



INDIAN INSTITUTE OF TECHNOLOGY KHARAGPUR
KHARAGPUR, WEST BENGAL 721302

TENDER DOCUMENT

for

**Comprehensive Annual Maintenance Contract (AMC)
with regular maintenance of the pumps and starters
of Sewerage Pump House in i) Near 55G type Qtr.
Area, ii) Beside J C Ghosh & P C Roy science Block
and iii) Agriculture Farm House.**

NIT No. IIT/E&M/E/T/76/2018-19 Dated: 18.01.2019

Tender Serial No. _____ Issued to:

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1. NOTICE INVITING TENDER

1.1. INTRODUCTION

Indian Institute of Technology (IIT) Kharagpur, hereinafter called IITKGP, invites sealed tenders from the eligible contractors for **Comprehensive Annual Maintenance Contract (AMC) with regular maintenance of the pumps and starters of Sewerage Pump House in IIT Kharagpur i) Near 55G type Qtr. Area, ii) Beside J C Ghosh & P C Roy science Block and iii) Agriculture Farm House.** Particulars of the project are as following.

1.2. PARTICULARS

1.NIT Number	NIT No. IIT/E&M/E/T/76/2018-19
2.Name of Work	Comprehensive Annual Maintenance Contract (AMC) with regular maintenance of the pumps and starters of Sewerage Pump House in IIT Kharagpur i) Near 55G type Qtr. Area, ii) Beside J C Ghosh & P C Roy science Block and iii) Agriculture Farm House.
3.Location of Work	i) Near 55G type Qtr. Area, ii) Beside J C Ghosh & P C Roy science Block and iii) Agriculture Farm House in IIT Kharagpur
4.Estimated Cost(including GST)	₹ 1,41,970/- (Rupees One lakh Forty one thousand Nine hundred Seventy only)
5.Earnest Money Deposit	₹ 2840/- (Rupees Two Thousand Forty only)
6.Time Limit	365 days.
7.Tender Fee	Nil
8.Tender Basis and Mode	Two stage (Technical Bid & Financial Bid)
9.Mode of Payment to IITKGP (EMD/Tender fee)	Demand Draft / Pay order in favour of IIT Kharagpur payable at Kharagpur.
10.Date, Time & Venue of Pre-bid Meeting	30 th Jan 2019, 15:30hrs, E&M/ CCM Meeting Room, 1 st Fl, Old Bldg, IIT Kharagpur, Kharagpur-721302
11.Closing Date & Time for Receipt of bids	13 th Feb 2019 up to 15:30hrs
12.Date& Time for Opening of Technical Bid	13 th Feb 2019 2019 at 16:30hrs
13.Date& Time for Opening of Price Bid	To be intimated to the eligible bidders subsequently.
14. Engineer-in-charge and contact details.	Mr S. Ghosh _____ Senior Executive Engineer Tel: 03222- 282522 _____, Email: sghosh@hijli.iitkgp.ernet.in
15. Address for tender issue, submission and opening	Office of SE(E&M), 1 st Floor, Old Building, IIT Kharagpur, Kharagpur WB 721302
16.Website for full and updated information	https://eprocure.gov.in/cppp/tendersearch; http://www1.iitkgp.ac.in/topfiles/tenders.php

1.3. ELIGIBILITY CRITERIA



1.3.1. The bidder must be registered in appropriate class of works with Government organization like CPWD/ PWD/ MES or PSUs or those having experience in similar nature of works awarded by Government / Semi Government Organizations/ Government Funded Autonomous Organization.

1.3.2. The bidder must have done at least 1 (ONE) similar work of value of 80% of the estimated cost for similar works or 2 (TWO) similar works for projects each of value 60% of the estimated cost for similar works or 3 (THREE) similar work for projects each of value 40% of the estimated cost for similar Works with Government/ Semi-government/ PSU/ Government Funded Autonomous Organization during last 7 (seven) years preceding last date of the month of tender submission.

Note:

- (i) The estimated cost is ₹ 1,41,970/- (Rupees One lakh Forty one thousand Nine hundred Seventy only) 1,41,970/- (Rupees One lakh Forty one thousand Nine hundred Seventy only)
- (ii) The value of executed works shall be brought to current costing level by enhancing the actual value of work at simple rate of 7% per annum; calculated from the date of completion to the last date of receipt of applications for tender.
- (iii) **Similar works shall mean:** Electrical Maintenance & Pump maintenance work

1.3.3. Special condition for associate consultant:

This work includes an item in Part II of BoQ for detailed design and drawing work including structural and architectural, electrical, S&P. Bidders shall associate themselves with the consultant eligible for comprehensive consultancy work at least for 1 (one) similar project costing 80% of the estimated cost or 2 (two) similar projects for each value 60% of the estimated cost or 3 (three) similar projects each value 40% of the estimated cost.

The bidder has to submit document in support of eligibility of their associate consultant.

1.3.4. The bidder or the specialized agency the bidder intends to associate with must be registered with appropriate government authority as a bonafide business entity and must have GST registration certificate and Permanent Account Number of income tax.

1.3.5. Electrical work shall be executed by selected bidder through agency holding electrical license and electrical supervisor license valid on date of execution.

1.3.6. The validity of the registrations and licenses should be valid as on the date of tender submission.

1.3.7. Average annual turnover of the bidder as per ITCC or profit & loss statement shall not be less than 30% of the estimated cost, not having incurred loss in more than two years, during last 5 years ending 31 Mar 2018.

1.3.8. Bidder must hold solvency certificate from any scheduled banks for a minimum value of 40% of the estimated cost, issued not earlier than 6 (six) months from the last date of submission.

Sd/-

Sr. Executive Engineer (Electrical)

On behalf of the Director, Indian Institute of Technology Kharagpur



**Copy to:**

- 1) Registrar
- 2) Chief System Manager
- 3) SE(E&M)
- 4) Senior Executive Engineer (Water Works)
- 5) Executive (E&M/WW)
- 6) Assistant / Junior Engineer (WW/ E&M)
- 7) Notice Board
- 8) Office file

2. INFORMATION TO BIDDERS

2.1. SCOPE OF WORK

Proposal for Comprehensive Annual Maintenance of Sewerage Pumping stations

The Indian Institute of Technology Kharagpur has 3 Sewerage Pump Houses as per the table below:-

Sl. No.	Pump House No.	Location	No. of Pumps	Capacity of Pumps	Motor Starter
1	No # 1	Beside S/S # 9 (Nearer 55G Type Qtr. area)	4	(a) 10 HP Motor, Make: KIRLOSKAR CHEMICAL	Star Delta, Contactor MNX-12, MCB C32,4Pole
				(b) 10 HP Motor, Make: KIRLOSKAR CHEMICAL	Star Delta, Contactor MNX-12, MCB C32,4Pole
				(c) 20 HP Motor, Make: KIRLOSKAR CHEMICAL	Star Delta, Contactor MNX-12, MCB C63,4Pole
				(d) 03 HP Submersible Pump	Direct from MCB C32,4pole
					DOL Starter (Spare) Contactor MNX-9, L&T, MCB C32,4Pole
2	No # 2	Beside P C Roy & J C Ghosh Science Block	5	(a) 35 HP Motor, Make: KIRLOSKAR CHEMICAL	Star Delta, Contactor MNX-45, MCB C100,4Pole
				(b) 35 HP Motor, Make: KIRLOSKAR CHEMICAL	Star Delta, Contactor MNX-45, MCB C100,4Pole
				(c) 12.5 HP Motor, Make: KIRLOSKAR CHEMICAL	Star Delta, Contactor MNX-12, MCB C63,4Pole
				(d) 03 HP Submersible Pump	DOL Starter Contactor MNX-9, L&T, MCB C32,4Pole
				(e) 03 HP Drain Out Pump	DOL Starter (Separate), L&T Make
					DOL Starter (Spare) Contactor MNX-12, L&T, MCB C63,4Pole
3	No # 3	Beside Agriculture Farm House	8	(a) 25 HP Motor, Make: KIRLOSKAR SURLOSKAR	Star Delta, Contactor MNX-12, MCB C63,4Pole
				(b) 15 HP Motor, Make: KIRLOSKAR SURLOSKAR	Star Delta, Contactor MNX-12, MCB C63,4Pole
				(c) 20 HP Motor, Make: KIRLOSKAR SURLOSKAR	Star Delta, Contactor MNX-12, MCB C63,4Pole
				(d) 50 HP Motor, Make: KIRLOSKAR SURLOSKAR (Motor burnt and out from Pump)	Star Delta, Contactor MNX-12, L&T, MCB C63,4Pole(Spare)
				(e) 03 HP Submersible Pump	DOL Starter Contactor MNX-9, L&T, MCB C32,4Pole
				(f) 5.5 HP Mono Pump Motor, Water immersed	DOL Starter (Separate), L&T Make
				(g) 5.5 HP Mono Pump Motor, Water immersed	DOL Starter (Separate), L&T Make
				(h) 01 HP , 3Ph Pump Motor for treatment plant	DOL Starter (Separate), L&T Make



The Institute intends to invite bid from eligible bidders for Comprehensive Annual maintenance of the above sewerage pumping station.

The scope of work is as follows:

A total of six visits every year (i.e. One visit every two months) for preventive & breakdown maintenance. In the preventive maintenance, the contractor will do the following jobs.

(1) All pumps sets will be made operational and all electrical & mechanical parts will be checked.
(2) Greasing of Bearings has to be done.
(3) (a) Alignment of pump set will be done & checked and in case of any abnormality, rectification has to be carried out.
(b) The pumps should be checked for any abnormal vibration using vibration meter.
(4) Current, Voltage, Speed & Pressure will be measured and recorded in service report.
(5) Any material found to be defective has to be replaced by the contractor at his own cost.
(6) All the pumps must be thoroughly overhauled at least once in a year without any extra charges. Any replacements required will be done as per above (5)
(7) Electrical starter has to be checked for tightness/cleaning, repairing of any damage including supply of any material if required. Motor bearing has to be checked for abnormal sound and rigid conditions and has to be replaced if necessary.
(8) The contractor must respond to any breakdown less than 24 Hours and complete the repair within 06 hours.
(9) The supply of grease, lubricants and any other consumable items will be in the scope of the contractor.
(10) A back up arrangement is to be kept ready by the contractor. This includes a Motor and pump set which would work on emergency in case of failure of a pumping station.
(11) Payment Terms: No advance payment will be entertained by the Institute. However, monthly or quarterly payment will be made subsequent to satisfactory completion of maintenance obligations.

2.2. GENERAL INSTRUCTIONS

- 2.2.1. Bidding documents are to be obtained electronically through websites: <https://eprocure.gov.in/cppp/tendersearch>; <http://www1.iitkgp.ac.in/topfiles/tenders.php>. The tender fee in the prescribed mode must accompany the tender documents issued electronically at the time of submission.
- 2.2.2. This bid document shall be read in conjunction with GCC (General Conditions of Contract) available on <http://www1.iitkgp.ac.in/topfiles/tenders.php>.
- 2.2.3. The bidder shall visit and inspect the site and obtain all information on his own responsibility and at own cost, which may be necessary for the purpose of quoting and submitting the tender. No excuse or ignorance as to site conditions and local information shall be accepted after awarding of the contract. Access to the site will be granted by the Engineer-in-charge on all working days within working hours.
- 2.2.4. IITKGP shall not provide any space at site for labour hutments.
- 2.2.5. All clarifications about the tender shall be sought by bidder on or before pre-bid meeting. The bidders may make suggestions which shall be considered during the Pre Bid Meeting. Intending bidder(s) may also send their queries or suggestion, if any, through e-mail to the Engineer-in-charge sghosh@hijli.iitkgp.ernet.in on or before **30 Jan 2019 3.30 PM**. No queries shall be entertained after notification of replies to noteworthy queries received till the date of pre-bid meeting.
- 2.2.6. Completion certificate issued by Competent Authority will only be considered as credential. If the Completion certificate issued by Competent Authority does not reflect the type of work, then Final bill /



Schedule of Quantity of the qualifying works also to be attached along with the Completion certificates. Certificate from private individuals / organizations for whom such works have been executed shall not be accepted.

- 2.2.7. The bidding document (consisting of specifications, the schedule of quantities of various types of items to be executed, the set of terms and conditions of the contract and other documents / drawings, if any), Corrigenda, Clarifications to Pre-bid queries can be downloaded from the websites: <https://eprocure.gov.in/cppp/tendersearch>; <http://www1.iitkgp.ac.in/topfiles/tenders.php>. Corrigenda, if any shall be published only on these websites. The institute shall not be responsible for any delay / difficulties / inaccessibility of downloading facility for any reason whatsoever.
- 2.2.8. All costs, charges & expenses that may be incurred in connection with the preparation of his tender shall be borne by him and the Institute accepts no liability whatsoever therefore.
- 2.2.9. Rates quoted by the bidders shall be inclusive of GST (Goods and Services Tax - Central, State and Interstate) and all applicable taxes. Income Tax and all other statutory deductions like labour cess etc. will be deducted from the bill as per prevailing rules.
- 2.2.10. Exemption to IITKGP against any tax/ duty/ fee/ surcharge/ charge/ cost, if any, found applicable or sought later from IITKGP after award shall be passed on to IITKGP by the contractor without dispute.
- 2.2.11. IITKGP reserves the right to reject any or all of the bids without assigning any reason.
- 2.2.12. **Bid Validity:** Bid shall remain valid for 120 days from the date of submission.
- 2.2.13. **Firm Price: Bidder's quoted Rates/Prices for executing the activities under the Contract shall remain firm till completion of the entire work & shall not attract any escalation under any circumstances whatsoever.**
- 2.2.14. If any information furnished by the bidder is found as false / fabricated, then his bid will be rejected and treated as cancelled. Even if the such manipulation is detected at any stage after signing of the contract, it would lead to termination of the contract besides forfeiture of Earnest Money Deposit and liabilities towards prosecution. In such cases the bidder will be debarred from participation in future tendering process in IITKGP for next 05 (Five) years.
- 2.2.15. **Earnest Money Deposit (EMD)** of requisite amount and that in prescribed mode or proof of payment thereof shall be enclosed with the Technical Bid explained in following section.
- 2.2.16. **Refund / Conversion of Earnest Money Deposit:** The Earnest Money received shall be refunded to the unsuccessful bidders without any interest after the opening of financial bids. The Earnest Money Deposit of successful bidder shall be retained and converted into part of Security Deposit.
- 2.2.17. **Forfeiture of Earnest Money Deposit:** Earnest Money Deposit will be forfeited in any of the following cases:
- The bidder withdraws / modifies his tender during the period of Bid Validity.
 - The bidder, in case of tie between lowest bids, refuse to submit revised offer.
 - The bidder does not accept the correction of arithmetical errors of his tender.
 - The bidder fails to deposit Performance Guarantee and information as per format given in GCC within the stipulated time period before award of the work.

2.3. SUBMISSION OF TENDER

- 2.3.1. The sealed tenders shall be received at the Office of Sr. Executive Engineer (E&M), 1st Floor, Old Building, IIT Kharagpur, Kharagpur WB 721302, up to **15:30hrs, 13th Feb 2019** or Corrigenda otherwise.
- 2.3.2. Tenders received after the due date and time shall not be considered.
- 2.3.3. Tenders shall be submitted in a sealed Master envelope super scribed "**Comprehensive Annual Maintenance Contract (AMC) with regular maintenance of the pumps and starters of Sewerage Pump House in IIT Kharagpur i) Near 55G type Qtr. Area, ii) Beside J C Ghosh & P C Roy science Block and iii) Agriculture Farm House.**" with NIT No. **NIT No. IIT/E&M/E/T/76/2018-19** as NIT No., containing three separate sealed covers, each clearly super scribed as "**Tender Fee and EMD**", "**Technical Bid**" and "**Financial Bid**" respectively, in the following manner:

2.3.4. **Envelope-1 (Tender FEE & EMD)** will consist of:

- Earnest Money Deposit** of requisite amount, in the prescribed mode or proof of payment thereof.



- 2.3.5. Tender without payment of Earnest Money Deposit would be summarily rejected.
- 2.3.6. **Envelope-2 (Technical Bid)** will consist of:
- (i) Covering letter of the offer signed by firm's authorized signatory.
 - (ii) Documents establishing the identity and authenticity of the bidder/ bidding firm
 - (iii) Self-certified copies of all the documents in support of eligibility of bidder.
 - (iv) Self-certified copies of all the documents in support of eligibility of proposed/associated agencies for specialized services.
- 2.3.7. **Envelope-3 (Financial Bid)** will consist of the complete tender document, each page duly signed and stamped by the bidder as acceptance of the conditions, Declaration by Bidder and **Financial Bid** all duly filled-in, signed by the bidder or his/her authorized signatory and stamped.

2.4. EVALUATION OF BIDS AND AWARD OF WORK

- 2.4.1. The Bid of bidder will be opened on the specified date and time of opening at the Office of SE(E&M), 1st Floor, Old Building, IIT Kharagpur, Kharagpur WB 721 in the presence of willing bidders or their authorized representatives.
- 2.4.2. Date, time and place of opening of Financial Bid will be informed after evaluation of Technical Bid to the Technically Qualified Bidders.
- 2.4.3. Bids shall, first, be checked for payment of **Tender Fee** and **Earnest Money Deposit**. Only those bids found to have duly paid/ submitted Tender Fee and Earnest Money Deposit shall be considered for evaluation.
- 2.4.4. Evaluation of **Technical Bid**: The bids received will then be assessed on the eligibility criteria mentioned at para 1.3 of Notice Inviting Tender. Bids found not meeting the eligibility criteria shall be considered non-responsive and shall be rejected summarily.
- 2.4.5. IITKGP retains the right to revert back to individual bidders with further clarifications / queries on the Technical Bid. The bidder has to respond to the queries within the specified time mentioned in the covering letter.
- 2.4.6. On the date & time specified for opening of Financial Bid or the Revised Financial Bids as the case may be will be opened on specified date and time.
- 2.4.7. **EVALUATION OF Financial Bids**: The Financial Bid should contain the complete bid document with duly filled in Schedule of Financial Quote. Financial Bids opened as above will be checked for arithmetical errors.
- 2.4.8. The successful bidder shall be issued Letter of Acceptance (LOA) of the bid, and be required to furnish a Performance Guarantee as per General Conditions of Contract, Program Schedule with specific Milestones to be achieved as to complete the work within the stipulated time limit and details of his Technical Staff to be deployed as per ANNEXURE-I
- 2.4.9. **Letter of Award (Work Order)** shall be issued to the successful bidder only after receipt of the Performance Guarantee, along with Program Schedule and the details of Technical Staff to be deployed for the work.
- 2.4.10. **Agreement (Contract)** consisting of complete tender document including conditions, bill of quantities, technical proposal and specialized services, drawings, if any, and acceptance thereof together with any correspondence leading thereto, shall be drawn and signed with the awardee within 10 days of the Letter of Award.
- 2.4.11. **Date of start** of work shall be reckoned from the 7th day of the issue of the Work Order.
- 2.4.12. **Defect Liability Period (DLP)**: In partial modification to clause no.16 of General Conditions of Contract(GCC), the Defect Liability Period shall be 12 months after the certificate final or otherwise of its completion of work or till the final bill has been prepared.



3. UNDERTAKING BY THE BIDDER

UNDERTAKING

I / We have read and examined the Tender document including terms & conditions, specifications, bill of quantities, drawings and designs, general rules & directions, General Conditions of Contract, Special Conditions of Contract and all relevant other documents, publications and rules referred to in the Conditions of Contract and all other contents in the tender documents for the work.

I / We, hereby tender for execution of the work specified for the Indian Institute of Technology Kharagpur within the time specified and in accordance in all respects with the specifications, designs, drawings and instructions in writing.

We agree to keep the tender open for 120 days from the last date of its submission and not to make any modifications in its terms and conditions. A sum of Rs. _____ has been deposited in cash / demand draft of a scheduled bank / Pay order as earnest money. If I / we, fail to furnish the prescribed performance guarantee within prescribed period, I / we agree that the said Director, Indian Institute of Technology Kharagpur or his authorized officer shall without prejudice to any other right or remedy, be at liberty to forfeit the said earnest money absolutely. Further, if I / we fail to commence work as specified, I / we agree that the Director, Indian Institute of Technology Kharagpur shall without prejudice to any other right or remedy available in law, be at liberty to forfeit the said earnest money and the performance guarantee absolutely, otherwise the said earnest money shall be retained by him towards security deposit to execute all the works referred to in the tender documents upon the terms and conditions contained or referred to therein.

Further, I / We agree that in case of forfeiture of earnest money or both Earnest Money & Performance Guarantee as aforesaid, I / We shall be debarred for participation in the re-tendering process of the work.

I / We hereby declare that I / We shall treat the tender documents, drawings and other records connected with the work as secret / confidential documents and shall not communicate information derived there-from to any person other than a person to whom I / We am / are authorized to communicate the same or use the information in any manner prejudicial to the safety of the State.

Seal & Signature of Contractor

Postal Address

Dated

Witness

Address

Occupation



ANNEXURE-I

TECHNICAL STAFF OF CONTRACTOR

DISCIPLINE	NAME	QUALIFICATION	EXPERIENCE	CONTACT NUMBER
Overall Project In-charge				
Engineer - Structure and Civil Works				
Engineer – Electrical & Mechanical Works				
In-charge - Safety, Health & Environment				

Seal & Signature of Contractor



Schedule of Quantities

Name of work: Comprehensive Annual Maintenance Contract (AMC) with regular maintenance of the pumps and starters of Sewerage Pump House in i) Near 55G type Qtr. Area, ii) Beside J C Ghosh & P C Roy science Block and iii) Agriculture Farm House.

Sl. No.	Job description	Unit	Qty.	Rate	Amount (Rs.)
1	Comprehensive maintenance for one year: Motor with pump set servicing (Exclude the motor winding), overhaul the pump and motor, bearings are to be checked/cleaned and properly greasing or replaced if required. Any other rectification job has to be done as per ANX-1 (Spare parts material is included in the Scope of work).				
1 (a)	Upto 5.5 HP Pump Motor Set	Set	4		
1 (b)	Above 5.5 HP and Upto 10 HP	Set	2		
1 ©	Above 10 HP and Upto 20 HP	Set	4		
1 (d)	Above 20 HP and Upto 35 HP	Set	3		
1 (e)	Above 35 HP and Upto 50 HP	Set	1		
2	Motor starter servicing/repairing contactors are cleaning, tightning of connection, burnt lead replacement as per required. (Spare parts material is included in the Scope of work).				
2 (a)	Upto 5.5 HP Pump Motor Set	Set	4		
2 (b)	Above 5.5 HP and Upto 10 HP	Set	2		
2 ©	Above 10 HP and Upto 20 HP	Set	4		
2 (d)	Above 20 HP and Upto 35 HP	Set	3		
2 (e)	Above 35 HP and Upto 50 HP	Set	1		
3	Gate valve/Butterfly valve repairing/replacement, valve dia. 100mm to 150mm (Spare parts material is included in the Scope of work).	Set	10		
4	Pipe line replacement as required , Pipe dia 100 mm to 150 mm (Spareparts material is included in the Scope of work, including supply of pipe if required).	Mts	30		
Total Amount in Rs. (Inclusive GST)					

Total amount in words inclusive GST (Please mention applicable GST %):

Signature of contractor



Check list for Weekly / Bi-weekly / Quarterly / Monthly / Half - Yearly / Yearly**Sewerage Pump House No- 1, 2 & 3, IIT Khargpur Campus**

Sl. No.	Pump House No.	Location	No. of Pumps	Capacity of Pumps	Motor Starter	VOLT.	CURRENT			Speed/ RPM OK/Not OK	Bearing Sound OK/Not OK	Greasing	Abnormal Sound if any Yes/ No	Heating Normal/ Abnormal	Starter Condition OK/Not OK	Indication lamps	Push buttons	Remarks			
							R	Y	B												
1	No # 1	Beside S/S # 9 (Nearer 55G Type Qtr. area)	4	(a) 10 HP Motor, Make: KIRLOSKAR CHEMICAL	Star Delta, Contactor MNX-12, MCB C32,4Pole																
				(b) 10 HP Motor, Make: KIRLOSKAR CHEMICAL	Star Delta, Contactor MNX-12, MCB C32,4Pole																
				(c) 20 HP Motor, Make: KIRLOSKAR CHEMICAL	Star Delta, Contactor MNX-12, MCB C63,4Pole																
				(d) 03 HP Submersible Pump	Direct from MCB C32,4pole																
					DOL Starter (Spare) Contactor MNX-9, L&T, MCB C32,4Pole																
2	No # 2	Beside P C Roy & J C Ghosh Science Block	5	(a) 35 HP Motor, Make: KIRLOSKAR CHEMICAL	Star Delta, Contactor MNX-45, MCB C100,4Pole																
				(b) 35 HP Motor, Make: KIRLOSKAR CHEMICAL	Star Delta, Contactor MNX-45, MCB C100,4Pole																
				(c) 12.5 HP Motor, Make: KIRLOSKAR CHEMICAL	Star Delta, Contactor MNX-12, MCB C63,4Pole																
				(d) 03 HP Submersible Pump	DOL Starter Contactor MNX-9, L&T, MCB C32,4Pole																
				(e) 03 HP Drain Out Pump	DOL Starter (Separate), L&T Make																
					DOL Starter (Spare) Contactor MNX-12, L&T, MCB C63,4Pole																
3	No # 3	Beside Agriculture Farm House	8	(a) 25 HP Motor, Make: KIRLOSKAR SURLOSKAR	Star Delta, Contactor MNX-12, MCB C63,4Pole																
				(b) 15 HP Motor, Make: KIRLOSKAR SURLOSKAR	Star Delta, Contactor MNX-12, MCB C63,4Pole																
				(c) 20 HP Motor, Make: KIRLOSKAR SURLOSKAR	Star Delta, Contactor MNX-12, MCB C63,4Pole																
				(d) 50 HP Motor, Make: KIRLOSKAR SURLOSKAR (Motor burnt and out from Pump)	Star Delta, Contactor MNX-12, L&T, MCB C63,4Pole(Spare)																
				(e) 03 HP Submersible Pump	DOL Starter Contactor MNX-9, L&T, MCB C32,4Pole																
				(f) 5.5 HP Mono Pump Motor, Water immersed	DOL Starter (Separate), L&T Make																
				(g) 5.5 HP Mono Pump Motor, Water immersed	DOL Starter (Separate), L&T Make																
				(h) 01 HP, 3Ph Pump Motor for treatment plant	DOL Starter (Separate), L&T Make																



Special Condition for Electrical work

1. The work shall be carried out as per national code or C. P. W. D specifications for works with correction slips issued up-to date unless otherwise specified in the schedule of quantities for the works.
2. The following Indian Standard Specifications and Codes of Practice will apply to the equipment and the work covered by the scope of this contract. In addition the relevant clauses of the Indian Electricity Act 1910 and Indian Electricity Rules 1956 as amended upto date shall also apply. Wherever appropriate Indian Standards are not available, relevant British and/or IEC Standards shall be applicable.

BIS certified equipment shall be used as a part of the Contract in line with Government regulations. Necessary test certificates in support of the certification shall be submitted prior to supply of the equipment.

It is to be noted that updated and current Standards shall be applicable irrespective of those listed below.

Low voltage Switchgear and Controlgear specifications	IS 13947 : 1993
Part 1 – General	
Part 2 – Circuit Breakers	
Part 3 – Switch Fuse Units	
Part 4 – Contactors and Motor Starters	
Part 5 – Control Circuit Devices	
Electrical Relays for power system protection	IS 3231 : 1986
Low voltage Switchgear and Control gear assemblies	IS 8623 : 1993
Marking of Switchgear busbars	IS 11353 : 1985
Degree of Protection of Enclosures for low voltage switchgear	IS 2147 : 1962
Code of Practice for selection, installation and maintenance of Switchgear	IS 10118 : 1982

4. No under-ground work or above the false ceiling shall be covered until the same has got approved by the Engineer-in-charge. The contractor will supply the drawings of specific works for approval, if required
5. All the old wiring has to be dismantled with proper care. The reusable old materials if any are to be handed over to departmental store with proper documentation and the other non reusable (nil reselling value) will be disposed by the contractor. The contractor shall clear the site thoroughly of all scaffolding materials & rubbish etc. left out of his work & dress the site around the building to the satisfactions & his decision in writing shall be final & binding on all concerned
6. Special care to be taken to avoid any theft of electrical fittings and fixtures while executing the work.
7. The location of Panel / DB / Switch board / Light point / Fan point will be as per existing location or as per the instruction of Engineer-in-charge.
8. All the wiring will be done with feruling and cable / Wire termination by required size or lugs of required materials and It should be noted that license wire man shall only be allowed for the wiring work.

Electrical safety at work site

The contractor will identify one of the supervisors for taking care of implementation of Safety systems.

The Contractor should follow the following General Guidelines governing the safety rules as laid down under:

Usage of eye protection equipment shall be ensured when workmen are engaged for grinding, chipping, welding and gas-cutting. For other jobs as and when site safety co-coordinator insists eye protection has to be provided.



1. All safety appliances like Safety shoes, Safety gloves, Safety helmet, Safety belt, Safety goggles etc. shall be arranged before starting the job.
2. All excavated pits shall be barricaded & barricading to be maintained till the backfilling is done. Safe approach to be ensured into every excavation.
3. All the dangerous moving parts of the portable / fixed machinery being used shall be adequately guarded.
4. Ladders being used at site shall be adequately secured at bottom and top. Ladders shall not be used as work platforms.
5. Material shall not be thrown from the height. If required, the area shall be barricaded and one person shall be posted outside the barricading for preventing the tre-passers from entering the area.
6. Other than electricians no one is allowed to carry out electrical connections, repairs on electrical equipment or other jobs related thereto.
7. All electrical connections shall be made using 3 or 5 core cables, having a earth wire.
8. Inserting of bare wires for tapping the power from electrical sockets is completely prohibited.
9. A tools and tackles inspection register must be maintained and updated regularly.
10. Debris, scrap and other materials to be cleared from time to time from the workplace and at the time of closing of work every day.
11. All the unsafe conditions, unsafe acts identified by contractors, reported by site supervisors and / or safety personnel to be corrected on priority basis.
12. No children shall be allowed to enter the workplace.
13. All the lifting tools and tackles shall be stored properly when not in use.
14. Clamps shall be used on Return cables to ensure proper earthing for welding works.
15. All the pressure gauges used in gas cutting apparatus shall be in good working condition.
16. Proper eye washing facilities shall be made in areas where chemicals are handled.
17. Connectors and hose clamps are used for making welding hose connections.
18. All underground cables for supplying construction power shall be routed using conduit pipes.
19. Spill trays shall be used to contain the oil spills while transferring / storing them.
20. Tapping of power by cutting electric cables in between must be avoided. Proper junction boxes must be used.
21. Non-compliance to above shall invite a penalty recovery as per 3.22.8.