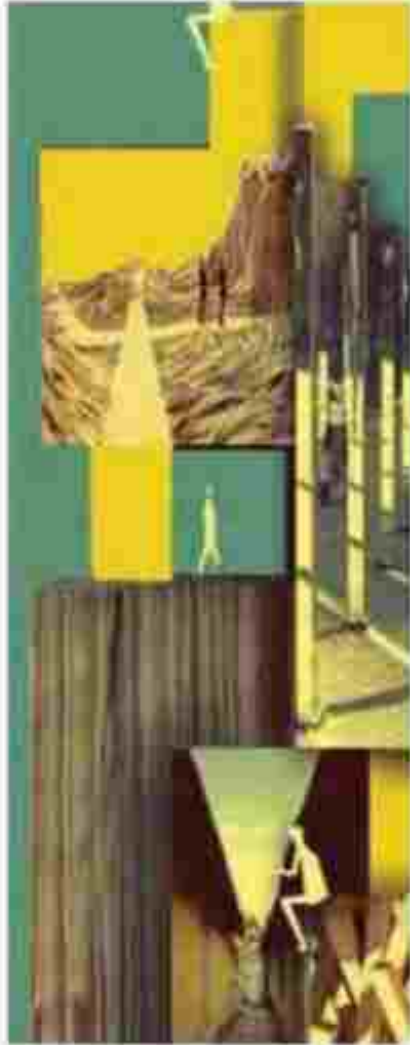


**P  
O  
R  
T  
F  
O  
L  
I  
O**

**ARCHITECTURE AND DESIGN**



**SELECTED WORKS FROM ACADEMICS AND EXPERIENCE 2018-2023**



PRITI BHUSHAN DEOGHARE

+91 914639675  
deogharepriti@gmail.com  
03\_priti  
Nashik, Maharashtra

EDUCATION

KAMLA RAHEJA VIDYANIDHI INSTITUTE FOR ARCHITECTURE AND ENVIRONMENTAL STUDIES, MUMBAI (2018-23)  
HPT ARTS AND BJK SCIENCE COLLEGE, NASHIK (2016-2018)  
ADARSH ENGLISH MEDIUM SCHOOL, NASHIK (2003-2016)

HEY PRITI HERE! I AM A PASSIONATE ARCHITECT WITH AN EYE FOR DETAIL. I AM CREATIVE AND LIKE TO KEEP ON EXPLORING DIFFERENT FORMS OF DESIGNS. I ALSO LIKE TO RESEARCH ABOUT VERNACULAR ARCHITECTURE AND IS CURIOUS ABOUT LEARNING NEW TECHNIQUES IN THE SAME. I HAVE 6 MONTHS' WORK EXPERIENCE AT MOSAIC ARCHITECTURE DESIGN FIRM, SET DESIGNING AND INTERIOR DESIGNING. I HAVE ALSO WORKED FOR A COMIC AND IS INTERESTED IN INDUSTRIAL DESIGN TOO. I AM GOOD AT ILLUSTRATION, GRAPHICS AND REPRESENTATION. I MANAGE MY TIME EFFECTIVELY. I LIKE TO SOLVE PROBLEMS, CHALLENGE MYSELF AND EVOLVE AS A DESIGNER.

SKILLS



OTHER SKILLS

MODEL MAKING, HAND DRAFTING, INKING, HAND SKETCHING, WATER AND OIL PAINTING, PLAYING GUITAR, UKELELE, KALIMBA, MUSICAL KEYBOARD

LANGUAGES

ENGLISH, HINDI, MARATHI

WORKSHOPS:

- THE OBJECT IN THE MUSEUM (NISHA NAIR)
- ECOLOGICAL DESIGN (ANURAG TAMHANKAR) (ANAND PENDHARKAR)
- URBAN ECOLOGY (ANAND PENDHARKAR)
- DESKTOP PUBLICATIONS AND PRESENTATIONS (ANKUSH CHANDAN)
- BIM WITH ARCHICAD (SHIVANG RAJIV)
- FIVE FUTURES: SOCIAL THEORY AND SCIENCE FICTION (HUSSAIN INDOREWALA)
- URBAN SPACES (ANDRE BAPTISTA)
- WAYS OF SEEING AND DRAWING (VISHVA SHROFF)

OTHER INTERESTS

ADVENTUROUS SPORTS, MARTIAL ARTS, PAINTING, SKETCHING, PLAYING MUSICAL INSTRUMENTS, CRAFTS.

WORK EXPERINEECE

- MOSAIC GOA, NOV 2022- MAY 2023
- ONLINE SANCTION DRAWINGS
- RESIDENTIAL PROJECTS, APRIL 2022-NOV 2022
- FREELANCING, MAY 2023
- CYBER CRIME COMIC BOOK. (PATHIK MUNI)
- SET DESIGNING PROJECT (MET COLLEGE)

ORGANIZATION

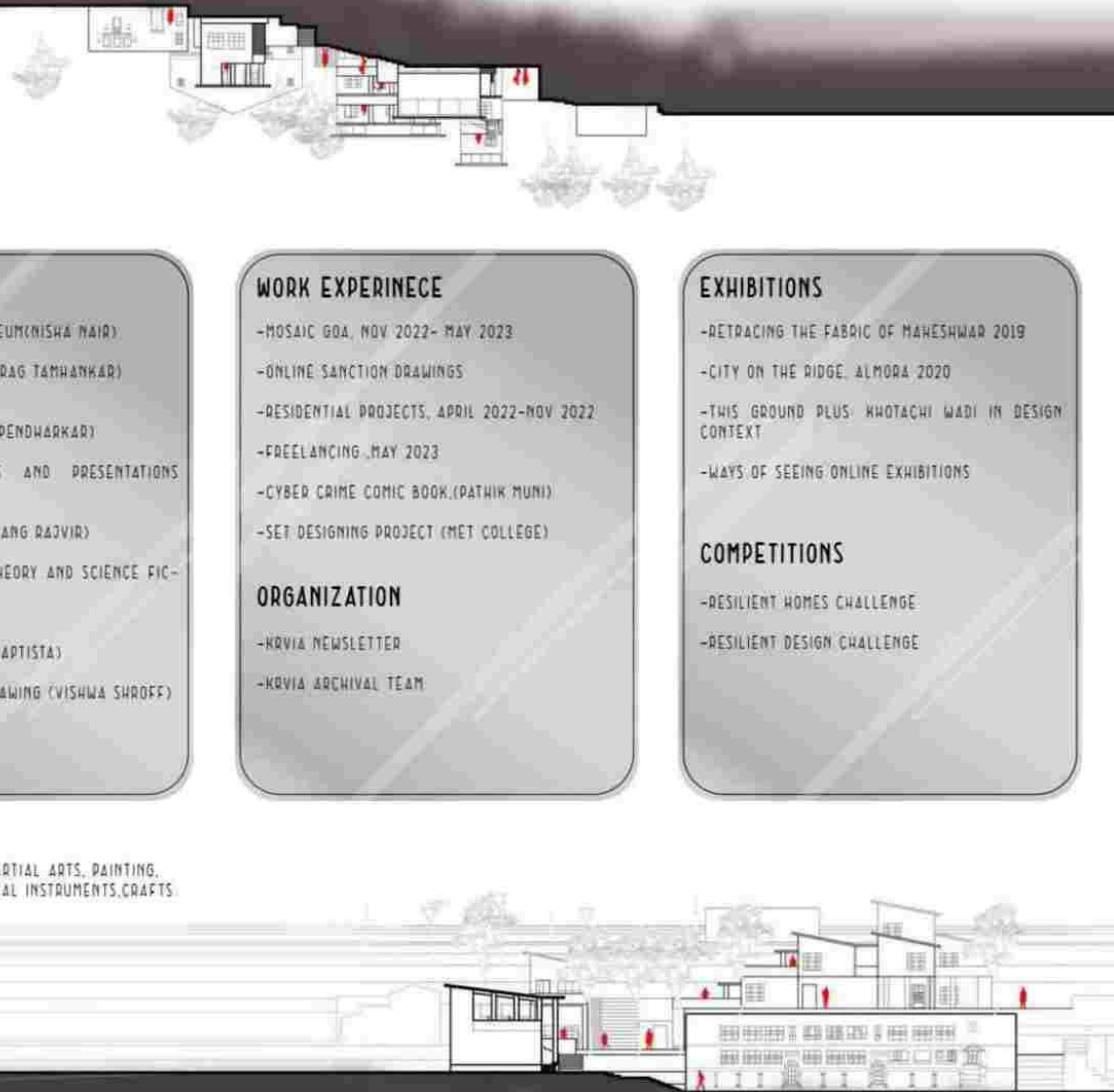
- KRVA NEWSLETTER
- KRVA ARCHIVAL TEAM

EXHIBITIONS

- RETRACING THE FABRIC OF MAHESHWAR 2019
- CITY ON THE RIDGE, ALMORA 2020
- THIS GROUND PLUS: KHOTACHI WADI IN DESIGN CONTEXT
- WAYS OF SEEING ONLINE EXHIBITIONS

COMPETITIONS

- RESILIENT HOMES CHALLENGE
- RESILIENT DESIGN CHALLENGE





07

**DESIGN PROJECTS -**  
Academic year  
2018-23

- Community on Go
- Journey of Mithi River
- City and the riverfront
- Democratic Architecture
- Study of Neighbourhood

68

**WORK EXPERIENCE-**  
(Internship)

- Spandan Banerjee
- Edwin Saldhana
- Maker's Asylum
- Jacob Neelam

78

**SCALED MODELS/  
PHYSICAL  
MODELS**

80

**DOCUMENTATION  
AND  
COLLABORATION**

83

**MISCELLANEOUS**



# DESIGN PROJECTS - ACADEMIC

## YEAR 2018-23

SELECTED WORKS

07

Community on Go  
-not by choice but by context

44

Journey of Mithi River  
-River to Sewage drain to river

47

City and the riverfront  
- case study of Nashik  
-Farming Institution

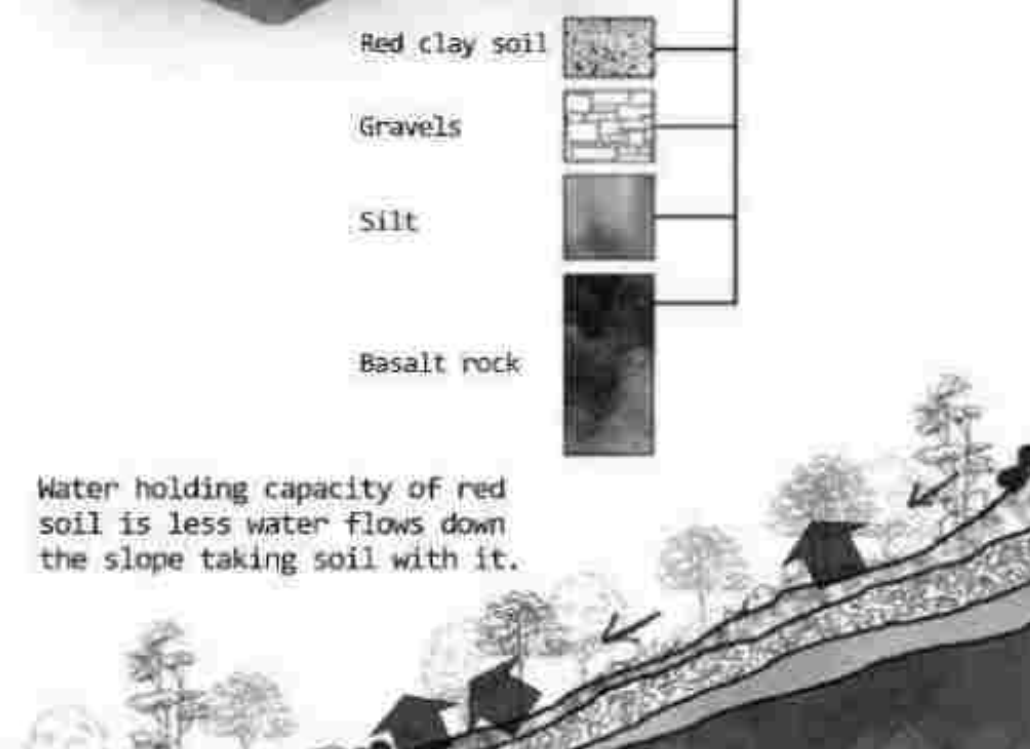
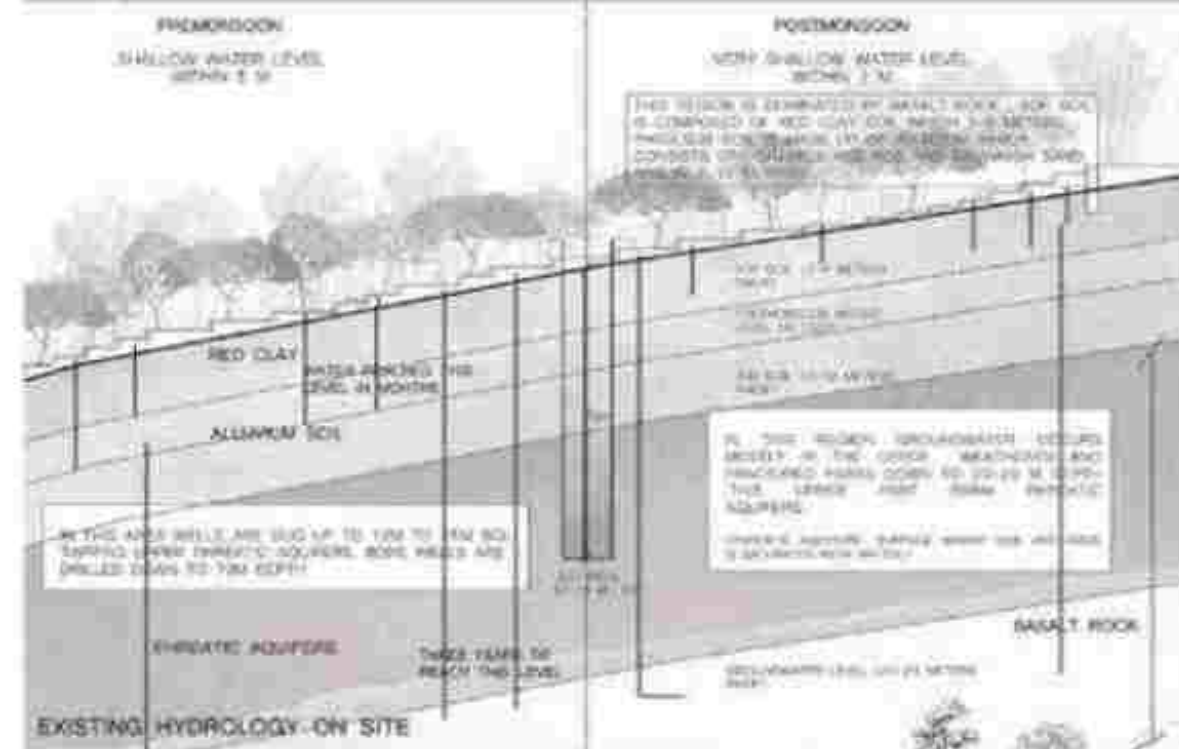
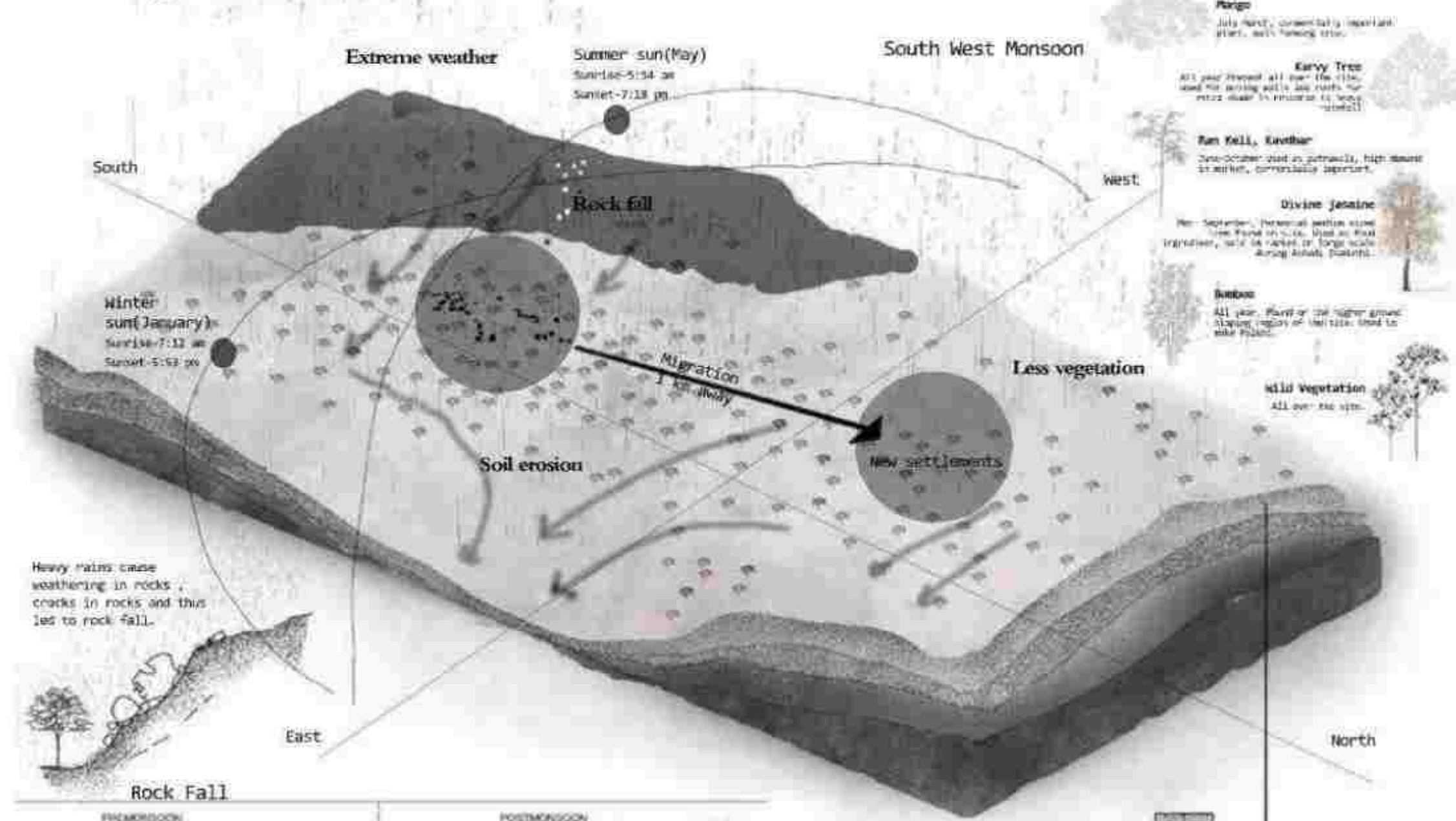
56

Deomcractic Architecture  
-Ward office building  
-Inside outside of space

60

Study of Neighbourhood  
-Biomimicry research centre

### Existing site conditions



Heavy rainfall lead to erosion of soil thus leading to landslide.





## COMMUNITY ON GO - NOT BY CHOICE BUT BY CONTEXT

Undergraduate Thesis project  
Guide- Swati Shehadri

Natural disaster is the occurrence of an extreme geophysical, atmospheric and hydrological hazardous events that impacts on communities causing damage, disruption and casualties and leaving the communities unable to function normally without outside assistance. Vulnerability to natural hazard is on the rise, it is an increasing source of concern for the community.

Landslides are more widespread than any other geological event and can occur anywhere in the world. Landslides accompany heavy rains or follow droughts, earthquakes, and volcanic eruptions. Landslides contributes about 30 % of the natural disasters. In India 12.6% of land area, excluding snow covered area, is prone to landslides. There is increase in landslides occurrence in hilly terrain because of climate change and global warming. With this increase in landslides there is loss of housing and there is a subsequent need.

Brahmagiri is a mountain range in the Western Ghats of Maharashtra which experiences landslide once a year and rock fall every other day especially in monsoon. Brahmagiri is the first peak of Sahyadri's and is 1298 meters high from mean sea level. This region sits in seismic zone III and experiences heavy rainfall which had caused weathering of rocks and cracks in them. This hill is composed of Basalt rock and red soil which is impermeable and leads to erosion of soil and thus triggers landslides.

Design thesis aims to study landslides and create a relation with a land where the structure and land both can co-exist through the lens of architecture. The idea is to look at a structure or design that at present deals with landslides and in the future adapts the climate change. How lightly can the structure be placed on earth? What will be the language of architecture in the present and the future given the context of natural calamity? Thesis focuses on learning construction techniques to develop future landslide resilient house.

*This thesis project is about the study of vulnerable natural terrain and studying of various methods of dealing with it through the lens of landscaping as well as structurally. To reach the conclusion as to why vulnerable terrains a thorough study of climate change and its effects on rising disasters was done.*





## Predictions

- » By 2050 world population will exceed at least 9 billion and by 2050, the population of India will exceed that of china
- » Climate models predict that earth's global average temperature will rise an additional 40C during 21st century if greenhouse gas levels continue to rise at present levels.
- » Climate change is predicted to impact regions differently – temperature increase are expected to be greater on land than over oceans and greater at high altitude than in tropic and mid-latitudes.
- » Thus, hilly regions will experience more temperature rise.
- » Warmer temperature will cause changes to other aspects of climate such as rain, snow and clouds. They are also causing changes to the ocean, life, ice and all other parts of the earth systems.
- » Temperature rise will cause more evaporation and will lead to more precipitation.
- » Global average precipitation can increase by 7% for each degree of warming.
- » A warmer climate will cause sea level to rise via two methods melting glaciers and ocean water expansion.
- » Since 1880, sea levels have risen about 0.10 to 0.20 m
- » By the year 2050, sea level will rise an additional 0.25 to 0.3m and by 2100, sea level rise is expected to rise by 2.1 m

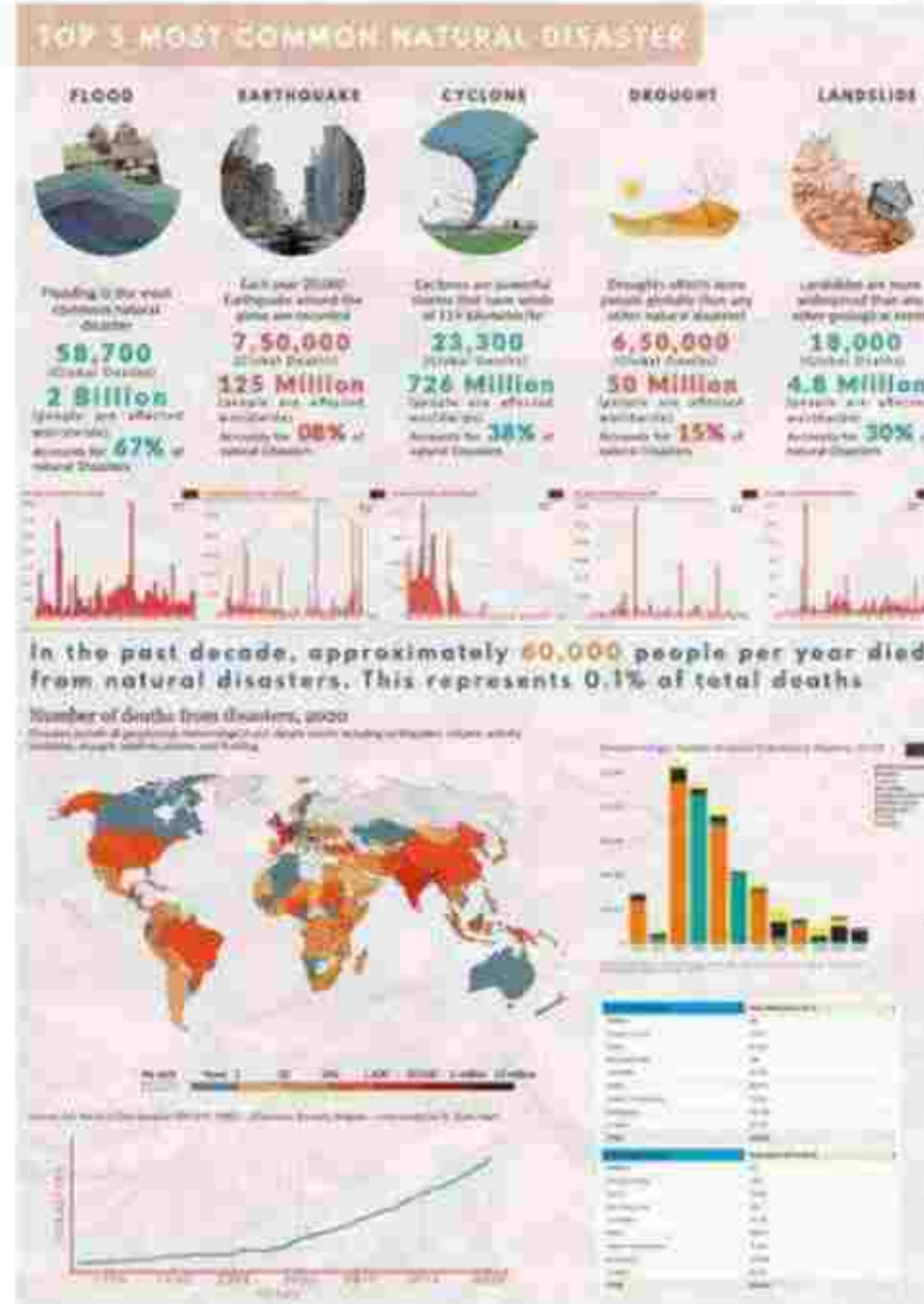
## Evidence

- » Maps depict projected sea level rise in 2030, 2050 and 2100 showing impacts on dense urban development of major cities of world like Mumbai, Chennai, in India, Haiti, Florida, Kiribati, Jakarta, etc.
- » A Lagos city in the Nigeria is already experiencing hot climate and droughts.
- » Haiti the hurricane happening are now wetter and more intense due to climate change. The landscape here is heavily deforested because of frequent hurricane and is now also experiencing landslides.
- » Kiribati- Kiribati is now already six feet above sea levels and is experiencing regular floods.
- » Antarctica have lost 2.71 trillion tons of ice from 2002 to 2020.
- » Forests fire of Australia and Uttarakhand in India are examples of rise in global temperature rise
- » Cities like Netherlands have already started building floating cities because of sea level rise.

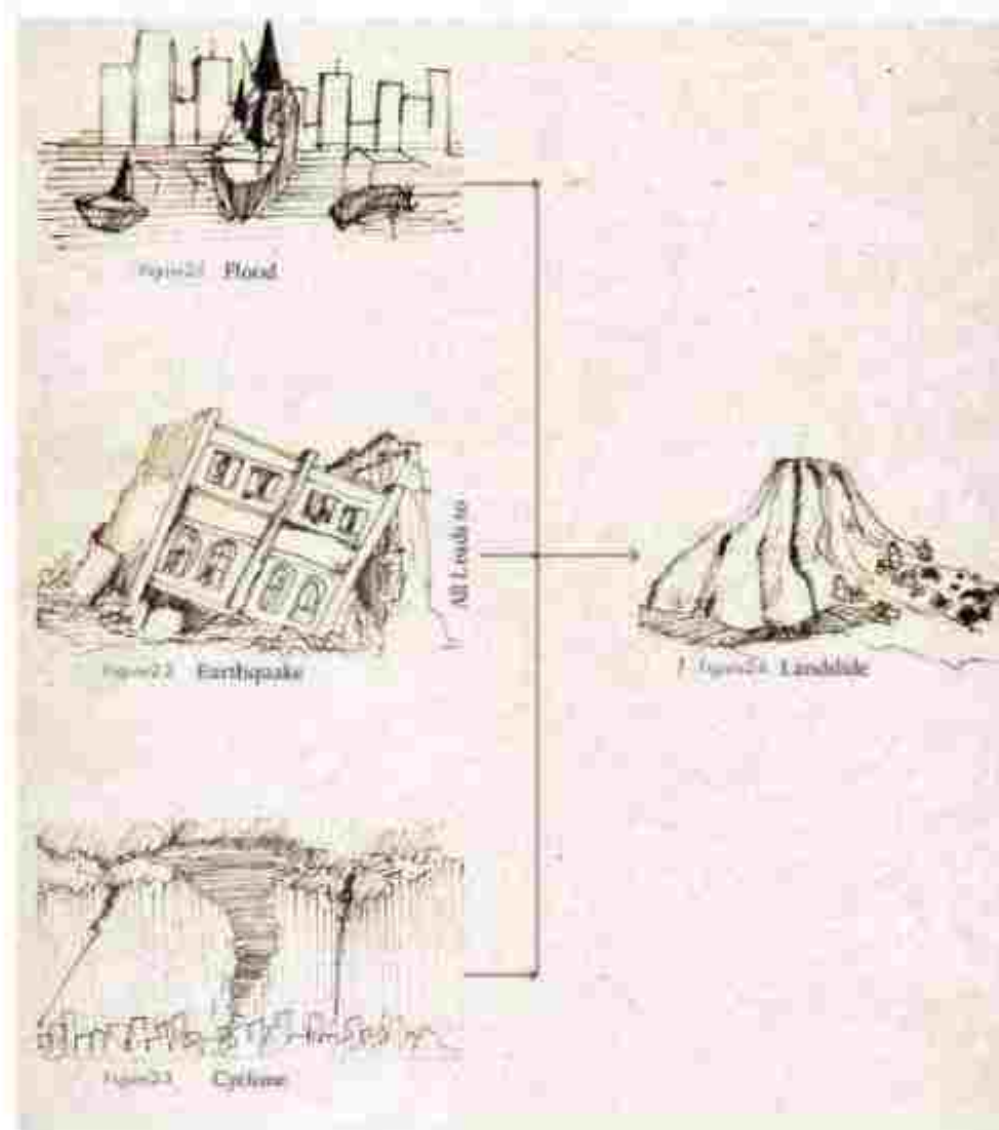
## GLOBAL DISASTER TIMELINE



## NATURAL DISASTER TIMELINE OF INDIA



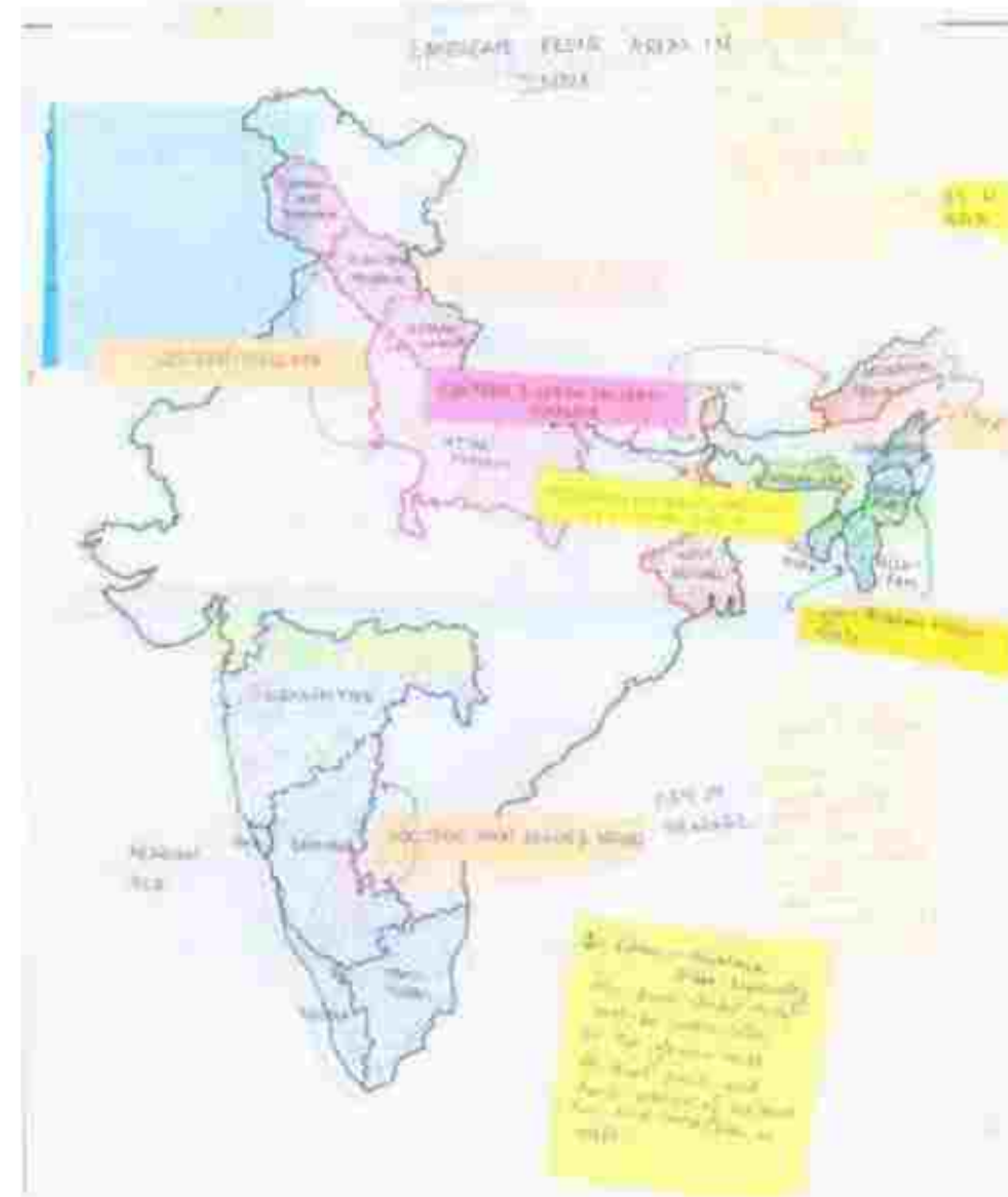
To understand rising frequency of disaster different timelines were studied globally and of India. Based on the research of timelines, predictions and evidences natural terrains was the main them of my thesis and how to build sensitively on such terrains was the intent of this thesis.



Vulnerable terrains which combat with landslides were briefly examined. Western Ghats is one such zone which have very challenging landscape and Maharashtra have recorded the largest numbers of natural terrain disasters in the recent years. Taking Malin as a case study a site with similar conditions was chosen so as to provide an alternative to avoid future devastation.



Landslide, a natural hazard in mountain areas, can cause extensive damage to life and property. India has areas which are prone to landslides. The most affected area are Jammu & Kashmir, Himachal Pradesh, Garhwal Himalayas, North East Himalayas, Western Ghats and Nilgiri Hills. The Western Ghats region is tectonically more stable and has less frequency of tremors and landslides due to it. Therefore the causes of landslides in the Western Ghats are different from the Himalayan region in terms of geo tectonic. Western Ghats is comprised of basalt rocks. These rocks have great resistance to erosion and denudation and result in fewer landslides due to differences in rock composition. The Western Ghats are less susceptible to Earthquakes and have fewer Earthquake-induced Landslides. Extensive quarrying in the Ghats, changes in land use, increase in rubber and other plantations and tourism where structures are being built are now resulting in landslides.



to steep hill slopes, overburden, and high intensity rainfall. The Western Ghats, exhibited numerous scars of landslides due to their location in a zone of high intensity rainfall and oversaturation of over burden material. Many mountainous regions in the tropics witnessed extreme orographic rainfall episodes in the recent past. The portions of the Western Ghats that fall on the Kerala state also experienced extreme climatic conditions in floods and landslides in 2018 and 2019. More than a thousand small and large landslides occurred during that period in the State's Western Ghats regions. The landslide at Kavalapara in the Malappuram district in 2019 is at the top in the state regarding the casualties, financial loss, and spatial spread



Maharashtra experiences 10000 landslides approximately from past 4-5 years. Maharashtra consist of some very high ranges from Western Ghats such Kalsubai, Mahabaleshwar, etc. which are experiencing landslides and are causing harm to nearby areas too. And this number is increasing day by day with the rise of global warming. Pune, Raigad, Nashik and Mumbai are most vulnerable site in Maharashtra which experiences landslides. 30% land in Maharashtra is under landslide prone zone.



Karnataka have experienced 993 landslides during last 4-5 years. In the last few years, landslides have become a common sight in many parts of Karnataka during the monsoon season, especially in the areas covered by the Western Ghats. Between 2015-2022, Karnataka had reported 194 landslides. The topography of the region is sensitive and any changes in the land use causes landslide or slope failures affecting the population.



Kerala experienced 5,191 landslides during last 4-5 years. Kerala stands second in the list of areas experiencing landslides. Out of 3782 landslides 2,239 landslides were recorded in Kerala from 2015- 2022. 43% of the total land in Kerala in under land slide prone-zone. Majority of the movements has occurred in hill slopes. Year 2018 recorded 80 landslides and 2019 recorded 341 landslides.

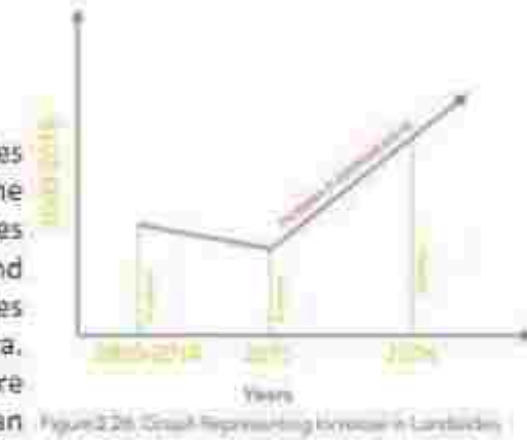


Tamil Nadu experienced 606 in last 4-5 years. Nilgiris in Tamil Nadu have extensive history in Landslides. It's the most affected area in South of India. Past 2-3 decades experienced 5 major landslides. Landslides here mostly happened because of plantations of crops which lead to 70 % of loss of original forest land. 1902, 1978, 1993, 2001, 2006, 2009 are notable years for landslides in the history.



### Maharsashtra

As mentioned earlier Maharashtra experienced 10000 landslides in past 4-5 years and this number is increasing day by day. In the beginning the reason was construction of Konkan railway lines but recently changing climate is causing more precipitation and have led to heavy rainfall and floods. This flood induced landslides are causing numerous deaths and destruction in Maharashtra. Some areas experience are too vulnerable to landslides where the option is to displace people but at some places solution can be provided by building houses which are landslide resistant.



### Landslide Prone areas

Pune, Nashik, Ratnagiri, Raigad and Mumbai .Raigad and Pune are the most vulnerable zones experiencing landslides. Whereas Nashik and Ratnagiri are moderate zone and Mumbai rarely experiences landslides

**ELEVATIONS**

- NASHIK-587M
- PUNE-557M
- MUMBAI-6M
- RAIGAD-475M
- RATNAGIRI-19M



The number of landslides could be traced from 2000 to 2019. (Refer our 5th semester file for the period 2000-2019 see table for the detailed data)

- The date of the earliest landslide in the 41 is on 12 July 2000. The period 2000-2019 had 31 events.
- The year 2015 had eight events.
- The year 2019 recorded 30 events.

Taking Malin as a case study a site with similar conditions was chosen so as to provide an alternative to avoid future devastation.





## SITE CONTEXT

Brahmagiri is a mountain range, situated in Nashik in the Western Ghats of Maharashtra. Brahmagiri hill is composed of undulated terrain and is rich in biodiversity. It's the first peak of Sahyadri's and is 1298 meters high from mean sea level. The ranges of Brahmagiri meets to Kalsubai range which is the highest peak in Maharashtra. This hill is surrounded with by Basgarh fort, Harihar fort on its east, Trilanganwadi and Karnayi fort towards south, Anjaneri fort and Ranhjaneri fort towards west and Waghiera fort towards north. Bhandardurga fort is a part of Brahmagiri fort which is surrounded by two villages, Metghar Killa on its left and Godadwar village on its right. Both these villages are located 650 m above ground and on a sloping land in the valley Trimbakeshwar village is located which is famous religious place in Nashik District.

## WHY THIS SITE?

Local want government to cover the Brahmagiri hill with wire mesh. From all the sides.

But government says that it is such huge area of hill and it's practically impossible to cover it with mesh from all the side.

Also government says that even if we try to achieve the task of covering the hill with mesh, there are still chances of landslides in the area as the villages are situated on the slope and the soil here is already in poor condition, so the slope is bound to slide.

Thus government have asked locals to migrate and thus this village have received the migration order from the government.

But locals won't migrate as their main occupation is based in this area and they are attached to this place since their birth.

Also in this village locals have freedom to expand their houses or utilize the space in whatever way they want to use.

But once they migrate to a place provided by government they won't have freedom to build or expand houses.

Also locals don't have any other occupation than being a porter and they think it's their responsibility to guard the hill as their ancestors did.

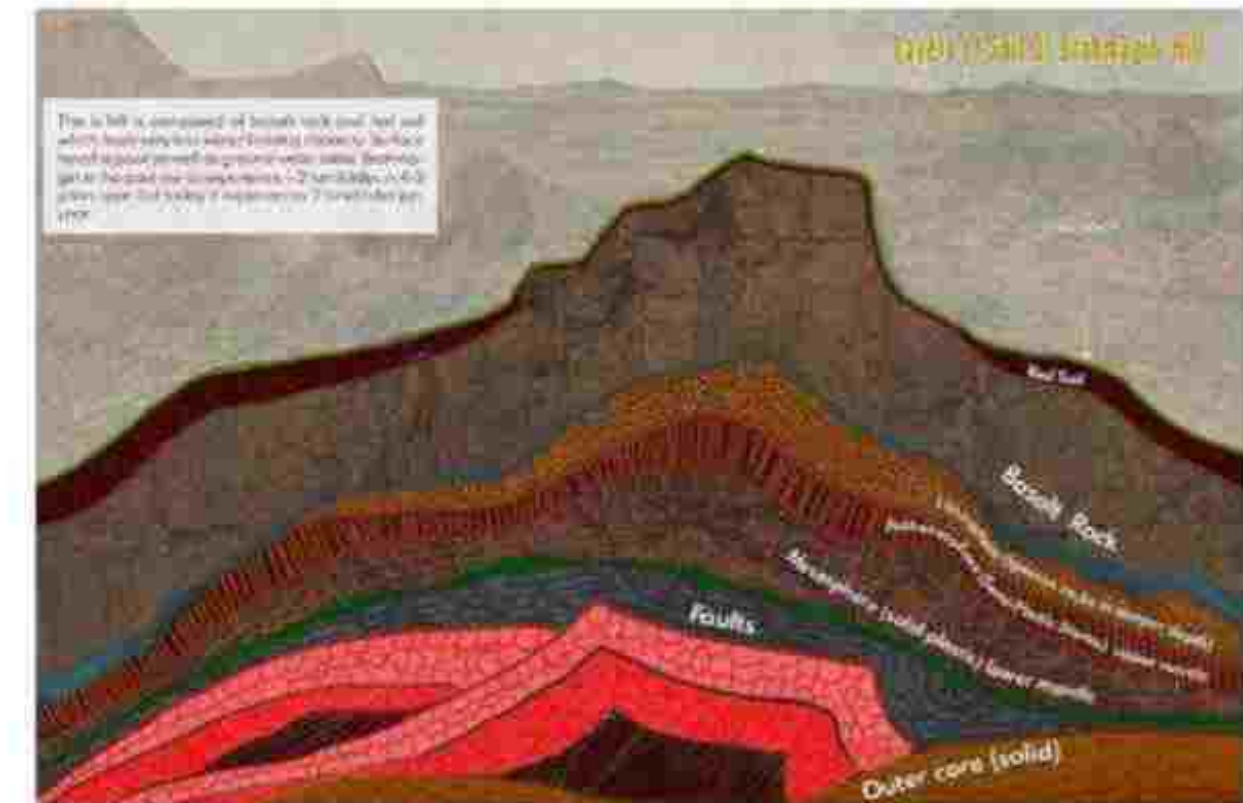
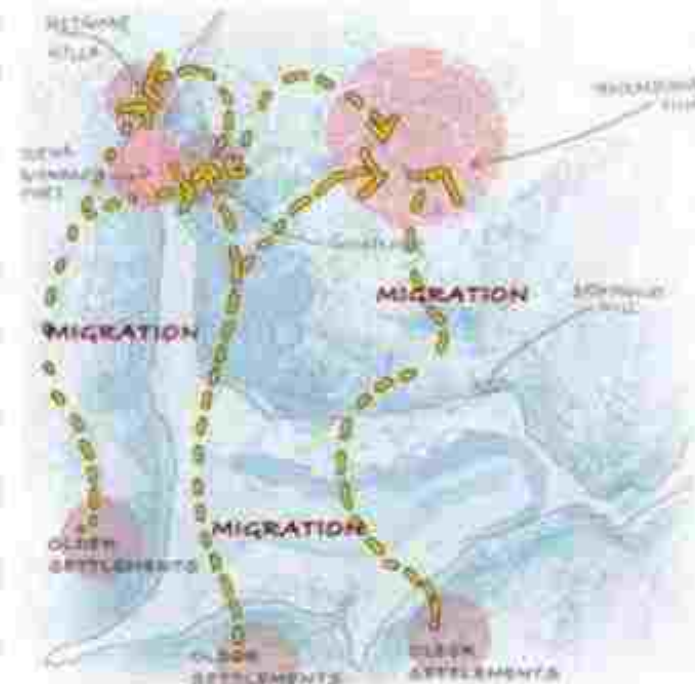
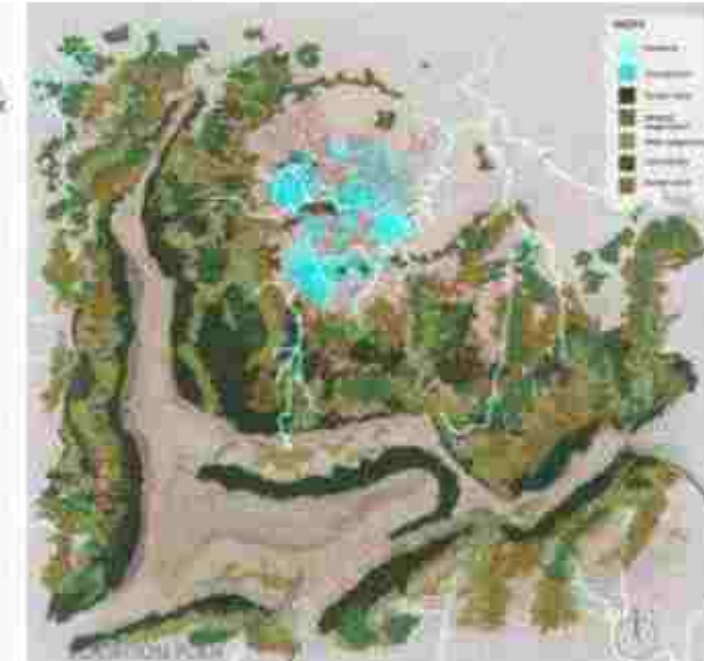
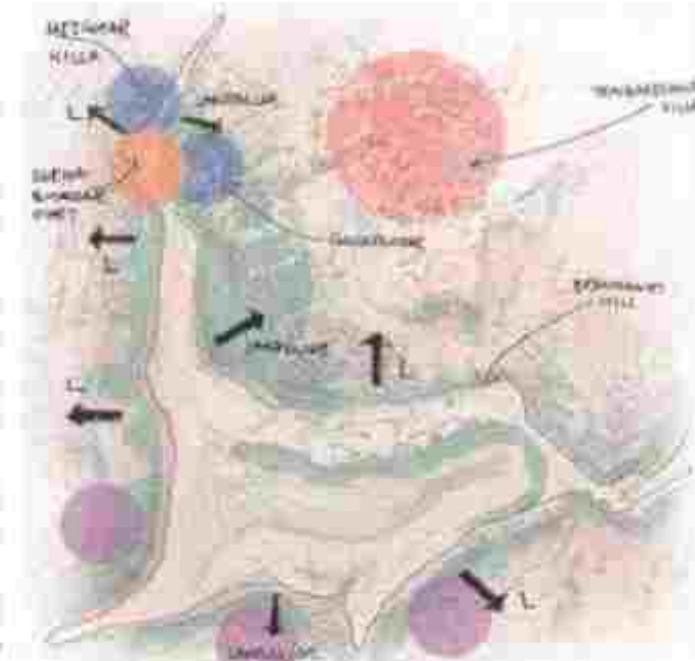
Thus in such situation how architecture will create a bridge between land and people?

How architecture can be integrated given the site condition?

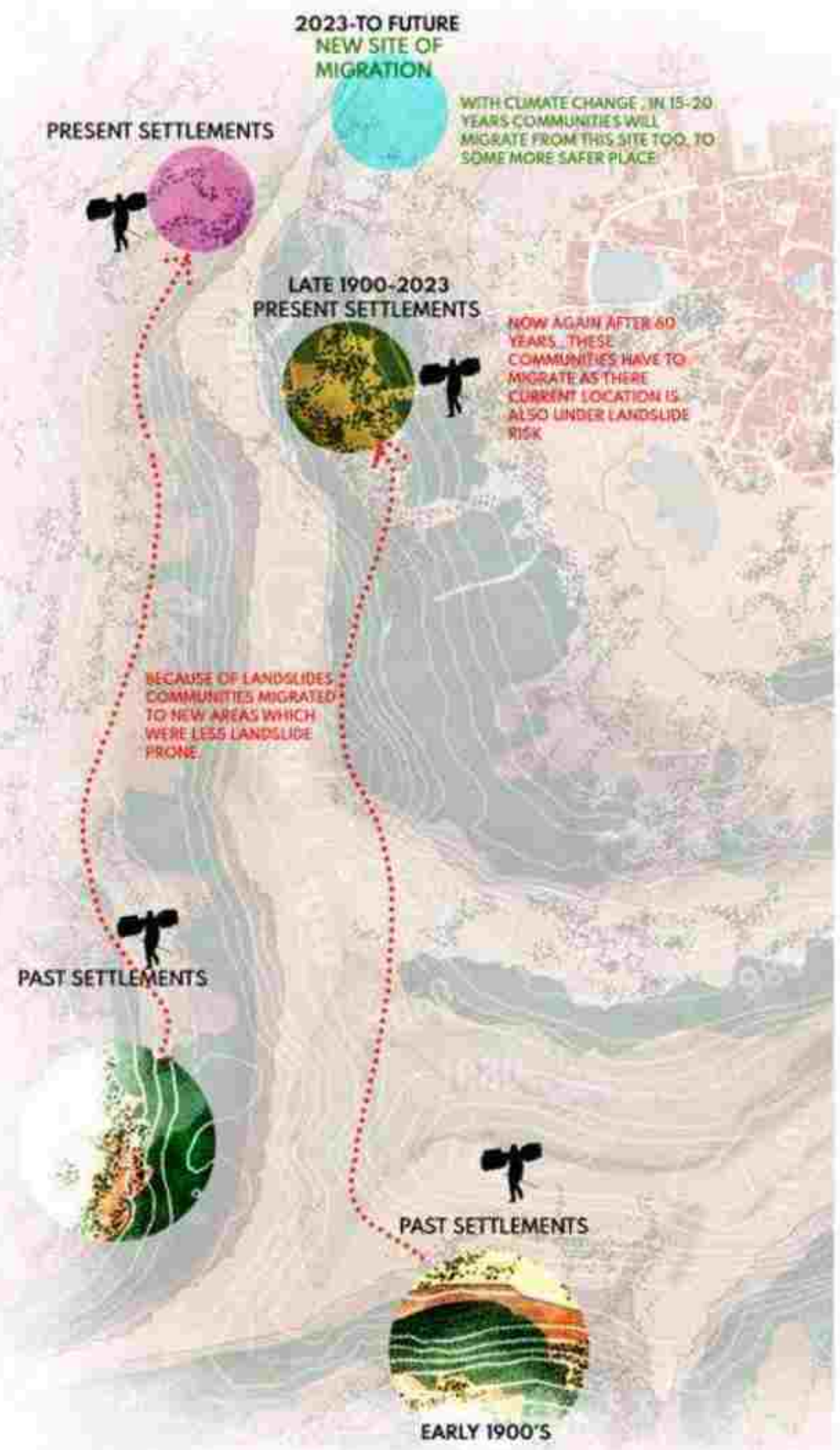
What type of design or technology can be used to avoid current and future landslides and climate problems?

How will architecture respond and how the structure be such that it will remaining as a monument or symbol even after years in future just like the existing temple are , so that tourism will also increase in future and will help villagers too?

The areas marked in blue and green captures most of the water and then led the streams to the Godavari River, Valtrana dam and the lakes in Trimbakeshwar village. A large part of this hill and nearby area is under forest reserve and farming. Rest of the area have wild vegetation grown all over the hill and open brown fields which have become unfertile by over farming. The Trimbakeshwar village is a floodplain zone as most of the water from the hill also accumulates here.



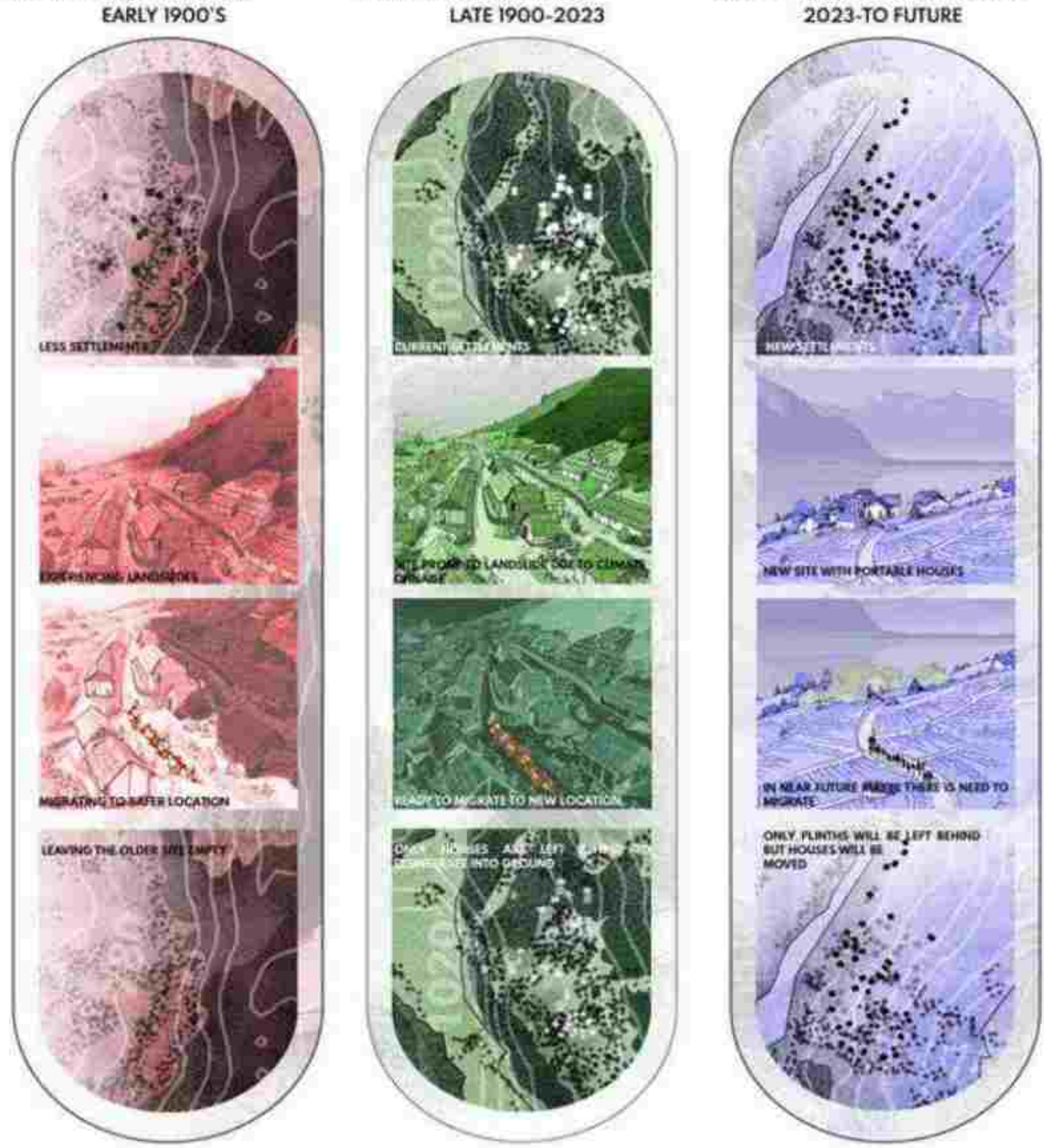




During Peshwa's regime communities used to stay on the rear side of the mountain which soon experienced landslide and these communities lost their houses and thus they had to migrate to Godadwar village and Metghar killa which are current present villages on the hill.

Due to Climate Change and ever rising Global warming these communities again have to migrate from Godadwar and Metghar village to new site as these site have become prone to landslides. But these communities don't want to migrate as their livelihood is based here.

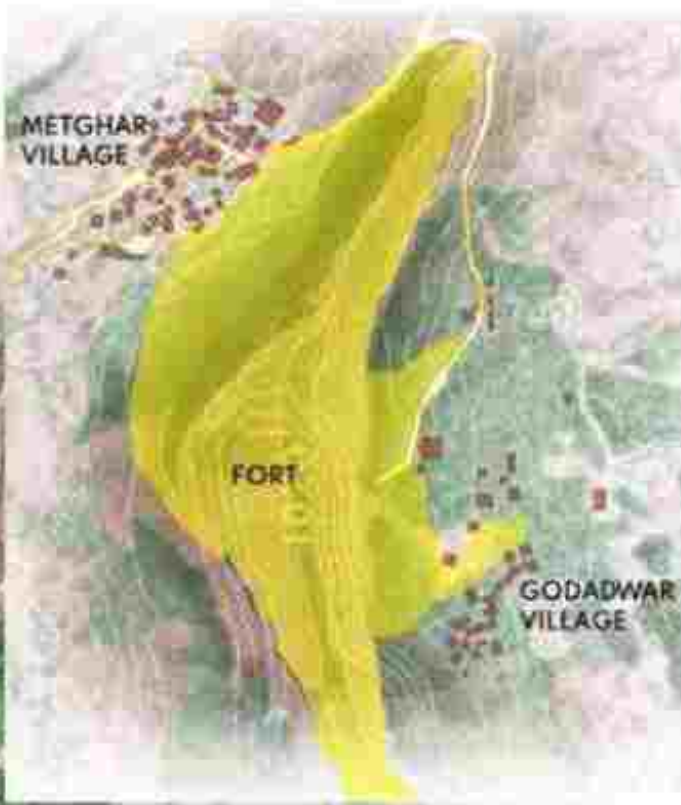
The communities from Godadwar and Metghar village were not having resources and idea as to what to do if they migrate somewhere else and where to migrate, and also what to do with their houses. Providing a prototype will help communities to migrate even to any other location in future.



Rocks of this hill are very old and are already experiencing weathering. But the effect of climate change is speeding this process of weathering. This region is located in seismic zone II and in the past have experienced earthquakes which have caused cracks in the mountain. The foothill are experiencing mining and blasting activities which are also increasing the cracks in the mountain and thus leading to rock fall. As the soil is red soil its bearing capacity is less, groundwater table of the area is less and surface runoff is more so with heavy rainfall most of the soil goes down with water leading to landslides. The upper part of the hill is fully comprised of basalt rock and a thin layer of red soil. Timeline below shows how the rocks of the hill experienced weathering, and how the shape of the hill changed over the years. This change is evident in sections as well as in plan.

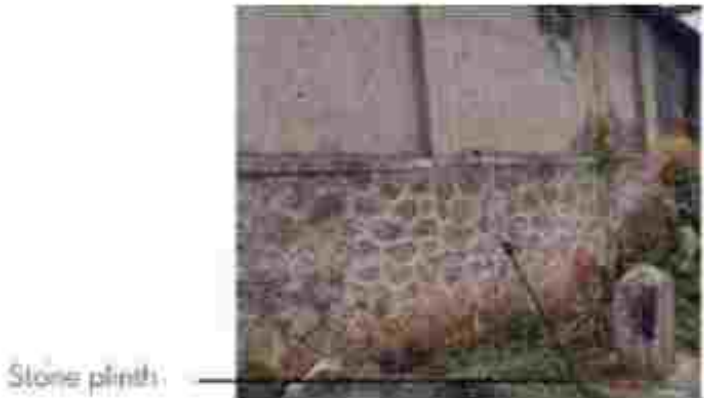






**MEASURES TAKEN BY LOCALS AGAINST LANDSLIDE IN THE REGION**

People of the Metghar Killa have built Retaining walls around the sloping land where they are situated right now. They have also tried to build strong stone plinths for their houses. But their roof and walls are not strong enough to resist any shock by landslides. People of Godadwar village have not taken any measure and just staying in brick wall houses. Some people are adopting RCC houses and steel roofs, but their base i.e. foundations are not strong enough to protect their houses during the time of landslides. This houses are built by villagers only who are have or are learning new construction technologies. But there are no other measure taken by villagers than building a retaining wall



**EXISTING HOUSING TYPOLOGY**

The houses of Metghar Killa and Godadwar village are usually brick houses with stone plinth. Earlier there were mud houses and today villagers are slowly slowly adapting to build cement houses. But some houses are still built in mud. These houses use traditional methods to protect their houses from extreme weather conditions. Around the mud wall there are thin walls made up of Karvy sticks which are woven into each other and thatched with leaves. This wall protects the mud and brick houses from heavy rains and prevents water from seeping into the house. During this leaved keeps the house colder once the water is sprinkled all over them. During winter the gap between the mud walls and the Karvy stick wall thatched with leaves acts as a cavity and provides warmth to the house.

The roofs are generally made out of bamboo and steel with mud tiles and some thatched leaves. Sometimes bamboos and steel both are used together to build roof. For some houses half cut bamboos are used and they even have gutter systems. The houses are simple rectangular houses with one partition wall which divides the space into kitchen and living room. The toilet, bathrooms and store rooms are outside the rectangular layout but are shaded with the roof. Sometimes when the number of family increases a thin wall 100mm thick is built out of bricks inside the house to create more partitions in the house. But sometimes kitchen is moved outside the house and the kitchen space is utilized as another room. They don't have any plumbing facilities. There is one well for the village from where they fill water for their daily needs.



**RCC HOUSES**



**BRICK WALL HOUSES**



**MUD WALL HOUSES**

Durgbhandar fort is a part of Brahmagiri hill and is surrounded by two villages Metghar Killa and Godadwar village respectively. There are tanks and two temples located at the top of the hill. There are steps to reach the top of the hill which are carved inside the basalt rock. Durgbhandar fort is facing climate change effects and have formed cracks in the rocks and is experiencing rock fall every consecutive day in monsoon. Communities from Metghar Killa and Godadwar village are facing landslides twice a year but not the major landslides. Due to this rock fall some houses have been damaged and people have also been injured and severely though. But Durgbhandar fort is under great risk as it is experiencing extreme weathers too and erosion and weathering too.



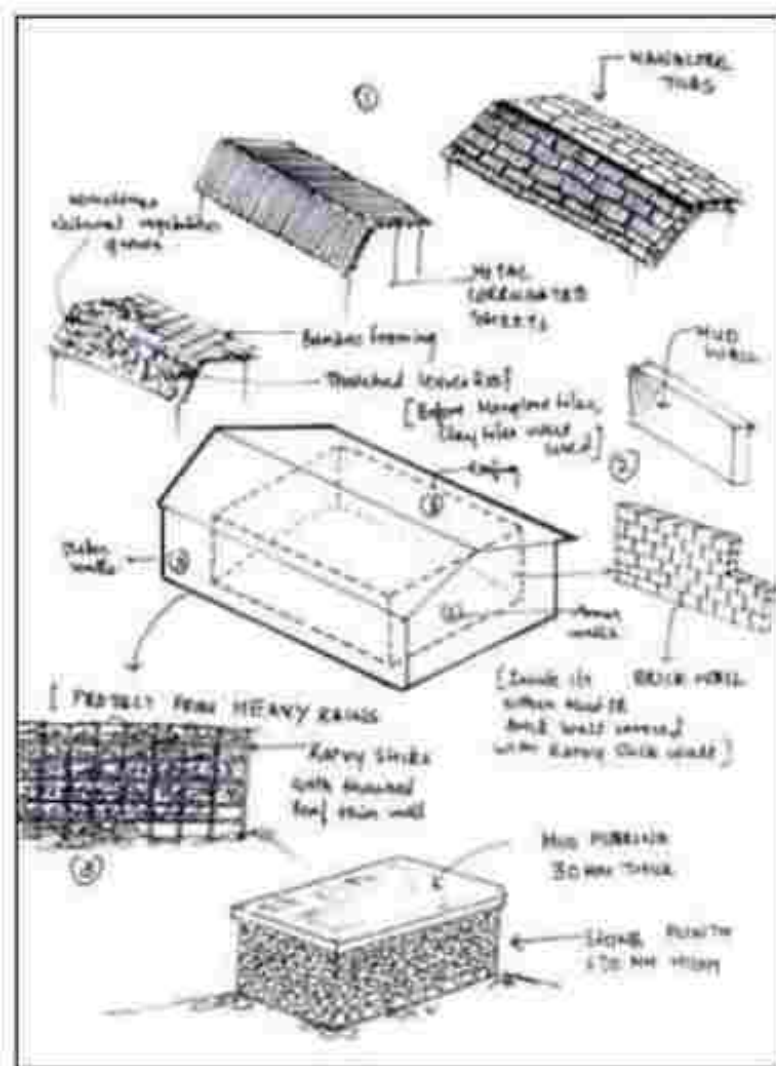
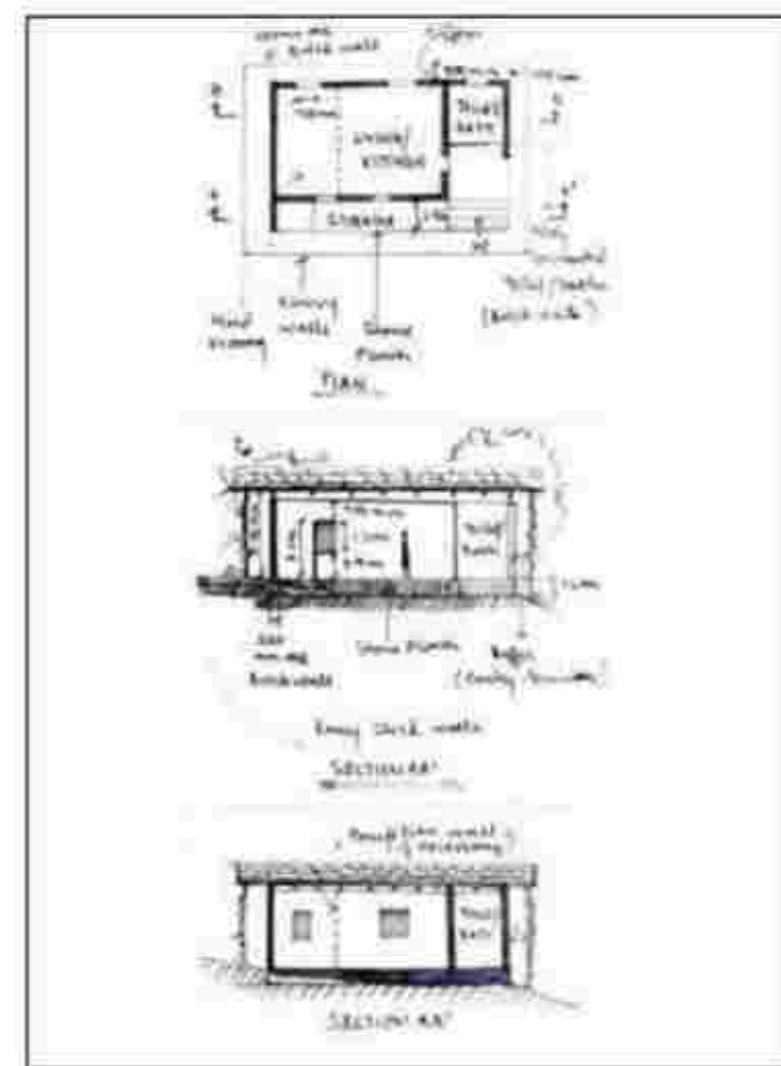
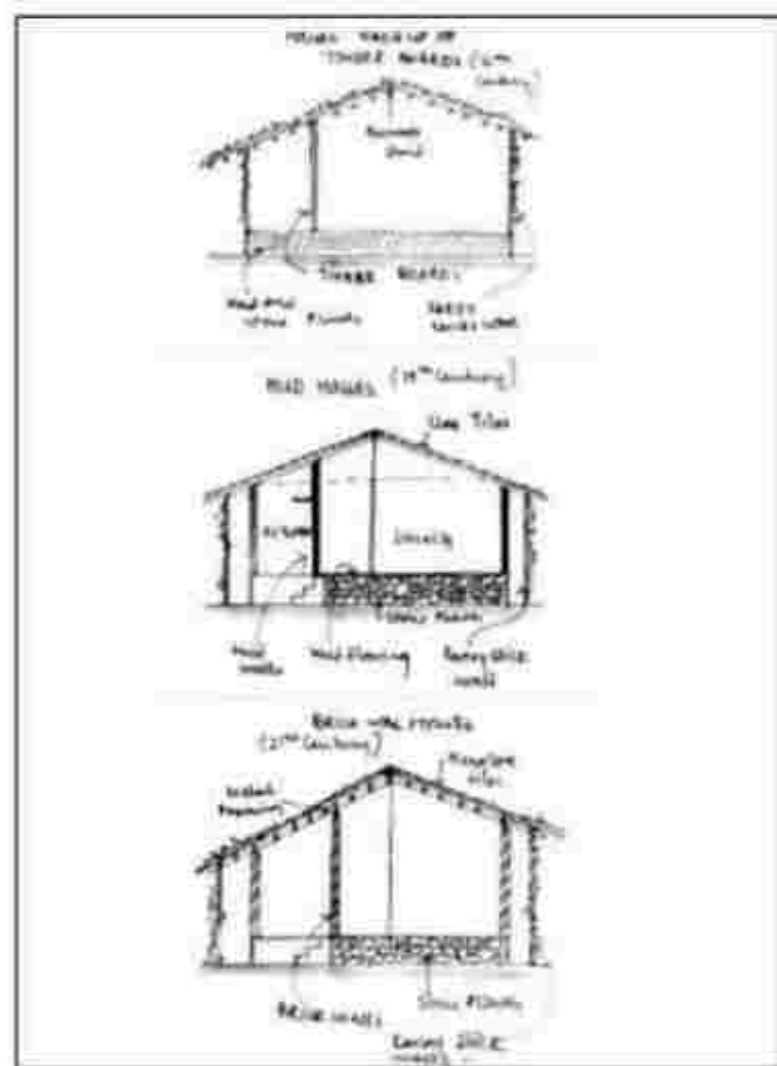


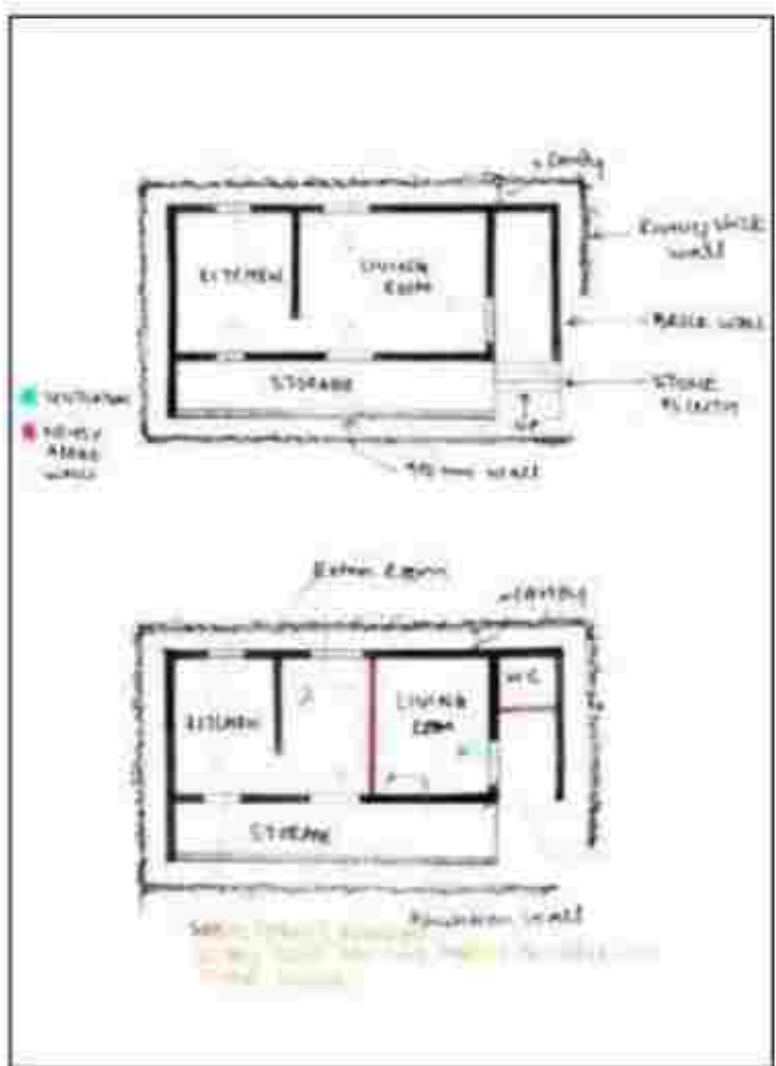
Diagram explaining components of the houses in Durgbandar Fort



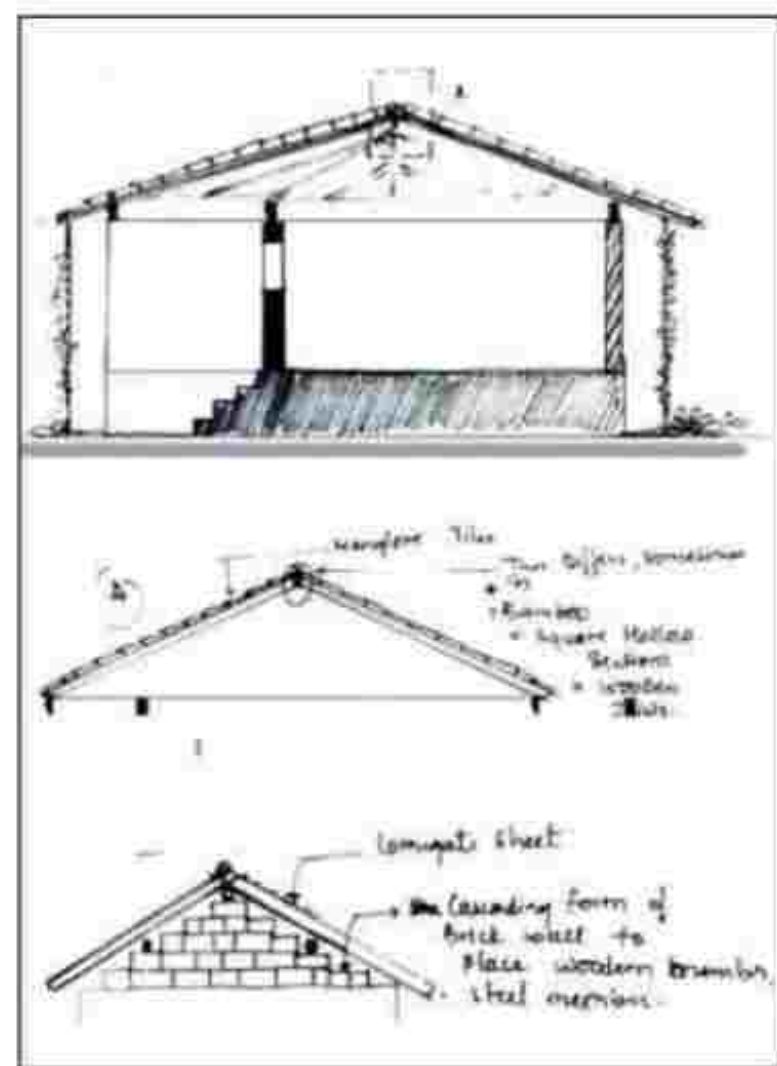
Diagrams explaining layout and Details of Houses in Durgbandar Fort



Diagrams explaining Evolution of Houses in Durgbandar Fort



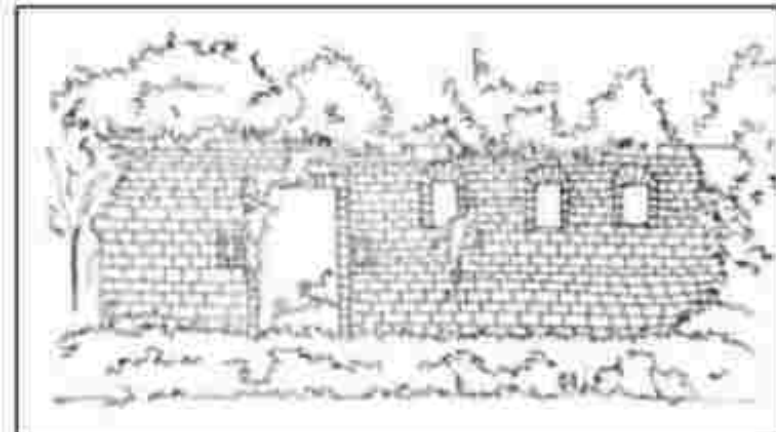
Diagrams explaining Planning of Houses in Durgbandar Fort



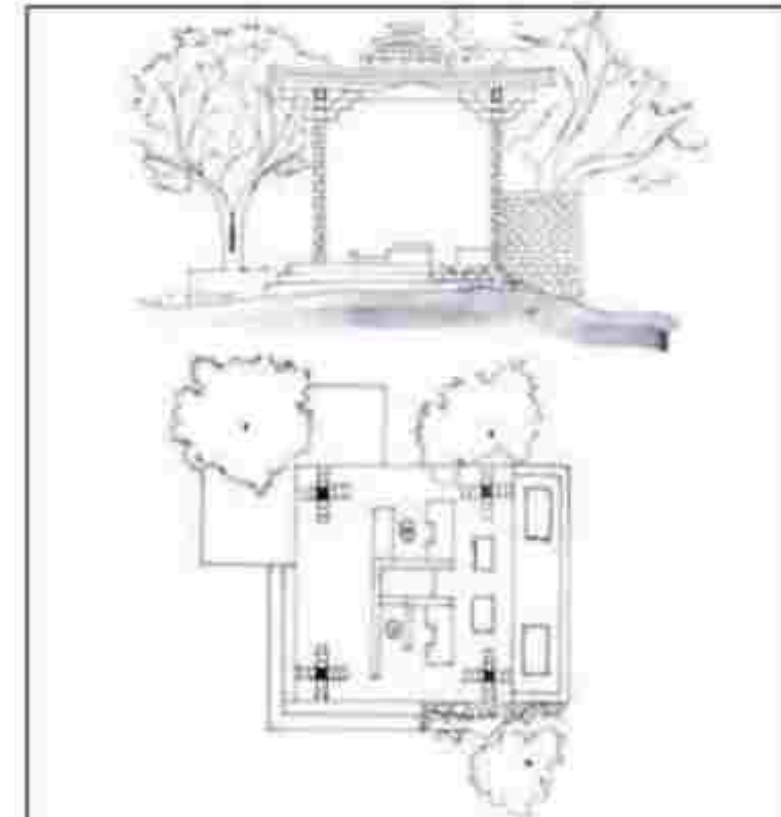
Diagrams Explaining Roofing System of Houses in Durgbandar fort

### RELIGIOUS IMPORTANCE OF BRAHMAGIRI HILL

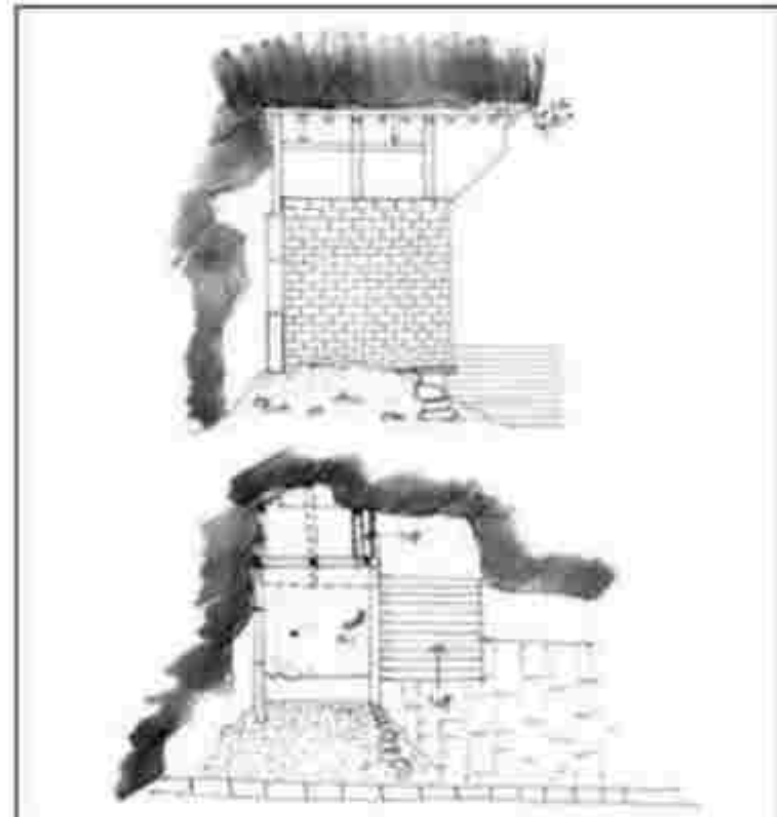
Lord Shankar was pleased with Lord Brahma when he meditated here and said "I shall be known by your name". Hence it is called as Brahmagiri. Five peaks of this mountain are called Sadyo-Jata, Vamdev, Aghora, Ishana and Tat-Purusha and are considered as five mouths of the Lord Shiva and they are worshipped. The water flows in three directions on the Brahmagiri Mountain. The one flowing towards east becomes Godavari River, one flowing towards the south is Vaitarna River and the one flowing towards the west is called the west-flowing Ganga and meets Godavari near Chakra Tirth. River Ahilya meets Godavari in front of the Trimbakeshwar temple.



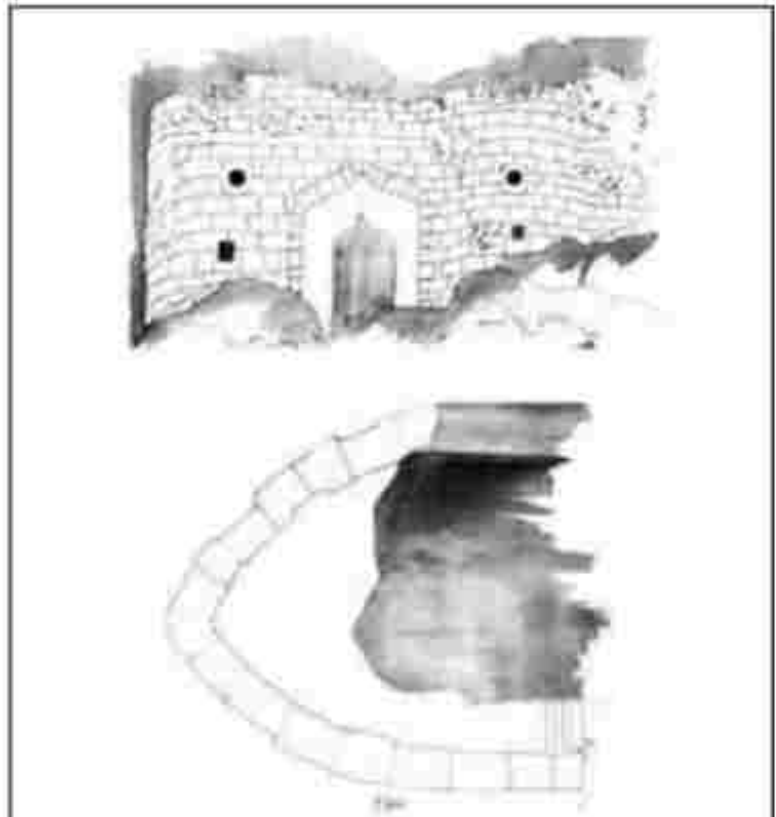
**OLD RUINED STRUCTURE**  
This structure is an abandoned rectangular shaped building which was used as a bath during Peshwa's time. The walls of this structure are 500 mm thick and is a load bearing structure made out of local stones. There are niches carved into this walls for storage purpose. There are wide three opening to this bath where the height of opening is 2.5m and the height of the whole structure is 3.7m. There is no roof or slab on the top to provide shelter and its open to sky.



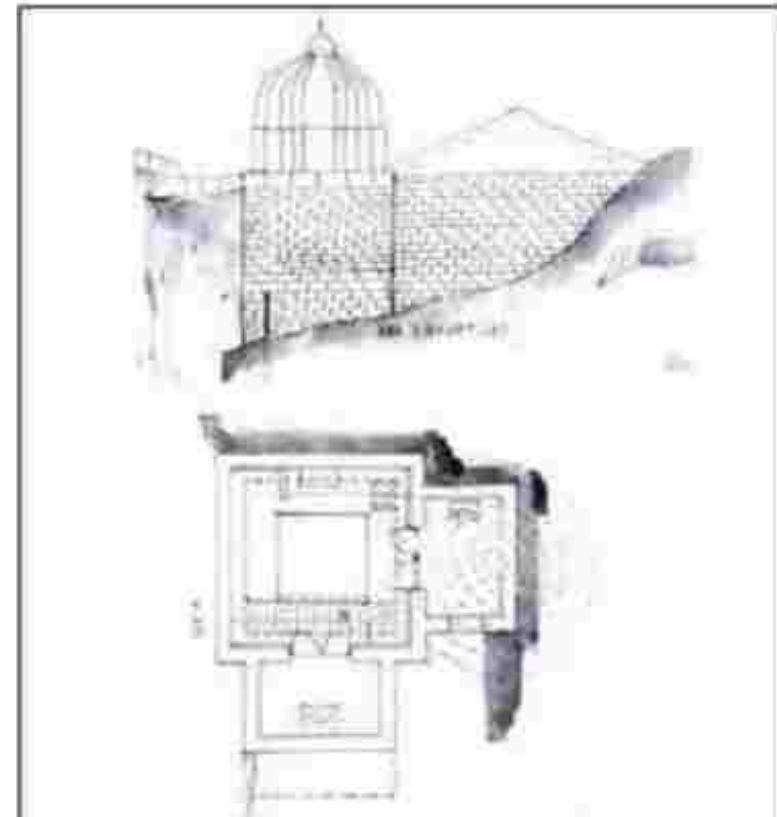
**MULGANGA TEMPLE**  
This is the oldest temple from build by Peshwa's during 15th century AD. This structure is a unique structure because of the form of its column and thickness of slab. This structure don't have any walls all around and is standing on 500x500mm thk stone columns. The structure span 6000x6000mm and the slab projects 450 mm beyond that 6000mm span.



**GODAVARI UGAMSTHAN MANDIR**  
One encounters this temple while climbing the steps to reach the top of the Durgabhandar fort. This temple is carved into the stone of the hill (the basalt rock). But to protect devotees while worshipping recently a shade has been put up on this temple. A 300 mm thk stone wall is built to support the steel posts which supports the roof. Corrugated metal sheet is used as roof which have steel farming. Three posts of this structure are nailed into the rock of the hill.



**OLD RUINED STRUCTURE**  
This structure is an abandoned rectangular shaped building which was used as a bath during Peshwa's time. The walls of this structure are 500 mm thick and is a load bearing structure made out of local stones. There are niches carved into this walls for storage purpose. There are wide three opening to this bath where the height of opening is 2.5m and the height of the whole structure is 3.7m. There is no roof or slab on the top to provide shelter and its open to sky.

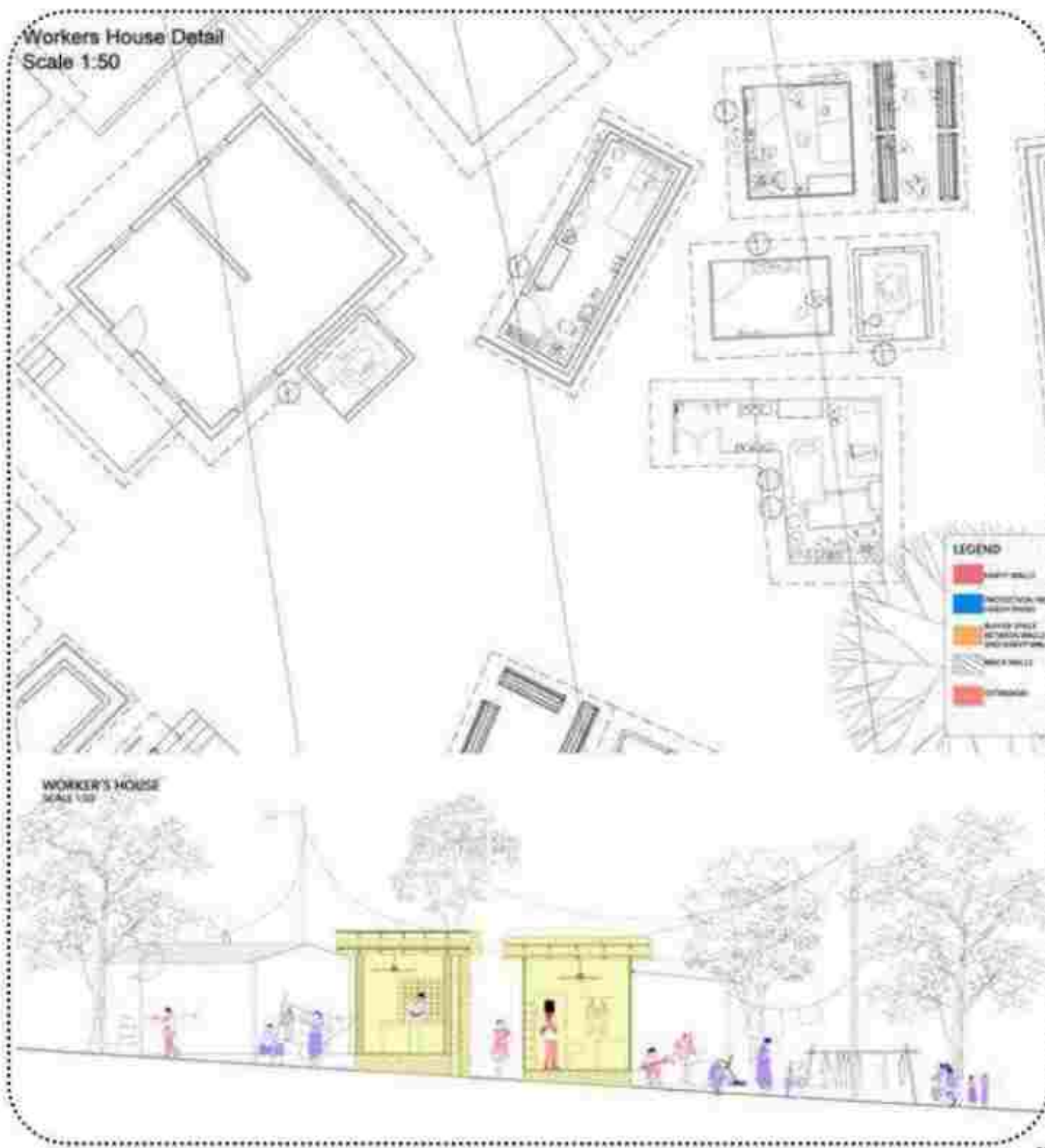
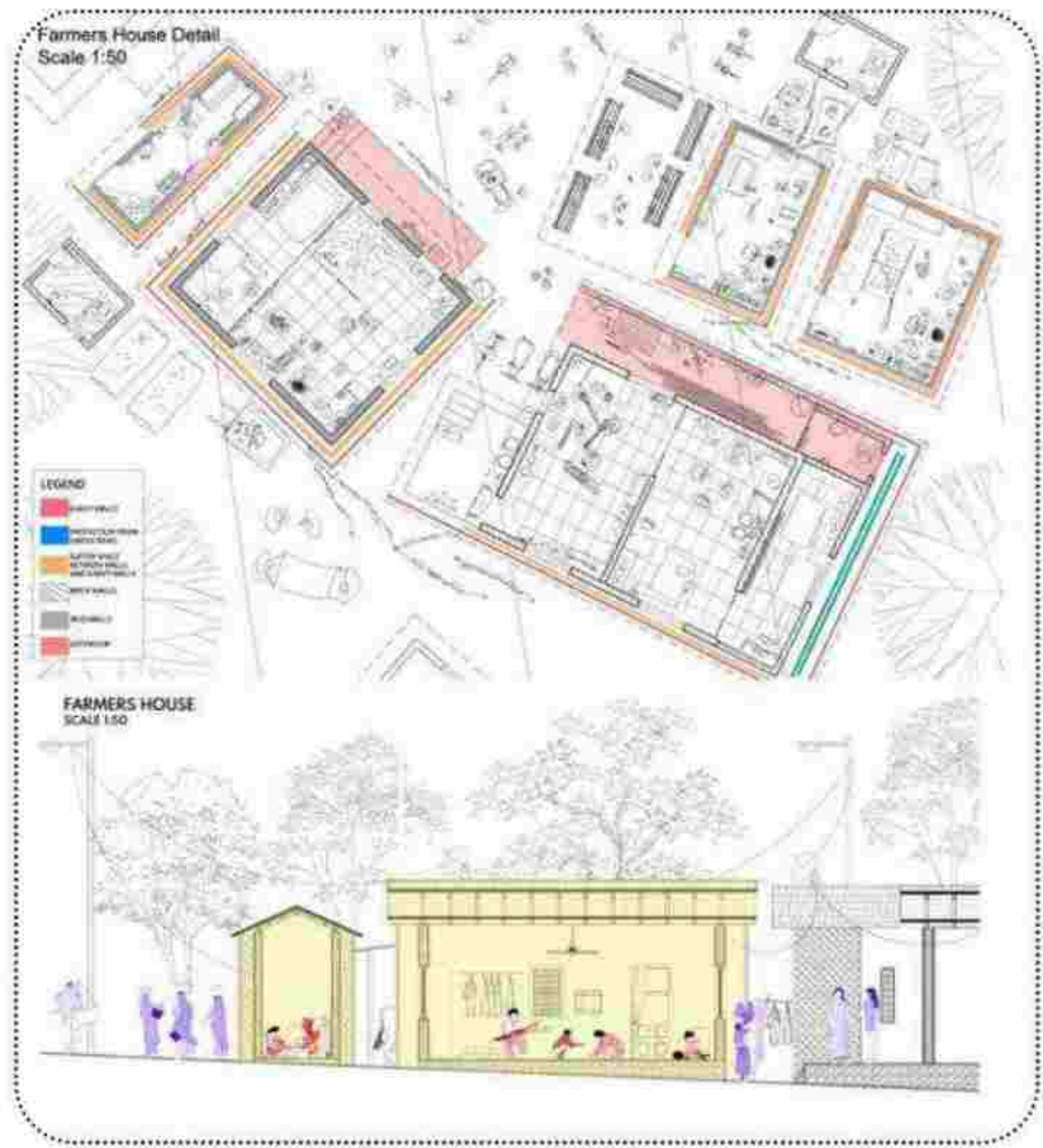
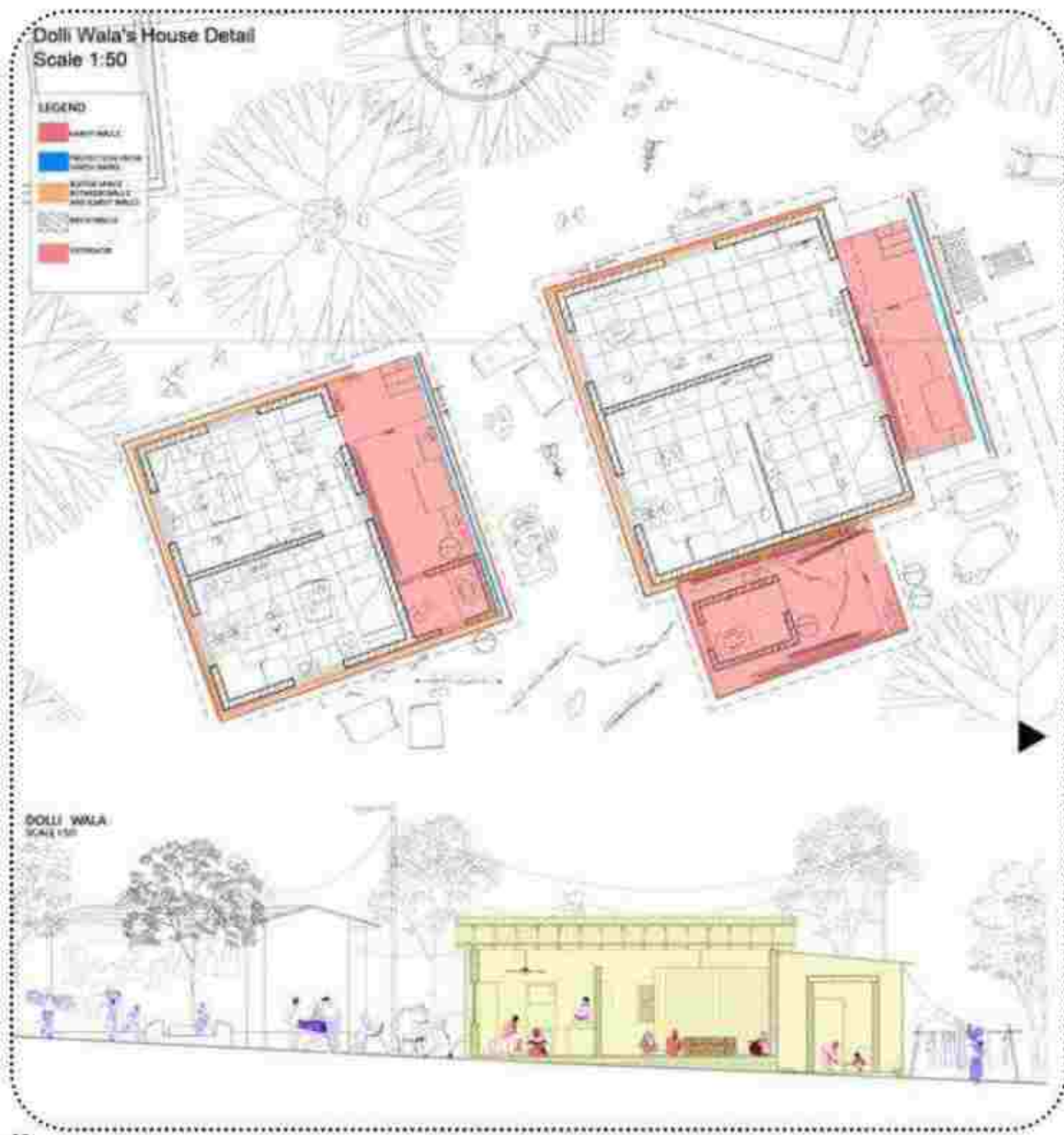


**BRAHMAGIRI TEMPLE (LORD SHIVA TEMPLE)**  
This is also one of the oldest temple on this hill build during 15th century AD. This structure sits at the cliff of the hill. Even though the hill is facing weathering and rock fall issues, this structure is still unharmed and as it is sitting there at the cliff of the hill. Half part of the temple is carved into the basalt rock and half is built out of stone walls which is 500 mm thick. The part of the temple which is carved into the stone is covered with some concrete material recently.

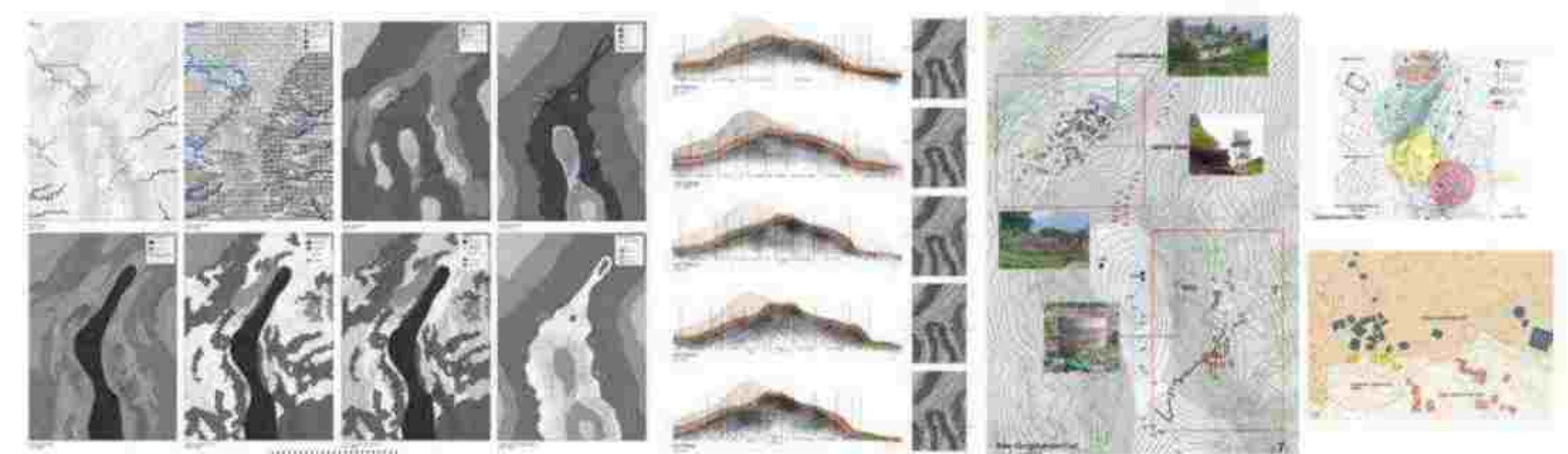




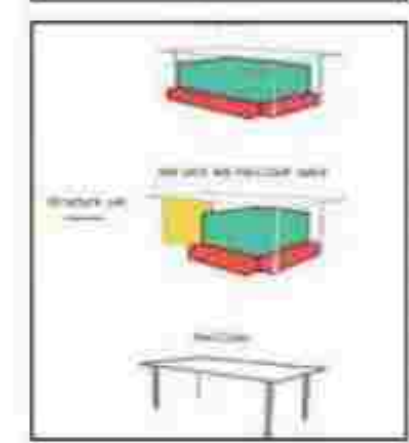
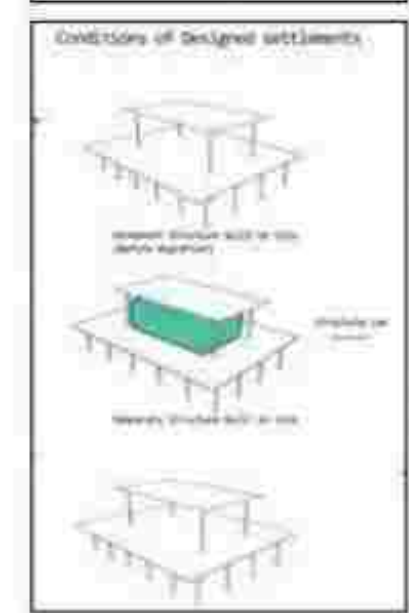
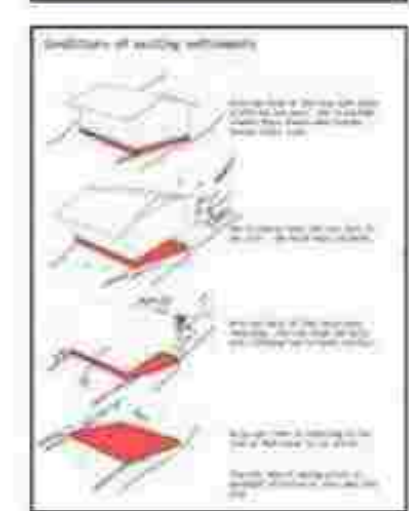
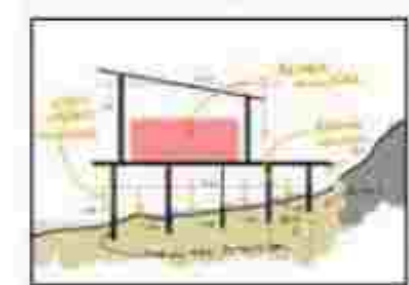
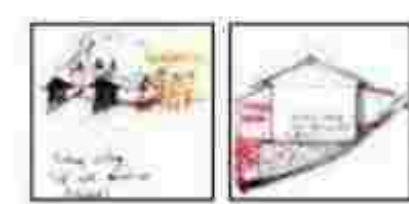
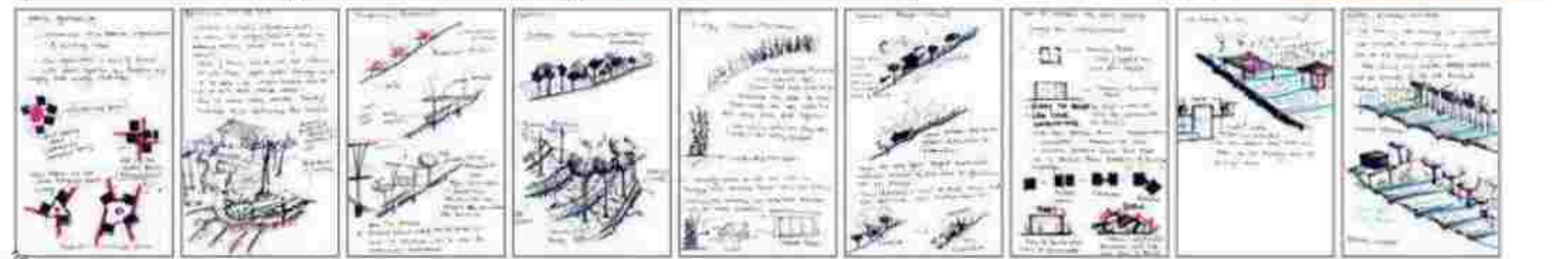
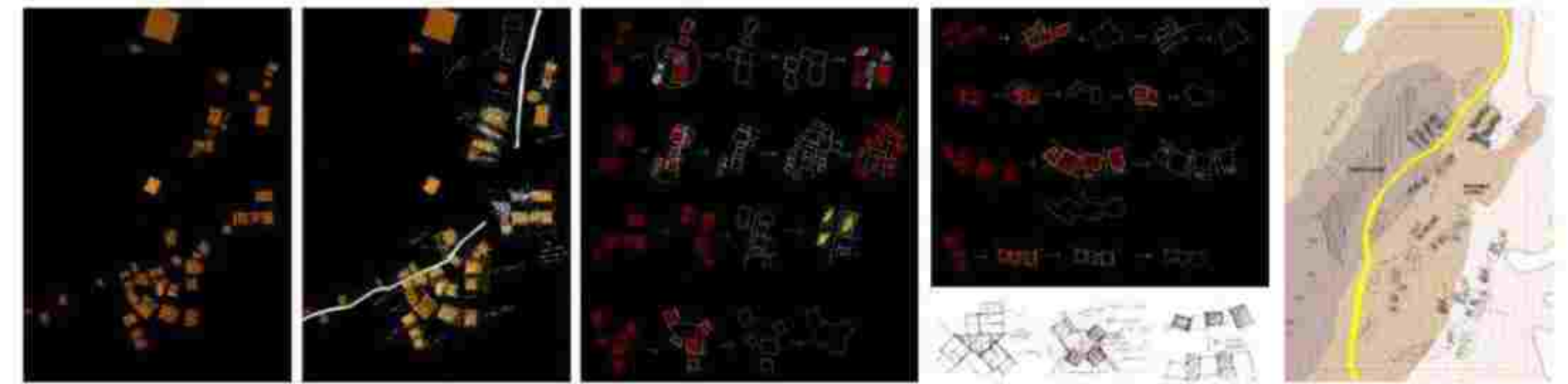
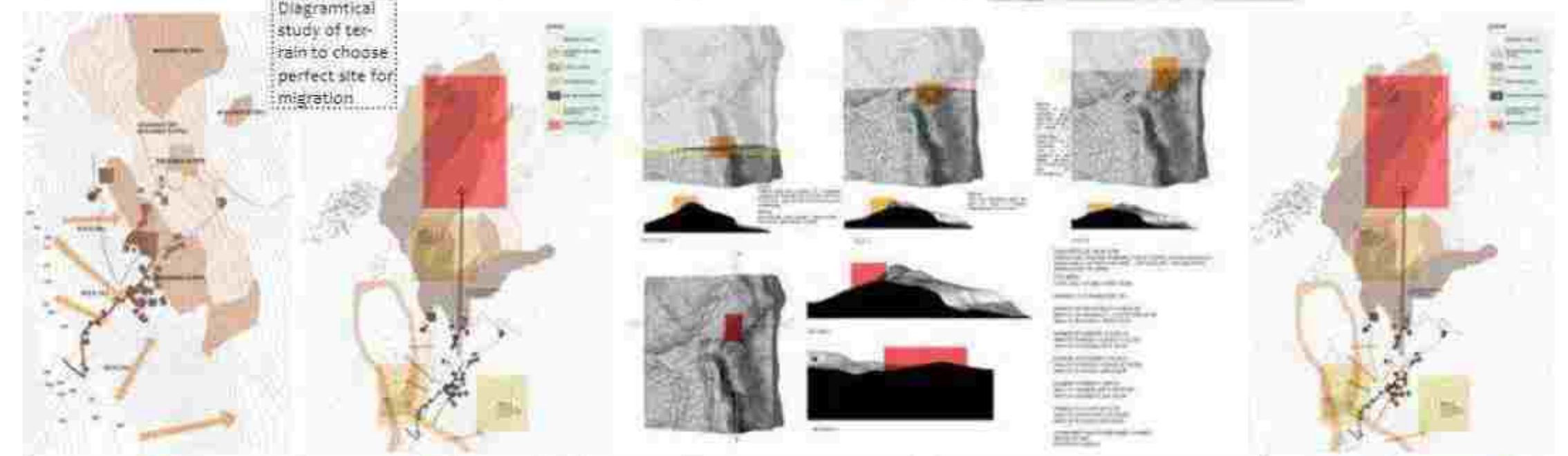
Major communities which have settled in this region are farmers, Palkhi-wala and workers (labourers), thus design focuses on designing a housing typology for these communities based on their requirement as well as by making shift houses which will help for easy migration to protect from any future disasters. To design housing there existing living pattern was studied.







Diagrammatical study of terrain to choose perfect site for migration



### Resilience through - Landscape



- poor slope facilities without retaining walls.
- less vegetation on site
- poor water management systems
- Steep slope
- poor soil quality



- To stabilize the slope on site gabion wall have been built. Further these retaining walls becomes foundation for designed stilted structure



- After building gabion walls terraces are created which helps channelize water.
- These terraces also support agriculture by creating worklands on the site for farming and that too with stable soil



- To prevent water flowing from the top soil and to recharge aquifers more plantation is done on site. Existing species of trees are grown in site which also helps hold the soil and prevent soil erosion



- By taking above measures the site becomes rich in biodiversity as well as becomes a sustainable region for existing communities as there are more farmlands or agriculture and more vegetables and fruits to sell in market.

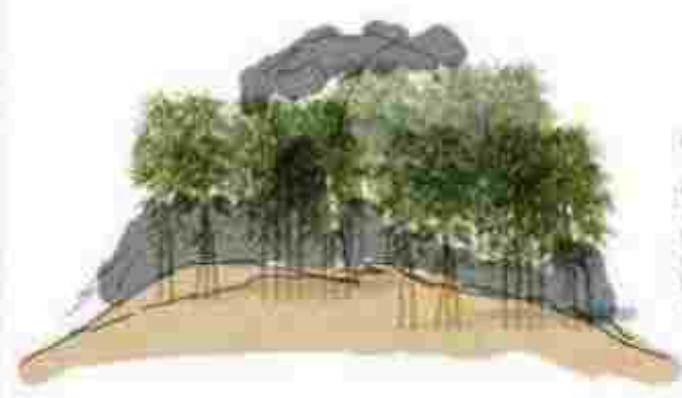
### Resilience through Material

#### Material - Bamboo

The structure designed for landslide prone zone should be light weight and causing less damage to ecology as well as health. Bamboo is one such material which fits in this criteria due to following reasons :

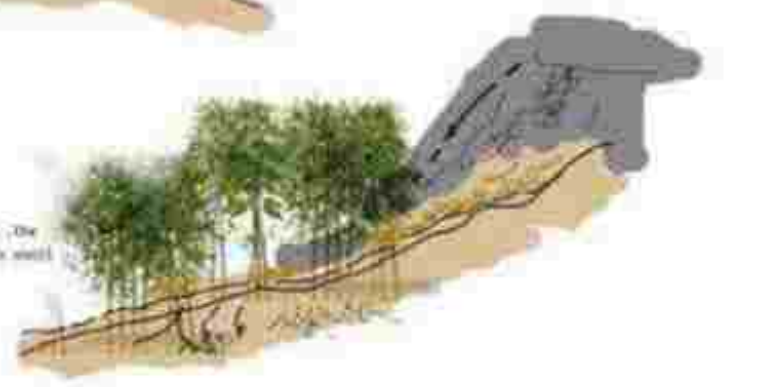
#### Easily available on site.

For making of stilt communities are available in bamboo on the site. Thus the same can be used for making houses. Also government of Maharashtra have asked communities settled on hills of Maharashtra to practice bamboo plantation to help stabilize the slope as well as increase income too.



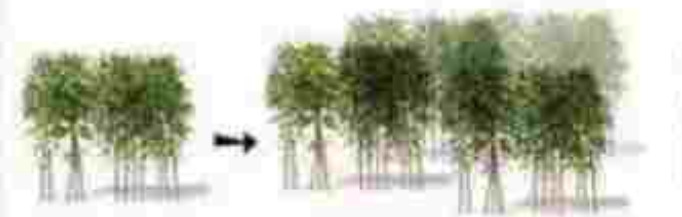
#### Prevent soil erosion

Bambo plantation helps prevent soil erosion. The roots of bamboo grow upto 30 inches deep into soil and helps hold together.



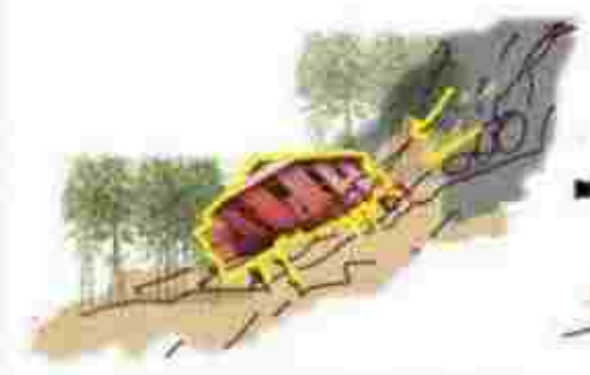
#### Rapid Growth

Bamboo grows faster compared to other plants. Thus even if bamboo material is used in less construction it will be making of plants themselves be the surplus of bamboo in site.

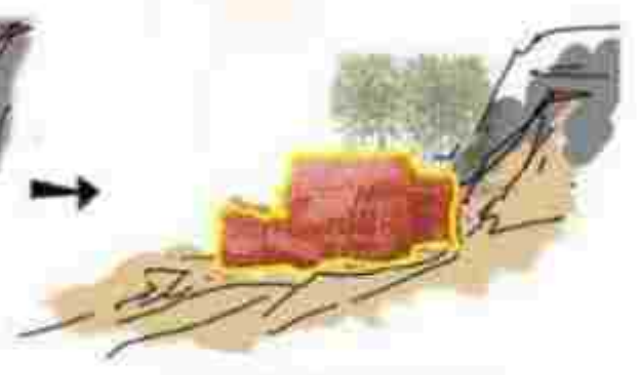


#### Adaptive to climate change

Bamboo can withstand high heat as well as heavy rainfall. Bamboo structures have good insulation property. In such scenarios are treated in such situation they are good to use for construction all year long and even in future climate conditions.



Bamboo house Collapsing due to landslide

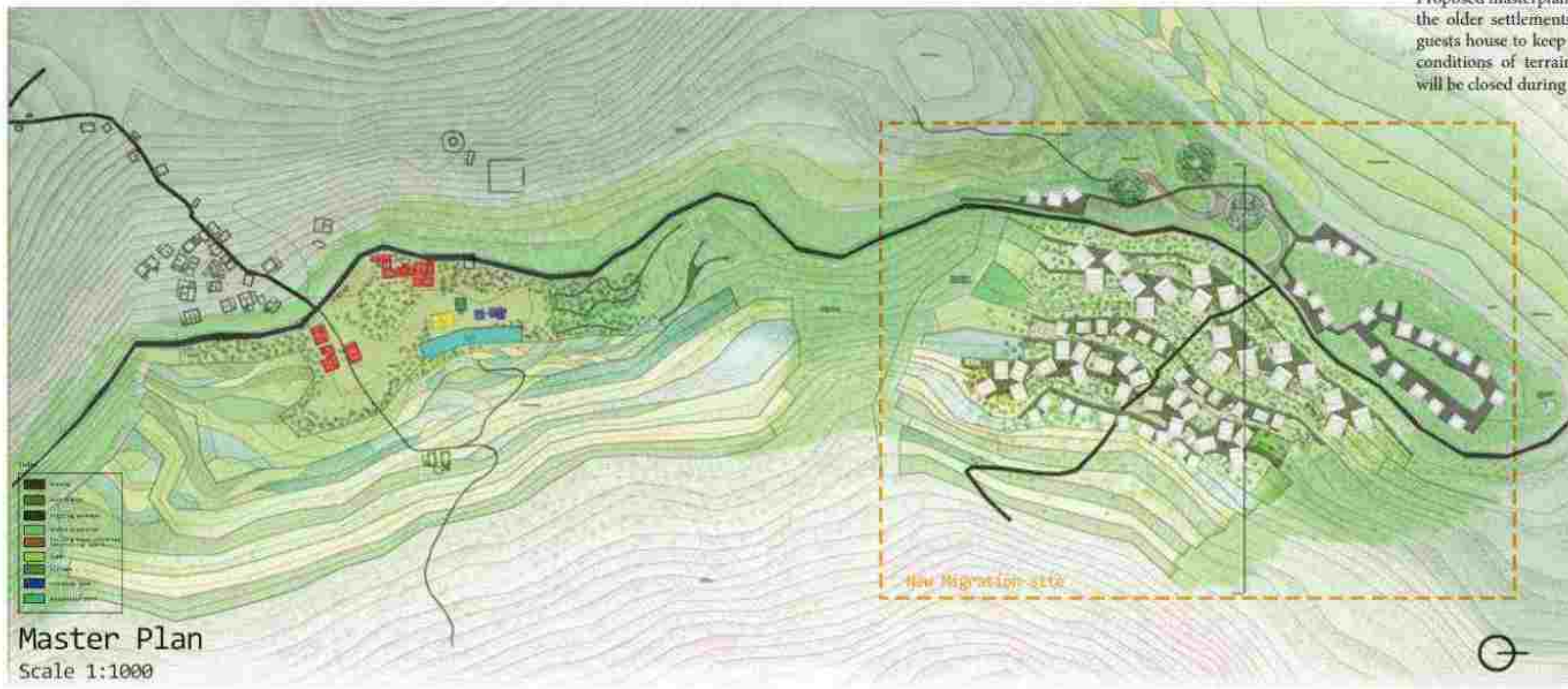


Less damage caused to the property

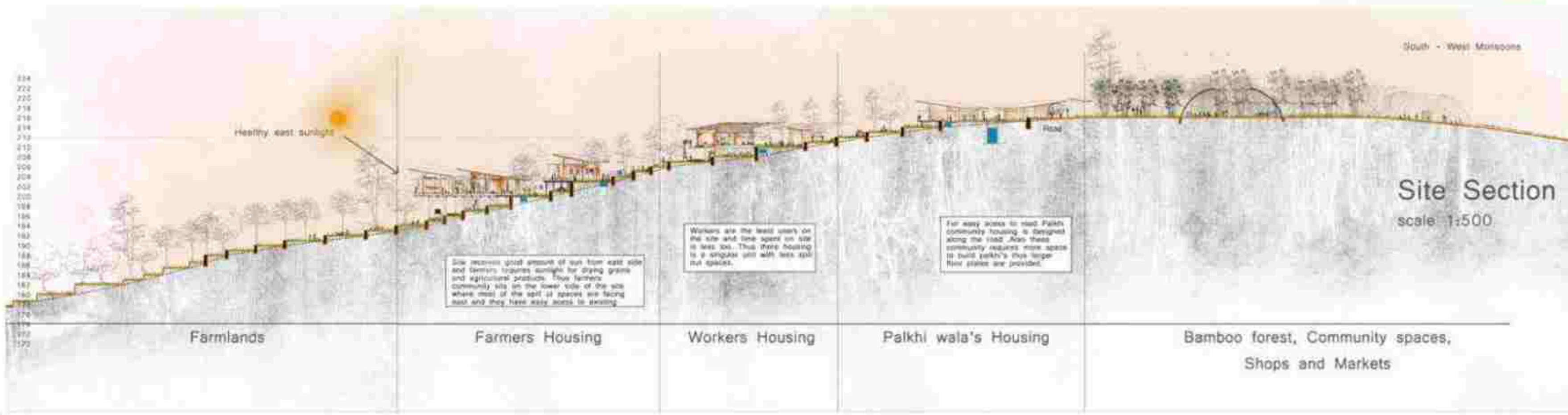
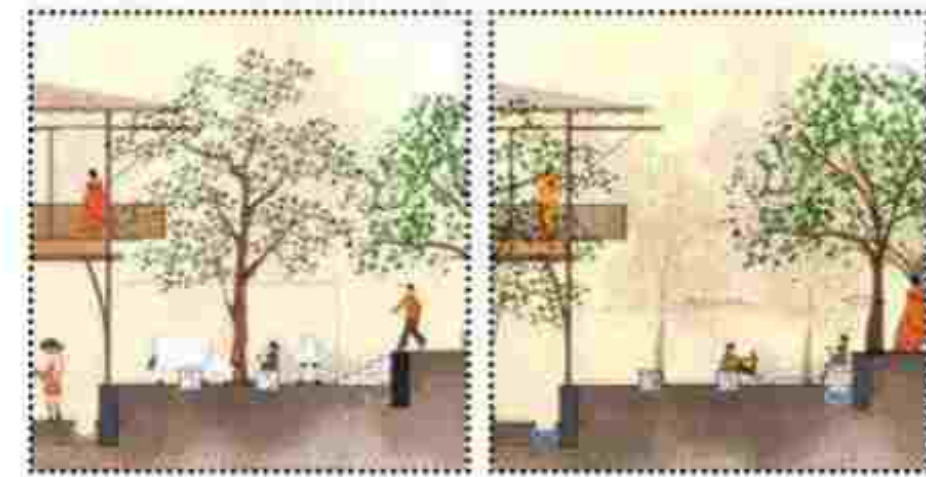
Sustainable - Causes less damage to property.

If houses are built using bamboo in landslide prone zone they will cause less destruction as compared to concrete. Like brick, stone, etc.





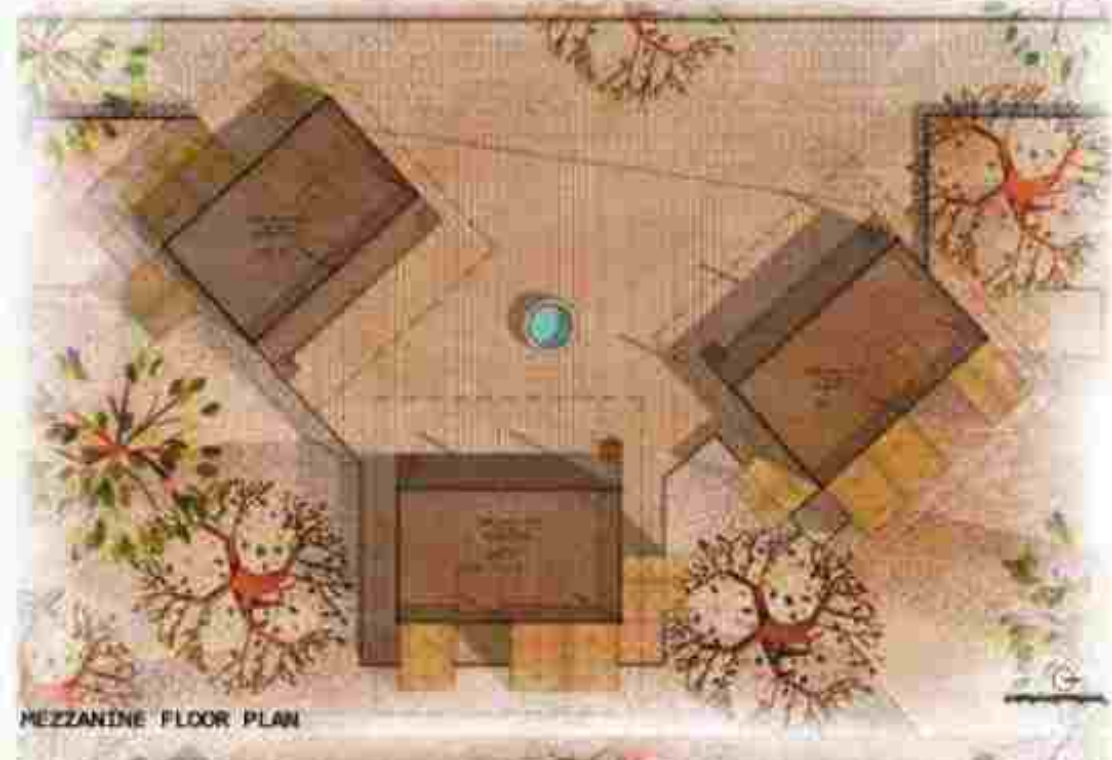
DETAIL VIEWS OF THE SITE







FLOOR PLAN

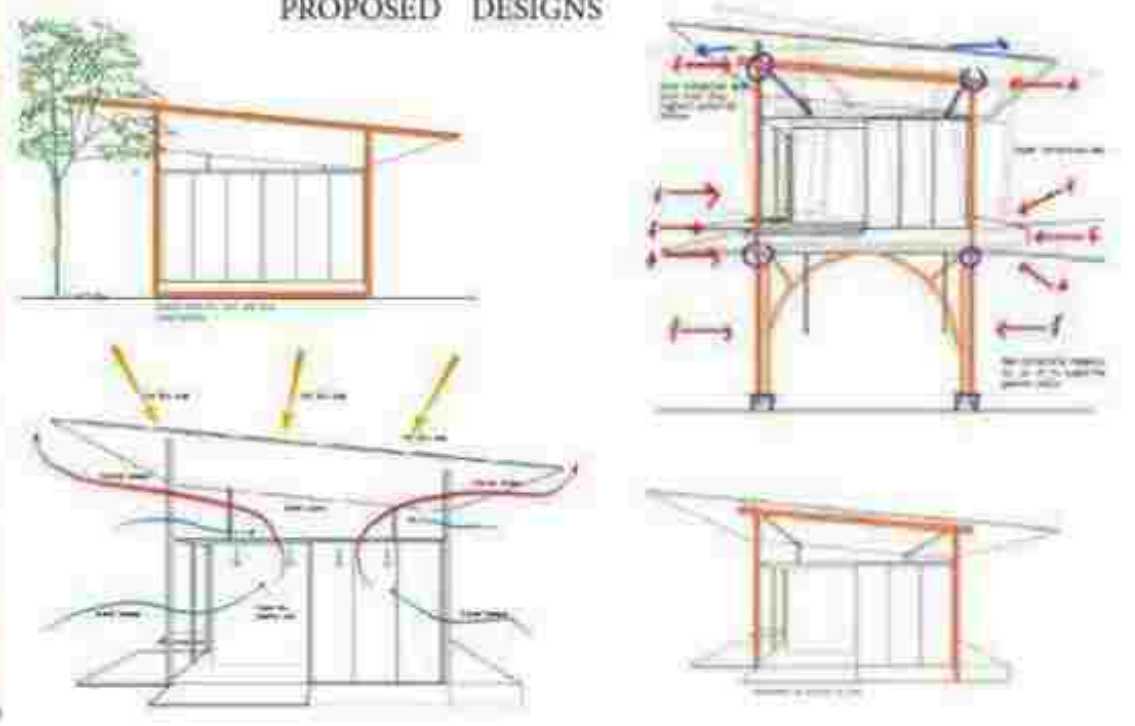


MEZZANINE FLOOR PLAN



ROOF PLAN

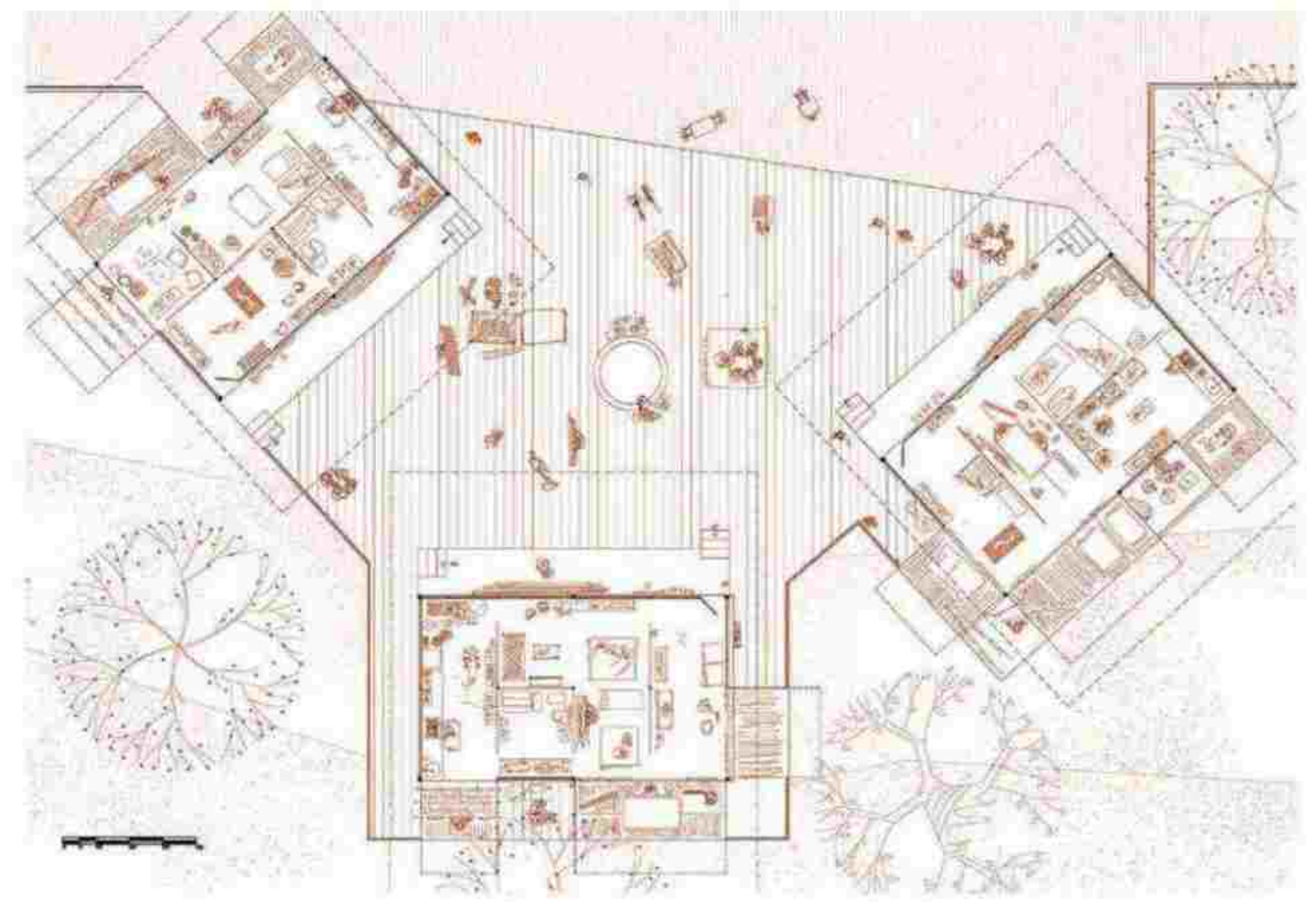
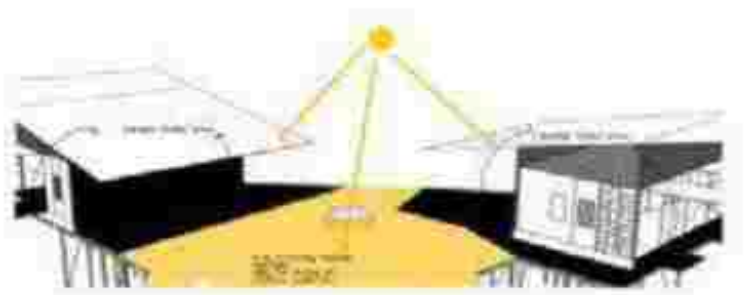
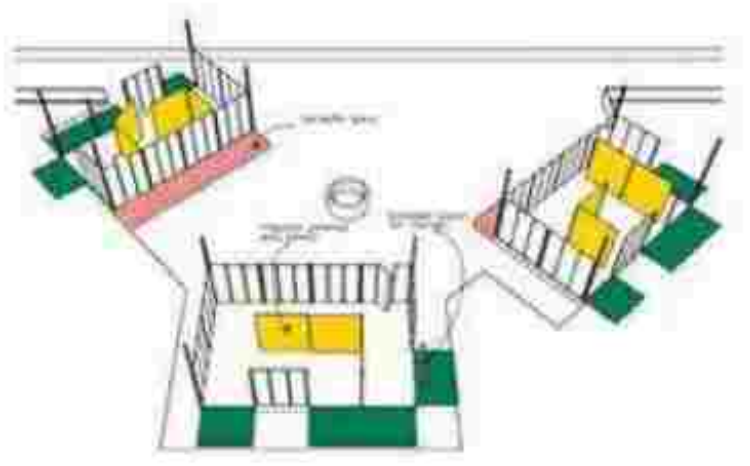
PROPOSED DESIGNS



Palkhi community housing is designed near the existing pathway so that it would become easy for them to carry their palkhi's.

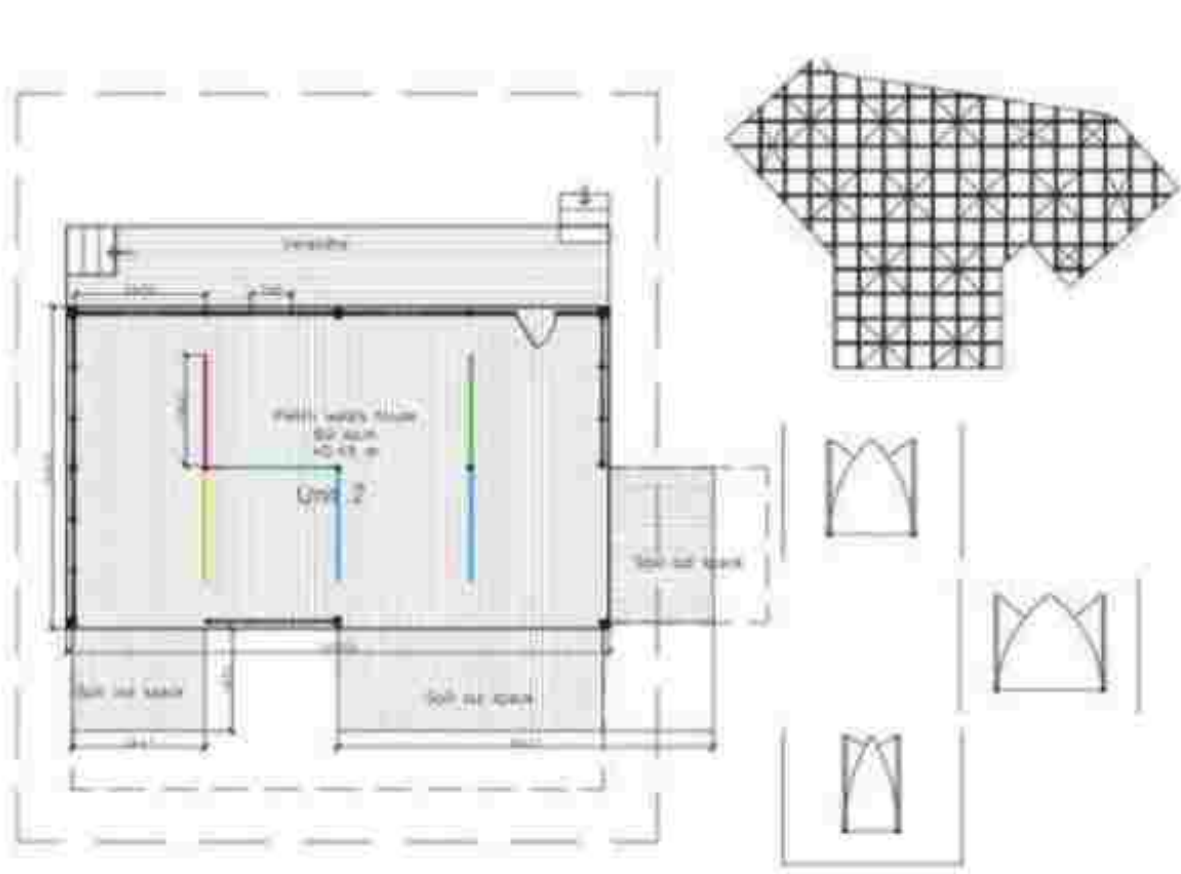
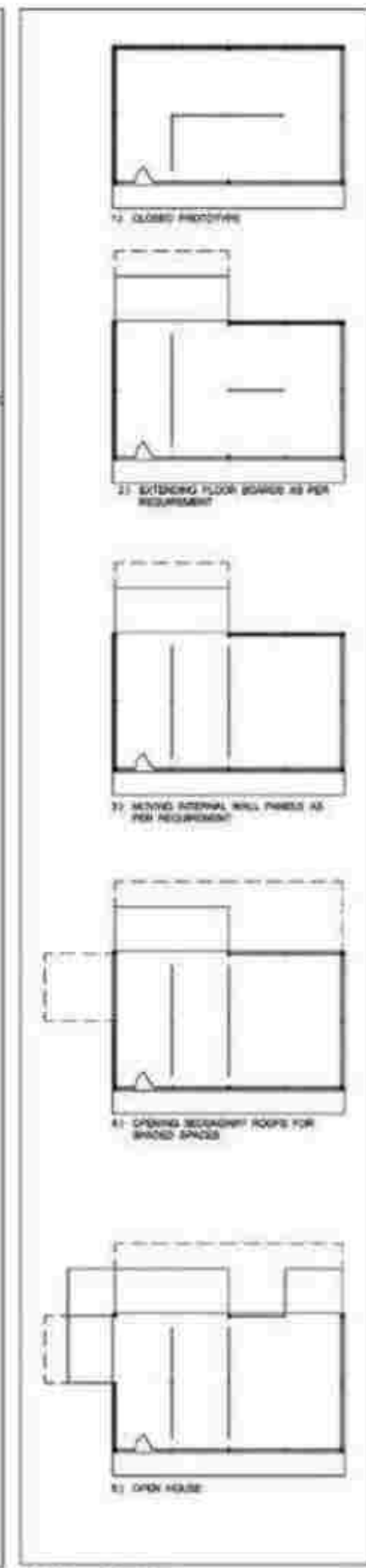
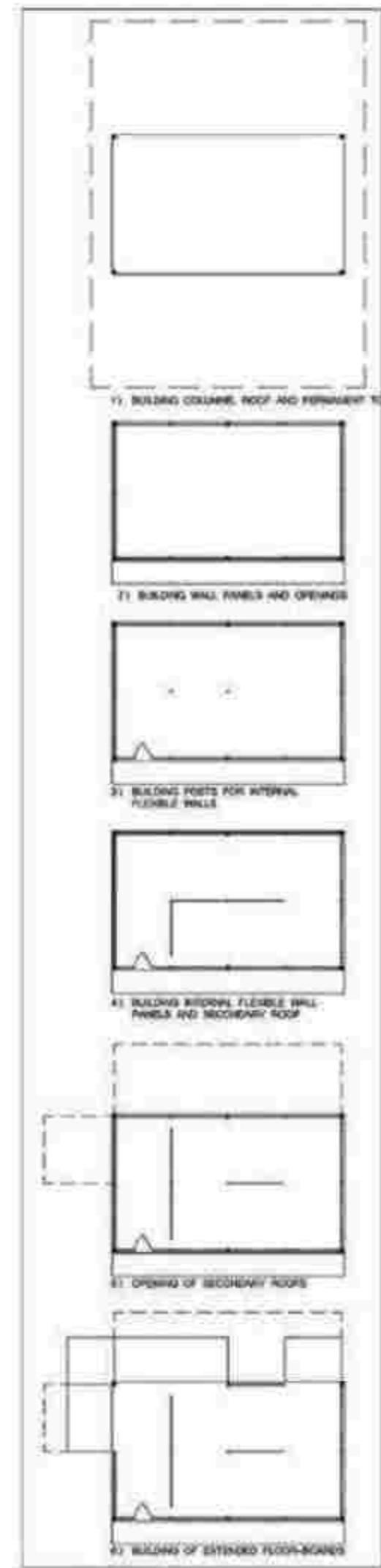


Also they have all houses opening to central courtyard space for community gatherings as they can even build palkhi's there together.



Front Elevation





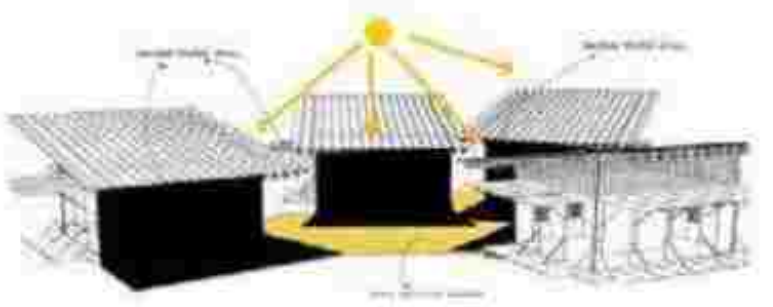
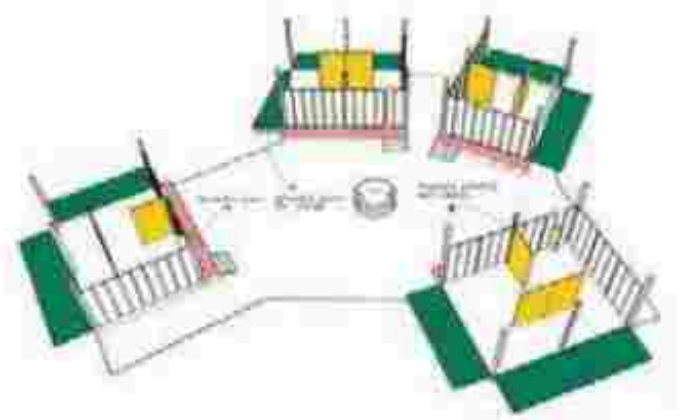
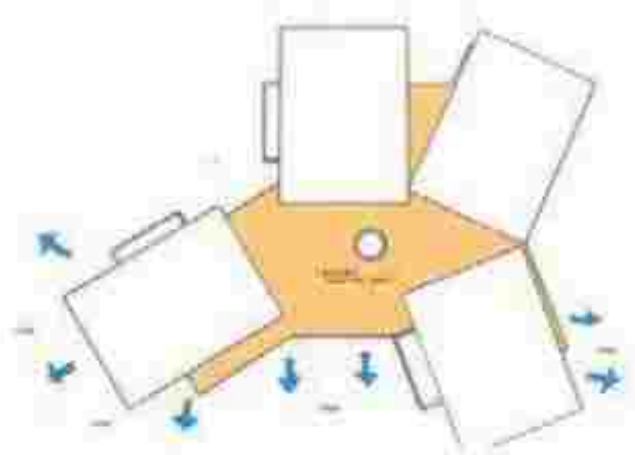
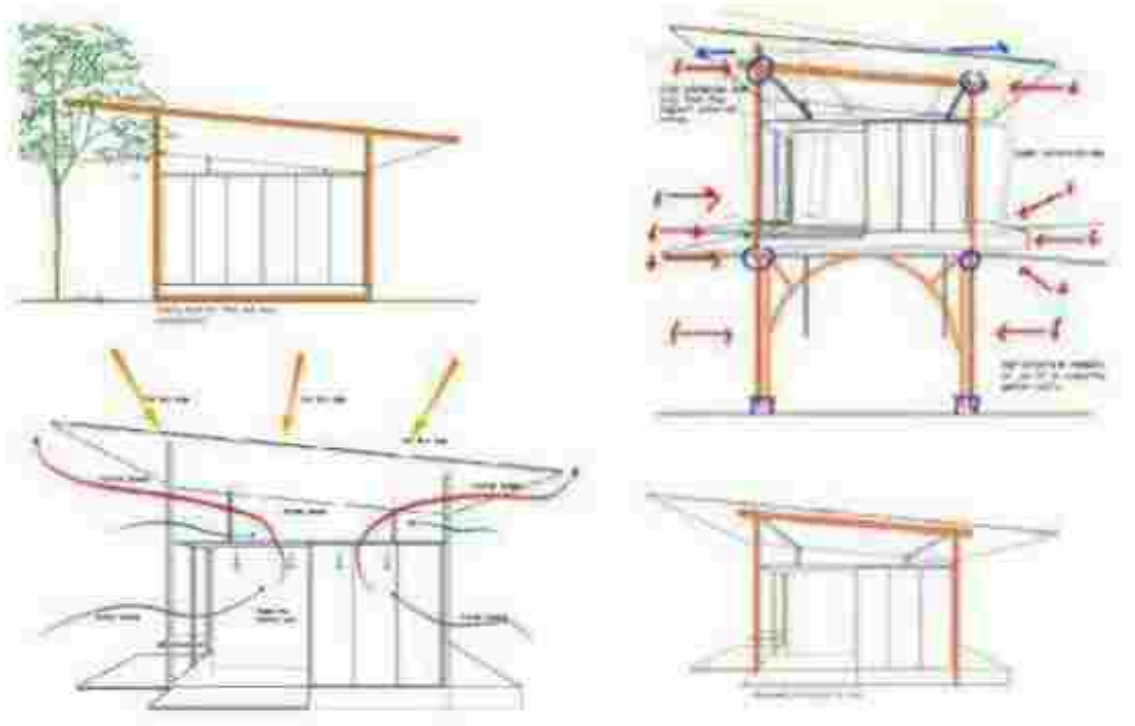
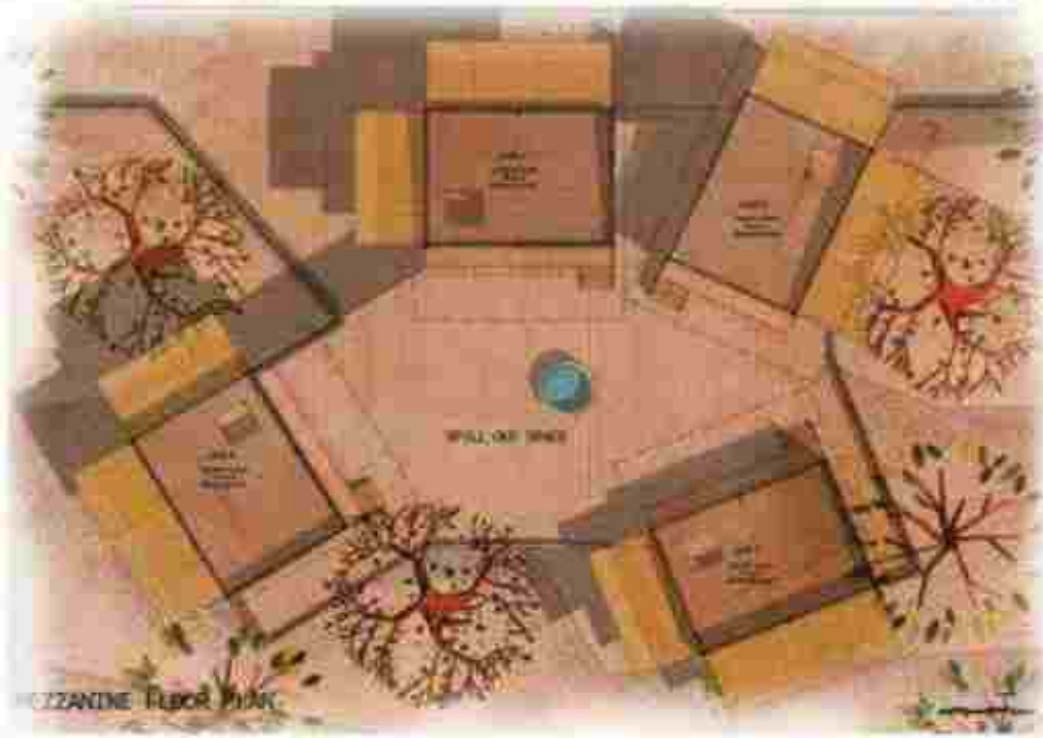
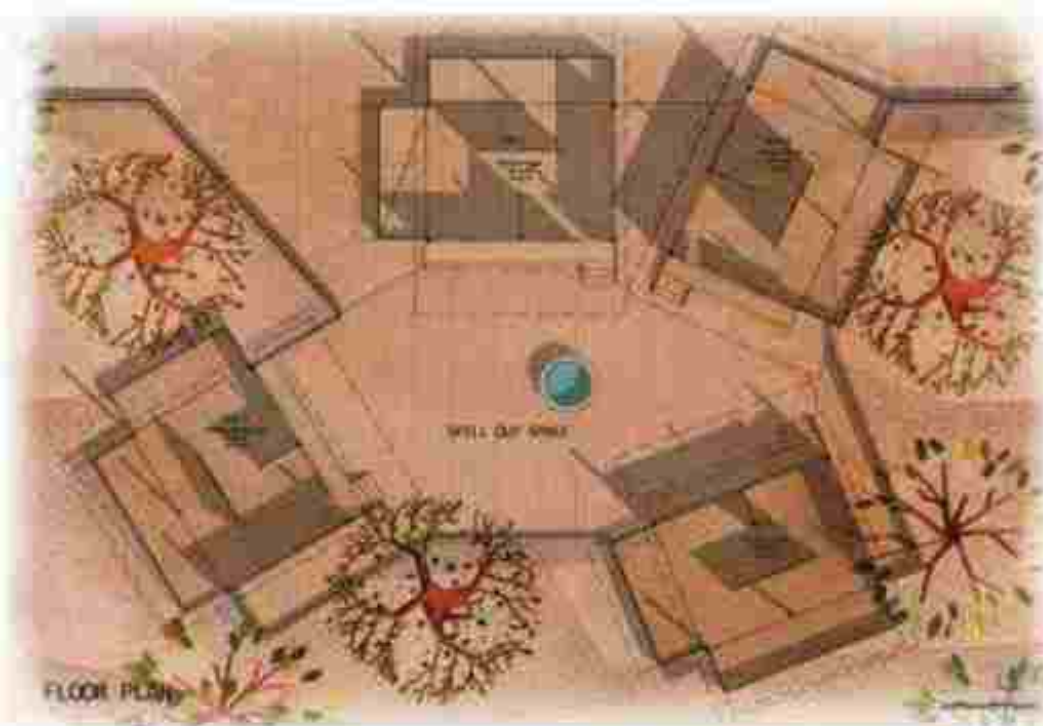
Space beneath the stilts is used to keep material used for making palkhi's or even store palkhi's there.

These houses have double roof system to create cooler space inside house during summers as these region experience very hot summers.

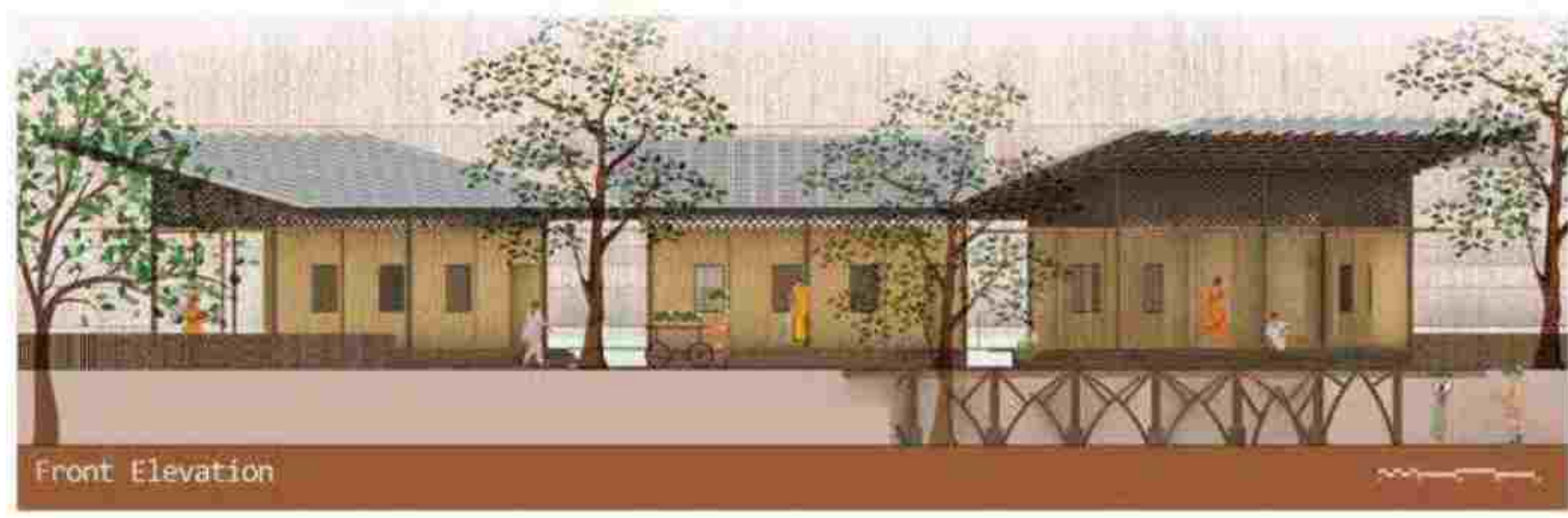
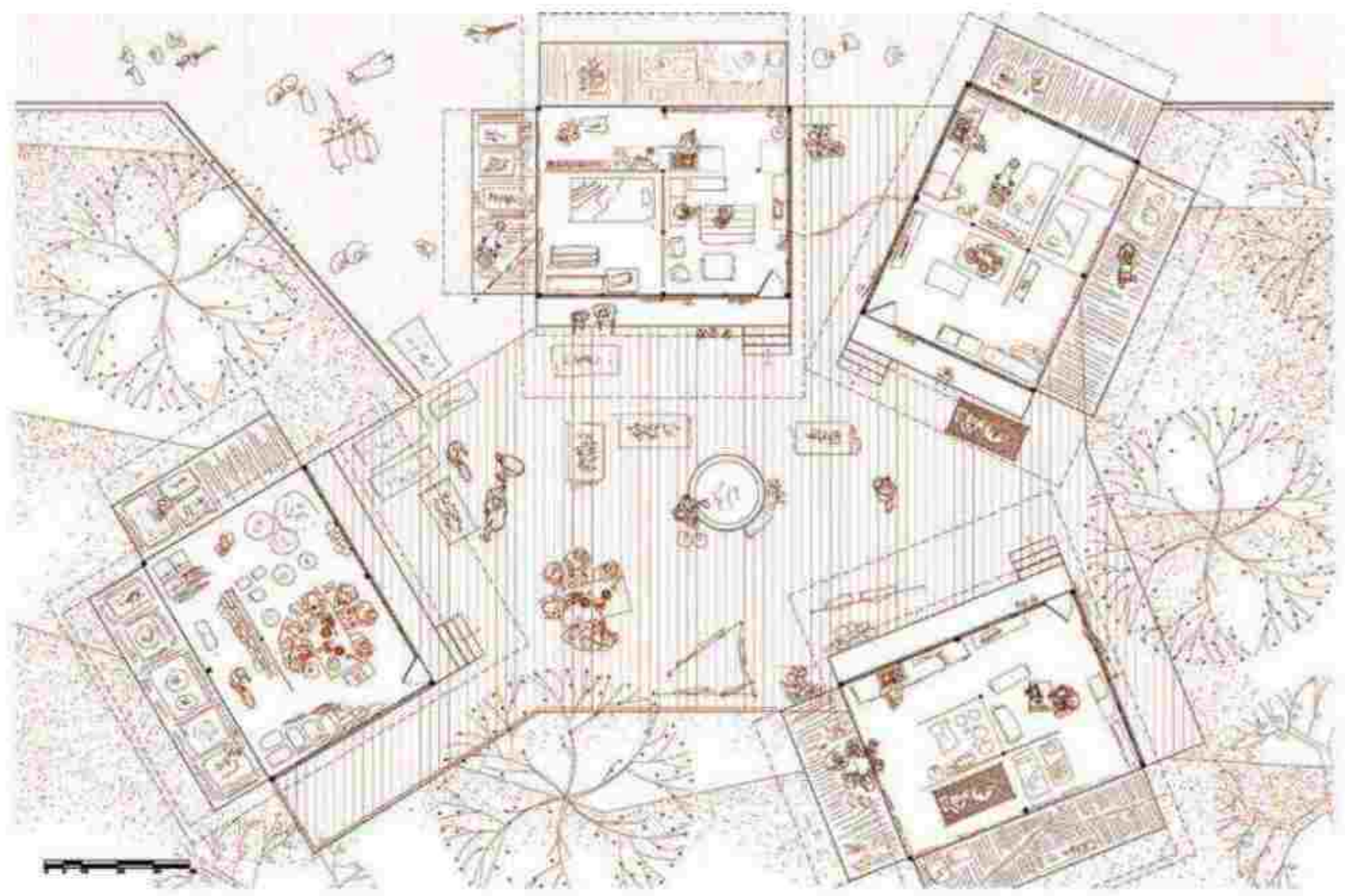


Palkhi wala's Section

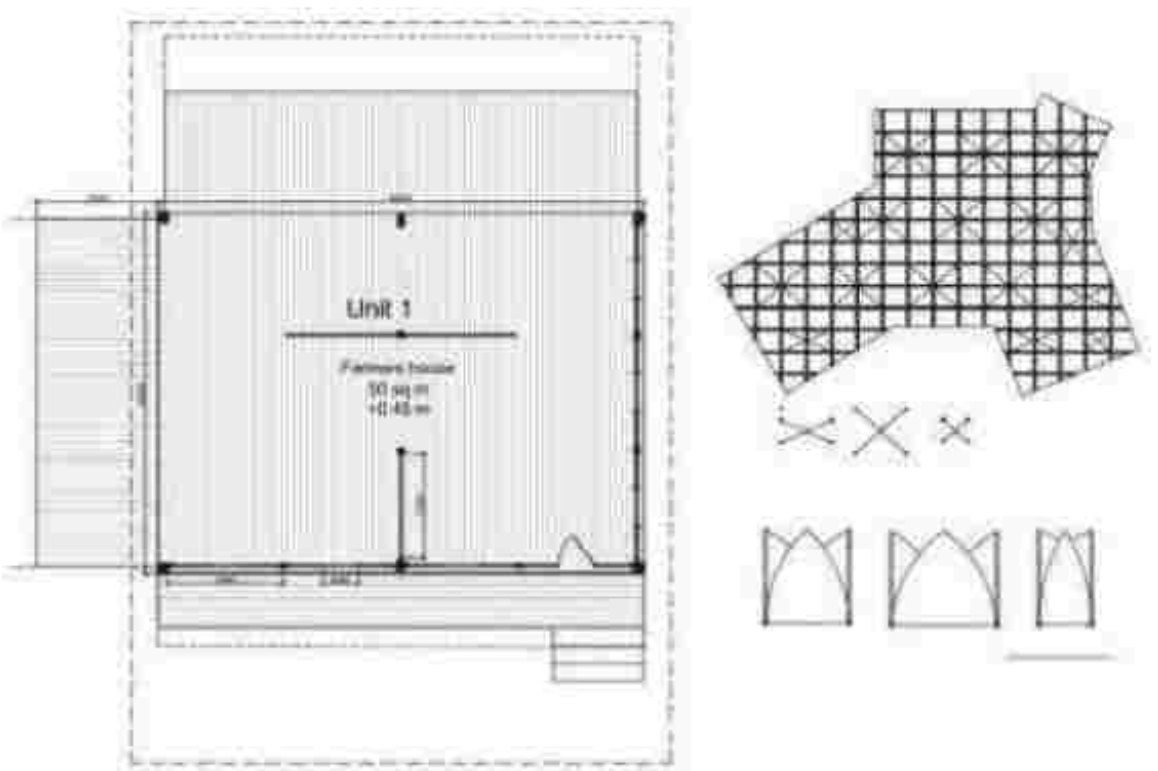
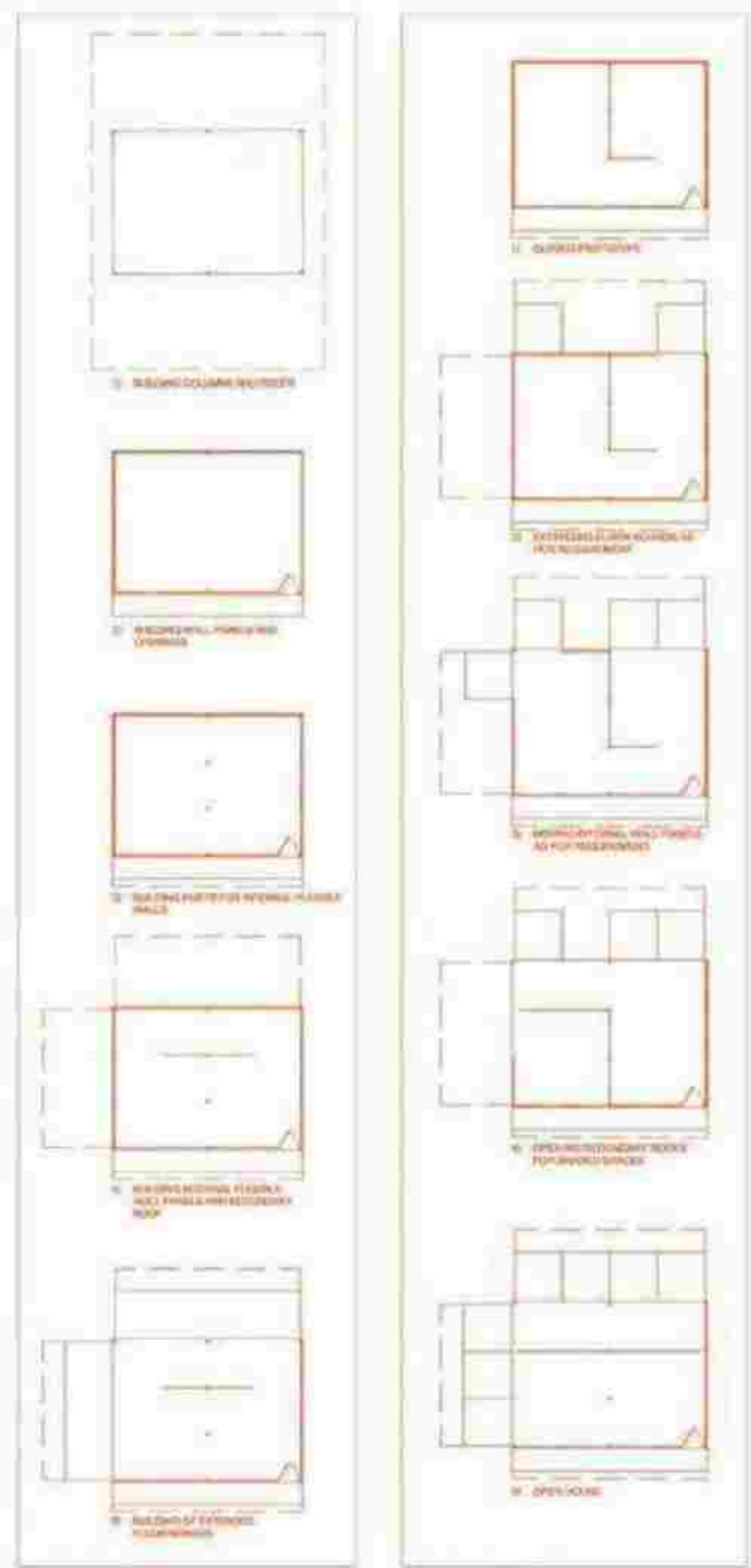




These housing settlements are located on the lower side of the hill for easy access to exiting farmlands and also to gain maximum eastern sunlight.

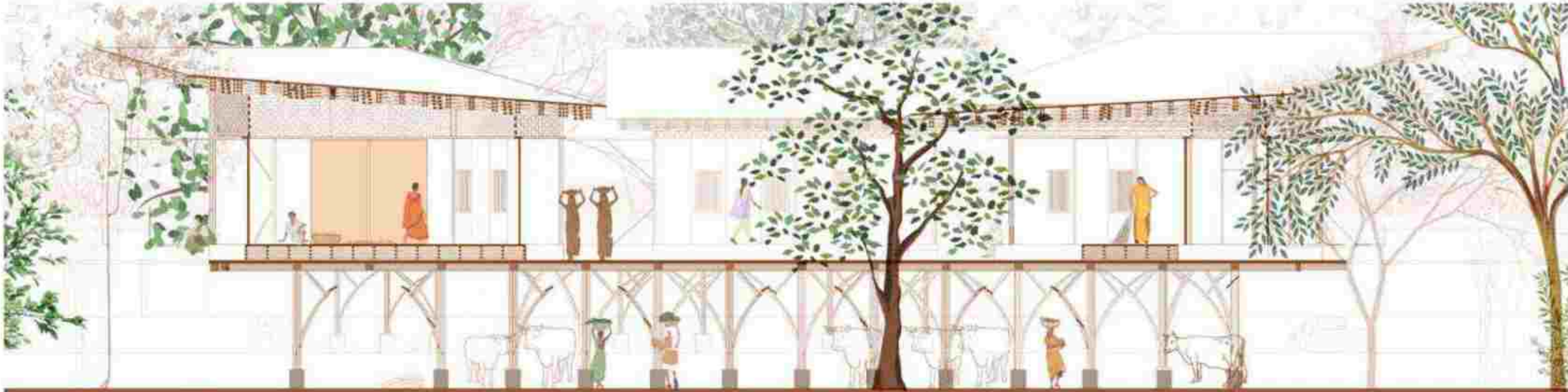






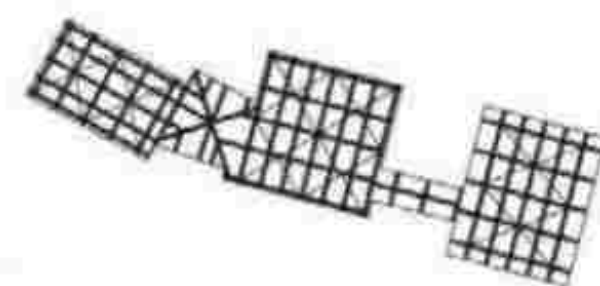
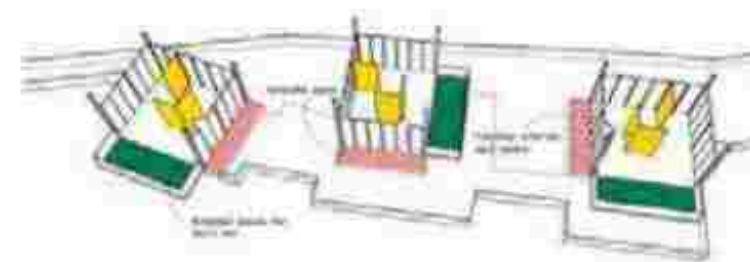
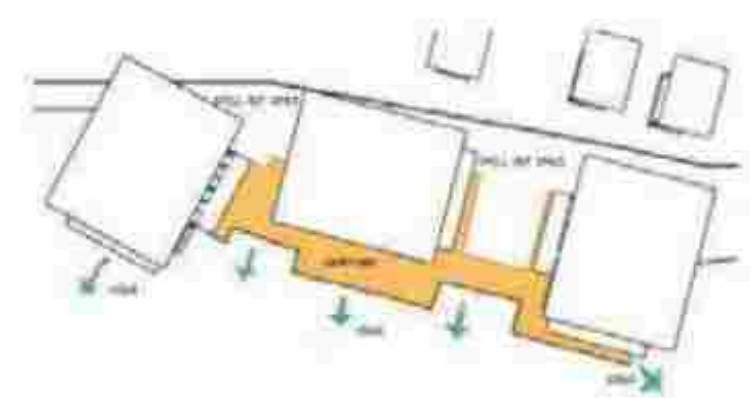
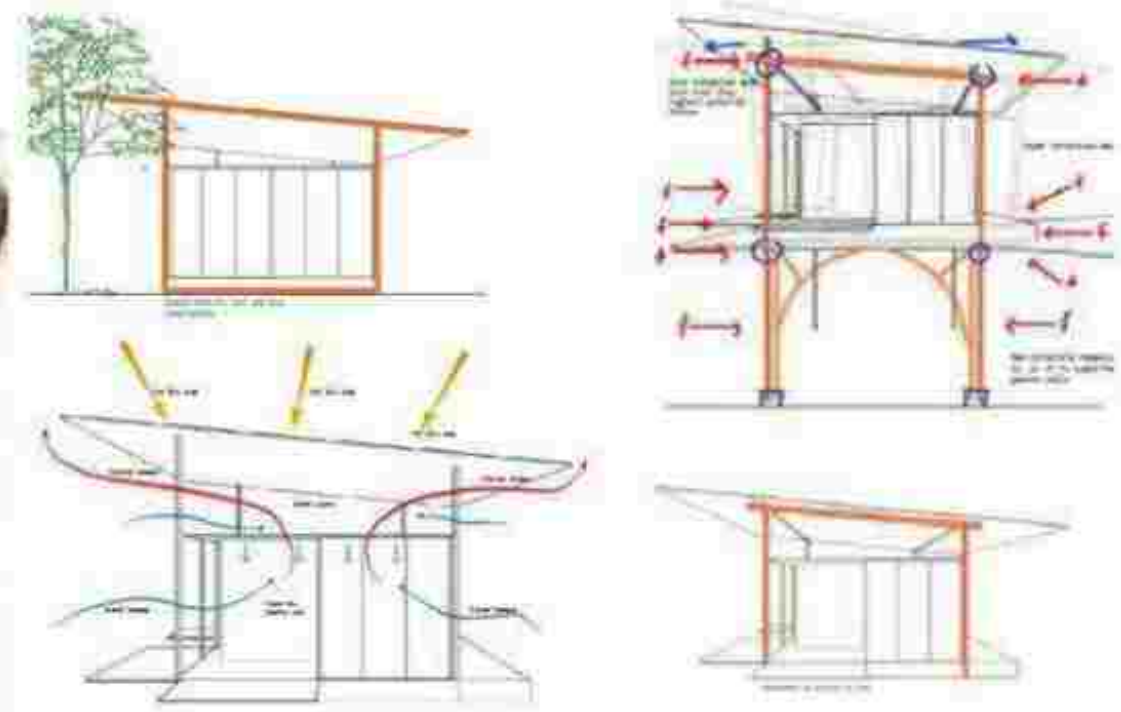
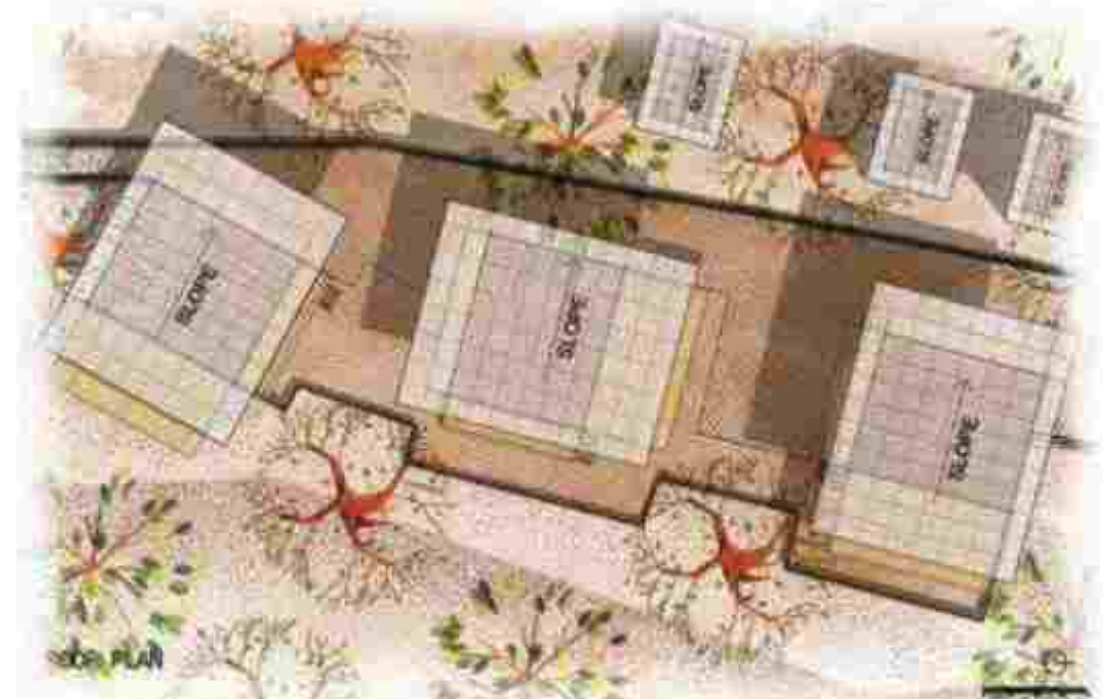
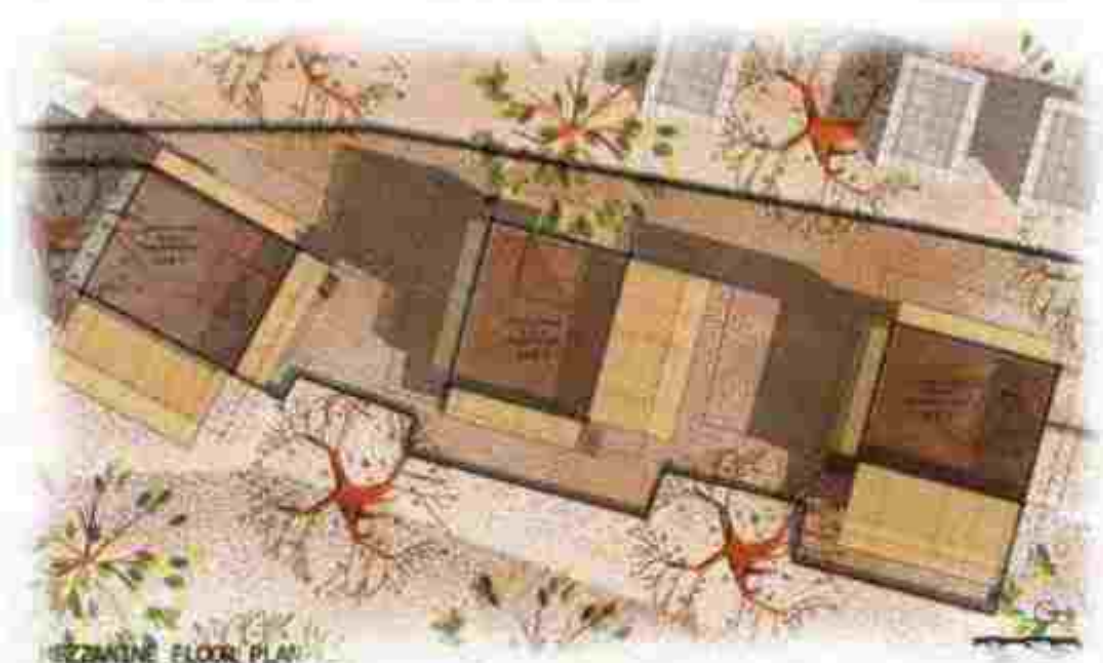
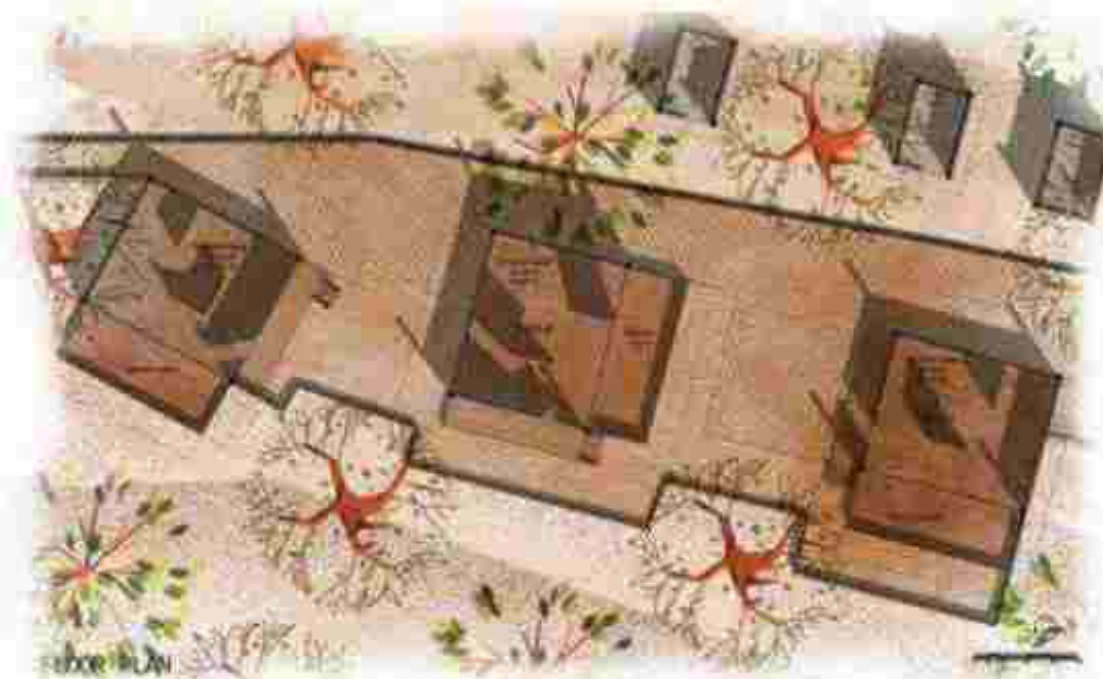
The housing for farmers is designed in such a way that most of the openings of houses and extended spaces faces the sun and gains maximum sunlight which helps farmers to dry their seeds.

The space below stilts is used for storage. They have one common granary storage room where all the farmers together can sit and sieve the seeds.



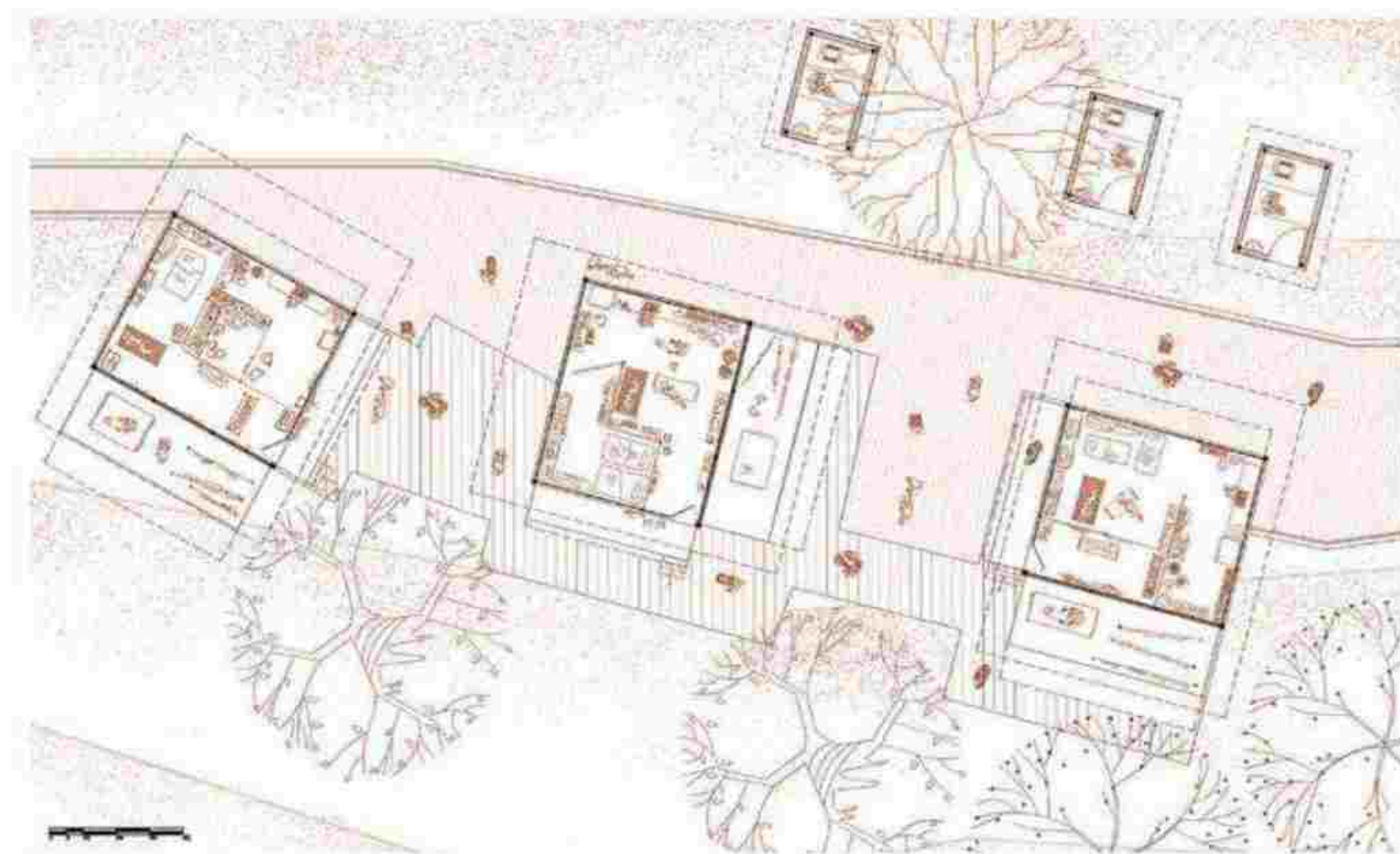


# WORKERS COMMUNITY



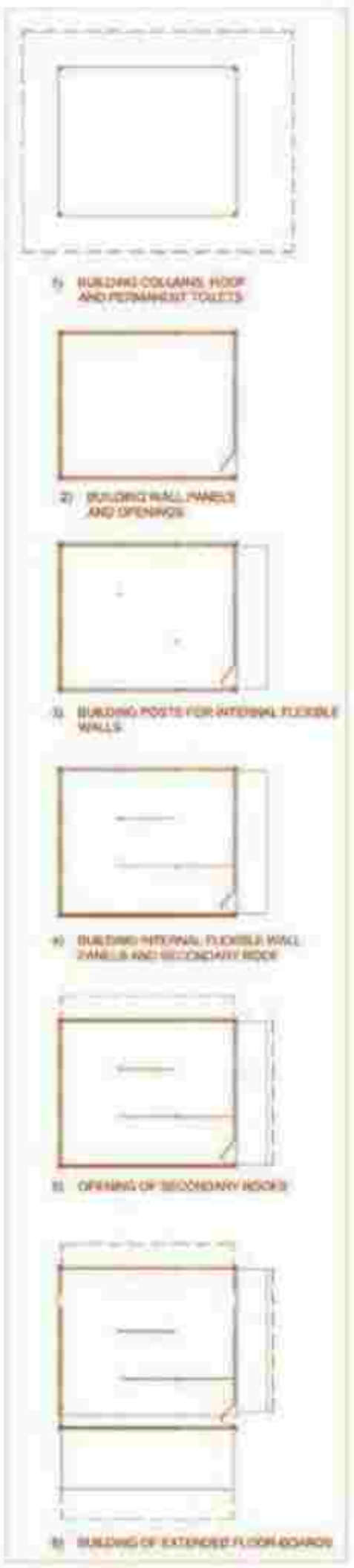
Workers are least people using their houses as they are mostly working on sites for the works.

The open common spaces are used for community gatherings.

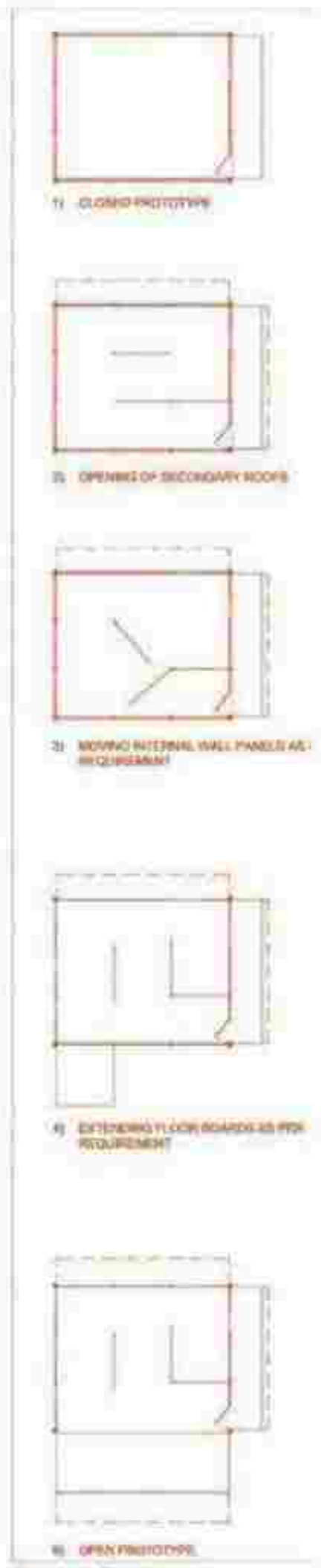


Front Elevation

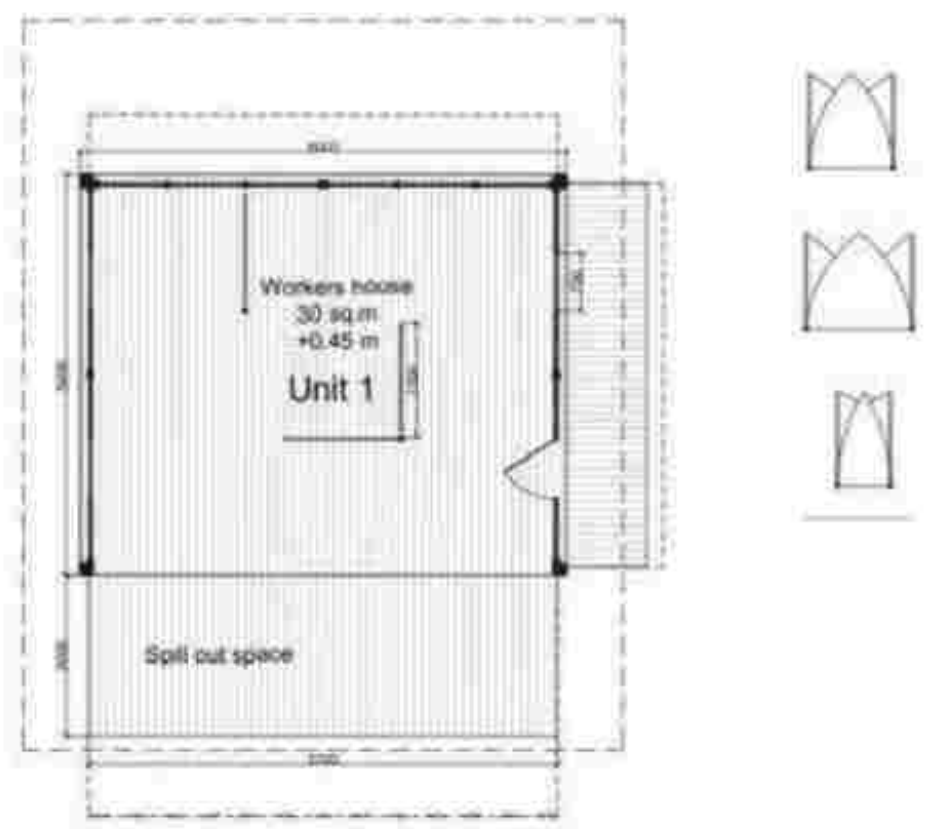




Stages of construction



Working of Panchow



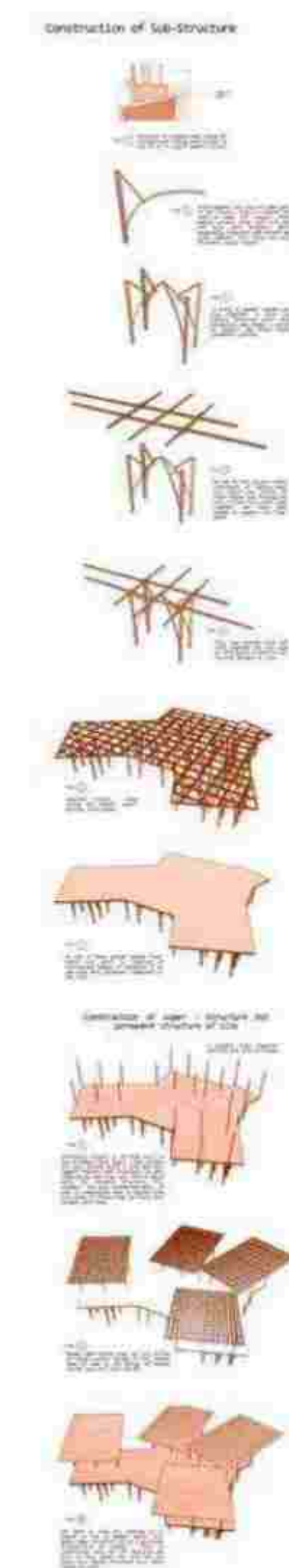
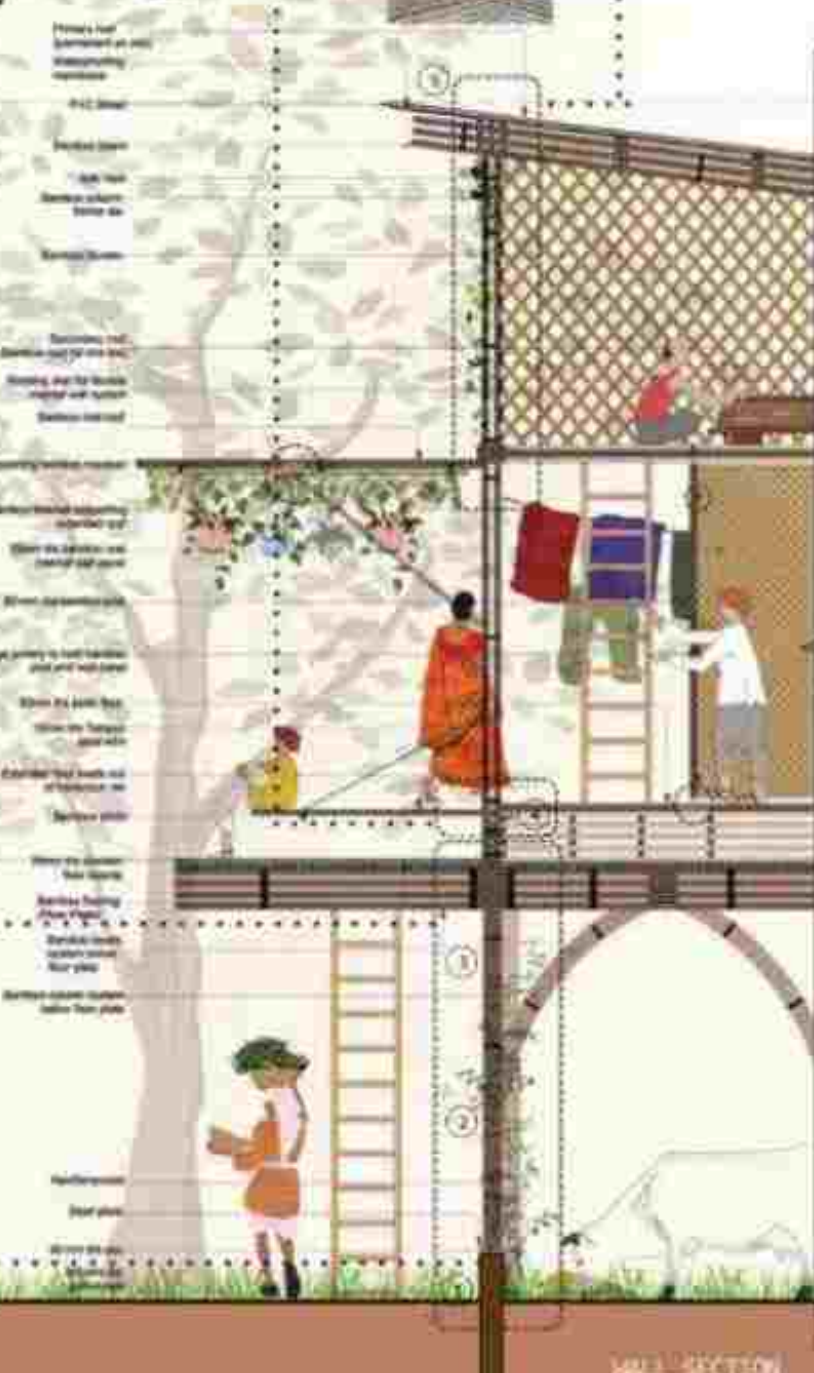
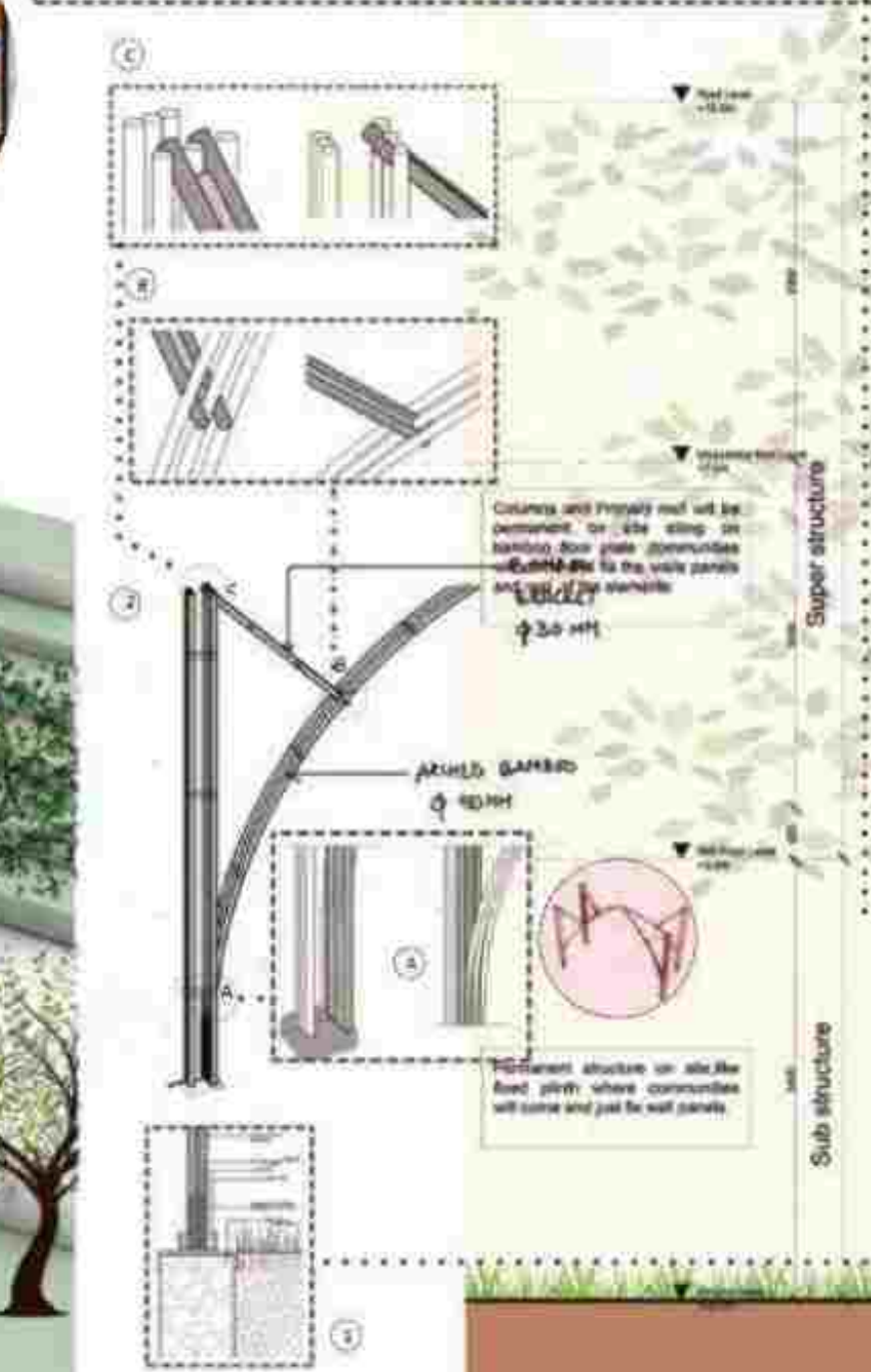
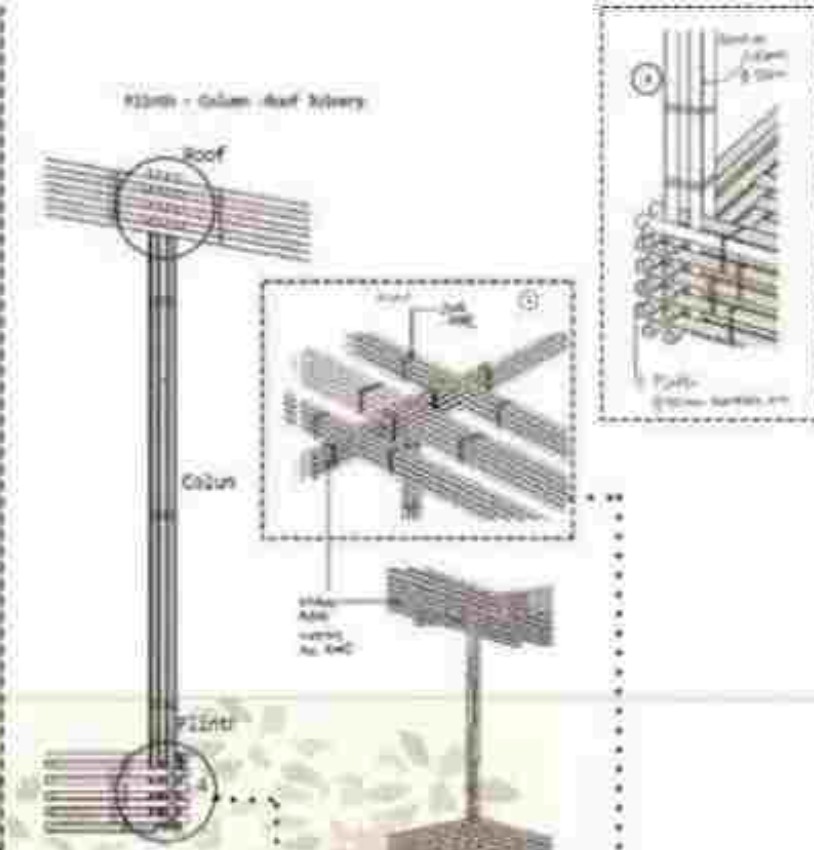
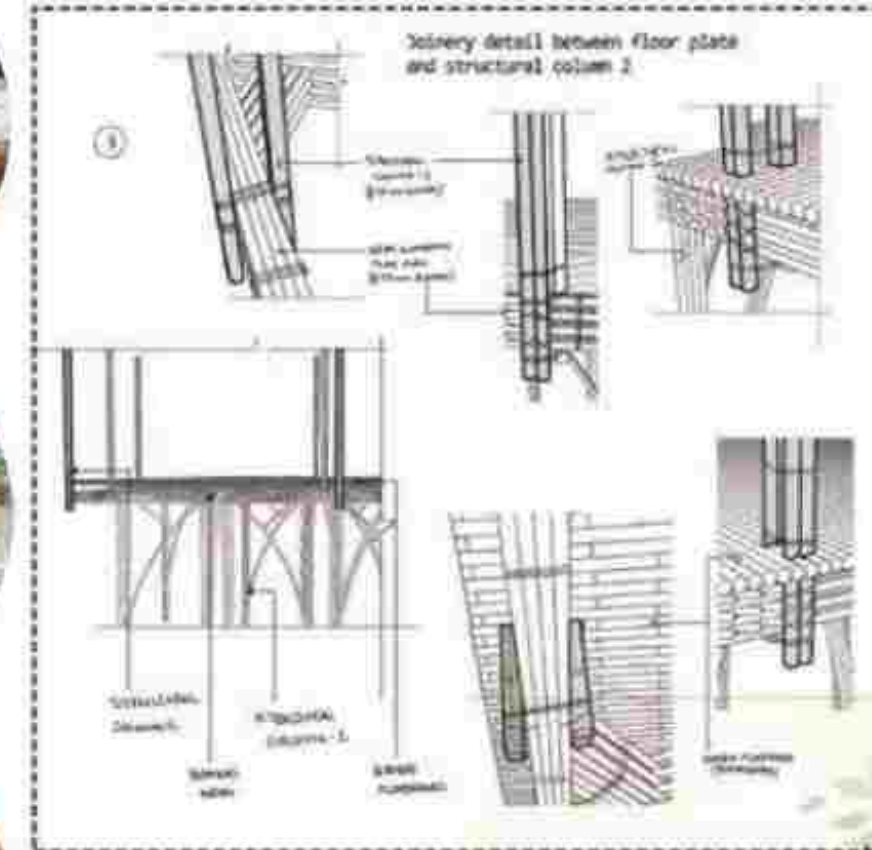
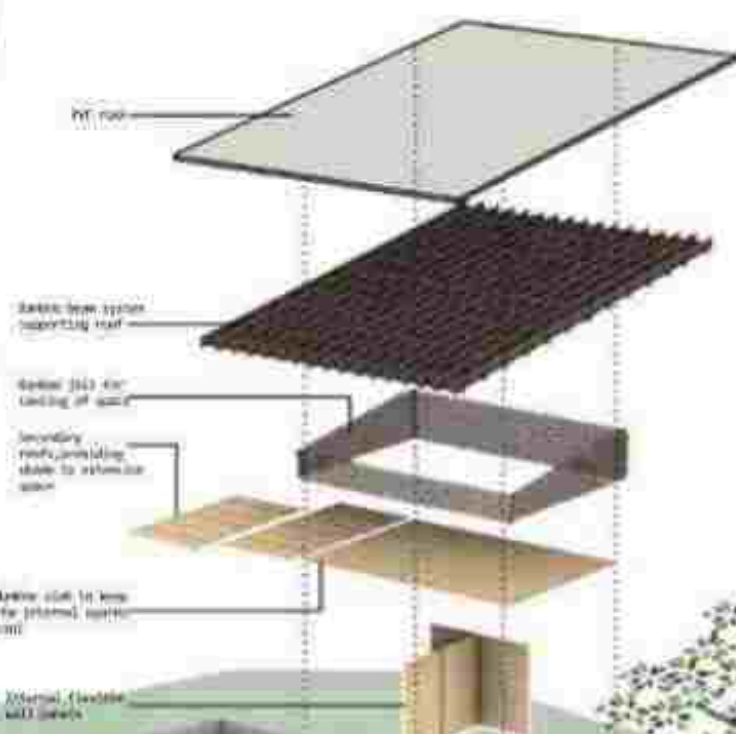
As the use of shelter is minimum of these communities the housing is designed on a linear platform and is located in between the palkhi wala's and farmers housing.

The spaces under the stilts are used for storing there tools and sometimes to park their hand carts.



Workers Community Section











Mithi River

**As a part of bridge studio - fast architecture government proposals which are left incomplete due to some reasons were chosen. And its designing challenge we have to propose strategies and design in such a way that the construction or process advances further or that incomplete structure can be designed for some different program.**

**Making riverfront more public and providing proper drainage system, etc were some of the strategies**

**This design was done in part. Thus our challenge was to propose strategies for Mithi River and design intervention such that it will help to speed up the clearing process of Mithi River.**

Present Condition - The story of the river till now

**Identification of issues, Analysis of site, Possible Solutions**

**1. Wastewater Treatment Plant**  
 - Issue: Wastewater discharge into the river.  
 - Solution: Construct a wastewater treatment plant to treat effluent before discharge.

**2. Riverbank Stabilization**  
 - Issue: Erosion and bank collapse.  
 - Solution: Plant native vegetation and install gabion structures for stabilization.

**3. Public Access Points**  
 - Issue: Lack of public access to the river.  
 - Solution: Create pedestrian paths, cycle lanes, and public seating along the riverbank.

**4. Green Spaces**  
 - Issue: Urban heat island effect and lack of greenery.  
 - Solution: Integrate green roofs, vertical gardens, and pocket parks in urban areas.

**5. Stormwater Management**  
 - Issue: Flooding during heavy rains.  
 - Solution: Implement rainwater harvesting and permeable pavement to reduce runoff.

Identification of issues, Analysis of site, Possible Solutions

**Identification of 7 potential sites and their programs**

**1. Wastewater Treatment Plant - Intervention Detailed**  
 - Program: Constructing a wastewater treatment plant to treat effluent before discharge into the river.

**2. Near Sarvath Nagar - Completion**  
 - Program: Riverbank stabilization, public access, and green spaces along the riverbank edge.

**3. Near Indian Education Society, Mawal**  
 - Program: Public access, riverbank stabilization, and green spaces along the riverbank edge.

**4. Green Spaces in urban**  
 - Program: Integrate green spaces in urban areas to reduce heat island effect.

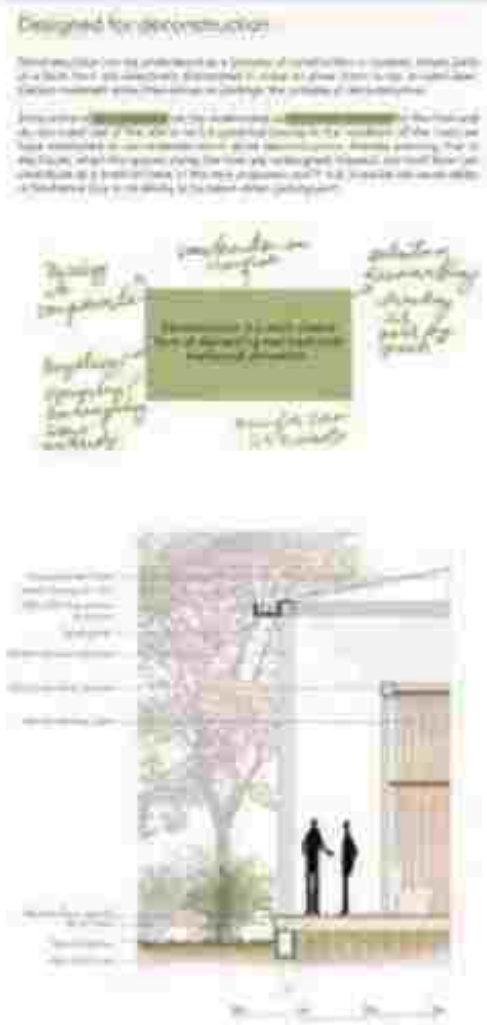
**5. Stormwater Management**  
 - Program: Implement rainwater harvesting and permeable pavement to reduce runoff.

**6. SAC - New Bridge**  
 - Program: Construct a new bridge to improve connectivity across the river.

**7. SAC - AMPH - Intervention Detailed**  
 - Program: Construct an amphitheater to provide a public space for cultural activities.

Identification of 7 potential sites and their programs



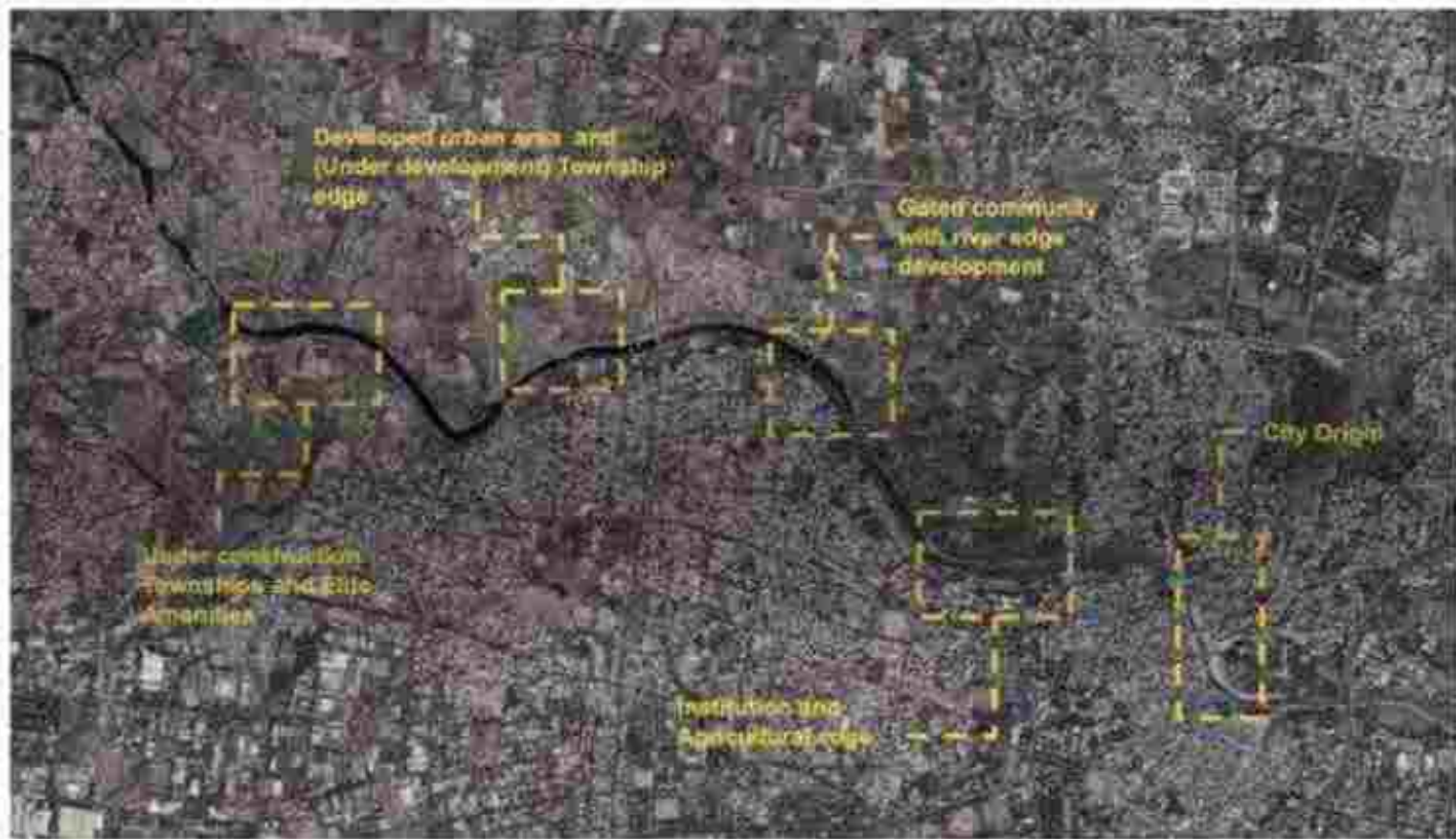


**THE CITY AND THE RIVER FRONT - STUDY OF NASHIK**

Urban Design project- Sem 7  
 Guide- Sandeep Menon, Dipti Talpade, Karan Rane

Nashik originated on the banks of the holy river Godavari and flourished as an Agricultural city for a very long time. A main exporter of flowers to the Middle East and an important producer of many crops, Nashik grew independently in the past until the city started growing subsequent to Mumbai and Pune. Lack of proper road network and bridges led to urbanization taking charge on the southern bank of the river Godavari and as the population grew, so did the need for residential and commercial spaces.



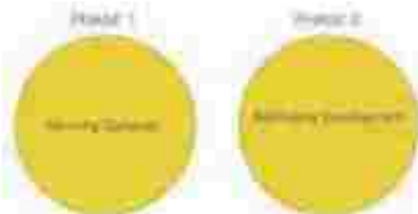


In the current scenario, farmlands are sparse and on the verge of extinction. We observe a similar trend of urban development taking over the agricultural lands on the northern bank of the river. Lack of schemes for development, less income, frequent flooding, impact of the polluted river and many such problems are causing farmers to sell away their lands for urban development.

#### IMPACT OF LAND USE CHANGE ALONG THE RIVER



We propose an integrated model for the future development of Nashik that will support both the future developing infrastructure as well as the existing farming lands. A two-phase project that first seeks to improve the current concretized banks of the river into a more flood resilient landscape while also improving the health of the river. This in turn will also enable an improved condition for the farmlands depending on the river. Proposing programs in the second phase that bridge the urban and the rural of the city in a way to support each other while also retaining, empowering and encouraging the agricultural landscape in Nashik.



#### NEIGHBOURHOOD (2021)



#### NEIGHBOURHOOD (1971)



#### DEVELOPMENT THROUGH THE YEARS

##### TOPOGRAPHY



##### BRIDGES



##### NOLLI PLAN



#### WATER MORPHOLOGY CENTRE



Exhibits and installations that will help people understand and become aware to the current state of the neighborhood and its impact on the river



#### FARMING INSTITUTION



Institute where people of all ages and background can learn and practice farming as a hobby or skill. Aim is to improve the existing conditions of farmers while promoting agriculture as an important occupation for future



#### FLORICULTURE RESEARCH AND DEVELOPMENT CENTRE



Reviving the old agriculture as a major source of income for the farmers as well as the state.



#### YOUTH CENTRE



Lack of infrastructure and no learning opportunities. Empowering the future of the youth.



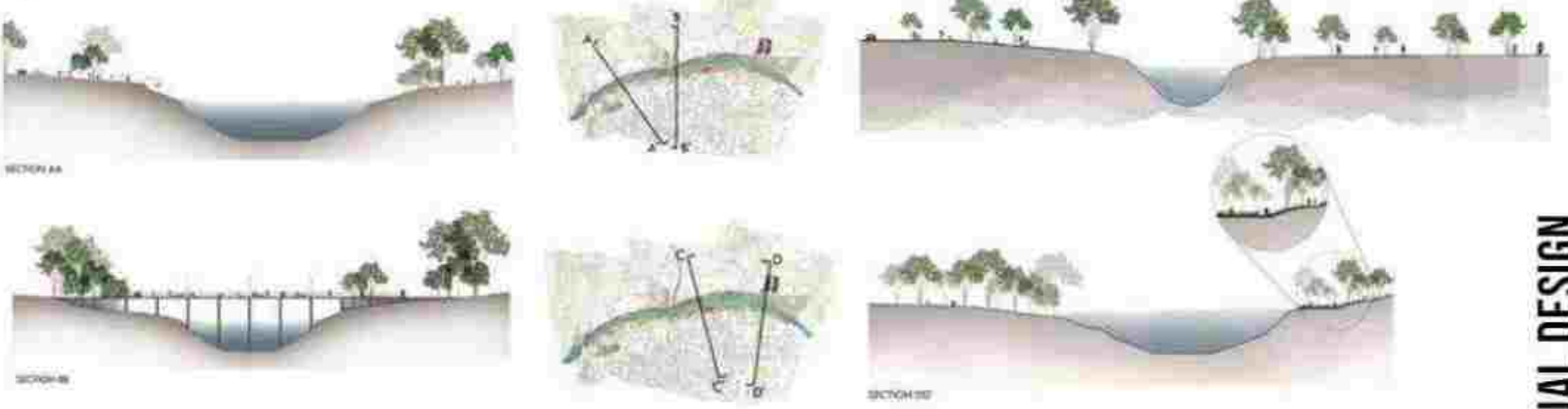


**FARMER'S MARKET**

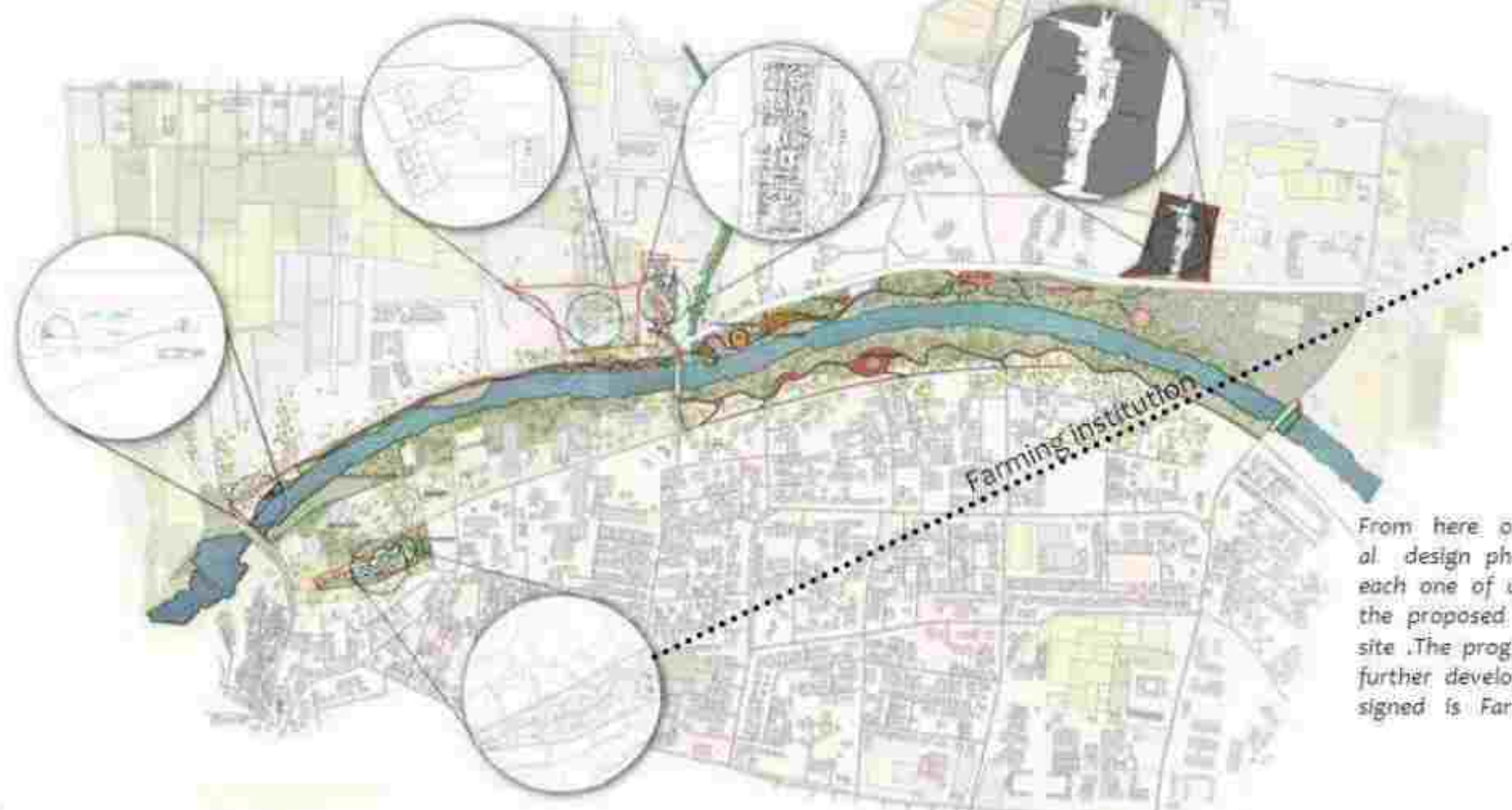


A weekly Farmer's Market will set a platform to establish a direct connection with the residents. Techniques like Agricultural tracing will be an attraction for people from all around the city.

Proposed



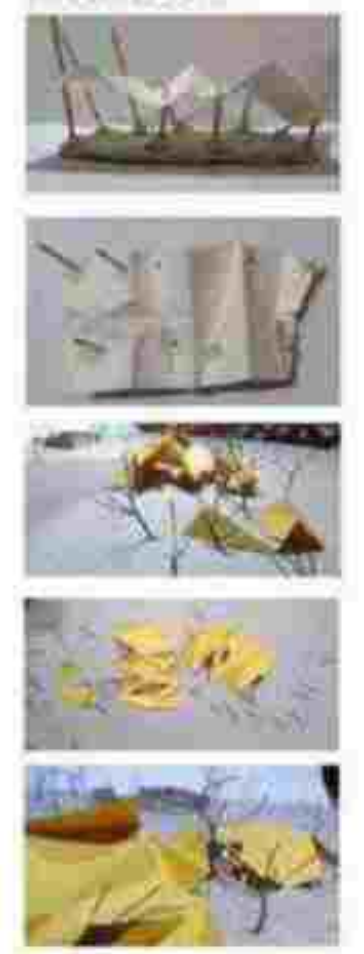
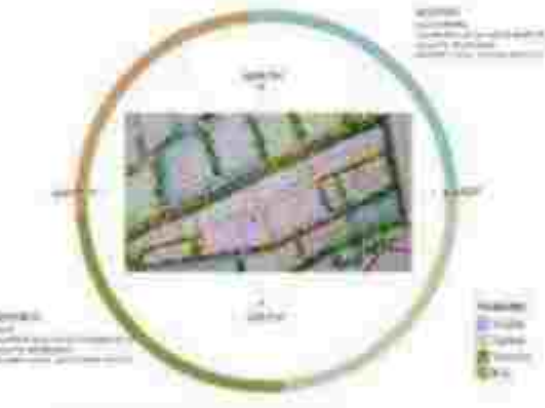
Up to masterplanning the research was done in collaboration with Tanvi Kakad, Rutuja Dhodisval, Sanyukta Bagrecha, Sarthak Malunde.



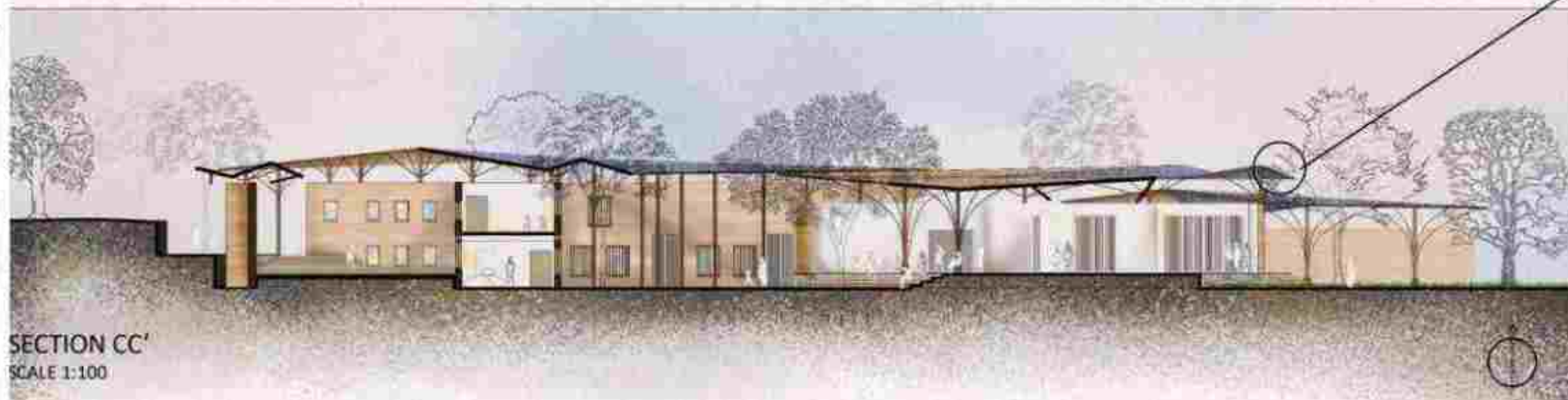
From here onwards Individual design phase starts where each one of us had to design the proposed Interventions on site. The program that I have further developed and designed is Farming Institution.

**INDIVIDUAL DESIGN**

**GROUND FLOOR PLAN**  
SCALE 1:100







Model views:



Entrance



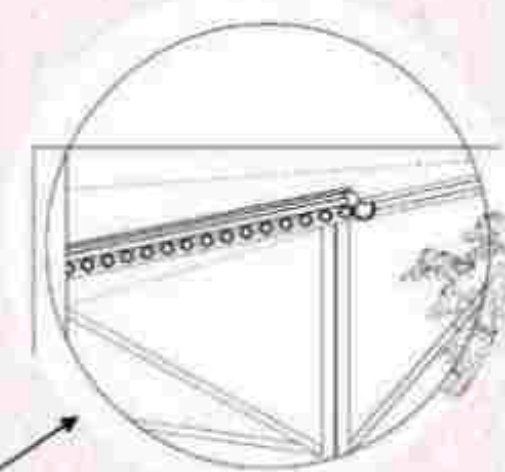
Gathering space and courtyard



Small courtyards



Roof view



Bamboo roof detail

Thatched bamboo roof for summer sun for coolness



Solar shingles for winter sun to catch maximum sunlight



## FARMING INSTITUTION INDIVIDUAL DESIGN

This institution is designed on more of the urbanized bank of Godavari River so as to create more green lands and prevent the bank being concretized. This institution is designed where there are existing green lands but no more used for farming and also have very good connectivity to both side of the river banks. As the institution is more kind of public, attracting common people is the main goal to enrich farmer's wellbeing. Also the employees here will be farmers themselves who will teach visitors about farming. Seasonal farming is practiced here. Also for people who wants to learn farming or enjoy farming or want to have their own farm for farming practice are welcomed here and have guest house to stay. Also students and researchers are welcomed on the site. There are workshops, learning centers. Research centers for students and farmers to learn new advanced as well as some basics of farming.



**FRONT ELEVATION**  
SCALE 1:100







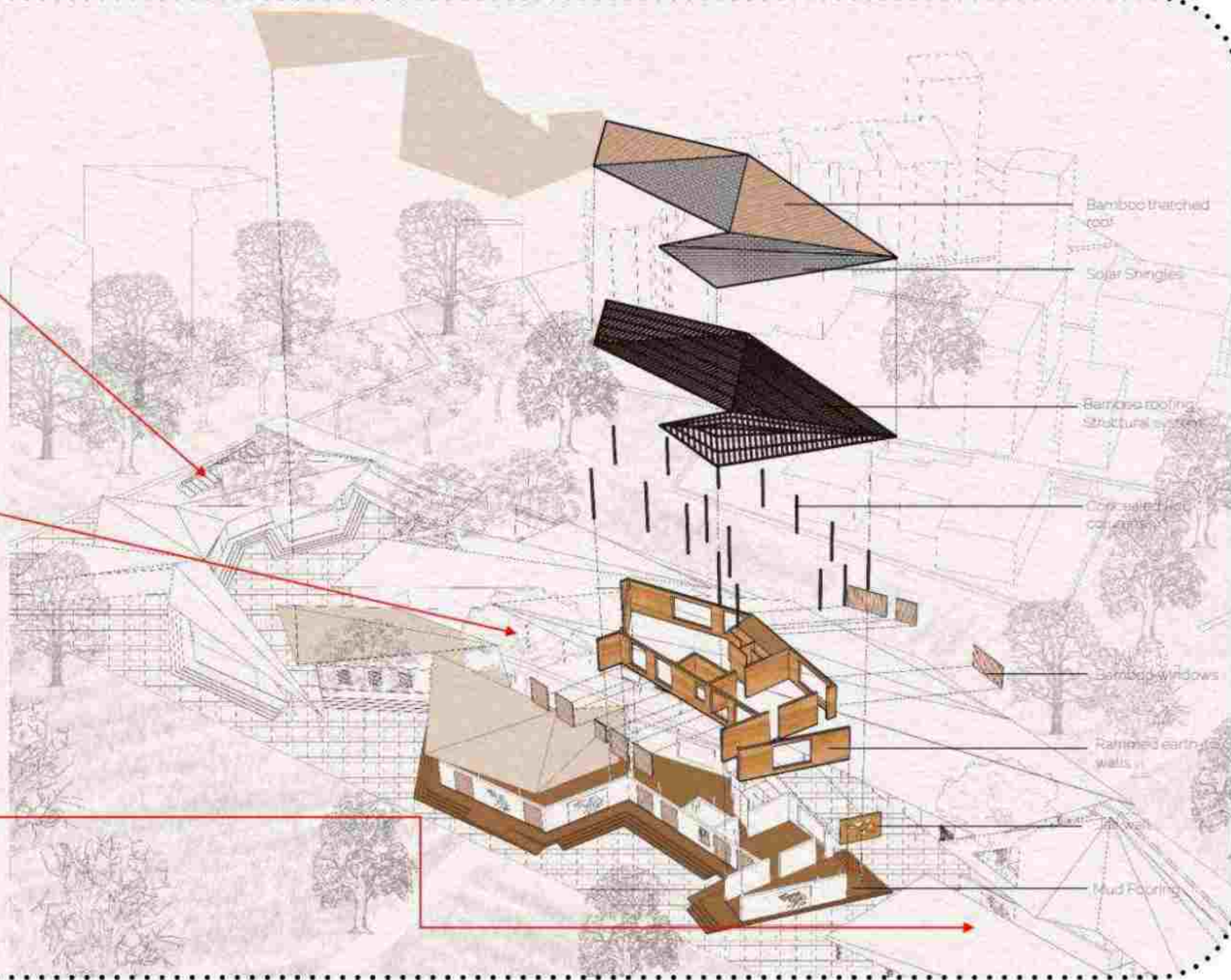
Temporary housing  
backside



Workshop space



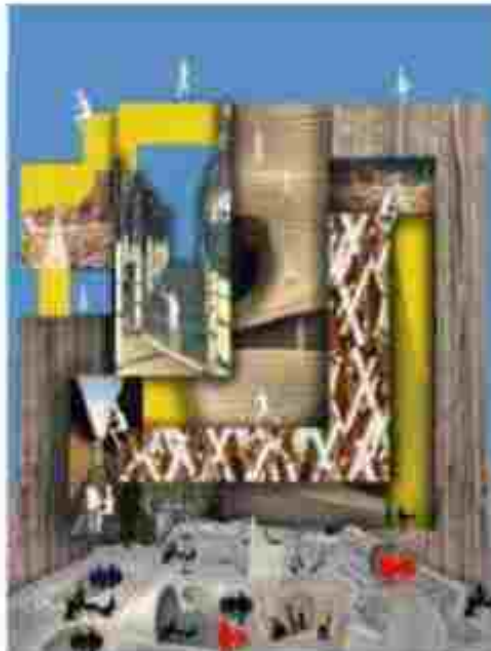
Central courtyard spaces







HAVING OVER-LOOK SPACES AND BRIDGES TO CONNECT PEOPLE TO THE BUILDING



WEAVING THE INTERIOR AS WELL AS EXTERIOR OF THE BUILDING USING RAMPS/ STAIRCASES



COMMON PROGRAM HAVING INSTALLATION SPACES FOR COMMUNITIES



HAVING MEANDERING PATHWAYS AROUND THE TREES WHICH LEAD TOWARDS THE BUILDING



PLAYFUL PATHWAYS STARTING FROM THE WATER EDGE AND CONTINUING ALL THE WAY TO THE SITE

## DEMOCRATIC ARCHITECTURE

Project- Sem 6  
Guide- Vishal Javan

The project in VI semester was a group project with Shruti Rajmare as my partner. Our project site was Mattancherry, Kochi. The basic theme of the project was to 'design a building with the lens of democracy'. The project was further divided into two parts where we both have to individually design. We were provided with two sites of Mattancherry. The first plot was along the side of water body near the Mattancherry Ferry and was the site where I have to design. The structure I was assigned to design was the 'Ward's Office'. The other site was near the 'Heritage site' where 'The observatory' was to be designed, which was the site where my partner had designed. We together also designed a common programme which was 'The installation space' for the people of Mattancherry and the students applying to study 'EnteKochi' programs. This space would be a common platform for recreational purposes and can also be utilised for organising fests for the community and eco-walks.

What is a democratic building? Was the very first thought that came into my mind when the project was introduced to us? A Democratic building is a space which is open to public and have transparency between the government and the public. Also it is a space which is created because of people's movement or is weaved because of people's movement. Using transparency and weaving as the main key words of the design a structure with alley spaces narrowing and widening and the opening to court-



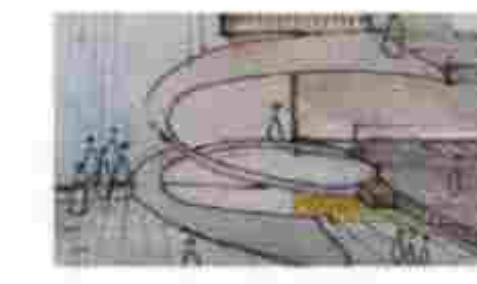
At least  
Kondhacherry (Heritage Site)



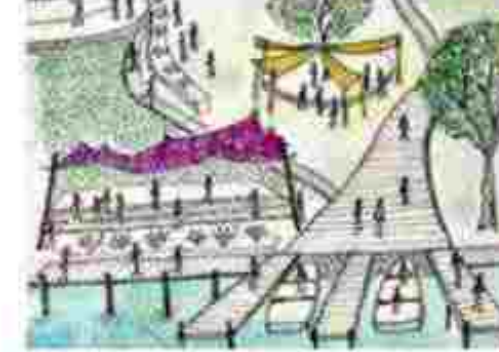
Extrusions in socket



Staggered Floor slabs to create



Internal circulation (weaving building by process)



SECTION-B





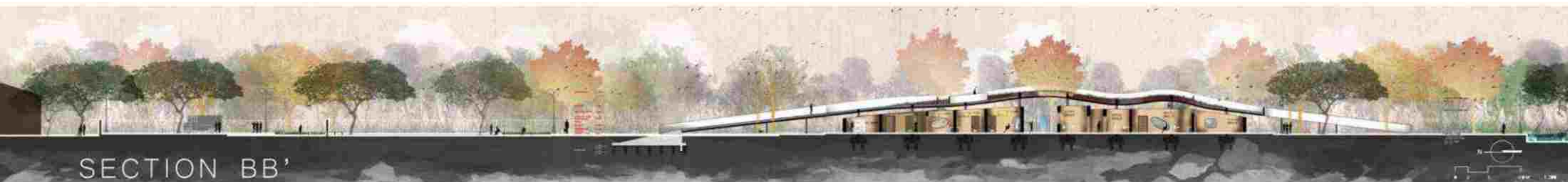
Architect: white  
[http://www.whitepeter.com/whitepeter.com/whitepeter.com/whitepeter.com/](http://www.whitepeter.com/whitepeter.com/whitepeter.com/whitepeter.com/whitepeter.com/)



### WARD OFFICE BUILDING

yards which acts as a pause point was designed. . Huge three ramps which are the result of people's movement, which are also the green roof of the structure where exhibition space is programmed for public was designed. The structure have part of workshops and multipurpose hall open to sky. The structure is open from all the sides for people with some private programs designed in the centre of the public space. The structure is an initiative to bring all the communities and government bodies together.

The structure is a curvilinear structure which derived its form after placing geometries on the site considering the placement of tree and the connecting pathways .the roof of the structure is accessible with large ramps which is wavy in both the directions. The roof have a play of up and down and also have green terrace spaces and concrete pathway. Structure is a pavilion type structure which is supported on RCC columns and have upstand beams. The walls are dwarf walls which creates room for natural sunlight and ventilations. The structure also have a floating RCC helical staircase which is supported which tension cables. The alleys in the structure are covered with skylights. The windows are parabolic curved windows which gives wide open view of the surrounding.



### SECTION BB'



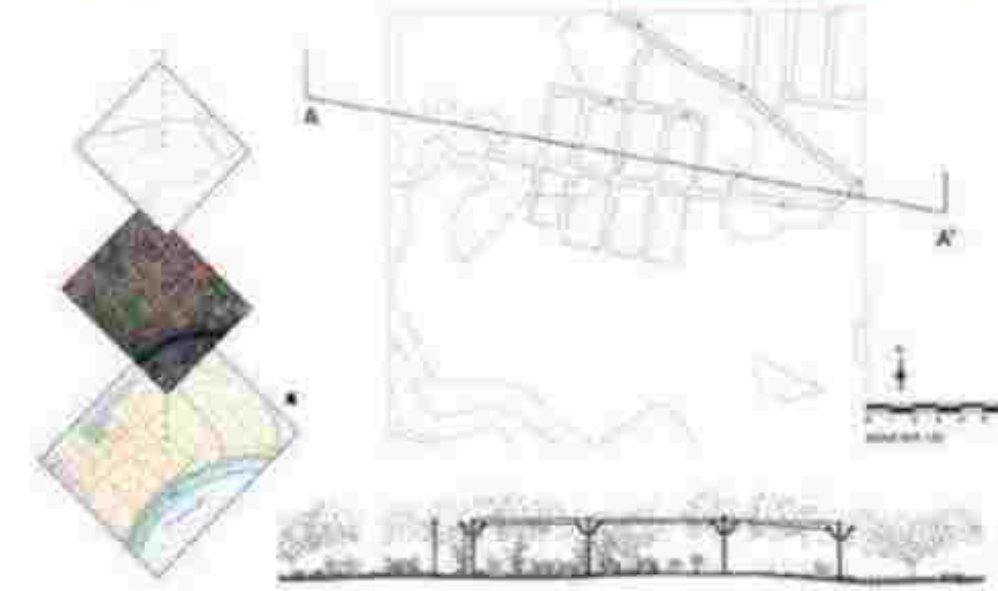
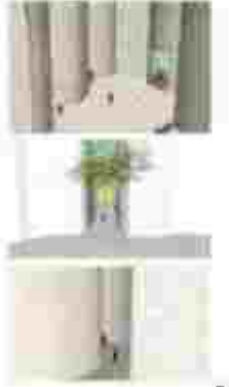
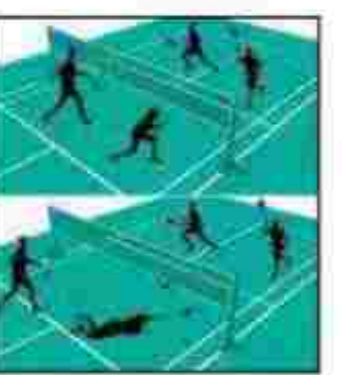
# SITE PLAN

SCALE 1:200

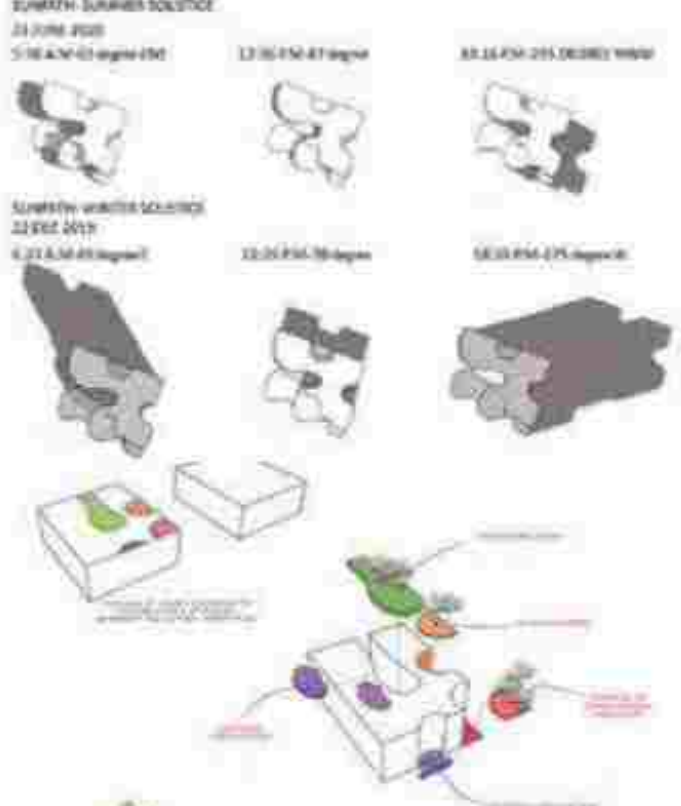
## STUDY OF NEIGHBOURHOOD

Design Project- Sem 5  
Guide- Jude D'suza

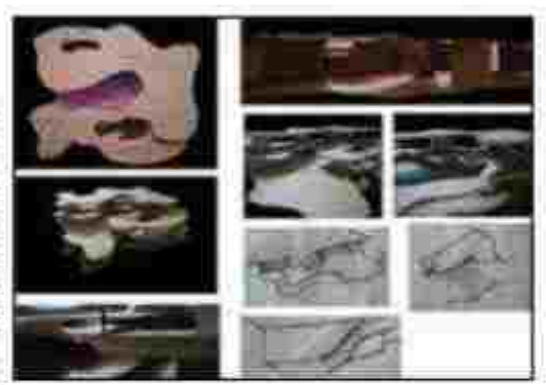
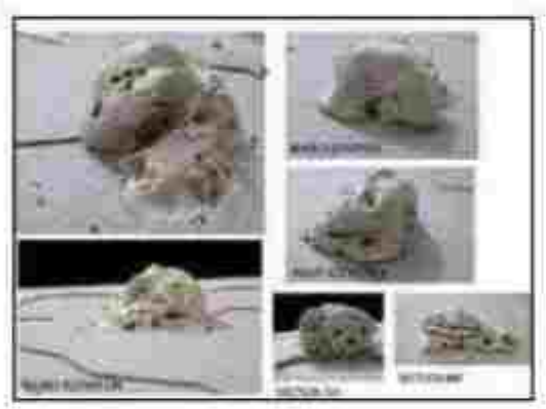
This project is about studying our neighbourhood, own city. As I stay in Nashik, my neighbourhood was based in Nashik city and that too along river Godavari. Further we have to choose a character who is someone that inspires us to create an institutional space. And then create a narrative for the character and then base on that narrative the studio further progressed to design of a structure. The character that I studied was an industrial designer who was highly inspired by nature to create new gadgets. The character whenever runs out of idea, just think of the nature and try to depict the nature in her gadgets. Based on this narrative I thought of designing an institution which will create a space for more thinkers like her and that institution is biomimicry research Centre.



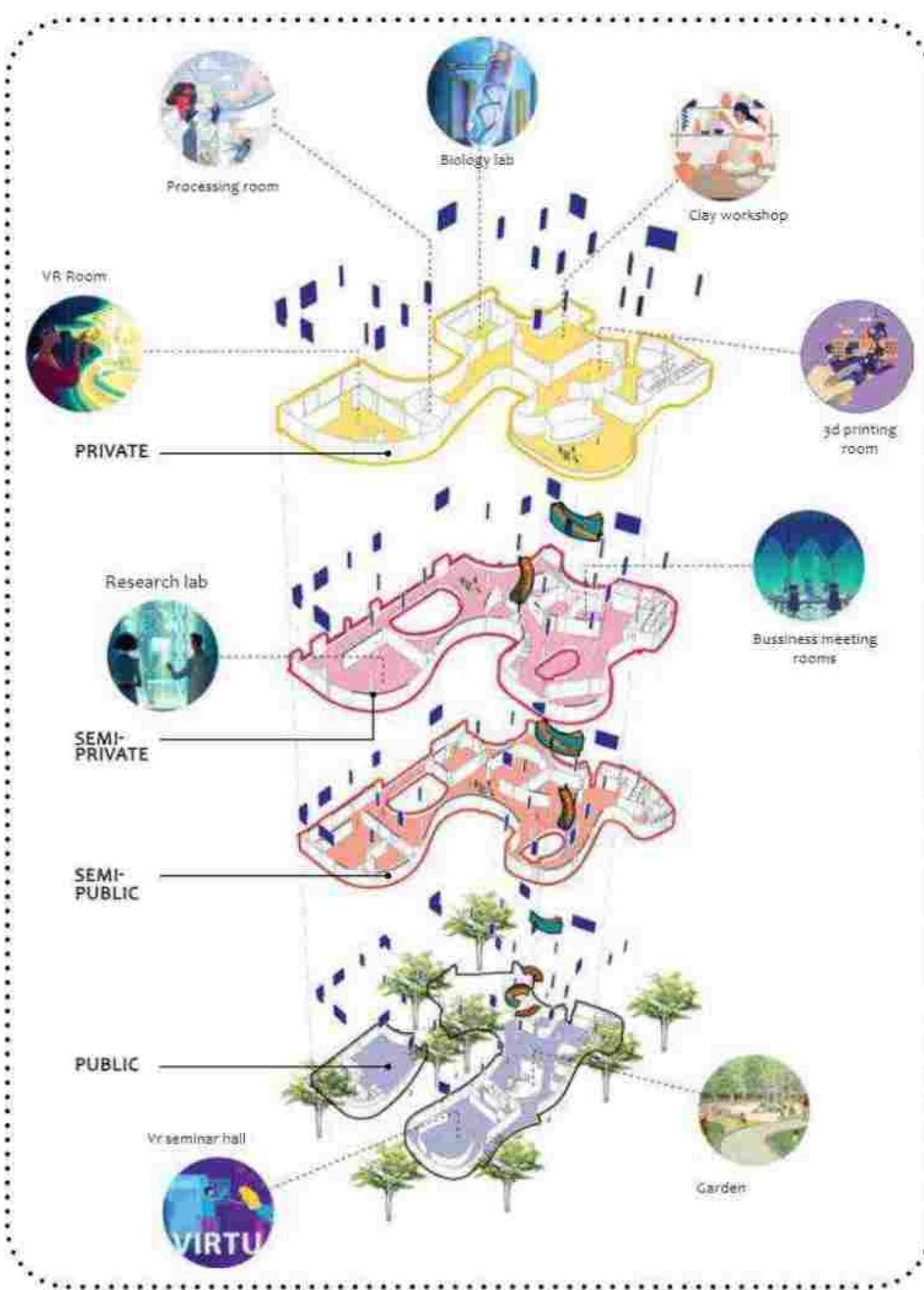
SECTION AA'  
SCALE 1:50



**CONCEPT:**  
Base on narrative as the idea was about nature, my concept was also based on the morphological activities on the banks of the river. Weathering of rocks along the bank of the river was the key concept so my structure is a rock which is placed on the river edge and is weathered by the people's movement. There are some carved out space formed inside the structure to preserve the natural vegetation of the site. The structure is designed in such a way that it have organic facade facing toward river and rigid/plane facade on the city side, to depict the merging of structure into the landscape of the site.





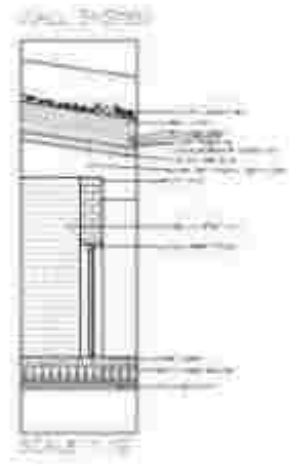
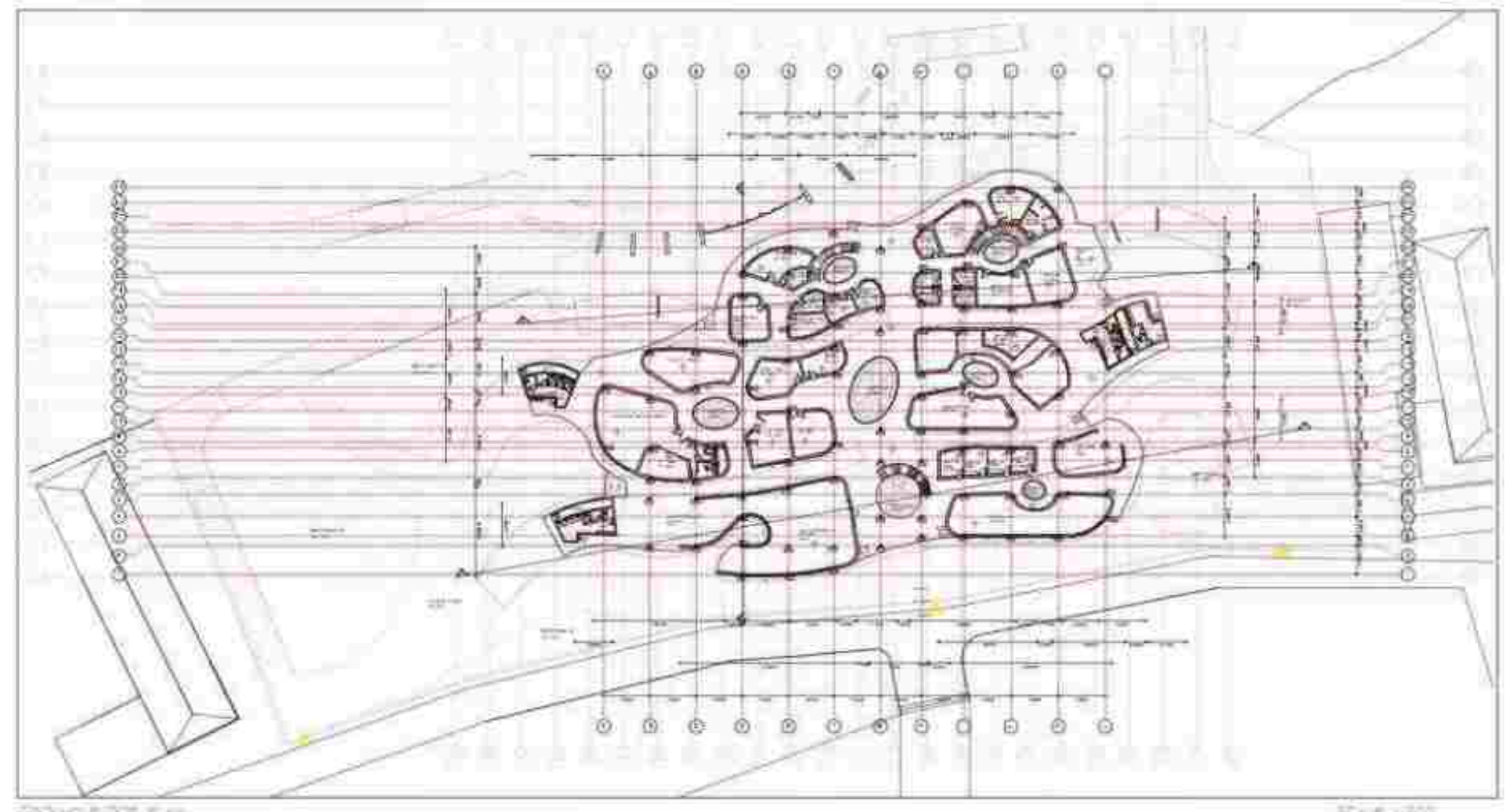


*Exploration of the form was the most interesting part of this project. To try out varied out spaces and weathering of rock dry clay was used and to convert this organic form into physical model was a bit tricky part. So this part was explored with the floor plates which were stacked upon one another.*

The building is four storey structure, where the ground is completely public, middle two floors semi-public, top and the underground floor are private. The site is raised from the original ground level and the contours are designed in such a way that both the entrances of the ground and underground floor are accessible (section BB'). Other amenities are also designed on the contoured land like parking, walking paths, playing areas. The structure has 7 x 9 m column grid on each floor, but the shape of the columns changes on each floor (axonometric). There are internal ramps in the structure with 1:5 slope. The roof is undulating roof which is accessible by the provided ramp.



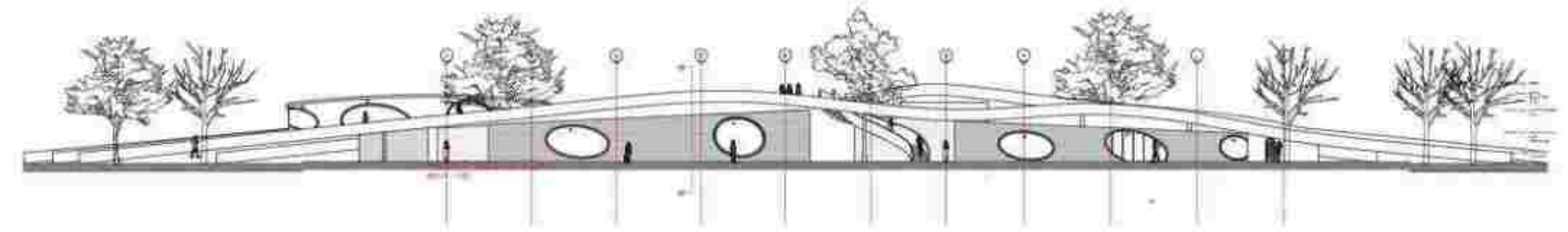
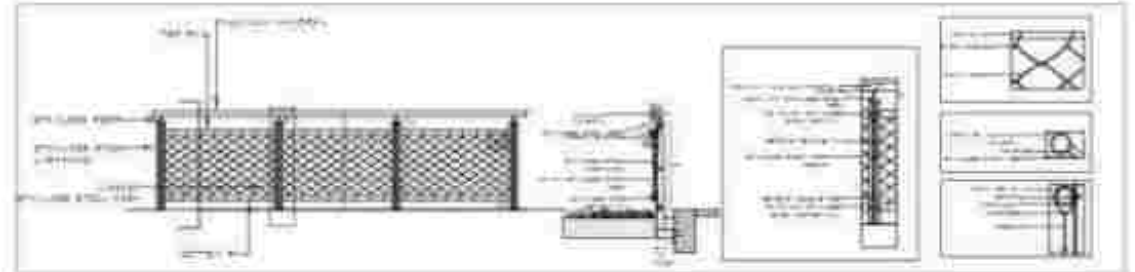
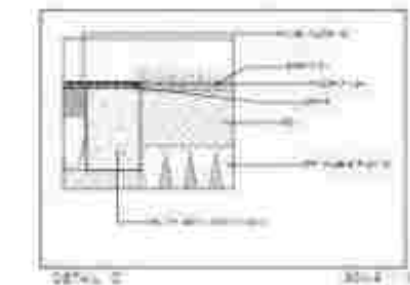
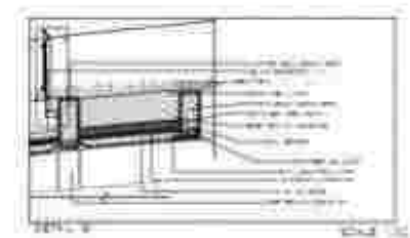
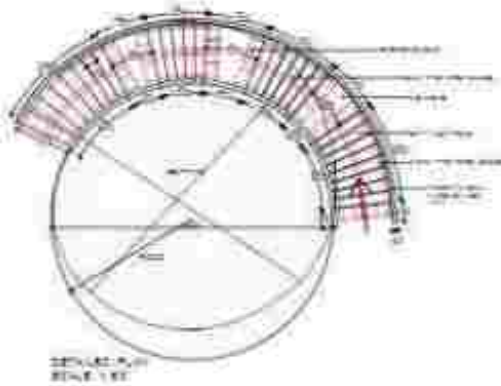
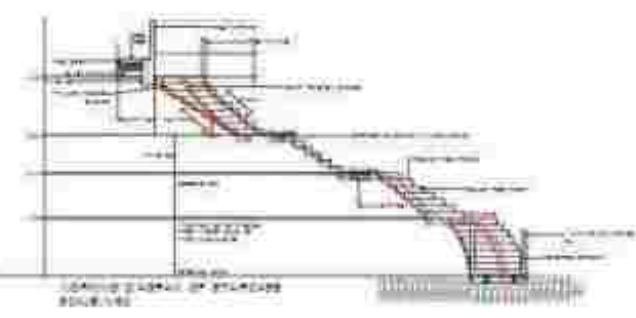
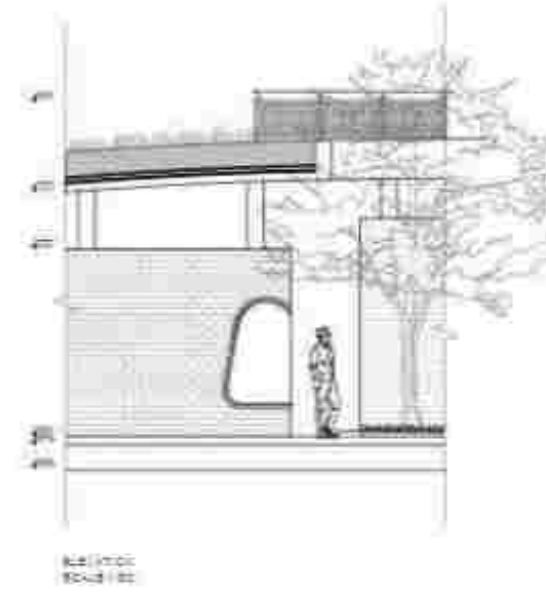
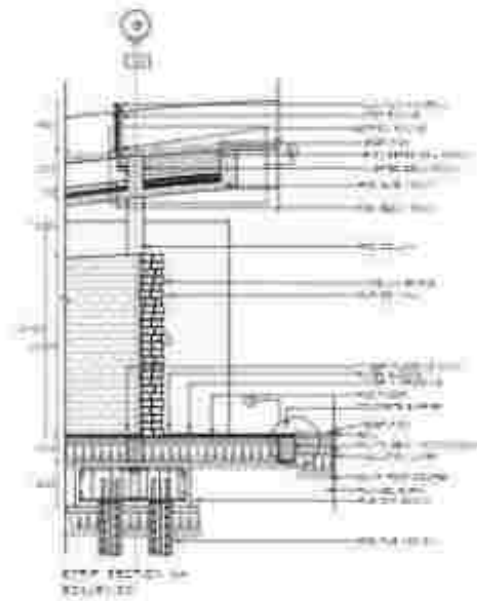
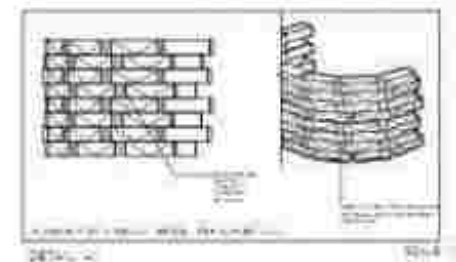
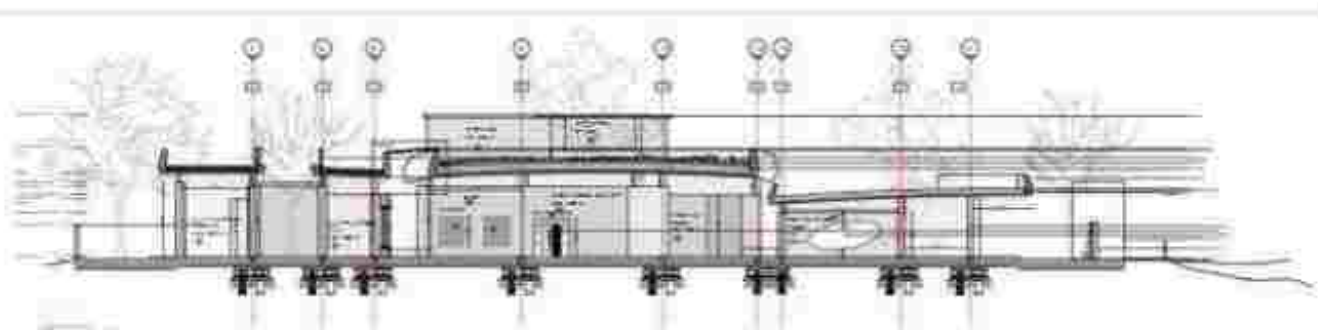
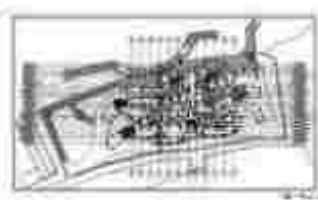
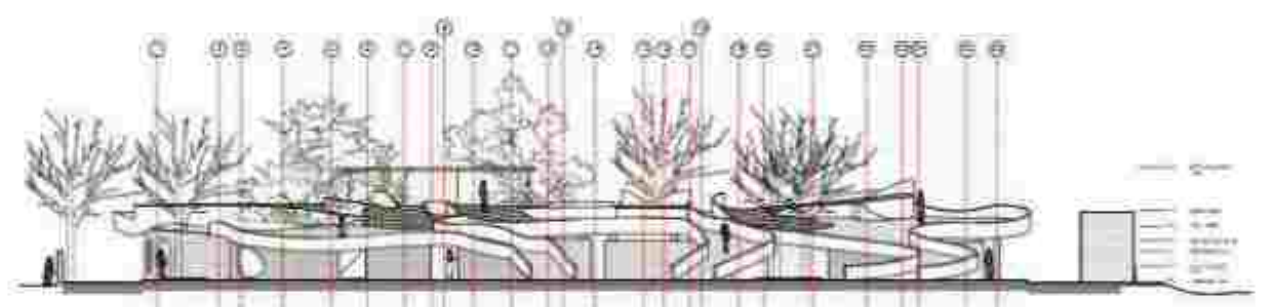




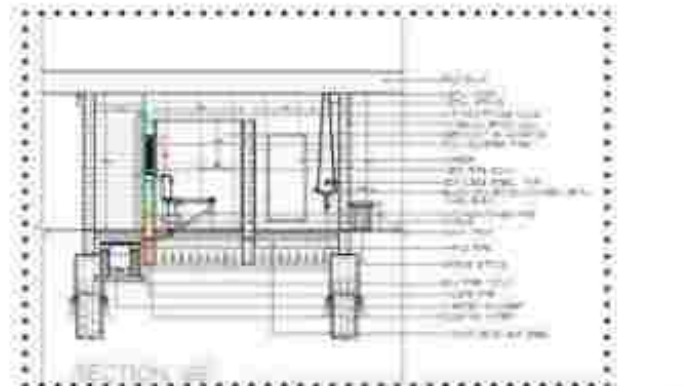
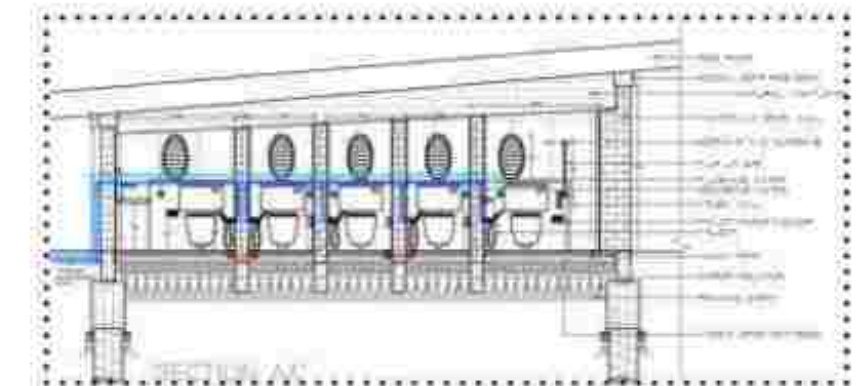
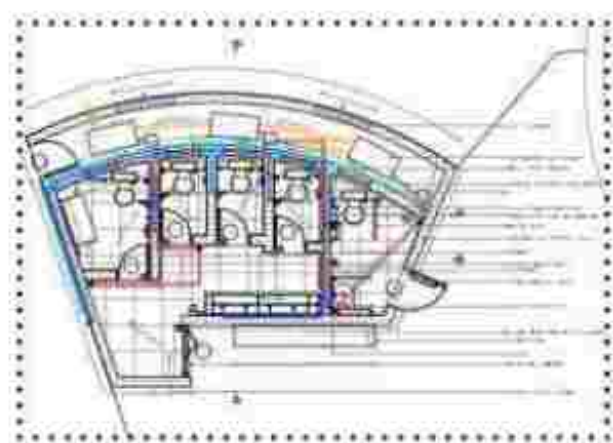
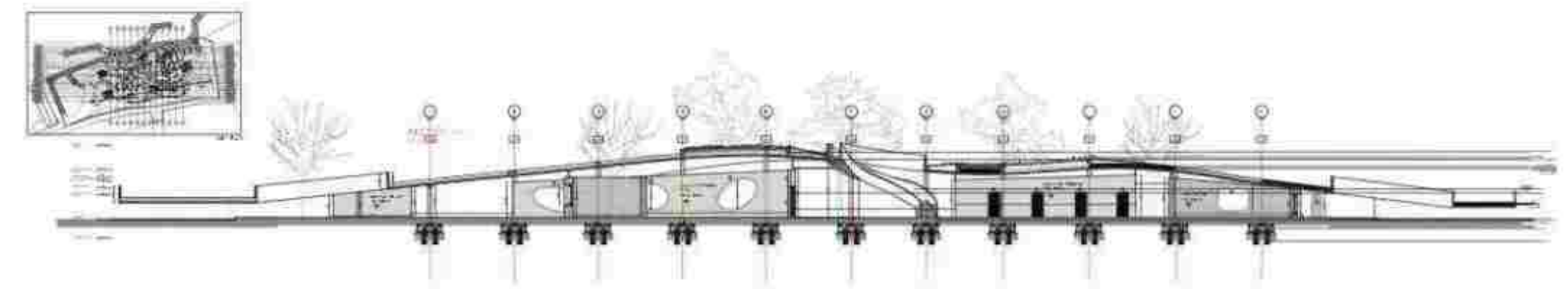
## WORKING DRAWINGS

Project- Sem 6  
Guide- Swati Sheshadri

Ward office building is structural resolved. More detailing of frame structures, roof, envelope system is done. The structure was designed as a pavilion where the roof is supported on circular columns and have free standing dwarf walls. Grid was set for columns and setting out for the curvilinear walls was done. By using tension cable the helical floating staircase was resolved.



SCALE: 1:100

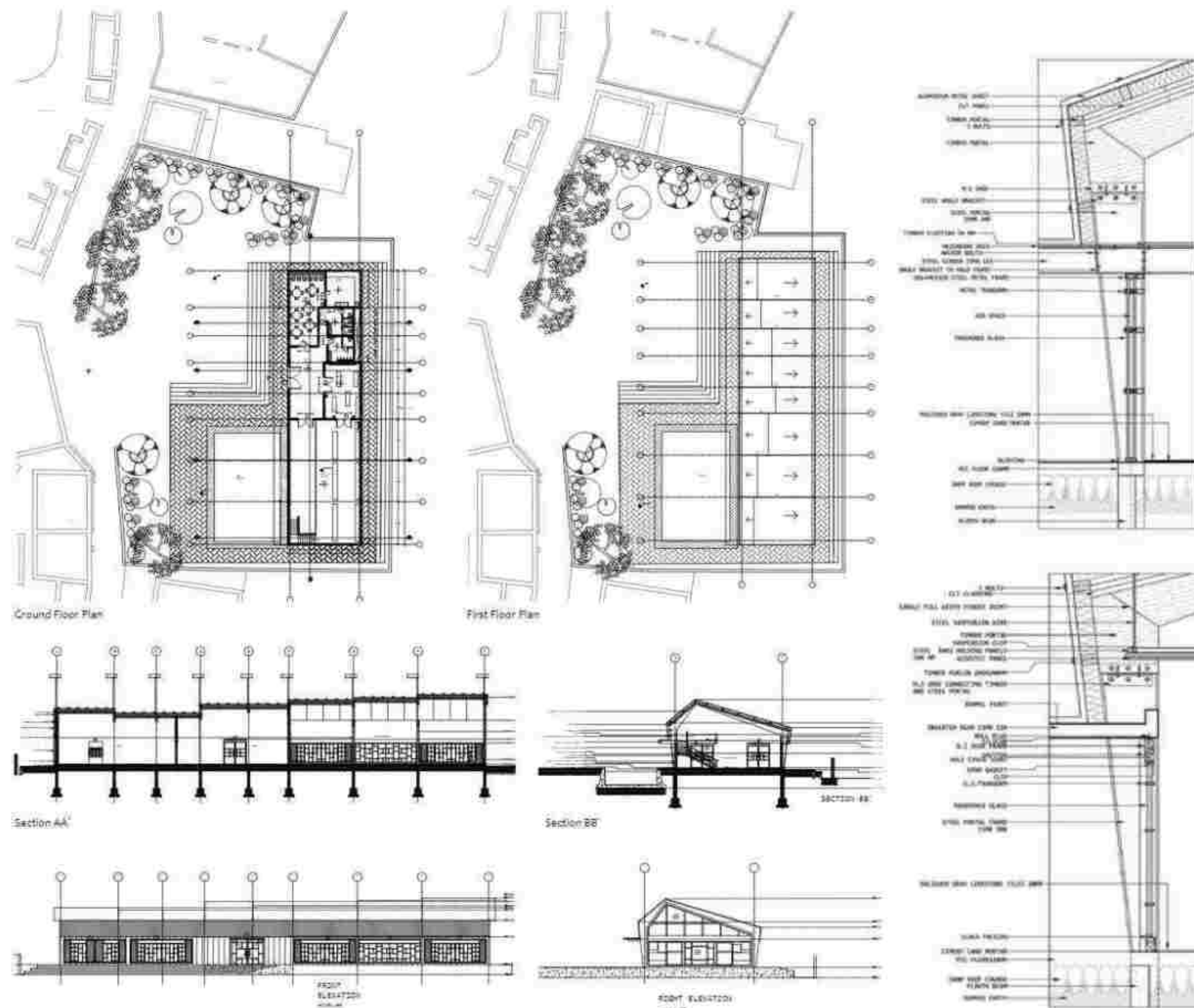




## Project- Sem 5

Guide- Jamshed Bhiwandiwala

An Artillery museum was designed using portal frames. Composition of steel and timber portal frame with cantilever mezzanine floor was designed. There is cross ventilation throughout the building. Whenever there is change in the height of the portal frame a skylight is provided in between two portals. The roofing is metal roofing which is covered with CLT pales from the interior part of the building.



# WORK EXPERIENCE

## SEM 8 INTERNSHIP PROGRAM

Selected Works

68

Spandan  
Banerjee

72

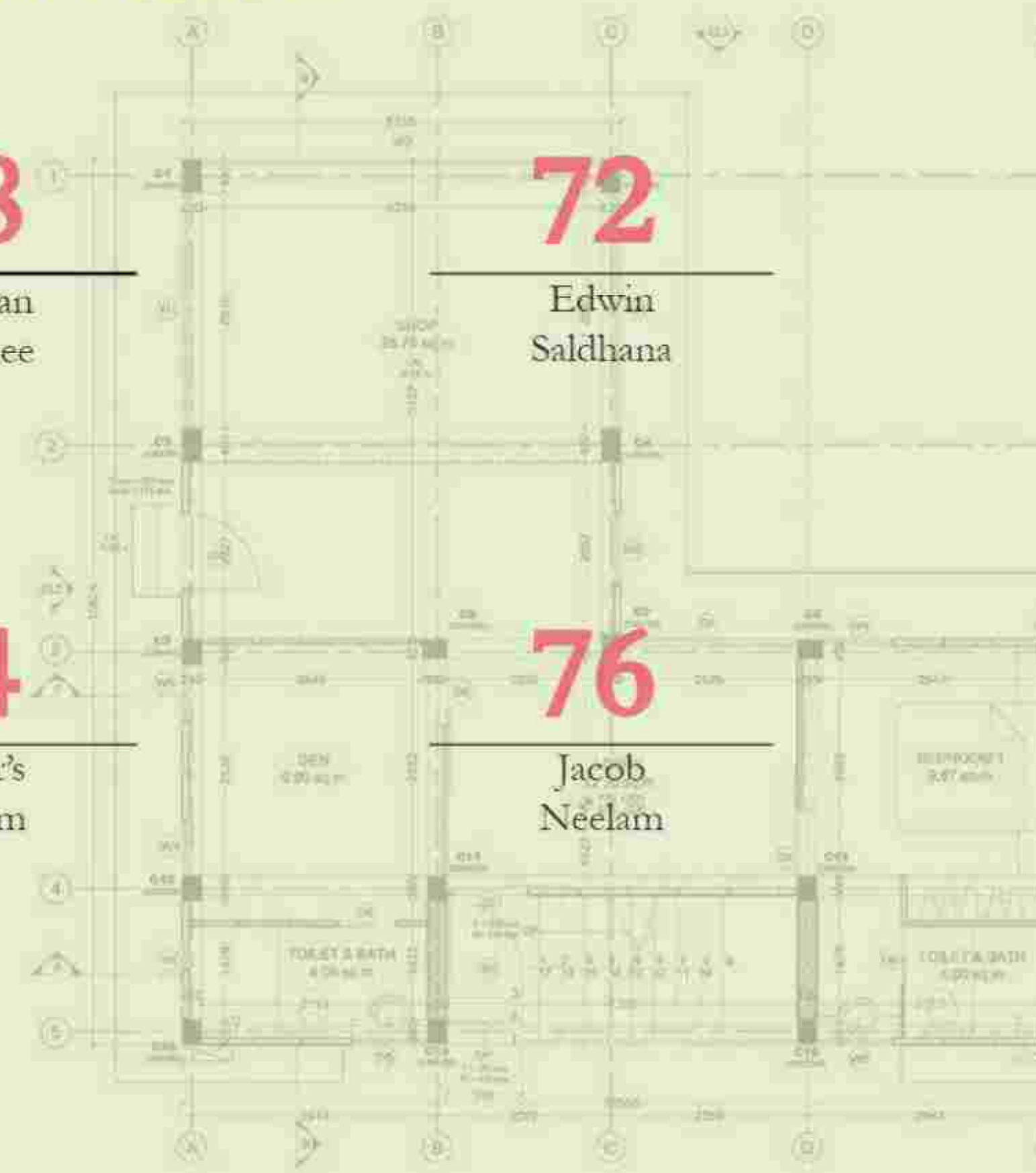
Edwin  
Saldhana

74

Maker's  
Asylum

76

Jacob  
Neelam



Interned At Mozaic,Goa  
Principal Architect- Dean DeCruz



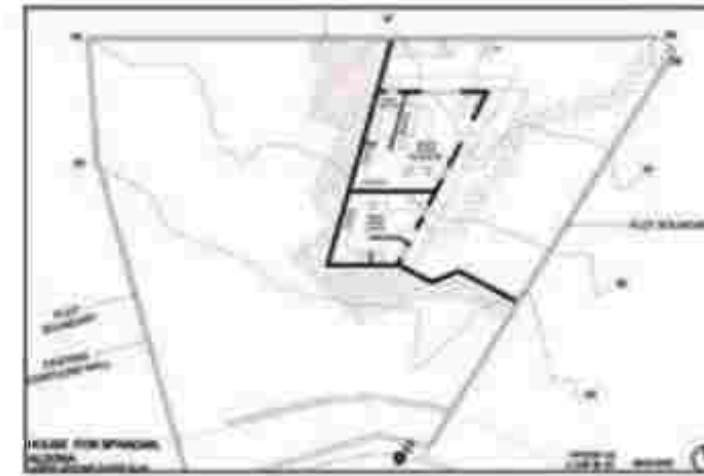
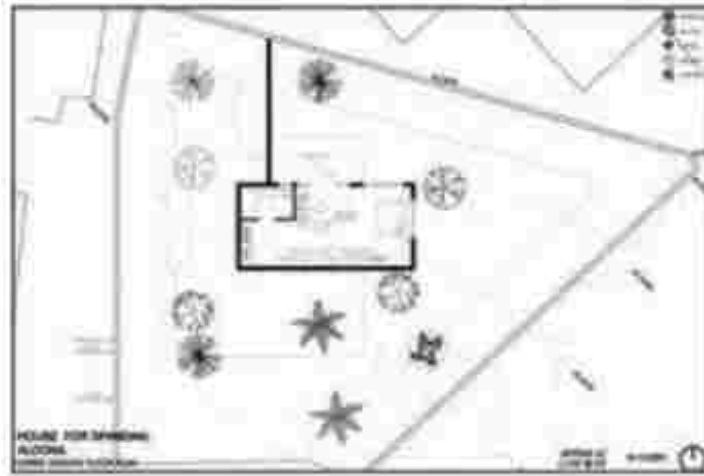
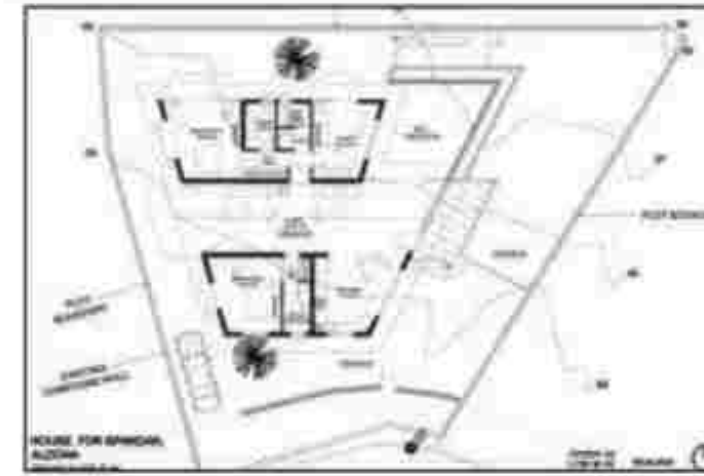
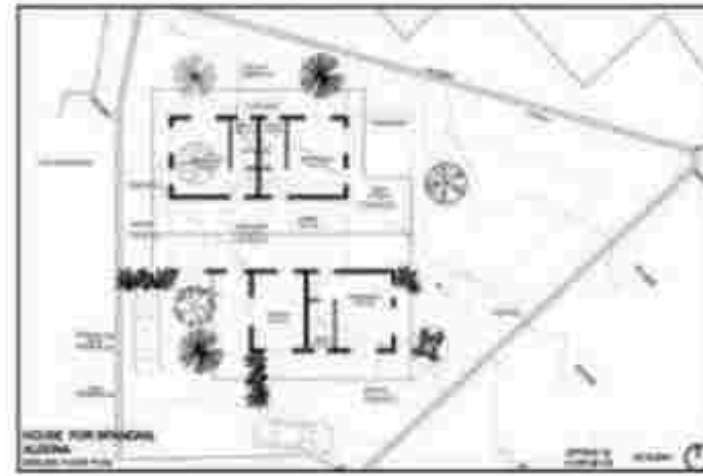
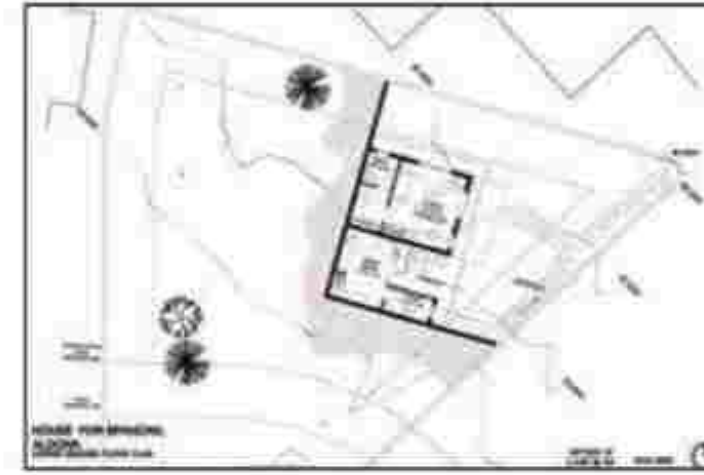
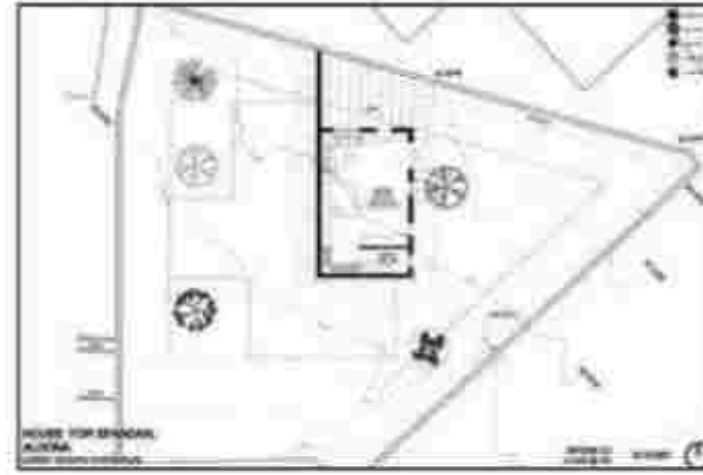
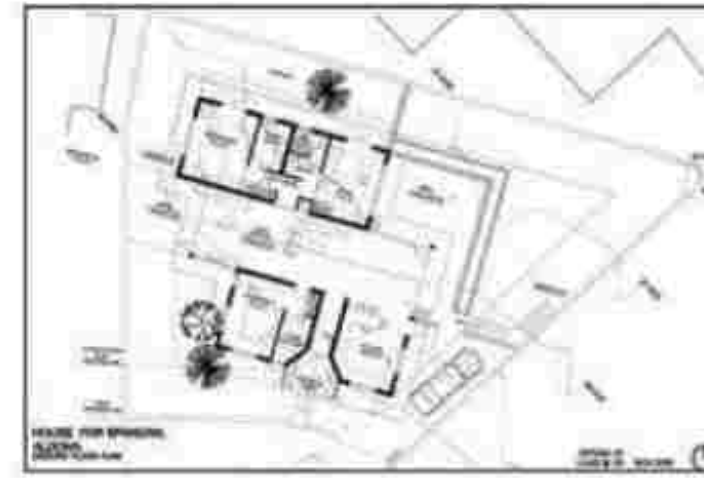
## SPANDAN BANERJEE

Aldona Goa  
Team- Dean Dcruz, Pooja Nagaraj  
Stage- Design Development

### WORKED ON

- Conceptual drawings
- Conceptual models
- Sanction drawings
- Online sanction drawings
- Detailed model
- Interior model
- Porch designs
- Site visits

Spandan is a film director and wanted a house which is cosy and have wide open windows for views. He also wanted a nice small garden space for parties and a studio for his work. He wanted his house to be more contemporary with simple roofing and a single story structure. In this design skewed corners are intentionally designed so that the rooms looks spacious and gives an opportunity to provide wide openings. Various types of roofs were designed for the structure such as mosaic tiles, then puff panel roof, rcc roof, etc. The area requirement of this project was more before road widening took place. One design was also finalized but after road widening whole design changed and area requirement was also decreased to 200 sq.m.







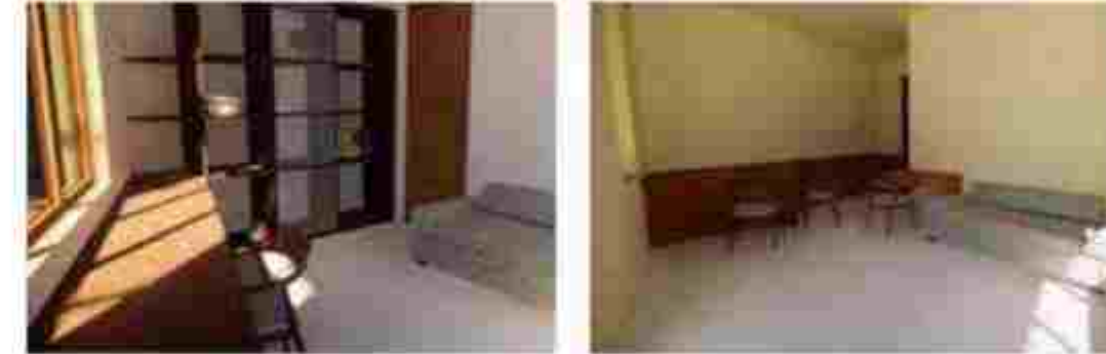
*External views of the house. Lime plaster is done to the external wall. As the house is located in heavy rainfall zone, roofs extends about 900 mm from all the sides.*



*After discussing with structural engineer roof design was changed and so the windows design were changed above lintel level. As roof was changed, porch design changed, deck area was changed and some other changes external changes took place. But the design and internal layout is still same.*



*Internal views of the house. Huge windows allow light to lay in the house all day.*



*After offline submission of sanction drawings, online submission was also done as it's a new rule in goa to get TCP permission for single dwelling. It's a submission where a software checks the area and height requirement, whether the designed structure follows all the goa bylaws.*



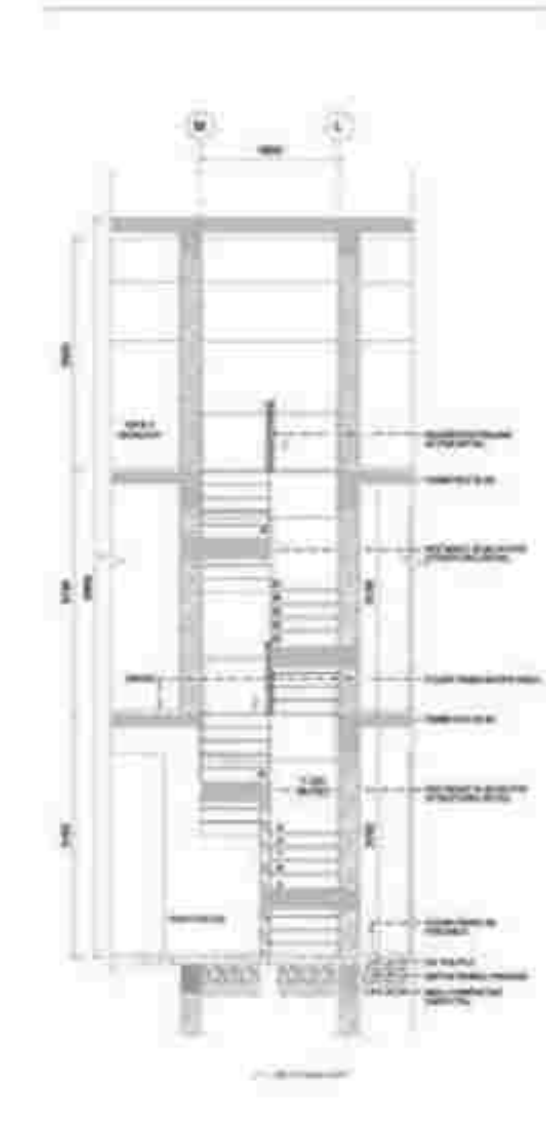
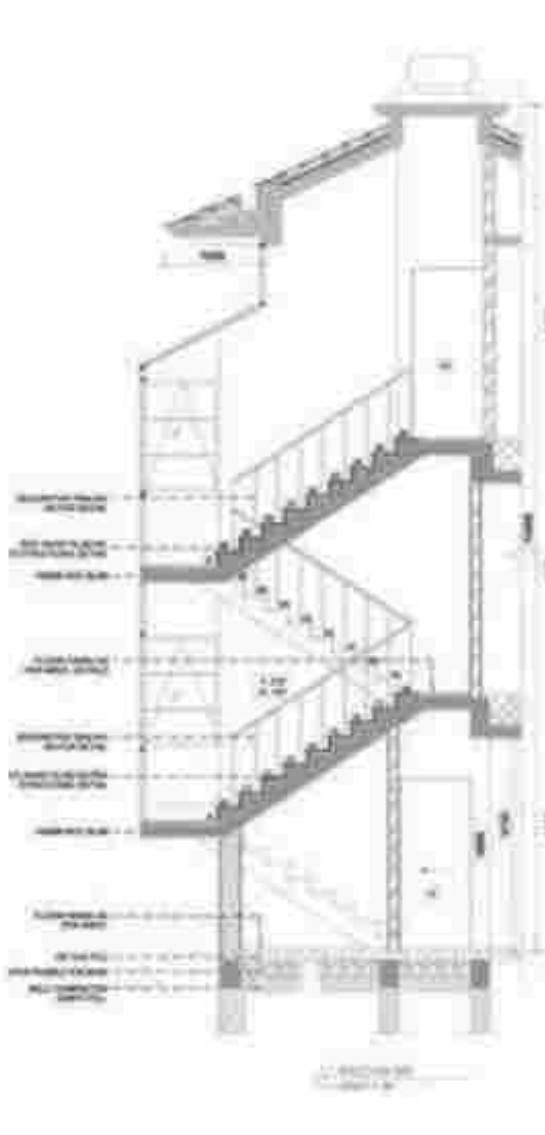
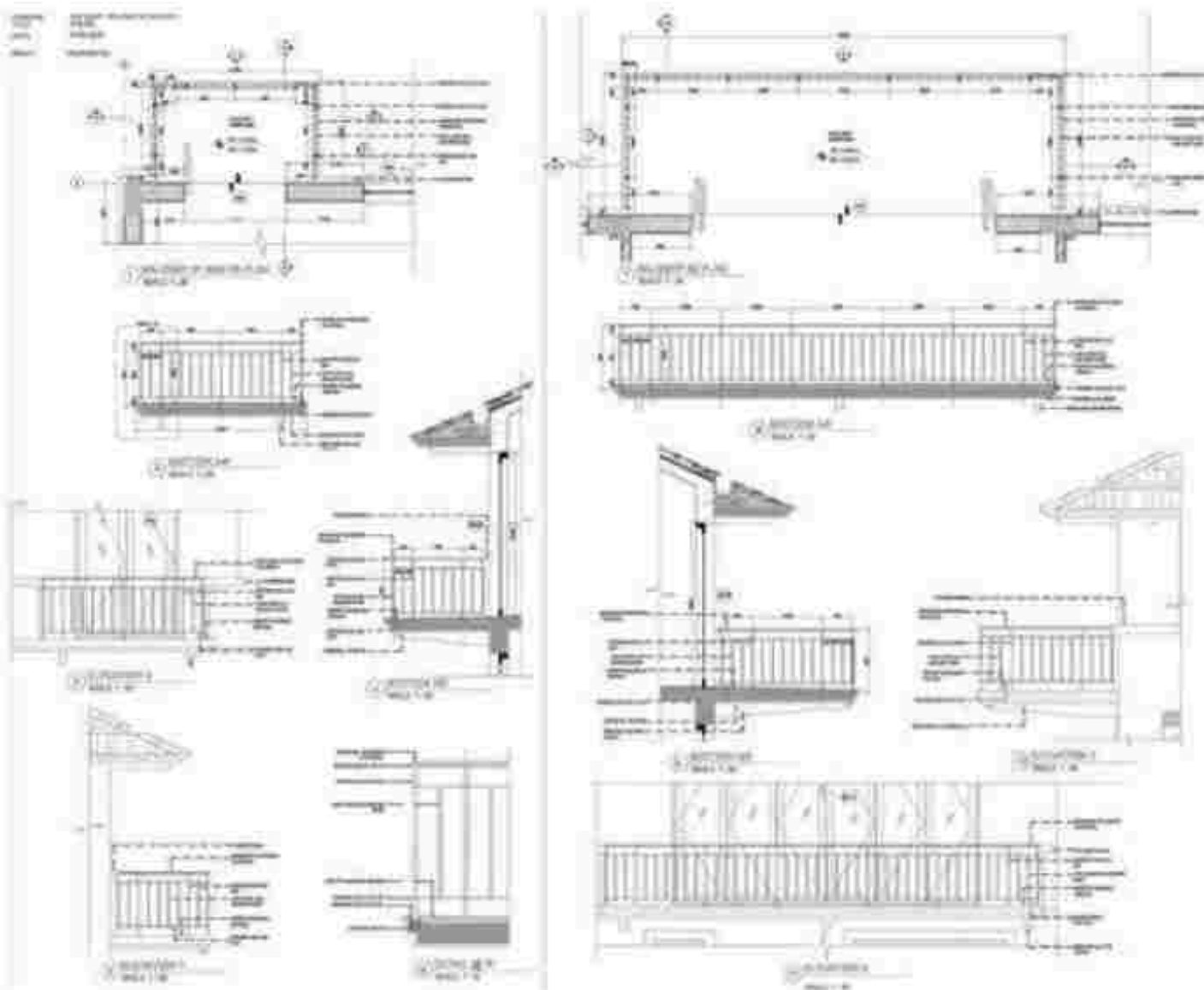
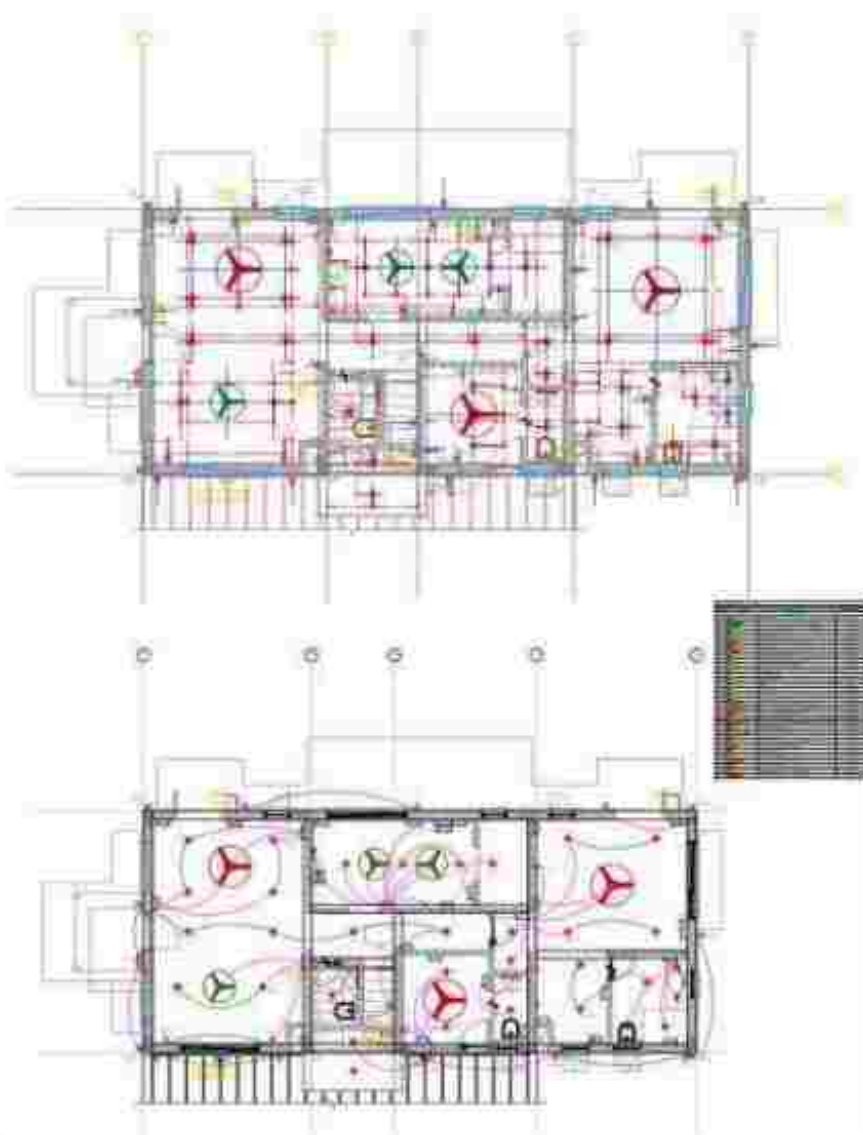
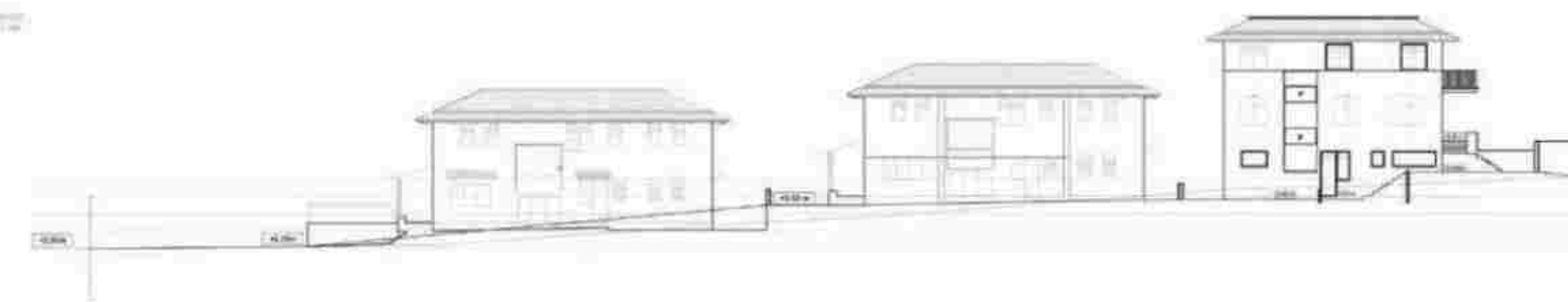
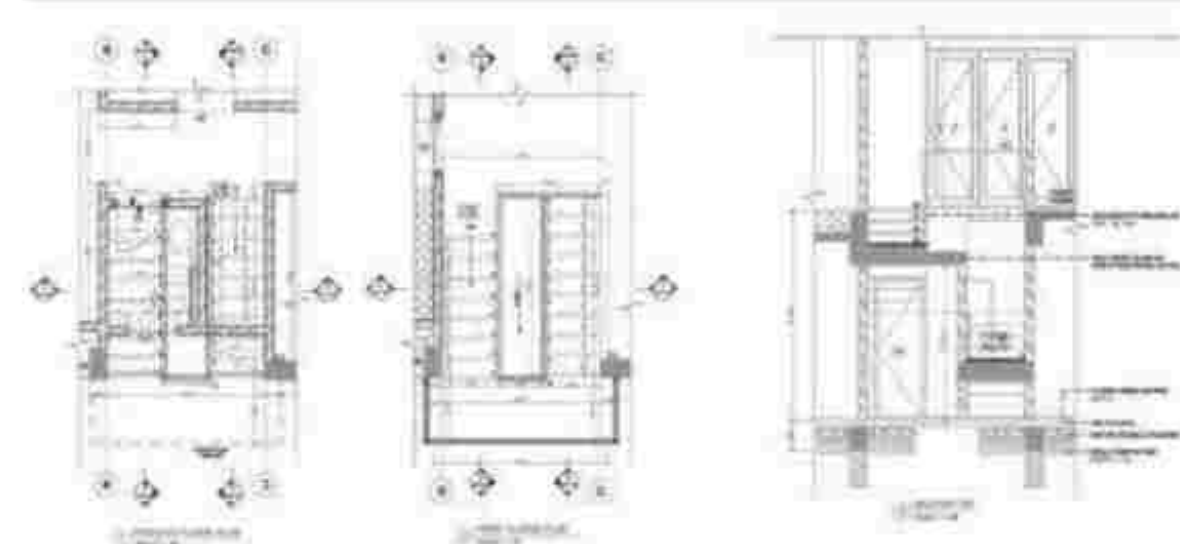
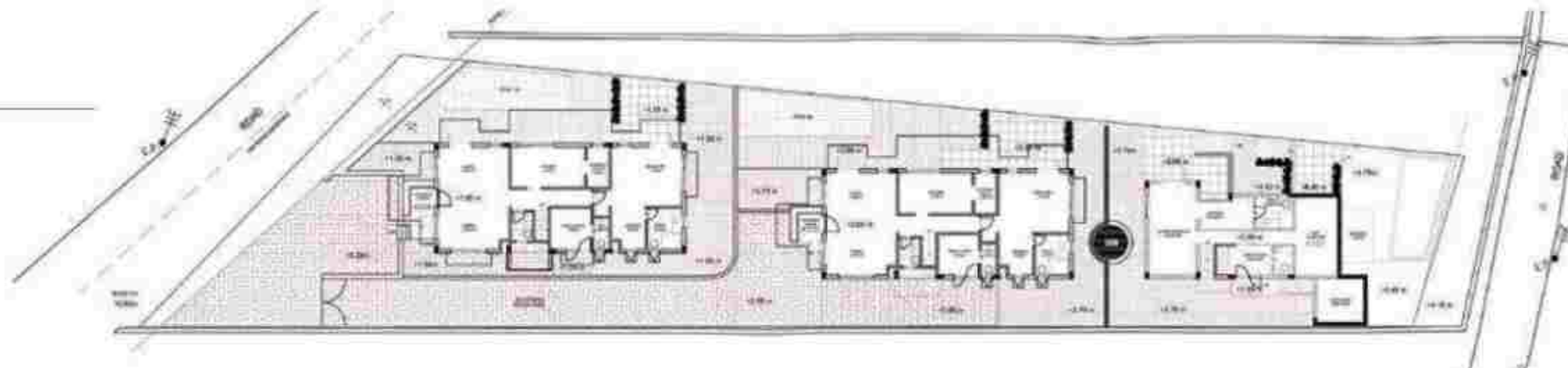
# EDWIN SALDHANA

Aldona Goa  
Team- Dean Dacruz, Pooja Nagara  
Stage- Construction

## WORKED ON

- Working drawings
- Site plan-landscaping
- Electrical drawings
- Site visits
- Technical meetings
- Brochure

This project consist of three houses, where house 01 and house 02 were designed same and are going to be sold out to others. Whereas house 03 was designed di-fferent from 01 and 02 and was for the owner/client himself. House 01 & 02 are two story structure and house 03 was three storey structure. All three houses were designed as traditional Goan houses with Balcoá space, etc.





# MAKER'S ASYLUM

Goa

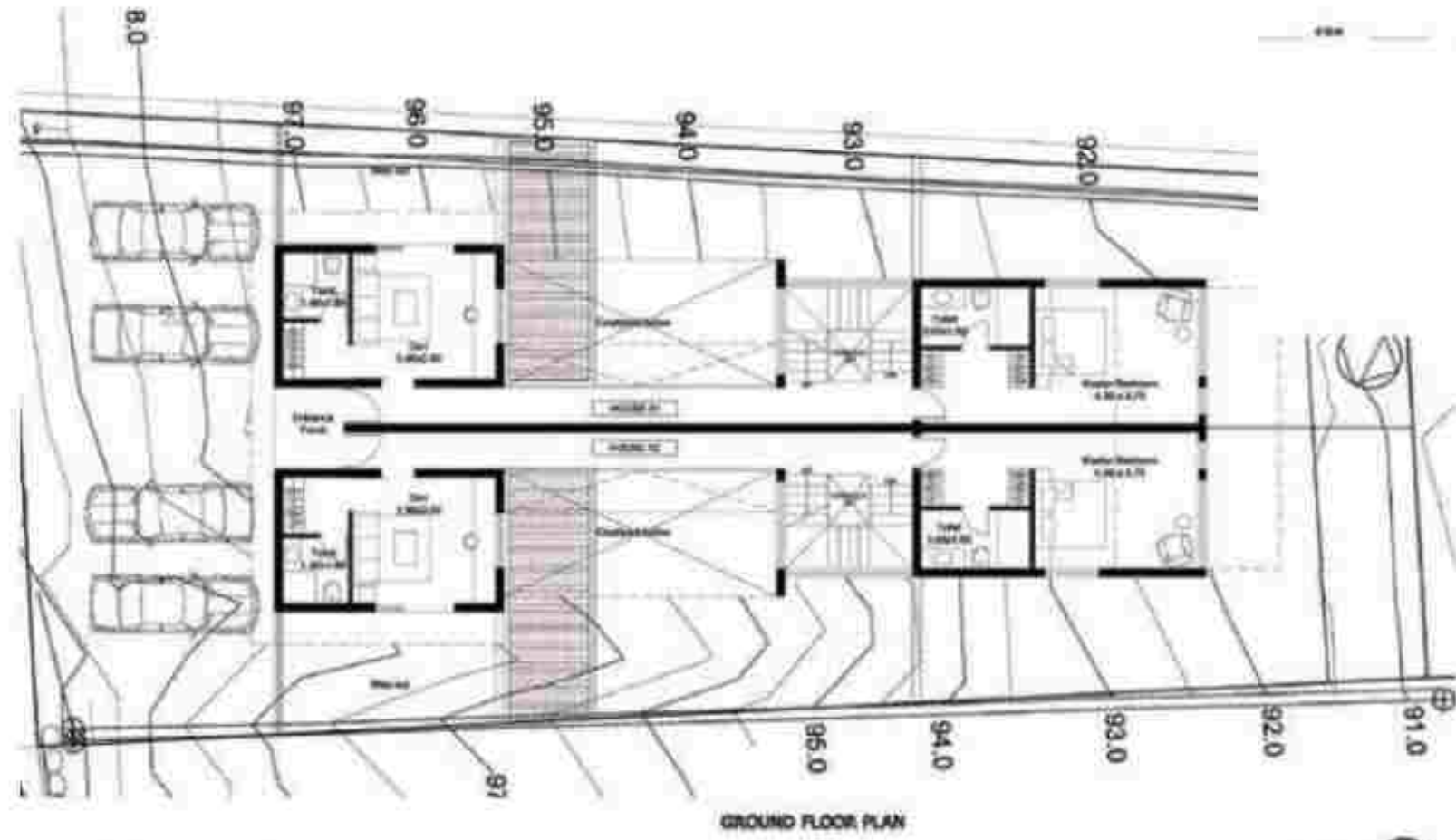
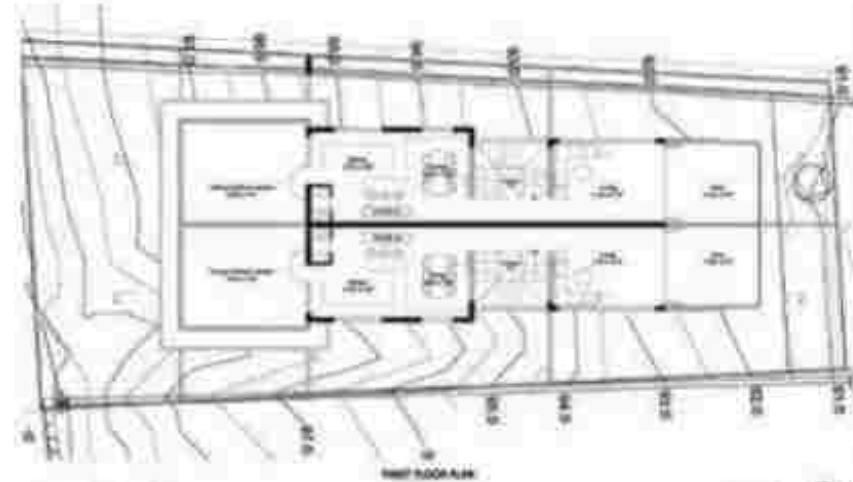
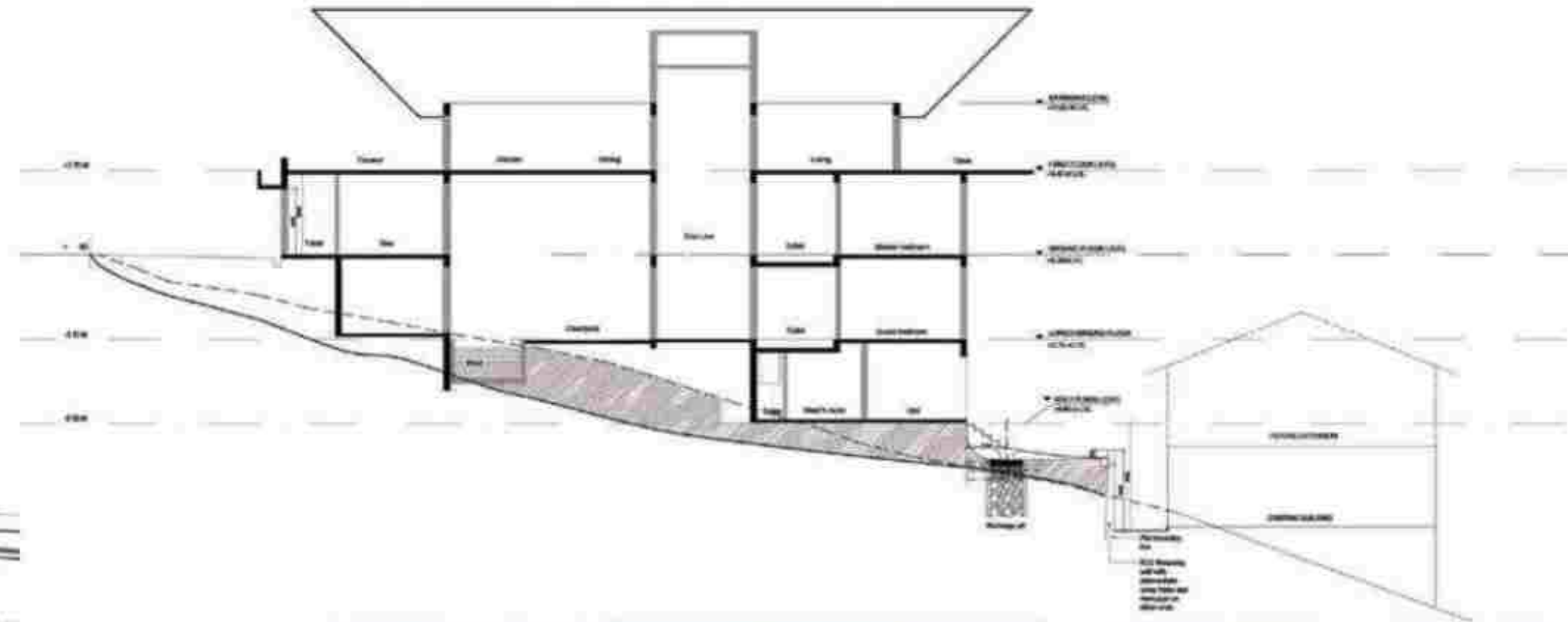
Team- Dean Dctuz, Pooja Nagaraj

Stage- Design Development

## WORKED ON

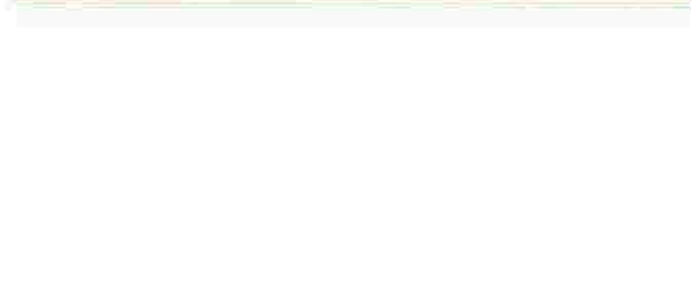
- Conceptual Drawings
- Conceptual models
- Sanction Drawings
- Client meetings
- Site visits

The client of this project is famous person who runs a workshop known as maker's asylum. They wanted a house with huge openings, a swimming pool with shower outside, a balcony or a deck kind of area with hammock. This structure is also designed as a twin house where one side of this property will be owned by the owner of maker's asylum and the other part will be sold out to others. As for the roof, they wanted huge volume and a contemporary style of roof and facade. They also had the requirement of a lift in their house and a small hydraulic lift. As the site is a sloping site, we had to restrict the springing height up to 5 metres and not to exceed that, which is why the roof had such a steep angle which is 22 degrees. For the roof slope, we also had limitations that we cannot exceed it beyond 25 degrees. The structure follows the exact FAR and is not exceeding anything. There were more challenges faced while designing this structure as it is located on a steep slope and because of road widening.



TWIN HOUSE . OLALIM

1:100 A3 OPTION 2A 27.04.2022







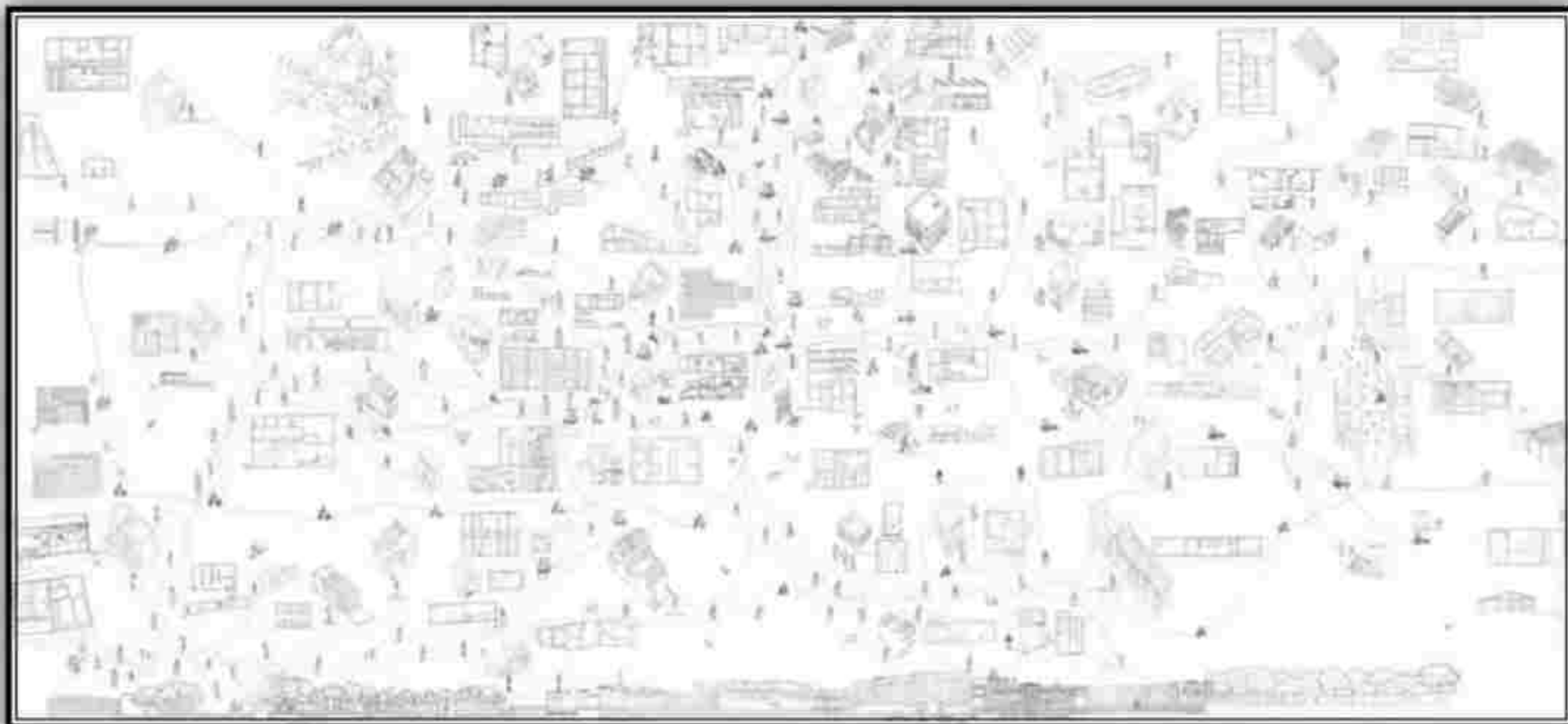


# HANDS ON

Physical models made for various project

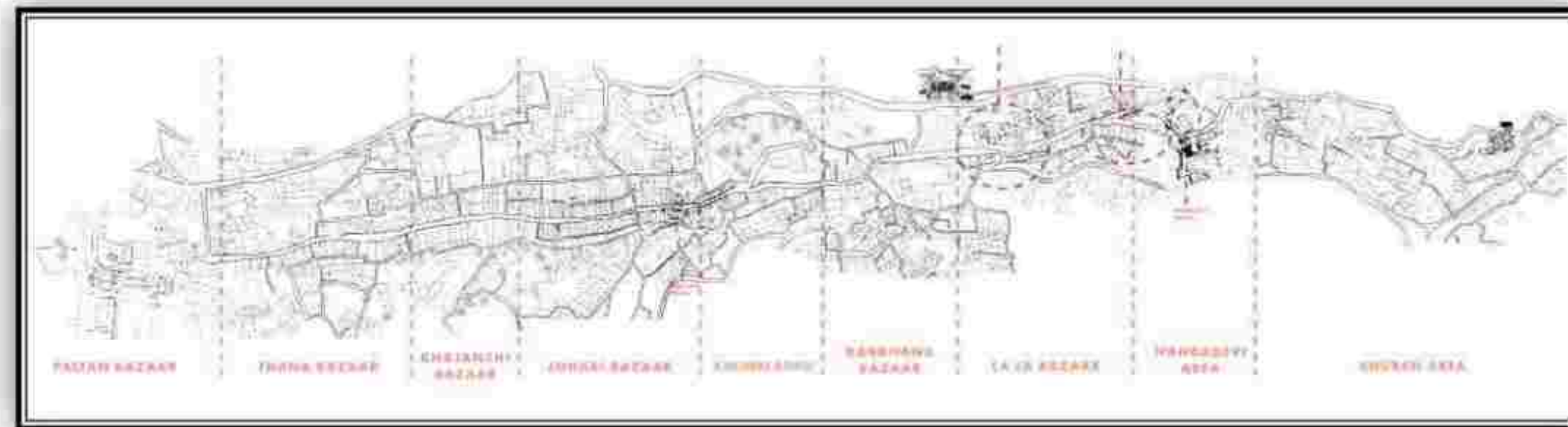






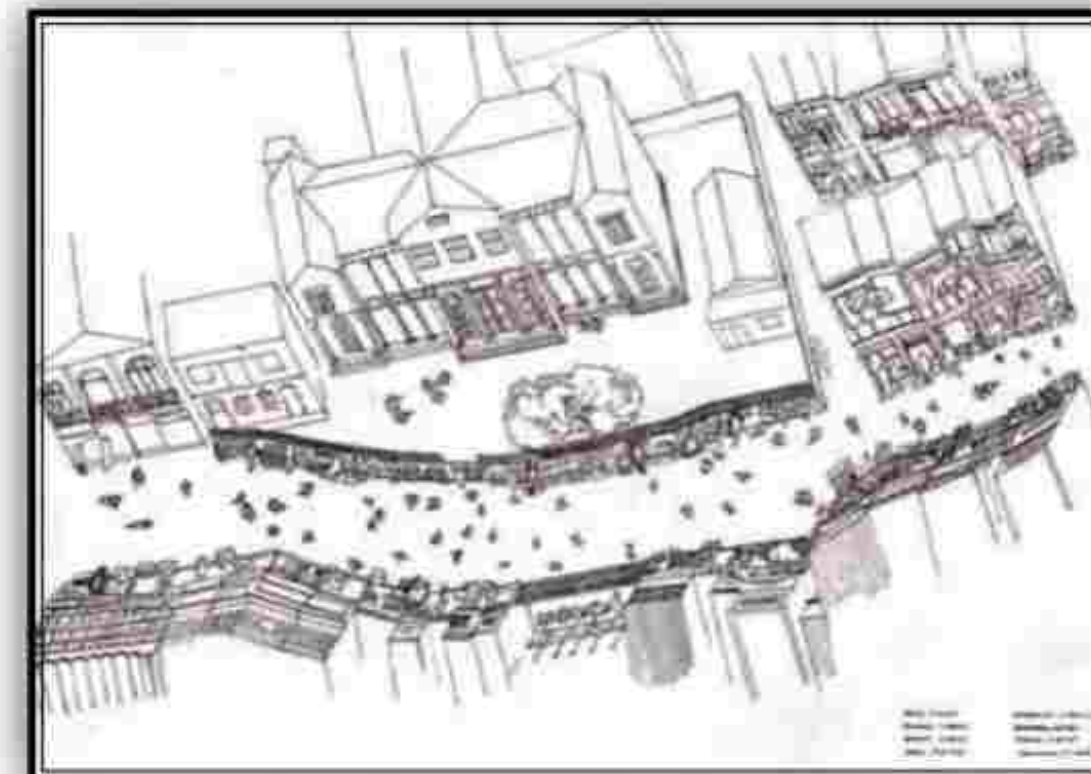
## FIRST YEAR STUDY TRIP- Maheshwar, Madhya Pradesh

The study trip in Maheshwar documented 40 houses and 40 characters and their day to day activities and way of leaving. Maheshwar located on banks of river Narmada is a textile industry thus major occupation of locals here is hand looming. Occupation of all these 40 characters were traced by 40 pairs and mapped from their work of place to home. Drawing represents all 40 characters and their houses and their route to workplace. The drawing also represents occupation of individual character.

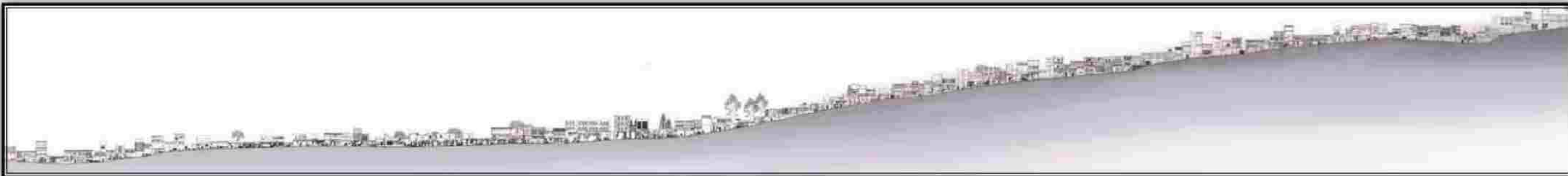


## SECOND YEAR STUDY TRIP- Almora, Uttarakhand

Almora, city of Uttarakhand is settled on the ridge. While walking on the streets you can feel the city sloping on both the sides. This city has a cascading settlement overall the ridge. The spine of Almora starts from Nandandevi to cantonment area. These cities have different bazars. Each bazar has its own specialty such as Johari bazar is known for Jewellery shops, Khajanji Bazar for food, etc. To map all these different bazars, number of shops, elevations of the houses and type of construction was the part of the study. Leveling of the streets of Almora was also done with the help of dumpy levels. The whole city spine was mapped by the group of 8 students including myself. These houses of Almora were also documented by the other students. The houses of Almora were very attractive because of their colored facades and type of roofing. Here stone locally called as patals were used.

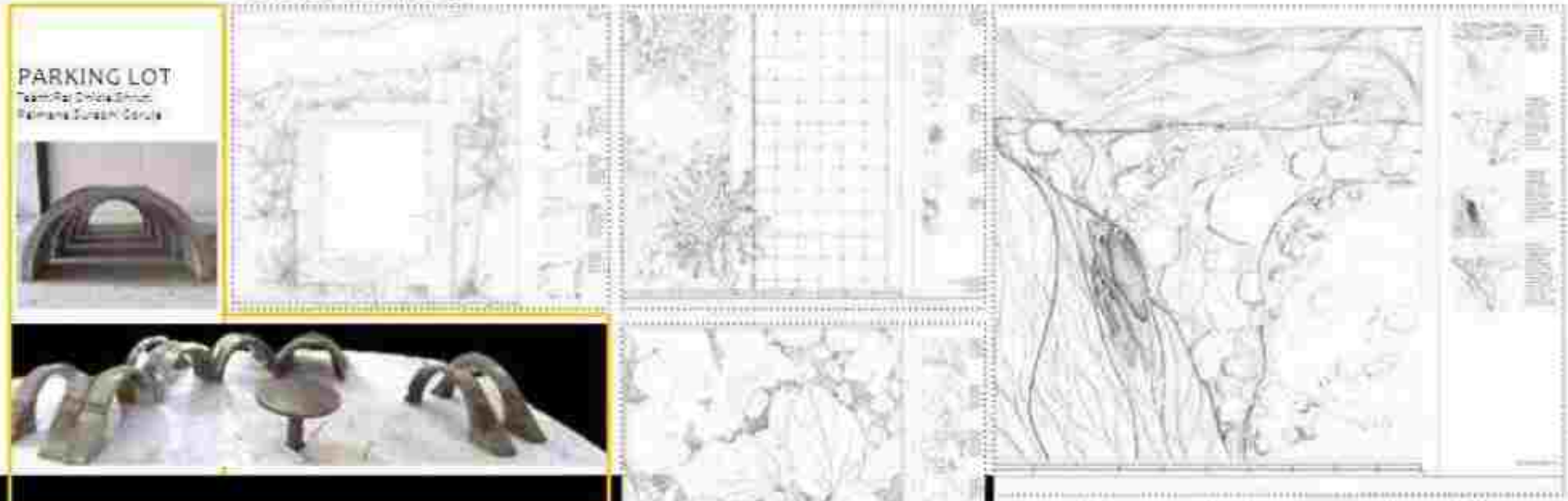


Mapped the whole Ridge of Almora with team of 8 people. We checked levels of the street, documented all elevations and markets. Survey of road was also done.





WAYS OF SEEING

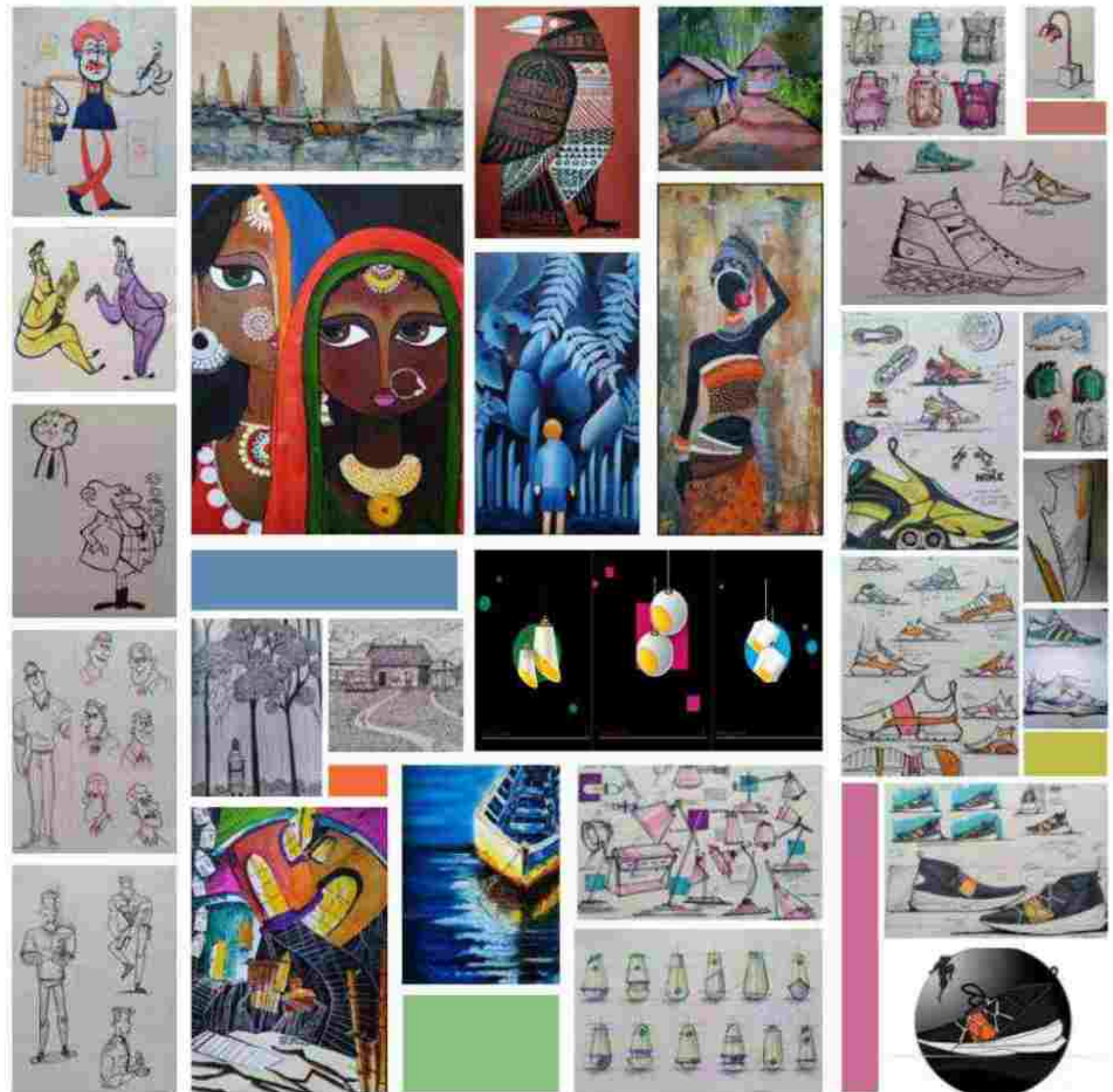


PAPER CHAIR  
Team: Anshu, Nishu, Nishu, Nishu



CONCRETE AND WOODEN JOINERIES  
Team: Abhishek, Abhishek

COLLABRATIVE WORK



SKETCHES , CHARACTER AND PRODUCT DESIGNING



**THANK YOU**

+91 914639675

deogharebpriti@gmail.com

