



THESIS REPORT ON

**“SWAMINARAYAN TEMPLE, PURI,  
ORISSA”**

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE  
REQUIREMENT FOR THE DEGREE OF:

**BACHELOR OF ARCHITECTURE**

BY

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THESIS GUIDE

**AR. VARSHA VERMA**

SESSION 2022-23

**TO THE  
SCHOOL OF ARCHITECTURE AND PLANNING  
BABU BANARASI DAS UNIVERSITY  
LUCKNOW.**



**SCHOOL OF ARCHITECTURE AND PLANNING**  
**BABU BANARASI DAS UNIVERSITY, LUCKNOW (U.P.).**

**CERTIFICATE**

I hereby recommend that the thesis entitled  
**“SWAMINARAYAN TEMPLE, PURI”** under the  
supervision, is the bonafide work of the students and can be  
accepted as partial fulfillment of the requirement for the degree  
of Bachelor’s degree in architecture, school of Architecture and  
Planning, BBDU, Lucknow.

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Recommendation

Accepted

Not Accepted

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External Examiner

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# **INTRODUCTION**





# SWAMINARAYAN TEMPLE



## **1.1 INTRODUCTION**

The Swaminarayan temple complex is a spiritual, volunteer-driven organization dedicated to improving society through individual growth by fostering the Hindu ideals of faith, unity, and selfless service.

"ALWAYS BE HAPPY" "IN THE JOY OF OTHERS LIES OUR OWN."

"TRUE SPIRITUALITY SPEAKS THE LANGUAGE OF LOVE."

"BETTER THE WORLD AROUND YOU BY BETTERING YOURSELF."



## **1.2 HISTORY AND BACKGROUND**

BHAGWAN SWAMINARAYAN, the founder of the Swaminarayan Sampradaya, was born on 2 April 1781, in the village of Chhapiya, near Ayodhya, North India. Having mastered the scriptures by the age of 7, He renounced home at 11 to embark upon a 7 year spiritual pilgrimage on foot across the length and breadth of India. Eventually settling in Gujarat, He spent the next 30 years spearheading a socio-spiritual revolution.

With a faithful following of 500 Paramhansas, He established the Swaminarayan Sampradaya, introducing social reforms, serving the poor and the needy, challenging superstition, addictions and blind faith.

His work concentrated on promoting personal morality and molding spiritual character. In a life span of 49 years, He enriched humanity with six majestic mandirs, revealed the Vedic philosophy of Swaminarayan worship, and imparted deep spiritual wisdom in the sacred scripture - Vachanamrut.

In His own lifetime, He was worshipped as the supreme God by hundreds of thousands of devotees.



## 1.2 HISTORY AND BACKGROUND

As a center for religious gatherings and instruction,

As a center for studying Sanskrit, devotional music and Vedic literature,

As centers of social services where alms, medicines, and clothes, were available to the poor and needy.



The first temple Swaminarayan constructed was in Ahmedabad in 1822, with the land for construction given by the British Imperial Government. Following a request of devotees from Bhuj, Swaminarayan asked his follower Vaishnavananand Swami to build a temple there. Following planning, construction commenced in 1822, and the temple was built within a year. A temple in Vadtal followed in 1824, a temple in Dholera in 1826, a temple in Junagadh in 1828 and a temple in Gadhada, also in 1828. By the time of his death, Swaminarayan had also ordered construction of temples in Muli, Dholka and Jetalpur. From early on, ascetics have played a major role in the Swaminarayan sect. They contribute towards growth and development of the movement, encouraging people to follow a pious and religious life.

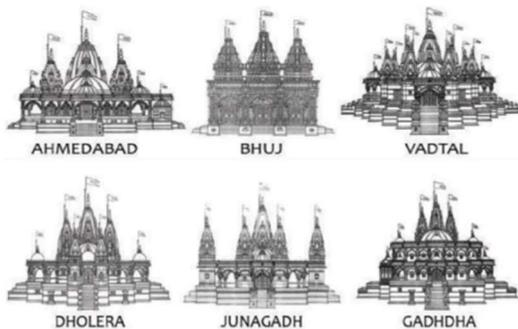


### **1.3 AIM**

The aim is to design a temple complex in which the constraints of the Swaminarayan temple by laws are followed and a link is established between the traditional and modern minimization the philosophy of Swaminarayan sampraday and their code of conduct to be followed.

Swaminarayan sampraday believes that there should be; A forum where people forget their differences and voluntarily unite to serve society. It functions as a center for learning about man, nature, and Bhagwan.

A Mandir is where ethics and values are reinforced into the lives of children and adults. It is where people celebrate festivals and seek refuge during difficult times. It cultivates talents in various arts, music, and literature that are offered in the service of Bhagwan and the community. They contribute towards growth and development of the movement, encouraging people to follow a pious and religious life.



### **1.4 OBJECTIVES**

The main objectives behind establishing this Swaminarayan temple complex are;

- Study of Traditional Hindu architecture (temple)
- Developing of Modern architecture in Temple design on basis of traditional architecture.
- To design an innovative design on modern design concept.
- This project is to spread the spirituality around the world for helping its
- 20mn devotees, so they can be guided and become more graceful to have an
- landmark which provides the correct path to groom in their life.

## **1.5 SCOPE**

The main scope to have Swaminarayan temple is to revive and to keep alive the Hindu tradition with modern design. In this sort of temple complex it's not only about the living tradition and culture but also about how the miniature architecture and the traditional Indian Architecture becomes a prominent way to be visualized to India as well in international world.

Scope in architectural context:

- Providing spiritual environment for peace & divine guidance.
- To design a temple complex in Pun, a sacred dham of India to fulfil wish of Bhagwan as they wished to build a temple here in future.
- To provide a place for its followers to live in a spiritual environment where they can communicate with other followers and gurus. Also where they can attend workshops held for their overall growth.
- To provide ashram for sadhu's and provide instruction in the performing arts, cooking, literature, public speaking, athletics, leadership, and human resources administration. Instruction is followed with recitals, competitions, and practical applications of training.
- To provide space to nurture children through academic programs, character building initiatives, and wellness programs & to also provide a platform to practice and perfect their talents. At the center of these initiatives is the mandir, an epicenter for overall development.
- To develop space for satsang sabhas, spiritual counseling sessions, and daily rituals and practices serve as a reminder of spirituality to millions of individuals.
- Provide space to celebrate various festivals like Janmastmi, Rasotsav, Deepawali, Holi, Jaljulani Ekadashi etc.



## **1.6 PROJECT SITE ----- MOHINIPPUR , PURI, ORISSA**

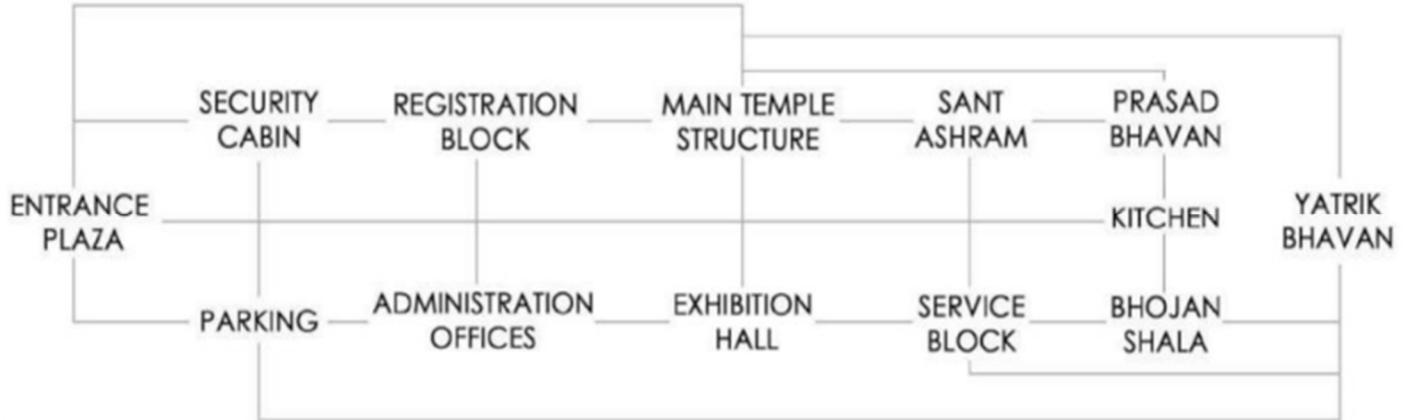
- SITE AREA:- 18.4 ACRES
- MAXIMUM GROUND COVERAGE:- 30%
- MAXIMUM F.A.R.:- 1.5
- HEIGHT:- 26M
- CLIENT:- SWAMINARAYAN MANDIR TRUST
- DISTANCE FROM JAGANNATH TEMPLE:- 14KM
- APPROACH TO THE SITE:-
  - BUS STATION:- 7.8KM
  - RAILWAY STATION:- 10.4KM
  - AIRPORT(BHUVNESHWAR).:- 60KM



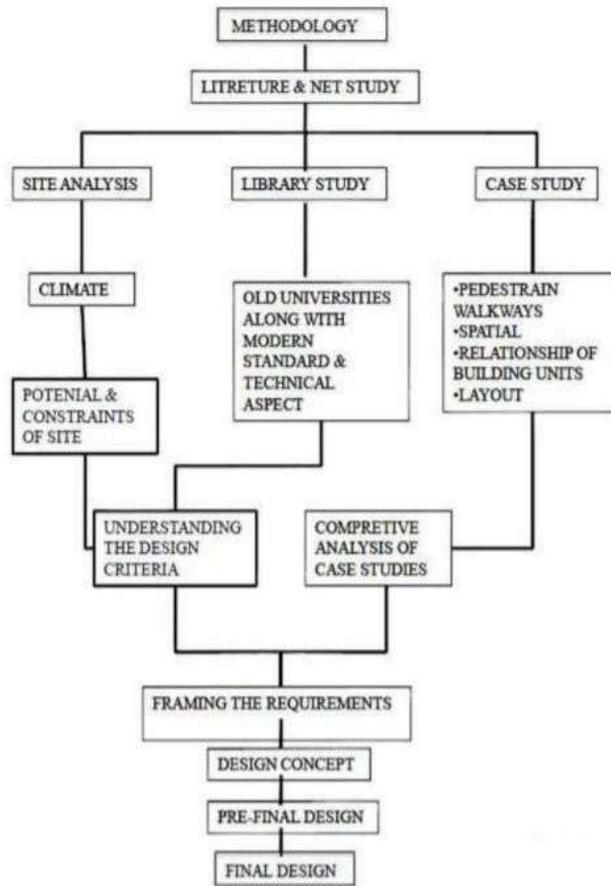
## **1.7 CLIENT NAME AND BRIEF**

Swaminarayan Temple is a project by Bochasanwasi Akshar Purushottam Swaminarayan Sanstha (BAPS).

## 1.8 PROJECT REQUIREMENTS



## 1.9 METHODOLOGY





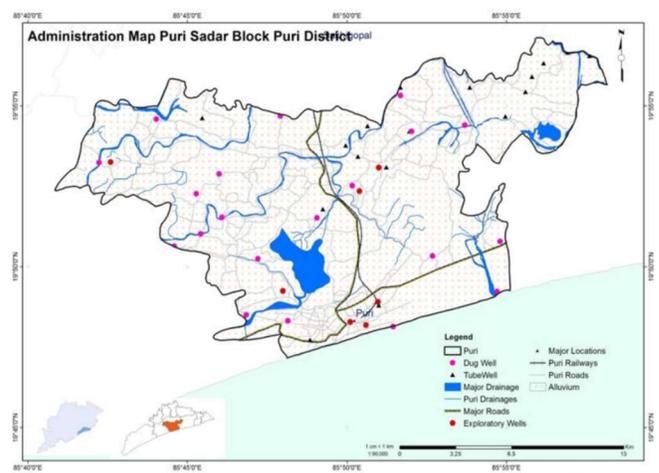
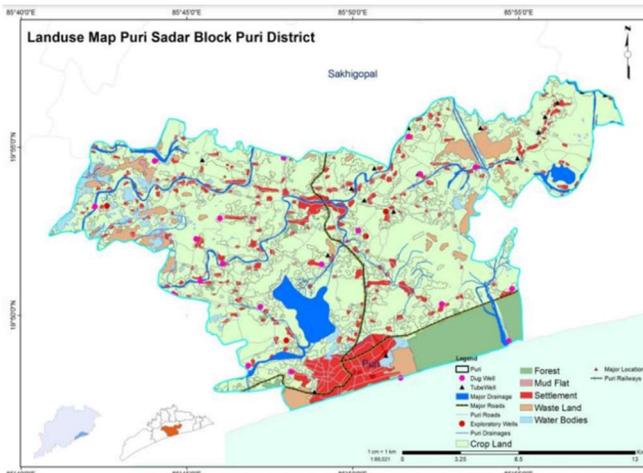
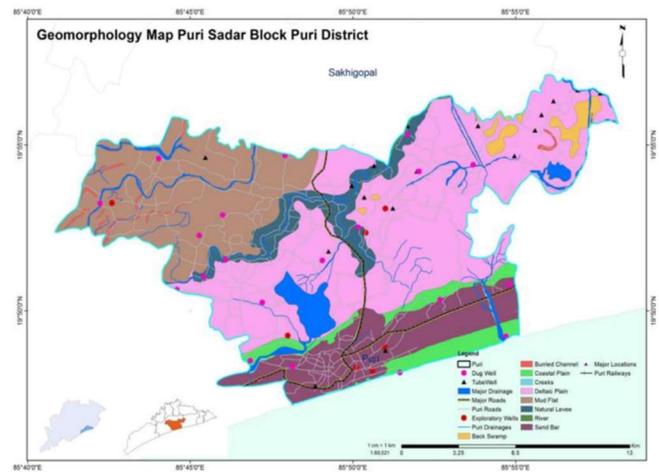
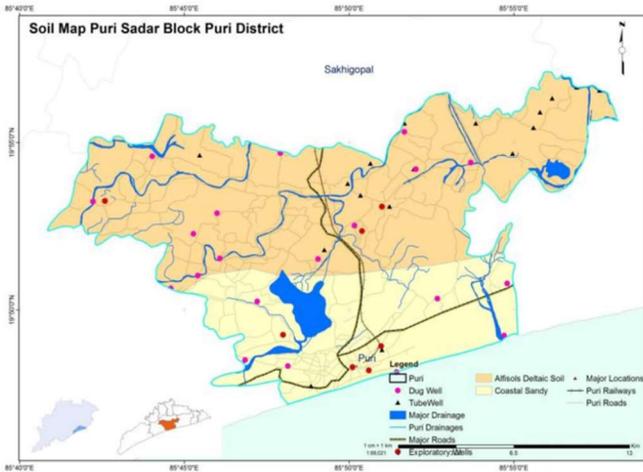
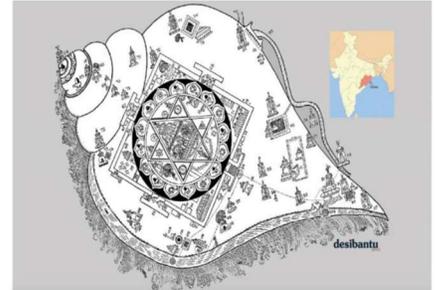
# SITE AND CLIMATE ANALYSIS



# 2.1 SITE LOCATION

## PURI

Vedic age to 9th century AD	
Initial settlement of Puri dating back to age of 'Rigveda'	<ul style="list-style-type: none"> <li>An early settlement of Puri town dating back to the age of Rigved itself.</li> <li>According to the records, Puri started with fisherman</li> </ul>
	<ul style="list-style-type: none"> <li>The original history of Jagannath temple dates back to the times of Mahabharata.</li> <li>According for which the temple was constructed by the king Indradyumna as he found the daru (in the</li> </ul>
First Nagar (town) 2nd Century BC	<ul style="list-style-type: none"> <li>King Ashoka invaded Kalinga in 262 AD. With Bhuddism being spread over Odisha.</li> </ul>
Established as one of the "Dhams" (holy destinations)	<ul style="list-style-type: none"> <li>In 9th century AD, Acharya Shankar visited Puri &amp; named the place as one of the four dhams.</li> </ul>
The 2nd temple 10th	<ul style="list-style-type: none"> <li>In this period King Yayati Keshari built the 2nd temple of the same place because 1st one was dilapidated.</li> </ul>
3rd and the Present temple	<ul style="list-style-type: none"> <li>King Chodaganga deva (1174-1198 AD) built the temple at the time of 1135 AD &amp; his grandson completed the temple.</li> <li>In this time migration took place due to Lord Jagannath</li> </ul>



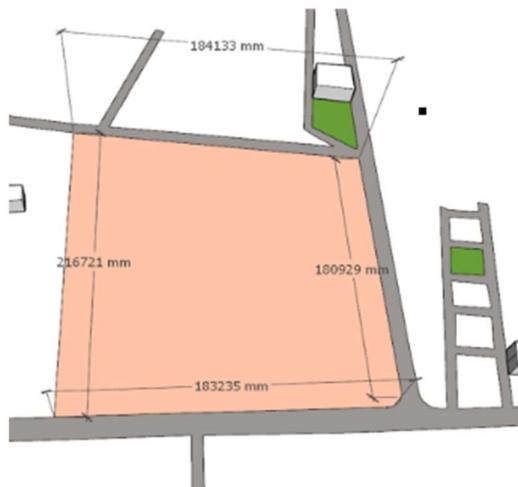
## 2.2 SITE CO-ORDINATES



**LATTITUDE:-** 19°50'12.1"N

**LONGITUDE:-** 85°53'07.1"E

## 2.3 SITE ANALYSIS



**SITE AREA:-** 18.4 ACRES(74462.16SQM)

**GROUND COVERAGE:-** 35% (26061.756SQM)

**F.A.R.:-** 1.5

**SITE ORIENTATION:-** SOUTH EAST FACING

**SITE TOPOGRAPHY:-** FLAT SITE

**SITE VEGETATION:-** SHRUBS

**ACCESS ROAD:-** 24M WIDE PURI-KONARK MARINE

**ON SITE CONSTRUCTION:-** PORTAL FRAME CONST.

## 2.4 SITE SPECIFICATIONS

**THE SITE IS LOCATED ON THE MAIN ACCESS ROAD OF PURI-KONARK MARINE DRIVE**

**IMMEDIATE CONTEXT-** PENTHAKATA MARINE POLICE STATION

**NEAREST BUS STOP :-** PURI BUS STAND (6.5KM)

**NEAREST RAILWAY STATION:-** PURI RLWY STN (6.9KM)

**NEAREST AIRPORT:-** BHUBANESHWAR INTERNATIONAL AIRPORT (61.1KM)

**MAJOR LANDMARKS:-**

**DISTANCE FROM JAGANNATH TEMPLE:-** 8.2KM

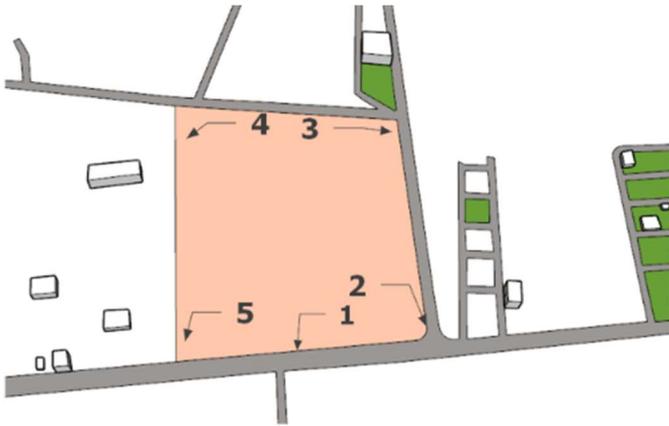
**DISTANCE FROM KONARK SUN TEMPLE:-** 32.2KM

## 2.5 SITE DESCRIPTION

THE LAND IS ALOTTED BY BAPS FOR THE DEVELOPMENT OF EXISTIN STRUCTURE OF SWAMINARAYAN TEMPLE (AKSHARDHAM TEMPLE).

THE SURROUNDED AREA IS AN UNDEVELOPED AREA. THE SITE IS WELL CONNECTED BY ROAD NETWORK.

THE PROJECT WILL RESULT IN THE INCREASE IN THE SOCIAL INFRASTRUCTURE AS THE POPULATION RELATED TO HINDUSIM IN FORM OF SUPPORTING STAFF, WORKING STAFF AND VISITORS WILL INCREASE.



ON SITE PHOTOGRAPHS

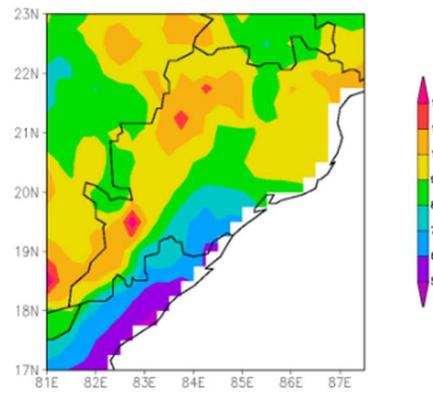
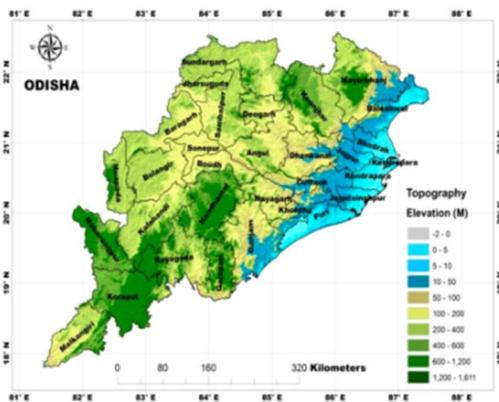
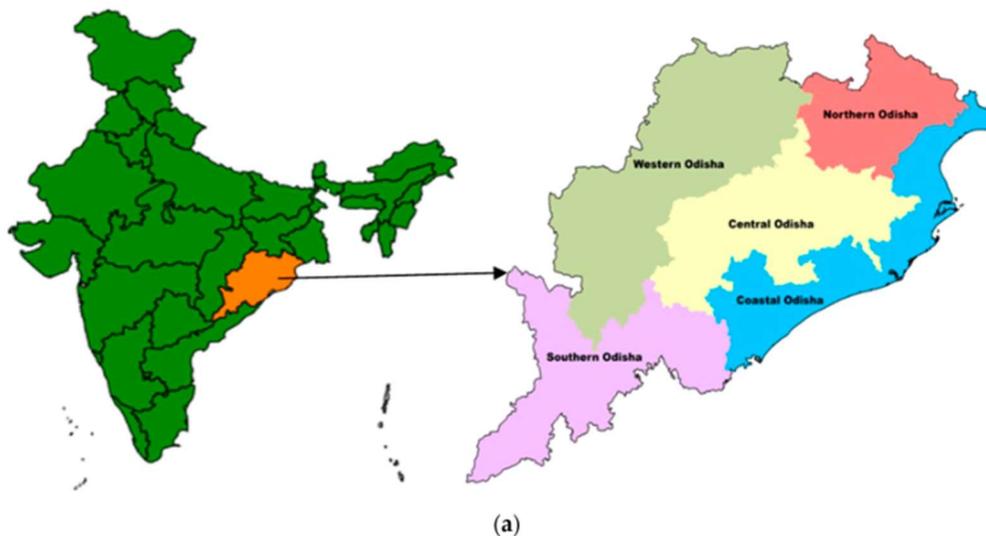


## 2.6 CLIMATE ANALYSIS

### ORISSA CLIMATE

The State has tropical climate, characterized by high temperature, high humidity, medium to high rainfall and short and mild winters. As per Koppen's climatic classifications most part of Orissa comes under the AW having a tropical Savannah type of climate. The south-west monsoon normally sets in between 5th June and 10th June in the coastal plain, and by 1st July the whole of the state is under the full sway of the south-west monsoons. By 15th October, the south-west monsoon withdraws completely from Orissa. These are the normal dates which fluctuate from year to year. As per "Thorn Thwaite's classification", Orissa comes under the "Sub humid" category, implying deficient winter rains.

On the basis of climate type, Orissa has been divided into ten agro-climatic zone. The normal rainfall of the state is 1451.2 mm. About 75% to 80% of rainfall is received from June to September. Floods, droughts and cyclones occur almost every year varying intensity.



(b)

(c)

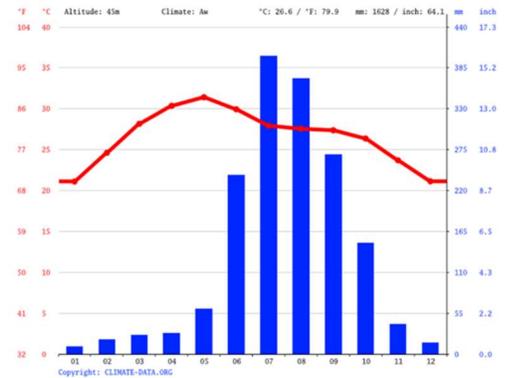
# 2.6 CLIMATE ANALYSIS

## ORISSA CLIMATE

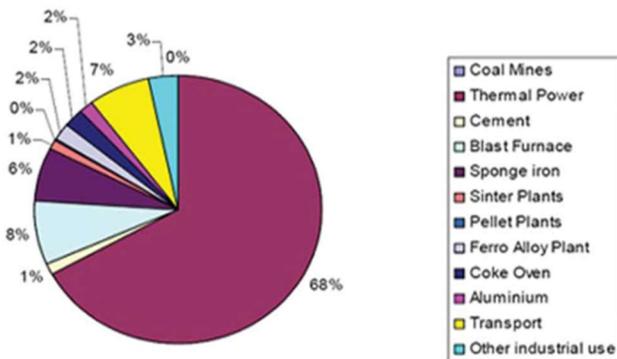
Climate Odisha: Monthly Averages

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Nov	Oct	Dec	Year
Record high °C (°F)	34.0 (93.2)	38.0 (100.4)	45.0 (113.0)	48.0 (118.4)	50.0 (122.0)	48.0 (118.4)	39.0 (102.2)	38.0 (100.4)	36.0 (96.8)	36.0 (96.8)	33.0 (91.4)	32.0 (89.6)	50.0 (122.0)
Average high °C (°F)	28.02 (82.44)	32.45 (90.41)	37.26 (99.07)	41.45 (106.61)	42.03 (107.65)	37.63 (99.73)	33.0 (91.4)	32.16 (89.89)	32.31 (90.16)	31.37 (88.47)	29.64 (85.35)	27.56 (81.61)	33.74 (92.73)
Daily mean °C (°F)	22.94 (73.29)	27.35 (81.23)	32.25 (90.05)	36.27 (97.29)	37.11 (98.8)	34.34 (93.81)	30.52 (86.94)	29.7 (85.46)	29.52 (85.14)	27.84 (82.11)	25.45 (77.81)	22.91 (73.24)	29.68 (85.42)
Average low °C (°F)	14.26 (57.67)	17.54 (63.57)	21.35 (70.43)	25.02 (77.04)	27.49 (81.48)	27.99 (82.38)	26.16 (79.09)	25.29 (77.52)	24.65 (76.37)	21.85 (71.33)	18.07 (64.53)	14.99 (58.98)	22.05 (71.69)
Record low °C (°F)	8.0 (46.4)	11.0 (51.8)	13.0 (55.4)	18.0 (64.4)	22.0 (71.6)	22.0 (71.6)	20.0 (68.0)	20.0 (68.0)	21.0 (69.8)	15.0 (59.0)	13.0 (55.4)	9.0 (48.2)	8.0 (46.4)
Average precipitation mm (inches)	4.82 (0.19)	20.31 (0.8)	12.7 (0.5)	25.14 (0.99)	44.55 (1.75)	117.66 (4.63)	170.03 (6.69)	178.43 (7.02)	149.42 (5.88)	122.15 (4.81)	4.87 (0.19)	7.11 (0.28)	71.43 (2.81)
Average precipitation days (≥ 1.0 mm)	1.64	2.09	2.91	3.27	4.18	15.91	23.45	21.64	20.0	11.36	1.55	1.64	9.14
Average relative humidity (%)	53.91	47.96	43.35	44.92	50.92	59.37	74.56	78.73	78.68	73.32	62.72	57.26	60.48
Mean monthly sunshine hours	8.55	8.45	10.77	12.67	12.94	12.6	11.7	11.63	10.36	10.6	9.93	8.42	10.72

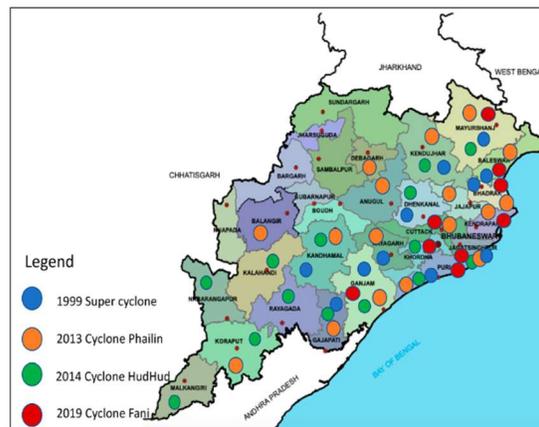
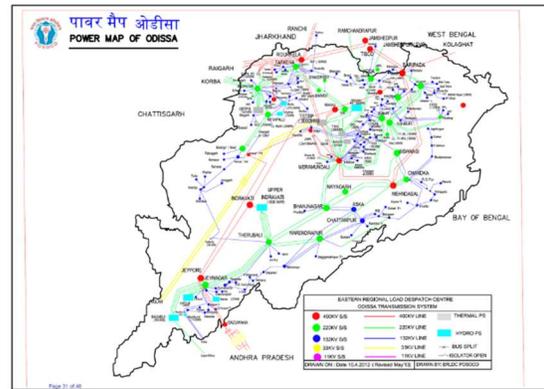
CLIMATE GRAPH // WEATHER BY MONTH BHUBANESWAR



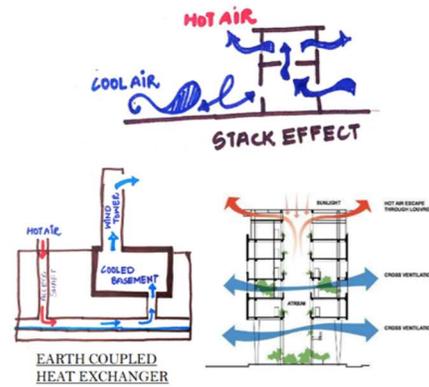
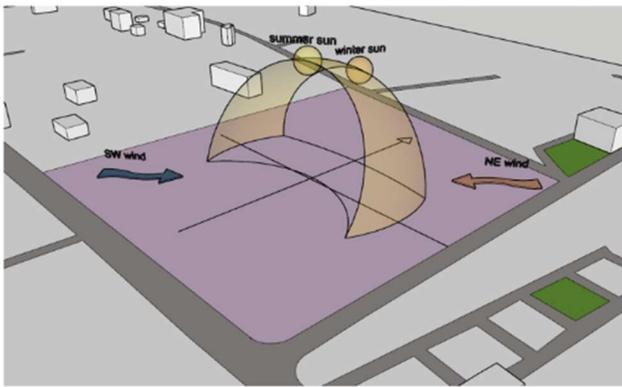
GHG Emission profile of Orissa



Source- Odisha Climate Change Action Plan Cell Report



## 2.7 SUNPATH AND AIR MOVEMENT



Courtyard/Atrium is the best solution in Warm and Humid climate. It excludes sun and trap wind.

Summer wind (+)

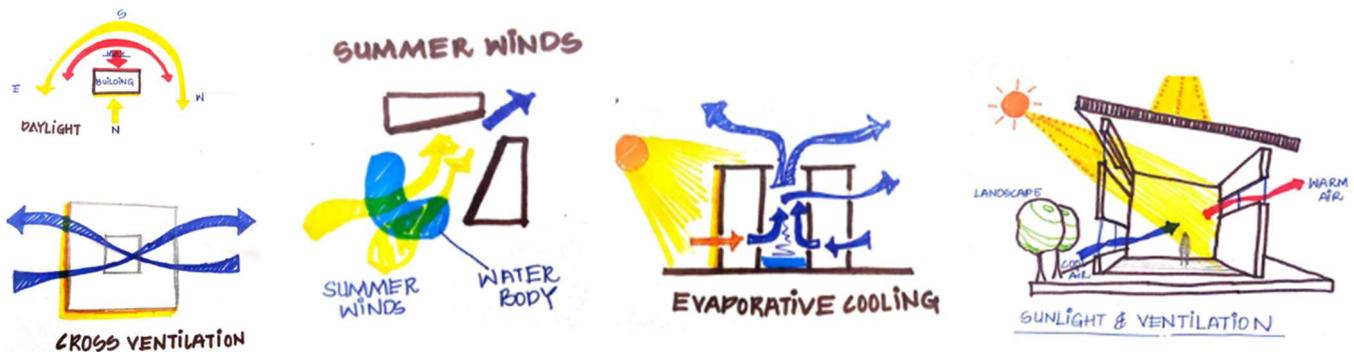
Sun Shading (+)

Evaporative Cooling (+)

Winter wind (-)

The building's orientation is based on the path of the sun. The atrium bathes the building in northern daylight while the solar panels on the southern facade shield the workspaces from the sun. Louvers on the south facades are designed according to sun angles and provide additional shading for the spaces, reducing solar heat gain. The North facades are highly transparent and use thicker glass to dampen noise from the motorway.

The Atrium façade is totally transparent, allowing views out over the dyke, and steady north light in.



In taller buildings, STACK VENTILATION can be used to draw fresh air through a building, and IN deeper building, atriums or courtyards can be introduced to allow light into the center of the floor plan.

EARTH TUBES are often a viable and economical alternative or supplement to conventional central heating or air conditioning systems since there are no compressors, chemicals or burners and only blowers are required to move the air.

Light color coatings with high reflection.

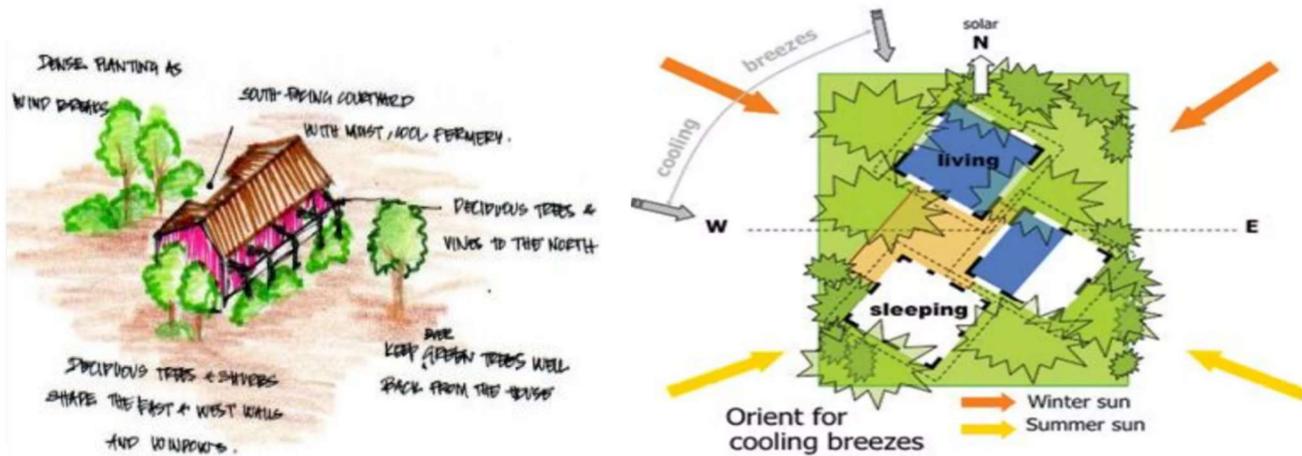
Active Techniques which can be used are HVAC System.

## 2.8 DESIGN CONSIDERATIONS

Heat absorption and heat storage are avoided.

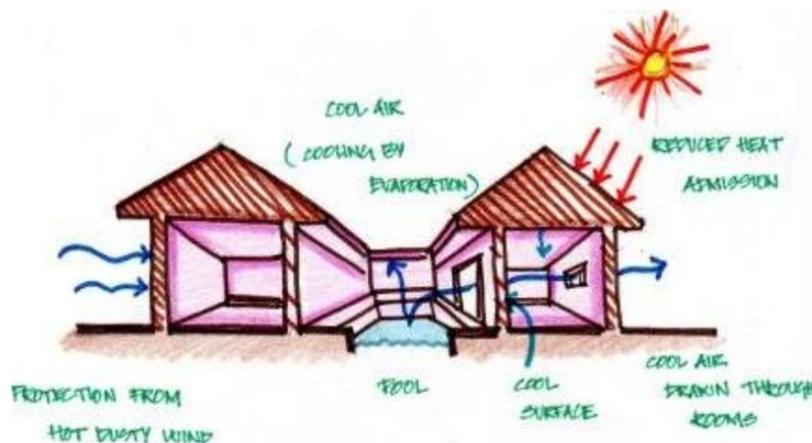
The use of low thermal mass, high reflective outer surfaces or double skin structures is Recommended.

Temperature at the interior level can be maintained by the proper designing of ventilation and utilization of air movement at increased velocity, which takes the advantage of reduction in heat and compresses the humidity level.



### SUN ORIENTATION

- Orientation of the settlements pattern should be placed preferably on southern or northern slopes.
- The best orientation is longer sides facing north and south directions to protect from the solar radiations. the east and west sides should be shaded by shading devices.



## 2.8 DESIGN CONSIDERATIONS

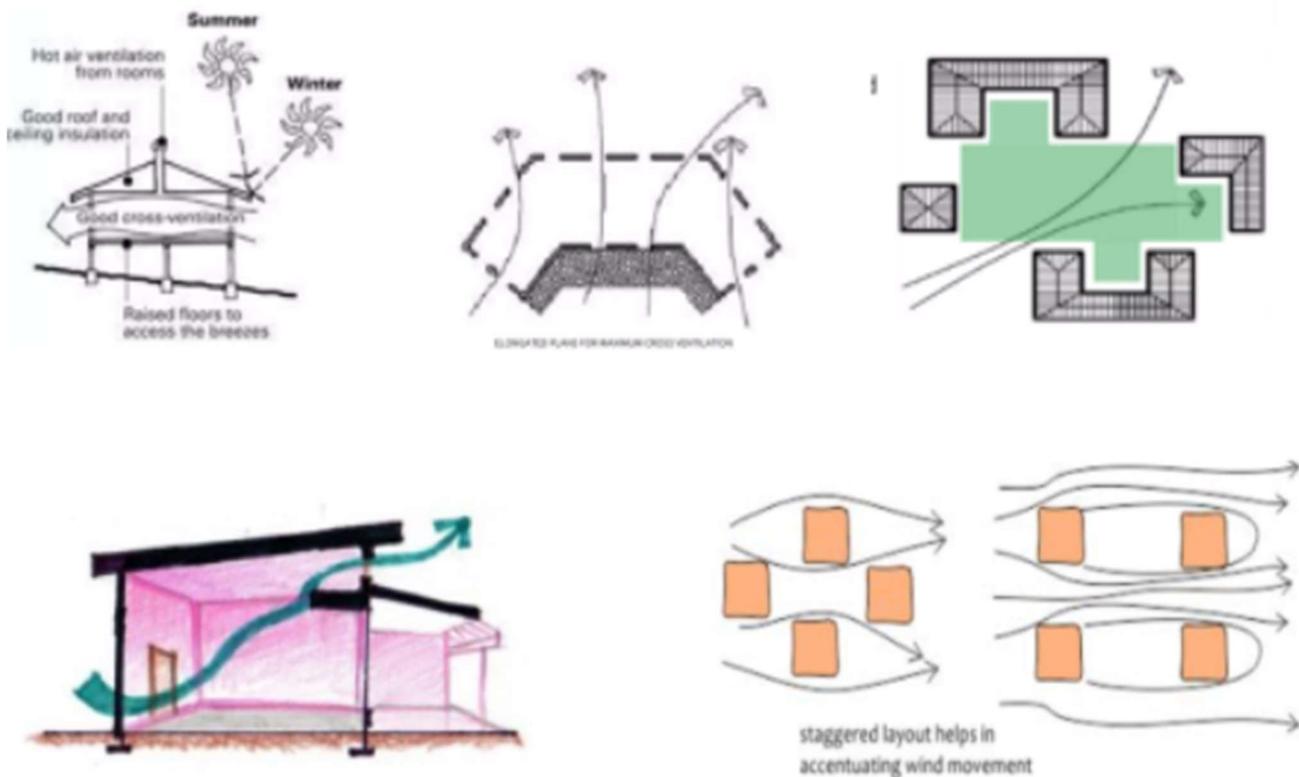
### WIND ORIENTATION

Building should be oriented along the wind direction with the longer axis intercepting the predominant wind directions.

Elongating the settlement in a line across the prevailing wind direction gives low resistance to air movement and is therefore the ideal solution.

Cross-ventilation acts more effective in interior spaces by enlarging the openings of the internal partitions and by providing free passage, courtyards, verandah, etc.

Continuous circulation of air enhances the space with appropriate temperature and humidity





# **3. CASE STUDY**



## 4.1 SWAMINARAYAN AKSHARDHAM TEMPLE, NEW DELHI

### 4.1.1 SITE ANALYSIS

**LOCATION:** Noida Mor, Pandav Nagar, New Delhi

**BUILT YEAR:** 2005,

**DESIGNER-** Kiran Trivedi Gr.

**BUILT BY:** BAPS(Bochasanwasi Akshar Purushottam Swaminarayan Sanstha)

**SITE AREA:** 100 Acres approx.

**MATERIAL USED:** Rajasthani pink sandstone and Italian Carrara marble

**ORIENTATION:** East facing



### 4.1.2 SELECTION CRITERIA FOR CASE STUDY

- The planning and traditional motives around the temple.
- The project has almost same in complex features like library, exhibition areas e
- The project is one of the major epitome in Today's temple history



### 4.1.3 SPIRITUAL SIGNIFICANCE

Each element of Akshardham echoes with spirituality – the Mandir, the Exhibitions and even the Gardens.

The Akshardham mandir has over two hundred murtis, representing many of the spiritual stalwarts over many millennia. The spiritual premise of Akshardham is that each soul is potentially divine. Whether we are serving the family, the country our neighbors or all living beings the world over , each service can help one move towards divinity. Each prayer is a call towards improving oneself and moving closer to God.

A visit to Akshardham is a spiritually enriching experience. Whether it is in realising the power of prayer, in feeling the strength of non-violence, in being aware of the universal nature of Hinduism's ancient principles, or just in admiring the beauty of God's abode on Earth -- each element has a spiritual significance.

## 4.1 SWAMINARAYAN AKSHARDHAM TEMPLE, NEW DELHI

### 4.1.4 ABOUT AKSHARDHAM, DELHI

Akshardham or Swaminarayan Akshardham complex is a Hindu mandir, and a spiritual-cultural campus in New Delhi, India. Also referred to as Akshardham Temple or Swaminarayan Akshardham, the complex displays millennia of traditional Hindu and Indian culture, spirituality, and architecture.

The temple, which attracts approximately 70 percent of all tourists who visit Delhi, was officially opened on 6 November 2005 by Dr. A.P.J. Abdul Kalam. It sits near the banks of the Yamuna adjacent to the 2010 Commonwealth Games village in eastern New Delhi. The temple, at the centre of the complex, was built according to the Vastu shastra and Pancharatra shastra.

The complex features an Abhisheka Mandap, Sahaj Anand water show, a thematic garden and three exhibitions. According to Swaminarayan Hinduism, the word Akshardham means the abode of almighty Lord Swaminarayan and believed by followers as a temporal home of God on earth



The main attraction of the Swaminarayan Akshardham complex is the Akshardham Mandir. It rises 141-foot (43 m) high, spans 316-foot (96 m) wide, and extends 356-foot (109 m) long. It is intricately carved with flora, fauna, dancers, musicians, and deities.

Under the temple's central dome lies the 11-foot (3.4m) high murti of Swaminarayan seated in abhaya mudra to whom the temple is dedicated. Swaminarayan is surrounded by images of the faith's lineage of Gurus depicted either in a devotional posture or in a posture of service

BAPS Swaminarayan Akshardham in New Delhi, India, is the world's largest comprehensive Hindu temple. It measures 356 ft (109 m). long, 316 ft (96 m). wide and 141 ft (43 m). high, covering an area of 86,342 sq ft (8,021.4 m<sup>2</sup>).

The record was presented for Akshardham as the World's Largest Comprehensive Hindu Temple Delhi Development Authority offered 60 acres (240,000 m<sup>2</sup>) of land, and the Uttar Pradesh Government offered 30 acres (120,000 m<sup>2</sup>) for the project

## 4.1 SWAMINARAYAN AKSHARDHAM TEMPLE, NEW DELHI

### 4.1.4.1 GAJENDRA PEETH

The Akshardham Mandir rests on the unique 1,070 ft long Gajendra Peeth, which comprises 148 sculpted stone elephants, and dozens of other sculptures of people, animals and birds weighing in excess of 3,000 tons. It pays tribute to the glory of elephants and nature in Indian culture.



The Gajendra Peeth, the lower pradakshina, is a unique, captivating feature of Swaminarayan Akshardham and is an inspiring revival of an ancient architectural tradition. Ancient architectural treatises like Mayamtam, Shilpa Ratnakar, Diparnav and others prescribe a gajsthar (plinth of elephants) for palaces and mandirs. This tradition is found in the ancient Kailas Mandir of Ellora, which is 1300 years old and in the Mahabalipuram Mandir that is 1400 years old. Prior to the 12th century, many mandirs followed this tradition by having a gajsthar. The large gajsthar of the Swaminarayan Akshardham marks a bold return of this tradition.



This depiction of elephants is to honor these grand yet gentle animals and also share messages of peace, beauty and gentleness.



# 4.1 SWAMINARAYAN AKSHARDHAM TEMPLE, NEW DELHI

## 4.1.5 VISUAL STUDY



Marvelous Sculptures



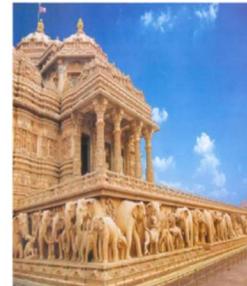
Heavy Carvings on the ceiling



Main Deity  
Bhagwan SwamiNarayan

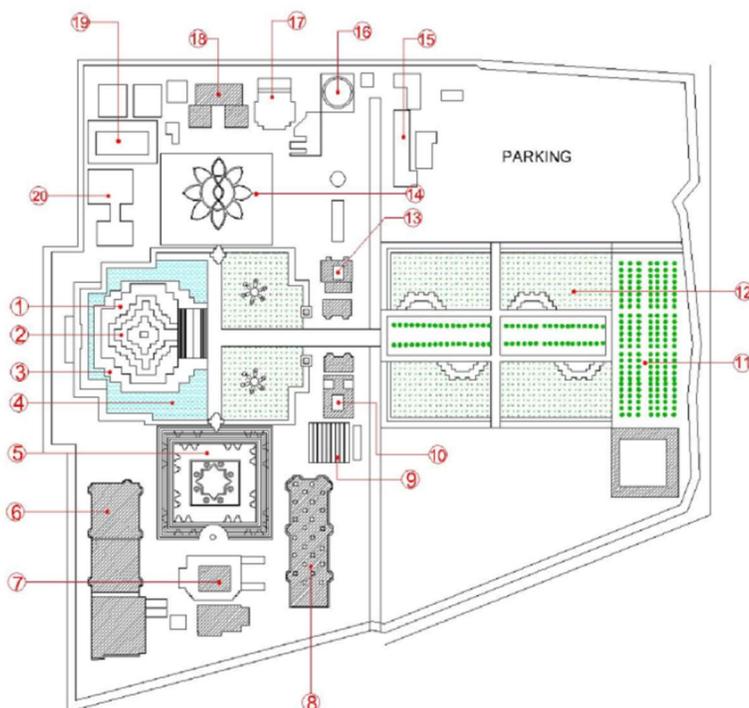
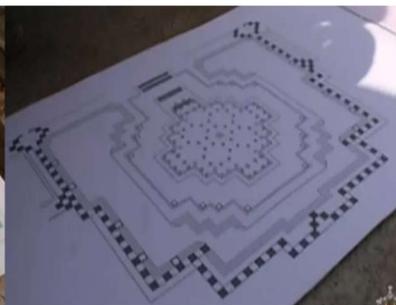


Sacred Water of 108 rivers  
flowing around the main temple



Encircling Plinth of the  
temple  
With the story of  
Gajanan

## 4.1.6 SITE PLAN



SI.NO	NAME OF SPACE
1	MANDOVAR
2	MONUMENTAL SANCTUM
3	GAJENDRA PEETH
4	NARAYAN SAROVAR
5	MUSICAL FOUNTAIN
6	EXHIBITION HALL2
7	NEELKANTH YATRA
8	EXHIBITION HALL
9	SHADE FOR WRITING CUE
10	OFFICE AND GUEST AREA
11	IN HOUSE NURSERY
12	CULTURAL GARDEN
13	BHAKTI DWAR
14	YOGIHRIDAY KAMAL
15	SECURITY CHECK
16	CLOAK ROOM
17	SHOP
18	FOOD COURT
19	TEMPLE

## 4.1 SWAMINARAYAN AKSHARDHAM TEMPLE, NEW DELHI

### 4.1.6. SITE PLAN

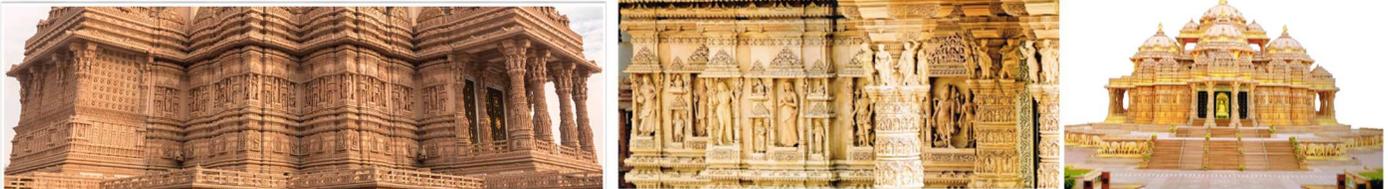
#### 4.1.6 .1 MANDOVER

The ornate external wall of the Swaminarayan Akshardham monument is known as the mandovar. It is the largest, most intricately carved mandovar built in India in the past 800 years, and is 610 ft long and 25ft high. It features 200 sculptured stone figure Ganeshji in different mudras.

The base of the mandovar is called the jagati. In this layer, one finds carvings of living beings from our everyday world.

In the subsequent layers, one finds carvings of flowers that stand for beauty and fragrance. In the middle of the mandovar, known as vibhuti, are sculptures of the avatars, sages, devas, acharyas and devotees.

And on top within this layer are the samarans that exhort people to strive for spiritual height in life. The entire mandovar inspires an individual to liberate his life from the shackles of mundane pleasures and ascend to the ultimate state of God-realization.



#### 4.1.6 .2 GARBHAGRIH

The inner sanctum or garbhagruh of the Akshardham mandir is home to Bhagwan Swaminarayan and his divine succession of gurus - Gunatitanand Swami, Bhagatji Maharaj, Shastriji Maharaj, Yogiji Maharaj, and Pramukh Swami Maharaj.

As manifestations of Aksharbrahma, the gurus, as manifestations of Aksharbrahma, are God's eternal servants and ideals of saintliness and devotion.

They reside in the garbhagruh eternally offering service and worship to Bhagwan Swaminarayan. Items sanctified by Bhagwan Swaminarayan during his time on Earth are also preserved for darshan directly behind the garbhagruh.

Around the garbhagruh, special altars are devoted to other Hindu deities of Sanatana Dharma: Shri Sita-Ram, Shri Radha-Krishna, Shri Lakshmi-Narayan, and Shri Shiv-Parvati.



## 4.1 SWAMINARAYAN AKSHARDHAM TEMPLE, NEW DELHI

### 4.1.6. SITE PLAN

#### 4.1.6 . 3. GAJENDRA PEETH

A mandir stands, traditionally and symbolically, on the shoulders of elephants. In a uniquely creative adaptation, the elephants at the base of Swaminarayan Akshardham are not just standing still. The Gajendra Peeth or Elephant Plinth presents stories and legends of elephants with nature, with humans and with God. This depiction of elephants is to honor these grand yet gentle animals and also share messages of peace, beauty and gentleness.



#### 4.1.6 . 4. NARAYAN SAROVAR

Narayan Sarovar surrounds the Akshardham Monument on three sides. The holy waters of 151 rivers, lakes and stepwells of India, visited by Bhagwan

Swaminarayan, have been ritually added to Narayan Sarovar. Water flows into the Narayan Sarovar through 108 gaumukhs on the side and back walls of the Mandir.



#### 4.1.6 5. MUSICAL FOUNTAIN

Narayan Sarovar surrounds the Akshardham Monument on three sides. The holy waters of 151 rivers, lakes and stepwells of India, visited by Bhagwan

Swaminarayan, have been ritually added to Narayan Sarovar. Water flows into the Narayan Sarovar through 108 gaumukhs on the side and back walls of the Mandir. The fountain is named after the founder of the Hindu organisation BAPS, Shastriji Maharaj.[22] The fountain measures 300 feet (91 m) by 300 feet (91 m) with 2,870 steps and 108 small shrines. In its centre lies an eight-petaled lotus shaped yagna kund designed according to the Jayaakhya Samhita of the Panchratra shastra.

## 4.1 SWAMINARAYAN AKSHARDHAM TEMPLE, NEW DELHI

### 4.1.6. SITE PLAN

#### 4.1.6 . 6. EXHIBITION HALL

The exhibitions are displayed in three large halls, each with a unique display style. A source of education, information and inspiration, they are a fourfold combination of art, science, culture and spirituality. Artistically mesmerizing, scientifically stunning, culturally moving, and spiritually elevating, the exhibitions create amazing environments capable of transporting viewers to ancient India. A balanced fusion of ancient values and wisdom and the best of modern media and technology, the exhibitions provide a powerful, soul-stirring experience of Hindu heritage and universal values. The three halls are: Sahajanand Darshan – Hall of Values; Neelkanth Darshan – Large Format Film; Sanskruti Darshan – Cultural Boat Ride.



#### 4.1.6 . 7. NEELKANTH YATRA

At Akshardham's giant screen theater, visitors become engrossed in Neelkanth Yatra - a signature giant screen film. Here, on 76 feet wide and 57 feet tall screen and 15.1 channels sound experience, the audience follows a young Neelkanth Varni on an epic trek across the Indian subcontinent. From the icy peaks in the northern Himalayas to the warm beaches of southern India, follow Neelkanth as he traverses 12,000 kilometers across the length and breadth of India. Be reminded of the value of sacrifice and service, the wisdom of the eternal soul, and the power of faith.



#### 4.1.6 . 8. SHADE FOR WRITING CUE



## 4.1 SWAMINARAYAN AKSHARDHAM TEMPLE, NEW DELHI

### 4.1.6. SITE PLAN

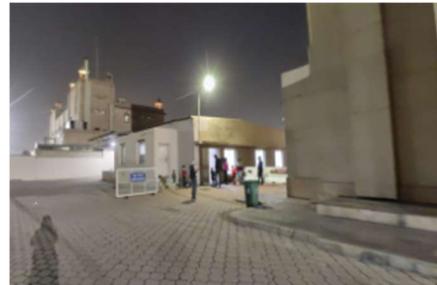
#### 4.1.6 . 13. BHAKTI DWAR AND MAYUR DWAR

BHAKTI DWAR:-The Gate of Devotion celebrates the Vedic tradition of dual worship. Offering devotion to God and his choicest Devotee is the genuine form of worship. Honouring this custom, 208 sculpted dual forms of God and His devotee decorate this splendid gate.



MAYUR DWAR:-The peacock is a symbol of beauty and purity. It is also the national bird of India. The two Mayur Dwars (Peacock Gates) pay tribute to the joy and colour peacocks add to life. A total of 869 sculpted peacocks adorn each of the beautiful gates.

#### 4.1.6 . 15. SECURITY CHECK



#### 4.1.6 . 16. CLOAK ROOM



## 4.1 SWAMINARAYAN AKSHARDHAM TEMPLE, NEW DELHI

### 4.1.6. SITE PLAN

#### 4.1.6 . 17. CLOAK ROOM

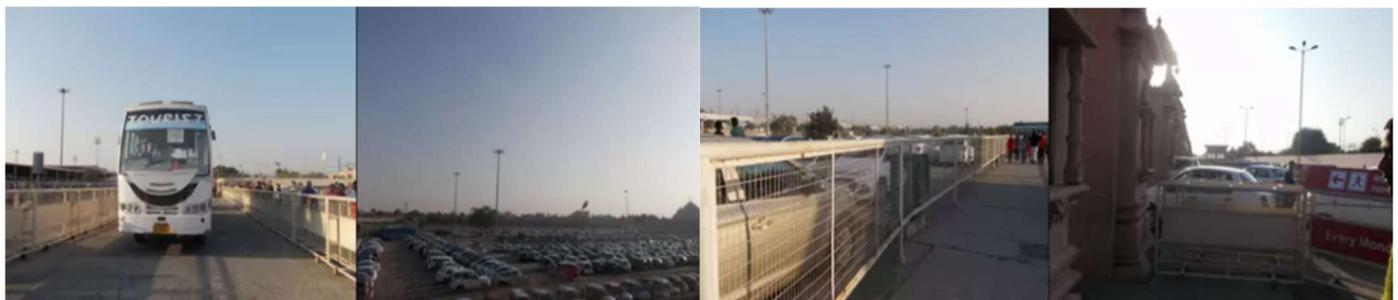


#### 4.1.6 . 18. FOOD COURT



#### 4.1.6 . 20. PARKING

car parking (open) 500 car + 20 bus + 3000 bikes



## 4.1 SWAMINARAYAN AKSHARDHAM TEMPLE, NEW DELHI

### 4.1.7. AREA ANALYSIS

Sr					
1	main temple	109X96 sq m	Auditorium (capcity 750 ppl)		
2	multi purpose hall	1200 sq m			
3	kitchen (prasadm)	250.00 sq m		stage	200.00 sq m
4	5 food container store	100.00 sq m		sitting	4000.00 sq m
5	liabarary 100 ppl	NA		Toilet	140.00 sq m
6	pandal	NA		cloak room	120.00 sq m
			foyer	900.00 sq m	

Sr					
1	parking	15000 sq m	Auditorium (capcity 330 ppl)		
2	oht in lt	2lakh lt			
3	soft scape	30 %		no entrance exit	3 entery 2 exit
4	hard scape	40%		total site area	60 acre
5	crowed /day	3000- 7000		material	stone/marble
6	crowed in festival	90,000- 1Lakh		focal point	NA
			foyer	2000.00 sq m	

## 4.2 ISCKON - SHRI RADHA PARTHASARATHY TEMPLE COMPLEX, SANT NAGAR, NEW DELHI

### 4.2.1 SITE ANALYSIS



#### 4.2.1 1 LOCATION

ISCKON temple is 1.9 km from Nehru Metro station. The temple is located at a distance of 14 Km from Delhi Railway station on the Hare Krishna Hill. The Temple is located in Sant Nagar main road, East of Kailash, New Delhi

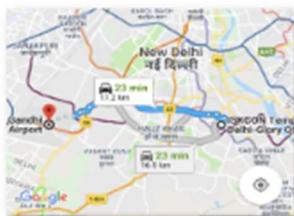


#### 4.2.1 2 SITE AREA

3 Acres approx.

#### 4.2.1 3 SITE APPROACH

This Temple has 2 Entrances: one is from 30 ft. wide Raja Dhirsain Marg and other one is secondary entrance from parking



**AIRPORT**

AIRPORT IS APPROX: 17 KM.



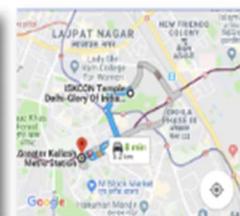
**RAILWAY STATION MAP**

New delhi railway station is approx: 13 km



**BUS STATION**

Anand vihar bus staion is approx: 15 km.



**METRO STATION MAP**

Greater kailash metro station 3 km.

## 4.2 ISCKON - SHRI RADHA PARTHASARATHY TEMPLE COMPLEX, SANT NAGAR, NEW DELHI

### 4.2.1. SITE ANALYSIS

#### 4.2.1 4.SITE SURROUNDINGS

ISCKON Temple is 2.4 Km from Lotus Temple



#### 4.2.1 5. SITE DRAINAGE SYSTEM:

The waste water is Drained along the natural slope of 8m. The Temple is on Hare Krishna hill. The site gets its natural slope of 8 meters. The road on the side of temple is towards North-east.



#### 4.2.1 6. ORIENTATION OF SITE

The site- Hare Krishna hill as it's called, this is the most logical direction to orient the temple to, if you want to utilize the entrance, and let the hill dictate the pathway leading up to the temple.

The complex oriented at east west direction.

Coordinates: 28°33'21"N 77°15'13"E



SITE ORIENTATION



TEMPLE ORIENTAION

## 4.2 ISCKON - SHRI RADHA PARTHASARATHY TEMPLE COMPLEX, SANT NAGAR, NEW DELHI

### 4.2.2. SITE ANALYSIS

#### 4.1.2 7. SOIL TYPE

Hard and Rocky Soil.

#### 4.1.2 8. TOPOGRAPHY

The temple is situated on a sloping site and covers an area of 3 acres with slope of 8m.



### 4.2.3. SELECTION CRITERIA FOR CASE STUDY

- The planning and use of levels on site.
- The case study has almost same climatic conditions as compared to proposed project site.
- The proposed project is almost same as case study in terms of usage, the client needs and spatial requirements.

### 4.2.4. VISUAL STUDY



MAIN ENTRY



SECOND ENTRY



FINAL ENTRY



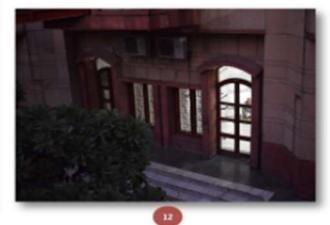
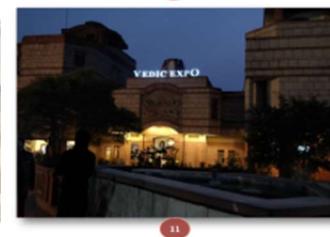
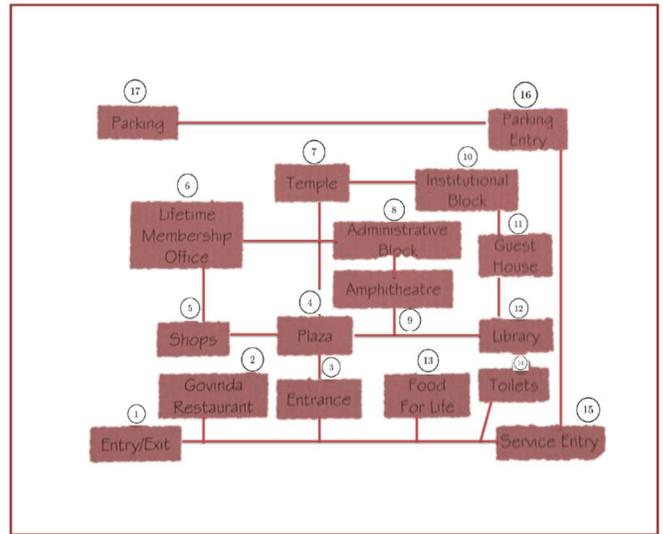
GARBHA GRIH

# 4.2 ISCKON - SHRI RADHA PARTHASARATHY TEMPLE COMPLEX, SANT NAGAR, NEW DELHI

## 4.2.5. SITE PLAN



MODEL OF TEMPLE



## 4.2 ISCKON - SHRI RADHA PARTHASARATHY TEMPLE COMPLEX, SANT NAGAR, NEW DELHI

### 4.2.6. LANDSCAPE FEATURES

Water bodies have been provided to create micro climate in the site. Oat is provided around the plantation zone and water bodies and fountain.

The temple is already situated on natural mound.

The natural slope is maintained by designing the levels.

The trees have been grown in pockets of these levels on the ground covers. There are zones of plantations in several pockets pediments, along the circulation and foundation plantation is also done. Row of plantation is done along the boundary.



Soft Pockets



Water Features



Water fountains at various levels



Soft pockets and mounds



Plantation along with the paving



Gardening at various levels

Ornamental plantation has been done in the foundation plantation. Various flowering plants with vivid texture and colour creates interest in the fancy areas to be highlighted which are water bodies, entrance and near street lights and fountains.

Encouraging the theme of the temple sculptures of Krishna have been synchronized in the landscaping features creating interest in levels when one approaches towards the temple through the stairs of different levels comes across the different pockets of landscaping, plantation rows and pockets of soft and hard scape.

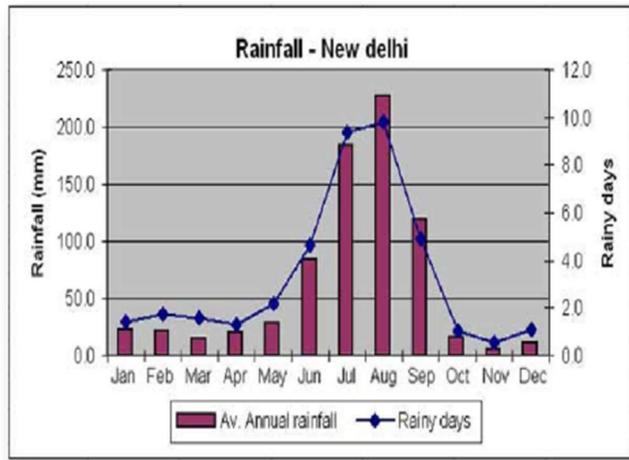
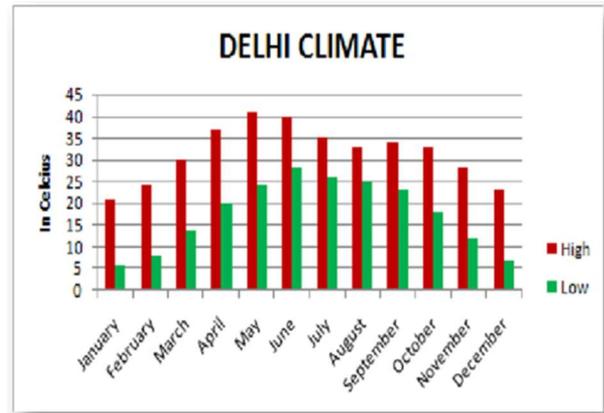
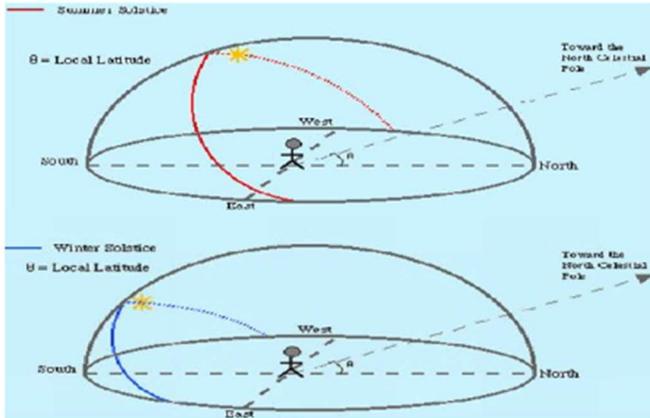
# 4.2 ISCKON - SHRI RADHA PARTHASARATHY TEMPLE COMPLEX, SANT NAGAR, NEW DELHI

## 4.2.7. CLIMATE

The climate of Delhi is an overlap between monsoon-influenced humid subtropical, with high variation between summer and winter temperatures and precipitation.

The city features dust storms (something more commonly seen in a desert climate) has relatively dry short winters and has a prolonged spell of very hot weather, due to its semi-arid climate.

Summers start in early April and peak in May, with average temperatures near 32 °C although occasional heat waves can result in highs close to 45 °C (114 °F) on some days and therefore higher apparent temperature. Wind is blowing from South-West (SW) to North-East (NE)



Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Average high °C (°F)	21.1 (70)	24.2 (75.6)	30.0 (86)	34.2 (97.2)	39.6 (103.3)	39.3 (102.7)	35.1 (95.2)	33.3 (91.9)	33.9 (93)	32.9 (91.2)	28.3 (82.9)	23.0 (73.4)	31.4 (88.5)
Average low °C (°F)	7.3 (45.1)	10.1 (50.2)	15.4 (59.7)	21.5 (70.7)	25.9 (78.6)	28.3 (82.9)	26.6 (79.9)	25.9 (78.6)	24.4 (75.9)	19.5 (67.1)	12.8 (55)	8.2 (46.8)	18.8 (65.8)
Rainfall mm (inches)	20.3 (0.799)	15.0 (0.591)	15.8 (0.622)	6.7 (0.264)	17.5 (0.689)	54.9 (2.161)	231.5 (9.114)	258.7 (10.185)	127.8 (5.031)	36.3 (1.429)	5.0 (0.197)	7.8 (0.307)	797.3 (31.389)
Avg. rainy days	1.7	1.3	1.2	0.9	1.4	3.4	10.0	11.3	5.4	1.6	0.1	0.6	39.1
Mean monthly sunshine hours	213.9	217.5	238.7	261.0	263.5	196.0	167.4	176.7	219.0	269.7	246.0	217.0	2,688.4



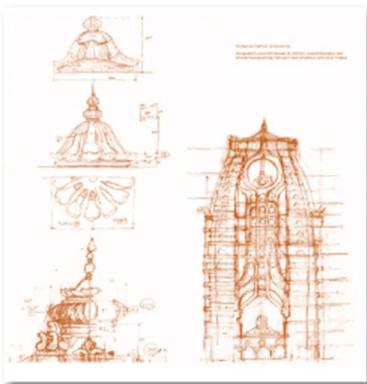
## 4.2 ISCKON - SHRI RADHA PARTHASARATHY TEMPLE COMPLEX, SANT NAGAR, NEW DELHI

### 4.2.8. CONCEPT

Ar. A P Kanvinde accurately studied the temples of East West and Central India and those related to Vaishnavism.

The Concept is based on the four protectors in a temple guarding all sides and major elements like Kalash, Shikhara are executed just like in Kaling reign Temple of Ganga Daynasty, eg. Lingaraj temple.

The Jangha in temple is used and is modified to slim architectural rings.



### 4.2.9 PLANNING

The plan here is divided in 4 main blocks considering the studies ahead :

Temple block:

This block faces west and has 3 floors.

Entries from 3 sides North, west and south.

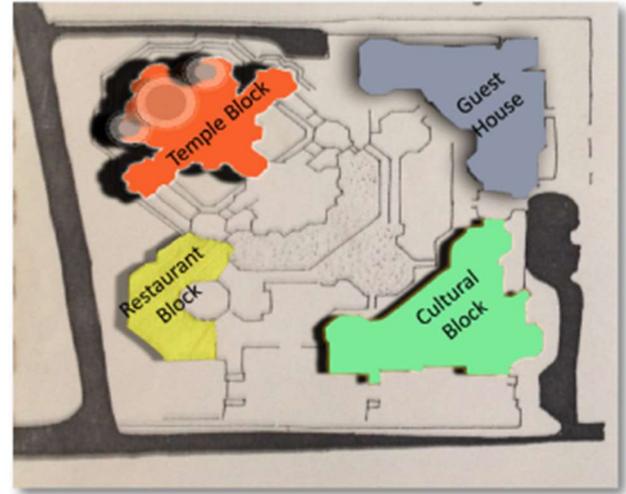
The site was very suitable for constructing the temple as height has an auspicious significance from mythological view point.

The design approach is aimed at synthesizing all activities so that the functional needs are met maintaining association with the historical past on one —hand and giving new thoughts with respect to the time and technology.

As the highest spot of the site has been allotted to the main temple deity(facing an east west direction) the hierarchy of buildings have been so beautifully placed around it that it gives the expression of unified whole.

## 4.2 ISCKON - SHRI RADHA PARTHASARATHY TEMPLE COMPLEX, SANT NAGAR, NEW DELHI

### 4.2.9. PLANNING



Layout Plan

The whole temple complex is divided into two zones:

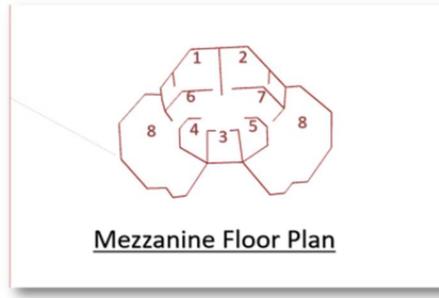
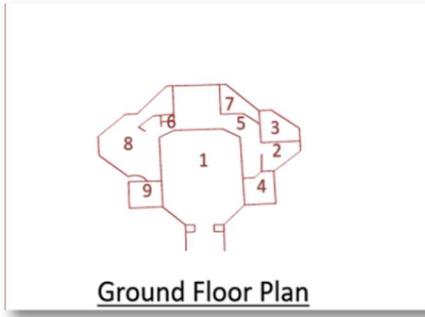
- one includes the temple and the other involves the ancillary functions separated by a sunken landscape court in between. At the intermediate levels one finds the shopping area and shoe keeping area. This is not the highlighted area.
- From the central court there is entry to the halls and a special kitchen with accommodation for the Priest at the lower level under the main hall and this also has the benefit of not disturbing the activities of the main hall in any way.
- There are, therefore two parikramas: one around the deities and the other around the temple complex as a whole.



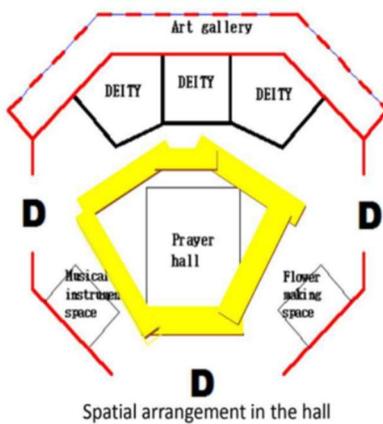
## 4.2 ISCKON - SHRI RADHA PARTHASARATHY TEMPLE COMPLEX, SANT NAGAR, NEW DELHI

### 4.2.9. PLANNING

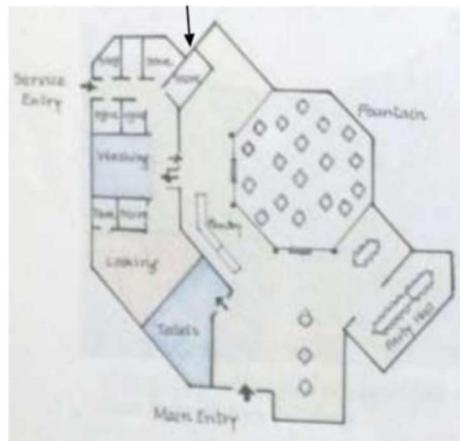
#### TEMPLE BLOCK



#### MAIN HALL

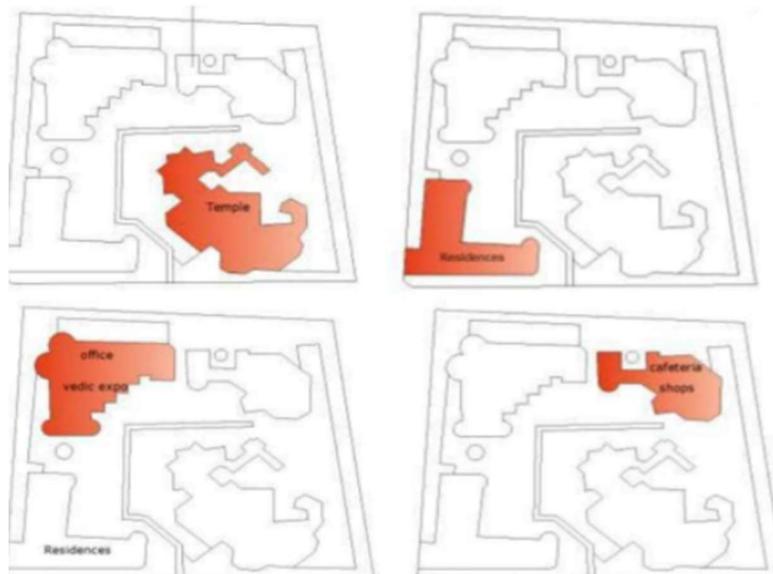


#### RESTAURANT BLOCK



The area of the Govinda restaurant is about 1500 sq ft and is used for seating 120 people at a time, which is somewhat less than the standard area required for this seating capacity (required area = 1800 to 2160 sq ft)

### 4.2.10. INTER-RELATIONSHIP BETWEEN SPACES



## 4.2 ISCKON - SHRI RADHA PARTHASARATHY TEMPLE COMPLEX, SANT NAGAR, NEW DELHI

### 4.2.11. CONSTRUCTION SYSTEM

The building was constructed in reinforced concrete frame structure with brick wall filling and clad with red sand stone and white marble finish.

This temple has an interesting choice. Brown Dholpur stone with white Marble.

Just like in jama masjid and humayun tomb the two tone scheme has been carried out beautifully. The materials have been handled carefully, each given its due respect.

The marble has been used only for cladding, while the dholpur stone has been carved, and used to highlight the edges. It's treated with only dholpur stone- with some very angular geometric carvings. And, the entrance on the road-side, is a little like an amusement park. With the huge ISKON logo hanging and figures to welcome you on either.



## 4.2 ISCKON - SHRI RADHA PARTHASARATHY TEMPLE COMPLEX, SANT NAGAR, NEW DELHI

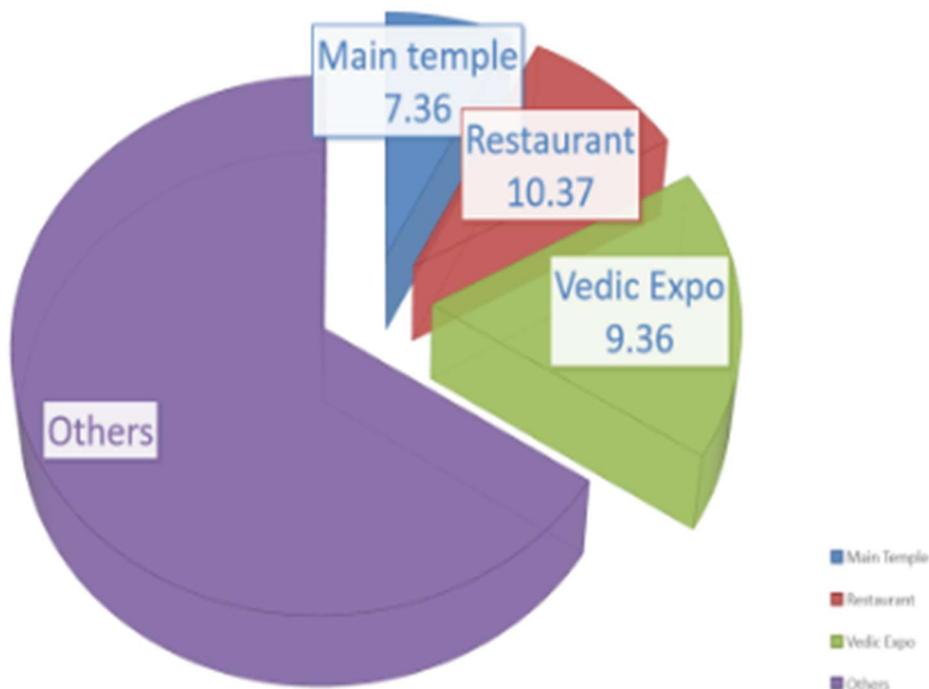
### 4.2.12. AREA ANALYSIS

Name	Area
1.Prasadam Hall	135 m <sup>2</sup>
2.Kitchen	16.2 m <sup>2</sup>
3. Deity kitchen	16.4 m <sup>2</sup>
4.Store	15 m <sup>2</sup>
5.StairCase	45 m <sup>2</sup>
6.Service Lift	2 m <sup>2</sup>
7.Handwash	12 m <sup>2</sup>
8.BhramCharis Room	32.6 m <sup>2</sup>
9.Air Cooling Room	13.8 m <sup>2</sup>

Name	Area
1.President's Room	30.5 m <sup>2</sup>
2.Vice President's Room	30.5 m <sup>2</sup>
3. Dressing Room For Lord Krishna	12 m <sup>2</sup>
4.Dressing Room	13.7 m <sup>2</sup>
5.Dressing Room	13.7 m <sup>2</sup>
6.Service Lift	2 m <sup>2</sup>
7.Staircase	4.5 m <sup>2</sup>
8.Brahamchari's Room	69.5 m <sup>2</sup>

Name	Area
1.President's Room	30.5 m <sup>2</sup>
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6.Service Lift	2 m <sup>2</sup>
7.Staircase	4.5 m <sup>2</sup>
8.Brahamchari's Room	69.5 m <sup>2</sup>

### 4.2.13. INFERENCES





# **4. STANDARDS**



## 4.1 INTRODUCTION

'Akshardham' means the divine abode of God. It is hailed as an eternal place of devotion, purity and peace.

Swaminarayan Akshardham – an abode of God, a Hindu house of worship, and a spiritual and cultural campus dedicated to devotion, learning and harmony. Timeless Hindu spiritual messages, vibrant devotional traditions and ancient architecture all are echoed in its art and architecture.

The mandir is a humble tribute to Bhagwan Swaminarayan (1781- 1830), the avatars, devas and great sages of Hinduism.



Hindu temple architecture as the main form of Hindu architecture has many varieties of style, though the basic nature of the Hindu temple remains the same, with the essential feature an inner sanctum, the garbhagriha or womb-chamber, where the primary Murti or the image of a deity is housed in a simple bare cell.



Each element of Akshardham echoes with spirituality – the Mandir, the Exhibitions and even the Gardens.

The Akshardham mandir has over two hundred murtis, representing many of the spiritual stalwarts over many millennia. The spiritual premise of Akshardham is that each soul is potentially divine. Whether we are serving the family, the country, our neighbors or all living beings the world over, each service can help one move towards divinity. Each prayer is a call towards improving oneself and moving closer to God.

A visit to Akshardham is a spiritually enriching experience. Whether it is in realizing the power of prayer, in feeling the strength of non-violence, in being aware of the universal nature of Hinduism's ancient principles, or just in admiring the beauty of God's abode on Earth – each element has a spiritual significance



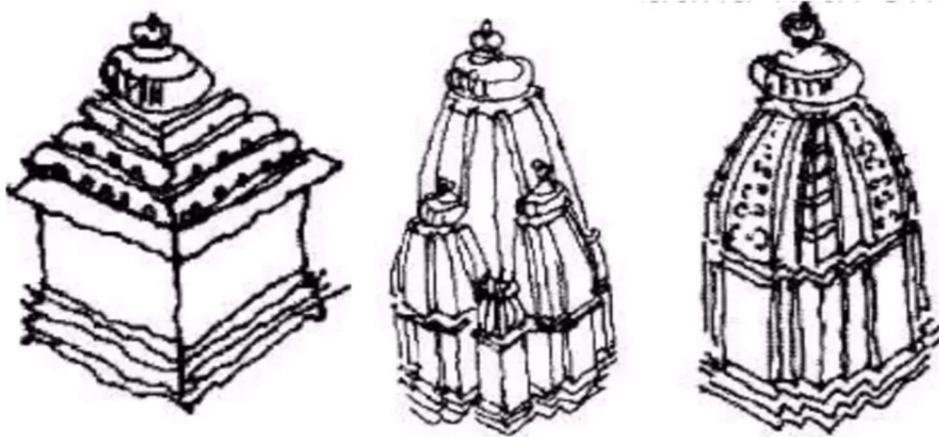
## 4.3 PRINCIPLE FEATUTES OF A TEMPLE

### 4.3.1 SHIKHARA

SIKHARA, a Sanskrit word translating literally to "mountain peak", refers to the rising tower in the Hindu temple architecture in North India.

The North Indian shikhara is basically of two types:

- (1) The , Rectilinear in outline and capped by a bell-shaped member, the form more usually found above the mandapa.
- (2) The , Curvilinear in outline, the type most usually found above the sanctuary; and
- (3) The Sekhari, consists of a central Latina with one pr more rows of half spires



### 4.3.2 VIMANA

Refers to the tower above sanctum in the Hindu temple architecture in South India.

It is always square in plan and surmounted by a pyramidal roof of one /or more stories; it contains the cell where the image of the god or his emblem is placed.

### 4.3.3 ANTRALA

'Antarala' meaning the vestibule or the intermediate chamber. It unites the main sanctuary and the pillared hall of the temple

### 4.3.4 GOPURAMS

'Gopurams' meaning the monumental and ornate tower at the entrance of the temple complex. specially found in south India



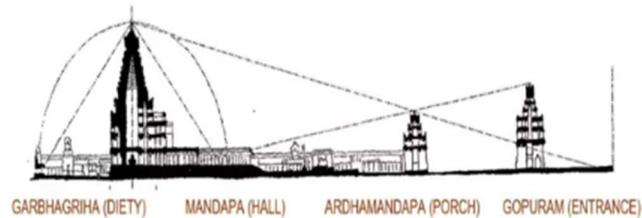
## 4.3 PRINCIPLE FEATUTES OF A TEMPLE

### 4.3.8 PARIDAKSHINA PATHA

Pradakshina patha. meaning the ambulatory passageway for circumambulation. It consists of enclosed corridor carried around the outside of garbhagriha. The devotees walk around the deity in clockwise direction as a worship ritual and symbol of respect to the temple god or goddess.

### 4.3.9 ARDHAMANDAPA

Ardhamandapa. meaning the front porch or the main entrance of the temple leading to the mandapa

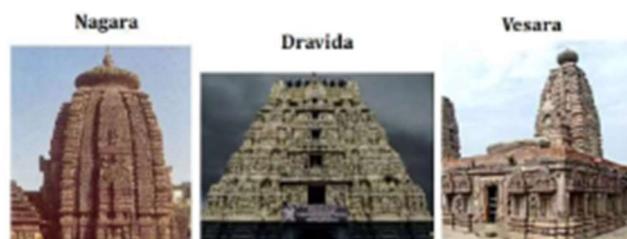
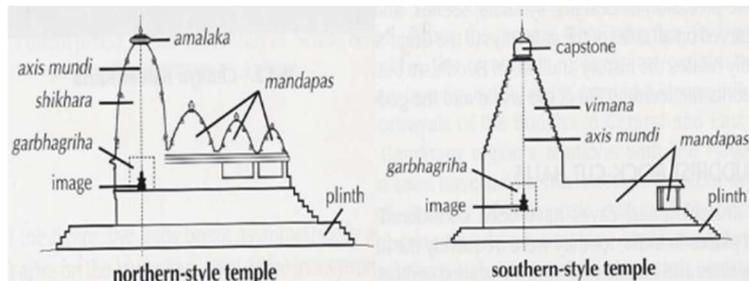


## 4.4 EVOLUTION OF ARCHITECTURAL STYLES

The distinctive architectural styles of Hindu temples have so developed due to broad geographical, climatic, cultural, racial, historical and linguistic differences between the northern plains and the southern peninsula of India. Broadly based on geography, Hindu temples have been classified into three different orders; the Nagara or 'northern' style, the Dravidian or 'southern' style, and the Vesara or hybrid style which is seen in the Deccan between the other two.

There are also other distinct styles in peripheral areas such as Bengal, Kerala and the Himalayan valleys. This dissertation focuses on The Nagara or 'the northern style' and the Dravidian or the southern style of Hindu temple architecture

Feature	Nagara Architecture	Dravidian Architecture
Location	According to the Silpasastras, north Indian temples are Nagara style.	According to the Silpasastras, those temples which are situated between the Krishna River and Kanyakumari are Dravida style.
Central Tower	It is characterized by a beehive shaped curvilinear tower (called a Shikhara, in northern terminology) made up of layer upon layer of architectural elements and a cruciform ground plan. In this style, there is a multiple Shikharas.	It has pyramidal shaped central tower (called Vimana in Dravida style). In this style, there is only one single Shikhara or Vimana.
Gopuram (gateway)	In Nagara style, the Shikhara remains the most prominent element of the temple and the gateway is usually modest or even absent.	Gopuram is the most prominent. It is stylized and big in size.
Boundary	In this style, boundary has less emphasised.	In this style, temples have elaborated boundary.
Entrance	In this style, Ganga and Yamuna rivers are depicted in personified form at the entrance of Garbhagriha or sanctum sanctorum	In this style, Dvarapalas are there on the entrance.
Tower	In this style, there are multiple towers. For example Khajuraho temple	In this style, there is always a single tower.
Pedestal	In this style, pedestals are higher than ground.	In this style, pedestals are more or less at ground level
Deities on the outside	In this style, temples have deities inside.	In this style, temples have deities outside.
Purpose	Most of the temples in Nagara style had only religious purpose.	Temples in South have not only been religious centres, but were also used for administrative activities, controlling vast areas of land and were also centres of education.



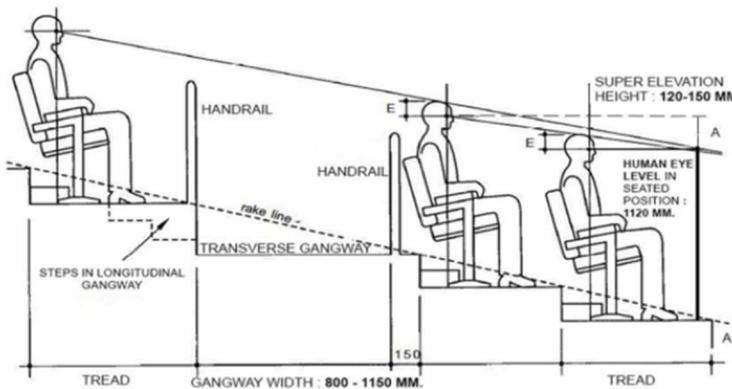
Different Styles of Temple Architecture

## 4.5 AUDITORIUM

The design of large auditoriums depends upon:

- The maximum number to be accommodated and the range of audience sizes for which the hall should cater.
- The different purposes, apart from congress for which the hall may be used, such as staged shows, live theatres etc.
- Budgets allowed and cost limits for particular requirements in order that a full cost-evaluation can be made.
- Supplementary services to be provided in the hall or foyer, such as for banquets, coffee and bar service etc.
- The configuration of the site and the relationships with other buildings and accommodated forming of the same complex.

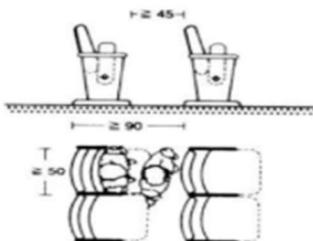
The characteristics of a space, in simplified terms, are dependent upon the behavior of the sound reflections and on the period of reverberation.



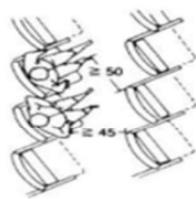
### SEATING :

AREA PER SEAT VARIES FROM  
0.38 SQ MT-3.05 SQ MT  
AISLE WIDTH- 900-1000MM  
EXISTS- 150 PERSON/EXIT  
STAIRCASE WIDTH- 2000MM

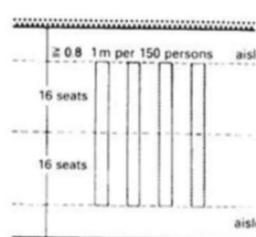
The quality of an open stage performance can be obtained within an auditorium which nevertheless has the means to shut off the acting area, or part of it, from the audience for the purpose of deploying scenery.



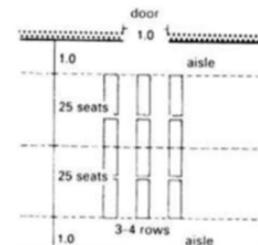
① All seats apart from boxes must have fixed, self-operating folding seats with the above minimum dimensions



② Offset folding seats provide elbow space



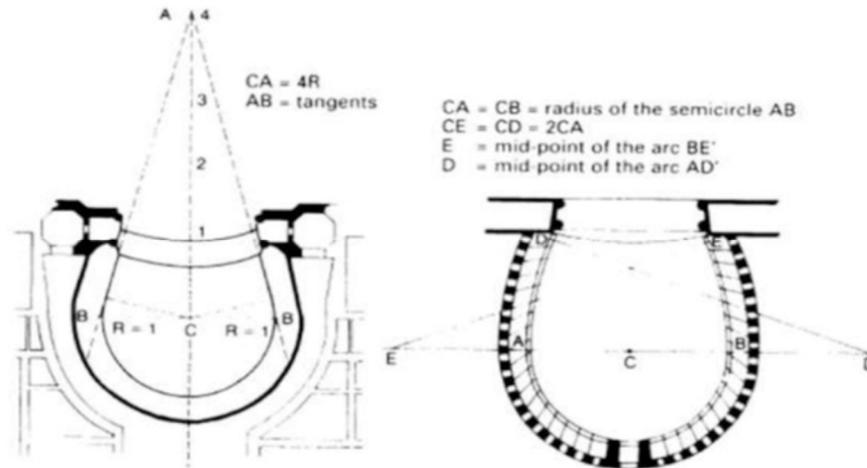
③ Row width: 16 seats



④ Row width: 25 seats + necessary door

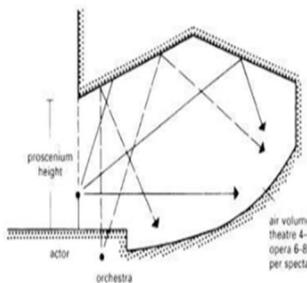
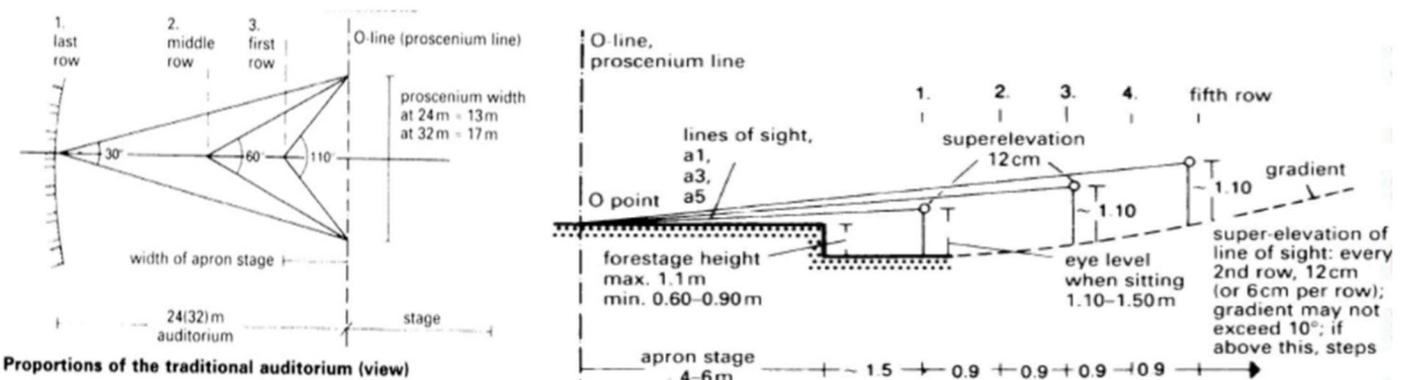
## 4.5 AUDITORIUM

Essentially the aim has been to bring auditorium and acting area into the same architectural space and to get as close as possible a relation between the action of the play and the spectators watching it. The focus of the audience tends to group themselves round this focus.

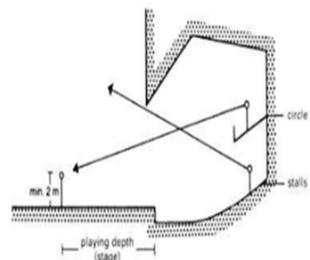


The period of reverberation must be short for clarity of speech; it is usually preferred longer for music and longer still for choral singing. It depends mainly upon two factors:

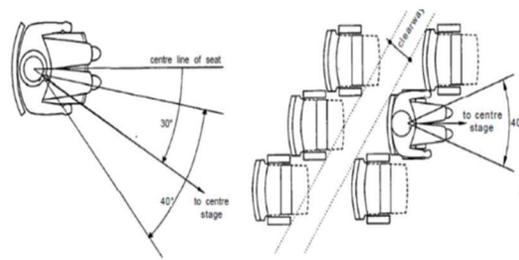
- The amount of sound absorbed and reflected by the surfaces of the auditorium and
- The volume of the auditorium and stage.



6 Ceiling shape and sound reflection



7 Circle theatre and view of stage



10.25 a The maximum comfortable amount the head can be turned from the seat centreline is 30°.

20.25 b Where the head angle would exceed 30°, the seats may be angled within the row.

## 4.6 LIBRARY

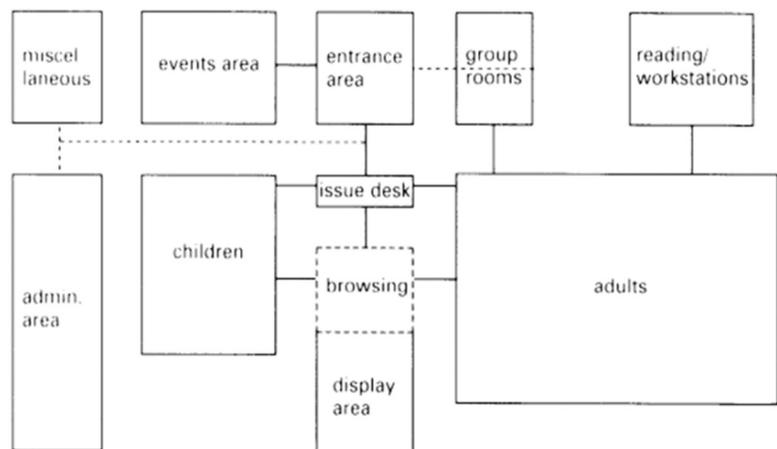
Floor area: 40sq.ft./reader.

Occupancy: reader requiring privacy and extra space.

For groups of 4-6. Lounge readers.

Ceiling height:

- 9' for reading areas less than 100 sq.ft.
- 10'-14' for main reading areas.
- 16'-20' for rooms with mezzanine.

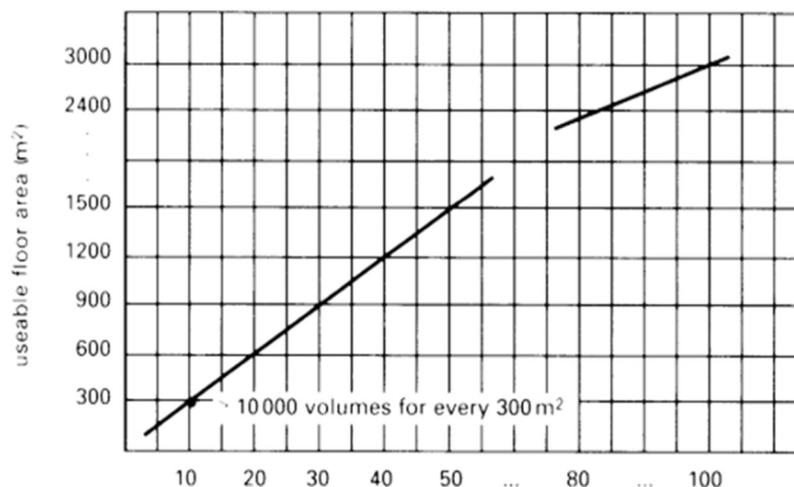


① Functional diagram of medium-sized library

Floors: sound isolated structure. Nylon or carpet rated for heavy wear and glued to floor in heavy traffic areas. Padded carpets may be provided in study areas. Tight weave, cut and loop pile type. Static removal is essential.

Special furnishings:

- Bulletin and announcement boards.
- Display and exhibit cabinets.
- Display shelves for periodicals, special publications. Book shelves.



② Public library floor area as a function of collection size

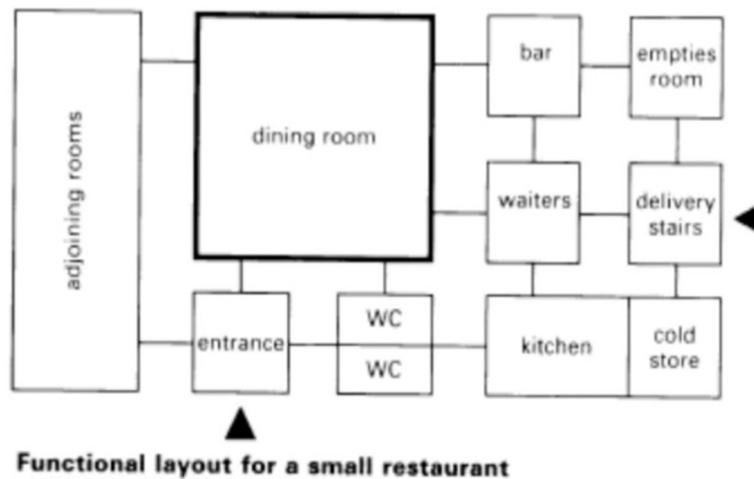
## 4.7 RESTAURANT

Floor area recommended seating areas for dining 4 diners = 130sq. ft. minimum 90 sq.ft.

6 diners= 160sq.ft. minimum 150sq.ft.

8 diners= 180sq.ft. minimum 172 sq.ft.

10-12 diners= 248sq.ft. minimum 210 sq.ft.



Minimum widths and clearances width per aisles per place seating= 32" minimum=28".

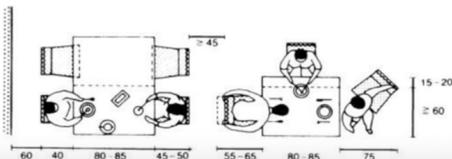
Aisle access behind chairs: 36" minimum-24".

Service aisle= 40-48" minimum=36".

Ceiling heights:9'-14', 7'6" soffits are workable.

Special plan considerations: 4 persons tables set at 45 deg. provide maximum seating room and greatest planning flexibility .

Avoid level changes, not more then 2-3 steps at maximum. Large spaces can be broken into smaller intimate one. Proper Circulation.



dining floor area	walkway width
up to 100 m <sup>2</sup>	≥ 1.10 m
up to 250 m <sup>2</sup>	≥ 1.30 m
up to 500 m <sup>2</sup>	≥ 1.65 m
up to 1000 m <sup>2</sup>	≥ 1.80 m
over 1000 m <sup>2</sup>	≥ 2.10 m

### 8 Walkway widths

customer places	toilets		urinal bowls	urinals (m)
	men	women		
50	1	1	2	2
50-200	2	2	3	3
200-400	3	4	6	4
400	- determine in individual case -			

### 9 Toilet facilities

tables	seats	waiter service (m <sup>2</sup> /seat)	self-service (m <sup>2</sup> /seat)
square	4	1.25	1.25
rectangular	4	1.10	1.20
rectangular	6	1.05	1.10
rectangular	8	1.05	1.05

### 11 Total space requirements for dining rooms:

main aisles	min 2.00 m wide
intermediate aisles	min 0.90 m wide
side aisles	min 1.20 m wide

### 12 Aisle widths

## 4.8 KITCHEN

Floor area: restaurants serving 100-400 meals per day generally require 5'7 sq.ft. per meal.

Over 500 require 6sq.ft. meal. Approx. 33 percent floor area is for equipment rest for work tables aisles.

Worktable sizes: 24/1-36/1 wide tables. 40"-42" work tables with workers on both sides.

Aisle width: 38" aisles and wider for single worker 40"-44" and wider for two way cart or tray traffic.

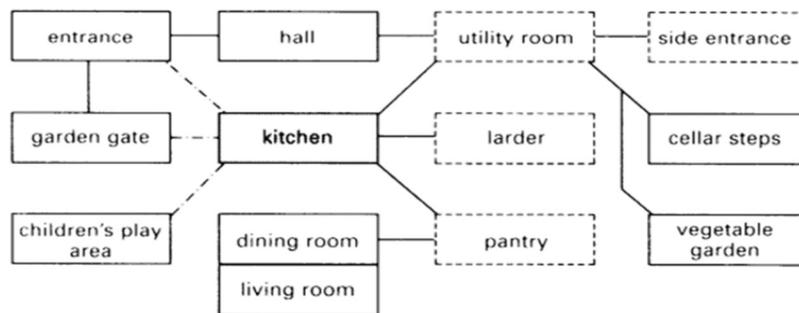
Ceiling: 12' and higher ceilings recommended for air flow and easy exhaust. 7' soffits with exhaust fans.

Special plan considerations: work counters and aisles at right to main traffic aisles.

Floors: provide floor slopes to drains and depress floor slabs for insulation at walk in registers.

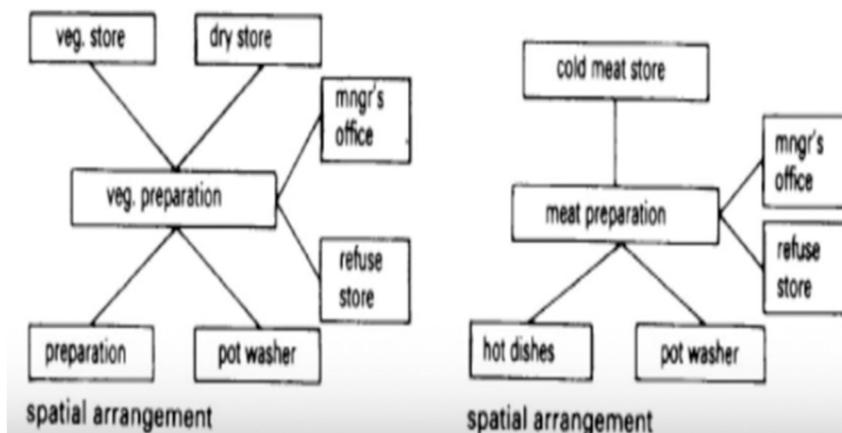
Seamless poured floors, non slip ceramic tile or quarry tile. Solid vinyl tiles, terrazzo and rubber are avoided.

Walls: ceramic tiles, keens cement plaster, gypsum board.



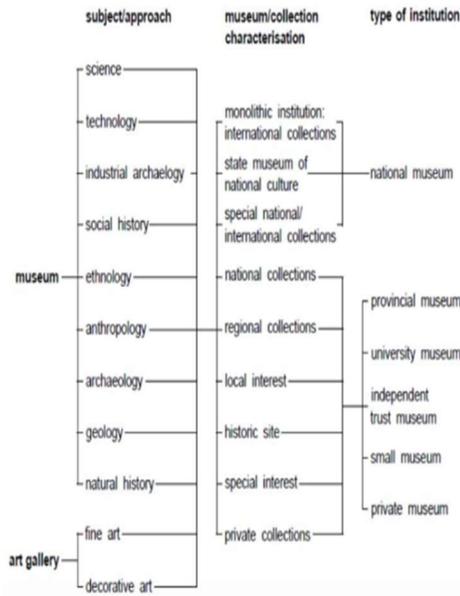
----- view from kitchen  
 ——— routes  
 ..... rooms normal only in larger houses

### 1 Relationship between large kitchen and other areas



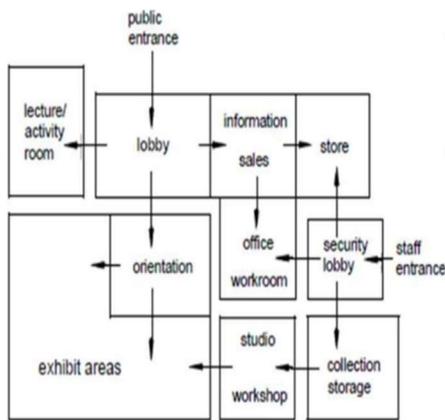
# 4.9 MUSEUMS

'A museum is an institution which collects, documents, < preserves, exhibits and interprets material evidence and associated information for the public benefit'

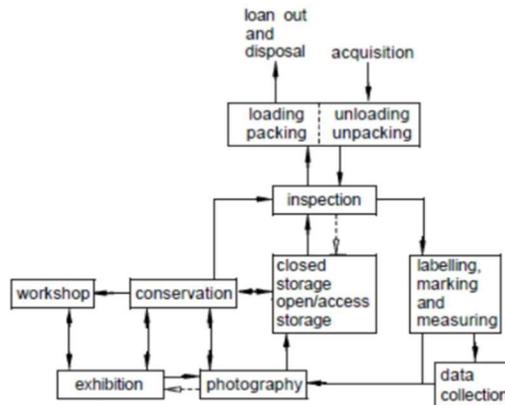


## ACOUSTICS AND ZONING

The transport of sound through structure should be controlled. Functional zones should be provided with surface or sub-surface materials that dampen impact sounds and isolating cavities to interrupt the structural transmission of sound. Noise levels should be controlled within zones by appropriate choices of material finishes on floors, walls and ceilings, and the shaping of interior spaces to prevent flutter and unwanted: amplifying effects



31.4 A possible layout diagram for a small museum



31.2 Flow diagram of collection item movements in the operation of collection services: exhibitions, conservation and collections management

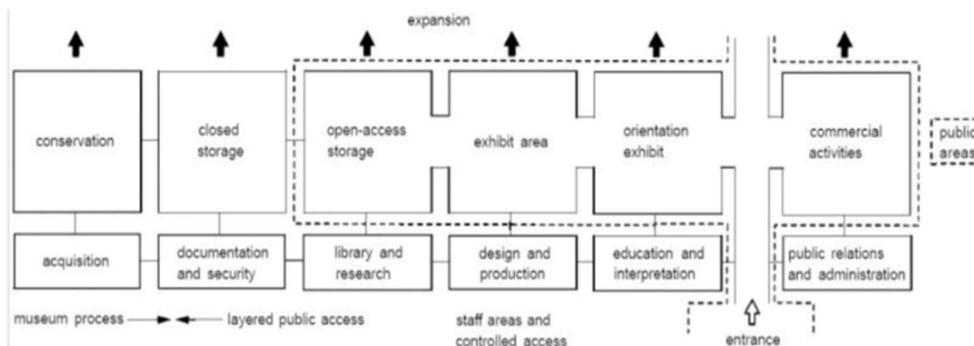
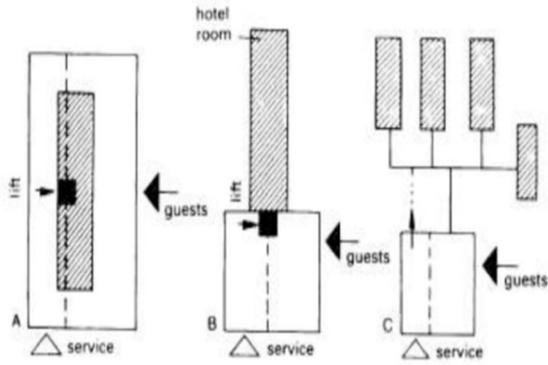
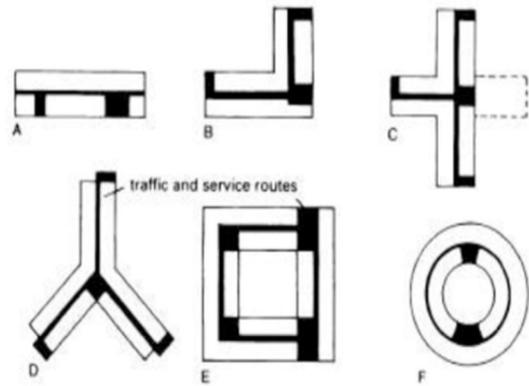


Figure 24: A layout concept showing a clear relationship between museum functions and an approach to zoning and expansion

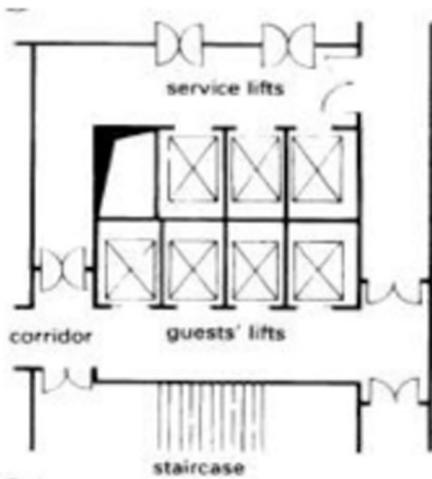
# 4.10 GUEST HOUSE



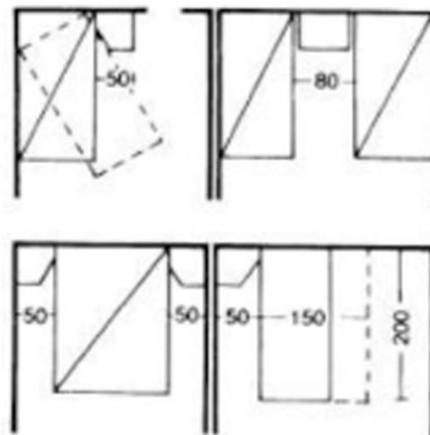
1 Relationship between services and guest rooms



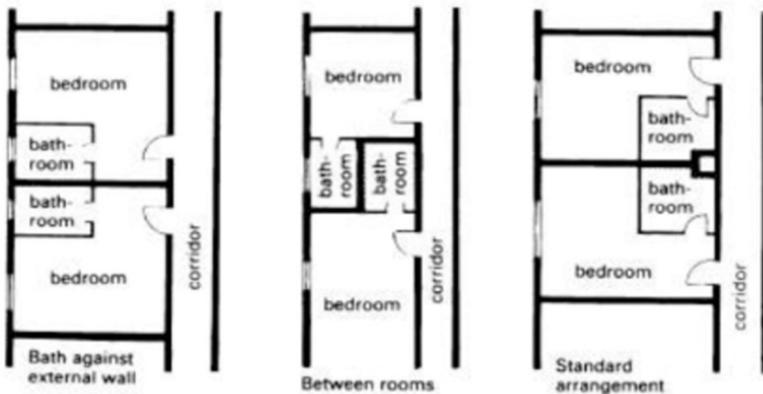
2 Plan views of hotels



3 Vertical circulation in hotel



4 Minimum spacing between hotel beds

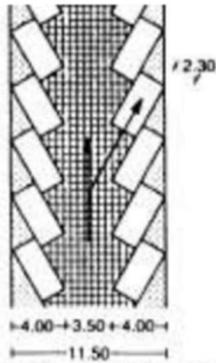


5 Bathroom arrangement

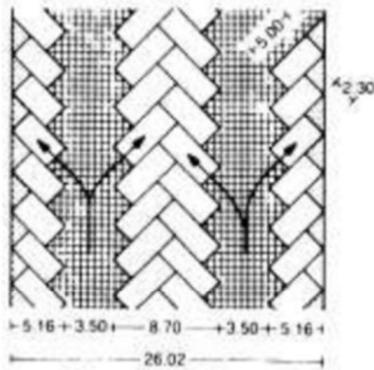


7 Double bed in economy hotel

# 4.11 PARKING



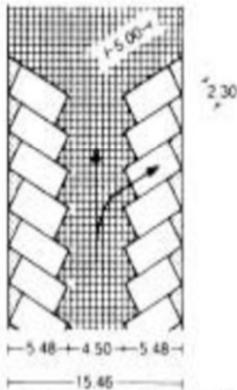
**30° oblique spaces, easy entry and exit, but for use only with one-way traffic**



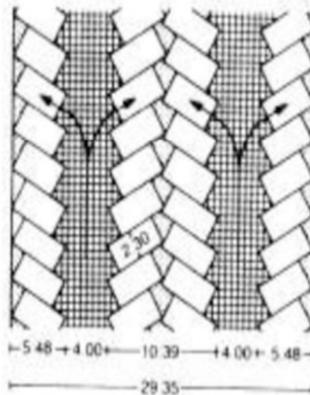
**45°-angled parking, one-way traffic only**



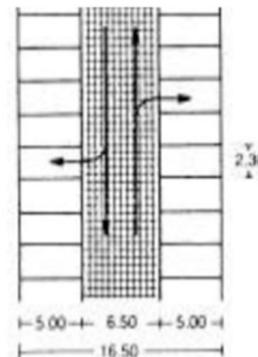
**45° oblique parking, way traffic only**



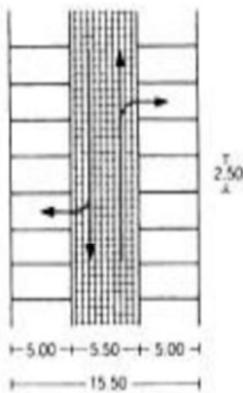
**60° oblique parking, one-way traffic only**



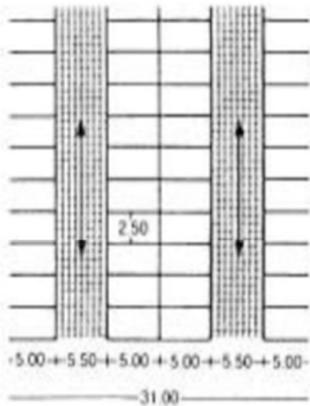
**60° angled parking, one-way traffic**



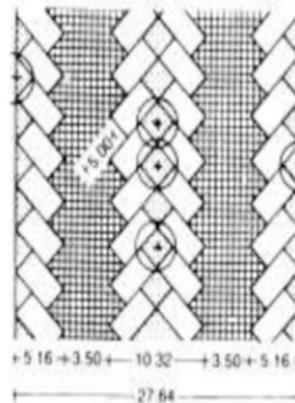
**90° entry/exit to parking spaces, for two-way traffic  
Parking space 2.30m wide**



**90° entry/exit to parking spaces for two-way traffic  
Parking space 2.50 m wide**



**90° parking, 5.5m wide road  
Parking spaces 2.5 m wide**



**Parking for one-way traffic  
(with spaces for plants)**



# **5. LITERATURE STUDY**



## 5.1 SRI RADHARASBIHARI TEMPLE, JUHU ,MUMBAI

### 5.1.1. SITE ANALYSIS

**LOCATION:** Hare Krishna Land Church road, Juhu, Mumbai (Maharashtra)

**BUILT YEAR:** 1978

**DESIGNER-** Ar. T. Shetty

**SITE AREA:** 4 Acres( 16, 180 sqm)



**MATERIAL USED:** White marble for temple Brick and RCC work for other construction

**ORIENTATION:** North facing

**TOTAL BUILT-UP AREA:** 11,504 m<sup>2</sup>



### 5.1.2. SELECTION CRITERIA FOR LITERATURE STUDY

The space utilization and the use of multistoried

Became major landmark in the area.

The proposed project is of ISKCON, and different climatic conditions will allow to study a different design aspects.



### 5.1.3. ISKON MUMBAI

Sri Radharasbihari temple is a well known Vaishnav temple where deities of Radha Krishna is accompanied by Gaura Nitai, and Sri Sita, Ram, Laxman. The Deities were personally installed by A. C. Bhaktivedanta Swami Prabhupada.

The temple displays compact planning, with easy Interconnectivity among the various spaces.

Both its interior and exterior walls are festooned with frescoes and sculpture.

One can find beautiful paintings depicting incidents from the life of lord Krishna.



## 5.1 SRI RADHARASBIHARI TEMPLE, JUHU ,MUMBAI

### 5.1.4. SITE APPROACH



#### AIRPORT

Airport is approx 6 km.



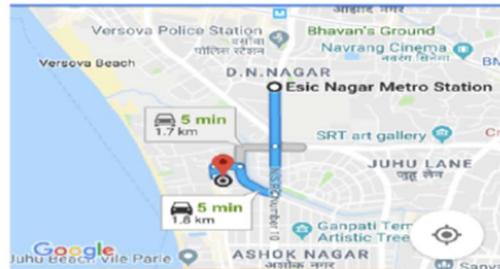
#### LOCAL RAILWAY STATION

Local railway station ville parle is 3.4km.



#### RAILWAY STATION MAP

Railway station LTT is approx 12 km.



#### METRO STATION MAP

Metro station esic nagar is approx 1.5 km



#### BUS STATION

Bus station Juhu is approx 1.2 km.



#### ROAD MAP

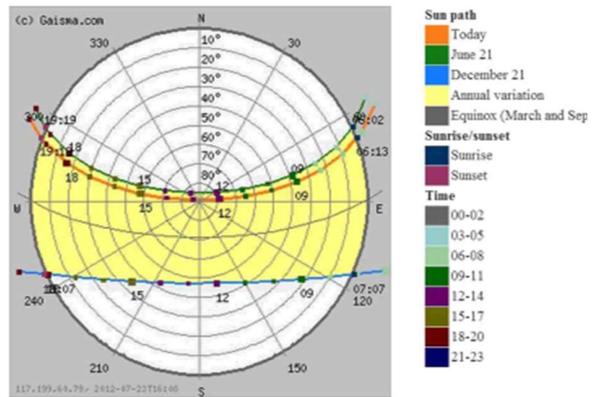
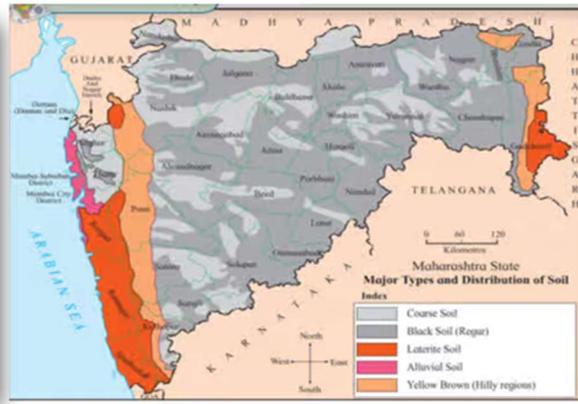
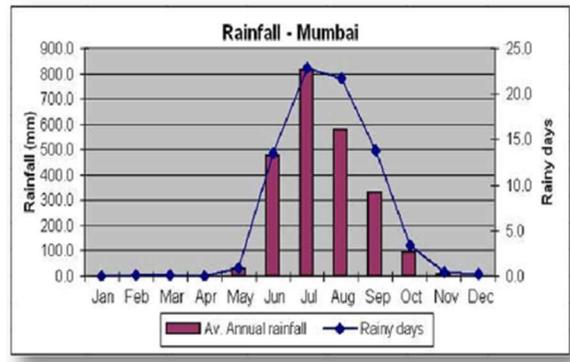
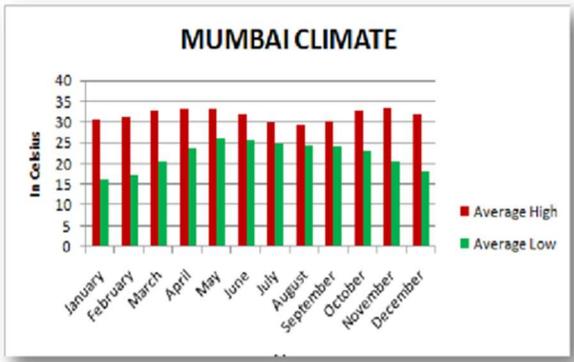
All the local transport like auto cab and city bus are easily available.

### 5.1.5. CLIMATE ANALYSIS

The climate of Mumbai is a tropical wet and dry climate. Mumbai's climate can be best described as moderately hot with high level of humidity. Its coastal nature and tropical location ensures temperatures won't fluctuate much throughout the year. The mean average is 27.2 °C and average precipitation is 242.2 cm (95.35 inches). The mean maximum average temperatures is about 32 °C (90 °F) in summer and 30 °C (86 °F) in winter, while the average minimums are 25 °C (77 °F) in summer and 20.5 °C (68.9 °F) in winter. Mumbai experiences four distinct seasons: Winter (Jan–Dec ) winter 18 to 5 degree, 30 to 27 Summer (28 Feb); Monsoon (June–August); and Post-Monsoon (Dec-Feb) Wind is blowing from South-West (SW) to North-East (NE).

# 5.1 SRI RADHARASBIHARI TEMPLE, JUHU ,MUMBAI

## 5.1.5. CLIMATE ANALYSIS



## 5.1.6. VISUAL STUDY



MAIN GATE ENTRY



TEMPLE ENTRY



GARBHAGRIHA



MANDAP

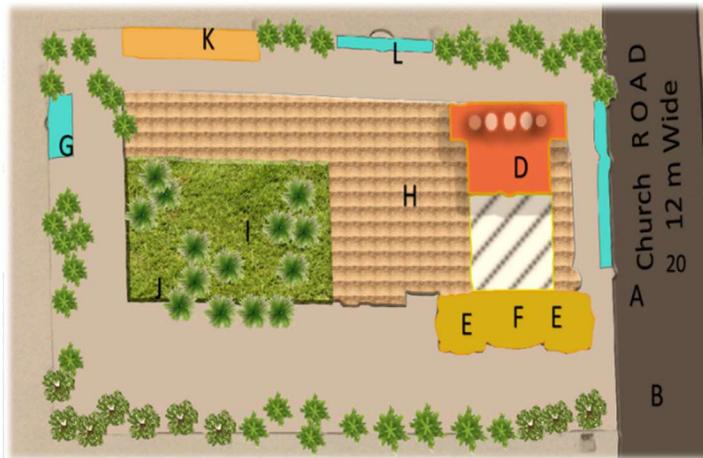
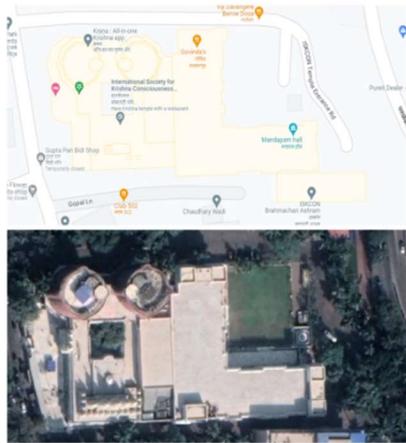


GARBHAGRIHA



# 5.1 SRI RADHARASBIHARI TEMPLE, JUHU ,MUMBAI

## 5.1.7. PLANNING



**LEGEND**

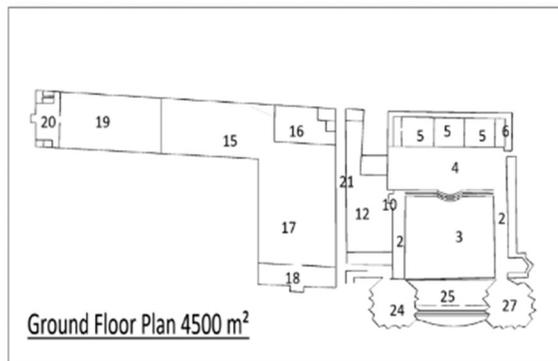
A	Public Entry/Exit
B	Entry/Exit For Parking
C	Shoe Stand
D	Temple Block
E	Guest House
F	Waiting/Institutional Area
G	Toilets
H	New Building, govinda Restaurant, Auditorium, Library, Multi Purpose hall, Guest house, Gifts and Snack Shops
I	Landscaping
J	Basement Parking
K	Brahmchaari Ashram
L	Snack Shop

A VIEW OF TEMPLE

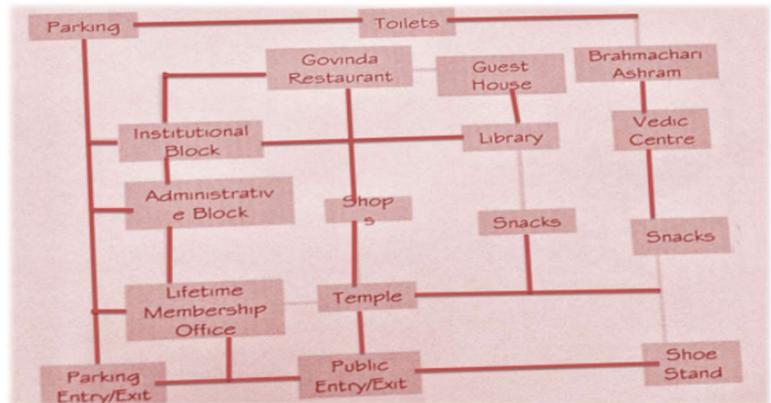
Access from 12 m wide Juhu Church Road

Flat terrain throughout the site

Vertical Planning dominates the whole structure, lesser area covered on the ground



Ground Floor Plan 4500 m<sup>2</sup>



**LEGEND**

1	Temple Entry	14 m <sup>2</sup>
2	Shaded side passages	69.3 m <sup>2</sup>
3	Ardhamandapa	520 m <sup>2</sup>
4	Mandapa	365 m <sup>2</sup>
5	Garbagriha (Deity Chambers)	64 m <sup>2</sup>
6	Entry for pujaris	2.8 m <sup>2</sup>
7	Store	21 m <sup>2</sup>
8	Pradakshina Path	75.3 m <sup>2</sup>
9	Vedic Sculptures	14.4 m <sup>2</sup>
10	Temple Exit	
11	Books Counter	144.8 m <sup>2</sup>
12	Offices	53.3 m <sup>2</sup>
13	Gift Shops	58.1 m <sup>2</sup>
14	Snacks Counters	77.3 m <sup>2</sup>
15	Offices	6 m <sup>2</sup>
16	Kitchen	133.7 m <sup>2</sup>
17	Govinda Restaurant	1068 m <sup>2</sup>
18	Entrance Foyer	110 m <sup>2</sup>
19	Banquet Hall	375 m <sup>2</sup>
20	Entrance Foyer	60 m <sup>2</sup>
21	Service Lane	136.4 m <sup>2</sup>
22	Small Restaurant	42 m <sup>2</sup>
23	Side Entry to Gauranga	33.8 m <sup>2</sup>
24	Gauranga Tower	14.4 m <sup>2</sup>
25	Waiting Area	137 m <sup>2</sup>
26	Entry/Exit, security Check	144.8 m <sup>2</sup>

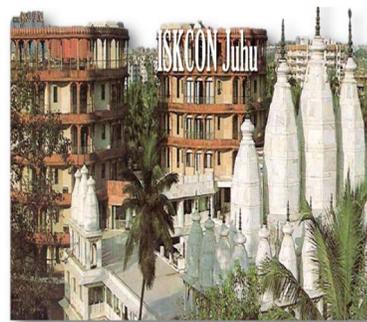
**GROUND FLOOR**

On the ground Floor, Gauranga Tower consists of :

A marriage cum Functional hall, Toilets, Staircase, Lift.

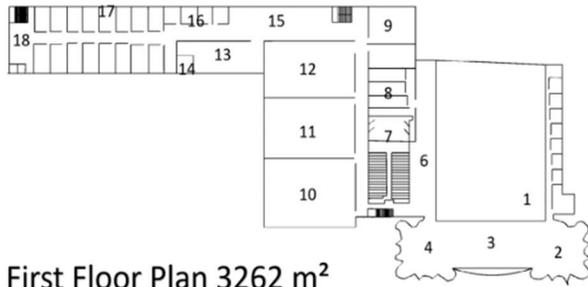
Prabhupada Tower Consist of :

Reception for guest House, Waiting Area, toilets, Cyber Café, Life Membership Office, Staircase



# 5.1 SRI RADHARASBIHARI TEMPLE, JUHU ,MUMBAI

## 5.1.7. PLANNING



## 5.1.8. SERVICES

**WATER SUPPLY:** Water is supplied from MCGM water department to the temple

**ELECTRICITY SUPPLY:** Electricity is supplied from Brihan Mumbai Electric Supply, the poles are outside the campus.

**AIR CONDITIONING:** Window and split ACs in guest house

**FIRE FIGHTING:** Fire extinguishers kept in the complex at different places

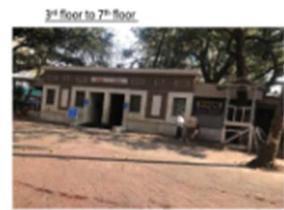
**PARKING:** Basement parking for 150 cars and surface parking for 30 cars.

## 5.1.8. VISUAL STUDY

LEGEND	
1	Offices 54 m <sup>2</sup> each
2	Prabhupada Tower 155 m <sup>2</sup>
3	Institute of Semantic Sciences & Technology, Bhakti/Vedanta Institute 254.4 m <sup>2</sup>
4	Gauranga Tower 133 m <sup>2</sup>
5	Offices 188 m <sup>2</sup>
6	Auditorium Management office 38 m <sup>2</sup>
7	Auditorium (500 per.) 254 m <sup>2</sup>
8	Green Rooms 27 m <sup>2</sup>
9	Toilets 68 m <sup>2</sup>
10	Shankh Hall 352
11	Padma Hall 274 m <sup>2</sup>
12	Bhaktivedanta book Trust library 232 m <sup>2</sup>
13	Prasadam Hall for Life Members 125.3 m <sup>2</sup>
14	Kitchen 12 m <sup>2</sup>
15	Food for life counter 75 m <sup>2</sup>
16	Room for Trustees 14 m <sup>2</sup> each
17	Rooms for Guests (16 nos.) 21 m <sup>2</sup> each
18	Waiting Area 60 m <sup>2</sup>



LEGEND	
1	Gauranga Tower-Guest house rooms, each floor having 6 rooms- total no. of rooms 42
2	Prabhupada Tower-Guest house rooms, each floor having 6 rooms- total no. of rooms 42
3	Auditorium Balcony
4	Multi Purpose Hall 1
5	Multi Purpose Hall 2
6	BBT Library
7	Prasadam Hall for lifetime members
8	Kitchen
9	Rooms for trustees
10	Rooms for guests
11	Waiting Area
12	Bhaktivedanta book Trust library
13	Prasadam Hall for Life Members



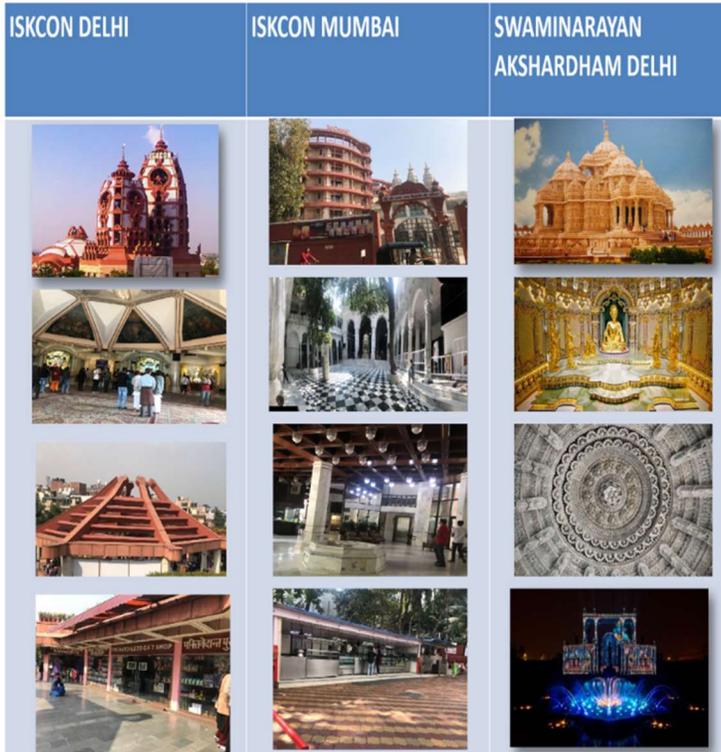


# **6. COMPARATIVE ANALYSIS**

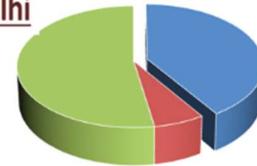


CRITERIA	ISKCON DELHI	ISKCON MUMBAI	AKSHARD HAM DELHI
Location	Hare Krishna Hills, east of Kailash	Hare Krishna land Juhu, Mumbai.	Noida mor pandav nagar, new delhi
Climate	Humid sub tropical climate	Moderate climate	Humid sub tropical climate
Architect	Ar. Achyut Kanvinde	Ar. T. Shetty	Ar. Sanjay Tompura
Footfall	180 people per hour 2000 people per day	200 people per hour 2500 people per day	900 people per hour 10,000 people per day
Material	Red and yellow sandstone	White marble and brick work	Red sand stone and white marble
Circulation	Red sandstone pathways	White marble pathways	Stone and marble pathways
Orientation	The longer axis of temple is east-west. West facing deity	Longer axis is east-west, north facing deity.	East-west, east facing deity.
Area	5 acres	4.5 acres	100 acres
Form and Plan	Compact Planning having polygon form	Every block is linked with each other	Polygon form with symmetry on all sides, scattered planning.
Concept	Based on nagara style, following kalinga features and modern motives	Vedic Architecture	Based on MVA, the storyline around temple like traditional temples.

CRITERIA	ISKCON Delhi	Lingaraj Temple	AKSHARD HAM DELHI
Main Parts	Temple Restaurant Book Trust Institutional Block Admin block Auditorium Guest house Parking	Temple Restaurant Book stall Admin block Institutional block Auditorium Guest house parking	Entrance Plaza Temple Library Restaurant Musical fountain Prakarma Path Exhibition hall
Architectural features	Modern construction techniques with amalgamation of traditional architectural motif.	Modern construction technique is used with trabeated style	Rich Carvings, Symmetry in main temple, Vedic Constuction methodology, MVA based plan.
Services	Water supply DG sets, AHU Water tank for Fire Fighting	Water Supply, Drainage system, electricity, fire fighting,	DG sets, Water tank, Parking, AHU, water supply
Parking	Ground parking for 30 cars	Basement parking for 150 cars as well as ground parking for 10 cars	Parking for 500 including bus and cars
Function	Side road entries with main road entry. Can take larger prakrama around temple.	Different entries for pedestrian and vehicle	Each space is meant to explain great philosophy of Swaminarayan bhagwan,



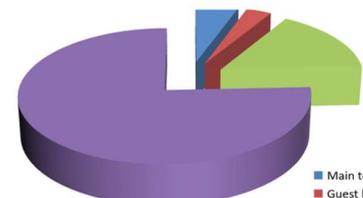
### Swaminarayan Akshardham, Delhi



■ Temple ■ Restaurant ■ Exhibition, Boat Ride etc ■ Other



### ISKCON Delhi



### ISKCON Mumbai

■ Main temple  
■ Guest house  
■ LANDSCAPING  
■ 4th Qtr



# **7. CONCEPT**





# TECHNOLOGY

## MEGA KITCHEN

Fixed Focus Elliptical Dish, often called a Scheffler concentrator, is a small, flat section of a parabola which concentrates sun's radiation over a fixed receiver. The dish comprises of a large number of mirrors to reflect the sun rays to a fixed receiver which contains a working fluid to be heated.

The Scheffler dish system works on the following principles:

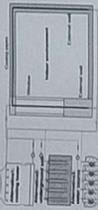
1. The parabolic reflective dish wraps about north-south (N-S) axis parallel to earth's axis, tracking the sun's movement from morning (East) to evening (West).
2. The parabolic reflector also performs change in inclination angle while staying directed to sun, in order to obtain sharp focal point. Adjustments for the seasonal variations in the sun's position (N-S direction) have to be made manually every few days by an operator.
3. Focus always lies at the end of relation: it remains at a fixed position, where concentrated heat is captured and transferred to water through the receiver to generate hot water or high pressure steam.
4. Water from header pipe passes to receiver (thermosyphon principle). At the receiver, the hot water or steam generated water and collected in the header pipe flows to the end use application.



## POTENTIAL OF UTILIZING

Cooling pipes are embedded into the wall and the double pane window. Cooling water flows inside to take away the heat from the envelope.

The heat transfer of the pipe-embedded structure is more efficient than the traditional indoor fan coil unit.

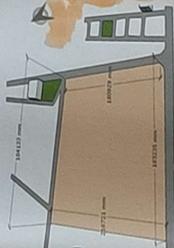


## BIOGAS PLANT

A biogas plant is a facility that provides oxygen-free conditions where anaerobic digestion can occur. Simply put, it's an artificial system where you can turn waste into sustainable energy and fertilizers, with positive effects on the environment.



## SITE DETAILS



### SITE DIMENSIONS

SITE AREA:- 18.4 ACRES (74462.16 SQM)  
 ROUND COVERAGE :- 35% (26061.7565 SQM)  
 FAR:- 1.5

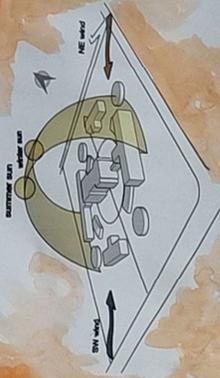
SITE ORIENTATION:- South East Facing

SITE TOPOGRAPHY:- FLAT SITE

SITE SETBACKS:- FRONT:- 15M  
 REAR:- 9M  
 SIDE:- 9M  
 ACCESS ROAD:- 2.1M WIDE PURI-KONARK MARINE DRIVE

NATURAL SITE SLOPE:- TOWARDS SOUTH

CLIMATE:- The State has tropical climate, characterized by high temperature, high humidity, medium to high rainfall and short and mild winters.

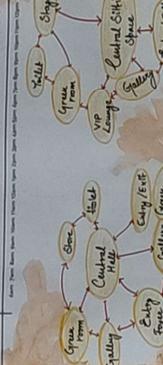
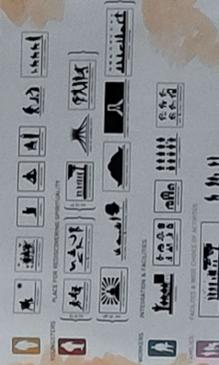


### SITE ORIENTATION



### PROPOSED PROGRAM

## ACTIVITY MAPPING



## FUNCTIONAL RELATIONSHIP OF SPACES



## INTERPRETATION GALLERY



## AREA ANALYSIS

S.N.	FUNCTIONAL ZONE	USE	AREA (SQ. FT.)	NO. OF PEOPLE	SEATING CAPACITY	TOTAL AREA (SQ. FT.)
1	RECEPTION	RECEPTION	100	1	1	100
2	RECEPTION	RECEPTION	100	1	1	100
3	RECEPTION	RECEPTION	100	1	1	100
4	RECEPTION	RECEPTION	100	1	1	100
5	RECEPTION	RECEPTION	100	1	1	100
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7	RECEPTION	RECEPTION	100	1	1	100
8	RECEPTION	RECEPTION	100	1	1	100
9	RECEPTION	RECEPTION	100	1	1	100
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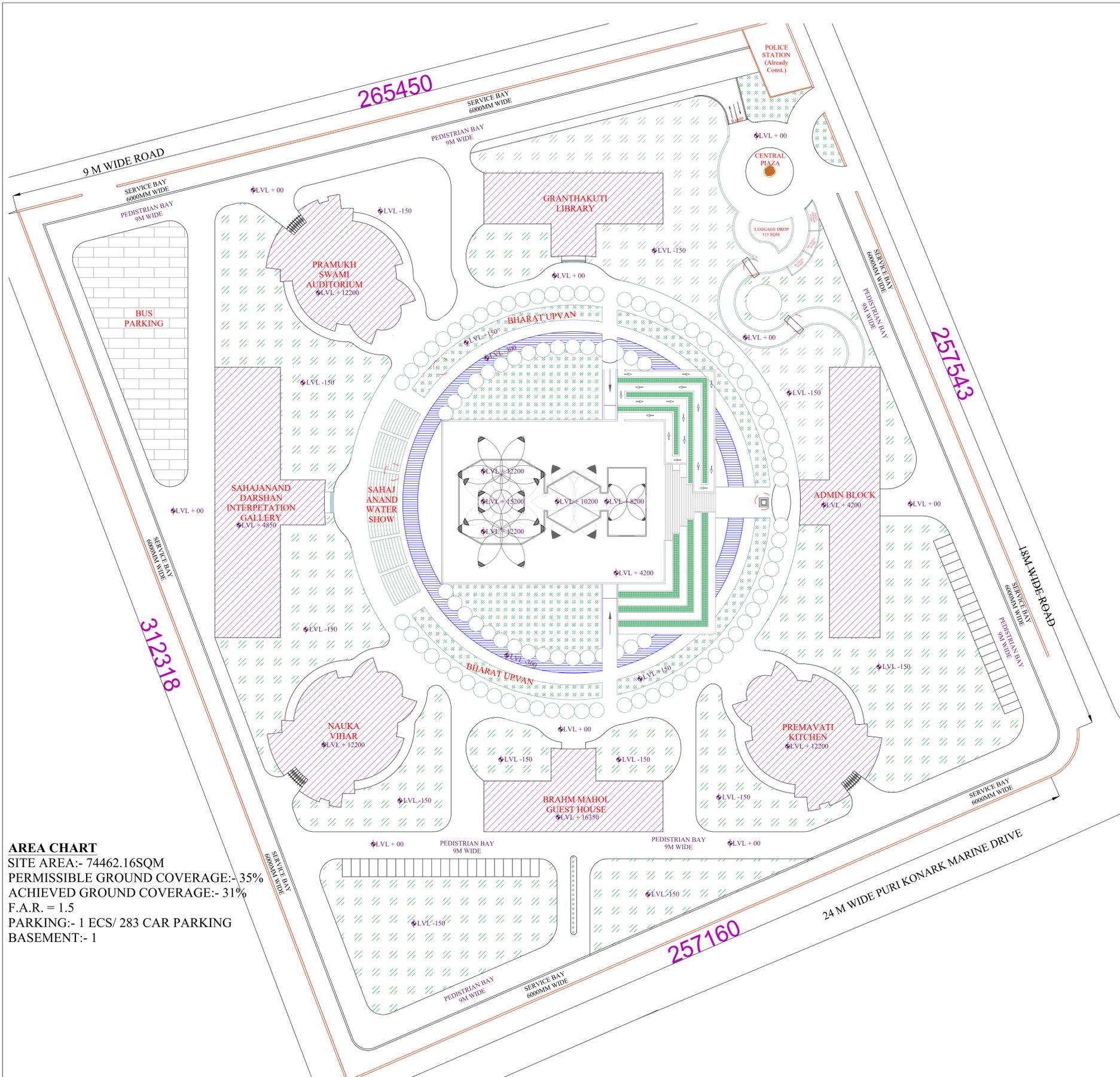




# **8. DRAWINGS**



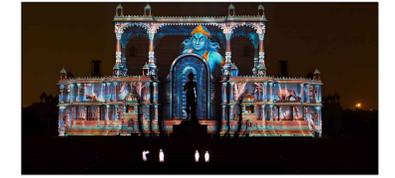
# DESIGN THESIS



**AREA CHART**  
 SITE AREA:- 74462.16SQM  
 PERMISSIBLE GROUND COVERAGE:- 35%  
 ACHIEVED GROUND COVERAGE:- 31%  
 F.A.R. = 1.5  
 PARKING:- 1 ECS/ 283 CAR PARKING  
 BASEMENT:- 1



BHARAT UPVAN



SAHAJ ANAND WATER SHOW



SAHAJ ANAND WATER SHOW



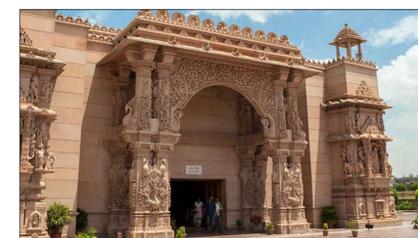
STATUES IN BHARAT UPVAN



CHARAN PADUKA



CARVINGS AT PLINTH OF TEMPLE



SECURITY CHECK 1



SECURITY CHECK 2



# DESIGN THESIS



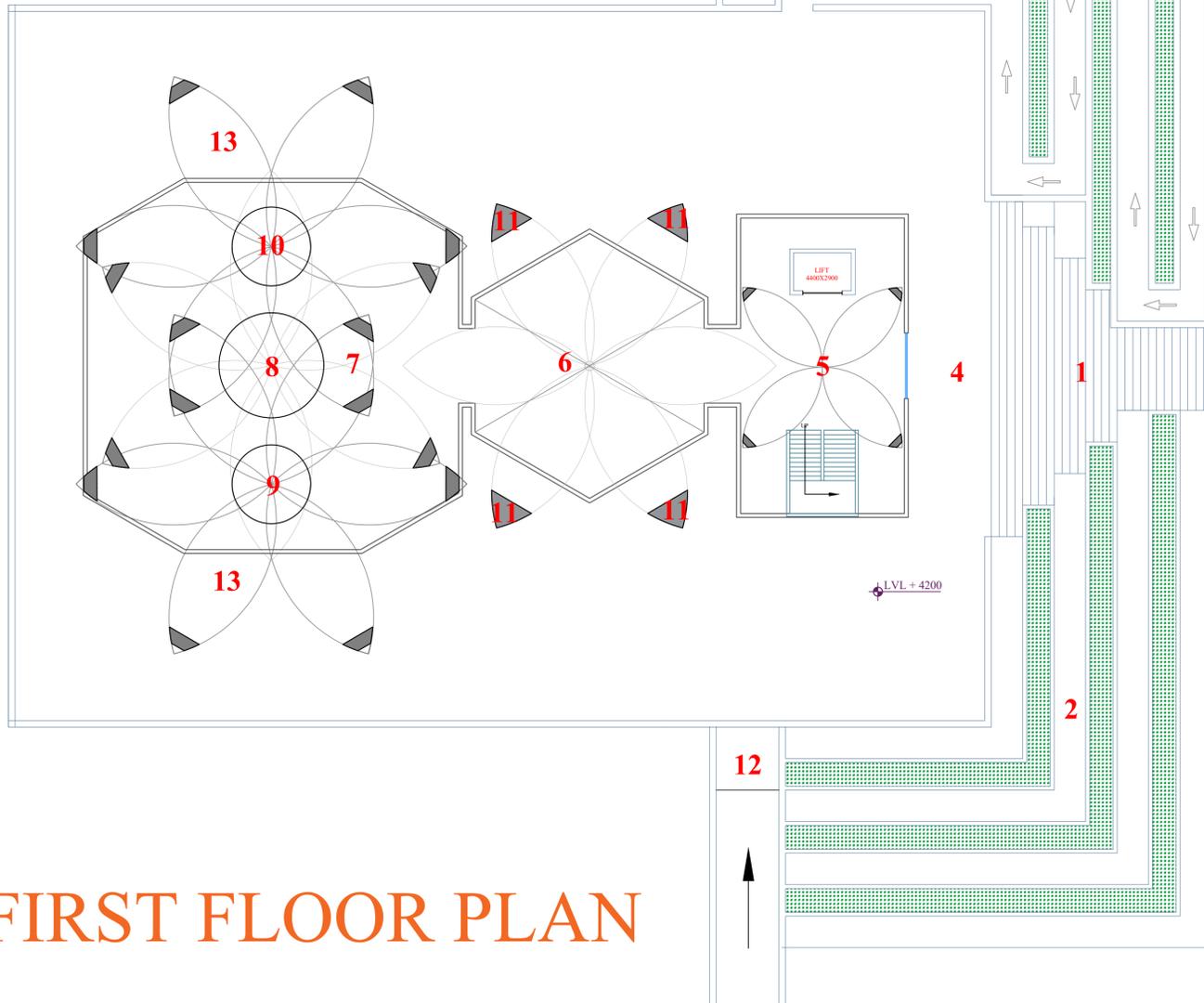
13. PARIDAKSHINA PATH



1. MAIN ENTRANCE STAIRS



EXTERIOR VIEW OF TEMPLE



FIRST FLOOR PLAN

## Legend

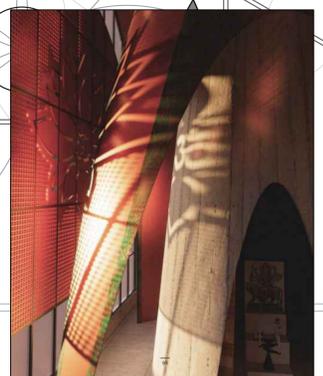
- 1 - Main Entrance Stairs
- 2 - Bleachers
- 3 - Ramp
- 4 - Plinth
- 5 - Ardhmandapa (entrance hall)
- 6 - Mandapa (hall)
- 7- Garbhagriha (sanctum)
- 8 - Lord Swaminarayan Sanctum
- 9 - Lord Vishnu & Goddess Laxmi Sanctum
- 10 - Lord Shiva & Goddess Parvati Sanctum
- 11 - Skylight
- 12 - Community Hall Entrance
- 13 - Paridakshina Patha



7. GARBHAGRIHA



8. LORD SWAMINARAYAN SANCTUM



INTERIOR VIEW OF TEMPLE



RAILINGS AROUND PLINTH



2. BLEACHERS



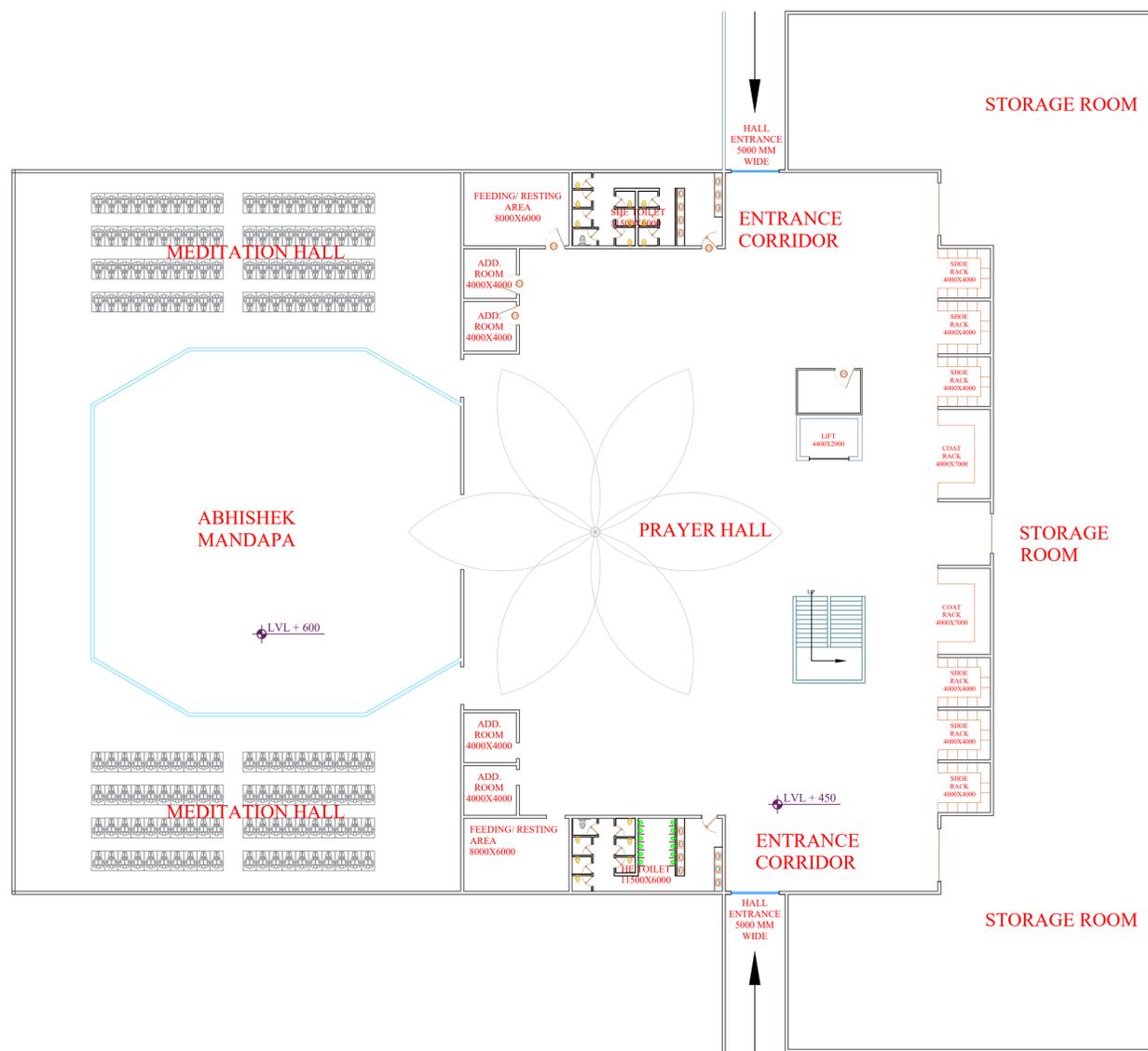
9. LORD VISHNU & GODESS LAXMI SANCTUM



10. LORD SHIV & GODESS PARVATI SANCTUM



# DESIGN THESIS



GROUND FLOOR PLAN



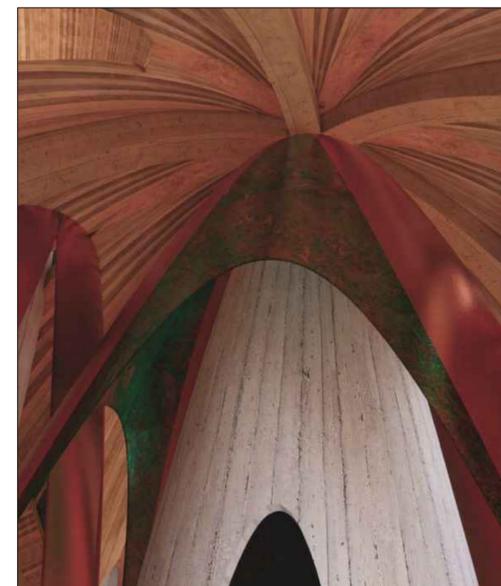
VIEW OF ENTRANCE



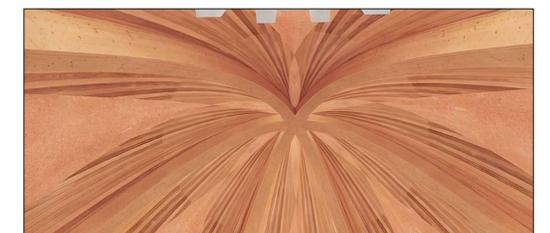
REFERENCE FOR ABHISHEK MANDAPA



INTERIOR VIEW OF PRAYER HALL



CEILING OF PRAYER HALL



CEILING OF PRAYER HALL



INTERIOR VIEW PRAYER HALL

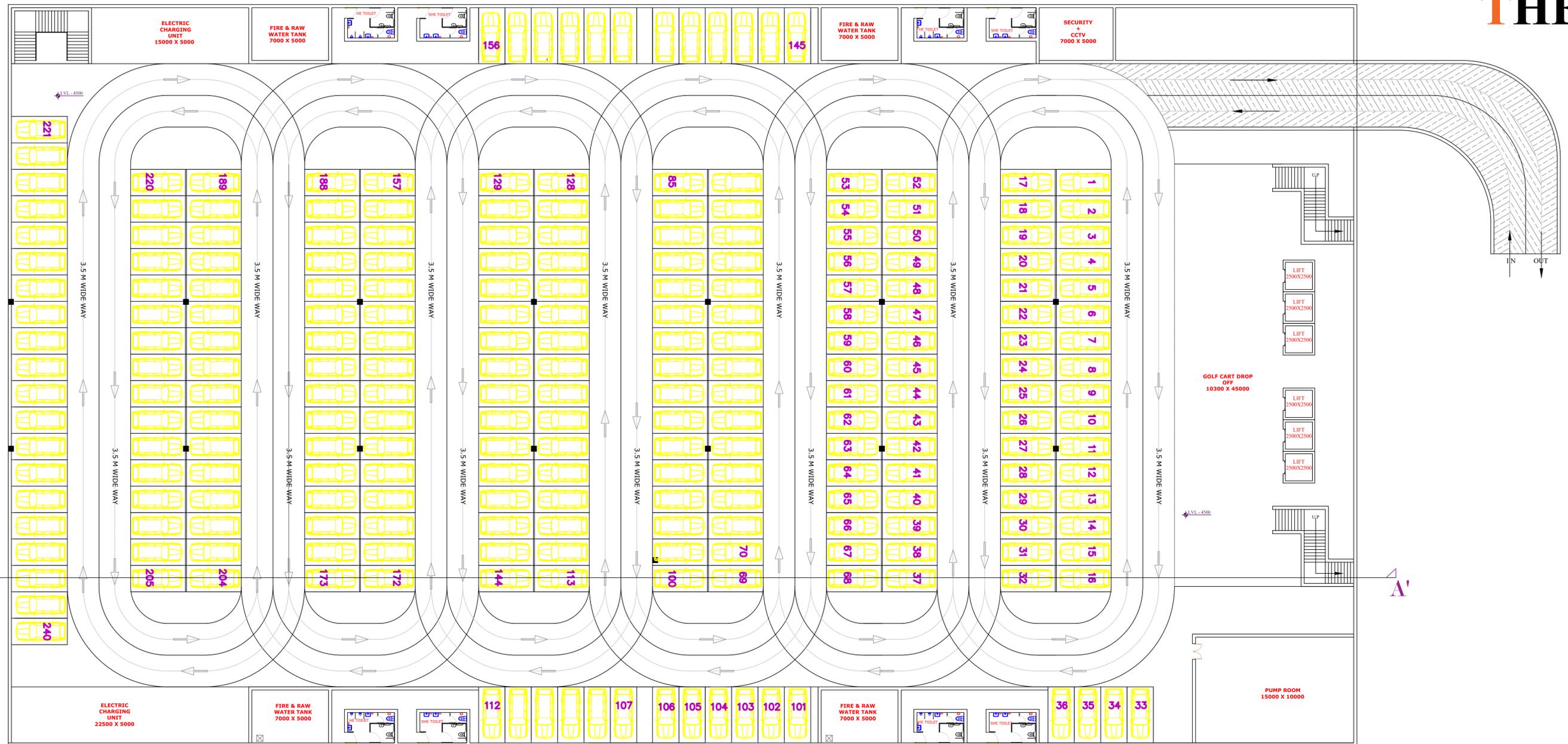
SWAMINARAYAN

TEMPLE

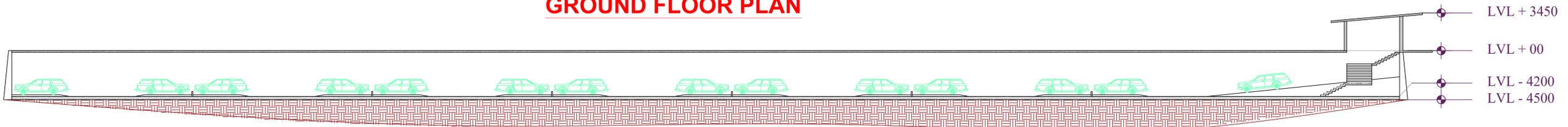
Shree Swaminarayan Temple



Divyansh Mishra  
1180101015  
Architecture V (2022-23)  
S.A.P BBD University



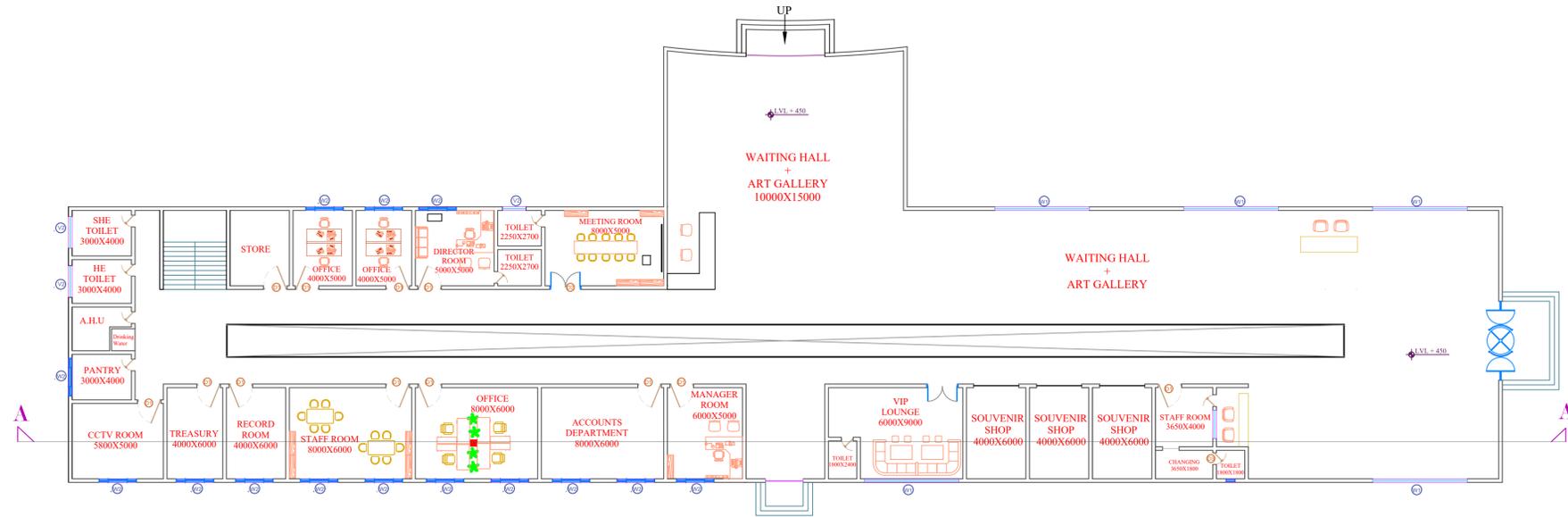
**GROUND FLOOR PLAN**



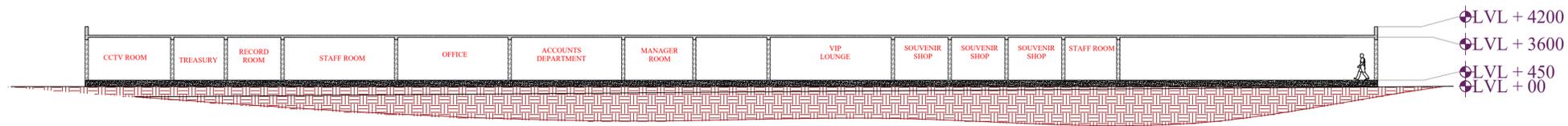
**SECTION A - A'**



# DESIGN THESIS



**GROUND FLOOR PLAN**



**SECTION A - A'**



**FRONT ELEVATION**



**INTERIOR VIEW OF MEETING ROOM**



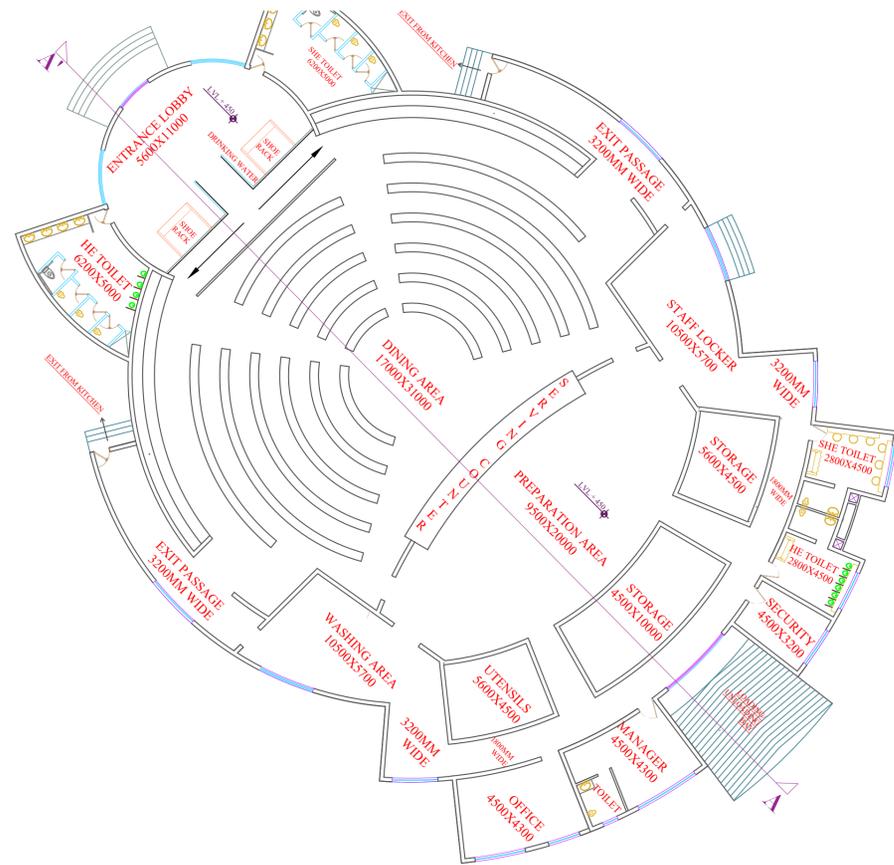
**INTERIOR VIEW OF MEETING ROOM**



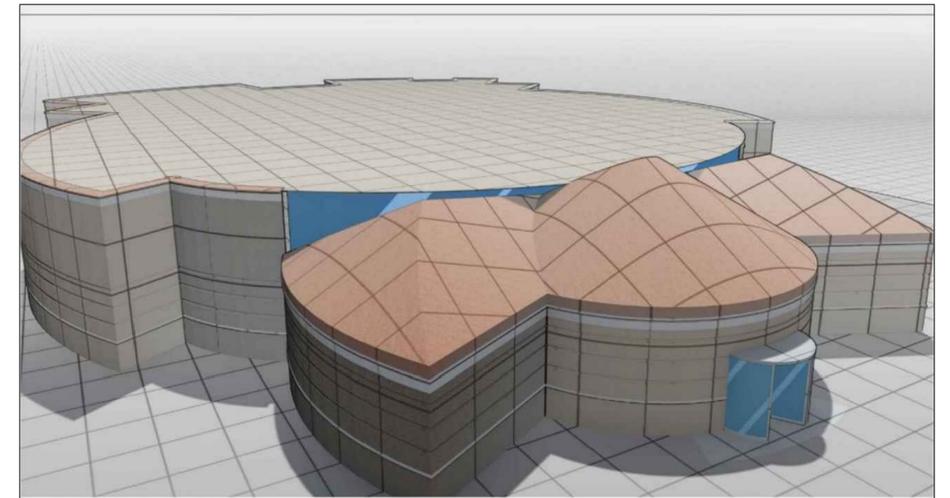
**INTERIOR VIEW OF V.I.P. LOUNGE**



# DESIGN THESIS



**GROUND FLOOR PLAN**



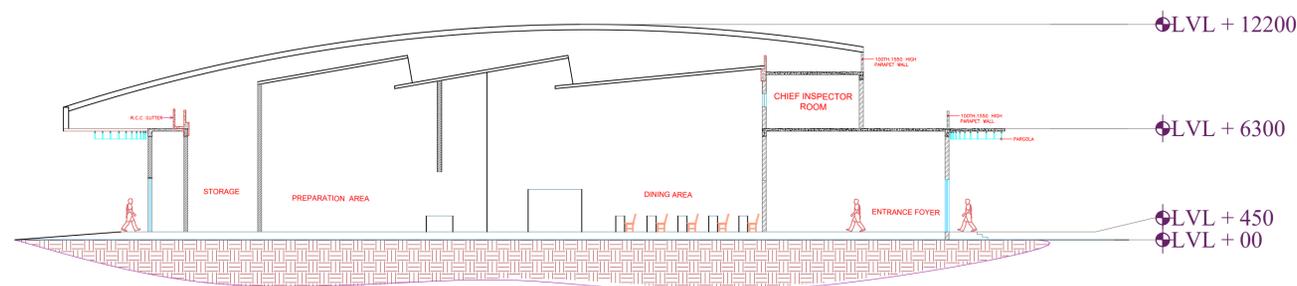
**EXTERIOR VIEW OF KITCHEN**



**INTERIOR VIEW OF PREPARATION AREA**



**INTERIOR VIEW OF PREPARATION AREA**



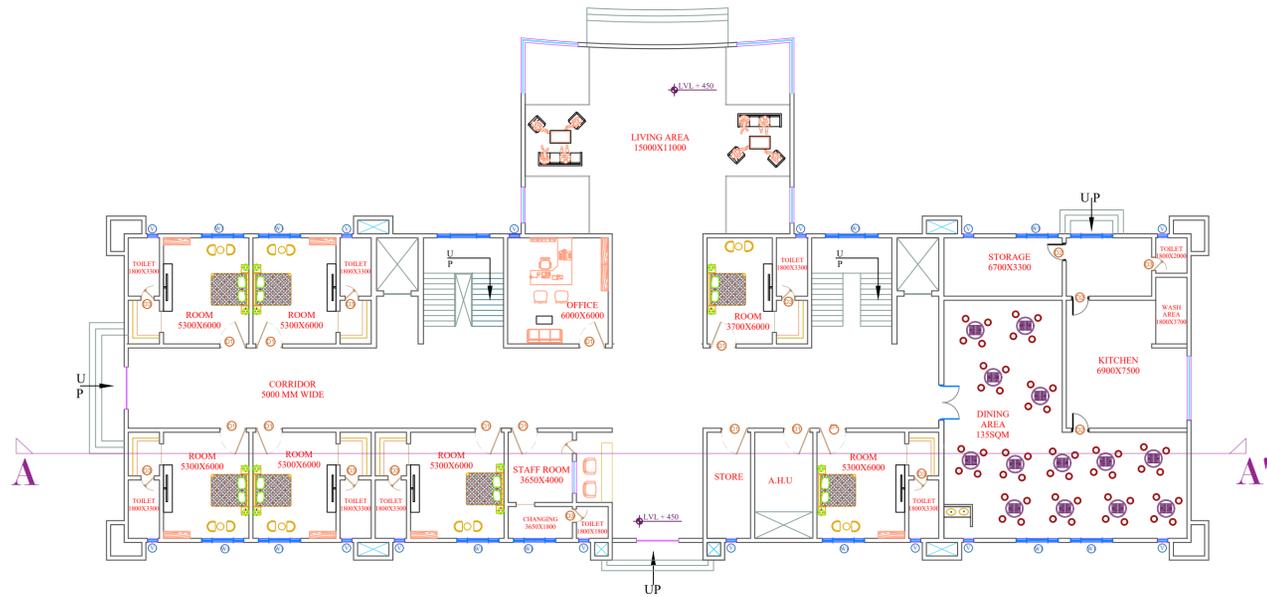
**SECTION A - A'**



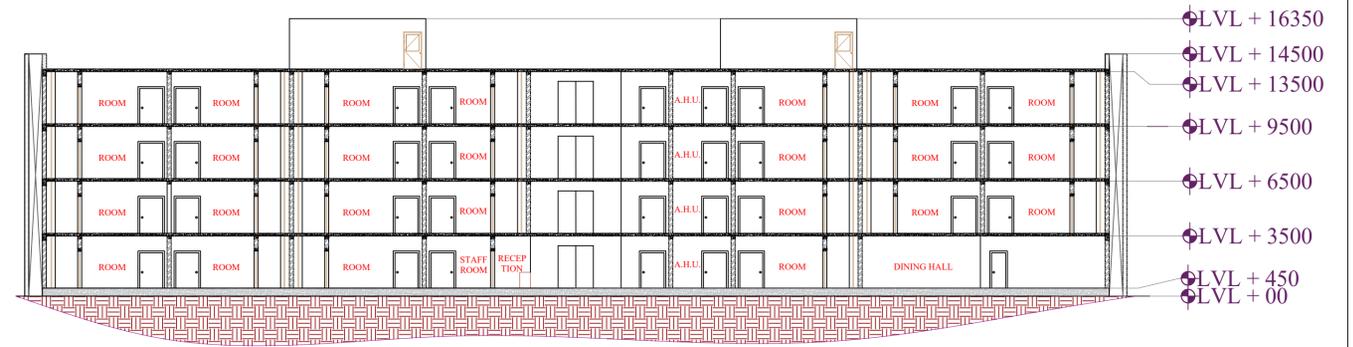
**SOLAR DISH TO BE INSTALLED ON ROOF**



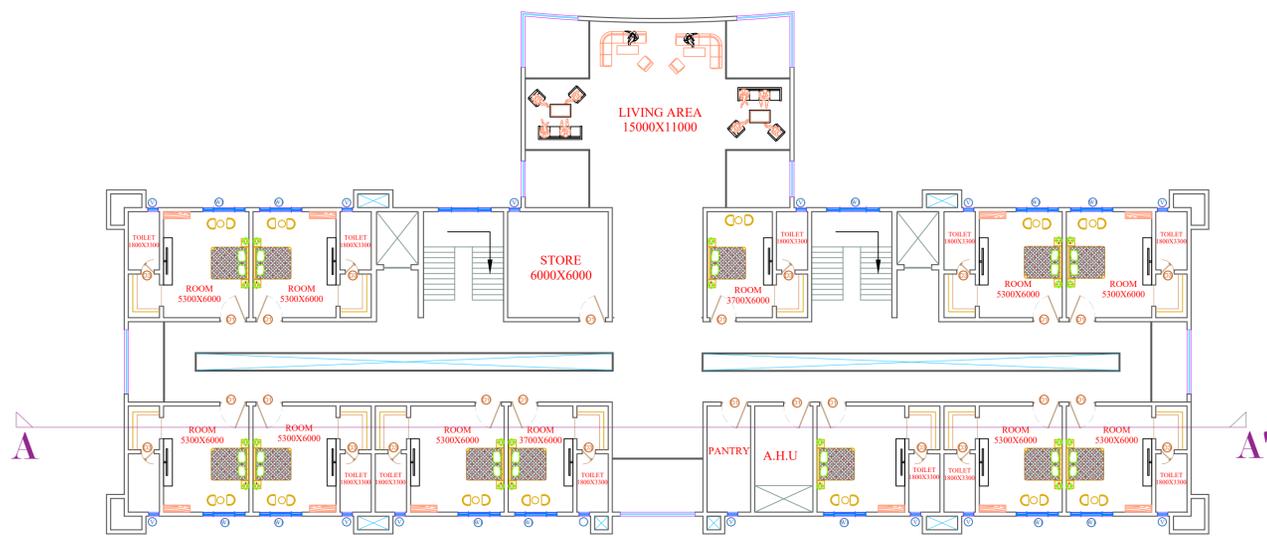
# DESIGN THESIS



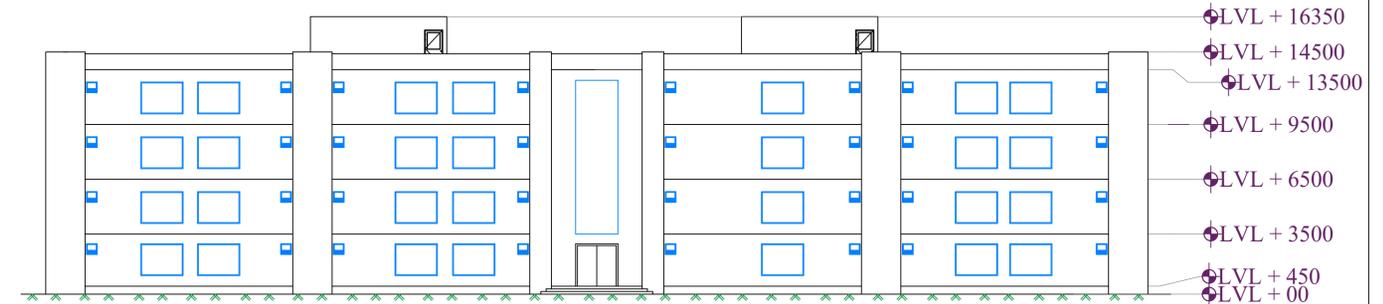
**GROUND FLOOR PLAN**



**SECTION A - A'**



**TYPICAL FLOOR PLAN  
(UPTO 4th FLOOR)**



**ELEVATION**



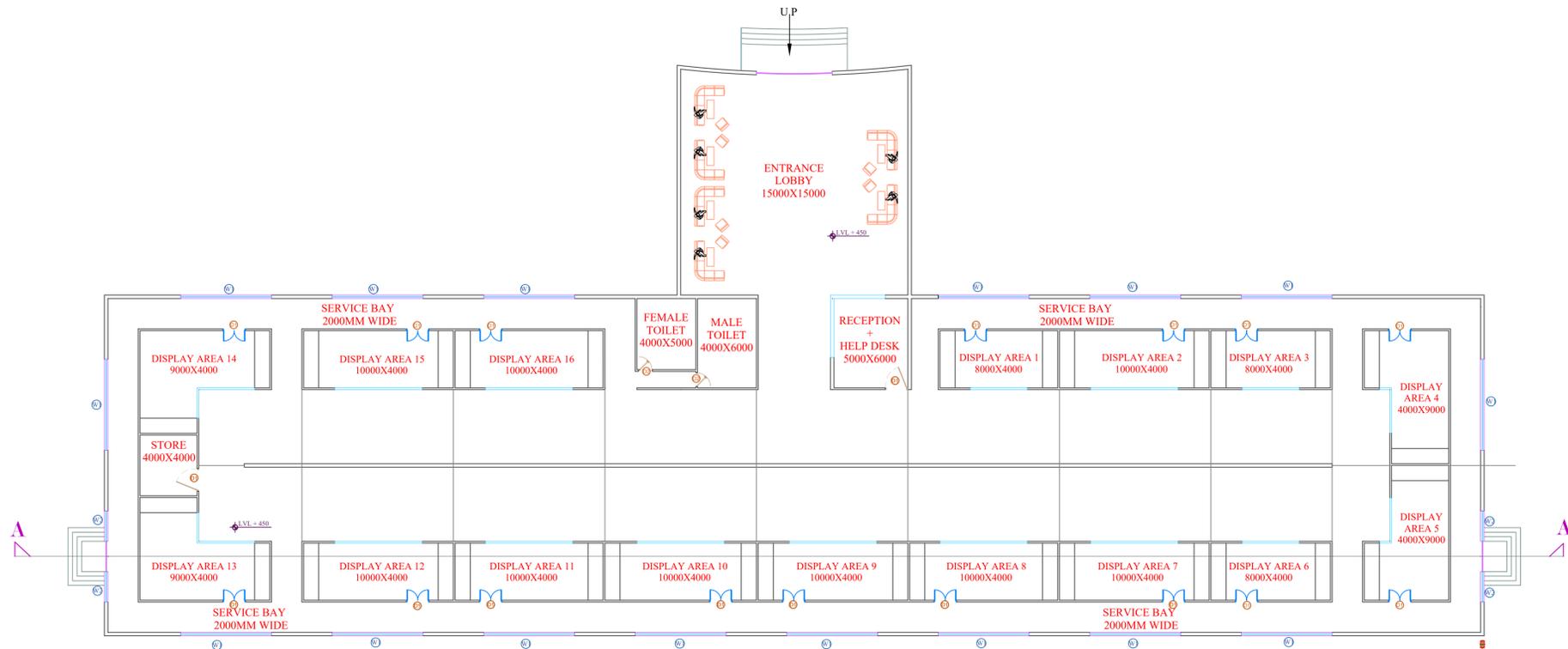
**GUEST ROOM INTERIOR**



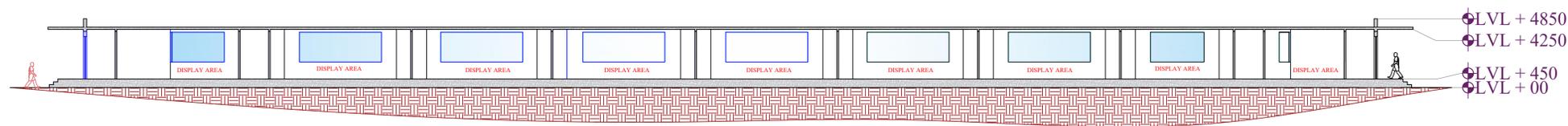
**GUEST ROOM INTERIOR**



# DESIGN THESIS



**GROUND FLOOR PLAN**



**SECTION A - A'**



**FRONT ELEVATION**



**DISPLAY AREA 3**



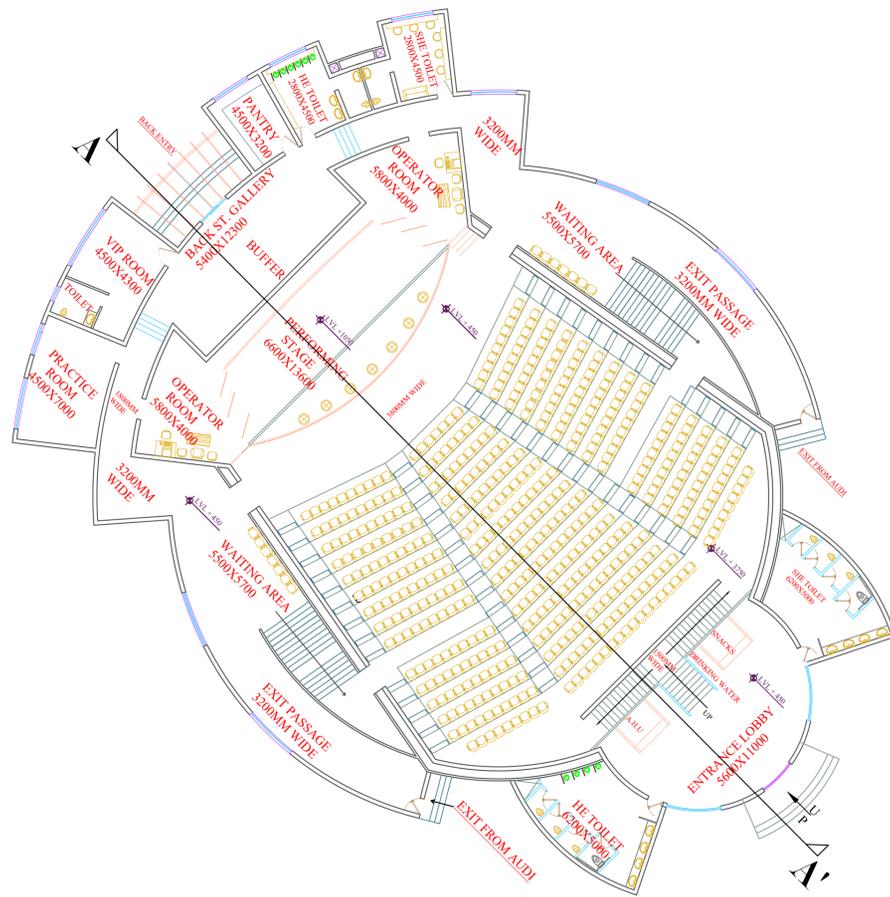
**DISPLAY AREA 11**



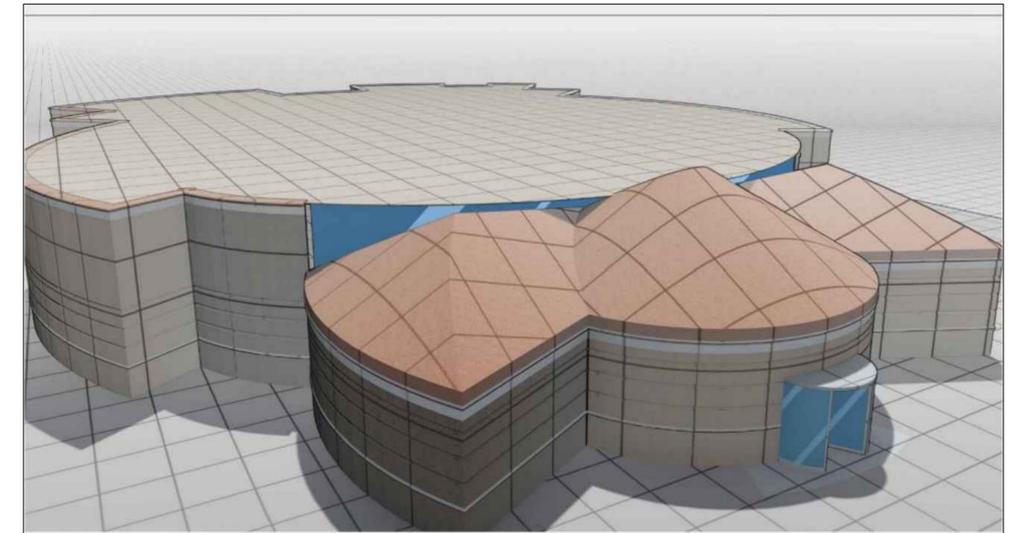
**DISPLAY AREA 15**



# DESIGN THESIS



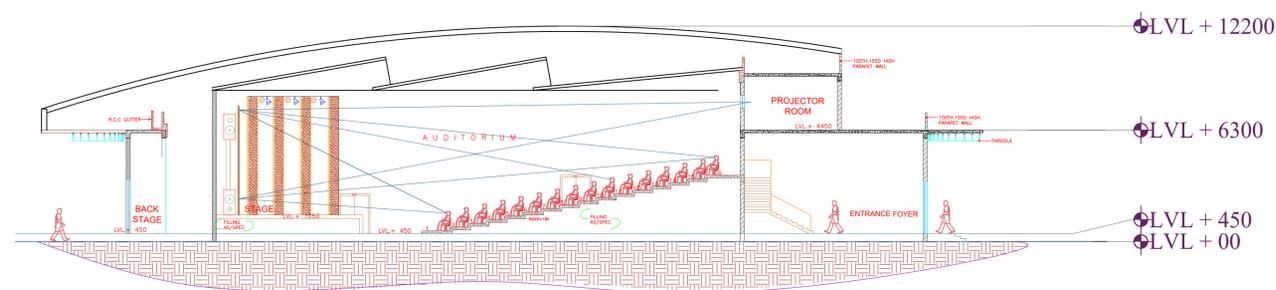
**GROUND FLOOR PLAN**



**EXTERIOR VIEW**



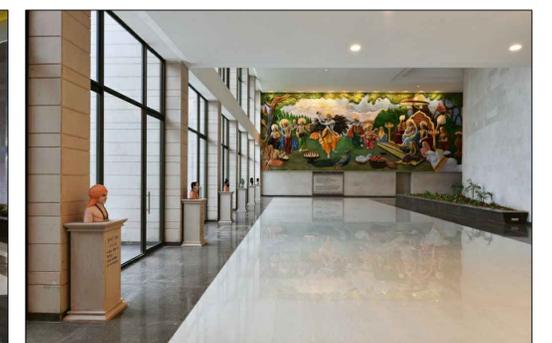
**INTERIOR VIEW OF AUDITORIUM HALL**



**SECTION A - A'**

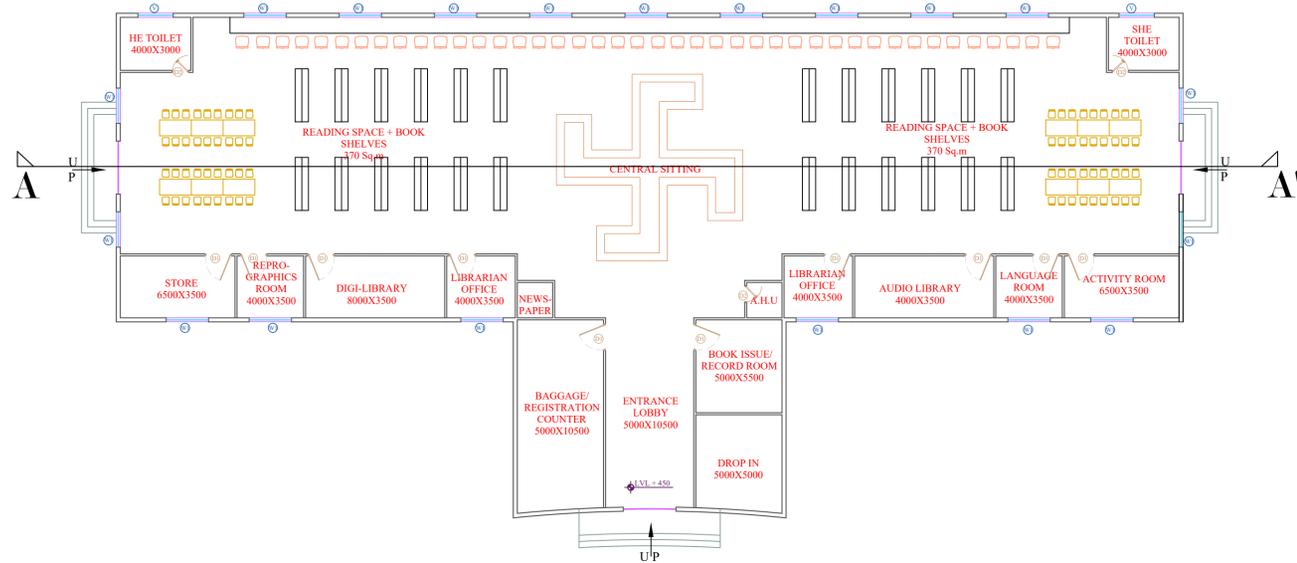


**INTERIOR VIEW OF ENTRANCE LOBBY**

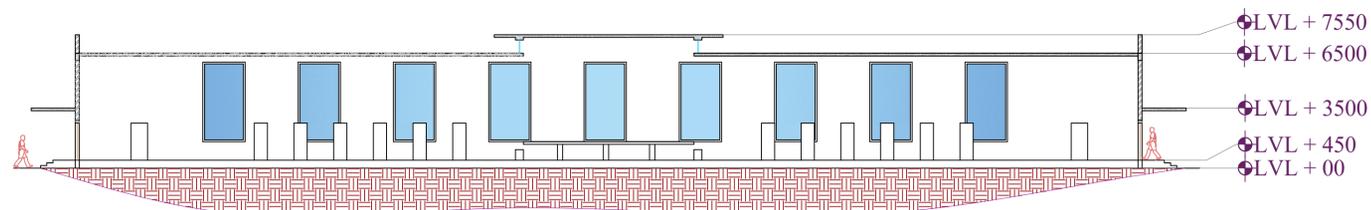


**INTERIOR VIEW OF ENTRANCE LOBBY**

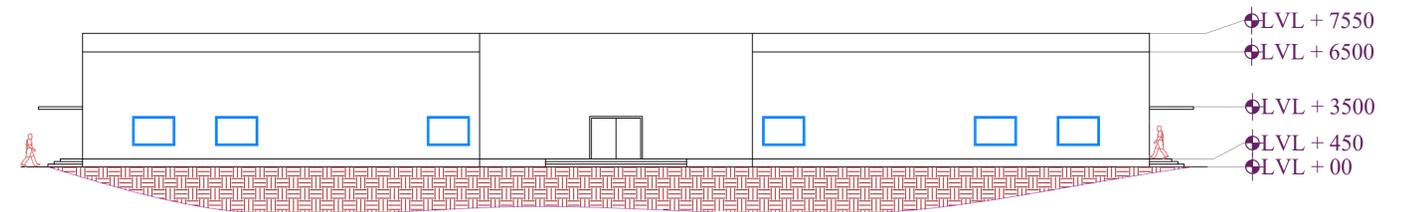
# DESIGN THESIS



**GROUND FLOOR PLAN**



**SECTION A - A'**



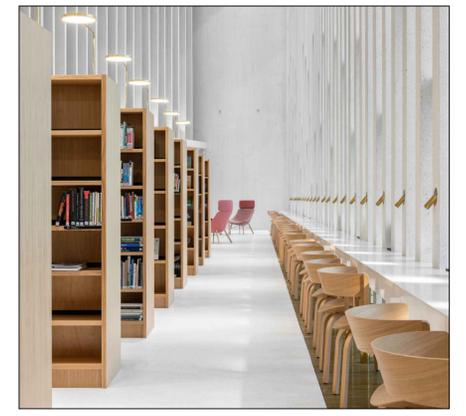
**ELEVATION**



**SITTING IN LIBRARY**



**INTERIOR VIEW OF LIBRARY**



**INTERIOR VIEW OF LIBRARY**



**SITTING IN LIBRARY**

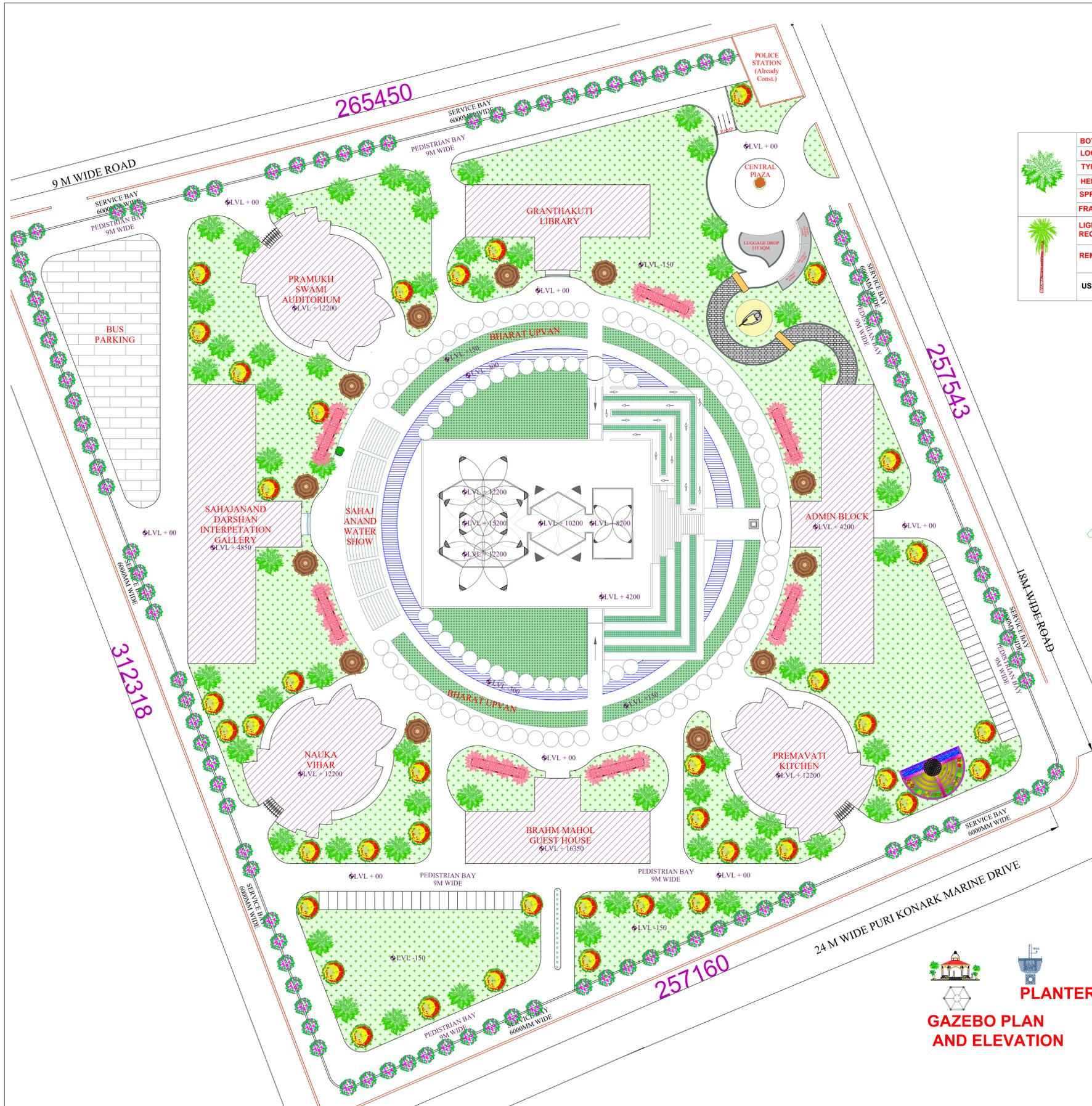


**INTERIOR VIEW OF LIBRARY**



**INTERIOR VIEW OF LIBRARY**

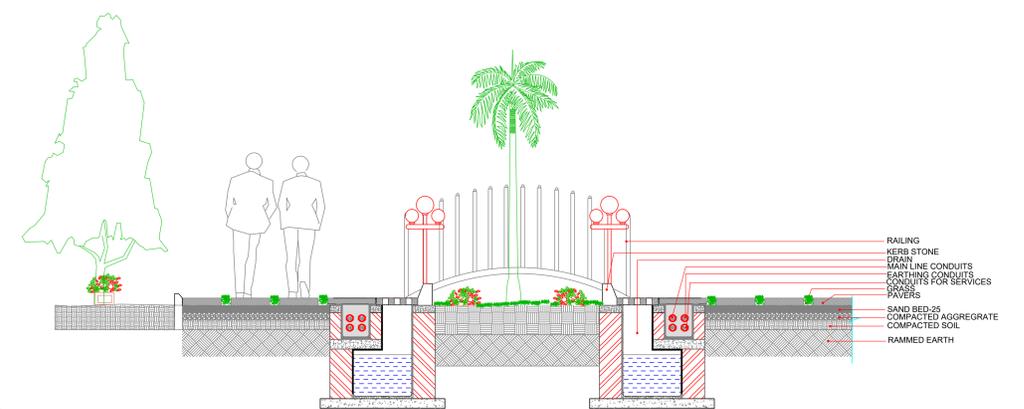
# DESIGN THESIS



	<b>BOTANICAL NAME</b>	DLCTYOSPERMA ALBUM
	<b>LOCAL NAME</b>	ARECA PALM
	<b>TYPE</b>	HOUSE PLANT
	<b>HEIGHT</b>	STEM ABOUT 10M LONG
	<b>SPREAD</b>	LEAF PINNATE 3-5 M LONG
	<b>FRAGRANCE</b>	NO
	<b>LIGHT REQUIREMENT</b>	GROW WELL IN SHADE OR SEMI SHADE
	<b>REMARK</b>	TOLERANT TO WIDE RANGE OF CLIMATE
	<b>USAGE</b>	EASY TO GROW IN GARDENS

	<b>BOTANICAL NAME</b>	BOMBOX CEIBA
	<b>LOCAL NAME</b>	COTTON TREE
	<b>TYPE</b>	DECIDUOUS
	<b>HEIGHT</b>	15-20 M
	<b>SPREAD</b>	10-12 M
	<b>FLOWERING SEASON</b>	MARCH-SEPTEMBER
	<b>COLOUR OF FLOWER</b>	RED, PURPLE ,ORANGE
	<b>REMARK</b>	FEATHERLY LEAVES, SLENDER TRUNK
	<b>USAGE</b>	ITS A ORNAMENTAL TREE

	<b>BOTANICAL NAME</b>	GRANTOPHYLLUM
	<b>LOCAL NAME</b>	CARICATURE PLANT
	<b>TYPE</b>	DECIDUOUS
	<b>HEIGHT</b>	15-20 M



SECTION OF PATHWAY



LIGHTING POST DETAIL



BENCH DETAIL



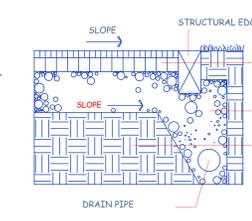
PLAN OF FOUNTAIN



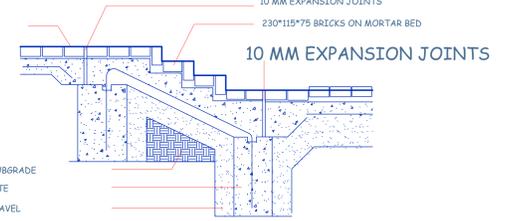
ELEVATION



PERSPECTIVE



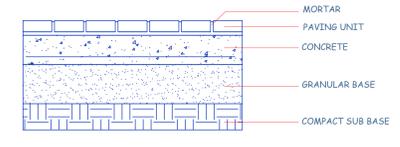
DETAIL OF DRAIN WITH PAVING UNITS



BRICK STEPS DETAIL



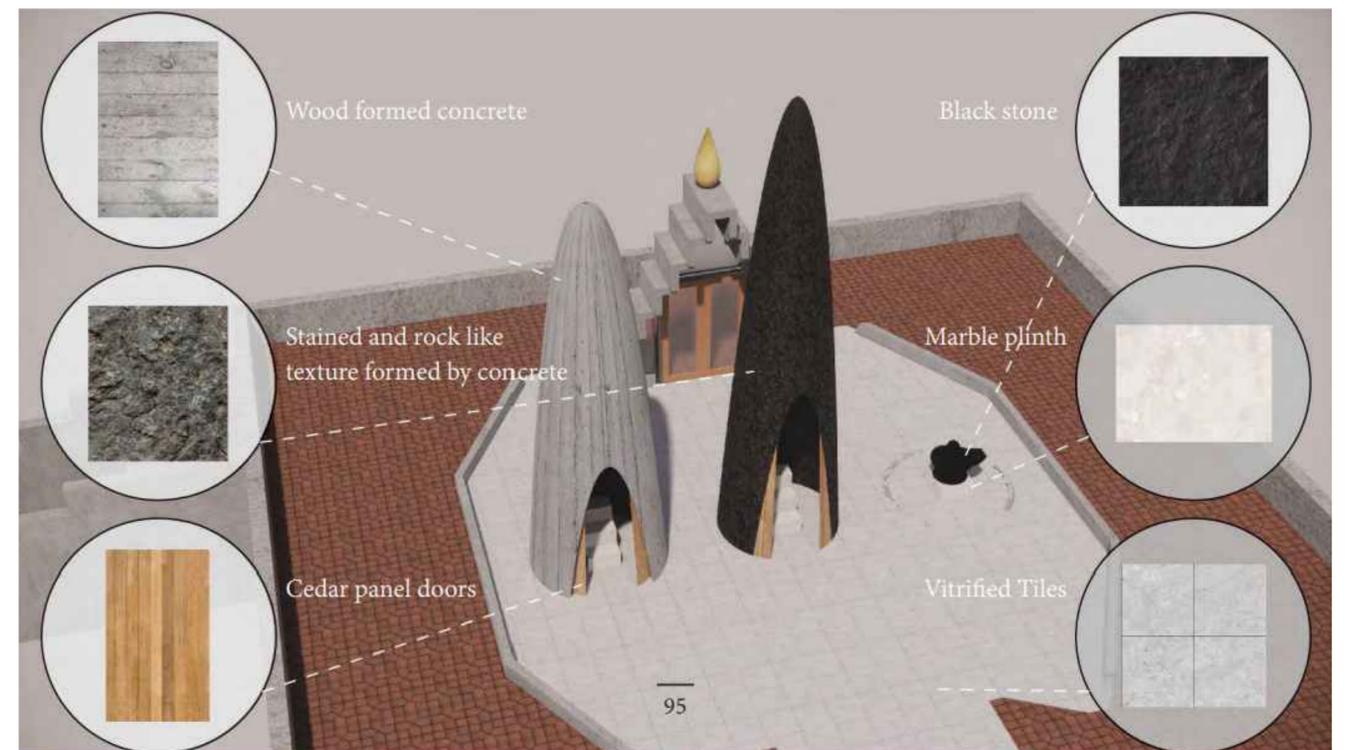
PLANTER DETAIL  
GAZEBO PLAN AND ELEVATION



RIGID PAVEMENT STRUCTURE



# DESIGN THESIS





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