



RAJKOT MUNICIPAL CORPORATION

RAJKOT

: Name of Work :

Design, Procurement, Installation, Erection, Testing and Commissioning, of Pumping machinery, piping and electrical for the pump house at Jilla Garden ESR & GSR for the water supply augmentation scheme for Ward 8 & 15 Jilla Garden- Rajkot including 05 Years Comprehensive Operation and Maintenance of pumping station.

TENDER NOTICE NO.: / 2019

Milestone Dates	
Downloading of e-Tender documents	30/ 05 /2019 to 21 / 06 /2019 upto 1800 Hours
Pre – Bid Meeting in the office Addl. City Engineer at Central Zone office	10 / 06 /2019 at 1100 Hours
Last date of Online Submission of Technical Bid & Price Bid	21 / 06 /2019 up to 1800 Hours.
Date of submission of physical document EMD, Tender fee, and other documents.	27 / 06 /2019 up to 1800 Hours.
Online Opening of the Technical Bid and verification of physical documents - EMD, Tender fee and bank Account Number/GST/PAN.	On 27/06/2019 at 1800 Hours (if possible)
Opening of On-line price bid	On 29 /06/2019 at 1100 Hours (if possible)
Bid Validity	180 Days

Note : Bidders are requested to submit their queries before 09/06/2019, 12:00 PM on kpdeharia@rmc.gov.in, hmkhakar@rmc.gov.in, dy_trivedi@yahoo.co.in

VOLUME – III PRICE BID

**The ADD. City Engineer,
Rajkot Municipal Corporation,
Water Works Central Zone Room No.06
Dhaberbhai Road,
Rajkot – 360 001**

RAJKOT MUNICIPAL CORPORATION

Name of Work: Design, Procurement, Installation, Erection, Testing and Commissioning, of Pumping machinery, piping and electrical for the pump house at Jilla Garden ESR & GSR for the water supply augmentation scheme for Ward 8 & 15 Jilla Garden- Rajkot including 05 Years Comprehensive Operation and Maintenance of pumping station.

VOLUME III (PRICE BID)

INDEX

Sr. No.	CONTENT	Page No.
01	Bill of quantities	03-04
02	O & M	05
03	Schedule A	06
03	Schedule B (Price Schedule)	07
04	Payment Schedule	08
05	B O Q Part-B1 Mechanical	09 to 13
06	B O Q Part-B2 Electrical	14 to 19
07	B O Q Part-B3 Comprehensive Operation and Maintenance	19 to 20

BILL OF QUANTITIES AND PRICE

The Bill of quantities consists of following sections:

Supply items (Horizontal split casing centrifugal pumps for water, Elect Motors, Electrical & Mechanical items related to turnkey work. etc)

Erection Items (Pumps, Motors, all piping of seamless MS pipe of 6.3 mm thk, valves, Electrical control panels, lighting, foundation plates, Puddle grouting etc.

Civil Works (Foundation bolts grouting, Grouting for all CI / MS piping, Manifold header with valves, rising main from pump house to ESR Shaft, puddles, operating platform with MS Angles-channels & railing Etc.

Summary:

The bill of quantities forms the most important part of the tender documents. The supply, Erection and Commission of various equipment which form a part of total works are indicated in the schedules separated include in the documents. The tendering contractors shall price of this document.

Each items in the bill of quantities is individually priced is shown in and the tender sum. The description of the works given here is only for guidance and all relevant clause must be consulted. The contractor's prize must allow for all works as per the detailed specification and for all works as per the detailed specification and for all contractual obligations whether separately specified or not.

SUPPLY ITEMS

The supply items (Pure water Horizontal split casing centrifugal pumps, Elect Induction Motors, Electrical control panel (MCC) & all Electrical & Mechanical items related to turnkey work. etc. including spares to be supplied as specified in tender)

ERECTION ITEMS

Erection, Testing and Commissioning

The bill of quantities for supply, erection, testing and commissioning of the pumping station, insurance until the pumping station is handed over. It also include provision of representatives, erection skilled, semiskilled and unskilled labor, provisions of contractor's equipment / machinery, power cabling etc. complete.

This shall also include:

The cost of passages for all expatriate staff from contractor head office to site of works and allied expenses.

Performance testing and commissioning.

Three month's running trial run.

CIVIL WORKS

Civil works requires for following.

Foundation bolts grouting, concreting, Grouting for all CI/MS piping puddles, Etc.

Support of piping system.

All required necessary items as directed by engineer in charge.

The bill of quantities, general conditions of contractor and the specifications which from an integral part of this contractor shall be read in conjugation.

The rates and price in the bill of quantities shall except in case separately provided for be deemed to cover all the contractor obligation under this and above quoted documents which require the setting of the works for satisfactory performance.

The break-up of payment for different items shall be decided by the municipal corporation wherever not specified in the tender.

NOTE:

The above prices should also include transportation to site, loading and unloading at site, storage at site, insurance etc. complete.

The quoted price must be inclusive of all applicable Central and state and Taxes duties, sales-tax on work contract, octroi and entry tax as specified in GC- 18 of tender vol-I.

The inspection of Equipment's shall be at the cost of contractor.

The General breakup of payment will be as under.

4.1 On supply of equipment's	65 % item wise against delivery.
4.2 On Erection of equipment's	15 %
4.3 On Testing and commissioning	10%
4.4 After satisfactory running of plant/machinery and 03 Month Operation and maintenance	10%
TOTAL = 100%	

OPERATION & MAINTENANCE OF PUMPING STATION:

O & M of **60 months** include following.

Operation and maintenance shall include:-

- 1 Spare Parts, tools and tackles required during O & M period
- 2 Administration & management, training charges including running office etc.
- 3 Comprehensive Operation and Maintenance including preventive maintenance
And cost of lubricants, Cost of repairs (All electro mechanical equipment's,
Refurbishment of spare parts, general utilities
- 4 Estimated value of taxes (if any) including service tax
- 5 Training of RMC staff.
- 6 All other consumables and other related expenses.
- 7 Chlorination system will be provided and commissioning by Agency initially, but the same will be maintained by Contractor for entire period of O & M, it includes operation and comprehensive maintenance of chlorination system.

Operation and maintenance shall not include:-

- 1 Electricity Bill(PGVCL Bill)
- 2 Communication/ Telephone Bill
- 3 DG Set Fuel
- 4 Chlorine tuners Cylinder

Note: - Employee/Man power shall be provide as per the annexure I of O&M. If contractor fails to provide nos. of staff mention in the schedule, his payment shall be cut down on following shift/monthly basis.

Sr. No.	Designation	No. of persons required	Monthly wages in Rs. Experience
1.	Operator Electrical/Mechanical	3 (Single in each shift)	Rs. 8325.20
2.	Helpers cum Sweeper	3 (Single in each shift)	Rs. 8117.20
3	(House- Keeping)	1 (General Shift)	Rs. 8117.20
	Total	7 Nos.	

Note: - rates up monthly basis as per minimum of month December 2018

Contractor shall have to submit the muster roll each shift monthly to the engineer in charge, which shall be certified by the Concern DEE of pumping station.

Minimum staff / Manpower required shall be as per the schedule shown in Technical Specifications.

Payment shall be made quarterly as per the payment schedule for Comprehensive Operation and Maintenance.

Penalty – Operator, Helper (Per day)

SCHEDULE – A

Schedule showing a material to be supplied from Rajkot Municipal Corporation stores at free of cost for use in work contracted and to be executed.

Name of Work: Design, Procurement, Installation, Erection, Testing and Commissioning, of Pumping machinery, piping and electrical for the pump house at Jilla Garden ESR & GSR for the water supply augmentation scheme for Ward 8 & 15 Jilla Garden- Rajkot including 05 Years Comprehensive Operation and Maintenance of pumping station.

Sr. No.	Particulars	Qty.	Rate at which material will be charged to the contractor	Total amount
-	NIL	-	-	-
NOTE NO. 1	The Contractor shall have to make his own arrangement for procuring the cement required for the work from open market. Cement shall be ordinary Portland cement confirming to IS 269. Or IS 8112 Grade 43 No mini-plant cement shall be allowed.			
NOTE NO. 2	The person or firm submitting the tender should see that the rates in the above schedule are filled up by the Engineer-in-charge for the issue of the firm prior to submission of the tender.			
NOTE NO. 3	Material not included in “SCHEDULE – A” but required for the work shall be provided by the contractor and cost of such material shall be included in the respective tendered items by the contractor.			

Signature of Contractor

ADD. City ENGINEER
Rajkot Municipal Corporation

PAYMENT SCHEDULE

Schedule of payment % Break-up of payment for each component of the Pumping machinery during supply, installation, trial run, & commissioning.

Sr. No.	Break-Up	% of quoted Amount
1.	On supply of equipment	65 %
2.	On Erection of equipment	15 %
3.	On Testing and commissioning	10 %
4.	After satisfactory running of plant/machinery and 03 Month Operation and maintenance	10 %
	TOTAL	100 %

Schedule of payment % Break-up of O & M component of 60 months.

Sr. No	Break-up	% of quoted amount of O & M
1.	Quarter I of each year	24
2	Quarter II	24
3	Quarter III	24
4	Quarter IV	22
5	On handing over the plant / pumping station to owner	06
	Total	100

Note: -O&M cost @ 6% will be kept as a security Money and will be returned to contractor without any interest at the end of fifth year

Contractor's Signature

ADD. City ENGINEER
Rajkot Municipal Corporation

Water Supply Scheme at Ward No. 8 & 15, RMC,
District: Rajkot

SCHEDULE-B

Name of Project :-Design, Procurement, Installation, Erection, Testing and Commissioning, Operation and maintenance of Pumping machinery, piping and electrical for the pump house at Jilla Garden ESR GSR for the water supply augmentation scheme for Ward 8 & 15 Jilla Garden -Rajkot including O&M of pumping station for 05 Years period.works at Jilla Garden,Rajkot Municipal Corporation,Rajkot.

SCHEDULE -B ABSTRACT (GRAND SUMMARY)

Schedule. No.	Description	Amount (in Rs)	Amount in words (in Rs)
B1	Mechanical Equipment & Control Panel for Pump Room at Jilla Garden Water Works	7614000.00	Rupees SeventySix Lakh Fourteen Thousand Only
B2	ELECTRICAL Equipments, material and services to be supplied for pump room at Jilla garden water works	12807000.00	Rupees One Crore TwentyEight Lakh Seven Thousand Only
B3	Comprehensive O & M for 5years	3654000.00	Rupees ThirtySix Lakh FiftyFour Thousand Only
	Total of Schedule B1 to B3	24075000.00	Rupees Two Crore Fourty Lakh SeventyFive Thousand Only
	SAY	24075000.00	Rupees Two Crore Fourty Lakh SeventyFive Thousand Only

Note:-1 All work shall be carried out as per public works Department Handbook and other specifications of Division or as Directed.

Note:-2 Agency has to quote rate

Note:-3 Rates quoted include clearance of site (Prior commencement of work and at its close) in all respects and hold good for work under all conditions, site, moisture, weather etc.

Note:-4 Working survey should be carried out by contractor before starting work

A.A.E
SIGN OF CONTRACTOR

A.E

D.E.E

D.E.E

A.C.E
Water Works Division,RMC, Rajkot

RAJKOT MUNICIPAL CORPORATION

WATER WORKS - BHADAR

MECHANICAL ABSTRACT - A

PRICE SCHEDULE : MECHANICAL EQUIPMENT FOR PUMP ROOM AT JILLA GARDEN WATER WORKS

Sr. No	Item Description	Qty	Unit	Rate (Rs)	Amount (Rs)
1	2	3	4	5	6
1	HSCF PUMP (SET)				
	SITC of approved make horizontal split casing centrifugal pump confirming to IS-6595 of required capacity and head with suitable TEFC Squirrel Cage Induction motor working on 3 Phase 50 HZz +/- 3% ,415 V +/- 10% along with base frame confirming to IS 12615 - (Efficiency IE-3), coupling with guard, foundation bolts etc. complete. set as per relevant IS and following M.O.C				
	Impeller and Wearing ring CF-8M, Shaft and Sleeve -S.S., Casing .C.I., Base Frame MS				
	Duty Point - 150 HP / 110 KW (2W+2SB)				
	i) Discharge :185.00 Lps				
	ii) Head :- 40.00 Mtrs.	4	Nos.	826500.00	3306000.00
2	DUAL PLATE CHECK VALVES				
	Supply, Installation, testing, painting & Commissioning of non slam, Spring action, Flanged Dual plate check valve confirming to API 594 & 598, PN 1.0 with C.I. body, S.S. seating and spring steel with all necessary carbon steel hardwares.				
	Size : 350 mm N.B. - Delivery side of each pump (Manual Operation)	4	Nos.	57418.00	229672.00
3	VALVES				
	SLUICE VALVE				

	Supply, Installation, testing, Painting & Commissioning of ISI mark C.I. D/F Sluice Valve confirming to IS 14846 of PN 1.0 rating and diameter incl. all taxes, insurance, transportation, Freight, Charges, inspection charges, load-ing unloading, conveyance to departmental stores, stacking etc. complete				
	Motorized Valves fitted with Rotor (Syncropac)/ Auma (E-Pac) with integral starter / as well as gear operated				
	(A) Sluice Valve with Actuator - ISI Mark Only.				
	Size : 400 mm. N.B. - Suction side of each pump	4	Nos .	51426.00	205704.00
	Size : 350 mm N.B. - Delivery side of each pump	4	Nos .	36136.00	144544.00
	Size : 600 mm N.B. - on Header pipe	1	Nos .	142678.00	142678.00
4	SITC of stainless steel expansion bellows with flanges, 75 mm axial movement, 350 mm overall length with tie rods nuts etc.				
	a. 350 mm	4	No.	18555	74220.00
	b. 600 mm	1	No.	39827	39827.00
5	MS Angles –channels 1.0 m wide Operating platform with railing including fabrication for 04 pumps	1	Lot	106500.00	106500.00
6	PIPE & PIPE SPECIALS				
	Manufacture, supply, Delivery, Lowering & Laying and Jointing of submerged Arc Welded MS pipeline having beveled ends conforming to IS-3589-2001 or its latest revision/ammendment for following thick outside dia. at site anywhere in Gujarat State including all taxes, insurance, transportation, fright charges, inspection charges, loading unloading conveyance departmental stores, stacking etc. comp.				
a	Size : 406.4 mm. OD. -6.3 mm thk (Suction side of each pump) Aproximate qty	1	Lot	113600.00	113600.00
d	Size : 355.6mm. O.D. - 5.6 mm thk (Delivery side of each pump) Aproximate qty	1	Lot	89425.00	89425.00
e	Size : 610 mm. OD. - 6.3 mm thk (Header Pipe Laying Pump House to ESR Inlet Vavles With Connection) Aproximate qty	1	Lot	341550.00	341550.00
7	E.O.T CRANE				

	Providing & erecting Double girder Monorail type fully electrically perated E.O.T crane with electrically operated hoist , class II Duty , Geared travelling trolley with 7 seven mtr. Lift complete with long travel rail track (40 mm sq Bar) moving or cross girder , all three motions electrically operated by suitable rating motor IP 54 , Control panel & down pendant control block , brake , safety Device , cables form motor to starter panel & other required accessories & tested to 50 % overloaded					
	3 tonne capacity	1	Nos	670500.00	670500.00	
8	EXHAUST FAN					
	Supplying & erecting single phase approved make industrial exhaust fan suitable for medium duty ring mounted low noise operation suitable for medium duty having following dia size and maximum speed in RPM [A] 305 mm dia 900 RPM cat - ii	6	No	2400	14400.00	
9	MS Specials Flanged Ended - SITC of M.S.Specials fabricated from MS pipes/ plates of required thickness confirming to relevent IS including hot dipped galvanized, High Tensile Bolts, Nuts, Washers etc. as per technical specification including all taxes, duties, insurance, transformation, freight, inspection, loading, unloading,convey to site, stacking, etc. complete.	1	Lot	125800	125800.00	
10	DEWATERING PUMP SET					
	Providing, Erecting approved make Portable Self priming horizontal mono pump set (Dewatering Set) having flow rate 12-30 LPS & 6-12 Meters head, GI Medium duty delivery pipes , specials, suction strainer etc complete. set					
	5 HP, 3 phase M.O.C. Impeller- Bronze, Casing C.I. Shaft Carbon Steel	1	No	24141	24141.00	
11	VACCUM PUMP					
	Providing, Erecting approved make coupled vaccum pump set having air flow rate 20m3/hr with horizontal foot mounted TEFC squirrel cage motor having under mentioned capacity working on three phase 50Hz, 415 V +- 10%, with base plate, DOL starter , cable, GI medium duty suction pipes 10 meters long specials , valve , PVC tank of 250 litres capacity etc compete set.					
	M.O.C. Rotor Bronze, Involute C.I. Shaft Carbon Steel					
	5 H.P.	1	No	100150	100150.00	
12	Supply of Mechanical Spares & Tools – Tackles as per Annexure III & IV	1	Lot	1200000	1200000.00	

13	PRESSURE GAUGE (COMPOUND GAUGE)				
	Providing & Erecting burden type glycerine filled Compound and pressure gauge complete with syphone tube with isolating cock having range of having 0-14 kg/sq.cm as per IS 8793. - 150mm diameter	9	Nos	2207.5	19867.50
14	S.S. STRAINER				
	Supply, Installation, testing, painting & Commisioning of strainer				
	Size : 600 mm.	4	No.	40000	160000.00
15	Operation and maintenance manuals along with all electro mechanical Drawings.(for five year)	2	No.	4000	8000.00
16	SITC of Chlorination plant as per design capacity with all equipments and including of piping work with C-Channel rail for tonner, Fabrication of AC Sheet Roof (size 6 mtr X 4 mtr) including all type for pre/ or post chlorination. Chlorination gravity feed type chlorine unit (5 kg/ hr capaity) and 3 tone Capacity EOT including all structure and equipment etc complete	1	Nos	350000	350000.00
17	Protection and Emergency Equipment (Emergency kit no :-1as per list)	2	Nos	55000	110000.00
18	Chlorination Nutralization System Nutralization Pit (2.5x2.5x1.5 mt) this chamber construction of RCC Work (M-20)	10	Cu m	3709	37090
TOTAL AMOUNT (Rs)					7613668.50
SAY (Rs)					7614000.00
SAY (Rs in Words)					Seventy Six Lakh Fourteen Thousand Only

A.E.

D.E.E.

A.C.E.

RAJKOT MUNICIPAL CORPORATION						
WATER WORKS - BHADAR						
ELECTRICAL ABSTRACT - B						
PRICE SCHEDULE : ELECTRICAL EQUIPMENT FOR PUMP ROOM AT JILLA GARDEN WATER WORKS						
Sr.No	Item Description	Qty	Unit	Rate (Rs)	Amount (Rs)	
1	2	3	4	5	6	
1	11 KV SWITCHYARD					
1.1	TWO POLE STRUCTURE :					
	S.I.T.C. of 11 kV two pole structure made of 6" X 3" 'I' section girder having minimum 9 m length, ISMC - 100 - 4" X 2" channels, clamps, hardware, etc., suitable for erection of the following accessories duly connected with necessary ACSR conductors as per approved drawing & in compliance with requirement of IEC (without earthing & copper plate) (a) 11 kV, 200 A, drop out fuses with SRBP (Synthetic Resin Bonded Paper) tubes carrier - 3 nos. (b) 11 kV, 400 A, G.O.D. switch complete with insulators, operating handle with galvanised pipe, square bar, etc. - 1 set. (c) 11 kV lightning arrester with clamps - 3 nos. (d) 11 kV shackle insulators - 6 nos. (e) 25 mm x 3 mm thick copper earth strips in two parallel run in required quantity i.e. from LA to earthing chamber.	2	No.	137390	2,74,780.00	
	The cost shall include two pole structure, insulator, lightning arrester, switches, DO fuse, ACSR conductor and all other necessary accessories					
2	APFCR PANEL - AS PER IS 16636-2017					
2.1	Design, engineering, procurement, supply, Installation, Testing & commissioning of 415V, 150 KVAR APFCR Panel with fuses, 10 Steps control relay, contactors and necessary accessories as per technical specification and instruction by engineer incharge	2	No	363000	7,26,000.00	
3	DISTRIBUTION TRANSFORMER					

3.1	Design, Supply, installation, testing and commissioning of 11000 / 433 V, 475 KVA ONAN type step - down transformer confirming to IS 1180-P-I efficiency level-2 with OFF load tape changer as per Specification, Technical Data sheet and its Cost shall include License fees, chain link fencing, gate and all other necessary accessories.	2	No	803530	16,07,060.00	
4	H.V. CABLES					
4.1	Design, engineering, procurement, supply, laying, connecting, testing and commissioning of 11 KV armored, 3 core, 95 mm ² Al XLPE (E) cable for both DP to TR with ISI Mark including gland, lugs and necessary accessories, supports etc. as per specification and applicable IS.	2	Lot	46290	92,580.00	
4.2	HT Cable Termination kit - Indoor termination kit for 11kV - 95 Sqmm	2	No	7590	15,180.00	
4.3	HT Cable Termination kit - outdoor termination kit for 11kV - 95 Sqmm	2	No	12320	24,640.00	
5	415 V, 4 Pole Metal enclosed switchgear with incomer (As per Drawing)	1	Lot	2500000	25,00,000.00	
5.1	Design, engineering, procurement, supply, erection, testing and commissioning of Medium Voltage Distribution Board including required capacity 4 pole ACB incomer with bus coupler & Bus bar, 4 pole SFU for motor, APFC Panel, 4 Pole SFU for capacitor & LDB as per specifications, data sheet, IS & respective drawings.					
5.1.1	Design, engineering, procurement, supply, installation, testing and commissioning of MCC panel with incomer & bus coupler system & 4 Nos ATS Starter including required capacity capacitor. Also, desk panel shall be provided for change over switch for DG set.					
5.1.2	Design, engineering, procurement, supply, Installation, Testing & Commissioning of Lighting Distribution Board including required capacity TPN SFU incomer, and TPN outgoing for crane, DOL starters, Vaccume pumps, drain pumps, welding facility, internal and extrenal lighting arrangement etc. complete. This item also includes feeder for TPN ELCB, 2 Pole and 4 Pole MCB for spare.					

	The item described above and indicated in drawing is for reference to the contractor and indicates minimum items to be executed on site. However, in case any item to be executed additional as per design and site condition, the contractor shall execute the same with no extra cost.					
6	Desigging and SITC of Automation panel with all accessories (show in Drg.) - The items shown in drawings are indicative and minimum to execute. In case additional item need to execute as per design and actual site situation, contractor shall execute the same with no extra cost.	1	Nos	150000	1,50,000.00	
7	MEDIUM VOLTAGE CABLES					
7.1	Design, engineering, procurement, supply, laying, connection, testing and commissioning of heavy duty, medium voltage, PVC insulated, inner & outer PVC sheeted, standard Cu conductor armoured cables as per specification & IS. The cable shall be laid underground as per electrical drawing and design, Transformer to Main Panel, Main Panel to Motor, Main Panel to APFC, DG to Change over switch, Main Panel to LDB, Main Panel to Automation Control Panel, LDB to Dewatering Pump, LDB to Vaccune Pump, LDB to E.O.T. Crane, LDB to All ligthing (contol cables), Automation panel to valve actuator and all required cable for completion of all works incuding SCADA work as per site condition and instruction by engineer in charge.	1	Lot	2400000.00	24,00,000.00	
7.2	Design, engineering, procurement, supply, installation, testing and commissioning of Cable end termination as per site condition and instruction by engineer in charge	1	Lot	20000.00	20,000.00	
7.3	(a) Design, engineering, procurement, supply, installation, testing and commissioning of G. I. Perforated type cable tray with G. I. coupler plate & nuts bolts and associated tees elbows and reducers including coupler plates etc., - 150mm/300mm/450mm Wide X 35mm Height X 2mm thick as per site requirement	1	Lot	43200.00	43,200.00	
8	(a) Design, supply, installation, testing and commissioning of Chemical Earthing as per site condition and instruction by engineer in charge - Chemical Earthling for					
	1. Transformer					
	2. DP Structure					
	3. MCC panel	1	Lot	150000.00	1,50,000.00	
	4. Motor					
	5. DG Set					

8.1	b) Design, supply, installation, testing and commissioning of HOT Deep Galvanised Strip for earthing of Transformer Body, DG Set Body, LT Pannel board, Motors, etc., using necessary clamps. - 50mm X 5mm for main earth grid and 25mm X 5mm for other as per site requirement and instructions of engineer in charge	1	Lot	20500.00	20,500.00
8.2	c) Design, supply, installation, testing and commissioning of copper strip for Transformer Neutral and DG Set Neutral using necessary clamps. - Size - 25mm X 5mm or as per site requirement and instructions of engineer in charge	1	Lot	21000.00	21,000.00
9	Design, engineering, procurement, supply, installation, testing and commissioning of DG Set. Continuous Rating of 400 KVA (Roof and Foundation Work in civil scope)				
9.1	Supplying and erecting, commissioning and testing diesel generating set having continuous rating, 3 phase, 415 volts, 50 cycles A.C. supply comprising of a totally enclosed air/water cooled diesel engine with multi-cylinders developing suitable BHP not less than following capacity at 1500 RPM with 10% overload for one hour in 24 hours with standard accessories like fly wheel, lubricating oil cooler, "A" class governor, heavy duty fuel wheel and lubricating oil filter, oil bath air filler, lubricating oil pressure gauge, end exhaust manifold, standard set of cylinder head to cover, joint cylinder head to exhaust, element lube oil filter, 12/24 volts electric starting equipment complete with standard battery, dynamo, cut-outs, ammeter, necessary cable, wiring, C/O switch, pressure gauge, starter etc and heavy duty Residential type exhaust silencer and vertical hot air duct both.	1.00	Nos	39,50,000	39,50,000.00
	Note: Necessary approval from Electrical Inspector will be in scope of Agency.				
	logged with asbestos rope, save oil trays, exhaust piping of required length, standard wall/floor mounted fuel with level indicator and piping and drip proof alternator, self excited, self regulated, screen protected, with excitation system, capable of delivering the rated system output at 415 volts, 3 phase, 0.8 PF, 50 Hz, 4 wire, running at 1500 RPM, conforming to IS-4722- 1968 with voltage regulation +/- 5% of rated voltage from no load to full load. Both the engine and alternator fitted on a common fabricated steel base plate with antivibration mounting engine and alternator both connected to each other by flexible flange coupling and with floor/wall mounted control panel box comprising of voltmeter ammeter, selector switches, ACB / MCCB / MCB of adequate capacity,				

	indicator lamps duly wired with HRC fuses. The alternator & control panel shall be connected with provided suitable capacity armoured cable and complete with Acoustic enclosure (canopy) made out of 18 SWG CRCA Sheet, sound absorbing material Rockwool of 64 density & 100 mm thick conforming to IS:8183 The resin bonded rockwool covered from inside the canopy by perforated sheet with 3/4 mm holes, sound level not more than 75 dB at a distance of 1 mtr, as per PVCT norms. Erection, commissioning and satisfactory testing as per requirement with first filling of fuel, oil, etc. with guarantee of complete system for comprehensive O&M Period. & with obtaining all necessary certificate from Electrical Inspector. The Capacity and Ratings of DG sets are as below.					
10	INTERNAL WIRING					
10.1	Design, engineering, procurement, supply, Installation, testing and commissioning of following outlet points as mentioned below. The unit rate for the point shall consist of the circuit wiring from MCB in LDB to outlet point as required and including connector, PVC junction box, sockets etc. A point shall include in addition to phase and neutral wire and earth continuity wire from panel to the final termination at outlet points. All the wiring, outlet point shall be done with PVC conduit of min. 25 mm. The main circuit shall be of 2.5sqmm size cable. Primary and secondary circuit shall be 2.0 sqmm or 1.0 sqmm as per the actual requirement. A separate MCB and circuit shall be provided for each 10.0 point connection. In case point connection exceeds to 10 No, a separate MCB / Circuit shall be provided. Also, separate circuit / connection shall be provided for domestic point. For primary / secondary lighting, point wiring in copper (modular) shall be provided.	1	Lot	250000	2,50,000.00	
10.2	Primary light point.	1	Lot			
10.3	Secondary light point	1	Lot			
10.4	15/6A Plug point	1	Lot			
10.5	Industrial metal clad plug point	1	Lot			
11	LIGHT FIXTURES					
	Design, engineering, procurement, supply, installation and testing of light fixture complete with all required accessories & mounting bracket for internal lighting	1	Lot	15000	15,000.00	
11.1	1 x (18 to 22) W LED surface or suspended type IP-65 light fixture with lamp & all necessary arrangement(Manufacturing : phillips, Cg, Havells , bajaj)	16	Nos	880	14,080.00	

11.2	Ceiling Fan (Heavy Duty) double ball bearings 3 blades	5	Nos	3210	16,050.00	
11.3	30W LED indoor type Fitting (SITC Fittings) (Manufacturing : phillips, Cg, Havells , bajaj)	10	Nos	3150	31,500.00	
11.4	90W LED outdoor Fittings (SITC Fittings) (Manufacturing : phillips, Cg, Havells , bajaj)	20	Nos	12450	2,49,000.00	
12	FOR EXTERNAL LIGHTING					
12.1	Design, engineering, procurement, supply, installation, testing and commissioning of external light including junction boxes, cables, connectors etc. complete as specified in Specification.	1	Lot	45500	45,500.00	
12.2	Design, engineering, procurement, Supply, laying, testing & connecting of medium voltage cable & cabling as described in chapter medium voltage cables for external lighting	1	Lot			
12.3	Design, engineering, procurement, Supply, Installation, testing and commissioning of earthing work as per standards for external lighting	1	Lot			
13	SAFETY ACCESSORIES					
13.1	Design, engineering, procurement, supply and fixing / laying / installation of following safety accessories complete with necessary fixing brackets, other accessories and tools etc. as required to complete the job.					
	(a) Supplying & erecting 4.5 kg capacity carbon dioxide (CO2) fire extinguisher with necessary clamps made from 50 x 6 mm M.S. Flat with nut & bolts grouted in wall complete.	2	Nos	7700	15,400.00	
	(b) Supplying standard First Aid Box with all standard contents	4	Lot	288	1,152.00	
	(c) Providing printed instruction chart both in English and Gujarati duly framed with front glasses for treatment of person suffering from electric shock	2	Each	144	288.00	
	(d) Supplying Fire Bucket round bottom of 9 liters capacity made out of 24 gauge GI sheet with extra handle at bottom duly painted white inside and red out side with fire mark, filled with dry sand and kept on existing stand provided or hung on wall hook.	4	Nos	155	620.00	

	(e) Supplying and erecting floor mounting stand for keeping four nos. fire buckets comprising 1500 mm in length, 900 mm height frame made out of 30 mm x 30 mm x 4 mm angle iron with cross supports for legs, welded with 4 hooks and duly painted with one coat of red oxide and two coats of approved enamelled silver paint.	1	Nos	518	518.00	
	(e) 11KV Grade rubber insulating mat (Front and Back Side of Panel) Supplying of 12 mm thick corrugated rubber mate of required length & breadth	1	Lot	7000	7,000.00	
13.2	Supply of Electrical Spares as per Annexure IV	1	Lot	165000	1,65,000.00	
Total Amount Rs :					1,28,06,048.00	
Say Rs :					1,28,07,000.00	
Say Rs in Word :					One Crore Twenty Eight Lakh seven Thousand Only	

A.A.E.

D.E.E.

A.C.E.

RAJKOT MUNICIPAL CORPORATION		
WATER WORKS - BHADAR		
COMPREHENSIVE O&M FOR 5 YEARS ABSTRACT - C		
Sr. No.	Details	Amount (Rs.)
1	OPEARATION COST 1st Year :	689332.00
2	OPEARATION COST 2nd Year :	689332.00
3	OPEARATION COST 3rd Year : 10 % increase on 1st Year	758265.20
4	OPEARATION COST 4th Year : 10 % increase on 1st Year	758265.20
5	OPEARATION COST 5th Year : 10 % increase on 1st Year	758265.20
TOTAL (Rs)		3653459.60
SAY (Rs)		3654000.00
SAY (Rs in Words)		Thirty Six Lakh Fifty Four Thousand Only

A.A.E

A.E

D.E.E(Mech.)

D.E.E(Elect.)

Addl.City Engineer

Note: .Bidders is advised to quote their rate in the numeric figures as well as in words by the bidders.

❖ Prices to be quoted online only in Percentage base.

Signature of contractor

