. These details shall be verified by the Tender Issuing Authority from concerned formations in case bids 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, are 7 (Seven) or more, applications of only those one class

**APPENDIX 'A' TO NOTICE INVITING TENDER (NIT)**

below the eligible class bidders shall be considered, who have previously completed similar works satisfactory and are meeting the criteria of up gradation in respect of past experience of completed works (individual work experience and/or average annual turnover as applicable) and financial soundness (solvency/financial soundness and working capital) as per details given in Manual on Contracts. Therefore such contractors shall upload the requisite information/documents in the Cover-1.

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 directors(s) shall be considered subject to security clearance from the concerned authorities.

4. Contractors enlisted with MES will upload following documents in Cover I for checking eligibility:-

- (a) Application for tender on Firm's letterhead.
- (b) Enlistment letter issued by the Registering Authority duly renewed for the cycle period in vogue.
- (c) Scanned copy of DD/Bankers Cheque toward cost of tender EMD instrument in case SSD bond is not signed at the time of registration.
- (d) Copy of GST registration certificate , EPF Code allotment letter no and all other document required as described in this Appendix.

5. Contractors not enlisted with MES will be required to upload following document 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 document required for enlistment in MES for the class mentioned in Para8(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) Copy of GST registration certificate, EPF Code allotment letter no and all 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 I shall not be considered for validation of 'T' bid and their Financial Bids will not be opened.

7. Contractors should ensure that their original physical DDs and Earnest Money Deposit (EMD) instruments (as applicable) reach the office of Accepting Officer of within 07 days of bid submission end date failing which following action shall be taken.

- (a) In case of tenders from an enlisted contractor of MES, Where scanned copies of requisite DD/Bankers Cheque towards cost of tender have been upload 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 tenders from un enlisted contractor, where scanned copies of requisite DD/Bankers Cheque towards cost of tender have been uploaded 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 Financial bid (Cover 2).

(c) In case of tenders from enlisted and un enlisted contractors, where scanned copies of instructions for Earnest Money Deposit (as applicable) have been upload 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/daughter/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 names 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 upload 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.

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 Officers 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 his Technical bid assigning reasons therefore through tender evaluation report which shall be upload on the website. Such tenderer, if desires, may appeal to the next higher Engineer Authority (NHEA) viz Chief Engineer Jalandhar zone on email id [cejr2-mes@nic.in](mailto:cejr2-mes@nic.in) with copy to accepting officer ([cweasr@gmail.com](mailto:cweasr@gmail.com)) here concerned before due date of opening of Cover 2. NHEA shall decided 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 un enlisted 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 case 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 II 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 un enlisted 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 call.

14. Tender to related firms shall not be issued simultaneously. Firm 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  
File No \_\_\_\_\_

(-----sdx-----)  
EE (QS&C)  
DCWE (Contracts)  
For CWE ASR

Address of Accepting Officer  
(Contact Details of the Concerned Officer )

File No : 82425/CWE/ASR-32/ /E8

Dated : Sep 2024

Headquarters

Commander Works Engineer

Amritsar Cantt

**Distribution:-**

1. Builders Association of India G-1/G-20 Commerce Centre 7th Floor Tardeo Bombay-400034	9. Cantonment Board Jalandhar Cantt General Post office Amritsar Cantt State Bank of India, Amritsar Cantt
2. MES Builders Association of India 807, Sahyog, 58 Nehru Place, New Delhi-110019	10. General Post office Amritsar Cantt
3. MES Builders Association of India Chandigarh Branch, 706, Sector 8-D Chandigarh	11. State Bank of India, Amritsar Cantt
4. MES Builders Association of India, C/O 13 Sadar Bazar Jalandhar Cantt	12. Municipal Committee Jalandhar
5. MES Builders Association of India, Shivaji Nagar-1, Dhanguj Road Pathankot-145001.	13. SE CPWD Jalandhar Cantt
6. HQ Chief Engineer Jalandhar Zone Jalandhar Cantt	14. Executive Engineer, CPWD Jalandhar
7. HQ CWE Jalandhar Cantt	15. Station Master, Station Amritsar
8. All GEs under HQ CEJZ	16. HQ CEWC Chandimandir

**Internal**

E-2, E-4, E-6 Section. Website folder Computer E8 Sec

- for uploading in MES website

<https://defproc.gov.in>

**IN LIEU OF IAFW-1779-A (REVISED-1955)**

**(TO BE READ IN CONJUNCTION WITH GENERAL CONDITIONS OF CONTRACTS  
( IAFW-2249 -1989 PRINT)**

**MILITARY ENGINEER SERVICES**

Headquarters  
Commander works Engineer  
Amritsar Cantt

82425/CWE/ASR-32/ /E 8

Oct 2024

**PROVN OF INFRA FOR MERGING TO TOP-I TO 66 KV MRS AND ALLIED WORKS AT NAMS**

Dear Sir (s),

Shri/S'Shri\_\_\_\_\_

of \_\_\_\_\_ is/are hereby authorized to tender for the above  
work. Online bid only is to be submitted on web site <https://defproc.gov.in>

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

\_\_\_\_\_  
Signature of the Contractor  
Dated:

Signature of the Officer  
issuing the tender documents.  
Appointment: DCWE (Contract)

**SCHEDULE 'A' NOTES****NOTES:**

1. Schedule 'A' of this Contract is divided into two parts as follows :-
  - (a) Schedule 'A' Section – I : BOQ
  - (b) Schedule 'A' Section –II: Schedule of credit
2. The tenderer's are required to work out and quote their prices for each item of works as catered in Schedule 'A' Sec-I in the manner set out in condition 6 (A) (D) of IAFW-2249 and quote their rates as per unit under col 5 in figures based on the description of items, specification, special conditions, general conditions and other conditions of the contract for each item separately and sum of the total amount so arrived at, and carry forward the same to the general summary at appropriate place provided for.
3. Method of Measurement for all items of Schedule 'A' shall be as given in MES standard Schedule of rates unless specifically stated otherwise elsewhere in tender documents for particular item of work.
4. Description of works and items of works given under col 2 of all parts of Schedule 'A' is in brief. These shall be deemed to be amplified and read in conjunction with special conditions, particular specifications, specification contained in the relevant trade sections of MES standard Schedule (SSR) including preambles and notes therein.
5. All items of Schedule 'A' Section-I are for materials and labour/supplying and fixing as applicable complete unless specifically described otherwise as "Labour only" and or "Fixing only in the description of particular items under col 2.

**6. Period of Completion**

- (a) The entire work under this contract shall be completed within **06 (Six months)** from date of handing over of site and commencement of work as stated in work order No 1 to be issued by GE for the purpose. **Work Order No 1 shall be placed only after submission of performance security of adequate value by the contractor.**

- (b) Site for execution of work will be available immediately after placing of work order. In case it is not possible to make the complete site available and site handed over in piecemeal, the contractor will have to arrange his working program accordingly in consultation with Engineer in Charge.

**7. Performance Security**

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, Insurance Surety Bond or any other Government Instruments stipulated by the Accepting Officer.

Failure of the successful contractor to deliver the Performance security within the time period as mentioned above shall constitute sufficient grounds for cancellation of the award of work and forfeiture of the Earnest Money/equal amount from security deposit in case of enlisted contractor.

In case contractor has opted to submit performance security in the form of the bank guarantee bond ie BGB, the validity of BGB should be up to the expiry of defect liability period plus 60 days. Further, in case defect liability period of the contract is extended due to delay in completion of work, contractor shall get the validity of BGB extended from the bank without waiting the notice from the department.



The performance security deposit shall be refunded to the contractor after expiry of defect liability period as certified by the GE provided contractor shall first been paid the final bill and have rendered a "No demand certificate".

**8. Defect liability period :-**

The defect liability period for this contract shall be 24 (twenty four) calendar months after the certified date of completion by the GE and work have been handed over to the government.

9. Contractor's Rate shall be deemed to include for all minor details, processes and operations which may not have been specifically mentioned or given in particular specifications but which are essential for the execution of works and services in a sound and workman like manner so as to be structurally and functionally sound. In case of any difference of opinion between GE and the Contractor as to whether or not certain items of works constitute(s) minor details which is included in the contractor's Rate the decision of the Accepting Officer shall be final conclusive and binding.

10. Unit rate quoted against each item as described in Sch 'A' shall also include the cost of any cutting, leaving, forming, holes/chases etc in walls, as required and making good. No adjustment shall however, be made separately on this account.

11. The abbreviation 'RM', Sqm, Cum and Kg where ever appear in the tender documents especially under column of unit of Sch 'A' shall have the meaning "Running metre", "Square metre", "cubic metre" and "Kilogram" respectively.

12. The contractor shall take all necessary precautions for the protection of adjoining property (wall, plaster, doors, chowkats etc.) while demolishing/dismantling of existing joinery items/sanitary/structure/builder's hardware items or part thereof as ordered by Garrison Engineer. It shall be the responsibility of the contractor to make good if any damages to existing property is caused during dismantling/ demolition.

13. The old unserviceable dismantled/demolished material (as decided by the Engr-in-charge) not shown in the Sch of Credits & mentioned in Sch 'A' to be reused, shall become the property of the depts and the contractor shall deposit the same in the MES Store yard without any extra cost.

14. Rates quoted against all items shall be deemed to include all taxes, **Goods & Services Tax** (CGST, IGST & SGST) on works contracts, levies, duties, Octroi, entry tax, labour welfare cess and shall also include all other local taxes as levied by the State Government, local bodies payable under respective statutes etc directly related to contract value, employees provident fund as EPF & MP Act 1952 and all taxes applicable to contracts. In this connection clause 26 of Particular Specifications Section-I (Special Conditions) shall also be referred. No claim whatsoever shall be entertained by the department on account of any misunderstanding in the regard. Any other condition stipulated by the tenderer regarding any other taxes/ duties will not be considered and such tender shall be liable for rejection.

15. **GST ACT:** It is incumbent on the part of tenderers to hold GST number. Irrespective of whether any tenderer has got his firm registered or not for execution of the work, GST/ TDS on account of GST as applicable shall be deducted at sources.

16. **EPF** : It is mandatory for every bidder to get him registered with EPF organisation and submit the Universal Account Number (UAN – Unique ID allotted by EPF Org) of his employees to the GE for record purpose. The contractor shall be wholly responsible for submission of EPF contribution for himself (being employer) and his employees.

17. All the materials to be incorporated in the work shall be got tested as per the latest relevant IS codes and the cost of the same shall be deemed to be included in the unit rates quoted.

18. In case any repeated items in Sch 'A', lowest rate quoted by tenderer shall be considered for payment purpose.

19. Irrespective whatever written elsewhere in the tender documents the fine aggregate, coarse aggregate, bricks and other materials shall be procured only from the legal sources.
20. Wherever in Sch 'A' / anywhere else in the tender document, it is mentioned "or equivalent" in the makes, the equivalent makes shall only be provided on in case the makes mentioned does not manufacture the respective item. The makes shall be as approved by GE.
21. The payments due to the contractor shall only be made by e-payments. The contractor shall provide all the necessary details including bank account number, IFC code etc to the GE. If, however, the mode of payment is changed, no claim on this account shall be entertained.
22. Work beyond scope of CA shall not be executed by the contractor without written approval of GE. No payment will be made to the contractor in RAR/Final bill for works executed without written approval of GE. In this regard General condition 7 of IAFW-2249 be also referred.
23. A tenderer is supposed to check if any revised BOQ has been uploaded, and quote in Revised BOQ only. Thus uploading quotation in pre-revised BQO shall be considered as a willful negligence by the bidder and his quotation shall be considered non-bonafide.
24. Contractor not in possession of Provident Fund Code Number shall be disqualified in 'T' bid evaluation and his financial bid shall not be opened. The Contractor shall upload fund code number documents in the respective envelope.
25. Quoted sum shall be arrived at after deducting amount of schedule of credit and any amendment/corrections (if any) from the total amount of the BOQ.
26. **Court of Jurisdiction** : - Court of the place from 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.
27. In case of any deviation, mode of pricing shall be decided by Accepting Officer in terms of Condition 62 of IAFW2249.
28. In the event of a deviation order involving fixation of Special (Star) Rate, Draft Rate shall be prepared by GE (within a maximum period of 30 days) while initiating the proposal for deviation seeking approval of Accepting Officer and notified to contractor. While notifying the Draft Rate, it will be clearly stipulated that the same is merely an estimated rate and firm rate shall be fixed based on actuals and receipt of supporting documents from contractor such as vouchers/literature of product/test certificates etc (as applicable) on completion of the work involving Star Rate. Any objection to the method of fixing Star Rate will be dealt as per Condition 7 of IAFW-2249.
29. Draft Star Rate shall be made based on market enquiry through telephonic enquiry/ quotations/email/rate lists/internet based sources, materials & labour constants available in various civil engg books and record available in respect of Star Rates approved in the past for similar items of work etc. Contractor may also assist GEs office in preparation of draft Star Rate.
30. The draft Star Rate shall be purely a draft rate and shall not be used for claiming final payment during execution of work. However GE shall allow part payment to the tune of 80% during execution to avoid any financial hardship to contractor.
31. After completion of the item of work involving Star Rate, contractor shall submit the vouchers/literature of product/test certificates (as applicable, decision of GE being final in case of any disagreement) for finalization of Star Rate. The Star Rate shall be technically checked by DCWE (C)/ Director (C) depending upon the financial effect & approved by competent authority within a period of one month from submission of the relevant documents by contractor as mentioned above.
32. The star rate as approved by competent authority after technical check by DCWE (C)/Director (C) depending upon the financial effect shall be referred as "the rate decided by GE" under Para 62(G) of IAFW-2249.
- 33. For execution of electrical works/ electrical component of works requiring Electrical License in accordance with Central Electricity Authority Rule 29 under Part-III, 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.

34. Prior to commencement of electrical work/ electrical component of works and other works as mentioned in Para 33 above, 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 through GE. 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 in all contracts shall be got done from competent authority, who shall be concerned CWE (concerned CE Zone/CCE in case there is no CWE). Copy of License shall be kept on record by CE Zone/CWE/GE for future reference.

35. **Location of work - Area under AGE E/M (GE NAMS)**

<u>Srl No.</u>	<u>Job No.</u>	<u>Name of Work</u>
1.	NAMS/ALBW-04/2023-24	<u>PROVN OF INFRA FOR MERGING TO TOP-I TO 66 KV MRS AND ALLIED WORKS AT NAMS</u>

SCHEDULE 'A' SECTION -II(SCHEDULE OF CREDIT)NOTES:-

1. The amount of credit given below is for the materials obtained from the dismantling/demolition of the items described in BOQ / Schedule 'A' Section-I.
2. Quantities of the material listed in this Schedule are Provisional. The amount of Credit of material shall be calculated on the basis of actual quantities of material retrieved at site and the contractor shall have no claim on this account.
3. The contractor shall have no claim if the material obtained from dismantling/demolitions of items are found disfigured or broken.
4. The amount of Credit shall be deducted from the contractor's RAR/Final Bill payments becoming due just after dismantling/demolition of the old work.

S. No	Description of work	A/U	Qty	Rate	Amount
1	2	4	5	6	7
1	Old aluminium door window and ventilator with frame and accessories	Sqm	4	200	800.00
2	Old steel window	Sqm	2	250	500.00
3	Old brick bats	Cum	4	400	1600.00
	<b>Total carried over to Summary of Credit on Srl Page</b>				<b>2900.00</b>

GENERAL SUMMARY OF BOQ/SCHEDULE 'A'

1. Total of BOQ B/F from Srl. Page No = Rs. \_\_\_\_\_
2. Deduct as per Sch of Credit (Sch 'A' Sec-II) = **Rs. 2,900.00 (Minus)**
3. Total C/O to Srl Page No = Rs. \_\_\_\_\_

(Signature of Contractor)

DCWE (Contracts)  
For Accepting officer

**SCHEDULE 'B' STORE****(ISSUED OF MATERIALS ETC TO CONTRACTOR)****SEE CONDITION 10 OF IAFW-2249**

Ser No	Particulars of materials	Unit	Rate at which material is Issued	Place of issue by name	Remarks
1	2	3	4	5	6

**NIL****SCHEDULE 'C'****ITEMS OF TOOLS AND PLANTS (OTHER THAN TRANSPORT)****WHICH WILL BE ISSUED TO THE CONTRACTOR****(See Condition 15, 34 & 35 of IAFW-2249)**

Ser No	Quantity	Particulars	Details of Crew	Hire Charges per unit Per working Day in Rs.	Standby charges per unit per off day Rs.	Place of issue	Remarks
1	2	3	4	5	6	7	8
<b><u>N I L</u></b>							

**SCHEDULE 'D'****TRANSPORT TO BE HIRED TO THE CONTRACTOR****(See conditions 16 and 35 of IAFW-2249)**

Ser No	Particulars	Rate per unit per working day	Place of issue (by Name)	Remarks
1	2	3	4	6
<b><u>N I L</u></b>				

Signature of the Contractor

DCWE (Contracts)  
For Accepting Officer

TENDERTHE PRESIDENT OF INDIA

Having examined and perused the following documents:-

1. Specification signed by DCWE (Contracts).
2. Drawing detailed in list of drawings.
3. Schedule 'A', 'B', 'C' and 'D' attached hereto.
4. MES standard schedule of Rates 2009 (Part-I) (Specifications) & (Part-II) 2020 (Rates) together with Errata/Amendments as under :-
 

(a) SSR Part-I (2009) :	Amendment	1 to 3	
	Errata		Nil
(b) SSR Part-II(2020) :	Errata		NIL
	Amendment	1 to 122	
5. General conditions of contract IAFW-2249 (1989 Print) together with Amendment No 1 to 49 and Errata 1 to 20.
6. WATER under condition 31 of IAFW-2249 (General conditions of contracts). Water will be supplied by the MES and will be charged from the contractor @ Rs 3.75 per 1000 Rupees worth of work done.
7. Should this tender be accepted :-

I/We agree

\*(a) That the sum of Rs. \_\_\_\_\_ Rupees \_\_\_\_\_) forwarded as earnest money shall either be retained as a part of Security Deposit or be refunded by the Department on receipt of an appropriate amount as Security deposit within the time specified in 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 and to Carry out such deviations as may be ordered vide condition 7 of IAFW-2249, upto a maximum of **10% (TEN PERCENT)** percent and further agree to refer all the disputes as required vide condition 70 to Sole Arbitration of serving officer having degree in Engineering or equivalent or having passed final/direct final examination of sub Div-II from institution of surveyors (India ) recognised by the Govt. of India to be appointed by **Chief Engineer Western Command, Chandimandir**, or in his absence, the officer officiating as Chief Engineer Western Command, Chandimandir, whose decision shall be final, conclusive and binding..

\*To be deleted where-ever not applicable.

Total amount brought forward from serial page No : \_\_\_\_\_ Rs \_\_\_\_\_

(Rupees. \_\_\_\_\_  
\_\_\_\_\_ for the contract sum.

Signature \_\_\_\_\_ (Name \_\_\_\_\_) in the  
capacity of \_\_\_\_\_ duly authorized to sign the tender for and on  
behalf of M/S \_\_\_\_\_ ( In block letters ).

Dated:

Postal Address:

Witness \_\_\_\_\_

Address \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Telephone No : \_\_\_\_\_

### **ACCEPTANCE**

\_\_\_\_\_ Alternations have been made in these documents and as evidence  
that these alterations were made before the execution of the contract agreement, these have been  
initialed by the contractor and **Shri** \_\_\_\_\_ **DCWE (Contracts)**. The said officer  
is hereby authorised to sign and initial on my behalf the documents forming part of this contract.

The above tender was accepted by me on behalf of the president of India for the contract sum of Rs

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

on the \_\_\_\_\_ day of \_\_\_\_\_ 2024 )

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

Appointment: Accepting Officer  
Commander works Engineer  
Amritsar Cantt  
(For and on behalf of the President of India)

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

1.1 The following special conditions shall be read in conjunction with General Conditions of contracts IAFW-2249 (1989 Print), including errata/amendment thereto, If there are any provisions in these special conditions which are at variance with the provisions in the above mentioned documents, the provision in these special conditions shall be deemed to take precedence.

1.2 General Rules, preambles, special conditions method of measurements etc. specified in MES Standard Schedule of Rates shall be applicable unless specific provisions to the contrary are made in these tender documents.

**2. INSPECTION OF SITE BY CONTRACTOR & RESPONSIBILITY TO ASCERTAIN HIS OWN INFORMATION**

- (a) The tenderers are advised to contact the Garrison Engineer for the purpose of inspection of site(s) and relevant documents other than those sent herewith, who will give reasonable facilities for this purpose. The tenderers shall also make themselves familiar with working conditions, accessibility of site(s), availability of materials and other cogent conditions, which may affect the entire completion of work under this contract.
- (b) The tenderers shall be deemed to have inspected the site(s) and made themselves familiar with the working conditions, whether they actually inspect the site (s) or not.

**3. CONDITIONS FOR WORKING**

The contractor, his agents, employees, work people and vehicles may pass through the unit lines. The contractor shall submit list of personnel employed by him alongwith their Aadhar card, police verification etc . There after security passes of contractor and his employees will be issued by competent authority. Passes shall be returned at any time on demand by Engineer-in-Charge and in case of completion of work.

The contractor and his people on the work site(s) shall observe all security rules promulgated from time to time by the authorities controlling the area where the work is to be carried out e.g. prohibition of smoking and lighting in certain Zones, search of persons at entry and exit and keeping to specified routes, restricted hour of working etc. Any person(s) found violating the security rules laid down by the authorities in the area is/are liable to be expelled from that area without assigning any reasons whatsoever and the contractor shall have no claim on this account.

**4. CONDITIONS FOR WORKING: ALL WORKS LIE IN UNRESTRICTED AREA**

- (a) The contractor, his agents, servants, workmen and vehicles may pass through the unit lines in which case the Competent Authority on recommendation of Engineer in charge/GE shall, at his discretion, has 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 other informations called for by the Engineer-in-Charge 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.
- (b) The contractor and his work people shall observe all the rules promulgated from time to time by the authority controlling the area where the work is to be
- (c) carried out e.g. prohibition of smoking, keeping to specified routes, etc. Any person found violating the security rules laid down by the authority, shall be immediately expelled from the area without assigning any reasons what-so-ever and the contractor shall have no claim on this account. Nothing shall be admissible for any man-hours lost on this account.



**5. HOURS OF WORKING**

The working hours shall be as notified by the authority controlling the area, which will be normally from 0800 hours to 1700 hours. If however, contractor wants to work beyond these normal hours he can do so if permitted by the GE in writing. Similarly no work will be allowed to be carried out on Sunday and Gazetted holidays unless specifically permitted by the GE in writing.

**6. LAND FOR TEMPORARY WORKSHOPS, STORES ETC. (REFERENCE CONDITION 24 OF GENERAL CONDITIONS OF CONTRACTS (IAFW-2249))**

- (a) The contractor shall be permitted to store his materials including erection of temporary sheds for stores and workshops with chowkidar at the area decided by the GE in consultation with the user. The contractor shall pay licence fee of Rupee one per year or part thereof in respect of each and every separate area of land allotted to him.
- (b) The Contractor shall not be permitted to erect his labour camp and the like on the Defence land. He shall make his own arrangement for this purpose outside the Defence land.

**7. DAILY RETURNS TOOLS & PLANTS, MACHINERY AND TRANSPORT DEPLOYED AT SITE**

- (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/ equipments, their make, manufacturers Model No if any, Registration No if any, capacity, year of manufacture and year of purchase etc.
  - (ii) Total No (Quantity) on site of work.
  - (iii) Location, indicating No., (quantity) at each location on the site of work.
  - (iv) Purchase value on the date of purchase. For the purpose of this condition, plant/ equipment, vehicle No., i.e. of trucks and lorries but neither the workman's tools or any manually operated tools/equipment shall be given. Engineer-in-Charge shall record the particulars supplied by the contractor in the works diary and send the return to the GE for record in his office.

**8. LOSS OR DAMAGE ON ACCOUNT OF ENEMY ACTION**

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

- (i) The loss suffered by him on account of any damage or destruction of his plant and/or equipment (as defined in special condition para 7 above) or materials or any part or parts thereof. (The amount of loss assessed by the Accepting Officer of the contract, or CWE in the case of contract accepted by GE, shall be final and binding).
- (ii) The compensation paid by him under any law for the time being in force to any workman employed by him for any injury caused to him or to the Workmen's legal successors for loss of the workman's life.
- (iii) Payment of compensation for loss or damage to any work or part or work carried out. The amounts of compensation shall be determined in accordance with condition 48 of General Conditions of contracts (IAFW-2249). No reimbursement shall be made nor any compensation be payable under the above provision unless the contractor has taken Air

**SPECIAL CONDITIONS (CONTD..)**

Defence Precautions ordered in writing by the GE concerned or in the absence of such reasonable precautions. Neither reimbursement nor any compensation shall be payable for any plant and/or equipment or material not lying at site of work at the enemy action.

**9. USE OF EXISTING BUILDINGS ETC.**

The contractor shall not use the existing latrines, baths and other existing buildings if any for use by his work people or for storage of his materials or for any other purpose unless permitted to do so in writing by Garrison Engineer.

**10. WATER**

10.1 If contractor so desires, water will be supplied by MES to the contractor at one point by the GE from piped system and shall be paid for by the contractor @ Rs. 3.75 per Rs. 1000/- worth of work done at contract rates. The contractor shall make arrangements at his own expense for storage of water and lifting, pumping, carrying or conveying water to the site of work as required.

10.2 The supply of water may not be continuous. The contractor shall be deemed to have ascertained the hours of availability of water before submitting his tender. The MES does not guarantee for the continuous supply of water and no compensation shall be allowed for intermittent or inadequate supply of water and break down in the system. If the supply is not sufficient the contractor shall make his own arrangement to supplement the water supply at his own costs. For this purpose the contractor shall be allowed to install hand pump(s)/tube well(s) at the site of work at places as directed by the Engineer-in-Charge without any extra cost from the contractor on this account. The contractor shall remove the hand pump(s)/tube well(s) as and when asked to do so by the Engineer-in-Charge or GE and in any case on completion of work. No compensation what-so-ever shall be admissible to the contractor if the GE ask him to remove the pump(s)/tube well(s) before completion of work.

10.3 In case contractor is not willing to draw water from MES, he shall have to give his unwillingness in writing for drawing water from MES along with tender documents. In case such unwillingness in writing is not found enclosed with tender, it will be assumed that he is willing to buy water from MES and his rates quoted include for the same. In case he is unwilling to draw water from MES then he will have to make his own arrangements for bringing and storing of water required for works and his employees from outside MOD land and he shall not be allowed to dig any well/tube well inside the defence land.

**11. ELECTRICITY**

11.1 In case the contractor desires to buy electricity from the MES he shall be charged for electric energy consumed on the following :-

- (i) At Rs 11.84 (Rupees Eleven and paise eighty four) only per unit for lighting.
- (ii) At Rs 11.84 (Rupees Eleven and paise eighty four) only per unit for power.

11.2 Electric supply required for works shall be made available by the MES at the incoming terminal of the main switch as marked on the site plan. The main switch and KWH meter to register the electric energy supplied shall be provided and installed by the MES. The contractor shall provide all necessary cables fittings etc. from the main switch in order to ensure a proper and suitable supply of electricity for the execution of work.

11.3 The MES do not guarantee for continuity of supply and no compensation what-so-ever shall be allowed for supply becoming intermittent or for break down in the system.

**SPECIAL CONDITIONS (CONTD..)**

11.4 The supply shall be AC, 3 phase.

11.5 In case point is not marked on site plan, it shall be as decided by GE.

12. **DAMAGE TO EXISTING BUILDINGS, ROADS AND DRAINS ETC.**

The contractor shall be responsible to reinstate and make good at his own expense, the damage if any caused by his workmen etc. to existing buildings, roads, drains, cables etc. while carrying out the work under this contract. Rectification, reinstatement, replacement, making good and touching up, etc. shall conform to the standard of workmanship and materials, originally used and the same shall be done to the entire satisfaction of Engineer-in-Charge.

13. **QUARRIES AND ROYALTY**

Reference condition 14 of IAFW-2249 General Conditions of contracts. Delete this condition in toto and substitute as under :-

“Neither quarries are available nor the quarrying shall be permitted on the defence land”.

14. **OCTROI AND OTHER DUTIES**

The price quoted by the contractor shall be deemed to include all duties, taxes such as Octroi, GST, etc., on work services as applicable. The contractor shall not include any condition for fluctuation in price of labour and or materials in his tender. Variation in prices of labour and materials during the progress of work consequent to any act of legislature is already covered in condition 63 of IAFW-2249 as modified by special condition here-in-after.

15. **ADJUSTMENT OF TAX ON SERVICE**

15.1 The price quoted by the contractor shall be deemed to include all duties, taxes , etc, payable under the respective statutes including the GST on works/contracts levied by the government. Accordingly the contractor shall include the same in his quotation/offer/ Rates.

15.2 **RE-IMBURSEMENT/ REFUND ON VARIATION IN “TAXES DIRECTLY RELATED TO CONTRACT VALUE” :-**

- (a) Rates quoted against all items shall be deemed to include all taxes, **Goods & Services Tax** (CGST, IGST & SGST) on works contracts, levies, duties, Octroi, entry tax, labour welfare cess and shall also include all other local taxes as levied by the State Government, local bodies payable under respective statutes etc directly related to contract value, employees provident fund as EPF & MP Act 1952 and all taxes applicable to contracts. No reimbursement/ 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-below.
- (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 **Goods & Services Tax** (CGST, IGST & SGST) as applicable, Turnover Tax, Labour Welfare Cess/ Tax and like but excluding Income Tax. The tendered rates shall be deemed to be inclusive of all “taxes directly related to Contract value” with existing percentage rates as prevailing on bid submission end date. Any increase in percentage rates of “taxes directly related to Contract value” with reference to prevailing rates on bid submission end date shall be reimbursed to the Contractor and any decrease in percentage rates of “taxes directly related to Contract value” with reference to prevailing rates on bid submission end date shall be refunded by the

**SPECIAL CONDITIONS (CONTD..)**

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 bid submission end date shall be reimbursed to the Contractor and abolition of any "taxes directly related to Contract value" prevailing on bid submission end date 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. Contractor shall 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 related 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.

16. **MINIMUM WAGES PAYABLE TO LABOUR**

- 16.1 Refer Condition 58 of IAFW-2249. The contractor shall not pay wages lower than minimum wages for labour as fixed by the Govt. of India/ State Govt./ Union Territory, whichever is higher.
- 16.2 Contractor's attention is also drawn amongst other things to the explanation to the Schedule of minimum wages referred to above.
- 16.3 The fair wage referred to in condition 58 of IAFW-2249 will be deemed to be the same as the minimum wages payable as referred to above as upto date from time to time.
- 16.4 Schedule of minimum wages are not enclosed alongwith tender documents. However contractor shall be deemed to have verified the minimum fair wages payable as on the last due date of receipt of tender. 16.5 The contractor shall have no claim whatsoever, if on account of local factors and or regulations, he is required to pay the wages in excess of minimum wages as described above during the execution of work.

17. **ADVANCE ON ACCOUNT AGAINST MATERIALS WHICH DOES NOT LOSE IDENTITY (APPLICABLE ONLY FOR CONTRACTS EXCEEDING RS 50 LAKHS)**

- 17.1 Condition 64 Of IAFW-2249 Advances On Account: - Add the following in continuation of para 8 "Provided further, the contractor may be paid advance on account of the full value of the under mentioned materials only, brought on the site, on his furnishing guarantee Bond(s) from a Schedule Bank for the amount of retention money which should otherwise be recoverable from him under the contract:-

- |                   |   |              |
|-------------------|---|--------------|
| (i) Aluminium     | (ii) Cement .   | (iii) Steer  |
| (iv) GOD.         | (v) Cable joints  | (vi) GI pipe |
| (vii) Earth plate | (viii) All other perishable materials as decided by GE. |              |

**SPECIAL CONDITIONS (CONTD..)**

17.2 Bank Guarantee bonds shall be executed for a period on the form appended as Annexure- I to these special conditions. The contractor shall further arrange to extend the period of Guarantee Bond(s) if and when necessary as directed by the Accepting Officer on a format appended as Annexure-II to these special conditions or shall furnish fresh guarantee bond(s) of similar value in lieu. It will be noted that advance on account to the full value of materials brought on the site is permissible only in respect of fittings and fixtures and other manufactured items which do not lose their identity. Materials like bricks, aggregate, pre-cast concrete and similar items shall not be taken in the list.

17.3 **Procedure for Acceptance of Bank Guarantee Bond(s) in Lieu of security deposit / retention money**

- (a) Bank guarantee bonds will be sent by the manager of the banks under registered post to the Accepting Officer of the contract under the covering letter has been endorsed to their superior office.
- (b) A Guarantee Bond received as mentioned above may be accepted by the competent authority if found otherwise in order. The office receiving the bond from the bank will acknowledge the same to the Bank concerned and enclose a certificate or a Photostat copy of the Bond for their record. A copy of this letter alongwith a copy of the bond will also be endorsed to the superior office of the bank as aforesaid for their information and record. Both the above communications to the banks shall be sent under registered post.
- (c) The above instructions will also be applicable to extension of validity to Bank Guarantee Bonds.

18. **CO-OPERATION WITH OTHER AGENCIES**

The contractor shall permit fire access and afford reasonable facilities to other Agencies or departmental workmen engaged by Govt. to carry out other work services (whether or not in connection with the work under the store of this contract) on the site, simultaneously. The contractor shall not be allowed any extra payment on this account.

19. **PERFORMANCE SECURITY DEPOSIT**

19.1 **Refer Conditions 19 of IAFW-2249. The contractor has to deposit performance security for this Contract as per condition 19 of IAFW-2249 as notified by the Accepting Officer.**

19.2 Performance security by the successful contractor shall be given in the form of Bank Guarantee Bonds or Govt Securities or FDR in terms of Condition-19.1 of IAFW-2249. No other form of performance security will be accepted.

19.3 The full amount of Performance security for the contract shall be given by contractor in any one of the forms stipulated in Clause- 23.2 here-in-before. Mix of performance security for the contracts shall not be allowed.

19.4 Performance security will be released in accordance with Condition-68 of IAFW-2249.

20. **RELEASE OF ADDITIONAL SECURITY**

Reference condition 22 and 68 of IAFW-2249. To enable the department to release the additional security deposit in two installments, the contractor shall be required to submit the security in two equal parts which can be released separately.

21. **TIME AND PROGRESS CHART USING CRITICAL PATH METHOD**

**SPECIAL CONDITIONS (CONTD..)**

21.1 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 will be drawn jointly by the GE and contractor soon after but before the date of commencement as per Work Order No.1. The time scheduling of the activities will be done by the contractor so as to finish the work within the stipulated time. On completion of the time scheduling a firm calendar date schedule will be prepared and submitted by the contractor to GE who will approve it after the scrutiny. The calendar date schedule will be submitted in four copies within two weeks from the date handing over site.

21.2 During the currency of the work the contractor is expected to adhere to the time schedule and this adherence will be one of the main parameters of the contractor's performance under this contract. During the execution of the work the contractor is expected to participate in the review and updating of the net work as and when called for by GE. The reviews may be undertaken at the discretion of GE either as a periodical appraisal measure or when the quantum of work ordered on the contractor is substantially changed through deviation orders or amendment. Any revision of time schedule as a result of the review will be submitted by the contractor to the GE for his due scrutiny and approval.

21.3 The contractor shall adhere to the revised schedule thereafter. In case of contractor disagreeing with a revised schedule, the same will be referred to the Accepting Officer whose decision shall 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 under the existing rules and Acts.

21.4 Contractor shall mobilise and employ sufficient resources to achieve the detailed time schedule within the broad frame work of the accepted method of working and safety. No additional payment will be made to contractor for any multiple shift work or other incentive of achieving the target dates.

**22. RECORD OF CONSUMPTION OF CEMENT**

22.1 The contractor shall maintain a Pucca bound register with serially numbered pages with all pages initialed by 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 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 Engineer-in-Charge, at least once a week and on the days cement is brought by the contractor.

22.2 The register shall be kept at site in 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).

22.3 On completion of the work the contractor shall deposit the cement register with the Engineer-in-Charge for record.

**23. SECURITY OF CLASSIFIED DOCUMENTS**

23.1 Tenderer's special attention is drawn to condition 2A & 3 of General Conditions of Contract IAFW-2249 for compliance. The contractor shall not communicate any classified information regarding the work either to sub contractor or others without the prior approval of the Engr-in-Charge. The contractor shall also not make copies of the design/drawings and other documents

**SPECIAL CONDITIONS (CONTD..)**

furnished to him in respect of work and he shall return all documents to the department on completion of the work or earlier on determination of the contract and or termination of the contract.

23.2 The contractor shall alongwith the final bill, attach a receipt of his having returned the classified documents as per condition 3 of IAFW-2249(General Conditions of contracts).

24. **CLEANING DOWN**

The contractor shall clean all floors, joinery, glass panes etc. and remove drops of cement/lime paint etc. and touch up all painter's work and carry out other items of work as are necessary to make and leave the premises clean and tidy before handing over the buildings and/or works. The contractor shall not be allowed any extra payment on this account.

25. **VALIDITY OF TENDER**

The tender shall remain open for acceptance for a period of **60 (Sixty)** days from the bid submission end date commencing from the date next to bid submission end date.

26. **RECORD OF MATERIALS**

(a) The quantity of materials such as paint, water proofing compound, chemicals for anti-termite treatment 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.

(b) The quantity of proprietary articles brought to site shall be recorded in Measurement Book (IAFW-2261) 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 works.

The proprietary materials shall be stored as directed. Those already recorded in the measurement book shall be marked suitably for identification.

(c) The contractor shall on demand, produce to the GE, original receipt vouchers/invoices in respect of the supplies to ensure that the contractor has actually brought the required quality and quantity from the authorized source/sources and also to find out the rates thereof. The vr/invoices shall be defaced and stamped by Engr-in-Charge indicating contract No, Name of work under his dated signature. The vr/invoices shall be kept on record.

(d) Under no circumstances payment on account (RAR) shall be made to the contractor as material lying at site for incorporation in the work, unless the contractor submit original purchase vouchers/invoices for the items of materials as applicable.

(e) The vouchers/invoices will clearly indicate the contract number and the IS No. with specific alternatives to which the materials conforms in case of various alternatives given in IS.

(f) Contractor shall produce vouchers/invoices from the manufacturers and/or their authorized agents for the full quantity of the following materials, as applicable as pre-requisite before submitting claims for payment for advances on account of the work done and/or materials collected in accordance with Condition 64 of General Conditions of Contracts –IAFW-2249.

- |                   |   |              |
|-------------------|---|--------------|
| (i) Aluminium     | (ii) Cement .   | (iii) Steer  |
| (iv) GOD.         | (v) Cable joints  | (vi) GI pipe |
| (vii) Earth plate | (viii) All other perishable materials as decided by GE. |              |

**SPECIAL CONDITIONS (CONTD..)****27. PURCHASE VOUCHERS**

Contractor shall produce following voucher/invoice from the manufacturer and /or their authorized agents of materials and deface by the Engr-in-charge:-

- |                   |   |              |
|-------------------|---|--------------|
| (i) Aluminium     | (ii) Cement .   | (iii) Steer  |
| (iv) GOD.         | (v) Cable joints  | (vi) GI pipe |
| (vii) Earth plate | (viii) All other perishable materials as decided by GE. |              |

**28. MATERIALS AND SAMPLES**

28.1 Refer condition 10 of IAFW-2249.

28.2 The materials and articles, which have been specified from certain makers/manufactures, shall be of makes/manufacturers as specified. If the manufacturer specified in tender documents makes both ISI marked and conforming to ISI, the materials/articles shall be provided only of ISI marked.

28.3 The materials and articles, which have not been specified in tender documents by makes/manufactures shall be as under: -

- (i) If ISI marked materials are being manufactured the same shall be ISI marked. For list of ISI marked manufactures refer website of BIS i.e [www.bis.org.in](http://www.bis.org.in).
- (ii) If ISI marked materials are not being manufactured the same shall be confirming to IS specifications.

28.4 Materials of local origin shall be as specified and conforming to samples kept in GE's office. The tenderer is advised to inspect sample of materials, which are displayed in the office of 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 has actually inspected them or not.

28.5 The contractor shall not procure materials and articles unless the samples are first got approved by GE.

**29. GUARANTEE OF WATER PROOFING TREATMENT TO BUILDINGS IN CONTRACTS INCLUDING SPECIAL WATER PROOFING TREATMENT**

29.1 Provision should be made in tenders under Special Condition to cater for the following:-

- (i) The period of guarantee shall be 10 years (TEN YEARS) from the date of actual date of completion of work. The contractor shall furnish guarantee in favour of the Garrison Engineer for the effectiveness of the water-proofing treatment during the guarantee period. If the work is executed through a Sub Contract, the guarantee furnished by the Sub Contractor should be in favour of the Garrison Engineer and not in favour of the main Contractor.
- (ii) An appropriate sum, equal to the amount of security deposit calculated as per scales laid down for individual securities deposit on the amount of water proofing treatment at the contract rates under the contract, should be retained out of the final bill amount as Security Deposit for the water-proofing work, an it should be released to the Contractor only after the expiry of the guarantee period. The facility of furnishing fixed deposit receipt/BGB in lieu of the sum to be retained as security may be accepted.

**30. WATCH/ LIGHTING**



**SPECIAL CONDITIONS (CONTD..)**

The Contractor shall at his own cost take all possible precautions to ensure safety of life and property by providing necessary fencing, barrier, light, watchmen etc., during the progress of work and as directed by the Engineer-in-Charge.

31. **LABOUR REGULATION AND ABOLITION ACT**

Contract labour (Regulation and Abolition) Act 1970 is applicable to MES contracts. Rates quoted by the contractor shall be deemed to take into account the cost etc, required to comply with the provisions contained in the said act and the rules framed under the said act.

32. **HANDING OVER SITES**

Site for execution of work will be available as soon as the work is awarded. In case it is not possible to make the entire site available on the award of work the contractor will have to arrange his working programme accordingly. No claim whatsoever, for not giving entire site on award of work and for giving site gradually, will be tenable.

33. **APPROACHES**

The Contractor shall make arrangements for and provide at his own cost all temporary approaches, if required to the site(s), after obtaining approval in writing of the GE to the layout of such approaches.

34. **All the code of Practices/IS Codes/BIS Codes/Standards and specifications shall be the latest edition along with up to date correction with correction slip,revision,ammendment and errata if any shall be followed.**

SIGNATURE OF CONTRACTOR  
DATED :

DCWE (CONTRACTS)  
FOR ACCEPTING OFFICER

**PARTICULAR SPECIFICATIONS****1. GENERAL**

1.1 Work under this contract shall be carried out in accordance with Schedule 'A', particular specification, drawings, general specifications and other provisions in MES Standard Schedule of Rates here-in-after called MES Schedule Part -I of 2009 and Part -II of 2010 read in conjunction with each other.

(a) Terms "General specifications" referred to here-in-after as well as referred to in IAFW-2249 (General conditions of Contracts) shall mean the specifications contains in the MES Schedule Part -I

(b) General rules, specifications, special conditions and preambles in the MES Schedule shall be deemed to be applicable to the work under this contract unless specifically stated otherwise in these documents in which case the provision in these documents shall take precedence over the aforesaid provision in the MES Schedule. The terms "as specified" wherever appears in tender documents and drawings relates to relevant particular specifications and in its absence general specifications.

(c) Where specifications for any item of work are not given in MES Schedule or in these particular specifications, specifications as given in relevant India Standard or code of practice shall be followed.

1.2 Reference to some Paragraphs of MES Schedule have been made in these particular specification but other Paragraphs and provisions as applicable are also to be followed.

1.3 Where specification/provision given in these particular specification are at variance with the provision/specification given in MES Schedule, specifications/ provision given in these particular specification shall be followed.

**2. CEMENT**

2.1 **Type of Cement** : The details of various types and grade of cement are enumerated below :-

- (i) Ordinary Portland Cement, Grade-43, IS-8112-1989.
- (ii) Portland Pozzolana cement, Grade-43, IS-1489-2009(Part-I), subject to certain conditions given here-in-after.

2.2 **Procurement of Cement**: Cement shall be procured from the main producers/ manufacturers of the cement as specified in appendix 'B' to these particular specifications.

**2.2.1 BLANK**

2.2.2 The Particulars of the manufacturer of cement alongwith the date of manufacture shall be produced by the contractor for every lot of cement separately. The cement so brought shall be fresh and in no case older than 30 days from the date of manufacturing. The documents in support of the purchases of cement shall be verified by the GE. Before placing the order for supply of cement by the contractor, he shall obtain written approval from the GE regarding name of manufacturer, quantity of cement etc. Cement shall be procured for minimum requirement of one month and not exceeding the requirement of the same for more than two months at a time. The cement shall be consumed in the work within three months after receipt. Cement shall conform to the requirements of Indian Standard Specification and each bag of cement shall bear relevant ISI mark. The weight of each consignment shall be verified by the GE and recorded.

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

2.2.3 Where estimated requirement of cement is 1200 bags or less (but for all term contracts) cement can be procured from authorised distributors/dealers of the approved firms, however contractor will have to submit test certificates for the batch issued by the firms. In this case the independent testing for cement will be carried out at the discretion of the GE. In case the contractor does not produce test certificate, the testing of cement by the GE will be mandatory and tests shall be carried out as per IS-4031 (methods of physical tests for hydraulic cement). It will also be ensured by GE that cement accepted shall not be more than 2 months old. The Particulars of the manufacturer/ authorised dealers of cement along with the date of manufacture shall be produced by the contractor for every lot of cement separately. The cement so brought shall be fresh and in no case older than 60 days from the date of manufacturing. The documents in support of the purchases of cement shall be verified by the GE. Before placing the order for supply of cement by the contractor, he shall obtain written approval from the GE regarding name of manufacturer, quantity of cement etc. Cement shall be procured for minimum requirement of one month and not exceeding the requirement of the same for more than two months at a time. The cement shall be consumed in the work within three months after receipt. Cement shall conform to the requirements of Indian Standard Specification and each bag of cement shall bear relevant ISI mark. The weight of each consignment shall be verified by the GE and recorded.

2.2.4 The cement shall be procured by the contractor preferably in paper polyethylene bags. The Average weight of each bags cement shall not be less than 50 Kg. The average weight shall be tested by taking the weight of 50 Kg bags selected at random by GE per lot. In case the weight is less than 50 Kg whole lot shall be rejected. In case weight is more than 50 Kg it shall be deemed to contain 50 Kg only and nothing extra shall be claimed by contractor on account of extra cement used in the work.

2.2.5 Purchase vouchers as mentioned here-in-before shall bear machine number from the manufacturer's.

2.2.6. Use of Portland pozzolana Cement (PPC) : While using PPC, the following requirement shall be met with :-

- (i) PPC shall meet the strength criteria of 43 Grade Ordinary Portland Cement(OPC) as laid down in IS-8112-1989.
- (ii) Minimum period before striking the form work given in Clause 11.3.1 of IS-456 : 200 and MES Schedule Part-I(SSR Part-I) vide Clause 4.11.6.3 shall be increased by three days. For example the minimum period before striking form work for soffits of beams (props left under) given as 7 days in Clause 4.11.6.3(c) of SSR Part-I shall be 10 days (7 + 3) for PPC.
- (iii) Extra curing shall be carried out as required.
- (iv) PPC shall not be used for over head reservoirs, underground sumps, prestigious bldgs(to be decided by GE) and blgs with span more than 10 metre. In such cases only OPC shall be used.
- (v) Mixing of OPC & PPC shall not be allowed in a work and separate record shall be maintained showing location and types of cement used.
- (vi) While procuring PPC, the following requirements are to be ensured and certificate to that effect shall be obtained by contractor for each batch from the manufacturer :-

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

- (a) The quality of fly ash is strictly as per IS-1489 Part-I - 2002.
- (b) Fly ash is underground with clinker and not mixed with clinker.
- (c) Dry fly ash is transported in closed containers and stored in silos. Only pneumatic pumping shall be used.
- (d) The fly ash shall be from thermal plants using high temperature combustion above 1000° C.
- (e) The fly ash content in PPC shall be as per latest relevant IS code amended Upto date.

**2.2.7 Testing of Cement**

2.2.7.1 The contractor shall submit the manufacturer's test certificate in original along with test sheets giving the results of each physical test as applicable in accordance with relevant IS provision and the chemical composition of cement or authenticated copy thereof duly signed by the manufacturer with each consignment, as per the following IS provisions:-

- (a) Method of sampling for hydraulic cement as per IS-3535-1986.
- (b) Method of physical test for hydraulic cements as per IS-4031.
- (c) Method of chemical analysis of hydraulic cement as per IS-4032-1985.

The test certificate and test sheet shall be furnished with each batch of manufacture. The Engineer-in-Charge shall record these details in cement acceptance register to be maintained by him which will be signed by Supdt B/R Gde-I/JE (Civil), Engineer-in-Charge, Garrison Engineer and Contractor as given in the format here-in-after for verification.

2.2.7.2 The contractor shall however, organize setting time and compressive strength test of cement through designated laboratory on samples collected from the lot brought at site before incorporation in work. The contractor will be allowed to use the cement only after satisfactory compressive strength of seven days. To meet this requirement contractor is required to keep minimum 10 days stock before any new lot is brought at site which can be used in the work. The contractor shall be required to remove the cement not meeting the requirement from site within 24 hours. Seven day strength test will be relied upon to accept the lot of cement to commence the work. 28 days compressive strength test will be the final criteria to accept/reject the lot.

2.2.7.3 The GE shall carryout independent testing as per the tests mentioned in the 'CEMENT SUPPLY/ACCEPTANCE FORM' of random samples of cement drawn from various lots, if sample fails in 7 days compressive strength test. The testing shall be carried out through National Test House, SEMT wing of CME Pune, Regional Research Laboratories, Government approved Laboratories, Zonal Laboratories as per IS-3535-1986 (method of sampling hydraulic cement), IS-4031 (method of physical test for hydraulic cement) and IS-4032-1985 (method of chemical analysis of hydraulic cement) referred to above. The decision as to where the testing of cement is to be done shall be taken by GE. In case the cement is not of requisite standard despite manufacturer's test certificate, the contractor shall remove the total consignment from the site at his own cost after written rejection order of the consignment by the GE.

2.2.7.4 The random samples as per relevant IS shall be selected by GE before carrying out testing. The record of such samples selected by the GE for testing shall be properly

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

maintained in the 'Cement Testing Register' giving cross reference to relevant consignment of cement and quantity received etc.

2.2.7.5 Cost of transportation of samples to the approved laboratory/test house and all testing charges including cost of sample shall be borne by the contractor.

2.2.7.6 Notwithstanding the submission of purchase vouchers/test certificates, following tests shall be mandatory carried out as per IS-3535-1986 :-

- (a) Initial and final setting time.
- (b) Soundness test.
- (c) Compressive strength test to 3 and 7 days as specified in the relevant Paras of the Indian Standard.
- (d) Consistency test
- (e) Fineness

Other tests need not be carried out for cement procured with BIS certification mark unless specifically asked by GE or Accepting Officer and the contractor shall not have any claim on this account.

2.2.8 The cement shall conform to chemical requirements and physical requirements as specified in the respective clauses of the Indian Standard. The tests carried out as per provisions of IS codes specified here-in-before, shall be criteria for acceptance of cement by Engineer-in-Charge. If samples from a lot/lots are not within the acceptable limits of Indian Standard, the lot/lots shall be rejected without any claims or compensation to the contractor for the lot/lots purchased. The contractor shall replace the lot/lots with the fresh one which shall be tested again for acceptance.

2.2.9 The cost of all tests carried out on cement before acceptance for incorporation in the work shall be borne by the contractor whether the results are acceptable or not. No claim or compensation shall be entertained on this account and clause of IAFW-2249 deemed to be amended accordingly. Any cement lot/lots on being tested found not to be conforming with the relevant clauses of Indian Standard shall not be paid as material at site.

2.3 Storage of cement: Refer clause 4.3.1 of SSR Part-I 2009 for storage and precaution in storage of cement. The height of platform shall be at least 20 cm from floor, joint inspection of storage of cement shall be carried out by Engineer-in-charge and contractor once in a day. The cement fully set or partially set shall not be used in the work and shall be removed by the Contractor immediately without any extra cost.

2.3.1 Tested and untested cement shall be segregated and stored separately with distinct identification.

2.3.2 The cement go down shall be provided with two locks on each door. The key of one lock of each door shall remain with the Engineer-in-charge or his representative and that of other lock with the contractor or his authorised agent at site of work so that cement is removed from the go down only according to the daily requirement with the knowledge of both the parties. During the period of storage, if any cement bag(s) found to be in damaged condition due to whatsoever reason, the same shall be removed from the cement go down on written order of the GE and suitable replacement for the cement bag(s) as removed shall be made and no claim whatsoever shall be admissible on this account.

2.4 Documentation

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

2.4.1 The Contractor shall submit original vouchers from the manufacturer for the total quantity of cement 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 Vouchers and the Test Certificate shall be defaced by the Engineer-in-charge and kept on record in the office of GE duly authenticated and with cross reference to the consignment number/contract number recorded in the cement acceptance register clearly mentioning 'Batch No.' and 'Date of manufacture' with cross reference to the consignment number/contract numbers recorded in the cement accepting Register. The cement acceptance register will be signed by JE (Civil), Engineer-in-charge, GE and the contractor. The CWE and /or Accepting Officer may exercise random check of cement and verification of connected documents.

2.4.2 The entire quantity of all cement shall suitably be recorded in the measurement Book (Not to be abstracted) for record purpose before incorporation in the work and shall be signed by the Engineer-in- charge and the contractor.

2.4.3 In addition to the cement Acceptance Register, the cement consumption register shall be maintained as stipulated in special conditions here-in-before.

**2.5 Schedule and Supply**

2.5.1 Schedule of supply of cement shall be finalized by contractor with the GE and shall be incorporated in CPM chart so that supply of cement is monitored in a way to avoid any delay in completion of the work. The supply shall be regulated in such a way that cement is consumed in work within three months of its procurement.

2.5.2 The complete requirement of cement will be worked out before making any RAR payment. Procurement of cement by the contractor shall be complete sufficiently in advance of the date of completion. The contractor will forfeit his right to demand extension of time if the supply of cement got delayed due to his failure in placing order in time to the manufacturer.

2.6 General: The payment shall only be allowed after production of original purchase vouchers, certified copies of test certificates from manufacturer for each consignment and results of testing carried out in laboratory on receipt of cement (7 days compressive test) are found satisfactory after testing as specified here-in-before. Payment for cement shall be made as material lying at site as per condition 64 of IAFW-2249. Rate of cement given in SSR shall be applicable for cement irrespective of grade of cement specified for use in the work.

**3. CEMENT CONCRETE**

3.1 Cement: Refer Para 4.3 of MES SSR 2009 Part-I and Clause 2 of here-in-before..

3.2 Coarse and fine aggregate for cement concrete (PCC and RCC): Refer Paras 4.4.1 to 4.4.7.3, of MES Schedule Part-I. Fine aggregate shall be sand obtained from the sources given here-in-after.

3.3 Coarse and fine aggregate for lime concrete: Coarse aggregate shall be broken bricks as per Paras 4.5, 4.5.1, 4.5.2 of MES Schedule Part-I. Fine aggregate shall be natural sand as for cement concrete.

3.3.1 Coarse aggregate for plain and reinforced cement concrete shall be machine-crushed stone. Grading of coarse aggregate unless otherwise specified shall be as follow: -

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

- i) For all plain & reinforced cement concrete of thickness Upto 25 mm thickness. - 12.5 mm graded
  - ii) For all reinforced cement concrete over 25 mm thickness - 20 mm graded
  - iii) For plain cement concrete over 25 mm thick and under 75mm thick. - 20mm graded
  - iv) -ditto- but 75 mm thickness and over - 40 mm graded
- 3.3.2 Grading of coarse aggregate for plain and reinforced concrete i.e. crushed stone aggregate shall be as per Para 4.4.7.1 of MES Schedule Part-I. Grading of broken brick aggregate for lime concrete shall be as per Para 4.5.3 of MES Schedule Part-I.
- 3.3.3 Grading of fine aggregate (sand) shall be as per Para 4.4.7.2 of MES Schedule Part-I for grading Zone-III.
- 3.4 Mix of cement concrete: Refer Paras 4.11.1, 4.11.2, 4.11.2.1 to 4.11.2.4 of MES Schedule Part-I. Mix of cement concrete shall be as described in Sch 'A'.
- 3.5 Form Work : Refer Paras 4.11.6.1 to 4.11.6.5 of MES Schedule (Part-I). Irrespective of type of formwork mentioned elsewhere or indicated in the drawings, formwork shall be of steel only. Steel formwork (both verticals props and surfaces) shall be properly designed. However, for deviation if any, rates in MES Standard Schedule of Rates, for timber formwork (Rough finished surfaces) shall only be applicable.
- 3.6 Mixing: Mixing of concrete shall be done in a mechanical mixer.
- 3.7 Workability : Workability of concrete for various locations shall be as per Clause 7.1 of IS 456-2000.
- 3.8 Compaction of concrete : Refer to Para 4.11.11 of MES Schedule Part-I Consolidation/compaction of of RCC Slabs/beams/columns/lintel/chhajja/ shelves etc and the flooring (exceeding 75mm thickness) shall be done with approved mechanical vibrator. Where however the same is not feasible manual compaction shall be carried out after obtaining permission from Engr-in-Charge.
- 3.9 Throating/weathering: Throating to projection of RCC/PCC beyond external faces of the wall where shown on drawing and where RCC chhajja are not provided with down ward fascia shall be formed in concrete while casting by planting fillet/bar of 12 mm dia. in the form work and finished smooth.

**4. BRICK WORK**

- 4.1 (i) Refer Paras 5.6.1 to 5.6.9 of MES Schedule Part-I. The bricks shall have minimum compressive strength of 75 Kg/Sq.cm and shall be sub class 'B' which are locally best available and water absorption of bricks shall not exceed 20% (Twenty Percent). Sampling and testing of bricks shall be carried out as per IS-5454 (1998). Brick shall be old size brick as mentioned in Para 5.6.3 MES Schedule Part-I.
- (ii) The bricks shall be soaked in water before incorporation as mentioned in Clause 5.22 of MES Schedule Part-I.

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

4.2 Cement : As specified here-in-before.

4.3 Sand : Refer para 5.4, 5.4.1 and 5.4.3 of MES Schedule part-I.

4.4 LAYING AND BONDING

4.4.1 Preparation of Cement Mortar : Mixing shall be done preferably in a mechanical mixture. The mortar shall be mixed for at least three minutes after addition of water. Cement mortar shall be freshly mixed for immediate use. Any mortar which has commenced to set shall be discarded and removed from the site.

4.4.2 Bricks shall be laid and bonded all as specified in Paras 5.23 & 5.24 of SSR Part-I.

4.4.3 Striking of joints and curing shall be carried out as specified in Paras 5.28 & 5.30 of SSP Part-I.

5. **JOINERY**

5.1 Seasoning and moisture contents Refer para 7.6 & 7.7 of MES Sch Part-I. Moisture contents shall be as specified for Zone-I.

5.2 Species of timber : It shall be as described in Schedule 'A'

5.3 Workmanship : Workmanship shall be as specified in clause 8.15 to 8.20 of SSR Part-I.

5.4 The sizes/dimension of various members of shutters shall be as specified in clause 8.24(a) & (b) of SSR Part

5.5 Use of nails in joinery and other timber built in items is prohibited. Wood screws of appropriate sizes shall be used.

6. **FACTORY MADE SHUTTERS**

5.6.1 Refer to Para 8.20.8 of MES Sch Part-I. Thickness of paneled and glazed/wire gauged shutters shall be as per Schedule 'A' and conforming to IS-1003 manufactured from well selected kiln seasoned chemically treated for anti-termite second class hard wood (Hollock). The panel insert shall be 12mm thick exterior grade veneered particle board BWR type commercial faced on both sides as specified in Para 8.9, 8.9.1 to 8.9.5 of MES Schedule Part-I. Shutters shall be obtained from any one of the manufacturers given her under as approved by GE :-

- (a) M/S Pioneer Timber products, 622 Industrial Area Chandigarh - 160002
- (b) M/S Chandigarh Timber products, Hebatpur Road, PO: Mubarakpur, Distt Patiala - 140210
- (c) M/S C S Modi and Co, Ambala Chandigarh Road, Bhankharpur, Distt Patiala - 140210
- (d) M/S Rajindra Industrial Area, B-38, Industrial area Ph-III, SAS Nagar Mohali, Distt Ropar
- (e) Goyal Industrial Corp'n, 8748, D B Gupta Road, New Delhi - 55
- (f) M/S Sri Associated, 22 'C' Clock, Sirsa
- (g) M/S Sohal Industries, 182, Industrial Area Chandigarh
- (h) M/S Satish Kumar & Co, Khajuri Road, Yamuna Nagar
- (i) M/S Jain wood, 50 Km stone, G T Road, Sonapat



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

- (j) M/S Delhi Construction Equipment's(Wood works), 1/200 Sadar Bazar, Delhi Cantt-10
- (k) M/S Jagdamba Doors Plot No 17, Industrial Estate, Rajpura – 140401
- (l) M/S Sri Krishna Industries, Plot No 299, Phase-II, Panchkula – 134 109
- (m) M/S Shakit Industries, Barnala Road, Manapindi, Dhanaula – 145 105
- (n) M/S Sarab Enterprises, New G T Road, Damtal, Distt Kangra

**6. FLUSH SHUTTER**

6.1 It shall be as described in Sch 'A' and as per Clause 8.25, 8.25.1 to 8.25.9 of SSR Part-I and shall be procured from the manufacturer mentioned in clause 5.6.1 above as approved by GE.

**7. BLOCK BOARD**

7.1 It shall be as described in Sch 'A' and conforming to the requirement of IS 1656-1979 and as specified in SSR Part-I. Block board shall be ISI marked.

**8. BUILDER'S HARDWARE**

8.1 Material and sizes of Builder's Hardware shall be as described in Sch 'A' and conforming to relevant IS as specified in SSR Part-I and shall bear IS certification mark.

8.3 Wire cloth : Refer clause 9.25, 9.25.1 to 9.25.3 of MES Sch Part-I and conforming to IS-1568-1970, wire cloth shall be stainless steel having 0.36mm as nominal dia of wire and average width of aperture as 1.40mm.

**9. Blank****10 STEEL AND IRON WORK**

All steel including structural steel, steel sheets etc for entire completion of work shall be procured by the contractor at his own cost.

**10.1 Materials**

Size type and Gde of steel shall be as shown on drawing (s) However, if Gde and type of steel are not shown on drawing (s) the same shall be TMT bars Gde Fe-500/Fe-500d/ Fe-550/Fe-550d for reinforcement and MS Gde I Fe-410-S for structural purposes. Various types of steel are given as under :-

- (a) Reinforcement Steel. High strength deformed steel bars produced by thermo mechanical treatment process of Gde Fe-500/Fe-500d/Fe-550/Fe-550d and meeting all other requirements of IS-1786.
- (b) Structural Steel.
  - (i) Specification of structural steel as given in clause 10.4 of SSR Part-I shall be applicable. Standard quality Fe-410-S conforming to IS-2062 for all types of steel structures including these subject to dynamic loading shall be used.
  - (ii) Ordinary quality steel Fe-310-0 conforming to IS-1977-1975 for all non structural use viz, doors, windows guard bars, grills, steel gates, hand railing, fencing posts etc.

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

(c) Galvanised steel sheets (plain and corrugated) shall be conforming to IS- 277 of 1985 with medium coating of zinc, nominal 120g/Sqm.

(d) Fabric reinforcement for concrete shall be conforming to IS-1566 of 1982.

**10.2.1 Procurement**

10.2.1.1 TMT steel bars irrespective of size shall be procured only from SAIL/RINL/TISCO/M/s Shyam Steel Industries Ltd, Durgapur (W.B)/ M/s SPS steel rolling mills Ltd Durgapur (W.B)/M/s Jai Balaji Industries Ltd, Durgapur (W.B), M/S Steel Exchange India Ltd Hyderabad -5000016 (A.P), M/S Jindal Steel and Power Ltd Gurgaon -12001, Haryana, M/S SRMB Srijan Ltd, Kolkata-700012, M/s Concast Steel & Power Ltd, M/s Adhunik Metaliks Ltd, M/s Shri Bajrang Power & Ispat Ltd, M/s JSW Steel Ltd, M/s Electrosteel Steels Ltd, M/s Shyam Metalics & Energy Ltd, M/s Kamachi Sponge & Power Corporation Ltd.

10.2.1.2 All structural steel shall be procured only from main primary producers of steel. In case of Non availability of structural steel with primary producers the same can be procured from the following approved secondary producers with reduction of 5% (five percent) of accepted rate of structural steel. In case desired section is not rolled are manufactured by the primary producers the shall be procured from the approved secondary producers without any price adjustment :-

Note :- Steel section for railings, gates, fencing, guard bar, steel chowkhats and holdfasts etc, which do not constitute structural member, can be procured from main producers/secondary producers/BIS marked manufacturers or their authorized dealers at the option of contractor, without any minus price adjustment. These should also conform to IS-1732 for general engineering purpose. However, tests will not be insisted upon for such steel sections.

10.2.1.3 Reinforcement shall be fabricated, placed in position all as shown on drawings and specified in clause 10.17 to 10.22 of MES SSR Part-I without application of heat.

10.2.1.4 All laps and crossings shall be tied with mild steel wire (annealed) of size not less than 0.9mm dia and the cost deemed included in the quoted amount of the contractor.

10.2.1.5 For the purpose of making adjustment arising out of deviations involving reinforcement bars, the length of each bar for laps shall be taken as 10 (ten) meters.

10.2.1.6 All finished steel shall be well and clearly rolled to the dimensions, section and weights specified. The finished material shall be reasonably free from cracks, surface flaws laminations, rough, jagged and imperfect edges and other harmful defects and shall be finished in a workman-like manner.

10.2.1.7 Tolerance on size and weight of reinforcement bars shall not be more than specified in clause 10.17.4 & 10.17.5 of SSR Part-I.

**10.2.2 Testing of Steel**

The manufacturer is to carry out inspection and testing of steel in accordance with relevant BIS provisions. The contractor shall submit the manufacturer's Test Certificate in original along with the test sheet giving the result of each mechanical test as applicable and the chemical composition of the steel or authenticated copy thereof duly signed by the manufacturer with each consignment. The site staff and GE shall verify the original documents in support of the purchase of steel and keep true copy certified by GE. The

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

Engineer-in-charge shall record these details in a 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/AGE shall also organize independent testing of random samples of steel drawn from various lots from National Test House, SEMT Wing, CME, Regional Research Labs, Govt, approved Lab, Zonal Labs etc for Normal, Mass, Tensile, Bend & Re bend test of steel as per the following minimum frequency :-

<u>NOMINAL SIZE</u>	<u>QUANTITY</u>
<u>(a) Steel for Concrete Reinforcement</u>	
1. Bar size less than 10 mm	- 1 sample (3 specimen ) for each test for every 25 Tonnes or part there of.
2. Bar size 10mm to 16mm	- 1 sample (3 specimen) for each test for every 25 tonnes or part there of.
3. Bar size over 16 mm	- 1 samples (3 specimen) for each test for every 45 tonnes or part thereof
<u>(b) Structural Steel</u>	
4. Tensile Test	- 1 test for every 25 tonnes or part thereof.
5. Bending Test	- 1 test for every 10 tonnes or part thereof.
6. Testing annular ring of TMT bar-	1 test for every 05 tonnes or part thereof.

**Notes :**

(a) Independent testing of steel by the GE shall be optional at the discretion of the GE in case of procurement of steel from main producers and testing charges shall be borne in accordance with conditions 10A of IAFW 2249 i.e testing charges shall be borne by the Deptt if the test results are found in order otherwise these shall be borne by the contractor.

(b) Independent testing of steel by the GE shall be mandatory in case of procurement of steel from secondary producers and testing charges shall be borne by the contractor irrespective of the outcome of test results.

(c) In both the cases at sub para (a) and (b) above, the contractor at his cost shall provide all facilities required for the testing.

(d) Cost of materials used in testing including its transportation shall be borne by the contractor and no extra claim what so over shall be admissible irrespective of test results. Minimum numbers of tests shall be as mentioned here in before. Wherever same is not indicated, it shall be decided by GE.

(e) For various tests, acceptance criteria. Tolerance etc refer appendix 'F' and relevant BIS codes.

(f) Samples from each lot shall be tested for quality and elongation. The elongation shall not be less than 18%.

10.3 Documentation: Steel acceptance register and measurement book for steel (for record purpose and not to be abstracted) shall be maintained by the Engineer-in-charge. The contractor shall submit original machine numbered receipted paid vouchers from the supplier for the total quantity of steel supplied under each consignment received at the work site shall be inspected by the GE along with the relevant documents before acceptance. The original voucher 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 contract No recorded in the steel acceptance register. The steel acceptance register will be signed by the Engineer-

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

in-charge, GE and contractor. The entire quantity of all steel items shall also be suitably recorded in the measurement book for record purpose as not to be abstracted before incorporation in the work and shall be signed by the Engineer-in-charge.

**10.3.1 Steel in Coil etc.**

10.3.1.1 Any bar of any diameter for reinforcement may be procured in round bundles or rolls and the cost of straightening the same shall be borne by the contractor. When bars are procured in bundles the length of each bundle shall be worked out on the basis of unit weight predetermined by the GE by getting suitable length (not less than 3 meters) out of each consignment (s) received, getting it straightened, length measured and weighed in presence of contractor's accredited representatives. The length and the weight(s) shall be recorded from which unit weight (weight per unit length) shall be calculated. The length of bars shall be worked out on the basis of unit weight shall be used for the purposes of calculating quantity of steel used/to be used in the work and taking payment of material lying at site. However if the unit weight works out more than the unit weight given in SSR then unit weight given in SSR shall only be followed for computing weight of steel for the purpose of making payment of steel lying at site.

**10.4 Storage.**

10.4.1 Steel of different sizes shall be stacked separately for each classification of steel, separate areas shall be marked. Steel shall be marked with distinct painting marks for easy identification. Cost of storage shall be deemed included in the quoted amount of the contractor.

10.4.2 All steel shall be stored in such a manner so that it is always at least 15cm above the GL. Steel shall be stored in a manner so as to prevent distortion and corrosion. Any section that has deteriorated and corroded or if considered defective by Engineer-in-charge shall not be used in the work and shall be replaced by contractor without any extra cost. It will be the responsibility of the contractor to make sure that all possible arrangements are made for the safe custody of the steel. In case of loss of steel only contractor will be responsible and the loss will/shall be made good without any delay or claim what-so-ever.

**10.5 Scheduling and Supply**

10.5.1 Schedule of supply of steel shall be finalized by contractor with GE and shall be incorporated in CPM chart so that supply of steel is monitored in a way to avoid any delay in completion of the work.

10.5.2 The complete requirement of steel of various sizes will be worked out before making any RAR payment and procurement of steel by the contractor will be completed sufficiently in advance of the date of complete. The contractor will forfeit his right to demand extension of time if the supply of Steel and Iron got delayed due to his failure in placing order in time to the manufacturer.

10.6 Payment of steel: 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 if carried out by the department are found satisfactory after testing as specified here-in-before. Test certificates for ordinary quality structural steel of particular section of which quantity is less than 1.00 MT and if the test certificates are not produced,

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

the contractor can get tested the sample of each consignment of each diameter of bars through approved laboratories as brought out here-in-before.

10.7 **Welding:** Welding of reinforcement shall be by metal arc welding. Running welding shall be done unless otherwise specified. All welds should be 6mm fillet welds unless otherwise specified. The welding of frames of the doors shall be done by flush but welding, but permissible weld of MS square pipe with flat iron frames of railing where shown on drawings shall be with running welding.

10.8 **(a)Galvanised steel sheets & fabric reinforcement for concrete :**

(i) These shall be procured directly from main producers/BIS marked manufacturers at the opinion of contractor without any minus price adjustment.

(b) Reinforcement steel, structural steel and galvanized steel sheets & fabric reinforcement for concrete may be permitted from authorized dealers of main producers in case the total requirement of steel is less than 5 tones.

**10.9** Steel sections for railings, gates, fencing, guard bars, grills, steel chowkats, hold fasts 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 any minus price adjustment. Tests will not be insisted upon for such steel sections.

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12. **PLASTERING :**

12.1 GENERALLY : Refer Paras 14.16 of SSR Part-I.

12.2 MATERIALS :

12.2.1 CEMENT - Refer clause 2.2 herein before.

12.2.2 SAND - It shall be as per clause 14.5.2 of SSR Part-1.

12.3 Workman ship : Refer Paras 14.12 of SSR Part-I. Thickness of cement plaster mentioned in Sch 'A' shall be finished thickness exclusive of dubbing. Dubbing may, however, be done in one operation with plaster. Ratio of cement mortar for plastering shall be as described in Sch 'A'.

13. **SHEET GLASS**

13.1 The sheet glass shall be conforming to IS-2835. It shall be of good quality, free from sleeks, bubbles, smoking, air holes and other defects.

13.2 Thickness of glass shall be as mentioned in sch 'A'.

13.3 The glass shall be fixed to steel window/vent with glazing clips and putty as specified in Paras 16.10.1 of SSR Part I.

13.4 The glass shall be fixed to wooden shutter in the wooden beads as specified in Paras 16.9.2 of SSR Part I.

13A. **WHITE/COLOUR WASH :**

13A.1 Material : Refer Paras 15.2 to 15.4 of SSR Part-I.

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

13A.2 Workmanship : Refer Paras 15.9 of SSR Part-I. For white washing on ceiling adequate qty of zinc oxide shall be added to lime wash for achieving white shade. Skirting and dado are not to be white/colour washed.

14. **CEMENT BASE PAINT** :

14.1 Material : Refer Paras 15.7 of SSR Part-I.

14.2 Workmanship : Refer Paras 15.15 of SSR Part-I.

15. **DISTEMPER** :

15.1 Material : Refer Paras 15.5 & 15.6 of SSR Part-I.

15.2 Workmanship : Refer Paras 15.13 & 15.14 of SSR Part-I.

16. **PAINTING**

(a) Paint shall be of 1<sup>st</sup> quality not inferior to that specified in the ISS as applicable.

(b) Paint for priming coat, under coat and finishing coat shall be of the same manufacturer.

(c) All surfaces to be treated shall be suitably prepared before applying priming coat as specified in the MES Schedule.

(d) The contractor shall, if so required by the GE produce certificates from the manufacturers or their representative to establish that the brands of paint used by him are as per specifications or superior thereto.

(e) Priming coat on a prepared surfaces shall be applied only after the surfaces has been passed by the Engineer-in-Charge.

(f) Refer Paras 17.2, 17.3, 17.5, 17.6 & 17.8 SSR-I and Part-I (2009).

17. **FLOORING**

17.1 **Generally**

17.1.1 Floors of various types shall be provided as described in Sch 'A' and specified in Paras 13.25 of SSR Part-I.

17.1.2 Floor finish shall be carried over through all opening and dwarf wall.

17.1.3 Surface of PCC floors unless otherwise indicated in Schedule of finishes shall be finished even and smooth using extra cement with steel trowels. Top surface of ramp shall be finished Chequered using extra cement.

17.1.4 Cement concrete in sub base or sub base floor and wearing coat shall be laid separately and not monolithically. Su base or sub floor shall be laid at a stretch without forming panels and no adjustment shall be made for form work on this account.

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

17.1.5 Graded coarse aggregate shall be crushed stone aggregate.

17.1.6. Cement Concrete Floor : Refer paras 13.32 of SSR Part-I

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18.11 Kota Stone Flooring. Refer clause 13.47.1 to 13.47.4.5 of SSR Part I of 2009.

18.12 Marble flooring. Refer clause 13.12.1 of SSR part I of 2009.

18.13 Cement concrete Chequered tile flooring :- Refer Paras 13.16 & 13.17 of SSR Part-I. Cement concrete tiles shall be as described in paras 13.39 of SSR Part-I.

18.14 **PRECAST INTERLOCKING TILE FLOORING**

18.14.1 Pre-cast interlocking tiles shall be all as per manufacture's specifications and of design as approved by Engineer –charge and Refer paras 13.18 of SSR Part I(2009).

18A. **BIB TAPS/STOP VALVE/PILLAR TAP ETC**

18A.1 Bib taps/stop valves/pillar tap etc shall be as specified in clause 18.13 to 18.18 of SSR Part-I.

19. **Steel Tubes & Fittings**

19.1 Steel tubing and fittings shall be of mild steel tubes medium grade galvanized and as per Paras 18.4 of MES Schedule 1991-Part I. GI fitting shall comply with IS (1239(ii)) butt welded or seamless. Laying of pipe shall be as described in Paras 18.50, 18.51 and 18.56 of SSR Part-I. Unions shall be provided at suitable places as directed by Engr-in-Charge, so that long lengths of pipes are not disturbed during cleaning, changing/repair etc. Uncovered threaded portion of pipes shall be painted with approved paint. The contractor shall use proper bends/elbows/Tee at/turning point/corner. Bending of pipe is not permitted. The contractor shall provide screwed plug to all open ends of pipe at the end of day and at time when work is stopped.

19.2 Testing : Refer paras 18.55 of SSR Part-I.

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26 **Aluminum Door & Windows**

26.1. Anodised Aluminium doors and windows shall be provided all as directed by Engineer-in-Charge. The specifications and workmanship shall be as per para 10.37.1 of SSR Part I.

26.2 The aluminum section for windows shall be 1.6mm thick and for doors it shall be 2mm thick.

26.3. Standard aluminum beading shall be provided to all glazing all-around.

26.4 Irrespective of whatever shown in the drawing, glass for aluminum doors & window shall be 5.5 mm thick tinted sheet glass of Modi Guard/Float make. The Sheet glass shall be conforming to IS-2835. It shall be of good quality, free from streaks, bubbles, smoking, air holes and other defects.

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

26.5 Each openable window shutter shall be provided with two numbers of aluminum anodized tower bolts 125mm long and one handle of aluminum anodized 75mm long fabricated type. Each door shall be provided with one standard mortice lock 4 lever of Godrej/Harrison make. Each openable of doors shall provided with one hydraulically operated double action spring. Handles to the door leaf shall be provided as directed by Engr-in-Charge.

26.6 Each openable door leaf shall be provided with one floor door stopper. Hinges for connecting shutters with frame shall be as per standard engineering practice

26.7. All aluminum sections shall be of JINDAL/IBALCO/INDALCO make

**27. EXCAVATION AND EARTH WORK****27.1 Excavation General**

- a) Excavation and earthwork under this contract shall be considered as excavation in soft/loose soil as detailed in SSR 2009 (Part -I).
- b) Unit rates for Items in Schedule 'A' Section-I shall include for excavation and earthwork in soft/loose soil. No extra payment shall be admissible to the contractor in case the strata met with actually at site is found different from that mentioned herein. Any deviation involving excavation and earthwork will be priced on the basis of soft/loose soil.
- c) Boulder and stone obtained from excavation shall be sorted out and neatly stacked as directed by Engineer-in-charge without extra cost to the Govt.. These shall be taken over by the Engineer-in-charge.

**27.2 Filling in trenches, plinth and under floors etc.**

27.2.1 Filling excavated earth in foundation trench shall be carried out as per Paras 3.19.1 to 3.19.3 of MES Schedule Part -I. Earth obtained from excavation and not approved for filling or surplus to the requirement shall be removed to a distance not exceeding 50 meters, spread and levelled, If any additional earth is required for filling it shall be obtained from sources approved by Engineer-in-charge. All filling will be spread in layers not exceeding 25cm thick (each layer) watered and well rammed. Thickness of filling is after consolidation. Earth available from excavation in foundations and under various parts of Schedule 'A' to the extent approved by Engineer-in-Charge, shall be carted and used for filling in trenches, under floor, after removing bid stones, grass roots, vegetation and other organic matter. Any additional earth required for the purpose of filling shall be arranged by contractor under his own arrangements.

27.2.2 Filling under floors, sides of trenches shall be in layers not exceeding 250mm. Each layer shall be watered, compacted and rammed as approved by Engineer-in Charge. Thickness of filling as specified elsewhere and shown on drawings is the consolidated thickness.

**28. WEATHER PROOF EMULSION PAINTING**

- (a) Weather proof emulsion paint shall be of brand manufactured by any of following firms :-

<u>Name of Firms</u>	<u>Brand Name</u>
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**PARTICULAR SPECIFICATIONS (Contd...)**

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- (i) Asian Paints, Nariman Point, PB No APEX (ULTIMA)  
11801, Bombay
- (ii) Goodlas Nerolac Paint Ltd, PB No EXCEL (TOTAL)  
163322, Nerolac Hosue, Power Parel  
Bombay-400 013
- (iii) Berger Paints Industrial Ltd,32 WEATHER COAT (ALL GUARD)  
Chowringhee Road, Calcutta
- (iv) ICI Ltd Division ICI House,34 DULUX WEATHER SHIELD  
Chowringhee Road, Calcutta (ULTRA CLEAN)
- (b) Weather proof emulsion Paint for priming coat, under coat and finishing coat shall be of the same manufacturer.
- (c) The contractor shall inform the GE immediately after acceptance of the tender, the brand names of the manufactures of paint proposed to be used in the works and submit samples thereof well in time and obtain prior written approval of the GE before their incorporation in the work.
- (d) The contractor shall, if so required by the GE produce certificates from the manufacturers or their representative to establish that the brands of paint purchased by the them, are as per specifications or superior thereto.
- (e) Priming coat on a prepared surfaces shall be applied only after the surfaces has been passed by the GE.
- (f) Also refer para 17.2.3,17.2.5,17.3.1 to 17.3.6 and 17.5 of SSR Part-1
29. WORKMANSHIP Weather proof emulsion painting work shall be executed by the authorized skilled worker/applicator of main manufacturing Co, as approved by the Accepting Officer. Weather proof painting work shall be carried out by brush or roller or spray as per manufacturer's instructions and as approved by GE.
30. SHADE/COLOUR OF WEATHER PROOF PAINTING
- 30.1 The projected surface of Building shall be treated with the Dark colors and other surfaces with light color of tint as approved by GE.
- 30.2 GURANTEE FOR WEATHER PROOF PAINTING WORK
- (a) The contractor shall furnished the written guarantee in favor of the GE for the effectiveness of the weather proof painting work for a period of 5 (five) year after certified date of completion. The contractor may obtain a similar guarantee from the specialist firm engaged/manufacturer by him for the purpose.
- (b) Security deposit for painting work shall be calculated as per scales laid down by the MES for calculating Individual security deposit as applicable on the date of receipt of tender on the amount of painting work at contract rates quoted by the contractor's against respective item of sch 'A' and the amount shall be withheld from the contractor's final bill. The security deposit shall be refunded to him after expiry of guarantee period. Alternatively, the contractor may give a separate interest bearing security deposit to GE valid for 5 years for this amount.
- (c) The contractor shall provide a plaster board of adequate dimension but not less than 45cm x 30 cmx2 cm thick in cement mortar 1:4 on all building as directed by Engr-in-Charge and indicate thereon the CA No Name of contractor and

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

date of expiry of the guarantee period etc. The cost of the plaster plate is deemed to be included in unit rate quoted by the contractor

**31. ELECTRIFICATION WORK**

31.1 General: Refer Para 19.2 of MES Schedule Part-I (1991). All internal wiring and fittings shall be provided all as described in Sch 'A' and as directed by Engr -in-Charge.

31.2 No price adjustment in prices shall be made on account of change in location of fittings and accessories at the time of execution of work at site.

31.3 Material and workmanship of fittings and fixtures shall be all as given in SSR and as specified in Schedule 'A'.

31.4 Terminal points of light and power plugs (Socket outlets) Switches, Regulators, Fittings, etc. shall terminate in recessed mild steel boxes fixed flush to the wall, top covered with 3mm thick plastic laminated Bakelite sheet.

**32. Material**

32.1 Refer Paras 19.24 of SSR Part-I and as described in respective item of Schedule 'A'.

**33. Workmanship**

33.1 Refer Paras 19.101 to 19.136 of SSR Part-I.

**34. Earthing**

34.1 Refer Paras 19.137 to 19.145 of SSR Part-I.

35. **Testing:** On completion of the work the following test shall be carried out :-

- (a) Insulation resistance test overall and sectional. This shall be carried out between each phase and neutral and between phase and earth. Polarity test of switches shall be carried out to ascertain that each switch has been fixed on phase wire.
- (b) Earth continuity test: This test shall be carried out as per clause 19.146.3 at serial page No. 19-39 of SSR 1991 (Part-I). The result shall not be more than one ohm.
- (c) All test carried out shall be recorded in triplicate and signed both by the contractor and Engineer-in-charge and shall be kept on record.

**36.EXTERNAL ELECTRIC WORKS****36.1 General**

36.1.1 All work shall strictly comply with the provision in the Indian Electricity Act and rules framed there under amended upto date) as applicable to this work. The work shall also comply with the provision contained in the latest edition on the relevant ISS/BSS issued up to the date of receipt of the tender irrespective of what is referred to in the particular specification

36.1.2 All works shall conform to the best method of modern practice and shall be executed by the fully qualified electrician/ lineman/ wireman etc etc. the evidence of their qualification shall be produced by the contractor on demand by GE.

**PARTICULAR SPECIFICATIONS (Contd...)****37. Layout**

37.1 The electric lines and cables shall be laid by route as actually directed by the Engineer-in-charge. The contractor shall measure on the ground the actual length alongwith the said route to work the exact requirement of electric lines and cables before placing orders for procurement of the same. The contractor is to ensure that materials/ equipment offered by him can be suitably placed in the space marked for the purpose.

**37.2 Samples of Materials/Equipment**

37.3 All materials/equipment incorporated in the work shall comply with relevant ISS. Samples of materials for which no IS Specification is issued and which are to be supplied by the contractor for incorporation in the work, shall be approved by the GE before incorporation in the work.

37.4 Materials offered for incorporation shall be new and no reconditioned/used equipment/materials will be accepted in the work.

37.5 All equipment, allied accessories and materials to be incorporated in this work shall be of the make (s) specifically mentioned or where the make(s) are not specifically mentioned, they the same shall be standard make and strictly comply with latest ISS.

**38. Underground Cables HT & LT**

38.1 The contractor shall produce original purchase vouchers and test certificates from the manufacturer for HT & LT cables, which shall be got verified by the GE before approval and incorporating in the work.

**38.2 Laying and Jointing of Underground cables**

38..3 The cables shall be laid and jointed strictly as specified in the MES schedule 2009 Part-I and in accordance with instructions furnished by the manufacturer and latest IS specification and as specified herein in the particular specifications.

38.4 The sand for the purpose of cushioning should be fine sand.

38.5 The bricks for protection cover of the cable shall be sub class 'B' bricks with compressive strength 75 Kg/Square CM. Bricks shall be laid across the cable length.

38.6 After the layer of brick covers is laid, the remaining trench will be filled with excavated earth all as specified in respective item of schedule 'A'.

38.7 The cable shall be snaked at all joints and junctions boxes. Snaking shall be done as directed by the Engineer-in-Charge. Extra length on account of snaking will also be payable under respective item of schedule 'A'. The quantity payable under schedule 'A' item shall be the length of cable laid including the length in snaking and no price adjustment shall be made for variation in quantity of connected (allied) item like sand cushion/cover and brick layer protection cover.

38.8 Where the cable run vertically, these shall be firmly fixed with flat iron clamps as directed by the Engineer-in-Charge at one metre center to center along the supports.

38.9 Where cable is required to be fixed with wall, it shall be properly secured by means of clamps/saddles as specified by Engineer-in-Charge.

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

38.10 When more than one cables are laid in same trench, minimum spacing between cables shall be 25cm.

38.11 Jointing of cable shall be carried out by crimping method using proper crimping tools. Suitable glands at entry to existing cable shall be provided. Jointing of cable and fixing of compound shall be in accordance to relevant IS specifications and material shall be best quality of compound.

38.12 Joint boxes where required shall be heat shrinkable type/epoxy type suitable for respective cable as specified in schedule 'A'. They shall be filled completely with ceiling compound and shall be tamped while doing so to insure that they are properly filled.

38.13 Testing during laying: Cables shall be meager tested before jointing and after jointing is completed. The cables shall again be meager tested for the following :

- (a) Continuity.
- (b) Insulation resistance to earth.
- (c) Insulation resistance between conductors.

38.14 Testing after laying and jointing

38.14.1 On the completion of laying and jointing of cables following tests shall be carried out:-

- (a) Insulation resistance test, sectional and overall.
- (b) Continuity test sectional and overall.
- (c) Full load test sectional and overall.
- (d) Earth test.

38.15 The result of all the above tests shall be recorded duly signed by the contractor and the Engineer-in-charge. If the test is unsatisfactory, the defective cable shall be replaced by the contractor at his own expense to the entire satisfaction of Engineer-in-charge. The contractor shall supply necessary apparatus, labour and instruments required for testing. However the Engineer-in-charge is at liberty to use any other instrument he may wish to employ for the purpose.

38.16 Continuous Earth Wire: GI earth wire shall be paid by weight either calculated from tables or actual, in case of variation, lesser only will be paid. No extra allowances for sag and jointing shall be made while computing the weight of GI wire.

38.17 Earthing

38.17.1 Earthing shall be carried out to the specification as given in respective item of Schedule 'A'/BoQ and shall conform to IS-3043.

38.17.2 The earth resistance of the whole system shall not be more than one mega ohm.

38.17.3 Each item of equipment as ordered by GE shall be connected to two sets of earth connections.

38.17.4 The contractor shall obtain approval of Engineer-in-charge to the earthing before commencement and it shall be executed in the presence of his respective. Excavation shall be passed by Engineer-in-charge before filling the charcoal dust. Filling and back filling of earth shall be done in 15cm layers well watered and rammed.

38.18. Pipes

38.18.1 GI pipes for laying cables and earth wire shall be light grade conforming to IS-1239.

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

38.18.2 Ends of pipes shall be properly sealed with wooden bush and bitumen compound after drawings the cable through pipes.

38.18.3 Where cables are to be fixed alongwith poles, these shall be drawn through pipes. The pipes shall be fixed to poles with suitable MS clamps and same shall be paid under appropriate item of Schedule 'A'

**39. PAINTING**

- (a) Paint shall be of 1<sup>st</sup> quality not inferior to that specified in the ISS as applicable.
- (b) Paint for priming coat, under coat and finishing coat shall be of the same manufacturer.
- (c) All surfaces to be treated shall be suitably prepared before applying priming coat as specified in the MES Schedule.
- (d) The contractor shall, if so required by the GE produce certificates from the manufacturers or their representative to establish that the brands of paint used by him are as per specifications or superior thereto.
- (e) Priming coat on a prepared surfaces shall be applied only after the surfaces has been passed by the Engineer-in-Charge.
- (f) MATERIALS AND WORKMANSHIP : - It shall be as described in various clauses of Sec 17 of SSR Part-1.

**40. STEEL WORK**

All steel and iron work shall be of mild steel (ordinary quality) and shall be fixed in position as directed by Engr-in-Charge. Steel section can be procured from main, producer/secondary producers/BIS marked manufacturers or their authorized dealers at the option of contractor without any minus price adjustment. Tests will not be insisted upon for such steel sections.

41 Testing: The contractor shall produce manufacturer's original test certificates for the following:-

- (a) HT lightning arrestor.
- (b) Air break switch gang operated.
- (c) HT underground cable 11 KV.
- (d) LT cable 1100 volts
- (e) Any other item(s) equipment(s) on plant as directed by GE.

Record Drawings: After completion the contractor shall submit 3 signed copies of the drawing of circuit diagram showing the layout plan of the equipment/cables as actually laid at site.

**42. PURCHASE VOUCHER**

42.1 Contractor shall submitted the purchase voucher for the **following:-**

**(a) Material lying at site for which contractor claims payments in RAR.**

(b) Cement , Tiles, cables, GOD , CABLE JOINT , Earth plate etc.

**43. DEMOLITION AND DISMANTLING**

43.1 The demolition and dismantling of any work covered in this tender shall be all as per applicable clauses of section 21 of SSR Part-1.

**44. Appendices to Particular Specification Section-II**

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

44.1 The following appendices to these Particular Specifications Section-II shall be referred for the purpose as indicated against each :-

- (a) Appendix 'A' : List of materials requiring ISI certification marking.
- (b) Appendix 'B' : Makes/Manufacturers of equipment's/materials.
- (c) Appendix 'C' : Source of materials of local origin.
- (d) Appendix 'D' : Materials and their tests.
- (e) Appendix 'E' : Cement supply/Acceptance form.
- (f) Appendix 'F' : Steel supply/Acceptance form.

Signature of Contractor  
DATED \_\_\_\_\_

DCWE (Contracts)  
For Accepting Officer

APPENDIX 'A' TO PARTICULAR SPECIFICATIONS SECTION-II  
LIST OF MATERIALS REQUIRING ISI CERTIFICATION MARKING

Ser No	Name of materials	Relevant IS
1.	<u>CONCRETE</u>	
	(a) Integral water proofing compound	2645
	(b) Plywood for concrete shuttering work	4990
2.	<u>JOINERY</u>	
	(a) Wooden flush door shutters solid core type.	2202(Part-I)
	(b) Plywood for general purpose.	303-1975
3.	<u>BUILDING HARDWARE</u>	
	(a) Steel butt hinges	1341
	(b) Non ferrous butt hinges	205
	(c) Ferrous tower bolts	204(Part-I)
	(d) Non ferrous tower bolts	204(Part-II)
	(e) Door handles(Non ferrous)	208
	(f) Parliament hinges(ferrous)	362
	(g) Hydraulically operated door closures	3564
	(h) Continuous Piano type	3818
	(i) Sliding door bolts(Non ferrous)	2681
	(k) Tee and trap hinges	206
	(l) Mild steel sliding door bolts	281
4.	<u>STEEL AND IRON WORK</u>	
	Steel doors, windows and ventilators	1038
5.	<u>FLOORING</u>	
	(a) White Portland cement	8042
	(b) Cement concrete flooring tiles	1237
6.	<u>WATER SUPPLY, PLUMBING DRAINS AND SANITARY APPLIACNES</u>	
	(a) Concrete pipes with or without reinforcement	458
	(b) Flushing cisterns for water closets and urinals other than plastic	774
	(c) Cast copper alloy screw down bib tap and stop valves	781
	(d) Galvanised mild steel tubes	1239(Part-I)
	(e) Gallvanised mild steel tube fittings	1239(Part-II)
	(f) Sand Cast Iron spigot and socket soil waste and ventilating pipes and fittings.	1729
	(g) Ball valves(horizontal plunger type) including floats for water supply purpose.	1703
	(h) Cast iron manhole covers and frames	1726
	(i) AC pressure pipes	1592
	(k) Automatic flushing cisterns	2326
	(l) Vitreous chinaware appliances	
	(i) Wash down water closets	2556(Part-II)
	(ii) Squat pans	2556(Part-III)
	(iii) Wash hand basin	2556(Part-IV)
	(iv) Laboratory sink	2556(Part-V)
	(v) Urinal bowl type	2556(Part-VI SEC-I)

Ser No	Name of materials	Relevant IS
	(vi) Half stall urinals	2556(Part-VI SEC-II)
	(vii) Syphonic wash down water	2556(Part-VIII)
	(viii) Foot rests	2556(Part-X)
	(m) Plastic WC seats & covers	2548(Part-I & II)
	(n) Vertically cast iron pressure pipes for water, gas and sewage	1537
	(o) Pillar taps	8934
	(p) Centrifugally cast(spun) iron spigot and socket soil, waste and ventilating pipes fittings and accessories.	3989
	(q) Rubber sealing ring for gas mains, water mains and sewers	5382
	(r) Cast iron fittings for pressure pipes for water, gas and sewerage	1538
	(s) Cast iron rain water pipes	1230

NOTE : Items listed above shall be ISI marked whether specifically mentioned or not elsewhere.

(\_\_\_\_\_)   
 Signature of Contractor

DCWE(Contracts)   
 For Accepting Officer



APPENDIX 'B' TO PARTICULAR SPECIFICATIONS  
NAMES/MANUFACTURERS OF EQUIPMENTS/MATERIALS

<b><u>"List of Makes"</u></b>		
<b>E/M ITEMS</b>		
<b>Srl No</b>	<b>Description of item</b>	<b>Brand/Make/Name of Manufacturer</b>
<b>1</b>	<b>2</b>	<b>3</b>
1	Solar water heating system	TATA BP SOLAR, RACOLD or as per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
2	Solar PV lighting system	As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
3	Solar cooker, UPS Inverter, Solar Drier, Solar space heating system	As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
4	LED Lights, Panels & Luminaries (Indoor)	EVEREADY, POLYCAB, HAVELLS, HALONIX, BENLO, HPL, WIPRO, LUKER, PHILIPS, ORIENT ELECTRIC, KCSAD, ASCENTECH, JAQUAR, GOLD MEDAL, SSK, PHILIPS, CROMPTON, BAJAJ, OSRAM
5	LED Light fitting & Luminaries for Road and Street Lighting (Outdoor)	EVEREADY, POLYCAB, HAVELLS, HALONIX, BENLO, HPL, WIPRO, LUKER, PHILIPS, ORIENT ELECTRIC, KCSAD, ASCENTECH, JAQUAR, GOLD MEDAL, SSK, PHILIPS, CROMPTON, BAJAJ, OSRAM
6	LED Lamps	POLYCAB, HALONIX, BENLO, WIPRO ORIENT ELECTRIC, KCSAD, EVEREADY, ASCENTECH, JAQUAR, GOLD MEDAL, PHILIPS, CROMPTON, BAJAJ, OSRAM
7	Smart street lights and control system	ORIENT ELECTRIC, KCSAD, EVEREADY, ASCENTECH
8	LED floor light	WIPRO, KCSAD, EVEREADY, ASCENTECH, JAQUAR, GOLD MEDAL
9	Tube light/ Street light fittings & accessories	POLYCAB, HAVELLS, HALONIX, HPL, JAQUAR, GOLD MEDAL
10	Street light fitting & accessories-HPSV (70/150/250/400), HPMV (80/125/250/400) Metal halide	GOLD MEDAL or As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
11	Solar street light fittings	EVEREADY, GOLD MEDAL
12	Flood light fittings	POLYCAB, HALONIX, KCSAD, EVEREADY, GOLD MEDAL
13	Box type decorative tube light fittings	POLYCAB, HAVELLS, HALONIX
14	CFL lamp & fittings	HALONIX, HAVELLS, C & S ELECTRIC
15	Power transformer 132/66/33/22 KV	JAY BEE INDUSTRIES PANCHKULA, JAYBEE INDUSTRIES BTI, MUSKAAN, ITE GURGAON, TRANSCON, ABC

		TRANSFORMERS, BHARAT BIJLEE, SCHNEINDER, CROMPTON GREAVES, ANDREW YULE, ALSTOM
16	Power transformer (non sealed type) upto 12.5MVA of 33 KV	JAY BEE INDUSTRIES PANCHKULA, JAYBEE INDUSTRIES BTI, MUSKAAN, TRANSCON, ABC TRANSFORMERS, BHARAT BIJLEE, SCHNEINDER, CROMPTON GREAVES, ANDREW YULE, ALSTOM
17	Outdoor type oil immersed distribution transformers 11 KV upto and including 2500 KVA, 33KV	JAY BEE INDUSTRIES PANCHKULA, JAYBEE INDUSTRIES BTI, IECO, MUSKAAN, TRANSCON, BHARAT BIJLEE, SCHNEINDER, CROMPTON GREAVES, ANDREW YULE, ALSTOM
18	Distribution transformers 11 KV above 500 KVA capacity	JAY BEE INDUSTRIES PANCHKULA, JAYBEE INDUSTRIES BTI, IECO, MUSKAAN, ITE GURGAON, POWERWARE, ABC TRANSFORMERS, BHARAT BIJLEE, SCHNEINDER, CROMPTON GREAVES, ANDREW YULE, ALSTOM
19	Distribution transformers upto 500 KVA capacity	JAY BEE INDUSTRIES PANCHKULA, JAYBEE INDUSTRIES BTI, IECO, MUSKAAN, ITE GURGAON, TRANSCON, POWERWARE, ABC TRANSFORMERS, BHARAT BIJLEE, SCHNEINDER, CROMPTON GREAVES, ANDREW YULE, ALSTOM
20	Power & Distr transformer upto 10 MVA & upto 33 KV	MUSKAAN, BHARAT BIJLEE, SCHNEINDER, CROMPTON GREAVES, ANDREW YULE, TRANSCON, KOTSONS
21	Dry type transformers upto 7.5 MVA/33KV class and Oil type transformers upto 20 MVA/66 KV class	JAY BEE INDUSTRIES PANCHKULA, JAYBEE INDUSTRIES BTI, MUSKAAN, TRANSCON
22	Power transformers 66/33/11 KV copper wired	JAY BEE INDUSTRIES PANCHKULA, JAYBEE INDUSTRIES BTI, MUSKAAN, TRANSCON, ABC TRANSFORMERS
23	LV Switchboard	L&T, CROMPTON, HENSEL
24	LT panels/ APFC/ panels/ AC control panels/ Pump house panels for SS having capacity 1000 KVA and above	SUPERTECH POWER CONTROL PVT LTD, IECO, BHANDARI, NEPTUNE, CORONET, SPC (SPC ELECTORTECH PVT LTD), DVEPL, PSC, ITE GURGAON, INDO ASIAN, HAVELLS, MEGAWIN, SHALABH, HPL, HARTEK, ABB, L&T, SIEMENS
25	LT panels/ APFC/ panels/ AC control panels/ Pump house panels for SS having capacity below 1000 KVA	SUPERTECH POWER CONTROL PVT LTD, IECO, BHANDARI, NEPTUNE, CORONET, SPC (SPC ELECTORTECH PVT LTD), DVEPL, PSC, ITE GURGAON, INDO ASIAN, HAVELLS, MEGAWIN, SHALABH, HPL, HARTEK, ABB, L&T, SIEMENS
26	LT capacitor bank	HAVELLS, GOLD MEDAL, C&S ELECTRIC
27	Fan (Ceiling, exhaust, table, wall & pedestal fans)	GOLD MEDAL, POLYCAB, HAVELLS, ANCHOR, LUKER, CROMPTON, BAJAJ, KHAITAN, USHA, ORIENT

28	Storage water heaters	JAQUAR, GOLD MEDAL, AO SMITH, USHA, CROMPTON, RAMCO, BAJAJ
29	PT switch/ sockets/ ceiling roses/ fan regulators	GOLD MEDAL, SSK, LEGRAND, CRABTREE, SCHNEIDER, PHILLIPS, ANCHOR, BAJAJ, KINJAL
30	Modular switch/ Sockets/ Fan regulators	GOLD MEDAL, BENLO, INDO ASIAN, POLYCAB, HAVELLS, HPL, ANCHOR, LEGRAND, CRABTREE, SCHNEIDER, PHILIPS
31	HT 132/66/33 KV & 11 KV XLPE cables	LS CABLE, GRANDLAY, V-MARC, GEMSCAB, RALLISON, POLYCAB, HAVELLS, JMW KABEL, CABLE CORPORATION OF INDIA, UNIVERSAL CABLE, ELEKTRON, PARAGON
32	LT power & Control cables, 1100 Volts, XLPE	LS CABLE, PLAZA CABLES, V-MARC, GEMSCAB, SHALABH, JMW KABEL, RALLISON, PLOYCAB, HAVELLS, GRANDLAY, HPL, CABLE CORPORATION OF INDIA, ELEKTRON, PARAGON
33	PVC wires & cables 650/1100/ Volts	LS CABLE, GOLD MEDAL, PLAZA CABLES, V-MARC, GEMSCAB, SHALABH, HPL, POLYCAB, HAVELLS, BENLO, GRANDLAY, RALLISON, JMW KABEL, FINOLEX, ELEKTRON, PARAGON
34	HT/LT XLPE aerial bunched cables	GRANDLAY, PLAZA CABLES, V-MARC, LS CABLE, JMW KABEL
35	LT/ HT cable joints Heat shrinkable/ Cold shrinkable/ Push on type	MS-SEAL, M-SEAL, DENSON
36	Cable junction boxes, Circuit breaker boxes, DC rated junction boxes	DVEPL, HPL, MEGAWIN, TRANSGUARD, PHOENIX CONTACT
37	Push button stations	As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
38	LT Air Circuit Breaker	INDO ASIAN, HAVELLS, MEGAWIN, HPL, TRANSGUARD
39	Composite & Relay panel and Control & Relay panel	SUPERTECH POWER CONTROL PVT LTD, CORONET, PRECISION SYSTEM CONTROL (PSC)
40	Composite polymeric insulator	JAIPURIA, POWER-GRID, MG MATERIALS
41	Fibre glass reinforced products 11 KV & 33 KV cross arms/ Top hamper	JAIPURIA or As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
42	Cable tray, Grating, Enclosure, safety ladder	SPC (SPC ELECTROTECH PVT LTD) or As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
43	DG Gensets (diesel/ gas based engines)	MAHINDRA, CUMMINS, JAKSONS
44	Rigid PVC conduit pipes & accessories	PLAZA CABLES, GOLD MEDAL, MODI'S, KALINGA, PLAZA
45	GI/ MS conduit/ ERW conduit pipe	As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes

		and make to be approved by GE
46	Conductive concrete earthing	As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
47	ACSR conductor	ALIND, COYOTE, STERLITE POWER
48	Battery charger, ACDB, DCDB, ELDB	As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
49	APFC units, HT/LT protection device & Automation cum protection units for electric & Water supply	As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
50	MV switchgear	CGPISL or As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
51	VCBs, GIS and numerical relays	CORONET, CGPISL or As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
52	Medium voltage SFC gas insulated RMU (Ring Main Unit) and oil insulated RMU of 12KV, 24KV & 36KV	MEGAWIN, PASCAL, CGPISL, TRANSGUARD
53	HT switch gear 33/66 KV, SF6 (Outdoor)	MEGAWIN 2025, TRANSGUARD, CGPISL, HARTEK, PASCAL
54	HT switch gear 11 KV, VCB (Indoor/ Outdoor) HT ring main unit, SF6/Vacuum, 11KV/CT & PT	PASCAL, TRANSGUARD, CORONET, HARTEK, CGPISL, ITE GURGAON, MEGAWIN
55	Package/ Unified sub-station	MUSKAAN, ITE GURGAON, MEGAWIN, CGPISL, CORONET
56	MCCBs	INDO ASIAN, HAVELLS, BENLO, HPL, ANCHOR, GOLD MEDAL, SSK, SHALABH
57	MCB/ELCB/RCCB/RCBO/ Isolators/ MCB distribution board/TPN-SPN	GOLD MEDAL, SSK, POLYCAB, INDO ASIAN, HAVELLS, BENLO, HPL, SHALABH
58	Change over switches	MEGAWIN, INDOASIAN, HAVELLS, HPL, SHALABH
59	Power contactor	INDO ASIAN, HAVELLS, HPL
60	Smart/ Tamper proof energy meters (Digital type)	ANCHOR BY PANASONIC, HPL, ELMEASURE, BENLO, L&T, SECURE
61	Static energy meter	BENLO, ELMEASURE, L&T, ABB, SECURE
62	Voltage stabilizers upto 25 KVA	MUSKAAN, IECO, ITE GURGAON, VOLINA, SINETRAC, VINITEC
63	Voltage stabilizers above 25 KVA (Servo controlled)	MUSKAAN, IECO, ITE GURGAON, VOLINA, SINETRAC, VINITEC, POWERWARE
64	Sodium hypochloride solution (Grade-I)	DECLIBAC, GRASIM or As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
65	UPS/ Inverter/ stabilizer/ Circuit protection device/ wires & cables	PLAZA CABLES or As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
66	UPS (Off line & online)	SINETRAC or As per generic specification given in Sch 'A'/ BOQ & relevant codal

		provisions/ IS codes and make to be approved by GE
67	Street light timers	SINETRAC, INDO ASIAN, HAVELLS
68	Isolation transformer	IECO, MUSKAAN, VOLINA, SINETRAC, VINITEC, ITE GURGAON
69	Single phase preventors/ Phase sequence corrector	SINETRAC, VOLINA or As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
70	HT/ LT steel tubular swaged poles	SHIVAM METAL SHAPERS INDUSTRIES, HPL or As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
71	Voltmeter/ Ammeter/ Frequency meter/ PF meter energy meter (Digital type)	HPL or As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
72	PCC pole, Fencing pole of 8 feet long & Kerb stone	SURYA, HPL, VENUS, SVRCC
73	HT AVR'S	MUSKAAN or As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
74	Earth inspection housing (Earth pit)	As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
75	1. Remote terminal units and related SCADA/ asset monitoring software for (a) Water & Electric Supply utility services incl automatic remote meter reading/ billing (b) HT & LT substation, solar plants & elec assets such as switch gear, transformer, diesel generators (c) HVAC, security systems, OT and hospital systems 2. SCADA application programming interface software	MEGAWIN, CORONET or As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
76	Solar inverter	As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
77	Aviation obstruction light	As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
78	AC supplied electronic control gear for led modules	As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
79	Oil filled distr transformer upto 2500 KVA (Voltage class upto 33 KV Class)	As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
80	OIL filled power transformer <2500 KVA TO 100MVA (Voltage class upto 220KV)	As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
81	Cast resin dry type transformer upto	As per generic specification given in Sch 'A'/

	12.5MVA in 33KV Class	BOQ & relevant codal provisions/ IS codes and make to be approved by GE
82	Resin impregnated dry type transformer upto 12.5MVA IN 33KV class	As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
83	HT panel	PSC, HARTEK, PASCAL
84	Bus ducts/ Rising Main	SPC (SPC ELECTROTECH PVT LTD), PHONEX CONTACT, SHALABH
85	Servo controlled stabilizer 1-500 KVA	MUSKAAN or As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
86	Static frequency converter	As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
87	28V DC power supply	As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
88	Solar cable	As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
89	EBXL cable	As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
90	Distr transformer upto 20 MVA, 33KV class	As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
91	Outdoor type oil immersed distr transformer power transformer upto 630 KVA	As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
92	Outdoor/ indoor type oil immersed distr transformer upto&incl 630 KVA, 33KV	As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
93	Geysers	As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
94	Power line conditioner	As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
95	Constant and variable voltage transformer	As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
96	FRP (Lighting Pole, Cable tray, Enclore& safety ladder)	As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
97	Composite polymer lighting arrester	As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
98	AC static watt- Hour prepaid meters/ Meters	ELMEASURE or As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
99	SCADA for energy/ Building management solution	ELMEASURE or As per generic specification given in Sch 'A'/ BOQ & relevant codal

		provisions/ IS codes and make to be approved by GE
100	Outdoor/ indoor type oil immersed distr transformer upto& including 500 KVA, 11KV system	POWERWARE or As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
101	Solar lighting system	As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
102	Elastomeric (Rubber) cables	As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
103	Medical lights : ceiling/ portable OT lights winged/ non winged, surgical head/ examination lights	ASCENTECH or As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
104	Emergency lights : Emergency lights with battery bank and AC Gen set/ Vehicle mounted revolving search lights, portable high mast LEDs with telescopic stand (100W to 300W), rechargeable flood lights/ search lights/ exist lights	ASCENTECH or As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
105	AAC/AAAC/ACSR/HTLS conductors	RHINO or As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
106	Compact substation/ Unitized substation upto 2.5 MVA, 11 KV class	VOLTAMP or As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
107	Ring main unit upto 12 KV, 630 Amps	VOLTAMP or As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
108	HT/LT Steel tubular decorative poles (3-7 Mtr)	JAQUAR or As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
109	Accessories- Door Bell, Angle Holder, Spikes, Batten Holder & Extension cords	GOLD MEDAL or As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
110	CCTV Cables	V-MARC or As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
111	Feeder pillar panel	HPC or As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
112	PCC cable cover for HV/ LV/HVP/EHV	MEGHA CONTRACTORS PVT LTD, Shri Ram Fly Ash Bricks or As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
113	Motor protection circuit breaker	BCH or As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
114	Starters & Submersible panels, Timers	BCH or As per generic specification given in

		Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
115	Lead acid batteries	As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
116	STAR RATED ENERGY EFFICIENT TRANSFORMERS STEP DOWN UPTO 200KVA CAPACITY (4/5 STAR RATING ONLY TO BE USED)	ANY MAKE AS APPROVED BY BUREAU OF ENERGY EFFICIENCY AND BEARING 4/5 STAR RATING LABEL LIST OF MAKES AVAILABLE ON BEE WEBSITE
117	OCTAGONAL/HIGH MAST POLES	FINOLEX, HAVELLS, CROMPTON GREAVES, C & S ELECTRIC, HOMEDEC,
118	PACKAGE/UNIFIED SUB STATION	As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
119	HT CAPACITOR BANKS	ABB, UNIVERSAL, BHEL, SCHNIDER, SIEMENS, EPCOS INDIA PVT LTD,
120	PVC COPPER WIRES-650/1100 VOLTS	L & T, FINOLEX, RPG, RR KABLE, GRANDLAY, KALINGA PREMIUM, HAVELLS, HPL, POLYCAB, EON, GLOSTER, ORISON
121	Brass/bakelite lamp holder(ISI Marked)	SSK/GM/Anchor Penta/cona/Plaza/Royal/ Plaza

**INTERNAL & EXTERNAL WATER SUPPLY**

<b>Srl No</b>	<b>Description of item</b>	<b>Brand/Make/Name of Manufacturer</b>
<b>1</b>	<b>2</b>	<b>3</b>
1	GI pipes/ MS pipes	JINDAL, TATA, OSWAL
2	HDPE/UPVC/PPR pipes	FUSION, SFMC, FINOLEX, PRINCE, SUPREME
3	Bronze sluice valves/ Non return valves/ Air release valves/ Pressure reducing valve/ Fire hydrant valve/ Spring relief valve/ Ball valve/ Steam valve/ Spring relief valve/ Float valve	PRAYAG, SHAKTI, KIRLOSKAR, ZOLOTO, LEADER, L&T (AUDCO)
4	Float valve	PRAYAG, SHAKTI, AIRAEURO, AGROTECH, TELEFLO, TECHNO INTERNATIONAL
5	Butterfly valves/ Check valves	ISI Marked or As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
6	Gun metal gate valve/ Globe valve/ Horizontal & Vertical check valve	KIRLOSKAR, PRIMS, LEADER, L&T (AUDCO)
7	PPR/PVC pipes and fittings	KPT, VECTUS or As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE



8	DI pipes	JINDAL, TATA or As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
9	CI pipes & fittings	JINDAL, TATA METALIKS, TATA KUBOTA
10	GI fittings	JINDAL, TATA, BST
11	Pump sets-Mono block	KIRLOSKAR, CROMPTON, KSB, JOHNSON & JOHNSON
12	Centrifugal pumps	KIRLOSKAR, KSB, GRANDFOS, ITT
13	Submersible pumps	KIRLOSKAR, BEACON, KSB, GRANDFOS, WASP, ITT
14	Non clog sewage pumps	KIRLOSKAR, KSB, BAJAJ ATLANTA, JOHNSON & JOHNSON

15	Vertical turbine pump	KSB, KIRLOSKAR, BAJAJ ATLANTA, JOHNSON & JOHNSON
16	Dosing pump/ Bleaching dozer	ION EXCHANGE, MAIC INDIA, JESCO
17	Motor starters	HPL, L&T, BCH, SCHNEIDER, SIEMENS, ABB
18	Electric motor	BHARAT BIJLEE, KIRLOSKAR ELECTRIC, CROMPTON GREAVES, ABB, SIEMENS, GEC
19	Single phase preventors/ Phase sequence corrector	L&T, SIEMENS, LEGRAND, SCHNEIDER, ABB
20	UPVC pipe screen & Casing pipe for bore/ Tubewell (IS 12818:2010)	ASIAN TUBES or As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE

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B/R ITEMS		
1	2	3
1	Pressed steel door frames/ Chowkhats for doors/ Cupboard and window frames	PARSHOTAM STEEL IND (PSI), SHAKTI, MADHU INDUSTRIES, SHIVAM METAL SHAPERS INDUSTRIES, ASHISH INDUSTRIES,
2	Galvanised colour/ Powder coated steel windows, Doors, partitions & structural glazing	ASHISH INDUSTRIES or As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
3	Steel windows/ Vents	PARSHOTAM STEEL IND (PSI), SHAKTI, MADHU INDUSTRIES, SHIVAM METAL SHAPERS INDUSTRIES, ASHISH INDUSTRIES
4	Rolling shutters & Rolling grills	PARSHOTAM STEEL IND (PSI) or As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE

5	Factory made panelled door shutters	JAIN DOOR PVT LTD, PARSHOTAM STEEL IND (PSI) or As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
6	PVC boards/door frame/ Shutters/ PVC panel door/ Windows	ECOCELL/ ECHON, H R ENTERPRISES, RAJSHRI PLASTIWOOD
7	UPVC windows/ Doors/ Frames & Ventilators	ECOCELL/ ECHON, YASHPOLY, APARNA VENESTER/ OKOTECH, MADHU INDUSTRIES, H R ENTERPRISES, RAJSHRI PLASTIWOOD, FENESTA, ENCRAFT, SUPREME
8	Anodised aluminium doors/ Windows/ Frames/ Partitions	ASHISH INDUSTRIES, JINDAL, KALCO, ALPURE
9	Galvanised steel sheets & colour coated galvanized steel sheets	KAMDHENU, TATA, JINDAL
10	Polycarbonate profiles roofing sheets in compact & embossed multi wall sheets	As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
11	Terrazzo tiles/ PPC tiles/ PPC chequered tiles	SURYA K., MOHINDRA, SWASTIK ALW, GPT, SVRCC
12	Interlocking tiles/ Exterior tiles/ Paver blocks	SURYA K, POOJA CONCRETE, MOHINDRA, HARIOM TILES, PAVERS, KB SPUN, RANA TILE CO, SHINO TILE, MOHINDRA, HARIOM TILES MOHINDRA, HARIOM TILES, KALOHA SPUN PIPE
13	Roof tiles, Kerb stone	MOHINDRA, HARIOM TILES MOHINDRA, HARIOM TILES MOHINDRA, HARIOM TILES
14	Fly Ash Cement bricks	KB SPUN, SBRCC or As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
15	Glazed ceramic/ Non-skid wall/ Floor tiles	AGL, ORIENT BELL, SUNHEARRT CERAMIK, RAK CERAMICS, SOMANY, NITCO, JOHNSON, VITERO TILES
16	Vitrified tiles (Normal/ Anti-skid)	AGL, ORIENT BELL, SUNHEARRT CERAMIK, VARMORA, RAK CERAMICS, SOMANY, NITCO
17	HDPE & LLDPE storage water tanks	ASTRAL, SINTEX, SUPREME
18	Stainless steel kitchen sink with or without draining board, Plate rack	JAINKO, SHAKTI, SPC, PRIMA, SILVER SHINE, PRAYAG, DIAMOND, NIRALI
19	Ball valves (Horizontal plunger type)	PRAYAG, PRIMA, JANCO
20	Brass valves	PRAYAG, PRIMA, L&T VALVES, AMCO, VIP VALVES
21	Shower roses chromium plated (Swivel type)	PRIMA, PLAYER, AP ROYALE & BATHSENSE, JAINKO, SHAKTI, SILVER SHINE, VITERO, SOMANY, PRAYAG

22	CP bathroom fancy fittings & accessories/ CP bath fittings	PRIMA, SHAKTI, PLAYER, SOMANY, SILVER SHINE, JAQUAR, ESSCO, PRAYAG, PLAYER, AP ROYALE & BATHSENSE, VITERO
23	Bib taps and Stop valves (CP) fancy fittings	ESSCO, JAQUAR, PRIMA, PRAYAG, PLAYER, AP ROYALE & BATHSENSE, SILVERSHINE, JAINKO, SHAKTI
24	PTMT fittings/ PVC fittings	SHAKTI, SILVERSHINE, PRIMA, PRAYAG
25	Readymade bathroom cabinets	PRAYAG or As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
26	HDPE pipes/ SNR pipes (Water/Sewage)	ASTRAL, SFMC, SUPREME, UTKARSH, DURALINE
27	Sand cast iron spigot & socket soil waste, Vent pipes & Fittings	SKF, RPMF or As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
28	RCC hume pipes	KB SPUN, SVRCC, KALOHA SPUN PIPES
29	Cement based paints	SNOWCEM, ASIAN, BERGER, DULUX
30	Decorative paint (Ext &Int)	J K MAXX PAINTS, SNOWCEM, DULUX
31	Plastic emulsion paint	J K MAXX PAINTS or As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
32	High built texture & wall finishes (Ext &Int)	J K MAXX PAINTS, ASIAN, BERGER, SNOWCEM, DULUX
33	Synthetic enamel paint	J K MAXX PAINTS or As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
34	Red oxide zinc chromate primer	As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
35	FRP door frame & shutter	SPC, ROOFFIT or As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
36	PVC wall paneling/ PVC ceiling & Partition	ECOCEL/ ECHON, HR ENTERPRISES, RAJSHRI PLASTIWOOD, DECOINN, SUNBEAM
37	HDF/ PVC door frame shutter moulded	HR ENTERPRISES, ECHON, ALCAD, DECOINN
38	PVC sheet cladding	ALCAD, DECOININ or As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE

39	CI centrifugally pipes & fitting (IS-15905)/ CI hubeless pipe (IS-3989)	SKF, RPMF or As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
40	Acoustic panels	GYPTech or As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
41	UPVC ceiling & paneling	YASHPOLY, HR ENTERPRISES, GIZA
42	Pre fab panel boards/ Wall lining ceiling tiles	HI-STEEL, RAJSHRI PLASTIWOOD or As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
43	False ceiling tiles/ Board (Gypsum board/POP / Mineral fibre)/ Jointing & finishing material	HI-STEEL, RAJSHRI PLASTIWOOD, GYPCORE, ARMSTRONG
44	False ceiling/ Metal false ceiling/ Metal framing	HI-STEEL, RAJSHRI PLASTIWOOD, ROYAL KRAFT, GYPCORE, ARMSTRONG
45	Particle board (Veneered and un-veneered laminated)	RELIANCE, THERMOPLAST or As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
46	Road marking paint, water based/ thermoplastic	3M, VERTEX or As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
47	WPC door frames/ Panels/ Hybrid sheet/ flooring/ Jalli	ECOCEL/ ECHON, RAJSHRI PLASTIWOOD, HR ENTERPRISES
48	Road furniture & Reflective sign boards (Road studs, Solar, Studs, Speed breaker, Traffic cone, Spring post, Median marker, Delineator, Safety cones, Safety convex mirror, Q-manager, reflective jackets, Lights beton, Bollard, Road barricades, Caution tape etc)	3M, DARK EYE, SHAKTI, SHEETAL
49	Asbestos Cement pipes (MAZZA PROCESS)	KIRTI (MAZZA PROCESS) or As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
50	FRP chajja	ROOFFIT or As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
51	FRP plain/Profile roofing & cladding skylight sheets	ROOFFIT or As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
52	FRP chemical resistant profile sheets/ FRP rain water gutter/ FRP chemical lining/ FRP gratings	ROOFFIT or As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE

		approved by GE
53	Wind driven roof turbo ventilators with matching FRP base plate in any profile	As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
54	CPVC pipes & fitting	FUSION, SENTINI FLOPIPES, PRAYAG, ASTRAL, SUPREME, FINOLEX, DUTTON
55	PVC/ UPVC/ SWR pipes & fittings	FUSION, SENTINI FLOPIPES, PRAYAG, ASTRAL, SUPREME, FINOLEX, DUTTON
56	Sanitary ware	SOMANY, RAK CERAMICS, JAQUAR, PRAYAG, AP ROYALE & BATHSENSE, HINDWARE, KOHLER
57	Pre painted galvalume steel sheet/ Galvalume	KAMDHENU, TATA, JINDAL, DYNA ROOFING PVT LTD
58	DI flanged pipes & fittings	As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
59	CI/DI valves	As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
60	Chain link fencing/ Barbed wire/ Punched tape concertina coil/ Razor blade tape fencing	ARMSTRONG WIRES, MAIMOM ROGER or As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
61	Galvanised steel weld mesh fencing	A1 FENCE or As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
62	Plain & pre laminated MDF & HDF boards	As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
63	Prowud MDF board	CENTURY PLY or As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
64	Self-supported steel roofing	PROFLEX or As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
65	Glass Reinforced Gypsum (GRG) ceiling tiles	DIAMOND CEILING, HI-STEEL, GYPCORE, MARUTI GYPSUM, SHERA
66	Gypsum boards/ Jointing & finishing material/ Partition & Ceiling framing work/ Plastering material/ Gypsum ceiling tiles	HI-STEEL, GYPCORE or As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
67	Glass wool tile and paneling	GYPCORE or As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
68	ACC blocks & jointing adhesive	MODCRETE, CLAVECON or As per generic

		specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
69	MS butt hinges	SURYA or As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
70	Laminates & Plywood	VIRGO or As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
71	Plywood for general purpose	As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
72	Aluminium rolled products (Sheets & coils)	VIRGO or As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
73	ACP (Aluminium Composite Panel)	ALUCOBOND, EUROBOND, ALUDECOR, ALEX PANEL
74	Marine plywood & Plywood for concrete shuttering works	GI PLY or As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
75	ERW pipes, Tube & Hollow sections, HRC-100	As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
76	PVC flushing cistern	SHAKTI, RAK CERAMICS, PRIMA, SILVER SHINE, JAQUAR, PRAYAG, HINDWARE, PARRYWARE, SUPREME
77	Toilet seat cover	RAK CERAMICS, SILVER SHINE, JAQUAR, PRAYAG, PRIMA, AP ROYALE & BATHSENSE, PARRYWARE, CERA
78	UV printed cupboard	HR ENTERPRISES or As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
79	Aluminium tower bolt, Hinges, Handles & Sliding door bolt	As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
80	SS tower bolt & Sliding door bolt	As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
81	MS tower bolt & Sliding door bolt	As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
82	Brass tower bolt	As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
83	Door handles (Brass, Zinc & SS)	As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
84	Locking system (Mortice lock, Night latches, Cylindrical lock, Euro profile cylinders)	As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
85	Door hardware (Door closure, Floor Spring, Tower bolt & Hinges)	As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes

		and make to be approved by GE
86	Universal waterproof putty (Wallmax X, Shieldmax X)/ Coarse (Levelmax X)/ White cement based primer (JK Primax X)/ Premium gypsum plaster (Gypsum max X)/ Vermiculate based light weight gypsum plaster (Plastomax X)/ Perlite based light weight gypsum plaster (Bondmax X)/ Tile adhesive (Tilemax X)	JK WHITE CEMENT or As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
87	MS, RHS, SHS and round black pipe	PRAKASH SURYA or As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
88	PUF panels	ROOFFIT or As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
89	Pulley system, Wall stands, Floor stands & Accessories of pully system	EASYDRY or As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
90	Flat glass (Float glass, mirror, Frosted glass, Lacquered glass, Extra clear glass, Solar control reflective glass, High performance low e glass, Tinted glass)	SISECAM or As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
91	Box type steel windows	FRIENDS MANUFACTURING CO.KAPURTHALA, TEE PEE or As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
92	Wooden panel doors, Window & Frames, Flush doors	JAIN DOORS, GL PLY,A-1 TEAK PRODUCTS
93	PCC manhole & drain cover, Earth pit, Cable route indicator	VENUS, HARIOM TILES & PAVERS, MOHINDRA, SVRCC
94	PVC kitchen cabinets & Cupboards	ECOCELL/ECHON, RAJSHRI PLASTIWOOD, GIZA
95	Wooden slat, Wooden ceiling	As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
96	Magnetic wood wool tiles	As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
97	Accoustic doors and Movable walls	As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
98	Prepainted galvanised colour/ Powder coated steel windows, Doors, Partitions, Ventilators& Structural Glazing	CHANDANI INDUSTRIES, ELIXIR or As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
99	Aluminium extrusions with anodizing & Power coating)	BHORUKA EXTRUSIONS or As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE

100	Wooden Flooring	A-1 TEAK PRODUCTS or As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
101	PVC foam sheet	RAJSHRI PLASTIWOOD or As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
102	HDPE DWC Pipe	ASTRAL, DUTRON, GEMINI PIPES
103	Suction & Delivery hose	KANAFLEX or As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
104	Braided Hose	DUPLON or As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
105	Veneered decorative plywood	GL PLY or As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
106	Block Boards	GL PLY or As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
107	All type of granite & Marble	ACE HARMONY or As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
108	Fly Ash Bricks	SWASTIK ALWST, INDERBIR INDUSTRIES, SHRI RAM FLY ASH BRICKS
109	Electric cable covers	INDERBIR INDUSTRIES, SHRI RAM FLY ASH BRICKS or As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
110	Precast RCC covers	SWASTIK ALW, SVRCC, KALOHA SPUN PIPE
111	Stainless Steel (WASH BASIN, WC, IWC & URINAL)	SILVER SHINE or As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
112	Precast CI Covers	RPMF or As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
113	PTMT & Fittings	JAYNAM or As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
114	WPC SPC (Stone Polymer Composite)	ECOCELL/ ECHON or As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
115	LEAD-FREE radiation shielding (wall tiles for	ASSURAYAS or As per generic specification



	hospitals)	given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE
116	Bitumen	HINDUSTAN PETROLEUM, INDIAN OIL CORPORATION & BHARAT PETROLEUM
117	DRAPERY RODS	VISTA , LEVALOR
118	MIRROR LOOKING	SAINT GOBAIN, MODI FLOAT, TRIVENI FLOAT GLASS, CROWN PRAYAG POLYMERS
119	Hydraulic Door closer	Everest, Universal, Godrej, Sandhu, Priya
120	CONSTRUCTION CHEMICALS, WATER PROOFING COMPOUND/ PRODUCTS, APP MEMBRANE	(i) M/S CHOKSEY CHEMICALS PVT LTD (ii) M/S STP LIMITED (iii) M/S IWL INDIA LIMITED (iv) M/S BERGER PAINTS INDIA LTD (v) M/s ASIAN PAINTS LTD (vi) M/s TIKI TAR DANOSA (INDIA) PVT LTD (vii) M/s STANROSE ENVIROTECH INDIA PVT LTD (viii) M/s TORCHTAR MEMBRANE & BITUMEN PRODUCT PVT LTD. (i) M/s PIDILITE INDUSTRIES LTD (ii) M/s BOSTIK INDIA PVT LTD M/S SIKA INDIA PVT LTD
121	Anti termite treatment Agency	As per the specifications given in tender including valid licence and registration of competent authority.
122	Salt Glazed stone ware pipes/ Glazed stone ware pipe	As per generic specification given in Sch 'A'/ BOQ & relevant codal provisions/ IS codes and make to be approved by GE.
123	Dry Distemper	Berger, Shalimar, Jenson & Nicholson, Asian paints
124	Chlorpyrifos Emulsifiable concentrate (20 EC)	As per relevant codal provisions/ IS codes

Ser No	Company Name	Address	Type of Cement	Valid upto	Remarks
<b>Cement-APPROVED CEMENT MANUFACTURERS FOR MES WORKS ON PAN INDIA LEVEL</b>					
1	The Associated Cement Companies Ltd <b>Brand: 'ACC'</b>	414-421, Splendor Forum (4 <sup>th</sup> Floor), 3, District Centre, Jasola, New Delhi – 110044, Ph : 011 46583600	All		
2	Ultra Tech Cement Ltd <b>Brand: 'ULTRATECH'</b>	'B' Wing, 2 <sup>nd</sup> Floor, Mahakali Caves Road, Andheri (East) Mumbai – 400093 Ph- 022 66917800	All		
3	The India Cement	Dhun Building, 827, Anna Salai, Chennai – 600002	All		
4	Dalmia Cement (Bharat) Ltd <b>Brand: 'DALMIA INFRA PRO'</b>	Dalmiapuram, Distt – Truchirappalli, Tamil Nadu – 621 651	All		
5	Century Cements <b>Brand: 'CENTURY'</b>	Industry House, 159 Church Gate Reclamation, Mumbai – 400020, Ph : 022 22023936	All		
6	Saurashtra Cement <b>Brand: 'SAURASHTRA'</b>	Gala No A-1, Ground Floor, UdhogSadan No 3 MIDC, Central Road, Andheri (East) Mumbai – 400093, Ph : 022 32955557/ 67 Mob : 93202 90081	All		
7	The Ramco Cements Ltd <b>Brand : 'RAMCO'</b>	Auras Corporate Centre, 98-A, Dr.RadhakrishnanSalai, Mylapore, Chennai – 600004, Ph- 044 28478666	All		
8	Mangalam Cement Ltd <b>Brand: 'MANGALAM'</b>	PO Adityanagar, Morak, Distt Kota, Rajasthan – 326520 Ph : 9351468076	All		
9	Birla Corporation Ltd <b>Brand: 'BIRLA'</b>	Birla Building (3 <sup>rd</sup> & 4 <sup>th</sup> Floor) 9/1, R N Mukherjee Road, Kolkata – 700001, Ph : 033 30573700	All		
10	Orient Cement <b>Brand: 'BIRLA –A1'</b>	5-9-22/57/D, 2 <sup>nd</sup> and 3 <sup>rd</sup> Floor, GP Birla Centre, Adarsh Nagar, Hyderabad – 500063, Ph : 044 23688600	All		
11	Nuvoco Vistas Corporation Ltd (Formerly Lafarge Cement) <b>Brand : 'NUVOCO'</b>	Equinox Business Park, Tower-3, East Wing, 4 <sup>th</sup> Floor, LBS Marg, Kurla (West), Kurla Mumbai, Maharashtra-400070	All		

12	Shree Cement <b>Brand : 'SHREE'</b>	Bangur Nagar, Beawar, Dist-Ajmer, Rajasthan-305901 Ph : 01462-2281101-06	All		
13	J K Cement <b>Brand: 'J K'</b>	Kamla Tower Kanpur – 208001	All		
14	J K Lakshmi Cement Ltd <b>Brand: 'JK LAKSHMI'</b>	Jaykaypuram, Distt. Sirohi, Rajasthan, Ph : 02971 244409/10	All		
15	JaypeeRewa Cement <b>Brand: 'JAYPEE'</b>	Jaypee Nagar, P.O. - Jaypee Nagar, Rewa – 486450 M.P.	All		
16	Ambuja Cement Ltd <b>Brand: 'AMBUJA'</b>	Kodinar, PO- Ambujanagar Taluka– Kodinar, Distt- Junagadh, Gujarat – 362715, Ph : 02795 237000	All		
17	M/s JSW Cement Ltd A P <b>Brand "JSW PSC (Portland Slag Cement)"</b>	JSW Centre Opp MIMRDA Ground Bandra Kurta Complex, Bandra (East) Mumbai-400051 Tele +91-22-42865047 Fax +91-22-26502001 Website : <a href="http://www.jswcement.in">www.jswcement.in</a>	PSC	<b>01 Apr 2024</b>	
18	M/s Kesoram Industries Ltd. <b>Brand: 'BIRLA SHAKTI'</b>	<b><u>M/s Kesoram Industries Ltd.</u></b> Unit 12 <sup>th</sup> , 1201 of T19 Towers , Indra Nagar , Ginwala Compound, M G Road , Secundrabad , Hyderabad – 500003, Ph : 91-40-4334-4555  91-40-4334-4534  Website : <a href="http://www.kesocarpo.co">www.kesocarpo.co</a>	OPC 43 OPC 53 PPC	<b>27 Dec 2024</b>	
19	M/s Sagar Cement Ltd , Hyderabad <b>Brand "SAGAR"</b>	<b><u>M/s Sagar Cements Ltd</u></b> Plot No 111, Road NO 10, Jubilee Hills Hyderabad-500033 Tele +91-40-23351571, 2335672 Fax +91-40-2335673 Email : <a href="mailto:info@sagarcments.in">info@sagarcments.in</a> Website : <a href="http://www.sagarcements.in">www.sagarcements.in</a>	OPC 43 OPC 53 PPC PSC	<b>24 Aug 2025</b>	
<b><u>APPROVED CEMENT MANUFACTURERS FOR MES WORKS ON REGIONAL LEVEL</u></b>					
1	M/S Star Cement Meghalaya	Lumshnong, PO-Khaliehriat, DisttJanta Hills, Meghalaya Ph – 03655-278215/16/18	PPC OPC		
2	M/S Meghalaya Cements Ltd <b>Brand: 'TOP CEM'</b>	Lohia House, M.G Road, Factory Bazar, Guwahati – 781001 Tele: 0361-260367/671	PPC OPC		
3	M/s Hill Cement Company Ltd <b>Brand: 'TAJ'</b>	<b><u>M/s Hill Cement Company Limited</u></b> SHIVAM COMPLEX, Bharalumukh, A.T Road Guwahati, Assam-781009	OPC 43 OPC 53 PPC	<b>19 Dec 2024</b>	

		Mob – 7086085118 Ph – (0361) 2735527, 2735552 Email: <a href="mailto:kchakraborty@tajcement.com">kchakraborty@tajcement.com</a>			
4	M/S Green Valley Industries Ltd <b>Brand: 'Sanghi'</b>	<b><u>M/s Green Valley Industries Ltd</u></b> 4 <sup>th</sup> Floor, LB Plaza, G S Road, Bhangagarh, Guwahati – 781005 Tele: +91-361-2465482/84 FAX +91-361-2465481 Email – <a href="mailto:info@greenvalliey.com">info@greenvalliey.com</a> Website – <a href="http://www.maxcement.co.in">www.maxcement.co.in</a>	OPC 43 OPC 53 PPC	<b>24 Aug 2025</b>	

TMT STEEL: APPROVED TMT STEEL MANUFACTURERS FOR MES WORKS					
Ser No	Company Name	Address	Type of Steel	Valid upto	Remarks
1.	Rashtriyaspat Nigam Limited (RINL) <b>Brand: 'RINL'</b>	Visakhapatnam Steel Plant, Visakhapatnam -530 031, India Tel (91 891) 518226, 518376. Fax : (91 891)518316 Email: <a href="mailto:cmdvsp@itpvis.ap.nic.in">cmdvsp@itpvis.ap.nic.in</a>	All	-	
2.	Tata Iron & Steel Company (TISCO or Tata Steel) <b>Brand: 'TATA'</b>	Bombay House, 2, 4 HomiModi Steel, Mumbai-400 001, Tel (91 22) 2049131, Fax : (91 22) 204 9522, 287 0840 Email: <a href="mailto:corpcomm@jsr.tatasteel.com">corpcomm@jsr.tatasteel.com</a> (Br Office for North: Jeevan Tara Bldg, Patel Chowk, New Delhi)	All	-	
3.	Steel Authority of India Limited (SAIL) <b>Brand: 'SAIL'</b>	Central Marketing Organization Northern Region, 17th Floor, Scope Minar, Laxmi Nagar Distt Centre, Delhi- 110 092	All	-	
04.	M/S Kamachi Industries Ltd. <b>Brand: 'KAMACHI'</b>	ABC Trade Centre, 3 <sup>rd</sup> Floor (Inside Devi Theatre Complex), Old No. 50, New No. 39, Anna Salai, Chennai- 600002, India Tel: 91 044 42961100, Fax: 91 044 42961122 Custom care:7700067000 Email: <a href="mailto:sales@kamachitmt.com">sales@kamachitmt.com</a> Website: <a href="http://www.kamachitmt.com">www.kamachitmt.com</a>	TMT Bars of Gde Fe 500, Fe 500D Fe 550, Fe 550D& HCRM (Size 8- 40mm)	29 May 2024	
05	M/s ShyamMetalics& Energy Ltd <b>Brand : "SEL"</b>	Viswakarma, 1 <sup>st</sup> Floor, 86 C,Topsia Road , Kolkata-700046 Tel : +9133 -4011-3000 Fax : +9133-2285-2212 Website : <a href="http://www.shyammetalics.com">www.shyammetalics.com</a>	TMT Bars of Gde Fe 500&Fe 500D (Size 8-32 mm)	31 Aug 2024	
06	M/S Electrotherm	Survey No. 72, Palodia, Via-	TMT Bars of	05 Oct	

	(India) Ltd <b>Brand : 'ET TMT'</b>	Thaltej, Ahmedabad Gujarat-382115 Tel +91-2717-660649/660550 Fax +91-2717-234866 Website – <a href="http://www.electrotherm.com">www.electrotherm.com</a>	Gde Fe 500, Fe 500D & CRS, (Size 8- 36mm)	2024	
07	M/s Tulsyan NEC Limited <b>Brand "TULSYAN TMT"</b>	APEX Plaza, 1 <sup>st</sup> Floor, Old No 3, New No 77 Nungambakkam High Road, Chennai – 600034 (TN) Website – <a href="http://www.tulsyanec.in">www.tulsyanec.in</a> Tele – 044-61991060/61991045 Mob – 9840354010, 9677088334	TMT Bars of Gde Fe 500, Fe 500D & Fe 550, (Size 8- 32mm)	29 May 2024	
08	M/s Incredible Industries Ltd (Formerly M/s Adhunik Industries Ltd) <b>Brand : 'ADHUNIK Fe 500 SD'</b>	Lansdowne Towers, 2/1A, Sarat Bose Road, 6 <sup>th</sup> Floor, Kolkata- 700020 Tel-033-30517100, Fax- +91-33-2289 0285 Website- <a href="http://www.adhunikindustries.com">www.adhunikindustries.com</a>	TMT Bars of Gde Fe 500, Fe 500D &CRS (Size 8- 32mm)	19 Jul 2024	
09.	M/S Gallantt Metal Ltd, Gujarat  <b>Brand : 'GALLANTT TMX'</b>	Ward 10BC, Plot No 123, Ground Floor, Gandhidham, Kutch, Gujarat – 370201 Tel : + 91 – 2836-228164, Fax : +91-2836-235787, E-mail : <a href="mailto:gml@gallantt.com">gml@gallantt.com</a> Website : <a href="http://www.gallantt.com">www.gallantt.com</a>	TMT Bars of Gde Fe 500 Fe 500D CRS (Size 8-32 mm)	05 Jul 2025	
10.	M/S RashmiMetaliksLtd(WB ) <b>Brand : 'RASHMI TMT'</b>	<b><u>M/S RashmiMetaliks Ltd(WB)</u></b> Premlata Building, 39, Shakespeare Sarani, 6 <sup>th</sup> Floor, Kolkata – 700017 Tel : 033-22894255/56, Fax : 033-22894254 E-mail : <a href="mailto:mkt.domesticdip@rashmigroup.com">mkt.domesticdip@rashmigroup.com</a> Website : <a href="http://www.rashmigroup.com">www.rashmigroup.com</a>	TMT Bars of Gde Fe 500 (Size 8- 32mm) Fe 500D, Fe 550D (Size 8- 25mm)	23 Aug 2025	
11	M/S Bajrang Power &Ispat Ltd, Raipur <b>Brand: 'GOEL TMT'</b>	<b><u>M/S ShriBajrang Power &amp;Ispat Ltd, Raipur</u></b> Vill - Borjhara, Urla industrial Area, Raipur-493221, Chhattisgarh, Tel- 0771 4288019/ 29/ 39	TMT Bars of Gde Fe 500 Fe 500D (Size: 8- 32mm)	08 Jan 2026	
12.	M/S Real Ispat& Power Ltd, Chhattishgarh <b>Brand : 'G K TMT'</b>	<b><u>M/S Real Ispat&amp; Power Ltd, (CG)</u></b> Vrindavan, Near IDBI Bank Civil Lines Raipur-492001, C.G Tel : +91-771-4224000 Fax : +91-771-4224010 E-mail : <a href="mailto:real@realispat.com">real@realispat.com</a> Website : <a href="http://www.realispat.com">www.realispat.com</a>	TMT Bars of Gde Fe 500 Fe 500D (Size 8- 36mm)	09 Mar 2026	
13.	M/S Steel Exchange India Ltd(AP) <b>Brand: 'SIMHADRI TMT'</b>	<b><u>M/S Steel Exchange India Ltd (AP)</u></b> D No 1-65/K/60, Plot No 60 Abhis Haryana, 1 <sup>st</sup> floor Kavuri Hills, Hyderabad Telangana-500081	TMT Bars of Gde Fe 500D Fe 500D HSCRM	29 Jan 2026	

		E-mail- <a href="mailto:info@seil.co.in">info@seil.co.in</a>			
14.	M/S Super Smelters Limited. Kolkata <b>Brand : 'SUPER SHAKTI'</b>	<b><u>M/S Super Smelters Limited. Kolkata</u></b> Premlata, 39, Shakespeare Sarani, 3 <sup>rd</sup> Floor Kolkata-700017 Tel/Fax : +91-33-2289-2734/36 E-mail : <a href="mailto:info@supershakti.in">info@supershakti.in</a> Website : <a href="http://www.supershakti.in">www.supershakti.in</a>	TMT Bars of Gde Fe 500 Fe 500D, Fe 550 (Size 8- 32mm)	13 Feb 2026	
15.	M/S Shyam Steel Industries Ltd(WB) <b>Brand: 'SHYAM'</b>	<b><u>M/S Shyam Steel Industries Ltd(WB)</u></b> Shyam Towers EN-32, Sector-V, Salt Lake, Kolkata-700 091, Tel: 033-40074007, Fax: 033 40074010, E-mail: <a href="mailto:marketing@shyamsteel.com">marketing@shyamsteel.com</a>	TMT Bars of Gde Fe 500 Fe 500D (Size 8- 32mm)	30 Jan 2026	
16	M/S Jai Balaji Industries Ltd(WB) <b>Brand: 'BALAJI SHAKTI'</b>	<b><u>M/S Jai Balaji Industries Ltd(WB)</u></b> 5, Bentinck Street, Kolkata-700 001 <b><u>Delhi Office:-</u></b> 510, Block-b, Navraung House, 21 Kasturba Gandhi Marg, New Delhi-110001, Tel: 011-43620219, 43620220 Mob: 7838272772/ 9958936103, E-mail: <a href="mailto:info@jaibalajigroup.com">info@jaibalajigroup.com</a>	TMT Bars of Gde Fe 500D Fe 500D CRS(Size 8- 32mm)	09 Feb 2026	
17	M/S MSP Steel & Power Limited(Chhattisgarh) <b>Brand: 'MSP TMT 500D'</b>	<b><u>M/S MSP Steel &amp; Power Limited(Chhattisgarh)</u></b> 16/S, Block-A, New Alipore, Kolkata - 700053, Tel: 033-400547777/2398 2239, Mob : 7381028976, E-mail: <a href="mailto:contactus@msspsteel.com">contactus@msspsteel.com</a> Website – <a href="http://www.msspsteel.com">www.msspsteel.com</a>	TMT Bars of Gde  Fe 500D (Size 8- 32mm)	10 Mar 2026	

**STRUCTURAL STEEL: APPROVED TMT STEEL MANUFACTURERS FOR MES WORKS**

Ser No	Company Name	Address	Type of Steel
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1.	Rashtriya Ispat Nigam Limited (RINL) <b>Brand : 'RINL'</b>	Visakhapatnam Steel Plant Visakhapatnam – 530 031, India, Tel : (91 891) 518226, 518376, Fax : (91 891) 518316 Email : <a href="mailto:cmdvsp@itpvis.ap.nic.in">cmdvsp@itpvis.ap.nic.in</a>	Structural Steel (Angle, Beam, Column, Channel, Plate)
2.	Tata Iron & Steel Company (TISCO, or Tata Steel) <b>Brand : 'TATA'</b>	Bombay House, 2, 4 Homi Modi Street Mumbai – 400 001, India, Tele : (91 22) 204 9131, Fax : (91 22) 204 9522, 287 0840 Email : <a href="mailto:corpcomm@jsr.tatasteel.com">corpcomm@jsr.tatasteel.com</a> (Br office for North : Jeevan Tara Bldg, Patel Chowk, New Delhi)	-- do --
3.	Steel Authority of India Limited (SAIL) <b>Brand : 'SAIL'</b>	Central Marketing Organization Northern Region, 17 <sup>th</sup> Floor, Scope Minar, Laxmi Nagar Distt. Centre, Delhi – 110092	-- do --
4.	M/s Jindal Steel and Power Ltd. <b>Brand : 'JINDAL'</b>	Jindal Centre, Plot No 2, Sector – 32, Gurgaon – 122001, Haryana, Tele – 0124 661 2000, Fax – 0124 661 2125, Website : <a href="http://www.jindalsteelpower.com">www.jindalsteelpower.com</a>	-- do --

**Notes :-**

1. Makes specified in Sch 'A' shall only be provided when makes are mentioned in Sch 'A'.
2. If makes (or equivalent) as mentioned in Sch 'A' are not available in the market / not specified in Sch 'A', then specific makes as decided and as approved by GE /Engr-in-charge from the list of makes given in Appx 'B' of particular specifications shall be followed. No claim whatsoever on this account shall be admissible to the contractor later on.
3. The materials and articles, which have been specified from certain makers/ manufacturers, shall be of makes/manufacturers as specified. If the manufacturers specified in tender documents make both ISI marked and conforming to ISI, the materials/ articles shall be ISI marked.
4. The materials and articles, which have not been specified in tender documents by makes/manufacturers, shall be as under :-
  - (i) If ISI asked materials are being manufactured the same shall be ISI marked. For list of ISI marked manufacturers refer website of BIS i.e , [www. bis.org.in](http://www.bis.org.in)
  - (ii) If ISI marked materials are not being manufactured the same shall be conforming to IS specifications.
5. Irrespective of makes, manufacturer in tender documents, material(s) should not be procured from/of the makes, manufacturers, brands, models etc, if as on date, there is ban due to technical defaults or not operating/ manufacturing for a long time or, non-existent etc. No claim whatsoever on this account shall be admissible to the contractor later on.
6. GE shall take into the consideration of cost, specifications, and parameters etc. while deciding the equivalency of cat part of different makes, models and manufacturer. In case of difference in the opinion of GE and Contractor, decision of the Accepting Officer shall be final, conclusive and binding. No claim whatsoever on this account shall be admissible to the contractor later on.
7. It is clarified that wherever the number of makes / brand mentioned in the above list is less than 03 then the name of makes / brands mentioned are for reference only. Please note such items/ products/ equipment shall be used as per the generic specification and its relevant codal provisions and shall be approved by GE.
8. The contractor shall not procure materials and articles unless the samples are first got approved by the GE.

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Signature of ContractorDCWE(Contracts)  
For Accepting Officer



**LIST OF FLY ASH BRICKS MANUFACTURERS**

Ser No	Name of Manufacturers	Production Capacity	Correspondence Address
1	M/s GEE ESS Enterprises Bathinda (Pb)	10000 bricks per day	# 16697H, St No – 7, BasantVihar, Bathinda – 151001 (Pb)
2	Singla Industries	10000 bricks per day	M/s Singla Industries, C/o Singla Rice Mil, Bathinda Road, RampuraPhul 0 151 103 (Pb)
3	Paras Construction	20000 to 25000 bricks per day	Vill – Saidpura, G T Road, Tehsil and Distt – Fategarh Sahib – 140406 (Pb)
4	Sachin Builders & Construction	30000 bricks per day	SachinPrakash, 11, Aggar Nagar, Ext Ferozepur Road, Ludhiana-141012 (Pb)
5	Ramji Concrete	35400 bricks per day	Vill- Jhanjher, Landran, Chunni Road, Tehsil – Kharar, Mohali (Pb)
6	M/s MGM Infra Development Solution Pvt Ltd	80000 bricks per day	Office 74, Ward o-74, Gurudwara Road, KhararDisttMohalli (Pb)
7	SS Enterprises	10000 bricks per day	324, New Golden Aneue, Amritsar-143001
8	Ramjee Enterprises	10000 bricks per day	Ramjee Concrete Pvt Ltd Village Hjaanghari, Mohalli-140307
9	Royal Bricks	12000 bricks per day	Royal Birkcs, Industrial VillBigapur, MalerKotla Road, Khanna, Pb
10	KB Spun Pipes (Make KB Spun)		M/s KB Spun Pipes, Ind Area, Defence Road, Vill-Chacheli, PO-Sujanpur, Pin-145023
11	Mohindra Industries		M/s Mohindra Industries, Jammu Jalandhar Bypass, Near Military Hospital, Pathankot-145001
12.	Shri Ram Fly Ash Bricks	-	M/s Shri Ram Fly Ash Bricks Near MSP Cinema, Jannu-Jalandhar Bypass Road Pathankot-145001
13	M/s Inderbir Industries	-	M/S Inderbir Industries, H. No. 204, Barat Nagar, Pathankot-145001

**APPENDIX 'C' SOURCE OF MATERIALS**  
**SOURCES OF MATERIAL**

Ser No	<u>MATERIAL</u>	<u>L NAMES/SOURCE OF MATERIALS</u>
1	<u>2</u>	<u>3</u>
1.	Sand for plastering/ pointing and mortar for masonry.	Contractor shall arrange for any resources available with them. However the material should conform to SSR/ IS specifications
2.	Sand for plain concrete, and coarse sand for reinforced concrete	-ditto-
3.	Sand for filling under floor.	-ditto-
4.	Coarse aggregate for plain and reinforced concrete.	-ditto-
5.	Aggregate for soling and WBM/WMM	-ditto-
6.	Hard Core	-ditto-
7.	Aggregate for premix	-ditto-
8.	Bricks/ Brick tiles	-ditto-

***NOTE:** - The source of materials shall be as given in Column 3 above or in vicinity thereof. The tenderer shall ascertain the actual position/exact location of source before submitting his tender. The contractor shall be deemed to have ascertain the location/actual position of the source whether actually be ascertained the availability and its distance from the site of work or not and no claim shall be entertained on this account for any reasons whatsoever and all taxes and all levies and royalty etc. shall be borne by the contractor.*

\_\_\_\_\_  
Signature of Contractor

Dated:

DCWE(Contracts)  
For Accepting officer

**NOTES:-**

1. The materials listed hereinafter shall be tested as per the frequency indicated therein. Tenderer is deemed to cater for the under mentioned provisions in his quoted lump sum.
2. It is mandatory for the Contractor to set up his own Site Lab for all contracts of Rs 1 Crore and above. However the contractor may be permitted to set up site lab for the works costing less than Rs 1 Crore at his option.
3. **Out of the level 'A' tests carried out in Contractor's own Site Lab, a percentage/ selected checks as decided by the Accepting Officer, shall be got done independently in the MES (CE/ CWE/ GE)/ Govt approved lab, the expenditure for which shall be borne by the department. The contractor shall be responsible for tests to be carried out in site lab established by him and for that they shall employ a competent technical representative as approved by the GE.**
4. Level of testing shown under Col 6 as 'A', 'B', 'C' are defined as under:-  
Level 'A' : (a) "Site Lab" means own site lab established by Contractor at the work site for such tests. This lab shall house all the facilities including T&P, machinery, equipment, manpower etc. required for conducting tests. This lab shall be operative for the entire duration of the contract till its completion. Tests shall be carried out in the presence of Engineer-in-Charge.  
(b) Records shall be maintained at work site. The successful test results shall be recorded and signed jointly by the Contractor and Engineer-in-Charge.  
(c) Within 15 days of placement of work order No. 1, Site Lab shall be established and this fact alongwith the particulars of the technical representative of the Contractor responsible for the Site Lab, shall be reported by the Contractor to GE in writing who will verify the facts and satisfy himself of the facilities provided and the particulars of the technical representative of the Contractor. Thereafter, GE shall issue a certificate to this effect in writing listing out equipment, particulars etc. of each material test. Only after issue of this certificate by GE, the tests shall be carried out and materials so approved shall be incorporated in the work.  
(d) Manpower, material and infrastructure like electricity, water etc. required for conducting these tests shall be provided by the Contractor.  
(e) Remedial measures, if any, required to achieve/ obtain desired results for each test shall be taken promptly by the Contractor.

- (f) In case during any point of time, Contractor fails to adhere to the laid down frequency of the tests due to non availability of the required facilities in his site lab, the tests shall be carried out in MES (CE/CWE/GE) Laboratories, in which case the testing charges as stipulated therein' shall be levied. However, in case the testing facilities are not available in MES (CE/CWE/GE) laboratories, the tests shall required to be conducted in Engineering Colleges or any other Government approved test house and the actual charges as levied by these test houses/labs shall have to be paid by the contractor without any extra cost to the department. Whether the testing facilities exist in Contractor's Site Lab, MES (CE/CWE/GE) Laboratories or not shall be decided by the GE, whose decision shall be final and binding. All facilities for tests including conveyance/labour etc. shall also be borne by the contractor without any extra cost to the department. No extension of time shall be admissible on this account.
- (g) However, in case GE in his opinion considers that Contractor is purposely not adhering to the laid down frequencies of the tests, he shall reserve the right to deduct penal recovery which shall be double the rates of tests indicated in Appendix 'D'. However, besides effecting penal recovery for non-compliance of contractual testing frequency, for adhering to quality control norms of testing, simultaneously GE will get tests done from MES (CE/ CWE/ GE) Lab as per laid down frequency and necessary testing charges shall be recovered from running bills. In case facilities are not available to conduct test in MES (CE/ CWE/ GE) Lab, then GE will get them tested from any other source and necessary testing charges paid by GE shall be debited to the running payments of the Contractor. GE's decision shall be final and binding on recoveries.
- (h) No charges shall be recovered from the Contractor for tests carried out in his Site Lab.
- (i) 'A' level tests for the works costing upto 100 lakhs: - The contractor may set up site laboratory at his own option for works costing up to 100 Lakhs. The other stipulations will be same as above. However in case the contractor has not set up the site lab and tests are carried out in MES (CE/ CWE/ GE) or any other lab approved / setup by GE, the recovery shall be made at rates applicable i.e. as given herein after.

Level 'B' & 'C'

: The Test charges mentioned under column 7 of Appendix 'D' are the charges to be paid by the contractors in case the tests are conducted in MES (CE/ CWE/ GE) laboratories. Wherever it is convenient to get 'B' level tests done at Govt. approved test houses/Engg colleges the same can be done at the cost of the contractor and no separate recovery shall be made by the Deptt for such tests. However, the tests required to be conducted in Engineering Colleges or any other Government approved test houses and the actual charges as levied by these test houses/ labs irrespective of the rates indicated shall have to be paid by the contractor without any extra cost to the department. The rates of 'C' level tests have been given for the purpose of recovery if these tests are done in MES lab (if facility available) or these are not done and non testing of 'C' level tests is accepted by the Accepting officer. Whether the testing facilities exist in MES (CE/ CWE/ GE) laboratories or not shall be decided by the GE, whose decision shall be final and binding. All facilities for tests including conveyance/labour etc. shall also be borne by the contractor without any extra cost to the department.

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

6.        However, in case GE in his opinion, considers that contractor is purposely not adhering to the laid down frequency of the tests, he shall reserve the right to deduct panel recovery which shall be **double** the rates of tests indicated in Appx 'D'. However besides effecting penal recovery for non compliance of contractual testing frequency, for adhering to quality control norms of testing, simultaneously GE will get tests done from Zonal lab as per laid down frequency and necessary testing charges shall be recovered from running bills. In case facilities are not available to conduct test in Zonal Lab, then GE will get them tested from any other source and necessary testing charges paid by GE shall be debited to the running payments of the contractor. GE's decision shall be final and binding on recoveries.

**GEND**  
**A - SITE LAB**  
**B MES (CE/CWE/GE) LAB**  
**C - GOVT APPROVED TEST HOUSES/ENGG COLLEGES**

Srl No	Materials	Name of tests	Relevant Code	Description	Type	Cost	<u>Remark</u>
1	2	3	4	5	6	7	8

1	Bricks	(i) Compressive Strength.	IS :3495 (Part-II) -do-	As per IS : 5454 as given under :- <u>Lot size</u> <u>Sample size</u> <u>Permissible No. of defective bricks.</u>	`A'	330/-	Checks for visual and dimensional characteristics shall also be carried out as per IS : 5454
		(ii) Water Absorption.	IS-3495 (Part-I)	1001 to 10000                      5                      0	`A'	330/-	
				10001 to 35000                      10                      0	`A'	330/-	
		(iii) Efflorescence		35001 to 50000                      15                      1			
2	Coarse aggregate	(i) Sieve analysis	IS :2386 (Part-I)	One test for every 16 Cu.m of aggregate or part thereof brought to site.	`A'	660/-	
		(ii) Flakiness Index	-do-	-do-	`A'	250/-	
		(iii) Estimation of deleterious materials	IS-2386 (Part-I)	One test for every 100 Cum of aggregate or part thereof brought to site.	`A'	600/-	
		(iv) Organic impurities	-do-	One test per source of supply	`B'	275/-	
		(v) Moisture Contents	-do- (Part-II)	Regularly as required.	`A'	330/-	
		(vi) Specific gravity	-do-	One test per each source of supply	`B'	330/-	
3	Fine Aggregate	(i) Sieve Analysis	IS: 2386 (Part I)	One test for every 15 Cum of fine aggregate or part when brought to site	`A'	660/-	
		(ii) Test for clay, silt and impurities	-do-(Part-I)	-do-	`A'	500/-	
		(iii) Specific Gravity	-do- (Part-II)	One for each source of supply	`B'	330/-	
		(iv) Moisture Contents	-do- (Part-II)	Regularly as required subject to two tests/day when being used	`A'	330/-	
		(v) Test for organic impurities	-do- (Part-II)	supply	`B'	275/-	
4	Cement	(i) Setting time	IS: 4031- 63 affirmed 1980	Once for each consignment or as and when required	`B'	500/-	

		(ii) Soundness	-do-	-do-	B	550/-	
		(iii) Compressive strength	-do-	-do-	`B'	550/-	
		(iv) Fineness	-do-	-do-	`B'	275/-	
		(v) Consistency Test	-do-	-do-	`C'	140/	
5	Structural Concrete (M-15 Grade & above).	(i) Slump test or compacting factor test or Vee-Bee time	IS : 1199	The minium frequency of sampling of concrete of each grade shall be as under:-	`A'	300/-	Random sampling shall be carried out to cover all mix units.
				Qty of Concrete in the work    No. of Samples			
		(ii) Compressive Strength	IS : 516	1-5 cum                  1 6-15 cum                 2 16-30 cum                3 31-50 cum                4 51 cum & above      4+1 for each additional 50 Cum or part thereof.	`A'	900/-	As per IS:456 2000 clause 14 for frequency of sampling
6	Design Mix			CTL Chandigarh		5000/-	As per PS Clause
7	(a) PCC block for walling (Hollow block)	(i) Compressive strength	IS : 2156-1984 (Appx`B')	8 block out of 14	`A'	900/-	Sample: 14 blocks from consignment of every 5000 blocks or part thereof.
		(ii) Water absorption	-do-(Appx `E')	3 block out of 14	`B'	330/-	
		(iii) Density	-do-(Appx`A')	3 blocks out of 14	`B'	330/-	
	(b) PCC solid block for walling	(i) Compressive strength	IS : 2185	12 blocks out of 18	`A'	900/-	Sample: 18 blocks from consignment of every 1000 blocks or part thereof. These blocks to be checked for dimension and weight.
		(ii) Water	-do-	3 block out of 18	`B'	330/-	

		absorption					
		(iii) Density	-do-	3 blocks out of 18	`B'	330/-	
8	Cement Flooring tiles/ Terrazo tiles	(i) Water absorption	IS: 1237(Appx`D')	6 tiles out of 18	`B'	330/-	Sample of 18 tiles from each source of supply selected at random.
		(ii) Wet transverse strength	IS: 1237 (Appx`E')	6 tiles out of 18	`B'	660/-	
		(iii) Resistance to wear	IS : 1237 (Appx`F')	6 tiles out of 18	`C'	1000/-	
9	Burnt clay roofing tiles (Hand made) as per IS:2690 (Part-II) Length : 150-250 mm Width : 100-200 mm Thickness :35-50 mm	(i) Water absorption	IS : 3495 (Part-II)	6 tiles out of 12	`B'	216/-	12 tiles from each source of supply selected at random
		(ii) Compressive strength	-do- (Part-I)	6 tiles out of 12	`A'	180/-	
10	Mangalore Pattern roofing tiles	(i) Water absorption	IS : 654 (Appx `A')	6 tiles out of 32	`B'	180/-	32 tiles from each Consignment of 3000 tiles or part thereof, These tiles shall be checked for dimension and weight.
		(ii) Breaking Load	-do- (Appx `C')	6 tiles out of 32	`B'	120/-	
11	Timber	(i) Specific gravity and weight	IS:1708	Minimum 3 samples from a lot of 4 Cu.m or 250 pieces of seasoned timber	`B'	120/-	
		(ii) Moisture content	-do-	-do-	`A'	120/-	



12	Water for construction purposes	(i) Test for Acidity	IS:456 and 3015	Once at the stage of approval of source of water.	`B'	500/-	Also refer clause 4.3 of IS-456 and its subsequent sub clauses regarding suitability of water
		(ii) Test for Alkalinity	-do-	-do-	`B'	500/-	
		(iii) Test for total dissolved solids (TDS) contents	-do-	-do-	`B'	500/-	
13	Welding of steel work	Visual inspection test	IS-822 clause 7.1	100% by visual inspection	Work site	360/-	Specialised tests their method & frequency to be decided on consideration of their importance by the Accepting Officer.
14	Timber panelled and glazed door/window and shutters including factory made shutters.	(a) Dimensions, sizes, workmanship and finish.	IS: 1003 (Part-I)	Frequency of sampling for each lot shall be as under :-	`A'	180/-	
				<b>Lot Size</b>			
				26 to 50			
				51 to 100			
				101 to 150			
				151 to 300			
				301 to 500			
				501 to 1000			
				1001 and above			
		(b) Strength Test					
		(i) Slamming	IS:1303				
		(ii) Impact indentation	-do-	From each lot 5% of the factory made shutters shall be tested for strength tests.			
		(iii) Shock resistance	-do-				
15	Plywood(IS:303)	(a) Moisture Content	IS:1734	Six test pieces cut from each of the boards selected as per table I shall be subjected to tests.	`C'	240/-	Sampling shall be as per IS-

			(Part-I)				7835 ables.
16	Wood Particle Board (Medium density) IS:3097-	(a) Density	IS:2360 (Part-III)	Three test specimens from each sample (size 150 mm x 75 mm).	`A'	60/-	Sampling shall be as per IS: 3487 with moisture metre.
		(b) Moisture content	-do-	-do-	`A' & `B	60/-	
		(c) Water absorption	-do-(Part-16)	-do- but sample size 300 mm x 300 mm	`A'	60/-	
		(d) Swelling due to surface absorption	-do-(Part-17)	-do- but sample size 125 mm x 100 mm	`A'	60/-	
		(e) Swelling in Water	-do-	-do- but sample size 200 mm x 100 mm	`A'	60/-	
		(f) Modulus of rupture	-do-(Part-4)	Three test specimens as per IS:2380-77	`B'	90/-	
		(g) Screw withdrawal strength	-do-(Part-4)	-do- as per IS:2385	`C'	120/-	
17	Reinforcement Steel	(i) Physical tests upto 16mm dia (Normal mass, tensile elongation, bend and rebend)	IS : 1786	As per IS : 1786	`B'	2500/-	
		(ii) More than 16mm dia	IS : 1786	As per IS : 1786	`B'	2750/-	

(Signature of contractor)  
Dated: \_\_\_\_\_

DCWE(Contracts)  
For Accepting Officer

**APPENDIX 'E' TO PARTICULAR SPECIFICATIONS SECTION-II**  
**CEMENT SUPPLY/ACCEPTNACE REGISTER**

1. CA No & Name of work :
2. Control No
3. Name of Manufacture/Brand Name/Gde of Cement (a) Manufacture \_\_\_\_\_ (b) Brand \_\_\_\_\_ (c) Grade \_\_\_\_\_
4. Qty of cement & Lot No/Week No(In Bags) : (Qty \_\_\_\_\_) (b) Lot No/Week No \_\_\_\_\_
5. Manufacturer's test certificates No \_\_\_\_\_
6. Random test details (a) Physical test report from \_\_\_\_\_ vide their letter No \_\_\_\_\_ (Name of approval Lab/Engg College)  
 (b) Chemical test report from \_\_\_\_\_ vide their letter No \_\_\_\_\_ (Name of approval Lab/Engg College)
7. Details of physical & chemical properties :-

Physical requirement (As per IS-4031)										Chemical requirements(As per IS-4032)								
	Specific surface area(M <sup>2</sup> /K <sub>n</sub> )	Soundness by Autoclave	Soundness by Auto Clave	Initial setting time(Minutes)	Final setting time(Minutes)	Comprehensive strength (MPA)			Temp during testing °C	Standard consistency(%)	Lime saturation Ratio	Aclumina iron Ratio	Insoluble residue(%)	Manesium(%)	Sulphuric Anhydride(%)	Loss of ignition(%)	Alkalies(%)	Chlorides(%)
						03 Days	07 Days	28 Days										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
As per relevant IS																		
As per manufacturer's test certificate																		
As per random test certificate																		

Remarks with signature

JE (Civil) : \_\_\_\_\_

Engineer-in-Charge : \_\_\_\_\_

Contractor : \_\_\_\_\_ -

Accepted/Rejected :

Garrison Engineer :

Remarks of BSO/Inspecting Officer/CWE

Signature of the Contractor

DCWE(Contracts)  
FOR ACCEPTING OFFICER

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

A copy of the General Conditions of Contracts (IAFW-2249 1989 Print) with errata and amendments 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, elsewhere 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 with errata 1 to 20 and amendment No 1 to 49 form part of these documents.

\_\_\_\_\_  
DCWE(Contracts)  
For Accepting Officer

\_\_\_\_\_  
Signature of Contractor  
Dated :

**SCHEDULE OF MINIMUM FARE WAGES**

It is hereby agreed that schedule of minimum fare wages (SMFW) as published vide Government of India Notification dated 10 Mar 1992 (Revised upto date) comprising 10 pages, form part of this tender documents.

My/Our signature hereunder amounts to my/our having read and understood the provision 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 Fare Wages" referred to above is available for reference in any MES Office under this HQ.*

\_\_\_\_\_  
DCWE(Contracts)  
For Accepting Officer  
Dated :

\_\_\_\_\_  
Signature of Contractor