

MILITARY ENGINEER SERVICES
(CENTRALCOMMAND)

INDEX

NAME OF WORK: SPECIAL REPAIR/REPLACEMENT OF GI PIPE AND ALLIED WORKS AT SOUTH CAMP AND OTHER SANCTION WORKS UNDER GE (AF) BAMRAULI

Srl No.	Particulars	Page Nos
1	2	3
1.	Index Page.	01
2.	Tender forwarding letter including Instructions to Tenders.	02 TO 05
3.	Tender and Item rate contract for works by measurement IAFW-1779-A (Revised 1955).	06 TO 14
4.	*General Condition of Contract IAFW-2249, (1989 Print) together with errata and amendment thereto.	15 TO 15
5.	*Schedule of Minimum fair wages.	16
6.	*Special Conditions.	17 TO 35
7.	Particulars Specifications including list of drawings.	36 TO 90
8.	*Notice of tender IAFW-2162 including Appendix "A" Notice Inviting Tender.	91 TO 96
9.	BOQ	TO
10.	Errata/Amendments to Tender Documents.	TO
11.	Relevant correspondence.	TO
12.	Acceptance Letter.	TO
	Drawing <u>NIL</u> Sheets.*	

Total _____ Pages

* Note:-These documents can be seen in the Office of the GE (AF) Bamrauli during working hours.

(Signature of Contractor)
Dated _____

AGE (Contracts)
For Accepting Officer

Tele: AF-5730

Garrison Engineer (AF)
Military Engineer Services
Bamrauli, Allahabad-12

8943/ /E8

15 Oct 2024

M/S _____

NAME OF WORK: SPECIAL REPAIR/REPLACEMENT OF GI PIPE AND ALLIED WORKS AT SOUTH CAMP AND OTHER SANCTIOIN WORKS UNDER GE (AF) BAMRAULI

Dear Sir(s),

1. Tender documents in respect of above work are uploaded on the site www.defproc.gov.in. The tender is based on single stage two cover/two stage three cover e-tendering system. The contents of Cover I & Cover II are specified in NOTICE OF TENDER.
2. Bids will be received online by ACCEPTING OFFICER upto the date and time mentioned in the NOTICE INVITING TENDER (NIT). No tender/bid will be received in physical form and any tender/bid received in such manner will be treated as non bonafide .
3. Bid will be opened on line on a due date fixed for opening as per critical dates given in the portal. Cover 1 will be opened first. Tenderers may see the result of the opening of Cover 1 on the tender portal. Date of opening of Cover 2 shall be decided after technical evaluation of Cover 1 keeping in view the various eligibility criteria given in the NIT and the same will be intimated to the tenderers while uploading the technical evaluation on the tender portal.
4. Your attention is also drawn to instruction on filling and submission of tender attached herewith. You may forward your points on tender documents through e-mail and/or depute your technical representative for discussion on tender/drawings and to clarify doubts, if any, before the bid submission starts. You are requested not to write piece meal points and forward your points duly consolidated in one go. You may also attend the pre bid meeting on the date given in the tender.
5. Unenlisted contractors are required to submit the scanned copies (in pdf file) of documents required as per eligibility criteria mentioned in instructions for filling the tender documents and Appendix 'A' to NIT alongwith EARNEST MONEY DEPOSIT (EMD) and tender fee on procurement portal mentioned above and submit the physical documents in the office of Garrison Engineer (AF) Bamrauli Prayagraj within time limit specified in NIT. Inadequacy /deficiency of documents shall make the bid liable for rejection resulting in disqualification for opening of finance bid.
6. Enlisted contractors of MES shall submit the scanned copies (pdf file) of enlistment letter, tender fee and such other documents as mentioned in Appx 'A' to NIT on e-procurement portal and submit physical documents in the office of Garrison Engineer (AF) Bamrauli Prayagraj before date & time fixed for this purpose.
7. The contractor must ensure that the tender/bid is uploaded on the tender portal using the authorised DSC in time as the Accepting Officer will take no cognizance of any quotations/offer received in any other electronic or physical form like email/fax/by hand/through post from tenderer/bidder.
8. Keeping in view delays due to system failure or other communication related failures, it is suggested that tender/bid may be uploaded sufficiently in advance of the last due date and time fixed on the portal.
9. General Conditions of Contracts (IAFW-2249) (1989 Print) and errata and amendments

thereto, Schedule of Minimum Fair Wages and MES SSR (Part-I and Part- II) are not enclosed with these documents. These are available for perusal in the Office of GE/AGE concerned and this office. Tenderer is also requested to keep the copy of these documents with him as same are available in the market.

10. PERFORMANCE SECURITY DEPOSIT

After acceptance of the Tender, the contractor will be required to lodge with the Accepting Officer PERFORMANCE SECURITY DEPOSIT @ 5.0% of contract amount. The amount is required to be lodged within 28 (Twenty eight) days of the receipt by the contractor of notification of acceptance of tender/bid, failing which action as stipulated in Condition 19 of GCC shall be taken.

11. ANY TENDERER, WHICH PROPOSES ALTERATIONS TO ANY OF THE CONDITIONS, SPECIFICATIONS LAID DOWN IN THE TENDER DOCUMENTS OR ANY NEW CONDITION, WHATSOEVER, IS LIABLE TO BE REJECTED.

Encls:As above

Yours Faithfully,

Signature of Contractor
Dated: _____

AGE (Contracts)
For Accepting Officer

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

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

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

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

NOTES:- Earnest Money Deposit (EMD) in the form of cheque/Bank Guarantee etc will not be accepted. **Non-Submission of Earnest Money Deposit (EMD) (scanned copy alongwith Technical Bid & hard copy before the date & time fixed for opening of BOQ) will render the bid disqualified for opening of Cover -II (finance bid).**

2. PERFORMANCE SECURITY:

2.1 Performance Security Deposit for individual works shall be for an amount equal to 5% of the contract amount. In case work is foreclosed, the Performance Security shall be recalculated as per cost of completed work. In case the Performance Security already deposited is more than that required after foreclosure of works, contractor shall have the option to submit the fresh Performance Security and original Performance Security shall be released.

2.2 If the tender submitted by a contractor is accepted, he will be required to lodge with the Accepting Officer concerned, Performance Security Deposit for the specific work calculated as per Para 2.1 above, within twenty eight days of the receipt by the contractor of notification of acceptance of the tender. Work order No 1 shall be placed only after submission of Performance Security Deposit. Failure of the successful contractor to deliver Performance Security shall constitute sufficient grounds for cancellation of the award of work. In addition to this, in case of MES enlisted contractor, amount equal to the Earnest Money stipulated in the Notice Inviting Tender, shall be notified to the tenderer for depositing the amount through MRO. Issue of tender to such tenderers shall remain suspended till the aforesaid amount equal to the Earnest Money is deposited in Government Treasury. In case of unenlisted contractor, the Earnest Money deposited alongwith tender shall be forfeited. If the contractor failed to deposit the Performance Security within 28 days, Show Cause Notice shall be issued to the contractor prior to enforce this provisions.

2.3 Performance Security shall be submitted in any of the forms given below:-

- (a) Bank Guarantee Bond in the prescribed format (Appendix 2.1 of Manual on Contract) in favour of Accepting Officer from any Bank listed in 2nd schedule of RBI Act 1934.
- (b) Government Securities, Fixed Deposit Receipt or any other Government Instruments in favour of Accepting Officer.

3. GENERAL INSTRUCTIONS FOR COMPLIANCE

3.1 The bids received only in the electronic form will be considered. All bids shall be submitted on defproc.gov.in portal. Documents should be scanned and forwarded in 'pdf' format and 'xls' form as indicated. Bids shall be uploaded on 'defproc.gov.in' portal on or before the bid closing date mentioned in the tender. No tender/bid in any other electronic or physical form like date email/fax/by hand/through post will be considered.

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

3.2 The bid shall be DIGITALLY signed using authorised DSC. All pages of tender documents, drawings, corrections/alterations shall be signed/initialed by the lowest bidder after acceptance of tender for making original and CTC of the contract.

3.3 Digital signatory of the bid/tender shall ensure that he is competent to bind the contractor (through partnership deed, general power of attorney or Memorandum and Article of Association of the Company) in all the matters pertaining to the contract with Union of India including arbitration clause. A scanned copy of the documents in confirmation of such authority shall be attached with the tender/bid in 'pdf' form in Cover-1. It shall be ensured that power of attorney shall be executed in accordance with the constitution of the company as laid down in its Memorandum & Article of Association.

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

3.5 The tender shall be signed, dated and witnessed at all places provided for in the documents after acceptance. All corrections shall be initialled. The Contractor shall initial every page of tender and shall sign all drawings forming part of the tender. Any tender/bid, which proposes alterations to any of the conditions whatsoever, is liable to be rejected.

4. **BOQ :-**

4.1 The tenderer shall quote his rates on the BOQ EXCEL FILE only as per guide line of e-procure web portal. No alteration to the format will be accepted and such bid will be disqualified.

4.2 In case any tenderer wishes to revise/modify the rates quoted in the BOQ file, he can do so only in the BOQ files before uploading the tender through <https://defproc.gov.in> site only before closing date & time.

4.3 After the uploading of tender, Department may upload the errata/ amendment through corrigendum. The tenderer/bidder should submit their offer considering the errata/amendment carried out through corrigendum issued from time to time.

4.4 While uploading the bid, the tenderers/bidders should specifically check whether any **revised BOQ** has been uploaded by department through corrigendum prior to **Bid submission start date**. Tenderers/bidders attention is specifically drawn to the fact that they should submit their offer on revised BOQ only. In case any tenderer/bidder submit offer on pre-revised BOQ in lieu of Revised BOQ, **it will be considered as a willful negligence by the tenderer/bidder and quotation shall be considered non- bonafide.**

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

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

7. The contractor shall employ Indian Nationals after verifying their antecedents and loyalty. Attention is also drawn to relevant provisions in Special Condition referred here-in-after and also Conditions 24 & 25 of IAFW-2249 (General Conditions of Contract).

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

(Signature of Contractor)
Officer
Dated:

AGE(Contracts)
For Accepting

(In lieu of IAFW-1779A) (Rev 1955)

(TO BE USED IN CONJUNCTION WITH GENERAL CONDITIONS OF
CONTRACTS IAFW-2249)

MILITARY ENGINEER SERVICES

Tele: AF-5730
Civ : 0532-2580125

Registered by Post
Garrison Engineer (AF)
Military Engineer Services
Bamrauli, Allahabad-12

8943/ /E8

15 Oct 2024

**NAME OF WORK: SPECIAL REPAIR/REPLACEMENT OF GI PIPE AND ALLIED WORKS AT SOUTH
CAMP AND OTHER SANCTIOIN WORKS UNDER GE (AF) BAMRAULI**

M/s _____ is hereby authorised to tender for the above work. The technical and price bid (Cover 1 & 2) to be uploaded in the web site **www.defproc.gov.in** on 15 Oct 2024 **up to 1800 Hrs**. Any correspondence concerning to this tender, should be addressed quoting the reference as to GE(AF) Bamrauli and marked on the outside **CA NO. GE/BAM/E- of 2024-25**.

“THE PRESIDENT OF INDIA DOES NOT BIND HIMSELF TO ACCEPT THE LOWEST OR ANYTENDERS.”

Appointment :AGE(Contracts)
Signature of the Officer
Issuing The Tender Documents:

Dated :

(Signature of Contractor)
Dated:

NOTES TO SCHEDULE "A"**NAME OF WORK: SPECIAL REPAIR/REPLACEMENT OF GI PIPE AND ALLIED WORKS AT SOUTH CAMP AND OTHER SANCTION WORKS UNDER GE (AF) BAMRAULI****Notes:-**

1. This contract comprises for full and final execution of the work including material and labour complete all as described in Schedule "A" (BOQ).
2. The rate in Col 5 are to be filled by the tenderer in figures only.
3. **PERIOD OF COMPLETION:** -The entire work under this contract shall be completed within a period of **180 Days** from the date of commencement as mentioned in the work order No.1.
4. **Defect liability period:**-Refer condition 46 of IAFW 2249 (General Condition of Contracts) amended vide amendment No. 49 of IAFW-2249. Defects liability period for this contract shall be 12 (Twelve) calendar months after the work have been handed over to the Government.
5. Unless, otherwise specifically mentioned, the unit rates quoted against all items of Schedule "A" (BOQ) shall be inclusive of costs towards materials, labour, T&P, taxes/ duties i.e. GST, labourcess and any other tax asapplicable day by day, insurance charges, freight charges, transportation, loading, unloading, testing charges asapplicable, fixing in position as described in the respective items and all other ancillaries items of work requiredfor the satisfactory execution of the items of work as per description given in the Schedule "A" (BOQ) and as specified in the particular specification. Nothing extra will be admissible to the contractor.
6. Form 3D, 31 & 32 or any other form shall not be issued by MES. This is an express condition of this contract. No claim of the contractor shall be entertained by MES on this account.
7. The quantities shown under column 3 are approximate, and are inserted as guide only. These shall however not be varied beyond the limits laid down in condition 7 of IAFW-2249 (General Condition of Contracts).
8. Total amount under column 7 is not firm but will be treated as "Contract Sum" as referred to in IAFW-2249. The amount schedule of credit (if any) shall be deducted from the total amount of BOQ under Col-7contract sum shall be arrived accordingly to arrive lowest tender L1.
9. Description of works given in Schedule "A" (BOQ) are brief, these shall deemed to be amplified and read in conjunction with special condition particular specification, specifications for material and labour, preamble and condition given in the relevant sections of MES Schedule of rates Part-I 2009 specification and part-II rates 2020(including all amendments upto date).
10. The unit rates quoted by the contractor shall be deemed toincluded for all minor extra constructional details and accessories which are not specifically mentioned in Schedule „A"(BOQ) and or given in particularspecification but are essential for the execution of works in workman like manner and sound Engineering practice.In case of difference of opinion between the contractor and Engineer-in-Charge as to whether or not certain itemsof work constitute minor constructional details and accessories which is deemed to have been included in the Unitrates,the decision oftheAcceptingOfficer shallbefinalconclusive and binding.
11. Unit rates of all items shall be incisive of Supply & Fixing (S&F) Materials &Labour (M&L), Laying Jointing & Testing (as applicable) unless mentioned specifically "Fixing only", "Supply only" or "Hanging only".
12. The work will be carried out up to triple storey buildings. The rates quoted by the bidders shall Include erecting/construction of platforms and scaffolding upto required height.

NOTES TO SCHEDULE "A"(Contd...)

13. The work for periodical surfaces shall include the following and the rates quoted by the bidders shall include the same:

- (a) Use of all scaffolding, trestles, ladders, cradles, etc. necessary for execution of work and protective measures.
- (b) Removing of nails, making good holes, cracks, etc.
- (c) Work in patches, and in narrow widths. bands, cornices, pilasters, etc. and cutting in edges to line, where necessary.
- (d) Spreading and removing coverings to doors, windows, floors, fittings, etc., to protect them from splashes.
- (e) Removing and replacing furniture, movable cupboard, chicks, blinds, etc.
- (f) Washing floors, cleaning glass, joinery, electric fittings, wiring, etc. of drops and splashes and leaving premise, clean and tidy.
- (g) First coat of finish on plastered surfaces, wherein the previous decoration has been completely removed, shall be treated as on undecorated surfaces.

14. Contractor shall observe all necessary precautions for working on heights, overhead tanks, in manholes, soak wells, septic tanks and in foul conditions. Workmen shall be provided with safety equipment, masks, gloves, gum boots etc for protection from hazardous gases and polluted sewage.

15. Preparation of surfaces shall be carried out as specified for carrying out finishes. After preparation of surfaces, approval shall be obtained from Engr-in-charge before applying further treatment / coat. Building wise stage passing register shall be maintained.

16. Painting on area exc more than 3sqm will be done with roller. Painting brush will be used only in corner, grill etc with the permission of Engr-in-Charge.

17. The contractor shall inspect & examine site by prior appointment with GE & satisfy himself with the work & its site condition etc., before submitting his tender. No claim on account of any misunderstanding or otherwise shall be entertained at later date.

17.1. Whether or not mentioned anywhere else, cleaning of sewage lines, septic tanks, soakwells, manholes and any other similar situation shall be executed by mechanical means. In situations where application of mechanical means is not feasible, Engr-in-Charge shall be intimated before carrying out the work manually. The persons deployed for work in these situations shall be provided necessary safety equipment and gears. Contractor shall be responsible for safety of workmen. All the norms and rules for working in foul and hazardous conditions as per prevailing act shall be followed. Any Equipment/ Machine / T&P necessarily & technically required for effective & safe workmanship as directed by Engr-in-Charge shall be arranged by the contractor at his own cost.

18. Complete site for work may not be available at the time of placing of work order and as on the stipulated date of commencement of work. In such case the contractor may have to start the work on part site. The contractor while preparing the phased schedule of work shall take this into consideration and schedule his programme accordingly. No claim whatsoever for not handing over the entire site on acceptance of contract / placing of work order and for giving the site gradually shall be tenable.

19. **ENGINEERING ESTABLISHMENT**

19.1 Contractor shall employ Engineering and Supervisory staff as per condition 25 of IAFW2249 (General condition of the contract) and mentioned in the tender documents.

20. **T&P/ MACHINERY/ EQUIPMENT:**

20.1 Contractor shall arrange minimum following T&P required for the work at his own cost for entire completion of work.

B/R Works

(a)	One bag capacity concrete mixer (diesel)	-	01
(b)	Vibrator (Needle and plate type)	-	02
(c)	Steel shuttering with spans, props etc.	-	As per site requirement
(d)	Drillings machines	-	01

SCHEDULE "A"(Conted....)**E/M Works**

(a)	Steel/ Aluminium ladders 1.5m to 8m	-	02 (Nos)
(b)	Chase cutting machines	-	01
(c)	Torque wrench for nuts/bolts/screws	-	01
(d)	LT Meggar 500 volts	-	01
(e)	Tong tester	-	01
(f)	Earth tester	-	01
(g)	Welding sets	-	01
(h)	Machines for screw driving	-	01

20.2 Any other Equipment/ Machine / T&P not listed in para 2 above but necessarily & technically required for effective & workmanship like execution of work as directed by Engr-in-Charge shall be arranged by the contractor at his own cost.

21. Contractor will be required to strictly ensure engagement of engineers and deployment of „T&P“ Machinery & Transport as stipulated in the contract and IAFW 2249. Inadequate engagement of engineers/deployment, „T&P“, Machinery & Transport as per contract conditions shall be considered as serious lapse attracting ban/ removal/ downgrading/ debarment of the Firm/Company.

26. The following Jobs/works are clubbed in this tender:-

Srl No.	Job No.		Brief description
(a)	29WG/SR (E/M)/06/2024-25	:	Special Repair/Replacement of GI Pipe and Allied Works at South Camp at AF Stn Bamrauli
(b)	CAC (U)/Maj Rev/05/2024-25	:	Provision of Shed for Temporary Guard Post at SNCos Mess at AF Stn Bamrauli
(c)	29WG/Maj Rev/07/2024-25	:	Improvement to POL Stores at AF Stn Bamrauli
(d)	29WG/AA/MW/03/2024-24	:	Provision of Fire Alarm with Smoke Detectors at Stn Armoury at AF Stn Bamrauli

SIGNATURE OF CONTRACTOR

FOR ACCEPTING OFFICER

SCHEDULE OF CREDIT**TENDER FOR : SPECIAL REPAIR/REPLACEMENT OF GI PIPE AND ALLIED WORKS AT SOUTH CAMP AND OTHER SANCTION WORKS UNDER GE (AF) BAMRAULI**

Srl No	Description of item	Unit	Qty	Rate (in Rs)	Amount (in Rs)
1	2	3	4	5	6
1	Old U/s CI/DI pipe any type 80 mm	RM	260	75.00	19500.00
2	Old U/s GI tubing 80 mm bore dia	RM	185	60.00	11100.00
3	Old U/s GI tubing 50 mm bore dia	RM	395	40.00	15800.00
4	Old U/s GI tubing 40 mm bore dia	RM	370	30.00	11100.00
5	Old U/s GI tubing 25 mm bore dia	RM	480	25.00	12000.00
6	Old U/s GI tubing 20 mm bore dia	RM	480	20.00	9600.00
7	Old U/s GI tubing 15 mm bore dia	RM	370	15.00	5550.00
8	Old U/s Gate valve 50 mm bore	Each	15	80.00	1200.00
9	Old U/s Gate valve 40 mm bore	Each	15	80.00	1200.00
10	Old U/s Gate valve 25 mm bore	Each	45	60.00	2700.00
11	Old U/s Gate valve 20 mm bore	Each	45	40.00	1800.00
12	Old U/s Gate valve 15 mm bore	Each	50	30.00	1500.00
13	Old U/s bib tap 15 mm dia	Each	55	15.00	825.00
14	Old/ unserviceable sluice valve 150 mm	Each	10	400.00	4000.00
15	Old/ unserviceable sluice valve 100 mm	Each	10	350.00	3500.00
16	Old/ unserviceable dismantled valve pit chamber	Each	10	300.00	3000.00
17	Old/ unserviceable hydrant opener	Each	10	20.00	200.00
18	Old/ unserviceable sprinkler	Each	12	100.00	1200.00
19	Old/ unserviceable hydraunt	Each	50	80.00	4000.00
20	Old U/s PVC pipe any type 160 mm	RM	200	25.00	5000.00
21	Old U/s PVC pipe any type 90 mm	RM	150	18.00	2700.00
22	Old U/s PVC pipe any type 75 mm	RM	150	15.00	2250.00
23	Old U/S Chowkats incl panel shutters, exc. 1.5 sq. m but	Each	1	300.00	300.00
24	Old U/S Chowkats incl panel shutters n exc. 1.5 sq. m	Each	1	200.00	200.00
25	Old broken tiles	sqm	210	5.00	1050.00
26	Old U/S doors frame with shutters any description; any	Each	4	200.00	800.00
27	Old u/s Iron scrap	Kg	20	10.00	200.00
28	Old u/s Aluminium scrap	Kg	5	150.00	750.00
Total to be deducted from total of BOQ quoted by the tenderer					1,23,025.00

Notes: -

- The department has assessed the rate of credit and inserted under Column -5 and extended the amount to column 6. The total of the credit so assessed shall be deducted from amount quoted by the tenderer under collection of schedule "A"(BOQ).
- The rate of credit assessed by the department is firm. The quantity is measurable. The final credit shall be based on the sum arrived at by the final quantity multiplied by the unit rate of credit assessed by the Department.
- Recovery shall be affected for the net quantity dismantled/demolished under Schedule "A" (The quantity reused in the work will be deducted) for the purpose of credit measurement of AC/CGI Sheet actual quantity shall be measured after dismantling.
- The amount of credit shall be deducted from the RAR for the completed portion of work.
- Items issued under Schedule of Credit shall not be re-used in the work.
- The site shall be kept clean and tidy after removal of the materials issued under schedule of credit.
- No claim of any nature regarding the rate of credit, quality of material obtained and its suitability, etc shall be entertained at any stage.
- No lead will be measured and paid for stacking or subsequent removal of material.
- The items not included in Schedule of Credit but dismantled/demolished shall be the property of Govt and shall be returned/deposited by the contractor to MES store yard without any extra cost to Govt.

Signature of contractor**For Accepting officer**

COLLECTION OF SCHEDULE 'A' (BOQ)

1.	Total amount BF from Srl Page No	Rs. _____
2.	Deduct the amount of Schedule of credit	Rs. 1,23,025.00
	Net Amount	Rs. _____

Signature of Contractor
Dated:

AGE (Contracts)
For Accepting Officer

SCHEDULE "B"**LIST OF MATERIALS TO BE ISSUED BY THE
DEPARTMENT SEE CONDITION 10 OF IAFW-2249**

SrlNo	Description of items	Unit	Rate	of issue by name	Remarks
1	2	3	4	5	6

-----NIL-----

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

SerNo	Quantity	Particulars	Details of MES crew supplied	Hire charge per unit per working day	Stand by charges per unit per off day	Place of issue (by name)	Remarks
1	2	3	4	5	6	7	8

-----NIL-----

SCHEDULE "D"

(TRANSPORT TO BE HIRED TO THE CONTRACTORS)
(See Conditions 16 & 35 of IAFW-2249)

Ser No	Quantity	Particulars	Rate per Unit per Working day	Place of issue (by name)	Remarks
1	2	3	4	5	6

-----NIL-----

(Signature of Contractor)
Dated:

AGE (Contracts)
For Accepting Officer

TENDER

THE PRESIDENT OF INDIA

Having examined and perused the following documents:-

1. Specifications signed by GE & AGE (Contracts).
2. Drawings detailed in the specifications.
3. Schedule "A" (BOQ), "B", "C" & "D" attached here to.
4. MES Standard Schedule of Rates (2009) Part-I specification and Part-II Rates (2020) (here after referred to as MES Schedule) together with errata/amendments Nos 1 to 3 for SSR Part -I (2009) and errata/amendment Nos. 1-to-122 for SSR Part -II(2020).
5. General Conditions of Contract IAFW-2249, 1989 Print together with amendments No. 1 to 49 and errata No. 1 to 20.
6. WATER: [Condition 31 of IAFW-2249 (General Condition of Contracts)] Water will be supplied by MES and shall be paid, by the contractor @ Rs. 3.75 per Rs. 1000/- worth of work done priced at contract rates.
7. Should this tender be accepted I/We agree:-

* (a) That the sum of Rs. _____ (Rupees _____ only) forwarded as earnest money, shall either be retained as a part of security deposit or refunded by the Govt. on receipt of the appropriate – amount of security deposit with in the time specified in condition 22 of IAFW-2249.

(a) To execute all the work referred to in the said documents upon the terms and conditions contained or referred to there in and at the item rates contained in the aforesaid Schedule "A" (BOQ) or at such other rates and may be fixed under the provision of condition 62 of IAFW-2249 and to carry out such deviations as may be ordered vide condition 7 of IAFW-2249 upto maximum of **10%(Ten percent)** and further agree to refer all disputes as required by conditions 70 of IAFW-2249 to the Sole Arbitration of a serving officer having a degree in Engineering or equivalent or having passed final/direct examination of Sub Division II of Institution of Surveyors (India) recognized by Govt. of India, to be appointed by the Chief Engineer(AF) Prayagraj Zone, Prayagraj or his absence the Officer Officiating as Chief Engineer (AF) Prayagraj Zone, Prayagraj whose decision shall be final, conclusive and binding.

* To be deleted where not applicable.

Contd.../-

TENDER(CONTD....)

Signature _____ in the capacity of _____ duly authorized to sign the tender
for and on behalf of _____

Dated _____

Postal Address

Witness Address:-

TELEGRAPHIC ADDRESS _____

Telephone _____

ACCEPTANCE

_____ Alternations have been made in these documents and as evidence that these alternations were made before the execution of Contract Agreement, they have been initialed by the Contractor and AGE (Contracts) of Garrison Engineer (AF)Bamrauli. The said officer is hereby authorized to sign and initial on my behalf the documents forming part of thiscontract.

The above tender is accepted by me on _____ day of _____ on behalf

of PRESIDENT OF INDIA, for the item rates contained in Schedule "A" (BOQ) and contract sum of

Rs. _____ (Rupees _____)
_____)

Signature _____ Dated _____ Day of _____

APPOINTMENTGARRISONENGINEER
(AF) BAMRAULICANTT
(For and on behalf of the President of India)
AcceptingOfficer

GENERAL CONDITIONS OF CONTRACTS (IAFW-2249:PRINT-1989)
FOR MEASUREMENT CONTRACTS (IAFW 1779 & 1779A)

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

It is hereby further agreed and declared by me/us, that the MES General Conditions of Contracts (IAFW-2249: Print -1989) including Condition 70 & 71 thereof pertaining to settlement of disputes first through Conciliator/Dispute Resolution Board and there after by Arbitration, containing 34 pages(including this page) with Errata 1 to 20 and Amendment Nos. 1 to 49 shall form part of these tender documents.

It is also agreed by me/us that in case of any discrepancy in the interpretation of the Contents between ENGLISH and HINDI VERSION, ENGLISH VERSION shall take precedence over HINDI VERSION.

*DELETEWHICHEVERISNOTAPPLICABLE

(SIGNATURE OF CONTRACTOR)
DATED: _____
Officer

AGE (Contracts)
for Accepting

SCHEDULE OF MINIMUM WAGES

It is hereby agreed that the "Schedule of Minimum wages" as published by Government of India/ StateGovt. / Govt. Local authorities which ever is highest and which specifies minimum rates of wages for various categories of work men as applicable on the last due date of receipt of this tender shall form part of these tender documents.

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

(SIGNATURE OF CONTRACTOR)

DATED: _____

AGE (Contracts)

for Accepting Officer

SPECIAL CONDITIONS**1. GENERAL**

1.1 These special conditions shall be read in conjunction with General Conditions of Contracts, IAFW- 2249 including Errata/amendments there to. If any provisions in these special conditions are at variance with the provisions of abovementioned documents the provisions given in these special conditions shall take precedence there over.

1.2 The work under this Contract shall be carried out in accordance with MES Schedule, Particular Specifications, drawings and other provisions made in MES Schedule.

1.3 The term 'General Specifications' referred to herein before/ here in after as well as referred to in IAFW- 2249. (General Conditions of Contracts), shall mean the Specifications contained in MES Schedule.

1.4 General rules, specifications, special conditions and all preambles in MES Schedule shall be deemed to apply to the works under this Contract unless specified otherwise in these tender documents, in which case the provisions in these tender documents shall be deemed to take precedence over the provisions made in MES Schedule.

2.0 VISIT TO SITE BY CONTRACTOR

2.1 The renderers shall contact GE for the purpose of inspections of site(s) and examination of relevant documents other than those sent herewith, who will extend reasonable facilities for the purpose. The renderers shall also make themselves familiar with working conditions, accessibility to site (s), availability of materials and other cogent conditions which may affect the entire completion of work under this contract.

2.2 In case of a tender containing an offer is submitted, the renderers shall be deemed to have visited the site (s) and made themselves familiar with the working conditions etc. irrespective of whether they actually inspect the site or not.

3.0 MINIMUM WAGES PAYABLE

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

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

3.3 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 date from time to time.

3.4 Schedule of minimum wages are not enclosed alongwith tender documents. However contractor shall be deemed to have verified the minimum fair wages payable as on the last due date of receipt of tender.

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

4. LABOUR REGULATION AND ABOLITION ACT

4.1 Contract labour (Regulation and Abolition) Act 1970 is applicable to MES contractors. Rates quoted by the contractor shall be deemed to take into account the cost/extra expenditure etc required to comply with the provisions contained in the said Act and the rules framed regarding labour from time to time by Central/State Govt.

SPECIAL CONDITIONS

5.0 **The works under this contract lies in RESTRICTED AREA.**

5.1 **CONDITIONS FOR WORKING IN RESTRICTED AREA**

5.1.1 **VISIT TO SITE WITHIN THE RESTRICTED AREA :**

5.1.1.1 Permission to enter the restricted area at the time of submission of tenders can be obtained through the Garrison Engineer. Tenderers are advised to send prior intimation of visit of their agents, representatives etc. If any, as regards to dates and time of their proposed visit so that necessary arrangements may be made by GE to secure admission. Whether a tenderer visit the site or not, he shall be deemed to have full knowledge of the restrictions of entering into /exiting from the site of works, for working within the Restricted Area.

5.2 **ENTRY /EXIT**

5.2.1 The Contractor, his agent(s) representatives, workmen etc and his materials, carts, trucks or other means of transports etc will be allowed to enter through and leave from only such gate(s) and at such times as the GE or authorities in charge of the Restricted Area(s) may at their sole discretion permit to be used. The Contractor's authorized representative is required to be present at the place of entry and exit for the purpose of identifying his workmen carts, trucks etc to the person in charge of the security of Restricted Area.

5.3 **IDENTITY CARDS OR PASSES:**

5.3.1 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.

5.4 **IDENTITY OF WORKERS**

5.4.1 Every worker shall be in possession of an identity card. The identity card will be issued after thorough investigation of the antecedents of the labourers by the Contractor and attested by the Officer-in-Charge of the unit concerned in accordance with the standing rules and regulation of the units.

5.4.2 Contractor shall be responsible for the conduct and action of his workers, agents or representatives.

5.4.3 **SEARCH:** Thorough search of all persons and transport shall be carried out at each gate and as many times as the gate is used for entry/exit and may also be carried out any number of times at the site within the restricted area.

5.5 **FEMALE SEARCHER**

5.5.1 If the Contractor desires to employ female labours on works to be carried out and a female searcher is not borne on the authorized strength for the establishment the contractor may be asked for employment of a female searcher (Class IV/Gp 'D') for the calculated period. The cost incurred by the Contractor in doing so shall not be reimbursed to him. The Contractor is deemed to have ascertained from GE, before quoting, whether a female searcher is held on the authorized establishment or not. No subsequent claim on this aspect shall be entertained.

5.6 **WORKING HOURS:**

5.6.1 The units controlling restricted area, usually work during six days in the week and remain closed, on 7th day. The working hours available to Contractor's labour and Staff are however appreciably reduced because of time of entry and exit during working hours.

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

SPECIAL CONDITIONS

5.6.3 The definition of "working days" as given under condition 1 (t) of IAFW-2249 does not apply in case where the works are carried out in restricted area.

5.7 WORK ON HOLIDAYS INSIDE RESTRICTED AREA:

5.7.1 The Contractor shall not carry out any work on gazetted holidays, weekly holidays and other non-working days except when he is specially authorized in writing to do so by the GE. The GE may at his sole discretion declare any day as holidays or non-working day without assigning any reason for such declaration.

5.8 ACCESS TO RESTRICTED AREA AFTER COMPLETION OF WORKS:

5.8.1 After the works are completed and surplus stores etc removed, the Contractor, his agent/representatives or workers etc may not be allowed to have access to the restricted area except for attending to rectification of defects pointed out to him by the GE.

5.9 FIRE PRECAUTIONS:

5.9.1 The contractor, his agents, representatives, workers etc. shall strictly observe the orders pertainin to fire precautions prevailing within the restricted area.

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

6. SECURITY OF CLASSIFIED DOCUMENTS

6.1 Contractor's special attention is drawn to conditions 2A and 3 of General Conditions of Contract IAFW- 2249. The contractor shall not communicate any classified information regarding works either to sub - contractor 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 works and he shall return all documents on the completion of the works or earlier on determination of the contract. The contractor shall alongwith the 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.

7. MATERIALS AND SAMPLES

7.1 Material listed in Appx `A` to special condition will only be accepted if they bear ISI certification marking. Material having only embossing of IS number can be rejected. Materials listed in Appx `A`. will not be accepted even if they are conforming to relevant IS but not having IS marking. In case of deviation price adjustment @ 10% of the cost of article (on minus side only) shall be made for the articles/materials not having ISI marking. Materials listed in Appx `A` & `B` to particular specification are the products which are manufactured by number of firms and are generally superior to certified products though they do not bear the ISI mark. Such materials shall be accepted if they are conforming to the relevant IS.

7.2 Materials other than listed in condition 7.1 above required to be provided by the contractor for incorporation in this work shall unless otherwise specified in the particular specification, comply with the relevant Indian standard as specified in MES SSR Part-I subsequently amended or revised. Preference shall be given for ISI marked materials in such cases also. Materials required to be incorporated in the work to be procured by the contractor will be preferred in following order of preference.

- (a) Materials with ISI marking.
- (b) Materials superior to ISI standards but not ISI marked.
- (c) Materials conforming to relevant IS.
- (d) Materials conforming to the samples kept in the GE's office.

SPECIAL CONDITIONS

7.3 The contractor shall produce samples of all materials, articles fittings, accessories etc. that he proposes to use and get them approval in writing by the Garrison Engineer. The materials, articles, etc. as approved shall be signed by the Engineer-in-Charge and the contractor's representative. These samples shall be kept in the custody of the Engineer-in-Charge. Contractor's quoted rates shall be deemed to include the cost of materials and labour for this purpose.

7.4 The brands of all materials, articles, fittings etc. approved together with the names of the manufacturers and firms from which supplies have been arranged shall be recorded in the materials passing register.

7.5 The materials for which IS do not exist or which are specified in these particular specifications to conform to the samples kept in the GE's office, shall comply with the requirement of these samples. The contractors are advised to inspect the sample which shall remain open for inspection with GE during working hours. The contractor shall be deemed to have full knowledge of the samples whether he inspects them or not.

7.6 The contractor shall submit two samples of each item requiring approval of the GE so that an approved sample can be kept in the site office/ incorporated in the sample quarter and other in the AGE/GE office. The contractor shall place order only after approval of the sample by the GE.

8. REIMBURSEMENT/REFUND ON VARIATION IN "TAXES DIRECTLY RELATED TO CONTRACT VALUE"

8.1 The rates quoted by the contractor shall be deemed to be inclusive of all taxes/cesses viz GST as applicable, 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 on any new /existing taxes/cesses, duties, Royalties, Octroi & other levies shall be made except as provided in Sub para 8.2 (a) to 8.2 (d) here-in-below.

8.2 (a) The taxes/cesses which are levied by Govt at certain percentage rate of contract sum/Account shall be termed as "taxes directly related to contract value" such as GST, Labour Welfare cess/tax and like as applicable 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 tender. Any increase in percentage rates of "taxes directly related to contract value" with reference to prevailing rates on last due date for receipt of tender shall be reimbursed to the contractor and any decrease in percentage rates of "taxes directly related to contract value" with reference to prevailing rates on last due date for receipt of tender shall be refunded by the contractor to the Govt/deducted by the Govt from any payments due to 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 tender shall be refunded by the contractor to the Govt/deducted by the Govt from any payments due to contractor.

8.2 (b) The contractor shall, within a reasonable time of his becoming aware of variation in percentage rates and/or imposition of an 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 as the GE may require.

8.2 (c) 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 informations as the GE may require.

8.2(d) 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 addition "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 concerned Govt Authority and submits documentary proof for the same as the GE may require.

SPECIAL CONDITIONS**9. CONTRACTOR'S REPRESENTATIVES, AGENTS & WORKMEN**

9.1 Refer condition 25 of IAFW-2249. The contractor shall employ only Indian Nationals as his representative, servants and workmen and verify their antecedents and loyalty before employing them for the work. 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 consideration the employment of foreign national is unavoidable, the contractor shall furnish the particulars to this effect, to the Accepting Officer at the time of submission of tender.

9.2 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 representative, any agents, servants and workmen or employees whose continued employment is, in his opinion undesirable. The contractor shall not be allowed any compensation on this account.

10. SITING OF BUILDINGS

There may be some changes in location/siting 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 changes in the location/siting of works.

11. PERIOD FOR KEEPING THE TENDER OPEN

11.1 The tender shall remain open for acceptance for a period of **60 days** from the next date subsequent to date of bid submission end date.

12. SIGNING OF CONTRACT DOCUMENTS

12.1 The person signing the tender on behalf of another or on behalf of a Firm shall attach with the tender a proper power of attorney duly executed in his favour by such other persons or by all 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.

13. CRITICAL PATH NETWORK

13.1 The time and progress chart to be prepared as per Condition 11 of IAFW-2249 (General Conditions of Contracts) shall consist of detailed network analysis and a time schedule. The GE and the contractor will draw the critical path network jointly 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. On completion of the time schedule a firm calendar date schedule will be prepared and submitted by the contractor to the GE who will approved it after due scrutiny. The schedule will be submitted in four copies within two weeks from the date of handing over of site.

13.2 During the currency of the work 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, contractor is expected to participate in the review and updating of the network undertaken by the GE.

13.3 These reviews may be under taken at the discretion of the GE either as periodic appraisal measure or when the quantum of work ordered on the contractor is substantially changed through deviation order or amendments. Any revision of the schedule as a result of the reviews will be submitted by the contractor to the GE within a week who will approve it after due scrutiny. The contractor shall adhere to the revised schedule thereafter. In case of contractor not agreeing to revised schedule, the same will be referred to the Accepting Officer whose decision will be final, conclusive and binding. GE's approval to the revised schedule resulting in a completion date beyond the stipulated date of completion shall not automatically amount to a grant of extension of time. Extension of time shall be considered and decided by the appropriate authorities mentioned in condition 11 of IAFW-2249 and separately regulated.

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

SPECIAL CONDITIONS

13.5 No additional payment will be made to the contractor for any multiple shift work or other incentive method contemplated by him in his work schedule even though the time schedule is approved by the department.

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

14.1 The contractor shall permit free access and afford normal facilities and usual convenience to other agencies or departmental workmen, etc. to carry out works of services under separate arrangement. The contractor shall not be allowed any extra payment on this account.

15. **CLEANING DOWN**

15.1 Refer condition 49 of IAFW-2249 General Conditions of Contracts. After the work is complete, the contractor shall clean all floors, remove cement/lime/paint drops, clean joinery, glass etc. touch up all painters work and carry out all other necessary items of work to make the premises clean and tidy before handing over the buildings. No additional payment will be made to the contractor for the purpose.

16 & 17. BLANK

16. **WATER SUPPLY**

16.1 Refer to condition 31 of IAFW-2249.

(a) Water will be supplied by MES to the contractor at points shown on site plan from piped system and shall be paid by the contractor @ Rs 3.75 per Rs 1000.00 worth of work done priced at contract rates. The contractor shall arrange at his own expense for storage of water and lifting pumping, carrying of conveying water to the site of work as required. In case water points are not marked on the site plan, the water shall be supplied at one point as decided by GE. Contractor shall plug the bore hole through a suitable cap as directed by Engineer – in – Charge for removal of hand pump to prevent any accidental falling.

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

16. **ELECTRIC SUPPLY**

16.1 In case the contractor desires to buy electricity from MES, it will be supplied at point up to 03 km away from site of work shown on site plan./or as decided by the GE.

16.2 Electric supply shall be 415/230 volts, 50 cycles, three phase AC supply at upto 05 KW.

16.3 The contractor shall be charged for the electric energy consumed at Rs. 14.88 (Rupees Fourteen and Paise Eighty Eight Only) per unit (KWH) for lighting and power.

16.4 The above rate is all in cost rate. Duties and/or taxes if any, levied by State Govt. and/or any Electricity Undertaking and the like on the electricity charges will be borne by the Department.

16.5 . Main switches and KWH meter to register the power supplied shall be provided and installed by MES. All other fittings, cable switch, connection etc. for distribution and supply of electricity from main switch to work site shall be arranged by the contractor at his own according to Indian Electricity Rules and along with the routes approved by the GE. The GE shall have free access to inspect all installations, connections, devices for consuming the electricity and if these are not found satisfactory the GE shall have the power to get these disconnected.

16.6 Supply of electricity shall be during the hours as decided by the GE. However MES does not constitute any guarantee for the continuity of supply and no compensation shall accrue to the contractor for the supply becoming intermittent or if there is any breakdown for any reason. Contractor shall have provision of sufficient stand by supply under their own arrangement to ensure that no delay occurs on account of no or intermittent supply from the MES.

SPECIAL CONDITIONS

16.7 It is the responsibility of contractor to maintain the unit power factor of electric supply. For this contractor shall provide capacitor of appropriate capacity for each connection for installation of his construction equipments.

17. Blank**17. ROYALTIES**

Delete the existing description of condition 14 of IAFW-2249 and insert the following: - "No quarries on defence land are available".

18 CONTRACTORS PLANTS/EQUIPMENT AT SITE :

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

- (i) Particular of plants/equipments, their make, manufacturer's model No. if any, Registration No., if any, capacity, year of manufacture and year of purchase etc.
- (ii) Total No. of (Quantity) on site of work.
- (iii) Location indication No. (quantity) at each location on the site of work.
- (iv) For the purpose of this condition, purchase value on the date of purchase for plant/equipment and vehicle No. of trucks and lorries shall be furnished. However neither the workman's tools nor manually operated tools/equipment shall be given. The Engineer-in Charge shall record the particulars supplied by the contractor in the works diary and sent the return to the GE for record in his office.

19. OUT OF POCKET EXPENSES

19.1 No out of pocket expenses incurred by the tenderer in submitting his tender shall be reimbursed whether his tender is accepted or not.

20. DAMAGE TO EXISTING WORKS

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, conforming 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, binding and conclusive.

21 MINOR CONSTRUCTION DETAILS

21.1 Unit rates offered by the Contractor in Sch 'A' shall be deemed to include for all minor details of construction which are obviously and fairly intended and which may not have been referred to in these documents but these are essential for the execution of work and services in workmen like manner and sound construction.

21.2 In case of difference of opinion as to whether or not a certain item of work constitutes minor details of construction included in the contractor's quoted rates, the decision of the Accepting Officer shall be final, conclusive and binding.

22. RECORD OF PROPRIETARY BRANDED MATERIALS WHICH LOOSE IDENTITY AFTER INCORPORATION

22.1 Proprietary/branded materials such as all types of bitumen, cement, steel, sealing compounds, glass grid, SAMI, paints, bonding agents etc, the quantity of which cannot be checked after incorporation in the work, shall when collected at site, be recorded in Measurement Book with reference to Vr No, make, brand and rate charged by manufacturer/supplier, and signed both by the MES representative and the contractor.

22.2 The contractor shall obtain proprietary/branded materials direct from the manufacturer(s) or from their authorised stockiest where such authorised stockiest have been appointed. Contractor shall produce original purchase voucher/bill/invoices for full quantities of materials showing quantity and quality of the materials before claiming advance on account payment or before incorporating these materials into the work to satisfy the Engineer-in-Charge that materials comply with the I.S. Specifications. These vouchers shall be endorsed, dated and initialed by the Engineer-in-Charge giving the contract number and name of work and a certified copy of each such vouchers signed both by Engineer-in-Charge and the contractor shall be kept in MES record.

SPECIAL CONDITIONS

22.3 When cost of each category of materials is less than Rs 2500/- production of vouchers may not be insisted upon if the Garrison Engineer is otherwise satisfied of the quality and quantity of the materials.

23. STORAGE OF MATERIALS

23.1 The contractor shall not be provided any storage accommodation at the site by MES. The contractor shall make his own arrangement as per condition 10 of IAFW-2249 and as directed by the Engineer-in-Charge.

24. -BLANK-

25. RETENTION MONEY/COMPENSATION FOR DELAY

For the purpose of calculating retention money under condition 64 of IAFW-2249 and compensation for delay in completion of work under condition 50 of IAFW-2249, income tax (at source) and like, the value of contract as revised by price variation under condition 63 of IAFW-2249 shall be taken into account.

26. BANK GUARANTEE BOND

26.1 In case the contractor desires to furnish Bank Guarantee in lieu of retention money/performance security deposit, the guarantee bond shall be executed as per specimen prescribed by the Govt. of India, Min. of Defence on non-judicial stamp papers of appropriate value from Nationalized/Scheduled Indian Bank. Guarantee Bond shall come into force after the same is accepted by the Accepting Officer.

27. MATERIALS IN METRIC SIZES

27.1. If the materials (other than those issued under Sch. 'B') are not available in metric sizes as shown on drawings, the contractor shall provide materials in equivalent inch sizes which should not be less than the metric size dimensions under any circumstances, at no extra cost to the Govt.

28. LAND FOR TEMPORARY WORKSHOP, STORES ETC

Delete. The following from line 5 to 9 of sub para 1 of condition 24 of IAFW-2249 reading "In the event of area of land allotted to him" and insert as under :-

"The contractor shall be allotted the area as marked on the layout plan(s) for the purpose of erecting temporary workshop, stores etc. Plot of land so allotted shall not be used for accommodation for labour and canteen, for which the contractor shall make his own arrangements at his own expense. For this purpose, a token rent of Rs. 1/- per year or part of a year will be recovered from the contractor in respect of each and every separate area of land allotted to him. The area so occupied shall be vacated by the certified date of completion and site of work shall be cleared as stipulated in condition 49 of IAFW-2249"

29. TESTING OF MATERIAL

29.1 For works costing more than one crore it will be mandatory for the contractor to establish his own laboratory at his own cost at site on commencement of work to carry out test of level 'A' specified in appendix 'B' to special condition here in after. In case the cost of work is less than Rs. 1 crore it will be at the option of the contractor to set up site laboratory. All equipment of the laboratory will be got calibrated by the contractor from the authorised test house at commencement of work and there after on yearly basis and test certificate produced to the GE

29.2 Contractor will be responsible for carrying out all the tests specified in appendix 'B' for level 'A', level 'B' and level 'C' and all others tests specified elsewhere in tender documents such as test for cement, steel etc. The cost of material and transportation for all the tests will be born by the contractor.

SPECIAL CONDITIONS

29.3 There will be no recovery by the department for the tests of level 'A' carried out in the site lab established by the contractor. For level 'B' or any other tests carried out in zonal lab, testing charges will be recovered at the rates given in appendix 'B'. The recovery for the tests carried out in National test house/Engineering college/SEMT wing, CME, Pune etc shall not be effected by the department and the testing charges for such tests will be borne by the contractor himself.

29.4 The test in site lab shall be carried out in the presence of Engineer-in-Charge.

29.5 The percentage/selective checks as desired by the accepting officer/GE shall be got done independently in the Zonal/Govt approved labs. The testing charges only for such tests shall be borne by the department. Cost of material shall be born by the contractor. In case test results are found at variance from the results of site lab, the results obtained from the Zonal/Govt approved lab will be final and binding

29.6 For the works costing less than 1 Crore in case contractor does not opt to establish site lab, level 'A' tests shall also be got carried out by the contractor in Zonal lab and recovery shall be effected as specified in Appendix 'B'.

29.7 In case the same are got carried out from other Govt/Govt approved/Engg College, the cost of materials, transportation as well as testing charges will be borne by the contractor

29.8 The contractor shall employ a full time, competent technical representative having diploma in Civil Engineering for carrying out tests in site laboratory. This will be in addition to Engineer (s) employed for supervision of works as required vide condition 25 of IAFW -2249.

30. **HANDING OVER OF SITE**

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

31. **BLANK**

32. **WATCH, WARD AND LIGHTING**

32.1 The Contractor shall provide and maintain all necessary watch, ward and lighting arrangements to keep the traffic off the trenches. Necessary boards and sign posts shall be provided and set up to the entire satisfaction of the Engineer-in-charge.

32.2 The Contractor shall reimburse the loss to the Govt. on account of any damage, that may occur on this account.

33. **PRECAUTION AGAINST RISKS**

33.1 The Contractor shall be responsible at his own expense in taking precaution to prevent any damage from what so ever cause arising, other than out of accepted risks and to minimise the amount of any such loss or damage and for adoption of necessary protective measures required for the purpose in compliance with Condition 38 of IAFW-2249 and Rule 5 of the MES SAFETY CODE vide (Annexure 'B') of IAFW-2249 until the works have been handed over duly completed to the Engineer-in-charge.

34. **APPROACHES**

34.1 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.

35. **PERFORMANCE SECURITY DEPOSIT**

35.1 Within 28 days of receipt of the letter of Acceptance, the successful contractor shall deliver to the Accepting Officer a performance security in any of the forms given below for an amount equivalent to **5% [FIVE PERCENT] of the contract sum.**

(a) A bank Guarantee in the prescribed form.

(b) Government securities, FDR or any other Government Instruments stipulated by the Accepting Officer.

SPECIAL CONDITIONS

35.2 If performance security is provided by the successful contractor in the form of Bank Guarantee, it shall be issued by Nationalized / Scheduled Indian Bank but its confirmation shall be done only from the Head Office of the Bank.

35.3 Failure of the successful contractor to comply with the requirements of sub-clause 35.1 above shall constitute sufficient grounds for cancellation of the award of work and forfeiture of the Earnest Money. In case of MES enlisted contractor, amount equal to the Earnest Money stipulated in the Notice inviting tender, shall be notified to the tenderer for depositing the amount through MRO. Issue of tender to such tenders shall remain suspended till the aforesaid amount equal to the Earnest Money is deposited in Government Treasury.

35.4 All compensation or other sums of money payable by the contractor to the Government under the terms of this contract or under any other contract with Government may be deducted from, or paid by the sale of a sufficient part of the performance security or from the interest arising therefrom from any sums which may be due or become due to the contractor by the Government on any account whatsoever and in the event of his performance security being reduced by reason of any such deduction, or sale as aforesaid, the contractor shall within ten days thereafter make good in cash or securities, endorsed as aforesaid any sum or sums which may have been deducted from or realized by the sale of his performance security or any part thereof. Government shall not be responsible for any loss of securities or any depreciation in the value of securities while in their charge nor for loss of interest thereon.

35.5 In the event of contract being cancelled, under condition 52, 53 & 54 of General conditions of Contracts, the Performance Security shall be forfeited in full and shall be credited into Consolidated Fund of India

36. **REFUND OF PERFORMANCE SECURITY DEPOSIT:-**

(a) The performance security deposit deposited by the contractor as per condition 19 of the IAFW-2249 shall be refunded after the expiration of the defect liability period (vide condition 46 of IAFW-2249) as per condition 68 of IAFW-2249 provided, that the contractor shall first have to paid the final bill and have to render a NO demand certificate (IAFW-451) and provided there are no claims outstanding against the contractor in respect of the contract in which the performance security deposit is lodged and the final bill is not minus. In the event of departments claims against the contractor becoming and / or the final bills under condition 66 of IAFW-2249 becoming minus the amount of the performance security shall be adjusted against this claims due to Government and the balance if any will be refunded to the contractor.

37. **Record of materials and purchase Vouchers :**

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

(b) Material brought to site shall be stored as directed by the Engineer-in-Charge and those already recorded in measurement book shall be suitably marked for identification.

(c) Contractor shall produce original vouchers/invoice from the manufacturers and/or their authorised agents for the full quantity of the following materials, as applicable as a pre requisite before submitting claims for payment for advances on account of the work done and / or materials collected in accordance with condition 64 of General condition of contracts-IAFW-2249.

(i) Water proofing compound.

(ii) Chemicals for Anti-termite treatment.

(iii) Paints Distemper, cement base paints & like.

(iv) Cast iron pipes and fittings.

(v) Sanitary fittings.

(vi) steel windows/ventilator

(vii) Factory made door shutters.

(viii) Floor/wall tiles.

(ix) Iron mongery

(x) Tarfelt/bituminous products.

(xi) Salt glazed stoneware pipes.

(xii) Electrical and water supply fittings / fixtures where names of manufacturers / brands are specified or approved

(xiii) Cables

(xiv) Cement.

(xv) Steel

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

SPECIAL CONDITIONS

(d) Bitumen shall be purchased directly from manufacturer's stockiest or their authorised dealers only. These 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.

(e) The vouchers/invoices will clearly indicate the contract number and the IS No., specific alternative to which the material conforms in case of various alternative in IS.

38 ACCEPTANCE QUALITY OF WORK AND FINISHES:

38.1 To determine the acceptable standard of materials and workmanship, the GE will order the contractor to execute sample works and shall select a portion of building as sample building in which all the works as per contract agreement will be carried out before incorporation in the whole building. The comments / suggestion received from users / visitors will be implemented firstly on sample quarter and then may be implemented in the whole building based on approval of competent authority. The workmanship of the sample quarters / works shall serve as guiding sample for the remaining works.

39 RECORD OF CONSUMPTION OF CEMENT :

39.1 For the purpose of keeping a record of cement consumed in the works, the Contractor shall maintain a pucca bound register with serially numbered pages duly initialled by Engineer-in-Charge, showing daily receipt, quantity used in works and balance in hand at the end of each day. This register shall be signed daily by the Contractors representative and MES representative in token of their verification of its correctness. This register shall be checked by Engineer-in-Charge at least once a week and on the day, cement is brought by the contractor.

39.2 The register shall be kept at site in the safe custody of the Contractor during progress of the work and he shall on demand produce the same for verification of inspecting Officer. On the completion of the work, cement register shall be handed over to the Engineer-in-Charge for record with MES.

40 SPECIAL CONDITION FOR CONCILIATION

40.1 The following disputes between the parties to the contract shall after written notice by either party to the contract be referred to the "Sole conciliator". This is an serving officer not below the rank of superintending Engineer / Superintending Engineer (QS&C) having degree in Engineering or equivalent or having passed final /direct final Examination of sub division II of Institution of Surveyor (India) recognized by Govt of India to be appointed by the Engineer in Chief, Army Head Quarters, New Delhi or in his absence the officer officiating as Engineer in chief or Director General of works specifically delegated by the Engineer in chief.

40.2 The scope of conciliation shall be restricted to the following types of disputes with financial limits as Rs. 2.00 lacs (Rupees two lacs only) for each claim in dispute.

a) Disputes relating to levy of compensation for delay in completion.

b) Disputes relating to technical examination of works.

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

d) Disputes relating to non return of schedule "B" stores over issued to the contractor.

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

40.3 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.

40.4 The party initiating conciliation shall send to the other party a written invitation to conciliate, briefly identifying the subject of the dispute. The conciliation proceedings shall commence when the other party accepts in writing the invitation to conciliate.

40.5 If the conciliator so appointed resigns his appointment or vacates his office or is unable or unwilling to act due to any reason whatsoever, the authority appointing him may appoint a new conciliator to act in his place.

40.6 The parties shall not initiate during the conciliation proceedings in respect of a dispute that is the subject matter of conciliation proceedings except that a party may initiate arbitral or judicial proceedings where in his opinion such proceedings are necessary for preserving his rights. The failure of conciliation shall in no way absolve the right of the parties to invoke arbitration for the disputes referred to for the conciliation.

SPECIAL CONDITIONS

- 40.7. The conciliation proceedings shall be governed as per the Arbitration and Conciliation Act 1996.
40.8. 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.

40. BLASTING

- 40.1. Blasting in any form is prohibited.

41. SITE DOCUMENTS

- 41.1. In addition to the site documents which are normally maintained for works, the following additional documents (as applicable for this work) shall be maintained at site and signed by GE / his authorised representative and the Contractor :-
- Mix design for quality concrete for rigid pavement.
 - Sieve analysis and silt test of sand
 - Sieve analysis of stone aggregates of different sizes
 - Water absorption test of stone aggregates of different sizes
 - Impact value of stone aggregates of different sizes
 - Crushing value of stone aggregates of different sizes
 - Flakiness index of stone aggregates of different sizes.
 - Rolling hours
 - Daily work register
 - Register of materials daily arrived at site
 - Materials approved register
 - Aggregate abrasion value register
 - Cement consumption register
 - Register for soundness test
 - Register for temperature control at boiler out at paver
 - Register for clay, silt and impurities in aggregate test.
 - Cube testing register
 - Beam testing register

42. **VALUATION OF DEVIATIONS** Condition 62 of General Conditions of Contracts (IAFW-2249) shall be referred.

43. **OFFICIAL SECRET ACT** In reference to condition 2 A of General Conditions of Contracts IAFW-2249, the contractor shall be bound by the Indian Official Secret Act-1923 and particularly section 5 thereof.

44. **CONSTRUCTION ON LABOUR WELFARE TAX** The lump sum/unit rate quoted by the tenderers shall be deemed to include the element of tax consequent to building and construction workers (Regulation of employment and condition of services) welfare cess act-1996.

45. **TAX ON WORKS CONTRACT CONSEQUENT UPON CONSTITUTION (FORTY SIXTH AMENDMENT) ACT 86**

The tendered rates shall be deemed to be inclusive of all taxes & levies payable under the respective statutes including the Sales tax/VAT imposed by State Govt consequent upon constitution (Forty Sixth) amendment Act 1986. All orders notifications in connection with tax on works contracts issued shall be considered by the tenderer & nothing extra on this account shall be paid/reimbursed by the Department.

46. EMPLOYEES' PROVIDENT FUND:

- 46.1. The contractor shall be in possession of EPF code number and all the workers deployed by him shall be enrolled as member of Employees' Provident Fund and shall have Universal Account Number [UAN]. The contractor shall render a certificate that all workers directly or indirectly employed by him are registered for EPF and the due contributions have been credited in to their accounts, before claiming for any payment. The payments shall be released only on verifying the same from official website of EPFO [www.epfindia.gov.in].

47. DEFECT LIABILITY PERIOD

The defects liability period for this work shall be **twelve calendar months** after the works have been handed over to Government as per condition 46 of IAFW-2249.

Signature of Contractor
Dated

for Accepting Officer

SPECIAL CONDITIONS**APPENDIX 'A' TO SPECIAL CONDITIONS****LIST OF CERTIFIED PRODUCTS TO BE INCORPORATED IN WORKS**

Sl No	Material
1.	<u>Concrete</u> (a) Internal water proofing compounds (IS : 2645) (b) Plywood for concrete shuttering work (IS-4990)
2.	<u>Joinery</u> Wooden Flush Door Shutters, solid core type (IS-2202)
3.	<u>Builders Hardware</u> (a) Steel shutter hinges (IS:1341) (b) Non-ferrous Butt Hinges (IS : 205) (c) Ferrous Tower Bolts (IS:204) (d) Non-ferrous Tower Bolts (IS: 204) (e) Door Handles (non-ferrous) (IS:208) (f) Parliament Hinges (Ferrous) (IS:362) (g) Hydraulically Operated Door Closures (IS:3564) (h) Continuous Piano Hinges (IS:3818) (j) Non-ferrous Metal sliding door Bolts (IS:2681) (k) Tee and Strap Hinges (IS:206) (l) Mild steel sliding door Bolts (IS:281)
4.	<u>Steel And Iron Work</u> (a) Steel doors, windows and ventilators (IS: 1038)
5.	<u>Roof Covering</u> Bitumen Felts for water proofing and damp proofing (IS-1322)
6.	<u>Ceiling and Lining</u> (a) Plywood for General Purposes (IS- 303) (Second revision) (b) Block boards (IS : 1659) (c) Veneered decorative plywood (IS : 1328) (Second revision) (d) Marine plywood (IS : 710) (e) Fiber Hard board (IS : 1658)
7.	<u>Flooring</u> (a) White Portland cement (IS : 8042) (b) Cement concrete flooring (IS : 1237)
8.	<u>WATER SUPPLY, PLUMBING, DRAINS AND SANITARY APPLIANCES</u> (a) Concrete pipes with or without reinforcement (IS: 458) (b) Salt glazed stoneware pipes and fittings (IS: 651) (c) Flushing cisterns for water closets and urinals other than plastic (IS: 774) (d) Cast copper alloys screw down bib taps and stop valves (IS: 781) (e) Galvanised mild steel tubes (IS: 1239) (f) Galvanised mild steel tube fittings (IS: 1239) (g) Sand cast irons spigot and socket soil waste and ventilating pipes and fittings (IS: 1729) (h) Ball valves (Horizontal plunger type) including floats for water supply purposes (IS: 1703) (j) Cast iron manhole covers and frames (IS: 1726) (k) AC presser pipes (IS: 1592) (l) Automatic flushing cisterns (IS: 2326)

SPECIAL CONDITIONS**APPENDIX 'A' TO SPECIAL CONDITIONS (CONTD..)****LIST OF CERTIFIED PRODUCTS TO BE INCORPORATED IN WORKS**

Sl No	Material
<u>8</u> <u>cont</u>	(m) Vitreous china sanitary appliances (i) Wash down water closets (IS: 2556 Part II) (ii) Squatting pans (IS: 2556 Part III) (iii) Wash basins (IS: 2556 Part IV) (iv) Laboratory Sinks (IS: 2556 Part V) (v) Urinals Bowl type (IS: 2556 Part VI Section I) (vi) Half Round Channels (IS: 2556 Part VII) (vii) Syphonic wash down water closets (IS: 2556 Part VIII) (viii) Foot rests (IS: 2556 Part X) (n) Plastic WC seats and covers (IS: 2546) (o) Vertically cast iron pressure pipes for water and sewage (IS: 1531) (p) Pillar tap (IS: 1793) (q) Centrifugally cast (Spun) iron pressure pipes for water gas and sewage (IS: 1536) (r) Centrifugally cast (CI) spigot and socket soil waste and ventilating pipes, fittings and accessories (IS: 3989) (s) Rubber sealing rings for gas main water mains and sewers (IS: 5382) (t) Cast iron fittings for pressure pipes for water mains and sewers (IS: 1538)
9.	<u>Electrical Works</u> (a) Ceiling Rose (IS: 371) (b) Tumbler switches (IS: 3854) (c) Socket outlet 3 pin plug and socket (IS: 1293) (d) Switch fuses (main & switch) (IS: 1064 Part-I&II) (e) Rigid steel conduit (IS: 1063) (f) Rigid Non-Metallic conduit (IS: 2509) (g) Single core cable polyethylene insulated and PVC sheathed cable (IS: 1596) (h) Starter for tube light (IS: 2215) (i) Fluorescent lamps (IS: 2418 Part I&II) (j) Aluminium stranded conductor (IS: 398 Part I & II) (k) Switchgears (IS: 2208) (l) HRC cartridge fuse links upto 650 volts (IS: 9224 Part II) (m) Porcelain Insulators for overhead power lines (IS: 731) (n) MCB (IS: 8828)

Signature of contractor

Dated:

For Accepting Officer

SPECIAL CONDITIONS

APPENDIX 'B' TO SPECIAL CONDITION

MATERIALS AND THEIR TESTS

Srl No	Material	Tests	Method of testing	Frequency of tests	Level of test	Rate per test Rs.	Remarks
1	2	3	4	5	6	7	8
1.	Brick	1) 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
		2) Water Absorption	--Do--	Lot Size.	A	330/-	as per IS:5454
		3) Efflorescence	---Do... (Part-I)	1001 to 10000 10001 to 35000 35001 to 50000	A	330/-	Legend A-Site Lab B-Zonal Lab/Govt Engg college. C-National test house/SEMT WING/Engg. College.
2.	Coarse Aggregate	1) Sieve Analysis	IS:2386(Part-I)	One test for every 15 cum of aggregates or part there of brought to site.	A	660/-	
		2) Flakiness Index	---do--		A	250/-	
		3) Estimation of deleterious materials	---do--	One test for every 100 cum of aggregate or part thereof.	A	600/-	
		4) Organic impurities	---do--	One test per source of supply	B	275/-	
		5) Moisture content	IS:2386(Part-II)	Regularly as Req'd.	A	330/-	
		6) Specific gravity	--do--	One test for each source of supply.	B	330/-	

CONTD. /.

SPECIAL CONDITIONS

APPENDIX 'B' TO SPECIAL CONDITION(Contd...)

MATERIALS AND THEIR TESTS

Srl No	Material	Tests	Method of testing	Frequency of tests	Level of test	Rate per test Rs.	Remarks
1	2	3	4	5	6	7	8
3.	Fine aggregate	1) Sieve Analysis	(IS:2386Pt-I)	One test for every 15 cum of FA or part thereof when brought to site.	A	660/-	
		2) Test for clay, silt and impurities.	--do--	--do--	A	500/-	
		3) Specific gravity	--do. but (Part-II)	One for each source of supply	B	330/-	
		4) Test for organic impurities	--do--	One test for each source of supply.	B	275/-	
		5) Moisture content	-do-	Regularly as required subject to 2 tests/ per day when being used.	A	330/-	
4.	Cement	1) Setting time	IS-4031-63 Reaffirmed 1980	Once for each consignment or as and when Reqd.	B	500/-	
		2) Soundness	--do--	--do--	B	550/-	
		3) Compressive strength	--do--	--do--	B	550/-	
		4) Fineness	--do--	--do--	B	275/-	
5.	Structural concrete	1) Slump test or compacting factor time or VEE-BEE test	IS-1199	The Min frequency of sampling of concrete of each grade shall be as under :-	A	300/-	(1) Random sample shall be carried out to cover all mix units.
		2) Compressive strength	IS-516	Qty of Conc. IN THE work(M ³)	A	900/- per sample	(2) Refer IS-456-2000 Clause. 15.2 for frequency of sampling.
				1 - 5			
				6 - 15	2		
				16 - 30	3		
				31 - 50	4		
				51 and above	4+1 for each Addl		
				50 cum or part thereof			
6.	Water for constn purpose	1) Test for acidity	IS:456 & 3025	Once at the stage of approval of source of water	B	500/-	Refer relevant clause of IS-456:2000
		2) Test for alkalinity	-do-		B	500/-	
		3) Test for TDS content	-do-		B	500/-	

CONTD. /.

SPECIAL CONDITIONS

APPENDIX 'B' TO SPECIAL CONDITION(Contd...)

MATERIALS AND THEIR TESTS

Srl No	Material	Tests	Method of testing	Frequency of tests	Level of test	Rate per test Rs.	Remarks
1	2	3	4	5	6	7	8
7.	(a) PCC block for walling (Hollow Block)	1) Compressive strength.	IS:2156-1984 (Appx 'B')	8 Blocks out of 14	A	900/-	Samples :- 14 blocks from consignment of every 5000 blocks or part thereof.
		2) Water Absorption.	-do- (Appx 'B')	3 Blocks out of 14	B	330/-	
		3) Density.	-do- (Appx 'A')	5 Blocks out of 14	B	330/-	
	(b) PCC solid block for walling.	1) Compressive strength	IS-2185	12 Blocks out of 18	A	900/-	Samples :- 18 Blocks from consignment of every 1000 or part thereof.
		2) Water absorption.	-do-	3 Blocks out of 18	B	330/-	These Blocks shall be checked for dimensions and weight
		3) Density	-do-	3 Blocks out of 18	B	330/-	
8.	Cement flooring Tiles/Terrazzo tiles	1) Water absorption	IS:1237-1980(Appx 'D')	6 Tiles out of 18	B	330/-	Samples: 18 Tiles from each source of supply selected at Random.
		2) Wet Transverse strength	-do-(Appx "E")	-do-	B	660/-	
		3) Resistance to wear	-do- (Appx 'F')	-do-	C	1000/-	
9.	Burnt clay roofing Tiles (Hand Made) IS:2690(Pt-II) <u>LENGTH</u> 150 MM to 250MM, <u>WIDTH</u> 100 MM to 200MM, <u>THICKNESS</u> 35 MM TO 50 MM	1) Water absorption	IS : 3495 (Part-II) -do- (Part-I)	6 Tiles out of 12	B	216/-	Samples 12 tiles from each source of supply selected at Random.
		2) Compressive strength		-do-	A	180/-	
10.	Manglore Pattern Roofing Tiles	1) Water absorption	IS : 654 (Appx 'A')	6 Tiles out of 32	B	180/-	SAMPLES: 32 tiles from each consignment of 3000 tiles or part thereof.
		2) Breaking load	-do- (Appx 'C')	-do-	B	120/-	These tiles shall be checked for dimensions and weight.

CONTD. /.

SPECIAL CONDITIONS

APPENDIX 'B' TO SPECIAL CONDITION(Contd...)

MATERIALS AND THEIR TESTS

Srl No	Material	Tests	Method of testing	Frequency of tests	Level of test	Rate per test Rs.	Remarks
1	2	3	4	5	6	7	8
11.	Timber	1) Specific gravity and weight	IS:1708-1960	Minimum 3 samples from a lot of 4 Cum or 250 pieces of seasoned timber.	B	120/-	
		2) Moisture content	-do-		A	120/-	
12.	Welding of steel work	Visual inspection Test.	IS:822-1970 Clause-7.1	100% by visual inspection	Work site	360/-	Specialised tests, their method and frequency to be decided on consideration of their importance by the Accepting Officer.
13.	Timber paneled and glazed door/ window shutters (including factory made shutter)	a) Dimensions, sizes workmanship and finish	IS:1003-1977 (Pt-I)	Frequency of sampling from each lot shall be as under :- Lot size Sample Size 26 to 50 5 51 to 100 8 101 to 150 13 151 to 300 20 301 to 500 32 501 to 1000 50 1001 and above 80	A	180/-	
	-do-	b) STRENGTH TEST					
	-do-	1) Slamming	IS:1303-1990				
		2) Impact Indentation					
		3) Shock Resistance	-do-	From each lot 5% of the factory made shutter shall be tested for strength tests.	Man- ufac- turer		
		4) Edge Loading	-do- -do-				

CONTD. /.

SPECIAL CONDITIONS

APPENDIX 'B' TO SPECIAL CONDITION(Contd...)

MATERIALS AND THEIR TESTS

Srl No	Material	Tests	Method of testing	Frequency of tests	Level of test	Rate per test Rs.	Remarks
1	2	3	4	5	6	7	8
14.	Ply Wood (IS:303-1989)	a) Moisture content b) Water Resistance	IS:1734-1983 (Pt-I) --do-- (Part-6)	Six test pieces cut from each of the boards selected shall be subjected to tests.	B	240/-	Sampling shall be as per IS-7835-1975 Tables
15.	Veneered Wood Particle Board (Medium Density) IS:3097-1985	a) Density b) Moisture content c) Water absorption d) Swelling due to surface absorption e) Swelling in water f) Modules of rupture g) Screw withdrawal strength	IS:635 (Part-1) --do-- --do-- (Part-16) --do-- (Part-17) --do-- --do-- (Part-4) --do-- (Part-14)	Three test specimen from each sample(Size 150mm x 75mm) (Size 300mm x 300mm) (Size 125mm x 100mm) (Size 200mm x 100mm) Three test specimens as per IS : 2380-1977 --do-- as per IS:2385	C A&B A A B C	60/- 60/- 60/- 60/- 90/- 120/-	Sampling shall be done as per IS: 3087-83 clause 2 with moisture meter.
16	Reinforcement steel	(i) Physical tests upto 16mm dia (Normal mass, tensile elongation, bend and rebend) (ii) More than 16 mm dia	AS per IS AS per IS	As per requirement As per requirement	B B	2500/- 2750/-	

Notes :

- 'A' for Site Lab, 'B' for CTL/Zonal Lab and 'C' for approved Test Labs/Engineering College.
- No other changes in Column Nos 4, 5 and 8 of Annexure I of Contract Manual against above listed materials.

SIGNATURE OF CONTRACTOR

AGE (Contracts)
for Accepting Officer

(PARTICULAR SPECIFICATIONS(CONTD...))**1.1 GENERAL:**

- 1.1.1 Specifications for materials and workmanship shall be all as described in MES Schedule part-I 2009 except where specifically mentioned otherwise in these documents. General rules, preamble to various sections, special conditions, method of measurements, etc. , given in MES schedule part-II 2020 shall also apply to this contract unless otherwise mentioned in these documents.
- 1.1.2 Particular specifications given hereinafter are in brief and are meant only to particularize, amend and emphasize the specifications given in MES schedule
- 1.1.3 Particular specifications given hereinafter shall be read in conjunction with the provisions in MES Schedule part-I 2009 and relevant IS referred therein and these particular specifications. In case of discrepancy the provisions of these particular specifications shall take precedence.
- 1.1.4 Materials provided by the contractor for incorporation in the work shall comply with the requirements of relevant Indian Standards (IS) of latest edition i.e. edition current at the date of issue of tender document.
- 1.1.5 Where specifications for any item of work is not given in MES Schedule or in these particular specifications, the specifications given in relevant Indian Standard specification or code of practices shall be followed. Specifications given for the items not included in this tender shall be deemed deleted for the purpose of this tender.

1.2. MATERIALS:

- 1.2.1 All the materials required to be incorporated in the work shall conform to the relevant IS number and bear the ISI certification mark. However the materials which are not being manufactured with ISI certification mark and ISI embossing, shall conform to the relevant IS provisions and shall be as approved by the GE.
- 1.2.2 Materials, which are not being manufactured with ISI certification mark and ISI embossing/ local materials such as sand, aggregate etc. shall strictly conform to samples kept in GE's office or shall be superior to respective samples kept in GE's office.
- 1.2.3 Unless otherwise indicated in schedule „A“, Contractor shall incorporate the material either of the makes listed in list of makes, with prior written approval of GE.

1.3. SAMPLES AND MATERIALS:

- 1.3.1 Samples of materials shall be supplied by the contractor to GE for approval within 15 days of the date of issue of work order.
- 1.3.2 The contractor shall ensure that the materials used in the work are identical with the approved samples; the materials shall be brought to the site by the contractor in the maker's original packing with the seal intact or with wrapper and shall not be installed unless approved by the Engineer-in-Charge.
- 1.3.3 **TESTING OF BUILDING MATERIALS:** Sampling and testing of materials shall be done as per IS specification and as modified in tender documents. The cost of samples of materials and other expenses required to be incurred for taking the samples, packing, transportation, preservation for further reference and testing charges shall be borne by the contractor.

1.4 MATERIALS WHICH LOOSE IDENTITY AFTER INCORPORATION:

- (a) For materials, the quantity of which cannot be checked after incorporation in the work shall when collected at site, be recorded in measurement book and signed by both the MES representative and the contractor as a check to ensure that the required quantity has been brought to site for incorporation in the work. Reference to purchase vouchers No; Name of Manufacture/ dealer from whom material has been purchased shall be recorded on the measurement book(s).
- (b) The contractor shall obtain/ procure materials from Manufacture's authorized dealers/ stockists where such authorized sockets have been appointed. The contractor shall produce original receipted voucher of suppliers to the GE to ensure that the contractor has actually brought the required quantity and the quality of the materials from the authorized dealers/ stockists also to find out the dates thereof. These vouchers shall be endorsed, dated and initialed by the Engineer-in-Charge giving the contract, and name of work and a certified copy of each of such vouchers signed by both the Engineer-in-Charge and the Contractor shall be kept on record with the Engineer-in-Charge who shall forward these to the GE soon after completion of work.

(PARTICULAR SPECIFICATIONS(CONTD...))**1.5 WORKMANSHIP:**

- (a) The contractor shall employ qualified supervisors and skilled tradesman during the entire period of execution of the contract. He shall be demanded by the Engineer-in-Charge to produce such evidence of qualification of his supervision tradesman at the time of commencement of work or at any time during the execution of the contract.
- (b) The work carried out shall be of the highest standard conforming to modern Engineering practice Both as regards to design and execution. The work shall be executed to the entire satisfaction of the Garrison Engineer
- (c) All work shall be executed as per the code of practice as listed in the IS. All electrical work shall be governed by the requirement as specified under the Indian Electricity Act/Rules with latest amendments. The code of practice for electric wiring installation as per IS-274 with amendment No.1 Will be strictly followed.
- (d) All other items not particularly specified in the aforesaid clause here-in-before shall confirm to the samples kept in GE's office and shall be got approved by GE. The workmanship shall be as described in SSR Part-I (2009).

2. EXCAVATION:

2.1.1 Excavation and earth work shall be as described in Schedule 'A'.

2.1.2 The unit rates in Schedule 'A' do not include the cost of timbering to uphold the sides of excavations. The same if considered necessary by the Garrison Engineer will be ordered as deviation.

2.1.3 Unit rates in Schedule 'A' shall be deemed to include for bailing, pumping, dewatering foundation trenches, if water is met with or accumulated from any sources or cause. No additional payment as stipulated in para 3.11 of MES Schedule 2020 (Part II) shall be admissible. In the event of deviation, no adjustment shall be made for cost of bailing, pumping and dewatering specified here-in-before.

2.2. FILLING IN TRENCHES/UNDER FLOORS:

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

2.2.2 Filling under floors/sides of trenches shall be in layers not exc 250 mm and each layer shall be watered, compacted and rammed as approved by Engineer-in-Charge.

2.2.3. Surplus soil shall be removed and spread at places as directed by the Engineer-in-Charge, at a distance as specified in Schedule „A“ and levelled. Rubbish shall be removed from site time to time as directed by Engineer-in-Charge.

3. DEMOLITION/DISMANTLING/TAKING DOWN AND MAKING GOOD:

3.1 Dismantling/demolition/taking down to the extent as specified shall be carried out all as directed by the Engineer in Charge. Particular precaution shall be taken to prevent damage to the part of equipment to be left intact and adjacent equipments. If any damage caused to the equipments due to carelessness and negligence on the part of the contractor shall be made good by the contractor at his own expense.

3.2 Rubbish shall be disposed off to a distance as specified in sch „A“ as directed by the Engineer-in-Charge.

(PARTICULAR SPECIFICATIONS(CONTD...))

3.3 All works in any trade, dismantled/demolished/taking down in excess of the requirements given in contract due to mistake/carelessness of contractor or his workman or any case whatsoever, shall be made good by the contractor to the original state at his own cost.

3.3.1 ANTI TERMITE PRECONSTRUCTION SOIL TREATMENT IN FOUNDATION AND GROUND FLOORS.

3.3.2 Preconstruction anti termite chemical treatment, which includes bottom and sides of foundation trenches/pits, filling in trenches/ pit, and below floors, junctions of wall and floors external perimeter of building (s), under plinth protections/ paving surroundings of conduits/ pipes, of all buildings as mentioned in schedule „A“ notes, shall be carried out all as specified in clause 3.26 of MES Schedule Part-I. However, in case of RCC framed structure with column and plinth beams, the treatment shall start at a depth of 500 mm below ground level.

3.3.3 Antitermite treatment shall be got done by main contractor through approved specialist agency holding valid license as per clause 13 of insecticides Act-1968.

Person employed to do the antitermite treatment shall be qualified as per rule 10 of the rules framed under the Insecticide rules 1971. The contractor shall furnish particulars of agency to the GE for his approval and work shall be entrusted only if name is approved by GE in writing if necessary, frequent checks with regard to composition, concentration of chemicals shall be carried out in approved laboratory and a record shall be maintained incorporating the laboratory results. Testing charges shall be borne by the contractor.

3.3.4 Antitermite treatment shall be carried out with emulsion of any chemical specified here in after, purchased direct from the manufacturer or his authorised agents. Purchase vouchers shall be produced to the Engineer-in-Charge for verification and defacement against this contract.

3.3.5 The defects liability period of antitermite treatment shall be ten years and the main building contractor shall be responsible to keep the entire buildings free from termite infestation for a period of 10 years after the date of taking over the completed buildings from the contractor. The contractor may obtain a similar guarantee from the specific firm engaged by him for the purpose.

3.3.6 The GE at any time during the construction or prior to the expiry of said Guarantee period of 10 years, find that the buildings have been infested with termite, the contractor, on demand in writing from the GE, will forthwith undertake to carry out such treatment which may be necessary to render the buildings free of termite infestation at his own expense till expiry of the Guarantee period of ten years.

3.3.7 In the event of contractor's failure to comply with the GE's direction 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 be however extended beyond the period of the 10 years from the certified date of completion, unless the notice was served on the contractor previously to rectify such defects.

3.3.8 SECURITY DEPOSIT TOWARDS ANTI TERMITE TREATMENT

The amount calculated as per table given below shall be retained 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 the guarantee period satisfactory. Alternatively, contractor may give a separate interest bearing security deposit or bank guarantee bond to GE valid for 10 years for the sum mentioned above. Security deposit/ bank guarantee shall be released after expiry of defect liability period of 10 years as specified. The contractor may at his discretion furnish fixed deposit receipt for the above amount in lieu of the security for guarantee period mentioned. For the purpose of calculating security deposit on account of guarantee for ATT for 10 years as per table given below, the amount is the cost of termite work (on which amount of security deposit is to be calculated) shall be calculated as per SSR 2020 (Part II) subject to contractor's percentage.

S N o	Amount (Cost of termite work)	Amount to be retained from contractor's dues
(i)	Upto Rs 50.00 lakhs	: 2% of amount subject to minimum of Rs 5,000.00 and enhanced by 25%
(ii)	Over Rs 50.00 Lakhs and upto Rs 100.00 lakhs	: 1,00,000.00 + 1.5% of amount exceeding Rs 50 Lakhs and enhanced by 25%
(iii)	Over Rs 100.00 lakhs and upto Rs 500.00 lakhs	: Rs 1,75,000.00 + 1% of amount exceeding Rs 100 Lakhs and enhanced by 25%
(iv)	Over Rs 500.00 lakhs and upto Rs 1500.00 lakhs	: Rs 5,75,000.00 + 0.5% of amount exceeding Rs 500 Lakhs and enhanced by 25%
(v)	Over Rs 1500.00 lakhs	: Rs 10,75,000.00 + 0.5% of amount exceeding Rs 500 Lakhs subject to maximum of Rs 15,00,000.00 and enhanced by 25%

(PARTICULAR SPECIFICATIONS(CONTD...))

3.3.9 The contractor shall provide a cement plaster plate of requisite size in situation as decided by the Engineer-in-Charge on the wall of each of the building. The plates shall be 10mm thick in cement mortar (1:4) to indicate the CA No., Name of the contractor, the date of completion of the work and the date of expiry of 10 years guarantee for antitermite treatment by engraving and painting (black). The cost of plaster plates etc is deemed to be included in the unit rates of the buildings.

3.3.10 Chemical for antitermite treatment shall be brought in sealed containers. The sealed container of the chemical for use in antitermite treatment shall bear ISI mark. Chemical brought without ISI marked sealed container shall be rejected. Quantity of chemicals brought to site with manufacturer's name, brand, batch No. etc shall be recorded in M.B. The empty container shall be kept at site till completion of the work for inspection by GE/Engineer-in-Charge.

3.3.11 For the purpose of advance on account, the main contractor shall produce proof of payment/paid receipts and written guarantee from the nominated specialist firm/ agency.

3.3.12 The antitermite treatment in foundation, back fill floor and plinth etc shall be carried out all as per clause 3.26 of MES Schedule Part-I and as specified in IS-6313 Part-II. The chemical used shall be chlorophyryfos 20% EC/ Gammx- 20 (Lindane- 20% EC) Conforming to IS 8944 and as per manufactures instructions. The concentration of chemical for antitermite treatment in different stages shall be 1.00%.

4. **HARDCORE:**

4.1. Refer Clause 3.27 of MES Schedule. The material for hard core shall be broken stones.

4.2. Hard core shall be of broken stone / boulders gauge/size as specified. Hard core shall be deposited, spread and levelled in layers n-exc 15 cm thick and well watered, rammed to a true surface and compacted. The thickness of the hard core specified or as indicated in the TD drawings, is the thickness after consolidation.

5. **CONCRETEWORK**

5.1 **CEMENT**

5.1.1 **GENERAL:** Cement required for the entire work under the contract shall be procured, supplied and incorporated in the works by the contractor under his own arrangement. Cement shall be of tested quality and shall comply with the requirements mentioned in the drawings, MES Schedules, IS specification as amended and particular specifications given here-in-after.

5.1.2. Type of cement for the subject work shall Ordinary Portland cement of Grade 43 (Forty Three) in accordance with IS-8112 of 1989 or Portland Pozzolana Cement (IS : 1489-1991) as mentioned in notes of Structural drawings. Mixing of OPC & PPC shall not be allowed in the work.

5.1.3. While using the PPC, following requirements shall be met by the contractor :-

- (a) PPC shall meet the strength criteria of 43 Grade OPC as laid down in IS : 8112-1989.
- (b) The minimum period before striking formwork given in clause 11.3.1 of IS:456 of 2000 shall be increased at site by 03 days. Contractor shall not claim anything extra on this account.
- (c) Wet curing shall be done for a period of 14 days, wet curing of column shall be done through Hessian cloth wrapped on the columns.
- (d) Contractor shall submit the following certificates from the manufacturer of the cement for every batch of cement:-
 - (i) The quality of fly ash is strictly as per IS : 14989 (Part-I)-2002.
 - (ii) Fly ash is inter-ground with clinker and not mixed with clinker.
 - (iii) Dry fly ash is transported in closed containers and stored in silos. Only pneumatic pump has been used.
 - (iv) The fly ash is received from thermal power plant using high temperature combustion above 1000°C as only been used.

(PARTICULAR SPECIFICATIONS(CONTD...))

(e) The compressive strength of cement at 03 days, 07 days and 28 days shall not be less than 23Mpa, 33Mpa and 43Mpa respectively. Each lot of cement brought at site shall be tested for compliance by the GE before acceptance.

(f) In cold climate regions, where temperature is lower than 15°C, OPC shall be used (However during working seasons in cold climate regions, where OPC is not available use of PPC may be permitted provided it shall be ensured that while using PPC, atmospheric temperature should be more than 15°C).

(g) Mixing of OPC and PPC shall not be allowed in a work. However with the strict control of the ground executives, different buildings can have different types of cement.

5.1.4. SOURCES OF PROCUREMENT

List of manufacturer of cement as per E-in-C's branch letter no. A/90154/12/E2 Des-3 dated 13 Mar 2024.

Srl No	Company Name	Brand Name	Address	Cement Grades
1	2	3	4	5
1.	The Associated Cement Companies Ltd	ACC	414-421, Splendor Forum (4 th Floor), 3, Distt Centre, Jasola, New Delhi-110044 Ph-011-46583600	ALL
2.	Ultra Tech Cement	Ultratech	'B' Wing, 2 nd Floor, Mahakali Caves Road Andheri (East), Mumbai-400093	ALL
3.	The India Cement	-	Dhun Building, 827, Anna Salai, Chennai-600002	ALL
4.	Dalmia Cement (Bharat) Ltd	Dalmia Infra Pro	Dalmiapuram, Distt: Tiruchirappalli, Tamil Nadu – 621651	ALL
5.	Century Cements	Century	Industry House, 159 Church gate Reclamation, Mumbai-400020 Ph-022-22023936	ALL
6.	Saurashtra Cement	Saurashtra	Gala No A-1, Ground Floor, Udhog Sadan No 3 MIDC, Central Road, Andheri (East), Mumbai-400093 Ph 022 32955557/67 MO 9320290081	ALL
7.	The Ramco Cements Ltd (Formerly Madras Cement)	Ramco	Auras Corporate Centre, 98-A, Dr. Radhakrishnan Salai, Mylapora, Chennai-600004, Ph-044-28478666	
8.	Mangalam Cement Ltd	Manglam	PO-Adityanagar, Morak, Dist-Kota, Rajasthan-326520 Mob-9351468076	ALL
9.	Birla Corporation Ltd	Birla	Birla Building (3rd & 4th Floor) 9/1 R.N Mukherjee Road Kolkata-700001 Ph-033-30573700	ALL
10.	Orient Cement	BIRLA-A1	5-9-22/57/D, 2nd and 3rd Floor, GP Birla Centre, Adarsh Nagar, Hyderabad-500063 Ph-04423688600	ALL

(PARTICULAR SPECIFICATIONS(CONTD...))

11.	Nuvoco Vistas Corporation Ltd (Formerly Lafarge Cement)	NUVOCO	Equinox Business Park Tower-3, East Wing, 4 th Floor LBS Marg, Kurla (West), Kurla Mumbai, Maharashtra-400070	ALL
12.	Shree Cement	Shree	Bangur Nagar, Beawar, Distt-Ajmer, Rajasthan-305901 Ph-01462228101/06	ALL
13.	J K Cement	JK	Kamla Tower, Kanpur 208001	ALL
14.	JK Lakshmi Cement Ltd	J K Lakshmi	Jaykaypuram, Dist-Sirohi, Rajasthan Ph-02971 244409/10	ALL
15.	Jaypee Rewa Cement	Jaypee	Japee Nagar P.O. Japee Nagar, Rewa-	ALL
16.	Ambuja Cement Ltd	Ambuja	Kodinar, PO-Ambujanagar, Taluka-Kodinar,	ALL
17.	M/S JSW Cement Ltd AP	JSW PSC (Portland Slag Cement)	JSW Centre, Opp MIMRDA Ground, Bandra Kurla Complex, Bandra East, Mumbai -400051,	PSC
18.	M/s Kesoram Industries Ltd	Birla Shakti	Unit 12 th 1201 of T 19 Towers, India Nagar Ginwala Compound, MG Rad, Secunderabad, Hyderabad, Telangana-500003, Tele-+91-40-4334-4555,	OPC 43 OPC 53 PPC
19.	M/S Sagar Cements Ltd, Hyderabad	Sagar	M/S Sagar Cements Ltd, Plot No.111, Road No. 10, Jubilee Hills, Hyderabad-500033, Tele : 91-40-23351571 Fax : 91-40-2335673, Email:- info@sagarcements.in	OPC 43 OPC 53 PPC PSC

(a) However, where the quantity of cement required is less than 1200 bags, same may be procured from authorised distributors/dealers of approved manufacturer's, if so, permitted by GE in writing. Testing of cement shall invariably be got done before incorporation in work. The contractor shall submit test certificate for each batch of cement issued by the manufacturer.

(b) The contractor shall furnish the particulars of the manufacturer of cement along with the date of manufacture to the GE for every lot of cement separately. The cement so brought shall be fresh and in no case older than 90 days from the date of manufacture. The GE shall verify the document in support of the purchase of cement. Before placing order for supply of cement by the contractor, he shall obtain written approval from the GE regarding name of manufacturer, quantity of cement etc. Cement shall be procured for minimum requirement of one month and not exceeding the requirements of the same for more than two months at a time. The cement shall be consumed in the work within three months after receipt. Cement shall conform to the requirement of IS specification and each bag of cement shall bear relevant ISI mark. The weight of each consignment shall be verified by the GE and recorded. The content of cement shall be checked at random to verify the actual weight of cement per bag. However, the content of cement per bag shall be 50 Kg only subject to tolerance given in Clause 9.2.1.1 and Annexure „B” of IS-8112 and Clause 10.2.1.1 and Annexure „B” of IS – 1489 for OPC and PPC respectively.

5.1.5. **TESTING OF CEMENT:**

5.1.6. (a) The contractor shall submit the manufacturer's test certificate in original along with test sheets giving the results of each physical test as applicable in accordance with relevant IS provision and the chemical composition of the cement or authenticated copy thereof, duly signed by the manufacturer

PARTICULAR SPECIFICATIONS(Contd...)

with each consignment, as per the following IS provision :-

- (i) Method of sampling hydraulic cement as per IS: 3535-1986.
 - (ii) Method of physical test of hydraulic cement as per IS-4031.
 - (iii) Method of chemical analysis of hydraulic cement as per IS-4032-1985.
- (b) The test certificate and test sheet shall be furnished with each batch of cement. The Engineer-in-Charge shall record these details in cement acceptance register to be maintained by him which will be signed by JE (Civil), Engineer-in-Charge, GE and the Contractors as given in the format here-in-after for verification.
- (c) The contractor shall however, organize setting time and a compressive strength test of cement through designated laboratory on samples collected from the lot brought at site before incorporation in work. The contractor will be allowed to use the cement only after satisfactory compressive strength of seven days. To meet this requirement contractor is required to keep minimum 10 days stock before any new lot is brought at site, which can be used in the work. The contractor shall be required to remove the cement not meeting the requirement from site within 24 hours. Seven days strength test will be relied upon to accept the lot of cement to commence the work. 28 days compressive strength test will be the final criteria to accept/reject the lot.
- (d) The random samples as per relevant IS shall be selected by GE before carrying out testing. The record of such samples selected by the GE for testing shall be properly maintained in the cement testing register giving cross reference to relevant consignment of cement and quantity received etc.
- (e) Cost of transportation of samples to the approved laboratory/test house and all testing charges including cost of sample shall be borne by the contractor.
- (f) The contractor shall be required to set up adequate testing facilities at site to the entire satisfaction of GE for conducting setting time test and compressive strength test as per IS codes referred to here-in-before for the samples collected from the lot brought at site. These tests shall be carried out within 07 days of receipt of cement at site. The tests can alternatively be carried out at the Zonal laboratory, or any other recognized laboratory so designated by GE.
- (g) The GE shall carry out independent testing as per the tests mentioned in the „CEMENT SUPPLY AND ACCEPTANCE REGISTER“ (as per Annexure „I“) of random samples of cement drawn from various lots, if sample fails in 7 days compressive strength. The testing shall be carried out through National Test House, SENT, CME, Regional Research Laboratories, Govt. approved Laboratories, Zonal laboratories/ IIT Kanpur as per IS : 3535-1986, (method of sampling hydraulic cement), IS-4031 (Method of physical test for hydraulic cement) and IS-4032-1985 (Method of chemical analysis of hydraulic cement) referred to above. The decision as to where the testing of cement is to be done shall be taken by GE. In case the cement is not of requisite standard despite manufacturer's test certificate, the contractor shall remove the total consignment from the site at his own cost after written rejection order of the consignment by the GE. The cost of test shall be borne by the contractor irrespective of the results of testing.
- (h) The contractor shall submit original purchase vouchers 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 to ensure the requirements as mentioned here-in-before, before acceptance the original purchase vouchers and the test certificate shall be verified for subject contract and defaced by the Engineer-in-Charge and kept on record in the office of the GE duly authenticated and with cross reference to the consignment/control number recorded in the „Cement Acceptance Register“. The Cement Acceptance Register shall be signed by the JE (Civil), Engineer-in-Charge, GE and the contractor. The contractor shall maintain schedule of supply of cement for each consignment.
- (j) The Accepting Officer may order a board of officers for random check of cement and verification of connected documents during the currency of contract.

5.1.7. STORAGE/ACCOUNTING/PRESERVATION OF CEMENT:

- (a) Cement shall be stored in covered godown over dry platform at least 20 cm high in such a manner as to prevent deterioration due to moisture or intrusion of foreign matter. In case of store room the stack should be at least 20 cm away from floors and 60 cm from walls. The stacking of cement shall be done as specified in relevant IS. The storage accounting and preservation of cement supplied by

PARTICULAR SPECIFICATIONS(Contd...)

the contractor shall be done as per standard Engineering practice till the same is incorporated in the work and the cost of the same shall be deemed to be included in the unit rate/ amount quoted by the tenderer. The Engineer-in-Charge shall inspect once a day to verify that cement lying at site is stored, accounted, preserved and maintained as per the norms. The cement shall be stored so as to differentiate each tested and untested consignment separately with distinct identification. If the GE is not satisfied with the storage/preservation of cement, he may order for any test(s) of cement as applicable for that consignment to ensure its conformity to the quality mentioned in the manufacturer's test certificate. The contractor shall bear the cost of necessary testing (s) in this regard and no claim whatsoever shall be entertained.

(b) Stacking of cement shall be done as per relevant IS and as under:-

(i) Each cement consignment shall be stacked separately and removal shall be made on the basis of First in First out.

(ii) Adequate top cover will be provided.

(iii) Stacks in no case shall be higher than 12 bags. The maximum width of each stack shall be 3.0 m. If the stack is more than 07 or 08 bags high, the bags shall be arranged in header and stretcher fashion, i.e. alternatively lengthwise and crosswise so as to pile together and avoid toppling over.

(iv) Adequate spaces shall be kept between two stacks.

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

(d) In case more than one type of cement is used in the work i.e. Ordinary Portland cement or Portland Pozzolana Cement, both type of cement shall be stored separately as directed by the Engineer-in-Charge to avoid mixing of these type of cement. Separate record shall be maintained including the location/items where these type of cement are used.

(e) Cement shall be removed from the store only according to daily requirement with the knowledge of both the parties and the Engineer-in-Charge and the contractor shall record daily consumption of cement in cement consumption register, which shall be signed. Cement constants given in Appendix „A“ to E-in-C's branch letter No. 19280/E8 dated 03 May 1976 shall form the basis of consumption of cement for various items of works unless specifically indicated otherwise.

(f) In case the consumption of cement as per cement consumption register is found to be more than the estimated quantity of cement due to whatsoever reason, the contractor shall not have any claim whatsoever for such excess consumption of cement.

5.1.8. **SCHEDULE OF SUPPLY:**

The Contractor shall procure the cement timely as required in accordance with CPM chart agreed between GE and the contractor. The contractor will forfeit his right to demand extension of time if the supply of cement got delayed due to his failure in placing order in time to the manufacturer.

5.1.9. **MEASUREMENTS AND PAYMENT OF CEMENT:**

5.1.11.(a) The entire quantity of cement shall also be suitably recorded in the measurement book for record purposes as „Not to be abstracted“ before incorporation in the work and shall be signed by the Engineer-in-Charge and the contractor.

(b) The payment shall only be allowed after production of original purchase voucher, certified copies of test certificates from manufacturer for each consignment and results of testing carried out in laboratory on receipt of cement (07 days compressive test) are found satisfactory after testing as at site as per condition 64 of IAFW-2249. Rate of payment given in SSR shall be applicable for cement irrespective of type and grade of cement specified for use in the work.

Annexure "I"CEMENT SUPPLY AND ACCEPTANCE REGISTER

01. CANo. & Name of work :
02. Control No.* :
03. Name of Manufacturer/Brand Name/Grade of Cement:-
- (a) Manufacturer :
- (b) Brand :
- (c) Grade :
04. Qty of cement & Lot No./Week No. (in Bags) :-
- (a) Quantity :
- (b) Lot No./Week No. :
05. Manufacturer's test Certificate No. :
06. Random Test Details:-
- (a) Physical test report from _____ vide their letter No. _____
(Name of approved Lab/Engineering College)
- (b) Chemical test report from _____ vide their letter No. _____
(Name of approved Lab/Engineering College)
07. **Details of Physical & Chemical properties:-**

	Physical Requirements(as per IS-4031)								Chemical Requirements(As per IS-4032)									
	Specific Surface Area(Sqm/Kg)	Soundness by Le Chatelier	Soundness by Auto Clave	Initial Setting Time(Minutes)	Final Setting Time(Minutes)	Compressive Strengths(Mpa)			Temp during testing 0C	Standard Consistency(%)	Lime Saturation Factor(Ratio)	Alumina Iron Ratio(Ratio)	Insoluble Residue(%)	Magnesium(%)	Sulphuric Anhydride(%)	Loss on Ignition(%)	Alkalies(%)	Chlorides(%)
						03 Days	07 Days	28 Days										
As per relevant IS																		
As per manufacturer's Test certificate																		
As per random test certificate																		

Remarks with Signature

Accepted/RejectedContractorJunior EngineerEngineer-in-ChargeGarrison Engineer

Remarks of BOO/Inspecting Officer/CWE

*To be allotted serially by GE consignment wise

PARTICULAR SPECIFICATIONS(Contd...)

5.2. **Fine Aggregate.** Fine aggregate for concrete work shall conform to material specifications and gradings within the limits of Grading Zones II to III as specified in clause 4.4 of MES Schedule 2009 Part-I.

5.3. **Coarse Aggregate.** Refer Clause 4.4 of MES Schedule Part I. Coarse aggregate for all plain cement concrete shall be graded crushed stone at contractor's options. For all RCC work the coarse aggregate shall be graded crushed stone.

5.3.1. **Grading of Coarse Aggregate.** Graded Aggregate of nominal sizes given herein under shall be used, unless specified otherwise:-

(a) Plain or reinforced cement concrete except in foundation of Brick or stone Walls/Pillars, Floors and Sub base to Floors.

- (i) For structural elements of depth/thickness more than 50mm - 20mm.
- (ii) For structural elements of depth/thickness less than 50mm - 12.5 mm.

(b) Plain Cement concrete in Foundation of Brick/stone Walls, Pillars, Floors and Sub Base to Floors.

- (i) Under 30 mm thickness : 12.5 mm
- (ii) 30 to 80 mm thickness : 20 mm
- (iii) Exceeding 80 mm thickness : 40mm

5.4. **Water.** Water shall conform to the requirement stipulated in IS 456 and as per clause 4.9 of MES Schedule.

5.5.1 All cement concrete, both plain and reinforced shall be mixed in mechanical mixer of approved type. 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 Garrison Engineer, 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.

5.5.2. All concrete for RCC work shall be consolidated/compacted by mechanical vibrators of approved type. Precast/cast-in-situ, plain cement concrete may however, be rammed and consolidated by tamping and rodding as specified in MES Schedule.

5.5.3. Curing and protection of cement concrete surfaces:-

All cement concrete surfaces shall be cured and protected as specified in clause 4.11.13 and 4.11.14 of SSR Part I.

5.5.4. Sampling and testing of concrete:-

- (a) Refer clause 4.11.17 of MES Schedule Part I.
- (b) Test will be carried out on 15 cm cubes as per IS 456.
- (c) The contractor shall provide all necessary materials (including mould set) and labour for mixing and casting of cubes and carrying the test cubes including its transportation to Govt labs and any other assistance that may be required for the sample tested in the lab and cost/charges of testing shall be borne by the contractor.

(d) For relatively very small quantities and unimportant work even though testing is waived off by GE, the contractor shall be responsible for to achieve the desired strength of concrete.

(e) The concrete which is not upto the desired strength shall be rejected and the same shall be made good by the contractor without any extra cost to the Govt.

(f) The test results shall be entered in register and shall be signed both by the Engineer-in-Charge and by the contractor.

5.6. **FORMWORK:**

5.6.1 Form work shall be all as specified in para 4.11.6 4.11.6.1 to 4.11.6.5 and para 7.15 7.15.1 to 7.15.12 of MES Schedule 2009 (Part I). Form work shall be timber, contractor may use steel/plywood form work without any price adjustment.

5.6.2 Following precautions shall be taken for structural concrete work while using portland/pozzolana/blast furnace slag cement:-

i) Wet curing shall be done for a period of 14 days.

ii) For stripping of formwork the following provisions of IS-456 shall be strictly adhered to.

6.1 **BRICKWORK:**

6.1.1 Bricks shall be kiln burnt Sub Class 'B' best quality conforming to the samples kept in GE's office. Irrespective of whatever specified in Sch 'A'/Notes on drawings, bricks shall have average compressive strength of not less than 75 Kg/cm² for all works. Water absorption of bricks shall not exceed 20% when tested in accordance with IS-3454 and IS-3495. The nominal size of bricks shall be 230mm x 115mm x 75mm. The tolerance in size of bricks shall be +/-8%.

6.2 **Fly ash brick work:** Fly ash brick shall be factory made fly ash lime-cement brick. Visually the bricks shall be sound, compact & uniform in shape and free from visible cracks, warpage & organic matters, the bricks shall be solid with 10 to 20 mm deep on one of its flat side. The bricks shall have smooth rectangular faces with sharp corners & shall be uniform in shape & color. Bricks shall be manufactured by using standard & latest technology with indigenous fly ash brick making machine and shall be of following specifications:-

Technical Specification

- (a) **Size:** Non-modular 230x110x70mm
- (b) **Wet Compressive Strength :** Min 7.5 MPa.
- (c) **Water Absorption:** 8-12%
- (d) **Efflorescence:** Nil
- (e) **Density:** 1250-1600 Kg/M³
- (f) **Drying Shrinkage:** Shall not exceed 0.15 percent.
- (g) **Brick Colour:** Grey
- (h) **Tolerances:** As per IS: 12894: 2002 and IS: 5454: 1978.
- 6.2.1. **Composition:-**

i. Cement: Cement OPC 53 Grade - Minimum 6%

ii. Fly Ash: Thermal Station Fly Ash (Gde-II) confirming to IS: 3812: 1981 for physical & chemical properties - Minimum 55-60%

iii. Crushed Sand/Stone (VSI Grade)

iv. Hydrated Lime

v. Gypsum and POP
and specification.

As per requirement of mix to
achieve above properties

Admixtures: Construction chemicals as per manufacturer's instructions.

Bricks shall be tested in accordance and as described in IS: 3495 (Part I to IV). Sampling criteria for conformity of the bricks shall be as given in IS: 5454:1978. Each brick shall be marked in a suitable manner with manufacture identification mark. In general, bricks shall be as per IS: 12894:2002.

6.2.2. **Acceptance Criteria:-** Bricks shall be tested for above parameters for each lot. For the purpose of sampling, lot shall be maximum 50000 bricks and for every day of production of bricks. In general bricks shall be as per IS: 12894:2002.

6.2.4 **Makes:-** Aditi Infra works/Resources Bareilly, Power Bricks corporation Ghaziabad and any other make approved by HQCEBZ Bareilly.

6.3 Cement – Cement shall not be issued under Schedule “B”. Contractor shall make his own arrangement. Cement shall be as specified in para 5.1 to 5.11(b) herein above.

6.4 Sand for mortar shall be as specified in Clause 5.4 of MES Schedule.

7. **WOODWORK AND JOINERY:**

7.1 Type of timber in various location is as described in Sch 'A'. However if the species of timber is not specified in CA, it shall be as under:-

a)	Ist Class hard wood	:	Shisham
b)	IInd Class hard wood	:	Sal
c)	Ist Class soft wood	:	Deodar

7.2 Particle board shall be veneered teak face particle board bonded with phenol formaldehyde synthetic resin exterior grade conforming to IS-3097.

7.3 All surfaces of joinery and woodwork shall be wrought except hidden surfaces and surfaces in contact with or embedded in concrete or masonry which shall be clean swan.

7.4. **PANELLED/GLAZED/GAUZED SHUTTERS:**

7.5 Refer to para 8.16.8 of MES schedule Part I. All panelled/glazed and wire gauged shutters for

door shall be factory made conforming to IS: 1003 (1987), manufactured from well selected kiln seasoned, chemically pressure treated timber. Styles and rail shall be of 2nd class hard wood Hollock/Sal/Bijasal/Benteak treated as per IS-1141. The panel inserts shall be 12mm thick BWR ply wood having seven ply commercial veneer on both faces of BWR grade and bonded with phenol formaldehyde synthetic resin adhesive and shall be ISI marked with IS-303. The shutters shall be procured from any one of specified manufacturers. Sample of shutters shall be got approved from the GE before placing the bulk order.

Factory made shutters shall be brought to site without application of primer. Primer shall be applied after the shutters are got approved from the GE.

7.6 Panelled shutter shall be provided beading around the panel insert both side of shutters, size of be adding shall be 20mm width and tapered thickness from 10mm to 5mm.

7.7 **FACTORY MADE SOLID PANEL PVC DOORS/PVC WALL LINING:**

7.9 These shall be factory made and shall be provided as specified in schedule “A” and as described in clause 8-B-1 to 8-B-10 and shown in the section 08 of SSR Part II – 2020.

8.0 **BUILDERS HARDWARE:**

8.1 Builders hardware shall be provided of type and size as specified in Sch 'A'. Fittings shall be of ISI marked/approved makes as indicated.

8.2 Irrespective of what is mentioned in Sch “A”, sliding door bolt shall be bolt type, conforming to relevant IS.

8.3 The shape and dimension of the fittings shall conform to that given in relevant IS Specifications, unless otherwise indicated. Where however shape of fitting or its components are indicated in the relevant IS specifications, as illustrative, they are not intended to limit their design. Such fittings or components shall be provided of the shape as approved by the GE.

8.4 Where no IS specifications are indicated, such fittings shall be provided of equal quality to the

PARTICULAR SPECIFICATIONS(Contd...)

sample maintained in GE office or otherwise as approved by GE.

8.5 Except where otherwise specified, articles of builder's hardware shall have the following finishes:-

- | | | | |
|-----|----------------------------------|---|---|
| (a) | Mild steel or cast iron fittings | - | Stove enamelled black |
| (b) | Brass fittings | - | Finished bright or satin polished |
| (c) | Aluminium fittings | - | Anodised, Anodic film shall be transparent unless indicated |

8.6 Fittings shall be well made and finished to correct shape and size, free from surface defects and flaws and shall have smooth action. Cast fittings or components shall be free from casting and other defects. All screw holes shall be countersunk to suit the countersunk head wood screws. All burrs, sharp edges and corners shall be removed and finished smooth.

8.7 Unless otherwise indicated, brass articles shall be fixed with brass screws and mild steel, cast iron and aluminium articles with steel chromium plated screws or as indicated. Screws shall be of the size as given in the Specifications for the fitting or as required.

8.8 **WIRE CLOTH:** Wire cloth shall comply with IS-1568-1970. Wire cloth shall be regularly woven with a number of equally spaced parallel wires in both warp and weft directions to produce uniformly square meshes or opening. The wire cloth shall be properly selvaged by one or more wires in each edge. It shall be of size as mentioned in relevant item of Schedule „A“.

9. **ALUMINIUM WORK:**

9.1 Aluminium doors, windows, ventilators shall be provided all as specified in Sch „A“ shall be fixed in position all as specified and directed by Engineer-in-Charge.

9.2 Aluminium work shall be provided all as per clause 10.37 and 10.38 of MES SSR Part I.

9.3 Make of all Aluminium Sections shall be M/s Jindal Aluminium Ltd/INDAL.

9.4 In case of non availability of sections specified in Sch „A“, section of higher size shall be allowed without any extra cost to the Govt.

9.5 In case any variation in section and size in catalog No. the dimension on higher sides shall be followed.

9.6 Contractor shall furnish drawings for windows/doors/ventilators prior to fabrication in triplicate for approval without any extra cost to Govt.

10. **STEEL AND IRON WORK.**

NOTE: No item of steel and iron work for incorporation/ required in this contract shall be issued under Schedule 'B'. Contractor shall make his own arrangements to procure steel and iron all as specified here-in-after. The following checks shall be carried out before the steel supplied by contractor is accepted and

Is approved for incorporation in the work.

10.1 **GENERAL**

10.1.1 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 10.4.3 and 10.17.6 of SSR Part-I and shall be conforming to IS Specifications as given below:-

(a)	Reinforcement Steel	-	High strength deformed steel bars produced by Thermo Mechanical Treatment Process (TMT) steel bars of grade Fe-500/Fe500D/Fe550/Fe 550D Meeting all other requirements of IS-1786.
(b)	Structural Steel (i) Standard Quality (ii) Ordinary quality	-	Conforming to IS-2062. Conforming to IS-1977.
(c)	Galvanised Steel Sheets (Plain & Corrugated)	-	Conforming to IS-277.
(d)	Fabric Reinforcement for Concrete	-	Conforming to IS-1566

10.1.2 **Procurement of materials:**

PARTICULAR SPECIFICATIONS(Contd...)

10.1.2.1 (A) Reinforcement Steel

TMT Steel bars of all sizes of grade Fe500/Fe500D/Fe550/Fe550D shall be procured directly from the following primary producers only:-

List of makes of steel as per E-inC's Branch letter no. 83044/Steel/32/E2 Des -3 dated 12 Mar 2024.

Sl No.	Company Name	Brand	Address	Steel Grades/Sizes
1.	Rashtriya Ispat Nigam Limited (RINL),	RINL	Visakhapatnam Steel Plant Visakapatnam-530031, India Tel: (91891) 518226, 518376 Fax: (91891) 518316 E-mail: cmdvsp@itpvis.ap.nic.in	ALL
2.	Tata Iron & Steel Company (TISCO, or Tata Steel),	TATA	Bombay House,2, 4, Homi modi Street Mumbai-400001, India Tel: (9122) 2049131 Fax: (9122) 2049522, 2770840 E-mail: corpcomm@jsr.tatasteel.com (Br office for North: Jeevan Tara Bldg, Patel Chowk, New Delhi)	ALL
3.	Steel Authority of India Limited, (SAIL)	SAIL	Central Marketing Organization, Northern Region 17th Floor, scope Minar, Laxmi Nagar Distt Centre, Delhi-110092	ALL
4.	M/S Kamachi Industries Ltd.	Kamachi	ABC Trade Centre, 3rd Floor (Inside Devi Theatre Complex) Old No. 50, New No. 39, Anna Salai, Chennai- 600002, India Tel: +91-044-42961100 Fax: +91-044-42961122 E-mail: sales@kamachitmt.com Website: www.kamachitmt.com	TMT Bars of Gde Fe 500, Fe 500D, Fe 550, Fe 550D & HCRM (Size 8-40mm) (29 May 2024)
5.	M/s Shyam Metalics & Energy Ltd	SEL	Viswakarma, 1 st Floor, 86 C, Topsia Road, Kolkata-700046, Ph- +913340113000, Fax- +913322852212, Website: www.shyammetalics.com	TMT Bars of Gde Fe 500, Fe 500D & CRS (Size 8-32mm) (31 Aug 2024)
6.	M/s Electrotherm (India) Ltd	ET TMT	Survey No 72, Palodia, (Via-Thaltej, Ahmedabad), Gujarat-382115, Tel : +91-2717-234553/660550, Fax- +91-2717-234866 Website- www.electrothem.com	TMT Bars of Gde Fe 500, Fe 500D & CRS (Size 8-36mm) (05 Oct 2024)
7.	M/s Tulsyan NES Limited	Tulsyan TMT	APEX Plaza, 1 st Floot Old No 3, New No 77, Nungambakkam High Road, Chennai-600034 (TN), Website- www.tulsyanneec.in , Tele- 044-61991060/61991045, Mob- 9840354010, 9677088334	TMT Bars of Gde Fe 500, Fe 500D, Fe 550 (Size 8-32mm) (29 May 2024)
8.	M/s Incredible Industries Limited (Formerly M/s Adhunik Industries Limited)	Adhunik Fe 500 SD	Lansdowne Towers 2//1A, Sarat Bose Road, 6 th Floor, Kolkata-700020, Tele-033-66384700, Fax- +91-33-22890285, Website- www.adhunikindustries.com	TMT Bars of Gde Fe 500D) (Size 8-32mm) (19 Jul 2024)
9.	M/S Gallant Ispat Ltd, Gujrat	Gallant TMX	Ward 10BC, Plot No. 123, Ground Floor, Gandhi Dham Kutch, Gujarat - 370201 Tel: +91-2836-228164 Fax: +91-2836-235787 E-mail: gml@gallantt.com Website: www.gallantt.com	TMT Bars of Gde Fe 500, Fe 500D & CRS (Size 8-32mm) (05 Jul 2025)

PARTICULAR SPECIFICATIONS(Contd...)

10.	M/S Rashmi Metaliks Ltd, W.B.	Rashmi TMT	Premlata Building, 39, Shakespeare Sarani, 6th Floor, Kolkata - 700017 Tel: 033-22894255/56 Fax: 033-22894254 E-mail: mkt.domesticdip@rashmigroup.com Website: www.rashmigroup.com	TMT Bars of Gde Fe 500 (Size 8-32mm) Fe 500D, Fe550D (Size 8-25mm) (23 Aug 2025)
11.	M/S Real Ispat & Power Ltd, Chhattishgarh	G K TMT	Vrindavan, Near IDBI Bnk Civil Lines Raipur - 492001, C.G. Tel: +91-771-4224000 Fax: +91-771-4224010 E-mail: real@realispat.com Website: www.realispat.com	TMT Bars of Gde Fe 500 (09 Mar 2026)
12.	M/S Steel Exchange India Ltd (AP)	Simhadri TMT	My Home Laxminivas Apartments, Ameerpet, Hyderabad-500016, A.P. Tel: (040) 23403725 Fax: (040) 23413267, E-mail: info@seil.co.in	TMT Bars of Gde Fe 500, Fe 500D & HSCRM (29 Jan 2026)
13.	M/S Super Smelters Ltd, Kolkata	Super Shakti	Premlata, 39, Shakespeare Sarani, 3rd Floor, Kolkata - 700017 Tel/Fax: + 91-33-2289-2734/36 E-mail: info@supershakti.in Website: www.supershakti.in	TMT Bars of Gde Fe 500D & Fe 550 (Size 8-32mm) (13 Feb 2026)
14.	M/S Shyam Steel Industries Ltd (WB)	Shyam	Shyam Towers EN-32, Sector-V, Salt Lake, Kolkata-700091 Tel: (033) 40074007 Fax: (033) 40074010 E-mail: marketing@shyamsteel.com	TMT Bars of Gde Fe 500D & CRS (30 Jan 2026)
15.	M/S Jai Balaji Industries Ltd (WB)	Balaji Shakti	5 Bentek Street, Kolkata – 700001 Delhi Office 510, Block-B, Navraung House, 21 Kasturba Gandhi Marg, New Delhi-110001 Tel: (011) 43620219, 43620220 Mob: 7838272772, 9958936103 E-mail: info@jaibalajigroup.com	TMT Bars of Gde Fe 500D & Fe-500D CRS (09 Feb 2026)
16.	M/s MSP Steel & Power Limited, Chhattisgarh	MSP TMT 500D	M/s MSP Steel & Power Limited, Chhattisgarh 16/S, Block-A, New Alipore, Kolkata-700053, Tele-03340057777/23982239, Mob-7381028976 Email-contactus@mspsteel.com	TMT Bars of Gde Fe 500D (Size 8-32mm) (10 Mar 2026)

10.1.2.1 (A)Structural Steel

APPROVED STRUCTURAL STEEL MANUFACTURER FOR MES WK AS ON 12 Mar 2024:-

SI No.	Company Name	Brand	Address	Type of Steel
1.	Rashtriya Ispat Nigam Limited (RINL)	RINL	Visakhapatnam Steel Plant Visakapatnam-530031, India Tel: (91891) 518226, 518376 Fax: (91891) 518316 E-mail: cmdvsp@itpvis.ap.nic.in	Structural Steel (Angle, Beam, Column, Channel, Plate etc.)
2.	Steel Authority of India Limited, (SAIL)	SAIL	Central Marketing Organization, Northern Region 17th Floor, scope Minar, Laxmi Nagar Distt Centre, Delhi-110092	Structural Steel (Angle, Beam, Column, Channel, Plate etc.)

PARTICULAR SPECIFICATIONS(Contd...)

3.	Tata Iron & Steel Company (TISCO, or Tata Steel),	TATA	Bombay House, 2, 4, Homi modi Street Mumbai-400001, India Tel: (9122) 2049131 Fax: (9122) 2049522, 2770840 E-mail: corpcomm@jsr.tatasteel.com (Br office for North: Jeevan Tara Bldg, Patel Chowk, New Delhi)	Structural Steel (Angle, Beam, Column, Channel, Plate etc.)
4.	M/S Jindal Steels and Power Ltd.	Jindal	Jindal Centre, Plot No 2, Sector-32, Gurgaon-122001, Haryana Hissar , Haryana -125005, Tel: 01246612000 Fax:01246612125 Website: www.jindalsteelpower.com	Structural Steel (Angle, Beam, Column, Channel, Plate etc.)

10.1.2.5 The contractor will place their demand/requisition of steel with adequate lead time. The steel will be procured from the storage depots of the primary producers/approved secondary producers (as applicable) and not from their authorized agents/dealers.

10.1.2.7 **Testing of Steel.**

The manufacturer is to carry out inspections and testing of steel in accordance with relevant BIS provisions. The contractor shall submit the manufacturer's test certificate in original along with the Test Sheet giving the 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 'B'** after due verification and send a certified true copy of test sheet to GE for his records. The GE shall also organize independent test of random samples of steel drawn from various lots from National Test House, SEMT Wing CME, Regional Research Labs, NABL approved labs etc. as per the recommended minimum frequency shown in Table here in below. Sample from each lot should be tested for quality and elongation. The elongation shall not be less than 18%. Cost of samples, transportation and testing shall be borne by the contractor. The records of such checks shall be maintained in steel test register.

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 Accepting Officer. The decision of 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 Govt.

FREQUENCY FOR NORMAL MASS, TENSILE, BEND AND REBEND TESTS OF STEEL

SerNo	Nominal size	Quantity
A. <u>STEEL FOR CONCRETE</u>		
1	Bars size less than 10mm	1 sample (3 specimens) for each test for every 25 tonnes or part thereof.
2	Bar size 10mm to 16mm inclusive	1 sample (3 specimens) for each test for every 35 tonnes or part thereof.
3	Bar size over 16mm	1 sample (3 specimens) for each test for every 45 tonnes or part thereof.
B. <u>STRUCTURAL STEEL:</u>		
1	Tensile Test	1 Test for every 25 tonnes of steel or part thereof.
2	Bend Test	1 Test for every 25 tonnes of steel or part thereof.

Note:-For various tests, acceptance criteria tolerance etc, refer to Appendix 'B' and relevant BIS Code.

10.1.2.8 Documentation.

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 shall inspect all consignments received at the work site along with relevant documents before acceptance. The original vouchers and the Test Certificate shall be defaced by the Engineer-in-Charge and kept on record in the office of 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.

10.1.3. Tolerances:

10.1.3.1 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 and the steel below permissible limit shall be removed from the site of work without any extra cost to Govt. If weight of steel bars per metre is more than specified in SSR, the payments shall be allowed based on conversion factors specified in SSR. The contractor shall have no claim whatsoever in this regard.

10.1.3.2 Schedule of supply

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

10.1.3.3 STORAGE, ACCOUNTING, PRESERVATION AND MAINTENANCE

10.1.3.4 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 purposes only.

PARTICULAR SPECIFICATIONS(Contd...)

- 10.1.3.5 All steel shall be stored on dunnage at least 15 Cms above ground level. Steel reinforcement shall be stored properly to prevent distortion and corrosion. In case of long time storage, suitable protective measures like cement coating, provision of temporary shelter etc. to save it from rusting/distortion 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.

10.1.3.6 **Procedure for Making Payments for Steel including measurements, conversion weight etc.**
METHOD OF MEASUREMENT

- 10.2 All items of steel brought at site shall be entered in MB as “**Not to be abstracted**” indicating the diameter and length of bars, quantities, voucher number with dates. 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 offcuts and every care shall be taken to ensure that all such quantities will be utilized in the work.

RECORD OF MEASUREMENTS

- 10.3 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 records 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.

WEIGHT CONVERSION

- 10.4 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 table shall be followed.
- 10.5 Testing of steel as referred above is an essential requirement before the payment is released to contractor, as material lying at site or before the steel is incorporated in the work.

Note:-

- (a) 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.
- (a) TMT bars shall not be treated as corrosion resistant steel bar

PARTICULAR SPECIFICATIONS(Contd...)

10.7

STEEL SUPPLY AND ACCEPTANCE REGISTER

1. CANo and Name of Work :
2. Contract 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 Engr College)
 - (b) Chemical test report from _____ vide letter No _____ (Name of NABL approved Lab/Govt Engr College)
6. Type of steel, dia and qty :
 - (a) Type : TMT/CRS
 - (b) Dia : _____ mm
 - (c) Actual wt : _____ MT
 - (d) Conversion wt : _____ MT

	Chemical Test							Mechanical Test						
	Carbon %	Sulphur %	Phosphorous %	Sulphur + Phosphorous %	Manganese %	Silicon %	Corrosion Resistant element	Wt per meter	Yield Stress (N/mm ²)	Tensile Strength (N/mm ²)	Percent elongation (Min 18%)	Bend test	Rebend test	Remarks
As per IS 1786-2008														
As per manufacturer's test certificates														
As per independent test														

Remarks with Signature

Accepted/Rejected

Contractor

 Junior Engineer
 Engineer-in-Charge
 Garrison Engineer
 Remarks of BOO/Inspecting Officer/CWE

*To be allotted serially by GE consignment wise.

PARTICULAR SPECIFICATIONS(Contd...)**10.8 ACCEPTANCE/REJECTION OF STEEL:**

The Contractor shall keep a separate stack of steel brought at site for inspection, away from the accepted stack of steel. In case, the consignment does not meet any of the requirements of the relevant IS codes, the steel shall be rejected by the GE, and it shall be removed from the site within 24 hours at the cost of the Contractor.

10.9 WELDING:

10.9.1 Refer clause 10.15 of MES schedule Part-I and shall be carried out by metal arc process as per IS-816 and IS-823.

10.9.2 Unless, otherwise specified hereinafter, weldings shall be 6mm thick continuous fillet weld over the joints.

10.9.3 All welding for lightning protection work shall be done by oxyacetylene gas welding

10.10 STEEL WINDOWS

10.11 Steel doors shall conform to IS-1038 (Specification for steel doors, windows and ventilators

third revision) as indicated and detailed on drawings. This section particulars shall be provided as per TD drawing and clause 10.25 of SSR Part-I. steel window shall be procured from approved manufacturer as per list given in Appx., "B" shall be confirmed and approved by GE.

10.12 All steel windows shall be provided with mild steel 10 mm square guard bars at 150mm center to center and all ventilators shall be provided with mild steel 10mm square guard bars at 100mm center to center. The guard bars shall be welded to 12x6 mm flat iron and the assembly shall then be fixed to the window/ventilator with screws. Rate quoted in BOQ shall be deemed to be included respective the guard bar also, if not otherwise indicated in BOQ.

10.13 The glazing of windows shall be with 4mm thick float glass and fixing shall be as shown on TD drawings.

10.14 **ALUMINIUM DOOR/WINDOW:** Aluminium Door/window shall be provided as per BOQ. Specification for aluminium door and window shall be 15 micron anodized (colored) aluminum section having embossment of the name of the manufacturer on each section at every metre and thickness of colour anodizing shall be not less than 15 micron. The section particulars shall be provided as per drawing and clause 10.37 of SSR Part-I, 2009. In case of non availability of any particular section mentioned the next available section (having higher per Kg/Rm weight) shall be provided without any price adjustment. The test certificate from Govt authorized testing laboratory shall be produced by the contractor to conform thickness of anodizing. The glazing to door and window shall be provided as specified in BOQ.

10.15 **ALUMINIUM GRILL:** The grill shall be provided as per BOQ.

11. ROOFING**11.1 CGI SHEET/PGI SHEET ROOFING**

11.1.1 Galvanised steel sheets, plain or corrugated shall comply with the requirements of IS/277-1977, Specification for galvanised steel sheets, plain or corrugated. Galvanising of sheets shall range from 120 Gms/Sqm to 175 Gms/Sqm as specified in schedule "A". Laying and fixing of sheets shall be carried out as specified in para

11.22 of SSR 2009 (Part-I). Galvanised J/L hooks/bolts and nuts, 8 mm dia with bitumen and GI washers filled with white lead shall be used for fixing sheets.

11.1.2 The size of flats, section etc. shall be as decided by GE.

11.2 ACSHEET ROOFING:

11.2.1 **ACSHEET ROOFING:** Wherever AC sheet roofing shall be provided with 6mm thick AC corrugated sheet roofing as described in Sch "A" and shall be one of the makes as specified in Appendix "B" to Particular Specifications confirming to IS-459 and as specified in Para 11.2.2 of MES Schedule 2009 Part-I. AC sheet shall be fixed with "J" type or "L" type hook bolts and nuts of 8mm dia and shall be provided all as specified in clause 11.24 of MES Schedule 2009 Part-I. AC ridge shall be serrated and two-piece adjustable for corrugated sheet

11.3 **GALVALUME SHEET ROFFING:** Galvalume sheet shall be 0.5mm 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 screw 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 & fastener setc. The colour of the sheet shall be approved by GE.

11.3.1 Fixing system shall be as per manufacturer's instructions and shall be safe against effects of Wind velocity. The work shall be executed completely as per manufacturer's instructions and literature. The work shall be executed as per clause 11.3 of SSR part I.

11.3.2 **GALVALUME SHEET WALL CLADDING:** Galvalume sheet wall cladding shall be same as for roof and shall be fixed with 8mm and 30mm deep trapezoidal profile sheeting fixed with self trapping fasteners.

11.3.3 **ROOFING ACCESSORIES:** Roofing accessories i.e. Corner piece apron, eaves/valley gutters, hoppers, ridges, sheet floor connectors etc shall be of galvalume sheet and of size shape as directed by Eng-in-charge.

11.4 **RAIN WATER PIPE:** UPVC rain water pipe shall be 110mm dia & 75mm dia as indicated in Sch "A" and shall conform to IS 13592-1992, thickness of pipe shall be 3.2mm to 3.8mm. UPVC pipe shall have withstand continuous hydraulic pressure of 4 ksf/sqcm. Pipes and fittings shall be secured to wall just below all joints with UPVC clamps and holder bats. Pipe and fittings jointed with epoxy resin or compound as recommended by manufacturer's instruction.

11.5 **ROOF TREATMENT:** Roof treatments shall be provided as described in Sch "A"

11.5.1 **TESTING OF WATER PROOFING TREATMENT:-**

Test shall be done by ponding. For this purpose, mud, mortar, fillet ponds shall be made longitudinally one meter apart over entire treated surfaces of roof slab to form ponds of suitable size as directed by the Engineer-in-Charge. These ponds shall be filled with potable water so that an average 50 mm (minimum 25 mm and maximum 75 mm) height of water is maintained during the test period. Test shall be carried out continuously for a period of 48 hours. Any seepage notified shall be rectified by the contractor and the defective portion shall be made good to entire satisfaction of the GE without any extra cost. All mud fillet ponds shall be removed and surface made clean and tidy after completion of satisfactory testing. Satisfactory completion of test shall not absolve the contractor from his responsibilities of rectification of defects which may arise during guarantee period.

11.5.2 **GUARANTEE OF ROOF TREATMENT:** Water proofing treatment executed under this contract is under the guarantee of contractor for **10 (TEN)** years after the certified physical completion of work. Contractor is fully liable under this guarantee to replace / rectify all defective work intimated to him during this period. In case contractor fails to rectify / replace the defective work, Accepting officer shall get the replacement / rectification as necessary at the risk and cost of contractor and recover the cost in full from the contractor. If the contractor considers that any additional treatment is required over and above that specified here in before in Schedule "A", the same shall be carried out by the contractor without any extra cost to the Government. During the Guarantee period if any leakage / seepage of water is found, the contractor shall rectify or replace defective work / material at his own expenses, when called upon in writing to do so by the GE. Condition 46 of IAFW-2249 (for defects liability period) for the Guarantee period shall be deemed amended accordingly.

11.5.3 **SECURITY DEPOSIT FOR MINOR RECTIFICATIONS:** Contractor shall furnish security deposit for water proofing treatment carried out @ 2.5% of amount of waterproof treatment at contract rates for the guarantee period of TEN years in favour of Garrison Engineer. In case the contractor fails to submit the FDR on completion of work, the said amount will be retained from the final bill. The Guarantee money shall be released by the GE after expiry of the guarantee period of ten years after obtaining clearance from the Engineer-in-Charge by submitting a certificate duly signed by him that no seepage/leakage has been noticed. This security deposit amount is only for covering the minor repairs/rectifications required to be executed urgently. This deposit shall not in any way limit the liability of contractor under the guarantee as per clause here above, under which contractor is fully liable for complete rectification/replacement of entire defective work / material.

11.5.4 The contractor shall provide a plaster plate of size 450x450mm on places as directed by the Engineer in charge on the wall of the buildings where roof treatment has been carried out. The plate shall be 15 mm thick in CM 1:4 to indicate CA No, Name of contractor, date of completion of work and date of expiry of ten years guarantee period by engraving and painting (Black). The cost of plaster plates etc shall be deemed included in the unit rates of roof treatment.

12. **FLOOR:**

12.1.1 Refer clause No 13.25 of MESS Schedule 2009 (Part I). Exposed edges of floor shall be finished to match with top surface of floors. The junction between floor and wall shall be at right angle. Floors shall be laid to level or to slope of sunk as directed by Engineer-in-Charge. Floors shall be laid through all openings in walls and over dwarf walls of passage, verandah etc. Composition of floor shall be as described in Schedule 'A'. PCC floor shall be laid in bays adopting panel dimensions specified in clause 13.32.1 of MESS Schedule 2009 Part I.

12.2 Subbase need not be laid in bays. No price adjustment shall be made on this account.

12.3 **MARBLE/UDAIPUR GREEN/GRANITE STONE:**

Marble/udaipur green shall be of selected quality, hard, sound, durable, and free from weathering, decay and defects like cavities, crack flaw, sand holes, injurious veins, patches of loose or soft materials and other similar defects that may adversely affect its strength and appearance. As far as possible marble/udaipur green shall be uniform in colour and texture. Marble/Udaipur green shall be laid and polished as specified in relevant clause of SSR part I.

12.4 **KOTA STONE FLOORING:** 20 to 25 mm thick polish kota stone slab shall be laid over bedding complete all as specified in Schedule "A" and directed. Colour and shade shall be approved by GE. Kota stone slab flooring shall be laid in the manner as specified in relevant clause No. 13.47 of MES SSR Part-I (2009). Colour of kota stone shall be uniform.

12.5 **NON SKID CERAMIC TILES FLOORING:** Non skid ceramic coloured tiles shall be conforming to the requirements as given in clause No. 13.14 of MES SSR Part-I (2009) and shall be provided of size 300x300x 6 to 7mm over screed bed and jointed in neat cement slurry pointed in white or coloured cement to match the shade of tiles. The design of tiles shall be approved by GE. Non skid ceramic tiles shall be laid as in the manner as specified in relevant clause of SSR Part-I. The tiles shall be ISI marked and best quality classification and characteristics shall be given in Table-I here in after and as approved by the Garrison Engineer. Workmanship shall be as per clause 13.40 and 13.40.1 to 13.40.3 of SSR part I.

12.6. **GLAZED CERAMIC TILES:**

Glazed ceramic tiles shall be laid in the manner as specified in relevant clause of MES Schedule 2009 (Part I). Tiles shall be white or coloured and of size as mentioned in respective item of Schedule 'A'. These shall be laid over screed as described in Sch 'A' and set and jointed in neat cement slurry and pointed in white cement or coloured cement as per site requirement. Glazed tiles shall conform to relevant IS and shall be from any one of the makes given in Appendix 'A'. Workmanship shall be as per clause 13.40 and 13.40.1 to 13.40.3 of SSR Part I. Classification and characteristics shall be given in Table-I below and shall be approved by GE.

12.7. **PREPOLISHED CHEQUERED CEMENT CONCRETE TILES:** Prepolished chequered cement concrete tiles shall conform to IS 13801-1993, chequered cement concrete tiles shall be with centre to centre of chequers not less than 25 mm and not more than 50 mm, the groove of chequers being uniform and straight with the depth of grooves not less than 3 mm. The tiles shall be manufactured in pressure process. Thickness of wearing layer measured from top of the chequers shall not be less than 6mm. The upper of tiles shall be pre-polished/ unpolished as indicated in Sch "A" and shall be free from projection, depression and cracks holes, cavities and other blemishes. All angles shall be right angle and all arises shall be sharp and true. The colour and texture of wearing layer shall be uniform throughout the thickness. The size of tiles shall be mentioned in Sch "A", the tolerance length & breadth shall be + 1mm and tolerance of thickness shall be +5mm. In addition the difference in thickness between the thick stand thinnest in the samples shall not exceed 3mm. Tiles shall be laid in accordance with clause No. 13.39, 13.39.1 to 13.39.6 of SSR Part-I"

12.8 **PREPOLISHED CEMENT CONCRETE PAVER BLOCK:** Pre cast concrete Paver block shall conform to IS 15658-2006, the paver block shall be sound, free from cracks and other visual defects, the tolerance of length and breadth as specified in SSR, the colour shall be approved by GE. Grade of concrete of Paver block as specified in BOQ. The paver block shall be laid over sand cushioning minimum consolidated thickness 50mm as recommended by manufacturers. Sand cushioning shall be measured and paid separately"

TABLE-I

Serial No	Characteristics	Ceramic wall tiles	Non-Skid Ceramic floor tiles.	Ceramic fully vitrified tiles	Method of Test, Ref to Part of IS 13630
1	2	3	4	5	6
(A)	(i) Classification according to their water Absorption (Group)	Group BIII	Group BII	Group BIa	
	(iii) Size (Minimum Nominal Size)	300mm x 200mm	300mm x 300mm	600mm x 600mm	
	(iv) Thickness (Minimum)	6mm	7mm	10mm	
	(iv) Color	Light	Light	Light	
(B)	Dimensions and Surface Quality				
	(i) Length and width:-				Part-1
	(a) The deviation in percent to the average working size of each tile (2 or 4 sides) from the work size (W):-	±0.2	±0.1	±0.1	Part-1
	(b) The deviation in percent of the average working size of each tile (2 or 4 sides) from the average size of the 10 test specimen (20 or 40 sides):-	±0.15	±0.1	±0.1	Part-1
	ii) Thickness:- The deviation, in percent of the average working thickness of each tile from the Work size thickness:-	±4.0	±5.0	±4.0	Part-1
	iii) Straightness of sides (Facial sides) The maximum deviation from straightness, in percent related to the corresponding work sizes:	±0.15	±0.1	±0.1	Part-1
	iv) Rectangularity The maximum deviation from rectangularity in percent related to the corresponding work sizes:	±0.15	±0.1	±0.1	Part-1
	v) Surface flatness The maximum deviation from flatness, in percent:-				Part-1
	(a) Centre curvature, related to Diagonal calculated from the work sizes	±0.2/2	±0.5	±0.2	Part-1
	(b) Edge curvature, related to the corresponding work size	±0.2/2	±0.5	±0.2	Part-1
	(c) Warpage, related to the diagonal calculated from the work-sizes	±0.2/2	±0.5	±0.2	Part-1
	vi) Surface quality ³	Minimum 95 percent of tiles shall be free from visible effects that would impair the appearance of a major area of tiles.			Part-1
(C)	Physical Properties				
	i) Water absorption, % by mass	10 ≤ E < 20	Average 3 ≤ E ≤ 6, Individual maximum 6.2	Average ≤ 0.08, Individual Maximum 1.0	Part-2

PARTICULAR SPECIFICATIONS(Contd...)

	ii) Modulus of rupture, in N/mm^2	Average 12 for thickness < 7.5mm Average 15 for thickness \geq 7.5mm	Average 30, Individual minimum 28	Average 47, Individual minimum 44	Part-6
	iii) Breaking strength, in N	200 for \leq 7.5mm thickness, Minimum 500 for >7.5mm thickness, Minimum	500 for \leq 7.5mm thickness, Minimum 1000 for >7.5mm thickness, Minimum	1500 for >7.5mm thickness, Minimum	Part-6
	iv) Scratch hardness of surface (Mohs' scale)				
	(a) Residential applications	3, Minimum	5, Minimum	6, Minimum	Part-13
	v) Resistance to abrasion of glazed tiles Class 1 to V	-			
	(a) Residential applications		(a) Class II with 600 Revolutions for Wet Abrasion Test (PEI Method) (b) Class II with 1000 Revolutions for Dry Abrasion Test (MCC Method)		Part-11
	vi) Co-efficient of linear thermal expansion from ambient temperature to $100^\circ C (K^{-1})$	$9 \times 10^{-6} K^{-1}$, Maximum	$9 \times 10^{-6} K^{-1}$, Maximum	$6 \times 10^{-6} K^{-1}$, Maximum	Part-4
	vii) Thermal shock resistance	10 cycles, Minimum	10 cycles, Minimum	10 cycles, Minimum	Part-5
	viii) Craze resistance ⁴ glazed tiles	4 cycles at 7.5 bar, Minimum	4 cycles at 7.5 bar, Minimum	4 cycles at 7.5 bar, Minimum	Part-9
	(ix) Bulk density, in (g/cc)	-	-	2.2 (Minimum)	Part-2
(D)	Chemical Properties				
	(i) Resistance to staining of glazed tiles	Class 1, Minimum	Class 1, Minimum	-	Part-7
	ii) Resistance to household chemicals and swimming pool water cleanser except to cleansing agents containing hydrofluoric acid and its compounds Glazed tiles	Class AA, Minimum	Class AA, Minimum	Class AA, Minimum	Part-7

PARTICULAR SPECIFICATIONS(Contd...)**14. PLASTERING&POINTING:**

14.1 Sand for plastering/pointing work shall be fine sand and shall be obtained from a sample kept in GE's/AGE's office and shall be conforming to the requirement as specified in 14.5 of SSR Part I.

14.2 Cement:-Ref clause 5.1 including sub paras.

14.3 Plastering/pointing shall be carried out all as described in Sch 'A' (BOQ).

14.4 Mortar for plastering/pointing work may be machine mixed or hand mixed at the discretion of the contractor.

14.5 All plaster surface shall be trowel led to a smooth and even surface without issuing extra cement if not otherwise specified in Sch „A“ and external surfaces shall be even & fair.

14.6 All external plasters shall be carried out 15 cm below GL.

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

14.8 All corner, angles, junction and edges shall be truly vertical or horizontal as the case may be and shall be carefully finished. Corners around jambs, of opening and junction of walls shall be rounded to minimum radius 5mm, 12mm wide groove at the junction of wall and RCC slab to the entire thickness of wall plaster shall be provided. Also trowel groove shall be provided at the junction of wall and RCC columns or any other dissimilar material e.g. wooden/steel chowkat etc.

14.9 Particular attention of the contractor is invited to take note of local practices and local availability of material like brick stone form work etc for any extra quantity of mortar is required for rendering smooth, extra dubbing required, touching up properly and archiving smooth & even surfaces. This shall be included in the quoted rates of plaster work as applicable.

15. PLINTH PROTECTION:-

15.1 Plinth protection shall be laid all as described in relevant items of BOQ (Sch „A“). The exposed surface shall be floated with fair and even surface without using extra cement; PCC shall be laid in alternate bays not exceeding 2 mtr in length with 10 mm gap to the full depth of PCC. Gap shall be filled with mastic filling comprising one part of bitumen blown grade (any penetration) and three parts of sand (all by weight)). The plinth protection shall be laid in slope 1:40

15.2. **WHITE LIME WASH/COLOUR WASH:-** White wash shall be prepared by slaking freshly burnt class 'C' (fat) lime conforming to IS-712 and shall be done at site with an excess of water and lime allowed to remain under water for two days. The mixture of lime and water shall be drawn off, placed in the suitable receptacle and clean fresh water added to bring it to the consistency of thin cream. Mixture so prepared shall be strained through coarse cloth or fine sieve 300 micron and mixed with gum water. The quantity of gum to be used shall be at the rate of 1 Kg. per cum of cream. Sodium chloride (common salt) dissolved in hot water in proportion 1.3 Kg in 10 Kg of lime shall be added. Small quantity of ultramarine blue (3 grams per Kg. lime) shall also be added to the white wash solution.

15.3 All brushes, spray tools, pots, kettles etc, used in carrying out the work shall be clean and free from foreign matters and shall be thoroughly cleaned with hot water soap solution at the end of a day work before use of different type of class materials.

15.4 White wash shall be applied with proper brushes or suitable sprayers. When applied, the operation for each coat shall consist of a stroke of brush from top down wards another from bottom upwards over the first stroke and similarly one stroke horizontally from right to left another from left to right before the previous stroke dries. The brushes shall be dipped in white wash etc pressed lightly against the wall of the container and then applied lightly pressing against the surface with a full swing hand. The finish on ceiling shall be done prior to that on walls.

15.5 Wherever scaffolding is necessary, it shall be erected on double supports and no ballies, bamboo or planks shall be inserted in floor. Where ladders are used pieces of old gunny bags on cloth shall be tied to their top to avoid damage or scratches on the walls.

15.6 White wash shall be provided to the surfaces as indicated in Sch 'A' (BOQ) and shall be carried out as specified in clause No 15.12 of MES SSR Part I (2009).

CEMENTBASEDPAINT:

15.7.Cement base paint shall comply with IS 5410-1992. The material shall be in powder form, free from lumps that are not friable and when mixed with required volume of water shall be suitable for use on porous surfaces of masonry, concrete, bricks and rough plaster surfaces the tint of cement base paint shall be approved by GE.

15.8 Cement base paint shall be applied all as specified in clause 15-15 and its sub clauses of SSR 2009 (Part I).

15.9. **OILBOUND DISTEMPER:** Oil bound distemper of required colour and shade shall be obtained ready mixed conforming to IS 428-2000. The material shall be in the form of a homogeneous paste free from odour of putrefaction as such and when mixed with water and shall be carried out all as specified in clause No 15.14 of MES SSR Part I. The tint of distemper shall be approved by GE.

16 **GLAZING:**

Glazing shall be provided of size as specified in relevant item of Schedule 'A' (BOQ) and as specified in clause 16.2 to 16.16 of MES SSR Part-I.

16.1 The glass in steel frame shall be fixed with special spring glazing clips with golden putty as specified in SSR Part I. However glazing with wooden joinery shall be fixed with wooden beads including panel pins, bedding with putty as specified in SSR part I.

17 **PAINTING**

17.1 All synthetic enamel paint emulsion paint shall be of 1st quality manufactured by standard firm as listed in Appx., B"

17.2. **SYNTHETIC ENAMEL PAINT:-** All paints unless otherwise specified shall be of 1st quality not inferior to that required by the relevant Indian Standard specifications and as mentioned in clause 17.2 to 17.2.5 of page 17-2 of MES Schedule 2009 (Part I). Synthetic enamel paint shall be ready mixed of tint as approved by the Engineer In Charge. Paint as approved by the Garrison Engineer shall be brought in manufacturers original packing of tins/containers duly seal intact. Synthetic enamel paint shall be ready mixed of tint as approved by the Engineer In Charge and shall be of any of brands as listed in appendix 'A'.

17.3 **WORKMANSHIP:** Synthetic Enamel Paint shall be applied all as described in schedule 'A' and as specified in clause 17.8 and its sub clauses on SI page No 17-6 and 17-7 of MES Schedule Part I - 2009 for steel and iron work and clause 17.6 and its sub clauses on SI page No 17-3 and 17-4 of MES Schedule Part I – 2009 for woodwork.

17.4 The contractor shall inform GE within 15 days of the date of acceptance of tender, the brand name of manufacturer's of paint proposed to be used in the works and submit sample thereof well in time and obtained prior written approved of GE before their use in work.

17.5 Contractor where so required by GE, produce certificate from the manufacture or their representative to establish that the brands of paints prepared by the contractor from them satisfy the requirement of the relevant Indian standard.

17.6 Paints for priming coat, undercoat and finishing coat shall be same manufactures.

17.7 Tint of paint shall be approved by GE.

17.8 **WEATHER COAT PAINT:-** This shall be withstand extreme topical condition of high rainfall and humidity and heat, this shall be antifungal performance resistance to growth of algae and fungi on the wall, this shall be UV protected, The paint shall applied on wall through brush or as recommended by the manufactures, Paint shall be procured from approved manufactures as listed in Appendix, B".

PARTICULAR SPECIFICATIONS(Contd...)

17.9. **PLASTIC EMULSION PAINT:**

17.9.1 The plastic emulsion paint shall confirm to IS 5411 (Part I) 1974 or IS 5411 (Part II) – 1972 as indicated.

17.9.2 The surface shall be thoroughly cleaned of dust. The surface shall then be allowed to dry for at least 48 hrs. It shall then be sand papered to give smooth and even surface. Any unevenness shall

be made good by applying putty made of Plaster of Paris with water on the entire surface including filling up of undulation and then sand papering the same again when surface is dry.

17.9.2 The paint shall then be applied either by brush or by roller.

17.9.4 Each coat of paint shall be allowed to dry before the next coat is applied.

17.9.5 The thinning of emulsions shall be done with water not Turpentine oil. The quantity of water added as per manufacturer's instruction.

17.9.6 No washings shall be done within 3 to 4 weeks of application.

17.10 **SILICONE WATER REPELLANT**

Providing and applying silicon based breathable non flammable, transparent alkaline stable, impregnable solvent soluble silane siloxane mixture on exposed mineral substrate like plaster/natural porous stone/grit wash/lime panning/concrete etc for exterior wall application. The chemical shall be dilute with solvent like MTO weight ratio 1:5 or as recommended by manufacturers. The diluted solution shall be applied by spraying preferably not under pressure. If required two coats then do not leave long back between two coats. Next coat shall be applied, when substrate has absorbed the previous coat and shall no longer shine. The substrate shall not have damp spots and it shall look dry before application. Minimum covering area approx 35sqm approx, it may vary depend upon the absorbency of the substrate. Make: - Alstone-International or wacker.

18. **WATER SUPPLY**

18.1 **GALVANISED STEEL WATER TUBING & FITTINGS:** Galvanized steel tubes/pipes shall be as per IS-1239 (Part I) 1979 and shall bear ISI mark. The pipe fittings shall be as per IS-1239 (Part II) 1982 and shall bear ISI mark. For pipes and fittings refer clause 18.4 of MES Schedule 2009 (Part-I).

18.2 **BIB TAPS/STOP VALVES/ANGLE COCKS (CAST COPPER ALLOY/ CP BRASS):** These shall be as described in Schedule 'A' & shall be ISI marked and of any of the make as specified herein after. If

ISI marked product is not available in the market, in that case product as approved by the Garrison Engineers shall be incorporated in the work. Fancy bib tap and stop valves shall conform to IS-8931 cast copper alloy nickel chromium plated and shall be procured from approved manufacture as given in appendix, "B".

18.3 **PILLAR TAP:** Fancy pillar taps shall be cast copper alloy and shall confirm to IS 8934-1978, and shall be of approved pattern and shall be nickel chromium plated.

18.4 **BALL VALVES:** Ball valve shall confirm to IS 1703-2000 ISI marked and comply the requirement laid down in clause 18.19 of MES Standard Schedule of Rates (Part I) - 2009. & fixed as specified in clause 18.102 of MES Standard Schedule of Rates (Part I) - 2009

18.5 **GUN METAL GATE VALVE:** Gun metal valve shall confirm to IS:778 and bear ISI marked & fixed as specified in clause 18.102 of MES Standard Schedule of Rates (Part I) - 2009.

18.6 **SHOWER ROSE:** Shower rose shall be brass chromium plated, size of shower rose as specified in Sch "A", shower roses shall be bent in swivel action of approved quality and make only.

18.7 **TOWEL RAIL:** Towel rail shall be brass chromium plated, "D" type with flanged ends, towel rail shall be fixed on wall with brass chromium plated screws with wall/plugs, size of towel rail as indicated in sch "A" (BOQ)

18.8 **SOAP TRAY:** Soap tray shall be brass chromium plated size and design shall be approved by GE, soap tray shall be fixed on wall with chromium plated brass screws and rail/plug.

18.9 **MIRROR:** Mirror shall be selected quality sheet glass not less than 5.5mm thick the edges shall be rounded or bevelled as specified in Sch "A", It shall be free from all floors, specks or bubbles. The glass shall be uniformly silver plated back, free from silvering defects. The silvering shall have uniform protective coating red lead paint.

19. PLUMBING

19.1 Plumbing work shall be carried out in accordance with clause No. 18.13 to 18.23 of SSR Part I.

19.2 **SOIL WASTE VENT PIPE/FITTINGS/ACCESSORIES:-** All CI pipes shall be of cast iron (sandcast/centrifugally cast as indicated in BOQ) conforming to IS 1729/3989 respectively with or without ears and with spigot & socket ends. All pipe and fittings shall have ISI certification mark.

19.3 **JOINTINGS:-** All soil & waste pipes shall be jointed with run lead joints as specified in clause No.

18.48 and 18.67 of SSR Part I. However vent pipes shall be jointed with cement mortar as specified in SSR.

19.4 **FIXING OF PIPES ON WALLS:-** CI pipes and fittings shall be fixed to wall as specified in clause No. 19.67.4 to 18.67.6 of SSR Part I.

19.5 NAHANI TRAP/FLOOR TRAP:-

Nahani trap/floor trap shall be cast iron and conform to IS 3989 nahani/floor trap shall be provided CP steel grating if not otherwise specified in Sch "A" (BOQ).

19.6 **SALT GLAZED STONE WARE PIPE:-** Salt glazed stone ware pipe shall be grade "A" conforming to IS-651 and shall be laid and jointed in cement sand mortar (1:1) and as specified in clause in 18.70 of SSR Part-I.

19.7 **CONCRETE BED TO DRAIN PIPE:-** Concrete foundation to the drain and sewer pipe and the hunching or encasing to be provided as described in Sch "A" work shall be executed in accordance with clause No. 18.68, 18.68.1 to 18.68.5 of SSR Part-I.

19.8 **GULLY TRAP:-** 150mm dia gully trap shall be of glazed stone ware of grade „A" connected with cast iron pipe with cement joint, Gully trap shall be bedded and haunched in PCC (1:3:6) type CI.

20. SANITARY AND TOILET FITTINGS

20.1 All sanitary appliance shall be vitreous china (white) if not otherwise categorically specified in BOQ and shall be 1st quality and shall conform to IS-2556 for General requirements and specified requirements

as mentioned in relevant clause of SSR part I. These shall be of approved make from the list given in appendix "B"

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

20.3 "P" or "S" trap shall be of cast iron and jointed to WC pan with cement joint as specified in clause 18.45.5 of SSR Part-I.

20.4 **WATER CLOSET (SQUATTING PATTERN):-** Water closet squatting pattern shall conform to IS 2556 (Part III) these shall be Orrisa pattern 580x440mm with integral foot rests, The flushing inlet shall be provided at both end, Each pan shall be provided with or 100mm dia „p" or „s" trap with or without inspection vent at directed. The trap shall be glazed inside. The inside of pan shall be regular and smooth to ensure efficient flush.

The pan shall be set in lime concrete (1:2) or PCC (1:5:10) with brick ballast 40 mm nominal size, The thickness of concrete 15cm average. The concrete shall be left 115mm below the top level of pan so as to allow flooring and bed concrete. The joint between the pan and the trap shall be made leak proof with cement sand mortar (1:1)

20.5 **WASH DOWN WATER CLOSET (EWC):-** Wash down water closet shall conform to IS-2556 (Part-II) and their pattern shall be Pattern-4 (Pedestal WC with independent cistern and concealed „S" Trap or „P" Trap, white, 410 mm high. WC shall be provided with 10 litres capacity PVC flushing cistern as mentioned here-in- before and 32mm bore PVC flush pipe for pedestal pattern WC and plastic water closet seat cover, flat with hinging device. All other details shall be as per MES schedule Part-I

20.6 **UNIVERSAL WATER CLOSET (ANGLO-INDIAN TYPE):-** Universal Water Closet (Anglo-Indian Type) shall conform to IS-2556 (Part-15) and their pattern shall be size-1 i.e 560mm x 460mm with S-Trap or P-Trap, WC shall be provided with 10 litres capacity PVC flushing cistern with PVC connection 15mm size with PTMT nuts of length 450mm and 32mm bore PVC flush pipe for pedestal pattern WC and Universal plastic water closet seat cover, flat with hinging device. All other details shall be as per MES schedule Part-I.

20.7 **WASH HAND BASIN (WASH HAND BASIN OVAL TYPE):-** Oval shaped Ceramic Basin to be provided as indicated in Sch „A“ oval below counter basin. The basin shall be provided with a granite slab counter even if it is not shown in drawings wherever Oval Type Wash hand Basin is shown. The diameter of the opening in the counter slab over the basin shall be 10mm less than the diameter of the said basin. The counter slab shall be of 18mm thick granite slab and all exposed edges of the counter slab shall be grinded with portable power driven grinder to smoothness and rounded finished and to be polished for shining of size as shown on drawings. The pillar tap shall be fixed on the counter slab. The granite fascia in front shall be in one piece fixed to the RCC band and behind with polymer brand cementations adhesive and supported on brick walls on both sides.

20.8 **WASH HAND BASIN:-** Wash hand basin (WHB) shall conform to IS-2556 (Part-IV), white, Flat back pattern WHB shall be with single tap hole.

20.9 **URINAL:-** The urinals shall be flat back type of size as specified in sch „A“ and if no size is mentioned then the size shall be 465x355x265mm (minimum), white and fitted with automatic PVC flushing cistern. Capacity of flushing system to be provided for numbers of urinal in ranges shall be as per SSR Part clause

18.88.3. Each urinal shall be provided with chromium plated grating and union for discharge pipe and PVC waste pipe of required diameter and length and 5Ltr capacities PVC flushing cistern shall be provided with PVC connection 15mm size with PTMT nuts of length 450mm, 390x810mm ceramic partition plate shall be provided as partition wherever any type of partition wall is shown in drawings.

20.10 **PVC CABINET WITH MIRROR:-** Cabinet with mirror shall be PTMT of size 450mmx350mm, Cabinet with mirror shall be procured from approved manufacturer as given in BOQ/Appendix „B“.

20.11 **WATER STORAGE TANKS:-** Water storage tanks shall be of HDPE vertical type and of capacity as specified in Schedule 'A'. Water tank shall be rotational moulded polyethylene water storage tank as per IS-12701-1989. Water tank shall have three layer wall construction. The tank shall be installed in position truly leveled. The tank shall be placed on staging/brick platform as directed by the Engineer in charge. The installation of same shall be done as directed by the Engineer in Charge and as per clause 18.60 of MESS Schedule.

21. **REMOVAL/ SITE CLEARANCE:-**

Old demolished materials considered under Schof credit shall be the property of the contractor and will be removed by the contractor at his custody. Debris and other materials if any shall be disposed off and site to be cleared to the entire satisfaction of the GE.

(Signature of Contractor)

Dated: _____

AGE(Contracts)
for Accepting Officer

APPENDIX 'A'**SOURCES OF MATERIALS**

Sl No	Name of Materials	Source of materials for works at station
1	2	3

- | | | |
|----|--|---|
| 1. | Bricks and brick tiles | Local Kiln burnt bricks of best quality |
| 2. | (a) Coarse aggregate (Single) for RCC/PCC works. | Bharatkoop/ Kalpijhansi/ Dala |
| | (b) Coarse aggregate (crushed) for RCC/PCC works. | Shankargarh |
| 3. | Coarse sand for RCC/PCC lime concrete, DPC and seal coat. | Shankargarh |
| 4. | Sand for plastering, pointing, brick work, sand for cushioning filling and covering for LT cables. | Yamuna river mixed in such proportion so as to give grading as specified in SSR |

NOTE:

1. Sources indicated are for guidance only. The tenderer shall ascertain the actual position/exact location of source before submitting his tender and no additional payment shall be made on account of misunderstanding or its distance from site of works.

2. The tenderer shall amongst other things also ascertain all information such as royalties, taxes, duties and other charges etc, on the materials and no additional payment shall be made on account of the foregoing.

3. However, if due to any ban imposed by the State Government/any other authority on obtaining the materials from the sources specified hereinabove and /or specified materials is not available at the source mentioned above, these materials conforming to specifications as given in particular specifications will be obtained by the contractor from any other place/source without any extra cost to the Government.

(Signature of Contractor)
Dated: _____

AGE(Contracts)
for Accepting Officer

ELECTRIFICATION:**22.1 GENERAL**

- (a) The work shall be executed as per approved lay out by the GE(AF) and no price adjustment what so ever shall be admissible to the contractor on this account.
- (b) The wire runs shall be marked on the walls and soffits of roofs/floors slabs and approval of the Engineer-in-Charge shall be obtained in writing before fixing plugs, cables & fittings etc.
- (c) All electrical fittings & wiring shall be laid/fixed clear of doors and windows and other openings.
- (d) Wiring shall be done strictly in conformity with IS rules, specifications and lay outs shall be in conformity with modern engineer practice. Loop-in type of wiring shall invariably be adopted throughout the installation.
- (e) No twisting/jointing in earth wire is allowed. All continuous earth wires shall be connected to main earth/switch boxes/DBs/MCCB, socket outlets, fitting etc by use of suitable size lugs/sockets and application of crimping tools only.
- (f) Cables shall be connected to a terminal only by crimped lugs using suitable sleeve, lugs or ferrules and application of proper crimping tools. In case where this is not feasible, the ends may be soldered together. Cables in each circuit shall be bunched together.
- (g) Proper phase identification code should clearly be provided at the main in-coming switch.
- (h) The name of functions of each distribution board like 'POWER' 'LIGHT' or 'SUB MAIN DB' as applicable shall be clearly and neatly painted on the distribution boards with white synthetic enamel paint.
- (j) The height of the incoming & distribution switch boards and various electrical fittings/sockets outlets/switch boards etc shall be as per E-in-C's TI. However, the height of the distribution boards shall not be less than one metre. Socket outlets may be installed at the height of one metre from the finished floor level.
- (k) General conditions and specifications as given in clause 19.2 of MES SSR (Part-I) shall be complied.
- (l) Make of materials shall be as given in Appendix 'A', to particulars specifications.
- (m) All manufactured articles required for incorporation in work shall be brought to site in the manufacturer's original packing with the seal intact. The materials shall be procured from the manufacturers or their authorized dealers only and original purchase vouchers (duly machine numbered & bearing the ST/CST number) and manufacturer's test certificates shall be submitted by the contractor to the department for inspection and perusal before approval of material. Incorporation shall be done after material is approved by GE(AF) in writing.
- (n) Executives and the contractor are to clearly understand the "sample approval" and "material approval" are two distinct activities & phase and proper record for both these activities in a proper sample & material approval register is to be kept.
- (p) Notwithstanding, the fact that an equipment has passed the inspection carried out during the stage of manufacture, the contractor is not relieved from his obligations to conform to the quality, workmanship, guarantee of performance etc.
- (q) Any defective materials, equipment or workmanship which may come to the notice of the GE(AF) or his representative after installation shall be liable for rejection and the contractor shall to replace such materials, equipmentsetc or rectify the defects at his own cost.

22.1. Wiring shall be done without any junction or connection boxes on line.

22.2 Special attention is drawn to termination of cable ends of point and sub main wiring cables. All exposed ends of multi-stranded cables, whether terminating at MCBs or switches (including piano switches) or at electrical fittings shall be crimped together with suitable lugs using proper crimping tools. In exceptional cases where the Engineer-in-Charge is convinced that crimping/provision of lugs is not possible these ends shall be soldered together.

PARTICULAR SPECIFICATIONS(Contd...)

- 22.3 Looping back system of wiring shall invariably be used throughout the installation.
- 22.4 Proper colour coding viz red/yellow/blue wire for phases, black wire for neutral and green wire for earthing shall be adopted strictly in point wiring.
- 22.5 The conduits shall be ISI marked and proper accessories at junctions, bends and successive lengths shall be provided. For fixing of conduits and their accessories etc, PVC sleeves and cadmium plated screws shall invariably be used.
- 22.6 Joint between conduits and accessories shall be securely made to ensure earth continuity.
- 22.7 All the fan boxes shall be covered with 3mm thick plastic laminated sheet white and contractor's rate for the point wiring for fan shall be included for these provisions.
- 23 CIRCUITS**
- 23.1 Each circuit shall have its separate neutral conductor originating from neutral bus bar in DBs.
- 23.2 IS-732 provides that in a lighting circuit not more than 10 points shall be connected and maximum load shall be 800 watts. Similarly two power plugs may be connected to one circuit with a maximum load of 2 Kw and power and light sub-circuits should be separate.
- 23.3 (a) All circuits and sub-circuits shall be designed by making a provision of 20 percent increase in load due to any future modification.
- (b) It is advisable that while planning/execution not more than 8 light/fan points (etc) are connected to one circuit within the maximum load ceiling. This will allow scope of extension without over-loading and piecemeal changes. The incoming MCB should be a closely graduated one instead of indiscriminately putting a 6 Amps SP MCB in a lighting circuit. A spare way should always be kept in the DB to cater for extension.
- (c) The power circuits with 2 normal power plugs be controlled by a 10 Amps SP MCB, thereby limiting the load to 2 kw approximately.
- (d) In case of equipment like geyser, air-conditioners, water coolers etc only one power plug shall be connected to the circuit and protected by a suitable graded MCB.
- (e) Lights and fans may be wired on a common circuit. In installations requiring the use of group control for switching operations, circuits for socket-outlets may be kept separate from lights and fans. Even these may be wired to separate circuits if further separate group control is required on ground.
- 23.4 Cable markers/identification sleeves shall be provided in DBs to identify the cable leading to a particular circuit to avoid trial and error method for circuit identification during fault rectification. Proper colour code shall be followed so that phase, neutral and earth conductors can easily be identified.
- 23.5 In case of single phase circuits, it shall be ensured that the phase conductor is taken on the single pole switches so that with switches in 'OFF' position there should be no live conductor at the outlet controlled by that switch.
- 23.6 Power circuit and lighting circuit which have three pin type socket outlets shall have a separate earth wire for each circuit brought upto the earth terminals on the control boards from where the circuit originates.
- 23.7 Sub bus bar chambers shall be connected with two distinct cables with lugs and nuts/bolts.
- 23.8 All circuits shall be planned in advance and got approved from the Engineer-in-Charge before execution and fixing the controls and fittings.
- 23.9 PVC insulated copper conductor cable as mentioned in Schedule shall be run in the conduit/ casing capping (as applicable) as continuous earthing and connected to all light fittings, ceiling fans, sockets points and regulators. The cost of the same shall be deemed to be included in the quoted unit rate of point wiring.
- 23.10 It shall be ensured that as per NEC-85, the size of earth continuity conductor shall be equal to the size of main current carrying conductor subject to a minimum of 1.5 sq mm for copper and 2.5 sq.mm for aluminium.
- 23.11 The terminal points for switches, sockets outlets etc for all wiring shall terminate in sunk type mild steel sheet terminal boxes covered with 3 mm thick plastic laminated sheet (white) with brass screws. Boxes shall be earthed. The cost of the above arrangement is deemed to be included in rates for respective items of point wiring.

24. SWITCHES, SOCKET-OUTLETS, BUZZER/ BELL PUSH

24.1 Switches, socket-outlet, bell push and buzzer shall be snap type, white finish and shall be of the makes specified in the tender. Switches shall invariably be ISI marked.

24.2 **MCB, MCCB & DISTRIBUTION BOARD:** Provide distribution board and MCBs as indicated in Schedule 'A'. Miniature circuit breaker shall comply to the requirement of IS-8828. The terminals of MCBs should be brought out sufficiently to connect cable lugs directly. No adopter should be used for terminating the cables. The MCBs should have quick-break-trip free mechanism to ensure that contact cannot be closed against persistent fault. Bus bars shall be electroplating copper tin plated and rated 200Amps minimum. Exposed faces of sheet steel enclosures shall be with epoxy polyester powder coating at factory. Neutral has same number of outgoing holds as the number of MCBs. Unit rate quoted shall also be deemed to include for all internal connections in the distribution board and bus bar system shall be completely insulated and fitted in PVC channel to avoid accidental toner. Bus bar available in single phase and 3 phase shall be colour coded suitable for both flush and surface mounting.

24.3 **END TERMINATION:** All cable terminations for internal electrification for various switches, light fittings, MCBs, switch fuse units, junction boxes, connectors etc. shall be provided with suitable crimped lugs/studs/sleeves as required to avoid any possibility of loose connections and sparking. The loose screwing and without providing suitable lugs/studs/sleeves will be strictly prohibited.

24.4 **SITING OF ELECTRICAL EQUIPMENT:** The siting of cable conduit, controls, distribution boards, fittings and accessories etc. shall be as laid down in IS 4648 "Guide for electrical layout in building" or as directed by EIC/GE(AF).

24.5 **CONTROL AT POINT OF ENTRANCE OF SUPPLY:** There shall be a linked main switch gear with MCB on each live conductors of supply main at the point of entrance. No fuse shall be inserted in the neutral.

24.6 **TYPE OF SWITCH BOARD:** Standard Sheet metal enclosure for mounting MCB shall be of 16 gauge MS Sheet supplied by the manufacturer.

24.7 **TESTS ON COMPLETION:** The following tests shall be carried out by the contractor after completion of the work in presence of Engineer-in-Charge. The results of such tests shall be recorded and signed by the contractor and Engineer-in-Charge. All testing equipment required to carry out the tests shall be arranged by the contractor without any extra cost. The work which does not withstand satisfactory test shall be re-executed by the contractor at his own expense.

(a) (i) **POLARITY TEST:** A test shall be made to ensure all switches are connected to correct phases or line conductor of supply.

(ii) Effectiveness of earth shall be tested by earth tester.

(b) **RESISTANCE OF EARTH CONTINUITY PATH:** Maximum continuity resistance from any point in the installation including earth continuity wire and earth lead to earth plate shall not exceed one ohm or as specified in Schedule 'A'.

(c) **INSULATION TEST:** The insulation resistance shall be measured between all conductors connected to neutral and phases of supply and result shall be less than those specified in IS/IEE rules and shall be such to ensure reliable operation of protection devices.

25. EARTHING

12.1 Earthing shall be provided of the types as mentioned in Schedule 'A' and shall be executed as per IS-3043 and clause 19.137 to 19.146 of MES SSR Part-I. The overall earth resistance of the earthing system (electrode) shall not exceed one ohm. Earthing shall be done in a manner that the inner edges of earth pit is at least 2 metre from the foundation (extreme outside end) of building/poles etc and the minimum distance between any two earth electrodes shall be regulated as per IS-3043. All pipes used in earthing shall be of medium grade.

25.2 RCC cover for earth pit shall be 40 mm thick mix of concrete for cover shall be (1:2:4) type B-1 using 20 mm graded crushed stone aggregate and reinforced with 8 mm dia high strength TMT steel bars @ 150 mm c/c both ways. Handle shall be of 8 mm dia high strength deformed TMT steel bars and shall be fixed in such a way that the gap between cover and handle is at least 150 mm. Cover shall be placed on cast iron frame embedded in concrete.

25.3 Concrete chamber shall be PCC (1:3:6) type C-1 using 20 mm graded stone aggregate. All internal surfaces of the chamber shall be given 15 mm thick plaster in cement mortar (1:4). Funnel in chamber shall be made out of CI. It shall be leak proof and provided with wire gauge duly soldered.

PARTICULAR SPECIFICATIONS(Contd...)

- 25.4 Charcoal dust and salt filling shall be done in layers as shown in electrical plate. Surplus soil shall be disposed off and site left clean and tidy on completion.
- 25.5 For checking the efficiency of earthing, the following test shall be carried out, preferably during the summer months :-
- (a) The earth resistance of each electrode is measured.
 - (b) The earth resistance of earthing grid is measured.
 - I All electrodes are connected to the grid and the earth resistance of the entire earthing system is measured.

25.6 DEMOLITION/DISMANTLING

- (a) Prior to commencement of work, inventory of all existing items of works, materials and fittings to be demolished shall be prepared and signed by the Engineer-in-Charge.
- (b) Proper care shall be taken while demolition, that the demolition work shall be carried out without disturbing other nearby existing structures which are not to be dismantled. Demolition shall be carried out all as specified in the MES SSR Part-I.

26. GI PIPES AND FITTINGS:

- 26.1 Water tubing and fittings shall be of grade as indicated in Schedule 'A' and shall conform to IS-1239 (Part-I). Pipes and fittings shall be one of the following make approved by the GE
- 26.2 Laying, jointing and fixing of pipes shall be carried out all as specified in clauses 18.50 and 18.51 of MES Schedule Part I.

27.0 XLPE CABLES:

- 27.1 XLPE cables shall be all as specified and described in the Sch 'A' item, and shall conform to the requirements of IS 1225-1983 latest revision. The cable drum and the cables shall be handled in the correct manner so as to ensure safety for personal and obviating kinks or other damage to the cable insulation armoring or cable sheath.
- 27.2 The XLPE insulated cables shall be capable of withstanding a conductor temperature of 250 degree C during short circuit without any damage.
- 27.3 Cables shall be laid in trenches as specified in MES Shedule Part-I.

28.0 SAND CUSHIONING:

- 15.1 Sand shall be as per clause No. 3.21.2 of MES Schedule Part-I and sand cushioning to underground cables shall be done all as per clause Nos.19.75 and 19.76 of MES Schedule Part-I.

29.0 BRICKS FOR CABLE PROTECTION:

- 29.1 Bricks shall be well burnt bricks, old size, best, locally available and as approved by the GE with crushing strength not less than 35 kg/Sq.cm. Bricks without frogs are also acceptable without any price adjustment. The nominal size of the bricks shall be 230mm long, 110mm wide and 75mm thick with a tolerance of 8% in each dimension. The GE may permit the use of bricks (without any price adjustment) which may not strictly conform to the measurement in size provided that he is satisfied that bricks conform to specifications in all other aspects.

30 SAFETY CODE:

- 30.1 While executing the work, the contractor should follow the MES safety code brought out in Annexure 'B' to IAFW-2249 (General Conditions of Contracts) without fail.
- 30.2 The contractor shall provide all necessary and sufficient tools and instruments to his tradesmen. These tools and instruments shall be new and in working condition. The contractor shall check the condition of the tools and instruments from time to time and shall also provide the additional tools/safety equipment/instruments as instructed by Engineer-in-Charge.
- 30.3 The workmen shall be provided with protective devices and shall wear them while working. In case any accident/injury/fatal or partial disability happened, the contractor shall be solely responsible for settling all

claims/compensation. Department will have a right to recover any sum indicated/claimed by Labour Commissioner/Court directive. Engineer-in-Charge will however ensure that contractor has provided all adequate and required means to the workmen and contractor shall get his personnel covered by insurance at his own cost and proof for the same shall be submitted to GE.

30.4 The contractor shall make necessary safety measures for his workmen in accordance with IS standard practice and IE rules/Labour Rules. The tradesmen personnel shall be provided with protective clothing and shall wear them while working. Any accident causing minor/fatal injury, partial disability due to any untoward incident and non-adherence of safety and IE regulations, the contractor shall be solely responsible for settling all claims of compensation to the deceased, failing which department will have a right to recover any sum indicated/claimed by Labour Commissioner/Court Authorities. No claim whatsoever will be entertained in this regard.

31.0 SITE CLEARANCE

31.1 The site shall be cleared off phase wise/complete and cleaned up to the entire satisfaction of Engineer-in-Charge.

Signature of Contractor

For Accepting Officer

4. MAKES OF MISCELLANEOUS ITEMS TO BE INCORPORATED IN TENDER:-

(a) Makes in ADG NEI approved list vide letter No. 20034/ADGNEI/239 /E2 Dt 31 Jan 2020.

(b) Makes in CE CC approved list vide letter No. 920004/9/CMPT/Annual Bd/2020-21/08/E2W dated 04 Jan 2022 and 920004/9/CMPT-II/40/E2W dated 20 Dec 202 .

(c) Makes in CE SC approved list vide letter No.

CESC/CMPT/212/Gen dated 03 Sep 2018.

(d) Makes in CE SWC approved list vide letter No.36150/CPMT/CO/123/E2(P&C) dated 01 Dec 2022.

Srl No.	Item Name	Makes	Remarks
1.	PVC/FRP/UPVC Shutter for doors , windows , ventilators & Frames	Profine India Window Technology Pvt Ltd	Approved list of CE CC
		NCL Alltek&Seccolor ltd Hyderabad	Approved list of CE CC
		Sintex India Ltd	Approved list of ADG NEI Approved list of CE SWC
		Rajshri Plastiwood Ltd	Approved list of ADG NEI Approved list of CE SWC
		Duro Plast	Approved list of CE SWC
		Accucel(Accura Polytech)	Approved list of CE SWC
	UPVC Shutter for doors , windows , ventilators & Frames	H2O Solution	Approved list of CE SWC
		Madhu Industries	Approved list of CE SWC
		Fenesta	Approved list of CE SWC Approved list of CE CC
		NCL Vela	Approved list of CE SWC
		Profine India Window Technology Pvt Ltd	Approved list of CE CC Approved list of CE SWC
		AIS	Approved list of CE SWC
		Rajshri Plastiwood Ltd	Approved list of ADG NEI Approved list of CE SWC
		Prizma Winsol	Approved list of CE SWC
		YashPoly	Approved list of CE SWC
		Sintex India Ltd	Approved list of ADG NEI
		Koemmering	Approved list of CE CC
		Aluplast	Approved list of CE CC
		Prominace	Approved list of CE CC
2.	Factory made Wooden panel/gauge shutters for door & window	Rama Woods Crafts Satna	Approved list of CE CC
		A-1 Teak Products Pvt Ltd	Approved list of CE CC Approved list of CE SWC
		MP Wood Products, Indore	Approved list of ADG NEI
		Jain Door Pvt Ltd, Haryana	Approved list of ADG NEI Approved list of CE SC Approved list of CE SWC
		Pioneer Timber, Chandigarh	Approved list of CE SWC
	Factory made Wooden flush shutters for door	Rama Woods Crafts Satna	Approved list of CE CC
		A-1 Teak Products Pvt Ltd	Approved list of CE CC Approved list of CE SWC
		MP Wood Products, Indore	Approved list of ADG NEI
		Jain Door Pvt Ltd, Haryana	Approved list of ADG NEI Approved list of CE SC Approved list of CE SWC
		Pioneer Timber, Chandigarh	Approved list of CE SWC
		Kitply Industries	Approved list of CE SWC
		Century Plywood(Brand-Century Door)	Approved list of CE SWC Approved list of CE CC
		Durian	Approved list of CE SWC
		Greenlam(Mikasa)	Approved list of CE SWC Approved list of CE CC
		Archid Ply	Approved list of CE SWC

PARTICULAR SPECIFICATIONS(Contd...)

3.	Steel Windows, Ventilators, Door Frame, Shutters	NCL Alltek&Seccolor Ltd Hyderabad	Approved list of CE CC
		Ashish Industries Gaziabad	Approved list of CE CC
		M/S Godrej & Boyce Steel mfg Mumbai	Approved list of CE SC
		M/S Bihar Bobbin & Engg Work , Katihar	Approved list of CE SC
		M/S Sen-Harvic , Mumbai	Approved list of CE SC
		Arm Strong	Approved list of CE SWC
		Gyproc(Saint Gobin)	Approved list of CE SWC
		Gyptech	Approved list of CE SWC
4.	Aluminium Shutters , frames for doors , windows & ventilators	Hindalco	Approved list of ADG NEI
		Jindal	Approved list of CE SC
		M/S Profine India windows Technology Pvt Ltd (Brand Alupure)	Approved list of CE SWC
		Associated Profile & Aluminium Ltd	Approved list of ADG NEI and CE SC
		Fenesta	Approved list of CE SWC
		AIS	Approved list of CE EC
		Nalco	Approved list of CE SC
			Approved list of CE SWC
			Approved list of CE SWC
			Approved list of CE SWC
5.	UPVC /PVC False Ceiling	Rajshri Plastiwood Ltd	Approved list of ADG NEI
		Accura	Approved list of ADG NEI
		Saint-Gobain	Approved list of ADG NEI
		Black Cobra	Approved list of ADG (N)
		ECOCELL/ECHON	Approved list of Engrs Br EC
6.	Gyp Board / E Board	PR Ceiling Products	Approved list of CE CC
		Visaka Industries Ltd	Approved list of CE CC
		Armstrong World Industries	Approved list of CE SC
			Approved list of ADG NEI
		Indian Gypsum	Approved list of ADG NEI
		Lafarge	Approved list of ADG NEI
7.	Perforated particle board /tiles for insulation and acoustic	Saint-Gobain	Approved list of ADG NEI
		Anchor Ceiling tiles	Approved list of CE SC
			Approved list of CE SWC
		Arm Strong	Approved list of CE SWC
8.	Plain /Pre laminated Particle Board	Gyp Board	
		Gyptech	Approved list of CE SWC
		Eco board Industries , Pune	Approved list of CE SC
		Kitply	Approved list of CE SC
			Approved list of CE SWC
			Approved list of CE CC
		Green ply	Approved list of CE SC
			Approved list of CE CC
		Archid Ply Industries Ltd (Brand – Archidply)	Approved list of CE CC
		Novapan	Approved list of ADG NEI
		Century Plywood	Approved list of CE SWC
			Approved list of CE CC
		Action Tesa	Approved list of CE SWC
9.	Wooden Wall Panels	Anchor	Approved list of CE SWC
		Visaka Industries Ltd	Approved list of CE CC
		HIL Ltd	Approved list of CE CC
		Mascot Overseas Delhi (Brand – Metacil)	Approved list of CE CC

PARTICULAR SPECIFICATIONS(Contd...)

10.	Plywood	Kitply	Approved list of CE SC Approved list of ADG NEI and Approved list of CE SWC Approved list of CE CC
		Century plywood	Approved list of CE SC Approved list of ADG NEI Approved list of CE SWC & Approved list of CE CC
		Greenply	Approved list of CE SC Approved list of ADG NEI and Approved list of CE CC
		Novapan	Approved list of ADG NEI
		National Plywood Industries Pvt Ltd	Approved list of ADG NEI Approved list of CE SWC
		Archid Ply	Approved list of CE SWC
		Anchor	Approved list of CE SWC
11.	Laminated Sheets	Sun Gloss	Approved list of CE SC Approved list of CE SWC
		Eco board	Approved list of CE SC
		Archidply Industries ltd (Brand – Archidply)	Approved list of CE CC Approved list of CE SWC
		Backlite Hylum	Approved list of CE SC Approved list of CE SWC
		Formica	Approved list of CE SWC
		Delta Laminates	Approved list of CE SWC
		Merino Laminates	Approved list of CE CC
		Royale Touche Laminates	Approved list of CE CC
		Greenlam Laminates	Approved list of CE CC
		Kitply	Approved list of CE CC
		Sunmica	Approved list of CE CC
		Formica	Approved list of CE CC
12.	Ceramic and vitrified tiles incl Non Skid tile	Kajaria Ceramics Ltd (Brand – Kajaria)	Approved list of CE CC Approved list of CE SWC
		Orient Bell Ltd (Brand –Orient Bell)	Approved list of CE CC
		Nitco	Approved list of CE SC Approved list of ADG NEI
		H&R Johnson India	Approved list of ADG NEI Approved list of CE SWC
		Asian Granito India Ltd	Approved list of ADG NEI Approved list of CE SWC
		Somany	Approved list of CE SWC Approved list of CE CC
		Johnson	Approved list of CE CC
		RAK Ceramic	Approved list of CE CC
13.	Interlocking Paver blocks	NITCO	Approved list of CE SC Approved list of ADG NEI
		Ultra tiles Pvt Ltd	Approved list of CE SC Approved list of ADG NEI
		Topaz tiles	Approved list of CE SC
		Ecco Scope	Approved list of ADG NEI
14.	Chequered tiles	Ultra tiles Pvt Ltd	Approved list of ADG NEI
		Nitco	Approved list of ADG NEI
		Bansal	Approved list of ADG NEI
15.	Acid Resistant Vitrified tiles	Johnson (Endura)	Approved list of CE SC Approved list of ADG NEI Approved list of CE SWC
		Somany (Durastone)	Approved list of CE SC Approved list of ADG NEI Approved list of CE SWC
		Kajaria	Approved list of CE SC Approved list of ADG NEI Approved list of CE SWC

PARTICULAR SPECIFICATIONS(Contd...)

16.	Wooden flooring	HIL Ltd	Approved list of CE CC
		Vista	Approved list of ADG NEI
		Pergo	Approved list of ADG NEI Approved list of CE SWC
		Haro	Approved list of ADG NEI
		Action Tesa	Approved list of CE SWC
17.	Acrylic Washable distemper /Oil Bound distemper	Nerolac	Approved list of CE SC Approved list of ADG NEI
		Jenson and Nicholson	Approved list of CE SC Approved list of ADG NEI
		Shalimar Paints	Approved list of CE SC and ADG NEI
		Berger (Jadoo)	Approved list of ADG NEI
		Asian Paints	Approved list of ADG NEI
		Dulux(Akzo Nobel)	Approved list of CE SWC
18.	Acrylic/ Plastic emulsion paint	Berger (Silk)	Approved list of CE SC Approved list of ADG NEI Approved list of CE SWC Approved list of CE CC
		Asian Paints (Royal Aspira)	Approved list of CE SC Approved list of ADG NEI Approved list of CE SWC Approved list of CE CC
		Nerolac Paints (Impression)	Approved list of CE SC Approved list of ADG NEI Approved list of CE SWC Approved list of CE CC
		Shalimar Paints Ltd(Superlac stay clean)	Approved list of CE SC and ADG NEI
		Dulux (Velvet touch)	Approved list of ADG NEI Approved list of CE SWC
		Jenson Nicholson	Approved list of CE SWC
19.	Synthetic enamel paint	Shalimar Paints (Superlac)	Approved list of CE SC Approved list of ADG NEI
		Asian (Apcolite)	Approved list of CE SC and ADG NEI Approved list of CE CC
		Nerolac (Impression)	Approved list of CE SC Approved list of ADG NEI Approved list of CE CC
		Berger (Luxol Hi-Gloss)	Approved list of CE SC Approved list of ADG NEI Approved list of CE CC
		Dulux(Akzo Nobel)	Approved list of CE SC Approved list of CE SWC
		Jenson & Nicholson Paints	Jenson & Nicholson Paints
20.	Cement base paint	Snowcem Plus	Approved list of CE SC Approved list of ADG NEI
		Berger Paints	Approved list of CE SC Approved list of ADG NEI Approved list of CE SWC
		Asian Paints (Gutucam)	Approved list of ADG NEI
		Duracem	Approved list of CE SC Approved list of CE SWC Approved list of CE CC
		Super Snowcem	Approved list of CE SWC Approved list of CE CC
		Aquacem	Approved list of CE SWC
		Shalimar	Approved list of CE SWC

PARTICULAR SPECIFICATIONS(Contd...)

21.	Exterior Acrylic Emulsion Weather Coat Paints	Asian Paints Ltd (Apex Ultima)	Approved list of ADG NEI Approved list of CE SWC Approved list of CE CC
		Shalimar Paints Ltd (Xtra Maximum)	Approved list of ADG NEI
		Berger Paints Ltd (Weather Coat All Guard)	Approved list of ADG NEI Approved list of CE SWC Approved list of CE CC
		Dulux (Weather Shield Max)	Approved list of ADG NEI Approved list of CE SWC
		Nerolac (Excel Total)	Approved list of ADG NEI Approved list of CE SWC Approved list of CE CC
22.	Thermoplastic Road Marking Paints / Retro-Reflective Paint	Asian Apcomark	
		Shalimar Paints Ltd	Approved list of ADG NEI
		Berger Paints Ltd	Approved list of ADG NEI
		STP	Approved list of ADG NEI
		Jenson and Nicholson Paints Ltd	Approved list of ADG NEI
			Approved list of ADG NEI
23.	Water based Road marking Paint	Asian Apcomark	Approved list of ADG NEI
		Shalimar Paints Ltd	Approved list of ADG NEI
		Berger Paints Ltd	Approved list of ADG NEI
		Jenson and Nicholson Paints Ltd	Approved list of ADG NEI
24.	White Cement / wall Putty	Birla White	Approved list of CE SC Approved list of ADG NEI Approved list of CE SWC
		JK White	Approved list of CE SC Approved list of CE SWC
		Asian Paints	Approved list of ADG NEI Approved list of CE SWC
		Berger	Approved list of ADG NEI Approved list of CE SWC
		Shalimar Paints	Approved list of ADG NEI Approved list of CE SWC
		Nerolac	Approved list of CE SWC
		Golden Mohar	Approved list of CE SWC
25.	Oil Putty	Shalimar Hardware	Approved list of CE SC
		UK Paint Industries	Approved list of CE SC
		Berger	Approved list of CE SC
		Gold Mohar	Approved list of CE SC
26.	Sheet Glass Plain/ Frosted /Heat absorbing Glass & reflective solar control film /Rough cast wired glass	Hindustan Pilkington Glass works	Approved list of CE SC
		Saint-Gobain	Approved list of CE SC
		Modi Float	Approved list of CE SC
		Modiguard	Approved list of CE SC
27.	Mirror	Modi	Approved list of CE SC
		Kohinoor	Approved list of CE SC
		Swastik	Approved list of CE SC
		Saint-Gobain	Approved list of CE SC

PARTICULAR SPECIFICATIONS(Contd...)

28.	UPVC/CPVC pipes and fittings	Astral Polytechnic Ltd Ahmedabad	Approved list of CE CC Approved list of CE SWC
		RC Plasto Tanks & Pipes Pvt Ltd	Approved list of CE CC
		HIL Ltd	Approved list of CE CC Approved list of CE SWC
		Finolex	Approved list of CE SC Approved list of CE SWC
		Supreme	Approved list of CE SC Approved list of CE SWC Approved list of CE CC
		Truflo(Hindware)	Approved list of CE SWC
		Prince	Approved list of CE SWC
		Ashirvad	Approved list of CE SWC Approved list of CE CC
		Dutron	Approved list of CE SWC
		SFMC	Approved list of CE SWC
29.	CP Bath fittings and accessories	Jaquar& Coy Pvt Ltd (Brand Jaquar)	Approved list of CE CC
		KajariaBathware Pvt Ltd	Approved list of CE CC
		Cera sanitaryware	Approved list of CE CC
		Marc	Approved list of ADG NEI
		Grohe	Approved list of CE CC
		Kohler	Approved list of CE CC
		Prayag	Approved list of CE CC
30.	PTMT Bath fittings and accessories	Prayag Polymer Pvt Ltd	Approved list of ADG NEI Approved list of CE SWC
		R S Industru(Polytuff)	Approved list of ADG NEI Approved list of CE SWC
		Zoloto	Approved list of CE SWC
31.	Vitreous China Sanitary ware WHB/WC/Urinal	Jaquar& Coy Pvt Ltd (Brand Jaquar)	Approved list of CE CC Approved list of CE SWC
		KajariaBathware Pvt Ltd	Approved list of CE CC
		Cera sanitaryware	Approved list of CE CC Approved list of CE SWC
		Hindware	Approved list of CE SC Approved list of CE SWC
		M/S Hindustan Sanitary ware	Approved list of CE SC
		Parryware	Approved list of CE SWC
		Kohler	Approved list of CE SWC
		Johnson	Approved list of CE SWC
		Prayag	Approved list of CE CC
32.	Seat Cover for EWC	Kajaria Bathware Pvt Ltd	Approved list of CE CC Approved list of CE SWC
		Cera sanitaryware	Approved list of CE CC Approved list of CE SWC
		Parryware	Approved list of CE SC Approved list of CE SWC
		M/S Hindustan Sanitary ware	Approved list of CE SC Approved list of CE SWC
		Neycer	Approved list of CE SWC
		Jaquar	Approved list of CE CC
		Grohe	Approved list of CE CC
		Kohler	Approved list of CE CC
		Prayag	Approved list of CE CC

PARTICULAR SPECIFICATIONS(Contd...)

33.	PVC Flushing Cistern	Kajaria Bathware Pvt Ltd	Approved list of CE CC Approved list of CE SWC
		Cera sanitaryware	Approved list of CE CC Approved list of CE SWC
		M/S Hindustan Sanitary ware	Approved list of CE SC Approved list of CE SWC
		Parryware	Approved list of CE SC Approved list of CE SWC
		Johnson	Approved list of CE SWC
		Kohler	Approved list of CE SWC
		Prayag	Approved list of CE SWC
34.	Stainless Steel Kitchen Sinks	Diamond	Approved list of CE SC Approved list of ADG NEI
		Neelkant	Approved list of CE SC Approved list of CE SWC
		Nirali	Approved list of CE SC Approved list of ADG NEI Approved list of CE SWC Approved list of CE CC
		Kolher	Approved list of ADG NEI
		Prayag	Approved list of CE SWC
		Parryware	Approved list of CE SWC
		Blue Star(Silver Shine)	Approved list of CE SWC
		Johnson	Approved list of CE CC
		Hindware	Approved list of CE CC
35.	SS Plate Rack	Suyog	Approved list of CE SC
		Prayag	Approved list of CE SC Approved list of CE SWC
		Nirali	Approved list of CE SC Approved list of CE SWC
		Neelkanth	Approved list of CE SWC
		Parryware	Approved list of CE SWC
		Blue Star(Silver Shine)	Approved list of CE SWC
36.	CI-Soil , waste , Rainwater (SWR) & Drainage pipe	NECO Nagpur	Approved list of CE SC Approved list of CE SWC
		Kesoram	Approved list of CE SC
		Electro steel	Approved list of CE SC
		Singhal Iron Foundry, Mathura	Approved list of CE SWC
37.	AC-Soil , waste , Rainwater (SWR) and drainage pipes	M/S Everest Asbestos Hyderabad	Approved list of CE SC Approved list of CE SWC
		M/S Hyderabad Asbestos Cement (Charminar)	Approved list of CE SC Approved list of CE SWC
		M/S Ramco	Approved list of CE SC Approved list of CE SWC
		Vishakha	Approved list of CE SWC

PARTICULAR SPECIFICATIONS(Contd...)

38.	PVC Soil, waste , Rainwater (SWR) pipe and fittings	Kisan	Approved list of ADG NEI
		Supreme	Approved list of ADG NEI Approved list of CE SWC
		Prince	Approved list of ADG NEI Approved list of CE SWC
		Jain Irrigation	Approved list of ADG NEI
		Finolex	Approved list of CE SWC
		Ashirwad	Approved list of CE SWC
		HIL	Approved list of CE SWC
		Truflo(Hindware)	Approved list of CE SWC
		Astral	Approved list of CE SWC
39.	RCC Pipes	Indian Hume Pipe	Approved list of CE SC Approved list of CE SWC
		Everest	Approved list of CE SC Approved list of CE SWC
		Himalaya	Approved list of CE SC Approved list of CE SWC
		Thuluvananikal pipes	Approved list of CE SC
40.	Galvanised& Galvalume colour coated plain/corrugated profile sheet	JSW Steel coated products	Approved list of CE CC
		TATA Bluescope	Approved list of ADG NEI
41.	HDPE Water storage tanks	RC Plasto Tanks & Pipes Pvt Ltd	Approved list of CE CC
		Sintex	Approved list of ADG NEI
		Supreme	Approved list of ADG NEI
		Jindal	Approved list of ADG NEI
		Polycon	Approved list of ADG NEI
		Astral	Approved list of ADG NEI
42.	Stop Valves /Gate Valves /Bib taps (Brass)	Leader	Approved list of CE SC
		Zoloto	Approved list of CE SC
43.	Sluice/Reflux/Air release/Non Return/Gate Valve/Butterfly Valve /Foot Valve	Kirloskar	Approved list of ADG NEI
		Leader	Approved list of ADG NEI
		Zoloto	Approved list of ADG NEI
44.	Gun metal Valves (Full way, Check , angle and globe valve	Audco (L&T)	Approved list of ADG NEI
		Zoloto	Approved list of ADG NEI Approved list of CE SC Approved list of CE SWC
		Kirloskar	Approved list of ADG NEI and CE SC
		Leader	Approved list of ADG NEI Approved list of CE SC Approved list of CE SWC
		Kirloskar	Approved list of CE SWC
45.	Float Valves	Cera Sanitaryware ltd	Approved list of CE CC
		Leader	Approved list of ADG NEI Approved list of CE SC Approved list of CE SWC
		Kirloskar	Approved list of ADG NEI
		Zoloto	Approved list of ADG NEI Approved list of CE SC Approved list of CE SWC
		Prayag	Approved list of CE SWC

PARTICULAR SPECIFICATIONS(Contd...)

46.	PVC Stop Cock and Bib cock /float Valves and accessories	Zoloto	Approved list of CE SC
		Prayag Polymer	Approved list of CE SC
		Jaypee	Approved list of CE SC
		GMP	Approved list of CE SC
47.	CP bib cock, Stop Cock , Pillar cock and accessories	Jaquar	Approved list of CE SC Approved list of CE SWC
		Leader	Approved list of CE SC
		Soma	Approved list of CE SC
		Zoloto	Approved list of CE SC
		Kohler	Approved list of CE SWC
		Grohe	Approved list of CE SWC
		Cera	Approved list of CE SWC
		Johnson	Approved list of CE SWC
		Hindware	Approved list of CE SWC
48.	Water Proofing Compound	Pidilite (Dr Fixit)	Approved list of CE CC
		Super Aquacem	Approved list of CE SC
		Forsoc	Approved list of CE SC
49.	APP Membrane	STP Ltd	Approved list of CE SC
		IWL Ltd	Approved list of CE SC
		Tiki Tech	Approved list of CE SC
50.	CI Pipe and fittings	Electro steel	Approved list of ADG NEI Approved list of CE SC Approved list of CE SWC
		Neco	Approved list of ADG NEI Approved list of CE SC Approved list of CE SWC
		Kesoram	Approved list of ADG NEI and CE SC Approved list of CE SWC
		Kejriwal	Approved list of CE SWC
51.	GI Pipe and fittings	TATA	Approved list of ADG NEI Approved list of CE SC Approved list of CE SWC Approved list of CE CC
		Jindal	Approved list of ADG NEI Approved list of CE SC Approved list of CE SWC Approved list of CE CC
		Swastik	Approved list of CE SC Approved list of CE SWC
		Surya Prakash	Approved list of ADG NEI Approved list of CE SC Approved list of CE SWC
52.	DI pipe and fittings	Jindal Saw Ltd	Approved list of ADG NEI Approved list of CE SC Approved list of CE SWC Approved list of CE CC
		Electro steel Castings Ltd	Approved list of ADG NEI Approved list of CE SC Approved list of CE SWC Approved list of CE CC
		TATA Metaliks	Approved list of ADG NEI Approved list of CE SC Approved list of CE SWC Approved list of CE CC
		Electrotherm India Ltd (Brand-Electrotherm)	Approved list of ADG NEI Approved list of CE SC
		Kejriwal	Approved list of CE SWC

PARTICULAR SPECIFICATIONS(Contd...)

53.	MS Pipe and fittings	TATA	Approved list of ADG NEI Approved list of CE SC Approved list of CE SWC
		Jindal	Approved list of ADG NEI Approved list of CE SC Approved list of CE SWC
		Zenith	Approved list of CE SC
		Surya Prakash	Approved list of ADG NEI Approved list of CE SWC
		Swastik	Approved list of CE SWC
54.	HDPE Pipe and fittings	Finolex	Approved list of CE SC Approved list of CE SWC
		Prince	Approved list of CE SC Approved list of CE SWC
		Supreme	Approved list of CE SC Approved list of CE SWC
		Jain Irrigation System	Approved list of CE SC
		Astral	Approved list of CE SWC
		Keshav Kripa	Approved list of CE SWC
		Kiran Infratech(Gemini)	Approved list of CE SWC
		SFMC	Approved list of CE SWC
55.	HT XLPE Cable upto 33 KV	Havells	Approved list of ADG NEI Approved list of CE CC
		Polycab	Approved list of CE CC Approved list of CE SWC
		Gloster	Approved list of ADG NEI Approved list of CE CC Approved list of CE SWC
		Finolex	Approved list of ADG NEI
		Grandlay Electricals	Approved list of CE CC
		Cable Core of India(CCI)	Approved list of CE SWC
		Universal Cable(UCL)	Approved list of CE SWC
		Gemscab	Approved list of CE SWC
		Havells	Approved list of CE SWC
		KEI	Approved list of CE SWC
		Dynamic Cables	Approved list of CE SWC
56.	PVC Insulated cable 1100 V FRLSH Copper /Aluminium Conductor	Havells	Approved list of ADG NEI Approved list of CE CC
		Polycab	Approved list of ADG NEI Approved list of CE CC
		Anchor	Approved list of CE CC
		Grandlay Electricals	Approved list of CE CC
		Finolex	Approved list of ADG NEI
		SCI	Approved list of CE (AF) Prayagraj
		KEI	Approved list of CE (AF) Prayagraj
		HPL	Approved list of CE (AF) Prayagraj
57.	PVC/XLPE insulated PVC seathed Heavy duty armoured/ unarmoured cable upto 1100 Volts copper /aluminium conductor	Havells	Approved list of ADG NEI Approved list of CE CC
		Polycab	Approved list of CE CC
		Gloster	Approved list of ADG NEI Approved list of CE CC
		Gemscab Industries	Approved list of CE CC
		Grandlay Electricals	Approved list of CE CC
		SCI	Approved list of CE (AF) Prayagraj

PARTICULAR SPECIFICATIONS(Contd...)

58.	Cable Jointing Kit LT & HT hot and cold shrinkable / push on type	M-Seal	Approved list of ADG NEI Approved list of CE SC Approved list of CE SWC
		Denson	Approved list of ADG NEI Approved list of CE SC Approved list of CE SWC
		Raychem	Approved list of ADG NEI Approved list of CE SC Approved list of CE SWC
		Birla 3M	Approved list of ADG NEI Approved list of CE SC Approved list of CE SWC
		Seimen	Approved list of CE SWC
59.	PVC Conduit	AKG Plastics Pvt Ltd	Approved list of CE CC
		Finolex	Approved list of ADG NEI
		Presto Plast	Approved list of ADG NEI
		PCG	Approved list CE (AF) Prayagraj
60.	Conduit Steel ERW	TATA	Approved list of ADG NEI
		Jindal	Approved list of ADG NEI
		BEC	Approved list of ADG NEI
61.	Switch fuse / Change Over Switch	Havells	Approved list of CE CC
		L&T	Approved list of ADG NEI
		Legrand	Approved list of ADG NEI
		ABB	Approved list of ADG NEI
		Schneider	Approved list of ADG NEI
		BENLO	Approved list of CE (AF) Prayagraj
62.	MCB, RCCB, RCBO & Distribution Boards for MCB & MCCB , Isolators	HPL	Approved list of CE (AF) Prayagraj
		Legrand	Approved list of ADG NEI
		L&T	Approved list of ADG NEI
		ABB	Approved list of ADG NEI
		Schneider	Approved list of ADG NEI
		Havells	Approved list of CE CC
63.	Air Circuit Breaker	BENLO	Approved list of CE (AF) Prayagraj
		HPL	Approved list of CE (AF) Prayagraj
		Legrand	Approved list of ADG NEI
		ABB	Approved list of ADG NEI Approved list of CE SC
		L&T	Approved list of ADG NEI Approved list of CE SC
		Schneider	Approved list of ADG NEI Approved list of CE SC
64.	Switch/Buzzer/Socket/Bell Ceiling Rose / Regulator Piano type		
		HavellsReo	Approved list of ADG NEI Approved list of CE CC
		Legrand	Approved list of ADG NEI
		Schneider	Approved list of ADG NEI
		L&T	Approved list of ADG NEI
		Anchor	Approved list of ADG NEI Approved list of CE CC

PARTICULAR SPECIFICATIONS(Contd...)

65.	Switch/Socket Regulator Modular Type	Havells (Carbtree)	Approved list of ADG NEI Approved list of CE CC Approved list of CE SWC
		Anchor Penta PC	Approved list of ADG NEI Approved list of CE CC
		Legrand	Approved list of ADG NEI Approved list of CE SWC
		L&T	Approved list of ADG NEI Approved list of CE SWC
		Schneider	Approved list of ADG NEI
		Panasonic	Approved list of CE SWC
		GM Modular	Approved list of CE SWC
		Honeywell	Approved list of CE SWC
		Polycab	Approved list of CE SWC
66.	LT Panels , Feeder Pillars & LT Control Panels	Shalabh India Industries Roorkee	Approved list of CE CC
		Indo Asian	Approved list of CE CC
		Power Systems and Control Jalandhar	Approved list of CE CC
		REW Constructions Pvt Ltd	Approved list of CE CC
		BENLO	Approved list of CE (AF) Prayagraj
		HPL	Approved list of CE (AF) Prayagraj
		PSC	Approved list of CE (AF) Prayagraj
67.	HT Switchgear	Crompton Greaves	Approved list of CE SC Approved list of CE SWC
		Schneider	Approved list of ADG NEI Approved list of CE SWC
		ABB	Approved list of ADG NEI Approved list of CE SWC
		Siemens	Approved list of ADG NEI Approved list of CE SWC
		BHEL	Approved list of CE SWC
68.	VCB	BHEL	Approved list of CE SC
		Schneider	Approved list of ADG NEI Approved list of CE SC
		ABB	Approved list of ADG NEI Approved list of CE SC
		Crompton Greaves	Approved list of ADG NEI Approved list of CE SC
69.	Capacitor Bank/ Automation Power Factor Correction Panels(APFC)	L&T	Approved list of ADG NEI Approved list of CE SC Approved list of CE SWC
		Siemens	Approved list of ADG NEI Approved list of CE SC Approved list of CE SWC
		ABB	Approved list of CE SC Approved list of CE SWC
		Schneider	Approved list of ADG NEI Approved list of CE SWC
		Epcos	Approved list of CE SWC
		Crompton & Greaves	Approved list of CE SWC
		Havells	Approved list of CE SWC

PARTICULAR SPECIFICATIONS(Contd...)

70.	Lightening Arrestor LT and HT	Oblum	Approved list of ADG NEI Approved list of CE SC Approved list of CE SWC
		BHEL	Approved list of ADG NEI Approved list of CE SC Approved list of CE SWC
		Crompton Greaves	Approved list of CE SC Approved list of CE SWC
		Jaypuria Brothers	Approved list of ADG NEI Approved list of CE SWC
		Gec Elpro	Approved list of CE SWC
71.	Steel Tubular Poles	National Tubing Company	Approved list of ADG NEI Approved list of CE SC
		Bombay Tube and Store	Approved list of ADG NEI Approved list of CE SC
		Jindal Steel	Approved list of ADG NEI
		India Tube and Company	Approved list of CE SC
		Calcutta Poles and Tubes	Approved list of ADG NEI
72.	Servo Voltage Stabalizers(LT)	Vinitec	Approved list of ADG NEI Approved list of CE SC
		Automatic Electric (AE)	Approved list of ADG NEI and CE SC
		V-Guard	Approved list of CE SC
		Brentford	Approved list of ADG NEI
		Andrew Yule	Approved list of ADG NEI
73.	HT Voltage Stabalizers	Andrew Yule	Approved list of ADG NEI
		Brentford	Approved list of ADG NEI
		Kirloskar	Approved list of ADG NEI
74.	Dol / Star-Delta Starter	Siemens	Approved list of ADG NEI
		L&T	Approved list of ADG NEI
		ABB	Approved list of ADG NEI
		Schnieder	Approved list of ADG NEI
		BENLO	Approved list of CE (AF) Prayagraj
		HPL	Approved list of CE (AF) Prayagraj
75.	Ammeter/Voltmeter / Power Factor / Frequency meter	Automatic Electric (AE)	Approved list of CE SC
		L&T	Approved list of ADG NEI and CE SC
		Havells	Approved list of ADG NEI Approved list of CE SC
		MECO	Approved list of CE SC
76.	Indicating Lamp Neon/ LED Type	L&T	Approved list of CE SC
		AE	Approved list of CE SC
		Siemens	Approved list of CE SC
77.	Electric Meter	L&T	Approved list of ADG NEI Approved list of CE SC
		Siemens	Approved list of ADG NEI
		ABB	Approved list of ADG NEI
		Havells	Approved list of ADG NEI Approved list of CE SC

PARTICULAR SPECIFICATIONS(Contd...)

78.	Battery Maintenance Free	Exide	Approved list of ADG NEI
		Amco	Approved list of ADG NEI
		Amaron	Approved list of ADG NEI
79.	Battery Chargers	Exide	Approved list of ADG NEI
		Microtech	Approved list of ADG NEI
		Su-Kam	Approved list of ADG NEI
80.	Current & Potential Transformer (LT and HT)	AE	Approved list of ADG NEI
		Crompton Greaves	Approved list of ADG NEI Approved list of CE SWC
		L&T	Approved list of ADG NEI Approved list of CE SWC
		Schneider	Approved list of ADG NEI Approved list of CE SWC
		ABB	Approved list of CE SWC
		Siemens	Approved list of CE SWC
81.	Fan Regulator	Havells	Approved list of CE SC
		Anchor	Approved list of CE SC
		Bajaj	Approved list of CE SC
		Usha	Approved list of CE SC
82.	Exhaust /Ceiling Fans / Air circulation/ Wall Mounting Fan	Havells	Approved list of ADG NEI Approved list of CE CC Approved list of CE SWC
		Bajaj	Approved list of ADG NEI Approved list of CE CC Approved list of CE SWC
		Orient	Approved list of ADG NEI Approved list of CE SWC Approved list of CE CC
		Usha	Approved list of ADG NEI Approved list of CE SWC Approved list of CE CC
		Crompton	Approved list of ADG NEI Approved list of CE SWC Approved list of CE CC
		Khaitan	Approved list of CE SWC Approved list of CE CC
		Polar	Approved list of CE SWC
		V Guard	Approved list of CE SWC
		Panasonic	Approved list of CE SWC
83.	Electronic type Fan Regulator	Legrand	Approved list of CE SC
		Havells	Approved list of CE SC
		Bajaj	Approved list of CE SC
		Orient	Approved list of CE SC
		Crompton	Approved list of CE SC

PARTICULAR SPECIFICATIONS(Contd...)

84.	Water Heater (Geyser)	Jaquar& Company	Approved list of ADG NEI
		AO Smith	Approved list of ADG NEI
		Usha	Approved list of ADG NEI
			Approved list of CE SC
		Bajaj	Approved list of CE CC
		Havells (Adonia Series)	Approved list of CE CC
85.	Transformer 11/0.433 KV upto 500 KVA copper wound	ITE Gurgaon	Approved list of CE CC
			Approved list of CE SWC
		Transtron Electricals Pvt Ltd	Approved list of CE CC
			Approved list of CE SWC
		Jaybee Industries Bathinda	Approved list of CE CC
		Voltamp	Approved list of CE SWC
		ABB	Approved list of CE SWC
		Schneider	Approved list of CE SWC
		Crompton Greaves	Approved list of CE SWC
		Bharat Bijlee	Approved list of CE SWC
		Kotsons	Approved list of CE SWC
86.	Transformer Step down 11/0.433 KV above 500 KVA copper wound	ITE Gurgaon	Approved list of CE CC
			Approved list of CE SWC
		Transtron Electricals Pvt Ltd	Approved list of CE CC
			Approved list of CE SWC
		BHEL	
		Voltamp	Approved list of CE SWC
		ABB	Approved list of CE SWC
		Schneider	Approved list of CE SWC
			Approved list of CE CC
		Crompton Greaves	Approved list of CE SWC
			Approved list of CE CC
87.	Transformer Step down 33/11 KV & 33/0.433 KV copper wound	ITE Gurgaon	Approved list of CE CC
			Approved list of CE SWC
		Transtron Electricals Pvt Ltd	Approved list of CE CC
		BHEL	Approved list of ADG NEI
			Approved list of CE SWC
		Seimens	Approved list of CE SWC
		Bharat Bijlee	Approved list of CE SWC
		Crompton Greaves	Approved list of CE SWC
			Approved list of CE CC
		Schenider	Approved list of CE SWC
			Approved list of CE CC
		ABB	Approved list of CE SWC
		Voltamp	Approved list of CE SWC
		Andrew Yule	Approved list of CE SWC

PARTICULAR SPECIFICATIONS(Contd...)

113.	HT CT & PT	SCHINDLER	Approved list of CE CC
		Crompton Greaves	Approved list of CE CC
		ABB	Approved list of CE CC
		Seimens	Approved list of CE CC
		Wilo Mather & Platt	Approved list of CE SC Approved list of CE SWC
		Bharat Bijlee	Approved list of CE SWC
		Crompton Greaves	Approved list of CE SWC
89.	Submersible Pump / Open Well Pumps	Kirloskar	Approved list of CE SWC
		KSB	Approved list of CE SWC
		Wilo Mather & Platt	Approved list of CE SWC
		Bharat Bijlee	Approved list of CE SWC
90.	UPS		
		Luminous	Approved list of ADG NEI Approved list of CE SC
		Su-kam	Approved list of ADG NEI Approved list of CE SC
		APLAB	Approved list of ADG NEI Approved list of CE SC
		TATA-Liebert	Approved list of ADG NEI Approved list of CE SC
91.	Induction Motor	Crompton Greaves	Approved list of CE SC Approved list of CE SWC
		Kirloskar Electric	Approved list of CE SC
		Siemens	Approved list of CE SC Approved list of CE SWC
		ABB	Approved list of CE SC Approved list of CE SWC
		Texmo	Approved list of CE SWC
		Bharat Bijlee	Approved list of CE SWC
		NGEF	Approved list of CE SWC
92.	Pumps for fire fighting	Kirloskar	Approved list of ADG NEI Approved list of CE SC
		Crompton	Approved list of ADG NEI Approved list of CE SC
		KSB	Approved list of ADG NEI

93.	LED Light Fittings for Indoor and Out door Use	Signify Innovations India Ltd (Brand-Philips &Ecolink)	Approved list of CE CC
		Orient Electric	Approved list of CE CC Approved list of CE SWC
		Bajaj	Approved list of CE CC Approved list of CE SWC
		Havells	Approved list of CE CC Approved list of CE SWC
		Halonix	Approved list of CE CC
		Philips	Approved list of CE SWC
		Osram	Approved list of CE SWC
		Wipro	Approved list of CE SWC
		Syska	Approved list of CE SWC
		Luker	Approved list of CE SWC
		Jaquar	Approved list of CE SWC
		Surya Roshni	Approved list of CE SWC
		Panasonic	Approved list of CE SWC
		Crompton Greaves	Approved list of CE SWC
94.	Solar Based Street Light fittings	Havells	Approved list of CE CC Approved list of CE SWC
		Halonix	Approved list of CE CC
		Philips	Approved list of CE SC Approved list of CE SWC Approved list of CE CC
		Bajaj	Approved list of CE SC Approved list of CE SWC Approved list of CE CC
		Orient Electric	Approved list of CE SWC
		Surya Roshni	Approved list of CE SWC
		BHEL	Approved list of CE SWC
		TATA	Approved list of CE SWC
		Crompton	Approved list of CE SWC Approved list of CE CC
95.	High Mast Light	Bajaj	Approved list of CE CC Approved list of CE SWC
		Philips	Approved list of CE SC Approved list of CE SWC
		Crompton	Approved list of CE SC Approved list of CE SWC
		Orient Electric	Approved list of CE SWC
		Surya Roshni	Approved list of CE SWC
		Havells	Approved list of CE SWC
96.	DG Set Assembled with sound proof canopy	Kirloskar Green	Approved list of ADG NEI Approved list of CE SC Approved list of CE CC
		Jackson	Approved list of ADG NEI Approved list of CE SC
		Greaves Cotton	Approved list of ADG NEI Approved list of CE SC Approved list of CE CC
		Cummins	Approved list of CE SC Approved list of CE CC
		Sudhir	Approved list of CE CC

PARTICULAR SPECIFICATIONS(Contd...)

97.	DG Set Engine	Kirloskar Oil Engine	Approved list of ADG NEI Approved list of CE SC Approved list of CE SWC Approved list of CE CC
		Cummins	Approved list of ADG NEI Approved list of CE SC Approved list of CE SWC Approved list of CE CC
		Ashok Leyland	Approved list of ADG NEI Approved list of CE SC Approved list of CE SWC
		Greaves Cotton	Approved list of CE SC Approved list of CE SWC Approved list of CE CC
		Mahindra	Approved list of CE SWC
		Cater Piller	Approved list of CE SWC Approved list of CE CC
98.	DG Set Altenator	Crompton Greaves	Approved list of ADG NEI Approved list of CE SC Approved list of CE SWC Approved list of CE CC
		Kirloskar	Approved list of ADG NEI Approved list of CE SC Approved list of CE SWC Approved list of CE CC
		Stamford	Approved list of ADG NEI Approved list of CE SC Approved list of CE CC
		Siemens	Approved list of ADG NEI
		Cummins	Approved list of CE SWC
		Jyoti	Approved list of CE SWC Approved list of CE CC
		Bharat Bijlee	Approved list of CE SWC
	Package Type AC -	Bluestar	Approved list of CE CC
	Compressor/Condenser/Cooling coil	Hitachi	Approved list of CE CC
		Daikin	Approved list of CE CC
		Voltas	Approved list of CE CC
99.	Air Curtains	Almonard	Approved list of CE SC Approved list of CE SWC
		Air con	Approved list of CE SC Approved list of CE SWC
		Crompton Greaves	Approved list of CE SC Approved list of CE SWC
100.	Chiller Unit/ Compressors Scroll / Screw Type	Blue Star	Approved list of ADG NEI
		Voltas	Approved list of ADG NEI
		Kirloskar	Approved list of ADG NEI
		Carrier	Approved list of ADG NEI
		Daikin	Approved list of ADG NEI

PARTICULAR SPECIFICATIONS(Contd...)

101.	Split Type AC and Window Type AC	Hitachi	Approved list of ADG NEI Approved list of CE SC Approved list of CE SWC Approved list of CE CC
		Daikin	Approved list of ADG NEI Approved list of CE SC Approved list of CE SWC Approved list of CE CC
		Carrier	Approved list of ADG NEI Approved list of CE SC Approved list of CE SWC Approved list of CE CC
		Voltas	Approved list of CE SC Approved list of CE SWC Approved list of CE CC
		Bluestar	Approved list of CE SC Approved list of CE SWC
		O-General	Approved list of CE SWC Approved list of CE CC
		Havells(Lloyd)	Approved list of CE SWC
		Mitsubishi Electric	Approved list of CE CC
102.	Condensor & Chiller Pumps	Crompton Greaves	Approved list of ADG NEI
		Kirloskar	Approved list of ADG NEI
		ABB	Approved list of ADG NEI
		KSB	Approved list of ADG NEI
103.	Cooling Towers	Paharpur	Approved list of ADG NEI Approved list of CE SC Approved list of CE SWC
		Mihir	Approved list of ADG NEI Approved list of CE SC Approved list of CE SWC
		Delta	Approved list of ADG NEI Approved list of CE SC Approved list of CE SWC
		Advance	Approved list of CE SC
104.	Cooling Coil / AHU	Bluestar	Approved list of ADG NEI Approved list of CE SC
		Voltas	Approved list of ADG NEI Approved list of CE SC
		Lloyd	Approved list of ADG NEI
		Carrier	Approved list of ADG NEI
105.	Fire Pumps and Panels	Crompton Greaves	Approved list of ADG NEI
		Kirloskar	Approved list of ADG NEI
		KSB	Approved list of ADG NEI
106.	Fire Hose Reel and Stand post type Hydrant	Minimax	Approved list of ADG NEI
		Firex	Approved list of ADG NEI
		Safex	Approved list of ADG NEI
107.	RRL Hose pipe	Dunlop	Approved list of ADG NEI
		Cosmos	Approved list of ADG NEI
		Jayshree	Approved list of ADG NEI

PARTICULAR SPECIFICATIONS(Contd...)

108.	Sprinkler Head	Miminax	Approved list of ADG NEI
		Ceasefire	Approved list of ADG NEI
		Safex	Approved list of ADG NEI
109.	Pressure Switch	Honeywell	Approved list of ADG NEI
		Schneider	Approved list of ADG NEI
		Siemens	Approved list of ADG NEI
		Rapid Control	Approved list of ADG NEI
110.	Fire Extinguisher (All type)	Minimax	Approved list of ADG NEI
		Firex	Approved list of ADG NEI
		New Age	Approved list of ADG NEI
		Ceasefire	Approved list of ADG NEI
111.	Solar Water System	TATA-BP Solar System	Approved list of CE SC
		BHEL	Approved list of CE SC
		Best and Crompton Noval Energy , New Delhi	Approved list of CE SC
112.	LIFT	KONE	Approved list of CE SWC Approved list of CE CC
		OTIS	Approved list of CE SWC Approved list of CE CC
		SCHINDLER	Approved list of CE SWC Approved list of CE CC
		MITSUBISHI	Approved list of CE SWC
		THYSSEN KRUP	Approved list of CE SWC
		Hitachi Lifts India Pvt Ltd	Approved list of CE CC

Notes:

1. Makes specified in Schedule "A"/BOQ shall only be provided when makes are mentioned in Schedule "A"/BOQ.
2. Makes specified in Particulars specification shall be provided only when no makes are specified in Schedule "A"/BOQ.
3. Makes specified in this Appendix shall be provided only when no makes are mentioned in schedule "A"/BOQ and particular specifications.
4. Contractor will supply the material only after obtaining the written approval from GE regarding use of specific make of item 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 Engr-in-Charge will receive material after verifying the delivery challan of the supplier and after satisfying the genuineness of material.
6. Delete the make which ever is not applicable

Sign of Contractor

AGE (Contract)

MILITARY ENGINEER SERVICES
NOTICE INVITING TENDER(NIT)

1. A tender is invited for the work as mentioned in Appendix 'A' to this NOTICE INVITING TENDER (NIT).
2. The work is estimated to cost as indicated in aforesaid Appendix 'A'. This estimate, however, is not a guarantee and is merely given as a rough guide and if the work costs more or less, a tenderer/bidder will have no claim on that account.
3. The work is to be completed within the period as indicated in aforesaid Appendix 'A' in accordance with the phasing, if any, indicated in the tender from the date of handing over site, which will be on or about two weeks after the date of acceptance of tender.
4. Contractors whose names are on the MES approved list and within whose financial category the estimated amount would fall and unenlisted contractors may submit tender/bid subject to other criteria mentioned in Appendix A. However in case of term contracts, enlisted contractors of Class SS to E may submit tender. Not more than one tender shall be submitted/uploaded by one contractor/ firm. Under no circumstances will a father and his son(s) or other close relations who have business dealing with one another be allowed to tender/bid for the same contract as separate competitors. Two firms shall be deemed to have business dealing if any of the partners/proprietor/director is common among both of them. A breach of this condition will render the tenders/bids of both the parties liable for rejection.
5. The Office of GE (AF) Bamrauli will be the Accepting Officer here-in-after referred to as such for the purpose of this contract.
6. Not more than one tender/bid shall be submitted/uploaded by one bidder firm. Under no circumstances will a father and his son(s) or other close relations who have business dealing with one another be allowed to tender/bid for the same tender as separate competitors. A breach of this condition will render the tenders/bids of both the parties liable for rejection.
7. The Technical Bid and Financial Bid (Cover-1 and Cover-2) shall be uploaded by the contractor on or before the date & time mentioned in **NIT**. A scanned copy of DD with enlistment details and other documents as specified in Appendix A shall be uploaded as Cover-1 (Technical bid) of the tender on e-tendering portal. DD is refundable in case the contractor is not considered eligible in technical evaluation of Cover 1 resulting in non-opening of Cover 1. The applicant contractor shall bear the cost of bank charges for procuring and encashing the DD including revalidation of DDs and shall not have any claim from Government whatsoever on this account.
8. Tender form and conditions of contract and other necessary documents shall be available on website defproc.gov.in for download and shall form part of contract agreement in case the tender/bid is accepted.
9. In case of MES enlisted contractor who has not executed the Standing Security Bond and an unenlisted contractor, the Cover-I shall be accompanied by Earnest Money for the amount mentioned in Appendix 'A' in the form of deposit at call receipt in favour of concerned GE (see Appendix 'A') by a Scheduled Bank or in received treasury Challan the amount being credited to the revenue deposit of the concerned GE (see Appendix 'A'). The GE will return the Earnest Money, wherever applicable, to all unsuccessful tenderers/bidders by endorsing an authority on the deposit at call receipt for its refund, on receipt of intimation from the Accepting Officer to do that.
10. In case of successful contractor i.e. the lowest contractor having submitted EMD, he shall have the option of converting the EMD instrument into part of the Performance Security to be deposited by him within 28 days from the receipt of intimation of acceptance of tender from Accepting Officer.

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

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

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

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

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

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

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

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

18. Details of works completed and uploaded progress in MES be submitted in the following format :-

Srl No	CA No & Name of work	Value of CA	Date of commencement	Date of completion	Extended date of completion
--------	----------------------	-------------	----------------------	--------------------	-----------------------------

19. Un-enlisted Contractor who have secured two works in MES should be themselves registered in the appropriate designated Class with any Registering Authority, else the firm will not be eligible for participation in the tender unless until the firm is enlisted with the MES.

Signature of Contractor

Dated: _____

AGE (Contracts)

for GE (AF) Bamrauli

APPENDIX “A” TO NOTICE INVITING TENDER (NIT)

1.	Name of work	Special Repair/Replacement of GI Pipe and Allied Works at South Camp and Other Sanction Works under GE (AF) Bamrauli
2.	Estimated cost of work	Rs. 48,37,000.00 (At Par Market)
3.	Period of Completion	180 Days
4.	Cost of tender documents	Rs 500/- in the shape of DD/Bankers cheque from any schedule Banking Favour of Garrison Engineer (AF) Bamrauli and payable at Bamrauli. (Note: In case of retendering, the contractor who had quoted in the previous call is not required to submit the cost of tender.)
5.	Website/ portal address	https://defproc.gov.in
6.	Type of Contract	The tender shall be based on drawings and specifications IAFW-1779-A and GCC(IAFW-2249) with Schedule “A” (list of items of works) to be priced by tenderer.
7.	Timeline details:-	
	(a) Bid submission start date	Refer critical dates on the website.
	(b) Bid submission end date	
	(c) Date of bid opening	
8.	Eligibility Criteria:-	
	(a) For MES Enlisted contractors	All contractors enlisted with MES in Class “D” and above and category a(i) subject to satisfactory remarks wrt performance in respect of works in hand as reflected in Work Load Return (WLR) or any other report circulated by competent engineer authority.
	(b) For contractors not enlisted With MES	Contractor not enlisted with MES should meet the enlistment criteria of “D” class & a(i) category contractor with regard to satisfactorily completion of requisite value works with Central/ State Government/ Central/ State PSUs/ AWHO/ AFNHB/ CGEWHO/ DGMAP, annual turnover, bank solvency, working capital and other requirements given in Para 1.4 & 1.5 of section 1 of MES Manual of Contracts 2020 as available in all MES formations as well as MES website (www.mes.gov.in). (b) Not carrying adverse remarks in Work Load Return (WLR) or any other similar report circulated by any competent authority if already working in MES. (c) Not suspended/ debarred/ blacklisted (either permanently or temporarily) from participating in any bid or for business dealing by any Central/ State Government Department or any Central/ State Government PSU or any Autonomous Body as on the bid submission end date.
9.	Tender issuing and Accepting Officer	B Shruthi, GE (AF) Bamrauli Office phone No.0532-2975257 Mail ID : afbmr14-mes@nic.in
10.	Executing agency	Garrison Engineer (AF) Bamrauli
11.	Earnest Money	Rs 96,800/- in favour of Garrison Engineer (AF) Bamrauli In the form of Deposit at call receipt, FDR not acceptable

NOTES:

- After opening of Cover 1, if the number of MES enlisted contractors of eligible class as well as un-enlisted contractors, if any, fulfilling the other eligibility criteria given in NIT are less than 7 (Seven), applications in respect of contractors one class or two classes (in case of remote and difficult areas to be decided as per list circulated by CE command/ADG) below the eligible class shall also be considered subject to fulfilment of other eligibility criteria given in the NIT. Therefore MES contractors one class below (two classes below in case of remote and difficult areas) may also bid for this tender. However contractors of one/two classes below the eligible class shall not be considered in case their present residual work in hand is more than **FIVE TIMES** their present tendering limit. Such bidders shall upload in their Cover-1 bid details of works in hand showing names of work, names of Accepting Officers, Contract amounts, dates of commencement and completion (stipulated) and progress as on bid submission date. These details shall be verified by the Tender Issuing Authority from concerned formations in case bids of such contractors are considered for evaluation.

APPENDIX "A" TO NOTICE INVITING TENDER (NIT)

2. In case after opening of Cover 1, the number of MES enlisted contractors of eligible class as well as un-enlisted contractors, if any, fulfilling the other eligibility criteria given in NIT, are 7 (Seven) or more, applications of only those one class below the eligible class bidders shall be considered, who have previously completed similar works satisfactorily and are meeting the criteria of upgradation in respect of past experience of completed works (individual work experience and/or average annual turnover as applicable) and financial soundness (solvency/financial soundness and working capital) as per details given in Manual on Contracts. Therefore such contractors shall upload the requisite information/documents in the Cover-1.
3. Unenlisted contractor shall be considered provided he meets the criteria. Foreign firms shall not be eligible for this tender. However Indian Firms having foreign national / Indian nationals staying abroad / Indian national having taken foreign citizenship, as director(s) shall be considered subject to security clearance from the concerned authorities.
4. Contractors enlisted with MES will upload following documents in Cover 1 for checking eligibility :-
 - (a) Application for tender on Firm's letterhead.
 - (b) Enlistment letter issued by the Registering Authority duly renewed for the cycle period in vogue.
 - (c) Scanned copy of DD /Bankers Cheque toward cost of tender and EMD instrument in case SSD bond is not signed at the time of registration.
 - (d) Any other document required as described in this Appendix.
5. Contractors not enlisted with MES will be required to upload following documents in Cover 1 for checking eligibility.
 - (a) Application for tender on Firm's letterhead.
 - (b) Scanned copy of DD/ Bankers cheque toward cost of tender and Earnest Money Deposit (EMD) instrument.
 - (c) Copy of Police Verification Report/Police Clearance Certificate/ Character Certificate from the Police Authority of the area where the registered office of the firm is located/notarized copy of valid passport of Proprietor/each Partner/each Director.
 - (d) All documents required for enlistment in MES for the class mentioned in Para 8(b) above as per Para 1.5 of Section 1 of MES Manual on Contracts 2020.
 - (e) Details of works being executed in MES, if any.
 - (f) Any other document required as described in this Appendix.
6. Tenders not accompanied by scanned copies of requisite DD/Bankers Cheque towards cost of tender and earnest money (as applicable) in Cover 1 shall not be considered for validation of 'T' bid and their Financial Bids will not be opened.
7. Contractors should ensure that their original physical DDs and Earnest Money Deposit (EMD) instruments (as applicable) reach the office of Accepting Officer within 7 days of bid submission end date failing which following action shall be taken.
 - (a) In case of tenders from an enlisted contractor of MES, where scanned copies of requisite DD/ Bankers Cheque towards cost of tender have been uploaded in Cover 1 but physical copies are not received within the stipulated period, their financial bids (Cover 2) will be opened. However non-submission of physical copies of cost of tender shall be considered as willful negligence of the tenderer with ulterior motives and such tenderer shall be banned from bidding for a period of six months commencing from the date of opening of Financial Bid (Cover 2).
 - (b) In case of tenders from unenlisted contractor, where scanned copies of requisite DD/Bankers Cheque towards cost of tender have been uploaded in Cover 1 but physical copies are not received within the stipulated period, their financial bids (Cover 2) will not be opened. Name of such 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 Financial bid (Cover 2).

APPENDIX "A" TO NOTICE INVITING TENDER (NIT)

- (c) In case of tenders from enlisted and unenlisted contractors, where scanned copies of instruments for Earnest Money Deposit (as applicable) have been uploaded in Cover 1 but the same are not received in physical form within stipulated period, such tenders shall not qualify for opening of financial bid (Cover 2).
8. Contractor will not be allowed to execute the work by subletting or through power of attorney to a third party/another firm on his behalf. However a contractor can execute the work through power of attorney to sons/daughters/ spouse of Proprietor/Partner/Director and firm's own employees, director, project manager provided they are not having a separate enlisted firm in MES in their name as Proprietor/Partner/Director.
9. After opening of Cover 1 and during its technical evaluation, in case any deficiency is noticed in the documents required to be uploaded by the tenderers as per NIT, a communication in the form of e-mail/SMS/Speed Post etc shall be sent to the contractor to rectify the deficiency within a period of seven days from date of communication failing which their financial bid (Cover 2) shall not be opened and contractor shall not have any claim on the same.
10. Invitation for e-tender does not constitute any guarantee for validation of Technical bid and subsequent opening of financial bid of any applicant/bidder merely by virtue of enclosing DD. Accepting Officer reserves the right to reject the Technical bid and not to open the financial bid of any applicant/bidder. Technical bid validation shall be decided by the Accepting Officer based on eligibility of the firm as per criteria given in this Appendix. Tenderer/bidder will be informed regarding non-validation of his Technical bid assigning reasons therefore through tender evaluation report which shall be uploaded on the website. Such tenderer, if desires, may appeal to the next higher Engineer Authority (NHEA) viz on email id afbmrl4-mes@nic.in with copy to the Accepting Officer on email before the scheduled date of opening of Cover 2. NHEA shall decide the matter within a period of seven working days from the date of receipt of appeal. The decision of the NHEA shall be final and binding. The tenderer/bidder shall not be entitled for any compensation whatsoever for rejection of his bid.
11. In case an unenlisted contractor is already executing works in MES, he shall not be considered eligible for the subject tender if the total value of such works is more than twice the tendering limit of the MES Class of contractor for which it is eligible. For this purpose, details of the works being executed by such a contractor shall be uploaded in the Cover -1 of the bid and shall be checked/verified by the Accepting Officer.
12. In case the BOQ is revised through the corrigendum and the bidder has failed to quote on revised BOQ (ie he has quoted on pre revised BOQ), such bid shall be treated as willful negligence by the bidder and his quotation shall be considered non-bonafide. In such cases the lowest tender shall be determined from amongst the valid/bonafide bids only. Accepting Officer may decide whether to re-tender or consider the lowest bonafide tender for acceptance.
13. Revoking the offer or revising the rates upward or offering voluntary reduction by the lowest tenderer after opening of Cover 2 shall be considered as a wilful default. For this default a penalty of an amount equal to Earnest Money shall be levied. In case of an unenlisted tenderer, Earnest Money deposited by him shall be forfeited. In case of MES enlisted tenderer having deposited the Standing Security Bond, an amount equal to the earnest money stipulated in the NIT, shall be notified to the tenderer for depositing through MRO and consideration of such tenderer in tender evaluation for future works shall remain suspended till the aforementioned amount is deposited in the Government Treasury. No other disciplinary/administrative action shall be taken against such tenderers. In such a situation, the next lowest offer shall not be considered for acceptance. Instead, retendering shall be resorted to in a transparent and fair manner and the defaulting tenderer and his related firm if any, shall not be eligible for this tender in second call or subsequent calls.
14. Tender to related firms shall not be issued simultaneously. Firms shall be termed as related if Proprietor/one or more Partners/Directors are common. Decision of Accepting Officer on issue/deny the tender to any one of the related firms shall be final and binding.

APPENDIX "A" TO NOTICE INVITING TENDER (NIT)

15 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.

(B Shruthi)
Maj
GE (AF) Bamrauli

(Signature of Contractor)

Dated : 15 Oct 2024

Case File No : 8943/ /E8
Military Engineer Services
GE (AF) Bamrauli
PIN-211012

Distribution :-

- | | | |
|------------------------|---------------------------|------------------------|
| 1. HQ CE CC Lucknow | 2. HQ CE (AF) Allahabad | 3. HQ CWE(AF) Bamrauli |
| 4. HQ CWE Allahabad | 5. HQ CWE Kanpur | 6. HQ CWE Lucknow |
| 7. GE (East) Allahabad | 8. GE (West) Allahabad | 9. GE (EP) Allahabad |
| 10. AGE (I) Manauri | 11. AGE (I) Bihta | 12. GE (AF) BKT |
| 13. GE (AF) Izzatnagar | 14. GE (I) (P) Izzatnagar | |

Registered/AD 15. MES Builder Association of India (Regd), 124/108, Bakhtiyari, Old Katra, Kutchery Road, Allahabad-211002

Internal All Sub-division