

**Bharat Heavy Electricals Limited**  
**High Pressure Boiler Plant**  
**Tiruchirappalli – 620 014. India**  
**Civil Engineering Department (Township)**

**TENDER DOCUMENT (QUALIFICATION BID)**

**Name of work** : Entire House Keeping work at A & D-Sectors.

**Value of work** : 44 Lakh

**Tender Notice No.** : Township – 04/11

**Tender Schedule No.** : T- 21 / 11

**Period of Contract** : 12 Months

**Issued to** :



BHARAT HEAVY ELECTRICALS LIMITED  
(A Government of India Undertaking )  
Unit : TIRUVERUMBUR, BOILER PROJECT, P.O.  
TIRUCHIRAPALLI - 620 014.

**CIVIL ENGINEERING DEPARTMENT**

**NOTICE INVITING TENDER**

01. Name of work : **Entire House Keeping work at A & D-Sectors.**
02. Estimated Cost : **Rs. 44 Lakh**
03. Earnest Money Deposit : **Rs. 1,00,000.00**
04. Completion Time : **12 Months**  
( From the date of commencement of the work which will be reckoned from the date of handing over to the Contractor )
05. Cost of Tender Document : Rs.750/- ( including Sales Tax )  
This amount will not be refunded under any circumstances
06. Last Date for Receipt of Tenders : **09.30 Hrs. on 23 07 11**
07. Date of Tender Opening : **10.00 Hrs. on 23 07 11**
08. ~~Maintenance Period~~ : ~~6 (Six Months from the date of actual completion of the entire work and handing over to Bharat Heavy Electricals Limited)~~

Tender document contains 51 pages in Qualification Bid and 6 pages in Price Bid including Bill of Quantities, Drawing etc.

Issued to Messrs. / Thiru : .....

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## INSTRUCTIONS TO TENDERERS

1. The tender is open to all Contractors. The Contractors not borne on the approved list of contractors of this Organisation must submit the following testimonials simultaneously with their tenders.
  - i. A Certificate to establish that the tenderer is an independent contractor working on his own
  - ii. At least two certificates from responsible Officers of Government of Firms of repute, regarding the tenderer's capacity to undertake and carryout the work tendered for or similar work satisfactorily.

### NOTE :

- a) Copies of testimonials unless attested by a Gazetted Officer will not be accepted
- b) Non – Submission of the above testimonials simultaneously with the tenders may result in the tender being rejected
2. The tenders should be accompanied by a list of contracts already held by the contractor at the time of submitting the tender and giving the following particulars
  - a) Value of each contract
  - b) The balance value of work to be done on the same
3. The tenderer is advised to obtain the tender documents in person or by a messenger duly authorized to do so. The BHARAT HEAVY ELECTRICALS LIMITED will not under any circumstances accept responsibility for the non – receipt of delay in the receipt of the tender documents by the tender.
4. Rate for each item of the tender schedule should be quoted in FIGURES and in WORDS. In case of any difference in the rates quoted in figures and in words, the lower of the two rates will be taken as the tendered rate. Unit rate quoted shall be the basis for arriving the total value of the tender. The total amount for every item shall be arrived by multiplying the unit rate with the quantity indicated for that item. In case of any arithmetic deviation is noticed in the total amount, the same will be corrected and evaluated by taking unit rate as basis and multiplying with the quantity indicated.
5. Rate quoted shall include all royalties, terminal taxes, Octroi duties, Central or Provincial Excise Tax, Sales Tax and any other taxes leviable under the State or Central Government rules. The Bharat Heavy Electricals Ltd., will not entertain any claim whatever in this respect. **However if the service tax is applicable for this contract work including free issue materials, the same will be reimbursed on submission of the documentary evidence for having paid service tax by the tenderer.**
6. Should a tender find discrepancies or omissions in the drawings or any of the tender documents or should be in doubt as to their meaning, he should at once address the authority inviting the tender for clarification. Every endeavour is made to avoid any error which can materially affect the basis of the tender but the successful tenderer shall take upon himself to provide for the risk of any error which may be subsequently by discovered and shall make no subsequent claim on account thereof.
7. Tenders submitted by post should be sent "Registered Post with Acknowledgement due". These should be posted with due allowance for any delay in postal delivery. Tenders received after the due date and time of opening, tenders are liable to be rejected.

8. Where the tender called for covers only the building work and excludes internal services such as sanitary and water supply installations, electrification etc., the building contractor will have to leave pockets, holes, etc., as required for other works and will have to phase his work to ensure smooth progress of the work of the other agencies also as directed by the Engineer – in – charge.
9. Where the tender schedule contains special items of work such special floor finishes, foam concrete for insulation, special water proofing treatment to roofs etc., it will be entirely at the discretion of the Project Authorities to allot these items of work to other contractors specialized in these works. In such cases, the main building Contractor will have to tender all necessary co-operation to the agencies involved so as to ensure the smooth progress of all work.
10. The contractor's responsibility under this contract shall commence from the date of receipt of the LOI by the tenderer. The scheduled period of completion for this work will be as mentioned in page No. 01, and the Contractor will have to plan his work accordingly.
11. Generally, the maintenance period for any work under BHEL Organisation will be SIX (6) MONTHS .

**12. Earnest Money Deposit:**

Earnest Money is to be paid by each tenderer to ensure that the tenderer does not refuse to execute the work after it is awarded to him. Shall also be furnished in the form of Pay Order or Demand Draft in favour of BHEL, EMD in any other form will not be accepted. The rate of earnest money deposit shall be as under:

Works costing upto Rs. 2 lakhs	NIL
Works costing more than Rs.2 lakh and upto Rs. 5 lakhs	Rs. 10,000/-
Works costing more than Rs.5 lakhs and upto Rs.10 lakhs	Rs. 20,000/-
Works costing more than Rs.10 lakhs and upto Rs.20 lakhs	Rs. 40,000/-
Works costing more than Rs.20 lakhs and upto Rs.30 lakhs	Rs. 60,000/-
Works costing more than Rs.30 lakhs and upto Rs.50 lakhs	Rs. 1,00,000/-
Works costing more than Rs.50 lakhs and upto Rs.100 lakhs	Rs. 1,50,000/-
Works costing more than Rs.100 lakhs	Rs. 2,00,000/-

One time EMD will also be Rs.2 Lakh.

EMD by the Tenderer will be forfeited if,

- a) After opening the tender, the tenderer revokes his tender within the validity period or increases his earlier quoted rates.
  - c) The tenderer does not commence the work within the period as per LOI / Contract. In case the LOI / contract is silent in this regard then within 15 days after award of contract.
  - c) EMD given by all unsuccessful tenderers shall be refunded normally within fifteen days of acceptance of award of work by the successful tenderer.
  - d) EMD shall not carry any interest.
13. Should a tenderer or a contractor on the list of approved Contractors have a relative, or in the case or a firm or Company of contractors any of its share holders or shareholder's relative, employed in a gazetted capacity in the Engineering Department of the Bharat Heavy Electricals Limited, the authority inviting tenders shall be informed of this fact at the time of submission of the tender, failing which tender, may be disqualified or if such fact subsequently comes to light, the contract may be rescinded in accordance with the relevant provisions in the General Conditions of Contract.

14. If tenderer expires after the submission of his tender or after the acceptance of his tender the BHEL may, at their discretion, cancels such tender. If a partner of a firm expires after submission of tender or after the acceptance of the Tender, BHEL may cancel such Tender at their discretion unless the firm retain its character.
15. The Bharat Heavy Electricals Limited will not be bound by any power of attorney granted by the tenderer or by changes in the composition of firm made subsequent to the execution of the contract. They may however recognise such power of attorney and changes after obtaining proper legal advice the cost of which will be chargeable to the contract concerned.
16. If the tenderer deliberately gives wrong information in his tender or creates conditions favourable for the acceptance of his tender, the Bharat heavy Electricals Limited, reserves the right to reject such tender at any stage.
17. Words importing the singular number shall also be deemed to include the plural number and vice versa where the context so requires.
18. The expenses for completing and stamping the agreement shall be paid by the contractor.
19. The General and special conditions are complementary to each other and where they are conflict the Special Conditions shall prevail. In regard to matters not covered by the General and Special Conditions of Contract, those contained in the Tamil Nadu Building Practice Standard Specifications or other specifications approved by the Bharat Heavy Limited, Shall apply.
20. Tenderers shall not increase their quoted rate in case the Bharat Heavy Electricals Limited, negotiates for negotiation for reduction of rate. Such negotiation shall not amount to cancellation or withdrawal of the original offer and the rate originally quoted shall be binding on the tenderers for a period of three months from the date of opening of tenders.
21. Canvassing in any form in connection with tenders is strictly prohibited and the tenders submitted by the contractors who resort to canvassing will be liable to rejection
22. All contractors will have to produce Income tax Clearance Certificate from the Income Tax- Officer concerned along with their tenders. Those Contractors whose income is not taxable will be required to give an affidavit of their income on the prescribed form. If the successful tenderer fails to produce the Income – tax clearance certificate within the stated period the Earnest Money Deposit and Security Deposit of the tenderer may be forfeited and the contract terminated.

## TENDER NOTICE

**NAME OF WORK : Entire House Keeping work at A & D- Sectors.**

**ESTIMATED COST : Rs. 44 Lakh**

1. SEALED TENDERS for the above noted work are hereby invited from contractor experienced in works of similar kind and magnitude. Tenders will be received by ADDITIONAL GENERAL MANAGER / CIVIL / TOWNSHIP Bharat Heavy Electricals Limited, Tiruchirappalli – 620 014. Upto 09.30 hrs. on 23 07 11 and will be opened on the same day at 10.00 hrs. at the Office of the ADDITIONAL GENERAL MANAGER/ CIVIL / TOWNSHIP in the presence of such of those tenderers. Or their agents who may choose to attend.
2. TENDER FORMS and other particulars regarding the proposed work can be obtained on any working day from 8.00 A.M. to 4.30 P.M. upto 21 07 11 on payment of the prescribed sum of **Rs.750/** - per set ( including Sales Tax ) Amount nor refundable.
3. TENDERS must be submitted in sealed covers and should be addressed to **MANAGER/CIVIL/PLANNING (TOWNSHIP)** with full name and address of the tenderer and the name of work being noted on the cover
4. All entries in the tender documents should be in one ink. Erasers and overwritings are not permitted. All cancellations and insertions should be duly signed by the tenderer concerned.
5. TENDERERS should fill in all the required particulars in the blank spaces provided for this purpose in the tender documents and also sign each and every page of Tender Documents including the drawings attached there to before submitting their tender.
6. UNIT rate should be quoted in figures as well as in words with reference to each item and for all the items shown in the attached schedule. These rates shall be for the finished work in site. Amount of each item and the total page by page and also the grand total amount of the whole contract should be filled in by the tenderers. Unit rate quoted shall be the basis for arriving the total value of the tender. The total amount for every item shall be arrived by multiplying the unit rate with the quantity indicated for that item. In case of any deviation is noticed in the total amount, the same will be corrected and evaluated by taking unit rate as basis and multiplying with the quantity indicated.
7. QUANTITIES shown in the attached schedule are only approximate and are liable to variation without entitling the contractors to any variation in the Quoted rates till the total value of the Contract does not vary by more than 20% (twenty percent)
8. In quoting their rates, the tenderers are advised to take account all factors including any fluctuations in the market rates etc. No claim will be entertained on this account after acceptance of the tender or during the currency of the contract.
9. Before tendering, the tenderers are advised to inspect the site of work and its environments and be well acquainted with the actual working and other Prevalent conditions position of materials and labour, General and Special Conditions of Contract. Instructions to tenders, drawings and Specifications and all other documents which form part of the Agreements to be entered into.

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10. The rate quoted in the tender shall remain valid for a period **THREE MONTHS** from the date of opening of tenders.
11. In the event of tender being submitted by firm the tender must be signed separately and legibly by each partner or member of the firm or in their absence, by the person holding the power of attorney on behalf of the firm concerned in the latter case a copy of the power of attorney duly attested by a Gazetted Officer must accompany the tender.
12. Every tender must be accompanied with EMD for the amount as specified in Page No. 02 in any of the form mentioned in Para 12 of the "Instruction to Tenderers". This Earnest Money will be refunded to the unsuccessful tenderers within fifteen days of finalisation of the award of work. In case of the successful tenderer, the Earnest Money will be retained as part of the Security Deposit for satisfactory completion of the work in accordance with Clause 16 of the General Conditions of Contract

NOTE : Cheques, Currency Notes and Money Orders will not be accepted in lieu of the deposit receipt referred to above

### 1) Security Deposit

- 13.1 Security Deposit should be collected from the successful tenderer . The rate of Security Deposit will be as below:

Upto Rs. 10 lakhs	10%
Above Rs. 10 lakhs upto Rs.50 lakhs	Rs.1 lakh + 7.5% of the amount exceeding Rs. 10 lakhs.
Above Rs. 50 lakhs	Rs.4 lakhs + 5% of the amount exceeding Rs. 50 lakhs.

The security Deposit should be collected before start of the work from the contractor.

- 13.2 Security Deposit may be furnished in any one of the following forms

- i) Cash (as permissible under the Income Tax Act)
- ii) Pay Order, Demand Draft in favour of BHEL.
- iii) Local cheques of scheduled banks, subject to realization.
- iv) Securities available from Post Offices such as National Savings Certificates, Kisan Vikas Patras etc.  
(Certificates should be held in the name of Contractor furnishing the security and duly pledged in favour of BHEL and discharged on the back).
- v) Bank Guarantee from Scheduled Banks / Public Financial Institutions as defined in the Companies Act subject to a maximum of 50% of the total security deposit value. The balance 50% has to be remitted either by cash or in the other form of security. The Bank Guarantee format should have the approval of BHEL.
- vi) Fixed Deposit Receipt issued by Scheduled Banks / Public Financial Institutions as defined in the Companies Act . The FDR should be in the name of the contractor, A/C BHEL, duly discharged on the back.
- vii) Security deposit can also be recovered at the rate of 10% from the running bills. However in such cases at least 50% of the Security Deposit should be collected before start of the work and the balance 50% may be recovered from the running bills.

viii) EMD of the successful tenderer shall be converted and adjusted against the security deposit.

2) The security deposit shall not carry any interest.

**NOTE:** Acceptance of Security Deposit against Sl. No. (iv) and (vi) above will be subject to hypothecation or endorsement on the documents in favour of BHEL. However, BHEL will not be liable or responsible in any manner for the collection of interest or renewal of the documents or in any other matter connected therewith.

14. Unless the contractor whose tender is accepted signs the Contract Agreements and makes the necessary security deposit specified in Para 13 above within Seven days of the date of the order directing him to do so the amount of Earnest Money Deposit already deposited by him will be forfeited and acceptance of his tender withdrawn.
15. After tender opening if tenderer revokes his tender or increases his earlier quoted percentage rate or after acceptance of his tender does not commence the work in accordance with the instruction of the Engineer-in-charge, the Earnest Money deposited by him will be forfeited and acceptance of his tender withdrawn. If only a part of the work included in the tender had been awarded to the tenderer, the amount of Earnest Money to be forfeited will be based on the value of the contract so awarded.
16. The Bharat Heavy Electricals Limited reserved the right to reject any or all the received or accept any tender or part there of without assigning any reason thereof. In the case acceptance of part of tender, time for completion may also be reduced to the extent considered appropriate by the Accepting Authority.
17. Conditional and un-witnessed tenders, tender containing absurd rates and amounts tenders which are incomplete or otherwise considered defective and tenders not in accordance with the tender conditions laid down by the Accepting Officer are liable to be rejected.
18. Tenders not submitted on the prescribed form are liable to be rejected.
19. The work must be completed within a period as mentioned in page No.2
20. The Chairman / General Manger / Deputy General Manager / Deputy Manager / Senior Engineer shall be Accepting Officer, herein after referred to as such for the purpose of this contract.
21. This tender notice shall be deemed to form an integral part of the contract to be entered into for this work.
22. The contractor is required to carry out the work inside the occupied quarters with least disturbance to the occupant and the total work in the quarters is to be completed on the same day. The contractor is required to inform the occupant atleast one day in advance, plan the work accordingly and collect the feedback slip from the occupant immediately on satisfactory completion of the work.
23. The tenderers are advised to go through the condition stipulated in Tender document & code of conduct for 'Health & Safety of Contract Labourer' in details. Any violation thereof will invite punitive action being taken against them. While quoting the rate all the above factors are to be taken into account.

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## **REVERSE AUCTION**

**BHEL reserves the right to go for a Reverse Auction (RA)** instead of Opening the submitted sealed bid, which will be decided after technical evaluation. Information and general terms and conditions governing RA are given below.

### **GENERAL TERMS AND CONDITIONS OF RA**

Against this tender for the subject work/system with detailed scope of work as per tender specifications, BHEL may resort to "REVERSE AUCTION PROCEDURE" i.e., ON LINE BIDDING ON INTERNET.

1. For the proposed reverse auction, technically and commercially acceptable bidders only shall be eligible to participate.
2. BHEL will engage the services of a service provider who will provide all necessary training and assistance before commencement of on line bidding on internet.
3. BHEL will inform the vendor in writing in case of reverse auction, the details of Service Provider to enable them to contact & get trained.
4. Reverse Auction rules like event date, time, Start price, bid decrement, extensions etc. also will be communicated through service provider for compliance.
5. Vendors have to fax the Compliance form in the prescribed format (provided by Service provider) before start of Reverse auction. Without this, the vendor will not be eligible to Participate in the event.
6. BHEL will provide the calculation sheet (e.g., EXCEL sheet) which will help to arrive at "Total Cost to BHEL" like Taxes and Duties, Freight charges, Insurance and loading factors (for non-compliance to BHEL standard Commercial terms & conditions) for each of the vendor to enable them to fill-in the price and keep it ready for keying in during the Auction.

However if the service tax is applicable for this contract, the same will be reimbursed on production of valid document proof for having paid service tax by the tenderer.

7. Reverse auction will be conducted on scheduled date & time.
8. At the end of Reverse Auction event, the lowest bidder value will be known on the network.
9. The lowest bidder has to Fax the duly signed Filled-in prescribed format as provided on case-to-case basis to BHEL through Service provider within 24 hours of Auction without fail.
10. Any variation between the on-line bid value and the signed document will be considered as sabotaging the tender process and will invite disqualification of vendor to conduct business with BHEL as per prevailing procedure.
11. In case BHEL decides not to go for Reverse Auction procedure for this tender enquiry, the Price bids and price impacts, if any, already submitted and available with BHEL shall be opened as per BHEL's standard practice.
12. BHEL reserves the right to negotiate if need be, with the "L1" vendor of the Reverse Auction

## GENERAL AND SPECIAL CONDITIONS OF CONTRACT

### GENERAL CONDITIONS

1. No night work will be permitted without the written permission of the Engineer – in – charge.
2. Bulkage test on the sand to be used on the work should be conducted periodically to arrive at the correct quantity of sand to be mixed for the different proportions as and when required.
3. Items of work other than those mentioned in the Bill of Quantities (Tender Schedule) attached hereto will be carried out at the rates to be fixed by this organization as per relevant clauses of the General Conditions of Contract.
4. **(a)** On the written request from the contractor **Water required for the work may be provided by this organization at only one point at the site of the work at free of cost.** In case of failure of water supply, the Contractor will have to make his own arrangements for water without any extra claims until supply is restored. BHEL does not accept any liability whatsoever for non supply or delay in the supply of water under any circumstances. The contractor shall ensure that there is no wastage of water otherwise supply of water, is liable to be stopped at contractor's risk and cost.  
**(b)** On the written request from the contractor **Electrical energy required for the work may be provided by this organization at any one point at the site of work at free of cost.** BHEL does not accept any liability whatsoever for non-supply, delay in supply or failure of supply of electrical energy. Contractor shall ensure that there is no wastage of electrical energy otherwise supply is liable to be stopped at contractor's risk and cost.  
~~3) On the written request from the contractor **Compressed air alone will be provided this organization at only one point near the site of work at free of cost.** The contractor should be in a position to make his own arrangement for compressed air without any extra claim for the uninterrupted operation of jack hammer with silencer wherever BHEL is not in a position to supply compressed air.~~
5. Permission for erection of temporary work sheds etc., at site will have to be obtained from BHEL in writing in advance.
6. The works contract to be entered into with the successful tenderer will be governed by the BHEL revised General Conditions of Contract in force.
7. The successful tenderer / Contractor shall observe all safety regulations and take necessary safety precaution as called for under the "BHEL General Conditions of Contract and Safety Precautions" enclosed herewith.
8. In all matters of dispute, the decision of the General Manager, Bharat Heavy Electricals Ltd., Tiruchirappalli – 620 014. Shall be final and binding on the tenderer / contractor.

9. Some changes are likely in the quantities furnished as well as in the layout, design and specifications of the work. The rate quoted shall be deemed to be inclusive of all such contingencies.
10. All the materials to be used in the work and nature of work shall conform to respective TNBP, IS and National Buildings Organisation Standard Specifications and shall be got approved by the Engineer – in – charge before actual incorporation in the work
11. All surplus raw steel remaining with the contractor shall be returned to BHEL stores at his own cost after completion of fabrication, in the form of full lengths, useful cut bits and scrap. The following yardstick will be adopted for the purpose of classification of scrap.

4) Mild steel and alloy Steel plates and sheets	1000X500mm and above	Useful cut bit
(b) Mild steel and alloy Steel plates and sheets	Less than 1000 X 500 mm	Scrap
(c) Structural	One metre and above in length	Useful cut bits
(d) Structural	Less than one metre in length	Scrap

The invisible (Non-returnable) wastage should not exceed a maximum of 2% by weight of fabricated steel work and returnable wastage generated by way of scrap or useful cutbits shall be returned at "Actuals". Maximum permissible limit for scrap without recovery shall be 5% of actual fabricated quantity. However every care should be taken to see that raw steel is utilised most economically by preparing necessary cutting lists to restrict the scrap within the permissible limit.

Should the quantum of invisible wastage exceed the 2% permissible limit, RECOVERY AT TWO TIMES OF THE VALUE OF the extra tonnage involved (which will be evaluated on an average cost per tonne basis considering the total raw steel materials issued ) will be effected from the contractor for the excess quantity involved ( **2 times x Rs. 48,495 = Rs.96,990 / MT + applicable taxes at the time of recovery**). This rate is only indicative and BHEL issue rate on date of actual issue will be applied.

The Contractor shall submit a material tallying statement on completion of the work indicating the details of quantities of each material (section by section) received quantities used for fabrication as per DOD lists. Quantity returned in full length, useful cut bits and scrap and the quantity reckoned as invisible wastage.

## SPECIAL CONDITIONS OF CONTRACT

1. Unless otherwise indicated in the Bill of Quantities cement, structural steel sections, reinforcement steel (MS rods, CTD bars etc.,) and other items ( as mentioned in Schedule B ) will be issued at BHEL Stores at free of cost. The Contractor's quoted rates shall therefore be inclusive of the cost of conveyance of these items from BHEL Stores to site of work including, loading, unloading and other incidental costs etc. The quantities of each items to the extent required for actual incorporation of the work will be treated as ISSUED FREE OF COST.
2. All surplus reinforcement rod with the contractor shall be returned to BHEL Stores at his own cost in the form of full lengths, useful cut bits and scrap. The invisible (non-returnable) wastage should not exceed a maximum of 0.5% of the actual quantity consumed in the work.
3. The contractor shall return all the scrap to the disposal stores at his own cost. Bent rods will also be taken as scrap only, irrespective of their length. The maximum permissible limit of scrap without recovery is 5% of actual consumption. The recovery details for the materials are as follows:

- |   |          |  |
|---|----------|--|
| <b>a) Single recovery rate for the non returned scrap upto 5% of actual consumption</b>                                     | <b>:</b> | <b>Rs.49,547/- per M.T<br/>+ applicable taxes at<br/>the time of recovery</b>  |
| <b>b) The punitive recovery rate for steel qty. not accounted and extra scrap generated beyond 5% of actual consumption</b> | <b>:</b> | <b>Rs.99,094/- per M.T.<br/>+ applicable taxes at<br/>the time of recovery</b> |

The above rates are only indicative and BHEL issue rate on date of actual issue will be applied.

**Excess consumption of cement over and above the theoretical requirement as per BHEL Data upto a limit of 5% will be charged at the rate of Rs.6,668/per M.T. + applicable taxes at the time of recovery. Consumption beyond 5% will be charged at the punitive recovery rate of Rs.13,336/per M.T.. + applicable taxes at the time of recovery.**

The above rates are only indicative and BHEL issue rate on date of actual issue will be applied

4. Gunny bags or Polythene Bags or Paper Bags in which cement is issued from BHEL Stores, need not be returned by Contractor to BHEL. The cost for each empty cement bag will be recovered from the Contractor's bills at the following rates.
  - i. Empty cement gunny bag Rs.1.25 + ST and SC / each
  - ii. Empty Polythene bag Rs. 0.50 + ST and SC / each
  - iii. Empty paper bag Rs. 0.25+ST and SC / each.

5. The Contractor should maintain proper accounts of cement, MS rods / CTD bars, structural steel sections and other materials if any supplied by this organization and these should be available at the site of the work for verification and check by the official of this organization at any time.
6. All materials brought by the Contractor for incorporation in the work shall be got inspected and approved by the Engineer-in-charge before they are incorporated in the work
7. The Manager / Civil or his duly authorized representative shall have all reasonable times access to Contractor's premises of work and shall have the power at all the reasonable times to inspect and test any portion of the work or examine the materials and workmanship of the structures during their manufacture and test. The contractor shall give due notice in writing to the Inspecting Engineer of BHEL when the materials supplied to be incorporated in the work are ready for inspection and test. No material shall be incorporated in the work until the inspecting Engineer certified in writing that such materials have been inspected and approved by him.
8. The Contractor shall closely scrutinize all the drawings issued in connection with the work by this organization and bring to the notice of the Engineer-in-charge if any discrepancies, omissions in the drawings before undertaking the actual work pertaining thereto.
9. The contractor should submit in advance every fortnight a detailed programme of work to be undertaken from time to time strictly in conformities with the "Time and Progress Chart" covering the entire constructed work and reschedule them wherever necessary during the progress of the work so as to achieve the target set. Periodical progress reports of every fortnight should also be furnished by the Contractor regarding the collection of materials issued and to be issued from BHEL Stores and other relevant information as asked for by the Engineer-in-charge and other BHEL Officers-in-charge of the work.
10. The contractor should extend full co-operation to the other contractors who may be doing other works in the same areas to enable them to execute their portions of work without any delay or difficulty.

## **GENERAL AND SPECIAL SPECIFICATIONS**

### **1.Site Clearence:**

All the area upon which the construction is to be carried out and areas which are required by the Contractor for his construction facilities are to be cleared off all rubbish and objectionable matter at Contractor's own cost. Trees, if any, shall not be uprooted or cut without the prior approval of the Engineer-in-charge. All spoils, unserviceable materials and rubbish shall be burnt or removed from site. Usable materials, saleable timber, fire-wood etc., shall be stocked properly at work site in the manner as directed by the Engineer-in-charge. The cost of clearing the areas shall be deemed to have been included by the tenderer in his general rate.

### **2. Earthwork for Foundations**

Earthwork excavation for foundations and filling in foundations shall conform to TNBP 23 and 24. The area to be excavated or filled in with excavated materials shall be clearly demarcated in the field by the Contractor. Excavation shall be done to lines and levels defined. Excavation shall be carried out to such widths, lengths, depths, profiles and grades as shown in the drawing or as may be specified by the Engineer – in – charge. Rough Excavation may be carried out up to a depth 15 cm less than the final level but the balance shall be excavated to precise level with special care. All soft pockets of soil met with even below the final level shall be removed and the excavation filled up as directed by Engineer-in-charge. The methods of excavation shall in every case be subject to the approval of the Engineer-in-charge and the contractor shall ensure the safety and stability of the excavations, being executed by him as well adjacent buildings, structures, services and other works in the vicinity of the site of work. Wherever necessary Engineer-in-charge may direct that the sides of the excavation should be timbered and shored at the contractor's own cost, adopting a proper method approved by the Engineer-in-charge. Notwithstanding the above, should any slip occur, the contractor shall remove all the slipped materials from the excavated pit, at his own cost. He shall also make good at his own all damages caused to the work as well as adjacent buildings, structures etc., as a result of the slip, referred to.

All excavation work shall be subject to inspection and approved by the Engineer-in-charge before any further works in the excavated areas allowed to commence. Should any excavation be carried out beyond the specified depth, the contractor should fill it up at his own cost with the same type and class of material as it is proposed to be laid over the excavated portion. No payment will however be made to the contractor on his account.

The contractor shall ensure that the excavations and the structures under construction are kept free from water logging at all stages of construction. He shall take all necessary precautions and `streams, aquifers, springs, surface flows etc., are excluded effectively so as to ensure that the works are carried out in a reasonable dry conditions in accordance with the construction schedule.

Back filling around the foundations, trenches, plinth and under the floor shall be done in accordance with TNBP 24 and 25. The finished level of the plinth filling shall be trimmed to the slope required to be given to the finished floor. Back filling, watering and consolidation of excavated earth in layers etc., complete as per specifications shall be done unless otherwise stipulated in the tender schedule.

### **Removal of Hard rock by Blasting**

This shall include all rock occurring in large masses which cannot be removed except by blasting. Blasting shall be done in conformity with TNBP 19 & 23 and as instructed by the Engineer-in-charge. When rock blasting has to be done adjacent to structures, the following precautions shall be observed.

- (1) All blasting should be completely muffled to prevent damage by flying pieces.
- (2) Blasting within 3 meters of the structures shall be avoided
- (3) No blasting should be done within 1.5 meters of concrete / masonry structures.
- (4) An isolated boulder extending under the existing structure but projecting within the area of blasting should be blasted.
- (5) The contractor shall be responsible for all damages caused by blasting and shall replace or repair the damaged structures at his own cost.

### **3. Plain and Reinforced Cement Concrete Works :**

All design and construction shall be performed in accordance with the Indian standard code of Practice for plain and reinforced concrete – IS 456 and TNBP 30. Any Special requirements noted on the drawings or bill of quantities shall govern over the provisions of this specifications. Controlled concrete shall be used wherever specified in the schedule of items complying with all requirements of IS : 456 and as per special specifications appended herewith.

The coarse aggregate to be used shall be of hard broken granite stone jelly of various sizes as specified under respective items in the Bill of Quantities, conforming to IS 383 latest edition. The Engineer-in-charge may require the contractor to carryout moisture content tests in both fine and coarse aggregates. For determination of moisture content IS – 2386 shall be referred to. The amount of water to be added shall be then adjusted to compensate for any observed variation in the moisture contents. Proper control of mixing water is deemed of paramount importance. Mixtures with automatic water measuring drums shall be used or else. Water should be measured by volume in calibrated buckets. All measuring equipments shall be maintained in a clean serviceable condition and the accuracy periodically checked and got certified by the Engineer-in-charge. The contractor shall carryout slump tests apart from taking test cubes at regular intervals. All such methods of sampling and analysis of concrete shall be in accordance with IS – 1199.

Mixing of concrete shall be strictly carried out in an approved type mechanical mixer. The mixing equipment shall be capable of combining the aggregates, cement and water within the specified time (not less than 2 Minutes) into a thoroughly mixed and uniform mass and of discharging the mixture without segregation. Mixing shall be continued until there is a uniform colour and consistency, Concrete shall be handled from the place of mixing to the place of final deposit as rapidly as practicable by methods which will prevent segregation or loss of any of the ingredients. Before depositing the concrete, all debris and dirt shall be removed from the space to be occupied by concrete. Concreting shall not be done unless the formwork conform to the shapes, lines and dimension as shown in the drawings.

Unless otherwise approved, concrete shall be placed on single operation to the full thickness of slabs and beams and similar members and not exceeding 1 metre deep in walls, columns and similar members. Concrete shall be placed continuously until completion of the part of the work between construction joints or as directed by the Engineer-in-charge. The concrete after being laid shall be compacted by means of vibrators of approved type under proper supervision as directed by the Engineer-in-charge. Care should be taken to avoid segregation and formation of air bubbles. The whole process starting from the mixing of concrete to the placing and compaction shall not take more than 20 minute and the process shall be completed before the initial setting takes place. Curing shall be accomplished in accordance with IS-456 by keeping the concrete covered with a layer of sacking, canvas or similar absorbent materials and kept constantly wet for the period as directed by the Engineer-in-charge.

## **Reinforcement**

All reinforcement shall be clean and free from pitting, loose mill-scales, dust, loose rust and coats of paint, oil or other coatings which may destroy or reduce bond. General construction details and workmanship relative to reinforcement including bar bends, lap splices and installation shall be in accordance with the IS-2502 as well as IS-456. All bars be bent as per the bar bending schedules indicated in the drawings or supplied separately relevant to particular drawing. The contractor shall in all cases verify himself the correctness of schedules, giving the number, length and the bending details of the bars. The numbers, sizes, shape and position of all the reinforcement shall, unless otherwise, directed or authorized by the Engineer-in-charge be strictly in accordance with the drawing. The reinforcement shall be adequately held in position by 18 / 20 SWG soft black annealed binding wire. The contractor must obtain the approval of Engineer-in-charge for the reinforcement placed, before any concrete is placed in the form. All reinforcing bars shall be so tied as to form a rigid cage to prevent displacement before or during concreting. Rate quoted for reinforcement should include cost of transporting M.S. Rods / CTD bars from BHEL Store to site of work, cleaning, cutting, bending, placing, binding with contractor's own binding wire and providing necessary cover blocks of concrete but excluding cost of steel which shall be supplied free of cost at BHEL Stores.

## **Form Work**

Formwork shall conform to the shape, lines and dimensions of concrete and RCC structures as shown in the drawings and shall be well within the permissible tolerance. Formwork for concrete shall be of plywood, steel, good seasoned timber or other approved materials, properly designed easy for removal and cleaning. They shall be of sufficient strength and rigidity to maintain their position and shape under loads incidental to placing concrete. The number of props, their sizes and dispositions shall be such as to able safely carry the full dead load area constructional loads. The arrangement and alignment of formwork shall be got approved by the Engineer-in-charge prior to concreting. However this shall not relieve the contractor from his responsibility for proper work and safety. Formwork shall be sufficiently tight to prevent loss of cement slurry from the concrete. All joints and holes in the formwork shall be caulked with putty jute cloth or other approved materials to the satisfaction of the Engineer-in-charge. The stripping time for the shuttering and the formwork shall in general conform to the provisions in the relevant clauses of IS 456. Unless otherwise specified rates for reinforced cement concrete shall include cost of centering, shuttering charges also.

## **Expansion and Other Joints**

Expansion Joints in concrete structures shall be provided at specified places as indicated in the drawings. The material shall be as specified by the Engineer-inc-charge, expansion joints, with or without metal strip shall be as shown on drawings the filler shall be "EXPANDEX JOINT FILLER" premoulded non – extrudent type fibrous joint filler impregnated with bitumen conforming to IS : 1838. The filler shall be durable, waterproof, compressible and shall have a high degree recovery after compression is released, ensuring thereby that no free space develops in the expansion joints. The top 25 mm, or as specified in the drawings, shall be sealed with "SHALITEX SEALING COMPOUND" or equivalent after application of approved primer.

## **4. Stone Masonry**

General: Stone masonry shall conform to TNBP 35. Stone shall be obtained from the approved quarry and shall be free from decay and weathering.

All stones shall be thoroughly wetted before use. The mortar used for jointing shall be as specified under the respective items of the ' Bill of Quantities'.

The walls shall be carried up truly plumb. Every stone shall be carefully fitted to the adjacent stones so as to form neat and closed joints.

To give sufficient lateral bond, vertical joints shall be avoided. Prescribed number of headers as required shall be provided to give sufficient transverse bond. At junctions of wall the stones each alternate course shall be so carried into each of the respective walls as to unite the work thoroughly. Where breaks are unavoidable in carrying up the work continuously in horizontal course sufficiently long steps shall be left to joint the old and new work building of two thin faces and filling up the middle with small stuff or dry packing shall be strictly avoided. When plastering or raised pointing is not required to be done joints shall be struck flush and finished simultaneously.

### **Coursed Rubble Masonry**

Coursed rubble masonry shall conform to TNBP 35-H, I and J. Faces shall be accurately squared and all face joints shall be dressed at right angles. This bushing on the facing stones shall not project more than 38mm.

Face stones shall be laid alternate headers and stretchers. Depth of each course shall not be less than 150 mm. No course shall be greater than any course below. The height shall not exceed the breadth of stones of face. No stone shall tail into the wall less than its height. No pinning shall be allowed on the face. The stones shall be solidly bedded set full in mortar with joints not exceeding 12 mm in thickness.

### **Random rubble masonry**

Random rubble masonry work shall conform to TNBP 35-L and J. Stones shall be hammer dressed at faces and joints to enable them to come into close proximity with each other. The face stone shall be laid headers and stretchers alternately, so as to break joint by at least 75mm. Thickness of joint shall not exceed 12mm. No pinning shall be used on the face and face stone shall extend well back into the headers. Stones less than 130 mm. in height shall not be used on the face.

Bond stones running through the wall shall be provided at 1.8M intervals in walls up to 0.60 M. thickness and if the wall is more than 0.60 M. thick a line of headers shall be laid from face to back each header overlapping the other by at least 150 mm.

## **5. Brick Masonry:**

First class Bricks: Brick shall be sound, hard, tough, rectangular in shape and size, well burnt of uniform deep red or copper colour and conform to IS – 1077.

Brick shall be free from cracks, chips, flaws, stone or humps of any kind. Bricks shall be homogeneous in texture and emit a clear ringing sound on being struck and shall have a minimum compressive strength of 50KG / sq.cm. and shall not absorb water more than 20% of its weight, when soaked cold water for 24 Hrs. All bricks shall be table moulded.

Second Class Bricks: These shall be ground moulded but should otherwise conform to the specifications of first class bricks except for some surface cracks are allowable. These shall have minimum compressive strength of 50 Kg./sq.cm.

Samples of each type of brick, shall be got approved by the Engineer-in-charge before being used. All subsequent deliveries shall be up to the standards of the approved samples.

Brickwork shall conform to TNBP31 and IS –2212.

Brick works shall be classified as first or second class according to the classification of bricks used and the method of laying. The thickness of joints shall not exceed 6 mm. In first class brickwork and 10 mm in second class brick work.

Bricks shall be well soaked before use on works for at least 6 hrs. The soaked bricks shall be kept on wooden planks or platform. Brick required for masonry with clay or lime mortars shall not be soaked.

Brickwork shall be laid with specified mortar to be prepared in accordance with IS –2250. Brick works shall be laid in English Bond unless otherwise specified. Half or cut bricks shall not be used except when needed to complete the bond. Each course shall be taken up truly plumb, if battered, the batter is to be truly maintained. The level of brickwork shall be checked up at every one metre interval. Bricks shall be laid with frogs upward, while laying bricks shall be thoroughly bedded and flushed in mortar and taped into position with a wooden mallet and the superfluous mortar removed. Walls of all structures shall be carried up regularly in all cases, leaving no part, one metre lower than the other. Where the masonry of one part has to be delayed, the work shall be raked back according to bond (and not toothed) an angle not exceeding 45 Deg. But the raking back should not start within 60cm. of a corner vertical joints in alternate courses shall come directly over one another. The brickwork shall not be raised more than 14 courses per day. All iron fixtures, pipes, conduits, drains, sleeves, bolts, holdfasts of doors and windows etc. which are required to be built in walls shall be embedded in cement mortar or cement concrete as specified, in their correct position as the work proceeds.

### **Joints**

Joints shall be restricted to 6 mm in first class brickwork and 10mm in second class brick work. All bed joints shall be normal to the pressure upon them, radial in arches and at right angles to the face in battered retaining walls. Care shall be taken that all joints are fully mortared (proportion as specified in the schedule items) well flushed up and in case where no pointing to be done, neatly struck at the work proceeds. The joints in faces which are to be plastered or pointed shall be squarely raked out to a depth of 12 mm while the mortar is still green. The raked joints shall be well brushed to remove loose particles. After the work the faces of work shall be cleared well by brush so as to remove any splashed mortar during the course of raising the brickwork.

### **Curing**

Green work shall be protected from rain by suitable covering. Masonry work shall be kept thoroughly well watered on all faces for atleast 10 days after completion. In case of fat lime mortar curing shall commence two days after laying of masonry and shall continue for seven days.

### **6. Scaffolding**

Scaffolding will generally be single but may be double if warranted for the particular work as approved by the Engineer-in-charge. The contractor shall take all measure to ensure safety of work and the working people.

Payment for brickwork shall be made on cubic metre basis on the volume of actual work done. Half brick wall and brick on edge wall shall be paid on square metre basis. The rate of brick work shall include scaffolding and all items mentioned above and no extra payment will be made for cutting bricks if required either for openings or for rounding or insertions or for recesses at the time of brick wall construction.

### **7. Damp Proof Course**

Damp proof course shall either be with cement concrete or with cement mortar of specified thickness as mentioned in the relevant item of schedule. Damp proof course shall not be carried across doorways. It shall be laid for all walls except verandah retaining wall or for particular wall only directed by the Engineer-in-charge. It shall be laid flush with floor level or as instructed by the Engineer-in-charge.

Damp proof course with cement concrete shall be of 25 or 38 mm thick in cement concrete M15/M20 as specified using 12mm. and down size aggregate well rammed and smoothed with trowel. It will be kept wet for 40 hours and after it has dried, two coats of hot bitumen shall be applied over it and allowed it to dry after which sand shall be sprinkled over it.

Damp proof course with cement mortar shall be 12 or 20 mm thick in cement mortar 1:3 well mixed with crude oil at 5% by weight of cement used.

## **8. Cement Plastering:**

Cement plastering shall be in accordance with IS – 1661 and TNBP –56 & 57, Cement mortar shall conform to IS – 269. The mortar of specified mix and thickness shall be used.

The surface to be plastered shall be thoroughly cleaned so that it is free from dust, oil, salts etc., The joints of masonry shall be raked out to a depth of atleast 12 mm. On cement concrete surfaces the surface shall be cleaned with wire brush and scarified by lines with trowel or hacking done. The surfaces in both cases shall be washed properly and kept wet for 4 hours before plastering is commenced.

Plastering shall be started from top and gradually worked down towards the floor. It shall not at any place be thinner than specified. To ensure even thickness plaster of about 15 cm X 15 cm shall be first applied horizontally and vertically at not more than 2 metres intervals over the entire surface to serve as gauges. The surface of these gauges shall be truly in the plane of finished surface. The mortar shall then be laid in the wall or other surfaces between the gauges and finished even. All corners shall be rounded to a radius of 24 mm unless otherwise directed. The contractor shall not be paid for any extra thickness of plaster done than as specified.

Plaster, when more than 15 mm thick shall be applied in two coats, a base coat followed by the finishing coat. Thickness of the base coat shall be just sufficient to fill up unevenness in the surface, no single coat, however, shall exceed 12mm in thickness. The under coat shall be roughened or scratched before it is fully hardened.

Curing shall start 24 hours after the plaster is laid. It shall be kept wet for 14 days. During this period it shall be suitably protected from all damages at the contractor's cost by such means as approved by the Engineer-in-charge.

Any cracks which appear in the surface shall be cut out in rectangular shape and redone as directed by the Engineer-in-charge. Wherever specified standard waterproofing compound as approved by the Engineer-in-charge shall be added to the mortar at the rate of 2% or as specified by the manufacturer by the weight of cement for which the rate shall be paid separately. The rate for plastering shall include cost of scaffolding, swing etc., needed for the work with labour and material all complete.

## **9. Steel Door, Windows and Ventilators:**

All steel doors, windows and ventilators shall conform to IS – 1038, IS – 1361 and IS 1081 or equivalent as mentioned in the bill of quantities and as approved by the Engineer-in-charge.

Rolled steel sections shall conform to Is – 226. The sections shall be cold straightened and finished goods shall be free from bends and other defects. Materials used in the fabrication shall be the best procurable and conforming to relevant IS specification. Thickness and specification of the glass to be provided shall be as indicated in the relevant item of the bill of quantities. Glass shall be free from flaws, specks, bubbles, etc., Bolts, nuts, screws, peg stays and other mild steel fittings shall be treated for corrosion as per relevant Indian Standards. Putty for glazing shall conform to IS – 420.

Doors, windows and ventilators, etc., shall be truly square and free from twist and warp. They shall be constructed of sections which have been cut to the required lengths and welded or riveted at the corners as per standard specifications.

All steel surfaces shall first be thoroughly cleaned free of rust scale or dirt and mill scale by approved means and shall be painted with one coat of approved primer conforming IS – 102 before despatch. Alternatively if specified they may be galvanised by the “Hot dip” zinc spray or electro galvanising process described IS – 1361. Doors, windows and ventilators shall be fixed in positions, as specified under IS 1081.

Whenever contractor is required to supply the doors, windows and ventilators etc., he shall first submit to the Engineer-in-charge, the details about source of supply, detailed drawing and specifications etc., for prior approval.

#### **10. M.S. Rolling Shutters:**

It shall be of approved quality, made out of 18 gauge 75 mm black laths mechanically operated by reduction gear type mechanism. It shall be fitted with two self-aligning ball bearing with locking arrangements (both inside and outside) including M.S pressed side guides bottom rails brackets and top rolling spring pressed etc., complete provided with locking arrangements for padlocks, pulling hooks, handles, top cover etc., It shall be painted with one coat of approved primer conforming to Is – 102 before despatch.

#### **11. Wooden Doors, Windows and Ventilators :**

All wood work for doors, windows, ventilators cup board, shelves, etc., conform to relevant IS specification and TNBP 82 and shall be well seasoned teak wood or well seasoned country wood (pillamarudu or karumarudu) as the case may be. Timber shall be best quality and shall be free from knots, injurious open shales, bore holes, decay, soft or spongy spots, hollow pockets and all other defects and blemishes. Timber shall conform to IS 1003 (Part 1). Size of doors, windows and ventilators shall as specified in the relevant item of schedule and detailed drawings and generally in conformity with IS – 1003, part I and part II. The rates for doors, windows and ventilators etc., shall be for the finished work inclusive of fixing them in position with necessary iron hold fasts and furniture fitting of oxidized iron or aluminium or oxidized brass as stated in the description of the relevant items of the bill of quantities and as directed by the Engineer-in-charge. Fittings and furniture shall be of best quality and machine made and robust type. Wherever glazed shutters are to be provided, the cost of glass panes of specified thickness and fixing them in position should be included in the quoted rate. All glass shall be of superior quality from approved manufacturer. In case of solid core flush doors, they should conform to IS:2202 Part I and Part II. The flush door shutters should have a finished thickness as specified in the scheduled item. Flush door shutters shall be obtained from firms of repute as approved by the Engineer-in-charge.

#### **12. ROOFING : (A) R.C.C Slabs :**

Roof slab shall be of RCC of specified mix conforming to IS : 456, with adequate main tensile, transverse and adhesive reinforcement of ribbed steel bars of mild steel rounds. Unless otherwise mentioned the rates for RCC slab shall include cost of concrete, centering and shuttering charges, vibration charges, rounding of corners, curing and finishing etc., complete. Expansion joints in reinforced cement slabs shall be as per TNBP 30.

The ceiling should be finished as per Clause 30 of TNBP. No extra payment shall be made towards cost of ceiling plaster necessitated on account of defective centering materials used or poor workmanship.

The top of roof slab shall be finished with weathering course treatment if so specified. The weathering course work shall conform to TNBP 44-HJ and consist of concrete with broken brick in neat slacked lime of specified thickness finished with one course of pressed split tiles / pressed tiles of specified thickness and size as described in the bill of quantities.

#### **(B) Roofing and Side Cladding with A.C. sheets :**

The A.C. sheets shall be of specified and approved quality and shall conform to IS 459- 1962 in all respects. The sheet shall be laid with the smooth side upwards and with a minimum end lap of 15cm. and for every flatter slopes this should be 20cm. The laying operation shall include

scaffolding works involved. Sheets shall be secured to the purlins by means of 8mm galvanized iron J or L hook bolts and nuts. The grip of the hook bolt on the side of the purlin shall be not less than 25mm. Each bolt shall have a bitumen washer and galvanized iron washer placed over the sheet before the nuts are screwed down from above. Hole for hook bolts etc., shall be drilled and not punched in the ridges of the corrugations in the exact positions. The diameter of these holes shall 1.5 mm more than the diameter of the fixing bolts. The payment will be square metre basis of the laid area.

### **13.A.C. Rain Water Pipes**

The pipes shall be of standard quality conforming to IS 1628. These shall be straight, true smooth and regular in thickness. They shall be free from cracks and other flaws. The supply shall include all necessary pipe fittings and accessories.

All pipes shall be fixed to wall or columns by standard M.S butt holder clamps of approved make. The spigot of the upper pipe shall be properly fitted into the socket of the lower pipe, such that there is uniform annular space for filling with the jointing materials. One third depth of this annular space is to be filled with spun yarn soaked in bitumen of approved quality and properly pressed with caulking tool. The remaining two, third depth of the joint is to be filled with Cement Mortar 1:2 ( 1Cement : 2 coarse sand) and shall be pressed with caulking tool and finished smooth at the top at an angle of 45 Deg. Sloping up.

The rate shall include supplying and fixing pipes with specials and accessories, including sizing as required, jointing, testing, cutting of walls and making good necessary scaffolding etc., complete.

### **14.Flooring :**

Flooring shall consist of a base course of cement concrete of specified thickness and proportion laid over the compacted earth or sand filling as specified and a finishing layer of concrete, mosaic, glazed tiles or any other material as specified to be laid. Flooring work for Factory shop floors as well as mosaic flooring shall be done as per the special specifications.

The bed flooring shall be prepared either level or sloped as per relevant drawing or as instructed by the Engineer-in-charge. Filling in basement with earth or sand shall be in accordance with TNBP 25. On the prepared bed, cement concrete of specified mix and thickness shall be laid and well consolidated.

#### **A.Ellis pattern, 1<sup>st</sup> Sort Flooring**

On the clean wet surface of the concrete base before it has set, will be laid a layer of cement concrete to give a finished depth of 20/25 mm over the base concrete. The cement concrete will be of 1:3 proportion (one cement and 3 hard broken stone chippings 3 to 10 mm Size). To make a coloured floor red oxide iron powder or other approved materials should be mixed with cement at the rate 10% of the weight of cement or as directed by the Engineer-in-charge. Ellis pattern flooring shall be done as described under clause 41-G of TNBP.

#### **B. Glazed Tile Flooring**

The tiles shall be of ceramic white or coloured and of specified dimensions as described in the schedule item. The top surface of tiles shall be glazed with a neat finish of uniform colour and texture and free from flaws, cracks, craze, specks or other imperfections. Tiles shall be true and shape with straight edges, non-absorbing and non – fading. Samples of tiles together with manufacturer's literature shall be submitted to the Engineer-in-charge for approval. Tiles shall conform to IS 177 latest.

Over the prepared surface of the floor a bedding layer of Cement Mortar (1:3) of specified thickness shall be laid-in-proper level and slope using screed patterns. The bedding layer shall be deeply scratched while it is set. A mortar set bed of 6mm thickness in cement lime mortar 1:1:3

( one cement one lime putty and three sand ), shall be laid over the bedding layer. After mortar setting, bed has been leveled, a skin of neat cement shall be trowelled to the mortar setting bed immediately before the tiles are set. As soon as the mortar setting bed has sufficiently hardened, all tiles shall be finally secured in place and gently beaten in and finished surface brought to desired level. When grouting the glazed tiles, special care shall be taken to prevent scratching of the glazed surface. Joints shall be pointed with white or coloured cement to match the tile surface and cured. No joint shall be more than 1.5 mm thick.

### **15. White Washing and Colour Washing**

White washing and colour washing shall be done as per clauses 63 and 64 of TNBP. The surface shall be thoroughly cleaned off mortar drops and foreign matter. All patchings must be scraped properly. The white washing shall be done from pure shell lime / Janathacem. Samples of lime shall be got approved by the Engineer-in-charge. The wash shall be applied with a brush, the coats being laid on vertically and horizontally alternatively, each coat being allowed to dry before next coat is applied. For colour washing the desired shade shall be obtained by mixing approved quantity of colouring matter or distemper with shell lime solution and applied as per white. The contractor shall take every precaution to prevent white wash being splashed on wall, floor and other places and articles not to be white washed. No colour wash shall be done unless a sample pattern of the mixed colour has been approved by the Engineer-in-charge. The rates shall be inclusive of scaffolding charges, cost of ladder etc.,

### **16. Painting**

All painting work shall be done in accordance with TNBP-66 and the relevant Indian Standard Specifications. Paints, varnishes, cement paints etc., shall be the highest grade products of well known approved manufacturer and shall be delivered to site in original sealed containers. It is desired that materials of one manufacturer only shall be used as far as possible. Colours shall be uniform and nonfading. Samples of all colours selected shall be submitted to the Engineer in charge for approval before bulk purchase is made. All finished work shall match corresponding samples kept with the Engineer.

#### **Preparation of Surface :**

Before painting wooden surfaces, protruding timber fibres shall be removed and nail marks shall be covered with putty. The surface shall be thoroughly cleaned and sand prepared. In case of steel work it shall be scraped, well brushed and cleaned free of rust, scale dirt. Base preparation for painting concrete, masonry and plastered surfaces shall be carried out as per IS 2395 – Part I. Before actually proceeding with the work of painting the concrete, masonry and plastered surfaces, it shall be verified that the surfaces shall be completely dry, free from efflorescence and alkaline effect.

#### **Application**

The primer shall be applied with brushes and spread as evenly and as smooth as possible. For steel work a priming coat of Red Oxide / Zinc Chromate paint shall be applied. Painting shall be done by skilled labourers in a work-man like manner. All coats shall be of proper consistency and shall be well brushed out, so that no brush marks are visible. The under coating should be nearest to the specified colour of the finishing coat. Unless otherwise specified ready mixed synthetic enamel paints shall be used for painting, wood and steel work. Under coats should be completely dry before finishing coat is taken up. Priming coat and under coat shall be rubbed with sand paper and dusted clean. The finished coat of approved paint shall then be applied.

### **17. Cement Painting**

Cement Paint solution shall be applied to the surface with hair brushes in a number of coats to get uniform finish. After the first coat of paints has hardened, it shall be cured with water atleast for 24 hours. The surface shall be wetted again before the application of the second coat. Atleast 24 hours should lapse between the two coats, number of coats shall be as specified in the schedule of quantities. It shall be kept damp atleast for seven days.

## **18. French Polish**

French polish to be used shall comply with IS 348. Polishing shall be obtained by dissolving 1 lbs, of shellac in one gallon of methylated spirit without applying any source of heat. After the shellac has dissolved  $\frac{1}{4}$  lbs of cobalt,  $\frac{1}{4}$  lbs of lobano and 0.4 oz of crystals of desired pigment shall be added. The solution shall be applied with a pad of fine muslin cloth tied as per general practice. The pad shall be dipped into the solution and wrung with fingers and be rubbed hard on the surface in this way, the first coat is to be given after this gets dried up, the successive coats shall be given in the same fashion till the mirror like surface is obtained. The wood to be polished shall be first applied with a filler composed of 1.25 Kg. of whiting mixed with one litre of methylated spirit and then sand papered when dry. The finished surface shall have uniform texture and gloss. Approved transparent sealer shall only be used in base preparation.

## **SAFETY PRECAUTIONS TO BE OBSERVED WHILE TRANSPORTING MATERIALS**

### **I.VEHICLE**

1. Vehicles carrying material should have proper registration documents and must be produced on demand by our Security Staff.
2. The light on right side, i.e., over the drivers cabin shall be in working condition.
3. Both the head lights as well as park lamps must be in working conditions.

### **II. MOVEMENT OF VEHICLE**

1. The vehicle should not travel at more than 20 km.ph in our premises.
2. The Driver of the vehicle must possess heavy duty licence and produce on demand by the Security Staff.
3. Vehicles carrying inflammable liquids in the tank containers should have grounding chain or the tank should be coated with insulating material also to avoid Static Electricity.
4. In road junctions, speed breakers and railway crossing, the speed should be lowered and vehicle should proceed cautiously.
5. The driving should 'KEEP TO THE LEFT' at all places.
6. The vehicle should not be parked in road which could obstruct the vehicular traffic.
7. No person other than driver should be allowed to sit or stand on the prime mover or trailer.
8. The vehicle should pass only through the approved routes. Short cuts should be forbidden.
9. There must be a safe distance behind another moving truck.
10. The driver should avoid making quick starts, jerky stops or quick turns at excessive speed.

### **III SHIPPING**

1. Strong side supports should be provided on both sides of the trailer. The side supports should be fixed in such a way that it cannot be removed even temporarily.
2. Adequate packing must be given for easy slinging operation. The packing materials should be good enough to withstand the load.
3. The stacking of loads in the truck should be evenly placed. The load should not be heaped together or dumped over the chassis.
4. The loaded materials should be fastened tightly with 'WIRE ROPE'. Manila rope or coir rope should not at all be used. There must be side packing such as gunny or rubber tyre between the sharp edge of the job and wire rope in order to avoid cut in the wire rope.
5. There must be minimum two fastenings and it should be more in case of lengthier loads.
6. The wire rope should be in sound conditions i.e, there should not be links, knots or bristles etc.,
7. The wire rope ends should be clamped with 'U' clamps.
8. The load on the truck should not be beyond its standard capacity. The carrying capacity must be clearly marked on the trailer also.
9. The loose pieces should be bundled before loading on the truck.
10. There must be red flags or red lamps for the lengthy loads which extend beyond chassis.
11. The load should not be over hanging more than 3 ft. from the end of the body.
12. The materials should not be stacked too high to avoid hitting against live electric lines.
13. While transporting the scraps, there must be wire knitting cover to prevent falling of scrap.

### **IV GENERAL**

The vehicles should not be moved directly inside the production building in case the materials are to be unloaded there. But the vehicle should be parked outside the building and the driver should ascertain the passage as well as the unloading points with the help of shop officials. This will avoid the congestion of blocking of traffic in the gangway.

## **TERMS AND CONDITIONS REGARDING COMPLIANCE WITH VARIOUS LABOUR LAWS BY THE CONTRACTORS FOR BHEL**

1. The Contractor shall not employ in connection with the work any person who has not completed 18 years of age.
2. The Contractor shall in respect of labour employed by him either directly or through subcontractors, comply with or cause to be complied with the following statutory provisions and rules and in regard to all matters provided therein.
  - a) The Contract Labour (Regulation & Abolition) Act 1970 and the related Tamil Nadu Rules.
  - b) The Minimum Wages Act 1948 and the related Tamil Nadu Rules.
  - c) The Payment of Wages Act 1936 and the related Tamil Nadu Rules.
  - d) The Factories Act 1948 and the related Tamil Nadu Rules.
  - e) The Employee's Provident Fund & Miscellaneous Provisions Act 1952.
  - f) The Employees State Insurance Act 1948.
  - g) The Workmen Compensation Act 1923.
  - h) The Industrial Disputes Act 1947.And any other law or modifications to the above or to the Rules made thereunder from time to time.

### **REGISTRATION AND LICENSING**

3. Every Contractor shall register his name with the Welfare Section of BHEL before taking up the work awarded to him by giving the following information and getting a Code Number :
  - a) The Name of the Contractor
  - b) Nature of Contract Work
  - c) Period of work
  - d) Number of maximum labour employed by him on any one day
  - e) License No. & Date (Applicable in case of contractor employing 20 or more workers)
  - f) Whether enrolled for PF, ESI, etc., and enrolment No.

This information is called for, for the purpose of informing the Inspectorate of Factories whenever they call for information regarding contracts.

4. The Contractor employing 20 or more workmen is required to obtain license from the authorities ( The Deputy Chief Inspector of Factories / Assistant Commissioner of Labour as the case may be ). The license shall be amended and / or renewed wherever, there is an increase in the workmen employed by him or in the event of contract being extended or renewed. The Contractor shall inform the licence number to the BHEL Management before taking up the work.
5. The Contractor (Licensed or unlicensed) shall promptly furnish every information and document required by BHEL authorities for the purpose of fulfilling their obligations as Principal Employer and / or Occupier of the Factory and shall render all necessary assistance for the same.

### **WAGES**

6. The Contractor shall pay wages to the workmen employed by him at the rate which shall not be less than the minimum wages applicable under Law from time to time.
7. The Contractor shall fix wage periods in respect of which wages shall be payable. No wage period shall exceed one month.

8. The Contractor shall ensure payment of wages to the contract labour employed by him within three days from the end of wage period in case the wage period is one week or a fortnight and in all other cases before 10<sup>th</sup> day of the following month.
9. All Payment of wages shall be made on working days at the work site and during the working time and on date notified in advance. In case the work is completed before the expiry of the wage period final payment shall be made within 48 hours of the last working day.
10. Where the employment of any worker is terminated by or on behalf of the Contractor, the wages earned by him shall be paid before the expiry of the second working day from the day on which his employment is terminated.
11. Wages due to every worker shall be paid to him direct or to the person authorized by him in this behalf. All wages shall be paid in current coin or currency in both.
12. The Contractor shall ensure the disbursement of wages in the presence of such authorized representative of BHEL Management.
13. The above payment shall be verified by the authorized officer / representative of BHEL with the following certificate of the payment sheet "Certified that the amount shown in Column No..... has been paid to the workmen concerned in my presence on .....at....."
14. A certificate of payment shall be furnished in duplicate by the Contractor to the Engineer in charge each month in Form 'A'.
15. A notice showing the wage period and the place and time of disbursement of wages shall be displayed at the place of work and a copy to be sent to the Welfare Department by the Contractor under acknowledgement.
16. Notices showing the rate of wages, weekly rest days, hours of work, wage period, date of payment of wages, names and addresses of the Inspector having jurisdiction, the date of unpaid wages shall be displayed in Tamil and English in conspicuous places at the establishment and at work site by the Contractor. The Contractor shall inform the BHEL Management every month the details of contract labour engaged for contract in this following form :
  - a) Serial Number
  - b) Location
  - c) Period of work
  - d) No. of contract labour engaged during the month
  - e) No. of days worked
  - f) No. of men worked
  - g) Wages paid to workers

The above statement shall be furnished to BHEL Management at the end of every month.

## **REGISTERS AND RECORDS AND COLLECTION OF STATISTICS**

17. The following documents / formats under Contract Labour ( Regulation & Abolition ) Act 1970 and Tamil Nadu Rules thereunder shall be maintained by each contractor.
  - a) Register of persons employed by the Contractor
  - b) Employment Card
  - c) Service Certificate
  - d) Muster Roll, Wage Register, Deduction Register, Wage slip, Overtime Register, Register of Fines, Register of Advances etc.,
18. The Contractor shall display the abstract of the Contract Labour (Regulation&Abolition ) Act and the Rules thereunder both in English and Tamil.
19. Half yearly Return shall be sent by the Contractor in duplicate to the Licensing Officer.
20. The Contractor shall submit the returns required under the Contract Labour (Regulation & Abolition ) Act 1970 periodically to BHEL Management.
21. The Contractor shall without fail give upto date information in writing of the attendance of the workers employed by him.
22. The Contractor shall ensure that his workers keep and produce their Employment Card when coming to duty and take them back when leaving duty.
23. All the above registers and records shall be preserved in original for a period of three years. All the registers, records and notice maintained under the Act and rules shall be produced on demand by Inspector or any authority under the Act.

## **WORKING HOURS AND WORKING CONDITIONS**

24. No worker shall be required or allowed to work on Sunday unless he has or will have a holiday on anyone of the three days before or after the said day.
25. The Contractor shall inform BHEL Management in the prescribed form details of the contract workers scheduled to work on Sunday, the day of rest and also indicate the substituted holiday in lieu thereof. This shall be intimated two days in advance before his workmen are booked for work on Sunday.
26. The contract labour working for more than nine hours in any day or for more than 48 hours in any week shall be paid wages at the rate of twice the ordinary rate of wages in accordance with the provisions of Sections 59 of the Factories Act 1948.
27. The Contractor shall provide all safety devices and personal protective equipment to his workmen at his own cost and shall ensure that his workmen wear / use such devices or equipment provided to them while doing the work and there should not be any relaxation on this.
28. The Contractor shall give four paid National Holidays to his workers, viz., 26<sup>th</sup> January, 1<sup>st</sup> May, 15<sup>th</sup> August and 2<sup>nd</sup> October.

29. The Contractor shall ensure that his workmen vacate the premises after the shift is over.
30. The Contractor shall give leave with wages to his workmen who have worked for a period of 240 days or more in the Factory premises during a calendar year. This leave shall be allowed during the subsequent calendar year at the rate of one day for every 20 days of work performed by the worker during the previous calendar year. The worker whose services commences on a day other than the first of January shall be entitled to leave with wages at the above rate (One day for every 20 days of work) only if he had worked for a minimum of 2 /3 of the total number of days in the remainder of the calendar year. This leave will be admissible only during the subsequent calendar year.
31. No woman worker shall be required or allowed to work in the Factory except between the hours of 6.00 A.M. and 7.00 P.M.
32. The Contractor shall comply with the provisions relating to Welfare and Health facilities as provided in the Contract Labour (Regulation and Abolition) Act 1970 read with the Tamil Nadu Contract Labour Rules 1975.

#### **NOTICE OF ACCIDENTS**

33. Notwithstanding anything contrary to this, in the event of accident the contractor shall be required to fill injury report and submit the Engineer in charge immediately and ensure the compliances of ESI / Workmen's compensation Act, Factories Act and Rules made thereunder. He shall also maintain a register of accident as per the Act.
34. The Contractor shall get the contract labour engaged by him insured under Workmen's Compensation policy from General Insurance Corporation of India before actually starting the work of contract. The insurance coverage should be for the entire period of Contract. The Contract shall comply with the provisions of the Workmen's Compensation Act 1923. (This should be read in conjunction with the provisions of ESI Act )

#### **COVERAGE UNDER THE ESI ACT / PF AND MISCELLANEOUS PROVISIONS ACT**

35. The contractor shall ensure that all his workmen are covered under the Employee's State Insurance Act and produce to BHEL such Registration Number / Enrolment Number before executing the contract work.
36. The Contractor shall regularly pay the amount of contribution. i.e., employer's contributions as well as employees' contribution pursuant of the above scheme as fixed from time to time. The Contribution payable presently is 1.75% wages to be recovered from his workmen and 4.75% of wages to be contributed by the Contractor. Contributions recovered from employee and contribution made by the contractor may be rounded to the next higher multiples of five paise.
37. The Contractor shall take note of any amendment that may be brought forth in the above contribution rate and act accordingly.
38. The contractor shall ensure that his workmen are covered under the EPF & Miscellaneous Provisions Act 1952 and accordingly produce to the BHEL Management the registration / enrolment number before awarding of contract work. As per the existing provisions every worker shall be entitled and required to become a member of the fund. The employee's contribution payable at present is 12% of wages which will be recovered by the contractor from the wages of his workmen and the contractor should pay equal

contribution. The contractor is also liable to pay any administrative charges in this behalf that may be decided from time to time. It will be the responsibility of the contractor to ensure such contribution payable in respect of workmen employed through sub-contractors also.

39. The Contractor shall take note of any amendment in the rate of contribution payable under the scheme from time to time.
40. The Contractor shall within seven days of the close of every month submit to BHEL a statement showing the amount of contribution payable / paid for employees engaged by him or through him and shall also furnish to BHEL such information as Principal Employer is required to furnish under the provisions of the ESI Act and PF as well as the schemes made thereunder to the authorities concerned.
41. Whenever any sum of money is found to be recoverable from or payable by the contractor under the above Act, the sum shall be deducted from any sum that may be due or which at any time thereafter may become due to the Contractor under this contract or under any other contract or from his security deposit. In case the recoveries are not sufficient to satisfy the claim, the contractor shall pay the balance thereof on demand. In case any recoveries are made under this clause from security deposit, the contractor shall immediately thereafter pay such further sums as may be required to replenish the shortage caused by such recoveries in amount of security deposit.
42. The Contractor shall abide by all the labour and other laws applicable to contract labour / worker under this contract and shall at all times keep BHEL indemnified against all losses, claims, prosecutions under any law.
43. In case of non-compliance of any of the provisions of the Acts and in case BHEL having complied with the same, BHEL will be entitled to recover the same from the contractor / sub-contractor.
44. Non-exercise of any of the powers or rights available to BHEL hereunder or under any law, shall not in any way operate as waiver thereof.

Note : The Specimen forms for the following are available in BHEL.

- 1) Form 'A' - Payment Certificate
- 2) Form IV - Application for License
- 3) Form XIII - Register of Workmen employed by contractor
- 4) Form XIV - Employment Card
- 5) Form XV - Service Certificate
- 6) Form XVI - Muster Roll
- 7) Form XVII - Register of wages
- 8) Form XIX - Wage slip

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

**NAME OF WORK: Entire House Keeping work at A & D- Sectors.**

DETAILS & QUANTITIES of each item of work shown in the BILL OF QUANTITIES are only approximate. They are given as a guide for the purpose of tendering only and are liable to variation and alteration of the Competent Authority. The work under each item as executed shall be measured and priced at the corresponding rate quoted by the contractor in the BILL OF QUANTITIES

Sl.No.	Description of work / supplied	Total amount of work / supplies (in figures and words)		Period of contract
		Rs.	Ps.	
1.	<b>Entire House Keeping work at A &amp; D- Sectors.</b>	<b>44 Lakh</b>		<b>12 MONTHS</b>

**BILL OF QUANTITIES**

Sl. No.	Appx. Qty.	Description of work	TNBP No.	Rate (Both in Unit fig & Words)	Amount	
					Rs.	Ps.

AS PER SEPARATE SHEETS ATTACHED IN PRICE BID

## SCHEDULE 'B'

1. The following materials will be issued FREE of cost to contractor at BHEL Stores / Stock yard.

Sl.No.	DESCRIPTION	PLACE OF ISSUE
1	Cement	BHEL STORES or Stock yard
2	M.S Rounds, C.T.D Bars & Structural Steel, rails and all railway materials	BHEL STORES or Stock yard
3	A.C. / Galvalume / Polycarbonate Sheets	BHEL STORES or Stock yard
4	Cast iron pipes & specials including pig lead for jointing	BHEL STORES or Stock yard

2. It will be the responsibility of the Contractor to submit his demands for the above stores in writing atleast seven days in advance of the actual requirement.
3. Issue of Stores is subject of the availability at the place of issue cited above, items of stores to be issued by BHEL which are not available at the time of indenting by the contractor may be supplied by BHEL after necessary procurement. The contractor shall not be entitled to any claim of compensation for delay in the supply of stores by BHEL under any circumstances.
4. The materials will be issued only during the working hours of the BHEL Stores Department ( 8.00 a.m. to 4.30 p.m. ). Contractor shall have to transport them as soon as they are issued to him to the site of work at his own cost.
5. The steel materials if issued will be in random lengths and sizes as stocked by the BHEL and the cost of all cutting, conversion, substitution and fabrication as well as wastage shall have to be borne by the Contractor.
6. The contractor shall from time to time render proper account of all materials issued to him by BHEL. If he fails to do so, no further issue of materials will be made to him and he will be held responsible for any delay in the execution of the work which may occur on this account.
7. Where A.C. Sheets and accessories, Doors, Windows, Sanitary fittings, Special glasses or other items are issued free of cost to the contractor, the contractor will have to make good at his own cost any loss or damage to any part or whole of the items issued to him as above. All wastage within the premises limits as fixed by BHEL will be charged for at the prescribed issued rates of BHEL. Excess wastage will be charged for at punitive rates which will be 100% higher than the issue rates.
8. All surplus materials in good condition which are not returned to the BHEL Stores as also quantities of materials consumed in excess of the max. permissible limit as fixed by BHEL shall be charged for at punitive rates.

The decision of the Senior Engineer / Dy. Manager / Manager as to the extent to which materials have been rendered surplus or consumed in excess of the actual requirements shall be final and conclusive and binding on the contractor.

## SCHEDULE 'C'

### ISSUE OF TOOLS AND PLANTS TO CONTRACTORS

Sl.No.	Qty.	Particulars	Details of BHEL Crew Supplied	Hire Charges Per unit Per Day	Place of Issue	Remarks
--------	------	-------------	-------------------------------------	--	----------------------	---------

.....Nil.....

- a. Machineries shall not be operated over time without the written permission of the Sr. Engineer / Dy. Manager / Manager.
- b. All Coolies, Watermen etc., required in addition to BHEL crew mentioned in column 4 above shall be arranged by the contractor at his own expense.

## SCHEDULE 'D'

NOTE : All Drawings are to be signed by the Contractor as well as the officer entering into contract.

SL.No.	DRAWING NUMBER	DESCRIPTION
1.	<b>CEG: TP: 03: 00050</b>	<b>Entire House Keeping work at A &amp; D- Sectors.</b>

**SCHEDULE 'E'**  
**LEAD STATEMENT**

<b>Sl.No.</b>	<b>Name of Material</b>	<b>Name of Source</b>	<b>Lead Particulars both for Factory and Township</b>
1	Cement	BHEL Stores	2 Kilometre
2	M.S Rounds, C.T.D Bars & Structural Steel, rails and all railway materials	BHEL Stores	2 Kilometre
3	A.C. / Galvalume / Polycarbonate Sheets	BHEL Stores	2 Kilometre
4	Cast iron pipes & specials including pig lead for jointing	BHEL Stores	2 Kilometre
5	Broken Stones, R.R. Stones etc.	Thuvakudimalai	4 Kilometre
6	Sand	Coleroon River	14 Kilometre

C.A.....Date .....  
(To be used in conjunction with BHE Ltd., General Conditions of Contract )

### AUTHORITY TO TENDER

Tender Notice No. **TOWNSHIP- 04/11**

Office of the  
ADDITIONAL GENERAL MANAGER  
CIVIL / TOWNSHIP  
BHARAT HEAVY ELECTRICALS LIMITED  
TIRUCHY – 14.

Tender Schedule No. **T- 21/11**

Lumpsum / Percentage rate /Item rate tender for work required in **Entire House Keeping work at A & D- Sectors.**

Messrs / Mr. ....

.....of.....

are / is hereby authorized to tender for the above work. The Tender is to be delivered at the Office of the ADDITIONAL GENERAL MANAGER / CIVIL / TOWNSHIP Bharat Heavy Electricals Limited Unit, Thiruverumbur, Tiruchirappalli – 620 014, **upto 09.30 hrs. on 23 07 11** addressed to the Manager / Civil / Planning (Township), BHEL. Tiruverumbur, Tiruchirapalli – 620 014 superscribing the name of work as mentioned above.

Any correspondence concerning this tender should be addressed as indicated above quoting the Tender Notice, Schedule No. and other relevant particulars.

**BHARAT HEAVY ELECTRICALS LIMITED DO NOT BIND THEMSELVES TO ACCEPT THE LOWEST OR ANY TENDER.**

Issuing Officer with  
Designation

Contract Agreement No.....

**TENDER**

To

The Additional General Manager/Civil/Township  
Bharat Heavy Electricals Limited  
Unit : Tiruverumbur  
TIRUCHIRAPPALLI – 620 014.

I / We hereby offer to carryout the work of **Entire House Keeping work at A & D- Sectors.**

I / We hereby carefully perused the following documents connected with the above noted work and agree to obide by the same.

- 1.Specifications (General & Particular )
- 2.Drawings
- 3.Schedule 'A', 'B', 'C', 'D' & 'E'
- 4.Schedule of Rates
- 5.BHE Ltd., General & Special Conditions of Contract, Tender Notice and Instructions to Tenders attached hereto.

I / We forward herewith the sum of Rs.....as Earnest Money, which shall be refunded should this tender be rejected. I / We further agree to deposit such sum which along with the sum of Rs.....mentioned above shall make up 50% of the fully Security Deposit for this work as provided for under conditions of the BHARAT HEAVY ELECTRICALS LIMITED General Conditions of Contract.

I / We further agree to execute all the work referred to in the said documents upon the terms & conditions contained or referred therein and as detailed in Schedule 'A' and Bill of Quantities annexure thereto and to carry out such deviations as may be ordered, vide conditions 6 of the BHEL Ltd., General Conditions of Contract upto a maximum of 20% of the tendered amount of Rs.....

I / We further agree to refer all disputes, as required by condition 62 of the General conditions of Contract to the sole arbitration of an Officer, to be appointed by the General Manager, B.H.E Ltd., in his sole discretion whose decision shall be final and binding.

**WITNESS**

Signature of the Contractor

Date :

1. ....

2. ....

**GENERAL SUMMARY**

1.	(a) Net Cost of works or building etc., from Schedule 'A'	Rs.	
2.	Provisional sum	Rs.	
			.....
	Total	Rs.	
			.....

Rupees.....  
.....  
.....

Shri..... in  
the capacity of .....  
has been duly authorized by me / us to sign the tender for and on behalf of  
.....

( in block letters )

Date : SIGNATURE OF CONTRACTOR

Witness : Postal Address :

1.....  
Address

Telephone No.

2. ....  
Address

..... alterations have been made in the Tender Document and as evidence that these alterations were made before the execution of contract agreement, they have been initialed by the Contractor and the .....

.....the said officer is hereby authorized to sign and initial on my behalf the documents forming part of this contract (Number of alternation in figures and words to be given here)

The above tender is accepted by me on behalf of the Bharat Heavy Electricals Limited, Unit: Thriuverumbur, Tiruchirappalli – 620 014. for a sum of Rs.....

.....at the percentage rates as indicated in Schedule 'A'.

Signature .....Date.....

Designation .....

## **GENERAL SCOPE AND CONDITIONS FOR HOUSEKEEPING CONTRACTS**

Bharat Heavy Electricals Limited, Tiruchirapalli have around 5420 Quarters and various public buildings like Schools, Hospitals, Marriage halls, Recreation Centres, Shopping Centres, Offices etc. located in an extent of around 750 Acre. The housekeeping activities of the entire Township is being carried out through outsourcing.

To collect the garbage daily including Sundays and holidays at the door step and complete the daily collection before 10.00 Hrs. and get the acknowledgement from the occupants on weekly basis.

To segregate the garbage at source itself viz at the doorstep, at the dustbin and at other collection points.

To deploy adequate number of push carts suitable for road movement and tricycles for the effective management and disposal of garbage.

To engage lorries daily with minimum four load men for each lorry and to transport the garbage without spilling by covering with net.

To complete the conservancy (cleaning of closets etc at houses) before 10.00 Hrs. and get the acknowledgement from the occupants on daily basis.

To maintain and submit the daily log sheet for the work done to ensure the works are carried out as per the time table and for BHEL's approval. This return will be submitted on subsequent day in the forenoon.

To maintain and submit the daily logbook for the stock and consumption details of cleaning materials on the subsequent day for BHEL's approval.

To engage adequate workforce to meet the daily requirement and is to be ascertained that required persons are deployed for effective performance of item 1 of the contract

To ensure that workmen are provided with identity with an instruction to wear the uniform while on duty.

A recovery of Rs. 50/- for that trip will be effected when the lorry carries non segregated garbage.

All labours will have to be paid minimum wages as applicable to general engineering and fabrication industry fixed by Govt. of Tamilnadu and other statutory payments as prevailing.

All labour, consumables, tools & plants etc are under the contractor's scope except the spray machine and chemical for vector control.

To effect recoveries as mentioned in the Bill of Quantities (Price Bid) for non-performance.

To submit the detailed programme of work along with periodicity of each activity in line with the tender stipulation and implement the same throughout the contract period once the contract is awarded.

**CONTRACTOR**

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**ACCEPTING OFFICER**

**BHARAT HEAVY ELECTRICALS LIMITED  
TIRUCHIRAPPALLI - 620 014  
CIVIL ENGINEERING DEPARTMENT - TOWNSHIP**

**NORMS FOR QUALIFICATION**

**Name of work: Entire House Keeping work at A & D- Sectors.**

**Tender Schedule No. T-21 / 11**

**Tender value of Rs.40 Lakh**

<b>ELIGIBILITY:-</b>			
1. <b>Separate Registration for EPF, ESI, PAN &amp; Service Tax New registration No., proof of having submitted IT returns for the last three years, Profit &amp; Loss Account and Balance Sheet certified by the auditor.</b>			
2. <b>Average annual value of housekeeping works completed in the last 3 years (2007-10) shall be at least Rs. 12 Lakh</b>			
3. <b>During last seven years should have successfully completed works either</b>			
<b>I. Three similar works each not less than Rs.16 Lakh</b>			
<b>or</b>			
<b>II. Two similar works each not less than Rs.20 Lakh</b>			
<b>or</b>			
<b>III. One similar work not less than Rs.32 Lakh</b>			
4. <b>Solvency (obtained within 6 months) from Nationalised /Scheduled Bank shall be produced for at least Rs.16 Lakh</b>			
	<b>THRUST AREA</b>	<b>SCORE</b>	<b>QUALIFICATION NORMS</b>
<b>I</b>	<b>Nature of Company</b>	<b>5</b>	
	Public Limited	5	
	Private Limited/Partnership Firm	3	
	Sole Proprietor	2	
<b>II</b>	<b>Similar Experience (Housekeeping works)</b>	<b>30</b>	
	Total Value of housekeeping works executed in the last three years	30	More than Rs.72 Lakh.
	Pro-rata for in between cases	18	Rs.36 Lakh
<b>III</b>	<b>Performance on previous works</b>	<b>10</b>	
	Successful completion of three major works in time.	10	Costing at least Rs.16 Lakh each
	Successful completion of two major works in time	8	Costing at least Rs. 16 Lakh each
	Successful completion of one major work in time	6	Costing at least Rs.16 Lakh

**CONTRACTOR**

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**ACCEPTING OFFICER**

<b>IV</b>	<b>Highest value of single work completed</b>	<b>10</b>	
	More than	10	Rs. 32 Lakh.
	Pro-rata for in between cases	6	Rs. 16 Lakh.
<b>V</b>	<b>Value of single housekeeping work completed in the last three years</b>	<b>20</b>	Rs.40 Lakh
	More than	12	Rs.24 Lakh
	Pro-rata for in between cases	6	Rs.12 Lakh
<b>VI</b>	<b>Equipments owned</b>	<b>10</b>	
	Transport vehicles, tricycles with dust bins, push carts with dust bins, cobweb remover, sufficient tools like crowbars, spades, shovels etc. sewer cleaning machine, toilet cleaning equipments, etc.	10	
	Transport vehicles, tricycles with dust bins, push carts with dust bins, cobweb remover, sufficient tools like crowbars, spades, shovels etc.	8	
	Tricycles with dust bins, push carts with dust bins, cobweb remover, sufficient tools like crowbars, spades, shovels etc.	6	
<b>VII</b>	<b>Qualified staff availability</b>	<b>5</b>	
	If Sanitary Inspectors (3 Nos), Sanitary Supervisors (6 Nos) & Sanitary Field Staff (10 Nos) available	5	
	If Sanitary Inspectors (3 Nos) & Sanitary Supervisors (6 Nos)	4	
	If Sanitary Inspectors (3 Nos) & Sanitary Field Staff (10 Nos) available	3	
	If Sanitary Supervisors (6 Nos) & Sanitary Field Staff (10 Nos)available	2	
<b>VIII</b>	<b>Financial stability</b>	<b>10</b>	
	Solvency	10	Rs. 32 Lakh
	Pro-rata for in between cases	6	Rs.16 Lakh.
<b>Total</b>		<b>100</b>	

**NOTE:**

1. **Minimum score required for qualification is 60 out of 100.**

**CONTRACTOR**

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**ACCEPTING OFFICER**



10. Does the applicant maintain any office for this business?
11. Is the individual/sole proprietor/any partner/directors of company:
- (a) Dismissed Government Servant Yes  No
  - (b) Having business banned/suspended by any government in the past Yes  No
  - (c) Convicted by a court of law Yes  No
  - (d) Retired Engineer / Official from Engineering Departments of Govt. of India within last two years Yes  No
  - (e) Director or partner of any other company / firm enlisted with CPWD or any other department Yes  No
  - (f) Member of Parliament or any State Legislative Assembly  
If answer to any of the above is 'Yes", furnish details on a separate sheet Yes  No

12. Name of person holding power of attorney. ....  
(Copy to be enclosed)

- (a) Nationality Indian  Other
- (b) Liabilities

13. Name of Banker with full address  
**(Note:** Banker's report in original preferably in sealed cover, giving the financial capacity to handle works of the required magnitude should be enclosed).  
.....  
.....  
.....

14. Place of business  
.....

15. Date of commencement of business

16. Details of Income Tax paid during last three years.
- 1. 2009-10
  - 2. 2008-09
  - 3. 2007-08

17. Contractor's capital in the business. (in case of partnership, please mention percentage of shares and amount) \_\_\_\_\_

18. Quantum of business done during last three financial years
- 1. 2009-10
  - 2. 2008-09
  - 3. 2007-08

**CONTRACTOR**

**ACCEPTING OFFICER**

19. Value of fixed assets of the business in the last three years
1. 2009-10
  2. 2008-09
  3. 2007-08

20. Guarantee limits (if any) enjoyed by the firm.

21. Over-draft limits (if any) enjoyed by the firm.

22. State whether Audited report for Profit and Loss Account & Balance Sheet for last three years enclosed.

Yes

No

23. Details of Technically qualified and Non-Technical staff (Permanent & Temporary): -

Sl. No.	Name and Designation	Qualification	Experience and Specialisation	Remarks if any

24. Whether the details of T & P, Machinery, Equipments as per Annexure – I.

Yes

No

25. Whether enlisted with any other Department?

Yes

No

(a) If yes, give details:

(i) Name of Department & address .....

(ii) Money limit .....

(iii) Enlistment No. & date .....

(iv) Valid upto

26. Licence No. and validity of licence obtained from Dy. Chief Inspector of Factories / Assistant Commissioner of Labour

27. Whether the applicant has registered his workmen under Employees' State Insurance Act. If so, code number may be furnished. If applied, attested copy of application for registration acknowledged by ESI Authorities.

**CONTRACTOR**

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**ACCEPTING OFFICER**

28. Whether the applicant has registered his workmen under Employees' Provident Funds and Miscellaneous Provisions Act ?. If so, the code number may be furnished. If applied, attested copy of application for registration with acknowledged by PF Authorities.

29. Indicate Central / Local Sales Tax, Excise Duty code Numbers, PAN & VAT.
- |    |     |
|----|-----|
| 1. | CST |
| 2. | LST |
| 3. | ED  |
| 4. | PAN |
| 5. | TIN |

30. Is any person working with the applicant as a near relative of the Officer / Official of BHEL Yes  No

(a) If yes, give details:

- (i) Name .....
- (ii) Staff No. ....
- (iii) Designation & Department .....
- (iv) Unit .....

31. Details of similar works completed during the last seven years (To be submitted in separate sheet as per Annexure-II.)

32. Certificates from clients in original as per proforma given in Annexure -III for all eligible works.

33. Certificates:

- (i) I/We certify that the information given above is true to the best of our knowledge. I/We also understand that if any of the information is found wrong, I/We am/are liable to be debarred.
- (ii) I/We certify that I/We will not get myself / ourselves registered as contractor(s) in BHEL under more than one name.
- (iii) (a) I certify that I did not retire as an Engineer of Gazetted rank or as any Gazetted Officer employed on Engineering or Administrative duties in any Engineering Department of the Government of India during the last two years. I also certify that I have neither such a person under my employment nor shall I employ any such person within two years of his retirement except with the prior permission of the Government. (For Individuals seeking enlistment in their own name).

**CONTRACTOR**

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**ACCEPTING OFFICER**

- (b) We certify that none of the partners/directors retire as an Engineer of Gazetted rank or as any Gazetted Officer employed on Engineering or Administrative duties in last two years. We also certify that we have neither under our employment any such person nor shall we employ any person within two years of his retirement except with the prior permission of the Government. (For partnership firms and limited companies).

Signature(s) of the applicant(s) Name	Signature	Address (Seal in case of Firm)
1. ....	.....	.....
2. ....	.....	.....
3. ....	.....	.....
4. ....	.....	.....
5. ....	.....	.....

Date:

- NOTE:** 1) All the relevant certificates, details etc. should be attached with the application.  
2) The terms that are not applicable may be scored out.

Details of documents attached: -

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.

**CONTRACTOR**

**ACCEPTING OFFICER**

**ANNEXURE - I****DETAILS OF PLANTS AND EQUIPMENTS OWNED**

Sl. No.	Name of Equipments	Nos.	Capacity or Type	Age	Remarks
A	Vehicles for transporting garbage, sludge, etc.				
B	Tricycles with dust bins				
C	Push carts with dust bins				
D	Cobweb remover				
E	Tools like crowbars, spades, shovels etc.				

**CONTRACTOR**

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**ACCEPTING OFFICER**

**ANNEXURE - II**

<b>DETAILS OF SIMILAR WORKS COMPLETED DURING THE LAST SEVEN YEARS</b>								
Sl. No.	Name of work & Agreement No.	Date of commencement	Date of completion		Reasons for delay & compensation levied, if any	Work order Value	Gross cost of completion	Name, designation & complete address of the authority for whom the work was done
			Stipulated	Actual				

DETAILS OF WORK COMPLETION CERTIFICATES, WORK ORDERS ETC. ARE TO BE FURNISHED

**CONTRACTOR**

**ACCEPTING OFFICER**

**CLIENT'S CERTIFICATE REGARDING PERFORMANCE OF  
CONTRACTORS**

Name & Address of the Client

.....  
.....  
.....

Details of works executed by Shri . M/s

.....  
.....

1. Name of work with brief particulars :
2. Agreement No. and date :
3. Date of commencement :
4. Stipulated date of completion :
5. Actual date of completion :
6. Details of compensation levied for delay, if any:
7. Tendered amount :
8. Gross amount of the work completed :
9. Name and address of the authority under whom work executed :
10. Whether the contractor employed qualified Sanitary Inspector / Supervisor during execution of work? :
11. (i) Quality of work (indicate grading) :  
Outstanding/V.Good/Good/Poor  
(ii) Amount of work paid on reduced rate basis, if any :
12. (i) Did the contractor go for arbitration ? :  
(ii) If yes, amount of claim :  
(iii) Amount received :
13. Comments on the capabilities of the contractor
  - (a) Technical Proficiency :Outstanding/V.Good/Good/Poor
  - (b) Financial Soundness :Outstanding/V.Good/Good/Poor
  - (c) Mobilisation of adequate T & P :Outstanding/V.Good/Good/Poor
  - (d) Mobilisation of manpower :Outstanding/V.Good/Good/Poor
  - (e) General behaviour :Outstanding/V.Good/Good/Poor

NOTE: All columns should be filled in properly.

Signature of the  
Certifying Officer with Official  
seal.



DOUBLE CLICK  
ON THE PICTURE TO  
OPEN THE DRAWING

To  
THE PURCHASE / CONTRACT EXECUTING AGENCY / BHEL

**E FORMAT**

**ACCEPTANCE FOR ELECTRONIC FUND TRANSFER / RTGS TRANSFER**

01	Name & Address of the Supplier / Sub-contractor	
02	VENDOR CODE assigned by BHEL	
Details of Bank Account:		
03	NAME & ADDRESS OF THE BANK	
04	NAME OF THE BRANCH	
05	BRANCH CODE	
06	MICR CODE	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
07	ACCOUNT NUMBER	
08	TYPE OF ACCOUNT	CURRENT A/C / OD / CASH CREDIT
09	BENEFICIERY'S NAME	
10	IFSC CODE OF THE BRANCH	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
11	EMAIL ID	
12	TELEPHONE/MOBILE NO.	

**CERTIFICATE**

I / We hereby agree to receive the payments due from BHARAT HEAVY ELECTRICALS LIMITED by the National Electronic Funds Transfer and/or RTGS Transfer mode by credit to my / our above mentioned Bank Account. I / We also agree that payments made to the above mentioned Account is a valid discharge of the liability of Bharat Heavy Electricals Limited. I / We also agree to bear the applicable Bank Charges for the above mode of transfer. **A copy of the cheque leaf/cancelled cheque leaf of the above account is sent herewith.**

AUTHORISED SIGNATORY WITH NAME SEAL

**Banker's Certification**

We confirm that we are enabled for receiving RTGS and NEFT credits and we further confirm that the account number of \_\_\_\_\_ (name of account holder), the signature of the authorized signatory and the MICR and IFSC codes of our Branch mentioned above are correct.

PLACE: \_\_\_\_\_ (Manager / Officer's)  
DATE : \_\_\_\_\_ Signature Under Bank stamp and Name Seal  
With Membership No.  
(Telephone / Mobile No. \_\_\_\_\_ )

Forwarded to Accounts Dept.

We confirm the above details are verified with the records available with us.

Signature of the BHEL Executive with Name Seal (Operating the Contract/Services)