

MILITARY ENGINEER SERVICES**Name of work : SPECIAL REPAIRS TO EXISTING SEWAGE SYSTEM AT AF CAMP NARAINA UNDER GE (AF) GURGAON****CONTENTS SHEET**

Ser No	Contents	Pages	
		From	To
1	Contents	01	-
2	Tender forwarding letter including instructions to tenderers for completing the tender.	02	06
3	Notice of tender IAWF-2162 (Revised 1960) including Appendix 'A' to Notice of Tender and Annexure-I	07	12
4	Tender and item rate contract works by Measurements (IAFW-1779A Revised 1955) (Authorization Page No: 13, Schedule A Note 14 - 15, BOQ 16 & 17)	13	20
5	General Conditions of Contract IAFW-2249 (1989 Print)	21	53
6	Errata/Amendments to General Conditions of Contract IAFW-2249 (1989 Print)	54	72
7	Schedule of minimum fair wages	73	86
8	Special Conditions	87	96
9	Particular specifications	97	127
10	Corrigendum/Amendment to the tender documents		
11	Relevant correspondence		
12	Acceptance letter		

Total _____ Pages

SIGNATURE OF CONTRACTOR

DATED : _____

SSW
for Accepting Officer

CA NO: CWE/GGN/G-24/2018-19

Serial Page No 02

Tele: 25675755

Headquarters
Commander Works Engineer (AF) Gurgaon
Military Engineer Services
C/O CWE (AF) Palam Complex
Old Palam Road
Delhi Cantt -110010

8287/G-24 / /E8

Oct 2018

M/S_____

CA NO: CWE/GGN/G-24/2018-19: SPECIAL REPAIRS TO EXISTING SEWAGE SYSTEM AT AF CAMP NARAINA UNDER GE (AF) GURGAON

Dear Sir(s)

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

2. Bids will be received online by ACCEPTING OFFICER 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 tenders/bidders or their authorised representatives, who have uploaded their quotation bid and who wish to be present at the time of opening the bids.

4. Your attention is also drawn to instruction on filling and submission of tender attached herewith. You may forward your points on tender documents and/or depute your technical representative for discussion on tender/drawings and to clarify doubts, if any. You are requested not to write piece meal points and forward your points duly consolidated.

5. Unenlisted 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 **CWE (AF) Gurgaon C/o CWE (AF) Palam Complex, Delhi Cantt-10** within time limit specified in NIT. Inadequacy/deficiency of documents shall make the bid liable for rejection resulting in disqualification for opening of finance bid.

6 (a) 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 those two requirements, the finance bid will not be opened.

(b) Contractor having not executed standing security bond and standing security deposit in any MES formation would be required to deposit individual security on acceptance of tender which will be calculated with reference to the tendered cost as per scales laid down by MES for calculation of "EARNEST MONEY" enhanced by 25% subject to maximum of Rs. 1875000/- (Rupees Eighteen Lakhs seventy five thousand Only).

Contd.....

7. Enlisted contractors of MES shall submit the scanned copies (pdf file) of enlistment letter, tender fee and such other documents as mentioned in Appx 'A' to NIT on e-procurement portal and submit physical documents in the office of **CWE (AF) Gurgaon C/o CWE (AF) Palam Complex, Delhi Cantt-10** before date & time fixed for this purpose.

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

9. In view of delays due to system failure or other communication related failure, 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 the Office of GE concerned and 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 LAIBLE TO BE REJECTED.

12. (a) 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.

(b) Contractor having not executed standing security bond and standing security deposit in any MES formation would be required to deposit individual security on acceptance of tender which will be calculated with reference to the tendered cost as per scales laid down by MES for calculation of "EARNEST MONEY" enhanced by 25% subject to maximum of Rs. 1875000/- (Rupees Eighteen Lakhs seventy five thousand Only).

(SIGNATURE OF CONTRACTOR)

SSW
FOR ACCEPTING OFFICER

DATE: _____

INSTRUCTIONS ON FILLING AND SUBMISSION OF TENDER

1. EARNEST MONEY DEPOSIT (EMD)

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

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

It is advisable that Earnest Money is deposited in the form of deposit call receipt from an approved Schedule Bank for easy refund. In case the tenderer/bidder wants to lodge EARNEST MONEY DEPOSIT' in any other form allowed by MES, a confirmation about its acceptability will be obtained from the Accepting Officer well in advance of the bid submission end date and time. Earnest Money Deposit shall be submitted in the name of concerned GE.

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

2. SECURITY DEPOSIT

In case the tender/bid submitted by such contractor who is not enlisted with MES is accepted, the contractor will be required to lodge with the Controller of Defence Accounts INDIVIDUAL SECURITY DEPOSIT calculated with reference to TENDERED COST as notified by the Accepting Officer subject to a maximum of Rs 18,75,000/-. The amount is required to be lodged within 30(Thirty) days of the receipt by the contractor of notification of acceptance of tender/bid , failing which the sum shall be recovered from the 1st RAR payment or from the Final bill (See Condition 22 of GCC(IAFW-2249)).

3. CONTRACTORS ENLISTED WITH CHIEF ENGINEER WESTERN COMMAND AND WHO HAVE EXECUTED STANDING SECURITY BOND AND DEPOSITED STANDING SECURITY DEPOSIT BUT OF LOWER CLASS

In case the tender/bid is accepted, the amount of Additional Security Deposit will be as notified by the Accepting Officer. The amount will be the difference between the "Individual Security Deposit" calculated with reference to the "TENDERED COST" AND 'Standing Security Deposit' lodged. The amount is required to be lodged within 30 (Thirty) days of the receipt by the contractor of notification of acceptance of tender/bid, failing which the sum shall be recovered from the 1st RAR payment or from the Final bill (See Condition 22 of GCC (IAFW-2249)).

4. CONTRACTOR ENLISTED IN MES FORMATIONS OTHER THAN CE WESTERN COMMAND

Contractors whose names are on the approved list of any MES formation i.e. Other than CE Western Command and who have deposited Standing Security and have executed Standing Security Bond may tender/bid without depositing Earnest Money with the bid and if the Accepting Officer decides to accept the tender/bid, such tenderers will be required to lodge Security Deposit as notified by the Accepting Officer. The amount is required to be lodged within 30 (Thirty) days of the receipt by the contractor of notification of acceptance of tender/bid , failing which the sum shall be recovered from the 1st RAR payment or from the Final bill.

Contd/---

INSTRUCTIONS ON FILLING AND SUBMISSION OF TENDER(CONTD...)**5. GENERAL INSTRUCTIONS FOR COMPLIANCE**

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

5.2 Bids 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 date email/fax/by hand/through post will be considered.

5.3 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.

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

5.5 The tender shall be signed, dated and witnessed at all place 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.

5.6 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 contractor (through partnership deed, general power of attorney or Memorandum and Articles of Association of the company) in all the matters pertaining to the contracts with Union of India including arbitration clause. A scanned copy of the documents confirming of such authority shall be attached with the tender/bid in 'PDF' form, if not submitted earlier. The person uploading the bid on behalf of another partner(s) or on behalf of a firm or company using his DSC shall upload with the tender/bid a scanned copy (in 'pdf' form) of /Power of Attorney duly executed in his favour by such other or all of the Partner(s) or in accordance with constitution of the company in case of company, stating that he has authority to bind such other person of the firm or the Company 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.

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

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

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

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

Contd/---

INSTRUCTIONS ON FILLING AND SUBMISSION OF TENDER(CONTD...)

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

5.12 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.

5.13 In case the tenderer/bidder has to revise/modify the rates quoted in the BOQ (excel sheet) he can do so only in the BOQ, through 'https: //defproc.gov.in' site only before the bid closing time and date.

6. REVOKATION/REVISION OF OFFER UPWARD/ OFFERING VOLUNTARY REDUCTION AFTER CLOSING OF BID SUBMISSION DATE & TIME

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

7. C P M (Critical Path Method)

7.1 The Project planning for work covered in the scope of tender is based on CPM.

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

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

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

8. These instructions shall form part of the contract documents.

SIGNATURE OF CONTRACTOR

Dated: _____

SSW
for Accepting Officer

MILITARY ENGINEER SERVICES
NOTICE INVITING TENDER

1. A tender is invited for the work as mentioned in Appendix 'A' to this NOTICE INVITING TENDER (NIT)

2. The work is estimated to cost as indicated in aforesaid Appendix 'A'. This estimate, however, is not a guarantee and is merely given as a rough guide and if the work cost more or less, a 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 of categories SS to E may tender/bid. In case, where the tender amount is in excess of the financial limit of the contractor and the Accepting officer decides to accept the tender/bid, in which event the tenderer/bidder would be required to lodge additional security deposit as notified by the Accepting Officer in term of conditions of contract. Contractors whose names are on the MES approved list of any MES Formation and who have deposited standing security and have executed standing security bond may also tender/bid without depositing Earnest money along with the tender/bid and if the tender/bid submitted by such a tenderer/bidder is accepted, the contractor will be required to lodge with the Controller of Defence Accounts concerned the amount of 'Individual Security Deposit' within thirty days of the receipt by him of notification of acceptance of his tender/bid, failing which this sum will be recovered from 1st RAR payment or from the first final bill in the case of term/running contracts, remaining sum shall be recovered from subsequent bill(s) of the contractor. 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 render the tenders/bids of both the parties liable for rejection.

5. The Office of **CWE (AF) Gurgaon C/o CWE (AF) Palam Complex, Delhi Cantt-10** 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 form and conditions of contract and other necessary documents shall be available on **<https://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-I 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 concerned GE (see Appendix 'A') by a scheduled Bank or in receipted treasury Challan the amount being credited to the revenue deposit of the concerned GE (see Appendix 'A').

6.3 A contractor who is not enlisted for the area in which the work lies but whose name is in the MES approved list of any MES formation and who has deposited standing security and executed standing security Bond may bid without depositing earnest money along with the tender; but if the Accepting officer accepts the tender/bid, the contractor will be required to lodge with the Controller of Defence Accounts concerned the amount of 'individual security deposit' within thirty days of the receipt by him of notification of acceptance of his tender/bid, failing which this sum will be recovered from 1st RAR payment or from the first final bill. In this case of terms/running contracts, remaining sum shall be recovered from subsequent bill(s) of the contractor.

NOTICE OF TENDER (Contd.)

6.4 A Contractor who has executed standing security Bond but not corresponding to the appropriate class as mentioned above, shall lodge with the Accepting Officer, Additional Security Deposit as notified by the Accepting Officer within thirty days of the receipt of his notification of acceptance of his tender/bid, failing which this sum will be recovered from the first RAR payment or from the first final bill. In case of term/running contracts, remaining sum shall be recovered from subsequent bill(s) of the contractor. However, in case where any payment is made to the contractor within thirty days of the receipt by him of notification of acceptance of tender/bid, the amount of additional security deposit shall be recovered from such payment.

6.5 The GE will return the Earnest Money wherever applicable to all unsuccessful tenderers/bidders by endorsing an authority on 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.

6.6 The GE will either return the Earnest Money to the successful tender/bidder by endorsing an authority on the deposit-at-call for its refund, on receipt of an appropriate amount of Security Deposit or will retain the same in part or full on account of security deposit if such a transaction is feasible.

6.7 Copies of the drawings and other documents pertaining to the work signed for the purpose of identifications 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 tender/bidder at the office of Accepting Officer and concerned GE during working hours.

7. The tender/bidders are advised to visit the site of work by making prior appointment with GE who is also the Executing Agency of the work (see appendix 'A'). The tenders/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 specification of works to be done and to 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 a copy of the MES Standard Schedule of Rates (See Appendix 'A') including amendments and errata thereto.

11. Invitation for e-tender does not constitute any guarantee for validation of 'T' bid and subsequent opening of finance bid of any applicant/bidder, even of enlisted contractors of appropriate class, merely by virtue of enclosing DD. Accepting Officer reserves the right to reject the 'T' bid and not open the finance bid of any applicant/bidder. 'T' bid validation shall be decided by the Accepting Officer based on, inter alia, capability of the firm as per criteria given in Appx 'A' to this NIT. The applicant contractor/bidder will be informed regarding non-validation of his 'T' bid assigning reasons thereof through the defproc website. The applicant contractor/bidder if he so desires may appeal to the next higher Engineer authority viz **Chief Engineer (AF) WAC Palam, Delhi Cantt-10** with copy to the Accepting Officer on email before the scheduled date of opening of Finance Bid. The decision of the Next Higher Engineer Authority (NHEA) shall be final and binding. The contractors/bidder shall not be entitled for any compensation whatsoever for rejection of his bid.

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

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

14. This Notice Inviting Tender (NIT) including Appendix 'A' with its annexure shall form part of the contract.

(Signature of the Contractor)

Dated: _____

SSW

For Accepting Officer

APPENDIX 'A' TO NOTICE INVITING e - TENDER

1	Name of work	:	SPECIAL REPAIRS TO EXISTING SEWAGE SYSTEM AT AF CAMP NARAINA UNDER GE (AF) GURGAON
2	Estimated Cost of Work	:	Rs 48.75 Lakhs
3	Period of completion	:	09 (Nine) months
4	Cost of tender documents	:	Rs 500/- in the shape of DD / Bankers cheque from any Scheduled bank in favour of GE (AF) Gurgaon . (Copy shall be uploaded online and original to be submitted offline before due date of opening of cover No 1) payable at Gurgaon
5	Website/Portal Address		https://defproc.gov.in
6	Type of Contract		Item rate based on (IAFW-2249) and (IAFW-1779A). Rates to be quoted by the tenderers.
7	Information & Details		
	(a) Bid Submission start date	:	Refer critical dates shown below
	(b) Last date of bid submission		
	(c) Date of bid opening		
8	Eligibility Criteria		All contractors enlisted with MES in Class 'D' and above and category (a) (ii) subject to remarks with reference to performance in r/o works in hand reflected in Workload return (WLR) circulated by competent engineer authority. Refer Note - below.
	(a) For MES enlisted contractors Class in MES, Category of enlistment	:	
	(b) For Other contractors		(a) The firms not listed with MES shall meet enlistment criteria of Class 'D' and category (a) (ii) i.e. with regard to having satisfactorily completed requisite value works, annual turnover, solvency, working capital, immovable property/fixed assets, T&P, Engineering establishment, no recovery outstanding in any Govt Department, Police verification/Passport etc. As per enlistment criteria given in Para 1.4 & 1.5 of section I of Part I of MES Manual of Contracts-2007 (Reprint-2012) as available in all MES formations (b) These firms shall also submit copy of police verification from police authorities of the area where the registered office of the firm is located/notarized copy of valid Passport of proprietor/each partner/each director. (c) Firm should not carry any adverse remarks in WLR or any other similar report of any authority.
	(c) For all contractors		Contractors will not be allowed to execute the work by subletting or through power of attorney holder on his behalf to a third party/another firm except sons/daughters/spouse of proprietor /partner /director and firm's own employees, Director, Project Manager. This shall be subject to certain conditions which will be prescribed in the NIT forming part of tender documents
9	Tender Issuing and Accepting Officer		HQ CWE (AF) Gurgaon C/o CWE (AF) Palam Complex, Delhi Cantt-10
10	Executing Agency		GE (AF) Gurgaon
11	Earnest Money		Rs 97,500 in form of DD/ Banker's cheque from any Scheduled/Nationalized bank in favour of GE (AF) Gurgaon .

CRITICAL DATES

Para 7	Publishing date and time of tender documents	:	05 Oct 2018 at 1700 hrs
	Starting date & time of tender documents downloading	:	05 Oct 2018 at 1800 hrs
	Clarification start date & time	:	06 Oct 2018 at 1000 hrs
	Clarification end date & time	:	29 Oct 2018 at 1800 hrs
	Starting date and time of bid submission(Cover No 1 & 2)	:	19 Oct 2018 at 1500 hrs
	Bid documents download end date & time	:	29 Oct 2018 at 1800 hrs
	Closing date and time of bid submission(Cover No 1 & 2)	:	29 Oct 2018 at 1800 hrs
	Date and time of bid opening (Cover No 1)	:	30 Oct 2018 at 1500 hrs or subsequent days
	Date and time of bid opening (Cover No 2)	:	Will be intimated online after completion of evaluation of tech bid/application (Cover No 01)

APPENDIX 'A' TO NOTICE INVITING e - TENDER (Contd/--)**Notes:-**

(a) Contractor one class below (two class below in case of remote and difficult area) may also bid this tender. Their application shall be considered subject to fulfilment of other eligibility criteria given in NIT when number of applicants of eligible class qualifying for the tender are less than 7(seven).

(b) In case number of eligible class contractors satisfying the eligibility criteria given in NIT are 7 or more than 7, application of one class below the eligible class shall not be considered except those who have previously completed similar works satisfactorily and are meeting the criteria of up gradation in respect of past experience and / or average annual turnover as applicable and financial soundness (solvency/financial soundness and working capital) provided the value of work is less than twice the tendering limit of such contractors. Contractors one class below the eligible class may upload necessary documents wrt works experience and financial soundness in cover 1 of tender (T bid).

(c) (i) Application/bid not accompanied by scanned copies of requisite value DD/Bankers cheque towards cost of tender and earnest money (as applicable) shall not be considered for validation of 'T bid and their finance bids will not be opened.

(ii) Contractors should ensure that their original DDs and earnest money (as applicable) are received within 5 days of bid submission end date.

(iii) In case of applications/bids from enlisted contractors of MES, where scanned copies of requisite DD/Bankers Cheque towards cost of tender has been uploaded but physical copies are not received by the stipulated date, their finance bids will be opened. However non-submission of physical copies of cost of tender shall be considered as wilful negligence of the bidder with ulterior motives and such bidder shall be banned from bidding for a six months commencing from the date of opening of finance bid(cover 2).

(iv) In case of applications/bids from un-enlisted contractors, where scanned copies of requisite DD/bankers Cheque towards cost of tender has been uploaded but physical copies are not received by the stipulated date, finance bids will not be opened. Name of such contractor along with complete address shall be circulated for not opening of their bids for a period of six months commencing from the date of opening of finance bid (cover 2).

(v) In case of applications/bids (enlisted contractor as well as un-enlisted contractor) where scanned copies of requisite earnest money (as applicable) were uploaded but the same are not received in physical form within stipulated time, such bids shall not qualify for opening of finance bid (cover 2).

(vi) Contractor shall upload copy of Goods and Service Tax (GST) no of their company. In case of failure to submit GST no, the firm shall be disqualified in technical bid evaluation.

(vii) In case tenderers upload quotation in pre-revised BOQ, the same shall be considered as a wilful negligence by the bidder and their quotation shall be considered Non-bonafide.

(d) Contractors may note that they shall not be loaded beyond their tendering limit as under :-

(aa) In case contractors of eligible class are selected for issues of tender : 4 to 5 times the tendering limit.

(bb) In case of one class (two class in case of remote and difficult area as the case may be) contractors are selected for issue of tender : 6 to 7 times.

(cc) In case of unenlisted contractors : 2 times the upper tendering limit of class for which contractor meets the criteria for enlistment.

(e) In case any deficiency is noticed, in the documents required to be uploaded by the tenderers as per NIT, after opening of cover 1 (T bid) and during technical evaluation, a communication in the form of e-mail/whatsapp/sms/speed post etc. shall be sent to the contractor to rectify the deficiency within a period of 7 days from date of communication failing which financial bid (cover 2) shall not be opened and contractor shall not have any claim on the same.

(f) Contractors enlisted with MES will upload following documents for checking eligibility:

(i) Application for bid in Firm's letter head

(ii) Enlistment letter

(iii) Scanned copy of DD of cost of tender

(iv) Scanned copy of GST Registration

(v) Scanned copy of EPF Registration.

(g) Contractors not enlisted with MES will be required to upload necessary documents to prove their eligibility for enlistment in eligible class & category of work, including Affidavit for no recovery outstanding. List of documents required for enlistment in MES has been given in para 1.5 of section 1 of Part I of MES Manual on contracts 2007 (Reprint 2012). Following documents shall also be uploaded amongst others:

(i) Details of three highest valued similar nature of works executed during last five years, financial year-wise in tabular form giving name of work. Accepting Officer's details, viz Address, Telephone < Fax No., E-Mail ID etc, date of acceptance of tender and actual date of completion. This shall be duly signed by proprietor/all partners/authorized Director of Pvt/Public Ltd as applicable. It should indicate whether extension was granted or compensation was levied. Attested copy of acceptance letter and completion certificate shall be enclosed of each work. In case performance report has been given by the client same shall also be submitted duly attested.

APPENDIX 'A' TO NOTICE INVITING e - TENDER

- (ii) Solvency certificate and working capital certificate issued by scheduled bank.
 (iii) Annual turnover certificate for last 2 years issued by Chartered Accountant along with relevant pages of audited balance sheets in support thereof.
 (iv) Affidavits for possession of movable & immovable properties by proprietor/partner owning the immovable property along with Valuation certificate from regd Valuer in support of movable & immovable properties. In case of Limited Company, the immovable property is required to be in the name of the company.
 (v) In addition, the un-enlisted contractors shall also furnish affidavit on non Judicial stamp paper in the form of hard copy declaring their turnover for last 2(Two) years.
 (vi) Scanned copy of DD of cost of tender and earnest money.
 (vii) Scanned copy of GST Registration
 (viii) Scanned copy of EPF Registration.

(h) In case of rejection of technical/prequalification bid, contractor may appeal to next higher Engineer authority i.e. CE (AF) WAC Palam on email against rejection, whose decision shall be final and binding. However contractor/bidder shall not be entitled to any compensation whatsoever for rejection of technical/prequalification bid.

(f) Court of the place from where tender has been issued shall alone have jurisdiction to decide any dispute out of or in respect of this tender. After acceptance of tender, condition 72 – Jurisdiction of courts of IAFW 2249 shall be applicable.

8287/G-24/ /E8
 Headquarter
 Commander Works Engineers Gurgaon
 C/o CWE (AF) Palam Complex
 Delhi Cantt-110010

(Niranjan Singh)
 Lt Col
 SSW
 for Accepting Officer

Dated: Oct 2018

- | | | |
|---|---|---|
| 1. Hony General Secretary, MES Builders Association of India (Regd)
Flat No 807(8 th Floor)
Sahyog, 53
Nehru Place, New Delhi –
<u>REGD AD</u> | 2. The Hony Secretary, MES Builders Association of India, Delhi Branch, 106 Kirti Deep, Nangal Raya, New Delhi – 46–
<u>REGD AD</u> | 3. CE Executive Office
DDA, New Delhi |
| 4 HQ CE(R&D) Delhi -64 | 5 HQ CE(AF) WAC Palam | 6 HQ CE Delhi Zone |
| 7 HQ CWE (AF) Palam | 8 HQ CWE New Delhi | 9 HQ CWE Delhi Cantt-10 |
| 10 HQ CWE (U) Delhi Cantt-10 | 11 HQ CWE No-02 Delhi Cantt-10 | 12 GE(AF) Gurgaon |
| 13 GE (AF) Faridabad | 14 GE(AF) Subroto Park | 15 GE(P) West Delhi Cantt |
| 16 GE E/M Base Hospital, Delhi Cantt | 17 GE New Delhi | 18 GE E/M RR Hospital Delhi Cantt |
| 19 GE(P) East Delhi Cantt | 20 GE (E/M) Electric Delhi Cantt | 21 GE(W/S) Delhi Cantt |
| 22 GE (West) Delhi Cantt | 23 GE(U) Plant & Machinery Delhi Cantt | 24 GE Central Delhi Cantt |
| 25 Post Master Gopinath Bazar Delhi Cantt-10 | 26 CE CPWD, Nirman Bhawan, New Delhi | 27 SBI Delhi Cantt-10 |
| 28 Chief Executive Office, Cantt Board, Delhi Cantt-110 010 | 29 Station Master New Delhi Railway Station | 30 Station Master Delhi Cantt Railway Station |
| 31 GE(P) AF Palam Delhi Cantt - 10 | | |

Annexure 'I'
Of Appendix "A"

FORM OF SOLVENCY CERTIFICATE FROM NATIONALISED/SCHEDULED BANK

This is certified that to the best of our knowledge and information M/s / Shri / Smt _____ having address _____, a customer of our bank are/ is respectable and can be considered solvent up to Rs _____ (Rupees _____)/ Financially sound for any engagement up to Rs _____(Rupees _____). This certificate is issued without any guarantee or responsibility on the bank or any of the officers.

(Signature)
Name, Designation and Personal Code
No of Signatory & Seal of bank with bank address and Code no.

Note: In case of partnership firm, certificate to include names of all partners as recorded with the bank

FORM OF WORKING CAPITAL CERTIFICATE FROM NATIONALISED/ SCHEDULED BANK

This is certified that M/s / Shri / Smt _____ having address _____ have/has been maintaining a saving bank account/ current account/ fixed deposit account with this branch of bank since _____ and the firm is having working capital of approximately Rs _____ and/ or the firm is enjoying overdraft/ credit facilities up to limit of Rs _____. This certificate is issued without any guarantee or responsibility on the bank of any or the officers.

(Signature)
Name, Designation and Personal Code
No of Signatory & Seal of bank with bank address and Code no

DETAILS OF WORKS EXECUTED DURING LAST 05 YEARS

Ser No	CA No and Name of Work	Address of Accepting Officer	Amount of CA	Final amount of Work	Date of Completion	Extension granted if any	Remarks
1	2	3	4	5	6	7	8

MILITARY ENGINEER SERVICES**(IAFW-1779A REVISED 1955)****TO BE USED IN CONJUNCTION WITH GENERAL CONDITIONS OF CONTRACT
IAFW-2249 (1989 PRINT)**

Tele: 25675755

Headquarters
 Commander Works Engineer (AF) Gurgaon
 Military Engineer Services
 C/O CWE (AF) Palam Complex
 Old Palam Road
 Delhi Cantt -110010

8287/G-24/ /E8

Oct 2018

e-TENDER**CA NO:CWE/GGN/G-24/2018-19: SPECIAL REPAIRS TO EXISTING SEWAGE
SYSTEM AT AF CAMP NARAINA UNDER GE (AF) GURGAON**

1. Mr/Messers _____ of _____
 is/are hereby authorised to tender for the above work. The tender is to be submitted online through eprocurement solution (single stage two cover system) on website defproc.gov.in to “Commander Works Engineer (AF) Gurgaon C/o CWE (AF) Palam Complex, Old Palam Road, Delhi Cantt-10” upto **1800 hrs on 29 Oct 2018.**
2. Any correspondence concerning this tender should be online and no offline correspondence is permitted.

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

 SIGNATURE OF CONTRACTOR

SIGNATURE OF THE OFFICER ISSUING
 THE TENDER DOCUMENTS

DATED: _____

APPOINTMENT : SSW

DATED : Oct 2018

BOQ/SCHEDULE 'A' NOTES**(LIST OF WORKS AND PRICES)****NOTES:-**

1. The work under this contract comprises of **SPECIAL REPAIRS TO EXISTING SEWAGE SYSTEM AT AF CAMP NARAINA UNDER GE (AF) GURGAON** as described in Schedule 'A' and as specified in particular specifications.
2. Tenderer is required to get fully acquainted with the scope of work as catered for in tender documents and also the site of work. No claim whatsoever shall be entertained subsequently for any misunderstanding or any in-accuracy with regards to site conditions and provisions made in the tender documents.
3. Contractor's special attention is drawn to condition 6 (D) of IAFW-2249 (General Conditions of Contract). No claim on account of any error in the unit rates inserted by contractor shall be admissible later on.
4. The period of completion for the entire work under this contract shall be **09 (Nine) Months** from the date of commencement of work as per work order No 1 to be placed by **Garrison Engineer (AF) Gurgaon**. In case of any delay in handing over of site suitable, extension of time for delay shall be granted as per condition 11 of IAFW-2249 and nothing extra shall be admissible on this account.
5. Garrison Engineer referred to in IAFW-2249 or elsewhere in the tender documents shall be **Garrison Engineer (AF) Gurgaon**.
6. The unit rates quoted by the tenderer in BOQ shall be inclusive of all charges such as:-
 - (a) VAT/Sales tax/GST, Octroi, Central Tax, Excise Duty, Service Tax, Labour Tax and/or Cess etc
 - (b) Insurance if any.
 - (c) Packing unpacking if any.
 - (d) Transportation and delivery.
 - (e) Entire material and labour for execution of work.
7. The tenderers shall quote their rates against each items of BOQ in figures. The quantities shown in BOQ are provisional and are inserted as guide only. These shall however, not be varied beyond the limits laid down in condition 7 of IAFW-2249 (General conditions of contract)
8. Unit rates quoted by the tenderer shall be deemed to allow for all minor extra and constructional details, which are not specifically given in particular specifications but are essential for the execution of works services in a sound and workman like manner all as mentioned in the description of items of work to conform to good workmanship and sound engineering.

In case of difference in opinion as to whether or not a certain items of works constitutes "Minor extra and constructional details included in the contractor's prices, the decision of the Accepting Officer shall be final, binding and conclusive.

9. Blank.

Contd....,

(BOQ/SCHEDULE 'A' NOTES CONTD...)

10. During execution of work special care is to be taken to safeguard the losses/damages to the existing work as well as Govt properties. In case any losses/damage take place due to contractor's default shall be made good by the contractor without any extra cost to the department. No claim on this account shall be entertained later on.

11. Unless otherwise stated in BOQ and/or particular specification the unit rates quoted by the contractor in BOQ shall be deemed to include for all provisions in the preambles given in MES Schedule 2010 (Part-II) as applicable to respective items.

12. Unless otherwise stated, unit rates quoted by the tenderer in BOQ shall be deemed to include for all "Materials and Labour" or "Supply and fix" complete all as described in BOQ and specified in particular specifications.

13. All materials (except those catered in Schedule of Credit) obtained during dismantling/demolition shall become the property of the Govt and shall be deposited by the contractor in MES store yard as directed by Engineer-in-Charge. The rates quoted by the tenderer in BOQ shall be deemed to include this aspect and nothing extra shall be payable on this account.

14. GE/Engineer – in-Charge of work may administrate this contract in such a manner that work shall be executed by the contractor as per users and site requirement for entire contract period. The contractor will have to arrange his working programme accordingly. No claim what so ever will be entertained by the Department on this account.

15. The materials / fixtures /fittings shall be procured from any of the firms / manufactures whose name mentioned in tender documents. However the materials / fixtures / fittings whose manufacturers name are not mentioned in the tender documents these shall be conforming to relevant IS and as approved by GE.

16. A tenderer is supposed to check if any revised BOQ has been uploaded and quote in revised BOQ only. Uploading quotation in pre-revised BOQ shall be considered as a willful negligence by the bidder and his quotation shall be considered non-bonafide.

17. Consequent upon the provision of section 51 of the Goods and Service Tax Act came into force w.e.f. 01 Oct 2018 circulated vide E-in-C's Branch letter No. 66546/Manual/GST/168/E8 dt 26 Sep 2018 accordingly GST on works contract shall be deducted at source as notified/specified in the Government Of India, Ministry Of Finance , Department of Revenue letter No F. No. S. 31011/11/2018-ST-I-DoR dt. 14 Sep 2018.

Contd....

SCHEDULE 'B'**ISSUE OF MATERIAL TO THE CONTRACTOR (SEE CONDITION 10 OF IAFW-2249 AND AS AMENDED THERE TO)**

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

- NIL -

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

(See condition 5, 34 & 35 of IAFW-2249)

Ser No	Quantity	Details of MES Crew supplied	Hire charges per (unit per working day) (Rs.)	Standby charges (per off day) (Rs)	Place of issue (By Name)	Remarks
1	2	3	4	5	6	7

- NIL -

SCHEDULE 'D'**TRANSPORT TO BE HIRED TO THE CONTRACTOR**

(See condition 15 & 35 of IAFW-2249)

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

- NIL -

SIGNATURE OF CONTRACTOR

DATED : _____

SSW
for Accepting Officer

TENDER

THE PRESIDENT OF INDIA

Having examined and pursued the following documents:-

1. Specifications.
2. Drawings detailed in the specifications.
3. Schedule 'A' 'B' 'C' & 'D' attached hereto.
4. MES Standard Schedule of Rates: Part I, 2009 (Specifications) and Part II 2010 (Rates) together with errata and amendment as follows as applicable to the above said schedule:-

Part - I (2009)

Errata – NIL: Amendment Nos 1 & 2

Part II – (2010)

Errata /Amendment Nos - 1 to 59

5. General Conditions of Contract, IAFW-2249 (1989 Print) together with Errata Nos 1 to 20 and Amendment Nos 1 to 40
6. Water condition 31 of IAFW-2249 General Conditions of Contracts: Water will not be supplied by MES.

Should this tender be accepted I/We agree:-

*“(a) That the sum or **Rs 97,500/- (Rupees ninety seven thousand five hundred only)** forwarded as Earnest Money shall either be retained on account of Security Deposit or to be refunded by the Government on receipt of an appropriate amount as Security Deposit within the time specified on condition 22 of IAFW-2249.

(b) To execute all works referred to in the said documents upon the terms and conditions contained, or referred to therein and as detailed in General Summary below and to carry out such deviation as may be ordered vide Condition 7 of IAFW-2249 upto a maximum of 10% (TEN percent) and further agree to refer all disputes as required by condition 70 of IAFW 2249 to the Sole Arbitrator of a serving Engineer Officer having degree in Engineering or equivalent or having passed final/direct final exam of Sub Div II of Institution of Surveyors (India) recognized by the Govt of India to be appointed by Chief Engineer, Air Force, Western Air Command, Palam, Delhi Cantt -10 or his absence the officer officiating as Chief Engineer, Air Force , Western Air Command, Palam, Delhi Cantt-10 whose decision shall be final, conclusive and binding.”

7. To be deleted if not applicable.

Contd....

TENDER (CONTD--/--)

Signature _____ in the capacity of _____
 Name _____

duly authorised to sign the tender for and on behalf of M/S _____

(IN BLOCK LETTERS)

Date _____

Witness _____ Postal Address _____

Address _____

_____ Telephone No _____

ACCEPTANCE

_____ alterations have been made in these documents and as evidence that these alterations were made before the execution of the contract agreement; they have been initialed by the contractor and Lt Col Niranjana Singh, SSW.

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

The above tender is/are accepted by me on behalf of the President of India at the item rate contained in Schedule 'A'/BOQ on the _____ day of _____ 2018

Signature _____ dated this _____ day of _____ 2018

Appointment: COMMANDER WORKS ENGINEER (AF)
 GURGAON C/O CWE (AF) PALAM COMPLEX, DELHI CANTT-10
 (FOR AND ON BEHALF OF THE PRESIDENT OF INDIA)

GENERAL CONDITIONS OF CONTRACTS (IAFW-2249)(1989 PRINT)

FOR

MEASUREMENT CONTRACTS
(IAFW-1779 AND 1779-A)

A copy of the GENERAL CONDITIONS OF CONTRACT (IAFW-2249) (1989 PRINT) with Errata Nos 1 to 20 and Amendment Nos 1 to 40 has been supplied to me/us and is/in my/our possession. I/We have read and understood the provisions contained in the aforesaid GENERAL CONDITIONS OF CONTRACT before submission of this tender and I/We agree that I/We shall abide by the terms and conditions thereof, as modified, if any, elsewhere in these tender documents.

It is hereby further agreed and declared by me/us, that the General Conditions of Contract (IAFW-2249-1989 Print) including Condition 70 thereof pertaining to settlement of disputes by arbitration containing 33 pages (Serial Page Nos 21 to 53) with Errata Nos 1 to 20 and Amendment Nos. 1 to 40 containing 19 pages (Serial Page Nos. 54 to 72) form part of these tender documents.

SIGNATURE OF CONTRACTOR)
DATED: _____

SSW
FOR ACCEPTING OFFICER

SCHEDULE OF MINIMUM FAIR WAGES

A copy of the latest schedule of Minimum wages has been supplied to me/us and is in my/our possession. I/we have read and understood the provisions contained in the aforesaid Schedule of Minimum wages before submission of this tender and I/We agree that I/We shall abide by the terms and conditions thereof, as modified, if any, elsewhere in these tender documents.

It is hereby further agreed and declared by me/us, that Schedule of Minimum Wages **(Containing 14 Pages from Srl Page No. 73 to 86)** form part of these tender documents.

SIGNATURE OF CONTRACTOR)

SSW
FOR ACCEPTING OFFICER

DATED: _____

SPECIAL CONDITIONS

1. GENERAL

1.1 The following Special Conditions shall be read in conjunction with the General Conditions of contracts IAFW-2249 and IAFW-1779 & 1779-A including upto date Errata/Amendments thereto. If any provisions in these Special Conditions are at variance with that of the aforesaid documents, the former shall be deemed to take precedence there over.

1.2. The Work under this contract shall be carried out in accordance with Schedule 'A', particular specifications, drawings and other provisions given in General summary and general specifications/provisions given in MES Schedule.

1.3 The term 'General Specifications' referred to hereinbefore as well as referred to in IAFW-2249 (General Conditions of Contracts) shall mean the specifications contained in the MES Schedule.

1.4 General rules, Specifications, Special conditions and all preambles in the MES Schedule shall be deemed to apply to the works under this contract. In case of any discrepancy the provisions in these documents shall take precedence over the aforesaid provisions in the MES Schedule.

2. ADMISSION TO SITE BY CONTRACTOR TO ASCERTAIN HIS OWN INFORMATIONS

2.1. The tenderers shall contact the Garrison Engineer for the purpose of inspection of site(s) and relevant documents other than those sent herewith, who will give reasonable facilities for this purpose. The tenderers shall also make themselves familiar with working conditions, accessibility of site(s), availability of materials and other cognate conditions which may affect the entire completion of work under this contract.

2.2. The tenderers shall be deemed to have visited the site(s) and made themselves familiar with the working conditions, whether they actually inspect the site(s) or not.

3. SECURITY AND PASSES

3.1. Contractor's attention is invited to condition 25 of IAFW- 2249. He shall employ only Indian Nationals after verifying their antecedents and loyalty. The contractor shall on demand by the Engineer-in-Charge, submit list of his agents, employees and work people concerned and shall satisfy the Engineer-in-Charge as to the bonafides of such people.

3.2. The Engineer-in-Charge at his discretion has the right to forward the list of personnel's to CO of unit for issuing the passes as per rules and regulations of the area in force to control the admission of the contractor, his agents, employees and work people to the site of the work or any part thereof. Passes should be returned at any time on demand by the Engineer-in-Charge and or the authorities concerned and in any case on completion of work.

3.3. The contractor and his agents, employees and work people shall observe all the rules promulgated by the authority controlling the area in which the work is to be carried out e.g. prohibition of smoking and lighting, fire precautions, search of persons on entry and exit, keeping to specific routes, observing specified timing etc. Nothing extra shall be admissible for any man-hours etc lost on this account.

4. CONDITIONS OF WORKING IN RESTRICTED AREA

4.1. **WORK LIES IN RESTRICTED AREA (Visit to site within the Restricted Area):** 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 of their agent, representative etc. if any, dates and time of their proposed visit so that necessary arrangements may be made by GE to secure admission. Whether tenderer visit the site or not he shall be deemed to have full knowledge of the restrictions of entering into/exit from and within the restricted area and other cognate conditions which may affect the entire completion of work under this contract.

Contd . . ./-

SPECIAL CONDITIONS (Contd. .)

4.2 **ENTRY/EXIT:** The contractor, his agent(s), representatives, workmen etc and his materials, carts, trucks or other means of transports etc, will be allowed to enter through and leave from such gate or gates and at such times as the GE or authorities in-charge of the restricted Area may at their sole discretion permit to be used. The contractor's authorised 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 Areas.

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

4.3.1 **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 labourers 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.

4.3.2 Contractor shall be responsible for the conduct and action of his workmen, agents or representative.

4.4 **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.

4.5 **WORKING HOURS.**

4.5.1 The units controlling Area, usually work during six days in the week and remain closed on the 7th day. The working hours available to contractor's labour and staff are however, appreciably reduced because of the time taken in security checks observed at the time of entry, exit and during working hours.

4.5.2. The exact working hours, days and non working days observed for the restricted area, where works are to be carried out shall be deemed to have been ascertained by the contractor before submitting his tender. The tenderer's attention is invited to the fact that the total numbers of working hours for a unit are prescribed in regulations and they cannot be increased by the Garrison Engineer.

4.6. **Working 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 authorised 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.

4.7 **FIRE PRECAUTIONS:**

4.7.1 The contractor, his agents, representatives, workmen etc, shall strictly observe the orders pertaining to fire precautions prevailing within the restricted area.

4.7.2 Motor transport vehicles, if any, allowed by authorities to enter the area must be fitted with serviceable fire extinguishers.

4.8 **Female searcher:** If the contractor desires to employ female labours on work to be carried out inside the area and a female searcher is not borne on the authorised strength at the time of submission of the tender, he shall be deemed to have allowed in his tender for pay and allowances etc, for a female searcher (Class IV servant/GP `D` servant) calculated for the period female labour is employed by him inside that area. If more than one contractor has/have to be employed in addition to the authorised strength, the salary and allowances paid on an equitable basis between the contractors employing female labour taking in to consideration the value and period of completion of their contracts. The GE's decision with regard to the amount recoverable on this account from any contractor shall be final and binding.

Contd . . ./-

SPECIAL CONDITIONS (Contd. .)**5. MINIMUM WAGES PAYABLE**

5.1 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 whichever is higher.

5.2. The fair wages referred to in condition 58 of IAFW-2249 will be deemed to be the same as the minimum wages payable as referred to above.

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

6. ROYALTIES

Reference condition 14 of General Conditions of contracts (IAFW-2249).
No quarries on Defence land are available.

7. LAND FOR TEMPORARY WORKSHOP AND STORES

Delete the following from lines 5 to 9 of Sub Para 1 of Condition 24 of IAFW-2249 reading "in the event of area of landland allotted to him" and insert as under: -

"The contractor shall be allotted free of charge, the area as marked on the layout plans or as directed by Engineer-in-Charge for the purpose of erection of temporary workshop and stores. No M O D land is available for accommodation of labour and canteen for which the contractor shall make his own arrangement at his own expense.

8. WATER.

8.1 Water condition 31 of IAFW-2249 General Conditions of Contracts: Water will not be supplied by MES.

9. CO-OPERATION WITH OTHER AGENCIES

The contractor shall permit free access and generally afford reasonable facilities to other agencies or departmental workmen engaged by the Govt to carryout their part of the work, if any, under separate arrangements.

10. ELECTRIC SUPPLY

Electricity supply required for the work upto a maximum of 20 KW three phase 440 volts shall be available by the MES at points either shown on site plan or from point (s) as directed by Engineer in charge. KWH meters to register the electric energy supplied and main switch shall be provided and installed by the contractor. Contractor shall provide all necessary cables, fittings etc from the tapping point in order to ensure a proper and suitable supply of electricity for execution of work. The contractor will be craged for the electric energy consumed for execution of works at the following rate:-

- (a) At the rate of Rs. 9.50 Per unit for Lighting.
- (b) At the rate of Rs. 9.50 Per unit for Power.

10.1 MES do not guarantee continuity of supply and no compensation whatsoever shall be allowed for supply becoming intermittent or for breakdown in the system.

Contd . . ./-

SPECIAL CONDITIONS (Contd. .)

10.2 GE or his representative shall be free to inspect all the power consuming devices or any electrical lines provided by the contractor. Any devices or electric lines provided by the contractor which is not to the satisfaction of the GE shall be disconnected from the supply if so directed by him.

11. NET WORK ANALYSIS

11.1 The time and progress chart to be prepared as per Condition 11 of General Conditions (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 scheduling of the activities will be done by the contractor so as to finish the work within the stipulated time. On completion of the time 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 of site.

11.2 During the currency of work, the contractor will 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 under taken 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 orders or amendments. Any revision of the time schedule as a result of the review will be submitted by the contractor to GE within a week for the approval after due scrutiny by the authority concerned.

11.3. 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. GE'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.

11.4 Contractor shall mobilize and employ sufficient resources to achieve the detailed schedule within broad framework 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 GE.

12 ATTENDANCE UPON DEPARTMENTAL LABOUR AND CO-OPERATION WITH OTHER BUILDING CONTRACTORS

12.1 The work is required to be carried out in close co-operation with building contractor so as to cause minimum possible damage to the work already executed and this should be done by frequent visit to the site at the appropriate stage. The contractor should therefore supply to Engineer in charge sufficient details of pocket, holes/chases to be left in the work so the building contractor can be directed to do so.

12.2 The contractor shall note that if the requirement of leaving holes etc is not furnished in time, he shall/have to carry out such works himself and make good the disturbed works as necessary at his own cost.

12.3 The contractor shall also note that the building contractor is not required to provide any concrete blocks and the like for embedding lots etc. Such provision if required shall be the responsibility of the contractor under this contract.

Contd . . /-

SPECIAL CONDITIONS (Contd. .)**13. RECORD OF CONSUMPTION OF CEMENT**

13.1 The contractor shall maintain a pucca bound register with serially numbered pages with all pages initialed by Engineer in charge against numbering showing quantities of cement received, incorporated in the work and balance at the end of each day. The form of record shall be as approved by Engineer-in-Charge. The register shall be signed daily by representatives of MES and the contractor in token of verification of its correctness and will be checked by Engineer-in-Charge, at least once a week.

13.2 The register shall be kept at site in safe custody of the contractor's representative during the progress of the work and shall be produced on demand for verification to the inspecting officer(s).

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

14. PERIOD OF COMPLETION

14.1 Work order to commence the work shall be placed on the contractor soon after the acceptance of tender. The period of completion as laid down in schedule 'A' shall commence from the date of commencement shown in the first work order and the contractor should take the fabrication/procurement action immediately so as to ensure completion of entire work within the stipulated period of completion.

14.2 The period of completion shown in schedule 'A' is for the completion of the entire work to the satisfaction of the GE.

15. RECOMMENDATION FOR PROCUREMENT OF MATERIALS FOR INCORPORATION IN THE WORK.

15.1 The contractor shall at his own cost and expense provide all materials required for the work other than those listed in schedule 'B'

15.2 In the event of the contractor experiencing difficulty in procuring the materials required for incorporation in the work through his own requires he may apply to the appropriate authority/manufacturer, such application of the contractor with his recommendations.

15.3 The aforesaid condition would not however amount to any guarantee expressed or implied and the contractor still remains contractually liable to make his own. Arrangements to fulfill his contractual obligations. No claim what so ever shall be admissible in the event of any delay in finalization of the supply of such materials.

16. PERIOD FOR KEEPING THE TENDER OPEN

The tender shall remain open for acceptance for a period of 60 (Sixty) days from the date on which the tenders are due to be submitted.

17. CONTRACTOR'S REPRESENTATIVES AND WORKMEN

Refer condition 25 of IAFW-2249. The contractor shall employ only Indian Nationals as his representatives, servants and workmen and verify their antecedents and loyalty before employing them for the works. He shall ensure that no person of doubtful antecedents and nationality is, in any way associated with work.

Contd . . /-

SPECIAL CONDITIONS (Contd. .)**18. SECURITY OF CLASSIFIED DOCUMENTS**

Contractor's Special attention is drawn to conditions 2-A and 3 of IAFW-2249 (General Conditions of Contracts). The contractor shall not communicate any classified information regarding the work either to subcontractors or others without the prior written approval of the Engineer-in-Charge. The contractor shall also not make copies of the design/drawing and other documents furnished to him in respect of work, and shall return all documents on completion of the work or earlier on determination of the contract. The contractor shall alongwith the final bill attaches a receipt of his having returned the classified documents as per conditions 3 of IAFW-2249 (General conditions of contractor).

19. RECORD OF MATERIALS

19.1 The quantity of materials such as paints, water proofing compound and the like, as directed by the Engineer-in-Charge (the quantity of which cannot be checked after incorporation in the works), shall be recorded in measurement books and signed by the contractor and the Engineer-in-Charge as a check to ensure that the required quantity has been brought to site for incorporation in the work.

19.2 Materials brought to site shall be stored as directed by the Engineer-in-Charge recorded in Measurement Book and shall be suitably marked for identification.

19.3 The contractor shall, on demand, produce to the GE original receipted vouchers in respect of the supplies. Vouchers 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 containers/packing; bearing manufacturer's marking except in the case of the requirement of material(s) being less than smallest packing.

19.4 Contractor shall produce original vouchers from the manufacturers and/or their authorised agents for the full quantity of the following materials, as applicable as a prerequisite before submitting for payment for any advances on account of the work done and/or materials collected in accordance with condition 64 of General Conditions of Contracts IAFW-2249.

- (a) Cement.
- (b) Steel
- (c) SGSW Pipe
- (d) RCC Pipe
- (e) HDPE Pipe

20. SECURITY AGAINST LOSS OR DAMAGE

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

(i) Particulars of plants/equipments, their make manufacture Model No. If any. Registration No if any, capacity, year of manufacture and year of purchase etc.

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

(iii) Location, indication No. quantity at each location of site of work.

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

Contd . . /-

SPECIAL CONDITIONS (Contd. .)

Note: - However this will not absolve the contractor of his responsibility for safe custody of plants, equipments etc even though the work is to be executed in restricted area.

21. RELEASE OF ADDITIONAL SECURITY DEPOSIT

21.1 Refer condition 22 and 68 of IAFW-2249

21.2 The contractor in case he has to deposit additional security deposit for the contract, is advised to deposit the additional deposit security in two equal parts so as to facilitate its release in accordance with condition 68 of IAFW-2249.

22. OFFICIAL SECRET ACT

The contractor shall be bound by the official secret Act 1923.

23. CLEANING DOWN

Refer condition 49 of IAFW-2249, General Conditions of Contracts:- The contractor shall clean all floors, walls remove cement, lime, paint marks, drops etc. clean the joinery glass panes etc touch up all painters work and carryout all other necessary items of work in connection there with and leave the whole premises clean and tidy before handing over the building(s) and other works covered under this contract.

24. DETAILS OF CONSTRUCTION

The quoted rates shall be deemed to include for minor details of construction which are obviously and fairly intended and are essential for completion of the work but may not have specially been referred to in these documents. In the event of disputes the decision of the Accepting Officer shall be final, binding and conclusive.

25. OCTROI/SALES TAX/GST AND OTHER DUTIES

Contractor's rates shall be deemed to be inclusive of all duties such as Octroi, Sales Tax, excise, VAT/GST etc as referred in condition 10 of IAFW-2249 (General Conditions of Contract) and state Govt sales tax/GST on works contracts payable under respective statutes pursuant to the Constitution (Forty sixth amendment) Act 1982. Any condition stipulated by the tenderer regarding sales tax/GST on works contracts will not be considered and such tender shall be liable for rejection.

26. CONSTRUCTION LABOUR WELFARE CESS

The quoted rates by the tenderers shall be deemed to be inclusive of construction labour welfare cess and no extra payment shall be admissible to the contractor on this account.

27. TESTING OF MATERIALS

27.1. All the materials to be incorporated in the work shall be subjected to quality control tests as per the testing procedure and frequency as laid down in relevant IS and as indicated in the tender.

27.2. Irrespective of whatever is indicated elsewhere in the tender documents the modalities of testing arrangements shall be as mentioned here in after.

Contd . . /-

SPECIAL CONDITIONS (Contd. .)

27.3. The contractor shall set-up his site laboratory fully equipped to the satisfaction of GE to carry out the `A` type tests as given in Appendix `A` to these specifications. The laboratory shall be set up in all respects before any activity requiring tests as indicated above is physically commenced. Contractor shall employ a competent person technically qualified and approved by the GE to carry out the testing activities. All the tests shall be carried out in the presence of Engr-in-Charge and records shall be jointly signed by the contractor and Engineer-in-Charge.

27.4. Entire cost of laboratory and its functioning including cost of samples will be borne by the contractor in all respects and no separate recovery for testing charges shall be effected for tests/retests carried out at site laboratory. If in the opinion of GE (whose decision in this regard shall be final) any of the `A` type tests as given in Appendix `A` to these specifications cannot be satisfactorily carried out in the site laboratory at any stage due to any reason the same shall be got done in Govt approved lab/Engineering College as approved by GE in respect of which all expenditure there of shall be borne by the contractor.

27.5. Any tests marked as type `A` `B` or `C` in Appendix `A` if got done at SEMT wing, Pune, testing charge as indicated against them will be recovered from the contractor. In addition to this the contractor shall arrange for samples and its handling/transportation to the concerned labs at his own cost.

27.6. The tests marked as type `B` and `C` will not be carried out in the site laboratory. These tests shall be carried out only in SEMT wing/Govt approved lab/National test House/Engineering College as approved by the GE. In case type `B` and `C` testing is done in SEMT wing, the testing charges recovered shall be as indicated in the Appendix `A` to these P.S. against each test. However if testing is done in other places as mentioned above, the actual cost will be directly borne by the contractor.

27.7. The list of tests given in Appendix `A` to these PS contain only a few common tests. However all other tests required in the work but not covered in the appendix shall also be got done from Govt approved lab/ Engineering College /National test house as approved by GE and entire cost of samples, handling, transportation and actual testing charge will be borne by the contractor directly.

28. MATTERS ARISING BETWEEN VARIOUS AGENCIES WORKING AT SITE

The contractor shall permit free access and afford reasonable facilities to other agencies or departmental workmen, If any engaged by Govt to carry out their part of work in the area No extra payments shall, however be made to the contractor on this account what so ever. The decision of GE shall be final and binding on the contractors in all matters arising between the various contractor working at site simultaneously. The various agencies/contractors working contemporaneously at the site are required to work in close co-ordination.

29. DAMAGE TO EXISTING WORKS

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 shall be left clean and tidy on completion rectification/re-instatement making good etc shall conform to the standard of materials originally used on the work and shall match with existing work in all respects to the entire satisfaction of the GE. In case of any dispute on this account decision of the GE shall be final, conclusive and binding.

30. FORCE MAJEURE

Should any force majeure circumstances arise, each of the contracting party shall be excused for the non fulfillment or for the delayed fulfillment of any of its contractual if the affected part within 15 days of its occurrence informs the other party in writing.

SPECIAL CONDITIONS (Contd. .)

Force Majeure shall mean fires, floods, natural calamities or other acts such as war, turmoil's, strikes (as not limited to be establishment of the seller), sabotage, explosions, qua anatine restrictions beyond the control of either party.

It is understood and agreed between the parties hereto that the right and obligations of the parties shall be deemed to be in suspension during the continuance of the force majeure event as aforesaid and the said rights and obligations shall automatically revive upon the cessation of the intervening forces majeure vent the period within the rights and obligation of the parties shall be in suspension due to force majeure event shall not be considered as a delay with respect to the period of deliver and/or acceptance of delivery under the contract or other to the detriment of either party.

Not with standing the provisions of the immediately for clauses it is further understood and agreed between the party hereto that in the event of any force majeure persisting for uninterrupted period exceeding (06) six months, on their part reserves the right to terminate this contract upon giving prior written notice of 30 (thirty) days to the other party of the intention terminate without any liability other than reimbursement on the terms provided in their agreement for the goods received.

31. RE-IMBURSEMENT / REFUND ON VARIATION IN "TAXES DIRECTLY RELATED TO CONTRACT VALUE

31.1. The rates quoted by the Contractor shall be deemed to be inclusive of all taxes (including Sales Tax/VAT/GST on materials, Sales Tax/VAT/GST on Works Contracts, Turnover Tax, Service Tax, Labour Welfare Cess/Tax etc.), duties, Royalties, Octroi & other levies payable under the respective Statues. No reimbursement/refund for variation in rates of taxes, duties, Royalties, Octroi & other levies, and/or imposition/abolition of any new/existing taxes, duties, Royalties, Octroi & other levies shall be made except as provided in sub Para 31.2 here-in-below.

31.2. 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 Sales Tax/VAT/GST on Works Contracts, Turnover Tax, Labour Welfare Cess/Tax and like but excluding Income Tax. The tendered rates shall be deemed to be inclusive of all "taxes directly related to Contract value" with existing percentage rates prevailing on last due date for receipt of tenders. Any increase in percentage rates of "taxes directly related to Contract value" with reference prevailing rates on last due date for receipt of tender 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 date for receipt of tenders shall be refunded by the Contractor to the Govt. / deducted by the Govt. from any payments due to the Contractor. Similarly imposition of any new "taxes directly related to Contract value" after the last due date for 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 payment due to the Contractor.

31.3 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 thereto which he may be in a position to supply. The contractor shall submit the other documentary proof/information's as the GE may require.

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

Contd . . . /-

SPECIAL CONDITIONS (Contd. .)

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

(SIGNATURE OF CONTRACTOR)
DATED _____2018

SSW
FOR ACCEPTING OFFICER

PARTICULAR SPECIFICATION

1. GENERAL

1.1 The works under this contract shall be carried out in accordance with Schedule 'A', particular specifications and General specifications and other provisions in the MES Schedule.

1.2 The Term "General Specifications referred to in Para 1.1 above as well as referred in IAFW-2249 (General Conditions of Contract) shall mean the specifications contained in the MES Standard Schedule of Rates – 2009 (Part-I) Specifications and MES SSR Part-II (2010) Rates.

1.3 General Rules, specifications, special conditions and all preambles in the MES Schedule shall be deemed to apply to all works under this contract, unless mentioned otherwise in these tender documents in which case specifications in these tender documents shall take precedence over the aforesaid provisions in the MES Schedule.

1.4 Wherever reference has been given to the catalogue number of firms, the materials and fittings etc, will be only of the make of the firms whose catalogue numbers have been indicated in the tender documents.

1.5 SAMPLES OF MATERIALS

1.5.1 The contractor is advised to inspect samples of all the materials given herein-after which are displayed in the office of GE, before submitting his tender. The contractor is deemed to have inspected samples and satisfied himself as to the nature and quality of materials which he is required to incorporate in the work, irrespective of the fact whether he inspects them or not. The materials to be incorporated in the work by the contractor shall conform to or shall be superior in quality to such of the samples, which shall comply in all respects with the specifications given here-in-after.

1.5.2 Materials for which samples are displayed are given below:

- (a) Broken or crushed stone aggregate
- (b) Fine Sand
- (c) Burnt Brick

1.5.3 The contractor shall produce samples of all materials and shall obtain approval in writing from GE before he places bulk order for the materials for incorporation in the work. In respect of materials for which samples are not kept or detailed specifications are not given here-in-after, the materials shall comply with latest relevant Indian Standard specifications whether listed in MES schedule or not. Materials having ISI mark shall be given preference over those not having ISI mark.

1.6 MAKING GOOD

The contractor shall cut, leave or form holes, recesses, chases etc, in concrete, brick work, walls, ceiling, floors and in any other situations as required or as directed by the Engineer-in-Charge and finish to match the adjoining surfaces.

2. **SCOPE OF WORK:** The scope of work included in this contract mainly comprises of **SPECIAL REPAIRS TO EXISTING SEWAGE SYSTEM AT AF CAMP NARAINA UNDER GE (AF) GURGAON** all as detailed in these tender Documents .The tenderers are, however, advised to visit the site in consultation with GE to ascertain the actual locations of works, nature of work and quantum of work etc. involved, Restrictions etc imposed on the entry/exit of labour including requirement of verification of Antecedents of labour/supervisors/work men and issue of passes etc in respect of such people to be employed for the work by the contractor and/or any other factors which may effect his rates. The contractor shall be deemed to have visited the site and acquainted himself with all these Important aspects mentioned here-in-before, irrespective of the fact whether he actually visits the site or not and no claim what-so-ever shall be entertained on this account at a later date” .

Contd...

PARTICULAR SPECIFICATION (CONTD....)**3 EXCAVATION - GENERAL**

3.1 Excavation and earthwork under this contract shall be considered as excavation in soft/loose soil as detailed in MES SSR (Part -I).

3.2 In case timbering to excavation is required and specifically ordered by the GE in writing, it shall be paid as deviation. Timbering / planking shall be carried out as per para 3.24 of MES SSR Part-I

3.3 Bailing/pumping out of water where required shall be carried out as described in clause 3.17 of MES SSR. The cost of such work as may be necessary shall be deemed to be included in rates quoted by contractor.

3.4 Contractor shall ensure all safety measures in construction as per para 1.16 of SSR Part-I”.

3.5 **Excavation by trenchless method.** : Excavation by trenchless method shall be carried out as specified in BOQ and relevant IS.

3.6. DEMOLITION/DISMANTLING

3.6.1 The contractor shall carry out demolition/dismantling carefully without any damages to the existing structure. In the event of any loss or damage, the contractor shall at his own expense reinstate and make good to the full satisfaction of Engineer-in-Charges.

3.6.2 During demolition/dismantling all necessary precaution shall be taken by the contractor as per “MES Safety Code” mentioned in General Conditions of Contract (IAFW-2249).

3.6.3 The demolition/dismantling materials which are not covered under Schedule of Credit shall remain Govt property and the contractor shall remove the materials to the MES Store/places outside of the Defence land as directed by Engineer-in-Charge without any extra cost to the Govt.

4 CEMENT

4.1 The cement used shall be 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 Flyash based. Cement bag shall bear ISI certification mark and date of manufacture.

4.2 **Procurement of cement:** Cement shall be procured from the main producers/manufacturers of the cement as specified in appendix ‘B’ to these particular specifications. However where estimated requirements of cement is less than 1200 bags, contractor can procure cement from the authorized distributors/ dealers of the approved firms, but contractor will have to submit test certificate of the batch issued by the main producers.

4.3 The Particulars of the manufacturer of cement along with the date of manufacture shall be produced by the contractor for every lot of cement separately. The cement so brought shall be fresh and in no case older than 60 days from the date of manufacturing. The documents in support of the purchases of cement such as purchase voucher shall be verified by the site staff and GE. Before placing the order for supply of cement by the contractor, he shall obtain written approval from the GE regarding name of manufacturer, quantity of cement etc. Cement shall be procured for minimum requirement of one month and not exceeding the requirement of the same for more than two months at a time. The cement shall be consumed in the work within three months after receipt. Cement shall conform to the requirements of Indian Standard Specification and each bag of cement shall bear relevant ISI mark. The weight of each consignment shall be verified by the GE and recorded.

PARTICULAR SPECIFICATION (CONTD....)

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

4.5 Purchase vouchers as mentioned here-in-before shall bear machine number from the manufactures.

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

- (a) PPC shall meet the strength criteria of 43 grade Ordinary Portland Cement (OPC) as laid down in IS-8112-1989.
- (b) Minimum period before striking the form work given in clause 11.3.1 of IS 456:2000 and MES Schedule Part-I (SSR Part-I) vide clause 4.11.6.3 shall be 14 days.
- (c) Extra curing shall be carried out as required.
- (d) Mixing of OPC and PPC shall not be allowed in a building. However with the approval of GE, different buildings can be have different type of cement and separate record shall be maintained showing location and types of cement used.
- (e) While procuring PPC, the following requirements are to be ensured and certificate to that effect shall be obtained by Contractor for each batch from the manufacturer :-
 - (i) The quality of fly ash is strictly as per IS 1489 Part-I 2002.
 - (ii) Fly ash is inter-ground with clinker and mixed with clinker.
 - (iii) Dry fly ash is transported in closed containers and stored in cilos. Only pneumatic pumping shall be used.
 - (iv) The fly ash shall be procured from thermal plants using high temperature combustion above 1000 degree C.
 - (v) The fly ash content in PPC shall not exceed 25% to ensure consistency.
 - (vi) Ensure strict compliance of clause 4.1.3 and clause 9.2 of IS-1489 (Part-I) : 1991 by getting fly ash and cement tested at National Council of Cement and Building materials, Ballabgarh, Haryana, PIN-121004 or any other laboratories as mentioned in clause 4.4.4 here-in-after.
 - (vii) PPC shall not be permitted for use in pavement quality concrete (PQC) such as hanger floor, runway, link taxi etc. and water retaining structures.

4.6 TESTING

4.6.1 The contractor shall submit the manufacturer's test certificate in original alongwith 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 clearly bringing out above details. Engineer-in-Charge shall record these details in the cement acceptance register after due verification. GE shall also organise independent testing of random samples of cement drawn from various lots from the National Test House, SEMT Wing (CME Pune) Regional Research Laboratories, Government approved laboratories, as per IS: 3535 (method of sampling Hydraulic Cement), IS: 4031 (method of physical test for Hydraulic Cement) and IS: 4032 (method of Chemical analysis of Hydraulic Cement).

4.6.2 The average net mass of cement packed in bags at the plant in a sample shall be equal to or more than 50 Kgs. The number of bags in a sample shall be as given below:-

Contd/---

PARTICULAR SPECIFICATION (CONTD....)

Batch/Lot Size (in bags)	Sample Size (in bags)
100 to 150	20
151 to 280	32
281 to 500	50
501 to 1200	80
1201 to 3200	125
3201 and over	200

The bags in a sample shall be selected at random.

4.6.3 The cement shall conform to chemical requirements and physical requirements as specified in respective clauses of IS: 269. Each bag shall bear IS certification mark. The tests, carried out as per provisions of IS codes specified hereinbefore, shall be the criteria for acceptance of cement by Engineer-in-Charge. If samples from a lot/lots are not within the acceptable limits of Indian Standard, the lot/lots shall be rejected without any claims or compensation to the contractor for the lot/lots purchased. The contractor shall replace the lot/lots with the fresh one which shall be tested again for acceptance.

4.6.4 The cost of all tests carried out on cement before acceptance for incorporation in the work shall be borne by the contractor whether the results are acceptable or not.

4.7 **STORAGE**

Cement shall be stored over dry platform at least 20cm high in such a manner as to prevent deterioration due to moisture or intrusion of foreign matter. In case of storerooms, the stock should be at least 20cm above floors and away from walls. Inspection shall be carried out once a day by the Engineer-in-Charge. It shall be ensured by the Engineer-in-Charge that tested and untested cement are segregated and stored separately with distinct identification. The cement godowns shall be provided with two locks on each door. The key of one lock, at each door, shall remain with the Engineer-in-Charge or his representative and that of the other lock with the contractor's authorised representative at site of works so that cement is removed from the godown only according to daily requirement with the knowledge of both the parties.

4.8. **DOCUMENTATION**

The Contractor shall submit original vouchers from the supplier 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 alongwith the relevant documents before acceptance. The original vouchers and the Test Certificates shall be defaced by the Engineer-in-Charge and kept on record in the office of GE duly authenticated and with cross reference to the control number recorded in the Cement Acceptance Register. The Cement Acceptance Register will be signed by JE (Civil), Engineer-in-Charge, Board of Officers for random check of cement and verification of connected documents. The entire quantity of all types of cement shall also be suitably recorded in the Measurement Book for record purposes before incorporation in the work and shall be signed by the Engineer-in-Charge and the Contractor.

Contd/---

PARTICULAR SPECIFICATION (CONTD....)**4.9. SCHEDULING OF SUPPLY**

Schedule of procurement of cement shall be finalised by Contractor with GE and shall be incorporated in CPM chart so that procurement is in accordance with the progress contemplated in the CPM prepared. The complete requirement of cement shall be worked out before making any RAR payment and procurement of cement by the contractor shall be completed sufficiently in advance of the execution of work. Cement bags lying for more than 3 months after completion of test may be retested at the discretion of the GE before use and shall be rejected if it fails to conform to any of the requirements of IS-269.

4.10 CONCRETE

4.10.1 COURSE AGGREGATE: Unless otherwise specified, coarse aggregate for all cement concrete work shall be local broken or crushed stone conforming to samples. In all other respects, specification given in MES Schedule Part I shall be complied with Grading of coarse aggregate

4.10.2 FINE AGGREGATE. Fine aggregate for all concrete work shall be sand Ghaggar conforming to samples, comply with the requirement as specified in clause 4.4.7.2 for grading Zone I as per MES Schedule (Part I). Sand with Zone II grading may also be permitted subject to approval of GE and the requisite strength of the concrete is achieved.

NOTE: wherever Badarpur sand has been specified in the tender documents, the contractor shall be permitted to use Ghaggar sand (from near Chandigarh area) at his **own cost**. If he desires due to inadequate supply/nor availability of Badarpur sand, **No price adjustment** shall be made on this account. Sample of Ghaggar sand shall however be got approved from GE before incorporation in the work. Other provisions in the respective clauses shall remain unaltered.

4.10.3 Mix of concrete mentioned in these tender documents shall be by volume for nominal mix and as per approved design for design mix concrete.

4.10.4 Any cement which has deteriorated in quality to any cause whatsoever while in the custody of the contractor shall be removed by the contractor from the site. The decision of the GE in this regard shall be final, conclusive and binding.

4.10.5 In case of any dispute regarding quality of cement the contractor shall intimate the facts to the **GE within 7 days of receipt of cement** who will get the cement tested from the Govt. laboratory. The cost of testing cement will be borne by the contractor, if the cement proves to the quality as specified.

4.10.6 **AGGREGATE:** The aggregate shall conform to IS-383. Aggregate shall be non porous hard, strong, durable, clean and free from various impurities and exceeding the limits specified in the above referred IS. **When required by Engineer in charge the contractor at his own expense carry out test** laid down in IS-383 to verify that the aggregate comply with the requirement of the IS. The tests will be carried out in any laboratory approved by GE without any extra cost to government. Coarse aggregate proposed to be used shall be approved by the GE prior to bulk delivery on the same at the site of works. Fields tests for determining the contents of all silt, lime, clay etc from the aggregate shall be carried out by the Engineer-in charge from time to time to ensure that materials brought to use are conforming to the Samples approved by GE. The grading of coarse and fine aggregate shall be as per MES Schedule, fine Aggregate shall have a grading as per grading Zone II or Zone III. The grading of coarse and fine aggregate shall be checked as frequently as specified, the current frequency for a given job being determined by the GE/Engineer in charge to ensure that the specified grading is maintained.

Contd/---

PARTICULAR SPECIFICATION (CONTD....)

4.10.7 **WORK ABILITY**: this shall be done as specified in clause 4.11.4 of MES schedule Part I (2009).

5. STRENGTH TEST

Sampling and strength test of concrete shall be carried out as per clause 14 of IS-456. Coarse, fine aggregate and concrete cubes shall be tested in any Govt. lab approved by GE. The test samples should be identified and signed jointly by Engineer-in-Charge and contractor's representative.

6. STEEL AND IRON WORK

6.1.1 All steel required for incorporation in the work under this contract shall be procured by the contractor from the sources mentioned here-in-after and shall comply with the requirements of the following specifications:-

(a) REINFORCEMENT STEEL:

(i) Wherever high yield strength deformed bars or deformed/twisted steel reinforcement bars or CTD bars are specified/shown in the drawings or in these particular specifications, these shall be amended to read as high strength deformed steel bars. The high strength deformed steel bars shall be produced by Thermo Mechanically Treatment process (TMT steel bars) and shall be of grade Fe-500 or Fe 500(D) (as indicated in drawings) meeting all other requirements of IS-1786(amended up to date).

(ii) TMT steel bars of grade Fe 500D shall only be used in works to be executed in seismic Zone 4 & 5 irrespective of whatever is shown in drawings. However, Earth Quake Resistant (EQR) steel of grade manufactured by SAIL with the following tensile properties shall also be allowed to be used in Seismic Zone 4 & 5:

Standard	Mandatory as per IS:1786-2008	SAIL EQR
Grade	Fe 500D	Fe 500
Yield Strength (MPa min.)	500	500
Yield Strength (MPa max.)	-	625
Ultimate Tensile Strength(Min.)	565 (1.1)	1.18
Elongation (% Min.)	16	18
Uniform Elongation (% Min.)	15	8

(iii) The minimum elongation for steel of grade Fe-500D shall be 16 % as per IS: 1786-2008. For seismic zone II & III, the minimum elongation shall be 12 %. However, in seismic zone II & III steel of grade Fe 500 manufactured by SAIL with minimum elongation 18 % shall also be allowed to be used.

(iv) MS round bars (6 mm Dia) shall be of mild steel grade-I quality conforming to IS:432 (Pt-I)-1982. Chemical composition shall be in accordance with steel designation Fe 410-S of IS: 226-1975.

(b) STRUCTURAL STEEL:

(i) Definition of structural steel as given in clause 10.4 of MES Schedule Part-I shall be applicable. Standard quality steel of grade E-250 (Fe 410W quality 'A') conforming to IS: 2062 for all types of steel structures including that subject to dynamic loading shall be used.

Contd/---

PARTICULAR SPECIFICATION (CONTD....)

(ii) Ordinary quality structural steel wherever mentioned shall be of grade E-165 (Fe 290) conforming to IS: 2062 shall be used for steel doors, steel windows, grills, steel gates, railing, fencing posts etc.

(c) **GALVANISED STEEL SHEETS (PLAIN AND CORRUGATED)**: Unless otherwise mentioned galvanized steel sheet (plain or corrugated) shall be conforming to IS: 277 with minimum average mass of zinc coating (total both sides) as 450gms /square metre.

(d) **FABRIC REINFORCEMENT FOR CONCRETE**: Hard drawn steel wire fabric for concrete reinforcement shall be conforming to IS: 1566. Steel wire fabric for general use such as window grills, fencing work, etc. shall conform to IS: 4948 Specification for Welded Steel Wire Fabric for General Use.

6.1.2 In the drawings showing reinforcement details, the symbols # and O stands for deformed /twisted steel bars and mild plain round bars respectively. All reinforcement work including that of overlaps shall be provided as per standard Engineering practice and as directed by GE unless otherwise indicated in relevant drawings. No hook shall be provided in respect of the deformed steel bars.

6.1.3 Where there is a discrepancy between number of reinforcement bars as marked on the drawings and number of bars as worked out from the center to center spacing shown on drawings, the later shall prevail.

6.1.4 In the event of deviation, the length of each bar for calculating laps shall be taken as 10 metres. All laps and crossing of reinforcement shall be tied with mild steel annealed wire (soft drawn) of size not less than 0.9mm diameter.

Reinforcement shall be cut and bent to shape and shall be provided all as shown on drawings.

6.1.5. PROCUREMENT

6.1.5.1 **REINFORCEMENT STEEL**: TMT bars of all sizes shall be procured from manufacturers as mentioned in Appendix 'B'.

6.1.5.2 **STRUCTURAL STEEL**: Structural steel of all sizes shall be procured from manufacturers as mentioned in Appendix 'B'.

Contd/---

PARTICULAR SPECIFICATION (CONTD....)**7. Testing****7.1 Testing of Steel**

The manufacturer is to carryout inspections and testing of steel in accordance with the relevant BIS codes for testing. The contractor shall submit the manufacturer's Test Certificate in original alongwith the Test sheet giving the result of each mechanical test as applicable and the chemical composition of the steel or authenticated copy thereof duly signed by the manufacturer with each consignment. The Engineer-in-Charge shall record these details in the Steel Acceptance Register, after due verification and send a certified true copy of test sheet to GE for his record. The GE/CWE shall also organise independent testing of random samples of steel drawn from various lots from a National Test House, SEMT, CME, Regional Research Labs, Government approved labs , Zonal labs etc as per the following frequency. Samples from each lot should be tested for quality elongation. The elongation shall not be less than 18%. In order to undertake testing, the requisite facilities and cost of materials consumed in tests shall be borne by the contractor. However, testing charges shall be borne in accordance with condition 10A of IAFW-2249, i.e. testing charges shall be borne by the Deptt if the test results are found in order, otherwise these shall be borne by the contractor. The contractor at his cost shall arrange facilities for such tests. Tests are mandatory and hence all these tests shall invariably be carried out before incorporating the TMT bars in the work. No TMT bars shall be incorporated in the work without the above tests under any circumstance. Contractors to note that recovery in lieu of above tests shall not be acceptable.

FREQUENCY OF TESTING

NOMINAL SIZE STEEL FOR CONCRETE REINFORCEMENT	QUANTITY
1 Bars size less than 10mm	1 sample (3 specimen) for each test of every 25 tonnes or part thereof.
2. Bar size 10mm to 16mm inclusive	1 sample (3 specimen) for each test for every 35 tonnes or part thereof
3. Bar size over 16mm	1 sample (3 specimen) for each test for every 45 tonnes or part thereof

STRUCTURAL STEEL

4. Tensile Test	1 test for every 25 tonnes of steel or part thereof.
5. Bend Test	1 test for every 10 tonnes or part thereof.

NOTES:-

(i) For various tests, acceptance criteria, tolerance etc, refer to details given here-in-before and relevant BIS Codes.

(ii) Testing by the GE as per above frequency is mandatory before payment is released to the contractor or steel is incorporated in the work. However, tests will not be insisted upon for the steel required for guard bars, holdfasts, grills and such other allied items. Any item of steel, not meeting the requirements, shall be rejected and the particular consignment removed from the site by the contractor at his own cost. The contractor will have no claim on this account.

(iii) The GE may also increase frequency and number of samples /tests for his satisfaction. The cost of these additional tests shall be governed as per condition 10 (A) of IAFW-2249. However cost of samples, transportation and other overheads shall be borne by the contractor irrespective of test results. .

Contd/---

PARTICULAR SPECIFICATION (CONTD....)

7.2 Cost of testing, transportation and materials used in testing etc shall be borne by the contractor and no extra claim whatsoever will be admissible. Number of tests will be as mentioned in Para 9.1.8.1 here-in-before.

7.3. DOCUMENTATION

Steel Acceptance Register and measurement Book for steel (for record purposes and not to be abstracted) shall be maintained by the Engineer-in-Charge. The contractor shall submit original paid vouchers from the manufacturer for the total quantity of steel supplied under each consignment to be incorporated in the work. All consignments received at the work site shall be inspected by the GE alongwith the relevant documents before acceptance. The original vouchers and the Test Certificates shall be defaced by the Engineer-in-Charge and kept on record in the office of GE duly authenticated and with cross reference to the control Number recorded in the Steel Acceptance Register. The steel acceptance Register will be signed by JE(civil), Engineer-in-Charge, GE and contractor. The Accepting Officer may order a Board of Officers for random check of steel and verification of connected documents. The entire quantity of all steel items shall also be suitably recorded in the measurement book for record purposes as "not to be abstracted" before incorporation in the work and shall be signed by the Engineer-in-Charge and the contractor.

7.4 STEEL IN COIL, ETC.

7.4.1 Any bar of any diameter for reinforcement may be procured in round bundles or coils and the cost of straightening the same shall be borne by the contractor. When bars are procured in bundles, the length of each bundle shall be worked out on the basis of unit weight predetermined by the GE by getting suitable length (not less than 3 metres) out of each consignment(s) received, getting it straightened, length measured and weighed in presence of contractor's accredited representative. The said length(s) and the weight(s) shall be calculated. The length of bars worked out on the basis of unit weight determined as above shall form the basis for the purpose of calculating quantity of steel used/to be used in work and making payment of materials lying at site. However if the unit weight works out more than the unit weight given in SSR, then unit weight given in SSR shall be followed for computing weight of steel for the purpose of making payment of steel lying at site.

7.4.2 Size, type & grade of steel reinforcement shall be all as mentioned here-in-before. However, if grade & type of structural steel are not shown on drawing(s), the same shall be of grade Fe 410-S for structural purpose. Various types of steel shall be as given here under: -

(i) Reinforcement Steel

(a) Grade of TMT bars shall be as specified in PS Clause No. 9.1.1 (a) here-in before with yield stress (0.2% proof stress) of 500 N/sq. mm and shall confirm to all requirements of IS-1786 (Latest).

(b) MS round bars (6 mm dia) shall be of mild steel grade-I quality conforming to IS:432 (Pt-I)-1982. Chemical composition shall be in accordance with steel designation Fe 410-S of IS: 226-1975.

(c) Fabric reinforcement for concrete shall be conforming to IS: 1566.

8 STORAGE

8.1 Steel of different sizes shall be stacked separately. For each classification of steel, separate areas shall be earmarked. Steel shall be marked with distinct painting marks for easy identification.

Contd/---

PARTICULAR SPECIFICATION (CONTD....)

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

8.2 SCHEDULING & SUPPLY

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

The complete requirement of steel of various sizes will be worked out before making any RAR payment and procurement of steel by the contractor will be completed sufficiently in advance of the date of completion. No extension of time will be considered for non -availability of any section of steel.

8.3. WELDING

8.3.1 Refer clause 10.15 of SSR Part-I 2009.

8.3.2. Welding of iron and steel work shall be done in approved manner with electric welding/gas welding.

8.3.3. Electric welding shall be metal arc welding using consumable electrodes. All fillet welds shown on drawings shall be normal fillet welds. Welding shall be done as specified in IS-816 and IS-823.

8.3.4 Welding electrodes shall be of quality suitable for welding of structural steel and shall comply with the requirements of IS-814 for covered electrodes for metal arc welding of mild steel.

8.3.5. Contractor's particular attention is invited to IS-818 code of practice for safety and health requirements in welding and cutting operations and provisions mentioned vide clause No 10.15.19 of SSR Part-I (2009).

8.3.6 All weld shall be cleaned of slag and other deposits after completion.

8.3.7 Unless otherwise specified/shown on drawings, all welds shall be 5mm fillet welds.

8.3.8 All steel/MS work in railing etc, shall have joints welded all-round. Spot welding shall not be permitted.

8.4 REINFORCEMENT

8.4.1 Reinforcement shall be bent to shape and provided as indicated on the drgs.

8.4.2 All laps and crossings shall be tied with mild steel wire (annealed) of size not less than 0.9mm dia.

8.4.3 Stirrups fabricated out of tor steel bars shall also be provided with 90-degree bend.

Contd/---

PARTICULAR SPECIFICATION (CONTD....)**9 BRICK WORK**

9.1 Bricks to be used shall be best quality locally available known as first class (Sub class 'B' bricks). The size of bricks shall be within limits of 8 3/4" x 4 3/16" x 2 5/8" to 9 inches x 4 1/2 inches x 3 inches (Normal size bricks). Specifications given in clause 5.6.3 of MES schedule Part-I are not applicable to this contract in respect of dimensions/size of bricks.

9.2 Bricks shall be kiln burnt having minimum compressive strength of 75Kg/Sqcm and shall comply with the requirements of sub class 'B' designated as 75-B as specified in IS-1077.

9.3 Sand of mortar in all the brick work shall be 50% coarse sand (Badarpur/Ghaggar Sand) and 50% Jamuna (fine sand) Mix of cement and sand mortar for brick work shall be as given in the respective items of Schedule 'A'.

9.4 For workmanship, refer clause 5.18.2, 5.18.6, 5.18.7, 5.19 to 5.32 of MES Schedule Part-I.

10. **HDPE Pipe** HDPE pipe shall be provided as specified in clause 18.6 of SSR Part-I (2009).

10.1 **SGSW Pipe** SGSW pipe shall be provided as specified in clause 18.28 of SSR Part-I (2009).

10.2 **RCC Pipe** RCC pipe shall be provided as specified in clause 18.29 of SSR Part-I (2009).

10.3 **PVC(SWR) Pipe** PVC(SWR) pipe shall be provided as specified in clause 18.27A of SSR Part-I (2009).

10A PLASTERING/POINTING

10A.1 Sand for plastering shall be 50% Badarpur sand and 50% Jamuna sand conforming to sample kept in GE's office.

10A.2 The thickness of plaster mentioned in Sch 'A' is finished thickness exclusive of dubbing out plastering and dubbing out shall be done in one operation. Mix of plaster shall be as specified in respective item of Sch 'A'. Plastering on brick/concrete surfaces including curing shall be carried out as specified in relevant section of SSR Part-I.

11 FORM WORK

11.1 Form work shall comply with the requirement as specified in Para 10 on pages 33 and 34 of IS-456.

11.2 Form work shall be of timer of adequate strength. However, the form work to be used for surfaces specified in these specifications to be plastered shall be such that after application of the specified thickness, fair finished surfaces is achieved as specified therein. The contractor may at his discretion use timber or steel or plywood form work for which no price adjustment will be admissible and in such cases he will have to properly roughen the concrete surface for receiving plaster finish. Wall thickness shall not be made use of as form work wall shall be built after the columns are cast. In this connection also refer to Para 14.14.3 of SSR 2009 (Part I).

12 WHITE WASHING

12.1 White washing shall consist of three coats of white (lime wash) unless specified otherwise. White wash (lime wash) shall be carried out all as specified in Para 15.2 & 15.12 of MES Sch 2009 (Part -I). In final coat of white wash Fevicol DDL shall be mixed as per manufacturer's instructions. No ultramarine blue shall be mixed in any coat. However sodium chloride as specified in Clause 15.12.3 of MES Schedule (Part -I) shall be mixed in first and second coat.

13 CEMENT BASED PAINT

13.1 Cement based paint shall comprise of two coats of cement based paint of approved tint and applied as specified in Para 15.7 and Para 15.15 of MES Schedule (Part-I).

Contd.../-

PARTICULAR SPECIFICATION (CONTD....)

13.2 The cement based paint shall be obtained from any of the manufactures as specified in Appendix 'B' here-in-after.

14 ACRYLIC EXTERIOR EMULSION PAINT

The external wall of the building where-ever shown of drawings shall be painted with 100% Acrylic Exterior Emulsion Paint of "Weather coat" or "Apex- Ultima " With two finishing coats over a layer of wall care putty after preparation of the surface all as per clause 17.17 of MES Schedule (Part-I) & manufacturer's instructions.

15. OIL BOUND DISTEMPER (OIL EMULSION DISTEMPER)

Oil emulsion distemper shall conform to IS-428. It shall be of first quality and from the firms/manufacturers as specified for paint here-in-before and as approved by GE. It shall be of colour and shade as approved by GE. For workmanship, refer clause 15.14 and its sub clauses of MES Schedule Part-I (2009)

16 WALL CARE PUTTY

'Birla White' wall care putty is water resistant white cement based putty for concrete/mortar for walls and ceilings. Wall Care putty can be applied even on moist surfaces (internal/external). Wall Care has more adhesive strength, durability and increases the life of paints. Wall Care putty though white cement based does not require water curing. It renders a smooth and durable surface for all kinds of paints.

17. PAINTING**17.1 GENERAL**

17.2 The work "Paint and/or painting" wherever specified/indicated shown on drg shall be deemed to be first quality synthetic enamel paint.

17.3 The tint of the paint shall be as approved by GE. The contractor shall use fresh and first quality paint. The contractor shall obtain the permission of GE in writing well in advance for the makes/brands of paint that he will use in the work. He shall also submit samples thereof.

17.4 The contractor shall, if so required by the GE produce certificate from the manufacturers or their representative to establish that the brands of paints used by him are of the approved make and brand. Paints shall be brought at the site in manufacturer's drums with seal intact.

17.5 Paints used in priming coat (Primer) under coat and finishing coat shall be of the same manufacturer. The paints shall be applied, first using vertical strokes until the surfaces are covered and then brushed cross wise for complete coverage with light strokes so as to smooth out laps and brush marks and finally laid off with vertical strokes. This constitutes single coating of paint.

17.6 Surfaces of items to be painted shall be passed by the Engineer-in-Charge and marked as such before each coat is applied. Each coat shall be passed by the Engineer-in-Charge before next coat is applied.

18. GLAZING

18.1 The glazing shall be done with ordinary or selected quality sheet glass conforming to IS-2835 or tinted glass as mentioned in respective item of Schedule 'A'. All sheet glass shall be of good quality free from speaks, bubbles, smoke washed, air holes and other defects.

PARTICULAR SPECIFICATION (CONTD....)

18.2 Glass shall be fixed to steel windows/vents / doors/ partitions all as described in Sch 'A'.

19 MANHOLES

Manholes shall be provided as shown on drawings. and as directed by Engineer-in-Charge. Brief specifications of first manhole are as under: -

- (a) Excavation in soft/loose soil, return/filling in and disposal of surplus spoil upto a distance of 50 metres.
- (b) Foundation in PCC 1:3:6, type C-2.
- (c) Brick work with sub-class 'B' bricks in cement and sand mortar 1:4.
- (d) 15mm thick plaster internally and externally upto 15cm below GL in cement and sand mortar 1:4 mixed with water proofing compound in proportion as recommended by manufacturer.
- (e) PCC benching and channels shall be 1:2:4 type B-1 concrete. Surfaces shall be finished even and smooth using extra cement.

20. SITE CLEARANCE:

20.1 After completion of work, the site shall be cleaned neat and tidy and cleared off the rubbish/unserviceable materials to the satisfaction of Engineer in charge without any extra cost to Govt.

21 PRODUCTION OF VOUCHERS:

21.1 The contractor is advised to submit his original purchase vouchers duly machine numbered and dated in respect of following materials. The materials shall be purchased from the authorized agents/dealers who are required to show on the case memo bill all the times etc and make and IS number as required. The purchase vouchers shall be produced to the Engineer in charge for verification of materials/equipments before his permission to incorporate the same in the work communicated to the contractor. Two certified copies of the same shall be made by the Engineer-in-Charge for reference and record. The original purchase vouchers shall be released to the contractor after technical check of final bill by CWE as required.

- (a) Cement.
- (b) Steel
- (c) SGSW Pipe
- (d) RCC Pipe
- (e) HDPE Pipe

Signature of Contractor

Dated: _____

SSW
for Accepting Officer

Appendix 'A'
MATERIAL AND THEIR TESTS
RECOVERY RATES OF TESTING CHARGES

Ser No	Material	Test	Method of testing	Frequency of Tests	Level of test	Rate per test Rs.	Remarks
1	2	3	4	5	6	7	8
1.	Coarse Aggregate	(i) Sieve analysis	IS-2386 (Part-I)	One test for every 15 CUM of aggregates or part thereof brought to site.	'A'	660/-	Legend A- Site Lab/ Any Govt approved lab B- Zonal Lab C - National Test House SEMT Wing Pune/Engg College
		(ii) Flakiness Index	-do-	-do-	'A'	250/-	
		(iii) Estimation of deleterious materials	IS-2386 (Part I)	One test for every 100 CUM of aggregates or part thereof brought to site	'A'	600/-	
		(iv) Organic impurities	-do-	One test for each source of supply	'B'	275/-	
		(v) Moisture content	IS-2386 (Part II)	Regularly as required	'A'	330/-	
		(vi) Specific gravity	-do-	One test for each source of supply	'B'	330/-	
2.	Fine aggregate	(i) Sieve analysis	IS-2386 (Part I)	One set for every 15 CUM of FA of part when brought to site.	'A'	660/-	Checks for visual and dimensional Characteristics shall also be carried out. As IS-5454
		(ii) Test for clay, silt and impurities	-do- (Part I)	-do-	'A'	500/-	
		(iii) Specific gravity	-do- (Part II)	One test for each source of supply	'B'	330/-	
		(iv) Moisture content	-do- (Part II)	Regularly as required subject to tests/day when being used.	'A'	330/-	
		(v) Test for Organic impurities	-do- (Part II)	One test for each source of supply	'B'	275/-	

Contd

MATERIAL AND THEIR TESTS (Contd..)

1	2	3	4	5	6	7	8
3	TIMBER Paneled and glazed Door/Window and shutters (including Factory made shutters)	(a) Dimensions, sizes, workmanship and finish	IS-1003 1977 (Part I)	Frequency of sampling from each lot shall be as under :- <u>Lot size</u> <u>Sample size</u> 26 to 50 5 51 to 100 8 101 to 150 13 151 to 300 20 301 to 500 32 501 to 1000 50 1001 and above 80	'A'	180/-	
		(b) <u>Strength Test</u>					
		(i) Sampling	IS-1303 -1990	From the each lot 5% of the factory made shutters shall be manufacturer tested for strength tests.			
		(ii) Impact indentation	-do-				
		(iii) Shock resistance	-do-				
		(iv) Edge loading	-do-				
4.	Plywood (IS-303-1989)	(a) Moisture contents	IS-1734-1983 (Part I)	Six tests pieces cut from each of the boards selected as per table shall be subjected to tests.	'C'	240/-	Sampling shall be as per IS-7835-1975 Table.
5.	Wood particle board (medium density) IS-3097-1985)	(a) Density	IS-2360- (Part III)	Three test specimens from each sample (size 150mm x 75mm)	'A'	60/-	Sampling shall be as per IS 3487-83 with
		(b) Moisture contents	-do-	-do-	'A' & 'B'	60/-	
		(c) Water Absorption	-do- (Part 16)	-do- (size 300mm x 300mm)	'A'	60/-	
		(d) Swelling due to surface absorption	-do- (Part 17)	-do- (size 125mm x 100mm)	'A'	60/-	
		(e) Swelling in water	-do-	-do- (size 200mm x 100mm)	'A'	60/-	
		(f) Modulus of rupture	-do- (Part 4)	Three test specimens as per IS-2380-77	'B'	90/-	
		(g) Screw withdrawal strength	-do- (Part 4)	-do- as per IS-2385	'C'	120/-	
6.	Water for construction purposes	(i) Test for acidity	IS-456 & 3015	Once at the stage of approval of source of water	'B'	500/-	Also refer clause 4.3 of IS-456 and its subsequent sub clauses regarding suitability of water.
		(ii) Test for alkalinity	-do-		'B'	500/-	
		(iii) Test for solid content	-do-		'B'	500/-	

SIGNATURE OF THE CONTRACTOR
DATED: _____SSW
FOR ACCEPTING OFFICER

PARTICULAR SPECIFICATION (CONTD....)
Appendix 'B'
LIST OF MAKES / FIRMS/ MANUFACTURERS OF MATERIALS

S No	Product	GROUP OF PRODUCTS BASED ON MAKES / BRANDS			
		GROUP 1	GROUP 2	GROUP 3	
1	Cement		(a) M/s Sanghi Industries Ltd. 10 th Floor, Kataria Arcade, Off S G Highway, PO-Makarba, Distt-Ahmedabad, Pin-380051	"SANGHI"	
			(b) M/s Cement Manufacturing Company Ltd. Mayur Graden, 2 nd Floor, Opp-Rajuv Bhawan, GS Road, Guwhati-781005	"STAR"	
			(c) M/s Ultra Tech Cement Ltd. 'B' Wing, 2 nd floor, Mahakali Caves Road, Andheri (East), Mumbai-400093	"Ultratech"	
			(d) M/s OCL India Ltd. Rajgangpur, Distt-Sundargarh, Orissa, PIN-770017	"Konark"	
			(e) M/s Dalmia Cement (Bharat) Ltd. Dalmiapuram Dist-Truchirappalli, Tamil Nadu-621651	"Dalmia Cement"	
			(f) M/s Chettinad Cement Corporation Ltd. 4 th floor, Rani Seethai Hall Building, 603, Anna Salai Hall, Chennai-600006	"Chettinad"	
			(g) M/s Heidelberg Cement India Ltd 9 th Floor, Infinity Tower "C", DLF Cyber City, Gurgaon, Haryana-122002	"Mycem"	
			(h) M/s My Home Industries Ltd, 9 th Floor, Block-3, My Home Hub, Madhapur, Hyderabad-500081	"Mahashakti"	
			(j) M/s Parasakti Cements Ltd. 123/3rt, Plot # 8-3-214/21, Srinivasa Nagar Colony (West) Hyderabad-500038	"Prasakti"	
			(k) M/s Zuari Cement Ltd. No. 6, MC Nichols Road Chetpet Chennai-600031	"Zuari"	
			(l) M/s Toshali Cements Pvt Ltd 123/#rt, 2 nd floor, Sanjeeva Reddy Nagar, Hyderabad-500038	"Gajapati"	
			(m) M/s Prism Cement Ltd. 3/113, Vivek Khand, Gomto Nagar, Lucknow-226010	"Prism"	
			(n) M/s Shree Guru Kripa Cement (Pvt) Ltd 4/4, Trikuta Nagar, Jammu	"Sartaj"	
			(o) M/s Barak Valley Cements Ltd Debendra Nagar Badarpur Ghat Distt Karimganj Assam-788803	"BVCL"	
			(p) M/s Dhruv Industrial Company Ltd. 49/27, Sinha Market General Ganj, Kanpur-208001	"Dhruv"	
			(q) M/s The Ramco Cements Ltd. Auras Corporate Centre, 98-A, Dr. Radhakrishnan Salai, Mylapore, Chennai-600004	"Ramco"	
	(r) M/s Saurashtra Cement Gala No A-1, Ground Floor, Udhog Sadan No 3 MIDC, Central Road, Andheri (East), Mumbai-400093	"Saurashtra"			

PARTICULAR SPECIFICATION (CONTD....)
Appendix 'B'
LIST OF MAKES / FIRMS/ MANUFACTURERS OF MATERIALS

S No	Product	GROUP OF PRODUCTS BASED ON MAKES / BRANDS		
		GROUP 1	GROUP 2	GROUP 3
			(s) M/s Lafarge Cement (Lafarge india Pvt Ltd.) Crescenzo, 1004, B-wing, 10 th floor, C-38/39, G Block, Bandra Kurla Complex, Bandra (East), Mumbai-400051	"Lafarge"
			(t) M/s The Associated Cement Companies Ltd. 414-421, Splendor Forum (4 th Floor), 3, District Centre, Jasola, New Delhi-110044	"ACC"
			(u) M/s Grasim Industries Ltd Birlagram, Nagda, Madhya Pradesh, PIN-456331	"Grasim"
			(v) M/s The India Cement Dhun Building, 827, Anna Salai, Chennai-600002	
			(w) M/s The Andhra Cement Ltd Durga Cement Works, Durgapura, Dechepalli Guntur, Andhra Pradesh, PIN-522414	
			(x) M/s Century Cements Industry House, 159 Church gate, Reclamation, Mumbai-400020	"Century"
			(y) M/s Binani Cements Ltd. Mercantile Chambers, 12, J.N. Heredia Marg, Ballard Estate, Mumbai-400001	"Binani"
			(z) M/s Mangalam Cement Ltd PO Adityanagar, Morak, Distt-Kota, Rajasthan-326520	"Mangalam"
			(aa) M/s Birla Corporation Ltd Birla Building (3 rd & 4 th floor) 9/1, R.N. Mukherjee Road, Kolkata-700001	"Birla"
			(ab) M/s Orient Cement 5-9-22/57/D, 2 nd and 3 rd Floor, GP, Birla Centre, Adarsh Nagar, Hyderabad-500063	"Orient"
			(ac) M/s Shree Cement Bangur Nagar, Beawar, Distt-Ajmer, Rajasthan-305901	"Shree"
			(ad) M/s J K Cement Kamla Tower, Kanpur-208001	"J K"
			(ae) M/s J K Lakshmi Cement Ltd Jaykaypuram, Distt-Sirohi, Rajasthan	"J K Lakshmi"
			(af) M/s Jaypee Rewa Cement Jaypee Nagar, PO-Jaypee Nagar, Rewa-486450 MP	"Jaypee"
			(ag) M/s Ambuja Cement Ltd Kodinar, PO-Ambujanagar, Taluka-Kodinar, Distt-Junagadh, Gujarat-362715	"Ambuja"

Contd/---

PARTICULAR SPECIFICATION (CONTD....)
Appendix 'B'(Contd....)

Srl No	Product	Company Name & Brand	Address	Type of Steel	Valid Upto
2	TMT Steel	(a) Rashtriya Ispat Nigam Limited (RINL) Brand : "RINL"	Visakhapatnam Steel Plant, Visakhapatnam -530031, India. Tel : (91 891) 518226, 518376, Fax : (91891) 518316, Email: cmdvsp@itpvis.ap.nic.in	All	-
		(b) Tata Iron & Steel Company (TISCO, or Tata Steel) Brand "TATA"	Bombay House, 2, 4 Homi Modi Street, Mumbai-400001, India, Tel:(9122)2049131, Fax: (9122) 2049522, 2870840, Email:corpcomm@jsr.tatasteel.com (Br office for North : Jeevan Tara Bldg, Patel Chowk, New Delhi)	All	-
		(c) Steel Authority of India Limited Brand "SAIL"	Central Marketing Organization, Northern Region, 17th Floor, scope Minar, Laxmi Nagar Distt. Centre, Delhi-110092	All	-
		(d) M/S Jai Balaji Industries Ltd. Brand "Balaji Shakti"	5 Bentek street, Kolkata-700001, Delhi office :-510, Block-b, Navraung House 21 Kasturba Gandhi Marg, New Delhi-110001. Tele: 011-43620219, 43620220, Mob-7838272772/9958936103, Email: info@jaibalajigroup.com	TMT Bars of Gde Fe 500 Fe 500D	Feb 2023
		(e) M/S Shyam Steel Industries Ltd. Brand "SHYAM"	Shyam Towers EN-32, Sector-V, Slat Lake, Kolkata-700091, Tel-033-40074007 Fax-033-40074010, Email: marketing@shyamsteel.com	TMT Bars of Gde Fe 500 Fe 500D CRS	Jan 2023
		(f) M/S SPS Steels Industries Ltd. Brand : "ELEGANT TMT"	Elegant Towers, 68A, Ballygunge Circular Road, Kolkata-700019, Ph-033-2895160/67 Fax-033-22894386, Email: spsdelhi@spsgroup.co.in	TMT Bars of Gde Fe 500/ Fe 500D Fe 550	Feb 2023
		(g) M/S Steel Exchange India Ltd. Brand "SIMHADRI TMT"	My Home Laxminivas Apartments, Ameerpet, Hyderabad-500016, A.P. Tel-040-23403725, Fax-040-23413267, Email: info@seil.co.in	TMT Bars of Gde Fe 500 Fe 500D HSCRM	Jan 2023
		(h) M/S Jindal Steels and Power Ltd. Brand "JINDAL PANTHER"	OP Jindal Road, Hissar, Haryana, PIN-125005 Tel:+91 1662 222471-84, Fax:+91 1662 220476	TMT Bars of Gde Fe 500/ Fe 500D, Fe 550 /Fe 550D	Feb 2023
		(j) M/S SRMB Srijan Pvt Ltd Brand "SRMB"	SRMB House, 7, Khetra das lane, Kolkata-700012, Tel : 033-66006600 Fax: 033-22110483	TMT Bars of Gde Fe 500/ Fe 500D, Fe 550 /Fe 550D,(Size 8-32 mm)	Aug 2022
		(k) M/S Concast Steel & Power Ltd. Brand: "CONCAST MAXX"	21 Hemant Basu Sarani, Suit Nos -511 & 512, 5th Floor, Kolkata-700001 Tel-91-33-2213041-87, 91-33-22130488, Email:info@concastgroup.com	TMT Bars of Gde Fe 500/ Fe 500D, (Size 8-32 mm)	Aug 2019
		(l) M/S Shri Bajrang Power & Ispat Ltd Brand "GOEL TMT"	Vill-Borjhara Urla Industrial Area, Raipur-493221, Chhattisgarh, Tel: 0771 4288019/29/39	TMT Bars of Gde Fe 500, Fe 500D(Size 8-32mm)	Jan 2020
		(m) M/S JSW Steel Ltd Brand "NEOSTEEL"	JSW Centre, Bandra Kurla Complex, Bandra (East) Mumbai-400051, Maharashtra Phone: 022-42861000, Fax-022-42863000	TMT Bars of Gde Fe 500, Fe 500D CRS(Size 8-40mm)	Feb 2023
		(n) M/S Electrosteel Steels Ltd Brand "ELECTROSTEEL"	G K Tower, 2nd & 3rd Floor, 19 Camac Street, Kolkata, WB-700017 Tel No: 91-33-2283-9990, 91-33-7103-4400 Fax: 91-33-22902882, Website : www.electrosteel.com	TMT Bars of Gde Fe 500D (Size 8-36mm)	Aug 2020

Contd../-

PARTICULAR SPECIFICATION (CONTD....)**Appendix 'B'(Contd....)**

Srl No	Product	Company Name & Brand	Address	Type of Steel	Valid Upto
	TMT Steel (contd../)	(o) M/S Shyam Metalics & Energy Ltd. Brand "SEL"	Viswakarma, 1st Floor, 86 C, Topsia Road, Kolkata-700046 Ph: +91 33 22852212, Website: www.shyamgroup.com	TMT Bars of Gde Fe 500, Fe 500D(size 8-32mm)	Dec 2020
		(p) M/S Kamachi Industries Ltd Brand "KAMACHI"	ABC Trade Centre, 3rd floor, (Inside Devi Theatre Complex) Old No. 50, New No. 39, Anna Salai, Chennai-600002, India. Tel: +91-044-42961100, Fax: +91-044-42961122, Email: sales@kamachitmt.com, Website: www.kamachitmt.com	TMT Bars of Gde Fe 500, Fe 500D, Fe 550, Fe 550D HCRM(Size 8-40mm)	May 2021
		(q) M/S BDG Metal & Power Ltd Brand "BDG 6"	HMP House, 4 Fairlie Place, 5th floor, Kolkata-700001, India, Tel: +91-33-4005-9005 Fax: +91-33-4005-9095, Email: info@goyalgroup.in, Website: www.goyalgroup.in	TMT Bars of Gde Fe 500 Fe 500D Fe 550D(size 8-40mm)	Mar 2019
		(r) M/S Gallant Metal Ltd Brand "GALLANT TMX"	Ward 10BC, Plot No. 123, Ground floor, Gandhi Dham, Kutch, Gujrat-370201 Tel: +91-2836-228164, Fax: +912836-235787, Email: gml@gallantt.com Website: www.gallantt.com	TMT Bars of Gde Fe 500 Fe 500D(size 8-32mm)	Jul 2019
		(s) M/S Rashmi Metaliks Ltd Brand "RASHMI TMT"	Premlata Building, 39, Shakespeare Sarani, 6th floor, Kolkata-700017 Tel: 033-22894255/56, Fax: 033-22894254, Email: domesticdip@rashmigroup.com Website: www.rashmigroup.com	TMT Bars of Gde Fe 500(Size 8-32mm) Fe 500D, Fe 550D(Size 8-25mm)	Aug 2019
		(t) M/S Real Ispat & Power Ltd Brand "G K TMT"	Vrindavan, Near IDBI Bank, Civil Lines, Raipur-492001, C.G. Tel: +91-771-4224000, Fax: +91-771-4224010, Email: real@realispat.com Website: www.realispat.com	TMT Bars of Gde Fe 500 Fe 500D (Size 8-36mm)	Jan 2020
		(u) M/S Super Smelters Ltd Kolkata Brand "SUPER SHAKTI"	Premlata, 39, Shakespeare Sarani, 3rd floor, Kolkata-700017, Tel/Fax: +91-33-2289-2734/36, Email: info@supershakti.in Website: www.supershakti.in	TMT Bars of Gde Fe 500 Fe 500D, Fe 550(Size 8-32mm)	Feb 2020

Srl No	Product	Company Name & Brand	Address	Type of Steel
2A	Structural Steel	(a) Rashtriya Ispat Nigam Limited (RINL) Brand "RINL"	Visakhapatnam Steel Plant, Visakhapatnam -530031, India. Tel : (91 891) 518226, 518376, Fax : (91891) 518316, Email: cmdvsp@itpvis.ap.nic.in	Structural Steel (Angle, Beam, Column, Channel, Plate)
		(b) Tata Iron & Steel Company (TISCO, or Tata Steel) Brand "TATA"	Bombay House, 2, 4 Homi Modi Street, Mumbai-400001, India, Tel:(9122)2049131, Fax: (9122) 2049522, 2870840 Email:corpcomm@jsr.tatasteel.com, (Br office for North : Jeevan Tara Bldg, Patel Chowk, New Delhi)	-Do-
		(c) Steel Authority of India Limited (SAIL) Brand "SAIL"	Central Marketing Organization, Northern Region, 17th Floor, scope Minar, Laxmi Nagar Distt. Centre, Delhi-110092	-Do-
		(d) M/S Jindal Steels and Power Ltd Brand "JINDAL"	Jindal Centre, Plot No. 2, Sector-32, Gurgaon-122001, Haryana, Tele-01246612000 Fax-01246612125 Website: www.jindalsteelpower.com	-Do-

Contd.../-

PARTICULAR SPECIFICATION (CONTD....)**Appendix 'B'****LIST OF MAKES / FIRMS/ MANUFACTURERS OF MATERIALS**

S No	Product	GROUP OF PRODUCTS BASED ON MAKES / BRANDS		
		GROUP 1	GROUP 2	GROUP 3
3	Pressed Steel Door Frames/Chowk hats for Doors/Cupboard and Window frames	M/s SK Steel Fabricators Ludhiana, M/s Sehgal Doors, New Delhi, M/s Bhawani Steel Fabrication, Ghaziabad, M/s India Mart Intermesh Ltd, Hyat Interiors, Ashish Industries, Shivam Metal Shapers	SS Engg Industries, Ghaziabad, Dahiya Industries, Panchkula, M/s Metal Window Corporation, New Delhi, M/s Ishwar Industries, Meerut, M/s Trishul Industries, M/s Aswani & Sons, M/s Jangid Engineering Works, Ghaziabad, M/s GS Udyog, Kanpur, Shri Krishna Associates, Panchkula, Steel Master Industries, Panchkula, Pioneer Fabrication Meerut, Vardhman Precision Tubes and profiles, New Delhi M/s Royal Safe Works, New Delhi, M/s Delite Safe works, New Delhi, M/s Jangid Engineering Works, M/s Steelman Industries, Jalandhar, M/s laxmi steel Works, Rohtak,	M/s Anoop Industries, M/s Mohata Engg & Construction Co, Bikaner, M/s Chhabra Steel Udyog, Meerut, M/s Chandni Industries.
4	Steel Window/Vents	Agew Steel Manufacturer Pvt. Ltd, Ahmedabad, Multiwyn Industrial Corp, Kolkata, Satkar Industries, Pathankot Rd Jalandhar, Arcat, Ashish industries, Shivam Metal Shapers	Ganpat doors, Rajpura, M/s Metal Window Corporation, M/s Mohindra Fabricators, M/s SK Fabrication (India) M/s Gurjeet Industries, M/s GR Kalsi & Co, M/s SKS Industries, M/s Steel Plasts Machines, M/S Surbi Metal (India), Govind Enterprises, Delhi, M/s GS Udyog, Kanpur, M/s Shree Krishna Associates, Panchkula, M/s Jangid Engineering Works, Jaipur, Godrej and Boyce, Mfg, Mumbai, Steel Master Industries, Jalandhar, Shri Krishna Associates, Panchkula, M/s Bharat Steel fabrication & Engineer, Ghaziabad, M/S Laxmi Steel Works, Rohatak, M/s Steel Man Industries Jalandhar	Anup Industries, M/s Chandni Industries, Sen Harvice, Mumbai, M/s Bihar Bobbin & Engg Works, Katihar, M/s Mohata Engg & Construction Co. Bikaner
5	Rolling Shutters & Rolling Grills	Swastik Rolling Shutters & manufacturing works, Mumbai, Hercules Rolling shutters Bangalore, Standard Industries Pune	Prakash & Co, New Delhi, Ishwar Industries, Meerut Cantt, Dahiya Industries, Panchkula, Shubdwar, M/s Prakash Industries, SKS Steel Industries, New Delhi, M/s Akash Rolling Shutters, Delhi, M/s Auto Rolling Shutters Enterprises, Delhi, Rama Rolling Shutters industries New Delhi, Shri Krishna Associates, Panchkula, M/s Bharat Rolling Shutters Industries, Jabalpur, M/s Prakash Rolling Shutter Delhi, M/S Steelman Industries, Jalandhar, Chabra Steel Udyog.	
6	Welded wire Mesh/Fabric	Multiweld Wire Co Ltd, Mumbai, Jainsons Sales Crop, Delhi, Jainsons industries	Multiweld Wire Co Ltd, Mumbai, Jainsons Sales Crop, Delhi, Jainsons industries	

Contd/---

PARTICULAR SPECIFICATION (CONTD....)**Appendix 'B'****LIST OF MAKES / FIRMS/ MANUFACTURERS OF MATERIALS**

8	Factory mad Panelld Door Shutters	M/s MP Wood Product Indore, M/s Jainwood Industires (Jayana Board) Delhi, M/s Jain Doors Pvt Ltd Sonipat.	Chandigarh Timber Products, Patiala, M/s New Jagdamba Doors, M/s AB Composites Pvt Ltd, M/s Haryana Industries, M/s Supreme Doors and allied products, kanpur, M/S NND Wood Industries, Srigananagar, M/S Shakti Industries, Dhanaula. M/s Sarab Enterprises, Kangra, M/s Ecocell Doors, Udaipur, M/s Massonite Doors, Pathankot, Pioneer Timber Products, Chandigarh, Goyal Industiral Corporation New Delhi, Shri Krishna industries, Panchkula, M/s Laxmi Doors, M/s Joinery Manufacturing Co Kolkata,	M/s Rajendra, M/s Neha Industries, M/s Goel Brothers, Raipur, M/s Surbhi, Metal India, Ltd, Jodhpur.
9	Factory made Flush door Shutters	M/s Green Ply Industries, M/s Centuary Ply, M/s Dura Ply. Mysore Chip Board, Archid, Swastik Ply Wood, M/s Jain Wood Industries	Sitapur Plywood Manufacturers Sitapur, M/s Laxmi Doors, Lucknow, Merino Flush Door, Faridabad. MP Wood, Goyal Industries Faridabad	M/s Harkirat Industries, M/s PR Ceiling Products
10	PVC Door Frame/Shutters	Sintex, Rajshri Plastiwood Ltd, M/s Dura Plast Extraction PVt Ltd, M/s Fenesta	M/s Poly Window, Pune Accura, Polytech Ahmedabad, Fixopan indo Plast Pvt Ltd, New Delhi	
11	UPVC Window/Doors	Fenesta, Veka Industries Pvt Ltd Mumbai, Kundli Industrial Estate, Sonipat, H2O solutions	Accura Polytech, Kumar Arch Tech, Poly windows, Pune, H2O Solution (Window & doors)	
12	Iron Mongery	Mowjee, M/s Kitch Architectural Product Pvt Ltd, RS Industries.	Mowjee, M/s Kitch Architectural Product Pvt Ltd, RS Industries.	
13	Standard Mortice lock	Godrej, Harrison, Link	Godrej, Harrison, Link	
14	Hydraulic Door Closer	Everest, Universal, Godrej	Amar, Sandhu, Priya	
15	Anodised Aluminium Doors/Window/Frames/Partitions	Fenesta, jindal, Indal, Hindalco	Aluminium System Corp, Mumbai, Nairs Arkinetal Enterprises, New Delhi, Aluminium Manufacturing Co, Kolkatta Santosh & Co, New Delhi, Dada Aluminum Fabricators, Jalandhar, M/s Alumilite PVt Ltd, Dhiraj, M/s Ajay Industries, Bombay, M/s Ramnikal S Raste,, Jabalpur, M/s Aluminium Tech Industries, Delhi, M/s VR Associates, Delhi, Mahavir, Ambala, Consolidated Engineer Com, New Delhi, Aluminium PVT LTD, Ajit India Pvt. Ltd	
16	Aluminium wooden Doors and Window Fittings	Argent Industries, Mowjee, Crown	M/s Elite Enterprises, Mumbai, M/s Classic, NEW Delhi, M/s aluminium Udyog, M/s Mohan Metal Industries, Delhi	Ganpati

PARTICULAR SPECIFICATION (CONTD....)**Appendix 'B'****LIST OF MAKES / FIRMS/ MANUFACTURERS OF MATERIALS**

16	Aluminium Section	Hindalco, Jindal, Indal	Valco Industries Ltd Chandigarh, Banco Aluminium Ltd. Vadodra Gujrat.	
17	Aluminium Sheets	NALCO Pvt Ltd, CRIL, Jindal, BALCO	Jagdish Aluminium Pvt Ltd, Ahmedabad, Gurjat, Alco Industires Pvt Ltd New Delhi	
18	Aluminium Composite Panels	ALCO Bond, Aluminium Clad, Alstrong, Armstrong	Alstone	
19	Particle Board(Veneered & Unveneered Laminaed)	Kitply, Nova Pan Industries, New Delhi, M/s Green Ply Industries Ltd, Archid Ply, Bhutan Board, Dura Board Mysore Chip Board Ltd	Bakelite Hylam LTD	Asis Particle Board, Shirdi Industries, Arolite Ceiling System Pvt Ltd , M/s Associate Décor Ltd
20	Plywood for General Purposes	Dura Ply, Archid ply, Bhutan Board, Archid Board, Century, Durian, Mysore Chip Board Ltd	Swastik Ply, Jaipur, National Plywood Industries PVT Ltd, Kolkata, Merino Plywood, Mayur Ply, Jayna Plywood ,M/s Janardhan Ply Board Industries	Sh Ram Pannels Pvt Ltd Punjab, Rams Wood & General Industries Ltd, BLJ Plyam Marketing Pvt Ltd, MP & Co.
21	Decorative Laminates	Archid Lam, Sunmica, Merino, Lam, Mysore Chip Board, Greelam	Sungloss, Formica, ecolam, Bakelite Hylam	
22	Fibre Board(Medium Density)	Novapan,Bhuttan Board, Kit Ply, Mysore Chip Board Ltd, Green Panel Max (plain exterior Grade MDF/prelam/veneered MDF/Green Floormax Laminated)	Managalam Timber Products, Kolkatta, Ramco Industries Ltd, DECO, Green Panel Max Plain exterior MDF	
23	Pre Fab Panel Boards/Wall Lining ceiling tiles	Lafarge, Boral Gypsum Board Pvt Ltd, Shri Nepal Board Ltd, Aerolite Ceiling System Pvt Ltd, Hilux, Armstrong, V Board	Ramco Industries Pvt Ltd, Endura Modular Systems, Reliance Bldg System , BPB India Gypsum Ltd	M/s PR Ceiling Product,Dexume Marketing Pvt Ltd, M/s Bharat Steel Roll BahadurGarh(Calsi Brand)
24	Galvanised steel sheets & Colour Coated galvanized steel sheets	SAIL, TATA, Jindal, Bhushan	Aone Industires, Bhushan, CRIL, Prestar	Bhushan
25	Polycarbonate Sheets	Duratuff, Lexan , VMT Plaste Ltd M/s Coxwell Domes Engg Pvt Ltd	Duratuff, Lexan , VMT Plaste Ltd M/s Coxwell Domes Engg Pvt Ltd	
	Galvalume sheets	Indian Ispat, TATA Blue scope, JSW, Bhishan Galvacolor	Multicolor, aone industries, metco Global, CRIL, Kirby, Prestar	Bhushan Galvacolor

Contd/---

PARTICULAR SPECIFICATION (CONTD....)**Appendix 'B'****LIST OF MAKES / FIRMS/ MANUFACTURERS OF MATERIALS**

26	AC Sheets/AC Boards (Corrugated, Semi Corrugated)	Charminar, Ramco, Everest	Swastik, Bombay, M/s Eternit Everest Ltd, UP Asbestos Ltd	
27	Gypsum Board	India Gypsum, Lafarge, Son Industries, Kanpur	India Gypsum, Lafarge, Son Industries, Kanpur	
28	PVC Tiles/Sheet	Primer Polyfilm Ltd, Wonder Floor, Armstrong	Rikvin Floom Ltd, New Delhi, Fixopen Machinerics, New Delhi, Krishna Tiles, Polyfin	
29	Glass Mosaic Tiles	Johnson, Italia, Coral Mosaic, NITCO	Paladio, Accura, Bisazza, Mridul, Unistone, Arihant	
30	Terrazzo Tiles /PPC Tiles/PPC Chequered tiles	NTC,NITCO, Eurocon, Duracrete	Ultra Tiles Pvt Ltd Bharat Tiles, Mehtab Tiles, Regent Tiles, Hindustan Tiles, SS tiles	Oasis Vitrified Pvt. Ltd.
31	Interlocking Tiles/Exterior Tiles/ Paver Blocks	Unistone, NTC, NITCO, Ultra, Johnson, Surya K	Terra Firma, A-One tiles, Coral, Mehtab, Tiles, Pavit, SS Tiles, Hindustan Tiles	Shri Tiles, Surya K, Singh Traders
32	Decorative textures/Coatings	Unitile, Bakelite Hylam (Heritage) NCL Altek Seccolor, Dulux (Acratex), Apex (Duracast), British (Xtracem 76)	Luxture surface coatings, Spectrum Paint	
33	Exposed Brick Façade	Unistone, Pioneer Bricks, Regent Tiles	Unistone, Pioneer Bricks, Regent Tiles	
34	Glazed Earthen Ware Tiles	H&R Johnson, Kajaria, Somani	Orient Ceramic, Asian, Vermora, Orient Bell	
35	Glazed Ceramic/non Skid Wall/Floor Tiles	Kajaira, H&R Johnson, Cera, Unistone , Somani, NITCO, Eurotiles, Spartek, Cengres, Simpolo, Sunheart, Varmora	National tiles , Ultra, tiles, Orient Ceramic, Asian, Swastik, Varmora, Orient Bell, Bonzer-7 (Trial)	Victory Ceratec, Sogo Ceramics, Oricle Granites, Royal tiles, GEM tiles, Regency, Romano, Ferrous- Crete, Mashusudan Ceramics, Pavit Ceramic, Oasis Vitrified
36	Vitrified Tiles (Normal/Antiskid)	Somani,Kajaria, johnson,Orient Bell, NITCO, Cengres, Simpolo, Sunheart, Varmora	Murdushwar Ceramics Ltd, Orient, Asian, Swastik,Crystal, Bonzel-7(Trial)	Oasis Vitrified, Oracles Granito.
37	HDPE Storage Water Tanks	Sintex, Polycon, Sheetal	Rotex, Fusion, SPL, Diplast Plastics, Aqua Polymers	Uniplus
38	Sanitary appliances/fittings(China ware)	Hindustan Sanitary Ware, Parryware,Cera, Jaquar, Neycer	Duravit, Madhusudan Ceramics	Blue Star Sanitary, Anupam Industires, Sona Ceramic, Prakash Industries,SFMC Solution

Contd/---

PARTICULAR SPECIFICATION (CONTD....)**Appendix 'B'****LIST OF MAKES / FIRMS/ MANUFACTURERS OF MATERIALS**

	Water Closet Seats and cover (Solid Bakelite) Thermostat Moulded toilet seat cover	Parryware, Jaquar, Somani, Commander, CERA, Neycer	Supreme, Prayag, Polytuff, Millennium	Ajanta, Precision Products
	PVC Flushing Cisterns	Hindustan Sanitary Wares, Commander, Parryware, CERA, Jaquar, Johnson Pedar, Neycer	Khodiyar Pottery Works, Millennium, Supreme, Prayag	Precision Products
39	CI Flushing Cistern	Hindustan Sanitary Ware, Parryware, Orient Sanitary Ware	Sanifix Inida, Phenoweld Polymer, Anupam industries	Areal Bros, Hind Iron Foundry, Jaipur Maze Products
40	Stainless Steel Kitchen Sink with or without Draining Board, Plate Rack	NIRALI, Kobra, Neelkanth, Jayna Blue Star	Pheonix Diamond, AMC, Prestige, Allex, Neel, Prayag Polymers, Anupam Industries, Vardhaman Enterprises (Jain ko), Elite Metal Products, Franke India Pvt Ltd Prakash Sanitary Appliance, Shakti Enterprises	RA Engineering Industries, Plasto Craft, Impex Sanitation Kodar Industries
41	Ball Valves (Horizontal Plunger type)	Dripless Faucets India, Flowjet, Ball Valves Inida.	Hind Enterprises, Prakash & Co, Leader valves, Bombay metal, Taurus Engineering Industries, Prima	
42	Shower Roses Chromium plated (Swivel Type)	GEM,JAQUAR, Jal	Jainka,Blustar, Prima	Jal, Shakti
43	Bath room Fancy fittings	JAQUAR,GEM,MARC, Jalangi	Anchor, Spectrum,Pico,Dripless, Kingston, Prima	Shakti, Jalangi, Coronet
44	Bib Taps and Stop Taps (CP) Fancy fittings	JAQUAR, PARKO, GEM, Marc, ESS ESS, Jalangi	ELITE, Zim, Prima, Essco, Jainko, Prayag, Jalangi, Coronet, Shakti	Jalangi, Coronet, Shakti
	Bathroom Cabinets	Jaquar, Cera, Commander, Parryware	Gratolite,Alpina,Prayag, Pearl	Pearl
	Salt Glazed Stone Ware Pipes/ Glazed Stone Ware Pipes	Devraj Industrial, Buran, Perfect Santiary Pipe, Superme Pipe and fittings	Shri Kamakshi Agencies, Hind Creamics, Bhardwaj stone Ware, Binary Udyog, Creamic Industries	Bhaskar Sons, TriumatiMoulds, Kiran Potteries
	Concrete Hume Pipes	Indian Hume Pipe Company	Jain Spun,DayaSpun,Delhi Spun pipe,Ramnik Enterprises	Hindustan Pressure Pipes, Bhasker Sons

Contd/---

PARTICULAR SPECIFICATION (CONTD....)**Appendix 'B'****LIST OF MAKES / FIRMS/ MANUFACTURERS OF MATERIALS**

46	AC Pipes	Hyderabad Asbestos, Everest, Ganga Asbestos, Konark Cement and Asbestos	JK Super Pipes , Sarbamangala Manufactruing Co, Maharashtra Asbestos	Poddar Industrial Corporation
47	PVC Rain Water Pipe/Sewage Pipes	Supreme, Finolex, Reliance	Kissan, Prince, Diplast Plastics	
48	GI Pipe /fittings	Jindal, TATA, NECO<UNCO Steel Industries, Bharat Steel Tube Delhi, Bhishan, APL Appolo	Nidhi Pipe Ltd, Swastik Ltd, Surya Roshni (Prakash) Indus Tubes Ltd Bhushan, APL Applo	Tirupati, J-Steel, JTL, Bhushan, APL Applo
49	CI Pipes Fittings (For Sewerage/Rainwater)	SKF, SRIF, Singhal Iron Foundry, Hindustan Engineering Products, Jindal Saw, NECO(Jayaswal), HEPCO(BinaryUdyog)	Ashutosh Casting LTD, Veetus Industries LTD, Anand Founders&Engineers, Electrosteel, Kesoram, BIC, NFL.	Bhara Industrial corpn Delhi, New india Founry, Ludhinana, Mahavir Iron Foundry, NFL
50	Soil Waste Pipes fittings/steel Manhole Cover	SKF, Singhal Iron Foundry, NECO, SLIC	BIC	
51	PPR Pipes	SFMC, SAFE, WETFLOW	Diplast Plastics, Veekay Technocrat PVt Ltd, Amitex Polymers, Kitec Industries Ltd	Hindustan Plastics & Machine Corpn
52	HDPE Pipes/SNR Pipes(Water/Sewage)	Gamson India, Dustron, Rex Polyextrusion Ltd, SRIF, SKF	Kirti Industries India Ltd, Vertex Green Poly Pipes, Uniplus, Diplast Plastics	Nandi Polymer, Tirupati, Structural
53	Sand Cast Iron Spigot & Socket Soil Waste, Vent Pipes & fittings	SRIF, RIF (Gola Castings), NECO (Jayaswal), HIF	Raj Iron, Foundary, BIC Kolkatta, Kajecao, NFL	KK Pumps, NFL
	Cement Based Paints	Snowcem, Asian, Jenson & Nicholson, Berger, Duracem, British Xtracem	Acquolac Paints, Godavari Paints, Rajdoot Paints, Classic Paints, Acropoints	Gattocem, Rubycem, Cemkote, Snow White Industrial Corpn
	Dry Distemper/Oil Bound Distemper/Plastic Emulsion /Exterior emulsion /Silicon paints & Coating	Goodless Nerolac Paints, Jenson & Nicholson, Berger Paints, ICI Dulax, Asian paints, British Acri silk	Shalimar Paints, Godavari paints, Acro Paints	
	Plastic Emulsion Paint	Berger (Silk, Rangoli easy clean), Asian (Royale, Apcolite advance), Akzo Nobel (Velvet touch), Nerolac (Impression ecoclean, impression 24 carat), British (Splendour luxury)	Berger (Rangoli emulsion), Asian (Premium emulsion), Akzo Nobel (Supermooth), Nerolac (Lotus Touch Beauty Gold), Jenson & Nicholson (Eqvt. Make), Shalimar (Eqvt. Make), Shalimar (Eqvt. Make), British (Glamour Premium).	Bergar (Bison emulsion), Asia(Tractor emulsion), Akzo Noble (Rainbow), Nerolac(Beauty silver, Little Master), Jenson & Nicholson (Eqvt. Make) Shalimar (Eqvt Make), British Interior Emulsion.

Contd/---

PARTICULAR SPECIFICATION (CONTD....)**Appendix 'B'****LIST OF MAKES / FIRMS/ MANUFACTURERS OF MATERIALS**

64	Paint Exterior	Berger (Weather Coat all guard), Asian (Apex Ultima) Akzo Noble (Weather shield max), nerolac (Excel total), British (Expa-7 Advanced)	Berger (Weather Coat smooth), Asian (Apex weather proof) Akzo Noble (Weather shield), nerolac (Suraksha Advanced), British (Expa Cool)	Berger (Walmasta), Asian (Ace) Akzo Noble (Promise), nerolac (Suraksha Plus), British (Shiner Exterior)
65	Synthetic Enamel Paint	Goodless Nerolac Paints, Jenson & Nicholson, Berger Paints, ICI Dulux, Asian paints, British (Glo Highgloss)	Aquolac Paints, Shalimar Paints, Acro Paints, British (YAK)	British (20-20 Synthetic)
66	False Ceiling Tiles Fiber Cement Board	Lafarge, Boral, Gyproc, Armstrong, Diaken, Lloyds, luxalong., Dexune V- Board	Reliance big System , BPB India Ltd, Shree Nepal Boards, Bhutan , Duratuff, Anchor, V Board	Dexune Mareting, Endusa Modular System, V Board
67	Drapery rods	Vista Levalor	Visa Levalor	Visa Levalor
68	Mirror Looking	Saint Gobain, Modi Float, Triveni Float Glass	Saint Gobain, Modi Float, Triveni Float Glass, Crown, Prayag polymers	Saint Gobain, Modi Float, Triveni Float Glass, Crown, Prayag polymers
69	False Ceiling	Gypboard, Armstrong, Anchorlam Anchor, Hi Steel, Dexune	Gypboard, Armstrong, Anchorlam Anchor,Bhutan Boad, Duratuf, Aerolite, Hi Steel, Dexune.	Gyboard, Armstrong, Anchorlam Anchor,Bhutan Boad, Duratuff, Aerolite, Hi Steel, Dexune.
70	PTMT Fitting	PRAYAG, Shakti , Polytuf	PRAYAG, Shakti , Polytuf, Pearl, Millennium Ajanta Polymers	PRAYAG, Shakti , Polytuf, Pearl, Millennium Ajanta Polymers
71	Tiles PCC (Chequered/plain/T errazzo)	(a)Mehtab Tiles (b) NITCO (c) Bharat Tiles (d) Hindustan Tiles (e) Regent Tiles (f) NTC (g) Oasis Vitrified Pvt Ltd	(a)Mehtab Tiles (b) NITCO (c) Bharat Tiles (d) Hindustan Tiles (e) Regent Tiles (f) NTC (g) Oasis Vitrified Pvt Ltd	
72	WC Seat cover ISI Marked	(a) Commander (b) Parryware; (c)Hindware (d) Prayag (e) CERA	(a) Commander (b) Parryware; (c)Hindware (d) Prayag (e) CERA	
73	Steel Windows	(a) M/s Ram Fabricators Pvt. Ltd., 223, Industrial Area, Panchkula (b) Ganpati Doors, 18, Industrial Estate Rajpura (c) Tee Pee Entps, Gill Road, Ludhiana Punjab (d) Friends Manufacture Co., B-1 Focal point, Kotakapura, PB (e) Steelman Industries, Old Adda, Kapurthala, Jalandhar City. (f) Steelmaster Industries, Old Area, Kapurthala, Jalandhar City (g) Bharat steel fabricators & Engineers, 44 Majitha Road,B/S Canara Bank, Amritsar	(a) M/s Ram Fabricators Pvt. Ltd., 223, Industrial Area, Panchkula (b) Ganpati Doors, 18, Industrial Estate Rajpura (c) Tee Pee Entps, Gill Road, Ludhiana Punjab (d) Friends Manufacture Co., B-1 Focal point, Kotakapura, PB (e) Steelman Industries, Old Adda, Kapurthala, Jalandhar City. (f) Steelmaster Industries, Old Area, Kapurthala, Jalandhar City (g) Bharat steel fabricators & Engineers, 44 Majitha Road,B/S Canara Bank, Amritsar	

PARTICULAR SPECIFICATION (CONTD....)**Appendix 'B'****LIST OF MAKES / FIRMS / MANUFACTURERS OF MATERIALS**

74	Dry Distemper/Oil Bound Distemper/Plastic Emulsion /Exterior emulsion /Silicon paints& Coating	(a) Choksey (b) Fairmate; (c) Pidilite; (Dr Fixit- such as Terrece water proofing - Roofseals, New coat, Sunkens area -Fastflex, Pidifin 2K, Bathseal kit, General repair/water proofing- Powercrete, Pidicrete URP) (d) MC Bauchemie; (e) CICO; (f) Fosroc (g) Kunal Conchem (h) SIKA (J) STP LTD	(a) Choksey (b) Fairmate; (c) Pidilite; (Dr Fixit- such as Terrece water proofing - Roofseals, New coat, Sunkens area -Fastflex, Pidifin 2K, Bathseal kit, General repair/water proofing- Powercrete, Pidicrete URP) (d) MC Bauchemie; (e) CICO; (f) Fosroc (g) Kunal Conchem (h) SIKA (J) STP LTD	
75	INTEGRAL WATER PROOFING COMPOUND	(a) Water Seal/Acro1/Acroflo LWP from Acro Paints (b) Fair Plast IP from Fairmate (c) SIKA (d) Pidilite (Dr Fixit LW +, Dr Fixit) (e) Fosroc (f) Choksey (Masterproof IWP-1) (g) Kuna kon from Kunal Conchem (H)STP Ltd(h) BASF (j) Maruti Bitumen Pvt Ltd	(a) Water Seal/Acro1/Acroflo LWP from Acro Paints (b) Fair Plast IP from Fairmate (c) SIKA (d) Pidilite (Dr Fixit LW +, Dr Fixit) (e) Fosroc (f) Choksey (Masterproof IWP-1) (g) Kuna kon from Kunal Conchem (H)STP Ltd(h) BASF (j) Maruti Bitumen Pvt Ltd	
76	APP MODIFIED MEMBRANE FOR WATER PROOFING AND DAMP PROOFING	(a) Multi-plas-M/s Texas; (b) Shalimar Tar Products; (c)Tikitar; (d) Torch Tar (e) Pidilite Ind Ltd (Dr Fixit Torch Shield) (f) Bengal Bitumen (g) Modern Bitumen Pvt Ltd (h) Shivam Tar Products (j) Hyper Plas from IWL India Ltd (k) STP Ltd	(a) Multi-plas-M/s Texas; (b) Shalimar Tar Products; (c)Tikitar; (d) Torch Tar (e) Pidilite Ind Ltd (Dr Fixit Torch Shield) (f) Bengal Bitumen (g) Modern Bitumen Pvt Ltd (h) Shivam Tar Products (j) Hyper Plas from IWL India Ltd (k) STP Ltd	
77	Polyurethane Joints Sealant and Primer	(a) M/s Ameya Dye chem Pvt Ltd (ADPL) (b) CIPY Polyurethanes Pvt Ltd (c) Pidilite Industries Ltd (d) Sika India Pvt Ltd (e) AI Stone (f) BASF (g) STP Ltd (h) Maruti Bitumen Pvt Ltd	(a) M/s Ameya Dye chem Pvt Ltd (ADPL) (b) CIPY Polyurethanes Pvt Ltd (c) Pidilite Industries Ltd (d) Sika India Pvt Ltd (e) AI Stone (f) BASF (g) STP Ltd (h) Maruti Bitumen Pvt Ltd	
78	Backup rod	(a) STP Limited (b) Supreme Industries ltd	(a) STP Limited (b) Supreme Industries ltd	
79	Expansion Pad	Supreme Industries Ltd ,STP LTD	Supreme Industries Ltd ,STP LTD	
80	Premoulded Joint filler (IS-1838)	(a) Tikitar Industries Ltd, (b) STP Ltd (c) Capital Steel & Chemicals, (d) M/s Garlick & Co Pvt Ltd	(a) Tikitar Industries Ltd, (b) STP Ltd (c) Capital Steel & Chemicals, (d) M/s Garlick & Co Pvt Ltd	
81	Polymer modified Bitumen (PMB-40/70) /Polymer modified emulsion	a) M/s Ooms Polymer Modified Bitumen Pvt Ltd b) M/s Shell India Market Pvt Ltd c) HINDUSTAN COLAS Ltd, New delhi	a) M/s Ooms Polymer Modified Bitumen Pvt Ltd b) M/s Shell India Market Pvt Ltd c) HINDUSTAN COLAS Ltd, New delhi	

Contd/---

PARTICULAR SPECIFICATION (CONTD....)**Appendix 'B'****LIST OF MAKES / FIRMS/ MANUFACTURERS OF MATERIALS**

93	Refurbishment	a) Sika India Pvt Ltd	a) Sika India Pvt Ltd	
	Concrete surface Improvement	M/s BASF India Ltd,STP LTD	M/s BASF India Ltd,STP LTD	
94	Bitumen Emulsion	Shiva Asphaltic products Pvt Ltd M/s Shell India Markets Pvt Ltd M/s LN Petro Chem Pvt Ltd,STP LTD, Maruti Bitumen Pvt Ltd	Shiva Asphaltic products Pvt Ltd M/s Shell India Markets Pvt Ltd M/s LN Petro Chem Pvt Ltd,STP LTD, Maruti Bitumen Pvt Ltd	
95	Non circular synthetic fibre	Recron 3S.	Recron 3S.	
96	Repair and rehabilitation/Bonding agent/Grouts	a) The Structural Water Proofing Co Pvt Ltd b) Pidilite Industries Ltd c) Sika India Pvt Ltd d) STP Ltd e) BASF India Ltd	a) The Structural Water Proofing Co Pvt Ltd b) Pidilite Industries Ltd c) Sika India Pvt Ltd d) STP Ltd e) BASF India Ltd	
97	Reinforcement Glass Grid	a) M/s HMBS Textiles Pvt Ltd b) Maccaferri Environmental Solutions Pvt Ltd\ c) Tech Fab (India) Industries Ltd d) Giridhar Tech Fab Pvt Ltd	a) M/s HMBS Textiles Pvt Ltd b) Maccaferri Environmental Solutions Pvt Ltd\ c) Tech Fab (India) Industries Ltd d) Giridhar Tech Fab Pvt Ltd	
98	Curing Compound	a) The Structural Water Proofing Co Pvt Ltd b) STP Ltd c) SIKA INDIA PVT LTD(d)BASF e)Maruti Bitumen Pvt Ltd	a) The Structural Water Proofing Co Pvt Ltd b) STP Ltd c) SIKA INDIA PVT LTD(d)BASF e)Maruti Bitumen Pvt Ltd	
99	Admixtures for PQC/DLC	a) SIKA India Pvt Ltd b) STP Ltd c) BASF India Ltd d) The Structural Water Proofing Co Pvt Ltd e)Maruti Bitumen Pvt Ltd	a) SIKA India Pvt Ltd b) STP Ltd c) BASF India Ltd d) The Structural Water Proofing Co Pvt Ltd e)Maruti Bitumen Pvt Ltd	
100	Ready Mix Concrete	Alliance Concrete construction Company Adampur/RMC India Ludhiana/ACC Ludhiana/Lafarge Amritsar	Alliance Concrete construction Company Adampur/RMC India Ludhiana/ACC Ludhiana/Lafarge Amritsar	
101	Hangar Doors	M/S Butzbach Industries(Jugapro) M/S RCC Eco Build Systems Ltdd	M/S Butzbach Industries(Jugapro) M/S RCC Eco Build Systems Ltdd	

Contd/---

PARTICULAR SPECIFICATION (CONTD....)
Appendix 'B'
LIST OF MAKES / FIRMS/ MANUFACTURERS OF MATERIALS

102	Polymeric Bitumen Emulsion	(a)M/S Shell India Markets Private Ltd (b) M/S LN Petro Chem Private Ltdd (c) M/S Maruti Bitumen Pvt Ltd	(a)M/S Shell India Markets Private Ltd (b) M/S LN Petro Chem Private Ltdd (c) M/S Maruti Bitumen Pvt Ltd	
103	Soil Stabilizer	M/S Alchemist Touchnology Ltd	M/S Alchemist Touchnology Ltd	
104	Pothole Repair	M/S Shell India Markets Pvt Ltd, M/S Fosroc Chemicals, M/S STP Ltd, M/S Tiki Tar Industries (Baroda) Ltd, M/S Choksey Chemicals Pvt Ltd	M/S Shell India Markets Pvt Ltd, M/S Fosroc Chemicals, M/S STP Ltd, M/S Tiki Tar Industries (Baroda) Ltd, M/S Choksey Chemicals Pvt Ltd	
105	Reinforcement/Concrete Protective Coatings/Systems	a) SIKA India Pvt Ltd b) BASF India Ltd c)Maruti Bitumen Pvt Ltd (d) M/S Fosroc Chemicals	a) SIKA India Pvt Ltd b) BASF India Ltd c)Maruti Bitumen Pvt Ltd (d) M/S Fosroc Chemicals	
106	Rolled frames GI section windows	(a) NCL (b) Ashish Industries	(a) NCL (b) Ashish Industries	
107	EPOXY POLYURETHANE FLOORING	a) SIKA India Pvt Ltd b) STP Ltd c) Choksey Chemicals Pvt Ltd (d) M/S Fosroc Chemicals (e) CIPY Polyurethanes Pvt Ltd	a) SIKA India Pvt Ltd b) STP Ltd c) Choksey Chemicals Pvt Ltd (d) M/S Fosroc Chemicals (e) CIPY Polyurethanes Pvt Ltd	

Notes:-

- (i) If makes of items specified in Schedule 'A' are mentioned, than makes mentioned in Schedule 'A' are to be provided and makes of Group-2 of Appendix- B shall be provided if makes are not mentioned in Schedule 'A'
- (ii) In case makes mentioned in Group-2 are not available than Group I products shall be provided.
- (iii) In case makes are not specified in the tender documents, these shall be confirming to IS.

(SIGNATURE OF CONTRACTOR)
DATE: _____

SSW
FOR ACCEPTING OFFICER

APPENDIX 'C'**SOURCES OF MATERIALS****(LIST OF MATERIALS OF LOCAL ORIGIN TO BE INCORPORATED****IN WORKS (FOR GUIDANCE ONLY)**

Sl No	Name of Material	Sources of Material
1	2	3
1.	Coarse Aggregate for all RCC and plain cement concrete works.	Khanak (TOSHAM)/ Dadri,
2.	Sand for all RCC and PCC work.	Ghagger sand near Chandigarh Yamuna sand near Karnal
3.	Sand for plastering, pointing and brick work	Ghagger sand near Chandigarh Yamuna sand near Karnal
4.	Bricks and Brick tiles	Locally available best quality
5.	Stone for soling	Dadri (Harayana)
6.	WBM crushed stone aggregate	Dadri (Harayana)
7.	Fine sand	Ghagger sand near Chandigarh Yamuna sand near Karnal

NOTES: -

(a) Sources of materials shall be as given Serial 1 to 7 above or in the vicinity thereof. The tenderer shall enquire the actual location of source before submitting his tender and no additional payment shall be made on account of any misunderstanding or its distance from site of works.

(b) Materials of sources listed above, shall only be used. In the event of non-availability, use of alternatives shall be decided by the Accepting Officer without any price adjustment/extra cost to Government.

(SIGNATURE OF CONTRACTOR)
DATED: _____

SSW
FOR ACCEPTING OFFICER

Appendix 'D'

CEMENT SUPPLY AND ACCEPTANCE REGISTER

1. CA No & Name of Work: **CWE/GGN/G-24/2018-19: SPECIAL REPAIRS TO EXISTING SEWAGE SYSTEM AT AF CAMP NARAINA UNDER GE (AF) GURGAON**

2. Control No :

3. Name of Manufacturer/Brand Name/Gde of Cement:

(a) Manufacturer..... (b) Brand..... (c) Grade.....

4. Qty of cement & Lot No/Week No (in Bags): (a) Qty.....
 (b) Lot No /Week No.....

5. Manufacturer's test Certificates to

6. Random Test Details:

(a) Physical test report from..... vide their letter No
 (Name of approved Lab/Engg College)

(b) Chemical test report from vide their letter No
 (Name of approved Lab/Engg College)

7. Details of Physical & Chemical properties:-

	Physical Requirements (As per IS 4031)										Chemical Requirements (As per IS 4032)							
	Specific Surface (Area (M ² /Kg)	Soundness by Le Chatellar	Soundness by Auto Clave	Initial Setting Time (Minutes)	Final Setting Time (Minutes)	03 days	07 days	28 days	Temp during testing 0 C	Stranded Consistency (%)	Lime Saturation Factor (Ratio)	Alumina iron Ratio (Ratio)	Insoluble Residue (%)	Magnesium (%)	Sulphuric Anhydride (%)	Loss on Ignition (%)	Alkalies (%)	Chlorides (%)
As per relevant IS																		

Remarks with Signature

Accepted/Rejected

Contractor Junior Engineer

Engineer-in-Charge

Garrison Engineer

Remarks of BOO/Inspecting Office/CWE

Signature of Contractor

Dated: _____

SSW
for Accepting Officer