

TAMILNADU WATER SUPPLY AND DRAINAGE BOARD

BID DOCUMENT

FOR OPERATION AND MAINTENANCE OF WSS/ CWSS



NAME OF WORK: Operation and Maintenance of CWSS to 144 Habitations in Manikandam Union and 29 Habitations in Anthanallur Union and 3 Private Beneficiaries in Trichy District for the period from 16.06.2022 to 31.03.2023 (9.50 months)

Last date of submission: Up to 03.00 P.M on 09.06.2022

Opening date: At 3.30 P.M on 09.06.2022

CHECK LIST TO BE ENCLOSED BY BIDDER (along with Bid Document)

The check list is only indicative and to assist the bidder in satisfactorily enclosing all required major documents for Technical Qualification. The list is not exhaustive and the bidder should read all clauses of the bid document so as to enclose all documents as required:

A. BID SECURITY

- i) Bid security for a value of **Rs.69,000/-** to be furnished
- ii) Furnish the details of Bid Security as under

Sl. No.	Name of the Bidder	Amount and type of security	Issued By

B. ELIGIBILITY/QUALIFICATION CRITERIA

Sl. No.	Description	Requirement as per Bid Document	Particulars as furnished by the bidder.	Page No. with Ref. no., if any, where the particulars are furnished by bidder.
	Financial Turnover & Cash flow.			
1	Minimum Annual Turnover in last three financial year Rs 68.02 in lakhs. – 33% of BOQ value.	22.44 lakhs		
2	Minimum cash flow required in Rs. 68.02 in lakhs. = $\frac{\text{BOQ value} \times 3 \text{ months}}{\text{Completion Period in Months}}$	21.47 lakhs		
3	The bidder should have satisfactorily completed Execution of water supply scheme or satisfactorily maintained WSS/ CWSS of value not less than Rs 68.02 in lakhs in the last five Financial years: - Either a) In a single agreement 40% of BOQ value - Or b) Under two agreement 60% of BOQ value.	27.20 lakhs 40.80 lakhs		

Sl. No.	Description	Requirement as per Bid Document	Particulars as furnished by the bidder.	Page No. with Ref. no., if any, where the particulars are furnished by bidder.
4	Physical (Work Experience) Minimum aggregate during last five years			
4.a	Minimum aggregate number of construction of Collector Well/ Collection well/ Infiltration well/ Intake well/ Jack well / off-take arrangements should have been successfully executed / maintained for a continuous period of 1 year In the last five years 30% of the total requirement rounded off to nearest integer but anything less than 1 would be rounded off to 1 only.	1 no		
4.b	Minimum aggregate experience of Full Scale Water Treatment Plant successfully executed/ maintained for a continuous period of at least 1 year – In the last Five years 15% of total requirement ofMLD	...		
4.c	Minimum aggregate experience of Pipeline in KM – should have supplied, laid, jointed, tested and satisfactorily completed or maintained the pipelines for a continuous period of at least 1 year in the last 5 years i) 10 % of total length of 340 M in MS/DI/CI pipe ii) 10 % of total length of 169.50 KM in PVC/HDPE pipe	34 m 16.95 km		

Sl. No.	Description	Requirement as per Bid Document	Particulars as furnished by the bidder.	Page No. with Ref. no., if any, where the particulars are furnished by bidder.
	iii) 10 % of total length of 33.34 KM in AC/RCC/PSC/BWSC/GRP Pipe	3.33 km		
4.d	Minimum aggregate experience of RCC Water retaining structures (LL) successfully executed / maintained for a continuous period of 1 year in the last 5 years. - 10% of total requirement of 45.70 LL capacity.	4.57 LL		
4.e	Minimum Aggregate capacity of pumping machinery pump sets, Valves, etc successfully installed or maintained(KW) for a continuous period of 1 year in the last 5 years. a) 20% of total capacity of 155.91 KW b) In case of HT installation, minimum one number of 112 KW /150 HP and above capacity pump sets.	31.18 KW		
4.f	Minimum Aggregate capacity of Transformer successfully installed or maintained for a continuous period of 1 year in the last 5 years: Atleast 1 No. of substation turnkey work executed/maintained		
5.	Bid capacity (Rs.68.02 lakhs) The Available Bid capacity should be more than the Bid value.	Bid capacity should be more than the		

Sl. No.	Description	Requirement as per Bid Document	Particulars as furnished by the bidder.	Page No. with Ref. no., if any, where the particulars are furnished by bidder.
	<p>Assessed Available Bid capacity = $(A*N*1.5) - B$</p> <p>Where</p> <p>A = Maximum value of civil engineering works executed/ maintained in any one year during the last three financial years <i>[updated to current price level @ 6% per annum]</i> taking into account the completed as well as works in progress.</p> <p>N = Number of years prescribed for period of the contract for which bids are invited i.e.,..... years.</p> <p>B = Value of existing commitments and on-going works to be completed during the next years. <i>[Updated to current price level]</i></p>	total bid value		

6. Whether performance eligibility for 4 (a), 4 (b), 4 (c) and 4 (d) above are based on certificate issued by the officer not less than the rank of Executive Engineer of that user departments and in the case of Private organization from the General Manager of that Organization (along with necessary countersignature by any government departmental officer not below the rank of Assistant Executive Engineer/ Notarization & photographs)

(Yes/No)

7. Whether Annexure - I to XI are all filled up fully and enclosed?

(Yes/No)

If Yes, give details as under (Notarized as per requirement)

Sl. No.	Description	Page Nos. in the Bidder's Document
1.	Performance of the bidder showing total monetary value of Execution / Maintenance of Civil Engineering works for the last three financial years (Annexure– I)	
2.	Average Annual Execution / Maintenance of Civil Engineering works Turn over for the last three financial years (Annexure – II)	
3.	Experience in works of similar nature of Magnitude during the last 5 years (Annexure – III)	
4.	Commitment of contracts (Execution/Maintenance of Civil Engineering works) on hand (Annexure – IV)	
5.	Works for which Bids are already submitted (Annexure-V)	
6.	List of equipments available with the bidder (Annexure – VI)	
7	Qualification/Experience of the key personnel proposed for technical and administrative functions under this contract (Annexure -VII)	
8.	Sample Format for evidence of access to or availability of credit facilities (Annexure – VIII)	
9.	Details of Litigation if any (Annexure – IX)	
10.	Declaration by the bidder pertaining to blacklisting / debarment etc., (Annexure – X)	
11.	Affidavit as an undertaking given by the Contractor should be certified by the Notary duly stamped on a Notaries Stamp (Annexure-XI)	

8. List of Certificates to be enclosed by the Bidder (Notarized as per requirement)

Sl. No.	Description	Page Nos. in the Bidder's Document
1.	Signature of the proprietor or proprietress attested by the Notary public.	
2.	Signature of all the partners / power of attorney attested by the Notary public	
3.	Registration of the firm, Signature of all the authorized person attested by the Notary public	
4.	A copy of the listed Power of Attorney authorizing the signatory of the bidder.	
5.	Proof of Registration of firm / company	
6.	Audited Balance sheets	
7.	Credit line certificate from Financial institutions	
8.	Income Tax clearance certificate.	
9.	Valid GST registration certificate.	
10.	Certificate of performance issued by not less than the rank of Executive Engineer / Responsible person of the organization.	

SIGNATURE OF TENDERER

**BID DOCUMENTS
INDEX**

Item No	Description of Work	Page No
I	Invitation for Bids	
II	Letter of Application	
III	Instructions to Bidders	
A	GENERAL	
1	Scope of the Bid	
2	Method of Bidding	
3	One Bid per Bidder	
4	Cost of Bidding	
5	Site Visit	
B	ELIGIBILITY / QUALIFICATION CRITERIA	
6	Eligible Bidder	
7	Qualification of the Bidder	
8	Special attention to Bidders	
C	BID DOCUMENTS	
9	Contents of Bid Documents	
10	Clarification of Bid Documents	
11	Amendments to Bid Documents	
D	PREPARATION OF BIDS	
12	Language of the Bid.	
13	Documents comprising the bid	
14	Bid Prices	
15	Currencies of Bid and Payment	
16	Bid Validity	

Item No	Description of Work	Page No
17	Bid Security	
18	Formal and Signing of Bid	
19	Pre Bid Meeting	
E	SUBMISSION OF BIDS	
20	Sealing and marking of Bids	
21	Deadline for submission of Bids	
22	Late Bids	
23	Modification substitution and withdrawal of Bids	
F	BID OPENING AND EVALUATION	
24	Bid Opening	
25	Process to be Confidential	
26	Clarification of Bids	
27	Examination of Bids and determination of Responsiveness	
28	Correction of Errors	
29	Evaluation and comparison of Bids	
G	AWARD OF CONTRACT	
30	Award Criteria	
31	Employers Right to accept any Bid and to Reject any or all Bids	
32	Notification of Award	
33	Registration in TWAD	
34	Performance Security	
35	Signing of Agreement	
36	Forfeiture of performance Security	
37	Foreclosure of works	
38	Termination of Contract	

Item No	Description of Work	Page No
39	Release of performance security	
40	Recovery of money payable to the TWAD Board	
41	TDS on Income Tax, GST	
42	Fund contribution for manual workers	
43	Mobilisation Advance	
44	Price Adjustment	
45	Dispute	
46	Force majeure	
IV	LIST OF ANNEXURES AND CERTIFICATES	
1	Performance of the bidder showing total monetary value of Execution / Maintenance of Civil Engineering works for the last three financial years – (7.1.4) (Annexure– I)	
2	Average Annual Execution / Maintenance of Civil Engineering works Turn over for the last three financial years – (7.1.5) (Annexure – II)	
3	Experience in works of similar nature of Magnitude during the last 5 years – (7.1.6) (Annexure – III)	
4	Commitment of contracts (Execution/Maintenance of Civil Engineering works) on hand – (7.1.6) (Annexure – IV)	
5	Works for which Bids are already submitted – (7.1.6) (Annexure-V)	
6	List of equipments available with the bidder – (7.1.7) (Annexure – VI)	
7	Qualification/Experience of the key personnel proposed for technical and administrative functions under this contract – (7.1.8) (Annexure -VII)	
8	Sample Format for evidence of access to or availability of credit facilities-(7.1.9) (Annexure – VIII)	
9	Details of Litigation if any – (7.1.10) (Annexure – IX)	
10	Declaration by the bidder pertaining to blacklisting / debarment etc., - (7.1.11) (Annexure – X)	

Item No	Description of Work	Page No
11	Affidavit as an undertaking given by the Contractor should be certified by the Notary duly stamped on a Notaries Stamp – (7.1.12)(Annexure-XI)	
	Certificates:	
1	Signature of the Proprietor or Proprietress attested by the Notary Public	
2	Signature of all the Partners/Power of attorney attested by the Notary Public.	
3	Registration of the firm, signature of the authorized person attested by the Notary public.	
4	A copy of the listed Power of Attorney authorizing the signatory of the bidder	
5	Proof of Registration of firm/company.	
6	Audited Balance sheets.	
7	Credit line certificate from Financial Institutions.	
8	Income Tax clearance certificate.	
9	Latest GST filing returns Certificate along with GST registration certificate	
10	Certificate of Performance issued by not less than the rank of Executive Engineer/Responsible person of the organization.	
V	GENERAL CONDITIONS OF CONTRACT	
	PART – I- Role and Responsibilities of the Contractor	
	PART – II- Payment mode for Contractor	
	PART – III- Role of the TWAD board	
	PART – IV-Labour laws and procedure adopted	
	PART – V- Special conditions	
	PART – VI- List of beneficiaries and earmarked quantity of water to be supplied	

TAMILNADU WATER SUPPLY AND DRAINAGE BOARD
INVITATIONS FOR BIDS - TWO COVER – PERCENTAGE TENDER SYSTEM

Bid No	03/ F. O&M Tender notice/DO-I/TPC/TRY/2022/ Dt:19.05.2022		
Eligibility	Registered Class-I Civil Contractors		
Tender Invitee	The Superintending Engineer, TWAD Board, Trichy – Pudukkottai Circle, Integrated Office Complex, No.35, J.K. Nagar, Kajamalai (Post),Trichy – 620 023.		
Sale of Bid & Place of Sale	25.05.2022 to 08.06.2022 O/o the Executive Engineer, TWAD Board,Maintenance Division, Trichy cash or Demand Draft on any Scheduled/Nationalized bank payable for Rs.1180/- (Rs.1000+ 18% GST)		
Down loading	www. tenders.tn.gov.in and www.twadboard.tn.gov.in . (free of cost)		
Pre Bid meeting	01.06.2022 at 11.00 AM at the office of the Tender Invitee		
Bid Submission	09.06.2022 before 3.00 PM at the office of the Tender Invitee.		
Bid Opening	09.06.2022 at 3.30 PM at the office of the Tender Invitee		
Sl.No	Name of Work	App.value Rs.in Lakhs	Bid security (Rs. in thousands)
Outsourcing of Operation and Maintenance of following CWSS in Trichy District for the period from 16.06.2022 to 31.03.2023			
1.	CWSS to 129 Habitations	68.65	69,000
2	CWSS to 144 Habitations in Manikandam	68.02	69,000
3	CWSS to 141 habitations	87.39	88,000
4	CWSS to Thiruverumbur Municipality	65.80	66,000
5	CWSS to Thuraiyur Municipality	84.73	85,000
Superintending Engineer, TWAD Board,Trichy – Pudukkottai Circle, Trichy			

Sd/- A.Muthaiya, 19.05.2022
Superintending Engineer, TWAD Board,
Trichy-Pudukkottai Circle, Trichy.

for Superintending Engineer

I. LETTER OF APPLICATION

(Letter head paper of the Applicant, including full postal address, telephone no., fax no., cable address, and E.Mail)

Dated:

To

The Superintending Engineer, TWAD Board,
Trichy – Pudukkottai Circle,
Integrated Office Complex,
No.35, J.K. Nagar, Kajamalai (Post),
Trichy – 620 023.Sir,

Being duly authorised to represent and set on behalf of

(hereinafter-the Applicant),

and having reviewed and fully understood all the information provided, the undersigned hereby apply for consideration as a bidder for the following:

**INVITATION FOR BID No: 03/ F. O&M Tender notice/DO-I/TPC/TRY/2022/
Dt:19.05.2022**

NAME OF WORK: Operation and Maintenance of CWSS to 144 Habitations in Manikandam Union and 29 Habitations in Anthanallur Union and 3 Private Beneficiaries in Trichy District for the period from 16.06.2022 to 31.03.2023 (9.50 months)

Attached to this letter please find copies of original documents defining the Applicant's legal status

- the principal place of business and
- the place of incorporation (for applicants who are corporation) or the place of
- registration and the nationality of the owners (for applicants who are partnerships or individually owned firms)

Your Agency and its authorized representatives are hereby authorized to conduct any inquiries or investigations to verify the statements, documents and information submitted in connection with this application, and to seek clarification from the bankers and clients regarding any financial and technical aspects. This 'Letter of Application'

will also serve as authorization to any individual or authorized representative of any institution referred to in the supporting information, to provide such information deemed necessary and requested by yourselves to verify the statements and information provided in this application, or with regard to the resources, experience and competence of the Applicant.

This application is made in the full understanding that

- Bids by the applicants will be subject to verification of all information submitted for consideration, at the time of bidding.

Your Agency reserves the right to

- Amend the scope and value of any contract bid under this project.
- And reject or accept any application, to cancel the entire bidding process and reject all the applications and
- Your Agency shall not be liable for any such action and shall be under no obligation to inform the Applicants of the grounds for them

It is hereby certified that the unit rates and price for all the items covered in the Bill of Quantities set out in the Price Schedule have been furnished clearly in figures and words and it is hereby agreed to execute the works at the rates and prices mentioned therein and to receive the payments on measured quantities as per the Conditions of the Contract.

It is hereby distinctly and expressly declared and acknowledged that before the submission of the bid, the instructions therein have been carefully followed and the conditions of the Contract and other terms and conditions have been read. It is also declared and acknowledged that careful examination of the bid documents has been carried out with reference to the specifications, quantities, location where the said work is to be done, materials required for this contract and their source and other requirements, covenants, stipulations and restrictions. It is distinctly agreed that no claim or demand will be made on the TWAD Board by the applicant, arising out of any misunderstanding or misconception or mistake of the said requirements, covenants, stipulations, restrictions, conditions etc on the part of the Applicant.

The Income Tax Clearance Certificate and Valid GST Registration Certificate in currency are enclosed.

The Bid Security of **Rs.69,000/- (Rupees Sixty nine thousand only)** is enclosed in the shape of..... (enter the form and other details of the bid security) drawn in favour of the **Executive Engineer, TWAD Board, Maintenance Division, Trichy** It is hereby agreed that in case the bid is accepted, the Performance Security to the value and in the manner/ form prescribed by the Employer will be submitted and agreement entered into within the time frame stipulated for the due fulfillment of the contract. It is agreed that in the event of non remittance of the required Performance Security and execution of the Agreement within the stipulated time frame, the Bid Security deposited with the bid will be forfeited. In the event of non- acceptance of the bid offered by the Applicant, the Employer shall intimate the applicant of the rejection of his bid, upon which the applicant can get his Bid Security refunded on an application for the same. Any notice required to be served on the applicant shall be deemed to have been sufficient if delivered personally or left at the address given herein or sent by post either by registered mail or ordinary. Such notice shall, if sent by post shall be deemed to have been served on the applicant at the time when in due course of post it would be delivered at the address to which it is sent. For all purposes, the address given herein will serve as permanent address and any change therein will be promptly intimated then and there.

It is fully understood and agreed that on receipt of communication of acceptance of the bid from the accepting authority, there emerges a valid contract between the Applicant and TWAD Board represented by the officer accepting the bid and is expressly agreed that the bid documents with the schedules, conditions of the contract, negotiations, communications and other correspondence connected to this contract will all constitute the contract for this purpose and be the foundation of rights on both the parties.

It is agreed that providing earmarked quantity of water supply to all the beneficiaries under the scope of the WSS/CWSS shall be considered as the essence of this operation and maintenance contract and will be commenced immediately on getting information of the acceptance of the bid and any deficiency in supply due to contractor's operation and maintenance will be subjected to the relevant penal clauses contained in the Conditions of the Contract.

It is hereby agreed that the professionally qualified personnel to operate and maintenance shall be deployed as required.

The Applicant hereby agrees to undertake full responsibility for the safety of the scheme components during the contract period.

The Applicant hereby agrees that the bid will not be withdrawn during the period of validity as indicated in the bid documents and also during such extended periods agreed to by the applicant. The Applicant understands that the withdrawal of the bid after bid submission is not permitted.

It is explicitly understood that the Tender Inviting Authority is not bound to accept the lowest or any bid received.

It is hereby agreed that the Tender Inviting Authority reserves the rights to reject any or all the bids without assigning any reasons there for.

Dated this day of Month of

Signature of the Applicant
(To be signed by the authorized
signatory with seal)

NAME OF WORK:

Operation and Maintenance of CWSS to 144 Habitations in Manikandam Union and 29 Habitations in Anthanallur Union and 3 Private Beneficiaries in Trichy District for the period from 16.06.2022 to 31.03.2023 (9.50 months) BY CARRYING OUT ALL THE NECESSARY WORKS SUCH AS PUMPING, ATTENDING TO LEAK AND BURST, ATTENDING TO ELECTRICAL AND MECHANICAL REPAIR WORKS, PREVENTIVE MAINTENANCE OF ALL INSTALLATIONS, SUMP CLEANING AND DELIVERANCE OF EARMARKED QUANTITY OF WATER TO THE BENEFICIARIES AS PER DETAILED PROJECT REPORT ETC., AS PER STANDARD OPERATING PROCEDURES AND AS DIRECTED BY THE TWAD BOARD OFFICERS FOR A PERIOD OF 9.50 MONTH/ 2022-23 YEAR FROM 16.06.2022 TO 31.03.2023

III . INSTRUCTIONS TO BIDDERS**A. GENERAL****1. Scope of the Bid**

This is an **Operation and Maintenance of CWSS to 144 Habitations in Manikandam Union and 29 Habitations in Anthanallur Union and 3 Private Beneficiaries in Trichy District for the period from 16.06.2022 to 31.03.2023 (9.50 months)**

Contract and the contractor is responsible for providing earmarked quantity of water supply to all the beneficiaries under the scope of the Combined Water Supply Scheme **by carrying out all the necessary works, such as pumping , attending leaks and bursts in the pipelines inclusive of materials and workmen, attending all repair works in the pump set, valves and all other machineries related to the maintenance, and inclusive of spares/materials, accessories, cleaning of all storage structures like sumps, MSR, BPT, stand post etc. lubricants, chemicals, as and when required in accordance with the specifications as appropriately applicable to the Quality Parameters of the relevant BIS, TNBP, Bid Documents and deliverance of earmarked quantity of water to the beneficiaries as per Detailed Project Report etc** for successful operation and maintenance of the scheme for the specified period

1.1 The **Superintending Engineer, TWAD Board, Trichy-Pudukkottai Circle, Trichy** (herein after referred as - Employer (in these documents) invites bids for the operation and maintenance (as defined in these documents and referred as -the works) as detailed in the Bill of Quantities. The bidder shall offer their/his quote rates detailed in the Bill of Quantities.

Salient Details (as per Scope of the Scheme/ schemes):

S.No.	Name of the Component	Quantity	Location	Remarks
1	VIDE Annexure AA (Separately Enclosed)			
2				
3				
4				
5				
6				
7				
8				
and so on				

1.2 Down loading the documents from website.

The documents can be down loaded free of cost from the web site www.tenders.tn.gov.in and www.twadboard.tn.gov.in by the tenderer. Tender should, thereafter be submitted duly filled and signed along with all required documents to the tender inviting authority as notified in the IFB subject to the following:

- 1.2.1. The bidder shall furnish a certificate to the effect that **no correction/ alteration on the bid document as found in the web site** was made by him and he shall abide by all the terms, conditions and specifications contained in the bid document.
- 1.2.2. No cost towards bid document shall be required to be paid by the bidders who are using the forms downloaded from the designated website.

The bidder shall submit the tender to the tender inviting authority as prescribed in the Invitation for Bid.

- 1.3** The Bid Document can be purchased from the **Executive Engineer, TWAD Board, Maintenance Division, Trichy** by remitting the required cost of Bid Document as stipulated in the Invitation for Bid.

2. Method of Bidding

- 2.1 If the bid is made by an individual, the bid documents shall be signed by the individual with his full name and current address.
- 2.2 If the bid is made by a proprietary concern, the bid documents shall be signed by the

proprietor with his full names as well as the name of the firm and full address. In the case of an authorized person holding power of attorney signing the bid documents, a certified copy of the registered power of attorney **including still in existence certificate** should accompany the bid documents. The signature of the Proprietor shall be attested by a notary public and enclosed as documentary evidence.

2.3 If the bid is made by a partnership firm, the bid documents shall be signed by all the partners of the firm along with their full names and current address with specific mention on the registered address of the firm. In the case of a partner holding power of attorney signing the bid documents, a certified copy of the registered power of attorney should accompany the bid. It is also mandatory to furnish a certified copy of the registered partnership deed, current address of the partners, and registered address of the firm along with the bid. The signature of all the partners/ power of attorney shall be attested by a notary public and enclosed as documentary evidence.

2.4 If the bid is made by a limited company or a limited corporation, it shall be signed by a duly authorized person holding power of attorney for signing the bid documents in which case a certified copy of the registered power of attorney shall accompany the bid. Such limited company or corporation may be required to enclose satisfactory evidence of its existence along with the bid.

2.5 The bids from the contractors / firms shall be accompanied by an attested copy of the Income Tax Clearance Certificate relating to the previous financial year and Valid GST Registration Certificate.

3. One Bid per Bidder

Each bidder shall submit only one bid for this work. A bidder who submits or participates in more than one bid will be disqualified.

4. Cost of Bidding

The bidder shall bear all the costs associated with the preparation and submission of his bid. The Employer will in no case be responsible for those costs, regardless of the conduct or the outcome of the bidding process.

5. Site Visit.

The bidder, at the Bidder's own responsibility and risk is advised to visit and examine the site of works and its surroundings and obtain on his own all information that

may be necessary for preparing the bid and entering into contract for this operation and maintenance works. The costs of visiting the site and its surroundings shall be at the bidder's expense. Data made available are only for the information of bidder and the employer is not responsible for its correctness.

The bidder and any of his personnel or agents will be granted permission by the Employer to enter upon its premises and lands for the purpose of such visit, but only upon the express condition that the bidder will be responsible for death or personal injury, loss of or damage to property, and any other loss, damage, costs and expenses incurred as a result of the inspection.

The bidder should carefully inspect the site to assess the prevalence of ground reality of the scheme to be operated and maintained to quote the rate appropriately and no extra rate will be paid on any account at a later date during contract period.

B. Eligibility / Qualification Criteria

6. Eligible Bidders

6.1. The Invitation to Bid is open to any bidder who meets the Physical and Financial eligibility criteria mentioned in the above Check List.

6.2. Joint Venture / Subletting of contract is not permitted.

7. Qualification of the Bidder

7.1 General

Bidders shall provide the following as part of their bid in the prescribed formats.

- 7.1.1 A registered Power of Attorney authorizing the signatory of the bid to commit on Behalf of the bidder should be enclosed.
- 7.1.2 Proof of Registration of the firm/company under Companies Act should be enclosed.
- 7.1.3 Total monetary value of Execution/Maintenance of Civil Engineering works performed during each of the last three financial years should be furnished in Annexure-I.
- 7.1.4 Annual turnover (Execution/Maintenance of Civil Engineering works) for the past three financial years (Audited balance sheet for the last three financial years) should be enclosed. Annual turnover for the past three financial years should be certified by a registered Chartered Accountant. The certificate should be affixed with the seal of the office of the Chartered Accountant with the registration number legibly in Annexure-II.

- 7.1.5 Experience in works of similar nature and magnitude during each of the previous five financial years, the details of work contracts on hand and works for which bids are already submitted should be furnished in the Annexure - III, IV and V respectively.
- 7.1.6 List of equipments available with the bidder for deployment in the project should be furnished in Annexure-VI.
- 7.1.7 Technical, Administrative and Managerial Personnel to be employed for key management in this work with their qualification details should be furnished in Annexure VII
- 7.1.8 Evidence of access to lines of credit and availability of other financial resources, credit line certificates from financial institutions should be enclosed in the prescribed Annexure-VIII.
- 7.1.9 Litigation details of the bidder with the details of the parties concerned and the amount involved **and any Bank Guarantee executed for any purpose** should be furnished in Annexure-IX.
- 7.1.10 The bidder should declare clearly whether the bidder has been black listed, banned or debarred in Central Government Department/Under- taking/ Organization or any State/ Union Territory/ Department Undertaking/ Organization in Annexure-X.
- 7.1.11 Income Tax Clearance Certificate in currency as proof of having remitted the income tax for the previous financial year (with reference to the year in which the bid is opened)
- 7.1.12 Valid GST registration certificate issued by competent authority and latest GST filing return should be produced.
- 7.1.13 GST is not applicable for Maintenance Contracts (and) in case of composite contracts where the value of materials involved is less than 25%, as per Government of India Notification No:2/ 2018-Central Tax (rate) New Delhi, 25th January 2018.
- 7.1.14 Affidavit as an undertaken is to be given by the contractor as per Annexure XI and it should be certified by the notary duly stamped on a notary stamp.

7.2 Performance Eligibility:

7.2.1. Financial & Physical capacity:

Sl. No.	Description	Requirement as per Bid Document
	Financial Turnover & Cash flow.	
1	Minimum Annual Turnover in last three financial year Rs 68.02 in lakhs. – 33% of BOQ value.	22.44 lakhs
2	Minimum cash flow required in Rs. 68.02 in lakhs. = $\frac{\text{BOQ value} \times 3 \text{ months}}{\text{Completion Period in Months}}$	21.47 lakhs
3	The bidder should have satisfactorily completed Execution of water supply scheme or satisfactorily maintained WSS/ CWSS of value not less than Rs 68.02 in lakhs in the last five Financial years: - Either c) In a single agreement 40% of BOQ value - Or d) Under two agreement 60% of BOQ value.	27.20 lakhs 40.80 lakhs
4	Physical (Work Experience) Minimum aggregate during last five years	
4.a	Minimum aggregate number of construction of Collector Well/ Collection well/ Infiltration well/ Intake well/ Jack well / off-take arrangements should have been successfully executed / maintained for a continuous period of 1 year In the last five years 30% of the total requirement rounded off to nearest integer but anything less than 1 would be rounded off to 1 only.	1 no
4.b	Minimum aggregate experience of Full Scale Water Treatment Plant successfully executed/ maintained for a continuous period of at least 1 year – In the last Five years 15% of total requirement ofMLD	...
4.c	Minimum aggregate experience of Pipeline in KM – should have supplied, laid, jointed, tested and satisfactorily completed or maintained the pipelines for a continuous period of at least 1 year in the last 5 years iv) 10 % of total length of 340 M in MS/DI/CI pipe	34m

Sl. No.	Description	Requirement as per Bid Document
	v) 10 % of total length of 169.50 KM in PVC/HDPE pipe vi) 10 % of total length of 33.34 KM in AC/RCC/PSC/BWSC/GRP Pipe	16.95 km 3.33 km
4.d	Minimum aggregate experience of RCC Water retaining structures (LL) successfully executed / maintained for a continuous period of 1 year in the last 5 years. - 10% of total requirement of 45.70 LL capacity.	4.57 LL
4.e	Minimum Aggregate capacity of pumping machinery pump sets, Valves, etc successfully installed or maintained(KW) for a continuous period of 1 year in the last 5 years. c) 20% of total capacity of 155.91 KW d) In case of HT installation, minimum one number of 112 KW /150 HP and above capacity pump sets.	31.18 KW
4.f	Minimum Aggregate capacity of Transformer successfully installed or maintained for a continuous period of 1 year in the last 5 years: Atleast 1 No. of substation turnkey work executed/maintained

Note : In Addition to the above requirements the following criteria also to be satisfied.

7.2.2. Bid capacity:

Bidders who meet the minimum qualification criteria will be qualified only if their available bid capacity is more than the total bid value. The available bid capacity will be calculated as under:

$$\text{Assessed Available Bid Capacity} = [A*N*1.5-B]$$

Where **A** = Maximum value of civil engineering works executed/maintained in any one year during the last three financial years [updated to 2019-20 (current) price level @ 6% per annum] taking into account the completed as well as works in progress.

N = Number of years prescribed for period of the contract for which bids are invited i.e. years.

B = Value of existing commitments and on-going works to be completed during the next years. (Updated to current) price level]

The Accepted Contract Amount shall cover the entire operation and maintenance of the scheme for the period specified.

Note:

- i. The performance eligibility shall pertain to the similar works executed/ maintained by the tenderer in any of the Central/State Government Departments/Quasi Government Organizations and Government Undertakings, a Private Organization. The performance experience for Central/State Government Department/ Undertaking/ Quasi Government Organization should be supported by performance certificates issued by the concerned organization by an officer not less than the rank of Executive Engineer. **The experience certificates issued by an officer below the rank of Executive Engineer or on behalf of Executive Engineer will not be considered.**
- ii. **In case of experience certificate of a Private Organization, the following criteria should be satisfied:**
 - a) **The Photographs of the works undertaken for the Private Organization should be enclosed as a proof.**
 - b) **The certificate of the work done for the Organization be enclosed by a Senior Official who should be at least of the rank of the General Manager or Equivalent.**
 - c) **The above certificate should be countersigned by a Government Department Engineer at least of the rank of Assistant Executive Engineer and should also be notarised.**
- iii. For the experience certificates furnished by the bidders which are obtained from the Departments outside the State, clarification will be obtained by the Employer from the concerned Department whenever felt necessary as to whether the details furnished in the certificates are genuine, before finalization of evaluation.
- iv. The bills/ claims should be prepared by the contractor as per Agreement and in accordance with the agreement executed and submitted to the Department.
- v. In case if a contractor/firm worked as sub contractor previously, then their experience in those particular components of work will be considered only if their sub contract/sublet work was properly approved by the User Department. A certified copy to that effect from Engineer in charge (not below the rank of Executive Engineer) must be produced for arriving at the performance eligibility for the particular work to be sublet.

7.3. Disqualification:

Even though the bidders meet the above qualifying criteria, they are subject to be disqualified at any point of time if they have

- 7.3.1. made misleading or false representation in the form statements and attachments submitted and/or
- 7.3.2. Record of poor performance during the last 5 years as on the date of application such as abandoning the work rescinding of contract for which the reasons are attributable to the non performance of the Contractor inordinate delays in completion, consistent history of litigation awarded against the applicant or any of its constituents or financial failure due to bankruptcy etc.
- 7.3.3. been debarred / blacklisted as on the date of application by any Central / State Government Department/ Undertaking/ Organization and their bid will not be taken up for evaluation.

8. SPECIAL ATTENTION TO BIDDERS.

8.1. Copies of experience certificates obtained from the Officer not below the Rank of **Executive Engineer** of respective user departments must be attested by Notary Public and produced.

8.2. These Certificates should contain the following details

- 1) Name of Scheme (Name of the State also to be specified) :
- 2) Contract No. and date :
- 3) Value of Contract : Rs.
- 4) Name of Contractor with full address :
- 5) Period of completion/ maintenance as specified in the Contract :
- 6) Date of commencement of work :
- 7) Actual date of completion & commissioning/ of maintenance :
- 8) Reason for the delay if any :
- 9) Full details of components : executed under this contract :

10) Performance of the work should contain the following details :

S.No.	Component	Performance
i.	In case of Infiltration Well/ Collection Well/Intake Well/ Jack Well / Foot Bridge / Off take Well	: Whether completed & commissioned/ maintained satisfactorily?
ii	In case of Water Treatment Plant (Capacity in..... MLD – with type of Components to be clearly mentioned)	: Whether completed & commissioned/ maintained satisfactorily?
iii	In case of Pumping Machineries (Type and Capacity in KW & HP to be clearly mentioned)	: Whether completed & commissioned/ maintained satisfactorily?
iv	In case of Pipeline work (Type of Each pipe with diameter, length, pressure must be given)	: Whether completed & commissioned/ maintained satisfactorily?
v	In case of RCC Water retaining Structures (Capacity to be clearly mentioned)	: Whether constructed & commissioned/ maintained satisfactorily?

Signature of Officer with Seal

C. BID DOCUMENTS

9. Contents of Bid Documents

The Bid Documents will comprise the following documents & addenda issued in accordance with clause 10 below:

- 1) Invitation for Bids
- 2) Instruction to Bidders
- 3) Eligibility/Qualification Criteria Forms of Bid
- 4) General Conditions of contract
 - a) Part I - Roles and responsibilities of the Contractor
 - b) Part II - Payment mode for Contractor
 - c) Part III - Role of TWAD Board
 - d) Part IV - Labour Laws to be followed
 - e) Part V - Special Conditions of Contract
 - f) Part IV - List of Beneficiaries and earmarked quantity of water to be supplied under this contract
- 5) Schematic/Flow Diagram
- 6) Bill of Quantities
- 7) Forms of Agreement

10. Clarification of Bid Documents.

A prospective bidder requiring clarification may raise the same at the time of Pre-bid meeting in writing or **by Electronic Mail to Tender Inviting Authority** at the address indicated in the invitation for bid. The employer will respond to any clarification sought for.

11. Amendment to Bid Documents

- 11.1. At any time prior to 48 hours to the deadline for submission of bids, the Employer may amend the bid documents by issuing Addenda.
- 11.2. Any Addendum thus issued shall be part of the bid documents and shall be communicated in writing or by cable to all purchasers of the bid documents. Prospective bidders shall promptly acknowledge the receipt of each addendum by cable to the Employer.
- 11.3. To give prospective bidders reasonable time in which to take an addendum into account in preparing their bids, the Employer shall extend as necessary the deadline for submission of bids, in accordance with Clause 21.2 of Submission of Bids.

D. PREPARATION OF BIDS

12. Language of the Bid

The bid, and all correspondences and supporting documents related to the bid exchanged by the bidder and the Employer shall be written in English. Supporting documents and printed literature furnished by the bidder may be in other language provided they are accompanied by an accurate translation of the relevant passages in either English or Tamil language, in which case, for purpose of interpretation of the bid, the translation shall prevail.

13. Documents comprising the Bid

The bid submitted by the bidder shall comprise the following:

13.1 Cover – 1 (Technical Bid)

- i. The Bid Documents duly filled and signed
- ii. List of Annexure as below:

1.	Performance of the bidder showing total monetary value of Execution / Maintenance of Civil Engineering works for the last three financial years – (7.1.4) (Annexure– I)
2.	Average Annual Execution / Maintenance of Civil Engineering works Turn over for the last three financial years – (7.1.5) (Annexure – II)
3.	Experience in works of similar nature of Magnitude during the last 5 years – (7.1.6) (Annexure – III)
4.	Commitment of contracts (Execution/Maintenance of Civil Engineering works) on hand – (7.1.6) (Annexure – IV)
5.	Works for which Bids are already submitted – (7.1.6) (Annexure-V)
6.	List of equipments available with the bidder – (7.1.7) (Annexure – VI)
7.	Qualification/Experience of the key personnel proposed for technical and administrative functions under this contract – (7.1.8) (Annexure -VII)
8.	Sample Format for evidence of access to or availability of credit facilities-(7.1.9) (Annexure – VIII)
9.	Details of Litigation if any – (7.1.10) (Annexure – IX)
10.	Declaration by the bidder pertaining to blacklisting / debarment etc., - (7.1.11) (Annexure – X)
11.	Affidavit as an undertaking given by the Contractor should be certified by the Notary duly stamped on a Notaries Stamp (7.1.12) (Annexure-XI)

iii. List of Certificates.

- a. Signature of the Proprietor or Proprietress attested by the Notary Public (2.2)
- b. Signature of all the Partners/Power of Attorney attested by the Notary Public – (2.3)
- c. Registration of the firm, signature of the authorised person attested by the Notary Public –(2.3)
- d. A copy of the listed Power of Attorney authorising the signatory of the bidder – (7.1.2)
- e. Proof of Registration of firm/Company(7.1.3)
- f. Audited Balance Sheets –(7.1.5)
- g. Credit line Certificate from Financial Institutions – (7.1.9) (Format-VIII)
- h. Income Tax Clearance Certificate –(7.1.13)
- i. Latest GST filing returns Certificate –(7.1.14)

iv) Certificate of performance issued by not less than the rank of Executive Engineer of the Government organization concerned / responsible person of the private organization –(7.2)

v) Bid Security

vi) Any other material required to be completed and submitted by the bidders in accordance with these instructions.

13.2 Cover – II (Price Bid)

- i. Priced Bill of Quantity duly signed.
- ii. The Bid should be submitted only in the original documents as issued by the Tender Inviting Authority or as downloaded from the website. No alteration or correction should be made under any circumstances in the Bid Documents issued by the Tender Inviting Authority.
- iii. Conditional tenders are liable for rejection

14. Bid Prices

- 14.1 The contract shall be for the whole works as described in sub clause (1.1), based on the priced bill quantities submitted by the bidder.
- 14.2 The bidder shall fill in rates and prices and line item total (both in figures and words) for all items of works described in the Bill of quantities along with total bid price (both in figures and words). Items for which no rate or price is entered by the bidder will not be paid for by the employer when executed and shall be deemed covered by the other rates and prices in the bill of quantities. Corrections, if any, shall be made by crossing out and initialing.
- 14.3 All duties, taxes and other levies payable by the contractor, under the contract for any other cause shall be included in the rates, prices and total bid price submitted by the bidder.
- 14.4 The rate and prices quoted by the bidder is firm till the completion of contract period and price adjustments are not allowed.

15. Currencies of Bid and Payment

The unit rates and the prices shall be quoted by the bidder entirely in Indian Rupees.

16. Bid Validity

- 16.1. "Bids shall remain valid for a period not less than ninety days from the date of opening of Technical Bid, as per Sec. 14.2 of Tamil Nadu Transparency in Tenders rules 2000.
- 16.2. A bid validity for a shorter period shall be rejected by the employer as non-responsive."
- 16.3. In exceptional circumstances, prior to expiry of the original time limit, the Employer may request the bidders to extend the period of validity for a specific additional period. The request and the bidders' response shall be made in writing or by cable. A bidder agreeing to the request will not be required or permitted to modify his bid, but will be required to extend his bid security for; the period of extension.

17. Bid Security

17.1 The bidder shall furnish, as part of his bid, as bid security **of Rs.69,000/- (Rupees Sixty nine thousand only) duly pledged in favour of the Executive Engineer, TWAD Board ,Maintenance Division ,Trichy** in any one of the following forms.

17.1.1. Demand draft / Deposit call receipt / Fixed deposit receipt (FDR) / Bank Guarantee (Prescribed format of the Bank Guarantee (Unconditional) for the bid security issued by a Nationalised Bank/Scheduled Bank located in India/National savings certificate/Post office Savings Bank deposits.

17.1.2. Unconditional Bank Guarantee in the prescribed format for the bid security issued by a Nationalised Bank/Scheduled Bank located in India & valid for 45 days after the end of the validity period of the bid.

17.1.3. FDR and deposits at call receipts should contain lien certificate issued by the Bank for encashment by department. The FDR furnished by the firm should also bear the signature of the authorized signatory on a revenue stamp at the back of the FDR.

17.2 Any bid not accompanied by bid security in stipulated form shall be rejected by the Employer as nonresponsive

17.3 The bid security of the unsuccessful bidders will be returned as promptly as possible, but not later than 30 days either after the expiration of the period of bid validity or after finalizations of the bid whichever is later.

17.4 The bid security of the successful bidder will be returned after the bidder has furnished the required performance security and signed the agreement. No interest is payable on Bid security by the Employer.

17.5 The bid security shall be forfeited:-

17.5.1. In the case of bidder withdrawing or modifying his bid during the period of bid validity.

17.5.2. If the bidder does not accept the corrections of the bid price, pursuant to clause 28 of "Bid Opening and Evaluation".

17.5.3. In the case of a successful bidder failing to furnish the performance security in the specified form within the stipulated time.

17.5.4. In the case of successful bidder failing to enter into agreement within the stipulated time.

17.5.5. In the case of the bidder severing the conditions after intimation of the acceptance of the bid.

18. Format and Signing of Bid

- 18.1. The bid document submitted to the Employer shall be typed or written in indelible ink and shall be signed by a person duly authorized to sign on behalf of the bidder in accordance with-Instructions to Bidders. All pages of the bid and where entries or corrections have been made shall be initialed by the person signing the bid.
- 18.2. The bid shall contain no alteration or additions, except those to comply with the instructions issued by the Employer and wherever necessary to correct errors made by the bidder, in which case such corrections shall be initialed by the person signing the bid.
- 18.3. The technical and price bids (BOQ) as issued by the Employer should be submitted duly signed at the bottom of each page, failing which the bids will be summarily rejected.

19. Pre Bid Meeting:

- 19.1. The bidder or his authorised representative, who are desirous, may attend the pre bid meeting which will take place at **O/o the Superintending Engineer, TWAD Board, Trichy – Pudukkottai Circle, Integrated Office Complex, No.35, J.K. Nagar, Kajamalai (Post), Trichy on 01.06.2022 at 11.00 A.M.**
- 19.2. The purpose of the meeting will be to clarify issues and to answer questions on any matter that may be raised at that stage.
- 19.3. The bidder is requested, as far as possible, to submit the questions in writing or by cable, to reach the Employer not later than one week before the meeting. It may not be practicable at the meeting to answer questions received late.
- 19.4. Minutes of the meeting, including the text of the questions (without Identifying the source of enquiry) and the responses given together with any responses prepared after the meeting, will be transmitted without delay to all purchasers of the bidding documents.

- 19.5. Any modification of the bidding documents listed in clause 23.1 of—Submission of Bids, which may become necessary as a result of the pre bid meeting shall be made by the Employer exclusively through issue of an addendum pursuant to clause 10 of the Bid Document and not through the minutes of the pre-bid meeting which will be hosted on www.twadboard.tn.gov.in
- 19.6. Attendance at the pre bid meeting is not mandatory and non attendance will not be a cause for disqualification of the bidder.

E. SUBMISSION OF BIDS

20. Sealing and Marking of Bids

- 20.1. Two cover system shall be adopted for submission of bids.
- 20.2. The first cover shall contain the technical bid documents, supporting material relating to the eligibility criteria, Bid Security in the proper form and other connected Certificates as specified in Clause 13.
- 20.3. No indication either direct or indirect, implicit or explicit regarding the rates and prices should be made in the technical bid or any other documents submitted in the first cover.
- 20.4. The second cover shall contain the Price Bid alone.
- 20.5. The bids should be submitted in the original bid documents as issued by the Employer.
- 20.6. The bid documents under no circumstances are transferable.
- 20.7. The first cover containing the Technical Bid and Bid Security and the second cover containing the Price Bid, should be pasted properly, sealed and super-scribed indicating clearly the name of work and marking specifically as under:

Cover-I - Technical Bid

Cover II - Price Bid

Both the covers containing the Technical bid and Price Bid should be placed in a common envelope, pasted, sealed and super-scribed properly.

20.8. Format and signing of Tender

- 20.8.1 The Tenderer shall submit one original and one copy (hard) and one soft copy of both technical and Price bids comprising of Tender as described in the Instruction to Tenderers, bound in a format as stipulated.
- 20.8.2 All bidders will be provided with an electronic copy of the schedule of prices. Cells that contain permanent information are protected and cannot to be changed by the Bidder.
- 20.8.3 Cells into which the bidder can enter rates and Amount (where these may vary), will be left unprotected. However, the Employer will not enter any formulae in the spread sheets.
- 20.8.4 The Bidder is entirely responsible to ensure that the calculations presented in the Schedule of Prices are correct, and that the Bidder's offer is complete in all respects.

- 20.8.5 The Price Bid completed in computerized printout, adopting the format of the Bid document in total and shall be signed by a person or persons duly authorized to sign on behalf of the Bidder.
- 20.8.6 The Tenderer shall submit the Price bid in one original and one copy (hard) and one soft copy. The BOQ in the excel format is uploaded.
- 20.8.7 The Bidder will need to submit the completed Schedule of Prices together with the bound copy of the Price Proposal which has been issued by the Employer along with the separate Priced Schedule of Prices, and to affix his signature on all pages of his submittal. The Bidder shall give an undertaking that that the content of the CD and the content of hard copies are identical. In the case of discrepancy between the soft copy and hard copy (print out) furnished by the bidder, the hard copy (print out) will prevail. If there is discrepancy between the hard/soft copy furnished by the bidder and the hard copy issued by the Employer, the hard copy issued by the Employer will prevail.
- 20.8.8 The Tender shall contain no alternations, omissions or additions, except those to comply with instructions issued by the Employer, or as necessary to correct errors made by the Tenderer, in which case such corrections shall be initialed by the person or persons signing the Tender.
- 20.8.9 All the envelopes shall be addressed to the Employer namely "The Superintending Engineer, Trichy – Pudukkottai Circle, Integrated Office Complex, No.35, J.K. Nagar, Kajamalai (Post),Trichy – 620 023" and bear the following identification
 Bid for- Operation and Maintenance of CWSS to 144 Habitations in Manikandam Union and 29 Habitations in Anthanallur Union and 3 Private Beneficiaries in Trichy District for the period from 16.06.2022 to 31.03.2023 (9.50 months)
 INVITATION OF BID No.03/ F. O&M Tender notice/DO-I/TPC/TRY/2022/
 Dt:19.05.2022
 Do Not Open Before 09.06.2022 (Time and date of bid opening as per Clause 24 of
 at 3.30 pm Bid Opening and Evaluation)

and should be submitted to the following Address:

"The Superintending Engineer, Trichy – Pudukkottai Circle, Integrated Office Complex, No.35, J.K. Nagar, Kajamalai (Post),Trichy – 620 023.

20.8.10 In addition to the Identification required in sub clause above, the envelope shall indicate the name and address of the bidder to enable the bid to be returned in case it is declared late, pursuant to Clause 22 of Submission of Bids.

20.8.11 If the envelope is not sealed and marked as above, the Employer will assume no responsibility for the misplacement or premature opening of the bid.

21. Deadline for Submission of the Bids

21.1. Bids must be received by the Employer at the address specified in clause 20.8 above not later than **3.00 P. M on 09.06.2022** In the event of the specified date for the submission of bids declared a holiday for the Employer, the bids will be received up to the appointed time on the next working day.

21.2. The Employer may extend the deadline for the submission of bids by issuing amendment in accordance with clause-10 of Bid Documents in which case all rights and obligations of the Employer and the bidders previously subject to the original deadline will then be subject to the new deadline.

22. Late Bids

22.1. All bids received by the Employer after the deadline prescribed in clause- 21 of Submission of Bid will be returned unopened to the bidder.

22.2. TWAD Board will not be held responsible for any Postal/other modes delay leading to delayed submission of Bids after the deadline prescribed.

23. Modification/ Substitution of Bid before opening

23.1. No Tenderer shall be allowed to withdraw the tender after submitting the tender.

23.2. The Bidder may modify or substitute his bid after submission provided that written notice of the modification and substitution is received by the Employer prior to the Deadline of submission of Bid.

23.3. The Bidder's modification or substitution notice shall be prepared, sealed , marked and delivered in accordance with the provision clause – 21 & 22 of "Submission of Bids", with the envelop additionally marked "MODIFICATION" or "SUBSTITUTION" as appropriate.

23.4. Modification / Substitution for Price Bid cover should be super-scribed as "PRICE BID MODIFICATION COVER"/ "PRICE BID SUBSTITUTION COVER"

23.5. Modification / Substitution for Technical Bid cover should be super-scribed as "TECHNICAL BID MODIFICATION COVER"/ "TECHNICAL BID SUBSTITUTION COVER"

23.6. No Bid shall be modified /substituted after the deadline for the submission of Bids.

23.7. Modification / Substitution of a Bid between the Deadline for submission of Bids and the expiration of original period of validity specified in the Clause – 16.1 "PREPARATION OF BIDS" or as amended pursuant to the Clause 16.2 "PREPARATION OF BIDS" may result in the forfeiture of the Bid security pursuant to the Clause – 17 "PREPARATION OF BIDS".

F. BID OPENING AND EVALUATION

24. Bid Opening

- 24.1. The Employer will open all the bids received (except those received late) in the presence of the bidders or their representatives who choose to attend on the date at the time in the address specified in clause 20 of-Submission of Bids. (In the event of specified date of bid opening being declared a holiday for the Employer, the bids will be opened at the appointed time and location on the next working day).
- 24.2. Envelopes marked as substitution or modification shall be opened and read out first. Envelopes super-scribed as "MODIFICATION"/SUBSTITUTION to Technical bid will be opened at the time of opening of the Technical bid.
- 24.3. Envelopes marked as substitution or modification shall be opened and read out first. Envelopes super-scribed as "MODIFICATION"/SUBSTITUTION to price bid will be opened at the time of opening of the price bid.
- 24.4. The Bidders' names, the Bid prices, the total amount of each Bid, any discounts, bid modification / substitution, the presence or absence of Bid Security and such other details as the Employer may consider appropriate, will be announced by the Employer at the time of opening. Bids and modifications received pursuant to clause -22 of "Submission of Bids" that are not opened and not read out at the bid opening will not be considered for further evaluation regardless of the circumstances.

25. Process to be Confidential

Information relating to the examination, Clarification, evaluation and comparison of bids and recommendations for the award of a contract shall not be disclosed to bidders or any other person not officially concerned with such process until the award to the successful Bidder has been announced. Any effort by a bidder to influence the Employer's processing of Bids or award decisions may result in the rejection of his bid.

26. Clarification of Bids.

To assist in the examination, evaluation and comparison of bids, the Employer may, at his discretion, ask any Bidder for clarification of his bid, including breakdown of unit rates. The request for clarification and the response shall be in writing or by cable, but no change in the price or substance of the Bid shall be sought, offered, or permitted except as required to confirm the correction of arithmetic errors discovered by the Employer in the evaluation of the Bids in accordance with Clause-28 of "Bid Opening and Evaluation".

27. Examination of Bids and Determination of Responsiveness

- 27.1. Prior to detailed evaluation of Bids, the Employer will determine whether each Bid
- (a) meets the eligibility criteria set out in clause – 7 “Qualification of the Bidder”,
 - (b) has been properly signed,
 - (c) is accompanied by the required securities and
 - (d) is substantially responsive to the requirements of the Bid Documents,
- 27.2. A substantially responsive Bid is one which conforms to all the terms, conditions and specifications of the Bid Documents, without material deviation or reservation. A material deviation or reservation is one
- 27.2.1 which affects in any substantial way the scope, quality or performance of the works.
 - 27.2.2 which limits in any substantial way, inconsistent with the Bid Documents, the Employer’s rights to the Bidder’s obligations under the contract, or
 - 27.2.3 whose rectification would affect unfairly the competitive position of other bidders presenting substantially responsive Bids.
- 27.3. If a Bid is not substantially responsive, it will be rejected by the Employer, and may not subsequently be made responsive by correction or withdrawal of the non conforming deviation or reservation. The decision of the Employer on the issue whether the Bid is responsive or not will be final and binding on the bidders. The Employer is not bound to disclose the reason in case a bid is determined by him as nonresponsive.

28. Correction of Errors

- 28.1. Bids determined to be substantially responsive will be checked by the Employer for any arithmetic error. Errors will be corrected by the Employer as follows:
- If any variation is found in the rates between words and figures, the lesser of the two will only be taken in to consideration.
 - Where there is a discrepancy between the unit rate and line item total resulting from multiplying the unit rate by the quantity, the unit rate as quoted will govern.
 - Where there is an arithmetical discrepancy in the page total as well as grand total, the corrected total by the Employer will govern.
- 28.2. The amount stated in the Bid will be adjusted by the Employer in accordance with the above procedure for the correction of errors and shall be considered as binding upon the Bidder. If the Bidder does not accept the corrected amount of the Bid, his bid will be rejected and his bid security will be forfeited in accordance with Clause - 17.5 of “Preparation of Bids”.

29. Evaluation and Comparison of Bids

- 29.1. The Employer will evaluate and compare only the Bids determined to be substantially responsive in accordance with Clause- 27 of-Bid Opening and Evaluation.
- 29.2. In evaluating the Bids, the Employer will determine for each Bid, the evaluated Bid Price by adjusting the Bid price as follows:
 - 29.2.1. Making any correction for errors pursuant to Clause -28 of "Bid Opening and Evaluation". Or
 - 29.2.2. Making appropriate adjustments to refer discounts or other price modifications offered in accordance with Clause -23 of "Submission of Bids"
 - 29.2.3. The Employer reserves the right to accept or reject any variation/deviation.
- 29.3. If the Bid of a successful Bidder is found highly unbalanced in relation to the TWAD Board's estimate of the cost of work to be performed under the contract, the Employer may require the Bidder to produce detailed price analysis for any or all items of the Bill of Quantities to demonstrate the internal consistency of those prices with the methods of operation and maintenance of the CWSS and schedule proposed.
- 29.4. After evaluation of the price analysis, the Employer may require that the amount of the Performance Security set forth in Clause - 34 of "Award of Contract" be increased at the expense of the successful Bidder to a level sufficient to protect the Employer against financial loss in the event of default of the successful Bidder under the Contract.
 - 29.4.1. For tenders received with any plus percentage & up to minus 5 percentage of the Departmental Value, the successful tenderer should remit 2% of contract value as performance security.
 - 29.4.2. For tenders received with minus 5% & up to minus 15% of departmental value the successful tenderer should remit 4% on contract value as performance security.
 - 29.4.3. For tenders received with more than minus 15 % of Dept. Value, the successful tenderer should remit 5% of contract value as performance security.

AWARD OF CONTRACT

30. Award Criteria.

Subject to Clause 29 of-Bid Opening and Evaluation, the Employer will award the contract to the Bidder, whose Bid has been determined to be substantially responsive to the Bid Documents and who has offered the lowest evaluated Bid Price, provided that such Bidder has been determined to be (a) eligible in accordance with the provision of clause-6 of Eligibility / Qualification Criteria and (b) qualified in accordance with the provisions of Clause-7 of Eligibility/ Qualification Criteria.

31. Employer's Right to Accept any Bid and to Reject any or all Bids

The Employer reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids, at any time prior to award of contract, without thereby incurring any liability to the affected bidder or bidders or any obligation to inform the affected bidder or bidders of the grounds for the Employer's action.

32. Notification of Award

The Bidder whose Bid has been accepted will be notified of the award by the Employer prior to expiration of the Bid validity period by cable, telex or facsimile confirmed by registered letter. This letter (hereinafter and in the Conditions of Contract called the Letter of Acceptance), will state the sum that the Employer will pay to the contractor in consideration of the Operation and maintenance of the works by the Contractor as prescribed by the Contract (hereinafter and in the conditions of Contract called the-Contract Price). The notification of award will constitute the formation of the Contract.

33. Registration in TWAD

The successful contractor/ firm, if not a registered contractor in Tamil Nadu Water Supply and Drainage Board, he / they should get himself / themselves registered in TWAD Board, before awarding the work.

34. Performance Security

34.1. Within 28 days from the date of the Letter of Acceptance, the successful bidder shall deliver to the Employer a Performance Security as detailed below:-

34.1.1. For tenders received with any plus percentage & up to minus 5 percentage of Department Value, the successful tenderer should remit 2 percentage of contract value

34.1.2. For tenders received with minus 5 percentage & up to minus 15 percentage of departmental value the successful tenderer should remit 4 percentage on contract value.

34.1.3. For tenders received with more than minus 15 percentage of Department Value, the successful tenderer should remit 5 percentage of contract value.

34.2 The Performance security should be in the form of

34.2.1. in the form of National Savings Certificate/Post Office Savings Deposit account purchased within the State of Tamil Nadu and pledged in favour of the Executive Engineer, TWAD Board, Maintenance Division, Trichy

(OR)

34.2.2. Unconditional and irrevocable bank guarantee issued by any one of the branches of Nationalised Bank or scheduled Bank within the State of TamilNadu, provided they are in prescribed format (enclosed in this Document) for an amount equivalent to ----- percentage of the total value of the contract in favour of the Executive Engineer, TWAD Board, Maintenance Division, Trichy

34.2.3. The bidder along with the performance security, shall deliver a non judicial stamp paper for Rs.100/- (Rupees One Hundred only) at his cost for

35. Signing of Agreement

- 35.1. The Employer on receipt of the performance security and non-judicial stamp paper, will furnish to the bidder the Agreement in the form prescribed, incorporating all terms and conditions between the Employer and the successful bidder.
- 35.2. The Bidder should remit the performance security prescribed by the Employer in the form as in Clause 34 above and sign the agreement in the presence of the Employer within 28 days from the date of Letter of Acceptance notifying the award of contract.
- 35.3. Upon furnishing the performance security by the successful bidder, the Employer will promptly notify the other bidders that their bids have been unsuccessful.
- 35.4. Failure of the successful bidder to comply with the requirements of Clauses- 34 & 35 and 35.2 of "Award of Contract" shall constitute a breach of contract, cause for annulment of the award, forfeiture of the bid security and any such other remedy the Employer may take under the contract.

Amendment to Agreement:

35.5. Any amendment shall be issued by mutual consent between the Employer and the contractor only without any contrary to the bid conditions.

35.6. **Such amendment should not lead to change in rates and prices of the successful bidder.**

36. Forfeiture of Performance Security

The performance security is liable to be forfeited in cases where the firm/contractor fails to carry out the work in accordance with the specifications, terms and conditions of the contract leading to termination of the contract.

37. Foreclosure of Works

The Employer shall have the right to issue notice to the contractor, for any reason whatsoever does not require the whole or part of the contract to be carried out after the award of the contract. The contractor shall not have any claim towards compensation or whatsoever, on account of any profit or advantage, which he might have derived from the carrying out of such portion. For the portion already carried out in view of the foreclosure, the contractor shall be paid an eligible amount as certified by the Engineer in charge.

38. Termination of Contract

The employer may terminate the contract, when it is opposed / contrary to the covenant of the terms of the contract.

The employer shall issue notice of 15 days time to rectify and in the event of failure to rectify / comply the terms of the contract, the contract stands terminated on the 16th day from the date of issue of notice.

On termination of the contract, the employer shall withhold the amount payable to the contractor and the security deposit by the contractor till the amounts due to the Board are recovered.

39. Release of Performance Security

On successful completion of contract for the assigned period and after handing over the entire scheme with all its infrastructures and installations in good and operating condition to TWAD Board, the performance security will be refunded after three months from the date of handing over the scheme.

40. Recovery of money payable to TWAD Board

All losses, costs, damages and expenses and other money payable to the Board by the contractor under any stipulation in the contract, may be retained out of any money due or which may subsequently become due from the Board to the contractor under any contract or otherwise whatsoever and in case such money then due or to become due to the contractor by the Board shall be insufficient to pay such losses, costs, damages, and other money payable to the TWAD Board by the contractor, it shall be lawful for the Engineer in charge without any further consent on the part of the contractor to sell or dispose of any securities deposited in the Board by the contractor as aforesaid and with and out of the proceeds of such sale, after payment of all expenses connected therewith or reimburse and pay to the Board all such losses, cost, damages and expenses and other money payable to the contractor. And in case such proceeds of sale of the said securities shall be insufficient for such purpose then and in that case it shall be lawful for the Board to recover the residue thereof, if necessary by legal proceedings and or by resorting to revenue recovery act against the contractor.

41. TDS on Income Tax

41.1. During the course of the contract period, deduction of income tax shall be made at the prevailing rates from every payment as may be specified by the Income Tax Act and as amended from time to time.

41.2. **GST** is not applicable for Maintenance Contracts (and) in case of composite contracts where the value of materials involved is less than 25%, as per Government of India Notification No:2/ 2018-Central Tax (rate) New Delhi, 25th January 2018.

42. Mobilization Advance

Mobilization advance will not be provided under this contract

43. Price Adjustment:

Price adjustment is not applicable under this maintenance contract.

44. Dispute

44.1. Dispute Redressal Committee

A) In order to ensure a dispute Redressal mechanism, for tenders of value up to and Rs.1 Crore the Regional Technical Committee will be the " Dispute Redressal Committee" in order to resolve any disputes between the Employer / Engineer – in charge concerned and the contractor and the appeal committee is as in (B).

B) In order to ensure a dispute redressal mechanism, , for tenders of value more than Rs.1 Crore a Committee headed by the Managing Director / Joint Managing Director and consisting of Engineering Director, TWAD Board and Engineering Director, CMWSS Board as Member, will comprise the " Dispute Redressal Committee" in order to resolve any disputes between the Employer / Engineer – in charge concerned and the contractor.

44.2. Arbitration: In view of the above Dispute Redressal Committee, arbitration is not part of this Contract

44.3. Jurisdiction of Court

In the event of non settlement of any dispute by the Dispute Redressal Committee arising between the parties hereto in respect of any matter comprised in the contract, the same shall be settled by a competent court having jurisdiction over the place where the contract is awarded and agreement is concluded and by no other court.

45. Force Majeure

Neither party shall be liable to the other for any loss or damage caused by or arising out of Acts of God such as unprecedented flood, cyclone, volcanic eruptions, earthquake or other special risks referred above which prevent the performance of the contract and which could not have been foreseen or prevented by the prudent person. If a Force Majeure situation arises, the contractor shall promptly notify the Employer in writing of such condition and the cause thereof, Unless otherwise directed by the Employer in writing, the contractor shall continue to perform the obligations as far as it is reasonably practical and shall seek all reasonable alternative means for performing those not prevented by Force Majeure.

46. In the event of belated settlement of dues to the contractor, the contractor shall not claim interest for the belated payment.

47. The directions of the Hon'ble court in WMP. Nos. 11584 & 10723 of 2022 in WP No. 11128 of 2022 should be implemented scrupulously.

47.1. The wages paid to the labourers should not be less than minimum wages.

47.2. In case the contractor engaged the labourers already worked in the CWSS, the wages already paid to the labourers should not be reduced at any cost.

48. Contractor dying, becoming Insolvent or Insane

In the event of death or insanity of the contractor, the contract may be terminated by notice in writing, pasted at the site and advertised in the issue of the local newspaper. All acceptable works shall thereafter, be paid at appropriate rates after recovering all the contractor's dues to Employer, to the persons entitled to receive and give a discharge for such payments.

In the contractor is imprisoned because insolvent compound with his creditors has a receiving order made against him or carriers on business under receiver for the benefit of the creditors of any of them or being a corporation goes into liquidation or commences to be wound up not being a voluntary winding up for the purpose only of amalgamation or reconstruction, the employer shall be at liberty.

To give such liquidator, receiver or other persons in whom the contract may become vested the option of carrying out the contract or a portion thereof to be determined by the employer, subject to his providing an appropriate guarantee for the performance of such contractor.

To terminate the contract forthwith by notice in writing to the contractor the liquidator, the receiver or person in whom the contract may become vested and take further actions as provided in the clause pertaining to default by contractor, treating as if this termination is ordered under the respective clause.

VI. LIST OF ANNEXURES

Annex No.	Description	Para No.
I.	Performance of the bidder showing total monetary value of Execution / Maintenance of Civil Engineering works for the last three financial years	7.1.4
II.	Average Annual Execution / Maintenance of Civil Engineering works Turn over for the last three financial years	7.1.5
III.	Experience in works of similar nature of Magnitude during the last 5 years	7.1.6
IV.	Commitment of contracts (Execution/Maintenance of Civil Engineering works) on hand	7.1.6
V.	Works for which Bids are already submitted	7.1.6
VI.	List of equipments available with the bidder	7.1.7
VII.	Qualification/Experience of the key personnel proposed for technical and administrative functions under this contract	7.1.8
VIII.	Sample Format for evidence of access to or availability of credit facilities	7.1.9
IX.	Details of Litigation if any	7.1.10
X.	Declaration by the bidder pertaining to blacklisting / debarment etc.,	7.1.11
XI.	Affidavit as an undertaking given by the Contractor should be certified by the Notary duly stamped on a Notaries Stamp (Annexure-XI)	7.1.14

VII. LIST OF CERTIFICATES

Sl. No.	Description of Certificate	Para No.
1	Signature of the proprietor or proprietress attested by the Notary Public	2.2
2	Signature of all the partners/power of attorney attested by the Notary Public	2.3
3	Registration of the firm, signature of the authorised person attested by the Notary Public	2.3
4	A copy of the listed power of attorney authorising the signatory of the bidder	7.1.2
5	Proof of registration .	7.1.3
6	Audited Balance Sheets	7.1.5
7	Credit line Certificate from Financial institutions	7.1.9 Annexure-VIII
8	Income Tax Clearance Certificate (Latest)	7.1.13
9	Valid GST registration Certificate	7.1.14
10	Certificate of performance issued by not less than the rank of Executive Engineer/Responsible person of the private organisation.	7.2

ANNEXURE I (Para No 7.1.3)

**Performance of the Bidder showing Total Monetary Value
of Execution / Maintenance of Civil Engineering works
in the last Three Financial Years**

Year	Monetary Value of Execution / Maintenance of Civil Engineering works (Rs. In lakhs)

Seal of the Firm**Signature of the bidder with date**

ANNEXURE II (Para No 7.1.4)**Annual Turnover in Execution / Maintenance of Civil Engineering works in the Last Three Financial years.**

Each Bidder must fill in this form

Annual Turnover Data (Execution / Maintenance of Civil Engineering works) in the Last Three Financial years.		
Sl No.	Year	Amount (Rs.in Lakhs)
1		
2		
3		
Average Annual Turnover		

The information supplied should be the Annual Turnover of the Bidder in terms of the amounts billed to clients for each year for work in progress or completed.

.....

.....

(Signature of the Bidder)

Seal

ANNEXURE III (Para No 7.1.5)

Experience in works of similar Nature and Magnitude

within a period of 5 years(from to)

Sl. No	Contract No. and Name of the Project	Description of the work	Name of the employer with full address	Value of the Contract (Rs. In lakhs)	Date of Issue of Work Order and stipulated period of completion	Actual date of completion	Reason for the delay, if any in completing the Project

Seal of the firm

Signature of the bidder with date

ANNEXURE IV (Para No 7.1.5)**Commitments of works on hand**

Sl. No	Contract No and Name of the Project	Description of the work	Name of the employer with full address	Value of the contract (Rs. In lakhs)	Date of Issue of work order and stipulated period of completion	Value of works remaining to be completed (Rs. In lakhs)	Anticipated date of completion

Seal of the firm**Signature of the bidder with date**

ANNEXURE V (Para No 7.1.5)**Works for which Bids are already submitted**

Sl. No	Contract No and Name of the Project	Description of the work	Name of the employer with full address	Value of the contract (Rs. In lakhs)	Stipulated period of completion	Date when decision is expected	Remarks if any

Seal of the firm**Signature of the bidder with date**

Annexure VI (Para No 7.1.6)

List of Equipment Available with Bidder

Sl. No.	Equipment Name	Requirement for the project		Availability Status			Remarks
		Nos.	Capacity	Owned/ leased/ To be Procured	Nos and capacity	Age/condition	

Seal of the firm

Signature of the bidder with date

ANNEXURE VII (Para No 7.1.7)

Qualification/Experience of key Supervisory Personnel proposed for technical and administrative functions under this contract

Sl. No.	Name of the person	Position for which proposed	Qualification	Total years of experience	Years of experience in the proposed position	Remarks

Seal of the firm

Signature of the bidder with date

Value of contract	Qualification and No. of Technical supervisor / Assistant to be employed by the Contractor.
1. Upto Rs. 1.00 lakh	No Technical Assistant need be employed. If situation and nature of work warrants. 1) A Diploma holder in Civil Engineering or 2) A retired Junior Engineer may be employed..
2. From Rs.1.00 lakh to Rs.5.00 lakhs	1) One diploma holder in Civil Engineering or 2) Not less than one retired Junior Engineer.
3. From Rs.5.00 lakhs to Rs.10.00 lakhs	1) One B.E (Civil) Or 2) Equivalent degree holder. Or 3) Not less than one retired AEE/ADE 4) One diploma holder with three years experience.
4. From Rs.10.00 lakhs to Rs.25.00 lakhs	1) One B.E. (Civil) with 3 years experience plus one Diploma holder in Civil Engineering Or 2) Equivalent degree holder with 3 years experience plus one Diploma holder in Civil Engineering Or 3) Not less than one retired AEE/ADE plus one diploma holder in civil Engineering. 4) Two diploma holders in in civil Engineering with 3 and 5 years experience respectively.
5. From Rs.25.00 lakhs to Rs.50.00 lakhs	1) One B.E. (Civil) with 3 years experience plus two Diploma holder in Civil Engineering or 2) One B.E. (Civil) with 3 years experience plus two retired junior Engineers. or 3) Equivalent degree holder with 3 years experience plus two Diploma holder in Civil Engineering / two retired junior Engineers. or 4) One retired AEE or ADE plus two diploma holders in Civil engg. or 5) One retired AEE or ADE plus two retired Junior Engineers.
6) Above Rs.50 lakhs	(To be examined in individual cases depending upon the nature of work and the technical skill involved and defined in the tender notice regarding the No. of qualified technical personal to be employed by the contractor.
7) Penalty	The rate for failure on the part of the contractors to employ technical assistant 1) For Diploma holder - Rs 2000/- per month 2) For Degree holder - Rs 5000/- per month

ANNEXURE VIII (Para No 7.1.8)**SAMPLE FORMAT FOR EVIDENCE OF ACCESS TO OR AVAILABILITY OF CREDIT FACILITIES
– CLAUSE 7.1.9**

(To be furnished in the Letter Head of Bank)

BANK CERTIFICATE

This is to certify that M/s..... is a reputed company with a good financial standing.

If the contract for the work, namely..... is awarded to the above firm, we shall be able to provide overdraft/ credit facilities to the extent of Rs..... to meet their working capital requirements for executing the above contract.

Signature of the Authorised Officer of the Bank.

Date:

Seal of the Bank.

ANNEXURE IX (Para No 7.1.9)**Details of Litigation, if any.**

Sl. No	Name of the Govt. Dept./Private Organisation(Other party)	Cause of the litigation	Amount involved (Rs. In lakhs)	Award for (or) against bidder	Remarks / present stage

Note: Should be attested by the Notary Public.

Seal of the firm

Signature of the bidder with date

ANNEXURE X (Para No 7.1.10)

Declaration by the Bidder:

It is to certify that our firm.....

.....has **not** been black listed / banned / debarred by any Central/ State
/ UT Government Department or Undertaking /Organization.

Seal

.....

.....

(Signature of the Bidder)

ANNEXURE-XI (Para No 7.1.14)

(Affidavit as an undertaking given by the Contractor should be certified by the Notary duly stamped on a Notaries Stamp)

Model

(to be typed in Rs 100 Non-Judicial Stamp Paper)

AFFIDAVIT OF _____ (Name of Contractor).

I/We _____ (Name of Contractor) Son of (Hindu) aged about years, Partner/Proprietor/Authorised signatory of ----- having our office at no..... do hereby solemnly affirm and sincerely states as follows:-

I /We state that We have entered in to Operation and Maintenance of WSS/CWSS contract with TWAD Board on date.

I/We state that I/We will be the Principal Employer as referred in the labour laws in respect of any operating staff / work person engaged for the purpose of delivery of services under this contract.

I/We state that there will not be any employer and employee relationship between TWAD Board and the workmen employed by us. We will take all responsibilities relating to present Labour Laws with regard to our employees.

I/We state that the workers employed by us in connection with performance of this contract will not claim any right of employment with TWAD Board.

I/We state that this Affidavit can be used as a Document before any Court of Law or Tribunal to defend the TWAD Board.

Solemnly affirm and signed by me on this day of 2022

DEPONENT

BEFORE ME

NOTARY PUBLIC

PERFORMANCE BANK GUARANTEE (UNCONDITIONAL)

To

The Executive Engineer, TWAD Board.

(Name of Employer)

_____(Address of employer)

WHEREAS _____(Name and address of contractor) (hereinafter called "The Contractor" has undertaken, in pursuance of contract No. _____ dated _____ to execute _____(Name of contract and brief description of work) hereinafter called "the contract"

AND WHEREAS it has been stipulated by you in the said contract that the contractor shall furnish you with a Bank Guarantee by a recognized Bank for the sum specified therein, as security for compliance with his obligations in accordance with the contract.

AND WHEREAS the contractor has requested us to give the Bank Guarantee.

AND WHEREAS we have agreed to give the contractor such a Bank Guarantee unconditionally and irrevocably to guarantee as primary obligator and not as mere surety, all the payments to the ____

NOW THEREFORE we hereby affirm that we are the Guarantor and responsible to you, on behalf of the contractor, upto a total of____(amount of guarantee)____(amount in words) such being payable in the typesand proportion of currencies in which the contract price is payable, and we are undertaketo pay you unconditionally and irrevocably upon your first written demand and without cavil or argument, any sum or sums within the limit of_(amount of guarantee) as aforesaid without you needing to prove or to show grounds or reasons foryour demand for the sum specified therein.

We hereby waive the necessity of your demanding the said debt from the contractor.

CONTRACTOR

EXECUTIVE ENGINEER

GENERAL CONDITIONS OF CONTRACT

TABLE OF CONTENTS

S. No	Contents	Pag e no
1	PART – I- Role and Responsibilities of the Contractor	
2	PART – II- Payment mode for Contractor	
3	PART – III- Role of the TWAD board	
4	PART – IV-Labour laws and procedure adopted	
5	PART – V- Special conditions	
6	PART – VI- List of beneficiaries and earmarked quantity of water to be supplied	

PART I**ROLES AND RESPONSIBILITIES OF THE CONTRACTOR**

S.No	Contents	Page no
1.1	Interpretation of terminologies	
1.2	Responsibilities of the Contractor regarding operation and maintenance of the scheme.	
1.3	List of equipments, installations, structures, pipelines, appurtenances etc., to be maintained	
1.4	Schedule of Maintenance	
1.5	Equipment and Tools to be made available at each Pumping Station	
1.6	Safety Measures to be adhered	
1.7	Specifications for repairs to Electro Mechanical equipments and for attending Leaks and burst in pipelines.	
1.8	Formats for Registers to be maintained by the contractor at Site	
1.9	Uploading of data in Online Entry Formats in http://117.236.90.36/Maint-Projects/frmLeakBurst.aspx ,	

1.1. INTERPRETATION OF TERMINOLOGIES

- 1.1.1. In these conditions of contract the following definitions shall apply:
- 1.1.2. The Tender inviting authority and Tender Accepting Authority means the Executive Engineer, Superintending Engineer/ Chief Engineer of Tamil Nadu Water Supply and Drainage Board
- 1.1.3. The Implementing authority/ Department means the Executive Engineer, Superintending Engineer/ Chief Engineer of Tamil Nadu Water Supply and Drainage Board
- 1.1.4. The contract means the agreement concluded between the authority and the contractor, including all specifications, patterns, contractor's samples, plans, drawings and other documents incorporated or referred to there in.
- 1.1.5. The contractor means the person/agency who have been awarded the work and undertakes the Operation and maintenance of the CWSS.
- 1.1.6. The contract price means the price mentioned in the price schedule of the agreement for the respective items of works carried out, that is payable to the contractor by the authority under the contract for the full and proper performance by the contractor or its part of the contract.
- 1.1.7. The work means the work of supplying earmarked quantity of water to all the beneficiaries covered under the scope of the project, attending leaks/ bursts occurred during the maintenance period, attending repair works on the goods and equipments that the contractor is required to provide under the contract to establish the above mentioned service.
- 1.1.8. MLD is Million litres per day which equals 10,00,000 litres in one day.

1.2. Responsibilities of the Contractor regarding O&M of this Scheme.

- 1.2.1. A joint inspection to be conducted by the Contractor with TWAD Board Officials before taking over of the CWSS for maintenance.
- 1.2.2. The Contractor should take over the scheme after award of work for maintenance and handover the scheme in good condition, on completion of agreement period.
- 1.2.3. Before taking over the CWSS/WSS, inspect the Alignment and to check presence of any illegal connections (any connections other than the scope of the project) in the alignment during takeover of the scheme for maintenance. **If any illegal connection found during the course of taking over, the same shall be removed at the cost of TWAD Board.**
- 1.2.4. After taking over of the CWSS for maintenance, the Contractor is the custodian of the CWSS.
- 1.2.5. After taking over the scheme by the contractor, for any damages to the components of the CWSS made by men, machinery, etc., the contractor is solely responsible for rectification at his own risk and cost, except for damages caused by other line departments under the Government of Tamil Nadu, National Highways and NHAI.
- 1.2.6. Damages caused to the underground utilities by the contractor during rectification is to be rectified by the contractor under own risk and cost.
- 1.2.7. After taking over the scheme by the contractor if any illegal connection found, it should be reported immediately to the AE/AEE so as to file the FIR by the Department early. However, the Contractor should take immediate action to remove such Illegal connections at his risk and cost only. Continual illegal Tapping/Connection will lead to cancellation of agreement, as the maintenance of Pipeline is the sole responsibility of the contractor.
- 1.2.8. The CWSS taken over by the contractor is only for maintaining the scheme and to supply the earmarked quantity to all the beneficiaries. The contractor should not make any alterations in the CWSS / supplying water to any other beneficiaries/ supplying water through any other mode without the approval of the Executive engineer incharge of the CWSS in writing.

- 1.2.9. Ensure that the water is supplied to all beneficiaries covered under the project as per the earmarked quantity on normal condition.
- 1.2.10. Under all the circumstances, the supply to all beneficiaries including Tail end habitations shall be ensured as per the PART –VI of the GCC.
- 1.2.11. Should inform every day before 08.00 AM about the pumping status of the scheme from 06.00 AM of previous day to 06.00 AM of present day to the AE/AEE through WhatsApp and through online entry as per the prescribed format (beneficiary supply details).
- 1.2.12. If Diesel Generator (DG) is available in the scope of contract it should be maintained in working condition. Test run of Genset should be carried out for a minimum of 30 minutes per week while in idle condition or as recommended by the manufacturer / directed by TWAD Engineer. The contractor should make necessary arrangement for Diesel / Lube oil required for operating the generator and the related cost will be reimbursed as per actual on production of original bills.
- 1.2.13. In case of failure of electricity during emergency / calamity, the contractor shall take immediate action to restore the electricity by approaching the TANGEDCO authorities. In case of non availability of generators, the Contractor shall engage generators for pumping the Earmarked quantity (MLD) as and when required under approval of the Executive Engineer and the hire charges will be paid as per the rate approved for this case.
- 1.2.14. The contractor shall submit the operating methodology to carryout in full this contract as per the prevailing guidelines, CPHEEO guidelines and got it approved by the Engineer in charge. The Operating Staff should have the required minimum qualification as the case may be as Electrician with-C-Certificate, Electrician-grade II, Fitter grade II, Maintenance Assistant, filter bed operator, turncock, watchman as per the requirement of works to be performed. All shall read and write.
- 1.2.15. Must keep a copy of the relevant portions of the latest CPHEEO manual on Operation and Maintenance of Water Supply Systems at work site and carry out the O&M works in accordance to the guidelines prescribed in the Manual.
- 1.2.16. The Quantity of water supplied to the beneficiaries is the essence of contract, and the contractor is solely responsible for the supplied quantity. The contractor should ensure earmarked quantity (MLD) of supply to all the beneficiaries as per the scope.

Contractor should maintain and furnish register showing the quantity of water delivered to each habitations duly signed by Panchayat Secretary/ Panchayat President of the local body concerned or a person authorized by the Panchayat President and submitted to the Assistant Engineer for preparing the water charges demand by 26th of every month (from 26th of the previous month to 25th of current month)..

- 1.2.17. The Contractor should maintain Pumping quantity register, pump set operation register, Leak & burst register, Consumables register, Electro mechanical repair register, preventive maintenance register, water retaining structure cleaning register, pumpset panel boards repair register, valves inspection and rectification register etc. and the same shall be maintained and signed by the contractor/authorized person and the same shall be furnished during the inspection of TWAD Board Officer. The format for maintaining the above registers shall be got approved from the Executive Engineer in charge.
- 1.2.18. The Contractor should obtain the invoice / bill for electricity consumed and handover to the Assistant Engineer / Assistant Executive Engineer for onward submission for making payment and the contractor should make arrangements to submission of Cheque / Demand Draft to Electricity Board office without delay.
- 1.2.19. All the repair works whenever it occurs in the pumping machineries, Electro-mechanical items should be attended immediately under intimation to TWAD Board Engineers as all the works are included in the essence of contract.
- 1.2.20. The contractor should attend the Leaks and Bursts whenever it occurs, within the stipulated period, and necessary photos shall be taken before during and after attending the works with latitude / longitude and the same must be uploaded online in the link <http://117.236.90.36/Maint-Projects/frmLeakBurst.aspx>, through the Assistant Engineer/Assistant Executive Engineer concerned.
- 1.2.21. For attending the leaks/ burst, the contractor shall procure the minimum quantity of materials and keep advance stock which may require to attend all types of maintenance works at the earliest.
- 1.2.22. All the tools and equipments required for this contract shall be arranged by the Contractor at his own expense.

- 1.2.23. Contractor shall maintain the water meters in good working condition. The Quantity pumped will be ascertained based on water meter reading only. However in special circumstances if the water meter is not functioning / available, the supply quantity will be checked using portable flow meter provided by the contractor.
- 1.2.24. Operate and maintain capacitor and allied switch gear so as to maintain a power factor of not less than 0.90 and as prescribed by TANGEDCO.
- 1.2.25. The power factor will not decrease or increase suddenly and hence the contractor should monitor it daily. If any decrease in the power factor is noticed, it should be informed to the Departmental Engineers (concerned Assistant Engineer/Assistant Executive Engineer) and rectification to be carried out by the contractor which will be paid for as per the agreement. Any penalty levied by TANGEDCO for non-maintenance of power factor, will be recovered from the Contractor.
- 1.2.26. Mandatory Regulations prescribed by CEIG and Inspector of Factories shall be followed without any lapse.
- 1.2.27. To maintain periodically plant and machineries, pump room and it's premises, Pumping main and valves and Treatment Units etc. as per the list detailed in clause 1.3 and as per the Schedule of Maintenance detailed in clause 1.4 of General Conditions of Contract.
- 1.2.28. Each station should be provided with complete set of tools and equipments required for maintenance as listed in the clause 1.5 of GCC.
- 1.2.29. To adhere to safety measures as stipulated in clause 1.6 of GCC.
- 1.2.30. Recording Register including starting/stopping time of the pump sets etc as per standard format.
- 1.2.31. Checking the temperature/Noise of Running units and control panel
- 1.2.32. To Provide gland packing for the pumps, sluice valve etc. whenever required to avoid leakage of water.
- 1.2.33. The Contractor shall report any problem in the motor and pumps, electrical main boards and fixtures etc, leaks and burst if any occurred in the pipe line, leaks and repairs in valves and any other damages caused to the water supply system, shall be brought to the notice of the Assistant Engineer/ Assistant Executive Engineer, immediately and take immediate action for the rectification and restoration of water

supply within the prescribed time limit. Necessary entries shall be made in the corresponding register.

- 1.2.34. Any alternation/additions if needed to the existing arrangements, both in electrical and mechanical installations shall be attended only after proper approval from the Executive Engineer.
- 1.2.35. The contractor shall obtain the license from the competent authority of Labour Department in the respective District.
- 1.2.36.** The contractor shall provide Technical Supervisor with minimum technical qualification of Diploma/Degree in Civil/Electrical/Mechanical Engineering as per the value of work mentioned under Annexure – VII. **(The tender calling authority shall specify the requirement of technical supervisors to be engaged by the Contractor under this clause and the penalty for non employment of technical supervisors by the Contractor)**
- 1.2.37. The Contractor should also provide photo identity card to his own labour mentioning the name and category along with the name of the Contractor without mentioning the TWAD Board name and Logo, etc.,
- 1.2.38. If any labour is found to be unfit or disobedient to the instructions given by the TWAD Board officers, they shall be replaced by the contractor immediately.
- 1.2.39. The contractor shall provide required safety equipments to the labours engaged by him.
- 1.2.40. Operation on specified shifts / day as per labour law and ensuring that back up teams are available to take over during Sundays, Public Holidays and in the event of regular Operator's absence including watch and ward.
- 1.2.41. Operate and maintain pumping equipment with skilled staff with required qualifications and experience so as to safeguard the equipments against single phasing, earth fault, phase reverse etc., in power supply as well as their personal safety.
- 1.2.42. The contractors shall be fully responsible for operating and maintaining the scheme in a safe & secure manner.
- 1.2.43. The contractor shall obey all the provisions of various laws including Labour Laws as applicable to them. If the Board suffer any loss what so ever of nature, monetary or

otherwise, as a result of direct or indirect action or inaction of the contractor in failing to comply with or not properly complying with any law, rules, regulations, notifications, instructions, circulars, G.Os, Board Proceedings, etc. issued by the Government or Board or any other authority as applicable to them as mandated by the law or otherwise, the said laws shall be computed in terms of money and recovered from the contractor.

1.2.44. Temporary Diversion of Roads and Commencement of Work.

1.2.44.1. During attending leaks, burst and any other repair works, the contractor/firm shall make at his cost all necessary provision for the temporary diversion of roads, car tracks, footpaths, drains, water courses, channels etc.,

1.2.44.2. If the contractor/firm fail to do these arrangements, the same shall be done by the Engineer in charge and the cost thereof shall be recovered from the contractor/firm.

1.2.45. Notice to Telephone, Railway and Electric Supply Undertaking.

During attending leaks, burst and any other repair works, the Contractor / firm shall give all prior notices through Assistant Engineer/ Assistant executive Engineer required by any law or custom or as directed by the Engineer in charge, to other departments, who may be affected, prior to commencement of the works.

1.2.46. Watching and Lighting

The Contractor/firm shall at his expense, shall provide at the site of works sufficient fencing, barricading, watching and lighting during day and night. The contractor/firm shall in every respect conform to the police regulations in these matters, for which the Board will not take any responsibility. If the contractor/firm fail/neglect to do these arrangements, the same shall be carried out by the Engineer in charge and the costs thereof shall be recovered from the contractor/firm and prevent entry of unauthorized persons

1.2.47. Risk Insurance

TWAD shall not be liable for risks of loss or damage to any belongings and of personal injury and death to the persons employed by the contractor for this work and the public if any during the contract period. Copy of such insurance shall be produced to the Executive Engineer.

1.3 List of equipments, installations, structures, pipelines, appurtenances etc., to be operated and maintained under this contract.

Sl. No.	Name of the equipments, installations, structures, pipelines, appurtenances etc., to be operated and maintained along with the details of specifications such as type, make, HP, Head, discharge, capacity length, size and other relevant details such as hours of pumping, pressure, quantity & quality of water, etc.	Quantity	Location
1.	VIDE Annexure BB (Separately Enclosed)		
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
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11.			
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Note: It is the responsibility of the tender calling authority to fill the above details with respect to the scope of the works to be covered under this O&M contract without any omission.

1.4 Schedule of Maintenance

Item No.	Description of work	Daily	Weekly	Fort-nightly	Monthly
1	Pump House:				
1.1	Cleaning of site	▪			
1.2	Cleaning of Pump House including Doors and Windows	▪			
1.3	Cleaning of Panel Room, D.G. room etc.	▪			
1.4	Check pump is operational	▪			
1.5	Change over to stand by pumps	▪			
1.6	Record hours run	▪			
1.7	Check operation of air release pipe	▪			
1.8	Lubricating of Rolling Shutters			▪	
1.9	De-weeding of Pump Room premises and removal of cob webs etc in the Pump Room.				▪
2	H.T. Structure, Transformer yard and Transformers:				
2.1	Cleaning of transformer yard, removal of grass and plants	▪			
2.2	Check up and water the earth pits		▪		
2.3	Megger - earth resistance check in the earth pits				▪
2.4	Check and operate the AB switch in the structure for its smooth operation and replace contacts if necessary		▪		
2.5	Check up dropout fuses and H.G. fuses and replace if necessary	▪			
2.6	Check up insulators and lightning arrestor in the structure and replace if necessary			▪	
2.7	Check the transformer for any leakage of oil and top up if necessary		▪		
2.8	Check the temperature of transformer oil from dial thermometer and record		▪		
3	H.T. Panel:				
3.1	Clean the panel externally and internally using blower	▪			

Item No.	Description of work	Daily	Weekly	Fort-nightly	Monthly
3.2	Carryout visual check of observe over all condition of the breakers and clean the breakers thoroughly	▪			
3.3	Grease/Oil joints and sliding surfaces			▪	
3.4	Check the internal connections			▪	
3.5	Check the operations of doors and conditions of door gasket			▪	
3.6	Check Volt Meter, Ammeter etc. in the panel for its working and replace if necessary	▪			
3.7	Check all the indicator lamp and control fuses and replace if necessary	▪			
3.8	Check the operation of relays			▪	
4	LT Panel :				
4.1	Clean the panel externally and internally using blower	▪			
4.2	Check all the connections for tightness			▪	
4.3	Check the contacts switches for tightness and apply petroleum jelly if necessary			▪	
4.4	Check Volt Meter Ammeter and respective P.T. and CTS for its working and connection	▪			
4.5	Check all the indicator lamp bulbs and fuses and replace if necessary		▪		
4.6	Check operation of all switches and bush buttons		▪		
5	CAPACITORS:				
5.1	Check all the capacitors for oil leakage if any	▪			
5.2	Clean the insulator with dry cloth and check the connections for tightness			▪	
5.3	Check the fuses and meggar the units?	▪			
6	MOTORS:				

Item No.	Description of work	Daily	Weekly	Fort-nightly	Monthly
6.1	Clean the motor terminal box, check the cable connection to tightness	▪			
6.2	Check body of the motor for firm connection			▪	
6.3	Check the foundation bolt and nut for tightness	▪			
6.4	Check normal sound and vibration	▪			
6.5	Check the bearing grease and replace if necessary				▪
6.6	Check air cooling fan for vibration and noise				▪
6.7	Check meggar test for windings and earth				▪
6.8	Cleaning of motor slipring, carbon brush, contacts and replace if necessary		▪		
7.0	STARTERS AND OCB				
7.1	Clean the starter and check up the cable connection	▪			
7.2	Check contacts and replace if necessary		▪		
7.3	Check for cable connection		▪		
7.4	Check for OLR and No volt coil		▪		
7.5	Check the level of transformer oil in the OCB and top up if necessary			▪	
8.0	MAIN PUMPS				
8.1	Outside Cleaning	▪			
8.2	Check Bearing Temperature	▪			
8.3	Check & Top up Bearing grease or replace grease		▪		
8.4	Check gland for leak and add gland layer if required	▪			
8.5	Replace gland packing completely				▪
8.6	Check foundation nuts and bolts for tightness and rusting		▪		

Item No.	Description of work	Daily	Weekly	Fort-nightly	Monthly
8.7	Check inspection covers and check condition of impeller				▪
8.8	Check the pressure and pressure gauges on suction and delivery side	▪			
8.9	Clean the pump pit and pump floor	▪			
8.10	Check for coupling Bolts and nuts, coupling tyre and replace the tyre if required		▪		
8.11	Check for vibration and noise of the pump	▪			
8.12	Pump out leaked water from the pump pit	▪			
8.13	Check the condition of bearing oil and replace if required			▪	
9	SUMP PUMP				
9.1	Check the pump for operation	▪			
9.2	Check the coupling and replace if necessary			▪	
9.3	Clean the starter panel externally and internally	▪			
9.4	Check the fuses and contacts, apply petroleum jelly if necessary		▪		
9.5	Check the foot valve and replace if necessary	▪			
10	Diesel Generator Set, Battery and Emergency light:				
10.1	Clean the Battery, top up, distilled water in the battery if necessary	▪			
10.2	Remove the connection of battery terminals, clean thoroughly and reconnect after applying petroleum jelly		▪		
10.3	Clean the emergency lights internally and externally	▪			
10.4	Check the light, indicator lamp for its proper working and attend if necessary		▪		

Item No.	Description of work	Daily	Weekly	Fort-nightly	Monthly
10.5	Check fuel level in the diesel tank of DG set and top up if necessary		▪		
10.6	Check engine oil level in the D.G. set and add if necessary			▪	▪
11	OHT CRANES:				
11.1	Carry out thorough cleaning of crane including girders, trolley, platform other equipments and control panels			▪	
11.2	Check all the cable connections for tightness		▪		
11.3	Check contacts and fuses and replace if necessary		▪		
11.4	Inspect gearbox for any leakage of oil				▪
11.5	Check the connection of limit switch				▪
11.6	Check panels internally and externally and apply petroleum jelly if required				▪
11.7	Check the rope and apply grease if required				▪
12	SUCTION & DELIVERY VALVES AND ACTUATOR:				
12.1	Check the condition of gland packing and tighten or replace if necessary	▪			
12.2	Check actuator gear box for leakage		▪		
12.3	Check the condition of limit switches			▪	
12.4	Check the condition of oil and grease, replace if necessary			▪	
12.5	Check the bolts and nuts for tightness			▪	
12.6	Check cable terminals at motor terminal box of actuator			▪	
12.7	Check clutch and gear arrangement for manual operation				▪

Item No.	Description of work	Daily	Weekly	Fort-nightly	Monthly
12.8	Apply grease to the spindle if necessary			▪	
12.9	Check for free movement			▪	
13	<i>PIPELINE:</i>				
13.1	Check the pumping main, branch pumping main, feeder main for any leak /burst /damage	▪			
14.0	VALVES:				
14.1	Check the operation of non-return valve	▪			
14.2	Check the disc for its smooth opening and closing operation		▪		
14.3	Check the sluice valves	▪			
14.4	Check the air valves	▪			
14.5	Check the scour valves				▪
15	<i>SUMP:</i>				
15.1	Check the cleaning				▪

1.5 Equipments and tools to be made available at each pumping station

Sl. No.	Description	Set/no.
1	Ultrasonic Flow detector	1 set
2	Double end spanner (6 mm to 32 mm)	1 set
3	Screw driver (6", 8", 12")	1 set
4	Pipe wrench (14", 18", 24")	1 set
5	Cutting pliers	1 set
6	Long nose pliers	1 no.
7	Hammer (2 Kgs)	1 no.
8	Test lamp with 15m wire	1 no.
9	Megger (1000 V)	1 no.
10	Multimeter	1 no.
11	Tong tester	1 no.
12	Hacksaw frame with 3 nos. blade	1 no.
13	Spade (Manwetty)	2 nos.
14	Crow bar	1 no.
15	Sickles	2 nos.
16	Ring spanner (6mm to 32mm)	1 set
17	Caution Board (Men at work)	1 no.
18	Grass cutter	1 no.
19	Country knife	2 nos.
20	Iron chutty	2 nos.
21	Grease gun	1 no.
22	Wheel barrow	1 nos.
23	Torch light with 3 cells	2 nos.
24	Hand blower	1nos.

1.6 SAFETY MEASURES TO BE ADHERED:

1.6.1 All electrical safety equipments like hand gloves, testers and other electrical needs are to be provided by the contractor in the Pumping Stations as stated below:

Sl.No	Name of Equipment	For	
		HT Supply	LT Supply
1	Safety belt with rope	2 nos	1 no.
2	Gas Mask	1 no.	1 no.
3	Shock proof hand gloves (11 KV grade gloves)	1 pair	1 pair
4	Disposable hand gloves	2 pairs	2 pairs
5	Gum boot	2 pairs	1pair
6	Electrical line tester	1 no.	1 no.
7	Earth discharge rod	1 no.	1 no-
8	First Aid Box	1 no.	1 no.
9	Emergency light	1 no.	1 no.
10	Fire Extinguisher	2no.	1no.
11.	Rubber Mat of suitable size	as per requirement	

Note: The above is only an illustrative minimum list. The contractor must note that it is their responsibility to ensure the lives and safety of the workers employed by them. The premises should be maintained as per CEIG norms and requirements. If any failure/ Penalty due to non adherence of CEIG norms will have to be borne by the contractor. Towards this end, all the equipments of appropriate specifications should be procured and made available to the workers in usable conditions throughout the period of contract. Responsibility for any health problem or death will solely rest with contractor.

1.6.2 Only experienced, skilled people have to be employed by the contractor.

1.6.3 Safety belts, ropes, Gas mask, Torch lights, are to be provided by the contractor for laborers who get into wells.

1.6.4 All personnel shall be covered by insurance under workmen compensation Act.

1.6.5 All labour act provisions has to be met with.

1.6.6 Exhibit labels of "SAFETY FIRST"

1.6.7 First Aid Box should made available within the reach of the staff in all Pump Rooms and Booster Stations.

1.6.8 No medicine beyond the expiry date should be kept in the first aid box

1.6.9 First Aid Chart should be displayed in the Pump Rooms.

1.7 Specifications for repairs to Electro Mechanical equipments and for attending Leaks and burst in pipelines.

(Note: It is the responsibility of the tender calling authority to furnish the detailed specifications with respect to the repairs, rectification works and consumables for the following items of works.)

1.7.1 Detailed Specification for repair works

- a) Rectification of Leaks in pipelines**
- b) Rectification of Bursts in the pipelines**
- c) Rewinding of Motors**
- d) Repairs and reconditioning of Pump sets**
- e) Repairs and reconditioning of Panel Boards**
- f) Repairs and reconditioning of Sluice valves**
- g) Repairs and reconditioning of Air Valves**
- h) Other items of works.**

1.7.2 Payment for repair and rectification works:

The payment shall be made as per the rate quoted by the Contractor in the price schedule for each items of works as specified. As per the actual condition, during repairs and rectification works, If any material / work is omitted as not necessary, then the amount of such items shall be deducted based on the rate / cost in the sanctioned estimate along with tender premium.

1.7.3 Payment for supply, delivery and utilization of consumables

The items mentioned under the supply and delivery of consumables for various category of works shall be paid as per the rate quoted in the bid. These consumables are to be utilised during regular O&M works, preventive maintenance and attending minor repairs and shall be carried out by the operating staff and no additional payment will be made.

1.8. Formats for Registers to be maintained by the contractor at Site

1.8.1 Leak/ bursts Register

Sl. No.	LS/Location at which leak/ burst occurred	Reasons	Whether repeated occurrence or not	Size of main	Date of occurrence of leak/ burst	Date and Time of Information to the Assistant Engineer concerned	Date of inspection Field Engineer	Instruction issued	Date of rectification		Materials used for rectification
									Start	Finish	
1	2	3	4	5	6	7	8	9	10	11	12

1.8.2 Pump Set, Panel Boards Repair Register

Sl. No.	Location and Details of Pump set	Type of repair and reasons	Whether repeated occurrence or not	Date of occurrence of Repair	Date and Time of Information to the Assistant Engineer concerned	Date of inspection Field Engineer	Instruction issued	Date of rectification		Materials used for rectification
								Start	Finish	
1	2	3	4	5	6	7	8	9	10	11

1.8.3 Valves inspection and rectification Register

Sl. No.	No. of sluice valves/ Air valves/ scour valves inspected	No. of minor leak in any valves	No. of minor leaks attended	No. of gland packing/ applying grease in valves	No. of defective valves still to be attended
1	2	3	4	5	6
1					

1.8.4 Log Book Formats for Pump set operations, Genset Operation, etc shall be included and specified by the Tender Calling Authority.

1.9. Uploading of data in Online Entry Formats in <http://117.236.90.36/Maint-Projects/frnLeakBurst.aspx>,

1.9.1 Online Entry Format for Leak and Burst Details

Sl no	Leak ID	Project	Reach	Location	Date of Leak/Burst	Latitude	Longitude	Pipe Material	Diameter (mm)	Class of Pipe	Reason	Remarks

1.9.2. Online Entry Format For Pump set Repair

SL NO	Component	Location of Pump set	Pump set Type	Main /Stand bye	Discharge in LPM	Head in M	HP OF PUMPSET	Erection Year	Pump set Serial No. (As Mentioned in Name Plate)	Reason for Pump set Repair	Component of Pump set / Panel Board / Cable under Repair	Date of Repair occurred	Date of repair rectified and erected	Remarks

1.9.3. Other formats prescribed during contract period, such as

Pumping quantity register

Pumpset operation register

Consumables register

Electro mechanical repair register

Preventive maintenance register

Water retaining structure cleaning register

shall have to be maintained by the Contractor and carry out the online entry for such formats also.

PART II**PAYMENT MODE FOR THE CONTRACTOR**

S.no	Contents	Page no
2.1.	Measurement and Bill	
2.2.	Quantification of value of work done and Penalty	
2.3.	Payment for the value of work	

2.1. Measurement and Bill:

The payment to the contractor will be made based on the following basis.

2.1.1 Measurement:

2.1.1.1. The Measurement shall be recorded by the Assistant Engineer based on the works carried out every month as per the BOQ. The Contractor shall produce all relevant documents, registers, invoices, vouchers as the case may be for recording measurements.

2.1.1.2. The details to be uploaded online in the link <http://117.236.90.36/Maint-Projects/frmMain.aspx>, shall be completed by the Contractor, through the Assistant Engineer concerned, which will be one of the precondition for recording of measurements.

2.1.2 Bill Submission:

2.1.2.1 The contractor shall submit the O & M bills once in a month with proper records enclosed i.e., Pumping quantity register, ESI, EPF payment details, Leak & burst register, Consumables register, Electro mechanical repair register and sump cleaning etc .

2.1.2.2. Based on the bill submitted by the Contractor the Assistant Engineer shall prepare and submit the bills in relevant forms after deducting any penalty imposed towards the work as the case may be.

2.2 Quantification of value of work done:

2.2.1. The quantity of water drawn/supplied will be calculated monthly, based on the quantity of water supplied daily.

2.2.2. The contractor will not be penalised for the lesser quantity of water supplied to the beneficiaries on the following reasons, which should be approved by the Engineer / Employer.

a) Non availability of power supply for more than 6 hours in respect of 18 hours designed pumping and 12 hours in respect of 12 hours designed pumping or in the case of staggered power supply for the above mentioned designed pumping hours.

b) Any leak or burst when attended and water supply is restored within the stipulated time frame mentioned in clause 2.2.5

- c) When the availability of water at the drawal or first tapping point of this contract package is less than the earmarked quantity.
- d) Shifting and replacement of pipeline due to development activities of other departments.
- e) Any Force Majeure situation such as riots, War, Earthquake, Land slide, Cloud Burst etc., which leads to non operating condition of the equipments.

2.2.3. If the contractor fails to effect the supply of earmarked quantity of water to the beneficiaries under the scope of this contract, unless and otherwise due the reasons mentioned in clause 2.2.2, then 90% of the payments will be made proportionately (Initial, Intermediate and Tail End beneficiaries as finalised by the Executive Engineer as below:

"Bill Claim Amount for supply based portion of BOQ / Agreement =

$90\% \times (\text{BOQ or Agreement value for the reaches concerned}) \times ((\text{served Quantity in KL}) / (\text{Earmarked Quantity in KL}))$ ".

2.2.4 If the contractor fails to carry out the Preventive maintenance as per the Schedule of Maintenance listed in the Clause 1.4 of GCC then the payment will be deducted as below as the case may be:

(i) Daily scheduled activities not done fully	: (10 %)
(ii) Weekly scheduled activities not done fully	: (5 %)
(iii) Fortnightly scheduled activities not done fully	: (2.5 %)
(iv) Monthly scheduled activities not done fully	: (2.5 %)
Total : (20 %)	

The following formula will be adopted for making payment to each of the above four category in case of failure in schedule of Maintenance in that category:

"Bill Claim Amount for supply based portion of BOQ / Agreement =

$90\% \times (\text{BOQ or Agreement value for the schedule of Maintenance as per clause 1.4}) \times ((\% \text{ of schedule of Maintenance done for four category in total} / 20\%))$ "

2.2.5. For attending leak/ Burst works in the pumping and Feeder mains:

S.No	Description of the Pipes	Scheduled time for attending one leak work	Scheduled time for attending one Burst work
1.	For pipes from 50mm OD PVC to 110 mm OD PVC and GI	Within 12 hours	Within 24 hours
2.	For pipes 140 mm OD PVC, 160 mm OD PVC and 200 mm OD PVC and GI	Within 12 hours	Within 24 hours
3	HDPE pipes / AC pipe/ above 200 mm dia PVC Pipes and GI	Within 24 hours	Within 36 hours
4	For all size of DI / CI pipes	Within 24 hours	Within 36 hours
5	All sizes of MS pipe /PSC pipes/BWSC pipes	Within 36 hours	Within 48 hours

2.2.6. For attending pump set repairs:

S.No	Description of the Pump sets and allied accessories	Scheduled time for attending repair works
1.	For Submersible Pump sets and allied accessories	
a.	Minor repair works	With in 24 hours
b.	Major repair works with replacement of parts	With in 48 hours
c.	Coil rewinding works	4 – 6 days
2.	For Vertical Turbine Pump sets and allied accessories	
a.	Minor repair works	With in 48 hours
b.	Major repair works with replacement of parts	4 – 6 days
c.	Coil rewinding works	5 – 7 days
	For HSC Pumpsets and allied accessories	
a.	Minor repair works	within 24 hours
b.	Major repair works with replacement of parts	3 - 4 days
c.	Coil rewinding works	5 - 7 days

2.2.7. For attending the repair/ replacement works in Gate Valves, Sluice Valves, air valves, Non Return Valves, Scour Valves etc., it should be completed within **24** hours.

2.2.8. Penalty:

- 2.2.8.1. Non attending repairs within the specified period – 1% of value of work as per price schedule / day for unfinished portion or Rs.1000/day till the work is completed whichever is higher.
- 2.2.8.2. The transmission losses due to leaks or burst in pipeline, valves, and other installations, over flow of sumps during power failure should not exceed 7% of the quantity to be supplied calculated on monthly basis. If the transmission losses in the said situations exceed
 - 7% - 10 % as calculated above, amount will be deducted at Rs.10/ KL (for the excess quantity more than 7 %.)
 - 10% - 12 % as calculated above, amount will be deducted at Rs.30/ KL (for the excess quantity more than 7 %.)
 - 12% - 15 % as calculated above, amount will be deducted at Rs.80/ KL (for the excess quantity more than 7 %.)
 - More than 15 % as calculated above, amount will be deducted at Rs.150/ KL (for the excess quantity more than 7 %).
- 2.2.8.3. In the case of wastage of water by Over flow of sumps / OHTs due to failure on the part of contractor shall be Rs.150 per KL of such over flown/ wasted water.
- 2.2.8.4. If any damage occurred in the scheme components, damage shall be rectified immediately by the contractor at his own cost. Penalty shall also be imposed for the default caused as per relevant clauses of this contract. If defect is not duly rectified by the contractor within the specified time, the work will be carried out by TWAD Board and the cost will be recovered as determined by TWAD Board including all escalations and losses.
- 2.2.8.5. If the contractor fails to attend the rectification works of the Electro mechanical items, cleaning the sumps etc a fine will be imposed as decided by the Executive Engineer depending on the value of such repair works / cleaning of sump works.
- 2.2.8.6. If the contractor fails to ensure the required residual chlorine at all delivery points including the tail end, a penalty will be imposed at **"double the cost of one day consumption of Disinfectants"** under the scope of this contract. If the supply and delivery of chemicals is not included under the scope of the agreement, the same will be supplied departmentally.

2.3. Payment for the value of work:

2.3.1 95% of the amount will be paid to the contractor for the completed O & M works and the remaining 5% of the amount will be withheld for each and every part of the payment as in 2.3.2.

2.3.2 Under normal condition, payment will be made as follows subject to the conditions stipulated in the item no 2.2.

Category	As mentioned in PART-VI	Payment Value
A	At Head Woks / Treatment Plant / Tapping Point	20% of the Agreement value for Item No.1 of BOQ.
B	Completion of Preventive Maintenance and schedule of Maintenance as per Clause 1.4 in GCC	20% of the Agreement value for Item No.1 of BOQ.
C	Initial Beneficiaries	20% of the Agreement value for Item No.1 of BOQ.
D	Intermediate Beneficiaries	20% of the Agreement value for Item No.1 of BOQ.
E	Tail end Beneficiaries	20% of the Agreement value for Item No.1 of BOQ.

2.3.3 Withheld amount:

2.5% of the withheld amount will be released in the final bill. The Balance 2.5% will be released after 3 months from the date of taken over of the scheme.

2.3.4 Income tax:

During the course of the contract period, deduction of income tax shall be made at the prevailing rates from every payment as may be specified by the Income Tax Act and as amended from time to time.

Part III**ROLE OF TWAD BOARD**

1. A joint inspection will be made by the Assistant Engineer/ Assistant Executive Engineer or the Executive Engineer incharge of O & M of CWSS with the contractor or his representative before handing over of the CWSS / WSS for operation and maintenance.
2. The Executive Engineer or his Authorised representative shall furnish the salient details, components and flow diagram of the CWSS to the contractor along with the list of beneficiaries covered under the scope of this CWSS and the earmarked quantity required to be supplied to those beneficiaries. (PART –VI)
3. The field officers / Assistant Accounts Officers / Executive Engineers should ensure that all the statutory requirements as per the license issued by the competent authority and all the requirements of the Contract Labour (Regulation & Abolition) Act have been complied with by the contractor and a certificate to that effect may be directed to be incorporated by the concerned officer along with the running bills of the contractor, when the bill is sent for passing / sanctioning before the competent authority.
4. Power consumption charges will be paid by TWAD Board. However if penalty is imposed by the TANGEDCO due to reduction in maintaining the Power Factor, it will be recovered from the contractor.
5. The cost of Diesel consumption for operating Generators will be reimbursed by TWAD Board to the Contractor on submission of original voucher from the authorised seller.
6. Regular inspection will be conducted to ascertain the effective functioning of system through Engineers of TWAD Board.
7. Payment will be processed on monthly basis on receipt of bills from the contractor by following Board's procedures.

PART IV

LABOUR LAWS TO BE FOLLOWED

The rights and benefits conferred on the workmen employed by the contractor under the provisions of various Labour Laws are the responsibility of the contractor. The Contractor has to indemnify the TWAD Board in case of loss or any damages. It is the responsibility of the contractor to take insurance policy under Workmen's Compensation Act, 1923 for each labour engaged by the contractor. The Contractor will be responsible for nay deficiency of safety measures to be adhered as stipulated in Annexure D. A Photocopy of the insurance under workmen's compensation Policy should be furnished to the Board. The policies should be kept alive till completion of the contract.

The Contractor shall adhere to following Laws wherever applicable

- 1) Workmen Compensation Act, 1923,
- 2) Payment of wages Act, 1936,
- 3) Industrial Disputes Act, 1947,
- 4) Minimum Wages Act, 1948,
- 5) Factories Act, 1948,
- 6) Employees PF and Miscellaneous Act, 1952,
- 7) Payment of Bonus Act, 1965,
- 8) Payment of Gratuity Act, 1972,
- 9) Equal Remuneration Act, 1979,
- 10) Maternity Benefit Act, 1951,
- 11) Contract Labour(Regulation & Abolition) Act, 1970,
- 12) Industrial Employment (Standing Orders) Act, 1946,
- 13) Trade Unions Act, 1926.
- 14) Child Labour (Prohibition & Regulation) Act, 1986,
- 15) Inter-State Migrant Workmen's (Regulation of Employment & Conditions of Service) Act, 1979.
- 16) The Building and Other Construction workers (Regulation of Employment & Conditions of Service) Act, 1996 and the Cess Act of 1996,
- 17) Employee State Insurance Act, 1982,
- 18) The Tamil Nadu Manual Workers(Regulation of Employment and Conditions of Work) Act, 1982,
- 19) The Bonded Labour System (Abolition) Act, 1976,
- 20) The Employer's Liability Act, 1938.

PART V
SPECIAL CONDITIONS

1. The works which are not covered in the BOQ, but required for this scheme should be done by the contractor whenever required as supplemental works.
2. The Contractor shall pump or deliver additional quantity of water to the beneficiaries during festivals, emergencies, etc as directed by the TWAD Board Officials for which no additional payment will be made under the price schedule item no:1. The consumables for disinfection will be paid as per the rate in the BOQ / supplied departmentally.
3. If the reporting Data furnished by the Data operator under the Contractor is found to be False / Incorrect, necessary penalty (clause to be adopted) at the rate (as decided by the Executive Engineer) of Rs. 1,000 per instance.
4. Online Entry of daily pumping quantity should be consolidated, cross checked by the Supervisor/Technical Assistant and the data should be updated by the contractor in the TWAD web page in consultation with the section officer.
5. The EB reading should be noted / EB Demand should be received from the respective EB Section Office by the contractor and the same should be reported to the Section Officer, TWAD Board without any omission/delay.
6. Every month, the Water Demand raised should be distributed to the respective beneficiary of the TWAD Board and the acknowledgement of the demand should be reported to the section officer, TWAD Board. Then the Cheque / DD for the respective demand raised should be received from the beneficiaries and submitted to the Section officer, TWAD Board without any omission/delay by the contractor.
7. Contractor shall do watering of plants, trees, grass, etc., in the premises under the scope of this contract.
8. Any public representatives (Panchayat President, Union Chairman, District Chairman, M.L.A, M.P or any other socially responsible approaches) in connection with water supply problems they should be treated courteously and proper reply should be given.
9. No advance payment will be made.
10. Subletting of contract is not allowed under this contract.
11. Transfer of the contract is not permissible on any ground.
12. **The directions of the Hon'ble court in WMP. Nos. 11584 & 10723 of 2022 in WP No. 11128 of 2022 should be implemented scrupulously.**
 1. The wages paid to the labourers should not be less than minimum wages.
 2. In case the contractor engaged the labourers already worked in the CWSS, the wages already paid to the labourers should not be reduced at any cost.
 3. 9.50 months or Completion of ongoing Retrofitting works whichever is earlier

Note: Other Special conditions for the items of work to be carried out as per the BOQ specifications and the corresponding deduction for the work not required to be carried out for repairs and reconditioning works, etc., shall be included under special conditions by the Tender calling authority.

”

Note:

- Name of Scheme : **CWSS** to ----- in ----- District

SI No.	Name of Corporation / Municipality / Town Panchayat/ Union	Name of Panchayat	Name of Habitation	Earmarked/ Allotted Qty. as per Scope in KL/day	Supplied Quantity for the Month of							Monthly Qty in KL.	Total Quantity supplied Annually in ML
					1	2	31		
A	Initial Reach Beneficiaries			VIDE ANNEXTURE CC (Seperately Enclosed)									
1													
2													
3													
4													
B	Intermediate Reach Beneficiaries												
1													
2													
3													
4													
C	Tail End Beneficiaries												
1													
2													
3													
4													
			Total										

LETTER OF NEGOTIATION

In pursuance of negotiation with the Executive Engineer/Superintending Engineer/Chief Engineer of Division/Circle/Region on

I/We agree to reduce the rates for the items in the BoQ as follows.

Sl.No.	Item No.	In the BoQ	Reduced rate/unit
--------	----------	------------	-------------------

TAMILNADU WATER SUPPLY AND DRAINAGE BOARD

Forwarding Slip to The Lump sum Agreement No.

1.	Name of Work	:	
2.	Estimate Amount	:	
3.	Sanctioned in Original Estimate No.	:	
4.	Revised Estimate No.	:	
5.	Name of Contractor and Address	:	
6.	Original or Supplemental	:	
7.	If Supplemental, Original Agreement No.	:	
8.	Approximate value of work to be done under this Agreement	:	
9.	If this is Supplemental, approximate value of works to be done under Original Agreement	:	
10	If bids have been called for, is the lowest tender accepted? If not reasons to be recorded.	:	
11	Has the contractor signed the divisional copy of TNBP and Its addenda volume brought upto date	:	
12	Is data furnished for all items of works noted in the Schedule	:	
13	Are the rates in Agreement within the estimate rates / or schedule of rates / approved rates by the SE whichever is less and the Lump sum provision sufficient or likely to be exceeded.	:	
	Additional Information	:	
	A. Original Agreement	:	
	1.Original Agreement amount of tender excess and percentage over the estimate rate.	:	
	2.If concessional rate of EMD & SD have been allowed ref. to sanction thereof	:	

	B. Supplemental Agreement 1. Whether the approval of the competent authority has been obtained for the rates as required as per B.P.Ms.No.27/CMW/ dated 5.2.2002	:	
	2.If entrusted without tenders whether sanction is necessary with reference to total value of work covered by the supplemental agreement so far accepted.	:	

TAMILNADU WATER SUPPLY AND DRAINAGE BOARD

Form of Agreement (Lump sum)

Articles of Agreement made this-----

Day of -----
between Thiru-----

hereinafter referred to as the contractor which expression shall where the context so admits include his heirs, executors, administrators and legal representatives of the one part and the Tamil Nadu Water Supply and Drainage Board represented by the Executive Engineer/ Superintending Engineer/ Chief Engineer (hereinafter called the Employer) which expression shall where the context so admits include its successors in office and assigns) of the other part. Whereas the contractor delivered to the Employer the bid which was opened on ----

-----whereby the contractor offered and undertook to carryout the works specified under this contract and allied work, i.e. (name of work) -----
-

In the State of Tamil Nadu in India, and provide the works, materials matters and things described or mentioned in these presents at the prices set forth in the schedule annexed to such bid and the contractor also undertook to do all extra and varied works which might be ordered as part of the contract on the terms provided for in the conditions and specifications hereto annexed and the Employer accepted such tender in pursuance where of the parties hereto have entered into this contract.

And whereas the contractor in accordance with the terms of the said Bid has deposited in the Office of the -----Engineer, TWAD,-----
-----as performance security for the due and faithful performance by the contractor of this contract, the sum of Rs.------(Rupees-----

-----)

And whereas the contractor fully understands that on receipt of communication of acceptance of bid

from the accepting authority, there emerges a valid contract between the contractor and the Employer represented by the Officer accepting the agreement and the bid documents, i.e. invitation for bids, letter of application, bill of quantities and other schedules, general conditions of the contract, technical specifications of the bid, negotiation letter, communications of acceptance of bid, shall constitute the contract for this purpose and be the foundation off rights of both the parties, as defined in clause 8.1 of "—Bid Documents "Now hereby agreed that in consideration of payment of the said sum of Rs. (Rupees

) or such other sum as may be arrived at under the clause of the General conditions of the contract relating to payment by final measurement at unit prices, the contractor shall and well within the time specified in his bid thoroughly and efficiently and in a good workman like manner perform, provide, execute and do all the works, materials matters of things incidental to or necessary for the entire completion of the works specified under this contract and necessary works including all works shown in the drawings hereinafter referred to or described or set forth the said specifications and schedule hereto annexed and in accordance with such further drawings and instructions as the Engineer of the Board or other Engineer duly authorised in that behalf (therein after) and in the annexed documents referred to as the Engineer) shall at any time in accordance with the said schedule (Bill of Quantities) and specifications provide and give together, with any alterations in the works or additions thereto, in the time and manner in such schedule (Bill of Quantities) and specifications stipulated to the entire satisfaction of the Engineer, the Employer for themselves and their successors convenient and agree with the Contractor that during the progress of the works and on the completion of contract to the satisfaction of the Engineer, the Employer shall and will from time to time on receiving the certificates in writing of the Engineer pay to the contractor according to such certificates and the terms of this contract the price or sum mentioned in such certificates as due to the contractor under the terms of this contract subject nevertheless to deductions or additions thereto or the reform which may be lawfully made under terms of his contract. It is hereby mutually agreed and declared as follows.

- a) All certificates or notice or orders for items or for extra varied or altered works which are to be the subject of an extra or varied or altered works charge shall be in writing whether so described in the contract or not and unless in writing shall not be valid or binding or be of any effect whatsoever.
- b) The term contract include these presents and the invitation for bid, bid documents, bill of quantities and other schedules, general conditions, special conditions and specifications hereto annexed and the plans drawings herein and hereafter referred to.
- c) If the contractor claims that the decisions or the instructions of the Employer are unjustified and that accordingly, he is entitled to extra payments on account thereof he shall forthwith notify this to

the Employer to record his decisions and reasons therefor in writing and shall within two weeks state his claims in writing to the Employer thereafter. The Employer shall thereafter within four weeks of the receipt of the claim, reply to the points raised in the claim. Unless resolved by negotiation or discussions immediate thereafter, within further four weeks the question of liability for such payment will be treated as a dispute.

d) In the contract whenever, there is as discretion or exercise of will, by the Employer during the progress of the work, the mode or manner of the exercise of discretion shall not be a matter for dispute.

e) The decision of the Employer shall be final conclusive and binding on all, Parties to the Contract upon all questions relating to the meaning of specifications, designs, drawings and instructions, and as to the quality of workmanship or material used on the work or any matter arising out of or relating to the specifications, designs and drawings and instructions concerning the works or the erection of or failure to execute the same arising during the course of works. The above shall not be the subject matter of dispute and in no case shall the work be stopped consequent on such a dispute arising and the work shall also be carried out by the contractor strictly in accordance with the instructions of the Employer.

f) In case any question, difference or dispute shall arise on matters other than clauses (d) and (c) above and except any of the -excluded matters|| mentioned in bid documents touching the construction of any clause herein contained on the rights, duties and liabilities of the parties hereto or any other way touching or arising out of these presents, the same shall.

Settlement of dispute

Dispute Redressal Committee

In order to ensure a dispute Redressal mechanism, for tenders of value up to and Rs.1 Crore the Regional Technical Committee will be the " Dispute Redressal Committee" in order to resolve any disputes between the Employer / Engineer – in charge concerned and the contractor and the appeal committee is as mentioned below.

In order to ensure a dispute Redressal mechanism for tenders of value more than Rs.1 crore, a Committee headed by the Managing Director/Joint Managing Director and consisting of Engineering Director, TWAD Board and Engineering Director, CMWSS Board as Member, will comprise the " Dispute Redressal Committee" for each package in order to resolve any disputes between the Employer / Engineer- incharge concerned and the contractor

i) In the event of non settlement of any dispute by Dispute Redressal Committee arising between parties here to in respect of any of the matter comprised in this contract, the same

shall be settled by a competent court having jurisdiction over the place where contract is awarded and agreement is concluded and by no other court.

ii) Provided always the contractor shall not except with the consent in writing of the Engineer in any way, delay carrying out works in any such matter, question or dispute being referred to court but shall proceed with the works with all the diligence and shall until the decision of the Employer and no award of Competent Civil Court shall

relieve the contractor of his obligations to adhere strictly to the instructions of the Engineer with regard to the actual carrying out of the works.

⇒ Time shall be considered as essence of the contract and the contractor hereby agree to commence the work immediately after taking over of site or signing the agreement whichever happens earlier. The date of completion is March 31st of the financial year 2022-23.

In witness where of the contractor

and the

Employer on behalf of the

Board have caused their common seal to be affixed the day and year first above written Signed, sealed and delivered by the said.

In the presence of

Signature of Contractor

Name and Seal.

Signature,

Name and Designation of Witness.

Signed by on behalf of TWAD Board.

Signed, Name and
Designation of Witness

ENGINEER
TWAD BOARD

**Salient Details (as per Scope of the Scheme):
ANNEXTURE -AA**

**CWSS to 144 Habitations in Manikandam Union and 29 Habitations
in Andanallur Union and 3 Private Beneficiaries in Trichy District**

- | | | |
|---|-------------------------|--|
| 1 | Administrative approval | GO MS No:134 /MS&WS /WS3 /dt 8.9.2005 for Rs.1312 Lakhs. |
| 2 | Technical Sanction | CE/ER/TNJ 22/2005-06 for Rs . 1291 Lakhs |
| 3 | Project cost : | |
| | Cost for installation | Rs.1291 Lakhs |
| | Annual Maintenance Cost | Rs.30 Lakhs |
| 4 | Date of Commencement | 1.11.2007 |
| 5 | Date of completion | 1.4.2011 |
| 6 | Name of Beneficiaries | |

Sl. No.	Name of Panchayat	Name of Habitations	Designed Quantity in KL	Remarks
1	Athavathur	Athavathur	84	
2		Palayam	18	
3		Koyyathoppu	26	
4		Athavathur Santhai	18	
5		Pallakkadu	20	
6		Melappatti Sakthi Nagar	32	
7		Sunnampukaran Patti	22	
8		Nettachikadu	22	
9		Thappukkuttikadu	7	
10		Nondithiruvenkadu	13	
11	Allithurai	Allithurai	59	
12		Melasaveyriarpuram	25	
13		Santhapuram	23	
14		Saravanapuram	38	
15	Thyanoor	Thyanoor	61	
16		Melakkadu	16	
17		Keelakadu	10	
18		Ariyathukarai	14	
19	Alunthur	Alundur	22	
20		Sorakkudi Patti	13	
21		Kodanki Patti	4	
22		Sevalpatti	15	
23		Yahappa Udayan Patti	11	
24		Kavundanayakan Patti	11	

25		Pallappatti (H)	11	
26		Chetty Oorani Patti	12	
27		Soorali Patti	11	
28		Kottapattu	14	
29		Seventhiyandi Patti	11	
30		Sengulam	9	
31		Surakudipatti West	14	
32	Nagamangalam	Nagamangalam	15	
33		Silambudayan Patti	10	
34		J.J.Colony	11	
35		Eachan Thottam	8	
36		Samiya Pillai Patti North	6	
37		Samiya Pillai Patti South	4	
38		Narayanapuram	34	
39		M.G.R.Nagar & Anna Nagar	28	
40		Nehruji Nagar	17	
41		Mela Nagamangalam	10	
42		Malar Nagar	15	
43		Adukumadi Kudiyuruppu	37	
44	Sethurappatti	Sethurappatti	23	
45		Velappa Udayan Patti	8	
46		Eran Kudi	16	
47		Fathima Nagar	15	
48		Kumbakkuruchi(H)	12	
49		Therku Soorali Patti	13	
50		Kujiliam Patti	7	
51		Sethurappatti South	15	
52	Ariyavur South	Ariyavur South	28	
53		Ariyavur North	34	
54		Somasipatti	14	
55		Ottakadai	11	
56		Vijaya Nagaram	14	
57	Chathirappatti	Chathirappatti	37	
58	Mathur	Mathur	18	
59		Sannasi Patti	26	
60		Nayakkar Street	6	
61		Kallar Street	6	
62		Mathur Anna Nagar	4	

63		Sannasi Patti AD Colony	15	
64	Enamkulathur	Chinna Alampatti	22	
65		Vellivadi	58	
66		Raja Kattu Patti	12	
67		Thoppu Patti	15	
68		Periya Alam Patti	51	
69		Alampatti Puthur	51	
70		Pudukudiyuruppu	26	
71	Ammapettai	Mela Amma Pettai	37	
72		Keela Amma Pettai	18	
73		Poolan Kulathu Patti	29	
74		Vadakku Amma Pettai	31	
75		Amma Pettai Anna Nagar	13	
76		JJ Nagar	18	
77	K.Kallikkudi	Kalli Kudi	61	
78		Malai Patti	32	
79		Poonkudi	33	
80		Poonkudi Vadakku Medu	11	
81		Esanai Patti	11	
82		Aravakudi (H)	11	
83		Manikandam	11	
84		Manikandam Union Office	32	
85		Mattaparai Patti	18	
86		Deenathyalan Nagar	11	
87		Kalingapatti	11	
88		Iyyankadu	6	
89		Manakandam (H)	11	
90		Ambethkar Nagar	6	
91		Gandhi Colony	31	
92		Ramji Nagar Main	59	
93		Kandasamy Udayar Nagar	18	
94		Cholan Nagar	31	
95	Mekkudi	Mekkudi	15	
96		M.Alampatti	11	
97		Senkuruchi	15	
98	Nachikuruchi	Nachikuruchi	46	
99		Iniyanoor	15	

100		Deeran Nagar	59	
101		Pomma Samuhiram	34	
102		Kanakalakshmi Nagar	61	
103		Cholinga Nallur	15	
104		Vasan Nagar	76	
105		Vanchinathan Nagar	38	
106	Navalur Kuttappattu	Kuttapattu	63	
107		Keelakadu	15	
108		Aravangal Patti	14	
109		Bharathi Nagar	7	
110		Vannan Kovil	14	
111		Muthu Kulam	14	
112		Navalur	31	
113		Anbu Nagar	13	
114		Ambethkar Nagar	12	
115	Paganoor	Paganoor North	22	
116		Mela Paganoor	37	
117		Paganoor South	18	
118	Mudikandam	Mudikandam	17	
119		Kolarpatti	15	
120		Olaiyur	37	
121		Olaiyur East Street	15	
122	Thuraikudi	Thurai Kudi	22	
123		Kolukattan Kudi	13	
124	Thirumalai Samuthiram	Thirumalai Samuthiram	14	
125		Mullipatti	14	
126	Kumaravayalur	Kumaravayalur	31	
127		Kumaravayalur(H)	18	
128		Kothattai	16	
129		Kothattai (H0	10	
130	Somarasampettai	Somarasampettai	65	
131		Ambathkar Nagar	12	
132		Keelavayalur	14	
133		Varagan Thidal	16	
134		Pappakuruchi(H)	14	
135		Siruvayalur	32	
136		Vadugaputhur	14	
137		Ammbalakara Street	72	
138		K.K. Nagar	17	
139	Punganur	Punganoor	77	

140		Punganoor Ad Colony	8	
141		Ammasi Kavundan Kadu	10	
142		Murugan Kovil Street	14	
143		Kalingankadu	25	
144		Anthoniarpuram	17	
145	Pothavoor	Pothavur	26	
146		Vadakku Medu	11	
147		Singala Puram	19	
148		Uppukachi Medu	20	
149		Raja Pattian Theru	8	
150		Sivantha Nagar	16	
151	Puliur	Puliur	22	
152		Keelamedu	15	
153		Therkumedu	21	
154		Upukarankulam	19	
155		Koilanditheru	14	
156	Ettarai	Ettarai	54	
157		Ettaraipalayam	25	
158		Ponukuthikadu	19	
159		Natarajapuram (New)	23	
160	Posampatti	Posampatti	42	
161		Viyalanmedu	31	
162		Keerikalmedu	20	
163		Ganeshapuram	21	
164		Maniyampattiyankadu	23	
165		Melakadu	19	
166		Rajiv Nagar And MGR Nagar	29	
167	Allur	Allur	87	
168	Thiruchendurai	Thiruchendurai	57	
169	Andanallur	Andanallur	133	
170	Periyakaruppur	Periyakaruppur	15	
171		Subbaiyapuram	10	
172	Kulumani	Kulumani	163	
173	Kodiyalam	Ayilapettai	56	
174	Power Grid corporation, Alundur		10	
175	TNNLU, Navalur Kuttappattu		250	
176	Kali Aerated Water works		50	
	Total		4570	

7 POPULATION AND REQUIREMENTS (TOTAL)

Present Population / 2006	89709	12613	10959	113281
Intermediate Population / 2021	98685	13875	12055	124615
Ultimate Population / 2036	107647	15136	13151	135934

Present requirement

Intermediate requirement 3.73 + 0.30 MLD / 3106 LPM + 0.51 MLD / 424 LPM (7 Habs.)

Ultimate requirement 4.08 + 0.30 MLD / 3400 LPM + 0.59 MLD / 492 LPM (7 Habs.)

Hours of Pumping 20 Hours 21.45 Hrs

8 Head Works

- a) Source
Infiltration Well 2 Nos., Dia 4.5 m & Depth 12 m
Collection Well Cum Pumphouse Dia 5 m, depth 12 m, Capacity 2.25 LL

- b) Pumpsets
Infiltration Well Submersible Pumpset - 2 Nos 12.50 HP, 1553 lpm x 20 m (100 % Standby)
Collection Well Cum Pumphouse Vertical Turbine Pumpset - 2 Nos 30 HP, 3106 lpm x 29m (100% Standby)
Submersible Pumpset - 7.50 HP 424 LPM x 38 m Head (100% Standby) for 7 Habs.

- 9 Booster Sump
Booster Sump I Vadugaputhur Dia 5 m depth 2.5 m Capacity 2 LL
Centrifugal 1+1 Nos (100 % standby) 40 HP, 2706x40 m
Submersible 1+1 No (100 % standby) 3 HP, 400 lpm x 15 m
Booster Sump II Ariyavur North Dia 5 m depth 2.5 m Capacity 1 LL
Submersible 1+1 No (100 % standby) 25 HP, 978 lpm x 55 m
Submersible 1+1 No (100 % standby) 3 HP, 105 lpm x 24 m

- 10 Pumping Main
Connecting Main Infiltration Well
To Collection Sump 200 mm CI LA Class Pipe - 140 m
200 mm DI K9 Pipe - 200 m
Pumping Main 12285 m
350 mm PSC 6KSC & 350 mm PSC 4 KSC Pipe
Booster Main I 10500 m
Sizes varies from 350 mm AC CL 20 to 250 mm AC CL 15
Booster Main II 12760 m
Sizes varies from 200 mm AC CL 20, 200 mm AC CL 15 & 140 mm PVC 4 KSC Pipe
Branch Main & Feeder Main 174.24 Km

11 Group Sumps

Sl No	Location	Sump Capacity	Pumpset Details
1	Kanagalaksmi Nagar	1.50 LL	3 HP Submersible 358 lpm x 20 m
2	Malaipatti	2.00 LL	3 HP Submersible 287 lpm x 18 m
			5 HP Submersible 246 lpm x 24 m
3	Saravanapuram	5.00 LL	7.5 HP Submersible 391 lpm x 29 m
			5 HP Submersible 373 lpm x 22 m
4	Keelakadu	2.50 LL	5 HP Submersible 246 lpm x 29 m
			7.5 HP Submersible 524 lpm x 31 m
			5 HP Submersible 350 lpm x 40 m
5	Poongudi	0.30 LL	7.5 HP Submersible 249 lpm x 34 m
			1.5 HP Submersible 60 lpm x 17 m
6	Mathur	3.50 LL	3 HP Submersible 158 lpm x 35 m
			3 HP Submersible 211 lpm x 36 m
			4 HP Submersible 663 lpm x 19 m
7	Enamkulathur	2 LL	3 HP Submersible 279 lpm x 27 m
			3 HP Submersible 101 lpm x 31 m
			3 HP Submersible 232 lpm x 12 m
8	Narayanapuram	0.60 LL	2 HP Submersible 128 lpm x 18 m
			5 HP Submersible 422 lpm x 24 m
9	M.Alampatty	0.30 LL	1 HP Submersible 58 lpm x 14 m
			5 HP Submersible 194 lpm x 29 m
10	Kodangipatty	0.10 LL	2 HP Submersible 124 lpm x 33 m
11	Vadakkimedu	0.30 LL	3 HP Submersible 230 lpm x 26 m
12	Thirumalaisamuthiram	0.10 LL	1 HP Submersible 100 lpm x 25 m

12 Service Reservoirs

155 Nos + 29 Nos = 184 Nos
(Capacity varies from 0.1 LL to 1 LL)

List of equipments, installations, structures, pipelines, appurtenances etc., to be operated and maintained under this contract.

Annexure BB

1 Head Works

- a) Source
Infiltration Well 2 Nos., Dia 4.5 m & Depth 12 m
Collection Well Cum Pumphouse Dia 5 m, depth 12 m ,
Capacity 2.25 LL

b) Pumpsets

- Infiltration Well Submersible Pumpset - 2 Nos 12.50 HP, 1553 lpm x 20 m
(100 % Standby)
Collection Well Cum Pumphouse Vertical Turbine Pumpset - 2 Nos 30 HP, 3106 lpm x 29m
(100% Standby)
Submersible Pumpset - 7.50 HP 424 LPM x 38 m Head
(100% Standby) for 7 Habs.

9

- Booster Sump
Booster Sump I Vadugaputhur Dia 5 m depth 2.5 m Capacity 2 LL
Centrifugal 1+1 Nos (100 % standby) 40 HP, 2706x40 m
Submersible 1+1 No (100 % standby) 3 HP, 400 lpm x 15 m
Booster Sump II Ariyavur North Dia 5 m depth 2.5 m Capacity 1 LL
Submersible 1+1 No (100 % standby) 25 HP, 978 lpm x 55 m
Submersible 1+1 No (100 % standby) 3 HP, 105 lpm x 24 m

10

- Pumping Main
Connecting Main Infiltration Well
To Collection Sump 200 mm CI LA Class Pipe - 140 m
200 mm DI K9 Pipe - 200 m
Pumping Main 12285 m
350 mm PSC 6KSC & 350 mm PSC 4 KSC Pipe
Booster Main I 10500 m
Sizes varies from 350 mm AC CL 20 to 250 mm AC CL 15
Booster Main II 12760 m
Sizes varies from 200 mm AC CL 20, 200 mm AC CL 15 &
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Branch Main & Feeder Main 174.24 Km

11

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2	Malaipatti	2.00 LL	3 HP Submersible 287 lpm x 18 m	
			5 HP Submersible 246 lpm	

			x 24 m	
3	Saravanapuram	5.00 LL	7.5 HP Submersible 391 lpm x 29 m	
			5 HP Submersible 373 lpm x 22 m	
4	Keelakadu	2.50 LL	5 HP Submersible 246 lpm x 29 m	
			7.5 HP Submersible 524 lpm x 31 m	
			5 HP Submersible 350 lpm x 40 m	
5	Poongudi	0.30 LL	7.5 HP Submersible 249 lpm x 34 m	
			1.5 HP Submersible 60 lpm x 17 m	
6	Mathur	3.50 LL	3 HP Submersible 158 lpm x 35 m	
			3 HP Submersible 211 lpm x 36 m	
			4 HP Submersible 663 lpm x 19 m	
7	Enamkulathur	2 LL	3 HP Submersible 279 lpm x 27 m	
			3 HP Submersible 101 lpm x 31 m	
			3 HP Submersible 232 lpm x 12 m	
8	Narayanapuram	0.60 LL	2 HP Submersible 128 lpm x 18 m	
			5 HP Submersible 422 lpm x 24 m	
9	M.Alampatty	0.30 LL	1 HP Submersible 58 lpm x 14 m	
			5 HP Submersible 194 lpm x 29 m	
10	Kodangipatty	0.10 LL	2 HP Submersible 124 lpm x 33 m	
11	Vadakkimedu	0.30 LL	3 HP Submersible 230 lpm x 26 m	
12	Thirumalaisamuthiram	0.10 LL	1 HP Submersible 100 lpm x 25 m	

12

Service Reservoirs

155 Nos + 29 Nos = 184 Nos
(Capacity varies from 0.1 LL to 1 LL)

Part-VI**LIST OF BENEFICIARIES AND EARMARKED QUANTITY OF WATER TO BE SUPPLIED UNDER THIS CONTRACT.**

SI No.	Name of Corporation / Municipality / Town Panchayat / Union	Name of Panchayat	Name of Habitation	Allotted Qty. as per Scope (Inter)
A	Initial Reach Beneficiaries			
1	Manikandam Unuion	Athavathur	Athavathur	84
2	Manikandam Unuion	Athavathur	Palayam	18
3	Manikandam Unuion	Athavathur	Koyyathoppu	26
4	Manikandam Unuion	Athavathur	Melappatti Sakthi Nagar	32
5	Manikandam Unuion	Allithurai	Allithurai	59
6	Manikandam Unuion	Allithurai	Melasaveyriarpuram	25
7	Manikandam Unuion	Allithurai	Santhapuram	23
8	Manikandam Unuion	Allithurai	Saravanapuram	38
9	Manikandam Unuion	Thyanoor	Thyanoor	61
10	Manikandam Unuion	Thyanoor	Keelakadu	10
11	Manikandam Unuion	Thyanoor	Ariyathukarai	14
12	Manikandam Unuion	Alunthur	Kodanki Patti	4
13	Manikandam Unuion	Alunthur	Yahappa Udayan Patti	11
14	Manikandam Unuion	Alunthur	Kavundanayakan Patti	11
15	Manikandam Unuion	Alunthur	Chetty Oorani Patti	12
16	Manikandam Unuion	Alunthur	Soorali Patti	11
17	Manikandam Unuion	Nagamangalam	Nagamangalam	15
18	Manikandam Unuion	Nagamangalam	Silambudayan Patti	10
19	Manikandam Unuion	Nagamangalam	J.J.Colony	11
20	Manikandam Unuion	Nagamangalam	Narayanapuram	34
21	Manikandam Unuion	Nagamangalam	Mela Nagamangalam	10
22	Manikandam Unuion	Nagamangalam	Malar Nagar	15
23	Manikandam Unuion	Nagamangalam	Adukumadi Kudiyruppu	37
24	Manikandam Unuion	Sethurappatti	Velappa Udayan Patti	8
25	Manikandam Unuion	Sethurappatti	Eran Kudi	16
26	Manikandam Unuion	Ariyavur South	Ariyavur South	28
27	Manikandam Unuion	Ariyavur South	Ariyavur North	34
28	Manikandam Unuion	Ariyavur South	Ottakadai	11
29	Manikandam Unuion	Mathur	Mathur	18

30	Manikandam Unuion	Mathur	Sannasi Patti	26
31	Manikandam Unuion	Mathur	Nayakkar Street	6
32	Manikandam Unuion	Mathur	Kallar Street	6
33	Manikandam Unuion	Enamkulathur	Chinna Alampatti	22
34	Manikandam Unuion	Enamkulathur	Vellivadi	58
35	Manikandam Unuion	Enamkulathur	Thoppu Patti	15
36	Manikandam Unuion	Enamkulathur	Periya Alam Patti	51
37	Manikandam Unuion	Enamkulathur	Pudukudiyuruppu	26
38	Manikandam Unuion	Ammappettai	Mela Amma Pettai	37
39	Manikandam Unuion	Ammappettai	Keela Amma Pettai	18
40	Manikandam Unuion	Ammappettai	Amma Pettai Anna Nagar	13
41	Manikandam Unuion	K.Kallikkudi	Kalli Kudi	61
42	Manikandam Unuion	K.Kallikkudi	Malai Patti	32
43	Manikandam Unuion	K.Kallikkudi	Poonkudi	33
44	Manikandam Unuion	K.Kallikkudi	Poonkudi Vadakku Medu	11
45	Manikandam Unuion	K.Kallikkudi	Aravakudi (H)	11
46	Manikandam Unuion	K.Kallikkudi	Gandhi Colony	31
47	Manikandam Unuion	Mekkudi	Mekkudi	15
48	Manikandam Unuion	Mekkudi	M.Alampatti	11
49	Manikandam Unuion	Nachikuruchi	Iniyanoor	15
50	Manikandam Unuion	Nachikuruchi	Pomma Samuhiram	34
51	Manikandam Unuion	Nachikuruchi	Kanakalakshmi Nagar	61
52	Manikandam Unuion	Nachikuruchi	Cholinga Nallur	15
53	Manikandam Unuion	Nachikuruchi	Vasan Nagar	76
54	Manikandam Unuion	Navalur Kuttappattu	Kuttappattu	63
55	Manikandam Unuion	Navalur Kuttappattu	Keelakadu	15
56	Manikandam Unuion	Navalur Kuttappattu	Aravangal Patti	14
57	Manikandam Unuion	Navalur Kuttappattu	Vannan Kovil	14
58	Manikandam Unuion	Paganoor	Paganoor North	22
59	Manikandam Unuion	Paganoor	Mela Paganoor	37
60	Manikandam Unuion	Paganoor	Paganoor South	18
61	Manikandam Unuion	Mudikandam	Mudikandam	17
62	Manikandam Unuion	Mudikandam	Kolarpatti	15
63	Manikandam Unuion	Thirumalai Samuthiram	Thirumalai Samuthiram	14
64	Manikandam Unuion	Somarasampettai	Keelavayalur	14
65	Manikandam Unuion	Somarasampettai	Varagan Thidal	16
66	Manikandam Unuion	Somarasampettai	Pappakuruchi(H)	14
67	Manikandam Unuion	Somarasampettai	Vadugaputhur	14
68	Manikandam Unuion	Punganur	Punganoor	77

69	Manikandam Unuion	Punganur	Murugan Kovil Street	14
70	Manikandam Unuion	Punganur	Anthoniarpuram	17
71	Anthanallur Union	Pothavoor	Pothavur	26
72	Anthanallur Union	Pothavoor	Vadakku Medu	11
73	Anthanallur Union	Pothavoor	Sivantha Nagar	16
74	Anthanallur Union	Ettarai	Ettarai	54
75	Anthanallur Union	Ettarai	Ettaraipalayam	25
76	Anthanallur Union	Ettarai	Natarajapuram (New)	23
77	Anthanallur Union	Posampatti	Posampatti	42
78	Anthanallur Union	Posampatti	Ganeshapuram	21
79	Anthanallur Union	Posampatti	Maniyampattiyankadu	23
80	Anthanallur Union	Allur	Allur	87
81	Anthanallur Union	Thiruchendurai	Thiruchendurai	57
82	Anthanallur Union	Periyakaruppur	Periyakaruppur	15
83	Anthanallur Union	Periyakaruppur	Subbaiyapuram	10
84	Power Grid corporation, Alundur			10
85	TNNLU, Navalur Kuttappattu			250
86	Kali Aerated Water works			50
B	Intermediate Reach Beneficiaries			
1	Manikandam Unuion	Athavathur	Athavathur Santhai	18
2	Manikandam Unuion	Athavathur	Pallakkadu	20
3	Manikandam Unuion	Athavathur	Sunnampukaran Patti	22
4	Manikandam Unuion	Athavathur	Nettachikadu	22
5	Manikandam Unuion	Athavathur	Nondithiruvankadu	13
6	Manikandam Unuion	Thyanoor	Melakkadu	16
7	Manikandam Unuion	Alunthur	Alundur	22
8	Manikandam Unuion	Alunthur	Sorakkudi Patti	13
9	Manikandam Unuion	Alunthur	Sevalpatti	15
10	Manikandam Unuion	Alunthur	Pallappatti (H)	11
11	Manikandam Unuion	Alunthur	Sengulam	9
12	Manikandam Unuion	Alunthur	Surakudipatti West	14
13	Manikandam Unuion	Nagamangalam	Eachan Thottam	8
14	Manikandam Unuion	Nagamangalam	Samiya Pillai Patti North	6
15	Manikandam Unuion	Nagamangalam	Samiya Pillai Patti South	4
16	Manikandam Unuion	Nagamangalam	M.G.R.Nagar & Anna Nagar	28
17	Manikandam Unuion	Nagamangalam	Nehruji Nagar	17
18	Manikandam Unuion	Sethurappatti	Sethurappatti	23
19	Manikandam Unuion	Sethurappatti	Therku Soorali Patti	13
20	Manikandam Unuion	Sethurappatti	Kujilam Patti	7
21	Manikandam Unuion	Sethurappatti	Sethurappatti South	15
22	Manikandam Unuion	Ariyavur South	Somasipatti	14

23	Manikandam Unuion	Ariyavur South	Vijaya Nagaram	14
24	Manikandam Unuion	Chathirappatti	Chathirappatti	37
25	Manikandam Unuion	Mathur	Sannasi Patti AD Colony	15
26	Manikandam Unuion	Enamkulathur	Alampatti Puthur	51
27	Manikandam Unuion	Ammappettai	Poolan Kulathu Patti	29
28	Manikandam Unuion	Ammappettai	JJ Nagar	18
29	Manikandam Unuion	K.Kalikkudi	Esanai Patti	11
30	Manikandam Unuion	K.Kalikkudi	Manikandam	11
31	Manikandam Unuion	K.Kalikkudi	Mattapparai Patti	18
32	Manikandam Unuion	K.Kalikkudi	Deenathyalan Nagar	11
33	Manikandam Unuion	K.Kalikkudi	Kalingapatti	11
34	Manikandam Unuion	K.Kalikkudi	Iyyankadu	6
35	Manikandam Unuion	K.Kalikkudi	Manakandam (H)	11
36	Manikandam Unuion	Mekkudi	Senkuruchi	15
37	Manikandam Unuion	Nachikuruchi	Deeran Nagar	59
38	Manikandam Unuion	Nachikuruchi	Vanchinathan Nagar	38
39	Manikandam Unuion	Navalur Kuttappattu	Bharathi Nagar	7
40	Manikandam Unuion	Navalur Kuttappattu	Anbu Nagar	13
41	Manikandam Unuion	Navalur Kuttappattu	Ambethkar Nagar	12
42	Manikandam Unuion	Mudikandam	Olaiyur	37
43	Manikandam Unuion	Mudikandam	Olaiyur East Street	15
44	Manikandam Unuion	Thirumalai Samuthiram	Mullipatti	14
45	Manikandam Unuion	Kumaravayalur	Kumaravayalur	31
46	Manikandam Unuion	Kumaravayalur	Kumaravayalur(H)	18
47	Manikandam Unuion	Kumaravayalur	Kothattai (H)	10
48	Manikandam Unuion	Somasampettai	Somasampettai	65
49	Manikandam Unuion	Somasampettai	Siruvayalur	32
50	Manikandam Unuion	Somasampettai	K.K. Nagar	17
51	Manikandam Unuion	Punganur	Punganoor Ad Colony	8
52	Manikandam Unuion	Punganur	Ammasi Kavundan Kadu	10
53	Anthanallur Union	Pothavoor	Singala Puram	19
54	Anthanallur Union	Pothavoor	Uppukachi Medu	20
55	Anthanallur Union	Pothavoor	Raja Pattiyan Theru	8
56	Anthanallur Union	Puliur	Puliur	22
57	Anthanallur Union	Puliur	Keelamedu	15
58	Anthanallur Union	Puliur	Therkumedu	21
59	Anthanallur Union	Ettarai	Ponukuthikadu	19
60	Anthanallur Union	Posampatti	Viyalanmedu	31
61	Anthanallur Union	Posampatti	Melakadu	19

62	Anthanallur Union	Andanallur	Andanallur	133
63	Anthanallur Union	Kodiyalam	Ayilapettai	56
C	Tail End Beneficiaries			
1	Manikandam Unuion	Athavathur	Thappukkuttikadu	7
2	Manikandam Unuion	Alunthur	Kottapattu	14
3	Manikandam Unuion	Alunthur	Seventhiyandi Patti	11
4	Manikandam Unuion	Sethurappatti	Fathima Nagar	15
5	Manikandam Unuion	Sethurappatti	Kumbakkuruchi(H)	12
6	Manikandam Unuion	Mathur	Mathur Anna Nagar	4
7	Manikandam Unuion	Enamkulathur	Raja Kattu Patti	12
8	Manikandam Unuion	Ammappettai	Vadaku Amma Pettai	31
9	Manikandam Unuion	K.Kalikkudi	Manikandam Union Office	32
10	Manikandam Unuion	K.Kalikkudi	Ambethkar Nagar	6
11	Manikandam Unuion	K.Kalikkudi	Ramji Nagar Main	59
12	Manikandam Unuion	K.Kalikkudi	Kandasamy Udayar Nagar	18
13	Manikandam Unuion	K.Kalikkudi	Cholan Nagar	31
14	Manikandam Unuion	Nachikuruchi	Nachikuruchi	46
15	Manikandam Unuion	Navalur Kuttappattu	Muthu Kulam	14
16	Manikandam Unuion	Navalur Kuttappattu	Navalur	31
17	Manikandam Unuion	Thuraikudi	Thurai Kudi	22
18	Manikandam Unuion	Thuraikudi	Kolukattan Kudi	13
19	Manikandam Unuion	Kumaravayalur	Kothattai	16
20	Manikandam Unuion	Somarasampettai	Ambathkar Nagar	12
21	Manikandam Unuion	Somarasampettai	Ammbalakara Street	72
22	Manikandam Unuion	Punganur	Kalingankadu	25
23	Anthanallur Union	Puliur	Upukarankulam	19
24	Anthanallur Union	Puliur	Koilanditheru	14
25	Anthanallur Union	Posampatti	Keerikalmedu	20
26	Anthanallur Union	Posampatti	Rajiv Nagar and MGR Nagar	29
27	Anthanallur Union	Kulumani	Kulumani	163
	Total			4570