ARCHITECTURAL PORTFOLIO

SAMPADA LAD

SAMPADA SUSHIL LAD

JUNIOR ARCHITECT

OBJECTIVE

I intent to expand my design skills and knowledge in architecture and work in an environment that improves the current limits of my abilities. Belief in dedication, hardwork and eagerness to learn.

WORK EXPERIENCE

INTERN AT PRAKRITI PRAKALP ARCHITECTS,
C.B.D. Belapur, Navi Mumbai

Worked on projects related to Municipal Approval Drawings, Working Drawings, Presentation drawings, Landscape design schemes and civil drawings.

CERTIFICATIONS

- **Design entry selected in top 15** for South Asian Student Design Competition (SASDC 2015)
- **Research Paper Shortlisted** in South Asian Vernacular Architecture Competition (SAVA 2015)
- **Academic Execellence Certificate** from Bharati Vidyapeeth College of Architecture, Navi Mumbai for academic years 2015 - 2016 and 2016-2017

PARTICIPATIONS

- LA JOURNAL Landscape Design Competition (OCT 2015)
- International Tropical Architecture Design Competition (2017)

OTHER SKILLS

COMMUNICATION	●●●○○
TEAMWORK	●●●●○
ORGANIZED	●●●◐○
WORKAHOLIC	●●●●○

INTERESTS

Sketching | Model Making | Travelling | Photography | Hand Drafting

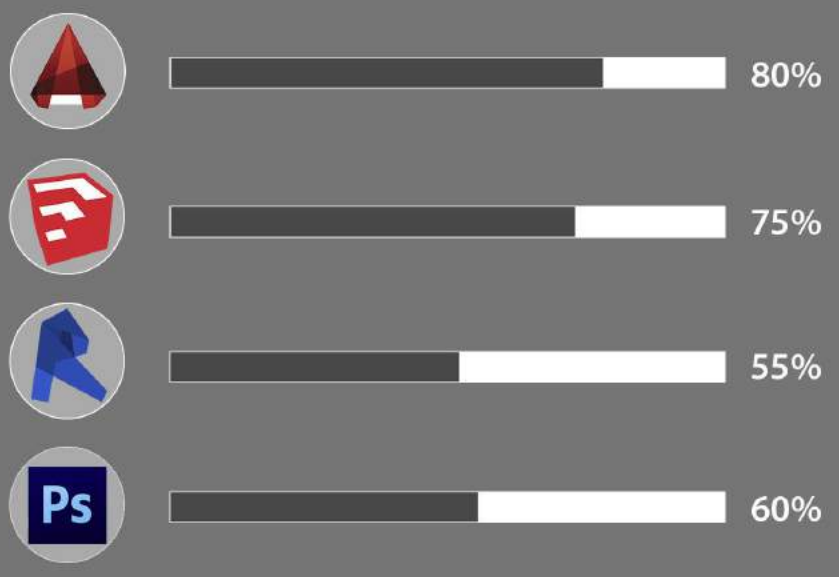
PERSONAL DETAILS

D O B : 07-09-1995
AGE : 23 years
LANGUAGES : English, Hindi, Marathi

EDUCATION

2011 SSC	ST. LAWRENCE HIGH SCHOOL VASHI, NAVI MUMBAI	90.55%
2011 - 2013 HSC	ELPHINSTONE COLLEGE FORT, MUMBAI	71.17%
2013 - 2018 B.ARCH	BHARATI VIDYAPEETH COLLEGE OF ARCHITECTURE KHARGHAR, NAVI MUMBAI	CGPI 7.98

COMPUTER SKILLS



CONTACT DETAILS

ADDRESS : A-305, Panchvati, Plot-92, Sector-5, Ghansoli, Navi Mumbai- 400701
E-MAIL : sampadalad7@gmail.com **MOBILE :** 9869850385

CONTENTS

ECO - RESORT AT GANESHGULE, RATNAGIRI

SITE AREA - 5 acres (20234 sq.m)

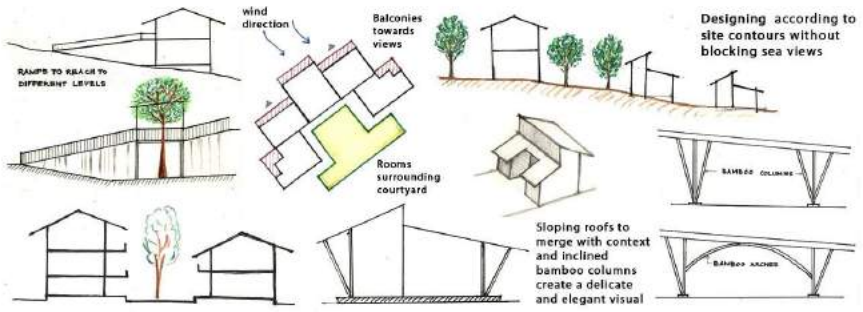
5th Year B.Arch

ARCHITECTURAL THESIS

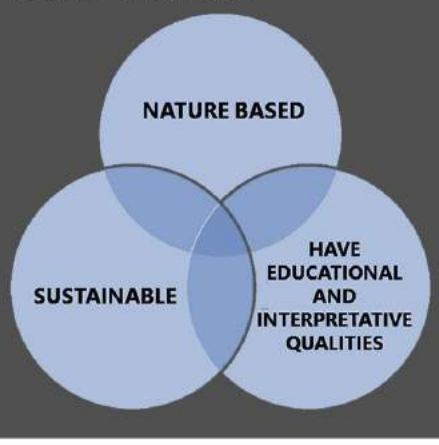
AIM - To design an eco - resort based on sustainable and vernacular aspects of design for an integrated developement of tourist destination and local communities.

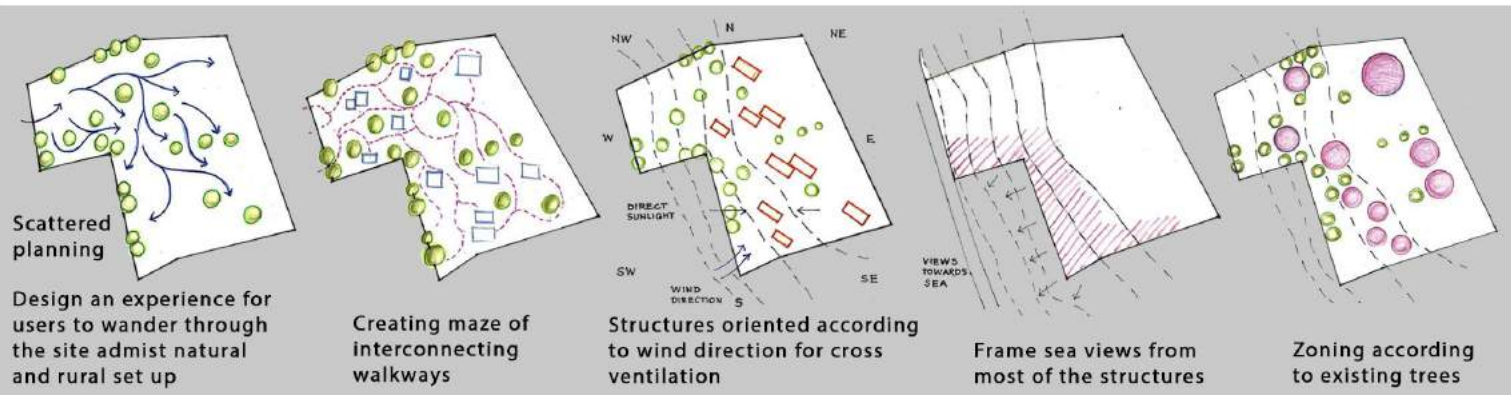
CONCEPT

- Blend of spaces – public and private
- Considering climatic factors
- Limited built up area
- Vernacular architecture
- Spaces should create relaxing ambience



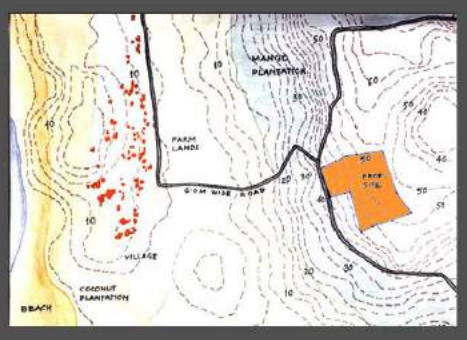
ECO - RESORT IS BASED ON THREE FACTORS



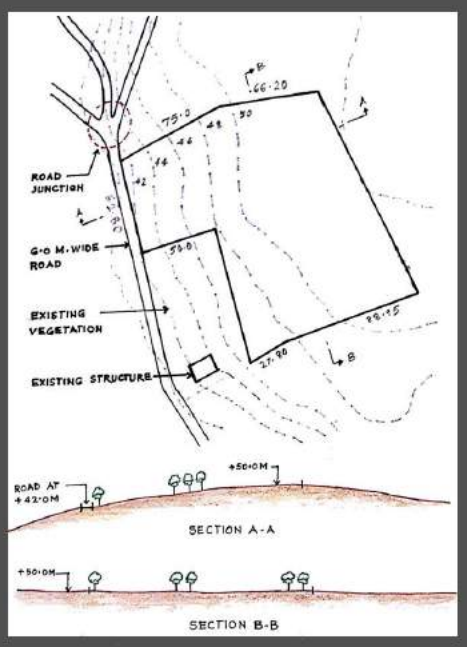


SITE CONTEXT

Extremely secluded, clean and beautiful beach lined with coconut plantations and small typical konkoni houses



Site has amazing scenic views due to its terrain. Location forms the major factor for the resort design. Site has serenity although amidst the village.



Site is away from city chaos which provied better relaxing experience.

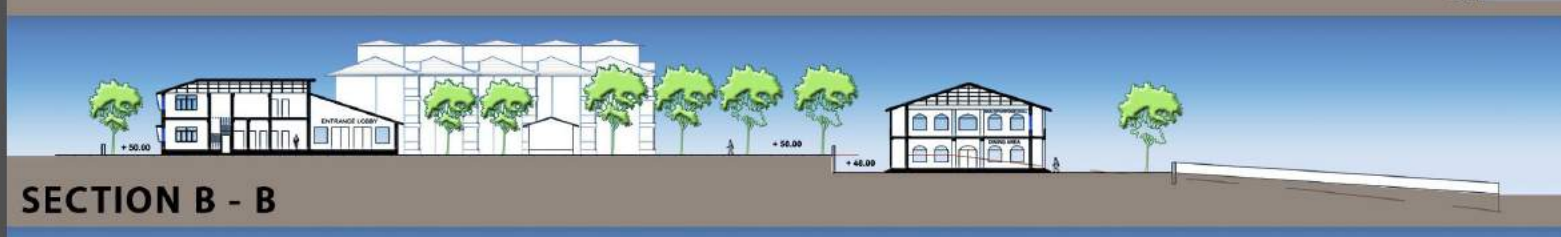
Picturesque views from site.

Site surrounded by dense vegetaation and greenary.

Ganeshgule Beach and site are easily accessible for visitors.

SITE PLAN

SECTION A - A



SECTION B - B

SECTION C - C

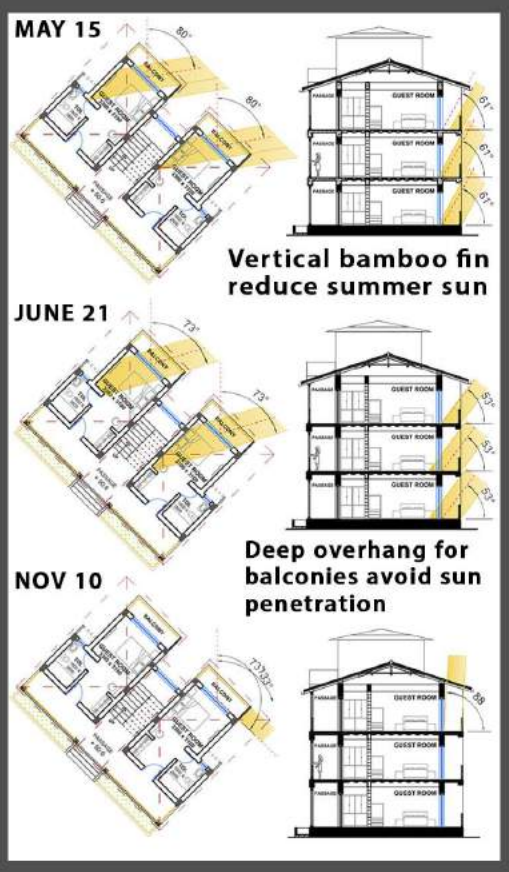
ECO - RESORT AT GANESHGULE, RATNAGIRI

SITE AREA - 5 acres (20234 sq.m)

5th Year B.Arch

ARCHITECTURAL THESIS

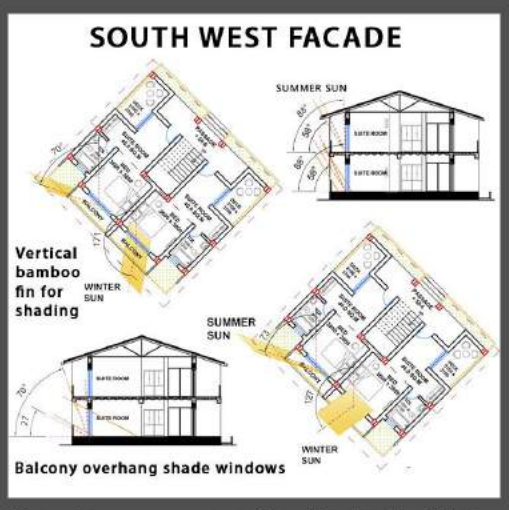
SHADING DEVICE DESIGN



All structures are oriented with their major facades facing SOUTH - WEST and NORTH - EAST directions.

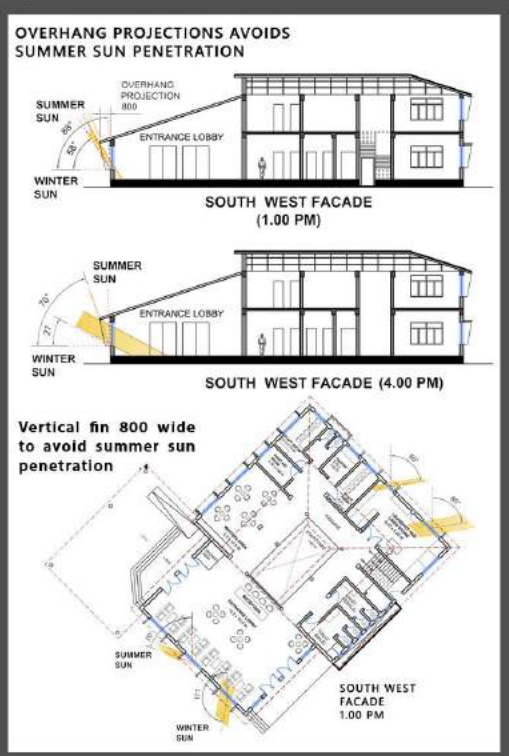
North east facade requires vertical shading device as horizontal sun penetrates into rooms.

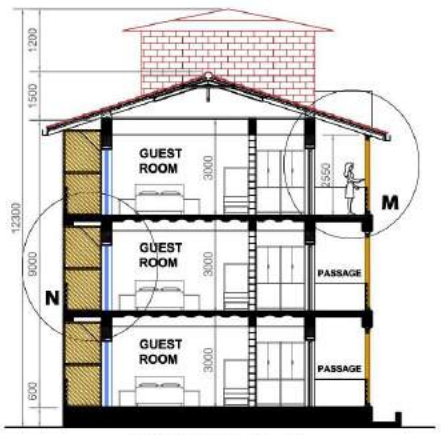
Vertical sun is avoided due to deep overhangs.



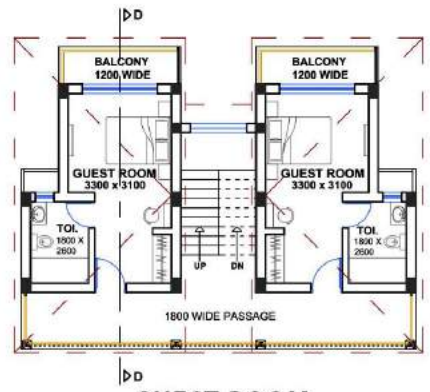
Openings on opposite site to facilitate cross ventilation.

Passages and balconies on both sides reduce the effect of solar gain into living spaces.



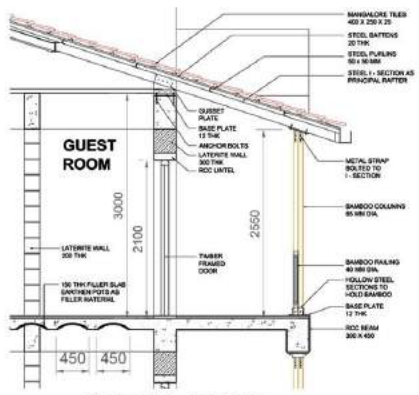


SECTION D-D

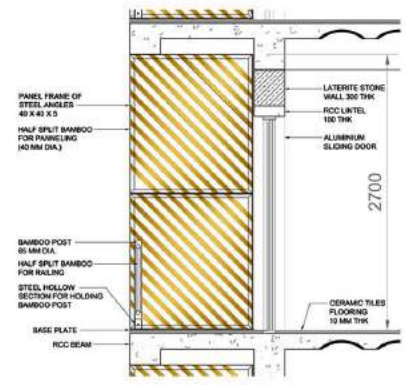


GUEST ROOM TYPICAL FLOOR PLAN

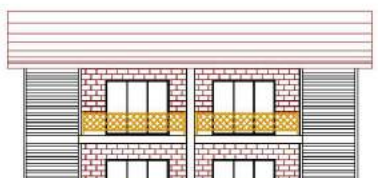
CONSTRUCTION DETAILS



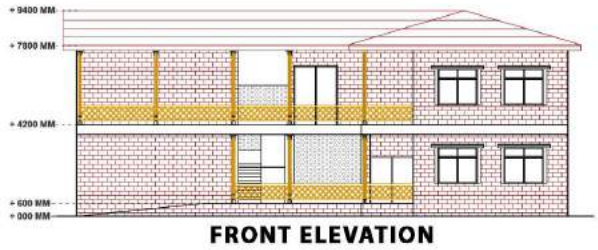
DETAIL AT 'M'



DETAIL AT 'N'

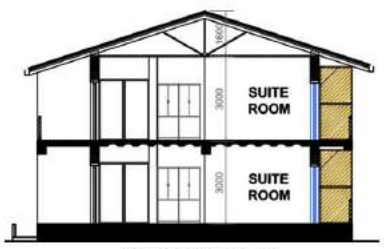


REAR ELEVATION



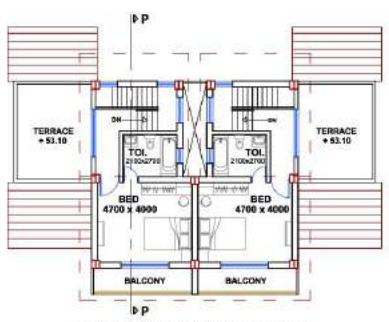
FRONT ELEVATION

SECTION P-P

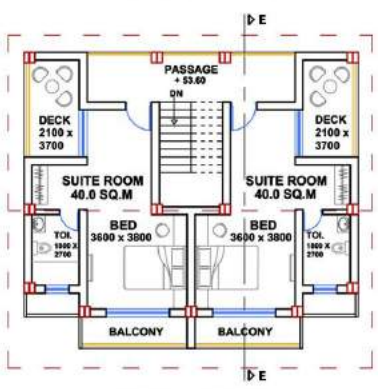


SECTION E-E

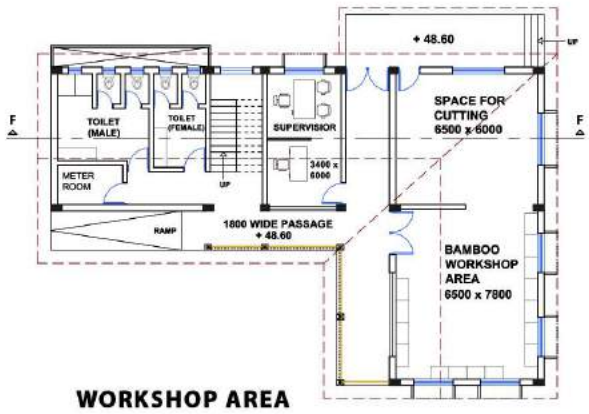
SECTION F-F



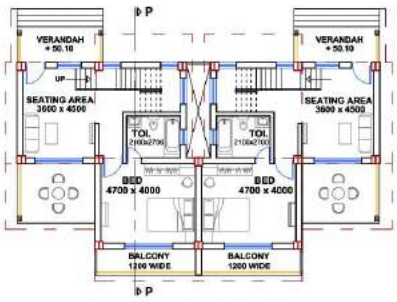
FIRST FLOOR PLAN



SUITE ROOM TYPICAL FLOOR PLAN



WORKSHOP AREA GROUND FLOOR PLAN



SEA VIEW COTTAGE GROUND FLOOR PLAN

ECO - RESORT AT GANESHGULE, RATNAGIRI

SITE AREA - 5 acres (20234 sq.m)

5th Year B.Arch

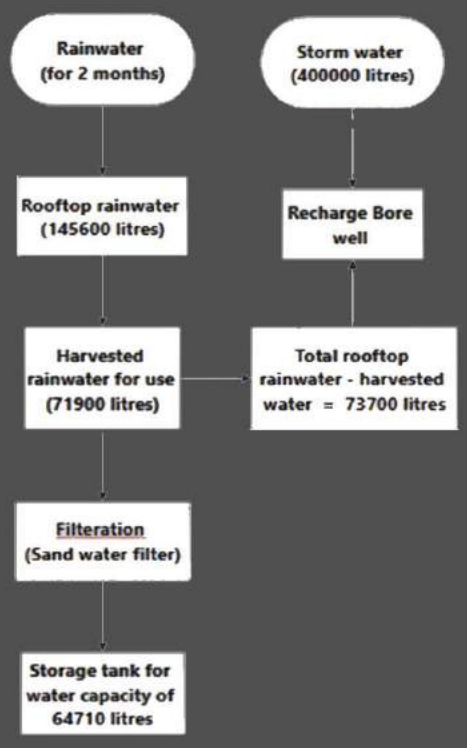
ARCHITECTURAL THESIS

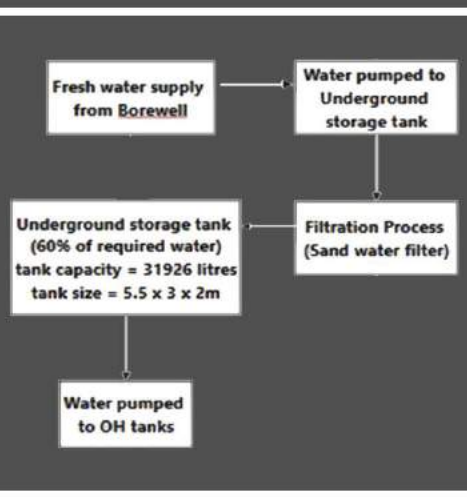
BUILDING SERVICES

RAIN WATER HARVESTING

WHY : High rainfall region, Water supply from pipelines not available.

WHERE : From Rooftops to storage tanks, Collecting surface run off through contour trenches to storage tanks.

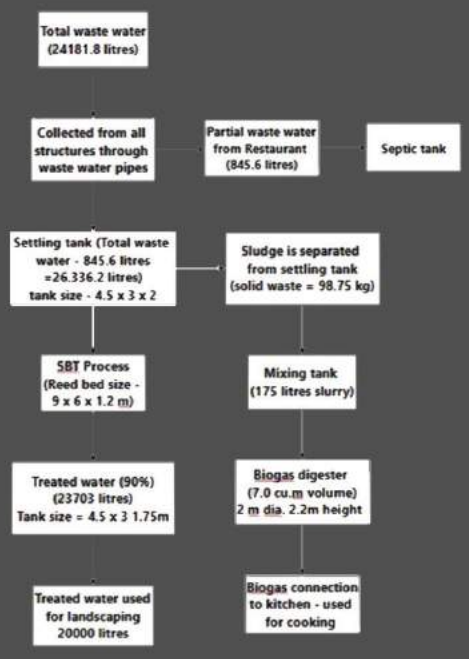




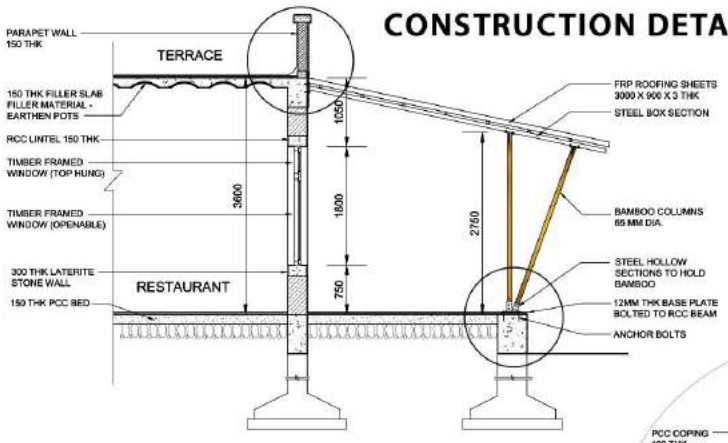
WASTE WATER TREATMENT

WHAT - Soil Bio- technology

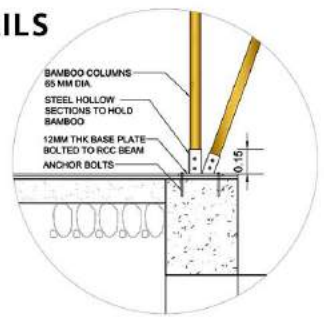
WHY - Simple combination of physical and biochemical processes.
Mechanical maintenance is not required. Cost effective in rural context.

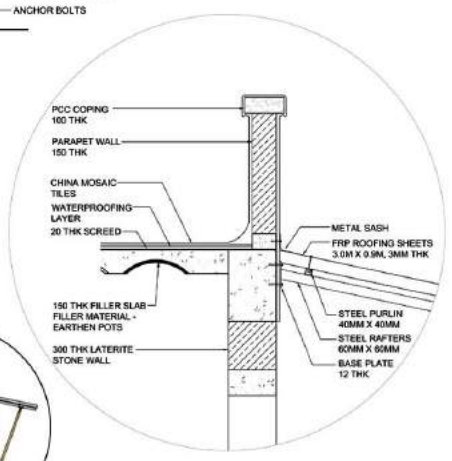


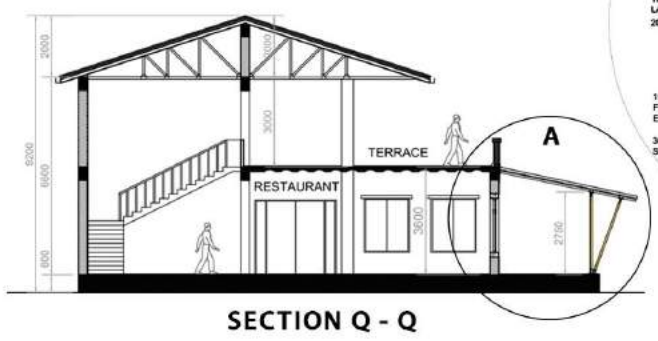
CONSTRUCTION DETAILS



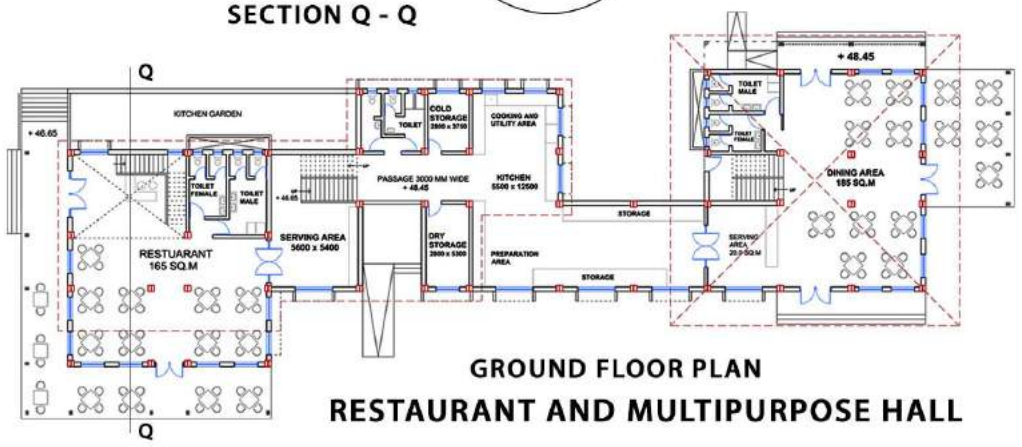
DETAIL AT 'A'







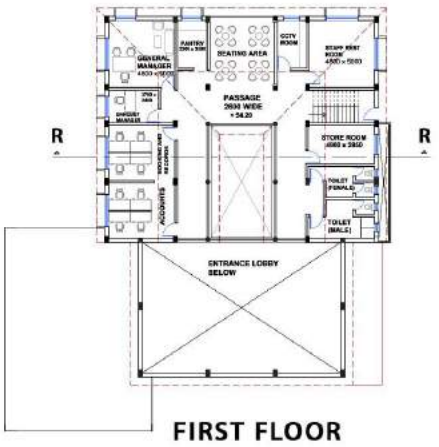
SECTION Q - Q



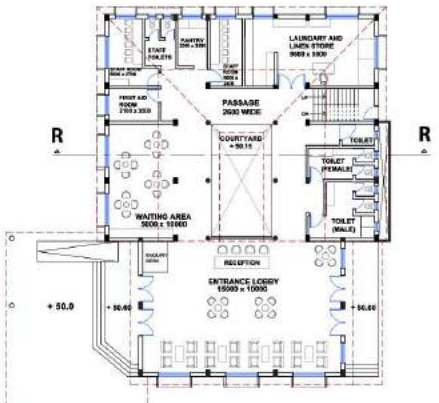
GROUND FLOOR PLAN
RESTAURANT AND MULTIPURPOSE HALL

ADMINISTRATION BLOCK

SECTION R - R



FIRST FLOOR PLAN



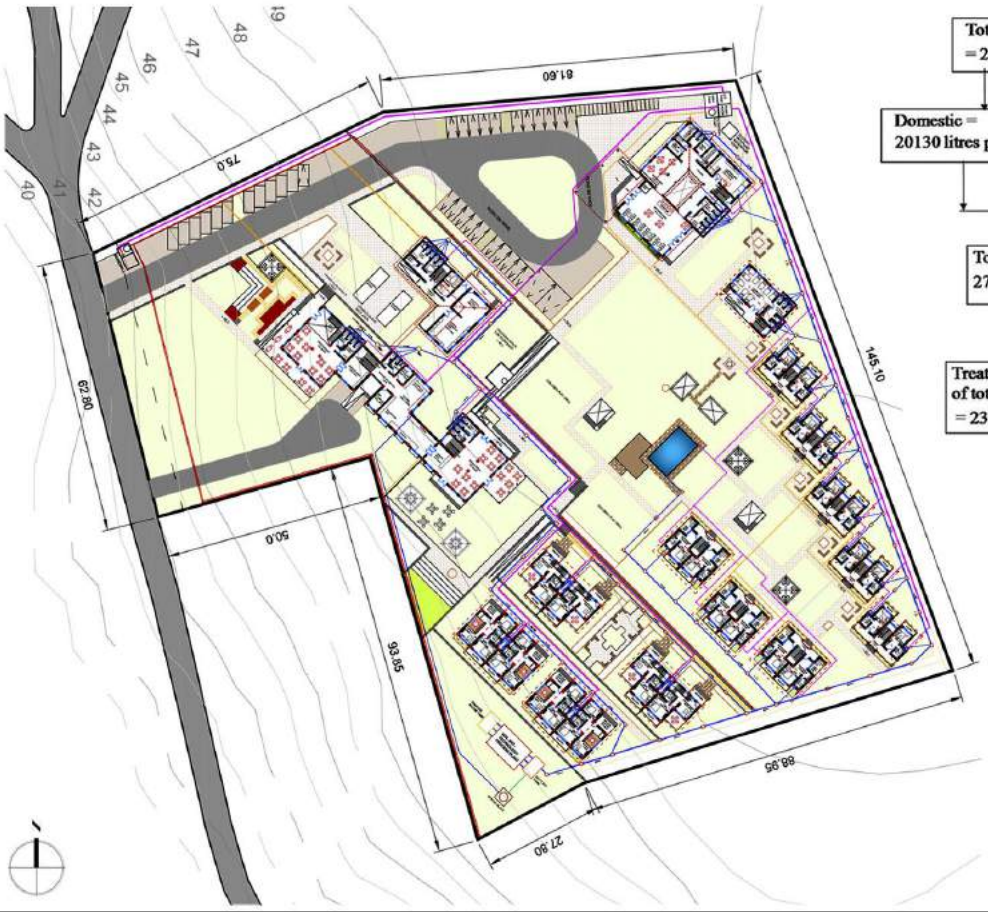
GROUND FLOOR PLAN

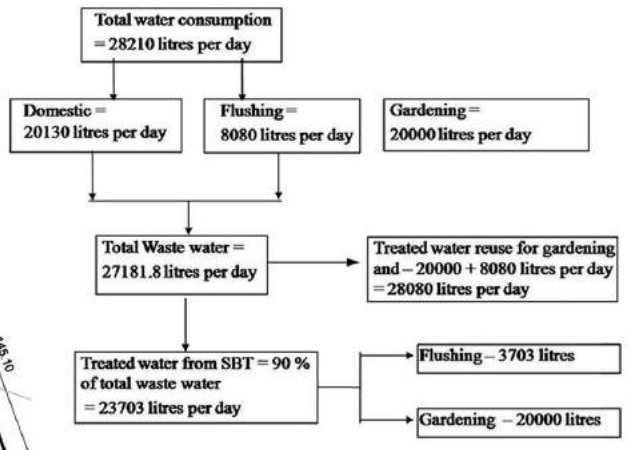
ADMIN BLOCK

DINING BLOCK

HANDMADE MODEL

SERVICES LAYOUT





Water requirement table

UTILITY	NO. OF UNITS	NO. OF USERS	WATER REQUIRED	TOTAL (litres) BASE CASE	WATER EFFICIENT FIXTURES
RESORT ROOMS			180/ person / day		
GUEST ROOMS(2 persons)	30	60	180	10800	
SUITE ROOMS(3 persons)	12	36	180	6480	
COTTAGES(4 persons)	8	32	180	5760	
		128 (60%occupancy)			
		100 users	180	18000	17657.5
RESTAURANT			70 / person / day		
RESTAURANT 1 (INTERNAL)		90	70	6300	
RESTAURANT 2 (VISITORS)		70	70	4900	
				11200	3942.8
WORKSHOPS			30 / person / day		
25 PERSONS PER ROOM	3	75	30	2250	2596.5
ADMINISTRATION (STAFF)			45 / person / day		
		60	45	2700	3990
TOTAL				34150	28206.8
LANDSCAPING		10000 sq.m		30000	20000

VOCATIONAL TRAINING CENTRE
UDAIPUR, RAJASTHAN

SITE AREA - 3 acres (12017 sq.m)

3rd Year B.Arch

ARCHITECTURAL DESIGN

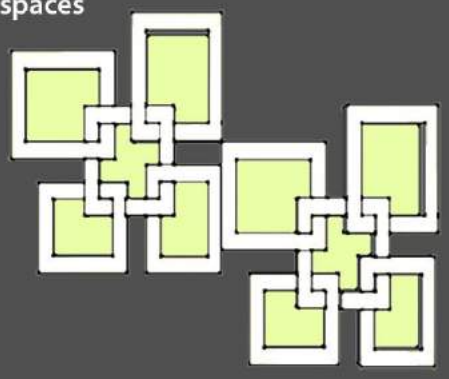
BRIEF

Design aims at creation of a positive, learning, interactive and commercial space open for all. The idea is to create a complete space for art which includes arts and crafts, performing arts and art related to food.

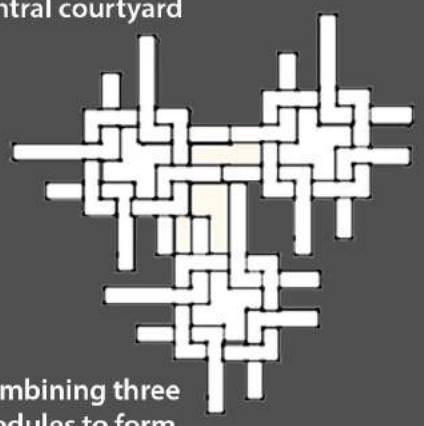
Project aspires at grooming and training and give a chance to see and learn any art form offered by the institution.

CONCEPT

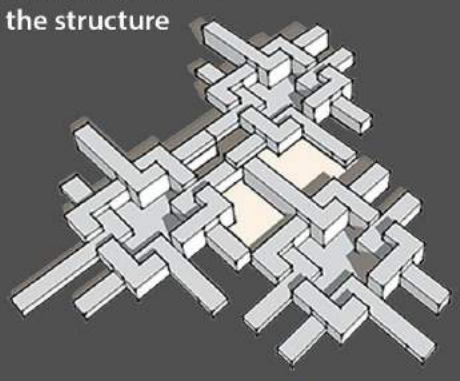
Interlocking squares to form composition of open and closed spaces

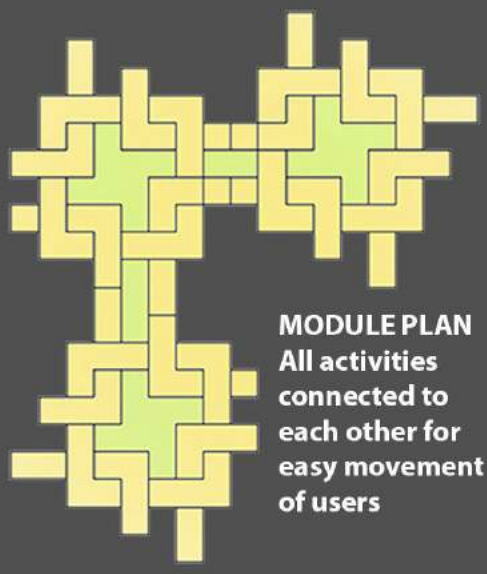


Forming voids in centre and all activities planned around the central courtyard



Combining three modules to form the structure

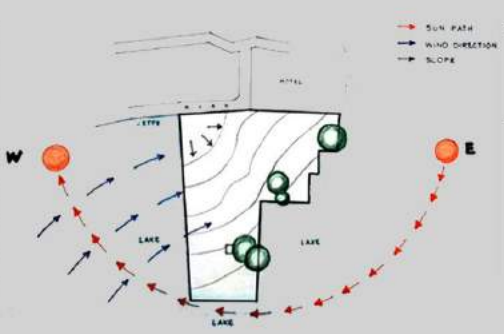


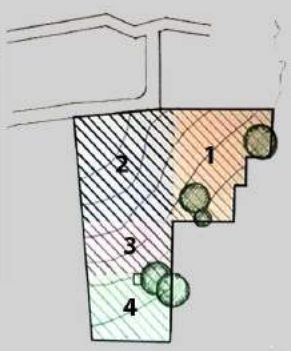


MODULE PLAN
All activities connected to each other for easy movement of users

Site context is famous for havelis, jali work and traditional architecture.

Courtyards are one of the typical features which has multiple uses and climatic effect.





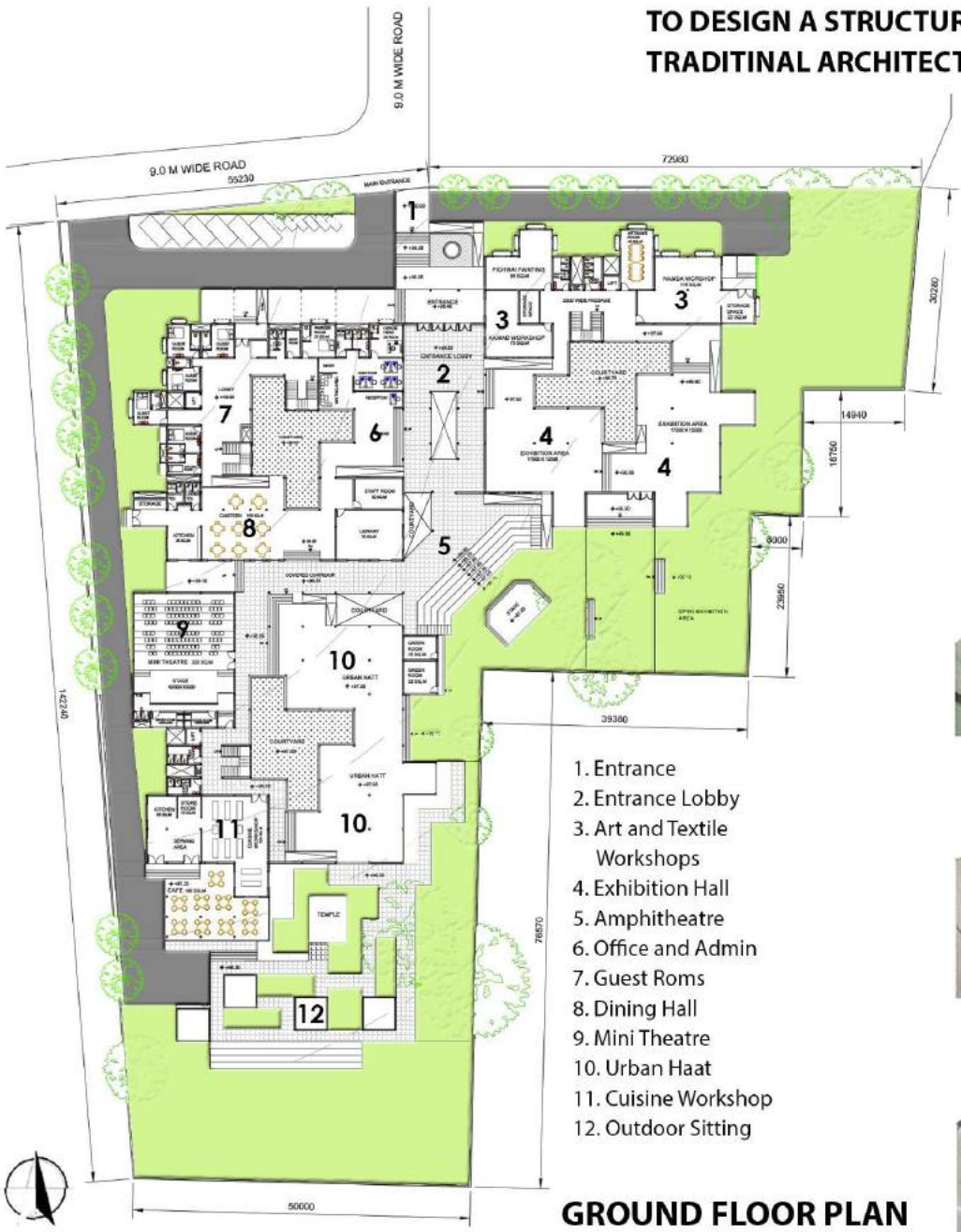
1 Low sun angle, morning sun : Used for open exhibitions/ performance areas.

2 Easy road access : Used for institutional area

3 Public areas like urban haat, cafe or pavilions to enjoy the views

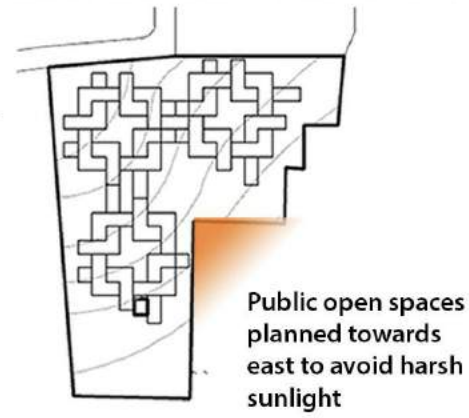
4 Viewing points : No structure having more height, winds not to be blocked

TO DESIGN A STRUCTURE HAVING AN ESSENCE OF TRADITINAL ARCHITECTURAL FEATURES OF THE REGION

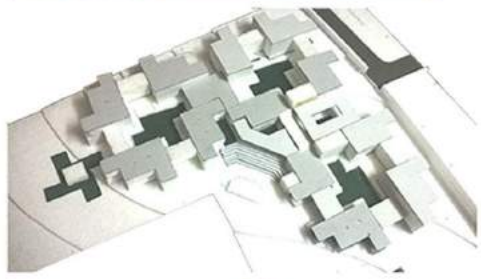


1. Entrance
2. Entrance Lobby
3. Art and Textile Workshops
4. Exhibition Hall
5. Amphitheatre
6. Office and Admin
7. Guest Roms
8. Dining Hall
9. Mini Theatre
10. Urban Haat
11. Cuisine Workshop
12. Outdoor Sitting

GROUND FLOOR PLAN



Public open spaces planned towards east to avoid harsh sunlight



SECTION A-A

EAST ELEVATION

WEST ELEVATION

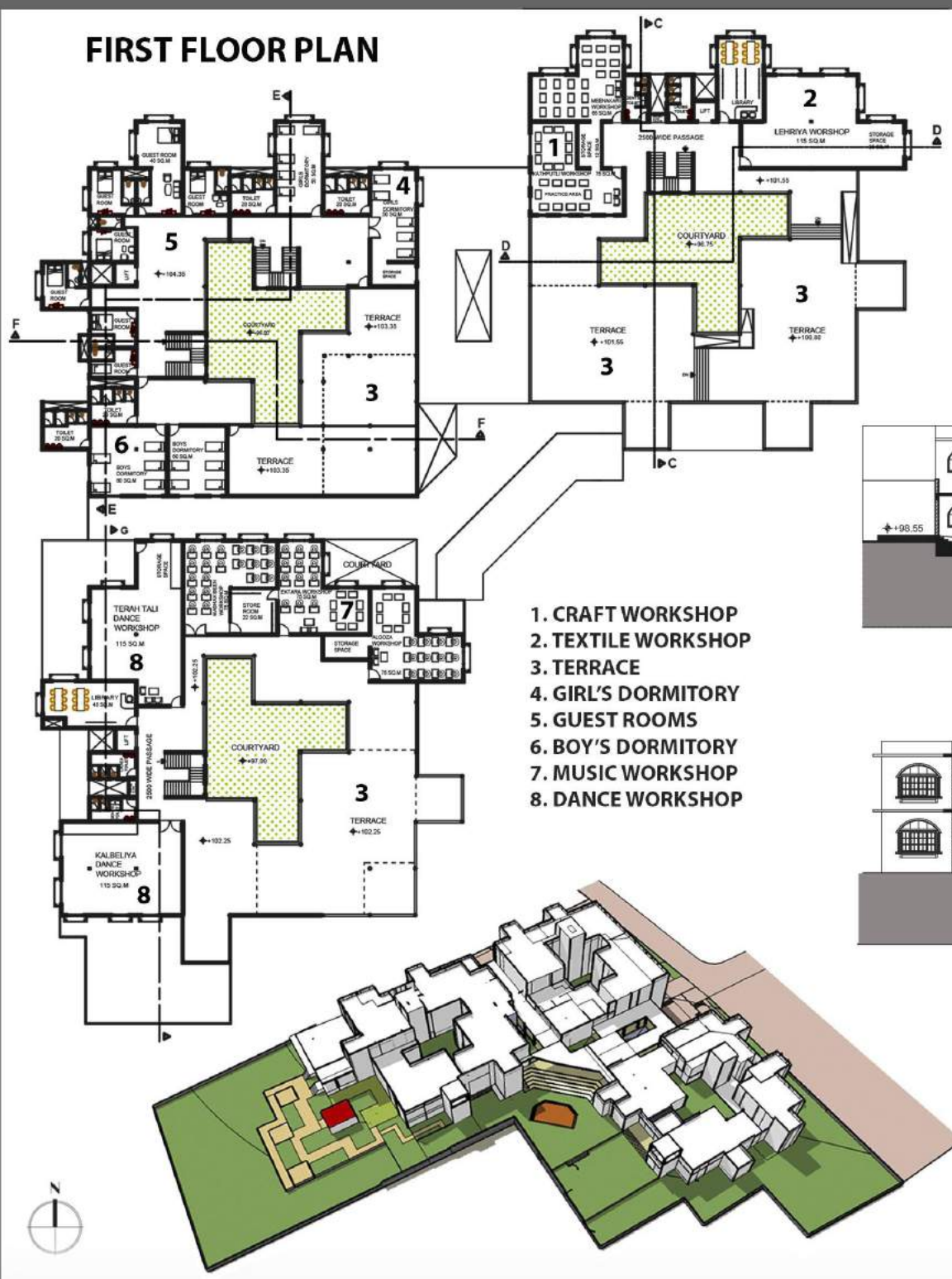
VOCATIONAL TRAINING CENTRE
UDAIPUR, RAJASTHAN

SITE AREA - 3 acres (12017 sq.m)

3rd Year B.Arch

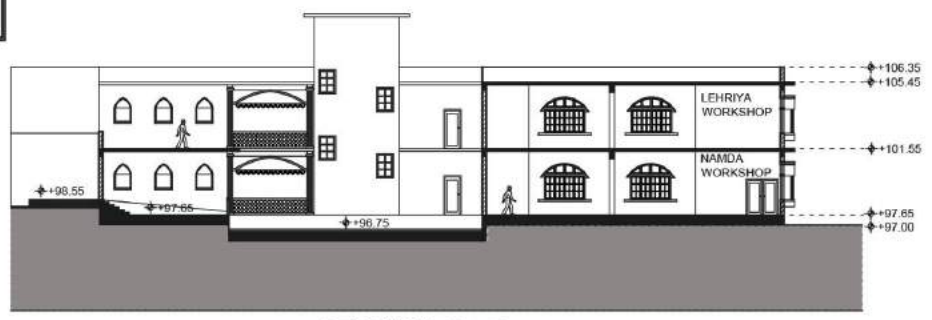
ARCHITECTURAL DESIGN

FIRST FLOOR PLAN

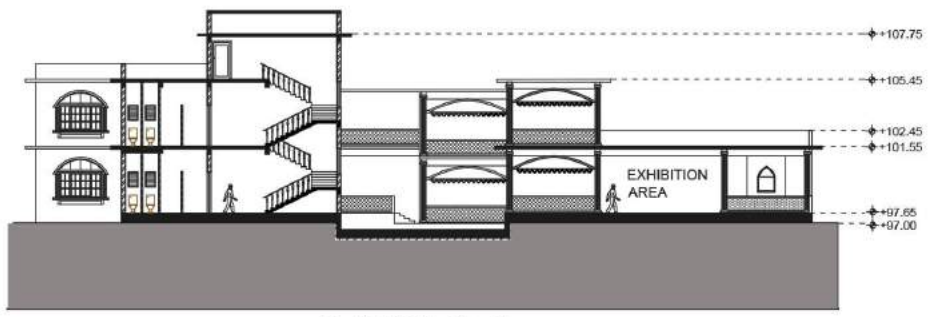


1. CRAFT WORKSHOP
2. TEXTILE WORKSHOP
3. TERRACE
4. GIRL'S DORMITORY
5. GUEST ROOMS
6. BOY'S DORMITORY
7. MUSIC WORKSHOP
8. DANCE WORKSHOP

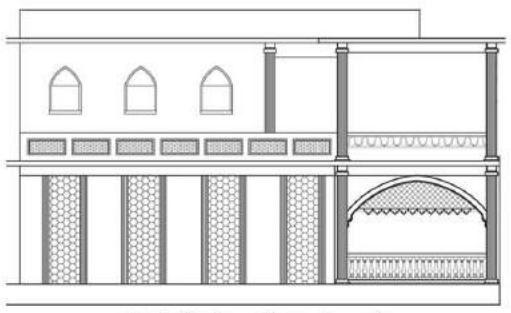
SECTION F - F



SECTION D - D



SECTION C - C



Detail elevation showing various elements of design

Elements like exposed jaliwork, decorated columns, arches & projected arched windows are used to emphasize & create an essence of traditional architecture

NORTH ELEVATION

SOUTH ELEVATION

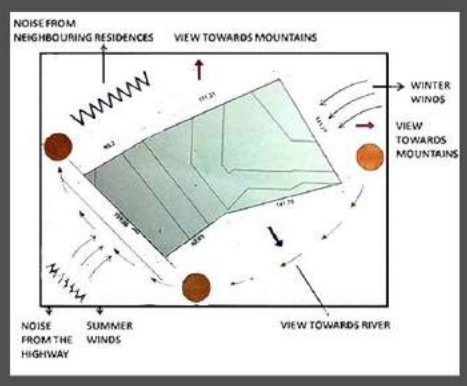
MASS HOUSING
MANDI, HIMACHAL PRADESH

4th Year B.Arch

SITE AREA - 7.48 ACRES (30300 SQ.M)

ARCHITECTURAL DESIGN

SITE CONTEXT
Site is situated in a small, scenic and beautiful town of Mandi in Himachal Pradesh with composite climate.



REQUIREMENT - 500 units
Combination of flats with different sizes and partial area covered with row houses

USERS - Mixed use housing
Middle income group
Second home

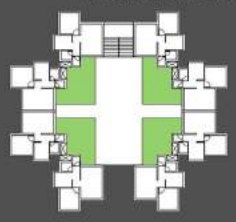
CONCEPT
Courtyard surrounded by group of units and forming one module of house

Different types of modules with courtyards and house units on four sides

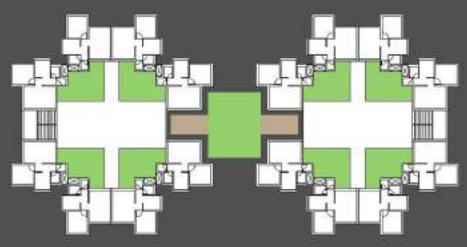
Groups of modules having common open space and community area

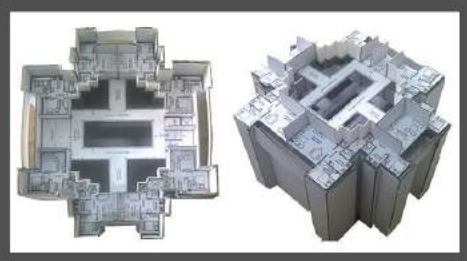
DIFFERENT TYPES OF HOUSE UNITS

FORMATION OF MODULE

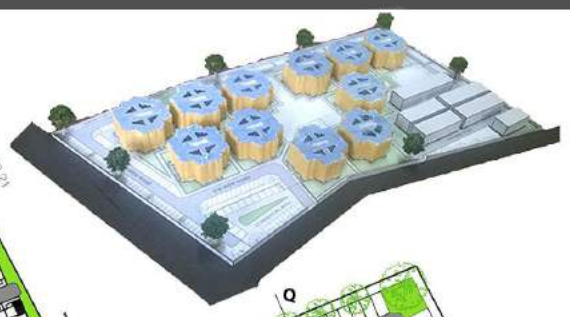


Grouping of two modules to form a common junction or public space at the entrance





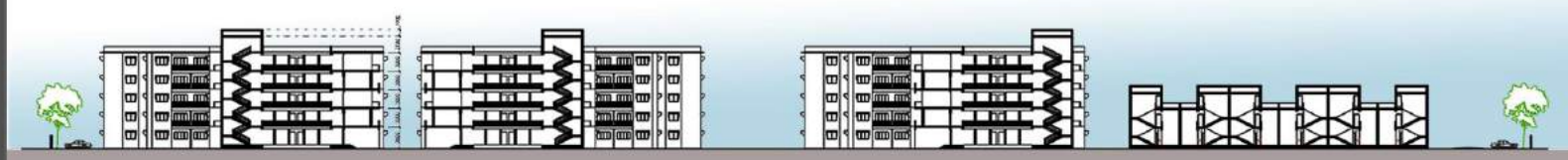
Site has two entrances one is towards commercial and other near the row houses.



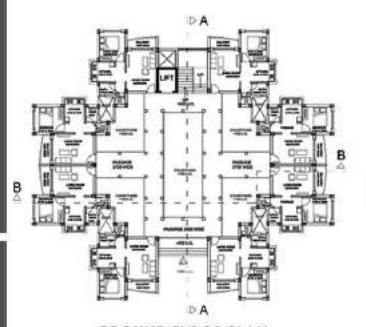
KEY PLAN
SCALE - 1: 1000
MODULE B
MODULE A

CALCULATIONS :
REQUIREMENT - 500 UNITS
MODULE A CONTAINS :
26 FLATS OF 40 SQ.M = 26 UNITS OF 40 SQ.M
4 FLATS OF 60 SQ.M = 6 UNITS OF 40 SQ.M
4 UNITS OF 80 SQ.M = 8 UNITS OF 40 SQ.M
TOTAL 42 UNITS OF 40 SQ.M IN MODULE A
MODULE B CONTAINS :
26 FLATS OF 40 SQ.M = 26 UNITS OF 40 SQ.M
6 FLATS OF 60 SQ.M = 9 UNITS OF 40 SQ.M
4 UNITS OF 80 SQ.M = 8 UNITS OF 40 SQ.M
TOTAL 43 UNITS OF 40 SQ.M IN MODULE B
NO. OF MODULE A = 3
NO. OF MODULE B = 8
TOTAL NUMBER OF MODULES = 11
TOTAL NUMBER OF UNITS =
(42 X 3 = 126) + (43 X 8 = 344) = 470 UNITS
BUILT UP AREA OF FLATS = 18,800 SQ.M
NUMBER OF ROW HOUSES = 27
PLOT AREA OF ROW HOUSES = 100 SQ.M
REQUIRED PARKING -1 PARKING FOR 2.5 FLATS
REQUIRED PARKING - 188
PROVIDED CAR PARKING = 182
REQUIRED RG = 10% = 3000 SQ.M
PROVIDED RG = 3000 SQ.M
REQUIRED COMMERCIAL AREA=2-5% =600-1500SQ.M
PROVIDED COMMERCIAL AREA = 700 SQ.M

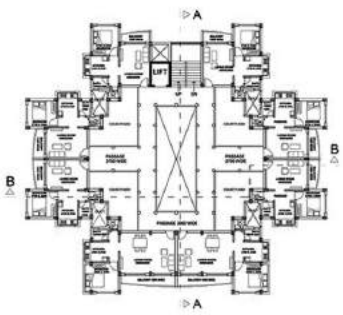
SECTION Q - Q



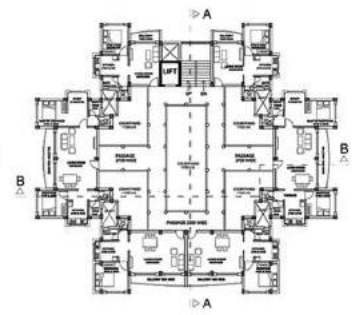
SECTION P - P



GROUND FLOOR PLAN
MODULE A AND B



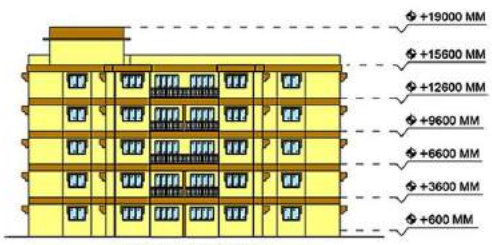
FIRST AND THIRD FLOOR PLAN
MODULE A



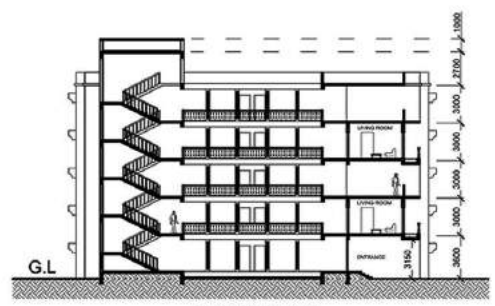
FIRST AND THIRD FLOOR PLAN
MODULE B

Floor plans are different on alternate floors.
House units are with three different areas : 40 sq.m, 60 sq.m, 80 sq.m.
House units convert from 40 to 60 and 80 on alternate floors.

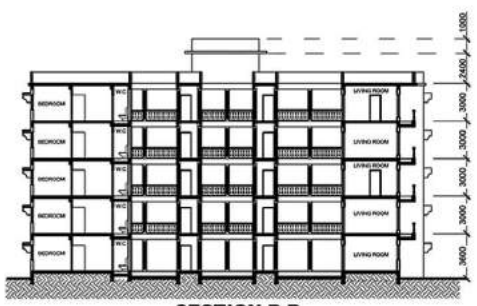
FRONT ELEVATION



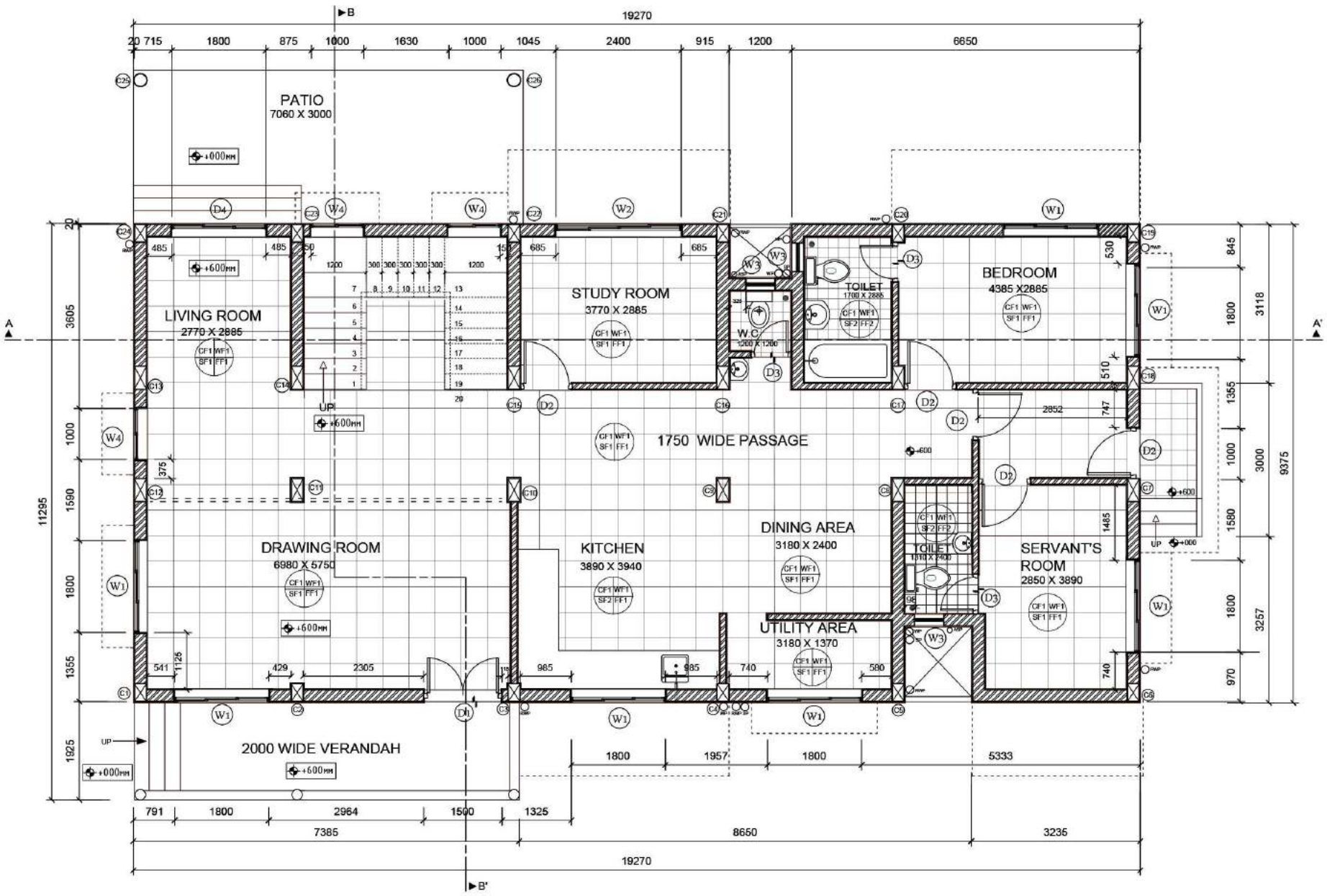
SIDE ELEVATION



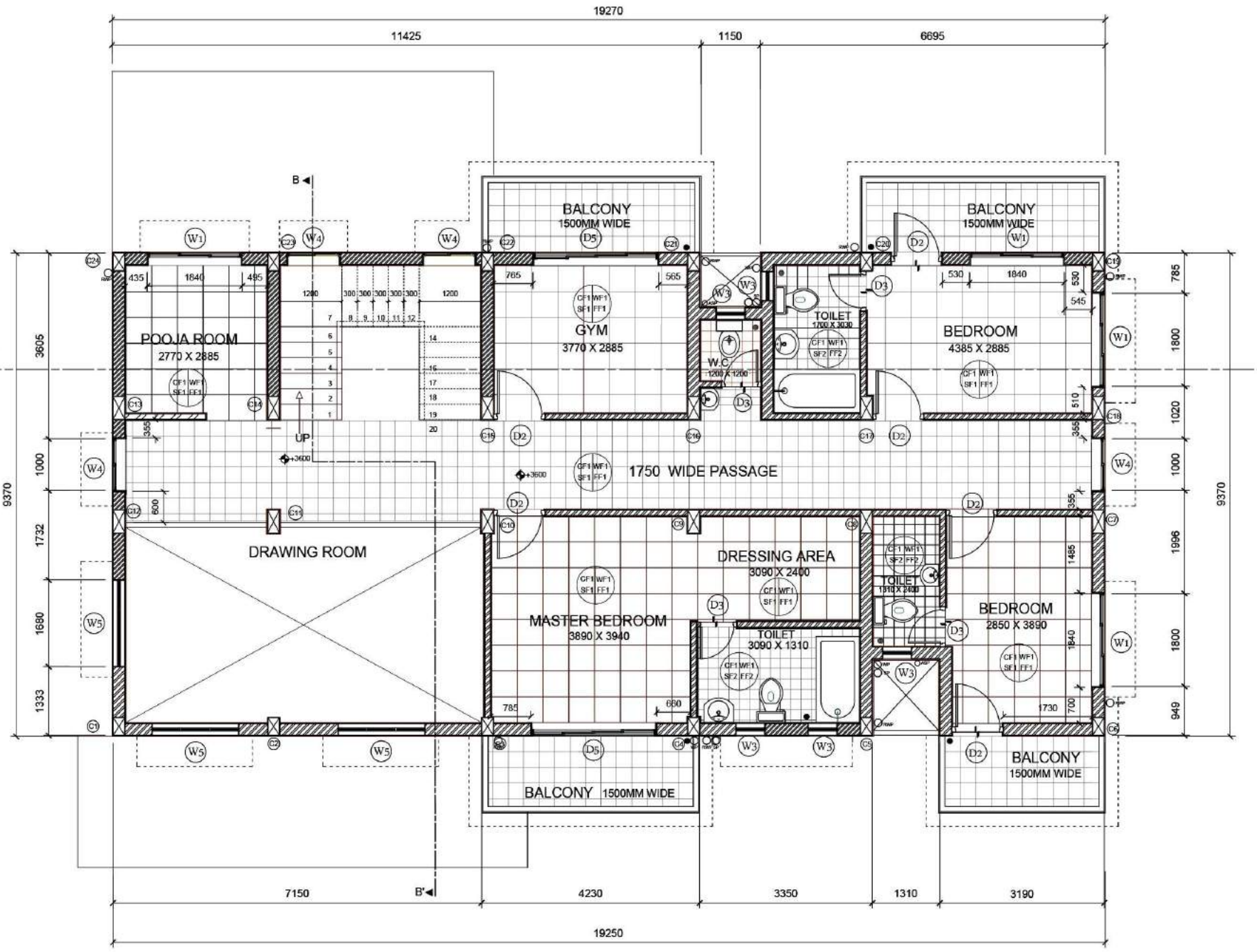
SECTION A-A



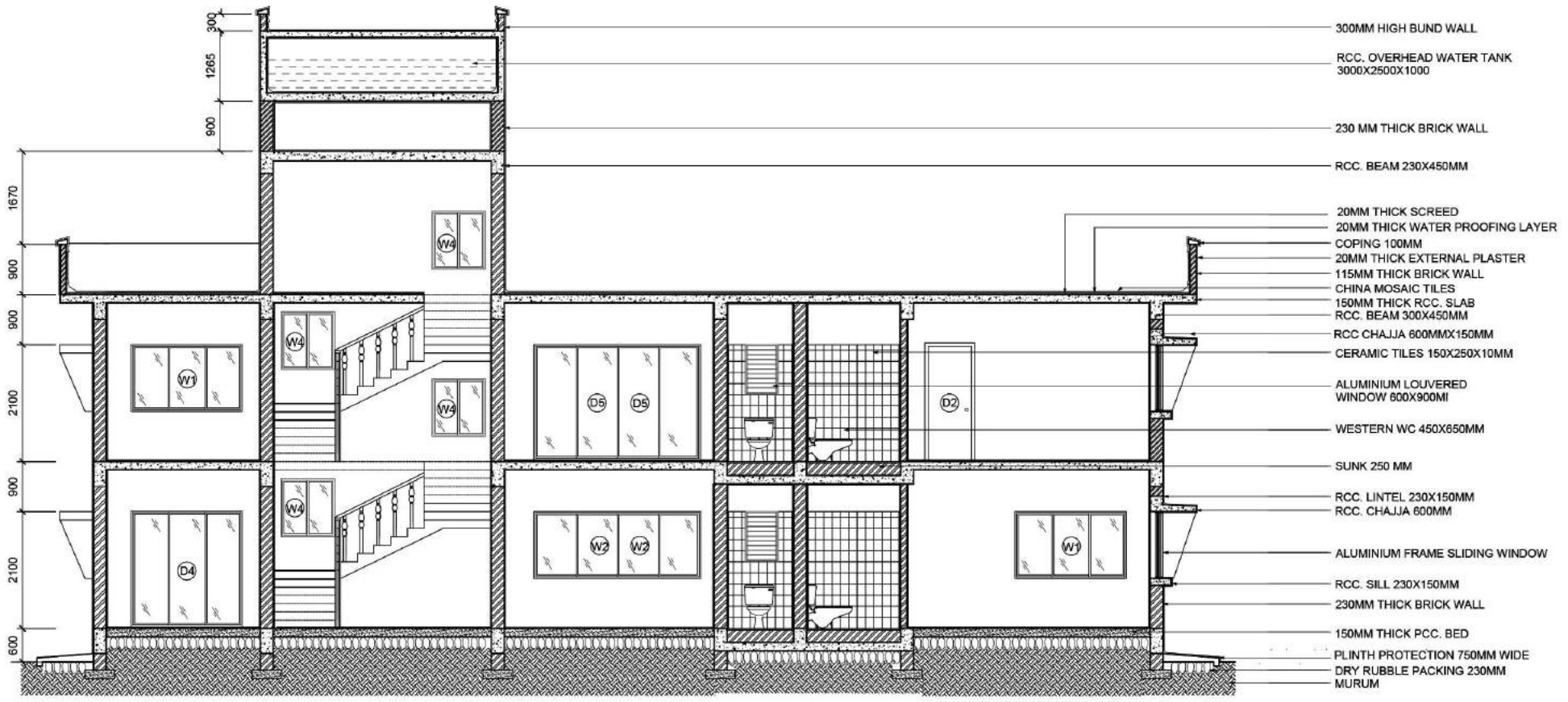
SECTION B-B



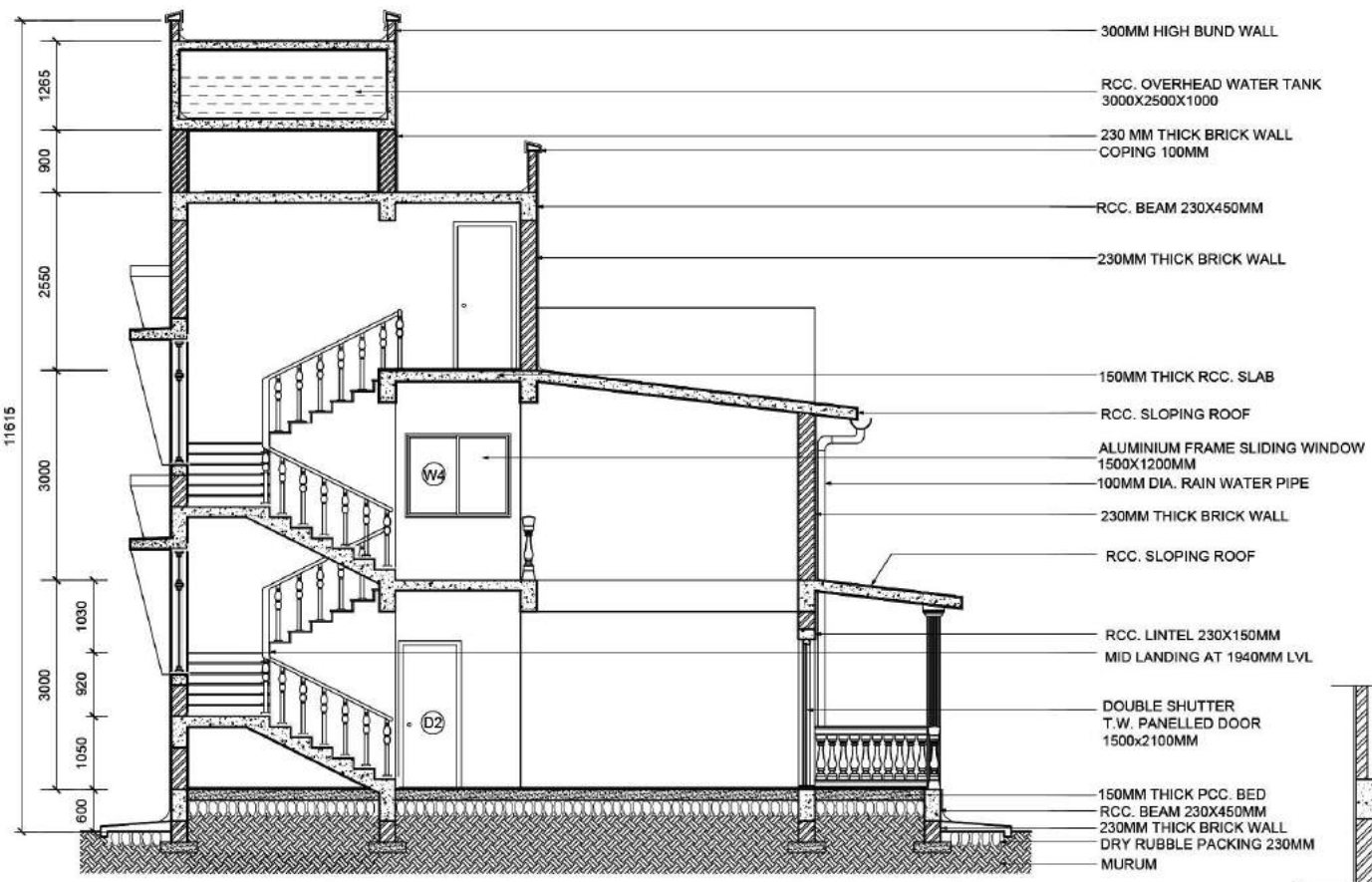
GROUND FLOOR PLAN



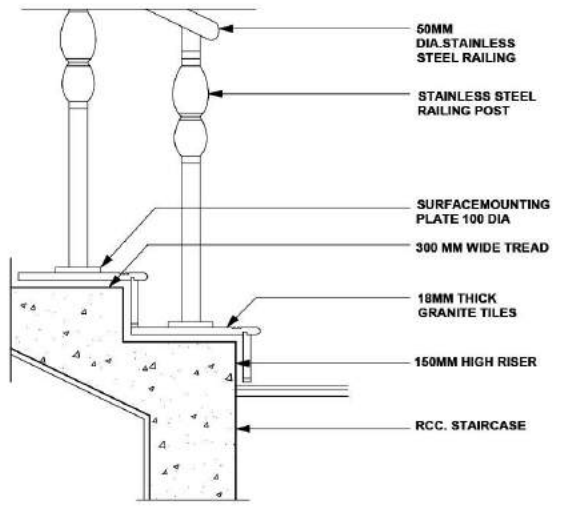
FIRST FLOOR PLAN



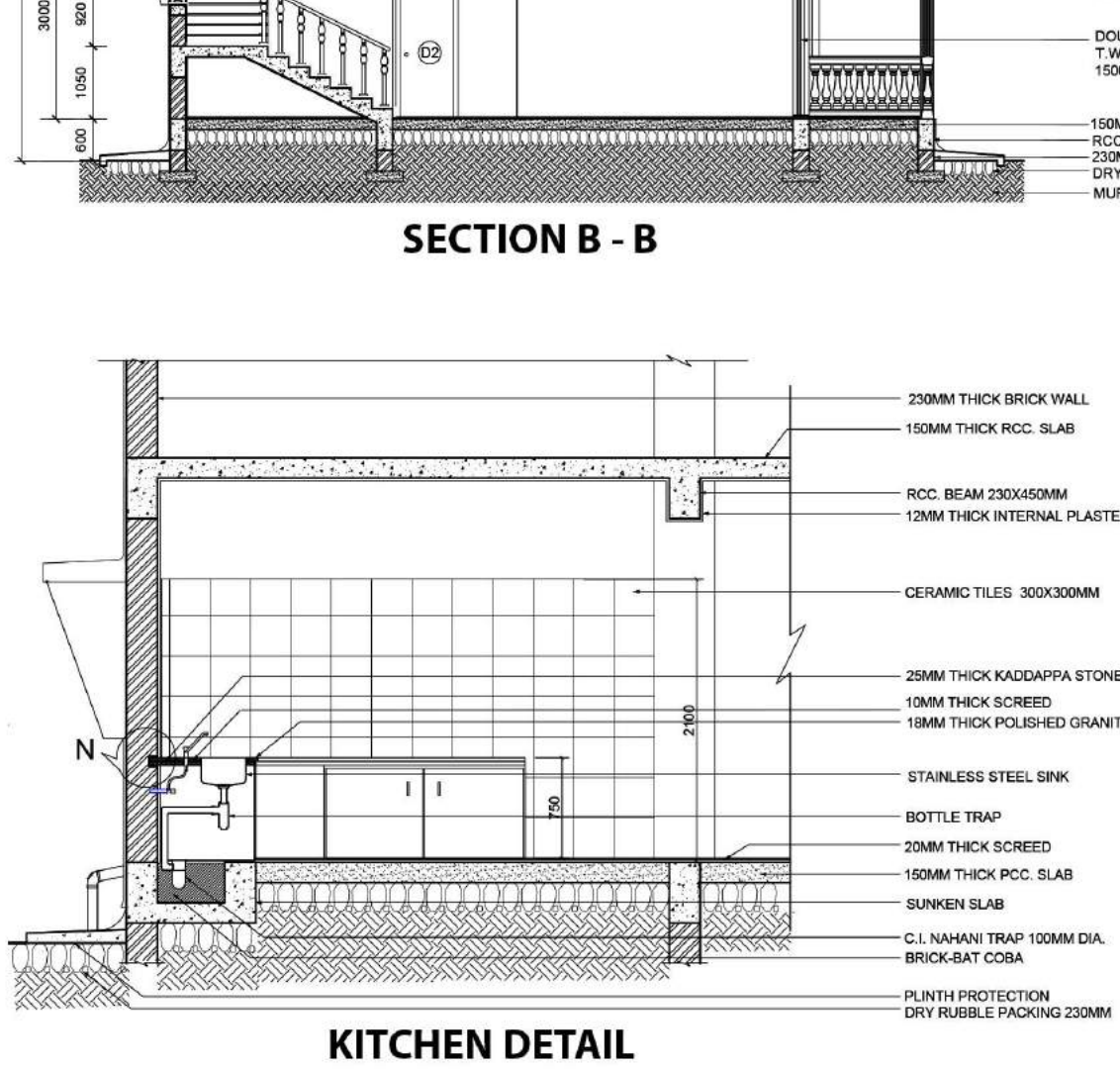
SECTION A - A



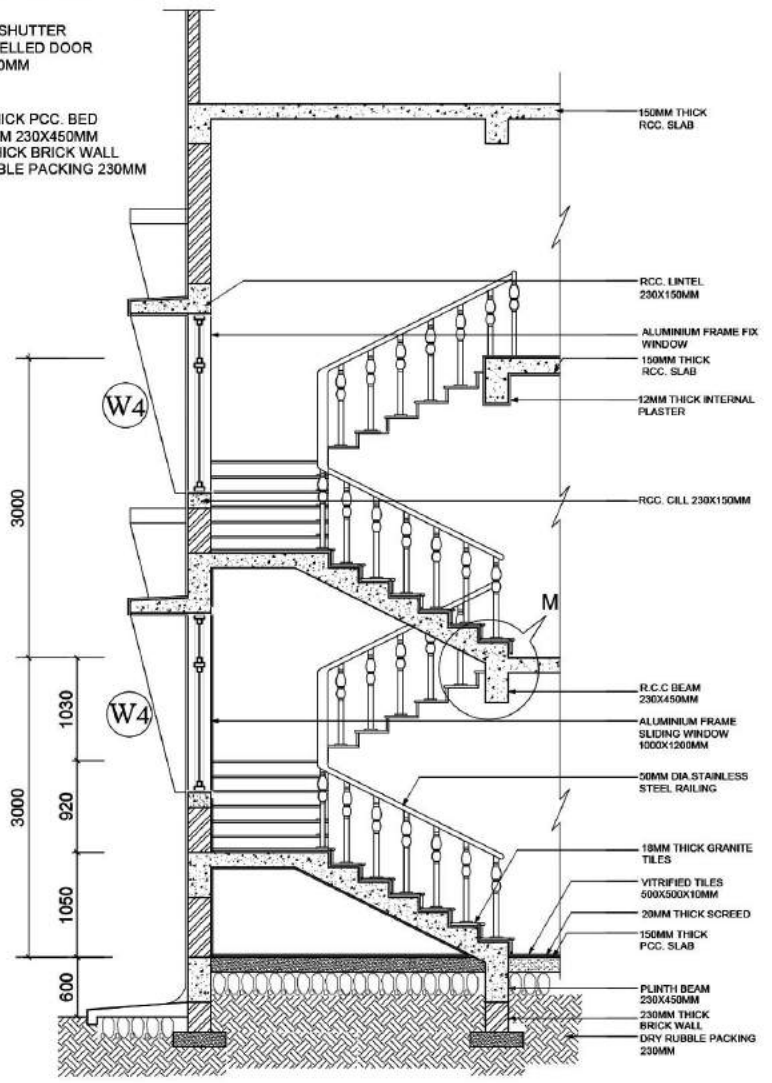
SECTION B - B



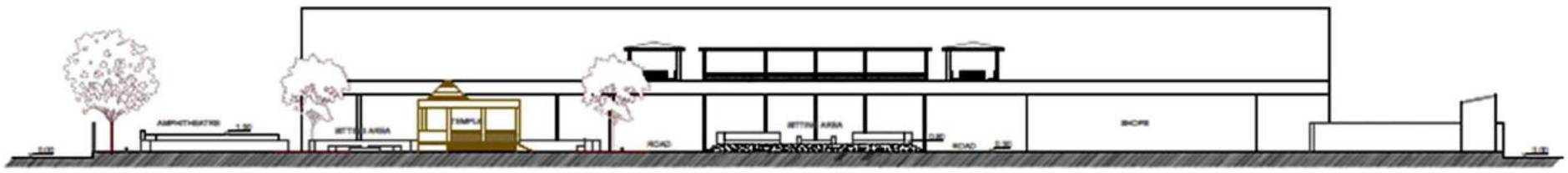
DETAIL AT 'M'



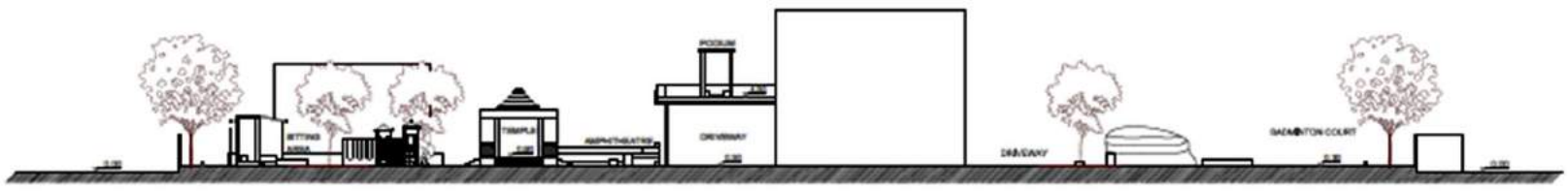
KITCHEN DETAIL



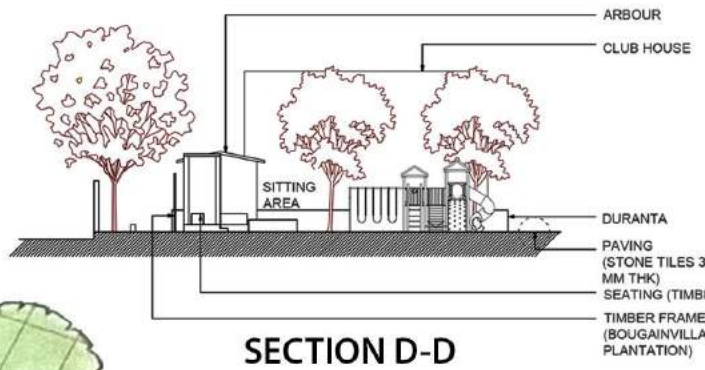
STAIRCASE DETAIL



SECTION A - A

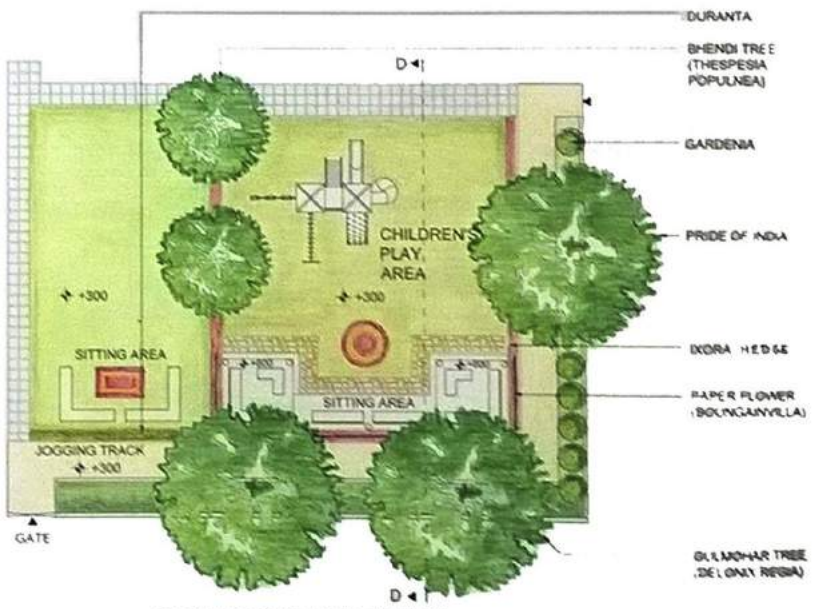


SECTION B - B

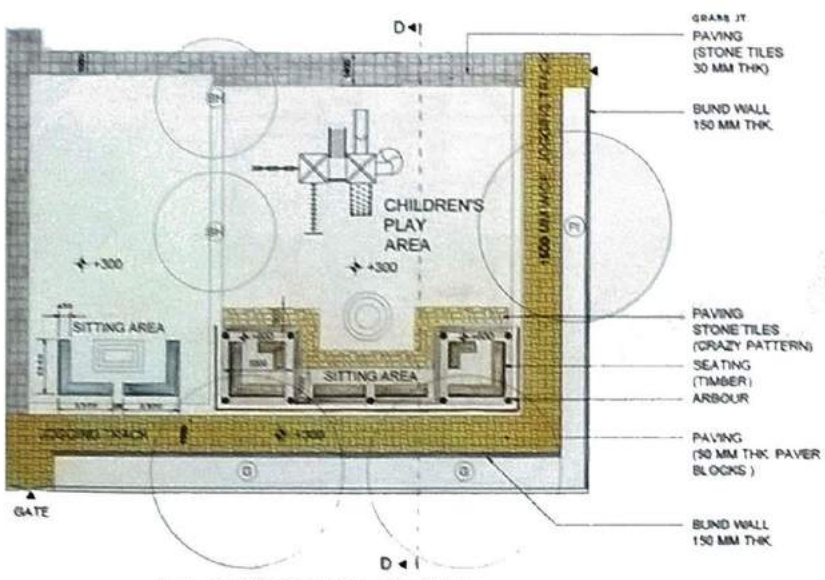


SECTION D-D

SITE PLAN



SOFTSCAPE PLAN



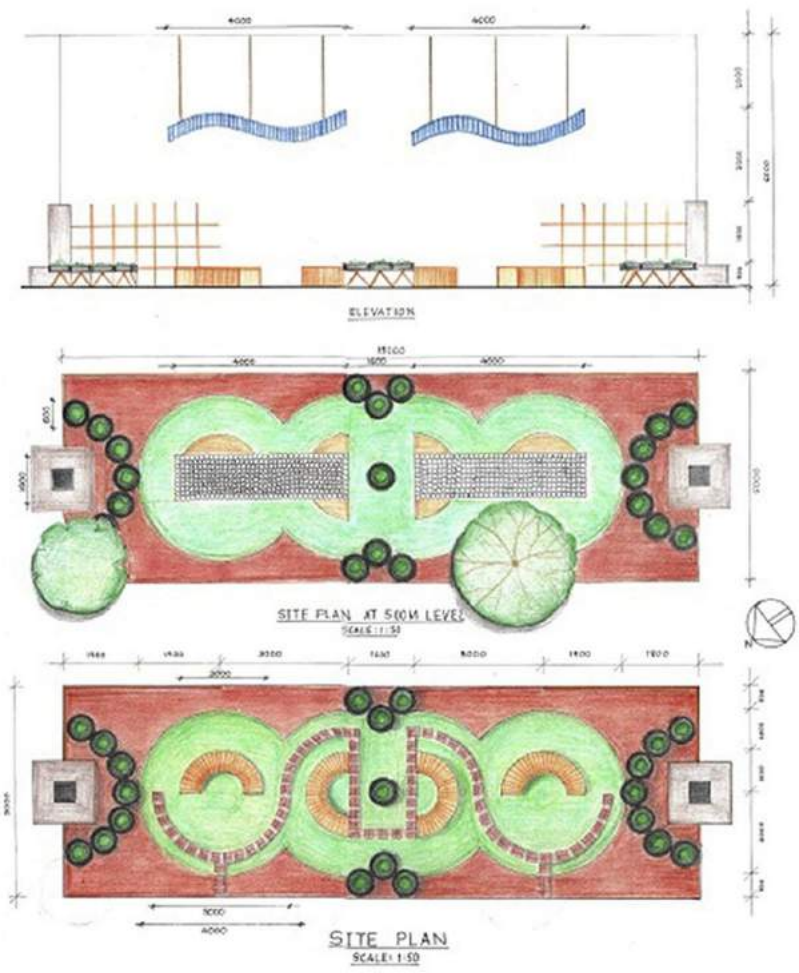
HARDSCAPE PLAN

BAY UNDER SKYWALK, KHARGHAR

WATER BODY IN MIRA ROAD

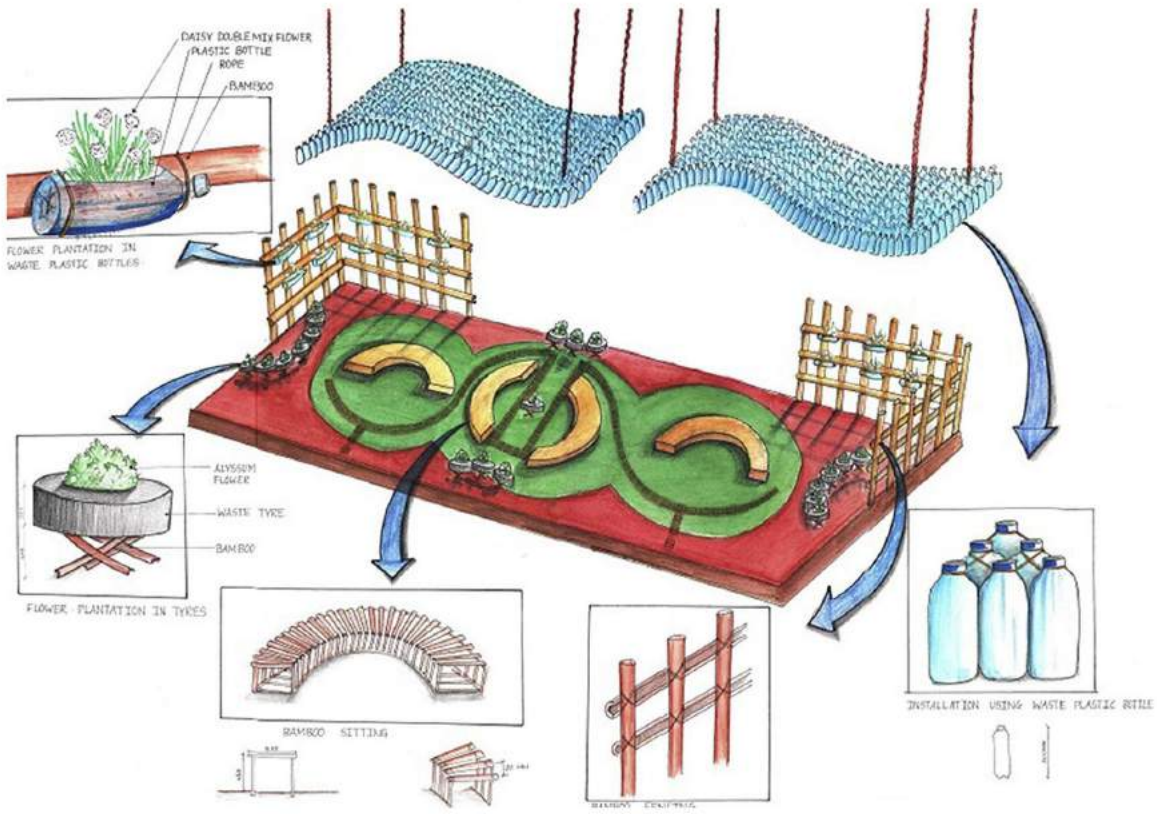
3rd Year B.Arch

LANDSCAPE DESIGN

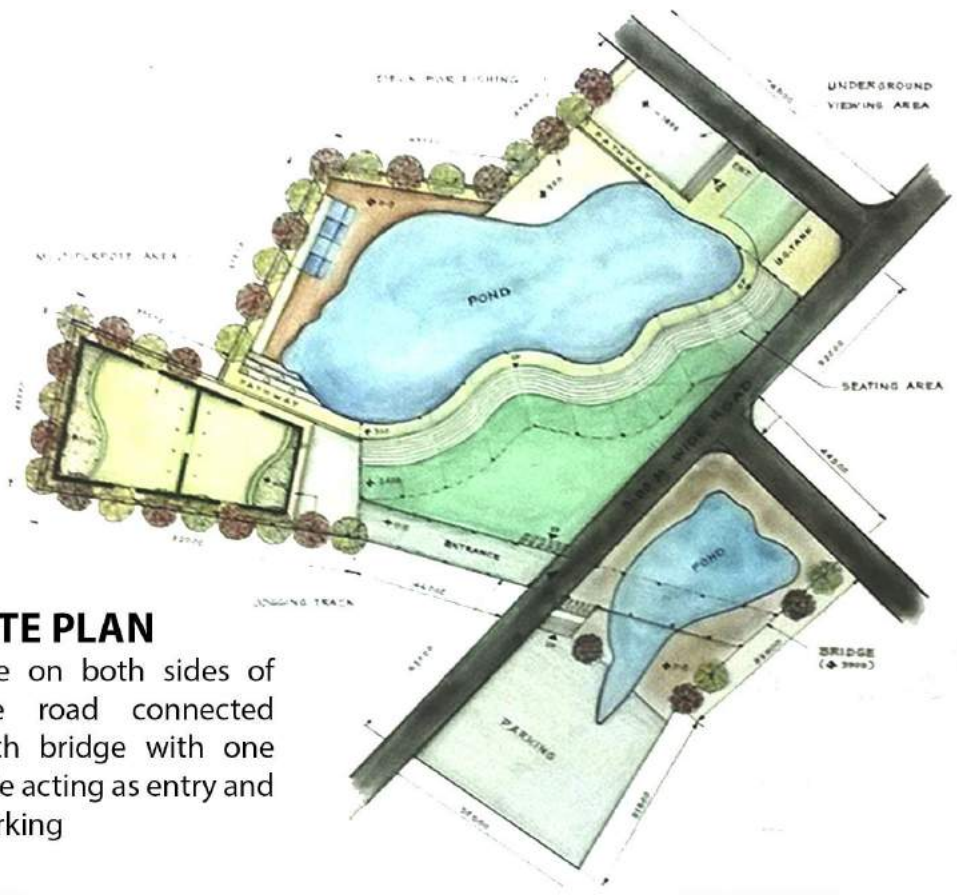


BRIEF : To design a bay under the skywalk using low cost materials

Design consists of using waste plastic bottles and waste tyres for plantation and installations along with bamboo for seatings.



LA JOURNAL - LANDSCAPE DESIGN COMPETITION (OCT 2015)



SITE PLAN

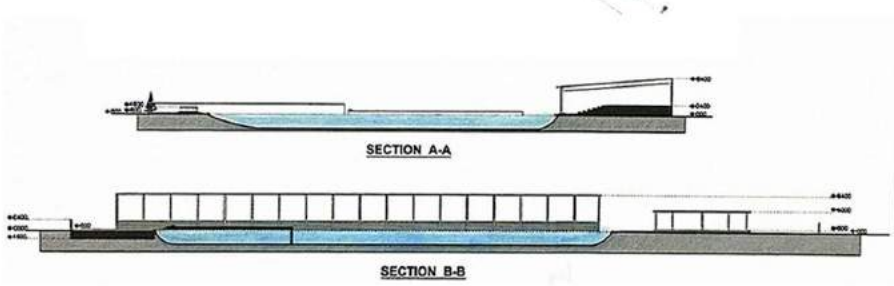
Site on both sides of the road connected with bridge with one side acting as entry and parking

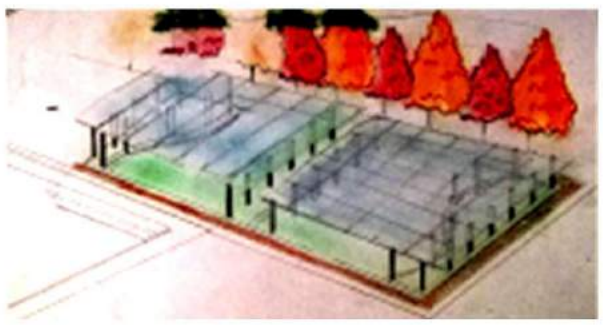
Site selected was a part of creek which got seperated due to land filling and paving ways to existing condition.

Present scenario of the site

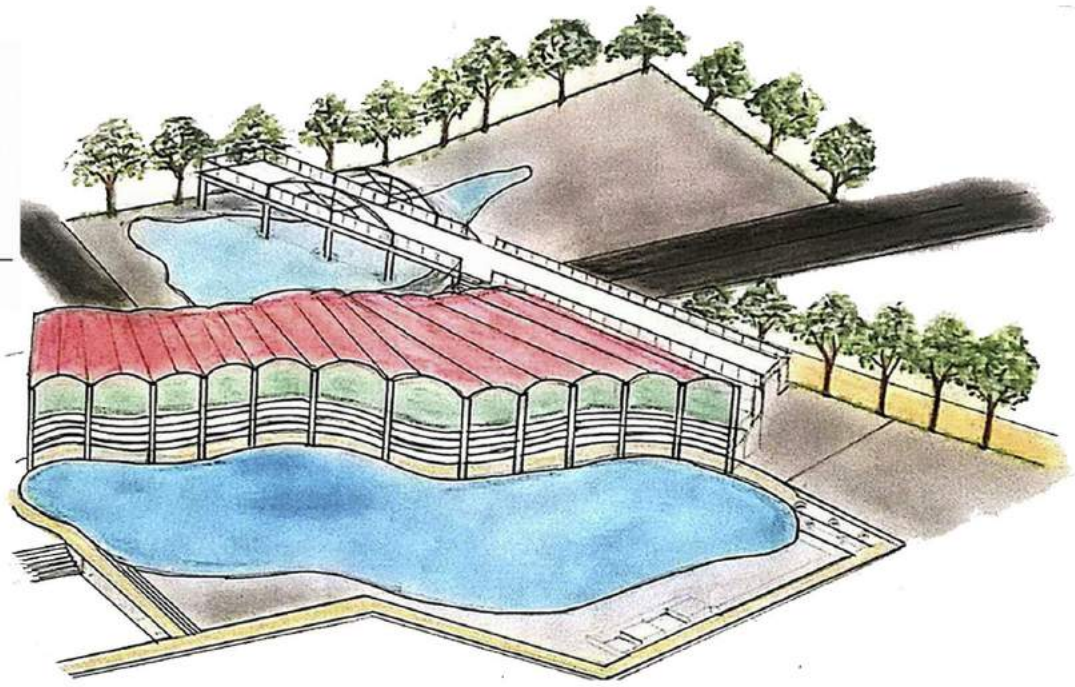
Prime concept was to conserve the existing water body on the site leading to water conservation. Keeping in mind the activities that still exist and which are required on site according to neighbourhood context are usedd in the design.

Fishing deck, Multipurpose garden with jogging track, Entertainment zone, Thinking of future with water conservation techniques - Roofing, Permeable paver blocks, Rain water harvesting system, Low maintenance bermuda grass are some of the design techniques used.





VIEW OF MULTIPURPOSE GARDEN AREA



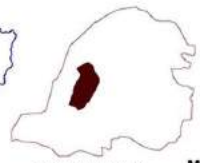
SOUTH ASIAN STUDENT DESIGN COMPETITION (2015)

3rd Year B.Arch

Documentation of Vernacular Architecture and Redesigning Naddi Village, Himachal Pradesh

COMPETITION

DOCUMENTATION



DOCUMENTATION OF TRADITIONAL HOUSES IN NADDI VILLAGE, DHARAMSHALA, HIMACHAL PRADESH

NADDI VILLAGE HAS A TRADITIONAL STYLE OF ARCHITECTURE WHICH THEY HAVE BEEN FOLLOWED TILL TODAY. THIS DOCUMENTATION EXPLAINS A SMALL PART OF NADDI VILLAGE, HOUSES BUILT IN CLUSTERS AND DETAILED DOCUMENTATION OF THE OLDEST HOUSE OF THE SELECTED CLUSTER.

NADDI VILLAGE (SITE CONTEXT)

The site being a contour region the houses are built on different levels. The documented house is 4800 mm high from the level of pathway.

The vernacular houses were planned typically with the cattle areas inside the houses on the ground floor with their kitchen and living areas on the first floor.

The clear headrooms is too less 2400 mm to 2600mm. Local materials used for construction are stone, mud and timber.

Houses are roofed by locally available slate tiles supported on timber joists and rafters

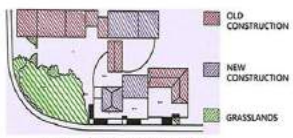
NADDI VILLAGE

SITE MAP

HOUSES CONSTRUCTED ARE AROUND 40-50 YEARS OLD.

LOCAL MATERIALS ARE USED FOR CONSTRUCTION.

FEW HOUSES ARE RENOVATED USING CEMENT AND CONCRETE

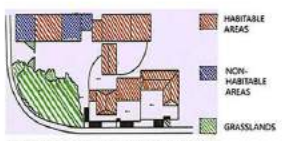


OLD AND NEW CONSTRUCTION IN THE CLUSTER

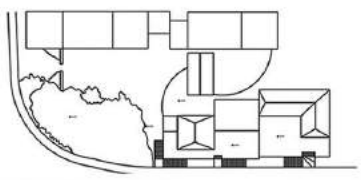
EXTERNAL PATHWAY ALONG THE CLUSTER IS THE MAIN RAOD FOR PEDESTRIAL MOVEMENT.

MOST PEDESTRIAL MOVEMENT IS ALONG THE PATHWAY.

DENSE AREA SHOW WOMEN CLEANING UTENSIL TOGETHER AND DOING DAILY CHORES.



HABITABLE AND NON-HABITAL SPACES



CLIMATE OF DHARAMSHALA

MINIMUM TEMPERATURE :
SUMMER : 16 DEGREE CELSIUS
WINTER : 6 DEGREE CELSIUS

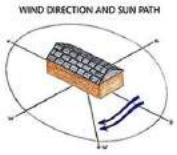
MAXIMUM TEMPERATURE :
SUMMER : 3 DEGREE CELSIUS
WINTER : 25 DEGREE CELSIUS

MONSOON SEASON :
JULY TO MID-SEPTEMBER

RAINFALL UPTO 3000MM CAN FALL MAKING DHARAMSHALA THE WETTEST PLACE IN THE STATE.

THE TEMPERATURE IS ALWAYS LOW AND SNOW-FALL OCCURRS BETWEEN OCTOBER TO JANUARY.

WIND DIRECTION AND SUN PATH



LIMITATIONS OF THE SITE :

EXISTENCE OF TALL TREES THAT OBSTRUCT WINTER SUN REQUIRED FOR BUILDINGS.

LIMITATIONS ON HEIGHT OF STRUCTURE DUE TO EARTHQUAKE PRONE AREA.

NON-AVAILABILITY OF TRANSPORTATION FACILITIES FOR CONSTRUCTION MATERIALS.

SOIL EROSION AND SLIDES

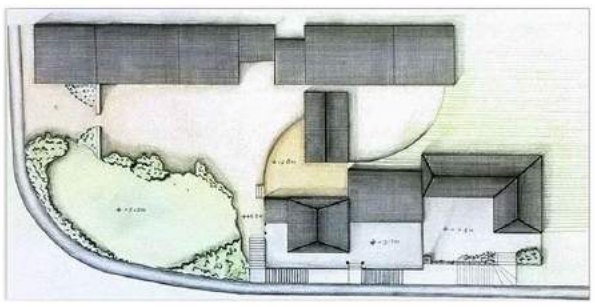
PEOPLE STAYING IN THE NOW NON-HABITABLE HOUSES MIGRATED TO URBAN CITIES.

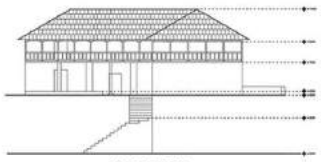
LEADING TO WHICH THE HOUSES ARE NOT MAINTAINED.

PEDESTRIAL MOVEMENT IN AND AROUND THE SELECTED CLUSTER

HOUSE DOCUMENTED IN DETAIL

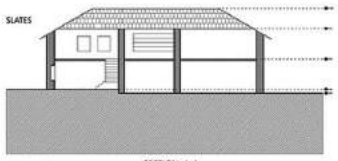
SITE ELEVATION
SCALE :- 1:200



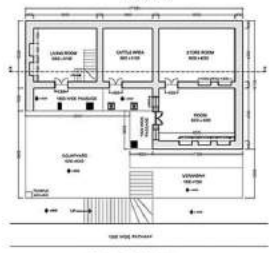


FRONT ELEVATION
SCALE :- 1:100

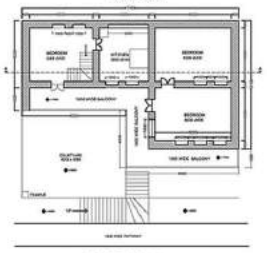
SIDE ELEVATION
SCALE :- 1:100



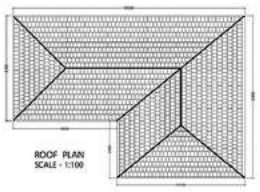
SECTION A-A
SCALE - 1:100



GROUND FLOOR PLAN
SCALE :- 1:100



FIRST FLOOR PLAN
SCALE :- 1:100



ROOF PLAN
SCALE - 1:100

DOOR

WINDOW

BALCONY RAILING

REDESIGNING OF DOCUMENTED HOUSE

CONCEPT

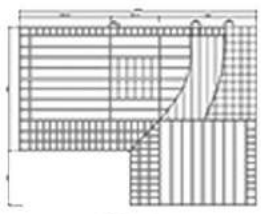
DESIGN PROPOSAL : REBUILD THE HOUSE

WHY TO REBUILD THE HOUSE

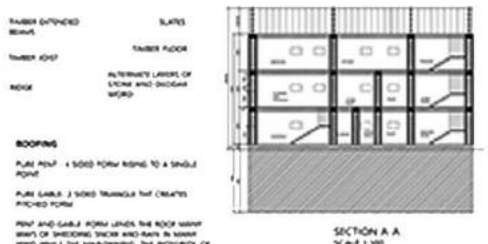
IF IS ARE 60 - 90 YEARS OLD STRUCTURE BUT STILL IN USE TODAY.
THE STRUCTURE IS IN DILAPIDATED CONDITION SO THERE IS NEED TO RECONSTRUCT IT.
THE MEMBERS OF THE HOUSE ALSO WISH TO RECONSTRUCT THE HOUSE IN THE TRADITIONAL WAY.
SO THE DESIGN PROPOSAL IS TO RECONSTRUCT THE HOUSE IN TRADITIONAL WAY WITH LOCALLY AVAILABLE MATERIALS IN KATH KHUNI STYLE OF ARCHITECTURE

KATH KHUNI FEATURES:

THE INHERENT STABILITY, FLEXIBILITY AND STRENGTH OF INDIGENOUS KATH KHUNI (WOOD AND STONE) :
BUILDING MATERIALS THEMSELVES FOR THIS EARTHQUAKE PRONE TERRAIN. BUILDINGS ARE MADE OF LOCAL MATERIALS. DEODAR WOOD AND SLATE STONES.
PLINTH OF STONE GIVES EACH BUILDING A HIGHLY ROBUST FOUNDATION.
WALLS ARE OF ALTERNATE LAYERS OF WOOD AND STONE WITH AN INFILL OF RUBBLE TO CLOSE GAPS.
BUILDING IS CAPPED BY ROOF OF SLATE SHINGLES, EACH NAILED TO WOODEN FRAMEWORK.
IN HIGH MOUNTAIN TERRAIN, KATH KHUNI CONSTRUCTION IS QUICK AND EFFICIENT USING STONE AND RUBBLE RATHER THAN SLOW SETTING MORTAR (WITH) RUBBLE TRAPS AIR WITH WHICH RETAINING HEAT DURING COLD WINTERS AND COOLING INTERIOR SPACES DURING SUMMER.



ROOF PLAN
SCALE - 1:100



ROOFING

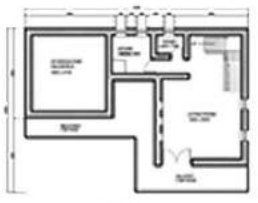
PURE ROOF : A SLOPED FORM RISING TO A SINGLE POINT

PURE GABLE : 2 SLOPED TRIANGLE THAT CREATES PITCHED FORM

HIPPED AND GABLE ROOF LOWERS THE ROOF MASS BY MEANS OF SHEDDING SNOW AND RAIN IN MANY WAYS, WHILE THUS MAINTAINING THE INTEGRITY OF INTERIOR SPACE.

SECTION A-A
SCALE 1:100

GROUND FLOOR PLAN
SCALE - 1:100



FIRST FLOOR PLAN
SCALE - 1:100

SECOND FLOOR PLAN
SCALE - 1:100

SECTION B-B
SCALE 1:100

PLANNING OF THE HOUSES ARE LOGICALLY ORGANIZED.
THE GROUND FLOOR IS COMPLETELY MADE UP OF STONE
GAUSHALA IS KEPT ON THE GROUND FLOOR THAT OPENS DIRECTLY TO THE OUTSIDE AND INSULATION.
DURING SUMMER CATTLES ARE KEPT OUTSIDE ON THE DEEP STONE PLINTH.
DURING WINTERS, THE HEAT IN THE GAUSHALA WARMS THE HOUSE ABOVE.
MEZZANINE LEVEL : FOR STORAGE WHICH ACTS AS BUFFER SPACE BETWEEN GROUND AND SECOND FLOOR TO AVOID SMELL.
DRAWING ROOM FORMING SPACE TO WELCOME THE GUEST
TOILETS ARE PROVIDED IN THE INTERIOR SPACES.

THE FIRST FLOOR IS MADE OF ALTERNATE LAYER OF STONE AND DEODAR WOOD.

THE STORE ROOM OF THE FIRST FLOOR IS FOR THE STORAGE OF INDOOR UTENSILS, VEGETABLES, ETC. IT IS ACCESSIBLE IN TERRACE BY LADDER AND TRAP DOOR SYSTEM FROM THE KITCHEN ON THE TOP FLOOR.

IT HAS A CONTINUOUS BALCONY 1500 MM WIDE.

TOP LEVEL USUALLY HOUSES COOKING AND LIVING SPACES.

THE KITCHEN IS PLACED ON THE TOP FLOOR TO ALLOW THE EXHAUST AIR TO ESCAPE FROM THE ROOF ABOVE.

IT IS ALSO MADE OF ALTERNATE LAYER OF STONE AND DEODAR WOOD.

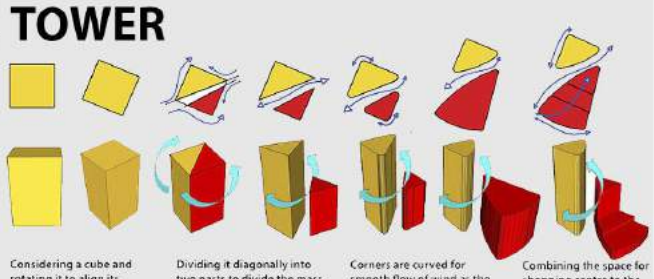
POSTER FOR SAVA

WINDSCAPE TOWER

Proposed project is a mixed use building in Mumbai
This project comprises of 5-star hotel and a shopping centre
It is designed near to Worli Sea Face , featuring picturesque surroundings that are characterised by endless blue waters of the Arabian Sea
Famous for experiencing giant waves during monsoon season, it attracts locals and tourists alike throughout the year

CONCEPT

The design is intended to use energy from natural and passive forces surrounding the building
The building is oriented in such a way that maximum solar energy and wind energy can be utilised to generate electricity
Shape and form of the design is derived considering the wind flow



Considering a cube and rotating it to align its corners along the wind direction

Dividing it diagonally into two parts to divide the mass and to create an interactive space for users

Corners are curved for smooth flow of wind as the connecting space has wind turbines

Combining the space for shopping centre to the smaller block and designing it in levels

FORM DEVELOPMENT

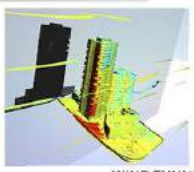
SITE STUDY

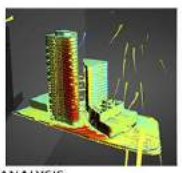
This proposed project site is in Worli, Mumbai Worli has commercial as well as residential areas. The site is easily accessible by rail and road-ways
Site has proximity to nearby hospitals
The site area being mix use has BDD Chawls on the south, adjoining west and north by Glaxo smith and Doordarshan respectively. And on the east residential as well as commercial area

Map showing location of Maharashtra and Mumbai

CLIMATIC DATA

Climate : Tropical warm and humid climate
Moderate temperatures with high level of humidity
Average temperature : 27.2 °C
Average precipitation :242.2cm
The temperatures in average about 30 in summer and 18 in winter Between June and September the south west monsoon rains lash the city





WIND TUNNEL ANALYSIS

Map showing location of Worli in Mumbai

Worli Map

PROPOSED BUILDING

Worli Seaface

COMMERCIAL AREAS

RESIDENTIAL AREAS

PODDAR HOSPITAL

SITE CONTEXT VIEW

Site plan

Three seperate entrances for different user groups
Main entrance for 5star hotel from the main road
Entrance for the public use shopping centre and interactive zones form other side and service entry from the local lane

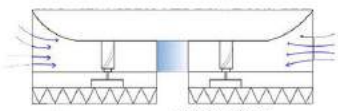
NODE
Node designed for public interaction
landscape is done using recycled water from grey water treatment plant
Xeriscape
dry landscape
plants using less water are planted

SITE PLAN

PUBLIC PARKING FOR COMMUNITY
Giving back to society
For decongestion on road

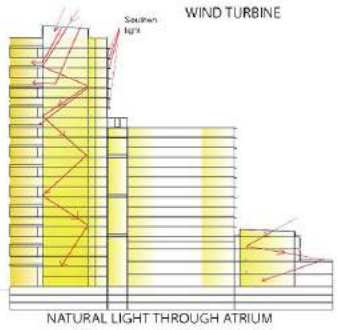
POLISHING POND
Polishing pond is the last part of the waste water treatment system
it is designed at the rear side of the hotel block
the system is arranged in levels
polishing pond is followed by

LIVE EDGE
Dead compound wall edge is designed for public seating
attempt to make the street interactive for the passers

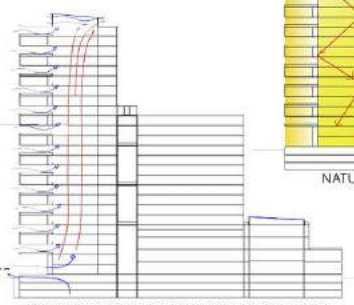


WIND TURBINE

RAIN WATER HARVESTING
In this system implemented in 25 floors building, is done through the roof tops and water will be filtered and collected in underground tanks .it is used for flushing landscaping and other laundry purposes



NATURAL LIGHT THROUGH ATRIUM

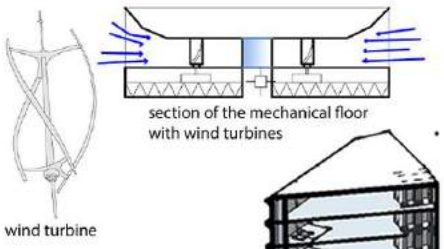


CENTRAL ATRIUM FOR NATURAL VENTILATION

The main focus of windscape is integrating energy conservation features, including wind turbines, photovoltaic cells, natural ventilation , and chilled beam system

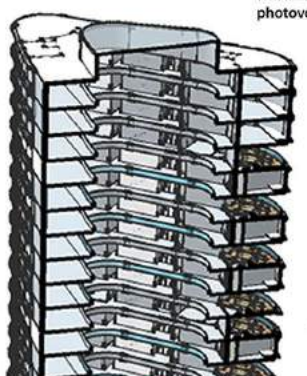
WIND TURBINES

Orientation of tower is according to the prevailing wind thus, the aerodynamic shape so formed improves the wind flow through the wind turbine
The wind flowing with high velocity at the top pushes wind turbines that generate energy for the building
The tower's funnel shape directs wind to a pair of openings at the mechanical floor on top of the connecting sky bridges, where turbines generate energy for the building



section of the mechanical floor with wind turbines

wind turbine



CENTRAL ATRIUM

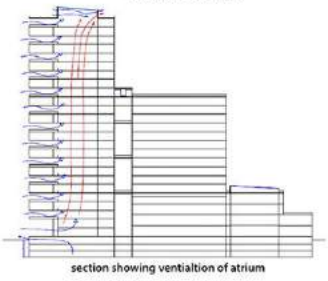
The central full height atrium allows daylight harvesting. It is covered with glass and solar panels, facing southern direction at an angle which allows more solar radiation to fall on the photovoltaic cells

CENTRAL ATRIUM

VENTILATION OF ATRIUM

The basic principle of cross ventialtion is used for creating pressure and exhaust the hot air from the atrium
The atrium is elevated in such a way that the louvers on south-west and north-east side allows cross ventilation of air

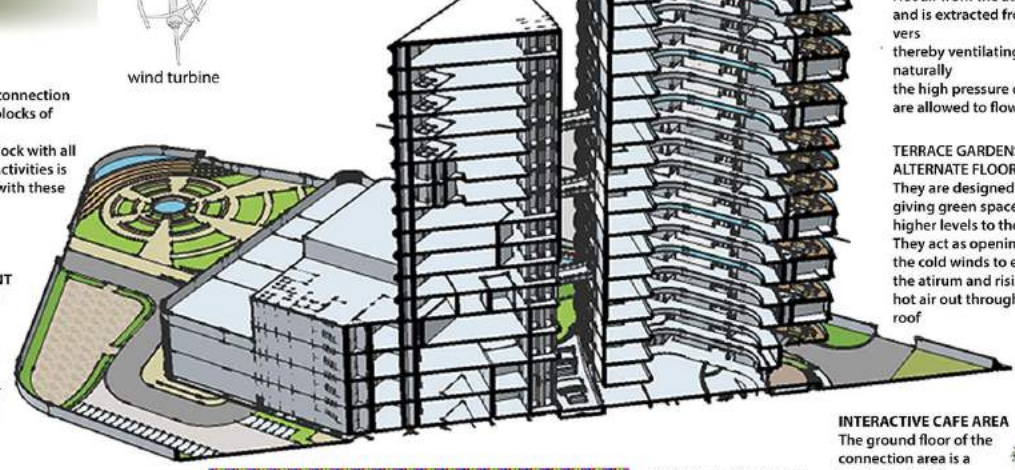
Hot air from the atrium rises up and is extracted from the louvers
thereby ventilating the atrium naturally
the high pressure cold winds are allowed to flow through the



section showing ventialtion of atrium

SKY BRIDGES

These are landscaped connection bridges between two blocks of hotel
Main hotel bock and block with all amenities and leisure activities is connected on 3 floors with these bridges



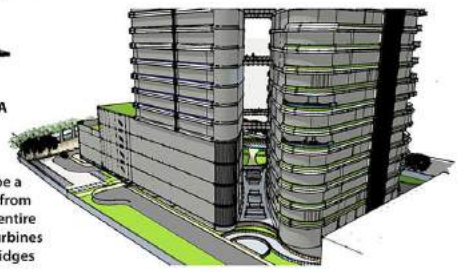
TERRACE GARDENS ON ALTERNATE FLOORS

They are designed for giving green spaces at higher levels to the users
They act as openings for the cold winds to enter the atirum and rising the hot air out through the roof

NODE DESIGN AT ENTRANCE AREA FOR SHOPPING CENTRE

WASTE WATER TREATMENT

Waste water from the two towers and mall will be treated and reused for landscaping, flushing and .cleaning purpose
Decentralised Wastewater Systems (DEWATS) will be used for waste water treatment



INTERACTIVE CAFE AREA

The ground floor of the connection area is a landscaped cafe
This area is intended to be a visual treat for the users from where one can view the entire hotel building the wid turbines at the top and the sky bridges

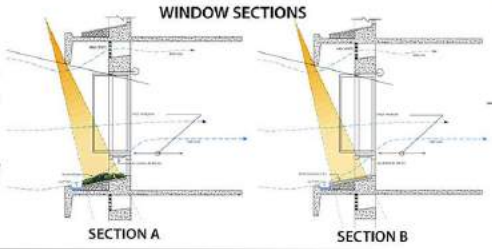
MONSOON WINDOW

Window sections are designed in different ways on different facades

South facade will have sunshade at the top and photovoltaic cells on bottom part to trap solar energy shown in section B

Facades in other direction will have plantation bed in place of solar cell to trap the rainwater and collect it through channels running parallel to plantation bed as shown in section A

WINDOW SECTIONS



SECTION A

SECTION B

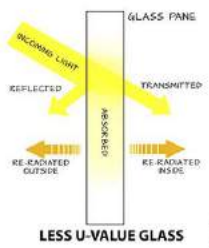
ELEVATION FOR COMMUNITY PARKING BLOCK

COMMUNITY PARKING BLOCK

A four levels parking for community will be provided in the site

Facade for community building is designed using glass fins and placing them in angle for natural ventilation and lighting
Plantation beds and aluminium net is added at the bottom of every floor

MATERIALS



LESS U-VALUE GLASS

AUTOCLAVE AERATED BLOCKS

SOLAR CELLS

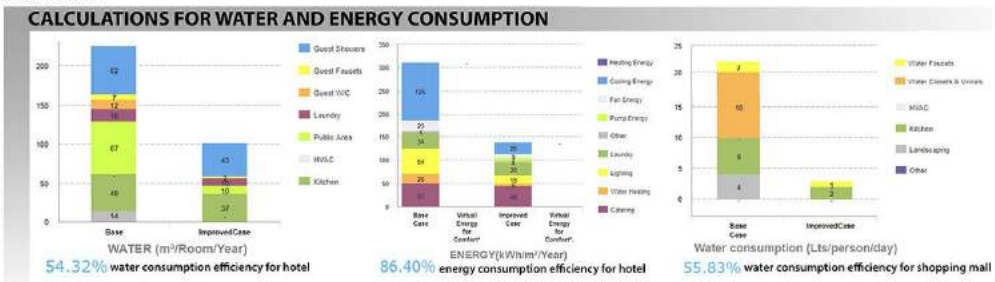
AIR PURIFYING PLANTS

These plants are used on the exterior plantation beds and terrace gardens
They filter exterior air to pollution free air for better indoor air quality

XERISCAPE

it used for landscaping indoor and outdoor areas
natural plants and stones are used for landscape without costly watering

CALCULATIONS FOR WATER AND ENERGY CONSUMPTION



54.32% water consumption efficiency for hotel

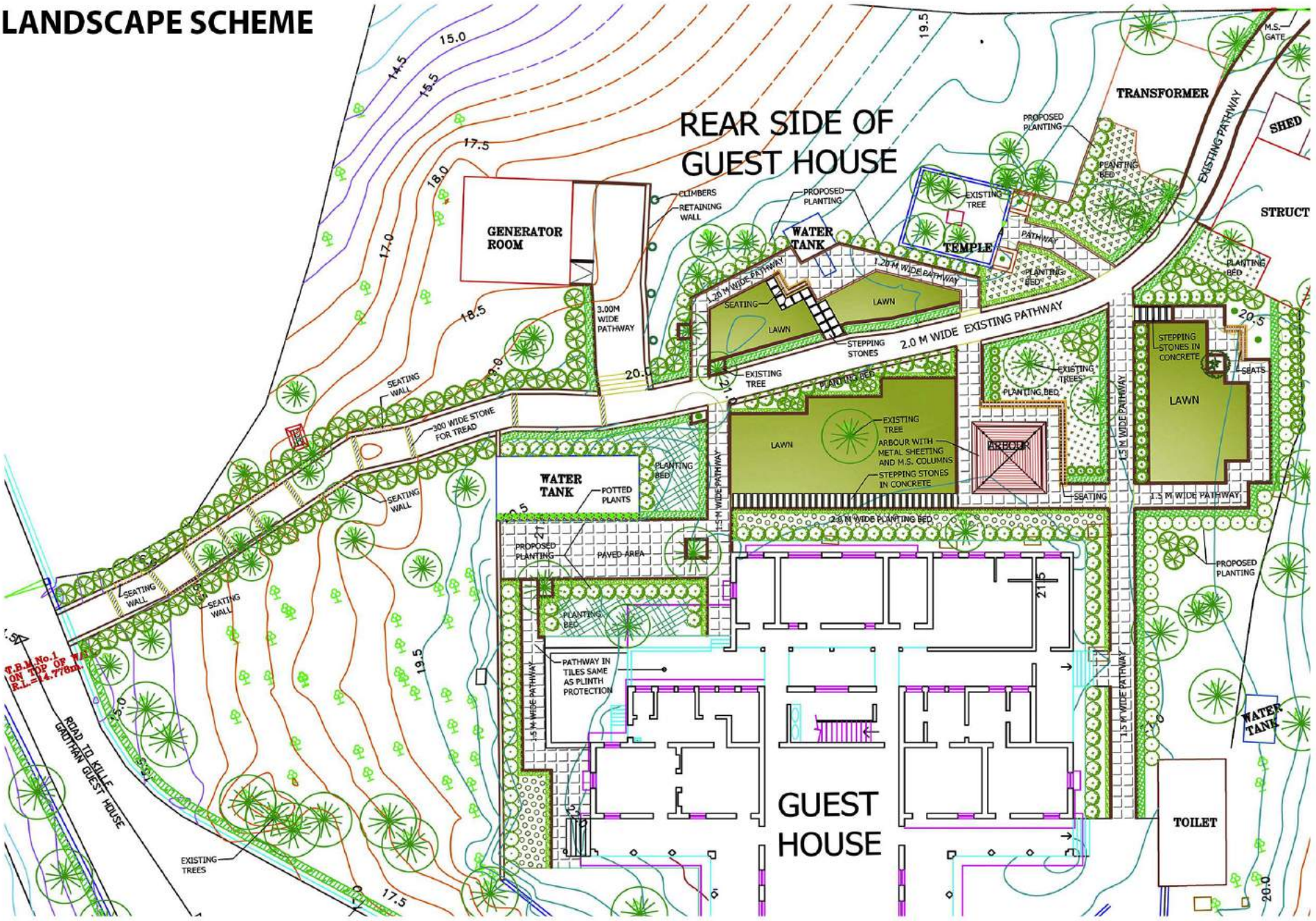
86.40% energy consumption efficiency for hotel

55.83% water consumption efficiency for shopping mall

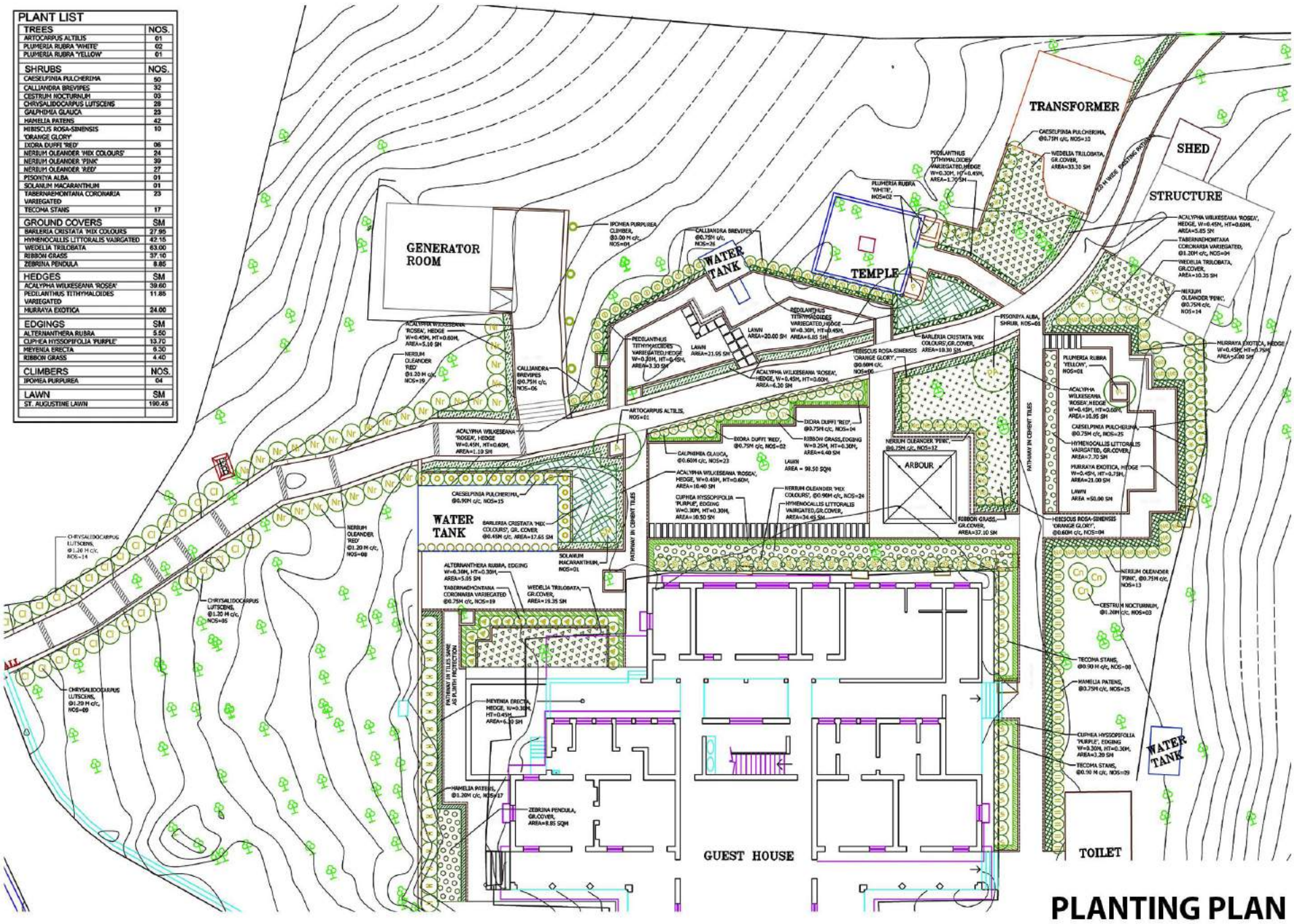
Calculations are shown through comparisons between a base case and improved case Base case is consumption without any efficency attempts and improved case is with use water and energy efficiency measures
Water efficiency includes rain water harvesting grey water treatment and resue and water efficient mechanisms used
Energy efficiency includes use of solar cells solar pumps water heater and use of wind energy

DESIGN BOARD
SAMPADA LAD, SONIA PADAVE ,BHARATI VIDYAPEETH, NAVI MUMBAI D B 1
SAMPADA LAD, ASHWINI MOGAVEERA ,BHARATI VIDYAPEETH, NAVI MUMBAI D B 2
SAMPADA LAD, SRUSHTI NAIK ,BHARATI VIDYAPEETH, NAVI MUMBAI D B 3
SAMPADA LAD, PRANITA GANDHRE ,BHARATI VIDYAPEETH, NAVI MUMBAI D B 4

LANDSCAPE SCHEME

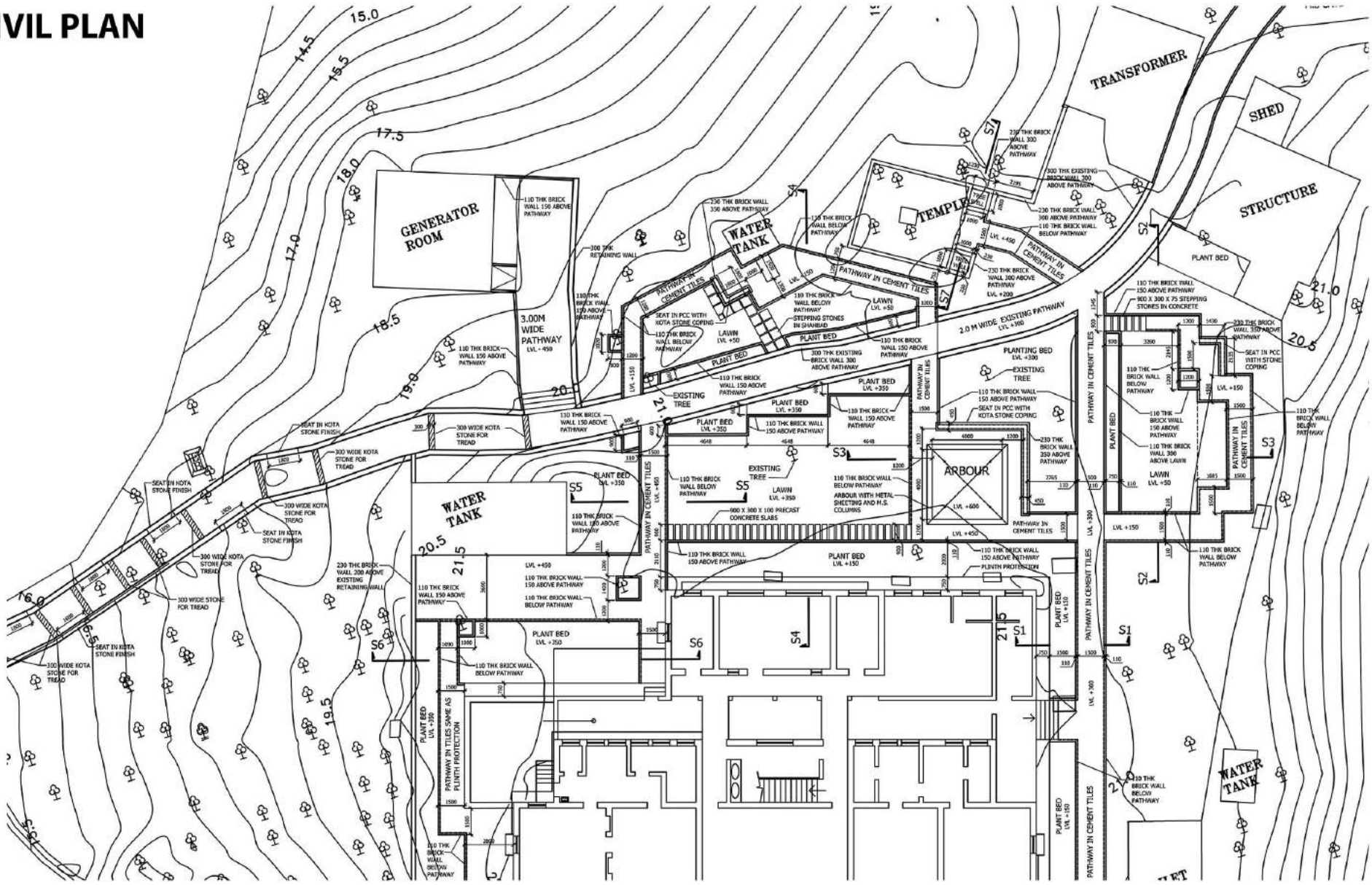


PLANT LIST	
TREES	**NOS.**
ARTOCARPUS ALTILIS	01
PLUMERIA RUBRA 'WHITE'	02
PLUMERIA RUBRA 'YELLOW'	01
SHRUBS	**NOS.**
CAESELPINIA PULCHERIMA	50
CALLIANDRA BREVIPES	32
CESTRUM NOCTURNUM	03
CHRYSALIDOCARPUS LUTSCENS	28
GALPHIMIA GLAUCA	23
HAMELIA PATENS	42
HIBISCUS ROSA-SINENSIS 'ORANGE GLORY'	10
IXORA DUFFI 'RED'	06
NERIUM OLEANDER 'MIX COLOURS'	24
NERIUM OLEANDER 'PINK'	39
NERIUM OLEANDER 'RED'	27
PISONIYA ALBA	01
SOLANUM MACARANTHUM	01
TABERNAEMONTANA CORONARIA VARIEGATED	23
TECOMA STANS	17
GROUND COVERS	**SM**
BARLERIA CRISTATA 'MIX COLOURS'	27.95
HYMENOCALLIS LITTORALIS VARIGATED	42.15
WEDELIA TRILOBATA	63.00
RIBBON GRASS	37.10
ZEBRINA PENDULA	8.85
HEDGES	**SM**
ACALYPHA WILKESEANA 'ROSEA'	39.60
PEDILANTHUS TITHYMALOIDES VARIEGATED	11.85
MURRAYA EXOTICA	24.00
EDGINGS	**SM**
ALTERNANTHERA RUBRA	5.50
CUPHEA HYSSOPIFOLIA 'PURPLE'	13.70
MEYENIA ERECTA	6.30
RIBBON GRASS	4.40
CLIMBERS	**NOS.**
IPOMEA PURPUREA	04
LAWN	**SM**
ST. AUGUSTINE LAWN	190.45

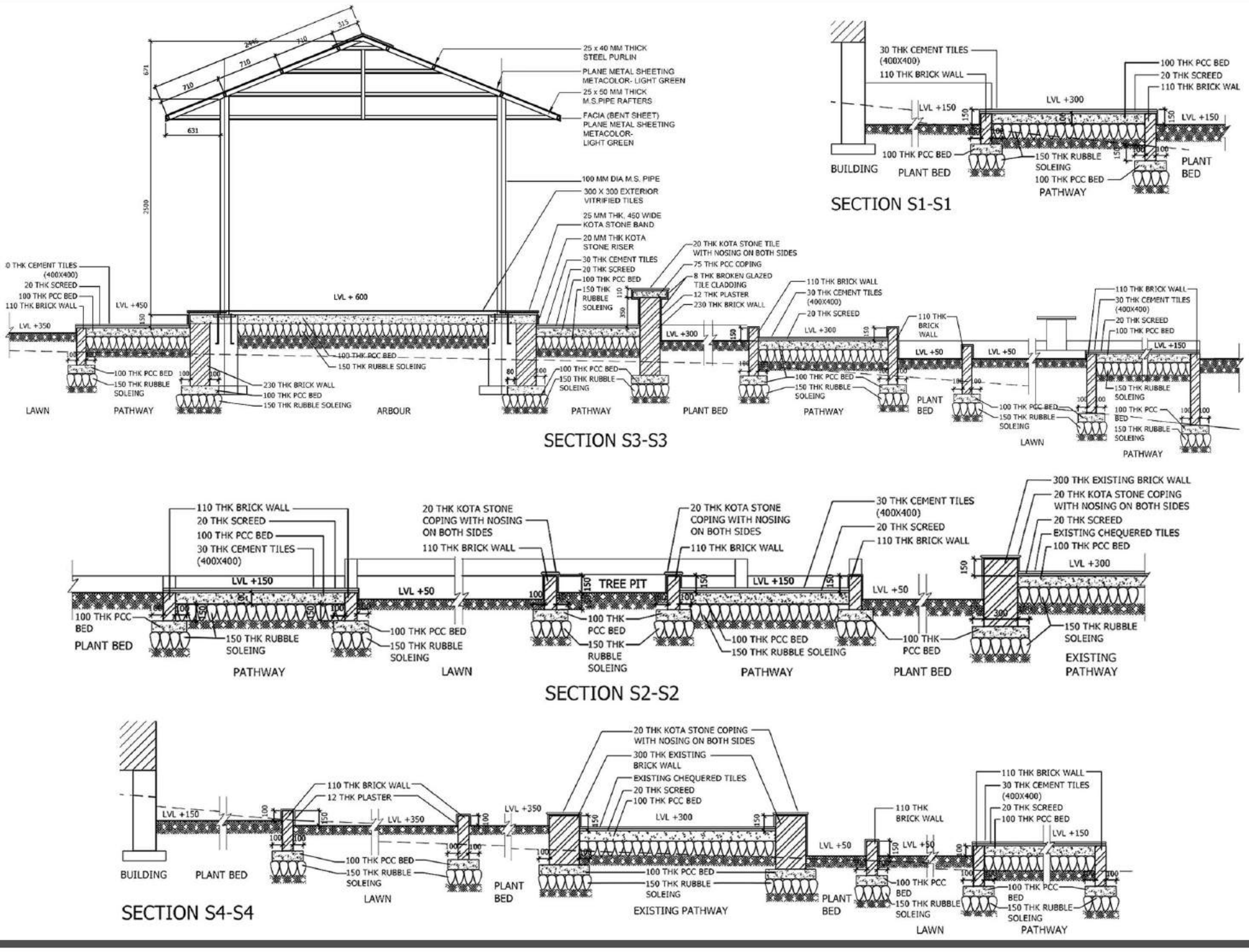


PLANTING PLAN

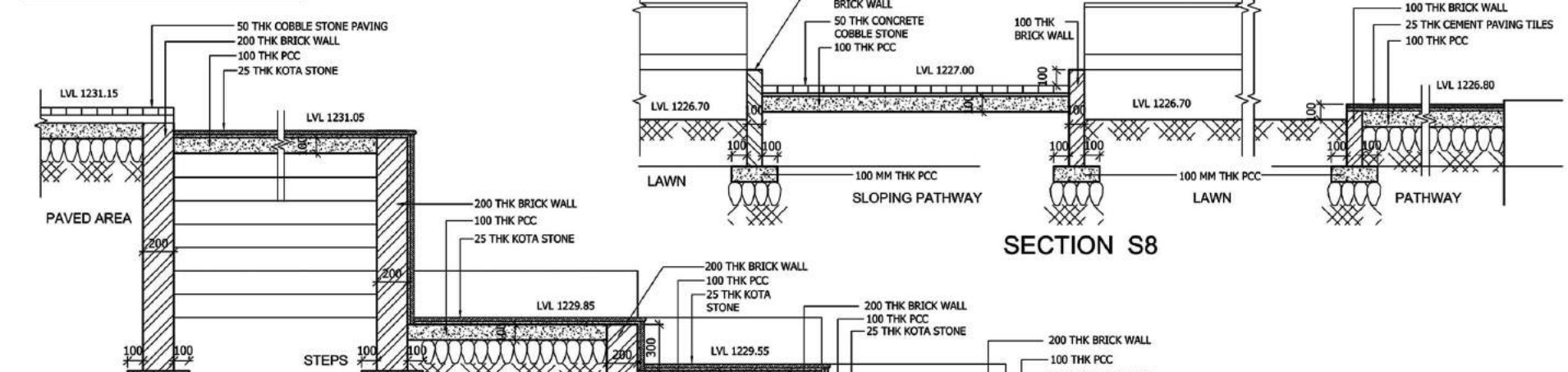
CIVIL PLAN

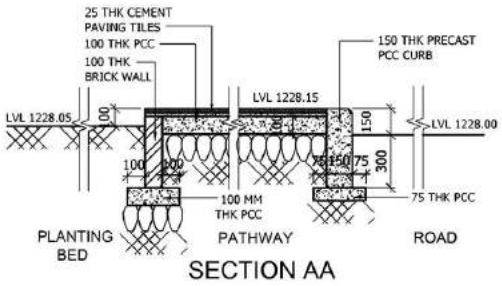


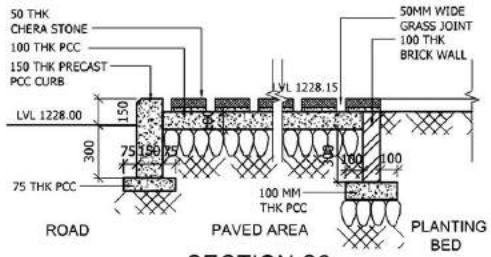
CIVIL SECTIONS

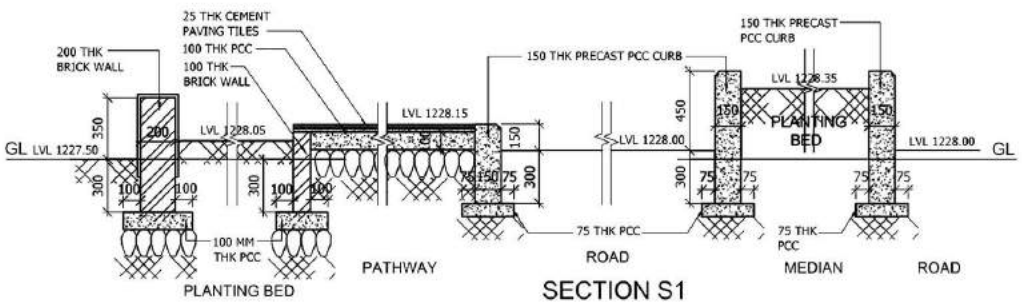


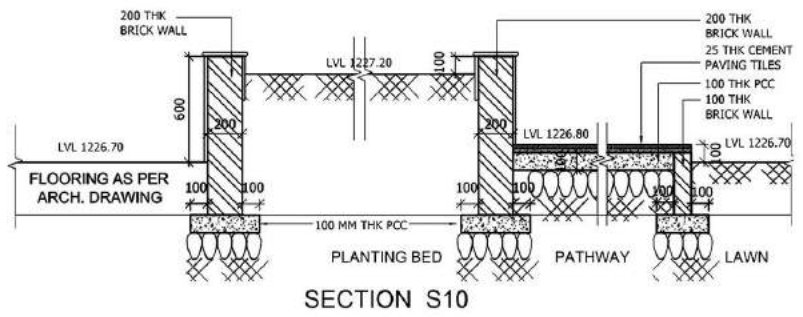
CIVIL SECTIONS

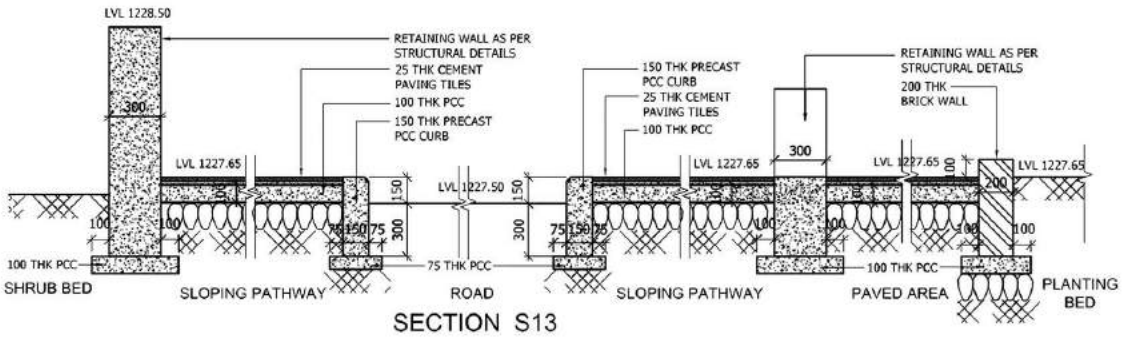


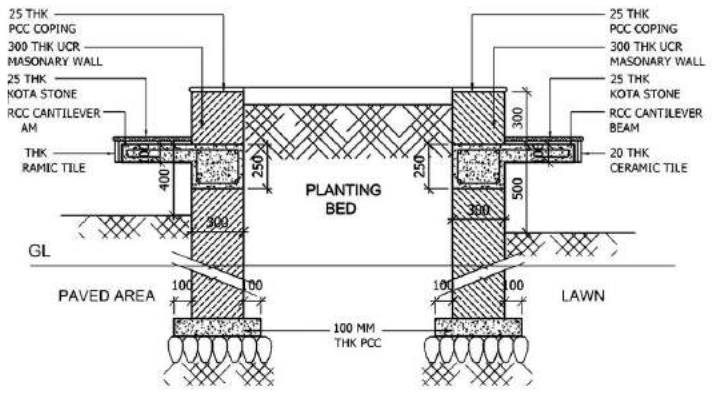




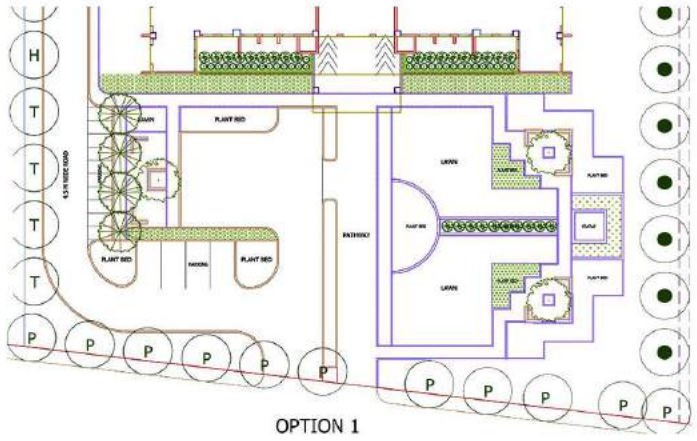


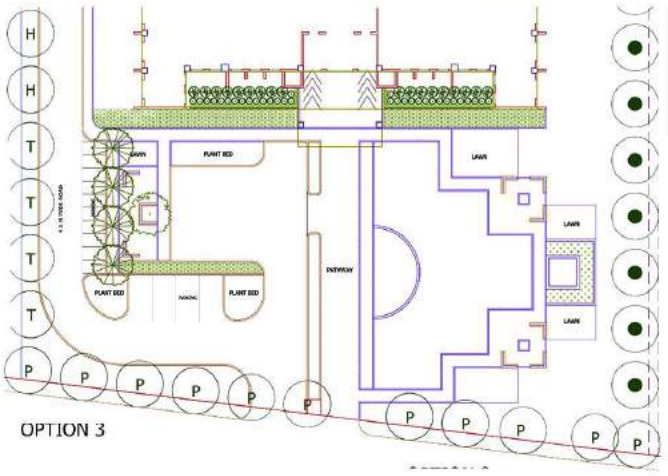






LANDSCAPE SCHEMES





THANK YOU