THESIS REPORT ON

“GLOBAL ART VILLAGE:

VRINDAVAN,MATHURA.

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

BACHELOR OF ARCHITECTURE

BY
AMIT PRAJAPATI
(1190101007)

THESIS GUIDE

PROF. MOHIT AGARWAL

SESSION

2023-24

TO THE

SCHOOL OF ARCHITECTURE AND PLANNING

BABU BANARASI DAS UNIVERSITY

LUCKNOW.

SCHOOL OF ARCHITECTURE AND PLANNING
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CERTIFICATE

I hereby recommend that the thesis entitled "GLOBAL ART VILLAGE,VRINDAVAN MATHURA." under the supervision, is the bonafide work of the student 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.

_____	_____	_____
Prof. Mohit Agarwal (Thesis Guide)	Prof. Sangeeta Sharma (Head of Department)	Prof. Mohit Agarwal (Dean of Department)

_____	_____	_____
Internal Examiner	External Examiner-1	External Examiner-2

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1. Name : AMIT PRAJAPATI

2. Roll No. : 1190101007

3. Thesis Title : GLOBAL ART VILLAGE

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Name: Prof. Mohit Agarwal

(Signature of the Candidate)

Name: Amit Prajapati
Roll No.: 1190101007

ACKNOWLEDGEMENT

First and foremost, gratitude towards the almighty God for his blessings.

I am grateful to all of my faculty colleagues, especially Prof. Sangeeta Sharma (Hod) and Prof. Mohit Agarwal (Dean), who have been incredibly cooperative from the start and have enabled me to fully utilize my abilities and creativity.

Sincere gratitude is owed to our thesis coordinators, Ar. Shailesh Yadav and Prof. Mohit Agarwal, who did everything in their power to help us shape our thesis in the best possible way and for their quick assistance when needed.

I would like to sincerely thank Prof. Mohit Agarwal, who guided me through my B.Arch thesis, for his invaluable, unbiased advice, insightful conversations, suggestions, and unwavering support.

I want to express my gratitude to all of my friends for their support while writing my thesis. They've all made a contribution, and I will always treasure the time I spent with them.

I am appreciative of all the staff at the BBDU School of Architecture and Planning for their collaborative and encouraging work environment, which greatly aided in the accomplishment of this research project.

Thank you to everyone who played a role in this project, making it a rewarding and enriching experience.

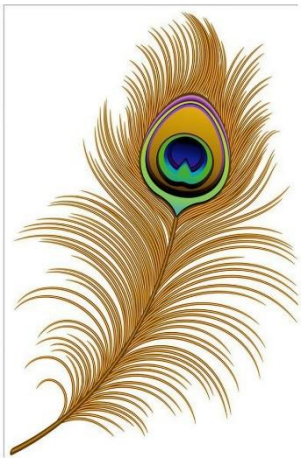
- AMIT PRAJAPATI

CONTENTS

CHAPTER 01

1.1_INTRODUCTION-

Handicraft is one of the most important sectors in the Indian economy employing more than seven million people. The craft industry in India is dominated by female artisans with over 56% of the total artisan. While most of the manufacturing units are in rural and small towns, and there is enormous market potential in all Indian cities and abroad. Handicrafts are becoming increasingly popular as the country's travel and tourism industry grows. Tourists spend significant money on souvenirs and other craft items, expanding the opportunity for local artisans and craftspeople to produce and sell efficient handicrafts. Furthermore, rising demand for handmade décor accessories in homes, offices, and restaurants and rising demand from the gifting industry are propelling market growth. The sector is economically viable with low capital investment, high value addition ratio and high export potential. This in turn creates an opportunity for the Indian rural economy to grow. The role of rural development is important not only for most of the population who live in rural areas but also for the overall economic development of a country in the process of the evolution of the country.



C R A F T

H I S T O R Y

C U I S I N E

C U L T U R E

1.2_PROJECT INTRODUCTION-

Creating experiential Centre by providing exposure and support to the handicrafts sector in the city by bringing the best designers to create Designs while creating a vibrant public space, “ART DISTRICT” in the heart of the city. The Project shall also create a research and training center to encourage more people into the trade and give the public a firsthand experience on the manufacturing process.

Project Name- GLOBAL ART VILLAGE

Client Name- UP PRO POOR TOURISM

MATHURA,VRINDAVAN PROPOSAL FOR GLOBAL ART VILLAGE

GLOBAL ART VILLAGE

History

Culture

Craft

Cuisine

1.3_AIM-

Increasing Tourist Inflow rate

Providing a Permanent Platform and integrated support to Artisans improving the Socioeconomic conditions of Artisan

Creating an identity
Increasing the quality of life
Bringing livelihood opportunities to the local

Promoting Craft
Capacity building and training

1.4_OBJECTIVE-

To discuss the importance of art and its impact on visitors and in the development of society.

Improving rural productivity and wages.

To provide a center where tourist and can see the process of making the craft and then purchase it.

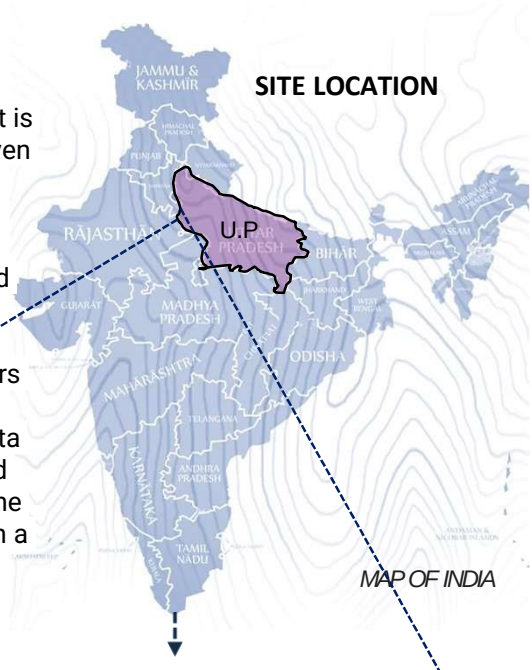
to achieve increased productivity, greater socio-economic equality and ambition, and stability in social and economic development.

CHAPTER 02

1. _SITE INTRODUCTION-

One of the spiritual and sacred places in India, lined with a number of temples along the roads is Mathura City, the birth land of Lord Krishna. It is situated in the state of Uttar Pradesh in North India and is one of the seven holy cities of India.

The city attracts a lot of worshippers and tourists on a daily basis and is filled to the brim with devotees seeking spiritual enlightenment. It is filled with many historical and religious significance sites. Lord Krishna was born in a prison, where their parents Mata Devaki and Vasudev were captured by his maternal uncle Kansa.. Some portray the different avatars of Lord Krishna and some show the idols Radha and Krishna. The two most important temples in the city are Dwarkadheesh temple and the Gita temple. These temples are an example of the wonderful architecture and design of the ancient India. Dwarkadheesh temple is the temple where the festivals of India like Holi and Janmashtami are celebrated every year on a grand scale.

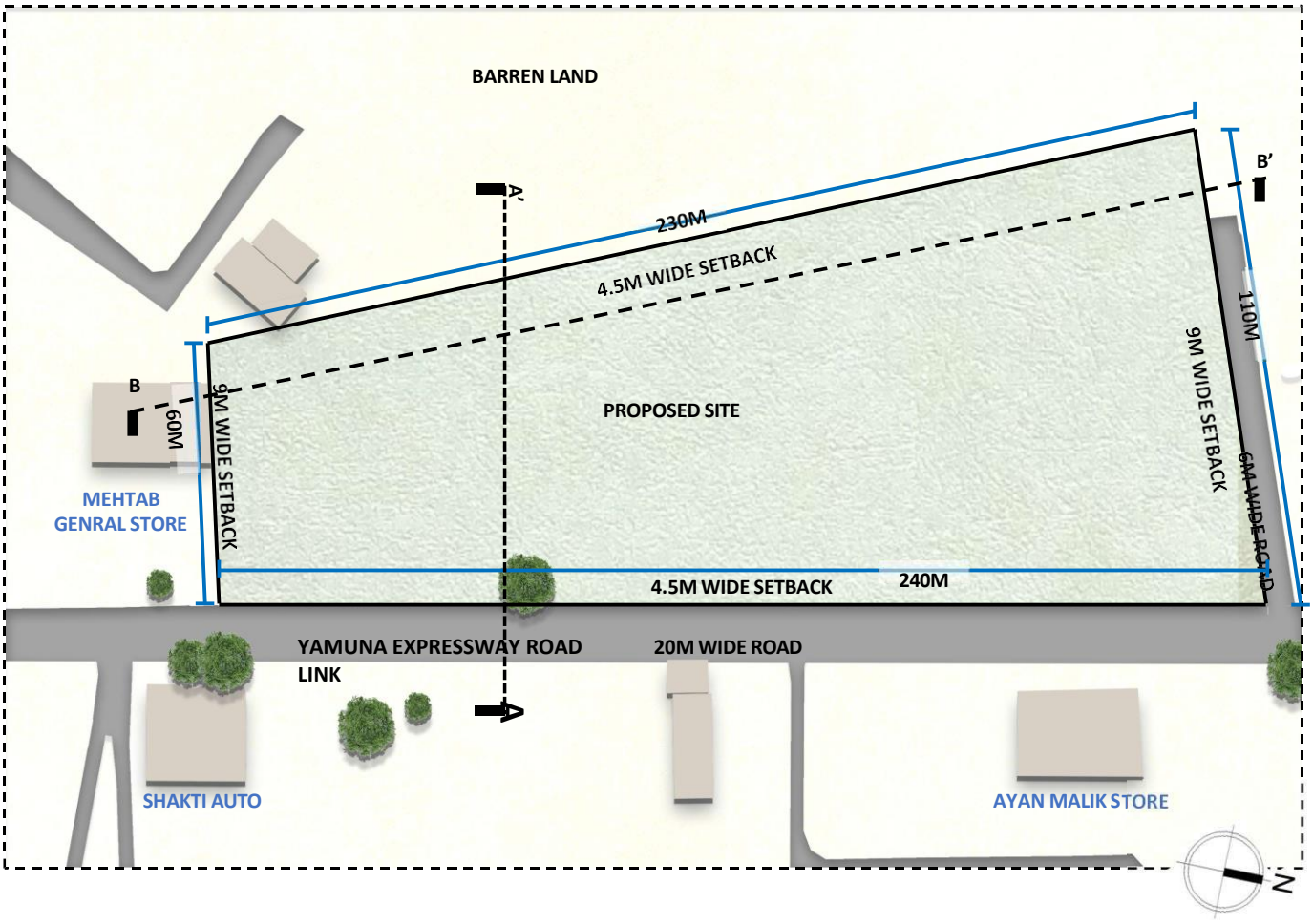


DESIGN PROPOSAL FOR GLOBAL ART VILLAGE ON THIS SITE LOCATED IN VATSALYA GRAM,VRINDAVAN ,MATHURA

PROJECT NAME	GLOBAL ART VILLAGE
CLIENT NAME	UP PRO POOR TOURISM
LOCATION OF PROJECT	MATHURA,VRINDAVAN, Uttar Pradesh,281121
SITE COORDINATE	27°33'31.0"N 77°41'14.3"E
PLOT AREA	5.05 ACRE (20477.09 SQ.M)
PERMISSIBLE FAR	1
PERMISSIBLE GROUND COVERAGE	40%
FRONT AND REAR SETBACK	9M
SIDE SETBACK	4.5M

CHAPTER 02

2.4_SITE PLAN/ SITE SURROUNDING

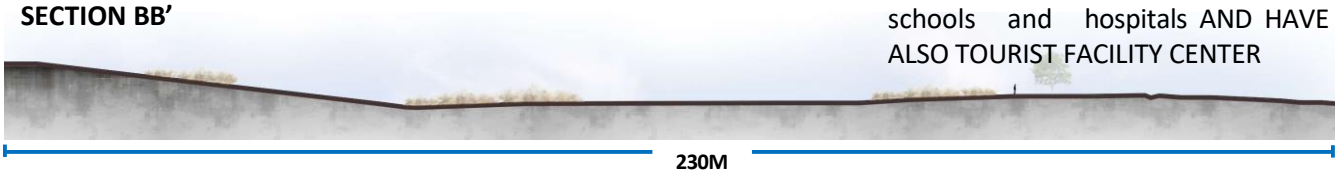


2.5_SITE IMAGES

2.6_SITE SECTION

SECTION AA'

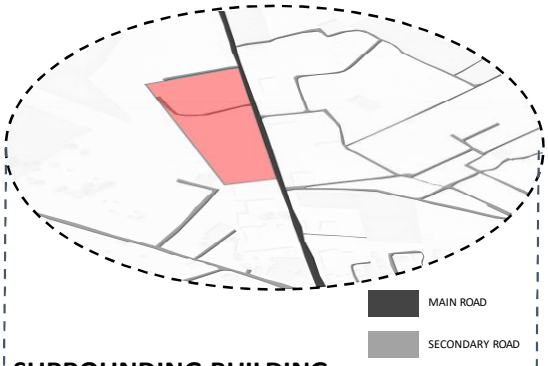
SECTION BB'



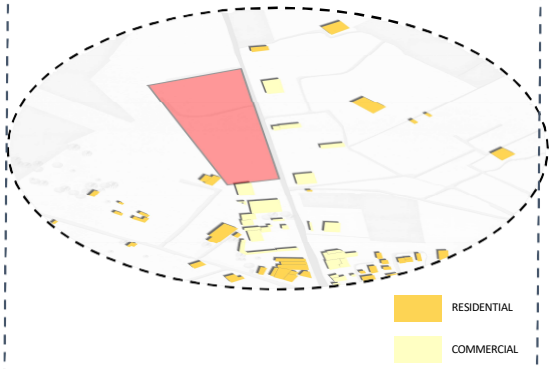
The site has a flat surface with little to no contours. It is surrounded by barren land at the east and has small retail stores at the surrounding. The site is adjacent to 20 M wide Yamuna expressway link road: that connects mathura togreater Noida and DELHI. Its front length is 240M by 70M form both the sides. The site is about 13M from the main MATHURA CITY at the outskirts. It comes in the developing area where there are multiple schools and hospitals AND HAVE ALSO TOURIST FACILITY CENTER

CHAPTER 02

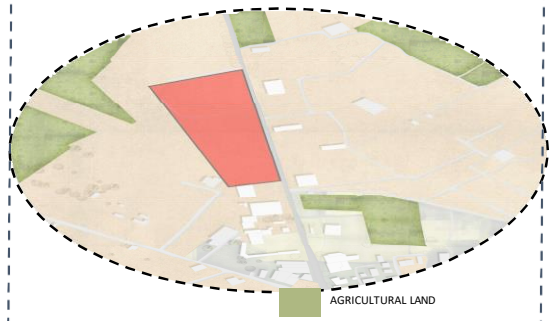
SURROUNDING ROAD

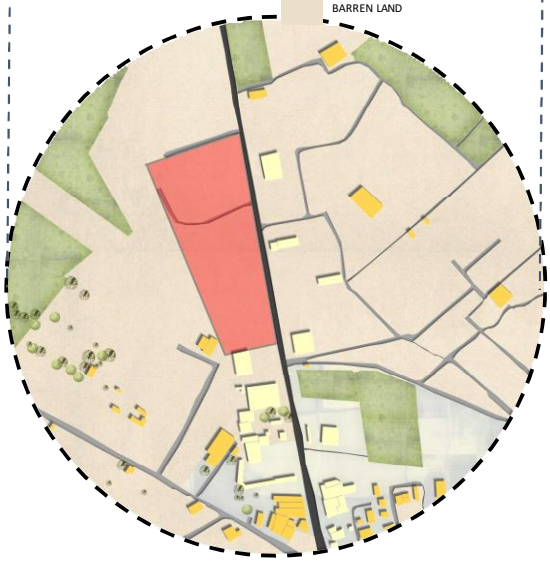


SURROUNDING BUILDING



SURROUNDING VEGETATION





SITE HIERARCHY

2.9.1_INFERENCE

- **SOIL CONDITION**

  The soil type is alluvial calcareous clay. It is deep, loamy soils, slight salinity and moderately sodality associated with silty soils slightly eroded. The SBC of the site is 150 KN/ SQ.M. The alluvial soils significantly modify the characteristics of ground shaking

  Analysis- For low rise Industrial Building Spread footing Foundations are used

- **SEISMIC ZONE 4 DESIGN ANALYSIS**
  - Grade of concrete - M25, grade of steel - Fe 415. Floor to floor height - 3.1 m
  - Slab thickness- 115 mm
  - External wall thickness - 230mm, internal wall thickness- 115mm. Size of column - 350mm x 350mm. Size of beam-300mm x 450mm.
  - Density of concrete - 25kN / (m ^ 5) , Density of masonry wall - 20kNm

  SOURCE: BASED ON IIT KANKUR HANDBOOK

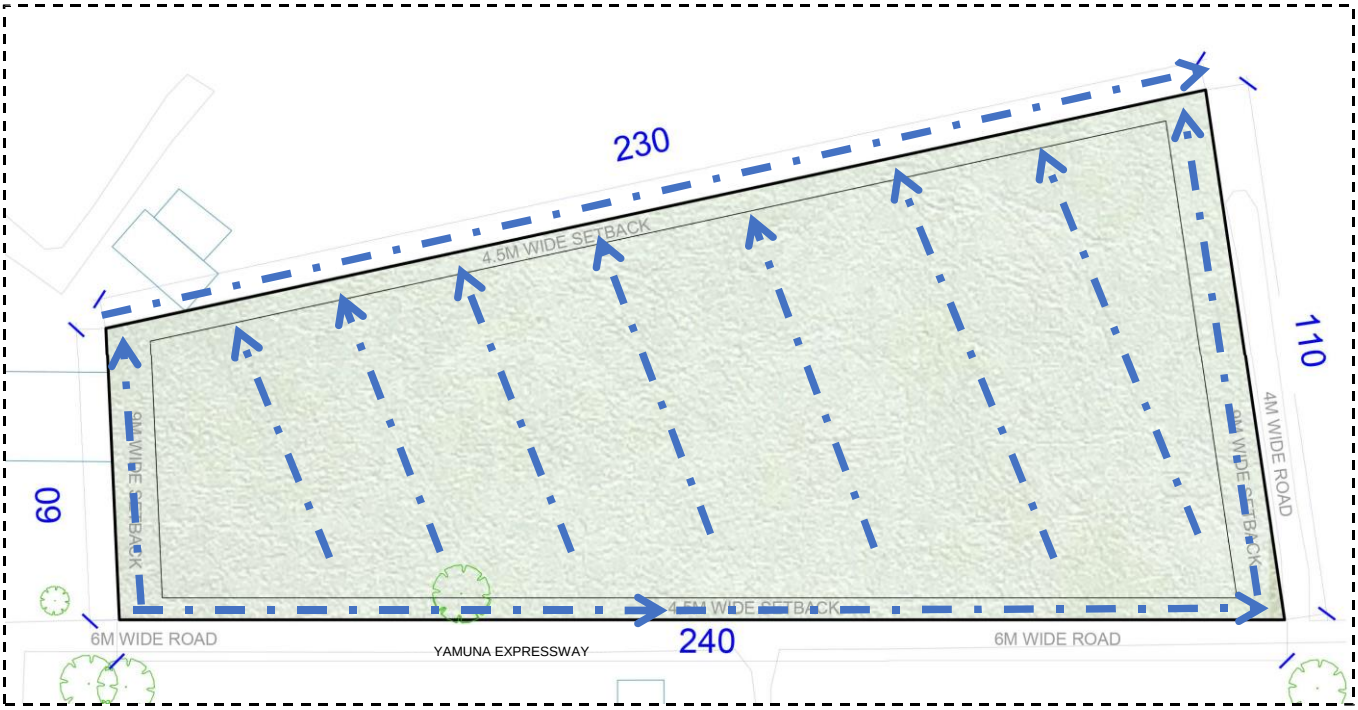
- **VEGETATION ANALYSIS.**

BABOOL TREE (Vachellia nilotica)- Suitable for afforestation. Good hedge plant due to its thorny nature. Although it is not suitable for roadside planting and for parks and garden as it is thorny with a shorten life span.

- **NEEM TREE** (Azadirachta indica)- Suitable for afforestation and ornamental purpose
- **SHISHAM TREE** (Dalbergia sissoo)- Planted along road and garden for shading.
- **EUCALYPTUS TREE** (Eucalyptus globulus)- Eucalypt timber is highly regarded for its decorative appearance, excellent strength, hardness

CHAPTER 02

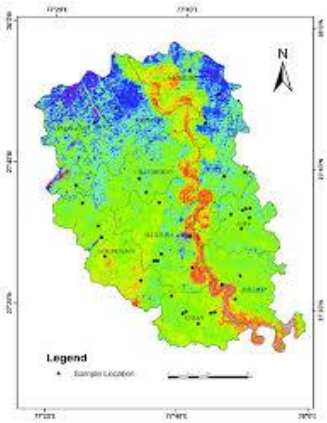
2.10_SITE VEGETATION



2.10.1_SITE GROUND DETAILS

SITE HEIGHT FROM WATER LEVEL	185M
ECOLOGICAL SUB REGION	Western plain zone
CLIMATIC ZONE	Upper Gangetic Plain Region
LAND USE	Developing Residential mixed use
SOIL TYPE	Alluvial soil
SBC	150- 180 KN/M2
CLIMATE	Semi-arid
SITE NATURAL DRAINAGE	Towards Yamuna river
GROUND WATER AVAILABILITY	7712 HAM
SEISMIC ZONE	Zone 4

2.10.2_DRAINAGE AND HYDROLOGY OF SITE DETAIL

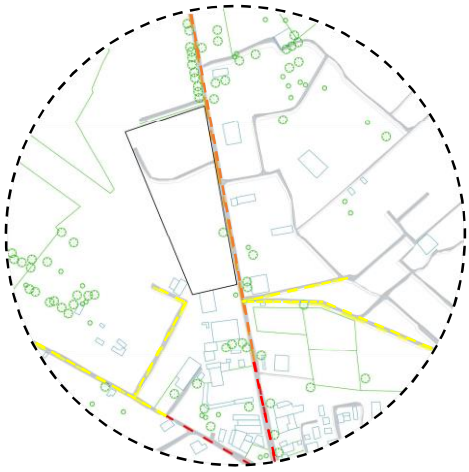


The natural slope of the district is towards Yamuna or Ganga River. The pre-monsoon depth to water level in the district generally ranges between 1.75 and 26.63 mbgl. Shallow water level conditions i.e. within 6.00 mbgl, generally occurs along the upper Ganga canal. The site has a natural slope towards the Yamuna River along the north- east direction, where it is more preferable to set up STP or Sewage Plant (if necessary).

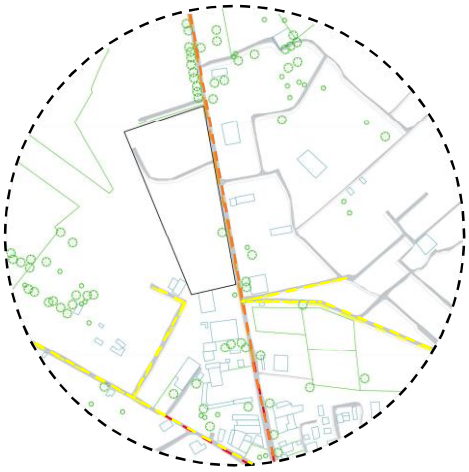
CHAPTER 02

2.11_TRAFFIC ANALYSIS

MORNING 10 A.M



EVENING 6 P.M



The road surrounding the site faces a high to medium traffic congestion as it runs parallel to the Yamuna expressway link. The road diverts the traffic of trucks and other heavy vehicle from the center of the city. Just before the site is the tourist facility center which causes a medium to low traffic congestion.

HEAVY VEHICLE

MEDIUM VEHICLE

SMALL VEHICLE

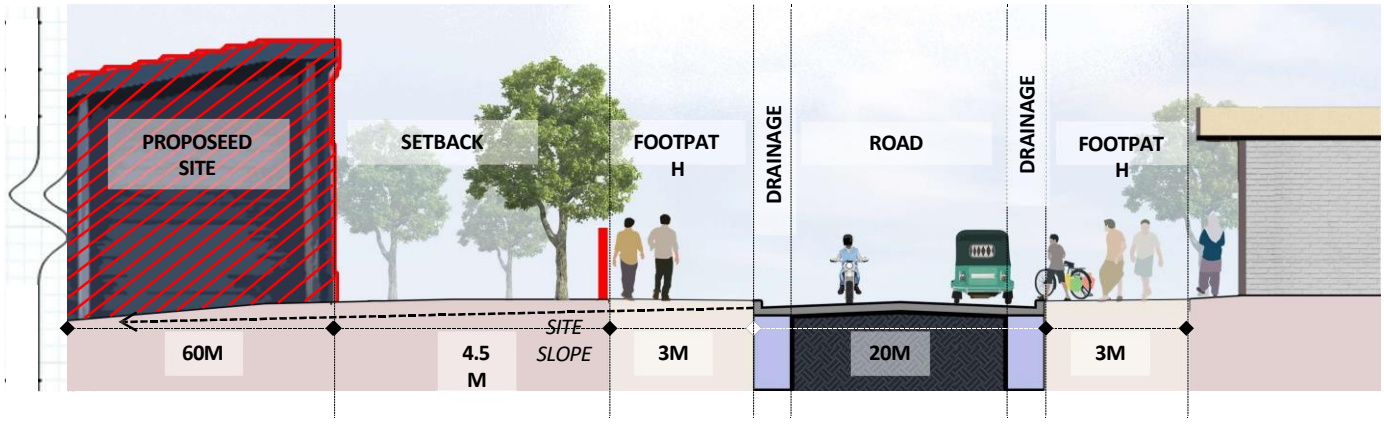
TRANSPORT MODE, EQUIVALENT PCU AND TYPE OF VEHICLE

VEHICLE	EQUIVALENT PCU FACTOR	TYPE OF VEHICLE
Bus/ truck	3	Motorized
Car/ Jeep	1	Motorized
LHV	1	Motorized
Auto Rikshaw	1	Motorized
Two-wheeler	0.5	Motorized
Cycle Rikshaw	1.5	Non-motorized
Bicycle	0.5	Non-motorized
Bullock Cart	6	Non-motorized

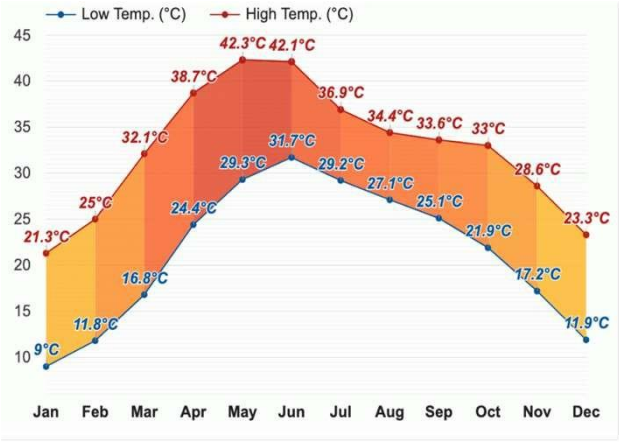
ANNUAL TOURIST VISITS STATISTIC FROM 2018-2022 (Form MDA)

YEAR	INDIAN	FOREIGN	TOTAL
2018	NA	NA	NA
2019	3220057	13522	3233579
2020	3428111	15364	3443475
2021	406000	0	406000
2022	1700000	0	1700000

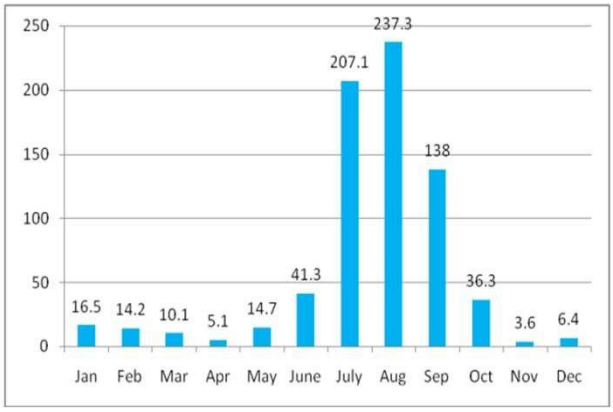
Form the tourist statistic we justify the need for a tourist center in MATHURA with an about estimate of users that might visit the site. It will give us the required number of car parking.



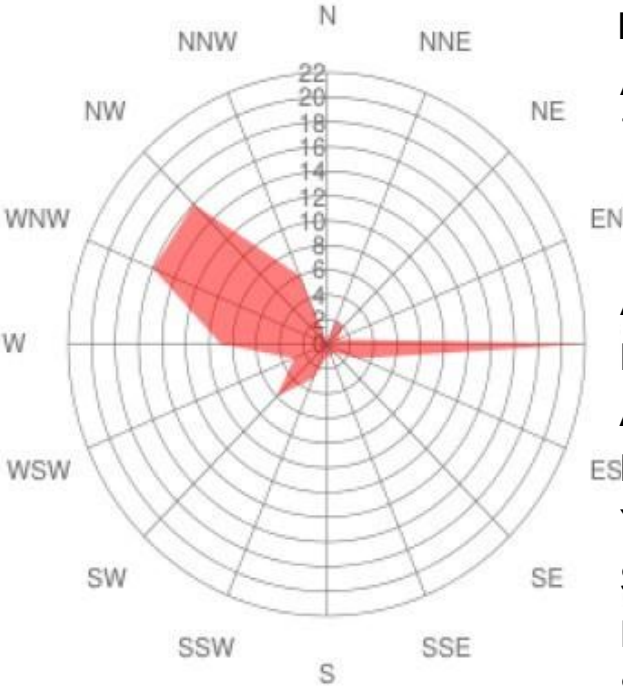
ANNUAL TEMPERATURE VARIATION IN MATHURA



AVERAGE MONTH-WISE RAINFALL (MM) IN MATHURA

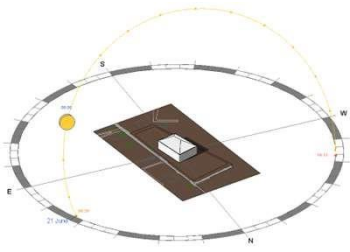


WIND DIRECTION DISTRIBUTION IN MATHURA

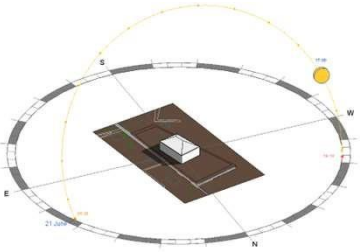


2.11_SUN PATH DETAILS

AS PER SUMMER SOLOISTIC

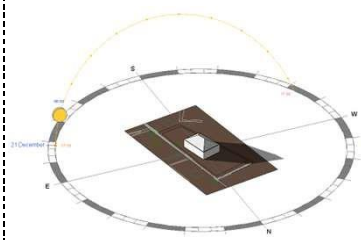


8 A.M- The morning sun hits the northeast region providing shade in the southwest region

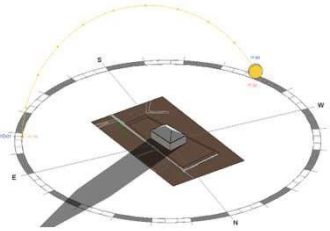


5 P.M- Southeast region receives most of the shade with the hottest region being northwest

AS PER WINTER SOLOISTIC



8 A.M- The sun angle is low due to which northwest region receives longer shade

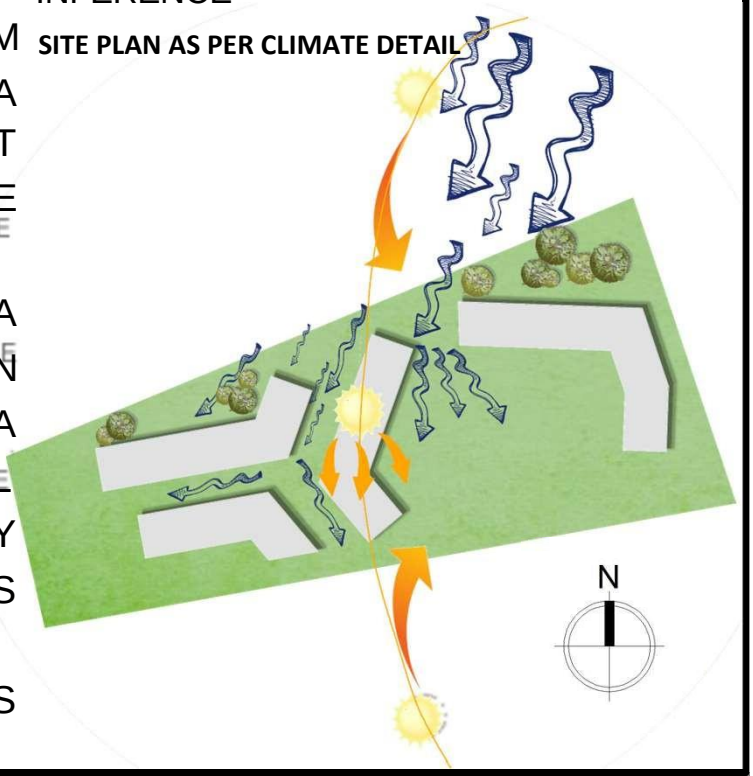


5 P.M- Northeast region receives most of the shade

CLIMATE ANALYSIS

INFERENCE

SITE PLAN AS PER CLIMATE DETAIL



STRENGTH S

- It is surrounded by local schools that makes is ideal for educational purpose.
- Great project to increase the local revenue
- Away from major congestion area making it an ideal site location for industrial use.

WEAKNESS W

- Poor pedestrian ways
- Lack of shaded walkways
- Lack commercial centres around the sit

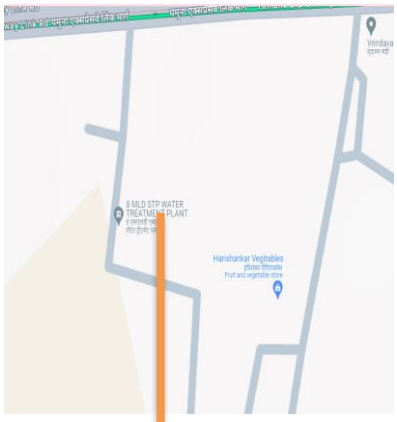
Opportunity O

- Residential zone around provides opportunity for the project.
- It is in a newly developing area, and it could be an attraction for both tourist and the local people.

THREAT T

- The Site is relatively flat with very gentle slope. The site drainage needs to be maintained.
- The site is in the seismic zone 4
- It is in the less populated part of the city which is not fully developed.

2.12_SITE SEVICES



MLD SEWAGE WATER TREATMENT PLANT

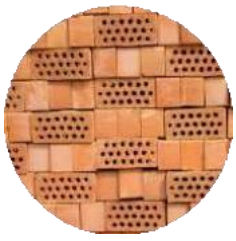
GROUND WATER TABLE ANLYSIS

- Net Annual Ground water Availability- **7712 ham**
- Existing Gross Ground Water for Industrial Supply- **448 ham**
- Safe to use and rising by 0.19 cm/per year
- Pre-monsoon- 9.7 to 19.8 mbgl and
- Post monsoon- 7.85 to 19.95 mgl
- **ANALYSIS-** It is safe to install boring as the water is safe to use for drinking and sanitation purpose and not depleting.

LOCALLY AVAILABLE MATERIAL IN MATHURA


Cement


Fly Ash Bricks

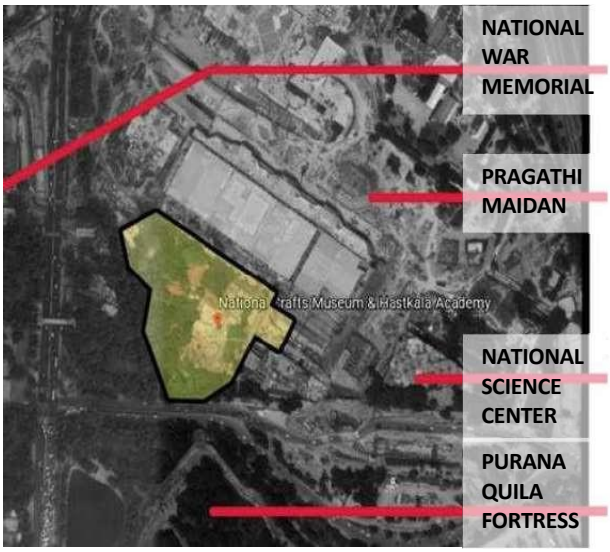

Hollow Clay Blocks

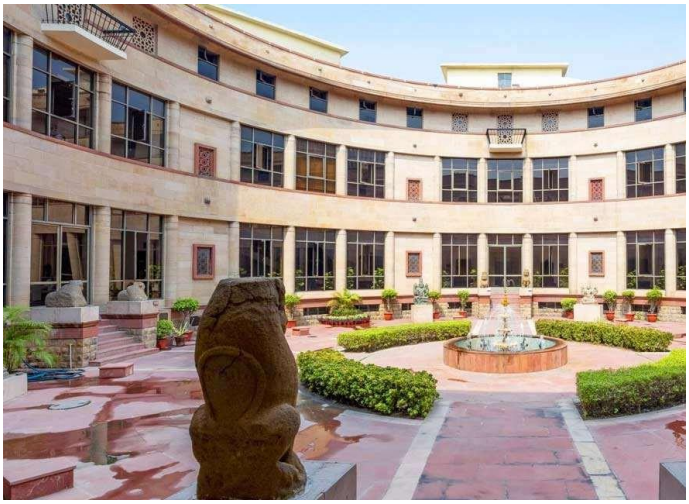
CHAPTER 03

3.1 NATIONAL CRAFT MUSEUM, DELHI

3.1.1_INTRODUCTION

The National Museum in New Delhi is one of the largest museums in India. It holds variety of articles ranging from pre-historic era to modern works of art .It was established on August 15, 1949. In this project the architect Charles Correa succeeds in interpreting the timeless quality of India, where tradition and modernity coexist, into a building that resists the label 'museum'. Showcase India's rich tradition of handicrafts. Perfect example to show case the local and national identity of crafts, that has been elaborated through architecture spaces, materials and other elements. The museum is mainly divided into three sections: Display gallery and store, Village complex, Crafts Demonstration area.





3.1.2_PROJECT DETAILS-

Architect:- Charles Correa
Site Area:- 5 acre (20234 sq. m)
Ground Coverage area:- 6800 sq. m
Ground Coverage Percentage:- 30%
F.A.R:- 0.9 sq.m
Built – up area:- 18500 sq. m
Construction Year:- 1975- 1990
Completion Year:- 1990
Footfall:- 400 visitors annually
Form and Scale:- Masculine Form and Human Scale
Style of Architecture:- Vernacular architecture
Set up in 1956 by the all-India handicrafts board

3.1.3_CONNECTIVITY-

This museum is connected to the main road with a 24m wide (72ft) road with approximately means 3+1 lanes for each side of traffic. Walking commuting pedestrians have an advantage too as there exists a 2m pavement. The street outside is a National Highway and directly connects to the Asian highway in 300m.

High Court Metro Station- 2km

Indira Gandhi International Airport - 16.7 km

Railway Station - 5 km

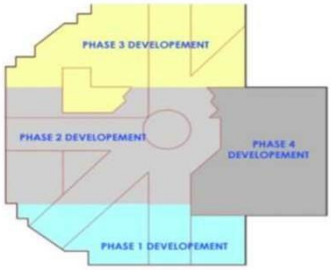
ISBT - 6.3 km

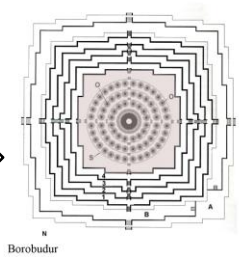
3.1.4_LOCATION-

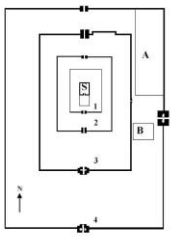
Bhairon Marg, Pragati Maidan, facing the Purana Qila complex, Delhi, 110001

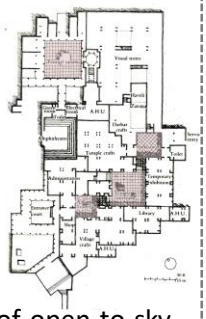
CHAPTER 03

3.1.5_CONCEPT-





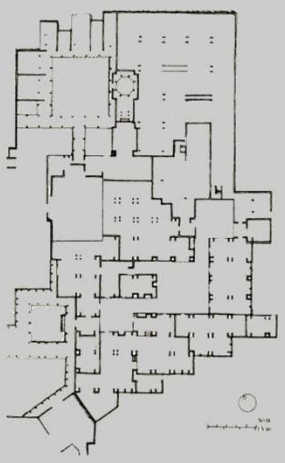




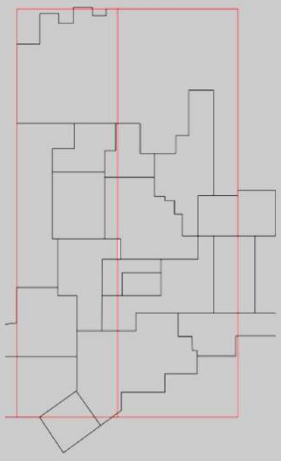
Planning Concept- Galleries, store, administrative areas and library situated around a series of open to sky courts.

Building was designed such that it merges with the site surrounding. Basic plan of the building is fan shaped with a circular courtyard in between surrounded by a covered Veranda. Wings are linked with the courtyard creating an unhinged circulation.

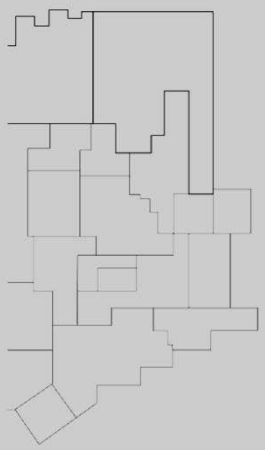
3.1.6_DESIGN ANALYSIS-



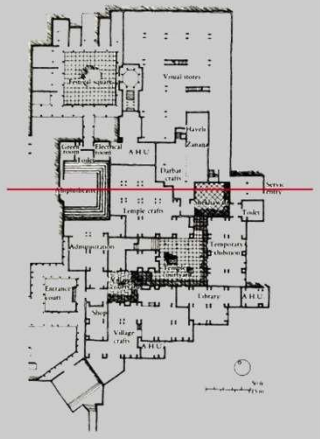
Structure: Columnar and planar structure, Regular, structure defines the space.



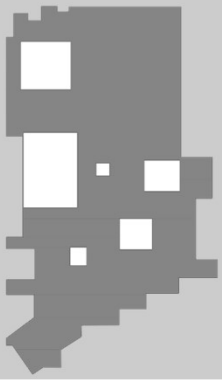
Geometry: The complex has a main rectangular geometry with manipulation of rectangular form around it.



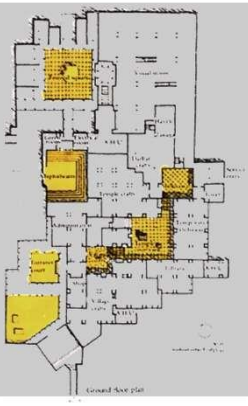
Hierarchy: there is hierarchical order from major to minor spaces through scale and geometry of spaces



Balance: The amphitheater at the Centre of the complex creates the balance to the entire structure



Built to unbuilt relationship: 80% of the area consist of built spaces



Light source: The main source of Natural light is the direct light from the courtyard which disperses towards the sides creating a natural environment.

CHAPTER 03

3.1.7_CLIMATE ANALYSIS

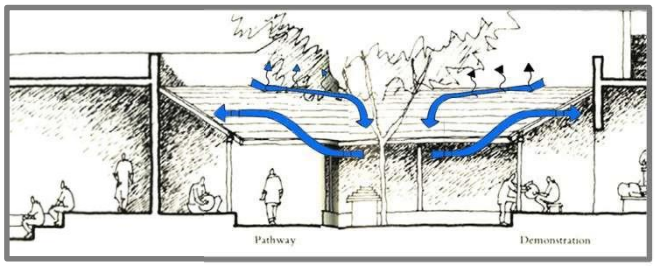
Delhi has a composite climate type to tackle this following construction technique and materials were used

CONSTRUCTION TECHNIQUES USED-

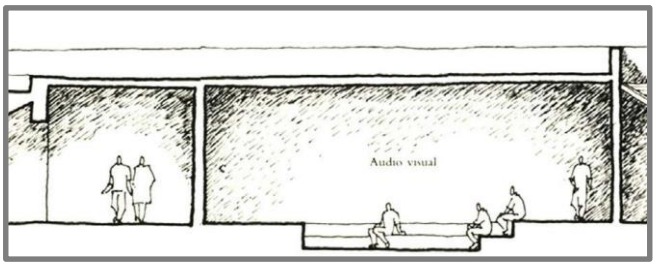
The low-lying building is "masked" with tiled roofs supported by ballis on all sides with big champa trees on the inside

Multiple internal Courtyard with trees as buffer zone and semi open passages

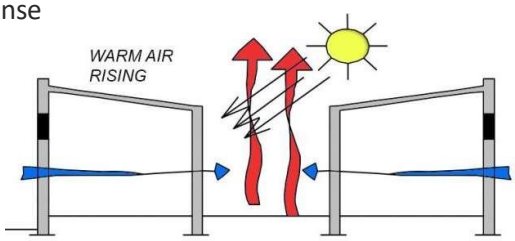
Mud and bamboo walls



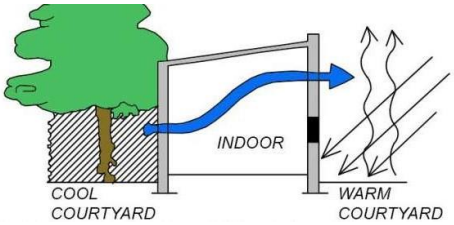
Hot air enters from smaller opening and gets cooled keeping the inside cool circulation climatic response



Due to hot and humid climate users mostly prefer the use of semi open spaces



Courtyard effect during day- air in courtyard becomes warmer due to incident solar radiation & rises up. Cool air flows through windows



Courtyard effect with buffer zones- air flow in room is main- tained by dual courtyard effect where courtyard is kept cool by shady trees

MATERIALS USED-

CLAY-ROOF TILES

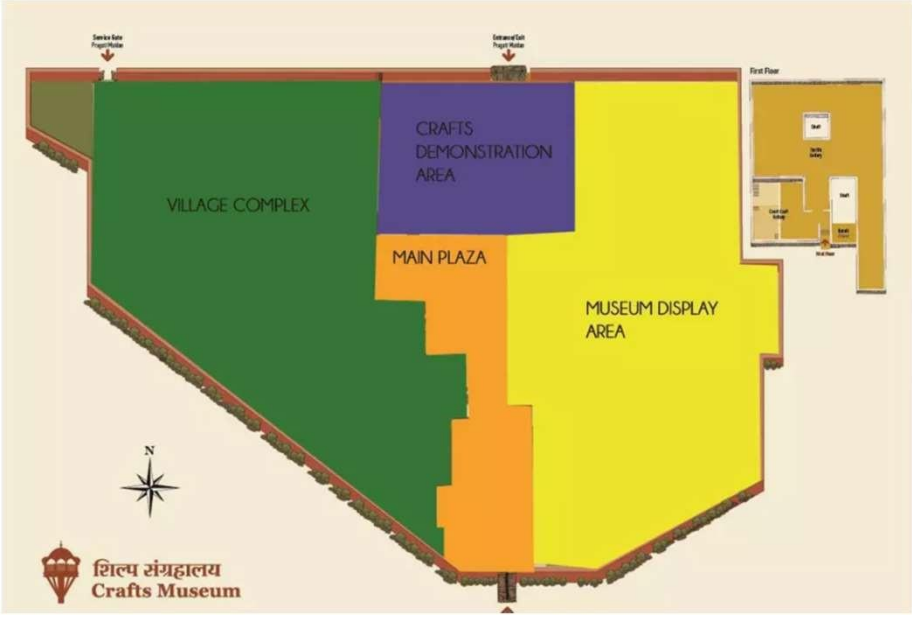
MUD WALLS

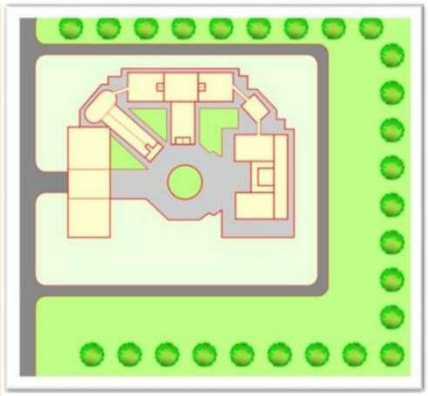
BAMBOO

THATCHED ROOF

CHAPTER 03

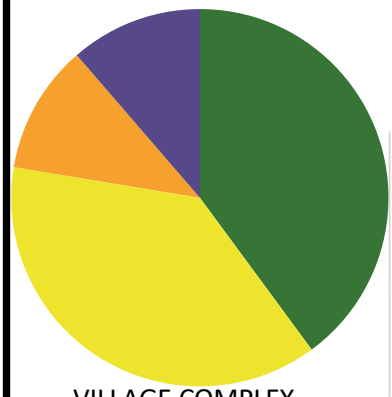
3.1.8_SITE PLAN





INFERENCE- Despite excellent building circulation the site is not well segregated. There is no proper parking facility around the building and the landscape area is not designed well. Parking facilities are provided at the adjacent building.

SEGREGATION OF SPACES AT THE SITE

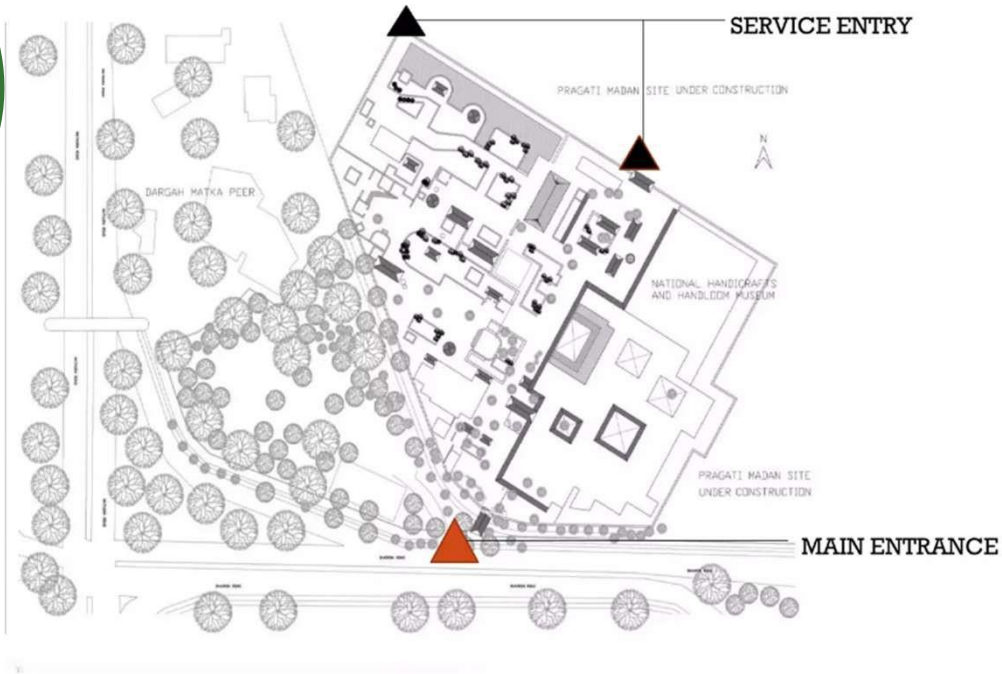


VILLAGE COMPLEX **40%**

MUSEUM DISPLAY AREA **38%**

MAIN PLAZA **11%**

CRAFT DEMONSTRATION AREA **11%**

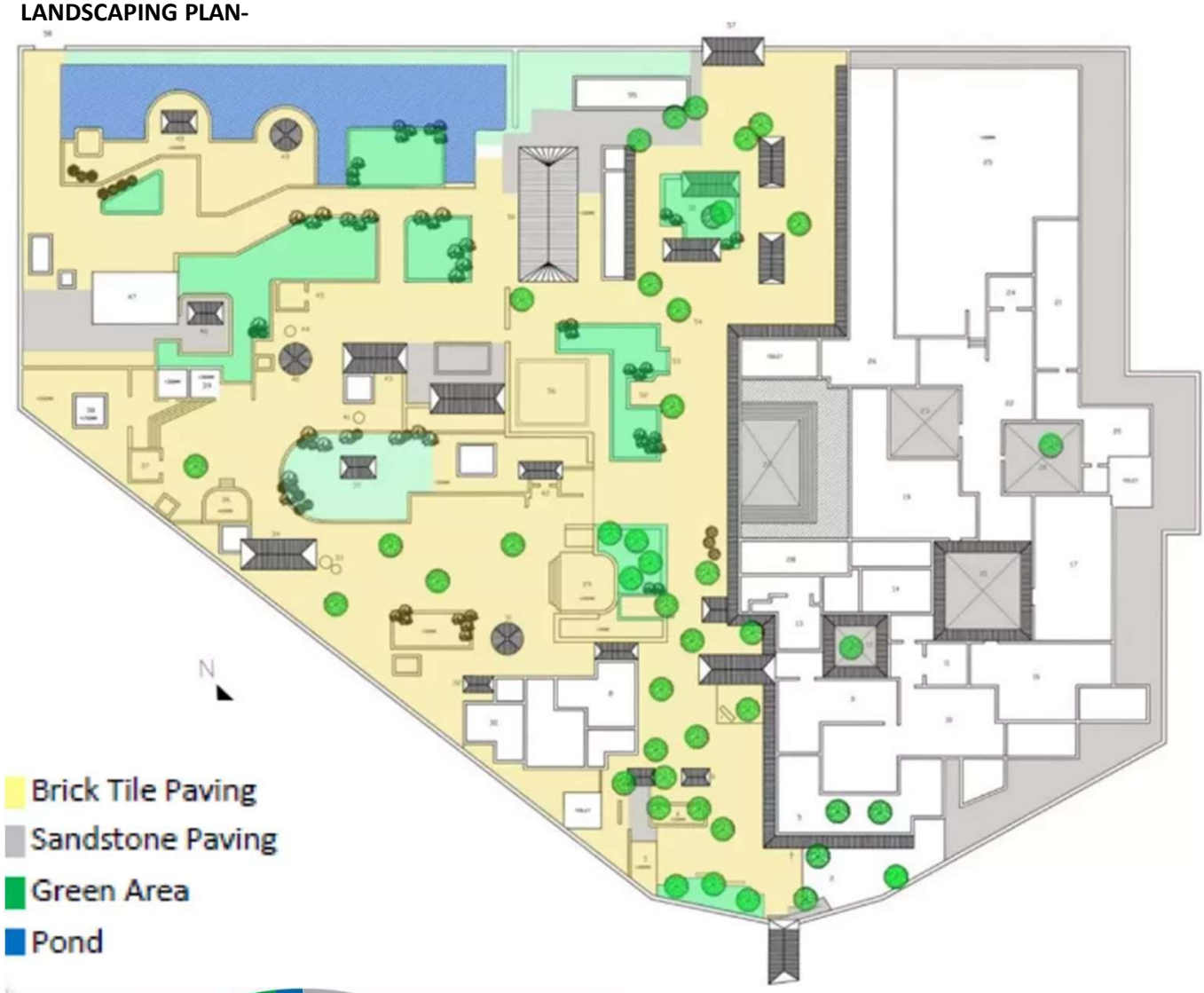


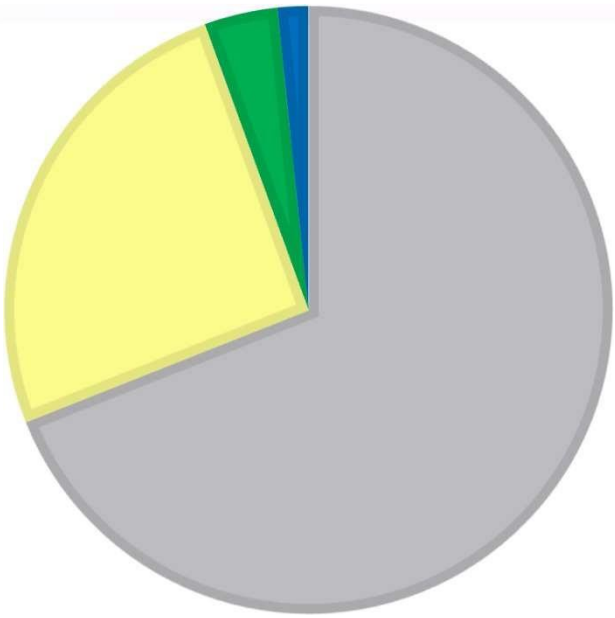
INFERENCE-

- Parking is not available
- Site can be accessed by a single road
- Service entries are from the back but not used currently due to construction in Pragati Maidan

CHAPTER 03

LANDSCAPING PLAN-



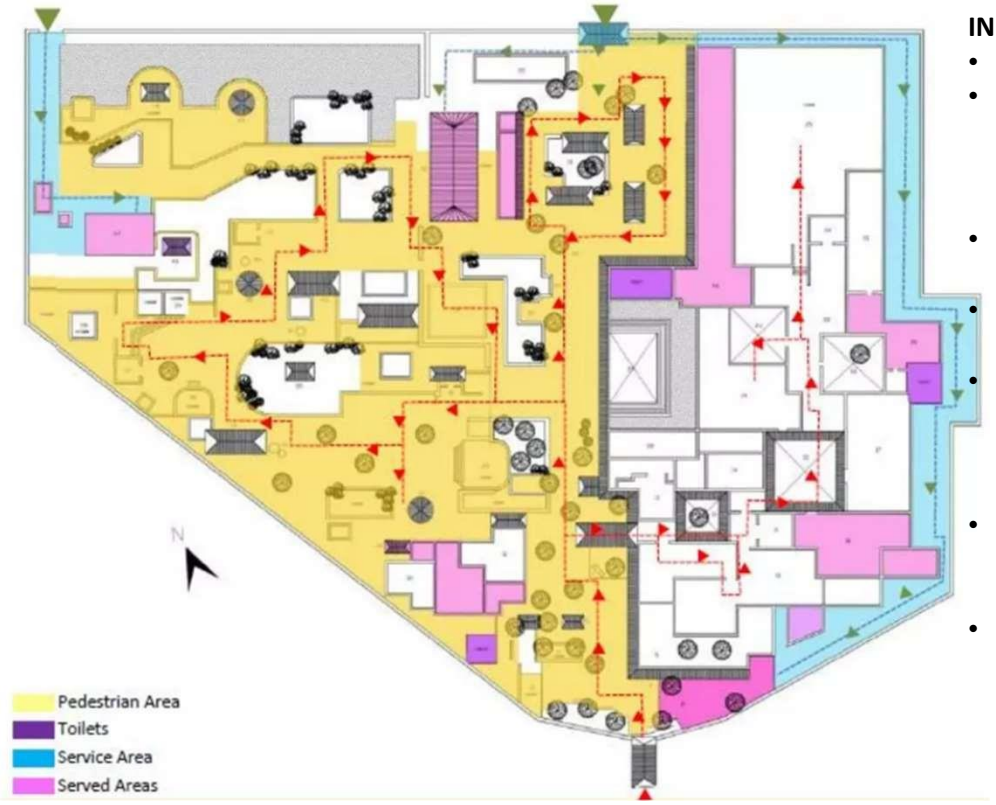


INFERENCES

- Brick on Edge paving creates a rural characteristics
- Courtyards in the museum complex brings daylighting and ventilation and provides visual interest
- Seating around trees helps to create a place for interaction

IDENTIFIED USERGROUPS:

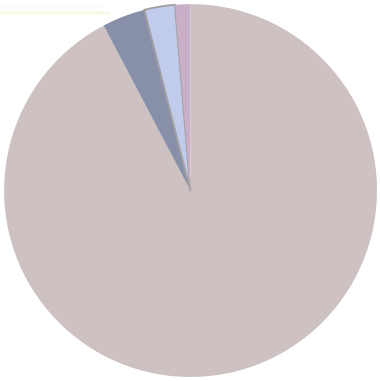
- craftsmen,
- professionals
- students of arts and handicraft discipline
- tourist local people with family



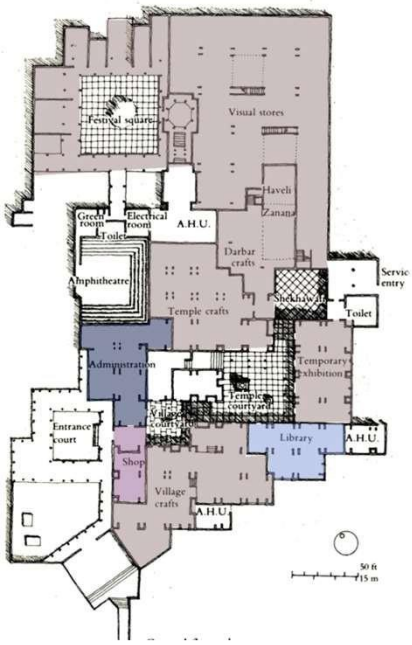
INFERENCE

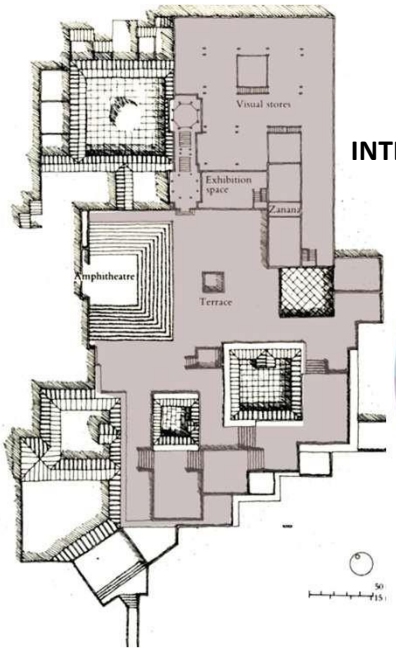
- Entirely Pedestrian
- A clean axis leading to craft demonstration area and haat, areas are clearly segregated
- Service road runs at the periphery of the site.
- 2 service entries at the back
- In the museum complex, line of circulation goes through courtyards through a veranda
- In the exhibition spaces, galleries don't have good entry exit points
- In the village complex, one moves through various human scaled models of houses

INTERNAL SPACE ANALYSIS BASE ON FUNCTION

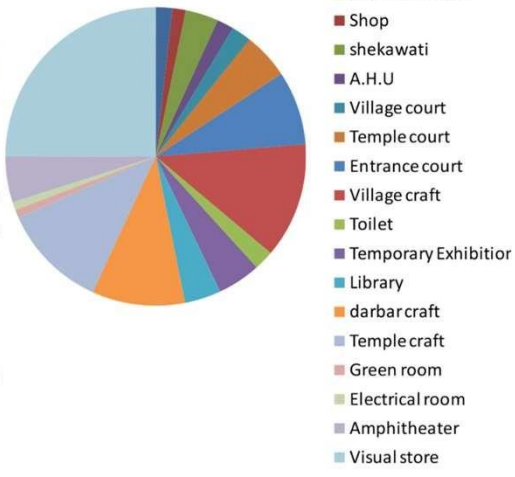


3.1.9_FLOOR PLANS-



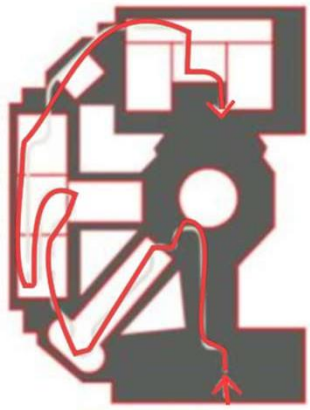


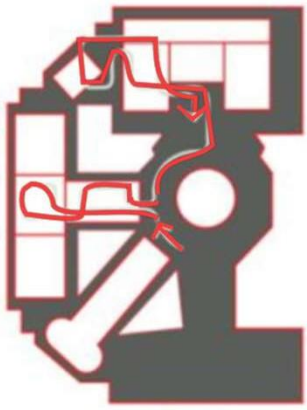
INTERNAL SPACE ANALYSIS BASE ON AREAS

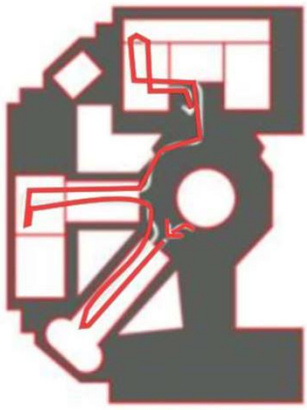


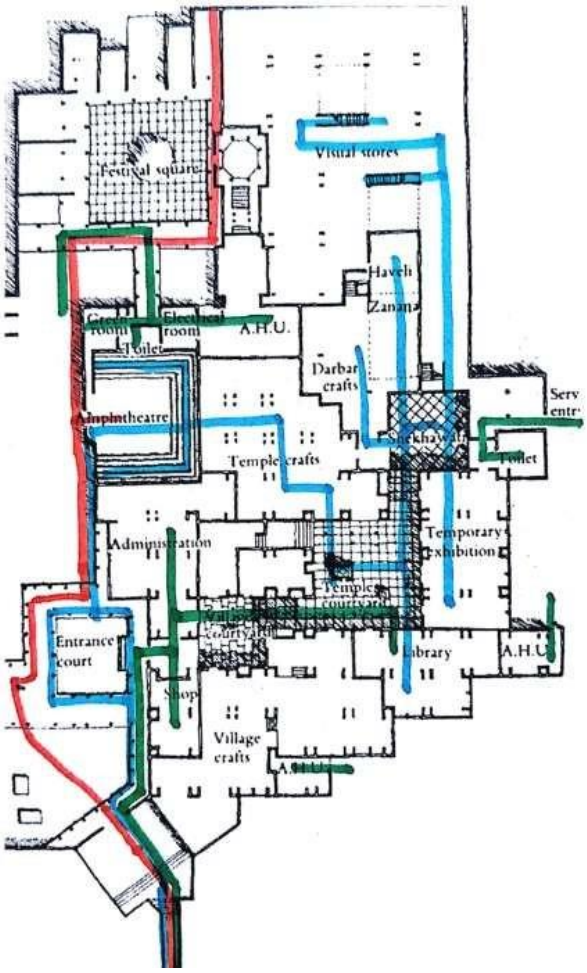
CIRCULATION PLAN-

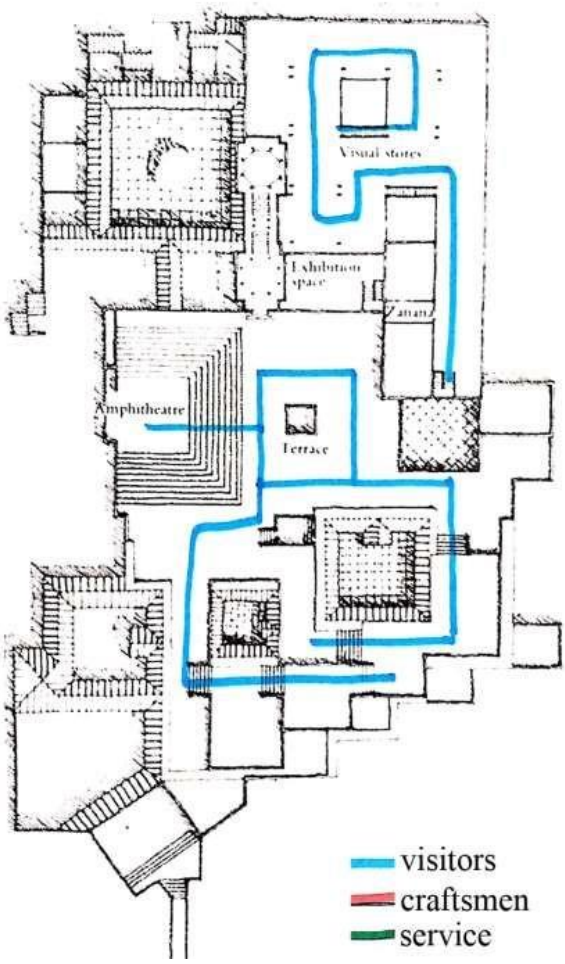
- The Ideology behind the circulation pattern was that every section of exhibition can be experienced by the visitors and no section is left untouched.
- The walk through the museum leads one through a series of open, semi open and closed spaces. The whole museum is divided into small galleries which reduces the problem of circulation.











3.1.10_ACTIVITY MAPPING-

3.1.11_INFERENCES-

CONSTRUCTION DETAILS-

SR NO.	DESCRIPTION	ANALYSIS
1	Structure	Load bearing
2	Material	Exposed Concrete, Stone
3	Roof	Clay Tiles
4	Height of Walls	3m
5	Wall Thickness	300 mm
6	Flooring	Stone
7	No. of Storey	1

SERVICES

SR. NO	SPACE	NO.OF UNITS	AREA (SQ.M)
1	Maintenance	1	50
2	Janitor Room	1	20
3	Store	5	100
4	Housekeeping Centre	1	20
5	High Tension Control Room	1	200
6	HVAC Room	1	200

- Brick is the main material used in walls as well as pathways. Walls are plastered with mud and cow dung plaster.
- Bamboo is used as purlins and rafters in roofing and as screens to separate one area from another.
- Supported on wooden truss, the roof is covered with Mangalore tiles.

CHAPTER 03

3.2 AWADH SHILPGRAM, LUCKNOW

3.1.2_INTRODUCTION

Awadh Shilpgram was designed from inspiration of cultural, political, commercial and entertainment activities of people. It was built with a motive to keep the warmth of lakhnavi markets and culture alive and to keep the memories of streets of the city alive. That aims to provide local craftspeople with a place where they can share ideas, teach, learn and sell their work directly to customers. The layout of the twenty-acre Awadh Shilpgram has evolved organically from the commercial, cultural, social and leisurely interactions of people.

3.2.2_PROJECT DETAILS-

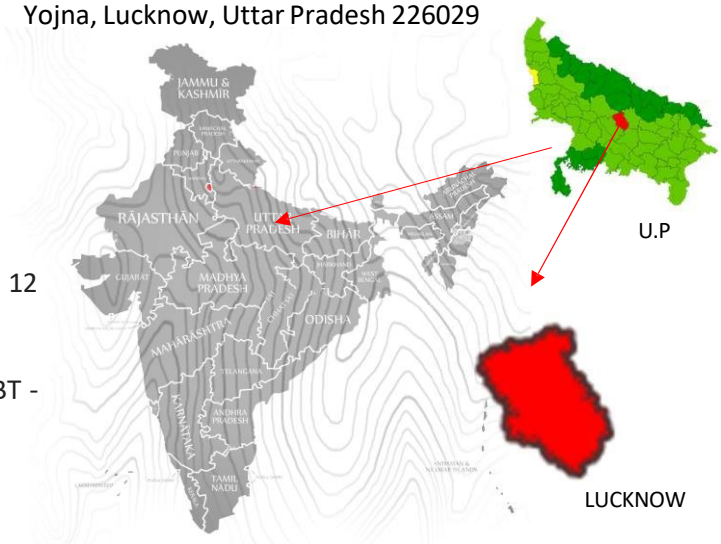
Architect:- Ar. Saurabh Gupta
Architectural Consultants :- Archom Consultant
Site Area:- 20 acre (80937.1 sq. m)
Ground Coverage area:- 32538 sq. m
Ground Coverage Percentage:- 45%
Built – up area:- 29784 sq. m
F.A.R:- 0.5 sq.m
Construction Year:- 2013- 2016
Completion Year:- 2016
Footfall:- 250 visitors annually
Style of Architecture:- Contemporary Architecture

3.1.3_CONNECTIVITY-

Its proximity to Kannauj, Khurja, Bhadohi, Moradabad, Varanasi, Firozabad, and many more such cities-each with distinct handicrafts, makes it a relevant place to host a socio-cultural institution. It is adjacent to outer bypass- Amar Shaheed path which is about 20 m in width. Entrance is from 9 m wide two-way road

3.1.4_LOCATION-

Near Sector 9, Amar Shaheed Path, Awadh Vihar Yojna, Lucknow, Uttar Pradesh 226029



Transport Nagar Metro Station- 11.1km

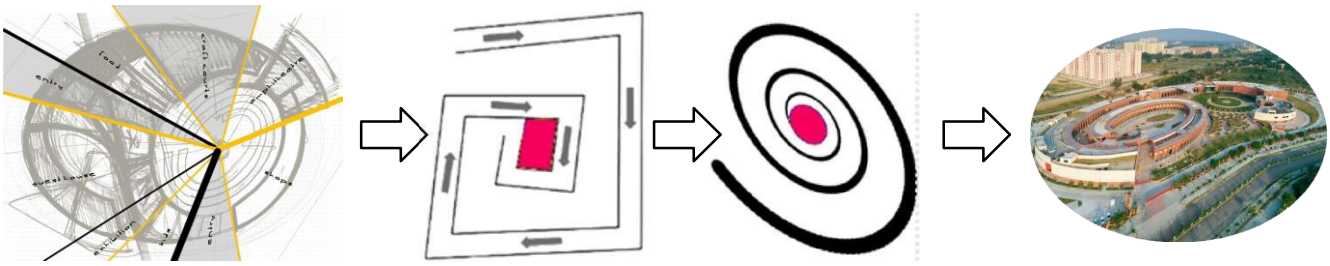
CCS Airport- 12 km

Charbagh Railway Station- 12 km

Alambagh ISBT - 12 km

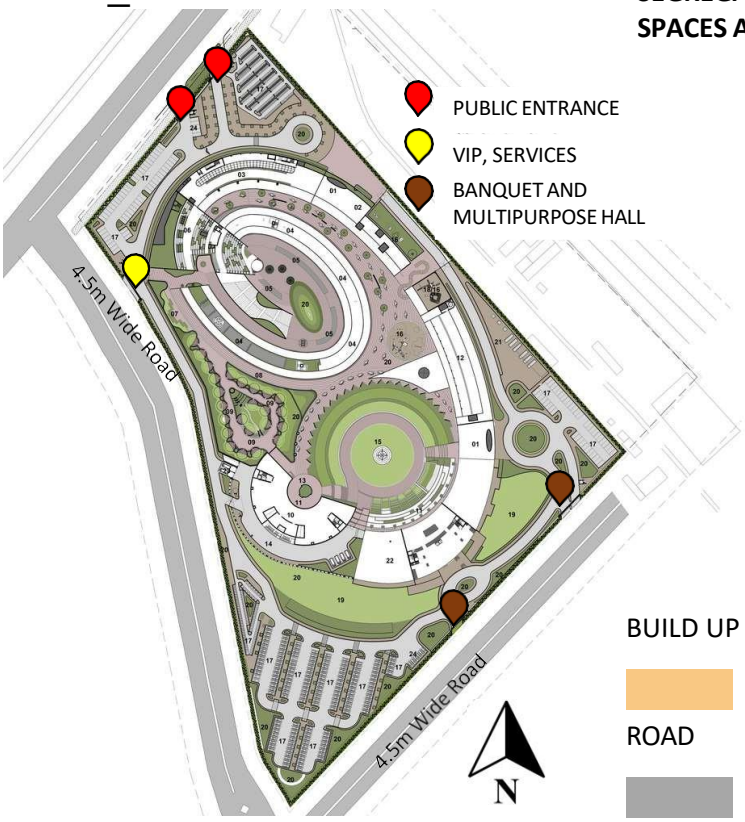
CHAPTER 03

3.2.5_CONCEPT-



- An elliptical form enables a smooth corner free circulation.
- Its vocabulary is contemporary yet rooted in history and traditions of the past
- The original concept, was to contribute to the creation of an iconic structure for the city of Nawabs and the people of Lucknow.

3.2.6_SITE PLAN-



SEGREGATION OF SPACES AT THE SITE

INFERENCE

- As per the regular footfall the no of parking is quite sufficient for the site.
- Different entry and exit points are given to the type of user that will access it, making the segregation of public, VIP and service parking successful.

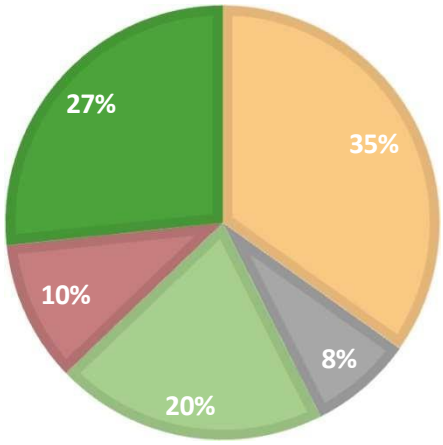
BUILD UP SPACE **35%**

ROAD **8%**

GREEN AREA **20%**

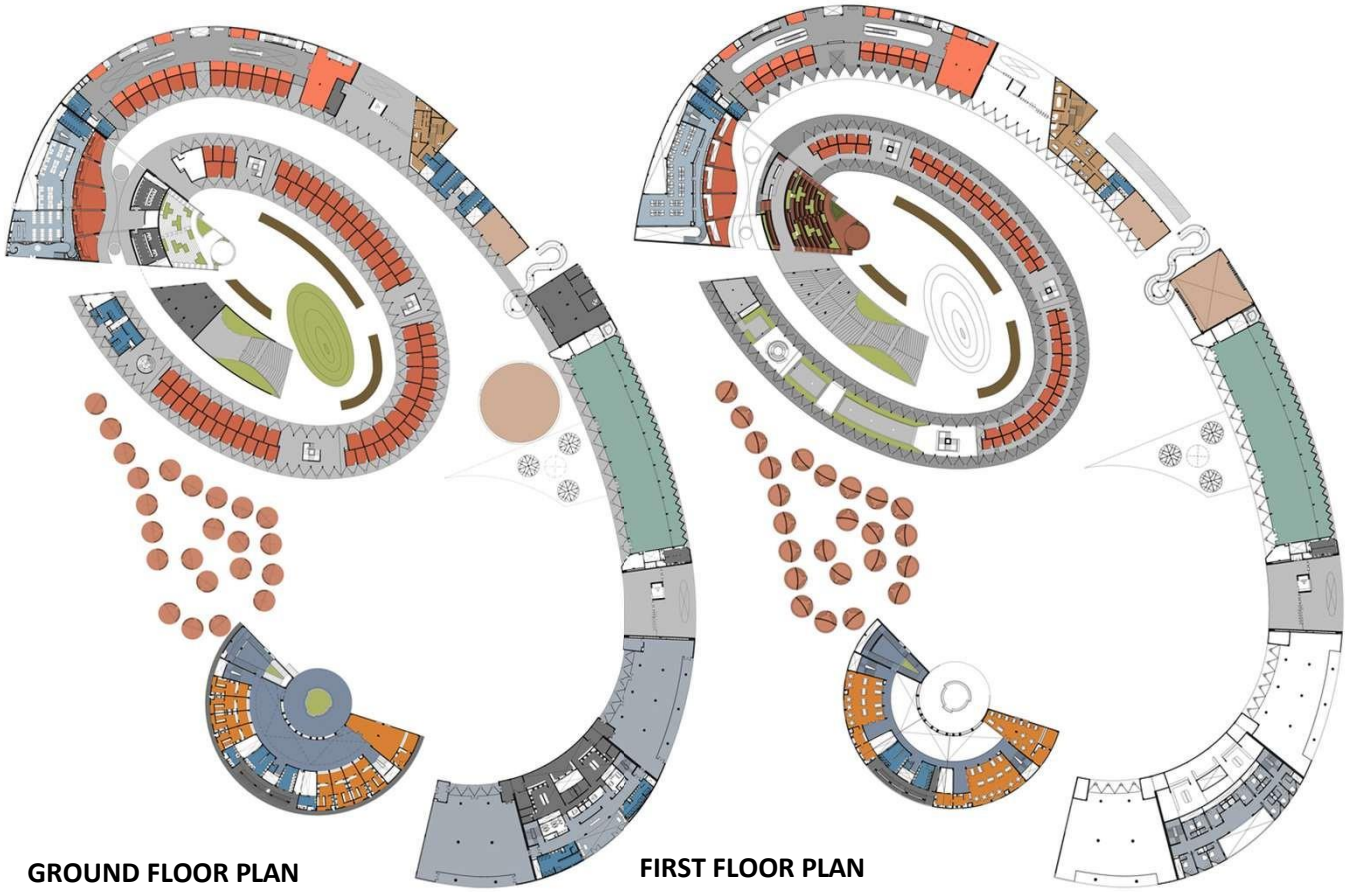
OPEN PARKING **10%**

HARDSCAPE AREA **27%**



CHAPTER 03

3.2.7_FLOOR PLANS-



GROUND FLOOR PLAN

FIRST FLOOR PLAN

AC SHOPS 13%

NON-AC SHOPS 18%

PLATFORM SHOPS 23%

EXHIBITION 7%

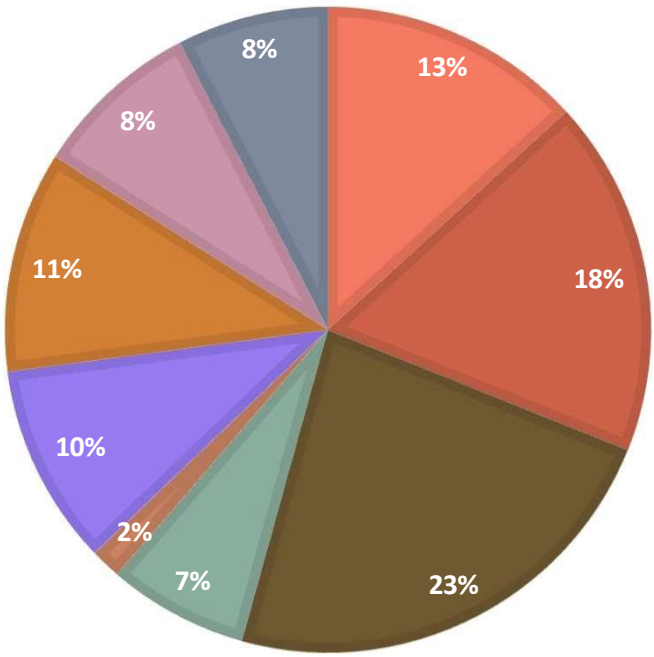
CRAFT COURTS 2%

BANQUET HALL 10%

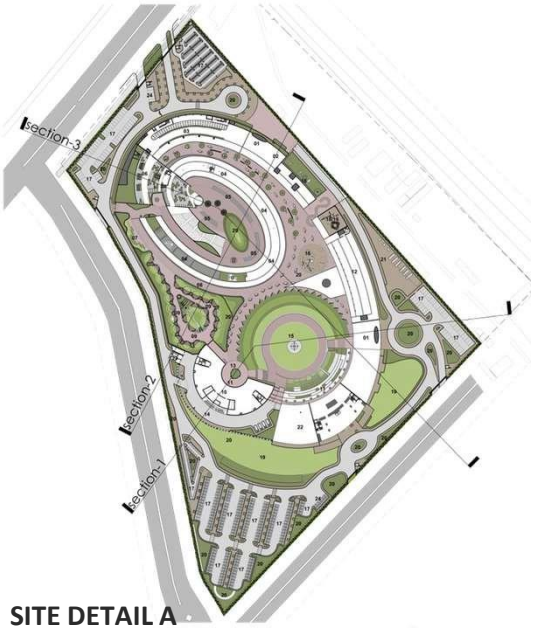
FOOD COURT 11%

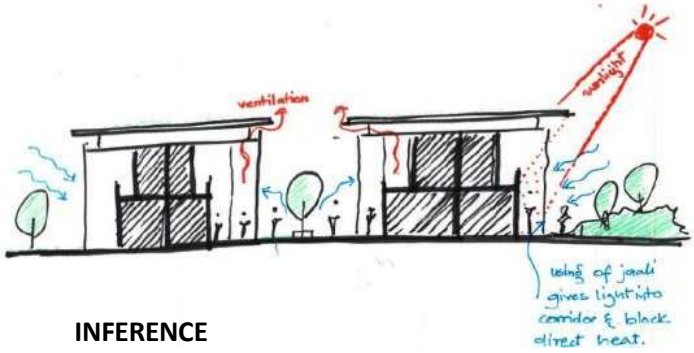
KIDS PLAY AREA 8%

SERVICES 8%



3.2.8_SITE SECTIONS





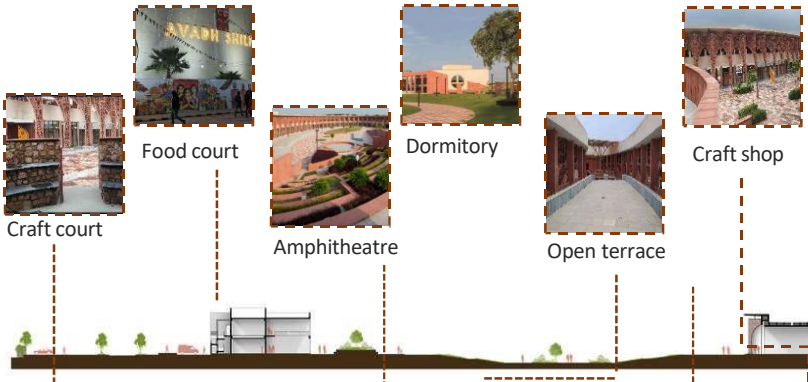
INFERENCE

- Interventions employed to achieve abundant light and natural cross-ventilation
- Outside of the main spiral building, a cluster of stone-walled structures with rounded turf- covered roofs provide demonstration areas where artisans can conduct workshops observed by groups seated on benches incorporated into the inner walls.

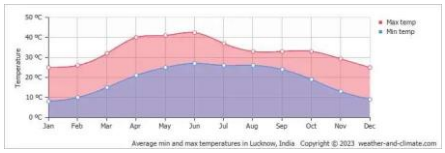
The open area at the center of the complex contains a stepped amphitheater that incorporates planted beds. A paved ramp provides access to the upper level, which looks down towards the circular stage.

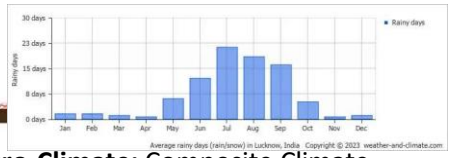
SITE DETAIL A

SITE DETAIL B



3.2.9_CLIMATE ANALYSIS-





Macro-Climate: Composite Climate
Micro-Climate: Humid Subtropical Average
Temperature: 25.0 °C
Maximum Temperature: 37.0 °C
Minimum Temperature: 4 °C
Annual Precipitation: 915 mm

3.2.10_ARCHITECTURAL CHARACTERISTIC

MATERIALS USED

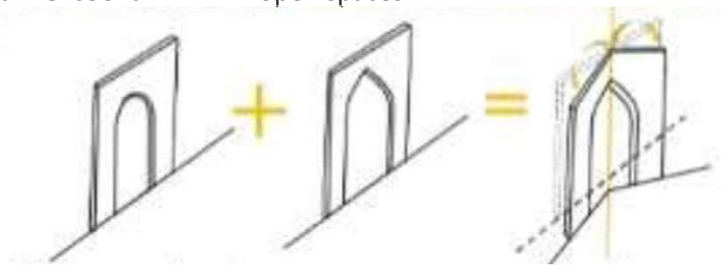
RED AGRA SANDSTONE BRICKS STEEL REINFORCEMENT

ARCHITECTURAL ELEMENTS USED

JAALIS- Perforated stone jali screens traditionally used to channel cool air

ARCHES- Used for internal shading in semi open spaces

GRASS ROOF- To keep the lower surface cool



ARCH- It is an important architectural element of the city Lucknow, each arch allows entry into the corridor of the ground floor

The steel structure is cladded with Red Agra Sandstone in a jaali pattern with motifs inspired by the renowned Lucknow embroidery- Chikankari

Craft Court- It is eco-friendly with no chemical paints. Moreover, a green covered roof on top of the shops acts as a natural air conditioner. The Stone is Masonry with Red Agra sandstone used a cooling agents.

A Cluster of Stone walled structure with rounded truf covered roofs provide a demonstration area where artisan can conduct workshops observed by groups seated on benches incorporated into inner walls.

3.2.11_INFERENCE

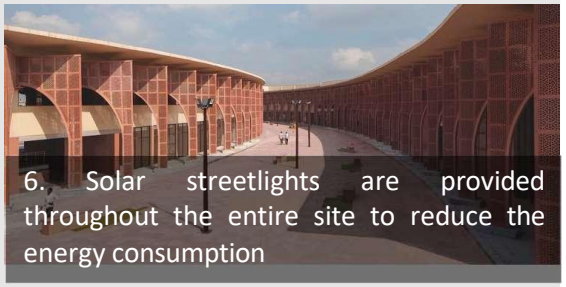
1. Lack of seating space under shading

2. Access of amphitheater to roof directly could be dangerous

3. Lack of proper signages boards along with suitable plans

4. Narrow space for gallery on 1st floor

5. The buildings are cladded with red agra sandstone that helps prevent the solar heat gain.



6. Solar streetlights are provided throughout the entire site to reduce the energy consumption

4.1_SPATIAL ORGANIZATION CHART

PUBLIC SPACES

ADMINISTRATION
- DIRECTOR'S OFFICE
- MAINTENANCE ROOM
- STAFF ROOM
- CONFERENCE ROOM
- SEMINAR HALL
- SECURITY AND MONITORING
- DOCUMENTATION AND RECORD

RECREATIONAL AMENITIES
- RESTAURANT
- CRAFT BAZAAR
- MULTI PURPOSE HALL

SEMI PUBLIC SPACES

INDUSTRIAL WORKSHOP
- TEXTILE HAND EMBROIDERY WORKSHOP

ARTS AND CRAFT CENTRE
- DISPLAY GALLERY AREA
- CURATORS' OFFICE AREA
- DIGITAL STUDIO
- STORAGE AREA

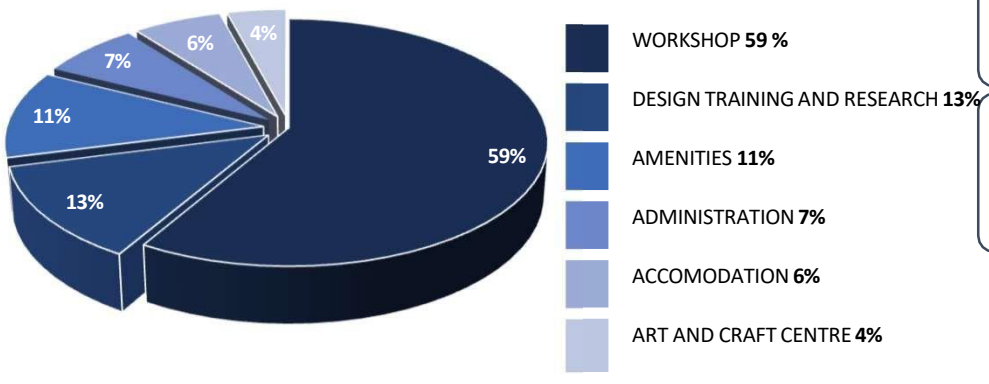
DESIGN TRAINING AND RESEARCH
- OFFICE
- CONFERENCE ROOM
- PRODUCT DEVELOPMENT
- TRAINING HALL
- LIBRARY

PRIVATE SPACES

MISCELLANEOUS
- BUILDING SERVICE SPACES
- WAREHOUSE STORAGE

ACCOMMODATION
- RECEPTION
- V.I.P
- STAFF
- TRAINEE HOSTEL
- ARTISAN
- MAINTENANCE
- HOUSEKEEPING CENTRE

TOTAL AREA DISTRIBUTION



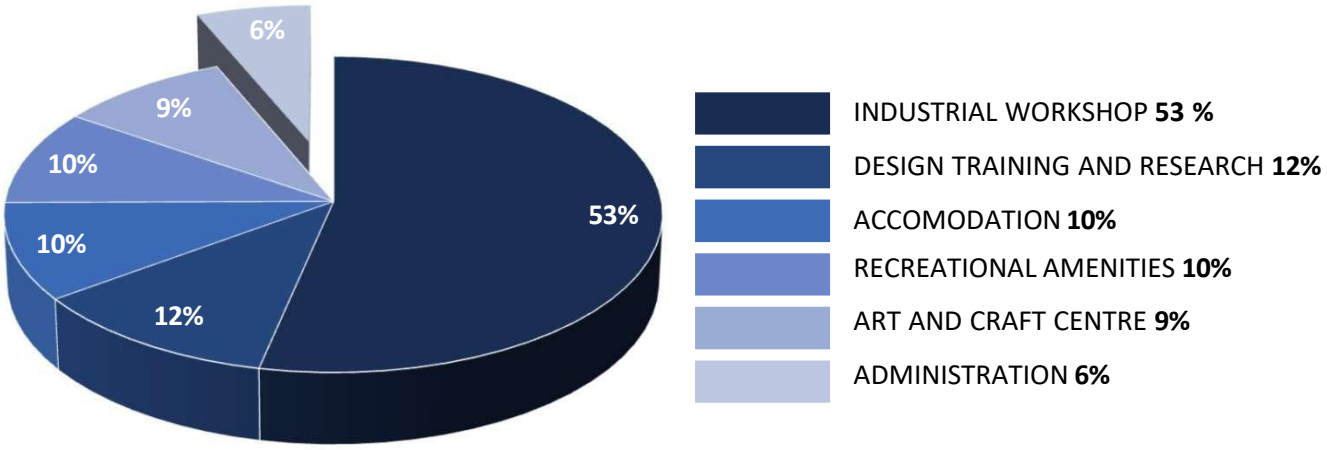
4.2_SITE DETAILS

SR.NO	FUNCTIONAL AREA	CASE STUDY 1	CASE STUDY 2	LITERATURE STUDY			STANDARDS/ NORMS	PROPOSED REQUIREMENT
		National Craft Museum	Uttarayan Art Centre	CFC AGRA	CFC BAREILLY	CFC SAHARANPUR		
1	SITE DETAILS							
2	PLOT AREA	5 Acre (20234 sq.m)	8 Acre (32374 sq.m)	0.6 Acre (2534 sq.m)	0.57 Acre (2311 sq.m)	2.3 Acre (9631.5 sq.m)		5.05 Acre (20477.09 sq.m)
3	PREMISSIBLE F.A.R	-	-	-	-	-		1
4	ACHIVED F.A.R	0.9	0.1	0.3	0.3	0.3		0.5
5	GROUND COVERAGE (%)	30%	10%	20%	30%	30%		30%
6	GROUND COVERAGE (SQ.M)	6800	3638	556	678	3634		6143
7	TOTAL COVERED AREA	18500	3638	800	678	3634		10192.3
8	BUILDING HEIGHT	6 M	3 M	6 M	3 M	3 M		
9	USER	400	-	-	-	-		450

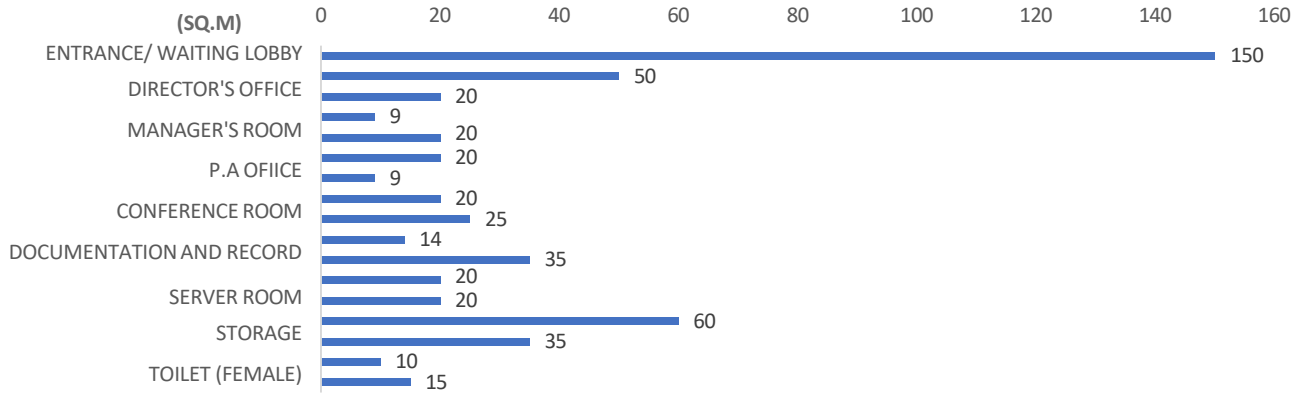
4.3_ADMINISTRATION BLOCK

SR.NO	FUNCTIONAL AREA	CASE STUDY 1 National Craft Museum				STANDARDS/ NORMS	PROPOSED REQUIREMENT				REMARKS
		NO	AREA (SQ.M)	TOTAL AREA (SQ.M)	USER CAPACITY	AREA (SQ.M)	NO	AREA (SQ.M)	TOTAL AREA (SQ.M)	USER CAPACITY	
A	ADMINISTRATION										
A.1	ENTRANCE/ WAITING LOBBY	1	250	250	100	0.5/ per person	1	150	150	300	as per requirement
A.2	RECEPTION	1	30	30	20	1/ per person	1	50	50	50	Time Saver_page 781
A.3	DIRECTOR'S OFFICE	1	30	30	1	20	1	20	20	1	Time Saver_page 700
A.4	P.A OFIICE	1	20	20	1	4.25	1	9	9	1	Time Saver_page 798
A.5	TOILET	1	5	5	1	2	1	5	5	1	Time Saver_page 795
A.6	MANAGER'S ROOM	-	-	-	-	1.4/ per person	1	20	20	2	Time Saver_page 791
A.7	TOILET	-	-	-	-	2	1	5	5	1	Time Saver_page 795
A.8	MAINTENANCE ROOM	1	20	20	2	-	1	20	20	1	-
A.9	P.A OFIICE	1	20	20	1	4.25	1	9	9	1	Time Saver_page 798
A.10	TOILET	1	12	12	1	2	1	5	5	1	Time Saver_page 795
A.12	ACCOUNTANTS ROOM	-	-	-	-	-	1	20	20	3	
A.13	CONFERENCE ROOM	2	100	200	-	2.5/ Per person	1	25	25	10	Time Saver_page 795
A.14	SEMINAR HALL	1	200	200	50	2/ per person	1	14	14	7	Time Saver
A.15	DOCUMENTATION AND RECORD	2	20	40	-	0.5/ per person	1	35	35	70	Time Saver
A.16	SECURITY MONITORING ROOM	1	20	20	1	-	1	20	20	1	Case Study
A.17	SERVER ROOM	1	20	20	1	-	1	20	20	1	Case Study
A.18	GUARD ROOM	3	15	45	3	13	3	20	60	6	Time Saver_page 707
A.19	STORAGE	5	200	1000	-	23	1	35	35	2	Time Saver_page 700
A.20	TOILET (MALE)	-	-	-	-	2 WC/ 35 Person+ 1 Urinal/ 25 person	1	10	10	25	Time Saver
A.21	TOILET (FEMALE)	-	-	-	-	2 WC/ 25 person	1	15	15	25	Time Saver
	TOTAL AREA								547		

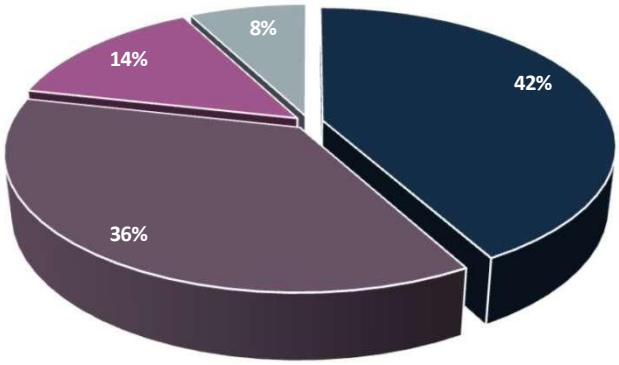
TOTAL AREA DISTRIBUTION (10954 SQ.M) FOR ADMINISTRATION BLOCK



TOTAL AREA DISTRIBUTION OF ADMINISTRATION BLOCK (547 SQ.M)

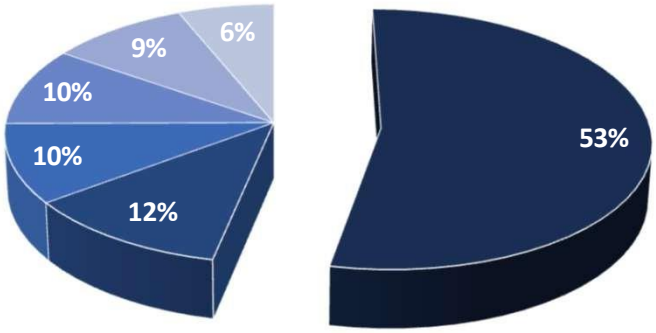


TOTAL AREA DISTRIBUTION OF INDUSTRIAL WORKSHOP (4660 SQ.M)



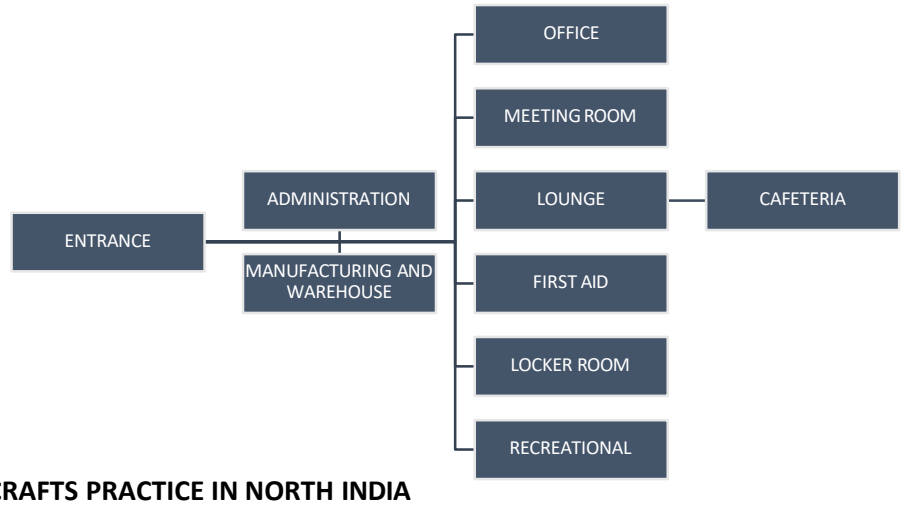
- COMMON WORKSHOP AMINETIES **41 %**
- LOCK AND METALWARE WORKSHOP **38%**
- TEXTILE HAND EMBROIDERY WORKSHOP **13%**
- STONE INLAY WORKSHOP **8%**

TOTAL AREA DISTRIBUTION (10954 SQ.M) FOR INDUSTRIAL WORKSHOP

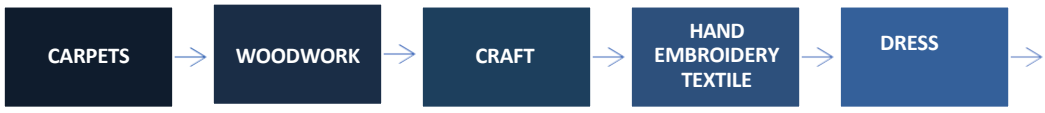


- INDUSTRIAL WORKSHOP **53 %**
- DESIGN TRAINING AND RESEARCH **12%**
- ACCOMODATION **10%**
- RECREATIONAL AMENITIES **10%**
- ART AND CRAFT CENTRE **9%**
- ADMINISTRATION **6%**

INDUSTRIAL WORSHOP EMPLYEE FACILITIES FLOW



TYPES OF CRAFTS PRACTICE IN NORTH INDIA

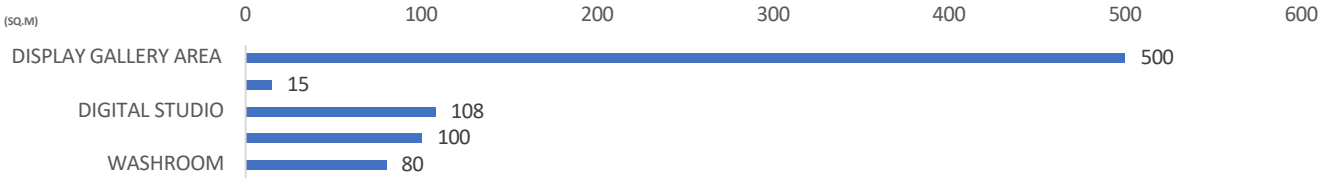


CHAPTER 04

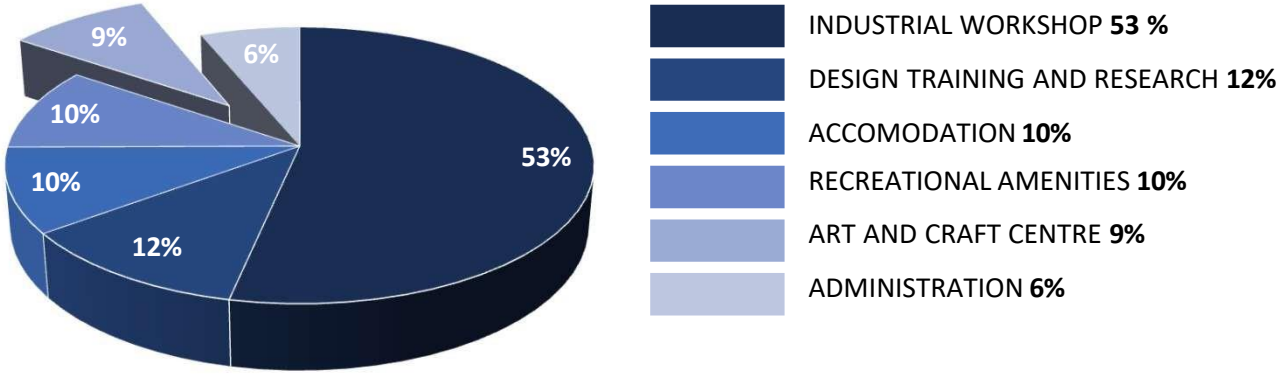
4.5_ARTS AND CRAFT

SR.NO	FUNCTIONAL AREA	CASE STUDY 1				CASE STUDY 2			STANDARDS/ NORMS	PROPOSED REQUIREMENT				REMARKS
		National Craft Museum				Utarayan Art Centre								
		NO	AREA (SQ.M)	TOTAL AREA (SQ.M)	USER CAPACITY	NO	AREA (SQ.M)	TOTAL AREA (SQ.M)	AREA (SQ.M)	NO	AREA (SQ.M)	TOTAL AREA (SQ.M)	USER CAPACITY	
C	ART AND CRAFT CENTRE				4050									
C.1	DISPLAY GALLERY AREA	26	340	8840	4000	2	125	250	-	4	125	500		
C.2	CURATORS OFFICE AREA	1	300	300	50	1	120	120	-	1	15	15		
C.3	DIGITAL STUDIO	-	-	-	-	2	120	240	2/ per person	2	54	108	48	As per Requirement
C.4	STORE AREA	-	-	-	-	1	30	30	35	4	25	100		
C.5	WASHROOM	-	-	-	-	2	14	28	-	2	40	80		
	TOTAL AREA											803		

TOTAL AREA DISTRIBUTION OF ARTS AND CRAFT CENTRE (338 SQ.M)



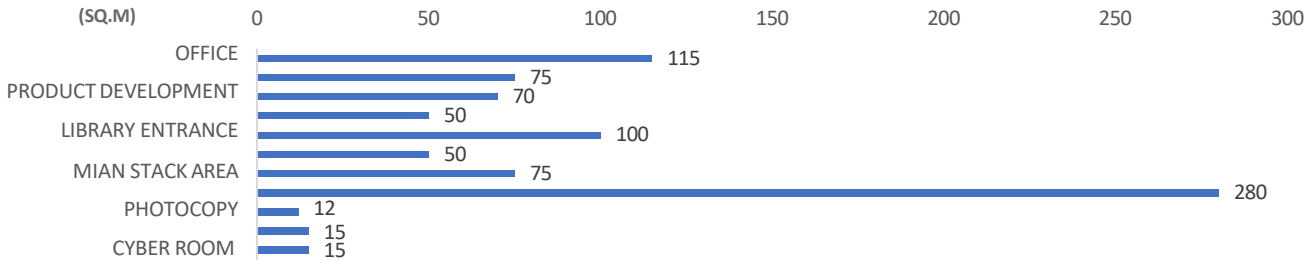
TOTAL AREA DISTRIBUTION (10954 SQ.M) FOR ATRS AND CRAFT CENTRE



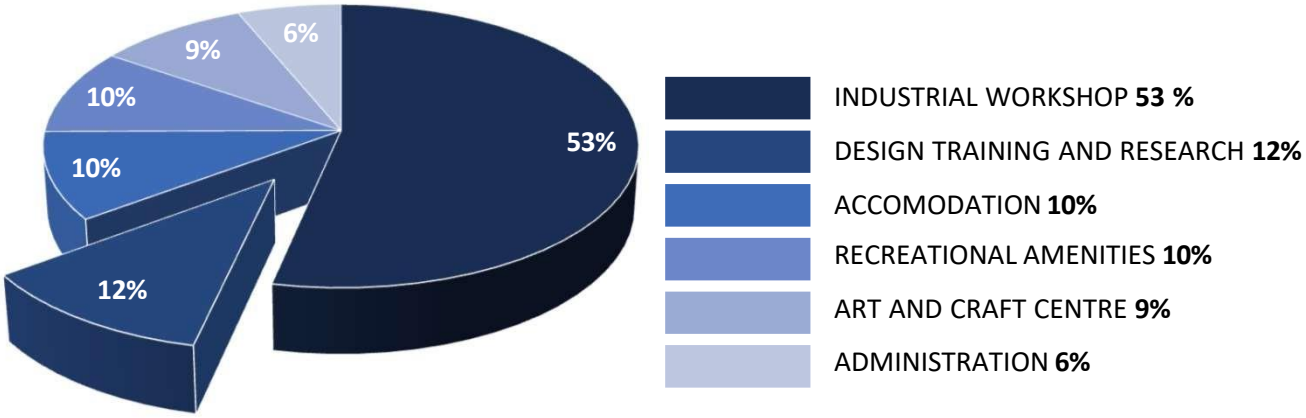
4.6_DESIGN TRAINING AND RESEARCH

SR.NO	FUNCTIONAL AREA	CASE STUDY 1				STANDARDS/ NORMS	PROPOSED REQUIREMENT			
		National Craft Museum								
		NO	AREA (SQ.M)	TOTAL AREA (SQ.M)	USER CAPACITY	AREA (SQ.M)	NO	AREA (SQ.M)	TOTAL AREA (SQ.M)	USER CAPACITY
D	DESIGN TRAINING AND RESEARCH									
D.1	OFFICE	-	-	-	-	5	1	115	115	
D.2	CONFERENCE ROOM	-	-	-	-	2.5/per person	1	75	75	
D.3	PRODUCT DEVELOPMENT	-	-	-	-	-	1	70	70	
D.4	**TRAINING HALL**	-	-	-	-	1/ per person				
D.4.1	COMPUTER LAB	-	-	-	-	-				
D.4.2	DRAWING ROOM	-	-	-	-	-	3	50	150	
D.4.3	A/V ROOM	-	-	-	-	-				
D.5	**LIBRARY**	1	200	200	50	-				
D.5.1	ENTRANCE	-	-	-	-	1/ per person	1	100	100	
D.5.2	ISSUE COUNTER	-	-	-	-	-	1	50	50	48
D.5.3	MIAN STACK AREA	-	-	-	-	92 at 10000 vol.	1	75	75	
D.5.4	READING AREA	1	200	200	50	2.8/ per person	1	280	280	
D.5.5	PHOTOCOPY	-	-	-	-	-	1	12	12	
D.5.6	LIBRARIAN'S OFFICE	1	20	20	1	-	1	15	15	
D.5.7	CYBER ROOM	1	30	30	-	-	1	15	15	
D.6	TOILET (MALE)	-	-	-	-	1 per 40 person	1	35	35	
D.7	TOILET (FEMALE)	-	-	-	-	1 per 25 person	1	20	20	
	TOTAL AREA								1012	

TOTAL AREA DISTRIBUTION OF DESIGN TRAINING AND RESEARCH (1012 SQ.M)



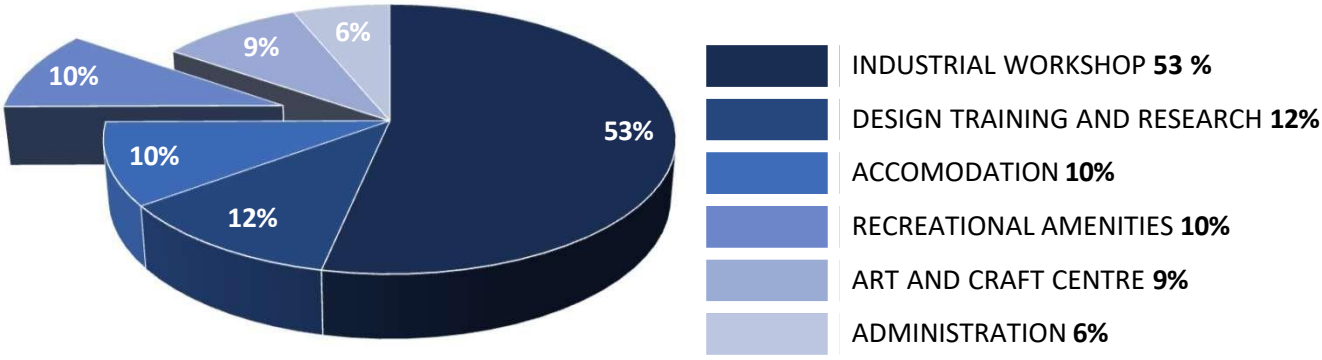
TOTAL AREA DISTRIBUTION (10954 SQ.M) FOR DESIGN AND RESEARCH CENTRE



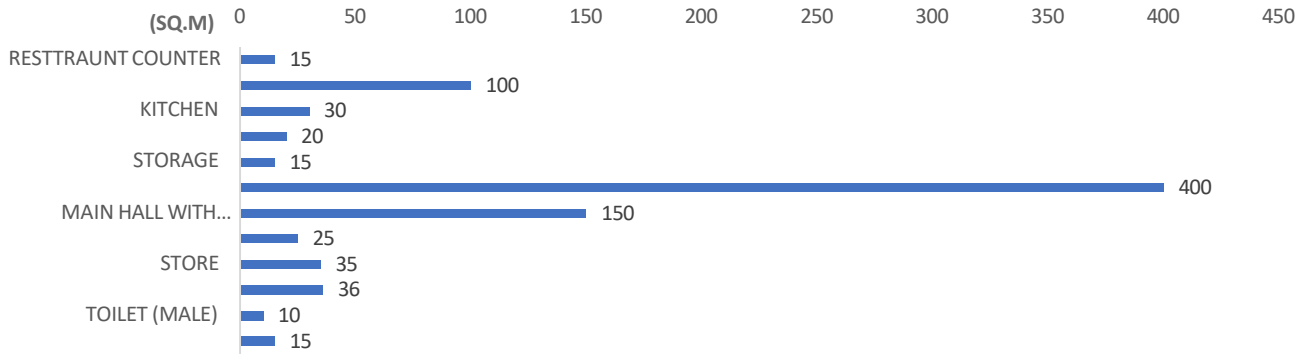
4.7_RECREATIONAL AMENITIES

SR.NO	FUNCTIONAL AREA	CASE STUDY 1 National Craft Museum				STANDARDS/ NORMS	PROPOSED REQUIREMENT			
		NO	AREA (SQ.M)	TOTAL AREA (SQ.M)	USER CAPACITY	AREA (SQ.M)	NO	AREA (SQ.M)	TOTAL AREA (SQ.M)	USER CAPACITY
E	RECREATIONAL AMENITIES									
E.1	RESTRAUNT	1	250	250	60					50
E.1.1	COUNTER	-	-	-	-		1	15	15	
E.1.2	DINNING AREA	-	-	-	-	2/ per person	1	100	100	
E.1.3	KITCHEN	1	25	25	-	30% of dinning	1	30	30	
E.1.4	WASH AREA	-	-	-	-		1	20	20	
E.1.5	STORAGE	1	15	15	-	50% of kitchen	1	15	15	
E.2	CRAFT SHOPS/ BAZAAR	1	100	100	25		4	100	400	
E.3	MULTI PURPOSE HALL	1	500	500	250					
E.3.1	MAIN HALL WITH STAGE	-	-	-	-	1.5/ per person	1	150	150	100
E.3.2	PROJECTION CONTROL ROOM	1	25	25	-		1	25	25	
E.3.3	STORE	-	-	-	-	35	1	35	35	
E.3.4	GREEN ROOM	1	18	18	-		2	18	36	
E.4	TOILET (MALE)						1	10	10	
E.5	TOILET (FEMALE)	-	-	-	-		1	15	15	
	TOTAL AREA								851	

TOTAL AREA DISTRIBUTION (10954 SQ.M) FOR RECREATIONAL AMENITIES



TOTAL AREA DISTRIBUTION OF RECREATIONAL AMENITIES (851 SQ.M)

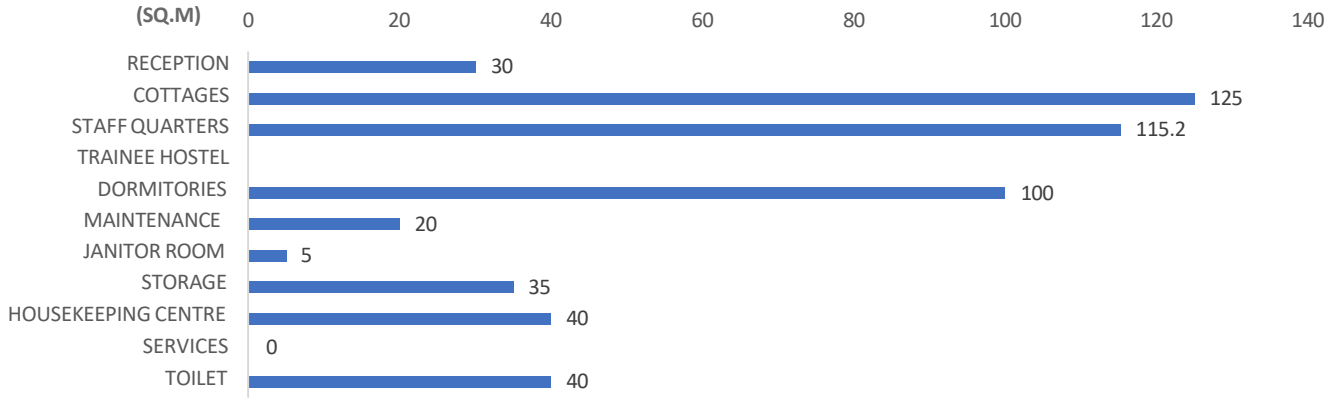


CHAPTER 04

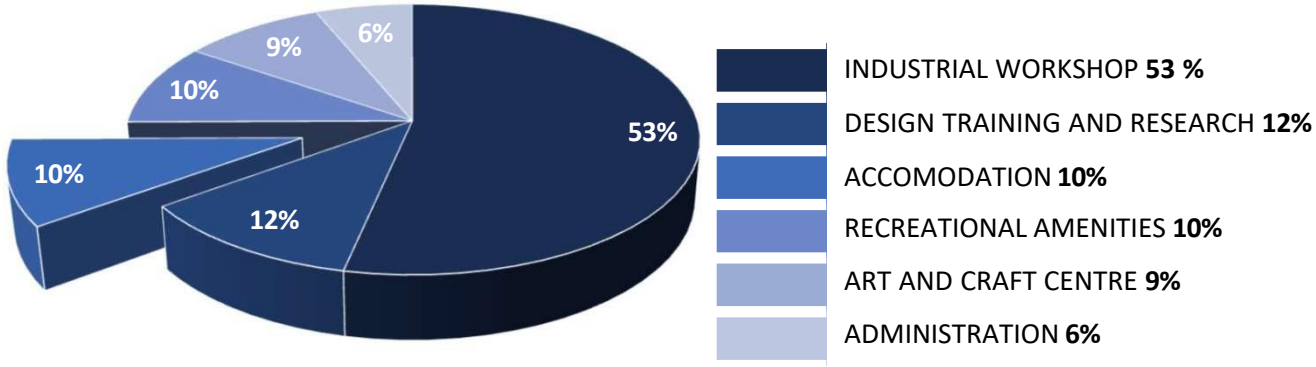
4.8_ACCOMODATION

SR.NO	FUNCTIONAL AREA	CASE STUDY 1 National Craft Museum				CASE STUDY 2 Uttarayan Art Centre				STANDARDS/ NORMS	PROPOSED REQUIREMENT			
		NO	AREA (SQ.M)	TOTAL AREA (SQ.M)	USER CAPACITY	NO	AREA (SQ.M)	TOTAL AREA (SQ.M)	USER CAPACITY	AREA (SQ.M)	NO	AREA (SQ.M)	TOTAL AREA (SQ.M)	USER CAPACITY
F	ACCOMODATION													
F.1	RECEPTION	-	-	-	-	1	30	30		1.5/ per person	1	30	30	
F.2	COTTAGES	-	-	-	-	6	112	672	3/ per cottage	1 room of 12.5 with W.C and Bathroom	7	40	280	10
F.3	STAFF QUARTERS	-	-	-	-					1 room of 9.6 with W.C and Bathroom	12	9.6	115.2	12
F.4	TRAINEE HOSTEL										1	200		
F.4.1	COMMON ROOM					1	20			1.5/ per person	1	30		
F.4.2	DINNING/ RECREATIONAL					1	16			2/ per person	1	60		
F.4.3	BEDROOM SPACE									2.2/ per person	4	11		
F.4.4	TOILET (MALE)	-	-	-	-	2	16	32		1 W.C+ 1 Urinal+ 2 wash basin+1 shpwer/ per 10 boys	1	20	200	20
F.4.5	TOILET (FEMALE)									2 W.C+ 2 wash basin+ 2 Shower/ per 10 girls	1	30		
F.5	DORMITORIES	-	-	-	-	4	24	96		2/per person	5	20	100	30
F.6	HOUSE PARENTS APARTMENT									50	1	50	50	2
F.7	MAINTENANCE	-	-	-	-						1	20	20	
F.8	JANITOR ROOM	1	20	20	-						1	5	5	
F.9	STORAGE	5	100	500	-						1	35	35	
F.10	HOUSEKEEPING CENTRE	1	20	20	-	1	40				1	40	40	
		-	-	-	-									
	TOTAL AREA												875.2	
	CIRCULATION (25%)												2190.8	
	TOTAL COVERED AREA									A+B+C+D+E+F X 0.25			10954	

TOTAL AREA DISTRIBUTION OF ACCOMODATION (875 SQ.M)



TOTAL AREA DISTRIBUTION (10954 SQ.M) FOR ACCOMODATION



4.9_SITE SERVICES

SR.NO	FUNCTIONAL AREA	CASE STUDY 1 National Craft Museum				STANDARDS/ NORMS					REMARKS
		NO	AREA (SQ.M)	TOTAL AREA (SQ.M)	USER CAPACITY	AREA (SQ.M)	NO	AREA (SQ.M)	TOTAL AREA (SQ.M)	USER CAPACITY	
G	SERVICES										
G.2	WATER TANK	-	-	-	-	45 l/ per day+ 30% for fire fighting+ 10% for irrigation	1	3.64	3.64		1L= 0.001 cu.m, 45x0.001= 0.045, 450x 0.045= 20.25, L (sq)= 20.25/33= 2.6
G.3	ELECTRICAL ROOM	12	30	-	-	1/ per 500 sq.m	21	21	441		
G.4	FIRE CONTROL ROOM	1	12	-	-	12	1	12	12		
G.6	DG SET	1	48	48	-	200kw = 140 kva	1	20	20		
G.7	BOILER/ PLANT ROOM					20	2	30	60		Specification as per Aadeetya Projects stainless steel industrial steam boiler
G.8	TRANSFORMER	-	-	-	-	15	1	50	50		
G.10	LOADING/ UNLOADING AREA	-	-	-	-	70	4	70	280		Specification as per CONTAINER 20 FT, TATA ACE
	TOTAL AREA								866.64		

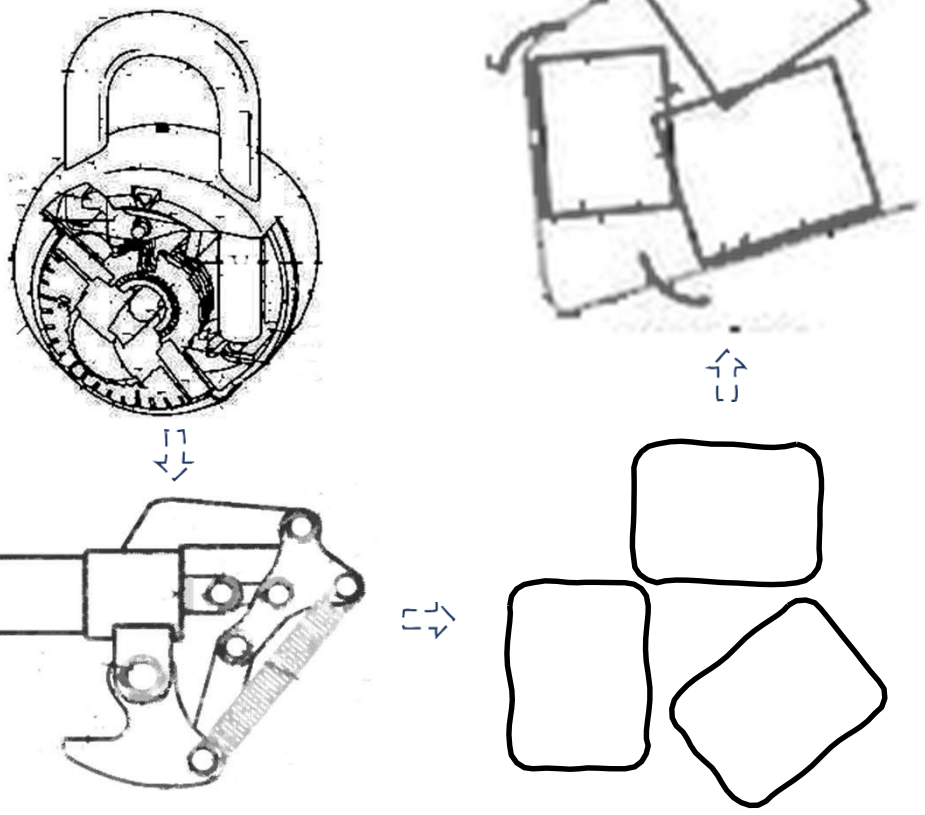
•Traditional crafts: Mathura is known for its rich tradition of arts and crafts, including intricate woodcarvings, marble sculptures, and colourful paintings.
•Cultural heritage: Mathura's cultural heritage is celebrated through its vibrant festivals, folk music, and dance forms. From the lively raas leela performances depicting Krishna's divine dance with the gopis to the colourful Holi celebrations that engulf the city in a riot of colours, Mathura's cultural vibrancy is truly unparalleled..

SOURCE-
http://odopup.in/en/article/district-profile-aligarh

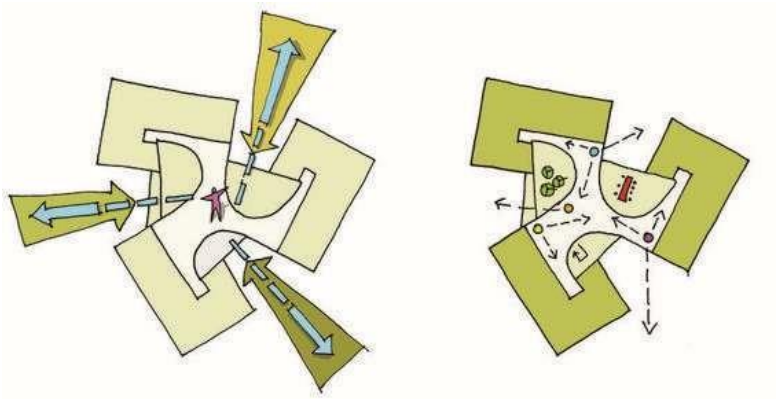
PHILOSOPHY

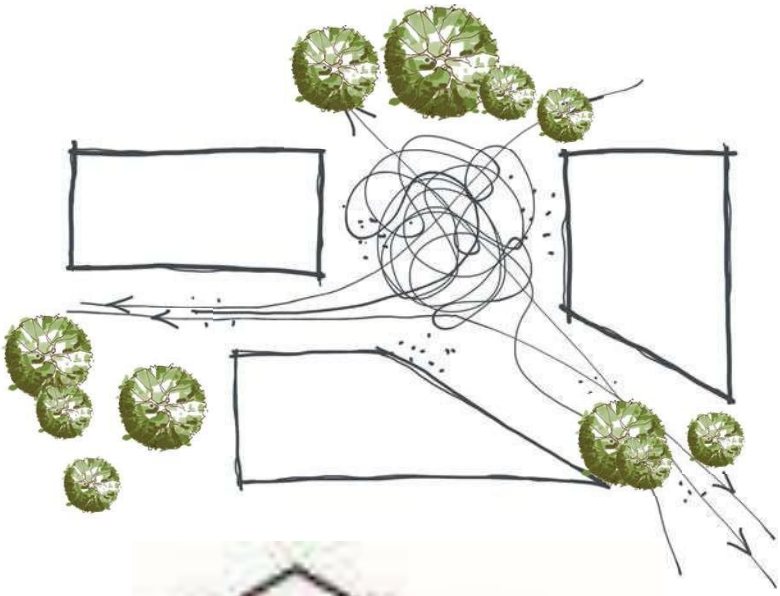
Locks and keys have a simple, obvious function—to lock and unlock doors. Yet when we think of locks and keys, we don't only think of doors; we think of the ways these objects can have symbolic meaning in our lives. As such, some people take the two as a symbol of freedom and confinement. Others see them as symbols of closing one chapter in their life and opening another.

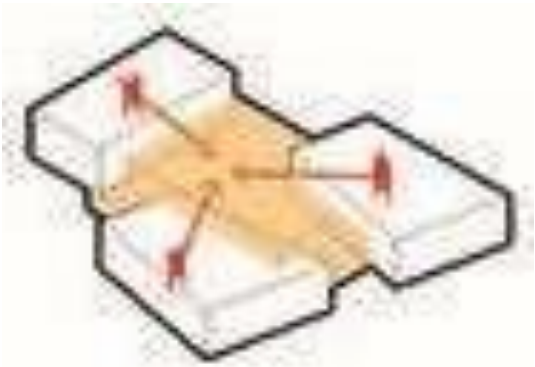
FORM DEVELOPMENT

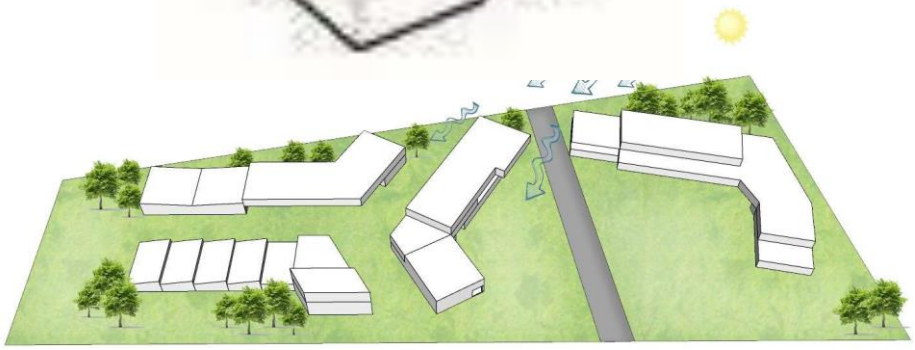


VISUAL EXPERIENCE



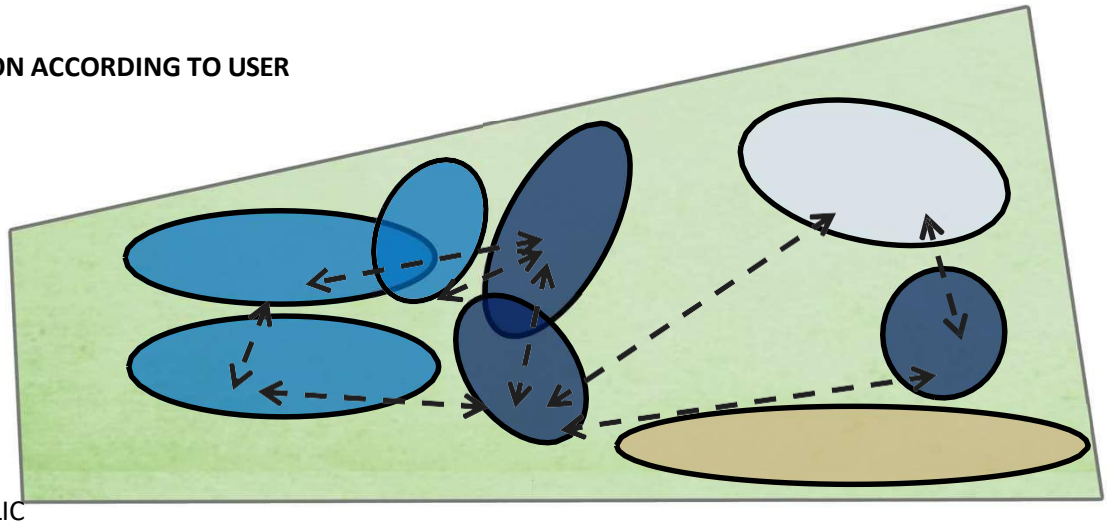






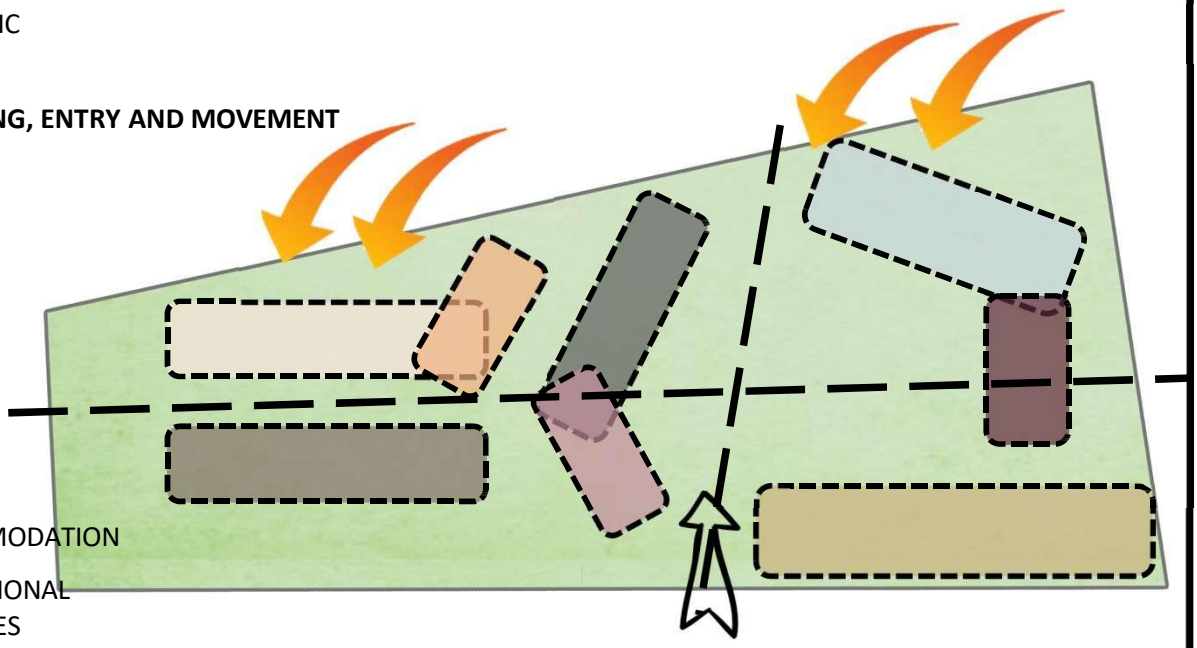
CONCEPTUAL DEVELOPMENT

SPACE SEGREGATION ACCORDING TO USER

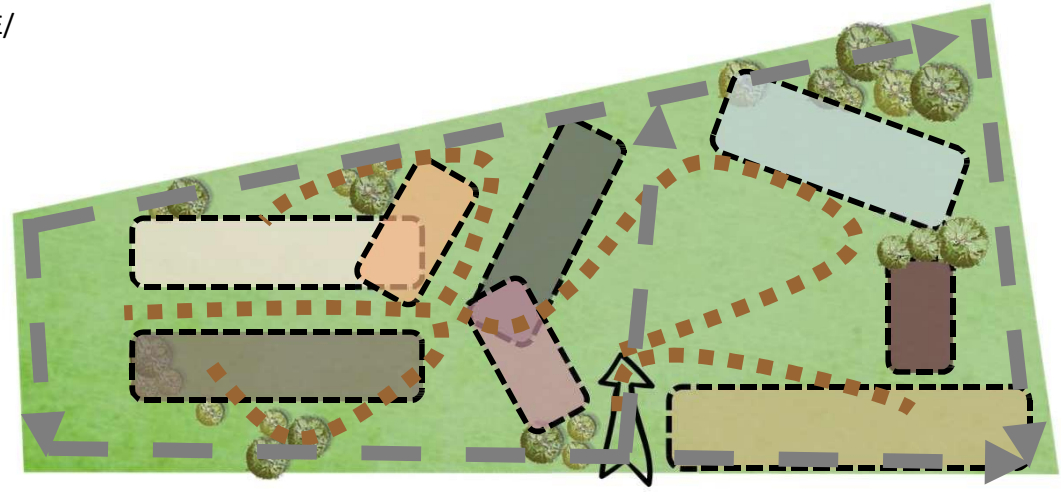


PRIVATE
SEMI-PUBLIC
PUBLIC

SITE ZOONING, ENTRY AND MOVEMENT

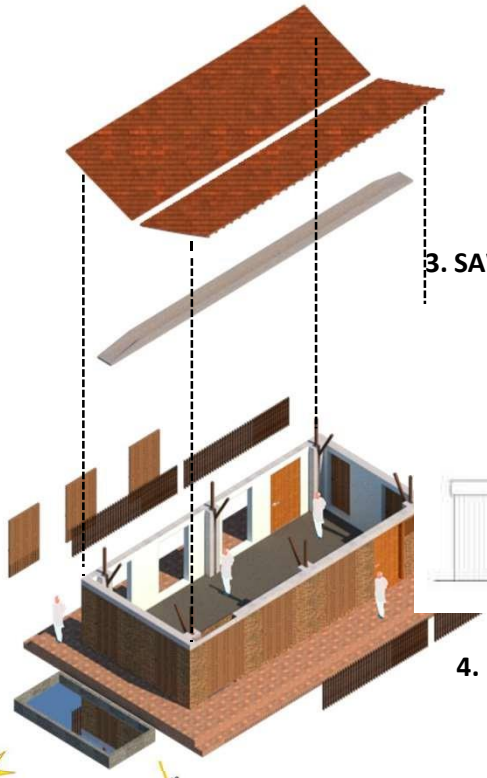


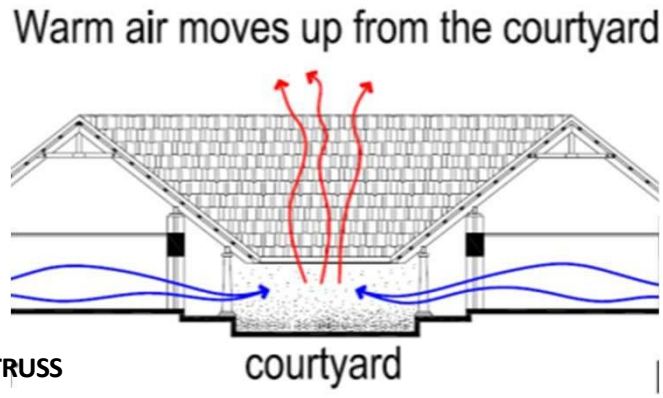
ACCOMMODATION
RECREATIONAL AMENITIES
DESIGN AND TRAINING CENTRE/ ART AND CRAFT CENTRE
ADMINISTRATION
COMMON WORKSHOP AMENITIES
TEXTILE/ WOOD WORKSHOP
METALWARE WORKSHOP
PARKING



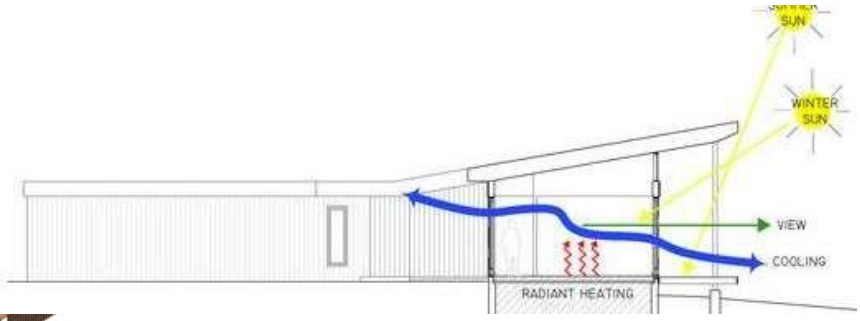
INFERENCE

1. BUTTERFLY TRUSS

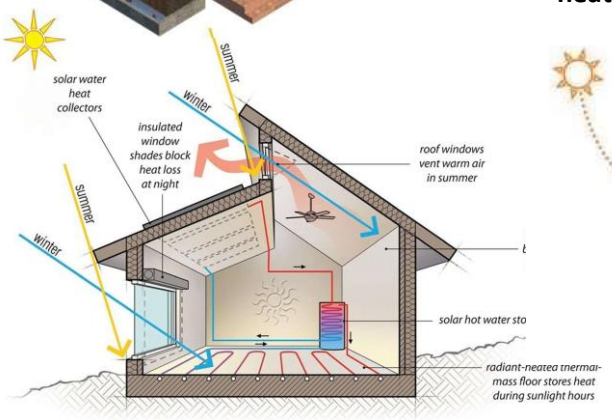




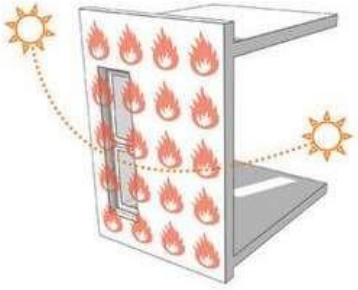
3. SAW TOOTH TRUSS



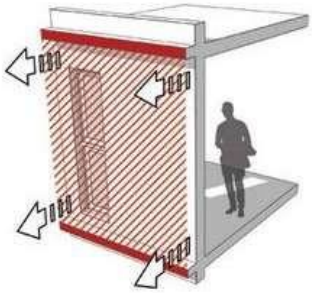
4. BRICK JAALI



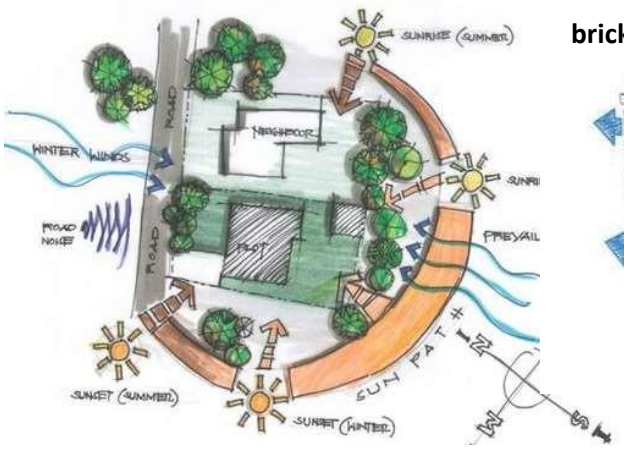
heat gain on plain façade



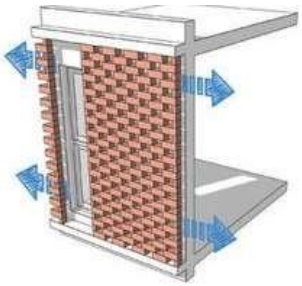
projecting concrete façade



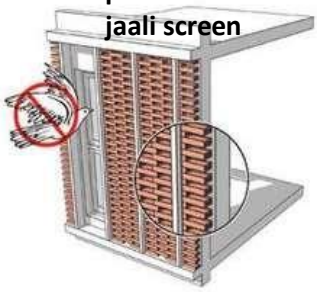
2. COURTYARD PLANNING



brick jaali screen with air cavity



self ventilating performance of jaali screen



BIBLIOGRAPHY

The following book references have been used in this thesis -

- **ARCHITECT'S DATA By Ernst Neufert**
- **NATIONAL BUILDING CODE 2016**
- **VRINDAVAN DEVELOPMENT AUTHORITY BYELAWS**
- **CITY DEVELOPMENT PLAN OF VRINDAVAN**

The following website references have been used in this thesis -

- **Weatherspark.com**
- **Google images**
- **Google maps**
- **Google earth**
- **Times of India newsletter**
- **Census2011**
- **Issu.com**

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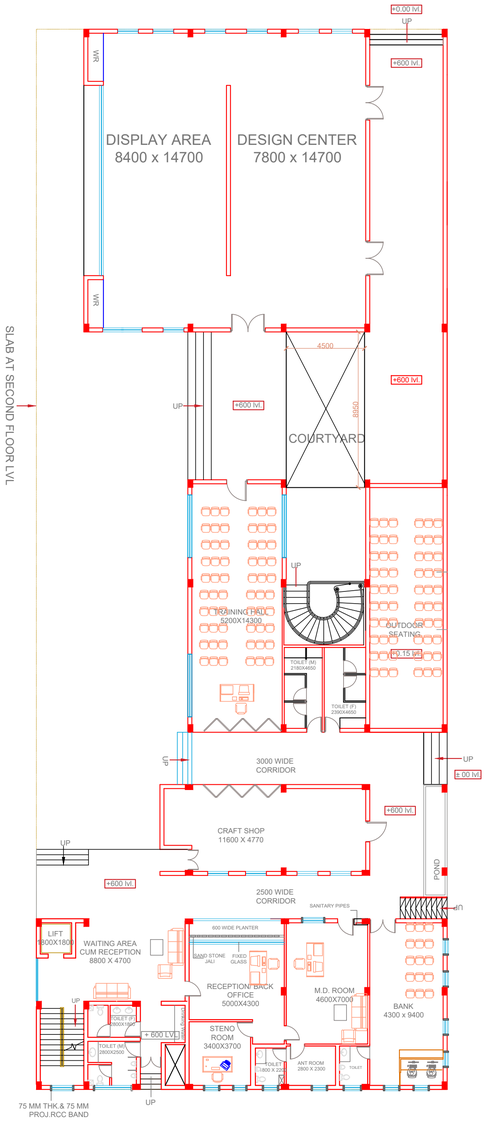
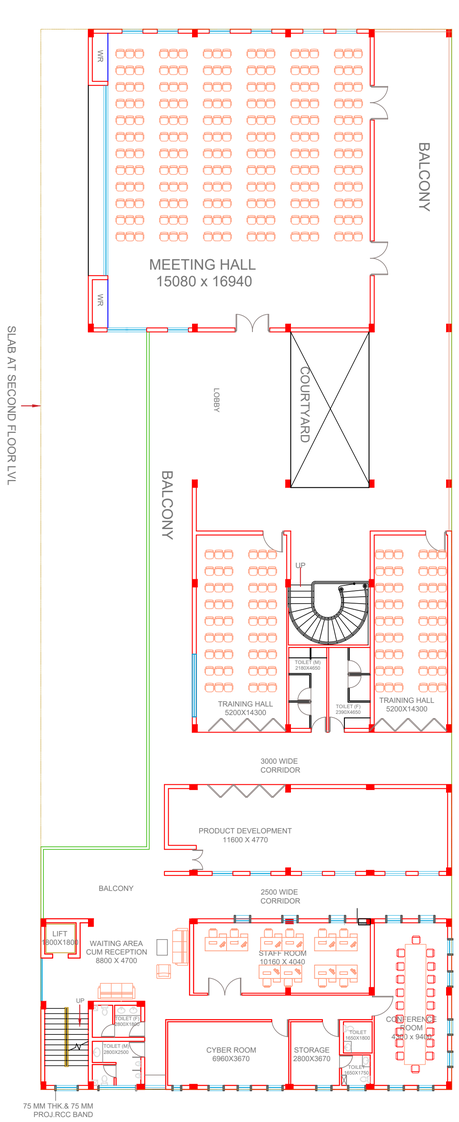


GROUND FLOOR



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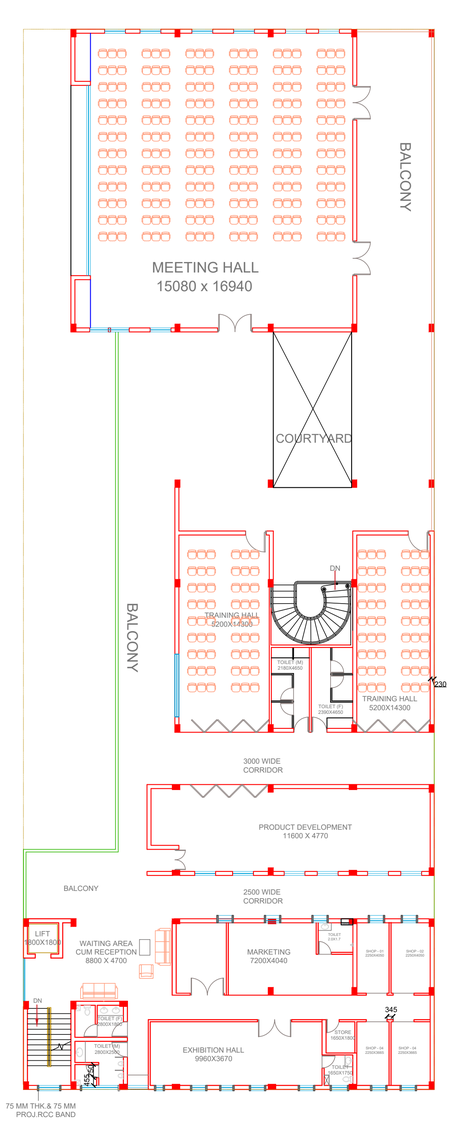

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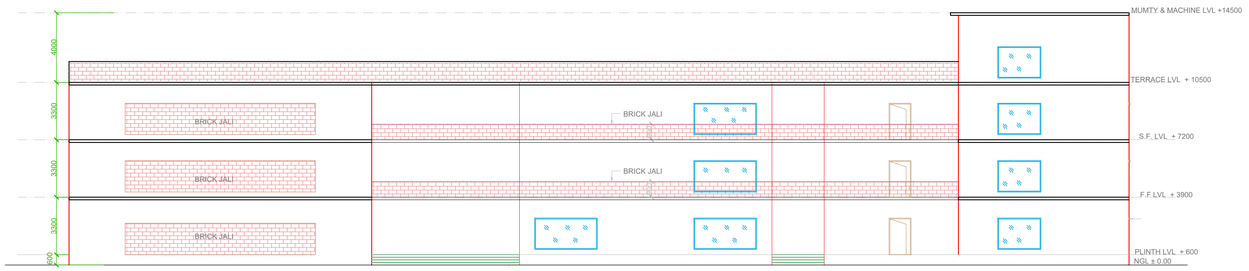
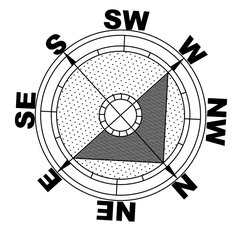


FRONT ELEVATION

ALL DIMENSION ARE IN MM

SCALE = 1 : 200



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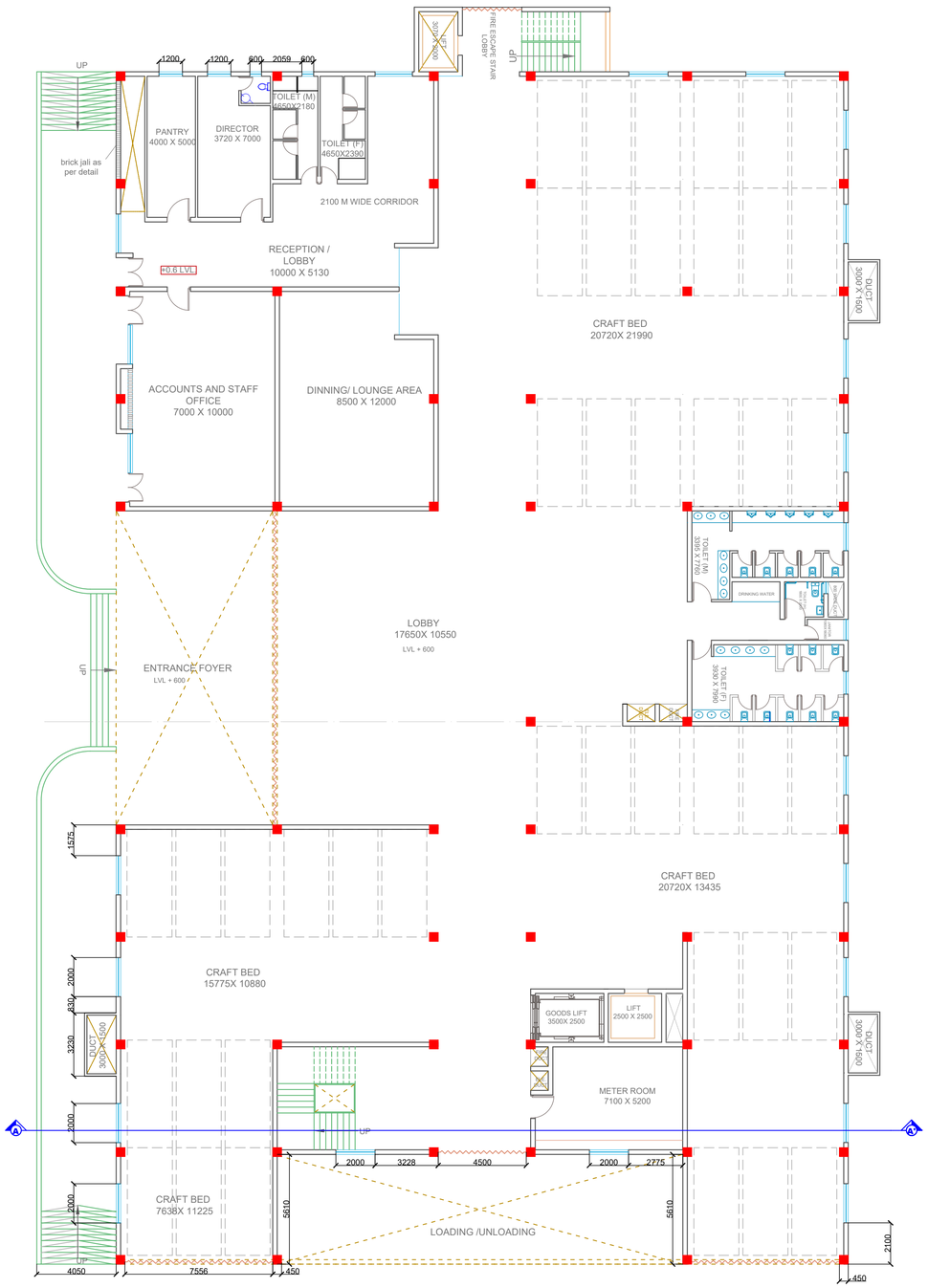
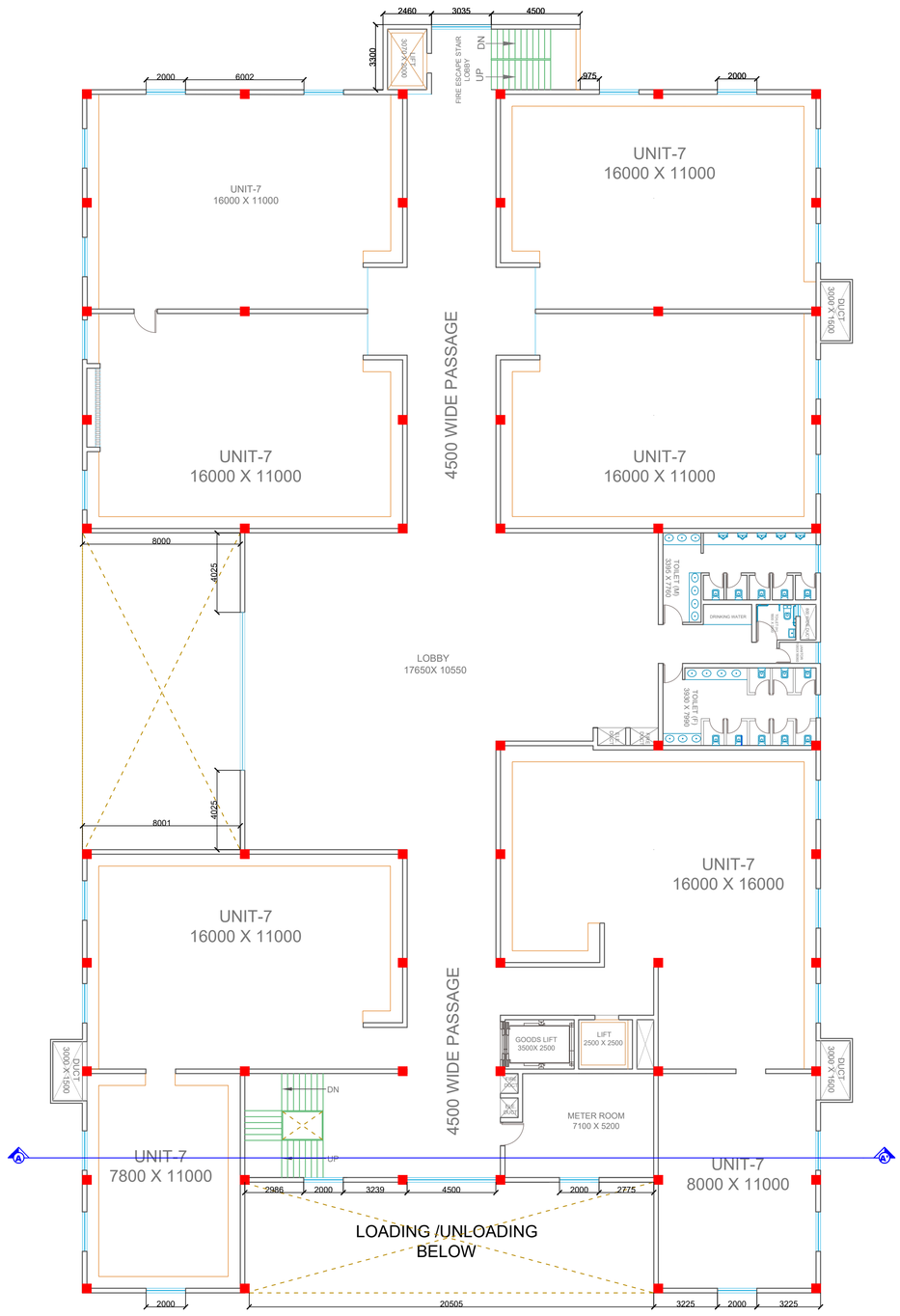
CRAFT FACTORY



GROUND FLOOR PLAN



FIRST FLOOR PLAN

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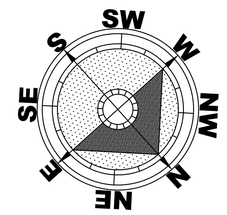

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V R I N D A V A N

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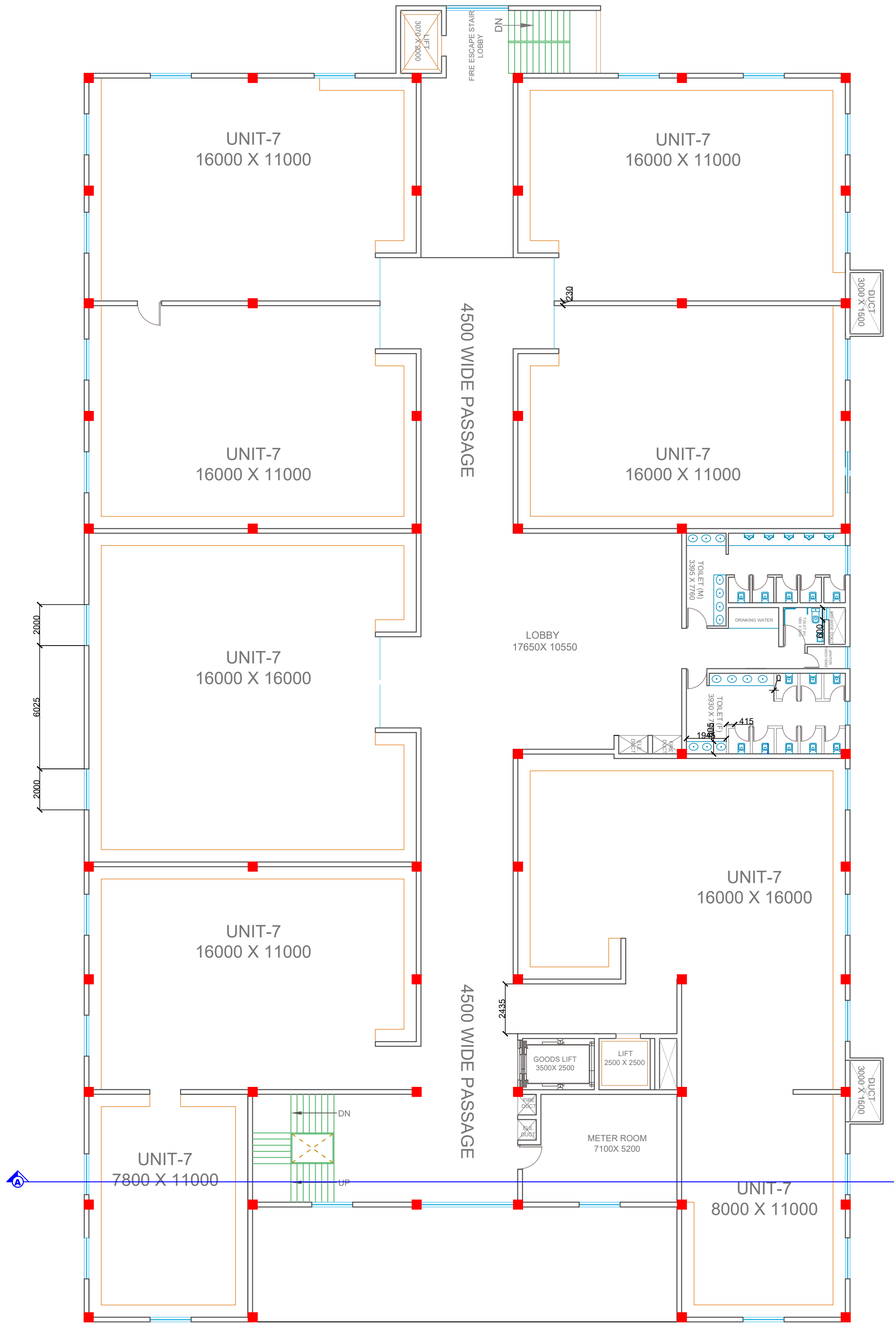
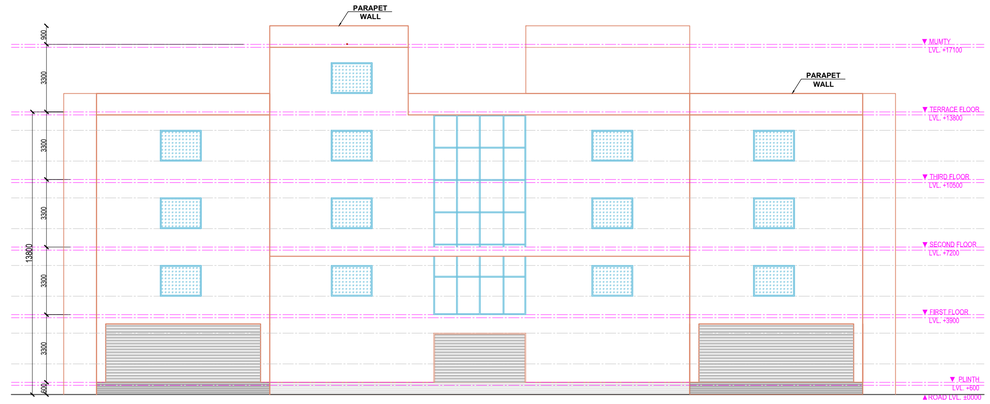
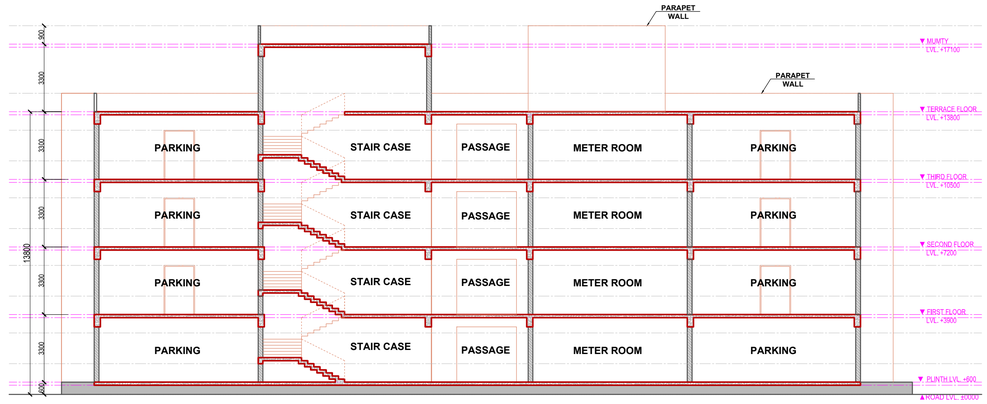


TYPICAL SECOND AND THIRD FLOOR PLAN



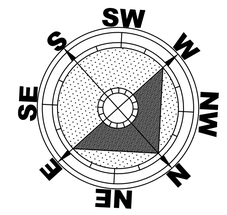
FRONT ELEVATION



SECTION AT AA'

ALL DIMENSION ARE IN MM

SCALE = 1 : 200



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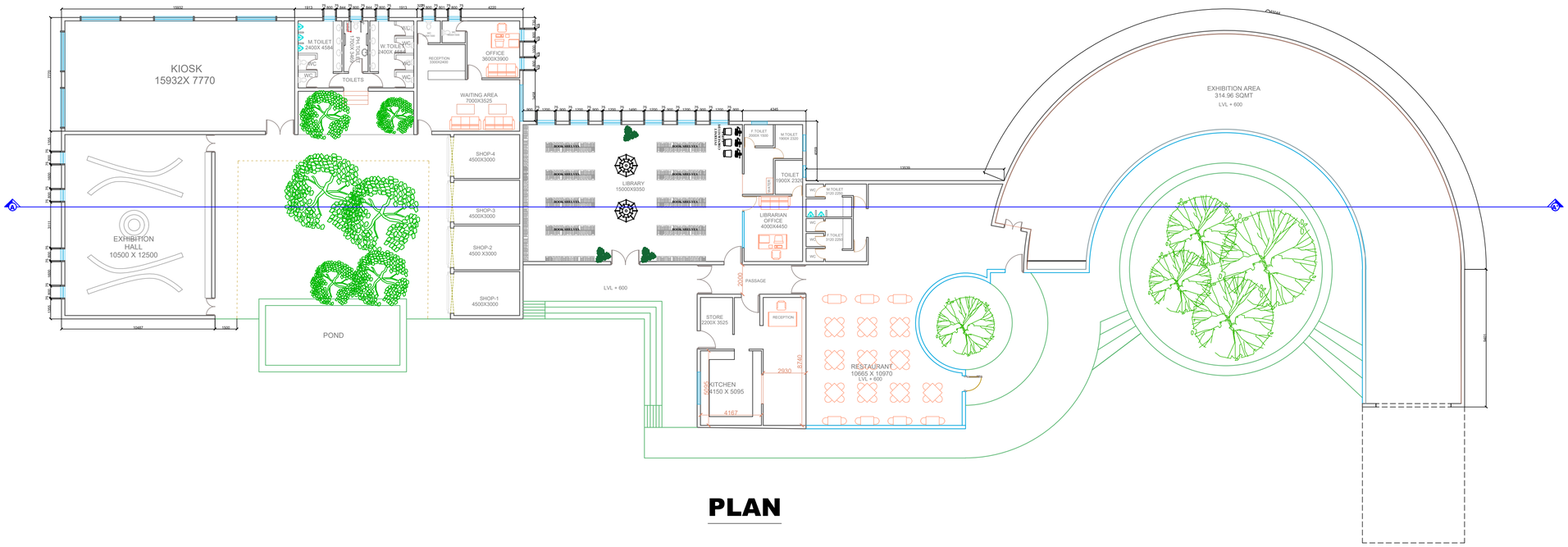

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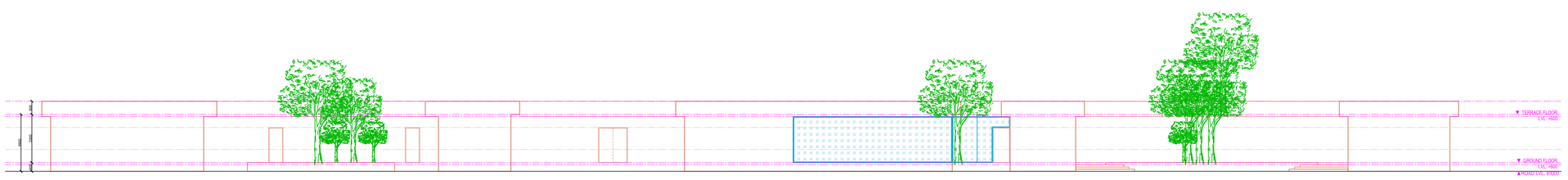

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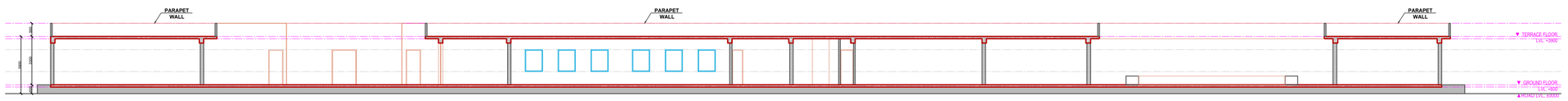

SECTION AT AA'

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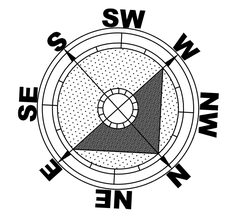

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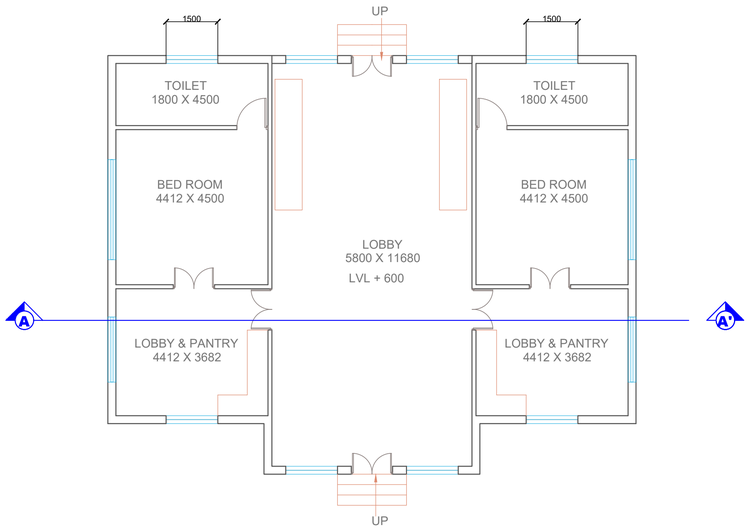
COTTAGE



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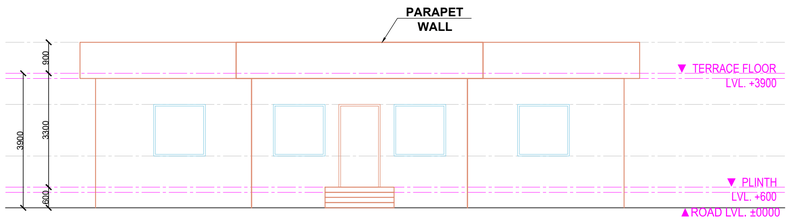

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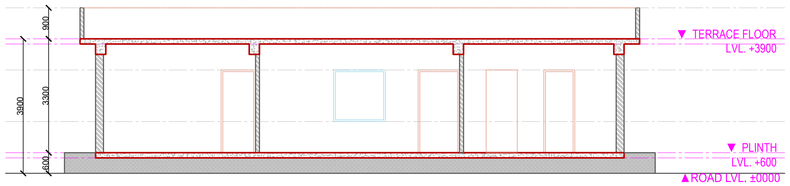

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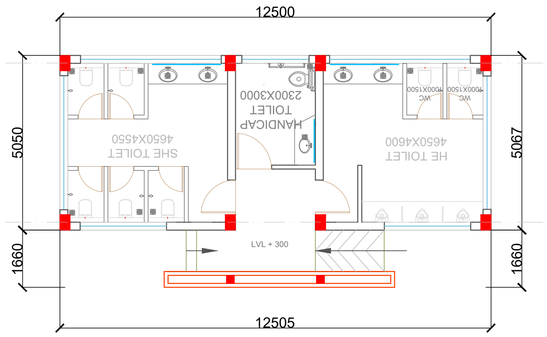
PUBLIC TOILET



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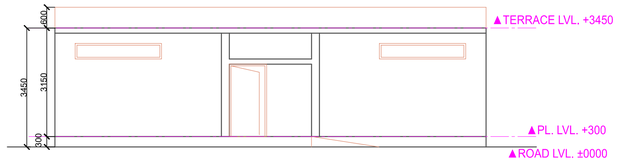

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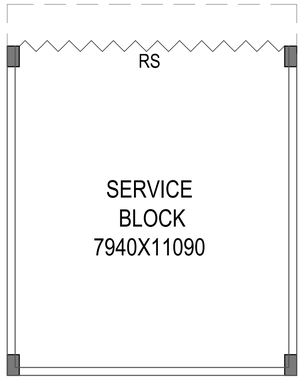
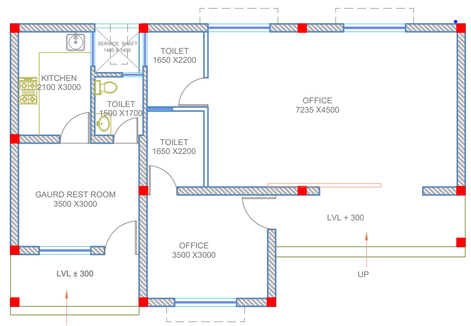


PLAN

RECEPTION BLOCK



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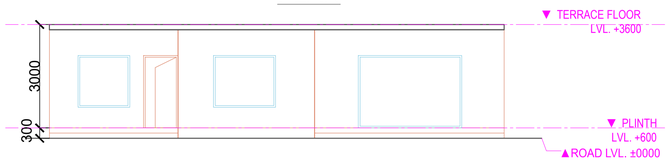

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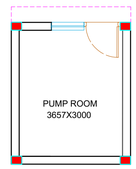

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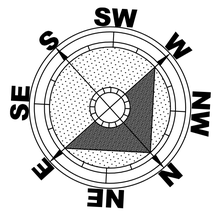

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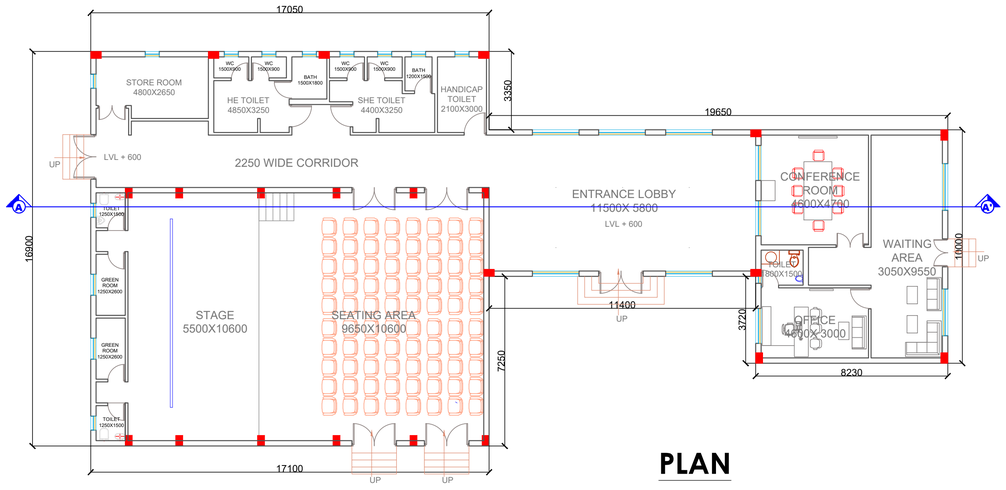

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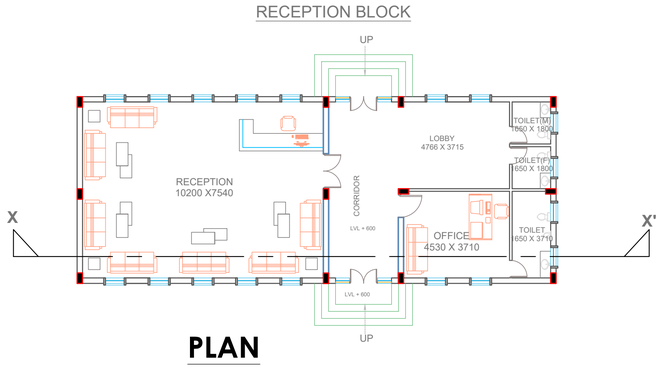

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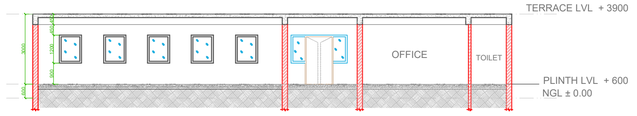
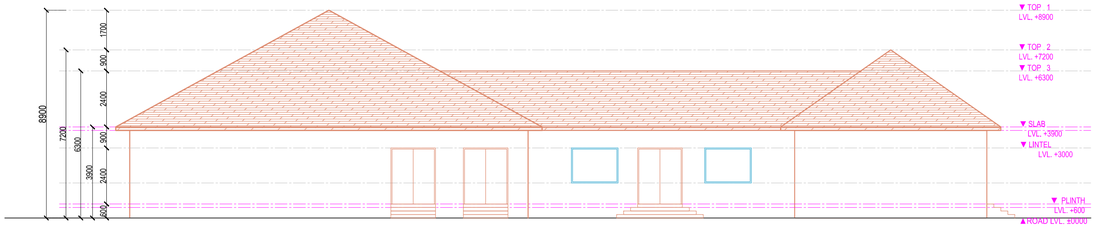


SECTION AT X-X'



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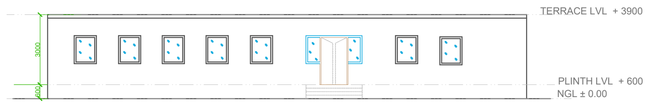

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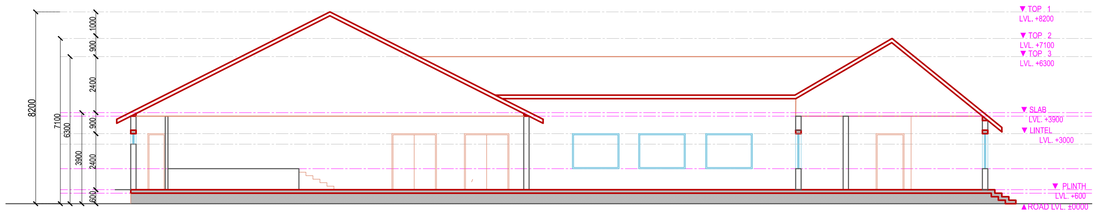
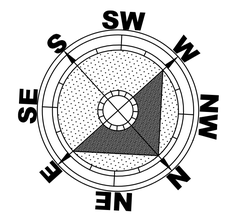


SECTION AT AA'

ALL DIMENSION ARE IN MM

SCALE = 1 : 200



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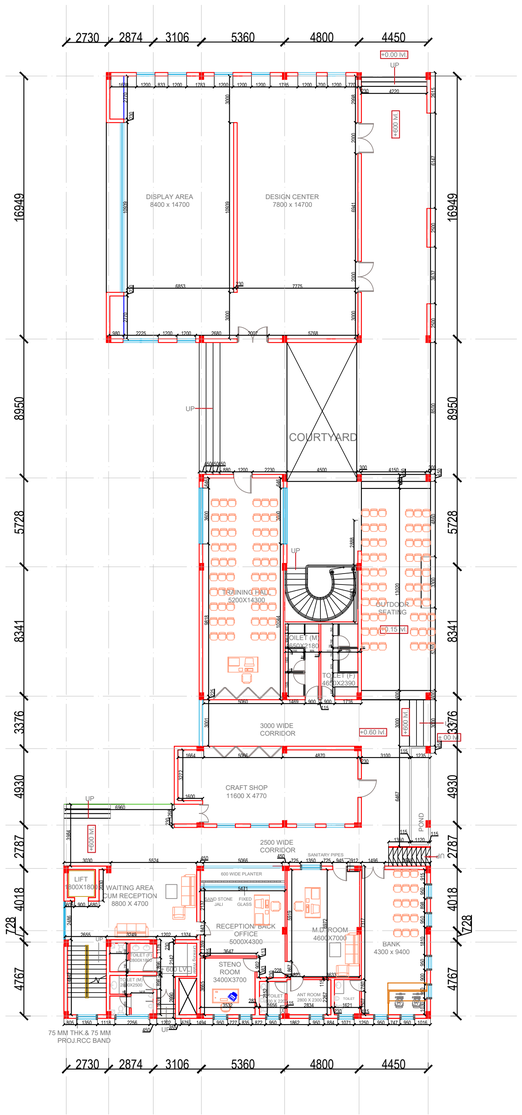
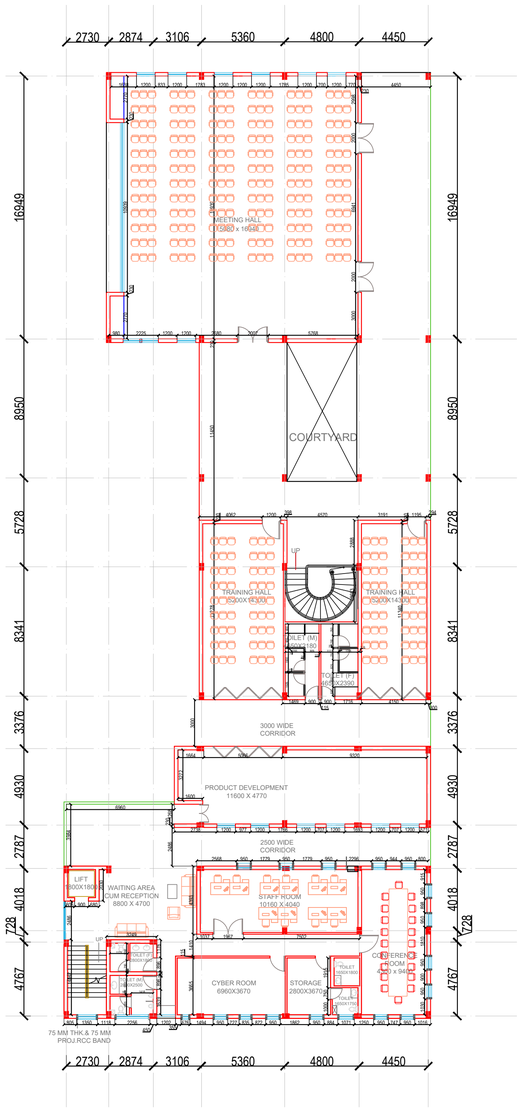
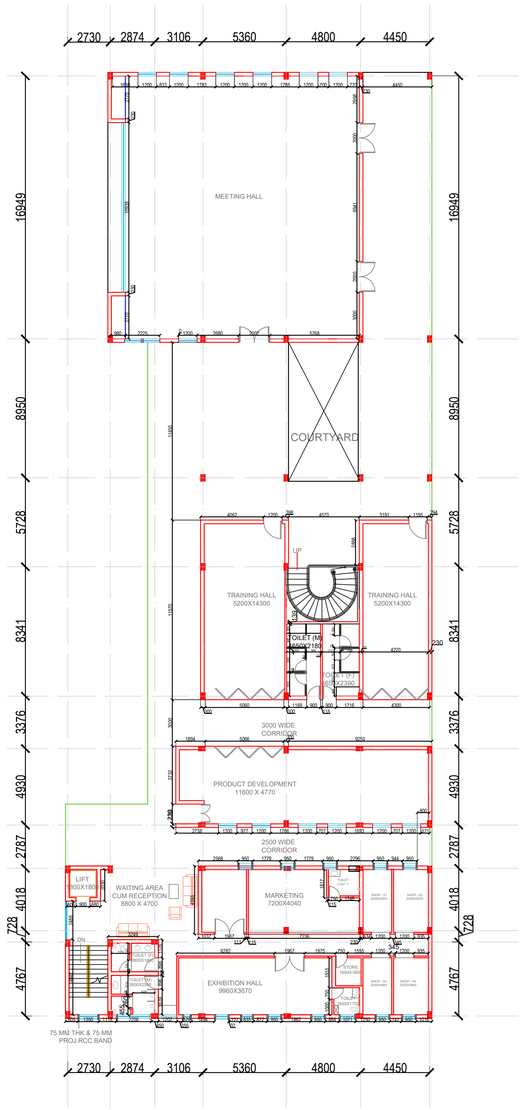
ELECTIVE



GROUND FLOOR



FIRST FLOOR



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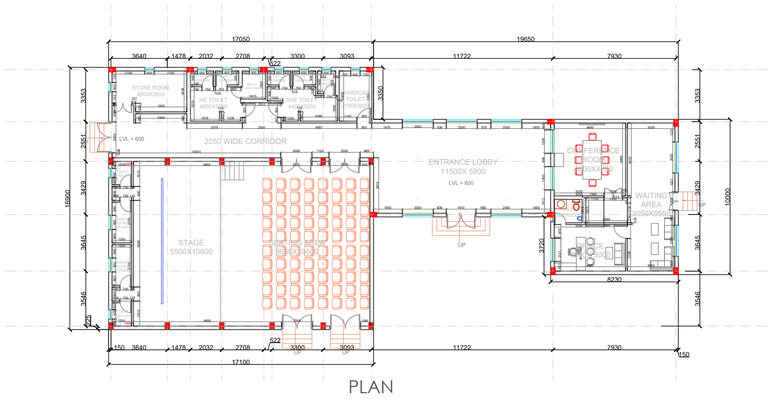

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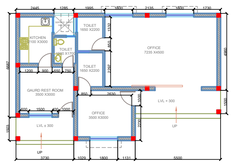

RECEPTION PLAN

WORKING DWG

ALL DIMENSION ARE IN MM

SCALE = 1 : 200

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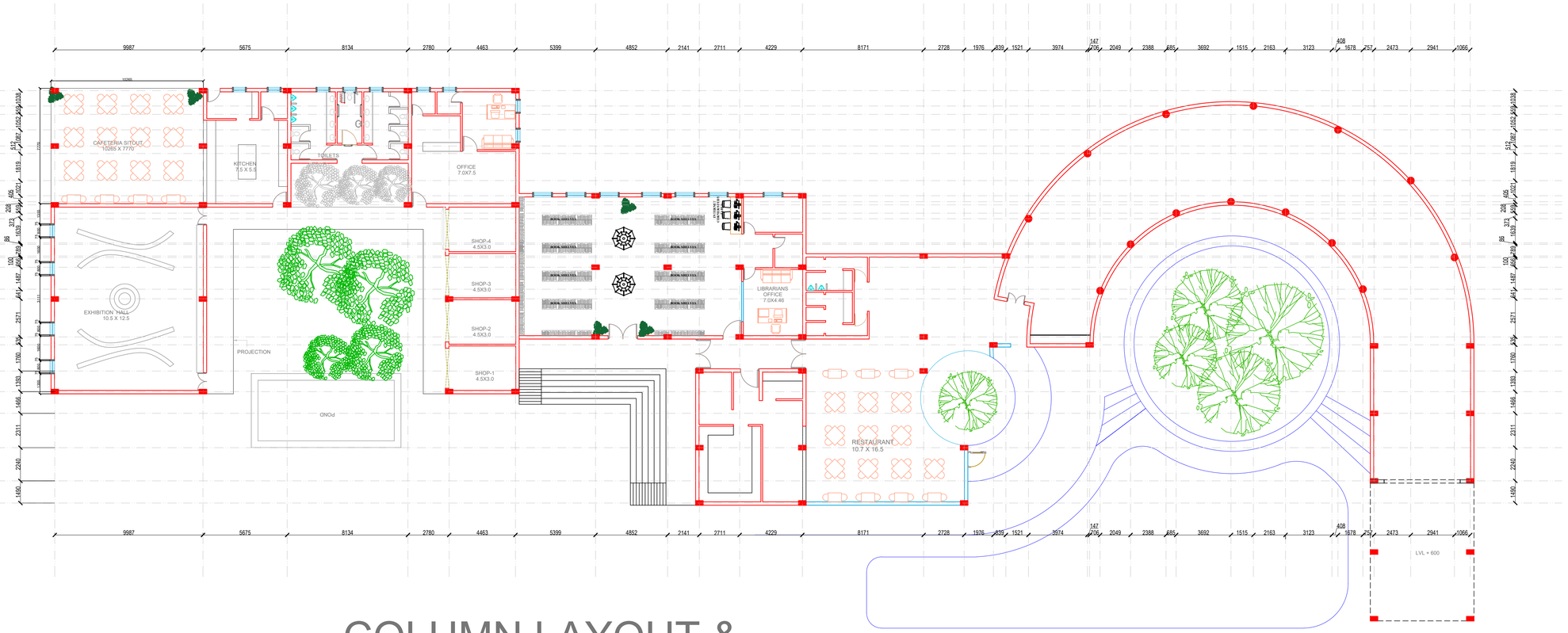
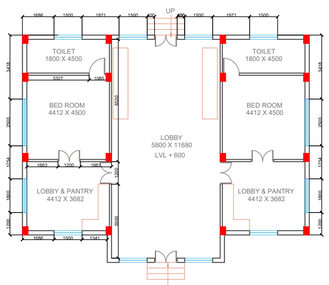
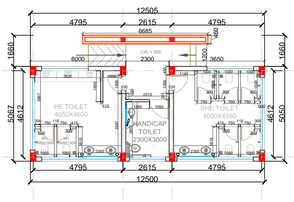


COLUMN LAYOUT & CENTER LINE



COTTAGE PLAN



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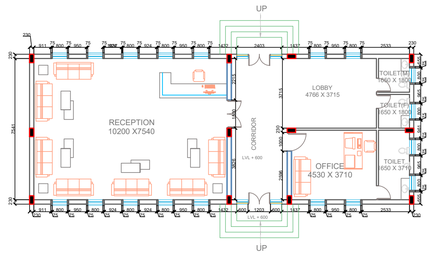
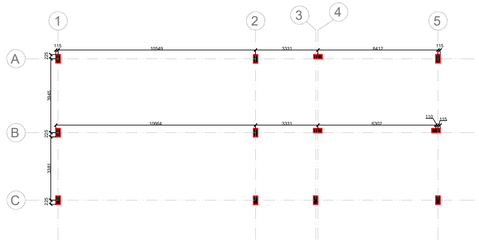


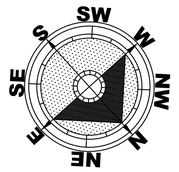


CENTER LINE PLAN

WORKING DWG

ALL DIMENSION ARE IN MM

SCALE = 1 : 200



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