

MILITARY ENGINEER SERVICES**TENDER ID :** 2023_MES_605904_1**NAME OF WORK** : **REPAIR/REPLACEMENT TO VARIOUS BUILDING ROOF TREATMENT AND GUNTING WORK TO CHAJJA COLUMN BEAM FLOOR SLAB, SUNKEN SLAB, STAIR AND ALLIED WORKS OF DRDO COMPLEX PHASE-I, CV RAMAN NAGAR, BANGALORE****NAME OF CONTRACTOR** :**CONTENTS**

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Signature of Contractor
Date:AGE (Contracts)
for Accepting Officer

Tele: 080 – 25242526
email : e8geirdwestbangalore@gmail.com

MILITARY ENGINEER SERVICES

Garrison Engineer (I) R&D (West)
Military Engineer Services
DRDO Complex, CV Raman Nagar PO
Bangalore – 560 093.

8212 / 06 / E8

27 Oct 2023

M/s. _____

TENDER ID : 2023_MES_605904_1**REPAIR/REPLACEMENT TO VARIOUS BUILDING ROOF TREATMENT AND GUNNING WORK TO CHAJJA COLUMN BEAM FLOOR SLAB, SUNKEN SLAB, STAIR AND ALLIED WORKS OF DRDO COMPLEX PHASE-I, CV RAMAN NAGAR, BANGALORE.**

Dear Sir (s),

1. Tender documents in respect of above work are uploaded on the site www.defproc.gov.in/ www.eprocuremes.gov.in . The tender is on single stage two cover e-tendering system. The contents of Cover I and Cover II are specified in NOTICE OF TENDER.
2. Bids will be received online by Garrison Engineer (I) R&D (West), Bangalore upto the date and time mentioned in the **NOTICE INVITING TENDER (NIT)**. No tender / bid will be received in physical form and any tender / bid received in such manner will be treated as non-bonafide tender / bid.
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 of 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 **04 Nov 2023**. You are requested not to write piecemeal points and forward your points duly consolidated before due dated **04 Nov 2023**.
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 and submit the physical documents in the office of Garrison Engineer (I) R&D (West), DRDO Complex, CV Raman Nagar - Post, Bangalore – 560 093 within the time limit specified in **NIT**. Inadequacy/deficiency of documents shall make the bid liable for rejection resulting in disqualification for opening of finance bid.
6. Contractor having not executed standing security bond and standing security deposit in any MES formation shall upload scanned copy of EARNEST MONEY DEPOSIT (EMD) mentioned in Notice of Tender and shall ensure receipt of hard copy of EMD in the office of tender issuing authority before date & time fixed for this purpose. In case of failure to abide by any of these two requirements, the finance bid will not be opened.

Contd.,

Para 6 Contd.,

13. 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 e-procurement portal and submit physical documents in the office of **Garrison Engineer (I) R&D (West), DRDO Complex, CV Raman Nagar - Post, Bangalore – 560 093** 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 e-mail / 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 uploaded, 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 this office.
11. ANY TENDERER, WHICH PROPOSES ALTERATIONS TO ANY OF THE CONDITION, SPECIFICATIONS LAID DOWN IN THE TENDER DOCUMENTS OR ANY NEW CONDITION, WHATSOEVER, IS LIABLE TO BE REJECTED.

Yours faithfully,

AGE (Contracts)
for Accepting Officer

Encls : As above.

Signature of Contractor
Date:

MILITARY ENGINEER SERVICES
NOTICE OF 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 estimates however, is not a guarantee is and is merely given as a rough guide and if the work cost more or less, the tenderer/bidder will have no claim on that account. The tender shall be based on as mentioned in aforesaid Appendix 'A'.
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. Normally contractors whose names are on the MES approved list for the area in which the work lies, and within whose financial category the estimated amount would fall, may tender/bid but in case of term contracts, contractors in categories 'SS' to 'E' may tender/bid. Not more than one tender/bid shall be submitted/uploaded by one contractor or one firm of contractors. Under no circumstances will a father and his son(s) or other close relations who have business dealing with one another be allowed to tender/bid for the same contract as separate competitors. A breach of this condition will tender the tenders/bids of both the parties liable for rejection.
5. This Office of **"Garrison Engineer (I)(R&D) West, DRDO Complex, C V Raman Nagar – Post, Bangalore – 560 093 will be the Accepting Officer** here-in-after referred to as such for purpose of the contract.
6. The Technical Bid and Financial Bid (Cover-1 and Cover-2) shall be uploaded by the tenderer/bidder on or before the date & time mentioned in NIT. A scanned copy of DD with enlistment details/documents shall be uploaded as packet 1/cover-1 ('T' bid) of the tender/bid on e-tendering portal. DD is refundable in case T bid is not accepted resulting in non-opening of 'Q' bid. The applicant contractor shall bear the cost of bank charges for procuring and encashing the DD and shall not have any claim from Government whatsoever on this account.
- 6.1 Tender forms and conditions of contract and other necessary documents shall be available on www.defproc.gov.in site for download and shall form part of contract agreement in case the tender/bid is accepted.
- 6.2 In case of contractor who has not executed the Standing Security Bond, the Cover-1 shall be accompanied with by Earnest Money of amount as mentioned in Appendix 'A' in the form of deposit at call receipt in favour of GE mentioned in the aforesaid Appendix 'A' by Scheduled Bank or in receipted treasury challan, the amount being credited to the revenue deposit of the Garrison Engineer (I)(R&D) West, Bangalore.
- 6.3 GE will return the earnest money wherever applicable to all un-successful tenderers/bidders by endorsing an authority to the deposit-at-call receipt for its refund, on production by the tenderer, bidder a certificate of the Accepting Officer, that a bonafide tender/bid was received and all documents were returned.
- 6.4 Copies of the drawings and other documents pertaining to the work signed for the purpose of identification by the Accepting Officer or his accredited representative, sample of materials and stores to be supplied by the contractor will also be available for inspection by the tenderer/bidder at the office of Garrison Engineer (I)(R&D) West, Bangalore. during office working hours.

NOTICE OF TENDER (Contd.....)

13. The tenderers/bidders are advised to visit the site of work by making prior appointment who is also the executing agency of the work (see Appendix 'A'). The tenderers/bidders are deemed to have full knowledge of all relevant documents, samples, site etc, whether they have inspected them or not.
8. Any tender/bid which proposes any alteration to any of the conditions laid down or which proposes any other condition or prescription whatsoever, is liable to be rejected.
9. The uploading of bid implies that bidder has read this notice and the conditions of contract and has made himself aware of the scope and specifications of work to be done and of the conditions and rates at which stores, tools and plants etc, will be issued to him and local conditions and other factors having bearing on the execution of the work.
10. Tenderers/bidders must be in possession of copy of MES Standard Schedule of Rates (see appendix 'A') including errata /amendments thereto.
11. The Accepting Officer reserves the right to accept a tender submitted by a Public Undertaking, giving a price 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 from such tenderer/bidder whose tender/bid is rejected.
12. The Accepting Officer does not bind himself to accept the lowest or any tender/bid or to give any reason for not doing so.
13. This Notice Inviting Tender (NIT) including Appendix 'A' shall form part of the contract.
14. Court of 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 132 (IAFW-2249) – Jurisdiction of Courts shall be applicable.

Signature of Contractor
Date:

AGE (Contracts)
for Accepting Officer

APPENDIX 'A' TO NOTICE INVITING TENDER

1.	Name of Work	<u>REPAIR / REPAACEMENT TO VARIOUS BUILDING ROOF TREATMENT AND GUNNITING WORK TO CHAJJA COLUMN BEAM FOOR SLAB, SUNKEN SLAB, STAIR AND ALLIED WORKS OF DRDO COMPLEX PHASE-I, CV RAMAN NAGAR, BANGALORE</u> <u>TENDER ID : 2023_MES_605904_1</u>
2.	Estimated Cost	₹ 33.00 Lakhs (At par market)
3.	Period of Completion	270 days
4.	Cost of Tender documents	₹ 500.00 in the form of Demand Draft / Banker's Cheque from any Scheduled Bank in favour of GE(I) R&D (West) Bangalore – 560 093, and payable at Bangalore. Note : In case of re-tendering the contractor who had quoted in the previous calls is not required to submit the cost of tender.
5.	Website / portal address	www.defproc.gov.in
6.	Type of Contract	The tender shall be based on IAFW-113139A and General Conditions of Contracts (IAFW-2249) with Schedule 'A' (list of items of work) to be priced by tenderer. The Contractor is required to quote their rates against items of Schedule 'A'.
13.	Timeline details :-	
	a) Date of Uploading of Tender on website www.defproc.gov.in by MES.	27 Oct 2023 by 1800 Hours
	b) Date of Downloading of tender from website by the tenderers	28 Oct 2023 from 1000 Hours
	c) Clarification Start date & time	28 Oct 2023 from 1500 Hours
	d) Clarification closing date & time	04 Nov 2023 upto 1700 Hours
	(i) Bid submission Start date	05 Nov 2023 from 1500 Hours
	(ii) Bid submission end date & time of uploading / Bid submission of duly quoted and filled up of tender by tenderers on www.defproc.gov.in site	11 Nov 2023 up to 1800 Hours
	e) Date of opening of online bid	18 Nov 2023 at 1500 Hours
8.	Eligibility Criteria	
	A) For MES enlisted Contractors	Contractors shall be enlisted with MES in Class 'E' and above and category 'a(i)' subject to satisfactory remarks wrt performance in respect of works in hand as reflected in Work load return (WLR) or any other report circulated by competent engineer authority.
	B) For Contractors not enlisted with MES	(i) Contractors not enlisted with MES should meet the enlistment criteria of Class 'E' & 'a(i)' Category, Contractor with regards to satisfactorily completion of requisite value works with Central / State Govt / Central / State PSUs / AWHO / AFNHB / CGEWHO / DG MAP, annual turnover,

APPENDIX 'A' TO NOTICE INVITING TENDER (Contd..)

	<u>SI No 8 (B) Contd..</u>	<p>Bank Solvency, working capital, and other requirements given in Para 1.4 and 1.5 of Section 1 of MES Manual on Contracts - 2020 as available in all MES Formations as well as MES website (www.mes.gov.in)</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>(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 PSUs or any Autonomous Body under Central / State Government or any Local Body as on the bid submission end date.</p>
9	Tender issuing and Accepting Officer	<p>Name : Garrison Engineer (I) (R&D) West Bangalore Address : Garrison Engineer (I) (R&D) West Bangalore, DRDO Complex, C V Raman Nagar – Post, Bangalore – 560 093.</p> <p>Contact Details of Concerned Officer : 080 – 25242526 email : e8geirdwestbangalore@gmail.com</p>
10	Executing agency	GE(I) (R&D) West, Bangalore
11	Earnest Money	₹ 66,000.00 in favour of GE(I) (R&D) West, Bangalore 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 13 (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 area) may also bid for this tender. Such Contractors (Contractors of one/two classes below the eligible class) shall not be considered in case their present residual work in hand is more than **FIVE TIMES** their present tendering limit. However, in case such contractors fulfill the criteria of 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 works in hand showing names of work, names of Accepting Officers, Contract Amounts, dates of commencement and completion (stipulated) and progress as on bid submission date. Such contractors, if claim to fulfill the criteria of 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.

APPENDIX 'A' TO NOTICE INVITING TENDER (Contd..)

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 13 (SEVEN) or more, applications of only those one class below the eligible class bidders shall be considered, who have previously complete similar works satisfactorily and are meeting the criteria of upgradation in respect of past experience of completed works (individual work experience and / or average turnover as applicable) and financial soundness (solvency / financial soundness and working capital) as per details given in Manual of Contracts. Therefore, such Contractors shall upload the requisite information / documents in the Cover – 1.
3. Unenlisted Contractor shall be considered provided he meets the Criteria. Foreign Firms shall not be eligible for this tender. However, Indian Firms having foreign national / Indian nationals staying abroad / Indian National having taken foreign citizenship, as Director (s) shall be considered subject to security clearance from the concerned authorities.
4. Contractors enlisted with MES will upload following documents in Cover – 1, for checking eligibility:-
 - a) Application for tender on Firm's letter head,
 - b) Enlistment letter issued by the Registering Authority duly renewed for the cyclic period in vogue,
 - c) Scanned copy of DD / Bankers Cheque towards cost of tender and EMD instrument in case SSD Bond is not signed at the time of Registration.
 - d) Any other document required as described in this Appendix.
5. Contractors not enlisted with MES will be required to upload following documents in Cover – 1 for checking eligibility :-
 - a) Application for tender on Firm's letter head,
 - b) Scanned copy of DD / Bankers Cheque towards cost of tender and 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 Pass Port of Proprietor / each Partner / each Director.
 - d) All documents required for enlistment in MES for the Class mentioned in Para 8 (b) above as per Para 1.5 of Section 1 of MES Manual of Contracts 2020,
 - e) Details of works being executed in MES, if any,
 - f) Any other documents required as described in this Appendix,
6. Tenders not accompanied by scanned copies of requisite DD/ Bankers Cheque towards cost of tender and earnest money (as applicable) in Cover – 1 shall not be considered for validation of 'T' bid and their Financial Bid will not be opened.
13. Contractors should ensure that their original physical DDs and Earnest Money Deposit (EMD) instruments (as applicable) reach the office of Accepting Officer within 05 (FIVE) of bid submission ends date, failing which following action shall be taken :-
 - (a) In case of tenders from enlisted contractors of MES, where scanned copies of requisite DD/ Bankers Cheque towards cost of tender has been uploaded in Cover – 1, but physical copies are not received within the stipulated period, their finance 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 Bbid (Cover - 2).

APPENDIX 'A' TO NOTICE INVITING TENDER (Contd..)

- (b) In case of tenderers from un-enlisted contractor, where scanned copies of requisite DD/Bankers Cheque towards cost of tender have been uploaded in Cover – 1, but physical copies are not received within the stipulated period, their Financial Bids (Cover – 2) will not be opened. Name of such Contractors alongwith complete address shall be circulated for not opening of their bids for a period of six months commencing from the date of opening of Financial Bid (Cover - 2).
- (c) In case of tenders from enlisted and un-enlisted contractors, where scanned copies of instruments for Earnest Money Deposit (as applicable) have been uploaded in Cover – 1, but the same are not received in physical form within stipulated period, such tenders shall not qualify for opening of Financial Bid (Cover - 2).
8. Contractor will not be allowed to execute the work by subletting or through power of attorney to a third party / another firm on his behalf. However a Contractor can execute the work through power of attorney to sons / daughters / spouse of Proprietor / Partner / Director and firm's own employees, Director, Project Manager **provided they are not having a separate enlisted firm in MES in their name as Proprietor / Partner / Director.**
9. After opening of Cover – 1 and during its technical evaluation, in case any deficiency is noticed, in the documents required to be uploaded by the tenderers as per NIT, a communication in the form of e-mail/SMS/Speed Post etc. shall be sent to the contractor to rectify the deficiency within a period of 13 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 Officer reserves the right to reject the Technical bid and not to open the Financial Bid of any applicant/bidder. Technical bid validation shall be decided by the Accepting Officer based on, eligibility of the firm as per criteria given in this Appendix. The tenderer / bidder will be informed regarding non-validation of his Technical Bid assigning reasons thereof through tender evaluation report which shall be uploaded on the website. Such tenderer, if desires may appeal to the next higher Engineer authority viz Chief Engineer R&D Secunderabad on e-mail : e8cerdsecbad@gmail.com with copy to the Accepting Officer on email before the scheduled date of opening of Cover - 2. Next Higher Engineer Authority (NHEA) shall decide the matter within a period of seven working days from the date of receipt of appeal. The decision of the NHEA shall be final and binding. The tenderer / bidder shall not be entitled for any compensation whatsoever for rejection of his bid.
11. In case an unenlisted contractor is already executing works in MES, he shall not be considered eligible for the subject tender if the total value of such works is more than twice the tendering limit of the MES Class of contractor for which it is eligible. For this purpose, details of the works being executed by such a Contractor shall be uploaded in the Cover – 1 of the bid and shall be checked / verified by the Accepting Officer.
12. In case the BOQ is revised through the Corrigendum and the bidder has failed to quote on the Revised BOQ (i.e., he has quoted on pre revised BOQ), such bid shall be treated as willful negligence by the bidder and his quotation shall be considered as non-bonafide. In such cases the lowest tender shall be determined from amongst the valid / bonafide bids only. Accepting Officer may decide whether to re-tender or consider the lowest bonafide tender for acceptance.

APPENDIX 'A' TO NOTICE INVITING TENDER (Contd.,)

13. Revoking the Offer or revising the rates upward or offering voluntary reduction by the lowest tenderer after opening of Cover – 2 shall be considered as a willful default. For this default a Earnest Money deposited by him shall be forfeited. In case of MES enlisted tenderer having deposited the Standing Security Bond, an amount equal to the earnest money stipulated in the NIT shall be notified to the tenderer for depositing through MRO and consideration of such tenderer in tender evaluation for future works shall remain suspended till the aforementioned amount is deposited in the Government Treasury. No other disciplinary / administrative action shall be taken against such tenderers. In such a situation, the next lowest offer shall not be considered for acceptance. Instead, retendering shall be resorted to in a transparent and fair manner and the defaulting tenderer and his related firm if any, shall not be eligible for this tender in second call or subsequent calls.
14. Tender to related firms shall not be issued simultaneously. Firms shall be termed as related if Proprietor / one or more Partners / Directors are common. Decision of Accepting Officer on issue / deny the tender to any of the related firms shall be final and binding

Signature of Contractor
Date:

AGE (Contracts)
for Accepting Officer

File No. 8212 / 06 / E8 dated 27 Oct 2023

Address of Accepting Officer :
Garrison Engineer (I) (R&D) West,
DRDO Complex, C V Raman Nagar – Post,
Bangalore – 560 093.

Contact details of the Concerned Officer
Shri Elisela Srinivasa Rao, AE (QS&C),
AGE (Contracts)
Phone : 080 – 25242526
Email : e8geirdwestbangalore@gmail.com

APPENDIX 'A' TO NOTICE INVITING TENDER (Contd..)**Copy to :-**

1. HQ DRDO (RD-28), Directorate of Civil works and Estates, DRDO Bhavan, A-wing, Marg, New Delhi-110 011
2. ADG (Coast Guard & Projects), Military Engineer Services, C/o HQ Coast Guard (East), Near Napier Bridge, Chennai – 600 009 (TN)
3. CE R&D Secunderabad, Opp Jubilee Bus station, Picket, Secunderabad-500003
4. CWE(AF) South, Gangamma Circle, Opp Main Guard Road, 410 AF Station, Jalahalli, Bangalore-560013
5. CWE (AF) North, MES, Bellary Road, JC Nagar Post, Bangalore-560006
6. CWE (Army), No 101, Dickenson Road, Shivan Chetty Garden-post, Bangalore-560042
13. MES Builders Association of India, 8013-88, Sahyog 58, Nehru Place, New Delhi- 110019
8. MES Builders Association of India, No 1012/B, 113th D Cross, Indira Nagar, II Stage, Bengaluru-560038
9. EE (C), PCWE, Kendriya Sadan, Koramangala, Bangalore-34
10. Chief Engineer (Construction), Southern Railways, Cantonment, Bangalore.
11. Chief Engineer (C&D), KPWD, New Public Office Commission Bldg, K.R. Circle, Bangalore-1
12. CE, Karnataka, Telecom Zone, 3rd Floor, Admin Bldg, CTO, Compound, Raj Bhavan Road, Bangalore-1.
13. AGM (E&C), Air Port Authority of India, HAL Air Port, Bangalore
14. ISRO Satellite Centre, Post Box No. 11395, Old Airport Road, Vimanapura Post, Bangalore-5600113
15. GE (Central), MES, Agram Post, Bangalore-5600013
16. DGM (Plant Maint) Engine Division, HAL (BC), CV Raman Nagar, Post, Post Bag No 9310, Bangalore-560093
113. Department of space, Group Head, Construction & Maint Group, ISTRAC, Bangalore-58.
18. GE (South), No.1, Ulsoor Road-Post, Post Box No 4232, Bangalore-560042
19. GE (North), T/64, Meanee Lines, MEG & Centre, Bangalore-560042
20. CE (AF)Bangalore, No-2, DC Area MES Road, Goreguntepalya, Yeshwantpur, Bangalore-5600213.
21. GE (M) (AF) Jalahalli, MES, Jalahalli, Bangalore-560013
22. GE (P) Bangalore.
23. GE (AF) Hebbal, MES, HQ Training Command, IAF Campus, Hebbal, Bangalore-006
24. GE (AF) Yelahanka, AF Station Yelahanka, Naga Bangalore Cross, MES Yelahanka, Bangalore-560063.
25. GE (AF) Marathahall, Wind Tunner Road, Kempapura Yemaluru-Post, Bangalore-5600313
26. AGE (I) (AF) Chimney Hills, AF Station Chikkabanavara – Post, Bangalore-560090

INSTRUCTIONS ON FILLING AND SUBMISSION OF TENDER**1. EARNEST MONEY DEPOSIT :**

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 any one of the following forms, along with their tender / bid :-

- (a) Deposit at Call Receipt from a scheduled bank in favour of **GE (I) R&D (WEST) Bangalore - 560 093**
- (b) Receipted Treasury Challan for the amount being credited to the Revenue Deposit of **GE (I) R&D (WEST) Bangalore - 560 093**

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 the **GE (I) R&D (WEST), Bangalore.**

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 & hard copy before the date and time fixed for opening of BOQ) WILL RENDER THE BID DISQUALIFIED FOR OPENING OF COVER II (FINANCE BID).

- 1.2 All bidders are exempted from submission of EMD except those who become in eligible from such exempted as mentioned in Para 1.3 here-in-after.
- 1.3 Bidders if withdraw or modify bids during the period of validity, or if awarded the Contract (s) and on being called upon to submit the Performance Security Deposit / Security Deposit, fail to submit the Performance Security / Security Deposit before the deadline defined in the request for bid documents / Notice inviting Tender, shall be debarred from exemption of submitting Bid Security / Earnest Money Deposit for a period of 06 (Six) months, from the date declared disqualified from exemption from submission of Earnest Money Deposit / Security Deposit, for all tender issued by MES during this period.
- 1.4 All bidders shall be required to sign the Bid Security Declaration as below : -

"I / We here by understand and accept that if I/We withdraw or modify my / our bids during the period or validity, or if I / We are awarded the contracts and on being called upon to submit the Performance Security / Security Deposit, fail to submit the Performance Security Deposit before the deadline defined in the request for bid documents / Notice Inviting Tender, I/We shall be debarred from exemption of submitting Bid Security / Earnest Money Deposit for a period of 06 (Six) months, from the date I / We are declared disqualified from exemption from submission of Earnest Money Deposit / Security Deposit, for all tender issued by MES during this period."

2. GENERAL INSTRUCTIONS FOR COMPLIANCE:

- 2.1 The bids received only in electronic form will be considered. All bids shall be submitted on www.defproc.gov.in / www.eprocuremes.gov.in portal. Documents should be scanned and forwarded in "pdf" form or "xls" form as indicated.
- 2.2 Tenders/bids (quoted Bid of BOQs) shall be uploaded on '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 e-mail / fax / by hand / through post will be considered.

INSTRUCTIONS ON FILLING AND SUBMISSION OF TENDER (Contd.,)

- 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, dated and witnessed at all places provided for in the documents after acceptance. All corrections shall be initialed. The contractor shall initial every page of tender and shall sign all drawings forming part of the tender. Any tender / bid, which proposes alterations to any of the conditions whatsoever, is liable to be rejected.
- 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 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 conforming 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 other 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.
- 2.13 Even in case of firms or companies which have already given power of attorney to an individual authorizing him to sign tender and in pursuance of which tender documents are being signed by such person as a routine, fresh power of attorney duly executed in his favour stating specifically that the said person has authority to bind such partner(s) 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 the power of attorney shall be executed in accordance with the Constitution of Company as laid down in Memorandum and Articles of Association.
- 2.8 Hard copies of all above documents shall 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 Bids (Cover 1 & 2) shall be uploaded online well in time.
- 2.10 The contractor shall employ only Indian Nationals after verifying their-antecedents and loyalty. Attention is also drawn to Special Condition 3 and also conditions 24 and 25 of IAFW-2249 (General conditions of contracts).
- 2.11 Tenderers / bidders who uploaded their priced tender / bids and are desirous of being present at the time of opening of the tenders/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 summarily rejected.
- 2.13 In case the tenderer/bidder has to revise / modify the rates quoted in the BOQ (excel sheet) or he can do so only in the BOQ, through "www.defproc.gov.in" site only before the bids closing time and date.

INSTRUCTIONS ON FILLING AND SUBMISSION OF TENDER (Contd.,)**3. CPM (Critical Path Method)**

- 3.1 The project planning for work covered in the scope of tender is based on CPM.
- 3.2 The tenderer 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.
- 3.3 The tenderers/bidders attention is drawn to special condition of the tender regarding preparation of the detailed network analysis and time schedule for the works 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 insufficiency and will affect his class of enlistment and future prospects/ invitation to tender for future works.
- 3.4 The department may issue amendments / errata's in the form of CORRIGENDUM to the tender/revised BOQ to the tender documents. The tenderer/bidder is required to read the tender documents in conjunction with all the errata / corrigendum/amendments, if any, issued by the department.
- 4.0 In case of any tampering / alteration is noticed between the documents as uploaded at the time of bid online and the original one as uploaded by the office of **GE (I) R&D (WEST), Bangalore**, then the bid submitted shall become invalid and the Government shall without prejudice to any other right or remedy be at liberty to forfeit the said earnest money as aforesaid.
- 5.0 These instructions shall form part of the contract documents.

Signature of Contractor
Date:

AGE (Contracts)
for Accepting Officer

(In lieu of IAFW 113139-A Revised (1955))

(TO BE READ IN CONJUNCTION WITH GENERAL CONDITIONS OF CONTRACT IAFW – 2249)

Telephone: 080 – 25242526
email : e8geirdwestbangalore@gmail.com

Garrison Engineer (I) R&D (WEST)
Military Engineer Services,
DRDO Complex,
CV Raman Nagar PO
Bangalore – 560093

8212 / 06 / E8

27 Oct 2023

MILITARY ENGINEER SERVICES**ITEM RATE TENDER AND CONTRACT FOR WORKS REQUIRED IN THE EXECUTION OF****TENDER ID : 2023_MES_605904_2****REPAIR/REPLACEMENT TO VARIOUS BUILDING ROOF TREATMENT AND GUNNING WORK TO CHAJJA COLUMN BEAM FLOOR SLAB, SUNKEN SLAB, STAIR AND ALLIED WORKS OF DRDO COMPLEX PHASE-I, CV RAMAN NAGAR, BANGALORE**

1. M/s. _____ of _____ is / are hereby authorised to tender for the above work. The tender is to be uploaded in the "www.defproc.gov.in" site before **1800 hours on 11 Nov 2023**.

Any correspondence concerning this tender should be addressed quoting the reference to Garrison Engineer (I) R&D (West) Bangalore – 560 093 and marked as **CA NO .GE(I) R&D (WEST) / BAN /TOKEN / 59 OF 2023 – 2024**.

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

Signature of Contractor

Date:

Signature of Officer
Issuing the Documents
Appt: AGE (Contracts)
for Garrison Engineer (I) R&D
(WEST) Bangalore - 93

Dated : **27 Oct 2023**

(In lieu of IAFW – 113139A (Revised 1955))

SCHEDULE 'A'**(LIST OF WORKS AND PRICES)**

1. The entire work covered under this contract shall be completed within a period of **270 days** from the date of handing over of site.
2. For Schedule of items refer BOQ sheet in Excel format.
3. The quantities shown in schedule (BOQ sheet) in column 3 are approximate and are inserted as a guide only. They do not constitute any guarantee of the ultimate quantities which will be ordered on the contractor. They shall not however be varied beyond the limit laid down in condition 13 of IAFW- 2249 (General conditions of contract).
4. The contractor shall enter the unit rate in column 5 of BOQ. The unit rates in figure shall be entered only.
5. Unless otherwise specifically stated in the description of the items, the unit rates quoted in Col 5 shall be deemed to include for all materials and labour complete required for executing the respective items of works.
6. (a) The unit rate quoted by the tenderer against respective items of schedule 'A' shall be deemed to include all minor details of construction of work, not specifically mentioned in description of schedule 'A' items and/or in the particular specifications/ drawing and which are fairly and obviously intended/essential for the execution of work in a workmen like manner and sound construction.

(b) In case of difference of opinion between the contractor and the GE as to, whether or not certain items of work constitute "Minor constructions details" which is deemed to have been included in the contractor's quoted rates, the decision of the Accepting Officer shall be final, conclusive and binding.
13. The description of Schedule 'A' items in BOQ sheet (Excel format) are brief. These shall be read in conjunction with particular specifications, special conditions, method of measurements, preambles contained in MES schedule and General conditions of contracts IAFW- 2249.
8. The tenderer's quotation shall be deemed to include all taxes, statutory levies/duties, such as GST, Labour welfare tax, EPF, ESI, etc., as levied by the Central & State Government payable under respective statues as applicable from time to time. Any other conditions stipulated by the tenderer on taxes/duties will not be considered and such tender shall be liable for rejection. The taxes liable to be paid as per statutory shall be considered by the Contractor while quoting their rates for this work and no claim of contractor, in this regard, shall be entertained at a later date. The contractor shall note this point and any condition to this effect will be treated as the **CONDITIONAL TENDER** and the tender thus quoted and submitted shall be rejected
9. **The scope of work caters for carrying out following works :**
"SPECIAL REPAIRS TO ROOF TREATMENT WITH ALLIED WORKS AND PROVISION OF STAGING TO OVERHEAD WATER TANK AT DIRECTOR ENCLAVE BLDG NO. E1, E2, E8 & E9 IN DRDO TOWNSHIP, PHASE-I, BANGALORE".
10. The Bldgs in which repairs/ services are required to be carried out are under under occupancy. Contractor shall account for various factors involved for executing connected items. Contractor shall not have any claim in this regards. **Maximum height of Bldgs in which works shall be carried out under this Contract is G+4. Contractor rates shall deemed to include necessary scaffolding / shuttering as required under respective items. Nothing extra will be paid in this regards.**

SCHEDULE `A' (Contd.)

11. The tenderers are advised to visit the site with prior information to GE, to ascertain the conditions of working at site. The contractor shall be deemed to have satisfied himself as to the nature of works, local facilities including type and nature of approach available to various locations of works and different mode of conveyance of materials, T&P etc., which will be involved in the subject tender, and all matters affecting the execution and entire completion of work. The rates quoted shall be deemed to include considering all these site conditions and nature of works involved in the subject tender. No extra charges due to misunderstanding or otherwise what so ever shall be allowed.
12. Contractor's further attention is invited to note the following and shall quote their rates accordingly. No claim whatsoever shall be admissible on this account.
 - a) The contractor should ensure that the labours provided shall carry an identity card duly signed by Engineer in Charge without any extra cost to state.
 - b) Contractor shall take all precautionary measures to avoid any inconvenience to the users. The site of work shall be left clean and tidy after day's work. No obstruction to passage shall be made by dumping materials during progress of work.
 - c) Any damage caused to any existing structure, etc., due to bad workmanship/ negligence of his workers, the same shall be rectified/ replaced by the contractor at his own expenses to match with the existing surfaces. Decision of GE in this regard shall be final and binding.
13. Total amount in Column of BOQ is not firm but will be treated as the "Contract Sum" referred to in IAFW-2249. Tenderer has to visit the BOQ pages of tender for quoting the rates of each item of the Schedules.
14. Cost of all minor constructional details which are not specifically shown or given in the particular specifications and are essential to the execution of work and services in workman like manner and sound Engineering Practice/ Construction Principles is deemed to be catered for in the rate quoted by the tenderer.
15. The descriptions inserted in BOQ are in brief. The unit rate quoted shall be deemed to include inter-alia the description given in particular specification read together with Schedule of works.
16. The rates quoted shall also include for all provision of labour regulation status promulgated by Central Govt/State Govt.
- 113 Contractor's attention is invited to Labour Wages Act with regards to payment of wages to the individuals engaged under this work. Contractor shall pay the wages through bank accounts and submit the particulars while claiming any payment. In case, payment is made in currency Coins or Notes, certificate shall be submitted by the firm alongwith undertaking by the concerned workmen asking for payment other than by cheque or by crediting in the bank account of the employee / workman and the same shall be submitted to the department while claiming any payment.

SCHEDULE OF CREDIT**NOTES:-**

1. The credit shall be offered for the materials obtained from dismantling/demolition as per Schedule 'A' is detailed below. The credit assessed by the department is only rough indication and the contractor shall have no claim what so ever against the Government, irrespective of the condition of the materials obtained from site and if the actual cost of the salvaged materials turnout to be different from the amount assessed by the department.
2. The quantities inserted in column 5 are provisional and the tenderer will have no claim if the quantities obtained turnout to be different on execution. The quantities of these items as measured against corresponding demolition/dismantling items shall only be considered. The assessed rate of credit shown in column 6 is for the materials as in position
3. The credit amount will be carried over to Summary to arrive at the contract sum.
4. The items in this Schedule shall not be reused/ incorporated in the work and it shall be removed out of site after getting permission of Engineer-in-Charge in writing.
5. The materials listed in this Schedule with quantity actually obtained shall be recorded in the Measurement Book and abstracted and this amount shall be deducted from the value of work done under Schedule 'A'. The contractor will not be allowed to remove the materials listed in this Schedule till such time the value of work done by him is more than the value of credit for such materials.
6. Any serviceable materials obtained other than those mentioned in Schedule of credit shall become property of Govt and shall be removed to store yard to GE (I) by the contractor without any extra cost.

Sl No	Brief Specification of items	Ref sch 'A' item No	Unit	Qty	Rate	Amount in
1	2	3	4	5	6	13
1	Unserviceable Brick bats		Cum	6.00	250.00	1500.00
2	Unserviceable GI tubing 15 mm dia.		RM	20.00	12.00	240.00
3	Unserviceable GI tubing 20 mm dia.		RM	200.00	15.00	3000.00
4	Unserviceable gate valve 20mm bore		Each	25.00	20.00	500.00
5	Unserviceable PVC water tank 1000 Ltr Cap		Each	5.00	300.00	1500.00
6	Unserviceable PVC water tank 750 Ltr Cap		Each	5.00	250.00	1250.00
7	Unserviceable PVC water tank 500 Ltr Cap		Each	5.00	200.00	1000.00
8	Unserviceable ball valve etc of any description		Each	30.00	2.00	60.00
9	Unserviceable PVC pipe 75/110mm of any size. & description		RM	150.00	5.00	750.00
10	Unserviceable PVC Bend, Elowb ,Tee, Floor /nani trap any description etc.		Each	35.00	2.00	70.00
11	Iron Scrap		Kg	1800.00	15.00	27000.00
Total of Schedule of Credit:						36,870.00

Signature of Contractor
Dated :

AGE (Contracts)
for Accepting Officer

SUMMARY

- a) Total Amount of Sch 'A' Brought forward from SI Page No 28 : ₹.
- b) **Deduct** :- Schedule of Credit Brought forward from SI Page No 29 : (-) ₹ 36,870.00

Contract Sum : ₹

(Rupees _____ Only)

Signature of Contractor
Date

AGE (Contracts)
For Accepting Officer

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

Ser No	Particulars	Rate at which materials will be issued to the contractor		Place of issue (by name)	Remarks
		Unit	Rate		
			Rs. P		
1	2	3	4	5	6
NIL					

SCHEDULE 'C'
LIST OF TOOLS AND PLANTS OTHER THAN TRANSPORT
WHICH WILL BE HIRED TO THE CONTRACTOR
(See conditions 15, 34 and 35 of IAFW-2249)

Ser No	Quantity	Particulars	Details of MES crew supplied	Hire charges per unit of working day	Stand by charges per unit per off day	Place of issue (by name)
1	2	3	4	5	6	13
-----NIL-----						

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

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

Signature of Contractor
Dated :

AGE (Contracts)
for Accepting Officer

(In lieu of IAFW 113139-A (Rev 1955))

TENDER

To THE PRESIDENT OF INDIA

Having examined and perused the following documents:-

1. Specifications signed by Assistant Garrison Engineer (Contracts), GE (I) R&D (West), Bangalore – 560 093
2. Drawings detailed in the specifications.
3. Schedule 'A', 'B', 'C' and 'D' attached hereto.
4. MES Standard Schedule of Rates – 2009, Part I (Specifications) and Part II (Rates) of 2020 (hereinafter and in IAFW – 2249 referred to as the MES Schedule) together with Amendment No. 01 to 03 for Part – I as applicable to the above said Schedule.
5. General conditions of contracts, IAFW-2249 (1989 Print) together with amendment Nos 1 to 48 and errata Nos 1 to 20.
6. Water: Condition 31 of IAFW 2249: General Conditions of Contracts.
- 6.1. Water will be supplied by MES and shall be paid by the contractor at Rs.3.135 for every Rs. 1000/- worth of work done at contract rates
7. SHOULD THIS TENDER BE ACCEPTED

I / We agree

(a) That the sum **₹ 66,000.00 (Rupees Sixty six thousand only)** forwarded as earnest money shall either be retained as a part on account of the **Performance Security (5% of Contract Sum)** or shall be repaid by the Government on receipt of the full amount of Performance Security within the time specified in Condition 19 of IAFW-2249.

(b) To execute all the work referred to in the said documents upon the terms and conditions contained or referred to therein at the item rates contained in the aforesaid Sch 'A' or at such other rates as may be fixed under the provision of conditions 62 and to carryout such deviations as may be ordered vide condition 13 of IAFW – 2249 upto a maximum of **10% (TEN) percent** and further agree to refer all disputes, as required by the condition 130 of IAFW-2249 to the sole Arbitration of a serving officer having degree in Engineering or Equivalent of having passed final/ Direct final examination of sub division II of Institution of Surveyor's(India) recognized by the Govt of India to be appointed by Chief Engineer R&D Secunderabad or in his absence the Officer officiating as Chief Engineer R&D Secunderabad, if specifically delegated in writing by the Chief Engineer R&D Secunderabad, whose decision shall be final, conclusive and binding.

(In lieu of IAFW-113139-A (Revised 1955))

TENDER (Contd...)Signature: _____
(With Name in Block Letters)In the capacity of _____ fully authorised to sign the tender for and
on behalf of _____ (In block letters).

Date : _____

Witness : _____ Postal Address : _____

Address : _____

_____Telegraphic Address _____

Telephone: (Office) _____

(Res) _____

(Mobile) _____

ACCEPTANCE

_____ alteration have been made in this document and as evidence that these alterations were made before the execution of the contract agreement they have been initialed by the contractor and AGE (Contracts). The said officer is / are hereby authorised to sign and initial on my behalf the documents forming part of this contract.

The tender was accepted by me on behalf of the President of India at the Item Rates contained in Schedule 'A' on the _____ day of _____ 2023.

Appointment:

(Biswajit Mandal)

Lt Col

Garrison Engineer (I) R&D (West)

DRDO Complex, CV Raman Nagar PO

Bangalore-560 093

(For and on behalf of the President of India)

Dated this _____ day of _____ 2023

GENERAL CONDITIONS OF CONTRACTS (IAFW-2249) 1989 PRINT

FOR

MEASUREMENT CONTRACTS (IAFW-113139-A)

1. It is hereby agreed by me/us that the General Conditions of Contract including Conditions 130 pertaining to the settlement of disputes by arbitrator (IAFW-2249 - 1989 Print) containing 33 pages (Serial Page Nos. **34 to 66**) with errata Nos 01 to 20 and amendment Nos 01 to 48 there to containing 29 Pages (Serial Page Nos. **67 to 95**) form an integral part of the tender documents.
2. This tender submitted by me/us * is subject to the aforesaid General Conditions of Contracts IAFW-2249 an amended copy of which has been supplied to me/us * and is in my/our possession and which I /we* have read and fully understood before submission of the tender.
3. My/Our * signature there under is in token of my/our * having accepted the aforesaid General Conditions of Contracts together with errata and amendments (IAFW-2249, 1989 Print) and the clause relating to arbitration forming an integral part of this tender.
4. It is agreed that in the event of any discrepancy in the English and Hindi version of IAFW-2249, the contents in English will prevail.

* Delete which is not applicable.

AGE (Contracts)
for Accepting Officer

Signature of Contractor
Date :

SCHEDULE OF MINIMUM FAIR WAGES

1. It is an express condition of contract that the schedule of Minimum fair wages form part of this contract and Contractor is liable to pay minimum wages to labour/worker engaged under the contract as per notification issued by Central/State Government whichever is high.
2. It is also an agreed condition of this contract that the Minimum wages Act and provisions catered there-in form part of this contract agreement.

AGE (Contracts)
for Accepting Officer

Signature of Contractor
Date :

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 amendments and errata thereto. If provisions in these special conditions are at variance with the provisions in the aforesaid documents, the provisions in these special conditions shall be deemed to take precedence there over.
- 1.2 The work under this Contract shall be carried out in accordance with Schedule “A”, the particular specifications, drawings and other provisions in MES Schedule.
- 1.3 The term General specifications referred to here as well as referred to in IAFW – 2249 (General conditions of contracts) shall mean the specifications contained in MES Schedule.

2. MES SCHEDULE

- 2.1 Contractor’s special attention is invited to the fact that this tender is based on MES Schedule mentioned on tender page including Errata / Amendments there to as applicable.

3. GENERAL CONDITIONS OF CONTRACTS IAFW – 2249 (1989 PRINT)

- 3.1 Wherever “IAFW–2249” is mentioned it means General conditions of contracts IAFW–2249 (1989 Print) including Errata/Amendments as applicable.
- 3.2 Wherever the letters “C.W.E.” (Commander Works Engineers) have been referred to in General Conditions of Contracts IAFW – 2249, (1989 Print), the same shall be amended to read as “CE” (Chief Engineer).

4. SECURITY OF CLASSIFIED DOCUMENTS (REFER CONDITION 2A AND 3 OF IAFW – 2249).

- 4.1 Contractor’s special attention is drawn to conditions 2A and 3 of General Conditions of Contracts (IAFW – 2249) and also to the Indian Official Secret Act – 1923 (Particularly Section 5). The contractor is bound by the provisions of the Act. The contractor shall not communicate any classified information regarding works either to sub-contractor(s) or others without prior approval of Engineer-in-Charge. The contractor shall also not make copies of the design/drawings and other documents furnished to him in respect of works and shall return all the documents on completion of the work or on earlier determination of the contract. The contractor shall along with final bill attach receipt from Engineer-in-Charge in respect of his having returned the classified documents as per condition 3 of the General Conditions of Contracts (IAFW – 2249).

4.2 OFFICIAL SECRET ACT

- 4.2.1 The contractor shall be bound by the official secret act and particularly Section 5 thereof.

SPECIAL CONDITIONS**5. INSPECTION OF SITE AND RELEVANT DOCUMENTS (REFER CONDITION 4 OF IAFW – 2249)**

- 5.1 The contractor is required to visit the site of works and make himself thoroughly acquainted with the working conditions and/or the approaches/accessibility to site availability of materials and all other relevant conditions affecting the completion of entire work. He is required to make himself fully acquainted with the nature and scope of the work before tendering. For the purpose of inspection of relevant documents other than those sent herewith, the contractor is required to contact the Garrison Engineer who will give reasonable facilities. The contractor shall be deemed to have visited the site before submitting the tender whether he does it or not.

6. MATERIALS AND SAMPLES (REFER CONDITION 10 OF IAFW - 2249)

- 6.1 The tenderer is advised to inspect samples of the local building materials maintained by the GE before submitting his tender. He will be deemed to have full knowledge of these materials whether he inspects them or not the materials to be provided by the contractor shall conform to/ shall be superior to the standard of samples displayed in the office of Garrison Engineer in the matter of quality unless otherwise specified.
- 6.2 Items conforming to Indian Standard Specification shall be accepted only when ISI marked materials are not manufactured. Material such as glazed tiles, AC sheets, AC rain water pipes, paint, bib taps and pillar taps, sanitary fittings etc., which are considered superior to IS specifications by the GE may be used without any extra cost to Government. However before incorporating such materials / Items, the contractor shall produce necessary test certificates as required by the GE.
- 6.3 The contractor shall produce samples of materials for incorporation direct to the GE with copy to the Accepting Officer and get them approved in writing by the GE before commencement of work. All approvals of materials shall be in writing from GE to contractor. The materials, articles etc., as approved shall be labelled accordingly and shall be signed by GE and contractor and kept and displayed at the site of works.

13 CO-OPERATION WITH OTHER AGENCIES

- 13.1 The Contractor shall permit free access and generally afford reasonable facilities to other agencies of specialist nature of departmental workmen engaged by Government to carryout their part of the works, if any, under separate arrangements.
- 13.2 The contractor's price shall be deemed to cater for all the above contingencies and nothing extra shall be admissible on this account.

8 DAMAGE TO EXISTING STRUCTURE/BUILDING

- 8.1 Any, damage done to the existing structure during the execution of work shall be made good by the contractor at his own cost and the site of work left clean and tidy on completion. Rectification/reinstatement/making good etc., shall conform to the standard materials originally used in the work and finished work shall match with existing work in all respects to the entire satisfaction of the GE. In case of any dispute on this account, the matter shall be referred to the Accepting Officer whose decision in writing shall be final conclusive and binding.

SPECIAL CONDITIONS**9 CONTRACT LABOUR (REGULATION AND ABOLITION) ACT 19130**

9.1 The contractor when required to employ more than ten workmen on the works under this contract shall be bound by the Contract Labour (regulation and abolition) Act 19130 and rules framed there under. No contractor can undertake or execute his work without a license issued by a Licensing Officer.

10. MINIMUM WAGES: PAYMENT TO LABOUR (CONDITION 58 OF IAFW-2249)

10.1 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.

10.2 Contractor's attention is also drawn, amongst other things to the 'explanations' to the schedule of minimum wages referred to above.

10.3 The fair wages referred to in condition 58 of IAFW - 2249 shall be deemed to be the same as the minimum wages payable as referred to above upto date from time to time.

10.4 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.

10.5 The contractor shall have no claim whatsoever if on account of local factor and/or regulations or otherwise he is required to pay the wages in excess of minimum wages as described above during the execution of work.

11 CONTRACTOR'S AGENTS, REPRESENTATIVES AND WORKMEN (REFER CONDITION 25 OF IAFW – 2249)

11.1 The contractor shall employ only Indian Nationals as his representatives, servants, and workmen and verifying their antecedents and loyalty before employing them in works. He shall ensure that no person of doubtful antecedents and nationality is in any way associated with the work. If for reasons of technical collaboration or other considerations, the employment of any foreign nationals is unavoidable the contractor shall furnish full particulars to this effect to the Accepting Officer at the time of submission of the tender. As a proof that the contractor has employed only Indian Nationals, he shall render a certificate to GE(I) within one month from the date of acceptance of tender to this effect. In case the GE(I) desires contractor will have the police verification done for personnel employed by him.

11.2 The GE shall have full powers and without giving any reasons to order the contractor to immediately cease the employ in connection with this contract any Representatives, Agent, Servant and Workmen or employee whose continued employment is in his opinion undesirable. The contractor shall not be allowed any compensation on this account.

11.3 The Contractor's attention is also drawn to Condition 25 of IAFW – 2249 in this connection.

12 ELECTRIC SUPPLY

12.1 Electricity will not be supplied by the department. Contractor shall have to make their own arrangement.

SPECIAL CONDITIONS**13 GUARANTEE BOND / RETENTION MONEY :**

13.1 On acceptance of the tender, the Government may accept a Guarantee Bond or a Fixed Deposit Receipt from State Bank of India and its subsidiaries, Nationalised banks or Scheduled banks for **Performance Security Deposit/ Retention Money**. The Bank Guarantee shall be in the prescribed form which is available in the office of the **Garrison Engineer (I) R&D (West) Bangalore - 560093** for tenderers perusal. The period of validity of the Bank Guarantee Bond against Performance Security shall be initially valid upto the stipulated date of expiry of Defects Liability Period plus minimum 60 days beyond that.

14 RELEASE OF PERFORMANCE SECURITY (REFER CONDITION 19 AND 68 OF IAFW – 2249)

14.1 The Performance Security Deposit mentioned in Condition 19 of IAFW-2249 may be refunded to the contractor after expiration of the defects liability period (vide Condition 46 of IAFW-2249) by the GE provided always that the Contractor shall first have been paid the final bill and have rendered a No-Demand Certificate (IAFW-451).

14.2 Defects liability period for the subject work is **24 months from the certified date of completion of work**.

15. ROYALTIES

15.1 Reference condition of 14 of General Condition of Contracts (IAFW –2249) No Quarries on Defence Land are available.

16. PERIOD OF KEEPING THE TENDER OPEN

16.1 The tender shall remain open for the acceptance for a period of *60 (SIXTY)* days from the date on which the tender is due to be submitted.

113 NETWORK ANALYSIS:

17.1 The time and progress chart to be prepared as per Condition 11 of General Conditions of Contracts IAFW-2249 shall consist of detailed network analysis and a time schedule. The critical path network will be drawn jointly by the GE and the Contractor soon after acceptance of tender. The time schedule of the activities will be done by the Contractor so as to finish the work within the stipulated time. On completion of the time schedule, a firm calendar date schedule will be prepared and submitted by the Contractor to the GE who will approve it after due scrutiny. The schedule will be submitted in four copies within two weeks from the date of handing over the site.

17.2 During the currency of the work, the Contractor is expected to adhere to the time schedule and this adherence will be a part of the contractor's performance under the Contract. During the execution of the work, the contractor is expected to participate in the reviews and updating of the network undertaken by the GE. These reviews may be undertaken at the discretion of the GE, either as a periodical appraisal measure or when the quantum of work ordered on the Contractor is substantially changed through deviation order or amendments.

17.3 Any revision of the time schedule as a result of the review will be submitted by the contractor to the GE within a week for his approval after due scrutiny.

SPECIAL CONDITIONS

17.4 The Contractor shall adhere to the revised time schedule thereafter. In case of Contractor disagreeing with revised schedule, the same will be referred to the Accepting Officer, whose decision shall be final, conclusive and binding. CE's approval to the revised schedule resulting in a completion date beyond the stipulated date of completion shall not automatically amount to a 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.

17.5 Contractor shall mobilise and employ sufficient resources to achieve the detailed 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 intensive methods contemplated by him in his schedule, even though the time schedule is approved by the department.

18. SITE CLEARANCE (Refer condition 49 of IAFW – 2249, General Conditions of Contracts)

18.1 The contractor shall remove from the site all unused stores and huts and the like belonging to the contractor provided for the execution of work under this contract and the site of works shall be cleared off all rubbish and waste materials by the contractor and the site of works delivered in clean and tidy manner to the satisfaction of the Engineer-in-Charge on or before the date of completion. Nothing extra whatsoever will be paid to the contractor for such clearance of site.

18.2 The contractor shall clean all floors, remove cement lime / paint drops etc., clean the joinery, glass panes etc., touch up all painting work in connection with and leave the whole premises clean and tidy to the entire satisfaction of the Engineer-in-Charge before handing over the buildings.

19. STANDARD OF WORKMANSHIP AND FINISHES

19.1 To determine the acceptable, standard of materials and workmanship / final finishes and layout of fittings etc., the contractor shall execute stages of work viz., excavation, foundation concrete, walling up to plinth / lintel / roof levels, roofing, flooring, joinery, built-in items, finishes and the like and services i.e., internal electrification, water supply, plumbing, sanitary fittings at one location as directed and shall get it completed within the stipulated time under close supervision of Engineer-in-Charge and shall get it approved by the GE. The workmanship of various trades and finishes of the sample items shall serve as guiding samples for the remaining work.

19.2 Approval of the stages and workmanship of sample items shall be separately entered and approved in stage passing register giving reference block and quarter numbers for easy identification even at a later date.

20. OUT OF POCKET EXPENSES

20.1 Out of pocket expenses incurred by the tenderer in submitting this tender will not be reimbursed whether tender is accepted or not.

21. AVAILABILITY OF LAND FOR STORAGE OF MATERIALS / ACCOMMODATION FOR LABOUR

21.1 Delete the following in Para 1 of condition 24 of IAFW – 2249 General Conditions of contracts "In the event of areas of land allotted to him".

21.2 The contractor shall be permitted to store his materials including erecting temporary sheds and also erect his temporary workshops for storage materials and for fabrication at the area of land marked for this purpose on the site plan free of rent if it is on class "A-1 land. For other types of land he shall be charged a license fee of Rs.1/- per year or part the rest is each & every separate area of land allotted to him. No defence land is available for accommodation of Labour for which the Contractor shall make his own arrangement at his own expenses.

SPECIAL CONDITIONS**22. WORKING HOURS / DAYS**

22.1 The contractor or his workmen shall not be permitted to work on Saturdays, Sundays, holidays or after normal working hours without prior written permission of the GE.

23. WATER (REFER CONDITION 31 OF IAFW – 2249)

23.1 Water will be supplied by MES (refer Condition 31 of IAFW-2249, General Conditions of Contract) for the construction purpose and shall be paid for by the contractor at the rate of ₹ 3.135 per every ₹ 1,000.00 worth of work done at contract rate.

23.2 Water will be supplied by MES at the point(s) marked on site plan. As the water supplied by MES is likely to be intermittent, the Contractor shall make his own arrangements for storing the water required for the work, labour and workmen etc., at his own expense. It is an express provision of this contract that no claim from the contractor shall be admissible if the quantity of water supplied by the department is inadequate on account or any reason what-so-ever.

23.3. As the water supplied by MES is likely to be intermittent, the contractor shall be deemed to have ascertained the hours of availability of water before submitting this tender. MES do not guarantee the output of water supply or break down in the system.

24. SIGNING OF TENDER

24.1 The person signing the tender on behalf of another partner or on behalf of a firm shall attach with the tender a proper power of attorney duly executed in his favour by such other person or by all the partners, stating that he has authority to bind such other person(s) or the firm as the case may be in all matters pertaining to the contract including arbitration clause.

25. CONDITIONS OF WORKING IN RESTRICTED AREA

25.1 VISIT TO THE SITE BEFORE TENDERING:- Permission to enter the restricted area at the time of submission of tenders can be obtained through the Garrison Engineer. Tenderers are advised to send prior intimation to the GE about the particulars of their agents, representatives etc., if any, dates and time of their proposed visits so that necessary arrangements may be made by GE to secure admission. Whether a tenderer visits the site or not he shall be deemed to have full knowledge of the restrictions on entering into/exit/from and working within the Restricted Area.

25.2 **ENTRY / EXIT:-** The Contractor, his agent(s), representatives, workmen etc., and his materials, carts, trucks or other means of transport etc., will be allowed to enter through and leave from only from such gate or gates and such times as the GE or authorities in-charges of the Restricted Areas may at their sole discretion permit to be used. The contractor's authorized representative is required to be present at the place of entry and exit for the purpose of identifying his carts, trucks etc., to the personnel in charge of the security of Restricted Area.

25.3 **IDENTITY CARDS OR PASSES:** The contractor, his agents and representatives are required individually to be in possession of an identify card or pass duly verified by the Security Department of the restricted area. The identify card or pass will be examined the security staff at the time of entry into or exit from the Restricted Area and also at time or any number of times inside the Restricted Area.

SPECIAL CONDITIONS

- 25.4 **IDENTITY OF WORKMEN**: Every workman shall be in possession of an identity card. The identity card will be issued after thorough investigation of the antecedents of the workmen by the contractors and attested by the Officer in charge of the unit concerned in accordance with the standing rules and regulations of the units. Contractor shall be responsible for the conduct and action of his workmen, agents and representative.
- 25.5 **SEARCH**: Thorough search of all persons and transport shall be carried out at each gate and for as many times as a gate is used for entry or exit and may also be carried out at any time or any number of times at the work site within the Restricted Area.
- 25.6 **FEMALE SEARCHER**: If the contractor desires to employ female labour on works to be carried out inside the area of Factory, Depot, Park etc., and a female searcher is not borne on the authorized strength of the Factory, Depot, park etc., at the time of submission of the tender, he shall be deemed to have allowed in his tender for, pay and allowances etc., for a female searcher (Class IV Servant/Group "D" servant) calculated for the period female labour is employed by him inside that area. If more than one contractor employees female labour during any month and female searcher has/have to be employed in addition to the authorized strength of the Factory, Depot, Part etc., the salary and allowances paid to the additional female searcher(s) shall be distributed on an equitable basis between the contractors employing female labour taking into consideration the values and periods of completion of their contracts. The GE's decision in regard to the amount recoverable on this account from any contractor shall be final and binding.
- 25.13 **WORKING HOURS**
- 25.13.1 The units controlling restricted area, usually, work during five days in the week and remain closed on the 13th day. The working hours available to contractor's labour and staff may however appreciably reduced because of the time taken in security checks carried at the time of entry, exit and during working hours.
- 25.13.2 The exact working hours of the working days and non-working days observed for the restricted area, where works are to be carried out shall be deemed to have been ascertained by the contractor before submitting his tender. Tenderer's attention is invited to the fact that the total number of working hours for a unit is prescribed in regulations and they cannot be increased by the Garrison Engineer. The contractor has to produce police verification report of his supervisory staff and labour before commencement of work to the security section of unit controlling the area through GE.
- 25.13.3 Contractor's materials, transport, etc., will normally be permitted to go out of the area between 8 AM to 6 PM only.
- 25.13.4 The work shall be executed entirely in the restricted area. Normal working hours are from 0900 hours to 11300 hrs on working days.
- 25.8 **WORK ON HOLIDAYS**: The Contractor shall not carry out any work on gazetted holidays, weekly holidays and other non-working days except when he is specially authorized in writing to do so by the GE. The GE may at his sole discretion declare any day as holiday or non-working day without assigning any reason for such declaration.
- 26 **RE-IMBURSEMENT / REFUND ON VARIATION IN "TAXES DIRECTLY RELATED TO CONTRACT VALUE"**:

SPECIAL CONDITIONS

- (a) The rates quoted by the Contractor shall be deemed to be inclusive of all Taxes (including GST on works contract / GST on materials, Turnover Tax, labour welfare cess / tax etc.), EPF, ESI & other levies / taxes payable under the respective statutes (Central & State). 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 tax 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 GST on works contracts, Turnover Tax, Labour Welfare Cess / tax, EPF, ESI or any other taxes / levies (by Central & State Govt) 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 last due date for receipt of tenders. Any increase in percentage rates of “taxes directly related to Contract value” with reference to prevailing rates on last due date for receipt of tenders shall be reimbursed to the contractor and any decrease in percentage rates of “taxes directly related to Contract value” with reference to prevailing rates on last due to for receipt of tenders shall be refunded by the contractor to the Govt. / deducted by the Govt. from any payments due to the contract. Similarly imposition of any receipt of tenders shall be reimbursed to the Contractor and abolition of any “taxes directly related to Contract value” prevailing on last due date for receipt of tenders shall be refunded by the contractor to the Govt./ deducted by the Govt. from the payments due to the Contractor.
- (ii) The contractor shall, within a reasonable time of his becoming aware of variation in percentage rates and / or imposition of any further “taxes directly related to Contract value”, give written notice thereof to the GE stating that the same is given pursuant to this Special Condition, together with all information relating thee to which he may be in position to supply. The Contractors 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 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 necessary & 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”.

213 ADVANCE ON ACCOUNT OF MATERIALS WHICH DON'T LOSE INDENTITY

213.1 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 bonds from a Schedule for the amount of retention money which should otherwise be recoverable from him under the contract.

- (a) Cement, Steel sections and reinforcement
- (b) Aluminium sections
- (c) Pressed steel door frames
- (d) Wooden door shutters
- (e) PVC/flush doors and frames
- (f) Doors frames and shutters
- (g) GI tubing, taps, sanitary fittings and fixtures,
- (h) PVC pipes,
- (i) Plywood, block boards

SPECIAL CONDITIONS

- (j) Floor and wall Tiles
- (k) Glass
- (l) Water tanks, Sanitary fittings & fixtures, Taps, pipes and fittings
- (m) Stainless steel sinks, kitchen rack
- (n) All other non-perishable materials as decided by GE.

213.2 The Bank Guarantee Bonds shall be executed for a period on a form as directed by the Accepting officer. The contractor shall further arrange to extend the period of Guarantee Bond if any when necessary, as directed by the Accepting officer or shall furnish fresh Guarantee Bond of similar value.

213.3 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, precast concrete and similar items shall not be taken in the list.

28. RECORD OF MATERIALS AND PURCHASE VOUCHERS

(a) The quantity of materials such as cement, steel, paints, 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 book and signed by the contractor and the Engineer-in-Charge as check to ensure that the required quantity has been brought to site for incorporation in the work. Materials brought to site shall be stored as directed by the Engineer-in-Charge and those already recorded in Measurement Book shall be suitably marked for identification.

(b) Contractor shall produce vouchers/ invoice from the manufacturer and/or their authorized agents for the full quantity of the following materials, as applicable as a 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 Contract IAFW-2249.

(c) The contractor shall, on demand, produce to the GE, original receipted vouchers/ invoice in respect of the materials other than as stated in sub-para (b) Voucher/ invoices so produced and verified shall be stamped by Engineer-in-Charge indicating contract number. The contractor shall ensure that the materials are brought to site, in original sealed, container/packing, bearing manufacturer marking except in the case of the requirement of materials (s) being less than smallest packing.

(d) The vouchers/invoice will clearly indicate the contract number and the S No specific alternative to which the materials conform in case of various alternatives in IS.

29. FOREIGN EXCHANGE

29.1 Particular attention of the tenderer is drawn to the fact that all materials, machinery, plants, spares components etc. required to be supplied under this contract shall be from ready stocks or such as would be available within India except for such items of plant and equipment which are not of indigenous manufacture and are not otherwise totally banned for import by the Ministry of Commerce and Industry. No import license will be obtained by the department as such item will have to be arranged by the contractor against their own import quota.

29.2 All equipment and materials to be used in the work shall be new and of the best of their respective kind.

29.3. No foreign exchange shall be provided for by MES for any equipment / materials.

SPECIAL CONDITIONS**30. RECORD OF CONSUMPTION OF CEMENT**

30.1 The contractor shall maintain a bound register with serially numbered pages with all pages initiated by Engineer-in-Charge against numbering showing quantities of cement procured, received at site 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 daily by representative 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 consumed by the contractor. The register shall be kept at site in safe custody of the contractor representative during the progress of the work and on demand be produced for verification to the inspecting officer (s). On completion of the work the contractor shall deposit the cement register with the Engineer-in-Charge for record.

31.00 CONCILIATION**31.1 SCOPE OF CONCILIATION**

31.1.1 The scope of conciliation shall be restricted to the following types of disputes with financial limits as indicated therein:-

(a) Disputes relating to levy of compensation for delay in completion - Actual amount of compensation.

(b) Disputes relating to technical examination of works.

(c) Disputes relating to interpretation of the provisions of the contract with reference to their application to parties.

(d) Disputes relating to non-return of schedule 'B' stores over-issued to contractor.

(e) Any other disputes having fair chances of being resolved by conciliation and considered fit to be referred to conciliation by the parties.

For item (b), (c), (d) and (e) each as stated above the financial limit shall be Rupees two Lakh or one percent of the contract amount whichever is less.

31.2 COMMENCEMENT OF CONCILIATION PROCEEDINGS

31.2.1 The party initiating conciliation shall send to the other party written invitation to conciliate, briefly identifying the subject of the dispute.

31.2.2 Conciliation proceedings shall commence when the other party accepts in writing the invitation to conciliate.

31.2.3 If the other party rejects the invitation, there will be no conciliation proceedings. If the party initiating conciliation does not receive a reply within 30 days from the date on which he sends or within such other periods of time as specified in the invitation, he may elect to treat this as a rejection of the invitation to conciliate and if he so elects, he shall inform in writing the other party accordingly.

31.3 NUMBER OF CONCILIATORS

31.3.1 There shall be a Sole conciliator.

31.4 STATUS OF EFFECT OF SETTLEMENT AGREEMENT

31.4.1 The settlement agreement signed by the parties as a result of conciliation proceedings shall have the same status and effect as it is an arbitral award on agreed terms.

SPECIAL CONDITIONS**32.0 HANDING OVER OF SITE**

32.1 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 program accordingly. No claim whatsoever, for not giving entire site on award of work and for giving site gradually, will be tenable

33. PERFORMANCE SECURITY

33.1 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.

33.2 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.

33.3 Failure of the successful contractor to comply with the requirement of clause 33.1 here-in-before 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 Govt Treasury.

33.4 (i) All compensation or other sums of money payable by the contractor to the Government under the terms of this contract or under any other contract with Government may be deducted from, or paid by the sale of a sufficient part of the Performance Security or from the interest arising there from or from any sums which may be due or become due to the contractor by the Government on any account whatsoever and in the event of his Performance Security being reduced by reason of any such deduction, or sale as aforesaid, the contractor shall within ten days thereafter make good in cash or securities, endorsed as aforesaid, any sum of sums which may have been deducted from or realized by the sale of his Performance Security or any part thereof.

(ii) 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.

33.5 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".

34. BANK GUARANTEE BOND AGAINST PERFORMANCE SECURITY (REFER PARA 33 HERE-IN-BEFORE)

34.1 Condition 19.1 of IAFW-2249 provides for submission of Performance Security by the successful contractor in the form of Bank Guarantee Bonds or Govt Securities, FDR or any other form of deposit stipulated by the Accepting Officer.

SPECIAL CONDITIONS

- 34.2 The Performance Security shall be in favour of Accepting Officer and shall be in any of the forms mentioned above. Work Order No 1 shall be placed only after submission of Performance Security of adequate value by the Contractor. In case a fixed deposit receipt of any Bank is furnished by the Contractor to the Government as part of the Performance Guarantee and the Bank is unable to make payment against the said fixed deposit receipt, the loss caused thereby shall fall on the Contractor and the Contractor shall forthwith on demand furnish additional security to the Government to make good the deficit.
- 34.3 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.
- 34.4 Form for Bank Guarantee Bond against Performance Security Deposit shall be same as Appendix 2.1 of MES Manual on Contracts 20013 (Reprint 2012) with “security deposit” in Para 1, line 4 replaced by “Performance Security Deposit”.
- 34.5 The period of validity of the Bank Guarantee Bond against Performance Security shall be initially valid upto the stipulated date of expiry of Defects Liability Period plus minimum 60 days beyond that. In case final bill is not paid during this period, the Contractor shall get the validity of Performance Guarantee extended to cover such enlarged time required for payment of final bill.
- 34.6 The original Bank Guarantee Bond against Performance Security alongwith necessary certified copies shall be sent to the PCDA / CDA by the Accepting Officer for verification and then returning the original to the Accepting Officer and the certified true copies to the GE (I) & AAO. The original BGB shall be kept in the custody of the Accepting Officer.
- 34.13 The Accepting Officer shall evolve a procedure to ensure that timely action is initiated to have the validity date of the Bond extended by the Contractor, or to have it encashed before the same expires. For this purpose, a suitable register shall be maintained by the Accepting Officer.
- 34.8 In case at a later stage, on account of delay in completion of work or due to any other reason, it is considered that the validity date stipulated in the Bank Guarantee against Performance Security should be extended, then the contractor shall be directed by the Accepting Officer of the contract to have the validity extended before the date of validity expires. If the contractor fails to do so, the Bank Guarantee shall be encashed before expiry. The encashment notice shall be similar to the format given in Appendix 18.5 of MES Manual on Contract 20013 (Reprint 2012) with “in lieu retention money” in Para 1, line 2 replaced by “against Performance Security”.
- 34.9 In case the BGB is not encashed by the concerned Bank, the matter shall be referred to the Central Office of RBI in Delhi and Mumbai at the following address or any latest address which can be found from internet: -
- | | |
|--|---|
| (a) Jt Chief Officer
Deptt of Banking and Operations
Reserve Bank of India
Parliament Street
New Delhi-110 011 | (b) Reserve Bank of India
Central Office
Department of Banking Operations
& Development Centre-1
World Trade Centre
Cuffe Parade, Colaba
Mumbai-400 005 |
|--|---|
- 34.10 Bank Guarantee Bond in lieu of Performance Security is due for discharge on expiry of Defect Liability Period provided always that the Contractor has been paid the final bill and contractor has rendered the No Demand Certificate (IAFW-451). Immediately after expiry of Defects Liability period. GE concerned shall check and ascertain the position of final bill.

SPECIAL CONDITIONS

- 34.11 In case final bill has been paid, contractor shall be asked to submit the No Demand Certificate (IAFW 451), if not already submitted by him. After submission of No Demand Certificate (IAFW – 451), GE will intimate this fact to the Accepting Officer within a week who shall release the Bond duly discharge to the Contractor. Accepting Officer will ensure that no delay occurs in releasing the Bank Guarantee Bond.
- 34.12 In case final bill has not paid, the status thereof shall be ascertained by Accepting Officer and efforts will be made to get it cleared within one month of expiry of Defects Liability period. After clearance and payment of final bill contractor shall be asked to submit the No Demand Certificate (IAFW-451), if not already submitted by him. After submission of No Demand Certificate (IAFW-451) to GE and on receipt of the same, Accepting Officer shall release the Bond duly discharged to the Contractor without any delay.
- 34.13 If any recovery is outstanding against the Contractor, release of Bank Guarantee will be subject to compliance of the procedure for effecting the recovery / with-holding the due amount as stipulated in Condition 613 (as amended) of General Conditions of Contract.

35.0 **TESTING OF MATERIALS**

- 35.1 Refer Condition 10 of IAFW-2249.

Signature of Contractor
Date:

AGE (Contracts)
for Accepting Officer

PARTICULAR SPECIFICATIONS**1. GENERAL:-**

- 1.1 Specifications of materials and workmanship, General specification special condition, method of measurement etc., shall be all as described in MES standard schedule of Rates, 2009 Part-I (Specification) and SSR 2010 Part-II Rates including errata/amendments as applicable to this contract unless otherwise specified hereunder.
- 1.2 These particular specifications shall be supplementary to the specifications contained in the aforesaid MES Schedule, drawing and notes thereon. Where at variance, these particular specifications shall take precedence over the provisions contained in the MES Schedule. Wherever any materials are specified in these particular specifications to be obtained from particular source(s), the same shall be obtained from the source specified. These specifications shall apply to all items in the Sch `A' unless specifically excluded or stated otherwise.
- 1.3 The term "General Specification" referred in IAFW-2249 shall mean the specifications mentioned in MES Schedule.
- 1.4 All materials provided by the contractor shall be bear ISI mark. If ISI marked materials are not manufactured, materials shall confirm to ISI specification. All materials shall be tested as per relevant IS and the cost of the same shall be borne by the contractor.

2. SCOPE OF WORK

- 2.1 [The scope of work caters for carrying out “REPAIR/REPLACEMENT TO VARIOUS BUILDING ROOF TREATMENT AND GUNNITING WORK TO CHAJJA COLUMN BEAM FOOR SALB, SUNKEN SLAB, STAIR AND ALLIED WORKS OF DRDO COMPLEX PHASE-I, CV RAMAN,NAGAR,BANGALORE.”. The repairs consist of B/R works as specified in BOQ and as directed by Engineer-in-Charge.](#)
- 2.2 Approved samples shall be labeled as such and signed both by the contractor and the Engineer-in-Charge and preserved till final completion of the work. The materials shall be brought to site by the contractor in the makers wrappers/containers. Materials shall not be installed unless approved by the GE. Necessary test certificate for the materials from the manufacturers shall be produced by the contractor on demand.
- 2.3 The work is to be carried out in multistoried buildings and hence the tenderer may visit the site to physically ascertain the nature of work before quoting the rates. All equipment, tools and scaffolding involved shall be provided as per site requirement and the quoted rates shall be deemed to include for the same irrespective of the height at which the work is to be carried out.

3. DEMOLITION / DISMANTLING:

- 3.1 The demolition/dismantling shall be carried out without damage to existing structure/work. The demolished/dismantled material removed by the contractor to the places as directed by the Engineer-in-charge and the unit rate quoted included for the same. If any existing structure/ work is damaged due to dismantling/demolition the same shall be made good by the contractor without any extra cost to the department. The unit rate quoted shall deemed to be included for the same. The materials for which credit has been given by the contractor shall become the property of the contractor and same shall be removed after effecting necessary recovery.
- 3.2 The scope of work under dismantling includes dismantling the fittings/fixtures in places as directed by the Engineer-in-charge without causing any damage to any equipment. Any damage made to the equipment and surrounding shall be made good to match with the systems and the unit rates quoted by the contractor shall be deemed to be included for the above provision. In this connection relevant provision contained in section 21 of MES schedule part I shall be applicable.

PARTICULAR SPECIFICATIONS (CONTD...)**4. CONCRETE**

4.1 **CEMENT:** The Cement used shall be of 43 grade ordinary Portland cement conforming to IS : 8112-1989 or Portland Pozzolana cement conforming to IS : 1489-Part-I : 1991 specification for Portland Pozzolana cement, Part-I flash based. Cement bags shall bear ISI certification mark and date of manufacture.

4.1.1 The following checks and procedure shall be followed before the cement supplied by the contractor is accepted and is approval for incorporation in the work.

4.1.2. **PROCUREMENT:** Cement shall be procured from the following manufacturers/main producers :-

SI No	Name of Cement Manufacturer	Type of cement approved
(i)	M/s. The Associated Cement Companies Ltd., Brand : ACC	All Cement Grades
(ii)	M/s. Ultra Tech cement Ltd., - Brand ULTRATECH	All Cement Grades
(iii)	M/s. The India Cement	All Cement Grades
(iv)	M/s. Dalmia cement (Bharath) Ltd - Brand " DALMIA INFRA PRO "	All Cement Grades
(v)	M/s. Century Cement - Brand CENTURY	All Cement Grades
(vi)	M/s. Saurashtra Cement - Brand SAURASHTRA	All Cement Grades
(vii)	The Ramco Cements Ltd., (Formerly Madras Cement) – Brand " RAMCO "	All Cement Grades
(viii)	M/s. Mangalam Cement - Brand MANGALAM	All Cement Grades
(ix)	M/s. Birla Corporation Ltd. - Brand BIRLA	All Cement Grades
(x)	M/s. Orient Cement - Brand ORIENT	All Cement Grades
(xi)	Nuvoco Vistas Corporation Ltd., (Formerly Lafarge Cement) – Brand " NUVOCO "	All Cement Grades
(xii)	M/s. Shree Cement - Brand SHREE	All Cement Grades
(xiii)	M/s. JK Cement - Brand J K	All Cement Grades
(xiv)	M/s. JK Lakshmi Cement - Brand J K LAKSHMI	All Cement Grades
(xv)	M/s. Jaypee Rewa Cement - Brand JAYPEE	All Cement Grades
(xvi)	M/s. Ambuja Cement - Brand AMBUJA	All Cement Grades
(xvii)	M/s. Shree Guru Kripa Cement (Pvt) Ltd., Brand : SARTAJ	OPC 43 Grade, PPC
(xviii)	M/s. Parasakti cements Ltd - Brand PRASAKTI	OPC 43 Grade, PPC
(xix)	M/s. My Home Industries Ltd - Brand MAHA CEMENT	OPC 43 Grade, PPC & PSC
(xx)	M/s. Chettinad Cement corporation Ltd - Brand CHETTINAD	OPC 43 Grade, PPC
(xxi)	M/s. Sanghi Industries Ltd - Brand SANGHI	OPC 53 Grade, PPC
(xxii)	M/s. Wonder Cement Ltd., - Brand WONDER Cement	OPC 43, 53 Grade, PPC
(xxiii)	M/s. Kesoram Industries Ltd., - Brand BIRLA SHAKTI	OPC 43, 53 Grade, PPC
(xxiv)	M/s. JSW Cement Ltd., A.P. – Brand JSW PSC (Portland Slag Cement), JSW OPC 53, JSW OPC 43	OPC 43, 53 Grade, PSC
(xxv)	M/s. Sagar Cements Ltd., Brand : SAGAR	OPC 43, 53 Grade, PPC, PSC

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Note : Any other make of cement approved by E-in-C's Branch, New Delhi can also be used with the approval of GE. If any of above manufacturer is banned / removed by E-in-C's Branch, New Delhi (even after acceptance of tender) same shall not be allowed to be used in the work.

4.1.2.1 For repair and maintenance contracts, where entire requirement of cement is **less than 1200** bags, same can be procured from authorized dealers of the above firms.

4.1.2.2 The contractor shall furnish the particulars of the manufacturers of cement along with the date of manufacture to the GE for every lot of cement separately. The documents in support of the purchase of cement shall be verified by the site staff and GE. The cement so brought shall be fresh and in no case older than 60 days from the date of manufacture. Before placing the order for cement by the contractor, he shall obtain written approval from the GE regarding name of manufacture, quantity of cement etc. Based on the CPM chart finalised, monthly requirement of cement and the proposed date wise schedule of deliveries for bringing the cement at site shall be worked out by the contractor and the same shall be submitted to the GE for information and approval. Cement shall be procured for requirement of not 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 IS specification and each bag of cement shall bear relevant ISI Mark. The weight of each consignment shall be verified by the GE and recorded. The content shall be checked at random to verify the actual weight of cement per bag.

4.1.3. **USE OF PPC :**

For using PPC, the following requirements should be met :-

(a) PPC should meet the strength criteria of 43 Grade OPC as laid down in IS 8112-1989.

(b) Mixing of OPC & PPC shall not be permitted except for plaster and mortar.

(c) While procuring PPC, the following requirements are to be ensured and certificate to the effect is to be obtained by the contractor for each batch from the manufacturer and the same shall be submitted to the GE for approval to procure PPC.

- (i) The quality of fly ash is strictly as per IS-1489 (Part-I)-2002
- (ii) Fly ash is inter-ground with clinker not mixed with clinker.
- (iii) The fly ash content in PPC does not exceed 25%.

4.1.4. **TESTING OF CEMENT:**

4.1.4.1 The manufacture /main producer shall carry out inspection and testing of cement in accordance with the relevant BIS provisions. The Contractor shall submit the manufacturer's test certificate in original along with the test sheet giving the result of each physical test as applicable and the chemical composition of the cement or authenticated copy thereof, duly signed by the manufacturer with each consignment. The Engineer-in-Charge shall record these details in the cement acceptance register (Annexure 'IV') given here in after, after due verification. The GE may organize independent physical testing of random samples of cement drawn from each lot from NABL laboratories as NATIONAL TEST HOUSE, SEMT WING CME, REGIONAL RESEARCH LABORATORIES, IITs, MES ZONAL LABORATORIES, GOVT ENGINEERING COLLEGES and NATIONAL INSTITUTE & TECHNOLOGY as per relevant BIS and record the results in the relevant portion of cement acceptance Register (Annexure 'IV'). The random samples of cement to be tested shall be drawn as per Quality Assurance manual. The cost of materials for testing, samples, conveyance etc shall be borne by the contractor irrespective of the test result. However the cost of testing charges shall be governed in terms of condition 10(A) of IAFW 2249. In case as per the result of independent test, the cement is found to be not of requisite standard despite manufacturer's test certificate, the contractor shall remove the

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total consignment from the site within 24 hrs at his own cost after written rejection order of consignment by the GE.

4.1.4.2 The record of random samples selected by the GE for testing shall be properly maintained in the cement testing register given cross reference to relevant consignment of cement and quantity received etc.

4.1.4.3. The contractor shall be required to set up adequate testing facilities at site to the entire satisfaction of GE for conducting setting time test and compressive strength test as per BIS for the samples collected from the lot brought at site. These tests shall be carried out within 13days of receipt of cement as site. The test can alternatively be carried out at the zonal laboratory, or any other recognised laboratory so designated be GE.

4.1.4.4 The contractor shall be allowed to use the cement only after satisfactory compressive strength of 13 days. 13 days strength will be relied upon to accept the lot of cement, 28 days compressive strength test will be final criteria to accept/ reject the lot.

4.1.4.5 Storage:

A temporary cement storage shed of appropriate capacity shall be constructed by the contractor at the site for keeping the consignments of cement as and when brought at site. The cement shed shall meet the following requirement:-

- (a) The roof, walls, doors, windows, ventilators of storage accommodation shall not allow any leakage, seepage and dampness.
- (b) Suitable tonnage of height not less than 200 mm shall be provided to prevent deterioration due to moisture or intrusion of foreign matters.
- (c) Each cement consignment shall be staked separately; similarly the tested and untested cement shall be segregated and stored separately with distinct identification.
- (d) Cement bags shall be stacked at least 200mm away from the walls and adequate protective top cover shall also be provided.
- (e) Stacks in no case shall be higher than 10 bags and the stacks shall be arranged in header & stretcher fashion.
- (f) The cement go down shall be provided with two locks at each door. The key of one lock at each door shall remain with Engineer-in-Charge and the key of the other lock with contractor or his authorized agent at site of works so that cement is removed from the go down as and when required with the knowledge of both the parties.
- (g) The store shed shall be inspected once a day for ensuring proper preservation of cement bags & also for the purpose of taking out cement as per daily requirement.

4.1.4.6 Documentation: 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 GE and documents verified before acceptance. The original vouchers and the Test Certificates shall be defaced by the Engineer-in-Charge, signed by contractor and kept on record in the office of GE duly authenticated and with cross reference to the control number recorded in the cement acceptance register. This register will be signed by JE, Engineer-in-Charge, GE and the contractor. The accepting officer may order a Board of Officers for random check of cement and verification of connected documents. The entire quantity of cement shall also be suitably

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recorded in the measurement book (Not to abstracted) for record purposed before incorporation in the work and shall be signed by the Engineer-in-Charge and the contractor.

4.2 COARSE AGGREGATE

4.2.1 Coarse aggregate shall be crushed / broken hard granite graded from approved quarries.

4.3 FINE AGGREGATE

4.3.1 Fine aggregate for concrete work (lean, plain and reinforced concrete works (except pre stressed concrete and road work), masonry works shall be either natural river sand (conforming to materials specifications and grading within the limits of grading zones II to III all as specified in Clause 4.4 to 4.4.13.3 of MES Schedule Part -I) or Manufactured sand.

4.3.2 The Manufactured sand shall conform to IS 386:2016-Coarse and Fine Aggregate for Concrete Specifications (Third Revision). The Manufactured sand shall pass through 4.135mm IS sieve and shall contain only so much coarser material as permitted in Clause 6.3 of above specified IS code.

4.3.3 The Manufactured sand refers to fine aggregates Manufactured from other than natural sources, by processing materials, using thermal or other process such as separation, washing, crushing and scrubbing. It included Recycled Concrete Aggregate obtained from Construction & Demolition Waste. The Manufactured sand shall not have presence of any organic or deleterious materials and shall have controlled shape and size. While using Manufactured sand, following IS provisions shall be adhered to:

(a) IS 383:2016: Salient provisions as per Table & Clause 4.2.1, 5.13 and 6.3 & Table 9 to be followed.

(b) IS 2430 Method of sampling of fine aggregates.

(c) IS 2383 (Part 1 to Part 8) Testing of aggregates

(d) IS 4032 & IS 14959 Chemical tests for aggregates

4.4 WATER: Water used in concrete/rendering shall be clear fresh and non-saline.

4.5 MIXING DEPOSITING AND CONSOLIDATING

4.5.1 All cement concrete, plain and reinforced shall be machine mixed, deposited and rammed and/or compacted as specified in MES Schedule. The GE may however, approve hand mixing for small quantities of works. Compaction shall be done by means of mechanical vibrators for structural concrete. Hand packing/tamping with rods may be permitted by GE in locations where vibrators are not accessible.

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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. Manufacture’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)
13. Details of physical & chemical properties :-

1	Physical Requirements (As per IS 4031)									Chemical Requirements (As per IS 4031)								
	Specific Surfaces Area (SqM/Kg)	Soundness by Le Chatelier	Soundness by Auto Clave	Initial Setting Time (Minute)	Final settings time (Minute)	Compressive strengths (Mpa)			Temp during testing C	Standard consistency (%)	Lime saturation factor (Ratio)	Alumina Iron (Ratio)	Insoluble Residue (%)	Magnesium (%)	Anhydride(%)	Loss on ignition(%)	Alkalies(%)	Chlorides(%)
						03 days	013 days	28 days										
	2	3	4	5	6	13	8	9	10	11	12	13	14	15	16	11 3	18	19
As per relevant IS																		
As per manufacture's test certificate																		
As per random test																		

Remarks with Signature

Accepted/Rejected

Contractor

Junior Engineer

Engineer-in-Charge

Garrison Engineer

Remarks of BOO/Inspecting Officer

*to be allotted serially by the GE consignment wis

PARTICULAR SPECIFICATIONS (CONTD...)**5. STEEL AND IRON WORK**

5.1 Structural / Reinforcement steel required for the work under this contract shall be procured and supplied and incorporated in the work by the contractor under his own arrangement.

5.2. Steel supplied by the contractor for incorporation in the work shall be procured from Dealers nominated by and from : -

(i)	Steel Authority of India Ltd. – Brand SAIL	For all types and dia of TMT bars & Structural Steel (Angle, Beams, Column, Channel, Plate)
(ii)	Tata Iron & Steel Company (TISCO or TATA Steel) – Brand TATA	For all types and dia of TMT bars & Structural Steel (Angle, Beams, Column, Channel, Plate)
(iii)	Rashtriya Ispat Nigam Limited - Brand RINL	For all types and dia of TMT bars & Structural Steel (Angle, Beams, Column, Channel, Plate)
(iv)	M/s Jindal Steels and Power Ltd., Brand JINDAL PANTHER	Structural Steel (Angle, Beams, Column, Channel, Plate) & TMT bars of Grade Fe 500, Fe 500D, Fe 550, Fe 550D & *CRS (with size 8 to 40 mm)(*Valid upto Dec 2020)
(v)	M/s Jai balaji Industries Ltd - Brand BALAJI SHAKTI	TMT bars of Grade Fe 500, Fe 500D
(vi)	M/s Shyam steel Industries Ltd – Brand SHYAM	TMT bars of Grade Fe 500, Fe 500D & CRS
(vii)	M/s Steel Exchange India Ltd Brand SIMHADRI TMT	TMT bars of Grade Fe 500, Fe 500D & HSCRM
(viii)	M/s. SRMB Srijan Pvt Ltd., - Brand SRMB	TMT bars of Grade Fe 500, Fe 500D, Fe 550, Fe 550D (with size 8 to 32 mm)
(ix)	M/s. Shri Bajrang Power & Ispat Ltd., - Brand GOEL TMT	TMT bars of Grade Fe 500, Fe 500D (with size 8 to 32 mm)
(x)	M/s. JSW Steel Ltd., - Brand NEOSTEEL	TMT bars of Grade Fe 500, Fe 500D, Fe 550 D, CRS(with size 8 to 40 mm)
(xi)	M/s. Shyam Metalics & Energy Ltd., - Brand SEL	TMT bars of Grade Fe 500, Fe 500D, (with size 8 to 32 mm)
(xii)	M/s. Kamachi Industries Ltd., - Brand – KAMACHI	For TMT bars Fe 500 / Fe 500 D, Fe 550 / Fe 550 D, HCRM (size 8 to 40 mm)
(xiii)	M/s. Real Ispat & Power Ltd., - Brand – G K TMT	For TMT bars Fe 500 / Fe 500 D (size 8 to 36 mm)
(xiv)	M/s. Super Smelters Ltd., Kolkata - Brand – SUPER SHAKTI	For TMT bars Fe 500 / Fe 500 D / Fe 550 (size 8 to 32 mm)
(xv)	M/s. Electrotherm (India) Ltd., - Brand – ET TMT	For TMT bars Fe 500 / Fe 500 D & CRS (size 8 to 32 mm)
(xvi)	M/s Adhunik Industries Ltd., - Brand ADHUNIK Fe 500 SD	For TMT bars Fe 500 D (size 8 to 32 mm)
(xvii)	M/s. Gallant Metal Ltd., - Brand – GALLANTT TMX	For TMT Bars of Gde Fe 500 / Fe 500 D & CRS, (size 8 to 32)
(xviii)	M/s. Rashmi Metaliks Ltd., - Brand – RASHMI TMT	For TMT Bars of Gde Fe 500 (Size 8-32 mm) / Fe 500 D, Fe 550 D, (size 8 to 25 mm)

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(xix)	M/s Shyam Sel and Power Ltd., – Brand SEL	For TMT Bars of Gde Fe 500 D (Size 8-32 mm)
(xx)	M/s SPS Steels Rolling Mills Ltd – Brand ELEGANT TMT	For TMT Bars of Gde Fe 500, Fe 550 & Fe 500 D
(xxi)	M/s Shree Nakoda Ispat Ltd., – Brand NAKODA TMT	For TMT Bars of Gde Fe 500, Fe 500 D (Size 8-32 mm)

- 5.3 Structural Steel of ordinary quality may however be procured by the contractor locally provided the quantity is less than 02 (Two) Metric tonnes. The documents in support of purchase of steel shall be verified by the Engineer-in- Charge and Garrison Engineer.
- 5.4 Steel supplied by the contractor shall conform to the following grades and quality:
- (a) **STEEL FOR CONCRETE REINFORCEMENT:**
- (i) High strength Deformed steel Bars, shall be produced by Thermo Mechanical Treatment process (TMT Steel bars of grade Fe-415, Fe-500 and Fe-550) conforming to IS-11386-1985 (Re-affirmed 1990).
- (ii) Mild steel bars, shall conform to IS-432 (Part-I) 1982/1989, Grade I. Chemical composition shall be in accordance with steel designation Fe-410- S of IS-2062 – 1992.
- (b) **STRUCTURAL STEEL:**
- (i) Structural steel standard quality shall conform to IS-2062-2006 and Grade E-250 (Fe-410W quality A). This type steel shall be provided in the locations mentioned as directed by the Engineer-in-Charge and in clause 10.4.1. of MES Schedule Part I.
- (ii) Structural steel ordinary quality shall conform to IS 2062-2006 and Grade E-165(Fe 290) quality B. This type of shall be provided in the locations mentioned as directed by the Engineer-in-Charge and in clause 10.4.2. of MES Schedule Part I.
- 5.5 Weight of steel, supplied by the contractor, shall be calculated at unit weights given in Appendix 'A' of MES Schedule Part II. For section not listed in MES Schedule the ISI conversion table shall be followed.
- 5.6 Bending and fixing of bars for concrete reinforcement including mild steel wire for binding shall be carried out all as specified in MES Schedule.
- 5.13 **WELDING**
- 5.13.1 Welding of steel and ironwork shall be done in an approved manner with electric arc welding.
- 5.13.2 Electric welding shall be metal arc welding as specified in Para 10.15 of MES Schedule Part-I
- 5.13.3 Welding electrodes shall be of quality suitable for welding of structural steel and shall comply with requirement of IS-814 for covered electrodes for metal arc welding of mild steel.

PARTICULAR SPECIFICATIONS (CONTD...)**6.0 ROOF TREATMENT WITH SBR LATEX BOND COAT AND WATER BASED POLYURETHANE MODIFIED ACRYLIC PU COAT**

- 6.1 The roof treatment shall be carried out as follows and all as per manufacturer's instruction:-
- (a) Applying two coats SBR latex based bond coat using **Latex Plus** of Berger or equivalent after mixing with water and cement in a ratio of 1:4:13 to improve the bonding between residual and PU coat .
 - (b) Applying two coats of single component, cold applied, water based polyurethane modified acrylic dispersion (PU Coat) with highly elastic and UV resistant water proofing treatment to the roof with **HS PU Roofcoat** of Berger or Equivalent at 1.2kg/per SqM confirming to ASTM D 6083-913a (Standard Specification for Liquid Applied Acrylic Coating Used In Roofing) and sandwiching 40gsm Geo-textile between two coats. The component shall have a density of 1.25 to 1.3kg/per Litre, having tensile strength of 1.5N/mm², having elongation of 350% with solid content not less than 60% in 2 coats .
 - (c) The treatment shall include surface preparation, making coving at Junction, bore packing, treatment of construction joints completely as per direction of the Engineer In Charge.
 - (d) The products considered equivalent shall be decided by GE for approval based on the specifications and literature of the products produced by the contractor. The decision of GE in this regard shall be final and binding.
 - (e) **The above treatment shall be got carried out by the authorised applicator of the manufacturer approved by the GE.**

Make: Berger or Equivalent

6.2 GUARANTEE

- 6.2.1 The contractor shall stand guarantee for the effectiveness of water proofing treatment carried out for 10 (TEN) years from the date of completion of work to the Government. For giving guarantee, if any additional treatment over and above that is specified is required, the same shall be carried out by the contractor without any extra cost to the Government. The contractor shall furnish a written guarantee for the effectiveness of the treatment for a period of **TEN YEARS** in favour of Garrison Engineer. The contractor shall obtain a guarantee from the specialist firm in his favour . The contractor in turn shall furnish guarantee to GE duly endorsing there with a copy of guarantee secured by him from specialist firm
- 6.2.2 An appropriate sum equal to amount of security deposit calculated as per scales laid down for Earnest Money enhanced by 25% on the amount of water proofing treatment at the contract rates subject to a minimum of **₹ 35,000.00** shall be retained from the final bill towards security deposit for guarantee. This amount shall only be released after successful expiry of the guarantee period. The contractor may however, furnish a fixed deposit receipt in lieu, from a Nationalised Bank, pledged in favour of Garrison Engineer for the period of Guarantee in which case the amount if any, deducted from the dues/ final bill shall be refunded.

13.0 BRICK WORK

- 13.1 Bricks. Bricks shall be kiln burnt sub class 'B' best quality, conforming to the samples kept in GE's Office. Unless otherwise specified in Schedule 'A'/Notes on drawings, bricks shall have average compressive strength of 135 Kg/Cm². Water absorption of brick shall not exceed 20% when tested in accordance with IS-3495, sampling and testing of bricks shall be carried out as per IS-5454 and IS-3495. The size of bricks shall be 230x113x135 mm. The tolerance in size of bricks shall be + 8%.

PARTICULAR SPECIFICATIONS (CONTD...)**8.0 PLASTERING/POINTING**

- 8.1 Plaster and/or skirting/dado shall be returned in jambs, soffits or lintels and windows cills etc.
- 8.2 Where plaster on concrete surface is shown to match the adjacent wall surfaces, the mix of plaster shall be as for the brick surfaces.
- 8.3 All plastered surfaces shall be troweled to smooth and even surfaces without using extra cement and external plastered surfaces shall be finished even and fair.
- 8.4 All external plastering shall be carried out upto 15 cm below the top level of plinth protection.
- 8.5 All corners, angle, junctions, and edges shall be truly vertical or horizontal as the case may be and shall be carefully finished. Corners around jambs of openings and junction of walls shall be rounded to minimum radius of 5 mm.
- 8.6 Contractor shall take note of local practices and local availability of materials like bricks, stones, form work etc., for any extra quantity of mortar required for rendering smooth, extra dubbing required, touching up properly and achieving smooth and even surfaces. This shall be deemed to have been included in the quoted rates of related item.
- 8.13 Where dados/skirting are provided, the internal plaster shall commence from the top of the dado/skirting.
- 8.8 Cement mortar in all situations shall be machine mixed at the discretion of the contractor. Nothing extra will be paid, in case contractor opts for superior methods of mixing.
- 8.9 Thickness of cement plaster mentioned in Schedule 'A' is the net thickness above the proudest part on masonry walls. Nothing extra shall be paid for dubbing.

8.10 MATERIALS

- 8.10.1 **CEMENT AND SAND.** Refer MES Schedule Part –I Clause 4.3 for cement and clause 14.5 to 14.5.2 for sand.

9.0 PAINTING

- 9.1 All synthetic enamel paint shall be of superior quality manufactured by the standard firms listed here-in-after. This shall be of first quality.
- 9.2 The contractor shall inform the GE, within four weeks of the acceptance of the tender, the brand names of manufacturers 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 use in work.
- 9.3 The contractor shall, when so required by the GE, produce certificate from the manufacturer, or their representative to establish that the brands of paints purchased by the contractor from them satisfy the requirements of relevant Indian Standard.
- 9.4 Paints for priming coat, under coat and finishing coat shall be of same manufacturer.
- 9.5 Tint of paint, if not mentioned same will be approved by the GE.
- 9.6 Prepare surfaces and apply two coats of synthetic enamel paint over a coat of primer to all exposed faces of wood work in joinery etc., other than covered with laminated sheets or surfaces for which other treatment is specifically indicated.

PARTICULAR SPECIFICATIONS (CONTD...)**9.13 WORKMANSHIP**

- 9.13.1 All wood work surfaces required to be painted shall be smoothened, sized and knotted and then applied with pink priming coat. Stopping and filling (filler coat) shall be done after priming coat and surface rubbed down to a level of smooth surface and thereafter under coat and finishing coat applied, all as specified in Clause 113.6 to 113.6.5 of MES Schedule Part – I. Steel and iron work shall be painted in the manner as specified in Clause 113.8, 113.8.1, 113.8.3 to 113.8.6 of MES Schedule Part – I.
- 9.13.2 No treatment shall be given to reinforcement.
- 9.13.3 All steel surfaces (except GI pipes) exposed to view shall be given two coats of synthetic enamel paint over a coat of zinc chrome primer of tint as directed by GE.
- 9.13.4 Bottom of door shutters shall be given one coat of primer only.
- 9.13.5 Irrespective of what is specified elsewhere, finishing coat and under coat shall be with synthetic enamel paint.

10.0 UPVC (SWR) PIPES:

- 10.1 UPVC (SWR) pipes shall conform to IS-4985 (4 Kg f/ Sq cm) and as per para 18.213A of section 18 of SSR Part-I. The size of pipes shall be as given in Sch `A'.
- 10.2 The rubber rings for the pipes and fittings shall conform to IS 5382. In case there is no IS code for the fittings, these shall generally conform to the requirement of BS : 4515 DIN 19531 and DIN 19534 PVC (SWR) pipe and fittings shall be strong, dimensionally stable and shall be free from defects.
- 10.3 PVC(SWR) pipes shall be laid and jointed as given in BOQ and as per Para 18.613.13A of Section 18 of SSR Part-I.
- 10.4 All soil and waste pipes and including fittings shall be tested as per manufacturer's instructions on completion of work and all as specified in clause 18.139 of MES Schedule Part I to the entire satisfaction of the Engineer-in-Charge. Joints found leaking/sweating or defective shall be remade to Engineer-in-Charge satisfaction.
- 10.5 Testing apparatus, materials, labour etc., shall be provided by the contractor at his own expense

11.0 GALVANISED STEEL TUBES

- 11.1 The pipe and fittings shall also be of same material as that of pipe and to be procured by the contractor. The pipes for supply of water (covered under external water supply) to all fittings shall run on the walls except where otherwise specified. Where pipe crosses the wall, sleeve piece of suitable dia/length shall be provided to accommodate the pipe to allow freedom to expansion and contraction and other movements and the cost of same shall be deemed to be included in the quoted rate of respective items. The holes in the walls and in floors shall be made good to match with the adjoining surfaces all as specified in clause 18.51.4 of MES Schedule Part – I. The contractor shall use proper bends, elbows, tee etc at turning corners. Contractor shall provide screwed plugs to al open ends of pipe or completion of days work. Mild steel galvanized tubes and fittings shall comply with the specifications given in clause 18.4 to 18.4.5 of SSR Part-I.

PARTICULAR SPECIFICATIONS (CONTD...)**11.2 PROTECTION OF EXISTING WORK**

11.2.1 All pipes water mains etc met during the course of excavation shall be carefully protected and supported without any extra cost to the Government.

11.2.2 The rate quoted by the tenderer shall be deemed to be included in their quoted rates for all the contingencies including testing system and nothing extra will be paid by the department on this account.

11.3 LAYING AND JOINTING OF GI PIPES

11.3.1 The width and depth of trenches shall be as indicated in clause 18.50.1 of SSR Part-I for GI pipes. Laying and jointing of GI pipes shall be as per clause No 18.50 of MES Schedule Part-I.

11.3.2 Cutting and threading shall be carried out as indicated in clause 18.50.2 of MES Schedule Part-I.

11.3.3 Jointing GI pipes shall be carried out as specified in clause 18.50.3 of MES Schedule Part-I.

11.4 GENERAL

(a) The contractor shall employ licensed skilled plumbers for all water supply works.

(b) Layout of pipes for internal water supply work shall be as directed by Engineer-in-Charge.

(c) The requirement pertaining to materials conform to with National Building Code, workmanship, testing, recording of installations shall be all as specified in MES Schedule (Part – I) clause 18.40 and 18.41. Laying and jointing of GI pipe shall be in accordance with Clause 18.50 and 18.51 of MES Schedule Part – I.

(d) All pipe work shall be laid or fixed to be completely airtight and water tight as specified.

(e) Testing of pipe shall be carried out as specified in clause 18.54 & 18.114.5 of MES Schedule part – I. Record of testing shall be maintained separately for each block.

11.5 TEST

11.5.1 After completion of work, and before under taking plaster work, entire water supply installation shall be tested as per clause 18.55 of MES Schedule Part I without any extra cost to the Government. Any defects noticed shall be rectified by the contractor to the entire satisfaction of Engineer-in-Charge. The test results shall be kept in records duly signed by Engineer-in-Charge and the Contractor. The quoted rate shall deem to include for the above provision.

12. FORM WORK

12.1 Form work shall comply with requirements of clause No 4.11.6 (4.11.6.1 to 4.11.6.5.) & 13.15.1 to 13.15.10 of MES Schedule Part-I except that the form work to be provided under this contract shall be of steel/plywood only as specified here-in-after in lieu of timber formwork. Props shall be of only steel and bottom plates and side shuttering shall be of either steel or plywood without any price adjustment. For supporting small heights, wooden support may be used in lieu of steel support at the discretion of GE.

12.2 Deformed steel sheet shall not be permitted for use as form work.

PARTICULAR SPECIFICATIONS (CONTD...)**12.3 EXPOSED SURFACE OF CONCRETE**

- 12.3.1 The soffits of slabs, sides etc. shall be plastered with cement mortar (1:3) 5 mm thick finished fair and even. Unit rate quoted for concrete items is deemed to include this provision.
- 12.3.2 However, exposed surfaces of lintels, beams, columns etc which are continuous with plastered surfaces of walls shall be plastered, in the manner specified for the walls.
- 12.3.3 All other exposed surfaces not covered above shall be finished such as to present a fair and even surface and shall not be plastered. The surfaces shall be presentable without any further treatment. Any irregularity and protruding formwork marks shall be removed and minor honey combing made good with cement and sand mortar (1:3). Lines along formwork joint may however show. Unit rate quoted for concrete items is deemed to include this provision.

13.0 WOOD WORK AND JOINERY**13.1 TIMBER**

- 13.1.1 Timber for all joinery and wood work unless otherwise specified here-in-after shall be second class hard wood conforming to specifications given in Clause 13.3 to 13.3.1.1 of the MES Schedule Part- I and shall be within the permissible limits of defects defined in Clauses 13.4 to 13.5.2 of MES Schedule Part – I.

13.2 MOISTURE CONTENT

- 13.2.1 Attention is drawn to IS-2813 and the map in the Indian Standard. The site of work lies under Zone II and the maximum percentage of moisture content permissible in timber to be used in the work for various purposes will be as given for this zone. It shall be ensured by the tenderer that the moisture content in timber to be used (before incorporation in the work) is within the maximum permissible limit as specified in MES Schedule. Adequate number of test shall be carried out by the Engineer-in-Charge to determine the moisture content in the timber to be used in the work and the contractor shall provide necessary facilities for test as required by Engineer-in-Charge without any extra cost to Government. Testing charges shall also be deemed to be included in rate quoted by the contractor against respective items of Schedule 'A'.

13.3 PRESERVATION OF TIMBER

- 13.3.1 Preservation treatment shall be carried out to all wood work and joinery fabricated by the contractor at site. Factory made shutters and ply boards are deemed to be provided with preservative treatment.
- 13.3.2 Chemical used for preservative treatment to wood work and joinery shall be organic solvent type 2 as specified IS-401 applied in any one of the manners specified in IS.

(i)	Flush door shutter	Factory made flush shutters shall be of second class hard wood of species as per IS 2202 (Part 2) 1983.
(ii)	Fully / Partly paneled / Wire gauzed shutter	Factory made shutters with styles/shutter rails of second class hard wood of species as per IS 1003 (Part I) BIJASAL (HONNE), BENTEAK (NANDI), LAUREL (MATTI)
(iii)	Wooden runner cleats/ stoppers, beading and fillets for shutters	Second class hard wood of species LAUREL/ BIJASAL / BENTEAK/ VENTEAK / SAL

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	and frames	
(iv)	All other wood work and Joinery not otherwise specified.	As in (iii) above.

13.5 **PVC DOOR FRAME -**

13.5.1 Provide PVC door and frames as specified in Sch 'A' and as per manufacturers instructions. The rate quoted in Sch 'A' item is deemed to include for fittings also. The same shall be approved by the GE before incorporation.

13.6 **PVC DOOR SHUTTER.**

13.6.1 Provide PVC door and frames as specified in Sch 'A' and as per manufacturers instructions. All fittings such as hinges, tower bolts, sliding door bolt, handle, etc., shall also be provided. The same shall be approved by the GE before incorporation.

14.0 **BUILDERS HARDWARE**

14.1 **ITEM AND QUANTITIES** Hardware fittings shall be provided as per directions of Engineer-in-Charge.

14.2 **SIZES**

14.2.1 Size shall be as specified in Schedule 'A'.

14.2.2 All articles of builder's hardware shall bear ISI marking. In case any item/fitting with ISI mark is not manufactured, it shall conform to the relevant IS specifications and the specifications given in the MES Schedule for the relevant item.

14.2.3 Screws used for fixing items of builder's hardware shall be as specified in Clause 9.2.6 of MES Schedule Part – I.

14.3 **ARTICLES.** All the builders' hardware except butt hinges shall be of aluminium anodized unless otherwise specified.

14.4 **BUTT HINGES**

14.4.1 Butt hinges shall be of cold rolled mild steel of medium weight all as specified in Clause 9.13.1 & 9.13.2 of MES Schedule Part – I.

14.5 **TOWER BOLTS**

14.5.1 Tower bolts shall conform to specifications given in clauses 9.3.1 to 9.3.3.2 of MES Schedule Part – I. The dia of shoot shall be 10 mm for length upto 125mm and 12mm dia for length 150 mm and above.

14.6 **HASP AND STAPLE**

14.6.1 Hasp and staple of safety type shall be provided at locations as directed by Engineer-in-Charge and as specified in clause 9.10 to. 9.10.2 of MES Schedule Part – I.

14.13 **SLIDING DOOR BOLTS**

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- 14.13.1 Sliding door bolts shall be all as specified in Clause 9.5.2 to 9.5.2.1 of MES Schedule Part – I. Size shall be as specified in Schedule ‘A’. In case it is not indicated, the size shall be 300 mm long with 16 mm dia bolt.
- 14.14 **HANDLES**
- 14.14.1 Handles shall be of aluminium alloy fabricated all as specified in Clause 9.11 & 9.11.1 of MES Schedule Part – I.
- 14.9 **TOWEL RAIL**
- 14.9.1 Towel rail shall be of 600mm long including brackets, wooden plugs and fixing accessories complete conforming to Cat Part mentioned in Schedule ‘A’. The thickness of pipe shall be 1.5mm minimum.
- 14.10 **PIANO HINGES**
- 14.10.1 Piano hinges shall be aluminium anodized and all as specified in Clause 9.13.6 of MES Schedule Part – I.
- 14.11 **MORTICE LOCK**
- 14.11.1 Mortice lock shall conform to IS 2209-19136. Entrance doors shall be provided with 100 mm size brass 4 livers “GODREJ” make mortice lock.
- 15.0 **ALUMINIUM GLAZED DOORS/ WINDOWS/ VENTILATORS POWDER COATED**
- 15.1 Provide aluminium doors, windows and ventilators all as specified in site and as specified here in below.
- 15.1.1 The shutters shall be made out of specially extruded tubular sections with provision for weather stripping made in the vertical jambs. The cleats for mechanical horizontal/vertical joints of the fixed frame and shutters shall be specially extruded aluminium sections so as to avoid any play between jointed members.
- 15.1.2 The aluminium door shutters shall be fixed with brass floor spring single action type provided with floor springs.
- 15.1.3 The active leaf shall have unity lock. The active leaf shall also have one concealed sheet bolt which can be operated from inside.
- 15.1.4 For fixing glazing, the glass shall be encased in EPDM gaskets so as to avoid direct contact between metal and glass.
- 15.1.5 The aluminium sections in case of powder coated, the powder coated shall be coated with epoxy polyester powder coating. Thickness of coating shall be 45 microns (± 5). Colour of coating shall be as approved by GE. Chemical and mechanical properties of sections shall comply with requirements given in IS 1333-115143 and as specified in Clause No. 10.313(a) to 10.313 (g) of MES Schedule Part–I.
- 15.1.6 Glazing shall be provided all as specified in Requisition. Wherever thickness of glazing not indicated, same shall be 5mm thick.
- 15.1.13 All aluminium doors shall be provided with hydraulic door closer and all aluminium doors shall have EPDM gaskets.

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16.1 Mild Steel Guard bars / Grills shall be provided as per approved pattern by Engineer-in-Charge. Mild steel guard bars/ Grills shall be painted with two coats of synthetic enamel paint over a coat of zinc chrome primer. Colour/tint of paint shall be as approved by GE.

16.2 PRESSED STEEL FRAMES FOR DOORS

16.2.1 Pressed steel frames shall be provided at locations as directed by Engineer-in-Charge. Pressed steel frames shall be of sections as specified in Sch 'A' and shall be made out of 1.25 mm thick MS Sheet and conforming to the specifications given in Clause No. 16.213.1 of SSR Part – I. The frames shall conform to IS-4351.

16.2.2 The void of the steel frames shall be filled with PCC 1:3:6 type CO (using 12.5mm graded stone aggregate). Hold fasts for the frames shall be provided as per manufacturers instructions and as directed by Engineer-in-Charge.

16.2.3 MS tie bar of 16mm dia round bars shall be provided at the bottom of frames by welding to the frame and tie bar shall be embedded and left in door.

16.2.4 MS conduit not less than 115mm dia of 16 gauge closed at one end shall be welded to inner face of frame for receiving shoot of bolt. MS Socket for housing shoots of tower bolt shall also be provided as directed by Engineer-in-Charge.

16.2.5 Exposed surface of steel door frames shall be given two coats of synthetic enamel paint over a coat of primer and surface in contact with masonry/concrete shall be sanded over two coats of tarring. Tarring shall be carried out all as specified in SSR Part-I.

16.3 STAINLESS STEEL WIRE CLOTH

16.3.1 Stainless steel wire cloth wire indicated in Sch 'A' shall be 0.56mm nominal dia of wire and 1.114 mm aperture. The wire cloth shall be fixed to each panel with beading according to specification as per SSR Part-I.

16.4 STAINLESS STEEL SINKS (WITH OR WITHOUT DRAINING BOARDS)

16.4.1 Stainless steel sinks shall be provided at locations as directed by Engineer-in-Charge. Stainless steel sinks shall conform to IS – 1315143-115154 and shall be manufactured from Salem Stainless Steel Sheets grade A1 S1 305 or Austenitic stainless steel of grade designation X04Cr115Ni15 (Numerical Symbol 304) or X013Cr114Ni15 (Numerical Symbol 302) conforming to IS 5522-115152. Thickness of sheet shall be not less than 1 mm. Size of sink shall be as specified in Sch 'A'. The surface of sink shall be plastic coated to make it safe and scratch free installation. Stainless steel sinks shall be provided as specified in Clause No. 114.150 & 114.160 of MES Schedule Part – I.

16B.0 PCC FLOOR

16B.1.1 PCC floor shall be of grade and of thickness as specified in Schedule 'A'.

16B.1.2 The concrete floor surfaces shall be finished even and smooth without using extra cement where no tiles are to be laid over it.

16B.2 CERAMIC TILES IN DADO/SKIRTING

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16B.2.1 Ceramic Coloured tiles shall be of glossy economy finish, light coloured, superior quality, Grade B II b with water absorption conforming to IS-131312. Size of tiles shall be as specified in Schedule 'A'. The tiles shall be procured from any one of the firms mentioned in list of manufacturers attached here-in-after. Texture, tint and colour of tiles shall be as approved by GE. The tiles in skirting shall match with the adjacent flooring. Contractor shall submit necessary test certificate at his own cost as per IS-131312 and cost of same shall be deemed to be included in the quoted rate. The tiles shall be fixed over 16 mm rendering in CM 1:3 unless otherwise specified.

16B.3 CERAMIC TILES IN FLOORING

16B.3.1 Ceramic tiles shall be of non – skid superior finish/ matt finished variety, light coloured, superior quality Grade B I with water absorption conforming to IS-131312. Size of tiles shall be as specified in Schedule 'A' and not less than 13mm thick for flooring. The tiles shall be procured from any one of the firms mentioned in list of manufacturers attached here-in-after. Colour of tiles shall be as approved by GE. Contractor shall submit necessary test certificate at his own cost as per IS-131312 and cost of same shall be deemed to be included in the quoted rate. Rate quoted shall be deemed to include for provision of tiles in any pattern. The tiles shall be laid over 16 mm thick screed in CM 1:3.

16B.3.2 Laying, jointing and finishing shall be done all as specified in clause 13.40.1 to 13.40.2 of MES Schedule 'A' Part-I.

17.0 PLASTERING/POINTING

17.1 Plaster and/or skirting/dado shall be returned in jambs, soffits or lintels and windows cills etc.

17.2 Where plaster on concrete surface is shown to match the adjacent wall surfaces, the mix of plaster shall be as for the brick surfaces.

17.3 All plastered surfaces shall be troweled to smooth and even surfaces without using extra cement and external plastered surfaces shall be finished even and fair.

17.4 All external plastering shall be carried out upto 15 cm below the top level of plinth protection.

17.5 All corners, angle, junctions, and edges shall be truly vertical or horizontal as the case may be and shall be carefully finished. Corners around jambs of openings and junction of walls shall be rounded to minimum radius of 5 mm.

17.6 Contractor shall take note of local practices and local availability of materials like bricks, stones, form work etc., for any extra quantity of mortar required for rendering smooth, extra dubbing required, touching up properly and achieving smooth and even surfaces. This shall be deemed to have been included in the lump sum.

17.7 Where dados/skirting are provided, the internal plaster shall commence from the top of the dado/skirting.

17.8 Cement mortar in all situations shall be machine mixed at the discretion of the contractor. Nothing extra will be paid, in case contractor opts for superior methods of mixing.

17.9 Thickness of cement plaster mentioned in Schedule 'A' is the net thickness above the proudest part on masonry walls. Nothing extra shall be paid for dubbing.

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17.10.1 **CEMENT AND SAND.** Refer MES Schedule Part –I Clause 4.3 for cement and clause 14.5 to 14.5.2 for sand.

17.11 INTERNAL PLASTER

17.11.1 Internal surfaces of walls of all the buildings shall be plastered with 16 mm thick in Cement Mortar (1:6) finished even and smooth above skirting/dado.

17.12 EXTERNAL PLASTER

17.12.1 Wherever external plastering Schedule of finishes shall be of 15 mm thick in Cement Mortar 1:4 (5mm thick setting coat mixed with water proofing liquid over 16 mm thick cement plaster) in two layers finished fair and even without using extra cement. Water proofing liquid shall conform to the requirements as specified here-in-after. Care shall be taken to ensure water proofing materials gets well and integrally mixed with cement and does not run out separately when water is added.

17.13 WATER PROOFING LIQUID

17.13.1 Water proofing liquid to be used shall be 0.4% by weight of cement or as specified in manufacturer's instructions whichever is more. It is to be ensured that with the use of water proofing liquid overall chloride content when determined in accordance with IS-61525 shall not exceed 2%.

18.0 FINISHES**18.1 BLANK****18.2 CEMENT BASED PAINT**

18.2.1 Cement based paint shall be provided at locations as directed by Engineer-in-charge. Apply cement based paint as specified in Schedule 'A' and as per manufacturer's instruction all as specified in clause 15.15 to 15.15.12 of MES Schedule Part I. The tint of the paint shall be as directed by the GE. The paint shall be of first quality and shall conform to relevant IS. Silicon based water repellent compound need not be used separately while preparing of cement based paint, in case, the same has been added by the manufacturer while manufacturing of cement based paint shall be as per manufacturer's literature. Primer shall be of the same manufacturer/make of cement base paint as approved by GE.

18.3 OIL BOUND DISTEMPER

18.3.1 Oil bound distemper shall be provided as locations as directed by Engineer-in-Charge and as specified in Schedule 'A'. The primer shall be of alkali resistant primer. The tint of the distemper shall be as directed by GE. Preparation of surfaces and application of distemper shall be done as specified in clause 15.14.1, 15.14.3 to 15.14.5.3 of MES Schedule Part–I.

19.0 PAINTING

19.1 All synthetic enamel paint shall be of superior quality manufactured by the standard firms listed here-in-after. This shall be of first quality.

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- 19.2 The contractor shall inform the GE, within four weeks of the acceptance of the tender, the brand names of manufacturers 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 use in work.
- 19.3 The contractor shall, when so required by the GE, produce certificate from the manufacturer, or their representative to establish that the brands of paints purchased by the contractor from them satisfy the requirements of relevant Indian Standard.
- 19.4 Paints for priming coat, under coat and finishing coat shall be of same manufacturer.
- 19.5 Tint of paint, if not mentioned same will be approved by the GE.
- 19.6 Prepare surfaces and apply two coats of synthetic enamel paint over a coat of primer to all exposed faces of wood work in joinery etc., other than covered with laminated sheets or surfaces for which other treatment is specifically indicated.

19.07 WORKMANSHIP

- 19.07.1 All wood work surfaces required to be painted shall be smoothened, sized and knotted and then applied with pink priming coat. Stopping and filling (filler coat) shall be done after priming coat and surface rubbed down to a level of smooth surface and thereafter under coat and finishing coat applied, all as specified in Clause 173.6 to 173.6.5 of MES Schedule Part – I. Steel and iron work shall be painted in the manner as specified in Clause 173.14, 173.14.1, 173.14.3 to 173.14.6 of MES Schedule Part – I.
- 19.07.2 No treatment shall be given to reinforcement.
- 19.07.3 All steel surfaces (except GI pipes) exposed to view shall be given two coats of synthetic enamel paint over a coat of zinc chrome primer of tint as directed by GE.
- 19.07.4 Bottom of door shutters shall be given one coat of primer only.
- 19.07.5 Irrespective of what is specified elsewhere, finishing coat and under coat shall be with synthetic enamel paint.

20.0 GLAZING

- 20.1 Glazing to door/window/ventilators, shall be of sheet glass of thickness as specified in Schedule 'A'. In case thickness is not mentioned the thickness shall be 4 mm sheet glass. However in case of toilet, figured glass 4 mm thick shall be provided all as specified in MES Schedule.
- 20.2 Sheet glass shall be of ordinary glazing quality confirming to IS-21435. Figured glass shall be of "Pin-head" pattern.
- 20.3 The glass to be fixed to steel frames shall be fixed with special spring glazing clips with oil putty as specified in MES Schedule.

21.0 GALVANISED STEEL TUBES

- 21.1 The pipe and fittings shall also be of same material as that of pipe and to be procured by the contractor. The pipes for supply of water (covered under external water supply) to all fittings shall run on the walls except where otherwise specified. Where pipe crosses the wall, sleeve piece of suitable dia/length shall be provided to accommodate the pipe to allow freedom to expansion and contraction and other movements and the cost of same shall be deemed to be included in the quoted rate of respective items. The holes in the walls and in floors shall be made good to match with the adjoining surfaces all as specified in clause 174.51.4 of MES

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Schedule Part – I. The contractor shall use proper bends, elbows, tee etc at turning corners. Contractor shall provide screwed plugs to all open ends of pipe or completion of days work. Mild steel galvanized tubes and fittings shall comply with the specifications given in clause 174.4 to 174.4.5 of SSR Part-I.

21.2 PROTECTION OF EXISTING WORK

21.2.1 All pipes water mains etc met during the course of excavation shall be carefully protected and supported without any extra cost to the Government.

21.2.2 The rate quoted by the tenderer shall be deemed to be included in their quoted rates for all the contingencies including testing system and nothing extra will be paid by the department on this account.

21.3 LAYING AND JOINTING OF GI PIPES

21.3.1 The width and depth of trenches shall be as indicated in clause 174.50.1 of SSR Part-I for GI pipes. Laying and jointing of GI pipes shall be as per clause No 174.50 of MES Schedule Part-I.

21.3.2 Cutting and threading shall be carried out as indicated in clause 174.50.2 of MES Schedule Part - I.

21.3.3 Jointing GI pipes shall be carried out as specified in clause 174.50.3 of MES Schedule Part-I.

21.4 GENERAL

(a) The contractor shall employ licensed skilled plumbers for all water supply works.

(b) Layout of pipes for internal water supply work shall be as directed by Engineer-in-Charge.

(c) The requirement pertaining to materials conform to with National Building Code, workmanship, testing, recording of installations shall be all as specified in MES Schedule (Part – I) clause 174.40 and 174.41. Laying and jointing of GI pipe shall be in accordance with Clause 174.50 and 174.51 of MES Schedule Part – I.

(d) All pipe work shall be laid or fixed to be completely airtight and water tight as specified.

(e) Testing of pipe shall be carried out as specified in clause 174.54 & 174.174.5 of MES Schedule part – I. Record of testing shall be maintained separately for each block.

21.5 TEST

21.5.1 After completion of work, and before under taking plaster work, entire water supply installation shall be tested as per clause 174.55 of MES Schedule Part I without any extra cost to the Government. Any defects noticed shall be rectified by the contractor to the entire satisfaction of Engineer-in-Charge. The test results shall be kept in records duly signed by Engineer-in-Charge and the Contractor. The quoted rate shall deem to include for the above provision.

21.6 BIB TAPS AND STOP VALVES

Bib taps and stop valves shall be cast copper alloy (chromium plated) screwed down and comply with IS-19141-175144 and shall be ISI marked. Stop valves shall be externally threaded. The minimum finished mass of bib taps and stop valves shall be as specified in clause No 174.14 of SSR Part-I.

21.07 BALL VALVES

Ball valves shall be of brass high pressure type and shall comply with IS-17303-1751919 and shall be ISI marked. Ball floats excluding floats shall be of brass. The float shall be of polythene. The minimum finished mass of ball valves exclusive of floats and wall thickness of float shall be as specified in clause No 174.175 of MES Schedule Part – I.

21.08 GATE VALVE / GLOBE VALVE

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Gate valve/Globe valve shall be of gun metal with wheel head, screwed both ends for PPR pipes. The weight of gun metal gate valve shall be as specified in Clause No. 174.162.1 of SSR Part – I and conform to the provisions of IS 191914 specifications bearing ISI mark. The valves shall be procured from any one of the manufacturers listed here-in-after. Fixing of valves shall be carried out all as specified in Clause No. 174.62 62 & 174.162.2 of MES Schedule Part – I.

21.09 STOP VALVES (CONCEALED)

Concealed type stop valves shall be all as specified in Schedule 'A' and Clause No. 174.165 of MES Schedule Part – I. The valves shall be fixed all as specified in Clause No. 174.171 of MES Schedule Part – I and as directed by Engineer-in-Charge.

21.10 PVC (SWR) PIPES:

21.10.1 PVC (SWR) pipes shall conform to IS-421145 (4 Kg f/ Sq cm) and as per para 174.219A of section 174 of SSR Part-I. The size of pipes shall be as given in Sch `A'.

21.10.2 The rubber rings for the pipes and fittings shall conform to IS 53142. In case there is no IS code for the fittings, these shall generally conform to the requirement of BS : 4521 DIN 175531 and DIN 175534 PVC (SWR) pipe and fittings shall be strong, dimensionally stable and shall be free from defects.

21.10.3 PVC(SWR) pipes shall be laid and jointed as given in BOQ and as per Para 174.619.19A of Section 174 of SSR Part-I.

21.10.4 All soil and waste pipes and including fittings shall be tested as per manufacturer's instructions on completion of work and all as specified in clause 174.1921 of MES Schedule Part I to the entire satisfaction of the Engineer-in-Charge. Joints found leaking/sweating or defective shall be remade to Engineer-in-Charge satisfaction.

21.10.5 Testing apparatus, materials, labour etc., shall be provided by the contractor at his own expense

21.11 PVC TANKS

21.11.1 PVC tanks shall be two layered vertical type "Rotational moulded polyethylene water storage tanks" as per IS 121901 - 1751421, hoisting and fixing in position, connecting up pipe etc shall be executed as per manufacturer's instructions.

21.12 SHOWER ROSE

21.12.1 Shower rose shall be of brass chromium plated swivel type 140mm dia rim suitable for 21mm bore inlet with swivel joints and including chromium plated arm. The make of shower rose shall be as approved by GE.

21.13 SANITARY & TOILET FITTINGS

21.13.1 All sanitary appliances shall be vitreous china ware (White) first quality for all toilets as approved by GE and shall conform to IS-2556 (Part-I) for general requirement and the specific requirements as mentioned in relevant clause of MES Schedules. These shall be of an approved make from the list given in clause here-in-after.

21.13.2 Flush pipe and socket of flushing rim of WC shall be jointed with white and red lead cement (white and red lead in equal proportion by weight and linseed oil added to form paste).

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- 21.13.3 'P' and 'S' trap shall be of vitreous china ware and jointed to WC pan with cement joints as specified in clause 174.414.5 of MES Schedule Part – I unless otherwise specified in Sch 'A'.
- 21.13.4 The sizes, given here in after are approximate sizes. The size of sanitary fittings to be provided shall be to the nearest size as per manufacturer's catalogue as approved by GE.

21.14 WATER CLOSET INDIAN TYPE (ORISSA PATTERN)

- 21.14.1 Provide Indian type water closet squat pan Orissa type of 5140mm x 440mm white with monolithically cast foot rests including 'P' or 'S' trap as directed. Flushing cistern shall be of 16 liters capacity, low level of HDPE with lever handle or knob press handle with internal fittings (valve less character fittings), ball valve with polythene ball, polythene LDPE flush pipe 32mm dia, and pair of CI or angle iron brackets. One flushing cistern per WC shall be provided. CI / angle iron brackets shall be painted two coats of synthetic enamel paint over a coat of red-oxide zinc chrome primer. Foot rests shall conform to IS 2556 (Part 19) – 175221. The size of foot rest shall be 250 x 125 mm and as specified in Clause No. 174.32.4 of MES Schedule Part – I.
- 21.14.2 The flushing cistern shall be procured from manufacturers as listed here-in-after.
- 21.14.3 It shall be vitreous china ware white conforming to IS 2556 (Part 3) – 2004 and as specified in clause 174.32.3 of MES Schedule Part – I.
- 21.14.4 Fixing of water closet, flushing cistern and foot rest shall be as specified in clause 174.146.1 to 174.146.3 of MES Schedule Part- I.

21.15 EUROPEAN WATER CLOSET

- 21.21.1 EWC shall be provided in locations as directed by Engineer-in-Charge. It shall be china ware pedestal pattern with plastic hinged seat and lid rebated type including necessary fittings with 'P' or 'S' trap as directed. Water closet shall be fixed to floor with brass screws of appropriate size. Jointing pipes to WC, flushing rim shall be done with red lead cement. One piece of PVC sleeves shall be inserted to full length of P or S trap outlet upto external wall face and joint shall be water proof sealed.
- 21.15.2 Flushing cistern shall be PVC low level cistern of 16 liters capacity conforming to IS-19194 with 32mm bore flush pipe of sufficient length with internal fittings valve less symphonic fittings, ball valve with polythene ball, chromium plated brass handle and fixed as per the manufacturers instruction. The make of flushing cistern shall be as specified here-in-after.

21.16 FLUSHING CISTERNS

Flushing cisterns shall be of type as specified in Schedule 'A'. These shall be of automatic / manually operated type either high level or low level as specified in Schedule 'A'. Flushing cisterns and connecting accessories shall be as specified in Clause 174.2121 of SSR Part –I.

21.17 WASH HAND BASIN

Provide wash hand basin at locations as directed by Engineer-in-Charge. Wash basin of size 550mm x 400mm vitreous china ware flat back pattern/oval pattern white with waste union of brass chromium plated. Wash hand basin shall be vitreous china ware white conforming to

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IS 2556 (Part 4) – 2004 and as specified in clause 174.32.5 of MES Schedule.

21.18 GULLY TRAPS / MULTI TRAP

(a) Gully traps shall be provided at locations as directed by Engineer-in-Charge complying with relevant IS-651.

(b) Gully traps shall be square mouthed, 160mm size/300mm size as specified in Schedule 'A', type 'P' set in PCC (1:3:6) type C-2, block measuring 450mm square, thickness of bed concrete shall be 16cm. Jointing to drain pipe shall be done in cement mortar (1:1).

(c) Cast iron perforated grating shall be 210mm x 210mm/300 mm x 300 mm to suit the size of opening of trap, bituminous coating and fixing shall be done as directed by the Engineer-in-Charge.

(d) PCC (1:2:4) type B-1 kerb and RCC cover slabs shall be provided all as directed by the Engineer-in-Charge.

21.19 NAHANI TRAP

PVC Nahani traps shall be provided at locations as directed by Engineer-in-Charge. These shall conform to relevant IS and shall be provided with necessary grating.

21.20 PTMT FITTINGS

PTMT fittings shall conform to relevant IS and weight not less than that specified in Schedule 'A'. PTMT fittings shall be procured from approved manufacturers listed here-in-after.

21.21 MIRROR

Mirror shall be of size as specified in Schedule 'A'. It shall be with approved selected quality sheet glass duly silver plated uniformly on the back edge 5.5mm thick mounted on 5 mm thick commercial ply wood exterior grade and as specified in Schedule 'A' Part I.

22.0 LIST OF MANUFACTURERS:

23.1 The make of various items of materials which to be incorporated in the work as per Sch 'A' are given below. The contractor shall ensure that the items of these makes only are incorporated in the work.

24.2 Other products which are equivalent in the specification having ISI certificate shall be permitted in the work if approved by GE in writing before incorporation in the work.

Ser No	Description of item	Name of manufacturer
1.	SYNTHETIC ENAMEL PAINT (1 ST QUALITY),	LUXOL (BERGER PAINTS) / BROLAC (JENSON & NICHOLSON) / SUPERLAC (SHALIMAR PAINTS) / NEROLAC (GOODLASS-NEROLAC) / APCOLITE (ASIAN PAINTS).

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2.	WOOD PRIMER PINK	ASIAN PAINT (WOOD GRITE), SHALIMAR (SHALIMAR WOOD PRIMER), JENSON & NICHOLSON (PINK WOOD PRIMER) GOODLASS NEROLAC (DURALAC WOOD PRIMER)
3.	RED OXIDE PRIMER	ASIAN PAINTS (STRUCTURAL STEEL PRIMER) SHALIMAR (SHALIMAR WOOD PRIMER) JENSON & NICHOLSON (STRUCTURAL STEEL PRIMER) GOODLASS NEROLAC (NEROLAC ZINC CHROMATE PRIMER) BRITISH PAINTS.
4.	DISTEMPER OIL EMULSION	ASIAN / NEROLAC / BEGER / SHALIMAR / JENSON & NICHOLSON
5.	CEMENT BASED PAINT	SNOWCEM INDIA LTD (SNOWCEM PLUS) / JENSON & NICHOLSON / BERGER PAINTS (DUROCEM) / ASIAN PAINTS (GATTER DECORATIVE WATER PROOF CEMENT COATING) / DUROCEM / SHALIMAR PAINTS (CEMCOAT)
6.	LIME (FIRST QUALITY)	LUCKY CEM/ SURYA CEM / BIRLA CEM.
19.	PVC (SWR) PIPES / SOIL/ WASTE PIPES AND FITTINGS	FINOLEX / PRINCE / SUPREME.
14.	ALUMINIUM MONGERY	CROWN / JYOTHI / PRESTIGE / SHALIMAR / CLASSIC / ARGENT
21.	MS IRON MONGERY	CROWN / MOWJEE / JYOTI / PRESTIGE / GARG
16.	GLASS (PLAIN/FIGURED)	TRIVENI GLASS / VALLABH GLASS WORKS / PILKINGTON GLASS / ATUL / MODIGUARD / HINDUSTAN / SAINT GOBIAN / ASANI.
17.	NON-SKID CERAMIC / GLAZED CERAMIC TILES.	SPARTEK / REGENCY / H & R JOHNSON/ ORIENT / SOMANY / NITCO / CERA / KAJARIA
12.	GI TUBING AND FITTINGS (ISI Marked)	ZENITH / TATA / JINDAL / PRAKASH SURYA / BANSAL / SWASTIK.
19.	CP BIB TAPS, STOP VALVES, HEALTH FAUCET, SHOWER ROSE & PILLAR TAPS, WASTE COUPLINGS	LEADER / ZENITH / SIEKO / CERA / ESS ESS / HINDWARE //ERA
14.	FITTINGS AND FIXTURES	CERA / HINDWARE / PARRYWARE / JAQUARE / ESS ESS / PARRYWARE
21.	FANCY TYPE BIB TAPS, STOCK COCKS, VALVES, PILLAR TAPS, ANGLE COCKS, WASTE COUPLINGS	JAQUAR / HINDWARE / MARC / JOHNSON / SIEKO
16.	PVC LOW LEVEL FLUSHING CISTERN	PARRYWARE (SLIMLINE) / SEASHELL / COMMANDER /CHAMPION / DUROLITE /WASTERAN/ CERA.

PARTICULAR SPECIFICATIONS (CONTD...)

173	SANITARY FITTINGS & FIXTURES	NEYCER / CERA / HINDUSTAN SANITARY WARE / RAASI / PARRYWARE.
174	MIRROR	KOHINOOR / ATUL /CROWN / SWASTIK / GOLDEN FISH/ CERA.
175	TOWEL RAILS (STAINLESS STEEL / CHROMIUM PLATED)	ESS & ESS / JAQUARE / HINDWARE / MARC / DIAMOND / JINDAL
20.	CHROMIUM PLATED HARDWARE	CLASSIC / PRESTIGE / CROWN / JYOTHI / GARG
21.	BRASS HARDWARE	CLASSIC / PRESTIGE / JYOTHI
22.	PVC DOOR (FRAME AND SHUTTER)	SINTEX / FOREX / NANDI / NATIONAL/ RAJASHREE
23.	PVC SEAT COVER	CERA / PARRYWARE / HINDWARE / JAQUARE
24.	MORTICE LOCKS	GODREJ / HARRISON / LINK / OZONE
25.	SWR PIPES	NAVODAY / INDO PIPE / KHANDELWAL
26.	CURTAIN RODS	VISTA / LEVADOR
219	STAINLESS STEEL SINK	DIAMOND / NIRALI / BLUE STAR / PRAYAG / JAYNA / NEELAKANTH / ANJALI / PRINCE
214	PRESSED STEEL FRAMES	M/s RAJA MECHANICAL WORKS, BANGALORE, M/s BHARAT STEEL INDUSTRIES, PUNE M/s DIWANI DOOR SYSTEMS, SECUNDERABAD, M/s SREE LAKSHMIT ENGINEERING WORKS, BANGALORE, M/s MADHU INDUSTRIES BANGALORE, M/s SEN HARVICK M/s AGEW M/s SHIV MULLER
221	STAINLESS STEEL PLATE RACK	DIAMOND / A-ONE / NIRALI / NEELAKANTH / ANJALI
30.	PLYWOOD /BLOCK BOARDS	KITPLY / ANCHOR (TPM) WESTERN / NATIONAL PLYWOOD / SWASTIK / BHUTAN BOARD/ WOOD KRAFT / PURO /MYSORE CHIP BOARD / CENTURY / GREEN LAME / ECO BOARD
31.	PRELAMINATED PARTICLE BOARD	ECO BOARD / GREEN LAM / CENTURY / ECO / KITPLY / ANCHOR
32.	BALL VALVES	BIR / LEADER / PRAYAG / ZOLOTO

PARTICULAR SPECIFICATIONS (CONTD...)

33.	FACTORY MADE PANELLED / GAUZED SHUTTERS	M/S. WOOD DESIGN (P) LTD BANGALORE M/S. BEN WOOD PVT. LTD. BANGALORE M/S. INDIAN WOOD & WOOD PRODUCTS, MANGALORE M/S. PARVATHI WOOD PROCESSING INDUSTRIES, BANGALORE M/S. STANDARD DOOR, JEEDIMETLA, HYDERABAD M/S. INDIAN TIMBER PRODUCT (P) LTD., HYDERABAD M/S. TIMBER TECHNICS, HYDERABAD M/S. VELLEPELLY TIMBER & METAL INDUSTRIES, KOLAMASSERY, KOCHI M/S. KERALA STATE WOOD INDUSTRIES LTD., NILAMBUR M/S. WOOD TREATMENT SPECIALISTS, CHENNAI. M/S. KOTTY FLUSH DOORS & FURNITURE CO. LTD., CHENNAI.
34.	PTMT FITTINGS	PRAYAG / SHAKTI / POLYTUF / WATERTEC
35.	INTEGRAL WATER PROOFING COMPOUND	FOSROC / CICO / Dr FIXIT
36.	ALUMINIUM SECTIONS FOR DOORS/WINDOWS/ VENTILATORS	INDAL/ JINDAL/ HINDALCO
37.	PVC WATER TANKS & COVERS	SINTEX / INFRA / POLYCON

Signature of Contractor
Date:

AGE (Contracts)
for Accepting Officer