TWO COVER SYSTEM



GOVERNMENT OF TAMIL NADU

WATER RESOURCES DEPARTMENT

CHENNAI REGION, CHENNAI – 5.

PALAR BASIN CIRCLE, CHENNAI - 5.

Price Bid Documents

Name of Work :- Construction of a Cut and Cover

Channel from L.S.550m to 910m and an Open Channel from L.S.910m to 3090m of the Paruthipattu Tank Surplus Course in Avadi Taluk of Thiruvallur

District.

EMD Amount :- Rs.10,60,000.00

Last date for receipt of tender :- 02.08.2022 Upto 3.00 P.M.

Price Bid

PART - B



GOVERNMENT OF TAMIL NADU WATER RESOURCES DEPARTMENT CHENNAI REGION, CHENNAI – 5.

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TENDER NOTICE

- 1. On behalf of Governor of Tamil Nadu sealed tenders (Two Cover System) will be received by the Superintending Engineer, WRD, Palar Basin Circle, Chennai 5 at his office upto 3.00 P.M on 02.08.2022 for the work of "Construction of a Cut and Cover Channel from L.S.550m to 910m and an Open Channel from L.S.910m to 3090m of the Paruthipattu Tank Surplus Course in Avadi Taluk of Thiruvallur District.."
- 1.1 The tenders should be in the prescribed form obtainable from the office of the Superintending Engineer, WRD, Palar Basin Circle, Chennai 5. The tenders will be opened by the Superintending Engineer, WRD, Palar Basin Circle, Chennai 5 at the place and on the date aforementioned.
- 1.2 The tenderer 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 therein and hand it over to the tenderer concerned and initial all corrections in the presence of the tenderers. If any of the tenderers or their agents finds 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 question whatsoever.
- 2. Tenders must be submitted in sealed covers and should be addressed to the Superintending Engineer, WRD, Palar Basin Circle, Chennai 5. The name of the tenderer with their address and the name of work being noted on the cover.
- 2.1 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 names and addresses 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. Each tenderer must also send current certificate of income tax clearance / verification from the appropriate income tax authority in the form prescribed there for. The certificate will be valid for one year from the date of issue of all tenders submitted during the period.
- 3.1 In the case of proprietary or partnership firm it will be necessary to produce the certificate aforementioned for the proprietor or proprietors and each for the partners as the case may be.
- 3.2 If the tenderer is a registered Public Works Department contractor and if a certificate for the current year had already been produced by him during the calendar year, in which the tender is made, it will be sufficient if particulars regarding the previous occasion on which the said certificate was produced are given.
- 3.3 The tenderer should furnish the copy of Goods and Service Taxes (GST) Registration Certificate with connected documents along with Pre-Qualification Tender.

- 3.4 All tenders received without a certificate as aforementioned will be summarily rejected.
- Each tender must pay as an earnest money a sum of Rs.10,60,000.00 (Rupees Ten Lakh and Sixty Thousand Only) pledged in favour of Executive Engineer, WRD., Kosasthalaiyar Basin Division, Thiruvallur or into the Government Treasury or Sub Treasury within the jurisdiction of the Executive Engineer concerned to the credit of Revenue Deposits on behalf of the Executive Engineer of the Kosasthalaiyar Basin **Division**, **Thiruvallur** are enclosed with his tender the chalan endorsed accordingly. The earnest money deposit can also be paid in any form as may be approved by the State Government from time to time as per Para 155 of TNPWD code. Or in the form of security deposit excluding bank guarantee inclusive of specified small savings scripts, Accounts, I.V.P., Deposits, Demand draft, Banker's cheque, NSC, pledged in favour of the Executive Engineer, WRD, Kosasthalaiyar Basin Division, **Thiruvallur**. This earnest money deposit will be refunded to the unsuccessful tenderer on application, after intimation is sent of rejection of the tender or at the expiration of ninety days from the date of opening of tender, whichever is earlier. The refund will be authorised by the Executive Engineer by suitable endorsement. The earnest money deposit will not be received in the shape of currency notes by the Public Works Department Officers. However the earnest money for the first three lowest tenderers will be retained till the final decision is taken on tender. However refund of the first three lowest tender will be considered only by the tender accepting authority. If any additional Earnest Money Deposit is required after tender, it should be paid before acceptance of agreement.

The Earnest Money Deposit will also be accepted in the shape of Bankers Cheque and demand draft of the Nationalised and Scheduled Banks. The Bankers Cheque / demand drafts of the Nationalised and Scheduled Banks furnished towards earnest money deposit should be drawn in favour of the Executive Engineer, WRD, **Kosasthalaiyar Basin Division, Thiruvallur** concerned.

- 4.2 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.
- 5.1 The tender will remain valid for a period of **ninety days** from the date of opening of the **tender**. The validity period can be extended further if the contractor gives his consent in writing, specifying the period of extension.
- 5.2 The tenderer whose tender is under consideration shall attend the Superintending Engineer'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 and intimation being given to him of acceptance of his tender by the officer duly authorised in this behalf under article **299** (1) of the constitution, here-in-after called the tender accepting authority make security deposit of 1 % of the value of contract (including G.S.T) in one of the forms prescribed in Tamil Nadu Public Works Account Code (i.e.) 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 up the 2 % of the value of contract (including G.S.T) for the purpose of security deposit.

The earnest money D.D. has to be converted as National savings certificate scripts / deposits / accounts of postal department or in the shape of Indira Vikas Patras or Irrevocable Bank guarantee as per the form prescribed by the Department, 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 (including G.S.T) for the purpose of security deposit, which has to be remitted only in the shape of NSC / deposits / accounts of postal department or Indira Vikas Patras or Irrecoverable Bank guarantee as per the form prescribed. National savings scripts / deposits / accounts of postal account pledged to the Executive Engineer concerned. The security deposit together the earnest money deposit and the deductions made at 5% of the value of each bill (including G.S.T) towards with held amount vide clause 64-1 of General condition to the contract, shall be retained as security for the due fulfillment of contract such deposit shall not bear any interest.

ADDITIONAL CONDITION:

On the evaluation of tender, if it is found that if the overall quoted amount of the tender (including G.S.T) is less than 5 to 15 % of the value put to tender (including G.S.T) the contractor shall pay additional security at 2% of the estimated value put to tender. If the tender discount exceeds 15 % to 20 %, the contractor shall pay an additional Security Deposit of 50 % of the difference between the quoted amount and the estimate value put to tender (including G.S.T). Failure to furnish the Additional Security deposit within 15 days from the date of receipt of acceptance order and execute the agreement shall entail cancellation of award of contract and forfeiture of Earnest Money Deposit furnished.

5.3 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 backs out from the tender or withdraw his tender, the Earnest Money Deposit shall be forfeited and credited to the Government account.

If the contractor fails to carryout the contract, after paying the requisite security deposits then he will be liable for the excess expenditure, if any incurred to complete the work as contemplated in the General conditions of the contract.

5.4 It shall be expressly understood by the tendered that on receipt of written communication of acceptance of tender from the accepting authority, there emerges a valid contract between the Governor of Government 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 condition to the contract, Special condition to the contract, Negotiation, Correspondences, Written communication of acceptance of tender, etc. shall constitute a valid contract and that will be the foundation of the rights of both the 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 tenderer shall examine clearly the Tamil Nadu Buildings practice and also the General conditions of contract contained therein, and sign the circle office copy of the Tamil Nadu Building practice and its addenda volume in token of such study before submitting his tender unit rates. While shall be for finished work in-situ. He shall also carefully study the drawings and additional specifications and all the documents connected with the contract. The Tamil Nadu Building practice and other connected documents with the contract, such as specifications, 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. on office days in the office of Superintending Engineer, WRD, Palar Basin Circle, Chennai 5.
- 7. The tenderer's attention is directed to the requirements for materials under the clause "Materials and Workmanship" in the General conditions to the contract. Materials conforming to the I.S.I standards shall be used on the work and the tenderer shall quote his rates accordingly.
- 8. Every tenderer is expected before quoting his rates, to inspect the site of the proposed work. He should also inspect the quarries, and satisfy himself about the quality and availability of materials. The names of quarries and kilns, etc., where from certain materials are to be obtained will be given in the descriptive specification sheet. The best class of materials to be obtained from the quarries or other source defined shall be used on the work. In every case the materials must comply with the relevant standard specifications samples of materials as called for in the standard specifications or in this tender notice or as required by the Executive Engineer in any case shall be submitted for the Executive Engineer's approval, before the supply to site of work is begun. 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 or other specifications of the contract cannot be obtained in quality or sufficient quantity, from the source defined in the descriptive specification sheet, he shall so state in his tender and state where-from he intends to obtain materials, subject to the approval of the Executive Engineer.

The Government will not, however, after acceptance of contract rate, (including G.S.T) 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 conditions to the contract regarding payment of Seignior-age, tolls etc.

- 9. The tenderer's particular attention is drawn to the sections and clauses in the General conditions of contract dealing with.
- a. Test, inspection and rejection of defective materials and work.
- b. Carriage.
- c. Construction plant.
- d. Water and lighting.
- e. Cleaning up during progress and for delivery.
- f. Accidents.
- g. Delays.
- h. Particulars of payment.

The contractor should closely pursue all the specification clauses, which govern the rates, which he is tendering.

- 10. A schedule of quantities accompanies this tender notice. It shall be definitely understood that the Government does not accept any responsibility for the correctness or completeness of this schedule and that this schedule is liable to alteration by omission, deductions or additions at the discretion of the Executive Engineer or Superintending Engineer, WRD, Palar Basin Circle, Chennai 5 or as set forth in the Conditions of contract. The tenderer will, however, base his lump-sum tender on this schedule of quantities. He should quote specific rates for each item in the schedule, (excluding G.S.T) and the rates should be in Rupees and in sums of five paise. The rates should be written both in words and figures and the units in words. In the case of percentage tender system for the works costing upto Rs.1 Crore, the tenderer should note 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 (excluding G.S.T). In case of works costing above Rs.1 Crore items 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.
- 10.1 The tenderer should also show the totals of each item and the grand total of the whole contract (including G.S.T), and quote in the tender a lump-sum for which he will undertake to do the whole work, subject to the Conditions of contract such lump-sum agreeing with the total amount of schedule A. This schedule accompanying the lump-sum tender shall be written legibly and free from erasures, over writings or conversion of figures. Corrections where unavoidable, should be made by crossing out, initialing, dating and rewriting.
- 10.2 In the event of work being transferred to any other division or Executive Engineer who is in-charge of that division having jurisdiction over the work shall be competent to exercise all to powers and privileges reserved in favour of Government.
- 11. Tenderers offering a percentage deduction from or Increase on the estimate amount (excluding G.S.T) except in the case of tender called for specifically under the percentage rate tender system and those not submitted in proper form or in due time will be rejected. Rates or lump-sum amounts for items not called for, shall not be included in the tender. No alternation which is made by the tenderer in the contract form, the conditions of contract, the drawings, specifications, or quantities accompanying same will be recognised, and if any such alterations are made that tender will be void.
- 12. The tenderer should work out his own rates (excluding G.S.T) without reference being made to the Public Works Department current schedule of rates, or the Public Works Department Estimate, which are not open for inspection by the tenderers. However, in case tender, called for percentage tender system, the tenderer should work out his own, rate but quote his percentage rate above or below the total estimate value of department indicate in the tender schedule (excluding G.S.T)

- 13. The price at which and the source from which certain particular materials shall be obtained by the contractor are given at the end of the schedule accompanying the tender form. Tenderers must accept the materials at these prices, and shall quote their price for finished work accordingly. Notwithstanding 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.
- 14. The attention of the tenderers is directed to the contract requirements as to the time of beginning work, the rate of progress and the dates for the completion of the whole works and its several parts. The following rate of progress and proportionate value of work done from time to time, as will be indicated by the Executive Engineer's certificates of the value of work done, will be required. Date of commencement of this programme will be the date on which the site (or premises) is handed over to the contractor.

Period of Contract - 12 (Twelve) Months

Period after date of commencement (1)	Percentage of work to be completed based on contract lumpsum amount (2)				
First Quarter	30 %				
Second Quarter	55 %				
Third Quarter	85 %				
Fourth Quarter	100% - The work should be completed in all respects				

- **Note :-** The periods to be entered in column for the purpose of defining the rate of progress may be fixed by the Superintending Engineer / Executive Engineer to suit each case.
- 15. No part of the contract shall be sub-let without written permission of the Superintending Engineer / Executive Engineer, nor shall transfer be made by Power of Attorney, authorising others to receive payment on the contractor's behalf.
- 16. If further necessary information is required the Executive Engineer of the Divisions will furnish such, but it must be clearly understood that tenders must be received in order, and according to instructions.
- 17. The Superintending Engineer or other sanctioning authority reserves the right to reject any tender or all the tenders without assigning any reason therefor.
- 18. The tenderers who are themselves not professionally qualified, shall undertake to employ qualified technical men 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. In case the selected tenderer is professionally qualified or has undertaken to employ technical men under him, 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.) reinforced concrete works, etc.

S.No	Value of contract	Qualification and No. of Technical Assistance to be employed.
1.	Rs.2095.00 Lakh	a. Site Engineers : (i) 3 Nos . – (B.E. [Civil] with atleast three years experience).
		b. Site Supervisors (ii) 5 Nos . (Diploma Holders in Civil Engineering with atleast three years experience)

A penalty of Rs.2,000 /- per month for Diploma Holders and Rs.5,000 /- per month for Degree Holders will be levied in case of default on part of the contractors in the prescribed norms laid as per G.O. Ms. No. 181 PWD dated 16.05.2003.

- 19. Tenderers who have not already registered themselves as PWD contractors shall furnish evidence of good record and capacity to do works.
- 20. A tenderer submitting a quotation which the tender accepting authority considers excessive and / or indicative of the insufficient knowledge of current prices or definite attempt at profiteering will render him 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, fixed by Government or the reasonable price permissible for the tenderer to charge private, purchaser under the provision of clause 8 of Boarding and Profiteering Prevention Ordinance 1943 as amended 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 for as possible. The number of ex toddy tapers to whom he can offer employment should be mentioned in the tender and he should undertake in the agreement to offer such employment to such number.
- 22. The Contractor 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 the 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 agreement conditions of contract. The Contractor shall also be liable to any pecuniary liability arising on account of any violation by him of the provisions of the Act. Contractor shall during the currency of the contract, ensure engagement of the apprentices in the categories mentioned below who may be assigned to him by the Director of Employment and Training / State Apprenticeship Advisor, Tamil Nadu. The contractor shall train them as required under the Apprentices Act 1961 and rules made there-under and shall be responsible for all obligations of the employer under the said Act including the liability to make payments to the apprentices as required under the said Act.

Value of contract	Category	Number to be appointed
Rs. 1.00 Lakhs and upto Rs. 3.00 Lakhs.	Building constructor	1
	2. Brick layer	1
Rs. 3.00 Lakhs and upto Rs. 10.00 Lakhs	Building constructor	1
	2. Brick layer	1
	3. Diploma holder in civil Engineering.	1
Above 10 lakhs and upto Rs. 50.00 Lakhs.	Building constructor.	1
	2. Brick layer	1
	3. B.E. (civil) / Equivalent Degree Holder	1

- 23. Unless the contractor has been exempted from engagement of apprentices by the Director of Employment and Training / State Apprenticeship Advisor, a certificate to the effect that the contractor had discharged his obligation under the said Act satisfactorily should be obtained from the Director of Employment and Training / State Apprenticeship Advisor and the same should be produced by the Contractor for final payment in the settlement of the contract.
- 24. A sum of equivalent to 2 ½ of the work done (including G.S.T) by the contractor will be retained with the Government for a period of **one year** reckoned from the date of completion of the work in order to enable the Departmental officers to watch the effect during the period on the work done by the contractor. The amount retained with the Government will be refunded only on expiry of **one year** period without any interest as referred above. The Contractor shall be liable to set right all the defects arising at his faulty execution or sub-let work noticed during the above mentioned **one year** period at his cost.
- 25. The tenderer of the contract who agree to employ the maximum number of ex-servicemen (Number to be specified in the tender) will receive preferential consideration. The tenderers are requested to report on their covering letter.
- 26. All rates quoted in the tender shall be exclusive of G.S.T and that the contractor is responsible to file the G.S.T return and pay the amount as amended by the Government of India and Government of Tamilnadu. 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 vide clause **38** (2) of General conditions of contract.
- 27. 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.

28. EVALUATION OF PRICE TENDER :-

- **a. VALIDITY OF PRICE TENDER:-** The Tender shall be valid for a period of 90 (Ninety) days from the date of opening of Tender.
- **b. NEGOTIATION:** "The Lowest tenderer will be identified who quotes lowest total tender price which including G.S.T. Negotiation of rates will be made only with the lowest tenderer for reducing the quoted rates and the negotiation will be made for the rates quoted to the items in the construction part alone and not for G.S.T amount".

"After negotiation with lowest tenderer, the G.S.T amount will be recalculated at 12% of the sum of the Negotiated tender value (excluding G.S.T) for construction Cost specified in the BOQ, subject to G.S.T rate applicable from time to time as recommended by the G.S.T Council".

c. RATES AND PRICES :-

c.1 Tenderer should quote rate and amount for each item of work and for full quantity. (excluding G.S.T) Grand total of the whole contract should be furnished without fail in the last page of schedule "A" of Price Tender (excluding G.S.T) and the G.S.T amount should be separately quoted in the Tender Schedule – A. The total tender price will be cumulative of value quoted for construction (Total Basic Rate + G.S.T).

c.2 PRICE ADJUSTMENT CLAUSE

The Price Adjustment on the components of Cement, Steel, Bitumen and Petroleum, Oil and Lubricants (POL) shall be applicable to the works with contract period of **12 months and below** with all other conditions remaining the same as per Rule 14(8) of 2000 Tamil Nadu Transparency in Tender Rules.

Contract price shall be adjusted for increase or decrease in rates for Cement, Steel, Bitumen and Petroleum, Oil and Lubricants in accordance with the following principles and procedures and as per formula given in General Conditions of Contract and will be operated by the respective **Executive Engineers**.

Price adjustment will apply only when the fluctuations of rates exceed or decrease by 3 % or more compared to the estimate rates (RBI index price)

The Price adjustment shall be calculated only on the departmental estimate cost of the work.

In respect of POL it may be considered on PASS through basis with payment of actual rates / price at the rates charged by IOC

All works for which price Escalation / Variation is contemplated must have miles stones fixed in physical terms and have a pre-fixed time-line for use of inputs clearly indicating the nature and quantum of eligible inputs to be used for the work for the relevant period between two milestones. Price Escalation / Variation will be applicable for those quantities 'actually' used by the contractor including additional quantities, if any, used or achieved ahead of the time-line. However, if the contractor does a certain quantity of the work in the third quarter which ought to have been done in the earlier quarter, Price Variation / Escalation will still be applicable on that quantity at the rates as applicable in the relevant quarter as per time-line or period of actual use whichever is less.

The Price adjustment mechanism will cease to operate for value of work executed beyond the agreement period. But agreement period shall include the "actual period" for which the work was "suspended officially" and extension of time permitted for any valid reasons such as, war, natural calamities, like flood, earthquake and other risks arising out of acts of God during the agreement; work delayed due to the land acquisition process; change in design, change in scope of work, etc., which is given in writing by the Tender Calling Officer of the respective work.

Price Variation will be calculated as per the specified formula from the last date of submission of tender upto the end of agreement period provided, If the agreement is signed within the minimum specified time, failing which, the price variation will be applicable from the date of agreement only, based on the wholesale Price indexes of RBI. The quarter would be reckoned with reference to the quarter of the calendar year in which the last date on tender submission is fixed. In case of delayed agreement, the quarter in which the agreement is signed will be reckoned for the purpose of calculation of Price adjustments.

c.3. PENALTY CLAUSE

As per Clause 57, 57.1, 57.2, and 57.3 of General Conditions of Contract in Tamil Nadu Building Practice.

c.4. BONUS FOR ADVANCE COMPLETION OF WORK

Bonus as an incentive for advance completion of work is considered. If the work is completed in advance by not less than 10 % of agreement period can be considered and bonus for 1 % on the value of actual quantum of works executed at tendered date may be paid.

d. REFUND OF EMD TO THE UN SUCCESSFUL TENDERER:-

Communication to the unsuccessful tenderers will be sent in 7 days time from the date of communication sent to the successful tenderers. Refund of Earnest Money Deposit will be made, within 15 days from the date of receipt of refund voucher duly stamped and signed, from the unsuccessful tenderer.

e. FORFEITURE OF EMD :- If the tenderer withdraws his tender after the acceptance of tender or fails to pay the requisite security deposit amount within the specified period of time, the Earnest Money Deposit furnished with the tender will be forfeited.

f. SECURITY DEPOSIT :-

f.1 The successful tenderer shall furnish a security deposit for an amount equivalent to 2 % of the contract value, (including G.S.T) which includes the earnest money deposit already paid within 15 days (Fifteen days) from the date of receipt of letter of acceptance. If the successful tenderer fails to execute the contract (sign the agreement) within the aforesaid 15 days time the Earnest Money Deposit furnished with the Price tender will be forfeited.

- **f.2** The security deposit may be in any one form as detailed under Earnest Money Deposit in Pre Qualification Tender notice. In addition the security deposit in the shape of irrevocable Bank guarantee will also be accepted. The Bank Guarantee in a form and by a Bank acceptable to the Superintending Engineer in amount and currencies as specified in letter of acceptance. The Bank Guarantee shall be valid until a date 28 days from the date of expiry of shrinkage period [Security deposit + additional security deposit for unbalanced tender]. All Bank Guarantee should be in favour of Executive Engineer
- **Note :-** Further details on Additional security deposit, Retention money, Shrinkage period, Refunds of security deposit and with held amount are available in the Price Tender schedule. Bank Guarantee will not be accepted towards EMD & Additional Security Deposit at any cost.
- g. All financial commitments in INDIAN RUPEE and Nationalized Bank or Scheduled bank in India only accepted

TENDER

To His Excellency of the Governor of Tamilnadu Represented by the Superintending Engineer, Palar Basin Circle, WRD, Chennai - 5.

Date:-
I / We do hereby tender and if this tender be accepted undertake to execute the following work viz
as shown in the drawings and described in the specifications details in the office of the Superintending Engineer, Palar Basin Circle, WRD, Chennai – 5 with such variations by way of alterations or additions to and Omission from the said works and method of payment as are provided for in the Conditions of contract for the sum of Rs
(Or) Such other sum as may be arrived at under the clause of the "General conditions to the contract "relating to payment on lump-sum basis or by final measurements at unit prices.
2. I / We have also completed the priced list of items in schedule "A" annexed [In words and figures] for which I / We agree to execute the work and receive payment on measured quantities as per General conditions to the contract.
3. I / We do hereby distinctly and expressly declare and acknowledge that, before the submission of my or our tender, I / We have 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 examination 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 as to enable me / us to thoroughly understand the intention of 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 thereafter make any claim or demand upon the Government, based upon or arising out of any alleged misunderstanding or misconception or mistake on my / Own part out of the said requirements, covenants, stipulations, restrictions and conditions.
4. I / We enclose an Income Tax verification certificate.
I / We have being a registered Public Works Department contractor.

I / We have already produced an Income Tax Verification certificate during the

current calendar year in respect of...... (Here particulars of the previous occasion on which the certificate was produced should be given). The legal address of

the contractor for service of all letters and notices will be as follows.

- 5. My / Our registration number in the commercial tax Department.
- a) I / We enclose herewith a chalan for the payment of the sum of Rupees...... as earnest money not to bear interest.
- b) I / We have paid Rs. (Rupees only) against the earnest money deposit of Rs. (Rupees only) since I am / We are eligible to pay the earnest money deposit at concessional rates.
- c) In lieu of cash deposits, I / We have enclosed a bearing No. dated for a value of Rs. (Rupees

only) drawn endorsed / pledged in favour of the Executive Engineer / Division.

- d) I am / We are and hence exempted from payment of earnest money deposit.
- 6. If my / our tender is not accepted, this sum shall be returned to me / us on my / our applications when intimation is sent to me / us about the rejection or at the expiration of **ninety days** from the date of this tender, whichever is earlier. If my / our tender is accepted, the Earnest Money Deposit shall be retained by the Government as security for the due fulfillment of contract. If upon intimation being given to me / us by the authority authorised by the Governor under article **299 (1)** of the constitution (herein after called the tender accepting authority) of acceptance of tender, (I / We) fail to make the additional security deposit, then I / we agree to the forfeiture of Earnest Money Deposit. Any notice required to be serving on me / we here under shall be sufficiently served on me / us if delivered to me / us personally or forwarded, to me / us by post to (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 emerges a valid contract between me / us and the Governor of Tamil Nadu and the Tender documents (i.e.) the Tender notice, Tender with schedules, General conditions to the contract and Special conditions of the Tender, negotiation letters, communication of acceptance of tenders, shall constitute the contract for this purpose and be the foundation of rights of both the parties, as defined in clause (iv) of tender notice, provided that it shall be open to the accepting authority to insist on execution of any written agreement by tenderer, if administratively considered necessary or expedient.
- 8. I / We have also signed the copy of the Tamil Nadu Building practice and National Building code and agenda volume thereto, be maintained in the Palar Basin Circle, WRD, Chennai 5, in acknowledgement 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 a specification number in schedule A.

- 10. The term "Executive Engineer" in the said conditions shall mean the Public Works officer in-charge of the Divisions having jurisdiction for the time being over the work, who shall be competent to exercise all the powers and privileges reserved, herein favour of the Government with the previous sanction of or subject to ratification by the competent authorities in case where such sanction or ratification may be necessary and who has been duly authorised under Article **299** (1) of the constitution.
- (ii) In the event of the work being transferred to any other Circle / Division / Sub division, the Superintending Engineer / Executive Engineer / Assistant Executive Engineer who is in-charge Circle / Division / Sub division having jurisdiction over the work shall be competent to exercise all the powers and privileges reserved in favour of Government.
- 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 Public Works Department code and the sites (or premises) is handed over to me / us as provided for in the said conditions and agree to complete the work within 12 (Twelve) months from the date of such handing over of the site (or premises) and to 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 appended 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 Engineer, the Security deposited by me / us herein before recited or such portion thereof as I / We may be entitled to, under said conditions be paid back to me / us as provided in clause **64** of the General conditions to the contract.
- 13. I am / we are professionally qualified and my / our qualifications are as follows:-
- I / We in pursuance of clause 18 of Tender notice undertake to employ the following technical staff for Supervising the work and will see that one of them is always at site during working hours personally checking all items of works and paying extra attention to such works as may require special attention (E.g.) Reinforced Cement Concrete, etc.

SI.No	Name of Technical Staff Proposed to be employed	Qualification and Experience.
1.		
2.		
3.		

- 14. I / We agree that the arbitrator for fulfilling the duties set forth in the arbitration clause of the General conditions to the contract shall be.
- (i) The Superintending Engineer, PWD., of Building Construction & Maintenance Circle, Chennai 5 in case the value of claim does not exceed. Rs.50,000 /- and
- (ii) I / We agree that in case the value of claim Rs.50,001 /- and above, the remedy will be thorough the competent civil court only.
- 15. In pursuance of negotiation with the Executive Engineer / Superintending Engineer of Division / Circle on

I / We agree to reduce the rates for the items in the schedule as follows:

SI. No	Tender Item No.	Rates Originally Quoted	Negotiation Rate with words

16.	On	behalf	of	the	Governor	of	Tamil	Nadu	and	as	duly	authorised	by	the
Gove	rnor ı	under A	rticl	e 29	9 (1) of the	со	nstitutio	on the	above	Те	nder	for a value o	of Řs	S.
(Rupe	es												only	y) is
accep	ted o	on this c	lay.											

Signature with Designation :

Signature of the Witness :

In full and Address :

With name in Block letters :

I will 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 works and paying extra attention to due works as required special attention reinforced concrete work, etc.

SI. No	Name of members of Technical Proposed to be employed	Qualification
1.		
2.		
3.		

And whereas the contractor who is not professionally qualified, has agreed to employ technical men as indicated above to the satisfaction of the Executive Engineer for the work.

SCHEDULE - A

SCHEDULE OF RATES AND APPROXIMATE QUANTITIES:

- a. The Quantities here given are those, upon which the lump-sum tender cost of the work is based, but they are subject to alterations, omissions, deductions or additions as provided for in the conditions of this contract and do not necessarily show the actual quantities of work to be done. The unit rates noted below are those governing payment of extras or deductions or omissions according to the conditions of the contract, as set forth in the General conditions to the contract of the Tamil Nadu Building Practice and other conditions or specifications of this contract.
- b. It is to be expressly understood that the measured work is to be taken net (not with standing any custom or practice to the contrary) according to the actual quantities when in place and finished according to the drawing or as may be ordered from time to time by the Executive Engineer and the cost calculated by measurement or weight, at the respective prices, without any additional charge for any necessary and contingent works connected therewith. The rates quoted are for the works in situ and complete in every respect.

Schedule - A Enclosed

WATER RESOURCES DEPARTMENT

Name of Work

:- Construction of a Cut and Cover Channel from L.S.550m to 910m and an Open Channel from L.S.910m to 3090m of the Paruthipattu Tank Surplus Course in Avadi Taluk of Thiruvallur District.

SI. No.	Quantity in Figures and in Words	Description of work	T.N.B.P No. or NBC No.	Unit in Figures and in words	Rate in words and figures (Excluding G.S.T)	Amount (Excluding G.S.T)
1	2	3	4	5	6	7
1.	760.00 Cu.m (Seven Hundred and Sixty Cubic Metre)	Dismantling, clearing away and carefully stacking materials useful for re-use for any thickness of Plain Cement Concrete etc complete complying with standard specifications and as directed by the departmental officers	SS 18	1 Cum (One Cubic Metre)		
2.	6900.00 Cu.m (Six Thousand and Nine Hundred Cubic Metre)	Earth work excavation in all soils except Medium rock/hard rock requiring blasting and conveying for formation of bund with lead 0 m to 100 m by deploying earth moving machineries and tippers including benching formation of bunds, breaking clods, ramming, sectioning, etc. complete complying with standard specifications and as directed by the departmental officers	Special	1 Cum (One Cubic Metre)		

SI. No.	Quantity in Figures and in Words	Description of work	T.N.B.P No. or NBC No.	Unit in Figures and in words	Rate in words and figures (Excluding G.S.T)	Amount (Excluding G.S.T)
1	2	3	4	5	6	7
3.	22080.00 Cu.m (Twenty Two Thousand and Eighty Cubic Metre)	Earth Work Excavation for foundation in all soils and sub soils and to full depth as may be directed by the Departmental Officers except hard rock requiring blasting including shoring, strutting and baling out water wherever necessary and refilling the sides of foundation with excavated soil in layers not exceeding 15 cm thick, well rammed and consolidated and depositing including all initial leads and initial lifts, etc., complete complying with standard specifications and as directed by the departmental officers (Narrow)	SS 23 & 24	1 Cum (One Cubic Metre)		
4.	8000.00 Cu.m (Eight Thousand Cubic Metre)	Conveyance of excavated earth by using tippers to a lead of 10 Km including the cost for the levelling the dumped earth uniformly of dumping yard etc. complete complying with standard specifications and as directed by the departmental officers		1 Cum (One Cubic Metre)		

SI. No.	Quantity in Figures and in Words	Description of work	T.N.B.P No. or NBC No.	Unit in Figures and in words	Rate in words and figures (Excluding G.S.T)	Amount (Excluding G.S.T)
1	2	3	4	5	6	7
5.	6900.00 Cu.m (Six Thousand and Nine Hundred Cubic Metre)	Earth work deploying earth moving machinery for desilting channel of width 3m to 10m and forming bund on either side and depositing the earth on banks including jungle clearance etc complete complying with standard specifications and as directed by the departmental officers	Special	1 Cum (One Cubic Metre)		
6.	215.00 Cu.m (Two Hundred and Fifteen Cubic Metre)	Providing and placing in position of Plain Cement Concrete M 10 using hard blue granite broken stone jelly of size 40 mm mixing with mixer machine and laying in layers of not exceeding 15 cm thick including dewatering if found necessary, compacting, consolidation by using vibrator, finishing, watering, curing etc. complete complying with standard specifications and as directed by the departmental officers		1 Cum (One Cubic Metre)		

SI. No.	Quantity in Figures and in Words	Description of work	T.N.B.P No. or NBC No.	Unit in Figures and in words	Rate in words and figures (Excluding G.S.T)	Amount (Excluding G.S.T)
1	2	3	4	5	6	7
7.	1800.00 Cu.m (One Thousand and Eight Hundred Cubic Metre)	Supplying and laying of ready mix for M 15 grade of concrete having characteristic strength not less than specified in the IS 456 - 2000 using Ordinary portland cement with minimum cement content of 240 Kg / cum confirming to IS 8112. Coarse aggregates having a specific gravity of 2.60 using 20 mm & down graded hard blue granite broken stone jelly and fine aggregate without flyash as per IS 383 - 1970 (2007) with suitable water cement ratio not less than 0.45 and not exceeding 0.50 of water quality confirming to IS 456 - 2000 including use of plasticizer of approved make & dosage of required grade at all locations and levels with specified high workability as per IS 1199 - 1959 (2004). The initial & final setting time confirming IS 12269 - 1987 (2004) with maximum temperature of concrete at the time of placing should not exceed 32° C. The admixtures affecting the quality and strength of the concrete should not be used and should confirm IS 9103-1979 [usual admixture - Air entraining & water reducing] including the cost of hire charges for pump and pumping charges to the required locations & levels as specified by the Engineer - in - charge, laying, compacting, consolidation by using vibrators, finishing, watering, curing, testing charges as per IS 456 - 2000, 4031 - (Part 3 & 6) / 1988 (2005) & (Part 2) / 1999 (2004) and 516 / 1959 (2004), 4926 - 1976 (1990), mix design details to be got approved before commencement of the work adopting pour card system and other OK cards. Excluding the cost of form works, centering and shuttering placed in position etc, complete complying with standard specifications and as directed by the departmental officers. (PCC Work at site)		1 Cu.m (One Cubic Metre)		

SI. No.	Quantity in Figures and in Words	Description of work	T.N.B.P No. or NBC No.	Unit in Figures and in words	Rate in words and figures (Excluding G.S.T)	Amount (Excluding G.S.T)
1	2	3	4	5	6	7
8.	7830.00 Cu.m (Seven Thousand Eight Hundred and Thirty Cubic Metre)	Supplying and laying of ready mix for M 25 grade of concrete having characteristic strength not less than specified in the IS 456 - 2000 using Ordinary portland cement with minimum cement content of 300 Kg / cum confirming to IS 8112. Coarse aggregates having a specific gravity of 2.60 using 20 mm down graded hard blue granite broken stone jelly and fine aggregate without flyash as per IS 383 - 1970 (2007) with suitable water cement ratio not less than 0.45 and not exceeding 0.50 of water quality confirming to IS 456 - 2000 including use of plasticizer of approved make & dosage of required grade at all locations and levels with specified high workability as per IS 1199 - 1959 (2004). The initial & final setting time confirming IS 12269 - 1987 (2004) with maximum temperature of concrete at the time of placing should not exceed 32 0 C. The admixtures affecting the quality and strength of the concrete should not be used and should confirm IS 9103-1979 [usual admixture - Air entraining & water reducing]. including the cost of hire charges for pump and pumping charges to the required locations & levels as specified by the Engineer - in - charge,. laying, compacting, consolidation by using vibrators, finishing, watering, curing, testing charges as per IS 456 - 2000, 4031 - (Part 3 & 6) / 1988 (2005) & (Part 2) / 1999 (2004) and 516 / 1959 (2004), 4926 - 1976 (1990), mix design details to be got approved before commencement of the work adopting pour card system and other OK cards. Excluding the cost of form works, centering and shuttering placed in position etc, complete complying with standard specifications and as directed by the departmental officers. (RCC work)	Special	1 Cu.m (One Cubic Metre)		

SI. No.	Quantity in Figures and in Words	Description of work	T.N.B.P No. or NBC No.	Unit in Figures and in words	Rate in words and figures (Excluding G.S.T)	Amount (Excluding G.S.T)
1	2	3	4	5	6	7
9.	380.00 Cu.m (Three Hundred and Eighty Cubic Metre)	Supplying and laying of ready mix for M 25 grade of concrete having characteristic strength not less than specified in the IS 456 - 2000 using Ordinary portland cement with minimum cement content of 300 Kg / cum confirming to IS 8112. Coarse aggregates having a specific gravity of 2.60 using 20 mm down graded hard blue granite broken stone jelly and fine aggregate without flyash as per IS 383 - 1970 (2007) with suitable water cement ratio not less than 0.45 and not exceeding 0.50 of water quality confirming to IS 456 - 2000 including use of plasticizer of approved make & dosage of required grade at all locations and levels with specified high workability as per IS 1199 - 1959 (2004). The initial & final setting time confirming IS 12269 - 1987 (2004) with maximum temperature of concrete at the time of placing should not exceed 32° C. The admixtures affecting the quality and strength of the concrete should not be used and should confirm IS 9103-1979 [usual admixture - Air entraining & water reducing]. including the cost of hire charges for pump and pumping charges to the required locations & levels as specified by the Engineer - in - charge, laying, compacting, consolidation by using vibrators, finishing, watering, curing, testing charges as per IS 456 - 2000, 4031 - (Part 3 & 6) / 1988 (2005) & (Part 2) / 1999 (2004) and 516 / 1959 (2004), 4926 - 1976 (1990), mix design details to be got approved before commencement of the work adopting pour card system and other OK cards. Excluding the cost of form works, centering and shuttering placed in position etc, complete complying with standard specifications and as directed by the departmental officers. (PCC work)	Special	1 Cu.m (One Cubic Metre)		

SI. No.	Quantity in Figures and in Words	Description of work	T.N.B.P No. or NBC No.	Unit in Figures and in words	Rate in words and figures (Excluding G.S.T)	Amount (Excluding G.S.T)
1	2	3	4	5	6	7
10.		Supplying and erecting centering for vertical plain / RCC concrete walls of supply channel, retaining wall etc for the following height with necessary supports, all cross bracing with mild steel size of 90 cm x 60 cm and gauge BG 10 stiffened with welded mild steel sheet angles of size 25 mm x 25 mm x 3 mm for bearing laid silver Oak / Country wood joist of size 7.50 cm x 5.0 cm spaced @ about 90 cm C / C and supported by Casurina props of 10 cm to 13 cm spaced @ 75 cm C / C, etc., complete complying with standard specifications and as directed by the departmental officers (Vertical Surface)	SS 30 (8)			
a.	5135.00 Sq.m (Five Thousand One Hundred and Thirty Five Square Metre)	0 m to 0.9 m height		1 Sq.m (One Square Metre)		
b.	20870.00 Sq.m (Twenty Thousand Eight Hundred and Seventy Square Metre)	0 m to 2.70 m / 3.00 m height		1 Sq.m (One Square Metre)		

SI. No.	Quantity in Figures and in Words	Description of work	T.N.B.P No. or NBC No.	Unit in Figures and in words	Rate in words and figures (Excluding G.S.T)	Amount (Excluding G.S.T)
1	2	3	4	5	6	7
11	1900.00 Sq.m (One Thousand and Nine Hundred Square Metre)	Supplying and erecting centering for sides and soffits and strutting upto 3.0 m height for plane surfaces such as RCC works etc, with all cross bracing with mild steel size of 90 cm x 60 cm and gauge BG 10 stiffened with welded mild steel sheet angles of size 25 mm x 25 mm x 3 mm for bearing laid silver Oak / Country wood joist of size 10 cm x 6.5 cm spaced @ about 90 cm C / C and supported by Casurina props of 10 cm to 13 cm spaced @ 75 cm C / C, and removing the same without any damages etc., complete complying with standard specifications and as directed by the departmental officers (Horizontal Surface)	SS 30 (8)	1 Sq.m (One Square Metre)		
12	11645.97 Qtl (Eleven Thousand Six Hundred and Forty Five Point Nine Seven Quintal)	Supplying, fabricating and placing in position of Mild Steel or Ribbed Tor Steel for all RCC works as per design & drawing given including cost of steel, binding wire and labour charges for cutting, bending, laying in position and tying with binding wire, etc. complete complying with standard specifications and as directed by the departmental officers		1 Qtl (One Quintal)		

SI. No.	Quantity in Figures and in Words	Description of work	T.N.B.P No. or NBC No.	Unit in Figures and in words	Rate in words and figures (Excluding G.S.T)	Amount (Excluding G.S.T)
1	2	3	4	5	6	7
13.	500.00 Rm (Five Hundred Running Metre)	Shoring, and strutting with Sheet Piles of size width 400 mm x height of 3m x thickness of 9mm as per IS 2314-1986 by driving on both sides of the trench from Ground Level up to the required depth and connecting the above sheet piles by horizontal strutting with sheet piles at an interval of 1.0m, fixing the sheet piles by connecting the horizontal strutting with casurina poles of 8cm to 10cm dia. at 1.50m interval and including removing the sheet piles after the pipelines are laid, jointed, tested, and stacking it safely for other uses. It includes the cost of sheet piles and casurina poles including labour charges for erecting the sheet piles, driving the sheet piles, removing the sheet piles, fixing Casurina poles, etc., complete and all other incidental charges for the depths (i) 0-3mts.,		1 Rm (One Running Metre)		
14.	2390.00 Cu.m (Two Thousand Three Hundred and Ninety Cubic Metre)	Supplying and spreading sand gravel mix ratio of 1 : 1 in layers not exceeding 10 cm thick below the retaining wall as required at site of work including watering and consolidation using power roller, etc, complete complying with standard specifications and as directed by the departmental officers		1 Cu.m (One Cubic Metre)		

SI. No.	Quantity in Figures and in Words	Description of work	T.N.B.P No. or NBC No.	Unit in Figures and in words	Rate in words and figures (Excluding G.S.T)	Amount (Excluding G.S.T)
1	2	3	4	5	6	7
15.	15.00 Nos. (Fifteen Numbers)	Supplying and fixing of SFRC Man holes of size 600 x 600mm all labours, transportation other necessary equipment which is essential for fixing at site etc., complete complying with standard specifications and as directed by the departmental officers	Special	1 No. (One Number)		
				Total Basic V		
			А	dd G.S.T @	12%	
			Grand	Total Value	of Tender	

The Schedule Contains 15 (Fifteen) Items Only.

Water Resources Department

Palar Basin Circle, Chennai

Chennai Region, Chennai

Schedule – B

Name of Work

:- Construction of a Cut and Cover Channel from L.S.550m to 910m and an Open Channel from L.S.910m to 3090m of the Paruthipattu Tank Surplus Course in Avadi Taluk of Thiruvallur District.

SI.No	Description	Remarks
1.	Index Plan	1 No.

SCHEDULE GENERAL CONDITIONS OF CONTRACT

I. Model rules for the provisions of Health and Sanitary arrangements for workers employed by the Public Works Department and their Contractor

The contractor's special attention is invited to relevant clauses of the "General Conditions of contract" in Tamil Nadu Building Practice and related Government Orders and as amended from time to time and he is requested to provide at his own expenses the following amenities to the satisfaction of the Executive Engineer.

- 1. Application These rules shall apply to all building and construction works in charge of PWD
- 2. Definitions :- a. "Work Place" :- Means a place at which, at an average 50 or more workers are employed in connection with construction work
- b. "Large Work Place":- Means a place at which, at an average 500 or more workers are employed in connection with construction work
- 3. First Aid :- At the work site, there shall be maintained in a readily accessible place, First aid appliances and medicine including an adequate supply of sterlised dressing and sterlised cotton wool. The appliances shall be kept in good order. They shall be placed under the charge of a responsible person who shall be readily available during working hours. Adequate provision shall be made for prompt first aid treatment and with suitable transport facilities of all injuries likely to be sustained during the course of the work.

At large work places, where hospital facilities are not available within easy distance of the work, first aid posts shall be established and be run by a trained compounder.

Where large work places are remote from regular hospitals an in-door ward shall be provided with one bed for every 250 employees

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

- 4. a. Drinking Water: Water of good quality fit for drinking purposes shall be provided for the workers on a scale of not less than 15 liters per head per day.
- b. Where drinking water is obtained from an intermittent public water supply each work site shall be provided with storage tank where such drinking water shall be stored.
- c. Every water supply storage shall be at a distance of not less than 15.m from any latrine, drain or other sources of pollutions. Where water has to be drawn from an existing well, which is within such proximity of latrine drain or any other source of pollution, the well shall be properly chlorinated before water is drawn from it for drinking, All such wells shall be entirely closed in and be provided with a trap door, which shall be dust & water proof and shall be cleaned atleast once in a month.

- 5. Washing and Bathing Places: Adequate washing and bathing places should be provided, separately for men and women. Such places shall be kept in clean and well drained condition. Bathing or washing should not be allowed in or near any drinking water well.
- 6. Latrines and Urinals: There shall be provided within the precincts of every work site, Latrines and urinals in an accessible places and the accommodation, separately for each of them, shall be one of the following scale or on the scale so directed by the Executive Engineer in any particular cases.
- i. Where the number of persons employed does not exceed 50 -- 2 seats
- ii Where the number of persons employed exceeds 50 but does not exceed 100 -- 3 seats
- iii. For every additional 100 persons -- 3 seats

If women are employed separate latrines and urinals are provided for those for men shall be provided in the same scale. Except in worksite provided with water flushed latrines connected with water borne sewage system, all latrines shall be provided with receptacle on dry earth system which shall be cleaned atleast four times daily and atleast twice during working hours, and kept in strictly sanitary conditions. The latrines receptacle as shall be tarred inside and outside atleast once in a year. The excreta from the latrines shall be disposed off at the contractor's expenses in out-way pits approved by the local Public Health Authority. The contractor shall also employ adequate number of scavengers and conservancy staff to keep the latrines and urinals in clean conditions.

- 7. Shelters during rest: At the work sites there shall be provided, free of cost two suitable sheds one for meals and other for rest separately for men and women for the use of labourers.
- 8. Crèehes:- At every work site at which 50 or more women workers are ordinarily employed there shall be provided two huts of suitable size for the use of children under the age of 6 years, belonging to such women, one hut shall be used for infants, games and play and the other as their bed room. The huts shall not be constructed of a standard lower than the following 1) Thatched roof, 2) Mud Floors and walls 3) Planks spread over the mud floor and covered with matting. The use of the huts shall restrict to children, their attendants and mothers of the children. The Creches should be properly maintained in hygienic conditions, necessary equipments, suitable & sufficient staff to keep the place clean and the sanitary utensils shall be provided to the satisfaction of the Health officer of the area concerned.
- 9. Canteens: A cooked road canteen on a moderate scale shall be provided for the benefits of workers if it is considered expedient.
- 10. Sheds for workers: The contractor should provide at his own expenses sheds for housing his workers. The shed shall be on a standard not less than cheap shelter type to live in which the workers in the locality are accustomed to. A floor area of about 1.80.m x 1.50.m for the two persons shall be provided. The sheds to be in rows with 1.3.m clear space between sheds and 9.m clear space between rows, if conditions permit. The workers camp shall be laid out in units of 400 persons, each, each unit to

have a clear space of 12.m. all-round. On completion of the work, the contractor should dismantle the temporary hutments and remove the same at his cost and no labour or huts allowed continuing (G.O. Ms. No.3 / Public Works Department / dated. 20.06.1990). If this is not done by him within three months from the date of completion of work, the department will arrange for dismantling the hutment and remove the labourers and recover the proportionate cost from his final bill and in other amount due to him.

11. Traffic Regulations: - Clause **41** of the TNBP shall apply to the whole work under separate rollers, water Lorries, mixers wall barrow when not actually in use shall be drawn clear of the road for the safety off the public all precautionary measures shall be taken by way of lighting with bright lighting and watching and warning.

Contractor shall maintain watchman to control and regular traffic notice board shall be placed in suitable portions boarding in large letters printed in conspicuous columns. The following work as they may suit.

12. Caution work in progress or Road closed: - Warning notice shall be places at points in the Neighbors hood of the work where other roads join and cross the road and at such points as may be directed to enable motorists. Cyclists or whichever traffic to avoid the constructed road by taking alternative routes. Extra will not be paid for any incidental items.

II. Additional Conditions

- 1. The contractor shall abide the Specifications for the various materials, and the execution all works in the schedule of quantities shall be as per Tamil Nadu Building practice specifications and as amended from time to time.
- 2.a. The portion of site free from land acquisition and readily available for execution will be handed over to the contractor soon after the award of contract and the portion of site involving land acquisition will be handed over to the contractor immediately after taking possession of the lands by the department probably well within the period of agreement. If not the work should be executed without claiming any extra cost.
- b. The work shall be proceeded with expeditiously from the date; the site is handed over and completed as per the time schedule prescribed.
- 3. The contractor must make his own arrangements to form approach roads and sumps if any, required at his own cost and maintain the same throughout the period of contract. Permission for using the existing roads, by the contractor will be recommended to the authorities concerned and the contractor must bear all charges incident in using the road if any. The department will entertained no extra on this account.
- 4. Safety provision in the building industry conditions in addition to clause **36** of TNBP at his own cost. Safe means of access shall be provided to all working platforms and other working places at his own cost. Adequate lighting shall be provided at every place where work is carried on and the means of approach at his own cost. Adequate precautions shall be taken to prevent danger from electrical equipment, explosives, etc

at his own cost. No materials on the site shall be so attached or placed as to cause danger to any person. If night work is required to fulfill the agreed rate of progress all arrangements shall be made by the contractor inclusive lighting without claims for any extra.

- 5. However the department has sole right to direct works at night in case of urgency. The plans schedule of quantities is subject to alterations during execution and payment shall be made or actual measurements. No claim for extra whatever shall be entertained for such deviation in design etc.
- 6. The specification in the schedule for the different item of work is for the finished work and no extra amount will be paid for dumping and baling out water wherever necessary.
- 7. The shed for storing materials should be put up by the contractor at his own cost. The Contractor's special attention is invited to clause **37** and **38** of TNBP and he is requested to provide at his own expenses that own latrines, urinals etc., for his work.
- 8. Incase it is found by the departmental officers that the contractor has brought any of the required materials from the quarry with lesser lead than that specified in the schedule proportionate deduction will be made from the respective item of work vide General condition of the contract also certified by the Executive Engineer for the quality.
- 9. The contractor will be held responsible for the proper and safe custody of the departmental materials which are handed over to the contractor until they are used on the work or taken over by the department and should be safely and carefully be stored. In case of surprise check by departmental officers any shortage and discrepancies noted will be entail action on the contractor.
- 10. The Executive Engineer, will be at his liberty to carry out any portion of the work at any time either departmentally or any other agency in the interest of Government, without assigning any reason to a contractor who is actually dealing with the work. The contractor is not entitled for any compensation of accounts of the same. The contract will be only subject to these conditions.
- 11. The Executive Engineer or any officer of the Public works Department of the Government of Tamil Nadu duly authorised in this behalf by such Executive Engineer may put an end to the agreement at his option at any time.
- 12. When an agreement in terminated under clause **53.1** of above the officer terminating the agreement shall have the option to take over any or all the materials and other equipments at site at a value assessed by him. If the contractor does not agree to this he shall clear the site by removing at his cost all such materials equipment with in 14 days of the termination of the agreement failing which the Government my remove and shall be taken the same holding the process the costs of removal will be to the credit of the contractor under **clause 57.6**.

In the event of the work being transferred to any other circle / Division / Sub Division the Superintending Engineer, Executive Engineer / Assistant Executive Engineer, who is in charge of circle / Division / Sub Division having jurisdiction over the work shall competent to exercise all the powers and privilege as reserved in favour of the Government.

- The officer incharge may in his power terminate the contract for slow progress of works or abandon the work as per TNPB rule under **53**, **55**, **56** & **57** and entrust the balance work to any other agency. Any additional expenditure due to entrustment of work to other agency which cost will be recovered from the original contractor.
- 14. Whenever any amount has to be paid by contractor in view of termination of the contract by virtue of clause. **57** of any amount that may be due or become due from the contractor under these presents and the contractor is not responding to the demands for the payment of the said among them the Government shall be entitled to recover the said amount under the provision of the Revenue recovery act.
- 15. Any of the items in the schedule may be omitted or radically altered. No variation in rate shall become payable to contractor on account of such omissions or variation in quantities.
- 16. Tenderers should obtain from the authorities concerned and produce Income Tax verification certificate and sales tax clearance certificate for the current year and submit them along with the tenders. A tender who are engaged in work contract, as well as business of the some materials should produced the sales tax clearance certificate and other should produce NIL certificates.
- 17. The fact of submitting the tender implies that the tenderers have actually inspected the site of work has examined before tendering the nature and extent of various kind of soils at various depths and have submitted their tenders after examinations by them and further tender after presentation in this regard will be considered.
- 18. A statement giving brief particulars of equipment and sources that will be put the disposal of the work under the following classification should accept anything the tender.
- a) Equipment (Transport for materials viz. Lorries, tippers, heavy machineries and concrete mixtures) with necessary documents such as invoice, insurance, license, etc.
- b) Organisation (i) Technical, (ii) Unskilled.
- c) Resources in materials like teakwood etc., and extent to the departmental held is required for procurement of materials and transporting 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.
- e) All necessary personal safety equipment shall be kept available for the persons employed on the site and be maintained in a condition suitable for immediate use.
- 19. The contractor shall not employ any labour below the fourteen (14) years age. As far as possible the tenders of the contractor who agree to employ the maximum of Ex serviceman / ex-toddy tapers / unemployed agricultural labourers / Women as for as possible on the work (No. to be specified in the tender) will receive professional consideration

- 20. Those who are not registered PWD / WRD contractors should invariably attach income tax clearance certificate and sales tax clearance with their tenders and registered PWD / WRD Contractor who has not previously produced those certificates in the current year should also produce the certificate with registration live certificate.
- 21. In case the tenderers are eligible for concessional PWD / WRD reference to the authority there fore to prove in which such concession be granted to them has to be specified and if possible a copy of each order will be enclosed along with the tender.
- 22. The Department will not be responsible for any delay or loss in transit if the tender documents are submitted by post.
- 23. Tenders received unless accompanied by the Government treasury chalan or in other prescribed manner towards remittance of EMD will be summarily rejected.
- 24. The Tenderers who have registered as PWD / WRD contractors shall state and furnish the particulars therefore with live certificate.
- 25. The safety measures and all amenities for the labours shall be made by the contactor at his cost as indicated on the safety code vide appendix to General condition to the contract. The contractor shall provide at his own expenses necessary amenities as per schedule. The Executive Engineer should satisfy the provisions of the water supply, sanitary & safety arrangement for workers.
- 26. The tender forms and schedule shall be duly filled in and completed. The tender form specification descriptive specification sheets and schedule and connected document shall be duly signed by the tenderer.
- 27. The Superintending Engineer, Palar Basin Circle, WRD, Chennai 5 reserves the right to himself to reject any or the entire tender received without assigning any reasons therefore.
- 28. The tenderer should fill up all the columns.
- 29. The works are to be done as per the design, drawing and specification enclosed.
- 30. Tenders shall be submitted only in the prescribed form supplied by the Department which should be closed in sealed covers with the name of work superscribed in details stipulated in tender notice. The works are to be done as per the design, drawing and specifications enclosed.
- 31. If the contractor intends to procure the materials from a private quarry he should obtain necessary permission for quarrying the materials with his own efforts and his own cost. The quarry should also be got approved by the Executive Engineer, vide also the General conditions of the contract 18.
- 32. When there are complaints of nonpayment of wages to the labourer employed by the contractor, the bills of the contractor will be with held pending a clearance certificate from labour department.

- 33. For detailed description of various items of work to be executed in addition to the brief description given in the schedule and for the rights and obligations of the contractor etc., the attention of the contractors are invited to Tamil Nadu Building practice which should be followed in all respects both in letter and spirit. The materials used the workmanship the mode of execution of the work etc should confirm to the relevant specification of TNDSS / TNBP / National buildings code / Indian standard specification as may be specified and amended thereafter.
- 34. If any damage is caused to the existing structures / banks of river, channel, canal etc due to the movement of the machinery etc, in the work site, the contractor should be brought to the correct section by the contractor before completing the work at his cost.
- 35. Adequacy of cement and steel need not be insisted for furnishing the same in the M.Book.

36. CONTRACTOR DYING BECOMING INSOLVENT, INSANE or IMPRISONED

In the event of the death or insanity to insolvency or imprisonment of the Contractor, or where the Contractor being a Partnership or Firm becomes dissolved or being a Corporation goes into liquidation, voluntary or otherwise, the contract may at the Executive Engineer, be terminated by notice in writing pasted at the site of the works and advertised in one issue of the local District Gazette and all acceptable works shall forthwith be measured up and paid for at the rates provided in the Contract Schedule where such apply, or otherwise, by the recent schedule of rate of the Division approved by Competent Authority to the person or persons entitled to receive and give a discharge for the payment.

37. INCOME TAX

Income Tax has to be deducted from the contractor / firm bill at the rate of 1 % in respect of advertisement charges and 2 % in respect other contracts, if the value of the contract exceeds Rs.20000. In addition to the above, surcharge at the rate of 15 % should also be deducted, if the contractor is a company.

38. Goods and Service Tax Registration & deduction of Goods & Services Tax from bills

(a) The contract rates are inclusive of G.S.T. The tender should furnish the copy of Goods and Services Taxes Registration Certificate with the tender.

(b) GST Rates at 12% for works contract

Government of India has notified vide notification No.20/2017 – Central Tax (Rate), dated 22nd August 2017 and notification No.24/2017 – Central Tax (Rate), dated 21st September 2017, that the concession of the Goods & Services Tax (GST) at 12% (CGST at 6% + SGST 6%) is leviable for any Government contract, whether civil or electrical, irrespective of the Goods and Services Tax (GST) rate applicable on purchase of goods used in the execution of Government contract.

(c) Input Tax Credit (ITC)

- (i) As per notification 202, dated 29.06.2017 and as per sub-section (s) of section 7 of the Tamil Nadu Goods and Services Act, 2017 (Tamil Nadu Act 19 of 2017), activities or transactions undertaken by State Government shall be treated neither as supply of goods nor a supply of service.
- (ii) As per Chapter IX, (Section 41) of the Tamil Nadu Goods and Service Act, 2017, every registered person may be entitled to take the credit of eligible input tax, as self-assessed, in his return and such amount shall be credited on a provisional basis to his electronic credit ledger.
- (iii) As per PWD revised SOR (2017-18), Dt.21.10.2017, under general note 8 (ix), the contractor is eligible to get refund of excess tax paid over or liable to pay tax for his contract work.
- (iv) The aforesaid rate of percentage of deduction is subject to the revisions as per amendments if any issued by the Government of India or Government of Tamil Nadu from time to time.

39. REVENUE RECOVERY ACT

Whenever any amount has to be paid, the contractor in lieu of determination of the contract by virtue of clause **57 (1 to 4)** or any amount that may be due or become due from the contractor under the present and the contractor is not responding to the 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 - V of 1864.

"Any amount fallen due from the contractor on account of this contract even after recovering from the bills for this work and any other contract awarded to the contractor, then, the amount is liable to be recovered from the contractor under the provisions of the Revenue Recovery Act"

40. RISK INSURANCE

The work executed by the contractor under the contract shall be maintained by 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 convulsions of nature, invasions, the acts of foreign enemies, hostilities or war like operations (before or after declaration of war) rebellion, military or usurped power 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 contractors.

41. SETTLEMENT OF DISPUTES

Arbitrations

1) In Arbitrations cases, of any disputes 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 contract or as to any matter or thing arising there under except as to the matters left to the sole discretion of the Executive Engineer under clause 18, 20, 25.3, 27, 31, 34, 35 & 37 of the General condition of the contract or as to the withholding by the Executive Engineer of payment of any bill to which the contractor may claim to be entitled, the either party shall forthwith give to the other notice of such dispute or difference and such dispute or difference shall be and is hereby referred to the Arbitration of the superintending Engineer of the nominated circle mentioned in the Article of agreement (hereinafter called the Arbitrator) in cases where the value of claim is less than and upto Rs. 50000 /-. In cases where the value of claim is more than Rs.50000 /-, the parties will seek remedy through the competent civil court.

Subject as aforesaid to the provisions of the Arbitrations Act 1940 or any statutory modification or re - enactment thereof and the rules made there under and for the time being in force shall apply to the Arbitration proceedings under this clause.

Upon every and any such reference, the costs of and incidental to the reference and award respectively shall be discretion of the Arbitrator subject to the conditions that the amount of such costs to be awarded to either party shall not, in respect of a monetary claim set out below or any such award irrespective of the actual fees, costs and expenses incurred by either party, provided that where a monetary claim is disallowed in full, the said percentage shall be calculated on the amount of the claim. The Arbitrator may determine the amount of the costs be awarded or direct the same to be taxed as between solicitor and client or as party and partly and shall direct by whom and to whom and in what manner the same shall be borne and paid.

The percentage above referred to in this clause are five percent on any such monetary award which does not exceed Rs. 10000 /- 3 percent on the next Rs. 40000 /- or any part thereof, 2 % percent on the next Rs. 50000 or any part thereof and 1 % on any excess over Rs. 100000 /-.

Provided that the Government shall not be liable to any claim in respect of any such dispute or difference until the liability and the amount thereof shall have been referred to and decided by the Arbitrator and decreed by the court.

III.SPECIAL CONDITIONS

A. Construction materials

1. Cement: The contractor shall make his own arrangements for the procurement of cement required for the work subject to the followings:-

The contractor shall procure cement required for the work only from reputed cement factories (main producer of their authorized agents, Manufacturing cement to ISI standard) acceptable by the Engineer incharge. The contractors 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 with details of printing in the cement bag as approved by ISI.

- b. The contractor shall procure cement in standard packing of 50 Kg per bag bearing manufactures name and ISI marking from the authorized manufactures. The contractor shall make necessary arrangement at his own cost, to the satisfaction of Engineer-in-Charge for actual weighment of random sample from the available stock and shall conform to the specifications laid down by the Indian Standards Institution as the case may be. Cement shall be got for all the tests including through destructive and non-destructive test methods etc., as directed by the Engineer in Charge in advance before the use of cement bags at the contractor's own cost. In case test results indicate that the cement arranged by the contractor does not conform to the relevant code, the same shall stand rejected and shall be removed from the site by the contractor at his own cost within a day's time of written order from the Engineer-in-charge to do so.
- c. The employer will supply admixtures and agents required to the contractor free of cost at the employer's 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 / handing / batching / mixing shall be borne by the contractor and shall be included by him to unit officers tendered for concrete.
- d. The cement shall be brought at site in bulk of approximately 50 tonnes or as decided by the Engineer-in-charge for large works.
- e. The cement Godown of the capacity to store a minimum of 1000 bag of cement shall be constructed by the contractor at site of work, for which no extra payment shall be made. The contractor shall facilitate inspection of the cement Godown by the Engineer-in-charge at any time.
- f. The contractor shall further at all times satisfy the Engineer-in-Charge on demand by production 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 Engineer-in-Charge for the purpose and contractor shall at all times, keeps his record upto date and enable the Engineer-in-Charge to apply such checks as he may desire.
- g. 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 forthwith 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.
- 2. Steel:- The contractor shall make his own arrangements for the procurement of cement required for the work subject to the followings:-

To be procured from the authorized dealers and test certificate for strength as well as for unit weight to be produced before use in order to as certain size of rod from the quantum of steel actually used in the work. Excessively rusted steel rods should be rejected. The Contractor shall provide Mild steel (MS) reinforcement bar, High yield strength deformed (HYSD Bars, rods and structural steel etc., required for the works only from the main and secondary producers manufacturing steel or other authorized agents to be prescribed specifications bureau of India standards requirements and licensed to affix . IST or other equivalent certification works and acceptable to the Engineer-in-Chief necessary I.S.T. test certification are to be produced to Engineer-in-Chief before use on works.

The diameters and weight of steel should be as follows:

SI	Diameter of Rod	Sectional weight in Kg. per running metres both for
No		Plain and HYSD steel
1.	6 Milli metres	0.22
2.	8 Milli metres	0.395
3.	10 Milli metres	0.617
4.	12 Milli metres	0.888
5.	14 Milli metres	1.208
6.	16 Milli metres	1.578
7.	18 Milli metres	1.998
8.	20 Milli metres	2.466
9.	22 Milli metres	2.984
10.	25 Milli metres	3.853
11.	28 Milli metres	4.84
12.	32 Milli metres	6.313
13.	33 Milli metres	6.714
14.	36 Milli metres	7.99
15.	40 Milli metres	9.865
16.	42 Milli metres	10.876

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

B. Concrete

- a. Only clean river sand / Crushed stones sand and hard blue broken granite stones from the approved quarries shall be used for the work. The broken stones shall be thoroughly washed before use. Only clean fresh water shall be used on the work. The contractor shall make his own arrangements for water and lighting shall be used on the work and shall meet all charges. The special attention of the contractor is drawn to clause **39** of TNBP regarding water and lighting.
- b. The broken stone for concrete and RCC works should be machine broken hard blue granite and passed by the Executive Engineer. All concrete for the work shall be machine mixed and hand mixing shall not be allowed except with prior approval of Executive Engineer.
- c. All concrete shall be protected against injury until final acceptances. Concrete shall be kept most continuously for not less than fourteen (14) days.
- d. For water for mixing, setting time, machine mixing IS 456 / 1964, 1965 & 2000 and IS 269 / 1969 shall apply.
- e. The arrangement of steel rod for reinforcement for each RCC work shall be in accordance with working drawing supplied.

The planks for forms and centering for RCC works shall be of well seasoned timber approved by the Executive Engineer according to clause - 8 of TNBP - 30. They must be made smooth and perfectly level at the top so as to give smooth and over finished to the RCC. Alternatively, the contractor may use steel sheets over wooden forms provided the required finish to the underside of the slab is attained. Large planks shall not be used under any circumstances. Centering and forming should be verified by the Executive Engineer during the execution.

All cement concrete for RCC works shall be machine mixed and vibrated.

Steel rod should be cut and placed as reinforcement with proper care according to the available rods at the site so as to ensure the minimum possible wastage.

Note :- All the tests directed by the Engineer - in - Charge of works for the quality of fine aggregates, coarse aggregates, water, and the concrete for their conformity to IS standards should be got tested in approved firms / laboratory by the contractor's at his own cost and results documented properly.

C. Stone Masonry:

a. Bond stones of length not less than 0.60 m shall be used at the rate of one in every 1.80 m length of space. Such stone should have a point or chisel mark for easy identification. The stones for masonry should be passed by the Executive Engineer

D. Rough stones for Revetment and Apron:

- a. Rough stone and gravel should be stacked for pre-measurement at the site of work. For rough stone 110 cft. Materials including 10 % chips will be reckoned as 100 cft. While 116 cft. Of gravel is required for 100 cft while of gravel is required for 100 cft of finished work.
- b. Payment for these items will be restricted to quantity based on stack measurement or finished work whichever is less.
- c. When the revetment is to be built to a uniform depth as directed by the departmental officers, each stone should run to full depth of the revetment with the gaps properly filled up with spalls by tightly wedging.
- d. The removed old stones for revetment should be stacked for pre-measurement 10 / 11 of stocked quantity for the finished work whichever is less will be paid for.
- e. The new chips required for the old revetment shall be stacked for pre measurement without any extra claim.
- f. Profiles of strings and pegs are to be put up to ensure that pitching is done, true and to proper slope through out from the bottom of the bank as. ISI No.4515 / 1967.

E. Earth work excavation:

- a. Earth work special specifications 20 A and 20 B. As soon as the thandus and muttus are removed and the soil thrown on the bund, the contractor should intimate the section officer and Assistant Executive Engineer by Registered letter to above effect especially noting the date of final removal of the thandus and muttus. Failure to do so will entail 20 % of deduction being enforced even if the same are removed at a later date. The original deduction made shall be final and cannot be revoked.
- b. Neat banking shall be done by the contractor without any claim for extra. In case where the contractor fails to do neat bank deductions as determined by the Executive Engineer or the officer accepting the agreement will be made and in case where the work is got done through other agency. The actual cost incurred will be recovered from the contractor's bill.

- c. The excavated soils should be deposited only in approved locations.
- d. Each and every borrow pit will be individually marked either by the section officer or by the Assistant Executive Engineer and in urgent cases by the work inspector incharge of the works subject to the approval of the section officer, Earth should be removed only from the places marked and to the depth ordered by the above officers.
- e. No borrow pit should be less than 0.45 m depth. A gap of 1.00 m should be allowed between any two consecutive pits. The length and depth of the pits should be decided to suit the requirements of earthwork for strengthening the bank in the reach opposite to the respective pits. When pits are excavated for more than 3.00 m in width, diagonall thandus should be provided.
- f. The contractor should not put in borrow pits for removal of earth in haphazard manner and they should only put in the place and in such a manner, as may be directed by the officers incharge of the work if any such unauthorized pits by the contractor alone will be held fully responsible for any consequences arising therefore.
- g. The contractor should not enter on Patta or any private lands for removal of earth from without the prior written consent of the land owners. If they does so unauthorised by the contractor alone will be held fully responsible for any consequences arising therefore.
- h. The contractor shall arrange for sectioning of the bank immediately after the work is completed. Then 15 days after the completion of the work in the entire reach the final sectioning to be completed.
- i. Earth work excavation and conveyance by lorry or tipper to the bund, mode of payment. Payment will be made for the least of the quantities arrived at the following manner
- 1. Pit measurement in the borrow area
- 2. Lorry body measurement with deduction of 15 % of voids
- 3. Quantity arrived at based on the initial and final level of the bund cross-section after consolidation.
- **Note:-** In code number 1200 part 1969 method of measurement of the building and civil engineers of work part 1. Earth work may be referred as and when necessary. The tests required for the suitability of earth requires for casing and tests requires for the degree of consolidation of the newly formed earthern bund should be got done in approved firms by the contractor at his own cost and results documented properly.
- **F.** a. Traffic rules and regulations in force on movement of the heavy loaded lorries / trucks have to be followed without detriment to the progress of work.
- b. Only computerised weighment slips will be accepted by this department. Manual script slips will not be accepted by the department. Weighing of Core stones, Armour stones, etc shall be done in computerised weight bridge which is mutually acceptable.

- c. Weighment slips indicating the date, time lorry Reg. no. should be signed by the site Engineer employed by the contractor (or) the contractor himself. The slips signed by the any other casual labour will not be accepted by the department.
- d. A register shall be maintained at the site of work by the contractor indicating the date and time of arrival of the lorry Reg.No. of the lorry the nature of stones like Core tone, Armour stone etc) conveyed and there each of the name of work to which the consignment is intended. The departmental officers should have free access to this Register at all the times and shall record certificate of verification in the register.
- e. Weighment slips should be arranged to be sent daily to the Executive Engineer with a copy to the Assistant Executive Engineer also, the weighment slips and the site Register should be compared and verified for their correctness for payment of bills of contractor for the supply of Core stones and Armour stones etc.,
- f. The tenderer has to make necessary arrangement at their own cost for transporting the stone from quarries required for the work by vehicles owned by them during the day and night. No extra cost will be paid to them whichever routes they transport due to any reason what so ever.
- g. Materials other than those mentioned in the tender if available with the department will be supplied to the tenderer in the interest of speedy execution at the prevailing market rate or book value whichever is higher plus centage and storage charges. The same materials and surplus materials which were originally issued to the contractor by the department for the work shall not be removed from the site of work without getting the written permission of Executive Engineer.
- h. The work should be completed in all respects within the time schedule. If it could not be completed as per programmed due to valid reason, the extension of time has to be sought for by tenderer before one month prior to the closing of contract. The Executive Engineer is empowered to decide whether to give extension of time or not. The Executive Engineer shall also empowered to decide whether any penalty as per the agreement clause is to be imposed for the delay before granting extension of the originally accepted rates and no enhanced rates of progress were permissible due to this extension.
- i. The contractor shall abide the contractor's labour regulation of the PW framed by the Tamil Nadu Government. The contractor at his own cost provides necessary arrangements for labour doing cement work, road work using tar, etc, to the satisfaction of the Engineer In charge and on his failure to do so the Government shall be entitle to provide same and recover the cost from the contractor.
- j. In case of any royalty / centage charges are to be paid to the other departments in respect of execution of this work. This department is in no way responsible for this payment and the tenderers has to settle this issue and make own arrangement for materials like quarrying of stone, sand and indemnity the department from any liability. Royalty or charges due for use or private land shall be paid by the contractor.

G. PRICE ADJUSTMENT CLAUSE

The Price Adjustment on the components of Cement, Steel, Bitumen and Petroleum, Oil and Lubricants (POL) shall be applicable to the works with contract period of **12 months and below** with all other conditions remaining the same as per Rule 14(8) of 2000 Tamil Nadu Transparency in Tender Rules.

Contract price shall be adjusted for increase or decrease in rates for Cement, Steel, Bitumen and Petroleum, Oil and Lubricants in accordance with the following principles and procedures and as per formula given in General Conditions of Contract and will be operated by the respective **Executive Engineers**.

Price adjustment will apply only when the fluctuations of rates exceed or decrease by 3 % or more compared to the estimate rates (RBI index price)

The Price adjustment shall be calculated only on the departmental estimate cost of the work.

In respect of POL it may be considered on PASS through basis with payment of actual rates / price at the rates charged by IOC

All works for which price Escalation / Variation is contemplated must have miles stones fixed in physical terms and have a pre-fixed time-line for use of inputs clearly indicating the nature and quantum of eligible inputs to be used for the work for the relevant period between two milestones. Price Escalation / Variation will be applicable for those quantities 'actually' used by the contractor including additional quantities, if any, used or achieved ahead of the time-line. However, if the contractor does a certain quantity of the work in the third quarter which ought to have been done in the earlier quarter, Price Variation / Escalation will still be applicable on that quantity at the rates as applicable in the relevant quarter as per time-line or period of actual use whichever is less.

The Price adjustment mechanism will cease to operate for value of work executed beyond the agreement period. But agreement period shall include the "actual period" for which the work was "suspended officially" and extension of time permitted for any valid reasons such as, war, natural calamities, like flood, earthquake and other risks arising out of acts of God during the agreement; work delayed due to the land acquisition process; change in design, change in scope of work, etc., which is given in writing by the Tender Calling Officer of the respective work.

Price Variation will be calculated as per the specified formula from the last date of submission of tender upto the end of agreement period provided, If the agreement is signed within the minimum specified time, failing which, the price variation will be applicable from the date of agreement only, based on the wholesale Price indexes of RBI. The quarter would be reckoned with reference to the quarter of the calendar year in which the last date on tender submission is fixed. In case of delayed agreement, the quarter in which the agreement is signed will be reckoned for the purpose of calculation of Price adjustments.

The formula for adjustment of prices are

R = Value of work during the quarter under consideration

i. Adjustment of Cement component

Price adjustment for increase or decrease in the cost of cement procured by the contractor shall be paid in accordance with the following formula if this component is involved in the work executed during the quarter under consideration

$$V_c = 0.85 \times P_c / 100 \times R \times (C_1 - C_0) / C_0$$

- V _c = Increase or decrease in the cost of work during the quarter under consideration due to changes in the rates of cement
- C₀ = The average RBI index for cement for the quarter during the date of opening of tenders
- C_1 = The average RBI index for cement for the quarter under consideration
- P_c = Percentage for the cement component of the work

ii. Adjustment of Steel component

Price adjustment for increase or decrease in the cost of steel procured by the contractor shall be paid in accordance with the following formula if this component is involved in the work executed during the quarter under consideration

$$V_s = 0.85 \times P_s / 100 \times R \times (S_1 - S_0) / S_0$$

- V _s = Increase or decrease in the cost of work during the quarter under consideration due to changes in the rates of steel
- S_0 = The average RBI index for steel for the quarter during the date of opening of tenders
- S₁ = The average RBI index for steel for the quarter under consideration
- P_s = Percentage for the steel component of the work

iii Adjustment of POL component (Fuel and lubricant)

Price adjustment for increase or decrease in the cost of POL procured by the contractor shall be paid in accordance with the following formula if this component is involved in the work executed during the quarter under consideration

$$V_f = 0.85 \times P_f / 100 \times R \times (F_1 - F_0) / F_0$$

- V _f = Increase or decrease in the cost of work during the quarter under consideration due to changes in the rates of POL
- F₀ = The average official retail price of High Speed Diesel (HSD) at the existing consumer pumps of IOC at **Thiruvallur** on the day thirty days prior to the date of opening of tenders

- F₁ = The average official retail price of High Speed Diesel (HSD) at the existing consumer pumps of IOC at **Thiruvallur** for the 15th day of the middle calendar month for the quarter under consideration
- P_f = Percentage for the POL component of the work

The following percentages will govern the price adjustment for the contract

а	Cement	Pc	8.44	%
b	Steel	P _s	28.80	%
С	POL	P _f	0.98	%

H. BONUS FOR ADVANCE COMPLETION OF WORK

Bonus as an incentive for advance completion of work is considered. If the work is completed in advance by not less than 10 % of agreement period can be considered and bonus for 1 % on the value of actual quantum of works executed at tendered date may be paid.

I. PENALTY CLAUSE

As per Clause 57, 57.1, 57.2, and 57.3 of General Conditions of Contract in Tamil Nadu Building Practice.

J. WARRANTY

- The contactor shall warrant that the work executed under this contract shall have no defect arising from workmanship or from any act or omission of the contactor that may develop in the normal course in the conditions obtaining at the site of work.
- 2. This warranty shall remain for the period of **12 (Twelve) months** from the date of completion of work or as soon after the expiration of such period of 12 months.
- 3. This department shall notify the contractor in weighting of any claims arising under this warrant.
- 4. Upon receipt of such notice, contractor shall within a period of 3 days, repair or replace the defective portion of work, free of cost, to this department.
- 5. If the contactor having been notified fails to remedy the defects within a period of 3 days, this department may proceed to make such remedial action, as may be necessary at the contactor risk and responsibility. The expenditure so incurred by the Department will be recoverable from the contactor in addition to penalty clause.



OFFICE OF THE ENGINEER-IN-CHIEF (BUILDINGS), CHIEF ENGINEER (BUILDINGS) CHENNAI REGION AND CHIEF ENGINEER (GENERAL), PWD., CHEPAUK, CHENNAI – 5

Technical Circular No. AEE / T10 / 57017 , dated 12.07.2017

Sub: Building – Crushed Stone Sand (CS-Sand) - Alternate material

to River sand - Circular Instructions issued - Regarding

Ref: Engineer-in-Chief (Buildings) & Chief Engineer (Buildings)

Chennai Region and Chief Engineer (General), PWD., Circular

No. AEE / T10 / 57017 / 2012, dated 30.08.2012

- 1.0. In recent years, considerable emphasis has been made by the experts in the construction industry to use Manufactured Sand (M-Sand) as River Sand resources are exhausting very rapidly. It has also been proved that Good quality M-sand can be used as an alternative construction material to River sand.
- 2.0. Though the definition of Manufacturing Sand (M-Sand) as per IS 383:2016 code refers to processed fine aggregates, the Crushed Stone Sand is commercially called as M-sand in the Market.
- 3.0. IS 383:2016 code under clause 3.1.2 defines the crushed sand as, (1) Crushed stone sand Fine aggregate produced by crushing hard stone. (2) Manufacturing fine aggregate (Manufactured Sand) Fine aggregate manufactured from other than natural sources, by processing materials, using thermal or other process such as separation, washing, crushing and scrubbing.
- 4.0. In the reference circular cited, PWD / WRD permitted to use Crushed Stone Sand hereafter called "CS-Sand" in the construction work as an alternate material to Natural Sand with the condition that it should comply with all the requirements as stipulated by relevant codes of Bureau of Indian Standards.
- 5.0. However, there has been general reluctance to use the CS-Sand in construction works mainly due to lack of supply of good quality CS-Sand. It has

been noticed that Quarry Dust which contains Flaky particles and higher percentage of Micro fines (particles less than 75 micron) is being supplied in the name of CS-Sand and these properties affect the quality of concrete and other works

6.0. Hence, in continuation of earlier circular instructions issued, to bring awareness about the use of good quality CS-Sand and to promote the use of the CS-Sand an alternate to River Sand, the following further circular instruction are issued in respect of quality checks to be carried out on CS-Sand and the manufacturing process of good quality CS-Sand.

Quality checks on Crushed Stone Sand

Following aspects help to assess the quality of CS-Sand.

- Carrying out Simple field tests for certain parameters.
- Testing at the Laboratories shall be in accordance with IS Bureau of Indian Standards.
- Inspection of CS-Sand production unit to ensure that the unit has the five stage processes established and practiced.

Field Tests on Crushed stone sand

8.0. Keeping in hand the Crushed Stone Sand taken from a heap and just by visual observation and rubbing it in between fingers, excess presence of quarry dust, flakiness, gradation, texture of crushed stone sand etc., is verified and quality can be ensured based on the experience.



Testing of CS-Sand by "visual observation" and "rubbing with hand"to assess the presence of Quarry dust Shape test by visual observation

9.0. Particles retained on 4.75mm and 2.36 mm can be verified visually for the particle shape. Additionally, an image taken with the help of Mobile camera that has resolution of 8 MP and more can be zoomed to verify the shape.



Good quality CS-Sand (2.36mm) - Cubical



River Sand (2.36mm) - Cubical



Poor Quality CS-Sand with Flaky Particles



Good Quality CS-Sand





Particle Size Distribution by Sieve Analysis

10.0. Sieve Analysis can be carried out at site with the set of sieves as stipulated by BIS to find out the particle size distribution of CS-Sand across various size fractions.

Particles less than 75 micron (Micro fines)

11.0. This test is done by "Wet Sieving" CS-Sand sample through 75 micron sieve through which the presence of Micro fines can be measured. Though IS 383:2016 accepts 15% as upper limit for presence of Micro fines, according to Industry experts it is advisable to limit this upper value to 7%.



Cube test for compressive strength

12.0. After the use of CS-Sand, to test the compressive strength of concrete, the specimen of required numbers of standard cube of (150 mm x 150 mm x 150 mm) have to be casted and cured in water and tested for 3, 7 and 28 days and test results should comply the stipulated requirements of Bureau Indian Standards.

Laboratory Tests on CS-Sand

CS-Sand should adhere to the highest standards and must undergo the following quality tests

- 1. Sieve analysis
- 2. Specific gravity
- 3. Water absorption
- 4. Bulk density (loose and compact)
- 5. Alkali aggregate reaction
- 6. Soundness
- 7. Deleterious materials
- 8. Organic impurities

- 9. Micro fines content
- 10. Chloride and Sulphate Content
- 11. Petro graphical Analysis if Manufacturer does not possess.
- 12. Tests for Silt and clay

14.0. List of few labs for conducting test on CS-Sand are furnished below:

- 1. National Test House, Government of India, Taramani, Chennai
- 2. ICOMAT- The IIT incubated lab, Perungudi, Chennai
- 3. Soil Mechanics and Research Lab, PWD, Taramani, Chennai
- 4. Tamilaga Arasu Building Research Station, Taramani, Chennai
- 5. Labs of various Engineering Colleges all over Tamilnadu

Plastering

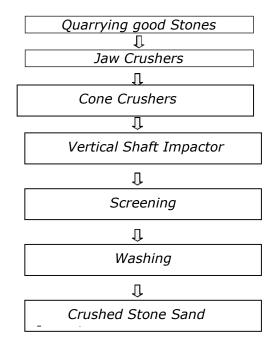
15.0. The specialized CS-Sand of particular gradation (as called Puuchchu Manal) should alone be used for plastering with addition of super plasticiser at the rate of 100ml per bag of cement for better bonding and achieving the required strength of plaster.

Caution

16.0. By-products during crushing of rocks are not Crushed Stone Sand. A Crusher Dust (or Quarry Dust) produced from fine screening of quarry crushing cannot be called Crushed Stone Sand.

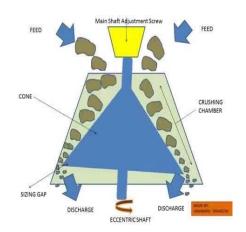
The fine particles obtained, as by-products during crushing of rocks to produce coarse aggregates (by jaw crusher and/or cone crusher) are known as Quarry Rock Fines / Quarry Dust / Crusher Dust. These by-products are not suitable for concrete or mortar as they contain higher percentage of dusty, flaky particles of un-controlled sizes with high water absorbent property. If the crusher dust is flaky and angular in shape, the workability will be very difficult. There is no plasticity in the concrete and mortar which makes it even difficult for the mason to work, whereas if it is cubical in shape with grounded edge, superior gradation and good plasticity to concrete will be obtained.

17.0. Crushed Stone Sand (CS-Sand) manufacturing process





Jaw Crusher



Cone Crusher

18.0. Vertical Shaft Impact (VSI) Crusher

This involves an important stage of using Tertiary crusher called Vertical Shaft Impact (VSI) Crusher which carries out a combined process of reducing coarser particles into finer particles and shaping the fine particles by removing the flaky and weak edges.



Vertical Shaft Impact (VSI) Crusher

19.0. Conclusion

Adhering to the above mentioned technical aspects and based on various studies conducted by Industry experts and also examination made by TNPWD, Use of Good quality Crushed stone Sand with distinctive properties, manufactured following the above mentioned processes can be permitted in PWD for construction works as alternate material to River Sand.

Further it is informed that, Good Quality C.S-Sand provides greater durability and required strength to concrete by overcoming deficiencies like segregation, honey combing, voids and capillary action.

ADDITIONAL CONDITIONS - II OF CONTRACT

Goods and Service Tax (GST) on Government Works Contract (Clause – 119 of Central Goods & Service ACT (CGST), 2017:-

- 1.The Central Government vide Notification No.24/2017- Integrated Tax (Rate), dated 21.09.2017 has amended the GST rate on Government, Contracts to 12 Percent, as described below. This rate would be applicable for ongoing as well new contracts "Service provided to the Central Government, State Government, Union Territory, a local authority or a Government authority by way of construction, erection, commissioning, installation, completion, fitting out, repair, maintenance, renovation, or alternation of "
 - ❖ A civil structure or any other original works meant predominantly for use other than for commerce, industry, or any other business or profession;
 - ❖ A structure meant predominantly for use as
 - An educational.
 - o A Clinical, or
 - o An art or cultural establishment; or
 - ❖ A residential complex predominantly meant for self-use or the use of their employees or other persons specified in Paragraph 3 of the Schedule III of the Central Goods and Services Tax Act, 2017.
- 2.Government of India has notified vide Notification No.20/2017- Central Tax (Rate), dated 22nd August, 2017 and Notification No.24/2017 Central Tax (Rate), dated 21st September 2017, the concessional rate of the Goods and Services Tax (GST) at 12% [CGST at 6% & SGST at 6%] is leviable for any Government Contract, whether Civil or Electrical, Irrespective of the Goods and Services Tax (GST) rate applicable on purchase of goods used in the execution of Government Contract.

And the GST amount will be calculated at 12% from the sum of total tendered value quoted by the tenderer for construction cost (excluding GST) specified in the BOQ, Subject to GST rate applicable from time to time as recommended by the GST Council.

- 3.All duties, taxes, and other levies except GST, payable by the contractor under the contract, or for any other cause shall be included in the rates, prices and total Bid Price submitted by the Bidder.
- a.As per Notification No.31/2017 Central Tax (Rate) dated 13th October, 2017 the concessional rate of GST at 12% [CGST at 6% + SGST at 6%] is leviable for any Government contract, whether Civil or Electrical, irrespective of the GST rate applicable on purchase of goods used in the execution of Government Contract. The Contractor is eligible to get refund of excess tax paid over or liable to pay tax as per Notification No.20/2017, Central Tax (Rate) dated 21.09.2017 and Notification No.31/2017, Central Tax (Rate), dated 13.10.2017.

b.Further, for works Contract services involving predominantly earth works (that is, constituting more than 75% of the value of the works contract) supplied to Central Government, State Governments, Local Authority, Governmental Authority for Government Entity shall be taxed at 5% as per Notification No.31/2017 – Central Tax (rate) dated 13th October, 2017. Therefore, for such contract the amount of GST is to be calculated at 5% [CGST at 2.5% + SGST at 2.5%] over and above the Basic Rate.

4. INPUT TAX CREDIT (ITC) :-

- a) As per Notification 202, dated 20.06.2017 and as per sub-section (2) of Section 7 OF THE Tamil Nadu Goods and Services Act, 2017, (Tamil Nadu Act 19 of 2017), activities or transactions undertaken by State Government shall be treated neither as supply of goods nor a supply of service
- b) As per Chapter IX (Section 41) of the Tamil Nadu Goods and Services Act, 2017, every registered persons may be entitled to take the credit of eligible input tax, as self-assessed, in his return and such amount shall be credited on a provisional basis to his electronic credit ledger.
- c) As per PWD Revised SOR (2017-18), dated 21.10.2017, under General Note, 8 (ix), the Contractor is eligible to get refund of excess tax paid over or liable to pay tax for this Contract Work.
- d) As per G.O.Ms.No.342 Finance (T&A-III) Dept. Dated.17.10.2018 Tax deducted at source at the rate of one percent for SGST and another one percent for CGST from the payment made or credited to the supplier of taxable goods or services or both, where the total value of such supply, under a contract, exceeds two lakh and fifty thousand rupees
- 5. In addition to the Security Deposit, retention amount shall be deducted from the running account bills, a sum equivalent to 5% (Five Percent) of the total value (including the Goods and Service Tax (GST) Amount for all the running account bill) of each bill as retention money.
- 6.Out of the above 5% retention amount, $2^{1/2}$ % of (Two and Half Percent) of the total value of the work so far executed will be released to the contractor on payment of final bill, and in the final bill, the Goods and Services Tax (GST) amount retained In previous payment has to be released to the contractor without interest.
- 7.The balance $2^{1/2}$ % will be retained for a period of 1 year reckoned from the date of completion of the work, as all defects shall have been made good according to the true intent and meaning hereof, whichever shall happen last.
- 8. The retention money of $2^{1/2}$ % including GST (Two and a Half Percent) of the total value of contract after deducting any amount due to the Department, shall be refunded to the Bidder without interest after the defects liabilities attached to the contract is over.

9.a.Part or complete payment will be made only in satisfactory completion of work in full / part thereof and value of work executed shall be determined, based on the measurements and check measurements by the Engineer in the Measurement Book.

b.For every Bill, 12% of GST will be paid to the Contractor based on the value of work done for Construction by the Employer. After the payment including 12% of GST, the Contractor should pay the GST Amount to Government through his GST Registration No. Also the contractor needs to submit the Material purchase bill mentioning the name of the work/s in the package and GST No. to the Employer.

c. FIRST BILL PAYMENT :-

At the time of payment for first running account bill, the contractor should produce the GST paid details on goods (materials) to the Employer for ITC.

d.INTERMEDIATE BILL PAYMENT :-

At the time of payment for next running account bills, the contractor should produce the GST paid details of services upto previous bill payment (i.e. GST paid detail for the previous work bill) along Input Tax Credit (ITC) availed at the time of payment of intermediate bill to the employer.

e.FINAL BILL PAYMENT:-

The Contractor should produce the GST paid details for all the materials used for construction work, and GST paid details of services for the upto previous payment (ie., GST paid detail for the upto previous work bill) to the Employer along with Input Tax Credit (ITC) availed at the time of payment of final bill to the employer.

f.SUBMISSION OF GST PAID DETAILS OF FINAL BILL:-

The GST paid details for the final work bill payment of construction work to be submitted by the contractor to the employer in few days after getting payment.

10.It is to be expressly understood that the measured work is to be taken net (Not withstanding any custom or practice to the contrary) according to the actual quantities. When in places and finished according to the drawings, or as may be ordered from time to time by the Collector and the cost calculated by measurement or weight at the respective prices, without any additional charge for any necessary or contingent works concerned therewith. The rates quoted excluding GST Amount are for the finished works in situ and complete in every respect.

CHILD LABOUR ERADICATION ACT.

(G.O.Ms.No:53/Labour and employment (U2) Department/Dated.12.05.2003.

"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".

