



Ministry of Culture
Government of India



**National Council of Science Museums
(Ministry of Culture, Govt. of India)**

E-TENDER DOCUMENT FOR

FABRICATION, SUPPLY AND INSTALLATION OF FIBERGLASS (FRP EPOXY RESIN, MIX MEDIA ETC) MANNEQUINS, 3D DIORAMAS, RAISED 3D RELIEF MODELS, MODELS OF PLANTS WITH THEIR ROOT SYSTEMS, SCALE DOWN REPLICAS OF TEMPLES OF DIFFERENT ARCHITECTURE STYLES, SCULPTURES, RAISED RELIEF MODELS, MODEL OF BATHU KI LADI & AQUATIC LIFE AND UNDERWATER ECOSYSTEM AROUND IT & MIGRATORY BIRDS USING CLEAR EPOXY RESIN & FRP, REPLICAS OF FOSSILS, ROCKS, MINERALS, ART & CRAFT ITEMS, PAINTINGS SPECIFIC TO HIMACHAL PRADESH FOR WEALTH OF HIMACHAL PRADESH GALLERY AT PALAMPUR SCIENCE CENTRE, PALAMPUR

At

PALAMPUR SCIENCE CENTRE
(A Unit of National Council of Science Museums)
HOLTA, MANDI-PATHANKOT NATIONAL
HIGHWAY - 154, PALAMPUR
HIMACHAL PRADESH -176062

NATIONAL SCIENCE CENTRE
(A Unit of National council of science museums)
Pragati Maidan, Bhairon road, Near gate no – 4,
New Delhi – 110 001

TENDER No. NSCD/18011/E-Tender – 21 / 2025 – 26

NOTICE INVITING E-TENDER

Centre, Palampur. Interested agencies may download the tender documents from the On-line Digitally signed e-tenders under QCBS (Quality and Cost Based Selection) method are invited in two Bid System from the competent and eligible agencies who satisfy the eligibility criteria enumerated in the Tender Documents for Fabrication, Supply and Installation of Fiberglass (FRP, CLEAR EPOXY RESIN, MIX MEDIA, PAINTS ETC.) Mannequins, 3D diorama of Himachal Pradesh at a Glance, Raised 3D relief model of Himachal Pradesh, FRP terrain & Geological features of Himachal Pradesh, Minerals, Rock samples and their display cabinet, Models of root system and plants with their specific adaptations, Diorama of Flora-Fauna adapted to different altitudes, diorama of scale down replicas of temples of different architecture styles with high relief of landscape & other temples in the backdrop (i.e. Shikhar style, pagoda style, pyramid style, kathkuni style), Sculptures, Diorama, Model of Bathu Ki Ladi & Aquatic life and Underwater Ecosystem around it & Migratory birds using clear epoxy resin, mix media & FRP, Replica of Fossils, Art & Craft items, Paintings specific to Himachal Pradesh for ‘Wealth of Himachal Pradesh’ Gallery at Palampur Science Centre Central Public Procurement Portal (CPPP): <http://eprocure.gov.in/eprocure/app>

Bid Document Published Date	26 th September,2025(04:15 PM)
Bid Document Download Start Date	26 th September,2025 (04:20 PM)
Bid Clarification Start Date	26 th September,2025 (04:25 PM)
Bid Submission Start Date	26 th September,2025 (04:30 PM)
Pre Bid Meeting	3 rd October,2025 (11:00 AM Onwards)
	Online Link for the Meeting: meet.google.com/gdc-uhrw-qoc
Bid Clarification End Date	15 th October,2025 (14:00 PM)
Bid Submission End Date	16 th October, 2025 (15:00 PM)
Technical Bid Opening Date	17 th October, 2025 (16:00 PM)
Financial Bid Opening date	Shall be communicated later on
Date of Technical Presentation to be made at National Science Centre, Delhi	To be announced later on
Estimated Cost	₹39.00 Lakhs
Earnest Money Deposit	₹97,500/- (Rupees Ninety Seven Thousand Five Hundred only)

The online bid both Technical Bid and Financial Bid, should be uploaded by the due date and time as per the above schedule. The responsibility to ensure the same lies with the bidders. Off-line tenders shall not be accepted and no request in this regard will be entertained whatsoever. Online Technical Bid will be opened at the first instance in National Science Centre, Delhi **at 04:00 p.m. on 17th October 2025** for technical evaluation as well as selection of technically acceptable offers. In the second stage, the Financial Bids of only the selected and techno-commercially acceptable offers will be opened. Decision of the Centre, regarding selection of eligible and qualified vendors / firms for opening the Financial Bid shall be final and binding on the bidders. Bidders may be present during opening of tenders.

NSCD reserves the right to accept or reject any or all tenders in full or part without assigning any reason whatsoever. NSCD shall also not be bound to accept merely the lowest tender but the superior workmanship and fineness of the fiberglass (FRP) work finish, clear epoxy resin in water bodies, hydro projects, Silicon rubber skin and fur of creatures & flora-fauna, cultural aspects, agricultural practices, landscaping with detailing and authenticity of the dioramic scenes, authenticity of different architectural styles of temples shall be of prime consideration for selection.

1. The E-Tenderer should fulfill the following eligibility criteria:-

The bidder should be an agency/individual/professionals/organization/Firm/Company/consortium/JV having professional & proven experience in executing of works similar to fabrication, supply and installation of fiberglass (FRP, CLEAR EPOXY RESIN, MIX MEDIA, PAINTS ETC.) Mannequins, 3D diorama, Raised 3D relief model, FRP terrain & Geological features models, replicas of Minerals, Rock samples and their display cabinet, Models of root system and plants with their specific adaptations, Diorama of Flora-Fauna adapted to different altitudes, diorama of scale down replicas of temples of different architecture styles with high relief of landscape & other temples in the backdrop (i.e. Shikhar style, pagoda style, pyramid style, kathkuni style), Sculptures, Diorama, Model of Bathu Ki Ladi & Aquatic life and Underwater Ecosystem around it & Migratory birds using clear epoxy resin, mix media & FRP, Replica of Fossils, Art & Craft items, Paintings etc. in reputed museums, art galleries, spiritual places and such other similar spaces at International/ central/ state level. The bidder should have past experience, technical and financial capabilities on the lines mentioned below.

a) Accomplished and completed such /similar project of repute successfully as under during the last 7 financial years ending April 2025:

- i. Minimum one project of 80% of the estimated cost or
- ii. Two projects of 50% of estimated cost or
- iii. Three projects of 40% of estimated cost.

(in case of consortium / JV, work experience of either of the Partners or combined work experience will be considered)

Note: Credentials pertaining to similar work of in executing of fabrication, supply and installation of fiberglass (FRP, CLEAR EPOXY RESIN, MIX MEDIA, PAINTS ETC.) Mannequins, 3D diorama, Raised 3D relief model, FRP terrain & Geological features models, replicas of Minerals, Rock samples and their display cabinet, Models of root system and plants with their specific adaptations, Diorama of Flora-Fauna adapted to different altitudes, diorama of scale down replicas of temples of different architecture styles with high relief of landscape & other temples in the backdrop (i.e. Shikhar style, pagoda style, pyramid style, kath kuni style), Sculptures, Diorama, Model of Bathu Ki Ladi & Aquatic life and Underwater Ecosystem around it & Migratory birds using clear epoxy resin, mix media & FRP, Replica of Fossils, Art & Craft items, Paintings etc. in reputed museums, art galleries, spiritual places and other similar spaces at International/ central/ state level will be considered as similar works.

Details to be provided in **Annexures –D-1**.

b) **Technical Expertise:** The bidder should have a recognition of work, appreciation letters from Central Govt. and Reputed Organizations, winning of national level design competitions and awards.

c) **Financial soundness-**The applicant should have:

- i. PAN&GST registration (proof to be submitted)
- ii. **Turnover Eligibility:** The Average Annual Turnover of the Bidder for the best of three of the last five financial years (2021-22, 2022-23, 2023-24, 2024-25) should be minimum INR 40.00 Lakh. (in case of consortium/JV, turnover of Lead Partner will be considered) (**Annexure- D-1**)

d) Intending agency should be an independent legal entity, registered under the applicable Act for running business of similar nature. (**Annexure –D-1**)

e) The firm/ agency should never have been blacklisted by any of the central/ state Govt. organization and no criminal case should be pending against the firm/ agency. An affidavit is required to be submitted to this effect. If the information provided is found to be false at a later date, necessary penal action shall be taken at the risk and cost of the agency (**Annexure-D-2**).

f) The agency shall provide the details of recognition of work, appreciation letters from Central Govt. and International Organizations of reputed organization, winning of national level design competitions and awards.

EVALUATION METHODOLOGY

Evaluation Methodology will have two stages:

Stage1-General cum Technical Bid Evaluation Stage 2-

Financial Bid Evaluation

Stage–1 General cum Technical Bid Evaluation

The submitted bids will be evaluated first for the conformity with the eligible criteria. The evaluation will involve validating the credentials submitted in the format as prescribed. **Credentials without valid proof will be invalid and will not be considered for eligibility.** The Council reserves the right to accept or reject proof of credentials at its sole discretion without having to give reasons to the Bidders thereof. In case any agency fails to comply with the eligibility criteria, the agency will not be considered for technical presentation and further evaluation.

Only those who qualify the eligibility criteria will be intimated about the venue, date, time and duration for making a presentation about their designs along with 3D models etc. for the proposed work, proposed implementation methodology, project management methodology and on- site execution methodology to be adopted by them. The presentations are to be made before the Technical Evaluation Committee (TEC) which will evaluate the proposals and award marking as per the format and weightage are given below.

The minimum qualifying score will be 70% of total marks as given below. Only those Bidders who fulfill guidelines of functional & technical requirements and score 70% or above in technical bid evaluation will be short listed for financial bid opening.

Technical Bid Evaluation and award marking shall be done as per the format and weightage as under:

S. No.	Required Experiences	Max. Score	Qualifying Marks, wherever applicable
1.	Experience– Min.05 Years - 8 Marks More than 05 to 08 Yrs.- - 3 Additional Marks Above 08 Years & above- - 4 Additional Marks	15	8
2.	Average annual turnover of {Lead Partner in case of consortium during best three of the last five years (2020- 21, 2021-22, 2022-23, 2023-24, 2024-25)} Min. 40 Lakh -8 Marks For each additional 02 lakhs, 01 mark will be added upto maximum 07 Marks	15	8
3.	Work Experience of completing similar projects:- i) Minimum fulfillment of criteria of similar work as per 1(a) above - 8 Marks ii) One Additional Project - 3 Additional Marks 02 or more Additional projects - 4 Additional Marks	15	8
4.	Recognition of work, appreciation letters from Central Government, State Government and reputed organizations. Winning of national level design competitions and awards from reputed organization. Enclose copies of documentary proof. Having received 3 National/ International recognitions / awards from reputed organization - 10Marks	10	Nil

	Having received 2 National/ International recognition / awards from reputed organization - 6 Marks Having received 1 National/ International recognition/awards from reputed organization - 3 Marks		
5.	Technical presentation by the bidder will involve following aspects: 3D Diorama of Himachal Pradesh at a Glance using FRP, mix media, Clear Epoxy Resin, paint etc. length 30 inch, height 12 inch and width 12 inch) as per details mentioned in Annexure-D-3 <ul style="list-style-type: none"> ● Marking will be done on following counts: Finishing - 9marks Authenticity & Realistic - 9marks Proportion - 9marks Aesthetics - 9marks Overall Composition - 9marks 	45	25
	Total Marks	100	

Stage-2: Evaluation of Financial Bid

- a. Bidders are required to mention clearly the details of the taxes and duties applicable on the basic cost quoted in the financial bid.
- b. The Financial Bids of the technically qualified bidders will be opened online through CPP Portal.
- c. The bidder with the lowest financial bid (L1) will be awarded 100% score.
- d. Financial Scores for other than L1 bidders will be evaluated using the following formula: Financial Score of a Bidder = $\{(Financial\ Bid\ of\ L1 / Financial\ Bid\ of\ the\ Bidder) \times 100\}$ % (Adjusted to two decimal places)

Note:

- 1. Only fixed price financial bids indicating total price for all the work together specified in this bid document will be considered.**
- 2. Errors & Rectification: Arithmetical errors will be rectified on the following basis: “If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price shall be corrected. If there is a discrepancy between words and figures, the amount in words will prevail”.**

Combined Evaluation of Technical & Financial Bids

- a. The technical and financial scores secured by each bidder will be added using weightage of 70% and 30% respectively to compute a Composite Bid Score.
- b. The bidder securing the highest Composite Bid Score will be declared as the Best Value Bidder for award of the work. The award of work will be given to the single successful bidder and will not be split. In the event the bid composite bid scores are “tied”, the bidder securing the highest technical score will be declared as the Best Value Bidder for award of the Project.

CHECK-LIST

Check list of Tender No. NSCD/18011/E-Tender-No – 21 / 2025-26 For Fabrication, Supply and Installation of Fiberglass (FRP, CLEAR EPOXY RESIN, MIX MEDIA, PAINTS ETC.) Mannequins, 3D diorama of Himachal Pradesh at a Glance, Raised 3D relief model of Himachal Pradesh, FRP terrain & Geological features of Himachal Pradesh, Minerals, Rock samples and their display cabinet, Models of root system and plants with their specific adaptations, Diorama of Flora-Fauna adapted to different altitudes, diorama of scale down replicas of temples of different architecture styles with high relief of landscape & other temples in the backdrop (i.e. Shikhar style, pagoda style, pyramid style, kathkuni style), Sculptures, Diorama, Model of Bathu Ki Ladi & Aquatic life and Underwater Ecosystem around it & Migratory birds using clear epoxy resin, mix media & FRP, Replica of Fossils, Art & Craft items, Paintings specific to Himachal Pradesh for ‘Wealth of Himachal Pradesh’ Gallery at Palampur Science Centre, Palampur.

Sl.No.	Description	Yes	No
01	Whether E-Tender uploaded on Central Public Procurement Portal of Govt. of India in two parts (i.e. Technical & Commercial) separately. (Please note that one set of original signed Technical bid must be delivered at NSC Delhi/ PSC, Palampur before the time of Bid opening).		
02	Whether Tender documents carefully studied & understood.		
03	Whether Tender document is duly signed and stamped on all pages is scanned and uploaded as Part – I of the Tender in Central Public Procurement Portal.		
04	Whether Declaration regarding Non-relation, duly signed and stamped, and scanned copy of the same uploaded as Part – I of the Tender in Central Public Procurement Portal. Annexure-C		
05	Whether Declaration certifying that there is no extra conditions quoted in the Offer Form duly signed and stamped and scanned copy of the same uploaded as Part – I of the Tender in Central Public Procurement Portal. Annexure-C		
06	Whether Earnest Money of ₹97,500/- submitted Online Demand Draft No.dated..... and Scanned copy of DD uploaded as Part – I of the Tender. Please note that the original DD should be couriered /hand delivered to NSC Delhi / Online payment details shall be sent to NSCD before last date of submission of the Tender document.		
07	Did you visit the actual site for execution of the work/ Supply before submitting the Tender		
08	In order to qualify the technical stage of the bid, selected tenderer will be called for presentation at NSC, Delhi with sample work as per “ Annexure-D-3 ”. (sample work to be submitted at the time of presentation)		

Date:

Place:

Signature of the Tenderer

Official Seal

General Information and Instructions

1. The instruction given here in will be strictly binding on the tenderers and deviation, if any will make the tender or tenders liable to be considered invalid. Tenders in incorporating additional conditions by the tenderer are liable for rejection.
2. Bids shall be submitted online only at CPPP website: <https://eprocure.gov.in/eprocure/app> **Manual bids shall not be accepted.**
3. The instruction given in “**Annexure-A**” for “**Instruction for Online Bid Submission**” should be strictly followed during submission of the Bid.
4. Bid documents may be scanned with 100 dpi with black and white option which helps in reducing size of the scanned document.
5. Bid should be submitted along with the **Earnest Money of ₹97,500/- (Rupees Ninety-Seven Thousand Five Hundred Only)** by way of crossed Demand Draft / Pay Order on any commercial Banks or payment online by NEFT/RTGS, Bank Guarantee / Bond payable in favor of “**NATIONAL SCIENCE CENTRE, Payable at DELHI**. Earnest Money deposit in respect of such offers which are not accepted will be returned to the bidders within 30 working days from the date on which the final decision is taken about the source from which the items under tender are to be procured or within 2 (two) months from the date of the opening of the tenders, whichever is earlier. No interest will be paid on the Earnest Money deposited with the Council. Earnest Money deposit in respect of the successful bidders will be retained with the NSCD until entire execution of the order as per terms of the tender. If the successful bidder fails to execute the order strictly as per NSCD/PSCP specification in full or part within the stipulated delivery period of the tendered items purchase order, the Earnest Money deposit retained with the NSCD shall be forfeited forthwith after cancellation of the concerned order.
6. **Validity of Bids:** The Bids should remain valid for 90 days from the date of bid opening.
7. **Rejection of Bids:** Canvassing by the Bidder in any form, unsolicited letter and post-tender correction may invoke summary rejection. Conditional tenders will be rejected. Non-compliance of applicable General Information and Instruction will disqualify the Bid.
8. The tenderers should have Digital Signature Certificate (DSC) for filling up the Bids. The Person signing the tender documents should be authorized for submitting the on line e-tender.
9. The Financial Bid (BOQ) shall be filled in and signed by the authorized signatory online as per Proforma “**Annexure-G**” available at Central Public Procurement Portal e-tender system website <http://eprocure.gov.in/eprocure/app>. Off line Financial Bid shall not be accepted.
10. Tender must be uploaded on-line in two separate sets - namely Set – 1 (Technical) on Central Public Procurement Portal. The contents of Cover shall be as follows:-

Set-1

- a) **Technical (Techno-Commercial) BID duly filled-in and signed with official stamp. (as per Annexure-D-1)**
- b) **General Terms & Conditions (as detailed in Annexure-B) duly signed with official stamp as a token of acceptance**
- c) **Scanned Copy of the current and valid Trade License and Dealership Certificate as applicable.**
- d) **Scanned Copy of the current and valid Tax Clearance Certificate.**
- e) **The” Declaration Bank Guarantee /Bond duly signed with official stamp (as detailed in Annexure-C).**
- f) **The “Technical Specification” as detailed in Annexure-E duly signed with official stamp.**
- g) **Technical Brochures of each equipment with technical explanation for every feature of the product offered by the bidder.**
- h) **Scanned copy of Demand Draft for ₹97,500/- as Earnest Money Deposit or scanned copy of MSME certificate for exemption of EMD.**
- i) **Tender Document comprising of complete NIT, Schedule Quantities/specification and drawing in pdf format (TENDERXXXXX.pdf file) digitally signed.**

Set-2

- i) **The Financial Bid (as per Annexure-G) i.e. Schedule of Price Bid in the form of attached BOQ Performa shall be duly filled in, digitally signed and uploaded online by the bidder.**

N.B. : 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 the competent authority of the NSC, Delhi against submission of supporting documentary evidence.

11. Order shall be placed in favour of the bidder whose technical bid is acceptable and offered OVERALL lowest rate of item(s) as per BOQ in Annexure –G.

12. The authorities of National Science Centre, Delhi does not bind themselves to accept the lowest tender, reserves the right to reject or accept any or all tenders wholly or partially without assigning and reason whatsoever.

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TENDER No.: NSCD/18011/E-Tender– 21/2025– 26

Instructions for Online Bid Submission

1. 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.
2. 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-Procurement 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 communicate on from the CPP Portal.
- 4) Upon enrolment, the bidders will be required to register their valid Digital Signature Certificate (Class II or Class III Certificates with signing key usage) issued by any Certifying Authority recognized by CCA India (e.g. Sify / nCode / e-Mudhra etc.), with their profile.
- 5) Only one valid DSC should be registered by a bidder. Please note that the bidders are responsible to ensure that they do not lend their DSC’s to others which may lead to misuse.
- 6) Bidder then logs into the site through the secured log-in by entering the user ID /password and the password of the DSC/e-Token.

SEARCHING FOR TENDER DOCUMENTS

- 1) 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. Once the bidders have selected the tender 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 /e-mail in case there is any corrigendum issued to the tender document.

- 2) 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 document that need to be submitted. Any deviations from these may lead to rejection of the bid.
- 3) 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 black and white option which helps in reducing 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 bid submission process.

SUBMISSION OF BIDS

- 1) Bidder should login to 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 has to digitally sign and upload the required bid documents one by one as indicated in the tender document.
- 3) Bidders should submit the EMD as per the instructions specified in the tender document. The original instrument should be posted/couriered/given in person to the Tender Processing Section at the above address, latest by the last date of bid submission. The detail of the Demand Draft / any other accepted instrument, physically sent, should tally with the details available in the scanned copy and the data entered during bid submission time, otherwise the uploaded bid will be rejected. Exemption will be given to the MSME/NSIC registered agencies having certificate of similar work for submission of EMD.
- 4) A standard Price Schedule format (BOQ) has been provided with the tender document to be filled by all the bidders. Bidders are requested to note that they should necessarily 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 by all the bidders. Bidders are required to download the BOQ file, open it and complete the Light Blue colored (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.

- 5) The server time (which is displayed on the bidder's 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.
- 6) 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 openers public keys.
- 7) The uploaded tender documents become readable only after the tender opening by the authorized bid openers.
- 8) 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.
- 9) 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 enquiries relating to the tender document and the terms and conditions contained therein should be addressed to the Tender Inviting Authority for a tender or Any queries relating to the Tender may be addressed to kkhimnani@gmail.com, srscpalampur@gmail.com, nscdelhi10@gmail.com with proper credentials of the bidders before the bid clarification date thereafter no queries will be entertained.
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. The contact number for the helpdesk is 1800 233 7315.

NATIONAL SCIENCE CENTRE
(A Unit of National council of science museums)
Pragati Maidan, Bhairon road, Near gate no – 4,
New Delhi – 110 001

TENDER No.– 21 /2025-26

GENERAL TERMS & CONDITIONS (GTC) FOR SUBMISSION OF TENDER

On-line digitally signed E-Tenders are invited from agencies having proven experience and capable in executing the work of Fabrication, Supply and Installation of Fiberglass (FRP, CLEAR EPOXY RESIN, MIX MEDIA, PAINTS ETC.) Mannequins, 3D diorama of Himachal Pradesh at a Glance, Raised 3D relief model of Himachal Pradesh, FRP terrain & Geological features of Himachal Pradesh, Minerals, Rock samples and their display cabinet, Kinnaur Rock cut gate with terrain, Models of root system and plants with their specific adaptations, Diorama of Flora-Fauna adapted to different altitudes, diorama of scale down replicas of temples of different architecture styles with high relief of landscape & other temples in the backdrop (i.e. Shikhar style, pagoda style, pyramid style, kathkuni style), Sculptures, Diorama, Model of Bathu Ki Ladi & Aquatic life and Underwater Ecosystem around it & Migratory birds, using clear epoxy resin, mix media & FRP, Replica of Fossils, Art & Craft items, Paintings specific to Himachal Pradesh for ‘Wealth of Himachal Pradesh’ Gallery at Palampur Science Centre, Palampur.. Essential conditions of the Tender are as below:

1. **Submission of tender:** Technical Bid (Part-I) as per format in **Annexure ‘D-1’**, should contain the following documents to establish the Bidders eligibility to the bid and his qualification to perform the contract if his bid is accepted.
 - a) **EARNEST MONEY:** Bid should be submitted along with the **Earnest Money of ₹97,500/- (Rupees Ninety-Seven Thousand Five Hundred only)** by way of crossed Demand Draft / Pay Order on any commercial banks / Bank Guarantee /Bond or payment online by NEFT/RTGS payable in favour of “NATIONAL SCIENCE CENTRE payable at Delhi (Bank details of NSCD is attached). Earnest Money deposits in respect of such offers which are not accepted will be returned to the bidders within 30 working days from the date on which the final decision is taken about the source from which the items under tender are to be considered or within 2 (two) months from the date of the opening of the tenders, whichever is earlier. No interest will be paid on the Earnest Money deposited with the Council. Earnest Money deposit in respect of the successful bidders will be retained with the NSCD until entire execution of the order as per terms of the tender. If the successful bidder fails to execute the orders strictly as per our specification in full or part within the stipulated delivery period of the Letter of Intent, the Earnest Money deposit retained with the NSCD shall be forfeited forthwith after cancellation of the concerned order.
 - b) The issued bid document (excluding BOQ), signed on each page by the authorized signatory of the bidder.
 - c) Attested copy of the firms’ partnership/ proprietorship deed/Memorandum of Association.
 - d) Power of Attorney in favor of the person signing the bid.
2. The firm must have valid TIN/GST/PAN Nos, Registration Certificates.
3. The successful tenderers shall submit the following documents within **7(seven)** Days from the date of placement of the order :-
 - i. Duplicate copy of the work order duly signed and stamped by the tenderer as a token of acceptance of the order.

- ii. The original copy of the Agreement governing the terms and conditions of the Contract on non-judicial stamp papers.
- iii. Security Deposit as contained in **Clause No. 16**.
4. In case, the successful tenderer refuses to accept the offer after finalization or does not comply with the Clause No.3 within 7 (seven) days from the date of placement of the order as per the finalized and accepted terms & conditions, the order shall be cancelled forthwith without any further reference and the EMD will be forfeited.
5. The authorities of the Centre reserve the right to amend, alter or modify the terms & conditions or quantities mentioned above if necessary.
6. The materials used by the successful tenderer shall conform to the description and/or specification given by the Centre. Sub-standard quality of materials will not be accepted. The samples must be got approved in advance from the competent authority of the Centre.
7. **No exemption will be allowed for submission of Security Deposit/Retention Money to NSIC/MSME certified firms. However, concession for submission of EMD shall be applicable to the Tenderers/Bidders registered with NSIC/MSME as per prevailing Govt. guidelines. The Tenderers/Bidders should upload document of the firm for claiming such exemption. Tenderer/Bidder must upload signed Annexure–D, if the bidder is registered under NSIC/MSME.**
8. Bad workmanship will not be accepted and if carried out is liable to be rejected and should be rectified by the successful tenderer at his cost as per specifications and directions given by the authorized representative of the Centre. Decision of this Centre, as to items of bad workmanship and proper replacement/rectification will be final and binding on the successful tenderer.
9. Modifications, as and when required during the execution, whenever suggested by the competent authority, have to be carried out. Successful tenderer shall take the responsibility of such modifications without any additional expenditure. Further to this the successful bidder need to visit the site before executing the work so as to get the comprehensive idea of the space available and ensure his own research about the Himachal Pradesh to present authentic and accurate information in the realistic environment. Bad workmanship will not be accepted and if carried out is liable to be rejected and should be rectified by the successful tenderer at his cost as per specifications and directions given by the authorized representative of National Science Centre, Delhi / Palampur Science Centre, Palampur. Decision of National Science Centre, Delhi / Palampur Science Centre, Palampur, as to items of bad workmanship and proper replacement/rectification will be final and binding on the successful tenderer.
10. Specifications of the items under tender are as given in the enclosed drawings. However, if any ambiguity in the specification is detected it shall be promptly brought to the notice of National Science Centre, Delhi / Palampur Science Centre, Palampur for clarifications. No deviation from the approved specifications shall be made by the successful tenderer without written approval of National Science Centre, Delhi / Palampur Science Centre, Palampur.
11. The successful tenderer shall pay not less than minimum wages as prevailing in the concerned municipal area and shall abide by all and every kind of legislation that are incidental to and concerned with engagement of persons for the time being for carrying out and execution of the work. NSCD/PSCP shall have no liability of any kind with regard to the workers of the successful tenderer.

12. The successful tenderer shall not under any circumstances whatsoever transfer wholly or partially this contract/agreement to any other person(s) firm/company or assign the contract/agreement or benefits of this contract/agreement to any other party for any reason whatsoever. Otherwise this contract/agreement will automatically stand cancelled.
13. The successful tenderer shall obtain necessary trade and other licenses as may be required to carry on the tendered job and shall also be responsible for compliance of all rules and regulations including the Contract Labor Regulations which maybe in force from time to time by the appropriate authority at his/their own cost.
14. The successful tenderer shall ensure that all wages and allied benefits as per statutory norms are paid to their workers for the purpose of this contract. The Agency shall remain liable to the authorities concerned for compliance of respective existing rules and regulations of the Govt. for the purpose of this contract and shall remain liable for any contravention thereof. They shall keep NSCD/PSCP indemnified against any liabilities arising out of non-compliance of any of the acts, rules, orders of the Govt. /Council on their part.

15. **FORFEITURE OF EMD:**

In case the successful bidder fails to furnish security deposit or fails to submit the required documents at the time of agreement or does not turn up for agreement within the prescribed time limit, the EMD of the bidder shall be forfeited and the tender approval shall be cancelled.

16. **PERFORMANCE SECURITY / SECURITY DEPOSIT:**

The successful bidder will have to deposit the prescribed security @ **3% of the approved tender value** adjusting 2.5% EMD in the form of crossed Demand Draft /Bank Guarantee / Pay Order of any commercial banks or payment online by NEFT/RTGS payable in favour of "NATIONAL SCIENCE CENTRE" payable at Delhi (Bank details of NSCD is attached). Earnest money deposited by the successful bidder will automatically be adjusted towards the security deposit. No interest will be payable on earnest money or security in any case. The security deposit shall be payable to NSCD as compensation for any loss resulting from the contractor's failure to complete its obligations under the contract.

The successful bidder will have to sign the contract agreement and furnish the required security deposit within 15 days of the acceptance of the tender.

The security deposit is liable to be forfeited in case the bidder violates the terms and conditions of the agreement in any manner.

17. **ACCESS:**

The Centre or its representatives shall, at all reasonable time, have free access to the works and/or to the workshops/factories or other places where the exhibits are for the contract and also to any places where materials are lying or from which they are being obtained and the successful tenderer shall give every facility to them for inspection, examination and testing of the materials and workmanship. Except the representative of Public Authorities and those mentioned above, no person shall be allowed on the works at any time without the prior written permission of the Centre.

INSPECTION:

- i. The successful tenderer shall arrange for inspection of all raw materials by the authorized official of the Centre before the raw materials are used for fabrication of the ordered jobs.

- ii. The successful tenderer shall also have to arrange for inspection of the job including other items at the site on completion of every stage and/or whenever desired by the authorized officer of the Centre. Any defect pointed out by the authorized officer of this Centre during such inspections has to be promptly rectified to ensure desired quality of work. It would be mandatory on the part of the successful tenderer to arrange for inspection and obtain approval of every stage of work including raw materials failing which action shall be taken as deem fit by the Centre. The decision of Centre in this regard shall be final and binding on the successful tenderer.

18. PAYMENT TERMS

No advance payment shall be made by this Centre under any circumstances. However, interim payment up to 50% of the value of work may be released at the discretion of this Centre on satisfactory completion of 75% of work. Online Payment shall be released within 30 days after satisfactory supply of the exhibits / material and submission of Pre- Receipted Tax-Invoice duly supported by receipted challan and satisfactory inspection certificate issued by the competent authority of the Centre.

19. TIME OF COMPLETION :

Time is the essence of this contract. **The entire work shall be completed within 40 days** from the date of placement of order. The work shall be executed as per the fabrication schedule given below. Inspection is to be carried out at the premises of the party at the end of each stage and if required in between also. If the progress of work is not found as per schedule, the order is liable to be cancelled and security deposit may be forfeited.

20. PENALTY CLAUSE

Every effort should be made to complete the work/job by the successful tenderer within the specified time schedule. In case the firm fails to comply with within the specified time schedule as per the finalized and accepted terms and conditions, the Centre shall have the right to either impose penalty (2% per week, subject to maximum of 10% of the quantum of work) or cancel the order. The decision of the Centre in this regard shall be final and binding on the successful tenderer.

21. DEFECT LIABILITY PERIOD:

The defect liability period shall be (2) Two Years from the date of completion of the work and for that 10% of the bill value will be deducted as security deposited. The successful tenderer shall be responsible for all defects in the exhibits supplied like defective workmanship, use of defective materials, de-coloring of material, strength of materials etc. for a period of two years from the date of completion of the job. The successful tenderer shall rectify the defects/defective parts within a reasonable time up to the satisfaction of the competent authority of the Centre or otherwise the Centre shall have the right to rectify the defect at the successful tenderer's own risk and the cost of which will be adjusted from tenderer's Security Deposit. Decision of the Centre in this regard shall be final and binding on the successful tenderer. 50% of the security deposit amount will be released after one year and balance 50% will be released after completion of second year.

DELAYS IN CONTRACTOR’S PERFORMANCE

Delay by the Contractor in the performance of its contractual obligations regarding performance of services shall render the Contractor liable to any or all of the following sanctions:

- a) Penalty/cost of repairs as per Clause 20 above.
- b) Forfeiture of its Security Deposit.
- c) Termination of the contract for default. The termination of the contract for default shall be at risk and responsibility of the contractor.

If at any time during performance of the Contract, the Contractor should encounter conditions impeding timely delivery of the goods and performance of service, the Contractor shall promptly notify to the NSCD/PSCP in writing of the fact of the delay, its likely duration and its cause(s). As soon as practicable after receipt of the Contractor's notice, the NSCD/PSCP shall evaluate the situation and may at its discretion extend the period of performance of the services ordered after mutual discussion with the Contractor.

- 22. All disputes and differences between the successful tenderer and the Centre of any kind except quality of workmanship and materials whatever arising out of or in connection with the order on the carrying out the work (whether during the progress of the work or after their completion and whether before or after the determination, abandonment or breach of the terms and conditions of the order) shall be referred to the sole arbitration of a person nominated by the Director General, National Council of Science Museums, whose decision in this regard will be final and binding on both the successful tenderer and the Centre.
- 23. The provisions of the Arbitration and Conciliation Act 1996 or any statutory modification or re-enactment thereof and of the rules made under there for the time being in force shall apply to arbitration proceedings under this Council.
- 24. The Centre will not be responsible for any injury in and out of work places to any of the employees of the tenderer.

25. **FORCE MAJEURE**

Neither party shall bear responsibility for the complete or partial non-performance of any of its obligations (except for failure to pay any sum which has become due on account of receipt of goods under the provisions of the present contract), if the non-performance results from such Force Majeure circumstances as Flood, Fire, Earthquake and other acts of God as well as War, Military operation, blockade, Acts or Actions of State Authorities or any other circumstances beyond the parties control that have arisen after signing of the present contract. In such circumstances the time stipulated for the performance of an obligation under the present contract is extended correspondingly for the period of time of action of these circumstances and their consequences.



NATIONAL SCIENCE CENTRE
(A Unit of National council of science museums)
Pragati Maidan, Bhairon road, Near gate no – 4,
New Delhi – 110 001

TENDER No. : NSCD/18011/E-Tender No- 21/2025-26

DECLARATION-I

We do hereby accept the “General Terms & Conditions” as provided by the National Science Centre along with the Tender documents for Fabrication, Supply and Installation of Fiberglass (FRP, CLEAR EPOXY RESIN, MIX MEDIA, PAINTS ETC.) Mannequins, 3D diorama of Himachal Pradesh at a Glance, Raised 3D relief model of Himachal Pradesh, FRP terrain & Geological features of Himachal Pradesh, Minerals, Rock samples and their display cabinet, Kinnaur Rock cut gate with terrain, Models of root system and plants with their specific adaptations, Diorama of Flora-Fauna adapted to different altitudes, diorama of scale down replicas of temples of different architecture styles with high relief of landscape & other temples in the backdrop (i.e. Shikhar style, pagoda style, pyramid style, kathkuni style), Sculptures, Diorama, Model of Bathu Ki Ladi & Aquatic life and Underwater Ecosystem around it & Migratory birds, using clear epoxy resin, mix media & FRP, Replica of Fossils, Art & Craft items, Paintings specific to Himachal Pradesh for ‘Wealth of Himachal Pradesh’ Gallery at Palampur Science Centre, Palampur and also undertake to execute the job strictly as per the technical specifications of National Science Centre as provided along with the tender documents, in the event of placement of any order on us. The Centre shall be at liberty to cancel the order in full or in part the event of failure of any of the above declaration made by us.

Signature of the Bidder /Constituted Attorney

DECLARATION-II

This is to certify that I/We have no close relative as an employee of the National Council of Science Museums (close relatives means: Father, Mother, Brother, Sister, Son, Daughter and Spouse) nor any such close relatives are associated with us as proprietor/partner/share holder/director and like.

Signature of the tenderer

Address:

Official seal with date

NATIONAL SCIENCE CENTRE
(A Unit of National council of science museums)
Pragati Maidan, Bhairon road, Near gate no – 4,
New Delhi – 110 001

TENDER No.: NSCD /18011/ E-Tender No- 21/2025-26

BID SECURING DECLARATION FORM

Date-----

Tender No.-----

I/We The undersigned, declare that:

I/We undersigned that, according to your conditions, bids must be supported by a Bid Securing Declaration.

I/We accept that I/We may be disqualified from bidding for any contract with you for a period of one year from date of notification if I am/We are in a breach of any obligation under the bid conditions, because I/We

- a) have withdrawn/modified/amended, impairs or derogates from the tender, my/our Bid during the period of bid validity specified in the form of Bid; or
- b) having been notified of the acceptance of our Bid by the purchaser during the period of bid validity (i)fail or refuse to execute the contract, if required, or (ii) fail or refuse to furnish the performance Security, in accordance with the instructions to bidders.

I/We undersigned this Bid Securing Declaration shall cease to be valid if I am/ we are not the successful Bidder, upon the earlier of (i) the receipt of your notification of the name of the successful Bidder; or (ii) thirty days after the expiration of the validity of my/our Bid.

Signed: (insert signature of person whose name and capacity are shown)

In the capacity of (insert legal capacity of person signing the Bid Securing Declaration) Name:
(insert complete name of person signing he Bid Securing Declaration)

Duly authorized to sign the bid for an on behalf of (insert complete name of Bidder) Dated on-
-----day of (insert date of signing)

Corporate Seal (where appropriate)

(Note: In case of a Joint Venture, the Bid Securing Declaration must be in the name of all partners to the Joint Venture that submits the bid)

DECLARATION ON REGISTRATION AS MSME

(Following declaration to be provided by the Bidder on the Company letter head)

This is to certify that our Company (Name of the Company) located at (Address of the Company) has registered as MSME. The details of registration are provided below:

Sl.No.	Particulars	Details
1	Vendor Code(allotted by BEL)	
2	Name of the Vendor/Company	
3	Date of incorporation	
4	Udyog Aadhaar Number	
5	GST Number	
6	PAN Number	
7	Type of Enterprise	Micro/ Small /Medium
8	Major Activity	
9	Type of Organization	Proprietary / Hindu Undivided Family / Partnership / Co-operative / Private Limited Company / Public Limited Company / Self Help Group / Limited Liability Partnership / Society/Trust/Non-MSME(not a MSME)
10	Have your investment in plant and machinery crossed the prescribed limits of MSME Act	Yes/No Value(for MSME only) :
11	Copy of Udyog Aadhaar	Yes/No (for MSME only) :
12	Annual ceiling amount up to which they Can take contract under MSME	
13	Value of orders already at hand as on Date of application	

I / we undertake to keep the National Science Centre, Delhi / Palampur Science Centre, Palampur informed if at any point in future, we cease to become MSME vendor or change in category as per the extant rules and such disclosures is entirely our responsibility. Until then, the company does not hold NSCD / PSCP as responsible for any issues related to MSME

Date:

Signature of Authorized Person
With Company Seal

NATIONAL SCIENCE CENTRE
(A Unit of National council of science museums)
Pragati Maidan, Bhairon road, Near gate no – 4,
New Delhi – 110 001

TENDER No - 21 /2025-26

TECHNICAL (Techno - Commercial) BID

Notes: ALL PARTICULARS/INFORMATION SHOULD BE GIVEN IN THE FOLLOWING FORMAT WITH COMPLETE DETAILS.

1.	Name of the Bidder	:	
2.	Mailing address of the Bidder with PIN/ZIP Code	:	
3.	Contact details	:	
	Telephone numbers(s)	:	
	Mobile	:	
	Fax number (s)	:	
	E-mail address	:	
	Website	:	
4.	(i) Back ground details of the Bidder (Profile of the agency / Consortium establishing their Status)		
5.	Name and Address of the Vendor to whom the order will be placed		
6.	Past experience in relevant field during past 3-5 years giving details of established clients, especially Government agencies. Submit satisfactory work completion certificate issued by Government agencies if any.	:	
7.	Submit the documentary evidence of Execution/completion of latest work of similar nature and magnitude.	:	

8.	Proof of financial status of the Firm. Audited Balance Sheet for last 3 years indicating total turnover as well / Income tax returns of previous five assessment years.(submit documentary evidence)	:	
9.	Manpower setup of the firm and Qualification of professionals.	:	
10.	Any recognition / appreciation / award for projects done by agency/firm	:	
11	In order to qualify the technical stage of the bid, selected tenderer will be called for presentation at NSC Delhi with sample work as per “Annexure D-3”.(sample work to be submitted at the time of presentation)	:	

I/We hereby declare that the above statements are true. I/We also declare that the decision of NSCD / PSCP regarding selection of eligible firms for submitting/opening of Tender Document (Financial Bid) shall be final and binding on me/us

Dated:

Official Seal and Signature of the Agency / Tenderer

(Format for Certificate to be typed on the non - judicial paper with attestation by the notary and to be submitted in Part –I (TECHNICAL ENVELOPE) of the e-tender document)

Certified that the Tenderer/Bidder or any of its Owner/partners/Director has/have not been blacklisted/ debarred by any of the Govt. agencies or department or has/have not been found guilty of commission of acts of moral turpitude or convicted for any economic offence or violation of any labour laws etc. by any Court or any PF/ESI authorities.

It is further certified that the Tenderer/Bidder has not been terminated by any of the Govt. department/autonomous institutions/public sector undertaking of the Govt. of India/other State Govt. or Public Sector Bank or local bodies/Municipalities during past three years on violation of laws or deficiency of service or breach of contract.

(Signature of the tenderer with seal /rubbers tamp)

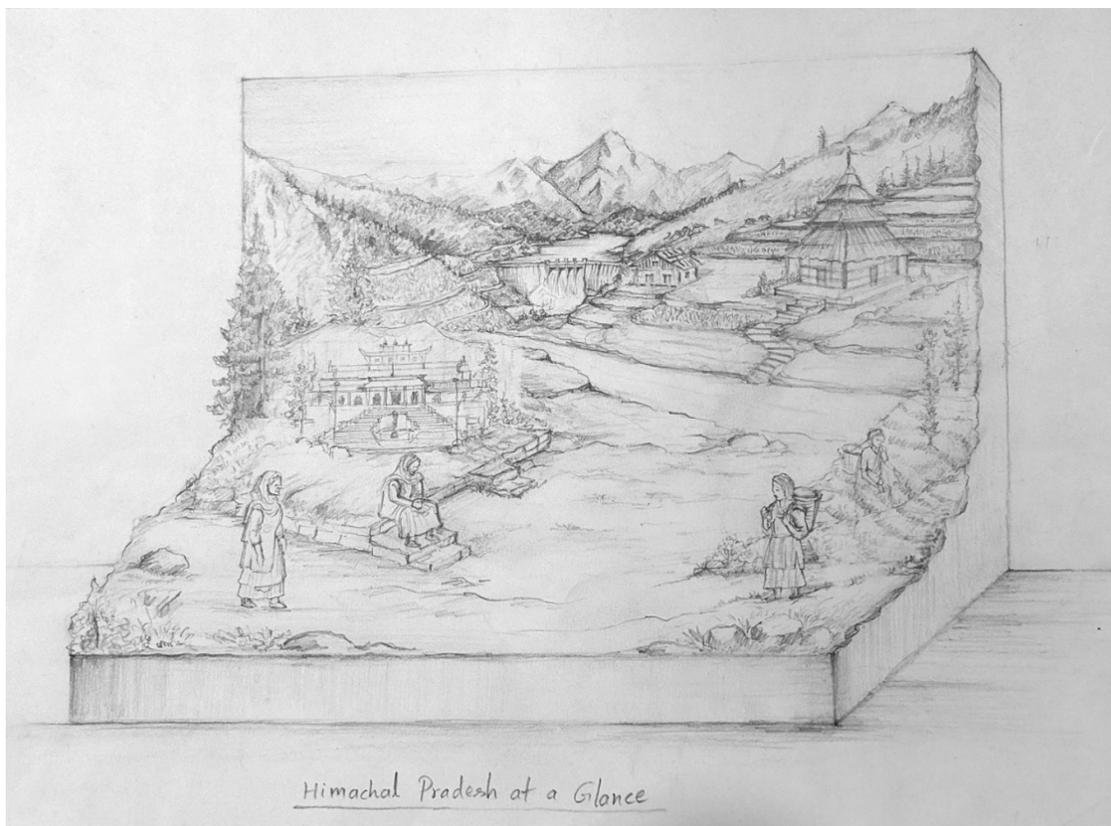
Date:

Place:

Sample work to be submitted during technical presentation at
National Science Centre, Delhi/ Palampur Science Centre,
Palampur

In order to qualify the technical stage of the bid, each applicant will be called for presentation before a technical committee at NSC Delhi. Date and timing for the presentation will be informed later. Tenderer shall present following sample art works during technical presentation to qualify their competence:

Theme: 3D Diorama “Himachal Pradesh at a Glance”



Material: Epoxy resin, fiberglass, wood, artistic colors, Mix Media highlighting to dramatize the total view of diorama with authenticity in terms of facts, feel and period and should also go with the landscape & environment of Himachal Pradesh.
Scale model: length 30 inch, height 12 inch and width 12 inch

Annexure-E

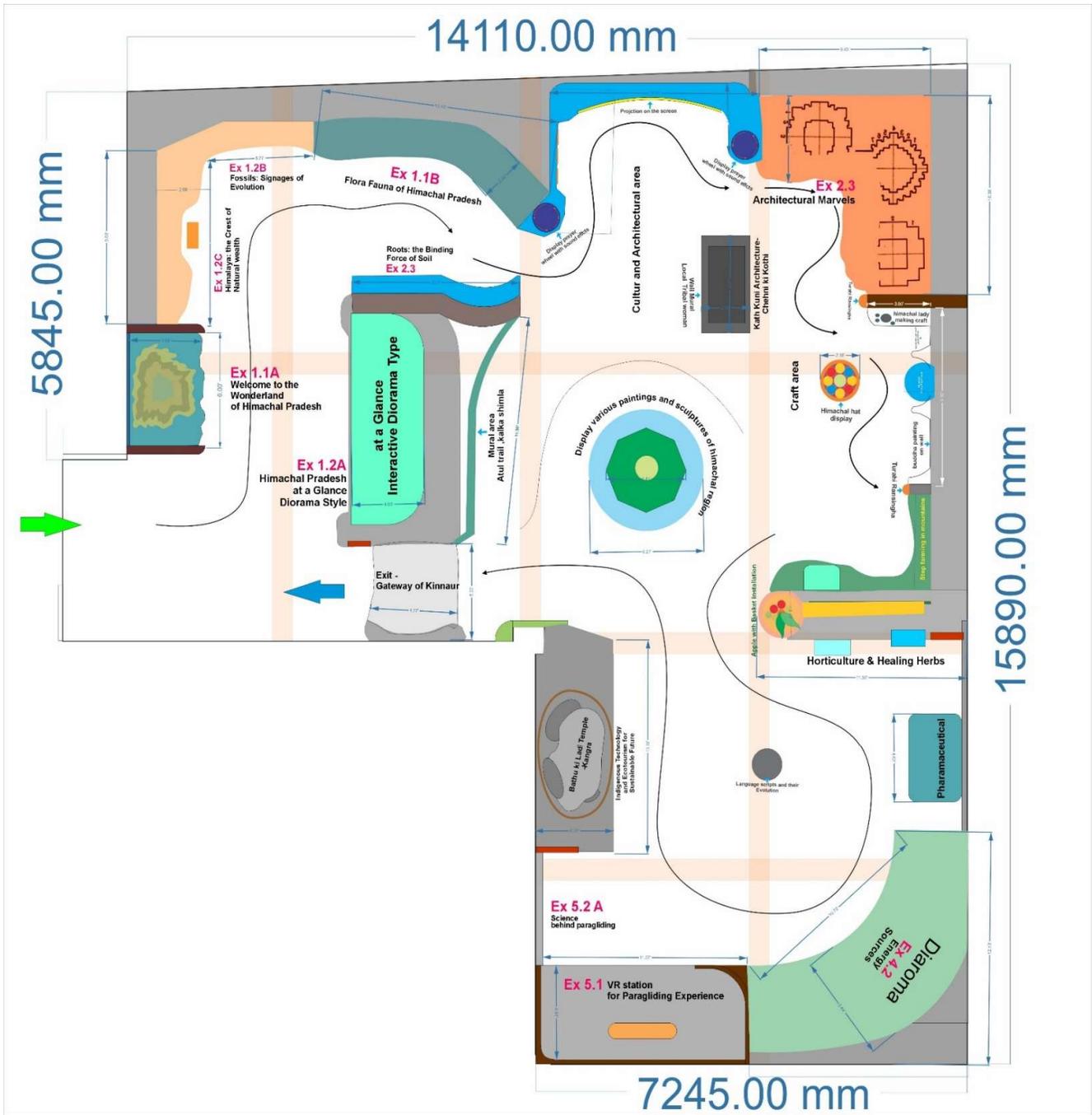
SCOPE OF WORK & TECHNICAL SPECIFICATIONS FOR Fabrication, Supply and Installation of Fiberglass (FRP, CLEAR EPOXY RESIN, MIX MEDIA, PAINTS ETC.) Mannequins, 3D diorama of Himachal Pradesh at a Glance, Raised 3D relief model of Himachal Pradesh, FRP terrain & Geological features of Himachal Pradesh, Minerals, Rock samples and their display cabinet, Kinnaur Rock cut gate with terrain, Models of root system and plants with their specific adaptations, Diorama of Flora-Fauna adapted to different altitudes, diorama of scale down replicas of temples of different architecture styles with high relief of landscape & other temples in the backdrop (i.e. Shikhar style, pagoda style, pyramid style, kadhkuni style), Sculptures, Diorama, Model of Bathu Ki Ladi & Aquatic life and Underwater Ecosystem around it & Migratory birds, using clear epoxy resin, mix media & FRP, Replica of Fossils, Art & Craft items, Paintings specific to Himachal Pradesh for ‘Wealth of Himachal Pradesh’ Gallery at Palampur Science Centre, Palampur.

1. Fiberglass casting should have minimum 6 mm thickness.
2. Use Gel coat with colour pigment mixed resin for the top layer (of finished model).
3. Fabrication work is required to be done using realistic technique of painting and modelling with all authentic, factual, intricate and anatomy details and to be executed at **Palampur Science Centre, Himachal Pradesh**
4. All required Materials like FRP, Epoxy Resin, Mix Media, clay, POP, FG chemicals & materials, paints, brushes, varnishes, reinforcement materials required for the fabrication and paintings, etc. shall be procured by the successful tenderer. Agency shall also supply necessary stands/ structure that are necessary to fabricate these models.
5. All mannequins and model armature shall be made of 6 to 10 mm dia (wherever necessary) iron rod and pedestal of iron plate of appropriate size of 10 mm thick having at least 4 holes for fixing or grouting.
6. After every stage i.e. fabrication of armature, clay modelling etc. clearance is required from authorized officer of this Centre.
7. Different colour fiber glass pigments are to be used for making dioramas, replicas, mannequins, models and enamel/ oil colour for final finishing.
8. Detailed dimensions of the dioramas, replicas, mannequins and models are shown in the drawing and Photograph as annexed below. Scaled down replica of different flora-fauna, art & craft items and other items should be proportionately scaled down as per the diorama dimension wherever applicable.
9. After finishing, the dioramas, replicas, mannequins and models should have authentic, accurate & natural look with look, feel and perspective.
10. All dioramas, replicas, mannequins and model are to be installed & commissioned at PSC, Palampur in the site specified for wealth of Himachal Gallery.
11. The agency has to provide all the moulds (properly numbered & packed in bubble/PU sheet) of replicas, mannequins and models after completion of fabrication work
12. Modifications, as and when required during the execution, whenever suggested by the competent authority, have to be carried out. Successful tenderer shall take the responsibility of such modifications without any additional expenditure.
13. Successful tenderer shall make their own arrangement for the boarding and lodging of their team of artisans at the work place, PSC, Palampur, during the period of contract. Entire process of fabrication work will be carried out at PSC, Palampur during the office hours or at their own site.
14. The Centre shall not be liable for injury of any employee who is deployed by the successful tenderer within/outside the premises/site at the time of execution of the work.

15. Additional small flora fauna species, fossils, aquatic species and art and craft items may also need to be included as per the requirement of the diorama within the quoted amount.
16. Silicon used for making models should have specific gravity-1.05 to 1.15, Viscosity-5000 to 50000 Centipoise, Vapour Density >1, Flash Point>300 F
17. All the models should be painted with NC paint with due follow of prior process such as NC primer, NC putty etc.
18. All the perspective paintings in diorama should be done with artistic acrylic colour with base colour on fabriano canvas with colour scheme approved by competent authority. Wooden frame of medium quality teak wood of 2" X 1.5" C/s in 2 feet X 2 feet grid is to be used for fixing canvas which in turn will be fixed on the wall.
19. It may please be noted that the images provided with individual models and diorama are artistic impression only; these are not to the scale; However, the successful bidder should ensure that the Dioramas and models fit into the provided dimensions giving a coherent view-of the intended scene and objects.
20. Colour on Silicon skin/rubber should be done by adding pigments, dyes, colour pastes to the silicon rubber compound during the manufacturing process.
21. BOQ for fiberglass and painting work

Item No.	Exhibit Name	Scope and Nature of work	Quantity
1.	3D Diorama of Himachal Pradesh at a Glance	Large 3D Diorama of Himachal Pradesh with comprehensive & condensed overview of Himachal Pradesh's geographical, natural, cultural, agricultural, tourism and economic wealth. It should include topographical terrain and landmark representation of Himachal Pradesh's mountain ranges, illuminated snow capped mountains, rivers, water bodies, hydro projects and mountain ranges, architectural heritage, culture, tribes and agricultural practices. Canopy Cover of Diorama should also represent hilly terrain specific to Himachal Pradesh. The diorama dimensions are 14 feet (length) x 6 feet (depth) x 12 feet (height) diorama view should start at approx. 30-inch height from floor surface. Details provided in Annexure –E-1	1 Set
2.	Raised 3D Relief Map Model of Himachal Pradesh	FRP 3D raised relief model showing altitudinal zones, rivers, district boundaries, Biodiversity Hot spots, peaks and passes with Ancient Scripts/Shloka inscribed on Stone tablet/Leaves/ Wood as per the direction of competent authority. Details in Annexure-E-2	1 No
3.	Dioramas of Flora and Fauna at Various Altitudes(Lower,Mid,High)	Three FRP-based dioramas to show distinct flora and fauna of Himachal Pradesh at Low, Mid, and High altitudes. The diorama should include typical species like Deodar, Snow Leopard, Monal, Himalayan Thar, Himalayan Bear, Musk deer, Langur, Pine, Oak, rhododendrons, apple, tea, and other representative flora fauna of Himachal Pradesh found at different altitudes. Details in Annexure-E-3	1 Set
4.	Relief Model of Himachal Pradesh Mountain Cross Sectional Showcasing Geology, Different Rock Samples & Minerals	Vertical cross-section model of the Himalayas showing peaks, valleys, rock layers, soil profile, and rounded boulders to show the origin of Himalaya, geological history and natural wealth of Himachal Pradesh. Painted geological features and texture. Different types of Rocks and minerals found in Himachal Pradesh are to be showcased with provision of suitable pick & Match interactivity & Rock cycle representation. Details in Annexure-E-4	1 No
5.	Fossils: Signages of Evolution	Diorama of paleontological timeline and replicas of different fossils, FRP scaled down models of life-size models of Megalochelys, Hexaprotodon, etc. Display of original/fiberglass replica fossils. Details in Annexure E-5	1 Set

6.	Roots: The Binding Force of Soil	Scientifically correct Comparative FRP realistic models of select plants/trees with their typical root systems and evolutionary traits of root structures (Fibrous/Adventitious/deep Taproots/Penetrating roots/Shallow Mat like roots), Leaves and stems of plants in response to diverse climatic and soil conditions. Details in Annexure-E-6	1 Set
7.	Architectural Marvels of Himachal Pradesh	Detailed FRP scale models of Masrur Rock Cut Temple, Hidimba Temple (Manali), Hateshwari Mata Temple: Hat Koti (Shimla), Chehni Kothi to depict architectural heritage of Himachal Pradesh. Fine details of Kath-Kuni Cheni ki Kothi (3feet depth X Breadth 5.5 feet X height 12.5 feet) with fine details of wood-stone interlocking technique, Nagara Style, Pyramid Style and Pagoda styles are to be provided. Dimension each of three temples should be breadth 3.5 feet X depth 3.5 feet, proportionate height as per real height scale down to equal base; temple surface should start at 36 inch from floor surface, total depth of landscaping & temple should be 5Feet., 3Layered High relief of other temples in particular area at the backdrop of all the three temple dioramas with high relief minimum 5-inch depth each total relief depth 15 inch, height upto 12 feet. Life size Mural of traditional tribal women (kinnauri & Chamba) with traditional dresses and ornaments in welcoming pose as per drawing and perspective landscape painting is to be provided in the backdrop of Cheni ki kothi Outer walls. Details in Annexure-E-7	1 Set
8.	Relief Model of Himachal Pradesh Mountains with representative architectural sites	Two Nos. of model of movable Boddhist Prayer wheel (18 inch dia height 8 feet cylinder, total Height with base and anchor 12 feet as per drawing) should be placed at corners specified in the gallery layout in between that area Low Relief Model (1.5 inch) of kath kuni wall texture effect of Himachal Pradesh cultural landscape and traditional dresses and ornaments of various regions with representative area specific dresses up to height 11 feet with low relief representation of cultural symbols and signs, dress, ornaments (Area Approx 230 sq ft, length 26 feet). Movement of prayer wheel should have movement and sound typical to Boddhist prayer wheels. Details provided in Annexure-E-8	1 No
9.	Sustainable Life Practices of Himachal Pradesh	FRP Model with Epoxy resin displaying traditional apiculture practices with Honey Comb Structure and collection pot as per drawing. Details provided in Annexure-E-9	1 Set
10.	Apple Tree Model	Model displaying traditional agriculture practices practices with fruit basket as per drawing. Details provided in Annexure-E-10	1 No
11.	Model for Migratory Birds & Ecosystem of Pong Dam Wetland with Submerged Bathu Ki Ladi temple complex	Diorama showing submerged temple complex (Bathu Ki Ladi), aquatic flora fauna, native and migratory birds of Pong Dam (e.g., bar-headed goose, cormorant). Includes a water body made using clear epoxy resin layered with aquatic plant textures, embedded pebbles, and underwater terrain. Migratory birds sculpted in lifelike posture using painted FRP. Trees, fishes, plants, reeds, and temple base constructed using resin-coated mixed media. Details provided in Annexure-E-11	1 Set
12.	FRP Model of Kinnaur Gate	Replica of iconic Kinnaur gate archway and taranda dhank with sculpted motifs, Himalayan backdrop, tough terrain. Details provided in Annexure-E-12	1 No
13.	Half Busts of Famous Personalities	FRP, Silicon based Artifact & Mannequins of Chamba Local women making Chamba Rumal with background setting and sample Chamba rumal hanged in natural cultural setting of Chamba. Details provided in Annexure-E-13	1 No



Floor Plan of "Wealth of Himachal Pradesh" Gallery

Diorama 1 : Himachal Pradesh at a Glance

A 3D Diorama is to be a condensed and engaging visualization tool to communicate the essence of Himachal Pradesh at a glance. It should be developed with a view to integrate science, geography, culture, agriculture, tourism and heritage into an experiential display. The diorama dimensions are 14 feet (length) x 6 feet (depth) x 12 feet (height) diorama view should start at approx. 30 inch height from floor surface. It will feature topographical terrain and landmark representations, including illuminated snow-capped mountains, rivers and water bodies, hydro projects, mountain ranges, architectural heritage, cultural vignettes (e.g., festivals, tribal dances, traditional attire), tribes (e.g., Gaddis, Kinnauris), and agricultural practices (e.g., apple orchards, terraced farming, apiculture). The diorama should have authentic & realistic depiction of all aspects of natural resources & wealth of Himachal Pradesh and LED lighting for illumination white/blue hues, dimmable, illumination for snow-capped peaks (e.g., using fiber-optic lights).

Materials

Fiberglass (FRP) casting with a thickness of 6 mm, sheet metal and mixed media *GP resin for indoor * mat quality 450 grade, Clear Epoxy Resin for water bodies and similar effects.

- FRP (Fiberglass Reinforced Plastic): Main terrain, monuments, figures.
- High Density Thermocol & Wooden Frames: Inner contour shaping and reinforcement.
- NC Paint Matt Finish: Surface finish with anti-glare, durable weatherproof coating.
- Mixed Media: Artificial grass, resin water, LED lighting for realistic detailing.

Support Structure

FRP model should be provided with proper wooden and MS metal or iron reinforcement inside & base wherever required.

- MS square pipe (2" × 2") structural frame, anti-rust coated, with galvanized steel reinforcements
(6mm rods, spaced 12 inches), Steel Mesh, MS Flat etc.
- Reinforcement Details: Embed steel mesh in FRP molds for strength; epoxy joints for stability.
- Inside skeleton structure for reinforcement of fiberglass relief model is to be made of appropriate iron sections, wood etc. to support the fiber jacket and rigidly fixed with screws.
- Wooden platform base with marine ply (19 mm) for durability.
- Reinforced ribs to prevent sagging of terrain.

Finishing & Detailing

- Hand-sculpted models for architectural heritage & tribes.
- Epoxy resin for rivers and hydro projects.
- PU transparent coat for anti-dust protection.
- Artistic representation for look and feel of the diorama is shown in fig 1.1 for reference.
- Support and armature of FRP model should be provided with proper wooden and MS metal or iron reinforcement inside & base wherever required.
- Perspective painting (using diorama perspective painting technique) of suitable size on background is to be done using Fabriano canvas and good quality artistic acrylic colors. Canvas is to be pasted on Back ground wooden panel made of 2" X 1.5" C/s medium teak wood with 2' X 2' grid size and 6mm BWP ply of Century or Green make with an effective good quality adhesive so that it should not come out from the wooden panel.
- Diorama should be authentic, accurate and and realistic in look and feel.
- Fig 1.1 given below maybe used for reference for making this diorama; however successful bidder should do their own research for authentic and detailed presentation and any other image may also be used with prior approval from authority of NSCD/PSCP

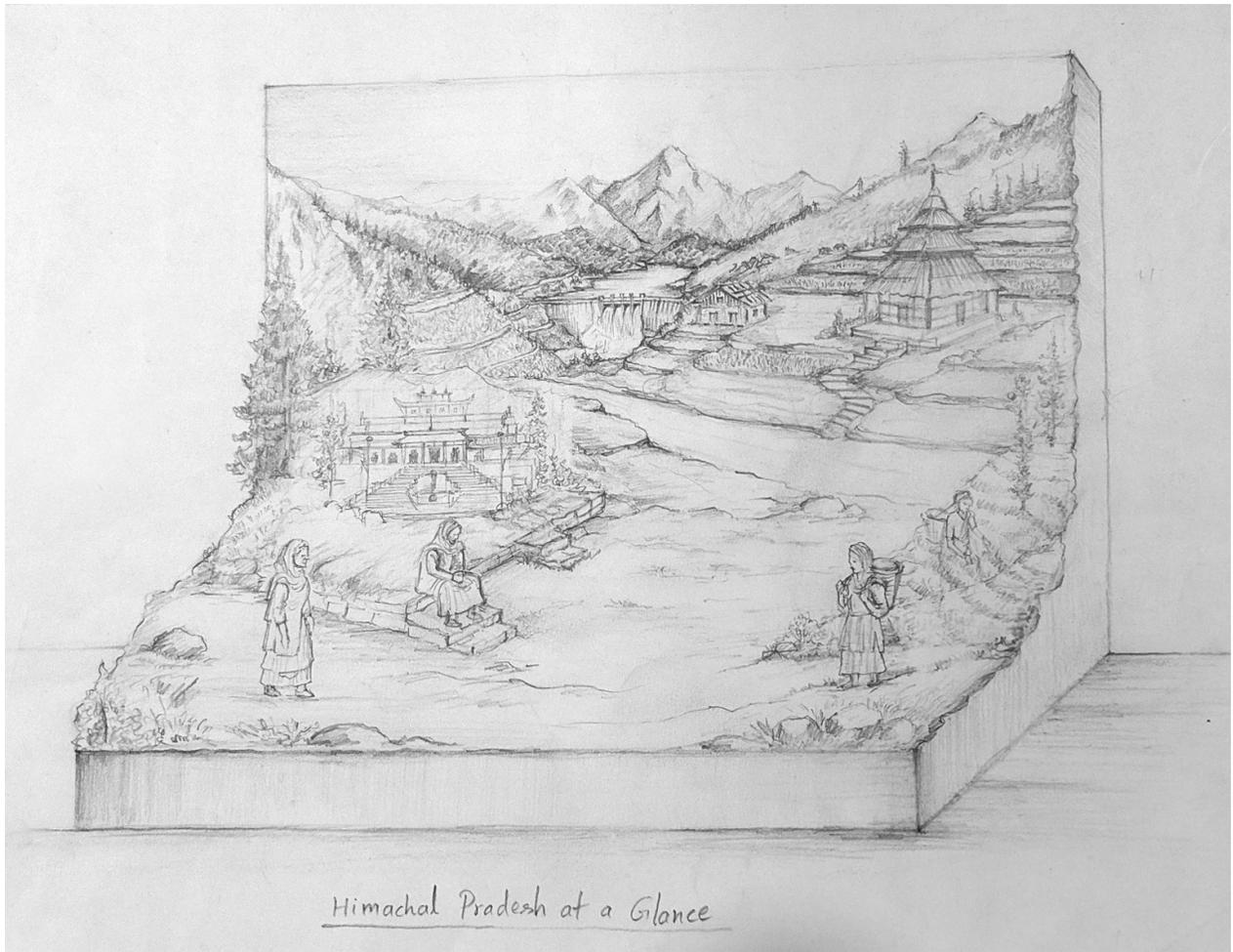


Fig. 1.1 The diorama dimensions are 14 feet (length) x 6 feet (depth) x 12 feet (height) Diorama starts at 30 inch approx. from floor surface.

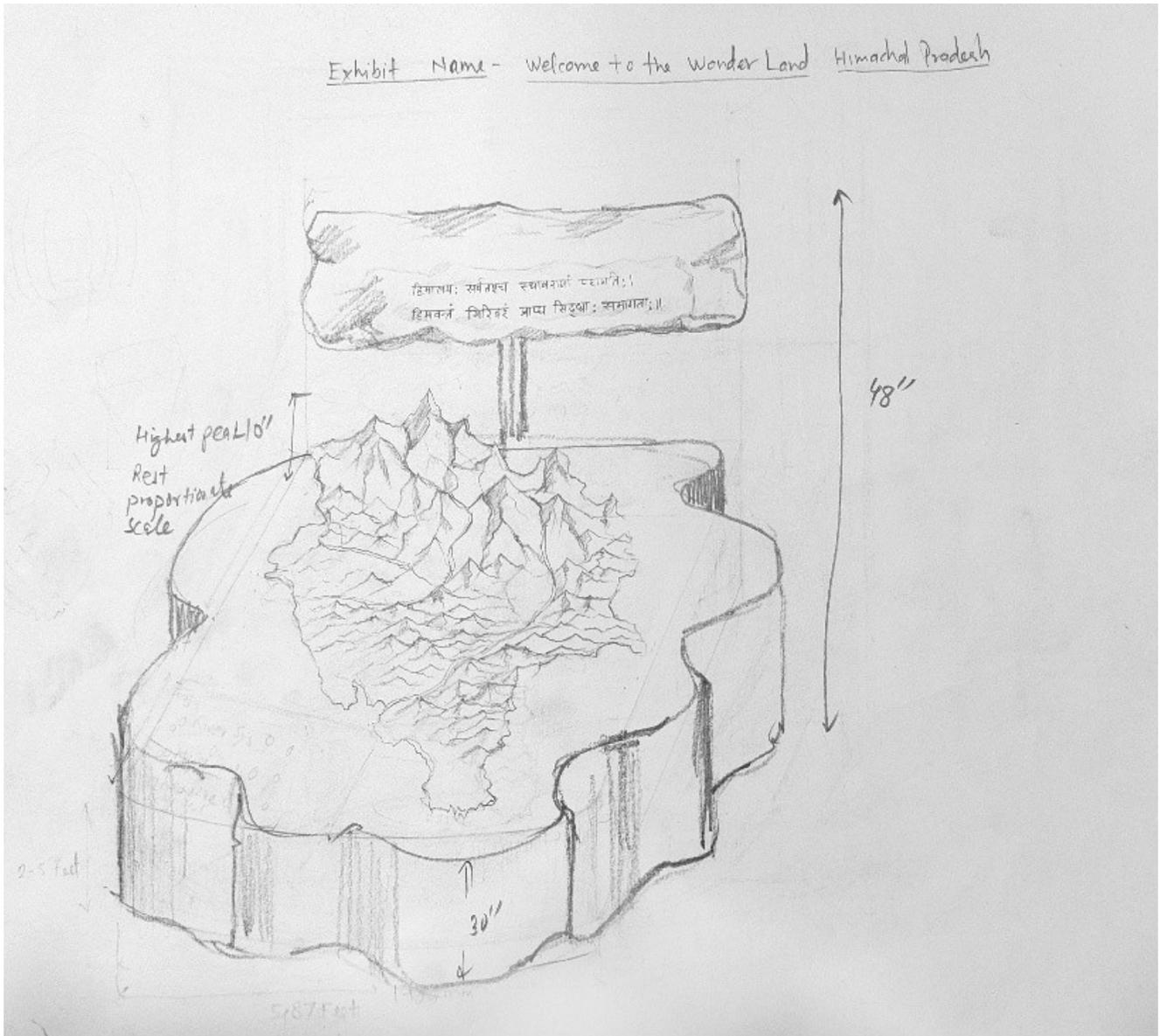
Model 2: 3D Raised Relief Map Model of Himachal Pradesh

Dimension : 6 ft breadth X 4 ft depth X 10 inch relief height; Placement of Title Board should be at approximate Height of 48 inch from floor surface.

FRP Topographical 3D Raised Relief Map Model of Himachal Pradesh will depict different altitudinal zones, rivers, district boundaries, peaks and passes. It will depict altitudinal zones (e.g., sub-tropical <1000m, temperate 1000-3000m, alpine >3000m), major rivers (e.g., Beas, Sutlej, Ravi, Chenab, Yamuna), district boundaries (12 districts: Bilaspur, Chamba, Hamirpur, Kangra, Kinnaur, Kullu, Lahaul & Spiti, Mandi, Shimla, Sirmaur, Solan, Una), prominent peaks and passes (e.g., Rohtang, Kunzum, Shipki La) and biodiversity hotspots. Ancient scripts/shlokas (e.g., Sanskrit verses from Vedas or local Takri script praising Himalayan nature) will be inscribed on simulated stone tablets, palm leaves, or wooden plaques, as directed by the competent authority. The 3D raised relief model should be fabricated in such a way that interactive projection mapping for highlighting features (e.g., river flows, zone changes) and seasonal variation can be smoothly done with any singularity problem in projection mapping. This model should have following main features:

- FRP: Primary material for relief terrain (6mm thick sheets/resin, polyester-based with UV stabilizers). FRP relief Model should have with minimum 6mm thickness at each point and mixed media GP resin mat quality 450 grad., Clear Epoxy Resin for water effect.
- Accurate data using GIS maps (e.g., from Survey of India or NRSC) for topography (vertically exaggerated for relief) should be presented in the model. Different altitudinal zones with color gradients (green for low, brown for mid, white for high) should be marked, rivers should be plotted as recessed channels, district boundaries as etched lines, peaks/passes, biodiversity hotspots as raised points with labels.
- Ancient scripture/shloka should be inscribed on simulated artifacts (stone tablets/ leaves/ wood) with prior approved by competent authority.
- Paint: All painting on Fabriano canvas (high-quality artist canvas, 300gsm, stretched over FRP surfaces for zones, rivers, etc.). Use NC (Nitrocellulose) Paint in Matt Finish only (2-3 coats, primer included; colors: Earth tones for terrain, blues for rivers, borders in gold/red). Brands: Asian Paints or equivalent, low-VOC, non-toxic.
- Mixed Media for Landscaping: High density Thermocol for base contours (carved for valleys); FRP for durable peaks/passes; acrylic resin for rivers (translucent blue with embedded LEDs); Fabriano canvas overlays for painted details.
- Wooden Frame: Seasoned teak/pine (2x2 inch sections) for table-top base, treated for moisture/termites for FRP landscaping in the base.
- Support Structure: Wooden frame base (6ftx8 ft platform, 3 ft depth) with galvanized steel reinforcements (6mm rods, spaced 12 inches), MS Flats.
- Reinforcement Details: Embed steel mesh in FRP molds for strength; epoxy joints for stability.
- Inside skeleton structure for reinforcement of fiberglass relief model is to be made of appropriate iron sections, wood etc. to support the fiber jacket and rigidly fixed with screws.
- Support and armature will be of FRP with proper wooden and MS metal or iron reinforcement inside & base, wherever it is required.
- Model should be authentic, accurate and real in form and finish.

- Fig given below maybe used for reference for making this relief model; however successful bidder should do their own research for authentic and detailed presentation and any other image may also be used with prior approval from authority of NSCD/PSCP.





Diorama 3 : Dioramas of Flora and Fauna at Various Altitudes

FRP (Fiberglass Reinforced Plastic) dioramas, measuring 13 feet breadth X 4 Feet Depth Height 11 feet height; Surface of Diorama should starts at 30 inch height from floor surface.

The diorama should depict the flora and fauna of Himachal Pradesh at low altitudes (sub-tropical, <1500m, e.g., Shivalik foothills), mid altitudes (temperate, 1500-3000m, e.g., Shimla/Kullu regions), and high altitudes (alpine/sub-alpine, >3000m, e.g., Lahaul-Spiti/Kinnaur). All the three sections in the diorama should include typical species like Deodar, Snow Leopard, Monal, Himalayan Thar, Himalayan Bear, Musk deer, Langur, Pine, Oak, rhododendrons, apple, tea, and other representative flora fauna of Himachal Pradesh found at different altitudes. The species are to be placed based on ecological data for accuracy.

Low Altitude Diorama: Flora - Pine (Chir Pine), Oak (Ban Oak), tea plantations, apple (lower varieties), Sal trees, Bamboo, sweet flag, Achyranthus Aspera, Yew (Taxus Walliichiana). Fauna - Langur (Gray Langur), Monkey, Himalayan Bulbul, Oriental White eye, Red Billed Cough, Barking Deer, Monitor lizard, Kalij Pheasant, Sambhar Deer, Himalayan Pit Viper, Blue Whistling Thrush, Indian Bull frog, Cheer Pheasant, Himalayan Quail, Indian Boar, Bar-headed goose, Rat Snake, Yellow throated Marten, Indian Palm Civet, Eagle, Sun birds, Himalayan Goral, Himalayan Black Bear, common birds (e.g., Indian paradise flycatcher), butterflies. Reference Fig 1.3 A

Mid Altitude Diorama: Mid Altitude Diorama: Flora – Cedrus Deodara (Cedar), Pine (Blue Pine), Great reed, Festuca Trachyphylla, crab grass, Allium Wallichii, Daruharidra Berberis, Viburnum Grandiflorum, Himalayan Oak, bermuda lawn, rhododendrons, apple orchards. Fauna - Musk Deer, Red vented bulbul, black red start, Himalayan Thar, Monal (Himalayan Monal pheasant), Himalayan Griffon, Himalayan langoor, Golden Eagle, Bearded Vulture, Speckled Wood Pigeon, Indian Giant Flying Squirrel, Western Tragopan, Koklass Pheasant, Himalayan Weasel, Black Bear, Langur. Reference Fig 1.3 B

High Altitude Diorama: Flora – Dwarf rhododendrons (alpine species), pinus gerardiana, Himalayan Juniper, sparse grasses, Hippophae Rhamnoides, Rhodiola Imbricata, Carum Bulbocastanum, saxifraga mucronulata, primroses, himalayan rhubarb, purple grass, creeping himalayan willows, Brahma Kamal, Himalayan Blue Poppy, Himalayan Cinquefoil, grasses and sedges, poa koelzii, Abies Spectabilis, Gentianella Fauna - Snow Leopard, Himalayan Thar, Snow Patridge, Yellow billed chough, Himalayan monal, Himalayan Wolf, Pika, Musk Deer, Himalayan Brown Bear, Himalayan Ibex, Blue Sheep, birds like Himalayan snowcock. Reference Fig 1.3 C

Materials

Fiberglass (FRP) casting with a thickness of 6 mm, sheet metal and mixed media GP resin for indoor mat quality 450 grade, Clear Epoxy Resin for water bodies and similar effects.

- FRP (Fiberglass Reinforced Plastic): Main terrain, monuments, figures.
- High Density Thermocol & Wooden Frames: Inner contour shaping and reinforcement.
- NC Paint Matt Finish: Surface finish with anti-glare, durable weatherproof coating.
- Mixed Media: Artificial grass, resin water, LED lighting for realistic detailing.
- Clear Epoxy Resin for water effects.

Support Structure

FRP model should be provided with proper wooden and MS metal or iron reinforcement inside & base wherever required.

- MS square pipe (2" × 2") structural frame, anti-rust coated, with galvanized steel reinforcements (6mm rods, spaced 12 inches), Steel Mesh, MS Flat etc.
- Reinforcement Details: Embed steel mesh in FRP molds for strength; epoxy joints for stability.
- Inside skeleton structure for reinforcement of fiberglass relief model is to be made of appropriate iron sections, wood etc. to support the fiber jacket and rigidly fixed with screws.

- Wooden platform base with marine ply (19 mm) for durability.
- Reinforced ribs to prevent sagging of terrain.
- Species should be scaled realistically and proportionately to fit in the available space.
- Design interactivity: Visitors interact via touch-screen kiosks (facts on properties like habitat, diet, threats), RFID Touch Points: Embedded sensors in key species to allow visitors to access detailed information and audio buttons (narrated adaptations, e.g., "Snow Leopard: Camouflaged fur for high-altitude hunting").
- Artistic representation for look and feel of the diorama is shown in figure given below for reference.
- Support and armature of FRP model should be provided with proper wooden and MS metal or iron reinforcement inside & base wherever required.
- Perspective painting (using diorama perspective painting technique) of suitable size on background is to be done using Fabriano canvas and good quality artistic acrylic colors. Canvas is to be pasted on Back ground wooden panel made of 2" X 1.5" C/s medium teak wood with 2' X 2' grid size and 6mm BWP ply of Century or Green make with an effective good quality adhesive so that it should not come out from the wooden panel.
- Modeling of animals is to be done with minimum 6mm thick fiber glass, Skin should be made of good quality silicon to provide real skin texture. Inside skeleton structure for reinforcement is to be made of appropriate iron sections of Apollo or Jindal make, which should be able to support the load and arrangement for fixing hinge or other mechanism part for the movement of the model. These sections iron sections should also be able to support the fiber jacket and rigidly fixed with screws. Silicone which will be used to make outer skin should have physical properties as Specific Gravity – 1.05 to 1.15, Viscosity – 5000 to 50,000 Centipoise, Vapor density >1, Flash Point > 3000
- It may please be noted that the images provided with individual models and diorama are artistic impression only; these are not to the scale; However, the successful bidder should ensure that the Dioramas and models fit into the provided dimensions giving a coherent view of the intended scene and objects.
- Diorama should be authentic, accurate and realistic in look and feel.
- Fig given below maybe used for reference for making this diorama; however successful bidder should do their own research for authentic and detailed presentation and any other image may also be used with prior approval from authority of NSCD/PSCP

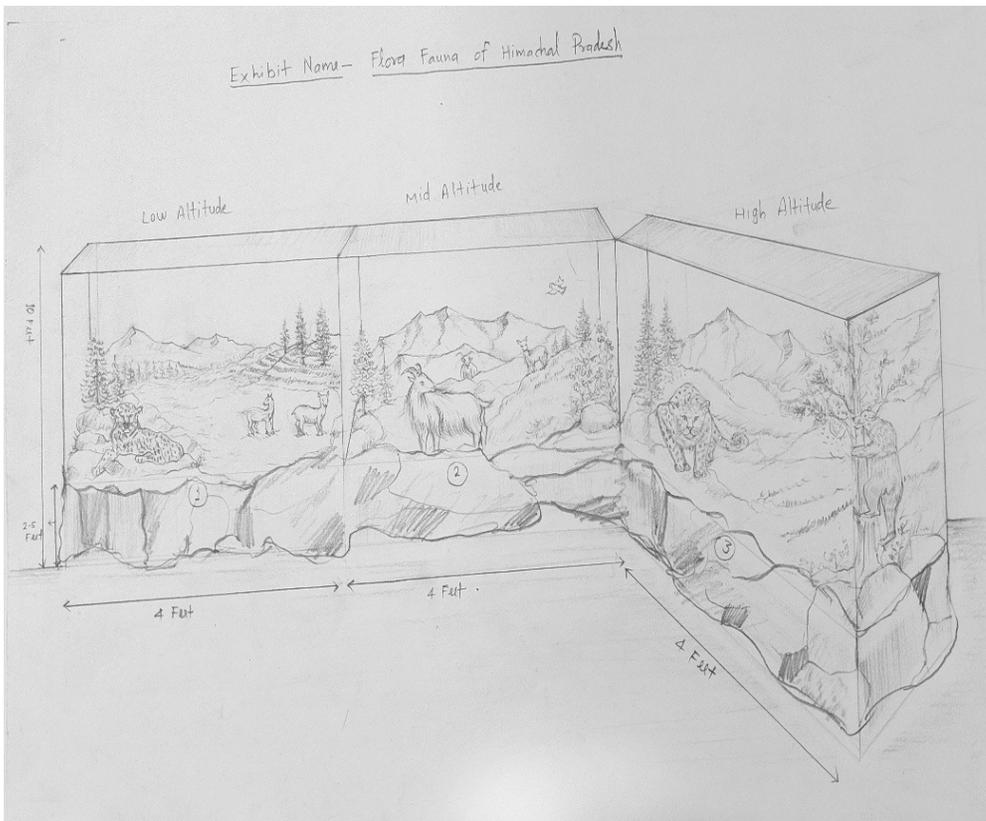
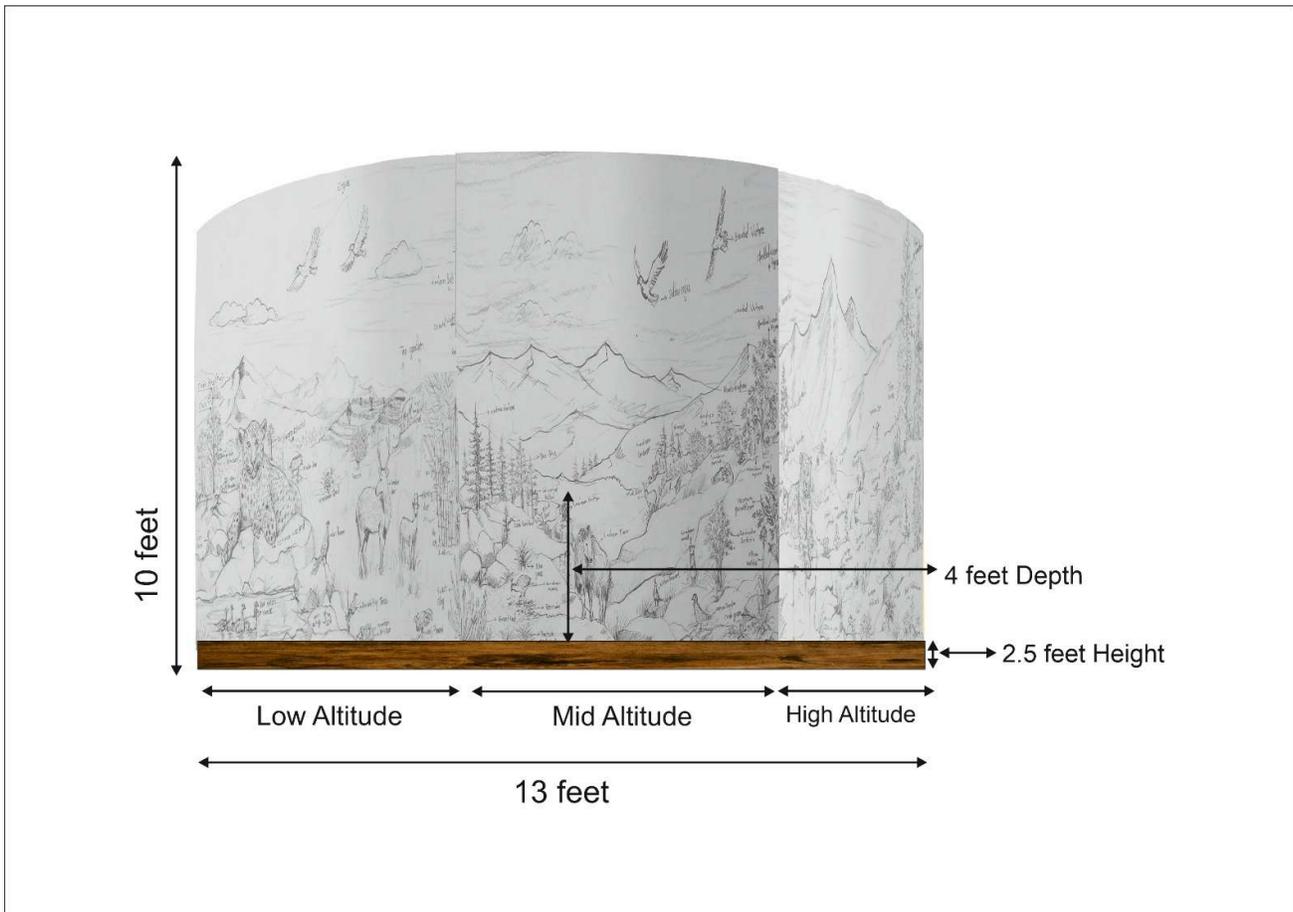


Fig 1.3



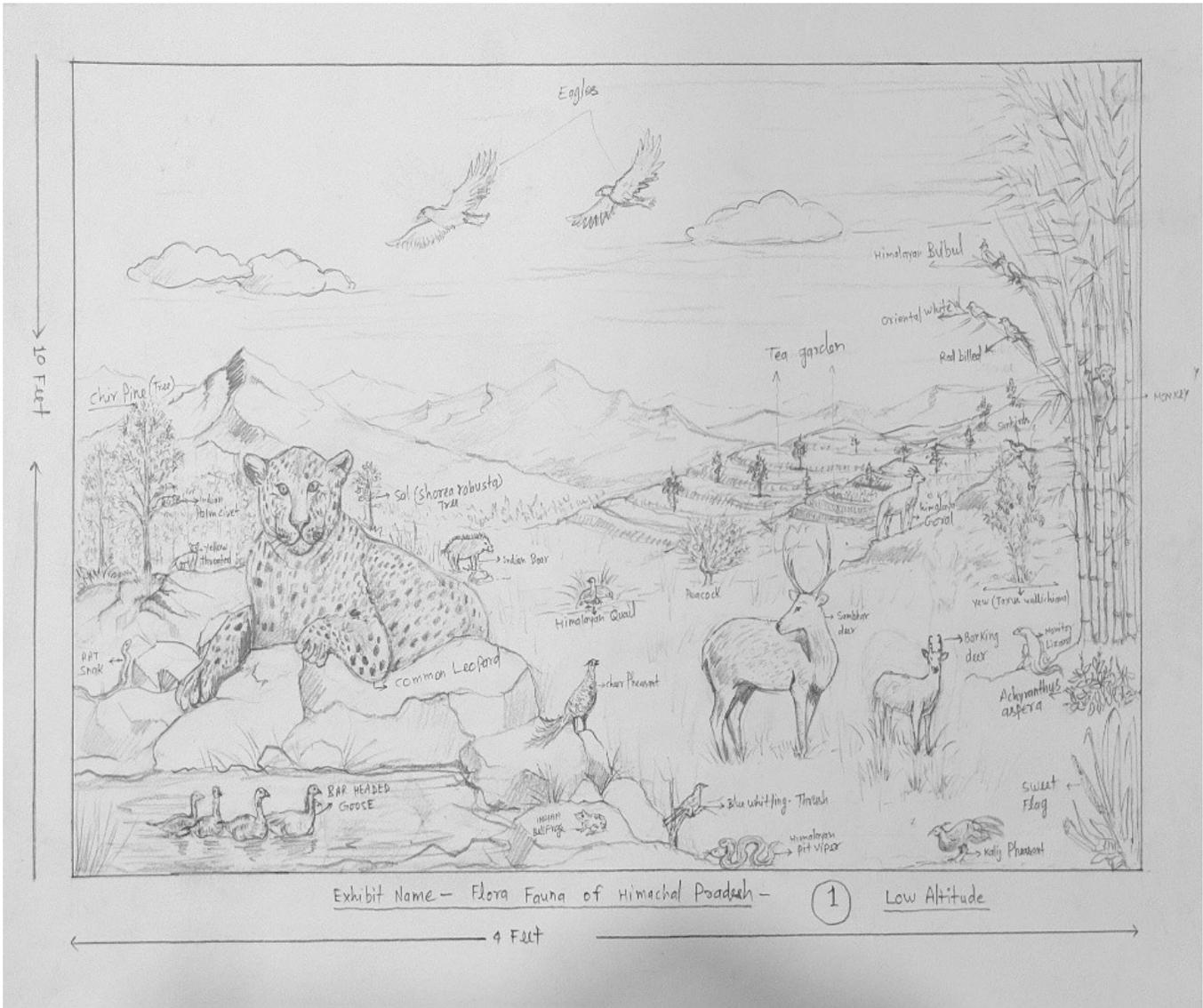


Fig 1.3 A Flora Fauna Low Altitude

➤ **High Altitude**

- Flora Shrubs & Dwarf Trees



Dwarf Rhododendron (*Rhododendron anthopogon*)



Creeping Himalayan Willows



Himalayan Junipers (*Juniperus spp.*)

- Herbaceous & Medicinal Plants



B r a h m a K a m a l
(*Saussurea obvallata*)



Himalayan Blue Poppy
(*Meconopsis aculeata*)



Primroses
(*Primula denticulata*)



Corydalis spp.
(*Corydalis cashmeriana*)



Himalayan Rhubarb
(*Rheum australe*)



Himalayan Cinquefoil
(*Potentilla atrosanguinea*)

- Grasses and Sedges



Festuca ovina



Kobresia kansuensis



Poa koelzii

- Fauna Mammals



Himalayan Marmot
(*Marmota himalayana*)



Himalayan Wolf
(*Canis lupus chanco* / Tibetan Wolf)



Himalayan Blue Sheep / Bharal
(*Pseudois nayaur*)



Himalayan Ibex (*Capra sibirica*)



Himalayan Musk Deer
(*Moschus chrysogaster*)



Pika (*Ochotona* spp.)



Snow Leopard
(*Panthera uncia*)

- Fauna Birds



Himalayan Monal
(*Lophophorus impejanus*)



Snow Partridge
(*Lerwa lerwa*)



Tibetan Snowcock
(*Tetraogallus tibetanus*)



Bearded Vulture
(*Gypaetus barbatus*)



Golden Eagle
(*Aquila chrysaetos*)



Grandala
(*Grandala coelicolor*)



Alpine Accentor
(*Prunella collaris*)



Yellow-billed Chough
(*Pyrrhocorax graculus*)

- Fauna Reptiles & Amphibians



Himalayan Pit Viper
(*Gloydius himalayanus*)



The Himalayan keelback
(*Herpetoreas platyceps*)



Theobald's toad-headed agama
(*Phrynocephalus theobaldi*)



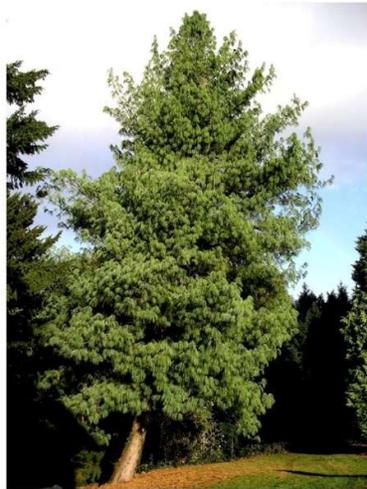
The Himalaya Paa Frog
(*Nanorana vicina*)

➤ **Mid Altitude**

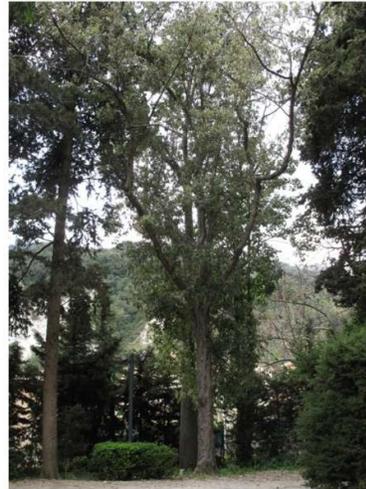
- Flora Trees



Deodar (*Cedrus deodara*)



**Himalayan Blue Pine
(*Pinus wallichiana*)**



**Ban Oak
(*Quercus leucotrichophora*)**



Himalayan Fir (*Abies pindrow*)



**Himalayan Spruce
(*Picea smithiana*)**



**Indian Bird
Cherry (*Prunus cornuta*)**



Rhododendron (*Rhododendron arboreum*)



Himalayan Maple (*Acer caesium*)



Horse Chestnut (*Aesculus indica*)



Walnut (*Juglans regia*)



West Himalayan Elm (*Ulmus wallichiana*)

- Shrubs and Understory



**Himalayan Barberry
(*Berberis lycium*)**



Wild Rose (*Rosa moschata*)



**Himalayan Stinging Nettle
(*Girardinia diversifolia*)**



**Viburnum species
(*Viburnum* spp.)**



Daphne (*Daphne papyracea*)

- Medicinal and Herbaceous Plants



**Himalayan Mayapple
(Podophyllum hexandrum)**



**Angelica
(Angelica glauca)**



**Indian Aconite
(Aconitum heterophyllum)**



**Marsh Orchid
(Dactylorhiza hatagirea)**



Picrorhiza (Picrorhiza kurroa)



Himalayan Gentian
(*Gentiana kurroo*)



Thyme
(*Thymus linearis*)



Wild Mint
(*Mentha arvensis*)

- Fauna Mammals



Himalayan Black Bear (*Ursus thibetanus*)

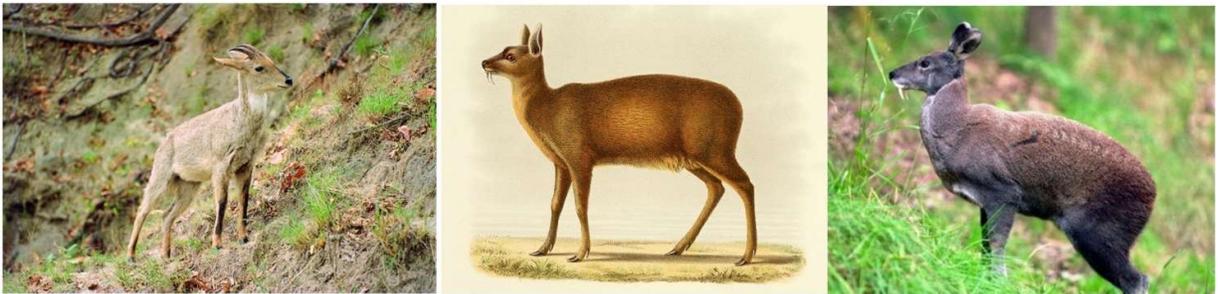


**Common Leopard
(*Panthera pardus*)**

**Himalayan Serow
(*Capricornis sumatraensis thar*)**

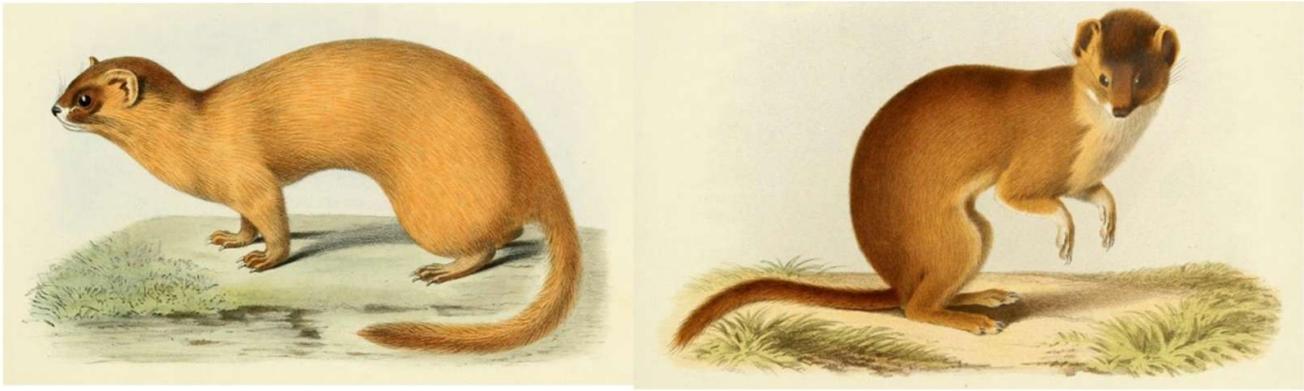


Himalayan Tahr (*Hemitragus jemlahicus*)



Goral (*Naemorhedus goral*)

Musk Deer (*Moschus chrysogaster*)



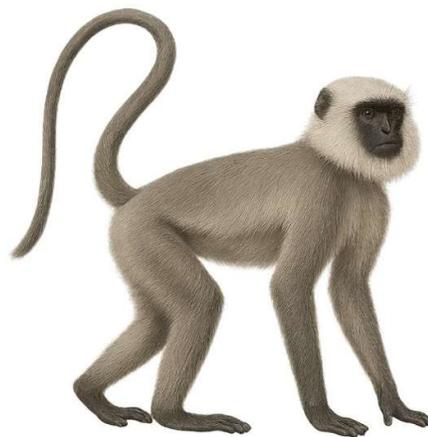
Himalayan Weasel (*Mustela sibirica*)



Himalayan Marmot (*Marmota himalayana*)



**Indian Giant Flying Squirrel
(*Petaurista philippensis*)**



**Himalayan Langur
(*Semnopithecus schistaceus*)**

- Fauna Birds



Western Tragopan (*Tragopan melanocephalus*)



Himalayan Monal (*Lophophorus impejanus*)



Koklass Pheasant (*Pucrasia macrolopha*)



Cheer Pheasant (*Catreus wallichii*)



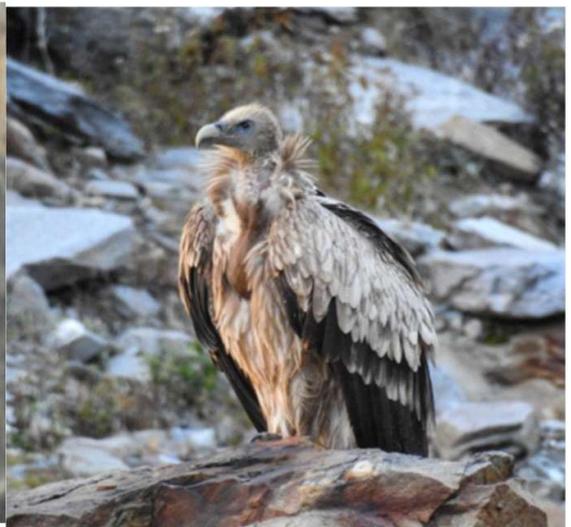
Streaked Laughingthrush (*Trochalopteron lineatum*)



Speckled Wood Pigeon (*Columba hodgsonii*)



Bearded Vulture (*Gypaetus barbatus*)



Himalayan Griffon (*Gyps himalayensis*)



Golden Eagle (*Aquila chrysaetos*)



White-throated Laughingthrush (*Pterorhinus albobularis*)

- Fauna Reptiles and Amphibians



**Himalayan Pit Viper
(*Gloydius himalayanus*)**



**Kashmir Rock Agama
(*Laudakia tuberculata*)**



**Himalayan Skink
(*Asymblepharus himalayanus*)**



**Jerdon's Bullfrog
(*Nanorana jerdonii*)**



**Himalayan Toad
(*Duttaphrynus himalayanus*)**

➤ **Low Altitude**

- **Flora Trees**



Chir Pine (*Pinus roxburghii*)



Sal (*Shorea robusta*)



Indian Rosewood (*Dalbergia sissoo*)

- Shrubs and medicinal plants



Khair (*Acacia catechu*)



Indian Gooseberry (*Emblica officinalis*)



Eucalyptus



Bamboo



Achyranthus aspera



Himalayan Yew (*Taxus wallichiana*)



Malabar Nut (*Justicia adhatoda*)



Sweet Flag (*Acorus calamus*)



Castor Oil Plant (*Ricinus communis*)

- Fauna Mammals



Common Leopard (*Panthera pardus*)



Wild Boar (*Sus scrofa*)



Sambar Deer (*Rusa unicolor*)



Barking Deer (*Muntiacus muntjak*)



Goral (*Naemorhedus goral*)



Rhesus Macaque (*Macaca mulatta*)



Indian Porcupine (*Hystrix indica*)



Nilgai (*Boselaphus tragocamelus*)



Jackal (*Canis aureus*)



Red Fox (*Vulpes vulpes*)



Leopard Cat (*Prionailurus bengalensis*)



Indian Hare (*Lepus nigricollis*)



Indian Palm Civet (*Paradoxurus hermaphroditus*)



Yellow-throated Marten (*Martes flavigula*):

- Fauna Birds



Cheer Pheasant (*Catreus wallichii*)



Kalij Pheasant (*Lophura leucomelanos*)



Red Junglefowl (*Gallus gallus*)



Peafowl (*Pavo cristatus*)



Red-billed Blue Magpie



Himalayan Bulbul
(*Pycnonotus leucogenys*)



Blue Whistling-Thrush
(*Myophonus caeruleus*)



Oriental White-eye
(*Zosterops palpebrosus*)



**Black Partridge (*Francolinus francolinus*) &
Grey Partridge (*Francolinus pondicerianus*)**



Himalayan Quail (*Ophrysia superciliosa*)



Sunbirds

- Fauna Reptiles and amphibians



Himalayan Pit Viper (*Gloydius himalayanus*)



Russell's Viper (*Daboia russelii*)



Kashmir Rock Agama (*Laudakia tuberculata*)



Monitor Lizard (*Varanus bengalensis*)



Common Toad (*Duttaphrynus stomaticus*)



Indian Bullfrog (*Hoplobatrachus tigerinus*)



Indian Rat Snake (*Ptyas mucosa*)



Common Krait (*Bungarus caeruleus*)



Model 4: Relief Model of Himachal Pradesh Mountain Cross Section Showcasing Geology, Different Rock Samples & Minerals FRP Model The model dimensions are 9 feet (breadth) x 12 feet (height) x 3.5 feet (depth), depicting a vertical cross-section of the Himalayan terrain.

Vertical cross-section model of the Himalayas showing peaks, valleys, rock layers, soil profile, and rounded boulders to show the origin of Himalaya, geological history and natural wealth of Himachal Pradesh. Painted geological features and texture. Different types of Rocks and minerals found in Himachal Pradesh are to be showcased with provision of suitable pick & Match interactivity & Rock cycle representation.

The model will educate visitors on the Himalayas' origin (collision of Indian and Eurasian plates ~50 million years ago), geological history (sedimentary, metamorphic, igneous rocks), and natural wealth (minerals like slate, limestone, biodiversity in valleys).

Fiberglass Reinforced Plastic (FRP) scale model titled "Himalaya: The Crest of Natural Wealth," representing the geological and natural features of the Himachal Pradesh Himalayas. The model dimensions are 9 feet (breadth) x 12 feet (height) x 3.5 feet (depth), depicting a vertical cross-section of the Himalayan terrain. Key features include snow-capped mountain peaks, valleys, rock profiles, layered strata (showing geological history and origin of the Himalayas), soil profiles, rounded boulders, and a carved cave within the cross-section to showcase rock samples from Himachal Pradesh. The envelope (outer framing) of the model will integrate peaks, valleys, and painted geological textures using mixed media for realism. Vertical cross-section model of the Himalayas showing peaks, valleys, rock layers, soil profile, and rounded boulders to show the origin of Himalaya, geological history and natural wealth of Himachal Pradesh. Painted geological features and texture.

Fabrication: Molding and assembly of FRP components, Different type of rock samples found in Himachal Pradesh, integration of thermocol for lightweight landscaping, wooden framing for support, and mixed media elements (e.g., faux snow, vegetation). Carving of the cave section with embedded rock sample displays.

Painting and Finishing: Application of NC (Nitrocellulose) Paint in Matt Finish on Fabiano canvas overlays for all painted surfaces (peaks, valleys, geological layers, textures). Mixed media for soil, boulders, and vegetation simulation.

Interactivity: Incorporation of a pick-and-match interactive system for visitors, using magnetic or slotted rock sample replicas to match with labeled geological features.

Materials

Fiberglass (FRP) casting with a thickness of 6 mm, sheet metal and mixed media *GP resin for indoor * mat quality 450 grade, Clear Epoxy Resin for water bodies and similar effects.

- FRP (Fiberglass Reinforced Plastic): Main terrain, monuments, figures.
- High Density Thermocol & Wooden Frames: Inner contour shaping and reinforcement.
- NC Paint Matt Finish: Surface finish with anti-glare, durable weatherproof coating.
- Mixed Media: Artificial grass, resin water, LED lighting for realistic detailing.

Support Structure

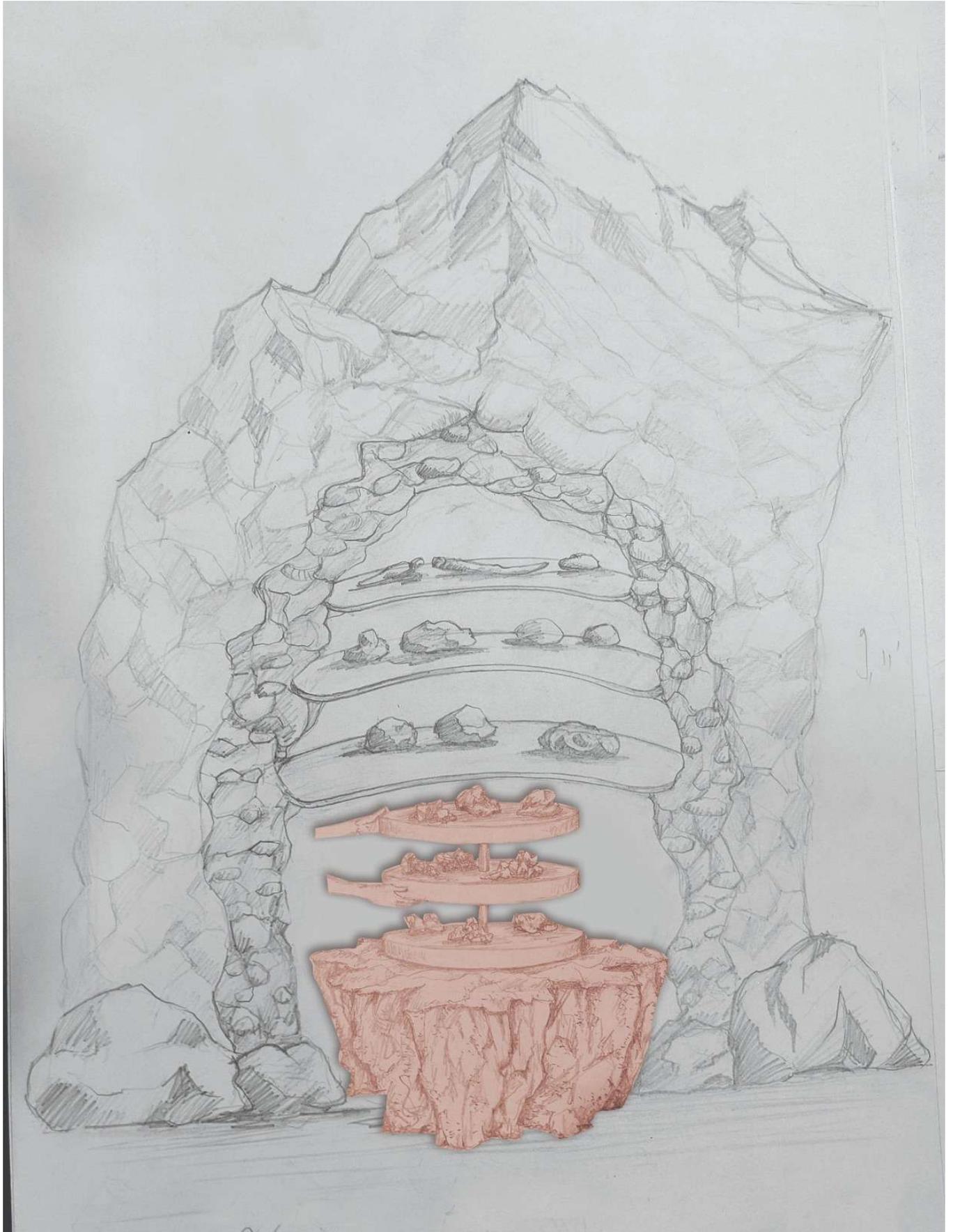
FRP model should be provided with proper wooden and MS metal or iron reinforcement inside & base wherever required.

- MS square pipe (2" x 2") structural frame, anti-rust coated, with galvanized steel reinforcements (6mm rods, spaced 12 inches), Steel Mesh, MS Flat etc.
- Reinforcement Details: Embed steel mesh in FRP molds for strength; epoxy joints for stability.

- Inside skeleton structure for reinforcement of fiberglass relief model is to be made of appropriate iron sections, wood etc. to support the fiber jacket and rigidly fixed with screws.
- Wooden platform base with marine ply (19 mm) for durability.
- Reinforced ribs to prevent sagging of terrain.

Finishing & Detailing

- Realistic replicas, samples of rocks and minerals.
- Epoxy resin for transparent effect.
- PU transparent coat for anti-dust protection.
- Artistic representation for look and feel of the diorama is shown in figure given below for reference.
- Support and armature of FRP model should be provided with proper wooden and MS metal or iron reinforcement inside & base wherever required.
- Perspective painting (using diorama perspective painting technique) of suitable size on background is to be done using Fabriano canvas and good quality artistic acrylic colors. Canvas is to be pasted on Back ground wooden panel made of 2" X 1.5" C/s medium teak wood with 2' X 2' grid size and 6mm BWP ply of Century or Green make with an effective good quality adhesive so that it should not come out from the wooden panel.
- Geological features, Rocks, Minerals in the Diorama should be authentic, accurate and realistic in look and feel.
- Different types of Rocks and minerals found in Himachal Pradesh are to be showcased with provision of suitable pick & Match interactivity & Rock cycle representation.
- Integration of LED lighting for cave illumination.
- It may please be noted that the images provided with individual models and diorama are artistic impression only; these are not to the scale; However, the successful bidder should ensure that the Dioramas and models fit into the provided dimensions giving a coherent view of the intended scene and objects
- Figure given below maybe used for reference for making this model; however successful bidder should do their own research for authentic and detailed presentation and any other image may also be used with prior approval from authority of NSCD/PSCP





ROHTANG GNEISSES
Lithology- Granitic gneisses with augen structure
Age- Palaeo-Proterozoic

BATAL FORMATION
Lithology- Siltstone

KUNZAM LA FORMATION
Lithology- Thinly laminated medium grained sandstone
Broad Age- Early- Middle Cambrian

Model 5: Fossils : Signages of Evolution

Measuring 6 feet (breadth) x 10 feet (height) x 3.5 feet (depth)

Diorama of paleontological timeline and replicas of different fossils, FRP scaled down models of Megalochelys, Hexaprotodon, etc. Display of original/fiberglass replica fossils. Outer FRP canopy should smoothly match with the envelope of Relief Model (Model 4) of Himachal Pradesh Mountain Cross Section Showcasing Geology, Different Rock Samples & Minerals The model dimensions are 9 feet (breadth) x 12 feet (height) x 3.5 feet (depth), depicting a vertical cross-section of the Himalayan terrain.

The scope of work entails the complete design, fabrication, supply, and installation of a Fiberglass Reinforced Plastic (FRP) model titled "Fossils: Signages of Evolution," measuring 6 feet (breadth) x 10 feet (height) x 3.5 feet (depth). The model illustrates the paleontological timeline (Miocene to Pleistocene, ~23-0.01 million years ago) and geological history of Himachal Pradesh (HP), emphasizing the Siwalik formations in regions like Suketi, Nalagarh, and Haritalyangar. It highlights fossils indicative of evolutionary transitions, such as from subtropical forests to grasslands, driven by Himalayan uplift. Features include scaled-down FRP replicas of key HP fossils like Megalochelys (giant tortoise, scaled to ~1 ft length x 0.7 ft height), Hexaprotodon sivalensis (ancient hippopotamus, scaled to ~1.5 ft length x 0.6 ft height), Propotamochoerus (pig-like suid), Giraffokeryx (giraffe ancestor), and Ramapithecus (primate). Displays fiberglass replica fossils (e.g., turtle shells, hippo jaws, elephant molars, primate mandibles), minerals (e.g., silica, calcite from fossil beds), and a rock cycle module showing processes tied to Siwalik sedimentation. The cave cabinet envelope will have rocky walls with engraved/etched imprint of different fossils found in HP to mimic natural exposures in HP's strata, integrated with painted geological features (faults, layers) and textures. Visitor interactivity will focus on the timeline, facts, and characteristics of fossil samples.

Interactivity: Implementation of pick-and-match or interactive panels for fossils: Visitors pick replica samples and match to timeline slots (e.g., "Place Hexaprotodon jaw in Pliocene era – Characteristics: Aquatic herbivore, 3m long, evidence of riverine habitats in ancient HP").

Illumination Method: LED-based system for targeted lighting on etched walls, displays, and interactivity to enhance visibility of natural impressions.

Cave cabinet envelope (5 ft wide x 10 ft high) with rocky walls featuring etched fossils (e.g., turtle shells at mid-levels, hippo teeth in lower strata). Depth (2.5 ft) for interior diorama.

Position elements: Scaled replicas in timeline sequence (Megalochelys in Miocene base, Hexaprotodon in Pliocene mid-section); fossil/mineral displays in illuminated niches; rock cycle (1 ft dia. panel) linked to HP geology.

Etching/Engraving: Design imprints (e.g., Ramapithecus mandible outlines) on walls for natural exposure effect.

Interactivity: 7-10 magnetic slots for pick-and-match; Illumination Equipment: LED strips (12V, neutral white); spotlights for etched areas; dimmers for ambient effects.

Materials

Fiberglass (FRP) casting with a thickness of 6 mm, sheet metal and mixed media GP resin for indoor mat quality 450 grade, Clear Epoxy Resin for water bodies and similar effects.

- FRP (Fiberglass Reinforced Plastic): Main terrain, monuments, figures.
- High Density Thermocol & Wooden Frames: Inner contour shaping and reinforcement.

- NC Paint Matt Finish: Surface finish with anti-glare, durable weatherproof coating.
- Mixed Media: Wall texture, Fossil samples detailing, LED lighting for realistic detailing.

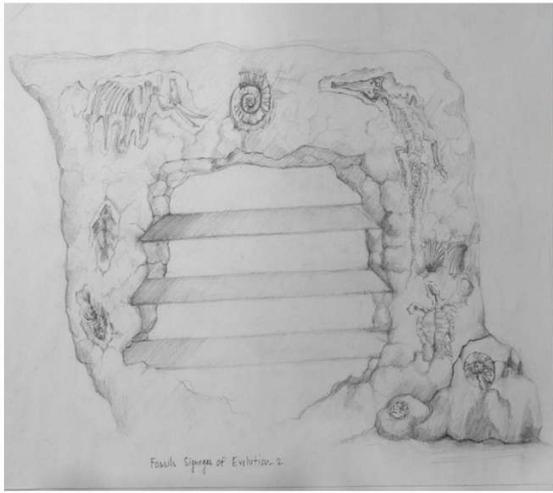
Support Structure

FRP model should be provided with proper wooden and MS metal or iron reinforcement inside & base wherever required.

- MS square pipe (2" × 2") structural frame, anti-rust coated, with galvanized steel reinforcements (6mm rods, spaced 12 inches), Steel Mesh, MS Flat etc.
- Reinforcement Details: Embed steel mesh in FRP molds for strength; epoxy joints for stability.
- Inside skeleton structure for reinforcement of fiberglass relief model is to be made of appropriate iron sections, wood etc. to support the fiber jacket and rigidly fixed with screws.
- Wooden platform base with marine ply (19 mm) for durability.
- Reinforced ribs to prevent sagging of terrain.

Finishing & Detailing

- Realistic replicas, samples of rocks and minerals.
- Epoxy resin for transparent effect.
- PU transparent coat for anti-dust protection.
- Artistic representation for look and feel of the diorama is shown in figure given below for reference.
- Support and armature of FRP model should be provided with proper wooden and MS metal or iron reinforcement inside & base wherever required.
- Perspective painting (using diorama perspective painting technique) of suitable size on background is to be done using Fabriano canvas and good quality artistic acrylic colors. Canvas is to be pasted on Back ground wooden panel made of 2" X 1.5" C/s medium teak wood with 2' X 2' grid size and 6mm BWP ply of Century or Green make with an effective good quality adhesive so that it should not come out from the wooden panel.
- Geological features, fossils in the Diorama should be authentic, accurate and and realistic in look and feel.
- Different types of Fossils found in Himachal Pradesh are to be showcased with provision of suitable pick & Match interactivity with palientological timeline.
- Integration of LED lighting for cave illumination.
- It may please be noted that the images provided with individual models and diorama are artistic impression only; these are not to the scale; However, the successful bidder should ensure that the Dioramas and models fit into the provided dimensions giving a coherent view of the intended scence and objects
- Replicas/Scaled down model of fossils should be authentic and realistic.
- Fig given below maybe used for reference for making this model; however successful bidder should do their own research for authentic and detailed presentation and any other image may also be used with prior approval from authority of NSCD/PSCP



Model 6: Diorama : “Roots : The Binding Force of Soil”

Dimension: The overall dimensions are 10 feet (breadth) x 12 feet (height) x 3 feet (depth)

This diorama is to depict Natural Adaptations in Plants

Scientifically correct Comparative FRP realistic models of select five plants with their typical root profile visible through clear acrylic and other adaptations of plants found in Himachal Pradesh illustrating adaptations and evolutionary traits of root structures (5 models representing Fibrous/Adventitious/deep Taproots/Penetrating roots/Shallow Mat like roots namely vetivar grass, willow tree, heracleum candican, cedrus deodara with parasitic mistletoe, hydrocotyle asiatica) of plants and leaves of plants in response to diverse climatic and soil conditions.

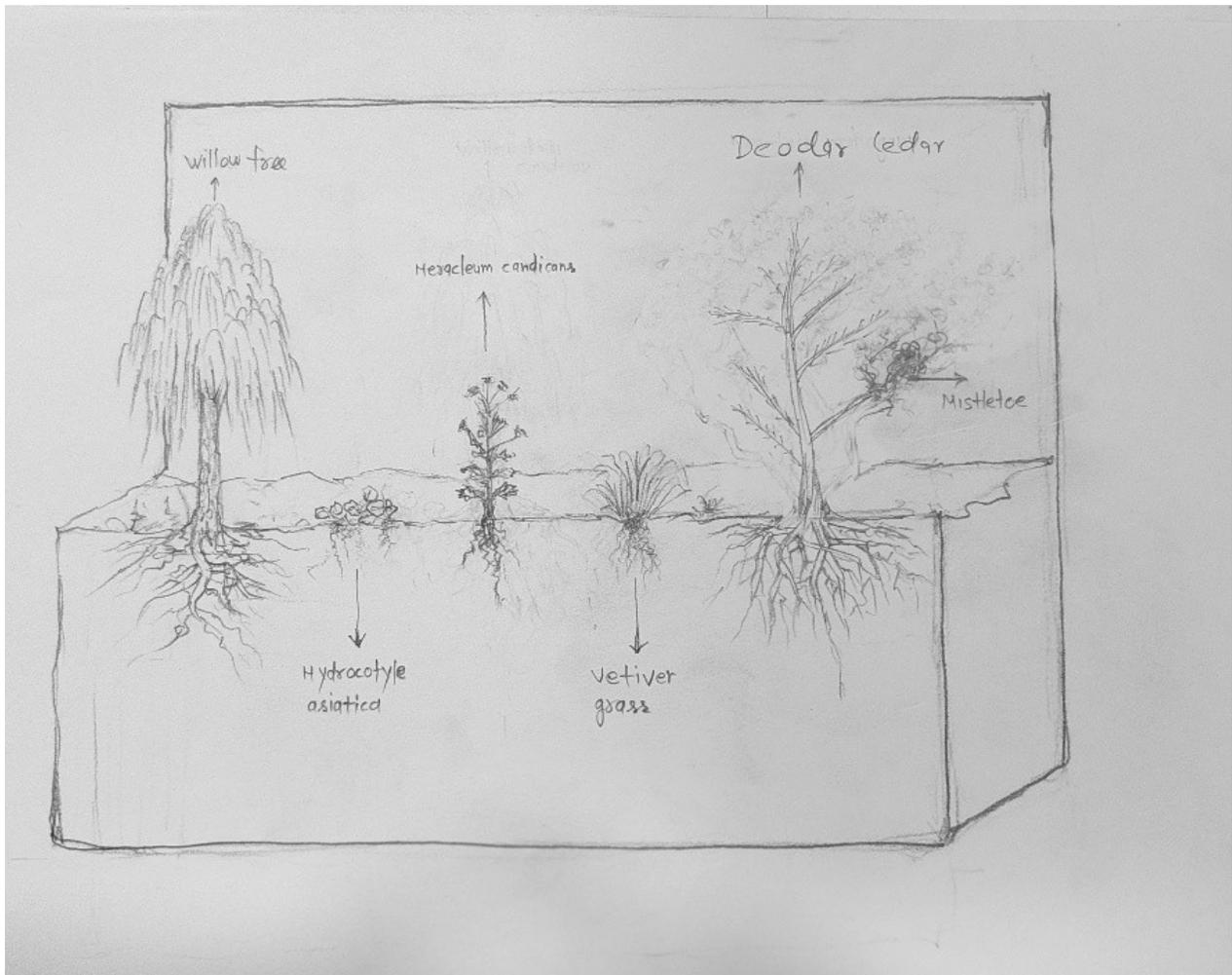
The scope of work covers the complete design, fabrication, supply, and installation of Fiberglass Reinforced Plastic (FRP) models of root systems for different plants, displayed in clear acrylic cabinets, as part of the "Fossils: Signages of Evolution" exhibit. The overall dimensions are 10 feet (breadth) x 12 feet (height) x 3 feet (depth), depicting "Adaptations in Plants." This includes scientifically accurate, comparative, realistic FRP models illustrating root adaptations and evolutionary traits across Himachal Pradesh's altitudinal zones: low altitude (<900m, subtropical), mid-hill (900-1800m, temperate), and high altitude (>1800m, alpine). Representative plants and root structures:

- The setup should feature a clear acrylic cabinet having curve as per drawing (3 ft depth X 4 feet height X breadth 10 feet in which five numbers of typical select plants roots profile will be depicted through mix media arranged side-by-side and upper part of plants will be raised upto 8 feet height and proportionate canopy spread), FRP models of the tree aboveground (trunk, branches, leaves), and the lower part (bottom 4 ft) displaying the characteristic root system in clear acrylic for maximum visibility, highlighting adaptations (e.g., root depth, branching, soil binding, leaves). The models emphasize roots' role in soil stabilization, erosion prevention, and evolutionary responses to climatic/soil variations (e.g., deep roots for water in low zones, shallow for permafrost in high) and other adaptations in plants.
- **Fabrication:** Molding FRP tree/root models, assembly in clear acrylic cabinets, integration of mixed media for soil/landscape simulation, and etching labels for adaptations.
- **Painting and Finishing:** NC Paint Matt Finish on Fabiano canvas for all painted surfaces (tree bark, leaves, roots, geological textures). Mixed media for realistic soil/root effects.
- **Support Structure:** MS reinforcement and wooden framing for cabinets.
- **Illumination Method:** LED strips for internal cabinet lighting, highlighting root structures (warm white with dimmers for natural effect, zoned to illuminate adaptations).

Material :

- **FRP:** Polyester resin + E-glass fiber (1.5-2 g/cm³). Thickness: 6 mm for models.
- **Acrylic:** Clear sheets (6 mm thick, UV-resistant) for lower cabinets.
- **Paint:** NC Paint Matt Finish (non-toxic; e.g., Asian Paints). 2 coats on Fabiano canvas (pre-primed cotton).
- **Mixed Media:** Acrylic gels for soil textures; epoxy for root details.
- **Landscaping Materials:** FRP for soil bases; thermocol (1 inch thick) for root fillers; wooden strips (1x1 inch) for frames.
- **Support Structure:** MS tubes (1x1 inch, 14-gauge) grid; wooden frame (2x2 inch teak) cylinders. Reinforcement with MS rods (1/2 inch) vertically; epoxy joints;

- **Illumination Equipment:** LED strips for internal cabinet lighting, highlighting root structures (warm white with dimmers for natural effect, zoned to illuminate adaptations).
- Plants and their root system, leaves, stems, branches modeling are to be done with minimum 6mm thick fiberglass and leaves with appropriate material using mix media and painting with matt NC paint of all intricate parts. All Plants & their root system should have authentic, accurate and realistic look and feel.





Heracleum candicans



Deodar Cedar



Hydrocotyle asiatica



Vetiver Grass



Willow Tree

Model 7: Architectural Marvels of Himachal Pradesh

Detailed FRP scale models of Masrur Rock Cut Temple, Hidimba Temple (Manali), Hateshwari Mata Temple: Hat Koti (Shimla), Chehni Kothi to depict architectural heritage of Himachal Pradesh. Fine details of Kath-Kuni Cheni ki Kothi (3feet depth X Breadth 5.5 feet X height 12.5 feet) with fine details of wood-stone interlocking technique, Nagara Style, Pyramid Style and Pagoda styles are to be provided. Dimension each of three temples should be breadth 3.5 feet X depth 3.5 feet, proportionate height as per real height scale down to equal base; temple surface should start at 36 inch from floor surface, total depth of landscaping & temple should be 5Feet., 3Layered High relief of other temples in particular area at the backdrop of all the three temple dioramas with high relief minimum 5 inch depth each total relief depth 15 inch, height upto 12 feet. Life size Mural of traditonal tribal women (kinnauri & Chamba) with traditional dresses and ornaments in welcoming pose as per drawing and perspective landscape painting is to be provided in the backdrrop of Cheni ki kothi Outer walls.

Materials

Fiberglass (FRP) casting with a thickness of 6 mm, sheet metal and mixed media GP resin for indoor mat quality 450 grade, Clear Epoxy Resin for water bodies and similar effects.

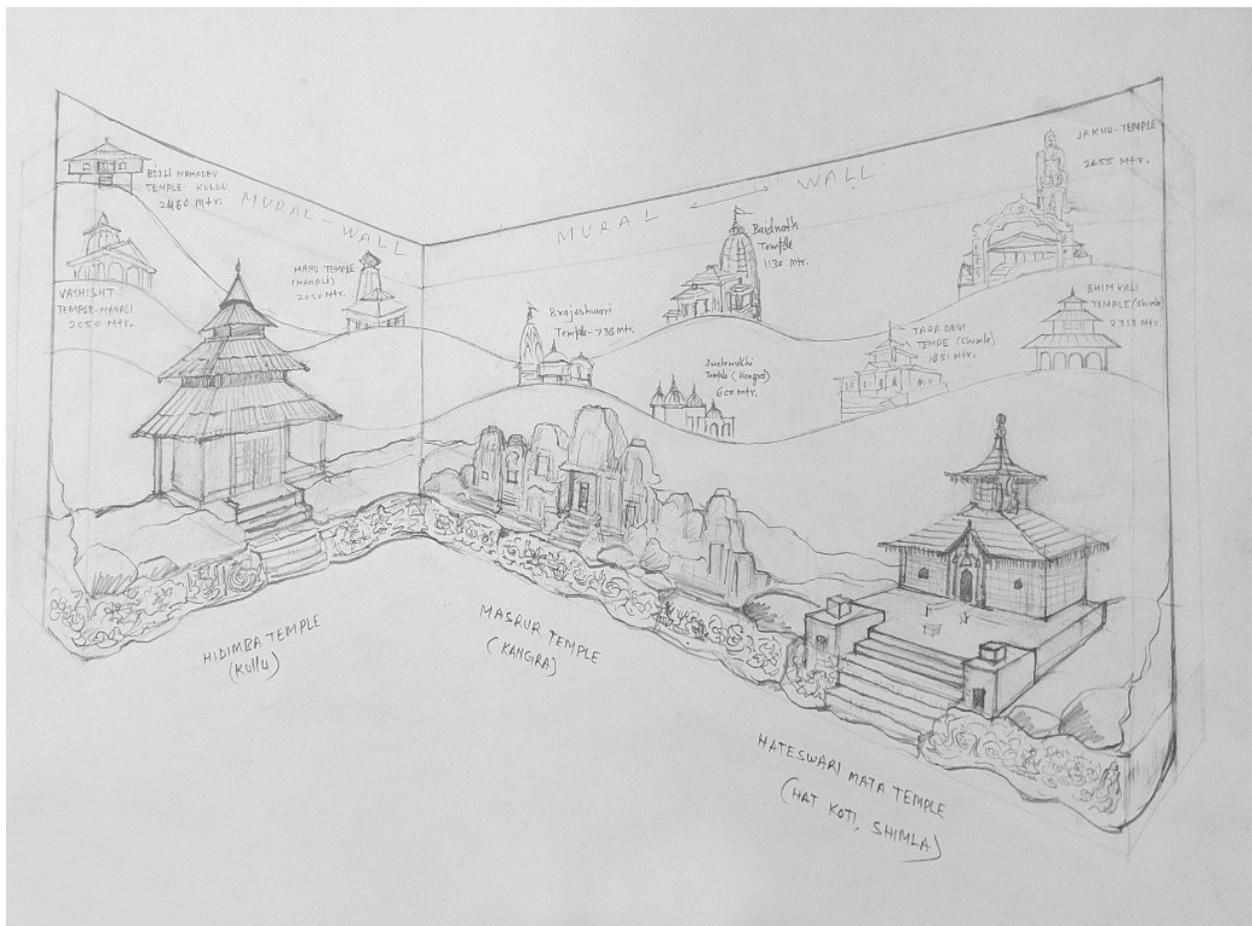
- FRP (Fiberglass Reinforced Plastic): Temples of different architectural styles and other architectural impression
- High Density Thermocol & Wooden Frames: Inner contour shaping and reinforcement.
- NC Paint Matt Finish: Surface finish with anti-glare, durable weatherproof coating.
- Mix Media: Natural look and realistic detailing.
- Clear Epoxy Resin for transparent effects.

Support Structure

FRP model should be provided with proper wooden and MS metal or iron reinforcement inside & base wherever required.

- MS square pipe (2" × 2") structural frame, anti-rust coated, with galvanized steel reinforcements (6mm rods, spaced 12 inches), Steel Mesh, MS Flat etc.
- Reinforcement Details: Embed steel mesh in FRP molds for strength; epoxy joints for stability.
- Inside skeleton structure for reinforcement of fiberglass relief model is to be made of appropriate iron sections, wood etc. to support the fiber jacket and rigidly fixed with screws.
- Wooden platform base with marine ply (19 mm) for durability.
- Reinforced ribs to prevent sagging of terrain.
- Species should be scaled realistically and proportionately to fit in the available space.
- Artistic representation for look and feel of the diorama is shown in figure given below for reference.
- Support and armature of FRP model should be provided with proper wooden and MS metal or iron reinforcement inside & base wherever required.
- Perspective painting (using diorama perspective painting technique) of suitable size on background is to be done using Fabriano canvas and good quality artistic acrylic colors. Canvas is to be pasted on Back ground wooden panel made of 2" X 1.5" C/s medium teak wood with 2' X 2' grid size and 6mm BWP ply of Century or Green make with an effective good quality adhesive so that it should not come out from the wooden panel.

- Modeling of temples is to be done with minimum 6mm thick fiber glass, Skin should be made of good quality silicon to provide real skin texture. Inside skeleton structure for reinforcement is to be made of appropriate iron sections of Apollo or Jindal make, which should be able to support the load and arrangement for fixing hinge or other mechanism part for the movement of the model. These sections iron sections should also be able to support the fiber jacket and rigidly fixed with screws. Silicone which will be used to make outer skin should have physical properties as Specific Gravity – 1.05 to 1.15, Viscosity – 5000 to 50,000 Centipoise, Vapor density >1, Flash Point > 3000
- It may please be noted that the images provided with individual models and diorama are artistic impression only; these are not to the scale; However, the successful bidder should ensure that the Dioramas and models fit into the provided dimensions giving a coherent view of the intended scene and objects.
- Models and their architectural details should be authentic, accurate and realistic in look and feel.
- Fig given below maybe used for reference for making this diorama; however successful bidder should do their own research for authentic and detailed presentation and any other image may also be used with prior approval from authority of NSCD/PSCP





MURAL



10 Feet

5 Feet

TEMPLES



Masrur Temple = 4'x4'



Hidimba Temple = 4'x4'



Hatkoti Temple = 4'x4'



Jawalamukhi Temple



Narbadeshwar Temple



Bainath Temple



Brijeshwari Temple



Bhim Kali Temple



Hidmba Devi Temple



Tripura Sundari Temple



Chintpurni Mata Temple



Shakti Devi Temple



Hateshwari Mata Temple:
Hat Koti

Relief Model 8 : Relief Model of Himachal Pradesh Mountains with Representative Architectural Sites and Culture

Two Nos. of model of movable Buddhist Prayer wheel (18 inch dia height 8 feet cylinder, total Height with base and anchor 12 feet as per drawing) should be placed at corners specified in the gallery layout in between that area Low Relief Model (1.5 inch) of kath kuni wall texture effect of Himachal Pradesh cultural landscape and traditional dresses and ornaments, himachal deity masks 07 numbers, cuisines of various regions with representative area specific dresses up to height 11 feet with low relief representation of cultural symbols and signs, dress, ornaments (Area Approx 230 sq ft, length 26 feet). Movement of prayer wheel should have movement and sound typical to Buddhist prayer wheels.

Materials

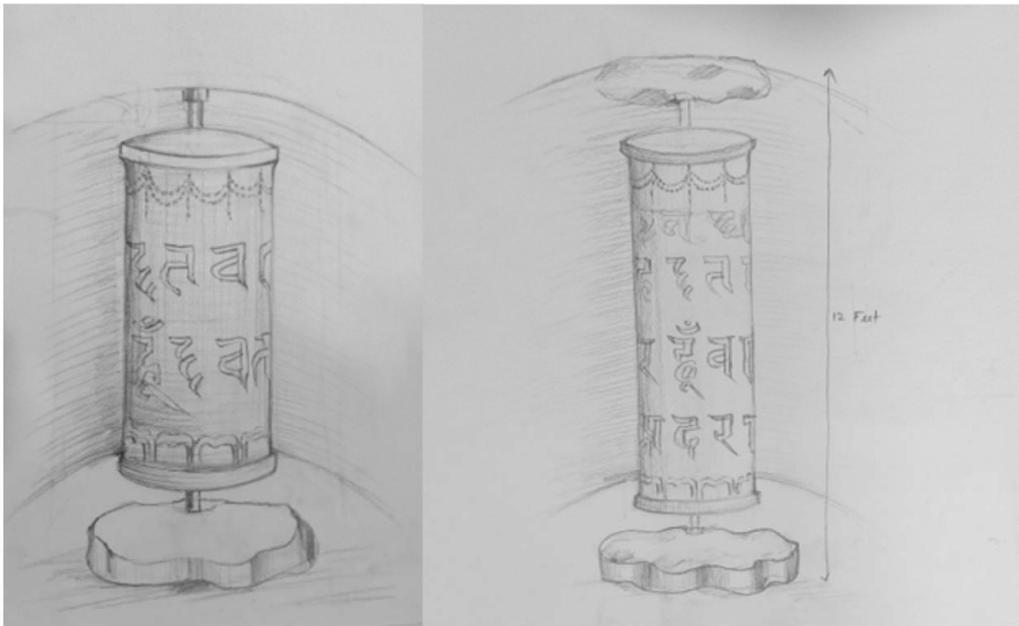
Fiberglass (FRP) casting with a thickness of 6 mm, sheet metal and mixed media GP resin for indoor mat quality 450 grade, Clear Epoxy Resin for water bodies and similar effects.

- FRP (Fiberglass Reinforced Plastic): Low relief cultural symbols, Signs and kath kuni wall textures. Buddhist Prayer wheels
- High Density Thermocol & Wooden Frames: shaping and reinforcement.
- NC Paint Matt Finish: Surface finish with anti-glare, durable weatherproof coating.
- Mix Media: Natural look and realistic detailing.
- Clear Epoxy Resin for transparent effects.

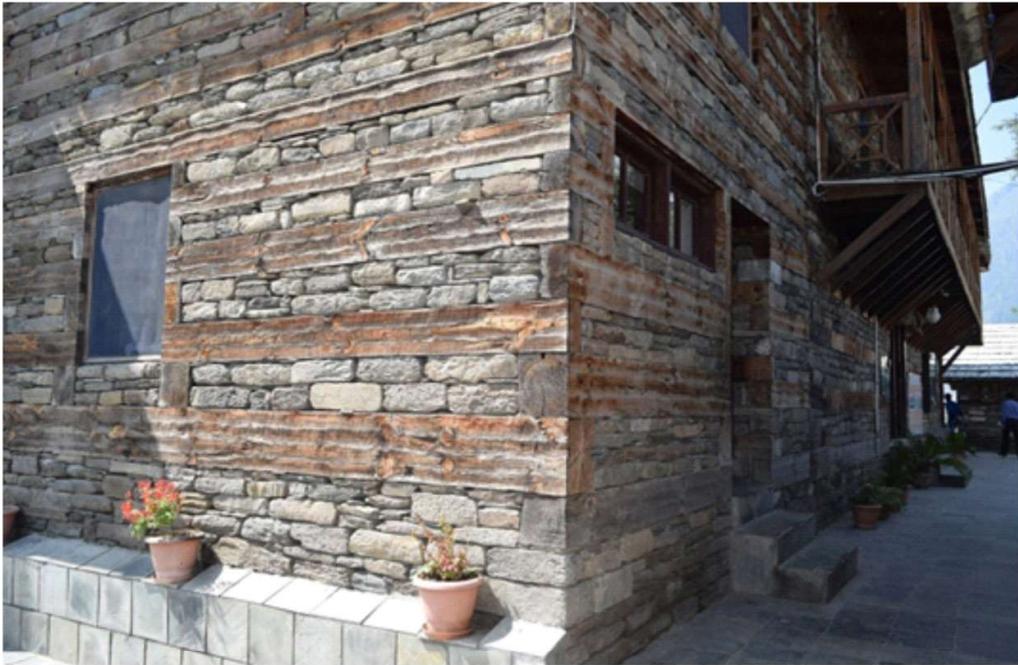
Support Structure

FRP model should be provided with proper wooden and MS metal or iron reinforcement inside & base wherever required.

- MS square pipe (2" × 2") structural frame, anti-rust coated, with galvanized steel reinforcements (6mm rods, spaced 12 inches), Steel Mesh, MS Flat etc.
- Reinforcement Details: Embed steel mesh in FRP molds for strength; epoxy joints for stability.
- Inside skeleton structure for reinforcement of fiberglass relief model is to be made of appropriate iron sections, wood etc. to support the fiber jacket and rigidly fixed with screws.
- Wooden platform base with marine ply (19 mm) for durability.
- Reinforced ribs to prevent sagging of terrain.
- Kathkuni architecture should be represented realistically and detailed impression.
- Artistic representation for look and feel of the models of Prayer wheel are shown in figure given below for reference.
- Support and armature of FRP model should be provided with proper wooden and MS metal or iron reinforcement inside & base wherever required.
- Modeling of prayer wheel is to be done with minimum 6mm thick fiber glass, with good quality reinforcement is to be made of appropriate iron sections of Apollo or Jindal make.
- It may please be noted that the images provided with individual models and kathkuni texture are artistic impression only; these are not to the scale; However, the successful bidder should ensure that the models fit into the provided dimensions giving a coherent view of the intended scene and objects.
- Models and their architectural details should be authentic, accurate and realistic in look and feel.
- Fig given below maybe used for reference for making this diorama; however successful bidder should do their own research for authentic and detailed presentation and any other image may also be used with prior approval from authority of NSCD/PSCP



Rotate able prayer Wheel with Typical Sound and Scripts



Kath Kuni Wall Texture



Model of Deity Mask fagni mask with dimensions – 36 inch by 36 inch and depth as per scale mounted on a platform of 30 inch height and dia 42 dia of base. The central mask should be surrounded by 7 different type of masks with proportionate dimension in approx. 1.5 feet by 1.5 feet and high relief 5 inch. as per refernce drawing.



Diorama 9: Sustainable Life Practices of Himachal Pradesh

FRP Model with Epoxy resin displaying traditional apiculture practices with Honey Comb Structure and Honey getting poured in collection pots as per drawing. Length of honeycomb 4.5 feet with honey container (3 nos) 12, 8, 6 inch height proportionate dia) base dimensions 12 inch height X length 6 feet X breadth 24 inch.

Materials

Fiberglass (FRP) casting with a thickness of 6 mm, sheet metal and mixed media GP resin for indoor mat quality 450 grade, Clear Epoxy Resin for semitransparent look of Honey and similar effects.

FRP (Fiberglass Reinforced Plastic): Honey Comb Structure, honeybees and collection pot

- High Density Thermocol & Wooden Frames: shaping and reinforcement.
- NC Paint Matt Finish: Surface finish with anti-glare, durable weatherproof coating.
- Mix Media: Natural look and realistic detailing.
- Clear Epoxy Resin for Honey transparent effects.

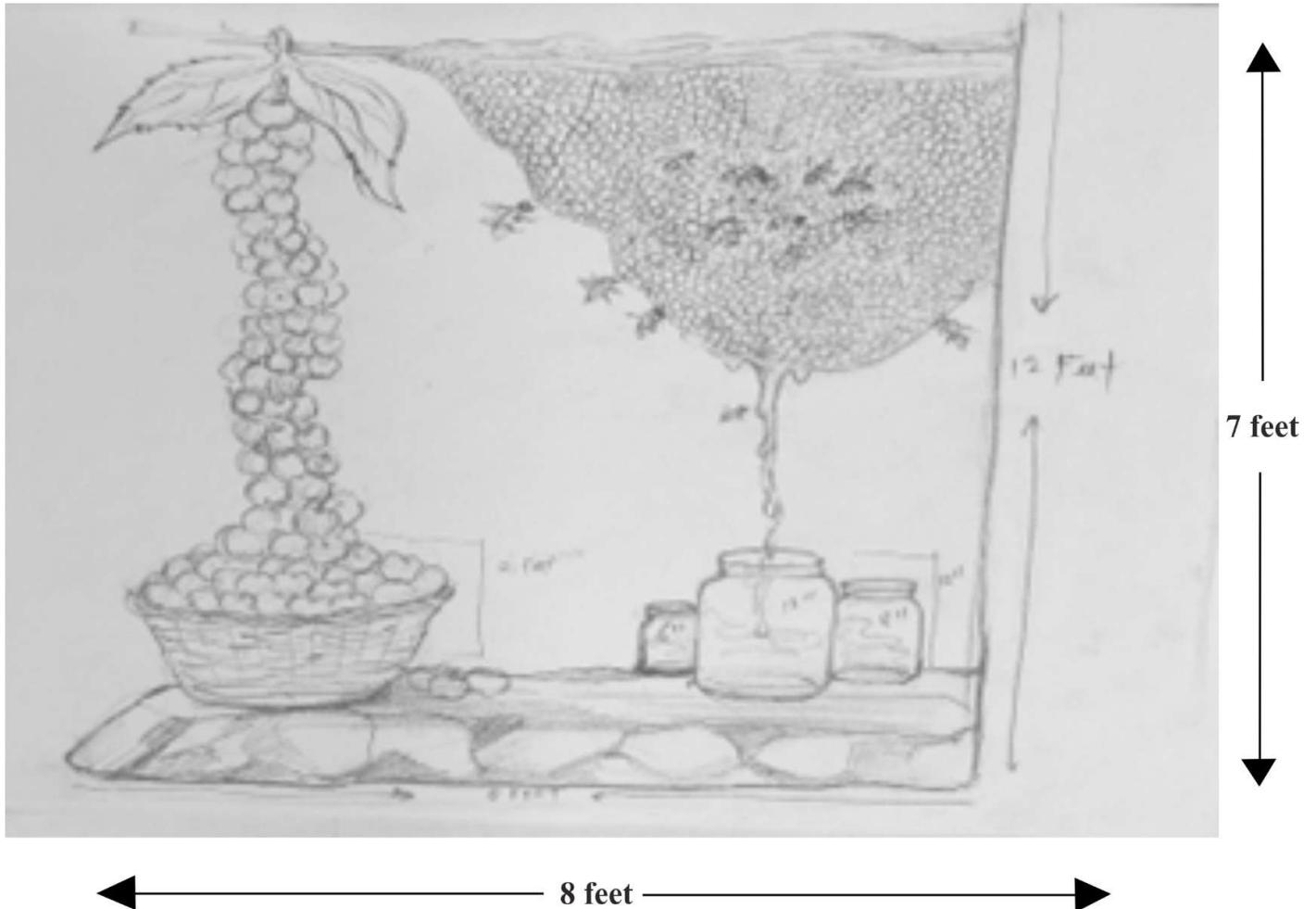
Support Structure

FRP model should be provided with proper wooden and MS metal or iron reinforcement inside & base wherever required.

- MS square pipe (2" × 2") structural frame, anti-rust coated, with galvanized steel reinforcements (6mm rods, spaced 12 inches), Steel Mesh, MS Flat etc.
- Reinforcement Details: Embed steel mesh in FRP molds for strength; epoxy joints for stability.
- Inside skeleton structure for reinforcement of fiberglass relief model is to be made of appropriate iron sections, wood etc. to support the fiber jacket and rigidly fixed with screws.
- Wooden platform base with marine ply (19 mm) for durability.
- Reinforced ribs to prevent sagging.
- Honey Comb should be represented realistically and detailed impression.
- Artistic representation for look and feel of the is shown in figure given below for reference.
- Support and armature of FRP model should be provided with proper wooden and MS metal or iron reinforcement inside & base wherever required.
- Modeling is to be done with minimum 6mm thick fiber glass, with good quality reinforcement is to be made of appropriate iron sections of Apollo or Jindal make.
- It may please be noted that the images provided with individual models and honeycomb texture are artistic impression only; these are not to the scale; However the successful bidder should ensure that the models fit into the provided dimensions giving a coherent view of the intended scene and objects.
- Details in the Honey Comb Model should be authentic, accurate and realistic in look and feel.
- Fig given below maybe used for reference for making this honeycomb with platform; however successful bidder should do their own research for authentic and detailed presentation and any other image may also be used with prior approval from authority of NSCD/PSCP

Diorama10: Apple Tree Model

A model of fruits and nuts (Apple, Apricot, peaches, pears, strawberries, plums & walnuts, hazelnuts, and chilgoza -pine nuts) installation with basket having different types found in Himachal Pradesh are to be fixed alongside honey comb model (As described in Annexure-E-09) as per drawing (dimension of Basket – 3 Feet, Height of Basket 1.5 feet, 6 feet breadth X 7 feet height. Basket is to be placed on the platform made with honeycomb structure.



Diorama 11: Model for Migratory Birds & Ecosystem of Pong Dam Wetland with submerged Bathu Ki Ladi Temple Complex

Dimension Depth 5 feet X Breadth 10 Feet X Height 12 feet; water body height 30 inches, with 1.5 feet height of bathu ki ladi landscaping, and installation of different Migratory Birds in proportionate size in perspective view as per reference photo. Bird species should be authentic migratory birds at least 5 types 4-5 numbers each with total numbers 20 birds. FRP Base on

Diorama showing submerged temple complex (Bathu Ki Ladi), aquatic flora fauna, native and migratory birds of Pong Dam (e.g., bar-headed goose, Greylag goose, Brahminy Shelduck, Gadwall, Eurasian Wigeon, Mallard, Northern Shoveller, Northern Pintail, Red Crested Pochard, Tufted Pochard, cormorant, Garganey etc). Includes a water body made using clear epoxy resin layered with aquatic plant textures, embedded pebbles, and underwater terrain. Migratory birds sculpted in lifelike posture using painted FRP. Trees, fishes, plants, reeds, and temple base constructed using resin-coated mixed media are to be installed upto ceiling height.

Materials

Fiberglass (FRP) casting with a thickness of 6 mm, sheet metal and mixed media *GP resin for indoor * mat quality 450 grade, Clear Epoxy Resin for water bodies and similar effects.

- FRP (Fiberglass Reinforced Plastic): Bathu ki Ladi Temple Complex, Main terrain, migratory Birds, plants, reeds figures.
- High Density Thermocol & Wooden Frames: Inner contour shaping and reinforcement.
- NC Paint Matt Finish: Surface finish with anti-glare, durable weatherproof coating.
- Mixed Media: Artificial grass, resin water, LED lighting for realistic detailing.

Support Structure

FRP model should be provided with proper wooden and MS metal or iron reinforcement inside & base wherever required.

- MS square pipe (2" × 2") structural frame, anti-rust coated, with galvanized steel reinforcements (6mm rods, spaced 12 inches), Steel Mesh, MS Flat etc.
- Reinforcement Details: Embed steel mesh in FRP molds for strength; epoxy joints for stability.
- Inside skeleton structure for reinforcement of fiberglass models is to be made of appropriate iron sections, wood etc. to support the fiber jacket and rigidly fixed with screws.
- Wooden platform base with marine ply (19 mm) for durability.
- Reinforced ribs to prevent sagging of terrain.

Finishing & Detailing

- Hand-sculpted models for architectural heritage & tribes.
- Epoxy resin for water body.
- PU transparent coat for anti-dust protection.
- Artistic representation for look and feel of the diorama is shown in figure given below for reference.
- Support and armature of FRP model should be provided with proper wooden and MS metal or iron reinforcement inside & base wherever required.
- Perspective painting (using diorama perspective painting technique) of suitable size on background is to be done using Fabriano canvas and good quality artistic acrylic colors. Canvas is to be pasted on Back ground wooden panel made of 2" X 1.5" C/s medium teak wood with 2' X 2' grid size and 6mm BWP ply of Century or Green make with an effective good quality adhesive so that it should not come out from the wooden panel.
- Diorama should be authentic, accurate and and realistic in look and feel.

- Fig given below maybe used for reference for making this diorama; however successful bidder should do their own research for authentic and detailed presentation and any other image may also be used with prior approval from authority of NSCD/PSCP





Bar Headed Goose



Ruddy shelduck



Male



Female

Gadwall



Adult male

Eurasian Wigeon



Female



Mallard



Northern Shoveler



Northern Pintail



garganey duck waterfowl



Male

Tufted Duck



Female/immature

Diorama 12: FRP Model of Kinnaur Gate

Replica of iconic Kinnaur gate archway and taranda dhank with sculpted motifs, Himalayan backdrop, tough terrain; Depth 5 feet X Breadth 5 Feet X height 12.5 feet

Materials

Fiberglass (FRP) casting with a thickness of 6 mm, sheet metal and mixed media *GP resin for indoor * mat quality 450 grade.

- FRP (Fiberglass Reinforced Plastic): Kinnaur gate archway and taranda dhank with sculpted motifs, Himalayan backdrop, tough terrain;
- High Density Thermocol & Wooden Frames: Inner contour shaping and reinforcement.
- NC Paint Matt Finish: Surface finish with anti-glare, durable weatherproof coating.
- Mixed Media: Artificial grass, resin water, LED lighting for realistic detailing.

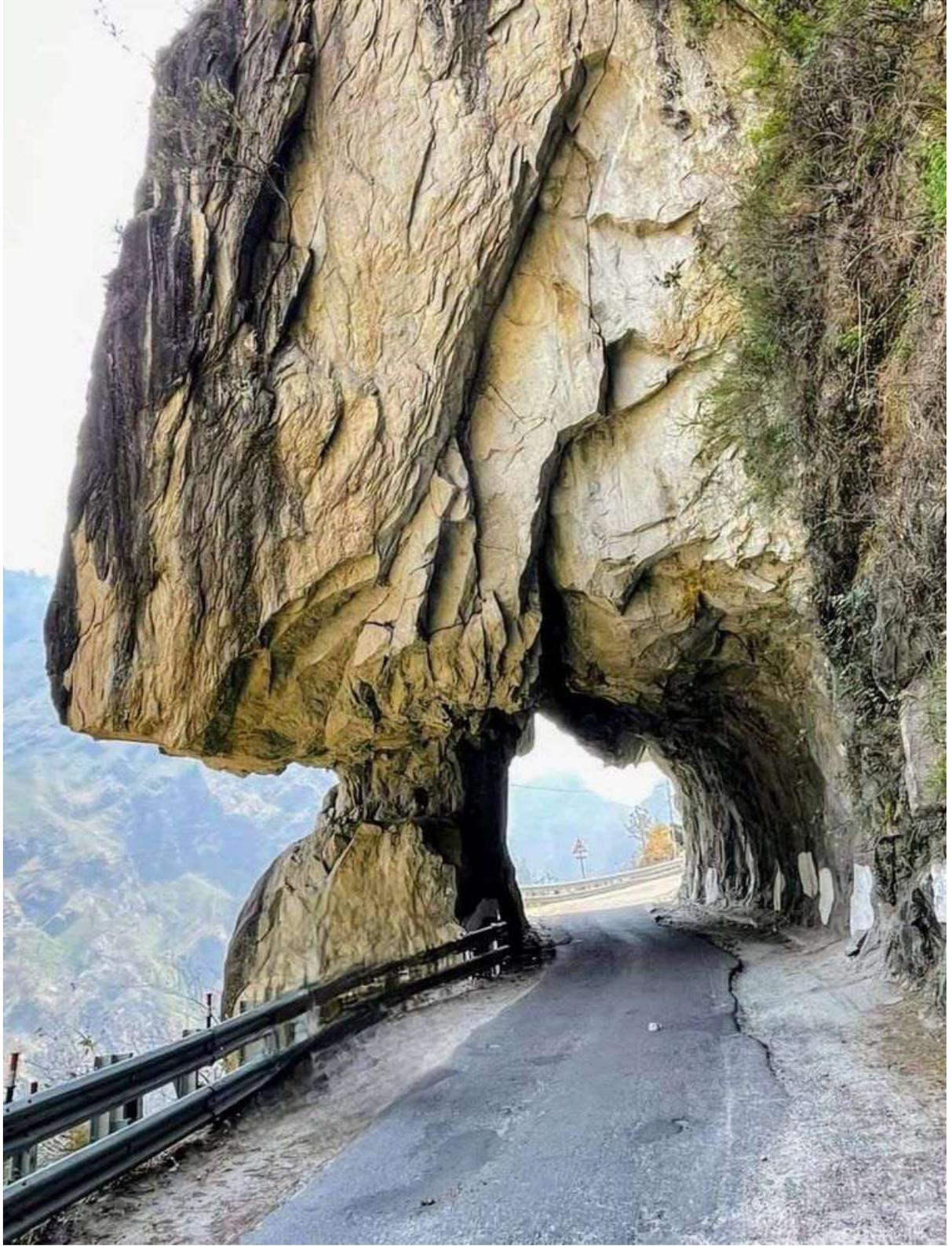
Support Structure

FRP model should be provided with proper wooden and MS metal or iron reinforcement inside & base wherever required.

- MS square pipe (2" × 2") structural frame, anti-rust coated, with galvanized steel reinforcements (6mm rods, spaced 12 inches), Steel Mesh, MS Flat etc.
- Reinforcement Details: Embed steel mesh in FRP molds for strength; epoxy joints for stability.
- Inside skeleton structure for reinforcement of fiberglass models is to be made of appropriate iron sections, wood etc. to support the fiber jacket and rigidly fixed with screws.
- Wooden platform base with marine ply (19 mm) for durability.
- Reinforced ribs to prevent sagging of terrain.

Finishing & Detailing

- Hand-sculpted models for architectural heritage & tribes.
- Epoxy resin for water body.
- PU transparent coat for anti-dust protection.
- Artistic representation for look and feel of the diorama is shown in figure given below for reference.
- Support and armature of FRP model should be provided with proper wooden and MS metal or iron reinforcement inside & base wherever required.
- Perspective painting (using diorama perspective painting technique) of suitable size on background is to be done using Fabriano canvas and good quality artistic acrylic colors. Canvas is to be pasted on Back ground wooden panel made of 2" X 1.5" C/s medium teak wood with 2' X 2' grid size and 6mm BWP ply of Century or Green make with an effective good quality adhesive so that it should not come out from the wooden panel.
- Kinnaur gate and surrounding terrain should be authentic, accurate and and realistic in look and feel.
- Fig given below maybe used for reference for making this diorama; however successful bidder should do their own research for authentic and detailed presentation and any other image may also be used with prior approval from authority of NSCD/PSCP



Diorama 13: Half Busts of Famous Personalities.

Scope of Work FRP, Silicon based Artifact & Mannequin of Chamba tribal woman making Chamba Rumal (Height in Sitting Pose -3.5 feet) with background setting with display of other craft items in the backdrop and sample Chamba rumal hanged in natural cultural setting of Chamba and two models of Himachal Traditional Ransingha(Turahi) with Height 8

Dimension : Breadth 3.5 feet + 2feet (L shape) X Depth 2 feet X height 11 feet,
Model of Ransigha (Turahi instrument) with height 8 feet and proportionate dimensions

Structure & Base

- Fabrication of mannequin structure using **FRP (Fibre Reinforced Plastic)** with reinforcement for durability.
- Internal support frame with metal/FRP skeleton to ensure stability in sitting posture.
- Height of mannequin: **3.5 feet (approx.)** in traditional seated pose.

Surface Finish & Detailing

- Silicon coating and finish for naturalistic skin texture, facial features, and hand details.
- Realistic hair implantation/wig styled in traditional Chamba fashion.
- Detailing of eyes, nails, and skin tone with hand-painting for lifelike effect.

Costume & Accessories

- Dressing the mannequin in authentic Chamba attire using handwoven fabric.
- Replication of ornaments traditionally worn by Chamba women.
- Provision of a small working frame/rumal embroidery in process.

Background Setting & Display

1. Cultural Setting

- Creation of a compact **backdrop in FRP/wooden paneling** replicating a traditional Chamba household/craft environment.
- Use of natural motifs, wall textures, or miniature household elements for realism.

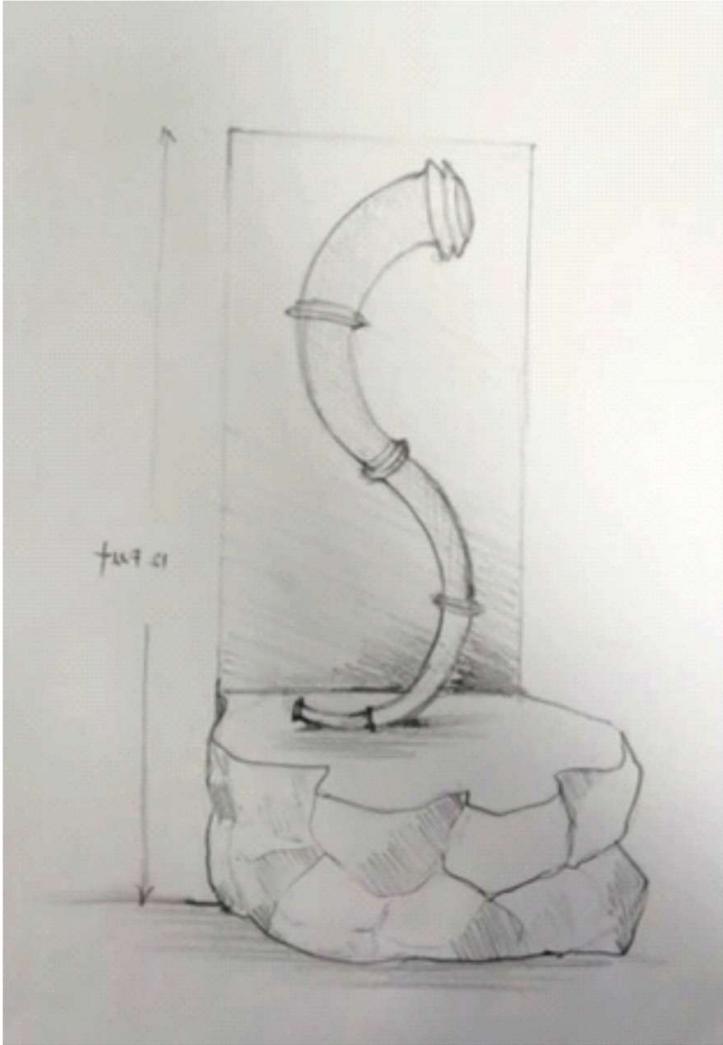
2. Sample Rumal Display

- Hanging of **replica/sample Chamba Rumals** in background (FRP frame with cloth mounting).
- Adequate lighting arrangement to highlight the Rumal work.

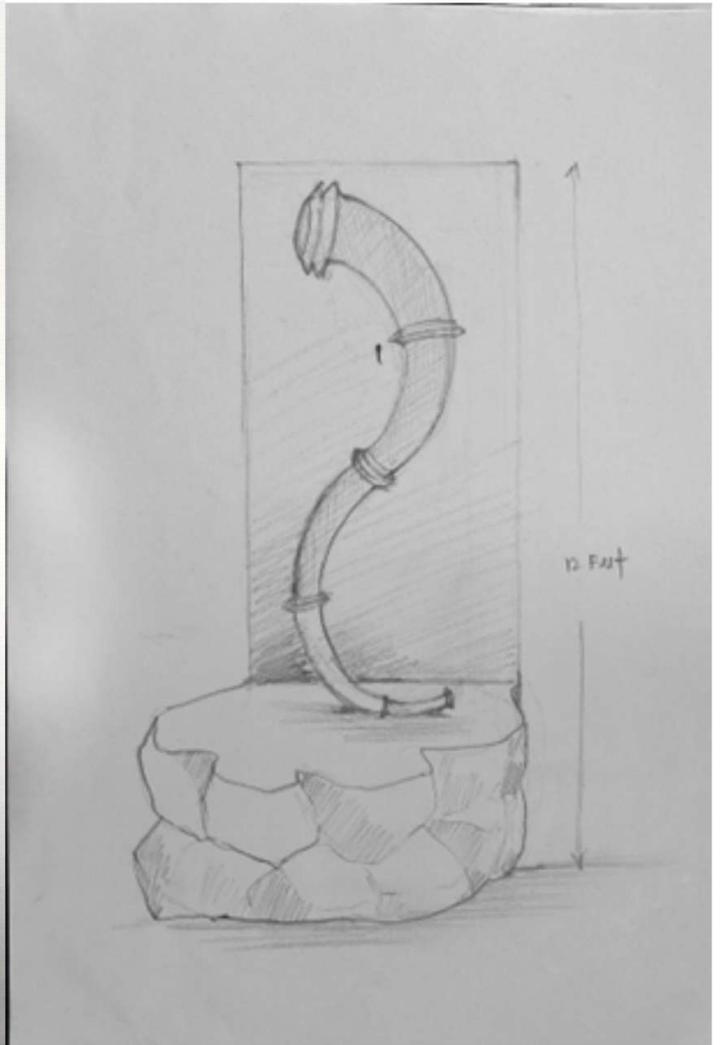
3. Integration

- Proper blending of mannequin with backdrop for seamless cultural storytelling.
- Display base/platform with smooth finish, approx. **4 ft × 4 ft**.





← 8 feet →



← 8 feet →

BANK DETAILS OF NATIONAL SCIENCE CENTRE, DELHI

Name of the Account Holder	NATIONAL SCIENCE CENTRE, DELHI
Account No.	2417101004100
Bank Name	CANARA BANK
Bank Address	6, Bhagwan Das Road, New Delhi
IFSC Code	CNRB0002417
MICR Code	110015045
Type of Account	Saving Account
Branch Code	2417
GST Number	07AAAAN2541C1Z5

TENDER NO. NSCD/18011/E-Tender- 21 /2025-26

Name of the Work: Fabrication, Supply and Installation of Fiberglass (FRP) Mannequins, FRP relief model of Himachal Pradesh, Geology features of Himachal Pradesh, Rock samples and their display cabinet, Models of root system, Flora-Fauna adapted to different altitudes, Scale down replica of temples of different architecture style, Sculptures, Diorama, FRP-based terrain model of Himachal Pradesh, Model of Bathu Ki Ladi & Aquatic life and Underwater Ecosystem around it & Migratory birds using clear epoxy resin & FRP, Replica of Fossils found in Himachal Pradesh, Art & Craft items of HP and Paintings for ‘Wealth of Himachal Pradesh’ Gallery at Palampur Science Centre, Palampur.

SAMPLE- FINANCIAL BID FORMAT

Rate NOT to be quoted here. To be quoted in excel sheet at CPP Portal

Tender Inviting Authority: National Science Centre, Delhi						
Contract No: NSCD / 18011 / E - Tender - 21 / 2025 - 26						
Name of the Bidder/ Bidding Firm/ Company :						
<u>PRICE SCHEDULE</u>						
(This is a just a format of the actual BOQ template and must not be filled here. The actual BOQ is available in Excel Sheet on CPP portal. Only the relevant columns of the BOQ available at CPP portal should be filled. No other format is acceptable.)						
S No.	Scope of Work	Qty	Basic Rate in Rs.	GST Value %	GST amount	Total amount
1	2	3	4	5	6	7
1.	3D Diorama of Himachal Pradesh at a Glance : Large 3D Diorama of Himachal Pradesh with comprehensive & condensed overview of Himachal Pradesh’s geographical, natural, cultural, agricultural, tourism and economic wealth. It should include topographical terrain and landmark representation of Himachal Pradesh’s mountain ranges, illuminated snow capped mountains, rivers, water bodies, hydro projects and mountain ranges, architectural heritage, culture, tribes and agricultural practices. Canopy Cover of Diorama should also represent hilly terrain specific to Himachal pradesh. The diorama dimensions are 14 feet (length) x 6 feet (depth) x 12 feet (height) diorama view should start at approx. 30 inch height from floor surface. Details provided in Annexure –E-1	1 Set				
2.	Raised 3D Relief Map Model of Himachal Pradesh : FRP 3D raised relief model showing altitudinal zones, rivers, district boundaries, Biodiversity Hot spots, peaks and passes with Ancient Scripts/Shloka inscribed on Stone tablet/Leaves/ Wood as per the direction of competent authority. Details in Annexure-E-2	1 No				
3.	Dioramas of Flora and Fauna at Various Altitudes (Lower, Mid, High) : Three FRP-based dioramas to show distinct flora and fauna of Himachal Pradesh at Low, Mid, and High altitudes. The diorama should include typical species like Deodar, Snow Leopard, Monal, Himalayan Thar, Himalayan Bear, Musk deer, Langur, Pine, Oak, rhododendrons, apple, tea, and other representative flora fauna of Himachal Pradesh found at different altitudes. Details in Annexure-E-3	1 Set				

4.	Relief Model of Himachal Pradesh Mountain Cross Sectional Showcasing Geology, Different Rock Samples & Minerals : Vertical cross-section model of the Himalayas showing peaks, valleys, rock layers, soil profile, and rounded boulders to show the origin of Himalaya, geological history and natural wealth of Himachal Pradesh. Painted geological features and texture. Different types of Rocks and minerals found in Himachal Pradesh are to be showcased with provision of suitable pick & Match interactivity & Rock cycle representation. Details in Annexure-E-4	1 No				
5.	Fossils: Signages of Evolution : Diorama of paleontological timeline and replicas of different fossils, FRP scaled down models of life-size models of Megalochelys, Hexaprotodon, etc. Display of original/fiberglass replica fossils. Details in Annexure E-5	1 Set				
6.	Roots: The Binding Force of Soil : Scientifically correct Comparative FRP realistic models of select plants/trees with their typical root systems and evolutionary traits of root structures (Fibrous/Adventitious/deep Taproots/Penetrating roots/Shallow Mat like roots), Leaves and stems of plants in response to diverse climatic and soil conditions. Details in Annexure-E-6	1 Set				
7.	Architectural Marvels of Himachal Pradesh : Detailed FRP scale models of Masrur Rock Cut Temple, Hidimba Temple (Manali), Hateshwari Mata Temple: Hat Koti (Shimla), Chehni Kothi to depict architectural heritage of Himachal Pradesh. Fine details of Kath-Kuni Cheni ki Kothi (3feet depth X Breadth 5.5 feet X height 12.5 feet) with fine details of wood-stone interlocking technique, Nagara Style, Pyramid Style and Pagoda styles are to be provided. Dimension each of three temples should be breadth 3.5 feet X depth 3.5 feet, proportionate height as per real height scale down to equal base; temple surface should start at 36 inch from floor surface, total depth of landscaping & temple should be 5Feet., 3Layered High relief of other temples in particular area at the backdrop of all the three temple dioramas with high relief minimum 5 inch depth each total relief depth 15 inch, height upto 12 feet. Life size Mural of traditional tribal women (kinnauri & Chamba) with traditional dresses and ornaments in welcoming pose as per drawing and perspective landscape painting is to be provided in the backdrrop of Cheni ki kothi Outer walls. Details in Annexure-E-7	1 Set				
8.	Relief Model of Himachal Pradesh Mountains with representative architectural sites : Two Nos. of model of movable Boddhist Prayer wheel (18 inch dia height 8 feet cylinder, total Height with base and anchor 12 feet as per drawing) should be placed at corners specified in the gallery layout in between that area Low Relief Model (1.5 inch) of kath kuni wall texture effect of Himachal Pradesh cultural landscape and traditional dresses and ornaments of various regions with representative area specific dresses up to height 11 feet with low relief reppresentation of cultural symbols and signs, dress, ornaments (Area Approx 230 sq ft, length 26 feet). Movement of prayer wheel should have movement and sound typical to Boddhist prayer wheels. Details provided in Annexure-E-8	1 No				

9.	Sustainable Life Practices of Himachal Pradesh : FRP Model with Epoxy resin displaying traditional apiculture practices with Honey Comb Structure and collection pot as per drawing. Details provided in Annexure-E-9	1 Set				
10.	Apple Tree Model : Model displaying traditional agriculture practices practices with fruit basket as per drawing. Details provided in Annexure-E-10	1 No				
11.	Model for Migratory Birds &Ecosystem of Pong Dam Wetland with Submerged Bathu Ki Ladi temple complex : Diorama showing submerged temple complex (Bathu Ki Ladi), aquatic flora fauna, native and migratory birds of Pong Dam (e.g., bar-headed goose, cormorant). Includes a water body made using clear epoxy resin layered with aquatic plant textures, embedded pebbles, and underwater terrain. Migratory birds sculpted in lifelike posture using painted FRP. Trees, fishes, plants, reeds, and temple base constructed using resin-coated mixed media. Details provided in Annexure-E-11	1 Set				
12.	FRP Model of Kinnaur Gate : Replica of iconic Kinnaur gate archway and taranda dhank with sculpted motifs, Himalayan backdrop, tough terrain. Details provided in Annexure-E-12	1 No				
13.	Half Busts of Famous Personalities : FRP, Silicon based Artifact & Mannequins of Chamba Local women making Chamba Rumal with background setting and sample Chamba rumal hanged in natural cultural setting of Chamba. Details provided in Annexure-E-13	1 No				
	Total In Figures					
	Quoted Rate in Figures					
	Quoted Rate in Words					
Offline Financial Bid shall not be accepted under any circumstances.						