

ARCHITECTURAL DESIGN

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S.Y.B.ARCH.2019-20

ROLL NO. 06

PRESENTATION THEME -
CODE RED(WARM COLOR)

ARCHITECTURAL DESIGN

1. PRESTUDY
 - A. CLIMATE STUDY -
 - CLIMATE RESPONSIVE ARCHITECTURE
 - CLIMATE ZONES
 - CLIMATE RESPONSIVE STRATEGIES
 - B. CASE STUDIES -
 - CASE STUDY 1 (CLIMATE)
 - CASE STUDY 2(CLIMATE)
 - CASE STUDY 3(CLUBHOUSE)
 - CASE STUDY 4(CLUBHOUSE)
 - C. STUDY OF THRISSUR
 - D. SITE ANALYSIS
2. INTRODUCTION
3. VERNOMODERN
4. SITEPLAN
5. FLOOR PLANS
6. SECTIONS
7. ELEVATIONS
8. CLIMATE RESPONSIVE STRATEGIES AND CONSTRUCTION DETAILS

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**PRESTUDY
A. CLIMATE STUDY**

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DIFFERENCE BETWEEN BIOCLIMATIC ARCHITECTURE AND CLIMATE RESPONSIVE ARCHITECTURE.

BIOCLIMATIC

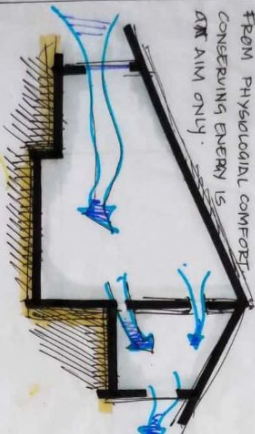


BIO-CLIMATIC ARCHITECTURE REFERS TO THE DESIGN OF BUILDING AND SPACES BASED ON LOCAL CLIMATE AIMED AT PROVIDING THERMAL AND VISUAL COMFORT, MAKING USE OF SOLAR ENERGY AND OTHER ENVIRONMENTAL SOURCES.

USING CAVITY WALLS FOR BIO-LIGHTING.

CLIMATE RESPONSIVE.

THE DESIGN OF PLEASANT BUILDINGS THAT ENSURE PHYSIOLOGICAL COMFORT OF USERS IS ACHIEVED THROUGH THE UNDERSTANDING OF CLIMATE & HUMAN RESPONSIVE SYSTEM CALLED CLIMATE RESPONSIVE ARCHITECTURE.



NOT INTERACTED WITH EXTERNAL CLIMATE.

- NO INTERACTION WITH ENVIRONMENT
- BUILDING OPERATES DIFFERENT FROM CLIMATE IT IS SET IN.
- NO DIRECTLY CONTACT WITH OUTDOORS.

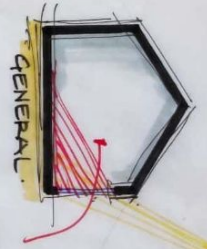
- BUILDING FIGHTS WITH OUTDOOR CLIMATE ONLY.
- EX. INSULATION TO EXTERNAL WALLS.

USING INSULATORS. FIGHTS WITH OUTDOOR CLIMATE.

- BUILDING ACTS AS AN ENVIRONMENT FILTER.
- ENERGY EXCHANGE WITH EXTERNAL CLIMATE FOR COMFORT PROVISION.



CLIMATE RESPONSIVE ARCHITECTURE



GENERAL.

SUMMER SUN.

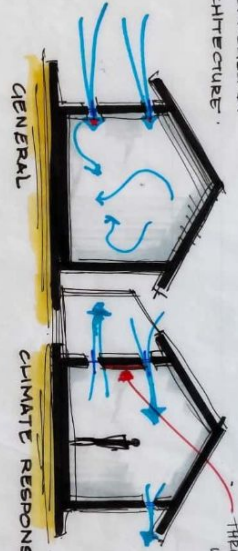
1. A CLIMATE RESPONSIVE ARCHITECTURE DESIGN REFLECTS THE WHETHER, PRECISE AREA WHERE BUILDING IS CONSTRUCTED.
2. CLIMATE RESPONSIVE ARCHITECTURE IS TO CREATE A COMFORTABLE INTERIOR LIKE REDUCING THE BUILDING'S RELIANCE ON ARTIFICIAL OR ARCHITECTURE ENERGY.



CLIMATE RESPONSIVE.

WINTER SUN.

ROOF TREATMENTS IN RESPONSE TO WINTER SUN.



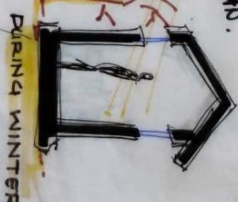
GENERAL

CLIMATE RESPONSIVE

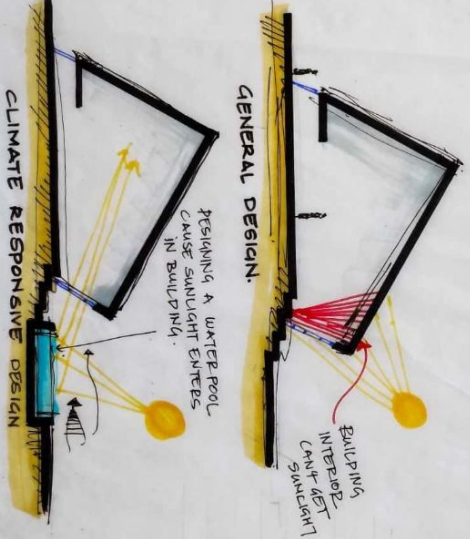
- 3) THE DESIGN OF PLEASANT BUILDINGS THAT ENSURE PHYSIOLOGICAL COMFORT OF USERS IS ACHIEVED THROUGH THE UNDERSTANDING OF A CLIMATE & HUMAN CALLED CLIMATE RESPONSIVE SYSTEM.
- 4) BUILDING ACTS AS AN ENVIRONMENTAL FILTER, THE BALANCE IS FOUND BETWEEN THE EXCLUSION OF UNDESIRABLE CLIMATIC ASPECTS & ADMITTANCE OF BENEFICIAL ONES.



DURING SUMMER



DURING WINTER



CLIMATE RESPONSIVE DESIGN

GENERAL DESIGN.

DESIGNING A WATER POOL CAUSE SUNLIGHT ENTERS IN BUILDING.

BUILDING INTERIOR CHAIR GET SUNLIGHT.

- 1) REDUCE ACTIVE DESIGN (ARTIFICIAL ENERGY) AND INCREASING PASSIVE SYSTEM (NATURAL ENERGY)
- 2) INCREASING PHYSIOLOGICAL COMFORT
- 3) INCREASE ENERGY BALANCE IN BUILDINGS.
- 4) REFLECTING INTERIOR CLIMATE TO EXTERIOR.
- 5) INCREASING INTERACTION BETWEEN BUILDING & ITS ENVIRONMENT.

CONCLUSION

FINAL GOALS OF CLIMATE RESPONSIVE ARCHITECTURE.

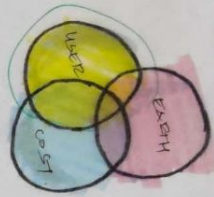
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SUSTAINABLE ARCHITECTURE

SUSTAINABLE ARCHITECTURE THAT MINIMIZE THE NEGATIVE AND MODERATION IN USE OF MATERIALS, ENERGY & DEVELOPMENT SPACE.

- CONSCIOUS APPROACH TO ENERGY & ECOLOGICAL CONSERVATION IN THE DESIGN OF BUILT ENVIRONMENT.

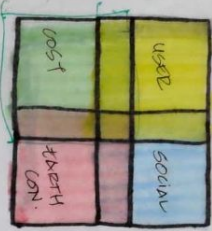
RELATIONS



VERNACULAR ARCHITECTURE

- LOCALISED NEEDS, CONSTRUCTION MATERIAL, & REFLECTING LOCAL TRADITION.

- IT IS SIMPLEST FORM OF ADDRESSING HUMAN NEEDS.



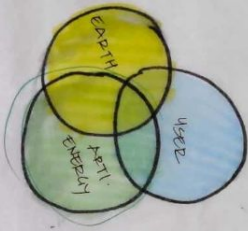
CHARACTERISTICS

- PROVIDES USER COMFORT.
- CONSIDER A COST AND ECONOMY & ALSO COMFORT
- CONSIDERING SOCIAL ASPECTS IN DESIGN.
- PROVIDES DESIRABLE COMFORT.
- BEING ENERGY EFFICIENT.
- WITHSTAND THE CLIMATE TRANSPORTED BY LOCAL TRADITION.
- ENVIRONMENTAL + CULTURE + HISTORIC.

BIOCLIMATIC ARCHITECTURE

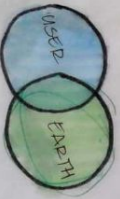
- BIOCLIMATIC ARCHITECTURE TENDS TO DESIGN THAT MAXIMIZE USE OF NATURAL ENERGY.

- IT MINIMIZE USE OF ARTIFICIAL ENERGY.



GREEN ARCHITECTURE

- PRACTICE OF INCREASING EFFICIENCY AND HELY USE OF ENERGY, WATER, MATERIALS.



- IMPROVING USER COMFORT.
- MAXIMIZE USE OF NATURAL ENERGY.
- MINIMIZE USE OF ARTIFICIAL ENERGY.
- IMPROVING USER COMFORT.
- GREEN ARCHITECTURE HELPS TO USER AS WELL AS DECREASE ENVIRONMENTAL DEGRADATION.

CLASSIFICATION OF CLIMATE :



HOT & DRY CLIMATE

CHARACTERISTICS OF HOT AND DRY CLIMATE

LOCATION : WESTERN AND CENTRAL PART OF INDIA

SOLAR RADIATION : INTENSIVE

AMBIENT TEMPERATURE : (C°) : MAX. 45 C°
MIN. 0-10 C°

RELATIVE HUMIDITY : (%) : 25% - 40%

PRECIPITATION PER YEAR : LESS THAN 500 MM

WINDS : DAY - HOT & NIGHT - COOL

LANDSCAPE & VEGETATION : LITTLE VEGETATION



ARID AND HUMID CLIMATE

LOCATION : COASTAL PART OF INDIA

SOLAR RADIATION : INCREASE ON CLEAR DAYS

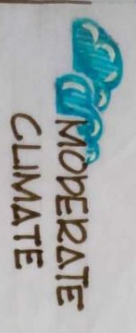
AMBIENT TEMP. (C°) : MAX. 30° - 35°
MIN. 20° - 25°

RELATIVE HUMIDITY (%) : 70% - 90%

PRECIPITATION / YEAR : MORE THAN 1200 MM

WINDS : FLOWS FROM TWO DIRECTION HIGH & LOW

LANDSCAPE & VEGETATION : ABUNDANT



MODERATE CLIMATE

LOCATION : HILLS OR HIGH PLATL

SOLAR RADIATION : MORE OR LESS IN YEAR

AMBIENT TEMP. (C°) : MAX 30°-34° MIN 16°-18°

RELATIVE HUMIDITY (%) : DRY SEASON : 20 - 25%
MON SOONS : 95 - 90%

PRECIPITATION : MORE THAN 1000 MM

WINDS : HIGH SPEED IN SUMMER

VEGETATION : ABUNDANT VEGETATION



COMPOSITE CLIMATE

LOCATION : CENTRAL PART OF INDIA

SOLAR RADIATION : INTENSIVE

AMBIENT TEMP (C°) : MAX: 40-45° MIN : 0-10°

RELATIVE HUMIDITY (%) : 20-25% AND 50%+95%

PRECIPITATION (MM) : VARIES IN 500-1300 MM

WINDS (MONSOON & SUKIMER) : STRONG AND HOT DUSKY

LANDSCAPE AND VEGETATION : VARIABLE LANDSCAPE & SEASONAL VEGETATION



COLD CLIMATE

LOCATION : NORTHERN PART OF INDIA

SOLAR RADIATION : LOW INTENSITY + MAX. DIFFUSED LIGHT

AMBIENT TEMP (C°) : MAX-17-24° C MIN -14-0

RELATIVE HUMIDITY : 10% TO 50%

PRECIPITATION : LESS THAN 200 MM

WINDS : INTENSE COLD WINDS

VEGETATION : LITTLE VEGETATION

CLIMATE

"THE WEATHER CONDITIONS PREVAILING IN INDIA OR (IN ANY AREA) IN GENERAL OR OVER LONG PERIOD.



TERMAL COMFORT :

TERMAL COMFORT IS THAT CONDITION OF MIND WHICH EXPRESSES SATISFACTION WITH THE THERMAL ENVIRONMENT

FACTORS AFFECTING ON THERMAL COMFORT :

- 1) AIR TEMPERATURE
- 2) AIR VELOCITY
- 3) RADIANT TEMPERATURE
- 4) RELATIVE HUMIDITY.

FACTORS :-

Solar Radiation

AIR TEMPERATURE HAVE THEIR ORIGIN IN THE ADOPTION OF RADIANT ENERGY FROM THE SUN.



Ambient Temp.

AMBIENT TEMPERATURE IS THE AIR TEMPERATURE OF AN ENVIRONMENT.



Relative Humidity :

HUMIDITY IS THE AMOUNT OF WATER VAPOR PRESENT IN AIR. RELATIVE HUMIDITY PRESENTS WITH (MM) UNIT.



ELEMENTS :

WATER

MAIN ESSENTIAL THING FOR LIVING THINGS TO SURVIVE ACCORDING TO CLIMATE WITHOUT WATER THERE IT'BE ABSENCE OF CLIMATE.



FIRE

AS AIR WATER FIRE ALSO PLAYS IMPORTANT ROLE HUMAN & EARTH RELATION. FIRE ALSO ESSENTIAL PART IN CLIMATE AND HUMAN RELATIONSHIP.



EARTH

IN UNIVERSE, THE PLANET OF HUMANS IS ONLY EARTH. SO, EARTH HAVE GREATEST RELATION WITH HUMAN & CLIMATE ALSO.



Precipitation :

PRECIPITATION IS THE ANY PRODUCT OF WATER THAT FALLS ON EARTH GRAVITY OCCURS.



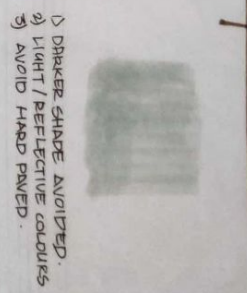
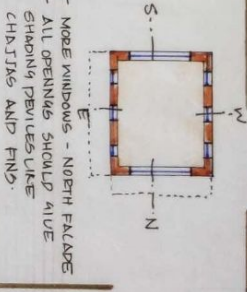
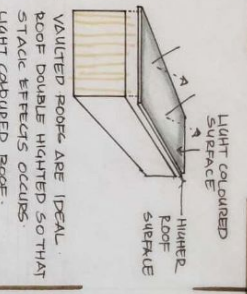
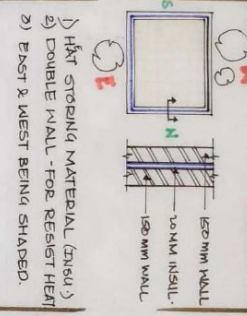
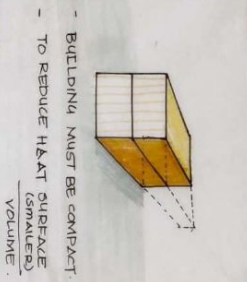
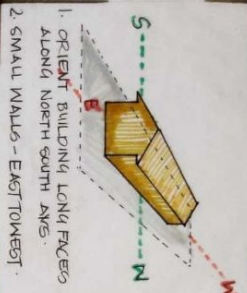
AIR

ONE OF THE MOST ESSENTIAL ELEMENT IN CLIMATE. PLAYS MOST ROLES TO GIVE A COMFORT TO HUMAN IN CLIMATE ARCHITECTURE.

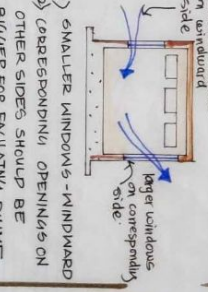
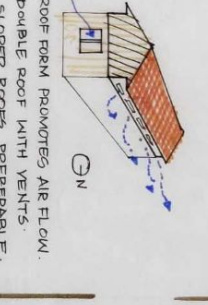
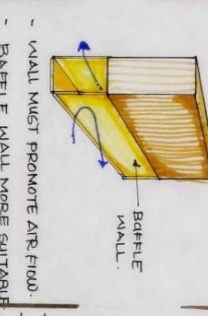
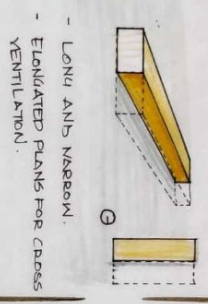
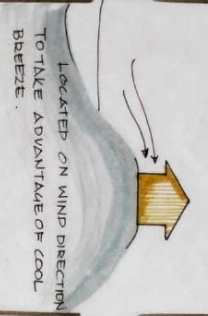


DESIGN CONSIDERATION ACCORDING TO SITE BUILDING ORIENTATION BUILDING PLATFORM

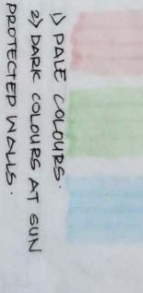
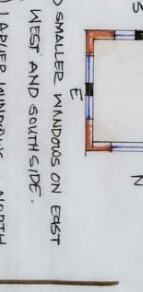
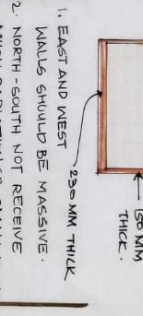
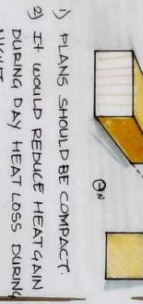
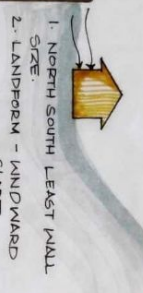
HOT & DRY CLIMATE



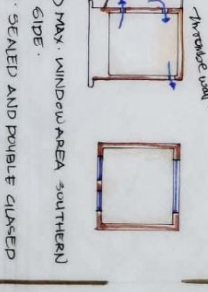
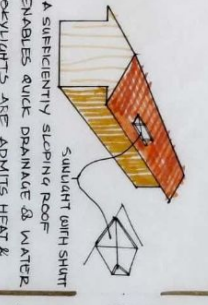
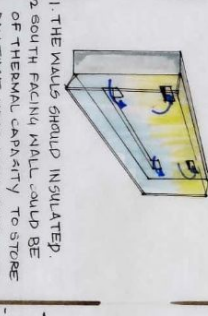
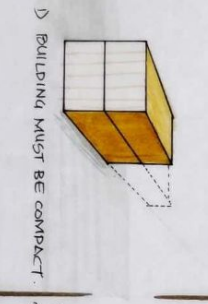
WARM AND HUMID



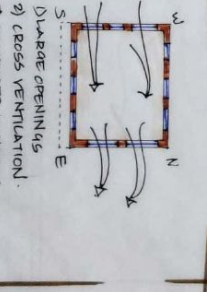
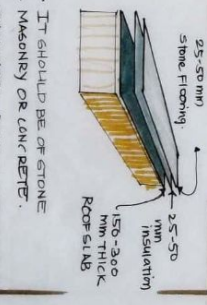
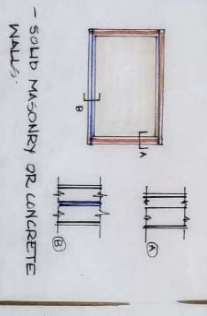
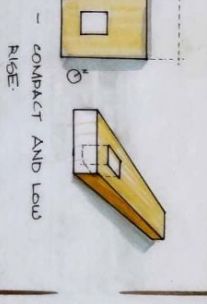
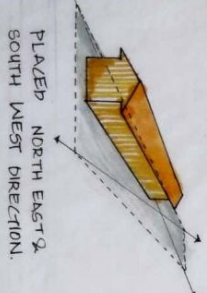
MODERATE CLIMATE



COLD CLIMATE



COMPOSITE CLIMATE





1. PRESTUDY
B. CASE STUDIES

DESIGN

APPROACH

CONCEPT:

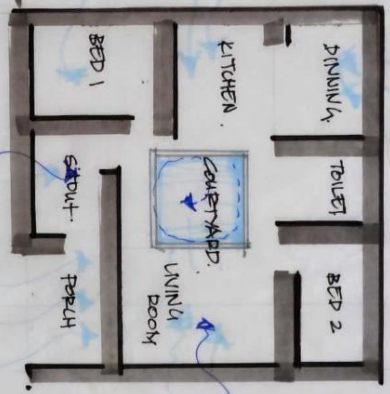
- THE IDEA WAS TO DESIGN A HOUSE USING VERNACULAR ARCHITECTURES



CLIMATE ANALYSIS.

DESCRIBE THE LOCAL CLIMATE:

- SITUATED IN WESTERN GHATS.
- WARM AND HUMID.
- RAINFALL - FROM JUNE TO DEC
- TEMPERATURES . 8° TO 37° C SUMMER.
- WINDS ARE NOT TOO STRONG.



PROJECT DESCRIPTION

SEGREGATION AND FRAGMENTATION OF SPACES FOR HIGHLY SPECIALIZED FUNCTIONS. - CREATING SPACES ARE FLOWING, FLEXIBLE, MULTI-PURPOSE

THE FARMHOUSE

BUILDING MATERIAL

- FOUNDATION - LATERITE MASONRY
- WALLS - LATERITE MASONRY
- DOORS AND WINDOWS - HOOP - TEAK, JACKFRUIT



USE OF LOCALY. AVAILABLE MATERIAL.



SHAPINGS.



NATURAL VENTILATION.

SPECIAL FEATURES.

NATURAL LIGHTING.
- NO ARTIFICIAL LIGHTING USE
- PLACING GLASS TO MANGOLODE

WATER EFFICIENCY
- USE THE FEATURE OF RAINWATER HARVESTING.

PASSIVE HEATING
- SHAPED ALL TIMES BY USING CANOPE OF MANGO TRETS.

COST EFFECTIVES.
- LATERITE STONE MASONRY.
- LOCALLY AVAILABLE FOROUS STONE.

ECO FRIENDLY
- USE OF SOLAR COOKER.
- METHANE GAS AND WOOD FROM THE ENERGY.



RAINWATER HARVESTING.

SPECIAL FEATURES

- 1) WE HAVE A VIEW OF STORE (RICE) ROOM FROM ENTRANCE, (SENSE OF ORDER).
- 2) CENTRAL COURTYARD (IMPROVES VENTILATION)
- 3) WINDOWS - 1) PERFECTLY ALIGNED TO SURROUNDING WALLS
2) WHEN CLOSED BECOMES INVISIBLE.
- 4) MEZZANINE - 1) THE PILLERS ARE A NEW ADDITION PUT UP TO SUPPORT THE DECAYING WOODEN BEAMS.
2) USED TO GENERAL STORE.

MATERIAL DETAILS

- HOUSE IS DIVIDED IN TWO SECTIONS
- 1) STORE ROOM & BEDROOMS.
- MADE ONLY IN WOODEN.
- 2) LIVING ROOM & KITCHEN
MADE OF LATERITE BRICKS BONDED IN LIME.



OTHER SPACES FEATURES

- EVERY TRADITIONAL HOUSE IN KERALA HAS A WELL, IN ADDITION OF POND.
- CONSTRUCTED OF STONE BRICKS.
- 2) AMBAL KULAM (WATER POND).
- FOR BATHING PURPOSE
- MADE IN ONLY VERANDALU-LAR MATERIAL.

PLAN FEATURES

- 1) THE PLANNING IS DONE IN THE RATIO 1:1:3 (BUILDING NATURE RATIO)
- 2) SENSE OF ORDER FEATURE IS USED.
- 3) KITCHEN PLACED IN NORTH EAST CORNER AND WATER SPACES ARE PLACED DIRECTLY OPPOSITE DIRECTION OF KITCHEN

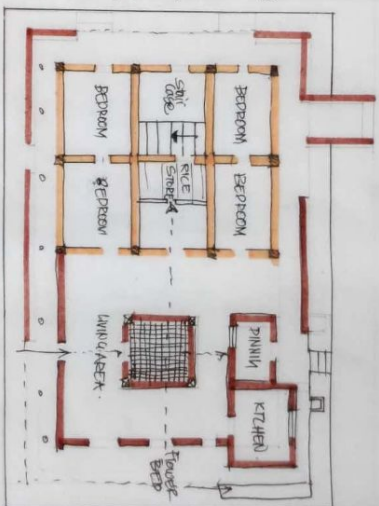
PASSIVE COOLING FEATURES

- 1) VENTILATION PANELS (VERTICAL LOUVER-WINDOW IS PLACED AT KITCHEN).
- 2) GRINDING STONES AND FOOD AREA PLACED OUTSIDE ADJASAT TO KITCHEN.
- 3) MANALORE TILE'S VENTILATOR ARE DETAILED OUT OVER KITCHEN.

CONCLUSION

- SENSE OF ORDER FEATURE IS USED FOR GIVE A WARMNESS TO PILE STORE. THAT GIVES WARM AND COOL EVENT. BY STACK EFFECT.
- 1) THE RATIO OF BUILT UP AND LANDSCAPE OF 1:1:3 IS GIVE BETTER RESPONSE TO WARM & HUMID CLIMATE.
- 2) TWO WATER SENSORY MODULES ARE ESSENGIAL TO FIGHT UNUSUAL CLIMATE ASPECTS.
- 3) IN WARM AND HUMID CLIMATE, CONSTRUCTION IS DONE IN HIGH DURABLE MATERIAL IS MANDATORY WITH VERNACULAR MATERIALS, THERE IS IMPORTANT TO PLACE PENETRATION COOLING TECHNIQUES TO GET BETTER CLIMATE RESPONSE.

PLAN (SCALE 1:200)



HOUSE AT KERALA

CLUBHOUSE - RAIPUR

BUILDING TYPOLOGY :
 LOCATION :
 ARCHITECT :
 BUILT UP AREA :
 COST :

LEGEND

- RAIPUR
- CREATIVE GROUP
- 100 SQ.M.
- 5.5 CR. OPES

REAR VIEW



- 1. POOL
- 2. BECK
- 3. SALON
- 4. RETIREMENT
- 5. COVERED PATIO
- 6. GALLERY
- 7. RESTROOM
- 8. LOBBY & CIRCULATION
- 9. GAMES ROOM
- 10. GYM



PLAN & SECTIONS

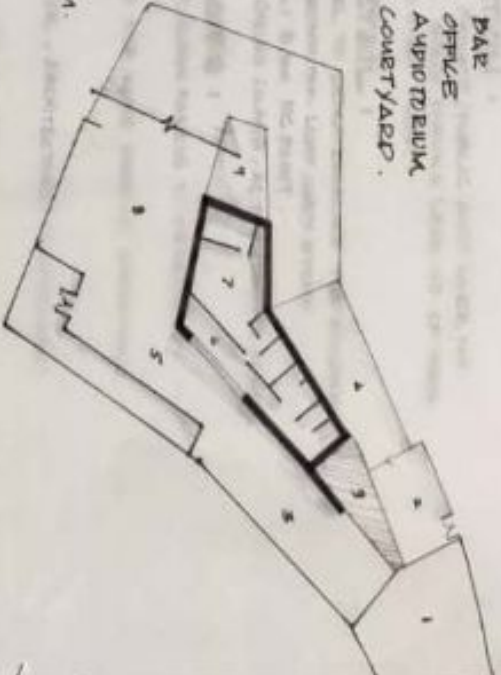
RIVERSIDE CLUBHOUSE



LEGEND

- 1. LOBBY
- 2. GALLERY
- 3. MEETING ROOM
- 4. LOUNGE
- 5. CHILDREN'S ROOM
- 6. BAR
- 7. OFFICE
- 8. AUDITORIUM
- 9. COURTYARD

TYPOLOGY :
 AREA : 800 SQ.M
 LOCATION : YANCHENG
 ARCHITECT : TRACE OFFICE
 BUILT UP AREA : 500 SQ.M



BUILDING LEVEL AND SITE LEVEL STRATEGIES:

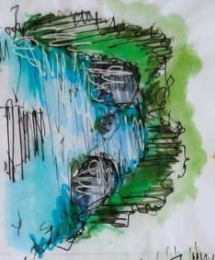
WARM AND HUMID:

- COASTAL PART OF INDIA.
- RADIATION CAN BE INTENSE ON CLEAR DAYS. 50° - 35°
- HUMIDITY 70% - 90%
- RAINFALL 71200 MM
- WINDS - VARIATIONED WINDS.

ORIENTATION.

BUILDING SHOULD BE LOCATED ON WIND DIRECTION TO TAKE ADVANTAGE OF COOL BREEZE.

PLATFORM



THRISSUR is a SOUTH INDIAN CITY OF KERALA.

- FAMOUS FOR COLOURFUL FESTIVALS.
- IN CENTER, VADAKUMNATHAN TEMPLE OF LORD SHIVA GIVES A BEST HISTORICAL TOUCH TO THIS CITY.

Also THRISSUR is BEST CITY FOR TRAVEL.

WALLS



ROOFS CONTAIN SPECIFIC HEIGHT TO INTAKE VENTILATION.



OPPOSITE OPENINGS ARE FREERABLE.

PENESTRATION.

MICROCLIMATE.

ACCORDING TO KOPEN GIEGER CLIMATE CLASSIFICATION, THRISSUR IS IN TROPICAL WET OR TROPICAL MONSOON. IT ALSO CONTAINS TWO VERSIONS:
 1) LESS PRONOUNED WET & DRY
 2) PRONOUNED WET & DRY



ECONOMY:

- IN ECONOMY THRISSUR IS LEAD IN KERALA.
- 7th GRADUATES 200K ENTREPRENEURS PER YEAR, 50% THRISSUR IS ECONOMICALLY STRONG.

CULTURE &

GEOGRAPHY:

POPULATION : 2.37L
 ELEVATION - 473M

CITY JUSTIFICATION:

- POPULATION OF THRISSUR IS CORRECT AS DEVELOPED CITY WANTS.
- THE ECONOMY OF THRISSUR IS BETTER AS COMPARE TO OTHER CITIES.
- THRISSUR IS WELL PLANNED CITY AND ALSO DIVIDED IN URBAN & RULER AREA.

WHETHER:

- TEMPERATURE - 25° - 38°
- RADIATION 1200MM
- HUMIDITY - 70% to 90%
- WIND SPEED VARIES.

TRADITIONAL ARCHITECTURE:

1) SITE PLANNING & SPATIAL ORGANIZATION:

- LOCATED ON LARGE EXPENSE OF LAND WHICH VEGETATED.
- ALLOWS UNOBSTRUCTED AIR FLOW
- THIS PLANNING OBTAINS CENTRAL COURTYARD.
- ENTRANCE - SOUTH OR EAST SIDE.
- HIGH PLINTHS.

2) MATERIALS:

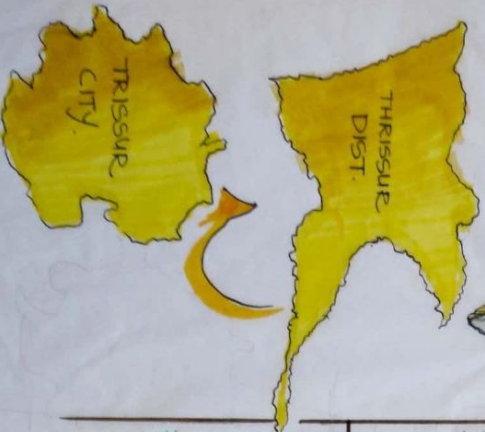
- LATERITE STONE / GRANITE STONE FOR FOUNDATION.
- WOOD / CLAY ROOF TILES, BAMBOO.
- VEGETABLE JUICES IS USED FOR PLASTER STRENGTHENING.
- MUD MORTAR FOR WALLS.

3) BUILDING ENVELOPE:

- WALLS:**
 - EXPOSED LATERITE BRICKS.
 - DOUBLE LAYER OF LATERITE MASONRY FOR THERMAL MASS.
 - FALADES ARE PAINT WITH LIGHT COLOURS TO MINIMIZE HEAT.
- ROOFS:**
 - HIGH PITCHED ROOFS & LARGE ROOFS USED TO MAXIMIZE PRESSURE DIFFERENCE.
 - PITCHED ROOF PROVIDED ROOF BEHIND CREATING A LARGE AIR SPACE ACTS AS AN ACTIVE PROVIDING AN INSULATING LAYER.
- PENESTRATION:**
 - OPPOSITE WALLS
 - CASSETTE MINIMUMS OF WOODEN.
 - WOODEN STAIRS USED TO VENT.
 - SIDE LIGHTING AND TOP LIGHTING USED TO DAYLIGHT.
 - NORTHERN SIDE MORE OPENINGS.

CONCLUSION:

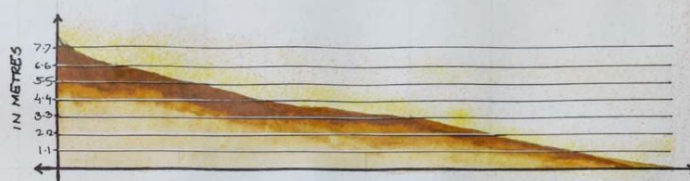
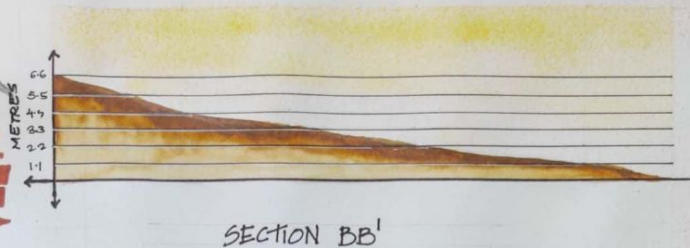
THE CLIMATE RESPONSIVE ARCHITECTURE HELPS TO MAINTAIN INDOOR ENVIRONMENTAL QUALITY AND CREATES PERFECT HARMONY WITH NATURE.



SITE LOCATION



SITE SECTIONS



NEIBOUR CONTEXT

TOURIST PLACES



SAINIK WELFARE CENTRE
0.9 KM



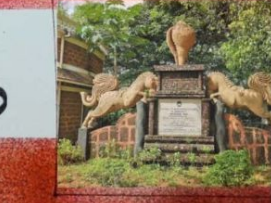
LOONG CRICKET ACADEMY
0.7 KM



RAILWAY STATION
2.3 KM



METROPOLITAN HOSPITAL
1.8 KM



LEGAL INFORMATION

TERLUK FARMS,
WEST THRISSUR,
BRIGHT AND UPPER LAND

TOPOLOGY

TOTAL HEIGHT OF
COUNTOUR IS 7.7 M.

SENSORY NEAR SITE

THE WATER POND IS
AT UPPER SIDE OF SITE
AT 38.9 M FROM SITE

SERVICES

- 0.8 METRO HOSPITAL
- 1.0 BHARAT PETROLEUM
- 1.4 KSRTC BUS STAND
- 2.3 RAILWAY STATION
- 0.9 SIB ATM
- 1.1 NEBUPURRA POLICE
- 1.4 POST OFFICE

CO-ORDINATES

10°30'23" N
72°12'13" E

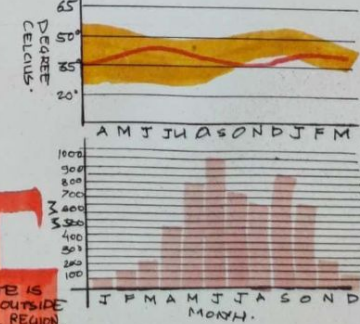


NATURAL FEATURES

- TOPOGRAPHY : CONTOUR
- VEGETATION : ABOUNDANT
- SOIL TYPE : LATERITE

CLIMATE AND MICROCLIMATE

HOT AND HUMID CLIMATE



SWOT

SITE HAVE A
CONNECTED TO
TWO ROADS
WITH FACING
SOUTH WEST.

THE TOPOG-
FACE HAS MORE
SLOPE AT EACH
LEVELS.

THE SITE HAVE
A PREFERABLE
COUNTOUR.

THE SITE IS
SLIGHTLY OUTSIDE
OF RURAL REGION.

SITE ANALYSIS

INTRODUCTION

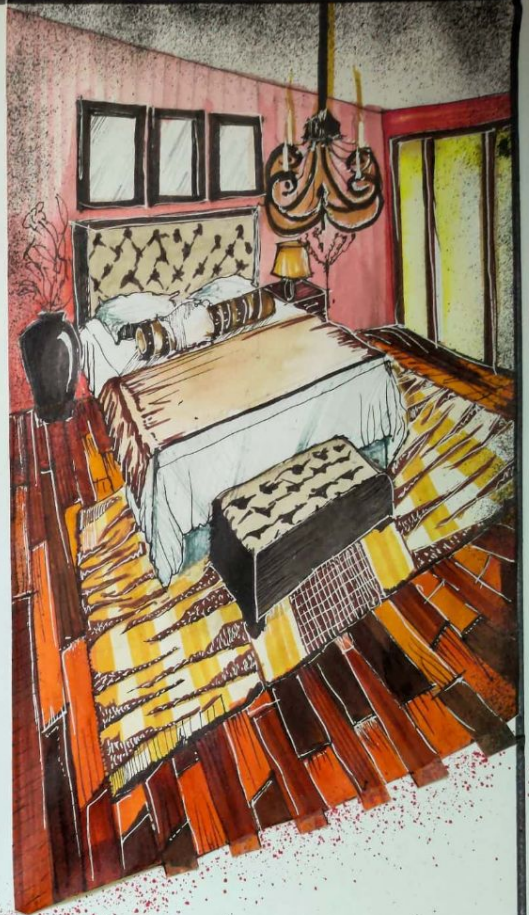
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INTRODUCTION

THE 'VERNOMODERN' CLUBHOUSE IS AN DELIGHTFUL EXPERIENCE OF MIXTURE OF MODERN AND VERNACULAR ARCHITECTURE.

IT IS THE COMBINATION OF VERNACULAR CLASSIC BRIDGE AND ADVANCED BUILDING HIDDEN CONNECTIONS.



VERNOMODERN RESTAURANT



'VERNOMODERN' CLUBHOUSE



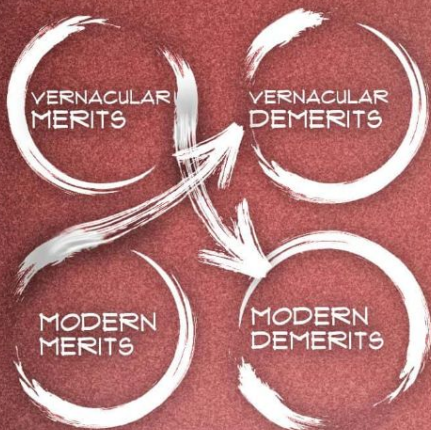
CONCEPT

NOWADAYS MODERN ARCHITECTURE AND VERNACULAR ARCHITECTURE HAVE THEIR OWN POSITIONS, SIGNIFICANCE, MODERN ARCHITECTURE DEFINES THE FLEXIBILITY OF DESIGN AT VARIOUS ASPECTS BUT VERNACULAR ARCHITECTURE HAVE THEIR OWN MEANINGS AND POWER OF DERIVING A SPACES IN ALL CATEGORIES, LIKE SUSTAINABILITY GREEN ARCHITECTURE.

ONE THING IS COMMON IN MODERN ARCHITECTURE AND VERNACULAR ARCHITECTURE IS THE BOTH HAVE A DEMERITS AT THEIR POSITIONS AND LIMITATIONS WHICH NEVER GIVE ENOUGH SATISFACTION AFTER ALL.

VERNOMODERN

"VERNOMODERN" IS A TEMPORARY IDEOLOGY WHICH CLUBBING POSITIVE ASPECTS OF VERNACULAR AND MODERN ARCHITECTURE AND IT WORKING ON DEMERITS OF BOTH OF THEM AND FINDING AN APPROPRIATE MIXTURE TO OVERRULED ALL DEMERITS OF BOTH OF THEM.



MODERN DEMERITS REPLACED WITH VERNACULAR TECHNIQUES,

AND VERNACULAR DEMERITS ARE REPLACED WITH MODERN TECHNIQUES TO GET APPROPRIATE AND BETTER RESPONSE TO CLIMATE.

CONCEPT EXECUTIONS :



EVEN THOUGH STRUCTURE IS DESIGN IN RCC AS A PRIMARY MATERIAL, BUT FOR FLOORING TILES FLOORING ARE REPLACED WITH WOODEN FLOORING

STRUCTURE IS DESIGN IN RCC AS A PRIMARY MATERIAL BUT WALLS ARE CONSTRUCTED IN LATERITE BRICK WALL WITH LIME COVER ON IT

USE OF STEEL TRUSS INSTEAD OF WOODEN TRUSS

MODERN COOLING TECHNIQUES ARE REPLACED WITH PASSIVE COOLING TECHNIQUES

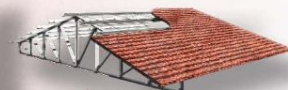
THE UNDERPASS ROUTES OF VERNACULAR HOUSES ARE REPLACED WITH MODERN UNDER GROUND ROUTES WITH VARIOUS MODERN STRATEGIES AND TECHNIQUES.



WOODEN FLOORING



LATERITE BRICK WALL



STEEL ROOF TRUSS

VERNO MODERN

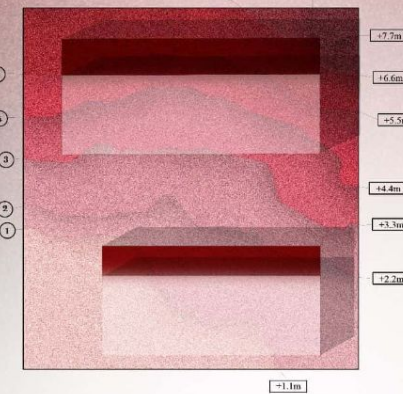
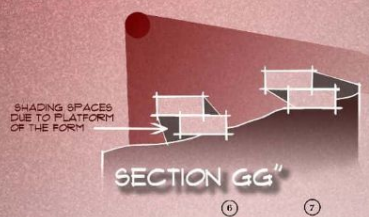
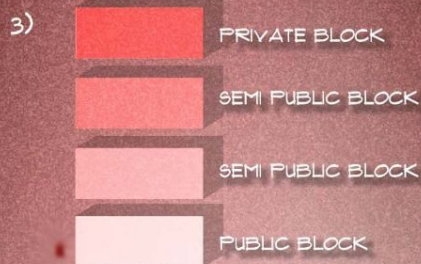
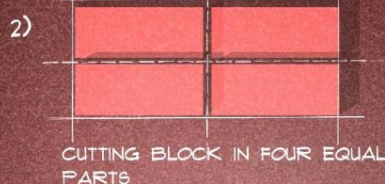
FORM DEVELOPMENT

BASIC IDEOLOGY ABOUT FORM :

IN WARM AND HUMID CLIMATE, THE BUILDING COULD BE LONG AND NARROW TO ALLOW CROSS VENTILATION.

ENLONGATED PLANS FOR MAXIMUM CROSS VENTILATION.

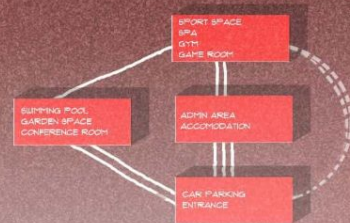
PROCESS :



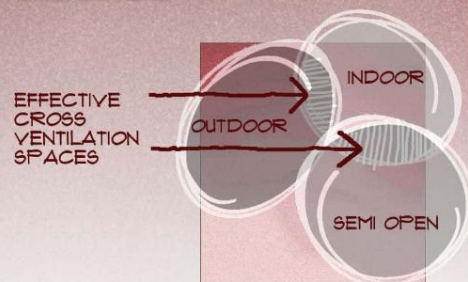
DESIGN PROCESS

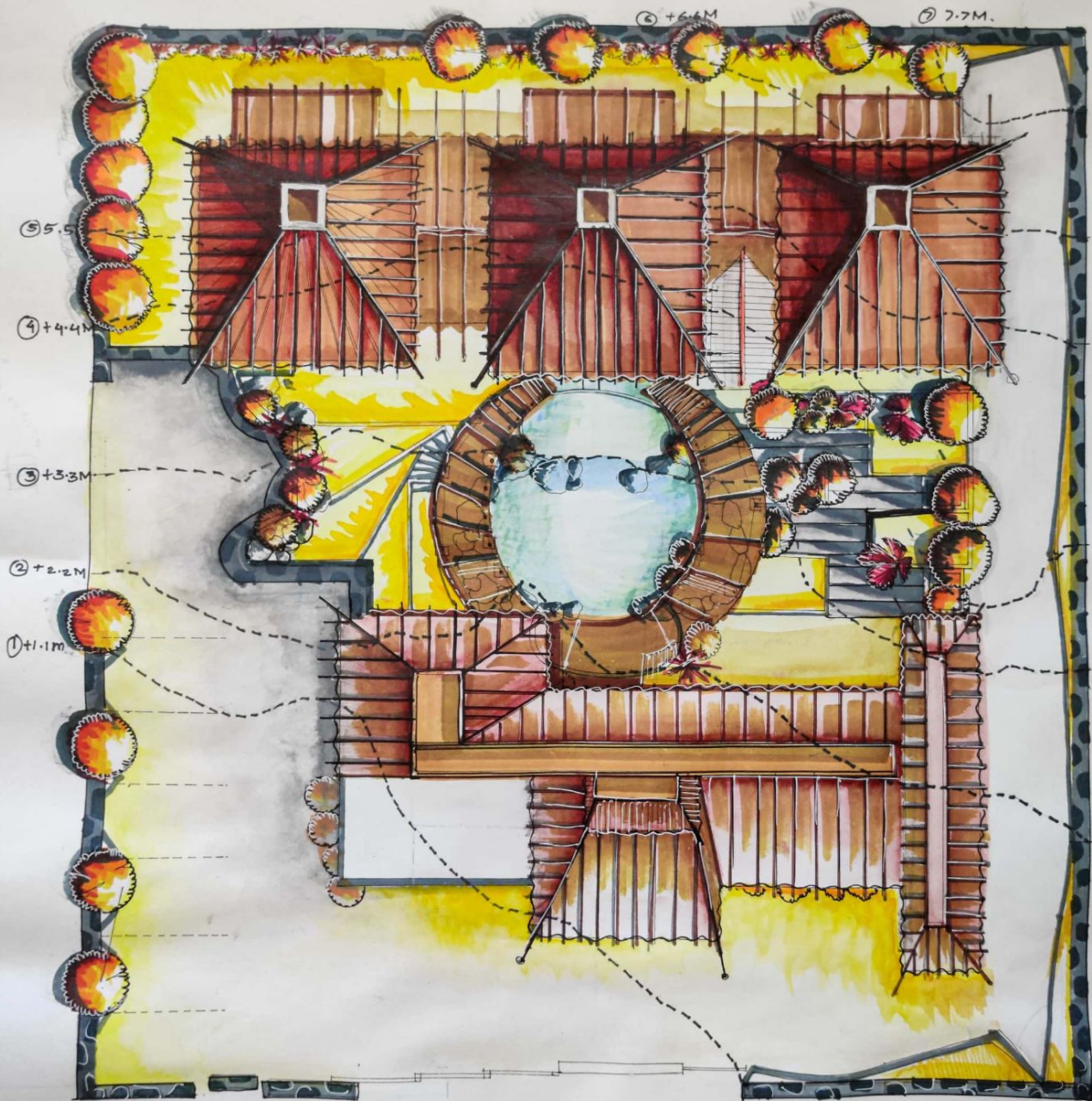
INDOOR	SEMI-OPEN	OUTDOOR
RECEPTION	MULTIPURPOSE HALL	SWIMMING POOL
OFFICE	RESTORANT	GARDEN
TOILET	BADMINTON COURT	CAR PARKING
CONFERENCE ROOM		
SPA		
ACCOMODATION		

BOX DAIGRAM (BUBBLE DAIGRAM) :



SITE ZONING :





SITE PLAN (SCALE 1:100)

BLOCK.5
SECOND FLOOR

- 18) SUITE
 I - SUITE I 63.30.M
 II - SUITE II 56.59.M
 III - SUITE III 63.69.M



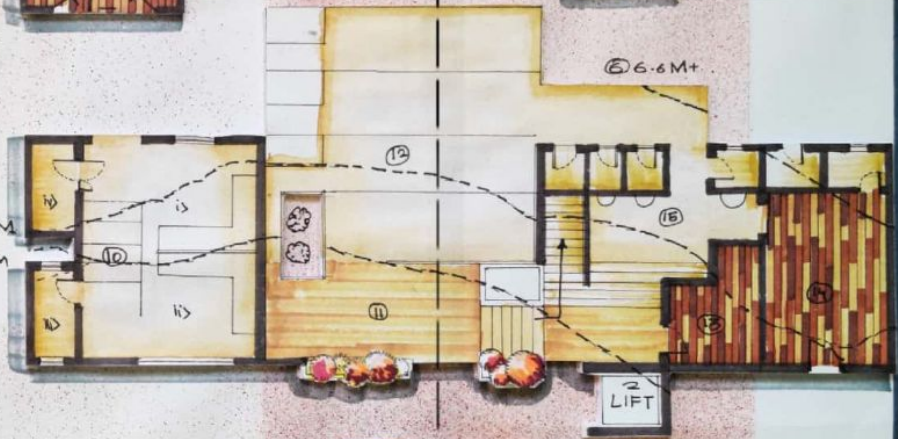
BLOCK.4
FIRST FLOOR

- 16) EXECUTIVE
 - EXECUTIVE - 1 35.59.M
 - EXECUTIVE - 2 35.59.M
 - EXECUTIVE - 3 .
 17) DELUXE -
 - DELUXE - 1 15.59.M
 - DELUXE - 2 15.59.M
 - DELUXE - 3 15.59.M
 - DELUXE - 4 15.59.M



BLOCK.3
GROUND FLOOR

- 10) KITCHEN - 64.59.M.
 i) VEG-KITCHEN
 ii) NON VEG-KITCHEN.
 iii) TOILET.
 iv) STORE ROOM.
 11) RECEPTION (RESTAURANT) 20.59.M.
 12) RESTAURANT 20.59.M.
 13) SPA 12.59.M.
 14) CONFERENCE ROOM 25.59.M.
 15) COMMON TOILETS.



BLOCK.2
FIRST FLOOR

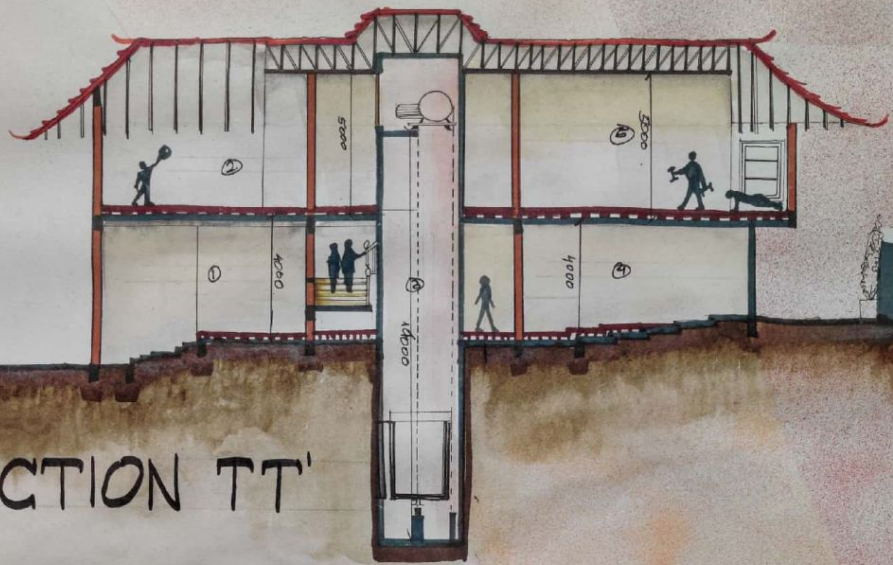
- 06) BADMINTON COURT 40.59.M.
 07) TOILET - 25.59.M.
 i) GENTS TOILET.
 ii) LADIES TOILET.
 08) GAMEROOM 64.59.M.
 09) UNISEX GYM 90.59.M.



BLOCK.1
GROUND FLOOR

- 1) OFFICE - 10.59.M
 2) RECEPTION - 32.69.M.
 3) COMMON TOILET.
 4) MULTIPURPOSE HALL - 50.59.M.
 5) TOILET (GENTS / LADIES) 35.59.M.





LEGENDS

- 1) OFFICE & RECEPTION
- 2) BADMINTON COURT
- 3) LIFT RUIT
- 4) UNISEX GYM
- 5) TOLLET/MULTIPURPOSE HALL

SECTION TT'

ABOUT SECTION G

SECTION GG' IS A SITE SECTION SHOWING ALL SPACES OF CLUBHOUSE IN ONE SECTION. SUCH AS, UNDERGROUND LIFT RUIT, MOVING WALKWAYS, ETC.

WOODEN FLOORING I-SECTION R.C.C. SLAB.



DETAIL AT 'O'

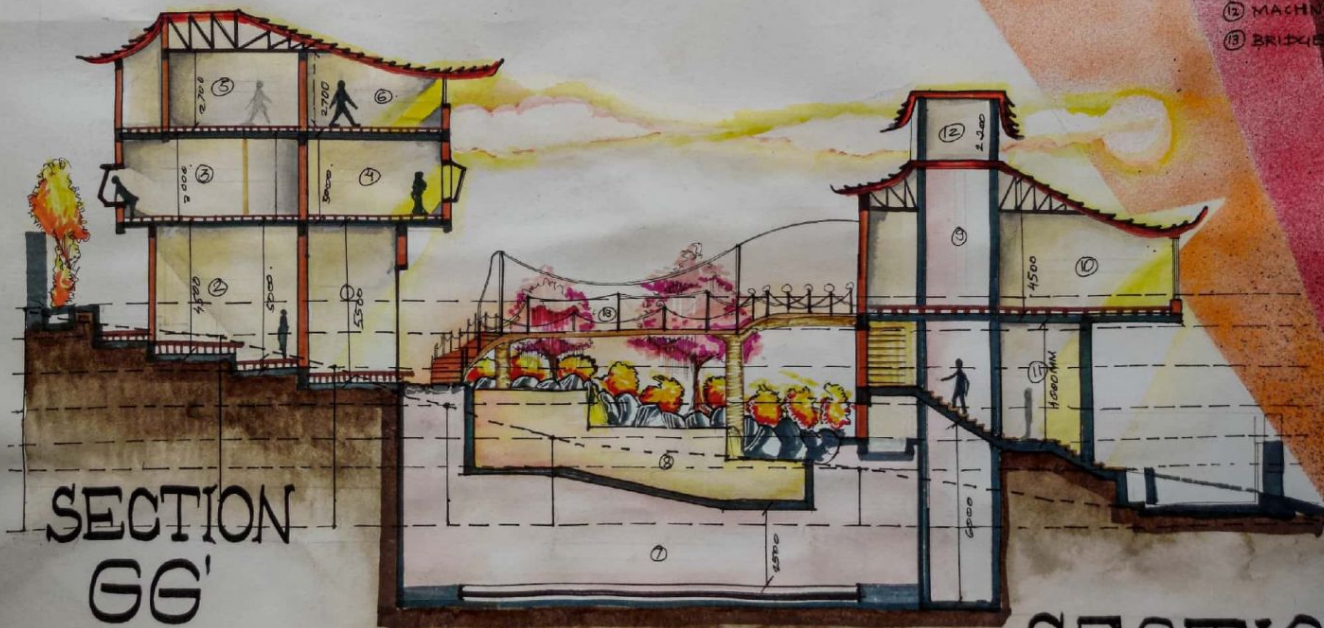
TIE BEAM
MAT. STEEL BEAM
STEEL TRUSS L-SEC. MANHALORE TILE



DETAIL AT 'P'

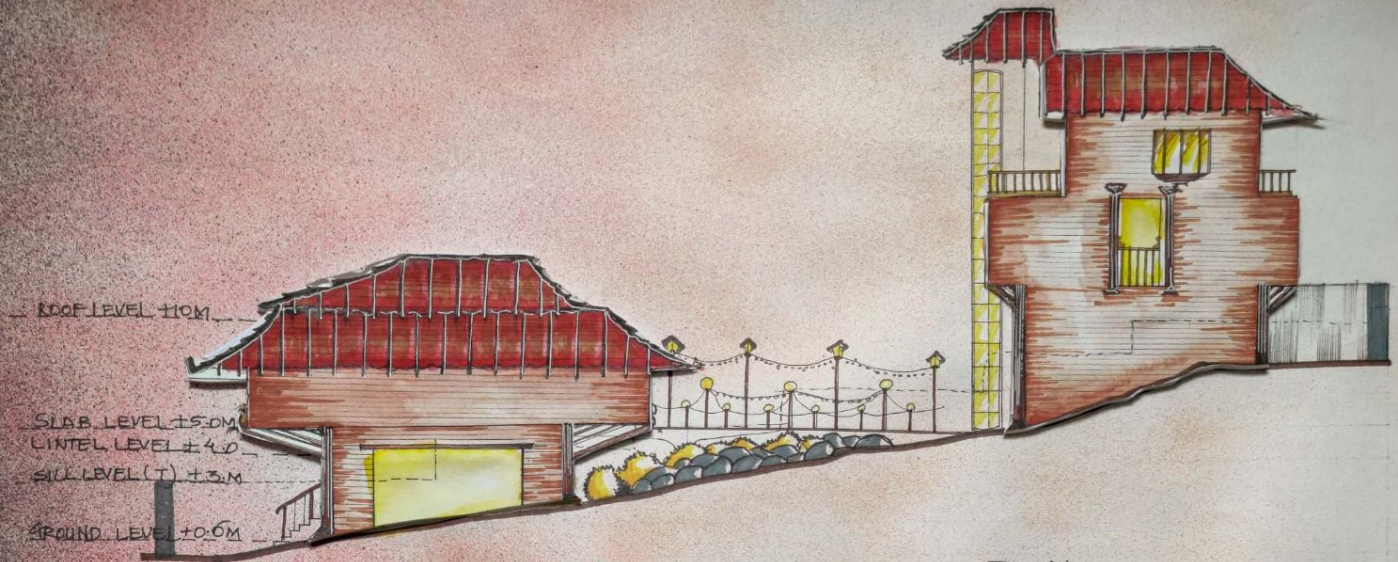
LEGENDS

- 1) RECEPTION
- 2) RESTAURANT
- 3) EXECUTIVE
- 4) DELUXE
- 5) SUITE
- 6) SUITE
- 7) UNDERGROUND WALKWAY
- 8) SWIMMING POOL
- 9) LIFT RUIT
- 10) GAME ROOM
- 11) RECEPTION
- 12) MACHNEROOM
- 13) BRIDGE



SECTION GG'

SECTIONS



LEFT SIDE ELEVATION.



FRONT ELEVATION.

ELEVATION



RIGHT SIDE ELEVATION.

BUILDING ENVOLEPE :

COLOR AND TEXTURE :

THE WALLS SHOULD BE PAINTED WITH LIGHT PASTEL SHADES OR WHITE WASHED OR EXPOSED BRICK WITH INNER COATING IS ESSENTIAL.

THE SURFACE OF ROOF CAN BE OF BROKEN GLAZED TILE TO REFLECT SUNLIGHT BACK, ALSO THE MANGALORE TILES ARE BETTER FOR REACTING WARM AND HUMID CLIMATE.

ALSO, LATERITE BRICK IS USE FOR EXTERIOR WALLS.



LATERITE BRICK



MANGALORE TILE

LANDSCAPE :

TREES AND SHRUBS :



BEECH TREE

INDIAN NAME - BEECH
SCIENTIFIC NAME - FAGUS
HEIGHT - 2 TO 3.5M



ASOKA TREE

INDIAN NAME - ASOKA
SCIENTIFIC NAME - SARACA
HEIGHT - 4 TO 6M



ROSE MALLOW

INDIAN NAME - ROSEMALLOW
SCI NAME - SORREL
HEIGHT - 0.3 TO 2 M



HYDRANGEAS

INDIAN NAME - HYDRANGEAS
SCI NAME - PITH PLANT
HEIGHT - 0.8 TO 2.0 M

WARM AND HUMID CLIMATE :

LOCATION : COASTAL PARTS OF INDIA
SOLAR RADIATION : INTENSE ON CLEAR DAYS

AMB. TEMP : MAX 30% - 35%

RE HUMIDITY : 70% TO 90%

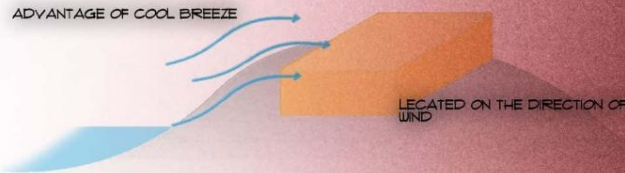
PRECIPITATION : MORE THAN 1200

MM/YEAR

WINDS : FLOWS FROM TWO DIRECTIONS WITH VERY HIGH LOW WIND SPEEDS

LANDSCAPE AND VEGETATION : ABUNDANT VEGETATION

BUILDING ORIENTATION



BUILDING SHOULD BE LOCATED ON WIND DIRECTION TO TAKE ADVANTAGE OF COOL BREEZE.

SO, THE BUILDING ORIENTATION SHOULD BE ON HEIGHT OF PARALLEL TO WESTERN-SOUTH.

BUILDING PLATFORM



SPECIAL STRATEGIES

THE WALLS MUST BE DESIGNED TO PROMOTE AIR FLOW, TO COUNTER THE PREVALENT HUMIDITY.

BAFFLE WALLS, BOTH INSIDE AND OUTSIDE THE BUILDING CAN HELP TO DIVERT THE FLOW OF WIND INSIDE.

BAFFLE WALL IS ACTS AS A BARRIER, THE WIND IS GETS DIVERTED BY THIS WALL AND CONVERT IN TWO PATHS.

BUILDING ENVOLEPE :

WALLS :

ACCORDING TO CLIMATE, THE WALLS ARE CONSTRUCTED IN LATERITE BRICK WALLS.

BECAUSE, LATERITE BRICK IS LOCALLY AVAILABLE MATERIAL IN KERALA.

THE WALL HAVE WOODEN PANELS IN INSIDE, FOR PURPOSE OF ACOUSTICS.



LATERITE BRICK WALL

BUILDING ENVOLEPE :

ROOF :

THE FORM OF ROOF SHOULD BE PLANNED TO PROMOTE AIR FLOW AND PROVIDE SHELTER FROM RAIN AND HEAT.

DOUBLE ROOF WITH VENTS AT THE ROOFTOP EFFECTIVELY INDUCE VENTILATION AND DRAW HOT AIR OUT.

SLOPED ROOFS ARE SUITABLE FOR THIS REGION.



ROOFING DETAIL

BUILDING ENVOLEPE :

FENESTRATIONS :

SMALLER WINDOWS CAN BE PLACED ON THE WINDWARD SIDE.

THE CORRESPONDING OPENINGS ON THE OTHER SIDES SHOULD BE BIGGER FOR FACILITATING A PLUME EFFECT FOR NATURAL VENTILATION.



CLIMATE RESPONSIVE STRATEGIES AND CONSTRUCTION DETAILS.