# School of Planning and Architecture (An Institution of National Importance, Ministry of Human Resource Development, Govt. of India) Neelbad Road, Bhauri, Bhopal – 462 030 (M.P.)



Ph: 0755-2526800 Ext. 429 Website: spabhopal.ac.in

No: Advertisement No. 09/2019 Date: 03/07/2019

#### Tender Notice for Supply & Installation of 500 LPH Capacity Reverse Osmosis Plant at SPA, Bhopal

Sealed tenders are invited for Installation of RO System 500 LPH (permeate capacity), Water Cooler Pure Chill 80 SS Without RO and Water supply distribution system in Girls Hostel-I, Boys Hostel-I & Boys Hostel-II (including a wing of Girls Hostel-II) at SPA, Bhauri, Bhopal. Tender document and other details containing Terms & Conditions can be downloaded from the Institute website i.e. spabhopal.ac.in.

Registrar

## Tender For Supply & Installation of 500 LPH Capacity Reverse Osmosis Plant at SPA, Bhopal

#### **List of Documents:**

- 1. Tender Notice
- 2. Schedule
- 3. Eligibilty Creiteria and others Terms & Conditions (Annexure 1)
- 4. Technical Specification (Annexure 2)
- 5. Technical Bid (Annexure 3)
- 6. Check List for Technical Bid
- 7. Financial Bid (Annexure 4)

## School of Planning and Architecture



(An Institution of National Importance, Ministry of Human Resource Development, Govt. of India) Neelbad Road, Bhauri, Bhopal – 462 030 (M.P.)

Ph: 0755-2526800 Ext. 429 Website: spabhopal.ac.in

No: Advertisement No. 09/2019 Date: 03/07/2019

## Notice For Supply & Installation of 500 LPH Capacity Reverse Osmosis Plant at SPA,Bhopal

Sealed tenders are invited for Installation of RO System 500 LPH (permeate capacity), Water Cooler Pure Chill 80 SS Without RO and Water supply distribution system in Girls Hostel–I, Boys Hostel-I & Boys Hostel-II (including a wing of Girls Hostel-II) at School of Planning and Architecture, Bhopal (An Institution of National Importance, Ministry of Human Resource Development, Govt. of India.)

Tenders complete in all respect should reach alongwith ₹2,000/- as tender fee by RTGS/NEFT to Account Name: SPA Bhopal-Internal Receipts Account No.: 2073201002565 (IFSC- CNRB0004725) to Section Officer (Stores & Purchase) by 15:00 hrs on or before 23/07/2019. Tender will be opened (Technical Bid) at 16:30 hrs on same day. Pre-bid meeting will be held on 09/07/2019; 15:00 hours in the Conference Hall, Senate Building of Institute. Incomplete Tender will be out-rightly rejected. Tender forms and other details given in Annexure can be downloaded from institute website i.e. spabhopal.ac.in

Registrar

- Institute reserves right to accept or reject any/all tenders without assigning any reason, thereof.
- Institute reserves the right to cancel the entire tendering process at any stage.

#### 2. Schedule:

Name of Work :	Tender for Installation of RO System 500 LPH (permeate capacity), Water Cooler Pure Chill 80 SS Without RO and Water supply distribution system in Girls Hostel–I, Boys Hostel-I & Boys Hostel-II (including a wing of Girls Hostel-II)	
Tender Fee :	RTGS/NEFT of ₹2,000/- (Account No. 2073201002565 IFSC-CNRB0004725) (Non-refundable) in the name of SPA BHOPAL-INTERNAL RECEIPTS	
Earnest Money Deposit (EMD):     [The amount (non-interest bearing shall be refunded after deducting the dues, on completion/termination of the contract for successful bidder] (EMD will be refunded to unsuccessful bidders)  [EMD not applicable for Micro and Small Enterprises (MSEs) as defined in MSE, Procurement Policy issued by Department of Micro, Small and Medium Enterprises (MSME) or are registered with the Central Purchase Organisation or the concerned Ministry or Department. (Please attached the relevant proof of documents)	RTGS/NEFT ₹ 1.00 lacs (One lakh only) (refundable to unsucessaful bidder but non-interest bearing) only in the form of RTGS/NEFT (Account No. 2073201002565 IFSC- CNRB0004725) from any Nationalized/ Scheduled Bank in favour of SPA BHOPAL - INTERNAL RECEIPTS	
Pre-Bid Meeting	15:00 hrs of 09/07/2019 (Conference Hall in the Senate Block)	
Last Date & Time for Receipt of Bid	15:00 hrs of 23/07/2019	
Date and Time of Opening of Technical bid	16:30 hrs of 23/07/2019	
Opening of Financial Bid	Will be informed to the qualifying bidders	
To whom the tender documents can be submitted	Bids shall be sent to Section Officer (Stores & Purchase Section), SPA, Bhopal, Neelbad Road, Bhauri, Bhopal-462030 (M.P.) by Speed Post (India Post)/by-hand	

2.1 The Technical bid in the prescribed format (Annexure-3) duly completed and signed should be submitted in a sealed cover super scribing "Technical Bid for Supply & Installation of 500 LPH Capacity Reverse Osmosis Plant" similarly the Price Bid in prescribed forms (Annexure 4) duly completed and signed shall be submitted in a separate sealed cover super scribing "Financial Bid for Supply & Installation of 500 LPH Capacity Reverse Osmosis Plant". Both the covers should put in a single large cover alongwith EMD & Tender Fee superscribing "Tender For Supply & Installation of 500 LPH Capacity Reverse Osmosis Plant" should be put in a Tender Box kept at Security Office, SPA gate, Bhauri Campus or send by Speed Post (India Post)/by-hand to Section Officer, Stores & Purchase Section, SPA, Bhopal, Neelbad Road, Bhauri, Bhopal-462 030 (MP) so as to reach us on or before the due date and time.

#### SECTION - 3

#### **ELIGIBILITY CRITERIA**

All the Bidders/ Agencies must fulfil the following eligibility criteria and submit the documents and the declarations (duly self-attested with stamp) in support of their claim along with the Technical Bid. The Financial Bids of only those bidders who meet all the eligibility criteria will be considered for opening. The bids not meeting the criteria and not accompanied with the requisite documents shall be treated as non-responsive hence rejected; and the corresponding financial bid shall also not be opened.

- The Agency must have registered office in Bhopal. In case of not having office in Bhopal they can submit an undertaking to start an office at Bhopal within one month of award of contract failing which the contract shall be cancelled and the EMD will be forfeited.
- 2. The Agency must have GSTIN Number and submit a self-attested copy of Certificate of Registration.
- 3. The Agency must submit Permanent Account Number and submit a self-attested copy of PAN card.
- 4. The Agency must have submitted Income Tax Return for last three years (2016-17, 2017-18 & 2018-19). Copies to be attached.
- 5. The Agency must have overall experience of 03 years in relevent field.
- 6. The agency must have attached a turnover certificate dully signed by the chartered Accountant in last three financial year i.e. F.Y. 2016-17, 2017-18, 2018-19. Minimum average annual turnover of last three years should be at least 11.00 lakhs.
- 7. An undertaking to the effect that the firm has not been blacklisted/ banned/ suspended/ debarred from any organization/ institute and no case is pending with the police or in court of law against their name, duly notarized. If the same is found at any point of time in any circumstance, the contracted shall be terminated and performance guarantee shall be forfeited.
- 8. The desirous bidders must submit the required EMD for bid security with technical bid and agree to submit the **Performance Guarantee** (5% of the total contract value) on the event of award of contract within 15 days of issue of Letter of Acceptance (LoA). The letter for award of contract will be issued to you only after receipt of above performance guarantee.
- 9. Copy of entire tender document must be numbered page-wise and duly self-attested and stamped on each pages as a token of acceptance of our terms and conditions.
- 10. The bidder must submit at least three Customer Satisfactory Performance Reports (CSPR) where the Agency has been working/worked during last three years.

#### **General Terms & Condition for Tenderer**

- 1. Tenderer should be read carefully & understand the scope of work which to be done.
- 2. Tenderers should clearly indicate on each copy of the tender under their full signature, whether it is the original or photocopy. Unsealed tenders will be rejected summarily.
- 3. No tender will be received after 15:00 Hours on 23/07/2019 & Tenders will be opened at 16:30 p.m. hours on 23/07/2019 at Senate Block in Conference Hall of School of Planning and Architecture, Bhopal at present campus Neelbad Road Bhauri Bhopal. Bidder or their representative may make himself present at the time of opening of the Bid.
- 4. The Contractor shall not sublet/assign any portion of the contract, except with the written consent of the Employer.
- 5. The Contractors responsibility for the contract shall commence from the date of issue of orders of acceptance of tender. The Contractor shall carry out all the work strictly in accordance with instructions by Stores & Purchase Section and Maintenance Cell.
- 6. The Contractor should note that unless otherwise stated the tender is strictly on item rate basis and his attention is drawn to the fact that rates for each and every item should be correct, workable and self supporting. The quantities in the Schedule of Quantities approximately indicate the total extent of work, but may vary to any extent and may even be omitted thus altering the aggregate value of the contract. No claim shall be entertained on this account.
- 7. Time allowed for carrying out the work will be 60 days from the award of the work order. The work shall throughout the stipulated period of the contract be proceeded with all due diligence and if the Contractor fails to complete the work within the specified period, he shall be liable to pay liquidated damage @0.5% of the contract value per week subject to maximum 10% of the contract value.
- 8. Correspondence: All the correspondence in respect of the tender/award of work shall be done to Stores & Purchase Section School of planning and Architecture, Bhopal, Neel Bad Road, Bhauri, Bhopal-462 030.
- 9. All documents submitted by the bidder should be self-attested along with stamp and should be valid up to the last date of validity of tender.
- 10. Price Bid (Part-B): In this bid, the bidder is required to quote his item rates in the BOQ attached in accordance with the scope of work, terms & conditions & technical specifications enclosed. The rates/price quoted by the contractor should be all inclusive i.e. should include all material cost, labour, services, plant/machinery/tools & tackles, ladders & scaffolding required for work, freight, Insurance, Octroi, Govt. Duties & levies, taxes (GST.), transport/cartage of materials/labour and all other expenses not specifically mentioned but reasonably implied. However, GST charges may be shown separetly.

Nothing over and above these rates shall be payable to the contractor. Further nothing extra in rates will be considered for any variations in tender quantities or due to any site difficulties. It is mandatory for the bidder to quote all item rates as asked for in the BOQ/ PRICE schedule. Failure in not filling some item rates will lead to rejection of tender. The bidders should quote unconditional rates, neatly written without any overwriting and all pages should be duly signed & stamped.

- 11. CPWD specifications and all amendments as well as I.S. Code numbers wherever mentioned in the tender shall be the latest version of CPWD specifications I.S. Codes, respectively as on the date of opening of Tenders.
- 12. Tenderer to Inform Himself fully:

  The Contractor shall be deemed to have carefully examined the work and site conditions including labour, the general and special conditions, the specifications, schedule and drawings and shall be deemed to have visited the site of work. To have fully informed himself regarding the local conditions and carried out his own investigations to arrive at the rates quoted in the tender. bidder, can visit the site before quoting rates during the working days (Monday to Friday (except holidays)
- 13. If during the execution of works, any damage is caused to SPAB property by contractor's workers, the contractor will duly make good the loss. The SPAB has the right to make a suitable deduction from contractor's bills along with penalties, if the contractor fails to make good the loss.

from 09:00 am to 05:30 pm) and meet Estate and Maintenance Office at main gate.

- 14. During execution of work, the contractor should follow all standard norms of safety measures/precautions as per relevant IS codes and CPWD specifications to avoid accidents/damages to man, machines and buildings, at his own cost. The Contractor will have his own arrangement to escort the labour to the nearest hospital for treatment in case any injury happens to any worker during execution of work.
- 15. Manpower deployed by the contractor at our site for carrying out contract works is strictly prohibited being associated with any other works on the campus.
- 16. Labour Laws: The contractor will abide by all the rules and regulations related to labour laws, accident, workmen compensation act, workmen insurance etc. This will be the sole responsibility of the contractor. SPAB will not be a party at any stage in any of the disputes relating to the above. In case, SPAB has to bear any expenditure due to non-conformance of the above provisions by the contractor, the same will be recovered from contractor's bills.
- 17. No material belonging to the contractor, whether consumable or non-consumable should be brought inside the SPAB campus without proper entry at the Main Gate nor any material should be taken out without proper gate pass issued by the authorized representatives of the Institute (SPAB).
- 18. Scope of Work: Detailed scope of work, special terms & conditions, makes of materials and specifications, etc. are enclosed with this Tender as per **Annexure –2**. Bidder must read them before filling rates.
- 19. Tender once submitted will remain with the Institute (SPAB) and will not be returned to the bidders.
- 20. Any dispute arising out of this contract will be subject to jurisdiction of Bhopal.
- 21. The Contractor will take due permission for the entry of all his workmen in SPAB. No unauthorised person will be allowed to work inside.
- 22. Contractor should depute a qualified supervisor dedicated for this work, who will monitor and coordinate work from the contractor's side and interact with the SPAB Engineers, responsible for supervision of work, on regular basis.
- 23. Warranty: RO plant, Water coolers and rapair/maintenance of complete system should be covered under warranty period of one year from the date of operation of the system. Whenver required, change of each part in the complete system should be the responsibility of service provider during warranty period of one year.

- 24. From second year onwards, Full Comprehensive AMC of RO plant and water cooler for 05 years should be provided for repair and maintenance including each parts by the service provider /bidder.
- 25. In case of any doubt; bidders may contact to Maintenance Cell, Gate Complex of the institute. (Phone 0755-2526808).
- 26. The contractor shall have to submit photocopy Registration which in the appropriate class with CPWD or Contractors of equivalent categories registered with other States /Central Govt. Departments, institutions, undertakings.
- 27. The contractor should get the sample of all material approved by Dean (P&D)/ Maintenance Cell prior to collecting for use in work.
- 28. In case of any dispute regarding the work, Director, SPA Bhopal will have right to take appropriate decision.
- 29. 5% of the net payable amount will be deducted as Security Deposit and will be paid after 1 Year of submission of the final bill.
- 30. During execution of the work, the contractor should dispose of waste material on a regular basis and should keep the area of work properly cordoned off and neat and clean as far as possible. After completion of work, the contractor should clear the site completely of all unwanted and junk material before submitting his final bill.
- 31. Claims –not admissible under following circumstances:
  - a) Extra items of work done without a written order of departmental officer.
  - b) In case of sudden fluctuation and/or increase in rates of labour, material, royalty, various taxes, railway freight, fuel, lubricant carriage cost etc .at Any stage work.
  - c) Non –availability of labour of any category required for the work.
  - d) Labour sitting idle due to any cause.
  - e) Delay in communication in changes or modification in design, drawing & specification at any stage of work.
  - f) Loss sustained due to:
    - 1) Acts of enemies, including agitation by public & riots.
    - 2) Transportation & procurement difficulties.
    - 3) Natural circumstances.
    - 4) Any other circumstances which are beyond human control.

I/We hereby declare that I/We have read and understood the above instructions for the guidance of bidders.

Witness: Signature of Bidder	
Address	
Address :	
Date:	<del></del>

#### **Technical Specifications**

**Name of work:** Supply &Installation of 500 LPH Capacity Reverse Osmosis Plant at School of Planning and Architecture, Neelbad Road, Bhauri, Bhopal-462 030 (MP).

#### 1. Introduction-

The proposed Reverse Osmosis System has been designed to produce permeate – 500 LPH from Raw Water with characteristics mentioned in further sections below.

The proposed Reverse Osmosis System consists of following constituents:

Raw Water tank (Client Scope) → Filter Feed Pump → Dual Media Filter→Activated Carbon Filter→Antiscalant Dosing System → Micron Cartridge Filter → High Pressure Pump → RO Block→ UV System→ Treated Water Tank (Client scope)

#### 2. Scope of Work -

- Installation, Testing & Commissioning of RO Water Plant and water cooler for supply of water at different locations of the hostels.
- Civil & Electrical Works with water distribution line and shed.

#### 3. Design of Required Reverse Osmosis system-

Feed flow rate	1.20 m <sup>3</sup> /hr.
Permeate flow rate	0.50 m <sup>3</sup> /hr.
Reject Line	60%
Blend Line	100 lit
System Recovery	40 %
Operation	Semi –Automatic
Source	Borewell, Municipal Corporation water
End Application	Drinking

#### **Limiting Conditions for RO Feed Water**

Temperature	Max. 40°C
Turbidity	< 2 NTU
Iron	< 0.3 ppm
Fluoride	< 1 ppm
SDI	< 3
Free Chlorine	Nil
Oil & Grease	Nil

#### Treated Water Quality at the Outlet of RO System:

Sr. No.	Parameters	Value	Unit
1	рН	6.5 - 7.5	
2	Odour	Odourless	
3	Color	Colorless	
4	TDS	100-150	Ppm

#### 4. Process Description -

#### **Dual Media Filter (DMF):**

The raw water will be passed through Dual Media filter for removal of suspended solids. The media provided for the same is sand and anthracite. The filter will be backwashed by indication of increase pressure drop and / once per day.

#### **Activated Carbon Filter (ACF):**

Water from pressure sand filter is passed through the activated carbon filter where all the color and odor get removed.

#### **Antiscalant Dosing System**

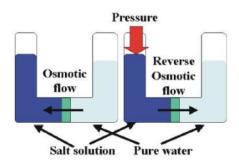
The anti-scalant chemical is added online to protect the membrane from scaling/fouling.

#### **Micron Cartridge Filter:**

The raw water is passed through Micron Cartridge Filter. The pore size of cartridges is 5 µm.

#### **RO System:**

Reverse Osmosis (RO) is the tightest possible membrane process in liquid/liquid separation. Water is in principle the only material passing through the membrane; essentially all dissolved and suspended material is rejected. Osmosis separates impurities from water by passing it through a semi-permeable membrane. The semi-permeable membrane allows only very small atoms and groups of atoms (such as water molecules, small organic molecules and gases) to pass through it.



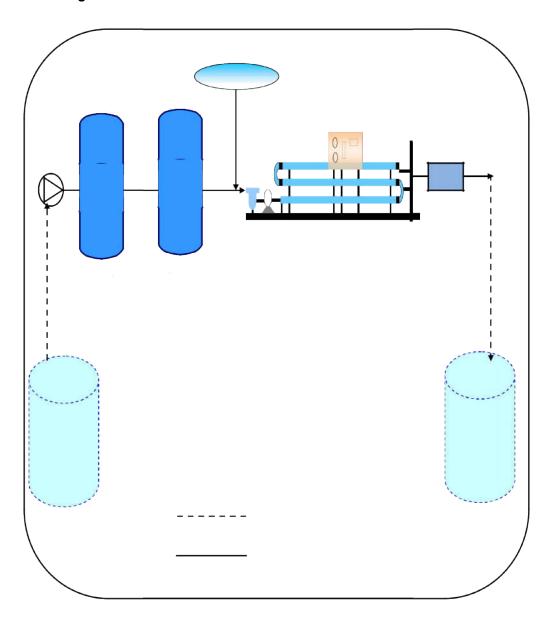
Advanced reverse osmosis technology uses "cross flow" that allows a partially permeable membrane to clean itself continually. As some of the fluid passes through the membrane, the rest continues downstream, sweeping the rejected species away from it. The process requires a pump to push the fluid through the membrane. The higher the pressure, the larger the driving forces.

As concentration of the fluid being rejected increases, so does the driving force? Reverse osmosis is used to reject bacteria, salts, sugars, proteins, particles, dyes, and other constituents. Separation of ions with reverse osmosis is aided by charged particles. This means that dissolved ions that carry a charge, such as salts, are more likely to be rejected by the membrane. The larger the charge and the particle; the more likely it will be rejected.

#### **UV System:**

Ultraviolet energy causes permanent inactivation of micro-organisms by disturbing DNA so that they are no longer able to maintain metabolism or reproduce. All bacteria, spores, viruses and protozoa are permanently inactivated by UV.

## 5. Schematic Diagram :



## 6. Scope of Supply with Technical Specifications -

	RO System Capacity (LPH)	500
1.	Raw Water Tank	
2.	Filter Feed Pump	Flooded Suction
	Quantity	1 No.(1W)
	Туре	Centrifugal Mono block
	Capacity	1.20 m3/hr@25mwc.
	MOC	CI
	Electric Supply	3 Phase, 415 V/50 Hz
3.	Dual /Sand Media Filter	,
	Quantity	1 No.
	Capacity	2.0 m3/hr.
	Size	13" x 40"
	Mock of Vessel	Polyglass
	Media	Sand + Support Bed.
	Type of valve	Manual Multiport
	Frontal Piping	UPVC Sch. 40
4.	Activated Carbon Filter	OT VO OCH. 40
т.	Quantity	1 No.
	,	2.0 m3/hr.
	Capacity Size	13" x 40"
	Mock of Vessel	Polyglass
	Media	Activated Carbon + Support Bed.
	Type of valve	Manual Multiport
	Frontal Piping	UPVC Sch. 40
5.	Antiscalant Dosing System	
	Quantity	1 No.
	Туре	Electronic magnetic
	Capacity Of Dosing Pump	0-6 LPH
	MOC Of Pump	PP
	Discharge Pressure	2.5 kg/cm <sup>2</sup>
	Dosing Tank	
	Quantity	1 No.
	MOC Of Tank	HDPE
	Capacity Of Dosing Tanks	50 Lit.
6.	Micron Cartridge Filter (MCF)	
	Quantity	1 No.
	Operating Capacity	1.20 m3/hr.
	MOC of Housing	ABS
	MOC Of Cartridge	PP
	Filter Rating	5 Micron
7.	High Pressure Pump	3 WICTOTT
1.	<u> </u>	1 No
	Quantity	1 No.
	Capacity  Maximum Discharge Pressure	1.20 m3/ hr.
	Maximum Discharge Pressure	13.0 kg /cm2
	Туре	Vertical Centrifugal Multistage
	MOC Common Commo	SS 304
8.	Reverse Osmosis System	4.11.
	Quantity	1 No.
	Permeate capacity	500 LPH
	Membrane Type	Spiral wound
	Membrane Specification	TFC-polyamide
	No. of Membranes	2 nos.
	No. of Membrane Housing	2 no.

	Piping MOC	UPVC
	Skid MOC	MSEP
	Electrical Control Panel	1 No.
9.	Online UV System	
	Quantity	1 No.
	Туре	Online
	Capacity	500 LPH
10.	ICPW	
	Low & High Pressure Line	UPVC
	Quantity	1 Lot
11.	Control Panel	
	Quantity	1 No.
	Cabling	1 Lot
12.	Instruments	
	Pressure gauges	1 Lot
	Pressure Switches	2 Nos.
	Conductivity meter	1 nos.( built in panel)
	Flow indicators	1 Lot
	Level Switch	1 Lot

#### 7. Make List -

S.No.	Items	Make
1	Horizontal Centrifugal Pumps-Cl	CRI/KBL / ISI mark
2	Vertical Centrifugal Multistage Pumps	CNP/CRI / ISI mark
3	FRP Vessels	Aventura / ISI mark
4	Pressure Gauges	Baumer / ISI mark
5	Pressure Switch	Aster / ISI mark
6	Rota meter	Aster / ISI mark
7	Dosing Pumps	E dose / ISI mark
8	Tanks	Sintax,waterwell,supremo ISI mark
9	UV System	Alpha UV / ISI mark
10	RO membranes	GE/LG/ ISI mark
11	Pressure Tubes	UKL / ISI mark
12	Cartridge Filter	Process Engineer/ ISI mark
13	Multiport Valve	Initiative / ISI mark
14	Conductivity Meter	Aster / ISI mark
15	Level Switch	Aster / ISI mark
16	Solenoid Valve	Aira / ISI mark
17	UPVC	Astral/ ISI mark
18	Valves & Fittings	ISI mark
19	Control Panel	ISI mark
20	Anthracite/Activated Carbon & Supporting pebbles	ISI mark

### 8. Technical Specification of Stainless Steel Water Cooler, Storage Tank 80 L & 60 L/Hr.

S.No.	Items	Make
1	Storage Capacity	80 L
2	Power Consumption (Watt)	Automatic
3	Material	Stainless Steel SS 304
4	No. of Tapes	02
5	Cooling Capacity	60 L/Hr.
6	Dimensions	665*485*1210
7	Nominal Cooling (L Per hr.)	60
8	Weight	65 kg
9	Current (A)	3.0
10	Water Over flow (Connection)	½ BSP
11	Type of Compressor	Hermatic
12	Body Material	Stainless steel
13	Туре	Cold Water
14	Type of end use for	All segments
15	Normal Demand	300 Glasses per hour
16	Color	Stainless Steel
17	Voltage	230 V
18	Frequency	50 Hz
19	Phase	Single
20	Power Consumption	3.0

## **Technical Bid**

S.No.	Details of the Tenderer/Bidder	
1	Name of the Tenderer/Bidder :	
2	Complete Address :	
3	State clearly whether it is a sole proprietor or Partnership firm or a company or a Government Department or a Public Sector Organization :	
4	Details of the Earnest Money Deposit (EMD) (Yes/No) UTR No. :	
5	Tender Fee of ₹ 2000/- (Yes/No) UTR No. :	
6	Whether each page of Terms & Condition and its annexure have been signed and stamped :	
7	Whether Bidders have quoted for each and every item mentioned in Financial Bid (Yes/No) (If No, then please attach a list of quoted items with the Technical Bid without indicating price):	
8	Copy of VAT/CST/ST Registration :	
9	Permanent Account No. :	
10	GST Registrartion No. :	
11	Email ID :	
12	Contract No. :	
13	The bidder should have at least three (3) years' experience in work of similar nature with Govt. offices/ IITs/ NITs/ PSU's etc., and must have executed the similar contract as mentioned in the eligibility criteria: (Copy of the same to be attached)	
14	Copy of Work Order & Satisfactory Performance Report from at least two clients where the Agency has been working/ worked during last three years attached:	

|--|

Documents attached should be provided page No. on each page otherwise bid details shall not be considered for further tender process.

Date:	Business Address :
Place:	Signature of Bidder
	Seal of the Bidder :

### **Check List for Technical Bid Format**

S.No.	Details of the Tenderer/Bidder/ documents	Information provided/ documents attached (Write Yes/No)	Page No. and Annexure No.	<b>Remarks</b> (if any)
1	Name of the Tenderer/Bidder			
2	Complete Address:			
3	Whether Company is a sole proprietor or Partnership firm or a company or a Government Department or a Public Sector Organization.			
4	Earnest Money Deposit (EMD)			
5	Tender Fee of ₹ 2000/-			
6	Whether Bidders have quoted for each and every item mentioned in Financial Bid			
7	VAT/CST/ST Registration			
8	Permanent Account No.			
9	GST Registrartion No.			
10	Certificate of three (3) years' experience in work of similar nature with Govt. Offices/IITs/NITs/PSU's etc., and must have executed the similar contract as mentioned in the eligibility criteria			
11	Work Order & Satisfactory Performance Report from at least two clients where the Agency has been working/worked during last three years attached			
12	Certificate for average annual turnover of financial Year 2016-17, 2017-18, 2018-19, duly signed and approve by the Chartered Accountant			

(Signature	and	Seal	of	Contractor)	
------------	-----	------	----	-------------	--

Date:	
Place:	

## **FINANCIAL BID**

### **FINANCIAL BID**

				SUMMAR	RY SHEET	
Chill	80 SS With	out RO and	d Water su	pply distri	bution sys	ermeate capacity),Water Cooler Pure tem in Girls' Hostel-I, Boys Hostel -I, A, Bhauri, Bhopal
S. No.			Location			Amount (₹)
Α	Schedule o	of Quantity	(Girls Hoste	∋l-l)		
В	Schedule o	of Quantity	(Boys' Host	:el-I)		
О	Schedule of Wing of Gir		(Boys Hoste	el -II) (inclu	ding a	
D		•	Electrification main pa		Panel)	
E	completion	of one yea	AMC Charger warranty   be mention	period.	ears after	
	1 <sup>st</sup> year	2 <sup>nd</sup> year	3 <sup>rd</sup> year	4 <sup>th</sup> year	5 <sup>th</sup> year	
			Grand To	tal [A+B+0	C+D+E] (₹)	
	An	nount in W	ords (inclu	ısive of all	taxes) (₹)	
	Amo	ount in Fig	ures (inclu	ısive of all	taxes) (₹)	

#### Note:-

Institute reserves right to award Full Comprehensive AMC for 05 years or less than 5 years after completion of one year warranty period. However, lowest one will be awarded on the basis of Grand Total.

## Financial Bid : Annexure - 4 (A)

SCHEDULE OF QUANTITY

Name of Work : Installation of RO System 500 LPH (permeate capacity), Water Cooler Pure Chill 80 SS Without RO and Water Supply Distribution System in Girl's Hostel-I at SPA, Bhauri, Bhopal

Bhopa		1	1	ī		1	T
S. No.	Description	Qty	Unit	DSR/ MR No	Rate inclusi ve of all taxes	Amt. (₹)	Preferred make
Α	RO System 500 LPH						
1	supplying and installation, Testing and commissioning of 500 litres per hour capacity water purifier with U.V.Disinfection including additional facility of automatic back washing of filter and last point purifier with post UV System etc .complete as per Technical Specification and Schematic diagram (Annexure-I).	1	Each	MR			Eureka Forbes,Blue Star,Kent
	TOTAL (A) (₹)						
<b>B</b> 1	Water Cooler  Supplying, Installation, Commissioning , testing of water cooler (pure chill SS) without RO Including Storage Capacity – 80 Ltr, Cooling Capacity – 60 Ltr/Hr, Complete as per technical specification (Annexure-II).	6	Each	MR			Blue Star, Voltas, Usha
	TOTAL (B) (₹)						
С	Civil Work for Distribution System of Water Supply						
1	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fittings, including fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and testing of joints complete as per direction of Engineer in Charge.						
Α	15 mm nominal outer dia Pipes	25	metre	18.7.1			Astral, Prayag, Prince
В	20 mm nominal outer dia Pipes	45	metre	18.7.2			Astral, Prayag, Prince
С	25 mm nominal outer dia Pipes	50	metre	18.7.3			Astral, Prayag, Prince

2	Providing and placing on terrace (at all floor levels) polyethylene water storage Circular tank, IS: 12701 marked, with cover and suitable locking arrangement and making necessary holes for inlet, outlet and overflow pipes but without fittings and the base support for tank.	2	1000 Itr each	modified 18.48A	Sintax, Waterwell, Supremo
3	Providing and fixing gun metal gate valve with C.I. wheel of approved quality (screwed end):				
Α	25 mm nominal bore	1	Each	18.17.1	Zoloto, Jindal, Kranti
В	20 mm nominal bore	1	Each	18.17.1A	Zoloto,Jindal, Kranti
4	Providing and fixing ball valve (brass) of approved quality, High or low pressure, with plastic floats complete: 25 mm nominal bore	1	Each	18.18.3	
5	Providing and fixing C.P. brass angle valve for basin mixer and geyser points of approved quality conforming to IS:8931 15 mm nominal bore	5	Each	18.53.1	Hindware, Perryware, Prayag, Cera
6	Providing and fixing G.I. Union in G.I. pipe including cutting and threading the pipe and making long screws etc. complete (New work):				
(a)	15 mm nominal bore	1	Each	18.46.1	
(b)	20 mm nominal bore	1	Each	18.46.2	
(c)	25 mm nominal bore	1	Each	18.46.3	
(d)	40 mm nominal bore	1	Each	18.46.5	
7	Providing and fixing precoated galvanised iron profile sheets (size, shape and pitch of corrugation as approved by Engineer-in-charge) 0.50 mm (+ 0.05 %) total coated thickness with zinc coating 120 grams per sqm as per IS: 277, in 240 mpa steel grade, 5-7 microns epoxy primer on both side of the sheet and polyester top coat 15-18 microns. Sheet should have protective guard film of 25 microns minimum to avoid scratches during transportation and should be supplied in single length upto 12 metre or as desired by Engineerin-charge. The sheet shall be fixed using self drilling /self tapping screws of size (5.5x 55 mm) with EPDM seal, complete upto any pitch in horizontal/ vertical or curved surfaces, excluding the cost of purlins, rafters and trusses and including cutting to size and shape wherever required.	16	sqm	12.5	

	GRAND TOTAL (A+B+C) (₹)					
	TOTAL (C) (₹)					
14	12 mm cement plaster finished with a floating coat of neat cement of mix: 1:3 (1 cement: 3 fine sand)	5	sqm	13.7.1		
13	15 mm cement plaster on the rough side of single or half brick wall of mix : 1:4 (1 cement: 4 fine sand)	5	sqm	13.2.1		
	Cement mortar 1:6 (1 cement : 6 Coarse sand)	2	cum	Modified 6.34.2		
12	Brick work with modular fly ash bricks conforming to IS:12894, class designation 10 average compressive strength in super structure above plinth level up to floor V level in :				1	
11	Painting with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade : One or more coats on old work.	5	sqm	14.54.1		
10	Centering and shuttering including strutting, propping etc. and removal of form work for : Foundations, footings, bases for columns	1	sqm	4.3.1		
9	4.1 Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level: 1:2:4 (1 cement: 2 coarse sand (zone-III): 4 graded stone aggregate 20 mm nominal size).	0.05	cum	4.1.3		
8	Steel work in built up tubular (round, square or rectangular hollow tubes etc.) trusses etc., including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer, including welding and bolted with special shaped washers etc. complete. Hot finished welded type tubes	105	Kg	10.16.1		

### Financial Bid : Annexure - 4 (B) SCHEDULE OF QUANTITY

Name of Work : RO System 500 LPH (permeate capacity),Water Cooler Pure Chill 80 SS Without RO Water Supply Distribution System in Boy's- Hostel-I at SPA, Bhauri, Bhopal

			ı	,	, ,			
S. No.	Description	Qty	Unit	DSR/ MR No.	Rate(₹) inclusive of all taxes	Amount (₹)	Preferred make	
Α	RO System 500 LPH				•		•	
1	supplying and installation, Testing and commissioning of 500 litres per hour capacity water purifier with U.V.Disinfection including additional facility of automatic back washing of filter and last point purifier with post UV System etc. complete as per Technical Specification and Schematic diagram (Annexure-I).	1	Each	MR			Eureka Forbes, Blue Star, Kent	
	TOTAL (A) (₹)							
В	Water Cooler							
1	Supplying,Installation,Commissio ning ,testing of water cooler (pure chill SS) without RO Including Storage Capacity – 80 Ltr ,Cooling Capacity – 60 Ltr/Hr,Complete as per technical specification (Annexure- II).	4	Each	MR			Blue Star, Voltas, Usha	
	TOTAL (B) (₹)							
С	Civil Work for Distribution System of Water Supply							
1	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fittings, including fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and testing of joints complete as per direction of Engineer in Charge.							
А	15 mm nominal outer dia Pipes	35	metre	18.7.1			Astral, Prayag, Prince	
В	20 mm nominal outer dia Pipes	75	metre	18.7.2			Astral, Prayag, Prince	
С	25 mm nominal outer dia Pipes	65	metre	18.7.3			Astral, Prayag, Prince	

	Providing and placing on terrace (at all floor levels) polyethylene					Sintax, Waterwell,
2	water storage Circular type tank, IS: 12701 marked, with cover and suitable locking arrangement and making necessary holes for inlet, outlet and overflow pipes but without fittings and the base support for tank.	2	1000 Itr each	modified 18.48A		Supremo
3	Providing and fixing gun metal gate valve with C.I. wheel of approved quality (screwed end):					
Α	25 mm nominal bore	1	Each	18.17.1		Zoloto, Jindal, Kranti
В	20 mm nominal bore	1	Each	18.17.1A		Zoloto, Jindal, Kranti
4	Providing and fixing ball valve (brass) of approved quality, High or low pressure, with plastic floats complete: 25 mm nominal bore	1	Each	18.18.3		
5	Providing and fixing C.P. brass angle valve for basin mixer and geyser points of approved quality conforming to IS:8931 15 mm nominal bore	5	Each	18.53.1		Hindware, Perryware, Prayag, Cera
6	Providing and fixing G.I. Union in G.I. pipe including cutting and threading the pipe and making long screws etc. complete (New work):		I			
Α	15 mm nominal bore	1	Each	18.46.1		
В	20 mm nominal bore	1	Each	18.46.2		
С	25 mm nominal bore	1	Each	18.46.3		
D	40 mm nominal bore	1	Each	18.46.5		
7	Providing and fixing precoated galvanised iron profile sheets (size,shape and pitch of corrugation as approved by Engineer-in-charge) 0.50 mm (+ 0.05 %) total coated thickness with zinc coating 120 grams per sqm as per IS: 277, in 240 mpa steel grade, 5-7 microns epoxy primer on both side of the sheet and polyester top coat 15-18 microns. Sheet should have protective guard film of 25 microns minimum to avoid scratches during transportation and should be supplied in single	16	sqm	12.5		

			•		T	,
	length upto 12 metre or as desired by Engineer-in-charge. The sheet shall be fixed using self drilling /self tapping screws of size (5.5x 55 mm) with EPDM seal, complete upto any pitch in horizontal/ vertical or curved surfaces, excluding the cost of purlins, rafters and trusses and including cutting to size and shape wherever required.					
8	Steel work in built up tubular (round, square or rectangular hollow tubes etc.) trusses etc., including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer, including welding and bolted with special shaped washers etc. complete. Hot finished welded type tubes	105	Kg	10.16.1		
9	4.1 Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level: 1:2:4 (1 cement: 2 coarse sand (zone-III): 4 graded stone aggregate 20 mm nominal size).	0.05	cum	4.1.3		
10	Centering and shuttering including strutting, propping etc. and removal of form work for : Foundations, footings, bases for columns	1	sqm	4.3.1		
11	Painting with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade:  One or more coats on old work.	5	sqm	14.54.1		
12	Brick work with modular fly ash bricks conforming to IS:12894, class designation 10 average compressive strength in super structure above plinth level up to floor V level in :					
	Cement mortar 1:6 (1 cement : 6 Coarse sand)	2	cum	modified 6.34.2		

13	15 mm cement plaster on the rough side of single or half brick wall of mix : 1:4 (1 cement: 4 fine sand)	5	sqm	13.2.1		
14	12 mm cement plaster finished with a floating coat of neat cement of mix : 1:3 (1 cement: 3 fine sand)	5	sqm	13.7.1		
	TOTAL (C) (₹)					
	GRAND TOTAL [A+B+C] (₹)					

## Financial Bid : Annexure - 4 (C) SCHEDULE OF QUANTITY

Name of Work : RO System 500 LPH,(permeate capacity),Water Cooler Pure Chill 80 SS Without RO , Water Supply Distribution System in Boy's Hostel-II (including a wing of Girls Hostel-II) at SPA, Bhauri, Bhopal

SPA,	Bnauri, Bnopai		1			1	1
S. No.	Description	Qty	Unit	DSR/ MR No.	Rate(₹) inclusive of all taxes	Amount (₹)	Preferred make
Α	RO System 500 LPH			ı			1
1	Supplying and installation, Testing and commissioning of 500 litres per hour capacity water purifier with U.V.Disinfection including additional facility of automatic back washing of filter and last point purifier with post UV System etc .complete as per Technical Specification and Schematic diagram (Annexure-I).	1	Each	MR			Eureka Forbes, Blue Star, Kent
	TOTAL (A) (₹)						
1 1	Water Cooler  Supplying,Installation, Commissioning, testing of water cooler (pure chill SS) without RO Including Storage Capacity – 80 Ltr, Cooling Capacity – 60 Ltr/Hr, Complete as per technical specification (Annexure-II).	8	Each	MR			Blue Star, Voltas, Usha
	TOTAL (B) (₹)						
С	Civil Work for Distribution System of Water Supply						
1	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fittings, including fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and testing of joints complete as per direction of Engineer in Charge.						
Α	15 mm nominal outer dia Pipes	35	metre	18.7.1			Astral, Prayag, Prince
В	20 mm nominal outer dia Pipes	95	metre	18.7.2			Astral, Prayag, Prince
С	25 mm nominal outer dia Pipes	95	metre	18.7.3			Astral, Prayag, Prince
D	40 mm nominal outer dia Pipes	30	metre	18.7.5			Astral, Prayag, Prince

	Providing and placing on terrace		1			Sintax,
2	(at all floor levels) polyethylene water storage Circular type tank, IS: 12701 marked, with cover and suitable locking arrangement and making necessary holes for inlet, outlet and overflow pipes but without fittings and the base support for tank.	2	1000 ltr each	modified 18.48A		Waterwell, Supremo
3	Providing and fixing gun metal gate valve with C.I. wheel of approved quality (screwed end):					
Α	25 mm nominal bore	1	Each	18.17.1		Zoloto, Jindal, Kranti
В	20 mm nominal bore	1	Each	18.17.1A		Zoloto, Jindal, Kranti
4	Providing and fixing ball valve (brass) of approved quality, High or low pressure, with plastic floats complete : 25 mm nominal bore	1	Each	18.18.3		
5	Providing and fixing C.P. brass angle valve for basin mixer and geyser points of approved quality conforming to IS:8931 .15 mm nominal bore	5	Each	18.53.1		Hindware, Perryware, Prayag, Cera
6	Providing and fixing G.I. Union in G.I. pipe including cutting and threading the pipe and making long screws etc. complete (New work):					
Α	15 mm nominal bore	1	Each	18.46.1		
В	20 mm nominal bore	1	Each	18.46.2		
С	25 mm nominal bore	1	Each	18.46.3		
D	40 mm nominal bore	1	Each	18.46.5		
7	Providing and fixing precoated galvanised iron profile sheets (size,shape and pitch of corrugation as approved by Engineer-in-charge) 0.50 mm (+ 0.05 %) total coated thickness with zinc coating 120 grams per sqm as per IS: 277, in 240 mpa steel grade, 5-7 microns epoxy primer on both side of the sheet and polyester top coat 15-18 microns. Sheet should have protective guard film of 25 microns minimum to avoid scratches during transportation and should be supplied in single length upto 12 metre or as desired by Engineer-in-charge. The sheet shall be fixed using	16	sqm	12.5		

	self drilling /self tapping screws						
	of size (5.5x 55 mm) with EPDM						
	seal, complete upto any pitch in						
	horizontal/ vertical or curved						
	surfaces, excluding the cost of						
	purlins, rafters and trusses and						
	including cutting to size and						
	shape wherever required.						
	Steel work in built up tubular						
	(round, square or rectangular						
	hollow tubes etc.) trusses etc.,						
	including cutting, hoisting, fixing						
8	in position and applying a	103	Kg	10.16.1			
	priming coat of approved steel						
	primer, including welding and						
	bolted with special shaped washers etc. complete.						
	washers etc. complete. Hot finished welded type tubes						
	Providing and laying in position						
	cement concrete of specified						
	grade excluding the cost of						
	centering and shuttering - All	0.05		4.4.0			
9	work up to plinth level :	0.05	cum	4.1.3			
	1:2:4 (1 cement : 2 coarse sand						
	(zone-III) : 4 graded stone						
	aggregate 20 mm nominal size).						
	Centering and shuttering						
40	including strutting, propping etc.	4		404			
10	and removal of form work for :	1	sqm	4.3.1			
	Foundations, footings, bases for columns						
	Painting with synthetic enamel						
	paint of approved brand and						
11	manufacture of required colour to	5	sqm	14.54.1			
	give an even shade: One or						
	more coats on old work.						
	Brick work with modular fly ash						
	bricks conforming to IS:12894,						
12	class designation 10 average						
	compressive strength in super						
	structure above plinth level up to floor V level in :						
	Cement mortar 1:6 (1 cement : 6			modified			
12A	Coarse sand)	2	cum	6.34.2			
	ŕ						
	15 mm cement plaster on the						
10	rough side of single or half brick	_		40.0.4			
13	wall of mix :	5	sqm	13.2.1			
	1:4 (1 cement: 4 fine sand)						
	12 mm cement plaster finished						
	with a floating coat of neat						
14	cement of mix :	5	sqm	13.7.1			
	1:3 (1 cement: 3 fine sand)						
	TOTAL (C) (₹)		I <u> </u>				
					1	i	i
	GRAND TOTAL [A+B+C] (₹)						

## Financial Bid : Annexure - 4 (D) SCHEDULE OF QUANTITY

Name of work: Electrification Work for RO Water Cooler Pure Chilled System and Water supplying to the 3 Nos Hostels at SPA Campus, Bhouri Bhopal

S.No.	Description	Unit	Qty	Rate (₹)	Amount (₹)
1	41.1) Supply of XLPE Insulated power cable (confirming IS-7098 Part-I ) 1100 Volt grade, 1 core /2 core /3½ core/4 core ISI MARKED with Alu. Stranded /solid conductor				
а	41.1.10.1) 4 CORE ARMOURED , 6 Sq.mm.	Meter	130		
2	41.23) Laying of one number armoured / unarmoured power cable 1.1 kV grade of size not exceeding 25 Sq.mm in the existing masonary open duct with included of proper PVC clamp as required	Meter	130		
3	41.5) Supplying and fixing heavy duty cable gland for P.V.C. insulated armoured cable with brass washer, Rubber ring complete erected with cable and lead connection etc. as per specification complete				
а	41.5.1) Gland Size 22mm suitable for cable 2,3,3½ & 4 x up to 6 Sq.mm	Meter	6		
4	41.7) Supplying and fixing cramping type Alum. lugs as per I.S.S. Specification suitable for following size of cable with Alu./Copper solid/stranded conductor evently cramped with high/pressure tool and connected to switchgear/Bus/ M.C.C.B./M.C.B. etc. as required complete				
а	41.7.1 6mm to 16 Sq.mm Each 2	Each	12		
	TOTAL (₹)				
	All materials should be ISI make only				

APPROVED BRANDS MAY PREFERRED FOR SUPPLY AND INSTALLATION PURPOSE:-

- 1. CABLE -LUGS DOWELL/3D
- 2. CABLE GLANDS -SUNIL/HMI/BRACO/COMET
- 3. CABLES- CCI/UNIVERSAL/POLYCAB/HAVELLS/RALLISON