

Name of work: Improvements to existing Chetpet sewage pumping station – Electrical & Mechanical works and pumping main.

Contract No: CNT/SEW/GOTN/CMCDM/2306D/2013-14.

CHECK LIST FOR THE GUIDANCE OF THE CONTRACTOR

I	The Tender schedule for the above work consists of 30 pages as detailed below:	
	(i)	Checklist for the guidance of the Contractors Page – 1 to 5
	(ii)	Notice Inviting Tender Page - 6
	(iii)	Special Instructions to bidders for e-submission Page - 7 to 9
	(iv)	Letter of Tender 2 pages Page - 10 & 11
	(v)	Price Schedule Page - 12 & 13
	(vi)	Work schedule Page - 14 to 25
	(vii)	Milestone Page - 26
	(viii)	Undertaking for adhering additional conditions to be followed regarding ban on entry of workers into the Sewerage System. Page - 27 to 29
	(ix)	Drawing Page - 30
II	1.	The total number of items in the work schedule – 117 Nos. and the departmental value put to tender is Rs.59,39,749.00
	2.	Tenderers are requested to sign all pages in the tender schedule and must sign letter of tender. Tenders which do not have the Signature of the Tenderer in letter of tender will be rejected. Tenderers are requested to furnish notarized copy of certificates, if any, along with this tender.
	3.	Technical specification of the equipment offered by the Bidders if any, and any other information related to the bid may be enclosed along with Tender Schedule after duly Signing in all the pages.
	4.	Bidders are requested to verify the number of pages in the work schedule and number of items in the work schedule. Any clarification and further information required may be obtained from the Office of the Contracts and Monitoring wing on any working day.
	5.	The present tender document contains priced work schedule and price schedule. The tenderers are requested to quote the percentage variation over the departmental value in words and figures in any one of the forms in price schedule. If there is any discrepancy between words and figures, the lower among the words and figures will be taken into account. All entries should be made legibly in ink. Writing the percentage variation first in pencil and later over writing in ink should be avoided and also over writing the corrections may be avoided. Corrections if any should be made by neatly scoring out the unwanted matter and rewriting legibly. Every such correction should be attested by the full signature of the tenderer.
	6.	<u>Eligibility :</u> 1. Contractors registered in CMWSSB having its current validity in Class – IIB & IIIA and above i.e. those who are eligible to take up Electro-mechanical work costing more than Rs.30.00 lakh and civil and pipe laying works costing more than Rs.15.00 Lakh.

Signature of the tenderer with seal

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	<p>I.</p> <p>II.</p>	<p>2. Contractors who have executed similar works of the same or higher magnitude and registered in other departments and undertakings of the Central or State Government in the corresponding class are also eligible to tender for this work.</p> <p>Note:</p> <p>Contractors registered in Board: If the performance of the tenderer in the works awarded earlier is found to be poor subsequent to opening of this tender or during evaluation of this tender, his/their tenders will not be considered for evaluation and will be treated as non-responsive.</p> <p>Contractors registered in State or Central Government Departments:</p> <p>1)The tenderer who comes under the Category-2 i.e. not Registered in the Board and who intend to participate in the tender, subject to their eligibility as above are requested</p> <p>i. To read the Standard tender document from the Office of the Contracts wing. The contents of Standard Tender document is binding along with the conditions in this tender schedule on the tenderer.</p> <p>ii. To furnish Proof for their registration in other State or Central Government departments in the appropriate class and its current validity and should also furnish performance certificate from an officer not less than the rank of Executive Engineer for having executed works of similar nature of the same or higher magnitude.</p> <p>2) The tender of tenderers who does not fulfill the above will be treated as non-responsive. The tender received from ineligible contractors will be treated as non-responsive.</p> <p>3) However the successful tenderer will have to get himself registered in the Board in the appropriate class.</p> <p>4) If at any circumstances, prior to finalization of the tender, if it is brought to the knowledge of the Board, that the contractor is banned / black listed their tender will be treated as non-responsive.</p>
7.		<p>EMD in the form of Demand Draft or Banker's Cheque or Pay Order drawn from Nationalised / Scheduled Bank / TNSC Bank in favour of CMWSS Board. Cash and Cheque will not be accepted towards Earnest Money Deposit.</p>
8.	<p>a).</p>	<p>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:</p> <p>Form in which S.D. collected. Certified cheque /Bank Draft in favour of Managing Director, CMWSS Board payable at Chennai.</p>

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	b)	The value of S.D will be as follows:
	i)	for tenders with any plus percentage and upto (-)5% over departmental value – 2% of the contract value.
	ii)	for tenders between (-)5% to (-)15% over departmental value --- 4% of the contract value.
	iii)	for tenders, above (-)15% over departmental value --- 5% of the contract value.
	9.	Milestone details for completion of works and details of penalty for the non-completion of work are furnished in the Milestone at Page No.26 . Tenderers are requested to take note of the details. The above details will be incorporated in the contract documents while executing agreement.
	10.	All duties, taxes and other levies payable by the contractor under the contract or for any other cause shall be included in the percentage quoted as submitted by the bidder. Any statutory variations in duties/taxes, which take effect from a date subsequent to the due date for receipt of tender, shall be to CMWSS Board's Account.
	11.	<u>Tender Validity</u> Tenders shall remain valid for a period of not less than ninety days (90 days) after the deadline date for bid submission. A tender valid for a shorter period shall be rejected by the Employer as non-responsive.
	12.	Tenders with conditions are liable for rejection.
	13.	The defects liability period in respect of original civil works and pipe laying works is 5 years and thirty six months in respect of all Electrical, Mechanical and allied works.
	14.	The rates and prices quoted by the tenderer shall be fixed during the performance of the contract except for cement and steel components involved in this work which are subject to adjustment in accordance with the provisions of clause 15 as detailed below.
	15.	<p><u>Price Adjustment:</u></p> <p>Contract price shall be adjusted for increase or decrease in rates and price of cement and steel in accordance with the following principles and procedures and as per formula given in SI.No.16:</p> <p>(a) The price adjustment shall apply for the work done from the start date and upto end of the initial intended completion date or extensions granted by the Engineer and shall not apply to the work carried out beyond the stipulated time for reasons attributable to the contractor.</p> <p>(b) The price adjustment shall be determined during each quarter from the formula as given in SI. No. 16.</p> <p>(c) Following expressions and meanings are assigned to the work done during each quarter:</p> <p>R = Total value of work done during the quarter based on the Contract value. It would also include the amount of secured advance for materials paid for (if any) during the quarter, less the amount of the secured advance recovered, during the quarter. It will exclude value for works executed under variations for which price adjustment will be worked separately based on the terms mutually agreed.</p> <p>It would also include the amount of secured advance for materials paid for</p>

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	<p>(if any) during the quarter, less the amount of the secured advance recovered, during the quarter. It will exclude value for works executed under variations for which price adjustment will be worked separately based on the terms mutually agreed.</p> <p>(d) Price adjustment will apply only when the fluctuation of rates exceeds by 3% compared to the estimate rates (based on RBI Index Price). Should be applied on each items of material individually / separately. Price adjustment shall be made for both increase and decrease in the cost of materials.</p> <p>(e) The percentage of components of inputs to be utilized in the work in each quarter between two milestones are calculated based on the actual quantity executed in the site. Due to delays not attributed to the Contractor, The Contractor may be allowed to execute the work in the subsequent quarter without imposing penalty. Also if the index in the quarter in which the work has been carried out increases / decreases, price adjustment clause governs the same</p> <p>(f) Price adjustment will be applicable for only those quantities which would be utilized to achieve the work as per milestone schedule as given in Page No.26. However, if a certain quantity of work to be completed in a quarter is completed in the succeeding quarter, the price adjustment can be claimed on that quantity at the rates applicable for the intended quarter only. If there is any decrease in the price index in the prevailing(subsequent) quarter, while the carried forward work is executed and measurements therefore are recorded, the payment for such carried forward works will be regulated as per the applicable price index during the prevailing/current quarter, (i.e.) at reduced price and not at the enhanced price index which might have prevailed during the relevant previous/earlier quarter in which the works should have been completed as per the prescribed milestone.</p>
16.	<p>The formula(e) for adjustment of prices are:</p> <p>R = Value of work as defined in SI.No.15 above and the percentage of components of inputs will be calculated based on the actual quantity during execution.</p> <p><u>Adjustment for cement component</u></p> <p>(i) Price adjustment for increase or decrease in the cost of Grey cement procured by the contractor shall be paid in accordance with the following formula.</p> $V_c = 0.85 \times P_c / 100 \times R \times (C_i - C_o) / C_o$ <p>V_c = Increase or decrease in the cost of work during the quarter under consideration due to changes in the rates for Grey cement</p> <p>C_o = The all India average wholesale price index for Grey cement for the quarter in which bids are opened as published by the Ministry of Commerce & Industry, Government of India, New Delhi</p> <p>C_i = The all India average wholesale price index for Grey cement for the quarter under consideration as published by Ministry of Commerce & Industry, Government of India, New Delhi</p>

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	<p>P_c = Percentage of Grey cement component of the work, as per actual consumption of cement in the reference quarter as per milestone.</p> <p><u>Adjustment for steel component</u></p> <p>(ii) Price adjustment for increase or decrease in the cost of steel procured by the Contractor shall be paid in accordance with the following formula: $V_s = 0.85 \times P_s / 100 \times R \times (S_i - S_o) / S_o$ V_s = Increase or decrease in the cost of work during the quarter under consideration due to changes in the rates for steel S_o = The all India average wholesale price index for steel (Rebars) for the quarter in which bids are opened as published by the Ministry of Commerce & Industry, Government of India, New Delhi S_i = The all India average wholesale price index for steel (Rebars) for the quarter under consideration as published by Ministry of Commerce & Industry, New Delhi P_s = Percentage of steel component of the work, as per actual consumption of steel in the reference quarter as per milestone.</p> <p>Note: For the application of this clause, index of Rebars has been chosen to represent steel group.</p>
17.	<p><u>Bonus for advance completion of work:</u></p> <p>Any work completed in advance by not less than 10% of the agreement period can be considered and bonus of 1% on the value of actual quantum of works executed at tendered rate may be paid.</p>

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**CHENNAI METROPOLITAN WATER SUPPLY AND SEWERAGE BOARD
NO.1, PUMPING STATION ROAD, CHINTAD RIPET, CHENNAI-600 002.
NOTICE INVITING TENDER**

LOCAL COMPETITIVE BIDDING

Sealed Bids are invited from the eligible bidders for the following works. Bidding will be conducted through Local Competitive Bidding procedures of CMWSSB under single cover system conforming to the Tamil Nadu Transparency in Tenders Act, 1998 and Rules 2000.

Sl. No	Name of Work and Contract No.	Due Date and time of tender submission	Approximate value of Tender Rs/ Lakh	E.M.D. in Rs.	Tender schedule available From - To	Eligibility	Contract Period
1	Improvements to existing Chetpet sewage pumping station – Electrical & mechanical works and pumping main CNT/SEW/GOTN/CMCDM/2306 D/2013-14	26.06.2013 Upto 03.00 PM	59.39	39,700/-	06.06.2013 To 25.06.2013	Class II B & III A and above	9 Months
2	Due Date and time for opening of tenders	26.06.2013 after 3.00 P.M. If the due date happens to be holiday, tenders will be received and opened on the next working day.					
3	Availability of Tender Schedule In person	Information & Facilitation Officer, CMWSS Board, No. 1 Pumping Station Road, Chintadripet, Chennai-600002, (Telephone: 044-28451300, Extn. 227)					
4	Through Website	www.chennaietrowater.tn.nic.in & www.tenders.tn.gov.in The downloaded document should be properly bounded and submitted for tendering along with necessary enclosures.					
5	Cost of Tender Schedule	Free of cost The document will also be sent by surface mail on an advance payment of Rs.500/- per set.					
6	Address for information and clarifications and for receipt of tenders	Office of Superintending Engineer, Contracts & Monitoring, 4 th Floor, CMWSS Board, Chennai – 600 002 Phone No. 044-2845 1300 Extn. 253 FAX : 044-2845 4336 Email: secm@chennaietrowater.com					
7	e-bid submission & portal	Permitted through portal www.tntenders.gov.in					

SUPERINTENDING ENGINEER
(CONTRACTS & MONITORING)

Signature of the tenderer with seal

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SPECIAL INSTRUCTIONS TO BIDDERS FOR E-BID SUBMISSION

The above tender notice is also available on the web site www.tntenders.gov.in. This site permits downloading of the tender documents at free of cost. The intending tenderers may visit this site and download the tender document at free of cost and use it for tender submission.

The tenderer is also permitted to upload the tender on the web site using the e-token.

The following list of items is to be uploaded by the tenderer (or) bidder within the date & time of submission of bids.

1. Earnest Money Deposit

Scanned copy of the Demand Draft/ Pay Order / Banker's Cheque in the acceptable manner as mentioned in the tender schedule.

2. **Letter of Tender:** Should be signed & the scanned copy of the Letter of Tender, along with the relevant documents in PDF format as one file.

The originals for the above (Item No. 1&2) should be posted/couriered/given in person to the Tender Inviting Authority, within the bid submission date & time for the tender.

3. **Schedule of Works / Bill of Quantities:** The Bidder has to fill only the rates/ percentage in figures in the columns provided in Bill of Quantities in excel form and uploaded as boq.xls file. The same file may also be converted into pdf and uploaded.

The Digital Signature Certificate/ e- token may be obtained from one of the authorised Digital Certifying Authorities such as SIFY / SCS (TCS) / nCode, at the risk and cost of the bidder.

During e-submission of tenders, the following special cares are to be taken:

- 1) Bidder should do the registration in the tender site using the option available. Then the Digital Signature registration has to be done with the e-token, after logging into the site.
- 2) Bidder then login to the site thro' the secured log in by giving the password of the e-token & then the user id/ password chosen during registration.
- 3) The e-token that is registered should be used by the bidder and should not be misused by others.
- 4) After getting the tender schedules, the Bidder should go thro' them carefully and then submit the documents as asked, otherwise, the bid will be rejected.

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- 5) If there are any clarifications, this may be obtained online thro' the tender site, or thro' the contact details. Bidder should take into account of the corrigendum published before submitting the bids online.
- 6) Bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender schedule and they should be in PDF format. If there are more than one document, they can be clubbed together.
- 7) Bidder should get ready the EMD as specified in the tender. The original should be posted/couriered/given in person to the Tender Inviting Authority, within the bid submission date & time for the tender.
- 8) The bidder read the terms & conditions and accepts the same to proceed further to submit the bids.
- 9) The bidder has to select the payment option as online/offline to pay the fee & EMD as applicable.
- 10) Bidders having current account with ICICI may make the pay the EMD online thro' the ICICI payment gateway during the e-submission of the tender.
- 11) In the case of offline payment, the details of the DD/any other accepted instrument, physically sent, should tally with the details available in the scanned copy and the data entered during bid submission time. Otherwise the bid submitted will not be acceptable.
- 12) The rates offered details have to be entered separately against the specified place in the downloaded spread sheet file (xls) and should be submitted as boq.xls file during the e-bid submission.
- 13) The bidders are requested to enter the individual rates offered in the boq.xls file considering all aspects inclusive of any rebates, etc. No separate rebate or discount should be entered at the end of BOQ. The uploaded boq.xls will not be available for subsequent modification.
- 14) The bidders can submit the bids only once and thereafter, it is not possible to make changes in the bids submitted.
- 15) The tendering system will give a successful bid updation message after uploading all the bid documents submitted & then a bid summary will be shown with the bid number & the date & time of submission of the bid with all other relevant details. The documents submitted by the bidders will be digitally signed with the e-token of the bidder and then submitted
- 16) The bid summary has to be printed and kept as an acknowledgement as a token of the submission of the bid.
- 17) The bid summary will act as a proof of bid submission for a tender floated and will also act as an entry point to participate in the bid opening date.
- 18) For any clarifications with the TIA, the bid number can be used as a reference.

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- 19) Bidder should log into the site well in advance for bid submission so that he submits the bid in time i.e. on or before the bid submission time. If there is any delay, due to other issues, bidder only is responsible.
- 20) Each document to be uploaded thro' online for the tenders should be less than 2 MB. If any document is more than 2MB, it can be reduced thro' zip and the same can be uploaded. However if the file size is less than 1 MB the transaction uploading time will be very fast.
- 21) The time settings fixed in the server side & displayed at the top of the tender site, will be valid for all actions of requesting, bid submission, bid opening etc., in the e-tender system. The bidders should follow this time during bid submission.
- 22) All the data being entered by the bidders would be encrypted using PKI encryption techniques to ensure the secrecy of the data. The data entered will not viewable by unauthorized persons during bid submission & not be viewable by any one until the time of bid opening. Overall, the submitted tender documents become readable only after the tender opening by the authorized individual.

For any other queries, the bidders are asked to contact thro'

Mail: secm@chennaietrowater.com
Phone no.: 044-28451300-320, Extn. 209 or 253 well in advance

This Department will not be held responsible for any sort of delay or the difficulty faced in the e-bid submission of tenders online by the bidders.

SUPERINTENDING ENGINEER(C&M)

Signature of the tenderer with seal

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LETTER OF TENDER

To be delivered to the Superintending Engineer, C&M Chennai Metropolitan Water Supply and Sewerage Board at or before 3.00 P.M. on **26.06.2013**.

To
The Managing Director
Chennai Metropolitan Water Supply & Sewerage Board
Chennai- 600 002

Sir,

I/We the undersigned do hereby tender and undertake to perform, provide and execute all the works, materials matters and things described or mentioned in the Schedule (Bill of quantities) hereto annexed and the specifications thereto and drawings therein referred to (which have been produced to and carefully examined by me/us) in strict accordance with and under and subject to the terms, provisions and conditions set forth or mentioned in the said Schedule (Bills of Quantities) specifications and the drawings therein referred to, at the rates given and as stated in the Bills of quantities.

I/We herewith enclose D.D/B.C./P.O No..... datedfor having remitted Rs..... into the Board's Cash Section as a guarantee for the due fulfillment of my/our tender, and if successful, undertake and agree to forward to the Board within fourteen days after the notification of the acceptance by the Board of this tender has been received by me/us, the sum as demanded in the Form and manner required as security for the due fulfillment of my/our contract.

I/we undertake and agree that I/We will not withdraw this tender during the period that will be required for intimation, acceptance or non/acceptance as stipulated in clause 15 on the Notice Inviting Tender or 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 Board and if I/We do so withdraw, I/We shall forfeit the Earnest Money Deposit to the Board.

I/We further undertake to produce the Income-tax Clearance Certificate and the certificate and the Sales Tax Verification Certificate from the Commercial Tax Department of this State and agree to execute at my/our cost the agreement attached and to sign the plans therein referred to within 14 days after the notification of the acceptance of my/our tender has been received by me/us. In the event of my/our failing to make the Security Deposit or to execute the agreement in the said manner and sign the plans within the time specified for the purpose, the sum of **Rs.39,700/-** accompanying this tender shall be forfeited to the Board and this concluded contract shall in such case be considered, as having been cancelled or terminated and you may thereupon at such time or times, in such manner and on such terms as you may think fit, arrange either departmentally or by any other person or persons to carry out the works and provide, execute and do all works, materials, matters and things described or mentioned herein and I/We agree to be liable irrespective of the forfeiture aforesaid for all damages, losses, costs, charges and expenses arising from or by reason of such failure and arrangements.

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I/We undertake to assume full responsibility for the stability and soundness of the Works/structures that will be executed by me/us as per this contract.

I/We also undertake to do all extra or varied works which may be ordered as part of this contract upon the terms provided for in the conditions and specifications. The tenders shall be valid for a period of 90 days from the last date fixed for receipt of tenders. In case my/our tender for the work of **“Improvements to existing Chetpet sewage pumping station – Electrical & Mechanical works and pumping main”** is accepted, I/We agree and guarantee to commence the said works within a period of seven days from the date of receipt of work order and complete the work as stipulated for a period of **9 months** from the date of commencement of the work by me/us. I/We also agree that time is the essence of contract. I/We have actually inspected the site of works and have tendered for the works after such inspection.

UNDERTAKING

I/We have gone through the copy of standard tender document received from the Office of the Contracts and Monitoring wing and abide by the same for this contract also.

As witness my/our hand this.....day of.....2013.

**Signature of the tenderer
with seal** -----

Name and
address:

Signature of the tenderer with seal

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Contract No: CNT/SEW/GOTN/CMCDM/2306D/2013-14.

PRICE SCHEDULE

1. This tender has been called for in the percentage tender system. In the work schedule, detailed items of works involved in the work with specifications along with the quantity, the departmental rates and amount for individual items are furnished. The total value of the work is also furnished.
2. The tenderers are requested to quote the percentage variation over the total departmental value, which will be applicable for all items of works, individually and uniformly at which they are willing to execute the works, in the following format. In case any discrepancy / correction are found between figures and words furnished for the percentage, then the LOWER percentage among them ALONE will be taken as correct.

Signature of the tenderer with seal

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FILL UP ANYONE OF THE FORM - A, B or C

STRIKE OUT THE IRRELEVANT FORMS WHICH ARE NOT APPLICABLE

FORM - A

I / We agree to execute the work of “**Improvements to existing Chetpet sewage pumping station – Electrical & mechanical works and pumping main**” with a tender percentage of (-) Minus-----
------(in words) -----(in figures) over departmental value of **Rs.59,39,749.00** as furnished in the work schedule which is also applicable for all items of works, individually and uniformly over the departmental rates, furnished in the work schedule.

FORM - B

I / We agree to execute the work of “**Improvements to existing Chetpet sewage pumping station – Electrical & mechanical works and pumping main**” at the department value of **Rs.59,39,749.00** for all items of work furnished in the schedule.

FORM - C

I / We agree to execute the work of “**Improvements to existing Chetpet sewage pumping station – Electrical & mechanical works and pumping main**” with a tender percentage of (+) Plus -----(in words) ----- (in figures) over departmental value of **Rs.59,39,749.00** as furnished in the work schedule which is also applicable for all items of works, individually and uniformly over the departmental rates, furnished in the work schedule.

NOTE:

1. If the tenderer offers to carry out the work at a value less than the department rate, the tenderer is requested to quote his percentage in Form No:A and strike out the Form B and C.
2. If the tenderer offers to carry out the work at the department rate, the tenderer is requested to strike out the Form A and C.
3. If the tenderer offers to carry out the work at a value higher than the department rate, the tenderer is requested to quote his percentage in Form No:C and strike out the Form A and B.
4. If there is any discrepancy in percentage quoted in words and in Figures the lowest percentage quoted will be considered.
5. If the price schedule is not quoted as above the tender submitted will be treated as Non-responsive.

Signature of the tenderer with seal

ABSTRACT

Name of work: Improvements to existing Chetpet sewage pumping station – Electrical & Mechanical works and pumping main

Contract No: CNT/SEW/GOTN/CMCDM/ 2306D/2013-14

Bill No.	Description	Amount Rs. P
1	SUPPLYING AND LAYING GRAVITY MAIN	1623174.00
2	SUPPLYING AND LAYING FORCE MAIN	205565.52
3	SUPPLY, DELIVERY, ERECTION & COMMISSIONING OF ELECTRICALLY DRIVEN NON CLOG SUBMERSIBLE SEWAGE PUMPSETS AND ALLIED WORKS	3339866.00
4	PIPES AND SPECIALS FOR SUCTION WELL	771143.45
	Total Amount	5939748.97
	Say	59,39,749.00

Signature of Tendere with seal

Work Schedule

Name of work: Improvement works to existing Chetpet sewage pumping station – Electrical & Mechanical works and pumping main in Area VIII

Contract No.:CNT/SEW/GOTN/CMCDM/2306D/2013-14.

SI No	Description of work	Qty	Unit	Rate Rs.P	Per	Amount Rs.P
BILL 1 : SUPPLYING AND LAYING GRAVITY MAIN						
1	Supplying, laying and jointing CI pipes including earth work excavation in hard stiff clay, stiff black cotton, hard red earth, shales, muram, gravel, stoney earth and earth mixed with small size boulders and hard gravelly, depositing the earth on banks with initial lead of 10m and lowering into trenches and aligning, refilling the trenches with excavated soil, watering and ramming to consolidation, disposal of surplus earth including timbering the trenches, pumping out sub soil water etc., complete including the cost of joining materials.					
	700mm dia CI pipe at 6.5 m deep	48	m	28869.50	m	1385736.00
2	Cement concrete 1:3:6 using 40mm gauge hard broken stone jelly for PCC works including laying in layers of not more than 15cm thick, compacting, curing etc complete for encasing and end concrete.	2.70	cum	2710.00	cum	7317.00
3	Construction of manholes at various depths to invert including earth work excavation as per SS20B, laying cement concrete in CM 1:3:6 using 40mm BG jelly for foundation, sinking well kerb below GL for 4.5m depth and above, pumping, timbering charges for 2.5m depth and above, stock brick work in CM 1:3, for 23cm thick wall and over 23cm thick wall, plastering interior with CM 1:3, 20mm thick and exterior with CM 1:3, 12mm thick, laying plain cement concrete 1:3:6 using 12 to 20mm BG jelly, fixing the frame, providing CI steps, manhole cover and frame, benching and channeling including refilling the trench with excavated earth and disposal of surplus earth etc. complete for the following sizes of manholes.					
	a) at 6.5m deep	3	nos	76007.00	each	228021.00
4	Barication work along both sides of the trench for laying the pipe line with casurina post at 1.52m centre to centre (8 to 10 cm dia. and 1.52m height) verticals, painting the vertical posts in different colours, tieing with coir rope, fixing danger flags, danger lights reflectors including watching during night for 1 metre.	100	m	21.00	m	2100.00
Sub total Bill 1						1623174.00

Signature of Tendere with seal

Work Schedule

Name of work: Improvement works to existing Chetpet sewage pumping station – Electrical & Mechanical works and pumping main in Area VIII

Contract No.:CNT/SEW/GOTN/CMCDM/2306D/2013-14.

SI No	Description of work	Qty	Unit	Rate Rs.P	Per	Amount Rs.P
BILL 2: SUPPLYING AND LAYING FORCE MAIN						
1	Supply, delivery at site and laying CI socket spigot pipes (B class) including earth work excavation for trenches in hard stiff clay, black cotton, hard red earth, shales, murrum gravel, stoney earth and earth mixed with small size boulders depositing the earth on banks with initial lead of 10m and initial lift of 2m, lowering in to the trenches, aligning including refilling the trenches with excavated earth, watering, ramming and disposal of surplus earth etc; complete at 1.5m depth to invert. a. 500mm dia	10	m	13811.58	m	138115.80
2	Supplying and fixing the following specials including earthwork excavation in all kinds of soils as per SS20B with initial lead of 10m and a lift of 2m etc., complete.					
a	500x500 CI All socket Tee	1	m	41900.88	m	41900.88
b	500mm CI Mechanical Collar	1	m	16525.84	m	16525.84
5	Cutting 500 mm dia CI main	2	m	340.00	m	680.00
6	Barrication work along one side of the trench for laying the pipe line with casurina post at 1.52m centre to centre (8 to 10cm dia and 1.52m height) verticals, painting the vertical posts in different colours, teing with coir rope, fixing danger flags, danger lights, reflectors including watching during night for 1 metre.	20	m	21.00	m	420.00
8	Making rubber joints for C.I Pipes	4	Nos	277.00	each	1108.00
9	Construction of thrust blocks using cement concrete 1:3:6, 40mm B.G. jelly for plain cement concrete for 500mm dia A/S tee	1	No	6815.00	each	6815.00
Sub total Bill2						205565.52

Signature of Tendere with seal

Work Schedule

Name of work: Improvement works to existing Chetpet sewage pumping station – Electrical & Mechanical works and pumping main in Area VIII

Contract No.:CNT/SEW/GOTN/CMCDM/2306D/2013-14.

Sl No	Description of work	Qty	Unit	Rate Rs.P	Per	Amount Rs.P
BILL 3: SUPPLY, DELIVERY, ERECTION & COMMISSIONING OF ELECTRICALLY DRIVEN NON CLOG SUBMERSIBLE SEWAGE PUMPSETS AND ALLIED WORKS						
1	Supply, delivery, erection, testing and commissioning of non-clog submersible sewage pumpset with following duty point, driven by 3 Ph, 415 V, AC, 50 Hz, Electrical Motor with suitable weather proof cable (Copper) of total length of 35 m, control panel, Pedestal Coupling, guide wire / guide pipe (GI-50 mm dia) of length 10m, M.S.(GLVD) lifting chain of length 10m, necessary level controlling probes with sufficient length of armoured copper LTUG cable to connect the probe from the junction box to the control panel, fasteners including laying of pump cable under ground with suitable conduit and clamping on walls / trays and incidental civil works etc.complete.					
a)	Pump 1 - 4200 lpm against a total head of 18 m	2	Sets.	512800.00	Set	1025600.00
b)	Pump 2 - 8400 lpm against a total head of 18 m	1	Set.	862300.00	Set	862300.00
2	Supply, delivery, erection, testing and commissioning of electrically driven non-clog sewage submersible Grit pumpset including agitator arrangements, with the following duty point, driven by 3 Ph, 415 V, AC, 50Hz Electrical Motor with suitable weather-proof cable (copper) of total length 25 m, control panel, Skirtbase, Flanged Elbow, lifting chain M.S.(GLVD) of length 10m, necessary level controlling probes with sufficient length of armoured copper LTUG cable to connect the probe from the junction box to the control panel, fasteners including laying of pump cable under ground with suitable conduit and clamping on walls / trays and incidental civil works etc.complete.					
	Grit Pump - 500 lpm against a total head of 9 m	1	Set.	180700.00	Set	180700.00
3	Supply, delivery, erection, testing and commissioning of following sizes of power shunt capacitor for power factor improvement, suitable to operate on 415V, 3Ph,50Hz A/C supply, on suitable angle iron frame-works (37.5 mm x 37.5 mm x 6.24mm) at a height of 0.25m from the ground, including earthing and incidental civil works etc., complete.					
a)	Pump 1 - 10 kVAR	2	Sets.	4365.00	Set	8730.00

Signature of Tendere with seal

Work Schedule

Name of work: Improvement works to existing Chetpet sewage pumping station – Electrical & Mechanical works and pumping main in Area VIII

Contract No.:CNT/SEW/GOTN/CMCDM/2306D/2013-14.

SI No	Description of work	Qty	Unit	Rate Rs.P	Per	Amount Rs.P
b)	Pump 2 - 20 kVAR	1	Set.	8365.00	Set	8365.00
c)	Grit Pump - 2 kVAR	1	Set.	1165.00	Set	1165.00
4	Supplying and fixing of 300 Amps Triple Pole fuse carrier in MS Sheet steel encloure with provision for accommodating the TNEB meter including earthing etc., complete.	1	Set.	12800.00	Set	12800.00
5	Supplying and fixing of 300 Amps Triple Pole SFU with HRC fuses on suitable angle iron frame with earth connection only.	1	Set.	14488.00	Set	14488.00
6	Supply, delivery, erection, testing and commiossioning of floor mounted M.V.panel with aluminium bus bars and consisting of the following accessories with necessary interconnections between busbars, switches and trunking box, measuring instruments such as voltmeters,ammeters with selectorswitches, energy meter,phase indicating lamps, etc., complete with incidental civil works and comprising of following;					
	Capacity of M.V. Panel - 300 Amps					
	250 A FP(SN) MCCB 35 kA (for EB) - 1 No					
	100 A FP(SN) MCCB 35 kA (for DG) - 1 No					
	75 A TP MCCB 35 kA for Pump 1 - 2 Nos					
	150 A TP MCCB 35 kA for Pump 2 - 1 No					
	20 A TP MCCB 35 kA for Grit Pump - 1 No					
	63 A TP MCCB 35kA (for Pump 1 cap.) - 2 Nos					
	63 A TP MCCB 35kA (for Pump 2 cap.) - 1 No					
	16 A TP MCCB 25kA (for Grit Pump cap.) - 1 No					
	32 A TP MCB 10kA (for LDB) - 1 No	1	Set.	138100.00	Set	138100.00

Signature of Tendere with seal

Work Schedule

Name of work: Improvement works to existing Chetpet sewage pumping station – Electrical & Mechanical works and pumping main in Area VIII

Contract No.:CNT/SEW/GOTN/CMCDM/2306D/2013-14.

SI No	Description of work	Qty	Unit	Rate Rs.P	Per	Amount Rs.P
7	Supply, delivery, erection, testing and commissioning of following capacity Diesel Generator set, Phase, 50Hz, 415V, consisting of Diesel Engine capable of delivering continous brake horse power with standard fittings, water-cooled Radiator, acuostic enclosure to restrict the noise level as per TNPCB norms, Residential silencer with exhaust pipe arrangements, suitable alternator (brushless), self-excited, self-regulated, suitable for continous operation. Standard control panel consisting of ammeter with CT's and selector switch, voltmeter with selector switch MCCB, energy meter, earth fault relay, indicating lamps, fuses, and required 1.1KV grade PVC armoured aluminium cable from alternator to alternator control panel , 12/24V battery, battery leads, battery charger etc.Coupling with guard ,Fuel tank (8 hours capacity) common rigid MS channel Base frame, antivibration mounting pad setc.complete.					
	Capacity of D.G. Set - 63 kVA	1	Set.	636800.00	Set	636800.00
8	Supplying and clamping of variuos sizes of PVC insulated PVC sheathed armoured aluminium LT UG cable by MS clamps on wall or in a trench to be excavated at a depth of 2 ½ ' putting 6" layer of sand and covering the cable with brick and sand refilling the earth to make good as directed.					
a)	From 300 Fuse Carriers to 300 Amps SFU & from there to 250 Amps MCCB Switch of MV panel (Wall)					
	size 3.5C, 240 Sqmm	10	m	1243.00	m	12430.00
b)	From Control Panel of DG to 100A MCCB of MV Panel (Under ground)					
	size 3.5C, 50 Sqmm	25	m	484.00	m	12100.00
c)	From 75 A MCCB of MV Panel to Control Panel of Pump 1 (Wall)					
	size 3.5C, 35 Sqmm	20	m	319.00	m	6380.00
d)	From 150 A MCCB of MV Panel to Control Panel of Pump 2 (Wall)					
	size 3.5C, 95 Sqmm	15	m	593.00	m	8895.00
e)	From 20 A MCCB of MV Panel to Control Panel of Grit Pump (Wall)					
	size 4C, 6 Sqmm	15	m	180.00	m	2700.00

Signature of Tendere with seal

Work Schedule

Name of work: Improvement works to existing Chetpet sewage pumping station – Electrical & Mechanical works and pumping main in Area VIII

Contract No.:CNT/SEW/GOTN/CMCDM/2306D/2013-14.

SI No	Description of work	Qty	Unit	Rate Rs.P	Per	Amount Rs.P
f)	From 63 A MCCB of MV Panel to Pump 1 Capacitors (Wall)					
	size 3C, 10 Sqmm	30	m	168.00	m	5040.00
g)	From 63 A MCCB of MV Panel to Pump 2 Capacitor (Wall)					
	size 3C, 16 Sqmm	15	m	205.00	m	3075.00
h)	From 16 A MCCB of MV Panel to Grit Pump Capacitor (Wall)					
	size 3C, 6 Sqmm	15	m	157.00	m	2355.00
i)	From 32A MCB of MV Panel to LDB (Wall) size 4 core 10 sq.mm	15	m	191.00	m	2865.00
j)	From control Panel of Pump to Local P.B. Station size 3 core 2.5 sq.mm copper (Under ground)	80	m	203.00	m	16240.00
9	Supplying and fixing of cable gland and termination with Al. cable lugs for the following sizes of PVC insulated PVC sheathed armoured aluminium LT UG cable and with earth connection.					
a)	size 3.5C, 240 Sqmm (EB)	4	jt	915.00	jt	3660.00
b)	size 3.5C, 50 Sqmm (DG)	2	jt	489.00	jt	978.00
c)	Size 3.5C, 35 sq.mm (Pump 1)	4	jt	476.00	jt	1904.00
d)	Size 3.5C, 95 sq.mm (Pump 2)	2	jt	688.00	jt	1376.00
e)	Size 4C, 6 sq.mm (Grit Pump)	2	jt	291.00	jt	582.00
f)	size 3C, 10 Sqmm (Pump 1 capacitor)	4	jt	295.00	jt	1180.00
g)	size 3C, 16 Sqmm (Pump 2 capacitor)	2	jt	233.00	jt	466.00
h)	size 3C, 6 Sqmm (Grit Pump capacitor)	2	jt	291.00	jt	582.00
i)	Size 4 core 10 sq.mm (LDB)	4	jt	236.00	jt	944.00
j)	size 3 core 2.5 sq.mm copper	8	jt	224.00	jt	1792.00
10	Supply delivery and fixing of out door weather proof junction box fabricated in MS sheet steel (12 SWG for front 14 SWG for other sides) near the suction well for terminating the Pump power cable and control cable on an angle iron frame at convenient height for working and above the local MFL with provision for terminal block & earthing as per IS including incidental civil works etc.,complete.					
a)	For Pump 1	2	Nos	3300.00	each	6600.00
b)	For Pump 2	1	No	3300.00	each	3300.00
c)	For Grit Pump	1	No	2800.00	each	2800.00

Signature of Tendere with seal

Work Schedule

Name of work: Improvement works to existing Chetpet sewage pumping station – Electrical & Mechanical works and pumping main in Area VIII

Contract No.:CNT/SEW/GOTN/CMCDM/2306D/2013-14.

SI No	Description of work	Qty	Unit	Rate Rs.P	Per	Amount Rs.P
11	Supply, delivery and fixing of out door wheather proof Local Push Button station in the compartment provided in the Junction Box with 1 No"ON" and 1 No "OFF" push buttons (the "OFF" push button shall be locable in "OFF" position).	4	Nos	2100.00	each	8400.00
12	Supply, delivery and erection of Three Phase 6 way 32 Amps, 10kA LDB with the following: 1 No of 40 A FP isolator for incoming supply 3 Nos. of 16A, DP RCCB 3 Nos. of 16A, SP MCB 1 No of 16A, DP MCB 3 Nos of 6A, DP MCB in sheet steel enclosure fitted with busbars and neutral links and suitable angle iron frame works with provision for earthing etc. complete.	1	No	13700.00	each	13700.00
13	Run of 2 of 2.5 sq mm PVC unsheathed copper single core cable in PVC pipe for mains with continuous earth connection by 14 SWG wire From the MCB DB to the Switch boards in office, store,and 16A power socket.	75	m	88.00	m	6600.00
14	Wiring with 2.5 sq mm PVC insulated single core copper cables of 650 V Grade on suitable rigid PVC pipe on wall and ceiling with PVC accessories, with MS switch box covered with 3 mm thick hylam sheet with continous earth wire connection of 14 SWG TC wire.					
a)	Light points	12	points	2083.00	Pt	24996.00
b)	Fan Points	1	points	2016.00	Pt	2016.00
15	Wiring with 2.5 sq.mm PVC unsheathed single core copper cable on suitable rigid PVC pipe for 5A 3 pin CS plug non interlocking including supply and fixing of plug pin top in MS box with continuous earth connection by 14 SWG TC wire.	1	No	657.00	each	657.00
16	Lighting Fixtures					
a)	Supply and installation of 215 V - 1 x 40 W Flouresent TL fitting box type with enamelled reflector complete with all accessories - choke, starter, tube, etc. suitable for wall mounting or roof mounting on conduit tube.	2	Nos	468.00	each	936.00

Signature of Tendere with seal

Work Schedule

Name of work: Improvement works to existing Chetpet sewage pumping station – Electrical & Mechanical works and pumping main in Area VIII

Contract No.:CNT/SEW/GOTN/CMCDM/2306D/2013-14.

SI No	Description of work	Qty	Unit	Rate Rs.P	Per	Amount Rs.P
b)	Supply and installation of 215 V - 2 x 40 W Flouresent TL fitting industrial type with enamelled reflector complete with all accessories - choke, starter, tube, etc. suitable for wall mounting or roof mounting on conduit tube.	6	Nos	1388.00	each	8328.00
c)	Supply and fixing of water tight bulk head fitting suitable for 100W bulb with lamp guard and lamp.	2	Nos.	406.00	each	812.00
d)	Supplying and fixing of 12" sweep AC exhaust fan complete including providing necessary opening in the wall.	2	Nos.	1567.00	each	3134.00
e)	Supply and fixing of 48" sweep AC ceiling fan complete with regulator with 1m down rod (stem pipe) including supplying and fixing of fan clamp with side plates and cross arms.	1	No	1884.00	each	1884.00
17 a)	Supply and erection of 1 No 3" dia 2 m long tubular Wall Mounted post with complete 250W sodium vapour lampwith necessary fitting and other accessories etc.	2	Sets	7540.00	Set	15080.00
b)	Supplying and clamping of PVC , LTUG cable by M.S.clamps on wall for 2 core 4 sq.mm	25	m	87.00	m	2175.00
c)	Supplying and fixing of cable gland and termination with earth connection for 2 core 4 sq.mm	6	jts	224.00	jt	1344.00
d)	Supplying and fixing of 15 amps, single phase, DP SFU switch with F&N on suitable TW Board with earth connection only	1	No	585.00	each	585.00
18 a)	Supply and erection of 1 No 3" dia 5 m long tubular Pole Mounted post with complete 250W sodium vapour lampwith necessary fitting and other accessories etc.	3	Sets	9082.00	Set	27246.00
b)	Supplying and laying of PVC , LTUG cable under ground in a trench to be excavated at a depth of 2 ½ ' putting 6" layer of sand and covering the cable with brick and sand refilling the earth to make good as directed for 2 core 4 sq.mm	75	m	158.00	m	11850.00
c)	Supplying and clamping of PVC , LTUG cable by M.S.clamps on wall for 2 core 4 sq.mm	25	m	105.00	m	2625.00
d)	Supplying and fixing of cable gland and termination with earth connection for 2 core 4 sq.mm	8	jts	287.00	jt	2296.00
e)	Supplying and fixing of 15 amps, single phase, DP SFU switch with F&N on suitable TW Board with earth connection only	1	No	670.00	each	670.00

Signature of Tendere with seal

Work Schedule

Name of work: Improvement works to existing Chetpet sewage pumping station – Electrical & Mechanical works and pumping main in Area VIII

Contract No.:CNT/SEW/GOTN/CMCDM/2306D/2013-14.

SI No	Description of work	Qty	Unit	Rate Rs.P	Per	Amount Rs.P
19	Supply and delivery of the following safety equipment a) 5 kg capacity ISI marked dry chemical powder type fire extinguisher	1	No	1292.00	each	1292.00
	b) First Aid box (medium)	1	No	393.00	each	393.00
	c) Fire bucket - 3 Nos with MS stand	1	set	657.00	set	657.00
	d) Rubber mat 6mmthick of 1.1 kv grade of size 2m x 1m	1	No	551.00	each	551.00
	e) Fire safety rules chart	1	No	73.00	each	73.00
	f) Shock treatment chart	1	No	51.00	each	51.00
	g) "Caution / Danger" Board	3	Nos	62.00	each	186.00
20	Supply and delivery of the following tools:					
	a) Double ended open jaw spanner set of size in mm 6x7, 8x9, 10x11, 12x13, 14x15, 16x17, 18x19, 20x22, 20x23 24x27, 25x28 & 30x32	1	Set	404.00	Set	404.00
	b) Ring spanner set of size in mm 6x7, 8x9, 10x11, 12x13, 14x15, 16x17, 18x19, 20x22 20x23 24x27, 25x28 & 30x32.	1	Set	681.00	Set	681.00
	c) Screw driver consisting of various sizes					
	12 inches	1	No	61.00	each	61.00
	d) Cutting plier of sizes					
	8 inches	1	No	143.00	each	143.00
	e) Tong Tester (clamp on type- multiutility) A C voltage 0 - 750 V AC current 0 - 1000 A D C voltage 0 - 1000 V Resistance 0 - 40 mega ohms	1	No	2320.00	each	2320.00
	f) Electrical tester	1	No	37.00	each	37.00
	g) Diesel Filling Pump (Hand operated)	1	No	506.00	each	506.00
	h) Measuring Dip Rod (MS) (for measuring 200 ltr. standard Barrel)	1	No	309.00	each	309.00
	i) Hack Saw frame with blade	1	No	56.00	each	56.00
	j) Lever type Grease gun	1	No	303.00	each	303.00
21	Supply and delivery of Rechargeable emergency lamp with 600mm Fluorocuent lamp, dry type rechargeable battery etc.,complete.	1	No	2753.00	each	2753.00
22	Earthing as per ISI specifications with necessary masonry work	6	Nos	1585.00	each	9510.00
23	Supply and connection of earthing conductor including two coats of approved painting and laying between earth pit and equipments					
	a) 25 x 6 mm GI Flat	50	m	71.00	m	3550.00
	b) 40 x 6 mm GI Flat	50	m	114.00	m	5700.00

Signature of Tendere with seal

Work Schedule

Name of work: Improvement works to existing Chetpet sewage pumping station – Electrical & Mechanical works and pumping main in Area VIII

Contract No.:CNT/SEW/GOTN/CMCDM/2306D/2013-14.

SI No	Description of work	Qty	Unit	Rate Rs.P	Per	Amount Rs.P
24	Operation and maintenance of the installation: Operation and maintenance of the plant with all auxiliary equipment for a period of 120 days after satisfactory supply, erection, commissioning and operating the entire plant for 30 days, free of cost by the contractor before handing over the plant to the Board.	120	days	1564.20	day	187704.00
Sub total Bill3						3339866.00
BILL4: PIPES AND SPECIALS FOR SUCTION WELL						
1	Supplying, conveying and fixing the following CI specials as per IS 9543 with ISI markings on it excluding earth work excavation inside the well and including earth work excavation as per SS 20 B outside the well, laying, jointing, refilling with excavated earth etc. complete.					
a	100mm x 200mm CI D/f taper	2	nos.	2624.68	each	5249.36
b	200mm dia CI D/f Duck foot bend	2	nos.	5904.72	each	11809.44
c	200mm dia CI D/f Pipe 4.0m long	4	nos.	16745.96	each	66983.84
d	200mm dia CI D/f Pipe 1m long	2	nos.	5250.60	each	10501.20
e	200mm dia CI D/f Pipe 2.0m long	4	nos.	9082.38	each	36329.52
f	200mm dia CI D/f Pipe 0.5m long	6	nos.	3334.70	each	20008.20
g	200 mm dia CI D/f 90 degree bend	2	nos.	3997.72	each	7995.44
h	200mm dia CI Sluice valve	2	nos.	13648.22	each	27296.44
i	200mm dia CI Non return valve	2	nos.	24650.51	each	49301.02
j	200mm x 350mm D/f CI taper	2	nos.	8073.74	each	16147.48
k	500mmx500mm x 350mm dia A/f Tee	2	nos.	34817.92	each	69635.84
l	200mm x 300mm CI D/f taper	1	nos.	5469.16	each	5469.16
m	300mm dia CI D/f Duck foot bend	1	nos.	14095.12	each	14095.12
n	300mm dia CI D/f Pipe 4.0m long	2	nos.	33063.15	each	66126.30
o	300mm dia CI D/f Pipe 1m long	1	nos.	10219.83	each	10219.83
p	300mm dia CI D/f Pipe 2.0m long	2	nos.	17834.27	each	35668.54
q	300mm dia CI D/f Pipe 0.5m long	3	nos.	6412.61	each	19237.83
r	300 mm dia CI D/f 90 degree bend	1	nos.	9166.00	each	9166.00
s	300mm dia CI Sluice valve	1	nos.	26184.58	each	26184.58
t	300mm dia CI Non return valve	1	nos.	58274.60	each	58274.60
u	300mm x 350mm D/f CI taper	1	nos.	9746.12	each	9746.12
v	500mm x 500mmx350mm A/f Tee	1	nos.	34817.92	each	34817.92
w	500mm x 350mm CI D/f taper	2	nos.	16661.60	each	33323.20
x	350mm dia CI Sluice valve	1	nos.	41569.52	each	41569.52
y	500mm dia CI D/f Pipe 0.5m long	3	nos.	16101.55	each	48304.65
z	500mm dia CI blank flange	1	nos.	8932.60	each	8932.60

Signature of Tendere with seal

Work Schedule

Name of work: Improvement works to existing Chetpet sewage pumping station – Electrical & Mechanical works and pumping main in Area VIII

Contract No.:CNT/SEW/GOTN/CMCDM/2306D/2013-14.

SI No	Description of work	Qty	Unit	Rate Rs.P	Per	Amount Rs.P
2	Jointing the C.I.Double flanged pipes and specials with rubber insertion to the required specifications with M.S. bolts and nuts, complete and testing the pipies to the required pressure with water (including cost of jointing materials) For depth upto 2m, For works above water level					
(i)	100mm dia	2	nos.	116.50	each	233.00
(ii)	200mm dia	38	nos.	221.50	each	8417.00
(iii)	300mm dia	19	nos.	349.60	each	6642.40
(iv)	350mm dia	7	nos.	455.70	each	3189.90
(v)	500 mm dia	11	nos.	933.40	each	10267.40
				Sub total Bill 4		771143.45
				Total (Bill 1+Bill 2+ Bill 3+ Bill 4)		5939748.97

Signature of Tendere with seal

Name of work: Improvements to existing Chetpet sewage pumping station – Electrical & Mechanical works and pumping main.

Contract No: CNT/SEW/GOTN/CMCDM/2306D/2013-14.

MILE STONE

Sl. No	Description of work	Milestone Period			
			I	II	III
		Total	3 months	6 months	9 months
1	Supplying and Laying Gravity Main	100%	40%	60%	100%
2.	Supplying and Laying Force Main	100%	40%	60%	100%
3.	Supply, Delivery, Erection & Commissioning of Electrically driven non-clog submersible sewage pumpsets and allied works	100%	-----	50%	100%
4.	Pipes and Specials for Suction Well	100%	-----	50%	100%

The Liquidated damages for the whole of the works are **Rs.2970/- per day** and that milestone are as under.

LIQUIDATED DAMAGES

I	Mile Stone	-	Rs.365/- per day
II	Mile Stone	-	Rs.1210/- per day
III	Mile Stone	-	Rs.1395/- per day

Signature of the tenderer with seal

Name of work: Improvements to existing Chetpet sewage pumping station – Electrical & Mechanical works and pumping main.

Contract No: CNT/SEW/GOTN/CMCDM/2306D/2013-14.

UNDERTAKING

ADDITIONAL CONDITIONS FOR THE CLEANING AND MAINTENANCE OF SEWERAGE SYSTEM (INCLUDING SEPTIC TANKS)

I / We aged
about years, S/o
residing at

I am / are aware of the direction of the Hon'ble High Court of Madras in its order dated 20.11.2008 in W.P. NO. 24403/2008 and the orders of the Government of Tamil Nadu in G.O.(Ms) No.293, M.A & W.S (MW) Department, dated 26.11.2010, regarding the ban on manual scavenging and on the entry of sanitary workers into the sewerage system of septic tank. I undertake to abide by the said directions of the High Court and Government Order in this regard. All cleaning and maintenance operations shall be done only through mechanical devices.

I / We shall not allow sanitary workers to enter into the sewerage system / septic tank for cleaning or maintenance operations except in the 4 circumstances permitted in the orders of the High Court in W.P. No. 24403, dated 20.11.2008. I am aware that even in these 4 circumstances, I should allow the workers to enter only with adequate safety gadgets and under the supervision of a qualified staff, and only after duly observing all safety precautions including testing for the presence of toxic gases.

I / We am/are aware that violation of the said directions of the Hon'ble High Court and the G.O. will attract punishment under section 14 of the Employment of Manual Scavengers and Construction of Dry Latrines (Prohibition) Act, 1993.

I / We shall not allow sanitary workers to enter into the sewerage system / septic tank for cleaning or maintenance operations except in the 4 circumstances permitted in the orders of the High Court in W.P. NO. 24403/2008, dated 20.11.2008 as follows:

Signature of the tenderer with seal

Name of work: Improvements to existing Chetpet sewage pumping station – Electrical & Mechanical works and pumping main.

Contract No: CNT/SEW/GOTN/CMCDM/2306D/2013-14.

- 1) For the removal of concrete / FRP manhole door which gets damaged due to the heavy vehicular traffic and often falls inside the manhole causing obstructions / blocks in the sewer and which results in the blockage of sewerage system, and where mechanical equipments cannot be put into operation.
- 2) For the purpose of inter-linking the newly laid sewer main with the existing sewer main, where it will be wholly necessary to block the main sewer main in the servicing manhole. Entry of sanitary workers on such occasions has to be necessarily permitted, in as much as it is stated that large size sewer i.e. where the diameter is more than 300 mm, blocking the sewer main from the top of the manhole is not possible and only the sanitary worker has to enter the manhole and that too with necessary safety gadgets for blocking the sewer temporarily.
- 3) For the removal of submersible pump sets fixed at the bottom of the suction wells, which goes out of order, for which the sanitary worker has to enter the well again with necessary safety gadgets after emptying the sewage from the well in order to remove the pumpset. It is made clear that before allowing any sanitary worker to enter on such occasions, steps should be taken to see that the sewage is totally emptied and thereby further ensure that no poisonous gas remains in the sewage line.
- 4) For the reconstruction of the manhole of rectification of the sewer main due to any damage caused by sinking of man hole covers / sewer line when the sewage pipe line gets blocked or gets obstructed, which results in the system getting surcharged. Here again, before allowing any sanitary worker to enter the sewer line, it is essential that sewage line is emptied by blocking the manholes in the system on either side of the sinking manholes / damaged manholes.

Even in the above four instances, I / We will allow the workers to enter only with adequate safety gadgets and under the supervision of a qualified staff, and only after duly observing all safety precautions including testing for the presence of toxic gases with a gas detector. Naked flame method of testing the presence of poisonous gases is hazardous and should be strictly avoided.

Signature of the tenderer with seal

Name of work: Improvements to existing Chetpet sewage pumping station – Electrical & Mechanical works and pumping main.

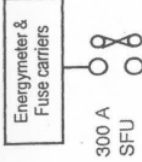
Contract No: CNT/SEW/GOTN/CMCDM/2306D/2013-14.

- a. Even in the non-exceptional circumstances, consideration of safety of the workers shall be paramount and the contractor shall ensure the same.
- b. I / We will indemnify the employer for any loss or damage caused by his negligence or by his non-observance / violations of any labour laws.
- c. I / We will take out insurance policies under the Workmen's Compensation Act, 1923 for all the workers engaged by him and a photocopy of the insurance policy should be furnished to the employer. The policy should be kept alive till completion of the contract.
- d. I / We will impart safety education to all his workers and train them in the use of safety gadgets.

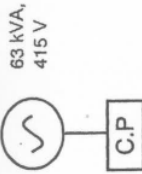
Signature of the Contractor
with seal

Signature of the tenderer with seal

TNEB SUPPLY

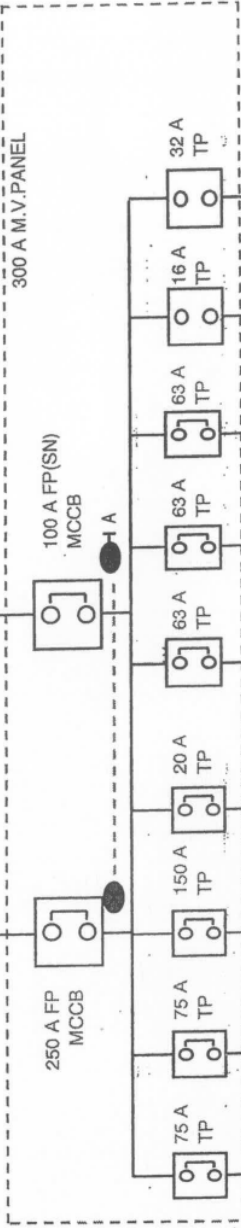


Stand by DG Set



3.5C, 240 Sqmm

3.5C, 50 Sqmm



300 A M.V. PANEL

100 A FP(SN) MCCB

250 A FP MCCB

75 A TP

75 A TP

150 A TP

20 A TP

63 A TP

63 A TP

63 A TP

32 A TP

16 A TP

32 A TP

3.5C, 35 Sqmm

3.5C, 35 Sqmm

3.5C, 95 Sqmm

4C, 6 Sqmm

3C, 10 Sqmm

3C, 10 Sqmm

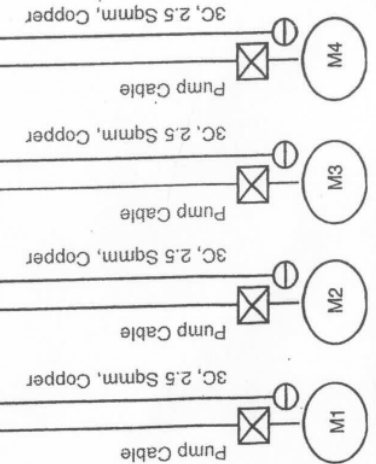
3C, 16 Sqmm

3C, 6 Sqmm

4C, 10 Sqmm

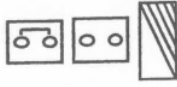
3 Ph, 6 Way 32 A

PUMP CONTROL PANELS



Power Capacitors

LEGEND



Mechanical Interlock to operate any one
 Mechanical Interlock to operate any two

Local Push Button Station
 Junction Box

M1 to M3 Sewage Pumps
 M4 Grit Pump



CHENNAI METROPOLITAN WATER SUPPLY AND SEWERAGE BOARD
 Planning & Design Wing

Project

PROVIDING UNDER GROUND SEWERAGE SCHEME TO AREA VII - Pumping Station at - CHETPUT PS

Title
SINGLE LINE DIAGRAM OF ELECTRICAL EQUIPMENT

Scale : Not to Scale

S.7 - Rev
 18/11/12

Handwritten signature