eProcu	reme	nt	Tend	er D	etails					
A13 194 1	tem							Date : 30-Nov-2	2023	11:22 A
न्यमेव जन्मते									I	/
<b>Basic Details</b>										
Organisation Chain		Institute of Technology pment Office- Civil - IIT		Infr	astructure Develop	ment O	ffice	- IITI  Infrastruc	ture	
Tender Reference Number	IITI/IC	00/E/HVAC/INSU RC/NI	T/23/03							
Tender ID	2023_1	ITI_783175_1	W	ithdı	rawal Allowed		Yes	5		
Tender Type	Open 7	Fender	Fo	orm c	of contract		Wo	orks		
Tender Category	Works		No	<b>b. of</b>	Covers		2			
General Technical Evaluation Allowed	No		Ev	alua	ise Technical tion Allowed		No			
Payment Mode	Offline			Muli DQ	ti Currency Allow	ed For	No			
Is Multi Currency Allowed For Fee	No		AI	low <sup>·</sup>	Two Stage Biddin	g	No			
Payment Instru	ments		Cov	ver <b>E</b>	Details, No. Of	Cover	's -	2		
Offline S.NoInstrun	nent Type		Cove	er	Cover	Dr		nent Type	Dec	riptio
1 R-T-G-S 2 NEFT			No		Cover		Cun	lent Type		Room
			1		Fee/PreQual/Techr	iical .po	lf		wate Insul	at IIT
			2		Finance	.xl	5		and o wate Insul	Room chilled r pipe ation at IIT re
Tender Fee Deta	ils, [Tot	al Fee in ₹ * - 0.00	<u>0]</u>	E	MD Fee Details					
Tender Fee in ₹ Fee Payable To	0.00 Nil	Fee Payable At	Nil	EN	1D Amount in ₹	86,505	5	EMD through BG/ST or EMD		No
Tender Fee	No	ree Payable At	INII	-∟				<b>Exemption Allo</b>		
Exemption					ID Fee Type	fixed		EMD Percentag		NA
Allowed				EN	1D Payable To	Regist IITI	rar	EMD Payable A	t	IIT Indor
Work /Item(s)							(	Click to view modi	ficatio	on histo
Title	AHU R	oom and chilled water p	ipe Insl	ulatio	n work at IIT Indor	e				
Work Description		oom and chilled water p		ulatio	n work at IIT Indor	е				
Pre Qualification Details		refer Tender documents	s.							
	- 1									
Independent Exterr Monitor/Remarks	nal NA									

Tender Valu	e in ₹		43,25,249		Proc	luct	Category	Electrica Works	Sub categ	ory	NA	
Contract Ty	pe		Tender		Bid	Valid	lity(Days)	180	Period Of	Work(Days	<b>s)</b> 90	
ocation			IIT Indore		Pinc			453552	- Bid Opening Place ID off Flo		E IDC AB, Flo	D office, Ground or, IIT lore
Pre Bid Mee Address	ting		IDO Office, C East Wing, A Bhawan, IIT 453552	bhinandan	r, <b>Pre</b>	Bid N	Meeting Date	07-Dec- 2023 11:00 AM			Flo	) ice,Groun or, IIT lore
Should Allov Tender	w NDA		No		Allo Bidd		eferential	No				
Critical Da	ites											
ublish Date	e			30-Nov-202	23 03:00	PM	Bid Opening	Date		21-Dec-2	2023 0	3:00 PM
Document D Date	ownlo	ad /	Sale Start	30-Nov-202	23 04:00	PM	Document D Date	ownload	I / Sale End	20-Dec-2	2023 0	2:00 PM
Clarification	Start	Date		NA			Clarification	End Dat	e	NA		
Bid Submiss	ion St	art D	ate	09-Dec-202	23 09:00	AM	Bid Submiss	ion End	Date	20-Dec-2	2023 0	2:00 PM
Tender Do	cume	ents										
IIT Oocument	S.No	Doc	ument Nam	e		De	escription				Docu Size (	ment (in KB)
	1	Tend	ernotice_1.pd	df			U Room and ch Indore	illed wate	r pipe Insulat	ion work at		596.7
Vork Item Oocuments	S.No	Doc	ument Type	9	Docume	ent N	ame	Des	cription		Docu Size (	ment (in KB)
	1	BOQ		E	30Q_823	248.>	ds		Room and cl Insulation wo			282.5
Bid Opene	ers Lis	<u>:t</u>										
5.No		-	er Login Id				pener Name			Certificate		e
			@iiti.ac.in @iiti.ac.in				khatri Jacob			"ROHIT KH/ SHERIN JAC		
	chainik					Sherin Jacob Chainika Malhotra					A MALHOTRA	
			it@iiti.ac.in		S	hailer	ndra Jat			SHAILENDR	A KUM	1ar jat
Tender Pro	ring		No					Show 1	echnical bi	d status		Yes
Process allo Show Finance			Yes					Show E	Bids Details			No
s <b>tatus</b> loQ Comparat nodel	tive Cha	art	Normal					BoQ Cor	npartive char	t decimal pl	aces	2
	tive Cha		L					Form Ba	sed BoQ			No
ank Type		ublic	lechnical Bid	Opening								
Soq Compara Rank Type Show Bid Deta Domain stage		uDIIC										
Rank Type Show Bid Deta	takin	g		Tender co					on compliance			

1 PPP-MII Order 2 MSEs Order 20	
Tender Inviting	a Authority
Name	Project In Charge
Address	IDO Office, Ground Floor, East Wing, Abhinandan Bhawan, IIT Indore 453552
Tender Creator	Details
Created By	Chainika Malhotra
Designation	Manager
Created Date	30-Nov-2023 11:11 AM

भारतीय प्रौद्योगिकी संस्थान इंदौर आधारिक संरचना विकास कार्यालय INDIAN INSTITUTE OF TECHNOLOGY INDORE Infrastructure Development Office



# NOTICE INVITING TENDER

N.I.T. No.	: IITI/IDO/PR/E/HVAC/INSU./R&C/NIT/2023-24/03
NAME OF WORK	: AHU Room & chilled water pipe Insulation work at IIT Indore.
ESTIMATED COST	: Rs. 43, 25, 2 49/-
EARNEST MONEY	: Rs. 86,505/-
TIME ALLOWED	: 03 (Three) Months

Project In-Charge

## **INDEX**

Name of work: - AHU Room & chilled water pipe	e Insulation work at IIT Indore.
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S. No	Description	Page No
1.	Index	2
2.	Notice Inviting Tender	3
3.	Information and instruction for bidders	4-6
4.	EMD submission procedure	7
5.	CPWD 6	8-13
6.	Form of Performance Bank Guarantee	14
7.	Instructions for Online Bid Submission	15-18
8.	General Conditions of Contract	19-21
9.	Special Conditions of Contract	22-29
10.	Proforma of Schedules	30-35
11.	Scope of work and technical specification	36-37
12.	Technical Bid Documents	38-52
13.	Financial Bid	53
14.	Schedule of Quantity	54

Certified that this Bid documents contains pages 01 to 54 Including front and back page.

APIC IIT Indore AEE-HVAC IIT Indore

## Project In-Charge

Infrastructure Development Office IIT, Indore

## INDIAN INSTITUTE OF TECHNOLOGY INDORE NOTICE INVITING TENDER

The Project In-Charge, IIT Indore invites item rate bids in two bid system for

NIT No.: IITI/IDO/PR/E/HVAC/INSU./R&C/NIT/2023-24/03

Name of Work: "AHU Room & chilled water pipe Insulation work at IIT Indore."

Estimated Cost: Rs. *43, 25, 249/-* (Rupees Forty-Three Lakhs Twenty-Five Thousand Two Hundred Forty-Nine Only)

Earnest Money: Rs. 86,505 /- (Rupees Eighty Six Thousand Five Hundred Five Only)

Time of Completion: 3 (Three) Months

following work:

Date of availability of tender document for download from November 30, 2023 to December 20, 2023 can be seen on website <u>https://www.iiti.ac.in/tender\_estate</u>. and downloaded free of cost and shall be submitted online on website central public procurement portal (CPPP) https://eprocure.gov.in/eprocure/app

For Site visit, kindly send the request to pic-1@iiti.ac.in and apic@iiti.ac.in minimum 24 hrs before date & time mentioned for site visit below, This request should include complete details of person who will be coming for site visit ( with their Id proof and authorization letter on company letter head with authorized seal and signature ) and timing for site visit will be from 10:00 AM to 3:00 PM of December 04, 2023 to December 06, 2023.

Pre-bid meeting will be held on December 07, 2023, from 11:00 AM to 1:00 PM at IDO office, Ground Floor, Abhinandan Bhawan, IIT Indore.

Bid submission will start from 9.00 AM of December 09, 2023

Last date and time for submission of bids is up to 2.00 PM of December 20, 2023

Time and date of opening of eligibility bid: December 21, 2023, at 3:00 PM

#### INFORMATION AND INSTRUCTIONS FOR BIDDERS

The Project in Charge, IIT Indore on behalf of IIT Indore invites online item rate tenders from eligible firms / contractors of repute in two bid system for the following work:

SI	IITI/IDO/PR/E/HVAC/INSU./R&C/NIT/2023-24/03	Name of work & Locatio n	Estimate d cost of work	Earnes t Money	Perio d of Comp letion	Site Visit	Date & Time of Pre-Bid meeting	Start Date and Time for submissio n /uploading of eligibility and financial bids and other document s as specified	Last date & Time of submissio n /uploading of eligibility and financial bids and other document s as specified	Time & date of opening of Eligibility bid
1	IITI/IDO/PR/E/HVAC/IN	AHU Room & chilled water pipe Insulatio n work at IIT Indore	Rs. 43, 25, 249/-	Rs. 86,505 /-	03 Month s	From 10.00 AM to 3.00 PM of December 04, 2023 to December 06, 2023.	December 07, 2023, from 11:00 AM to 1:00 PM	December 09, 2023 from 9.00 AM	December 20, 2023 up to 2.00 PM	December 21,2023 at 3:00 PM

- 1. Contractors who fulfill the following requirements shall be eligible to apply. Joint ventures are not accepted.
- (a) Should have satisfactorily completed similar works in CPWD / MES / State PWD / Central PSUs / Central Government Educational Institutes/ Central Government organization/ State Government Organization/State Funded or Centrally Funded Technical Institutes as mentioned below during the last seven years ending previous day of last date of submission of bids.

Three similar completed works each costing not less than Rs. 17.30 Lakh OR

Two similar completed works each costing not less than Rs. 25.95 Lakh OR

One similar completed work each costing not less than Rs. 34.60 Lakh

Eligible similar work shall mean" Works related to HVAC system/Insulation work of duct or chilled water". Decision of Institute to accept or reject any work as eligible similar work shall be final.

The value of executed works shall be brought to current costing level by enhancing the actual value of work at simple rate of 7% per annum; calculated from the date of completion to previous day of last date of submission of bids.

(i) Should have an average annual financial turnover of Rs. 25 Lakhs on construction works during the last five years ending March 31, 2023. In this regard a certificate issued by a Qualified Chartered Accountant is to be attached. The certificate should be latest and to be issued only after the date of publishing of this tender.

(ii) Should not have incurred any loss (profit after tax should be positive) in more than two years during the last five years ending March 31, 2023.

(iii) Should have a solvency of Rs. 17, 30, 000 /-. Bank solvency shall be latest and to be issued by the banks only after the date of publication of the tender

(iv) Online deposited receipt against EMD.

(v) Should submit seal and signed copy of complete tender documents along with corrigendum/addendum (If any)

(vi) Should have valid GST registration certificate.

(vii) Should have valid EPF registration certificate.

(viii) Should have valid ESIC registration certificate.

(ix) Should have valid PAN CARD registration certificate.

(x) Should have valid company/firm registration certificate.

(xi) Should have valid Building & other construction works (BOCW) registration certificate or undertaking that they will submit it if the work is awarded.

(xii) Should have valid labor license registration certificate or undertaking that they will submit it if the work is awarded.

(xiii) Should submit affidavit as per clause 1.3 of CPWD-6 (Page-9).

(xiv) Should submit the documents as per technical bid documents (From P-38 to P-52 of this tender).

(xv) Should submit the self-declaration certificate on their letter head that for any work in last five years performance bank guarantee has never been forfeited / encashed by the client.

(xvi) Work Order copy fulfilling similar work condition shall be provided with Schedule of Rates and Scope of Works including Satisfactory Completion certificate by client (Seal and signed by Executive Engineer or equivalent) with executed value, date of completion of the job and reference work order number. In case executed value is not mentioned in the completion certificate issued by the client, work order value with amendments, if any, shall be considered for the purpose of evaluation.

- The intending bidder must read the terms and conditions of CPWD-6 carefully. He should only submit his bid if he considers himself eligible and he is in possession of all the documents required and should submitted with technical bid.
- 3. The amount of EMD will be paid by online mode only.
- 4. Information and Instructions for bidders posted on website shall form part of tender and bid document.
- 5. The bid document consisting of plans, specifications, the schedule of quantities of various types of items to be executed and the set of terms & conditions of the contract to be complied with and other necessary documents can be seen and downloaded from website stated above.
- 6. The tender shall only be submitted after uploading the mandatory scanned documents as per list given in tender document.
- 7. The Eligibility bid shall be opened first on due date and time as mentioned above. The time and date of opening of financial bid of contractors qualifying the eligibility bid shall be uploaded on CPP portal.
- 8. IIT Indore reserves the right to reject any prospective application without assigning any reason and to restrict the list of qualified contractors to any number deemed suitable by it, if too many bids are received satisfying the laid down criteria.
- 9. Disqualification of Tenderer: Even if a Tenderer meets all the Eligibility Criteria and all other technical and commercial requirements, he is liable to be disqualified, without prejudice to IITI's rights to take legal actions as per applicable law, if he has made untrue or false representations in the forms, statements, translations and enclosures submitted in proof of eligibility and qualification requirements, and/or made any misrepresentation of facts in order to influence the tendering process and its outcome. There shall be no post tender negotiations except in case of negotiations with Tenderer of substantially responsive, reasonable and lowest evaluated (L-1) Bid.

## EMD submission procedure

The tender shall be accompanied with the Acknowledgment of Earnest money paid of amounting Rs. **86,505** /- (Rupees Eighty Six Thousand Five Hundred Five Only) and the payment should be made through digital means only. The following payment gateway link (sbi collect) can be used for EMD payment:

https://forms.eduqfix.com/indoreiit/add.html

While submitting the EMD only, following details to be mentioned on portal:

Tender number IITI/IDO/PR/E/HVAC/INSU./R&C/NIT/2023-24/03

Name of work: AHU Room & chilled water pipe Insulation work at IIT Indore

CPWD - 6

#### Indian Institute of Technology Indore Notice Inviting Tender

- 1. Project in Charge IIT Indore on behalf of IIT Indore invites item rate bids from eligible firms/contractors of repute in two bid systems for the work of "AHU Room & chilled water pipe Insulation work at IIT Indore."
  - i) The work is estimated to a composite cost of: Rs 43, 25, 249 /- this estimate, however, is given merely as a rough guide.
  - ii) Criteria of eligibility for contractors: Same as Mentioned in earlier pages.
  - iii) To become eligible for participation in bidding process, the bidder shall have to furnish an affidavit as under: - I/We undertake and confirm that eligible similar works(s) has/have not been got executed through another contractor on back to back basis. Further that, if such a violation comes to the notice of Department, then I/we shall be debarred for tendering in IIT Indore in future forever. Also, if such a violation comes to the notice of Department before date of start of work, the Engineer-in-Charge shall be free to forfeit the entire amount of Earnest Money Deposit/Performance Guarantee.
- Agreement shall be drawn with the successful bidder on prescribed Form No. CPWD 8 modified / amended up to last date of receipt of tender, Bidder shall quote their rates as per various terms and conditions of the said form which will form part of the agreement.
- 3. The time allowed for carrying out the work will be 3 (Three) Months (including rainy season and holidays) from the date of start as defined in Schedule 'F' or from the first date of handing over of the site, whichever is later, in accordance with the phasing, if any, indicated in the bid documents.
- 4. The site for the work is available at IIT Indore
- 5. The bid document consisting of plans, specifications, the schedule of quantities of various types of items to be executed and the set of terms and conditions of the contract to be complied with and other necessary documents except Standard General Conditions of Contract Form, 2014 can be seen on website mentioned on earlier pages.
- 6. Copy of certificate of work experience, Certificate of financial turnover from Chartered Accountant, Bank Solvency Certificate and other documents mentioned shall be submitted within the period of bid submission and all documents mentioned in Technical bid document (P-38 to P-52 of this

tender) in the prescribed formats of Form 'A' to 'G' and Annexure 'A' to 'F' along with certified copies of supporting documents shall also be submitted At the time of submission of bid contractor must submit 'Affidavit / Certificate from CA mentioning Financial Turnover of last 3 years or for the period as specified in the bid document and further details, if required, may be asked from the Contractor after opening of Eligibility bid documents.

- 7. The bid submitted shall become invalid and shall not be refunded if:
  - i. The bidder is found ineligible.
  - ii. The bidder does not submit all the documents as stipulated in the bid document.
  - iii. If any discrepancy is noticed between the documents as uploaded at the time of submission of bid and hard copies as submitted physically by the lowest bidder in the office of bid opening authority.
- iv. If any cell is left blank the same shall be treated as "0". Therefore, if any cell is left blank and no rate is quoted by the bidder, rate of such item shall be treated as "0" (ZERO) and the bidder shall be bound to execute that item without any cost implication. However, if a tenderer quotes nil rates against each item in item rate tender, the tender shall be treated as invalid and will not be considered as lowest tenderer.
- 8. The contractor whose bid is accepted will be required to furnish performance bank guarantee of 3% (Three Percent) of the bid amount within the period specified in Schedule F. This guarantee shall be in the form of Fixed Deposit Receipts or Guarantee Bonds of any Nationalized Bank or the State Bank of India in accordance with the prescribed form. In case the contractor fails to deposit the said performance guarantee within the period as indicated in Schedule 'F' including the extended period if any, the performance guarantee shall be valid up to successful completion of defect liability period. Further the claim period of the performance guarantee. The performance guarantee shall be irrevocable in nature and shall be in the prescribed format given in the tender document. The performance guarantee shall be submitted directly by the Issuing bank to IIT Indore.
- 9. The contractor whose bid is accepted will also be required to furnish either copy of applicable licenses / registrations or proof of applying for obtaining labor licenses, registration with EPFO, ESIC and BOCW Welfare Board including Provident Fund Code No. if applicable and also ensure the compliance of aforesaid provisions by the sub-contractors, if any engaged by the contractor for the said work and program chart (Time and progress) within the period specified in Schedule 'F'.
- 10. The description of the work is as follows:

The scope of works includes "AHU Room & chilled water pipe Insulation work at IIT Indore"

Intending bidders are advised to inspect and examine the site and its surroundings and satisfy themselves before submitting their bids, the form and nature of the site, the means of access to the site, the accommodation they may require and in general shall themselves obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect their bids. A bidder shall be deemed to have full knowledge of the site whether he inspects it or not and no extra charge consequent on any misunderstanding or otherwise shall be allowed. The bidder shall be responsible for arranging and maintaining at his own cost all materials, tools & plants, water, electricity access, facilities for workers and all other services required for executing the work unless otherwise specifically provided for in the contract documents. Submission of a bid by a bidder implies that it has read this notice and all other contract documents and has made itself aware of the scope and specifications of the work to be done and of conditions and rates at which stores, tools and plant, etc. will be issued to it by the Government and local conditions and other factors having a bearing on the execution of the work.

- 11. The competent authority on behalf of the Board of Governance of IIT Indore does not bind itself to accept the lowest or any other bid and reserves to itself the authority to reject any or all the bids received without assignment of any reason. All bids in which any of the prescribed condition is not fulfilled or any condition including that of conditional rebate is put forth by the bidder shall be summarily rejected.
- 12. Canvassing, whether directly or indirectly, in connection with bidders is strictly prohibited and the bid submitted by the contractors who resort to canvassing will be liable to rejection.
- 13. The competent authority on behalf of Board of Governance of IIT Indore reserves to himself the right of accepting the whole or any part of the bid and the bidder shall be bound to perform the same at the rate quoted.
- 14. The contractor shall not be permitted to bid for works in the IIT Indore in which its near relative is posted as an officer in any capacity between the grades of Superintending Engineer and Junior Engineer (both inclusive) responsible for award and execution of contracts. It shall also intimate the names of persons who are working with it in any capacity or are subsequently employed by it and who are near relatives to any Gazetted officer in the IIT Indore or in the Ministry of Education. No Engineer of Gazetted rank or other Gazetted Officer employed in Engineering or Administrative duties in an Engineering Department of the Government of India is allowed to work as a contractor for a period of one year after his retirement from Government service, without the previous permission of the Government of India in

writing. This contract is liable to be cancelled if either the contractor or any of its employees is found any time to be such a person who had not obtained the permission of the Government of India as aforesaid before submission of the bid or engagement in the contractor's service.

- 15. The bid for the works shall remain open for acceptance for a period of **180 days** (One Hundred Eighty days) from the date of opening of the technical bid. If any bidder withdraws its bid before the said period or issue of letter of acceptance, whichever is earlier, or makes any modifications in the terms and conditions of the bid which are not acceptable to the department, then IIT Indore shall, without prejudice to any other right or remedy, be at liberty to forfeit 100% of Earnest Money as aforesaid. Further the bidders shall not be allowed to participate in the re-bidding process of the work.
- 16. The Eligibility bid shall be opened first on due date and time. The time and date of opening of financial bid of contractors qualifying the eligibility bid shall be uploaded on CPP portal.
- 17. This Notice Inviting Bid shall form a part of the contract document. The successful bidder, on acceptance of its tender by the Accepting Authority shall within 15 days from the stipulated date of start of the work, sign the contract consisting of:
  - i. The Notice Inviting Bid, all the documents including additional conditions, specifications, and drawings, if any, forming part of the bid at the time of invitation of bid and the rates quoted online at the time of submission of bid and acceptance thereof together with any correspondence leading thereto.
  - ii. Standard C.P.W.D. Form 8 amended / modified up to last date (or other Standard C.P.W.D. Form as applicable) of receipt of bid.

## <u>T E N D E R</u>

I/We have read and examined the entire tender documents including notice inviting tender, schedule A, B, C, D, E & F, technical specifications, Drawings & Designs, General Rules and Directions, Conditions of Contract, clauses of contract, Special conditions, Schedule of Rate & other documents and Rules referred to in the conditions of contract and all other contents in the tender document for the work.

I/We hereby tender for the execution of the work specified for the President of India within the time specified in Schedule 'F', viz., schedule of quantities and in accordance in all respects with the specifications, designs, drawings and instructions in writing referred to in Rule-1 of General Rules and Directions and in Clause 11 of the Conditions of contract and with such materials as are provided for, by, and in respects in accordance with, such conditions so far as applicable.

I/We agree to keep the tender open for one hundred eighty (180) days from the due date of opening of eligibility bid and not to make any modification in its terms and conditions.

A sum of Rs. 86,505 /- is hereby forwarded online and is scanned and uploaded. If I/We, fail to furnish the prescribed performance guarantee within prescribed period, I/we agree that the said President of India or his successors, in office shall without prejudice to any other right or remedy, be at liberty to forfeit the said earnest money absolutely. Further, if I/We fail to commence work as specified, I/We agree that President of India or his successors in office shall without prejudice to any other right or remedy available in law, be at liberty to forfeit the said performance guarantee absolutely. The said Performance Guarantee shall be guaranteed to execute all the works referred to in the tender documents upon the terms and conditions contained or referred to those in excess of that limit at the rates to be determined in accordance with the provision contained in Clause 12.2 and 12.3 of the tender form. Further, I/we agree that in case of forfeiture of earnest money or performance guarantee as aforesaid, I/We shall be debarred for participation in the re-tendering process of the work.

I/We undertake and confirm that eligible similar work(s) has / have not been got executed through another contractor on back-to-back basis. Further that, if such a violation comes to the notice of Department, then I/We shall be debarred for tendering in IIT Indore in future forever. Also, if such a violation comes to the notice of Department before date of start of work, The Engineer – in – Charge shall be free to forfeit the entire amount of Earnest Money Deposited / Performance Guarantee.

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

Dated #.....

Signature of Contractor

Postal Address# Witness: # Address: # Occupation: # **# To be filled in by the contractor/witness as applicable** 

# ACCEPTANCE

The a	above te	ender	(as modifie	ed vide	e letters	menti	oned here	under)	is acc	cepted by	/ me
for	and	on	behalf	of	the	IIТ	Indore	for	а	sum	of.
		_(Rup	ees								
		)									
The I a)	etters re	eferred	d to below	shall fo	orm pa	rt of thi	s contract	Agreer	nent:	-	
b)											
c)											
						For	& on beha	alf of th	e IIT I	Indore.	
							Signatu	ire			
									•••••		
Date	d						C	Designa	ation		

# FORM OF PERFORMANCE BANK GUARANTEE BOND

As per CPWD GCC 2020 Construction works

# Instructions for Online Bid Submission

The bidders are required to submit soft copies of their bids electronically on the CPP Portal, using valid Digital Signature Certificates. The instructions given below are meant to assist the bidders in registering on the CPP Portal, prepare their bids in accordance with the requirements and submitting their bids online on the CPP Portal.

More information useful for submitting online bids on the CPP Portal may be obtained at:

https://eprocure.gov.in/eprocure/app.

## **REGISTRATION**

- 1. Bidders are required to enroll on the E- Tender module of the Central Public Procurement Portal (URL: https://eprocure.gov.in/eprocure/app) by clicking on the link "Online bidder Enrollment" on the CPP Portal which is free of charge.
- 2. As part of the enrolment process, the bidders will be required to choose a unique username and assign a password for their accounts.
- 3. Bidders are advised to register their valid email address and mobile numbers as part of the registration process. These would be used for any communication from the CPP Portal.
- 4. Upon enrolment, the bidders will be required to register their valid Digital Signature Certificate (Class III Certificates with signing key usage) issued by any Certifying Authority recognized by CCA India (e.g. Sify / nCode / eMudhra etc.), with their profile.
- 5. Only one valid DSC should be registered by a bidder. Please note that the bidders are responsible for ensuring that they do not lend their DSC's to others which may lead to misuse.
- 6. The Bidder then logs in to the site through the secured log-in by entering their user ID / password and the password of the DSC / e-Token.

## SEARCHING FOR TENDER DOCUMENTS

- There are various search options built in the CPP Portal, to facilitate bidders to search active tenders by several parameters. These parameters could include Tender ID, Organization Name, Location, Date, Value, etc. There is also an option of advanced search for tenders, wherein the bidders may combine a number of search parameters such as Organization Name, Form of Contract, Location, Date, Other keywords etc. to search for a tender published on the CPP Portal.
- 2. Once the bidders have selected the tenders they are interested in, they may download the required documents / tender schedules. These tenders can be moved to the respective 'My Tenders' folder. This would enable the CPP Portal to

intimate the bidders through SMS / email in case there is any corrigendum issued to the tender document.

3. The bidder should make a note of the unique Tender ID assigned to each tender, in case they want to obtain any clarification / help from the Helpdesk.

#### PREPARATION OF BIDS

- 1. Bidder should take into account any corrigendum published on the tender document before submitting their bids.
- 2. Please go through the tender advertisement and the tender document carefully to understand the documents required to be submitted as part of the bid. Please note the number of covers in which the bid documents have to be submitted, the number of documents - including the names and content of each of the documents that need to be submitted. Any deviations from these may lead to rejection of the bid.
- 3. The bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender document / schedule and generally, they can be in PDF / XLS / RAR / DWF/JPG formats. Bid documents may be scanned with 100 dpi with a black and white option which helps in reducing the size of the scanned document.
- 4. To avoid the time and effort required in uploading the same set of standard documents which are required to be submitted as a part of every bid, a provision of uploading such standard documents (e.g., PAN card copy, annual reports, auditor certificates etc.) has been provided to the bidders. Bidders can use "My Space" or "Other Important Documents" area available to them to upload such documents. These documents may be directly submitted from the "My Space" area while submitting a bid and need not be uploaded again and again. This will lead to a reduction in the time required for the bid submission process.

Note: My Documents space is only a repository given to the Bidders to ease the uploading process. If Bidder has uploaded his Documents in My Documents space, this does not automatically ensure these Documents being part of Technical Bid.

#### SUBMISSION OF BIDS

- 1) Bidder should log into the site well in advance for bid submission so that they can upload the bid in time i.e. on or before the bid submission time. Bidder will be responsible for any delay due to other issues.
- 2) The bidder must digitally sign and upload the required bid documents one by one as indicated in the tender document.
- 3) Bidders are requested to note that they should submit their financial bids in the format provided and no other format is acceptable. If the price bid has been given as a standard BoQ format with the tender document, then the same is to be downloaded and to be filled out by all the bidders. Bidders are required to download the BoQ file, open it and complete the white coloured (unprotected) cells with their respective financial quotes and other details (such as name of the bidder). No other cells should be changed. Once the details have been completed, the bidder should save it and submit it online, without changing the filename. If the BoQ file is found to be modified by the bidder, the bid will be rejected. The vendor/firm should fill the complete details as mentioned in BOQ and exclusion of any cell of BOQ (Financial bid), the cost will be treated as inclusive of GST and other charges as mentioned in the BOQ column.

- 4) The server time (which is displayed on the bidders' dashboard) will be considered as the standard time for referencing the deadlines for submission of the bids by the bidders, opening of bids etc. The bidders should follow this time during bid submission.
- 5) All the documents being submitted by the bidders would be encrypted using PKI encryption techniques to ensure the secrecy of the data. The data entered cannot be viewed by unauthorized persons until the time of bid opening. The confidentiality of the bids is maintained using the secured Socket Layer 128 bit encryption technology. Data storage encryption of sensitive fields is done. Any bid document that is uploaded to the server is subjected to symmetric encryption using a system generated symmetric key. Further this key is subjected to asymmetric encryption using buyers/bid opener's public keys. Overall, the uploaded tender documents become readable only after the tender opening by the authorized bid openers.
- 6) The uploaded tender documents become readable only after the tender opening by the authorized bid openers.
- 7) Upon the successful and timely submission of bids (i.e. after Clicking "Freeze Bid Submission" in the portal), the portal will give a successful bid submission message & a bid summary will be displayed with the bid no. and the date & time of submission of the bid with all other relevant details.
- 8) The bid summary has to be printed and kept as an acknowledgement of the submission of the bid. This acknowledgement may be used as an entry pass for any bid opening meetings.

## **ASSISTANCE TO BIDDERS**

- 1. Any queries relating to the tender document and the terms and conditions contained therein should be addressed to the Tender Inviting Authority for a tender or the relevant contact person indicated in the tender.
- 2. Any queries relating to the process of online bid submission or queries relating to CPP Portal in general may be directed to the 24x7 CPP Portal Helpdesk.

## **GENERAL INSTRUCTIONS TO THE BIDDERS**

- 1. The tenders will be received online through portal http://eprocure.gov.in/eprocure/app. In the Technical Bids, the bidders are required to upload all the documents in pdf format.
- 2. Possession of a Valid Class II/III Digital Signature Certificate (DSC) in the form of smart card/e-token in the company's name is a prerequisite for registration and participating in the bid submission activities through https://eprocure.gov.in/eprocure/app. Digital Signature Certificates can be obtained from the authorized certifying agencies, details of which are available in the web site https://eprocure.gov.in/eprocure.gov.in/eprocure/appunder the link "Information about DSC".
- Tenderer are advised to follow the instructions provided in the "Instructions to the Tenderer" for the e-submission of the bids online through the Central Public Procurement Portal for E- Tender at http://eprocure.gov.in/eprocure/app

# **Online Bid Form**

The bidder shall complete the online bid form and the appropriate price schedule furnished in the online bidding documents.

## **Online Bid prices**

The Bidder shall indicate on the Price Schedule the unit price and total bid prices of the goods/works/services it proposes to supply/execute under the Contract.

For	taking	assistance	for	bid	CPP		Porta		we	bsite:
subi	mission, i	f any			CPP	eprocur. Portal 8002337	Help	Desk		Free

## **GENERAL CONDITIONS OF CONTRACT**

#### GCC 2020 (Construction Works) of CPWD is a part of the tender document.

However, the designations of authorities concerned as per this GCC should be read as below:

Sr. No.	Name of Concerned authority as per GCC of CPWD	To be read as				
1	2	3				
1	President of India	Chairperson BOG, IIT Indore				
2	Engineer-In-Charge	Project In charge				
3	Director General	Director, IIT Indore				
4	Department	Infrastructure Development Office, IIT Indore				
5	Chief Engineer CPWD	Project In charge,				
6	Director General (works) CPWD	Director, IIT Indore				
7	Additional Director	Dean of Infrastructure Development,				
	General	IIT Indore				
8	The Divisional Engineer	Executive Engineer, IIT Indore				

• The word "CPWD" will remain intact, wherever the rules, forms, formats, annexures, appendices, clauses, rate analysis formats, specifications etc. published by CPWD are referred.

#### **DEFINITIONS**

In the contract, the following expressions shall, unless the context otherwise requires, have the meanings hereby respectively assigned to them:

The CONTRACT shall mean the documents forming the tender and acceptance thereof together with the documents referred to therein including conditions, specifications, designs, drawings and instructions issued from time to time by the Engineer-in-Charge and all these documents taken together shall be deemed to form one contract and shall be complementary to one another.

The WORKS OR WORK shall, unless there be something either in the subject or context repugnant to such construction, be construed and taken to mean the works, by virtue of the contract contracted, to be executed whether temporary or permanent, and whether original, altered, substituted or additional.

The SITE shall mean the land/or other places on, into or through which work is to be executed under the contract or any adjacent land, path or street through which work is to be executed under the contract or any adjacent land, path or street which may be allotted or used for the purpose of carrying out the contract.

The CONTRACTOR shall mean the individual, firm or company, whether incorporated or not, undertaking the works and shall include the legal personal representative of such

individual or the persons composing such firm or company, or the successors of such firm or company and the permitted assignees of such individual, firm or company.

# General Condition of Contract for CPWD works 2020 as amended to the latest stage shall become parts & parcel of the tender documents.

The Board of Governors of IIT Indore shall mean its successors also. The Engineer Incharge shall mean the Project in charge IIT Indore or his authorized representative.

The Institute shall mean the Indian Institute of Technology Indore or his nominee as notified.

The Accepting Authority shall mean the Director, IIT Indore on the behalf of Board of Governors IIT Indore.

The Expected Risks shall mean risks due to riots (other than those on account of contractor's employees), war (whether declared or not) invasion, act of foreign enemies, hostilities, civil war, rebellion revolution, insurrection, military or usurped power, damages from aircraft, acts of God, such as earthquake, lightening and unprecedented floods, and other causes over which the contractor has no control and accepted as such by the Accepting Authority.

The Market Rate shall mean the rate as decided by the Engineer-in-Charge on the basis of the cost of material and labor at the site where the work is to be executed plus 15% cover all the overheads and profits.

The Schedule(s) referred to in these conditions shall mean the relevant schedule(s) annexed to the tender document and the Standard Schedule of Rates of the Institute with the amendments there to issued up to the date of issue of notice inviting tenders.

The Tendered Amount shall mean the amount of the work as stipulated in the letter of award.

Where the context so requires, words imparting the singular only also include the plural and vice versa. Any reference to masculine gender shall, whenever required, include feminine gender and vice versa.

Headings to the General Conditions of Contract shall not be deemed to form part thereof or be taken into consideration in the interpretation or construction thereof or of the contract.

The contractor shall be furnished, free of cost one certified copy of the contract except standard specifications, Schedule of Rates and such other printed and published documents, together with all the drawings as may be forming part of the contract. None of these documents shall be used for any purpose other than that of this contract.

#### Governing language

The contract shall be written in English. All correspondence and other documents pertaining to the contract which are exchanged by the parties shall be written in the same language.

Applicable Law - The applicable laws shall be that of Union of India.

Notices Any notices given by one party to the other pursuant to this Contract shall be sent to other party in writing or by E-mail, tele-fax, or facsimile and confirmed in writing to the other party's address as below:

#### Project in Charge

#### Infrastructure Development Office, IIT Indore.

A notice shall be effective when delivered or on the notice's effective date, whichever is later.

#### SUFFICIENCY OF TENDER

The contractor shall be deemed to have satisfied himself before tendering as to the correctness and sufficiency of his tender for the works and of the rates and prices quoted in the Schedule of Quantities, which rates and prices shall, except as otherwise provided, cover all his obligations under the Contract and all the matters and things necessary for the proper completion and maintenance of the works.

# SPECIAL CONDITIONS OF THE CONTRACT

- 1. Since the given work is balance work in which some of the material is supplied and already installed at site, its integration with existing system shall be the responsibility of the contractor.
- 2. The contractor shall employ the required number of technical and non-technical manpower. During contract period, the contractor shall depute qualified, experienced and competent manpower as per the site set-up/staff requirement for executing the work. During execution of installation, commissioning, testing activities, in case some additional manpower is required, contractor shall provide the same free of cost. For entry in institute, contractor shall submit the details of the employees i.e. Address proof, I.D. proof, photo etc. for gate pass of all deputies.
- 3. Project monitoring / Supervision / Quality assurance and control shall be done by IIT Indore. All the bills with measurement sheets and other documents shall be certified/verified by IIT Indore.
- 4. Contractor shall maintain the following document at site during execution of work such as hindrance register, site order book, pour card, quality documents, Site test reports, cement and steel consumption register, measurement book etc. but not limited too and the copy of the same shall be submitted by contractor with respective RA bills. Original shall be submitted at the time of final bill.
- 5. The contractor shall not be entitled for any additional payment during the tenure of the contract due to increase in cost of manpower or any other items.
- 6. The Institute shall provide space to contractor for site office, store and laboratory. However, it shall be contractors' responsibility to develop site office, store and laboratory on allocated space at his own cost.
- 7. Contractor shall provide Bar-chart and work program within one week from date of award of work. Also, the contractor shall provide weekly progress report and method statement.
- 8. It shall be contractor's responsibility to provide Mock-up / training of systems commissioned by them. The water and electricity required for such activity shall be the contractor's scope and no payments shall be made in this regard.
- 9. No extra payment will be made against tools and tackles, scaffolding etc. which will be required for execution of any works.
- 10. Contractors should understand that some buildings are occupied, and they shall work in these buildings according to flexibility of the users with prior permission.
- 11. For performing the assigned work, the contractor shall deploy medically and physically fit persons (Preferably below the age of 50). The contractor shall ensure that the people are punctual and disciplined and remain vigilant in the performance of their duty. Persons engaged by the contractor shall be from amongst properly trained electricians of high integrity and good conduct and shall be conversant in the local language i.e., Hindi. In no circumstances, persons under 18 years of age be employed.
- 12. The contractor shall further keep the IIT Indore indemnified against any loss to the IIT Indore property and assets. IIT Indore shall have further the right to adjust and/or deduct any of the amounts as aforesaid from the payments due to the contractor under this contract.

- 13. Contractor shall keep the IIT Indore indemnified against all claims whatsoever in respect of the employees deployed by the contractor, in case any employee of the contractor so deployed enters in dispute of any nature whatsoever, it will be the primary responsibility of the contractor to contest the same. In case IIT Indore is made party and is supposed to contest the case, the IIT Indore will be reimbursed for the actual expenses incurred towards Counsel fee and other expenses, which shall be paid in advance by the contractor to IIT Indore on demand. Further, the contractor shall ensure that no financial or any other liability comes on IIT Indore in this respect of any nature whatsoever and shall keep IIT Indore indemnified in this respect.
- 14. No accommodation & transportation facility will be provided by the IIT Indore.
- 15. Contractor is informed that the items or quantity mentioned in BoQ/SoQ are tentative and may be decreased or deleted completely as per the requirement of IIT Indore during the time of execution. Due to such reductions, any loss to the contractor shall not be the responsibility of IIT Indore and no damages to the contractor shall be entertained in this regard.
- 16. Before procurement of any item, Contractor shall take prior approval in writing from IITI/PMC. Otherwise IITI may not accept it and the contractor shall be solely responsible for such losses.
- 17. The site of work falls in the operational Simrol campus of IIT, Indore. The firm/ contractor shall have to abide by the security arrangements forced in the campus. Proper discipline shall have to be maintained at the site of work. The character and antecedents of staff engaged on work shall be verified through Police from time to time as required by the Security authorities. The staff shall not be changed frequently once the verification of character & antecedents is done since getting security passes for the building is a difficult process.
- 18. Any damage done to the man, machine and building during the execution of work shall be the responsibility of the contractor and same will have to be made good promptly by the contractor at his own cost to the entire satisfaction of the Project-in-Charge.
- 19. The work shall be executed as per of the CPWD General Specification for HVAC works – 2017, specifically but not limited to appendix H of CPWD General Specification for HVAC works – 2017(As detailed in Annexure-IV of this NIT for applicable equipment's.) amended up to date.
- 20. Watch and ward: Watch & ward for the installations, materials, including materials supplied by the department shall be the responsibility of the contractor till the installations / left over materials are finally taken over by the department. Nothing shall be payable on this account separately as this is deemed to be included within the scope of work.
- 21. No T & P shall be supplied by the department. The contractor shall arrange all the necessary T&P for the work and nothing extra shall be paid by the department.
- 22. The department shall be at liberty to terminate the contract in between also if the performance of the contractor is found unsatisfactory or otherwise without assigning any reason and the decision of the Project-in-charge in this

respect shall be final and binding on the contractor and no claim of the contractor of being put to loss by the department because of premature termination of the contract shall be entertained by the department.

- 23. The contractor shall deploy trained and experienced staff on duty to maintain the installation as per requirement. The department shall satisfy itself about the persons to be engaged by the contractor on this job and the decision of the Project-in-charge shall be final and binding on the contractor. The contractor shall be fully responsible for the integrity and character of the staff engaged. Any staff not considered suitable for the job shall have to be changed immediately by the contractor.
- If any scheduled check/exercise is not carried out in a timely manner, 24. suitable recovery shall be made from the bill and the decision of the Projectin-charge in this respect shall be final and binding on the contractor.
- Any damage done to the building or installation during the execution of 25. the work shall be made good by the contractor free of cost. In the event of his failure to do so, same shall be rectified through another agency at his risk & cost.
- All material before use shall have to be approved by the Project-in-26. charge. If at any stage during the execution of work, the Project-in-charge is not satisfied with the quality of material brought at the site of work, he shall be at liberty to reject all such materials. The rejected material shall have to be removed from the site of work immediately.
- The contractor shall work at his own responsibility. In case of any 27. accident, mishappening, disablement, no compensation shall be paid to the contractor or his employees by the IIT, Indore.
- The contractor shall be responsible for maintaining records of attendance 28. and payment etc. of his deputed-on duty staff as per rules and shall be paid minimum wages as per Minimum Wages Act of M.P. Govt. revised time to time.
- The contractor shall provide weekly rest to each member of staff to be 29. engaged for operation at their end accordingly as per direction of labour law to be complied.
- 30.

## SAFETY CODES AND LABOUR REGULATIONS

In respect of all labour employed directly or indirectly on the work i) for the performance of the contractor's part of work, the contractor at his own expense, will arrange for the safety provisions as per the statutory provisions, B.I.S. recommendation, factory act, workman's compensation act, CPWD code and instruction issued from time to time. Failure to provide such safety requirements would make the tenderer liable for a penalty of Rs. 200/- for each violation. In addition, the Project In-charge-, shall be at liberty to make arrangements and provide facilities as aforesaid and recover the cost from the contractor.

ii) The contractor shall provide necessary barriers, warning signals and other safety measures while laying pipelines, ducts cables etc. Or wherever necessary so as to avoid accidents. He shall also indemnify IITI against claims or compensation arising out of negligence in this respect. Contractor shall be liable, in accordance with the Indian Law and regulations for any accident occurring due to any cause. The department shall not be responsible for any accident that occurred, or damage incurred or claims arising there from during the execution of work. The contractor shall also provide all insurance including third party insurance as may be necessary to cover the risk. No extra payment will be made to the contractor due to the above provisions thereof.

## 31. RATES

- a) The rates quoted by the tenderer, shall be firm and inclusive of all taxes (i/c works contract taxes), duties and levies all charges for packing, forwarding, insurance, freight and delivery, installation, testing, commissioning etc. at site i/c temporary constructional storage, risks, overhead charges, general liabilities/ obligations and clearance from concerned authorities. However, the fee for these inspections by local bodies shall be borne by the department on production of supporting documents.
- b) Octroi duty shall not be paid separately but octroi exemption certificate can be furnished by the department on demand. However, the department is not liable to re-imburse the octroi duty in case exemption certificates are not honored by the concerned authorities.

## 32. COMPLETION PERIOD:

The completion period of Three months indicated in the tender documents is for the entire work of supplying, installation, testing, commissioning, and handing over of the entire system to the satisfaction of the Project-in-Charge.

33. VALIDITY:

Tenders shall be valid for acceptance for a period of 180 days from the date of opening of technical bid.

34. MOBILIZATION ADVANCE: No mobilization advance shall be given. 35. VERIFICATION OF CORRECTNESS OF EQUIPMENT AT DESTINATION: The contractor shall have to produce all the relevant records to certify that the genuine equipment from the manufacturers or authorized dealer has been supplied and erected.

## 36. POWER SUPPLY & WATER SUPPLY

a) <u>Water: -</u>The department will not supply water for execution of the work. However, the same shall be made available for testing and commissioning.

#### b) **Power: -**

- i.In partial modification to GCC, power supply may be provided by the department, if available, to contractor at one point (nearest substation) for installation at site. Termination switchgears with energy meter however, shall be provided by the contractor. Further extension if required shall be done by the contractor. For final system commissioning & handing over, power supply of 3 Phase, 415 volts, or 1Phase, 230 V, 50 Hz as applicable shall be made available in the control room(s) of the respective systems. The recovery of electricity so consumed shall be made as per tariff decided by the Institute from time to time from their bill or any other amount due or payable to the contractor or available with the Institute.
- ii. The contractor shall not use the power supply for any other purpose than that for which it is intended for. No major fabrication work shall be done at site. Power supply shall be used only for welding/ cutting works. Power supply shall be disconnected in case of such defaults and the contractor shall then have to arrange required power supply at his cost.

## 37. MACHINERY FOR ERECTION

All tools and plants required for unloading/handling of equipment and materials at site, their assembly, erection, testing and commissioning shall be the responsibility of the contractor.

## 38. COMPLETENESS OF THE TENDER

All sundry equipment, fitting, assembly, accessories, items, foundation bolts, supports termination lugs for electrical connection

cable glands, junctions boxes and all other items which are useful and necessary for proper assembly and efficient working of the various equipment and components of the work shall be deemed to have been included in the tender, irrespective of the fact whether such items are specifically mentioned in the tender or not.

## 39. SUBMISSION OF PROGRAMME

Within fifteen days from the date of receipt of the letter of acceptance, the successful tenderer shall submit his program for supply of material, installation, testing, commissioning and handing over of the installation to the Project-in-charge.

## 40. DISPATCH OF MATERIALS TO SITE AND THEIR SAFE CUSTODY

The contractor shall dispatch materials to the site in consultation with the Project-in- charge. Watch & ward, however, shall be the responsibility of contractor. Safe custody of all machinery and equipment supplied by the contractor shall be the responsibility of the contractor till final taking over by the department. Contractor shall have to prove bonafides of the make of materials by producing necessary documentary evidence, firms are advised accordingly to obtain prior approval of project-in-charge for proposed make of materials before bringing materials to site of work. However the contractor will be responsible for quality of material used in the work even after such approval.

#### 41. QUALITY OF MATERIALS AND WORKMANSHIP

- i) The components of the installation shall be of such design so as to satisfactory function under all conditions of operation.
- ii) The entire work of manufacture/fabrication, assembly and installation shall conform to sound engineering practice. The entire installation shall be such as to cause minimum transmission of noise and vibration to the building structure.
- iii) All equipment and materials to be used in work shall be manufactured in factories of good repute having excellent track record of quality manufacturing, performance and proper after sales services.

#### 42. CARE OF THE BUILDING

Care shall be taken by the contactor during execution of the work to avoid damage to the building. He shall be responsible for repairing all such damages and restoring the same to the original finish at his cost. He shall also remove all unwanted and waste materials arising out of the installation from the site of work from time to time.

#### 43. CONTRACTOR LIABILITY FOR DAMAGES CAUSED AND IMPERFECTION NOTICED WITHIN THE MAINTENANCE PERIOD

If the contractor or his working people or servants shall break, deface, injure or destroy any part of the building, in which they may be working, or any building, road, road kerb, fence, enclosure, water pipe, cables, drains, electric or telephones posts or wires, trees grass or grassland, or cultivated ground contiguous to the premises on which the work or any part of it is being executed, or if any, damage shall happen to the work while in progress from any cause whatever, or if any detect, shrinkage or other faults appear in the work within 12 months after a certificate final or otherwise of its completion shall have been given by the Engineer-in-charge arising out of defective or improper materials or workmanship, the contractor shall upon a receipt of a notice in writing on that behalf make the same good at his own expense, or in default, the Engineer-in-Charge may cause the same to be made good by other workmen and deduct the expense from any sums that may be then or at any time thereafter may become due to the contractor or from his security deposit.

## 44. INSPECTION AND TESTING

Initial Inspection and testing Initial inspection of materials & equipment at manufacturer's works may be done by the project-in-Charge or his representative at his discretion. For item / equipment requiring initial inspection at manufacturer's works, the contractor will intimate the date of testing of equipment at the manufacturer's works before dispatch. The contractor shall give sufficient advance notice regarding the dates proposed for such tests to the department's representative(s) to facilitate his presence during testing. The Engineer-in-Charge at his discretion may witness such testing. Equipment will be inspected at the manufacturer / authorized dealer's premises before dispatch to the site by the contractor.

- i) The department also reserves the right to inspect the fabrication job at the factory at the discretion of the Project-in-charge and the successful tenderer has to make arrangements for the same.
- ii) The materials duly inspected by Project In-charge, or his authorized representative shall be dispatched to site by the contractor.
- iii) No additional payment shall be made to the contractor for initial

inspection / testing of the manufacturer's works by the representative of the Project In-Charge. However, the department will bear the expenses of its representative deputed for carrying out initial inspection / testing.

iv) The requirement of initial inspection can be dispensed with waived off the Project In-Charge at his discretion.

## 45. GUARANTEE

- i) The contractor shall guarantee the complete system to provide the specified flow and pressure under all conditions & outlets.
- ii) All work shall be guaranteed for a period of 12 months from the date of acceptance and taking over of the installation by the Department against unsatisfactory performance and/or breakdown due to defective design, material, manufacture, workmanship or installation. The equipment or component or any part thereof found defective during the guarantee period shall be repaired or replaced free of cost to the satisfaction of the Engineer-in-charge. In case it is felt by the department that undue delay in being caused by the department at the risk & cost of the contractor. The decision of Engineer-in-charge in this regard in this regard shall be final.
- 46. PAYMENT TERMS:

The following percentage of contract rates shall be payable against the work shown here in:

S.No	Description of work	Payment
I	After initial inspection (as specified) & delivery at site in good condition on pro-rata basis	50%
11	On completion of pro-rata laying and installation	20%
111	For Testing and commissioning	15%
111	Approval and handing over the site/ installations in good working conditions.	

## **PROFORMA OF SCHEDULES**

## SCHEDULE 'A'

Schedule of quantities (as per PWD-3): As per enclosed BOQ

## SCHEDULE 'C'

Tools and plants to be hired to the contractor

S.No.	Descriptio n	Hire charges per day	Place of issue
1	2	3	4
Nil	Nil	Nil	NA

## SCHEDULE 'D'

Extra schedule for specific requirements/document the additional for the work, if any: NIL.

#### SCHEDULE ' E'

Reference to General Conditions of contract: General condition of contract 2020 as amended up to date

Name of Work:		"AHU room and chilled water pipe insulation work at IIT Indore."		
(I) Estimated cost of work	:	Rs. 43, 25, 249/-		
(i) Earnest Money	:	Rs. 86,505/-		
(ii) Performance Guarantee	:	5% of tendered value		
(iii) Security Deposit	:	2.5% of tendered value		
SCHEDULE ' F'				
GENERAL RULES & DIRECTIONS: Officer inviting tender:	:	Project In-Charge, Infrastructure Development Office, IIT, Indore.		
2(v) Engineer-in-Charge	:	Project In-Charge, Infrastructure Development Office, IIT, Indore.		
2(viii) Accepting Authority	:	Director, IIT, Indore.		
2(x) Percentage on cost of materials and Labour to cover all overheads and		: <b>15%</b>		

2(xi)	Standard Schedule of Rates:	:	_	2022 wi ection s		
2(xii)	Department	:		ructure o <b>IT, Indo</b>	development re	
9(ii)	Standard CPWD Contract Form contract to date	:	Gene		condition as amended	of I up
(i) T F C a r E a	<b>use 1</b> Time allowed for submission of Performance Guarantee, Programme Chart (Time and Progress) and applicable labour licenses registration with EPFO, ESIC and BOCW Welfare Board or proof of applying thereof from the date of ssue of letter of acceptance	e d , t f	07 (S	even) d	ays	
i C	Maximum allowable extension with ate fee @ 0.1% of Performance Guarantee amount per day beyond he Period provided in (i) above	Э	02 (T	wo) day	/S	
	use 2 Nority for fixing compensation under o	clause	e 2:	Directo	r, IIT, Indore.	
	<b>ise 2A</b> ether Clause 2A shall be applicable		:	No.		
Nur	use 5 nber of days from the date of issue of cceptance for reckoning date of start Mile Stone(s) as per table given below	of lett	er :	05 (Fiv	e) days	

Mile Stone(s) as per table given below

SI. No.	Description of Milestone (Physical)	Time allowed in days (from date of start)	Amount to be with- held in case of non achievement of mile stone
1	Delivery of material	30 days	20 % of the tendered value of the work
2	Installation of 50% material	60 days	10 % of the tendered value of the work

<sup>3</sup> Installation of 100% material & 90 handing over of the whole system	) days 10 % of the tendered value of the work		
Time allowed for execution of work	:03 (Three) months		
Authority to decide:			
(i) Extension of time	: Director IIT, Indore.		
(ii) Rescheduling of milestones	: Director IIT, Indore.		
(iii) Shifting of date of start in case of delay in handing over of site	Dean of Infrastructure Development Office, IIT, Indore.		
Clause 6, 6A			
Clause applicable - (6 or 6A)	: Clause 6A		
<b>Clause 7</b> Gross work to be done together with net /Adjustment of advances for material collected, if any, since the last such payment for being eligible to interim payment	payment : 3 Lakh		
Clause 7A Whether Clause 7A shall be applicable	: Yes		

No Running Account bill shall be paid for the work till the applicable labour licenses, registration with EPFO, ESIC and BOCW Welfare Board, whatever applicable are submitted by the contractor to the Engineer-in-Charge.

#### Clause 10A

List of testing equipment to be provided By the contractor at site lab.	:	NA
Clause 10B (ii)		

Whether Clause 10 B (ii) shall be applicable : NA

## Clause 10C

: Delete

....

Component of labour expressed as precent of Value of work.

# Clause 10CA

C	Ja	use 10CA		: NA	
S	SI.	Material	covered	Nearest Materials (other than cement,	Base Price of all
Ν	lo	underthis	clause	reinforcement bars and the structural	Materials covered
				steel) for which All India Wholesale	under clause 10
				Price Index to be followed	CA
				NA	

#### Clause 10CC

Clause 10 CC to be applicable in contracts where the stipulated period of completion exceeding the period shown in next column : NA

#### Clause 11

Specifications to be followed for execution of work

:General	Specifications	for

Heating, Ventilation & Air-

Conditioning (HVAC)

## (As amendment up to date)

## Clause 12

Type of work : Original & Project work

- 12.2. & Deviation Limit beyond which clauses 12.3
  - 12.2 & 12.3 shall apply for building work : **30%**
- 12.5 (i)Deviation Limit beyond which clauses 12.2 & 12.3 shall apply for foundation work **30%**

(Except Earth Work)(ii)Deviation Limit for items in earth work : 100%Sub head of DSR and or related items.

#### Clause 16

Competent Authority for deciding reduced rates

Director, IIT, Indore. Clause 18 List of mandatory machinery, tools & plants to be deployed by the contractor at site: out the electrical work

: All T&P as required to carry out the electrical work Testing/measuring instruments as directed by Project in-charge.

#### Clause 25 (1) Constitution of Dispute Redressal Committee

Chairman	Dean of Indore	Infrastru	ucture	Develo	opment,	IIT,
Member	Associate Developme		in dore	of	Infrastruc	cture
Member	Project In-0 Office, IIT, I	•	Infrastru	ucture	Developr	nent

#### Clause 31

Whether Clause 31 shall be applicable

Yes

	use 36 (i) quirement of Te	echnical Re	epresentative(s	) and reco	very R	ate	
	Minimum	Disciplin	Designation	Minimu	Num		at
No.	Qualification	е	(Principal	m	ber	which	า
	of Technical		Technical/	Experie		recov	very
	Representativ		Technical	nce		shall	be
	е		Representati			made	e from
			ve)			the	
						contr	actor in
						the e	event of
						not	fulfilling
							sion of
						clau 36(i)	
						Fig	Words
						ures	
	Graduate				1		ω ς τ
	Engineer	E&M	Project	2 years	•	s.15000	Rupees Fifteen
1	or		Planning/			s.1	titt Lift
	Diploma		Site/ billing	5 years	1	Ř	ц. — с
	Engineer		Engineer				-

Assistant Engineers retired from Government services who are holding Diploma will be treated at par with Graduate Engineers.

Clause 42 : Not Applicable for Electrical Works

# **TECHNICAL SPECIFICATIONS**

#### APPLICATION OF ACOUSTIC LINING IN AHUROOMS

- i) The wall/ roof surface should be thoroughly cleaned with wire brush.
- ii) A 610 x 610 mm framework of 25mm x 50mm x 50mm x 50mmx25mm shape channel made of 0.6mm thick G.S.S. shall be fixed to walls leaving 610mm from floor by means of raw plugs in walls and dash fasteners in ceiling. Similar framework shall also be fixed on ceiling by means of dash fasteners.
- iii) Resin bonded glass wool/ mineral wool as specified cut to size will be friction fitted in the framework and covered with tissue paper.
- iv) Aluminum perforated sheet having perforation between 20-40% of thickness not less than 0.8mm shall be fixed over the entire surface neatly without causing sag/ depression in between and held with screws. Sheet joints should overlap at a minimum of 10mm.
- v) Aluminum beading of 25mm wide and thickness not less than 1.00 mm shall be fixed on all horizontal/vertical joints by means of screws.

#### **INSULATIONTHICKNESS FOR CHILLED WATER PIPE INSULATION**

The thickness of insulation shall be as indicated below unless specified otherwise in the tender specifications and it should meet the requirements mentioned in the ECBC.

Pipe Size(mm)	Insulation
150&above	75 mm thick expanded polystyrene
Below150	50 mm thick expanded polystyrene

**APPLICATION OF INSULATION ON PIPES** (including suction line insulation):

- The surface to be insulated shall be first cleaned and a coat of zinc chromate 'primer shall be given. The insulation shall be fixed tightly to the surface with hot bitumen/ cold setting adhesive CPRX compound as recommended by the insulation manufacturer. All joints shall be staggered and sealed. The second layer of insulation shall be similarly applied over the first layer.
- 2. The insulation shall be finished asunder:
  - I. For pipes laid inside the building, the insulation over the pipe work shall be finished with 0.63mm thick aluminum sheet cladding over a vapor barrier of 120gm/sqm polythene sheet with 50mm overlap and tied down with lacing wire and complete with type 3, grade-1 roofing felt strip (as per IS 1322 as amended up to date) at the joints.

- II. For pipes outside the building laid above ground the finishing over the pipe insulation shall be finished with 0.63 mm G S sheet cladding over a vapor barrier of 120gm/sqm polythene sheet with 50mm overlap and tied down with lacing wire and complete with type 3 grade-1 roofing felt strip applied by means of hot bitumen.
- III. For pipes outside the building laid underground the insulation shall be covered with 500-gauge polythene faced hessian, (the polythene facing outwards), with 50 mm overlap. All joints shall be sealed with bitumen. A layer of 0.50 mm x 20 mm G.I. wire mesh netting shall be provided over it is butting all joints and it shall be laced down with GI wire, sand cement plaster (1:4) 20 mm. thick shall be provided in 2 layers of each 10mm and shall be water proofed by applying hot bitumen & fixing tar felt over the plaster. It shall be finally finished with a coat of hot bitumen.
- 3. All valves, fittings, strainers etc. shall be insulated to the same thickness and in the same manner as for the respective piping, taking care to allow operation of valves without damaging the insulation.

|--|

Sr. No.	Material / Item	Brand & Manufacturer/ Supplier –1	Brand & Manufacturer/ Supplier –2	Brand & Manufacturer/ Supplier –3
1	Glass Wool insulation	UP TWIGA	OWENS CORNING	KIMMCO
2	'TF' Quality expanded polystyrene	BEARDSELL	STYRENE	TOSHIBA

# TECHNICAL BID DOCUMENTS

#### A. List of Documents to be submitted within the period of bid submission:

- 1. Certificate of Registration for GST.
- 2. Online receipt of deposited EMD.
- 3. Certificate of Registration for EPF.
- 4. Certificate of Registration for ESIC.
- 5. Certificate of Registration for PAN Card.
- 6. Certificate of Registration for company/firm.
- 7. Integrity pact as per CPWD GCC format
- 8. Certificate of Financial Turnover from Chartered Accountant as per Form-A.
- 9. Copy of receipt for payment of EMD through online mode.
- 10. Should have satisfactorily completed similar works- copies of relevant documents
- 11. Latest Bank Solvency Certificate as per tender condition.
- 12. All documents mentioned in technical bid (P-38 to P-52)
- 13. Should submit seal and signed copy of complete tender documents along with corrigendum/addendum (If any)
- 14. Should have valid Building & other construction works (BOCW) registration certificate or undertaking that they will submit it if the work is awarded.
- 15. Should have valid labor license registration certificate or undertaking that they will submit it if the work is awarded.
- 16. Should submit affidavit as per clause 1.3 of CPWD-6 (Page-9).
- 17. Should submit the self-declaration certificate on their letter head that for any work in last five years performance bank guarantee has never been forfeited / encashed by the client.
- 18. Work Order copy fulfilling similar work condition shall be provided with Schedule of Rates and Scope of Works including Satisfactory Completion certificate by client (Seal and signed by Executive Engineer or equivalent) with executed value, date of completion of the job and reference work order number. In case executed value is not mentioned in the completion certificate issued by the client, work order value with amendments, if any, shall be considered for the purpose of evaluation.

## (B) Data Sheets to be filled up by the Tenderers/ Bidders

SI. no.	Information	Format of submission	Compliance
1	Obligation / Compliance to Be Insured by Contractor	Annexure- "A"	Yes/No
2	Tax	Annexure- "B"	Yes/No
3	Indemnity by contractor	Annexure- "C"	Yes/No
4	Certificate in prescribed format	Annexure- "E"	Yes/No
5	Letter of Transmittal	Annexure- "F"	Yes/No

Note:

1. If necessary, additional sheets may be added to the forms.

2. Some of the forms will require attachments. Such attachments should be clearly marked as follows: Attachment I to Form # Attachment 2 to Form #. etc.

# Annexure- "A"

Obligation/Compliance to be insured by Contractor

U		,
Sr.	Items	Compliance of Contractor to be
No.		filled by Contractor (Yes or No)
1	Registration	
2	Compliance of provisions of Child Labor Act, and Workmen compensation Act	
3	To ensure treatment in case of accident / injuries suffered in Performance of work including wages and compensation under WC Act.	
4	Send accident report to Regional Labor Commissioner (RLC)	

# Annexure – "B" TAX

Attach copy of current last five years' income tax returns details (i.e. F.Y. 18-19,19-20,20-21, 21-22 & 22-23)

## Annexure- "C" INDEMNITY

(To be filled by Contractor)

I on behalf of M/s ...... hereby agree and undertake that I have understood all the safety rules and procedures and all staff working on behalf of M/s..... will follow all safety rules and procedures. I declare that I M/s ..... will be responsible for any safety violations/ accident etc. IIT Indore will not be responsible in case of any accident / incident and will not compensate financially or otherwise.

I hereby declare that I am sole responsible on behalf of M/s..... for giving such declaration.

Name of Indemnifier

-----

name of indemniner

Signature of Indemnifier

Stamp/Seal of the Indemnifier /Contractor

## Annexure- "E"

#### 

#### (To be provided on letter head of the firm)

I hereby certify that the above firm has not been ever blacklisted by any Central/State Government/Public Undertaking/Institute on any account.

I also certify that the above information is true and correct. In every respect and in any case at a later date, if it is found that any details provided above are incorrect, any contract given to the above firm may be summarily terminated and the firm blacklisted.

Date: Place:

Signature of Contractor

#### Annexure-"F" LETTER OF TRANSMITTAL

#### From:

To The Project in Charge, IIT Indore (MP).

#### Name of work: - "AHU room and chilled water pipe insulation work at IIT Indore"

Sir,

Having examined the details given in Press Notice and bid documents for the above work, I/ we hereby submit the relevant information.

- 1. I / we hereby certify that all the statements made and information supplied in the enclosed forms A to E and accompanying statement are true and correct.
- 2. I / we have furnished all information and details necessary for eligibility and have no further pertinent information to supply.
- 3. I / we submit the requisite certified solvency certificate and authorize PIC, IIT Indore to approach the Bank issuing the solvency certificate to confirm the correctness thereof. I / we also authorize PIC, IIT Indore to approach individuals, employers, firms and corporation to verify our competence and general reputation.
- 4. I / we submit the following certificates in support of our suitability, technical knowledge and capability for having successfully completed the following eligible similar works:

Name of work	Certificate from
1	
2 3	
J	•••••

CERTIFICATE: It is certified that the information given in the enclosed eligibility bid are correct. It is also certified that I/We shall be liable to be debarred, disqualified/ cancellation of enlistment in case any information furnished by me / us found to be incorrect.

Enclosures: -

Seal of bidder

Date of submission

SIGNATURE(S) OF BIDDER(S)

(C) Data Sheets to be filled up by the Tenderers/ Bidders
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SI. no.	Information	Format of submission	Compliance
1	Financial Information	Form - "A"	Yes/No
2	Solvency Certificate	Form - "B"	Yes/No
3	Experience of Similar Nature of Works	Form - "C"	Yes/No
4	Performance Reports of above referred works in Form 'C'	Form - "D"	Yes/No
5	Structure & Organization details	Form - "E"	Yes/No
6	List of the projects under execution or awarded	Form - "F"	Yes/No
7	Compliance Sheet	Form - "G"	Yes/No

#### FORM 'A'

### **FINANCIAL INFORMATION**

I Financial Analysis - Details to be furnished duly supported by figures in balance sheet / profit & loss account (after tax) for the last five years duly certified by the Chartered Accountant, as submitted by the applicant to the Income Tax Department (Copies to be attached).

Financial Year	15-16	16-17	17-18	18-19	19-20
Gross Annual turnover on construction works					
Profit/Loss					

II. Financial arrangements for carrying out the proposed work.

Signature of Chartered Accountant with Seal.

SIGNATURE OF BIDDER(S)

Solvency Certificate from Bankers of bidders in the prescribed Form "B".

#### FORM 'B'

## FORM OF BANKERS' CERTIFICATE FROM A SCHEDULED BANK

This certificate is issued without any guarantee or responsibility on the bank or any of the officer.

(Signature) For the Bank

Note (1) Bankers certificates should be on letter head of the Bank, addressed to tendering authority.

(2) In case of partnership firm, certificate should include names of all partners as recorded with the Bank.

#### FORM 'C'

## DETAILS OF ELIGIBLE SIMILAR NATURE OF WORKS COMPLETED DURING THE LAST SEVEN YEARS ENDING PREVIOUS DAY OF LAST DATE OF SUBMISSION OF TENDERS

\* Indicate gross amount claimed and amount awarded by the Arbitrator.

Signature of bidder(s)

## FORM 'D'

PERFORMANCE REPORT OF W	ORKS R	EFERRED TO IN FORMS "C"
1 Name of work/project & location	:	
2 Agreement no.	:	
3 Estimated cost	:	
4 Tendered cost	:	
5 Date of start	:	
6 Date of completion		
(i) Stipulated date of completion	:	
<ul><li>(ii) Actual date of completion</li><li>(a)Whether case of levy of</li><li>7 compensation</li></ul>	:	
for delay has been decided or not?	:	Yes / No
(b) If decided, amount of compensation	n levied	
for delayed completion, if any.	:	
8 Performance Report		Outstanding
Quality of work	:	Outstanding/Very Good/Good/Poor
Financial soundness	:	Outstanding/Very Good/Good/Poor
Technical Proficiency	:	Outstanding/Very Good/Good/Poor
Resourcefulness	:	Outstanding/Very Good/Good/Poor
General Behavior	:	Outstanding/Very good/Good/Poor

Dated:

## FORM 'E' STRUCTURE & ORGANISATION

- 1 Name & address of the bidder
- 2 Telephone no./Telex no./Fax no.
- 3 Legal status of the bidder (attach copies of original document defining the legal status) :
  - i. An Individual
  - ii. A proprietary firm
  - iii. A firm in partnership
  - iv. A limited company or Corporation
- 4 Particulars of registration with various Government Bodies (attach attested photocopy)

Organization /Place of registration/Registration No.

- 1.
- 2.
- 3.
- 5 Names and titles of Directors& Officers with designation to be concerned with this work.
- 6 Designation of individuals authorized to act for the organization
- 7 Has the bidder or any constituent partner in case of partnership firm, Limited Company /Joint Venture ever were convicted by the court of law? If so, give details.
- 8 In which field of E&M Engineering construction the tenderer has specialization and interest.
- 9 Any other information considered necessary but not included above.

# Signature of bidder(s)

## FORM 'F'

1	S. No.
2	Name of work/project and location
3	Owner or sponsoring organization
4	Cost of work in crores of rupees
5	Date of commencement as percontract
6	Stipulated date of completion
7	Upto date percentage progressofwork
8	Slow progress if any andreasonsthereof.
9	rvarme and address / telephone Number of officer to whomreferencemaybemade
10	Remarks

#### List of the projects under execution or awarded

Certified that the above list of works is complete and no work has been left out and that the information given is correct to my knowledge and belief.

Signature of bidder(s)

# FORM 'G'

Sr. No.	Description	Compliance	Remarks
1	Name of the Contractor/Agency		
2	Address & Contact number		
3	Name of person, who has signed the tender		
4	GST Registration number (copy should be attached)	YES/NO	
5	EPF registration number (copy should be attached)	YES/NO	
6	ESIC registration number (copy should be attached)	YES/NO	
7	Permanent Account Number (copy should be attached)	YES/NO	
8	Company/Firm Registration Number (copy should be attached)	YES/NO	
9	Building & other construction works (BOCW) Registration (copy should be attached)	YES/NO	
10	Labour License Registration (copy should be attached)	YES/NO	
11	Valid "A" or "B" Class Electrical Contractor license. (copy should be attached)	YES/NO	
	Duly signed & stamped of complete downloaded tender document. (copy should be attached)	YES/NO	

#### **Financial BID**

Financial BID - Schedule of price bid in the form of BOQ format:

1. The below mentioned Financial Proposal/Commercial bid format is provided as BoQ along with this tender document at https://eprocure.gov.in/eprocure/app

2. Bidders are advised to download this BoQ.xls as it is and quote their offer/rates in the permitted column and upload the same in the commercial bid.

3. Bidder shall not tamper/modify downloaded price bid template in any manner. In case if the same is found to be tampered/modified in any manner, tender will be completely rejected.

4. The rate to be quoted in the price bid should be inclusive of all taxes, duties, levies etc. and no separate payment will be made on account of any type of taxes or duties.

5. The tender shall remain valid for acceptance for 180 days, from the date of tender opening.

#### OTHER CONDITIONS FOR PRICE BIDS

1. No unilateral revision in price will be admissible.

2. Rates should be quoted in the accounting units (A/U) mentioned in this tender. Rates must be quoted clearly on free delivery basis at IIT Indore, and total value is also indicated in words.

3. In case spares/accessories are applicable, their list and price should be clearly indicated separately.

Signature of the Tenderer Name of the Firm: Contact No.: Email: Seal:

#### SCHEDULE OF WORK

#### Name of work: "SITC of insulation work in POD 3 building at IIT Indore."

Sr.	Name of work: "SITC of insulation work in POD Description	Qty	Unit	Rate	Amount
No		~.,		nuto	
1	Supplying & fixing of acoustic lining on walls and ceilings of AHU rooms with 50mm thick, density 32 kg/cum resin bonded glass fiber insulation friction fixed in 610mm x 610 mm framework made of 25x50x50x50x25 mm made out of 0.6mm thick GI sheet U shaped channel and covered with reinforced fiber glass tissue and finished with 0.80 mm perforated aluminum sheet etc. complete as required and as per specifications.	2500	Sqmt		
2	Supplying, laying/ fixing, testing and commissioning of following nominal sizes of fire retardant quality expanded polystyrene moulded pipe section, for the following already laid chilled water piping, of density 20 kg/cum after a thick coat of cold setting adhesive (CPRX compound) wrapping with 500g polythene faced hessian and finally applying 0.63mm aluminum sheet cladding complete with type3 , grade 1 roofing felt strip(as per IS:1322 as amended up to date ) at joints repairing of damage to building etc. as per specifications and as required complete in all respect.				
2.1	Chilled water piping of nominal size - 600mm dia. (75mm thick expanded polystyrene)	30	Rmt		
2.2	Chilled water piping of nominal size - 300mm dia. (75mm thick expanded polystyrene)	70	Rmt		
2.3	Chilled water piping of nominal size - 250 mm dia. (75mm thick expanded polystyrene)	40	Rmt		
2.4	Chilled water piping of nominal size - 125 mm dia. (50mm thick expanded polystyrene)	40	Rmt		
2.5	Chilled water piping of nominal size - 100 mm dia. (50mm thick expanded polystyrene)	40	Rmt		
2.6	Chilled water piping of nominal size - 80 mm dia. (50mm thick expanded polystyrene)	80	Rmt		
2.7	Chilled water piping of nominal size - 65 mm dia. (50mm thick expanded polystyrene)	70	Rmt		
2.8	Chilled water piping of nominal size - 50 mm dia. (50mm thick expanded polystyrene)	160	Rmt		
2.9	Chilled water piping of nominal size - 40 mm dia. (50mm thick expanded polystyrene)	90	Rmt		