

# भाकृअनुप-राष्ट्रीय उच्च सुरक्षा पशुरोग संस्थान ICAR-National Institute of High Security Animal Diseases

(एवियन इन्फ्लूएंजा ओ.आई.ई. संदर्भ प्रयोगशाला) (OIE Reference Laboratory for Avian Influenza)

आनंद नगर, भोपाल - ४६२०२२ (म.प्र.), भारत Anand Nagar, Bhopal - 462022 (M.P.), India



Dated: - 24.01.2018

EPABX Tel. No. 0755-2757542, 2750647, FAX: 0755-2758842, Website: www.nihsad.nic.in

F. No. 9-209/17-18/NIHSAD (P&S)

## NOTICE INVITING TENDER THROUGH E-PROCUREMENT

Online Bids are invited from interested firms under two bid system for **Replacement of Blowers** at ICAR-NIHSAD, Bhopal (M.P.). Manual bids shall not be entertained. Tender documents may be downloaded from e-Procurement website of CPPP <a href="https://eprocure.gov.in">https://eprocure.gov.in</a> as per the schedule as given in CRITICAL DATE SHEET as under: -

# **CRITICAL DATE SHEET**

Tender ID	
Tender No.	No. F. 9-209/17-18/NIHSAD (P&S)
Name of Organization	ICAR-National Institute of High Security
	Animal Diseases, Hathai Kheda Dam Road,
	Anand Nagar, Bhopal – 462022 (M.P.)
Date and time for Issue/Publishing	06:00 PM on 24.01.2018
Document Download/Sale Start Date and Time	11:00 AM on 25.01.2018
Pre Bid Meeting Date & Time	11:30 AM on 05.02.2018
Bid Submission Start Date and Time	11:30 AM on 25.01.2018
Bid Submission End Date and Time	11:00 AM on 20.02.2018
Date and Time for Opening of Bids	11:00 AM on 22.02.2018
(Technical)	
Price Bid/BOQ Opening Date and Time	Will be intimated after scrutiny of technical bid
Address for Communication	Director, ICAR-NIHSAD, Hathai Kheda
	Dam Road, Anand Nagar, Bhopal – 462022
	(M.P.)

Adm. Officer ICAR-NIHSAD Anand Nagar, Bhopal – 462022 (M.P.)

# Annexure – I

# **INSTRUCTIONS FOR BIDDER**

- 1. The tender form/bidder documents may be downloaded from the website: <a href="https://eprocure.gov.in">https://eprocure.gov.in</a>. Online submission of Bids through Central Public Procurement Portal (<a href="https://eprocure.gov.in">https://eprocure.gov.in</a>) is mandatory. Manual/Offline bids shall not be accepted not be accepted under any circumstances.
- 2. Tenderers/bidders are requested to visit the website <a href="https://eprocure.gov.in">https://eprocure.gov.in</a> regularly. Any changes/modifications in tender enquiry will be intimated by corrigendum through this website only.
- 3. In case, any holiday is declared by the Government on the day of opening, the tenders will be opened on the next working day at the same time. The Director, ICAR-NIHSAD reserves the right to accept or reject any or all the tenders.
- 4. The interested Firms are required to deposit (in original) the Tender cost (in shape of DD Only and an Earnest Money Deposit (EMD) of the amount mentioned against item in the form of Account Payee Demand Draft/FDR/TDR/Banker's Cheque/Bank Guarantee from any of the Commercial Banks in favour of ICAR Unit, NIHSAD, Bhopal payable at Bhopal may be addressed to Director, ICAR-NIHSAD, Bhopal 462022. The EMD can also be deposited online in an acceptable form on or before bid opening date and time as mentioned in the Critical Date Sheet. In case of depositing the EMD through online mode, proof of EMD (UTR No or any other) must be submitted alongwith tender. No quotation shall be considered without the earnest money deposit. The earnest money will be refunded only after the finalization of the procurement and no interest will be paid on earnest money.
- 5. The firm should send the <u>original brochures of the product as well as complete tender documents</u> in a sealed envelope addressed to <u>Director</u>, <u>ICAR-NIHSAD</u>, <u>Bhopal 462022</u> on or before bid opening date and time as mentioned in the Critical Date Sheet. Original brochures should also be available on the website of the firm.
- 6. Bidder need not to come at the time of Technical as well as Financial bid opening at ICAR-NIHSAD. They can view live bid opening after login on CPPP e-procurement Portal at their remote end. If bidder wants to join bid opening event at ICAR-NIHSAD then they have to come with bid acknowledge slip that generates after successfully submission of online bid. The firms are also required to upload copies of the following document: -

# • Technical Bid

- (a) Scanned copy of Tender Cost (Rs. 1, 000/-) in shape of DD (Only) in favour of ICAR Unit, NIHSAD, Bhopal/its exemption, if any.
- (b) Scanned copy of Earnest money Deposit (EMD)/its exemption, if any.
- (c) Scanned copy of Firm's registration, Pan card, GST No., Tender Acceptance Letter (Annexure V).
- (d) Scanned copy of Annexure II and IV duly signed and stamped by the bidder.
- (e) Scanned copy of User List/Purchase Orders of its satisfactory installation (Scanned copy of Supply & Installation of blowers with atleast 2 works executed in last 5 years in Govt/PSU/Autonomous bodies).

# • Financial Bid

Price Bid as BOQ\_XXXX.xls

Adm. Officer ICAR-NIHSAD Anand Nagar, Bhopal – 462022 (M.P.)

#### Annexure – II

# **Terms & Conditions**

- 1. The tenderer shall quote rates, which will include the delivery & other incidental charges. Taxes etc. should be indicated separately.
- 2. The rates should be quoted as per the BOQ uploaded on the CPP Portal (reference may be obtained from Annexure III). Taxes, if any, should be indicated separately. It must be noted that the contract shall be awarded to the firm which fulfills all the required terms and conditions and remains L-1 for any particular items.
- 3. The firm must also possess valid PAN No., GST No. registration number and a copy of the same must also be enclosed with the tender documents.
- 4. The equipment quoted should be of latest technology. The spare parts of the equipment quoted should be available for next 10 years.
- 5. Modification in the tender documents after the closing date is not permissible.
- 6. The successful firm shall have to supply the Scientific Equipment within 30 days from the date of confirmed supply order and if the materials are not supplied in time then EMD shall be forfeited. The rates quoted shall be valid for One Hundred & Eighty days (180) from the date of opening of tender.
- 7. The contractor bidder/ or his representative may contact the undersigned at Tel No. 0755-2750647, 2757542 for any further clarification between office hours. No variation in terms of quality of the items shall be entertained or else EMD/Security deposit shall be forfeited.
- 8. The Director, ICAR-NIHSAD shall have the right to reject all or any of the offers, accept more than one offer, and assign part of the job.
- 9. Merely quoting of lowest rates does not mean that order shall be given to that firm. The competent authority will finally decide on the basis of quality & performance or past installations.
- 10. Rates once finalized will not be enhanced/reduced during the currency of the contract.
- 11. In case of foreign currency, conversion rates in INR will be taken on that day when financial bid will open.
- 12. In case, the successful bidder shown inability at any stage, after the contract is finalized and awarded, for whatsoever reason(s), to honour the contract, the earnest money/performance security deposited would be forfeited.
- 13. The Director, ICAR-NIHSAD reserves the right to cancel the contract at

any time during the currency period of the contract without giving any reasons.

- 14. The firm, to whom the tender will be awarded, will have to deposit the performance security equal to 10% of the total amount before installation of the equipment. If the services are not found to be satisfactory, the performance security is liable to be forfeited. No interest will be paid on performance security.
- 15. If any dispute(s) arises between ICAR-NIHSAD and the firm with reference to the contract, ICAR-NIHSAD will decide it and its decision will be binding on the firms.
- 16. No official of a procuring entity or a bidder shall act in contravention of the codes which includes
- (i) Prohibition of
- (a) Making offer, solicitation or acceptation of bride, rewards or gift or any material benefits, either directly or indirectly, in exchange for an unfair advantage in the procurement process or to otherwise influence the procurement process.
- Our institute is registered with DSIR and we are exempted from Excise Duty & Custom Duty. Hence, CDEC/DSIR will be provided to the firm, if demanded. Rate should be quoted accordingly.
- 18. **Payment -**

PAYMENT TERMS: Payment will be made within reasonable time say within 30 days from the date of receipt of material in good condition without any damage and after installation of the equipment in accordance with the ordered specification at the end. Since the mode of payment will be e-payment system, hence Bank Account Number, name of bank with location and IFSC Code Number of Bank may be furnished on the body of the bill

#### 20. Installation:-

Within 30 days from the date of receipt of equipment/Blowers in the Institute failing which Liquidated Damage clause shall apply.

**Liquidated Damage clause:** - It would be realized @ 0.5% (half per cent) of the base price (excluding taxes) of the delayed goods for each week of delay subject to maximum 10%.

**21. Warranty:-** Warranty period should be as per Annexure VII or at least one year whichever is higher.

# 'Terms & conditions are acceptable'

Date:- (Authorized Signatory of the firm)

#### ANNEXURE – III

# (Reference for BOQ) (To be quoted in format provided on CPP Portal)

Price bid for Replacement of Blowers & AHU Systems) at ICAR-NIHSAD, Bhopal -

Sr.	Name of the item	Qty	Price (In figure/words)
No.			(as per BOQ)
1.	<b>Replacement</b> of	1	Price should only be
	<b>Blowers</b> (AHU	(8 Supply Fan Blowers	quoted in BOQ format
	Systems)	& 7 Exhaust Fan	provided in CPPP
		<b>Blowers</b> ) alongwith	
		motors	

- \* Items should be of reputed make and suitable for high end elite users.
- \* Tax extra as applicable should be indicated separately in the column provided.

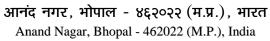
Note:- The above mentioned Financial Proposal/Commercial bid format is provided as BoQ\_XXXX.xls along with this tender document at <a href="https://eprocure.gov.in">https://eprocure.gov.in</a>. Bidders are advised to download this BoQ\_XXXX.xls as it is and quote their offer/rates in the permitted column and upload the same in the financial bid. Bidder shall not tamper/modify downloaded price bid template in any manner. In case if the same is found to be tempered/modified in any manner, tender will be completely rejected and EMD would be forfeited and tenderer is liable to be banned from doing business with ICAR-NIHSAD.

# Annexure – IV



# भाकृअनुप-राष्ट्रीय उच्च सुरक्षा पशुरोग संस्थान ICAR-National Institute of High Security Animal Diseases

(एवियन इन्फ्लूएंजा ओ.आई.ई. संदर्भ प्रयोगशाला) (OIE Reference Laboratory for Avian Influenza)





EPABX Tel. No. 0755-2757542, 2750647, FAX: 0755-2758842, Website: www.nihsad.nic.in

Nar	ne of the Firm					
Reo	Registered/Postal Address					
Νυξ						
1.	Permanent Account Number (PAN)					
2.	GST Registration No.					
3.	BANK D	ETAILS: -				
a)	Bank Name					
b)	Branch Address					
c)	Account No.					
d)	Type of Account (Current/Savings)					
e)	MICR No.					
f)	RTGS/NEFT Code					
	·					
Dat	Date: Name of the Authorized Signatory					
		Stamp & Signature				
Pla	ce:					

# $\underline{Annexure - V}$

# TENDER ACCEPTANCE LETTER (To be given on Company Letter Head)

То	Date:
Sul	b:- Acceptance of Terms & Conditions of Tender.
Te	nder Reference No.:
Na	me of Tender / Work: -
	ar Sir,  I/ We have downloaded / obtained the tender document(s) for the above mentioned 'Tender/Work' from the web site(s) namely:
2.	as per your advertisement, given in the above mentioned website(s). I / We hereby certify that I / we have read the entire terms and conditions of the tender documents from Page No to (including all documents like annexure(s), schedule(s), etc .,), which form part of the contract agreement and I / we shall abide hereby by the terms / conditions /
3.	clauses contained therein The corrigendum(s) issued from time to time by your department/ organizations too have also been taken into consideration, while submitting this acceptance letter.
4.	I / We hereby unconditionally accept the tender conditions of above

- mentioned tender document(s) / corrigendum(s) in its totality / entirety.
- 5. I / We do hereby declare that our Firm has not been blacklisted/ debarred by any Govt. Department/Public sector undertaking.
- 6. I / We certify that all information furnished by the our Firm is true & correct and in the event that the information is found to be incorrect/untrue or found violated, then your department/ organization shall without giving any notice or reason therefore or summarily reject the bid or terminate the contract, without prejudice to any other rights or remedy including the forfeiture of the full said earnest money deposit absolutely.

Yours faithfully,

(Signature of the Bidder, with Official Seal)

# **ANNEXURE - VI**

# **Details of Equipment & EMD**

Purchase of Item Qty		Qty	Earnest Money in	File No. for reference
			INR	
Replacement	of	1	25000/- in favour of	9-209/17-18/NIHSAD (P&S)
Blowers	(AHU		ICAR Unit,	
Systems)			NIHSAD, Bhopal	

Tender Cost: - Rs. 1000/- in shape of Demand Draft (Only) in favour of ICAR Unit, NIHSAD, Bhopal may also be submitted in

original alongwith EMD.

#### ANNEXURE – VII

#### Specifications of Blowers [For Supply Fan & Exhaust Fan of AHU (Air Handling Units)]

The ICAR-NIHSAD has a BSL-3 containment laboratory in which gradient negative pressure w.r.t. atmospheric pressure and the desired room temperature is maintained with the help of AHU (Air Handling Unit) system. AHU typically employs supply fan blowers, filters cooling coil, heating coil to supply the conditioned air in the laboratory and exhaust fan blowers to discharge the air into the atmosphere at rated CFM for the required no. of air change. The AHU runs 24x7x365 days & therefore suitable material required along with minimum maintenance may be quoted. The bidder has to quote the rates for the items/equipment (PART A) as well as for the installation & modification (PART B). The bidder should quote for the supply, installation and modification completely & the offer quoted for either only equipment supply or installation alone will not be considered for financial evaluation.

# **PART A (Technical Specifications of Blowers)**

#### 1) For Supply Fan -

S.No.	Item	Quantity	Existing	Required	Remarks
	Description		<b>Specifications of</b>	<b>Specifications</b> of	
			Supply fan	supply fan	
1.	a.) Centrifugal		Fan Dia -457mm	Fan Dia -457mm	To be installed
	Forward	(Out of which 1 is	RPM-980	RPM-980	in AHU no. 16
	Curved <b>DIDW</b>	for "Y"-clockwise	CFM -6200	CFM -6200	
	Fan Type -	Up blast 360° and 2	Presuure-75 mm	Presuure-75 mm WG	
	Multi vane	is for "X"-counter	WG	Arrangement-3	
		clockwise Up blast 360°).	Arrangement-3		
	b.) Motor	02		4 pole, 415 ± 10 %	
				Volts, $50 \pm 5\%$ Hz,	
				energy efficient	
				motor, 3 phase AC	
				power supply, Duty	
				S1, IE2/IE3 ,	
				induction motor,	
				totally enclosed, fan	
				cooled motor,	
				Insulation class F,	
				IP55, ambient 50 <sup>0</sup> C, 1440 RPM , PF	
				0.85,	
				IS2615/IEC60034-1.	
2.	a.) Centrifugal	02	Fan Dia -254 mm	Fan dia- Blower	To be Installed
	Forward	(Out of which 1 is	RPM-1625	housing complete	in AHU no. 02
	Curved <b>DIDW</b>	for "Z"-clockwise	CFM -2000	with Blower of	
	Fan Type -	Up blast 360 <sup>0</sup> and 2	Presuure-75 mm	required dia (suitable	
	Multi vane	is for "W"-counter	WG	dia to be designed by	

		clockwise Up blast 360°).	Arrangement-3	the bidder) RPM- Preferably below 1000 RPM CFM -2000 Presuure-75 mm WG Arrangement-3	
	b.) Motor	02		4 pole, 415 ± 10 % Volts, 50 ± 5% Hz, energy efficient motor, 3 phase AC power supply, Duty S1, IE2/IE3, induction motor, totally enclosed, fan cooled motor, Insulation class F, IP55, ambient 50° C, 1440 RPM, PF 0.85, IS2615/IEC60034-1.	
3.	a.) Centrifugal		Fan Dia -457 mm	Fan Dia -457 mm	To be Installed
	Forward	(Out of which 1 is	RPM-900	RPM-900	in AHU no. 13
	Curved <b>DIDW</b>	for "Y"-clockwise	CFM -3900	CFM -3900	
	Fan Type -		Presuure-75 mm	Presuure-75 mm WG	
	Multi vane	is for "X"-counter	WG	Arrangement-3	
		clockwise Up blast 360°).	Arrangement-3		
	b.) Motor	02		4 pole, $415 \pm 10$ % Volts, $50 \pm 5$ % Hz, energy efficient motor, 3 phase AC power supply, Duty S1, IE2/IE3, induction motor, totally enclosed, fan cooled motor, Insulation class F, IP55, ambient $50^{\circ}$ C, $1440$ RPM, PF $0.85$ , IS2615/IEC60034-1.	
4.	a.) Centrifugal	02	Fan Dia -380 mm	Fan dia- Blower	To be Installed
	Forward	(Out of which 1 is	RPM-1130	housing complete	in AHU no. 17
	Curved <b>DIDW</b>	for "Y"-clockwise	CFM -3200	with Blower of	
	Fan Type -	Up blast 360 <sup>0</sup> and 2 is for "X"-counter	Presuure-75 mm	required dia (suitable	
	Multi vane	18 101 A -counter	WG	dia to be designed by	

	clockwise Up blast 360°).	Arrangement-3	the bidder) RPM-1000 CFM -3200 Presuure-75 mm WG Arrangement-3	
b.) Motor	02		4 pole, $415 \pm 10$ % Volts, $50 \pm 5\%$ Hz, energy efficient motor, 3 phase AC power supply, Duty S1, IE2/IE3 , induction motor, totally enclosed, fan cooled motor, Insulation class F, IP55, ambient $50^{0}$ C, 1440 RPM , PF 0.85, IS2615/IEC60034-1.	

# 2) For Exhaust Fan-

S.No.	Item	Quantity	Existing	Required	Remarks
	Description		Specifications of	ications of Specifications of	
			Exhaust fan	exhaust fan	
1.	a.) Industrial Centrifugal ("W" for both backward curved inclined SWSI  Backward curved inclined SWSI  CFM -6220 Presuure-125 mm WG Arrangement-1  Fan Dia -800 mm RPM- 1045 CFM -6220 Presuure-125 mm WG Arrangement-1  Fan designed bidder required RPM-9 CFM -		Complete assembly of exhaust fan. It will be standby to our existing exhaust blower system.  Fan dia – To be designed by the bidder as per requirement  RPM- 900 Approx.  CFM – 6800 Approx.  Presuure-125 mm		
	b.) Motor	02		WG Arrangement-1  4 pole, $415 \pm 10$ % Volts, $50 \pm 5$ % Hz, energy efficient motor, 3 phase AC	
				power supply, Duty S1, IE2/IE3 , induction motor,	

				totally enclosed, fan	
				cooled motor,	
				Insulation class F,	
				IP55, ambient $50^{\circ}$ C,	
				1440 RPM , PF	
				0.85,	
				IS2615/IEC60034-1.	
2.	a.) Industrial	02	Fan Dia -500 mm	Complete assembly of	To be Installed
	Centrifugal	(Out of which 1 is	RPM-1670	exhaust fan. It will be	
	backward	for "Z"-clockwise	CFM -2200	standby to our	
	curved inclined	0	Presuure-125 mm	existing exhaust	
	SWSI	is for "W"-	WG	blower system.	
	51151	clockwise Up blast		Fan dia – To be	
		$360^{\circ}$ ).	Arrangement-1	designed by the	
				bidder as per	
				requirement	
				RPM- 900 Approx.	
				CFM -2200 Approx.	
				Presuure-125 mm	
				WG	
				Arrangement-1	
	b.) Motor	02		4 pole, 415 ± 10 %	
	U.) MOIOI	02		Volts, $50 \pm 5\%$ Hz,	
				· ·	
				energy efficient motor, 3 phase AC	
				power supply, Duty	
				S1, IE2/IE3 ,	
				induction motor,	
				totally enclosed, fan	
				cooled motor,	
				Insulation class F,	
				IP55, ambient 50° C,	
				1440 RPM , PF	
				0.85,	
				IS2615/IEC60034-1.	
3.	a.) Industrial	02	Fan Dia -710 mm	Complete assembly of	To be Installed
	Centrifugal	("W" for both	RPM-1145	exhaust fan. It will be	in AHU no. 13
	backward	counter clockwise	CFM -4400	standby to our	
	curved inclined	UP blast 360°)	Presuure-125 mm	existing exhaust	
	SWSI	,	WG	blower system.	
				Fan dia – To be	
			Arrangement-1	designed by the	
				bidder as per	
				requirement	
				RPM- 900 Approx.	
				CFM - 4400 Approx.	
				CI IVI - TTOU Appiux.	

	b.) Motor	02		Presuure-125 mm WG Arrangement-1  4 pole, 415 ± 10 % Volts, 50 ± 5% Hz, energy efficient motor, 3 phase AC power supply, Duty S1, IE2/IE3 , induction motor, totally enclosed, fan cooled motor, Insulation class F, IP55, ambient 50° C, 1440 RPM , PF 0.85, IS2615/IEC60034-1.	
4.	a.) Industrial Centrifugal backward curved inclined SWSI	("W" for counter clockwise UP blast	Fan Dia -710 mm RPM-1176 CFM -4650 Presuure-125 mm WG Arrangement-1	Complete assembly of exhaust fan. It will be standby to our existing exhaust blower system.  Fan dia – To be designed by the bidder as per requirement RPM- 900 Approx.  CFM – 4650 Approx.  Presuure-125 mm WG  Arrangement-1	
	b.) Motor	01		4 pole, 415 ± 10 % Volts, 50 ± 5% Hz, energy efficient motor, 3 phase AC power supply, Duty S1, IE2/IE3, induction motor, totally enclosed, fan cooled motor, Insulation class F, IP55, ambient 50° C, 1440 RPM, PF 0.85, IS2615/IEC60034-1.	

- 3) Terms and conditions for supply fan blower and exhaust fan blower: -
- 3.1) For Supply Fan Blower (Centrifugal Forward Curved)-
- a). The certifications of supply fan blower should be as per AMCA licensed.
- b). Transmission should be V-belt driven with belt pulley & Belt guard.
- c). **Frame-** The structure should be T type with welded frame made of angle utilizes enhanced bearings to support higher dynamic load necessary for the increased performance. The section should be manufactured with sections of steel and finished with polyester powder coating.
- d). Wheel The wheel should be made of galvanized sheet steel forward curved blades.
- e). **Housing -** For all sizes above, the housing should be of galvanized sheet steel with the housing fixed to the side plates. It shall be rigidly reinforced and supported by structured angles.
- f). **Shaft -** Shafts should be made of C45 carbon steel using an automatic process for positioning and cutting of the keyways. All dimensional tolerances of the shaft should be fully checked to ensure a precision fit. All shafts should be coated with an anti-corrosion varnish after assembly.
- g). **Bearings -** Bearings should be of either deep groove ball bearing type with an eccentric locking collar or an adapter sleeve, or spherical roller bearings type sealed at both sides for different duty application.
- h). **Balancing Quality -** All wheels should be statically and dynamically balanced to ISO1940 and AMCA 204 G2.5 standards. All fans after assembly should be trim-balanced to ISO1940 and the bidder should validate the balancing at site.
- i). Anti-vibration mounts (spring/rubber) for low vibration along with low noise (of less than 50 db) and quiet running.
- j). The position of the motor for belt drive centrifugal fan should be in accordance with AMCA standard 99- 2407-66.
- k). Location of motor should be determined by facing the drive side of fan and designating the positions by letters W, X, Y, or Z.
- 1). **Motor-** 4 pole,  $415 \pm 10$  % Volts,  $50 \pm 5$ % Hz, energy efficient motor, 3 phase AC power supply, Duty S1, IE2/IE3, induction motor, totally enclosed, fan cooled motor, Insulation class F, IP55, ambient  $50^{0}$  C, 1440 RPM, PF 0.85, IS2615/IEC60034-1 with suitable HP. While selecting capacity of the motor transmission losses, copper losses etc. may be considered.

#### 3.2) For Exhaust Fan Blower (Industrial Backward Curved)-

- a). The certifications of exhaust fan blower should be as per AMCA licensed.
- b). Transmission should be V-belt driven with belt pulley & Belt guard.
- c). **Fan housing-** Motor support and base frame are in Mild steel execution.
- d). Wheel Fan wheel shall be made of galvanized steel blades are statically and dynamically balanced.
- e). **Housing Casings** Made of high strength fully welded mild steel casings finished in a durable prime coat of smoke grey color.
- f). The support angles should be intermediately welded.
- g). **Shaft -** Shafts should be hot rolled steel accurately turned, ground, polished, and ring gauged for accuracy.
- h). **Bearings -** Bearings should be heavy-duty, self lubricated, anti-friction ball or roller, self aligning, pillow block type.
- i). **Foundation for Exhaust Blowers -** Foundation should be of vibration absorbing concrete 1:1.5:3.
- j). The position of the motor for belt drive centrifugal fan should be in accordance with AMCA

- standard 99- 2407-66.
- k). Location of motor is determined by facing the drive side of fan and designating the positions by letters W, X, Y, or Z.
- l). **Motor-** 4 pole,  $415 \pm 10$  % Volts,  $50 \pm 5$ % Hz, energy efficient motor, 3 phase AC power supply, Duty S1, IE2/IE3, induction motor, totally enclosed, fan cooled motor, Insulation class F, IP55, ambient  $50^{\circ}$  C, 1440 RPM, PF 0.85, IS2615/IEC60034-1 with suitable HP. While selecting capacity of the motor transmission losses, copper losses etc. may be considered.
- m). **Vibration isolation-**MS base shall be provided for both fan and motor built as an integral part and shall be mounted on a concrete foundation through retroflex vibration isolator.

#### General terms & conditions –

- i. The firm must have experience in supply, installation, testing, commissioning of blowers with atleast 2 works executed in last 5 years in Govt/PSU/Autonomous bodies (scanned copies of work order and certificate of satisfactory completion from atleast 2 clients must be enclosed).
- ii. The bidder should also provide technical literature along with bid.
- iii. While designing/supply CFM may be considered to be supplied 5% higher than existing CFM.
- iv. The validation & calibration of required CFM will be under bidder's scope.
- v. Bidders to furnish the technical data of the equipment selected & to be supplied along with fan curves etc.
- vi. The electrical equipments & installation shall also conform to the latest Indian Electricity Rules, as regards safety, earthling and essential provisions specified therein for installation and operation of electrical equipments.
- vii. In case, where the offer deviates from the specified standards, the tenderer shall indicate clearly in his offer the standards proposed to be adopted by him along with the details thereof.
- viii. All items covered in the specifications shall be manufactured from the best materials under first class workmanship suitable for 24x7x365 days operation.
- ix. All equipments shall be provided with efficient lubrication arrangement so that bearings and other parts are not subjected to under wear and tear. Sufficient lubrication point shall be provided, wherever necessary and all such points shall be easily accessible.

#### PART B (INSTALLATION & MODIFICATION)

Installation & modification of the Blowers has to be carried out by the firm at the designated location (AHU no. 02, 13, 16 & 17 as specified in PART A) which operates at a single speed as noted below.

- 1. All modification work should be with minimum loss & should be compatible with over existing system and with minimum modification time.
- 2. Supply, fabrication, installation, testing and commissioning of blower system with motor having low noise level, low vibration as complete in all respect with all materials and labors etc including dismantling and repairing of civil parts and minor modification of duct for connection of blowers inlet/outlet if any.
- 3. The installation & modification of blower in AHU is to be carried out in phased manner without disturbing the negative pressure of lab & working of Bio-containment lab as per the bio –safety norms of NIHSAD under the supervision of NIHSAD staff.
- 4. The existing electrical cable at site shall be used as far as possible for connection of motors.

- 5. In order to ensure exact repairs & modification involved and to know Bio-safety norms the vendors are highly recommended to visit the location before quoting the bid.
- 6. No change in the offer/bid will be permitted once the offer/bid is submitted.
- 7. The bidder should offer one year Comprehensive on-site warranty.

# Arrangement 1 SWSI For belt or direct drive. Impeller overhung on shaft, two bearings mounted on pedestal base. Arrangement 3 SWSI/DWDI For belt or direct drive. Impeller mounted on shaft between bearings supported by the fan casing.

# Financial Bid (BOQ) should be filled & uploaded separately

To

The Director,

NIHSAD,

Bhopal – 462021 (M.P.)

Sir.

I/We submit our tender with respect to financial bid for Replacement of Blowers at NIHSAD, Bhopal and my/our rate is as follows which may be read with reference to Schedule – II: -

Financial Bid (BOQ)								
	(For reference purpose only and not to be filled with technical bid)							
`	Tender Inviting Authority: Director, ICAR-NIHSAD, Bhopal							
	ment: Replacement of Blowers							
	9-209/17-18/NIHSAD (P&S)							
Name of the								
Bidder/								
Bidding Firm								
/ Company:								
	PRICE	<u>SCHEDULE</u>						
NUMBER#	TEXT #	NUMBER#	NUMBER#	TEXT #				
Sl.	Item Description	BASIC RATE In	TOTAL	TOTAL				
No.		Figures To be entered	AMOUNT	AMOUNT In				
		by the Bidder in	in	Words				
		Rs. P	Rs. P					
1	2	3	4	5				
1	Equipment							
1.01	Replacement of Blowers		0.00	INR Zero				
	(8 Supply fan Blowers & 7			Only				
	Exhaust Fan Blowers) alongwith							
	motors							
1.02	Applicable GST % (Amount in		0.00	INR Zero				
	INR)			Only				
Total in			0.00	INR Zero				
Figures				Only				
Quoted Rate		INI	R Zero Only					
in Words	in Words							

I/We agree to forfeiture of the EMD deposited by me/us in connection with tender if we fail to comply with any of the terms and conditions in whole or in part as paid down in the tender documents. We have carefully read the terms and conditions of the tender and agree to abide by these in letter and sprit.

In other terms and conditions that the tender would like to specify, it will form a part of the schedule.

Signature Name and address of the firm with phone number