INDEX PAGE

NAME OF WORK:

REPAIR AND REPLACEMENT OF DRAIN, FOOT PATH, PROTECTIVE WORK, CONCERTINA COIL, BARBED WIRE, CHAIN LINK FENCING, STEEL GATE AND POST AT ZONE-A DHAR ROAD UNDER GE (ARMY) DHAR ROAD

Srl. No.	Description	Page No.
1	2	3
1.	Index Page	01
2.	Tender forwarding letter	02 to 05
3.	Notice of Tender including Appendix 'A' and Errata/ Amendments thereto	06 to 11
4.	Item rate tender and Contract for works IAFW-1779-A (Revised)	12 to 23
5.	Special Conditions	24 to 40
6.	Particular Specifications including relevant Appendices	41 to 68
7.	List of drawings including clarifications, if any	-
8.	General Conditions of Contracts IAFW- 2249 (1989 print) and Errata/Amendments thereto	69 to 108
9.	Schedule of minimum fair wages and annexure thereto	109 to 117
10.	Errata/Amendments to tender documents	
11.	Relevant correspondence	
12.	Acceptance letter	
	Total Pages:	

Signature of Contractor

For Accepting officer

REGISTERED/AD
GE Army Dhar Road
Udhampur

PIN: 182101

8070/NIT- 60/ /E8 Oct 2024

M/S_			

NAME OF WORK:

REPAIR AND REPLACEMENT OF DRAIN, FOOT PATH, PROTECTIVE WORK, CONCERTINA COIL, BARBED WIRE, CHAIN LINK FENCING, STEEL GATE AND POST AT ZONE-A DHAR ROAD UNDER GE (ARMY) DHAR ROAD

Dear Sir (s),

- 1. A set of tender documents for the work mentioned above is uploaded herewith on the MES portal of **www.defproc.gov.in**.
- 2. The complete tender including BOQ is to be uploaded on the MES portal of www.defproc.gov.in upto 1800 hrs on 15 Oct. 2024. The cover 1 of the bid shall be opened on 07 Nov 2024 at 1200 hrs or on subsequent days in the office of GE Army Dhar Road Udhampur C/O 56 APO in the presence of such tenderers who have uploaded their priced tender and who wish to be present.
- 3. The printed form of General conditions of contract IAFW 2249 (1989 print) and errata/amendments thereto and schedule of minimum fair wages, forming part of the tender documents but have not been sent along with the tender and these can be seen by you in any of the MES office during working hours. Tenderers shall be deemed to have full knowledge of IAFW 2249 with upto date errata/amendments whether they study the same or not. No claim will be admitted on account of any misunderstanding in complying with this contractual requirement.

4 **Earnest Money**

- 4.1 If you are not enlisted as an approved contractor with any MES formation or if you are enlisted but have not deposited the standing security, you are required to submit your tender with sum of Rupees (see Appendix 'A' to Notice of Tender) as earnest money in the form of call deposit receipt from a scheduled bank in favour of the GE. (See Appendix 'A' to Notice of tender.) The scanned copy of the same in the pdf file is to be uploaded at the time of applying for the bid.
- 4.2 Any tender/bid not accompanied by earnest money in the prescribed form will be treated as non-bonafide and will not be considered for acceptance.

5 Individual Security Deposit/Additional Security Deposit

In the event of your tender being accepted the amount of individual security "or" Additional Security shall be calculated as per standing instructions which can be seen in any of the MES office.

- It shall be noted that any tender which proposes any alteration to any of the conditions and/or specifications and/or other provisions laid down in these documents and/or which proposes other conditions of any description what so ever is liable to be rejected.
- Tenderers are required to quote their tender carefully so as to submit an accurate and bonafide tender. No subsequent offer for reduction in the rates as a pretext of error/mistake in estimate or in quoting the tender will be entertained after opening of tender from any of the tenderers other than the lowest tenderer. Please note that any offer or reduction from contractor other than the lowest tenderer after opening of the tender will be viewed seriously and will call for severe disciplinary action against such contractor by the Department for a minimum period of one year and in addition any other action as deemed necessary by the department against such contractor.

8 GUDE LINES / PROCEDURE TO BE FOLLOWED IN THE PROCESS OF E - TENDERING

- 8.1 It is mandatory for all the bidders to have class-III digital signature certificate (in the name of person who will sign the Application) from any of the licensed certifying agency (Bidders can see the list of licensed CAs from the link www.cca.gov.in) to participate in e-tendering process.
- 8.2 There is no physical supply of tender documents. The bidders, participating in e-procurement solution, can view /download the tender documents from the www.defproc.gov.in. The bidder shall submit their offer online in electronic formats, however DD / bankers cheque for Tender Fees and EMD required to be submitted manually in the office of **GE Army Dhar Road Udhampur C/O 56 APO** as done in conventional tender, before date & time of opening of bid (first stage) and scanned copy of DD/ bankers cheque for Tender Fees and EMD etc must also be uploaded at www.defproc.gov.in.
- 8.3 The tender to be submitted online at www.defproc.gov.in by due date and time as mentioned in NIT, which shall form the part of the contract document. The bidders who are desired of participating in e- procurement shall submit their price bids in the standard formats prescribed in the tender documents, displayed at www.defproc.gov.in. The bidders should upload the scanned copies of all the relevant certificates, documents etc, in the www.defproc.gov.in in support of their price bids. The bidder shall sign on all the statement, documents, certificates, uploaded by him, owning responsibility for their correctness / authenticity.
- 8.4 The Price Bids will be opened online by the opening officer/officers at the specified date & time and the result will be displayed on the www.defproc.gov.in, which can be seen by all the bidders who participated in the tenders. If the office happens to be closed on the date and time of bid opening as specified or due to some unforeseen reason (s), the bid could not be opened on the date and time of bid opening as specified, the bid will be opened on the next working day on same venue and on the time as decided by the Accepting officer without assigning any reason. No claim will be entertained on this account.
- 8.5 The bidders have two options to participate in tendering process at the time of opening of bids. : (i) Bidders can come at the place of opening of bids (electronically) as done in the conventional tender process or (ii) Bidders can visualize to process online.

- 8.6 The concerned officer/officers will evaluate and process the tenders as done in the coinventional tenders and will communicate the decision to the bidder online / by registered post. After the award of the contract, an agreement shall be signed as done in Conventional Tenders.
- 8.7 No physical form of tender will be accepted in any MES office anywhere and shall be summarily rejected. The department does not take any responsibilities for non-availability of internet connection or network traffic jam etc for online bid at any stage. The MES will not be responsible for any error like missing of schedule data while downloading by the bidder. No claim will be entertained on this account.
- 8.8 One bidder can submit only one bid for one work/project. If a bidder will submit more than one bid, his bids will be summarily rejected.
- 8.9 The tender for the works shall remain open for acceptance for a period of sixty (60) days from the date of opening of financial bid. In case of lowest tenderer revoking his offer/ tender or revising his rates upward (which will be treated as revocation of offer), before the said period or issue of letter of acceptance, whichever is earlier or makes any modifications in the terms and conditions of the tender which are not acceptable to the department, then the Government shall, without prejudice to any other right or remedy, be at liberty to forfeit the said earnest money as aforesaid. 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 for depositing the amount through MRO. Failing which the amount shall be recovered from payment due to such Contractor or shall be adjusted from his Standing Security Deposit. Participation for further tender to such tenderer (s) shall also remain suspended till the aforesaid Earnest money is deposited in the Govt. treasury. Further the tenderer shall not be allowed to participate in the re-tendering process of the work.
- 9 In case any tempering/ alteration is noticed between the documents as uploaded at the time of submission of the bid online and the original one as upload by the office of **GE Army Dhar Road Udhampur C/O 56 APO**. Then the bid submitted shall become invalid and the Government shall, without prejudice to any other right or remedy, be at liberty to forfeit the said earnest money as aforesaid. In case of MES enlisted contractors, the amount equal to the Earnest Money stipulated in the NOTICE OF Tender shall be recovered from payment due to such Contractor or shall be adjusted from his Standing Security Deposit. Participating for further tender to such tenderer (s) shall also remain suspended till the aforesaid 'earnest money is deposited in the Govt Treasury. Further the tenderer shall not be allowed to participate in the re-tendering process of the work.
- The bidder should keep checking the website www.defproc.gov.in for any Errata/ Amendments to tender documents/ price bid till the date and time of online submission of price bid and bidder must incorporate them in their bid document.
- Before deadline for submission of bids, the department can modify the bid documents (s) by issuing addendum/corrigendum. Any addendum/corrigendum thus issued shall be part of bidding documents and shall be uploaded on the website as a corrigendum and same shall be taken into account by the bidders in preparing their bids. The department may, at his discretion, extend as necessary the deadline for submission of bids. However, no claim will be entertained on this account.
- 12 Your attention is drawn to the official secret Act, particularly section 5 thereof for compliance.
- 13 The accepting Officer reserves right to accept a tender submitted by public under taking giving a price preference over other tender(s) which may be lower, as are admissible under the Govt. policy. No claim for any compensation or otherwise shall be admissible from such tenderer(s) whose tender may be rejected on account of the said policy.

- 14 These instructions shall form part of the contract documents and shall be signed alongwith the tender documents during signing of contract agreement.
- 15 (a) The tender is based on CPM.
 - (b) The tenderer is expected to be fully conversant with the technique and employ technical staff who can use the technique in sufficient detail. Sufficient books and other literatures on the subject are widely available which the tenderer may take use of.
 - (c) The tenderer's attention is drawn to special condition 21 of the tender regarding preparation of the detailed net work and time schedule for the work and his liability for employing sufficient resources to adhere to his schedule. Any inability on the part of the tenderer in using the technique will be taken as his technical insufficiency and will affect his class of enlistment and further prospects of receiving tenders for works.

Signature of Contractor

AGE (Contracts)
For Accepting officer

NOTICE OF TENDER

- 1. A **e-tender** is invited for (See Appendix 'A')
- 2. The work is estimated to cost (See Appendix 'A')

The estimated cost however not a guarantee is and is merely given as rough guide and if the work costs more or less, the tenderer will not have any claim on that account. The tender shall be based on (See Appendix 'A').

- 3. The work is to be completed within (See Appendix 'A') from the date of handing over site.
- 4. The scanned copy of application for the tender document(s), DD/ banker cheque and other relevant documents should be uploaded on MES e-procurement site. But the original application along with DD/Banker cheque as cost of tender must be submitted to GE Army Dhar Road Udhampur, PIN-901216 C/O 56 APO so as to reach this office on or before opening of bid (first stage) failing which the application may be rejected and tenderer will not be allowed to participate in second stage (Priced bid).
- 5. Normally contractors whose names are on the MES approved list for the area in which the work lies and within whose financial limit the estimated amount would fall, may tender but in case of term contracts, contractors in the category S, A to D may tender. In cases where the tendered amount is in excess of his financial limit, whether or not the estimated amount is within the financial limit of the contractor, the Accepting Officer reserves the right to accept the tender, in which event the tenderer would be required to lodge additional security deposit as notified by the Accepting Officer in terms 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 participate in e-tendering process without depositing earnest money along with the tender and if Accepting Officer proposes to accept the tender, such tenderer would be required to deposit Individual Security Deposit as notified by the Accepting Officer before acceptance of tender.

In case, however, the Accepting Officer subsequent to deposition of security deposit, decides not to accept the tender for any reason what so ever the amount deposited will be refunded to the contractor.

Not more than one tender shall be submitted by one contractor or one firm of contractor(s). Under no circumstances will a father and his son (s) or their relation having business dealings with one another be allowed to tender for the same contract as separate competitors. A breach of this condition will render the tenders of both parties liable for rejection.

- 6. The **GE (Army) Dhar Road Udhampur,PIN-901216 C/O 56 APO** will be the Accepting Officer here in after referred to as such for the purpose of the contract.
- 7. Application for the tender form along with requisite demand Draft (for the cost of tender) must be submitted addressed to GE(Army) Dhar Road Udhampur, PIN-901216, C/O 56 APO so as to reach this office on or before (See Appendix 'A'). Condition 3 of IAFW- 2249 (General Conditions of Contacts) shall be deemed to have been amended accordingly.

NOTICE OF TENDER

8. Tender form and conditions of contract and other necessary documents can be downloaded on or after (See Appendix 'A'). The appropriate standing security amount for this work shall be deposited by contractor (See Appendix 'A').

In case of contractor who has not executed the standing security bond, the tenderer shall be upload scanned copy of paid earnest money amounting to (See Appendix 'A') in the form of deposit at call receipt drawn in favour of (See Appendix 'A') or on the receipted Treasury Challan, the amount being credited to the revenue deposit of the GE (See Appendix '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 tender without depositing earnest money along with the tender, but if the Accepting Officer decides to accept the tender, such tenderer shall lodge security deposit as notified by the Accepting Officer with the **Principal Controller of Defence Accounts, Northern Command, Jammu** in the prescribed form before acceptance of tender.

A contractor who has executed standing security bond but not for the appropriate category as mentioned above shall lodge with the Accepting Officer, additional security deposit as notified by the Accepting Officer within 30 days of the receipt by him of notification of Accepting officer failing which the same will be recovered from the first RAR payment.

However, in case where any payment is made to the contractor with in thirty days of the receipt by him of notification of acceptance of tender, the amount of additional security deposit shall be recovered from such payment.

The GE will return the earnest money wherever applicable to all the un successful tenderers by endorsing an authority on the deposit receipt for its refund on production of certificate by the tenderer of the Accepting Officer that a bonafide tender (vide condition 13 here-in-after) was received and all documents were returned.

- 9 The GE will return the earnest money, wherever applicable, to the contractor in whose favour contract has been accepted by endorsing authority on the deposit receipt for its refund on receipt of amount of security deposit or will retain the same as part of the security deposit, if such a transaction is feasible.
- Copies of the drawings and other documents pertaining to this work signed for the purpose of identification by the Accepting Officer or his accredited representative and samples of materials and stores to be supplied by the contractor will be open for inspection of the tenderer at the office of **GE(Army) Dhar Road Udhampur, PIN-901216, C/O 56 APO** during working hours.
- The tenderers are advised to inspect/visit and examine the site and its surroundings by making prior appointment with the Garrison Engineer in sufficient times and satisfy themselves before submitting their tenders as to the nature of the ground and sub-soil (so far as is practicable), the form and nature of the site, the means of access to the site, the accommodation they may require and in general shall themselves obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect their tender. A tenderer shall be deemed to have full knowledge of the site whether he inspects it or not and no extra charges consequent on any misunderstanding or otherwise shall be allowed. The tenderer shall be responsible for arranging and maintaining at his own cost all materials tools & plants, water, electricity, access facilities for workers and all other services

NOTICE OF TENDER

Required for executing the work unless otherwise specifically provided for in the contract documents. The online submission of tender/Price bid by a tenderer implies that he has read this notice and all other contract documents and has made himself aware of the scope and specification of the work to be done and of the conditions and rates at which materials, tools and plants etc will be issued to him, local conditions and other factors having a bearing on the execution of the work.

- The accepting authority on behalf of the President of India does not bind himself to accept the lowest or any other tender and reserves to himself the authority to reject any or all of the tenders received without the assignment of any reason. All tenders. In which any of prescribed condition is not fulfilled or any condition including that of conditional rebate/rebate is put forth by the tenderer, shall be summarily rejected.
- 13. Tenders will be submitted on line to the **GE (Army) Dhar Road Udhampur, PIN-901216, C/O 56 APO** (See Appendix 'A'). Any tenderer which proposes any alterations to any of the conditions laid down or which proposes any other condition of any description what so ever is liable to be rejected.
- The submission of a tender by the tenderer implies that he has read this notice and conditions of contracts and he has made himself aware of the scope and specifications of the work to be done and of conditions and rates on which stores, tools and plants etc will be issued to him and local conditions and other factors bearing on the execution of work.
- 15. Tenderer must be in possession of a copy of the MES schedule of Rates including amendments thereof.
- 16. Tenderer must be very careful to upload a bonafide tender complete with all documents forming part of the tender. A bonafide tender must satisfy each and every condition laid down in the notice of tender.
- 17. This Notice of Tender shall form part of the Contract Agreement.

Signature of Contractor

Accepting officer

APPENDIX 'A' TO NOTICE INVITING TENDER (NIT)

1.	Name of Work	REPAIR AND REPLACEMENT OF DRAIN, FOOT PATH, PROTECTIVE WORK, CONCERTINA COIL, BARBED WIRE, CHAIN LINK FENCING, STEEL GATE AND POST AT ZONE-A DHAR ROAD UNDER GE (ARMY) DHAR ROAD
2.	Estimated cost	Rs 35.00 Lakhs (At Par market)
3.	Period of completion	09 Months
4.	Cost of tender documents	Rs 500.00 in the shape of DD/Bankers cheque from any scheduled Bank in favour of GE (Army) Dhar Road Udhampur payable at Udhampur.
5.	Website/portal address	www.defproc.gov.in
6.	Type of contract	The tender shall be item rate contract based on IAFW-2249 & IAFW-1779A (Revised 1955) with Schedule 'A' list of items of works to be priced by the tenderers electronically (BOQ).
7.	Information and Details:-	
	(a) Bid submission start date	Refer critical dates on the website.
	(b) Last date of bid submission	
	(c) Date of bid opening	
8	Eligibility Criteria	
	(A) For MES enlisted	Contractor shall be enlisted with MES in class 'D' and above and
	contractors	category a(i) subjected to satisfactory remarks wrt performance in respect of works in hand as reflected in work load return (WLR) or any other report circulated by competent engineer authority.
	(B) For contractors not enlisted with MES	(i) Contractor not enlisted with MES should meet the enlistment criteria of 'D' Class & 'a(i) category contractor with regard to satisfactory completion of requisite value works with Central/ State Government/ Central/ state PSUs/ AWHO/ AFNHB/ CGEWHO/ DGMAP, annual turnover, bank solvency working capital and other requirements given in Para 1.4 &1.5 of Section 1 of MES Manual of Contracts 2020 as available in all MES formations as well as MES website (www.mes.gov.in) (ii) Not carrying adverse remarks in Work Load Report (WI.R) or any other similar report circulated by any competent authority, if already working in MES. (iii) Not suspended/debarred/blacklisted (either permanently or temporarily) from participating in any bid or for business dealings by any Central/State Government Department or any (Central/State Government PSU or any Autonomous Body under Central/State Government or any Local Body as on the bid submission end date.
	(C) Technical PQC criteria	In case of solar Power works and Runway/ Pavements, Technical PQC criteria as stipulated in Manual on Contracts and as per policy letters issued by E in C's Branch from time to time shall be included suitably.
9.	Tender issuing and Accepting Officer	Name : Maj Ajay Sharma GE Address: GE (Army) Dhar Road Udhampur. Contact Detail : 7073619058 Email Id: iadhrd-4mes@nic.in
10.	Executing agency	GE (Army)Dhar Road Udhampur
11.	Earnest Money	Rs 70,000.00 in favour of GE (Army) Dhar Road Udhampur

Notes

1. After opening of cover 1, if the number of MES enlisted contractors of eligible class as well as un-enlisted contractors, if any, fulfilling the other eligibility criteria given in NIT are less than 7(Seven), application in respect of contractors one class or two class (in remote and difficult area to be decided as per list circulated by CE command/ADG) below the eligible class shall also be considered subject to fulfillment of other eligibility criteria given in the NIT. Therefore MES contractor's one class below (Two class below in case of remote and difficult areas) may also bid for this tender. However contractor of one/two class below the eligible class shall not be considered in case their present residual work in hand is more than twice their present tendering limit. Such bidder shall upload in their Cover-1 bid detail of work in hand showing name of work. Names of accepting officer, Contract amount, date of commencement and completion (stipulated) and progress as on bid submission date. This detail shall be verified by tender issuing authority form concerned formations in case bids of such contractor are considered for evaluation.

NIT GE/ADR- 60/2024-25 Serial Page No 10

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

2. In case after opening of Cover 1, the number of MES enlisted contractors of eligible class as well as un-enlisted contractors, if any, fulfilling the other eligibility criteria given in NIT, are 7 (Seven) or more, applications of only those one class below the eligible class bidders shall be considered, who have previously completed similar works satisfactorily and are meeting the criteria of upgradation in respect of past experience of completed works (individual work experience and/or average annual turnover as applicable) and financial soundness (solvency/financial soundness and working capital) as per details given in Manual on Contracts. Therefore such contractors shall upload the requisite information/documents in the Cover-1

- 3. Unenlisted contractor shall be considered provided he meets the criteria. Foreign firms shall not be eligible for this tender. However Indian firms having foreign national / Indian national staying abroad / Indian national having taken foreign citizenship, as director(s) shall be considered subjected to security clearance from the concerned authorities
- 4. Contractors enlisted with MES will upload following documents in Cover 1 for checking eligibility:-
 - (a) Application for tender on Firm's letterhead.
 - (b) Enlistment letter issued by the Registering Authority duly renewed for the cycle period in vogue.
 - (c) Scanned copy of DD /Bankers Cheque toward cost of tender and EMD instrument in case SSD bond is not signed at the time of registration.
 - (d) Any other document required as described in this Appendix.
- 5. Contractors not enlisted with MISS will be required to upload following documents in Cover 1 for checking eligibility:-
 - (a) Application for tender on Firm's letterhead.
 - (b) Scanned copy of DD/bankers cheque toward cost of tender and Earnest Money Deposit (EMD) instrument.
 - (c) Copy of Police Verification Report/Police Clearance Certificate/ Character Certificate from the Police Authority of the area where the registered office of the firm is located/notarized copy of valid passport of Proprietor/each Partner/each Director
 - (d) All documents required for enlistment in MES for the class mentioned in Para 8(b) above as per Para
 - 1.5 of Section 1 of MES Manual on Contracts 2020
 - (e) Details of works being executed in MES, if any
 - (f) Any other document required as described in this Appendix
- 6. Tenders not accompanied by scanned copies of requisite DD/Bankers Cheque towards cost of tender and earnest money (as applicable) in Cover 1 shall not be considered for validation of 'T' bid and their financial Bids will not be opened
- 7. Contractors should ensure that their original physical DDs and Earnest Money Deposit (EMD) instruments (as applicable) reach the office of Accepting Officer within 07 (Seven) days of bid submission end date failing which following action shall be taken.
 - (a) In case of tenders from an enlisted contractor of MES, where scanned copies of requisite DD/ Bankers Cheque towards cost of tender have been uploaded in Cover -1 but physical copies are not received within the stipulated period, their financial bids (Cover 2) will be opened. However non-submission of physical copies of cost of tender shall be considered as willful negligence of the tenderer with ulterior motives and such tenderer shall be banned from bidding for a period of six months commencing from the date of opening of Financial Bid (Cover 2).
 - (b) In case of tenders from unenlisted contractor, where scanned copies of requisite DD/Bankers Cheque towards cost of tender have been uploaded in Cover 1 but physical copies are not received within the stipulated period, their financial bids (Cover 2) will not be opened. Name of such 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 Financial bid (Cover 2).
 - (c) In case of tender from enlisted and unenlisted contractors. where scanned copies of instruments for Earnest Money Deposit (as applicable) have been uploaded in cover 1 but the same are not received in physical form within stipulated period, such tenders shall not qualify for opening of financial bid (Cover 2).
- 8. Contractor will not be allowed to execute the work by subletting or through power of attorney to a third party/another firm on his behalf. However a contractor can execute the work through power of attorney to sons/daughters/ spouse of Proprietor/Partner/Director and firm's own employees, director, project manager provided they are not having a separate enlisted firm in MES in their name as Proprietor/Partner/Director.

NIT GE/ADR- 60/2024-25 Serial Page No 11

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

9. After opening of cover 1 and during its technical evaluation. in case any deficiency is noticed in the documents required to be uploaded by the tenderers as per NIT a communication in the form of e-mail/SMS/ Speed Post etc shall be sent to the contractor to rectify the deficiency within a period of seven days from date of communication failing which their financial bid (cover 2) shall not be opened and contractor shall not have any claim on the same.

- 10. Invitation for e-tender does not constitute any guarantee for validation of Technical bid and subsequent opening of financial bid of any applicant/bidder merely by virtue of enclosing DD. Accepting officer reserves the right to reject the technical bid and not to open the financial bid of any applicant/bidder. Technical bid validation shall be decided by the Accepting Officer based on eligibility of the firm as per criteria given in this Appendix. Tenderer /bidder will be informed regarding non-validation of his technical bid assigning reasons thereof through tender evaluation report which shall be uploaded on the website. Such tenderer, if desire, may appeal to the next higher Engineer Authority (NHEA) viz HQ CWE Dhar Road Udhampur C/o 56 APO on email id dhrd3-mes@gov.in with copy to the Accepting Officer on email before the schedule date of opening of Cover 2. NHEA shall decide the matter within a period of seven working days from the date of receipt of appeal. The decision of the NHEA shall be final and binding. The tenderer/bidder shall not be entitled for any compensation for rejection of his bid.
- 11. In case an unenlisted contractor is already executing works in MES. hc shall not be considered eligible for the subject tender if the total value of such works is more than twice the tendering limit of the MES Class of contractor for which it is eligible. For these purpose details of the works being executed by such a contractor shall be uploaded in the Cover -1 of the bid and shall be checked/ verified by the Accepting Officer.
- 12. In case the BOQ is revised through the corrigendum and the bidder has failed to quote on revised BOQ (i.e. he has quoted on pre revised BOQ), such bid shall be treated as willful negligence by the bidder and his quotation shall be considered non-bonafide. In such cases the lowest tender shall be determined from amongst the valid/bonafide bids only. Accepting Officer may decide whether to re-tender or consider the lowest bonafide tender for acceptance.
- 13. Revoking the offer or revising the rates upward or offering voluntary reduction by the lowest tenderer after opening of Cover 2 shall be considered as a willful default. For this default a penalty of an amount equal to Earnest Money shall be levied. In case of an unenlisted tenderer, Earnest Money deposited by him shall he forfeited. In case of MES enlisted tenderer having deposited the Standing Security Bond an amount equal to the earnest money stipulated in NIT shall be notified to the tenderer for depositing through MRO and consideration of such tenderer in tender evaluation for future works shall remain suspended till the aforementioned amount is deposited in the Government Treasury. No other disciplinary/administrative action shall be taken against such tenderers. In Such a situation, the next lowest offer shall not be considered for acceptance. Instead retendering shall be resorted to in a transparent and fair manner and the defaulting tenderer and his related firm of any shall not be eligible for this tender in second call or subsequent calls.
- Tender to related firms shall not be issued simultaneously. Firms shall be termed as related if Proprietor/one or more Partners/Directors arc common. Decision of Accepting Officer on issue/deny the tender to any one of the related firms shall be final and binding.
- 15 Court of the place from where tender has been issued/published 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.

16 INTEGRITY PACT-Not applicable 17 JOINT VENTURE –Not applicable

Signature of Contractor

Accepting officer

IN LIEU OF IAFW-1779-A(REVISED)

(TO BE USED AND READ IN CONJUNCTION WITH GENERAL CONDITIONS OF CONTRACT IAFW-2249 (1989 PRINT))

MILITARY ENGINEER SERVICES

GE Army Dhar Road Udhampur PIN-901216, C/O 56 APO

8070/NIT- 60 / /E8

Oct 2024

ITEM RATE TENDER AND CONTRACT:

REPAIR AND REPLACEMENT OF DRAIN, FOOT PATH, PROTECTIVE WORK, CONCERTINA COIL, BARBED WIRE, CHAIN LINK FENCING, STEEL GATE AND POST AT ZONE-A DHAR ROAD UNDER GE (ARMY) DHAR ROAD

	Shri/M/S		of		is/are hereby auth	orized t	O
		tender fo	r the above mentic	ned work.	·		
	The consider to de-	to about a DOO to to b		MEO		1- 4	400
1.	The complete tender	including BOQ is to b	e upioaded on the	MES portal of	www.defproc.gov.ir	<u>1</u> upto 1	180

- hrs on 15 Oct 2024. The cover 1 of the bid shall be opened on 07 Nov 2024 at 1200 hrs or on subsequent days in the office of GE Army Dhar Road Udhampur, Pin-901216, C/O 56 APO in the presence of such tenderers who have uploaded their priced tender and who wish to be present.
- 3. All correspondence must be returned to this office whether or not the tender has been submitted.
- 4. All correspondence concerning to this tender shall be addressed as indicated on the top of this letter quoting the reference as given.

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

Signature of the Contractor	Signature of the Officer issuing the tender documents. Appointment: Accepting Officer GE (Army) Dhar Road Udhampur
	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
	(For and on behalf of the President of India)

SCHEDULE 'A' NOTES

NAME OF WORK : REPAIR AND REPLACEMENT OF DRAIN, FOOT PATH, PROTECTIVE

WORK, CONCERTINA COIL, BARBED WIRE, CHAIN LINK FENCING, STEEL GATE AND POST AT ZONE-A DHAR ROAD UNDER GE (ARMY)

DHAR ROAD.

NOTES:

1. Schedule 'A' (BOQ) of this contract is divided into 02 (Two) parts as follows: -

(a) Part-I - List of items of work for B/R.

(b) Part-II - Credit Schedule of retrieved material.

- 2. The quantities (Appx Nos of units) required for all items of Schedule 'A' (BOQ) as indicated in col 5 are provisional. However, these shall not be varied beyond the limits laid down in condition 7 of IAFW-2249 (General Conditions of Contracts).
- 3. Sch 'A'(BoQ) has not been pre-priced by MES. The tenderers are required to work out and quote their unit rates for each item of works as catered in schedules in the manner set out in condition 6A(A) of IAFW-2249 and quote their rates per unit under rate column in figures based on the description of items, specification, special conditions, general conditions and other conditions of the contract for each item separately.
- 4. Method of measurements for all items of Schedule 'A'(BoQ) shall be as given in MES Standard Schedule of rates 2020(Part-II) unless specifically stated otherwise in these tender documents for any particular item of work.
- 5. Description of items of works given under column 2 of Schedule 'A' (BOQ) is in brief. These shall be deemed to be amplified and read in conjunction with special conditions, particular specifications, specifications contained in the relevant sections of MES standard Schedule of rates including preambles and contract drawings if any including notes there in.
- 6. All items in Schedule 'A'(BoQ) are for 'material and labour/supplying and fixing, installation, testing and commissioning as applicable complete unless specifically described otherwise as "Labour only" and/ or "Supplying only" and/ or "Fixing only" in the description of a particular item under col 2.
- 7. Cutting of roads /paths/drains etc. where required for laying of cables, pipes etc. shall be done by the contractor all as directed by the Engineer-in-Charge and the same after laying of cables, pipes etc. shall be made good to match with the adjoining works. Also proper sign boards, display boards etc. shall be displayed by the contractor all as directed by the Engineer-in-Charge. Quoted rates of Sch 'A' shall deemed to include for cutting of roads /paths /drains etc. and nothing extra shall be admissible on this account.

8. **PERIOD OF COMPLETION**

- 8.1 Work under this contract shall be completed within **(09) Nine months** from the date of handing over site as given in work order No-1 to be placed by the GE.
- 8.2 The work under this tender pertains to **Job No: Repair and Maintenance work.**
- 9. Contractor's quoted rates shall be deemed to include for all minor details, processes and operation which may not have been specifically mentioned or given in particular specifications but which are essential for the works and services in a sound and workman like manner so as to be structurally and functionally sound. In case of any difference of opinion between GE and the contractor as to whether or not certain items of works constitute minor details, processes and operations which are deemed to be included in the contractor's quoted rates, the decision of the Accepting Officer shall be final, conclusive and binding.
- 10. The abbreviation "Cum", "Sqm", "RM", "Kg" and "Qtl" where ever appear in the tender documents especially under column of unit rate of Sch "A" shall have the meaning "Cubic metre", "Square metre", "Running metre" "Kilogram" and "quintal" respectively.
- 11. Quoted rates of items in Schedule 'A' (BoQ) shall include the cost of any cutting/leaving, forming holes chases etc in walls, floors nd ceiling as required and making good. No adjustment shall however be made on this account for pricing of deviation in Schedule 'A'(BoQ).

12. Goods and Services tax (GST)

It be noted that statutory Goods and Services Tax levied by J&K Govt on Works Contracts under J&K Goods and services tax Act 2017 dated 7th July 2017 shall be applicable. Tenderers are advised to independently ascertain the rate of Goods and Services Tax as formulated under J&K Goods and services tax Act 2017 dated 7th July 2017 and subsequently amended under various SROs. No claim on account of any kind of misunderstanding on this issue shall be entertained at a later date. The rates quoted by the contractor shall be deemed to be inclusive of Goods and Services Tax including any other tax as applicable on the date of submission of tender.

- 13. All other taxes which are not abolished under GST act levied by the state or central Govt or statutory body as applicable on the date of submission of tender documents shall also be applicable and deducted from the contractor's payments and no claim whatsoever on this account shall be admissible to the contractor.
- 14. This tender is governed with General conditions of contract IAFW-2249 (1989 Print) together with amendment No. 1 to 49 and errata 1 to 20 as applicable and all other provisions as specified and indicated wherever in the tender documents. The newly inducted certain changes in general conditions of contract through amendment Nos 41 to 49 are highlighted below and bidders are requested to go through these provisions alongwith other provisions before quoting their rates in the BoQ and rates shall be deemed to have been quoted accordingly:-
 - (a) Provision of performance security @ 5% of contract sum to be furnished by successful contractor within 28 days of receipt of letter of Acceptance.
 - (b) Defect liability period of work from the certified date of completion shall be two years.
- **15.** If due to site requirement any new item(s) required to be executed at site for proper completion of the work, the same shall be priced in accordance with section 62 of IAFW-2249. Regarding any deviation for which SSR rates are available in SSR Part-II 2020 (Rates) the same shall be priced at (-) 25% below rates of SSR Part-II (2020). The rates not available/derivable from SSR Part-II (2020) shall be regularized as per Condition 62 of IAFW-2249. The contractor shall have no claim whatsoever on this account.

16. PRICING OF DEVIATION:-

- (a) In case of any deviation, mode of pricing shall be decided by the Accepting Officer in terms of condition 62 of IAFW-2249.
- (b) In the event of a deviation order involving fixation of Special (star) rate. Draft star rate shall be prepared by GE (with a maximum period of 30 days) while initiating the proposal for deviation seeking approval of Accepting Officer and notified to contractor. While notifying the Draft Rate, it will be clearly stipulated that the same is merely an estimated rate and firm rate shall be fixed based on actual and receipt of supporting documents from the contractor such as vouchers/literature of product/test certificates etc. (as applicable) on completion of the work involving Star Rate. Any objection to the method of fixing Start Rate will be dealt as per condition 7 of IAFW-2249.
- (c) Draft Star Rates shall be made based on market enquiry through telephonic enquiry/quotations/email/rate lists/internet based sources, material & labour constants available in various civil engg books and record available in respect of Star Rates approved in the past of similar items of work etc Contractor may also assist GEs office in preparation of draft Star Rates.
- (d) The draft Start Rates shall be purely a draft rate and shall not be used for claiming final payment during execution of work. However GE shall allow part payment to the tune of 80% during execution to avoid any financial hardship to contractor.
- (e) After completion of the item of work involving Star Rate, contractor shall submit the vouchers/literature of product/test certificates (as applicable, decision of GE being final in case of any disagreement) for finalization of Star Rate. The Star Rate shall be technically checked by DCWE(C)/Director(C) depending upon the financial effect & approval by competent authority within a period of one month from submission of the relevant documents by contractor as mentioned above.
- (f) The Star Rate as approved by competent authority after technical check by DCWE(C)/Director(C) depending upon the financial effect shall be referred as "the rate decided by GE" under para 62(G) of IAFW-2249.
- **17.** <u>Covid-19 instructions</u>: Contractor and his labour will strictly follow the Codit-19 protocols and as and when directed by Engr-in-Charge, he will arrange for testing of Covid-19 for his labours/manpower at his own expense. No any claim on this account shall be entertain by the department at any stage of contract agreement.
- 18 Tenderers are requested to note that if any item/items is/are repeating in BOQ and tenderer has quoted different rate for the same item, the minimum rate shall be consider for acceptance and payment purpose.
- 19. <u>Security deposit for post construction anti termite treatment for 10 years (As applicable)</u>:- The security deposit referred to held from the contractor against the guarantee period for anti-termite shall be calculated as per scales laid down for calculating "Individual Security deposit" on the amt of anti-termite treatment items included in BOQ at contract rates for which treatment is to be done or Rs 5000/- which is more and may be refunded to the contractor after the expiration of the period of ten years fir the certified date of completion by the GE, provided always that the contractor shall first have been paid the final bill and have rendered a No-Demand Certificate (IAFA-451). The facility of furnishing fixed deposit receipt/BGB in lieu of the sum to be retained as security may be accepted.
- 20. <u>Security deposit for post construction Roof Treatment for 10 years (As applicable)</u>:- An appropriate sum, equal to the amount of security deposit as per scale laid down for "Individual Security deposit" on the amount of water proofing treatment items included in BOQ at the contract rates under the contract shall be retained out of the final bill amount as security deposit for the water proofing work of Rs 5000/- whichever is more, and it shall be released to the contractor after the expiry of the guarantee period. Alternative the contractor may give separate interest bearing deposit to GE valid for ten years for the sum mentioned above.

SHCHEDULE 'A' (PART-II) CREDIT SCHEDULE OF RETERIVED MATERIAL

- 1. The quantities mentioned here under are 'Provisional'.
- 2. The demolition/dismantling work is to be carried out in workmen like manners without causing any damage to the adjoining structure. Any damage caused to adjoining structure due to care-less-ness of contractor's workmen the same shall be made good to match with the existing specifications without any extra cost to the Govt. The contractor is fully responsible for taking safety measure during demolition/dismantling of structure/items.
- 3. After demolition/dismantling the material obtained shall be neatly stacked by the contractor through his workmen and accounted for in the presence of Engineer-in-Charge without any extra cost to the Govt. The contractor shall be allowed to take away the material from site of work only after affecting the recovery of each item as per the rates mentioned here under from his running RAR. All serviceable/unserviceable material which are neither accounted for in schedule of credit nor described to be reused in the work, shall be the property of Govt and shall be deposited in MES store yard as directed by Engineer-in-Charge.

SI/ No	Brief Description of items of work	A/U	Qty	Rate	Amount
1	Old brick bats	Cum	95.00	400.00	38000.00
2	Old U/S steel iron scrap	Kg	655.20	10.00	6552.00
3	Old Fencing post of any type	RM	100.00	10.00	1000.00
4	Old fencing/mesh of any type	Sqm	210.00	15.00	3150.00
5	Old Barbed wire	100RM	5.00	50.00	250.00
6	Old RCC pipe of any dia	RM	20.00	15.00	300.00

Total 49252.00

Total amount of credit Sc	= Rs. (-) 49252.00	
	GENERAL SUMMARY	
01.	Total amount of schedule 'A' Part-I B/F from page No.	= Rs
02. (Sch 'A	Deduct amount of credit schedule 'Part-II) B/F from page No	= (-) Rs 49252.00
Contrac	ct sum C.O. to Srl page No.	= Rs.

(Signature of contractor)

Accepting Officer

Signature of the Contractor

Dated: _____

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

<u>NIL</u>

Si	Signature of Contractor Accepting officer							
Da	ated:							
				SC	HEDULE 'C'			
	ITEMS OF TOOLS AND PLANTS (OTHER THAN TRANSPORT) WHICH WILL BE ISSUED TO THE CONTRACTOR (See Condition 15, 34 & 35 of IAFW-2249)							
	S.No.	Quantity	Particulars of Crew	Details	Hire charges per unit per working day Rs. Ps.	Standby charges per unit of Off day Rs. Ps.	Place of issue	Remarks
Signature of Contractor Accepting officer Dated:								
				<u>s</u>	CHEDULE 'D'			
			TRANSPO	RT TO BE	HIRED TO THE	E CONTRACT	OR	
_			(See	condition	s 16 and 35 of IA	AFW-2249)		
	S.No.	Particulars	Rate per uni working day Rs. Ps.		Place of issue	Remark	KS .	
_								

Accepting Officer

TENDER

THE PRESIDENT OF INDIA

1. Having examined and perused the following documents: -

Specifications signed by Accepting Officer, GE Army Dhar Road, Udhampur,

Drawings detailed in the specifications

Schedule 'A', 'B', 'C' and 'D' attached hereto.

- 2. MES standard schedule of Rates 2009 (Part-I) (Specifications) & 2020 (Part-II) (Rates) for together with amendments 1 to 3 to Part-I and errata/amendment 1 to 122 to Part-II (as applicable) respectively here-in-after and in IAFW-2249 referred to as the MES schedule.
- 3. General conditions of contract IAFW-2249 (1989 Print) together with amendment No. 1 to 49 and errata 1 to 20 as applicable.
- 4. <u>WATER</u>: Refer condition 31 of IAFW-2249 (General conditions of contract); Water will be supplied by the MES at points as directed by engineer-in-charge and shall be paid for by the contractor@ RS.3.75 PER RS.1000/-of work done priced at contract rates.
- 5. Should this tender be accepted: -

I/We agree

*(a) That the sum of		
`´Rs.	Rupees	
)

forwarded as earnest money shall either be retained as a part of Security Deposit or be refunded by the Department on receipt of an appropriate amount as Security deposit within the time specified in condition 22 of IAFW-2249.

(b) To execute all the works referred to in the said documents upon the terms and conditions contained or referred to therein and as detailed in the General Summary and to Carry out such deviations as may be ordered vide condition 7 of IAFW-2249, up to a maximum of 10% (Ten percent) and further agree to refer all the disputes as required vide condition 70 to Sole Arbitration of serving officer having degree in Engineering or equivalent or having passed final/direct final examination of sub Div-II from institution of surveyors (India) recognised by the Govt of India to be appointed by Chief Engineer Udhampur Zone, PIN-900386, C/O 56 APO or in his absence, the officer officiating as Chief Engineer Udhampur Zone whose decision shall be final, conclusive and binding.

Contd...

^{*}To be deleted wherever not applicable.

NIT GE/ADR- 60/2024-25 SERIAL PAGE NO 23

TOTAL BROUGHT FORWARD FROM SERIAL PAGE No.

Rs	(Rupees		
)
Signature	in the capacity of	duly	authorised to
sign the tender for and on behalf of	•	(In block letters	·).
Dated:	Po	ostal Address:	
	Те	elegraphic Address	
	Telephone No:		
Witness			
Address			
	ACCEPTAN	<u>CE</u>	
Alterations have made before the execution of the contract.	ontract agreement, these l	have been initialed by th	
The above tender was accepted Rs (Rupee			
			_)
on the	day of		
Signature	dated this	_ day of 2024	

Appointment: Garrison Engineer GE(Army) Dhar Road Udhampur, Pin 901216 C/O 56 APO Accepting Officer (For and on behalf of the President of India).

1. **GENERAL:** The following Special Conditions shall be read in conjunction with the General Conditions of Contracts, IAFW-2249 and IAFW-2159 including Errata/amendments thereto. If any provision in these Special Conditions is at variance with that of the aforesaid documents, the former shall be deemed to take precedence there over.

2. <u>ADMISSION TO SITE BY CONTRACTOR & RESPONSIBILITY TO ASCERTAIN HIS OWN INFORMATION</u>

- 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 cogent 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. No claim, what so ever may be, shall be admissible to the contractor on this account.
- 3. **HANDING OVER OF SITE:** Site for execution of work will be available as soon as the work is awarded. In case it is not possible to make the entire site available on the award of work, the contractor will have to arrange his working program accordingly. No claim what so ever, for not giving the entire site on award of work and giving the site gradually, will be tenable.

4 SECURITY AND PASSES

- 4.1 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. If for reasons of technical collaboration or other consideration, the employment of any foreign national is unavoidable, the contractor shall furnish full particulars to this effect to the Accepting Officer at the time of submission of his tender.
- 4.2 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.
- 4.3 The Engineer-in-Charge shall at his discretion have the right to issue passes as per rules and regulations of the installation/Area in force to control the admission of the contractor, his agents, employees and work people to the site of the work or any part thereof. Passes should be returned at any time on demand by the Engineer-in-Charge or the authorities concerned and in any case on completion of work.
- 4.4 The contractor and his agents, employees and work people shall observe all the rules promulgated by the authority controlling the installation/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.

5 CONDITIONS FOR WORKING

5.1 <u>UNRESTRICTED AREA (COMPLETE AREA UNDER GE DHAR ROAD EXCEPT</u>

MENTIONED UNDER SPECIAL CONDITION 5.2

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

5.2 **RESTRICTED AREA (TECH AREA DHAR ROAD & DEPOT AREA AT JINDRAH)**

5.2.1 <u>ENTRY AND EXIT:</u> The contractors/his agents/ representatives/workmen etc and his materials, carts, trunks or other means of transport etc. Will be allowed to enter through and leave from only such gate or gates and at such times as the GE or authorities in charge of the restricted area may at their sole direction permit to be used. Contractor's authorized representative is required to be present at the security of the restricted area.

5.2.2 IDENTITY OF WORKMEN

- 5.2.2.1 Every workman shall be in possession of an identity card. The identity card shall be issued after a thorough investigation of antecedents of the laboursers by the contractors and attested by Officer-in-Charge of the unit concerned in accordance with the standing rules and regulations of the unit. Contractors shall be responsible for conduct of his workmen, agent or representatives
- 5.2.2.2 <u>IDENTITY CARD OR PASSES:</u> The contractor, his agent and representatives are required individually to be I possession of an identity card or pass which will be examined by the security staff at the time of entry into or exist from the restricted area at any time or number o times inside restricted area.
- 5.2.3 <u>SEARCH:</u> Through search of all persons and transport shall be carried out at each gate and for as many times the gate is used for entry or exit and may also be carried out any number of times at the site within the restricted area

- WORKING HOURS: The units controlling restricted area, usually work during six days in a week and remain closed on the 7th day. The working hours available to the contractor's labour and staff are however appreciately reduced because of the time of entry and exist during working hours. The exact working hours, working days and number of working days observed for these restricted area (s) where works are to be carried out shall be deemed to have ascertained by contractors before submitting his tender. The tenderer's attention is invited to the fact that number of working hours for a unit are prescribed in regulations and that they cannot be increased by the Garrison Engineer or authorities controlling the restricted area. The definition of 'working days' as given under condition 1(t) of IAFW-2249 does not apply in case where the works are carried out in restricted area.
- 5.2.5 <u>WORKING ON HOLIDAYS:</u> The contractor shall not carry out any work on gazetted holidays, weekly holidays and other non-working days except when he is specially authorized in writing to do so by the GE. The GE may at his sole discretion declare any day as holiday or non-working day without assigning any reason for such declaration. Nothing extra shall be admissible on this accounted for any man hours lost.
- 5.2.6 <u>FIRE PRECAUTIONS:</u> The contractor, his agent, representatives, workmen etc shall strictly observe the order pertaining to fire precautions prevailing within the restricted area. Motor transport vehicle, if allowed by the authorities to enter the restricted area must be fitted with the serviceable fire extinguisher.
- 5.2.7 <u>FEMALE SEARCHER:</u> If the contractor desires to employ female labour or work to be carried out inside the area of factory, depot, park etc., and a female searcher is not borne on the authorized strength of the factory, depot, park etc at the time of submission of tender, he shall be deemed to have allowed in his tender for pay and allowances etc. for a female's searcher (Class IV servant) calculated for the period female labourers during any month and female's searcher (s) has/ have to be employed in addition to the authorized strength of the factory, depot, park etc the salary and allowances paid to the additional female searchers shall be distributed on equitable basis between the contractors employing female labour taking into consideration the value and period of completion of their contracts. The GE's decision in regard to the amount payable on this account by any contractor shall be final and binding.
- WORK ON HOLIDAYS: The contractor shall not carry out any work on gazetted holidays, weekly holidays and other non-working days except when he is specially authorized in writing to do so by the GE. The GE may at his sole discretion declare any day as holiday or non-working day without assigning any reason for such declaration. Nothing extra shall be admissible on this accounted for any man hours lost.

6. MINIMUM WAGES PAYABLE

6.1 Refer Conditions 58 of IAFW-2249. The "Schedule of Minimum Fair Wages" as published vide Govt. of India Notification dated 10 Mar 92 (revised upto date) forms part of the tender documents. The contractor shall not pay wages lower than minimum wages for labour as fixed by the Govt. of India/State Govt. under Minimum Wages Act or Contract Labour (Abolition and Regulation Act), whichever is higher.

- The fair wage referred to in condition 58 of IAFW-2249 will be deemed to be the same as the minimum wages payable as referred to above.
- 6.3 The contractor shall have no claim whatsoever, if on account of local factors and or regulations, he is required to pay the wages in excess of minimum wages as described above during the execution of work.
- **7. ROYALTIES:** Reference Condition 9 of General Conditions of Contracts (IAFW-2249). No quarries on Defence land are available.
- **8. LAND FOR TEMPORARY WORKSHOPS, STORES ETC.**: Delete the following from lines 5 to 9 of sub para 1 of condition 24 of IAFW-2249 reading "In the event of allotted to him" and insert as under: -
 - "Separate land will be allotted to the contractor for the storage of materials, temporary workshop and offices, for which he shall pay the nominal rent of Rupee 1/- per year or part of a year as mentioned in condition 24 of IAFW 2249. The land/open space available within vicinity of site of work as directed by GE may also be used by the contractor for these purposes but free of charge. No land for accommodation of Labour will be allotted."
- WATER (Refer condition 31 of General Conditions of Contracts IAFW-2249 and clause 1.13 of MES Schedule.)
- 9.1 Water will be supplied by MES at the point(s) marked on site plan or as decided by GE. As the water supply by MES is likely to be intermittent/short supply, the contractor shall make his own arrangements for storing the water required for the works, labour and workmen etc. at his own expense. The contractor shall not have any claim on account of short/intermittent supply and shall make his own arrangements to supplement the requisite quantity of water.
- 9.2 Point of water supply shall be decided by the GE. MES will be responsible to carry/supply water upto the above stated point but beyond that it will be the responsibility of contractor to make arrangement as described in Para 2 of condition 31 of IAFW-2249. Size of ferrule at the point of supply shall be 15 mm bore unless otherwise indicated.
- **10. CO-OPERATION WITH OTHER AGENCIES:** The contractor shall permit free access and generally afford reasonable facilities to other agencies or department workmen engaged by the Govt. to carryout their part of the work, if any, under separate arrangements.

11 **ELECTRIC SUPPLY**

In case contractor desires to buy the Electric energy from the MES, the electric supply required for the work up to a maximum of 10 KW three phase 4 wire system shall be made available by MES from the location of existing transformer as indicated in the site plan and in case not indicated, from the location as directed by the GE. KWH meters to register the electric energy supplied and main switch shall be provided and installed by the **MES**. 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.

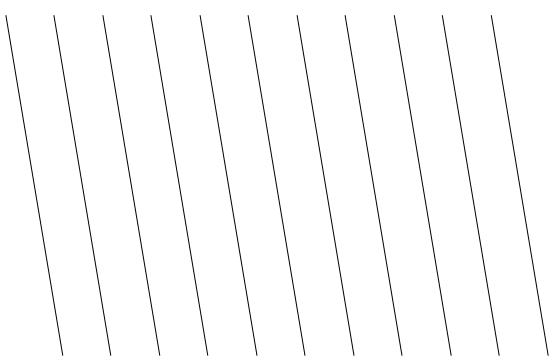
- The contractor will be charged for the electric energy consumed for the execution of works at Rs 11.75 per unit for lighting as well as for power.
- 11.3 MES do not guarantee continuity of supply and no compensation whatsoever shall be allowed for supply becoming intermittent or for breakdown in the system.
- 11.4 GE or his representative shall be free to inspect all the power consuming devices or any electric lines provided by the contractor. Any devices or electric lines provided by the contractor, which are not to the satisfaction of the GE, shall be disconnected from the supply, if so directed by him and no claim for compensation whatsoever may be, shall be allowed on this account.
- 12 Critical Path Method / Net work Analysis and the time schedule
 - (a) The time and progress chart, to be prepared as per condition-11 of IAFW-2249 (General conditions of contracts), shall consist of detailed network and time schedule. The critical path network will be drawn jointly by the GE and the contractor soon after the acceptance of tender.
 - (i) The time scheduling of the activities will be done by the contractor so as to finish the work within the stipulated time. The contractor is advised to use the facility of computerization available with any organization, which affords such facility in doing the same. On completion of time schedule, a firm calendar date schedule will be prepared and submitted by the contractor to GE, who will approve it after due scrutiny.
 - (ii) The schedule will be submitted in four copies within two weeks from the date of handing over site. In case the contractor fails to submit the CPM net work diagram, the net work prepared by the GE will be binding on him and he will be bound to employ resources of men and materials in the manner directed by the GE.
 - (c) During currency of the work the contractor is expected to adhere to the time schedule and this adherence will be the part of contractor's performance under the contract. During the execution of the work, the contractor is expected to participate in the reviews and updating of the network undertaken by the GE. These reviews may be undertaken at the discretion of the GE either as a periodic appraisal measure or when the quantum of work ordered on the contractor is substantially changed through deviation order(s) / or amendments. Any revision of the schedule as a result of the review will be submitted by the contractor to the GE within a week, who will approve it after due scrutiny. The contractor will adhere to the revised schedule thereafter.
 - (d) In case of contractor not agreeing to the revised schedule, the same will be referred to the Accepting Officer whose decision will be final, conclusive and binding. GE's approval to the revised schedule resulting in completing 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 in terms of conditions of IAFW-2249 and separately regulated.

- (e) Contractor is expected to mobilize and employ sufficient resources to achieve the detailed schedule within the broad framework of the accepted methods of working and safety
- (f) No additional payment will be made to the contractor for any multiple shift work or other incentive methods contemplated by him in his work schedule even though the time schedule is approved by the Department.
- **13. SAMPLE OF MATERIALS** (Refer condition 10 of I.A.F.W. 2249 and clause 1.6 & 1.7 of MES Schedule, Part-I.)
- Materials provided by the contractor for incorporation in the works shall, unless otherwise specified in the particular specifications, be ISI marked. IS means Indian Standards as issued by the Bureau of Indian Standards. Wherever in the specifications `I.S.' is referred to, it means the edition with all amendments, current on the due date of receipt of the tender documents. In case of conflicting provisions regarding makes in schedule 'A', particular specifications, the following order of precedence shall be followed:-
 - (a) Schedule 'A'
 - (b) Particular specification
- The tenderer is advised to inspect other materials, which are displayed in the office of GE, before submitting his tender. The tenderer shall be deemed to have inspected the samples and satisfied himself as to the nature and quality of materials he is required to incorporate in the work irrespective of whether he has actually inspected them or not. The materials to be incorporated in the work by the contractor shall be I.S marked or shall be equal or superior in quality to sample displayed and shall comply with the specifications given hereinafter.
- 13.3 The contractor shall not procure materials unless the GE has first approved the samples.

14 RECORD OF CONSUMPTION OF CEMENT

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

- 15. <u>PERIOD FOR KEEPING THE TENDER OPEN:</u> 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 excluding the day of submission of tender.
- 16. BLANK



- 17. <u>SECURITY OF CLASSIFIED DOCUMENTS:</u> 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 approval of the Engineer-in-Charge. The contractor shall also not make copies of the design/drawings and other documents furnished to him in respect of the work, and shall return all documents on completion of the works or earlier on determination of the contract. The contractor shall along-with the final bill, attach a receipt of his having returned the classified documents as per condition 3 of IAFW-2249 (General Conditions of Contracts).
- **18. OFFICIAL SECRETS ACT**: The contractor shall be bound by the Official Secrets Act 1923.

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19. RECORD OF MATERIALS

- 19.1 The quantity of materials such as paints, water proofing compound, chemicals for antitermite treatment and the like, as directed by the Engineer-in-Charge (the quantity of which cannot be checked after incorporation in the works), shall be recorded in measurement books and signed by the contractor and the Engineer-in-Charge as a check to ensure that the required quantity has been brought to site for incorporation in the work.
- 19.2 Materials brought to site shall be stored as directed by the Engineer-in-Charge and those already recorded in measurement book shall be suitably marked for identification.
- The contractor shall, on demand, produce to the GE, original receipted vouchers/ invoices in respect of the supplies. The vouchers/invoices shall be defaced and stamped by Engineer-in-Charge indicating contract number, name of work, under his dated signature. The contractor shall ensure that the materials are brought to site, in original sealed containers/packing, bearing manufacturer's marking except in the case of the requirement of material(s) being less than smallest packing.
- 19.4 Production of vouchers by the contractor shall be his MANDATORY contractual obligation and shall be fully filled by him. Contractor shall produce vouchers/invoices from the manufacturers and/or their authorized agents for the full quantity of the following materials, as applicable as a pre-requisite before submitting claims for payment for advances on account of the work done and/or materials collected in accordance with Condition 64 of General Conditions of Contracts IAFW-2249: -
 - (a) Water proofing compound.
 - (b) Chemicals for Anti-termite Treatment
 - (c) Paints like synthetic enamel, emulsions, distempers & Cement base paint
 - (d) GI & CI pipes and their fittings.
 - (e) Sanitary fittings.
 - (f) Windows/ventilators of any description
 - (g) Factory made shutters.
 - (h) Floor/Wall tiles, PCC tiles, Paving blocks, kerb stones, etc.
 - (j) Fittings/fixtures of door and windows/Iron Mongery
 - (k) Bituminous products
 - (I) Electrical and Water Supply fittings/fixtures.
 - (m) Cables/wires.
 - (n) For any other items/materials as directed by the GE.

20. <u>ACCEPTANCE QUALITY OF WORK AND FINISHES</u>

20.1 To determine the acceptable standard of materials and workmanship, one room (to be decided by GE) shall be completed by the contractor well in advance (minimum two stages ahead of remaining work) as directed by GE under close supervision of the Engineer-in-Charge and shall be got approved by the GE. The workmanship of various trades and finishes of this room shall serve as guiding sample for the work in remaining building.

20.2 Approval of the stages and workmanship of sample room shall be separately entered and approved in stage passing register giving reference to building and name of buildings for easy identification even at a later date. The above provisions shall however do not absolve the responsibility of the contractor for execution of work as per contract provisions.

21 CONTRACTORS PLANT/EQUIPMENT AT SITE

- 21.1 The contractor shall furnish to the Engineer-in-Charge every morning distribution return of his plants/equipment's on the site of work stating the following particulars: -
 - (i) Particulars of plants/equipment, their make, manufacturers Model No if any, Registration No if any, capacity, year of manufacture and year of purchase etc.
 - (ii) Total No. (Quantity) on site of work.
 - (iii) Location, indicating No., (quantity) at each location on the site of work.
 - (iv) Purchase value on the date of purchase. For the purpose of the condition, plant/equipment, Vehicle No., i.e. of trucks and lorries but neither the workman's tools or any manually operated tools/equipment shall be given. 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.
- 21.2 LOSS OR DAMAGE ON ACCOUNT OF ENEMY ACTION :- If as a result of enemy action, the Contractor suffers any loss or damage, the Government shall reimburse to the Contractor such loss or damage to the extent and in the manner hereinafter provided: -
 - (i) The loss suffered by him on account of any damage or destruction of his plant/ equipment (as defined in special condition (a) above) or materials or any part or parts thereof. (The amount of loss assessed by the Accepting Officer of the Contract or the CWE in case of contracts accepted by GE, on this account shall be final and binding).
 - (ii) The compensation paid by him under any law for the time being in force to any workman employed by him for any injury caused to him or to the workman's legal successors for loss of the workman's life.
 - (iii) Payment of compensation for loss or damage to any work or part of work carried out (The amount of compensation shall be determined in accordance with condition 48 of General Conditions of Contracts IAFW-2249). No reimbursement shall be made nor shall any compensation be payable under the above provision unless the Contractor had taken Air Defence Precautions ordered in writing by the GE/OC concerned or in the absence of such orders, reasonable precautions. No reimbursement shall be payable nor shall any compensation be payable for any plant/equipment or materials not lying on site of work at the time of enemy action.
- 22. RELEASE OF ADDITIONAL SECURITY DEPOSIT (Refer Conditions 22 and 68 of IAFW-2249.) The contractor, in case he has to deposit additional security for the contract, is advised to deposit the additional security in two equal parts so as to facilitate its release in accordance with condition 68 of IAFW-2249.
- 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 therewith and leave the whole premises in clean and tidy condition before handing over the building.

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 obligations, if the affected party within 15 days of its occurrence informs the other party in writing.

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, quarantine, restrictions beyond the control of either party.

It is under stood and agreed between the parties hereto that the rights and obligations of the parties shall be deemed to be in suspension during the continuance of the force majeure event(s) as aforesaid and the said rights and obligations shall automatically revive upon the cessation of intervening force majeure event(s). The period within which the rights and obligations of the parties shall be in suspension due to the force majeure event(s) shall not be considered as a delay with respect to the period of delivery and/or acceptance of delivery under the contract or otherwise the determinant of either party.

Notwithstanding the provisions of the immediately foregoing clause(s), it is further understood and agreed between the parties hereto that in the event(s) of any force majeure persisting for an uninterrupted period exceeding 06 (six) months, either party hereto reserves the right to terminate this contract upon giving prior written notice of 30 (thirty) days to the other party of the intention to terminate without any liability other than reimbursement on the terms provided in this agreement of the goods received.

25. REIMBURSEMENT/REFUND ON VARIATION IN TAXES DIRECTLY RELATED TO CONTRACT VALUE:

- 25.1 The rates quoted by the contractor shall be deemed to be inclusive of all taxes (such as Goods and Service Tax on Works Contracts, Labour Welfare Cess, duties, Royalties, Octroi Excise Duty & other levies etc, payable under the respective Statutes, No reimbursement /refund for variation in rates of taxes including GST, 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 here-in-below.
- 25.2 The taxes which are levied by Govt. at certain percentage rates of Contract (i) Sum/Amount shall be termed as "taxes directly related to Contract value" such Goods and Service Tax on Works Contracts, Labour Welfare Cess/tax as applicable and like but excluding Income Tax. The tendered rates shall be deemed to be inclusive of all "taxes directly related to Contract value" with existing percentage rates as prevailing on end date of submission of bid. Any increase in percentage rates of "taxes directly related to Contract value" with reference to prevailing rates on end date of submission of bid 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 end date of submission of bid 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 end date of submission of bid shall be reimbursed to the contractor and abolition of any "taxes directly related to Contract value" prevailing on end date of submission of bid shall be refunded by the Contractor to the Govt. /deducted by the Govt. from the payments due to the Contractor.

- (ii) The contractor shall with 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 here to which he may be in a position to supply. The Contractors shall submit the other documentary proof/ information's as the GE may require.
- (iii) The Contractor shall for he purpose of this condition keep such books of account and other documents as are necessary and shall allow inspections of the same by a duly, authorized representative of Govt. and shall further, at the request of the GE furnish, verified in such a manner as the GE may require, any documents so kept and such other information as the GE may require.
- (iv) Reimbursement for increase in percentage rates/imposition of "taxes directly related to Contract value" shall be made only if the contractor necessarily & properly pays additional "taxes directly related to Contract value "to the Govt. with out getting the same adjusted against any 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

26. <u>TESTING OF MATERIALS</u>

26.1 **DEFINITIONS**:

- 26.1.1 <u>SITE LABORATORY (FOR 'A' LEVEL TESTS)</u>: A laboratory for material testing established by the contractor at site of work for all the works costing more than Rs.1crore. However, for works costing less than Rs. one crore, it will be optional for the contractor to set up his site lab or he may carry out these tests in the Command Engineer Test Laboratories for which recovery of charges shall be made as given in **Annexure 'I'** to the tender documents.
- 26.1.2 Command Engineer Test Laborteries (CTL)/NABL (FOR 'B' LEVEL TESTS): These test shall be got done by the contractor from Command Engineer Test Laboratories for which recovery of charges shall be made as given in **Annexure 'I'** to the tender documents.
- 26.1.3 C level tests for which facilities are available in Command Engineer Test Laborteries(CTL)/NABL shall be conducted in CTL/NABL with testing charges as given in **Annexure 'I'** to the tender documents. Balance C level tests shall be carried out by the contractor from Lab of Govt. Engineering College/SEMT Pune/Approved Govt Labs.
- Frequency of testing of materials and the charges for testing, if tested in CTL/NABL are given at **Annexure** 'I'. GE may order additional tests depending upon nature of work as required at site, for which no recovery shall be affected from the contractor's dues and only cost of materials, labour and their transportation shall be borne by the contractor.
- 26.3 No material will be incorporated in the work unless it has been tested, found fit and approved by the GE.
- Levels 'A' tests as described in Annexure 'I' will be conducted in the site lab of contractor for which no charge will be recovered as the same will be done at the cost of the contractor in his site lab. However, if the contractor does not carry out these tests, the tests shall be carried out in the CTL/NABL or any other lab approved by the GE [except private lab(s)] and then charges for tests shall be recovered from contractor, in case these tests are carried out in CTL/NABL. Contractor shall employ a competent technical person for testing as approved by GE and asked such tests shall be carried out in the presence of Engineer-in-Charge by the technical person.

- 26.5 Level 'B' and C level tests as described in **Annexure** 'l' will be conducted in CTL/NABL and charges for tests shall be recovered from contractor.
- 26.6 If any of the Level B and C level tests cannot be conducted in CTL/NABL for whatsoever reason, the same will be got done under the arrangements of the contractor in a laboratory other than CTL/NABL approved by the GE [except private lab(s)] in writing and charges for the same shall be borne by the contractor.
- The GE will lay down, in writing, the approved laboratory for conduct of each of level 'C' tests in case facilities not available in CTL/NABL. The charges for 'C' level tests (when tests have been carried out in SEMT Pune) shall be recovered from contractor as actual (where charges not given in Appx) or as given in Appendix 'D', when these tests are carried out in SEMT Pune, recovery shall be made at the rates mentioned in Annexure 'l' and when these tests are carried out in labs other than SEMT Pune, no recovery shall be made and charges as per actual shall be borne by the Contractor.
- 26.8 Contractor shall provide all facilities such as materials and labour, tools/equipment for moulding, casting of cubes, conveyance of test cubes and other materials to be tested, to the laboratory directed by the GE.
- 26.9 The samples for the tests will be drawn by the GE in the presence of the contractor/his authorised representative.
- 26.10 The rates quoted by the contractor shall deem to include: -
 - [a] Expenses on account of testing in CTL/NABL and/or in pursuance of Para 26.1.1, 26.1.2, 26.4 & 26.5.
 - [b] Expenses on account of testing in any laboratory approved by the GE in pursuance of paragraphs 26.1.3, 26.6, 26.7 & 26.8 above.
- 26.11 The Accepting officer may order independent testing for which expenditure will be borne by the Govt. However, the charges for the independent testing will be borne by the contractor if test fails.
- 27 <u>Site Engineer.</u> The GE shall have full powers, to put the contractor on notice on account of default either for non employment of engineers of absence of engineers from site and levy penalty @ Rs 1500 per day per vacancy upto 30 days period. Thereafter GE shall have the option to either to suspend the work or employee engineer at contractors cost and recover the amount from contractors dues.

ANNEXURE- I

(Refer to special condition 31)

Srl	Material	Tests	Method			of tests	Level	Rate	Remarks				
No			of testing				of test	Rs.					
1	2	3	4		5		6	7	8				
		<u> </u>	•										
1	Bricks	(i) Compressive strength	IS-3495 (Part-II)	As per	As per (IS-5454)		As per (IS-5454)		As per (IS-5454)		`A′	330	Checks for visual and dimensional characteristic s shall also be carried out as per IS-5454.
		(ii) Water Absorption	-do-			Nos of Defecti ve Bricks.	`A'	330					
		(iii) Efflorescence	-do- (Part-II)	1001 to 10000 10001 to	5 10	0	`A′	330					
				35000 35001 to 50000	15	1							
2.	Coarse Aggregat e	(i) Sieve Analysis	IS-2386 (Part-I)		f agg ther		`A'	660	Legend 'A' –site lab or CTL				
		(ii) Flakiness Index	-do-		-do		`A′	250	'B'-CTL				
		(iii) Estimation of deleterious materials	IS : 2388 (Part-I)	One test for every 100 Cum of aggregates or part there of One test per source of supply		100 Cum of aggregates or part		600	'C'- CTL or Approved test house /Engg college.				
		(iv) Organic impurities	-do-				,C,	275					
		(v) Moisture content	-do- (Part-II)		gular equir	ly as ed	`A′	330					
		(vi) Specific Gravity	IS:2386			or each supply	`B'	330					
3.	Fine Aggregate	(i) Sieve analysis	IS:2386 (Part-I)	15 Cu	m FA	or every or part nt to site.	`A′	660					
		(ii) Test for clay silt and impurities.	-do-		-do	-	`A′	500					
		(iii) Specific gravity	-do-		r eac f sup	ch source ply	`B'	330					

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1	2	3	4	5	6	7	8
		(iv) Moisture content	-do-(Part-II)	Regularly as required subject to 2 tests/day when being used	`A″	330	
		(v) Test for organic impurities	-do-(Part-II)	One test for each source of supply.	,C,	275	
4	Cement	(i) Setting time	IS: 4031-63 affirmed 1980	Once for each consignment or as and when required.	`B′	500	
		(ii) Soundness	-do-	-do-	`B'	500	
		(iii) Compressive strength	-do-	-do-	`B'	550	(ii) Refer IS-456 2000 clause 14 for frequency of sampling.
		(iv) Fineness	-do-	-do-	`B'	275	
5	Structural concrete (M-25 grade and above)	i) Slump test (OR) compacting factor test (OR) Vee Bee time.	IS: 1199	The minimum frequency of sampling of concrete of each grade shall be as under :-	'A'	300	Random sampling shall be carried out to cover all mix units.
		ii) Compressive strength	IS : 516	Qty of No of Concrete samples in the work Cum	`A′	900	456 of 2000 clause 14 for frequency of sampling.
				1-5 1 6-15 2 16-30 3 31-50 4 51 & above 4+1 for each addl or part there of			

Note: - The contractor shall provide following items at site lab for carrying out field tests: -

- (a) Universal testing machine.
- (b) Sieve set 02 Nos.
- (c) Weighing balance 02 Nos.
- (d) Cube mould 27 Nos.
- (e) Graduated jars.
- (f) Oven

6.	(a) PCC blocks for walling (Hollow block)	(i)Compressiv e strength	IS:2156 1984' (Appx `B')	8 Blocks out of 14	`A'	900	Samples: 14 blocks from consignment of every 5000 blocks or part thereof.
		(ii) Water absorption	-do- (Appx `E')	3 blocks out of 14	`B′	330	
		(iii) Density	-do-	-do-	`B'	330	
	(b) PCC solid blocks for walling	(i) Compressive strength	(Appx `A') IS : 2185	12 blocks out of 18	`A'	900	Samples: 18 blocks from consignment of every 2000 blocks or part thereof. These blocks to be checked for dimensions and weight.

1	. 2		3		4	5	6	7	8
			(ii) Water absorption		-do-	3 blocks out of 18	`B'	330	
			(iii) Density		-do-`	3 blocks out of 18	`B′	330	
7	7 Cement (i) Water flooring absorption tiles./ Terrazz o tiles		IS-1237 198 (Appx 'D')	0	6 Til	es out of 18	`B'	330	Samples: 18 tiles from each source of supply selected at random.
			(ii) Wet trar strength.	nsverse	-do- (Appx'E'	-do-)	`B'	660	
			(iii) Resistar wear	nce to	-do-	-do-	'C'	1000	
8.	8. Burnt clay roofing tiles (Manmade) As per IS: 2690 (Part-II)		(i) Water absorption		IS: 3499 (Part-II)		`B'	330	Samples :12tiles from each source of supply selected at random.
	length 150mm to 250mm width 100mm to 200mm thickness 35mm to 50mm		(ii) Compresstrength	ssive	-do- (Part-I)	-do-	`A'	330	
9.	9. Mangalore pattern roofing tiles		(i) Water absorption		IS:654 (Appx 'A')	6 Tiles out of 32	`B'	330	Samples: 32 tiles from each consignment of 3000 tiles or part thereof. These tiles shall be checked for dimension.
			(ii) Breaking	load	-do- (Appx `C	-do-	`B′	330	
10	Timber	(i) Specific weight	gravity	IS :170 1960	8 Minii from or 2!	mum 3 samples a lot of 4 Cum oned timber.	`B'	330	

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	/ii\	Moisture content	-do-	-do-	`A′	120	
11	(ii) Water for	(i) Test for	IS: 456&	Once at the stage	`B'	500	Also refer
	constructio n purpose	acidity	3015	of approval of source of water.			clause 4.3 of IS :456 and its subsequent
							sub clauses regarding suitability of water at work site.
		(ii) Test for alkalinity	-do-	-do-	`B′	500	
		(iii) Test for soil content	-do-	-do-	,Ċ,	500	
12	Welding of steel work	(i) Visual inspection test	IS: 822 1970 Clause 7.1	100% by visual inspection	Work site	360	Specialized tests, their method and frequency to be decided on consideratio n of their importance by the accepting officer.
13	Timber panelled and glazed Door/Win- dow shutters (including factory made shutters)	(a) Dimensions, sizes, Workmanship and finish	1977 each I (Part I) :- Lot 26 to 51 to 101 t 151 t 301 t 501 t 1001	to 100 8 to 150 13 to 300 20 to 500 32 to 1000 50 and above 80	`A'	180	
		(b) Strength test	3034 factor 1990 be ma	n each lot 5% of the y made shutters shall anufacturer tested for yth tests.	`B'	240	
		(i) Slamming (ii) Impact Indentation	-do- -do-				
		(iii) Shock Resistance	-do-				
		(iv) Edge loading	-do-				Contd D/

Contd.P/..

14	Plywood	(a) Moisture	IS:	Six test pieces cut from each of	`B′	240	Sampling
	(IS: 303	content	1734	the boards selected as per table			shall be
	1989)		1983	shall be subjected to tests.			as per IS
			(Part I)				: 7638-
							1975
							tables.

15	Wood particle board (Medium density IS : 3097 1985)	(a) Density	IS : 635 (Part I)	Three test specimens from each sample (Size 150mm X 75mm)	`C'	60	Sampling shall be as per IS: 3487 1983 with moisture meter.
		(b) Moisture content	-do-	-do-	`A' & `B	60	
		(c) Water absorption	-do- (Part-16)	-do- (Size 300mmX 300mm)	`A′	60	
		(d) Swelling due to surface absorption	-do- (Part-17)	-do- (Size 125mmX 100mm)	`A'	60	
		(e)Swelling in water	-do-	-do- (Size 200mmX 100mm)	`A'	60	
		(f) Modulus of rupture	-do- (Part-4)	Three test specimen as per IS: 2380-77	`B'	90	
		(g) Screw withdrawal strength	-do- (Part-14)	-do- as per IS : 2385	,C,	120	
16	Reinforcem ent steel (IS:1786)	(a) Physical tested upto 16mm dia (Normal mass, tensile, elongation, bend and, rebend)	As per relevant IS	As per Appx `D'	`B'	225 per samp le	
		(b) -do- but more than 16mm dia	As per relevant IS	As per Appx 'D'	`B′	450 per samp le	

PARTICULAR SPECIFICATIONS

1	GENERAL
1.1	Work under this contract shall be carried out in accordance with Schedule 'A', Particular Specifications, drawings (where applicable) and general specifications and other provisions in MES Standard Schedule of Rates (here-in-after called MES Schedule), read in conjunction with each other.
1.2	Term "General Specifications" referred to herein after as well as referred to in IAFW-2249 (General Conditions of Contracts) shall mean the specifications contained in the MES Schedule Part-I.
1.3	General rules, specifications special conditions and preambles in the MES Schedule shall be deemed to be applicable to the work under this contract, unless specifically stated otherwise in these documents in which case the provision in these documents shall take precedence over the aforesaid provisions in the MES Schedule. The terms as specified wherever appear in tender documents and drawings (where applicable) related to relevant particular specifications and in its absence general specifications. All references to MES Schedule in these specifications relate to SSR Part-I of MES Schedule unless otherwise mentioned. References to some paragraphs of MES Schedule have been made in these particular specifications but other paragraphs and provisions as applicable are also to be followed for all sections/parts of Schedule 'A' even though not particularly mentioned here-in-after e.g. reference to Para's pertaining to general workmanship for brickwork, iron and steel work etc. have not been made but provision therein as required for work are applicable.
1.4	Where specifications for any item of work are not given in MES Schedule or in these particular specifications, specifications as given in relevant Indian Standard or as per code of practice shall be followed.
1.6	Rates quoted for a particular item by the tender shall be deemed to include for any minor details/items of work and/or constructions which are obviously and fairly intended and which may not have been included in these documents but which are essential for the execution and entire completion of the work. Decision of the Accepting Officer as to whether any minor details/items of work and/or construction is obviously and fairly intended to be included in the contract or not shall be final, conclusive and binding.
1.8	Where specifications/provisions given in these particular specifications are at variance with the
2	provision/specifications given in MES Schedule, specifications/ provision given in these particular CEMENT:REFER ANNEXURE-II
3	EXCAVATION AND EARTH WORK
3.1	<u>CLASSSIFICATION OF SOIL</u> : Unless otherwise specifically mentioned in Schedule 'A', excavation and earth work under this contract shall be considered as any type of soil. Soft/loose soil, hard /dense soil mixed boulders as defined or disintegrated rock and mud shall be classified as any type of soil. The measurement of excavation shall be as given in MES Schedule (Part-II). However in the event of deviation involving excavation and earth work, the rate shall be the average of soft/loose and hard/dense soil.
3.2	If hard rock is met at site, contractor shall immediately notify the fact to the GE in writing, who will after due verification, regularize the change through a proper deviation order. Hard rock boulders if obtained from excavation shall become the property of the contractor and a recovery @ Rs.499.40 per cubic metre shall be deducted from contractor's running account receipt. However contractor may use hard rock so obtained in the work after breaking them in to required size in case approved by GE in writing.
3.4	In case timbering to excavation is required and specifically ordered by the GE in writing, it shall be paid separately through a deviation order.
3. 5	Bailing/pumping of water where required shall be carried out as described in Para 3.17 of MES Schedule (Part-I). The cost of such work as may be necessary shall be deemed to be included in the contractor's lump sum. No additional payment as stipulated in Special Condition 3.11 of MES Schedule Part-II will be admissible. In the event of deviation no price adjustment shall be made for cost of bailing/pumping etc.

3.6	FILLING IN TRENCHES, PLINTH AND UNDER FLOOR ETC: Refer paras 3.19.1 to 3.19.3 of MES Schedule Part-I. All filling will be spread in layers not exceeding 25 cm thick. Each layer will be watered and well rammed. Thickness of filling shown on drawing is after consolidation.
3.7	HARD CORE: Hard core shall be as mentioned in Schedule 'A', the thickness of the hard core shall be considered as consolidated thickness. Material for hard core shall be hard,tough, clean and free from dust and other deleterious matter. The material for hard core shall be well graded for providing a dense and compact sub-grade. Brick aggregate shall be from well burnt or slightly over burnt bricks and shall not contain any appreciable solution of sulphate content when used on a wet side.
4.	CEMENT CONCRETE
4.1	MATERIALS
4.1.1	CEMENT: Refer Particular Specifications clause 2 and other sub clauses here-in-above.
4.1.2	COARSE AND FINE AGGREGATE FOR CEMENT CONCRETE (PCC & RCC):- Refer Paras 4.4.1 to 4.4.7 of MES Schedule Part-I.
4.1.2.1	Coarse aggregate for lime concrete shall be broken bricks as per Para's 4.5, 4.5.1, 4.5.2 of MES Schedule Part-I. The fine aggregate shall be natural sand as for cement concrete.
4.1.2.2	Grading of fine aggregate (sand) shall be as per Para 4.4.7.2 of MES Schedule Part-I for grading Zone-III. Coarse aggregate up to 20 mm shall be machine-crushed stone and aggregate of size 40 mm and above shall be manually broken or machine crushed at the option of contractor. Fine aggregate (sand) shall be obtained from natural source approved by EIC.
4.1.3	WATER: Refer clause 4.9, 4.9.2 of MES Schedule Part-I.
4.2	WORKMANSHIP:
4.2.1	MIX OR GRADE OF CEMENT CONCRETE: - Reference of IS 456-1978 in Clause 4.11.1 shall be amended to IS-456-2000 (fourth revision) shall be followed in respect of all the situations of plain or reinforced concrete superceding the provision of IS-456-1978 including in MES Schedule Part-I and Para 4.11.1, 4.11.2, 4.11.2.1 to 4.11.2.4 of MES Schedule Part-I.
4.2.2	WORKABILITY OF CONCRETE: - Refer clause 7.1 of IS-456: 2000 and para 4.11.4 of MES Schedule Part I.
4.2.3	MIXING OF CONCRETE: - Refer para 4.11.5 & 4.11.5.1 of MES Schedule Part I.
4.2.4	FORM WORK: Refer to Paras 4.11.6.1 to 4.11.6.5 of MES Schedule Part-I. Also refer clause 7.15 here in after. Form work shall be of steel or plywood of adequate strength, at the option of the contractor. However, deformed steel sheet shall not be permitted for use as form work. Further, in lieu of wooden ballies, standard shuttering telescoping type steel props shall only be used.
4.2.5	TRANSPORTATION OF CONCRETE: - Refer Para 4.11.9 of MES Schedule, Part-I.
4.2.6	PLACING OF CONCRETE: - Refer Para 4.11.10 to 4.11.10.3 of SSR, Part-I.
4.2.7	COMPACTION OF CONCRETE: - Refer to Para 4.11.11 & 4.11.11.1 of MES Schedule Part-I.
4.2.8	CURING OF CONCRETE: Refer Para 4.11.13 of MES Schedule, Part-I.
4.2.9	PROTECTION, INSPECTION & FINISHING TO EXPOSED SURFACE OF CONCRETE: - Refer Para 4.11.14, 4.11.15 & 4.11.16 of MES Schedule Part-I.
4.2.10	SAMPLING AND STRENGTH TEST: Refer clause 15 on page 29 of IS: 456-2000. Tests on cubes
	for 'Compressive Strength Test' at 7 days shall also be carried out.
4.2.11	ACCEPTANCE CRITERIA: - Refer clause 16 on page 29 of IS: 456-2000.
4.2.12	INSPECTION AND TESTING OF STRUCTURES:- Refer Clause 17 on page 16 & 19 of IS:456-2000.

Important requirements for M-25 Design Mix

Design Mix M-25 shall be carried out in accordance with IS-456 :2000 (Code of practice for plain & reinforced concrete) and IS-10262 (revised upto date) pertaining to recommended guide lines for concrete mix design with following stipulations:-

(a) Characteristic compressive strength : 25 N/mm²

required in the field at 28 days.

(b) Maximum size of aggregate : 20mm (Crushed aggregate)

(c) Type of exposure : Severe

(d) Degree of quality Control : Good (Refer Appendix A of IS- 10262)

(e) Degree of workability : As per IS-456: 2000

(f) Minimum cement contents : 360 Kg

3.6.2 At the time of tendering, the contractor after taking into account the type tested design mix being followed in adjoining area in MES works and contractor may follow the same after taking approval from GE in writing.

- 3.6.3 Actual proportion of cement, aggregate and water to obtain the required strength shall be determined by preliminary tests as specified hereinafter. The water cement ratio may be reduced in the trial mix design but not increased
- 3.6.4 Concrete for M-25 (Design Mix) shall have the minimum quantity of cement as above. There shall be no price adjustment whatsoever, on account of variation (plus side) in cement contents of design mix `approved and the minimum cement content indicated above. In case the cement content as per actual Mix Design are working out lower than minimum cement content indicated above, the contractor shall provide minimum cement content indicated above and nothing extra shall be payable on this account. Engineer-incharge shall maintain a record of actual consumption of cement in a proper register and initial the entry for every change in quantity of material.
- 3.6.5 As soon as possible after receiving the order to commence the work, the contractor, shall submit the mix design being followed in adjoining area in MES works for the concrete of grade as specified as per Appendix 'C' of IS-10262 keeping into considerations provision of Para 3.6.1 to 3.6.4 here in above for perusal & approval by the GE. Based on the mix design as above, contractor shall arrange to carry out trial mixes from a credited engineering establishment (lab/college) (To be approved by the GE) using material (cement, sand, aggregates and water) from the site of construction as per Appendix 'D' of IS-10262.
- 3.6.6 Details/results of trial mixes from the engineering establishment along with their recommendations regarding quantities of cement, water, sand, and coarse aggregates to be used in the work to achieve characteristic compressive strength of 25 N/mm² in the field at 28 days shall be submitted by the contractor to the GE for final approval by the CWE.
- 3.6.7 The approval of the GE will not absolve the contractor of his responsibilities to obtain the required minimum strength of concrete at any stage.
- 3.6.8 Contractors unit rates against respective parts of Sch 'A' shall include for the above provisions and as brought out here-in-after. Further, in case there is any change in source of local materials viz sand/aggregates or grade of cement etc, the procedure as in Para 3.6.5 & 3.6.6 here-in-before shall be repeated.

3.6.9 MIXING OF CONCRETE

- (i) The contractor shall use power driven mechanical concrete mixer of adequate capacity with hopper of approved type of mixing. The period of mixing shall be not less than 2 minutes after adding all the materials in drum and shall continue till the resulting concrete is uniform in appearance.
- (ii) Quantity of concrete mixed in any one batch shall not exceed the rated capacity of the mixer. The whole of the mixed batch shall be removed before adding new batch. Concrete mixed above shall not be modified by addition of water or otherwise in order to facilitate handling or for any other purpose.
- (iii) On resumption of work and other stoppages exceeding 20 minutes, the mixer and other plant used for the wet mix shall be thoroughly washed with clean water. Pick up and throw overblades in the drums of the mixer, which are worned down 20mm or more in depths shall be replaced with new blades.
- 3.6.10 <u>SAMPLING AND ACCEPTANCE CRITERIA FOR CONCRETE</u>: The criteria for sampling and acceptance of the concrete shall be as per Para 15.1 to 16.1 of IS-456:2000, (Code of practice for plain and reinforced concrete). The minimum frequency for the work tests shall be as specified therein and as specified here in after.
- 3.6.11 <u>TESTS:</u> The following tests shall be carried out during the execution of work. Tests shall be carried out in accordance with IS-516 and IS-1199. The contractor shall provide all facilities and equipment for casting and curing of test cubes.

	(A) <u>SLUMP TEST:</u> The frequency of the test shall be decided by the GE. The slump for the vibrated concrete shall be as specified in IS-456. The GE, however, reserves the right to vary the limit which will be ascertained at the time of deciding the mix design for each grade. Any batch from which a slump test is being made shall not be transferred to the places of laying until the slump in excess of the required for the particular batch is not removed from the site.
	(a)Three cubes shall be tested at 7 days and three at 28 days for crushing and the remaining three cubes shall be kept as reserved exclusively for Govt use for subsequent testing (if so desired by Govt) and preserved for one year from certified date of completion of work under the contract. The contractor can not object testing of other cubes for the purpose as a matter of right.
	(b) For the purpose of subsequent identification of the work test cubes, the concrete to which these pertains shall be cross referred and record of this maintained and signed by the Engineer-in-Charge and contractor or his authorized representative.
	(B) COMPRESSIVE STRENGTH TEST :
	(a)Three cubes shall be tested at 7 days and three at 28 days for crushing and the remaining three cubes shall be kept as reserved exclusively for Govt use for subsequent testing (if so desired by Govt) and preserved for one year from certified date of completion of work under the contract. The contractor can not object testing of other cubes for the purpose as a matter of right.
	(b) For the purpose of subsequent identification of the work test cubes, the concrete to which these pertains shall be cross referred and record of this maintained and signed by the Engineer-in-Charge and contractor or his authorized representative.
	PLACING AND COMPACTION OF CONCRETE:
	(i) Concrete shall be transported without delay and incorporated in works at the position of laying within 20 minutes from the time of discharge from the mixer.
	(ii) Mixed concrete shall be deposited in final position and solidly packed around reinforcement, carefully poured and consolidated by means of portable vibrators or mechanically operated and of the kind as suitable for a particulars situation as directed by the GE. Care shall be exercised that no voids or honey comb pockets are formed. The concrete shall not be laid in position for more than 1 metre in height in one concrete operation.
5.	BRICK WORK
5.1.1	CLASS DESIGNATION: - Irrespective of whatever is mentioned elsewhere in the tender documents and indicated on the drawings, bricks shall be of class designation 10 all as per IS-1077-1992. The contractor may use non modular bricks irrespective of what is given in forward Note No. 5 of IS-1077-1992 regarding relaxation of four years for use of non modular bricks. For the purpose of pricing of the brick work including deviations related to the brick work, rates given in MES Schedule Part-II for "sub class 'B' old size bricks of class designation 100 (i.e. sub class 'B' old size bricks of minimum compressive strength 100kg/sq.cm)" shall be applicable for bricks of class designation 10 as per IS-1077-1992.
5.1.1.1	TESTING: - Testing of bricks shall be carried out as per IS-3495 (Para 1to 4) of 1992.
5.1.2	GENERAL QUALITY: - Bricks shall be free from cracks, flaws and nodules of free lime, uniform in colour, smooth rectangular faces with sharp corners.
5.1.3	<u>DIMENSIONS AND TOLERANCE</u> : - Dimensions and tolerance shall be as specified in clause 5.6.4 of MES Schedule Part-I. The permissible tolerance on the dimensions of the bricks shall be as per IS: 1077-1992.
5.1.4	PHYSICAL REQUIREMENTS: -
5.1.4.1	COMPRESSIVE STRENGTH: -Minimum compressive strength of any one brick shall not be less than 100 kg /Sq. cm.
5.1.4.2	WATER ABSORPTION: - Not more than 20% by weight.
5.1.4.3	EFFLORESCENCE: - Not more than moderate.
5.2	CEMENT: Refer clause 2 of particular specifications and other sub clauses here in before.
5.3	SAND: - Refer paras 5.4 of MES Schedule, Part-I. Also refer PS clause 4.1.2.2 here in above.
5.4	BRICK WORK-WORKMANSHIP
5.4.1	LAYING AND BOND Bricks shall be laid and bonded all as specified in clauses of MES Schedule as applicable to old size brick (FPS convention brick).
5.4.2	Mortar bed joints shall be such that four course of brickwork and three joints taken consecutively shall measure 3 cm to 4 cm in addition to the combined height of bricks themselves. The provision regarding above made in Para 5.27 of MES Schedule Part-I shall be deemed to be modified accordingly and no price adjustment shall be done on this account.

	Irrespective of whatever is shown on drawings, brick work in all situations shall be built in cement mortar 1:4 except security wall. Security wall shall be built in CM 1:6.
	Half brick thick walls of height more than 90cms shall be reinforced with two Nos. 8# bars with 6mm dia mild steel round bars link @ 150 c/ c, placed horizontally at every fourth course, starting from top of first course from floor and anchored in walls/column at junctions. The anchorage length provided shall not be less than 100mm. Over laps, if any, required in the reinforcement shall not be less than 30cms. In the event of deviations, brick work as specified above shall be priced at the applicable rates in MES Schedule (Part-II) for material and labour with sub class 'B' old sized bricks.
8.	<u>JOINERY</u>
8.1	WOODEN OR WOOD BASED SHUTTERS GENERALLY: Shutters shall be hammer marked as specified in IS and of approved make as specified. Shutter shall be procured from factory without any primer or painting coat or polishing. Independent tests on species/class of wood and moisture content shall be carried out as per IS when specifically ordered by the GE.
8.2	FLUSH DOOR SHUTTER: Refer to Para 8.25 & 8.26 of MES Schedule Part-I. Flush shutters shall be factory made, solid core type with block board core and plywood face panels, commercial type on both sides, conforming to IS:2202 (Part-I) -1999. These shall be of make/manufacturers appearing on the list of licencees as per IS:2202 (Part-I) of latest year as existing on the date of receipt of tender by Bureau of Indian Standards.
8.3	PANELED/WIRE GAUZED SHUTTER: Refer to Para 8.21 of MES Schedule Part-I. Shutters shall be hammer marked factory made conforming to IS:1003 (Part-I) manufactured from well selected kiln seasoned chemically treated for anti-termite second class hard wood (except Mango). These shall be of make/manufacturer mentioned as under: -
8.3.1	
	Everest Trading Corporation, Pathankot.
	Goyal Industrial Corporation, 8748, DB Gupta Road, New-Delhi-110055.
	Jagan Saw Mills, Top Sherkhanai, Akhnoor Road, Jammu
	Jain Timber Industries, Near Water Works, Murthal Road Murthal.
	KC Joinery Mills, Jammu.
	Sarab Enterprises, Kathua (J&K)
8.4	PVC DOORS AND DOOR FRAMES:- Refer to Para 8.34.2.1 of MES Schedule Part-I.
8.5	PVC SHEET/PLAIN COLOUR PVC SHEET MATERIALS Refer to Para 8.34.1.1 of MES Schedule Part-I.
9.	BUILDERS HARDWARE: Hardware fittings shall be provided all as per Schedule 'A'. All articles of builder's hardware shall bear ISI marking. Mild steel fitting shall be of make AGGARWAL, SHREE KRISHNA and aluminium fittings shall be of NU-LITE, CROWN, OXFORD, GLOBAL. In case any item/fittings with ISI mark is not manufactured, then it shall conform to the relevant IS specifications and the specifications given in MES Schedule for the relevant item. Screws used for fixing items of builder's hardware shall be as specified in clause 9.2.6 of MES Schedule. For workmanship refer Para 9.27 to 9.34 of MES Schedule Part-I as applicable. BALL CATCH
	Aluminium magnetic catcher of heavy duty of standard make shall be provided in all type of Dwelling Units. TOWEL RAILS:
	Towel rails shall be tubular, mild steel, chromium plated, 22 gauge, min 18/19 mm bore, 'D' shaped with flanged ends for fixing. In case length is not mentioned in drawings, it shall be 60cm long. Wherever aluminium towel rails are indicated in the drawings, these shall be deemed to read as chromium plated mild steel rails as specified in this clause.
	WIRE CLOTH: Wire cloth to be used for wire gauzed shutters shall be stainless steel with average width of aperture 1.18mm and nominal dia of wire 0.457 mm. In case of deviation, rates given in MES schedule part II for wire cloth of nominal dia of wire of 0.56 mm shall be applicable.

10	STEEL IRON & ALUMINUM WORK
	STEEL & IRON WORK: REFER ANNEXURE-III
10.7	STEEL WINDOWS AND VENTILATORS: Steel windows and vents shall be ISI marked, factory made of make available on web site www.BIS.Org.in. Provisions like glass panes, wire gauge & guard bars are not included in the item(s) of steel windows & ventilators and these shall be measured and paid for separately under respective item(s) of Schedule 'A'.
10.7.1	GUARD BARS/GRILLS TO WINDOWS AND VENTILATORS: - Guard bars/Grills to the windows and vents shall be provided all as directed by Engineer-in-Charge
10.7.2	PRESSED STEEL FRAMES FOR WOODEN SHUTTER: Refer clause 10.27 of MES Schedule Part-I. Pressed steel frames shall be ISI (IS: 4351-1976) marked, factory made of make available on web site www.BIS.Org.in. Size of PCC blocks for fixing lugs shall be length of lug + 5 cm x width of wall x 15 cm. Unless otherwise specially mentioned in Schedule 'A' steel frames shall be pressed out of cold rolled mild steel sheet of 1.25 mm thickness.
10.8	ROLLING SHUTTERS (RS): Refer clause 10.23 of MES Schedule Part-I and as specified in relevant item of schedule 'A'. Rolling shutters shall be factory made and procured from one of the approved manufacturers.
10.9	STEEL WINDOWS :- These shall be conforming to clause 10.26 of SSR Part-I and shall be procured from approved make. These shall be ISI marked.

10.9	GALVANISED STEEL SHEETS: It shall comply with the requirement of IS 277-2003 Refer clause 10.29,10.29.1 and 10.29.2 of MES Schedule Part-I.
11.	Pre-painted Galvalume Roof Sheet: These shall be conforming to clause 11.3 of SSR Part-I. and fixing system shall be as per manufacturer's instructions. Roofing shall be safe against effect of wind velocity. Maintenance
	The fixing of sheets shall be such, that the roofing system provided is free of leakages and seepages. The contractor will be liable to repair all leakages and seepages free of cost for five years after completion. A sum equal to 2.5% of the total amount of roofing work will be held back out of contractor's final bill as security deposit for the guarantee period of five years from the date of completion of entire work which shall be refunded to him after expiry of this period. Alternatively the contractor may give separate interest bearing deposit to GE valid for five years for the sum mentioned above. Cutting & Cleaning:-
	Sheets cutting and cleaning before fixing & after fixing shall be carried out as per manufacturer's instructions The fixing system recommended by the manufacturer shall be approved by GE before starting fixing of sheets. Sheeting, Ridges, valley gutters, facia, eaves board etc. shall be of the same manufacturers and shall be fixed as per instructions in order to:- Fulfill the site requirement as per sound engineering practices. Be complete in all respects Contractor shall procure sheets as defined here in before and shall also produce manufacturers test
	certificate alongwith original purchase vouchers. Material shall be allowed for incorporation only after production of original purchase voucher and manufacturer's test certificate. Original Purchase voucher and manufacturer's test certificate shall be verified and defaced by the Engineer in Charge in token of genuineness and shall be kept on record
11.1	Contractor shall obtain all the material from any of the following manufacturers subject to the approval of GE .The manufacturer shall be BIS approved.
	1) M/s JSW Ispat Steel Ltd 2) SAIL 3) TATA Sheets 4) RINL OR
	any other BIS approved manufacturer
11.2	PRESSED STEEL FRAMES FOR DOORS
	(a) Steel frames for wooden shutters shall be pressed out of cold rolled mild steel sheets of 1.25mm thickness as indicated and shall comply with requirements of IS 4351-2003, Specifications for steel door frames. Cold rolled mild steel sheet shall confirm to IS 513. The size, type (profile) and dimensions of the frames shall be as indicated. Tolerance in the size of frames shall not vary by more than <u>+</u> 2mm. the tolerance over the profile size shall be <u>+</u> 1mm. Steel frames shall be of approved make.
	(b) Frames shall be either painted with two coats of ready mixed paint or power coated (confirming to IS 13871) as indicated.
	(c) Frames shall be filled with PCC 1:3:6.

444	WATER PROOFING TREATMENT TO ROO POOF. Wetween first treatment and the POO and alselections
11A	WATER PROOFING TREATMENT TO RCC ROOF:- Water proofing treatment to existing RCC roof shall be carried out after removing existing treatment and thereafter water proofing treatment shall be carried out as indicated in Schedule. (a) PONDING TEST FOR COMPLETED WATER PROOF TREATMENT
	Provision for ponding of water for 96 hours (minimum) after creating temporary bunds on roof to check leakage/ seepage shall be made under contractor's own arrangements. In case any leakage/ seepage is noticed, the same shall be rectified by the contractor by re doing the water proof treatment as specified above of the affected position (s) and matching with the adjoining surfaces. Water tightness of the RCC slab shall be rechecked for 96 hours as above in later eventuality. GE shall
	carry out check and certify that RCC slab does not have any leakage/ seepage. GE's decision in this regard shall be final and binding.
	10.3.2 <u>DEFECT LIABILITY PERIOD OF WATER PROOFING TREATMENT</u>
	10.3.2.1 The defect liability period of water proofing treatment to RCC slabs including sunken floors shall be 10 years and the contractor shall be responsible to keep the entire buildings free from leakage/seepage for a period of 10 years after certified date of completion. The contractor may obtain a similar guarantee from the specialist firm (if any) engaged by him for the purpose.
	10.3.2.2 Security deposit for this treatment shall be with-held from the contractor's payments during the guarantee period. The amount of security deposit for this contract shall be @ 2.5% of the cost of water proofing treatment work subject to a minimum of Rs5000/- The security deposit shall be refunded to contractor after expiry of this period. Alternatively, the contractor may give a separate interest bearing term deposit receipt to GE valid for 10 years for the above-mentioned amount.
	10.3.2.3 If the GE, at any time during the construction or prior to the expiry of said Guarantee period of 10 years, find that the buildings have been found leaked/seeped, the contractor, on demand in writing from the GE, will forthwith undertake to carry out such treatment which may be necessary to render the buildings free from leakage/seepage at his own expense.
	10.3.2.4 In the event of contractor's failure to comply with the GE's direction within the stipulated period, the work shall be got carried out at the risk and cost of the contractor. The liability of the contractor under this condition shall not however be extended beyond the period of 10 years from the certified date of completion unless the notice was served on the contractor previously to rectify such defects.
	10.3.2.5 The contractor shall provide a plaster plate of size 1000 mm × 600 mm and letters of suitable size at a place, as decided by the Engineer-in-Charge on the wall of each of the building. The plate shall be 10 mm thick in cement mortar (1:4) to indicate the Contract No., name of contractor, the date of completion of the work and the date of expiry of 10 years guarantee for water proofing treatment by engraving and painting Black. The cost of plaster plates is deemed to be included in the lump sum rates of buildings.
12.	CEILING AND LINING
12.1	E-BOARD CEILING WITH GI FRAME/MILD STEEL FRAME Refer Para 12.1 to 12.31 of MES Schedule Part-I.
12.2	PRELAMINATED PARTICLE BOARD Refer Para 12.1 to 12.24 of MES Schedule Part-I.
13	<u>FLOORING</u>
13.1	GENERAL: Refer Para 13.25 of MES Schedule Part-I. Sub base or sub floor shall be laid at a stretch without forming panels over well rammed earth filling in ground floor and no adjustment shall be made for form work on this account. Cement concrete in the sub base or sub floor and top stretch coat shall be laid separately and not monolithically.
13.2	MATERIALS
13.2.1	CEMENT: Cement shall be as specified in Clause 2 of Particular Specifications.
13.2.2	<u>AGGREGATE</u>
13.2.2.1	BRICK AGGREGATE: - Refer clause 13.6 and 13.7 of MES Schedule part-I.
13.2.2.2	STONE AGGREGATES AND SAND: Stone aggregates and sand shall be as specified for concrete work, here in before. For source of snad refer PS clause 4.1.2.2 here in before.
13.3	WORKMANSHIP:
13.3.1	PCC FLOORS: Refer Clauses 13.25 and 13.32 of MES Schedule, Part-I.
13.3.2	JOINTS IN FLOOR:- Joints in floor shall be construction joints as indicated in Sch 'A'. It shall be provided throughout the thickness of floor as specified.
13.3.2.1	Filler for joints shall be conforming to clause 20.13.2.9 of SSR Part-I
13.3.2.2	Sealing compound shall be as specified in relevant item of Sch 'A' and shall conforming to relevant IS.

13.4	PLINTH PROTECTION Plinth protection shall be laid in 1:20 slope. The concrete shall be laid at stretch not exceeding 3.00 metre in length. Joints/gaps between adjoining slabs, at corners and along junction of walls shall not exceed 10 mm in width and shall be sealed with mastic filling. Top surface of concrete shall be finished even and smooth. Joints shall be provided at not more than 3.00 metre interval and also along corners and at junctions of walls.
13.5	KOTA STONE FLOORING Refer Clauses 13.47 of MES Schedule, Part-I.
13.6	CERAMIC TILES FLOORING Refer Clauses 13.40 of MES Schedule, Part-I.
13.7	MARBLE STONE SLAB AND TILES These shall be conforming to clause 3.12.1 of SSR Part-I and size as indicated in Schedule Á/as directed by EIC. These shall be laid as per the specification given in Schedule A and in accordance with clause 13.39.6 of SSR Part-I.
13.8	INTER LOCKING PAVER BLOCKS
	(a) MATERIALS: PRECAST INTERLOCKING PAVER BLOCKS: Refer clause 13.18 of MES Schedule part- I. Unless otherwise mentioned in schedule 'A' the grade of concrete for paver blocks shall be M-35. Pattern/ design of tile as approved by GE and contractor shall have no claim on this account at later stage. Generally the work shall be carried out as defined in clause 13.25 of SSR Part-I. These shall be laid over compacted sand and placed in position as directed. The ends of path shall be sealed with PCC 1:2:4, type B-1 with minimum radius of benching not less than 10cm. These shall be of make:-NTC/GECO/MODERN (b) CEMENT: Refer clause 10.2 herein before.
	(c) SAND: Sand for mortar shall be as specified in clause 5.4 of MES Schedule Part-I.
14	PLASTERING AND POINTING
14.1	GENERAL
14.1.1	The thickness of plaster exclusive of dubbing coat. Plastering & dubbing coat shall, however be done in one operation with plaster.
14.1.2	All corners, angles, junctions and edges shall be truly vertical or horizontal as the case may be and shall be carefully finished. Corners around jambs of opening and junction of walls shall be rounded to minimum radius to 5 mm. 12 mm wide groove at junction of all walls and RCC slabs to the entire thickness of wall plaster shall be provided. Also trowel grooves shall be provided at junction of walls and RCC columns or any other dissimilar material i.e. wooden/steel chowkhats etc.
14.1.3	Contractor's attention is invited to local practices and the local availability of materials like bricks, form work etc., and cater for any extra dubbing required for touching up properly and for smooth and even surfaces. This shall be deemed to have been included in the rates for plasterwork, as applicable.
14.2	MATERIALS
14.2.1	CEMENT: - Cement shall be as specified in clause 2 of Particular Specification.
14.2.2	SAND: - Refer clause 1 & 5 of MES Schedule Part-I. For source refer PS clause 4.1.2.2 here in before.
14.3	WORKMANSHIP: Refer clause 14.12 to 14.20 of MES Schedule Part-I.
14.3.1	MIX AND THICKNESS OF PLASTER:- It shall be as indicated in Schedule 'A'. The thickness of plastering is exclusive of dubbing coat. Any dubbing is required due to variance in brick size shall be provided with of same mortar without any extra cost to the Govt.
15	FINISHES:
15.1	GENERAL:
15.1.1	PREPARATION OF SURFACES: Refer clause 15.12.1 to 15.12.2.5, 15.13.1 to 15.13.2.2, 15.14.1 to 15.14.2.2 and 15.15.2 of MES Schedule Part-I as applicable.

15.1.2	<u>COAT:</u> Operation of each coat shall consist of a stroke of the brush given from the top downwards, another from the bottom upwards over the first stroke and similarly one stroke horizontally from the right and another from the left before it dries.
15.2	WHITE/COLOUR WASHING
15.2.1	MATERIALS: Lime used for white washing shall be freshly burnt fat lime (Class C) or magnesium lime (Class D or F), white in colour, conforming to IS-712-1984 specification for building limes.
15.2.2	<u>WORKMANSHIP</u>
15.2.2.2	PREPARATION OF WHITE WASH: Refer clause 15.12.3 of MES Schedule Part-I.
15.1.2.3	PREPARATION OF COLOUR WASH: Refer clause 15.12.4 of MES Schedule Part-I. Colours used in the preparation of the colour wash shall be first dissolved in water. Sufficient quantity of solution enough to produce the colour of required shade shall be strained through a clean course cloth and the filtrate mixed evenly and thoroughly to the white wash.

15.2.2.4	APPLICATION OF WHITE WASH: Refer clause 15.12.5 of MES Schedule Part-I. Unless otherwise indicated, minimum three coats shall be applied so that the surface presents a smooth and uniform finish through which the plaster does not show. The finished dry surface shall not show any signs of cracking and peeling and the whitewash shall not come off readily on the hand, when rubbed. For white wash on ceiling adequate quantity of zinc oxide shall be added to lime wash for achieving pure white shade.
15.2.3	APPLICATION OF COLOURWASH: Refer clause 15.12.6 of MES Schedule Part-I.
15.3	DISTEMPER DRY:
15.3.1	MATERIALS: Refer clause 15.5 of MES Schedule Part-I. Dry distemper shall be ISI marked.
15.3.2	WORKMANSHIP: Refer clause 15.13 of MES Schedule Part-I.
15.4	OIL BOUND/ ACRYLIC DISTEMPER: -
15.4.1	MATERIALS: Refer clause 15.6 of MES Schedule Part-I and shall be first quality directly procured from manufacturer
	or from their authorized dealer.

15.4.2	WORKMANSHIP: Refer clause 15.14 of MES Schedule Part-I.
15.5	CEMENT BASE PAINT:
15.5.1	MATERIALS: Refer clause 15.7 of MES Schedule Part-I and shall be directly procured from manufacturer or from their authorized dealer.
15.5.2	WORKMANSHIP: Refer clause 15.15 of MES Schedule Part-I.
15.6	WHITE CEMENT BASED PUTTY: Refer Para 15.19 of MES Schedule part-I. MAKE: BIRLA, JK, WEBER (SAINT GOBAIN).
15.8	PLASTER OF PARIS WORK: Wherever shown on drawings, POP work shall be provided by the contractor from the reputed manufacturers approved by the GE.
16	GLAZING
16.2	MATERIALS:
16.2.1	SHEET GLASS: Refer Para 16.2 of MES Schedule part-I.
16.2.2	OBSCURED/PIN HEADED GLASS: - Refer Para 16.3 of MES Schedule Part-I. MAKE: MODIGUARD, SAINT GOBAIN.
16.2.3	<u>WIRED GLASS</u> : Refer Para 16.3 of MES Schedule part-I. Unless otherwise mentioned in Schedule 'A', the nominal thickness of wired glass shall be 6.4 mm.
16.2.4	GLASS FOR ALUMINIUM JOINERY: Glass shall be of selected quality having thickness as mentioned in Schedule 'A' and of shade approved by the GE.
16.2.5	PUTTY: Refer Para 16.5 of MES Schedule, Part-I.
16.3	WORKMANSHIP: Refer clause 16.7.1, 16.7.2 ,16.7.4 & 16.10 of MES Schedule, Part-I.
17.	PAINTING
17.1	PAINTS AND ALLIED MATERIALS: Refer Para 17.2 of MES Schedule, Part-I. Painting work-generally-refer Para 17.3 of MES Schedule, Part-I.

MATERIALS:
All synthetic enamel paint and primer shall be directly procured from manufacturer or from their
authorized dealer.
ALUMINIUM PAINT: - Aluminium paint shall conforming to IS: 2339.
FRENCH POLISH:- Refer clause 17.7.4.1 of MES Schedule, Part-I. French polish shall be ready made of make as under: -
(i) Asian Paints, Nariman point, PB no. 11801 Bombay.
(ii) Berger Paints Indl Ltd., 32, Chowringhee Road, Calcutta.
(iii) Goodlass Nerolac Paint Ltd., Nerolac House, Bombay.
(iv) ICI Ltd. Division, ICI House, 34 Chowringhee Rd, Calcutta.

17.2.4	PLASTIC EMULSION/INTERIOR EMULSION PAINT:- Refer clause 17.16.1 of MES Schedule,
	Part-I. Plastic emulsion paint shall be of first quality directly procured from manufacturer or from
	their authorized dealer.

17.2.5	EXTERIOR ACRYLIC EMULSION PAINT: Acrylic emulsion shall be first quality directly procured	
	from manufacturer or from their authorized dealer.	

17.3	WORKMANSHIP
17.3.1	PAINTING-WOODWORK: - Refer clause 17.6 of MES Schedule, Part-I.
17.3.2	VARNISHING: - Refer clause 17.7.3 of MES Schedule, Part-I.
17.3.3	FRENCH POLISHING: - Refer clause 17.7.4 of MES Schedule, Part-I. All the French polished surfaces shall be treated with PU finish.
17.3.4	FINISHING OF WOOD BASED MATERIALS: - Refer clause 17.7.6 of MES Schedule, Part-I.
17.3.2	PAINTING-STEEL & IRON WORK: - Refer clause 17.8 of MES Schedule, Part-I.
17.3.3	ALUMINIUM PAINT: - Aluminium paint shall be applied all as mentioned in Schedule 'A'.

17.3.4	PLASTIC EMULSION PAINT: Refer clause 17.16 of MES Schedule, Part-I.					
17.3.4	ACRYLIC EMULSION PAINT: Refer clause 17.17 of MES Schedule, Part-I.					
17.3.5	TARRING: - Refer clause 17.12 of MES Schedule Part-I.					
17.3.6	<u>CEMENT SLURRY</u> : - Portions of MS bolts, lugs, anchor bolts and anchoring other than anchor bolts etc. embedded in concrete shall be treated with neat cement slurry.					
18.1.1	SANITARY APPLIANCES AND TOILET FITTINGS All Sanitary ware (except flushing cistern) shall be of white vitreous china best quality ISI marked of makes as specified in Schedule A. The samples of sanitary fittings, fixing accessories shall be approved by the GE wherever occurs in tender documents before bulk procurement for incorporation in the work. Fittings shall be of approved pattern, type and make and shall conform to the relevant IS specification.					
18.1.2	uPVC PIPES FOR SOIL WASTE & DRAINAGE PURPOSE: Refer clause 18.27A of MES					
	Schedule Part-I. uPVC pipes shall be of make SUPREME , PRINCE , DIPLAST .					
	WATER STORAGE TANKS: Water storage tank shall be of rotational moulded, HDPE, ISI					
	marked double layered and as per clause 18.60 and 18.60.A of SSR Part-I of make SYNTEX,					
	GANGA, DIPLAST					
18.1.3	WATER CLOSET PADESTAL PATTERN (EWC):					
	Where indicated in Schedule A, Water closet (EWC) shall be as per Cat No. 2008 EWC conventional, standard with 'P' trap or 'S' trap of Make: CERA or any other equivalent model of approved make as specified in Appx attd . EWC shall consist of:-					
	 (i) Water closet wash down pattern of height 40cm vitreous china ware (with 'S' trap or 'P' trap) all as per IS-2556 Part-II. (ii) Plastic seat and cover with flat under side, solid moulding closed front pattern, with cover. Seat and cover shall be white in colour with chromium plated hinges and nuts, make 'Commander' or equivalent make (ISI marked). 					
	(iii) 10 litre discharge capacity polythene low level flushing cistern, solid moulded (bottle green colour) with valve less syphonic fitting, manually operated with one PVC ball valve horizontally plugged type and polythene float valve shall be provided.					
	(iv) A pair of standard brackets/clamps as supplied by manufacturers.					
	(v) 15mm dia PVC connection pipe.					
	(vi) 32mm dia flush pipe of chromium plated brass tube bent to required shape including chromium plated brass coupling.					
	(vii) The closet shall be screwed with brass screws to sheesham wood plugs embedded in floor.					

18.2	WASH HAND BASIN:			
	Where vitreous china ware glazed Wash hand basins are indicated, these shall consist of the following:- (i) (i) Wash hand basin of size 550x400mm vitreous china glazed ware, flat back pattern as per Cat No CASINO and along with pedestal Cat No-1117 of Make CERA or any other equivalent model of approved make as specified Appx attd with waste union and perforated grating (both fittings of brass chromium plated). Colour of WHB shall be as indicated/directed.Brass chromium plated chain rubber plug arrangements. (ii) Waste fittings brass chromium plated, screwed with fly nut and washer suitable for 50mm bore pipe. (iii) 50 mm bore GI light grade waste pipe from basin to trap. A pair of cast iron brackets Refer clause 18.100 of MES Schedule Part-I.			
18.2.1	CP FITTINGS: Refer relevant clause of MES Schedule Part-I. CP fittings shall be of make PRAYAG, CZAR, JAQUAR, MARC.			
	SANITARY FITTINGS: Refer relevant clause of MES Schedule Part-I. Sanitary fittings shall be of make HINDWARE, CERA, PARRYWARE, JAQUAR.			
PTMT BATH FITTINGS: Refer relevant clause of MES Schedule Part-I. PTMT bath fittings s PRAYAG OR EQUIVALENT IN POLYTUF				
	WORKMANSHIP: Refer relevant clause of MES Schedule Part-I FLUSING CISTERN Refer clause 18.34 and 18.35 of MES Schedule Part I			
18.3	WASTE PIPE AND COUPLING: 32mm dia, PVC flexible, waste pipe of required length shall be provided with brass chromium plated waste coupling with perforated grating 32mm dia. Refer clause 18.20 of MES Schedule Part-I.			
18.4	URINALS: Where indicated in Schedule A, Urinal shall be provided of white vitreous china full stall urinals Cat No 5001 of Cera or equivalent in other approved makes as specified in Appx attd conforming to IS-2556 Part-VI (Section-1) with grating and union including the following fittings:			
	(i) 5 litres discharge capacity PVC automatic flushing cistern. (For set of four urinals or part thereon only one flushing cistern is to be provided as directed)			
	(ii) 20mm bore medium grade galvanised iron flush pipe.			
	(iii) 32mm bore medium grade galvanised iron waste pipe up to outlet drain.			
	(iv) Chromium plated brass coupling to connect urinal pan with waste pipe and chromium plated adopter to connect pan with flush pipe.			
	(i) The pan shall be fixed with brass screws on sheesham wooden plugs embedded in the wall in cement mortar (1:2).			

18.5	HDPE OVER HEAD WATER STORAGE TANKS & OTHER ALLIED			
	WORKS:			
	(a) LIDDE Water starge tanks shall be as indicated in Cahadula (
	(a)	HDPE Water storage tanks shall be as indicated in Schedule A.		
	(b) Mild steel galvanized medium grade 25mm bore over flo			
		pipe and float ball valve with brass rod and polythene ball. Wash out		
		pipe shall be provided with stop valve and anti-mosquito rose.		
	(c)	Over flow pipe shall be connected to wash outlet pipe beyond the		
		stop valve at an approximate distance of 50cm from take off point		
		of wash out pipe and beyond this the combined wash out and		
		over flow pipe shall be provided.		
	(e)	One wash out pipe of 25mm bore medium grade GI pipe shall be		
	(0)	taken to discharge the water at 15cm above ground level.		
		3		
18.5.1	WATER C	OSET (SOLIATT DATTEDNI ODISSA DANI) .		
10.5.1		OSET (SQUATT PATTERN- ORISSA PAN): pan shall conform to IS-2556 Part-III and shall be as		
		2004 of long pattern of Hind ware or other equivalent		
		pake as specified of size 580mm x 440 mm shall be provided		
		S' trap. Refer clause 18.32.2 to 18.32.4 of MES Schedule Part-I.		
18.5.2	STAINII ESS	CETEL CINIC WITH DOMINING DOADD.		
10.3.2		S STEEL SINK WITH DRAINING BOARD: - e indicated in Schedule A , Kitchen sink with drainage board shall be one		
	unit made out from non magnetic stainless steel sheet 1.00 mm thick of			
	specific	ed make of over all size 915mmx 460mm with bowl size of 410 mm x		
		nx160 mm. If size of sink and draining board as specified are not		
		ble in the market then next (higher) nearest size available shall be		
		ed with following accessories/fittings. Brass chromium plated chain rubber plug arrangements.		
	(i) (ii)	Waste fittings brass chromium plated, screwed with fly nut and		
	(,	washer suitable for 50mm bore pipe.		
	(iii)	50 mm bore GI light grade waste pipe from basin to trap.		
	, ,	A pair of cast iron brackets		
	Refe	er clause 18.100 of MES Schedule Part-I.		
18.5.3	MIRROR:			
	147			
		erever shown on drawings, mirror shall be polished sheet glass		
	5.5m			
	wooden/polythene (PVC) moulding frame. Mirror shall be hung to slots on screws fixed to plug embedded in walls unless otherwise s			
		drawings. Size of mirror where not shown on drawings shall be		
	60x45cm. Colour of PVC moulding frame shall be same as that of v			
		d basin.		
	nand	i basiii.		

	SOAP NICHE						
18.5.4	Provide soap niche at the location (s) and of size as shown in drawings. In case size is not indicated, the						
	same shall be of size 30cmx20cmx10cm deep. The location of soap niche shall be as directed by Engineer-						
	in-Charge in case the same is not indicated on the drawings. Irrespective of whatever is shown on drawings,						
	all the surfaces of niche (cill, sofit, back and sides) shall be provided with glazed ceramic tiles (coloured or						
	white depending upon the colour of tiles to be provided in the adjoining dado), set and jointed in neat cement						
	slurry, pointed neatly in white cement (with colour pigment to match the colour of tiles). Glazed tiles shall						
	have "Matt Glaze". The screed to glazed ceramic tiles shall comprise of cement and sand mortar 1:3, 10mm						
	thick, Dado shall not be returned to soffits, back and sides of the Niche. Cill (bottom) of the niche shall be						
	given imperceptible outwards slope so that the water flows down leaving the niche dry.						
	PEG SETS: Peg set where ever shown/ indicated on drawings shall be of aluminium anodized. These shall be screwed with steel screw on Deodar planks 10cm wide x 20mm thick and of such length that the end peg is at a minimum distance of 5cm from end edge and the distance in between the respective pegs is not less than 15cm, The planks shall be fixed to wall with wooden gutties/plugs and screws. Where peg sets are indicated to be provided on the back of the door, peg sets as indicated above shall be provided on the top rail of back of the door with screw without providing wooden planks.						
	<u>CURTAIN ROD</u> . Curtain rods shall be provided at the locations wherever indicated on drawings as "CR" or otherwise and all as per details shown in TD drawings. Curtain rod shall be of 18/19 mm bore MS chromium plated conduit (with wall thickness 22 gauge) and shall be fixed with standard sockets. Wooden brackets and fillets shall be of 2 nd class soft wood 'Kail'. All wooden surfaces shall be painted with two coats of synthetic enamel paint(white) over a coat of primer.						
18.6	PLUMBING WORK						
18.6.1	GENERAL :						
	Plumbing work shall be carried out as specified in clause 18.13 to 18.23, 18.40 and 18.62 to 18.67 of MES Schedule part-I.						
18.6.2	18.40 and 18.62 to 18.67 of MES Schedule part-I.						
18.6.2	· ·						
18.6.2	18.40 and 18.62 to 18.67 of MES Schedule part-I. SOIL/WASTE/VENT PIPES/FITTINGS/ACCESSORIES: Irrespective of whatever shown in drgs all soil/waste/vent pipes shall be of UPVC pipes conforming to IS-13592-1992 & fitting conforming to IS-14735-1999. All the pipes and fittings shall have ISI certification mark.						
	18.40 and 18.62 to 18.67 of MES Schedule part-I. SOIL/WASTE/VENT PIPES/FITTINGS/ACCESSORIES: Irrespective of whatever shown in drgs all soil/waste/vent pipes shall be of UPVC pipes conforming to IS-13592-1992 & fitting conforming to IS-14735-1999. All the pipes and fittings shall have ISI certification mark. Refer clause 18.7 and 18.27A of MES Schedule Part-I WATER TUBING, BIBTAPS, STOP VALVES, ANGLE VALVE AND SHOWER ROSE: Mild steel galvanised tubes (pipes) and fittings shall be all as specified in						
	18.40 and 18.62 to 18.67 of MES Schedule part-I. SOIL/WASTE/VENT PIPES/FITTINGS/ACCESSORIES: Irrespective of whatever shown in drgs all soil/waste/vent pipes shall be of UPVC pipes conforming to IS-13592-1992 & fitting conforming to IS-14735-1999. All the pipes and fittings shall have ISI certification mark. Refer clause 18.7 and 18.27A of MES Schedule Part-I WATER TUBING, BIBTAPS, STOP VALVES, ANGLE VALVE AND SHOWER ROSE: Mild steel galvanised tubes (pipes) and fittings shall be all as specified in clause 18.4 of MES Schedule part-1, bib taps and stop valves shall be all as						
	18.40 and 18.62 to 18.67 of MES Schedule part-I. SOIL/WASTE/VENT PIPES/FITTINGS/ACCESSORIES: Irrespective of whatever shown in drgs all soil/waste/vent pipes shall be of UPVC pipes conforming to IS-13592-1992 & fitting conforming to IS-14735-1999. All the pipes and fittings shall have ISI certification mark. Refer clause 18.7 and 18.27A of MES Schedule Part-I WATER TUBING, BIBTAPS, STOP VALVES, ANGLE VALVE AND SHOWER ROSE: Mild steel galvanised tubes (pipes) and fittings shall be all as specified in						
	18.40 and 18.62 to 18.67 of MES Schedule part-I. SOIL/WASTE/VENT PIPES/FITTINGS/ACCESSORIES: Irrespective of whatever shown in drgs all soil/waste/vent pipes shall be of UPVC pipes conforming to IS-13592-1992 & fitting conforming to IS-14735-1999. All the pipes and fittings shall have ISI certification mark. Refer clause 18.7 and 18.27A of MES Schedule Part-I WATER TUBING, BIBTAPS, STOP VALVES, ANGLE VALVE AND SHOWER ROSE: Mild steel galvanised tubes (pipes) and fittings shall be all as specified in clause 18.4 of MES Schedule part-1, bib taps and stop valves shall be all as specified in clause 18.14 and 18.15 of MES Schedule part-1. Shower rose						
	SOIL/WASTE/VENT PIPES/FITTINGS/ACCESSORIES: Irrespective of whatever shown in drgs all soil/waste/vent pipes shall be of UPVC pipes conforming to IS-13592-1992 & fitting conforming to IS-14735-1999. All the pipes and fittings shall have ISI certification mark. Refer clause 18.7 and 18.27A of MES Schedule Part-I WATER TUBING, BIBTAPS, STOP VALVES, ANGLE VALVE AND SHOWER ROSE: Mild steel galvanised tubes (pipes) and fittings shall be all as specified in clause 18.4 of MES Schedule part-1, bib taps and stop valves shall be all as specified in clause 18.14 and 18.15 of MES Schedule part-1. Shower rose shall be of approved make as per sample kept in GE's office. MILD STEEL GALVANISED TUBES (PIPES) AND FITTINGS Mild steel galvanised tubes (pipes) and fittings shall bear ISI certification mark with IS-1239 (Part-I and IS-1239 Part-II) all as specified in clause 18.4.1. and 18.4.3 on page 18.4 of MES SSR-1991 (Part-I).						
18.6.3	SOIL/WASTE/VENT PIPES/FITTINGS/ACCESSORIES: Irrespective of whatever shown in drgs all soil/waste/vent pipes shall be of UPVC pipes conforming to IS-13592-1992 & fitting conforming to IS-14735-1999. All the pipes and fittings shall have ISI certification mark. Refer clause 18.7 and 18.27A of MES Schedule Part-I WATER TUBING, BIBTAPS, STOP VALVES, ANGLE VALVE AND SHOWER ROSE: Mild steel galvanised tubes (pipes) and fittings shall be all as specified in clause 18.4 of MES Schedule part-1, bib taps and stop valves shall be all as specified in clause 18.14 and 18.15 of MES Schedule part-1. Shower rose shall be of approved make as per sample kept in GE's office. MILD STEEL GALVANISED TUBES (PIPES) AND FITTINGS Mild steel galvanised tubes (pipes) and fittings shall bear ISI certification mark with IS-1239 (Part-I and IS-1239 Part-II) all as specified in clause 18.4.1. and 18.4.3 on page 18.4 of MES SSR-1991						

18.6.3	UPVC SOIL, WASTE AND RAINWATER (SWR) DRAINAGE PIPES				
	UPVC (SWR) pipes shall conform to IS 13592-1992 as under: Type 'A' Pipe: For use in ventilation pipe work and rain water application. Type 'B' Pipe: For use in soil and waste discharge system. The size of pipes shall be indicated. Rubber rings for pipes and fittings shall conform to IS 5382-1985.				
	UPVC (SWR) fittings shall be used as per recommendations of the manufacturer of the pipes. In case there is no IS code for the fittings, these shall generally conform to the requirements of BS 4515 DIN 19531 and DIN 19534. UPVC (SWR) pipes and fittings shall be strong, dimensionally stable and shall be free from defects.				
18.7	JOINTING: UPVC pipes and fittings shall be jointed with solvent welded routs all joints as specified in clause 18.52 of MES Schedule Part-1 & IS code.				
18.8	FIXING OF PIPES TO WALLS: UPVC pipes and fittings shall be fixed to wall with mild steel clamps as specified in of MES Schedule Part-1. However the size of MS clamps shall be such so as to accommodate the insulation.				
18.9	SHORTER LENGTH: Except for WC connections, the contractor may use pipe pieces without sockets in shorter lengths (less than one pipe length), where approved by the GE and connect these to pipe fittings with suitable collars including additional joints as specified above without extra cost to the Government.				
18.10	GULLY TRAPS: (a) Gully traps shall be of size 150mmx150mm salt glazed stone ware complying with the requirements of IS-651. These shall be set in PCC (1:4:8) type D-2 block measuring 450 x 450mm and 100mm thick. Jointing to drain pipe shall be done in cement mortar (1:1). (b) Cast iron perforated grating shall be 150mmx150mm bituminous coated and fixed as directed by Engineer-in-Charge. PCC 1:2:4 type B-1 in kerb and RCC cover slab and shall be provided all as directed by Engineer-in-Charge. Refer clause 18.28.3 of MES Schedule Part-I				
18.11	TRENCHES FOR PIPE LINES: Excavation for trenches shall be done as per the width given in clause 3.2.3 of MES Schedule Part-I and depth as required at site. The trenches shall be back filled after testing of pipes with excavated earth in layers not exceeding 250mm and surplus spoil disposed off to a distance not exceeding 50 meters. All pipe lines will be laid minimum 1.6 mtr below ground level.				
18.12	TESTING: All soil, waste and vent pipes shall be tested as specified in clause 18.67 of MES Schedule part-1.				

SIGNATURE OF CONTRACTOR

PARTICULAR SPECIFICATIONS

18.14	CAST IRON PIPES & FITTINGS:- Refer clause 18.2 of MES Schedule, Part-I.
	<u>SPUN CAST DUCTILE IRON PRESSURE PIPES & FITTINGS</u> :- Spun cast ductile iron pressure pipes shall be having ISI stamping with IS: 8329- 2000. Also D.I. fittings shall be having ISI stamping with relevant I.S.
	JOINTING OF CI PIPES/FITTINGS : - Refer Clause 18.48.2 and 18.48.3 of MES Schedule Part-I.
19	DEMOLITION/DISMANTLING : Refer section 21 of MES Schedule Part-I.
19.1	During During demolition or dismantling, every precaution shall be taken by the contractor to prevent damage to any part of the structure and also to any adjacent structures which are to be left intact. Any damage caused to the structures, due to the carelessness and negligence of the contractor shall be made good by him at his own expense.
19.2	The workmanship and other specifications of the work not covered above shall be as specified in the relevant Para of MES Schedule or otherwise if the same is not available in SSR, then the same shall be at par with the relevant latest Indian standards all as directed by the GE.

Accepting officer

1	<u>CEMENT</u>
	Contractor shall procure the cement under his own arrangement for the entire completion of the work. Provision of condition 10 of IAFW-2249 be read in conjunction with this clause. The specifications and other provisions laid down vide section 4 Para 4.3 of MES Schedule, Part-I shall be read in conjunction with the provisions contained in the subsequent paras here-in-after.
1.1	TYPE OF CEMENT: - The Cement shall be ordinary Portland cement grade 43 (IS-8112-1989) or Portland Pozzolana Cement (IS: 989-1991). However for ready mixed concrete (RMC) as specified for Reinforced cement concrete works here in after in these tender documents, only ordinary Portland of grade 43 and 53cement shall be used. Mixing of OPC & PPC shall not be allowed in a particular member of the structure or of any work. While using the PPC, following precautions/conditions shall be met with by the contractors at site:-
	(a) PPC shall meet the strength criteria of 43 Grade OPC as laid down in IS 8112-1989.
	(b) The contractor shall submit following test certificate from the manufacturer of the cement for every batch of cement:-
	 (i) The quality of fly ash is strictly as per IS 989 (Part I)-2002 (ii) Fly ash is inter-ground with clinker and not mixed with clinker. (iii) Dry fly ash is transported in closed containers and stored in silos. Only pneumatic pumping shall be used. (iv) The fly ash is received from thermal power plant using high temperature combustion above 1000° C should be used. (v) The fly ash content in PPC shall not exceed 35% to ensure consistency.
1.1.2	STRIPPING TIME : Refer provision given in clause 4.11.6.3 OF MES Schedule Part-I and clause 11.3 of IS-456. However for PPC, the stripping time shall be as under :-
	 (i) For members/items under sub-paras (a) & (b) of clause 11.3.1 of IS-456: Period specified for the members/items by using OPC under sub-paras (a) & (b) of clause 11.3.1 of IS-456 + 01 day. (ii) For members/items under sub-paras (c) to (e) of clause 11.3.1 of IS-456: Period specified for the members/items by using OPC under sub para (c) to (e) of clause 11.3.1 of IS-456 + 07 days.
1.1.3	The contractor at the time of commencement of work shall intimate to GE in writing regarding one type of cement, out of the types of cement mentioned in para 2.1.1 above, for incorporating in the work. Any change in use for type of cement thereafter shall only be allowed after the written approval of GE.
1.1.4	For repairs, maintenance and works where the entire requirement is less than 1200 bags, same can be procured from authorized dealers of the main producers. The particulars of manufacturer of cement along with the date of manufacture shall be submitted by the contractor separately for every consignment of cement procured. Each consignment of cement procured by the contractor shall be recorded in the measurement book as "Not to be abstracted" and shall be supported with authentic original purchase vouchers highlighting the makes, batch Nos., quantity etc.

Procurement

Cement shall be procured by the contractor (**both OPC & PPC**) directly from any of the producers listed below or as approved by E-in-C's Branch even after date of receipt of tender:-

(A) Approved Cement Manufacturers for MES on Regional level

(a)	Ambuja Cement Ltd.(Brand : AMBUJA)	(g)	Lafarge Cement
(b)	M/s Wonder Cement Ltd (Brand : WONDER Cement)	(h)	JK Lakshmi
			Cement Ltd
			(Brand JK
			LAKSHMI)
(c)	My Home Industries Ltd (Brand : MAHA SHAKTHI for	(j)	J K Cement
	PPC		(Brand : JK)
(d)	M/s Cement Manufacturing Company Ltd (Brand:	(k)	M/s Sanghi
	STAR)		Industries Ltd
			(Brand : SANGHI)
(e)	M/s OCL India Ltd (Brand : KONARK)	(l)	Ultra Tech
(f)	Jaypee Rewa Cement (Brand JAYPEE)		

MAIN PRODUCER OF OPC (ORDINARY PORTLAND CEMENT)

- (a) M/s J&K cement corp Kathua.
- (b) M/s Shiva Industries Kathua.
- (c) My Home Industries Ltd (Brand : MAHA)
- 1.3 | **IDENTIFICATION**: Marking of each cement bag shall be as per relevant IS code.
- 1.4 SCHEDULE OF SUPPLY:- Schedule of supply of cement shall be finalised by Contractor with the GE and shall be incorporated in CPM chart so that supply of cement is monitored in a way to avoid any delay in completion of the work. The complete requirement of cement will be worked out before making any RAR payment. Procurement of cement by the Contractor shall be completed sufficiently in advance of the date of completion. No extension of time will be considered for non-availability of cement. Every Cement godown shall be provided with two locks on each door. The key of one lock of each door shall remain with the Engineer-in-Charge or his representative and that of other lock with the Contractor or his authorised agent at site of work so that cement is removed from the godown only accordingly to the daily requirement with the knowledge of both the parties. Cement for purpose of accounting shall be on the basis of no. of bags. Minor variations in cement not more than 2% by weight of cement in a bag will be permissible for purpose of accounting of cement bags. However cement shall be incorporated in the work on actual weight basis where specified without any additional cost.
- TESTING OF CEMENT: The contractor shall submit the manufacturer's test certificate in Original along with the test sheet giving the result of each physical test as applicable and the chemical composition of the cement or authenticated copy thereof, duly signed by the manufacturer with each consignment. The Engineer-in-charge shall record these details in the Cement Acceptance Register after due verification. The GE shall also organize independent testing at random samples of every 250 MT of cement (If batch changes within 250 MT then testing of each batch has to be carried out) from the labs as indicated under special condition No. 26: TESTING OF MATERIALS as per IS: 3535-1986 (Method of Sampling Hydraulic Cement), IS: 4019 (Method of Physical test for Hydraulic Cement) and IS: 4032-1985 (Method of chemical analysis of hydraulic Cement). In case cement test result does not fall with-in the acceptable limits, respective consignment of cement shall be rejected and shall be removed by the contractor within 24 hours from the site. The cost of tests shall be borne by the contractor irrespective of status of the results and no claim shall be/to be entertained on this account and clause of IAFW-2249 and provisions in this regard in Para 1.7.3 of MES Schedule Part-I shall be deemed to be amended accordingly. Sample of cement from each consignment should be collected by the Engineer-In-Charge and GE in accordance with IS: 3535-1986.
- 1.6 STORAGE OF CEMENT: The cement shall be stored over dry platform at least 20 cm high and in such a manner as to prevent deterioration due to moisture or intrusion of foreign matters. In case of store rooms, the stack should be at least 20 cm away from floors and walls. The stacking of cement shall not be more than 10 bags high. Inspection shall be carried out once a day by rep of GE associated with the work and rep of contractor. It shall be ensured that tested and untested Cement shall be segregated and stored separately with distinct identification. Not more than three months requirement should be procured and held in stock to avoid its deterioration.

1.7	DOCUMENTATION: - The Contractor shall submit original Vouchers and original manufacturer's test certificates from the manufacturer for the total quantity of Cement supplied under each consignment to be incorporated in the work. Any consignment received at the work site shall be inspected by the GE along with relevant documents before acceptance. The Original Vouchers and the Test Certificate shall be defaced by the Engineer-in-Charge showing CA No., Year and dated signature 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, GE and the Contractor or his rep. The Accepting Officer may order Board of officers for random check of cement and verification of connected documents. The entire quantity of all type of cement shall be suitably recorded in the measurement Book (Not to be abstracted) for record purposes before incorporation in the work and shall be signed by the Engineer-in-Charge and the Contractor.
1.8	RECORD OF CONSUMPTION OF CEMENT
1.8.1	For the purpose of keeping a record of cement used, the contractor shall maintain a properly bound register serially numbered (all pages initialed against the numbering by the Engineer-In-charge) in the form approved by the Engineer-In-Charge showing daily quantity used in the work and balance in hand at the end of each day. The register shall be maintained with daily entries duly authenticated by the contractor or his authorised representative and the Engineer-in-Charge. Separate register shall be maintained for OPC & PPC indicating locations where the cement was used.
1.8.2	The register shall be kept at site in the safe custody of the contractor's rep and Engineer-In-Charge during the progress of the work and shall on demand be produced for verification to the inspecting officer. On completion of the work, the contractor shall deposit the cement register with the Engineer-In-Charge for record.
	NOTES: 1. In case of any dispute relating to the interpretations arising out of the above-referred provisions, the decision of the Accepting Officer shall be final, conclusive and binding. 2. The specifications and provisions here in before for cement shall be applicable for all works indicated in the scope of this contract. 3. In case estimated requirements of cement is less than 1200 bags, contractor may procure the cement from authorized distributors/ dealer of the approved firms. However, contractor will have to submit test certificate for the batch, issued by the firm. In this case, the independent testing will be at the option/discretion of the Garrison Engineer even if the factory test certificates are produced by the contractor.

(Signature of Contractor)

Accepting Officer

1	STEEL & IRON WORK						
1.1	Entire steel required for use in the work shall be arranged by the contractor and shall comply with the requirements of following specifications (Test certificate shall be produced as 'specified' in succeeding Paras): -						
	(i)	High strength deformed steel bars produced by TMT process.	:	Fe-500/Fe-500d/Fe-550/Fe-550d meeting all requirements of IS:1786-1985			
	(ii)	MS round Bars for reinforcement	:	IS:432 (Part-I) (1982) Grade-I for bars			
	(iii)	Structural Steel	:	Unless otherwise mentioned in Schedule 'A' structural steel shall be standard quality Fe-410-S Conforming to IS:2062/ standard quality Fe 410-W conforming to IS:2062.			
	(iv)	Hold Fasts, grills, guard bars, fencing posts, railing, gates etc. which do not constitute structural members	:	Unless otherwise mentioned in Schedule 'A' steel shall be Fe-310-O (Steel conforming to IS:1977).			
	(v)	Galvanised steel sheets (plain or corrugated)	:	IS:277-2003			
	(vi)	Welded steel wire fabric for reinforcement	:	IS: 1566.			
	(vii)	Welded steel wire fabric for other than reinforcement purpose	:	IS: 4948.			

1.2	GEN	IERAL
1.2.1	Steel shall not be issued under Schedule 'B'. Contractor shall purchase the same from any of sources mentioned here in after for entire completion of work.	
1.2.2	All finished steel shall be well and clearly rolled to the dimensions, sections, and weight specified. The finished material shall be reasonably free from cracks, surface flaws, laminations rough, jagged and imperfect edges and other harmful defects and shall be finished in a workman like manner.	
1.2.3	Tolerance in size and weight of reinforcement bars shall not be more than specified in clauses 10.17.4 & 10.17.5 of MES Schedule Part-I.	
1.2.4	STRUCTURAL STEEL: Structural steel shall be used at places as defined in Para 10.4.1 to 10.4.6 of MES Schedule Part-I.	
1.3	PRODUCERS OF STEEL	
1.3.1	PRIMARY PRODUCERS: SAIL/RASHTRIYA ISPAT NIGAM LTD./TISCO or any other primar producer approved by E-in-C's Branch.	
	(a)	M/S Jindal Steels and Power Ltd, Plot No 2, Sector-32, Gurgoan, 122001 (Haryana) (Tele: 01662 222471-84, Fax:1662 220476)
	(b)	M/S Steel Exchange India Ltd, My Home Laxminivas Apartments Ameerpet, Hyderabad-500016,A.P Tel-040-23403725
	(c)	M/S Jai Balaji Industries Ltd, 1401-1402, Nirmal Tower, 14 th Floor 26, Barakhamba Road, New Delhi-110001 (Tele: 0120-2867911, 2867915, Fax: 0120-2867917)
	(d)	M/S SPS Steel Rolling Mills Ltd.
	(e)	M/S Shyam Steel Industries Ltd.

	(f)	M/S Concast Steel & Power Ltd, Kolk	ata (Fe 500- 8 to 32mm)
	(g) M/S Jindal Steels and Power Ltd,(for Structural Steel)		
	(h) M/S SRMB Srijan Ltd, 46, Srmb House,7, Khetra Das Lane, Kolkata – 700 012 (Tele 03366006600)		
	(i)	Any other primary producer approved	I by E-in-C's Branch.
1.4	PRO	CUREMENT:	
1.4.1	REINFORCEMENT & STRUCTURAL STEEL: Reinforcement steel (TMT steel bars) shall be procured directly from primary producers only.		
1.4.2	STRUCTURAL STEEL: Structural steel shall also be procured from primary producers only. In case of non availability with primary producers, the structural steel can be procured from approved secondary producers with a reduction of 5% (Five percent) of the accepted rate of structural steel. In case the desired section of structural steel is not rolled/manufactured by primary producers, there shall be no price adjustment in use of structural steel procured from approved secondary producers.		
1.4.3	GALVANISED IRON SHEETS & FABRIC REINFORCEMENT FOR CONCRETE: These shall be procured directly from main producers/BIS marked manufacturers without any price adjustment.		
1.4.4	STEEL SECTIONS DO NOT CONSTITUTE STRUCTURAL MEMBERS: Steel sections for railings, gates, fencing, guard bars, grills, steel chowkhats, holdfasts etc. which do not constitute structural members can be procured from main producers/secondary producers/BIS marked manufacturers or their authorized dealers without any price adjustment.		
1.5	TES	<u>TING</u>	
	The contractor shall submit the manufacturers test certificate in original along with the test sheet giving the result of each mechanical test as applicable and the chemical composition of the steel or authenticated copy there of duly signed by the manufacturer with each consignment. The Engineer-in-Charge shall record these details in the Steel Acceptance Register , after due verification. The GE shall also organize independent testing of random samples of steel drawn from each and every lot from the Labs as indicated under SPECIAL CONDITION NO. 25: TESTING OF MATERIALS, with following frequency-		
	Srl No.	Nominal Size Steel for Concrete Reinforcement	Quantity
	1.	Bars size less than 10 mm	1 sample (3 specimens) for each test for every 25 tonne of steel or part thereof.
	2.	Bars size10 mm to 16 mm	1 sample (3 specimens) for each test for every 35 tonne of steel or part thereof.
	3.	Bars size over16 mm	1 sample (3 specimens) for each test for every 45 tonne of steel or part thereof.
		STRUCTURAL STEEL	
	4.	Tensile Test	1 test for every 25 tonne of steel or part thereof.
5. Bend Test 1 test for every 10 tonne of steel or part		1 test for every 10 tonne of steel or part thereof.	

NOTES:

	NOTES:
	1. For various tests acceptance criteria, tolerance etc refer to Annexure 'IV' and relevant BIS Codes.
	2. Independent testing of steel by the GE shall be optional at the discretion of the GE in case of procurement of steel from main producers and testing charges shall be governed by condition 10 A 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. Testing by the GE as per above frequency is mandatory before payment is released to the contractor or steel is incorporated in the work for steel procured from secondary producers and testing charges shall be borne by the contractor irrespective of the outcome of test results. However, tests will not be insisted upon for the steel required for guard bars, holdfasts, grills, and such other allied items. Any items 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 shall have no claim on this account. The contractor at his cost shall provide all facilities required for the testing and cost of materials consumed in the test and transportation charges etc. shall be borne by the contractor for steel procured from main producers/ secondary producers.
	3. 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 the test results.
	4. The TMT steel received from secondary producers shall be tested by GE and CWE in person, before incorporation in the work, by simple field tests and records shall be maintained. Simple field test involves sand papering the X-Section of the TMT bar and dipping the same in chemical solution to give a clearly defined annular ring of tempered steel. The contractor at his cost shall arrange facilities for such tests.
1.6	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 machine numbered receipted paid vouchers from the manufacturer for the total quantity of steel supplied under each consignment to be incorporated in the work. GE shall inspect all consignments received at the work site along with the relevant documents before acceptance. The original vouchers and the Test Certificates shall be defaced by the Engineer-in-Charge and keep on record in the office of the GE duly authenticated and with cross-reference to the Control No. recorded in the steel Acceptance Register. JE (Civil), Engineer-in-charge, GE and contractor, will sign the steel acceptance register. The entire quantity of all steel items shall also be suitably recorded in the measurement book for record purpose as 'not be abstracted', before incorporation in the work and shall be signed by the Engineer-in-Charge. The accepting officer may order a board of officers for random check of steel and verification of connected documents.
1.6.1	STEEL IN COILS ETC. Any bar of any diameter for reinforcement may be procured in round bundles or rolls and the cost of straightening the same shall be borne by the contractor. When bars are procured in bundles the lengths 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 metre) out of each consignment(s) received getting it straightened length measured and weighed in presence of contractor's accredited representative. The length and the weight(s) shall be recorded from which unit weight of bars worked out on the basis of unit weight determined as above shall form the basis for the purposes of calculating quantity of steel used/to be used in the work and taking payment of material lying at site. However if the unit weight works out more than the unit weight given in MES Schedule then unit weight given in MES Schedule shall be followed for computing weight of steel for the purpose of making payment of steel lying at site.
1.7	STORAGE
1.7.1	Steel of different sizes shall be stacked separately. For each classification of steel, separate areas shall be marked. Steel shall be marked with distinct painting.
1.7.2	All steel shall be stored in such a manner so that it is always at least 15 cm above the ground level. Steel shall be stored in a manner so as to prevent distortion and corrosion. Any section that has deteriorated and corroded or if considered defective by Engineer-in-Charge shall not be used in the work and shall be removed from site by contractor without any extra cost. It will be the responsibility of the contractor to make sure that all possible arrangements are made for the safe custody of the steel. In case of any loss of steel only contractor will be responsible and the loss will/shall be made good without any delay or claim whatsoever.

1.8	SCHEDULING OF SUPPLY
1.8.1	Schedule of supply of steel shall be finalized by contractor with GE and shall be incorporated in CPM chart so that supply of steel is monitored in a way to avoid any delay in completion of the work.
1.8.2	The complete requirement of steel of various sizes will be worked out before making any RAR payment and procurement of steel by the contractor will be completed sufficiently in advance of the date of completion. No extension of time will be considered for non-availability of any section of steel.
1.9	STEEL REINFORCEMENT:WORKMANSHIP
	Reinforcement shall be provided as shown on drawings and in the absence, provisions of IS: 456 and IS: 1786-1985 shall be followed. Refer clause 10.18 to 10.21 of MES Schedule Part-I
1.10	WELDING
1.10.1	WELDING OF REINFORCEMENT: - Refer Para 10.22 of MES Schedule, Part-I. Welding of reinforcement is not permitted. However where due to congestion of reinforcement the welding is required, then necessary permission shall be obtained by the contractor from the GE.
1.10.2	<u>WELDING: GENERAL</u> : - Welding wherever required shall be done by metal arc process in accordance with IS-816 and IS: 823, unless specifically indicated otherwise on drawings. Running welding shall be done unless otherwise specified.

(Signature of Contractor)

Accepting Officer

MAKES OF PRODUCTS TO BE INCORPORATED IN WORKS

Makes/Brand of B/R and water supply items

Ser No	Name of Item	Makes/Brands/Manufactures
1.	Chemical for anti termite treatment : Chlorpyriphos / Lindane 20% EC / Gammax - 20	M/S Osolihn, Banglore / Lindane – 20 EC/ (i) M/S Kamona Chemicals Ind. Ltd., (ii) M/S India Pesticides Ltd. Lucknow. Chlorpyriphos Emulsifiable Concentrate (Conforming to IS- 8944 (2005).
2	Fancy Bib Taps, Stop Valves and Pillar taps, Surgical Basin mixer, Shower Rose etc.	Jaguar / ESS-ESS /Parko/ MARC/PRAYAG/JAINKO
3.	Sanitary and Toilet Fittings and Appliances	Johnson / Parryware(Super fine) / Hindware/ Jaquar/ Neycer Cera (First Quality) Super quality All sanitary ware will be of 1st quality & ISI marked
4.	Stainless Steel Sink	Nirali / Neal Kanth /Jayna/M/S Anupam Industries/ Diamond/ AMCO/ Prayag/Silver line/Parryware
5.	PVC Flushing Cistern IS: 774-1984	M/S Johnson/ Prayag / Slimline (Parryware)/Hindware/Commander Dual lever type for WC
6.	Synthetic enamel Paint	(a) Asian Paint(Apcolite) (b) Shalimar Paints(Superlac Hi Gloss) (c) Godlass Nerolac paints(Nerolac full gloss) (e) Jenson & Nicholson Paints Ltd (Brolac) (f) Berger Paints (Luxol Hi Gloss).
7.	Cement Based Paint	Super Snowcem./ Duracem. / Aqualac Park
8.	Oil Bound distemper/Acrylic washable distemper	Goodlass Nerolac(super Acrylic)./ Shalimar Paints(No 1 Premium) Acrylic distemper / Jenson & Nicholson (Jensoline Acrylic Distemper/ Asian Paints/ Berger Paints (Bison Super)./ ICI India (Maxilite Acrylic Distemper).
9.	Plastic emulsion Paint	Goodlass Nerolac (All Escapes)./ Shalimar Paints(Hussain collection). / Jenson & Nicholson (Special effect). / Asian Paints (Royal). / Berger Paints (Luxol Silk Splender) ./ ICI India (Dulux Velvet touch).
10.	Exterior Emulsion Paint	ECOPLUS (Exterior Emulsion Paint) Tata Product./ Goodlass Nerolac. / Shalimar Paints,/ Jenson & Nicholson./ Asian Paints./Berger Paints./ ICI India.
11.	Mosaic /cement Flooring Tiles (ISI Marked)	GICO Tiles NITCO/Ultra
12.	PVC Tiles/Flooring (IS- 3461)	(a) Armstrong (b) Krishna Vinyl flooring
13.	Glazed Ceramic Tiles/ Non Skid Tiles	(a) Kajaria (b) Somani (c) NITCO (d) Johnson (e) Varmora (f) ORIENT
14.	Vitrified tiles (Normal /Anti skid)	(a) Kajaria (b) Somani (c) NITCO

NIT GE/ADR- 60/2024-25 SERIAL PAGE NO 67

15.	Corrugated, Semi Corrugated & Plains AC & AC life guard Sheets/ Pre painted galvolume sheets Steel Windows Ventilators (As	(a) M/S Eternit Everest Ltd Tata Dura shine/JSW or its equivalent approved (b) UP Asbestoss (c) Charminar (d) RAMCO M/S Agew Steel manufacturers Pvt Ltd Ahmedabad/ M/S AR
	per IS-1038 of 1983) & Pressed steel door/ window frames/ cupboard shutters/ Steel lockers	Industries,109 Navyug Market Ghaziabad (U.P)/ M/S Steel man Industries, Jalandar/M/S Shivam metal shapers Industries National Highway,Gangyal, Jammu /Sen Harvic, 37 Abdul Rahman street, Bombay-400063, M/S Guru Nank Engineering Works Udhampur Garhi
17.	Factory made wooden Paneled/ glazed/Wire Gauge Shutters	 (a) M/S Drone Timber Technologists(P) Ltd, New Delhi (b) M/S Pioneer Timber Products, Chandigarh (c) M/S Chandigarh Timber Product, Chandigarh (d) M/S Everest trading Corporation, Pathankot (Damtal) (e) M/S Sarab Enterprises, Damtal(HP) Kathua (J&K) (f) M/S Jagan Saw Mills Top Sherkhani, Akhnoor Road, Jammu (g) M/S K.C. Joinery Mills, Jammu. (h) M/S Jain Wood Industries, Murtal Sonepat.
18.	Aluminum Section for Door/ Window	(a) Handalco (b) Indal © Jindal
19.	Fabricators for Aluminum works	 (a) DADA Industries Jalandhar (b) Gupta Aluminum Jammu © Zoom Fabricator Janipura Jammu (d) Modern Aluminum Jammu (e) Aluplex Industrial Digiana Jammu (f) Siddhi Enterprises Gangyal
20.	Flush doors (IS Marked)	 (a) M/S Swastik Brand (b) M/S Mysore Wood Products. (c) Century Plywood (d) KITPLY Industries Ltd Shahabad Road Rampur-2449011 (e) Pioneer Timber, Chandigarh (f) Kutty Flush Door Pvt Ltd.
21.	Laminated Sheets	(a) Sungloss (b) Novateak Super Kitlam.
22.	Prelaminated particle board three layer Exterior Grade (ISI marked)	(a) Greenlam, from Greenply (b) Duro Board, Duroteck, Duromarine
23.	Plywood for general purposes BWP grade (ISI Marked)	(a) Kit ply (b) Mysore chip board (c) Century Plywood (d) Doroboard from Sharada Plywood
24.	Integral water proofing compound (Powder/ liquid) ISI marked IS 2645 : 1975)	(a) Impermo (b) Pidilite (c) Roff Chemicals (d) SIKA (e) M/S Snowcem India Pvt Ltd. (f) Plastocrete 'N' (g) IWL India Ltd. (h) Hydro Tech Ltd (j) DWI Derma Bir water proofing India Ltd (k) Fosrock (I) Chowksey Chemicals

NIT GE/ADR- 60/2024-25 Serial Page No 68

25.	Construction Chemical	(a) Chokesy chemicals (b) Fairmate (c) Pidilite (d) CIBA (e) Raft construction chemicals (f) Denson (g) Fosroc Chemicals (I) Ltd. (h) SAMROCK (j) MC Banchime Boruloay (k) CICO (l) Sunanda Specialities Pvt. Ltd.
26.	Plain/Pinhead/ Frosted glass	(a) Hindustan Piklington Glass Works(b) Saint Globin (c) Modi Float(d) Triveni Float Glass
27.	Looking Mirror	Saint Globin/Modiguard/ Modi Float/ Swastic/ Atul Glass Industries/ Prayag
28.	SGSW Pipe	(a) Perfect Jabalpur (b) Stone ware pipe Ltd. Chennai (c) Mysore Stone ware (d) TFC, Bhasker
29.	Putty Oil/ wall care putty	(a) Gold Mohar Birla/JK/WEBER/(SAINT GOBAIN) (b) M/S Shalimar Hardware (c) Burger (d) J&N
30.	PVC (Polythene) Rotational moulded) Insulated water Storage Tanks (ISI) Marked IS- 12701)	(a) Sintex (b) Polywell (c) JS Polyplast (d) Rotex (e) Polycon
31.	False Ceiling	(a) Anchor Ceiling Tiles (b) Gypboard (c) Eternit Everest (d) Armstrong (e) Hilux Calcium Silicate Boards (RAMCO)
32.	CI (Centrifugally cast) pipes (ISI Marked)	(a) NICO Jayaswals Neco Ltd. Nagpur(b) Cial, Corporate Ispat Alloys Ltd(c) Ashutosh Iron Foundary
33.	PVC rainwater/ Sewerage pipe (ISI Marked)	(a) Finolex (b) Supreme (c) Kisan (d) Prince
34	GI PIPES& MS PIPES	TATA, SWASTIK,JINDAL, PRAKASH,SURYA
35	SLIDING DOOR BOLT	AGGARWAL/ SHREE KRISHNA
36	GI FITTINGS	NVR/SVW/MAC/R
37	BALL VALVE	ZOLOTO/ SANT/ RAPIDCOOL/ NVR
38	HDPEWATER STORAGE TANKS	SINTEX/GANGA/POLYCON/STAR
39	Interlocking Tiles/ Exterior tiles/ paver blocks	Modern Hollow Block Udhampur / Hindustan Tiles / M/s Everest Cement Product SS TILES Ruchi Industries Udhampur

GENERAL CONDITIONS OF CONTRACTS (IAFW-2249 1989 PRINT) FOR MEASUREABLE CONTRACT (IAFW-1779A)

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

It is hereby further agreed and declared by me/us that the **GENERAL CONDITIONS OF CONTRACTS** (IAFW-2249 1989 PRINT) including condition 70 thereof pertaining to settlement of disputes by arbitration containing 40 pages (Serial page No. 69 to 108) with errata 1 to 20 and amendment No 1 to 49 form part of these documents.

Accepting Officer

Signature of contractor

SERIAL PAGE NO 109 to 117

SCHEDULE OF MINIMUM FAIR WAGES

It is hereby agreed that the "Schedule of Minimum fair wages" (SMFW) as published vide Government of India (Ministry of Labour) Notification vide their letter No S.O.113(E) .dated 28th Jan 2002 comprising 9 pages form part of these tender documents.

My/Our signature here under amount to my/our having signed the aforesaid documents forming part of this tender.

Accepting Officer

Signature of contractor

Note:- Schedule of Minimum Fair Wages referred to above is available for reference in the office of HQ Chief Engineer Udhampur Zone, C/O 56 APO