

**NAME OF WORK : CWE/PKT/T-23/2018-19: SPECIAL REPAIR TO BLDG NO NP-30 (01 TO 08)
OR MD ACCN AT ABROL NAGAR UNDER GE (WEST) PATHANKOT.**

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NOTE: - Documents mentioned at Srl No 7 and 8 above are not attached with the tender documents, which can be seen in any of CWE/GE. These documents shall, however, form part of contract agreement and be deemed to have been read by the contractor.

Signature of contractor
Dated:

DCWE (Contracts)
For Accepting Officer

REGISTERED

Military Engineer Services
HQ Commander Works' Engineers
Pathankot- 145001

T-8154/23/ 04 /E8

01 Oct 2018

Shri/M/S _____

NAME OF WORK : SPECIAL REPAIR TO BLDG NO NP-30 (01 TO 08) OR MD ACCN AT ABROL NAGAR UNDER GE (WEST) PATHANKOT.

Dear Sir(s),

1. Tender documents for the work mentioned above are forwarded herewith. The tender will be received by CWE Pathankot (Punjab) –145001 at the date and time given in the critical dates “eprocuremes.gov.in” portal.

2. Your attention is invited to ‘Instructions to Tenderers’, on “eprocuremes.gov.in” portal, which shall be strictly complied with.

3. The salient points/instructions to the tender documents are highlighted in the Annexure to this letter attached herewith in addition to the following :-

(a) TENDERS ISSUED TO CONTRACTORS WHO ARE NOT ENLISTED WITH THE MES/WHO ARE HAVE NOT EXECUTED THE STANDING SECURITY BOND.

(i) The amount of “Earnest Money“ for the work to be furnished alongwith the tender. Scanned copies of Earnest Money to be forwarded in the e-bid.

(ii) The amount of ‘ individual security deposit ‘ for the work, in case the tender is accepted indicate that the ‘Individual Security deposit’ would be the amount calculated with reference to the tendered cost, as per the scale laid down by the MES for calculation of Earnest Money enhanced by 25% subject to a maximum of Rs 18,75,000/-

(iii) Non submission of earnest money will render the tender as non bonafide and consequently liable to be ignored.

(b) TENDERS ISSUED TO CONTRACTORS WHO ARE ENLISTED AND WHO HAVE LODGED THE SS BOND BUT FOR A LOWER CLASS.

The amount of ‘Additional Security Deposit’ for the work in case the tender is accepted indicate that the amount of ‘Additional Security Deposit’ would be the difference between the ‘Individual Security Deposit’ calculated with reference to TENDERED COST, as per the scale laid down by MES for calculation of EARNEST MONEY enhanced by 25% (subject to maximum of Rs 18,75,000/- and the“ Stranding Deposit” lodged.

Yours faithfully,

Signature of Contractor
Dated :

DCWE (Contracts)
For Accepting Officer.

ANNEXURE TO FORWARDING LETTER**1. Earnest money**

(i) Please refer Para 5 sub Para 2 of the notice of tender including Appendix 'A' to notice of tender and amendments thereto. The tenderers who have not executed the Standing Security Bond or are not borne on the MES approved list of contractors are requested to submit with their tender an earnest money as intimated in the NIT and given on "eprocuremes.gov.in" portal.

(ii) Earnest money shall be in the form of deposit at call receipt from a Scheduled Bank in favour of **GE (West) Pathankot** or receipted treasury challan amount being credited to the revenue deposit of GE. Earnest money in form other than those mentioned above such as cheques, Bank Guarantee etc, will not be acceptable.

2. Individual Security Deposit : In case tender of contractor who has not executed Standing Security Bond (as per 1 (i) above), is accepted the Individual Deposit would be the amount calculated with reference to the tendered cost as per the scale laid down by the MES for calculation of earnest money enhanced by 25%.

3. Additional Security Deposit : In case of the contractor who is enlisted and has lodged Standing Security Deposit and executed SS Bond with Chief Engineer, Western command, C/O 56 APO but for a class lower than the appropriate class indicated in the notice of tender and his tender is accepted, Additional Security Deposit will be the difference between the Individual Security Deposit calculated with reference to the Tendered cost as indicated in Sub Para 2 above and the Standing Security Deposit lodged.

4. Contractors enlisted in MES formation but other than Chief Engineer, Western Command and who have deposited Standing Security and have executed Standing Security Bond may tender without depositing earnest money with the tender and if the Accepting Officer decides to accept the tender, such tenderer will be required to lodge security deposit as notified by Accepting Officer before acceptance of tender or otherwise the same shall be recovered from 1st RAR payable to the contractor.

5. GENERAL INSTRUCTIONS FOR COMPLIANCE :-

(i) The tender will only be accepted in the electronic form. All bids to be submitted in "eprocuremes.gov.in" portal. Documents should be scanned and forwarded in pdf form or xls form as indicated.

(ii) Tenders shall be forwarded on eprocuremes.gov.in portal on or before the bid closing date mentioned in the tender. No physical form of the tender will be accepted.

(iii) All bids will be digitally signed by the contractor.

(iv) Power of Attorney: Attorney in favour of the signatory of the tender documents incorporating therein in stipulation that the signatory has the power to bind such other persons of firm, as the case may be in all matters pertaining to this contract including arbitration clause, shall be furnished with the tender as follows :-

(a) Proprietorship firm : In case the signatory himself is sole proprietor, an affidavit on stamp paper of appropriate value to this effect and in the case of signatory being other than the proprietor, a power of attorney in his favour by the proprietor shall be furnished on stamp paper of appropriate value. Scanned copy of the same in pdf form to be forwarded along with the bid.

(b) Partnership firm : In case of partnership concern, power of attorney in favour of the signatory by all partners shall be furnished on stamp paper of appropriate value together with a copy of the constitution of the firm shall be furnished. Scanned copy of the same in pdf form to be forwarded along with the bid.

(c) Limited firm : In case of Limited concern, power of attorney in favour of signatory in accordance with constitution of the firm on stamp paper of appropriate value together with copy of the constitution of the firm shall be furnished. Scanned copy of the same in pdf form to be forwarded along with the bid.

(v) Bids to be submitted online well in time.

ANNEXURE TO FORWARDING LETTER (CONTD...)

(vi) The contractor shall employ only Indian Nationals after verifying their antecedents and loyalty. Attention is also drawn to special condition 3 and also conditions 24 and 25 of IAFW-2249 (General conditions of contracts).

(vii) Tenders will be opened by two bid openers.

(viii) The tenderer shall quote his rates on the BOQ file only. No alteration to the format will be accepted or the bid will be disqualified.

(ix) In case the tenderer has to revise/modify the rates quoted in the Schedule 'A' and/or General Summary, he can do so only in the Schedule 'A' / General Summary through "eprocuremes.gov.in" site only.

(x) In case a tenderer has to revise his offer, he can do so through the eprocuremes.gov.in site only before the bid closing time and date.

(xi) In the event of lowest tenderer revoking his offer or revising his rates upwards/offering voluntary reduction, after opening of the tenders, the Earnest Money deposited by him shall be forfeited. In case of MES enlisted contractors, the amount equal to the Earnest Money stipulated in the Notice of Tender, shall be notified to the tenderer for depositing the amount through MRO. Issue of tender to such contractors shall remain suspended till the aforesaid amount equal to the earnest money is deposited in Govt Treasury. In addition, such tenderer and his related firm shall not be issued the tender in second call or subsequent calls. Reduction offered by the tenderer on freak high rates referred to the tenderer for review shall not be treated as voluntary reduction.

6. Time and Progress chart.

(a) The tenderers are expected to be fully conversant with the CPM techniques and employ technical staff who can use this technique in planning of execution of work on ground.

(b) The tenderer's attention is particularly drawn to the provisions with regard to preparation of the detailed network and the Time Schedule for the work and liability of employing sufficient resources to adhere to schedule. Inability on the part of the tenderer in using the technique will be taken as his technical inefficiency and may affect his class of enlistment and prospects of receiving invitations to submit tenders for future works.

7. The General conditions of contract IAFW-2249 in the printed form including amendments/errata thereto form part of the tender documents but have not been sent alongwith the tender. These documents can be gone through by the tenderer at any MES office during office hours. The tenderer will be deemed to have full knowledge thereof and no claim will be admitted on account of any misunderstanding in complying with this contractual requirement.

8. The department may issue amendments/errata to the tender documents before due date of submission of tenders. The tenderer is required to read the tender documents in conjunction with the amendments, if any, issued by the department. The tenderer is not supposed to incorporate the amendments/ erratas in the body of tender documents of his own either in ink or in pencil. In case, the amendments/erratas are incorporated by the tenderer in body of tender, they shall not be considered and the amendments/erratas to the tender documents as issued by the department shall only hold good.

9. These instructions shall form part of the contract documents and shall be signed and returned along with the tender documents on acceptance of the bid. Accepted firm to submit hard copies of all documents duly signed by the authorised person.

(Signature of the Contractor)

Dated :

DCWE (Contracts)

For Accepting Officer

MILITARY ENGINEER SERVICES
NOTICE OF TENDER

1. A tender is invited for the work as mentioned in Appendix 'A' to this Notice of tender.
2. The work is estimated to cost as indicated in aforesaid Appendix 'A'. This estimated cost, however, is not a guarantee and is merely given as a rough guide, and if the work costs more or less, the tenderer will have no claim on that account.
3. Sch 'A' has not been prepriced by MES and therefore tenders are required to work out their own rate for each item of Sch 'A' based on description of items of Sch 'A', drawings, Particular Specifications & Special Conditions etc. and quote the same in rate columns both in figures and words in the BOQ as per the procedure given in the website "eprocuremes.gov.in".
 - 3.1 Method of measurement for all items list in Sch 'A' shall be as given in MES SSR unless specifically stated otherwise here-in- after for any items of work.
4. The work is to be completed within the period as indicated in aforesaid Appendix 'A' (in accordance with the phasing, if any, indicated in the tender) from the date of handing over of the site, which will be on or about two weeks after the date of acceptance of the tender.
5. Normally contractors, whose names are on the MES approved list for the area in which the work lies and within whose financial category, the estimated amount would fall, may tender. In case where the amount is in excess of the financial category 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.
6. Contractors whose names are borne on the MES approved list of any other MES formations and who have deposited Standing Security and have executed Standing Security Bond may also tender without depositing Earnest Money alongwith the tenders and if the Accepting Officer proposes to accept the tender, such tenderer would be required to deposit "Security Deposit" as notified by the Accepting Office, before acceptance of tender. Not more than one tender shall be submitted by one contractor or one firm of contractor.
7. Under no circumstances will a father and his son(s) or other close relations who have 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 parities liable for rejection.
8. The Commander Works Engineer Pathankot will be the "Accepting Officer" here-in-after referred to as such for the purpose of this contract.
9. Applications for the tender forms must be submitted to the Commander Works Engineer Pathankot, so as to reach this office on or before the date as mentioned in aforesaid Appendix 'A'. Invitation for application for issue of tender does not constitute any guarantee for issue of tender to any applicant, even to enlisted contractors of appropriate class. Issue of tender will be decided by the Accepting Officer based on the past track records, financial position and experience of similar works executed by the applicant/contractor. The Accepting Officer shall consider the applications received upto the date of receipt of applications/extended date of receipt of application for issue of tender. The applicant/contractor will be informed regarding non-issue of tender without assigning reasons. The applicant/contractor, if he so desires, may appeal to the next higher Engineer authority with copy to the Accepting Officer. No appeal/representation shall be entertained in respect of application for issue of tenders as received after due date of receipt of applications/extended date of receipt of application.
10. The decision of the next higher Engineer Authority shall be final. The applicant/contractor shall not entitled for any compensation whatsoever for rejection of his application.
11. Tender form and conditions of contract and other necessary documents (together with addressed envelopes to be used for the return of tender forms and documents) will be issued on or after the date as mentioned in the aforesaid Appendix 'A'. Appropriate Standing Security amount for this work shall be as deposited by contractors enlisted in the area in which the work lies for category and class mentioned in aforesaid Appendix 'A')

NOTICE OF TENDER (CONTD.....)

12. In the case of contractor who has not executed the 'Standing Security Bond' the tender shall be accompanied by "Earnest Money" of the amount referred to in the aforesaid Appendix 'A' in the form of deposit at call receipt issued in favour of GE mentioned in the aforesaid Appendix 'A' by a Scheduled Bank or a receipted Treasury Challan, the amount being credited to the revenue deposit of the GE. 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 alongwith the tender, but if the Accepting Officer decides to accept the tender, such tenderer shall lodge security deposit, as notified by the Accepting Offr, with the Controller of Def Accounts in the prescribed form before acceptance of tender.

13. A contractor who has executed the Standing Security Bond but not for appropriate category as mentioned above, shall lodge with the Accepting Officer an Additional Security Deposit as notified by the Accepting Officer within thirty days of the receipt by him of notification of acceptance the tender, failing which the sum will be recovered from first RAR/payment. However, in cases where any payment is made to the contractor within thirty days of receipt by him of notification of acceptance of tender, the amount of Additional Security Deposit shall be recovered from such payment.

14. The GE will return the Earnest Money, wherever applicable, to all unsuccessful tenderers by endorsing an authority on the deposit receipt of its refund on production by tenderer a certificate of the Accepting Officer that a bonafide tender (vide condition here-in-after) was received and all documents were returned. The GE will either return the Earnest Money to the successful tenderer, by endorsing the authority on the deposit receipt for its refund, on receipt of an appropriate amount of Security Deposit, or will retain the same on account of Security Deposit, if such a transaction is feasible.

15. Copies of the drawings and other documents pertaining to the work (signed for the purpose of identification by the Accepting Officer or his accredited representatives) and samples of materials and stores to be supplied by the contractor will be open for inspection by the tenderer in office of CWE/GE as mentioned in the aforesaid Appendix 'A' during working hours.

16. The tenderers are advised to visit site by making prior appointment with the GE by giving sufficient time.

17. The tenderers shall be deemed to have full knowledge of all relevant documents, samples, site etc whether he has inspected them or not.

18. Any tender which proposes any alteration to any of the conditions laid down or which proposes any other condition of any description whatsoever, is liable to be rejected.

19. The submission of tender by the tenderer implies that he has read this Notice and the Conditions Of Contract and has made himself aware of the scope and specifications of the work to be done, the conditions and rates at which stores, tools and plants etc. will be issued to him, local conditions and other factors having bearing on the execution of the work.

20. Tenderers must be in possession of a copy of the MES Schedule of Rates (Part-I and Part-II) including errata/amendments thereto of relevant Zone in which this work lies.

21. Tenderers must be very careful to submit a bonafide tender. A bonafide tender must satisfy each and every condition laid down in this notice. Refer the help for contractors in "eprocurerem.gov.in".

22. The Accepting Officer reserves his right to accept a tender submitted by a Public Sector Undertaking, 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 tenderers whose tender may be rejected on account of the said policy.

23. The Accepting Officer does not bind himself to accept the lowest or any tender or to give reasons for not doing so. Alteration to any of the conditions laid down or which proposes any other condition of any description whatsoever, is liable to be rejected.

24. In the event of lowest tenderer revoking his offer or revising his rates upward (which will be treated as revocation of offer), after opening of tenders, the earnest money deposited by him shall be forfeited. In case of MES enlisted contractors, the amount equal to the earnest money stipulated in the notice of tender, shall be notified to the tenderer 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. In addition, such tenderer and his related firm shall not be issued the tender in 2nd call or subsequent calls. Issue of further tenders to such tenderer shall also remain suspended till the aforesaid Earnest money is deposited in the Govt Treasury.

NOTICE OF TENDER (CONTD.....)

25. Tenders will be received by the Commander Works Engineer Pathankot, on the date and time indicated in the aforesaid appendix 'A'.

26. The tenderer is supposed to check, if any revised BOQ has been uploaded and quote in revised BOQ only. Thus uploading bid in pre-revised BOQ shall be considered as wilful negligence by the bidder and his quotation shall be treated as 'Non-bonafied'.

27. This notice of tender shall form part of the Contract.

(Signature of the Contractor)
Dated :

DCWE (Contracts)
For Accepting Officer

APPENDIX 'A' TO NOTICE INVITING TENDER (NIT)

1. Name of work **SPECIAL REPAIR TO BLDG NO NP-30 (01 TO 08) OR MD ACCN AT ABROL NAGAR UNDER GE (WEST) PATHANKOT..**
2. Estimated Cost Rs. 28.50 Lakhs
3. Period of completion 06 Months
4. Cost of tender documents **Rs 500/-** in the shape of DD/bankers cheque from any scheduled bank in favour of **GE (West) Pathankot** payable at **Pathankot**.
5. Website/portal address www.defproc.gov.in and www.mes.gov.in
6. Type of contract The tender shall be based on (IAFW- 1779-A) and General Conditions of Contract (IAFW-2249) with BOQ (list of items of work) to be priced by tenderer. The Tenderer are required to quote their rates against each items of BOQ

7. **Information & details:**

(a) Publication date of tender documents	01 Oct 2018 at 1700 hrs
(b) Starting date & time of tender document downloading	01 Oct 2018 at 1800 hrs
(c) Clarification start date & time.	NA
(d) Clarification end date & time.	NA
(e) Pre-bid meeting date & time	NA
(f) Starting date and time of bid submission (Cover No 1&2)	15 Oct 2018 at 0900 hrs
(g) Bid document download end date & time.	22 Oct 2018 at 1700 hrs
(h) Closing date and time of bid submission (Cover No 1&2)	22 Oct 2018 at 1800 hrs
(j) Date and time of bid opening (Cover No 1)	24 Oct 2018 at 1200 hrs
(k) Date and time of bid opening (Cover No 2)	Will be intimated on line after completion of evaluation of tech bid/application (Cover No 1)

8 **Eligibility criteria :-**

- (A) For MES enlisted Contractors All contractors enlisted with MES in **class 'D' and above & Category (a) (i)** shall be considered qualified provided they do not carry adverse remarks in WLR of competent Engineer authority.
- (B) For Other Contractors (a) The firms not enlisted with MES shall meet the enlistment criteria of **'D' class MES contractors & Category a (i)** i.e with regard to having satisfactorily completed requisite value work. Annual turnover, solvency, working capital, immovable property/ fixed assets, T&P, Engineering establishment, no recovery outstanding in Govt department, Police verification/ passport etc. Enlistment criteria may be seen in Para 1.4 of section-I of Part- I of **MES Manual on contracts. 2007 (Reprint 2012)** as available in all MES formations.
(b) These firms shall also submit copy of police verification from 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.
(c) They should not carry adverse remarks in WLR/or any other similar report of any authority.
- (C) For all contractors Contractor will not be allowed to execute the works by subletting or through power of attorney holder on his behalf to a third party/another firm except sons/daughters of proprietor/partner/Director and Firm's own employees, Director, Project Manager. This shall be subject to certain conditions which will be prescribed in the NOT forming part of the tender documents.

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

9	Tender issuing and Accepting Officer	HQ Commander Works Engineers, Pathankot, Punjab -145001
10.	Executing agency	GE (West) Pathankot
11.	Earnest Money	Rs 57,000.00 in favour of GE (West) Pathankot payable at Pathankot

Notes :-

- (a) The contractors enlisted up to one class below the eligible class may also apply/bid. Application/ bids from one class below eligible class applicants may be considered in the event of inadequate response/bids from the applications of eligible class.
- (i) Normally the application from contractor enlisted in eligible class only shall be considered.
- (ii) However, contractors enlisted in one class/two class below eligible class may also apply/bid. Applications from one class below eligible class contractors may be considered in the event of inadequate response / bids from the applicants of eligible class provided their past performance has been satisfactory and in the opinion of Accepting Officer they are considered capable of handling this work.
- (iii) Applications from two class below eligible class contractors may be considered in the event of inadequate response from the applicants of eligible class and one class below eligible class provided their past performance has been satisfactory and in the opinion of Accepting Officer are considered capable of handling work.
- (iv) To infuse better competition, Accepting Officer may consider applicants from one class below eligible contractors even in the event of sufficient applications from eligible class contractors provided such contractor(s) strictly meet the criteria laid down in Section 3.5.5.2(b)(ii) of MES Manual on Contracts, 2007 (Reprint 2012).
- (v) Contractors enlisted in one class/two class below eligible class shall submit the documents such as details of three highest value similar nature works executed during last 03 years, affidavit for possession of movable and immovable properties etc. In the manner prescribed for unenlisted contractors here-in-before in support of their capability to execute the subject work, to enable Accepting Officer take a considered decision.
- (b) (i) Applications/bids not accompanied by scanned copies of requisite DD/bankers cheque toward cost of tender and earnest money (as applicable) shall not be considered for validation of 'T' bid and their financial bids will not be open.
- (ii) Tenders/bidders to note that they should ensure that their original DDs and earnest money (as applicable) are received within five days of bids submission end date.
- (iii) In case of applications/bids from enlisted contractors of MES , where scanned copy of requisite DD/Bankers cheque towards cost of tender has been uploaded but physical copies are not received by the stipulated date, financial bids will be opened. However non-submission of physical copies of cost of tender shall be considered as willful negligence of the bidder with ulterior motives and such bidder shall be banned from bidding for a period of six months commencing from the date of opening of financial bid.
- (iv) In case of application/bids from un-enlisted contractors, where scanned copies of required DD/Bankers cheque towards cost of tender has been uploaded but physical copies are not received by the stipulated date , financial bids will not be opened . Name of such contractors along with complete address shall be circulated for not opening of their bids for a period of six months commencing from the date of opening of finance bid
- (v) In case of application/bids (enlisted contractor as well as un-enlisted contractor) when scanned copies of requisite earnest money (as applicable) were uploaded but the same are not received in physical from within stipulated time such bids shall not qualify for opening of finance bids.
- (c) **Contractors enlisted with MES will uploaded following documents for checking eligibility :-**
- (i) Application for bid in firm's letter head
 - (ii) Enlistment Letter
 - (iii) Scanned copy of DD of cost of tender
 - (iv) Scanned copy of EPF Number and GST Number

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

- (d) Contractors not enlisted with MES will be required to upload necessary documents to prove their eligibility for enlistment in eligible class & category of work, including affidavit for no recovery outstanding. List of documents required for enlistment in MES has been given in Para 1.5 of Section-I of Part-I of MES Manual on contracts 2007(reprint 2012). Following documents shall also be uploaded amongst others.
- (i) Details of three highest valued similar natures of works executed during last five years, financial year-wise in tubular form giving name of works. Accepting officer's details, viz, address, telephone, Fax no, E-mail, Id etc, date of acceptance of tender and actual date of completion. This shall be duly signed by proprietor/all partner/authorized Directors of Pvt. /Public Ltd., as applicable. It should indicate whether extension was granted or compensation was levied. Attested copy of acceptance letter and completion certificate shall be enclosed of each work. In case performance report has been given by the client same shall also be submitted duly attested.
- (ii) Solvency Certificate and working capital certificate issued by scheduled bank.
- (iii) Annual turnover certificate for last 2 years issued by chartered accountant along with relevant pages of audited balance sheets in support thereof.
- (iv) Affidavits for possession of moveable & immovable properties by proprietor/partner owing the immovable property along with valuation certificate from regd. valuer in support of moveable & immovable properties. In case of limited company, the immovable property is reqd to be in the name of company.
- (v) In additional the un-enlisted contractors shall also furnish affidavit on Non Judicial stamp paper in the form of hard copy declaring their turnover for last 2 (two years)
- (vi) Scanned copy of DD of cost of tender and earnest money.
- (vii) Scanned copy of EPF Number and GST Number
- (e) Court of the place from where tender has been issued shall alone have jurisdiction to decide any dispute out of or in respect of this tender. After acceptance of tender, Condition 72-Jurisdiction of Courts of IAFW-2249 shall be applicable.
- (f) In case of rejection of technical/ prequalification bid, contractor may appeal to next higher Engineer authority i.e. **Chief Engineer Pathankot Zone, Pathankot** on email- **pathankotengrs@gmail.com** against rejection, whose decision shall be final and binding. However contractor/bidder shall not be entitled to any compensation whatsoever for rejection of technical /prequalification bid.

Signature of Contractor

(M C Agnihotri)
EE (SG) (QS&C)
DCWE (Contracts)
For Accepting Officer

T-8154/T-23/ 03 /E8

Military Engineer Services
HQ Commander Works Engineer
Pathankot-145001
01 Oct 2018

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

TENDER AND ITEM RATE CONTRACT FOR WORKS BY MEASUREMENT CONTRACT (TO BE USED AND READ IN CONJUNCTION WITH GENERAL CONDITIONS OF CONTRACT IAFW-2249 (1989 PRINT))

MILITARY ENGINEER SERVICES

Military Engineer Services
HQ Commander Works' Engineers
Pathankot-145001

T-8154/23/ 04 /E8

01 Oct 2018

TENDER FOR : SPECIAL REPAIR TO BLDG NO NP-30 (01 TO 08) OR MD ACCN AT ABROL NAGAR UNDER GE (WEST) PATHANKOT.

1. Shri/M/S _____ of _____ is/are hereby authorised to tender for the above mentioned work. The tender is to be uploaded in the eprocuremes.gov.in site before the date and time given in the "eprocuremes.gov.in" portal.
2. Any correspondence concerning this tender should be addressed quoting the reference as "Tender No CWE/PKT/T-23/2018-19" to office of Commander Works Engineers Pathankot (Pb) 145001.
3. THE PRESIDENT OF INDIA DOES NOT BIND HIMSELF TO ACCEPT THE LOWEST TENDER OR ANY OTHER TENDER.

Signature of the Contractor
Date :

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

SCHEDULE 'A' (NOTES)**NOTES** : -

1. The entire work under this contract shall be completed within **06 (Six)** Months from the date of handing over of site. Sites for all items of work shall be handed over simultaneously.
2. For Schedule of items refer BOQ sheet in Excel format and schedule of credit.
3. The quantities shown in schedule (BOQ sheet) in column 3 of Sch 'A' are approximate and are inserted as a guide only. They do not constitute any guarantee of the ultimate quantities which will be ordered on the contractor. They shall not however be varied beyond the limit laid down in condition 7 of IAFW- 2249 (General conditions of contract).
4. The contractor shall enter the unit rate in column 5 of BOQ. The unit rates in figure shall be entered only.
5. Unless otherwise specifically stated in the description of the items, the unit rates quoted in Col 6 shall be deemed to include for all labour and materials complete required for executing the respective items of works.
6. (a) The unit rate quoted by the tenderer against respective items of schedule 'A' shall be deemed to include minor details of construction of work, not specifically mentioned in description of schedule 'A' items and/or in the particular specifications/ drawing and which are fairly and obviously intended/essential to the execution of work in a workmen like manner and sound constructions.
(b) In case of difference of opinion between the contractor and the GE as to, whether or not certain items of work constitute "Minor constructions details" which is deemed to have been included in the contractor's quoted rates, the decision of the Accepting Officer shall be final, conclusive and binding.
7. The description of Schedule 'A' items in BOQ sheet (Excel format) shall be read in conjunction with particular specifications.
8. The payment shall be made for net measured quantities. The method of measurement shall be as laid down in SSR-2009 (Part-I) specifications and (SSR-2010 Part-II) Rates.
9. RM means Running Metre, cum means cubic metre, sqm means square metre, cm means centimetre, mm means millimetre, CM means cement mortar & kg means kilogram and Qtl means Quintal, M&L means Materials and Labour and S&F means Supply and fixing.
10. Rates quoted under Col 5 are complete for 'Material & Labour' or 'Supply & Fixing' unless otherwise specified.
11. Contractor's attention is invited to the method of measurements and preambles in "MES Schedule of Rates Part I 2009 & Part II 2010.
12. The rates quoted by the contractor shall be deemed to be inclusive of all taxes including GST on materials and GST on Works Contracts. Turnover Tax, Goods and service tax, Labour Welfare cess/tax (etc) duties, Royalties, Octroi & other levies payable under the respective Statutes. No reimbursement/refund for variation in rates of taxes, duties, Royalties, Octroi & other levies, and/or imposition/abolition of any/existing taxes, duties, Royalties, Octroi & other levies shall be made.
13. SALES ACT: It is incumbent on the part of tenderers to get themselves registered with Sales Tax department and shall hold sale tax clearance certificate in form XI. Irrespective of whether any tenderer has got his firm registered or not for execution of the work contract shall be deducted at sources (the sum equivalent to percentage of the payment being made to the contractor as per policy in vogue.
14. All the materials to be incorporated in the work shall be got tested as per the latest relevant IS codes and the cost of the same shall be deemed to be included in the unit rates quoted.
15. Any item of SSR Part II-2010, not available in the Schedule 'A', and if required at site, shall be measured and paid at SSR rates at par.

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

16. The rates of all Reinforced Cement Concrete (RCC) and Plain Cement Concrete (PCC) items shall be deemed to include the cost of form work and other accessories required to execute the item. The tenderer shall quote the rates of RCC/PCC items taking into consideration the cost of centering, shuttering including strutting, propping etc complete. Nothing extra shall be payable on this account.

17. In case any repeated items in BOQ, lowest rate quoted by tenderer shall be considered for payment purpose.

18. Irrespective whatever written elsewhere in the tender documents the fine aggregate, coarse aggregate, bricks and other materials shall be procured only from the legal sources.

19. Wherever in Schedule 'A' anywhere else in the tender document, it is mentioned "or equivalent" in the makes; the equivalent makes shall only be provided only in case the makes mentioned does not manufacture the respective item.

20. The payments due to the contractor shall only be made by e-payments. The contractor shall provide all the necessary details including bank account number, IFC code etc to the GE. If, however, the mode of payment is changed, no claim on this account shall be entertained.

21. GOODS AND SERVICE TAX (GST) ON WORKS CONTRACT

21.1 In terms of GOI Ministry of Finance, Goods and Service Tax (GST) has become leviable w.e.f. 01 Jul 2017 on works contracts. The liability of Goods and Service Tax (GST) rests with the contractor and accordingly rates quoted are deemed to be included in this aspect. The contractors are advised to take this fact in mind while quoting tender. Nothing extra whatsoever on this account is admissible.

21.2 The rates quoted by the contractor shall be deemed to be inclusive of all taxes including Sale Tax/VAT/GST on materials Sales Tax/VAT/GST on Works Contracts. Turnover Tax, Service Tax/ Goods and Service Tax, Labour Welfare cess/tax etc) duties, Royalties, Octroi & other levies payable under the respective Statutes. No reimbursement/refund for variation in rates of taxes, duties, Royalties, Octroi & other levies, and/or imposition/abolition of any/existing taxes, duties, Royalties, Octroi & other levies shall be made.

21.3 It is mandatory for the contractors to upload their Goods and Service Tax registration number along with the 'T' bid. This will be one of the criteria for qualifying in 'T' bid. The contractors, who do not upload Goods and Service Tax registration number shall be disqualified in 'T' bid evaluation and his finance bid shall not be opened.

21.4. Notwithstanding above, it shall also be mandatory that contractor will intimate their Goods and Service Tax Number to GE before payment is released to them **failing which no any payment shall be released on a/c of RAR/Final Bill**. No any claim whatsoever on this account shall be entertained.

22. All debris & rubbish shall be removed by the Contractor from the site of works and disposed off outside Defence land as directed by Engineer-in-Charge. The site shall be left clean and tidy before completion. Contractor's quoted rates shall be deemed to include the necessary cost in this regard.

23. The contractor is required to employ a supervisor over and above manpower stipulated in BOQ having diploma with minimum two years experience who will work as interface between the users, MES staff and contractor's personnel deployed to carry out said maintenance services as mentioned in Sch 'A' BOQ.

SCHEDULE `A` (NOTES) (CONTD...)

24. **Statutory Provisions:** There are large number of statutory provisions which needs to be followed strictly for works contracts and are equally applicable for outsourcing of services. These includes the following:-

(a) **Contract Labour (Regulation & Abolition) Act 1970**

- (i) The Contract Labour (Regulation & Abolition) Act 1970 is applicable to MES and MES contractors except that the MES will not have to take license in respect of labour directly employed by it (Para 21.7 of MES Manual of Contract 2007 (Reprint 2012) refers). Each Garrison Engineer under whom the work is being carried out through contract has to register himself as Principal Employer under the ACT. Contractors carrying out MES works and providing services should be advised to take steps to get their establishment registered under the Act and obtain license.
- (ii) **Amenities under the Act:** The amenities conferred under the ACT to workers like wholesome drinking water, toilets, bathing & washing facilities, first aid, labour camps (where required/permitted), rest-rooms, canteen & dining hall, adequate facilities for women employees, crèche and/or any other amenities conferred to workers from time to time shall be provided by the contractor at the work sites.

Minimum Wages Act 1948 and Fair Wages. The contractor shall pay not less than the fair wage as defined below or the minimum wage fixed under the Minimum Wages Act. Whichever is higher to labourers engaged by him on the work (Condition 58 of IAFW-2249 (General condition of contracts) refers), The contractor shall not pay wages lower than minimum wages for labour as fixed by the Government of India/State Government/Union Territory, whichever is higher. The contractor shall notwithstanding the provisions of any contract to the contrary has to pay fair wage or minimum wage fixed under the Minimum Wages Act, whichever is higher to labourers indirectly engaged on the work, including any labour engaged by his sub-contractors in connection with the said work as if the labourers had been directly employed by him.

‘Fair Wage’ means wage whether for time or piece-work notified at the time of inviting tenders for the work and where such wages have not been so notified the wages prescribed by the Chief Engineer for the stations at which the work is done.

The Employees Provident Funds & Miscellaneous Provisions (EPF & MP) Act, 1952. The implementation of EPF & MP Act 1952 in MES has been instructed, containing the following provisions:-

Payment of Wages Act, 1936

- (i) The amendment to Payment of Wages Act, 1936 Act, issued in the Gazette Notification dated 15 Feb 17 states “All wages shall be paid in current coin or currency notes or by cheque or by crediting the wages in the bank account of the employee. “Crediting of wages directly in bank account of the employee may preferably be adopted over other modes of payment of wages. This provisions would make it easy to verify and ensure that minimum/due wages are paid to the employees and their social security rights are protected, leaving little room for complaints/litigations at a later date.

SCHEDULE `A` (NOTES) (CONTD...)

(ii) **Mode of Payment** : The payments will be made into AADHAAR linked bank account of the employees by the contractor. Where the employees insists on being paid in coins or currency notes or by cheque the same will not be denied. An undertaking may be obtained from such employees. However efforts shall be made to educate the employees on benefits of bank/digital payments and pursue with the individual(s) to shift towards banking system/digital modes.

25. The GE being the Principal Employer is responsible to ensure that the contractors fully comply with the provisions contained in the above regulations. The Principal Employer during his visit to the sites should specifically check that the contractor is complying with the labour laws and rules and should there be any shortcomings action is taken to rectify the same. The CsWE also during the inspections of works should examine this aspect and satisfy themselves about the compliance of the Labour Laws by the contractors. GE being the Principal Employer shall ensure payment of minimum fair wages to labourers engaged by contractors by verifying the same from Muster Rolls.

26. Vis-à-vis the Government the contractor shall be primarily liable for all payments to be made under and for observance of the Regulations aforesaid without prejudice to his right to claim indemnity from his sub-contractors. **The GE concerned shall have the right to deduct from the payment due to the Contractor any sum required or estimated to be required for making good the loss suffered by a worker or workers by reason of non-fulfillment of the Conditions of the Contract for the benefit of the workers, non-payment of wages or of deductions made from his or their wages, which are not justified by the terms of the Contract or non-observance of the Regulations.**

27. The GE should co-operate with the inspecting Officers and keep a constant watch with regard to proper maintenance of registers, records, display of notices by contractors and ensure enforcement of MES contractors Labours Regulations forming part of the contract.

28. The GE should take prompt action in rectifying irregularities notified by the inspecting officers **in case of non-payment or short payment of fair wages to the workers by the contractors, he shall take prompt action by recovering the amount notified by labour officer and paying the same to workers.** Amount of unpaid wages withheld from Contractors bills should be paid to the labourers concerned within 60 days from receipt of report from the labour Welfare Officer/Regional Labour Commissioner.

EPFO MoL vide their letter No. CAIU/011(33)2015/HQ/Vol-II dated 02 Feb 2017 have circulated a letter of Additional CPFC-II containing the undermentioned provisions which shall be strictly complied with:-

- (a) The Principal Employer should ensure that the contractor is registered with EPFO before awarding any Contract. After award of the contract the contractor details should be entered in the EPFO portal.
- (b) Payments due to the contractor should be made only after verifying that the statutory PF payments have been made to EPFO. This can be verified either directly from the EPFO portal or insisting on a payment receipt obtained by the contractor from the EPFO portal while making payment.

29. **Contract conditions and Compliance** The above measures are aimed towards ensuring that the rights conferred to the workers (engaged through contracts for Government works and outsourcing of services) are duly protected, creating just working conditions for all stakeholders and shall be strictly enforced by the ground executives.

SCHEDULE `A' (NOTES) (CONTD...)

30. Submission of proof of crediting the wages in the bank account/payment made to the employees by the contractor shall be a pre-requisite to enable the contract executing authority to release subsequent payments to contractors. The registered contractor shall also provide the details of individuals EPF and ESI account number to claim the payment and the contract executing authority will ensure verification of the same from time to time.

31. No contractor/ firm shall be permitted to take advantage of ignorance of the above provisions. The above instruction will be strictly implemented and **NO payments** to the contractors/ firms will be made after 31 Oct 2017 unless proof of payment of wages through Aadhaar linked bank accounts is submitted by the contractors/ firms. Adherence to these instructions will be checked during various inspections as well as vigilance checks.

32. The work comprises of Job No : - P-12/SR Bldg/2018-19.

Signature of the Contractor

DCWE (Contracts)
For Accepting Officer

SCHEDULE OF CREDIT (NOTES)**NOTES: -**

1. Old materials obtained from dismantling shall be incorporated in the work to the extent as shown in Schedule 'A' and as directed by Engineer-in-Charge. The disturbed Parts, if any, shall be made good to the entire satisfaction of Engineer-in-Charge.
2. The contractor shall be deemed to have visited the site of work and assessed for himself as to the nature of work and the material retrieved there from. The contractor shall take care and all necessary precautions for protections of adjoining property.
3. No other materials except as mentioned here-in-after obtained from taking down/ dismantling shall become the property of the contractor.
4. The contractor shall be required to pay the credit for the following old taken down materials which shall become his property at the rates mentioned against each item.
5. The quantities shown in this schedule are provisional but the payment will be made by contractor for the quantity actually obtained from dismantling/demolition/taking down and adjusted accordingly. The contractor will be allowed to lift the materials only after the amount is deposited by him in the Govt Treasury or recovery made in advance from the payments due to the contractor. The contractor shall remove the materials from Ministry of Defence premises under his own arrangements and cost.
6. The other Parts (Not being reused and not listed here) obtained from dismantling/demolition/taking down shall remain the property of Govt. The contractor shall remove the said materials to MES Store Yard at his own expenses and cost and stack the materials to the entire satisfaction of the Engineer-in-Charge. Contractor shall remove unserviceable materials, debris and rubbish to a distance as directed without any extra cost to Government.
7. The condition and quality of materials to be obtained from dismantling/demolition/taking down shall be ascertained by the contractor by visiting the site of work before quoting the tender and no claim on any account shall be admissible whether he visits the site or not.
8. If any other parts, shall got damaged during dismantling/demolition/taking down the same shall be replaced by the contractor at his own cost.

Ser No	Description	A/U	Qty	Rate	Amount	Remarks
1	Old brick bats.	Cum	12	500.00	6000.00	
2	Old U/S flushing cistern any type and capacity	Each	8	50.00	400.00	
3	Old U/S frame with shutter exc 1.5 sqm but n.exc 4 sqm each of any description with iron mongry.	Nos	44	600.00	26400.00	
4	Old U/S frame with shutter not exc 1.5 sqm each of any description with iron mongry.	Nos	48	400.00	19200.00	
5	Old U/S shutter exc 1 sqm but n.exc 2 sqm each with iron mongry.	Nos	2	100.00	200.00	
6	Old GI tubing 15/20 mm dia	RM	170	15.00	2550.00	
7	Old Bib tap, stop cock, pillar cock, shower rose 15 mm bore of any description	Each	80	20.00	1600.00	
8	Asbestos corrugated sheeting incl ridge	Sqm	280	50.00	14000.00	

SCHEDULE OF CREDIT (NOTES) (Contd...)

Ser No	Description	A/U	Qty	Rate	Amount	Remarks
9	Ceiling board of any description with cover fillet	Sqm	142	20.00	2840.00	
10	Old unserviceable storage water tank	Each	3	200.00	600.00	
11	Old rusted CI soil/waste /vent pipe of any bore.	RM	65	50.00	3250.00	
12	Old rusted CI bend/branch piece/traps	Each	56	30.00	1680.00	
13	Old Iron scrap	Kg	50	20.00	1000.00	
14	Old UNSV point wiring for light, fan and socket 5 Amps and 15 Amp complete with batten and gutties and plastic sheet cover, wires, sunken boxes, conduit etc	Each Point	232	20.00	4640.00	
15	Old UNSV wiring Fittings and fixtures such as switches, socket, switch socket combination, ceiling rose, lamp holders, regulator & buzzer any type make any capacity	Each	232	2.00	464.00	
16	Old UNSV DB of any capacity & type	Each	10	50.00	500.00	
17	Old UNSV MCB SPN/SP, DP and TP any capacity any make	Each	56	5.00	280.00	
18	Old UNSV light fitting, sketch any typewith shade, bulk head , fancy and mirror light	Each	40	45.00	1800.00	
19	Old UNSV sub main wiring	RM	120	15.00	1800.00	
20	Old UNSV Earth plate	Each	2	240.00	480.00	
Total					89,684.00	

Signature of contractor

DCWE (Contracts)
For Accepting Officer

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

Ser No	Description of materials	Rate at which materials etc issued to the contractor		Place of issue by Name	Remarks
		Unit	Rate Rs		
1	2	3	4	5	6

----- **NIL** -----

Signature of contractor

DCWE (Contracts)
For Accepting Officer**SCHEDULE 'C'****LIST OF TOOLS AND PLANT (OTHER THAN TRANSPORT) WHICH WILL
BE HIRED TO THE CONTRACTOR
(SEE CONDITIONS 15, 34 AND 35 OF IAFW 2249)**

SRL NO	QUANTIT Y	PARTI- CULAR S	DETAILS OF CREW	HIRE CHARGES PER UNIT PER WORKING DAYS (RS.)	STAND BY CHARGES PER UNIT PER OFF DAY (Rs.)	PLACE OF ISSUE	REMARKS
1	2	3	4	5	6	7	8

----- **NIL** -----

Signature of contractor

DCWE (Contracts)
For Accepting Officer**SCHEDULE 'D'****TRANSPORT WHICH WILL BE HIRED TO THE CONTRACTOR
(SEE CONDITIONS 16 & 35 OF IAFW 2249)**

SRL NO	QUANTITY	PARTI- CULARS	DETAILS OF CREW	HIRE CHARGES PER UNIT PER WORKING DAYS (RS.)	STAND BY CHARGES PER UNIT PER OFF DAY (Rs.)	PLACE OF ISSUE	REMARK S
1	2	3	4	5	6	7	8

----- **NIL** -----

Signature of contractor

DCWE (Contracts)
For Accepting Officer

TENDER

THE PRESIDENT OF INDIA

Having examined and perused the following documents :-

1. Specification signed by DCWE (Contracts).
Drawing detailed in the specifications.
Schedule 'A', 'B', 'C' & 'D' attached hereto.
2. MES Standard Schedule Part-I 2009 (Specifications) and MES Standard Schedule Part-II 2010 (Rates) amendments 1 to 3 including sub paras for part-I and 1 to 59 including sub paras for Part-II 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 errata 1 to 20 and amendment 1 to 40.
4. WATER CONDITIONS 31 OF IAFW-2249 (GENERAL CONDITIONS OF CONTRACT):
Water will be supplied by the MES at point(s) shown in site plan and shall be paid for by the contractor at the rate of Rs. 3.75 per Rupees one thousand worth of work done.

Should this tender be accepted:-

*I/We agree

*(a) That the sum forwarded as earnest money shall either be retained as a part of security deposit or refunded by the Government on receipt of the appropriate amount of security deposit all as per condition 22 of IAFW-2249.

(b) To executed all the work referred to in the said documents upon the terms and conditions contained there-in and as detailed in the Schedule 'A' on the subsequent pages and to carry out such deviation as may be ordered vide condition 7 of IAFW-2249 upto a maximum of **10% (Ten)** percent and further agree to refer all disputes as required by condition 70 to the Sole Arbitrator of a Serving Officer having a degree in Engineering or equivalent or having passed final/direct final examination of sub-division-II of Institution of Surveyors (India) recognized by Govt of India to be appointed by Chief Engineer Pathankot Zone or Officiating Chief Engineer Pathankot Zone whose decision shall be conclusive and binding.

*To be deleted where-ever not applicable.

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

(IN BLOCK LETTERS) DATED _____

Postal Address _____

Telegraphic address _____

Telephone No _____

Witness _____

Address _____

ACCEPTANCE

_____ Alterations have been made in these documents and as evident that these alterations were made before the execution of the contract Agreement, they have been initialled by the said contractor and DCWE (Contracts).

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

The above tender was accepted by me on behalf of the President of India for the lump sum/ contract sum of Rs _____ (Rupees _____) contained in schedule/BOQ.

Signature _____ Dated this _____ day of _____ 2018

Appointment: SE
Commander Works Engineer
Pathankot
(for and on behalf of the President of India)
ACCEPTING OFFICER

SPECIAL CONDITIONS**1. GENERAL**

1.1 The following special conditions shall be read in conjunction with General Conditions of Contracts (IAFW-2249) including amendments and errata thereto. If the provision in these conditions are at variance with the provision in these conditions are at variance with the provisions in the aforesaid documents, the provisions in these special documents shall be deemed to take precedence there-over.

1.2 General specifications mentioned any where in the contract including those in General Conditions of Contracts, viz IAFW-2249, shall mean the specifications given in the MES Standard Schedule of Rates Part I: 2009 print. Particular specifications given here-in-after are in brief and only to particularise/amend and emphasise the specification given in the MES standard Schedule of Rates. Specifications, General Rules, Preambles and special conditions contained in MES standard Schedule of Rates 2010 Part-II shall, unless specifically described otherwise, be applicable to this contract.

1.3 Any work shown on drawings(s) but not described in particular specifications shall, unless specifically described to be excluded from the contract, be deemed to be included in the lumpsum quoted by contractor for Schedule 'A' Part-I. In case of doubt with regard to the manner of detail for executing the work, the decision of the Accepting Officer shall be final, conclusive and binding. This shall not be applicable to the items of work pertaining to services for which separate parts of Schedule 'A' setting out the requirements have been given. Should there be item(s) or parts as shown on drawings but not included in the relevant sections of Sch 'A' these shall, unless otherwise described or stated in the contract, constitute an additional work.

1.4 All headings and marginal notes to these special conditions or to any other documents of this contract are solely for the purpose of giving a concise indication and not a summary of the contents thereof, and they shall never be deemed to supersede the contents of the clauses.

1.5 The tenderer is advised to point out in writing discrepancy(s), if any, of the tender documents, at least 10 days before the due date of receipt back of tender. In case discrepancy(s) in contract documents is/are noticed by the Contractor during execution of the works, it shall be brought out to the notice of the Accepting Officer of contract and others concerned in writing before commencement of the particular work where discrepancy (s) is/are noticed failing which the contractor shall forfeit his right to claim on account of such discrepancy (s)

1.6 Also where there are obvious mistakes in any of the contract provisions, the Accepting Officer shall be sole deciding authority with regard to the intention of the contract documents and his decision in this respect shall be final, binding and conclusive.

1.7 Where the drawings show finishes to wooden members, such finishes shall be applied to wooden members as well as wood based members. However, surfaces covered with laminates shall not be given any finish such as painting, polishing etc.

1.8 Where reinforcement details/thickness of RCC members such as slab, beams, lintels etc are not shown on the drawings, the same shall be supplied by the GE on the basis of provisions in IS-456-2000 and the same shall be provided and incorporated in the works by the contractor and no extra payment will be admissible on this account.

1.9 Where ever nomenclatures of structural slabs (e.g S-1, S-2 etc) is given in the RCC Plans, the details of reinforcement for such slabs shall be as given for slabs of the same nomenclature else-where, if not given in the same drawing.

1.10 Dwarf wall in situations like verandah, passage etc even if not shown on drawings, shall be deemed to be included in the scope and shall be provided at no extra cost to the department.

SPECIAL CONDITIONS (CONTD.....)**2. CONDITIONS OF CONTRACTS AND EXECUTION OF WORKS**

2.1 The various sections/Sub-divisions of the tender documents shall be deemed to be supplementary/ complementary to each other.

3. INSPECTION OF SITE BY THE TENDERER

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

3.2 The tenderer shall be deemed to have inspected the site (s) and made themselves familiar with the working conditions, whether they have actually inspected the site (s) or not.

4.A. CONDITIONS OF WORKING IN UN-RESTRICTED AREA

4.A.1 Work under this contract if lies in **Un-restricted** area.

4.A.2 However, the contractor, his agents, servants, work people and vehicle may pass through the unit lies in which case the Engineer-in-Charge shall at his discretion, has right to issue passes to control their admission to the site of works 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.

4.A.3 The Contractor and his work people shall observe all the rules promulgated from the authority controlling the area in which the work is to be carried out viz. prohibition of smoking, lighting and fire precaution, restricted hours of working etc. if any. Any person found violating the security rules laid down by the authority, shall be immediately expelled from the area without assigning any reasons whatsoever and the Contractor shall have no claim on this account. Nothing shall be admissible any man-hour lost on this account.

4.A.4 The contractor, his agents and representative are required individually to be in possession of an Identity Card or pass duly verified by the police department. The Identity Cards or pass will be examined by the security staff at the time of entry into or exit from the areas and also at any time or number of times inside the area.

4.B. CONDITIONS OF WORKING IN RESTRICTED AREA

4.B.1 The work under this contract if lies in **RESTRICTED AREA**.

4.B.2 The restrictions for entry to work site and conditions of working in restricted area shall be as under :-

(a) **Entry And Exit** : The contractor/his agents/representatives / workmen etc. and his materials, carts, trucks 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 discretion permit to be used. Contractor's authorized representative is required to be present at the places of entry and exit for purpose of identifying his carts, trucks, etc. to the person in charge of the security of the restricted area.

SPECIAL CONDITIONS (CONTD.....)**(b) Identity of Workmen**

(i) Every workman shall be in possession of an identity card. The identity card shall be issued after a thorough investigation of antecedents of the labourers by the contractor and attested by Officer-in-Charge of the unit concerned in accordance with the standing rules and regulations of the unit. Contractor shall be responsible for conduct of his workmen, agents or representatives.

(ii) **Identity Card or Passes.** The contractor, his agent and representatives are required individually to be in possession of an identity card or pass which will be examined by the security staff at the time of entry into or exit from the restricted area at any time or number of times inside restricted area.

(c) **Search.** Thorough 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.

(d) **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 appreciably 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 been ascertained by contractor before submitting his tender. The tenderer's attention is invited to the fact that number of working hours for a unit is 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.

(e) **Working on Holidays.** The contractor shall not carry out any work in gazetted holidays, weekly holidays and other non working days except when he is specially authorized in writing to do so by the Garrison Engineer. The GE may at his sole discretion declare any day as holidays or non working day without assigning any reasons for such declaration.

(f) Fire Precautions.

(i) The contractor, his agents, representatives, workmen etc. shall strictly observe the order pertaining to fire precautions prevailing within the restricted area.

(ii) Motor transport vehicle, if allowed by the authorities to enter the restricted area must be fitted with the serviceable fire extinguisher.

(g) **Female Searcher:** If the contractor desires to employ female labour or works to be carried out inside the area of factory, depot, part etc. and a female searcher is not borne on the authorized strength of the factory, depot, part etc. at the time of submission of tender, he shall be deemed to have allowed in his tender for pay and allowances etc. for a female 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, part etc. the salary and allowances paid to the additional female searches 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.

SPECIAL CONDITIONS (CONTD.....)

(h) The contractor and his work people shall observe all the rules promulgated from time to time by authority controlling the area in which the work is to be carried out e.g. prohibition of smoking, etc. Any person found violating the security rules laid down by the authority shall be immediately expelled from the area without assigning any reasons, whatsoever, and the contractor shall have no claim on this account. Nothing shall be admissible for any man hours lost on this account.

5. WORKING ON HOLIDAYS

5.1 The contractor shall not carry out any work in gazetted holidays, weekly holidays and other non working days except when he is specially authorized in writing to do so by the Garrison Engineer. The GE may at his sole discretion declare any day as holidays or non working day without assigning any reasons for such declaration. No claim, whatsoever for loss of any working hours shall be entertained on this account.

6. FIRE PRECAUTIONS

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

6.2 Motor transport vehicle, if allowed by the authorities to enter the restricted area must be fitted with the serviceable fire extinguisher.

7. FEMALE SEARCHER

7.1 If the contractor desires to employ female labour or works to be carried out inside the area of factory, depot, park etc. and a female searcher is not borne on the authorized strength of the factory, depot, part 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 searcher (Class IV servant) calculated for the period female labour by him inside that area. If more than one contractor employs female labour 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 searches shall be distributed on an equitable basis between the contractors employing female labour taking into consideration the value and period of completion of their contracts. The GE's decision in regard to the amount recoverable on this account by any contractor shall from final and binding.

7.2 The contractor and his work people shall observe all the rules promulgated from time to time by authority controlling the area in which the work is to be carried out e.g. prohibition of smoking, etc. Any person found violating the security rules laid down by the authority shall be immediately expelled from the area without assigning any reasons, whatsoever, and the contractor shall have no claim on this account. Nothing shall be admissible for any man hours lost on this account.

8. SECURITY OF CLASSIFIED DOCUMENTS

8.1 Contractor's special attention is drawn to Condition 2-A & 3 of General Conditions of Contracts (IAFW-2249). The contractor shall not communicate any classified information regarding the works either to Sub-contractors or others without 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 he shall return all documents on completion of the work or earlier on termination of contract. The contractor shall alongwith final bill attach a receipt from the Engineer-in-Charge in respect of his having returned the classified documents as per Condition 3 of General Conditions of Contracts (IAFW-2249).

SPECIAL CONDITIONS (CONTD.....)**9. OFFICIAL SECRET ACT**

9.1 The contractor shall be bound by the India Official Secret Act, 1923, particularly Section 5 thereof, all as per condition 2A of IAFW-2249.

10. EMPLOYMENT OF PERSONNEL

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

10.2 The GE shall have full powers, and without giving any reason to order the contractor immediately to cease to employ, in connection with this contract, any agent, servant or employee whose continued employment is, in his opinion, undesirable. The contractor shall not be allowed any compensation on this account.

10.3 The contractor's attention is also drawn to Condition 25 of IAFW-2249 in this connection.

11. APPROVAL OF SAMPLE OF WORKMANSHIP IN BUILDING

11.1 To determine the acceptable standard of workmanship, one quarter (to be decided by GE) shall be completed by the contractor well in advance as directed by GE under close supervision of the Engineer-in-Charge and shall be got approved from the GE. The workmanship of various trades and finishes of this quarter shall serve as guiding samples for work in the remaining quarter/buildings.

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

12.1 The tenderer is advised to inspect samples of the local building materials maintained by the GE before submitting this tender. He will be deemed to have full knowledge of these materials whether he inspects them or not. The materials to be provided by the contractor shall conform to/shall be superior to the standard of samples displayed in the office of GE in the matter of quality unless otherwise specified.

12.2 Items conforming to India Standard Specification shall be accepted only when ISI marked material are not manufactured. However, before incorporating such materials/items, the contractor shall produce necessary test certificates as required by the GE.

12.3 The contractor shall produce samples of materials which he proposes to use in the work to GE through Engineer-in-Charge and get them approved in writing before commencement of work. All approvals of materials shall be in writing from GE to contractor. The materials, articles, etc. as approved shall be labelled as such and shall be signed by GE and Contractor and kept in the safe custody of Engineer-in-Charge.

12.4 The materials to be incorporated in the work shall be of the make as specified in the Particular Specifications or as given in Appendix 'F'. Where make of the material has not been specified, materials to be incorporated in the work shall be ISI marked. Where specified firm manufacturers both ISI marked and non ISI marked product, the material incorporation in the work shall be ISI marked and no extra payment shall be admissible on this account. In case the material having ISI certification marked are not manufactured, material conforming to relevant ISI may be incorporated in the work after approved by GE. Where make of the same material has been specified in particular specification as well as in the Appendix 'F' to Particular Specification the make given in Appendix 'F' to Particular Specification shall be provided. However, in case the Make of materials specified in Sch 'A', the same shall take precedence over the Make as specified in Particular Specification or in Appendix 'F'.

SPECIAL CONDITIONS (CONTD.....)

12.5 The materials/articles/fittings which are generally superior to IS/BIS certified products shall be incorporated in the work as approved by GE.

12.6 In case the fixture/fittings/materials which are not manufactured/available with ISI marks/BIS certified products as specified here-in-before the fixtures/fittings/material of superior to IS/BIS specifications or conforming to IS shall be got approved from the GE before incorporation in the work. Fixture/fittings/materials where these are superior to IS/BIS specifications conforming to relevant IS/BIS certifications marks, no price adjustment shall, however, be made on this account.

13. AVAILABILITY OF LAND FOR STORAGE OF MATERIALS, TEMPORARY WORKSHOP AND OFFICES ETC.

13.1 Refer Condition 24 of IAFW-2249. The contractor shall be permitted to store his materials , temporary workshops and the like during the currency of the contract, at area of land marked for the purpose on the site plan and he shall pay a licence fee @ Re. 1/- (Rupee one only) per year or part thereof in respect of each and every separate area of land allotted to him. The contractor shall dismantle all stores, temporary workshops & offices erected inside defence land within one month of actual completion of the work. An amount equal to 0.50% of the contract amount or Rs 2.00 lakhs whichever is less, shall be retained from the RARs which shall be released back to the contractor only after complete dismantling of labour camps and temporary workshops and clearing the debris from the site to the complete satisfaction of the Engr-in-Charge.

14. SECURITY

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

14.2 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 exist, keeping to specific routes, observing specified timing etc. Nothing extra shall be admissible for man hours etc lost on this account.

15. DAMAGE TO EXISTING STRUCTURES

15.1 Any damage to the existing structures, any existing road, etc during the execution of work shall be made good by the contractor at his own expense. Rectification, replacement, making good and touching up etc shall be carried out to conform to the materials and workmanship originally provided and to the satisfaction of the Engineer-in-Charge. In case of any dispute on this account, the decision of the GE shall be final, conclusive and binding.

16. QUARRIES AND ROYALTIES

16.1 Quarries are not available on land which is in the charge of MES authorities. Condition 14 of IAFW-2249 shall be treated as not applicable.

17. APPROACHES

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

SPECIAL CONDITIONS (CONTD.....)**18. LOCATION OF BUILDINGS AND WORKS**

18.1 There may be some changes in location/sitting of building shown in site (layout) plan (s) to suit local conditions and/or departmental requirements. The contractor shall have no claim what-so-ever consequent to such change in the location/sitting of works.

19. ACTION WHERE NO SPECIFICATIONS EXIST

19.1 In case of any class of work for which there are no specifications in the tender documents including SSR, such work shall be carried out in accordance with Indian Standard Specifications and where Indian Standard Specifications do not cover the same, the work shall be carried out as per standard engineering practice subject to the approval of the GE.

19.2 No claim what-so-ever will be tenable for any misunderstanding or for not having ascertained requisite information/knowledge to muster the resources required in satisfactory completion of the entire work to requirements as per contract agreement.

20. METHOD OF MEASUREMENTS

20.1 Measurement of all measurable work executed under this contract shall be taken in accordance with the rules of measurements as laid down in SSR Part –I, 2009 & SSR Part-II, 2010 pertaining to various items of work as applicable, unless otherwise indicated in the respective sections\ parts of Schedule 'A'. In case the method of measurements for a particular item of work is not given in SSR, a reference will be made to the relevant provisions contained in the latest edition of IS-1200.

21. CONTRACT LABOUR (REGULATION AND ABOLITION) ACT 1970

21.1 The contractor when required to employ more than twenty workmen on the works under this contract, shall be bound by the Contract Labour (Regulation and abolition) Act, 1970 and rules framed there under including (State and Central) all other rules related to Labour including deduction of EPF etc. No contractor can undertake or execute his work without a licence issued by a licensing officer.

22. CRITICAL PATH METHOD/NET WORK ANALYSIS AND THE TIME SCHEDULE

22.1 The time and progress chart, to be prepared as per Condition 11 of IAFW-2249 (General Conditions of Contracts), shall consist of detailed net work analysis and a time Schedule. The critical path net work will be drawn by the contractor and approved by GE and the contractor soon after acceptance of the tender. 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 the time-schedule, a firm calendar date schedule will be prepared and submitted by the contractor to GE, who will approve it after scrutiny. No financial liability shall accrue to the Govt in connection with computerization.

22.2 The schedule will be submitted in quadruplicate within two weeks from the date of handing over the 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.

22.3 During currency of the work, the contractor is expected to adhere to the time schedule and this adherence will be part of the contractor's performance under the contract. During the execution of the work, the contractor is expected to participate in the reviews and updating of the net work undertaken by 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 amendment. 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.

SPECIAL CONDITIONS (CONTD.....)

22.4 In case of Contractor not agreeing to the revised Schedule, the same will be referred to the Accepting Officer whose decision will be the final, conclusive and binding. GE's approval to the revised Schedule resulting in completion date beyond the stipulated date of completion shall not automatically amount to grant of extension of time. Extension of time shall be considered and decided by the appropriate authority in terms of Condition 11 of IAFW-2249 and separately regulated.

22.5 Contractor is expected to mobilise and employ sufficient resources to achieve the detailed schedule within the broad frame work of the accepted methods of working and safety.

22.6 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.

23. CO-OPERATION WITH OTHER AGENCIES

23.1 The contractor shall permit free access and afford normal facilities and usual convenience to other agencies or departmental workmen to carryout connected works or services under separate arrangements.

23.2 The contractor's prices shall be deemed to cater for all the above contingencies and nothing extra shall be admissible on this account.

24. SECURITY AGAINST LOSS OR DAMAGE

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

- (i) Particulars of plants/equipments, its make, manufacture No., 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 and indication of No.(quantity) at each location of the site of work.
- (iv) Purchase value on the date of purchase. For the purpose of this condition, plant/equipment shall include vehicles i.e. trucks and lorries but neither the workmen's tools nor any manually operated tools/equipment. The Engineer-in-charge shall record the particulars supplied by the contractor in the works diary and send monthly return to the GE for record in his office.

24.2 Loss on account of Enemy Action :-

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

- (i) The loss suffered by him on account of any damage or destruction of his plants/equipment (as defined in special condition (a) above), materials or any part or parts thereof the amount of loss assessed by the Accepting Officer of the contract on this account shall be final, conclusive and binding.
- (ii) The compensation paid by him under any law for the time being in force, to any workmen employed by him for any injury caused to workman or workman's legal successor for loss of the workman's life.

SPECIAL CONDITIONS (CONTD.....)

(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).

(iv) No reimbursement shall be made nor shall any compensation be payable under the above provision unless the contractor had taken Air Defence precautions ordered by the GE/or concerned, or in the absence of such order, reasonable precautions taken by the contractor. No reimbursement shall be made nor shall any compensation be payable for any plants/equipment or materials not lying at site of work at the time of enemy action.

25. FORCE MAJEURE

25.1 Should any force majeure circumstances arise, each of the contracting party shall be executed for the no fulfillment or for the delayed fulfillment of any of its contractual obligations, if the affected part 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 no limited to be establishment of the spelled), sabotage, explosions, quarantine restrictions beyond the control of either party.

25.2 It is understood 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 as aforesaid and the said rights and obligations shall automatically revive upon the cessation of intervening force majeure event. The period within which the rights & obligations of the parties shall be in suspension due to the force majeure event 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 detriment of either party.

25.3 Notwithstanding the provisions of the immediately foregoing clauses it is further understood and agreed between the parties hereto that in the event of any force majeure persisting for an uninterrupted period exceeding 6(six) months, either party hereto reserves the right to terminate this contract upon giving prior written notice of 30 (thirty)days to the other party of the intention to terminate without any liability other than reimbursement on the terms provided in this agreement of the goods received.

26. WATER (Refer to condition 31 of IAFW-2249)

(a) Water will be supplied at the points shown in the layout plan or as directed by Engineer-in-Charge. The average duration of water supply duration of water supply during the day is 3 hrs.

(b) The contractor shall pay for the water drawn from MES supply points used in works and for his work people at the rate of of Rs.3.75 for every thousand rupees worth of work done .

(c) However, the supply of water may not be continuous and adequate. Necessary arrangements for conveyance and storage of water will have to made by the contractor at his own cost. In the event of breakdown of MES supply of water or its becoming intermittent or in the event the said supply of water is found inadequate for use in works and by his work people, the contractor shall allow in his tender for making his own arrangements to supplement the MES supply by any other means or digging tube well(s) under his own arrangements at his own cost at the site(s) of work. and the contractor shall have no claim what-so-ever on this account.

(d) The contractor shall have no claim on restriction imposed during the currency of the contract with regard to supply of water to meet other local requirements.

(e) Irrespective of whether contractor uses water supplied by MES in part or in full or supplements the MES supply of water by wells or by any other means, the contractor shall pay for the water drawn from MES as specified in Sub Para (b) above.

SPECIAL CONDITIONS (CONTD.....)**27. ELECTRIC SUPPLY**

27.1 In case the contractor desires to buy electricity from the MES, he shall be charged for electric energy consumed in the following rates :-

- (i) At Rs. 8.80 per unit for the light.
- (ii) At Rs. 8.80 per unit for power.

27.2 Electric supply required for the work shall be made available by the MES at the point (s) marked on the layout plan and/or at the points as shown by the Engineer-in-Charge at site. The main switches and energy meter to register the electric energy supplied shall be provided and installed by the MES. The contractor shall provide all necessary cable, fittings etc from the main switches in order to ensure a proper and suitable supply of electricity for the execution of work. The contractor shall also provide necessary earthing keeping in view the safety requirements.

27.3 The MES does not guarantee for the continuity of supply and no compensation what-so-ever shall be allowed for supply becoming intermittent or for breakdown in the system. The type of electric supply will be AC.

27.4 The actual position of supply point (s) for electric energy will be ascertained by the contractor from the GE before submitting his tender. Irrespective of whether he actually inspects or not, he shall be deemed to have inspected and seen the supply point (s) in consultation with GE before submitting his tender. No claim, what so ever, shall be entertained on this account.

27.5 GE or his representative shall be free to inspect all the power consuming devices or any electric lines provided by the contractor. Any device or electric lines provided by the contractor, which is not to the satisfaction of the GE, shall be discontinued from the supply of so desired by him.

28. VALIDITY OF TENDER

28.1 Tender shall remain open for acceptance for a period of 60 days from the date on which the tender is due to be submitted.

29. RECORD OF PROPRIETARY MATERIALS/ARTICLES

29.1 The quantities of materials 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.

29.2 The proprietary articles such as Antitermite Chemical, bitumen, fibre base felt, water proofing compound, paint, etc. when brought to site, shall be inspected and approved by the GE.

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

29.4 The contractor shall, on demand, produce to the GE, Original receipt vouchers in respect of the supplies, this is to ensure that the contractor has actually brought the articles of required quality and quantity from the authorised agent/manufacturer/supplier and also to find out the rates thereof. The contractor shall ensure that the materials are brought at site in original sealed containers/packing, bearing manufacturer's marking except in the case of the requirement of materials being less than smallest packing.

29.5 Bitumen for road, roof treatment and mastic filling to be used in the work shall be purchased directly from manufacturer's stockiest or their authorised dealers only.

SPECIAL CONDITIONS (CONTD.....)

29.6 All vouchers/invoices shall be defaced by the GE/Engineer-in-charge, indicating reference to the contract number, under his dated signature, and CTC thereof shall be kept on record so as to avoid their being used again. Test certificate from the manufacturer shall also be produced by the contractor alongwith purchase voucher of materials.

29.7 The chemical required for antitermite treatment shall be purchased from manufacturers/authorised dealers only and contractor shall produce the cash voucher etc. to prove the genuineness of the same. GE will also ensure that proper quality/quantity of chemicals are brought and incorporated in the works.

29.8 The contractor shall be required to submit the purchase vouchers in respect of all items for which payment is claimed in RARs as material laying at site. However the purchase vouchers in respect of following items shall invariably be submitted by the contractor irrespective of whether claimed in RARs as material lying at site or not:-

- | | |
|---|--|
| (i) Cement | (ii) Major E/M equipments like DG Set, transformers, all electrical panels, Voltage stabilizers, Solar water heating system. |
| (iii) Steel | (iv) All types of factory made shutters. |
| (v) Water Proofing compound/ admixture. | (vi) All types of factory made steel windows & ventilators. |
| (vii) Chemical for antitermite treatment | (viii) Aluminium sections for all types of joineries. |
| (ix) All types of paints. | (x) HT/LT cables |
| (xi) Plywood & particle boards, | (xii) APP membrane including primer. |
| (xiii) CI, DI pipes including fittings and all types of valves. | (xiv) Electronic tamper proof energy meter. |
| (xv) All types of electrical poles. | (xvi) All sanitary fittings including flushing cisterns. |
| (xvii) All types of MCCB's, MCB's, DB's, Air circulators | |

The Vouchers will clearly indicate the contract number and the IS No and specific alternative to which the material conforms in case of various alternatives given in IS.

30. ACCEPTANCE QUALITY OF WORK AND FINISHES

30.1 To determine the acceptable standard of materials and workmanship/final finishes and layout of fittings, etc contractor shall execute stages of work viz excavation, foundation concrete walling up to plinth/lintel/roof levels, roofing, flooring, joinery, built in items, finishes and the like and services i.e. internal electrification, water supply, plumbing, sanitary fittings in one portion of the building ie one room, WC and bath of a block (as decided by GE) and shall be completed at least three months ahead the progress stipulated completion time period given in Schedule 'A' Notes from the date of commencement of Phase-I of work under the close supervision of Engineer-in-Charge and shall get it approved by the GE. The above portion of the block shall be labelled as sample block. The workmanship of various trades and finishes of the sample block shall serve as guiding samples for work in remaining portion of that block and other buildings.

SPECIAL CONDITIONS (CONTD.....)

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

31. RECORD OF CONSUMPTION OF CEMENT

31.1 For the purpose of keeping record for cement issued and consumed in works one properly bound register serially numbered and all pages initialed against the numbering by the Engineer-in-charge and in the form approved by the Engineer-in-charge showing daily receipt, quantity used in the work, balance in hand, shall be maintained.

31.2 The register shall be kept at site in the safe custody of the contractor's representative during the progress of the work and shall be produced for verification of the Inspecting Officer on demand.

31.3 The entries in the aforesaid register will be signed daily by the contractor or his authorised representative and the concerned JE (Civil) and Engineer-in-charge in token of their verification of its correctness. This check will not however, absolve the contractor of his responsibility to justify the consumption of cement at the time of finalisation of his accounts.

31.4 On completion of the work, the contractor shall deposit the cement register with the Engineer-in-charge for record.

32. WATCH/LIGHTING

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

33. MAKING GOOD

33.1 The contractor shall not leave or form holes in concrete (Plain or RCC), Brick work, stone masonry and in any other situation as required for the work or as directed by the Engineer-in-charge and make good all the holes in the same mortar and mix as specified for that portion of work.

34. SITE CLEARANCE

34.1 Refer Condition 49 of IAFW-2249.

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

34.3 The contractor shall clean all floors, remove cement, lime or paint drops, clean joinery, glass panes etc, touch up all painter's work and carry out all other necessary items of work in connection there with and leave the whole premises clean and tidy to the entire satisfaction of Engineer-in-charge before handing over the items/works. No extra payment shall be admissible to the contractor for this operation.

35. OUT OF POCKET EXPENSES

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

SPECIAL CONDITIONS (CONTD.....)

36. **ADJUSTMENT OF TAXES/LEVIES** : "The quoted rates by the tenderers shall be deemed inclusive all taxes of State Govt and Centre Govt including GST (Goods and Service Tax) lavied w.e.f 01 Jul 2017 what so ever shall be payable by the contractor. No re-imbusement shall be admissible by the department/Govt on this account".

37. **CONSTRUCTION LABOUR WELFARE CESS/TAX**

37.1 Consequent upon promulgation of ordinance by the President of India, the Contractor is liable to pay element for construction labour welfare cess/Tax. The rates quoted by the contractor shall be deemed to be inclusive of this CESS/TAX at the rate prevailing on last due date for receipt of tenders.

38.0 **BUILDING AND OTHER CONSTRUCTION WORKERS (RECS) ACT 1996 AND BUILDING AND OTHER CONSTRUCTION WORKERS WELFARE CESS ACT 1996**

38.1 The contractor has to provide welfare measures to the worker engaged in the construction of buildings and other projects as per the Act Building and other construction workers (RECS) act 1996 and building and other construction workers welfare Cess Act 1996. The contractor shall be bound by the above act rules framed there under:-

39.0 **MINIMUM WAGES: PAYMENT TO LABOUR (CONDITION 58 OF IAFW-2249)**

39.1 Refer Condition 58 of IAFW-2249. The contractor shall not pay wages lower than the latest minimum wages for labour as fixed by the Govt. of India/State Govt/Union Territory, whichever is higher.

39.2 The fair wages referred to in Condition 58 of IAFW-2249 shall be deemed to be the same as the minimum wages payable as referred to above.

39.3 The contractor shall have not claim whatsoever if on account of local factors and/or regulations or otherwise he is required to pay the wages in excess of minimum wages as described above during the execution of work except reimbursement/refund of wages of labour as specified in the Contract.

40. **ADVANCE ON ACCOUNT**

40.1 Refer Condition 64 of IAFW-2249.

41.0 **TESTING OF MATERIALS**

41.1 **'A' LEVEL TESTS FOR WORKS COSTING UPTO 100 LAKHS**

41.2 The contractor shall provide all facilities for testing of materials at Zonal Laboratory/Govt approved Laboratories or test house/Engg Colleges at his own cost. The lump sum/rates quoted by the contractor shall to be inclusive of these tests. The other stipulations will be same as specified in proceeding para 39.2.1 above. However, in case the contractor has not set up the site laboratory and tests are carried out in Zonal or any other laboratory approved/set up by GE, the recovery shall be made at rates given in Appx 'A' for tests carried out in Zonal lab or otherwise as per actual rates in case the tests are carried out in other labs. Testing charges will be deducted from the RARs irrespective of the test result for such tests.

SPECIAL CONDITIONS (CONTD.....)**41.3 B&C LEVEL TESTS**

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

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

41.3.3. The cost of materials and carriage, etc shall be borne by the contractor. The cost of material, carriage-testing charges etc. shall be deemed included in the quoted rates and nothing extra shall be admissible on this account.

42. SIGNING OF TENDER

42.1 The person signing the tender on behalf of another partner or on behalf of a firm shall attach with the tender, a proper Power of Attorney duly executed in his favour by such other person or by the partners, stating that he has authority to bind such other persons or the firm as the case may be in all matters pertaining to the contract including the Arbitration clause.

43. QUALIFIED TRADESMEN

43.1 In compliance with the Condition 26 of IAFW-2249 (General Conditions of Contracts), the contractor shall employ skilled/semi skilled tradesmen who are qualified and possessing certificate in particular trade from Industrial Training Institute (ITI)/National Institute of Construction Management and Research (NICMAR)/National Academy of Construction (NAC)/Similar reputed and recognized institutes by State/Central Government, to execute the works of their respective trade. The number of such qualified tradesmen shall not be less than 25% of total skilled/semi skilled tradesmen required in each trade. The contractor shall submit the list of such tradesmen alongwith requisite certificates to Garrison Engineer for verification and approval. Notwithstanding the approval of such tradesmen by GE, if the tradesmen are found to have inadequate skill to execute the work of their trades, leading to unsatisfactory workmanship, the contractor shall remove such tradesmen within a week after written notice to this effect by the GE and shall engage other qualified tradesmen after prior approval of GE. GE's decision whether a particular tradesmen possesses requisite qualification, skill and expertise commensurate with nature of work, shall be final and binding. No compensation, whatsoever, on this account shall be admissible.

44. CONCILIATION**44.1 SCOPE OF CONCILIATION**

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

- (a) Disputes relating to levy of compensation for delay in completion - actual amount of compensation.
- (b) Disputes relating to technical examination of works.
- (c) Disputes relating to interpretation of the provisions of the contract with reference to their application to parties.

SPECIAL CONDITIONS (CONTD.....)

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

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

For Condition 44.2 (b), (c), (d) & (e) each as stated above the financial limit shall be Rupees two lakhs or one percent of the contract amount whichever is less.

44.3. COMMENCEMENT OF CONCILIATION PROCEEDINGS

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

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

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

44.4 NUMBER OF CONCILIATORS

44.4.1 There shall be a Sole conciliator.

44.4.2 APPOINTMENT OF CONCILIATOR

44.4.2.1 All disputes brought out in Para 44.1.1(a) to (c) above shall be referred to the Sole conciliator viz Serving Officer not below the rank of Superintending Engineer/Superintending Engineer (QS&C) having degree in Engineering or equivalent or having passed final/direct examination of Sub Division-II of Institution of Surveyors (India) to be appointed by the Chief Engineer, Pathankot Zone, Pathankot or in his absence the officer officiating as Chief Engineer, in writing.

44.5 STATUS OF EFFECT OF SETTLEMENT AGREEMENT

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

45. PRICING OF DEVIATIONS

45.1 The principle enumerated in Condition 62 of IAFW-2249 shall apply to various sections of Schedule 'A' of this contract. The contractor's percentage applicable for pricing deviation as per Condition 62 of IAFW-2249 shall be the contractor's percentage for the respective sections of Schedule 'A'.

46. MINIMUM WAGES PAYABLE

46.1 Refer Condition 58 of IAFW-2249 have fixed minimum rates of wages as upto dated from time to time for various categories of employees under the Minimum Wages Act, 1948. The contractor shall not pay wages lower than minimum wages including allowances as fixed under said notification as updated till the date of receipt of tender. Where in any area the minimum rates of wages are also fixed by State Government for employees in employment in the construction/maintenance of buildings/roads/ runways, the labour wages as fixed vide above said updated Notification of Ministry of Labour or respective state Government whichever is higher in respect of these areas shall be deemed minimum rates of wages payable under this contract and the contractor shall not pay lower than this minimum rates of wages.

SPECIAL CONDITIONS (CONTD.....)

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

46.3 The fair wages referred to in Condition 58 of IAFW-2249 will be deemed to be the same as the minimum wages, referred to above as upto dated from time to time.

46.4 The contractor shall have no claim, whatsoever, if on account of local factor and/or regulations or otherwise, he is required to pay the wages in excess of minimum wages as described above during the execution of work except reimbursement/refund of wages of labour as specified in contract.

47. RE-IMBURSEMENT/ REFUND ON VARIATION IN 'TAXES DIRECTLY RELATED TO CONTRACT VALUE'.

47.1 The rates quoted by the Contractor shall be deemed to be inclusive of all taxes (including GST on materials, GST on Works Contracts, Turnover Tax, Goods and service tax, Labour Welfare cess/tax etc.) duties Royalties, octroi and other levies, and/or imposition/abolition of any new/existing taxes, duties royalties, Octroi & other levies shall be made except as provided in Sub Para (b) here-in-below.

47.2 The taxes which are levied by Govt. at certain percentage rates of contract Sum/Amount shall be termed as "taxes directly related to contract Value" such as GST on Works Contracts, Turnover Tax, Labour Welfare Cess/tax and like but excluding Income Tax. The tendered rates shall be deemed to be inclusive of all "taxes directly related to contract value" with existing percentage rates as prevailing on last due date for receipt of tenders. Any increase in percentage rate of "taxes directly related to contract value" with reference to prevailing rates on last due date for receipt of tenders shall be reimbursed to the contractor and any decrease in percentage rate of "taxes directly related to Contract value" with reference to prevailing rates on last due date of receipt of tenders shall be refunded by the Contractor to the Govt/deducted by the Govt from any payments due to the contractor. Similarly imposition of any new "taxes directly related to contract value" after the last due date for receipt of tenders shall be reimbursed to the contractor and abolition of any taxes directly related to contract value" prevailing on last due date for receipt of tenders shall be refunded by the contractor to the Govt/deducted by the Govt from the payments due to the contractor.

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

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

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

Signature of Contractor

DCWE (Contracts)
for Accepting Officer

SPECIAL CONDITIONS (CONTD....)**Appx 'A'****MATERIALS AND THEIR TESTS**

Sl No	Material	Tests	Method of testing	Frequency of tests	Level of tests	Rate (Rs.)	Remarks		
1	2	3	4	5	6	7	8		
1.	Bricks	(i) Compressive strength	IS-3495 (Part-II)	As per IS 5454 as given under	A	330	Checks for visual and Dimensional Characteristics shall also be carried out as per IS : 5454 Legend 'A'-Site lab 'B' - Zonal Lab of CE Pkt Zone, Pathankot 'C'- Approved test House/Engg College		
		(ii) Water absorption	-do-	Lot size	Sample size	Permissible No of defective bricks		A	330
		(iii) Efflorescence	-do-	1001 to 10000	5	0		A	330
			(Part-I)	10001 to 35000	10	0			
				35001 to 50000	15	1			
2.	Coarse Aggregate	(i) Sieve analysis	IS-2386 (Part-I)	One test of every 15 Cubic Metre of aggregates or part three of brought to site	A	660			
		(ii) Flakiness Index	-do-	-do-	A	250			
		(iii) Estimation of deleterious materials	IS-2386 (Part-I)	One test for every 100 Cubic Meter of aggregates or part there of	A	600			
		(iv) Organic impurities	-do-	One test per source of supply	B	275			
		(v) Moisture content	-do- (Part-II)	Regularly as required	A	330			
		(vi) Specific gravity	-do-	One test for each source of supply	B	330			
3.	Fine Aggregate	(i) Sieve analysis	IS-2386 (Part-I)	One test of every 15 Cubic Metre of FA or part when brought to site	A	660			
		(ii) Test for clay, silt and impurities	-do- (Part-II)	-do-	A	500			
		(iii) Specific gravity	-do- (Part-II)	One for each source of supply	B	330			
		(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 for each source of supply	B	275			
4.	Cement	(i) Setting Time	IS-4031-63 affirmed 1980	One for each consignment or as and when required	B	500			
		(ii) Soundness	-do-	-do-	B	550			
		(iii) Compressive strength	-do-	-do-	B	550			
		(iv) Fineness	-do-	-do-	B	275			
5.	Structural Concrete (M-15 Grade & 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	(i) Random sampling shall be carried to cover all mix units. (ii) Refer IS-456 2000 Clause 14 for frequency of sampling.		
		(ii) Compressive strength	IS-516	Qty of concrete in the work (Cubic Metre)	No. of samples	A		900	
				1 – 5	1				
				6 – 15	2				
				16 – 30	3				
				31 – 50	4				
				51 and above	4+1 for each addl 50 Cubic Metre or part thereof				

SPECIAL CONDITIONS (CONTD....)**Appx 'A'****MATERIALS AND THEIR TESTS**

1	2	3	4	5	6	7	8	
6.	(a) PCC block for walling (Hollow Block)	(i) Compressive strength	IS-2156-1984 (Appx 'B')	08 Blocks out of 14	A	900	Sample : 14 blocks from consignment of every 5000 blocks or part thereof	
		(ii) Water absorption	-do- (Appx 'E')	03 Blocks out of 14	B	330		
		(iii) Density	-do- (Appx 'A')	03 Blocks out of 14	B	330		
	(b) PCC solid block for walling	(i) Compressive strength	IS-2185	12 Blocks out of 18	A	900		Sample : 18 blocks from consignment of every 1000 blocks or part thereof These blocks to be checked for dimension and weight.
		(ii) Water absorption	-do-	03 Blocks out of 18	B	330		
		(iii) Density	-do-	03 Blocks out of 18	B	330		
7.	Cement Flooring Tiles/ Terrazzo tiles	(i) Water absorption	IS-1237 (Appx 'D')	06 tiles out of 18	B	330	Sample of 18 tiles from each source of supply selected at random.	
		(ii) Wet transverse strength	-do- (Appx 'E')	-do-	B	660		
		(iii) Resistance to wear	-do- (Appx 'F')	-do-	C	1000		
8.	Burnt clay roofing tiles (hand made) as per IS-2690 Part-II) Length 150mm to 250mm Width 100mm to 200mm Thickness 35mm to 50mm	(i) Water absorption	IS-3495 (Part-II)	06 tiles out of 12	B	235	Samples : 12 tiles from each source of supply selected at random.	
		(ii) Compressive strength	-do- (Part-I)	-do-	A	200		
9.	Mangalore Pattern roofing tiles	(i) Water absorption	IS-654 (Appx 'A')	06 tiles out of 32	B	200	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	130		
10.	Timber	(i) Specific gravity and weight	IS-1708	Minimum '3' samples from a lot of 4 Cum or 250 pieces of seasoned timber	B	130		
		(ii) Moisture content	-do-	-do-	A	130		
11.	Water for Construction purpose	(i) Test of Acidity	IS-456 & 3015	Once at the stage of approval of source of water	B	500	Also refer clause 4.3 of IS 456 and its subsequent sub clauses regarding suitability of water.	
		(ii) Test for Alkalinity	-do-	-do-	B	500		
		(iii) Test for solid content	-do-	-do-	B	500		

SPECIAL CONDITIONS (CONTD....)**Appx 'A'****MATERIALS AND THEIR TESTS**

1	2	3	4	5	6	7	8																
12.	Welding of steel work	Visual inspection test	IS-822 Clause 7.1	100% by visual inspection	Work site	390	Specialized tests, their method and frequency to be decided on consideration of their importance by the Accepting Officer.																
13.	Timber panelled and glazed Door/ Window and shutters (Including factory made shutters)	(a) Dimensions, sizes, workmanship and finish (b) Strength test (i) Slamming (ii) Impact indentation (iii) Shock resistance (iv) Edge loading (c) Chemical Treatment test	IS-1003 (Part-I) IS-1303 -do- -do- -do- -	Frequency of sampling from each lot shall be as under :- <table border="1"> <thead> <tr> <th>Lot Size</th> <th>Sample size</th> </tr> </thead> <tbody> <tr> <td>26 to 50</td> <td>05</td> </tr> <tr> <td>51 to 100</td> <td>08</td> </tr> <tr> <td>101 to 150</td> <td>13</td> </tr> <tr> <td>151 to 300</td> <td>20</td> </tr> <tr> <td>301 to 500</td> <td>32</td> </tr> <tr> <td>501 to 1000</td> <td>50</td> </tr> <tr> <td>1001 and above</td> <td>80</td> </tr> </tbody> </table> From the each lot 5% of the factory made shutters shall be manufacturer tested for strength tests - -	Lot Size	Sample size	26 to 50	05	51 to 100	08	101 to 150	13	151 to 300	20	301 to 500	32	501 to 1000	50	1001 and above	80	A - -	200 - -	
Lot Size	Sample size																						
26 to 50	05																						
51 to 100	08																						
101 to 150	13																						
151 to 300	20																						
301 to 500	32																						
501 to 1000	50																						
1001 and above	80																						
14.	Plywood (IS-303-1989)	(a) Moisture content	IS-1734-1983 (Part-I)	Six tests pieces cut from each of the boards selected as per table shall be subjected to tests.	B	260	Sampling shall be as per IS-7835-1975 Tables.																
15.	Wood particle board (medium density) IS-3097	(a) Density (b) Moisture content (c) Water Absorption (d) Swelling due to surface absorption (e) Swelling in water (f) Modulus of rupture (g) Screw withdrawal strength	IS-2360 (Part-III) -do- -do- (Part-16) -do- (Part-17) -do- -do- (Part-4) -do- (Part-4)	Three tests specimens from each sample (Size 150mm x 75 mm) -do- -do- (Size 300 mm x 300 mm) -do- (Size 125 mm x 100 mm) -do- (Size 200mm x 100 mm) Three test specimens as per IS-2380-77 -do- as per IS-2385	A A & B A A A B C	65 65 65 65 100 130	Sampling shall be as per IS-3487-1983 with moisture meter																
16.	Reinforcement Steel Bars	a) Physical tests upto 16mm dia (Normal mass, tensile, elongation, bend and rebend) b) Physical tests over 16mm dia (Normal mass, tensile, elongation, bend and rebend)	IS -1786	As per Appx 'D' of Tender	B B	2500 2750	Testing Charges as per set of test per diameter																

Signature of Contractor

DCWE (Contracts)
for Accepting Officer

PARTICULAR SPECIFICATIONS

1. GENERAL

1.1 Works under this contract shall be carried out in accordance with Schedule 'A', particular specifications, drawings, general specifications and other provisions contained in MES Schedule Part-I (2009) and Part-II (2010) read in conjunction with each other.

1.2 Term "General Specification" referred to hereinbefore as well as referred in IAFW-2249 (General Conditions of Contracts) shall mean the specifications contained in the MES Schedule 2009 (Part-I).

1.3 General Rules, specifications, special conditions and all preambles in the MES Schedule shall deemed to be applicable to the works under this contract, unless specifically stated otherwise in these documents in which case the provisions in these documents shall take precedence over the aforesaid provisions in the MES Schedule. The term "as specified" wherever appears in the tender documents and drawings, relates to relevant particular specifications and in its absence, general specifications. All references to MES Schedule/SSR in these specifications relate to Part-I of MES Schedule 2009 unless otherwise mentioned. Reference to only 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 parts of Schedule 'A' provided in General Summary, if any, though not particularly mentioned hereinafter.

1.4 Where specifications for any item of work are not given in MES Schedule or in these particular specification, specifications as given in relevant BIS Code of Practice shall be followed.

1.5.1 Lump sum/Unit rates quoted by the tenderer 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 work. Decision of the Accepting Officer as to whether any minor detail of work and/or construction is obviously and fairly intended to be included in the contract or not shall be final, conclusive and binding.

1.5.2 However, some of the minor details/items which shall be deemed to be essential for execution and entire completion of work are detailed, as under, for guidance :-

- (i) Reinforcement for any member not indicated in the drawings.
- (ii) Dwarf wall in situations like verandah, opening, passage, etc not indicated in drawings.
- (iii) Lintels over doors, windows and openings not shown in drawings.

1.5.3 In all the above and in all similar cases, the details indicated elsewhere in the drawings which are similar or near to the missed out items of work shall be followed. In the absence of any other similar or near details, minimum essential requirement for completion of the work from structural and utility point of view shall be deemed to be included in the lump sum quoted. In the event of any dispute, decision of the Accepting Officer shall be final, binding and conclusive.

1.5.4 The Notes on the drawings (if any) to the effect that foundations are based on specified safe capacity of the soil are for the guidance of MES executive staff only.

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

2. EXCAVATION

2.1 SITE CLEARANCE AND SURFACE DRESSING

PARTICULAR SPECIFICATIONS (CONTD.....)

2.1.1 Before setting out the layout of building and commencing the construction, contractor shall carry out site clearance and surface dressing of the area as per clause 3.6, 3.8 and 3.10 of MES Schedule Part-I to the entire satisfaction of Engineer-in-Charge. The 'area' referred to implies the entire building plot extending upto three metres all around from the outer edge of plinth protection of the building. All rubbish obtained from the site clearance and all spoil obtained from surface dressing shall be removed (to a distance not exceeding 500m), spread and levelled. The ground level indicated is after site clearance/surface dressing. The cost of such work as may be necessary shall be deemed to be included in the contractor's quoted lump sum. However, in case buildings to be constructed under this contract are located on the area of site clearance (vide Sch 'A' Part-V), necessary change for not carrying out the site clearance and surface dressing shall be regularized through a deviation order. The surface dressing required for levelling purpose of site shall be deemed to be included in lump sum quoted by the contractor.

2.2 EXCAVATION AND EARTH WORK

2.2.1 Unit rates for buildings/structures in Schedule 'A'/BOQ shall include for excavation and earth work in any type of soil (i.e. loose/soft/hard/dense). However, in the event of deviation involving excavation and earth work, the rate shall be the average of loose/soft soil and hard/dense soil.

2.2.2 The measurement of excavation shall be as explained in MES Schedule (Part-II) with the exception that separate quantities of soft/loose soil, hard/dense soil and mud shall not be worked out but these materials shall be grouped together as any type of soil as aforesaid.

2.2.3 Boulders and stones obtained from excavation shall be sorted out and neatly stacked at site by the contractor as directed by the Engineer-in-Charge, without any extra cost to the Govt. The aforesaid boulders and stones in stacks shall be issued to the Contractor @ Rs 500.00 per Cum and recovery shall be made in the RAR payments.. These boulders may be used in the work in soling/WBM/Hard Core/hand packing in retaining wall/Filling in wire crates etc, after breaking them into specified size as approved by GE. Balance boulders/stones, if required will be arranged by the Contractor and nothing extra shall be payable on this account. In case the quantity of Stone boulders stones is more than what can be incorporated in the work, the balance quantity issued shall be the property of contractor.

2.2.4 If rock (soft/hard/disintegrated) is met at site, contractor shall immediately notify the fact to the GE in writing, who will after the verification, regularise the change through a proper deviation order.

2.2.5 The excavation shall be restricted to dimensions shown on the drawings. Excavation made, if any, in excess of required depth/width shall be made good by the contractor with cement concrete PCC M-10(Nominal mix) without extra cost to the Govt.

2.2.6 For dewatering/pumping, bailing out water, if met with during excavation due to water table, no extra payment shall be admissible to the contractor on any such account. No additional payment as stipulated in para 3.17 of SSR Part-II will be admissible. In the event of any deviation, no price adjustment shall be made for cost of bailing/pumping out etc.

2.2.7 The bed of the trenches, if in soft or made up earth, shall be watered and well rammed and any depressions thus formed shall be filled with approved earth as required to the level and slope as directed by Engineer-in-Charge.

2.3. FILLING IN TRENCHES/UNDER FLOORS

2.3.1 The approved earth obtained from excavation in foundations shall be used for filling in trenches, under floors and any other situation as specified after removing big stones, grass roots and vegetable moulds, or other organic matter. Earth mixed with small stones/pebbles (if approved by GE) is permitted for use in filling under floors and foundations. The filling around pipes, after the pipes are laid and tested shall however be with earth-free from pebbles/stones. Any additional earth required for the purpose of filling shall be arranged by the contractor at no extra cost to the department from outside of defence land.

PARTICULAR SPECIFICATIONS (CONTD.....)

2.3.2 Filling under floors/sides of trenches shall be in layers not exceeding 250mm thick, and each layer shall be watered and well rammed.

2.3.3 REMOVAL OF SPOIL

2.3.3.1 Surplus spoil (obtained in Schedule 'A' Part-1) shall be disposed off/removed and spread at places as directed by the Engineer-in-Charge, to a distance exceeding 100 metres, but not exceeding 200 metres from the site of excavation, and levelled as directed by Engineer-in-Charge, without any extra cost to govt.

2.4 DRESSING AROUND BUILDINGS

2.4.1 After construction and before handing over any building, the area around, as defined here-in-before shall be dressed without extra cost to the Govt. Spoil obtained from surface dressing shall be removed to a distance not exceeding 100 metres, spread and levelled as directed by Engineer-in-Charge.

2.5 FOUNDATION AND PLINTH

2.5.1 Any change in foundation/plinth necessitated due to undulating ground, which may have to be carried out as per the decision of the GE, shall be adjusted through a proper deviation order.

2.5.2 For the purpose of reckoning the depth of the foundation, the average level of the ground after surface dressing shall be considered except at the places where cutting is involved.

2.6 HARD CORE

2.6.1 Hard core shall be of hard broken stone or boulders broken to gauge not exceeding 63mm. The material of hard core shall be well graded for providing dense and compact sub grade. Hard core shall be deposited, spread and levelled in layers not exceeding 15cm thick and watered and well rammed to a true surface and compacted with sufficient fine material. The thickness of hard core specified or indicated in the drawing, is the thickness after consolidation. Where thickness has not been mentioned it shall be 150mm consolidated.

3. CONCRETE WORK**CEMENT**

3.1 Contractor shall make his own arrangements to procure cement as specified here-in-after. The cost of cement, its transportation, storage, testing charges, its accounting and preservation etc till consumed in work shall be borne by the contractor.

3.1.2 Type of cement to be used in this contract shall be ordinary Portland cement, grade 43, conforming to IS-8112-1989/Portland Pozzolana Cement conforming to IS-1489-1991, unless otherwise specifically specified. Different type of cement, if so required, as per contract provisions, shall also be arranged by contractor at no extra cost to Govt. However, in water retaining structure such as overhead tank, static tank, floatation tank, etc. OPC shall only be used.

3.2 PROCUREMENT

3.2.1 Cement shall only be procured by the contractor directly from any of the main producers of cement as listed in Appendix 'F'.

3.2.2 Where total estimated requirement of cement in the work is less than 1200 bags, contractor can procure cement from the authorised distributor/dealers of the main approved producers as mentioned in Appendix 'F' here-in-after.

PARTICULAR SPECIFICATIONS (CONTD.....)

3.2.3 Use of PPC : While using PPC, the following requirements shall be met with:-

- a) PPC shall meet the strength criteria of 43 grade OPC as laid down in IS 8112.
- b) The minimum period before striking formwork given in clause 11.3.1 of IS-456 shall be suitably modified at site by the GE. The contractor shall not claim any extra cost on this account.
- c) Mixing of OPC and PPC shall not be allowed in a work.
- d) While procuring PPC, the following requirements are to be ensured and certificate to that effect from the manufacturer shall be submitted by the contractor for each batch:-
 - (i) The quality of fly ash used is strictly as per IS-1489 (Part-I).
 - (ii) The fly ash is inter ground with clinker and not mixed with clinker.
 - (iii) The dry fly ash is transported in closed containers and stored in silos. Only pneumatic pumping has been used.
 - (iv) The fly ash has been received from thermal power plants using high temperature combustion above 1000 Degree Centigrade.
 - (v) The fly ash content in PPC is as per IS provision to achieve desired consistency.

3.2.4 Cement brought by the contractor at site(s) of work shall be in jute/polythene/paper bags containing 50Kg cement in each bag originally sealed by manufacturer. Cement for purpose of accounting shall be on the basis of the number of bags. Minor variation in contents of cement not more than 2% of weight of cement in a bag shall be permissible for purpose of accounting of cement bag. However, cement shall be incorporated in the work on actual weight basis without any additional cost.

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

3.3 TESTING OF CEMENT

3.3.1 The manufacturer is to carry out inspections and testing of cement in accordance with relevant BIS provision. The contractor shall submit the manufacturer's test certificate in original along with the test sheets giving the result of each physical test as applicable and the chemical composition of the cement or authenticated copy thereof, duly signed by the manufacturer with each consignment. The Engineer-in-Charge shall record these particulars in the Cement Acceptance Register (Format given in Appx 'B' attached here-in-after).

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

PARTICULAR SPECIFICATIONS (CONTD.....)

3.3.3 It shall be ensured that tested and untested cement is segregated and stored separately with distinct identification. Cement of different brands shall be stacked separately by the contractor.

3.3.4 If the test results on samples of a particular consignment are not within acceptable limits, the same shall be rejected and/or any bag of cement in godown showing indication of any setting shall be segregated and removed by contractor from the site within a week's time, with due permission of the GE for their removal.

3.3.5 Cement brought by the contractor shall be allowed to be incorporated in the work after satisfactory test results as per IS, of the sample sent for testing. GE shall inform the contractor, about the test result and permission to incorporate in the work, in writing. GE shall ensure that work 'Pass' is embossed on both side of the cement bags of lot which has been found as per specification as per test result.

3.4 STORAGE/CONSUMPTION OF CEMENT

3.4.1 Cement in bags shall be stored in proper leak proof/damp proof storage godown, at least a 20cm high platform, away from walls, in such manner as to prevent deterioration due to moisture or intrusion of foreign matter, all as specified in clause 4.3.1 of SSR Part-I. The stacking of cement shall not be more than 10 bags.

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

- a) Daily by JE(Civil) in-charge of works.
- b) Twice in a week by the Engineer-in-Charge.

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

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

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

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

3.5 DOCUMENTATION

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

PARTICULAR SPECIFICATIONS (CONTD.....)**3.6 SCHEDULE OF SUPPLY**

3.6.1 It shall be the responsibility of the contractor to arrange cement well in advance, to facilitate its testing, before use in the work. The contractor shall submit the programme of procurement of cement to the GE before the date of commencement of the works indicating date of procurement and quantity.

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

3.7 AGGREGATE**3.7.1 FINE AGGREGATE (SAND)**

3.7.1.1 Grading for fine aggregate shall be within the limits of grading zone I to III as given in clause 4.4.7.2 of MES Schedule Part-I. Crushed stone sand of grading I to IV shall be used for concrete, brick/stone masonry & plaster work.

3.7.2 COARSE AGGREGATE

3.7.2.1 Unless specified otherwise in these particular specifications, coarse aggregate for all concrete work in all situations shall be graded crushed stone aggregate of approved quality. In case of any deviation, the rate for graded crushed stone aggregate shall be treated at par with the rate of graded stone aggregate as available in the SSR.

3.7.3 GRADING OF COARSE AGGREGATE

3.7.3.1 Graded aggregate of nominal sizes given hereunder, shall be used, unless specified otherwise in the specifications hereinafter:-

(i)	For all reinforced cement concrete of- thickness 80mm and above	-	20mm graded
(ii)	For all reinforced concrete of thickness less than 80mm	-	12.5mm graded
(iii)	For plain cement concrete 80mm thick and over	-	40mm graded
(iv)	For plain cement concrete 30mm to 80mm thick	-	20mm graded
(v)	For plain cement concrete less than 30mm thick	-	12.5mm thick

3.7.3.2 Where due to less thickness of concrete, the use of 20mm graded crushed stone aggregate is not possible, the aggregate shall be of 12.5mm grading as specified in SSR Part-I without any price adjustment. However, in no case the nominal size of aggregate shall be greater than one fourth the minimum thickness of the member and further it should conform to the requirement given in Clause No 5.3 of IS 456-2000.

3.8 **WATER** : Water shall conform to the requirements stipulated in Clause 5.4 of IS 456-2000.

3.8.1 **ADMIXTURE** : Admixture, if used shall conform to the requirements stipulated in clause 5.5 of IS 456-2000.

PARTICULAR SPECIFICATIONS (CONTD.....)**3.9 MIX OF CONCRETE FOR WORKS**

3.9.1 Unless otherwise specified elsewhere in these particular specifications, mix of cement concrete in various situations shall be as under :-

<u>SITUATIONS</u>	<u>TYPE OF CONCRETE</u>
a) Lean concrete under foundation of walls/plinths/beams/toe beam/steps & in gaps between plinth beam/column footings.	M-10 (Nominal mix)
b) Foundation concrete under column footings	M-10 (Nominal mix)
c) PCC cills, PCC block for holder bats, holdfasts/lugs for doors, windows and ventilators, and plinth protection.	M-15 (Nominal mix)
d) PCC in bed blocks/plates, kerbs padding, benching, splash stones, coping and PCC in any other situation (except sub floor/sub base of floor and flooring) not covered above.	M-15 (Nominal mix)

Note : (i) Unless otherwise indicated PCC/RCC for the work covered under other than Schedule 'A' Part-1 shall be as specified in relevant Schedule or as specified in respective Schedule for Particular Specifications hereinafter or as shown on drawing, shall be followed.

3.10 IMPORTANT REQUIREMENTS OF REINFORCED CEMENT CONCRETE/ PLAIN CEMENT CONCRETE

3.10.1 (i) All the materials, workmanship, inspection and testing for the cement concrete of grade M-10 & M-15 (Nominal mix) to be used for PCC work shall be as per the requirements given in section 2 of IS-456-2000.

ii) Testing of cement concrete cubes shall be carried out all as provided in Clause No 3.11 hereinbefore. The confirmatory tests when required by the GE shall, however, be carried out in MES laboratory situated in HQ CE Pathankot Zone, for which necessary facilities for casting of samples, curing and conveyance of samples etc shall be provided by the contractor at his cost. Testing in Zonal laboratory shall be carried out in the presence of contractor or his authorised representative. In case, the contractor or his authorised representative does not remain present during the time of testing of cubes, the testing shall nevertheless be done by the Officer-in-charge of MES laboratory. The test reports shall be signed by the Engineer-in-Charge and the contractor and the same shall be maintained as a record.

3.10.2 All plain Cement concrete shall be mixed in a mechanical mixer with hopper of approved type. The coarse and fine aggregates for mixing of cement concrete shall be put in the hopper through measuring boxes. Under no circumstances measuring with other than electronic weigh batcher shall be allowed. However, in case of small quantity (i.e the quantity of concrete required being less than one batch of mix), the contractor may, after obtaining written permission of the Engineer-in-Charge be allowed hand mixing. Where hand mixing is permitted, it shall be carried out on a water tight platform and care shall be taken to ensure that mixing is continued until the concrete is uniform in colour and consistency.

3.11 TESTS

3.11.1 The following tests shall be carried out during the execution of work. Tests shall be carried out in accordance with IS-516 and IS-1959. The contractor shall provide all facilities and equipment for casting and curing of test cubes and conveyance of test cubes and other material for testing purpose to MES laboratory, the cost for which shall be borne by contractor. However, testing charges be levied from contractor for tests carried out in MES laboratory as specified here-in-before.

PARTICULAR SPECIFICATIONS (CONTD.....)

- a) **WORKABILITY TEST** : Workability test shall be as per clause 7 of IS-456-2000.
- b) **SAMPLING & STRENGTH OF CONCRETE** :
- i) **SAMPLING**
Minimum frequency of sampling of concrete of each grade shall be in accordance with clause 15.2 of IS-456-2000.
- ii) **TESTING SPECIMEN**
A group of nine test specimens (15cm x 15cm x 15cm) cubes shall be made from each sample.
- iii) Three cubes shall be tested at 7 days and three at 28 days for crushing strength 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 completion of work under the contract. The contractor can not object testing of other cubes for a purpose as a matter of right.
- iv) 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 authorised representative.

3.12 ACCEPTANCE CRITERIA

3.12.1 The concrete shall be deemed to comply with the strength requirement when the conditions given in clause 16 of IS-456 are met.

3.13 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 or a particular 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 mtr in height in one concrete operation.

3.14 WATER CEMENT RATIO

3.14.1 The water cement ratio for the concrete shall be as per IS-456-2000. To achieve this water cement ratio, the moisture contents in respect of coarse aggregate and fine aggregate shall be tested and kept on record. The frequency of testing of moisture contents in respect of coarse and fine aggregate shall be as specified in Appx 'A' to Special Condition here-in-before. The amount of water required shall be adjusted depending upon the result of tests for the moisture contents carried out. For determination of moisture contents in aggregate IS-2386(Part-III) may be referred to.

3.15 CURING

3.15.1 The concrete shall be protected from premature drying for at least 8 days after pouring and shall be cured as directed by the Engineer-in-Charge for a period of not less than 14 days.

3.16 FORM WORK

3.16.1 Form work shall comply with requirements of para 4.11.6.1 to 4.11.6.5 and 7.15.1 to 7.15.10 of MES Sch (Part-I).

PARTICULAR SPECIFICATIONS (CONTD.....)

3.16.2 Formwork shall only be of steel of adequate strength with adjustable steel vertical props and other steel accessories and shall conform to IS 14687 : 1999 (Guide lines for false work for concrete structure).

3.16.3 Scaffolding shall be mild steel stand type only. It shall be double scaffolding having two sets of vertical supports. Steel scaffolding shall be erected in accordance with provisions contained in IS-2750 specification for steel scaffolding and relevant provisions of IS-3696 (Part-I) and Part-II. Please note that neither any hole shall be made in the brickwork nor any support of any element of the building shall be used for scaffolding.

3.17 to 3.20 -----Blank-----

3.21 EXPOSED SURFACE OF CONCRETE

3.21.1 Exposed (RCC/PCC)/Cement concrete surfaces, which are ultimately required to be finished by application of white/colour wash, distemper, cement base paint or oil paint etc shall be plastered with cement and sand mortar(1:3), minimum 5mm thick finished even and smooth after removal of form work.

3.21.2 Exposed surface of lintels, beams, columns etc, which are continuous with plastered surfaces of walls shall be plastered in the same manner as specified for the walls.

3.22 PRECAST CONCRETE ARTICLES

3.22.1 Cement concrete lintels with or without integrally cast chajjas upto 1.5 metre clear span, shelves, bed blocks/plates, cover slabs, fins and the like may either be precast or cast in situ at the contractor's option, unless otherwise specified elsewhere. If precast, these shall be set in cement mortar(1:3). In case of deviation involving these items, pricing shall be done on the basis of cast-in-situ work.

3.23 RCC CHAJJAS

3.23.1 RCC Chajjas (whether casted integral with the lintel or precast and embedded in the wall) shall be provided with a coved fillet of radius 75mm in PCC M-15(Nominal mix) preferably casted while the concrete is still green.

3.23.2 The top of chajjas/faccia shall be treated with 15mm thick cement plaster (1:4) with water proofing compound and PCC M-15 (Nominal Mix) coving shall be provided and rounding at the junction of walls and chajjas/faccia.

3.24 DRIP COURSE

3.24.1 Drip course shall be provided all as shown in drawings No CEPZ/C-TD/018/13 Sheet 1/3 to 3/3

3.25 PCC CILLS

3.25.1 PCC cills shall be provided under all windows/vents. PCC cill of windows shall be extended 100mm on either side of opening to the full bearing of wall and thickness shall be 50mm and shall be projected 50mm beyond the external face of the wall and shall have 12mm x 5mm groove as directed.

PARTICULAR SPECIFICATIONS (CONTD.....)**3.26 PCC CILLS COVERED WITH GREEN MARBLE**

3.26.1 Wherever shown on drawing, 16 to 18 mm thick polished Udaipur green/Baroda green marble stone slab in one piece (machine cut) of approved quality shall be provided over 10 mm thick CM (1:3) bedding layer over PCC cills. The outer edges of the slab shall be bull nosed.

3.27 BEARING OF RCC STRUCTURAL MEMBERS

3.27.1 Irrespective of what is shown on structural drawings, bearing plaster shall be provided as specified/shown on TD drawing. Bearing plaster shall comprise of 20mm thick plaster in cement mortar (1:4) finished even and smooth treated with one coat of white wash and two layers of bitumen laminated water proofing building paper type-I weighing not less than 60gms/sqm each layer laid over it. However, in case of any deviation, bitumen laminated water proofing building paper shall be priced @ Rs. 20.00/Sqm for two layers.

3.27.2 All beams/ bressumers resting on masonry shall be provided with PCC bed blocks of PCC M-15(Nominal mix). The size of bed block shall be as indicated on drawing. In case size is not indicated it shall be 200mm deep, length equal to the width of beam plus twice the depth of block and width equal to the thickness of wall.

3.27.3 The bearing of lintels shall comprise of a full brick with vertical joints in brick work staggered.

3.28 JUNCTION OF RCC ROOF SLABS AND PARAPET WALLS, MOULDS/ FACIA/PIPE ETC(AS APPLICABLE)

3.28.1 PCC padding in the form of coved fillet of radius 75mm shall be provided in PCC M-15(Nominal mix) all along the junction of RCC roof slab and vertical projections as specified above.

3.29 PLINTH PROTECTION

3.29.1 Plinth protection in all situations as shown on drawings/described in BOQ shall be provided with 75mm thick PCC M-15 (Nominal mix) over 75mm thick Hard core laid to slope of 1 in 12 over well consolidated earthen slope. The width of the plinth protection if not shown on drawing shall be 75cm. PCC shall be laid in alternate bays n. exc. 2 Sqm each and finished fair on top without using extra cement. 6mm wide joints shall be provided throughout the thickness of plinth protection in concrete bays. All joints in bays of concrete, shall be filled with mastic filling comprising of one part of heated bitumen Vg-30 grade and 3 parts of sand (all by weight).

3.30 PCC BENCHING

3.30.1 PCC Benching/stopper shall be provided as shown on drgs and the radius of the round portion shall be 75mm.

3.31 CONCRETE PADDING

3.31.1 Where the required height of walls, openings is not obtained with adequate size of PCC blocks/stone/brick, the same shall be obtained by providing concrete padding of PCC M-15(Nominal mix).

3.32 SEISMIC STRENGTHENING PROVISION

3.32.1 Seismic strengthening provision shall be provided to buildings all as per relevant IS &/or shown on structural drawings.

PARTICULAR SPECIFICATIONS (CONTD.....)**3.33 RCC SHELVES**

3.33.1 RCC shelves shall be provided as per details shown on drawings. Where the thickness of shelf is not indicated, it shall be 50mm finished thickness RCC shelves shall be finished in CM 1:3, 5mm thick where there is no other topping is specified / provided shown on drawing over it. The edges of RCC shelves shall be rounded off to a minimum radius of 5mm.

3.34 RCC JALI

3.34.1 RCC Jali (with mix 1:2 using aggregates of size 6 mm and below) shall be precast with wire reinforcement as per drawings (but not less than 4mm dia) and jointed in cement mortar (1:3). Thickness where not shown on drawings shall be 50mm. Faces of RCC jali shall have fair and even surfaces. Exposed surfaces of RCC jali shall be finished in CM 1:3, 5mm thick. In the event of deviation, RCC Jali shall be priced on cast in situ PCC type B0 subject to uniform percentage as mentioned in Note No 12 of Sch 'A' note here-in-before. The type of RCC jali shall be as shown on drawings."

4. BRICK WORK**4.1 MATERIALS :****4.1.1 Bricks :-**

4.1.1.1 Bricks shall be kiln burnt, available locally or in the neighboring region, best quality conforming to the samples kept in CWE/GE's office. Unless specified otherwise in Schedule 'A'/Notes on drawing, bricks shall be old size bricks having minimum crushing strength of 75 Kg/Sqcm. Water absorption of bricks shall not exceed 20% when tested in accordance with IS-3495. Sampling and testing of bricks shall be carried out as per IS-5454 and IS-3495. The nominal size of brick shall be 230mm x 115mm x 75mm. The tolerance in the dimensions shall +/- 8 percent.

4.1.2 **CEMENT** : Refer clause 3 herein before.

4.1.3 **SAND** : Sand for mortar shall be as specified in clause 3.9.1 here-in-before.

4.2 WORKMANSHIP :

4.2.1 Unless otherwise specified here-in-after and/or shown on drgs, brick work in various situations shall be built in cement mortar, as under :-

- | | | |
|---|---|-------------------|
| (i) Brick work in half brick thick and under, the independent pillars and reinforced brick work including foundation and brick work in buildings having load bearing structure. | - | Cement Mortar 1:4 |
| (ii) Brick work in all other situations | - | Cement Mortar 1:6 |

4.2.2 Half brick thick wall of height more than 90cms shall be reinforced with two Nos 8mm TMT steel bars, placed horizontally at every fourth course, starting from top of first course from floor and anchored in wall/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.

4.2.3 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' Bricks.

4.3 **FI TIES.** Brick masonry coming in contact with RCC columns shall be anchored to columns with MS flat iron ties, starting from 15cms above plinth beam/band/DPC. The MS iron ties shall be of 40mm x 3mm flat iron, 30cm long provided at every fourth course. At least 15cm shall be embedded inside the column.

PARTICULAR SPECIFICATIONS (CONTD.....)**4.4 DAMP PROOF COURSE**

4.4.1 Irrespective of what is shown on drawings the DPC shall be provided for all masonry walls at plinth level except where plinth beams occurs. Damp proof course shall consist of a layer of 40mm thick PCC M-20(Nominal mix) using 12.5mm stone aggregates with water proofing compound conforming to IS-2645 liquid grade as per manufacturer instructions. A layer of hot blown bitumen of grade VG-30 shall be applied @ 1.2 Kg/Sqm over DPC after 14 days of curing. DPC shall be provided on half brick walls of height more than 2100mm. However in case of any deviation, the rate for hot blown bitumen of grade VG-30 shall be applied as available in SSR for paving bitumen.

4.4.2 Integral liquid water proofing admixture shall be of Make as specified in Appendix 'F' and shall be conforming to IS-2645-1975, IS-9103-1999. It shall be mixed with cement concrete in the proportion and manner as given in manufacturer's instructions. Deviation, if any, shall be priced at the rate of 0.4% by weight of cement.

4.5 LAYING AND BONDING

4.5.1 Bricks shall be laid and bonded, all as specified in clauses 5.23 and 5.24 of MES Schedule Part-I as applicable to old size bricks (FPS conventional bricks).

4.5.2 Half brick walls upto 2100mm height shall rest directly on sub base of floor. Half brick walls above 2100mm height and dwarf walls shall be provided with foundations.

5. --Blank--

6. WOOD WORK**6.1 TIMBER**

6.1.1 Timber for all joinery and wood work shall conform to specifications given in clause 7.3 of the MES Schedule Part-1 and shall be within the permissible limits of defects in clauses 7.4 and 7.5 of the MES Sch Part-1.

6.1.2 Timber shall be well seasoned whether air or kiln dried at the discretion of the contractor (except factory made door shutters which shall be kiln seasoned only) but without any price adjustments. The moisture contents of timber shall not exceed the limits laid down in clause 7.7 of MES Schedule Part-1.

6.1.3 Maximum permissible moisture content in timber used for various purpose is 12%. The contractor shall get the timber kiln seasoned tested to ensure that permissible moisture contents is not exceeded.

6.2 PRESERVATION OF TIMBER

6.2.1 Preserving antitermite treatment shall be carried out to all wood work and joinery fabricated by the contractor at site. Factory made wood based boards are not to be treated at site with any chemical.

6.2.2 Chemical used for antitermite treatment to woodwork and joinery shall be copper naphanate or any other chemical specified in IS-401 applied in any one of the manners specified in the ibid IS.

PARTICULAR SPECIFICATIONS (CONTD.....)**6.3 SPECIES OF TIMBER**

6.3.1 The species of timber and prefabricated wood products (ie plywood, wood particles board etc) shall be as specified below :-

- i) Paneled/glazed/wire gauzed shutter for doors - Factory made shutter using (Styles, rails, glazing bars only, beading/ moulding fillets) - IInd class hard wood
- ii) Any wood work not covered above and hereinbefore - First class hard wood (teak)
- iii) Wooden plugs, cleats, choke stops etc. - Second class HW (SAL)

6.3.2 In the event of deviation the pricing shall be done at the rates given in SSR Part II. However, price adjustment will be made either to the unit for the building in Schedule 'A' Part-I or while pricing any deviation on account of kiln seasonal as specified here-in-before, as the element is deemed to be included in the rates.

6.3.3 Paneled shutters shall be provided with beading all-round the panel inserts on one side of door. The size of beading shall Be 20mm in width and tapered thickness from 10mm to 5mm.

6.4 PARTICLE BOARD

6.4.1 Particle board shall be of (medium density) general purpose, flat pressed, three layers, Gde-I (Exterior Grade) type II using BWP type synthetic resin adhesive conforming to IS-3087 and shall be ISI Marked, all as specified in Para 12.13 of MES Schedule Part-I. Particle board shall be of uniform thickness and density throughout. Both the faces of particle board shall have sanded smooth finish. Where thickness of particle board has been shown as 20mm, it shall be read as 18/19mm. Exposed edges of particle board shall be with 6mm thick teak wood lipping and finish as specified. Sealant SR 998 shall be applied as per manufacturer's instructions on the edges of particle board before insertion or for fixing lipping to all particle board.

6.5 PLYWOOD

6.5.1 Plywood where indicated shall be BWR grade bonded with phenol formaldehyde synthetic resin adhesive and marked with IS -303 for general purpose plywood and IS-1328 for decorative face plywood. Facing shall be of teak veneer or commercial veneer as shown on drawing/specified.

6.6 PRE-LAMINATED PARTICLE BOARD

6.6.1 The prelaminated particle board in all situations shall be three layered exterior grade ISI marked (IS :12823 Gde I) with prelamination of approved shade on one side and balancing white on other side, irrespective of what is shown on drawings.

6.6.2 Pre-laminated particle Board 12/18/25mm thick as specified or of thickness shown on drgs, shall be melamine faced, 3 layered, flat pressed, grade wood as per IS 12823 (1990) and its core conforming to IS 3087 (1985) exterior grade, type II 'grade I' ISI marked single sided (one side laminated/decorative) as indicated on drawings all as approved by GE. Wherever 18mm thick Pre-laminated particle board is indicated it shall be equivalent 18mm to 19mm thick unless otherwise shown on drawings, pre-laminated particle board for shutters shall be one side laminated/decorated the other side balancing white. Sealant SR-998 WP shall applied as per manufacturer's instructions on the edges of particle board before insertion or before fixing lipping.

6.7 SURFACE FINISH

6.7.1 Exposed surface of carpenters work shall wrought except surfaces buried of in contact with concrete/brick work etc which shall be left clear sawn.

PARTICULAR SPECIFICATIONS (CONTD.....)**7. JOINERY****7.1 WORKMANSHIP**

7.1.1 Joinery shall be wrought all over. Timber exposed to view shall be wrought and timber not exposed to view shall be clean sawn. The workmanship and fixing of joinery shall be as per clause 8.11 to 8.22 of MES Sch Part I.

7.1.2 The dimensions of the various components of joinery (other than block board shutters) shown on drawings, wherever at variance, shall supersede the standard dimensions mentioned in clause 8.20 of the MES Schedule Part I. However, for pricing deviations involving any joinery work, the rates in MES Sch (Part-II) for the corresponding joinery items shall be applicable.

7.1.3 Unless otherwise specified, all work both carpenter's and joiner's shall hold full dimensions as shown on drgs except that an allowance of 1.00mm shall be allowed for each wrought face. Wooden beads and fillets shall however, hold the full dimensions as shown on drgs. The contractor shall also maintain the overall sizes of the doors and windows etc. as shown on drgs.

7.1.4 Timber members upto 3.00 metre in length shall be in one piece.

7.1.5 Plugging to walls shall be done with wooden plugs as per clause 7.29 of the MES Schedule Part-I.

7.2 FACTORY MADE PANELLED/GAUGED/GLAZED SHUTTERS

7.2.1 All paneled/glazed/wire gauged shutters of doors shall be factory made, manufactured in accordance with IS-1003, made of well selected kiln seasoned, chemically pressure treated, 2nd class hardwood shall be all as specified in clause 6.3.1 (i) hereinbefore. Panel inserts shall be 12mm thick BWP grade commercial ply, conforming to IS specifications. Thickness of shutter shall be 35mm thick. Factory made shutters shall be procured from the manufacturers as listed in Appendix 'F' here-in-after.

7.2.2 A Tolerance of (plus/minus) 3mm on width and height only shall be allowed, provided the shutter snugly fits into the frame. The thickness of shutters given in drawing shall be the finished thickness and no tolerance on this shall be permissible.

7.2.3 The GE should visit the factory when a lot of factory made paneled shutters are ready for despatch to site. The GE should ascertain whether the testing facilities are available for seasoning, preservative treatment of timber and shutters are manufactured as per IS-1003 specifications.

7.2.4 Testing of shutters is mandatory from Govt approved lab as per IS-1003 Part-I before incorporation in the work. Shutters shall be allowed to be incorporated in the work only after the GE is satisfied with the quality of the shutters brought by the contractor. The cost of testing shall be borne by the contractor.

8. BUILDERS HARDWARE**8.1 GENERAL**

8.1.1 Items and quantities:-Hardware fittings shall be provided according to the scales indicated in the schedule of iron mongry on the relevant drgs and in conformity with any note that may be appearing on particular drawings.

8.1.2 In case the size of particular fitting is not given in the drawings, it shall be of size as decided by the GE.

PARTICULAR SPECIFICATIONS (CONTD.....)

8.1.3 All articles of builders hardware shall bear ISI marking. In case ISI marked articles are not manufactured, those shall conform to the relevant IS specifications given in the MES schedule for the relevant item.

8.1.4 Finish of articles shall be as specified in clause 9.2.4 of the MES Schedule Part-I.

8.1.5 Screws used for fixing the articles of builders hardware shall be as specified in clause 9.2.6 of the MES Schedule(Part-I).

8.1.6 Irrespective of what is shown on drgs, door handles, tower bolts and sliding door bolts & other such fixtures/fitting shall be aluminium powder coated anodised duly ISI marked for all buildings covered under Sch 'A' Part-I

8.2 ARTICLES**8.2.1 BUTT HINGES**

8.2.1.1 Butt hinges shall be cold rolled, mild steel, medium weight all as specified in clause 9.7.2 of MES Schedule Pt-I.

8.2.2 WIRE CLOTH

8.2.2.1 Wire cloth to be used for wire gauged shutters shall be galvanised mild steel with average width of aperture 1.18mm and nominal dia of wire 0.457mm all as specified in clause 9.25 and 9.32 of MES Schedule Part-I.

8.2.3 CURTAIN RODS

8.2.3.1 Curtain rod as per details shown in drawing, shall be provided to doors & windows in the locations as indicated on the drawings. Curtain rods shall be of 19 mm bore aluminium pipe fixed in bracket all as shown on drawing.

9. STEEL AND IRON WORK**9.1 GENERAL**

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

9.1.2 Items of steel and iron brought to site by the contractor for incorporation in the work shall be free from defects all as specified in clause 10.4.5 and 10.17.6 of SSR Part-I and shall be conforming to IS specifications as given below :-

- | | | |
|--|---|---|
| (i) Structural steel standard quality | - | Conforming to IS-2062. |
| (ii) Structural steel ordinary quality | - | Conforming to IS : 1977 |
| (iii) Reinforcement steel | - | High strength deformed steel bars produced (TMT bars)by Thermo Mechanical Treatment Process (TMT steel bars of grades Fe 500/Fe 500D and Fe 550/Fe 550D) meeting all other requirements of IS:1786 |
| (iv) Galvanised steel sheet (plain & corrugated) | - | Conforming to IS-277 |
| (v) Fabric Reinforcement for concrete | - | Conforming to IS-1566 |

PARTICULAR SPECIFICATIONS (CONTD.....)**9.2 MATERIALS****9.2.1 REINFORCEMENT STEEL**

9.2.1.1 TMT steel bars manufactured by SAIL/RINL/TISCO/ M/s Shyam Steel Industries/M/s SPS Steel Rolling Mills Ltd/ M/s Jai Balaji Industries/ M/s Jindal steel & Power Ltd & SRMB Srijan Ltd shall be procured directly from the manufacturers for the works.

9.2.1.2 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 borne in accordance with Condition 10A of IAFW-2249 i.e. testing charges shall be borne by the Deptt if the test results are found in order otherwise these shall be borne by the contractor. However, the contractor at his cost shall provide all facilities required for the testing and cost of materials consumed in tests shall also be borne by the contractor.

9.2.2 STRUCTURAL STEEL

9.2.2.1 Structural steel shall also be procured from primary producers i.e. SAIL/RINL/TISCO. In case of non availability with primary producers, the structural steel can be procured from approved secondary producers (as mentioned in Appendix 'F') who manufacture structural steel out of ISI marked billet and are having BIS Certification of ISI marking on their products 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 not be no price adjustment in use of structural steel procured from secondary producers.

9.2.2.2 Independent testing of structural steel by the GE shall be at the discretion of the GE in case of procurement from main producers and testing charges shall be borne in accordance with Condition 10A of IAFW-2249 i.e. testing charges shall be borne by the Deptt if the test results are found in order.

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

9.2.2.4 In both the cases at sub Para 9.2.2.2 & 9.2.2.3 above, the contractor at his cost shall provide all facilities required for the testing and cost of materials consumed in tests shall also be borne by the contractor.

9.3 PROCUREMENT

9.3.1 The GE for every lot of steel shall obtain the particulars of the manufacturers/suppliers of steel from the contractor separately. The form given at Appendix 'C' will be used for this purpose.

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

9.3.3 The GE will ensure that contractor place their demand/requisition of steel with adequate lead time. The steel will be procured from the storage depots of the main producers/approved secondary producers and not from their authorised agents/dealers.

9.4 DOCUMENTATION

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

PARTICULAR SPECIFICATIONS (CONTD.....)**9.5 TOLERANCE**

9.5.1 Rolling and cutting tolerance of structural steel products shall be as specified in IS-1852. Tolerance on size and weight of reinforcement bars shall be as specified in clause 10.17.4 and 10.17.5 of SSR part-I. Steel with less weight than permissible shall not be used.

9.6 SCHEDULE OF SUPPLY

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

9.7 STORAGE, ACCOUNTING, PRESERVATION AND MAINTENANCE

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

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

9.8 TESTING OF STEEL

9.8.1 The manufacturer is to carry out inspections and testing of steel in accordance with the relevant BIS provisions. The contractor shall submit the manufacturer's test Certificate in original along with the Test Sheet giving the results of each mechanical test as applicable and the chemical composition of the steel or authenticated copy thereof, duly signed by the manufacturer with each consignment. The Engineer-in-Charge shall record these details in Steel Acceptance Register, as given at Appendix 'C' after due verification and send a certified true copy of test sheet to GE for his records. The GE/CWE shall also organise independent testing of random samples of steel drawn from various lots from National Test House, SEMT Wing CME, Regional Research Labs and NABL approved Lab, as per the recommended minimum frequency shown in Table at Appendix 'D'. Samples from each lot should be tested for quality and elongation. The elongation shall not be less than 18%. Cost of testing shall be governed as per Conditions of contract. The cost of samples, transportation & shall, however, be borne by the contractor. The records of such checks would be maintained in the steel test register.

9.8.2 Quality of steel shall be ascertained by following tests :-

(i) THERMO MECHANICALLY TREATED BARS.

Tensile test, bend test and rebend test shall be carried out as per Clause 8 of IS-1786. Test specimen shall be taken as per clause 10 of IS-1786-1985. Minimum tensile strength, yield stress and minimum elongation for TMT steel bars of grades Fe 500/Fe 500D and Fe 550/Fe 550D shall be as per clause 7 of IS-1786.

(ii) STRUCTURAL STEEL.

Tensile test and bend test shall be carried out as per clause 7 & 8 of 'IS-2062'. Minimum yield stress shall be 240 N/Sqmm.

(iii) CHEMICAL TEST.

PARTICULAR SPECIFICATIONS (CONTD.....)

9.8.3 Chemical test shall be carried out to ascertain chemical composition which shall conform to the norms laid down in relevant ISI codes. For TMT bars, Chemical Composition shall be as given in Appendix 'E' attached.

9.8.3.1 If the test fails and steel has been incorporated in the work, the further execution of work with that steel will be stopped and matter shall be referred to the Accepting Officer. The decision of the Accepting Officer regarding acceptance of work with the steel which has failed in test with price adjustment as decided by him or redoing the work with steel of proper specifications or any other decision shall be final and binding on the contractor. In case Accepting Officer decides to remove the sub standard steel, the work executed using sub standard steel shall also be demolished and site cleared by the contractor without any extra cost to the Government.

9.8.3.2 The TMT steel received from secondary producers shall be tested by GE/CWE in person, before incorporation in the works by simple field tests and records shall be maintained. However, CWE will carry out random checks where he has not tested the steel by himself and record his remarks in the steel test register. Simple field test involves sand papering the X-section of the TMT bars 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.

9.8.4 METHOD OF MEASUREMENT

9.8.4.1 All items of steel brought at site shall be entered in MB for record purpose "Not to be abstracted" before incorporation in the work and shall be signed by Engineer-in-Charge and the contractor indicating the diameters and length of bars, quantities, voucher number with date. It shall form the basis to allow advances on account through RAR's. While allowing advance on such materials, quantities so entered in MB shall be reduced by 2% to account for waste and off cuts and every care shall be taken to ensure that all such quantities will be utilised in the work.

9.8.5 RECORD OF MEASUREMENTS

9.8.5.1 Before casting of concrete, reinforcement incorporated shall be measured by rep of GE and contractor jointly. These measurements shall be entered in a register for the purpose of record and shall be signed by contractor's rep and Engineer-in-Charge. Proper reference of Drg. No., location, date etc. shall also be given therein.

9.8.6 WEIGHT CONVERSION.

9.8.6.1 Conversion factor for various sections/sizes of steel shall be as per conversion tables given in SSR. Where conversion table is not available in SSR, IS conversion.

NOTES : Mixing of different types and grades of bars shall not be done in the same structural members as main reinforcement to satisfy clause 26.1 of IS-456 of 2000 shall be avoided.

9.9 STEEL REINFORCEMENT :

9.9.1 TMT bars shall be provided irrespective of whatsoever shown on drawings.

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

9.10 WELDING.

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

PARTICULAR SPECIFICATIONS (CONTD.....)**9.11 GUARD BARS.**

9.11.1 Irrespective of what is shown on drawings, mild steel guard bars shall be provided to all steel windows and ventilators all as specified and shown on drawings as per detail shown on drawings Nos. CEPZ/C-TD-026/13 Sh 1/5 to 5/5 & CEPZ/C-TD/116/13 sh 1/2 & 2/2.

9.12 HOLD FASTS/LUGS.

9.12.1 Flat iron hold fasts/lugs shall be provided by welding as and where shown on drgs, (however minimum thickness shall not be less than 5mm) except those chowkats which shall be fixed with bolts/nuts as per details shown on drawings. Holes in wooden chowkats shall be plugged with hard wood plugs. The hold fasts/lugs shall be embedded in PCC 1:2:4 blocks (Type B) for one brick thick and over shall be of size 230x230x150mm and that for half brick wall shall be 230 x 115 x 150mm for doors and 100x100x100mm for windows/ventilators respectively. However, GE may allow to use adequate number of approved DASH THRIUGH fasting bolts in case of steel windows/doors to be fixed with RCC columns where not shown on drawing without any price adjustment.

9.13 STEEL WINDOWS/VENTS (BOX TYPE)**9.13.1 GENERAL**

9.13.2 Standard steel windows of over all sizes shown on drawing shall be provided alongwith all standard fittings in the situation shown therein. Minor variation in overall sizes to suit the standard practice of the manufacturers will however be accepted without any price adjustment".

9.13.2.1 Standard steel windows of overlap sizes shown on drawing shall be provided in the situation shown therein minor variation in overall sizes to suit the standard practice of the manufacturers will however be accepted without any price adjustment.

9.13.2.2 Steel windows box type for frame and shutter shall be provided/ manufactured all as per relevant drawings. These shall be got manufactured from any of the manufacturers given in Appendix 'F'.

9.13.2.3 Fixed and openable shutter frames shall be fabricated of sections specified hereinbefore, corners welded to form a solid fused welded joint. The process of welding adopted shall be flash butt welding which gives a continuous and solid joint all along the place of meeting of the members. Welds shall be properly ground and left with no protrusion of welding material at the joint. Steel shutter in contact with masonry/concrete shall be tarred and other exposed surfaces shall be painted as specified here-in-after.

9.13.2.4 In case of any deviation pricing of steel window/ventilator with box type frames shall be done at the net rate of Rs. 75.00/Kg. No deviation percentage will be added on rates mentioned hereinbefore. Rate is net and inclusive of all overhead charges.

9.14 PRESSED STEEL FRAMES FOR DOORS

9.14.1 Machine Pressed steel frames for doors including chock stop shall be fabricated from 1.25mm thick mild steel plain (Black) sheet (comply with the requirement of IS-4351) and shall be provided all as per details shown on drawings and as specified in clause 10.27 of MES Schedule (Part-1). Pressed steel frames shall be filled with PCC M-10 (Nominal mix) using 12.5mm size crushed stone aggregate before fixing of door frame in position including providing shock absorbers. Steel surfaces in contact with PCC/masonry shall be tarred and other exposed surfaces shall be painted as specified here-in-after. The pressed steel door/cup board frames shall be factory made of manufacturers given in Appendix 'F'.

9.14.2 Fixing of hinges to the frame : Mild steel flat iron measuring 120x30x6mm thick shall be welded inside to the pressed steel frame for fixing of the butt hinges with screw from outer side of the frame. Mortar guard sheet 1.25mm thick around MS flat iron to be provided behind the hinges. The plate shall be threaded to the required size of the machine screw.

PARTICULAR SPECIFICATIONS (CONTD.....)

9.15 **GALVALUME SHEET ROOFING** : Galvalume sheet shall be 0.50 mm thick (total coated thickness), 550 Mpa minimum, yield strength. It shall be coated with hot dip alloy of 55% Aluminium 43.5% Zinc 1.5% Silicon and finished with resin coat on both surfaces @ 150 gm/sqm of coating (total both surfaces) having overall width and laid width as specified and shall be fixed using hot dip galvanized, self drilling and self tapping screws neoprene and EPDM washers. Penetrations and laps in sheet shall be sealed by using proper sealant profile. HDPE fillers shall be provided wherever required to close voids between sheets, sheet & fasteners etc.

10. RCC ROOF

10.1 RCC roof slabs shall be laid to the slope as shown in drawings. Slab surfaces shall be roughened and 15 mm thick plaster in CM 1:4 mixed with water proofing admixture shall be applied on roof slab when the concrete is still green to bring it to level and grade as specified.

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

10.2. **WATER PROOFING TREATMENT TO RCC ROOF SLAB (BUILDINGS COVERED UNDER SCH 'BOQ** : Water proofing treatment shall be provided with APP modified membrane on prepared surface as per manufacturer's instructions and under strict supervision of manufacturer technical representative.

10.2.2 The water Proofing treatment to RCC roof shall be consisted & provided as mentioned below:-

(a) The surface to be cleaned of all foreign material such as fungus, moss, dust etc. by wire brushing and dusting.

(b) Sprinkle water on the surface and ensure water does not stand anywhere. If it is so, the roof surface shall be levelled with cement mortar (1:3).

(c) Applying roof treatment on top of roof with APP modified membrane with non-woven polyester reinforcement/mat (centre core) with thermal insulation with white mineral gravel finish on upper side of weight not less than 3.5 Kg/Sqm & thickness not less than 3mm, laid by torch application method with overlap 100mm on length side and 100mm on the width side as per manufacturer's instructions over a coat of approved cold applied bituminous oil based primer (IS-3384) @ 0.40 Litre/Sqm complete all as specified.

10.2.3 Manufacturer/approved agencies for APP modified membrane shall be as given in Appendix 'E' attached.

10.2.4 At least one test consists of three sample specimen at random from each lot shall be tested from the govt approved lab before incorporating in the work. The testing charges shall be borne by the contractor.

10.2.5 In case the roof is accessible, PCC tiles of size 300x300x25mm thick shall be laid over a separate layer of geotextile over APP. The tiles shall be laid over 10mm thick in CM 1 :4 and jointed and provided in CM 1:3.

10.2.6 Water proofing treatment to RCC slab of octagon hall of religious building hall however shall be as specified in clause 10.7 A here-in-after. However WPT of flat roof of religious Institute should be provided as per PS clause 10.2.2 above

PARTICULAR SPECIFICATIONS (CONTD.....)**10.3. FLOODING TEST TO RCC SLABS**

10.3.1. The contractor shall carry out flooding test of each RCC slab after 28 days of curing of RCC slabs. In case of roof slab in addition to above flooding test for second time shall be carried out on completion of the water proofing treatment. Flooding test shall be carried out by forming earthen bunds over part of the roof slab and at selected locations as directed by the GE. Water will be ponded for a minimum depth of 50mm and shall allowed to remain over the terrace/roof for a period of 72 hours. During this period if any defects such as leakage, seepage, wet patches etc. is noticed, it shall be rectified by the contractor to the satisfaction of the GE. In case of leakage more tests shall be carried out at the discretion and to the entire satisfaction of GE.

10.4 WATER PROOFING TREATMENT OF RCC CHAJJA/FACIA

10.4.1 Top of RCC Chajja/Facia shall be treated with 15mm thick cement plaster (1:4) with water proofing compound and PCC M-15 (Nominal mix) coving shall be provided and rounding at the junction of walls and chajjas/facia.

10.5 GUARANTEE

10.5.1. The defects liability period of water proofing treatment 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 the certified date of completion for the work by the GE. The contractor may obtain a similar guarantee from the specialist firm engaged by him for the purpose.

10.5.2 A sum equal to 10% of the quoted amount as per Schedule 'A' / BOQ for which water proofing treatment has been specified, will be held back out of the contractor's bill as security deposit for the guarantee period of 10 years which shall be refunded to him after expiry of this period. Alternatively, the contractor may give a separate interest bearing security deposit or bank guarantee bond to GE valid for ten years for sum mentioned above.

10.5.3 Should the GE at any time during the construction or prior to the expiry of said Guarantee period of 10 years finds that there is seepage/leakage in the buildings wherein water proofing treatment has been given under the contract, the contractor shall on demand in writing from the GE specifying the bldgs complained of, notwithstanding that the same may have been inadvertently passed, certified and paid for, forthwith undertake to carry out such treatment which may be necessary to render the buildings free from leakage/seepage at his own expenses, till expiry of the Guarantee period of ten years.

10.5.4. In the event of contractor's failure to comply with GE's directions within the stipulated period, the work shall be carried out at the risk and cost of the contractor. The liability of the contractor under this condition shall not, however, extend beyond the period of the 10 years as elaborated in Para 10.5.1 hereinbefore unless the notice was served on the contractor previously to rectify such defects.

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

10.5.6 The contractor shall provide a plaster board of adequate size but not less than 45cmx30cmx2cm thick in CM (1:4) on all buildings as directed by the Engineer-in-Charge and indicating thereon the CA No, Name of Contractor and date of expiry of the guarantee period. The cost of plaster plate is deemed to be included in cost of the building.

10.6 WATER PROOFING TREATMENT TO SUNKEN SLAB/PORION

10.6.1 The water proofing treatment to sunken slab /portion shall be provided as mentioned below:-

- (a) The sunken slab shall laid to a slope of 1:40 outwards with GI pipe (MG) spout as shown on drawing, projecting atleast 150mm beyond outer face of wall. A coving of 75mm size shall be provided using PCC M-15 type B0 at the junction of vertical and horizontal surface of the sunken floors.

PARTICULAR SPECIFICATIONS (CONTD.....)

- (b) 15mm thick plaster in cement sand mortar (1:4) mixed with water proofing compound (conform to IS 2645-Specifications for integral cement water proofing compound) as approved as per manufacturer's instructions shall be applied both on floor and wall. The surfaces then shall be cured and allowed to dry. All the joints of pipe shall be sealed properly as per the instruction of agency who is carrying out water proofing treatment.
- (c) Apply a coat of APP modified membrane on floor as well as on wall as per manufacturer's instructions of make/manufacturers as specified in clause 10.2.3 here-in-before. After the treatment is over, sunken portion shall be kept full of water for atleast one week to check that no seepage is seen from the external surface.
- (d) Sunken floor then shall be filled with PCC M-10 (Nominal mix) using 20mm graded crushed stone aggregate complete all as specified to receive floor toping as specified after carrying out the required tests of water proofing.

10.7 RAIN WATER PIPES AND ACCESSORIES

10.7.1 Where ever Rain water pipes shown on drawings, the same shall be of PVC (S.W.R) pipes Type 'A' conforming to IS:13592 and fittings conforming to IS:14735 of makes as specified in Appendix 'F'. The diameter of rain water pipe shown/indicated on drawings as 100mm and 150mm, the same shall be amended to read as 110mm and 160mm respectively. The pipes and fittings shall be secured to walls below all joints with mild steel holder bat clamps as specified in clause 11.34.5 of the MES Schedule Part-I. The colour of pipes shall be as decided by GE. The pipes and fittings shall be jointed with rubber rings and fixed to walls as indicated.

10.7.2 Wherever pipe as indicated 'PVC', the same shall be read as 'UPVC (SWR)'. In case of any deviation in 'UPVC' pipe, rate of MES schedule for PVC (SWR) shall be applicable subject to deviation percentage.

10.7.3 Where the pipes have been encased in masonry/brick work/concrete works, bracket/holder bat clamps etc need not be provided for fixing the pipes. Bends will be acceptable in lieu of shoe or nose, without any price adjustment. Irrespective of what is shown on drawing, the gap between shoe/bend & plinth protection/splash stone shall be packed with PCC M-10 (Nominal mix). Sealing compound "M" seal or equivalent shall be provided around rain water pipes passing through RCC chajjas/roof projections as shown on drawings.

10.7.4 The grating shall be of CI round type weighing not less than 0.5 Kg each, provided and fixed of the inlet of rain water pipe.

10.7.5 Splash stones as specified here-in-before shall be provided below the rain water pipe.

10.7.6 Spouts and pipe outlet where shown on drawing shall be of GI tubing medium grade as per IS-1239. Size and length shall be as shown on drawing, wherever, the same is not shown on drawing it shall be 50mm bore, projecting 250mm beyond outer face of walls. Spout/GI Pipe/Conduit wherever passed through beam/RCC, it shall be put in position at the time of casting of beam/RCC.

10.8 FLOORING :**10.8.1 GENERAL :**

10.8.2 Floors of various types shall be provided as specified here-in-after and as shown in drawings.

10.8.3 Floors shall be laid to levels or to falls as shown on drawings/directed by Engr-in-Charge. Floor shall be sunk below the general floor level to the required depth where shown in drawings, by suitably sinking the slabs at the time of casting them.

10.8.4 Floor finish shall be carried over through out all openings and dwarf walls.

PARTICULAR SPECIFICATIONS (CONTD.....)

10.8.5 Surface of concrete floors unless otherwise specified shall be finished even and smooth using extra cement with steel trowels.

10.8.6 The dividing line between the floors of different type where ever they so met between adjoining rooms shall be determined on the basis of finish visible when the doors are closed and the applicable finish shall accordingly be provided. Exposed edges of floors shall be finished to match with top surface finish.

10.8.7 Sub base shall not be laid in panels.

10.8.8 Cement concrete sub base or sub base floor and wearing coat shall be laid separately and not monolithically.

10.8.9 PCC floor topping shall be laid in square or rectangular panels with each side not exceeding 1.2 m.

10.8.10 If any extra thickness of concrete is required to provide slope in the floor as directed by the Engineer-in-Charge, the same shall be provided by the Contractor at no extra cost to the department.

10.8.11 Where floor finish is to be laid over RCC slab, the top surface of RCC slab shall be cleaned with hard brushes and given a coat of neat cement slurry using 3 Kg of cement per square metre just before laying the floor finish.

10.8.12 The lump sum quoted by the tenderer shall also include for cement concrete floors at location which are obviously and fairly intended and which may not have been specifically referred to in the tender documents but which are essential for the execution and completion of the work in a workmen line manner and sound construction.

10.8.13 Marble aggregate (Chips) shall be of size 7mm to 10mm for terrazzo floors. The colour of marble chips be as shown on drawings or as approved by GE, when not indicated in drawings but in no case black marble aggregates (black chips) shall be used.

10.9 MATERIALS**10.9.1 CERAMIC GLAZED TILES**

10.9.1.1 Ceramic glazed floor/wall tiles shall be of 1st quality and shall conform to IS: 13753. The size of tiles, if not indicated, shall be 450x300x7mm/350x250x7mm thick (in case of walls) and 300x300x7mm/ 600x600x10mm thick non skid tiles (in case of floor).

10.10 SKIRTING/DADO :**10.15.1 CEMENT SKIRTING/DADO**

Cement skirting/dado shall be provided in locations as indicated in the drgs. Skirting/dado shall be finished even and smooth with steel trowel using extra cement. Height of cement dado/skirting, where not shown on drawings, shall be 1.15 metre for dado and 10 cm for skirting. The thickness of skirting/ dado shall be 5mm in cement mortar 1:3 over 10mm thick in CM (1:4).

10.16 INTER LOCKING TILES/ PAVERS :

Inter locking precast concrete Tiles/pavers flooring shall be provided at locations as shown in drawing / mentioned in BOQ. Interlocking precast tiles shall be laid over 20mm thick screed bed in cm (1:4) over 75mm thick PCC (1:5:10) type E-2 over rammed earth. Precast concrete Interlocking paving blocks 60mm thick shall be of pattern (hexagon, rectangular or other pattern) and of colour as approved by GE. These Precast concrete Interlocking paving blocks shall be laid over 50mm thick sand filling/cushioning over 75mm thick PCC (1:5:10) type E-2 using 40mm graded stone aggregate over rammed earth. Interlocking paving blocks/tiles shall be procured from the manufacturers as mentioned in Appx 'F'.

PARTICULAR SPECIFICATIONS (CONTD.....)**11. PLASTERING AND POINTING****11.1 GENERAL**

11.1.1 Plaster and skirting/dado shall be returned in jambs, soffits of lintels and windows etc.

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

11.1.3 All plastered surfaces shall be towelled to even and smooth surfaces without using extra cement.

11.1.4 All external finishes shall be carried out upto 15cm below ground level except where plinth protection etc is provided.

11.1.5 Thickness of cement plaster mentioned in Sch of finishes shall be finished thickness exclusive of dubbing. Dubbing may, however, be done in one operation with plaster.

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

11.2. MATERIALS :

11.2.1 CEMENT - Refer clause 3.2 here-in-before.

11.2.2 SAND - Refer clause 3.9.1 here-in-before.

11.3 GROOVES AT THE JUNCTION OF MASONRY AND RCC

11.3.1 No grooves shall be provided at the junction of brick wall and RCC work on the external surface of buildings. A strip of chicken wire mesh 15 cm wide having aperture approximately 12.5 mm in least dimension with a weight not less than 0.40 Kg per Sqm shall be fixed over the junction of RCC and brick work on the external surfaces of buildings before plastering . The chicken wire mesh shall be fixed on the wall surface with the help of nails of suitable size. The chicken wire mesh shall be fixed in a manner that it covers 7.5cm of brick work and 7.5 cm of RCC work. However in case of lintel band, chicken wire mesh shall be fixed covering whole width of lintel band and projecting 7.5 cm each on either side of brick work. After fixing of chicken wire mesh, 10mm thick plaster in CM (1:4), finished fair and even shall be applied as mentioned in Clause 11.4.1 here-in-after. However no such provision shall be required where columns,/beams/slabs are projecting from external faces of wall.

11.3.2 Irrespective of what is specified and shown on drawing, 10mm wide and 5mm deep continuous groove shall be provided in plaster throughout, at the junction of brick wall and RCC works on the internal surfaces of buildings and edges shall be properly made up. However no groove shall be provided at the junction of lintel band and brick masonry.

11.4. CEMENT PLASTERING

11.4.1 Internal surfaces as indicated in Sch of finishes of buildings under Sch 'A' Part I, shall be plastered in cement mortar 1:6 over dubbing coat when required all as specified in clause 14.17 of MES Schedule (Part -1). The thickness of internal plaster exclusive of dubbing shall be 10mm irrespective of whatsoever is shown on drgs.

11.4.2. All external surfaces, except where otherwise indicated/specified, shall be plastered in cement mortar 1:4 ; 15mm thick in two layers i.e. first layer 10mm thick and second layer of 5mm thick shall be mixed with water proofing admixture (conform to IS 2645-Specifications for integral cement water proofing admixture) as approved as per manufacturers instructions. For the purpose of the deviation the water proofing admixture shall be considered @ 0.4% by weight of cement.

PARTICULAR SPECIFICATIONS (CONTD.....)

11.4.3 Plaster on RCC ceiling/soffit of slab, fascia, beams, roof projection, chajjas, etc. shall be with cement and sand mortar (1:3), minimum 5mm thick finished even and smooth after removal of form work.

11.4.4 All internal wall/concrete surfaces below FFL upto GL shall be plastered in cement mortar 1:3 with water proofing compound (as per manufacturer instruction) of 15 mm thick, keeping in view high water table at site.

11.4.4 Unless otherwise indicated/shown on drawing, the size of groove in plaster shall be 10x5mm or as directed by the Engineer-in-Charge.

11.5.1 GLAZED TILES DADO

Where glazed tiles dado is indicated in drawings/Schedule of finishes, the same shall be with Glazed tiles of size 300mmx200mm and not less than 5mm thick all as specified in clause 13.14 of MES Schedule Part-I and shall be provided as specified in clause 13.40 of MES schedule Part-I. Glazed tiles shall be laid over 10mm thick screed in cement mortar 1:3. Unless otherwise indicated or shown on drawing, the height of the dado shall be 2100mm. The tiles shall be glossy and shade shall be as approved by GE. Make of tiles shall be as mentioned in Appendix 'F'.

11.5.2 KOTA STONE SKIRTING

Where Kota stone skirting is indicated in drawings/Schedule of finishes, the same shall be with 16mm thick Kota stone laid over 10mm thick screed bed in cement mortar (1:3) and jointed with grey cement slurry mixed with pigment to match the shade of the slab including rubbing/grinding and polishing all as specified in MES schedule Part-I. The colour and shade of Kota stone in skirting shall be same as for floors as decided by GE. Height of skirting shall be 100mm. Kota stone skirting shall be laid in such a manner that it is flush with cement plaster. For this purpose, the brick work upto skirting height to the required depth shall be cut and washed thoroughly with water before applying cement screed.

11.5.3 NON SKID CERAMIC TILES SKIRTING

Where non skid ceramic tiles skirting is indicated in drawings/Schedule of finishes, the same shall be with Non skid ceramic tiles of shade, colour and texture as per flooring, shall be laid over 10mm thick screed in cement mortar (1:3), jointed & pointed in white cement with colour pigment (suitable to match with the colour of tiles). Irrespective of whatever is shown on drawings, the height of skirting shall be 100mm. Non skid ceramic tiles skirting shall be laid in such a manner that it is flush with cement mortar. For this purpose, the brick work upto skirting height to the required depth shall be cut and washed thoroughly with water before applying cement screed.

11.5.4 VITRIFIED CERAMIC TILE SKIRTING

Where vitrified tiles skirting is indicated in drawings/Schedule of finishes, the same shall be with Vitrified porcelain tile of shade, colour and texture as per flooring, shall be laid over 10mm thick screed cement mortar (1:3). After fixing the tile, the joints will be filled up with polymer bases tile grout of colour matching with tile as per manufacturer's recommendations. The height of skirting where not indicated on drawing shall be 150mm.

12. WHITE/COLOUR WASH/DISTEMPER/CEMENT BASE PAINT :**12.1 WHITE/COLOUR WASH**

12.1.1 White [lime] wash or colour wash shall be provided as indicated in drawings, all as specified in clause 15.2 & 15.12 of MES schedule Part-I. For white washing on ceiling adequate quantity of zinc oxide shall be added to lime wash for achieving egg white shade. Skirting and dado are not to be white/colour washed. Where number of coats are not indicated in Schedule of finishes, it shall be as under:-

a) White wash : Three coats of white wash over prepared surfaces.

b) Colour wash : Two coats of colour wash over one coat of white wash over prepared surfaces.

PARTICULAR SPECIFICATIONS (CONTD.....)**12.2. OIL BOUND DISTEMPER**

12.2.1 Oil bound distemper (Oil emulsion distemper), shall be applied in two coats over a coat of primer after preparation of surfaces. Plastered surfaces shall be prepared smooth by using white cement putty before applying distemper of make JK White/Birla White/Tata pigment. Makes/brand of Distemper shall be as specified in Appendix 'F'.

12.3 CEMENT BASE PAINT

12.3.1 Cement base paint shall be provided in two coats over a coat of primer computable to the cement base paint as per manufacturer's instruction at location as indicated in drawings, all specified in clause 15.7 and 15.15 of MES Schedule Part-1. Shade shall be approved by Garrison Engineer. Cement base paint shall conform to IS-5410-1992 as approved by GE. Makes/brand of cement base paint shall be as specified in Appendix 'F'.

12.4 WEATHER PROOF PAINT/COATING

12.4.1 Weather proof paint/coat on external plastered surfaces, where indicated in Schedule of finishes/drawing shall be applied in two coats over a coat of primer after preparation of surfaces. The weather proof coat and primer shall be applied as per manufacturer's instructions. The brand of weather proof coat shall be of following manufacturer's :-

- | | | |
|-------|---------------------|------------------|
| (i) | WEATHER COAT SMOOTH | - Berger Paints |
| (ii) | APEX | - Asian Paints |
| (iii) | XTRA | - Shalimar Paint |
| (iv) | AXCEL | - Nerolac Paint |

13. GLAZING

13.1 All glazing shall be with sheet glass of ordinary quality and shall conform to IS -2835. Glass shall be free from all defects viz bubbles, waviness etc. and shall be of uniform thickness.

13.1.1. Glazing to steel windows/vents as shown on the relevant drgs shall be with 4mm thick sheet glass unless otherwise shown on drgs. Glass used shall be plain sheet glass except in baths /WC/Toilets/Lav and bottom glass of steel windows (in ground floor) only of single living accn where it shall be pinhead glass. Makes/brand of sheet glass shall be as specified in Appendix 'F'.

13.1.2. The glazing to steel frames, where shown on drgs, shall be fixed with special spring glazing clips with putty and glazing to wooden joinery shall be fixed with wooden beading with putty all as specified in clauses 16.5 to 16.10.2 of MES Schedule Part-I.

13.1.3 Glazing to glass door shall be selected quality. The thickness of sheet glass shall be 5.5mm unless otherwise indicated in the drawing.

14. PAINTING

14.1 All synthetic enamel paints and emulsion paints shall be of 1st quality manufactured by the standard firms as per Appendix 'F'.

14.1.2 The contractor shall inform the GE, with in three weeks of the acceptance of the tender, the brand/ names of the manufacturers of paint proposed to be used in the work and submit samples thereof to GE before their use in work and obtain prior approval of GE.

14.1.3. The contractor shall, when required by the GE, produce certificate from the manufacturer or their authorised agents to establish that the brand of paints purchased by the contractor from them satisfy the requirements of the relevant IS.

14.1.4. Paints for priming coat, under coat and finishing coat shall be of the same brand.

14.1.5. Tint of paint, if not mentioned in drgs/schedule of finishes, will be as approved by the GE.

PARTICULAR SPECIFICATIONS (CONTD.....)**14.2. WORKMANSHIP**

14.2.1 All wood work required to be painted shall be smoothed size and knotted and then applied with priming coat, stopping and filling [filler coat] shall be done after priming coat and surface rubbed down to a level and smooth surface and thereafter under coat and finishing coat shall be applied all as specified in clause 17.6 of MES Schedule Part-I. Steel and iron work shall be painted in the manner as specified in clause 17.8 of MES Schedule Part-I.

14.2.2. The surfaces of all wooden and steel or iron, where indicated in schedule of finishes to be painted, shall be given two coats [under coat and finishing coat] of synthetic enamel paint over a coat of pink primer/red oxide zinc chrome primer respectively.

14.2.3. The surfaces indicated in schedule of finishes to be aluminum painted shall be given two coats of aluminum paint conforming to IS-2339 over a coat of appropriate primer.

14.2.4. No treatment shall be given to reinforcement and galvanised fittings such as , GI tubing for hand rails, aluminum doors and windows etc.

14.2.5. All other steel surfaces, exposed to view but not covered in schedule of finishes or their finishing is not specifically indicated in any other drgs or specified elsewhere shall be given two coats of synthetic enamel paint over a coat of red oxide Zinc chrome primer of tint as directed by the GE.

14.2.6 Bottom of door shutter shall be given one coat of primer only.

14.2.7 All exposed cast iron soil/waste/vent/anti syphonage pipes, PVC RWP and fittings thereto shall also be painted with synthetic enamel paint (one under and finishing coat) external matching in colour with the adjoining surfaces.

14.2.8 If the under coat of the paint is not executed within six months after applying the priming coat of paint, the priming coat shall be redone by the contractor at no extra cost to the govt.

14.3 TARRING

14.3.1 The back of wooden/steel chowkats in contract with stone/brick work/plaster etc. shall be given two coats of tar. Hold fast shall be given two coats of tar and sanded it.

14.4 FRENCH POLISH

14.4.1 French polish, where indicated on drgs, shall be all as specified in clause 17.7.4 of MES Schedule Part-I. Unless otherwise specified in drawing, wooden surfaces of built-in furniture shall be french polished.

14.5 CEMENT SLURRY

14.5.1 Portions of MS bolts, lugs, anchor bolts etc. embedded in concrete or masonry shall be treated with neat cement slurry.

14.6 ALUMINIUM PAINT

14.6.1 Aluminum paint, where indicated on drgs, shall be provided in two coats over a coat of primer.

14.7 Irrespective of what is specified in drawings wire gauge fixed in doors/windows shall be painted with one coat of blue synthetic enamel paint.

PARTICULAR SPECIFICATIONS (CONTD.....)**15. PVC WATER STORAGE TANKS**

15.1 PVC water storage tanks shall be as per IS-12701 and shall be of make as mentioned in Appendix 'F'. Rotational moulded, three layered polyethylene water storage tanks shall be of capacity as shown in the drawings. Following accessories shall be provided with each water tank :-

- a) 20mm bore wash out GI tubing [medium grade] 10cm long with GI plug.
- b) 20mm bore GI over flow pipe (medium grade) fitted with brass anti mosquito rose coupling at end extended upto 150mm above the finished roof level.
- c) Ball valve with polythene float and fly nut ISI Marked of Make –Prayag, suitable for bore size of inlet pipe.
- d) Inlet and outlets of GI pipe 10cm long each of bore to suit the riser/down take pipe.

15.2 TOWEL RAILS

15.2.1 Towel rails shall be tubular of brass chromium plated with CP brass brackets. It shall be of 19/20mm dia and 60cm long (between flanges) in case length is not indicated on the drawings. Minimum thickness of towel rails shall be 1mm.

16. SANITARY AND TOILET FITTINGS**16.1 GENERAL**

16.1.1 All sanitary appliances shall be of vitreous china (white) first quality and shall conform to IS-2556 for General requirements and the specific requirements as mentioned in clause 18.32 to 18.40 of MES Schedule Part-I. These shall be of an approved as specified in Appendix 'F'.

16.1.2 All waste pipe and fittings upto floor/nahani trap shall be galvanised steel tubing medium grade all as specified in clause 18.4 of MES Schedule Part-1.

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

16.1.4 'P' or 'S' trap shall be jointed to WC pan with cement joints as specified in clause 18.48.5 of MES Schedule Part-I. Irrespective of whatsoever shown on drgs, cast iron 'P' or 'S' trap shall be provided.

16.1.5 Cast iron brackets (for the relevant sanitary and toilet fitting shall be given two coat of aluminium paint over a coat of primer.

16.1.6 Cast iron brackets shall conform to IS-775.

16.1.7 The sizes, given here-in-after are approximate sizes. The sizes of sanitary fittings to be provided shall be the nearest size as per manufacturer's catalogue.

16.2 WATER CLOSET (SQUATT PATTERN ORISSA TYPE)

16.2.1 Water closet squat pattern shall be Orissa type and conform to IS-2556 Part-III of size 580mm x 440mm shall be provided with 'P' or 'S' trap and the following fittings/items irrespective of whatsoever is shown on drawings :-

- a) Flush pipe of polyethylene of low or high density or PVC, 32mm dia, for low level cistern.
- b) 15mm dia polythene overflow pipe upto 75mm above from floor level with polythene anti mosquito rose.
- c) 10 liters discharge capacity polyethylene low level flushing cistern solid moulded with valve less symphonic fitting, manual operated with one pull ball valve horizontal plunger type with polyethylene float valve.

PARTICULAR SPECIFICATIONS (CONTD.....)

NOTE : Where flushing cistern cannot be fixed in wall due to window/lintel as per sanitary plan, the same shall be fixed in the side wall with additional bend, the cost of which shall be deemed to be included in the lump sum cost of building given in Sch 'A' Part-I.

d) The pan shall be set in lime concrete (1:2) at least 25cms around and finished just below the rim to receive the specified thickness of floor finish.

16.3 WASTE PIPE AND COUPLING

16.3.1 In all locations where waste pipe is to provided e.g for WHB, Sinks etc., 32mm dia, GI, medium grade, waste pipe of required length shall be provided with brass chromium plated waste coupling with perforated grating 32mm dia.

16.4 MIRROR

16.4.1 Wherever shown on drawings/mentioned in Sch'A'/described, mirror shall be polished sheet glass 5.5mm thick on 12mm thick commercial plywood BWR grade, mitred at corners and provided with wooden/polythene moulding frame. Mirror shall be hung by key slots on screws fixed to plug embeded in walls unless otherwise shown on drawings. Size of mirror where not shown on drawings shall be 60x45cm.

16.5 WASH HAND BASIN

16.5.1 Wash hand basin shall consist of :-

i) Wash hand basin of size 55x40cm vitreous china glazed ware, flat back pattern as per Cat No WB-01855 of Neycer Keramog or Cat No. 10008 of Hindustan Sanitary Wares & Industries Ltd. or any other equivalent approved make as mentioned in Appendix 'F' with waste union and perforated grating (both fittings of brass chromium plated).

ii) A pair of cast iron brackets.

iii) 32mm dia galvanised steel medium grade waste pipe fitted with brass chromium plated waste coupling outlet complete, length of waste pipe shall be as indicated on drgs/as directed by Engineer-in-Charge.

17. INTERNAL ELECTRIFICATION**17.1 SCOPE OF WORK**

17.1.1 The work consists of items as described in Sch 'A'.

17.2 GENERAL REQUIREMENTS

17.2.1 Refer clause 19.2.1. to 19.2.8 of MES Sch 'A' Part-1.

17.3 TYPE OF WIRING

17.3.1 The type of wiring (batten or concealed conduit) shall be as shown on drawings and directed by the Engineer-in-Charge. Point wiring for light/power/ fan/bell or buzzer point(s) includes all works mentioned in preambles to the rates in MES Schedule part-II for point wiring unless otherwise indicated in these tender documents. In case of conduit wiring, colour coding for phase, neutral and earth cable shall be followed as per clause 19.25(b)(ii) of MES Schedule Part-I.

PARTICULAR SPECIFICATIONS (CONTD.....)**17.4 INTERNAL ELECTRICAL WORK**

17.4.1 Cable for internal wiring for light, power and sub main cables shall be with copper conductor and shall be of following type :-

a) WIRING WITH PVC CONCEALED CONDUIT

- (i) Single core, copper conductor (flexible) FRLS PVC insulated cable (unsheathed) of suitable size, 1.5/2.5/4.00 Sqmm copper conductor upto 1100 Volts grade conforming to IS-694 shall be used.

b) FLEXIBLE CORDS, TWISTED COPPER CONDUCTOR

- (i) Flexible cords, twin core, each with tinned annealed stranded copper conductor elastomer insulated and textile braided twisted together, size, nominal cross sectional area 0.5 Sqmm shall be as per IS-9968 part-1.

c) WOODEN BLOCK, BOARDS AND ROUND BLOCKS

- (i) These shall be in accordance with clause 19.28 of MES Schedule part-1. Conduit and conduit fitting shall be in accordance with clause 19.29 of MES Schedule Part-I.

d) PLUG/GUTTIES, SCREWS AND FASTENINGS

- (i) These shall be in accordance with clause 19.30 and 19.31 of MES Schedule part-1.

e) CEILING ROSE, SHADES AND BULK HEAD FITTINGS

- (i) These shall be in accordance with clause 19.32, 19.33 and 19.34 of MES Schedule part-1 and as specified and as shown on drawings.

f) SUNK TYPE BOXES

- (i) These shall be in accordance with clause 19.38 of MES Schedule part-1.

g) SWITCH SOCKET OUTLETS

- (i) These shall be in accordance with clause 19.40 of MES Schedule part-1.

h) LAMP HOLDERS

- (i) These shall be in accordance with clause 19.41 of MES Schedule part-1.

i) MINIATURE CIRCUIT BREAKERS

- (i) These shall conform to IS-8828 (specification for MCBs for AC circuit for voltage not exceeding 1000 Volts). All MCBs shall be housed in suitable size standard sheet metal enclosure of 16 gauge MS Sheet supplied by the manufacturer of MCBs.

j) LIGHT FITTINGS

- (i) All light fittings shall be provided in accordance with the description of the items given in Sch. 'A' and as shown on the drawings.

k) Particular attention is drawn to the neatness as in appearance which is to be achieved by judicious planning of run of the cable, the locations of the light fittings, fans, switches, socket outlets, main switches etc.

PARTICULAR SPECIFICATIONS (CONTD.....)

l) Due regard shall be given to doors, windows, opening etc. in fixing of runs of cables, position of fittings, control switches and outlet points. The workmanship shall comply strictly with the rules contained in latest Indian Electricity rules.

m) Samples of all electric fittings shall first be got approved from GE in writing before incorporation in work and shall conform to relevant IS. Utility light fittings shall be of the best quality available and conform to sample kept in GE/CWE office.

(n) Types of Light Fittings shall be provided at the locations as mentioned in drawings/as directed by Engineer-in-Charge. However generally Mirror optics fittings are to be fitted in CO, 2ICs room in Adm Block and Anti room, Mess Room in Offrs Mess. T-5 Box type fittings are to be fitted in single offrs accn, offrs mess, adm block (except passage). Channel type (Patti type) fittings are to be fitted in Remaining all accn, including passage of Offrs mess and Adm block.

17.5 EARTHING AND TESTING

17.5.1 Earthing shall be carried out as described in clause 19.137 to 19.146 and as shown in electric plate No.5 of MES Schedule part-1.

17.6 SITING OF ELECTRIC EQUIPMENT

17.6.1 The siting of cable, conduit run controls, distribution boards, fittings and accessories etc. shall be as laid down in IS-4648. "Guide for electrical layout in residential building" or as directed by the Engineer-in-Charge. The location of fittings etc shall be marked in advance on walls etc and approved by the Engineer-in-Charge.

17.7 SYSTEM OF WIRING

17.7.1 Wiring shall be carried out with PVC insulated cable. All conductors as far as possible shall run near walls and ceiling so as to be easily accessible and capable of being thoroughly inspected. Power wiring shall be kept separate and distinct from light wiring. In all type of wiring due consideration shall be given for neatness, good appearance and safety. Diagonal runs will not be permitted.

17.8 CONTROL AT POINT OF ENTRY OF SUPPLY

17.8.1 These shall be linked with main switch gear (Isolator) with MCB on each live conductor of the supply mains at the point of entry. The wiring through out the installation shall be such that there is no break in the neutral wire except in the form of a linked switch gear. No fuses shall be inserted in the earth neutral.

17.9 TYPE OF SWITCH BOARDS

17.9.1 Hinged type metal boards for mounting the MCB and electrical meters shall be as per clause 19.105.1 of MES Schedule part-1. Meter box shall be made of 16 gauge MS Sheet with provision of locking arrangement and glass window.

17.10 JOINTS AND LOOPING BACK

17.10.1 These shall be as per clause No. 19.109 of MES Schedule part-1.

17.11 PASSING THROUGH WALLS AND FLOORS

17.11.1 Refer clause 19.111 of MES Schedule part-1 for passing the conductors through walls and floors. The rate for surface wiring against internal electrification shall deemed to include the provisions mentioned in clause 19.111 of MES Schedule part-1.

PARTICULAR SPECIFICATIONS (CONTD.....)**17.12 RECESSED CONDUIT WIRING**

17.12.1 System of conduit wiring shall be as per clause No. 19.102 and 19.132 of MES Sch Part-1.

18. INTERNAL WATER SUPPLY**18.1 WATER TUBING, BIBTAPS, STOP VALVES AND SHOWER ROSE**

18.1.1 Mild steel galvanised tubes (pipes) and fittings shall be ISI Marked & 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.

18.2 LAYING AND FIXING PIPES

18.2.1 The pipes for supply of water to all fittings inside the buildings/toilets shall be run on the walls except otherwise as specified in these tender documents or shown on drawings, connected to various fittings and shall be brought in the room at point/position approved by the Engineer-in-Charge at site.

18.2.2 Where pipes are laid underground, the trenches shall be excavated as directed by the Engineer-in-charge. The pipes running along face of the walls/concealed in walls shall be clamped in the walls as specified in SSR. Where pipe is passing through a wall, a mild steel tube sleeve shall be fixed all as specified in clause 18.51.1 of SSR part-1.

18.3 PVC PIPE CONNECTION

18.3.1 Ready made PVC connection pipes of standard make shall be 450mm long suitable for 15mm bore GI pipe complete with brass chromium plated coupling nuts and rubber washer. The weight of brass coupling nuts shall not be less than 40 grams. The weight of PVC pipe 450mm long shall not be less than 40 grams.

18.4 WORKMANSHIP

18.4.1 Laying of GI pipes (internal works) shall be in accordance with clause 18.51 of MES Schedule part-1.

18.4.2 The contractor shall use proper bends, elbows, unions etc at turning corner. Bending of pipes shall not be allowed in any case.

18.4.3 Pipe shall not run diagonally.

18.4.4 Contractor shall provide screwed plugs to all open ends of pipes on completion of days work.

18.5 TESTING

18.5.1 Testing of pipes shall be carried out all as per clause 18.50.4 of MES Schedule Part-1.

19. PLUMBING WORK**19.1 GENERAL**

19.1.1 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-1.

PARTICULAR SPECIFICATIONS (CONTD.....)**19.2 SOIL/WASTE/VENT PIPES/FITTINGS/ACCESSORIES**

19.2.1 Soil waste and vent pipes (except of 50mm bore) shall be of cast iron (Spun pipe) conforming to IS-3989:1984 with or without ears and with spigot and socket ends. 50mm bore CI pipe shall be sand cast conforming to IS-1729: 1979 with or without ears and with spigot and socket ends. All the pipes and fittings shall bear ISI certification mark.

19.3 JOINTING

19.3.1 CI pipes and fittings laid under floor/hidden portion shall be jointed with run lead joints as specified in clause 18.40 and 18.67 of MES Schedule part-1 and all other joints shall be in cement mortar as specified in MES Sch Part-1.

19.4 FIXING OF PIPES TO WALLS

19.4.1 CI pipes and fittings shall be fixed to wall with mild steel clamps as specified in clause 18.67 to 18.67.6 of MES Sch Part-1.

19.5 NAHANI/FLOOR TRAPS

19.5.1 Nahani/floor traps shall be provided in situations as shown on drawings. These shall conform to IS-1729. Floor traps shall be provided with CI grating.

19.5.2 Where Nahani/floor traps of 22.5cm depth can not be accommodated in sunken floor, a 300mm x 300mm portion of the RCC slab shall be sunk to the extent it accommodates the Nahani trap without any additional cost.

19.6 SHORTER LENGTH

19.6.1 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 double sockets/collars including additional joints as specified above without extra cost to the Government.

19.7 GULLY TRAPS

19.7.1 Gully traps shall be salt glazed stone ware complying with the requirements of IS-651. These shall be set in PCC M-10 (Nominal mix) block measuring 450 x 450mm and 100mm thick. Jointing to drain pipe shall be done in cement mortar (1:1).

19.7.2 Cast iron perforated grating shall be 150mmx150mm bituminous coated and fixed as directed by Engineer-in-Charge. PCC M-10 (Nominal Mix) in kerb and RCC cover slab reinforced with XPM weight not less than 4Kg/Sqm and shall be provided all as directed by Engineer-in-Charge.

19.8 TRENCHES FOR PIPE LINES

19.8.1 Excavation for trenches shall be done as per the width given in clause 3.2.3 of MES Schedule Part-II and as specified hereinbefore 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 metres.

19.9 TESTING

19.9.1 All soil, waste and vent pipes shall be tested as specified in clause 18.79.1 to 18.79.5 of MES Schedule part-1.

PARTICULAR SPECIFICATIONS (CONTD.....)**20. SITE CLEARANCE****20.1 EXCAVATION AND EARTH WORK**

20.1.1 Before commencement of site clearance work, the representative of the GE and the contractor will be required to take the levels jointly of the existing ground surfaces at intervals decided by the GE (the decision of the GE shall be final and binding in this respect). The longitudinal and cross sections shall be prepared from these levels by the Engineer-in-Charge. These cross sections shall also show the proposed, formation levels after consolidation and shall be signed by the GE and contractor in taken of their acceptance.

21. EXTERNAL ELECTRIFICATION**21.1 GI PIPES AND FITTINGS**

21.1.1 GI pipes and fittings shall be laid in trenches, fixed to walls/floor/ceiling/poles and jointed all as specified in clause 18.50 and 18.50.3 and 18.51.1 to 18.51.5 of MES Schedule Part-I.

21.2 STREET LIGHT FITTINGS

21.2.1 Refer clause 19.42 of MES Schedule Part-I. This shall be of cast housing and shall comply to IS: 2149 of 1970 for street light all as detailed in Schedule 'A' and shown on drawings.

21.3 EXPULSION FUSES, LINE CONNECTORS, POWER CABLE:- Refer clause 19.16,19.17 and 19.19 of MES Sch Part I, 2009.

22. TEST CERTIFICATE AND LITERATURE

22.1 The contractor shall produce to the GE the manufacturers test certificate and literature/manual of the following equipments (as applicable) :-

- | | | |
|--|--------------|------------------|
| (a) LT/HT cable | (b) LT poles | (c) LT/HT panels |
| (d) Any other equipments as directed by GE | | (e) Transformer |

23. TESTING OF CABLE & EQUIPMENTS

23.1 LT/HT cable (where the quantity of particular size is more than 500m), HT panel/DG set transformers, compact package type sub stations, RMU, and the like shall be inspected & tested in presence of Accepting Officer rep and Engr-in-Charge in factory premises prior to despatch of these items. The contractor shall inform well in advance to the department for inspection at factory premises.

23.2 The testing and setting of relays of HT panels shall be carried out by the Electrical Inspector.

24. **General** : If any of the specifications are not given above, the material used shall either bear ISI marking or conforming to ISI (if ISI marked not manufactured) and workmanship shall be all as per MES Schedule 2009 Part I.

Signature of Contractor

DCWE (Contracts)
for Accepting Officer

PARTICULAR SPECIFICATIONS (CONTD.....)

Appendix 'B'

CEMENT SUPPLY AND ACCEPTANCE REGISTER

1. CA No & Name of work :
2. Control No :
3. Name of Manufacturer/Brand Name/Gde of Cement
a) Manufacturer_____ b) Brand_____ c) Grade_____
4. Qty of cement & Lot No (in Bags) :
a) Qty_____ b) Lot No _____
5. Manufacturer's Test Certificate No _____
6. Random Test Details :
(a) Physical Test report from_____ vide their letter
No_____ (NAME OF APPROVAL LAB/ENGG COLLEGE)
(b) Chemical test report from_____ vide their letter
No_____ (NAME OF APPROVAL LAB/ENGG COLLEGE)
7. Details of Physical & Chemical properties

	Physical Requirements (As per IS-4031)							
	Specific Surface area (M/KG)	Soundness by Le Chatellar	Soundness by auto clave	Initial setting time Minutes	Final setting time Minutes	Compressive strength (Mpa)		
						03 days	07 days	28 days
1	2	3	4	5	6	7	8	9

As per relevant IS

As per Manufacturer's test cert

As per random test cert

Temp during testing OC	Standard consistency(%)	Chemical Requirements (As per IS-4032)							
		Lime saturation factor (Ratio)	Alumina Iron factor (Ratio)	Insoluble Residue (%)	Magensium (%)	Sulphuh-ric Anhdride (%)	Loss of Lgnit-ion (%)	Alkai-lest (%)	Chlo rides (%)
10	11	12	13	14	15	16	17	18	19

Accepted/Rejected

**JE
Engineer**

Engineer-in-Charge

Garrison

PARTICULAR SPECIFICATIONS (CONTD.....)**Appendix 'C'****STEEL SUPPLY/ACCEPTANCE REGISTER**

1. CA No & Name of work :
2. Control No :
3. Name of Manufacturer's TC No :
4. Manufacturer :
5. Random Test Details :
 - (a) Physical Test report from _____ vide letter No _____ (NAME OF NABL APPROVED LAB/GOVT ENGG COLLEGE)
 - (b) Chemical test report from _____ vide letter No _____ (NAME OF NABL APPROVED LAB/GOVT ENGG COLLEGE)
6. **Types of Steel, dia & Qty** :
 - (a) Type : TMT/CRS
 - (b) Dia : mm
 - (c) Actual weight : MT
 - (b) Conversion Wt : MT

	Chemical Test						
	Carbon %	Sulphur %	Phosphorous %	Sulphur + Phosphorous %	Manganes e %	Silicon %	Corrosion Resistant element
1	2	3	4	5	6		7

As per IS-1786

As per Manufacturer's test cert

As per independent test

Mechanical Test						Remarks
Wt per meter	Yeild Stress (N/mm ²)	Tensile strength (N/mm ²)	Percent elongation% (Min 18%)	Bend Test	Rebend test	
8	9	10	11	12	13	14

Accepted/Rejected**Remarks with signatures**

Contractor

JE

Engineer-in-Charge

Garrison Engineer

Remarks of BOO/Inspecting Officer/CWE

PARTICULAR SPECIFICATIONS (CONTD.....)**Appendix 'D'****FREQUENCY FOR NORMAL MASS, TENSILE, BEND AND REBEND TESTS OF STEEL**

SRL NO	NOMINAL SIZE	QUANTITY
--------	--------------	----------

STEEL FOR CONCRETE:

- | | |
|-----------------------------|---|
| 1. Bars size less than 10mm | 1 sample (3 specimens) for each test for every 25 tonnes or part thereof. |
| 2. Bars size 10mm to 16mm | 1 sample (3 specimens) for each test for every 35 tonnes or part thereof. |
| 3. Bars size over 16mm | 1 sample (3 specimens) for each test for every 45 tonnes or part thereof. |

STRUCTURAL STEEL :

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

NOTE :- For various tests, acceptance criteria, tolerances etc. refer to Appendix 'C' and relevant BIS Codes.

Appendix 'E'**CHEMICAL COMPOSITION IN PERCENT (MAXIMUM)**

SL NO.	DESCRIPTION	IS-1786-1985 ALL GRADES	SAIL-TMT ALL GRADES	TISCON-42	RASTRIYA ISPAT NIGAM LTD. R-BARS ALL GRADES
a)	Carbon	0.30	0.25	0.17	0.20
b)	Sulphur	0.06	0.05	0.045	0.04
c)	Phosphorous	0.06	0.05	0.045	0.05
d)	Sulphur and Phosphorous	0.11	0.10	0.09	0.09
e)	Manganese	-	-	-	0.60

PARTICULAR SPECIFICATIONS (CONTD.....)APPENDIX 'F'LIST OF MAKES/MANUFACTURERS/PRODUCERS1. Producers of Cement (PPC & OPC)

- | | |
|--|---|
| a) Saurashtra Cement (For OPC & PPC) | x) M/s Zuari Cement Ltd.
(OPC 43 grade & PPC) |
| b) Madras Cement. (For OPC & PPC) | y) Shiva Industries, Kathua (For J&K, Northern Command only) (OPC only) |
| c) M/s Ultra Tech Cement Ltd (For PSC). | z) M/s Saifco Cement Pvt Ltd.
(OPC 43 grade) |
| d) M/s Chettinad Cement Corporation Ltd (For OPC 43 Grade, PPC & PSC) | aa) Lafarge Cement (Lafarge India Pvt Ltd).
OPC & PPC) |
| e) M/s Dalmia Cement (Bharat) Ltd. (For OPC 43 Grade, & PPC) | ab) M/s Prism Cement Ltd. (OPC 43 grade & PPC) |
| f) J&K Cement Corp. Kathua (For J&K, Northern Command only) (For OPC) | ac) M/s Meghalaya Cements Ltd
(For eastern region only) (OPC & PPC) |
| g) M/s Narayankar & Associates Pvt Ltd
(For NE region only), (OPC & PPC for NE only and OPC for bal states) | ad) M/s Cemtac Cement Pvt Ltd
(For J&K region only)
(OPC 43 grade) |
| h) M/s Shree Digvijay Cement Co. Ltd (For Gujrat area only) (OPC 53 grade & PPC) | ae) M/s Dhruv Industrial Co. Ltd.
(OPC 43 grade) |
| j) M/s Parashakti Cements Ltd (OPC 43 grade & PPC) | af) M/s Cement Manufacturing Co. Ltd
(OPC 43 grade, 53 grade & PPC) |
| k) Grasim Industries Ltd (OPC & PPC) | ag) M/s Toshali Cements Pvt Ltd
(OPC 43 grade, PPC & PSC) |
| l) M/s Heidelberg Cement India Ltd (PPC only) | ah) M/s Shri Guru Kirpa Cement Pvt Ltd
OPC 43 grade & PPC) |
| m) M/s My Home Industry Ltd (PSC only) | aj) M/s Barak Valley Cements Ltd
(OPC 43 grade) |
| n) M/s OCL India Ltd (OPC 43 grade & PPC) | ak) Ultra Tech Cement
(OPC, PPC & PSC) |
| o) The Associate Cement Companies Ltd
(OPC & PPC) | al) The India Cement
OPC & PPC) |
| p) Andhra Cement Ltd (OPC & PPC) | am) Century Cements
(OPC & PPC) |
| q) Binani Cement Ltd (OPC & PPC) | an) Mangalam Cement Ltd
(OPC & PPC) |
| r) Birla Corporation Ltd (OPC & PPC) | ao) Orient Cement
OPC & PPC) |
| s) Shree Cement (OPC & PPC) | ap) JK Cement
(OPC & PPC) |
| t) JK Lakshmi Cement (OPC & PPC) | aq) Jaypee Rewa Cement
(OPC & PPC) |
| u) Ambuja Cement Ltd (OPC & PPC) | ar) M/s Calcom Cement India Ltd
(NE region only), (OPC 43 grade & PPC) |
| v) M/s Trumboo Industries Pvt Ltd
(Only for J&K Area) (OPC 43 grade) | |
| w) M/s Cement Corporation of India Ltd
(For AP and Ajoining States only)
(OPC 43 grade) | |

PARTICULAR SPECIFICATIONS (CONTD.....)APPENDIX 'F'LIST OF MAKES/MANUFACTURERS/PRODUCERS

2. Approved factories for factory made Panelled/Glazed/wire gauge shutters
- M/s Massonite doors Pathankot
 - M/s Shri Krishna Industries, Plot No. 299, Phase-II, Panchukla -134109.]
 - M/s Poineer Timber Products, Chandigarh.
 - M/S Goyal Industrial Co, New Delhi.
 - M/s Sarab Enterprises, Damtal (HP)
3. Manufacturers for Steel Windows/Ventilators with Tubular Frame, Pressed Steel Door frames, Steel lockers, Cup board shutters
- M/S Steel Master Industries, Jalandhar.
 - M/S Steelman Industries, Jalandhar.
 - M/S Shree Krishna Associates, 304 Industrial Area, Phase II, Panchkula.
 - M/s Mohindra Fabricators, Focal Point, Haryal, Pathankot (Pb)
 - Shri Ganpati Doors 18 Industrial Estate Rajpura, Patiala , Punjab
 - Satkar Industries, Pathankot road, Jalandhar.
4. Manufacturer/Approved Agencies of Polymeric water proofing membrane (APP) (Atactic Polypropylene polymer) :-
- | | |
|---|--|
| (i) M/s Texsa India Ltd
A-4/8, 1st Floor, DLF City Phase-I
Gurgaon – 122002 | (ii) M/s Hydro Tech Ltd
17 Shiv Bagh, Arncer Pet
Hyderabad – 16 |
| (iii) STP Ltd
FAX No 011-3632167 | (iv) M/s MK Petro Products ndia)
180-C Jeevan Nagar
New Delhi-110044 |
| (v) M/s Pidilite Industries Ltd
Ram Krishna Mandir Road
PB No 17411, Andheri (E)
Mumbai – 400059 | (vi) M/s Torch Tar Membranes &
Bitumen Products Pvt Ltd
Delhi |
| (vii) M/s SIKA WP SHIELD,
M/s SIKA INDIA PVT LTD | (viii) M/s Tiki Tar Danosa (India)
Pvt Ltd
8 th Floor, Neptune Tower,
Productivity Road,
Vadodara-390007 (Gujrat) |
| (ix) IWL India Ltd,
C & D Laxmi Bhawan,
609 Anna Salai Chennai 600006 | |
5. Ply wood (ISI Marked)
- | | | |
|---------------------------|---------------|-----------------|
| a) Dura Ply | b) Archid Ply | c) Bhutan Board |
| d) Archid Board | e) Century | f) Durian |
| g) Mysore chip Board Ltd. | | |
6. Particle Board/ Prelaminated Particle Board (ISI Marked)
- | | | |
|---------------------------------|-----------------|---------------------------|
| a) Kitply. | b) Dura board | c) Archid Ply |
| d) Novapan | e) Bhutan Board | f) Mysore chip Board Ltd. |
| g) M/S Green Ply industries Ltd | | |

PARTICULAR SPECIFICATIONS (CONTD.....)APPENDIX `F`LIST OF MAKES/MANUFACTURERS/PRODUCERS

18. Vitreous China Water Closet (Squatt Pattern/Padestal Pattern), Urinals, Wash Hand Basins (ISI Marked, Ist Quality) :-
- | | | |
|----------------------------|-----------|-----------|
| a) Parryware | b) Jaquar | c) Somany |
| d) Hindustan Sanitary Ware | e) Cera | f) Neycer |
19. Polyethylene low level flushing cistern (ISI Marked):-
- | | | |
|-----------------------------|------------------|--------------|
| a) Hindustan Sanitary Wares | b) Commander | c) Parryware |
| d) Cera | e) Johnson Pedar | f) Neycer |
20. Plastic Seat and Cover : ISI mark as approved.
21. SANITARY APPLIACNCES/FITTINGS (CHINA WARE)
- | | | |
|-----------------------------|--------------|-----------|
| a) Hindustan Sanitary Wares | b) Parryware | c) Cera |
| d) Jaquar | e) Neycer | f) Somany |
22. Mirror:-
- | | | |
|------------------------|---------------|---------------------|
| a) Triveni float glass | b) Modi float | c) M/S Saint Gobain |
|------------------------|---------------|---------------------|
23. Plain/Pin headed/Frosted Sheet Glass/tinted & toughened glass :-
- | | | |
|---------------------|-------------------------|----------------|
| a) M/S Saint Goblin | b) Triveni Floatglass | c) Indo Asahi. |
| d) Modi Float | e) Hindustan Pilkington | |
24. Integral Water proofing Compound (Powder/Liquid), Construction Chemicals, admixtures, Plasticisers:-
- | | | |
|------------------------|------------------------------|----------------------|
| a) Pidilite Industries | b) Waterseal | c) CICO |
| d) Roffee Chemical | e) Impermo | f) Snowcem India Ltd |
| g) Fairmate | h) Bostic | i) J K Cement |
| j) Fosrock | k) MC BAU Chemic (I) Pvt Ltd | |
25. GI Pipes/ MS pipe (ISI Marked):-
- | | | |
|------------------|------------|---------------|
| a) Jindal Pipes | b) TATA | c) BEST |
| d) Prakash Tubes | e) Bhushan | f) APL Appolo |
26. GI Fittings:-
- | | | |
|-----------|---------|---------|
| a) Jindal | b) TATA | c) BEST |
|-----------|---------|---------|
27. Chromium plated Fancy Bib Taps, Stop valves, Pillar taps, Basin mixer, Shower rose-
- | | | |
|-----------|------------|------------|
| a) Jaquar | b) PARKO | c) GEM |
| d) Marc | e) ESS ESS | f) Jalangi |
28. PVC (Polythene Rotational moulded) Water storage tanks (ISI Marked):-
- | | | |
|-----------|------------|------------|
| a) Sintex | b) Polycon | c) Sheetal |
| d) Vectus | | |

PARTICULAR SPECIFICATIONS (CONTD.....)APPENDIX 'F'LIST OF MAKES/MANUFACTURERS/PRODUCERS29. Primary Producers of TMT Steel:-

M/s Steel Authority of India Ltd (SAIL) 17 th floor, Scope Minar, Laxmi Nagar, Dist Centre, Delhi – 110 092	For all types of dia of TMT bars	M/s Tata Iron & Steel Co (TISCO or Tata Steel) Bombay House, 2,4, Homi Modi Street, Mumbai – 400 001	For all types of dia of TMT bars
M/s Rashtriya Ispat Nigam Ltd (RINL), Visakhapatnam Steel Plant, Visakhapatnam – 530 031	For all types of dia of TMT bars	M/s SRMB Srijan Ltd SRMB House, 7, Khetra Das Lane, Kolkata – 700 012	Fe 500, Fe 500D, Fe 550 & Fe 550D TMT bars (8mm to 32mm)
M/s Jindal Steels and Power Ltd (JINDAL PANTHER) OP Jindal Road, Hissar, Haryana, Pin-125005	Fe 500, Fe 500D, Fe 550 & Fe 550D TMT bars	M/s Steel Exchange India Ltd My Home, Lakshmi Niwas, Apartment, Ameerpet, Hyderabad 500016 (AP)	Fe 500 & Fe 500D (Simhadri TMT bars)
M/s Jai Balaji Industries Ltd (Balaji Shakti) 510, Block-b, Navraung House, 21 Kasturba Gandhi Marg, New Delhi 110001	Fe 500 & Fe 500D TMT bars	M/s SPS Steel Rolling Mills Ltd 68, Ballygunge, Circular Road, Kolkata – 700 019	Fe 500, Fe 550 & Fe 500D (ELEGANT TMT bars)
M/s Shyam Steel Industries Ltd Shyam Tower, EN-32, Sector-V Salt Lake, Kolkata – 700091	Fe 500 & Fe 500D CRS TMT bars	M/s Concast Steel & Power Ltd, Kolkata 21, Hemant Basu, Sarani Suit No 511 & 512, 5 th Floor, Kolkata – 700001	Fe 500 & Fe 550 TMT bars (8mm to 32mm)
M/s Shyam Metalics & Energy Ltd, Viswkarma, 1 st Floor, 86 C, Topsia Road, Kolkata-700046	Fe 500 & Fee 500D (SEL TMT bars 8mm to 32mm)	M/s Shri Bajrang Power & Ispat Ltd, Vill – Borjhara, Urla Industrial Area, Raipur, Chhatisgarh – 493 221	Fe 500 & Fe 500D(GOEL TMT bars mm to 32mm)
M/s JSW Steel Ltd JSW Centre, Bandra Kurla Complex, Bandra (East), Mumbai – 400051, Maharashtra	Fe 500, 500D & CRS TMT Steel bars (8mm to 40mm)	M/s Electrosteel Ltd Bokaro, Jharkand G K Tower, 2 nd & 3 rd Floor 19 Camac Street, Kolkata WB – 700017	Fe 500D (8mm to 36 mm) (ELECTROST EEL TMT bars)
M/s Kamachi Industries Ltd, ABC Trade Centre, 3 rd Floor (Inside Devi Theatre Complex) Old No. 50, New No. 39, Anna Salai, Chennai-600002	Fe 500, Fe 500D, Fe 550 & Fe 550D HCRM TMT bars (8mm to 40mm)	M/s BDG Metal &Power Ltd, HMP, 4 Fairlie Place, 5 th Floor Kolkata-700001	Fe 500, Fe 500D, Fe 550 & Fe 550D HCRM TMT bars (8mm to 40mm)

PARTICULAR SPECIFICATIONS (CONTD.....)APPENDIX `F`LIST OF MAKES/MANUFACTURERS/PRODUCERS

- g) M/s Karam Steel Corportation,
Nasrali Road, PO Box No. 56
Mandi Gobindgarh –147 301 (Pb)
Tele : 01765-257536
- h) M/S K L Steel Pvt Ltd
Post Box no 61, Lal Kuan
Bulandshahar Road,
GHAZIABAD (UP)
Tele : 0120-2867911, 2867915
Fax : 0120-2867917
- i) M/S Shyam Steel Ltd.
29, Ganesh Chandra Avenue
1st Flour, Kolkata-700 013
Tele : 033-22379444
Fax: 033-22366937
- j) M/s Tata Steel Structura
Tata Steel – Tube Division
Jeeva Tara Building, 1st Floor
5, Sansad Marg, New Delhi-110001
Tele : 99111 2334 264601734-309983,
309986
35. Flush door shutters (ISI Mrked):-
- | | | |
|-----------------------------|--------------------|---------------------|
| a) M/s Green Ply Industries | b) M/s Century Ply | c) M/s Dura Ply |
| d) Mysore Chip Board | e) Archid | f) Swastik Ply Wood |
| g) M/s Jain Wood Industries | | |
36. HDF door shutters
- | | | |
|-----------------------------------|-------------------------------|---------------------------------|
| a) M/s Trehan Doors, Pathankot | b) M/s Sej Pal & Sons, Mumbai | c) M/s Perfect House, Banglore |
| d) M/s Door craft Industry, Delhi | e) M/s Sarab Enterprises | f) M/s HR Enterprises Pathankot |
37. Bitumen:-
- | | | |
|--------------------------------|---------|---------|
| a) Indian Oil Corporation Ltd. | b) HPCL | c) BPCL |
|--------------------------------|---------|---------|
38. PVC Door Frames/Shutters
- | | | |
|--------------------------------------|---------------------------------|----------------|
| a) Sintex | b) Rajshri Plastiwood Ltd | c) M/s Fenesta |
| d) M/s Dura Plast Extraction Pvt Ltd | e) M/s HR Enterprises Pathankot | |
39. UPVC Windows/Doors
- | | | |
|-----------------------------------|--------------------------------------|----------------|
| a) Veka Industries Pvt Ltd Mumbai | b) Kundali Industrial Estate Sonipat | c) M/s Fenesta |
| d) H2O Solutions | | |
40. HDPE/UPVC/PPR PIPES
- | | | |
|---------------------|--------------|-------------|
| a) Dutron | b) Finolex | c) Tirupati |
| d) SFMC Pipe | e) Jain Pipe | f) Swastik |
| g) Reliance (RPPPL) | | |
41. Hydraulic Door Closer
- | | | |
|------------|--------------|-----------|
| a) Everest | b) Universal | c) Godrej |
|------------|--------------|-----------|

PARTICULAR SPECIFICATIONS (CONTD.....)APPENDIX 'F'LIST OF MAKES/MANUFACTURERS/PRODUCERS

42. Paint Exterior
- | | | |
|--------------------------|------------------------------------|-----------------------------------|
| a) Asian (Apex Ultima) | b) Berger (Weather Coat all guard) | c) Akzo Novel (Wether shield max) |
| d) Nerolac (Excel total) | e) British (Expa-7 Advanced) | |
43. PTMT Fittings
- | | | |
|-----------|-----------|------------|
| a) Prayag | b) Shakti | c) Polytuf |
|-----------|-----------|------------|
44. Galvalume sheets:-
- | | | |
|-----------------|----------------------|---------------|
| a) Indian Ispat | b) TATA | c) Blue Scope |
| d) JSW | e) Bhushan Galacolor | |
45. Stainless Steel Kitchen Sink with or without Draining Board/Plate Rack:-
- | | | |
|-----------|--------------|--------------|
| a) NIRALI | b) Kobra | c) Neelkanth |
| d) Jayna | e) Blue Star | |
46. Salt Glazed Stone Ware Pipes/ Glazed Stone Ware Pipes
- | | | |
|------------------------------|----------|--------------------------|
| a) Devraj Industrial | b) Buran | c) Perfect Sanitary Pipe |
| d) Supreme Pipe and fittings | | |
47. Reflux valve, Air Release Valve, Foot Valve, Float Valve/Gun Metal Valve:
- | | | |
|------------------|-----------|-----------|
| a) Kirloskar | b) Leader | c) Zoloto |
| d) L & T (AUDCO) | e) NVR | |
48. Cast Iron Pipes and Fittings:
- | | | |
|---------------|--------------------|----------------------------------|
| a) SKF | b) SRIF | c) Singhal Iron Foundry |
| d) Jindal Saw | e) NECO (Jayaswal) | f) Hindstan Engineering Products |
49. XLPE LT Cable:-
- | | | |
|------------|------------|---------------------------|
| a) CCI | b) Finolex | c) Universal Cables |
| d) Havells | e) RPG | f) KEI Industries Pvt Ltd |
50. FR/FRLS wires for Internal Wiring :-
- | | | |
|--------------------|-------------|------------|
| a) L & T | b) Finolex | c) RPG |
| d) RR Cable | e) Grandlay | f) Havells |
| g) Kalinga Premium | h) Polycab | j) Gloster |
51. Internal Wiring fixtures (Piano type switch, Switch Socket & Fan regulators):-
- | | | |
|-----------|------------|-------------------------|
| a) Anchor | b) Legrand | c) Crabtree (Schneider) |
|-----------|------------|-------------------------|

PARTICULAR SPECIFICATIONS (CONTD.....)APPENDIX 'F'LIST OF MAKES/MANUFACTURERS/PRODUCERS61. CFL Lamps:-

- | | | |
|---------------------|------------|----------|
| a) Crompton Greaves | b) Philips | c) Bajaj |
| d) Wipro | e) Hi-Tech | f) EON |
| g) Halonix | | |

62. Flood Light Fittings:-

- | | | |
|---------------------|------------|------------|
| a) Crompton Greaves | b) Philips | c) Bajaj |
| d) Wipro | e) Havells | f) Polycab |
| g) Halonix | | |

63. All other materials :

Make of all other materials except as listed above shall approved by GE.

Notes :

1. Makes specified in Sch 'A' shall only be provided when makes are mentioned in Sch 'A'/BOQ.
2. Makes specified in Particulars Specifications shall be provided only when no makes are specified in Sch 'A'/BOQ.
3. Makes specified in this Appendix shall be provided only when no makes are mentioned in Sch 'A' /BOQ and Particulars Specifications.
4. Contractor will supply the material only after obtaining the written approval from GE regarding use of specific make of items and will supply the material at appropriate time as and when required by the GE.
5. To ensure genuineness of material the contractor will order only on manufacture or authorised dealer and the Engineer-in-Charge will receive material after verifying the delivery challan of the supplier and after satisfying the genuineness of material.

Signature of Contractor

DCWE (Contracts)
for Accepting Officer

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

1. A copy of the General Conditions of Contracts (IAFW-2249-1989 Print) with errata 1 to 20 and amendments 1 to 40 has been supplied to me/us is in my/or possession. I/we have read and understood the Provisions contained in the aforesaid GENERAL CONDITIONS OF CONTRACTS before submission of the 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.
2. It is hereby further agreed and declared by me/us, that GENERAL CONDITIONS OF CONTRACTS (IAFW-2249-1989 Print) including Condition 70 thereof pertaining to settlement of disputes by arbitration, containing 33 pages (Serial Page Nos 105 to 137) with errata 1 to 20 and amendments No 1 to 40 containing 17 pages (Srl Page Nos 138 to 154) form part of these tender documents.
3. My/our signature hereunder is in token of my/Our having acceptance the aforesaid General Conditions of Contracts together with errata and amendments IAFW-2249 (1989 Print).
4. It is agreed that in the event of discrepancy in the English and Hindi version of IAFW-2249, the contents in English will prevail.

Signature of the Contractor
Dated :

DCWE (Contracts)
for Accepting Officer

SCHEDULE OF MINIMUM FAIR WAGES

1. Copy of the Schedule of minimum fair wages has been supplied to me/us in my/our possession. I/We have read and understood the provision contained in the aforesaid Schedule of minimum fair wages before submission of the tender and I/we agree that I/we shall abide by the term and conditions thereof as modified if any, elsewhere in this tender document.
2. It is hereby agreed that the 'schedule of minimum fair wages' (SMFW) as published vide Government of India, Ministry of Labour Notification dated 28.1.02 as subsequently amended till dates form part of these tender documents.
3. My/Our signature here under accounts to my/our having signed the aforesaid documents forming part of this tender.

Signature of the Contractor
Dated :

DCWE (Contracts)
for Accepting Officer

Note :- "Schedule of minimum fair wages" referred to above said is available for reference in the office of **GE (West) Pathankot**.