



# CREATIVE MUSEUM DESIGNERS

**(Section 8 company guaranteed by NCSM)**

NCSM Campus, Building II, 6th Floor, 33, Block - GN, Sector - V, Bidhan Nagar,  
Kolkata - 700091, India. Phone: 033 2357 6041, Website: [www.cmdhncsm.in](http://www.cmdhncsm.in), [www.ncsm.gov.in](http://www.ncsm.gov.in)

## **CORRIGENDUM 2 FOR SITC OF 12 M FULL DOME DIGITAL PLANETARIUM AT AGARTALA, TRIPURA**

**Ref. No. : CMD 007.12.59 (WORKS)/23-24/04 Dated 10.07.2023**

Based on the pre bid meeting held on 7<sup>th</sup> July, 2023. Following salient points are circulated.

- Minutes of Pre- Bid meeting (Attached).
- Bid submission end date is extended up to 5<sup>th</sup> August, 2023 till IST 05:00 PM.
- EMD is revised to 25 Lakhs.
- Bank solvency certificates to be submitted in Envelope 1 ( INR 8 Cr for OEM & INR 80 Lakhs for Indian counterpart of OEM).
- DAP: Successful agency is responsible for delivery of the materials at the project site which includes loading, transportation and unloading at site.
- Updated Annexure-C, Annexure-H (Attached).
- Annexure-I (New) is added.



## Creative Museum Designers

### Minutes of Meeting of pre Bid meeting held on 07.07.2023 at CMD office in hybrid mode

**Tender Name:** SITC of 12 Mtr Full Dome digital Planetarium system at Science City, Agartala including 5 yrs onsite comprehensive warranty, operation.

**Tender Ref no:** CMD 007.12.59 (WORKS)/23-24/04

A pre bid meeting regarding the SITC of 12 Mtr Full Dome Digital Planetarium System at Science City, Agartala including 5 Years onsite comprehensive warranty against the tender ref no: CMD 007.12.59 (WORKS)/23-24/04 was held at CMD on 07.07.2023 at 11:30 AM. The meeting was held at the conference room of CMD Building at Kolkata. The meeting was held both in offline and in online mode. A meeting link was sent to all the interested bidders who mailed queries as per the scheduled date mentioned in the tender document. Along with the tender committee of CMD representatives of following OEM/bidders participated in the pre bid meeting:

Sl. No.	Name of OEM/ Bidder	Mode of Presence
1	Evans and Sutherland (E&S) Computer Corporation, USA and Spitz Inc./ Infovision Technologies Pvt. Ltd.	Online
2	RSA Cosmos – Konica Minolta/ Orbit Animate Pvt Ltd.	Online and Offline
3	Sky-Skan- GOTO India	Online

In the meeting the queries which were raised by different agencies and also some other points related to the tender were discussed. The decisions which were taken by CMD against the enquiries are summarised as below.

Summary of Discussions				
Sl. No.	Page	Enquiry Details	Suggestions by Agency if any	Reply of CMD
1	4, 117	EMD & Annexure-K, both are contradictory. Either EMD will be there or bid security will be there. Format for BG		Corrigendum uploaded on 30.06.2023
2		As this tender is very exhaustive and needs lot of documentation, we request you to extend the date of submission by at least two (2) weeks.		10 days extension is given that is upto 5th August 2023.
3		<b>EMD:</b> We request you to reduce the Earnest Money deposit amount. We have been participating in few major tenders of India. Making EMD deposit to all such high value EMD's are blocking of funds and cash flow. So we request you to consider reducing the EMD amount in order to make it possible for us to participate in this bid.		EMD is reduced upto the value ₹ 25 Lakhs. All other clauses regarding EMD remains same
4	Page 10: refer "XVII	<b>One Licensed digital 4K 2D fulldome film</b> (Film title : Voyager: The Never-Ending Journey) show in English and Bengali for 3 years of about 30 minutes duration is to be supplied, encoded and tested for satisfactory projection." . Please delete this clause as we have not come across this show and not sure we will be able to encode this show. In case, if CMD wants to include this show in this tender, then we request CMD to get this rendered from the show producer for the system purchased.		Please refer to the fulldome films database site.
5	Page 21: 7/	<b>Time of completion:</b> You are requested to extend this time to 18 months due to logistic issues for the spare parts and other components of the system post covid.		1 month extension is given that is in total completion time is extended to 13 months.

6	Page 22: 10.	<p><b>Payment terms.</b> : we request you to make following changes in payment terms An irrevocable and confirmed Letter of Credit shall be opened for 100% value of the imported items quoted in foreign currency immediately upon receipt of the order confirmation. The mode of payment shall be as follows: -</p> <p>75% (Seventy percent) of the total sum of the imported items on shipment of the entire materials/consignment and presentation of the dispatch documents.</p> <p>ii. 15%(fifteen percent) of the total sum of the imported items after successful installation and commissioning of the fully integrated high resolution Fulldome digital 2D immersive projection system at site and successful trial runs of the Fulldome 2D film shows and planetarium shows.</p> <p>iii. Balance 10% (Ten percent) of the total sum of the imported items on successful operational training and handing over of the equipment to our authorized representative and satisfactory running of the entire Fulldome digital 2D immersive projection system for a minimum period of 10 (ten) consecutive days and on submission of a certificate issued by CMD stating that installation and commissioning of the ordered system has been done satisfactorily and also on submission of warranty certificate as detailed in clause No.10.</p>		No changes, the payment terms are as per CMD's payment schedule set.
7	Page 19: 24.	<b>Security deposit:</b> we request you to reduce this security deposit to 5%.		Standard SD of 10% is the practice of CMD. No deviation in it.
8	Page 27 : 15	<b>Sound proofing</b> and acoustic treatment of the Full dome theatre : this clause must be removed. We are suppliers of Electronic equipment and we should not be kept responsible for this part of the project. This is a job of Civil Contractor.		The work is integral part of creation of the dome theatre.
9	Page 32: table 1.1.1	Please change point (3) as below The panels should be painted / powder coated to appear seamless with single line of rivets with seamless overlaps.		Both paint/ powder coat can be considered, same defined in the main description of panels.
10	Page 32:	<b>Insulation of outer concrete dome.</b> inner surface & Acoustic panelling below the dome screen:: Please remove this clause as we are suppliers of Electronic equipment and we should not be kept responsible for this part of the project. This is a job of Civil Contractor.		The work is integrated and includes civil works also.
11	Page 13, 2.iii.	The Bidder/manufacturer must have previous experience of having supplied and installed Digital Fulldome 2D theatres/planetariums in India and elsewhere. The bidder must have installed at least 1 (one) 4K or higher resolution 2D immersive projection system of 12-meter diameter dome or higher in India and elsewhere which is currently operational (supporting document must be furnished).	<p>There are only four planetarium OEM's in the planetarium field who have their own developed planetarium simulation software and database. This clause can be satisfied or matched by only one or two vendor/OEM in India.</p> <p>Because of this clause the OEM's who are doing excellent piece of work worldwide will never get the chance to prove their work in India. Other OEM's are also having equal or more installations worldwide but not getting the chance to enter in India because of the tender eligibility clause. This clause preventing OEM's like us, who can supply equal or better quality product and service at good price.</p> <p>Hence we request you to review this clause to allow all the international vendors having similar installations worldwide. Hence we request to modify the eligibility clause as-</p> <p>"The Bidder/manufacturer must have previous experience of having supplied and installed Digital Fulldome 2D theatres/planetariums in India or elsewhere. The bidder must have installed at least 1 (one) 4K or higher resolution 2D immersive projection system of 12-meter diameter dome or higher in India OR elsewhere which is currently operational (supporting document must be furnished).</p>	<b>Not accepted</b> Experience in India and elsewhere as mentioned in the tender document is must.
12	16, Note 3	All the documents shall be notarized.	Please clarify whether the entire offer document need to be notarized or any specific document to be notarized	Notarization of following documents are required: 1. All kinds of MoU between Indian counterpart and OEM. 2. Audited balance sheet, financial statement of the bidder.
13	21, 6	Science City, Agartala may provide custom duty exemption certificate, if any, as per norms. Science City, Agartala will have the final ownership of this project, all necessary invoices/documents of the planetarium / projection equipment including UPS, servers, dome, sound system, cove light etc. should be in the name of Science City, Agartala.	As per our understanding, to make the invoice in the name of Agartala Science City, the LC has to be opened by Agartala Science City. Otherwise source of payment against the shipment will be different from the name in the invoice. Therefore, please Clarify the name of the authority who will open the LC for this project.	All the invoices will be in the name of CMD. LC will be opened by CMD only.
14		The rates of Excise Duty /Custom Duty (if any), Goods and Service Tax and other taxes /levies to be imposed on the quoted rates as the case may be shall be clearly mentioned in the offer form with proper break-up. No GST exemption (Form C/E/D) will be issued.	Please clarify, whether quoted price should be inclusive of Customs Duty and GST? And the price inclusive of Customs Duty and GST will be taken for the price evaluation. OR Customs Duty will be paid by the purchaser at the time of clearing of consignment.	1.Custom duties, and applicable taxes on the imported items shall be paid by CMD. 2.The quoted price is <b>not</b> inclusive of GST and Custom duty. However, separate breakup to be provided for the same as given in Annexure- H.

15	21, 7	The entire work comprising supply, installation, commissioning, testing and training for the complete integrated functional full dome 2D digital immersive projection system for a 12 meter diameter perforated aluminium dome screen with geometrical correction, image stitching and blending etc. for seamless projection of high resolution 2D digital full dome film shows and digital planetarium shows shall be completed with 12 (TWELVE) months from the date of placement of confirmed order or opening of Letter of Credit, whichever is later	Dome Manufacturer use to take 10 to 12 months for the manufacturing of dome. Therefore, it will be difficult to complete the entire project within 12 months from the date of opening LC. Hence we request you to increase the completion time at least 15 months from the date of opening LC	1 month extension is given that is in total completion time is extended to 13 months.
16	31, 1.1.1	The dome panels reflectivity should be 0.53	This is extremely high reflection for a 12m dome with 10,000 lumen projectors. Such a value is normally reserved for 3D projection where there is a lot of loss of brightness due to black frame insertion and reduction of brightness through the 3D glasses. We would recommend a value under 0.40 (<40%)	No changes
17	35, 1.2	Image Generator Server- Acceptable OEMs: Dell, HP	We request to consider Dell, HP, or equivalent	Only Dell or HP is preferred
19	4, 4.a	The Earnest Money of ₹30,00,000/-	Please considering the EMD amount to 15 Lakhs as the requested EMD amount of 30 Lakhs is considered to be very high in respect to the volume of the project	EMD is reduced upto the value ₹ 25 Lakhs. All other clauses regarding EMD remains same
20	2	Bid Submission End Date 26.07.2023 till 05:00 pm	Due to summer holiday season, some documents require longer than usual, we request you to consider a one week extension.	10 days extension is given that is upto 5th August 2023 till IST 05:00 PM.
21	16, 2.xiii	Average turnover for the five financial years (2016-17, 2017-18, 2018-19, 2019- 20, and 2020-21)	If this is the for the last 5 years, would it be acceptable to provide data of period between 2017-18 and 2021-2022?	Best of five in last 7 years will be accepted.
22	27, 16	The bidder shall submit proposed modifications of HVAC ducts if necessary for the purpose of cooling of projectors etc	Please clarify whether the modification of existing HVAC ducts will be in the scope of the successful bidder?	Modification will be done by Science city, Agartala as per suggestion of successful bidder . Bidder must propose it at earliest which is absolute necessary
23	6	<b>Dome Screen Suspension:</b> Please provide drawings for the load bearing structure for Dome Screen suspension. A structural study that needs to be carried out to assess the load bearing capability of the structure for suspending load of the dome screen. Please clarify whether the same should be included in our scope?		Necessary drawings can be provided
24	53, 1.8	For the assessment of quantity for the laying of carpet & vinyl, please provide a drawing or estimated area measurement.		Estimated area is provided in Annexure-L, page 119, point 14
25		<b>Vinyl Flooring/ Carpet Flooring</b> For the assessment of quantity for the laying of carpet & vinyl, please provide a drawing or estimated area measurement.		Estimated area is provided in Annexure-L, page 119, point 14
26		Please clarify that the supply & installation of aircondition for Server room and projector rooms is not considered in the scope of the Bidder and will be provided by CMD according to the need specified by the successful bidder.		Installation of Split AC in server room will be done by Science City Agartala.
27	112, 27	<b>Electrical Works</b> Please clarify that the raw power will be terminated by CMD at the desired Server Room location and necessary arrangements for Earthing, Surge protection and Mains Junction box will be provided by CMD.		Yes, it will be done by Science City Agartala.
28	118 Annexure L	Please clarify whether the scaffolding required for the painting of the inner surface of the outer dome and installation of the insulation will be provided by locally by CMD/Science City or the same shall be supplied by the successful bidder		Scaffolding and all other necessary tools and tackels are to be provided by the bidder only.
29	118 Annexure L	Please clarify that the temporary platform required for the installation of the Dome after fabrication & installation of the steel seating gallery is in the scope of the successful bidder or the same shall be provided by CMD.		Scaffolding and all other necessary tools and tackels are to be provided by the bidder only.
30	118 Annexure L	Please clarify whether the quantities mentioned in Annexure L are approximate. Whether CMD will allow additional sanction should the quantities exceed? Also please clarify whether the entire job as defined in Annexure L should be quoted in Lump sum/Turnkey and no quantitative joint measurement will result in deduction/alterations in payment.		Quantities provided in Annexure-L are approximate. If the quantities exceeds, additional sanction will be given. A quantitative joint measurement will be done by both CMD and successful bidder. The rates of each item for each item is to be given by the bidder in cost breakup in Annexure- H ( part B for civil and electrical work). payment will be done as per actual measurement

31	118 Annexure L	Please clarify that a separate work order will be awarded to the Indian Representative of successful Bidder to carry out the Civil, electrical works as defined in Annexure-L		Amount quoted in INR will be given to Indian Associate only.
32	14	<b>Customs duty</b> Kindly clarify that the budget of 12 Crore includes Customs Duty.		Yes, it includes taxes and all kind of custom duties. Refer to page 14, point vi
33	21, 6	<b>Price</b> Science City, Agartala may provide custom duty exemption certificate, if any, as per norms. Science City, Agartala will have the final ownership of this project, all necessary invoices/documents of the planetarium / projection equipment including UPS, servers, dome, sound system, cove light etc. should be in the name of Science City, Agartala. All other invoices for interior works like chairs, sitting platform, acoustics, etc. shall be made in the name of CMD. However, CMD shall accept offers on Delivery at site basis only"	kindly clarify that CMD will be opening the LC and the goods will be imported by CMD under CMD's IEC? In this case it is mandatory as per INCOTERMS and Indian Customs that all material bills/Invoices exported from abroad will be addressed to CMD i.e the importer only. The successful bidder can issue the Warranty Certificate in the honour of Science City, Agartala under the instruction of CDM to transfer the ownership after successful completion of the project. Kindly specify the Incoterms / Terms of Shipment for this project and clarify who shall be responsible to pay the customs duty	CMD, on behalf of Science City Agartala shall be responsible for paying the custom duties and applicable taxes on the imported items only.
34	14 Eligible bidders iii	<b>Eligible bidders</b> The Bidder/manufacture must have previous experience of having supplied and installed Digital Fulldome 2D theatres/planetariums in India and elsewhere. The bidder must have installed at least 1 (one) 4K or higher resolution 2D immersive projection system of 12-meter diameter dome or higher in India and elsewhere which is currently operational (supporting document must be furnished)	kindly clarify that is it needed to showcase an Installation in India & ABROAD (both) for a 12m dome Planetarium system? We request you to make it time bound within the last 5 years to avoid old/historical installations which has got no technological relevance today.	Last 7 years as per the eligibility criteria mentioned in tender document.
35		Price bid ( Annexure-C)		Price to be quoted in price bid that is in Annexure-C is exclusive of custom duties and GST.
36		Bank Solvency certificate		Bank Solvency Certificate of the following is required to be submitted in Envelope 1: 1. INR 8 Crore for OEM 2. INR 80 Lakhs for Indian counterpart of OEM
37		DAP ( Delivery at Place) and loading unloading		DAP for all the materials including loading, transportation and unloading at Science City, Agartala is under the scope of successful bidder.



**Creative Museum Designers**  
**(A Section 8 Company Guaranteed by National Council of Science Museums)**  
**Govt. of India**  
**33, Block – GN, Sector-V, Bidhannagar,**  
**Kolkata-700 091**

**Tender No. CMD 007.12.59(Works)/23-24/04**

**OFFER FORM (FINANCIAL BID)**

**TENDER FOR SUPPLY, INSTALLATION, INTEGRATION, TESTING AND COMMISSIONING OF HARDWARE AND SOFTWARE PACKAGES, ALUMINIUM DOME SCREEN, INTERFACES, TOOLS AND / OR DRIVERS OF A COMPLETE AND FULLY INTEGRATED FUNCTIONAL FULLDOME DIGITAL 2D IMMERSIVE PLANETARIUM PROJECTION SYSTEM (12 MTR DIAMETER) INCLUDING ONSITE COMPREHENSIVE WARRANTY FOR FIVE YEARS, AND OPERATION FOR A PERIOD OF FIVE YEARS.**

We hereby offer our rates for the above tender as per following details: -

01. Name of the tenderer :

02. Mailing address of the tenderer :  
including PIN/ZIP Code

03. Communication details like :

Telephone numbers(s) :

Fax number(s) :

E-mail address :

Website address :

04. Name and address of the Banker and their :  
address with ABA Routine Number and Swift  
Code Number

PRICE BID						
Sl.	Description of Work	Units	Quantity	Name of the Currency	*Quoted Rate in foreign currency	Quoted Rate in INR
1A	Supply, Installation, Integration, Testing and Commissioning of hardware and software packages, interfaces, tools and / or drivers of a complete and fully integrated functional Full dome digital 2D immersive Planetarium projection system (12 mtr. diameter) including onsite comprehensive warranty for five years and training on planetarium system, its operation & development of shows.		Whole JOB			
1B	Supply, Installation, Integration, Testing and Commissioning of 20 KVA UPS with battery bank. <b>(Must be quoted in INR)</b>		1 SET	INR		
1C	Supply and fixing of LED Cove light inside theatre as per Section II of NIT. <b>(Must be quoted in INR)</b>		1 SET	INR		
1D	Supply and installation of 5.1 audio system inside the theatre as per Section II of NIT. <b>(Must be quoted in INR)</b>		1 SET	INR		
2	Supply, Installation, Integration, Testing and Commissioning of 12 meter Aluminium Dome as per the approved specification provided in Section II of NIT.		1 SET			
3	All Civil and Electrical Works (Planetarium interior works )as per the Annexure- L ( Separate price breakup in Annexure-H as per the BOQ to be provided, <b>Must be quoted in INR</b> )		Whole JOB	INR		
4	Fabrication, supply, Installation, Testing and Commissioning of Reclining chairs as per the approved specification provided in Section II of Annexure B of tender document (100+5 Spares). <b>(Must be quoted in INR)</b>		105	INR		
5	Supply of Licensed film for 3 year <b>(Film title : Voyager: The Never-Ending Journey , Must be quoted in INR)</b>		1 no	INR		
6	Operation of Planetarium for five Years after successful commissioning of the entire system. <b>(Must be quoted in INR)</b>		Whole JOB	INR		
7	Comprehensive AMC for 02 Years on Sl. No. 1A, 1B,1C. 1D and 2 after completion of 5 years comprehensive warranty <b>(Rate only, Must be quoted in INR) (Value will not be considered for selection of L1 bidder.)</b>		Whole JOB	INR		
<p><i>Note: The final bid value will be arrived at by converting to INR based on the currency conversion rate on the date of opening of the financial bid.</i></p> <p><i>Cost break up to be provided in Annexure-H</i></p> <p><i>* Custom duties, and applicable taxes on the imported items shall be paid by CMD</i></p> <p><i>The quoted price is exclusive of GST and custom duties. However, separate breakup to be provided for the same as given in Annexure-H.</i></p>						

05.	Machine Self-life time (i.e. up to which period technical support as well as spare parts including consumables shall be available with the firm).	:	
06.	Payment terms(Only payment in foreign currency shall be made only through bank against irrevocable Letter of Credit).	:	
07.	Delivery Schedule	:	
08.	Validity of the offer for acceptance (minimum 180 days from the date of financial bid opening may be offered for acceptance).	:	

The above rates quoted by us for supply of the tendered items are strictly in accordance with our specifications mentioned in the “Technical & Commercial Bid Document”. Deviation, if any, will make the tender/offer liable to be considered invalid.

Date:

Signature of the Tenderer/Constituted Attorney with Official Seal

**PART A:**

<b>Sl. No.</b>	<b>Description</b>	<b>Quantity</b>	<b>Rate</b>	<b>Currency</b>	<b>Amount</b>	<b>Applicable Taxes (with break-up)</b>	<b>Total Amount</b>
<b>1.</b>	<b>Supply &amp; Installation of 12 meter aluminium projection dome including associated civil work/ structures and including cost of scaffolding, labour etc.</b>	<b>1</b>				<b>NA</b>	
<b>2.</b>	<b>Supply Installation, testing and commissioning of projectors with geometric correction and image blending for seamless projection</b>	<b>2</b>				<b>NA</b>	
<b>3</b>	<b>Supply, Installation, testing and Commissioning of Image Generator workstations.</b>	<b>4 (1 master+2 nodes+1 spare)</b>				<b>NA</b>	
<b>4.</b>	<b>Supply, Installation, testing and Commissioning of content creation workstation/server</b>	<b>1</b>				<b>NA</b>	
<b>5.</b>	<b>SITC Interactive planetarium and Fulldome configurator and playback software</b>					<b>NA</b>	
<b>6.</b>	<b>SITC of Show control system</b>					<b>NA</b>	
<b>7.</b>	<b>SITC of Automatic Calibration and alignment system</b>					<b>NA</b>	
<b>8.</b>	<b>SITC of Integrated 5.1 surround sound system (to be quoted in INR only)</b>			<b>INR</b>			
<b>9.</b>	<b>SITC of 20 KVA U.P.S. system with 30 minute backup</b>			<b>INR</b>			



	including electrical panel for distribution of power to the installed equipment (to be quoted in INR only)						
10.	SITC of LED Cove light, staircase lighting, step lights, exit and emergency exit signage etc. (to be quoted in INR only)			INR			
11.	Training on FULL DOME PROJECTION SYSTEM and its operation & development of shows						
12.	Any other items of work/equipment etc. not covered above, under Sl. NO. 1 to 10 but required as per scope of work provided. <i>(add additional rows as may be required)</i>						
13.	Planetarium Full dome licenced Show in English and Bengali for 3 years (Film title : Voyager: The Never-Ending Journey)( to be quoted in INR only)	1		INR			
14.	a) Comprehensive AMC for 1 <sup>st</sup> year after comprehensive warranty of 5 years. (rate only to be quoted in INR only) b) Comprehensive AMC for 2 <sup>nd</sup> year after comprehensive warranty of 5 years. (rate only to be quoted in INR only)			INR			
15.	Operation for 5 years	1 <sup>st</sup> Year		INR			
		2 <sup>nd</sup> Year		INR			

	(to be quoted in INR only)	3 <sup>rd</sup> Year		INR			
		4 <sup>th</sup> Year		INR			
		5 <sup>th</sup> Year		INR			
16.	Fabrication, Supply, Installation, Testing and Comissioning of Reclining chairs as per approved specifications provided in Section II of Annexure B. ( to be quoted in INR only)			INR			

PART B (To be quoted in INR only)				Annexure-H			
Insulation Job							
1	Painting in the inner surface of the outer concrete dome with water proof paint.	400 sqm	Make:Asian/ Berger/ICI .				
2	Installation of 40 mm thick mineral wool fibre, 48 kg/cu-m density with aluminium vapour barrier in the inner surface of the outer concrete dome.	400 sqm	Make: UP Twiga				
3	Installation of 40 mm thick, 48 kg/cu-m rockwool resin bonded fibre on top of mineral wool in the inner surface of the outer concrete dome.	400 sqm	Make: UP Twiga				
4	Installation of acoustic non woven black tissue as covering layer for insulations in the inner surface of the outer concrete dome.	400 sqm	Make: UP Twiga				

**Special Steel Work – Gallery, Projector Stand etc. (The agency has to provide detailed drawings )**

5	Special steel work , using standard MS plates and Standard MS sections for dome chain fixing, studs and inserts to be fastened to concrete using high strength fasteners.	0.3T	Make of MS section: Tata. Make of fasteners: Hilti				
6	Special steel work for Seating Gallery , using standard tubular Steel Sections (Tata Structura) , Rectangular Hollow Sections (RHS) & Square Hollow Sections (SHS) in Stepped Gallery Structure including sockets, base plates, stiffeners, bolts and HS fastener bolts. All steel work to be welded as per instruction and design.(Butt weld, plug weld and chain weld etc.) The whole to be painted with two coats of red lead paint after due cleaning, grinding etc. as per design	8T	Make : Tata Structura				
7	i) RHS 80x40x4 and SHS 40x40x4 for Gallery Sloped		Make : Tata Structura				

	members, including plate sockets and bolts as per the schematic design attached.						
8	ii) RHS 80x40x4 for Stepped Gallery Upper members: Chords & Radials including plate sockets and bolts as per the schematic design attached.		Make : Tata Structura				
9	iii) RHS 80x40x4 & SHS 40x40x4 for Gallery Upper Main and Secondary members including plate sockets and bolts as as per the schematic design attached.		Make : Tata Structura				
10	ii) Stand alone Table Type Projector Stands using SHS sections 50x50x3.6 with MS sockets (6mm) and fixing plate , grouted/ fixed to the floor with 8mm fastener anchor bolts (75 long), Hilti. Agency to provide with the detailed drawings.	0.2 T	Make : Tata Structura				
<b>Flooring Work</b>							
11	IPS flooring of required thickness for the entire planetarium	180sqm					

	theatre including technical corridor to achieve +0.00 using non metallic hardener matching existing finish in Hall.						
12	Block board work in platforms and risers of 38 mm thick (Stepped Gallery ) using 2 X 19 mm Block boards (Marine Grade BWP) and fixing with self threading fastener screws to steel members below (at places over IPS) .All complete with two coats of wood primer and anti termite treatment.	140sqm	Make: Century/ Green				
13	High grade Sal Wood / or similar hardwood nosing along gallery steps and stage edge , all complete with rounding etc.. The whole to be finished with two coats of wood primer and anti termite treatment..	0.23sqm					
14	Finishing Hall and stepped galleries with loop piled carpet at least 6mm thick, 590 GSM over an	140sqm	Colour: Deep Blue or Deep Grey.				

	underlay of 8mm Kinny foam. The whole to be fixed as per manufacturers norms including anodised aluminium channels for edges.						
<b>Panelling, Woodwork &amp; False Ceiling</b>							
15	Custom made Projector Enclosures using Plywood ( 19 MM, BWP marine grade) with insulation treatment in Walls & Ceiling using gypsum or modular insulation panels.	2 numbers	Make: Century/ Green				
16	Projection gallery wall finish with Perforated Coated aluminium Panels (of minimum 01 mm thickness) with acoustic insulation backing or modular wood panels (of minimum 25 mm thickness) achieving 0.6-0.8 NRC, having horizontal slits of varied widths and gaps. The whole to be fixed snap fittings/ channels with necessary screws etc..The	80sqm	Make of modular section : Hunter Douglas/ Armstrong				

	panels shall have resilient mountings. Use Kinney foam backing at fasteners. Alternatively use Rubberwood Slats with varied slit openings.						
17	<p>Wooden flush Door Panel (with 20mm ply , 60mm thick door frame) in front of Projector opening and at Technical corridor using High grade Sal wood Frame and finishing front with Perforated Coated aluminium Panels (of minimum 01 mm thickness) with acoustic insulation backing or modular wood panels (of minimum 25 mm thickness) achieving 0.6-0.8 NRC, having horizontal slits of varied widths and gaps. The whole to be fixed snap fittings/ channels with necessary screws etc..</p> <p>The doors to have projector openings with</p>	2 nos	<p>Make of projector opening cover glass : Schott glasses (anti reflective glass)</p> <p>Make of modular section: Hunter Douglas/ Armstrong</p>				

	<p>special glass and finished with all hardware (locks etc) and staining.</p> <p>High grade Sal frame to be lined with foam. Door locations markings to be provided by the agency. Use Kinney foam backing at fasteners. Alternatively use Rubberwood Slats with varied slit openings.</p>						
18	<p>Supplying and fixing of Commercial Grade Flush doors 35mm thick for entry to Projection Gallery space , all finished with quality 1mm thick matt finished laminate of approved colour on both sides and TW lipping all round,13 Nos , size 1000x2100 . All complete with quality hardware.</p>	13	Make: Century / Green				
19	<p>Supplying and fixing of Gypsum board False ceiling for Projector Enclosures, Theatre entries and Server Room over a standard GI</p>	Approximate: 100 sqm	Make: Armstrong				



	framework, all complete with taping hanging fasteners etc.. All as per Design and detailed drawings. Drawings to be provided by the agency.						
<b>Server Room</b>							
20	Server Room Wall and ceiling Acoustical insulation using 50 mm thick with polysynth insulation covered with plastic net of 1-2 mm openings and final cover with black tissue. Resilient fixing. Design to be provided by the agency.	Approximate: 10sqm	Make: Good quality brands				
21	Finishing of Server with Anti-static flooring	10sqm	Make: Good quality brands				
22	Laying of cable tray and connecting to Mains, Console & Projectors - all complete.	LOT					
23	3mm thick Vinyl Flooring in the entire technical corridor	70sqm	Make: Good quality brands				
<b>Projector Room</b>							
24	Gypsum false ceiling, and insulation using 12 mm modular Gypsum panels. Enclosure walls		Make of ply board:				

	using 19 mm ply board ( marine grade, BWP) with entrance and exit on both sides. All walls to be insulated with polysynth insulation.	Approximate 05sqm	Century/ Green.				
25	Finishing Projection Room with Anti-static flooring	2sqm	Make: Good quality brands				
26	Wall and ceiling Acoustical insulation using 50 mm thick with polysynth insulation covered with plastic net of 1-2 mm openings and final cover with black tissue. Resilient fixing. Design to be provided by the agency	Approximate: 05sqm	Make: Good quality brands				
<b>Electrical Works</b>							
27	Total electrification work in Server Dome Room with conductors, conduits , switches, receptacles, DBs etc.. Detailed drawings to be provided by the agency.	LOT	Make of wire : Polycab/ Anchor/ Finolex  Make of DB and receptacle s: Legrand				
28	LED lighting and fixtures for all technical corridors, projector room, server room, annular space behind dome,	LOT	Make: Philips				

	and above catwalk level. .						
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#### IMPORTANT NOTES:

1. The bidders shall along with Annexure H (Part A) submit in their letterhead a detailed list of deliverables along with cost break-up of each item, break-up of taxes considered while arriving at the gross value of each item as per the following format:

S. No.	Description	Quantity/Unit cost as may be applicable	Rate	Amount	Applicable Taxes (with break-up)	Total
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2. For deciding the L1 bidder, the following costs only shall be considered:
  - a. SITC of Planetarium system including projection dome, cove lights etc.
  - b. SITC of UPS system
  - c. Civil, Electrical, Acoustics and Interior including chairs etc.
  - d. 4K 2D Digital License Film for three years ( Voyager: The Never-Ending Journey)
  - e. Operation of planetarium system for 5 years.
3. The order for operation of Planetarium systems for five years on year to year basis will be placed by Science City, Agartala separately after SITC of the complete planetarium system.
4. The order for Comprehensive AMC for 2 years after the warranty period of 5 years may be placed by Science City, Agartala separately based on the rate quoted.
5. The bidders shall consider the prevailing tax rates while quoting the rates. However, in the event of any changes in the statutory taxes and duties, the rates applicable at the time of payment shall be made by CMD against submission of supporting documentary evidence.
6. The total cost provided in the cost breakup sheet should exactly match with total cost quoted in the financial bid.
7. In case there is discrepancy in the cost breakup sheet and the cost quoted in the financial bid, the cost quoted in the financial bid will prevail.

**8. Rate / information of the following items may also be provided (This will not be considered for evaluation the Financial Bid).**

S. No.	Item Description	Licence fee for one year's lease	Licence fee for five years lease	Licence fee for perpetual lease
1.	List of available 2D Fulldome shows with time duration of each of topics related to science, technology, environment etc. suitable for screening after completion of this facility with charges for yearly/5 yearly/perpetual lease.			
	a) 2D Fulldome Planetarium shows			
	b) 2D Fulldome shows			
2.	Shelf-life time of the Digital immersive Fulldome 2D projection system (i.e. up to which period technical support as well as spare parts including consumables shall be available with the firm).			
3.	Bengali translation and voice over for the free Fulldome planetarium and astronomy shows (per show)			

**1.7 Complete Planetarium Full dome as well as Astronomy Sky Shows of 30 to 35 minutes duration in English and Bengali Language.**

1. One Licensed digital 4K 2D fulldome film (**Film title : Voyager: The Never-Ending Journey**) show in English and Bengali of about 30 minutes duration is to be supplied, encoded and tested for satisfactory projection.
2. The above show should be provided with three year licence for projection.
3. At least 8 Free shows available from international producers like NASA/ESO/ESA etc. of which at least two shows should be in Bengali.

Note:

- i. Necessary scripts and original sound tracks must be supplied.
- ii. The shows should be of around 25-35 minutes duration.
- iii. The selected vendors should provide list of all latest available shows in DVDs or other information storages from which CMD will select above shows.

## Annexure- I

### UNDERTAKING

Ref. No.:-----

Date:-----

Tender No. CMD 007.12.59(Works)/23-24/04 Dated: 26<sup>th</sup> June 2023

To  
Creative Museum Designers  
NCSM Campus  
Building II, 6<sup>th</sup> Floor  
33, Block – GN, Sector – V,  
Bidhan Nagar, Kolkata, West Bengal 700091

Dear Sir/Madam.

We have read the clause regarding restrictions on procurement from the bidder or a country which shares a land border with India; we certify that this bidder is not from such a country or; if from such a country, has been registered with the Competent Authority. We hereby certify that this bidder fulfils all requirements in this regard and is eligible to be considered. [Where evidence of valid registration by the Competent Authority shall be attached.]

We also agree that, during any stage of the tender/contract agreement, in case the above information/documents submitted by us are found to be false, CMD has the right to immediately reject our bid/terminate contract at any stage and carry out further legal action on us in accordance with law.

Yours faithfully

For (Name of the bidder)  
Signature of the Authorized Signatory  
(Seal of the Organization)

Name:  
Designation:  
Phone No.:  
Place:  
Date: