



**GOVERNMENT OF TAMILNADU**  
**WATER RESOURCES DEPARTMENT**

Special Project Circle,  
Palani

Coimbatore Region,  
Coimbatore.

<b>PRICE TENDER SCHEDULE</b>
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NAME OF WORK:	Construction of a Check dam across the Amaravathy river at LS 102.00 km of Mambadi - Pungandurai village in Dharapuram Taluk of Tiruppur District.
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EMD :               :   Rs. 5,45,000/-

Tender submitted by



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E.M.D : Rs.5,45,000/-

Last date for receipt of  
Pre/ Qualification Application  
and Price Tender } 12.07.2022 - 3.00 P.M

**WATER RESOURCES DEPARTMENT**  
**SPECIAL PROJECT CIRCLE, PALANI**

**ANNEXURE**

**Particulars to be furnished by Tenderer**

1. Name of Tenderer :
2. Name of Work :
3. Date of Tender :
  - a) In Person :
  - b) By Registered Post :
4. Total Value of Tender :
5. Detail about E.M.D. enclosed for this tender and its nature of remittance and validity
6. Registered class of the Tenderer with Monetary limit and department in which registered (Certified copy of the live-registration order should be attached)
7. Recent works executed, details about name and place of work Agt. No. and value of works etc., should be given
8. Works under execution, details about name and place of work, Agt.No& Value of works etc. should be furnished.\
9. Command of labour in brief :
10. Turnover of previous years(particulars for a period of five consecutive years are to be furnished) :

**CONTRACTOR**

11. Whether current Income Tax clearance :  
Certificate saral form is enclosed.?

12. Whether current Sales Tax Clearance :  
Certificate is enclosed

13. GST Registration No.

**CONTRACTOR**

## **INSTRUCTION TO TENDERERS**

- 1) The Tenderer shall inspect the site of work before tendering and satisfy himself as to the nature of work, materials provided and their availability, quarry specified etc.,
- 2) The tenderer may present his tender directly or send it by registered post with acknowledgement due or by courier on or before the last date of receipt of tenders. Tenders received after the closure date and time fixed will not be considered, and liable for summarily rejection.
- 3) The tenderer should write his Rates both in figures and in words in the prescribed slip and if the Rates written in figures and in words are different, the lesser rate only will be taken into account for tender comparison purpose.
- 4) Tenders containing over writing or corrections which are not attested by the tenderer will be liable for rejection
- 5) The tenderer should put his full signature in each page of the tender schedule provided for that purpose in taken of his acceptance of all the tender conditions and other details stipulated in the tender schedule.
- 6) The price tender under Item wise rate system may be submitted as per the instruction given in the price tender schedule. The lumpsum tendered amount for the whole work should be written both in figures and in words at the prescribed places in the tender schedule “A” and if the amount written in figure and in words are different, the lesser amount only will be taken into account for tender purposes.
- 7) The tender submitted in person after the prescribed time on the notified date will not be accepted.
- 8) The Postal tender or by courier Tender received after due date and time fixed will also be rejected.
- 9) Tender received without **E.M.D** as prescribed shape in the tender notice will be summarily rejected.
- 10) Tenders with tampered seal will not be accepted
- 11) The rates should be inclusive of all taxes payable to the Government by the tenderer.

## **CONTRACTOR**

- 12) If any variation has been necessary either in the Schedule “A” Parts I and II schedule of rates and approximate quantities or under special conditions as a result of tender process, Special condition will be suitably amended or added before acceptance of the agreements or agreed to by both parties to the agreement. Under no circumstances the correspondences pertaining to tender processing will form part of the contract.
- 13) For detailed description of various items of work to be executed in addition to the brief description given in the schedule. “A” and for the rights and obligations of the contractors etc., the attention of the contractor is invited to Tamil Nadu Standard Specification/ 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 relevant specification of Tamil Nadu Building Practice (T.N.B.P) or National Building Code or Indian Standard Specification as may be specified.
- 14) The tenderer should furnish his GST registration certificate number issued by the Sales Tax Department in the Tender form and to produce Income Tax Clearance Certificate for the current season along with his tender.
- 15) The contractor shall be solely responsible for the payment of GST under the provisions of GST as inforce from time to time and the rates for various items of work will remain unaffected by any change that may be made from time to time in the rates at which such tax is levied.

SUPERINTENDING ENGINEER, WRD.,  
SPECIAL PROJECT CIRCLE  
PALANI

**CONTRACTOR**

**ADDITIONAL GENERAL CONDITIONS (i.e. IN ADDITION TO GENERAL CONDITIONS TO CONTRACT APPENDED WITH TAMIL NADU BUILDING PRACTICE)**

**1) Postal Tenders:-**

- a) The contractor may have the option to present the tender directly or to send it by registered post with acknowledgement due or by courier. However the tender should reach this office on or before last date and time fixed for receipt of tender.
- b) In case of sending tenders by registered post acknowledgement due, it is the responsibility of the tenderer himself to despatch the tender sufficiently early so as to reach the tender opening authority before the date and time notified in the tender notice for receipt of tenders.
- c) No representation / appeal of any kind will be entertained against belated receipt of tenders by post beyond the notified date and time or loss in transit, etc.
- d) Tender offered in person before the last date and postal tenders received within time will be opened in a consolidated manner on the notified date and time for opening of tenders.
- e) The Earnest Money will be retained in the case of the successful tenderer and will not carry any interest. It will be dealt with, as provided in the tender.

**CONTRACTOR**

## **APPENDIX – 1 TENDER NOTICE**

**(FOR L.S. CONTRTACT)**

**(As amended in G.O.Ms.No.618, PW/ Dated 30<sup>th</sup> April 1985)**

On behalf of the Governor of Tamil Nadu, Tenders will be received by the **Superintending Engineer, WRD, Special Project Circle Palani** at his office at Palani upto **3.00 P.M on 12.07.2022** for the work “Construction of a Check dam across the Amaravathy river at LS 102.00 km of Mambadi - Pungandurai village in Dharapuram Taluk of Tirupur District.”

The Tender should be in the prescribed form obtainable from the **Superintending Engineer, WRD., Special Project Circle, Palani** office. The Tenders **will be opened** by the **Superintending Engineer, WRD, Special Project Circle, Palani** at his office **at 3.30 PM on 12.07.2022.**

The tenderer or his authorized Agent is expected to be present at the time of opening of Tenders. The Tender receiving officer, will, on opening each tender, prepare a statement of the attested and unattested corrections there in and hand it over tenderers. If any of tenderer or his agent 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 what so ever.

2.Tenders must be submitted in sealed covers and should be addressed to the **SUPERINTENDING ENGINEER, WRD, SPECIAL PROJECT CIRCLE PALANI** the name of tenderer and the name of the work being noted on the covers.

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

**CONTRACTOR**



3. Each tenderer must also send a certificate of Income- Tax verification from the appropriate Income Tax authority in the form prescribed therefore. The Certificate will be valid for one year from the date of issue of all tenderers submitted during the period.

3.1 In the case of proprietary or partnership it will be necessary to produce the certificate after mention for the proprietor or proprietors and for each of the partners as the case may be.

3.2 If the tenderer is a registered **PWD/WRD**, 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 All Tenders received without a certificate as afore-mentioned will be summarily rejected.

4. Each tenderer, must pay, as Earnest Money, a sum of **Rs.5,45,000/-(Rupees Two Lakh Sixteen Thousand only)** will be accepted in the form of Demand Draft obtained from the Nationalized Banks in the name of the **Executive Engineer ,WRD, Amaravathy basin Division, Dharapuram.**

The Earnest money deposit can also be paid in any other form i.e., National Savings Certificates/ Small Savings Scripts/ Deposits/ Accounts / issued by the Post office duly endorsed in favour of the Executive Engineer concerned. In case, the Earnest Money Deposit is produced in the form of demand draft issued by the Nationalized Banks and Schedules Banks, the successful tenderer will have to replace the earnest money deposit in the shape of National Savings Certificate duly pledged in favour of the Executive Engineer concerned vide **G.O.Ms.No. 143**, Finance/ Small Savings/ Department ddt.27<sup>th</sup> February 1986. National Savings Certificates not pledged in favour of the Executive Engineer concerned will not be accepted. Bank Guarantees will not be accepted. This Earnest Money will be refunded to the unsuccessful tenderer on application, after intimation is sent for rejection of the tender or at the expiration of **90 days** from the date of tender, whichever is earlier. This refund will be authorized by the Superintending Engineer by suitable endorsement on the Chalan. The Earnest Money will not be received in cash or currency notes by the Water Resources Department Officer, say in exceptional cases, where there are no treasuries or Banks within the jurisdiction of the Officer Calling for tenders. When currency notes are given, The tenderer should sign his name in full with date on the back side of all the currency notes given by him whatever their denominations may be.

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

## **CONTRACTOR**

5. The tender will remain valid for a period of **90 days** from the last date for receipt of tender. The validity period can be extended further, if the contractor gives his consent in writing, specifying the period of extension.

- 5.1 The tenderer whose tender is under consideration shall attend the 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 (I) of the Constitution, herein after called "the accepting authority" make security deposit of 2 percent of the value of contract in one of the forms prescribed in Tamil Nadu Public Works Account Code" (ie. by taking into account of the amount of Earnest Money Deposit, already deposited with the tender, it would be sufficient to pay the balance amount to make up the 2 percent of the value of contract, for the purpose of security deposit)
- 5.2 The security deposit together with earnest money deposit and amount withheld according to clause 64.1, of general Conditions to the contract, shall be retained as security for due fulfillment of contract. If a cash security deposit is made by the contractor, he shall follow the procedure laid down in the preceding paragraph for payment of earnest money deposit and such deposit shall not bear any interest.
- 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 withdrawals his tenders, the earnest money deposit shall be forfeited to the Government.
- 5.4 If the contractor fails to carry out the contract, after paying the requisite deposits, then he will be liable for the excess expenditure if any incurred to complete the work as contemplated in the General Conditions to the contract.
- 5.5 It shall be expressly understood by the tenderer, that on receipt of written communication of acceptance of tender from the accepting authority, there emerges a valid contract between the Governor 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 the contractor, General condition to the contract, special conditions to the contract, negotiation correspondences communication of acceptance of tender, etc., shall constitute a valid contract and that will be the foundation of the rights of both the parties of 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 Building Practice and also the general conditions to contract contained therein and sign the Divisionsal Office copy of the Tamil Nadu Building Practice and its addenda volume in token of such study before submitting his tender. 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 between 10.00 A.M to 5.45 P.M on all office days in the office of the **Superintending Engineer, WRD., Special Project Circle, Palani**

## **CONTRACTOR**

The tender's attention is directed to the requirements for material under the clause "Materials and Workmanship" in the general conditions to contract, Materials conforming to the I.S.I standard shall be used on the work and the tenderer shall quote his rates accordingly.

7. 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 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 of 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 specification or in this tender notice or as required by the Executive Engineer in any case shall be submitted for the Executive Engineers approval before the supply to site of work is began. 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.

8.1 The Government will not , however, after acceptance of contract rate, pay any extra charge 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 contract regarding payments of seignorage tolls. etc.,

8. The tenderers particular attention is drawn to the sections and clause in General conditions to contract dealing with.

- 1) Test, inspection and rejection of defective materials and work
- 2) Carriage
- 3) Construction Plant
- 4) Water and Lighting
- 5) Clearing up during progress and for delivery
- 6) Accidents
- 7) Delays
- 8) Particulars of payment.

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

9. 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 this schedule is liable to alterations, omissions, deductions or additions at the discretion of the Executive Engineer concerned or the **SUPERINTENDING ENGINEER, WRD., SPECIAL PROJECT CIRCLE, PALANI** or as set forth in the conditions of the contract. The tenderer will however base his lumpsum tender on this schedule of quantities. He should quote specific rates for each item in the schedule and the rates should be in rupees and in sums of five paise. The rates should be written both in words and in figures and the units in words.

## CONTRACTOR

- 9.1** The tenderer should also show the total of each item and the grand total of the whole contract, and quote in the tender a lumpsum for which he will undertake to do whole work subject to the conditions of contract such lumpsum agreeing with the total amount of Schedule “A” This schedule accompanying the lumpsum tender shall be written legibly and free from erasers, over writings or conversion of figures. Corrections where unavoidable should be made by crossing out initialing dating and rewriting.
10. Tenderers offering a percentage deduction from or increase the estimate amount and those not submitted in proper form or in due time will be rejected. Rates for lumpsum amounts for items not called for shall not be included in the tender. No alteration which is made by the tenderer in the contract form the conditions of contract., the drawings specification or quantities accompanying same will be recognized, and if any such alternations are made, the tender will be a void.
11. The tenderer should work out his own rates without reference being made to the Public Works Department current schedule rates or Public Works Department estimate, which are not open for inspection by the tenderers.
12. 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 of 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.
13. 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 work 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 Engineers certificates of the values 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.

## **CONTRACTOR**

## **I Mile Stone**

### **6 months from Date of Commencement (Including rainy season)**

1.	Earthwork Excavation including Filling and Gravel Backing	-	57294 M <sup>3</sup>
2.	Cement concrete including RCC	-	6332 M <sup>3</sup>
3.	Centering	-	6269 M <sup>2</sup>
4.	Fabrication of steel	-	422 Qtl

## **II Mile Stone**

### **7 months to 12 months from the Date of Commencement (Including rainy Season)**

1.	Earthwork Excavation including Filling and Gravel Backing	-	67000 M <sup>3</sup>
2.	Cement concrete including RCC	-	2183 M <sup>3</sup>
3.	Centering	-	1000 M <sup>2</sup>
4.	Fabrication of steel	-	100 Qtl

#### **NOTE:-**

The periods to be entered in column 1 for the purpose of defining the rate of progress may be fixed by the Executive Engineer/ Superintending Engineer to suit each case.

#### **CONTRACTOR**

15. No part of the contract shall be sub let without written permission of the Executive Engineer nor shall transfer be made by power of attorney, authorizing others to receive payments on the contractor's behalf.
16. If further necessary information is required, the Executive Engineer of the Division 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 reasons therefore.
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 tenders 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 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 work and paying extra attention to such works as may demand special attention e.g. reinforced cement concrete works. etc..

**Scale and Qualification for employment of Technical Assistant.**

Project Manager	: 1) One B.E Civil Engineering with Five years Experience (or) 1 No. (One number) M.B.A. with 10 Years Experience in similar project.
Site Engineer	: 2) Three. B.E., in Civil Engineering with 3 years experience Plus three diploma Engineering with 5 years experience in civil engineering (or) Three. B.E., in Civil with 3 years experience Plus three retired junior engineers (or) Equivalent degree holder with 3 years experience plus three diploma holders in civil engineering/ 3 retired junior Engineers Plus one BE civil (or) One retired AEE or ADE plus three diploma holders in civil engineering Plus one BE civil (or) One retired AEE or ADE plus two retired Junior engineers Plus one BE civil

If the tenderer, who is not professionally qualified, details to employ the technical men as indicated above on the works penalty shall be levied as followed during the period of employment of technical men.

**CONTRACTOR**

**NOTE:** (1) A Penalty of **Rs 2000/-** per month for diploma holder, **Rs.5000/-** per month for degree holder and **Rs. 8000/-** per month for MBA holder be levied in case of default on the part of contractors in following the norms laid down above.

**NOTE:** (2) The employment of Technical Assistants could be based only on the value of contract. Engineer with mechanical Engineering qualification and retired from Civil Engineering department are also suitable to supervise the Civil Engineering works because of their experience in Civil Engineering field.

**NOTE:** (3) In case of contractor who is professionally qualified is not in a position to remain always at the site of work and to pay extra attention to such works may demand special attention ( e.g) R.C.C works, etc. he should employ technically qualified man as prescribed above.

20. A tenderer submitting a quotation which the tender Accepting authority considers excessive and or indicative of the insufficient knowledge of current prices of definite attempt at profiteering will himself liable to be debarred permanently from tendering or for such period as the tender accepting authority may decide. The tender rates should be based on the controlled price for materials 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 tappers as far as possible. The number of ex-toddy tappers to whom he can and he should undertake in the agreement to offer such employment to such number.
22. The Contractor shall comply with the provisions in 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 be at his discretion, cancel the contract or evoke any of the penalties for the breach of the contract provided in the conditions of contracts. 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 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 Adviser, Tamil Nadu. The contractor shall train them as required under the Apprentices act, 1961 and the rules made there-under, and shall be responsible for all obligations of the employer under the said act including the liability to make payment to the apprentices as required under the said Act.

## **CONTRACTOR**

Value of Contract	Category		No. to be appointed
One Lakh and uptoRs. 3.00 Lakhs	1	Building Constructor	1
	2	Brick Layers	1
Above Rs.3 Lakhs and up to Rs. 10.00 Lakhs	1	Building Constructor	1
	2	Brick Layer	1
	3	Diploma Holder inCivil	1
Above Rs. 10.00 Lakhs and upto Rs. 50.00 Lakhs	1	Building Constructor	1
	2	Brick Layer	1
	3	B.E. (Civil) or Equivalent Degree Holder	1
Above Rs. 50 Lakhs and uptoRs. 2.00 Crores	1	Project Manager (BE., Civil)	1
Above Rs. 2 Crores and uptoRs. 5.00 Crores	1	Project Manager (BE., Civil)	1
		Diploma holder in Civil	1
Above Rs.5.00 Crores	1	Project Manager (BE., Civil)	1
	2	B.E. Civil (or) Equivalent	1
	3	Diploma holder in Civil	1

“Unless the contractor has been exempted from engagement of apprentices by the Director or 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 settlement of the contract”.

23. The Contractor should employ one ITI Trained mason for every ten masons or part thereof. In case on non availability of ITI Trained Masons the contractor should obtain the prior approval of the Executive Engineer concerned before proceeding the contract with the other kinds of mason.

## CONTRACTOR



## **APPENDIX II (A) TENDER**

(For L.S. Contract)

(As amended in G.O.Ms.No. 618.P.W. dated: 30<sup>th</sup> April 1985)

To

Date:

His Excellency, The Governor of Tamil Nadu  
Represented by  
The Superintending Engineer, WRD.,  
Special Project Circle  
Palani

Sir,

I / We do here by tender and if this tender be accepted undertake to execute the following work of “Construction of a Check dam across the Amaravathy river at LS 102.00 km of Mambadi - Pungandurai village in Dharapuram Taluk of Tiruppur District” as shown in the drawing and described in the specification deposited in the office of the Superintending Engineer, WRD. Special Project Circle, Palani with such variations by way of alterations or additions to and omissions from the said work and method of payments as provided for in the Conditions of Contract’ for the sum of Rs. ....(Rupees .....only) or such other sums as may be arrived at under the clause of “General Conditions of the Contract” relating to payment on lumpsum 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 the 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 practices and the general conditions to the contract therein and the Tamil Nadu Building Practice addenda Volume and that I / We have made such examination of the contract. documents and 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 the same and requirement, covenants, stipulation and restrictions contained in the contract and on the said plans and specifications and restrictions contained in the contract and on the said plans and specifications and distinctly agree that I / We will not hereafter make any claim or demand upon the Government based upon or arising out of any alleged misunderstanding or misconception of mistake on my / our part of the said requirements, covenants, stipulation and restrictions contained in the contract and on 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 of mistake on my / our part of the said requirements, covenants, stipulations, restrictions and conditions.

**CONTRACTOR**

4. I / We enclose an Income Tax verification certificate

I / We being a Registered Public Works Department / Water Resources Department Contractor.

I / We have already produced an income Tax verification Certificate during the current calendar year in respect of

(here particulars of previous occasions on which the certificate was produced should be given)  
The legal address of the contractors for service of all letters and notices will be as follows:

5. (i) (a) I / We enclose herewith a Chalan for the payment for the sum of Rs...../- (Rupees .....only) as earnest money not to bear interest.

5. (i) (b) I / We have paid Rs...../- (Rupees ..... only) as against the E.M.D of Rs. ....-/- (Rupees ..... only) I am / We are eligible to pay the E.M.D at concessional rates.

5. (i) © In lieu of cash deposits I / We have enclosed a ..... bearing No..... issued by ..... for a value of Rs..... ( Rupees ..... only )

drawn / endorsed pledged in favour of the Executive Engineer,PWD ,NanganjiyarDivision, Palani

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

6. If my / our tender is not accepted, this sum shall be returned to me / us on my / our application when intimation is sent to me / us rejection or at the expiration of **Ninety Days** from the date of this tender, which ever is earlier. If My / Our tender is accepted, the Earnest Money shall be retained by the Government as security for the due fulfillment of contract. If upon intimations being given to me / us by the authority authorized by the Governor of Tamil Nadu under article 299(i) of the Constitution (herein after called “ the accepting authority”) of acceptance of tender. I / We fail to make the additional security deposit, then I / We agree to the forfeiture of earnest money deposit. any notice required to be served on me / us hereunder shall be sufficiently served on 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 delivered at the address to which it is sent.

**CONTRACTOR**

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) 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 Addenda Volume thereto, maintained in the Office, in acknowledgement of being bound by all conditions of the clauses of General conditions to the contract and all specifications for items of work described by a specification number in Schedule ‘ A ‘

9. In consideration of the payment of Rs. ..../- (Rupees ..... only) or such other sum as may be arrived at under the clause of the General conditions to the contract, relating to payment on lumpsum basis or by final measurement at unit prices, I / We agree subject to said conditions to execute and complete the works shown upon the said drawing serially from number 1 to ..... inclusive Schedule (B) and described in the specification ( Schedule ‘C’) and to extend of probable quantities shown in (Schedule ‘ A”) with such variations by way of alteration of additions to or deductions from, the said work and method of payment there for as are provided for in the said conditions.

10. The term “ Executive Engineer “ in the said condition shall mean the Water Resources Department 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 in favour of the Government with the previous sanction of or subject to ratification by the competent authorities in case where such sanction of ratification may be necessary and who has been duly authorized under Article 299 (1) of the Constitutions.

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 site ( or Premises) handed over to, me / us as provided for in the said conditions and agree to complete the work within **12months** 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 provisions for extension of time contained in clause 56 of the General conditions to the contract appended to the Tamil Nadu Building Practice.

**CONTRACTOR**

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 as here in before received or such portion thereof as I / We may be entitled to under the said conditions be paid back to me / us 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 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.

Name of Technical Staff Proposed to be employed.	Qualification	Experience
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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 of the Parambikulam Aliyar Basin Circle, Pollachi in case the value of claim is up to Rs. 50,000/- and (ii) I / We agree that in case, the value of claim is Rs.50,001/- and above the remedy will be through the competent Civil Court only.

SIGNATURE OF THE CONTRACTOR WITH DATE

15. In pursuance of the negotiation with the Superintending Engineer, W.R.D., Special Project Circle, Palani on

I/ We agree to reduce the rates for the items, in the Schedule as follows:-

Serial Number	Item Number	Short Description	Reduced rate per unit
(1)	(2)	(3)	(4)
Vide Separate Sheet enclosed			

Date:

Signature of the Contractor.

16. On behalf of the Governor of Tamil Nadu and as duly authorized by the Governor under Article 299 (i) of the Constitution the above tender for a value of **Rs.**

is accepted on this day of

Signature of the Witness in full and address with name in block letters.

Signature and Designation

**CONTRACTOR**

## SCHEDULE – ‘A’

### Schedule of Rates and Approximate Quantities :

- a) The quantities hereby given those upon which the lumpsum 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 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 that (not withstanding any custom or practice to be contrary) according to the actual quantities when, in place and finished according to the drawings or as may be ordered from time to time by the Executive Engineer 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 works in SITU and complete in every respect.

**Name of Work : Construction of a Check dam across the Amaravathy river at LS 102.00 km of Mambadi - Pungandurai village in Dharapuram Taluk of Tiruppur District.**

Item No.	Probable quantity figures	Description of work	T.N.B.P. No.	Rate		Unit	Amount
				Words	Figures Rs. P.		
1	2	3	4	5	6	7	8
( Vide Separate sheet enclosed )							

Signature of Contractor

Superintending Engineer, WRD.,  
Special Project Circle, Palani

The second sub – Division of this column (i.e.) column 2 for entering description in words such as numbers, cubic meter, kg., etc.,

**CONTRACTOR**

### SCHEDULE - A

**Name of work:** Construction of a Check dam across the Amaravathy river at LS 102.00 km of Mambadi - Pungandurai village in Dharapuram Taluk of Tiruppur District.

Sl. No	Quantity of Works to be executed	Description of work	Tamil Nadu Building Practice specification	Unit of Calculation (In figures and Words)	Rate In Rupees		Amount (In Rs.)
					(In figures)	(In words)	
1	2	3	4	5	6	7	
1	36000.00 m <sup>2</sup> (Thirty Six Thousand square metre only)	Clearing the scrub jungle and destroying the same effectively, complete complying with standard specification and as directed by the departmental officers.	SS 16	1 M <sup>2</sup> (One Square metre only)			
2	11038.00 m <sup>3</sup> (Eleven Thousand Thirty Eight Cubic metre only)	Earth work excavating and depositing on bank with an initial lead of 10m and initial lift of 2m in hard stiff clay, stiff black cotton, hard red earth, shales, murrum, gravel, stoney earth and earth mixed with small size boulders etc., (SS20B) complete complying with standard specification and as directed by the departmental officers	SS 20B	1 M <sup>3</sup> (One Cubic metre only)			

**CONTRACTOR**

3	43001.00 m <sup>3</sup> ( Forty Three Thousand One Cubic meter only)	Earth work excavating and depositing on bank with an initial lead of 10m and initial lift of 2m in sand, silt or other loose soil,wet sand or silt not under water, light black cotton soil,sandy loam and ordinary soil including excavated earth, hard stiff clay, stiff black cotton,hard red earth, shales, murrum, gravel, stoney earth and earth mixed with small size boulders, soft disintegrated rock,laterite,soft rock or kankar not requiring blasting including clearing, levelling the site etc.,complete complying with standard specification and as directed by the departmental officers (open excavation)	SS 20B	1 M <sup>3</sup> (One Cubic metre only)			
4	3255.00 m <sup>3</sup> ( Three Thousand Two Hundred and Fifty Five Cubic meter only)	Earth work excavating and depositing on bank with an initial lead of 10m and initial lift of 2m in hard stiff clay, stiff black cotton, hard red earth, shales, murrum, gravel, stoney earth and earth mixed with small size boulders, soft disintegrated rock, laterite, soft rock or kankar not requiring blasting including refilling the sides of foundation with excavated earth, shoring, strutting and bailing out water where ever necessary, well rammed, consolidated and depositing the surplus earth in places as shown by the departmental officers and clearing, levelling the site etc., complete complying with standard specification and as directed by the departmental officers ( Narrow Excavation)	SS 20B	1 M <sup>3</sup> (One Cubic metre only)			

**CONTRACTOR**

5		Providing and laying Plain Cement Concrete M10 grade, (Design mix ) using nominal size of 40mm HBGS jelly (well graded) confirming to I.S specified grading (to produce concrete of the specified grading and characteristic strength of 10N/mm2 in 28 days) and mixing the ingredients by mixer machine including dewatering by baling / pumping wherever necessary, laying the concrete in layers and in bays with all leads and lifts, compacting and finishing the surface, watering, curing etc., complete complying with standard specification as directed by the departmental officers.					
a	375.00 m <sup>3</sup> (Three Hundred and Seventy Five Cubic meter only)	Below Ground level	SS 28	1 M <sup>3</sup> (One Cubic metre only)			

**CONTRACTOR**



6		Providing and laying in position, Plain Cement Concrete M15 grade (Design mix) with well graded aggregates and the maximum nominal size of HBGS jelly of 40mm and down graded ( 60 % of 40mm and 40% of 20mm) confirming to I.S specified grading and mixing by mixer machine (to produce concrete of the specified characteristic strength of 15N/mm <sup>2</sup> in 28 days) including dewatering by bailing / pumping wherever necessary laying the concrete in layers and in bays with all leads and lifts, vibrating compacting, and finishing the surface, watering, curing, for various depth and height below and above ground level so as to attain the profile and strength specified in the drawings as per the direction of the departmental officers and complying with standard specification.					
a	2502.18 m <sup>3</sup> (Two Thousand Five Hundred and Two Point One Eight Cubic meter only)	Below G.L. upto 1.5 m depth	SS 28	1 M <sup>3</sup> (One Cubic metre only)			
b	1337.00 m <sup>3</sup> (One Thousand Three Hundred and Thirty Seven Cubic meter only)	Below G.L. upto 1.5 m to 4.5 m depth	SS 28	1 M <sup>3</sup> (One Cubic metre only)			

**CONTRACTOR**

c	2029.50 m <sup>3</sup> (Two Thousand Twenty Nine Point Five Zero Cubic meter only)	Above G.L. upto 4.5 m height	SS 28	1 M <sup>3</sup> (One Cubic metre only)			
d	401.50 m <sup>3</sup> (Four Hundred and One Point Five zero Cubic meter only)	Above G.L. above 4.5 m height	SS 28	1 M <sup>3</sup> (One Cubic metre only)			

**CONTRACTOR**

7		Providing and placing Plain Cement Concrete M15 grade using (well graded) aggregates and the maximum size of HBGS jelly of 20mm confirming to I.S specified grading and mixing by mixer machine (to produce concrete of the specified characteristic strength of 15N/mm <sup>2</sup> in 28 days) including dewatering by bailing / pumping wherever necessary laying the concrete in layers and in bays with all leads and lifts, vibrating, compacting and finishing the surface watering, curing for various depth and height below and above ground level so as to attain the profile and strength specified in the drawings as per the direction of the departmental officers and complying with standard specification.					
a	464.50 m <sup>3</sup> (Four Hundred and Sixty Four Point Five zero Cubic meter only)	Below G.L. upto 1.5 m depth	SS 28	1 M <sup>3</sup> (One Cubic metre only)			
b	261.00 m <sup>3</sup> (Two Hundred and Sixty One Cubic meter only)	Below G.L. upto 1.5 m to 4.5 m depth	SS 28	1 M <sup>3</sup> (One Cubic metre only)			

**CONTRACTOR**

c	168.50 m <sup>3</sup> (One Hundred and Sixty Eight Point Five zero Cubic meter only)	Above G.L. upto 4.5 m height	SS 28	1 M <sup>3</sup> (One Cubic metre only)			
8		Providing and placing Plain Cement Concrete M20 grade (Design mix) using (well graded) aggregates and the maximum size of HBGS jelly of 20mm confirming to I.S specified grading and mixing by mixer machine (to produce concrete of the specified characteristic strength of 20N/mm <sup>2</sup> in 28 days) including dewatering by bailing / pumping wherever necessary laying the concrete in layers and in bays with all leads and lifts,vibrating,compacting and finishing the surface watering,curing for various depth and height below and above ground level so as to attain the profile and strength specified in the drawings as per the direction of the departmental officers and complying with standard specification.					
a	6.25 m <sup>3</sup> (Six Point Two Five Cubic meter only)	Above G.L. above 4.5 m height	SS 28	1 M <sup>3</sup> (One Cubic metre only)			

**CONTRACTOR**

9		Providing and laying in position standardised Reinforced cement concrete Mix M-20 Grade in accordance with IS 456-2000 using 20mm and downgrading hard broken granite stone jelly for all RCC items of works with minimum cement content of 325 kg/m <sup>3</sup> and maximum water cement ratio of 0.55, including admixture (plasticiser /Super plasticiser) in recommended proportions as per IS 9103 to accelerate , retard setting of concrete, improve workability without impairing strength and durability with about (5 cu.m) 7730kg of 20mm machine crushed stone jelly and with about (3.3 cu.m) 5156 kg of 10-12mm machine crushed stone jelly and with about (4.79 cu.m) 7670 kg of sand, but excluding cost of reinforcement and fabrication charges , centering and shuttering and also including laying, vibrating with mechanical vibrators, finishing, curing etc complete complying with standard specification and as directed by the departmental officers. The coarse and fine aggregates to be used should comply with the requirements of IS standards.(No separate payment will be made by the Department for the excess usage of materials)					
a	586.00 m <sup>3</sup> (Five Hundred and Eighty Six Cubic meter only)	Below G.L. upto 1.5 m depth	SS 30	1 M <sup>3</sup> (One Cubic metre only)			

**CONTRACTOR**

10		Providing and laying in position standardised Reinforced cement concrete Mix M-25 Grade in accordance with IS 456-2000 using 20mm and downgrading hard broken granite stone jelly for all RCC items of works with minimum cement content of 350 kg/m <sup>3</sup> and maximum water cement ratio of 0.50, including admixture (plasticiser /Super plasticiser) in recommended proportions as per IS 9103 to accelerate , retard setting of concrete, improve workability without impairing strength and durability with about (5 cu.m) 7730kg of 20mm machine crushed stone jelly and with about (3.3 cu.m) 5156 kg of 10-12mm machine crushed stone jelly and with about (4.79 cu.m) 7670 kg of sand, but excluding cost of reinforcement and fabrication charges , centering and shuttering and also including laying, vibrating with mechanical vibrators, finishing, curing etc complete complying with standard specification and as directed by the departmental officers. The coarse and fine aggregates to be used should comply with the requirements of IS standards. (No separate payment will be made by the Department for the excess usage of materials)					
a	102.80 m <sup>3</sup> (One Hundred and Two Point Eight zero Cubic meter only)	Below G.L. upto 1.5 m depth	SS 30	1 M <sup>3</sup> (One Cubic metre only)			

**CONTRACTOR**

b	270.60 m <sup>3</sup> (Two Hundred and Seventy Point Six zero Cubic meter only)	Below G.L. upto 1.5 m to 4.5 m depth	SS 28	1 M <sup>3</sup> (One Cubic metre only)			
c	10.40 m <sup>3</sup> (Ten Point Four zero Cubic meter only)	Above G.L. upto 4.5 m height	SS 28	1 M <sup>3</sup> (One Cubic metre only)			
11	3370.40 m <sup>3</sup> (Three Thousand Three Hundred and Seventy Point Four Zero Cubic meter only)	Supplying and laying of Launching apron revetment with jeddy stones of each size greater than 300mm and weight more than 40kg including cost of labour etc., complete complying with standard specification and as directed by the departmental officers.	SS 3 & 25	1 M <sup>3</sup> (One Cubic metre only)			
12	698.50 m <sup>3</sup> (Six Hundred and Ninety Eight Point Five zero Cubic meter only)	supplying and filling for 80mm to 10mm jelly for inverted filter with a thickness of 40cm over river sand filling as a filter media for concrete blocks including cost of materials , conveyance, labour charges for laying etc., complete complying with standard specification and as directed by the departmental officers.	SS 5A & 25	1 M <sup>3</sup> (One Cubic metre only)			
13	349.25 m <sup>3</sup> (Three Hundred and Forty Nine Point Two Five Cubic meter only)	Supplying and filling with clean river sand in layers of not more than 15 cm thick, well watered, rammed and consolidated etc., complete complying with standard specification and as directed by the departmental officers	SS 5A & 25	1 M <sup>3</sup> (One Cubic metre Only)			

**CONTRACTOR**

14	585.00 m <sup>3</sup> (Five Hundred and Eighty Five Cubic meter only)	Supplying and filling the gravel in between gaps of CC blocks including cost of gravel and stacking to the department gauge for premeasurement etc., complete complying with standard specification and as directed by the departmental officers.	Special	1 M <sup>3</sup> (One Cubic metre Only)			
15		Providing steel centering for cement concrete block, column, footing, pedestal, plinth beam, grade beam etc., which require nominal strutting etc., using MS sheets 10 gauge thick of size 90cm x 60cm stiffened with MS angle of size 25mm x 25mm x 3mm laid over silver oak joists of size 10cm x 6.5cm spaced at 90cm c/c duly supported and removing the centering, strutting after specified period without damaging the concrete laid complete complying with standard specification and as directed by the departmental officers. Scaffolding and centering charges for the structural components is including the cost and conveyance of all material to the site including all labour charges and incidental charges etc., complete complying with standard specifications and as directed by the departmental officers.					
a	4354.00 m <sup>2</sup> (Four Thousand Five Hundred and Fifty Four Square meter only)	Centering Below Ground Level (Without strutting)	SS 86	1 M <sup>2</sup> (One Square metre Only)			

**CONTRACTOR**



		Supplying and erecting centering for sides and soffits including necessary supports and strutting upto 3.29m height for vertical/sloped surface as detailed below with all cross bracings using mild steel sheets of size 90cm x 60cm and 10BG stiffened with welded mild steel angle of size (25x25x3)mm laid over silver oak joists of size 10x6.5cm spaced at about 90cm c/c and supported by casurina props of 10cm to 13cm dia spaced not more than 75cm c/c etc.,complete complying with standard specifications and as directed by departmental officers.Scaffolding and centering charges for the structural components including the cost and conveyance of all materials to the site including all labour charges and incidental charges etc., complete complying with standard specifications and as directed by the departmental officers.					
b	2800.25 m <sup>2</sup> (Two Thousand Eight Hundred and Point Two Five Square meter only)	Centering Above Ground Level (For plain surface)	SS 86	1 M <sup>2</sup> (One Square metre Only)			

**CONTRACTOR**

		Providing steel centering for plain surfaces such as circular column , curved surfaces including strutting upto 3.29m high using MS sheets, 10 gauge thick of size 90cm x 60cm, stiffenend with MS angle of size 25mm x 25mm x 3mm laid over silver oak joists of size 10cm x 6.5cm spaced at 90cm c/c and suppoerted by casurina props of 10cm to 13 cm dia spaced at 75cm c/c and removing the centering and shuttering after specified period without damaging the concrete laid,complying with standard specification and as directed by the departmental officers.(For curved surface)					
c	114.70 m <sup>2</sup> (One Hundred and Fourteen Point Seven zero Square meter only)	Centering for curved surface	SS 86	1 M <sup>2</sup> (One Square metre Only)			

**CONTRACTOR**

16	522.00 Qtl (Five Hundred and Twenty Two Quintal only)	Supply and fabricating of steel required for all RCC works involved in the schedule including cost of steel ,cost of fabrication, labour charges for cleaning the rods straightening, cutting, bending, tying grills including over lapping to the required length wherever necessary and placing reinforcement in position as specified in the drawing including cost of binding wire provision for space bar cover blocks and all other incidental charges etc., complete complying with standard specification and as directed by the departmental officers.	SS 86	1 Qtl (One Quintal Only)			
17	690.00 Nos. (Six Hundred and Ninety Numbers only)	Manufacturing, supplying and fixing of Cement Concrete blocks of following size in CC M15 (One cement, Two sand and Four Aggregate) using 20 mm hard broken granite stone jelly including cost of moulding charges, casting of slabs, finishing, curing and fixing in position and transportation etc., complete complying with standard specification and as directed by the Departmental Officers.	SS 28	1No. (One Number Only)			

**CONTRACTOR**

18	5485.00 Kg (Five Thousand Four Hundred and Eighty Five Kilograms only)	Fabricating, supplying and erection of screw Gearing steel Shutters of size 2.40mx 1.50m made out of 8mm thick Mild steel plates using ISMC 100 x 50 mm for horizontal stiffeners minimum 4Nos and ISMC 100 x 50mm channels for vertical stiffeners 6 Nos and 10mm mild steel plate for Gusset Plate 2 Nos of size 0.40 x 0.30m with required bolts and nuts, The grooves made by two numbers of 75x75x10mm MS angle in both sides with 40x40x6mm holdfast four numbers including fixing in correct alignment. The Shutter lifted with 63mm dia screw rod to a length of 6m threaded to a full length extended for a length of 4m with suspension channel 125x65mm MS channels. The screw rod operated with New 2T capacity worm nut and worm shaft gear box assembly consist of gear box body made up of cast iron, worm nut made up of gun metal including inside threading to suit the 63mm dia screw rod and helical teeth cutting in outside of the nut to suit the worm shaft and the worm shaft made up of ENS steel rod including machining, forming helical teeth and shaping the end to square to match the operating key and including providing 040 bearings two numbers on top and bottom of the worm nut and also provided with the gun metal pushes and thrust bearings each two numbers of worm shaft including cost of materials, machining charges and also including fabrication of stool for the Gear box made up of 16mm MS plate on the top supported with four legs for required height made up of 70x75x10mm MS angle and the top with 16mm MS plate of required size and the steel is to be rest on the top beam 2 Nos. for a length of 2.60m made up of 200x100mm RSJ beams fixed to the pier with 25mm dia foundation bolt 0.60m length and fix plate 2 Nos of size 450mm x300mm made up of 20mm thick MS plate. The rate including cost of all materials, labours, equipments charges, conveyance of labours, materials and equipments to site and also the conveyance of above equipments and labours from the worksite. The shutter should be painted with two coat of Anticorrosive black paint over one coat of zinchromate primer. The rate shall include petty civil works and trial operations etc., complying with standard specifications and as directed by the departmental officers	Special	1 Kg (One Kilo gram only)			
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**CONTRACTOR**

19	40.25 m <sup>2</sup> (Forty Point Two Five Square meter only)	Providing chequered plate in the operating platform for a vertical lift geared shutter of size 2400 x1500 mm 3no with a platform of size 16100 x 2500 mm. The new chequered plate of 6 mm thickness of M.S.plate shall be checked for flatness and lifted to the overhead platform and marked and cut to exact size. Then the plate shall be laid in the panel welded to the suitable stiffeners below. Suitable holes shall be provided at appropriate places for drainage of rain water. Then all steel members should be given a coat of anticorrosive red oxide primer over which two coats of industrial black paint is applied. The cost includes cost of all materials, process charges like welding, cutting & drilling, labour charges for dismantling, loading, lifting, unloading, transport, erection, scaffolding charges, hire charges for equipments like chain pulley block, power charges from generator, conveyance to site and clearing them after completion of work, risk allowance for working at a height of more than 3m, cost of consumable like diesel, oil, welding rods & oxygen gas, warranty for 5 years, inclusive of all taxes,etc., complete and as directed by the departmental officers.	Special	1 M <sup>2</sup> (One Square metre only)			
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**CONTRACTOR**

20	1540.00 Hrs. (One Thousand Five Hundred and Forty Hours only)	Dewatering the stagnated water using dewatering pump with engine including cost of fuel and labour charges for operator pump etc complete and as directed by the departmental officers	Special	1 Hr. (One Hour only)			
21	88.00 RM (Eighty Eight Running meter only)	Supplying and fixing PVC pipes of size 110mm dia with ISI Standards (4 kg/cm <sup>2</sup> ) for providing pressure relief holes (weep holes) etc., including all labour charges for fixing etc complete complying with standard specifications as directed by the departmental officers.(at 2m interval)	SS 97	1 RM (One Running metre only)			
22	67000.00 m <sup>3</sup> (Sixty Seven Thousand Cubic meter only)	Earthwork in all soils except hard rock requiring blasting and conveying for formation of bund with all the leads or part thereof deploying earth moving machineries and tippers in layers of 15 cm thick including benching ,formation of bunds, breaking clods, sectioning etc., Complete complying with standard specification as directed by the Engineer in charge.(Bund formation). With a lead of 5 KMMR.	SS 20B	1 M <sup>3</sup> (One Cubic metre only)			

**CONTRACTOR**

23	432.00 m <sup>3</sup> (Four Hundred and Thirty Two Cubic meter only)	Manufacturing and fixing the Cement concrete block of size 300 mm X 250 mm X 200 mm of mix M 15 grade using machine broken hard blue granite broken stone jelly of 20 mm size including the cost and conveyance of all materials to work site, labour charges for fixing the same in position and including all other incidental charges, handling charges etc complete complying with standard specifications and as directed by the departmental officers.	SS 28	1 M <sup>3</sup> (One Cubic metre only)			
24	10.00 Nos. (Ten Numbers only)	Providing and fixing in position RCC Boundary Pillar of size 1.45x0.20x0.20m RCC M15 mix using machine crushed 20mm gauge hard granite stone jelly including grills placed in position and laying consolidating by vibrators, curing, finishing etc., complying with standard specification and as directed by the Engineer – in Charge of works.	SS 28	1 No. (One Number Only)			
25	132.50 RM (One Hundred and Thirty Two Point Five zero Running meter only)	Supplying and fixing of PVC water Bar 150mm wide with single bulb including all labour charges, conveyance charges for fixing etc.,complete complying with standard specification and as directed by the departmental officers.	SS 97	1 RM (One Running metre only)			
26	151.00 m <sup>2</sup> (One Hundred and Fifty One Square meter only)	Supplying and fixing Bitumen felt 15mm thick pad for joints in the wall etc., at 25m interval including all labour charges for fixing etc., complete complying with standard specification and as directed by the departmental officers.	Special	1 M <sup>2</sup> (One Square metre only)			

Total No. of Items : 26 (Twenty Six items)only

**CONTRACTOR**

- 1) Total bid Price (in figures)**
- 2) Total bid Price (in words)**
- 3) GST @ 12 % for Total bid Price (in figures)**
- 4) GST @ 12% for Total bid Price (in words)**
- 5) Total Including GST = Rs.**
- 6) Note: The Rate and price and line items total for all items of works described the bill of quantity should be excluding GST along with total price. The GST will be calculated and quoted @ 12% for the sum for total bid value.**

**Contractor**

**Superintending Engineer, WRD.,  
Special Project Circle, Palani**



## **SCHEDULE – 'B'**

### **List of Drawings**

Note : All drawing to be signed by the contractor as well as the officer entering into contract.

<b>Sl. No.</b>	<b>Description</b>	<b>Number of Drawings</b>
<b>1</b>	<b>2</b>	<b>3</b>
1	Layout Plan	1
2	Plan and Cross Section of Checkdam	1
3	Plan and Cross Section of Scour vent	1
4	Section of Abutment, wing wall and return wall	1
5	Sectional Elevation and Cross section of divide wall of check dam	1
6	General Notes	1

**CONTRACTOR**

**Superintending Engineer, WRD.,  
Special Project Circle, Palani.**

## **SCHEDULE – 'C'**

List the specifications for the various items of works supplementing those described in Schedule – “A” by Standard Specification numbers.

1) The contractor shall employ the following Technical Staff for supervising the work and shall see that one of them is always at site during working hours, personally checking all items of works and paying extra attention to such works as may demand special condition attention e.g. reinforced cement concrete work.

Contractor:

<b>Name and number of the Technical staff to be employed</b>	<b>Qualification</b>	<b>Experience.</b>
1	2	3
--Separate sheet enclosed ---		

Note: In case contractor is himself professionally qualified, the above specification should be suitably altered and in cases in which the contractor selected has not given an undertaking to employ qualified men, it should be scored out.

Note: Additional specification, if any, which have to be entered in schedule “C” should be entered below head(1) above and numbered continuously.

**CONTRACTOR**

## **GENERAL CONDITIONS**

- 1) The work shall be carried out in strict accordance with Tamilnadu Building practicing and its volumes.
- 2) The contractor shall make his own arrangements for the procurement of cement, steel, binding wire and all other construction materials to the required specifications required for the work. The rates for several items of work involving the cement and steel will be inclusive of the cost of cement steel, storage, centage, conveyance charges.

Cement shall confirm to clause No 4 of I.S.456 – 1978 for the purpose of Specification.

For specification of Ordinary rapid hardening and low heat Portland cement L.S.269-1989 and for Portland Pozzalana cement I.S.1489 – 1991 shall apply

- 3) In case where the contractor is required to procure Portland cement for the work, shall always purchase Portland cement as fresh as possible after manufacture, and he shall on demand by the Executive Engineer, furnish a laboratory certificate of a character material with the approval of the Executive Engineer. This should be demanded in every case where there is reason to believe that the cement has been long stored and may have hereby deteriorated in quality.

The quality of cement and steel procured shall be in confirmation with I.S.I standards. The quality test shall be conducted by the contractors at their own cost, in the technical education centre laboratories(or) in the Government approved testing laboratories (or) in the Laboratories of Water Resources Department if available at various stages Water Resources Department has liberty to confirm the quality of the materials supplied by the contractor at various levels and stages at their own laboratory, at the cost of contractors, Random check by the officer incharge will be made for the each consignment and samples sent to Government authorized institution for testing at the cost of contractor.

- 4) The Executive Engineer shall reject any cement which is proved to be not according to standards.

- 5) For storage of cement paragraph 5 of I.S.269-1967 shall apply. In case where the contractor required to procure Portland cement for the work, he shall notify the Executive Engineer on the arrival of each consignment of Portland cement on the work, informing him at the same time of the brand, agent from whom obtained and age of the cement. Transporation from the place of supplying to the batching plant shall be whether Flight, Rail, Cars, Trucks, conveyance and other means which will protect the cement completely from exposure and moisture. Immediately upon receipt at the job site, bulk cement shall be stored in dry-Weather Light, properly ventilated places until the cement is used on works. Cement which has become or perished by moisture or other causes on no account be used on the work.

- 6) All storage facilities shall be subject to approval of Engineer in charge and shall be constructed to permit easy access for inspection and identification by the departmental officers.

- a) Avoid storage for long periods, do not store at all, if possible, during the rainy season
- b) Prevent circulation of air through the cement by close packing and cover with a tarpaulin
- c) For other precautions in this regard, I.S.A.4082-1987 shall apply
- d) Cement should be stored in a building or shed which is a leak proof and as moisture proof, as possible
- e) Cement which has fully(or) partially set, shall not be used

## **CONTRACTOR**

**f. Temporary store at site**

Very often bag of cement have to be stored in the work site out in the open, for use on work for one or more days. In such cases the bags shall be laid on a dry platform made of wooden planks resting on brick masonry, concrete or dry sand or aggregate platform 150mm above the ground.

The number of bags shall be kept to a minimum, preferably just sufficient for the day's consumption

Care shall be taken to see that every point in the pile is well covered by tarpaulin or polythene sheet and protected against the moisture in air. The Tarpaulin over lap each other properly.

**g. Non Payment to wasted concrete**

No payment will be made for wasted concrete in replacement of damaged or defective concrete or extra concrete required as a result of over excavation and excess concrete placed by the contractor intentionally, performed to facilitate the contractor's operations, shall be borne by the contractor himself, No extra payment will be made to contractor for such additional quantity of cement.

**h. Use of Pozzalona cement on works**

Ordinary Portland cement confirming to I.S.269 – 1989 shall be used for masonry work. Portland Pozzalona cement confirming to I.S.1489 – 1991 may also be used for masonry work in the event of non – availability of ordinary Portland cement with the prior approval of Engineer – in Charge.

7. Departmental machinery to the extent available will be supplied to the contractor and the hire charges will be recovered for the machinery from the contractor's bill at the rates that will be specified by the department, if hired

8. The contractors who are themselves not professionally qualified shall undertake to employ qualified Technical men at their cost to look after the work. The contractors would state in clear terms to employ Technical men required by 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 Technicaly qualified men is always at the site of work during working hours professionally checking all the items of works and paying extra attention to such works as may demand special attention (e.g.) reinforced cement concrete works, etc.,

**CONTRACTOR**

8(A) **The Details of Technical Assistants to be Employed**

The applicant shall have a site Engineer with degree in civil Engineering, Diploma in civil Engineering with minimum field experience noted against each, available as given below, exclusively for this work.

Project Manager : 1) One B.E Civil Engineering with Five years Experience  
(or)

1 No.(One Number) MBA with 10 years experience in similar project

Site Engineer : 2) Three. B.E., in Civil Engineering with 3years experience  
Plus three diploma Engineeringwith 5years experience in civil engineering

(or)

Three. B.E., in Civil with 3years experience  
Plus three retired junior engineers

(or)

Equivalent degree holder with 3years experience  
Plus three diploma holders in civil engineering/  
3 retired junior Engineers Plus one BE civil

(or)

One retired AEE or ADE plus three diploma holders in civil engineering  
Plus one BE civil

(or)

One retired AEE or ADE plus two retired junior Engineers  
Plus one BE civil

**CONTRACTOR**

**8(B)** If the tendered who is not professionally qualified fails to employ technical men as indicated above, fine shall be levied as follows during the period of Non- employment of technical men.

- a. **Rs.2000/-** Per month for Diploma holder
- b. **Rs.5000/-** Per month for Degree holder

**Note:** In case the contractor who is professionally qualified is not in a position to remain always at the site work during working hours personally checking all items of work and paying extra attention to such works as may demand special attention (e.g Reinforced cement concrete works etc) he should employ technically qualified men as prescribed for the works above.

The employment of Technical Assistant should be based on the value of contract. Engineers with Mechanical Engineering Qualification and reputed from Civil Engineering Department are also suitable to supervise the Civil Engineering Works because of their experience in Civil Engineering field.

A movement register should be opened and maintained for technical assistants employed by the contractor (or) for the technically qualified contractor. The Technical Assistant or Technically qualified contractor should note the arrival and their departure timings every day along with their initials. Such register should be produced during the inspection of the inspecting officer.

9) One I.T.I trained mason for every ten masons or part there of should be employed

10) The contractor shall not employ the labour below the age of 18 years

11) He should offer employment to Ex-Service man, Ex- toddy tappers and unemployed agricultural labours as far as possible

12) Sufficient labourers as may be required by the Executive Engineer shall be employed on the work so as to gear up the progress of the work and the contractor bound to employ such extra labourers without claiming extra.

13) The contractor shall not claim for any loss due to unforeseen circumstances including suspension of work due to cause.

14) Accident to people employed by the contractor resulting compensation to be paid as per the workmen Compensation Act shall be on the contractor's account.

15) The contractor should make his own arrangements for the conveyance of materials to the work site from sources specified.

16) The quarry specified is the nearest one to the work spot, where one use material as per specification required are now available, but if the quarry containing similar of specification , happened to be at the nearer distance of the work spot then the quarry specified in the schedule. The Executive Engineer shall have right to ask the contractor to quarry the required materials only from nearest quarry and to allow rates for the same based on the lesser lead during the time of execution of the work.

17) Payment will be made on detailed measurement. Any of the items in the schedule may be omitted or altered technically and no variation in the rate shall become payable to the contractor on account of the omission (or) variation in quantities.

18) Before payment of final bills the contractor shall produce certificate from the Income Tax authority that all income – tax payable by him up to date has been paid and certificate from the sale tax authority that all the Sales Tax payable by him up to date has been paid.

## **CONTRACTOR**

19) The Executive Engineer will be at liberty to withdraw any portion of work or to carry out any portion of the work at any time either Departmentally or through other agency in the interest of Government without assigning any reasons to the contractor who is actually doing the work and the Executive Engineer's decision will be final and binding on the contract and contractor is not entitled for any compensation on account of the same.

20) In the event of work being transferred to any other Circle/ Division/ Sub-Division, the Superintending Engineer / Executive Engineer / Assistant Executive Engineer who is in charge of the Circle/ Division/ Sub-Division having jurisdiction over the work shall be competent to exercise all the powers and privileges reserved in favour of the Government.

21) The rates should be inclusive of all taxes payable to the Government by the contractor.

22) The rates will be for the finished items of work and no extra will be paid for seigniorage charges.

23) An amount of 2% of the value of the work including cost of all materials such as cement, steel, etc., will be deducted from the contractor's bill at the time of payment towards income tax.

24) The site should be cleared by the contractor after completing the work, as required by the departmental Engineers, at his cost without claiming extra.

25) The work shall be carried out without any hindrance or damage to the existing cross masonry works such as bridges, super passages etc.

26) A deduction of 20% and 10% will be made in the quantity of earth work measured for thandoos and muttoos respectively and refund of amount on account of this deduction will be made only when the satisfactory removal of the thandoos and muttoos is made. If the thandoos and muttoos are not removed within 30 days from the date of check measurement or within the period as fixed at the discretion of the Executive Engineer, the 20% and 10% deduction will not be revoked.

27) The recovery towards hire charges of machineries will be made at the rates specified and for the time actually utilised by the contractor or for the time required as per the date considering the output which ever is higher.

28) The sectioning of the bank should be done immediately after the work in the reach is completed. The final sectioning must be completed within 15 days after the completion of the work in the entire reach.

29) The earth required for the work shall be normally selected by the Department Engineers and the contractor is to use the earth so selected for forming bank, etc. as directed by the Departmental officers.

30) Payment for sand will be made for quantity of sand stacked after making necessary deduction for bulking from the stacked quantity.

NET QUANTITY =  $\frac{\text{Gross stacked quantity} \times 100}{100 + \text{percentage of bulking}}$

The percentage of bulking will be determined from the test conducted according to the procedure indicated in the Chief Engineer's circular Memo No.535-G/63 FP dt.9.9.93 on the undisturbed sample taken from the stacks. The rates to be quoted shall therefore be for one cubic meter of final quantity of sand to be stacked after necessary deduction of bulking.

31) Measurement for rock blasting and removal will be made on level basis and stack measurement also will be taken into comparison allowing 40% voids and the lesser one will be considered for payment. No over bulking will be allowed in blasting.

32) The contractor should prepare a bar chart for the works costing more than Rs.500 lakhs and produce the same before starting the work to the Executive Engineer for his approval.

## **CONTRACTOR**

33) For the purpose of payment for the earth work for the formation of the bund where special consolidations done by mechanical roller or hand or power roller, the quantity as per the borrow pit measurement or the quantity of Earth work as per levels after consolidation with 15 % allowances over the finished earth work, whichever is less will be taken as final quantity for making payment.

34) In case of any dispute or difference between the parties to the contract either during the progress (or) after the completion of the works or after determination, abandonment or breach of the contract as to any other matter or thing arising there under, except as to matters left to the self discretion of the Executive Engineer of the clause 18, 20, 25-3, 27(1), 34, 35 and 37 of the General conditions of contract as to the contractor may claim to be entailed them party shall forthwith give to the other notice or 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 herein after called "the arbitrator". In cases where the value of claim is more than Rs.50,000/- the parties will seek as specified in tender notice.

35) The contractor has to maintain the progress of work as per the percentage of work specified in tender. If the contractor fails to keep the rate of progress as stipulated in the tender, penalty will be imposed on the contractor for his slow progress with reference to clause 57 of Tamil Nadu Building Practice under preliminary specification.

36) Similarly for lighting arrangements to do any work, to keep up the accepted progress of work, the contractor has to take his own arrangements at his cost. Possible help to get power connections from the Tamil Nadu Electricity Board, etc so as to complete the work within the accepted contract period will be made by this department. But concreting has to be done in day time. No extra payment will be paid for such works.

37) The leads and lifts involved for the various materials as well as finished works are clearly furnished in the schedule. However the contractors are requested to inspect the places of work, the quarries for sand and metal and satisfy themselves about the adequacy of the provision made for lift and lead before tendering. The contractor will not be eligible for extra lead and lift even if it is actually involved during the course of the work.

38) An amount of 2% in the respect of civil works contract and 4% in respect of other works of the value of work including cost of all materials such as cement, steel etc, will be deducted from the contractors bill at the time of payment towards sales tax.

39) In the event of the death or insanity or insolvency or imprisonment of the contractor or where the contractor being a partnership or firm becomes dissolved or being a corporation goes into liquidation, voluntarily or otherwise, the contract may at the option of 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 forth with be measured up. and paid for at the rates provided in the contract schedule where such apply, or otherwise, by the most 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.

## **CONTRACTOR**



## **GENERAL CONDITIONS**

1. Period of Completion **12(twelve) months** inclusive of **RAINY SEASONS**.
  2. Execution and completion of the work should be within the period specified in the tender notice from the date commencement of work or handing over of site which ever is earlier.
  3. It must be distinctly and specifically understood that work will be executed complying with the specification in metric system found by Tamil Nadu Building Practice Vol. I and II. Payment will be made as per measurement recorded units only.
  4. The work shall be proceeded with expeditiously from the date on which the site is handed over and completed as early as possible as required by the departmental officers.
  5. The contractor must make his own arrangement to form approach roads and ramps, if any, required at his own cost and maintain the same through out the period of contract. On permission for using existing roads, if any, by the contractor must bear all charges to maintain for using the road. No extra cost on this account will be entertained by the Department.
  6. If night work is required to fulfill the agreed rate of progress all arrangements shall be made by the contractor including lighting the area without any additional claims.
  7. The rates specified in the schedule for the different items of work are for the finished works and no extra will be paid for baling and pumping charges indented on the work.
  8. The shed for storing the materials should be put up by the contractor at his own cost. The contractor's special attention is invited to relevant clauses of the general conditions of contract of Tamil Nadu Building Practice and also required to provide at his own expenses sheds, latrine, water, lights, urinals, etc.,
  9. Earth work and masonry work should be constructed simultaneously as required by the departmental officers.
  10. The contractor will be held responsible for the proper and safe custody of all the Departmental Materials which are handed over to the contractor until they are finally used on the work (or) taken over by the Department.
- 10(A) For slow progress action will taken by the Executive Engineer as per the clause 57.1, 57.2 and 57.3 of General Conditions of Contract of T.N.B.P. The contractor rates are inclusive of Sales Tax payable by the contractor to the Government as per the Tamilnadu General Sales Tax Act 1989 as amended from time to time. No enhanced rate will be payable to the contractor for any up a ward revision of Sales Tax during the currency of the contract 11. The contractor rates are inclusively of Sales Tax payable by the Contractor to the Government as per the Tamil Nadu General Sales Tax Act 1989 as amended from Time to time . No enhanced rates will be payable to the Contractor for any upward revision of Sales Tax during the currency of the Contract.
11. The contractor rates are inclusive Sales Tax payable by the contractor to the Government as per the Tamil Nadu General Sales Tax Act 1989 as amended from time to time . No enhanced rates will be payable to the contractor for any upward revision of Sales Tax during currency of the contract.

## **CONTRACTOR**

12. Contractors should obtain from the authorities concerned an Income Tax Clearance Certificate and Sales Tax Clearance certificate for the current year and submit it along with the tenders, contractors, who are engaged in works contract as well as Business for selling materials, should produce Sales Tax clearance Certificate or they should produce **NIL certificate**.

13) The work executed by the contractor under the contract shall be maintained at the contractor's risk until the work is taken over by the Executive Engineer. The Government shall not be liable to pay for any loss or damages occurred by or arising out of fire, flood, Volcanic eruption, earth quake, other convulsions of nature and all other 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.

14) If there are any dues from the contractor to the Government for this work, if it is not recoverable from the contractor under this contract or other contract, the dues will be recovered from the contractor by evoking the provision of the Tamilnadu Revenue Recovery Act 1964 (Tamilnadu Act V of 1964)

**15) Recovery under Revenue Recovery Act**

Whenever any amount has to be paid by the contractor by virtue and clause 57.4 General condition to the contract or any amount that may be due or may become due from the contractor made those presents and the contractor is not responding to the demands for payments against a said amount, then, the Government shall be entitled to recover the said amount under the provisions of the Tamil Nadu Revenue Recovery Act 1964 (Tamilnadu Act V of 1964) G.O.Ms.No. 1318 PW dt.22.5.1986 amended in Government letter No. 135130/Y2/88-3/dt.30.3.1990

16) A sum equivalent to **2 ½ percent** of the total value of the work done by the contractor will be retained with the Government for a period of 6 Months reckoned from the date of completion of the work in order to enable the department officers to watch the effect of all seasons on the work done by the contractor. The amount so retained with the Government will be refunded only on expiry of 6 Months period referred above. The contractor shall be liable to set right all the defects arising out of his faulty execution or sub standard work noticed during the above mentioned three years period at his cost.

**CONTRACTOR**

## **ADDITIONAL CONDITIONS FOR CONTRACTOR'S SPECIAL ATTENTION.**

1. The contractor is bound for recovery under Revenue Recovery Act for any liabilities under this contract.
2. "It at any time the Executive Engineer shall be of the opinion that the contractor delaying commencement of the work or violating any conditions of the progress of work, as defined in the tabular statement" rate of progress in the Articles of Agreement" the Executive Engineer will so advise the contractor in writing and at the same time demand compliance. If the contractor neglects to comply with such demand, within 7 days after the receipt of such notice it shall be then or at any time thereafter be lawful for the Executive Engineer to impose penalty or forfeiture on this contractor from the Deposit or to the determine the contract.
3. 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 under the provisions of Revenue Recovery Act.
4. On evaluation of tender if it is found that if the overall quoted amount of the tender is less than 5% to 15% of the value put to tender, the contractor shall pay an additional security at 2% of the estimated value. If the tenders discount exceeds 15% to 20% the contractor shall pay an additional security deposit of 50% of the difference between the quoted amount and estimated amount. . The tender documents received without the required EMD, and the additional security deposit, as indicated above will be treated as non responsive and Summarily rejected at first instance itself(EICE circular memo No: HDO(A)/13205/2011 dt:5.5.2011.
5. The Security Deposit in the shape of Bank term Deposit will also be accepted. The Security Deposit should have a validity period of **49( Forty Nine)** Months from the date of signing of agreement.
  - i. In addition to the aforesaid security deposit, the Executive Engineer shall deduct from the running account bills, an amount equivalent to **5% ( Five percent)** of the total value of each bill as retention money.
  - ii. The Security Deposit shall be released only after **36 Months** reckoned from the date of completion of work.
  - iii. **2 ½ % (Two and a Half Percent)** of the total value of the work, will be retained in the final bill of the work for a period of 36 months, reckoned from the date of completion of the work or as soon as after the expiration of such period of **36 Months**, as all defects shall have been made good according to the true intent and meaning here of, whichever shall last happen.
  - iv.(k). The Retention money of **2 ½ (Two and a Half Percent)** of the total value of contract after deducting any amount due to the department, shall be refunded to the contractor, after the defects liabilities attached to the contract is over (as per para 9(j) above) subject to the following conditions.
    - (i) The Executive Engineer, concerned should certify that no liability is due from the contractor.

## **CONTRACTOR**

### **CONDITION OF THE EARTH WORK**

1. The entire earthwork will be carried out in accordance with the relevant clauses of the Tamilnadu Building Practice and National Building code and confirming to the special specification set forth here under.
2. The site should be cleared before the excavation of foundation and starting of work
3. The rates specified in the schedule for the different items of works are for the finished work and no extra will be paid for incidental works like shoring, strutting, planking, sheeting etc., found necessary during excavation work.
4. The excavation and depositing of excavated soils shall be carried out as per the direction of departmental officers.
5. Each and every borrow pit will be individually marked either by the section officer or by one sub divisional officer and in urgent cases by the Technical Assistants 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.
6. No borrow pits should be less than 0.5 m in depth and a gap of not less than 0.5m should be left between any two consecutive pits. The length, width and depth of pits shall be decided to suit the requirement of earth work. When they were excavated for more than 3m in width, diagonal thandoos should be provided. In case the depth of the pit has kept lower than 0.5 m as mentioned above, the prior approval of the Executive Engineer must be obtained.
7. The contractor should not enter any private lands for removal of earth without prior written consent of the land owner and as per directions of the departmental officers. If he does so, for the unauthorised entry by the contractor, he will be fully held responsible for any consequences.
8. The contractor shall confine, to the areas allotted to him in the borrow areas. Any borrow pit in a area not allotted to and in reach not specifically allotted to him and in reaches allotted to other contractor, will not be measured and the contractor shall have no claim to such earth work. In case of any dispute on classification of soils in earth work the decision of the Executive Engineer shall be final, binding on the contractor.
9. The contractor's responsibility for excavating earth, loading into his lorries, transporting it and unloading in places shown by the departmental officer Whenever the earth is to be conveyed in contractor's lorries, the earth loaded into the lorries shall be transported and unloaded at the places shown by the departmental officers. Any earth deliberately unloaded at any other place not shown by the departmental officers will be measured separately and deducted from the contractors bill. The cost of conveying this earth will not be billed for.
10. The contractors responsibility is for excavating earth, loading into his lorries, transporting it and unloading in places shown by the Departmental officers.
11. Whenever the earth is to be conveyed in contractor's lorries, the earth loaded into the lorries shall be transported and unloaded at the places shown by the departmental officers. Any earth deliberately unloaded at any other place not shown by the departmental officers will be measured separately and deducted from the contractors bill. The cost of conveying this earth will not be billed for.

### **CONTRACTOR**

## **ADDITIONAL CONDITIONS**

### **1. CONCRETE**

- a) Only clear river sand, hard broken granite stones from the approved quarries specified in the tender schedule shall be used for the work. The broken stone shall be thoroughly washed before use.
- b) All concrete for the work shall be machine mixed and vibrated. Hand mixing shall not be allowed.
- c) All concrete shall be protected against injury until setting. Concrete shall be kept moist continuously for not less than fourteen days.
- d) The contractor must be prepared to conduct test at his own cost, on materials used in the work in standard laboratories and produce test certificate to ensure quality of materials.

### **2. STONE MASONRY**

- a. Only clean river sand and good stone shall be used on the works
- b. In all walls up to a width of 60cms bond stones running the wall shall be provided at an interval of 1.80 meters in a line of headers each header overlapping the other by 30cms or more shall be provided from front to back at 1.80m interval in every course. Care shall be taken not to place the bond stones of successive courses over each other. The position of bond stones shall be marked on both the faces for identification and verification (tar marking where plaster is to be applied will suffice)

### **3. ROUGH STONE AND GRAVEL FOR REVETMENT AND APRON:**

- a). Rough stone and gravel should be stacked for pre measurement at the site of work. The rough stone 110 cft including cft chips will be reckoned as 100cft, while 15 cft, of gravel are 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. When the revetment should be built up to an uniform depth as directed by the departmental officers, each stone should run to the full depth of the revetment.
- c) The new chips required for the revetment shall be stacked for premeasurements without any extra claim.

**Note: Supply of sand available at site an average lead of 1 km.**

## **SPECIAL CONDITIONS FOR STEEL**

### **MATERIALS**

- 1) The contractor shall make his own arrangements to procure all materials like cement, steel, binding wire and other required for the work, at his own cost.
- 2) In case where the contractor is required to procure steel for the work, he shall always purchase and use on work, high yield strength deformed (H.Y.S.D) steel bars of Grade Fe 415 conforming to L.S.1786-1985 specification for high yield strength deformed steel bars and mixed for cement concrete (Unless shown otherwise on the drawings the reinforced to be used)
- 3) The contractor shall always purchase the steel rods as fresh as possible after manufacture and he shall on demand by the Executive Engineer, furnish a laboratory test certificate of a character material, with the approval of the consignment of steel rods and for each category of rods (each dia) samples of rods will be selected for testing by department officer. Each consignment and cost of testing at the Government authorized institution will be borne by the contractor.

## **CONTRACTOR**

The quality of steel rods produced shall be with the I.S.I standard. The quality tests shall be conducted by the contractors at their own cost in the Government testing laboratories or in the laboratories of Water Resources Department if available at various stages. Water Resources Department has liberty to confirm the quality of the materials supplied by the contractor at various levels and stages at their own laboratory at the cost of contractor.

- 4) The Executive Engineer shall reject any cement and steel which is proved to be not according to standards.

### **PLACING**

1. The arrangement of steel rods for reinforcement for R.C.C. work shall be in accordance with departmental drawing supplied. For anchoring the concrete to the land rock, provision of anchor rods is made in the drawing and the contractor shall place these anchor rods to the spacing and depth shown in the drawing.
2. Reinforcement shall be bent and fixed in accordance with the procedure specified in Land Acquisition.2502-1963 (code of practice for bending and fixing of bars of concrete) All reinforcement shall be placed and maintained in position as shown in the drawings.
3. The rates for fabrication works should include all operations such as bending rods, binding wires, fixing grills and placing in position. The payment will be made on the basis of the weights of steel rods only. The diameter and linear length of rods will be measured after grills are tied and fixed in position unless otherwise prescribed. Placement dimensions shall be to the centre line of bars.

Reinforcement will be inspected for compliance with requirements as to size, shape, length, splicing, position after it has been placed but before laying concrete. Before reinforcement is embedded in concrete, the surface of the bars shall be cleaned of heavy flaky rust, if opinion of the Engineer in charge are objectionable. Heavy flaky rust than can be removed by firm rubbing with bulb.

As specified in the clause 11.3 of L.S. 4565-1978 unless otherwise specified by the Engineer in charge, reinforcement shall be placed with the following tolerances.

- a) For effective depth 20 min or less plus or minus 10mm
- b) For effective depth 20 more than 20 mm plus or minus 10mm

The cover in no case be reduced by more than one-third of specified cover of 5mm whichever is less. Reinforcement shall be securely held in position so that it will not be placed during placing of concrete. Special care shall be exercised to prevent any disturbances of the reinforcement in concrete that has already been placed. Welding of bars shall be done as directed by the Engineer in Charge in conformity with the requirement of clause 11.4 of L.S.456-1978 Chairs, hangers, spacers and other supports for reinforcement shall be concrete in total or other approval materials. Concrete shall be as shown in the drawings.

### **C. MEASUREMENT**

The diameter, linear length of rods will be measured when grills are tied and fixed in position. The length measure will include overlaps. But overlaps which are not authorised by the Engineer in Charge will not be measured. Overlaps on account of the contractor will not be measured. The waste cut bits will not be measured. The position on the overlaps should be got approved by the Engineer in Charge before grills are tied. The rates furnished are inclusive of binding wires and should be supplied by the contractor for which no extra payment will be given. The Engineer in charge will supply drawings of reinforcement details and bar bending schedules for adoption.

### **CONTRACTOR**

### **SPECIAL CONDITIONS**

1. The contractor shall be responsible for the sole custody and storage of the material under dry conditions at the places approved by the Executive Engineer
2. No royalty shall be charged where due for materials quarried from the Public Works Department (or) Government quarries. Assistance as necessary will be given to the contractor by the department to obtain access to quarries approved by the Executive Engineer . Plot rent shall be charged for the materials stacked in the department land during the course of construction provided such materials are removed in a month after the works are completed.
3. Royalty charges for use of private quarries and private land shall be paid by the contractor himself.
4. The contractor should make his own arrangements for providing approach road to the work site for which no extra will be paid to him . On completion of the work the contractor shall be permitted to remove the materials laid for formation of road. If the contractor is allowed to use the existing roads, he shall maintain it in good condition at his won cost through out the period of the execution of work.
5. Reference to Tamil Nadu Building Practice No. in the schedule of quantities referred to Vol. I and II of 1988.
6. The contractor shall abide by the contract labour regulation of the Public Works Department framed by the Tamil Nadu Government
7. The contractor should bear his own expenses for providing footwear for any labourer during cement mixing work and all the types of works and on his failure to do so, Government shall be entitled to provide the same and cost will be recovered from the contractor.
8. When there are complaints of non payment of wages, the labour bill of the contractor may be withheld pending clearance certificate obtained from the Labour Department
9. The Executive Engineer or any officer of the Public Works Department Government of Tamil Nadu duly authorised in this behalf or such Executive Engineer may put an end to the agreement at his option at any time.
  - a) Provided in respect of work costing above Rs.2500/- a notice of 10 days shall be given before such termination of work or for subletting for the portion of the work for any other reason.
  - b) And provided that in the case of said work (or) materials, action will be taken as provided in the clause 27.1 of General conditions of contract.
10. When an agreement is terminated under the clause (9) above, the officer terminating the agreement shall have the option to take over any or all the materials and other equipments at a value assessed by him and if the contractor does not agree to this he shall clear the site by removing at his own cost all such materials, equipment etc. within 10 days from the termination of the agreement, failing which, the Government may remove and sell the same, holding the proceeds less the cost of removal and sale, to the credit of the contractor.

### **11. Claims of Contractors on account of Losses due to unprecedented floods and other acts of God.**

The works executed by the contractor under the contract shall be maintained at the contracctor's risk until the work is taken over by the Executive Engineer. The Government shall not be liable to pay for any losses or damages accessioned by or arising out of fire, flood, volcanic eruption, earthquake, other convulsions of nature and all other natural calamities, risk arising out of acts of God during such period and that the option whether to **take an insurance** cover or not to cover such risks, is left to the contractors.

### **CONTRACTOR**

## **SCHEDULE – D**

(Applicable to all cases of works other than those relating to roads, channels and canals when a minimum of fifty workers are employed)

### **RULES FOR THE PROVISION OF HEALTH AND SANITARY ARRANGEMENTS FOR WORKERS.**

The contractor's special attention is invited to relevant clauses of the General conditions of contract in the Tamil Nadu Building Practice and he is requested to provide at his own expense the following amenities to the satisfaction of the Executive Engineer .

#### **1. FIRST AID**

- a) At the work site there shall be maintained in a readily accessible place, first aid appliances and medicines including an adequate supply of sterilised dressings and sterilised cotton wool. The appliances shall be kept in good order. They shall be readily available during working hours.
- b) At large work places, where hospital facilities are not available within easy distance of the works, first aid posts shall be established and be run by a trained compounder.
- c) Where large work places are remote from regular hospitals an in-door ward shall be provided with one bed for every 250 employees.
- d) Where large work places are situated in cities, towns or in their suburbs and no beds are considered necessary owing to the proximity of 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 person or persons suddenly taken seriously ill, to the nearest hospital.

#### **2. DRINKING WATER**

- a) Water of good quality fit for drinking purposes shall be provided for the work people on a scale of not less than fifteen litres per head per day.
- b) Where drinking water is obtained from an intermittent public water supply each work place shall be provided with storage tank where such drinking water shall be stored.
- c) Every water supply storage shall be at a distance of not less than fifteen metres from any latrine, drain or other source 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 and water proof.
- d) A reliable pump shall be fitted to each covered well, the trap door shall be kept locked and opened only for cleaning or inspection which shall be done at least once a month.

#### **3. 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 drained condition. Bathing or washing should not be allowed in or near any drinking water well.

### **CONTRACTOR**



#### **4. LATRINES AND URINALS:**

There shall be provided within the presents of every work place, latrins and urinals in an accessible place and the accommodation, separately for each of them, shall be on the following scale or 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 exceed  
50 but not exceed 100 - 3 seats
- iii) For every additional 100 - 3 seats

If women are employed, separate latrines and urinals, screened from those for men shall be provided on the same scale.

Except in work places provided with water, flushed latrines connected with a water borne sewage, all latrines shall be provided with receptacle on dry earth system which shall be cleaned atleast four items daily and atleast twice during the working hours, and kept in strictly sanitary conditions. The receptacles shall be tarred inside and outside atleast once a year.

The excreta from the latrines shall be disposed off at the contractor's expense, in outway pits approved by the local Public Health Authority. The contractor shall also employ adequate number of scavengers and conservancy staff to keep the latrins and urinals in a clean condition.

#### **5. SHELTERS DURING REST**

At every work site there shall be provided, free of cost, two suitable sheds one for meals and the other for rest separately for men and women for the use of labourers.

#### **6. CRECHES:**

- a) At every work place at which 50 or more women workers are ordinarily employed there shall be provided two huts of suitable size for the use of children under 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 on a lower standard than the following.
  - i) Thatched roots ii) mud floors and walls iii) Planks spread over the mud floor and covered with matting.

The huts shall be provided with suitable and sufficient opening for light and ventilation. There shall be adequate provision of sweepers to keep the places clean. There shall be two dais in attendance. Sanitary utensils shall be provided to the satisfaction of the Health Officer of the area concerned. The use of the hunts shall be restricted to children, their attendants and mothers of the children.

- b) Where the number of women workers is more than 25 but less than 50, the contractor shall provide atleast one hut and one dai to look after the children of women workers.
- c) The size of creche or creches shall vary according to the number of women workers.
- d) The creche or creches shall be properly maintained and necessary equipment like toys, etc, shall be provided.

#### **7. CANTEENS**

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

### **CONTRACTOR**

## **8. SHEDS FOR WORKMAN**

The contractor should provide at his own expense sheds, for housing his workmen. The sheds shall be on a standard not less than the cheap shelter type, to live in which the work people in the locality are accustomed to.

A floor area of about 1.8m x 1.5m two persons shall be provided. The sheds to be in rows with 3 meters clear space between sheds and 9 meters clear space between rows if conditions permit. The work people's camp shall be laid out in units of 400 persons, each, each unit to have a space of 12 meters around.

## **9. GENERAL RULES AS TO SCAFFOLDS**

i) Suitable scaffold shall be provided for workmen for all works that cannot be safely done from a ladder or by other means. When a ladder is used an extra maxdoor shall be engaged for holding the ladder and the ladder shall be given an inclination not steeper than 0.25 to 1 (0.25 horizontal to 1 Vertical) when the ladder is used for carrying materials as well, suitable foot holds and hand holds shall be provided on the ladder.

- i) Scaffold shall not be constructed, taken down or substantially altered except.
  - a) Under the supervisions of a competent and responsible person and
  - b) As far as possible by competent workers possessing adequate experience in such work
- iii ) All scaffolds and appliances connected therewith and all ladders shall, be of sound materials
  - a) Be of adequate strength having regard to the load strain to which they will be subjected, and
  - b) be maintained in proper condition
- III. Scaffolding or staging more than 3.5 metres above the ground or floor shall have a guard rail properly attached, bol braced and otherwise secured at least 0.9 meters above the floor or platform of such scaffolding or staging and extending along the entire length of the outside and ends thereof with only such opening as may be necessary for the delivery of materials. Such scaffolding or staging shall be fastened as to prevent it from swaying from the building or structure.
- v) Scaffolds shall be so constructed that no part thereof can be displaced in consequence of normal use.
- vi) Scaffolds shall not be overloaded and so far as practicable the load shall be evenly distributed.
- v) Before installing lifting gear or scaffolds special precautions shall be taken to ensure the strength and stability of the scaffolds.
- vi) Working platform gangways, and stairways should be constructed that no part there can save unduly or unequally. if the height of the platform or the gangway or the stairway is more than 3.5 meters above ground level or floor level they should be closely boarded, should have adequate width and should be suitably fenced as described in (4) above.
- vii) Every opening in the floor of a building or in a working platform shall be provided with suitable fencing or railing for a minimum height of 0.9 meters to prevent the fall of persons or materials.

## **CONTRACTOR**

- viii) Safe means of access shall be provided to all working platforms and other working places. Every ladder shall be securely fixed. No portable single ladder shall be over 9 meters in length while the width between side rails in rung ladder shall in no case be less than 30cm for ladder up to and including 3 meters in length.

For longer ladders this width should be increased at least 20mm. for each additional meter of length. Uniform step spacing should not exceed 30cm. Adequate precautions should be taken to prevent danger from electrical equipment. No materials on the site of work shall be so stacked or placed as to cause danger or inconvenience to any person of the public. The contractor shall provide all necessary fencing and lights to protect the public from accidents and shall be bound to bear the expenses of defence of every suit, action or other proceedings at law that may be brought by any persons for injury sustained owing to neglect of the above precautions and to pay any damages and cost which may be awarded in any such suit, action or proceedings to any such persons or which may with the consent of the contractor be paid to compromise any claim by any such person.

## **10. WORKING PLATFORMS, GANGWAYS AND STAIRWAYS SHOULD BE**

So constructed that no part there can save unduly or unequally

- a) be so constructed and maintained having regard to the prevailing conditions as to reduce as far as practicable risks of persons tripping or slipping
  - b) be kept free from any unnecessary obstruction.
2. In the case of working platforms gangway working places and stairways at a height exceeding that to be prescribed by national laws or regulations.
- a) Every working platform gangway working places and stairways at a height boarded unless the adequate measures are taken to ensure safety.
  - b) Every working platform and every gangway shall have adequate width and every working platform gangway working place and stairway shall be fenced.
3. Every opening in the floor of a building or in a working platform shall except and the extent required to allow the excess of persons or the transport of shifting of manufacture provided with suitable means to prevent the fall of persons or materials.

When persons are employed on a roof, where there is a danger of falling from a height exceeding, that to be prescribed, by National Laws of regulations, suitable precautions shall be taken to prevent the fall of person or materials.

- 4)
  - a) Some means of access shall be provided to all working platforms and other working places
  - b) Every place where work is carried on and the means of approach, there shall be adequately lightened.
  - c) Every ladder shall be securely fixed one of such length to provide secure handhold and foothold at every position at which it is used.
  - d) Adequate precautions shall be taken to prevent danger from electrical equipment
  - e) No materials on the site shall be so stacked or placed as to be caused danger to any person.

## **11) HOISTING APPLIANCES**

- a) Hoisting machines and tackle including their attachments, anchorages and supports shall be good mechanical construction, sound materials and adequate strength and free from patent defect and shall be kept in good repair and in good working order. Every rope used in hoisting or lowering materials or as a means of suspension shall be of suitable quality and adequate strength and free from patent defect.

## **CONTRACTOR**

- b) Every crane driver or hoisting appliance operator shall be properly qualified and no person under the age of 21 years should be in control of any hoisting machine including the scaffold which or give signals to the operator.
- c) In the case of every hoisting machine and of every chain ring, hook shackle level and pulley block used in hoisting or lowering or as a means of suspension, the safe working load shall be ascertained by adequate means. Every hoisting machine and all gear referred to above shall be plainly marked with the safe working load, in the case of a hoisting machine having a variable safe working load, each safe working load and the conditions under which it is applicable shall be clearly indicated. No part of any hoisting machine or of any gear referred to above in this paragraph shall be loaded beyond the safe working load except for the purpose of testing.
- d) Motors, gearing, transmissions, electric wiring and other dangerous parts of hoisting appliance shall be provided with efficient safeguards. Hoisting appliances shall be provided with such means as will reduce to a minimum the risk of the accidental descent of the load. Adequate precaution shall be taken to reduce to a minimum the risk of any part of a suspended load becoming accidentally displaced.

When workers are employed on electrical installations which are already energised. Insulating mats, wearing apparel such as gloves, sleeves and boots as may be necessary should be provided. The workers shall not carry keys or other materials which are good conductors of electricity.

## **12. SAFETY EQUIPMENT AND FIRST AID**

- 1) These safety provisions should be brought to the notice of all concerned by display on a notice board at a prominent place at workshop. The person responsible for the compliance of the safety code shall be named by the contractor.
- 2) To ensure effective enforcement of the rules and regulations relating to safety precautions, the arrangements made by the contractor shall be open to inspection by the Labour Officer, Executive Engineer of the Departmental or other representative.
- 3) All machinery personal safety equipment shall be kept available for the use of the person employed on the site and be maintained in a condition suitable for immediate use.
- 4) The workers shall be required to use the equipment as provided and the employer shall take adequate steps to ensure proper use of the equipment by those concerned.
- 5) When work is carried on in any place where there is a risk of drawing all necessary equipment, shall be provided and kept ready for use and all necessary steps shall be taken for the prompt rescue of any person in danger.
- 6) Adequate provision shall be made for prompt first-aid treatment of all injuries likely to be sustained during the course of work.

## **13. PAYMENT**

- 1 When there are complaints for non-payment of wages, payment will be withheld pending clearance certificate from the Labour Department
- 2 All payment of wages shall be made on a working day except when the work is completed before the expiry of the wage period of which case final payment bill beyond within 48 hours of the last working day. The term working day means a day on which the labourer is employed is in progress.
- 3 Any person aggrieved by the decision of the Commissioner of Labour or the officers deputed by him to conduct enquiry may appeal against such decision of the Engineer –in-Charge of the works. The Commissioner of Labour shall be appellate authority in this regard.

## **CONTRACTOR**

- 4 The contractor is bound to allow or cause to be allowed to the labourers directly or indirectly employed in the works one day rest for six days continuous work and pay wage at the same rate as for duty. In the event of default the Executive Engineer or Sub Divisional Officer concerned shall have the right to deduct the sums not paid on account of wages for weekly holiday to any labourer and pay the same to the persons entitled there to from any money due to the contractor.
- 5 In case of an appeal made by the contractor under clause-3 above actual payment to labourers will be made by the Executive Engineers after the Commissioner of Labour has given his decision on such appeal.
- 6 A Workman shall be entitled to be represented in any investigation or enquiry under those regulations by
  - a) All officers registered under Trade Union of which he is a member
  - b) An officer of a federation of trade which to which the trade union referred to in clause (a) is utilized.
    - a) Where the employer is not member of any Association or by an officer an Association of employer connected with or by other employer engaged in the industry in which the employer is engaged.
- ii)
  - a) No part shall be entitled to be represented by a legal Fractioned in any investigation enquiry under those regulations.
  - b) All fines realised form the workers shall be applied only to such purpose beneficial to the person employed by specific authority.
  - c) Where the worker is not a member of any registered trade union or an officer of a registered trade union connected with or by any other workmen employed in the industry in which the worker.
- iii)
  - a) An officer of an Association of employers to which he is a member
  - b) An officer of a federation of "Association of Employers to which the Association referred to in clause (a) above is affiliated.
- 7) The contractors shall maintain in a wages in a wage register of each worker in such from as may be convenient, but at the same time it shall include the following particulars.
  - a)Rate of daily or monthly wages, nature of work on which employed,, total number of days worked during each wage period, all deduction from the wages with an indicator in each case of the ground for which deduction made and wages actually paid for each wage period.
  - b)The contractor shall also maintain a wage card for each worker employed on the work. The wage slips should also contain the particulars as in the above clause. Every contractor shall get the signature or thumb impression of every worker in wage books.

## CONTRACTOR

## **PREPARATION OF SUBGRADE IN EXPANSIVE SOIL**

In case of expansive soils, cohesive non swelling soil will be used for bedding. The thickness of C.N.S layer shall be designed according to swelling pressure of soil or as directed by the Engineer in charge. The bedding materials shall generally be 1000 mm in thickness and 600 thick cohesive non swelling materials in canal section whose discharges is more than 1.5 cumecs and less than 1.5 cumecs respectively conforming broadly to following gradation and Index properties.

Also, the CNS material shall be laid and compacted to 0.45 m beyond the finished profile ( as directed by the Engineer). This will provided a horizontal width of about 2.25 m corresponding to the canal slope of 1:5:1 which is the optimum width required for compaction by the power driven 8 to 10 T rollers. the extra width so laid shall be trimmed to the required profile and the material reused.

### **GRADATION**

- 1. Clay ( less than 2 microns )**
- 2. Silt ( 0.06 mm – 0.002 mm)**
- 3. Sand ( 2mm – 0.06 mm)**
- 4. Gravel ( Greater than 2 mm)**

### **INDEX PROPERTIES**

Liquid limit less than 55% but greater than 30% plasticity Index less than 30% but greater than 15%. The thickness of CNS in table I of IS 9451 - 1985 (reproduced below)

<b>SWELLING PRESSURE OF SOIL</b>	<b>THICKNESS OF CNS MATERIAL</b>
<b>KM / Sqm</b>	<b>Millimeters</b>
<b>50 to 150</b>	<b>750 to 850</b>
<b>200 to 300</b>	<b>900 to 1000</b>
<b>350 to 500</b>	<b>1050 to 1250</b>

Making due to allowance for field control and variation in the properties of CNS material in the field an optimum thickness of 1000 mm / 600 of CNS shall generally be adopted on bed and sides ( normal to slopes) in canal sections whose discharge is more than 1 : 5 cumecs and less than 1.5 cumecs respectively.

The contractor shall place test sections of selected bedding material at times and place designated by the Engineer – in – charges to show the adequacy of his construction procedures for laying the bedding material. The test sections shall confirm to clause 4.5.2 of I.S 3873 – 1978.

Suitable material trimmed from the canal shall be used to complete canal embankments to construct road embankments for back fill above structures or for selected bedding material. Where material suitable for selected bedding materials as determined by the Engineer – in - charge is encountered during trimming operations and cannot be placed in one continuous operation. Such materials shall be stock fitted along the right of way where designated by the Engineer in Charge.

All material required for preparing foundation shall be furnished by the contractor.

### **CONTRACTOR**

## **PRICE ADJUSTMENT CLAUSE**

**G.O. MS. NO. 60 PW (G2) Dept Dt:14.03.2008 and amended in G.O. MS. NO. 101 PW (G2) DeptDt : 10.06.2009.**

### **Price Adjustment Clause is eligible for this work subject to the following conditions:**

1. Price Adjustment Clause will be applicable for all works where value of work put to tender costing Rs. 100.00 lakhs and above. However **No Price Adjustment will be applicable for maintenance and repair works.**
2. The Full Price Adjustment on all the components including **cement, steel, bitumen and Petroleum, Oil and Lubricants (POL)** shall be applicable to the work with contract period of more than 12 months with all other conditions remaining the same as per rule 14(8) of 2000 Tamil Nadu Transparency in Tender rules.
3. Full Price adjustment **on cement, steel, bitumen and POL** is applicable, if the contract period is **12 months and below.**
4. Contract Price shall be adjusted for **increase or decrease** in rates for cement, steel, bitumen and Petroleum, Oil and Lubricants (POL), Labour, Plant & Machinery spares components and local materials 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.
5. Price adjustment will be calculated only on the estimated cost of work.
6. Price Adjustment will apply only when the fluctuation of rates exceed by 3% compared to the estimate rates (Reserve Bank of India – Index Price).
7. Price adjustment will be made for both **increase and decrease** in the cost of materials.
8. Bitumen and POL will be considered on 'Pass through" basis with payment of actual rates / price at the rates charged by Indian Oil Corporation.
9. Escalation will be given for only those quantities which would have been used had the contractor stuck to this original time line.
10. Price adjustment mechanism will cease to operate for the value of work executed beyond the agreement period.

## **CONTRACTOR**

11. 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 period; 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.

All works for which price Escalation / Variation is contemplated must have milestones 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 third quarter which ought to / should have been done in the earlier quarter, Price Escalation / Variation 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.

Price variation will be calculated as per 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 Reserve Bank of India. 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.

Price variation will be operated by the respective Divisional Engineers / Executive Engineers

**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.

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

where

$V_c$  = Increase or decrease in the cost of work during the quarter under consideration due to changes in the rate of Cement.

$C_0$  = The RBI index for cement for the quarter during the date of opening of tenders provided if the tender is accepted within 90days or otherwise this date will be reckoned only from the date of signing of agreement

$C_1$  = The RBI index for cement for the quarter under consideration

$P_c$  = Percentage for the cement component of the work

**CONTRACTOR**



#### **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.

$$V_S = 0.85 \times P_S / 100 \times R \times (S_1 - S_0) / S_0$$

where

$V_S$  = Increase or decrease in the cost of work during the quarter under consideration due to changes in the rate of Steel.

$S_0$  = The RBI index for Steel for the quarter during the date of opening of tenders provided if the tender is accepted within 90days or otherwise this date will be reckoned only from the date of signing of agreement

$S_1$  = The RBI index for Steel for the quarter under consideration

$P_S$  = Percentage for the Steel component of the work

#### **iii. Adjustment of Petroleum, Oil and Lubricants (POL)Component:**

Price adjustment for increase or decrease in the cost of Petroleum, Oil and Lubricants (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.

$$V_F = 0.85 \times P_F / 100 \times R \times (F_1 - F_0) / F_0$$

where

$V_F$  = Increase or decrease in the cost of work during the quarter under consideration due to changes in the rates of Petroleum, Oil and Lubricants.

$F_0$  = The average official retail price of High Speed Diesel (HSD) at the existing Consumer Pumps of IOC on the day thirty days prior to the date of opening of tenders provided if the tender is accepted within 90days or otherwise this date will be reckoned only from the date of signing of agreement

$F_1$  = The average official retail price of High Speed Diesel (HSD) at the existing Consumer Pumps of IOC for the 15<sup>th</sup> day of the middle calendar month for the quarter under consideration

$P_F$  = Percentage for the POL component of the work

#### **iv. Adjustment of Labour Component:**

Price adjustment for increase or decrease in the cost of Labour engaged 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.

$$V_L = 0.85 \times P_L / 100 \times R \times (L_1 - L_0) / L_0$$

where

$V_L$  = Increase or decrease in the cost of work during the quarter under consideration due to changes in the rates of local Labour.

$L_0$  = The average consumer price index for industrial workers for Chennai centre for quarter preceding the date of opening of bids as published by Labour Bureau provided if the tender is accepted within 90days or otherwise this date will be reckoned only from the date of signing of agreement

$L_1$  = The average consumer price index for industrial workers for Chennai centre for the quarter under consideration as published by Labour Bureau.

$P_L$  = Percentage for the Labour component of the work

#### **CONTRACTOR**

#### **v. Adjustment of Plant and Machinery Spares Component:**

Price adjustment for increase or decrease in the cost of Plant & Machinery spares 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.

$$V_P = 0.85 \times P_P / 100 \times R \times (P_1 - P_0) / P_0$$

where

$V_P$  = Increase or decrease in the cost of work during the quarter under consideration due to changes in the rates of Plant & Machinery spares.

$P_0$  = The average consumer price index Heavy Machinery and parts for quarter preceding the date of opening of bids as published by the Ministry of Industrial Development, Government of India provided if the tender is accepted within 90days or otherwise this date will be reckoned only from the date of signing of agreement

$P_1$  = The average consumer price index Heavy Machinery and parts for quarter under consideration as published by Ministry of Industrial Development, Government of India

$P_P$  = Percentage for the Plant & Machinery spares component of the work.

#### **vi. Adjustment of Local Materials Component:**

Price adjustment for increase or decrease in the cost of Local Material 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.

$$V_M = 0.85 \times P_M / 100 \times R \times (M_1 - M_0) / M_0$$

where

$V_M$  = Increase or decrease in the cost of work during the quarter under consideration due to changes in the rates of Local Material.

$M_0$  = The average consumer price index for all commodities for quarter preceding the date of opening of bids as published by RBI, Government of India provided if the tender is accepted within 90days or otherwise this date will be reckoned only from the date of signing of agreement

$M_1$  = The average consumer price index for all commodities for quarter under consideration as published by RBI, Government of India.

$P_M$  = Percentage for the Local Material component of the 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 rates may be paid.

The following percentages will govern the price adjustment for the entire contract:

a.	Cement	-	$P_C$	-	18.09 %
b.	Steel	-	$P_S$	-	4.37 %
c.	POL	-	$P_F$	-	0.57 %
d.	Labour	-	$P_L$	-	14.08 %
e.	Local Material	-	$P_M$	-	62.89 %
<b>TOTAL</b>				-	<b><u>100.00%</u></b>

(vi) Liquidated damages will be imposed on the contractor for the lapses / shortfall in achieving the rate of progress as per existing schedule.

#### **CONTRACTOR**

### **Liquidated Damages**

Liquidated damages will be imposed on the Contractor for the lapses/ short fall in achieving the rate of progress as per Milestone.

The liquidated damages for the whole of the works Rs.53500/Per day. (Rupees Fifty Three Thousand Five Hundred only)

- a. For mile stone 1 - Rs.27300 = per day (Rupees Twenty Seven thousand Three hundred only)
- b. For mile stone 2 - Rs.26200 = per day (Rupees Twenty Six thousand Two hundred only)
- c. The maximum amount of liquidated damages for the whole of the works is ten percent of final contract price.

Tender excess shall not be allowed on the tendered value of the work towards the probable increase in costs due to factors covered under Para 3 (1) (a), 3 (1) (b) and 3(1) (c) . In such Cases, if a cost increase is foreseen due to factors not covered under the above clauses, tender excess may be considered and provided based on justification of such factors and this power shall vest only with state Level Tender Award Committee/ Commissioner of Tenders

**CONTRACTOR**

**Superintending Engineer WRD.,  
Special Project Circle, Palani.**

**ADDITIONAL CONDITIONS**  
**TENDER CONDITIONS AMENDMENT TO BE MADE DUE TO IMPLEMENTATION OF GST (ANY FURTHER MODIFICATIONS / ADDITIONS CAN BE DECIDED BY THE TENDER INVITING AUTHORITY).**

The Tenderer should furnish the ‘ **Copy of Goods and Services Tax (GST) Registration No.**

The tenderer shall quote the rates and prices (both in figures and words) for all the items of the works described in the Bill of Quantities **excluding GST** along with sum of the quoted tender value **excluding GST** at the end (both in figures and words)

**GST RATES AT 12% FOR WORKS CONTRACT**

Government of India has notified vide Notification No. 20/2017-Central Tax (Rate), dated 22<sup>nd</sup> August, 2017 and Notification No.24/2017 – Central Tax (Rate). dated 21<sup>st</sup> 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

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

**INPUT TAX CREDIT (ITC)**

- a) **As per Notification 202, dated 29.06.2017 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.**

**TOTAL TENDER PRICE**

The total tender price will be the cumulative of value quoted for construction (Total Basic Rate+GST), shall be substituted.

The amount of EMD is fixed at 1% of the contract value of work put to tender **(including the GST Amount)**

The successful tenderer shall furnish a Security Deposit in the shape of Demand Draft drawn in favour of Executive Engineer for an amount equivalent to 2% of the contract value **including the GST Amount.**

In additional to the aforesaid 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 Services Tax (GST) Amount for all the running account bill)** of each bill as retention money.

Out of the 5% retention amount, 2 ½ % (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.**

**and the balance 2 ½ % will be retained for period of One** 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.

The retention money of 2 ½ % **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”.

The lowest tenderer will be identified who quotes lowest total tender price which including GST as per the clause..... 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 GST amount.

**CONTRACTOR**

**Superintending Engineer, WRD.,  
Special Project Circle, Palani.**

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

Substantially responsive to the tender documents and who has offered the lowest evaluated total tender price **(Total Quoted Value including the Goods and Services Tax (GST) Amount)**

Part or completed payment will be made only on 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.

**a) 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.**

**b) 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.

**c) 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 with input Tax Credit (ITC) availed at the time of payment of intermediate bill to the employer.

**d) Final Bill Payment :**

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

**e) 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.

The Applicant should produce income tax Clearance certificate valid for the current period, 'VAT' Verification Certificate (i.e. Previous assessment year and 'TIN' number having validity **and copy of Goods and Services Tax (GST) Registration No.**

The quantities given here are those upon which the lump sum tender cost of the work is based, but they are subject to alternations, omissions, deductions or addition as provided for in the conditions of this contract and do not necessarily show the actual quantities of work to be done. The unit rates excluding GST Amount, quoted below are those governing payment for extras or deductions or omissions according to the condition of the contract, as set forth in the Preliminary specification of the standard specifications for roads and bridges with the MORTH Specifications and other condition of specifications of the contract.

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.

The tendered should quote their rates excluding GST for the quantity and units specified under metric units under Schedule

**CONTRACTOR**

**Superintending Engineer, WRD.,  
Special Project Circle, Palani.**

The rates and prices tendered in the priced Bill of Quantities shall, except in so far as it is otherwise provided under the Contract, include all constructional plant, labour, supervision, materials, erection, maintenance, insurance, profit, taxes and duties (except GST), together with all general risks, liabilities and obligations set out in the Contract. The GST amount will be calculated at 12% of sum of the Bid value (excluding GST) quoted by the bidder for construction Cost specified in the BoQ. The BoQ should include **GST (Goods and ServicesTax )Amount**.

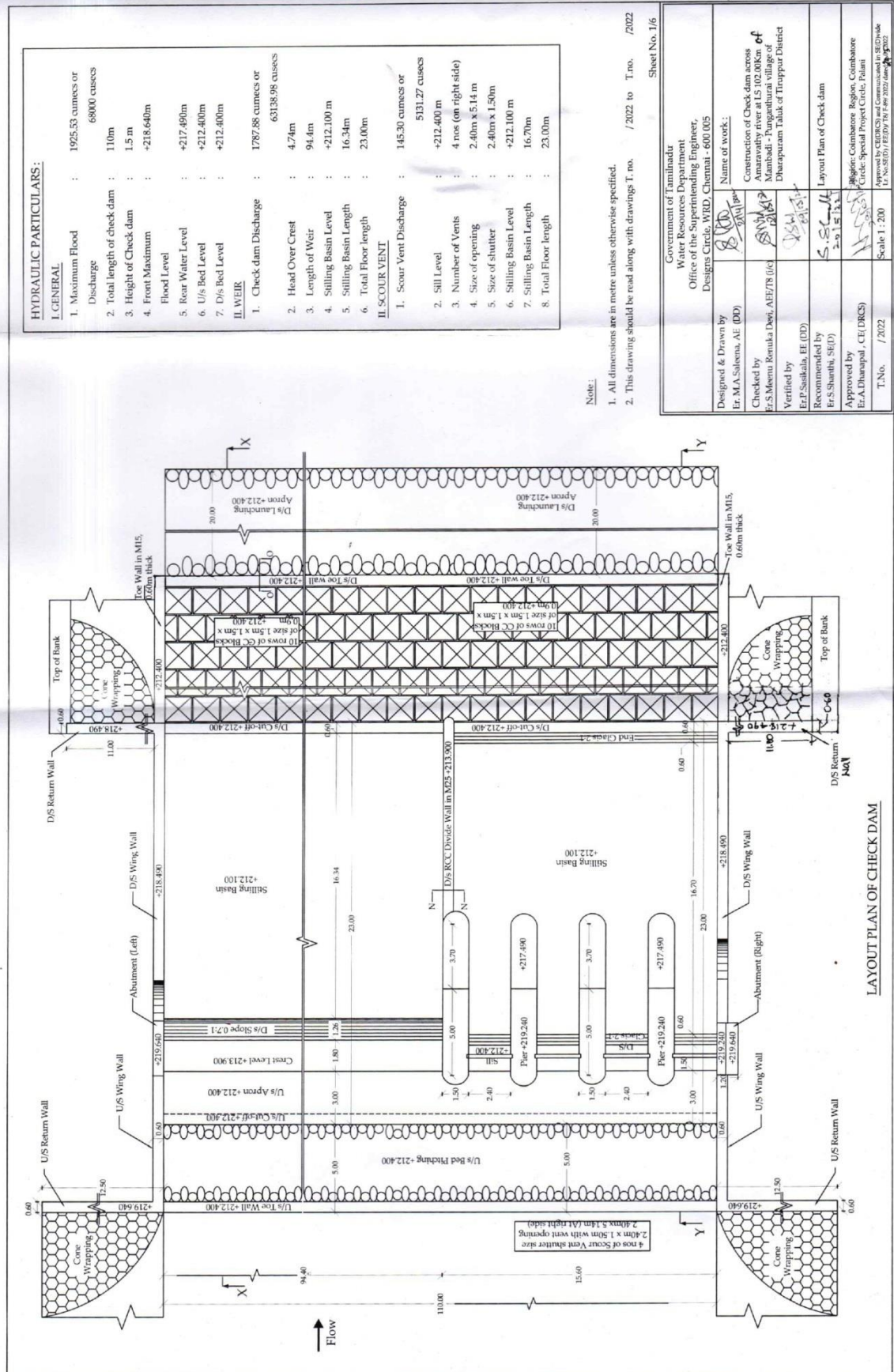
**Goods and Services Tax (GST) Registration and Addition of GST in Bills:**

The Contractor should be required to indicate their GST registration number under the Goods and Services tax (GST) Act 2017 in the tender form. The central Goods and Services (CGST) Act 2017, the integrated Goods and Services (IGST) ACT 2017 and the Tamil Nadu Goods and Services (TNGST) Act 2017 have been enacted and enforced from 01.07.2017. under the new tax regime, GST (Comprising CGST, SGST and IGST) on works contracts for Government work was finally notified at 12 Percent. As per the Tamil Nadu Goods and Services (TNGST) Act 2017, with effect from 01.07.2017.

**CONTRACTOR**

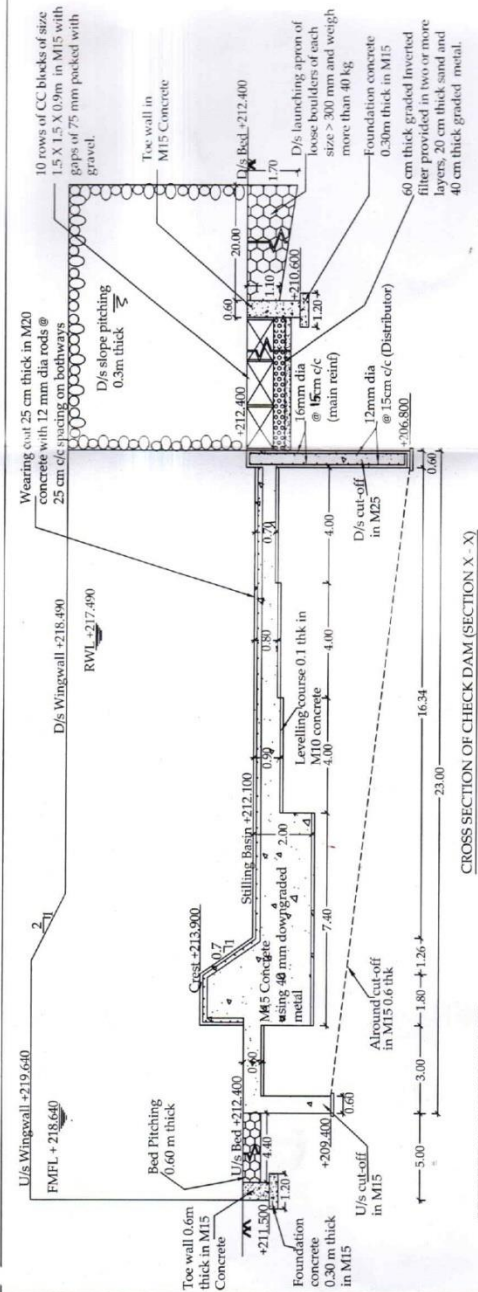
**Superintending Engineer, WRD.,  
Special Project Circle, Palani.**

# Drawing

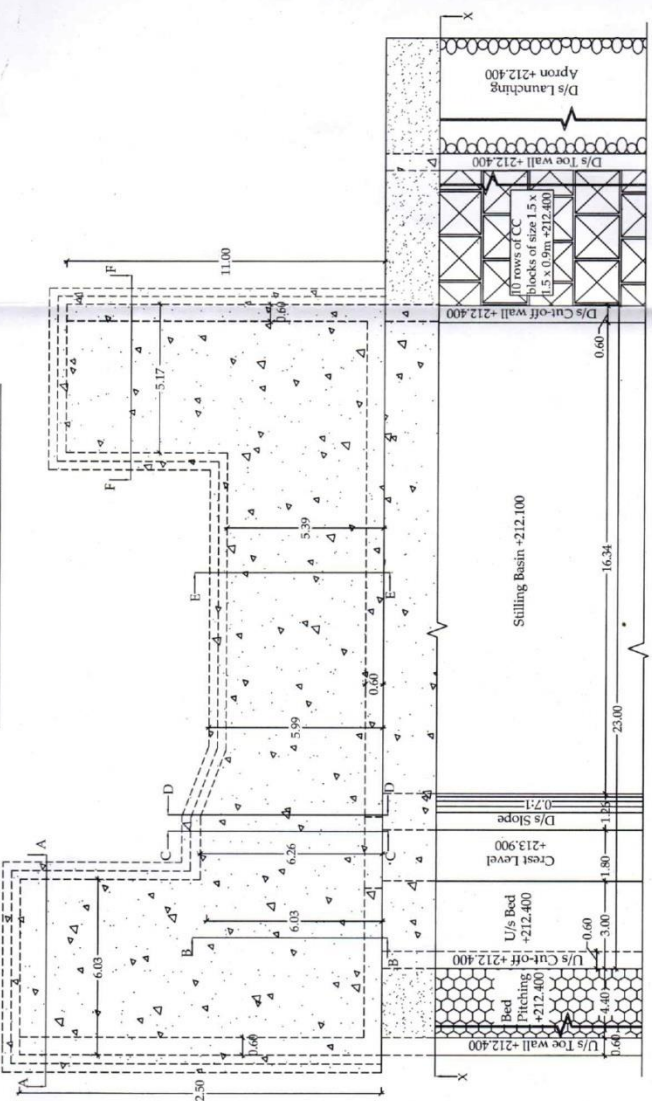




HYDRAULIC PARTICULARS (Weir):			
1. Maximum Flood Discharge	:	1925.53 cumecs or 68000 cusecs	
2. Discharge thru weir	:	1787.88 cumecs or 63138.98 cusecs	
3. Front Maximum Flood Level	:	+218.640m	
4. Rear Water Level	:	+217.490m	
5. Crest Level	:	+213.900m	
6. U/s Bed Level	:	+212.400m	
7. D/s Bed Level	:	+212.400m	
8. Height of weir	:	1.50 m	
9. Head Over Crest	:	4.74m	
10. Length of Weir	:	94.40m	
11. Stilling Basin Level	:	+212.100 m	
12. Stilling Basin Length	:	16.34m	
14. Stilling Basin Depth	:	0.30m	
15. Total Floor length	:	23.00m	



CROSS SECTION OF CHECK DAM (SECTION X - X)



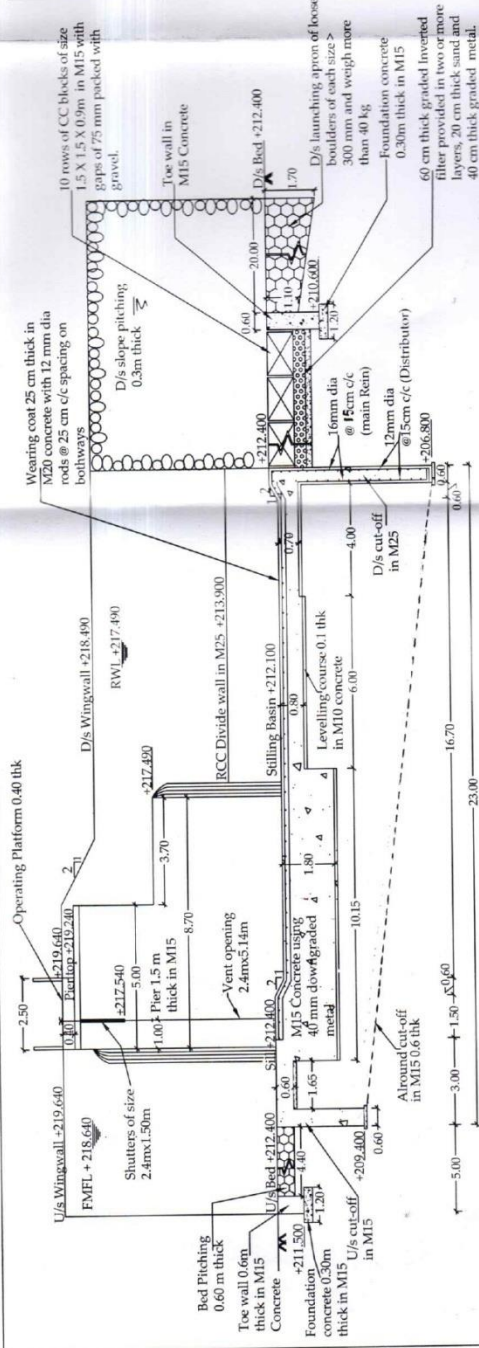
HALF PLAN AT TOP AND HALF PLAN AT BOTTOM M

Note:  
1. All dimensions are in metre unless otherwise specified.  
2. This drawing should be read along with drawings T. no. /2022 to T.no. /2022

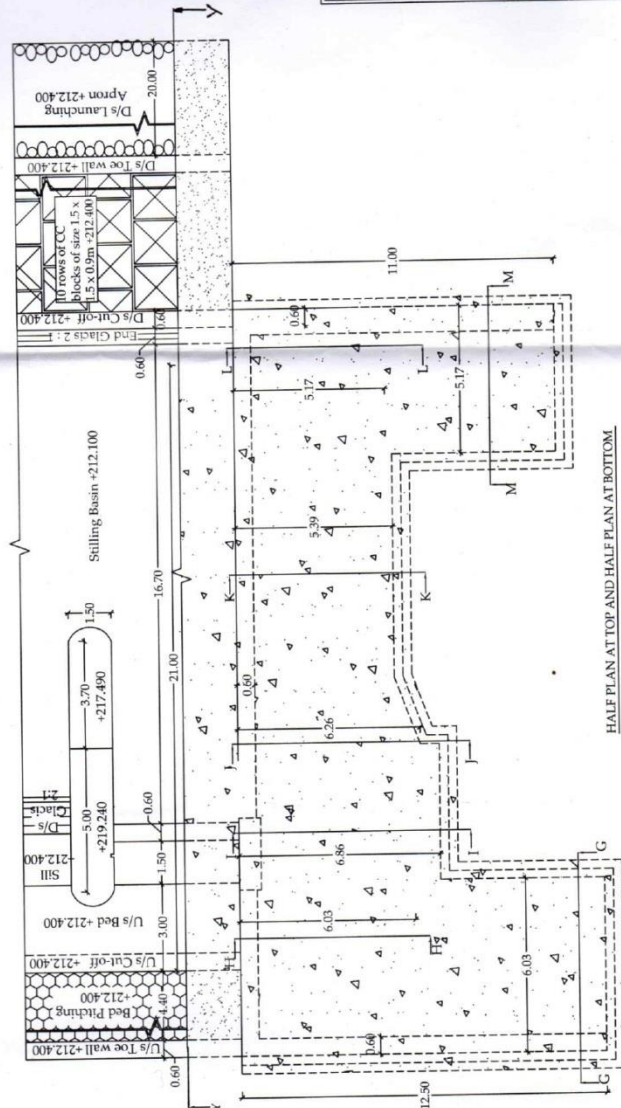
Government of Tamilnadu Water Resources Department Office of the Superintending Engineer, Designs Circle, WRD, Chennai - 600 005		Name of work: Construction of Check dam across Anaravathi river at LS 102.08km Mumbadi - Pungathuruthi village of Dharapuran Taluk of Tiruppur District	
Designed & Drawn by E.A.M.A. Salena, AE (DD)	Checked by E.S. Moosa Ramula Devi, AE/WRD	Verified by E.P. Sathish, EE (DD)	Recommended by E.S. Shanith, SE(DD)
Approved by E.A. Dhanapal, CE (DRCS)	Plan and cross section of Weir Region: Coimbatore Region, Coimbatore Circle: Special Project Circle, Palani		
T.No. /2022	Scale: 1:150	Approved by CE(DRCS) and Communicated in S.D.O. No. (S.D.O.) / WRD/ T. no. 2022, dated 15/05/2022	



HYDRAULIC PARTICULARS (Scour Vent portion):			
1. Maximum Flood	:	1925.53 cumecs or	68000 cusecs
2. Scour Vent Discharge	:	145.30 cumecs or	5131.27 cusecs
3. Front Maximum Flood Level	:	+218.640m	
4. Rear Water Level	:	+217.490m	
5. Sill Level	:	+212.400m	
6. Number of Vents	:	4 nos (right side)	
7. Size of shutter	:	2.40m x 1.50m	
8. Size of opening during flood	:	2.40m x 5.14m	
9. U/s Bed Level	:	+212.400m	
10. D/s Bed Level	:	+212.400m	
11. Stilling Basin Level	:	+212.100m	
12. Stilling Basin Length	:	16.70m	
13. Stilling Basin Depth	:	0.30m	
14. Total Floor length	:	23.00m	



CROSS SECTION OF SCOUR VENT PORTION (SECTION Y-Y)

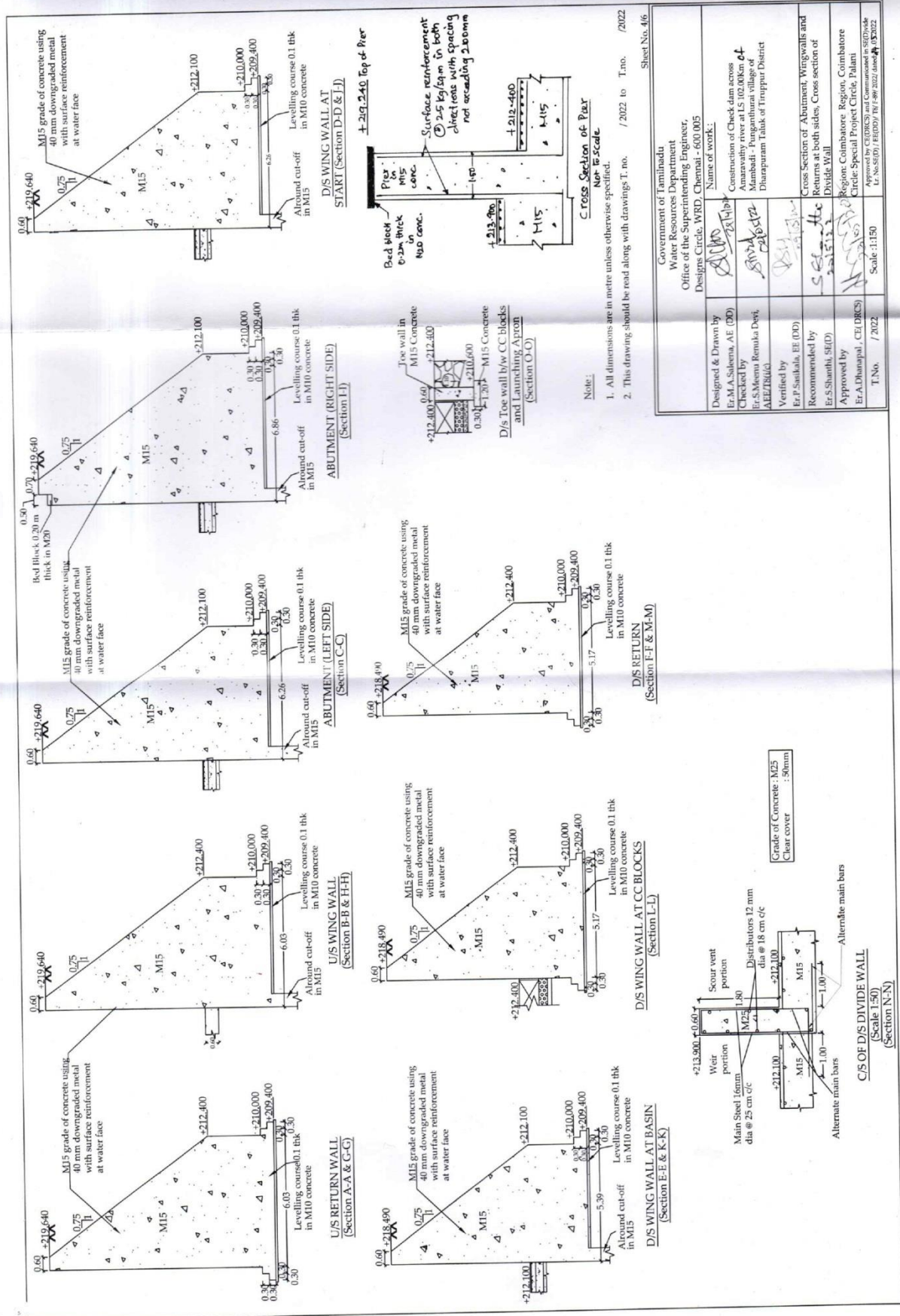


HALF PLAN AT TOP AND HALF PLAN AT BOTTOM

Note:

1. All dimensions are in metre unless otherwise specified.
2. This drawing should be read along with drawings T. no. / 2022 to T. no. / 2022

Government of Tamilnadu Water Resources Department Office of the Superintending Engineer, Designs Circle, WRD, Chennai - 600 005		Sheet No. 3/6	
Designed & Drawn by Er. M. A. Saleem, AE (DD)	Checked by Er. S. Meenu Renuka Devi, AE/ETB(c)	Name of work: Construction of Check dam across Anaravathi river at LS 102.00Km of Mambadi - Pungandhura village of Dharapuram Taluk of Tiruppur District	
Verified by Er. P. Sankala, EE (DD)	Recommended by Er. S. Shanthi, SE(D)	Plan and cross section of Scour vent	
Approved by Er. A. Dhanapal, CEI (RCS)	T. No. / 2022	Region: Coimbatore Region, Coimbatore Circle: Special Project Circle, Palani	
Scale: 1:150		Approved by CE/DRS and Communicated in SE/Dyade Lt. No. SE(D) / ETB(D) / TRF R/R 2022 dated 15/02/22	







# **General Notes:**

- The analysis has been made based on IS 6512-1984, IS 6966-1989, IS 12720-2004, IS 6531-1994, and IS 11130-1984.
- The design and drawing have been formulated based on the proposal received from the Superintending Engineer, WRD, Special Project Circle, Palani vide Lr. No : TS/ DB/ DO/ F/Checkdam/ 28M/ 2022 dated : 20.04.2022 and Executive Engineer, WRD, Amaravathi Basin Division Lr. No. TS/ AE(D)/ F/Mambadi-Pungandurai Checkdam/ 117M/ 2022 dated 25.04.2022.
- The design is prepared based on the hydraulic particulars furnished by the field Engineers. This may be ensured before execution.
- The Check dam has been designed for a maximum flood discharge of 68000 cusecs (1925.53 cumecs) as requested in the proposal and the same has been confirmed vide Executive Engineer, WRD, Amaravathi Basin Division, Dharapuram Lr. No. TS/ AE(D)/ F/Mambadi-Pungandurai Checkdam/ 126AM/ 2022 dated 04.05.2022.
- As per FMB sketch furnished, a land width of 135m is available. Hence, it is proposed to have the length of the structure between the abutments as 110m so as to accommodate the abutments, wing walls and return walls within the available width of 135m. This shall be ensured before execution. The Checkdam is proposed for a height of 1.5m as requested in the proposal.
- If any variation is noticed in the bed level or bed width of the proposed design during execution, the same shall be referred to Designs Circle for revised design.
- As per the trial pit details furnished, the sub strata consists of Brownish SDR for a depth of 3.00m followed by Blackish Weathered rock for a depth of 4.00m and Blackish hard rock for a depth of 10.0m. However, Permeable foundation is proposed for the structure. If there is any major variation in the soil strata furnished, it shall be referred to Designs Circle for revision.
- Weir is designed to dispose a discharge of 63138.98 cusecs (1787.88 cumecs). Four numbers of scour vents have been proposed with a shutter size of 2.40m x 1.50m with vent opening of 2.40m x 5.14m at the right side of the checkdam to dispose a flood of 5131.27 cusecs (145.30 cumecs).
- The parameters of backfill material such as saturated unit weight and angle of internal friction have been assumed as 2 t/cu.m. and 22° respectively. Hence material conforming to the above properties should be used as backfill material.
- The depth of footing for abutment and wing walls proposed below the sill levels are tentative and may be suitably modified according to the site conditions.
- The proposed lengths of upstream and downstream returns are tentative and may be modified to suit the site conditions to have proper key with the existing banks.
- The apron floor, body wall, pier abutment, wing walls and returns are proposed in M15 grade of concrete using 40mm downgraded metal. The upstream cutoff wall is proposed in M15 concrete using 20mm metal and the downstream cutoff wall is proposed in M25 concrete using 20 mm metal designed with necessary reinforcement.
- Surface reinforcement at the rate of 2.5 kg /sq.m. shall be provided in the abutment, wing walls and returns at water face in each direction i.e., both horizontally and vertically. Spacing of such bars shall not exceed 200 mm.
- Based on bore log particulars given, D/s cutoff bottom lies in Blackish Weathered rock. Hence the bottom of the D/s cutoff should not be keyed into the impervious layer as it will block the release of uplift pressure. If it exists suitable filter arrangements should be provided around the cutoff.
- Weep holes with necessary filter arrangements should be provided in the upstream and downstream wingwalls above FMFL and RWL respectively.
- Suitable Flood banks should be formed allowing a minimum free board of 1.0 m above the water surface elevation in the upstream side and in the downstream side.
- Necessary protection to the flood banks on the upstream and downstream sides shall be made by providing stone pitching for suitable length.
- The Pier and abutments should be constructed monolithic with apron floor.
- The top of operating platform has been tentatively fixed as +219.640m assuming that the depth of beam including the thickness of chequered plates over the bed block is 0.40 m. If there is any major variation, it shall be referred to Designs Circle for revision.

- The maximum stress developed at the bottom of the Abutment i.e., @ +212.100m level is 30.98/eq.m. The SBC of the foundation media should be checked before taking up the work.
- RCC Divide wall in M25 concrete is proposed in the downstream side designed with necessary reinforcement.
- The proposed downstream protection works should be maintained periodically for effective functioning of the check dam. The protections works may be relied after every flood if found necessary.
- Construction shall be carried out as per IS Specifications IS 457:1957 and IS 11155:1995.
- The abutment wing and return walls shall be founded in firm soil. Any minor disturbances during excavation shall be well compacted to the required level before founding the structure.
- Transverse contraction joints with PVC water stops shall be provided along the entire cross section of the check dam at the every 25m c/c up to the end of the floor as per IS specifications and code of practice in IS 15028: 2002 and IS 12200:2001.
- A clear cover of 75 mm shall be provided for the reinforcement provided in the stilling basin portion.
- The downstream of the river should be regraded for a bed width of 110m and a bed slope of 1 in 1200 for a distance of atleast 500m downstream from the proposed location of checkdam.
- Necessary bank connections should be provided at the ends of the structure both at U/s and D/s as indicated in the drawing.
- Design has been formulated based on the bed level, bed width and discharge furnished by the field Engineers. This shall be ensured before execution.

## Note :

This sheet should be read along with drawings T.no. / 2022 to T.no. / 2022

Sheet No. 6/6

Government of Tamilnadu Water Resources Department Office of the Superintending Engineer, Designs Circle, WRD, Chennai - 600 005		Name of work :	
Designed & Drawn by Er.M.A.Saleem, AE (DD)		Checked by Er.S.Meen Renuka Devi, AEE/T8(i/c)	Construction of Check dam across Amaravathi river at LS 102.00Km of Mambadi - Punganthurai village of Dharapuram Taluk of Tiruppur District
Verified by Er.P.Sathula, EE (DD)		Recommended by Er.S.Shanthi, SE(D)	General Notes
Approved by Er.A.Dhanapal, CE (DRCS)			Region: Coimbatore Region, Coimbatore Circle: Special Project Circle, Palani
T.No. / 2022	Scale 1 : 100	Approved by CE(DRCS) and Communicated to SE(D) vide Lr. No. SED/ F/ED/ T8/ F-89/ 2022 dated 14.05.2022	