

MUSEUM FOR CULTURE

A THESIS

Submitted in partial fulfillment of the requirements for the award of
Bachelor of Architecture degree

By

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DEPARTMENT OF ARCHITECTURE
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SATHYABAMA

INSTITUTE OF SCIENCE AND TECHNOLOGY
(DEEMED TO BE UNIVERSITY) Accredited

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SALAI, CHENNAI - 600 119

NOVEMBER 2021



DEPARTMENT OF ARCHITECTURE

BONAFIDE CERTIFICATE

This is to certify that this Thesis Report is the bonafide work of **Chandini Kumar (37210008)** who carried out the Thesis entitled “**Museum For Culture**” under our supervision from July 2021 to November 2021.

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I, **Chandini Kumar** hereby declare that the Thesis Report entitled “**Museum For Culture**” was done by me under the guidance of **Ar. Monisha. G** (Internal Guide), **Ar. Ramesh Kumar. A** (Internal Review Member), and **Ar. Nandini Vanzara** (External Guide) Sathyabama Institute of Science and Technology is submitted in partial fulfillment of the requirements for the award of Bachelor of Architecture Degree.

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Chandini Kumar.

ABSTRACT

Museums are intended to house information and collect objects and materials of cultural, religious, and historical significance, as well as to acquire, conserve, research, communicate, and exhibit tangible and intangible heritage for the purpose of education and enjoyment.

Museums are critical to the preservation of local culture. With careful documentation and artifact preservation, a culture can be recorded and remembered regardless of its future. People from various cultural backgrounds can also share and understand it. Museums are important for cultural preservation for a variety of reasons, including the following: they document daily life, educate others about local culture, display alternative historical perspectives, and connect people from diverse backgrounds.

Museums are lauded as cultural gathering places as well as hubs of information, understanding, and creativity. There is, however, no shortage of evidence that museums around the world are failing to connect with minority groups and vulnerable people.

The purpose of the museum of culture in Mahabalipuram is for visitors to learn about Tamil Nadu's culture and heritage. They must educate the culture and way of life in order for it to be respected and survive rapid globalization. The most effective way to accomplish this is to exhibit local cultures in museums in a respectful manner.

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1. INTRODUCTION

Tamil Nadu is the world's oldest civilization, with a rich culture and heritage that dates back thousands of years and continues to thrive. It is well-known for its magnificent architecture, temples, culture, cuisines, festivals, and apparel, among other things. My aim for this project is to highlight the state's unique characteristics and cultural influences through architecture

1.1 MUSEUM

- A museum's role is to collect cultural, religious, and historical objects and materials, preserve them, research them, and present them to the public for education and enjoyment.
- It promotes understanding and appreciation of different groups and cultures.

1.2 CULTURE

- Culture refers to the characteristics and knowledge of a specific group of people, such as religion, social habits, music, and the arts.
- Culture is a complex set of distinctive achievements, beliefs, and traditions that serve as the foundation for spiritual or social groups.
- The culture of every society is known through its manifestations like language, art, and architecture, and analysis within the field of culture is said to be the study of cultural manifestations.



Fig 1.1 Museum



Fig 1.2 Picture portraying different cultures

1.3 MUSEUM FOR CULTURE

- Culture is the legacy of a group's or society's physical artifacts and intangible characteristics that are inherited from previous generations, preserved in the present, and bestowed for the benefit of future generations.

- The museum for culture, in the context of India, there is a dearth of such spaces that have a significant impact on society. As a result, there is a gap in the promotion of its diverse cultural heritage, which has been limited to textual documents and photographs.
- Literature, dance, song, drama, arts, and other forms of Tamil Nadu culture are on the verge of extinction or are practiced on a small scale in a few parts.

1.4 AIM

- To design a museum and library dedicated to the culture of Tamil Nadu.
- To create a connection between architecture and society through culture.

1.5 OBJECTIVE

- To create a clear user experience for the visitors.

1.6 IDEOLOGY

- Museum for culture is meant to showcase the culture and concepts of Tamil Nadu so that the general public or the visitors can understand and appreciate the part of tradition and values.
- The idea of the thesis is to explore, understand and showcase the culture of Tamil Nadu for future generations to appreciate culture.



Fig 1.3 Culture of TN

2. LITERATURE STUDY

2.1 TYPES OF MUSEUMS

Museums are the most important architectural structures. In the architectural world, it has become a culture. Many museums are themed in various ways.

The museum can be of numerous types based on the type of collections and their function.

2.1.1 ART MUSEUM

Art museums showcase both historic and modern artistic achievements. Art museums help visitors understand, appreciate, and enjoy art through exhibitions and educational programs. Paintings, sculptures, prints, drawings, photographs, ceramics and glass, metalwork, and furniture are among the items on display.

Art museums showcase a wide range of cultural traditions from throughout the world.

2.1.2 HISTORY MUSEUM

History museums are dedicated to increasing awareness and knowledge of history, as well as its significance in comprehending the present and anticipating the future. Objects collected by history museums typically include fine art, furniture, clothing, papers, and other materials. Some history museums include a region's art or natural history as well as its cultural history.

2.1.3 NATURAL HISTORY MUSEUM

Natural history museums are dedicated to sharing knowledge about all aspects of the natural world. Many natural history museums began as centers of scientific research, with collections collected through research expeditions and fieldwork. Most major natural history museums nowadays integrate scientific study with a strong focus on public teaching. Natural history museums consist of collections and shows which are generally focused on nature and culture. They display natural art in order to teach the public about dinosaurs, ancient history, and anthropology.

2.1.4 SCIENCE MUSEUM

Science museums and science-technology centers are organizations dedicated to increasing public understanding of science and scientific achievements. They

encourage curiosity and let people learn at their own pace while studying the principles, concepts, and implications of science and technology through interactive exhibition approaches and participatory experiences. Visitors can learn about computers, robotics, machines, the human body and senses, chemistry, physics, and astronomy through common exhibits.

2.1.5 OTHER MUSEUMS

Museums are classified into four categories: art, history, natural history, and science. These disciplines may be integrated into some museums. There are also many specialized museums that focus on certain topics or sorts of collections, such as museums of local history, music, native peoples' cultural heritage, or maritime history. , KhalsaObjects, on the other hand, justify museums; that is, the type of museum is determined by the exhibits on show.

2.2 TAMIL NADU

- Tamil Nadu, the land of Tamilians, is a southern Indian state. It is the eleventh largest state in India.
- Tamil Nadu is well-known for its temples, architecture, cuisine, dancing, and music, among other things.
- Tamil is the most widely spoken language, followed by English in larger cities including the metropolitan capital city of Chennai.
- The famous kingdoms such as Chola, Chera, Pandya, and Pallava from ancient and medieval times originated from Tamil Nadu.
- Hinduism is the main culture of Tamil Nadu, accounting for 88 percent of the entire population.
- Tamil is the official spoken language of Tamil Nadu.
- It is the eleventh largest state in India.

2.3 HISTORY OF TAMIL NADU

- Tamil Nadu has a long history dating back thousands of years. During the era between the first and fourth centuries AD, the first prominent ruler, Karikalan, occupied the present Thanjavur and Tiruchirapalli districts.
- During the latter half of the fourth century AD, the Pallavas rose to prominence and dominated the south for another 400 years, governing a significant portion of Tamil Nadu from Kanchipuram.

- By the century AD, the Cholas had reclaimed dominance.
- Raja Raja Chola captured the kingdom of the eastern Chalukyas and overthrew the Cheras and Pandyas. Chola's power began to wane about the 13th century. With the Cholas' decline, the Pandyas rose to prominence in the early 14th century.
- The Muslim conquest of the south in the 14th century resulted in the formation of a powerful state known as the Vijayanagara empire.
- The battle of Talikota in 1564 brought an end to the Vijayanagara empire.
- The East Indian Company founded the first factory in Masulipatnam, Andhra Pradesh, in 1611. Tamil Nadu is one of the earliest places in India where the British established their business presence.
- In 1901, this state was known as the Madras presidency; afterward, the Madras province was renamed Tamil Nadu. When India gained independence in 1947, the Madras presidency was reorganized into the Madras state, which included Tamil Nadu, Andhra Pradesh, Kerala, and Karnataka.
- Madras state was divided in 1953 into Andhra Pradesh, which consisted of Telugu speaking areas, and Madras, which consisted of Tamil speaking areas, Tamil Nadu was given the name in 1968, and Madras, the capital city, was renamed Chennai in 1996.

2.4 CULTURE OF TAMIL NADU

- The culture of Tamil Nadu is super-rich and truly vibrant; people place great value on culture, values, and traditions, which are obvious in their daily life.
- The state of Tamil Nadu's cultural legacy can be found in both cities and towns, as well as in the most remote corners of villages.
- The art forms of Tamil Nadu owe their roots to ancient periods and are performed and practiced with great devotion and enthusiasm, even today. People comprehend the ethnicity of their culture and follow the rites and traditions of the community.
- Most famous for ancient Hindu temples and Bharatnatyam dance, Tanjore painting, and Tamil architecture has developed significantly.

2.4.1 ART AND ARCHITECTURE

- Folk arts and crafts have a great traditional significance in Tamil Nadu, and they have been passed down from generation to generation. To welcome goddess Lakshmi, kolam, also known as rangoli, is drawn at the doors of every house before sunrise.
- Tamilians have developed the technique of spinning, weaving, and chiseling over the years, and their brilliance is represented in various art forms like sculpture, carving, and so on.
- Tamil Nadu is also rich in architecture, literature, and traditions that have been passed down through generations and can still be seen now.

2.4.2 MUSIC AND DANCE

- Tamil music has evolved, with Carnatic music being the most prominent style of music for the elite.
- Bharatanatyam is the official dance form of Tamil Nadu, and it is highly recognized throughout India. Other folk dance genres performed by local artists include parai, villupaatu, karakaatam, and kuthu paatu.

2.4.3 TRADITIONAL CLOTHING AND FOOD

- Women wear sarees, which are five to six yards of rectangular cloth made of cotton, silk, or other materials. The textiles and communal rituals influence the design, prints, and style. Kanchipuram sarees are one of the most well-known saree centers, especially during festival seasons.
- Lungi is worn by men with a shirt and Angavastra, a rectangular cotton cloth tied around the waist. Dhoti, a long-form of Lungi, is also a type of apparel.
- Idli, Dosa, Sambar, Vadai, and Upma are the most well-known South Indian dishes. The essential ingredients in Tamil cuisine are rice, lentils, grains, and vegetables. Rice is the staple dish given with sambar and coconut chutney.

2.5 STANDARDS

2.5.1 CIRCULATION AND PLANNING

The layout of public areas in a museum may be based on a simple concept of free

circulation around a single open-plan exhibition space or no more complex concepts related to generic interpretive structures.

A museum is a public collection of objects testifying to human cultural development. It collects, documents, receives, researches, interprets, and communicates these through the display.

The following museum types can be categorized according to the origin and nature of the items in the collection:

Art gallery: Collection of works of fine art (including Craftworks and graphics).

Cultural history museum:

Collection of devices, weapons, clothing, written documents, etc. which show the cultural development of a geographically restricted area (ethnological museum,

The open-air museum, local history museum).

Ethnology museum:

Works from the cultural heritage of traditional people and lost cultures.

Science museum

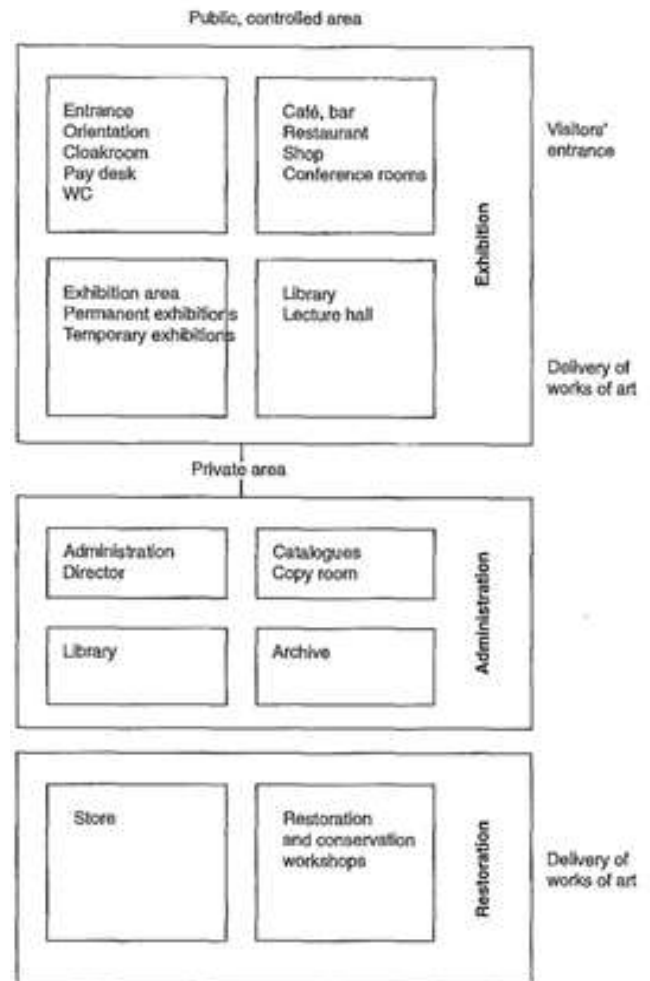


Fig 2.1 Museum and planning

Collection of educational and display material Connected with scientific and technical themes.

2.5.2 LIGHTING

There should be no direct daylight falling on museum objects as this could cause damage. Therefore display rooms should be provided with flexible lighting systems: no permanently built-in lights, no fixed wall and ceiling lights.

2.5.3 GUIDELINES FOR LIGHTING

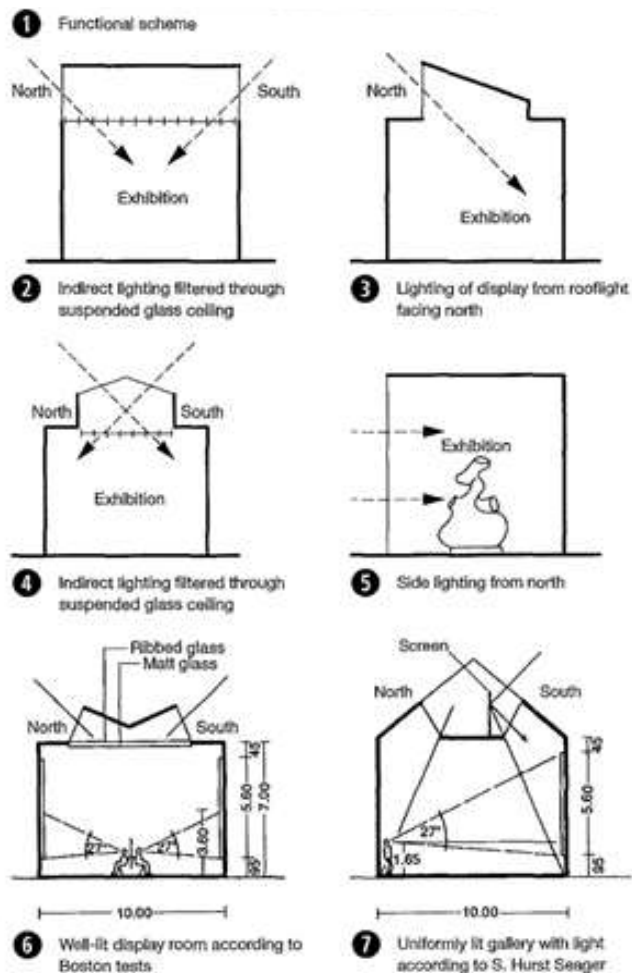
Very sensitive display objects

- 50–80 lx

Sensitive display objects - 100-150 lx

UV radiation must not exceed 25 W/m²-
150-300 lx

It must be possible to completely darken all display rooms. In public rooms where no items are displayed, e.g. entrance area, -café, library, the greater amount of daylight is desirable.



The lighting calculations for museums are highly theoretical: the quality of lighting is decisive. American tests can be more informative.

2.5.4 ROOM CLIMATE IN THE STORE AND THE DISPLAY AREAS

The Ideal temperatures in the store and the display areas are 15-18°C in the winter and 20-22°C In the summer. Except for short peaks, in the summer 26°C

should not be exceeded. Stores should not, therefore, be located in uninsulated attics, for example.

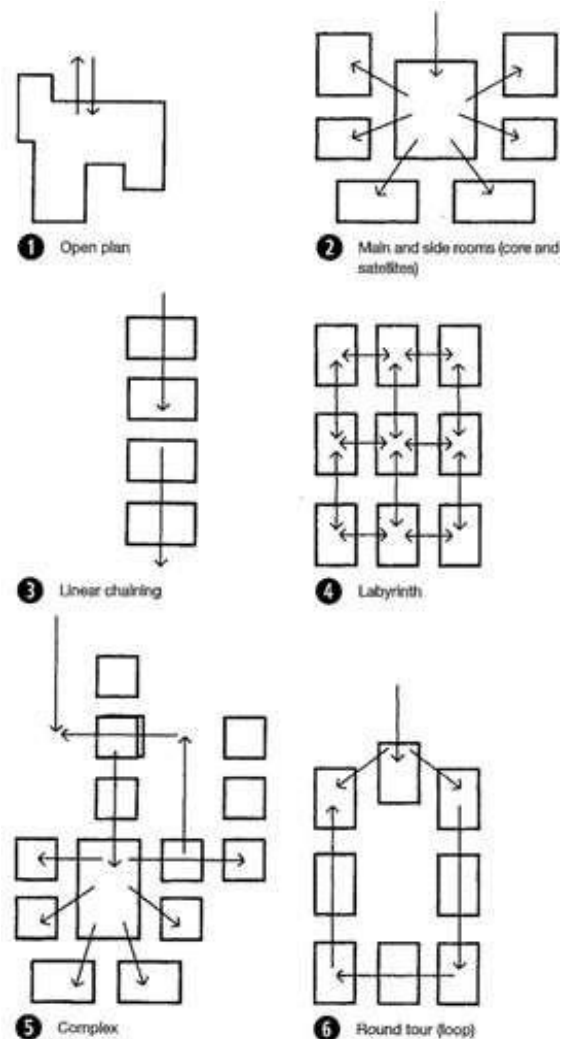
Because the reproduction of insects is very limited under 15°C, above all for science and ethnography collections a temperature of 12-13°C is optimal.

Photo and film material is relatively chemically unstable and the material should therefore be stored cool and dry at temperatures under 16°C (ideally at approx. 5°C).

The relative humidity in the store and the display areas depends on the displayed and stored materials: the optimal

values are for wood 55-60%, canvas 50-55%, paper 45-50%, and metals, max. 40%. It is important to avoid short-term variations in relative humidity: the variation within one hour should not exceed 2.5% or not more than 5% in one day. Seasonal variations should not be more than +5% in summer or -5% in winter. The changing flow of visitors in museums leads to continuous variation in the climatic parameters.

The decisive factor in the layout of display rooms is the relationship between the collection and the way it is to be displayed (display concept). There are the following basic types of layout 1 TO 6: **Fig 2.3 layout in the museum**



- Open plan → 1:

Large and visually autonomous items on display, free circulation, function rooms in the basement.

- Core and satellite rooms → 2: Main room for orientation in the museum or the exhibition, side rooms for autonomous displays (themes/collections)

Linear chaining → 3:

Linear sequences of rooms, controlled circulation, clear orientation, separate entrance, and exit.

- Labyrinth → 4:

Free circulation, guided route, and direction are variable, entrance and exit can be separate.

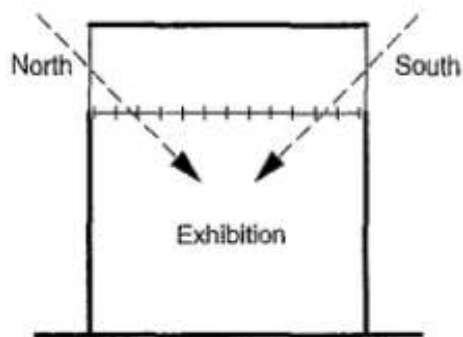
- Complex → 5:

Combined groups of rooms with typical features of → 1 TO 4: complex organization of collection and display concept.

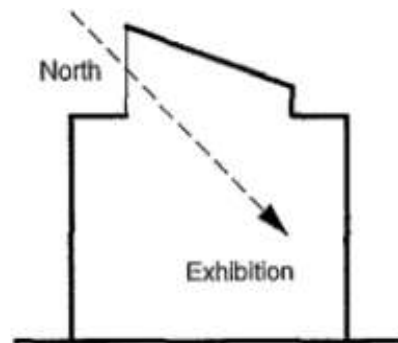
- Round tour (loop) → 6: similar to linear chaining → 3. controlled circulation leads back to the entrance.

Display concept	Spatial arrangement
oriented on display items	open plan → ①
systematically oriented	main and side rooms (core and satellites) → ②
thematically oriented	linear chaining → ③, round tour → ⑥
complex oriented	labyrinth → ④, complex → ⑤

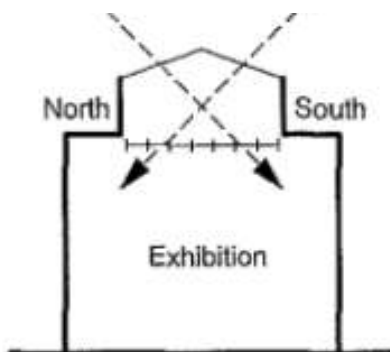
- The size and height of the display and storerooms depend on the dimensions of the works and the extent of the collection, but the minimum height is 4M clear.
- There should be no direct daylight falling on museum objects as this could cause damage. therefore display rooms should be provided with flexible lighting systems: no permanently built-in lights, no fixed wall, and ceiling lights.



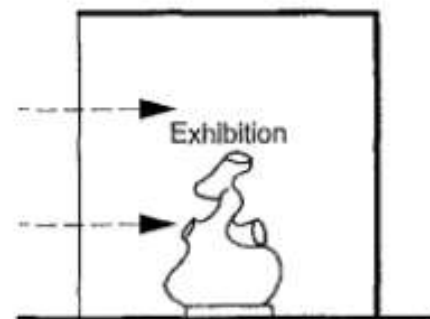
2 Indirect lighting filtered through suspended glass ceiling



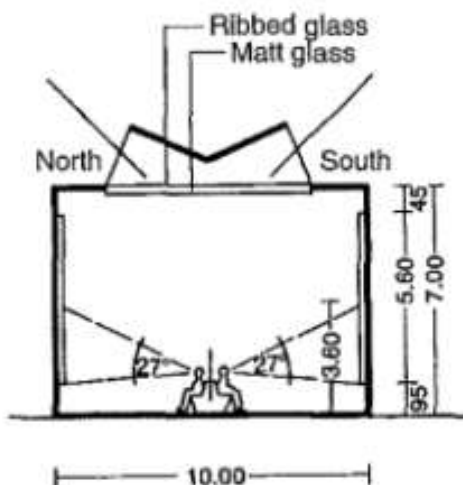
3 Lighting of display from rooflight facing north



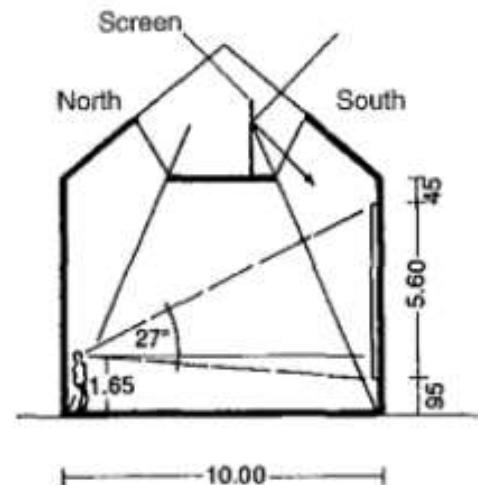
4 Indirect lighting filtered through suspended glass ceiling



5 Side lighting from north



6 Well-lit display room according to Boston tests



7 Uniformly lit gallery with light according to S. Hurst Seager

Fig 2.4 Viewing angles of exhibition

Fig 2.5 Minimum stair width in museum

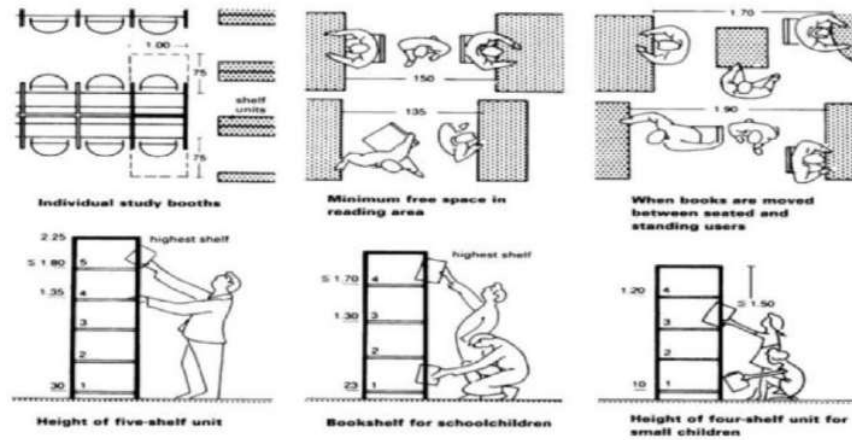


Fig 2.6 Minimum walking distance in museum

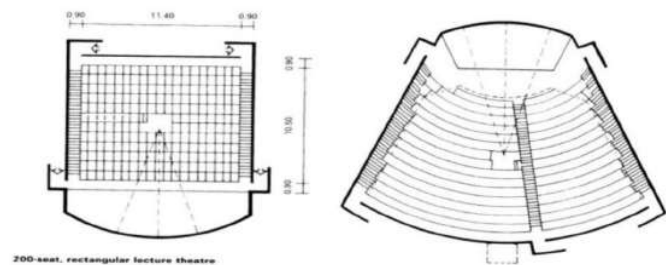
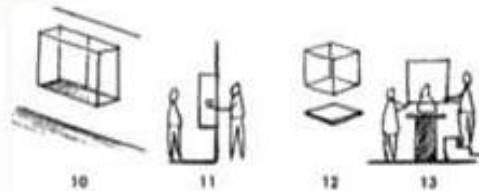


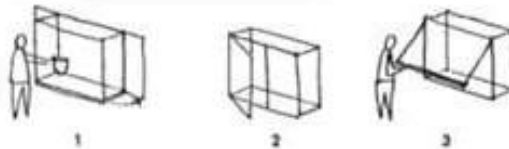
Fig 2.7 Auditorium in museum

2.5.5 DISPLAY CASES

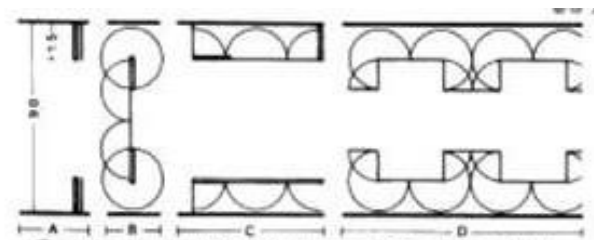
DISPLAY CASES



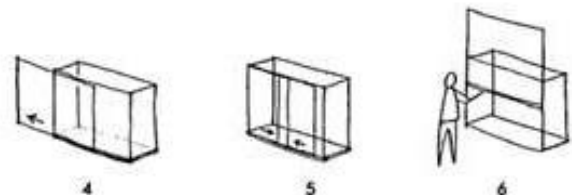
- 10/11 rear access: useful for large walk-in cases, but access corridor reduces gallery space; difficult to see the effect when dressing the case, and to make adjustment at front once dressed
- 12/13 lift-off 'hood' or 'hood' case: good visibility if constructed with edge-to-edge glass or perspex; covers too heavy to be manageable in larger sizes without risk to object displayed



- 1 hinged-side access: provides good visibility; case dimensions should relate to arm's length for dressing; if cases are placed together, fitting lining panels is difficult unless divided into convenient sections
- 2 hinged-front access: permits easy dressing; large cases may require a transom for stability, which will limit sizes of lining panels and inserted display blocks
- 3 top-hinged: strong opening stays are required for safety



(B) Exhibition room with folding screens (design: K. Schneider) allows great variety of room arrangements

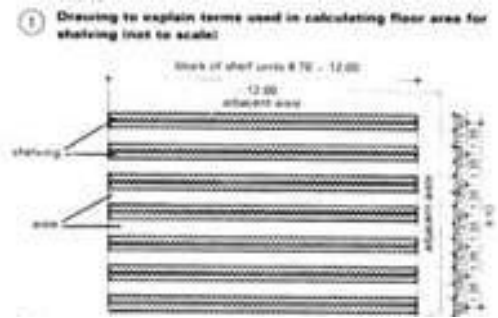
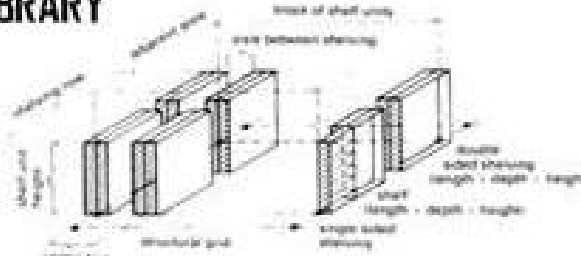


- 4 sliding front: provides good visibility, easy to dress; a single sliding panel may need support when fully opened; lining panels may need to be in sections to pass through the opening
- 5 two sliding panels: used where space is limited on both sides of the case; glass 'overlaps' when closed, and when sealed with dust-excluding strip, which may be distracting (some patent sliding systems provide a butt junction)
- 6 sliding upwards: weight of glass can present problems and be dangerous when in open position, strong 'stops' and supports are required

Fig 2.8 Display case

2.5.6 LIBRARY

LIBRARY



Public lending libraries:

Offer a wide range of literature and other information, preferably on open shelves. The supply of literature covers all populations and age groups. In larger cities, the functions of scientific and public libraries are sometimes combined.

Fig 2.9 Size of shelving units

Scientific libraries:

Collection, acquisition, and provision of literature on specific subjects for education and research, mostly publicly accessible without limitation.

State libraries:

Federal state and national libraries; collections, for example, of literature produced in the state or a region (legal deposit copies); publicly accessible. shelf unit.

Specialist libraries:

Scientific libraries for the collection of specialist literature and media on specific subjects, often with a very limited group of users.

Components:

Three areas in every library: user and reading area, store, and administration. The space requirement for these areas differs according to the type of library.

2.5.7 LIGHTING OPTIONS



Fig 2.10 Lighting techniques

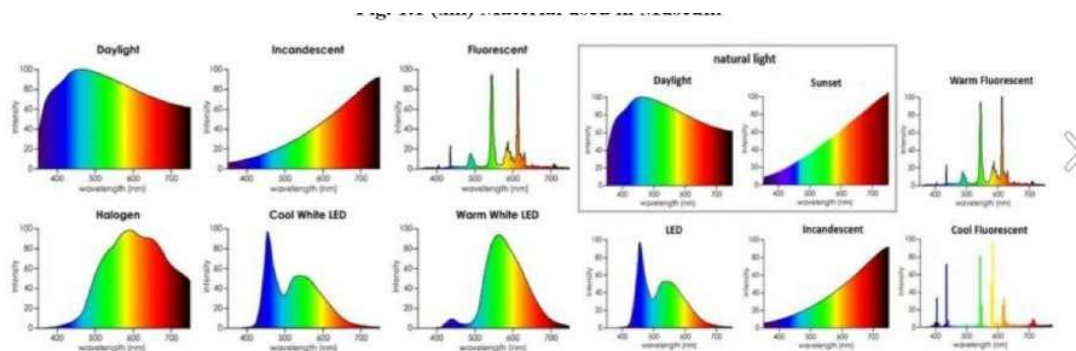


Fig 2.11 Light lumination and color rendition

3. CASE STUDY

3.1 DAKSHINA CHITRA

- Dakshinachitra is an existing cross-cultural living museum of art, architecture, lifestyles crafts, and performing arts of South India.
- It is the south Indian heritage village that brings together the culture of all the four southern states- Karnataka, Tamil Nadu, Kerala, and Andhra Pradesh in one campus
- It portrays it through the architecture of the region and the living conditions and habits of those people.
- An architectural feature that speaks to a time when buildings were constructed is the rustic character of the interiors. Various architectural spaces such as courtyards, verandas, and pitched roofs invoke a sense of timelessness in the buildings.
- In the year 1996, Dakshina Chitra opened its doors to the public at muttukadu in Tamil Nadu.



Fig 3.1.1 House of Dakshina Chitra



Fig 3.1.2 Agraharam

3.1.1 ENTRANCE

- The entrance to Dakshina Chitra is small and cozy, similar to that of a south Indian home.
- The diverse uses of brick at the entry compound wall façade, for example, spoke to the design's brick master.
- There were the classic chocolate pillars, thatched roofs, and ornately carved doors, all of which effectively blocked the views into the interiors, leaving the visitors to their imaginations.
- The inside art is well worth hiding; once inside the village, the world completely changes from the urban setting outside.
- In contrast to other public spaces that have a large entrance, this one has a



3.1.2 CIRCULATION

-

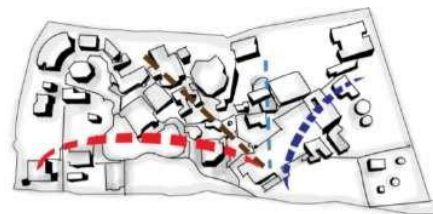


Fig 3.1.4 Zoning of Dakshina Chitra



Fig 3.1.6 site plan

3.1.3 VEGETATION

- Trees can be found in dense clusters near the parking area, guest houses, Kerala section, and Karnataka section.
- They can also be found in other areas of the site, such as along the pathway.
- Palm trees, coconut trees, and neem trees were the most common.
- The trees play an important role in blending all four states; there is a lot of greenery, especially along the pathway that connects them all.
- It aids in the peaceful transition between built-up and open spaces.

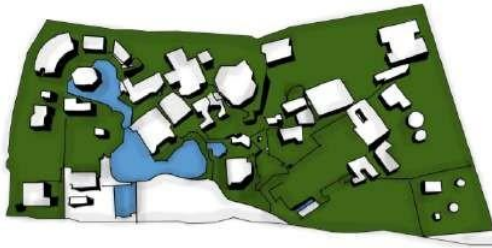


Fig 3.1.6 vegetation

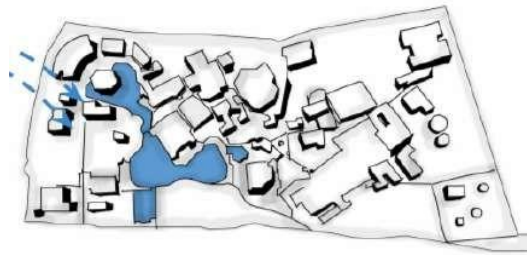


Fig 3.1.7 water body

3.1.4 WATER BODY

- The artificial pond extends from the open-air theatre along the Tamil Nadu section, the Kerala complex, and the artisans complex.
- The flow of water bodies is obstructed by stones.
- Above the water bodies, wooden bridges connect the children's play area and the Tamil Nadu section.
- Because of the wind direction, these bodies of water contribute to the formation of a microclimate.

3.1.5 RELATIONSHIP BETWEEN BUILT AND OPEN AREAS

- Proportion is one of the most noticeable characteristics of various masses or spaces.
- The open spaces are designed and proportioned in such a way that activities can be carried out in them. Many proportioning systems are used in the design to help identify visual relationships between open and built-up spaces.

- Landscaping is done following the natural layout of the site to suit its uses and provide aesthetic pleasure.
- The image depicts layout patterns that are centralized, linear, and clustered.
- Because it is not based on a rigid geometrical concept, the clustered pattern relies on physical proximity; the form of the clustered pattern is flexible and can easily accept growth and change without affecting its character.

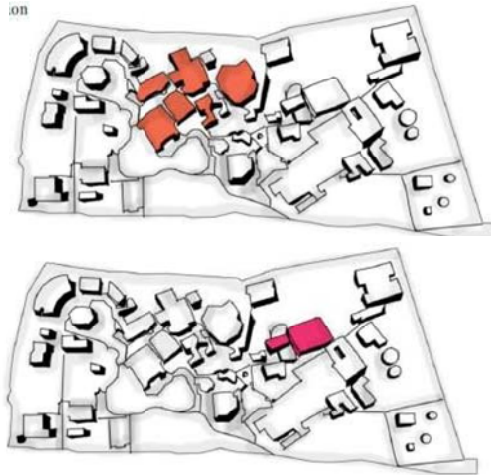


Fig 3.1.6 Kallialaka Section

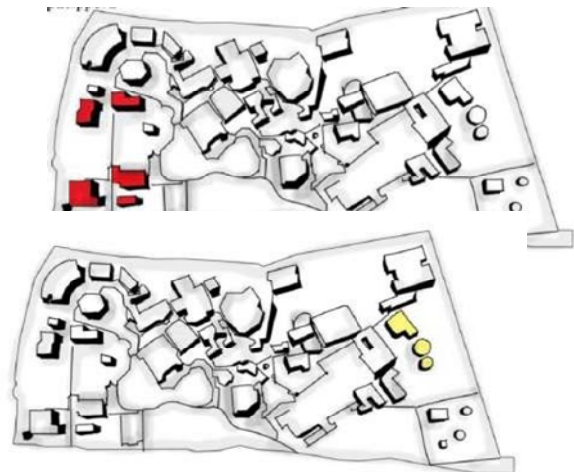


Fig 3.1.9 Alluri Section

3.2 VIRASAT-E-KHALSA - HERITAGE COMPLEX

- Virasat-e-Khalsa is a Sikhism museum in the holy town of Anandpur Sahib, near Chandigarh, the capital of the state of Punjab.
- Based on the scriptures, the museum commemorates 500 years of Sikh history as well as the 300th anniversary of Khalsa's birth.
- The museum exhibits Punjab's history and culture, and the heritage complex was built to emphasize the eternal message of the ten Sikh gurus.
- The museum, shaped like praying hands, reveals the Sikh history and tradition like never before.
- The roof of the flower building is shaped like five petals, possibly representing Guru Gobind Singh's panj piaras or the religion's five tenets.



Fig 3.2.1 Views of virasat-e-khalsa

3.2.1 CONCEPT

- The first block is designed as a boat, so it provides the first gallery that visitors enter. It provides a 360-degree, almost complete overview of Punjab's present culture.
- The second building is shaped like a flower, depicting Guru Gobind Singh's five virtues – sat (truth), Santosh (contentment), daya (compassion), Namrata (humility), and pyar (love) – or the panj piaras (the five beloved ones). Bhai Daya Singh, Bhai Dharam Singh, Bhai Himmat Singh, Bhai Mukham Singh, and Bhai Sahib Singh are the five Sikhs (panj piaras).
- The third building is a crescent-shaped structure with petal-like projections on its roof. All petals' rooftops are covered with special stainless steel sheets that reflect the skylight towards the Gurdwara.

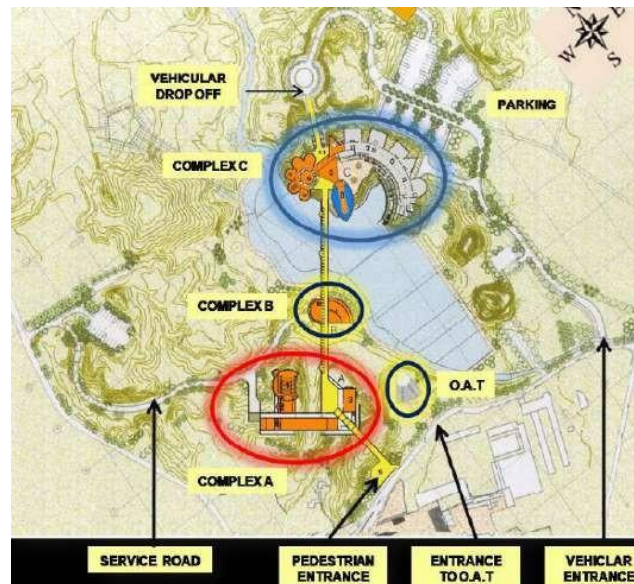


Fig 3.2.2 Zoning of Virasat-e-khalsa

3.2.2 COMPLEX - A

The western complex acts as a gateway to the museum from the town of

Anandpur sahib.

- The complex's structure is made up of concrete-bearing walls and trusses.
- The walls that rise from the ravine level are also made of weather-resistant sandstone.
- The library has a total covered area of 2230 square meters.
- The 400-seat auditorium has a total covered area of 1980 square meters, divided into three levels.
- The temporary exhibition gallery has a covered area of 1373 square meters.
- The complex's lower floor plan includes a library/reading room (which also serves as an audio room), an electrical room, a mechanical room, a switchgear room, a receiving area, a loading-unloading area, stores, a green room, and toilets.

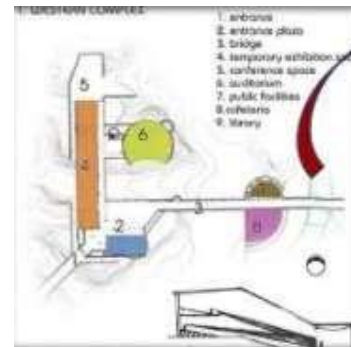
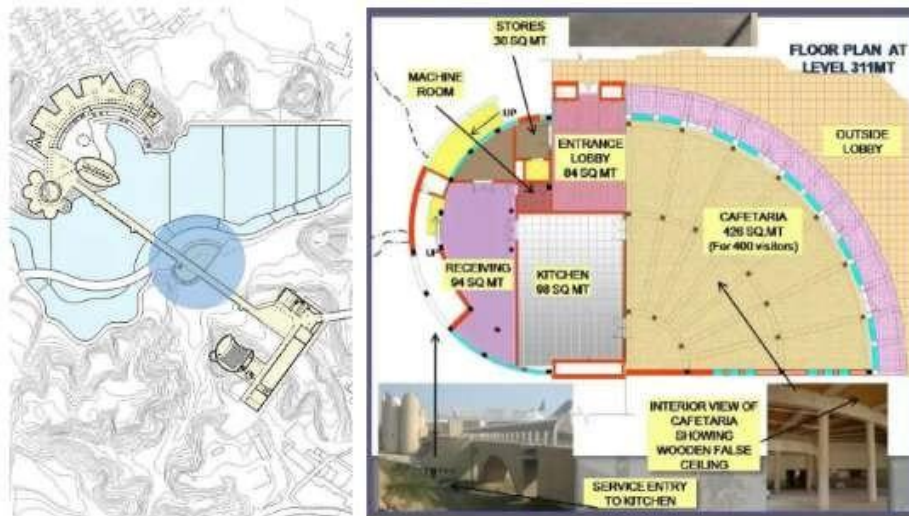


Fig 3.2.3 complex A of virasat - e - khalsa

3.2.3 COMPLEX - B

It mainly comprises the pedestrian bridge, cafeteria, and kitchen block.

- The 165m deep and wide pedestrian bridge connecting complexes a and c is divided into four main individually tied arches (three 33m long and one 27m long).
- Cafeteria and kitchen blocks include a cafeteria with a covered area of 1424 square meters. The starting point for café dining is 316.4 m.



3.2.4 COMPLEX - C

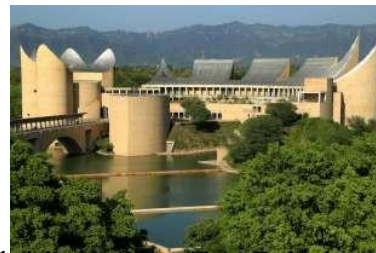
A structure comprises of receiving dock, mechanical/electrical room, reception, storage space, workshops, labs, lecture and meeting space, book store, gift shops, offices, toilets, exhibit galleries, planters, and grand stairs comprise the structure.

- The structure is divided into three levels:

The lowest level is 319 meters,

followed by 324 meters.

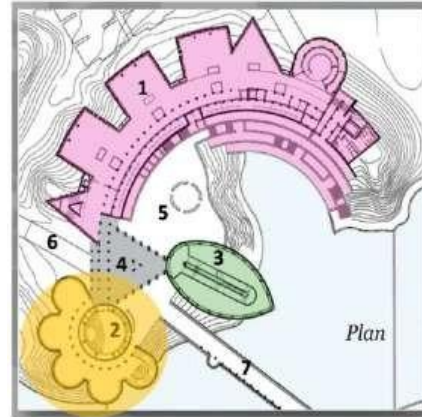
The highest floor level is 330 meters.



- Guru Hargobind, Guru Har Rai, Guru Harikrishna, Guru Teg Bahadur, Guru Gobind Singh, and Gupta Gaddi's lives will be represented by the petals in the crescent building.
- The galleries on the lower level (324th floor) will chronicle the Khalsa's trials, tribulations, and triumphs.
- The roof of the building is shaped like five petals, which represent the panj para.
- Guru Gobind Singh's five most treasured possessions.
- The exhibits in each of the five petals trace the first five gurus' lives from birth to salvation or martyrdom.
- These _____ are _____ long-term _____ exhibits.



Fig 3.2.5 complex C of virasat-e-khalsa



- The Heritage Museum, also known as the boat building, will have a planned area of 1780 square meters.
- It consists of a ramp that extends from 321m to 327.60m.
- The structure is an RCC shear wall with prestressed concrete inside the ramp.
- The foundation level is 308.5 meters, and the roof peak is 330.6 meters.
- The idea behind having a water body on the ground floor level is that it will be reflected in the glass ceiling, making a visitor unaware of the actual height of the building.

3.2.5 PEDESTRIAN BRIDGE

- The pedestrian bridge was not carefully designed by the architect, who placed the canopy in the opposite direction of the southern sunlight.
- While walking on the bridge, 70% of the complex is visible, while 30% is obscured by the canopy.

3.2.6 TECHNICAL FEATURES

- The structure is intended to cover all seismic aspects relevant to India.
- Columns and beams are made of single-cast fair-faced concrete.
- There are no shuttering joints in the columns.
- Beams are limited to pattern shuttering ply imported from Finland for greater length, thickness, and smoothness.
- There are over 2800 lighting fixtures.
- PSEB's 132kv substation provides power.



Fig 3.2.6 pedestrian bridge of virasat-e-Khalsa

3.2.7 LANDSCAPING

The ravine's floor serves as the complex's focal point.

- The natural landscape and topography have been preserved to the greatest extent possible.
- A large amount of readily available water has been incorporated as a major component of the landscaping scheme.



Fig 3.2.6 landscaping of virasat-e-khalsa

3.3 INDIAN HERITAGE CENTRE - SINGAPORE

With a unique and modern solution, the Indian Heritage Centre pays homage to Indian culture and heritage. This would include small-scale museum facilities as well as community and educational spaces, and would be positioned on a narrow

triangular-shaped site snuggled among the colorful and busy dwellings of 'Little India.' The design is inspired by the Baoli, an Indian stepping well that has long served as a community gathering area. The building's steps and plinth are built as street furniture for people to congregate along the pedestrian mall, and the curtain wall façade's interwoven steel structure reflects the staircases behind it, creating a unique Baoli theme.



Fig 3.3.1 entrance of IHC

The site has two entrances, one from Campbell Lane and the other from Clive Street. The winning design idea by Gaurang Khemka (URBNarc) and Robert Greg Shand is a direct answer to the site.

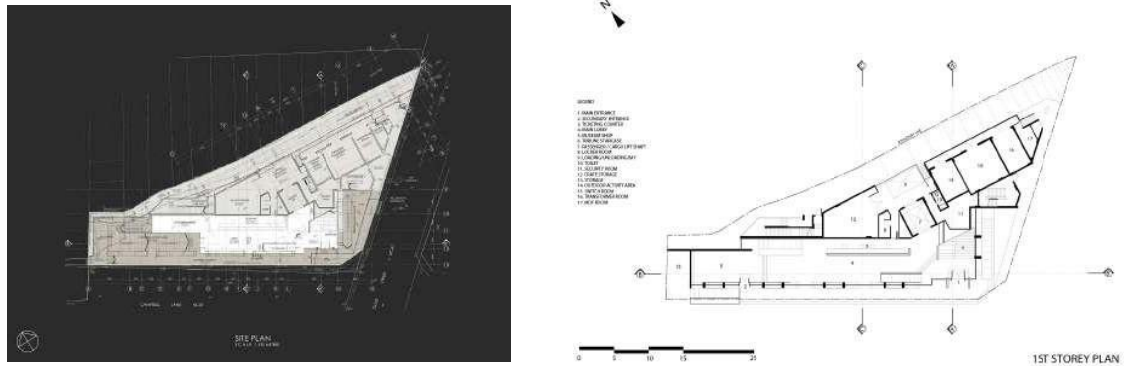


Fig 3.3.2 Site of IHC

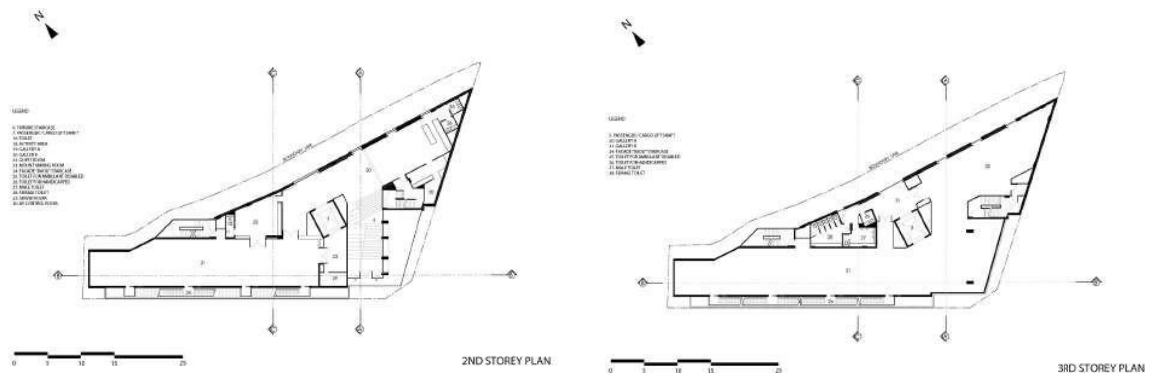
3.3.1 CIRCULATION AND SPATIAL COMPOSITION

- The ground floor is mostly used for service, making it simple to service the machines as well as load and unload.

- People are diverted to the first level by the presence of a staircase just opposite the door.
- The activity space is located on the bottom floor so that people can have a strong connection to their environment while also having additional opportunities to engage.



The only entrance to the first level is through the Museum shop and admission counter; otherwise, services and storage are available.



The circulation flow in the gallery space, with no levels or obstructions between galleries A and B

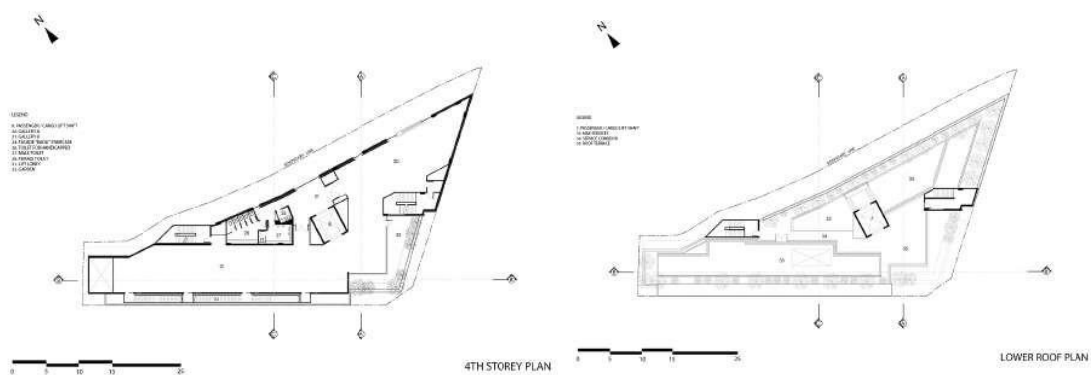
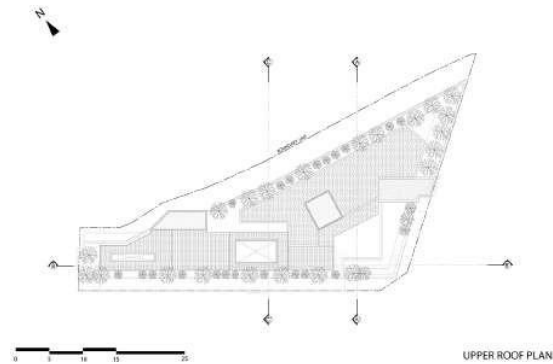


Fig 3.3.3 plans of IHC

On level 4, there is a green spot where tourists can take a break, relax, and take in the beauty of Little India.



The general building form and architectural finishes give a reasonable utilitarian backdrop against which the center's program and other design details provide a counterweight. The materials used are mostly concrete, granite, glass, and steel, with teak and travertine thrown in for good measure.

The centre is built as a living museum, with visitors starting on the fourth floor and after visiting the interior gallery proceed to the double skin volume, where they can see the rich tapestry and urban environment of Little India before returning to the galleries on Level 3.

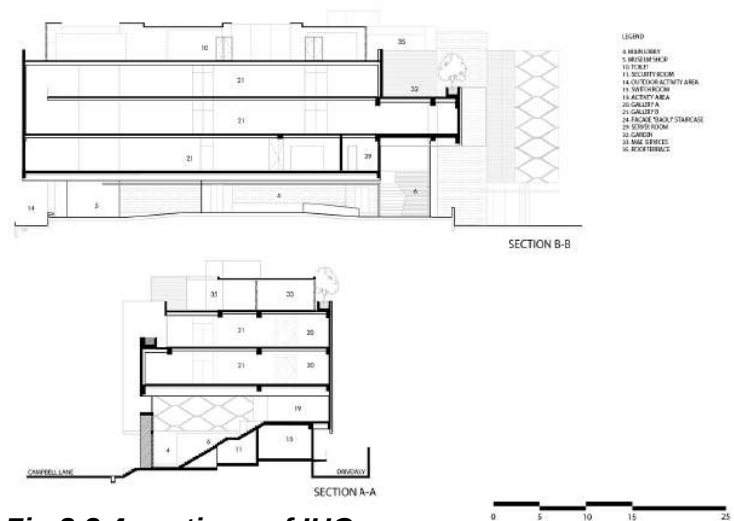


Fig 3.3.4 sections of IHC

3.3.2 ARCHITECTURAL INFLUENCE FROM CULTURE

The Indian stepping well, the famous Chand Baori in India, is a primary design element for the facade. The Baori is a wonderful reference for the Indian heritage center because it was a community hub for the Abhaneri residents.

The framework is built of steel, and the curtain wall glazing echoes the stairwells behind it, producing a one-of-a-kind element for the project.

The curtain wall glazing and staircases from the 3D 'jaali,' a traditional Indian Lattice screen, adjust light, ventilation, and views between the streetscape and gallery.

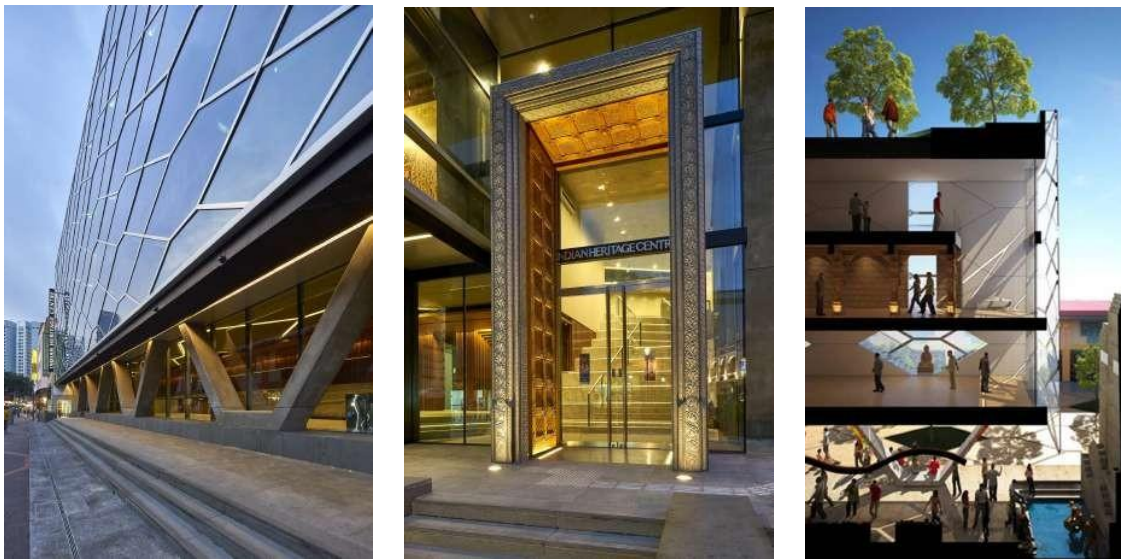


Fig 3.3.5 circulation in IHC

Two large galleries housing the center's permanent collection, a special exhibition gallery for changing exhibitions, and activity space for smaller groups that could be closed off when not in use or opened up to complement the special exhibition gallery were all required.

The aim was to optimize gallery and activity space while keeping ancillary and back house areas to a bare minimum of usefulness.

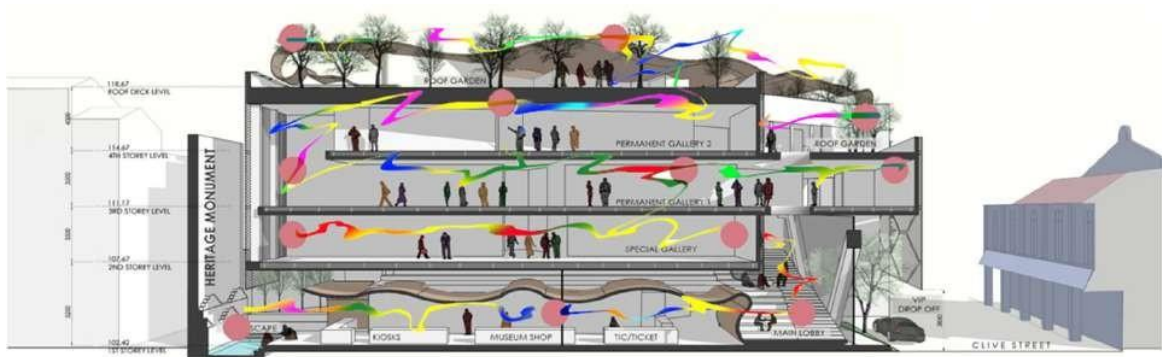


Fig 3.3.6 people movements in IHC

3.4 HEYDAR ALIYEV CENTER

The center with a focus on open spaces and green spaces is located in Azerbaijan, Baku, along the main trunk road, and is built around an urban fabric. Accessible through four roads that run parallel to the site.



Fig 3.4.1 View of heydar aliye center

As part of the former Soviet Union, the architecture of Baku, Azerbaijan's capital, was greatly impacted by Soviet-era planning.

Azerbaijan has invested considerably in updating and improving Baku's infrastructure and architecture since its independence in 1991, moving from its heritage of normative Soviet Modernism

3.4.1 CIRCULATION AND SPATIAL COMPOSITION

- Because of the required height, the program has two distinct appearances:

the towering one at the back - the library, with its many floors, and the rise to the side, which houses the conference center and the auditorium's fly tower.

- The three separate programs converge in the center, which becomes the lobby, which hosts multiple activities at once. A wide, open banquet space located between the library and the conference area serves as a venue for these gatherings. The rest is a cascading landscape, with portions melting into one another smoothly and perfectly until the building settles into the ground.

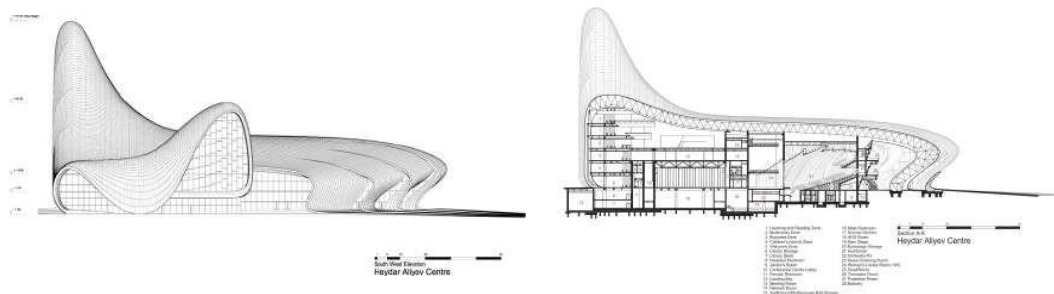


Fig 3.4.2 section of Heydar Aliyev center

3.4.2 MATERIALS

Glass Fibre Reinforced Concrete (GFRC) and Glass Fibre Reinforced Polyester (GFRP) were chosen as appropriate cladding materials because they allow for the building's design to be extreme plasticity while adapting to manyKhalsa functional demands: plaza, transitional zones, and envelope.



Fig 3.4.3 structure of Heydar Aliyev center

3.4.3 STRUCTURE

The Heydar Aliyev Center is primarily made up of two interconnected systems: a concrete structure and a space frame system. Vertical structural elements are

absorbed by the envelope and curtain wall system to generate large-scale column-free areas that allow visitors to experience the mobility of the interior.

3.4.4 ARCHITECTURAL INFLUENCE FROM CULTURE

- They aimed to relate to that historical concept of architecture by producing a distinctly contemporary interpretation, reflecting a more complex understanding, rather than through mimicry or a restrictive devotion to the iconography of the past.
- This region is no stranger to architectural fluidity. Rows, grids, or sequences of columns flow to infinity in classical Islamic architecture, providing non-hierarchical space.
- Continuous calligraphic and ornamental patterns flow from carpets to walls, walls to ceilings, and ceilings to domes, creating continuous links and blurring divisions between architectural features and the ground they occupy.



Fig 3.4.4 materials of Heydar Aliyev center

3.5 COMPARATIVE ANALYSIS

Table 3.1 Comparative study

	DAKSHINA CHITRA	VIRASAT-E-KHALSA	INDIAN HERITAGE CENTER	HEYDAR ALIYEV CENTER
LOCATION	ECR, CHENNAI	PUNJAB	SINGAPORE	AZERBAIJAN
USER	LOCALS AND TOURISTS	LOCALS AND TOURISTS	LOCALS AND TOURISTS	LOCALS AND TOURISTS
ARCHITECT	LAURIE BAKER, BENNY KURIAKOSE	MOSHE SAFDIE	URBNarc IN COLLAB WITH ROBERT GREG SHAND	ZAHA HADID ARCHITECTS
SITE ACCESS	1 SIDE	2 SIDES	2 SIDES	4 SIDES
BUILT-UP AREA	41,561 SQ.M	6500 SQ.M	3089.68 SQ, M	57,519 SQ.M
CONCEPT	"A PICTURE OF SOUTH"	PANJ PARAS (5 BELOVED ONES)	INDIAN STEPWELL	HISTORIC ISLAMIC ARCHITECTURE
TYPOLOGY	LIVING HISTORY MUSEUM, PUBLIC	MUSEUM COMPLEX, PUBLIC	CULTURAL CENTER, PUBLIC	CULTURAL CENTER PUBLIC
DESIGN INTENT	TO SHOWCASE THE ARCHITECTURE AND CULTURE OF SOUTHERN STATES	TO SHOWCASE THE HISTORY AND CULTURE OF PUNJAB	TO ENHANCE AND PAY HOMAGE TO INDIAN HERITAGE	TO EXPRESS THE SENSIBILITIES AND CULTURE OF AZERI
CIRCULATION	HORIZONTAL	HORIZONTAL AND VERTICAL	VERTICAL	HORIZONTAL AND VERTICAL

LIGHTING	NATURAL LIGHTING	ARTIFICIAL , DARK	ARTIFICIAL , DARK	ARTIFICIAL, DARK
ARCHITECTURAL INFLUENCE	THE PICTURE OF SOUTH	GOLDEN DOMES - SACRED SIKH BUILDINGS, FORTRESS OF RAJASTHAN,	INDIAN STEPPED WELL	HISTORIC ISLAMIC ARCHITECTURE
INFERENCE	>LIVING OPEN AIR - CROSS-CULTUR AL MUSEUM >CLUSTER DEVELOPMENT >SHOWCASE OF THE CULTURE OF 4 DIFFERENT STATES >TRADITIONA L METHOD OF LIGHTING AND VENTILATION > SHOWCASES TRADITIONAL OCCUPATION THROUGH WORKSHOPS >CIRCULATIO N AND ZONING	>EXPERIENCE OF THE PUNJABI CULTURE >DEDICATED TO CULTURE OF SIKHISM >THREE LEVELS CONNECTED WITH STAIRCASES >INTERCONNEC TED BY A COMMON STRUCTURE >ARTIFICIA L LIGHTING SYSTEM >AUDITORIUM FOR CULTURAL PURPOSES >SPACES MADE USE OF TRADITIONAL METHODS	> EXPERIENCE OF INDIAN HERITAGE >FUNCTIONALITY AND ACTIVITY >REFERENCE TO INDIAN STEPWELL DESIGN FACADE >CREATIVE AND CONTEMPORARY SOLUTION	>OPTIMISM OF NATION THAT LOOKS TO THE FUTURE >EXPRESSION OF AZERI CULTURE - INSPIRED HISTORIC ISLAMIC ARCHITECTURE >CONTEMPORARY INTERPRETATION >LARGE SCALE COLUMN-FREE STRUCTURE >DIFFERENT FUNCTIONAL DEMANDS >CASCADING LANDSCAPE

Table 3.2 Comparative study

4. SITE STUDY

4.1 WHY MAHABALIPURAM?

- During the Pallava era, Tamil architecture reached its peak.
- Mahabalipuram is a historic city in Tamil Nadu and a UNESCO World Heritage Site.
- It is located in Pallavas, the Pallava dynasty's capital, which became an important center of art, culture, architecture, and literature during their reign.
- Since this site is in the ECR stretch, it would play a part in the entertainment corridor that surrounds other entertainment facilities such as artists' villages, Dakshina Chitra, VGP, and so on.
- The ECR stretch is already a major spot for both locals and tourists in Chennai and Pondicherry.
- The site itself has a lot of potentials to attract a lot of tourists, and a cultural heritage precinct adds to that.

4.2 WHY IS THIS SITE?

- The site is 1.5 kilometers from Mahabalipuram on the ECR-Mahabalipuram stretch.
- Because there are several tourist attractions near the site, it attracts audiences and visitors.
- The govt college of architecture and sculpture is 0.3 km away.
- The presence of the shore provides good views and a natural breeze to the location.



Fig 4.1 Site location

4.3 LOCATION - Saluvankuppam, Mahabalipuram.

- Located in ecr stretch at 2 km from Mahabalipuram on Chennai - Mahabalipuram stretch.

- Site area - 40,468 sq,m (10 acres)
- Neighborhood - government college of architecture and sculpture, scarf Mahabalipuram, Mahabalipuram, sculpture museum, Indian seashell museum.

4.3.1 CONNECTIVITY:

- Chennai airport - 53 km
- Tambaram railway station - 47 km
- Mahabalipuram - 1.5 km

4.3 MAMALLAPURAM

- Mamallapuram, also known as Mahabalipuram, is a town in the Kancheepuram district, south of Chennai.
- This location is well-known for its extensive history and cultural heritage. During the reigns of Periplus and Ptolemy, this town was a busy seaport from which ancient Indian traders sailed to various countries.
- The town's vast built heritage, with its numerous Dravidian Temple structures and traditional handicrafts, is an ideal place to complement culture through architecture.

4.4 SITE AND SURROUNDINGS

- A museum solely dedicated to its culture can serve as a focal point in a heritage town, highlighting the existing fabric. The ancient monuments near the site have been emphasized to attract the tourist population.
- The site is located within a 2M radius of the group of monuments and is strategically placed, which complements the beachward location.
- A museum space would be appropriate to interlace the environment of preserving culture, tradition, and architecture with these elements surrounding the site.

4.5 SITE ANALYSIS

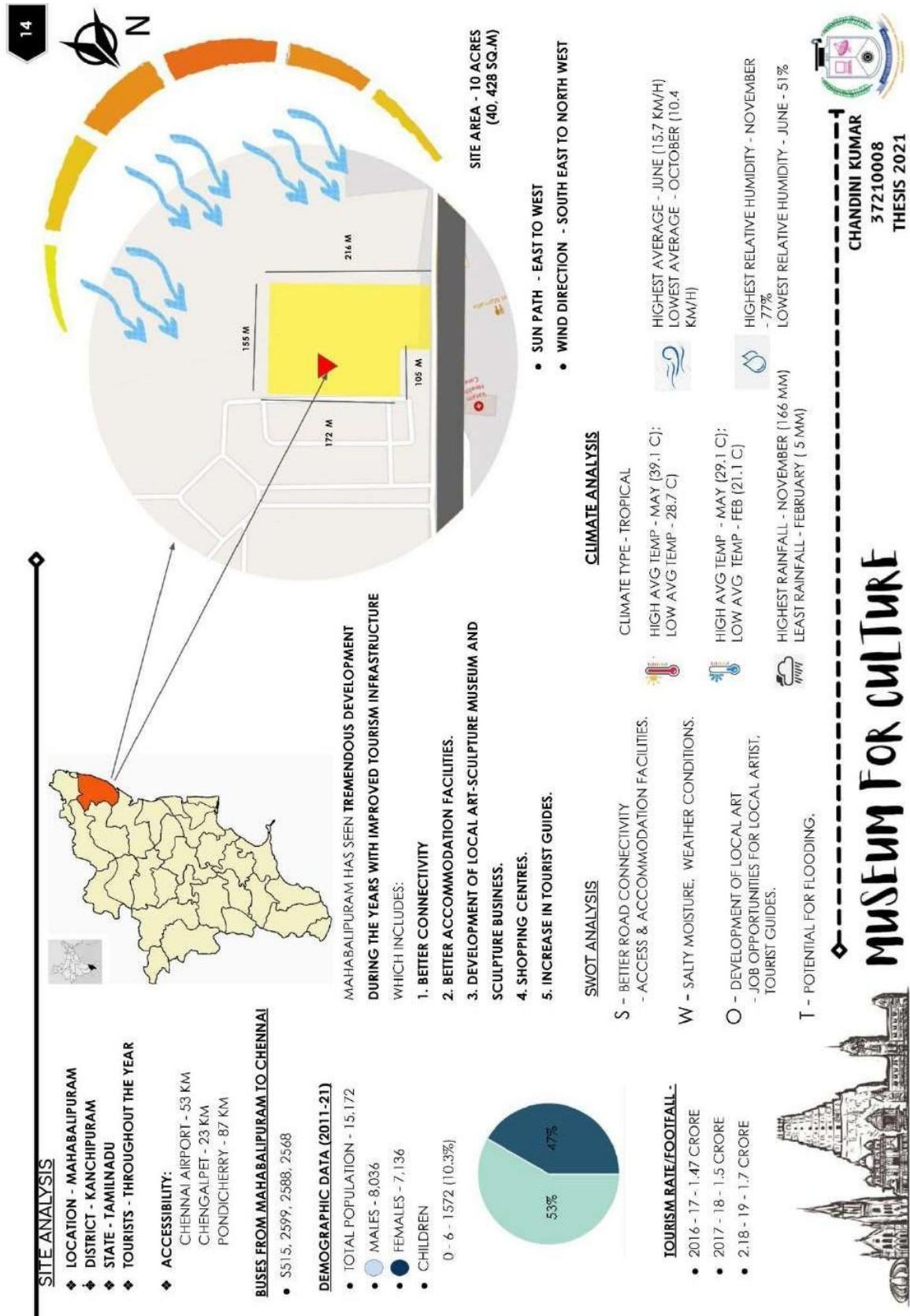
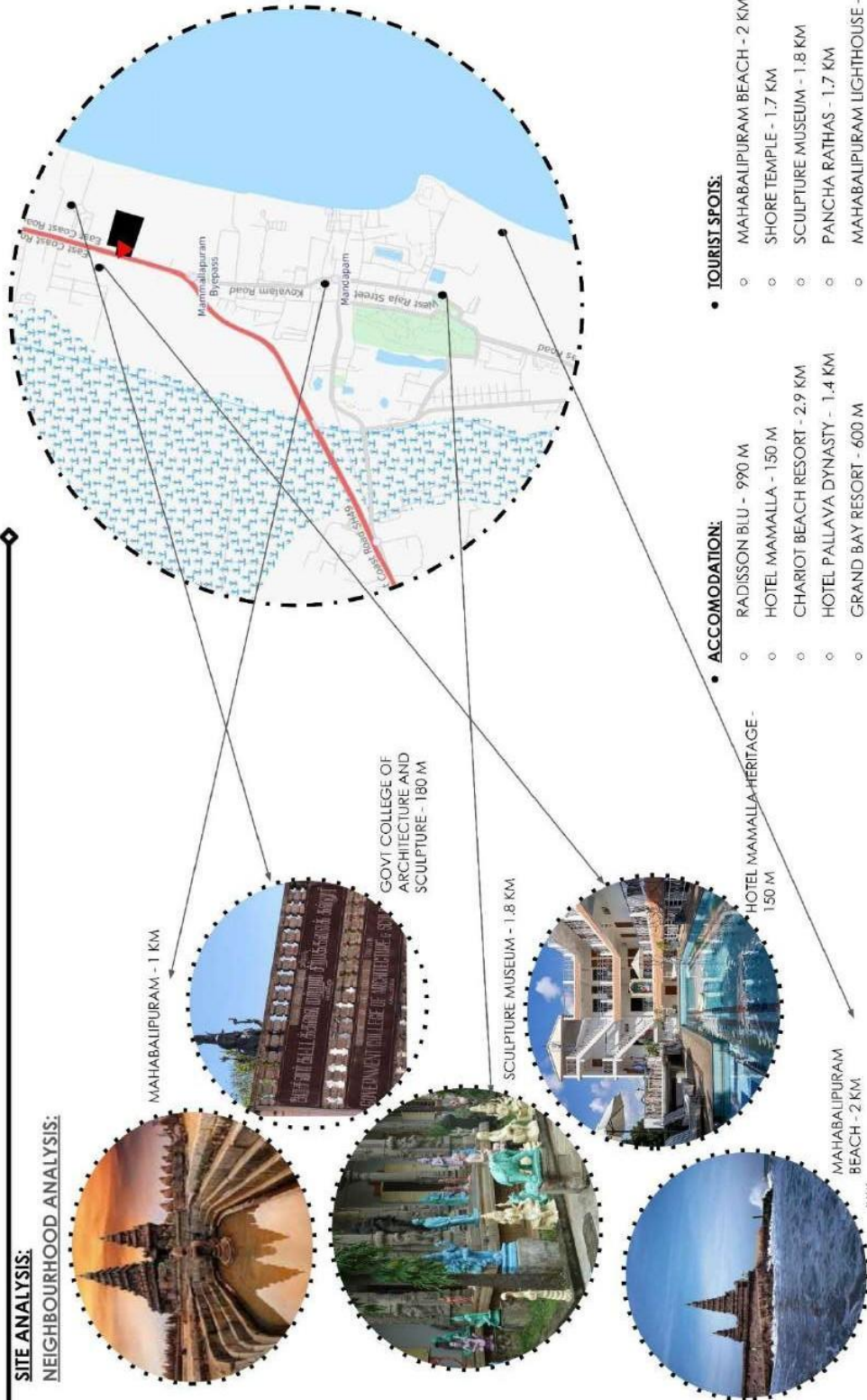


Plate 4.1 Site analysis

SITE ANALYSIS:**NEIGHBOURHOOD ANALYSIS:**

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Plate 4.2 Site analysis

→ NATURAL PHYSICAL FEATURES:

- SURROUNDED BY TREES
- THE BEACH IS AT A DISTANCE OF 0.6 KM
- WATER TANK IN FRONT OF THE SITE

→ VIEWS FROM THE SITE

- TOWARDS THE NORTH THERE IS THE GOVT COLLEGE OF ARCHITECTURE AND SCULPTURE.
- TOWARDS THE EAST SIDE THERE IS SHORE WHICH BRINGS IN PLEASANT VIEW AND BREEZE TO THE SITE.
- TOWARDS THE SOUTH, THE AGRICULTURAL LAND IS PRESENT.
- THE ENTRY TO THE SITE CAN BE ACCESSED FROM THE WEST SIDE.

→ ROAD NETWORKS:

- THE PRIMARY ROAD, SH-49 HAS A WIDTH OF 22 M., AND ARE RIGID PAVEMENT ROADS.
- THE SECONDARY ROAD WHICH IS AT A DISTANCE OF 100 M LEADS TO THE SHORE.

→ NOISE FACTORS:

- THE MAIN SOURCE OF SOUND IS FROM THE STATE HIGHWAY VEHICULAR MOVEMENTS.
- APART FROM THE VEHICULAR DISTURBANCES THERE ARE NO OTHER NOISE DISTURBANCE IS PRESENT AROUND THE SITE.

→ ACCESSIBILITY:

- BUS STOP - 500 M
- BANK, ATM - 1.4 KMM
- PETROL BUNK - 700 M
- PHARMACY - 1.3 KM
- HOSPITAL - 150 M

→ LAND USE PATTERN

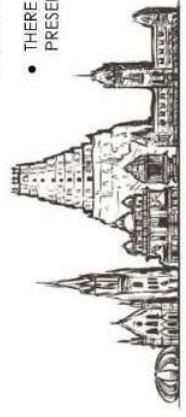
- RESIDENTIAL
- COMMERCIAL
- INSTITUTIONAL
- AGRICULTURAL
- PUBLIC (SITE)
- WATER BODY

→ TRAFFIC PATTERN:

- THE MAIN TRAFFIC FLOWS NEAR THE JUNCTION THAT LEADS TO THE MONUMENTS OF MAHABALIPURAM (SH-49)
- OTHER THAN THAT THERE ARE NO TRAFFIC HAZARD NEAR THE SITE

→ CIRCULATION:

- THERE ARE NO DISTURBING CIRCULATION IS PRESENT AROUND THE SITE



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-- DESIGN PROGRAM --

EXHIBITION SHOWCASES:

- INTRODUCTION TO TAMIL - PREHISTORY
- SANGAM AGE (500 BCE - 1300 CE)
- KEEZHADI
- ADICHANALLUR
- SILAPPADHIKARAM - STORY OF ANKLET
- MANIMEGALAI - AKSHAYAPATHRAM
- CHOLA EMPIRE (600 - 1300 CE)
- MANU NEEDHI CHOLAN
- CHOLA & MAURYAN WAR
- VELLORE MUTINY
- POST INDEPENDENCE (1947 - PRESENT)
- JALLIKATTU PROTEST



HISTORY OF TAMIL NADU

THE REGION OF TAMIL NADU OR TAMILAKAM.

IN THE SOUTHEAST OF MODERN INDIA,

IT SHOWS EVIDENCE OF HAVING HAD

CONTINUOUS HUMAN HABITATION FROM

15,000 BCE TO 10,000 BCE.

THROUGHOUT ITS HISTORY, SPANNING THE

EARLY UPPER PALEOLITHIC AGE TO MODERN

TIMES, THIS REGION HAS COEXISTED WITH

VARIOUS EXTERNAL CULTURES.



POTTERY

BASKET WEAVING

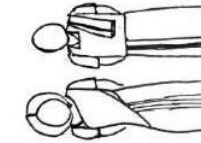
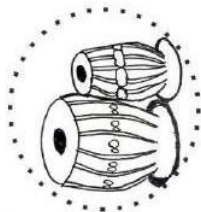
DOLL MAKING



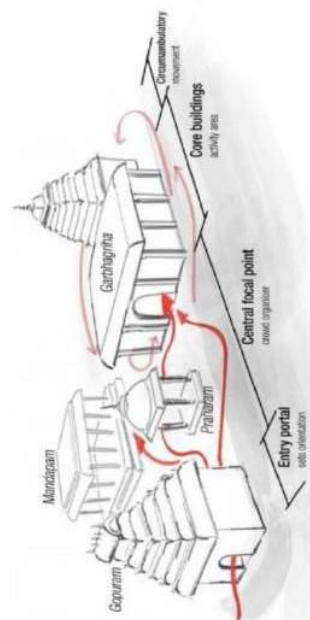
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GALLERY SHOWCASES:

- SCULPTURES
- TANJORE PAINTINGS
- MUSICAL INSTRUMENTS
- DANCE FORMS
- WEAPONS
- CLOTHING
- LIFESTYLE
- FESTIVALS



CONCEPT:



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Plate 4.4 Site analysis

5. DESIGN DEVELOPMENT

5.1 SITE INTRODUCTION:

The site is in Mahabalipuram, the town's religious center founded by a Pallava king in the seventh century. The town's vast built heritage, with its numerous Dravidian temple structures and traditional handicrafts, is an ideal location for enhancing culture through architecture.

The unique monuments in Mahabalipuram present a fusion of religion, culture, and legends all related to the Hindu religious pantheon; all of these monuments located on the Bay of Bengal's shores imbibe TamilNadu's art and culture.

Mahabalipuram has grown tremendously in recent years, thanks to improved tourism infrastructure such as better connectivity, better lodging facilities, the development of a local art-sculpture museum and sculpture business, a shopping center, and job opportunities for local artisans and tourist guides.

The site has existing features surrounded by trees, a water tank in front of the site, the beach is present at a distance of 0.6 KM towards the eastern side which helps in bringing in pleasant views and breeze to the site, agricultural land on the southern side, govt college following of architecture and sculpture in the northern side and the main entry is accessed from the western side.

5.2 DESIGN CONCEPT

5.2.1 OPEN LANDSCAPE GARDEN

Open landscaping garden with seatings to integrate the design with more usable interactive open spaces to accentuate the design. Also landscaping gardens with parks and shaded seating provide good resting points for the visitors to use unconditionally.



Fig 5.1 Open landscape garden

5.2.2 ORIENTATION

The blocks are oriented in consideration and in accordance with the views since the beach is located directly to the eastern side of the site and also zoned according to the climate-responsive orientation like sun path, wind path. The hierarchy of the buildings is also oriented accordingly.

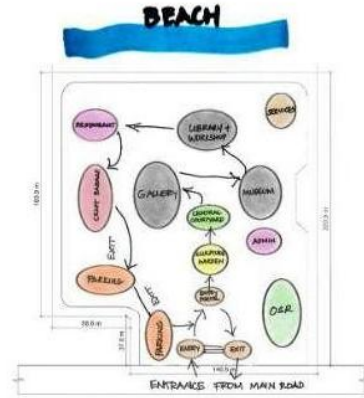


Fig 5.2 Orientation of zoning

5.2.3 COURTYARDS

Courtyard spaces are brought in to give the touch of cultural heritage as it is used commonly in Tamil-built forms. They also act as a buffer or transition space between different spaces or blocks helping to bring in more lighting and ventilation to the building.

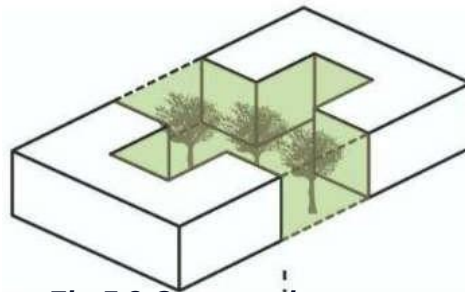


Fig 5.3 Courtyards

5.2.4 INTENDED USER GROUPS

Mainly targeted user groups are

- Residents
- Tourists from in and out of the country
- Children to old age peoples
- User-friendly design



Fig 5.4 parks



Fig 5.5 Resting points

5.2.5 AGE-FRIENDLY DESIGN

There is no restriction considering the various age groups that might visit the museum.

- Children - Parks to keep the children engaged and entertained.
- Old peoples - Addition of more resting points, seatings, and shaded spaces for the old peoples to have more resting spaces around the site.
- The addition of more trees surrounding the site helps in giving shade and helps with the humidity level.



Fig 5.6 Gallery

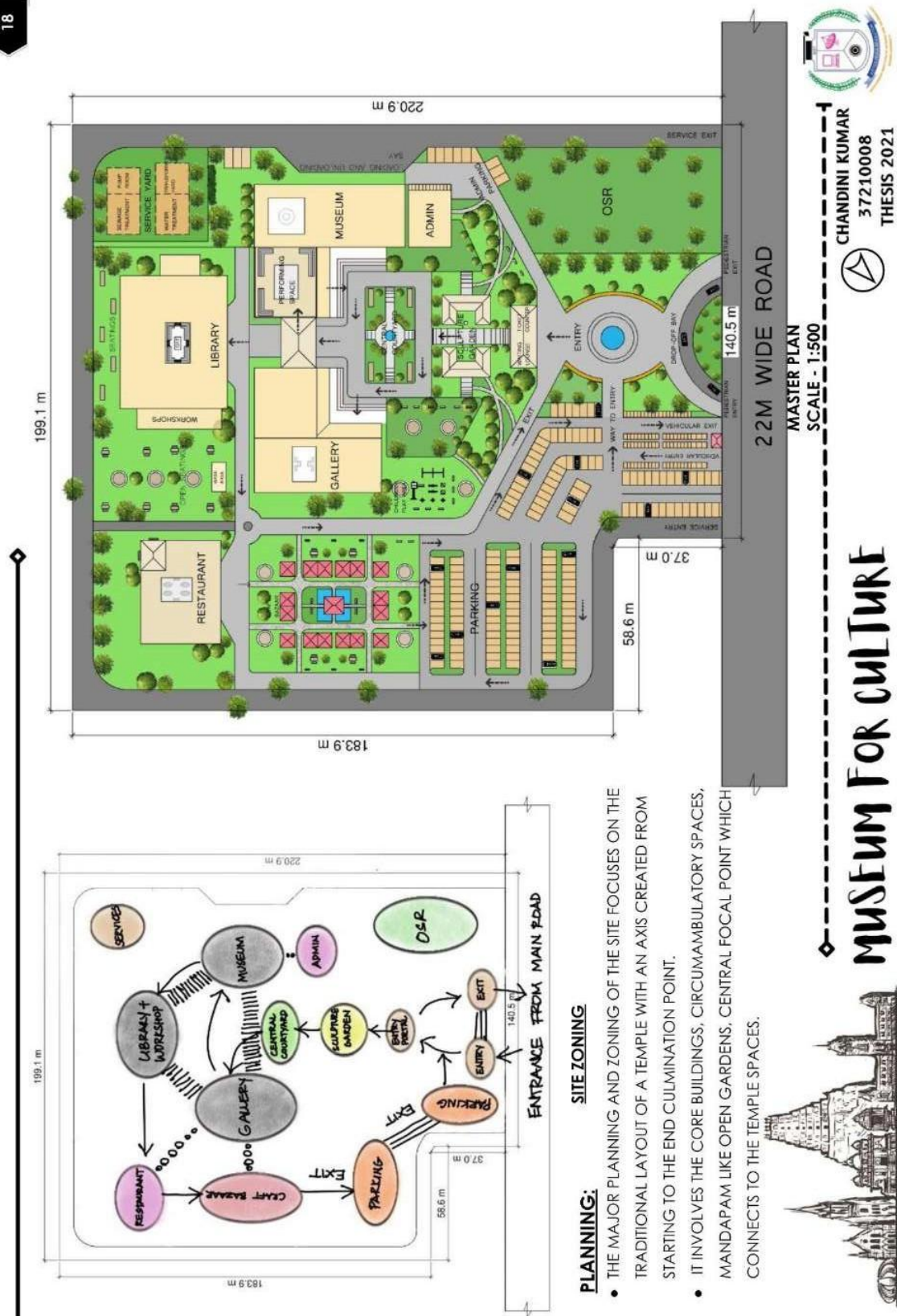
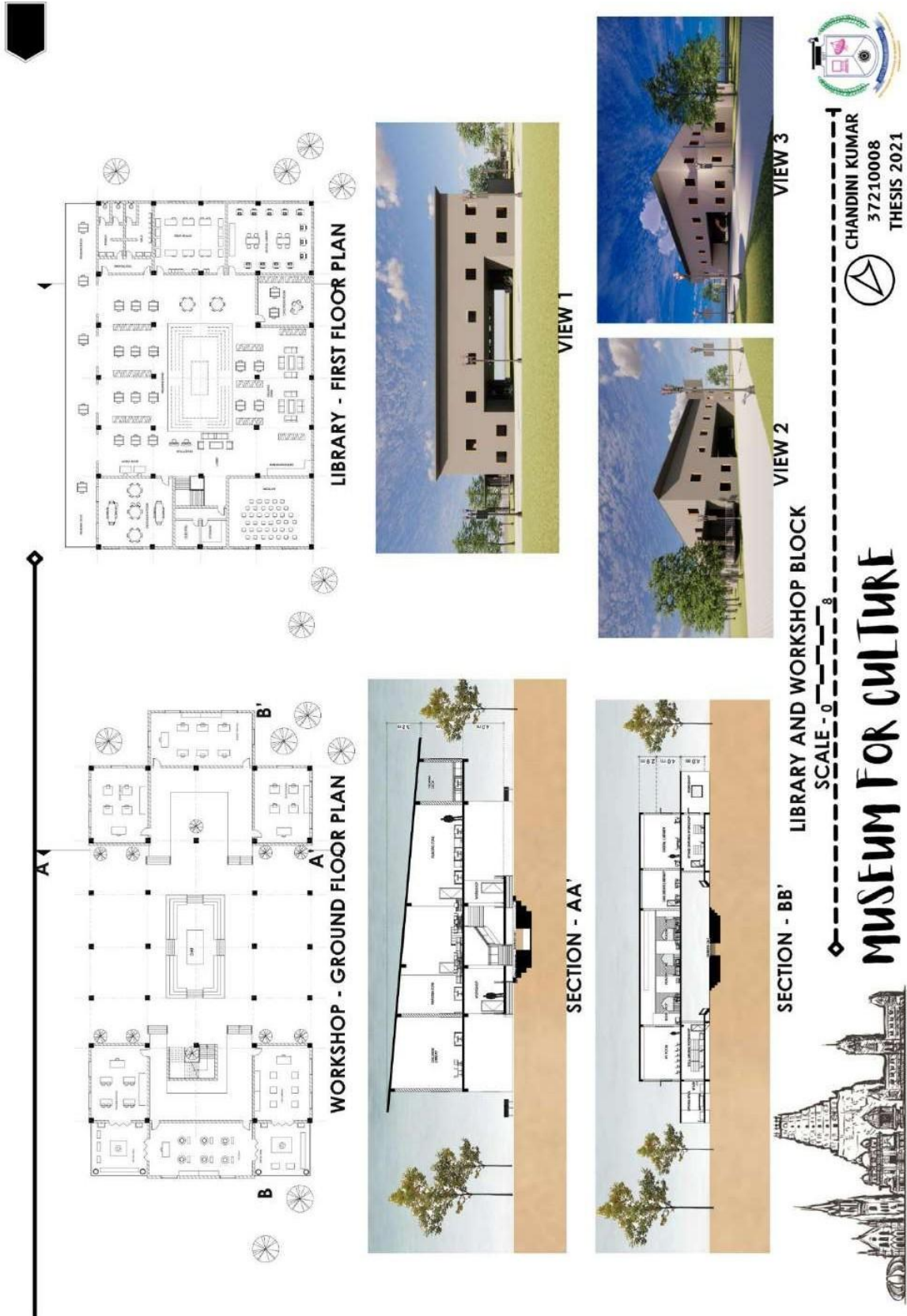
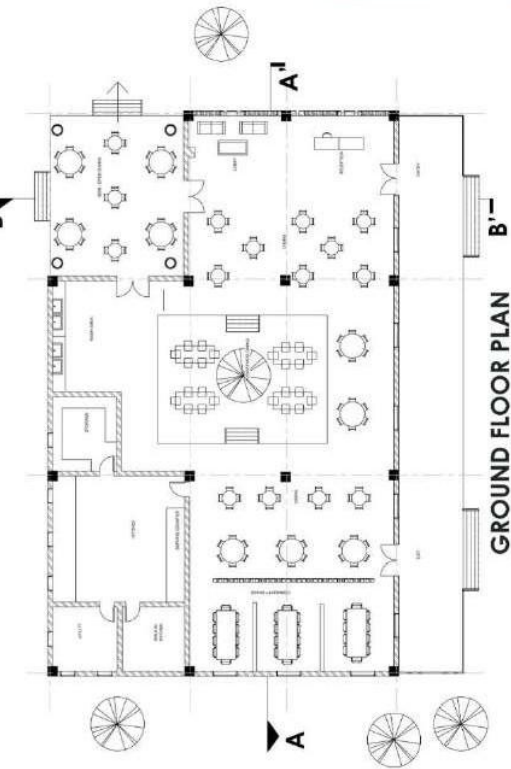
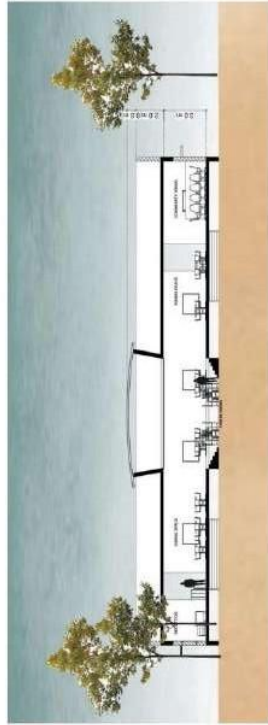


Plate 6.1 Site plan

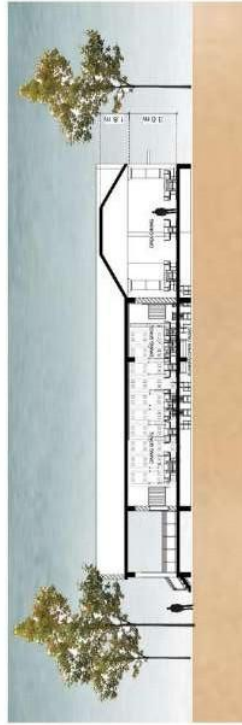




GROUND FLOOR PLAN



SECTION - AA'



SECTION - BB'



FRONT ELEVATION



VIEW - 1



VIEW - 2



RESTAURANT BLOCK

SCALE - 0 3

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Plate 6.4 Restaurant

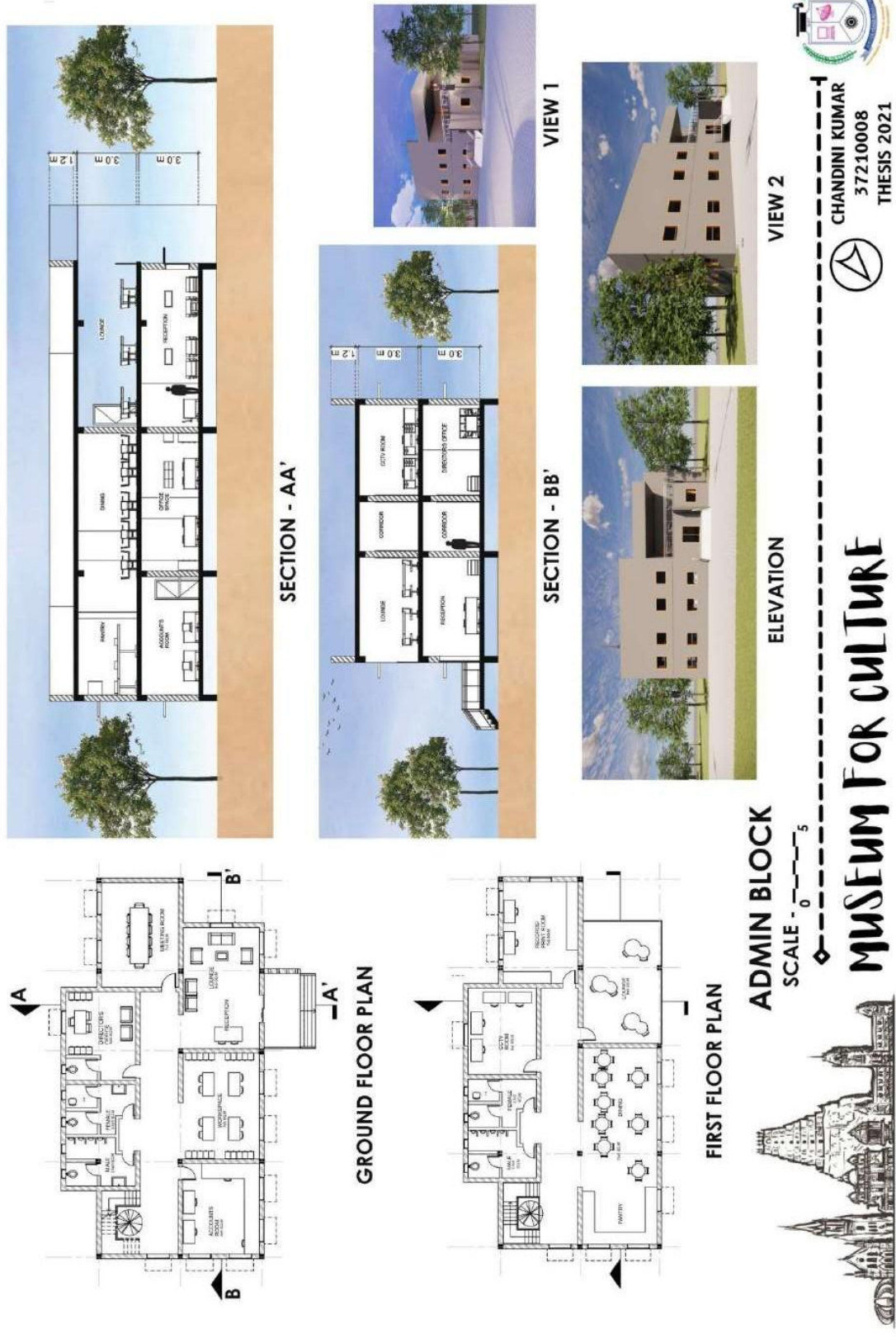


Plate 6.5 Admin block

7. CONCLUSION

This thesis aims to showcase to the upcoming future generation for them to understand and appreciate the culture, tradition, values, customs of Tamil Nadu.

The design idea majorly revolves around the important parts of history, art forms, different arts and crafts of Tamil Nadu. This project highlights the state's important aspects and unique characteristics, cultural influences through architecture.

Hence by creating an archive for the lack of such places in TamilNadu, every generation can relive and live through these important moments and also experience various art forms like Tanjore paintings, dance forms, musical instruments, weapons, and coin display, etc.

The museum for culture in Mahabalipuram showcases all such culture and heritage respectfully exhibiting them with a user experience created for the visitors with diverse age groups and communities.

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