Ref. No: I/15014/86 **Date: 03/11/2022**

Ministry of Culture
Government of India

National Council of Science Museums
33, Block-GN, Sector-V,
Salt Lake, Bidhan Nagar,
Kolkata- 700091

Notice for Selection of Architect for architectural and consultancy services relating to Setting up of Science City at Hyderabad.

National Council of Science Museums (NCSM) is planning to set up a Science City at Hyderabad. The architectural firms shortlisted (list of shortlisted agencies enclosed) against our empanelment advertisement published in Central Public Procurement Portal, Govt. of India & in our website in June, 2020 are requested to submit their conceptual scheme for the proposed project.

The brief requirement of the Science City is enclosed for your reference. You may submit your scheme/concept design (both hard & soft copy) latest by **3.00 PM on 22.11.2022 at National Council of Science Museums, 33, Block- GN, Sector-V, Salt Lake, Bidhan Nagar, Kolkata - 700091.** You may please note that your submitted concept should include the following: -

1) Master/Site plan highlighting the building blocks.
2) Plan, Elevation & Sections of all the units.
3) Perspective drawings of the building blocks.
4) Any special features/materials proposed in the building.
5) Consideration of green building norms.
6) Cost estimation.
7) An elaborate 3D walkthrough presentation of the entire scheme. It should cover the internal arrangements of exhibition galleries, displays, a digital panorama, Spherical Dome Theatre etc.

Further, you may come for a discussion/presentation of your scheme before an expert panel at National Council of Science Museums, 33, Block- GN, Sec-V, Salt Lake, Bidhan Nagar, Kolkata – 700091. The date for the discussion/presentation shall be intimated to you in due course of time.

You may contact Mr. Saikat Sikdar (Superintending Engineer, NCSM, Hqrs.), Mob no. 8777536210 E-mail: **s.sikdar@ncsm.gov.in** for any further clarification, if required.

Encl.:

I. List of shortlisted agencies.
II. Architects' Brief

List of Empaneled Architects of NCSM for SCIENCE CITY PROJECTS.

1. M/s. VYOM, New Delhi.
2. M/s. Archohm Consults Pvt. Ltd., Noida
3. M/s. Design Forum International, New Delhi
4. M/s. AAKRITI, Kolkata
5. M/s. Architect Hafeez Contractor, Mumbai.
6. M/s. Collage Design Pvt. Ltd., Mumbai.
7. M/s. Karan Grover & Associates, Vadodara, Gujarat.
8. M/s. Meinhardt EPCM (India) Private Limited, Bangalore.
9. M/s. Sunando Dasgupta and Associates, Delhi.
10. M/s. Kothari & Associates, Kolkata.
11. M/s. Bose Brothers Architects, New Delhi.
12. M/s. OCI Architects, Oscar & Ponni, Chennai.
13. M/s. Vastushilpalaya Consultancy Pvt. Ltd., Kerala.
14. M/s. Flying Elephant Studio, Bangalore.
15. M/s. Arch -En-Design, New Delhi.
16. M/s. I N I Design Studio Private Ltd., Ahmedabad.
17. M/s. Dhrumataru Consultants and Construction, Hyderabad.
18. M/s. Saakaar Foundation, Chandigarh.
19. M/s. OPOLIS, Mumbai.
20. M/s. Plural Design Consultants Pvt. Ltd., New Delhi.

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Architects' Brief for the proposed Science City at Hyderabad

1. Concept

National Council of Science Museums (NCSM), an autonomous organization under the Ministry of Culture, Government of India is the apex body, responsible for setting up and running several Science Cities, Science Centers and Science Museums in India. It is primarily engaged in popularizing science and technology and creating scientific temper and attitude among the common public in general and young students in particular. NCSM presently administers 26 science cities/centers and museums of various sizes situated in metropolitan cities, state capitals and district headquarters and it has developed 23 more science centers which have been handed over to respective states and union territories for managing.

Science Centres communicate principles of science and technology through hands on interactive exhibits in a non-formal environment - a method very effective in communicating science and engaging visitors to the Science Centres. Research by educationists and science centre professionals in recent years has revealed that science centres not only provide opportunities for *interactive mode of learning* but also provide an excellent opportunity for *experience based learning*. Further developments have brought in a new concept of *minds-on exhibits* that has been widely introduced in science centres and science museums world over for immersive presentations. Such exhibits not only make the visitors to delve deeply into the subject but also create a long lasting impression for lifelong learning. Science centres also organise plethora of science education programmes and activities all-round the year involving students, teachers, general public, tourists, housewives, senior citizens etc. Through temporary exhibitions, science fairs, science expos, science seminars etc., millions of common people are reached, especially the young students, thereby spreading the message of science.

The proposed Science City in Hyderabad shall be conceptually similar to a modern Science Centre but of a much larger dimension with focus on frontier areas of science and technology & modern presentation techniques. It is conceptualized on the theme of EDUTAINMENT to provide enhanced holding time to its visitors and to make science learning effective, impressive, enjoyable and comprehensible. Science City, Hyderabad will be characterized by impressive exhibition halls consisting of the state of the art displays supported by strong activity based learning environment to inculcate spirit of inquiry, foster creative talent and encourage scientific temper in the community as a whole. The proposed Science City shall have very strong and attractive appeal and will cater to students, teachers, families, tourists and general public of the region. Naturally, it will have strong emphasis on the subjects and content in local context.

The Science City, Hyderabad will use state-of-the-art communication tools and technology in its presentations with thematic galleries comprising large number of interactive exhibits and original artefacts, related to cutting edge science and technology, supplemented and supported by interesting demonstrations. To make the learning process experience-based, an immersive Capsule Simulator, Spherical Dome Theatre, 180° /270° Digital Panoramic presentations, Virtual Reality exhibits and mesmerising science shows will be set up. All such facilities will help for transporting visitors to different frames of reference for a better understanding of science through immersive experience.

The Science City will essentially serve as a resource centre for disseminating modern Science & Technology information with greater emphasis on Indian achievements in the region of South India. Once setup, the Science City will become useful, effective and participatory tool for science communication as it would become the hub of science popularisation and non-formal science education for the entire southern region of our country. Science City on its inauguration will strive to become **self-sustaining** through its presentations, visitor facilities, programmes and activities. Hence, revenue generating facilities, programmes and activities will find an essential and prominent place in the setting up of the Science City.

2. Land Area & Location

Requisite land area to the tune of 25.38 Acres out of which 17.37 Acre is available for setting up of various elements of Science City. CSIR has already committed for the land for setting up of Science City at CSIR-IICT and CSIR-NGRI premises, Hyderabad on Express way near NGRI Metro Station. The earmarked site is fairly levelled land. The area is well covered by trees, shrubs and similar vegetation.

3. Contents

The building/s accommodating various facilities of the proposed science city will have a **total covered area strictly not more than 14000 sq. mtr**. in modules or otherwise at split levels. The overall design should have a provision for lateral expansion in future, whenever necessary. The entire layout should be designed in such a way that the building in first phase with total covered area of 14000 sq. mtr look complete in all respect. The buildings may be one/two storied with an outdoor science park in the foreground/background. The main entrance for the visitors to the buildings may be at the ground floor level with a provision of appropriate ramps/lifts for the benefit of physically challenged persons. However, depending upon the contour of the site, an appropriate level for entry to the building/s may be suggested. Separate entrance(s) for the visitors/staff as per facilities listed in Group II and Group III below need to be provided suitably so as to operate such facilities without affecting other areas.

A) Entry Plaza and Visitor Facilities:(Approximate total covered area 1500 sq. mtr)

Main entry Gate complex at an appropriate location in the allotted land connecting to the approach road should have following facilities;

1. Befitting, wide entry gate for incoming and outgoing of visitors, vehicles, etc.
2. Security Office with Changing Room for Security Personnel
3. Ticket Counter (s) (4 to 6 Nos.)
4. Building Management system.
5. Information Dissemination / Interpretation Centre (Capacity 100)
6. Cloak Room
7. First Aid Room
8. ATM Counters
9. Wash Rooms
10. Holding Area for group visitors (till tickets are purchased) for 100 to 200 visitors.
11. Exhibition Hall of 200 Sqm area.
12. Cafeteria for 20-30 persons at a time for only dry snacks & beverages.
13. Souvenir Counter.

An attractive, appealing and befitting Main Entry Gate Complex design should also have provision nearby for prominently displaying information regarding special facilities/current programmes /activities at the Science City so as to inform visitors and also the passer byes. The Gate Complex should preferably be a light weight pre-fab steel structure construction.

B) Parking Zone: Paid Visitors' Parking area for buses (25 Nos.), 4 wheelers (100Nos) and 02 wheelers (150 Nos). Suitable infrastructure to be provided for revenue collection.

C) Science Park (Approximate area of science park 20000 sq. mtr)

A well-developed open air Science Park spread over an approximate area of 20,000 sq. mtrs. shall be one of the major attractions of the Science City. The entire area of the plot shall be developed in such a manner so as to make effective and fruitful use of contours, terrain, ups and downs, gorges, plains etc. as far as practical. There should be properly planned internal roads for pedestrian visitors as well as for vehicular movement for Visitors, VIPs and security purpose. Free movement of Fire tender should also be considered adequately.

Science Park should consist of following facilities;

1. Lawns & Hedges, Flowerbeds, Pathways, Shady and tall trees, Aromatic plants
2. Medicinal plants corner, Spices garden & Ornamental plants areas
3. Rosary, Cactus and bonsai gardens
4. Plant nursery
5. Hedge-maze
6. Bio Dome
7. Water-bodies (Natural and artificial for water based exhibits)
8. Musical Fountain with seating arrangement for viewers
9. Picnic Area with drinking water outlets
10. Rock garden / Geological park / Eco park / Fossil park
11. Nature Trail
12. Butterfly garden
13. Area with platforms for three dimensional science park exhibits explaining various principles of science and technology.
14. Weather Station
15. Large/Medium sized artifacts of historical importance with befitting weather protection
16. Pre-historic Animal Park with Light and Sound Show / Laser Show covering an area of about 3000 sq. mtrs.
17. Multi cuisine Food Court
18. Wash Rooms at strategic locations
19. Mini Botanical Garden for Special Plants species

For easy movement of visitors from Entry Gate Complex to the Main Exhibition Complex, there may be a facility of **battery/solar energy operated vehicles** in the science park with designated boarding and alighting stations on appropriate charge.

Science City, Hyderabad is to be developed with an aim of becoming **self-sufficient**. Naturally, it must have essential elements of high standard and also the unique features and facilities which should appeal the common people. There must be sufficient opportunities for the visitors/groups to spend ample time with their families and children without any inconvenience.

D) Major Facilities: In addition to the Open Air Science Park, the proposed Science City will have following major indoor facilities.

Group I - Science Exposition Halls, Panorama, Space Odyssey etc.
Group II - Exhibit Development Laboratory, Office and Utility Spaces.
Group III - Auditorium, Temporary Exhibition Hall(s)

Group I – Science Exposition Hall, Panorama, Space Odyssey etc. (Total covered area 10000 sq. mtrs)

The Main Exhibition Complex would accommodate following facilities;

1. **Entrance Lobby/Reception–**A double height area for making an appealing entry area with a few prominent exhibits. This area should serve the purpose of receiving, informing, guiding visitors etc. Visitors should be able to find clear ways to reach various facilities located in the main exhibition complex.

   Approx. area – 300 sqm.

2. **Thematic Science Exhibition Halls (4Nos) -** Roughly 500 - 600Sqmtr each for interactive science exhibitions on various themes of Science & Technology such as Space, Bio-technology, Climate change, Nano-technology, Nuclear Science, Energy, Bio-diversity, Fundamental science etc. Exhibition halls should have ample natural light and ventilation as they are not expected to be air conditioned. However, adequate protection from too much natural light, rain etc. will also have genuine consideration. Visitors should be able to have easy access to the exhibition halls. It would be an added advantage if the exhibition halls could be provided with single but wide entry and exit door.

   Approx. area – 2400 sqm.

3. **Spherical Dome Theatre (Space Odyssey) –**An air-conditioned Spherical Dome Theatre with digital projection facility from inside will be one of the major attractions of the science city. The **18-meter diameter dome** with a seating capacity of 200 should also have adequate spaces for projection room, UPS/Battery room, AC plant and other allied operation areas. Surrounding circular spaces of the dome theatre may be properly planned/designed for optimum use of space. The dome theatre will have sufficient fire escape route(s).

   Approx. area –2250 sqm.

4. **Digital Panorama**

   A large panorama hall with digital projection system will be another key attraction of the science city. For Panoramic projection up to 270^0 the space may be created. There should be appropriate entry/exit walkways for reaching the viewing platform from outside of the hall. Panorama will be an air-conditioned facility with a provision of accommodating roughly 75 standing/sitting visitors at a time on the viewing platform.

   The panorama hall needs to be designed in such a manner that while standing/sitting on the viewing platform, one should be able to view entire 270^0 of the panoramic scene of proportionate height all around the hall. Inside the hall, there should not be any natural light coming in. The space around the panorama may be properly utilized for visitors' movement, conveniences and allied services/exhibitions.

   Approx. area – 2500 sqm.

The digital panoramic show is expected to be of 10-20 minutes duration and visitors will have a unique immersive experience of its kind.

5. **3 D Science Theatre-** A moderately sized (150 sq. mtr approximately) 3-D theatre having a seating capacity of 50 – 60 visitors at a time needs to be incorporated in the main exhibition complex. It should have separate entry and exit points and the theatre needs to avoid natural light. The facility will be air conditioned with stepped seating arrangement. Certain area of the theatre is required for housing projection facilities and screen at one end of the hall at the centre. Since stepped seating arrangement is desired, ceiling height of the hall needs appropriate consideration.

Approx. area – 150 sqm.

6. **Capsule Simulator –** Floor mounted, six degrees motion, Capsule Simulator will be another key attraction of the Science City. The capsule simulator having seating capacity of 25-30 will be suitable for Science City Hyderabad. An approximate area of 200 sq. mtr may be needed for simulator/s.

Approx. area – 200 sqm.

7. **Science Show/Demonstration Hall –** In the main exhibition complex, there may be an enclosed but high-visibility area earmarked for Science Shows / Demonstrations where certain interesting demonstrations in Physics, Chemistry, Electricity, Sound, Light, Heat, Nanotechnology, Life Sciences etc. may be conducted at regular intervals. There may be sitting arrangement for about 50-60 visitors. A glass partitioned area would be preferred. The area needs to be air-conditioned. There may be space for demonstrator at an elevated platform so as to enhance visibility. The sitting arrangement can also be semi-circular around the demonstrator. An approximate area of 200 sqm. may be sufficient for the Science Show hall.

Approx. area – 200 sqm.

8. **Innovation Space & Design Studio –** An Innovation Lab spread over an area of 350 sq. mtr having 3-4 smaller portioned areas such as small workshop, laboratories, robotic area, computer centre, training hall, hobby activities, etc.

Approx. area – 350 sqm.

9. **Souvenir Shop–** One of the attractive features of the Science City would be a Souvenir Shop. It may be located in such a way that visitors can't miss it. It may occupy an approximate area of 150 Sqm.

Approx. area – 150 sqm.

10. **Allied Visitor Facilities/ Conveniences & Circulation areas–** In the main exhibition Complex since there will be large number of visitors continuously moving around, there should be sufficient allied facilities such as drinking water, rest rooms, sitting areas, **food court** for accommodating around 150 persons at a time, elevators etc. A suitable area for ATM counter may also be appropriate to be included here. In case, the food court is not

accommodated inside the building and thought off as a separate adjacent facility, the same may preferably be considered in pre-fab steel structure.

Approx. area – 1500 sqm.

Group II – Exhibit Development Lab, Office and Utility Spaces

Adjoining the main exhibition complex, there may be Group II facilities consisting of spaces for Office, Library, Conference/Meeting Hall, Exhibit Development Lab (Maintenance Workshop), Store, Pantry, etc. The areas for various utility spaces are approximately as below.

i.	Office	-	400 sq. mtr
ii.	Library / Information Centre	-	100 sq. mtr
iii.	Conference Hall / Meeting Room	-	100 sq. mtr
iv.	Exhibit Development Lab/Workshop	-	300 sq. mtr
v.	Stores	-	250 sq. mtr
vi.	Pantry, Toilet facilities etc.	-	100 sq. mtr

Approx. area – 1250 sqm.

Group-III Auditorium, Temporary Exhibition Hall(s) etc.

Science City, Hyderabad is expected to generate sufficient revenue from its programmes, activities and facilities so that it becomes a self-sufficient entity. In order to achieve this goal, it should have infrastructure facilities which can be hired by like-minded and other organizations. A Professional quality auditorium having seating capacity of 350- 400 is required to be set up where large meetings, public lectures, cultural programmes and shows can be held is required to be set up. Such an auditorium should have all the allied infrastructure facilities such as sufficient sized lobby, air-conditioning, professional lighting, befitting dais, sound system, seating arrangements, drapery, anterooms, restrooms, corridors, projection facilities, etc. Temporary Exhibition Halls are required for holding exhibitions of temporary nature from time to time. Temporary exhibition hall(s) with appropriate natural and artificial light, ventilation and power needs to be designed and located adjacent to the Auditorium.

Approx. area – 1250 sqm.

Fair Convention Centre / Open Ground – Adjacent to the temporary exhibition halls, there should be an open ground approximately of area 4000 – 6000 sq. mtrs. The ground will be available for hire for Fairs / Melas/ Events / Temporary exhibitions etc. The fairground needs separate see-through fencing.

4. Capacity:

The Science City is being planned for an average intake of about 2000 visitors per day (over 8 hours). A typical holiday crowd may reach a figure as high as 5000.

5. Finance & Time:

The cost of building and structures should not exceed **`102.00 crore** including sanitary & plumbing, electrical, AC services and towards expenditure on all other services like science park, car parking, outdoor visitors' amenities, lift, firefighting, CCTV etc. The Science City will be opened to the public in **36 months** from the date of start of the project work. Out of which the building construction time with all allied services shall be 30 months.

6. Architectural Feature:

The architecture will reflect the right combination of attractive and modern design to suit the Science & Technology Character, economy, efficient, functional utilisation of space and cost effectiveness. The design to conform to green norms, use eco-friendly material, **suit local architecture** with a blend of modernity to suit the Science & Technology Character. The buildings may be having futuristic striking feature(s). However, it is expected that the design should utilize the natural terrain of the plot.

7. Electrical Power:

The approximate electrical peak load requirement for the building and periphery shall be 1250KVA. The H.T. transformer, switchgear etc. are to be located suitably.

8. Time Schedule (in weeks from the date of Letter of Intent):

The construction activities of all the buildings of Science City complex shall commence simultaneously and accordingly the timeline for submission is given below:

Time in weeks	Description of services
0 – 6	Architectural planning and freezing of ideas/schemes with 3D walkthrough after elaborate discussions with client and conducting topographical survey, Soil investigation work at site.
0 – 12	All Architectural & Structural Design and Drawings of Gate complex/ Entry Plaza and Visitor Facilities.
0 – 18	Model of buildings, approval of Statutory Bodies, Structural Design Vetting, preparation of Tender Documents including Tender Drawings and detailed BOQ.
0 - 26	Execution drawing of all the work like Civil, S&P, Electrical and services like Air-conditioning work, Firefighting, Acoustics etc.

Services required from the Architect and necessary terms and conditions for the architectural work relating to Science City, Hyderabad.

1. Section-wise break up of covered area of construction as approved by the competent authority of the National Council of Science Museums. This must be adhered to, subject to the ceiling of cost while preparing the architectural plan and realistic estimate of the building.

2. i) All services such as electrical, sanitary and plumbing, water supply, fire detection & alarm, firefighting and other installations mandatory under statutory regulations prevailing in the State of Telangana, air-conditioning of covered areas as specified, acoustic treatment wherever essential, Lifts and other special fixtures and installations necessary for the exhibition halls (but excepting movable furniture and fixtures) shall be included in the work. The Architect shall provide necessary supervision and checking in the interest of the project, as may be decided by the Council to the extent required for ensuring quality of materials used, workmanship of the contractor. Day-to-day construction supervision will be carried out by the Council. Necessary travel, food and lodging arrangements for the Architect or his associate consultants/ representatives at the proposed place of construction /zonal office of the Council / NCSM Hqrs. as and when required shall be made by the Architect at their own expenses and nothing extra shall be paid for the same.

   ii) **The Architect shall set up his own office or have an office of his associate consultant in the city of Hyderabad throughout the tenure of the project** (consent letter of associate local consultant to be submitted to NCSM as the case may be), who shall be responsible for providing day to day clarification of drawings as per requirement along with monitoring & checking of the project construction work as per drawings & specification. Nothing extra shall be paid to the Architect on account of the above.

3. The Topographical Survey by total station and geo-technical investigation work required for the design purpose of the structures and other facilities of Science City shall be arranged by the Architect at their own cost. A copy of the topographical survey & contour map of the plot along with geo-technical investigation report to be submitted to NCSM along with the tender document for the construction work at no extra cost.

4. It shall be the responsibility of the architect to get the structural design & drawing of the Science City buildings vetted through IIT's / NIT's / Central Building Research Institute(CBRI) at their own cost. Original copy of the design vetting report and vetted drawings along with structural design calculation to be submitted to NCSM along with the tender document for the construction work at no extra cost.

5. The Consultant/Architect shall undertake all applicable Statutory approvals required for the project at their own cost and shall be fully responsible for the same. However, any fees that may be payable to the authorities for such sanctions/approvals against original demand/receipt shall be borne by NCSM.

6. There shall be preferably one tender for civil, sanitary and plumbing work and separate tender each for electrical, air-conditioning, firefighting, acoustic treatment work but all the tenders must be prepared and the work shall be awarded in such a manner so that the works on different structures can be initiated simultaneously by the contractor(s) and are properly synchronised and co-ordinated during execution.

7. The work for laying of conduits in concrete, either in roof slab or vertical columns and walls for electrical, fire detection systems, telephone lines and such other facilities shall be included in the civil tender after preparing the actual layout for these.

8. Locally available durable raw materials shall be considered for use in construction as far as practicable.

9. All detailed drawings necessary for execution of the work stamped 'Good for Construction' are to be submitted by the Architect at the time of preparation of the tender papers in Stage II so that no work is held up for lack of drawings after the award of work to the contractors.

10. Architect shall not make any alterations, deviations, additions or omissions from the approved design, rates and estimates without the prior approval of the Council and all instructions to the contractor affecting the rates and provisions of contracts shall be issued only after obtaining prior approval of the Council.

11. The lumpsum remuneration quoted by Architect is inclusive of supplying all **'Good for Construction' drawings including revision drawings** (minimum six sets hard copy as well as soft copy (editable format)) required for construction work and drawings necessary for statutory approval of local authorities, however, it is exclusive of any fees that may be paid to local authorities for sanction of Plans against official receipt or sanction of plan or cost of advertisement of tenders for the project. After the completion of the project, the architect shall submit to NCSM six sets hard copy of completion drawings (as- built) of building & services along with the soft copies (editable format) at no extra cost.

12. In consideration of the aforesaid services duly rendered, the professional fees of the Architect shall be reimbursed in 4 (four) stages as stated below:

Stage-I: Inspection of the site, study of local requirements, preparation of master plan including landscape architecture, science park, garden, roads etc., preparation & submission of preliminary plan, elevation, section and perspective drawings along with walkthrough presentation (covering both external & internal view) of the building and structure with proposed arrangement of facilities /galleries for covered area not exceeding 14000 sq.mtr for approval of NCSM. Conducting topographical survey and Soil Investigation work with submission of survey drawings & soil test report to NCSM.

Post approval, preparation and submission to the Council an architectural model of the entire plot with science park, building and other elements in the scale of 1:500; preparation and submission to the council **two sets** of identical architectural model of the building in the scale of 1:200; The architectural models shall be prepared with durable wood, acrylic and such other materials to show the exterior as well as interior views.

10% of Architect's fee based on Architect's fee on lump sum remuneration.

Obtaining approval of local authority for the construction after obtaining written approval of National Council of Science Museums on the master plan and preliminary estimate.

10% of Architect's fee based on Architect's fee on lump sum remuneration.

Stage-II: Preparation of detailed plans, sections, elevation and perspectives, layout and circuit drawings, structural calculations, specifications, schedule of quantities and detailed estimates with supporting measurement sheet for civil, sanitary, plumbing, electrical air-conditioning, acoustic fire protection and all other works as necessary for the proper functioning of Science City and as entrusted by National Council of Science Museums. Detailed drawings ready for execution in metric scale (1:100 or 1:50 depending on the sizes of the elements or structures), preparation of bar bending schedule and submission of

completed tender papers in computer printout formats in adequate numbers for calling tenders including soft copy (editable format) of the complete tender document. Detailed estimate shall be prepared based on the rates of latest C.P.W.D. Schedule Plus approved percentage to bring the rate up to date as allowed by the appropriate authorities or prevailing local latest PWD schedule of rates may be adopted. For special items not covered under the C.P.W.D. schedules, rates may be worked out on the basis of budgetary quotations received from manufacturers/vendors or through detailed rate analysis. The detailed plans and estimate shall be prepared by taking all existing factors and site conditions into consideration and no major change involving increase in expenditure is permissible after acceptance of the detailed plan by National Council of Science Museums.

a. On release of the tender document of the individual work: (10% of Architect's fee on lump sum remuneration)

(i) For Civil, sanitary and plumbing work: - 70% on 10% of Architect's fee on lump sum remuneration.

(ii) For electrical, air-conditioning, firefighting and acoustic treatment work etc.: - 30% on 10% of Architect's fee on lump sum remuneration.

b. After finalisation of tender procedure and selection of prospective agency: (10% of Architect's fee on lump sum remuneration)

(i) For Civil, sanitary and plumbing work: - 70% on 10% of Architect's fee on lump sum remuneration.

(ii) For electrical, air-conditioning, firefighting and acoustic treatment work etc.: - 30% on 10% of Architect's fee on lump sum remuneration.

c. After submission of all 'Good for Construction' drawings of the individual building, structure etc.: (20% of Architect's fee on lump sum remuneration)

(i) For Civil, sanitary and plumbing work: - 70% on 20% of Architect's fee on lump sum remuneration.

(ii) For electrical, air-conditioning, firefighting and acoustic treatment work etc.: - 30% on 20% of Architect's fee on lump sum remuneration.

Stage-III: Minor amendments of drawings as and when the necessity arises during the stages of construction and furnishing all necessary clarifications to the contractors. Review of bar bending schedules and fabrication drawings to be prepared by Architect. Periodic supervision at site as and when necessary for interpretation of drawings and specifications and to ensure that the execution of work proceeds generally in accordance with drawings, specifications and conditions of contract; checking of contractor's bill and issue of certificate for interim bills whenever so needed by Council.

25% of Architect's fee based on the progress of the work on prorata basis.

Stage-IV: Checking of final bill of contractors with the assistance of engineers of Council, submission of completion certificate in the format required by the appropriate authorities. Preparation of required number of sets of completion drawings of civil, electrical and other works as finally executed at site which may be necessary for reference and records of the council and other local authorities based on the feedback data to be collected by the Architect's representative during their periodic supervision at site in consultation with the Engineers of the council and make-up drawings showing modifications, received from the site.

Balance fees of the Architect after completion of work.

13. The cost of the project shall be the actual cost of work including cost of building, structure, sanitary, plumbing, mechanical and electrical work, ducts, electrical fitting and fixtures, air-conditioning work, acoustic work landscape on which the Architect have rendered professional services but shall exclude the cost of the following:
    a) Cost of Land
    b) Fees for plan approval and services connection deposits viz. Water supply, Sanitation, Electricity, Telephones, etc., fees payable by the Council to the local statutory bodies.
    c) Establishment cost of the client.
    d) Fees of the Architect
    e) Cost of exhibits, equipment, exhibits on display, accessories, display systems and other expenditure exhibits/shows etc.
    f) Other contingent expenditure like press advertisement, publicity, legal expenses etc.
14. Any other services incidental to or connected with the said work usually and normally rendered by architect and not referred to in any of the items referred to above.

II. Evaluation of bid for selection of architect:

Evaluation shall be made under Quality and Cost Based Selection (QCBS) System. Under QCBS, the technical proposals based on available data in the bid and personal presentation before the committee will be allotted weightage of 70% and only agencies securing minimum 80% marks in technical evaluation shall be considered technically qualified.

Technical evaluation shall be based on the following criteria:

Aesthetic & innovativeness	**Functionality**	**Cost effectiveness**	**Ease of Construction**	**Integration & future development**
20 Marks	40 Marks	20 Marks	10 Marks	10 Marks

Technical proposals will be checked and the bidder will be ranked accordingly. The agency scoring the highest in technical bid evaluation would secure 70 marks and the score(s) of the other bidder(s) shall be evaluated as per illustration cited below: -

Bidders	**Marks obtained in Technical Bid Evaluation**	**Calculation**	**Normalized Score**	**Remarks**
Highest technical scorer	Say 90	90x70/90	70.00	Qualified
2nd Highest technical scorer	Say 85	85x70/90	66.11	Qualified
3rd Highest technical scorer	Say 80	80x70/90	62.22	Qualified

Financial proposals **(lump sum basis)** of only those agencies who are technically qualified shall be opened publicly on the date and time specified to be notified separately, in the presence of the agency's representatives who wish to attend. Financial proposals will be allotted weightage of 30%.

Financial proposals will be checked and the bidder will be ranked accordingly. The lowest financial bid would secure 30 marks and the score(s) of the other bidder(s) shall be evaluated as per illustration cited below:

Bidders	**Lumpsum cost given in the financial bid**	**Calculation**	**Normalized Score**
Bidder L-1	1000	1000x30/1000	30.00
Bidder L-2	1100	1000x30/1100	27.27
Bidder L-3	1200	1000x30/1200	25.00

The numerator will be the charges as lumpsum fee quoted by L-1 and denominator will be the bidder charges as lumpsum fee quoted by respective bidders.

The agency scoring the highest combined score in technical and financial bid evaluation shall be considered for this work.

III) Termination & Penalty:

i) The contract may be terminated at any time by NCSM upon one month's notice in writing being given to consultant, if the Consultant's work is not found to be satisfactory according to the terms of the contract. In case the contract is terminated on account of Consultant's/Architect's work not being satisfactory, NCSM will get the work done at the risk and cost of the Consultant/Architect.

ii) The Consultant/Architect shall ensure at detailed design stage that the project is completed within approved project cost. For completion of the project, the actual cost of works executed at site based on details / drawings given by the Consultant, should not exceed by 5% (five percent) of tendered cost on the basis of which the project cost is approved.

In case the variation in the actual cost of work executed for completion of the project as per the approved scheme is more that 5%, then the extra expenditure beyond 5% shall be recovered from the Consultant's/Architect's fees upto the extent of maximum 10% (ten percent) of total consultancy fees. Further, no bonus shall be payable to the Consultant in case of saving in executed quantities as compared to quantities given at pre award stage.

However, the above guarantee by Consultant on cost variation of more than 5% is on the understanding that there is no major deviation in the approved scheme of the project as finalized during Stage-I. In case there is a major change in design scheme, which could affect the quantities & cost, the Consultant will revise the design and find ways and means of completing the project within the cost as approved by the client at the sanction stage. Final decision in this matter will be taken as per discussions between NCSM and Consultant at that stage. Nothing extra shall be payable to the Consultant in this regard and same is deemed to be included within the fee quoted by the Architect/Consultant.

iii) Since time is the essence of the contract, hence in case the Consultant fails to complete their scope of work within the time schedule as mentioned above owing to reasons attributable to consultant, liquidated damages @ 0.5 % per week of the total order value subject to a maximum of 10% of the total fees' payable shall be levied on the Consultant. NCSM shall be entitled to deduct such damages from the dues that may be payable to the Consultant.

IV) Force Majeure Clause:

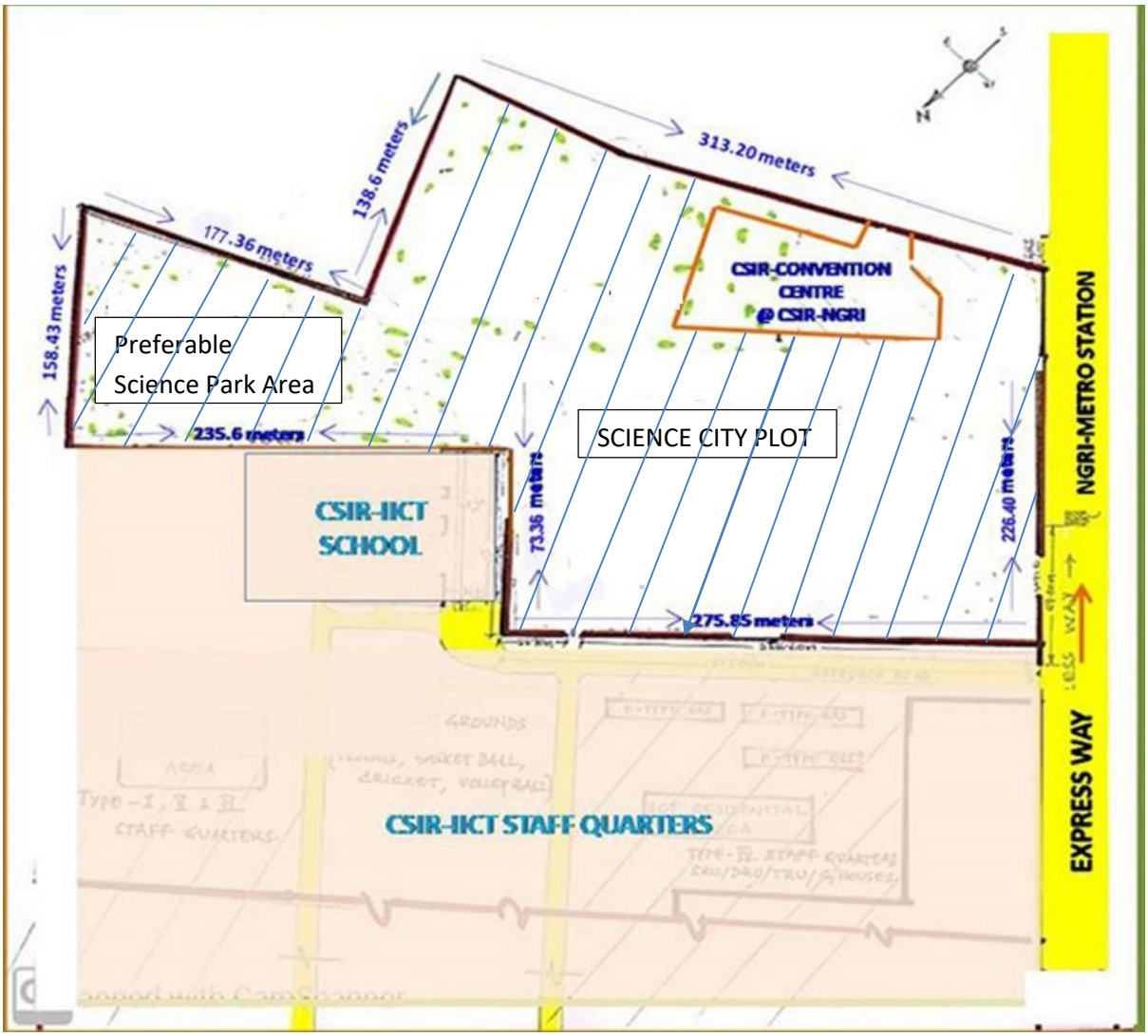
NCSM will not be responsible for any delay/stoppage of work due to force Majeure conditions like natural calamities, civil disturbances, strikes, war, pandemic etc. and losses suffered, if any, by the consultant on this account. NCSM shall not be liable in any way to bear such losses and no compensation of any kind whatsoever will be payable by NCSM to the Consultant.

V) LAWS & JURISDICTION:

The Contract shall be subject to Indian Laws. The Courts in Kolkata alone will have jurisdiction to deal with matters arising from the contract, to the exclusion of all other courts.

VI) PLOT LAYOUT DRAWING:

The hatched area in the layout drawing is available for setting up of the Science City.


313.20 meters
138.6 meters
177.36 meters
158.43 meters
235.6 meters
73.36 meters
226.40 meters
275.85 meters
CSIR-CONVENTION CENTRE @ CSIR-NGRI
Preferable Science Park Area
SCIENCE CITY PLOT
CSIR-IICT SCHOOL
CSIR-IICT STAFF QUARTERS
NGRI-METRO STATION
EXPRESS WAY