



TAMIL NADU HOUSING BOARD Madurai Circle

Name of Work: Area Development Scheme for 67 Nos. of Residential Plots (HIG-3, MIG- 40 & EWS- 24) in an extent of 3.01 Acres in S.No. 13/1A1pt, 13/1A2, 13/1A3, 13/1B 1pt, 13/1B2, 13/4Apt, 13/4Bpt, 13/8 & 9Apt, 13/2Bpt & 13/3pt of Thathaneri Village, Madurai North Taluk in Sector VI, Madurai.

PRE-QUALIFICATION SCHEDULE

Tender Date: 20.04.2022

Value of Work: Rs.116.54 Lakhs (Approximate)

EMD: Rs.69,000/-

Office of the
Superintending Engineer
Madurai Circle,
Tamilnadu Housing Board,
Ellisnagar, Madurai-625 016
Phone No: 0452-2600 901
semctnhb@yahoo.in

Name of the Contractor	
Address	

Contractor

No. of Corrections

Superintending Engineer



TAMIL NADU HOUSING BOARD

Madurai Circle

Name of Work: Area Development Scheme for 67 Nos. of Residential Plots (HIG-3, MIG- 40 & EWS- 24) in an extent of 3.01 Acres in S.No. 13/1A1pt, 13/1A2, 13/1A3, 13/1B 1pt, 13/1B2, 13/4Apt, 13/4Bpt, 13/8 & 9Apt, 13/2Bpt & 13/3pt of Thathaneri Village, Madurai North Taluk in Sector VI, Madurai.

PRE-QUALIFICATION SCHEDULE

TWO COVER SYSTEM

COVER-A

Value of Work: Rs.116.54 Lakhs (Approximate)
EMD: Rs.69,000/-

Office of the
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IMPORTANT INFORMATIONS TO THE TENDERERS FOR FILLING UP OF TENDER IN THE TENDER SCHEDULE

1. The contractors are requested to read the detailed specification in Schedule A and quote the rates clearly in the tender sheet. Quoting the rates in the tender Schedule-A sheet for all the items will only be taken up for comparison and final.
2. The contractor should make sure that the rates both in figures and in words filled up in the Schedule-A.
3. The Contractors are requested to fill up the rates inclusive of all demand and tariff, neatly without over writing. Otherwise the decision of the TNHB on these rates to be taken up for comparison is the final.
4. The tenderer / Contractor will make their own arrangements to procure and use the cement and steel (as per IS Standards and its latest amendment from time to time) required for the work..
5. The cement brought and used should confirm to IS No. 268 of 1976 and steel should confirm to IS No. 432/64 and 1786/79 (its latest amendment if any). It should be clearly understood that the rate quoted by the tenderer/contractor is inclusive the cost of 43 grade ordinary Portland cement / SRC and steel and other incidental charges such as conveyance, loading, unloading, stacking at site and testing charges etc., complete.
6. The tenderer / contractor will produce test certificate obtained from any one of the Govt. institutions for cement and steel brought to site. As and when required by the Department the cement and steel brought to the site shall be tested by the Department from any one of the approved Govt. institutions and only when the test results confirm to the ISI specification they will be allowed to be used in the works.

7. The contractors registered (the registration certificate should be re-classified and renewed upto date) under Class-1 in PWD, TNPHC, TNSCB, and other Government/Quasi Government Department with appropriate monetary limit are eligible to participate in the Tender.
8. Tenderer enclose a certificate from the concerned Department not below the rank of Superintending Engineer/Chief Executive who have executed such works within a period of five years.
9. The tenderer should have executed works of similar nature costing more than 50% of the value of the work put to tender in a single contract in Government department within the last five years period.
10. Tenderer should be an assesses of Income Tax and attested copy of latest income tax & GST certificate should be enclosed along with their requisition.
11. The tenderer should enclose registration, previous performance, nature and value of the work done etc.
12. Withdrawal of Tender on any circumstance after submission will not be entertained.
13. The Tender schedule is not transferable.
14. Certificate to be furnished for not correlate any corrections in the Downloaded Tender Document Schedule.
15. The Tenderer / Contractor should be followed the above instructions without fail.
16. In case of any discrepancy between the tender documents downloaded from website and the master copy available in the office, the later will prevail and will be binding on the Tenderer. No claim on this account will be entertained.

17. For PQ system, the tender should be accompanied by 2 separate envelopes 'A', and 'B' duly super-scribed on it, the name of work, reference No. and the due date of tender with the name of the tenderer and sealed with the following particulars.

Envelope A- Should contain Earnest Money Deposit in the form Prescribed and filled in pre-qualification Schedules.

Envelope B - Should contain filled in price schedule.

All the two envelopes should be enclosed in an overall envelope duly sealed and super-scribed with the name of the work, reference No., due date of tender and the name of the tenderer and addressed to the Superintending Engineer, Madurai Circle, Tamil Nadu Housing Board, Ellisnagar, Madurai-16 who is tender inviting authority.

At the time and date notified above for opening the overall envelope and cover "A" will be opened. Those bidders who satisfy the requirement of E.M.D. only will be considered for evaluation of pre qualification documents. If any of the bidders indicates the price in envelope "A", the prequalification bid will not be read out and be rejected. The envelope "B" of those who confirm to the pre qualification requirement will be opened in the presence of those who choose to be present on the later date. The date and time will be informed to them well in advance.

TAMIL NADU HOUSING BOARD

ANNEXURE

**PAYMENT OF EMD AND SECURITY DEPOSIT PRESCRIBED
ACCEPTABLE FORM**

Circular No. CE / TC / 5 /98 dated 10-06-98

EMD will be accepted in the following form only and any other form for payment of EMD will not be accepted.

- 1) Cash receipt from the Division office concerned.
- 2) Demand Draft / Banker's Pay orders / Banker's cheque drawn in the name of Exe. Engineer / Tamil Nadu Housing Board of Division concerned (subject to realization of cash)
- 3) A deposit at call receipt duly pledged to the Exe. Engineer / Tamil Nadu Housing Board of concerned Divisions.

(Note item 2 and 3 shall be from Nationalized Bank / Schedule (Indian) Bank)

- 4) Government Securities / Bonds / Certificates duly endorsed / pledged in favour of the Exe. Engineer / Tamil Nadu Housing Board of Division concerned.
- 5) Indra Vikas Patras along with letter (In triplicate) stating that he / they / is / are submitting EMD in the form of IVP & by indicating name of the post office, IVP numbers and value and to mark his / their name in the back side of IVP.
- 6) NSC / KVP pledged in favour of Exe. Engineer / Tamil Nadu Housing Board Division concerned, along with the letter triplicate confirming the pleading scripts to the Exe. Engineer / Tamil Nadu Housing Board (This is not applicable to companies and Institutions)

(Note : Item 3, 4, 5 & 6 above shall be valid for 150 days from the date of opening of Tender (i.e. maturity date of above shall be on or after 150 days from the date of opening of tenders)

II. The successful tenders / Suppliers should furnish security deposit (Including EMD furnished in other forms) in the form of small saving scripts / Deposit accounts.

- 1) NSC / KVP pledged in favour of the Exe. Engineer / Tamil Nadu Housing Board Division concerned along with the letter in triplicate confirming the pledging the scripts to the Exe. Engineer / Tamil Nadu Housing Board (This is not applicable for companies / Institutions)
- 2) I.V.P. along with the letter (in Triplicate) indicating the name of the Post office IVP number and value and confirming to have been furnished the same towards Security Deposits.

Contractor

No. of Corrections

Superintending Engineer

- 3) Other Small Savings scripts / Deposit accounts with the compliance of the stipulation stated in (1) / (2) (as application in this case)
- 4) The Security Deposit in the Form of Irrevocable Bank Guarantee from Nationalized Bank/Scheduled Banks can also be accepted.

III. The above are applicable to the Tenderer / firms situated in Tamil nadu only. The tenderers from other states shall remit EMD / SD by means of cash receipt from the TNHB, Division office concerned, Bankers Demand Drafts, Bankers Pay order, payable to the EE / TNHB. Division concerned. Other form of payment of EMD / SD. will not be considered in respect of the tenderers from other states.

IV. In case of Companies / Institutions, IVP alone will be accepted towards SD, selected Small saving scripts like KVP, NSC. Time Deposit will not be accepted for EMD / SD. The companies / Institutions along with IVP, if furnished for EMD / Security Deposit shall give letter indicating the name of the post office IVP No's and its value and confirming to have been furnished by them towards EMD / S.D. for the tender / Agreement under reference.

V. Actual purchase cost of small saving scripts will alone be taken as the amount paid by the Tenderer / Contractor. The maturity value will not be considered.

VI. This shall form part of tender schedule / Agreement and shall supersede any other stipulations made stated elsewhere in the tender schedule / Agreement.

TAMIL NADU HOUSING BOARD

ADDITIONAL PARTICULARS TO BE FURNISHED BY THE TENDERER

1. Attested copy of the Registration Certificate (The Registration Certificate should be reclassified and renewed upto date in PWD / under class I in PWD / TNHB alone with appropriate monetary limit are eligible.
2. Attested Copy of Solvency Certificate issued by the Competent Authority (not below the rank of Thasildar) issued not earlier than one year and along with E.C. in case of more than one year.
3. Command of Labour, Tools and plants, financial soundness.
4. Performance Certificate issued by the Concerned Department.
5. Credential of the Tenderer for the past five years issued by the authority not lower than the rank of Executive Engineer.
6. **To produce the proof of having executed / completed works of similar nature under a single contract more than 50% of value of work put to tender in Govt. department within the last five years period.**
7. The balance works value in Tamil Nadu Housing Board and other Government Departments should be furnished in the affidavit and the third party certificate in each department executing authority should be enclosed for evidence.
8. The list of works in each works has been taken into account from the Board Tender Register and from other departments. The evidence should be obtained from the executing authority.
9. If any work found left from the list of Balance works in the affidavit and Board Tender Register, the tender may be liable for rejection without any correspondence.
10. Tenderer must produce a certificate from the concerned department not below the rank of Superintending Engineer that they have executed works within a period of five years stating that
 - i) The works awarded were completed.
 - a) within the targeted time
 - b) with E.O.T. initially granted
 - c) Beyond the E.O.T. initially granted
 - d) No. of days taken for completion beyond item "C"
 - ii) Standard materials used on works
 - iii) Whether good and skilled workmanship turned out in the execution of work
 - iv) Deployment of skilled labourer
 - v) Usage of approved materials
 - vi) Response to instructions issued by the Departmental officials.
11. The Income Tax Clearance Certificate valid on the date of opening of tender should be enclosed along with tender.
12. The current GST Certificate valid on the date of tender should be enclosed along with tender.
13. The rate tender shall be valid for a period of 90 days after the date of opening of rate tender.

The Tender should be accompanied by two separate envelopes "A, & B " duly superscribed on it, the name of work reference No. and the due date of Tender with the name of the tenderer and address and sealed with the following particulars.

Envelope : "A" should contain EMD in the form prescribed and filled in pre qualification schedules.

Envelope : "B" should contain filled in price schedule.

All the two envelopes properly sealed separately each should be enclosed in an over all envelope duly sealed and super scribed with the name of the work, reference No., due date of tender and name and address of the tenderer and addressed to the Superintending Engineer, Madurai Circle, Tamil Nadu Housing Board, Ellisnagar, Madurai-16.

At the time and date notified above for opening, the overall envelope and cover "A will be opened. And those bidders who satisfy the requirement of EMD only will be considered for evaluation of pre qualification documents. If any of the bidders indicated the price in Envelope "A" the bid will not be read out and be rejected. The Envelope "B" of those who confirm to the pre qualification, requirement will be opened in the presence of those who choose to be present on a later date, time and place will be intimated to them well in advance.

The time of receipt of Tender will be at 11-00 a.m.

The time of opening of Tender will be at 11.30 a.m.

The cost of Tender schedule will be in the form of DD.

PRE-QUALIFICATION SCHEDULE
Schedule - I Structure and Organization

1. Name of the Company :
- Address :
- Telephone No. :
- Telex No. :
- II. Description of the Company :
 (For e.g. General, Civil Engineering Contractor, Supplier of Equipment etc.,)
- III. Classification of Registration :
- IV. Name and Address of the Bankers :
- V. No. of years of Experience as a General Contractor :
- VI. Number of years of Experience as a Sub Contractor :
- VII. Name and address of Partners or Associated Companies to be involved in Project and whether parent/ Subsidiary/other :
- VIII. Name and address of Companies who will be involved in the electrical work :
- IX. Organization chart showing the structure of the company including names and positions of directors and key personnel to be attached :

Note : Particulars for Item II to VI and IX should be furnished separately for each partner of Joint Venture.

Contractor

No. of Corrections

Superintending Engineer

SCHEDULE II FINANCIAL CAPABILITY

- I. Name of the Firm :
- II. Financial Positions
- a) Cash :
 - b) Current Assets :
 - c) Current Liabilities :
 - d) Working Capital :
 - e) Net worth :
- III. Income Tax Permanent No./GIR No :
- IV. Annual Turnover as per the Income tax Act:
- a) During 2016-17 :
 - b) During 2017-18 :
 - c) During 2018-19 :
 - d) During 2019-20 :
 - e) During 2020-21 :
- V. Annual Income as per Income Tax Return :
- a) During 2016-17 :
 - b) During 2017-18 :
 - c) During 2018-19 :
 - d) During 2019-20 :
 - e) During 2020-21 :
- VI. Financial Resources
- a) Own Resources :
 - b) Bank Credits :

Note : Income Tax Clearance Certificate to cover Item No. IV & V and Certificate of financial soundness from Bankers are to be enclosed.

SCHEDULE III TECHNICAL COMPETENCE

S.No.	Designation	Name	Qualification	Professional Experience and details of works carried out	Remarks
1	2	3	4	5	6
<hr/>					
		Project Manager			
		Works Manager (Civil)			
		Works Manager (Mechanical)			
		Engineer Incharge of Design office			
<hr/>					

Contractor

No. of Corrections

Superintending Engineer

SCHEDULE - IV MAN POWER

	With the Applicant's Pay Role	No. that could be made available for the work
1. No. of Engineering graduates	:	
2. No. of Administrative graduates	:	
3. No. of Skilled employees	:	
4. No. of Unskilled employees	:	

Contractor

No. of Corrections

Superintending Engineer

SCHEDULE - V - MACHINERY

Sl. No	Name of the Equipment	No.of Units	Kind & make	Capacity	Age & conditions	Present location	Present Book value	Remarks
1	2	3	4	5	6	7	8	9

Contractor

No. of Corrections

Superintending Engineer

SCHEDULE - VI –A-EXPERIENCE

Please fill in information about the works completed of the past 6 years

Sl. No	Name & location of the works	Name of the customer who awarded the work	Contract value	Scheduled time for completion	Date of commencement of work	Date of completions of work	Remarks
1	2	3	4	5	6	7	8

Note: Certificate from the customers for the completion of the respective works should be enclosed.

Contractor

No. of Corrections

Superintending Engineer

SCHEDULE - VI –B-EXPERIENCE

Please fill in information about all the works in progress including those where the company has received a letter but a formal contract has not yet been signed.

Sl. No	Name of the works & its location	Name of the customer who awarded the work	Contract value	Scheduled date of completion	Date of commencement of work	Value completed & certified	Percentage of Physical completion	Remarks
1	2	3	4	5	6	7	8	9

Note: Copies of work orders issued in respect of works not commenced and certificate from the customers regarding the stage of completion of works in progress should be enclosed.

Contractor

No. of Corrections

Superintending Engineer

SPECIAL CONDITION FOR PRE QUALIFICATION SCHEDULE

1. Income Tax Clearance Certificate or the Auditors report duly certified by the Chartered Accountant shall contain the information regarding the average annual turnover for 5 years shall be produced to cover of item No. IV and V of Schedule II and Certificate of financial soundness from Bankers are to be enclosed.
2. Proof of the item No. II a and VI b, Schedule II Bankers Certificates with the latest reconciliation statement and latest Auditor's balance sheet certified by the Chartered Accountant are to be enclosed.
3. Latest Auditors report certified by a Chartered Accountant and Balance sheet indicating the present status including the unutilized bank O.D. of the tenderer and bankers certificate for the cash in Bank and O.D. facilities availed to be produced for item VI of Schedule II.
4. Proof of having the given tools and plants tenderer shall produced attested xerox copies of R.C. Book of Vehicles or Bills for the purchase of tool and plants or Auditors report certified by the Chartered Accountant shall contain information regarding the machinery for which RC Books are not issued for Schedule V.
5. Copies of work orders in respect of works not commenced and certificates from the customers regarding stage of completion of works in progress should be enclosed for Schedule
6. In respect of contractor working in Tamil Nadu Housing Board, a certificate from the concerned Executive Engineer detailing the balance works shall be enclosed. Contractor executing other department shall produce attesting xerox copy of the letter with details of balance work and balance amount given by the Chief Executive of the Department or from the authority who executed the agreement for Schedule VI B.
7. The tenderer shall produce on affidavit signature of him / them on stamp paper of Rs. 20/- indicating.
 1. The balance works on hand being executing in private / public undertakings and Government Departments as on date is Rs.
 2. No. of staff in the firm (Manager, Engineers and skilled workers)
 3. I / We agree for debarring tendering for one year if any facts are suppressed.
8. The working capital available (Cash at Bank + Unutilized Bank Credit (OD)] + Sundry Debtors - Sundry Creditor) should be at least 5% of the Balance work on hand of all the works under execution by Contractor plus the value of the work put to tender.

9. The tenderer should enclose the following attested copy of certificates along with pre qualification tender.

- a. Latest I.T.C.
- b. Latest solvency certificate :
- c. Latest performance certificate
from atleast 3 officers not lower
than the Rank of E.E. :
- d. Experience certificate in the name
of tender firm / individual :
- e. Latest tools and plants :
- f. Latest balance sheet for the period of 5 years :
- g. R.C. book with latest F.C :
- h. O.D. facilities from Bank :
(Long term / short term amount)
- i. Firms registration Certificate and
Partnership deed :

**SPECIMEN COPY OF AFFIDAVIT TO BE TYPED IN NON-JUDICIAL STAMP
PAPER OF Rs. 20/- AND TO BE ATTESTED BY NOTARY PUBLIC**

AFFIDAVIT

I / We aged
..... years Son ofdo hereby
solemnly and sincerely affirm and declare as follows for and on behalf of the Firm.

- 1) Balance work on hand being
executed in Private/Public
undertakings and Government
Departments as on date is Rs.....
- 2) No. of Staff in our firm are as
detailed below :
 - a) Managers :
 - b) Engineers :
 - c) Diploma Holders :
 - d) Skilled workers :
- 3) No. of Current and incomplete
contract running under pre-
qualification bid :
- 4) Any of our contract was not terminated for the past five years.
- 5) If any information given is found to be concealed at a later date, the contract
will be terminated forthwith without prejudice to the rights thereon consequent on
termination and the bidder will be black listed.
- 6) I / We agree for debarring tendering for one year if any facts are suppressed.

SIGNATURE

SIGNATURE OF NOTARY PUBLIC

SEAL

Contractor

No. of Corrections

Superintending Engineer

**FOR THE PURPOSE OF PRE-QUALIFICATION TENDERS SIMILAR WORKS
MEANS**

- a) For multistoried (construction of more than 4 floors) that is, five and above, the experience should be similar building work done with height of more than 3 meters vertically from Ground level.
- b) For works up to 4 floors, that is, four and below the experience should be for similar Building works of structure / Buildings / Houses undertaken with a minimum height of 3.5 meters above Ground Level.
- c) For work relating to drains, culverts, retaining walls, bridges, the experience should be for any of the similar civil work construction including building works of houses and flats.
- d) For road work the experience should be for formation of roads and allied development works like filling the low lying area and consolidation.
- e) For the works of water supply mains & distribution system laying of sewer lines and sewage disposal the experience should be for the similar types of work.
- f) For leveling work and filling work, the experience should be for similar leveling and filling work.
- g) For over Head Tank, the experience should be for similar type of over Head Tank work.
- h) For any other items (Tender) the experience should be for the particular similar items executed previously.

In all cases, the decision of the Superintending Engineer is final and he is competent to settle the clarification and disputes wherever necessary.

CHECK LIST FOR THE DOCUMENTS TO BE ENCLOSED ALONG WITH THE PRE-QUALIFICATION TENDER:

1. All covers are sealed with Arrack Seals (covering all joints and corners)
2. Attested copy of the Registration under appropriate class.
- 3., Attested copy of the Firms Registration
4. Attested copy of Registered Partnership Deed
5. Attested copy of the Experience Certificate for having executed work of similar nature under single contract (the work should have been completed)
6. Affidavit in Rs. 20/- Stamp paper containing the following information.
 - a. List of personnel in the firm
 - b. List of Tools and plants available
 - c. Balance works on hand
 - d. Paragraph stating that
 - i) No work was terminated under Penal clause and
 - ii) "We agree for debarring if any facts are found suppressed by us"
7. Third Party certificate for the correct value of Balance works on hand as stated in item 6(c) and duly attested and there should be no variation. If the work order is shown as balance work in 6(c), it should be clearly indicated in the covering letter that the said work has not been commenced with reasons in which case third party certificate is not necessary.
8. Attested copy of solvency certificate from Revenue Authority for the stipulated value.
9. EMD in prescribed form.
10. Attested copy of the latest Income Tax Clearance Certificate.
11. Attested copy of latest GST Certificate. If it is a new case proof of Registration is to be furnished.
12. Attested copy of latest Tools and plants certificate to be duly certified by Chartered Accountant.
13. Attested copy of latest Balance Sheet to be duly signed by Chartered Accountant.
14. Attested copy of latest Bankers Certificate indicating O.D. facility and balance amount on hand.
15. Attested copy of Quality Certificate and performance certificate separately from the S.E. / Chief Executive authority for the works executed.

Contractor

No. of Corrections

Superintending Engineer



TAMIL NADU HOUSING BOARD

Madurai Circle

Name of Work: Area Development Scheme for 67 Nos. of Residential Plots (HIG-3, MIG- 40 & EWS- 24) in an extent of 3.01 Acres in S.No. 13/1A1pt, 13/1A2, 13/1A3, 13/1B 1pt, 13/1B2, 13/4Apt, 13/4Bpt, 13/8 & 9Apt, 13/2Bpt & 13/3pt of Thathaneri Village, Madurai North Taluk in Sector VI, Madurai.

PRE-QUALIFICATION SCHEDULE

COVER- B (Price Schedule)

Tender Date: 20.04.2022

Value of Work: Rs.116.54 Lakhs (Approximate)

EMD: Rs.69,000/-

Office of the
Superintending Engineer
Madurai Circle,
Tamil Nadu Housing Board,
Ellisnagar, Madurai-625 016
Phone No: 0452-2600 901
semctnhb@yahoo.in

TAMIL NADU HOUSING BOARD
TENDER NOTICE No. 08/ 2021-2022

Office of the Superintending Engineer, Madurai Circle Tamil Nadu Housing Board

Tenders will be received by the Superintending Engineer, Tamil Nadu Housing Board, at his Office at Ellisnagar, Madurai - 16 up to **11.00 A.M.** On **20.04.2022** for the work of

**Area Development Scheme for 67 Nos. of
Residential Plots (HIG-3, MIG- 40 & EWS- 24) in an
extent of 3.01 Acres in S.No. 13/1A1pt, 13/1A2,
13/1A3, 13/1B 1pt, 13/1B2, 13/4Apt, 13/4Bpt, 13/8 &
9Apt, 13/2Bpt & 13/3pt of Thathaneri Village, Madurai
North Taluk in Sector VI, Madurai.**

1. The Tender should be in the prescribed form obtainable from Office of the Superintending Engineer, Tamil Nadu Housing Board. The tenders will be opened by the Superintending Engineer, Tamil Nadu Housing Board or his delegate at the place on the date afore mentioned. The tenderers or their agents are expected to present at the time of opening of tenders. The Tender receiving officer will on opening each tender prepare a statement of the attested and unattested corrections therein and hand it over to the tenderers concerned and initial all such corrections in the presence of the tenderer. If any of the tenderers or their agents finds it inconvenient to be present at the time, then, in such case the tender Receiving Officer will on opening the tender of the absentee tenderer make out a statement of the unattested corrections and communicate it to him. The absentee tenderer shall then accept the statement of corrections without any question whatsoever.

2. Tenders must be submitted in sealed covers and should be addressed to the Superintending Engineer, Tamil Nadu Housing Board with the name of the tenderer and the name of the work being noted on the cover.

If the tender is made by an individual it shall be signed with his full name and his address shall be given. If it is made by a member of the firm, it shall be signed with the co-partnership name by a member of the firm who shall also sign his own name, and the name address of each member of the firm shall be given. If the tender is made by a corporation, it shall be signed by duly authorized officer, who shall produce with his tender, satisfactory evidence of his authorization. Such tendering corporations may be required before the contract is executed, to furnish evidence of its corporate existence.

3. Each tenderer must also send a certificate of Income Tax from the appropriate income tax Authority in the form prescribed therefore. This certificate will be valid for one year from the date of issue for all tenders submitted during the period.

In the case of proprietary and partnership firm it will be necessary to produce the certificate aforementioned for the proprietors and for each of the partners as the case may be.

If the tenderer is a registered contractor and if a certificate for the current year had already been produced by him during the calendar year in which the tender is made it will be sufficient if particulars regarding the previous occasion on which the said certificate was produced are given.

All tenders received without certificate as aforementioned will be summarily rejected.

Contractor

No. of Corrections

Superintending Engineer

4. ** Each Tenderer must pay as earnest money, a sum of **Rs.69,000/- (Rupees Sixty Nine Thousand Only)** in the cash counter of the **Madurai Housing Unit, Tamil Nadu Housing Board, Madurai**. Enclose the challan in original with this tender. This earnest money will be refunded to the unsuccessful tenderer on application after intimation is sent of rejection of the tender or at the expiration of 90 days from the date of tender, whichever is earlier. The earnest money will not be received in cash, cheque or Bank Guarantee. Tenders accompanied by cheque, cash or bank guarantee will be summarily rejected.
5. The earnest money will be retained in the case of the successful tendering and will not carry any interest it will be dealt with as provided for in the tender.
 - * Name of work
 - ** Alternatively the earnest money deposit to the required value will be accepted in any one of these forms.
 - i) **Crossed demand draft on any nationalized banks / NSC / KVP in favour of Executive Engineer & Administrative Officer, Madurai Housing Unit Tamil Nadu Housing Board, Madurai Payable at Madurai** When a tender is to be accepted, the tenderer who is under consideration shall attend the office before the end of the period specified by written intimation to him. If the tenderer fails to attend the office before the end of the period specified, his tender will not be considered. He shall forthwith upon intimation being given to him of acceptance of his tender make a security deposit, it will be informed to the successful tenderer on acceptance of tender and sign agreement in the proper departmental form for the due fulfillment of the contract. This security deposit together with the earnest money and the amount with held according to Clause 64-1 of the General Condition of the TNBP shall be retained as Security for the due fulfillment of his contract. Failure to enter into the required agreement or to make the Security deposit as defined in this paragraph shall entail forfeiture of the earnest money. The written agreement to be entered into between the contractor and the Superintending Engineer shall be foundation of the rights of the both the parties and the contract shall not be deemed to be complete until the agreement has first been signed by the contractor and then by proper officer authorized to enter into contracts on behalf of the Housing Board.
6. The tenderer shall examine clearly the TNBP and General Condition of and sign the copy of the TNBP and its addenda volume in token of such study before submitting his tender unit rates which shall be for finished work in site. He shall also carefully study the drawings and additional specifications and all the documents which form part of the agreement to be entered into by the accepted tender. The Tamil Nadu Building Practice and other documents connected with the contract such as specifications plans descriptive specifications sheet regarding materials etc., can be seen at any time between 11.00 a.m. and 5.00 p.m. on office of the Superintending Engineer aforementioned.
A copy of the set of contract documents can also be had on payment of **Rs.15,750/- Inclusive of taxes (Rupees Fifteen Thousand Seven Hundred Fifty Only inclusive of taxes)** for each set which will not be refunded on any account.
7. The tenderers attention is directed to the requirement for materials under the clause "Materials and workmanship" in the Preliminary. Materials conforming to the Indian Standards Specifications shall be used on the work and the tenderer shall quote his rates accordingly.
8. Every tenderer is expected, before quoting his rates to inspect the site of the proposed work. He should also inspect quarries, and satisfy himself about the quality and availability of materials. In every case the materials must comply with the relevant standard

specification. Samples of materials as called for the standard specifications or in this tender notice or as required by the Executive Engineer in any case, shall be submitted for the Executive Engineer's approval before the supply to site of work is begun.

The Tamil Nadu Housing Board will not, however, after acceptance of a contract rate pay any extra charges for load or for any other reason, in case the contractor is found later on to have misjudged the materials available. Attention of the contractor is directed to the "Preliminary Specification" regarding payment of seignior age tools etc.

9. The Tender's particular attention is drawn to sections and clause in the Standard "Preliminary Specification" dealing with.

1. Test, Inspection and rejection of defective materials and work.
2. Carriage
3. Construction plant;
4. Water and Lighting
5. Cleaning up during progress and for delivery;
6. Accidents;
7. Delays;
8. Particulars of payment;

* To be struck out if such copies are not be issued for sale.

The contractor should closely peruse all the specification clause which govern the rate which he is tendering.

10. A Schedule of quantities accompanies this tender notice. It shall be definitely understood that the Superintending Engineer, aforementioned does not accept any responsibility for the correctness or completeness, of this schedule and that this schedule is liable to alterations by omissions, deductions or additions at the discretion of the Executive Engineer, Tamil Nadu Housing Board or as set forth in the conditions of contract. The tenderer will however base his lumpsum tender on this schedule of quantities. He should quote specific rates for each item in the Schedule and the rates should be in Rupees and Paise. The rates should be written both in words and figures and the units in words. The tenderer should also show the totals of each item and the grand total of the whole contract. The schedule "A" accompanying the lump sum tender shall be written legibly and free from the erasures, overwriting of conversions of figures, corrections, where unavoidable should be made by crossing out, initialing dating and rewriting.

11. Tenders offering a percentage deduction from or increase on the estimate amount and those not submitted in proper form or in due time will be rejected. Rates or lumpsum amounts for items not called for shall not be included in the tender. No alteration which is made by tenderer in the contract from the conditions of contract, the drawings, specification, quantities accompanying same will be recognized and if any, such alterations are made the tender will be avoided.

Contractor

No. of Corrections

Superintending Engineer

12. The tenderer should work out his own rates without reference being made to the Tamil Nadu Housing Board current schedule of rates or to the estimate rates which are not open for inspection by tenderers.
13. The attention of the tenderers is directed to the contract requirements as to time of beginning work, the rate of progress and the dates for the completion of the whole work and its several parts, the following rate of progress and of proportionate value of work done from time to time. As will be indicated by the Executive Engineer's certificates of the value of work done will be required. Date of commencement of this programme will be the date on which the site (for premises) is handed over to the contractor.

Period after date of commencement	Percentage of work completed (based on contract lump-sum amount)
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I Month	15 %
II Month	30 %
III Month	45%
IV Month	60 %
V Month	80 %
VI Month	100%

Note : The period to be entered in Column (1) for the purpose of defining the rate of progress may be fixed by Executive Engineer to suit each case.

14. No parts of the contract shall be subject without written permission of the Superintending Engineer, not shall transfer be made by power of attorney authorized to receive payment on the contractor's behalf.
15. If further necessary information is required, the Superintending Engineer of the Tamil Nadu Housing Board will furnish such but it must be clearly understood that tenders must be received in order, and according to instructions.
16. The Superintending Engineer or other sanctioning authority reserves the right to reject any tenders without assigning any reason therefore.
17. Preference in the selections from among the tenders will be given. Other things equal, to those who are themselves professionally qualified or who undertake to employ qualified men at their cost to look after the work. The tenderers should therefore state in clear terms whether they are professionally qualified or whether they undertake to employ technical staff and if so to give their professional qualifications or of the staff to be employed. In case the selected tenderer is one who has undertaken to employ technical staff under him he should see that one of the staff is always at site of the work during hours personally checking all items of work and paying extra attention to such works as may demand special attention e.g., reinforced concrete works etc.,

18. A tenderer submitting a quotation which the tender accepting authority considers excessive and / or indicate of the insufficient knowledge of current prices or

Contractor

No. of Corrections

Superintending Engineer

definite attempt at profiteering will tenderer himself liable to be debarred permanently from tendering or for such period as the tender accepting authority may decide.

19. The fact of submitting the tender implies that the tenderers actually inspected the site of works and have examined before tendering the nature and extend of various kinds of soil at various depth and have based their tenders on such examination by them and no future representation in this regard will be consideration.

20. A statement giving brief particulars of equipment and resources that will be put at the disposal of the work under the following classifications should accompany the tender.

- a) Equipment (Transport for materials viz., lorries and carts, concrete mixers)
- b) Organization (i) technical and (ii) unskilled.
- c) Resources in materials like teakwood, steel, etc., and extent to which departmental help is not required for procurement of materials and transport of the same.
- d) Methods that will be adopted up the work to ensure completion within or less than the time fixed for completion.

21. The Superintending Engineer, reserves to himself the right of allotting the different sub-works to different contractors or to one and the same contractor as he may decide after the receipt of tenders.

22. The Contractors are liable to pay a penalty of not exceeding one percent of the estimated value of work for non employment of the technical staff if the value exceeding Rs. 50,000/-

23. The cost of materials supplied will be recovered from the bills or any other amounts due to the contractor.

**OFFICE OF THE SUPERINTENDING ENGINEER
TAMIL NADU HOUSING BOARD
MADURAI CIRCLE**

TENDER

To

**The Superintending Engineer,
Madurai Circle**
Tamil Nadu Housing Board
Ellisnagar, Madurai-16

Date2022

Sir,

I / We, do hereby tender and, if this tender accepted, undertake to execute the following work, viz.,

**Area Development Scheme for 67 Nos. of
Residential Plots (HIG-3, MIG- 40 & EWS- 24) in an
extent of 3.01 Acres in S.No. 13/1A1pt, 13/1A2,
13/1A3, 13/1B 1pt, 13/1B2, 13/4Apt, 13/4Bpt, 13/8 &
9Apt, 13/2Bpt & 13/3pt of Thathaneri Village, Madurai
North Taluk in Sector VI, Madurai.**

as shown in the drawings and described in the specification deposited in the Office of the Superintending Engineer, Madurai Circle, Tamil Nadu Housing Board, with such variations by way of alterations of additions to, and omissions from the said works and method of payment as are provided for in the conditions of contract for the sum of Rs.

..... (in words and figures)
.....
.....
.....

or such other sum as may be arrived at under the clause of the Standard Preliminary specification relating to "Payment of lump-sum basis or by final measurement at unit price".

I / We have also completed the price list of items of Schedule 'A' annexed (in words and figures) for which I / We agree to execute the work and receive payments on detailed final measurement at Unit Prices.

I / We hereby distinctly and expressly declare and acknowledge that, before the submission my / our tender I / We have carefully followed the instructions in the tender notice and have read the Tamil Nadu Detailed Standard Specification and the Preliminary Specifications therein and that I / We have made such examination of the contract documents and the plans, specifications and quantities and of the location where the said

Contractor

No. of Corrections

Superintending Engineer

work is to be *done* and such investigation of the work required to be done and in regard to the material to be furnished as to be enable me / us to thoroughly understand the intention of the same and the requirement, covenants, agreements, stipulations and restrictions contained in the contract, and in the said plans and specification and distinctly agree that I / We will not hereafter make any claim or demand upon the Board based upon or arising out of any alleged misunderstanding or misconception, of mistake on my / our part of the said requirements, covenants, agreements, stipulations restrictions and conditions.

I / We being a registered contractor enclose an income-tax verification / have already produced and income-tax verification certificate in respect of (here particulars of the previous occasion on which the certificate was produced should be given).

I / We enclose herewith a challan for the payment of the sum of Rupees (in words and figures) as earnest money not to bear interest. If my / our tender is not accepted; this sum shall be returned to me / us on my / our application when intimation is sent to me / us of rejection or at the expiration of 150 Days from the date of this tender whichever is earlier. If my / our tender is accepted, the earnest money shall be retained by the Board as security for the due fulfillments of the contract. If upon written intimation to me / us by the Superintending Engineer indicating that my / our presence is required for the purpose of enquiry. I / We fail to attend the said office before the end of period specified on such intimation, and if upon intimation being given to me / us by the Superintending Engineer of acceptance of my / our tender. I / We fail to make the additional security deposit or to enter into the required agreement as defined in clause 4 of the tender notice. Then I / We agree to the forfeiture of earnest money. A notice required to be served on me / us hereunder shall be sufficiently served on me / us personally or forwarded to me / us by post (registered or ordinary) or left at my / our address given herein such notices shall be sent by post be deemed to have been served on me / us at the time when-in due course of post it would be delivered at the address to which it is sent.

I / We fully understand that the written agreement to be entered into between me / us and the Board shall be the foundation of the rights of both the parties and the contract shall not be deemed to be complete until the agreement has first been signed by me / us and then by the proper officer authorised to enter into contracts on behalf of the Board.

I am / We are professionally qualified and my / our Qualification are given below:

Name	Qualifications

I / We will employ the following technical staff for supervising the work and will see that one of them is. always at site during working hours personally checking all items of works and paying extra attention to such works as require special attention (e.g) Reinforced Concrete Work.

Name of Members of technical Staff Proposed to be employed	Qualifications
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Note :

- a) The last two clauses should be scored out if the cost of the works involved is less than Rs. 10,000/-
- b) The tenderers should score out the last clause or the penultimate according as they are themselves professionally qualified or undertake to employ technical staff under them.

RATE OF PROGRESS

(Fill in under Notice)

Period after the Percentage of work to be Commencement of	completed on the whole work

SCHEDULE-A

TAMIL NADU HOUSING BOARD

SCHEDULE OF APPROXIMATE QUANTITIES FOR THE WORK OF:

Area Development Scheme for 67 Nos. of Residential Plots (HIG-3, MIG- 40 & EWS- 24) in an extent of 3.01 Acres in S.No. 13/1A1pt, 13/1A2, 13/1A3, 13/1B 1pt, 13/1B2, 13/4Apt, 13/4Bpt, 13/8 & 9Apt, 13/2Bpt & 13/3pt of Thathaneri Village, Madurai North Taluk in Sector VI, Madurai.

The quantities here given are those upon which the lumpsum tender cost for the work is based but they are subject to alteration, omission, deduction or addition, as provided for in the conditions of the contract and do not necessarily show the actual quantities of the work to be done. The unit rates noted below are those governing payment for the extras or deductions or omissions or alterations according to the conditions of contract as set forth in the preliminary specification of the Tamil Nadu Building practice and other conditions of specifications of this contract.

It is to be expressly understood that the measured work is to be taken nett. (Not withstanding any custom of practice to the contrary) according to the actual quantities when in place and finished according to the drawings or as may be ordered from time to time by the Executive Engineer, as the cost calculated by measurement or weight at the respective prices quoted are for the work in situ and in every respects.

Schedule-A

Name of Work: Area Development Scheme for 67 Nos. of Residential Plots (HIG-3, MIG- 40 & EWS- 24) in an extent of 3.01 Acres in S.No. 13/1A1pt, 13/1A2, 13/1A3, 13/1B 1pt, 13/1B2, 13/4Apt, 13/4Bpt, 13/8 & 9Apt, 13/2Bpt & 13/3pt of Thathaneri Village, Madurai North Taluk in Sector VI, Madurai.

S.No.	Probable Qty		Description of works	TNBP No.	Rate in Words and Figures	Unit in Words and Figures	Amount (Rs.)
1			Open Earthwork excavation for Boxing of roads in all soils and sub soils to the required depth as may be directed except in hard rock requiring blasting inclusive of shoring strutting and baling out water wherever necessary and depositing the surplus earth in places shown clearing and leveling the site with an initial lead of 10 metre and lifts as specified hereunder etc., all complete in all respects complying with relevant standard specification and drawing as directed by the departmental officers. (Excluding Refilling)				
	M ³	602.00	0 to 2 m depth (Roads)	17 & 20		1.00 M ³ (One Cubic Metre)	

Contractor

No. of Corrections

Superintending Engineer

2	M ³	733.00	Earth work excavation for foundation in all soils and sub-soils to the required depth as may be directed except in hard rock requiring blasting but inclusive of shoring, strutting, and bailing out water wherever necessary and refilling the sides of foundation with excavated earth in 150mm thick layers well watered rammed and consolidated and depositing the surplus earth in places shown clearing and levelling the site with an initial lead of 10 metres and lift as specified here under etc. complete in all respects complying with relevant standard specifications. (Including Refilling) (Drain & Retaining Wall)	17 & 20		1.00 M ³ (One Cubic Metre)	
3	M ³	180.00	Earth work excavation for foundation in all soils and sub-soils to the required depth as may be directed except in hard rock requiring blasting but inclusive of shoring, strutting, and bailing out water wherever necessary and refilling the sides of foundation with excavated earth in 150mm thick layers well watered rammed and consolidated and depositing the surplus earth in places shown clearing and levelling the site with an initial lead of 10 metres and	17 & 20		1.00 M ³ (One Cubic Metre)	

Contractor

No. of Corrections

Superintending Engineer

			lift as specified here under etc. complete in all respects complying with relevant standard specifications. (Including Refilling)				
4	M ³	98.50	Filling in foundation and basement with stone dust in layers of 150mm thickness well watered rammed and consolidated complying with relevant standard specifications including cost and conveyance of the same to the work site including stacking the same to the departmental gauge for pre-measurement including all labour charges for laying, spreading etc. complete in all respects complying with relevant standard specifications and as directed by the Departmental officers.			1.00 M ³ (One Cubic Metre)	
5	M ²	923.00	Providing Sectioning of side berms & carriage width including levelling cutting the undulations upto 75 mm depth in proper camber and alignment and trimming the surfaces including depositing the earth in places shown and hire charges for tools and plants etc., all complete complying with relevant standard specification and as directed by the Departmental Officers.			1.00 M ² (One Square Metre)	

Contractor

No. of Corrections

Superintending Engineer

6	M ³	240.00	Providing and laying Sub Grade with Quarry Rubbish of good grade of material for 150 mm consolidated thickness with 1.50 Cubic Metre of Quarry Rubbish, 0.38 Cubic metre of quarry dust and 0.30 Cubic Metre of gravel (for filling the voids) to cover Ten Square Metre area and to give CBR of 10 on prepared sub grade including cost and conveyance of all materials at site of work, labour charges for spreading, watering and consolidated by power roller of 8 to 10 Ton capacity, Hire Charges for tools and plants etc complete complying with relevant standard specification and as directed by the departmental officers.			1.00 M ³ (One Cubic Metre)	
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Contractor

No. of Corrections

Superintending Engineer

7	M ³	205.00	Supply and Spreading of Gravel for side berm of roads free all directions materials including cost of gravel and conveyance of good well gravel of approved quality and stacking to Departmental gauge for pre-measurement to the work spot, labour charges for watering with soft potable water and consolidated with hand roller including cost of tools and plants, labour charges for speeding etc., all complete complying with relevant standard specification and as directed by the Departmental officers.			1.00 M ³ (One Cubic Metre)	
8	M ³	240.00	Providing and laying Wet Mix Mecadam base course on the proposed sub base for 150 mm compacted thickness in two layers of 75 mm thick with 0.396 Cubic Metre of 45 to 22.40mm graded metal, 0.528 Cubic Metre of 22.40 to 2.36mm graded metal and 0.396 Cubic Metre of 2.36mm & below graded metal for one cubic metre of consolidated thickness, cost and conveyance of all materials at site of work, mixing in base mix plant, conveying the mixed material by tipper to site spreading with motor grader and compaction with vibrating rollers of 8 to			1.00 M ³ (One Cubic Metre)	

Contractor

No. of Corrections

Superintending Engineer

			10 Ton static weight and fine dressing to required grade and cross slope, Hire and fuel Charges for tools and plants such as Loader 5 Cubic Metre capacity, Tipper, Base Mix Plant (Pug Mull), Water Tanker 6 KL Capacity, Vibratory Roller 8 to 10 Ton Capacity, Motor Grader 110 HP, etc all complete complying with relevant standard specification and as directed by the departmental officers.				
9	M ³	81.00	Providing and laying 50 mm thick Dense Bituminous Macadam Concrete using 0.10 Cubic Metre of 11.20mm graded metal, 0.16 Cubic Metre of 6.70mm graded metal, 0.11 Cubic Metre of 2.80mm and below graded metal, 28.00 Kilogram of 80/100 grade Bitumen covering 10.00 Square Metre area including cost and conveyance of all materials at site of work, heating the bitumen and aggregate to required temperature and mixing them in required temperature in central hot mix plant 20 to 30 Tonne capacity, conveying the mix by tipper trucks to paver site spreading the mix in required temperature with motor grader and compaction with vibrating rollers of 8 to			1.00 M ³ (One Cubic Metre)	

Contractor

No. of Corrections

Superintending Engineer

			10 Tonne capacity and fine dressing to required grade and cross slope, Hire and fuel Charges for tools and plants such as Central Hot Mix Plant, Power Roller 8 to 10 Ton Capacity, Paver Finisher, Tipper Trucks etc all complete complying with relevant standard specification and as directed by the departmental officers. (The Road pavement design should got approved by competent Authority)				
10	M ²	1594.00	Providing and laying 25 mm thick compacted Semi Dense Bituminous Concrete using 0.35Cubic Metre of 37.5-13.20mm graded metal, 0.21 Cubic Metre of 13.20-2.36mm graded metal, 0.14 Cubic Metre of 2.36mm and below graded metal, 28.00 Kilogram of 80/100 grade Bitumen covering 10.00 Square Metre area including cost and conveyance of all materials at site of work, heating the bitumen and aggregate to required temperature and mixing them in required temperature in central hot mix plant 20 to 30 Tonne capacity, conveying the mix by tipper trucks to paver site spreading the mix in required temperature with motor grader and compaction with			1.00 M ² (One Square Metre)	

Contractor

No. of Corrections

Superintending Engineer

			vibrating rollers of 8 to 10 Tonne capacity and fine dressing to required grade and cross slope, Hire and fuel Charges for tools and plants such as Central Hot Mix Plant, Power Roller 8 to 10 Ton Capacity, Paver Finisher, Tipper Trucks etc all complete complying with relevant standard specification and as directed by the departmental officers (The Road pavement design should got approved by competent Authority)				
11	M ²	1594.00	Providing and laying Prime Coat over Wet Mix Mecadam surface using 6 kgs of bitumen emulsion for 10 sqm area including cost and conveyance of bituminous binder including labour charges for preparing the surface and applying the required quantity of bitumen by bitumen sprayer etc all complete complying with relevant standard specification and as directed by the departmental officers.(The grade of bitumen should got approved by the Competent Authority before using of execution)			1.00 M ² (One Square Metre)	

Contractor

No. of Corrections

Superintending Engineer

12	M ²	1594.00	Providing and laying Tack Coat over Compacted Bituminous Concrete using 2.5 kgs of Bitumen emulsion for 10 sqm area including cost and conveyance of bituminous binder including labour charges for preparing the surface and applying the required quantity of bitumen as tack coat by bitumen sprayer etc all complete complying with relevant standard specification and as directed by the departmental officers. (The grade of bitumen should got approved by competent authority before using of execution)			1.00 M ² (One Square Metre)	
13	M ³	132.50	Plain cement concrete 1:5:10 (One of cement, five of M-sand and ten of hard broken stone Jelly) for foundation using 40mm gauge hard broken stone jelly inclusive of shoring, strutting and bailing out water wherever necessary ramming, curing etc., complete in all respects complying with relevant standard specifications and as directed by the Departmental officers.			1.00 M ³ (One Cubic Metre)	

Contractor

No. of Corrections

Superintending Engineer

14	M ³	136.00	Plain Cement concrete 1:3:6 (One of cement, three of M-sand and six of hard broken stone jelly) for foundation and basement using 20 mm size hard broken stone jelly inclusive of shoring, strutting, baling out water wherever necessary ramming, curing etc., complete in all respect complying with relevant standard specifications and as directed by the departmental officers.	28		1.00 M ³ (One Cubic Metre)	
15			Reinforced Cement Concrete 1:1.5:3 (One of cement, one and half of M-sand and three of Hard broken stone jelly) for all RCC works namely TEE, ELL or rectangular beams, lintel, parapet cum drops, waist and landing slab, canopy, circular column, fin projections, sunshades, window boxing slab, slab and other similar works using 20mm gauge hard broken stone jelly excluding the cost and fabrication of reinforcement grills, shuttering and centering but including vibrating, laying, curing, finishing etc., complying with relevant standard specifications.				
	M ³	29.60	a) In foundation and basement.			1.00 M ³ (One Cubic Metre)	

Contractor

No. of Corrections

Superintending Engineer

16			Supply and erecting, centering for sides and soffits including supports and strutting up to 3.29 metre high for plane surfaces such as RCC slabs, rectangular beams, Tee (or) Ell beams, lintels, Bed Blocks, slabs, landing beam, canopy side slab or boxing or vertical slabs, rectangular or square or round columns etc. as detailed below with all cross bracings using MS sheets of size 90cm x 60cm and BG 10 stiffened with welded MS angles of size 25mm x 25mm x 3mm for boarding laid over silver oak or country wood joist of size 10cm x 6.5cm spaced at about 90cm centre to centre and supported by casurina props 10cm to 13cm dia spaced about 75cm center to centre or at suitable intervals etc. complete complying with standard specification and as directed by the Departmental officers.				
	M ²	2073.00	a) For R.C.C. works in foundation and basement such as pile cap grid beam, plinth beam, raft beam, raft slab, column base, column footings etc all complete.			1.00 M ² (One Square Metre)	

17	MT	10.45	Supplying, fabricating and placing in position of Steels of grade Fe500/Fe550 for reinforcement for all floors including cost of binding wire, bending, tying etc, all complete complying with relevant standard specification and as directed by the departmental officers.(Note: Steels of grade Fe500/Fe550 to be got approved by the competent authority before use)			1.00 MT (One Metric Tonne)	
18	M ³	147.00	Cement concrete 1:2:4 (One of cement, two of M-sand and four of hard broken stone jelly) for foundation and flooring using 20 mm size broken stone jelly inclusive of shoring, strutting, baling out water wherever necessary ramming, curing etc., complete in all respect complying with relevant standard specifications and as directed by the departmental officers.			1.00 M ³ (One Cubic Metre)	
19	M ³	12.50	Refilling the sides of foundation with excavated earth in layers of 150 mm thickness well watered and rammed and consolidated etc., complete in all respect complying with relevant standard specifications and as directed by the departmental officers.			1.00 M ³ (One Cubic Metre)	

Contractor

No. of Corrections

Superintending Engineer

20	M ³	0.50	Plain Cement concrete 1:8:16 (One of cement, eight of M-sand and sixteen of brick jelly) for foundation and basement using 40 mm size brick jelly inclusive of shoring, strutting, baling out water wherever necessary ramming, curing etc., complete in all respect complying with relevant standard specifications and as directed by the departmental officers.			1.00 M ³ (One Cubic Metre)	
21	M ²	23.00	Painting the new walls two coats with Cement paint including cost of brushes, emulsion paints scaffolding curing etc., complete in all respects complying with relevant standard specification and as directed by the departmental officers.			1.00 M ² (One Square Metre)	
22	M ²	151.00	Plastering with Cement Mortar 1:4 (one of cement and four of P-sand) 20 mm thick finished with neat cement including finishing providing band cornice scaffolding and curing, etc complete in all respects complying with relevant standard specifications and as directed by the Departmental officers.			1.00 M ² (One Square Metre)	

23	RMT	61.00	Supplying and fixing of 50mm dia PVC pipe of 4Kg/Sqcm with ISI mark for weep holes for PVC drain, culvert and retaining wall at 2.4m interval above 30cm from bed level of drain and culvert including cost of pipe, cutting and fixing charges etc all completed with relevant standard specifications and as directed by the departmental officers.			1.00 Rmt (One Running Metre)	
24	Nos.	251.00	Supplying and fixing of precast RCC strut made in cement concrete 1:2:4 (One of cement, two of M-sand and four of hard broken stone jelly) for all RCC works using 20mm gauge hard broken stone jelly including the cost and fabrication of reinforcement grills including moulding, laying, curing, finishing and fixing in position etc all complete complying with relevant standard specification and as directed by the departmental officers.			1.00 No. (Each)	
25			Construction of rectangular man holes of internal size 0.9m x 1.05m as per detailed drawing PH/SHB 2/70 and fixing of 560mm dia FRC Manhole frame, earth work excavation in all soils except hard rock requiring blasting but including shoring piling and timbering, pumping and dewatering and refilling the trenches, disposing				

Contractor

No. of Corrections

Superintending Engineer

			off surplus earth, fixing of FRC manhole cover slab, C.I. steps etc complete, as directed by the departmental officers (excluding cost of C.I. steps)				
	Nos.	6.00	a) 1.00 m deep			1.00 No. (Each)	
	Nos.	3.00	b) 1.50 m deep			1.00 No. (Each)	
	Nos.	3.00	c) 2.00 m deep			1.00 No. (Each)	
26	Nos.	36.00	Supplying and fixing of PVC steps of approved quality and brand (not less than 5kg each) including cost of material labour charges for fixing etc all complete and as directed by the departmental officers.			1.00 No. (Each)	
27			Supplying, laying and jointing the following sizes of UPVC pipes of Schedule-40 with ISI mark superior variety to the site of work including laying with proper gradient at various depth as required by the departmental officer and jointing of UPVC pipes and specials with tarred yarn with cement mortar 1:1 (one of cement and one of sand) to correct levels slopes and alignment as shown In the plan including earth work excavation in all soils and sub soils except hard rock requiring blasting but				

Contractor

No. of Corrections

Superintending Engineer

			including shoring, strutting, pumping and dewatering wherever necessary, testing of the completed pipe line as per the standard test to the entire satisfaction of the departmental officers and all other incidental charges such as barricading, lighting, watch and ward, hire charges for tools and plant etc., and refilling the trenches with excavated earth of 15 cm thick and proper consolidation after the pipes are laid, jointed and tested etc., complete and as directed by the departmental officers (External sewer arrangements)				
	RMT	150.00	a) 160mm dia. @ 1.00 m depth.			1.00 Rmt (One Running Metre)	
	RMT	95.00	b) 160mm dia. @ 1.50 m depth			1.00 Rmt (One Running Metre)	
	RMT	75.00	c) 250mm dia. @ 2.00 m depth			1.00 Rmt (One Running Metre)	
28			Supplying and laying and jointing the following dia PVC SWR pipes and tested with water, including necessary earth work excavation for trenches and refilling the same, well rammed and				

Contractor

No. of Corrections

Superintending Engineer

			consolidated after the pipes are jointed 1:1 and laid to proper gradient to the alignment as directed by the departmental officers (PVC SWR pipes should be got approved by the Competent Authority before laying)				
	RMT	405.00	110mm dia. PVC SWR pipe @ 1.0m depth			1.00 Rmt (One Running Metre)	
29	Nos.	67.00	Construction of Sewage inspection chamber of size 45 x 45 x 60 cm with brick jelly concrete 1:8:16 (one of cement eight of sand and sixteen of broken brick jelly using 40mm gauge broken brick jelly 15cm thick for foundation and 23cm thick brick masonry in C.M. 1:5 (One of cement and five of sand) using stock bricks of size 9" x 4 3/8" x 2 3/4 " plastering with cement mortar 1:3 (One of cement and three of sand) 12mm thick on both sides top and bottom including earth work excavation RCC 1:2:4 (One of cement two of sand and four of 20mm gauge hard broken stone) excluding supply and fabrication of steel but including benching channeling fixing cover slab in position curing finishing etc complete in all respects.			1.00 No. (Each)	

Contractor

No. of Corrections

Superintending Engineer

30	Nos.	40.00	Supply and planting of avenue trees including earth work excavation for pit of size 60x60x60cm filled with manure for 20cm depth and filling with river sand and red earth mix in the ratio of 1:1 for 40cm depth in the same pit and planting the avenue trees of approved varieties to a height of 200cm from the ground level and maintaining them for the period of 6 month including watering, periodical manuring and replacing the avenue trees if dead etc., all complete and as directed by the departmental officers. (Tree sappling shall be got approved from competent authority before planting)			1.00 No. (Each)	
31	Nos.	40.00	Supplying and fixing of Square shape chicken mesh TREE GUARD using 8cm dia casurina vertical post and middle tie using country wood reaper of size 50x25mm and 25 gauge chicken mesh including labour charges for fixing the Square tree guard and as directed by the departmental officers.			1.00 No. (Each)	
32			Supplying, laying, fixing and jointing the following diameter of PVC pipes as per ASTM D-1785 of schedule 40 of wall thickness not less than				

Contractor

No. of Corrections

Superintending Engineer

			the specified in IS 4985 suitable for plumbing by threading of wall thickness including the cost of suitable PVC/GI specials like Elbow. Tee reducers, plug, union, bend, coupler, nipple etc. wherever required below the ground level including earth work excavation or laying the pipes and refilling the trenches after the pipes are laid underground etc. complying with relevant standard specifications & as directed by the departmental officers. (Below G.L.)				
	RMT	402.00	a) 20mm dia PVC pipe			1.00 Rmt (One Running Metre)	
	RMT	180.00	b) 50mm dia PVC Pipe			1.00 Rmt (One Running Metre)	
	RMT	210.00	c) 63mm dia PVC Pipe			1.00 Rmt (One Running Metre)	
33			Supplying and fixing GM / PVC specials of approved quality with ISI mark as per standard specification.				
	Nos.	67.00	a) 20mm dia GM ferrule			1.00 No. (Each)	
	Nos.	43.00	b) 50x20 PVC saddle piece			1.00 No. (Each)	

Contractor

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Superintending Engineer

	Nos.	24.00	c) 63x20 PVC saddle piece			1.00 No. (Each)	
34	RMT	24.00	Supplying, laying, fixing and jointing the 50mm GI pipe for cable line crossing the drain (Below G.L.)			1.00 Rmt (One Running Metre)	
35	Nos.	2.00	Construction of Sluice valve pit as per standard type design vide Type design No.PH/SHB/3/86 including earth work excavation in all soils and sub soils except in hard rock requiring blasting refilling the sides of foundation with excavated earth foundation concrete with cement concrete 1:3:6 using 40mm HBG jelly, brick work in cement mortar 1:4 using IInd class ground moulded bricks of size 9"x4 3/8" x 2 3/4 and plastering with cement mortar 1:3, 12mm tk, plain cement concrete 1:2:4 using 20mm gauge HBG jelly and RCC 1:2:4 using 20mm gauge HBG jelly excluding cost and fabrication of steel grills but including jointing pipe lines and specials, fixing valves and surface box etc. all complete complying with relevant standard specification and as directed by the departmental officers.			1.00 No. (Each)	

Contractor

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Superintending Engineer

36	Nos.	1.00	Construction of Double Air Valve pit as per standard type design vide Type design No.PH/SHB/5/92 including earth work excavation in all soils and sub soils except in hard rock requiring blasting refilling the sides of foundation with excavated earth foundation concrete with cement concrete 1:4:8 using 40mm HBG jelly, brick work in cement mortar 1:5 using chamber burnt IInd class ground moulded bricks of size 9"x4 3/8" x 2 3/4 and plastering with cement mortar 1:3, 20mm tk, including jointing pipe lines and specials, fixing valves and surface box etc. all complete complying with relevant standard specification and as directed by the departmental officers. (50mm dia)			1.00 No. (Each)	
37			Supply and delivery of the following CI valve, fire hydrant of approved quality with ISI mark including cost of materials and conveyance to site of work etc., complete in all respects complying with relevant standard specifications and as directed by the Departmental officers. (The Quality and brand of valves, fire hydrant/surface boxes should be got approved				

Contractor

No. of Corrections

Superintending Engineer

			from by the competent authority before use)				
	Nos.	2.00	a) 65 mm dia sluice Valve			1.00 No. (Each)	
	No.	1.00	b) 50 mm dia CI double air valve			1.00 No. (Each)	
38	No.	1.00	Supplying, Fabrication and Erection in position of M.S. scheme name and layout board with 50x50x6mm M.S. angle for vertical post and support posts with 2.5 mm thick M.S. sheet for a size at 1.80x1.20m with 40x40x6mm M.S. angle around the board and 50x6mm flat stiffeners on both directions including cost of welding charges, painting charges and drawing the layout and lettering the scheme details as directed by the departmental officers including earth work excavation for 4 nos of pits, PCC 1:5:10 (One of cement, five of sand and ten of HB stone jelly) for pits. 0.45 x 0.45 x 0.60m below Ground level and P.C.C 1:2:4 (one of cement, two of sand and four of 20mm HB Stone Jelly) at 0.30 x 0.30 x 0.30m above Ground level for erection, conveyance charges etc., all complete and as directed by the departmental officers.			1.00 No. (Each)	
39	Nos.	4.00	Supplying, Fabrication and Erection in position of Street Name Board			1.00 No. (Each)	

Contractor

No. of Corrections

Superintending Engineer

			4 x 21/2 x 5 feet using M.S pipe frame and M.S sheet including two coats of painting (enamel) as directed by the departmental officers.				
40	M ³	412.95	Filling the low lying area of the scheme with well gravel in layers of 150mm thick including cost of well gravel, loading, un-loading and hire charges for transporting the earth with a lead of not less than 6 Km from the scheme boundary etc., complying with relevant standard specification and as directed by the departmental officers.			1.00 M ³ (One Cubic Metre)	
41	M ³	1330.58	Cutting the area as per the approved levels including cutting, loading and conveying the lead of 2KM etc all complete complying with relevant standard specification and as directed by the departmental officers.			1.00 M ³ (One Cubic Metre)	
42	Nos.	170.00	Supply & Fixing of Demarcation stone of size 75x15x15cm including the cost of survey stone, conveyance to the site of work, earthwork excavation, fixing in position, aligning, refilling the excavated earth, consolidation etc complete complying with relevant standard specification and as directed by the departmental officers.			1.00 No. (Each)	

Contractor

No. of Corrections

Superintending Engineer

43	Nos.	20.00	Supplying and fixing of 30 W LED street light fittings and etc all complete complying with relevant standard specification and as directed by the Departmental officers.			1.00 No. (Each)	
44	Nos.	10.00	Supplying and fixing of 30 W solar street light & 5 m high post with fittings and etc all complete complying with relevant standard specification and as directed by the Departmental officers.			1.00 No. (Each)	

Note: The contractor should sign in all pages of Schedule-A.

Contractor

No. of Corrections

Superintending Engineer

TAMIL NADU HOUSING BOARD**SCHEDULE 'B'**

Name of Work: Area Development Scheme for 79 Nos of Residential Plots (HIG-16, MIG-20 & EWS-43) at Sector III in Thathaneri Village, Madurai North Taluk, Madurai District and Area Development Scheme for 46 Nos. of Residential Plots (HIG-12, MIG-15 & EWS-19) in S.No. 218/3,218/5,218/6 & 218/7 of Madakulam Village at Ellisnagar, Madurai.

Sl.No	Drawing No.	Description	Remarks
1		Drawings.	
2		Layout	

Note: All the drawings can be seen in Madurai Housing Unit/ Drawing Branch.

TAMIL NADU HOUSING BOARD
SCHEDULE 'C'
ADDITIONAL SPECIFICATION

1. The contractor shall make his own arrangements for clean fresh water for use on the work and shall meet all charges therefore.
2. The broken stone for concrete and RCC work shall be granite as passed by the Executive Engineer.
3. SAND & BRICK: River sand will be used in all cases. The bricks shall be stock bricks or good country bricks of fairly uniform size, shape, colour and well burnt.
4. All iron works or steel work of every kind, except such as is to be embedded in cement concrete shall immediately on arrival at the site be, properly scrapped and wire brushed and given a priming coat of lead paint without claim for extra.
5. The teakwood shall be of best Indian Teak wood only and shall be subject to inspection and approval by the Executive Engineer before use on work country wood where specified shall be best and known for scantling and uniform planks.
6. Holes and chases for electric wiring, water supply and drainage etc., shall be provided as directed during the progress of work without any claim for extra,
7. All external corners, edges of beams, edges of doors and windows openings etc. shall be finished sharp using rich mortar if necessary and also finished truly vertical or horizontal as the case may be. The rates for plastering shall include the cost of finishing as above. No extra for finishing the corners, edges of beams, etc., will be paid. The construction of the building will be deemed to be complete only if all the items of work including finishing items contemplated herein are executed. Concrete works.
8. The arrangement of M.S./RTS rods for reinforcement for each RCC works shall be in accordance with working drawings supplied.
9. The contractor has to use steel sheets over wooden frames, providing the required finish to the underside of the slab. Centering and form work shall be provided to the extent and area ordered by the Executive Engineer during the execution. The payment for centering works will be paid after the concrete is laid.
10. All cement concrete for RCC works shall be machine mixed and vibrated.
11. All lime mortar shall be ground in a mortar mill as per TNDSS (MDSS).
12. The rate for brick work in all floors includes the labour charges for fixing the frame of doors and windows and fixing G.I. Pipe outlets for windows and per sub clause 14 of TNDSS (MDD.No.31).

Contractor

No. of Corrections

Superintending Engineer

13. The rate for plastering includes providing cornice, band cornice, ceiling cornice, and skirting wherever necessary as directed by the departmental officers.

14. It is not obligatory to supply any materials (controlled or non-controlled) required for the construction, which are not available in the general stores and the contractor is expected to make; his own arrangements. The quality of these materials shall conform with, the specification given in ISI. If the material is available in the general stores, the contractor should use that materials only and the cost there of will be recovered as per the ANNEXURE. The cost of materials supplied will be recovered from the bills or any other amount due to contractor.

15. M.S. Rod, RTS Rod should be cut and placed as reinforcement with proper care according to the available rod at site, so as to ensure the minimum wastage possible.

Note: No separate charge will be paid to the contractor for straightening the M,S. Rods, RTS Rods if happens to be bend or in coils.

16. The cement brought by the contractor for use on work should be carefully stocked in approved stores and should be used on works as and when required with proper care .

17. All the dismantled portion should be made good, plastered and cement painted etc., to match original surfaces.

18. If the rates are not separately called for, for similar items of works in the works in the different floor the contractor should quote one rate applicable for all the floors indicated in the detailed plans. Any claims for such items floor wise will not be entertained under any circumstances.

19. If night work required to fulfill the agreed rate of progress, all arrangements shall be made by the contractor inclusive of lighting without any claim for extra rate.

20. Rates: The tenderer shall quote their rates for the finished items of work only as given in the schedule. It shall be clearly understood that no increase in rate tendered for will be permissible on any account.

21. The contractor should not employ the labour below the age of 12 years.

22. The rate for all the items shall be quoted for in the metric units.

23. The tenderer, shall examine closely the general condition of contract of the Tamilnadu Detailed Standard specification issued in the G.O. Ms. No.2659, dt.23.12.1970 and to see the copy kept in the division office in token of such study before submitting his tender. Unit rates which shall be for finished work insite.

24. The electrical works should be executed by a person or firm holding 'A' grade or 'B' grade license issued by Electrical Wireman, Supervisor, contractors, licensing Board and Government of Tamil Nadu.

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25. Once the offer of the tenderer is accepted by the Board, If either the tenderers choose to withdraw this tender or for any reason refused to execute the agreement and comply with the terms of the tender and agreement, the amount deposited by the tenderer towards the EMD and A.S.D, shall be forfeited and tenderer shall not be entitled to refund the same (CE/TC/7/79) dt. 14.3.79.

26. The contractor should take risk insurance against fire, other usual risk for all or any loss or damages occasioned by or arising out of acts of God, and in particular un precedent flood, volcanic eruption . earth quake or other convulsion of nature, invasion, the act of foreign enemies, hostilities or warlike operations (before or after declaration of war) rebellion, military or usurped power, such policy should cover the construction period against the risk by the contractor at his /their own cost and produce to the concerned Executive Engineer & Superintending Engineer within one month from the date of execution of the agreement failing which the TNHB shall be entitled to take out what ever policy as may be required to cover those eventualities and to effect recovery towards the cost of such policies from the contractor's payments with a penalty of 50% on the cost of such policies.

27. The consumption of lead must be in accordance with the Table, VIII of MDSS No.109. any additional consumption of lead must be intimated to Executive Engineer and Admn. Officer, who will then decided the necessity.

28. The pipes should not be covered until the Executive Engineer tests and approve the work. If it is covered it must be uncovered by the contractor at his own cost without claiming extra.

29. Any extension of time may not be granted by the authority, unless the delay caused is on departmental side.

30. The contractor should agree for the change of Arbitrator due to change in incumbency or due to change in territorial Jurisdiction.

- a. For Claims upto Rs.10,000/- S.E. of TNHB
- b. Rs.10,001/- to Rs.50,000/- C.E of TNHB
- c. Rs.50,001/- and above referred to the court (CE/TC/24/83, dt.7.9.83).

31.(A) The EMD., SD and 50% of the RMD shall be released only after the expiry of six months period from the date of completion of the work (CE/TC/24/83 dt 7.9.83).

31.(B). For the release of RMD the contractor has to furnish the following:
Identiy Bond for the period of 5 years from the date of completion of work (After the release of final bill.)

- (a) For the release of RMD the contractor has to furnish Bank Guarantee for the above said RMD amount for a period of two years from the date of completion of work.
- (b) The contractor has to remit the interest for the period of two years based on the Boards prevailing rate of interest in force for the release of Bank

Guarantee pledged (on or before 60 Days). If the interest amount is not paid by the contractor, the Bank Guarantee will be encashed, and the interest amount will be deducted and the balance amount will be paid to the contractor vide BR.No.5.03 Dt.07.08.2014(Circular Memo No.TC1/19369/14 dt.19.08.14

32. In case of tender at 10% less than the estimate value 1% (One) of the estimate value shall be collected in one lump sum as additional security deposit.

33. It is obligatory on the part of the contractor to effect recovery of Employees Provident fund subscription from Employees who work more than 60 days and remit to the Regional provident Fund Commissioner.

34. The contractor is bound by all the conditions of clauses of the standard preliminary specifications as amended from time to time. If in the course of the contract any G.O. is issued introducing new conditions or clauses (for PWD / other Departments) supplemental agreement must be executed by the contractor.

35. The Security deposit shall be paid by the contractor in the form of small savings scripts. The Security Deposit in the Form of Irrevocable Bank Guarantee from Nationalised Bank/Scheduled Banks can also be accepted and it has to be duly verified with the concerned Bank for genuiness.

36. Contractors special attention is invited to clause 27 and 38 of the preliminary specification on TNDSS and he is requested to provide his own expenses, shed, latrine, and urinal for his workmen.

37. In respect of the work being transferred from any other circles / Divisions, subdivisions, the S.E, E.E, AEE and A.E who is incharge of Circle / Division / subdivision having jurisdiction over the work shall be competent to exercise all the powers and privileges reserved in favour of the Government.

38. Water closet, basins urinals, sinks and other sanitary ware shall be of approved make as required in the relevant items. The fixing of these should be in accordance with the special specifications after the completion of the work.

39. The work shall be carried out with least hindrance of the adjoining building and the contractor shall be responsible if any damage caused to the existing fixtures, electrical fittings etc., in the course of execution and the contractor shall make good any such damages without claim for extra.

40. The clamps of G.I. pipes fittings should not be spaced more than 3'-0" apart from the wooden plug for pipe and bracket fittings should be properly fixed in C.M. 1:3 in holes made in and not hammered into the walls. The size of plugs should be not less than 1 "square at this end and at the other end with the depth of not less than 3".

41. The contractor should procure approved quality of paint only in containers. The above container should be used in the present of the Assistant Executive Engineer and got approved before use. On any account paint in other than original container will not be allowed for use.

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42. The contractor shall form his own approach road to the work sites for which no extra will be due to him. On completion of work the contractor shall not be permitted to remove the materials laid for formation of road. If the contractor is allowed to use the existing roads, he shall maintain them in good condition at his own cost throughout the period of contract.

43. The work should be executed in accordance with the circular instruction of the CE issued time to time. Copy of the circular instructions can be perused in circle office during office hours.

44. Copy of latest income tax clearance certificate should be enclosed along with the tender.

45. An authenticated credential in support of experience for the similar works done so far should be enclosed.

46. EMD will be 1% upto Rs.20.00 Lakhs of estimate value plus 1/2% of the amount by which the estimates value exceeds Rs.20 Lakhs

47. Security deposit will be 2% of the contract value minus the EMD already remitted along with the tender.

48. Recovery under Revenue Recovery Act: - Whenever any amount has to be paid by the contractor in view of termination of the contract by virtue of clause 57.4 (TNBP) or any amount that maybe due or may become due from the contractor under these present and the contractor is not responding to the demand for the payments of the said amount, then the Government, Tamilnadu Housing Board shall be entitled to recover the said amount, as per the provisions of the Tamilnadu Revenue Recovery Act. 1964 (Tami Nadu Act. V of 1864).

49. Brick used should be of class designation 50 i.e. having a crushing strength of not less than 50 kg/cm².

50. The building materials like bricks, tiles etc., the finished products like concrete cubes etc., should be tested in recognized institution as directed by the departmental staff. The expenditure should be borne by the contractor.

51. The tenderers are requested to quote their validity of tender upto 90 days from the date of opening of the tender.

52. A levy towards the manual workers fund @ 1.00% of actual value of work done in the contract would be paid by the departmentally to the Labour and Employment department (vide Board's Res.No:-5.03 dated 07.08.2014 & Circular No: TC1/19369/2014 dated 19.08.2014)

53. Impounding minimum 10cm of water over roofs for 48 hours before laying the weathering course and press tiles to check the water tightness. (vide. Memo.No.TC4/68839/95 dated 24.11.95)

54. Xerox copy of the certificate for the technical personnel's to be enclosed along with the tender.

55. Withheld amount towards effective performance of the contract do not exceed 10% of the total value of Contract. Present rule of with-holding 5% of bill amount may be followed .

56. Payment of liquidated damages and penalty payable by the contractor in the event of non-fulfillment of any or Whole of the contract.

57. Quantity variation is permissible, to the extend of 25% with prior approval of the authority who accepted the tender provided that total value including variation is within the power of officers concerned. Otherwise, orders of higher authority shall be obtained .

58. In the Case of discrepancy between the prices quoted in words and in figures, the lower of the two shall be considered.

59. The contractors should not be allowed to use water with Saline content. The usage of water with saline content is strictly prohibited.

60. The payment of security deposit, FDR from any Nationalised Bank can also be accepted apart from whatever small savings scripts available in vogue with an understanding from the concerned Bank to release the deposit to Tamil Nadu Housing Board on request unconditionally.

61. Withdrawal of tender on any circumstances after its submission is not acceptable. The name of such of those tenderers will be removed from the list of approved contractors and their tender will not be entertained thereafter and will be summarily rejected.

62. In the event of the work being transferred to any other Unit I Division SubDivision the Exe. Engr. and Admn. Officer, the Asst. Engineer who is in-charge of the unit Division I Sub-Division having jurisdiction even the above work shall be competent authority to exercise all thsse powers and privileges of Tamiladu Housing Board and act on behalf of Tamilnadu Housing Board.

63. All the Measuring tapes used on works by Departmental officers and Contractors, Suppliers shall be graduated only in metric units and shall bear the verification Stamping of the department of Legal Meterology (on the end book) Dual Marked (Metric and feet and inches) measuring tapes should not be used by the departmental officers / Contractor; Suppliers. All the tapes should be Confirming to the Standard of weights and measures (General) Rules 1987 (Board Circular memo No. TC4/66896/98dt: 6.10.99).

64 (a). The Government of Tamil Nadu by Act 15 of 1999 has introduced section 7F to the Tamilnadu General Sales Tax Act 1959 where in provisions have been introduced for 'Deduction of Tax at Sources in Works Contract' at the time of payment.

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(b). According to Section 7F of the TNGST Act 1959, every person responsible for paying any sum to any dealer for execution of works contract will deduct Sales Tax at source (from the dealers I Contractors) at the time of payment at the following rates.

i. Civil works contract : 2% of total amount payable to such dealers

ii. All other works contract: 5% of the total amount payable to such dealers.

The amount so deducted shall be deposited to the Assessing Authority of Commercial Tax Department within 7 days of the amount so deducted along with a statement in the prescribed form (Form)(XXVII).

65. For testing the concrete and aggregate the contractor must procure the following equipments and make them available at site.

a. Steel mould for making 15cm cube of concrete

b. Slump cone for testing consistency (slump test) the cone will be 30cm height truss casted cone with top and bottom diameters of 10 cm and 20cm respectively. In addition a steel rod 1.5cm dia and 50cm in length and with tamping and rounded is to be procured.

c. For finding fineness modules and coarse aggregate hand operated Sieve Shaker apparatus may be procured along with weighing machine for weighing the aggregate and the sand.

d. In the case of any breach of the terms of the contract the contract will be closed at the risk and the cost of contractor in addition to the forfeiture of the EMD and security deposit.

e. The testing is to be done at the contractor's cost for all building materials and also for concrete cubes.

f. The work shall be executed and measured as per metric dimension given in the schedule of quantities drawing etc. (F.P. units where indicated are for guidance only)

g. Unless otherwise specified all the rates quoted by the contractor shall be for works at all levels of the buildings.

h. Rates for every item of work to be done under this contract shall be for all lifts and leads, heights, depths, lengths and widths Except when specifically mentioned in the item, otherwise nothing extra will be paid on this account The rate for all item in which use of cement is involved is inclusive of charges for curing.

66. If at any time the Executive Engineer shall be of the opinion that the contractor is delaying commencement of the work or violating any of the progress of the site work as defined by the tabular statement rate of progress in the article of agreement, the Executive Engineer shall so advise the contractor in writing and at the same time demand complied. If the contractor neglects to comply with such demand within seven days after the receipt of such notice it shall these or at any time thereafter be lawful for the Executive Engineer to determine the contract which determination shall carry with the forfeiture of the security deposit and the total of the amount withheld from the final bill together with value of such works as may have been executed and not paid for such proportion of such total sums as shall be assessed by the Executive Engineer.

67. Water and lighting : The contractor shall pay all fees and provide water and light as required from Municipal main or other sources and shall pay all charges therefore (including storage tanks, metre etc.) for the use of the works and workman unless otherwise arranged and decided as in writing with Executive Engineer.

The tenderer shall ensure that no damage is caused to the existing structure / building whether it is Government owned or private owned etc. in the adjacent areas close preliminary to the proposed site and if any damage is caused due to pile driving etc. to the adjacent buildings it shall be rectified / compensated by the tenderer at his own cost of the satisfaction of departmental officers / owners of any private building affected (i.e) the contractor should indemnify the department against damages if any to adjacent building due to pile driving.

The contractor has to make his own arrangements for procuring water for construction purpose and curing should be done with water free from injurious amounts of deletion materials portable water are generally considered satisfactory for curing and mixing concrete and masonry. However the water to be used should be periodically tested at contractors cost for its suitability for using the construction work and got approved from Department Engineers.

Electricity: The contractor should make his own arrangements for obtaining electricity for all types of his use like lighting, welding, pumping and mosaic and marble polishing etc. Any damages to work resulting from rains or flame, any other cause until these work is taken over by the department after completion, will made good by the contractor at his own cost.

The total value of contract/service with exceeds Rs.2.50 lakhs, 2% GST at source will be deducted (1% CGST & 1% SGST) as applicable from time to time in addition to 1% or 2% of TDS as per IT act.

TAMIL NADU HOUSING BOARD

SCHEDULE-C

SPECIAL CONDITION FOR "WHITE WASHING"

1. Each coat of white wash shall be laid on with a brush and allowed to dry before the next coat is applied.
2. A stroke of the brush shall be given from the top down wards another from the bottom upwards over the first stroke and similarly one stroke from the right and another from the left over the first brush before it dries. .
3. The No. of coats to be applied shall be as mentioned in the schedule.
4. The rate should be inclusive of wall cleaning, brushing and all patching must be scraped properly.
5. The old loose white wash is to be first removed and minor repairs to the plaster done, such as filling old holes etc.,
6. Each coat of white wash is to be allowed to dry and should 'be inspected by the subordinate in charge before applying the next coats.
7. The surface shall present a uniform white appearance without exhibiting any patching or hair cracks or streaks.
8. It is the responsibility of the contractor to clean the splashes on the wall, floor and other surfaces and articles to the satisfaction of the Executive Engineer.
9. The ladders, poles, scaffolding, etc. should be shoed with bags to prevent damages or scratching of the walls and floor.

SCHEDULE 'D'

Applicable to all cases of works where minimum of fifty workers are employed except works relating to roads, channels and canals.

For the Provision of Health and Sanitary Arrangement for the Workers.

The contractor's special attentions is invited to clauses of TNBP and he is requested to private at his own expense the following amenities to the satisfaction of the superintending Engineer.

1. **FIRST AID** At the work site there shall be maintained in a readily accessible place, first aid appliance and medicines including an adequate supply of sterilized dressings and sterilized cotton wool. The appliances shall be kept in good order. They shall be placed under the charge of the responsible person who shall be readily available during working hours.
2.
 - a) Water of good quality fit for drinking purposes shall be provided for the work people on a scale of not less than a gallon per head per day.
 - b) Where drinking water is obtained from an intermittence public water supply, each work place shall be provided with storage tank. Where such drinking water shall be stored.
 - c) Every water supply storage shall be at a distance of not less 50 ft. from any latrine, drain or other source of pollution. Where water has to be drawn from an existing well which is within such of latrine, drain or any other source of pollution the well shall be properly chlorinated before water is drawn from it for drinking.
 - d) All such well shall be entirely closed in and is provided with a trap door which shall be dust and water proof.
 - e) A reliable pump shall be fitted to each covered well, the trap door shall be kept locked and opened only for cleaning or inspection which shall be done at least once a month.

3. Washing and Bathing places:

Adequate washing and bathing places shall be provided, separately for men and women. Such places shall be kept in Glean and drained condition. Bathing for washing should not be allowed in or near any drinking water well.

4. Latrines and Urinals:

They shall be provided within the premises of every work places, latrines and urinals in an accessible place and the accommodation separately for each of them. shall be on the following scale as directed by the Superintending Engineer in any particular case :-

- i) Where the No. of persons employed does not exceed 50~2 seats.
- ii) Where the No. of persons employed exceed 50 but does not exceed 100.3 sets.
- iii) For every additional 100.3 slats.

Except in work places provided with water flushed latrine connected with a water bore sewage all latrines shall be provided with respectable on dry earth system which shall be cleaned atleast four times daily and atleast twice during working hours and kept in a strictly sanitary condition, The acceptance shall be tarred inside and outside atleast once a year.

The excrete from the latrine shall be disposed off at the contractor's expenses to the out way pits approved by the local public health authority. The contractor shall also employ adequate No. of scavengers and conservancy staff to keep the latrine and urinals in a clean condition.

5. SHEDS DURING REST

At the work site these shall be provided free of cost two suitable sheds one for male and the other for rest for the use of labourers.

6. At every work place at which 50 or more women workers are ordinarily employed there shall be provided two huts of suitable size for the use of children under age of 5 years belonging to such women. One hut shall be used for infants games and play and the other as their shed room The huts shall not be constructed on a lower standard than following.

- i) Thatched roofs.
- ii) Mud floors and walls.
- iii) Planks spread over the mud floor and covered with matting.

The Use of the huts shall be restricted to children, their attendants and mothers of the children.

7. CANTEENS

A cooked food canteen on a moderate scale shall be provided for the benefits of workers if it is considered expedient.

8. SHED FOR WOMEN

The contractor should provide at his expense sheds for housing his workmen. The shed shall be on a standard not less than the cheap shelter type to live in which the work people in the locality are accustomed to a foot area of about 6' x 5' for 2 persons shall be provided the sheds are to be row with 5 ft. clear space between rows if conditions could permit. The work people shall be laid out in units of 400 persons each unit to have a clear space of 40 ft.

TAMIL NADU HOUSING BOARD
SPECIAL CONDITION FOR TAXES

The taxes are applicable for the project with any tax/fund/charges announced by the State/Central Government will be recovered from the payment to the contractor without prior information and cannot be refunded.

The rates quoted in the tender shall be inclusive of all Taxes prevailing rate of GST etc., as announced by the State/Central Government.

Any change in the existing levy/charges announced by the State/Central Government from time to time will be recovered from the payment to the contractor without any prior information.

ADDITIONAL SPECIFICATIONS FOR QUALITY OF MATERIALS AND TESTS TO BE CONDUCTED

S.No.	Material to be tested	Sampling	Name of test	Permissible limits	Standards.
1.	Water	Local Source: Lab Test once in 3 month.	Total Alkalinity	250 mg/l	IS 456-1978
		Out Source: Lab Test once in a month	Total Dissolved Solids	3000 mg/l	IS 456-1978
		Lorry Load: Field Test – Litmus paper test for every load	Sulphates (SO ₄)	400mg/l	IS 456-2000 Clause 5.4
			Chlorides (Cl)	2000 mg/l for concrete not containing embedded steel and 500 mg /l for reinforced concrete work	IS 456-2000 Clause 5.4
			Suspended Matter	2000 mg/l	IS 456-2000 Clause 5.4
			pH Value	Not less than 6	IS 456-2000
2.	Cement (43 Grade)	One test for every 300 Ton of Single Brand – test to be done if there is change in Brand.	Initial Setting time	Not less than 30 minutes.	IS 8112-1976
			Final setting time	Not more than 600 minutes	IS 8112-1976
			Fineness of Cement	2250 sq.cm/gm	IS 8112-1976
			Soundness of Cement	Expansion not more than 10mm	IS 8112-1976
			Compressive strength of CM 1:3 cube		IS 8112-1976
			3 days (72+/- 1 hr)	Not less than 230 kg / cm ²	
			7 days (168+/- 2 hr)	Not less than 330 kg / cm ²	
			28 days (672 + /-4 hr)	Not less than 430 kg/cm ²	
3.	Steel (Deformed Bars (fe.415)	Every load and each diameter	Tensile Strength	15% more than the measured yield stress	IS 1786-1985.
			Minimum yield stress	42.5 / kg / Sq.mm	IS 1786-1985
			Minimum percentage elongation	14.5	IS 1786-1985

Contractor

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4.	Sand	Every Load	Clay, fine silt and the dust	Not more than 5% of mass	IS 2116-1980
5.	Coarse Aggregate	Every Quarry	Crushing value of Alternatively	Not more than 45%	IS 383-1970
			Impact Value	Not more than 50%	IS 383-1970
6.	Bricks	Lot Size – more than 1 Lakh bricks – number of Samples 20 Nos	Compressive Strength.		IS 1077-1986
			For Class 35	Not less than 35 Kg / cm ²	
			For Class 50	Not less than 50 Kg / cm ²	
			Water absorption	The average water absorption of bricks shall not be more than 20% of weight	IS 1077-1986
			Efflorescence	the rating of efflorescence shall not be more than moderate	IS 1077-1986
7.	Hydraulic Pressed tiles	One test for an area upto 1999 Sq.m and one additional test for every 1000 sq.m and part thereof.	Water absorption	Shall not exceed 15%	Part I of IS 2690 – 1993.
			Flexural strength	Shall not be less than 15 Kg / Cm ²	IS 2690-1993
8.	Mosaic Tiles	One test for an area upto 1999 sq.m and one additional test for every 1000 sq.m and part thereof.	Water absorption	Shall not be exceed 10%	IS 1237 – 1980.
			Transverse strength	Shall not be less than 30 Kg/cm ²	IS 1237 – 1980
			Wear: Ave: Wear	Shall not be more than 3.5mm	IS 1237-1980
			Wear on individual Specimen	Shall not be more than 4mm	IS 1237-1980
9.	Electric Cable	One test for each brand	Conductor Resistance at 20°C		IS 664-1990
			For 1.5sq.mm cable For 2.5sq.mm cable	max. allowable limit 12.10ohm/km max. allowable	

Contractor

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			For 4.0 sq. mm cable	limit 7.40 ohm/km max. allowable limit 4.95 ohm/km	
10.	Wood	One sample for each work	Lab Test – Moisture Test	Not more than 12%	
			Field Test – Visual Observation	Free from rotten, unsound Knots (or) Knots in cluster	IS 3629/1966
11.	Cube test in Lab		Compressive Strength		IS 456 – 2000
		1 m ³ to 5 m ³ – 1 Set	M 15 (1:2:4)		
		6 m ³ to 15 m ³ – 2 Sets	28 days	not less than 150 kg / cm ²	
		16 m ³ to 30 m ³ – 3 Sets	7 days	not less than 100 kg / cm ²	
		31 m ³ to 50 m ³ – 4 Sets			
		> 50 m ³ – 4 plus one for each addl. 50 m ³	M 20 (1:1.5:3)		
			28 days	not less than 200 kg / cm ²	
			7 days	not less than 135 kg / cm ²	
12.		Type work	With Vibration	Without Vibration	
	Slump Test at site (Slump in cm)	Mass concrete, large section, roads and pavements	1.0 to 2.5	5.0 to 7.5	
		RCC foundation, substructures, thick walls & other heavy sections	2.6 to 5.0	4.0 to 11.5	
		Thin vertical sections Such as walls, beams, columns with congested reinforcement	4.0 to 5.0	10.0 to 17.5	
		When using concrete pump	8.0 to 10.0		

TAMIL NADU HOUSING BOARD

CONDITIONS FOR TRAINING OF APPRENTICES AS PER APPRENTICES ACT

The contractor shall comply with the provision of the Apprentices Act 1961 and the rules and orders issued there under from time to time. If he fails to do so his failure will be a breach of contract and the competent authority may at his discretion cancel the contractor or invoke any of the parties of breach of contract provided in the agreement. The contractor shall also be liable for any precautionary liability arising of account of any violation by his of the provision of the Act.

2) Contractor shall during the currency of the contract ensure engagement of the Apprentices in the categories mentioned below who may be assigned to him by Director of Employment and Training State Apprenticeship Adviser, Tamilnadu. The Contractor shall train time as required under the Apprentices Act 1961 ad the rules made there under and shall be responsible for all obligations of the employer under the said item including the liability to take payment to the apprentices as required under the said Act.

Value of Contract	Category	To be appointed
1. Above Rs.1.00 lakhs to Rs.3.00 lakhs	1. Building contractor	1
	2. Brick layer	2
2. Above Rs.3.00 lakhs to Rs.10.00 lakhs	1. Building contractor	1
	2. Brick layer	1
	3. Diploma holder in Civil	1
3. Above Rs.10.00 lakhs	1. Building contractor	1
	2. Brick layer	1
	3. Engineering Degree holder in Civil	1

3) Unless the contractor has been exempted from the engagement of Apprentices by the Director of employment of training/State Apprenticeship Advisor, a certificate to the effect that the contractor has discharged his obligation under the said Act satisfactory should be obtained from the director of Employment and Training/State Apprenticeship Adviser and the same should be provided by the Contractor, final payment in the settlement of the contract.

(Authority: G.O.M.s.No.866/Transport Department dated 12.8.70)

Contractor

No. of Corrections

Superintending Engineer

TAMIL NADU HOUSING BOARD

TECHNICALLY QUALIFIED MEN SHOULD BE EMPLOYED AS FOLLOWS:-

1.	2	3
1.	Up to Rs.1.00 lakh	No technical Assistants need to be employed, However, if the Officer who accept the agreement feels that the nature of work requires a Technical Assistants, conditions may be stipulated in the tender notice that diploma holder in civil engineering or a retired Junior engineer may be employed.
2	Upto 1.00 Lakh to Rs.3.00 lakhs	One Diploma holder in Civil Engineering or not less than one retired Junior Engineer.
3	Rs.3.00 lakhs to Rs.10.00 lakhs	One B.E. (Civil) or equivalent degree holder or not less than one retired sub-divisional officer (Assistant executive Engineer or Assistant divisional Engineer).
4	Rs.10.00 lakhs to 25.00 lakhs	One B.E. (Civil) or equivalent degree holder with three years experience in Civil Engineering works or not less than one retired sub divisional officer plus one diploma holder in Civil Engineer.
5	Rs.25.00 lakhs to Rs.50.00 lakhs	One B.E. (Civil) or equivalent degree holder with three years experience or not less than one retired sub-divisional officer (Retired Assistant Executive Engineer plus two Diploma holder in Civil or two retired Junior Engineers)
		<u>ALTERNATIVE:</u> One B.E. (Civil) or equivalent degree holder with three years experience or not less than one retired sub-divisional officer and one more B.E. (Civil) or equivalent degree holder).
6	Above Rs.50.00lakhs	To be examined in individual class depending on the nature of work and the technical skill involved and defined in the Tender Notice regarding the number of qualified technical personnel to be employed by the contractor.
		Penalty of Rs.500/0 p.m. for Diploma holder and Rs.1000/- p.m. for degree holder be levied in case of default on the part of contractors in following the norms laid down above.
		The employment of Technical Assistant could be based only on the value of contracts. Engineer with Mechanical Engineering qualification and retired from Civil engg. Department are also suitable to supervise the Civil Engineering work because of their experience in Civil engineering field.

Contractor

No. of Corrections

Superintending Engineer

I am / we are professionally qualified and my / our qualification are given below:

Name	Qualification

I / we will employ the following technical staff for supervising the work and will see that one of them is always at site during working hours personally checking all items of work and paying extra attention to works as required special attention (e.g.) reinforce concrete work.

Name of members of technical staff proposed to be employed	Qualification

In deciding the period of absence, the certificate from the Assistant Engineer in charge of the work counter signed by the Executive Engineer in charge shall be taken as the conclusive evidence and I / We shall be bound by such a certificate.

SPECIAL CONDITIONS FOR SENDING THE CEMENT CONCRETE CUBES FOR TESTING

The contractor should make arrangements for getting mould to the site for casting of cubes for testing of concrete strength.

1. Mould: The concrete mould' should be as per IS Specification (IS-516-1959) the details of which are as follows:

The mould shall be of metal, preferably steel or cast iron, and stout enough to prevent distortion. It shall be constructed in such a manner as to facilitate the removal of the moulded specimen without damage and shall be so machined that when it is assembled ready for use, the dimensions and internal faces shall be accurate within following limits.

The height of the mould and the distance between opposite faces shall be the specified size + 0.2mm. The angle between adjacent internal faces and top and bottom planes of the mould shall be 90. + 0.50. The interior faces of the mould shall be plane surface with a permissible variation of 0.03 mm. Each mould shall be provided with a metal base plate having a plane surface and to support the mould during the filling without leakage and it shall be preferably attached to the mould by springs for screws.

The interior surfaces of the mould shall be thinly coated with mould oil to prevent adhesion of the concrete.

2. Compacting: The concrete shall be filled into the mould in layers approximately 5 cm. deep. each layer shall be compacted either by hand or by vibration as described below(as per ISI).

When compacting by hand, the standard tamping bar shall be used and the strokes of the bar shall be distributed in uniform manner over the cross section of the mould as prescribed in I.S.I. and for cubical specimen in no case, shall be concrete be subjected to less than 35 strokes per layer for 15 cm cubes (as per I.S.I.).

When compacting by Vibration each layer shall be vibrated by means of an electric or pneumatic hammer or vibrator (as Per I.S.I).

3. The concrete cubes shall be cured for 28 days and send on 29th day. if the day falls on a holiday the cubes shall be sent on the next working day.

4. All the charges connected with the cube testing etc. shall be borne by the contractor.

5. If the concrete cube is found to be of lesser strength then reduction in agreement rates shall be adopted as per the powers delegated to Executive Engineers.

6. For working out the reduction of rates the following procedures will be adopted.

When the strength of cubes tested is between 75% and 100% of the specified strength the agreement rates should be reduced proportionately to the allowable strength of concrete .

7. When the strength of cube tested falls below 75% of the allowable strength, the R.C. Component from where the cube samples are collected shall be rejected. However as an additional check, non-destructive test will be conducted through recognized institutions like Anna University etc., whether the concrete component can be rejected or reduced rate to be adopted will then be decided. However for working out the reduced rate, the cubes strength value only should be taken and worked out as given in par (6) above.

TAMIL NADU HOUSING BOARD

List of Electrical Materials and Sanitary fittings & PVC Doors and Windows of approved Brand to be used in TNHB works

Sl.No.	Name of Materials	Company Name	IS No
	ELECTRICAL ITEMS		
1	PVC Sheathed / Unsheathed Copper Cable 1100 V	FINOLEX, KUNDAN, ANCHOR, Q-FLEX, HAVELLS, JAIMAX GOLD, RALLISON, ROOPA, ORBIT WITH ISI MARK, GM, OMEX GOLD, ASMON, MARISON, SN Cab	IS 694:1990
2	Flush type switches, plug sockets power plug sockets staircase switches, Bell push switches and Ceiling rose, batten holder, etc.	RECORD, ANCHOR (ROMA MODULAR RANGE OF SWITCHES), LEADER, FINOLEX, KUNDAN ROOPA, GM, Savic Switches, Plugs & socket, LITASKI switches, plugs & socket. Great White switches , plugs & socket	IS 3854:1988
3	Double / Triple pole Main, Switches.	STANDARD, HAVELLS, ZETA, HPL, GEM, L&T, BCH SIEMENS, SPUTNIK, ROOPA WITH ISI MARK, GM	
4	Distribution Boards (Rewire able type)	MDS, GEM, HAVELIS, ZETA HPL, SPUTNIK WITH ISI MARK, MARISON	
5	Consumer unit with rewriteable Main switch and distribution fuse units for use in inside apartment other complexes.	MDS, ZETA, STANDARD, GEM & HAVELLS	
6	a) Miniature Circuit Breaker IS:12640-1(2000)	MDS, INDO-KOPP, HAVELLS, STANDARD, FINOLEX, BENTEC, INDO ASIAN, GEM, ANCHOR, Great White	IS:12640-1(2000) IS 8828-1996
	b) Miniature circuit breaker Distribution Board		
	c) Consumer unit with MCB Isolator for incoming and miniature circuit Breaker for distribution circuit for inside complexes.		IS 13032-1991
7	Bulkhead fittings	K-LITE, MUNDRA, FLOUROCRAFT, GLOLITE, BAJAJ, PHILIPS & CROMPTON GREAVES, ROOPA.	
8	PVC Electrical conduct Heavy gauge : Pipe	AVON PLAST (WITH ISI MARK) MERCURY, GM	
9	Hylem Sheet	3MM THICK WITH LAMINATION	
10	Light fittings	PHILIPS, BAJAJ, FINOLEX, ANCHOR, CROMPTON GREAVES, HMT, MYSORE LAMP, FIXOLITE, ROOPA WITH ISI MARK.	
11	L.T armored UG gables	UNIVERSAL, CCA, UNIFLEX, PARAGON, ANCHOR & FINOLEX, OMEX GOLD, MARISON, SN Cab	
12	Ceiling Fan	USHA, CROMPTON, ORIENT, ALMONARD, KHAITHAN, POLAR, RALLY & KEDIA	
13	FSUs for cubical/industrial type panel boards	Siemens/GE/L&T & Standard	

Contractor

No. of Corrections

Superintending Engineer

Sl.No	Name of Materials				Company Name		IS No	
	<u>SANITARY PIPES :</u>							
1	<u>PVC Rigid Pipes for water supply</u> Size and Range: 20mm to 200mm & 2.5 kg to 10 kg pressure				FINOLEX, SUPREME, TRUE BORE, FLOW GUARD & PRINCE, KISAN		IS 4985	
2	Heavy pressure Solvent Cemented Pipes				FINOLEX, SUPREME, TRUE BORE, FLOW GUARD & PRINCE		IS 4985	
	SIZE	OD	WALL THICKNESS					
			Minimum	Max				
	20	20.30	2.80	3.30				
	25	25.30	2.90	3.40				
	32	32.30	3.40	3.90				
	40	40.30	3.60	4.20				
50	50.30	3.70	4.30					
3	ASTM Heavy pressure Pipes at 23° C Schedule-40.							
	Size	Mean OD	Wall thickness		Pressur e rating (MPa)	FINOLEX, SUPREME, FLOW GUARD & PRINCE.	ASTM D-1785	
			Min	Max				
	½	21.24	2.77	3.28	4.14			
	¾	26.57	2.87	3.38	3.31			
	1	33.27	3.38	3.89	3.10			
	1¼	42.00	3.56	4.07	2.55			
	1½	48.11	3.68	4.19	2.28			
	2	60.17	3.91	4.42	1.93			
4	PVC fittings				SUPREME,FLOW GUARD, FINOLEX & PRINCE		IS 7834 (Part 3)	
5	UPVC Soil, Waste and Rain Water (SWR) Drainage System				SUPREME, PARAS, FINOLEX & PRINCE, KISAN		IS 13592 - 1992	
	Nomi nal thic kness (O.D)	tolerance (O.D)	Wall Thickness		Wall Thickness		<u>Note</u> :As per IS 13592-1992 <u>Type A</u> Pipes are recommended for use in ventilation pipe work and rain water application and <u>Type B</u> pipes are recommended for use in soil and waste discharge system.	
			Type-A		Type-B			
	Dia	Dia	max	min	max	min		
	50	+0.30	1.80	2.20	3.20	3.80		
	75	+0.30	1.80	2.20	3.20	3.80		
	90	+0.30	1.90	2.30	3.20	3.80		
	110	+0.40	2.20	2.70	3.20	3.80		
160	+0.50	3.20	3.80	4.00	4.60			

Sl.No	Name of Materials	Company Name	IS No
	BATH ROOM FITTINGS		
1	Hot & Cold water CPVC pipes & Fittings	FLOW GUARD,SUPREME(Life line), ESSCO, JAGUAR sanitary bath room fittings & Accessories, FINOLEX, PRINCE MARVEL & PARSELANO, KISAN	ASTM D -2846
2	Water Storage Tanks (PVC)	SINTEX, LOTUS, INFRA.	IS 12701:1996
3.a	UPVC Doors & Windows	SINTEX, POLYWOOD, Sleek, Captiv Fenestration, Qute, Akshara profile.	
b	Wooden flush door shutters (Solid core type)	South India Doors & Panels Pvt. Ltd.,	
4	Aluminum Doors & Window fittings	CROWN, CLASSIC WITH ISI mark	
5	G.P.C. Steel windows	NCL ALLTEK & SECCOLOR LTD.	
6	Floor & Wall Tiles.	JOHNSON, MARBITO & KHAJARIA, SAS, Naveen Daimon tiles, VARMORA, TAMIN products -Graphipaver tiles, (Graphitile) and Graphipaver blocks.	
b	Wall tiles	Swastik Tiles	
c	Roof tiles	TAMIN Products – Vermitile roof tiles, Vermitile Solar Reflective Cool tiles (Weathering course tiles)	
7	Painting works (First Class) with brand Name	(Dulux- I.C.I), (Luxor Hi-Gloss-Berger Paints), (Apcolite- Asian Paints), (Nerolac- Good Lass)	
8	Steel Rods - with TMT ISI Mark	TATA, SURANA, PULKIT, SISTRONG, BMM Ispat Ltd., Vela, Mangal TMT Fe 415, Fe 500 & Fe 550, , "PMP" High strength steel bars & wires Fe 415 & Fe 500	IS-1786 (1985)

Note; The EE &Ado concerned should follow the instruction given by the Chief Engineer /TNHB vide letter No Superintending Engineer/QC/12307-A /2017 dt.19.4.2017

Contractor

No. of Corrections

Superintending Engineer

TAMIL NADU HOUSING BOARD**Product Approval List****CEMENT**

S. No.	Company Name	Brand / Product Range	Validity of the Period
1	M/s.Chettinad Cement Corporation Pvt.Ltd., 603, Anna Salai, Chennai-600 006.	CHETTINAD CEMENT OPC 43, OPC 53, PPC, PSC.	Upto 31.07.2022.
2	M/s. Bharathi Cement Corporation Pvt. Ltd., 8-2-626 Reliance Megestic, Road No.10 Banjara Hills, Hyderabad-500 034.	BHARATHI CEMENT OPC 43, OPC 53	Upto 11.08.2022.
3	M/s. Sagar Cement Ltd., No.B-10, CMDA Truck Terminal Complex, Ponnammanmedu, Madhavaram, Chennai-600 110.	SAGAR CEMENTS LTD OPC 43	Upto 10.09.2022.
4	M/s. Penna Cement Industries Ltd., New No.8, Old no.8/1, Casa major road, 2 nd Cross Street, Jerret Garden, Egmore, Chennai-600 008.	1. Penna OPC 43 grade. 2. Penna OPC 53 grade. 3. Penna Portland Pozzolana and Penna Portland Slag cement.	Upto 11.03.2022.
5	Tamil Nadu Cement Corporation Limited,(A Govt. of Tamil Nadu undertaking), LLA, Building II Floor, 735, Anna Salai, Chennai-600 002.	Arasu Cement	

STEEL

1	M/s.Suryadev Alloys and power Pvt. Ltd., 497, 498 Isana Building 8 th Floor, Poonamallee High Road, Arumbakkam, Chennai- 600 106	SURYADEV TMT STEEL Fe500 (8mm to 32mm)	Upto 31.07.2022.
2	M/s. Sakthi Ferro Alloys India, Private Ltd., 18/26 2 nd Street, Loganathan Nagar, Soolaimedu, Chennai-600 094	SSI TMT Fe 500, Fe 500D and Fe 550	Upto 16.12.2021

Contractor

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Superintending Engineer

3	M/s. Pulkit Metals Private Ltd., 163/1 K.Sons Complex, 1 st Floor, Prakasam Salai Broadway, Chennai-600 108.	Pulkit TMT Fe 415, Fe 500, Fe 500D, Fe550 & Fe 550D	Upto 16.12.2021
4	M/s. GBR Metals Private Ltd., No.4, Ramanan Road, Chennai-600 079.	1. GBR TMT Fe 500 2. GBR TMT Fe 500D 3. GBR TMT Fe 550	Upto 16.12.2021
5	M/s. J.R Metal Chennai Ltd., No.32, Manali Express Road TKP Nagar, Tiruvottior, Chennai-600 019.	1. J.R TMT Fe 500 2. J.R TMT Fe 500D 3. J.R TMT Fe 550	Upto 16.12.2021
6	M/s. PMP Iron and Steels (India) Ltd., No.2, Nelson Manikkam Road, Aminjikarai, Chennai-600 029.	PMP TMT Fe500 (8mm to 25mm only) Steel for General Structural Purpose 1. Grade E250A- Angle 25*25*3mm to 65*65*6mm 2. Grade E250A- Square 10mm to 25mm 3. Grade E250A- Flat 25*3mm to 65*10mm 4. Grade E250A- Round 8mm to 25mm	Upto 20.12.2021
7	M/s. Sumangala Steel. (P) Ltd, Old No.45, New 79, Chamiers Road, Raja Annamalaipuram, Chennai-600 028.	1. Sumangala TMT Fe 500 2. Sumangala TMT Fe 500D 3. Sumangala TMT Fe 550 4. Sumangala TMT Fe 550D	Upto 21.12.2021
8	M/s. Prakash Ferrous Industries Pvt. Ltd., No.36, New Avadi Road, Kilpauk, Chennai-600 010.	Tirumala TMT Steel Fe 500D, Fe 550 (8 to 32mm)	Upto 15.02.2022
9	M/s. V.V.Iron and Steel Co Pvt. Ltd., 17 C, Keerai Karan Thattu, Thisayan vilai, Tirunelveli -627 657.	Ferron Steel Fe 500 (8 to 32mm dia)	Upto 18.02.2022
10	M/s. TULSYAN NEC Ltd, Apex plaza, 1 st floor, Old No.3, New No.77, Nungambakkam High Road, Chennai-600 034.	TULSYAN TMT Fe 500D (8 to 32mm)	Upto 25.02.2022
11	M/s. J.B.A Metal Company, 56-D, Mogalpura Street, Tiruvannamalai-606 601	Andavar TMT Fe500 TMT, Andavar TMT 500d bars, Andavar TMT Fe550 bars, Andavar TMT Fe 550D bars/ 8mm to 32mm	Upto 15.02.2022

Contractor

No. of Corrections

Superintending Engineer

TILES

1	M/s. Sunshine Tiles Company Pvt. Ltd., Jahnvi Hight, Babujagan street, 100' road (opp. to Hotel Vijai Park), Arumbakkan, Chennai-600 010.	Sunheart Ceramick Pressed Ceramic Tiles.	Upto 28.03.2022
2	M/s. Somany Ceramics Limited, P.O.Kassar, Bahadurgarh, Distt Jhajjar, Haryana-124 507.	"SOMANY" Ceramics Vitrified (Floors and Wall Tiles), Veil craft Technology Tile and Glazed Vitrified Tiles	From 06.08.2021 up to 05.08.2022
3	M/s. Asian Granito India Limited, 202, Dev. Arc., Opp. Iskcon Temple, S.G. Highway, Ahmedabad-380 015.	"AGL" Pressed Ceramic Tile, Glazed and without spacer lugs. For modular and non modular size for thickness above 7.5mm to 16mm for sizes up to and including 300mm*600mm with water absorption>10.0 percentage (Group B III) (Ceramic wall Tile).	Upto 21.10.2022

UPVC PIPES

1	M/s. Kisan Moulding Ltd, South Regional Office, 13/14 2 nd Floor, M block, Unity Building J.C.Road, Bangalore.	1. UPVC Pipes for Solid Waste and Rain Water (SWR) 2. CPVC Pipes for Potable Hot/Cold 3. UPVC Pipes for Potable water supply 4. UPVC Pipes ASTM D-1785	Upto 16.12.2021
2	M/s. Astral Poly Tech nic Ltd., 207/1, Astral House B/h Rajpath, Club S.G Highway, Ahmedabad.	1. CPVC Pipes for Potable Hot/Cold 2. Structure non Pressure drainage Pipe 3. UPVC Pipes for Potable water supply 4. UPVC Pipes for Soil and waste water/Injection moulded PVC Socket fitting	Upto 16.12.2021
3	M/s. Supreme Industries Ltd., No.30, Lind Floor I Main Road, (Above SBI) Nandanam, Chennai-600 035.	1. UPVC Pipes for Potable water 2. HDPE Pipe for Potable water 3. HDPE Pipe for Sewarage 4. UPVC Non Prv Pipe for UGD 5. Rotational Moulded water tank 6. Structured Wall Plate Piping System Non Presure drainager Pipe 7. UPVC Pipe for Solid water Sewerage 8. CPVC Pipes for Hot/Cold water 9. UPVC Screen of Casing Pipe 10. CPVC Pipes for Sprinkler fire extinguishing System 11. UPVC Pipe Aqua gold ASTM D 1785 12. SWR low Noise system 13. PE ultra Man hole 14. PP-R Hot/Cold	Upto 16.12.2021

Contractor

No. of Corrections

Superintending Engineer

4	M/s. HIL CK Birla Group, No.2A, Babu Jagan Street, Kannan Balanagar, Arumbakkam, Chennai-600 106.	Birla Aerocon CPVC Pipe for Hot and Cool pipe for potable water supply Birla Aerocon Aerated Autoclaved concrete Blocks AAC blocks Aerocon Block joining mortar/Aerocon wall & Putty of Birla	Upto 18.02.2022
UPVC DOORS			
1	M/s. SIMTA CLEAR COATS PVT. LTD., 4/56, Somanur Road, Muthugounden Pudur, Sulur, Coimbatore-641 406.	1. SIMTA ASTRIX UPVC Window 2. SIMTA ASTRIX UPVC Door Profiles	Upto 28.12.2021
2	M/s. QUTE Extrusions Pvt. Ltd., K-33 N & S, Phase-II Sipcot Industries Complex, Gummidipoondi-601 201 Thiruvallur District.	1. QUTE UPVC Windows 2. QUTE solid UPVC door with framd (Bath & Toilet door)	Upto 25.02.2022
3	M/s. Sarvesh Multi Plast India Pvt. Ltd., S.F.No.367/1, Kothamapalayam, M.Pidariyur (PO), Chennimalai-638 051. Erode District.	Sarvesh UPVC Windows and Doors	Upto 25.07.2022
HARDWARE ACCESSORIES			
1	M/s. Mavin Architectural Solutions Private Ltd, Old Lancers Lane, Secunderabad-600 094.	1. Mavin-Hinges, Pull handles 2. Yale-Hinges, locks, Digital locks, Door closers, Hardware Accessories 3. Lock wood-Hinges, locks, Door closers, Hardware Accessories 4. ENOX-Hinges, locks, Door closers, Hardware Accessories, Glass Shower cubicle fittings, Automatic sliding door system (Acoustic Partitions)	Upto 16.12.2021
2	M/s. CERA Sanitary Ware Ltd, Madhusudan House, Opposite to Navranpura Tel exchange, Ahmedabar-380 006.	1. CERA Viterous Products Water Closets, Washbasin 2. CERA Flusing Cisterns 3. CERA Chrome Plated fittings	Upto 16.12.2021
3	M/s. Aluminium UDYOG, HR,10, Street No.10 Anband Parbat Industrial Area, New Delhi-110 005.	1. Global Tower bolts Part 0-2 Non- Ferrous Metal 2. Global Door Handles 3. Global Non-Ferrous Metal Sliding door bolts (Aldrop) with Pad Lock 3. Global Non-Ferrous Metal Hinges	Upto 20.12.2021

Contractor

No. of Corrections

Superintending Engineer

ELECTRICAL ITEMS

1	M/s. Panasonic Life Solution India Pvt. Ltd., (Anchor Electricals Private Ltd.), Level 3 Isphani Centre 123/124, Nungabakkam High Road, Chennai-600 034.	1. Anchor Switches (Roma plus) 2. Anchor Plugs and Sockets 3. Anchor Circute Breaker MSB 4. Anchor RCCB house hold use 5. Anchor low Voltage switch gear 6. Anchor PVC Wires and Cables rated upto 1100V. 7. Anchor Conduits for electrical Installation	Upto 16.12.2021
2	M/s. Great White Global(P) Ltd., 13 th Floor,/B wing, Peninsula buysiness park, Senapathi Bapat Marg, lower parel (W), Mumbai-400 013.	1. Great White Switches for Domestic purpose 2. Great White Plugs & Sockets 3. Great White Wires and Cables upto 1100V 4. Great White Circuit breaker - MCB 5. Great White LED – Self-Blasted lamps	Upto 20.12.2021
3	M/s. Orbit Industries/Orbit cable (India), No.63, Pidariar Koil street, Chennai-600 001. No.36, Govidappa Naicken street, Chennai-600 001,	1. Orbit Switches for domestic purpose Express, Elica, Vento. 2. Orbit plugs and socket 250 V 16A Express, Elica, Vento. 3. Orbit PVC insulated wires and cables upto 1100V 4. Orbit PVC insulated heavy duty cable upto 1100V 5. Orbit cross linked Polyethylene insulated cable upto 1100V	Upto 28.03.2022

Contractor

No. of Corrections

Superintending Engineer

TAMIL NADU HOUSING BOARD

Special Condition for Electrical Works (To be enclosed in the Tender Schedule)

1. The work shall be carried out in accordance with the General specification for Electrical works and the code of practice for electrical wiring installation. IS. 732-1963 and I.S 3043 – 1965 and as amended upto date. All installation shall comply with the requirement of Indian Electricity Rules 1956 and Act and I.S code amended upto date.
2. Approval of the Engineer-in-charge shall be taken well in advance for all materials and brand of materials to be used on work by the contractors based on the approved brand of materials list enclosed in the tender. The choice of brand of materials from the approved list is the discretion of the Engineer in-charge and his decision will be final. The contractor is bound to use the brand of materials selected by the Engineer incharge.
3. Bad workmanship is liable to be rejected in to.
4. The contractor shall supply on completion of work, completed plan along with insulation, polarity and earth tests reports before the installation is handed over to the Engineer – incharge in good condition in triplicate. The tests should be carried out in the presence of Engineer – in – charge at Contractor's cost.
5. All repairs and patch work shall be neatly carried out to match the original finish and to the entire satisfaction of Engineer – In charge.
6. The contractor shall make his own arrangements at his own cost for all general and special T & P required on the job.
7. The contractor shall make his own arrangements for storage, of materials and watch and ward at his own cost, till the installation (completed work) is handed over to the Department after obtaining service connection from Electricity Board and testing the line. Any loss and tampering of materials for which the payment was made by the department will be made good by the Contractor at his own cost.
8. Issue of materials to the contractor wherever stipulated will be regulated to the needs from time to time depending upon the progress.
9. Materials stipulated for issue shall be taken over to the site of work and the safe custody till completion of the job is the responsibility of the contractor.

Contractor

No. of Corrections

Superintending Engineer

10. All the debris due to electrical works shall be removed from site by the Contractor as soon as the work is completed.

11. Electrical works shall be progressed by the Contractor side by side with the progress of the building work, burying of conduits for recessed portion shall be planned together with the building progress so that there is no hindrance to the building progress at any stage.

12. The internal E.I shall be ordinarily carried out according to the drawing supplied with the schedule of work subject to change made by the Engineer – in – charge.

13. The wiring route shall be marked at site first and get approval from the Engineer – in – charge before commencement of actual work. The work must be carried out as directed by Engineer – in – charge.

14. P.V.C. wiring shall be neatly painted with two coats of non cracking paint distemper suitable for painting P.V.C wire and of suitable colour to match the surroundings as per the direction of Engineer – in – charge.

15. In place where electrical conduit is required, to pass through wall RCC column / beam etc., the conduit shall be laid during the execution of work in consultation with the Engineer – in – charge So as to avoid the need for cutting the structure at a later date.

16. The teak wood materials such as fillets, specials, T.W. boxes and all materials shall be got approved from the Engineer – in - charge before use to ensure the quality of materials.

17. In the case of recessed conduit works, the M.S boxes shall also be recessed and covered with 1/8" (3mm) hylam / Bakelite sheet. The thickness of M.S.sheet shall not be less than 16 gauge thick.

18. Provision of fittings.

(a) All switch Boards shall be so placed that the bottom is normally 1.2 meter above floor level or such height as decided by the Engineer in-charge.

(b) All fittings shall be provided at 2.6 metre from the floor level or such height as decided by the Engineer in charge.

(c) The convenient 5/15 Amps plug socket shall be 23 cm above the floor level or such height as decided by the Engineer – in – charge.

(d) Wiring shall run normally at 2.6Metres above floor level or such height as decided by the Engineer in charge.

19. The materials issued if any by the department to the contractor, the cost will be recovered at the stores issue rate. If the contractor fails to return the surplus materials after completion of work, the cost will be recovered at double the stores issue rate or market rate whichever is higher.

20. Brass hinged brass hooks and eyes, single teak wood boards of 60mm minimum depth in case of open wiring and minimum depth of 200 mm in the case of concealed wiring and not less than 6.5 mm thickness shall be used on the works.

21. Fixing of Wooden battens.

(a) The screws shall be used for fixing the wooden batten and accessions at an interval not exceeding 50 cm. The thickness of patterns shall not be less than 10mm.

(b) The clips are provided on the wooden batten with screws / pins and spaced at an interval of 15 cm both in the case of horizontal and vertical run.

(c) Round block shall not be less than 75mm dia and 40 deep and fixed by means of 2 Nos screws.

22 (a). Pioner type switches, sockets, outlets of approved make wherever needed shall be used for recessed boards after getting the approval of Engineer – in charge.

(b) Only brass screws shall be used for fixing, fittings, switches, plug and sockets main boards and distribution boards and teak wood accessories etc., required for the wiring.

23. All conduct pipe shall be approved gauge (not less than 16 SWG, 14 SWG) solid drawn or lap welded, finished with galvanized stone enameled finish. The saddles used shall not be less than 24 gauge upto 55mm dia. Pipes and not less than 20 gauge for longer dia pipes.

24. The main earthing lead shall not be less than 8 SWG copper (4.06 mm) in case of copper wire earthing or 6 SWG G.I wire (4.93) in case of G.I wire earthing separate earthing shall be provided for all mountings of main boards, distribution boards, 5/15 amps. plug sockets with not less than 14 SWG of copper (2.03 mm)

25. Earthing shall conform to the relevant I S code, 3043 - 1966 the G I pipe earth electrode system is, adopted G 1 pipe shall be of medium class 38- 40 mm dia., 3.75 meters long. The electrode shall be buried in the ground vertically With its top not less than 20 cm. below ground level Normally an earth electrode shall provide 1.5 meters away from any building, In case of providing twin earthing the distance between the earth pits shall be 10 feet Alternate layers of charcoal or coke and salt of minimum 15cm. thick are to be provided from the bottom of earth pit upto 1 meter below ground level and the masonry work, is to be carried out in brick with

the cement mortar 1:4 above the last layer and the top is to be covered with suitable cast iron frame and cover.

26. The staircase light point wiring must be done by looping or piece wire system and switch must control phase or live wire only. 30. Looping in system is to be adopted for wiring. Normally the looping of neutral to light, fan, plug, points etc. should be restricted to 3 points for a single wire from the switch board.

27. The wooden batten and specials shall not be butt jointed and joints should be lap jointed.

28. The wiring must be done using bend and corners wherever necessary. Sharp bending or cable must be avoided.

29. The lighting circuit shall not have more than 10 points or a load of 800 watts. Whichever is less.

30. Power wiring shall be kept separate and distinct from the lighting wiring.

31. The contractor should be present at the premises at the time of effecting service connection by the Electricity Board authority and afford all facility for testing and commissioning the installation.

32. The contractor should provide sufficient leads for connecting the main switches to meters and cut outs provided by the Electricity Board at his own cost.

33. The apartment main switches and the main switches at the Electricity Board service connection boards should be numbered in paint for easy identification and the danger boards should be provided wherever necessary according to I. E. Rules and Act regulations.

34. Looping of neutral and connection wires in the switch boards must be carried out through mechanical connections and proper insulation shall be provided inside the switch wherever necessary to avoid short circuiting the system.

35. The scaffolding and the shed required for the electrical installation works should be put by the contractor at his own cost.

36. The Run off mains relates to the mains, run from the main switch inside the apartment to the mains switch provided for service connection by the Electricity Board authorities. The distribution box used shall be metallic enclosed type with fuse unit and neutral link. The earthing for the main switches provided in the service connection Board should be properly interconnected and connected to the main earthing system.

LIST OF HOUSE HOLD ELECTRICAL APPLIANCES**Circular No/ TC4 I 193 I 89 dt. 06-01-1989**

<u>Sl.. No.</u>	<u>House hold Electric & Electronics</u>	<u>Standard</u>
1.	Electric immersion water heater	IS: 368-1983
2.	Storage type automatic electric water heater	IS:2082-1985
3.	Switches for domestic & similar purposes	IS I 3854-196V
4.	Rubber insulated cables (with copper conductor (Voltage Upto 1 I 1 KKV.)	IS: 9968 (Part I) 1981
5.	Rubber insulated cables (with aluminum conductor (Part 11) 1981 (Voltage Upto 1 : 1 K.V)	IS: 9968
6.	PVC insulated cables (for voltage upto upth 11 OOV)	IS: 694.1977
7.	PoJythylene insulated and PVC sheathed cables upto and including 1100 Voltage	IS:1996-1997
8.	Electrical Irons	IS 1336.1985
9.	Electric Stoves	IS: 2994-1965
10.	Electric Hot plates	IS:1365-1983
11.	Domestic Electric food mixers (Liquidizers Blenders & Grinders)	IS : 4250-1980
12.	Electric Toasters	IS : 1287 -1965
13.	Electric Coffee percolaters (Non regulator type)	IS: 3514.1966
14.	Pomeatic Electric Cloths washing machines (Non. regulator type)	IS : 6390-1983
15.	Ele. Kettles and jugs for house and similar type	IS : 367-1983
16.	Electric Radiators	IS : 369-1983
17.	Electric Water boilers	IS : 3412-1985
18.	MAIN-operated electric shavers	IS : 71541973
19.	MAIN operated electric shavers	IS : 5152-1969
20.	Domestic electric cooking ovens	IS: 5790-1985
21.	Steam Irons	IS : 6290-1971
22.	Electric. Electronic hearing gads domestic use	IS: 5161-1969
23.	Portable hand-held mains operated electric massagers	IS: 7137-1973

(Contd. PTO)

Contractor

No. of Corrections

Superintending Engineer

<u>Sl. No.</u>	<u>House hold Electric & Electronics</u>	<u>Standard</u>
24.	Portable low speed food grinding machine	IS: 7603.1975
25.	Appliance connectors and appliance Inlets (Non-revertable three pin type) appliance	IS: 3010 (part-1)1965
26.	Appliance connector and appliance inlets (Non reversible three pin type) appliance inlets	IS: 3010 (Part-II) 1965
27.	Thermostats for use with electric water heater	IS : 3017-1985
28.	Cartidge type heating elements water heater (Non embedded type)	IS : 3724-1966
29.	Resistances wire. tapes and strips for heating elements	IS : 3725.1966
30.	Solid embedded type electric heating elements	IS : 4158 -1985
31.	Mineral filled sheathed heating elements	IS : 4159-1983
32.	Thermostats for general electric ovens	IS : 4165-1967
33.	MICA insulated heating elements	IS : 6446 1972
34.	2 Amps switches for domestic and similar purposes	IS : 4949-1968
35.	Electric portable lamp stands and brackets	IS : 3481-1966
36.	Three pin plugs & sockets-outlets (First revision)	IS 1293-1967
37.	Three pin plugs made of resilients materials	IS: 6538-1971
38.	Bayonet Lamp Holders	IS: 1258-1979
39.	Electric Instantaneous water heaters	IS : 8978-1985
40.	Single walled baking oven	IS I 8925-

TAMILNADU HOUSING BOARD

7. TYPES OF EARTH ELECTRODES:

7.1. Rod and pipe Electrodes (Fig.4)

- 7.1.1 These electrodes shall be made off metal rod or pipe having a clean surface not covered by paint enamel or poorly conducting materials.
- 7.1.2 Rod Electrodes of steel or galvanized iron shall be at least 16mm in diameter and those of copper shall be at least 12.5mm in diameter.
- 7.1.3 Pipe electrodes shall not be smaller than 30mm internal diameter if made of galvanized Iron or steel and 100mm internal diameter if made of cast iron.
- 7.1.4 Electrodes shall, as far as practicable be embedded below permanent moisture level.
- 7.1.5 The length of rod and pipe electrodes shall not be less than 2.5m.
- 7.1.6 Except where rock is encountered rod pipes and rods shall be driven to a depth of at least 2.5m where rock is encountered at a depth of less than 2.5m the electrodes may be buried inclined to the vertical. In this case too the electrodes shall be at least 2.5m and inclination not more than 3.0m from the vertical.
- 7.1.7 Deeply driven pipes and rods are, however, effective where the soil resistivity decreases with depth or where substratum of low resistivity occurs at depth greater than those to which rods and pipes are normally driven.
- 7.1.8 Pipes or rods, as far as possible, shall be of one piece.
- 7.1.9. For deeply driven rods, joints between sections shall be made by means of a screwed coupling which should not be of greater diameter than that of the rods which it connects together.
- 7.1.10. To reduce depth of burial of an electrode without increasing the resistance, a number of rods or pipe shall be connected together in parallel. The resistance in this case is practically proportional to the reciprocal of the number of electrodes used so long as each is situated outside the resistance area of the other (See fig.5). The distances between two electrodes in such a case shall be not less than twice the length of the electrodes.
- 7.1.11 If necessary rod electrodes shall have a galvanized iron water pipe buried in the ground adjacent and parallel to electrode itself. It's one end shall be at least 5cm above the surface of the ground and need not be more than 10cm. The diameter of the pipe shall be between 5cm and 10cm. The difference between the lengths of the electrode and that of the pipe if under the earth's surface not be more than 30cm and in no case shall the length of the pipe exceed that of the electrode.

TAMIL NADU HOUSING BOARD

Rules in respect of Power Rollers of the Tamil Nadu Housing Board Conditions of Power Roller

A. POWER ROLLERS

1. For Consolidation work to be done by the tenderer/Contractor and the rates should be inclusive of power roller with driver and cleaners will be engaged and paid by the contractor towards the hire charges of power roller(including fuel etc)per day, including pay of crew charges, including cost of fuel, oil grease etc. The E.E./Tamilnadu Housing Board shall be the sole judge as to the responsibility of the Contractor in respect of break down or other cases.
2. The normal working period for a power roller shall be 8 hours a day excluding after upon break and streaming up time, if the power roller works for more than 8 hours excluding the afternoon break and steaming up time, no hire charges shall be paid for the period worked in excess of 8 hours.
5. The Contractor shall be responsible for the cost of replacing any loss of damage to the plant while it is in his charge fair wear and tear exempted. The E.E. Tamil Nadu Housing Board shall be sole judge of what is "fair wear and tear" and his decision shall be binding on the Contractor.
6. The contractor shall employ at his cost necessary watchman to safeguard the plant.
7. On the Contractor's failure to carryout any of provision in the for joint clause it shall be open to the Exe.Engr., Tamil Nadu Housing Board to have the work carried out departmentally and to recover the cost there of from the Contractor bill or from any other amounts due to the Contractor.
8. The out turn is to be as per the prescribed manner of Sq.ft. per day.

FOR BLOCK TOPPING	1" thick	12000 Sft.
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FOR GRAVEL SOLLING	2" thick	12000 Sft.
	6" thick	8000 Sft.

(in two layers of 3" thick each)

For GRAVEL SOLLING 9" thick in	
Two layers of 4 ½ " tk.each	6000 Sft.
For metalling 1 ½ " tk.2 tk.	8000 Sft.
For metalling 3" tk.	5000 Sft.
For sand gravel mix 150mm thick	6400 Sft.
For sand gravel mix 200mm thick	5200 Sft.

Contractor

No. of Corrections

Superintending Engineer

SCHEDULE 'C'
Special conditions for Roads

1. This operation shall consists of quarrying or collecting the materials breaking, screening conveyance from quarry stacking at the site of work in the manner in the clause 1 & 2 of MDSS No.96 or as may be ordered by the Executive Engineer.
2. The spreading should be done in one layer or several layers as may be specified to the thickness defined in the schedule items.
3. Collecting and spreading should be carried out at the difference items and the same mile or in two at jointing miles.
4. The watering should ensure through consolidation of the earth bed-formation and binding of the several / layers of metal, gravel, blindage of materials etc., at every stages as several operations are carried on to the specification of departmental officers.
5. The small chips make a suitable binder as a substitute for a sand or gravel or as in the case may be.
6. Clay or black soil should not used as blindage.
7. The type of roller and weight to be used by the contractors or must confirm the departmental specifications.
8. Rolling should be commenced from the edges and carried on towards the centre of the road. No extra payment will be made for confirming strips.
9. Where the metal is confined by the road site strip the roller should be started half on the metal on the berm strip to prevent the metal being squeezed out.
10. The contractor should supply all tools and plants required in the several operation of the work even in the absence of the contrary instructions in the tender notice and provide for a cost of same in his unit rates such operations.
11. Blasted rocks will be measured in stacks. Payment will be measured in stacks, payment will be made based on pit measurement or stack measurement less 40% for voids whichever is less.
- 12.a). Initial levels of the scheme area will be taken and plan with levels will be countersigned by contractor. Jr.Engr. and AEE before commencing the work.
(b) Final bill will be paid and deposit released after watching compaction etc., after one monsoon at least levels will be taken, calculation of theoretical quantity as per levels will be taken shortage if any should be made good by contractor.

Contractor

No. of Corrections

Superintending Engineer

SPECIAL CONDITION

1. The tree planting work should be commenced within a fortnight from the date of execution of agreement.
2. Maintenance period: Six month is to be taken into account from the date of completion of tree planting.
3. If any damages occur to the planted trees, these trees will have to be replaced and maintained for six month. The maintenance period of six month for those trees will be taken into from the date of replacing of the damaged trees with fresh one.
4. Only one variety of tree should be planted.
5. Flame of forest, rain trees, margosa and other trees as directed by department are to be planted.
6. 30% of payment will be made soon after planting of trees and the sign of life in them is seen. The balance 70% will be made in the period of six month on Quarter years payment as follows based on the satisfactory progress of the trees growth.

I Quarter Year 35%

II Quarter Year 35%

TAMIL NADU HOUSING BOARD

Additional Specification

1. Filling material must be conveyed from the source specified if any time during the execution of work it is found that the filling material is transported from the area prohibited payment will not be made for the entire work.
2. Pre-levels will be taken in the presence of the Contractor or their representative for the proposed filling area. The Contractor should sign the pre-levels.
3. (a) After completion, final levels will be taken. The contractor should sign the final levels also, payment will be made based on the difference between the pre and final levels for the filled up filling material at difference stages.

(b) The full compaction should be ensured as tested by field and laboratory tests on soil specimens.
4. If and intermediate payment is desired by the contractor, levels at the stage will be taken and quantity arrived at deduction in the quantity will be arrived at based on stage of compaction or quantity conveyed at 140 units converted to 100 units for payment of lesser one
5. The decision of the Executive Engineer is final for proposing the quantity to be deducted and payment to be made for all bills.
6. Final payment will be made based for lesser quantity among the following three
 - 1.) Quantity arrived based on the pre-levels and final levels taken after fully compacted
 - 2.). Quantity worked out based on the stack measurement minus allowable voids
 - 3.). Quantity arrived by maintaining the Trip sheet conveyed through vehicles minus allowable voids
7. The contractor shall make his own arrangements for clean fresh water for use on the work and shall meet all charges therefore.
8. The contractor should pay the senior-age charges to Mines department and submit the Original bill of cost to Division Office for the release of payment.

Contractor

No. of Corrections

Superintending Engineer