

GOVERNMENT OF TAMILNADU

HINDU RELIGIOUS AND CHARITABLE

ENDOWMENT DEPARTMENT

**Arulmigu Natchiar (Andal) Temple , Srivilliputhur Nager &
Taluk in Virudhunager District.**

Tender No: 2/2021-2022

TENDER DOCUMENT

Tender Document Issued to :

Name of work:

Renovation of the Slab culvert in the enroute of
Petchiamman Temple Sub temple of Arulmigu
Nachiar (Andar) Temple @ Senbagathoppu ,
Srivilliputhur Taluk in Virudhunager District.

Tender shall be submitted on or before

:3.00PM , on 26. 04 . 2022

Earnest Money Deposit

: Rs .21 , 250 / -

Contract Value

: Rs.21,40,000.00

Period of contract

:3 Months

Tender Schedule Price Including GST

: Rs.6000.00 + 720

e-mail : eoandal@gmail.com

Office phone:

HINDU RELIGIOUS AND CHARITABLE ENDOWMENT DEPARTMENT

Arulmigu Natchiar (Andal) Temple , Srivilliputhur
Nager & Taluk in Virudhunager District.

Name of Work : Renovation of the Slab culvert in the enroute of
Petchiamman Temple Sub temple of Arulmigu
Nachiar (Andal) Temple @ Senbagathoppu ,
Srivilliputhur Taluk in Virudhunager District.

Last date of receipt of Tender : 26.04.2022 upto 3.00 PM

E.M.D. to be remitted : Rs.21,250/-
(Rupees Twenty One Thousand Two Hundred and
Fifty Only)

Mode of E.M.D. to be remitted:

E.M.D. will be accepted in the shape of Demand
draft of any nationalised Banks/ scheduled Banks
drawn in the name of the Executive Officer ,
Arulmigu Natchiar (Andal) Temple , Payable at
Srivilliputhur and also paid cash and the cash receipt
should be enclosed with the tender document.

1. Tenders not submitted in sealed cover will be summarily rejected.
2. The rate in the words and figure for each item of schedule should invariably/ be furnished by the tender without fail in appropriate columns, corrections, scribbling, over writing and erasing (should be avoided as far as possible) should be attested by the tenderer.
3. The total value of each item of work should be worked out and entered in the amount column.
Proper care must be taken in working out the value of each item of work taking in to account the unit for which the rate is quoted and the quantity of work to be done under the item.
4. The total from each page should be noted at the end of each page and carried over to next page. The grand value of the tender should be worked out and furnished at the end both in words and figures.

ANNEXURE-I

PARTICULARS TO BE FURNISHED BY THE TENDERER

1. Name of the Tenderer and address :
2. Name of Work:
3. Date of Tender:
4. Total value of tender:
5. Details about EMD enclosed for this tender & its validity :
6. Registered class of the Tenderer in PWD
with monetary limit :
7. Recent works executed (details about name and place of work, value of work, agreement number etc. should be furnished) :
8. Works under execution (details about name and place of work, value of work etc. should be furnished) :
9. Command of Labour in brief :
10. Turnover of previous year (particulars for period of three consecutive years to be furnished) :
11. Whether Income Tax clearance certificate is enclosed (**or**) not
12. i. Sales tax registration No. :
:
ii. Whether sales tax verification certificate is enclosed (**or**) not

Details with regard to name of work, nature of work etc. may be furnished in a separate sheet :

Contract	Name of Work	Value of work	Period of Contract	Nomination or Oncontract
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- 1.
- 2.
- 3.
- 4.
- 5.

13. Annual turnover for the three years :
14. Solvency / immovable / cash :
15. Tools and plant owned :
16. Was there any default in fulfilling terms of contract :
17. Special remarks if any :

DECLARATION SHOULD BE FURNISHED BY UNEMPLOYED ENGINEER

1. Name :
2. Address :
3. Age :
4. Native :
5. District :
6. Qualification :
7. Year of Passing :
8. No of years of employment :
9. Name of the Division in which : Registered as an unemployment Engineer
10. Date of Registration :
11. Class of contract Monetary limit :
12. Previous Experience in year :
 - a. Irrigation
 - b. Road work
 - c. Buildings
 - d. Bridges
 - e. other
13. In case of registered co-operative societies they should furnish name for the nominee with their credentials details at the time of tender itself. They should also certify that the nominee of the society is not a registered contractor in the Department.
14. Technical Assistant details :
 1. Name :
Qualification Certificate :
Experience Certificate :
 2. Name :
Qualification Certificate :
Experience Certificate :
OR
Name :

If Retired Civil Engineer Designation And date of retirement (copy may be enclosed)

15. If any other details :

Note: The consent letter from the Technical Assistant proposed to be employed should be furnished and enclosed with the tender.

FOR SPECIAL ATTENTION OF THE CONTRACTOR

1. Proof of registration in PWD, as a contractor shall be attached with the tender.
2. Current Income Tax clearance certificates shall be enclosed with the tender.
3. EMD will be received in the shape as detailed in page 2 (mode of EMD to be remitted).
4. Security should be in the form of Demand draft of any nationalised Banks/ scheduled Banks drawn in the name of the Executive Officer , Arulmigu Natchiar (Andal) Temple , Payable at Srivilliputhur and also paid cash and the cash receipt should be enclosed with the tender document.
5. **The Contractor should have Completed two similar nature of works in post five years relavant certificates should be enclosed**
6. The following particulars shall also be furnished by the contractor with the value.
 - a. List of details of works executed by the contractor with the value.
 - b. Annual turn over of the contractor for the last one year, necessary certificates to the effect issued by the respective bank shall be attached.
7. The lower / lowest tenderer when informed that his tender is under consideration shall have to furnish PERT chart in the proper form within a week from the date of receipt of letter calling for PERT chart. The part chart should confirm departmental time schedule for the completion of the work furnished in the tender notice. If the pert chart is not received within a week from the date of receipt of communication, his tender will not be considered.
8. The tender document will be issued only to the contractors who have registered their names as contractors in PWD in the appropriate class, and whose names are duly renewed during the current year. this condition is applicable to the contractors whose tender documents are downloaded from web.

TENDER NOTICE

1 . On behalf of Government of Tamil Nadu sealed tenders will be received by the Executive Officer, Arulmigu Natchiar (Andal) Temple , Srivilliputhur Taluk in Virudhunager District, at his office upto 5.00 pm on 26.04.2022 , for the work of Srivilliputhur Nager & Taluk in Virudhunager District.

1.1 The tender should be in the prescribed form obtainable from the office of the Executive Officer Arulmigu Natchiar (Andal) Temple , Srivilliputhur Taluk in Virudhunager District, at his office upto 3.00 pm on 25.04.2022 at the place and on the date afore mentioned.

2. The tenderers or their agents are expected to be 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 there in and hand it over to the tenderer concerned and initial all such corrections in the presence of the tenderer. If any of the tenderers or their agents find it inconvenient to be present at the time, then in such a 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 the corrections without any questions whatsoever.

2.1 Tenders may be submitted in sealed covers and should be addressed to the Executive Officer, Arulmigu Natchiar (Andal) Temple , Srivilliputhur Taluk in Virudhunager District

3. 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 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 and address of each member of the firm shall be given. If the tender is made by a corporation, it shall be signed by a duly authorised officer who shall produce with his tender, satisfactory evidence of his authorisation. Such tendering corporation may be required, before the contract is executed, to furnish evidence of its corporate existence.

3.1 Each tenderer must also send a certificate of income tax verification from the appropriate income tax authority in the form prescribed thereof. The certificate will be valid for one year from the date of issue for all tenders submitted during the period.

In the case of proprietor firm, it will be necessary to produce the certificate afore mentioned for the proprietors and for each of the partner as the case may be.

3.2. If the tenderer is a registered PWD contractor and if a certificate for the current year already been produced by him during 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.

3.3. All tenders received without a certificate as before mentioned will be summarily rejected.

4. Each tenderer must pay as earnest money deposit a sum of **Rs. 21250/-** in the shape of demand draft E.M.D will be accepted in the shape of demand draft of the any nationalized banks/ scheduled banks drawn in the name of Executive Officer, Arulmigu Natchiar (Andal) Temple , Payable at Srivilliputhur and also paid cost and the cash receipt should be enclosed with the tender document. The earnest money will be refunded to the unsuccessful tenderer on application after intimation is sent on rejection of the tender or acceptance of successful bidder by the concerned authority at the expiration of three months from the date of tender whichever is earlier. However the earnest money for the first three lowest tenderers will be retained till the final decision is taken on tender. This refund of the first three lowest tenderer will be considered only by the tender accepting authority. if any additional EMD is required after tender, should be paid before acceptance of agreement.

The earnest money will be retained in the case of successful tenderer and will not carry any interest. It will be dealt with as provided in the tender.

5 . The tender will remain valid for a period of **ninety days**, from the last date of receipt of tender. The validity period can be extended further if the contractor gives his consent in writing, specifying the period of extension.

5.1 The Tenderer whose tender is under consideration shall attend the Executive Officer's 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 specified period his tender will not be considered. He shall forthwith upon intimation being given to him of acceptance of his tender by the officer, duly authorised in this behalf, under article 299(1) constitution of the hereinafter called the tender accepting authority, make security deposit of 2% of the value of contract, in one of the form prescribed by department (ie) by taking into account of the amount of Earnest money Deposit already deposited with the tender it would be sufficient to pay the balance amount to make upto 2% of the value of contract for the purpose of security deposit. The earnest money deposit in the shape of Demand draft has to be converted as National Savings certificates/scripts/deposits/accounts of postal department and pledged to the Executive Officer concerned by the successful tenderer on intimation of acceptance of tender. It would be sufficient to pay the balance amount to make up the 2% of the value of contract for the purpose of security deposit, which has to be remitted only in the shape of NSC/deposits

/accounts of postal department or Irrecoverable Bank guarantee as per the form prescribed. The security deposit together with earnest money deposit and the deductions made at 5% of the value of each bill, towards with held amount vide clause 64(i) of General condition to contract out of which

21/2% deducted withheld amount will be released in final bill of the work, such deposit shall not bear any interest.

5.2 On receipt of written communication of acceptance of tender, if the tenderer fails to pay the requisite security deposit within the period specified in the written communication or back out from the tender, or withdraw his tender, the EMD shall be forfeited to the Government.

5.3 If the contractor fails to carry out the contract after paying the requisite security deposit then he will be liable for the excess expenditure if any incurred to complete the work, as contemplated in the general conditions of contract.

5.4 It shall be expressly understood by the tenderer, that on receipt of written communication of acceptance of tender from the accepting authority by the tender there emerges a valid contract between the Govt. of Tamil Nadu and the tenderer for execution of the work without any separate written agreement. Hence for this purpose the tender documents (i.e.) tender notice, tender offered by contractor general conditions to the contract, special conditions of the contract, negotiation correspondence written communication of acceptance of tender etc. shall constitute a valid contract and that will be the foundation of the rights of both parties to the contract, provided that it shall be open to the accepting authority to insist execution of any written agreement by the tenderer, if administratively considered necessary or expedient.

6. The work in HR & CE Buildings executed by the contractor under contract shall be maintained at the contractor's risk until the work is taken over by the Executive Officer. The contractor shall take risk insurance at his own cost against fire flood, volcanic eruption, earth quake other convulsion nature and all other natural calamities risk arising out of act God, during such period and that the government shall not be liable for any loss or damage occasioned. The contractor shall not be liable

for all or any loss or damaged occasioned by or arising out of facts of foreign enemies invasions, hostilities or war like operation (before or after declaration of war) rebellion military power.

7. The tenderer shall examine the Tamil Nadu Building's practice and also general condition of the contract contain therein and sign the divisional office copy of the Tamil Nadu Building practice and its addenda volume in token of such study before submitting his tender unit rate which shall be for finished work in site. He shall also carefully study the drawings and additional specification and all the documents connected with the contract. The Tamil Nadu building practice and other documents with the contract such as specification, plans descriptive specification sheet regarding materials, etc. can be seen at any time during office hours from 11.00 a.m. to 5.00 p.m. in the office of the Executive Officer Arulmigu Natchiar (Andal) Temple @ Srivilliputhur, Srivilliputhur Nager & Taluk in Virudhunager District.

8. The written agreement to be entered in to between the contractors and the Government shall be 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 the contractor and then by the office authorised to enter into contract on behalf of Government.

8. (A) 2 ½% of the total value of the work will be retained in the final bill of the work for a period of one year recovered from the date of completion of the work in order to enable the department to watch the effect of all sessions of the work. The contractor should furnish an indemnity bond for further period of four years. If any defects are noticed in the above said period the defects should be rectified by the contractor at his own cost as directed by the departmental officers and no extra payment will be made for the rectification such work.

REVENUE RECOVERY ACT

Whenever any amount has to be paid by the contractor in view of determination of the contract by virtue of clause 57(4) of Tamil nadu Building Practice (i.e.) if any amount that may be due or may become due from the contractor under theses Provisions and the contractor is not responding to the demands for the payments of the said amount, then the government shall be entitled to recover the said amount under the provision of the Revenue Recovery act.

The Arbitrator for fulfilling the set forth in the arbitration clause of the general conditions to the contract shall

- i. The Executive Officer in case of value of claim does not exceed Rs. 50,000/-
- ii. In case of the value of claim over Rs. 50,000/- and above, the remedy will be through competent civil court only.

9 .The Government will not however after acceptance of contract, rate, pay any extra charges for lead 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 General condition of the contract regarding payment of Seigniorage toll etc.

10 . The tenderer's particular attention is drawn to the section and clauses in the general conditions to the contract dealing with

1. Test inspection and rejection of defective materials on 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.

11 . The contractor should closely peruse all the specifications classes which given the rates which he is tendering.

11.1 A schedule of quantity accompanies this tender notice it shall be definitely understood that, the Government does not accept and responsibility or the correctness or completeness of this schedule and that this schedule is liable to alternation by omissions, deductions or additions at the discretion of the Executive Engineer, Concern or as set forth in the condition of contract. The tenderer will however base his lumpsum tender on this schedule of quantities. In the case of percentage tender system for the works costing upto Rs. 100.00 Lakhs, the tenderer should quote their tender percentage excess/Less (instead of quoting specific rate for each item in the schedule) for the works with reference to the total estimated value put to tender. In case of other works costing more than Rs. 100.00 Lakhs he should quote rates for each item in the schedule and the rates should be in rupees and in sum of five paise. The rate should be written both in words and figures and the units in words. The tender should also show the total of each item and the grant total of the whole contract and quote in the tender a lumpsum for which he will undertake to do the whole work subject to the condition of contract such lumpsum agreeing with the total amount of schedule A. This schedule accompanying the lumpsum tender shall be written legibly and free from erasures over writing or conventions of figures. Correction where unavoidable should be made by crossing out, initialing, dating and rewriting.

12 .The tender offering a percentage deduction from or increase on the estimate amount (except in the case of tender. Called for specifically under the percentage rate tender system) and those not submitted in prescribed 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 drawings, specifications which is made by the tenderer in the contract from the conditions of contract, the drawings, specifications or quantities accompanying the same will be recognized and, if any such alternations are made, the tender will be in valid.

13 .The tenderer should work out his own rates without reference being made to PWD current schedule rate or PWD Estimates. However in case tender called for under the percentage tender system, the tender should work out his own rate but quote his percentage rate above or below the total estimate cost of work of the department indicated in the tender schedule.

14 .The price at which and the source from which certain particulars materials shall obtained by the contractor are given at the end of the schedule accompanying the tender form. Tenderers must accept the material at these prices and shall quote their price for finished work accordingly. Not withstanding any subsequent change in the market value for these materials the charge to the contractor will remain as originally entered in the written contract. No centage or incidental charges will be borne by Government in connection with this supply.

15 .The attention of the tendered is directed to the contract requirements as to the time of beginning works the rates or progress and the dates for the completion of the whole work and its several parts. The following rates of progress and of proportionate value of work done from time to time as will be indicated by the Executive Engineer certificates of the work done will be required. Date of commencement of this programme will be the date on which the site, (or) premises is handed over to the contractor.

Period after date of Commencement	Percentage of work to be complete based on Contract lumpsum amount
1	2
Ist Month	30%
IInd Month	70%

Note: The periods to be entered in column I for the purpose of defining the rates of progress may be fixed by the Superintending Engineer or Executive Engineer to suit each case.

16 .No part of the contract shall be sub-let without written permission of the Executive Engineer, nor shall transfer be made by power of attorney, authorizing others to receive payment on the contractor's behalf.

17 .If further necessary information is required the Executive Officer, Arulmigu Natchiar (Andal) Temple @ Srivilliputhur of the Division will furnish such but it must be clearly understood, that tenders must be received in order and according to instructions.

18 .The Executive Officer is reserved the right to reject any tender or all the tenders without assigning any reason therefore.

19 .The tenderers who are themselves not professionally qualified shall undertake to employ qualified/technical man at their cost to look after the work. The tenderers should state in clear terms whether they are professionally qualified or whether they undertake to employ technical men required by the department, specified in the schedule below for the work, he should see that one of the technically qualified men is always at the site of the work during working hours, personally checking all items of works and paying extra attention to such works as may demand special attention (e.g.) Reinforcement concrete works etc.

EMPLOYMENT OF TECHNICAL PROFESSIONAL

(Based on the value of contract)

1. Up to Rs. 5.00 Lakhs
 - :1. One diploma holder in Civil Engineer (or)
 2. Not less than one retired Junior Engineer
2. From Rs. 5 to 10 Lakhs
 - :1. One B.E. (Civil) or
 2. Equivalent degree holder or
 3. Not less than one retired Sub – Divisional officer. Asst. Executive Engineer or ADE or
 4. One diploma holder with three years experience.
 - 1. One B.E. Civil with 3 years experience plus one diploma holder in Civil Engineering (or)**
 - 2. Equivalent degree holder with 3 years experience Plus on diploma holder in civil Engineer.**
 3. Not less than one retire sub-Divisional officer plus one diploma holder in Civil Engineering.
 4. Two diploma holders in Civil Engineering with 3 and 5 years experience respectively.
3. From Rs. 10 to 25 lakhs
 1. One B.E. Civil with 3 years experience plus two diploma holders in Civil Engineering (or)
 2. One B.E Civil with 3 years experience plus two Junior Engineers (or)
 3. Equivalent degree holders with 3 years experience plus two diploma holders in Civil Engineering/two retired Junior Engineers.
 4. One retired sub – Divisional officer AE E/ADE plus two diploma holder in Civil Engineering. (or)
 5. One retired Sub – Divisional Officer / Assistant Executive Engineer ADE plus two retired Junior Engineers.
- From Rs. 25 to 50 Lakhs:
 - To be examined in individual cases depending on the nature of work and the technical skill involved and defined in the tender notice regarding the number of qualified technical person to be employed by the contractor.
5. Above Rs. 50 Lakhs:
 - a. A penalty of Rs. 2000/- per month for diploma holders and Rs. 5000/- per month for degree holder be levied in case of default on the part of contractors in following the norms laid down above.

b. The employment of technical Assistants could be based only on value of contract, Engineers with mechanical Engineering qualification and retired from Civil Engineer Departments are also suitable to supervise the Civil Engineering works because of their experience in Civil Engineering field.

It will not be incumbent as the part of the contractor to employ technical Assistants when the work is kept in abeyance due to valid reasons and if during period in the opinion of the Executive Engineers the employment of Technical assistant is required for the due fulfillment of the contract.

c. In case of the contractor who is professionally qualified not in position on remain always at the site of work during working hours personally checking all items of work and paying extra attention of the works as may demand special attention (eg) RCC work etc. he should employ technically qualified person as prescribed for the work.

d. The Contractors who possess a degree in Mechanical or Civil Engineering may also have to appoint technical Assistants in case of Registered Contractors with degree in Electrical Engineering when they are entrusted with civil works by the Department.

e. Engineers with Mechanical Engineering qualification and retired from Civil Engineering Department are also suitable for supervising the Civil Engineering works subject to condition that evidence for experience in Civil Engineering field is produced.

f. On technical Assistant may be employed by the contractor for more than one work situated within one Kilometre provided that monetary limit prescribed for the nature of Technical assistants to the employed is adhered to by one and the same contractor.

20. A tenderer submitting a tender which the tender accepting authority considers excessive and or indicative of the sufficient of the insufficient knowledge of current prices of definite attempt at profiteering will under himself liable to be debarred permanently from tendering or for such period as the tender accepting authority may decide. The tender rates should be based on the controlled price for materials. If any rates fixed by Govt. or the reasonable price permissible for the tenderer to charge a private purchaser under the provisions of clause 8 of the Boarding the profiteering prevention ordinance 1943, as amounted from time to time and on similar principles in regard to labour and supervision in the construction.

21. The contractor should offer employment to ex – toddy tapers as far as possible The number of ex – today tapers to whom he can so offer employment should be mentioned in the tender and he should undertake in the agreement to offer such employment to such number.

22. Contractors shall comply with the provisions 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 contract, or invoke any of the penalties for the breach of contract provided in the conditions of the contract. The Contractor shall also be liable for any pecuniary liability arising on account of any violation by him of the provisions of the Act.

23. In the case of contracts for construction of buildings, either permanent or semi permanent buildings a sum of equivalent to 2 ½% of the value of work done will be retained from the date of completion of work in order to enable the department officers to watch the effect of all seasons on the work done by the contractor. The amount so retained with the Government will be refunded only on the expiry of one year period referred to above and on execution of indemnity bond by the contractor for a further period of four years. The contractor shall be liable to set right at defects arising out of this faulty execution or substandard work noticed during the above five years period at his cost.

24. A movement register should be opened and maintained, for technical Assistants by the contractor or for the technically qualified Contractor. The technical Assistants or Technically qualified contractor should note the arrival and the departure timing every day along with initials. Such register should be produced during inspection of the inspecting officers.

25. Without prejudice to the generating of the above clause the contractor shall during the currency of the contract when called upon the Engineer, incharge engaged and also ensure engagement by the sub- contractors and other employees by the contractor in connection with the work, such number of apprentices in the categories mentioned below and for such period as may be required by the Engineer – in – Charge.

26. The fact of submitting the tender implies that the tenderers have actually inspected the site of work and have examined before tendering the nature and extent of various kinds of soils at various depth and

have based their tender in such examination by them and no future representation in this regard will be considered.

27. 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 mixtures)
- b. Organisation i). Technical ii) Unskilled
- c. Resources of material, like teakwood etc. and extend to which dept. help is required for procurement of materials and transport of the same.
- d. Methods that will be adopted to speed up the work to ensure completion with or less than the time fixed for completion.

28. The tenderer of the contract who agree to employ the maximum number of ex service men (Number to be specified in the tender) will receive preferential consideration. The tenderers are requested to report on their covering letter.

29. The registered PWD contractors who had not already produced those certificates in the current year also should do so.

30. The superintending Engineer reserves to himself the right of allotting the different sub work to the different contractors or to one and the same contractor as he may denote after the receipt of tenders.

31. In the event of the works transferred to any other circle/division / sub-division and superintending Engineer/Executive Engineer/Assistant. Executive Engineer who is in charge of the Circle/Division/ Sub-Division having jurisdiction over work shall be competent to exercise all power and privilege reserved in favour of the Government.

32. All rates quoted in the tender shall be inclusive of sales tax payable under the General sales tax act as amended from time to time (including amendment Act 28/84) and that the contractor is responsible to file the sales tax return and pay the amount that an amended by the C.T. Department. No request for payment of sales tax separately in addition to tendered rates due to any plea of subsequent levy increase in tax will be entertained wide also clause 38(2) of General conditions to contract.

33. Royalty on seigniorage charges will be charged for the material quarried from the PWD District Board forest or other Government quarries. No plot rent will be charged for materials stocked on Government Land during the course of construction work is completed.

34. Royalty or charges due for the use of private quarries and private land shall be paid by the contractor.

ANNEXURE-II

To
The Executive Officer
Arulmigu Natchiar (Andal) Temple
Srivilliputhur
Srivilliputhur Taluk
Virudhunager District.
Sir,

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

.....
.....

As shown in the drawings and describing in the specification deposited in the office of the Executive Officer, Arulmigu Natchiar (Andal) Temple @ Srivilliputhur, Srivilliputhur Nager & Taluk in Virudhunager District. with such variation by way of alternations or additions to and omission from the said works and methods of payments as are provided for in the conditions of contract for the sum of rupees

.....
.....

Such or a sums as may be arrived at under the clause of the General condition to contract relating to payment on lumpsum basis or by final measurements at unit prices.

2.(i) I/We have also completed the price list of item schedule “A” annexed (in words and figures) for which I/We agree to execute the work and receive payment on measured quantities as per the General conditions to the contract.

3. I/We do hereby distinctly and expressly declare and acknowledged that before the submission of my/our tender. I/We carefully followed the instructions in the tender notice and have read the Tamil nadu Building practice and the General conditions to the contract therein and the Tamil nadu Building practice agenda volume and that I/We have made such examinations of the contract documents and of the plans, specifications, quantities and of the location where the said work is to be done and such investigation of the work required to be done and in regard to the materials required to be furnished has to enable me/us to thoroughly understand the intention of the same and the requirement covenants stipulations and restrictions contained in the contract and in the said plans and specifications and distinctly agree that I/We will not hereafter make may claim or demand upon the Government based upon or arising out of any alleged misunderstandings or misconception of mistakes on my/our own of the said requirements and covenants, stipulations restrictions and conditions.

4.I/We enclose an income tax verification certificate. I/We being registered public works Department Contractor. I/We have already produced an income tax verification certificate during the current year in respect of (here Particulars of the previous occasion on which the certificate was produced should be given) in legal address of the contractor for service of all letters of notices will be as follows.

5.(i) (a) I/We enclose herewith a DD / Cash receipt for the payment of the sum of Rs..... as Earnest Money not to bear interest.

5. (i) (b) I/We have paid Rs.....(in figure) Rupees(..... only) since I am / we are and eligible to pay the EMD at concessional rates.

5(ii) (c) In lieu of cash deposits, I/We have enclosed a certificate bearing No.....Date.....issued by..... for a value Rupees (.....only) drawn endorsed/pledged in favour of Executive Officer, Arulmigu Natchiar (Andal) Temple @ Srivilliputhur, Srivilliputhur Nager & Taluk in Virudhunager District.

5(iii) (d) I am/We are and hence exempted from payment of E.M.D.

6. If my/our is not accepted this sum shall be returned to me/us on my/our application. When intimation sent to me/us of rejection or at the expiration of three months from the date of this tender whichever is earlier. If tender is accepted, EMD shall be retained by government as security for due fulfillment of the contract. If upon intimation being given to me/ us by the authority authorized by the Governor under the Article 299(I) of the constitution. (Here in after called “the accepting authority”) of acceptance of tender, I/we fail to make the additional security deposit then I we agree to the forfeiture of the EMD. Any notice required to be serve on me/us by post (registered or ordinary) or left at my/our address given herein. Such notice shall if 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.

7. I/we fully understand that on receipt of communication of acceptance of tender from the accepting authority there emergent a valid contract, between me/us and the Governor of Tamil Nadu and Tender Documents (i.e) tender notice tender with general Schedule, condition to the contract, and special condition of the tender negotiation letter communication of acceptance of tender shall constitute the contract fore for this purpose and be the foundation of rights as defined in, clause IV of tender notice, provided that it shall be open to the accepting authority to insists on execution any written agreement by the tenderer, if administratively considered necessary or expedient.

8. I/we have also signs the copy of Tamil Nadu Building Practice and National Building Code and agenda volume there to maintained in the office of the Executive Officer Arulmigu Natchiar (Andal) Temple @ Srivilliputhur, Srivilliputhur Nager & Taluk in Virudhunager District.

In the acknowledgment of being bound by all conditions of the clauses of the general conditions to the contract and all specifications for items of works described by the specification number in Schedule (A).

9. In consideration of the payment of Rs..... or such sum as may be arrived at under clause of the general condition to the contract relating to the payment on lump sum basis or by final measurements at unit prices. I/we agree subject to the said condition to execute and complete the works shown upon the said drawing severally number from 1 to..... inclusive of (schedule B) and described in the specifications (Schedule C) and to the extent of probable quantities shown in (schedule A) with such variation by way of additions to or alterations, deductions from, the said work and method of payment therefore as are provided for in the said conditions.

10. The term Commissioner in the said condition shall mean HR & CE officer incharge of Circle having jurisdiction for the time being over the work, who shall be competent to exercise al the powers and privileges reserved, herein , favour of Government with the previous sanction of or subject to ratification by the competent authorities in case, where such sanction or rectification may be necessary and who has been duly authorized under Article 299 (I) of the Constitution.

11. I/we agree that the time shall be considered as the “Essence of this contract” and to commence the work as soon as this contract is accepted by the competent authority as defined by the Tamil Nadu PW code and the site or premises is handed over to me/us as provided for in the said condition and agreed to complete the work within month from the date of such handing over of the site or premises and show progress as defined in the tabular statement. “Rate of progress” subject nevertheless to the provision for extension of time contained in clause 56 of the general conditions to the contract appendix to the Tamil Nadu Building Practice.

12. I/we agree that upon the terms and conditions of this contract being fulfilled and performed to the satisfaction of the Executive Engineers, the security deposited by me/us herein before recited or such portion thereof as I/we may be entitled to under the said conditions be paid back me/us provided in clause 64 of general condition to the contract.

13. I am/we are professionally qualified and my/our qualifications are given below:

Name	Qualification and Experience
------	------------------------------

I we pursuance of clause of tender notice undertake to employ the following technical staffs for supervising the works 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 may require special attention (eg) reinforced cement concrete works.

Name of technical staffs Proposed to be employed	Qualification and Experience
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Note: a. The last two clauses should be scored out if the cost of the work involved is less than Rs.1 lakh.

b. The tenderers should scored out the last clause of the according they are themselves professionally qualified or undertake to employ technical staff under them.S. No.14.

I/we agree that the arbitrator for fulfilling duties set forth in the arbitration clause of the general condition to contractor shall be.

i)The Commissioner , H.R & C.E Department Chennai-34 in case the value of claim does not exceed Rs.50,000 (Rupees Fifty thousand only).

ii). I/we agree that in case of the value claim is over Rs.50,000 and above the remedy will be through the competent civil court only.

Signature of the contractor
With full address with Name

15. Additional Conditions : On evaluation of tender, it is found that if the over all quoted amount of the tender is less than 5 to 15% of the value put to tender the contractor shall pay additional security at 2% of the estimated value put to tender. If the tender discount exceeds more than 15% the contractor shall pay the Additional Security Deposit of 50% of the difference between the quoted amount and the estimated value put to tender. Failure to furnish the additional security deposit within 15 days from the date of receipt of acceptance order and execute the agreement shall entail the cancellation of, ward of contract and for forfeiture of EMD furnished.

17. In pursuance of negotiation with the Executive Officer Arulmigu Natchiar (Andal) Temple @ Srivilliputhur, Srivilliputhur Nager & Taluk in Virudhunager District. On..... I/we agree reduce the rate for the items on the schedule as follows.

S. No	Item No. in the Tender	Tender Rate	Reduced
	Schedule		rate per unit

SIGNATURE OF CONTRACTOR

16. On behalf of Governor of Tamil Nadu and as duly authorized by the Governor under Article 299 (I) of the constitution, the above tender for a value of Rs.....(Rupees.....only)
is accepted on this day.....2000.

Signature of the Witness
In full address with name
In block letters.

Signature and Designation

SPECIAL INSTRUCTION TO THE TENDERERS:

1. The tenderer should carefully go through the schedules and quote their rates for all items.
2. The rates should be filled in neatly in figures and words and taking into account the metric unit specified in the tender. Scribbling, over writing and erasing should be avoided as far as possible.
3. The amount of each item of work should be worked out and furnished. Proper care must be taken in working out the amount of each item of work taking into account unit for which, the rate is quoted and the quantity of work to be done under the item.
4. The total of each page should be noted at the end of each page and carried over to every page and the grand total value of work should be worked out and shown at the end.
5. The tender should be submitted along with a covering letter giving full details as stated in the tender notice.
6. Details of the earnest money deposit as per details in page No.2 (Mode of EMD to be remitted)
notice.
7. In case of tenderers who are eligible for concessional Earnest Money Deposit and accordingly they should furnish the reference number and date in which the concession was granted them to be along with the tender for ready reference specified and if possible a copy of the aforesaid reference may be enclosed.
8. Income tax clearance certificate for the current year should be submitted along with the tender.
9. Details of previous work done by the tenderer covering the cost of work the agreement amount and date, the Dept. in which the work was carried out etc. so as to assess the previous experience of the tender, and also make an easy reference to their record of work. Year wise details should be furnished so as to see that these tenderers have minimum experience of major buildings.
10. List of various machinery and other equipments at the tenderers disposal for use in the execution of work.
11. The tender forms should be filled in while submitting the tender. The tenders submitted without filling up the tender form are liable to be rejected.
12. The tenders must be submitted in a full shape cover there by duly signing all the conditions, plans and schedules issued as tender documents.

SCHEDULE 'A'
SCHEDULE OF RATES AND APPROXIMATE QUANTITIES

(a) The quantities given here are those upon which the lumpsum tender cost of the work is based but they are subject to alternations omissions, deductions or addition as provided for in the conditions of this contract and do not necessarily show the actual quantities of work to be done. The units rates noted below are those Governing payment for extras or deductions or omissions according to the condition of the contract, as set forth in the general condition of the Tamilnadu Building Practice and other conditions or specifications of the contract.

(b) It is to be expressly understood that the measured work is to be taken not (Not withstanding) any custom or practice 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 Exe. Engr. and the cost calculated by measurement or weight at the respective prices, without any additional charge for any necessary or contingent works connected therewith. The rates quoted are for works in site and complete in very respect.

Item	Probable Quantity	Description of work	T.N.B.P No	NBC No	<u>Rate</u> in words & figures	<u>Unit</u> in words & figures	Amount in figures
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- Vide separate sheet enclosed-

Note: The second sub division of this column (i.e. column 3) is for entering description in words such as numbers, cubic metre running metre, square metre kg etc.

Issued to M/s. Thiru,
..... Pages and with plans

SCHEDULE 'B'

Drawings-Enclosed

Note: All drawings to be signed by the contractor as well as the officer entering in to contract.
As entered to in the specification (including the preliminary specification of the TAMILNADU BUILDING PRACTICE)

SALES TAX REGISTRATION & DEDUCTION OF SALES TAX FROM BILLS

The tenderers should be required to indicate their registration number under the Tamilnadu General Sales tax

According to the notification issued by the Commissioner of sales tax Chennai with regard to IT Deduction of Sales tax at source in respect of works contractor in the, TAMILNADU GOVERNMENT GAZETTE CHENNAI., dt 31.05.99, a new provision under 7 F for deduction of tax at Sources is introduced in the Tamil nadu General sales tax ,Act 1959, by Tamil Nadu Act of 1999 with' effect from 10.06.99. As per this new section , 7F of this act, at the time of payment of such sum deduction @ 2% [two Percent] in respect of civil works and 4% [Four Percent] in respect of all other works :contractor, from total amount payable, to the contractor and the amount so deducted shall be deposited to the Assessing officer concerned with the "SEVEN" days.

FOR CONTRACTORS SPECIAL ATTENTION

1. Clean M sand shall be used in all cases.
2. Only clean fresh Water shall be used on the work. The Contractor shall make his own
3. The broken stone for concrete and RCC work shall be granite and passed by the Executive Engineer

All Iron work or steel work or every kind such as to be embedded in concrete shall *immediately* on arrival at the site be properly scrapped in wire brushed and given priming coat of approved lead painting without claims for extra.

5. The Iron holdfasts shall be built up on the walls in cement mortar 1:3 at the time of construction of walls. No extra claim shall be due for- the same wherever the holdfasts are to be provided to 9" thick wall. These should be fixed with cement concrete 1:3:6 using 20mm gauge broken granite stone jelly for proper anchorage and proper binding. No separate rates for such pockets of concrete 'filling at hold fast points will be allowed and measured as masonry along with adjacent masonry.

6. The Teakwood shall be best Indian Teakwood only and shall be subject to inspection and approval by the Executive Engineer before use on the work. Country wood where specified shall be of 'Karimarudhu' or 'Kongu' for scantling and Aiyini" for planks.

7. Holes for Electric, wiring, water supply and drainage's etc. shall be provided as directed during progress of work without any 'claim for extra.

8. The work will be carried out with the least hindrance to the adjoining building and the contractor will be Responsible for the any damages caused to the existing fixtures, electric fittings etc. the course of execution and the contractor shall make good any damages without any claim for extra.

9. In the case of 'T' beams and 'L' beams the .quantity given in the schedules is the quantity of rib portion only. The top flange portion will be always measured with the general slab portion and paid for at the slab rate only. For all RCC works, the rate' shall include the treatment of bearing as per TAMILNADU BUILDING PRACTICE

10. Concrete works: All exposed concrete surfaces will be required to be finished by cement plaster as detailed in Schedule 'A'.

11. Plastering all external corners. edges of beams, edges of doors and windows and windows openings etc. shall be finished sharp using richer mortar and also finished truly vertical horizontal as the case may be, The rate for plastering shall include the cost of finishing o as above and no separate extra or the corners, edges beams etc, shall be paid.

12. If rates are not separately called for, for similar items of works in difference floors the contractor should note that one rate is applicable for all floors indicated in the detailed plans. Any claims for extra for such items floor war will not be, entertained under any circumstances.

13. The projection if any to the masonry will be measured under the relevant items and no extra will be paid for finishing the same.

14. The Work in Public Works Department (Buildings) executed by the contractor Linder the contract shall le maintained by the contractor until the work is taken over by the Executive Officer. The contractor shall accordingly arrange his own insurance against fire, flood, volcanic eruption, earth quake other convention of nature and all other natural calamities risks arising' out of acts of God

during such period and *that the* Government shall not be liable ,for any loss or damages occasioned by or arising out of any such acts of God.

14(ii) Provided, however that the contractor shall not be liable for all or any loss or damages occasioned by or arising out of act of foreign enemies, invasion hostilities or war like operation (before or after declaration of war) rebellion, military or Usurped power.

RETENTION OR WITHHELD AMOUNT

(iii) 2 1/2% of the total value of the work will be retained in the final bill of the work for the period one year reckoned from the date of completion of the work in the order to enable the department to watch the effect of all seasons of the work. The contractor should furnish an indemnity bond for further period of four years. If any defects are notified in the above said period the defects should be rectified by the contractor at his own costs as directed by the Departmental Officers and no extra payment be made for the rectification of such work.

REVENUE RECOVERY ACT

(iv) Whenever any amount has to be paid by the contractor' in lieu of determination of the contract by virtue of clause 57 (4) any amount that may be due or may become from the contractor under the presence and the contractor is not responding to he demands for the payment of said amount, then the Government shall be entitled to recover the said amount under the provision of the Revenue Recovery Act. n the event of the work being transferred to any other circle / Division / Sub Division / Superintending Engineer / Executive Engineer / Assistant Executive Engineer who is in charge of Circle / Division / Sub Division having Jurisdiction over the work shall be component to exercise all the powers and privileges reserved in favour of Government

RISK INSURANCE

14(V) The work executed by the contractor or under this contract shall be maintained by the contractor's risk until the work is taken over by the Executive Officer. The Government should not be liable to pay for any loss or damages occasioned by (or) arising out of fire, flood, volcanic eruptions, earth quake, other invasions of nature and all other' natural calamities" risk arising out of. act of God during such period and that the option whether take insurance coverage (or) to care shall risks is left to the contractor.

The contractor shall not be liable for all or any loss of damages occasioned by or arising out of acts' of foreign enemies' invasions, hostilities or war like operations (before or after declaration of war) rebellion military or usurped power.

ARBITRATION CLAUSE

14. (vi) In case any dispute or difference between the parties to the contract either during the progress or after the completion of the works or after determination, abandonment or breach of the contract or as to any other matter or thing arising there under except as to the matters left to the sole discretion of the Commissioner H.R & C.E Dept Chennai-34 under clause 18,20,25-3,27-1 134,35 and.37 of the general condition of the contractor as to the with holding by the Commissioner or the payment of any bill to which the contractor may claim to be entitled. Then either party shall forth with give.. to the other I notice of such dispute or .difference.. and such dispute or difference shall be and is hereby referred. to the arbitration of the Commissioner, H.R & C.E Dept chennai-34. (Mentioned in the "Articles of agreement" (here in after called the Arbitrator) in case where the value of claim is less than and upto Rs. 50,000/ (Rupees Fifty Thousand only)

In case where the value of the claim is more than Rs. 50,000/- the parties will seek remedy through the competent civil Court.(G.O.Ms.No.. 253 P.W.D. at 24.2.1981)

14(vii) If at any subsequent to the execution of this arrangement, Government materials other than those specified in the agreement are supplied to the contractor for list of the work, they will be charged at the market value prevailing at the time of supply of stock, issue rates, whichever is higher. The contractor will be informed in writing of this charge and he should intimate in writing the rate which he demands for finish the work in view of the fact that he is to issue Government materials. No centage of incidental charges will be borne by the Government in connection with the supply of the materials referred to in this paragraph.

ADDITIONAL SPECIFICATION

1. The arrangements of M.S. rods for all RCC works shall be in accordance with the working drawing supplied.

2: (I) Payments for centering works for all RCC items shall be made only after the concrete is laid, even though separate items for centering works are included in the schedule. The centering and form shall be provided to the extent and area ordered by the Executive Engineer during execution. .

(ii) All cement concrete for RCC works shall be machine mixed and vibrated. (ii) All time mortar shall be ground in mortar will be as per TNBPS

SCHEDULE –C

List of specification for the various item of work supplementing those prescribed in schedule “A” by
Standard Specification Number

1. The contractor shall employ the following technical staff for supervising the work and shall see ‘that one of them is always at site, during working hours personally” checking all items of work and paying extra attention to such works as may demand special attention (*eg.*) reinforced concrete work etc.

Name or member of the technical
staff to be employed

Qualification

Experience

SCHEDULE-D

RATE OF PROGRESS

1) First Month completed from the 30% of the work should be completed

Date of handing over the site

2) Second month Completed :70 % of the work should be completed

3) Third month completed : 100% of the work should be completed

Note : 1 In the case the contractor is himself professionally qualified. The above specification should be evitably altered and in cases in which the contractor selected has not given any undertaking to employ qualified man it should be scored out.

Note : 2 Additional specification if any which have to be entered in Schedule 'C' should be entered below (item 91) above and numbered continuously.

Note : 3 A penalty of Rs. 2000 (Rupees Two thousand only) per month for diploma holder and rs.

5000 (Rupees Five Thousand only) per month for degree holder will be levied in case of default on the part of contractor as per the norms specified regarding appointment of Technical Assistant with tender notice.

ADDITIONAL CONDITION – 1

1. The materials noted in the list enclosed will be supplied departmentally at the section stores at site of work and their cost recovered from the contractor's bill at issue rates noted against each.

2. The contractor shall be responsible for the safe custody and storage of the materials under dry conditions at the places of the work spot approved by the Executive Engineer.

3. No royalty shall be charged where due for materials quarried from the PWD or District Board or other Government Quarries. Necessary assistance will be given to the contractor by the PWD to obtain access to quarries approved by the Executive Engineer. No plot rent shall be charged for materials stacked on the Government land during the course of construction, provided, all such materials are removed within a month after the work is completed.

4. The contractor shall pay royalty or charged due for use of private quarries and private land.

5. The contractor shall form his own approach road to the work site 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 road, he shall maintain them in good condition at his own cost throughout the period of the contract.

6.(a) Any surplus material remaining at the site, will not generally be taken over by the Department whether before or after the completion or termination of contract. such materials either which were originally procured by the contractors were issued to them by the department and charged to their accounts are the property to the contractors and can however be taken by the Department if required, for use on other works, which are in progress only, be special arrangement and at the prevailing market rates viz. The rates which the article or articles of a similar description can be procured at a given time at the store, godown, from Public market suitable to the Division for obtaining such there of.

b) If the materials were originally used by the Department the price allowed to the contractor on re-acquisition shall not exceed the amount charged to the contractor excluding the element of storage charged if any.

c) If at any time subsequent to the execution of this arrangement. Government materials other than those specified in the agreement are supplied to the contractor for use on the work they will be charged at the market value prevailing of at the time of supply or stock issue rates whichever is higher. The contractor will be informed in writing of this charge

and he should intimate in writing the rate he demands for finish the work in view of the fact that he is not to use Government materials. No centage or incidental charges will be borne by the Government in connection with the supply of materials referred to in this Paragraph 5.

(d) The surplus materials which were originally issued to the contractor back to the department for use of the work shall not be removed from the site of work without getting the written permission of the Executive Engineer.

7. The contractor's special attention is invited to clause 37 and 38 of the preliminary specification of T.N.B.P.S and he is requested to provide at his own expenses shed, latrine and Urinal for his workmen.

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

9. The contractor shall not employ the labours below the age of 12 years and shall also note that he must offer employment to exservice men, ex-today tappers and unemployment agricultural labours as far as possible.

10. Any of the items in the schedule may be omitted or radically altered no variation in rates shall become payable to contractors on account of such omissions or variation in quantity.

11. Reference to TNBPS in the schedule of quantities referred and addenda and corrigenda issued thereafter.

12. The construction of building will be deemed to be completed only, if all the items of work including finishing items contemplated herein after executed.

13. The contractors shall abide the contractor's labour regulation of the PWD framed by the Tamilnadu Government.

14. Construction Materials: Supplemental to clause of 20 of General conditions.

14.1 Cement :

A. The contractor has to make his own arrangements for the procurement of Cement of required Specifications for the works subject to the followings:

B. The contractor shall procure cement required for the works only from reputed cement factories (main producer of their authorized agents, manufacturing cement to ISI standard) acceptable to the Engineer – in – charge. The Contractor shall be required to furnish to the Engineer – in – charge bills of payment and cost certificates issued by the manufacturers or their authorized agents to authenticate procurement of quality cement from the approved cement factory. The contractor shall make his own arrangement for safe haulage and adequate storage of cement.

(C) The contractor shall procure in standard packing of 50kg per bag from the authorized manufacturers. The contractor shall make necessary arrangement at his own cost to the satisfaction of Engineer – in – charge for actual weightment of random sample from the available stock and shall conform with the specification laid down by the Indian Standards Institution or other standard foreign institution as the case may be. Cement shall be got tested for all the tests as directed by the Engineer – in – charge atleast one month in advance before the use of cement bags brought and kept at site godown.

(D) The employer will furnish air recreating agents and admixtures required to the contractor free of cost at the employer stores. the use of such admixtures and agents shall be made as per the instructions of the Engineer – in – charge. The cost of cartage / storage, handling, batching mixing shall be borne by the Contractor and shall be included by him to unit officers tendered for concrete.

(E) The contractor should store the cement of 60 days requirement atleast one month in advance to ensure the quality of cement to brought to site and shall not remove the same without the written permission of Engineer - in - charge. The contractor shall forthwith remove from the works area, and the cement that the Engineer - in - charge may disallow for use on account of failure to meet with required quality and standard.

(F) The contractor will have to construct sheds for storing cement having capacity not less than the cement required for 90 days use, at approved locations. The Engineer - in -charge or the representative shall have free access to such store at all times.

(G) The contractor shall further at all times satisfy the Engineer - in - charge on demand by production of records and test books or by submission of returns and other proofs as directed that the cement is being used as tested and approved by the Engineer - in - charge for the purpose and the contractor shall, at all times, keeps his record upto date and enable the Engineer - in - charge to apply Slight checks as he may desire.

(H) Cement which has been ‘unduly long in storage with the ‘contractor or alternatively has deteriorated due to inadequate storage and thus become unfit for use on the works will be rejected by the Department and no claim will be entertained. The contractor shall forth with remove from the work area any cement the Engineer in charge may disallow for. use of work and replace it by cement complying with the relevant Indian standards.

5.2 STEEL

The contractor shall provide mild steel (MS)’ reinforcement basis, High Yield strength deformed (HYSD) bars rods and structural steel etc., required for the works, only from the main and secondary producer: manufacturing steel or other authorised agents to the prescribed specifications. Bureau of Indian standard: requirements and licensed to affixing ISI test certificate issued, by the Government approval laboratory certification marks and acceptable to the Engineer - in - charges, Necessary ISI test certification are to be produced to Engineer- in - charge before use on works.

The Diameters and weight of steel should be as follows

S.NO	Diameter of Rod	Sectional Weight in Kg perrunning meter both for plain & HYSD steel
1	6 Millimeters	0.222
2	8 Millimeters	0.395
3	10 Millimeters	0.617
4	12 Millimeters	0.888
5	14 Millimeters	1.208
6	16 Millimeters	1.578
7	18 Millimeters	1.997
8	20 Millimeters	2.466
9	22 Millimeters	2.984
10	25 Millimeters	3.853
11	28 Millimeters	4.833
12	30 Millimeters	5.549
13	32 Millimeters	6.313
14	34 Millimeters	7.127
15	36 Millimeters	7.99
16	38 Millimeters	8.902
17	40 Millimeters	9.864
18	42 Millimeters	11.935

Note: If any rods other than those specified above are used the weight shall be as per standard steel tables.

SCHEDULE - E

ADDITIONAL CONDITION OF CONTRACT - II

The contractor shall at his own expense provide arrangements for this provision of food wear for any labour during cement mixing work all other similar type of work involving the use of tar mortar etc. to satisfaction of the Engineer - in -charge and on his failure to do so, the Government shall be entitled to provide same and recover the cost from the contractor.

When there are complaints of non-payment of wages to the labourers bills of the contractor may be withheld pending a clearance of certificate from the labour department.

ADDITIONAL CONDITION OF CONTRACT - III

Rules for the provision of health and sanitary arrangements for workers employed by the PWD and his contractors.

The Contractor's special attention is invited to clause 37,38.39 and 51. of the Tamilnadu Building Practice and he is requested to provide at his own expense the following amenities to the satisfaction of the Executive Engineer.

FIRST AID

1. At the work site there shall be maintained a readily accessible place, first aid appliances and medicines including adequate supply of sterilized dressings and sterilized cotton wool. The appliances shall be kept in a good order. They shall be under the charge of responsible person who shall be readily available during working hours.

DRINKING WATER

2.a) Water of good quality fit for drinking purposes shall be provided for the work people on a scale of not less than three gallon per head per day.

b) Where drinking water is obtained from an intermittent Public Water Supply each work place shall be provided with the storage tanks *where* such drinking shall be stored.

c) Every water supply and storage shall be at a distance, not less than 50 feet from any latrine drain or other existing well which is within such proximity of latrine, drain or any other source of pollution, the well shall be properly closed. If water is drawn from it for drinking. All such wells shall be entirely closed and be provided with a trap door, which shall be dust and water proof.

d) 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 atleast once in a month.

WASHING AND BATHING PLACES

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

LATRINES AND URINALS

4. These should be provided within the premises of every work place' latrines and urinals in an accordance place and the accommodation separately for each of them shall then on the following scale or on the scale so directed by the. Executive Engineer in any particular area.

1. Where the number of persons employed does not exceed 50-2 seats.
2. Where the number of persons employed exceed 50 but does not exceed 100, 3 seats
3. For every additional 100 persons 3 seats.

If women are employed, separate latrines and urinals screened from those for men shall be provided on the same scale. Except in work places provided with water flushed latrine connected. with a water borne sewage system, all latrines shall be provided with acceptable dry earth system which will be cleared atleast four times daily and atleast twice during' working hours and kept in a strictly sanitary condition. The latrines and urinals shall be tarred inside and outside atleast once a year. The escrets from the latrines shall be disposed off at the contractor's expense, in outside pits approved by the local public health authority. The contractor shall also employ adequate number of scavengers, conservancy staff to keep the latrines and urinals in a, clean condition.

SHELTER DURING REST

At the work site, two suitable sheds one for meals and another for rest separately for men and women for the use of labourers.

CRECHES:

2. At every work place at which 25 or more women are working there. shall be provided two huts of suitable size for the use of children under the age of 6 years belonging to such women. one hut shall be used for infants, games and play and the. other as their bedroom. The huts shall not be constructed and a lower standard than the following :

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

The size of the crèche or crèches should vary according to the number of women workers. The reaches should be properly maintained and necessary equipment like toys etc. should be provided and huts shall be 'provided with suitable and sufficient sweepers to keep the place clean. There shall be two ayahs in attendance. Sanitary utensils shall be provided to the satisfaction of the health officer of the area concerned. The number of huts shall be restricted to children and their attendants of the children.

CANTEEN

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

SHEDS FOR WORKMEN

8. The contractor should provide at his own expenses shed for housing the workmen. The sheds shall be on a standard not less than the cheap shelter type, to live in which the work pertaining to locality area accustomed to. A floor area of about 1.8 Metre X 1.5 Metres for 2 persons shall be provided. The sheds to be in rows with 1.5 Metres clear space between sheds and 9 Metres clear space between rows if conditions permit. The work people's camp shall be laid out in units of 400 persons' each . Each unit to have clear space of 12 meter around.

ADDITIONAL CONDITION - IV

Safety provision in the building industry conditions in addition to clause 36 preliminary specification of T.N.B.P.S

PART - I

ARTICLES - 1

1. Suitable scaffolds shall be provided for workmen for all work that cannot be safely done from ladder or by any other means.
2. A scaffold shall not be constructed, taken down or subsequently altered except.
 - a) Under the Supervision of a competent and responsible person and
 - b) by competent workers possessing adequate experience in this kind of work. .
3. Scaffolds shall be so constructed that no part thereof can be displaced in consequent of normal use.
4. Scaffolds shall not be overloaded so far as practicable and shall be evenly distributed.
5. Before installing lifting *gear* on scaffolds special precaution shall be taken to ensure the strength and stability of the scaffolds.
6. A competent person shall periodically inspect scaffolds.
7. Before allowing. a scaffold to be' used by his 'workmen every employer shall satisfy as to whether the scaffold has been executed by his workmen or not he should take step to ensure that it functions fully with the requirements. of this article.

ARTICLES - 2

1. Working platform gangways and Staircase shall be so constructed that no part thereof can sag unduly or unequally.
 - a) Be so constructed and maintained to obviate from risks or persons tripping or slipping and
 - b) Be kept free from any unnecessary obstruction
 - c) Every working platform gangway working place and staircase shall be suitably forced.

ARTICLE -3

- 1 . Every opening in the building or in a working platform shall except for the time and to the extent required to allow the. excess of persons or the transport or shifting of materials be provided with suitable means to prevent the fall of persons or materials
- 2 . When persons are employed on a roof where there is danger of falling from the height exceeding that to' be prescribed by national laws of regulations, suitable precautions shall be taken to prevent the fall of persons or materials, .
- 3 .Suitable precautions shall be taken to prevent person IS being struck by articles which might fall from scaffolds or other working places.

ARTICLES -4

- 1 .Safe means of access shall be provided, to all working platforms and other working places, .
- 2 . Every ladder shall be securely fixed and of such length as to provide secure hand hold and foot hold at every position at which it is used.
- 3 . Every place where work is carried on and the means of approach there to shall be adequately lighted.
- 4 . Adequate precautions shall be taken to prevent danger from electrical equipment.
- 5 . No material on the site shall be. so attached or ,placed as to cause danger to any person. . PART -II

GENERAL RULES AS TO HOISTING APPLIANCES

ARTICLE,. 5

1. Hoisting machines and tackle including their attachments anchorages and supports shall .
 - a) be of good mechanical conditions sound material and adequate strength and frae from patient defects and
 - b) be kept in good repair and in good working order.
- 2 . Every rope used in hoisting or lowering materials or as a means of suspension shall be of suitable quality and adequate strength and free from patient defects.

ARTICLE – 6

1. Hoisting machines and tackle shall be examined and adequately tested after erection on the site and before use and be reexamined in position at intervals to be prescribed by national law or regulation.
2. Every chain ring, hook shackle, swivel and pulley block used in hoisting or lowering materials or as a means of suspension shall be periodically examined.

ARTICLE – 7

1. Every crane driver or hoisting appliance operator shall be properly qualified.
2. No persons under an age to be prescribed by national law regulations shall be in control of any hoisting machinery including any scaffold which or gives signals to the operator.

ARTICLE – 8

1. In the case of every hoisting machine and every chain ring hook, shackle swivel and pulley block used in hoisting or lowering or as a means of suspension, the safe working load shall be ascertained by adequate means.
2. Every hoisting machine and all gear referred to in the proceeding shall be plainly marked with the safe working load.
3. In the case of hoisting machine having a variable safe working load, each safe working load and the conditions under which it is applicable shall be clearly indicated.
4. No part of any hoisting machine or of any gear referred to in the paragraph (i) of this article shall be loaded beyond the safe working load except for the purpose of testing.

ARTICLE – 9

1. Motor gearing, transmission, electric wiring and other dangerous parts of hoisting appliances shall be provided with sufficient safeguards.

Hoisting appliances shall be provided with such means as well reduce the risk of the accident descent of the load adequate precautions shall be taken to reduce the risk of any part of suspended load becoming accidentally displaced.

PART – III
GENERAL RULES TO SAFETY EQUIPMENT AND FIRST AID

ARTICLE – 10

1. All necessary personal safety equipment shall be kept available for the use of the persons employed on the site and be maintained in a condition suitable for immediate use.
2. The workers shall be required to use the equipment thus provided and the employer shall take adequate steps to ensure proper use of the equipment by those concerned.

ARTICLE – 11

When work is carried out in proximity to any place where there is risk of drawing all necessary equipment shall be provided and kept ready for use and all necessary step shall be taken for the prompt rescue of any person in danger.

ARTICLE – 12

Adequate provision shall be made for prompt first aid treatment of all injuries likely to be sustained during the course of the work.

ARTICLE – 13

Where large work places are situated in cities, towns or in their suburban and no beds are considered necessary owing to the proximity of city or town hospital, suitable transport shall be provided to facilitate removal of urgent cases to the hospitals, at their work places some conveyance facilities such as car shall be kept ready available to the injured person or persons suddenly taken seriously ill to the nearest hospital.

MOSAIC FLOORING

1. Cement concrete flooring tiles shall be manufactured from a mixed cement natural aggregates and colour materials where required by pressure process. During manufacture the tiles shall be subject to a pressure of not less than 140kg per sq.m. (or 2000 lbs. per sq.inch.)
2. Proportion of cement to aggregate in backing of the tiles shall not be less than 1:5 by weight.
3. On removal from mould, the tiles shall be kept in moist condition continuously for atleast 7 days and subsequently if necessary kept moist for such a longer period that would ensure their conformity to the requirement of Transfers strength, resistance to wear and tear absorption and would minimize shrinkage and cracking, tiles shall be stored under cover.
4. Tolerance: Tolerance on length and breadth shall be plus or minus one millimeter. Tolerance on thickness shall be plus 5mm that the range of dimensions if any of one delivery of tiles shall got exceed 1mm on length and breadth and 3mm on thickness.

THICKNESS OF WEARING LAYERS

Class of tiles	Minimum thickness of wearing layer
Plain cement and plain coloured tiles for general duty	3mm
Plain cement and plain coloured tiles for heavy duty	6mm
Plain (mosaic) terrace tiles with chips of size Varying from the smallest upto 6 mm (1/4")	5mm
Mosaic terrace tiles with chips of size ranging from the smallest upto 12mm (1/2")	5mm
Mosaic terrace tiles with chips of size varying from the smallest upto 20mm (3/4")	6mm

5. Colours and appearance: The colour and texture of the wearing layer shall be uniform through out its thickness.

6. When specifying the tiles, the contractor should specifically indicate whether the chips to be used are from the smallest units 6mm or from the smallest upto 12mm or from the smallest upto 20mm size. The officers of the department shall also specify size of chips by referring the approximate photograph given in figures upto figures 4 to 6 in Indian standard 1237/1959.

GENERAL QUALITY OF TILES

8. Unless otherwise required the wearing face of the terrace tiles should be mechanically sound and flat. The wearing face of the tiles should be plane from projection depressions and crack (Hair cracks not included) and shall be reasonably parallel to the back free of tiles all angle shall be right angles and all edges shall be sharp and true.

9. Breaking transverse strength of tile should be given as below:

Size of tiles	Span test	Breaking wet test	Load based Dry
19.85x19.85cm	15cm	71kg	106kg
24.85x24.85cm	20cm	90kg	120kg
29.85x29.85cm	25cm	99kg	149kg

10. The average wear of not less than 12 specimens shall not exceed 2mm and wear on any individual specimen shall not exceed 2.5 cm when tested in an vibration machine.

11. The average percentage of water absorption shall not be less than six full tiles shall not exceed ten in the case of water absorption test.

12. The density of the tiles shall be in the order of about 2.4 Kgs. The tiles shall be laid with the minimum possible width of joint. The joints shall be filled with gray cement to match the finish of the tiles and shall be made almost invisible when the floors is given the final polish. The polishing shall be done by means of electric polisher wherever possible and hand polish to other places like vertical faces or walls covered and other areas where the machines can have no access and to a high degree so as to present a perfectly smooth and glossy surface as even as possible.

13. All angles at junctions of vertical faces shall be rounded off to 1 ½" radius with same quality of materials and colour of the tiles of the floor. But laid in situ and these cover shall be measured as part of flooring and laid for at the same rates as the flat floors. The colours of the tiles shall generally match other coloured face adjacent or as may be directed by Executive Engineer.

14. The dadoing and skirting have to be finished by giving necessary recesses in the brick wall itself so that the projections does not exceed ¾" from the face of the wall i.e. the finish plastered surfaces.

15. Based on the modules of the ruptures of 30 kg. Per. Sq.m. for dry test and two thirds of the value of wet

GUIDE LINES FOR ADOPTION OF STRENGTH GRADENING OF CONCRETE

16. Plain and reinforced concrete have been graded according to the cube compressive strength and designation as M100, M150, M200, M250, M300, M350 and M400. In the designation of concrete the letter "M" refers to the mix and the 'Number' to the specified 28 days work cube compressive strength of that mix expressed in kg. Cm sq.

17. Approximately the M100, M150, M200, M250 grades of concrete corresponds to 1:3:6, 1:2:4, 1:1 1/2:3 and 1:1:2 nominal mix of ordinary concrete currently used. The national building code gives necessary specification for strength gradening of concrete, proportionately and works control and the same may be followed the extract of the same is enclosed.

18. The proportion of aggregates, cement and water to be used for controlled concrete shall be designed by preliminary tests of the materials to be actually used to obtain the specified strength with the maximum quantity of cements. However, the maximum total quantity of aggregate by weight per 50 kg. of cement shall not normally exceed 450 kg.

19. For any particular item compressive strength required to be obtained by the concrete at 28 days in the preliminary and work tests on the 15cm cubes minimum cement content, required to be used and the approximate proportions approved fine and coarse aggregate shall be specified, in the tender schedule. These particulars will be only for the guidance of the contractor for quoting rates.

20. Immediately upon the receipt of the award of contract, the contractor shall inform the Executive Engineer the exact location of the sources of the material which he propose to use and get the materials approved. The mix with the actual approved material to be used shall be got designed in an approved laboratory by the contractor with minimum quantity of cement to give the specified strength in the preliminary tests and the proportions got approved from the Executive Engineer in writing. These proportions shall be used so long as the materials continue to be of the same quality and the same sources subject only to slight changes in the relative qualities of fine and coarse aggregate for the purpose of promoting work ability provided the work tests also show the required strength.

21. If during the progress of work, the contractor wishes to change the materials the proportion shall be fixed on the basis of the fresh preliminary tests to give the required strength after the Executive Engineer is satisfied that the materials satisfy the specification. No adjustment of cost shall be made for change of proportions of cement fixed in the original preliminary tests.

PROPORTIONING OF MIX

Each batch of mix shall be proportioned by weight of cement fine aggregate and coarse aggregate. Water for each bag shall be added in quantity measured by volumes or by weight. Where weight of cement determined by accepting the maker weight per bag, a reasonable number of bag shall be weighted separately to check the nett weight, and the cement is weighted weight per bag, a reasonable number of bags shall be weighed on the site and not in bags. It shall be weighted separately from the aggregate. All the weighting equipment's shall be maintained in a clean and serviceable condition and their accuracy checked periodically.

MIXING

Mixing shall be done only by mechanical mixes. The quantities of fine aggregate and water shall be adjusted duly in the field to compensate for bulkage due to the quantity of moisture present in fine aggregate and free water in the coarse aggregate at the time of use.

TESTS

Tests shall be got done in an approved laboratory at the cost of the contractor. PRELIMINARY TEST

If concrete mixes are specified by its strength then the mix needs be designed and preliminary test should be carried out.

Preliminary test in conducted in a laboratory on the trial mix of concrete produced in the laboratory with the object of:

- a) Designing a concrete mix before the actual concrete operation starts.
- b) Determining the adjustments required in the designed mix when there is a change in the materials used during the execution of works or.
- c) Verifying the strength of cement mix.

B. WORK TESTS

The test shall be conducted either in the field or in a laboratory on the sample made in the work spot of the concrete used on the work.

The samples shall be spread as evenly as possible throughout the day then wide changes of weather conditions occur during concrete additional sample may be taken as desired by the Executive Engineer.

All expenses on the tests shall be borne by the contractor. Nothing extra shall be paid to the contractor for carrying out the tests.

All samples or tests shall be taken in the presence of the Assistant Engineer concerned and the contractor or his authorized agent.

All mix design and test date and results shall be maintained as part of the record for the contract and shall be signed by the Assistant Executive Engineer and the contractor.

A register of cement concrete cubes cast and tested giving the following particulars shall be maintained at the site:

1. Name of work and reference to Agreement:
2. Serial Number
3. Date and time of sample taken
4. Sample Number
5. Number of Cube
6. Identification marks
7. Proportions of mix
8. Description of the portion of work represented by the sample and quantity of concrete represented by the sample.
9. Initials of Assistant Executive Engineer and the contractor's authorised agent in whose presence the sample is taken.
10. Result of 7 days test
11. Result of 28 days test
12. Review and remarks by Executive Engineer

ADDITIONAL CONDITION
SPECIFICATION FOR SANITARY FITTINGS DRAINAGE AND WATER SUPPLY

1. Water closets basins urinals sinks and other sanitary ware shall be of approved make as required in the relevant items fixing of these shall be in accordance with the special specifications.
2. The rates shall include all dismantling making holes in walls or slabs and restoring the structure to the original conditions after the completion of the work.
3. The work should be carried out with least hindrance to the adjoining building and the contractor shall be responsible for any damage caused to the existing fixture, electric fittings etc., in the course of execution and the contractor shall make good any such damage without claim for extra.
4. The rate of laying stone ware pipes shall including necessary all incidental charges during execution of work and making good the damage to the roads and other structure
5. The rates for laying GI pipes or PVC pipes shall including fixing with wooden plugs GI / CI clamps and brass screws where the pipes are fixed to wall. The rates for GI pipes shall also include wrapping them with tarred taps where they are buried in earth tarring the portions embedded in masonry and painting with white lead two coats for portions above ground level.
6. The clamps for GI pipes fitting should not be spaced more than a part the wooden plugs for pipes and bracket fittings should be properly fixed in CM 1:3 in holder make in masonry with the wide and of wedge shaped plugs in side the walls. The size of plugs should not be less than 1 sq inch at one end, ½ sq . inch at the other end with depth of not less than 3”.
7. Painting with two coats of best white paint or any other colour approved by the Executive Engineer over priming coat of red lead to all flushing tanks brackets clamps used for fixing pipes and all other connections.
8. The contractor should employ sufficient number of qualified licensed plumber with necessary experience and skill in the trade to the satisfaction of the Executive Engineer concerned for execution of water supply and sanitary items of work.
9. The rate shall include all dismantling making holes in walls or slabs and testing the structure to the original condition after the completion of work.

SPECIAL CONDITION

1. The water for the works shall be as far as practicable free for vegetable or organic matter and from salts or other substance likely to with the setting of mortar or otherwise prove harmful to the work.
2. All items of work shall be done in accordance with the relevant clauses and agenda volume to the TNBP or amendments from time to time.
3. The contractor shall be responsible for the safe custody of all department materials once they are handed over to the contractor at the departmental. The cost of any materials in the custody of the contractor stolen, lost, or damaged or if tendered unfit for the work will be recovered from the contractor at the issue rate.
4. For testing the concrete and aggregate the contractor must procure the following equipment's and make them available at site :
 1. Steel mould for making 45cm cube of concrete (The mould will be in two hazard for easy removal).
 2. Slump cone for testing consistency (Slump test) the cone will be 30cm height truss casted cone wit top and bottom diameters of 10cm to 20cm respectively. In addition a steel rod 15cm dia and 50cm in length and weight tamping and rounded is to be procured.
 3. For finding fineness modules and coarse aggregate hand operated over apparatus may be procured along with weighing machine for weighing the aggregate and the sand.
 4. In the case of any breach of the terms of the contract the contract will be closed at the risk and the costs of the contractor In addition to the forfeiture of the EMD and security deposit.
 5. The testing is to be done at the contractor's cost of all building materials and also for concrete cubes.
 6. The work shall be executed and measured as per metric dimension given in the schedule of quantities drawings etc., (F.P. units where indicated are for guidance only)
 7. Unless otherwise specified all the rates quoted by the contractor shall be for works at all levels of the buildings.
 8. Except for every item of work to be done under this 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.

SUPPLYING AND FIXING INDIAN TYPE WATER CLOSET

9. The Indian type water closet shall be fixed in position at floor level in a bed of concrete brick jelly in lime mortar 1:2 so as to complete by embedding the closet trap and foot rests. The existing masonry structure after dismantling the floor, making the holes etc., Shall be restored to its original condition after completion of work. The foot rests should be fixed at an angle as per standards.
10. The PVC flushing tanks shall be of three gallons capacity of Indian make confirming to ISI specification supported on CI brackets with necessary CI chain and handle for pull float bell valve

½” PVC connections to the water main and closet including pier the white glazed paint 2 coats over a priming coat of red lead.

11. The fixing of water closet shall include the dismantling of existing floor wherever indicated making holes in necessary walls etc., and restoring structure to original condition after completion of the work. The flushing tank and accessories will be fixed to the walls with necessary clamps and brackets in CM 1:4

1. 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 work as defined by the tabular statement rate of progress in the article of agreement the Executive Engineer shall so advice 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.

ADDITIONAL CONDITIONS :

1. Water and Lighting : The contractor shall pay all fees, and provide water and lights as required from Municipal main or other sources and shall pay all charges therefore (including storage tanks, meter 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 adjustment areas close preliminary to the proposed site and if any damage is caused due to pipe 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 damaged if any to adjacent building due to the driving.

The contractor has to make his own arrangements for procuring water for construction purpose construction and curing should be done with water free from injurious amounts of deletion materials portable water are generally considered satisfactory for curing and fixing concrete and masonry. However the water to be used should be periodically tested at contractors cost for its suitability for using the construction works 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 damage to work resulting from rains or frame any other cause until these work is taken over by the department after completion will be made good by the contractor at his own cost.

**CHILD LABOUR ERADICATION ACT (G.O.Ms.No.53 Labour and Employment (U2) Dept., Dated :
12.6.2003**

The work contract assigned to the contractors shall be cancelled if they engage child labour in executing works and such contractors should be black listed for three years.

ADDITIONAL SPECIAL CONDITION

For existing para 47-1 and 47-2 of General conditions of contract of Tamil Nadu Buildings practice the following shall be substituted.

Cause 47(i) The work executed by the contractor (or) under those contract shall be maintained at the contractor's risk until the work is taken over by the Executive Engineer, the government shall not be liable to pay for any loss or damages occasioned by (or) arising out of fire, flood, volcanic, eruption, earthquake other convulsion of nature and all other natural calamities, risks arising out of acts of God during such period and that the option whether to take insurance coverage (or) not to cover such risks is left to the contractor.

The contractor shall not be liable for all or any loss of damages occasioned by or arising out of acts foreign enemy, invasions or war like operation (before or after declaration of war) rebellion military or unsecured power.

The tenderer's attention is directed to the requirements for materials under the clause "materials and workmanship" In the general connection of the contract, Materials conforming to the Indian standard specification shall be used on the work and tenderer shall quote his rates accordingly.

9. Every tenderer is expected before quoting his rates to inspect the sites of the proposed work. He should also inspect the quarries and satisfy himself about the quality and availability of materials. The names of quarries. Kilns etc. where from certain materials is to be obtained will be given in the descriptive specification sheet. The best class of materials to be obtained from the quarries or other sources defined shall be used on the work. In every case, the materials must comply with the relevant standard specification samples of materials as called for in the standard specification or in this tender notice for as required by the Executive Engineer in any case shall be submitted for the Executive Engineer's approval before the supply to the site of work is begun. If the contractor after examination of the source of materials defined in the descriptive specification sheet is of the opinion that materials complying with the standard specification or other specification of the contract cannot be obtained in the descriptive specification sheet he shall be said clearly in his tender and state where from he is to obtain materials subject to the approval of the Executive Engineer.

All a rates quoted in the tender shall be inclusive of sales tax payable under the General sales tax act as amended from time to time (including amendment Act 28/84) and that the Commercial Tax Department. No request for payment of sales tax separately in addition to tendered rates due to nay plea of subsequent levy increase in tax will be entertained wide also clause 38 (2) of General.

EXTRACT OF :
NATIONAL BUILDINGS CODE OF INDIA, 1970
Part VI Section 5A: PLAIN AND REINFORCED CONCRETE

4.2 Grades of concrete

4.2.1 Plain and reinforced concrete shall be in seven grades as designated as M100, M150, M200, M250, M300, M350 and M400.

Note: In the designation of a concrete mix, letter ‘M’ refers to the mix and the number of specified 28 days work cube compressive strength of that mix expressed in Kg/sq.cm.

4.2.2.1. Where ordinary Portland cement or Portland blast furnace slag cement conforming to accepted standard VI 5(2)” is used. The compressive strength requirements for various grades of concrete shall be as given in TABLE 1. Where rapid – hardening Portland cement is used, the 28 day compressive strength requirements specified in Table 1 shall be met at 7 days. Where other cements are used, the Engineer-in-charge shall specify the corresponding requirements preferably on the basis of preliminary tests.

IS 269 / 1967 specification for ordinary rapid hardening and low heat Portland cement. IS 455/1967 specification for Portland and blast furnace slag cement.

4.2.2.2. The strength requirements specified in Table 1 shall apply to both controlled concrete and ordinary concrete (see 43.1) Preliminary tests need not however, be made in the case of ordinary concrete:

a. In order to get a relatively quicker idea of the quality of concrete, optional works tests on beams for modulus of rupture at 72+or – 2 hours / at 7 days, compressive strength tests at 7 days may be carried out in addition to 28 days compressive strength test. In all cases, the 28 days compressive strength specified in Table 1 shall alone be the criterion for acceptance or rejection of the concrete. If however form tests carried out in a particular job over a reasonably long period, it has been established to the satisfaction of engineer – in charge that a suitable ratio between the 28 days strength and the modulus of rupture at 72+ or – 2 hours at 7 days of compressive strength at 7 days may be accepted. The Engineer-in charge may suitably relax the frequency of 28 days compressive strength test specified in Table 5 provided the expected strength values at the specified early age are consistently met. For this purpose the values given in Table 2 may be taken for general guidance in the case of concrete made with ordinary cement.

b. Whether the strength of a concrete mix, as indicated by test lies between the strength for any two grades, specified in Table 1, such concrete shall be classified for all purpose as a concrete belonging to the lower of the two grade between which its strength lies.

4.3 Proportioning and works Control:

4.3.1. Methods of proportioning: The determination of the proportion of cement aggregate and water to attain the required strength shall be made by one of the following:

- a. With preliminary tests by designing the concrete mix such concrete shall be called controlled concrete.
- b. Without preliminary tests by adopting nominal concrete mixes. Such concrete shall be ordinary concrete.

4.3.2. Controlled Concrete:

4.3.2.1 As far as practicable, controlled concrete should be used on all concrete works. Controlled concrete for use in plain and reinforced concrete structures shall be in grade 3 M 100, M150, M250, M300, M350 and M400.

4.3.2.2. The concrete mix shall be designed to have an average strength corresponding to the value specified for preliminary test in table 1. The proportions chosen should be given such that the concrete is of adequate workability for the conditions prevailing on the work in question and may properly compacted with the means available.

The maximum total quantity of aggregate by weight per 50 kg. Of cement shall not exceed 450 kg. Except where otherwise specifically permitted by the Engineer – in-charge.

4.3.2.3. Except where it can be shown to the satisfaction of the Engineer-in-charge that supply of proper graded aggregate of Uniform quantity may be maintained over the period of work and the grading of aggregate should be controlled by obtaining the Course aggregate in different sizes and blending them in the right proportion when required the different sizes being stocked in Separate stock file. the materials should be stock piled for several hours preferably a day before use. The grading of course and fine aggregate should be checked as frequently as possible the frequency for a given job being determined by the Engineer-in-charge to ensure that the suppliers are maintaining the grading uniform with that on the samples use in the preliminary tests.

4.3.2.4. In proportioning concrete the quantity of both cement and aggregate should be determined by weight. Where the weight of cement is determined by accepting the manufactures weight per bag and reasonable number of bags should be weighed separately to check the net weight where the cement is weighed on the site and not in bags it should be weighed separately from the aggregates. Water should be either measured by volumes in calibrates tanks on weighed. All measuring conditions and their accuracy may be periodically checked.

4.3.2.5. It is most important to maintain the water cement ratio constant at its correct value. To this end, determination of moisture contents in both fine and coarse aggregates should be made as frequently as possible the frequency for given job being determined by the Engineer – in – charge according to weather conditions. The amount of the added water should be adjusted to Compensate for any observed variations in the moisture contents. The determination of moisture content in the aggregate shall be carried out in accordance with good practice (VI – 5 – 9) IS 2386 Part III – 1963. To allow for the variation in the weight of aggregates due to variation in their moisture content suitable adjustment in the weight of aggregate should also be made.

4.3.2.6. No substitution in materials used on the work or alteration in the established proportions except as permitted in 4.3.2. Shall be made without additional tests to show that the quality and strength of concrete are satisfactory.

4.3.2.7. Workability of the concrete should be checked at frequent intervals. to slump test or where facilities with the compacting factor test conducted in accordance with good practice VI 5 (10) may adopted for this purpose.

4.3.2.8. A competent person should be employed whose duty will be supervised all stages in the preparation of materials for nominal concrete mixer for ordinary concrete in accordance with table 3. All work test specimen should be made and site tests carried out with his direct supervision.

4.3.3 Ordinary Concrete:

4.3.3.1 Where it is considered not practicable to use controlled concrete, ordinary concrete may be used for concrete of grades M100, M150, M200, M250. the proportions of materials for nominal concrete mixes for ordinary concrete shall be in accordance with table 3.

4.3.3.2. In proportioning concrete the quantity of cement should be determined by weight. The quantities of fine and coarse aggregates may be determined by volume but these should also preferably be determined by weight. For the lateral case the weight should be determined from the volume specified in table 3 and the weight per litre of dry aggregate. If fine aggregate is moist and volume batching is adopted, allowance shall be made for bulking in accordance with good practice (VI.5(9)*).

4.3.3.3. The water cement ratio shall not be more than the specified in Table 3. The cement content of the mix specified in the table 3 for any nominal mix may be increased if the quantity of water in a mix has to be increased to overcome to the difficulties of placement and compaction so that the water cement ratio specified in Table 3 is not exceeded.

Note 1: In case of vibrated concrete, the limit specified may be suitably reduced to avoid aggregation.

Note 2: The quantity of water used in the concrete mix for reinforced concrete work should be sufficient, but should not be more than what is sufficient to, produce a dense concrete of adequate workability for the purpose, which will surround the properly grip, all the reinforcements, work ability of the concrete should be controlled by maintaining water cement ratio that is found to give a concrete which is just sufficiently wet to be placed and compacted without difficulty with the means available.

4.3.3.4. Workability of concrete should be controlled by direct measurement of water content, making allowance for any surface water in the fine and coarse aggregates. The slump test may be conducted in accordance with good practice (VI.5.(10)).

4.3.3.5. Allowance should be made for surface water present in the aggregate when computing the water cement surface water shall be determined by field methods in accordance with good practice VI 5 (9)*. In the absence of exact data the amount of surface water may be estimated from the values given in the Table- 4 .

4.3.3.6. If ordinary concrete made in accordance with the proportions given for a particular grade does not yield the specified strength due to proper qualities of materials not being available, such concrete shall be classified as belonging to the appropriate lower grade ordinary concrete proportioned for a grade given in accordance with table-3 shall not however be placed in a higher grade on the ground that the test strengths are higher than the minimum specified. No interpolation shall be permissible.

4.4 Sample size and acceptance criteria

4.4.1 All tests shall be carried out in accordance with code practice (VI-5-(4))

4.4.2. The number of test specimens required, the frequency of sampling and the criteria for acceptance of a concrete as conforming to the specified grade shall being accordance with table 5 for both ordinary concrete and controlled concrete. No preliminary tests are, however, necessary in the case of ordinary concrete.

- IS 199 – 1959 – Methods of sampling, and analysis of concrete.
- IS 2386 (Part III 1963) specific gravity, density, voids absorption and bulking – methods of tests for aggregation for concrete.
- IS 2386-Methods of test for aggregates for concrete. IS (Part III) 1963 – Specific gravity density voids absorption and bulking.
- IS 516 -1959 Method of tests for strength of concrete.

TABLE: 1
STRENGTH REQUIREMENTS OF CONCRETE (CLAUSE 4.2.2.1 AND 4.2.2.2)
(All Values in Kgs./ Cm.Sq.)

Grade of
concrete

Compressive strength of 15cm cubes at 28 days after mixing
conducted in accordance with code practice VI 5(4)*

1	Preliminary tests Min
	2
M100	135
M150	200
M200	260
M250	320
M300	380
M350	440
M400	500

Note 1: Preliminary Test: A test is conducted in a laboratory on the trial mix* of concrete produced in the laboratory with the object of

- Designing a concrete mix before the actual concreting operation starts.
- Determining the adjustments required in the designed mix when there is a change in the materials used
- Verifying the strength of concrete mix

Note 2: Work Test:- A test conducted either in the field or in laboratory on the specimens made on the works out of the concrete being used on the works.

Note 3: Size of Cubes: In the working test, with the approval of the Engineer-in-charge 10cm cubes may be used in place of 15cm cubes provided the maximum nominal size of aggregate does not exceed 20mm. Even the use of 15cm cubes should normally be restricted to concrete's having a maximum nominal size of aggregate not exceeding 40 mm. Where concrete with aggregates larger than 40mm size is required to be tested, the size of cubes should be specified by the Engineer-in-charge, keeping in view that generally the length of side of the cube should be about four times the maximum nominal size of aggregate in the concrete constituting the cube specimen.

Note 4: Strength in Relation to Size of the cube: Where 10cm cubes are used the values obtained from the tests of 10cm cubes shall be reduced to the extent established by comparative preliminary tests with 10 and 15cm cubes or in the absence of such comparative tests by 10 percent of the tests. In order to give the equivalent strength for 15 cm cubes, when cubes larger than 15cm are adopted, generally on modification is necessary unless otherwise specified by the Engineer-in-charge

IS 5-16-1959-Method of test for strength of concrete

Note 5: Cylinder strength – compressive strength test may, with the approval of the Engineer – in – charge, be conducted on 15cm diameter and 30 cm high cylinders in accordance with good. Practice (VI-5(4)*) instead of one cube, where cylinder strength figures are adopted the compressive strength figures given above shall be modified according to the formula. Minimum cylinder compressive strength required 0.8 compressive strength specified for 15cm cubes.

THE CENTRAL ROAD RESEARCH INSTITUTE, New Delhi has carried out tests with a view to establishing a relation between water cement ratio and the compressive strength of concrete using ordinary Portland cement manufactured in the country confirmed to accepted standards (VI – 5-(2)).

As a result of these, it has been considered advisable to give graphs showing the relationship between the compressive strength of Concrete mixes with different water cement ratios and the 7 day compressive strength of cement tested in accordance with code practice (VI – 5 – (2)). These graphs have been given in Appendix – A. As they would be some assistance in obtaining the water cement ratio for trial mix of concrete.

TABLE 2:
OPTIONAL WORKS TEST REQUIREMENTS OF CONCRETE

(Clause 4.2.2.2.(a))

(All values in Kg/cm.sq.)

All tests shall be conducted in accordance with good practice (VI-5-(4)*)

Grade of concrete	Compressive strength of 15cm cubes min 7 days	Modules scripture by beams test in.
	1	At 7 days
	2	4
M100	70	17
M150	100	21
M200	135	24
M250	170	27
M300	200	30
M350	235	32

M400	270	34
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Note: notes 3 to 5 under Table 1 are also applicable to this table.

- L.S.510-1959 Methods of test for strength of concrete.
 - L.S.261-1967 – specification for ordinary rapid hardening and best Portland cement.

TABLE 3:
CONCRETE MIX PROPORTIONS (CLAUSE 4.3.3)
ORDINARY CONCRETE

Grade of concrete		Total qty. of dry aggregates by volume per 50 kg. of cement to be taken as the sum of the individual volumes of fine and coarse aggregate max.
1	2	4
M100	300 Litres	34 Litres
M150	220 Litres	32 Litres
M200	160 Litres	30 Litres
M250	100 Litres	27 Litres

adjusted from upper limit to lower limit progressively as the grading of the fine aggregate becomes finer and the

TABLE: 4
SURFACE WATER CARRIED BY AVERAGE AGGREGATE

Aggregate	Appr. Qty. of surface water 1/M3
1	2
Very wet sand	120
Moderate wet sand	80
Moist sand	40
*Moist gravel or crushed work/20 to 40	40

- Course aggregate, less the water it will carry.
- I.S. 383 – 1963 specification for coarse and fine aggregate for natural coarse for concrete.
- I.S. 516-1959 specification for nominal and manufactured aggregate for use in mass concrete.