

**DIRECTORATE OF MUNICIPAL ADMINISTRATION
ALANDUR MUNICIPALITY**

INVITATION FOR TENDER

TenderNo.:8155/06/E1

Date:22.11.2010

1. For and on behalf of Commissioner Alandur Municipality, Tamil Nadu Urban Infrastructure Financial Services Limited (TNUIFSL) invites separate open tenders in sealed covers (Two cover system) in the prescribed form from prospective Tenderers for the work given in the Table below. For the purpose of Two cover system this Tender , Commissioner Alandur Municipality is defined as the Owner.

2. Tender is open to all eligible Tenderers. Successful tenderers should however get themselves registered if they are not already registered with either the Central /State Governments or Central /State Government undertakings. **Tenderers are however advised to note the minimum qualification criteria specified in Clause 6 of the instructions to Tenderers to qualify for the award of the contract.**

3.1 Tender documents may be obtained from the office of The Commissioner, Alandur Municipality, Alandur, Chennai – 16, from **29.11.2010 to.29.12.2010., at a of cost Rs.16800** (including sales tax), by Demand Drand in favour of The Commissioner, Alandur Municipality, payable at Chennai. Interested Tenderers may obtain further information at the same address. Tender documents requested by mail will be dispatched by registered/speed post on payment of an extra amount of **Rs.500/-** The Tender inviting authority will not be held responsible for the postal delay if any, in the delivery of the documents or non-receipt of the same.

3.2 The tender schedule can also be freely downloaded from the websites <http://municipality.tn.gov.in/tenders> www.tnudf.com, and www.tenders.tn.gov.in and use it for tender submission at free of cost. However, the bidders who have downloaded the tender schedules shall be solely responsible for checking the websites for any Addendum / Amendment issued subsequently to the tender schedules and take into consideration the same while preparing and submitting the tender.

4. Tenders must be accompanied by Earnest Money Deposit of the amount specified for the work in the table below, payable at Chennai.. drawn in favour of The Commissioner, Alandur Municipality. Earnest Money Deposit will have to be in any one of the forms as specified in the Tender document.

5. Tenders must be delivered at the office of Tamil Nadu Urban Infrastructure Financial Services Ltd, (TNUIFSL), First Floor, Vairam Complex, 112, Sir Theyagaraya Road, T. Nagar, Chennai – 600 017, on or before **15.00hours on 30.12.2010** (date). Tenders will be opened on the same day at 15.30..hours, in the presence of the Tenderers or their authorized representative who wish to attend. If the office happens to be closed on the date of receipt of the Tenders as specified, the Tenders will be received and opened on the next working day at the same time and venue. After completion of evaluation of the Tenders the successful Tenderer will be informed inviting to sign the Agreement after payment of Prescribed performance security deposit.

6. A Pre-Tender meeting will be held **on 08.12.2010 at** 15.00 hrs. at the office of TNUIFSL, First Floor, Vairam Complex, 112, Sir Theyagaraya Road, T. Nagar, Chennai – 600 017, to clarify the issues and to answer questions on any matter that may be raised at that stage as stated in 17of 'Instructions to Tenderers' of the Tender document.

7. Other details can be seen in the Tender documents.TABLE

Name of work	Approximate value of work (Rs. In lakh)	Earnest Money Deposit(Rs.in lakh)	Period of completion	Minimum Class of Registration
1	2	3	4	5
Operation & Maintenance of Under Ground Sewerage Scheme (UGSS) in Alandur Municipality	250.00	2.50	36 months	Appropriate Clause for the value of Rs. 50/- lakh and above.

Commissioner
Alandur Municipality

DIRECTORATE OF MUNICIPAL ADMINISTRATION

ALANDUR MUNICIPALITY

**OPERATION & MAINTENANCE OF UNDERGROUND
SEWERAGE SYSTEM (UGSS) IN ALANDUR
MUNICIPALITY FOR 3 YEARS**

TENDER DOCUMENT

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INVITATION FOR TENDER
(IFT)

SECTION 1: INSTRUCTIONS TO TENDERERS (ITT)

INSTRUCTIONS TO TENDERERS

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INSTRUCTIONS TO TENDERERS

1. General.

No alteration whatever may be made in the text of the tender form; any remarks or explanations should be set out in a covering letter. The form of agreement is bound up with the documents, so that the tenderers may know what their liabilities and duties are and the entire tender form should be submitted to the TNUIFSL when submitting the tender.

2. Scope of Work.

This tender is for Operation & Maintenance of Under Ground Sewerage Scheme” (UGSS) in Alandur Municipality for three years

3. Eligibility.

Contractors registered in CMWSS Board / TWAD Board / PWD under the appropriate Class for the value Rs. 50/- lakh and above are eligible to tender for this work. Contractors registered in other Departments and undertakings of the State or Central Government in the corresponding Class who have executed similar works of the same or higher magnitude is also eligible to tender for this work. In any case the successful Tenderer will have to get himself registered in the appropriate class in this Municipality.

4. Joint Venture.

As this is purely a maintenance work, memorandum of understanding and Joint Venture will not be accepted.

5 EMD.

EMD in the form of Demand Draft or Banker’s Cheque or Pay Order drawn from Nationalised / Scheduled Bank in favour of commissioner „Alandur Municipality should be enclosed in a separate cover superscribed " EMD For Contract No.----- ". Tenders not accompanied by a separate cover containing EMD in the specified form will not be opened. No cheque will be accepted towards Earnest Money Deposit. Tender not accompanied with the Earnest Money Deposit in accordance with the tender conditions will be summarily rejected.

6. Qualification Criteria.

The following are the minimum Qualification criteria to be fulfilled by the bidders for the selection of the O&M Operator for this assignment

- a) Annual, financial turn over of the firm/bidder in any one year during last five years shall be not less than Rs.50.00lakh.
- b) Experience in O&M or Construction of WTPs/STPs or /pumping stations of minimum capacity 10 MLD.or Sewer collection system of minimum length 50 Km

7. Key Persons

The Bidder shall provide proof for having minimum of supervisory staff of one site engineer with BE,Civil/ /Mechanical of minimum 5 years experience. Other staff can be engaged after award of contract. The Bidder may change anybody from this list with person of equal or higher qualification and experience after obtaining specific approval of the Engineer.

8. Qualification information of the Tenderer

All Tenderers shall provide in Section 2, Forms of Tender and Qualification Information, as required under clause 3, 6 & 7, a preliminary description of the proposed work methodology and schedule, including drawings and charts, as necessary.

9. To agree for the terms and conditions

Tenderers must comply with instructions contained in the notice inviting tender. They must also agree to comply with all the conditions and specifications of the contract. Otherwise their tenders are liable for rejection.

10. One Tender per Tenderer

Each Tenderer shall submit only one Tender individually for this work. A Tenderer who submits or participates in more than one Tender (other than as a subcontractor) will cause all the proposals with the Tenderer's participation to be disqualified.

11. Cost of Tender

The Tenderer shall bear all costs associated with the preparation and submission of his Tender, and the Employer will in no case be responsible and liable for those costs.

12. Site visit

The Tenderer, at the Tenderer's own responsibility and risk is encouraged to visit and examine the Site of Works and its surroundings and obtain all information that may be necessary for preparing the Tender and entering into a contract for mentioned Works. The costs of visiting the Site shall be at the Tenderers own expense.

13. Amendment of Tender Documents

Before the deadline for submission of Tenders, the Employer may modify the Tender documents by issuing addenda.

Any addendum thus issued shall be part of the Tender documents and shall be communicated in writing or by cable to all the purchasers of the Tender documents. Prospective Tenderers shall acknowledge receipt of each addendum by cable to the Employer.

To give prospective Tenderers reasonable time in which to take an addendum into account in preparing their Tenders, the Employer shall extend as necessary the deadline for submission of Tenders.

14. Signing of the Letter Of Tender

Tenderers are requested to sign all pages in the tender schedule and must sign Letter of Tender. The attention of the tenderer is drawn to the following declaration, which forms part of the letter of tender to be signed by the tenderer.

"I / we agree that I / we will not withdraw the tender during the period that will be required for intimation of acceptance or non-acceptance during such extended period as agreed to by me / us, such period to date from the last date by which Tenders are due to be submitted to the Municipality and if I / we do so withdraw, I / we shall forfeit the E.M.D to the Municipality.

Failure to sign the letter of tender is liable for the rejection of the tender.

15. Tender Validity.

Tenders shall remain valid for a period of not less than one hundred and twenty days (120 days) after the due date for submission of bids. A tender valid for a shorter period shall be rejected by the Employer as non-responsive. In exceptional circumstances, prior to expiry of the original time limit, the Employer may request that the Tenderers may extend the period of validity for a specified additional period. The request and the Tenderers' responses shall be made in writing or by cable. A Tenderer may refuse the request without forfeiting his Earnest Money Deposit. A Tenderer agreeing to the request will not be required or permitted to modify his tender.

16. Period of Contract.

The operation and maintenance of Under Ground Sewerage System (UGSS) in Alandur Municipality shall be for a period of 3 years from the date of handing over the operation activities. The contract period is likely to be extended for a reasonable period beyond three years if required due to Administrative reasons. If the performance is found to be unsatisfactory during this period or in between, the contract will be terminated immediately.

17. Clarifications

Tenderers are requested to verify the number of pages in the tender schedule, number of items in the work schedule. Any clarification and further information required may be obtained from the Office of the TNUIFSL by sending the queries in writing on or before the pre-Tender date. The reply will be sent to all the tenderers in writing.

18. Conditional Tender.

Tenders with conditions are liable for rejection.

19. Preparation and Submission of Tender

19.1 Language of the Tender

All documents relating to the Tender shall be in the English language.

19.2 Documents comprising the Tender

The Tender submitted by the Tenderer shall be in two separate Covers

Cover 1

Shall be named as “Technical Tender” and shall comprise-

Tender Form for “Technical Tender” Prescribed in Section 2 duly completed and signed by the Tenderer.

Earnest Money Deposit in the form prescribed in clause 5.

A Power of Attorney duly authorized by a Notary Public indicating that the person signing the Tender has the authority to sign the Tender and that the Tender is binding upon the Tenderer during the full period of its validity in accordance to ITT Clause 15.

Qualification information and supporting documents as specified in Section 2, namely

Performance of the Tenderer showing the value of civil engineering works executed in the last five years

Experience in similar nature and magnitude executed in the last five years

Details of work on hand

Details of works for which Tenders have been submitted and yet to be awarded.

List of key and critical equipments (either owned or hired) proposed to be deployed on this work.

Qualification and Experience of the Technical Personnel proposed to be deployed for this work.

Details of Litigation if any

Details of works or components proposed to be sub-contracted with the credentials of the proposed sub-contractor.

List of Certificates

Proof of Registration of the Tenderer, place of business and address for communication.

Audited Balance Sheet duly authorized by the Chartered Accountant for the last five years.

Sales Tax Registration Certificate and Verification Certificates.

Certificate confirming the validity of the Tender for the period specified in the Tender document ITT Clause 15.

Credit line certificate from the Bank in the format prescribed in Section 2.

Any other certificate required to be furnished by the Tenderer in accordance with the ITT Clause 3, 6 & 7.

Note: In the Technical Tender there shall not any indication of the price/rate quoted.

Cover 2.

Shall be named as “Financial Tender” and shall comprise

Form of Tender for “Financial Tender” prescribed in Section 2 duly signed by the Tenderer

Priced Bill of Quantities for all the items specified in the Price Schedule.

Agreement form in Section 2 duly signed .

Each Cover shall be separately sealed and marked "in accordance with the sealing and marking instructions" in ITT Clause 19.7

19.3 Tender Prices

The contract shall be for the whole works as described in Scope of work and the Mandatory Duties of the Contractor as in the Tender Document and based on the priced Bill Quantities submitted by the Tenderer.

The Tenderer shall fill in rates and prices and line item total (both in figures and words) for all items of the Works described in the Bill of Quantities along with total Tender price (both in figures and words). Items for which no rate or price is entered by the Tenderer 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, initialing, dating and rewriting.

The rate entered in the Bill of Quantities for any class of work shall be for finished work on situ and shall include all contingent expenses whether direct construction expenses involved in the work in accordance with the drawings and specifications or whether they be expenses imposed by outside authority such as local bodies. Such contingent expenses shall not entitle the contractor to claim an extra in respect thereof.

Rates for finished work shall always include the cost of conveyance and all leads, lifts, loading unloading, and stacking in the manner and at the places ordered by the officer in immediate charge of the work, unless circumstances necessitate provisions for a separate schedule item in which case such will be specified in the Tender schedule.

All duties, taxes, and other levies payable by the contractor under the contract, or for any other cause shall be included in the rates, prices and total Tender Price submitted by the Tenderer.

The rates and prices quoted by the Tenderer shall be fixed for the duration of the Contract and shall not be subject to adjustment on any account.

19.4 Currencies of Tender and Payment

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

19.5 Tender Validity

Tenders shall remain valid for a period not less than one hundred and twenty days after the deadline date for Tender submission specified in Clause 15. A Tender valid for a shorter period shall be rejected by the Employer as non-responsive.

19.6 Format and Signing of Tender

The Tenderer shall prepare the document as described in these Instructions to Tenderers, bound with the volume containing the Form of Tender.

The Tender shall be typed or written in indelible ink and shall be signed by a person or persons duly authorized to sign on behalf of the Tenderer. All pages of the Tender where entries or amendments have been made shall be initialed by the person or persons signing the Tender.

The Tender shall contain no alterations 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.

19.7 Submission of Tenders

Sealing and Marking of Tenders

The Tenderer shall prepare Technical Tender (Cover 1) comprising the various documents prescribed in ITT.

The Tenderer shall also prepare "Financial Tender" (Cover 2) comprising the various documents prescribed in ITT

The Technical Tender shall then be put in a Cover properly sealed and super-scribed as "Cover 1 Technical Tender" to be opened on ...30.12.2010.....

Similarly the Financial Tender shall be put in a Cover properly, sealed and super-scribed as "Cover 2 Financial Tender" (to be opened on the date to be announced after the completion of evaluation of the Cover 1 Technical Tender.)

These two Covers shall then be put in another Big Cover properly sealed and super scribed "Tenders for the work of OPERATION & MAINTENANCE OF UNDERGROUND SEWERAGE SYSTEM (UGSS) IN ALANDUR MUNICIPALITY FOR 3 YEARS" to be opened on ...30.12.2010.....(date of Technical Tender opening indicated)

All Covers shall be

addressed to the Employer at the following address:

Tamil Nadu Urban Infrastructure Financial Services Ltd, (TNUIFSL),
First Floor, Vairam Complex, 112,
Sir Theyagaraya Road, T. Nagar, Chennai – 600 017

and should bear the following information.

Tender for OPERATION & MAINTENANCE OF UNDERGROUND SEWERAGE SYSTEM (UGSS)
IN ALANDUR MUNICIPALITY FOR 3 YEARS

Tender reference No-8155/06/E1-----

Cover 1 - Technical Tender to be opened on ---30.12.2010.-----

Cover 2 - Financial Tender to be opened on the date of the opening to be announced after the completion of evaluation of the Cover- 1 Technical Tender.

In addition to the identification required as above, the Covers shall indicate the name and address of the Tenderer to enable the Tender to be returned unopened in case it is declared late, pursuant to Clause 20.

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

20. Deadline for Submission of the Tenders

Complete Tenders (Both Technical and Financial) must be received by the Employer at the address specified above not later than...30.12.2010...at 15.00 hours. In the event of the specified date for the submission of Tenders declared a holiday for the Employer, the Tenders will be received up to the appointed time on the next working day at the same venue.

The Employer may extend the deadline for submission of Tenders by issuing an amendment in accordance with Clause 13, in which case all rights and obligations of the Employer and the Tenderers previously subject to the original deadline will then be subject to the new deadline.

20.1 Late Tenders

Any Tender received by the Employer after the deadline prescribed in Clause 20 will be returned unopened to the Tenderer.

21. Modification and Withdrawal of Tenders

Tenderers may modify or withdraw their Tenders by giving notice in writing before the deadline prescribed in Clause 20.

Each Tenderer's modification or withdrawal notice shall be prepared, sealed, marked, and delivered in accordance with Clause 19, with the Covers additionally marked "MODIFICATION" or "WITHDRAWAL", as appropriate for "Technical Tender" or "Financial Tender"

No Tender may be modified after the deadline for submission of Tenders as per ITT Clause 20.

Tenderers may only offer discounts without precondition, or otherwise modify the prices of their Tenders by submitting Tender modifications in accordance with this clause, or included in the original Tender submission.

22. Tender Opening and Evaluation of Technical Tenders

22.1 Opening of the Cover I of all Tenderers and evaluation to determine qualified Tenderers

The Employer will First open the common Cover containing the Covers 1 & 2 at the time & date given in the IFT including the modifications made pursuant to Clause 21 in the presence of those Tenderers or their authorized Representatives who shall sign a Register as a proof of their attendance. In the event of the specified date of the Tender opening being declared as a holiday for the Employer the Tenders will be opened at the appointed time and venue on the next working day.

After opening the common Cover, the Cover 1, “Technical Tender” will then be opened.

Covers Marked “Withdrawals” for “Technical Tenders” shall be opened and read out. Tenders for which an acceptable notice of withdrawal has been submitted, pursuant to Clause 21, shall not be opened.

Then the Employer will read out the details of Earnest Money Deposit and other such details as he may consider appropriate and the Employer will prepare minutes of the Tender opening.

The Cover-2 – Financial Tender of all Tenderers shall remain sealed and securely stored in the custody of the Employer.

The Employer will make a preliminary examination of the Technical Tenders to determine whether they are complete, whether the required Earnest Money Deposit furnished in the form specified in ITT, whether the documents are properly signed and whether the Tenders are generally in order.

Any Tender found to be not meeting the qualification criteria specified in ITT (such as required Earnest Money Deposit, Power of Attorney, Certificate of Tender validity period etc.) will be rejected by the employer and will not be included for further evaluation.

The Employer will carry out a detailed evaluation of the Tenders in order to determine whether the qualification and experience details furnished meet with the requirements set forth in the Tender documents. In order to reach such determination the employer will examine the information supplied by the Tenderers pursuant to ITT Clause 8 and other requirements in the Tender documents.

If any clarification (additional information) is required from the Tenderer by the Employer a letter seeking clarification will be sent by the Employer to the Tenderer to respond.

If the Tenderer furnishes the required details within the time prescribed by the Employer the same will be considered by the Employer and scrutiny and evaluation will be completed and in the event of the Tenderer failing to respond within the time period the Employer will scrutinize and evaluate with the data as submitted with the Tender.

23. Process to be confidential.

Information relating to the examination, clarification and evaluation of the Technical Tender shall not be disclosed to any Tenderers or any other persons not officially concerned with such process until the final decision on the Tender is made. Any effort by a Tenderer to influence the Employers’ processing of Tenders / decisions may result in rejection of Technical Tender of that Tenderer.

On completion of evaluation of the Technical Tender, final decision will be communicated to the concerned Tenderers and the qualified Tenderers will be informed of the date, time and venue of the opening of the financial Tender (Cover 2) by giving notice.

24. Opening of Cover – 2 “Financial Tender”

The Employer will open the Cover 2 “ Financial Tenders” including modifications made pursuant to Clause 21 of the qualified Tenderers of “Technical Tender” in the presence of the Tenderers or their authorized representatives who choose to attend at the time , date and venue of the opening specified in the information as per Clause 23 and sign a Register in token of their attendance. In the event of the specified date of Tender opening being declared a holiday for the Employer, the Tenders will be opened at the appointed time and location on the next working day.

24.1 The Employer shall read out the submissions in the modification proposals in appropriate detail.

24.2 The Tenderers names, the Tender prices , the total amount of each Tender, any discount(s), modification and such other details as the Employer may consider appropriate will be announced by the Employer at the opening. Tender modification / discount(s) that are not opened and read out at Tender opening will not be considered for further evaluation regardless of the circumstances.

24.3 The Employer will prepare minutes of the Tender opening including the information disclosed to those present in accordance with Clause 24.2.

The Employer will have preliminary examination of Cover 2 “Financial Tenders” to determine whether (1) they are complete, (2) any computational errors have been made, (3) the documents are properly signed and (4) the Tenders are substantially responsive to the requirements of tender documents .

A substantially responsive tender is one which conforms to all the terms, conditions and specifications of the Tender documents, without material deviation or reservation. A material deviation or reservation is one (a) which affects in any substantial way the scope, quality or performance of the works (b) which limits in any substantial way, inconsistency with the Tender documents, the Employer’s rights or Tenderers obligations under the contract or (c) whose rectification would affect unfairly the competitive position of other tenderers presenting substantially responsive tenders.

If a Tender 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.

25. Correction of Errors

25.1 The Financial Tenders determined to be substantially responsive will be checked by the Employer for any arithmetic errors. Errors will be corrected by the Employer as follows:

- (a) where there is a discrepancy between the rates in figures and in words, lesser of the two will govern; and
- (b) where there is a discrepancy between the unit rate and the line item total resulting from multiplying the unit rate by the quantity, the unit rate as quoted will govern.

25.2 The amount stated in the Financial Tender will be adjusted by the Employer in accordance with the above procedure for the correction of errors and, with the concurrence of the Tenderer, shall be considered as binding upon the Tenderer. If the Tenderer does not accept the corrected amount the Tender will be rejected, and the Earnest Money Deposit may be forfeited in accordance with Sub-Clause 34.

26. Evaluation and Comparison of Financial Tenders

26.1 The Employer will evaluate and compare only the Tenders determined to be substantially responsive in accordance with Clause 24 and Clause 25.

26.2 In evaluating the Tenders, the Employer will determine for each Tender the evaluated Tender Price by adjusting the Tender Price as follows:

- (a) making any correction for errors pursuant to Clause 25 and
- (b) making appropriate adjustments to reflect discounts or other price modifications offered in accordance with Clause 21

26.3 The Employer reserves the right to accept or reject any variation, deviation, or alternative offer. Variations, deviations, and alternative offers and other factors which are in excess of the requirements of the Tender documents or otherwise result in unsolicited benefits for the Employer shall not be taken into account in Tender evaluation.

27. Confidentiality

Information relating to the examination, clarification, evaluation, and comparison of financial Tender and recommendations of the award of the contract shall not be disclosed to tenderers or any other persons not officially concerned with such process until the award to the successful Tenderer has been announced. Any effort by a Tenderer to influence the Employer’s processing of Tenders or award decisions may result in the rejection of his Tender

28. Negotiations

28.1 The Tenders determined to be substantially responsive in accordance with Clause 24,25,26 will be taken into Consideration and the rates of all the items and the total Tender value quoted by the Tenderer will be compared with the estimate rates and the total estimate value put to Tender. Where considered necessary the employer may invite the lowest tenderer for negotiations as outlined below:

The Employer may seek breakdown detail from the lowest responsive Tenderer for the rates quoted for the unbalanced items and total Tender amount offered by the Tenderer within 10 days time. The Tenderer may also be requested to examine the possibility of reducing the rates of high pitched items quoted thereby to reduce the Tender amount to the extent possible.

28.2 Then the lowest Tenderer has to furnish the breakdown details as required by the Employer within the time limit fixed by the Employer. The Tenderer may also reduce the rates of the high-pitched items quoted / high percentage quoted if possible or express his inability to reduce the quoted rates/ percentage stating the reasons. A reply shall be furnished within the time limit fixed by the Employer.

28.3 If the Employer is satisfied that the details furnished and the reasons stated by the tenderer for his inability to reduce the rates /percentage by the Tenderer is considered to be reasonable then he may take a decision suitably.

28.4 If the Employer feels that the reduced offer is reasonable, suitable action shall be taken to award the work and if the reduced rates offered / percentage rate even after negotiation is considered still to be on the higher side and if the Tenderer refuses to reduce further then the Employer may record the reasons and take suitable action to reject the Tenders received and to go in for fresh Tender

29. Award of Contract

The Employer will award the Contract to the Tenderer whose Tender has been determined to be substantially responsive to the Tender documents and who has offered the lowest evaluated Tender Price, (after negotiation where appropriate) provided that such Tenderer has been determined to be (a) eligible in accordance with the provisions of Clause 3 and (b) qualified in accordance with the provisions of Clause 6.

30. Notification of Award and Signing of Agreement

30.1 The Tenderer whose Tender has been accepted will be notified of the award by the Employer prior to expiration of the Tender 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 the Contractor in consideration of the execution, completion, and maintenance of the Works by the Contractor as prescribed by the Contract (hereinafter and in the Contract called the "Contract Price").

30.2 The notification of award will constitute the formation of the Contract, subject only to the furnishing of a Security Deposit in accordance with provisions of clause 31.

30.3 The Agreement will incorporate all understandings reached between the employer and the successful Tenderer during negotiations and post Tender correspondences. It will be kept ready for signature of the successful Tenderer in the office of employer within 14 days following the notification of award along with the Letter of Acceptance. Within 14 days of receipt, the successful Tenderer will furnish the Security Deposit and sign the Agreement kept in the office of the Employer.

30.4 Upon signing of the agreement the Employer will promptly notify the other Tenderers that their Tenders have been unsuccessful and release their Earnest Money Deposit.

31. Security Deposit

Security deposit will be collected from the successful Tenderer in the following form and manner within 14 days from the date of receipt of work order

a) Form in which S.D is collected.

In the shape of NSC/NSS/KVP/Post office Time Deposits valid for the required contract period and pledged in favour of Owner and shall have the necessary transfer endorsement of the Post Office.

(OR)

Fixed Deposit for the required period from nationalized/Schedule Bank/TNSC Bank in favour of Owner

(OR)

Certified cheque/Bank Draft in favour of Owner payable at Chennai.

b) Manner in which S.D collected

i) for tenders with any plus percentage and up to (-)5% over departmental value will be collected at 2% of the contract value.

ii) for tenders between (-)5% to (-)15% over departmental value will be collected at 4% of the contract value.

iii) for tenders, above (-)15% over departmental value will be collected at 5% of the contract value.

Note: Security deposit will not carry any interest from the Employer.

32. Adjustment for EMD and Security Deposit.

The Owner will not adjust amounts towards E.M.D., S.D. either from pending bills of the tenderer or from the deposits held by the Owner for other works if any.

33. Refund of EMD.

The E.M.D. of the unsuccessful tenderer will be returned to them as soon as possible after the final disposal of Tenders. The E.M.D. of the successful tenderer will be returned to him after he deposits his security deposit and executes the agreement within the required time.

34. Forfeiture of EMD.

The Bid Security may be forfeited due to the following reasons:

a) if the Bidder withdraws the Bid after Bid opening during the period of Bid validity;

b) if the Bidder does not accept the correction of the Bid price, pursuant to Sl.No.22 of Instruction to tenderers; or

c) in the case of a successful Bidder, if the Bidder fails within the specified time limit to sign the Agreement; or furnish the required Performance Security

35. Unworkable rate.

If the Owner considers that any tender is unworkably low or very exorbitant indicating that tenderer has not understood the implications in the contract or is attempting either to frustrate the object of the Municipality or exploit the Municipality it can debar such tenderer permanently or for such period as it may deem fit from entering into any contract with the Municipality

36. Taking over of the System for O&M

Should the contractor fail to undertake to take over the system for Operation within 7 days from the date of handing over the site by the Municipality, the performance security will be forfeited and the contract is liable to be cancelled or terminated and the Municipality may thereupon at such terms as it may think fit, arrange through any other person or persons to undertake or perform, provide, execute and do all works, materials or matters and things described in the tender schedule.

37. Specifications

Whenever detailed specifications for various items of work included in this contract are not found in the tender TNDSS which is now revised and called as Tamil Nadu Building practice (TNBP) or the relevant Indian standard specifications or code of practice or the instructions and requirements of the Engineering shall apply in that order.

38. Address for communications.

Tenderers should give full postal address of their office in their tender. The delivery at the above named place or posting in a post box regularly maintained by the postal department or sending by letter registered for acknowledgement of any notice, letter or other communication to the tenderer or contractor shall be deemed sufficient service thereof upon the tenderer or contractor in writing. The address may be changed at any time by an instrument executed by the tenderer or contractor and delivered to the Alandur Municipality.

Note: Nothing contained in the agreement and its contract conditions shall be deemed to preclude or render inoperative the service of any notice, letter or communication upon the contractor personally.

SECTION 2: FORMS OF TENDER, QUALIFICATION
INFORMATION AND LETTER OF
ACCEPTANCE

SECTION 2:

FORMS OF TENDER, QUALIFICATION INFORMATION AND LETTER OF ACCEPTANCE

Table of Forms:

- CONTRACTOR'S TENDER (FORM COVER 1 - TECHNICAL TENDER)
- LETTER OF INTIMATION OF OPENING OF FINANCIAL TENDER
- TENDER FORM COVER 2 - FINANCIAL TENDER
- QUALIFICATION INFORMATION
- LETTER OF ACCEPTANCE
- NOTICE TO PROCEED WITH THE WORK
- AGREEMENT FORM

Contractor's Tender Ref. No.

Name of work: "OPERATION & MAINTENANCE OF UNDERGROUND SEWERAGE SYSTEM (UGSS) IN ALANDUR MUNICIPALITY FOR 3 YEARS"

To : Tamil Nadu Urban Infrastructure Financial Services Ltd, (TNUIFSL),
First Floor, Vairam Complex, 112,
Sir Theyagaraya Road, T. Nagar, Chennai – 600 017

GENTLEMEN,

Having examined the Tender documents including addendum, we offer to execute the Works described above in accordance with the Conditions of Contract, Specifications, Drawings and in conformity with the Tender documents and submit our Technical Tender.

We agree to abide by this Tender consisting of letter and attachments _____ through hitherto for a period of 120 days from the date fixed for submission of Tenders, and together with the above written undertakings it shall remain binding on us and may be accepted at any time before that date.

Dated this _____ date of _____ 20_____

Signature

In the capacity of _____
(position)

duly authorized to sign this Tender for and on behalf of _____

LETTER FOR INTI MATION OF OPENING OF FINANCIAL TENDER

Tender Reference No.

Name of Work: "OPERATION & MAINTENANCE OF UNDERGROUND SEWERAGE SYSTEM (UGSS) IN ALANDUR MUNICIPALITY FOR 3 YEARS"

Letter No.....dated.....

To
The Tenderer.....
.....

Dear Sirs,

This is to notify that your Technical Tender datedfor the work of(name of work and Tender ref. No.) has been evaluated based on the qualification and experience information, other documents and certificates furnished with the Tender and further clarification furnished by you and you are determined as qualified for participation in the Financial Tender opening onhours at.....in the address given below:

You are requested to make yourself present or send your authorized representative on the above date and time at the time of opening of the Financial Tender.

Please note that at any stage if the information furnished is found to be incorrect or false, the Employer reserves the right to reverse the decision.

Yours faithfully,

Authorized Signature of the Employer

Name and title of the Signatory.....

.....

Address

Name of the work: “OPERATION & MAINTENANCE OF UNDERGROUND SEWERAGE SYSTEM (UGSS) IN ALANDUR MUNICIPALITY FOR 3 YEARS”

To : Tamil Nadu Urban Infrastructure Financial Services Ltd, (TNUIFSL),
First Floor, Vairam Complex, 112,
Sir Theyagaraya Road, T. Nagar, Chennai – 600 017

GENTLEMEN,

Having examined the Tender documents including addendum, we offer to execute the Works described above in accordance with the Conditions of Contract, Specifications, Drawings and Bill of Quantities accompanying this Tender for the Contract Price of _____ [in figures] (_____) [in words]. 3

This Tender and your written acceptance of it shall constitute a binding contract between us. We understand that you are not bound to accept the lowest or any Tender you receive.

We undertake that, in competing for (and, if the award is made to us, in executing) the above contract, we will strictly observe the laws against fraud and corruption in force in India namely “Prevention of Corruption Act 1988”.

We hereby confirm that this Tender complies with the Tender Validity and Earnest Money Deposit required by the Tender documents.

Yours faithfully,

Authorized Signature:

Name & Title of Signatory: _____

Name of Tenderer _____ :

Address _____ :

3. To be filled in by the Tenderer together with his particulars and date of submission at the bottom of the form of Tender

Qualification Information

The information to be filled in by the Tenderer in the following pages will be used for purposes of Evaluation of the Tenderers. This information will not be incorporated in the Contract.

1.1 Constitution or legal status of Tenderer
[Attach copy]

Place of registration: _____

Principal place of business: _____

Power of attorney of signatory of Tender
[Attach]

1.2 Total value of Civil Engineering construction works executed including O&M works and payments received in the last five years**
2006-07 to 2010-11(in Rs. Lakhs)

YEAR	VALUE
_____	_____β
_____	_____
_____	_____
_____	_____

1.3.1 Work performed as prime contractor (in the same name) on works of a similar nature over the last five years. (2006-07 to 2010-11)**

Project Name	Name of the Employer*	Description of work	Contract No.	Value of contract (Rs. Lakhs)	Date of issue of work order	Stipulated period of completion	Actual date of completion*	Remarks explaining reasons for delay and work completed

1.3.2 Quantities of work executed as prime contractor (in the same name and style) in the last five years: **

Year	Name of the Work	Name of the Employer*	Quantity of work performed (cum) @ Cement concrete (including RCC&PCC)	Masonry	E/works	Remarks * (indicate contract Ref)

*Attach certificate(s) from the Engineer(s)-in-Charge

** immediately preceding the financial year in which Tenders are received.

β Attach certificate from Chartered Accountant.

1.4 Information on Tender Capacity (works for which Tenders have been submitted and works which are yet to be completed) as on the date of this Tender.

(A) Existing commitments and on-going works:

Description of Work	Place & State	Contract No. & Date	Name and Address of Employer	Value of Contract (Rs. Lakhs)	Stipulated period of completion	Value of works* remaining to be completed (Rs. Lakhs)	Anticipated date of completion
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)

(B) Works for which Tenders already submitted:

Description of Work	Place & State	Name and Address of Employer	Estimated value of works (Rs. Lakhs)	Stipulated period of completion	Date when decision is expected	Remarks if any
(1)	(2)	(3)	(4)	(5)	(6)	(7)

* Attach certificate(s) from the Engineer(s)-in-Charge.

1.5 List of Equipments/Machineries proposed to be made available for this Contract

1.6 Qualifications and experience of key personnel proposed for administration and execution of the Contract. Attach biographical data..

Position	Name	Qualifications	Years of experience (general)	Years of experience in the proposed position
*	*	*	*	*
*	*	*	*	*
*	*	*	*	*
*	*	*	*	*
etc.				

1.7 Proposed subcontracts and firms involved.

Sections of the works	Value of Sub-contract	Sub-contractor (name and address)	Experience in similar work
*	*	*	*
*	*	*	*
*	*	*	*
*	*	*	*

1.8 Financial reports for the last five years: balance sheets, profit and loss statements, auditors' reports (in case of companies/corporation), etc. List them below and attach copies.

1.9 Evidence of access to financial resources to meet the qualification requirements: cash in hand, lines of credit, etc. List them below and attach copies of support documents [sample format attached].

1.10 Name, address, and telephone, telex, and fax numbers of the Tenderers' bankers who may provide references if contacted by the Employer.

1.11 Information on litigation history in which the Tenderer is involved.

Other party(ies)	Employer	Cause of dispute	Amount involved	Remarks showing Present status

1.12 Statement of compliance under the requirements of Sub Clause 14 of the instructions to Tenderers.

2. Additional Requirements

2.1 Tenderers should provide any additional information required to fulfill the requirements of Clause 6 of the Instructions to the Tenderers, if applicable.

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.

__ Sd. __

Name of Bank

Senior Bank Manager

Address of the Bank

Letter of Acceptance
(letterhead paper of the Employer)

Tender Ref. No. _____ [date]

Name of Work:

To: _____ [name and
address of the Contractor]

Dear Sirs,

On behalf of the Alandur Municipality this is to notify you that your Financial Tender dated _____ for _____ execution of _____ the _____ [name of the contract and identification number, as given in the Instructions to Tenderers] for the Contract Price of Rupees _____ (_____) [amount in words and figures], as corrected and modified in accordance with the Instructions to Tenderers¹ is hereby accepted by the competent Authority.

You are hereby requested to furnish Security Deposit of Rs _____ plus additional security for unbalanced items in terms of ITT clause 31 for an amount of Rs. _____, in the form detailed in Para 31 of ITT within 14 days of the receipt of this letter of acceptance valid up to 45 days from the date of expiry of Defects Liability Period i.e. up to and sign the contract, failing which action as stated in Para 34 of ITT will be taken.

Yours faithfully,

Authorized Signature

Name and Title of Signatory

Name of Agency

1 Delete "corrected and" or "and modified" if only one of these actions applies. Delete "as corrected and modified in accordance with the Instructions to Tenderers" if corrections or modifications have not been effected.

* replace with the name of organization on behalf of which the Tenders are invited

Issue of Notice to proceed with the work

(letterhead of the Employer)

Tender Ref. No:

Name of Work:

----- (date)

To

(name and address of the Contractor)

Dear Sirs:

Sub :- Tender for the work of -----

accepted- Agreement accepted-Action to proceed with the works requested

Ref :- This office letter no -----dt-----

Pursuant to your furnishing the requisite Security Deposit and Additional Security Deposit * as requested in the letter cited and as stipulated in ITT clause 31 and signing of the contract agreement for the construction of the work above@ a Tender Price of Rs.------(Rupees-----) you are hereby instructed to proceed with the execution of the said works in accordance with the contract documents.

Yours faithfully,

(Signature, name and title of signatory authorized to sign on behalf of Employer)

*Delete if Additional Security Deposit is not applicable

AGREEMENT

ARTICLE OF AGREEMENT made this _____ day of _____ 2010 Between _____ (Herein after referred to as the contractor) on the one part and Commissioner, Alandur Municipality- (here in after called the Employer/Municipality) on the other part.

Whereas the contractor delivered to the Municipality the tender attached dated _____ day of _____ Two Thousand Ten hereby the contractor offered and under took to carry out the works specified under this contract and accessory work in the operation and Maintenance of UGSS in Alandur Municipality, in the state of Tamil Nadu in India, for 3 years and provide the works , materials , matter and things described or mentioned in these presents at the prices set forth in the schedule annexed to such tender and might be ordered as part of the contract on the terms provided for in the conditions and specifications hereto annexed and the Municipality accepted such tender in pursuance whereof the parties hereto have entered in this contract.

And whereas the contractor in accordance with the terms of the said tender has deposited in the office of the Municipality as security for the due and faithful performance by the contractor of this contract, the sum of Rs.------(Rupees-----)

NOW THESE PRESENTS WITNESS THAT for the consideration hereinafter mentioned, the contractor covenants and agrees with the Municipality and their successors in manner following that is to say; that the contractor shall and will within time specified in his letter of tender thoroughly and efficiently and in a good works, materials, matters or things incidental to or necessary for the entire completion of the works specified under this contract referred to or described or set forth in the said specifications and schedule hereto annexed and in accordance with such further instructions as the Engineer of the Municipality or other Engineer duly authorized in that behalf (herein after and in the annexed documents referred to as the Engineer) shall at any time in accordance with the said schedule (bills of quantities) and specifications provided and give together with any alterations in the works or additions thereto , in the time and manner in such schedule (bills of quantities) and specifications stipulated to the entire satisfaction of the Engineer and the Municipality for themselves and their successors covenant and agree with the contractor that during the progress of the works and on the completion of the contract to the satisfaction of the Engineer and the Municipality 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 of sum mentioned in such certificates as due to the contractor under the terms of this contract subject nevertheless to deductions or additions thereto or there from which may be lawfully made under terms of this contract. It is hereby mutually agreed and declared as follows:

- (a) All certificates or notices or orders for time or for extra varied or altered works which are to be the subject of an extra or varied 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 shall include the following documents and construed as part of the agreement in the hierarchy.
 - (i) Agreement
 - (ii) Letter of Acceptance
 - (iii) Notice to proceed with the works
 - (iv) Letter of Tender
 - (v) General stipulations and Conditions.
 - (vi) Scope of work
 - (vii) Price Schedule
 - (viii) Annexure enclosed with tender document and correspondences made
 - (ix) Instruction to the tenderers
 - (x) Safety and preventive measures and Labour Laws

IN WITNESS WHEREOF THE contractor _____ and the -----on behalf of the Alandur Municipality have caused their common seal to be affixed on the day and year first above written;

Signed, Sealed and delivered
By the said contractor in the presence of;

Signature of contractor

Name and Seal

Signature, name and designation of witnesses:

In witness whereof I hereunto affix my signature.

Alandur Municipality

Chennai-----

SECTION III: CONDITIONS OF CONTRACT

CONDITIONS OF CONTRACT

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CONDITIONS OF CONTRACT

1. Definitions

Capital initials are used to identify defined terms.

Adjudicator means a person appointed jointly by the employer and the contractor to resolve disputes in the first instance during the progress of the work as provided for in clauses 45 (a).

Bill of Quantities means the priced and completed Bill of Quantities forming part of the Tender.

The Completion Date is the date of completion of the O&M Works as certified by the Engineer.

The Contract means, the documents forming the Tender and acceptance thereof and the formal agreement executed between the competent authority on behalf of the Employer and the Contractor together with the documents referred to therein including these conditions, the specifications, designs, drawings and instructions issued from time to time by the Engineer in charge and all these documents taken together shall be deemed to form one contract and shall be complimentary to one another.

The Contractor means the individual or firm or company whether incorporated or not, whose Tender to carry out this work has been accepted by the employer and shall include legal personnel, representatives of such individuals or persons composing of such firm or company or unincorporated company or successors or such firm or company as the case may be and permitted assignees of such individuals or firm or company.

The Contractor's Tender is the completed Tender document submitted by the Contractor to the Employer.

The Contract Price is the price stated in the Letter of Acceptance and thereafter as adjusted in accordance with the provisions of the Contract.

Days are calendar days; months are calendar months.

A Defect is any part of the Works not completed in accordance with the Contract.

Employer means the Tender accepting authority and his assignees with the power delegated by him.

Engineer means the officer indicated by designation of the post who is responsible for supervising the execution of the work and administering the contract on behalf of the employer.

The Initial Contract Price is the Contract Price listed in the Employer's Letter of Acceptance.

The Intended Completion Date is the date on which it is intended that the Contractor shall complete the Works and the end of O&M Contract period. The Intended Completion Date/end of O&M Contract period is specified in the Tender Document. The Intended Completion Date/ end of O&M Contract period may be revised only by the Engineer by issuing an extension of time.

Item Rate contract system means the system where the contractor has to quote his rate for each and every item of work specified in the BOQ furnished by the Employer and total amount for each item and the grand total for all the items in the Tender.

Materials are all supplies, including consumables, used by the contractor for incorporation in the Works.

Plant is any integral part of the Works which is to have a mechanical, electrical, electronic or chemical or biological function.

The Site shall mean the land or other places on, into or through which work is to be executed under the contract or any adjacent land, path or street through which work is to be executed under the contract.

Site Investigation Reports are those which were included in the Tender documents and are factual interpretative reports about the surface and sub-surface conditions at the site.

Specification means, relevant Standard specification applicable on particular work and as indicated by the appropriate Standard Specification numbers in the contract.

The Start Date is the date when the Contractor shall commence O&M works. It does not necessarily coincide with any of the Site Possession Dates.

A Subcontractor is a person or corporate body who has a Contract with the Contractor to carry out a part of the work in the Contract which includes work on the Site.

Temporary Works are works designed, constructed, installed, and removed by the Contractor which are needed for construction or installation of the Works.

A Variation is an instruction given by the Engineer which varies the Works.

The Works are what the Contract requires the Contractor to construct, install, and turn over to the Employer, as defined in the Contract Document.

2. INTERPRETATION

In this contract the following words shall be understood as having the meanings herein assigned to them.

- a) "The Municipality" means the Alandur Municipality, a Local body having its office at No.1, New Street, Alandur, Chennai 600 016, represented by the Commissioner and any officer duly authorized officer by the Commissioner to act on his behalf.
- b) Contractor means the person or persons or firm or company contracting for the work specified including his or their executors or administrators or legal representatives or successors;
- c) Engineer means Municipal Engineer or any other Engineer appointed from time to time by the Municipality to act as such in connection with these works. Whenever any work is specified to be done or material supplied to the satisfaction of the Engineer it shall be taken as including his properly authorized assistants and duly authorized representatives.
- d) Works means Operation and Maintenance of the Collection system and the Pumping Stations of Under Ground Sewerage Scheme in Alandur Municipal Area for 3 years and in accordance with this contract.
- e) Contractor and Operator have the same meaning in this bid document

3. WORKS COMPRISED IN THE CONTRACT.

This contract comprises the Operation and Maintenance of the Collection system and the Pumping Stations of Under Ground Sewerage Scheme in Alandur Municipal Area described or mentioned in these specifications and in the schedule hereto, annexed and all extra works, which may be ordered under the powers herein, contained. The specifications, schedules etc., are to be considered as explanatory to each other and no advantage shall be taken of any omissions in any of these documents.

4. DISCREPANCIES

Should any discrepancy appear in any of the documents included in the contract or between different parts of the same documents or any ambiguity or insufficiency of information, the contractor shall point-out the same to the Engineer in writing and receive his instructions, explanation or decision in the matter, before beginning the work in question.

5. OMISSIONS

In the event of anything reasonably necessary or proper to the due and complete performance of the work (of which the Engineer shall be sole judge) being omitted to be shown or described in the specifications and schedules the contractor shall notwithstanding execute and provide at the rates noted in the bills all such omitted works and things as if they had been severally shown and described and according to the directions of the Engineer and to his satisfaction.

6. SCHEDULE (BILLS OF QUANTITIES)

The contractor shall not be held responsible for the accuracy of the schedules hereto attached but only for the accuracy of the prices, amounts and totals there in appearing. The rate for each item of the work in the schedule shall be inclusive of the costs and charges of all material, labour, tools and plant necessary for the full and complete execution of the work as described in the specification and schedule unless otherwise specified and for the due fulfillment of all the requirements relating thereto as specified in the contract. If any error, omission or misstatement shall be discovered in the said quantities the same shall not vitiate the contract for release the contractor from the Operation and completion of whole or any part of the said obligations or liabilities of the contractor under this contract or entitled the contractor to any damages or compensation from the Municipality.

7. PREPARATION OF CERTIFICATES

In preparing the interim or final certificates of payment to the contractor the Engineer shall take into account the total works included in this contract as set out in the priced bills and should it appear after measurement that these works have been exceeded, he shall certify for the amount so executed in excess at the several appropriate prices or rates in the said bills of quantities.

8. NET MEASUREMENT

Should the final measurement of work show that the various works executed are less than those set out in the bills the Engineer shall in like manner deduct at appropriate rates the value of such difference from the total sum of the contract.

9. CONTRACTOR GENERAL EXPLANATION

The works under this contract and every addition, alteration or deviation directed to be executed under this contract or that may be necessary or proper to be done in order to perfect and complete the same, shall be executed by the contractor in the best and most substantial and work man like manner, with materials of the best and approved quality of their respective kinds, according to the particulars contained in or implied by the specifications and schedules hereto attached or such other additional particulars explanations as may be given or approved by the Engineer , according to the instructions and directions from time to time given by the Engineer. The Engineer shall have full liberty from time to time and at all times to inspect, examine and test the materials and workmanship and may at any time reject any or all of the materials or workmanship which may seem defective or unfit or improper for the several purposes they are applied or not in accordance with the said bills, specifications instructions, or directions

10. CONTRACTOR'S LIABILITY

The contractor shall be absolutely and solely responsible for any and all kinds of injuries or damages to person and property of any description whatever may be caused by or result from the execution of the works, whether these may have been carried out skillfully and carefully and strictly in conformity with the provisions of the specifications or not.

11. POWER TO VARY WORK

The description of work required to be executed by the contractor are set forth in the specification, schedules. But the Engineer reserves the power to vary, extend or diminish the quantities of work, change or decreases the size, quality; description, character or kind of any work, to order the contractor to execute the works or any part thereof, by day or night work or to add to or take from the work included in the contract as he may think proper without violating the contract and the contractor shall not have any claim upon the Municipality for any such variation, extension, diminution, alteration, increase, change or decrease other than for the work actually done , calculated according to the prices tendered and accepted in this contract.

12. EXTRA OR VARIED WORKS

If the Engineer uses the power reserved to him under clause 11 above, an order in writing signed by the Engineer, shall be given to the contractor to that effect and any works executed under such order shall be paid for at the rates set forth in the schedule of prices where such rates in the opinion of the Engineer apply but if such rates do not apply ; a rate or price shall be agreed upon between the Engineer and the contractor in writing and failing their agreement, the contractor shall forthwith execute such order and the Engineer shall determine the rate or price at which the work shall be paid of.

13. CONTRACTOR TO BE RESPONSIBLE FOR ALL TRESPASSES AND DAMAGES

In the event of accidents to any person including employees of Municipality on duty, damages to property, trespass on land, injury to cattle, horses, or other animals, or damage injury of any description to any person or thing arising out of the execution of the works, the contractor shall be held responsible for and make good the same and shall indemnify the Municipality from all claims or expenses on account thereof and if the Municipality has to pay any money in respect thereof the sum so paid and the costs incurred by the Municipality shall be charged to the contractor as so much money paid to him on account of his contract and the contractor shall not be at liberty to dispute or question the right of the Municipality to make such payment for him or on his account notwithstanding the same may have been made without his consent of authority and decision or determination in law or otherwise to the contrary notwithstanding.

The Municipality shall not be liable to, or for in respect of any damages or compensation or claim there

for, under any Act for the time being in force or common law because or by reason or in consequences of any accident or injuries to workmen or others in the employment of the contractor or any subcontractor or of any person acting under him or on his behalf or the staff / persons employed by the Municipality for supervision of the work under his contract and the contractor shall save the Municipality harmless and indemnify in respect thereof and of any all costs and expenses incidental there to or consequent thereon.

13A. The Contractor shall conform to and comply with the regulations and by-laws of the State or Central Government or the Municipality and of all other local authorities such as Corporation of Chennai, The Tamil Nadu Electricity System, pollution Control Board, The Chief Electrical Inspector to Government of Tamil Nadu, The Government Customs and Police Departments Fire Services, the provisions contained in the various Labour Acts enacted by the State Legislature and Central Parliament in force and rules made there under including those under Minimum Wages Act. Factories Act, The Indian Electricity Act and rules framed under it, Workmen Compensation Act, The Employees State Insurance Act 1948, Provident Fund Regulations Act, The EPF and Miscellaneous Provisions Act 1952, Employees Provident Fund 1961 and scheme made under the said Act, Health and Sanitary Arrangements for workers etc. and the Contract Labour (Regulation and Abolition) Central Act 1970 and the Contracts (Regulation and Abolition) Central Rules 1971 etc. for Welfare and protection of works, workers or for the safety of the public and other Insurance provisions.

13B Further, the contractor has to give a declaration for the following provisions that:

- i) In the capacity of Contractor, the contractor has to comply with the provisions of Contract Labour (Regulations & Abolition) Act, 1970 by obtaining a valid license under the Act and the Rules thereto and similarly under Factories Act wherever applicable.
- ii) The contractor has to pay the wages in accordance with the Minimum Wages Act to all his / their employees.
- iii) The contractor has to abide to recover the Employees Provident Fund and the Employees' Insurance contributions (both Employees and employers contribution) from the payment of bills every month.
- iv) The contractor's Code Nos. for E.S.I. and E.P.F. are & and both the Employees, Employers contributions will be remitted by the contractor in his / their code numbers and copy of the remittance challans will be produced. In case, if the contractor is failing to remit, he / they will inform wage rates of employees to the Principal employer so that they can remit Employees' State Insurance Contribution & Employees Provident Fund contribution (both for employer and employee) and authorize them to make deductions from the payment of bills.
- v) The contractor has to authorize to recover the contributions towards Tamil Nadu Manual Workers (Regulations of Employment and Conditions of work) Act, 1982 fund at the percentage prescribed by the Government from time to time.
- vi) The contractor has to further declare and undertake that in case of any liability pertaining to his / their employees is to be discharged by the Principal Employer for his / their lapse, the contractor undertake to reimburse the same or the Principal Employer is authorized to deduct the same from the contractor's dues as payable.
- vii) The contractor will maintain the Registers and records about the Contract Labour employed under Section 29 of Labour (Regulation & Abolition) Act wherever applicable.
- viii) The contractor will take insurance policy under Workmen Compensation Act to meet out any untoward incident until the contract labourers are issued with ESI card.

13C. COMPLIANCE WITH LABOUR REGULATIONS

During continuance of the contract, the contractor and his sub contractors shall abide at all times by all existing labour enactment's and rules made there under, regulations, notifications and bye laws of the State or Central Governments or local authority and any other labour law (including rules), regulations, bye laws that may be passed or notification that may be issued under any labour law in future either by the State or the Central Government or the local authority. The contractor shall keep the Municipality indemnified in case any action is taken against the Municipality by the competent authority on account of contravention of any of the provisions of any Act or rules made there under, regulation's or notifications including amendments. If the Municipality is caused to pay or reimburse, such amounts as may be necessary to cause or observe, or for non-observance of the provisions stipulated in the notifications/bye laws/Acts/ Rules/Regulations including amendments, if any, on the part of the

contractor, the Engineer/Municipality shall have the right to deduct any money due to the contractor including his amount of performance security. The Municipality/Engineer shall also have right to recover from the Contractor any sum required or estimated to be required for making good the loss or damage suffered by the Municipality.

The employees of the contractor and the Sub-Contractor in no case shall be treated as the employees of the Municipality at any point of time.

13D. CONTRIBUTION TO FUND

Notwithstanding anything contained in any Law for the time being enforce or in any agreement every person/Contractor who undertakes any civil work shall be liable to pay a sum at such percent, not exceeding one percent of the total estimated cost of the work as may be fixed by the Government, by notification, as contribution to the fund constituted for the benefit of manual workers in the employment in Civil Works under a scheme, framed under Section 3 of Tamil Nadu Manual Workers (Regulation of Employment and conditions of Work) Act, 1982. The percentage of total estimated cost of work, as may be fixed by the Government, notification from time to time shall be recovered from the Contractor, deductible at source and remit it to the Tamil Nadu Constructions Workers Welfare Board within such period as may be prescribed.

14. RECOVERY OF SALES TAX

The Tamil Nadu Value Added Tax Act 2006 Section 6 (1) empowered the Municipality to deduct as Sales Tax an amount calculated at the following rate, namely.

- (i) Civil Works Maintenance Contract : Two percent of the total amount payable to dealer
- (ii) All other works contract: Four percent of the total amount payable to dealer

At the time of payment of any sum to such dealer for execution of works contractors. The Sales Tax for any payment due in this contract will be recovered as mentioned above.

15. ACCESS TO WORK

The contractor shall inform himself of the number and nature of the existing road and cart tracks available for access to the site of the work and make due provision in the rate for any difficulty involved in carting labours and materials.

16. TEST

Every part of the works and all the materials to be used therein shall be subjected to such tests from time to time during the execution of the work as the Engineer may direct and the whole of such tests shall in all cases be made at the contractor's sole expense.

17. WORKS UNDER THE CONTROL OF THE ENGINEER WHO MAY REJECT MATERIALS OR WORKMANSHIP.

The work shall be carried on and completed under the exclusive control, direction and supervision and to the satisfaction of the Engineer. The Engineer shall likewise have full power to reject or condemn any workmanship or materials that he may deem unsuitable. In case of any workmanship or materials being rejected by the Engineer, the contractor shall immediately remove and replace the same to the satisfaction of the Engineer, or the Engineer is hereby authorized to remove and replace the same, deducting the value of the work rejected or material removed or the cost of replacing the same, as he may think proper, from any amount due or that may become due to the contractor.

18. MAINTENANCE STAFF PATTERN

- i) The contractor shall give or provide all necessary superintendence during the execution of the works and as long thereafter as the Engineer may consider necessary. Such superintendence shall be given by sufficient person having adequate knowledge of the operations to be carried out (including the methods and techniques required, the hazards likely to be encountered and methods of preventing accidents) as may be required for the satisfactory Operation and Maintenance of the plant.
- ii) The employment of technical staff and no. of labour staff and the rate of penalty for the failure of the contractor to employ the technical staff and labour staff for the work be as indicated in the Annexure I & IV.

19. ORDER BOOK

An order book will be kept by the Junior Engineer / Asst. Engineer-in-Charge at the site of works, orders entered in this book by the Engineer, Executive Engineer, Asst. Executive Engineer, Asst. Engineer or Junior Engineer shall be held to have been formally communicated to the contractor. The Asst. Engineer or Junior Engineer will sign each order as it is entered and will hand over the duplicate to the contractor or his agent, who shall sign the original in acknowledgement of having received the order.

20. EXCLUDED MATTER

It is to be distinctly understood that the specifications are to receive their strict literal interpretations and that the works are in all respects to be carried out in accordance with them to the satisfaction of the Engineer. The decision, opinion certificate of valuation of the Engineer with respect to all or any of the following matters shall be final and with out appeal.

- a. The quality of the work carried out or materials supplied by the contractor; and
- b. Any requirements of the Engineer under clause 22.

21. MUNICIPALITY MAY OCCUPY THE SITE AND EMPLOY OTHER CONTRACTORS

The Municipality expressly reserve to themselves the right to occupy for their own purposes of whatever kind, at any time, and for so long a time as the Engineer may notice in writing to the contractor require, any portion or portions of the site of the works whether the works to be executed thereon be commenced or be in progress or completed and to employ thereon agents and the workmen other than the contractor in the execution of matter not the subjects of the contract and the contractor shall not obstruct such agents and workmen, but without extra charge and without relief from any liabilities or responsibilities incurred under the contract shall allow and provide them unmolested access thereto and such facilities as in the judgment of the Engineer may, by him be reasonably demanded.

22. COMMENCEMENT OF WORK AND RATE OF PROGRESS

- a) The contractor must commence, execute and complete with such expedition as the Engineer shall require and in a manner satisfactory to the Engineer all works for which he has accepted orders.
- b) **PENALTY FOR SLOW PROGRESS**
If the contractor fails to provide the required manpower tools, equipments, safety equipments and the maintenance works as stipulated in the Mandatory Duties of the Contractor, the Engineer shall have the power to impose as penalty of such amount as prescribed in the chapter for the recovery to be made for default (Annexure IV) for everyday that the work remains un-commenced or unfinished after the proper dates, provided however the total amount of penalty imposed during the stipulated period of completion of the work shall not exceed 5% of the contract value.

23. SKILLED WORKMEN TO BE EMPLOYED

The Contractor shall employ only competent and skilled persons to do the work. The Contractor shall change any of the persons only with person of equal or higher qualification and experience after obtaining prior approval of the Engineer.

Whenever the Engineer inform him in writing that any person on the work is in his opinion unsatisfactory or incompetent or unfaithful or dishonest, untruthful or disorderly or otherwise unsuitable, such person shall be discharged from the work and shall not be employed again on it.

24. ABSENCE OF THE ENGINEER

If and so often as it may happen that the Engineer shall be absent from the works for any cause whatsoever the Engineer authorized by the Commissioner shall act as the Engineer during his absence or until the Municipality shall appoint some other person to act as such Engineer or other person appointed as aforesaid as the case may be shall during the said absences of the Engineers, have all the powers and duties relating to all the matters and things in connection with the works or any disputes and difference arising there from or in any way connected there with as are conferred on the Engineer by virtue of his contract.

25. NIGHT WORK

The work shall be carried out on day and night without extra cost and intermission as directed in writing by the Engineer in charge of the works deemed fit to fulfill the day to day O&M of the UGSS. (collection system & Sewage Pumping Station)

26. MATERIALS, IMPLEMENTS AND LABOUR PROVIDED

Except for such materials as are herein stated to be supplied by the Municipality, the contractor shall at his cost and charges furnish all materials and labour and everything necessary for the full complete performance of this contract.

27. ENGINEER TO HAVE RIGHT TO INSPECT PLACES FROM WHERE MATERIALS ARE OBTAINED.

All places wherein any materials are being made or obtained for the works and the whole of the process connected there with and all the other operations of the contractor or any authorized sub-contractor, manufacturer or tradesman shall be open to the inspection and control of the Engineer and all person authorized by him at all times.

28. MATERIALS AND WORKMANSHIP INFERIOR WORK TO BE AMENDED

If any materials brought upon the site of works or to the places where any operations have been or are being carried out in connection with or for the purposes of the works, be in the judgment of the Engineer, of an inferior or improper description or improper to be used in the works, the said materials or workmanship shall where required by the said officer be removed or amended by the contractor forthwith or within such period or periods as the said officer may direct. In case of each and every breach by the contractor of this clause, the Engineer is hereby authorized to remove or cause to be removed, the materials and workmanship so objected to or any part thereof, and replace the same with such other materials and workmanship as shall be satisfactory to him and there upon the contractor or shall on demand repay to the Municipality the expense incurred thereby or to which the Municipality may be put or be liable in connection therewith, the amount thereof to be certified by the Engineer whose certificate shall be final.

29. CONTRACTOR NOT TO OCCUPY LAND ETC. AFTER NOTICE FROM THE ENGINEER.

In no case, shall the contractor continue to use or occupy or allow to be used or occupied any land or property either for the deposit of materials or plant or for any purpose whatever after written notice from the

Engineer shall have been addressed to the contractor at his usual or last known place or abode or business and sent through the post offices or other mode of delivery requiring the contractor to remove or cause to be removed all such materials or plant from any such land or property as aforesaid or to give up vacant possession of such land or property to the Engineer and should any such materials or plant remain upon any such land or property or shall any such land or property remain occupied or be used after such notice for any purpose whatsoever as aforesaid, then and in every such case and as often as the same shall happen the contractor shall forfeit and no demand pay to the Municipality the sum of Rs.1000/- (one thousand only) per day as and for liquidated and ascertained damages for each and every day during which the said lands or property are so used and occupied as aforesaid from the time such notice has been given.

30. RESPONSIBILITY FOR ACCIDENTS, DAMAGES ETC.

The care of the whole of the permanent works shall remain with the contractor who shall be responsible for all accidents or damages from whatever cause arising and chargeable for any thing that may be stolen, removed destroyed or damaged to whomsoever belonging and also for making good all defects and damages to the said works or to any property adjoining or any cause whatever whether such damage or defects were occasioned by the negligence of the contractor or not or may be or might have been discovered during the progress of the works or in consequences thereof, or shall appear to be known after the completion whereof or whether payment may wholly or partially have been made or the works approved as supposed to have been properly done and no certificate of approval of any works by any officers or members of the Municipality shall affect or prejudice the right of the Municipality against the contractor or be considered or held as at all conclusive as to the sufficiency of any works or materials.

31. SUSPENSION OF PROGRESS

The contractor shall without recompense claim or demand, delay or suspend the operation of the works or any part thereof, if and when and so often as required by the Engineer and for such time or times as may in the judgment of the Engineer be necessary for the purposes or advantages of the undertaking and shall whenever directed by the Engineer and upon all needful occasions whether directed or not at the contractor's expense properly cover down and secure so much of the works as may be liable to sustain damage from weather or any other cause and shall at all times and forthwith when required properly make good to the satisfaction of the Engineer all damages or injury which such works or any part thereof may have sustained.

32. RECOVERY ETC, OF MONEY PAYABLE TO ALANDUR MUNICIPALITY

All losses, costs damages and expenses and other money payable to the Municipality by the contractor under any stipulation in this contract, may be retained out of any money then due or which may subsequently become due from the Municipality to the contractor under this or any other contract or otherwise howsoever and in case such money then due or to become due to the contractor by the Municipality shall be insufficient to pay such losses cost, damages and other money payable to the Municipality by the contractor it shall be lawful for the Commissioner without any further consent on the part of the contractor to sell and dispose of any or all of the Govt. promissory notes or securities deposited with the Municipality 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 Municipality all such losses costs, damages and expenses and other money payable to the Municipality by the contractor and in case such proceeds of sale of the said Govt. Promissory notes or securities shall be insufficient for such purpose then and in that case, shall be lawful for the Municipality to recover the residual thereof, if necessary by legal proceedings against the contractor.

33. MUNICIPALITY MAY TERMINATE THE CONTRACT IN CASE IF INSOLVENCY OR WANT OF DUE DILIGENCE

Should the contractor during the continuance of the contract die or become bankrupt or insolvent or go into liquidation or should he suspend payment or compound with his creditors or from any other cause whatever become unable or fail to carry on the contract with efficiency or should he not progress with any portion of the work assigned to him in the program given by the Engineer from time to time in the manner intended by the contract or not have work ready for delivery in conformity with the terms of the contract or should his preparation for commencement and his subsequent rate of progress be slow from any cause whatever that in the opinion of the Engineer or his representative he shall be unable to complete the work by the expiration of the specified period or should he refuse or neglect to comply with the directions given to him by the Engineer, or his representative or in any other respect act contrary to the terms of the contract, the Municipality shall have power to declare the contract at an end in which case the contractor shall only be paid for such portion of the work as shall have been actually delivered in serviceable condition at the date of such declaration after due deduction of any sum that may be leviable under this contract. The contractor shall in addition be liable to pay to the Municipality or the Municipality at their option shall be entitled to further deduct the amount of all losses, damages or expenses (including any excess difference between the contract price of the work to be done under this contract or such portions thereof as may not have been delivered at the date of such declaration as aforesaid and the price which the Municipality may have to pay for the similar work provided in lieu of such portion as may not have been so delivered) which the Municipality may be put to or sustain by reason of or in consequence of the contractor's breach of contract. The above liability shall be in addition to forfeiture of the retention money and the security deposit specified in clause 35 and 38 hereunder.

34. MEASUREMENT OF WORK:

The work will be measured by the Engineer in charge or his authorized representative Engineer. The contractor will be at liberty to accompany them in order that they may agree on the measurements but should he neglect to do so, the measurements as recorded by the said officers shall be taken as final and conclusive.

35. CERTIFICATES

So long as he is satisfied with the works and with the manner in which they are being carried out, the Engineer shall subject to the provisions herein contained, certify each month payments on account based on the actual work executed by the contractor calculated according to the prices in the schedule hereto attached and measured in accordance with the provision contained herein and final certificate will be made out from such returns and measurements. No certificate will be issued except for work which has been completely finished.

36. PAYMENTS & RETENTION

Payments will be made by the Municipality to the extent of 95 percent of the value of the finished work done by the contractor on bills to be prepared and submitted by him for the work done for every month and that said bills are certified for and passed for payment by the Engineer or by any person appointed by the Municipality for this purposes subject nevertheless to any fines deduction cost or charge on the contractor to be made there from as provided for herein, The balance of 5 % of such bills will be retained in the hands of the Municipality without interest and this amount together with the security deposit paid by the contractor for the due fulfillment of this contract will be forfeited to the Municipality wholly or in part at the discretion of the Engineer if in his option the contractor fails to comply with the contract requirements.

The retention money 5% of the total value of works executed by the contractor less deduction if any will be paid to the contractor along with final bill.

No advance payment is payable on any account

37. LIMITATION OF CERTIFICATES

No certificates made by the Engineer or other person appointed as aforesaid upon any bill submitted by the contractor be taken or deemed as certifying that the contractor has duly executed his contract or any portion thereof and no certificate thereof given by the contractor shall relieve the contractor of any obligation he would have been under, in the absence of such certificate, but the certificate given by the Engineer or other officer aforesaid shall be deemed to mean no more than that at the time such certificate is given, the Engineer or other officer aforesaid believed that the contractor had done work other than temporary works, in respect of which the Municipality might pay the sum stated in such certificate. No payment or certificate shall protect or be deemed to protect the contractor in case over payment or in case it shall at any time appear that the works or any part of them have not been executed in accordance with this contract.

38. FINAL CERTIFICATE

When the works of this contract are completed, the contractor, shall submit a demand that the Engineer shall make a final measurement and verification of the works and take over the whole of the works on behalf of the Municipality and issue a final certificate to enable him to submit a final bill for payment. The Engineer shall thereupon, unless he shows reasons in writing to the contrary make a final measurement of the works and take them over on behalf of the Municipality and sign a certificate purporting to be a final certificate.

39. PAYMENT OUT OF PUBLIC FUNDS

The payment to the contractor shall be made out of the funds under the control of the Municipality in their public capacity and no member or officer of the Municipality shall be personally responsible to the contractor.

40. REPAYMENT OF SECURITY DEPOSIT

After the expiry of 2 months from the date of completion of works and grant of final certificate referred to in clause 38 the Municipality shall repay to the contractor the security deposit detailed in the preamble hereto or the remainder of the proceeds of such sums after the Municipality has deducted any sums due to the Municipality and recoverable from the said security in accordance with the terms of the contract or withheld as security for any portions of works repaired during this period.

41. SUBLETTING, TRANSFERRING, OR ASSIGNING CONTRACT

The contractor shall not sublet the whole of the works, except where otherwise provided by the contract, the contractor shall not sublet any part of the works without the written consent of the Engineer and such consent if given shall not relieve the contractor from any liability or obligation under the contract and he shall be responsible for the act, defaults and neglects of any sub contractor his agents servants or workmen as fully as if they were the acts defaults of neglects of the contractor his agents servants or workmen provided always that the provision of labour on a piece work basis shall not be deemed to be a subletting under this cause.

42. MUNICIPALITY TO HAVE POWER TO DEFEND OR COMPROMISE ACTION

The Municipality shall have full power in their absolute discretion to defend or compromise any action, suit or other proceeding brought against them by reason or arising out of the execution of the works or in connection there with without prejudice to the obligations of the contractor under this contract to indemnify the Municipality against such action or proceeding and the contractor shall be liable to repay to the Municipality any sums paid by them in any such action, suit or proceeding or in actions pursuant of any such compromise.

43. PROTECTION AGAINST CLAIMS FOR THE USE OF PATENTS

All fees for any patented invention, articles or arrangement, that may be used upon or in any manner connected with the maintenance of the works or any part thereof embraced in these specifications shall be included in the price mentioned in the bills of quantities and the contractor shall protect and hold harmless the Municipality against any and all demand for such fees or claims and before the final payment and settlement is made on account of this contract; the contractor, if required must furnish acceptable proof or a proper and satisfactory release from all such claims.

44. SERVICE OF NOTICE

For the purpose of this contract, any notice to contractor from the Engineer shall be deemed to be served upon the contractor if it be addressed to him or in which he signs the tender and be handed over to him or in the case of a firm to any member of the firm personally or in the case of a company to the secretary personally or left at his usual place of business or posted to him by a prepaid registered letter properly addressed to the name and address given in his letter of tender or such other address as the contractor may notify in writing to the Engineer for this purpose.

45. ARBITRATION

- a) In case any question, difference or dispute shall arise on matters (except any of the "excluded matters" mentioned in clause No.20) 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 presents, the same shall in cases where the total value of claims under the contract is less than and upto Rs.50,000 /- be referred to the interpretation, decision and award of an Engineer of the Alandur Municipality to be nominated by

the Commissioner of Alandur Municipality as the sole Adjudicator whose decision shall be final and binding on the parties.

- b) In case where the value of claims is more than RS. 50,000/- the parties will seek remedy through the provisions of the Arbitration Act Provided always that the contractor shall not except with the consent in writing of the Engineer, in any way delay carrying out works by reason of any such matter, question or disputes being referred to arbitration, but shall proceed with the work with all due diligence and shall until the decision of the arbitrator be given abide by the decision of the Engineer
- c) “The liability of the contractor to the Municipality arising out of them clause 13-A herein shall not be the subject matter of Arbitration”.

46. JURISDICTION

All disputes under the contract shall be subject to Court in Chennai Jurisdiction only.

47. CONTRACT LABOUR WELFARE

- i) 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 Alandur Municipality 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 any deficiency on safety measures to be adhered as stipulated in Annexure-V. A photocopy of the insurance under Workmen’s Compensation Policy should be furnished to the Municipality. The policies should be kept alive till the completion of the contract period.
- ii) The Contractor shall produce fitness certificate from any Authorized Medical Attendant (AMA) of Government Hospital for all the Technical staff and Labour staff to be employed.

48. SAFETY EQUIPMENTS & LOOSE TOOLS

The Contractor will be responsible to make available the safety equipment and loose tools as listed in the Annexure-VI. If the Contractor fails to keep the safety equipment and loose tools and consumable items as listed in Annexure, the above will be procured by the Municipality and the cost will be deducted immediately from the bill payable to the Contractor with a penalty of Rs. 2,000/-.

1.1 Alandur Municipality

Alandur, an important and large urban center in Tambaram Taluk in Kancheepuram District, is part of Chennai Metropolitan Area (CMA) and is situated on the southern peripheral of Chennai City at a distance of around 14 km. This Town is the southern gateway to the Chennai city on the Great Southern Trunk (GST) Road/National Highway 45. The town is well connected with road network system, round the clock suburban trains, and bus facilities. Airport is close-by. Proximity of multiple types of transport facilities has resulted in the Municipal area being a hub for transit passengers apart from preserving its culture as an old city.

Alandur Municipality was constituted as a III Grade Municipality on 1.4.1964 and subsequently upgraded to Second grade Municipality and then to First Grade Municipality. Alandur Municipality was elevated as Selection Grade Municipality with effect from 7.3.1983, by combining the following areas: Alandur, Adambakkam, Nanganallur, Palavanthangal, Thalakanancheri and a part of Velachery. The Municipality is divided into 42 wards. The population as per 2001 census is 1.46 lakhs.

Alandur Town is located at 13° 20' North latitude and 18° 30' East longitude and in relatively flat terrain with a gradual slope towards southeast of the town. The topography varies from 9m to 14m towards the northern side of the suburban railway line and 3m to 15m towards the southern side of the railway track.

The soil of the town falls under three major types viz, Red Clay and Clayey Loam with Laterite sub-soil. The predominant soil in the town is red or black soil. This extends to a depth of 0.30m to 1.0m, the sub-soil which is porous in nature, extends from 3 to 4m. The ground water table varies from 3.0m to 9.0m as maximum during summer while during monsoon season i.e., from November to January, the depth of ground water table improves and extends to 1.5m to 2.0m. Infiltration of ground water in the sewerage system during certain parts of the year has to be recognized.

The climate of the town is temperate as a whole except during the hot months of March to June. The mean annual average temperature is about 30°C while the relative humidity reaches up to 90 percent during monsoons. The region receives maximum rainfall from Northeast Monsoon from October to December and the Southwest Monsoon between July to August brings some rains. The annual rainfall is about 1300mm.

1.2 Organization Setup

The organizational setup of the Municipality comprises of a Political Wing and an Executive Wing. The Political Wing is an elected body of Councilors from different wards in the town, headed by the Chairperson. The Municipal Council, the political arm of the Municipality consists of 42 elected councilors, each representing a ward. The Executive Wing, is headed by the Commissioner who has overall responsibility for all the services of the Municipality including long range planning.

2. Under Ground Sewerage System (UGSS)

The sewerage project for Alandur Municipality was executed under Public Private Partnership (PPP) format and commissioned during the year 2003. This was the first sewerage project in India under PPP format. The Sewage treatment plant was constructed under BOOT basis as a Lump Sum contract with a concession period of 14 years. The STP is being operated and maintained by the BOOT Contractor since 2003. The sewer collection system including pumping station and the pumping mains were constructed under item rate contract and is now being maintained by the Municipality.

Salient features of the project are given below:

Population (2001 Census) : 1.46 lakh Ultimate Stage to be reached in
 2030 : 3.00 lakh Area of the Municipality : 19.5 Sq.km
 Total Wards : 42 nos Per Capita Sewerage Contribution
 : 80 lpcd Designed capacity of the system : 24 mld

Collection system

Total length is 130 km of Stoneware and RCC pipes comprising of the following:

- House Sewer connection - S W Pipe, 100/150mm diameter, 18000No.
- Branch sewers - S W Pipe, 150/300 mm diameter, 111km
- Main sewers - RCC Pipe, 350/1100 mm diameter, 19km
- No. of Manholes - around 5000 No
- Depth of manholes ranges from 1.5m to 7.0m

Pumping Station and Pumping Mains

There are two pumping stations, one main pumping station discharging the sewage to the sewage treatment plant and one lift pumping station for a local low lying area. The details of pumping systems are given below:

a) Main Pumping station (HT SUPPLY)

Sl.No	Description	Details
1	Screen Chamber	With 2 screens depth 5.77m
2	Grit Chamber	3.50x3.50x6.27m
3	Collection well	Circular Well of depth 10.20m
4	Pumps (Centrifugal pumps erected with extended shaft) Submersible pump	50 HP, 100 lps x 17 m – 2 No 100 HP, 200 lps x 17 m – 2 No 150 HP, 300 lps x 17 m – 1 No. 40 HP, 31 lps x 20m – 1 No.
5	DG Set	320 KVA Capacity
6	Other electrical Installations	320 KVA, 11 KV/433V Transformers 2No. ; LT panel, MCC panel, etc
7	Pumping main	800 mm dia RCC pipes- 5445 m length.

b) Lift Pumping station (LT Supply)

Sl.No	Description	Details
1	Screen Chamber	1 No
2	Collection well	1 No
3	Pumps	10 HP Submersible Pumps – 2 No
4	Other electrical	MCC panel

The Operator to be identified under the proposed bid is for the Collection System, pumping stations and pumping main only.

Sewage Treatment Plant (this is outside the scope of this bid)

The capacity of STP required for the ultimate stage is 24 MLD. It was proposed to construct two of 12 MLD each. One unit of 12 MLD has already been constructed. The second unit will be constructed at a later stage. The process for sewage treatment is Activated extended aeration process. STP is not included under this proposed O&M Contract.

House Service Connections

As on date there are about 18000 No of House Service Connections. It is estimated that the number of connections will increase to around 30000 in the next 2 or 3 years.

SCOPE OF WORK

1. Requirements for efficient O&M (UGSS)

The bidder to be identified under this bid for maintenance of the sewer system with its components is responsible for routine and preventive maintenance of the system with optimum use of labour, equipment and materials to keep the system in good condition, so that it can function efficiently for collection and transportation of waste water/ sewage to the treatment plant.

Sewers marked on a plan are to be divided into Sections and Areas, which are to be placed under a maintenance gang. As per CPHEEO Manual on Sewerage and Sewage treatment, the maintenance gang preferably consists of a supervisor / Superintendent with at least 6 skilled sewer worker. The area under each gang will depend on the size of the sewer, length, depth at which it is laid, the spacing of manholes, the condition of sewer line (whether surcharged or not) etc. In case, house gully traps are to be maintained, special gang of one or two persons who will clean these traps regularly in a phased or planned manner is necessary.

2. Important issues to be taken in to consideration

The High Court of Madras in its judgment on 13-10-2008 has directed Chennai Metropolitan Water Supply and Sewerage Board that “for the purpose of cleaning the blocks in the sewerage and drainage lines, no human being should be allowed to get inside the drainage/sewerage lines and if any drain is choked, it is the responsibility of the authorities to get it cleared by employing mechanical devices. This Court makes it clear that any violation of this direction will be viewed very seriously.”

The High Court further in its order dated 20-11-2008 has directed that “ In order to put an end to these menace for once for all, we wish to pass orders for strict compliance by Chennai Metropolitan Water Supply and Sewerage Board as well as second respondent herein namely, the Secretary to Government, Municipal Administration & Water Supply Department, Chennai to ensure that manual scavenging is totally prohibited in the State and that no case of such unwarranted deaths takes place by permitting the gullible employees to enter the drainage system in the Metropolitan Cities and cleaning of septic tank in other places.

Obstructions or blocks in the house sewer and main sewers are to be removed by Rodding equipments and jet Rodding machines. For removal of silt, the normal methods adopted for de-silting are a) Ball passing method b) Grab Bucket machines c) Drag bucket machines and d) Hydraulically operated De-silting machines. The suitability of the equipments have to be decided taking into account the site conditions like maneuverability of the equipments, sewer flow, availability of water for Jetting.

3. O&M Activities.

The following are the activities required for effective operation and maintenance of the UGSS.

(i) For the sewer system

- a. Removal of house sewer obstruction by cleaning the terminal chamber at the boundary of the property.
- b. Removal of blocks in the branch sewers and main sewers.
- c. Periodical de-silting of the sewer mains and the manholes.
- d. Flushing of the sewer mains for free flow after removal of blocks and de-silting.
- e. Raising and lowering of the manholes whenever roads are re-laid and repairs carried out and during breakages of the manholes by heavy vehicles. Also the buried man holes are to be detected and raised to the road surface level.
- f. Attending repairs in the leaky/ broken sewer pipe line in the house service connections and the collection system.

(ii) For the Pumping stations

- g. Operating the sewage pumping stations and the DG set.
- h. Preventive and periodical maintenance of the pump sets & electrical installations and DG set.
- i. De-sludge the wet well/ collection well and suction well in the pumping station.
- j. Maintenance of the pumping main by attending leaks, bursts and appurtenances.
- k. To carry out all repairs in the Transformers, pump sets, electrical installations and the DG set

All the O&M activities are to be attended by Contractor/O&M Operator in co-ordination with the Municipal Officials and the Ward councilors based on the public complaints received directly or through Officials and Public representatives and proper feed back has to be given to them, being the public complaint redressal activity.

The following are the types of equipments which may be required to cover the scope of work:

1. Sewer cleaning rods
2. Manual operated De-silt Grab Bucket
3. Hydraulically operated De-silt Machine
4. Jet Roding cum suction Machine
5. Safety equipments

The Municipality will provide Hydraulically operated De-silt Machine and Jet Roding cum suction Machine for which hire charges are to be paid by the Operator. The other equipments have to be procured by the operator. The water required for flushing has to be arranged by the Contractor.

The following are the over all staff requirements. for the O&M activities

- | | | |
|---|---|----|
| 1. Maintenance Engineer (BE;Civil/Mechanical) | : | 2 |
| 2. Sewer Superintendent 10 th passed | : | 7 |
| 3. ITI Certificate holder (Electrical) | : | 7 |
| 4. Field workers / sewer workers | : | 48 |

SECTION IV: PRICE SCHEDULE

PRICE SCHEDULE

Note:

1. Mandatory duties of the contractor specified in the schedule have to be carried out in full
2. The tenderer should quote the rates both in words and figures. In cases of discrepancy between the rates quoted in words and in figures, lower of the two shall be considered for evaluation. If there is a discrepancy between the amount quoted for an item and the line item total resulting from multiplying the unit rate by the quantity, the unit rate as quoted will govern.
3. The contractors are required to operate and maintain the sewage pumping stations continuously during the rainy seasons by providing additional shifts at no extra cost.
4. The rate quoted by the bidder is inclusive of provision towards Uniform and Stitching charges for two sets of shirt and pants for each employee (full pant for Maintenance Engineers, operators, sewer superintendents and half pants for field workers), and gingili oil for Sewer workers at one liter per month, soap for all staff at two soaps per person per month and Consumables like cotton waste, oil, grease, packing rope, etc.
5. It is the responsibility of the Contractor to make necessary provision towards the welfare measures as directed by statutory authorities and as prescribed by the applicable acts and rules for Contract Labourers
6. The Contractor having ESI, EPF Code Nos. should remit the contributions by themselves, the payment towards ESI & EPF for the employees, employers' contributions in his/their code numbers and copy of the remittance challans should be produced. If the contractor fails to remit, he/they should inform wage rates of employees to the principal employer and authorize the Municipality to make deductions from the payment of bills. The contribution / premium / tax etc. to any other statutory authorities, the contractor has to remit them directly after registering with the respective department.
7. If there are any changes in the prevailing tax component, increase in taxes will be borne by the Municipality and any decrease will be deducted from the contractors' payment.
8. The Contractor has to make available the Safety equipments and loose tools/equipments as per Annexure VI.
9. The rate quoted by the bidder should be inclusive of ESI as per labour Act 1948, Employee contribution of the wages to be recovered from the staff salary, EPF at matching contribution of the employee's wages be payable towards EPF a/c both by the Employer/Contractor and Employee and Service Tax and all other applicable taxes etc. all at applicable rates as per statutory provisions
10. Payment will be made on monthly basis as per the agreed price / rate and amount subject to deductions if any as per the agreed terms and conditions.

PRICE SCHEDULE

Schedule A

Operation and Maintenance Cost for three year Operation

S.No	Description of Work	Quantity and unit	Rate in Rs.	per	Total Amount (Rs.) in figures & words

I	Fixed Cost				
1	Towards Manpower Cost	36 months		month	
2	Office Rent	36 months		month	
3	Computer & Stationary/communication	36 months		month	
4	Supply of Sewer cleaning rods	350 No.		each	
5	For providing and using Manually operated de-silt grab bucket	50 No.		each	
6	Supply of FRC doors with frame 600 mm dia for replacement of damaged Man Hole covers	30 No.		each	
7	Supply of traffic regulation equipments Each set consists of cones-5no, caution board 3ftx4ft-2no, reflector tape-100m, casurina poles for barrigading.	16sets		set	
	Sub -Total of I				
II	Variable Cost as per actual				
1	Raising or lowering of manholes	3500 No.		each	
2	Towards charges for operation and maintenance of jet rodding cum suction machine**	720 days		day	
3	Towards charges for operation and maintenance of hydraulically operated desilting machine mounted on three wheels**	720 days		day	
	Sub-Total of II				
III	Lump sum amount for Safety equipments, Loose Tools and				

other equipments				
Grand Total (I+II+III)				

* Rate for raising and lowering of Manholes as and when required will be paid as per the actual at the rate specified in the above Table

** Operation of Jet rodding machine and hydraulically operated de-silting machine is assumed as 20 days per month and 240 days in a year and the rate per day shall be minimum of 8 hour operation. Any additional hours of operation in a day will paid extra at the proportionate rate on pro -rata basis

Signature of the Contractor

Name & Address Seal

PRICE SCHEDULE FOR REPAIRS AND REPLACEMENT OF SPARES

Note : The Rates Quoted and agreed as per the following schedule B to L will be applicable during the O&M contract period as per the actual work done in repairs and replacement of spares and as approved by the Municipal Engineer or his authorized representative.

Schedule B

List of Minor Repairs in HT / LT Pumping Stations

S.No.	Description of Work [Including Salvage Value]	per	Rate in Rupees (figures & words)
	HT installations	unit	
1.	Replacement of H.G. fuses	each	
2.	Replacement of Lightning arrester	each	
3.	Replacement of jumpers	each	
4.	Replacement of insulator (porcelain)	each	
5.	Replacement of A-B switch	each	
	HT & LT Pumping stations		
1.	Replacement of no-volt coil for ACB and OCB	each	
2.	Replacement of jumper with socket inside the panel	each	
3.	Replacement of cable lugs including terminations	each	
4.	Replacement of burnt out HRC fuses	each	
5.	Replacement of moving and fixed contacts or contactors	each	
6.	Replacement of coupling bolt & nuts including rubber bushes	set	
7.	Replacement of worn-out impellor nut	set	
8.	Replacement of spindle nut in the sluice valve	each	
9.	Replacement of terminal plate in the motor	each	
10.	Replacement of carbon brushes and brush holder	set	
11.	Replacement of bulb, choke, starter, etc	each	
12.	Replacement of defective capacitor and allied works for P.F improvement	each	

D.G Set			
1.	Replacement of burnt-out spares in the battery charger	set	
2.	Rewinding of self starter	each	
Lighting Equipments			
1.	Replacement of 40W tube light bulbs	each	
2.	Replacement of choke for tube light	each	
3.	Replacement of 70 W sodium vapor lamp	each	
4.	Replacement of 250 W sodium vapor lamp	each	
5.	Replacement of 70W M.V. lamp	each	
6.	Replacement of 250W M.V. lamp	each	
7.	Replacement of 500W halogen lamp	each	
8.	Replacement of 1000W halogen lamp	each	
9.	Replacement of Igniter for SV & MV lamp	each	
10.	Replacement of choke for SV & MV lamp	each	
11.	Replacement of 6 AMPS MCB	each	
12.	Replacement of 16 AMPS MCB	each	
13.	Replacement of 32 AMPS MCB	each	
14.	Replacement of 16 AMPS DP	each	
15.	Replacement of 32 AMPS DP	each	
16.	Replacement of MCB Isolator TPN-32 AMPS	each	
17.	Replacement of MCB Isolator TPN-63 AMPS	each	
18.	Replacement of MCB Isolator TPN-100 AMPS	each	

Schedule C
List of repairs to submersible pump set

S.No.	Description of Work [Including Salvage Value]	per unit	Rate in Rupees (figures & words)	
			10HP	40HP
1.	Rewinding of stator coil	Each		
2.	Replacement of Mechanical Seal [top]	Set		
3.	Replacement of Mechanical Seal [bottom]	Set		
4.	Replacement of bearings	Set		
5.	Replacement of GI/SS. Fasteners	Set		
6.	Replacement of coolant oil	Liter		
7.	Replacement of Terminal block	Set		
8.	Replacement of cable (submersible weather proof)	Meter		
9.	Replacement of "O" Rings	Set		
10.	Replacement of SS Shaft with safety rings	Set		
11.	Replacement of Impeller [SS]	Each		
12.	Replacement of Impeller Nut[SS]	Each		
13.	Replacement of pump shell	Each		
14.	Replacement of lifting chain	Set		
15.	Replacement of spiral bottom plate	Each		
16.	Re-fixing, testing and commissioning on load	Each		
17.	Replacement of Auto Coupler	Set		
18.	Replacement of profile gasket	Each		
19.	Replacement of 1 bolt [water pump]	Each		
20.	Replacement of SS Bush [water pump]	Each		
21.	Replacement of GM Bush [water pump]	Each		
22.	Replacement of Thrust bearing [water pump]	Each		
23.	Replacement of non return valve [water pump]	Each		
24.	Replacement of guide pipe with clamp & hook	Meter		
25.	Isolation of well & dewatering well with safety measure	Each		
26.	Dynamic balancing of shaft with impeller	job		

Schedule D

List of Repairs in Control panel for submersible pump sets

S.No.	Description of Work [Including Salvage Value]	per unit	Rate in Rupees (figures & words)	
			10 HP	40 HP
1.	Replacement of fuse unit-HRC	Each		
2.	Replacement of fuse links	Each		
3.	Replacement of pilot lamp indicator with holder	Each		
4.	Replacement of Fuse button with kit	Each		
5.	Replacement of volt meter	Each		
6.	Replacement of ammeter	Each		
7.	Replacement of hour meter	Each		
8.	Replacement of volt meter selector switch	Each		
9.	Replacement of ammeter selector switch	Each		
10.	Replacement of single pole 2 way switch	Each		
11.	Replacement of contractor	Each		
12.	Replacement of over load relay	Each		
13.	Replacement of timer [6-60 sec] Electronic	Each		
14.	Replacement of no volt coil	Each		
15.	Replacement of MCB/ISOLATOR SWITCH	Set		
16.	Replacement of Current Transformer	Each		
17.	Rewriting the power and control cable	Set		
18.	Replacement of pump guard with seal monitor	Each		
19.	Replacement of single phase preventor with phase preventor	Each		

Schedule E

List of Repairs to motors for centrifugal pumps

S.No.	Description of Work [Including Salvage Value]	per unit	Rate in Rupees (figures & words)		
			50 HP	100 HP	150 HP
1.	Rewinding of Stator [1450 rpm]	Each			
2.	Rewinding of Stator [960 rpm]	Each			
3.	Rewinding of rotor [1450 rpm]	Each			
4.	Improving the insulation value by varnishing & heating	Each			
5.	Replacement of bearings [NBC/SKF/ATN/EG]	Each			
6.	Replacement of bearing end covers	Each			
7.	Replacement of terminal plate	Each			
8.	Replacement of fan/fan blade	Each			
9.	Termination of cable from motor insulation wire	Each			
10.	Transport charges	Job			
11.	Reconditioning of motor shaft true to axis	Each			
12.	Reconditioning of motor shaft by metalising & turning	Each			
13.	Reconditioning of bearing end covers by metalising and providing sleeve	Each			
14.	Dismantling, re-fixing, painting, aligning & testing on load	Each			
15.	Slip-ring assembly	Each			
16.	Brush Holders	Each			
17.	Carbon Brush	Each			
18.	End shield	Each			

Schedule F

List of Repairs to centrifugal pumps

S.No.	Description of Work [Including Salvage Value]	per unit	Rate in Rupees (figures & words)		
			50 HP	100 HP	150 HP
1.	Replacement of shaft in S.S.	unit			
2.	Replacement of shaft in EN 8	Each			
3.	Reconditioning of shaft by metalising true to axis	Each			
4.	Replacement of shaft sleeve in SS	Each			
5.	Providing new key ways, key	Each			
6.	Replacement of coupling pulley	Set			
7.	Replacement of coupling tyre/star coupling bush	Set			
8.	Replacement of coupling bolts, nuts & rubber bushes	Set			
9.	Reconditioning of impeller by metalising, turning & dynamic balancing	Each			
10.	Providing impeller nut in SS	Each			
11.	Providing new taps & new studs	Each			
12.	Replacement of studs	Each			
13.	Replacement of pump gland in MS	Set			
14.	Replacement of pump gland in GM	Set			
15.	Replacement of ball/Roller bearing No.SKF/Eq.	Each			
16.	Replacement of thrust bearing no.SKF/Eq. Make	Each			
17.	Reconditioning of pump shell by metalising & turning	Each			
18.	Reconditioning of suction flair by metalising & turning	Each			
19.	Providing new tape for priming line & with gate valve [1" valve]	Each			

20.	Replacement of inspection door [MS]	Each			
21.	Transport Charges	Each			
22.	Reconditioning of base plate, providing base bolts including welding and Civil Works	Each			
23.	Reconditioning of pump shell by metalising & turning	Each			
24.	Providing Engine Oil & Greese	Each			
25.	Replacement of oil seal	Each			
26.	Dismantling, refixing, aligning, testing & commissioning	Set			
27.	Reconditioning of bearing Housing	No.			
28.	Replacement of suction cover/chief joint	Each			
29.	Replacement of aluminium/CI	Each			
30.	Providing Dummy Plate with Rubber insertion and bolts and nuts	Each			

Schedule G

List of Repairs to starters & switches

S.No	Description of Work [Including Salvage Value]	per	Rate in Rupees (figures & words)		
			50 HP	100 HP	150 HP
	I. STARTERS	unit			
1.	Replacement of fixed contacts	Each			
2.	Replacement of moving contacts	Each			
3.	Replacement of auxiliary contacts	Each			
4.	Replacement of V bar contacts	Each			
5.	Replacement of overload relay	Each			
6.	Replacement of timer	Each			
7.	Replacement of No volt coil	Each			
8.	Replacement of Ammeter	Each			
9.	Replacement of Voltmeter	Each			
10.	Replacement of single phase preventer with phase reversal	Each			
11.	Replacement of push button kit	Each			
12.	Replacement of transformer oil	Liter			
13.	Replacement of Operation Mechanism	Set			
14.	Replacement of Hylam Sheets	Each			
15.	Replacement of Hylam bars with bolts and nuts	Each			
16.	Rewinding of auto transformer coil	Set			
17.	Replacement of starter	Each			
18.	Replacement of current transformer	Each			
19.	Replacement of contactor	Each			
20.	Rewiring [Internal]	Set			
	II. SWITCHES				
1.	Replacement of moving contacts	Each			

2.	Replacement of fixed contacts	Each			
3.	Replacement of fuse carriers sets	Each			
4.	Replacement of HRC fuse base & carriers	Each			
5.	Replacement of switch	Each			
6.	Replacement of double breake switch	Each			
7.	Replacement of hylum sheets	Each			
8.	Providing link with LT Panel including necessary insulation	Each			
9.	Replacement of capacitor	KVAR			
10.	Replacement of cubical type switch	Each			
11.	Replacement of HRC fuse only	Each			
12.	Replacement of isolator	Each			
13.	Replacement of isolator bridges	Each			
14.	Provision of angle iron frame including civil works	each			

Schedule H

List of Repairs in Oil Circuit Breaker & Air Circuit Breaker

S.No.	Description of Work [Including Salvage Value]	per unit	Rate in Rupees (figures & words)
	HT installations		
1.	Replacement of fixed and moving contacts	Each	
2.	Replacement of operating mechanism set	Each	
3.	Replacement of tripping mechanism set	Each	
4.	Replacement of no-volt coil	Each	
5.	Replacement of Hylem plate	Each	
6.	Replacement of dash pot oil	Each	
7.	Replacement of moving contact for draw-out OCB	Set	
8.	Replacement of fixed contact for draw-out OCB	Set	
9.	Replacement of transformer oil	Liter	
10.	Dismantling, assembling and testing at site	Set	
	Air Circuit Breaker		
1.	Replacement of fixed contacts	Each	
2.	Replacement of moving contacts	Each	
3.	Replacement of no-volt coil	Each	
4.	Replacement of Hylem plate	Each	
5.	Replacement of fuse unit	Each	
6.	Rewiring of control unit	Each	
7.	Replacement of charging motor	Each	
8.	Replacement of arcing contact	Each	
9.	Replacement of arcing choke	Each	
10.	Replacement of shutter assembly	Each	
11.	Dismantling, assembling & testing on load	Each	

Schedule I

List of Repairs in Transformer (320 KVA), H.T Structure and Capacitors

S.No.	Description of Work [Including Salvage Value]	per unit	Rate in Rupees (figures & words)
		unit	
1.	Transformer oil filtration	liter	
2.	Replacement of Tap changing mechanism	each	
3.	Replacement of Air breather and silica gel	each	
4.	Replacement of dial thermometer	each	
5.	Replacement of Terminal bush (HT)	each	
6.	Replacement of earth plates	Kg	
7.	Spray painting to the transformer	job	
	HT Pole Structure	each	
1.	Servicing AB switch	each	
2.	Replacement of dropout fuses	each	
3.	Replacement of lightning arrester	each	
4.	Replacement of pin insulator	each	
5.	Replacement of Horn-Gap unit	each	
6.	Painting of pole structures (2 pole)	each	
7.	Painting of pole structures (4 pole)	each	
8.	Replacement of Aluminum bus bar	each	
9.	Replacement of dividing box and termination	each	
10.	Replacement of heat skin kit	each	
11.	Replacement of knife of AB Switch	Set/phase	
12.	HT end termination including compound	each	
	<u>Capacitors</u>		
1.	Replacement of capacitor	KVAR	
2.	Repairs to terminal of capacitor	each	

Schedule J

List of Repairs in the DG Sets

S.No.	Description of Work [Including Salvage Value]	per	Rate in Rupees (figures & words)
	A.ALTERNATOR	unit	320KVA
1.	Rewinding of alternator-Stator	Each	
2.	Rewinding of alternator-rotor	Each	
3.	Improving the I.R.Value by vanishing and heating etc.	Job	
4.	Replacement of terminal plate	Each	
5.	Replacement of terminal studs and legs	Each	
6.	Replacement of carbon brushes	Each	
7.	Replacement of brush holder	Each	
8.	Replacement of AVR	Each	
9.	Dismantling, refixing, painting, transporting, aligning and testing etc.	Job	
10.	Replacement of bearings	Each	
11.	Replacement of rectifier unit	Each	
12.	Rewiring of control panel of Alternator	Each	
13.	Replacement of commutator assembly	Set	
	B.ENGINE		
1.	Replacement of Radiator	Each	
2.	Repairs to radiator by welding providing metal paste etc.	Each	
3.	Replacement of fan belt	Set	
4.	Replacement of fuel Circulator hose	Set	
5.	Replacement of water circulation hose with clamp	Set	
6.	Replacement of air filter	Each	

7.	Replacement of oil filter	Each	
8.	Servicing of the self motor	Each	
9.	Repairs to self motor control circuit wiring	Each	
10	Replacement of engine oil	Liter	
11.	Replacement of nozzle	Each	
12.	Replacement of speedometer cable	Each	
13.	Replacement of oil cooler	Each	
14.	Servicing of turbo charger	Each	
15.	Service of Engine with gasket	set	
16.	Replacement of fuel filter	Each	
17.	Replacement of Silencer pipe	Meter	
18.	Replacement of Asbestos rope	Meter	
19.	Replacement of muffler	Each	
20.	Calibration of fuel pump	Each	
21.	Replacement of Battery with Terminals & cable	Set	
22.	Replacement of pressure gauge	each	
23.	Replacement of coupling unit	Set	
24.	Replacement of coupling guard	Each	
25.	Replacement of Anti vibration mounting	Each	
26.	Servicing of battery		
	C. GENERATOR CONTROL PANEL	Each	
1.	Replacement of MCB Control	Each	
2.	Replacement of frequency meter	Each	
3.	Replacement of energy meter	Each	
4.	Replacement of hour meter	Each	
5.	Replacement of change over switch	Each	
6.	Rewiring of control panel	Each	

Schedule K

List of Repairs in valves

S.No	Description of Work [Including Salvage Value]	per unit	Rate in Rupees (figures & words)		
			100mm to 250mm	300mm to 450mm	600mm to 750mm
	I. Sluice Valves				
1.	Replacement of spindle rod (SS)	Each			
2.	Replacement of spindle rod nut (GM)	Each			
3.	Rethreading, machining the existing shaft MS/SS	Each			
4.	Replacement of Bolts & Nuts 9MS) with rubber	Set			
5.	Dismantling and re-fixing etc	Each			
6.	Replacement of gland with studs	Each			
7.	Rewinding of actuator unit	Each			
8.	Replacement of gear unit	Each			
9.	Replacement of push button	Each			
10.	Replacement of sluice valve	Each			
11.	Reconditioning of disk with lining	Each			
12.	Replacement of brackets	Each			
13.	Provision of operating key rod	Each			
	II. Non- Return valve				
1.	Replacement of rod (SS)	Each			
2.	Replacement of Disc holder (SS)	Each			
3.	Replacement of bolts and nuts	Set			
4.	Dismantling and re-fixing etc	Each			
5.	Replacement of bush	Each			
6.	Replacement of reflex valve	Each			
7.	Replacement of ball valve (NR)	Each			

	III. Air release valve	Per/unit	Rate in Rupees (figures & words)	
1.	Replacement of foot valve	Each	100mm	200mm
2.	Replacement of foot valve leather	Each		
3.	Repairs to double flop type foot valve	Each		
	IV. Penstock valve		750mm	1000mm
1.	Replacement of bush (SS)	Each		
2.	Replacement of bush (SS)	Each		
2.	Replacement of operating rod (TOP)	Each		
3.	Replacement of operating rod (Bottom)	Each		
4.	Replacement of bearing set	Each		
5.	Reconditioning the valve disc by providing GM ring and bolt & nuts	Set		
6.	Replacement of bolts and nuts in well with safety measures	Each		
7.	Replacement of MS supporting clamps and angles	Each		

Schedule L

List of repairs in collection system

1. Attending repairs in the house service connections involving replacement of pipe.

100 mm dia rate per meter length to be replaced:-----
(Including excavation, dewatering , refilling, and cost of material,etc.)

150 mm dia rate per meter length to be replaced:-----
(Including excavation, dewatering , refilling, and cost of material,etc.)

2. Attending repairs in the pumping main involving replacement of the pipe.

800 mm dia rate per meter length to be replaced:-----
(Including excavation, dewatering , refilling, and cost of material,etc.)

Note: All other leaks and repairs are to be attended by the contractor as part of maintenance work without any extra cost

ANNEXURE

ANNEXURE-I

MINIMUM STAFF TO BE PROVIDED BY THE SUCCESSFUL CONTRACTOR

To carry out the activities of O&M requirements as specified, the Operator has to provide suitable man power, equipments and machineries as below:

For this purpose, Alandur Municipal Area may be divided in to two sectors and each sector shall be under the over all in-charge of one Maintenance Engineer with minimum of BE (Civil/Mechanical) Qualification. Thus two Maintenance Engineers are required for over all supervision.

Further 42 wards in Alandur Municipality may be divided into 7 divisions, with 6 wards in each division.

Each division requires the following personnel:

Sewer Superintendent	:	1
Field workers	:	6

Thus

Total No. of Sewer Superintendents required	:	7
Total No. of Field workers required	:	42

For maintaining the pumping stations the following personnel is required.

Electrical operator with ITI Certificate in Electrical and also with 'B' Certificate

For the LT Pumping station, (one per shift, one for maintenance, one for reliever)	:	5
For the Lift station (for two shift operation)	:	2
Field workers		
For LT Pumping Station (one per shift, one for reliever)	:	4
For the Lift station (for two shift operation)	:	2

The following are the over all staff requirements.

1. Maintenance Engineer (BE;Civil/Mechanical)	:	2
2. Sewer Superintendent 10 th passed	:	7
3. Electrical Operator with ITI Certificate (Electrical) & 'B' Certificate	:	7
4. Field workers / sewer workers	:	48

ANNEXURE-II

OBLIGATION OF THE MUNICIPALITY

1. Power Consumption charges for the operation of the sewage pumping stations will be paid by the Municipality directly to TNEB.
2. Alandur Municipality will arrange to provide the Telephone connection in the site offices of the Maintenance Engineers (2No.) and the entire telephone charges shall be paid by the contractor.
3. Ensuring that all equipments and accessories are in good working condition before handing over the pumping station to the O&M Operator on date of commencement of Contract. This could be decided by a joint inspection during handing over.
4. To conduct surprise checks to ascertain the effective functioning of the pumping station. For this purpose, Municipality may nominate any of its officers for inspection of pumping operations without prior notice.
5. Payment will be made monthly on receipt of bills from the contractor following Municipality's Regulations.
6. Prescribing of preventive maintenance schedule for adoption at different time intervals by the contractor.
7. Supply of Diesel and Engine Oil etc. for DG set.
8. Jet rodding cum suction machine and hydraulically operated de-silting machines will be supplied by the Municipality and the contractor shall arrange the personnel for the operation & maintenance of the equipments for the fee quoted in the Agreement

ANNEXURE-III
MANDATORY DUTIES OF THE CONTRACTOR

I. GENERAL:

The following commitment as per Citizen Charter shall be followed in maintenance of the UGSS. **collection system.**

Sl.No.	Activities	Required time limit in days
1	Removal of blockage in sewer line	1
2	Removal of house sewer block	1
3	Attending/arresting sewage over flow	2
4	Repair to damaged sewer line/renewal of sewer line	15

Pumping stations

1. Operating the sewage pumping stations.
2. Routine and Preventive maintenance of the pump sets and electrical installations.
3. De-sludge the wet well/ collection well and suction well in the pumping station.
4. Maintenance of the pumping main by attending leaks, bursts and appurtenances.

II. COLLECTION SYSTEM

1. The entire sewage generated in the area through the house service connection has to be collected, conveyed through the collection system to the sewage pumping stations, pumping the sewage by operating the pump sets in the pumping stations with suitable operating schedule to convey the sewage to the Sewage Treatment Plant and to keep the sewage flow at low level in the collection well of the pumping station.
2. The house sewer obstruction and main sewer obstruction or any other related complaints has to be attended within the stipulated period as in the table above.
3. The sewer line leaks and bursts are to be attended within the stipulated time above.
4. To maintain the sewer system for free flow at low levels periodical de-silting and flushing of the system has to be carried out using the equipments as already indicated in this document.
5. Hydraulically operated de-silting machine and the Jet rodding cum suction machine will be provided by the Municipality. The contractor has to provide the operator, other field workers required and the consumables like diesel, oil etc to use the machines. Any repairs in the machines shall be carried out by the contractor at his cost.
6. New house sewer connections will be provided by the Municipality with the staff /workers to be provided by the O&M Contractor as per the rules and regulations of the Municipality and requirements and these will be added on to the responsibilities of the contractor for O&M
7. Any disconnection of the house service connection will be done by the Municipality with the staff/workers to be provided by O&M Contractor and as per procedure. The existing house sewer service connection is to be verified and accounted and updated every month. Any illegal connections

direct to the system has to be detected by the Contractor. If they are identified by the Municipality, the contractor is liable to be penalized for nonperformance

8. Monthly statement on the number of complaints received and attended, adherence to maintenance schedule, repairs noticed in the installations and remedial action taken etc shall be properly documented and submitted to the Municipality before 15th of every succeeding month.
9. The contractor shall provide required mobile phones/wireless system to their key staff for communication purpose at his cost including call charges. The mobile numbers shall be given to Municipal Engineer in charge.
10. Replacement of the Maintenance Engineer will be with prior approval of the Owner. All replacements should be by a person of equal experience and qualification The new persons so employed also have insurance cover.
11. **Sewer Cleaning Rods**
The Contractor shall provide minimum of 50 No. of sewer cleaning rods of applicable specifications for each division and the total of 350 No. for the entire area for three year operation for which payment will made as per the agreed rates in the contract. Any replacement due to wear & tear damage, theft, etc shall at the contractor's account.
12. FRC Doors with frame 30 no. shall be supplied and kept ready for replacement whenever needed. The cost will be paid as per the agreed rate in the price schedule.
13. Raising and lowering of the manholes shall be done as directed by the Municipal Engineer or his authorized representatives and will be paid as per the agreed rates and as per the actual.
14. Traffic diversion caution boards and other safety materials as in the price schedule shall be supplied at the agreed rates and used during maintenance works as per the requirements. Any extra items required shall be provided by the contractor at his cost.

III. PUMPING STATIONS

1. Operation of specified shifts / day and ensuring that back up teams would be available to take over during Sundays, Holidays and in the event of regular Operator / Labour absence including watch and ward.
2. Making sure that the levels are maintained between safe and low levels, as specified at all times ensuring that fall below the incoming sewer whenever possible
3. Ensuring that the wells are de-silted minimum once a day to handle morning peak flow.
4. Ensuring that the screens are cleaned daily in every shift at regular intervals to ensure free flow and to prevent pump failures.
5. Operate and maintain equipment with technical staff so as to safeguard the equipments against single phasing, earth fault, phase reverse etc. in power supply.
6. Maintaining all equipment within the station as recommended by the manufacturers, with proper Logs and Records of the work carried out, as prescribed by Alandur Municipality.
7. Operate and maintain capacitor and allied switch gear so as to maintain a power factor of not less than 0.90 lag prescribed by TNEB.
8. The power factor will not decrease or increase suddenly and if the contractor observes daily and finds any decrease in the power factor, it should be informed to the Municipality Engineers. The Department Engineers will take immediate steps in rectifying this.

9. Test run of D.G. sets should be carried out for a minimum of 30 minutes per week in idle condition or as recommended by the manufacturer/ directed by Site Engineer. The required diesel/lub oil will be supplied by Municipality and the Contractor should make necessary arrangement for carting the same. However in case of emergency the Contractor may arrange to purchase the required diesel/lub oil as directed by the Engineer in charge and the related cost will be paid based on actual production of bills.
10. Keeping all wells, kiosk sheds free from dirt and dust.
11. Ensuring that premises are kept clean and tidy.
12. Inspection Register to be available at the Station.
13. Mandatory Regulations prescribed by CEIG and Inspector of Factories shall be followed without any lapse.
14. Carrying out all operations at intervals specified shown on attached sheets for each station
15. Each station should be provided with complete set of tools and equipments required for maintaining the station.
16. The following regular equipment maintenance and general maintenance have to be carried out along with those as per preventive maintenance schedule.
 - a) De-weeding and cleaning the transformer yard.
 - b) Drying and refilling of silica jell in the breather of the transformer.
 - c) Regular watering of the earth pits in the transformer yard and maintaining proper earth resistance.
 - d) Check for any oil leak in the transformer and top up of oil (transformer oil will be supplied departmentally).
 - e) All electrical connections have to be checked.
 - f) Provide gland packing for the pumps, sluice valve etc. whenever required to avoid leakage of water. Rope has to be provided by the Contractor.
 - g) Greasing of bearings and lubricating all moving parts minimum once a week (grease has to be provided by the Contractor).
 - h) Check for tightness of coupling bolts-nuts and all other fasteners.
 - i) Check for functioning of vacuum pumps.
 - j) Cleaning of motors, L.T. panel etc. minimum once in a week using air blower.
 - k) Lubricating and test operating of the penstock valves for proper seating minimum once in week.
 - l) Watering of plants and trees.
 - m) Check for charging battery including the acidity in cells once in a week so as to start and operate the DG sets in any emergency requirements.
 - n) Replacement of the HG fuse if required.
 - o) Replacement of fused out bulbs, choke, starters etc.
17. The contractor should furnish his local office and residential address along with Telephone Nos.

18. Attendance should be maintained in all the locations maintained by the contractor and the employees sign it in every shift.
19. The contractor has to fix leave regulation for the employees and submit a copy to Municipality.
20. In case of absence of the B.E. holder, Sewer Superintendent, operator (or) Sewer worker or anybody as envisaged, the specified amount for that particular shift will be recovered in the monthly bill as per Annexure-IV.
21. The contractor has to provide decent uniform with name badge to their staff and if they fail to wear the uniform, penalty at the rate indicated in the Annexure-IV will be recovered from this monthly bill.
22. The contractor has to operate the machineries according to the operating schedule fixed for that particular station and to maintain low-level. The level should not be more or less than that of the operating level fixed during that time of inspecting officials prescribed in the operating schedule. However tolerance of +/-5% can be allowed. If there is vast difference, unless otherwise specific reasons are not given wages for that particular shift will be recovered as per Annexure-IV, if the reason given by the contractor is not acceptable by the inspecting authority.
23. Maintenance of plant and machineries should be as per the chart given.
24. The maintenance gang should possess a register to record their activity in a particular station in a particular day and certified by the Municipality officials in charge of that particular station in that book.
25. The contractors are required to operate and maintain the sewage pumping stations continuously during the rainy season by providing additional shifts at no extra cost.

IV. LABOUR LAWS TO BE FOLLOWED

Following Laws shall be adhered to by the contractor wherever applicable

- a) Workmen Compensation Act, 1923
- b) Payment of Wages Act, 1936
- c) Industrial Disputes Act, 1947
- d) Minimum Wages Act, 1948
- e) Factories Act, 1948
- f) Employees PF and Miscellaneous Act, 1952
- g) Payment of Bonus Act, 1965
- h) Payment of Gratuity Act, 1972
- i) Equal Remuneration Act, 1979
- j) Maternity Benefit Act 1951
- k) Contract Labour (Regulation & Abolition) Act 1970
- l) Industrial Employment (Standing Orders) Act 1946
- m) Trade Unions Act 1926
- n) Child Labour (Prohibition & Regulation) Act 1986
- o) Inter-State Migrant workmen's (Regulation of Employment & Conditions of Service) Act 1979

- p) The Building and Other Construction workers (Regulation of Employment and Conditions of Service) Act 1996 and the Cess Act of 1996
- q) Employee State Insurance Act, 1948
- r) The Tamil Nadu Manual Workers (Regulation of Employment and Conditions of Work) Act, 1982.
- s) The Bonded Labour System (Abolition) Act, 1976
- t) The Employer's Liability Act, 1938

V. ELEMINATION OF CHILD LABOUR

1. Attention of all contractor are invited to the Child Labour (Prohibition and Regulations) Act 1986, which prohibits employment of children below 14 years of age in certain occupations and process and provides for regulations of employment of children in all other occupations and progress. Employment of child labour is prohibited in building and construction industry.
2. Hence all the contractors are requested to adhere to the provisions in the above Act and see that engagement of child labour in the operational activities of the Municipality are completely prohibited. Any violation of the provision will lead to penal action and removing of the contractor from the list of registered contractors.

VI. SAFETY MEASURES

1. All the work to be carried out in and around the pumping station, like electrical faults (or) attending to maintenance work in collection, suction and screen wells, it must be under the contractors supervision with their supervisor, at their own risk and cost.
2. The contractor should possess rubber gloves, gum boots, safety belt, helmet, rope, gas mask, torch light, emergency light etc. as safety equipments in good condition.
3. Each and every employee of the contractor should have insurance cover under workmen compensation act.
4. The contractor has to carryout any maintenance work only after informing and getting concurrence of the Municipality officials in charge of that particular pumping station.
5. The contractor r while entering the wells for carrying out O&M work, should close the penstock valve in the well and pump the sewage from the well should check the gas present in the well with gas monitor and make sure it is not dangerous for their staff and allow the men with safety equipments to enter the empty well for de-silting the wells. There should be no contact between human body and sewage. Men while entering the well should wear proper diving suit with mask, boot and airline supply apparatus.

VII. PROCEDURE FOR CARRYING OUT REPAIRS

Any repairs noticed in the system and equipment should be reported in writing to the Engineer in-charge of the system and pumping station without any time lapse. The rectification work have to be carried out immediately as per the direction of the Engineer in-charge without affecting the pumping Time schedule or by making alternative arrangements.

All the repairs & replacements in the UGSS and the Pumping Stations including pumping main shall be done by the Contractor as directed and requirements. Payment will made only for the items included in the price schedule as per the agreed rates and as per the actual work done. All other items of works are part of O&M Contract works and shall be carried out by the Contractor without any extra cost.

VIII. NON-COMPLIANCE TO SCHEDULE OF WORK / MANDATORY DUTIES

If the contractor fails to carry out any work or part of work/mandatory duties, the Municipality shall have the power to carry out such parts of work by engaging private agency and recover such amount including 5 (five) percent of the amount incurred from the progressive bills.

Photo Identify Cards have to be issued to the personnel and one set of these Identity Cards should be furnished to the Municipality and one set displayed in the Pumping station.

The responsibility of the contractor to take insurance policy under Workmen's Compensation Act 1923 for each labour and a copy of insurance policy should be furnished to the Municipality. This policy should be kept alive till completion of the contract period.

The name and qualifications of the personnel engaged in each Sewage Pumping Station should be prominently displayed in the Pumping Station.

IX. DUTIES AND RESPONSIBILITIES OF THE MAINTENANCE ENGINEER

He should be present between 8.30 A.M. and 5.30 P.M as same as department Engineers of Municipality with one hour lunch intervals.

- 1) He shall hold full responsibility of maintaining the system (collection system and the pumping stations with low levels as prescribed by the Municipality
- 2) Daily report on flow chart should be sent to office with all activities of the previous day.
- 3) Inform minor/major/repairs immediately and should be present at site until completion works of repair
- 4) He shall have full responsibility for maintaining maintenance schedule such as daily, weekly and monthly program.
- 5) He should organize the silt removal program and to follow as per safety rules.
- 6) He shall keep safety belt, gas mask, gas monitor and First Aid box to his custody and utilize whenever requires.
- 7) He shall be responsible for over all cleaning and keeping the station neat and tidy
- 8) He will approach TNEB authority and Municipality when power fails in TNEB structure/ and ensure early resumption.
- 9) He shall check up Power Factor everyday and to maintain at minimum 0.90 as prescribed by TNEB by ensuring that no penalty is levied by TNEB.
- 10) In charge shall be sole responsible for carryout mandatory duties of contractor in the individual pumping station and to organize the maintenance gang for routine maintenance work.
- 11) Up keeping the pumping station such as air blowing motors, control panels, gland packing, changing Engine Oil and maintenance of battery.

- 12) Care has to be taken for workers to avoid double/triple duties as per workmen compensation Act and arrange to renewal of Insurance policy.

X. DUTIES AND RESPOSIBLITIES OF THE SEWER SUPERINTENDENT

He shall be responsible for the day to day maintenance works in the collection system in attending the complaints on the sewer obstructions in the house service connections and in the mains and also attending the repairs, leaks bursts in the pipe lines etc

XI. DUTIES AND RESPONSIBILITIES OF THE OPERATOR OF THE PUMPING STATION

- 1) Operating the pump set as per the operating rules and maintaining low levels.
- 2) Recording Log Book for every hours and including starting/stopping times of the pump sets.
- 3) Check the temperature/Noise of Running units and control panel
- 4) Record daily shift activity in Log Book
- 5) Follow the instruction if any by Engineer in-charge of the pumping station regarding pumping.
- 6) Go through previous shift activities and explain the shift activities to the reliever
- 7) Arrange removing of rubbish in the screen well once in the shift with safety precautions
- 8) Draw flow chart as per log book in his shift
- 9) Operating D.G.Set when power fails.

XII. DUTIES TO BE ATTENDED BY FIELD WORKER

- 1) Ensuring that the screen are cleaned daily in every shift at regular intervals to ensure free flow and to prevent pump failure.
- 2) Keeping of all wells, kiosk sheds free from dirt and dust
- 3) Ensuring that premises are kept clean and tidy
- 4) Ensuring that adequate man power is available round the clock to carryout out the above task and to prevent entry of unauthorized persons.
- 5) Provide gland packing for the pumps, sluice valve etc. whenever required to avoid leakage of water.
- 6) General cleaning of all equipments buildings and the yard
- 7) Watering of plant and trees
- 8) To assist the operators to carry out the breakdown maintenance to avoid dislocation of pumping operation.
- 9) Operating of sluice valves and penstock valves

XIII. GENERAL MAINTENANCE TO BE DONE

- 1) Desilting of Wells
- 2) Lifting and lowering of submersible pump sets
- 3) Drying and refilling of silicon, oil in the breather of the transformer
- 4) Check for any oil leak in the transformer and top up oil if necessary
- 5) Greasing of bearings and lubricating all moving parts once in a week
- 6) Cleaning of motors and lubricating all moving parts once in a week by using air blower.
- 7) Regular watering of the earth pit in the transformer yard and maintaining proper earth resistance
- 8) All electrical connections have to be checked

- 9) Lubricating and test operating of the penstock valves for proper seating every week
- 10) Check conditions of cabling, motor and pumps etc.
- 11) De-weeding and clearing the transformer yard
- 12) Check for tightness of coupling, bolts and nuts and all other fasteners
- 13) The silt/sludge etc removed from the system during maintenance work, repair work, de-silting the system shall be disposed of safely in to the nearby Municipal solid waste collection points
- 14) All the O&M activities shall comply with the safe Environment/pollution control norms.

ANNEXURE-IV

RECOVERY TO BE MADE FOR DEFAULT

Sl.No.	Description	Amount
1	Maintenance Engineer	Rs.500 per day per each
2	Sewer Superintendent	Rs.300 per day per each
3	LT Operator	Rs.200 per day per each
4	Field Worker/ Sewer Worker/ Watchman	Rs.100 per day per shift
5	Silt removal in the well once in a week and attending complaints on sewer block, leak, burst and over flow within specified time.	Rs.500 per occasion
6	Cleaning of site	Rs.100 per day
7	Arranging sand bags	Rs.250 per occasion
8	Photo identity	Rs.100/ each
9	Not wearing uniform	Rs.50/-each
10	Safety belt	Rs.500 per month
11	Gas Mask	Rs.500 per month
12	Loose tools	Rs.100 per month
13	Maintaining of registers	Rs.2000 per month
14	Operational rules for pumping stations (To be finalized with the Approval of Municipality)	Amount paid to the shift as per the agreement
15	Display of staff particulars	Rs.500 per month
16	Disobedience of any person	To be replaced immediately
17	Preventive maintenance not done	
	a) For daily maintenance items	Rs.100 per day
	b) For weekly maintenance items	Rs.200 per week
	c) For fortnightly maintenance items	Rs.500 per fort night
	d) For monthly maintenance items	Rs.1000 per month
18	For not maintaining Diesel Generator batteries in good charge condition	Rs.50 per day
19	For not carting diesel / lub oil or purchase of required quantity of diesel/ lub oil as directed by the Engineer in-charge	Rs.100 per day

ANNEXURE-V

SAFETY MEASURES TO BE ADHERED

1. All electrical safety equipments like hand gloves, testers and other electrical needs are to be provided by the contractor.
2. Only experienced, skilled people have to be employed by the contractor
3. Safety belts, ropes, Gas mask, Torch lights, are to be provided by the contractor for laborers who get into wells.
4. All personnel should be covered by insurance under workmen compensation act..
5. All labour act provisions has to be met with
6. Those get into wells should do so after verifying the presence of gas with the help of the gas monitor in order to avoid any mishaps.
7. Exhibit labels of "SAFETY FIRST".

ANNEXURE VI

1. List of Safety Equipments (to be provided by the Contractor)

Sl.No.	Name of Equipment	Qty
1	Safety belt with rope	2 no.
2	Gas Mask	2 no.
3	Shock proof hand gloves (11 KV grade gloves)	2 pair
4	Disposable hand gloves	4 pairs
5	Gum boot	4 pairs
6	Electrical line tester	2 no.
7	Earth discharge rod	2 no-
8	First Aid Box	2 no.
9	Emergency light	2 no.

2.Tools and Equipments for each Pumping Station (to be provided by the Contractor)

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

ANNEXURE-VII
L.T. SEWAGE PUMPING STATIONS
SCHEDULE OF MAINTENANCE

Item No.	Description of work	Daily	Weekly	Fort nightly	Monthly	Attended / Not attended / O.K.	If not attended, reason
1.0	Pump house						
1.1	Cleaning of site	✓					
1.2	Cleaning of pump house	✓					
1.3	Cleaning of Panel Room, D.G. room etc.	✓					
1.4	Check pump is operational	✓					
1.5	Change over of pumps	✓					
1.6	Record hours run	✓					
1.7	Check operation of air release pipe	✓					
1.8	Clean windows	✓					
1.9	Operate vertically hung door and lubricate	✓					
1.10	Sweep and tidy up ground, roof, remove cob webs etc.	✓					
2.0	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 the earth resistance 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						
3.0	H.T. Panel						
3.1	Clean the panel externally and internally using blower	✓					
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				✓		

Item No.	Description of work	Daily	Weekly	Fort nightly	Monthly	Attended / Not attended / O.K.	If not attended, reason
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				✓		
4.0	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		✓				
5.0	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				✓		
6.0	MOTORS						
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 slip ring, carbon brush, contacts and replace if necessary		✓				

Item No.	Description of work	Daily	Weekly	Fort nightly	Monthly	Attended / Not attended / O.K.	If not attended, reason
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		✓				
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 leak water from the pump pit	✓					
8.13	Check the condition of bearing oil and replace if required			✓			
9.0	SUMP PUMP						
9.1	Check the pump for operation	✓					
9.2	Check the coupling and replace if necessary			✓			

Item No.	Description of work	Daily	Weekly	Fort nightly	Monthly	Attended / Not attended / O.K.	If not attended, reason
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	✓					
10.0	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		✓				
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			✓			
11.0	OHT CRANES						
11.1	Carry out thorough leaning 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				✓		

Item No.	Description of work	Daily	Weekly	Fort nightly	Monthly	Attended / Not attended / O.K.	If not attended, reason
12.0	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				✓		
12.8	Apply grease to the spindle if necessary				✓		
12.9	Check the for free movement			✓			
13.0	NRV (NON RETURN VALVE)						
13.1	Check the operation of non-return valve		✓				
13.2	Check the disc for its smooth opening and closing operation		✓				
14.0	Sewage Wells						
14.1	Clean the suction, screen and collection	✓					
14.2	Check up the operation of Penstock valves in the wells	✓					
14.3	Apply grease to vertical shaft of penstock valve for smooth operation			✓			
14.4	Rake the screen and dispose the waste	✓					
14.5	Desilt wells with equipment if available	✓					
14.6	Manually desilt of wells (no equipments)		✓				