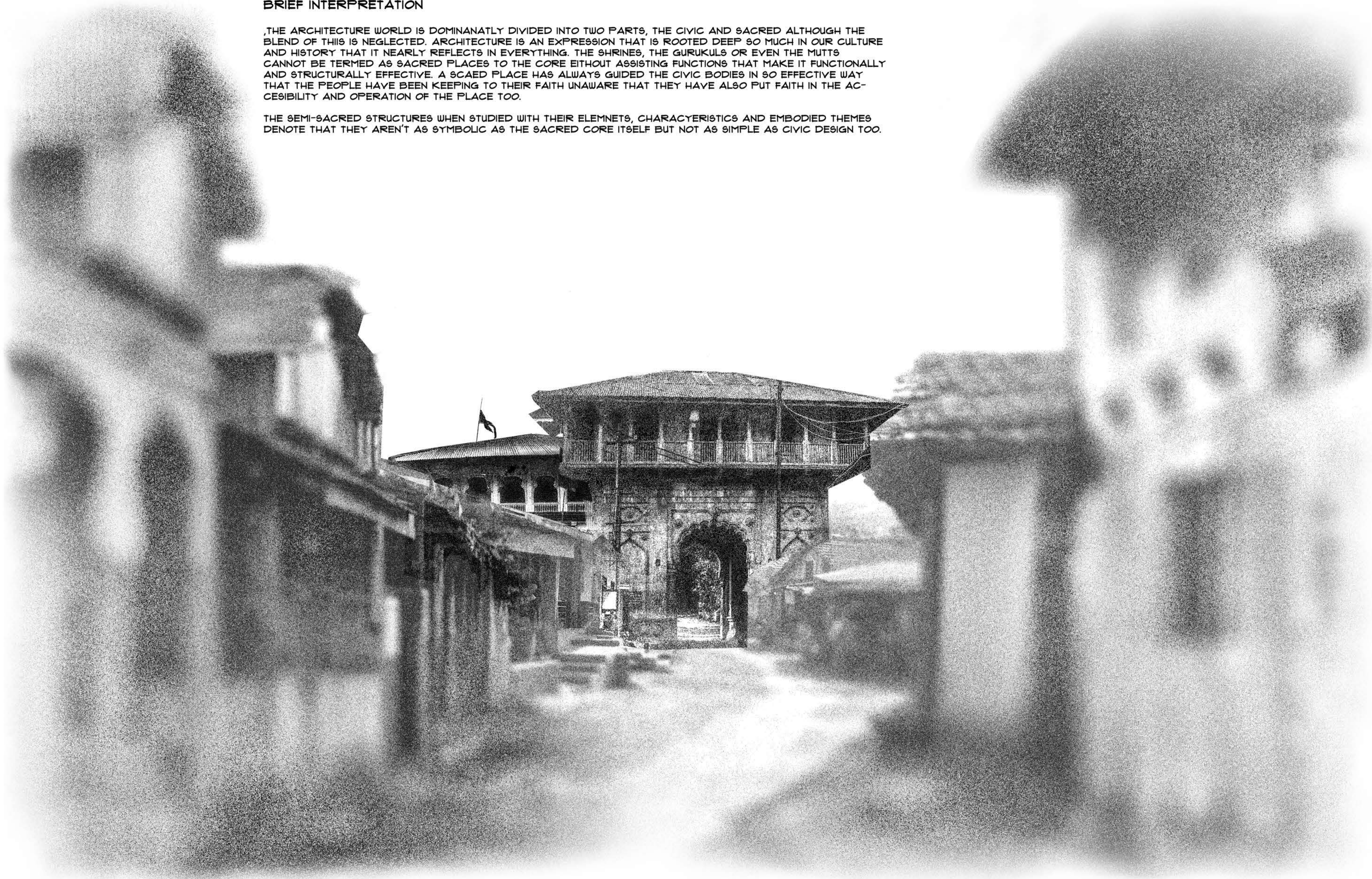


### BRIEF INTERPRETATION

THE ARCHITECTURE WORLD IS DOMINANTLY DIVIDED INTO TWO PARTS, THE CIVIC AND SACRED ALTHOUGH THE BLEND OF THIS IS NEGLECTED. ARCHITECTURE IS AN EXPRESSION THAT IS ROOTED DEEP SO MUCH IN OUR CULTURE AND HISTORY THAT IT NEARLY REFLECTS IN EVERYTHING. THE SHRINES, THE GURUKULS OR EVEN THE MUTTS CANNOT BE TERMED AS SACRED PLACES TO THE CORE WITHOUT ASSISTING FUNCTIONS THAT MAKE IT FUNCTIONALLY AND STRUCTURALLY EFFECTIVE. A SACRED PLACE HAS ALWAYS GUIDED THE CIVIC BODIES IN SO EFFECTIVE WAY THAT THE PEOPLE HAVE BEEN KEEPING TO THEIR FAITH UNAWARE THAT THEY HAVE ALSO PUT FAITH IN THE ACCESSIBILITY AND OPERATION OF THE PLACE TOO.

THE SEMI-SACRED STRUCTURES WHEN STUDIED WITH THEIR ELEMENTS, CHARACTERISTICS AND EMBODIED THEMES DENOTE THAT THEY AREN'T AS SYMBOLIC AS THE SACRED CORE ITSELF BUT NOT AS SIMPLE AS CIVIC DESIGN TOO.



# SHREE MOUNI MAHARAJ SAMADHI

LOUIS I. KAHN TROPHY 2019-20

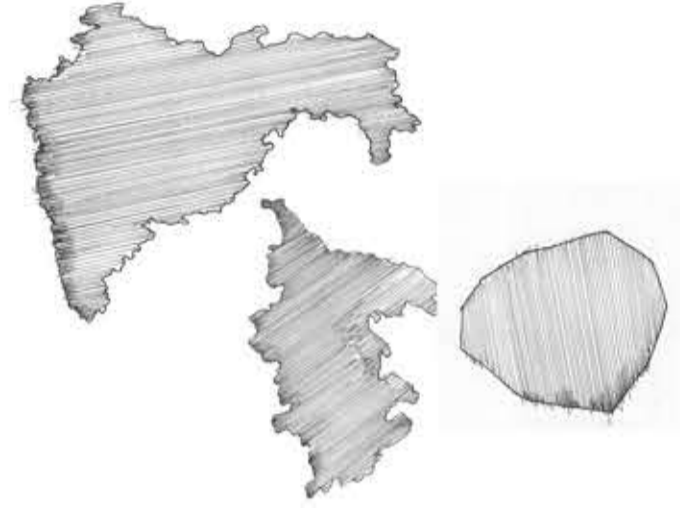
1



**SITE JUSTIFICATION**

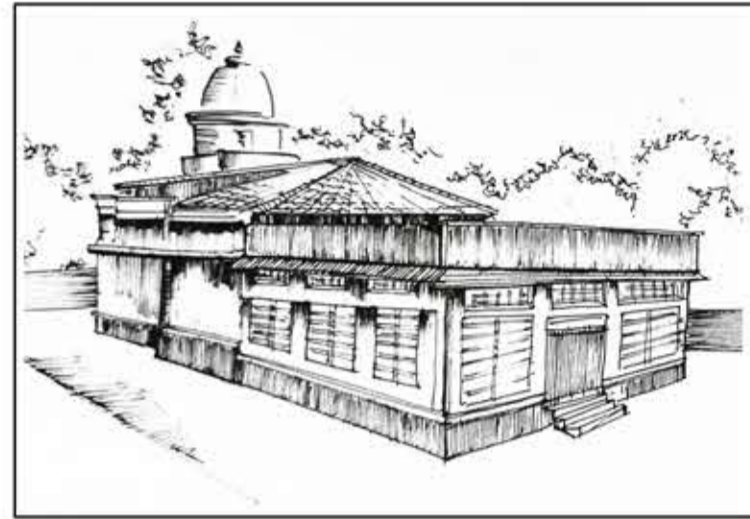
THE MOUNI MAHARAJ SAMADHI COMPLEX, SITUATED IN FATGAON, HOUSES THE SAMADHI OF SAGE (DHARMGURU) MOUNI MAHARAJ. IT WAS CONSTRUCTED BY CHHATRAPATI SHIVAJI MAHARAJ AS AN TRIBUTE TO MOUNI MAHARAJ. YEARS PASSED AND THE SEEKERS FOR HIS BLESSINGS INCREASED MIGHTILY. THUS CAME THE ADDITION OF PILGRIM RESIDENCES, VED SHALA AND BHOJAN SHALA IN THE COMPLEX FOR PILGRIMS. THE SEMI-SACRED SAMADHI COMPLEX EMBODIES INTRICATE MARATHA ARCHITECTURAL STYLE AND GIVES AN IDENTITY TO THE VILLAGE. NOT BEING MAINTAINED PRESENTLY, THE COMPLEX REPRESENTS THE DILUTED EXPRESSIONS OF ARCHITECTURE EVOLVED WITH TIME, PRESERVING TRADITIONS IN ITS WAKE

**LOCATION**

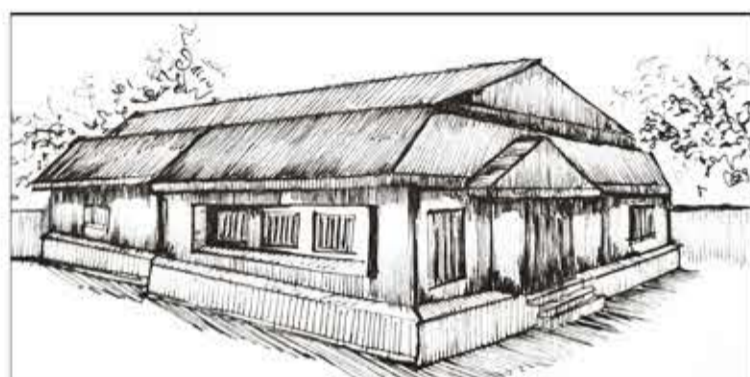


FATGAON -GARGOTI  
LATITUDE - 16.121° N, 73.9463° E

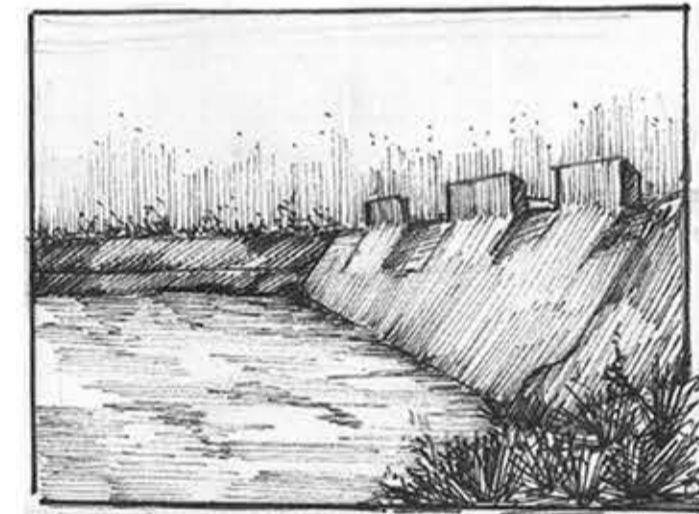
**SITE SURROUNDINGS**



BHADARKALI TEMPLE



LINGARAJ TEMPLE



FATGAON DAM

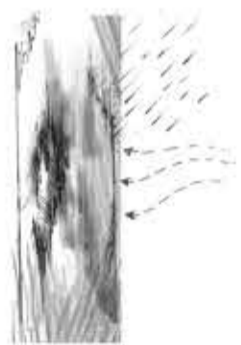
**CLIMATIC CONTEXT**

SUMMER WARMEST MONTH  
APRIL  
AVG TEMP 22.8 C  
WINTER DRIEST MONTH  
JANUARY  
AVG TEMP 21.6 C  
ANNUAL AVG WINDSPEED 4KM/H  
AVG RAINFALL 3653MM

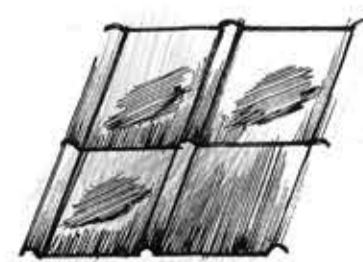
**IMPACT**



BASALT STONE AND LATERITE STONE DETERIORATED DUE TO HEAVY RAINFALL

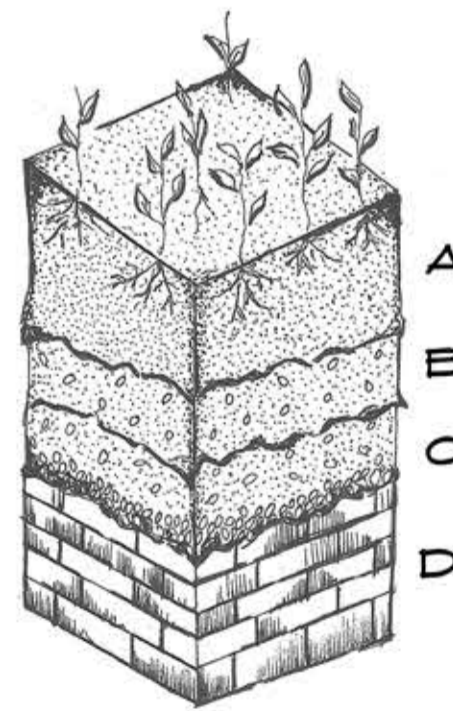


TIMBER POST GETS EXPOSED TO TERMITES, DUE TO CONTINUOUS EXPOSURE TO HEAVY RAINFALL AND WINDSPEED.



WHEN THE COPPER SHEETS ARE CONTINUOUSLY EXPOSED TO MOISTURE, IT GETS OXIDISED AND TURNS GREEN.

**GEOLOGY**



A- SOIL

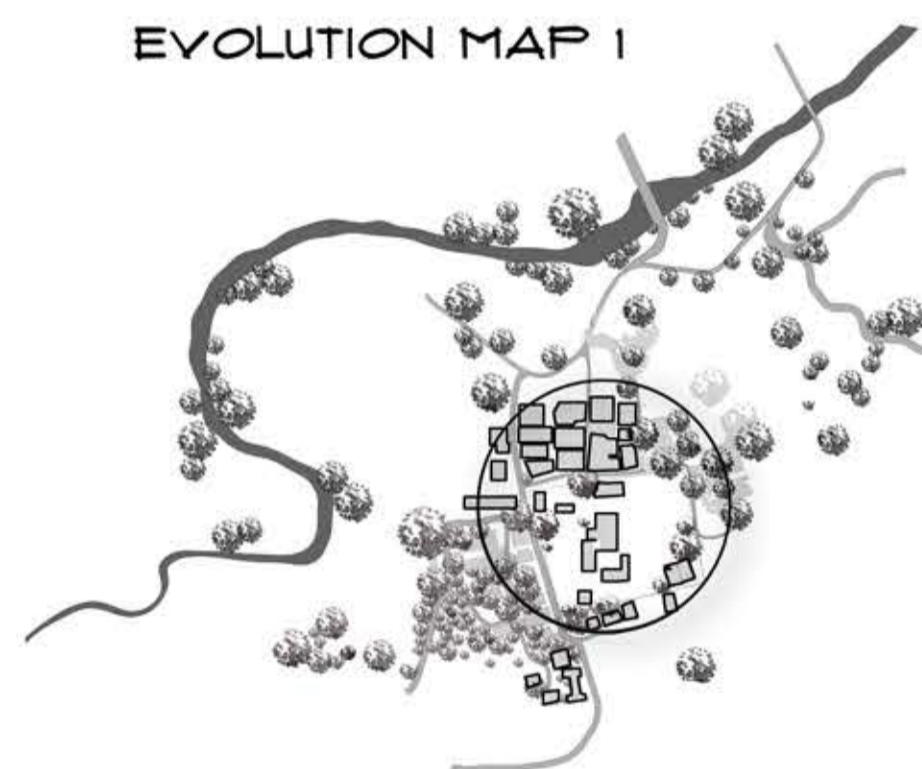
B - REGOLITH IS A LOOSE, HETEROGENOUS SUPERFICIAL DEPOSIT COVERING THE ROCK

C- SAPROLITE IS A CHEMICALLY WEATHERED ROCK

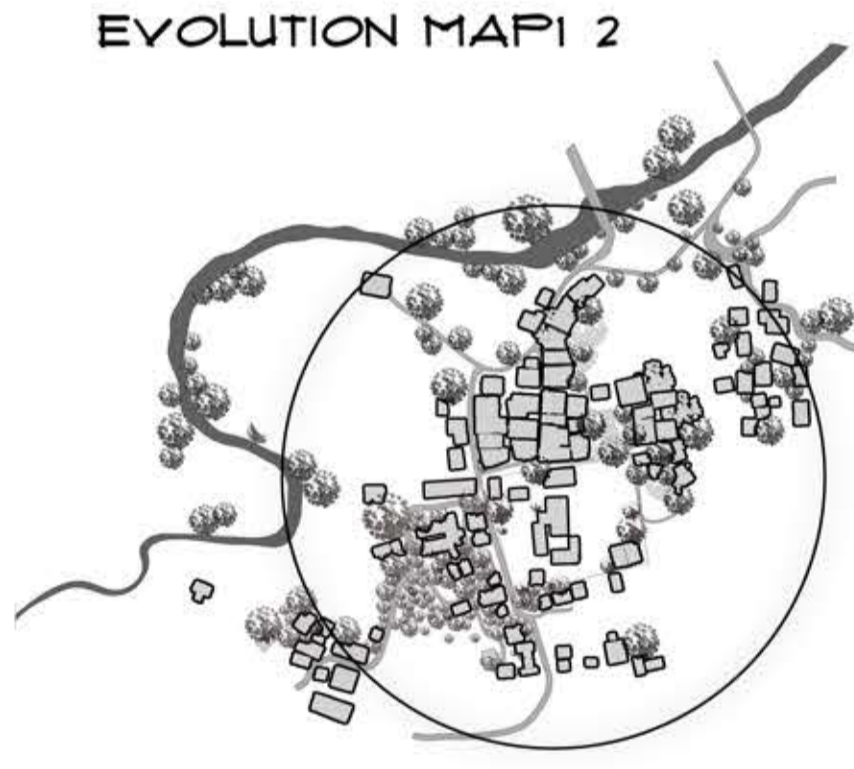
D- BEDROCK IS A LITHIFIED ROCK

**INFLUENCE OF STRUCTURE ON SURROUNDING**

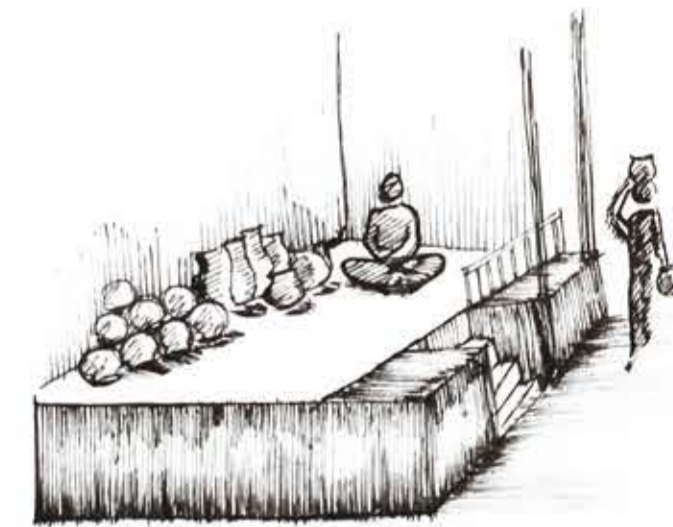
EVOLUTION MAP 1



EVOLUTION MAP 2



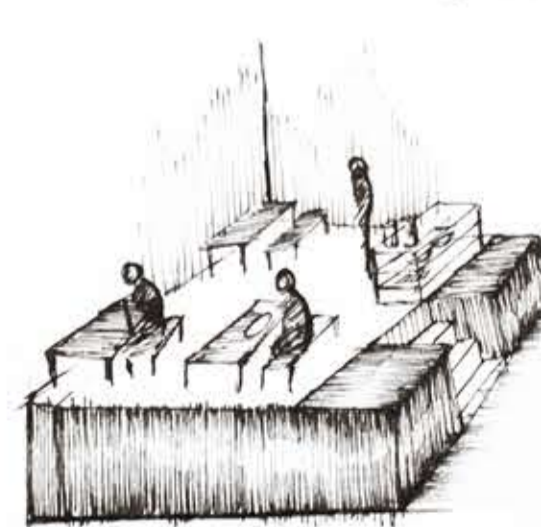
THESE MAPS SHOW THE EVOLUTION OF FATGAON OVER YEARS POST THE CONSTRUCTION OF THE SYAMADHI AND ITS FLOURISHING DEVELOPMENT



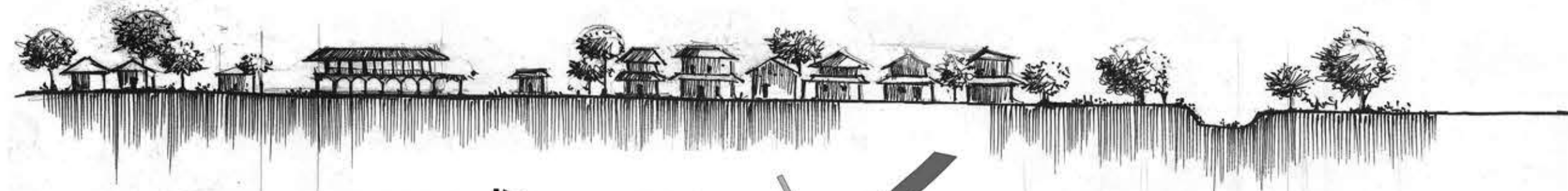
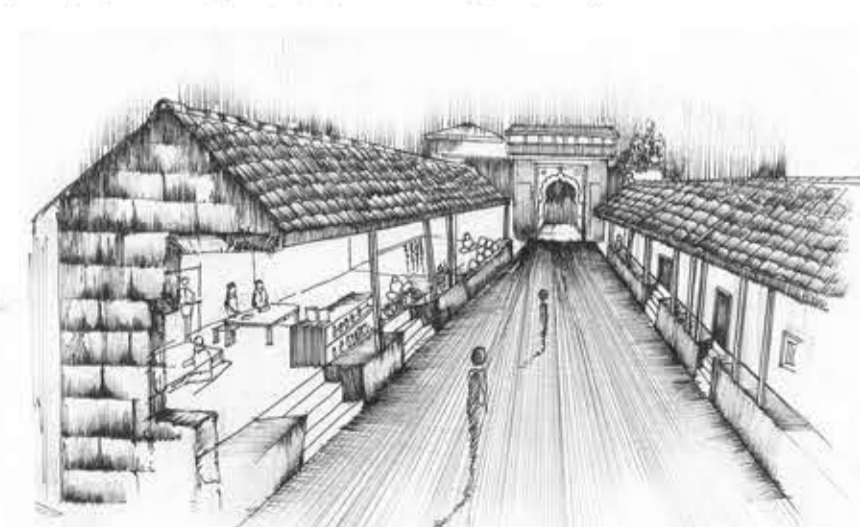
THE SCULPTORS ARE IN GREAT PROFIT DURING FESTIVE SEASON SINCE



OFFERINGS LIKE FLOWER, COCONUTS ARE MADE THESE SHOPS ALSO GAIN A LOT OF PROFIT



EATERY'S ECONOMY INCREASES DUE TO INCOMING OF MORE CUSTOMERS



**VEGETATION**



COCONUT



JACKFRUIT



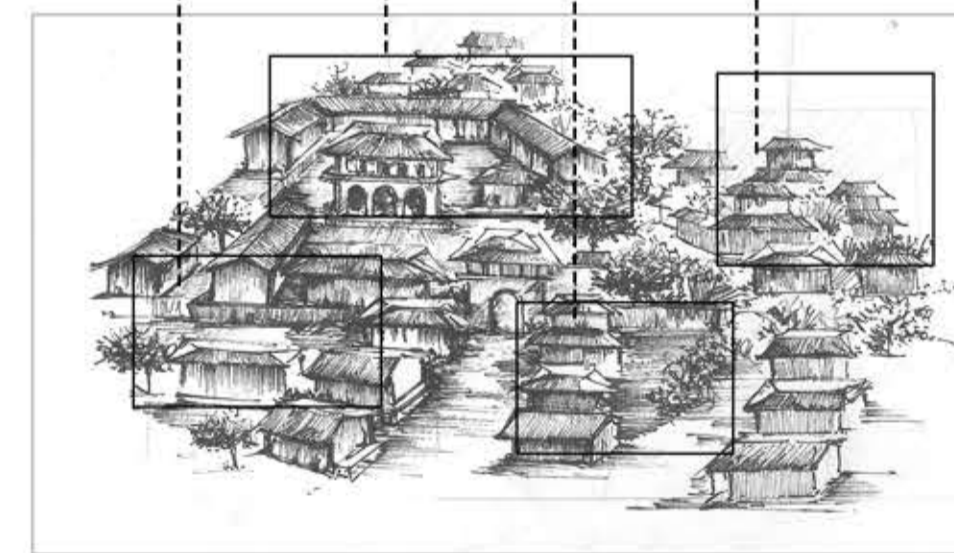
SUGARCANE



MANGO

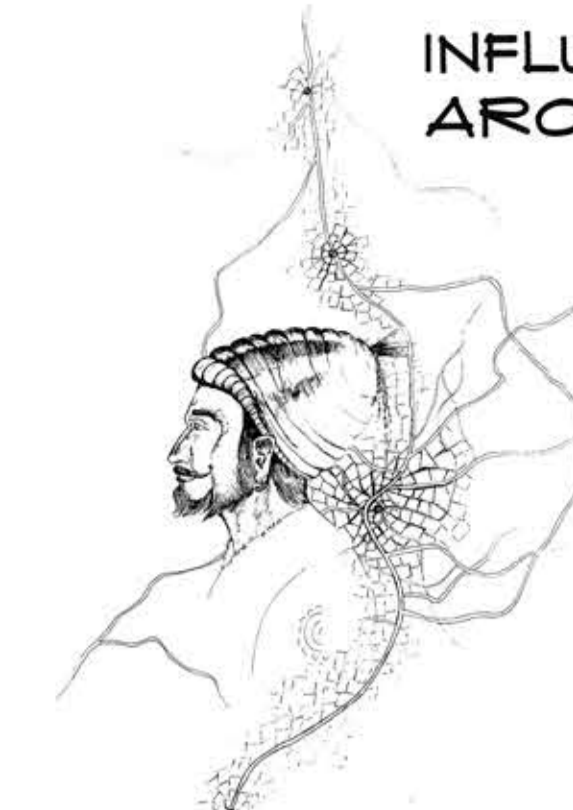
THE HARD STRATA IS NEARER TO THE SURFACE THEREFORE SHALLOW FOUNDATION IS FOUND IN THAT AREA. SINCE THE WALLS ARE CARRYING THE DEAD LOAD OF THE UPPER STRUCTURE, STRIP FOUNDATION HAS BEEN PROVIDED.

SUTAR LINGA WANI DESAI



THE VILLAGE HAS FIVE MAJOR CASTES NAMEDLY THE SUTAR WANI DESAI NAIK AND LINGA OUT OF WHICH THE MAJORLY POPULATED SITE GREW THE SETTLEMENT AROUND THE SITE

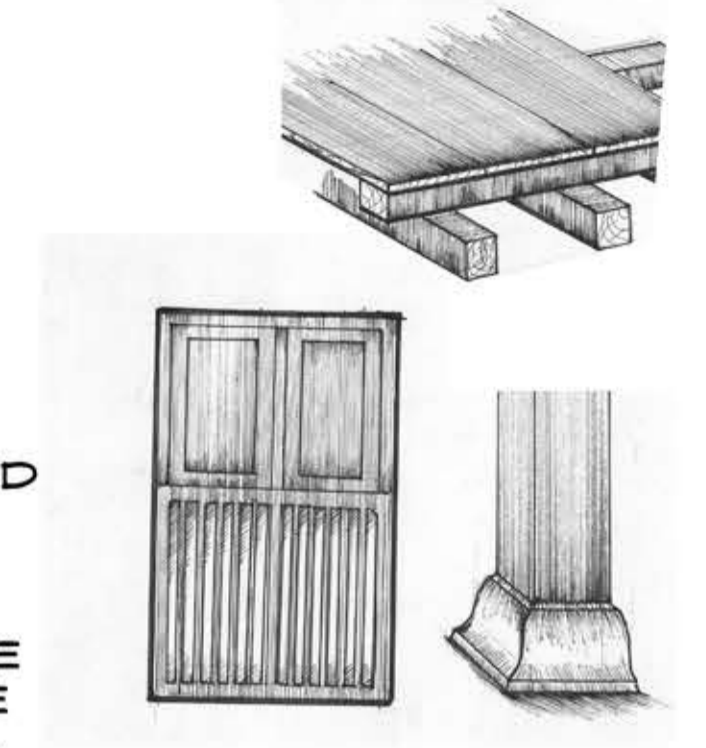
**INFLUENCE FROM MARATHA ARCHITECTURE**



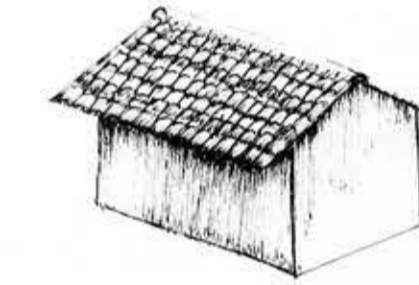
THE INFLUENCE OF MARATHA ARCHITECTURE CAN BE SEEN IN MOUNI MAHARAJ MATH WHICH IS INSPIRED FROM THE BHAVANI MANDAP IN KOLHAPUR. THIS ARCHITECTURE STYLE REACHED FATGAON DUE TO THE INFLUENCE OF SHIVAJI MAHARAJ.

**DEPICTION OF WADA ARCHITECTURE**

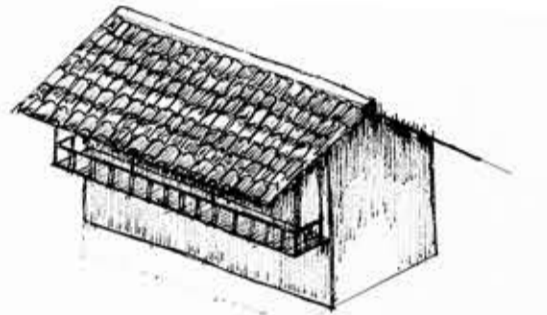
UPPER FLOORS WERE MADE UP OF GRIDS OF GIRDERS AND JOIST ON WHICH WOODEN PLANKS WITH MUD MORTAR WAS LAID TO KEEP THE INTERIOR COOL. THE BASE OF THE TIMBER POST IS MADE UP OF STONE THE WINDOW OPENINGS ARE LINED WITH WOODEN GRILLS



**ARCHITECTURAL FEATURE**



A SIMPLE SLOPING ROOF WITH GABLE END OR HIP ROOF



SLOPING ROOF WITH PROJECTED BALCONY WHICH ACT AS SHADING DEVICE



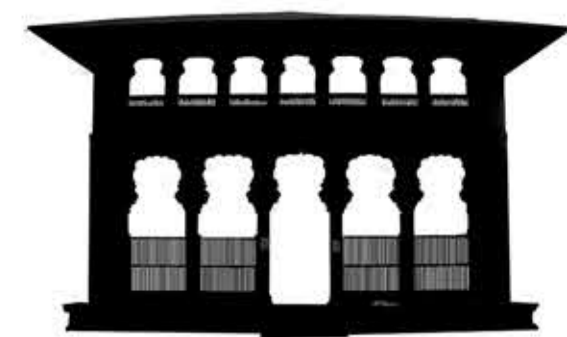
LEAN TO ROOF IS EXTENDED SUPPORTED ON THE WALLS CREATING A LIVING SPACE



LEAN TO ROOF EXTENDED SUPPORTED ON THE COLUMNS CREATING A SITTING SPACE



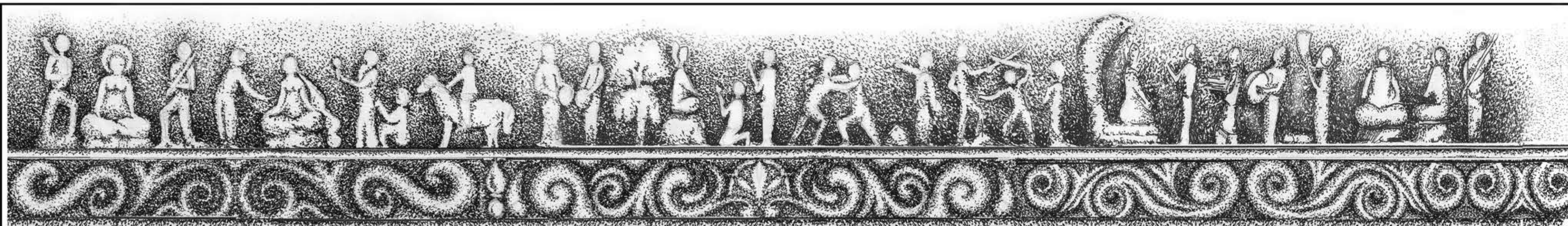
THE TRAIL BEGINS AT FATGAON LEADING TO GARGOTI, VILLAGES IN THE WAY, WITH EACH VILLAGE COVERING JOINING IN, CONSECUTIVELY. SIGNIFICANTLY, THE TRAIL BRINGS TOGETHER THE DIFFERENT COMMUNITIES OF THE VILLAGES



**SHREE MOUNI MAHARAJ SAMADHI**

LOUIS.I.KAHN TROPHY 2019-20





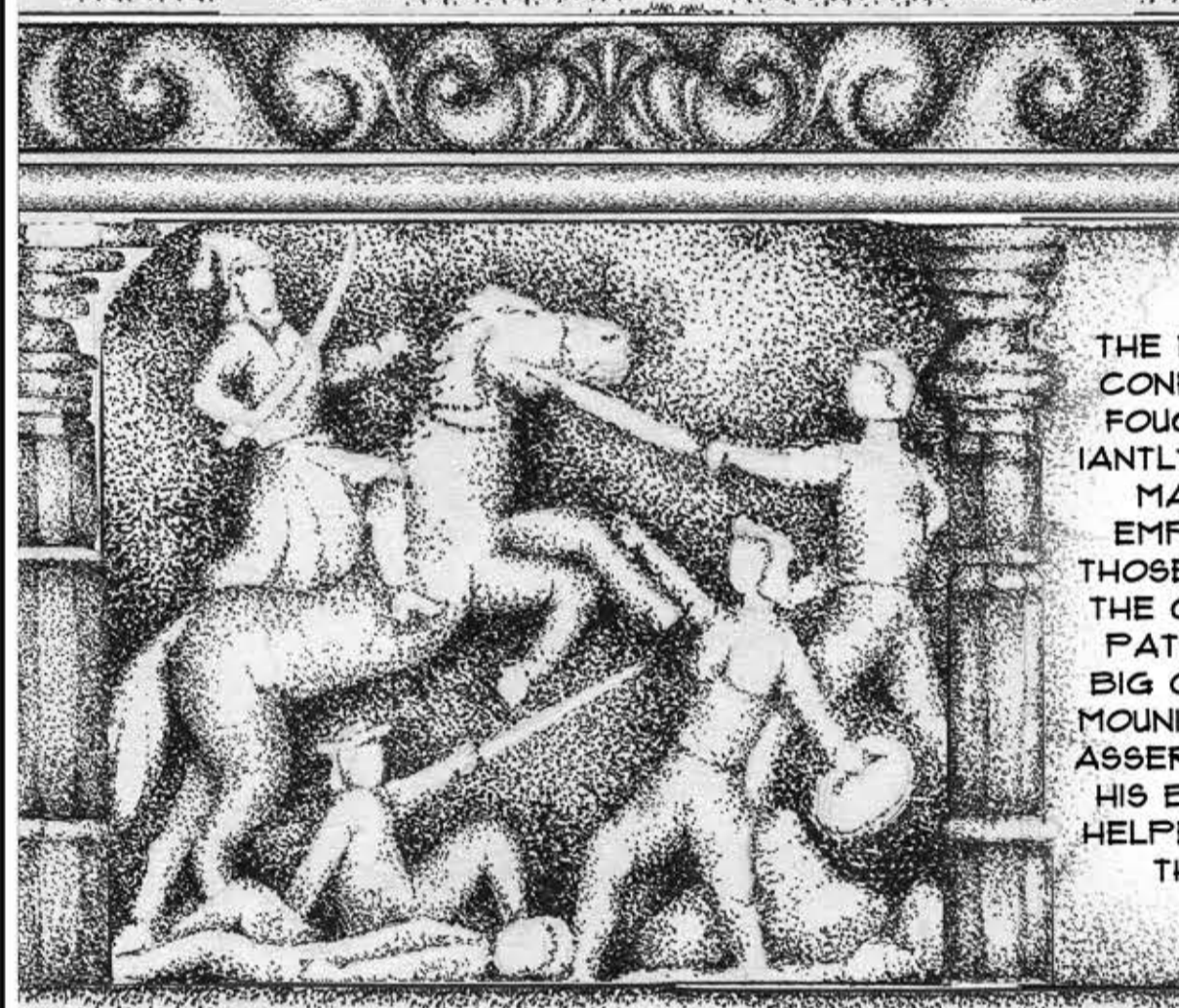
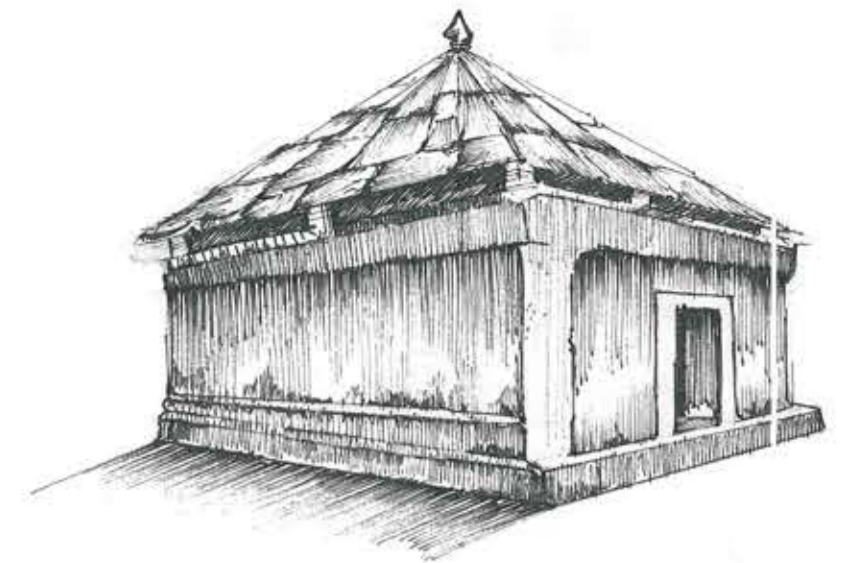
THE 11TH CENTURY: BEFORE THE WARS OF GINGI AND SRIRANGAPATTAM AGAINST THE MUGHALS, CHHATRAPATI SHIVAJI MAHARAJ SET OUT TO SEEK THE BLESSINGS AND GUIDANCE OF HIS GURU SHRI SAMARTH RAMDAS. THEREIN GURU RAMDAS ASKED HIM TO SEEK THE BLESSINGS OF ALL THE RELIGIOUS GURUS HE UTTERLY BELIEVED IN FOR THE EMPIRE'S VICTORY IN THE BATTLE.

MOUNI MAHARAJ WAS ONE OF THE CHHATRAPATI'S RELIGIOUS GURUS. IN SEPTEMBER OF 1616, HE VISITED FATGAON TO VISIT MOUNI MAHARAJ TO SEEK HIS BLESSINGS WHEREIN HE GUIDED SHIVAJI.



STRUCTURAL EVOLUTION

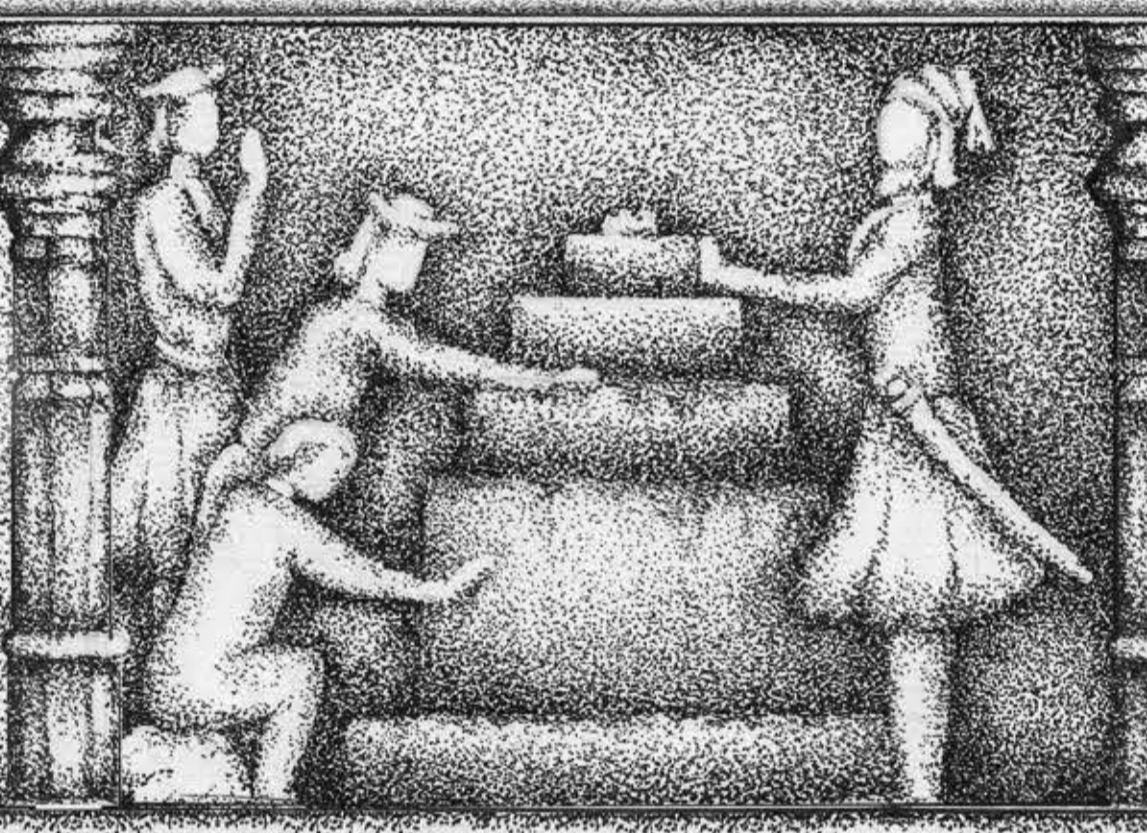
IN 1618 THE SAMADHI MANDIR WAS CONSTRUCTED THE ARCHITECTURE OF THIS MANDIR WAS INSPIRED FROM THE HEMDFANTI STYLE OF ARCHITECTURE.



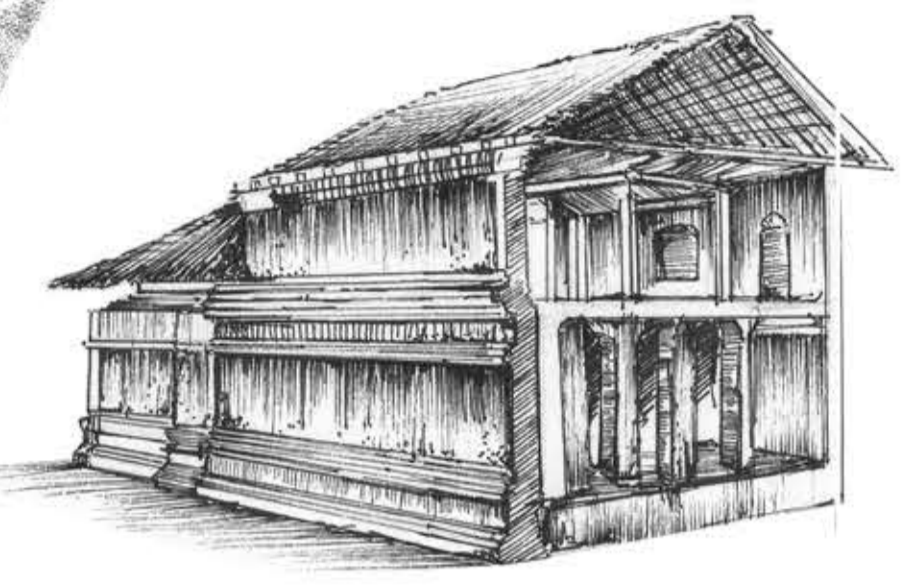
THE MARATHA CONFEDARCY FOUGHT VALIANTLY AND THE MARATHA EMPIRE WON THOSE BATTLES. THE CHHATRAPATI GAVE A BIG CREDIT TO MOUNI MAHARAJ ASSERTING THAT HIS BLESSINGS HELPED HIM WIN THE WAR.



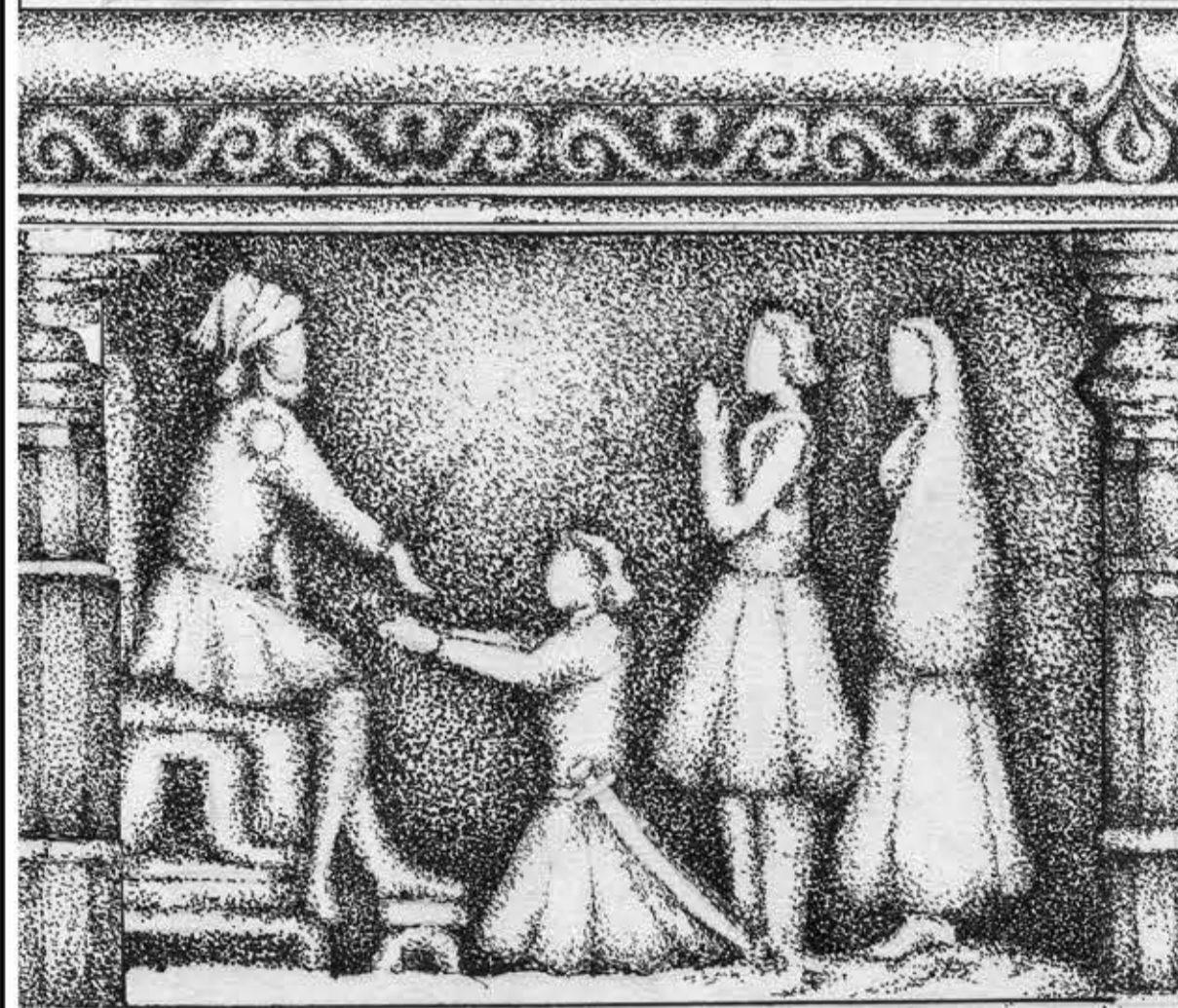
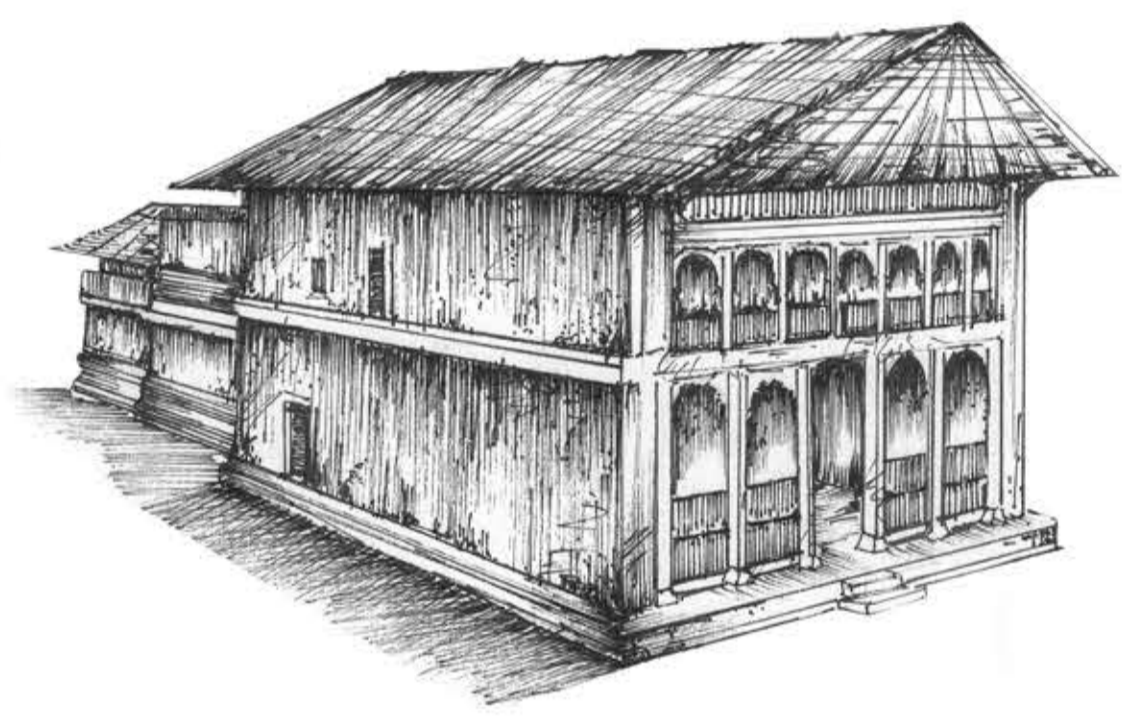
IN 1618, SHIVAJI MAHARAJ CAME BACK TO FATGAON TO MEET MOUNI MAHARAJ ONLY TO KNOW THAT THE WISE SAGE HAD TAKEN EXILE. CHHATRAPATI THEN DECIDED TO BUILD A SAMADHI FOR MOUNI MAHARAJ AND LAID THE FOUNDING STONE FOR ITS CONSTRUCTION ON 3RD MAY 1618.



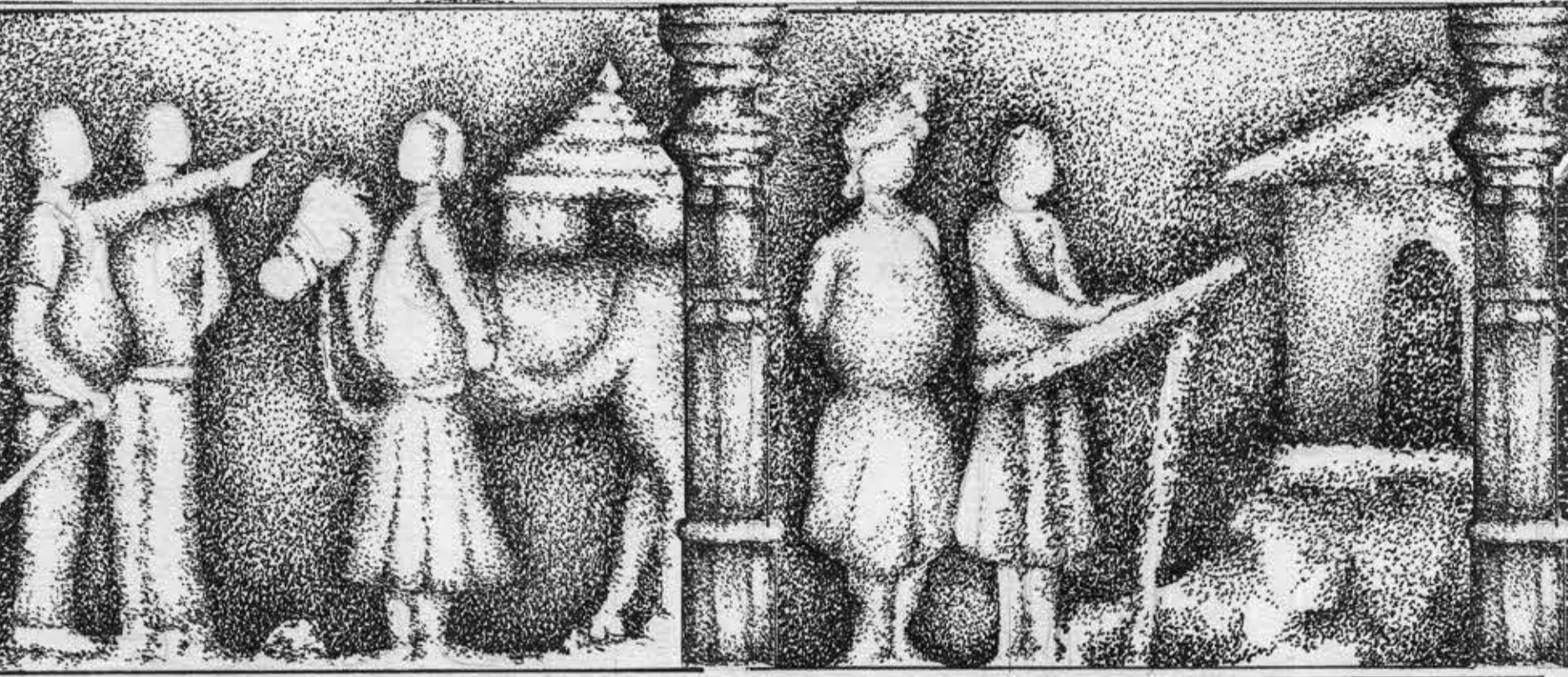
SANT MOUNI MAHARAJ'S TEACHINGS CAME ACROSS ROYAL FAMILIES. FOR THEIR ACCOMMODATION AND COMFORT SABHAMANDAPA WAS ADDED LATER. THE SABHAMANDAPA WAS CONSTRUCTED IN WADA ARCHITECTURE STYLE BECAUSE OF THE INFLUENCE OF ROYAL MARATHA FAMILIES.



INITIALLY THE STRUCTURE ONLY COMPOSED OF MANDIR SO THERE WAS NO BARRIER BUT LATER WHEN SABHAMANDAPA WAS ADDED AND INFLUENCE OF ROYAL FAMILY CAME INTO BEING SO THERE EMERGED AN NEED TO CREATE A BARRIER HENCEFORTH GATE CAME INTO BEING THE GATE WAS CONSTRUCTED IN INDO-ISLAMIC AND VICORIAN STYLE.

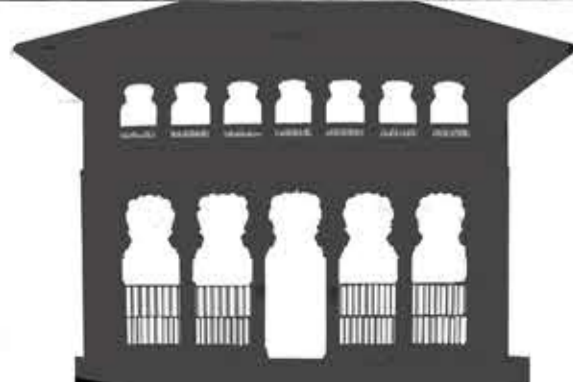
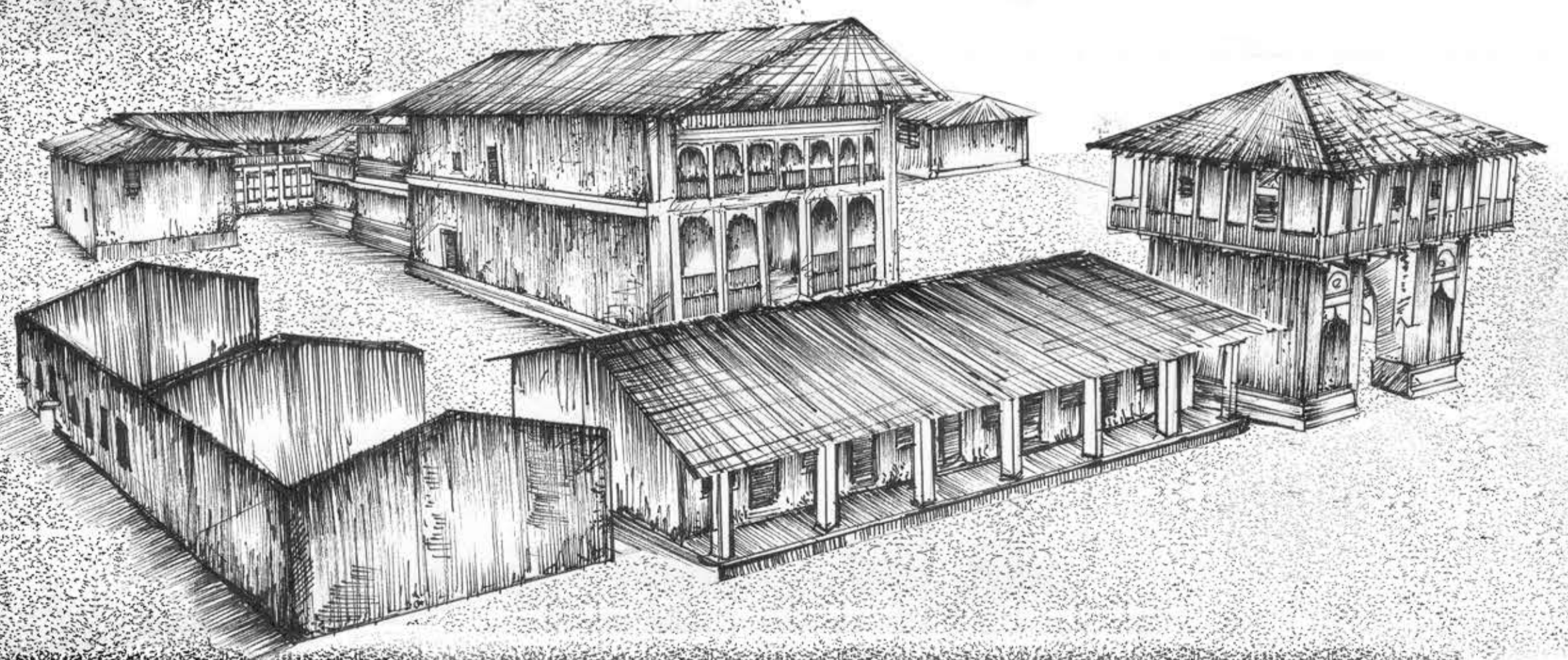


FOUR YEARS LATER, THE INEVITABLE HAPPENED AND CHHATRAPATI PASSED AWAY. BUT BEFORE HIS DEATH HE ASKED SAMBHAJI TO COMPLETE ALL HIS WORKS INCLUDING THE CONSTRUCTION OF THE SAMADHI, TO WHICH SAMBHAJI FAITHFULLY OBEYED.



CENTURIES PASSED, THE BRITISH COLONISED INDIA, BROUGHT REFORMS ALL AROUND, INCLUDING FATGAON. GENERAL ALEXANDER COMMISSIONED RAMGIRI IN 1814 FOR THE ADDITION OF A SABHAMANDAP TO THE SAMADHI TO ERECT A NAGARKAHANA FATGAON.

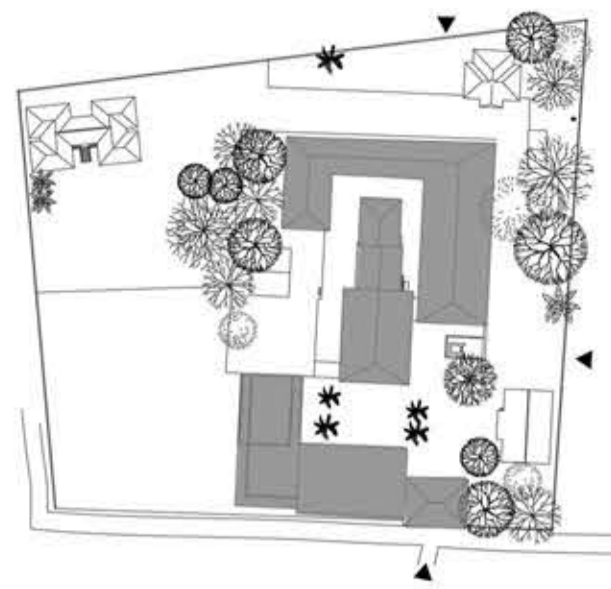
FATGAON BEACONING AS AN IMPORTANT PILGRIMAGE SPOT OVER YEARS, SHAHU MAHARAJ COLLECTED TAXES FROM NEARBY VILLAGES AND BUILT A PILGRIM HOUSE IN FRONT OF THE SAMADHI.



SHREE MOUNI MAHARAJ SAMADHI



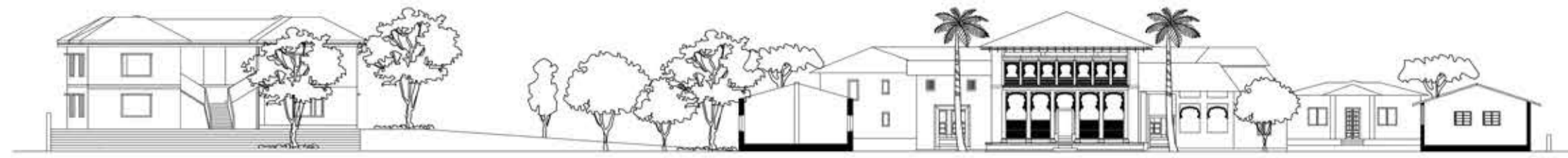
## SPATIAL ORGANISATION



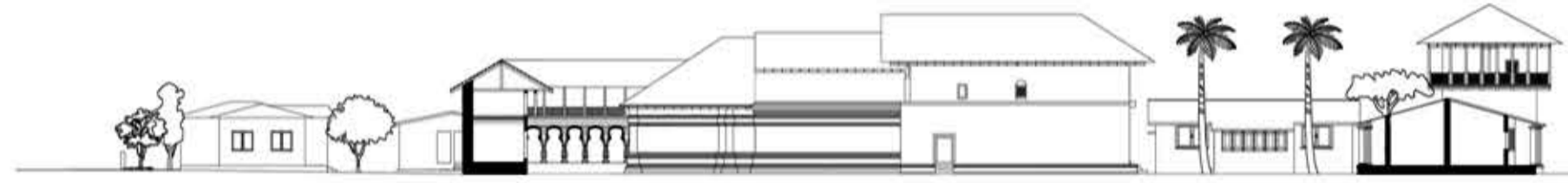
SITE AREA 8981 SQM  
 BUILT UP AREA 1634 SQM  
 OPEN BUILT UP 1:54

### ACCESS

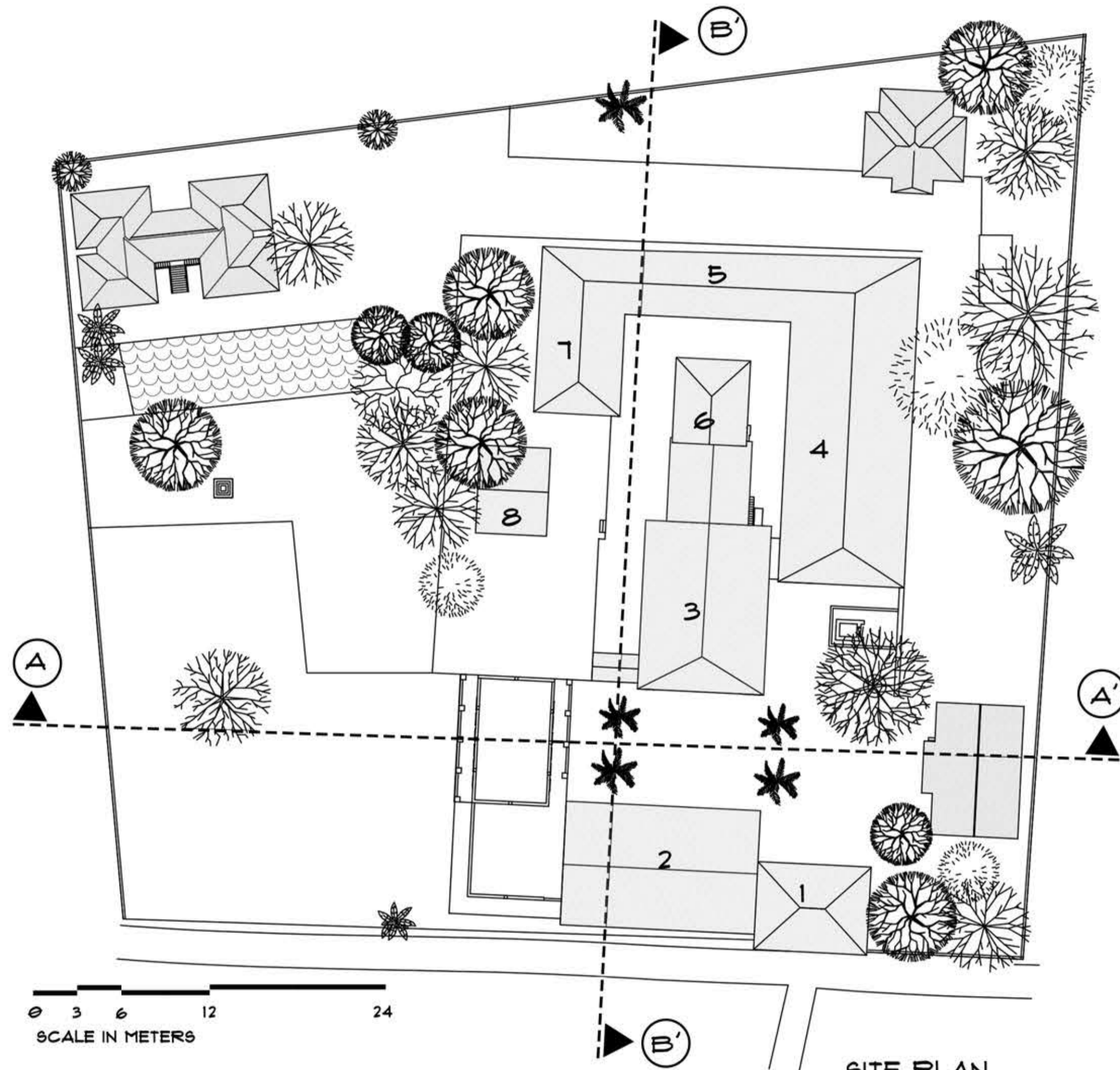
PRIMARY ACCESS IS PROVIDED FROM THE DIRECTION OF THE NAGARKHANA. TWO SEPARATE ENTRIES ALONG THE SOUTH AND WEST DIRECTIONS HAVE BEEN PROVIDED.



SECTION AA'



SECTION BB'



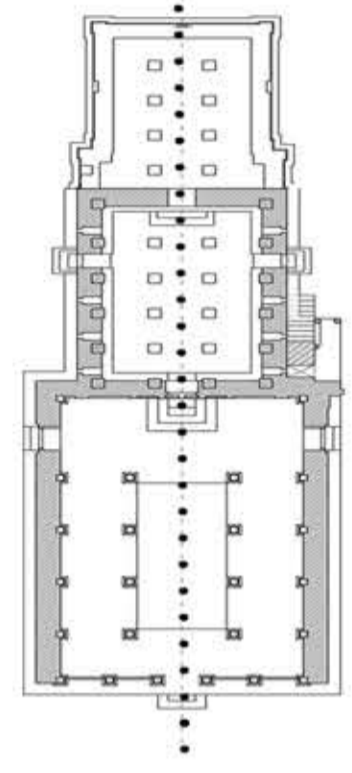
SITE PLAN

### LEGEND:-

- 1. MAHADWARA
- 2. PILGRIM RESIDENCE
- 3. SABHA MANDAP
- 4. BHOJANALAYA
- 5. PILGRIM RESIDENCE
- 6. SAMADHI MANDIR
- 7. DORMITORY
- 8. SAMADHI

## DESIGN PRINCIPLES

### SYMMETRY



THE STRUCTURE IS IN BILATERAL SYMMETRY DIVIDED ALONG THE NORTH SOUTH AXIS.

### HEIRARCHY



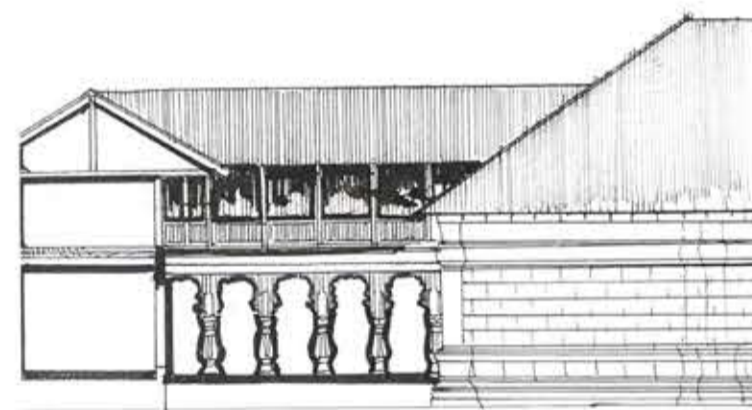
THE EXTENDED PART OF THE SAMADHI HAS THREE LEVELS WHERE DIFFERENT CLASSES OF PEOPLE WORSHIP.

### VASTUSHASTRA



THE SHAPE OF THE BUILT MASS IS RECTANGULAR WHICH CREATES VIBRATIONS APPROPRIATE FOR PEACEFUL AND TRANQUIL PATTERN OF LIFE. THE SHORTER SIDE SHOULD BE FACING ALONG NORTH AND SOUTH AXIS.

### PROPORTION



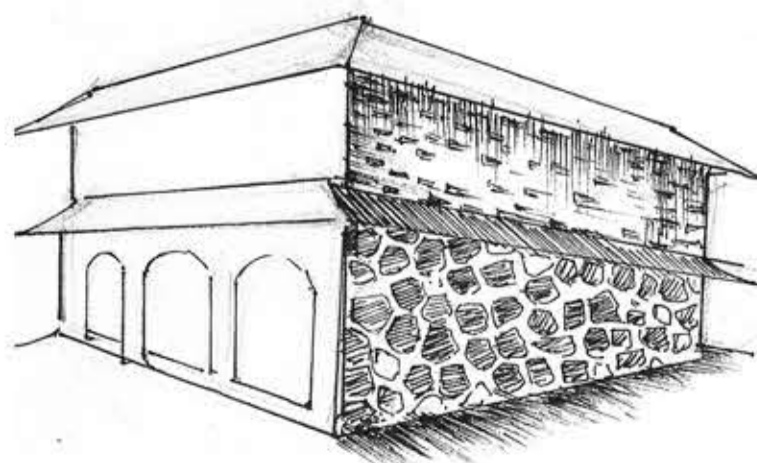
THE PROPORTIONS OF LARGER COURTYARD ARE IN ACCORDANCE TO THE HUMAN SCALE THEREBY PROVIDING SPACE FOR THE PEOPLE TO CARRY OUT THEIR ACTIVITIES AND ALSO FACILITATES CIRCULATION OF AIR AND LIGHT.

## STRUCTURE IN ACCORDANCE TO CLIMATE

### MATERIAL

FLOORING - BASALT STONE IS USED WHICH HELPS KEEPING THE INTERIORS WARMER IN WINTER AND COOLER IN SUMMER.

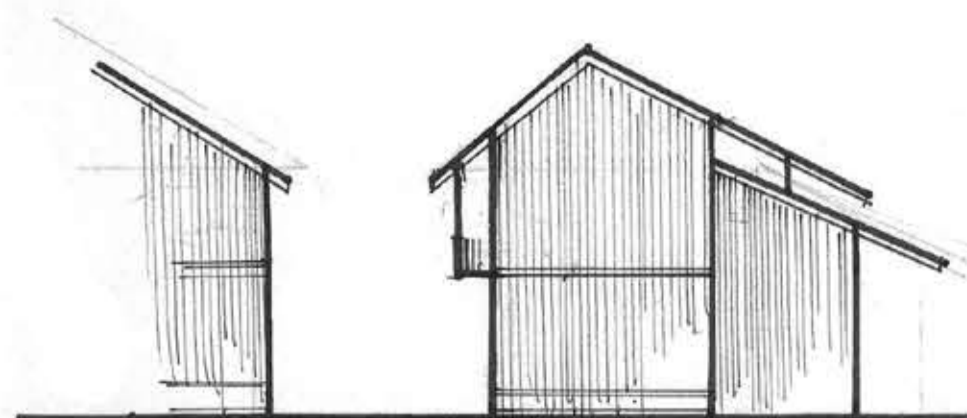
WALLS - LATERITE STONE WALL ACT AS A INSULATOR WHICH DOES NOT ALLOW THE WARM AIR TO GET IN.



### SHADING DEVICES

AT THE OUTER FACADE OF THE STRUCTURE, THE ROOF IS PROJECTED OUT TO PROVIDE SHADE.

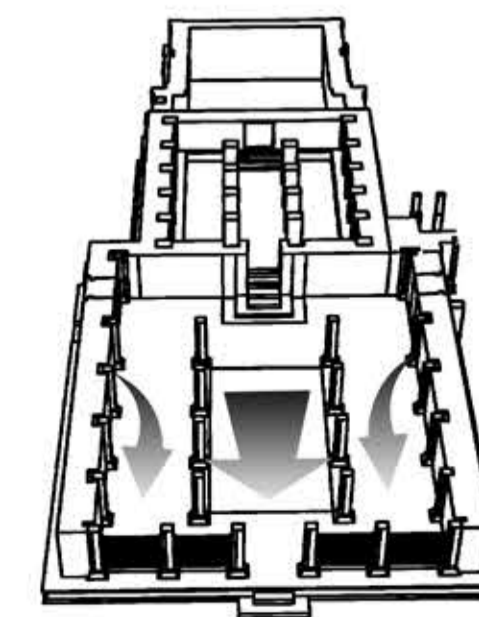
SINCE THE INNER COURTYARD DOES NOT RECEIVE HARSH SUNLIGHT, NO SHADING DEVICES HAVE BEEN PROVIDED IN THE INNER SIDE.



### PASSIVE COOLING TECHNIQUES

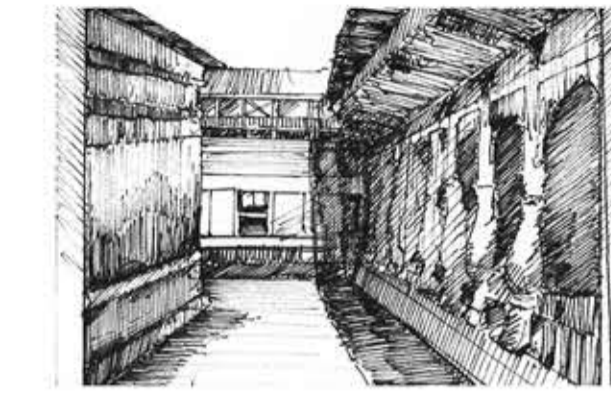
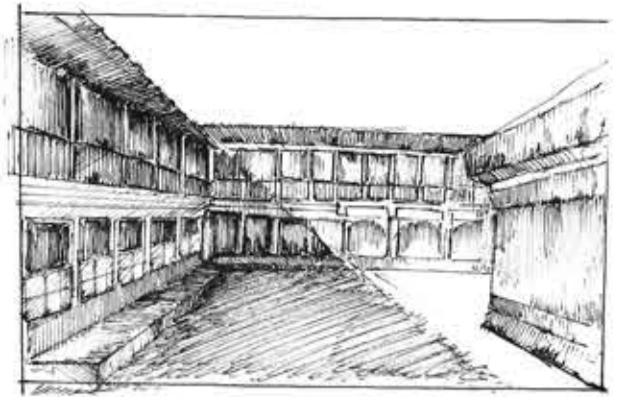
THE POSITIONING OF THE WINDOWS WERE SUCH THAT IT FACILITATES CROSS VENTILATION.

OPENING THE SLANTING WINDOW PROFILE PERMEATES MORE DAYLIGHT INTO THE STRUCTURE. PASSIVE COOLING STRATEGIES.



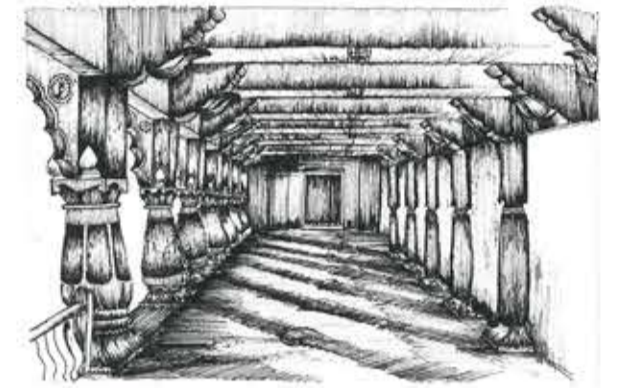
## LIK PRINCIPLE

THE SHADOW CREATED BY THE COURT BUILDING FALLS ON THE FOREGROUND, THUS CREATING A COMFORTABLE SPACE FOR KIDS TO PLAY AND OTHER LEISURE ACTIVITIES.

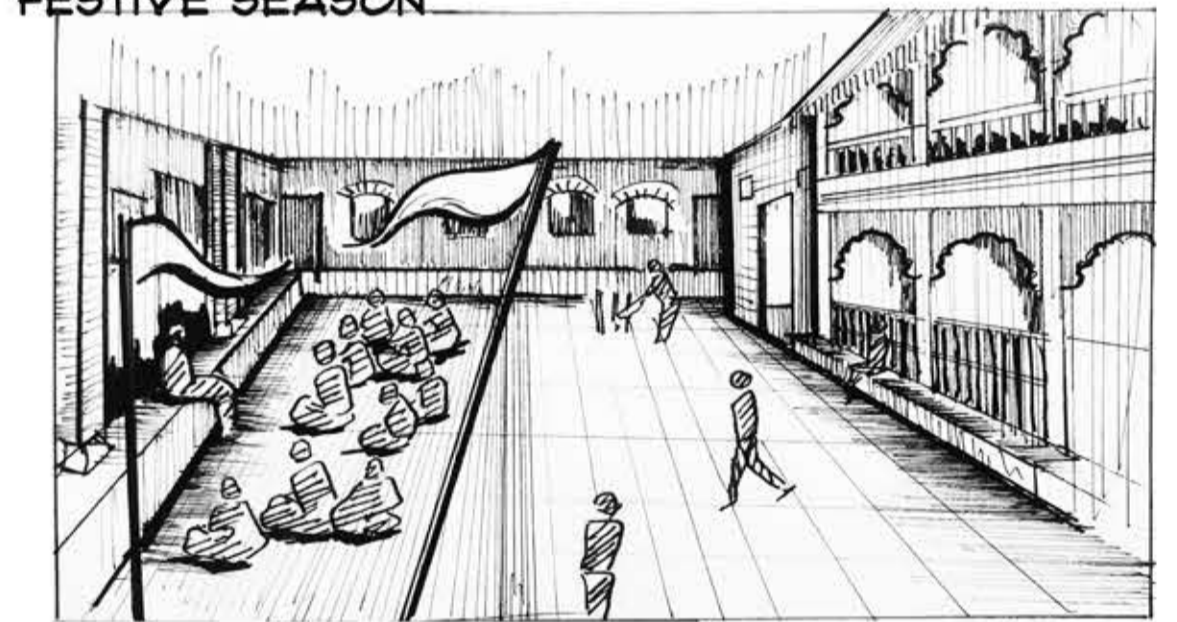


THE SPACE BETWEEN THE SAMADHI BUILDINGS IS SHADED FROM SUNLIGHT, THE FIRST AND LAST RAY OF SUNLIGHT FALLS ON THE COPPER TORTOISE.

THE LIGHT AND SHADOW PLAY IN THE OSARI CREATED BY THE COMBINATION OF COLUMNATES AND BEAM SHOWS HARMONY OF LIGHT AND SPACE.

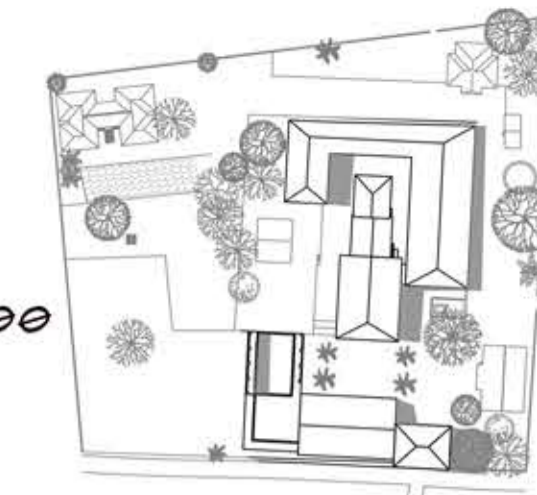


### FESTIVE SEASON



THE FRONTYARD OF THE SAMADHI WAS USED FOR GATHERING AND FOR HAVING PRASAD MEALS AT THE TIME OF UTSAV. WHEN THE FESTIVE SEASON CONCLUDES THE COMPLEX IS USED AS A COMMUNITY SPACE FOR THE VILLAGE. THIS SHOWS THE MULTIPURPOSE TRANSITION OF THIS COMPLEX FROM SACRED TO SEMI SACRED.

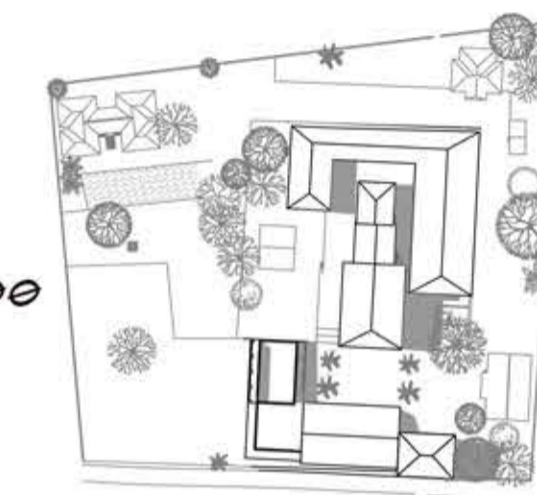
TIME :- 9:00 AM



TIME :- 12:00 PM



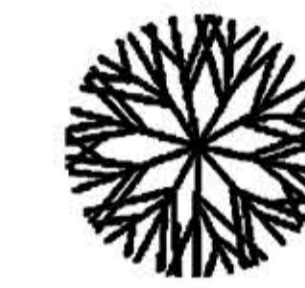
TIME :- 5:00 PM



MANGO TREE



JACKFRUIT TREE



BANANA TREE

### VEGETATION PLANS



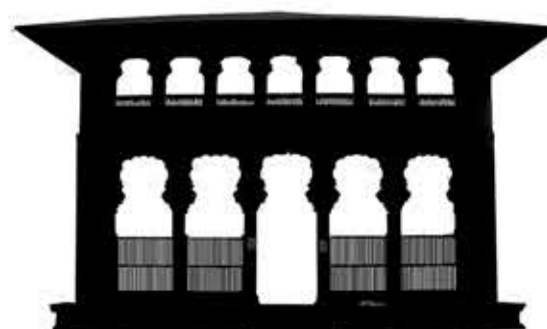
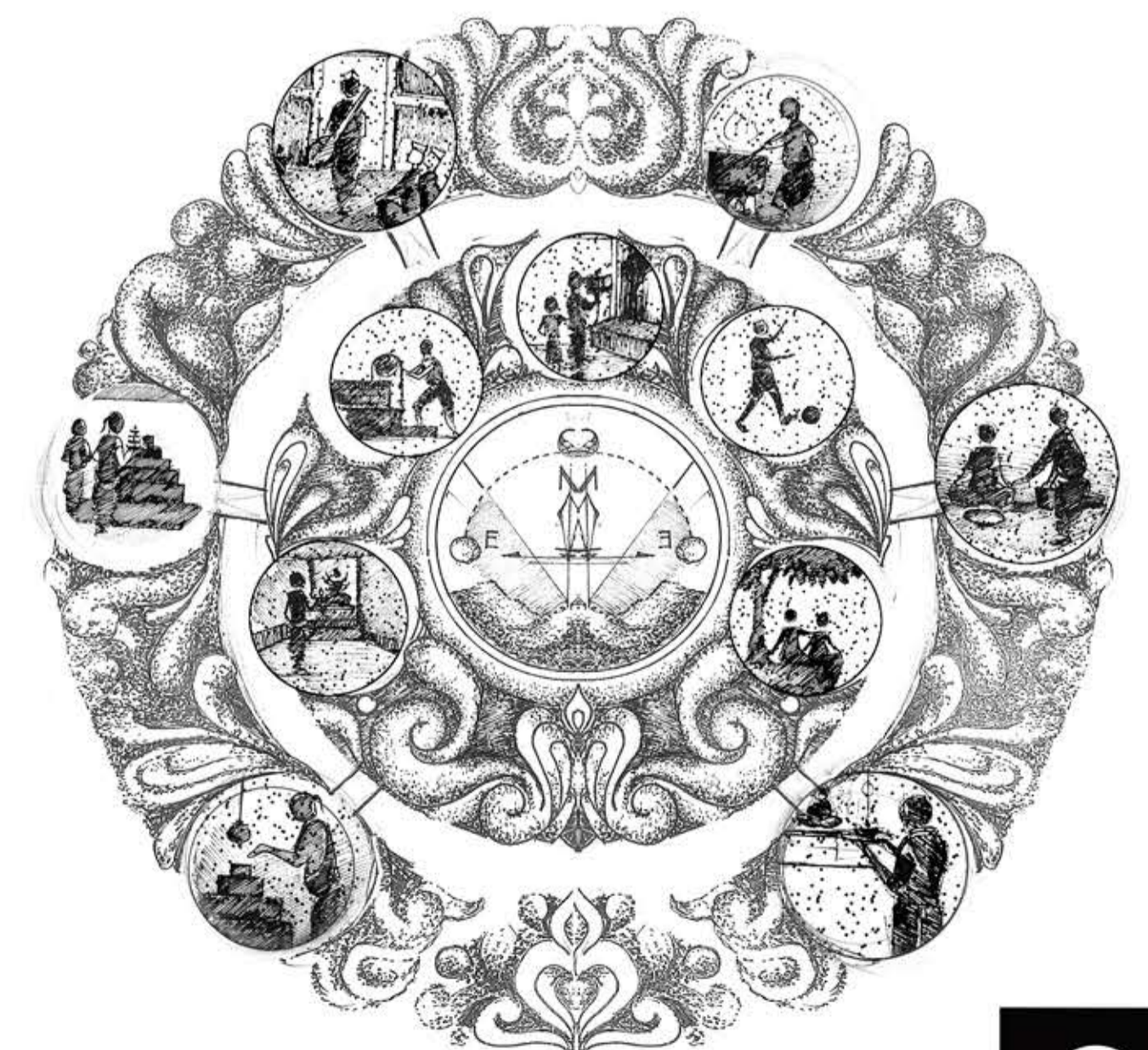
PALM TREE



ASHOKA TREE

### TIMEMAPPING

IN THE MORNING, LADIES OF THE VILLAGE COME TO DRAW WATER FROM THE WELL IN THE FRONTYARD OF SAMADHI, CHILDREN PLAY AFTER THEIR SCHOOL HOURS. PEOPLE FROM THE VILLAGE COME THERE IN THE EVENING AFTER THEIR MUNDANE WORKING HOURS FOR A PEACEFUL TIME.



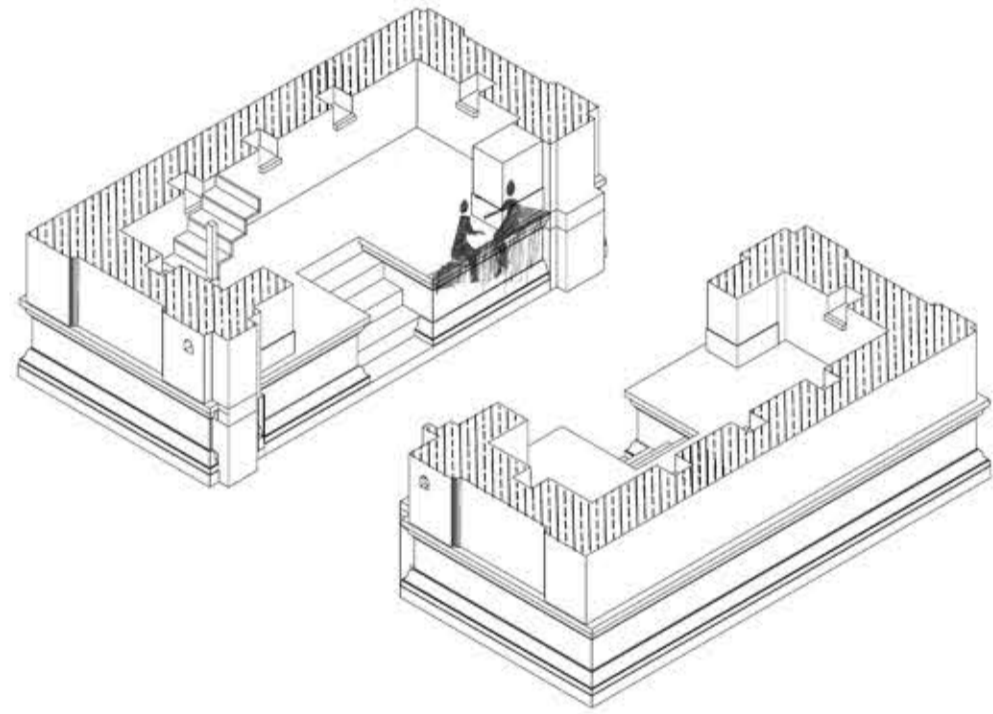
# MAHADARWAJA

- TOTAL AREA :- 18.50 SQ.M
- NAGAR KHANA/GATEWAY MARKS THE ENTRANCE TO THE SAMADHI COMPLEX.
- THE GATEWAY WAS BUILT IN THE YEAR 1874.
- THIS STRUCTURE MAINLY USED TO SERVE THE PURPOSE AS NAGAR KHANA.
- NAGAR KHANA
- THE STRUCTURE HAD AN INDO-ISLAMIC INFLUENCE.
- TYPICAL SLOPING ROOF STYLE WAS OBSERVED IN THE GATE WHICH IS A PREVAILING FEATURE IN THIS AREA.

## FUNCTIONALITY

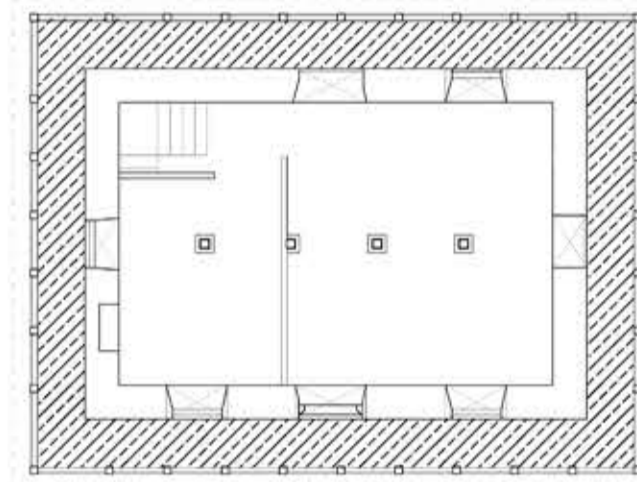
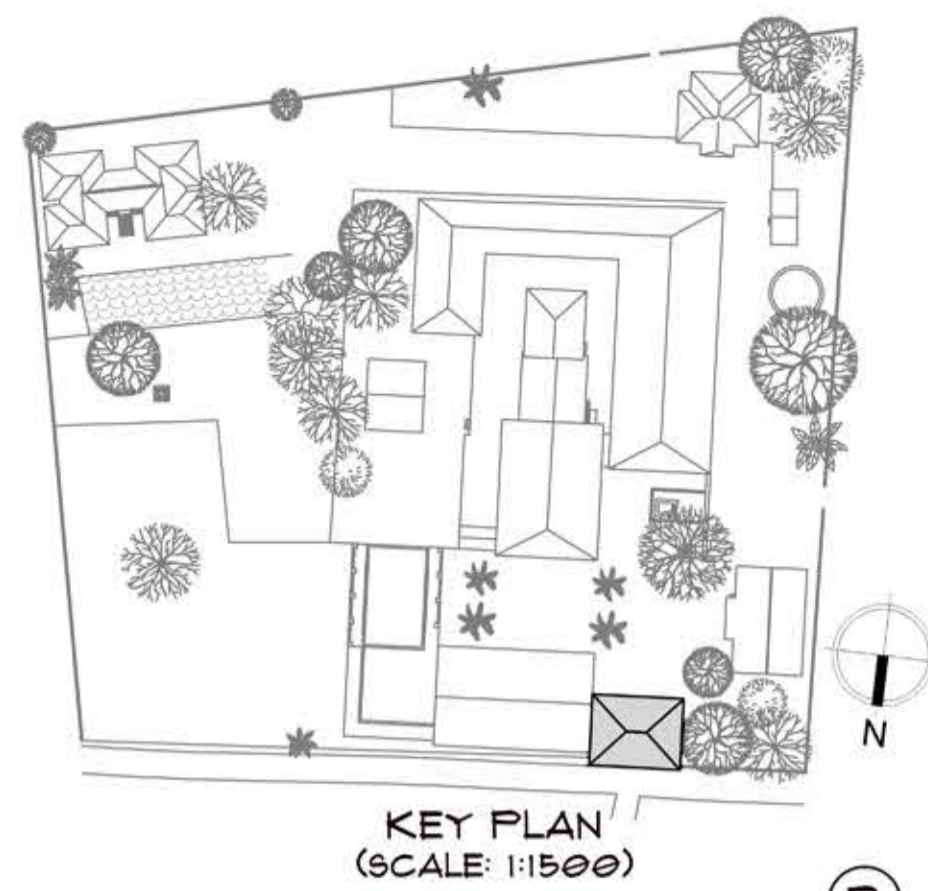
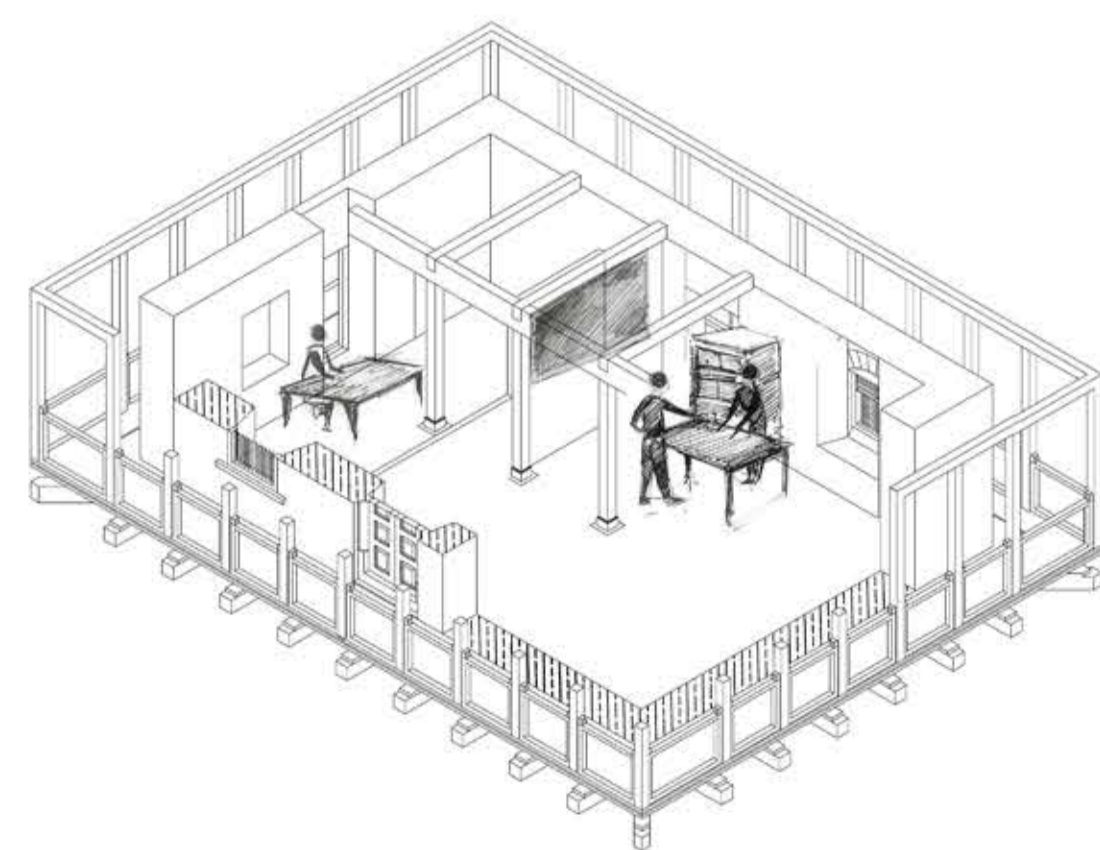
### GROUND FLOOR : JIBHI

THE GATEWAY HAD AN INTERNAL PASSAGE KNOWN AS JIBHI. JIBHI CONSISTS IN RAISED SIDE PLINTH WHICH SERVED AS INTERACTION SPACE BETWEEN THE SENTRIES AND THE MASSES. THIS ALSO FUNCTIONED AS A SITTING PLACE FOR ACCOMODATING THE OUTSIDERS. THIS ALSO MAINTAINED AS HINDRANCE FROM DIRECT ACCESS TO THE COMPLEX.



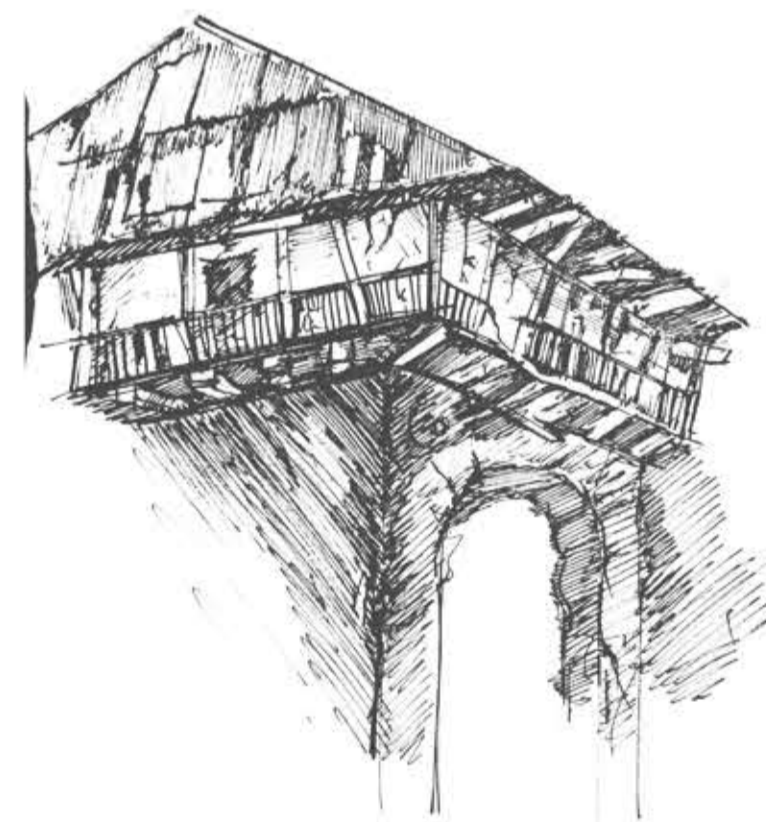
### FIRST FLOOR : NAGARKHANA

THE FIRST FLOOR OF THE GATEWAY HOLDS THE NAGAR KHANA, A DRUM HOUSE. IT WAS ALSO USED AS AN ADMINISTRATIVE OFFICE AND WATCHPOST. THE NAGAR KHANA WAS MORE OFTENLY USED TO SEEK VILLAGERS AND PILGRIMS ATTENTION FOR ANNOUNCEMENT AND GATHERING MASSES NEAR THE ENTRANCE.



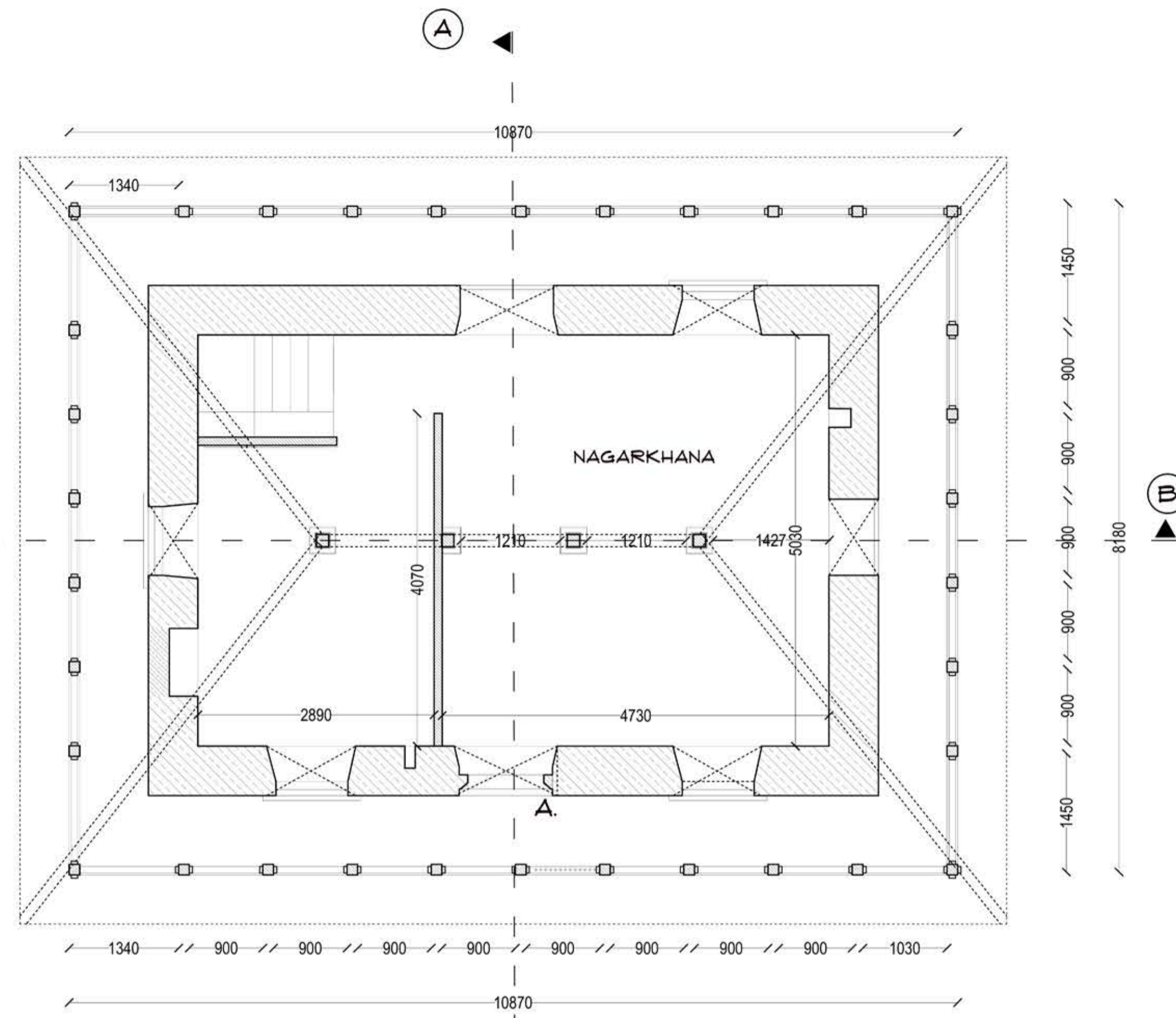
### CIRCULATION

INSTEAD OF PROVIDING FIRST FLOOR OVER GROUND FLOOR CANTILEVER BALCONY IS PROVIDED FOR CIRCULATION ON FIRST FLOOR. SO THE AREA THAT IS SAME AS THAT OF GROUND FLOOR CAN BE TOTALLY USED AS CARPET/FLOOR AREA ON FIRST FLOOR.

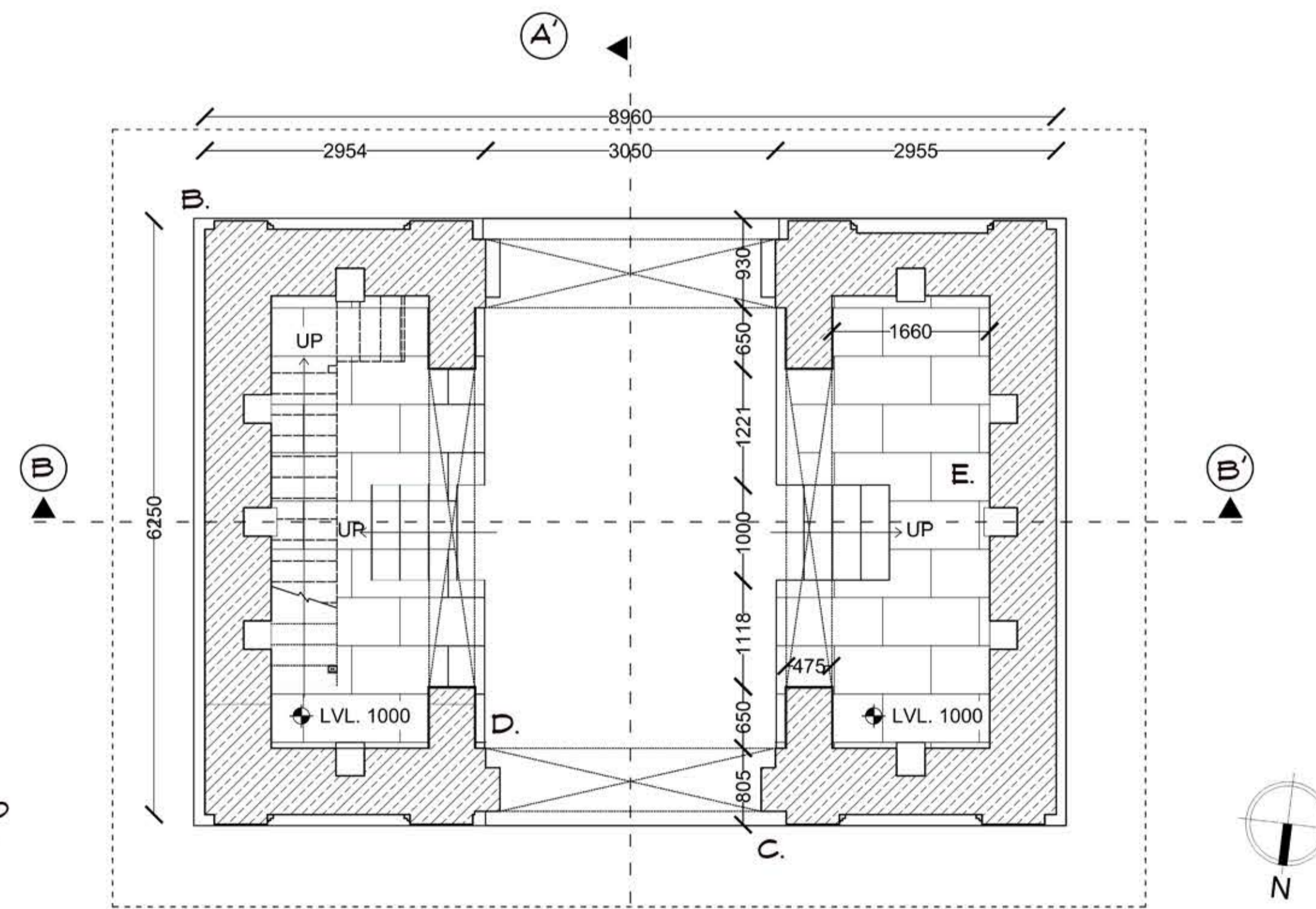


### BEHAVIOUR ANALYSIS

UPPER FLOOR OF MAHADARWAJA WAS DETERIORATING HENCE RETROFITTING WAS NECESSARY. COLUMNS AND BEAMS WERE WEATHERING OUT DUE TO TERMITE ACTION AND WEATHER EFFECTS. ALSO FLOOR ON THE BALCONY SIDE WAS ON THE VERGE OF COLLAPSING.



▲ FIRST FLOOR PLAN (SCALE :- 1:50)



▲ GROUND FLOOR PLAN (SCALE :- 1:50)

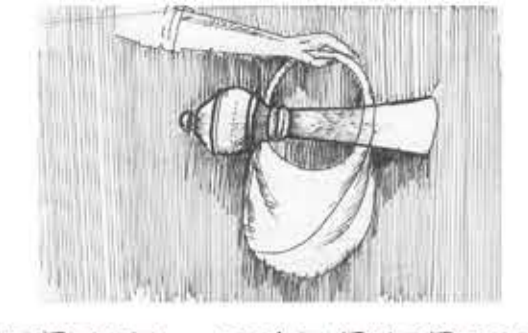
## TECHNICAL ADVANCEMENTS

### RINGS



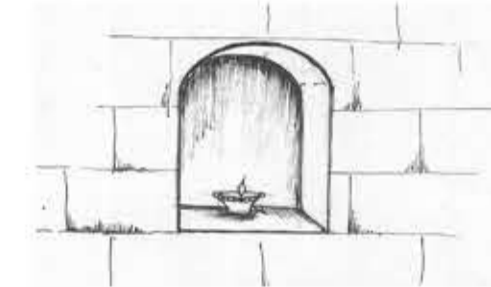
PURPOSE:- THE RINGS SERVED THE PUPOSE OF TIEING THE HORSES OF THE WARRIORS.

### KHUNTI



PURPOSE:- SOLE PURPOSE OF THE KHUNTI WAS TO HANG IN THE CLOTHES OR BAGS OF THE SERVING SENTRIES.

### KONADA

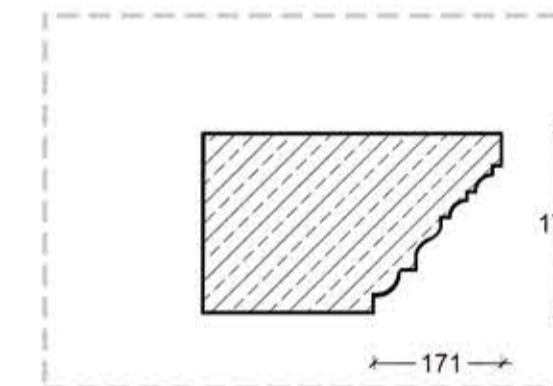


THE PURPOSE OF THE KONADA IS TO FACILITATE STORAGE AND OIL LAMPS.

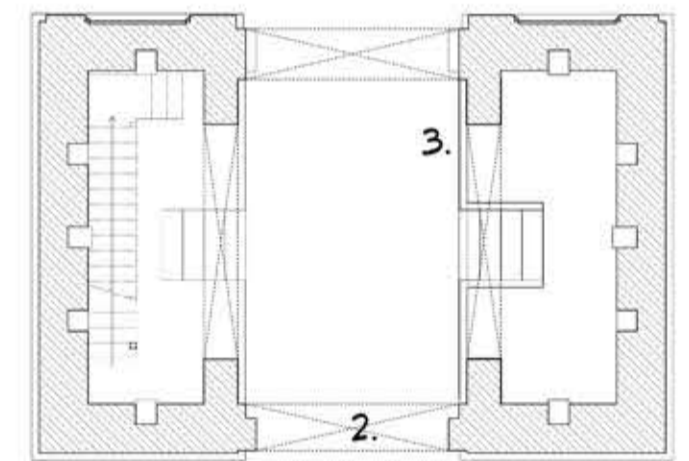
### LOCKING SYSTEM



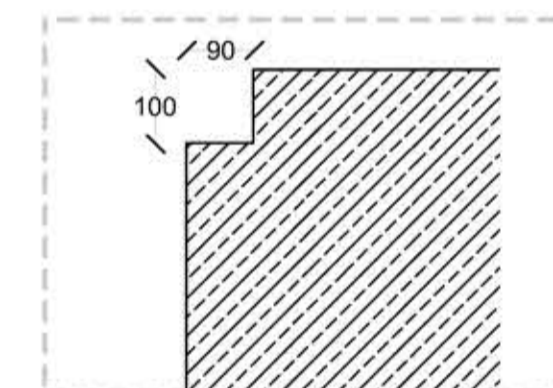
HOLES ON EITHER SIDE OF THE OPENING ARE PROVIDED TO INSERT THE WOODEN LOG AS LOCKING SYSTEM.



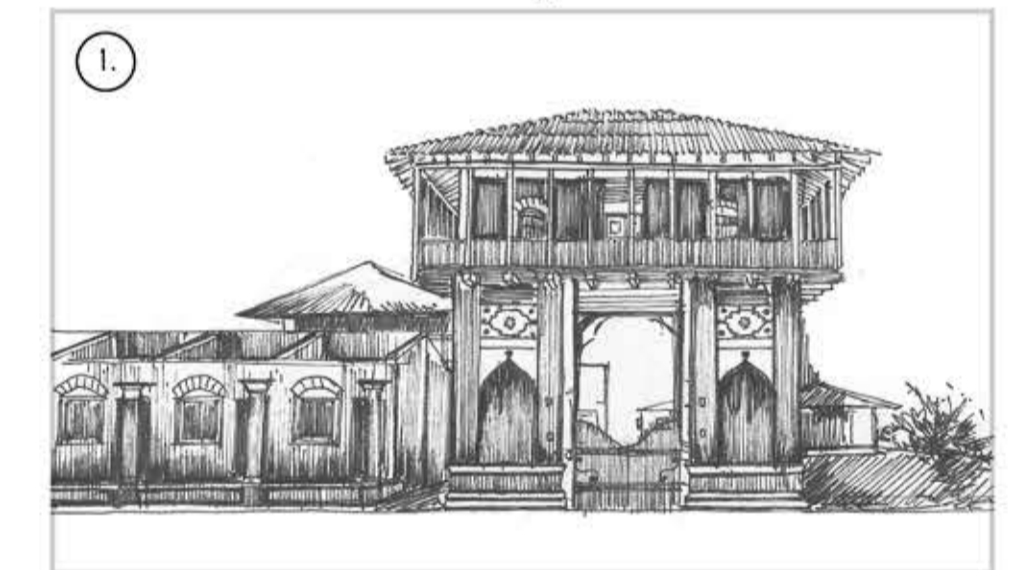
DETAIL AT A



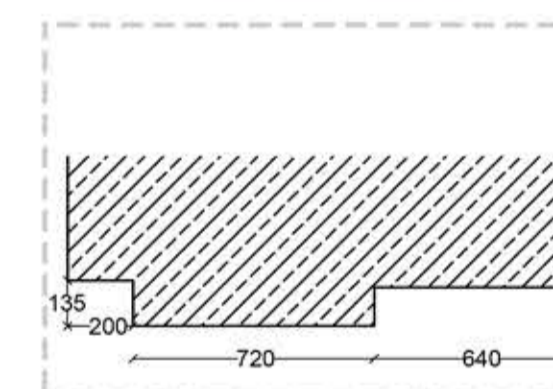
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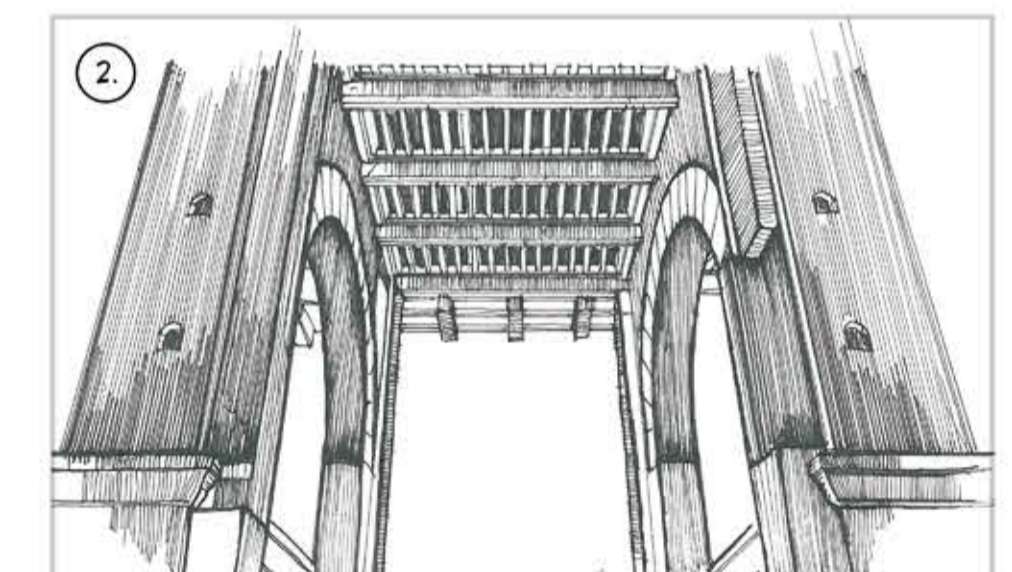
DETAIL AT B



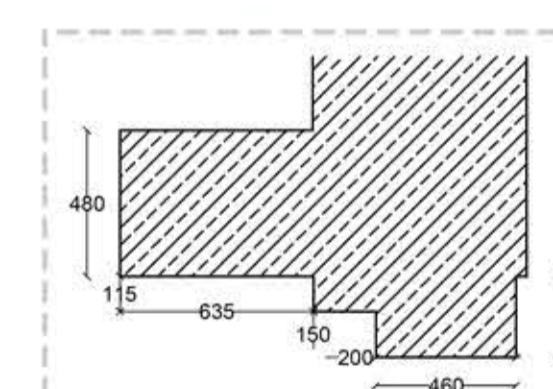
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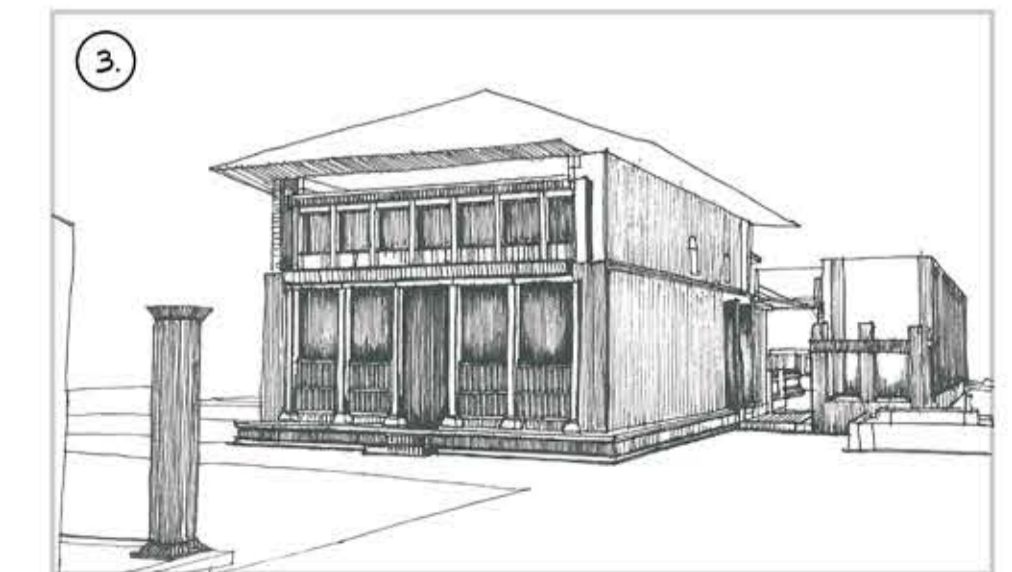
DETAIL AT C



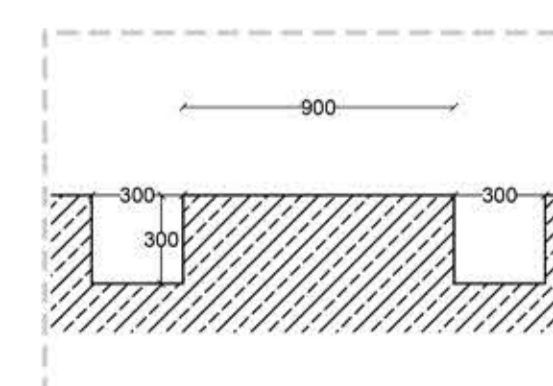
2.



DETAIL AT D

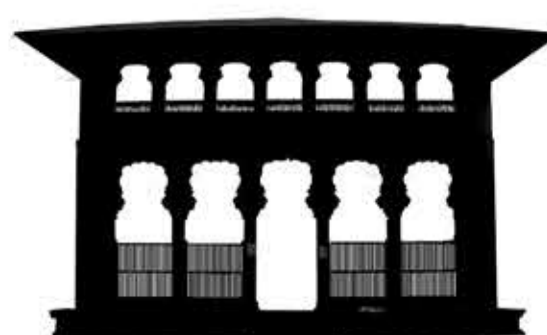


3.



DETAIL AT E

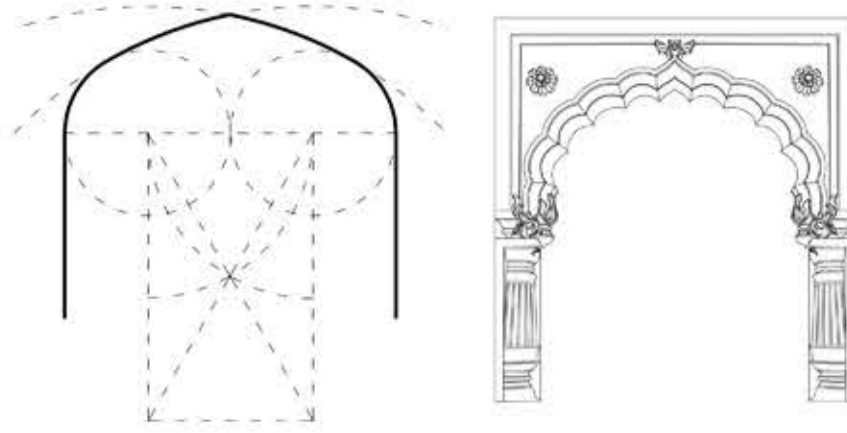
ALL DIMENSIONS ARE IN MM.



# MAHADARWAJA

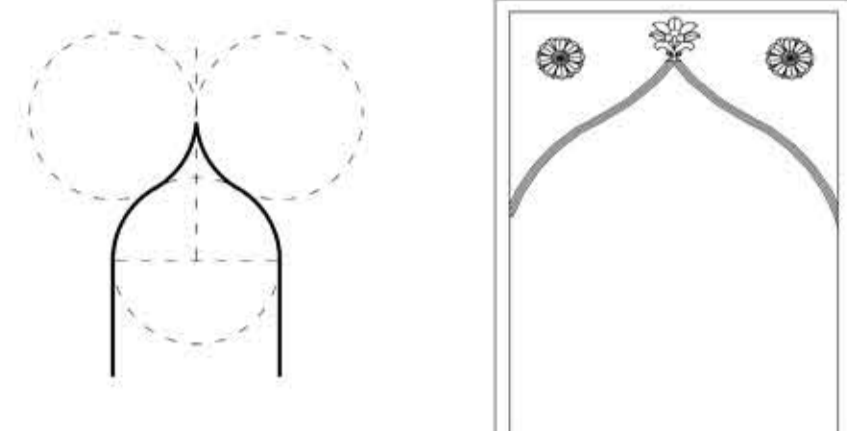
## POINTED ARCH

A POINTED ARCH PLACE MORE STRESS ON THE VERY TIP OF THE ARCH, WHICH ACTUALLY CONCENTRATES, RATHER THAN EVENLY DISTRIBUTES THE PRESSURE.



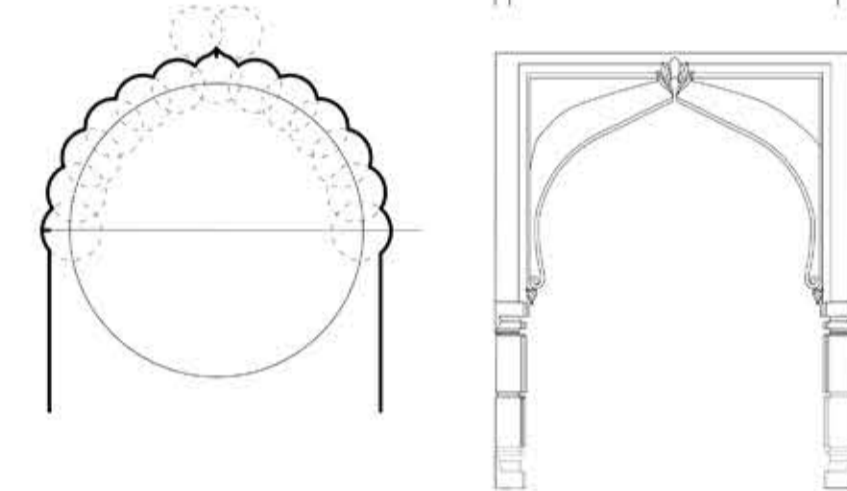
## OGEE ARCH

WHEN TWO DOUBLE CURVES (OGEE CURVES) MEET AT THE APEX IT IS CALLED Ogee ARCH.



## MULTI-FOLIATED ARCH

IT IS CREATED BY OVERLAPPING OF CIRCLES AND SYMMETRICAL LEAF SHAPES.

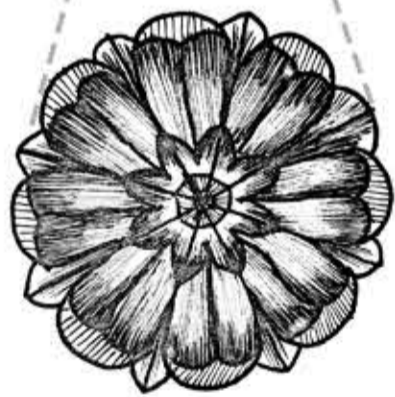
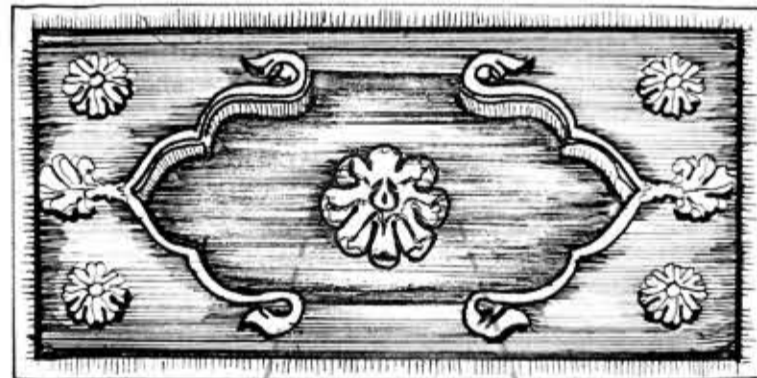


## KIRTIMUKHA

IT IS THE SWALLOWING FIERCE MONSTER FACE WITH HUGE FLANG AND GAPING MOUTH VERY COMMON MOTIF ON HINDU TEMPLE ARCHITECTURE.

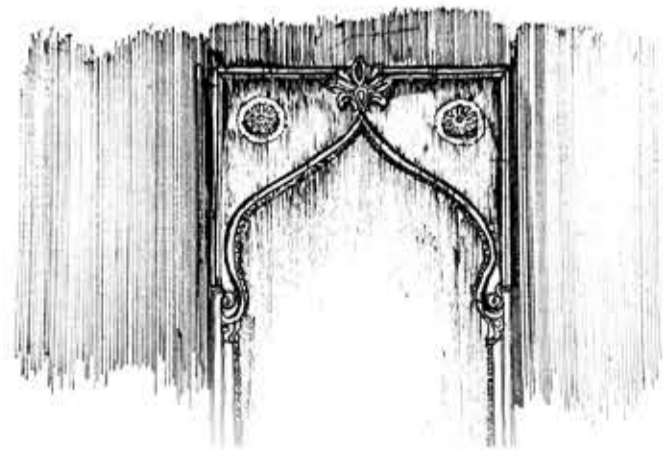


MOTIFS



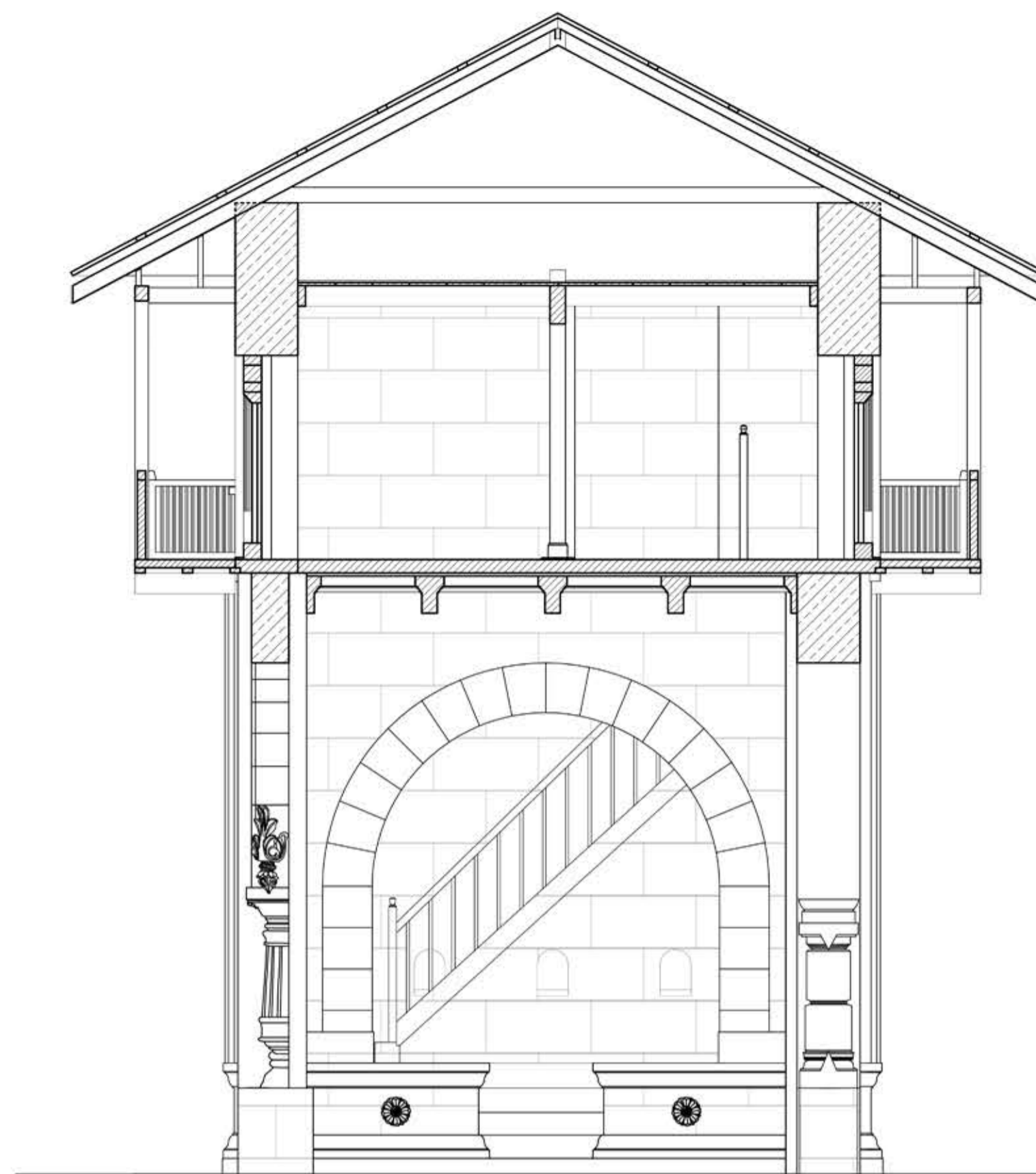
KELFULACHI NAKSHI BANANA FLOWER CARVING

THIS IS BASED ON WADA ARCHITECTURE WHERE CUSPED ARCHES ALSO CALLED MAHIRAPI KAMAN ARE CASCADED TO ACHIEVE GREATER LENGTHS OF MODULAR STRUCTURES.

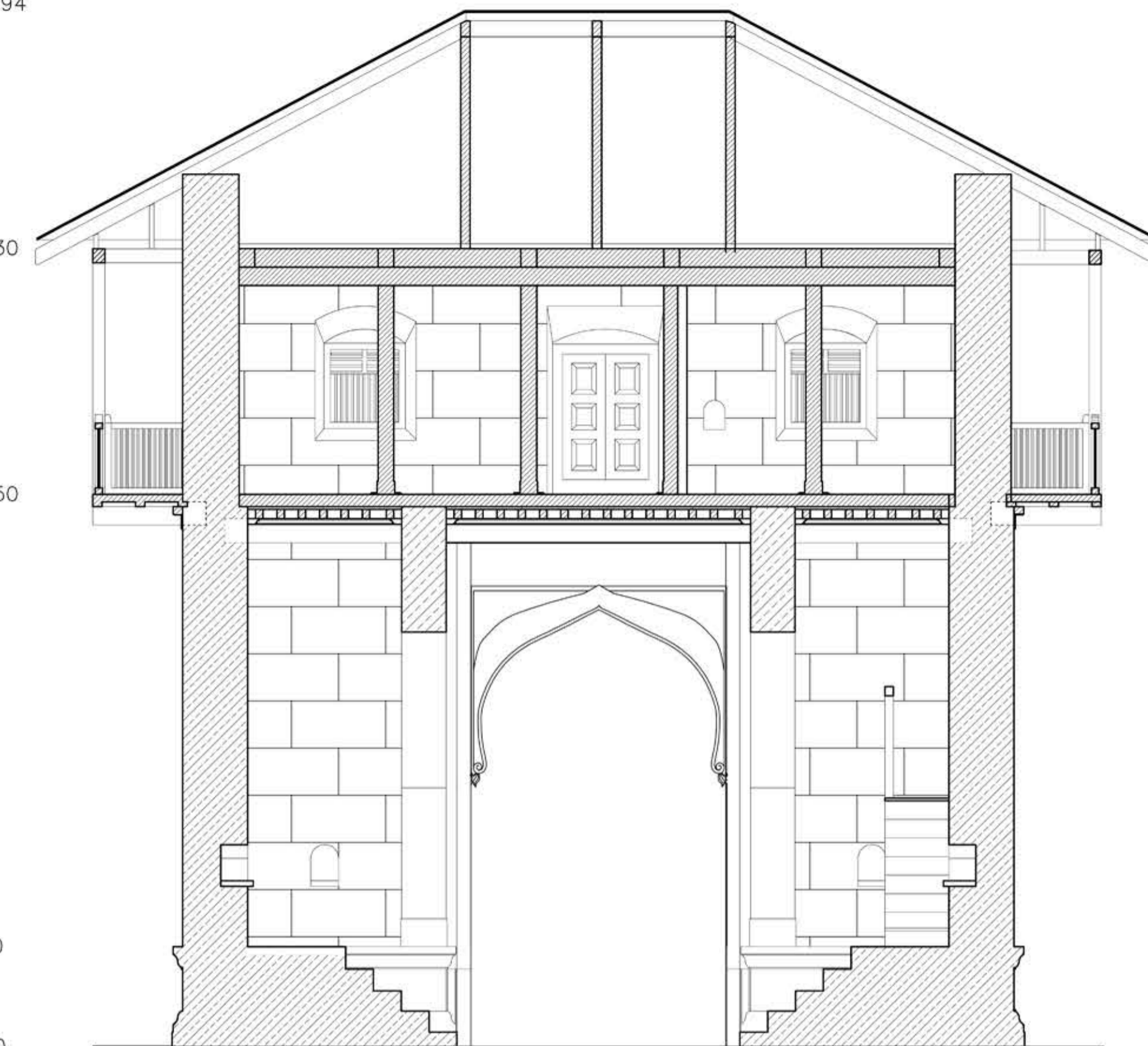


AEDICULES

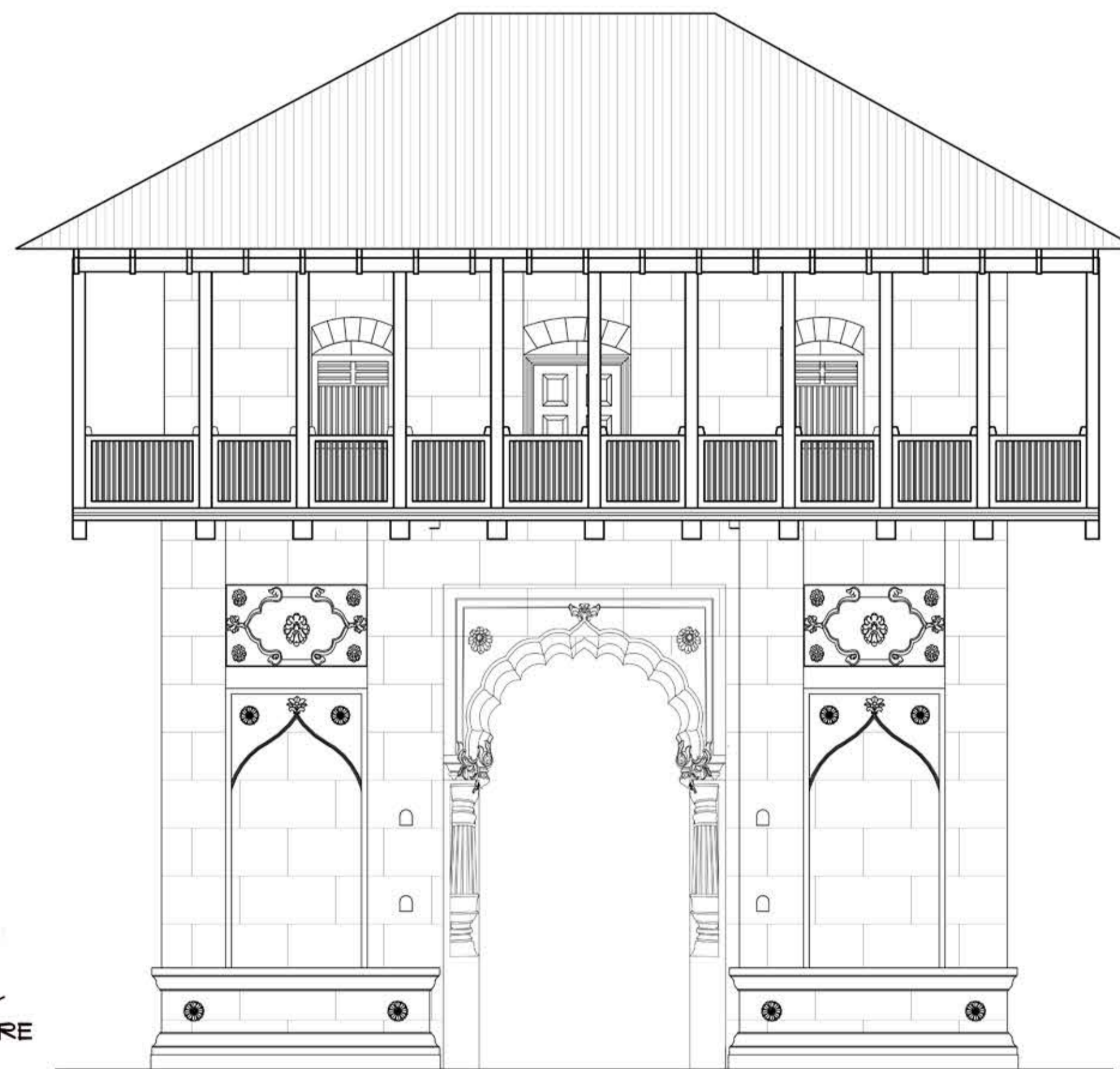
PURPOSE:- THE GEOMETRY OF STRUCTURE IS PURELY ENHANCE BY USE OF AEDICULES, THE ARCHITECTURE FRAMEWORK ON THE WALL SERVED AS AN ELEMENT OF ARCHITECTURAL COMPOSITION ON WALL SURFACE.



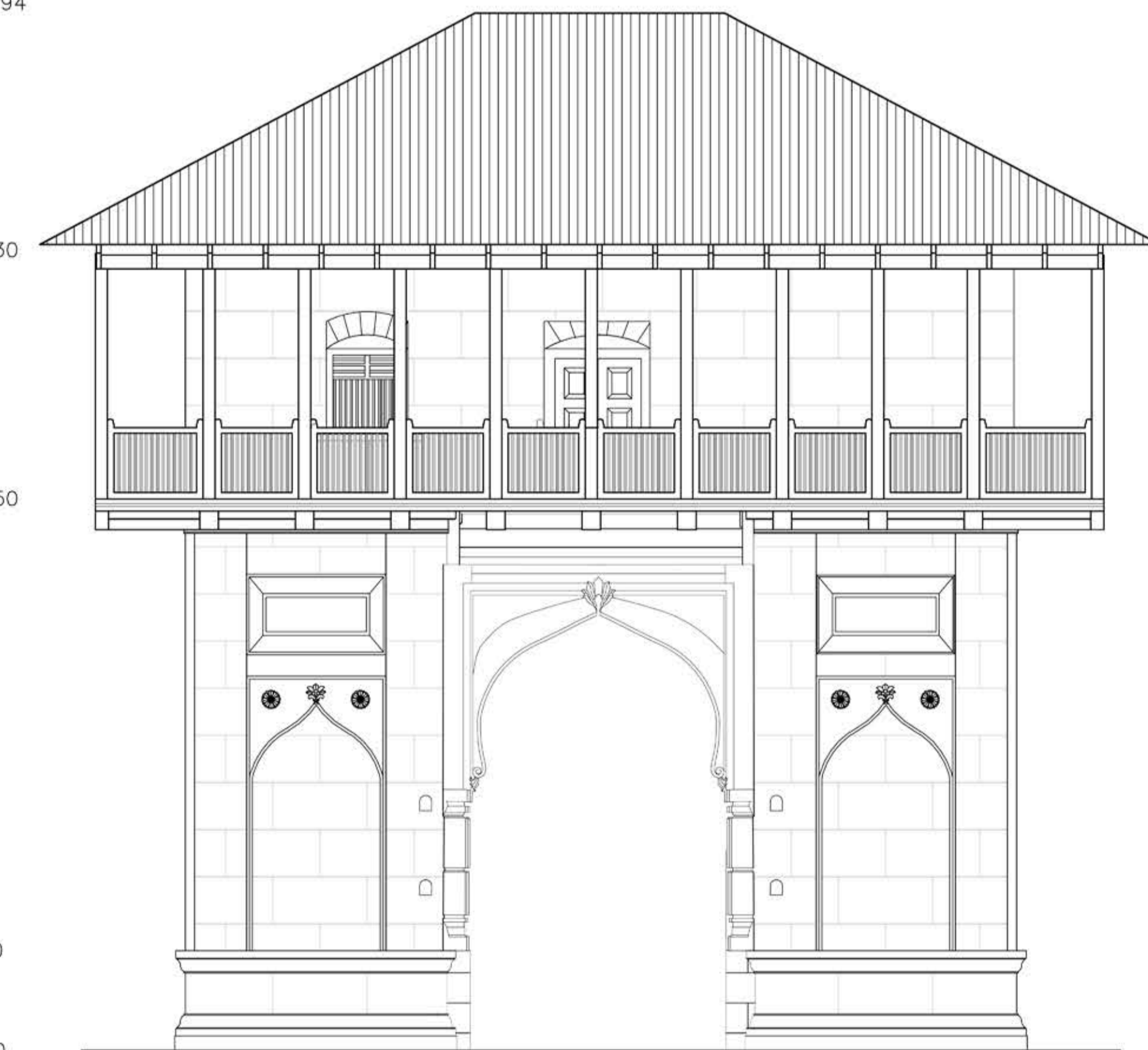
SECTION AA SCALE:- 1:50



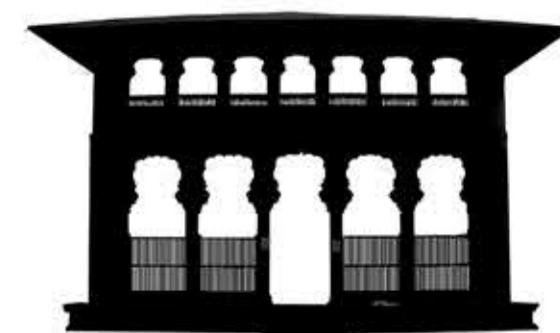
SECTION BB SCALE:- 1:50



FRONT ELEVATION SCALE :- 1:50



BACK ELEVATION SCALE :- 1:50



# SHREE MOUNI MAHARAJ SAMADHI

LOUIS.I.KAHN TROPHY 2019-20

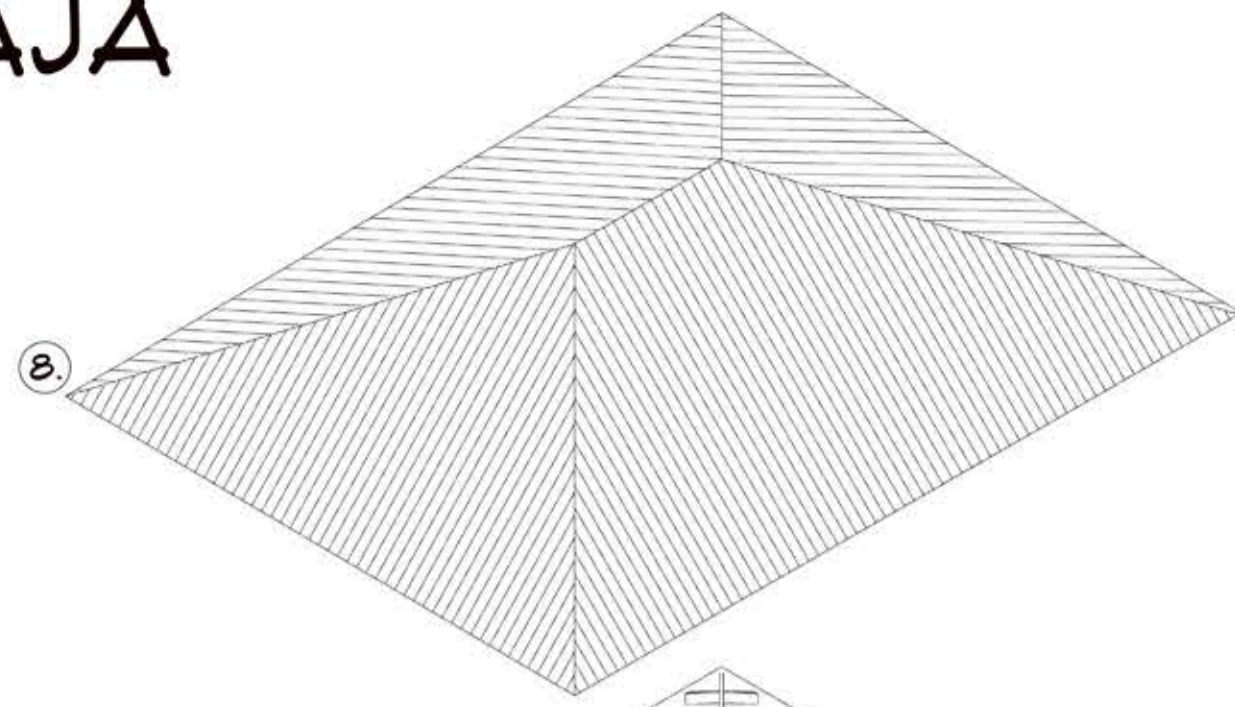


# MAHADARWAJA

## CONSTRUCTION PROCESS:

### ROOFING

THE ROOF IS SUPPORTED BY THE PRINCIPLE RAFTER, FURLIN AND KING POST. THE SPACING BETWEEN BATTEN IS DECIDED BY THE SIZE OF THE CORRUGATED SHEET.



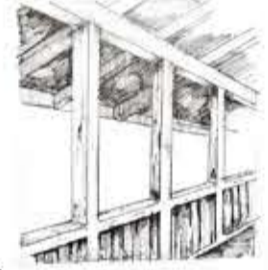
### OPENINGS

SEGMENTAL ARCH PROVIDED AS NON-MONOLITHIC LINTELS ON WINDOWS OR DOORS.



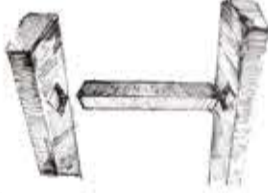
### BEAM-COLUMN JUNCTION

BEAMS ARE RESTED ON THE COLUMNS AND BOTH ARE FIXED BY TENON AND MORTISE JOINT.



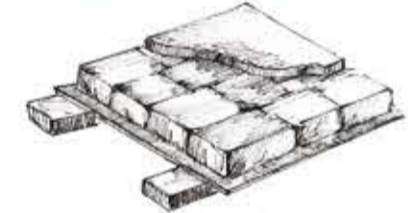
### RAILING

THE BALUSTRADE ARE FIXED IN HANDRAIL AND BASERAIL BY TENON AND MORTISE JOINT. THE BASE RAIL IS SECURED TO THE GROUND WITH A CENTRAL BOLT.



### SLABS

SLAB CONSISTS OF A GRID OF GIRDERS AND JOIST ON WHICH BRICK BAT COBA IS LAID. THERE IS AN RAMMED EARTH LAYER ABOVE BRICK BAT COBA.



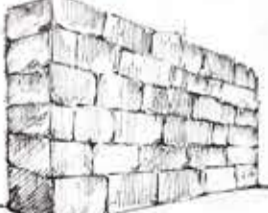
### TIMBER STAIRCASE

A STAIR STRINGER IS THE HOUSING ON EITHER SIDE OF A FLIGHT OF STAIRS INTO WHICH THE TREADS AND RISERS ARE FIXED AND WILL HAVE TWO STRINGERS ON EITHER SIDE OF THE STEPS.



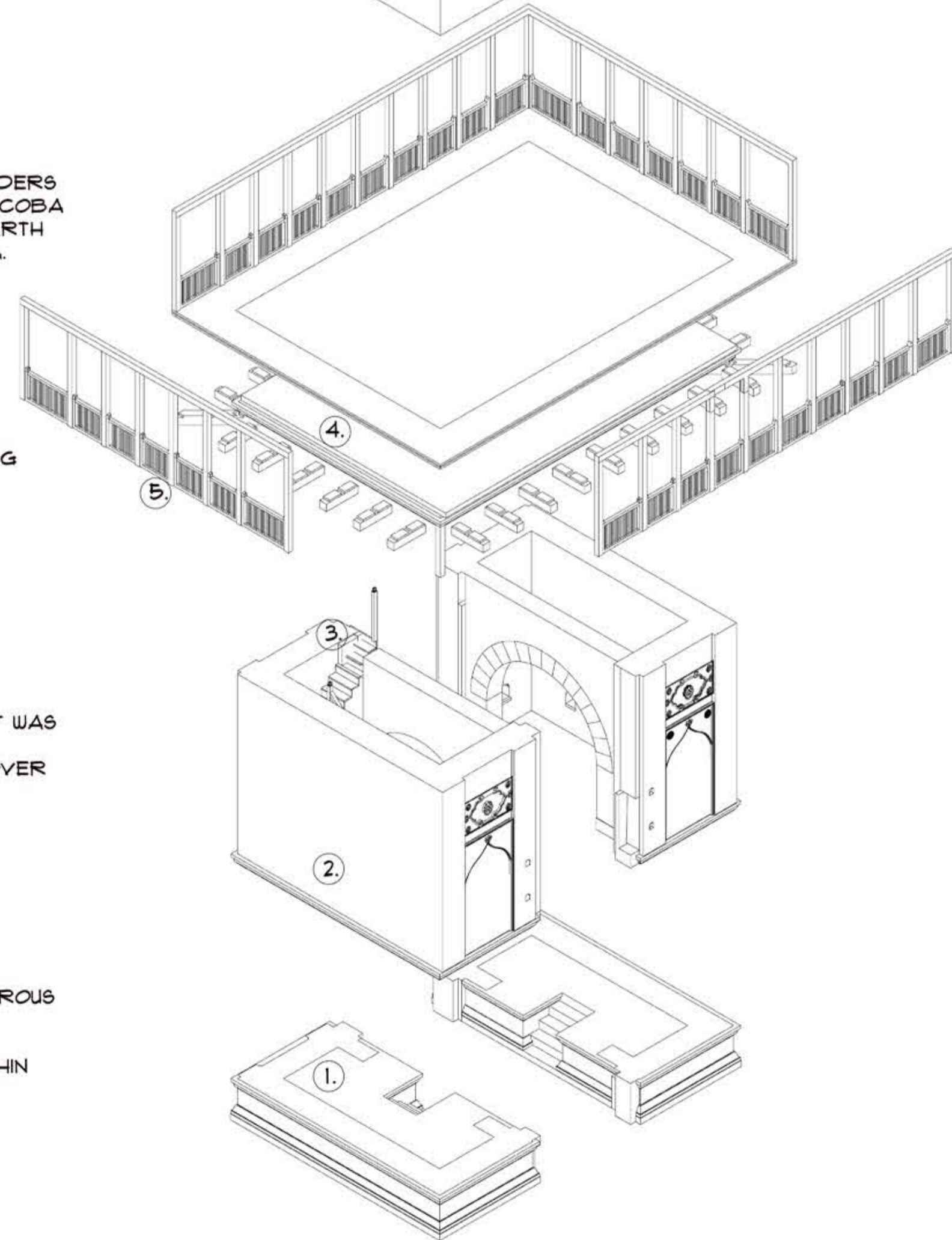
### WALLS

A LOAD BEARING WALL OF 3 FEET WAS CONSTRUCTED OUT OF DRESSED CALCAREOUS SANDSTONE LAID OVER THIN LAYER OF LIME MORTAR.



### PLINTH

PLINTH WAS MADE OUT OF CALCEROUS ROCKS WHICH WAS AVAILABLE IN JYOTIBA HILLS. THESE ROCKS WERE LAID ON A THIN LAYER OF LIMESTONE MORTAR. UPTO TO A HEIGHT OF 1.1M.



### ARCH

THE ARCH WAS MASSIVE IN SIZE SO AS TO ALLOW THE ELEPHANTS AND HORSES TO MOVE THROUGH EASILY.

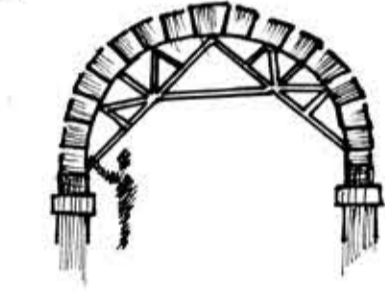
### FORMATION OF ARCH:-



1. THE STONES ARE PLACED IN THE MOULD. THIS PROCESS IS DONE ON THE GROUND.

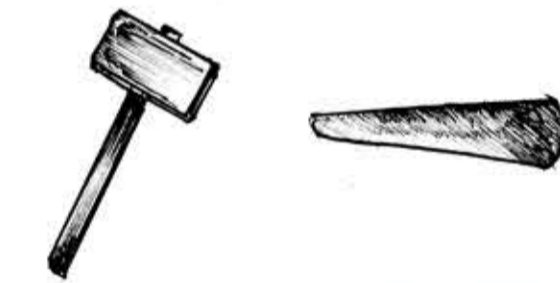


2. WOODEN FORMWORK IS BUILT.



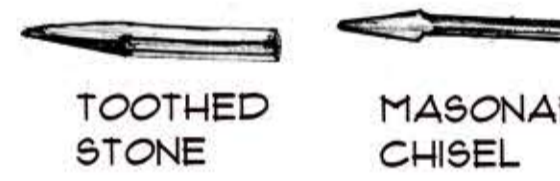
3. IN THIS FORMWORK THE STONES ARE PLACED.

### TOOLS TO CARVE THE STONE



CLUB HAMMER

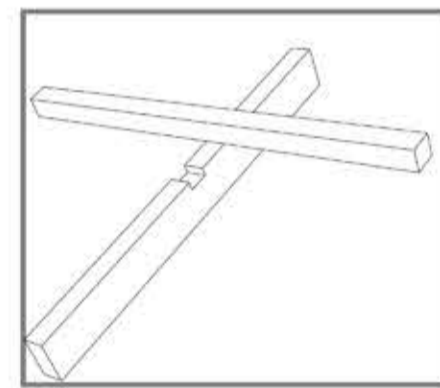
DIAMOND CHISEL



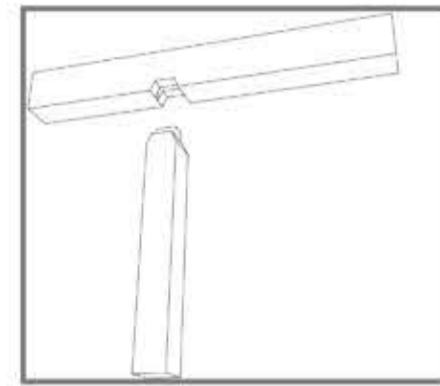
TOOTHED STONE

MASONRY CHISEL

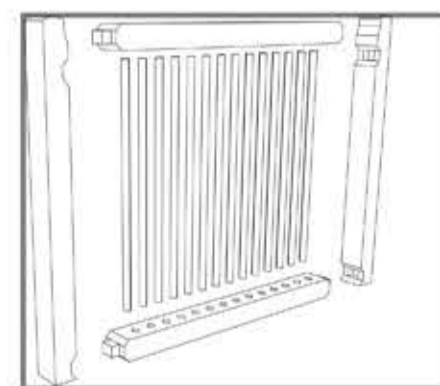
### JOINERIES



IT IS THE UPPERMOST JOINERY USED IN TRUSSES. THE BATTENS ARE ATTACHED TO THE RAFTERS USING FULL LAP JOINT.



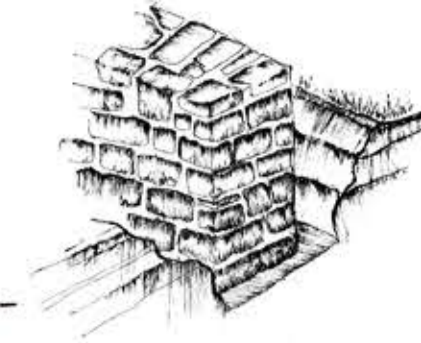
THIS KIND OF JOINERY IS USED IN CONTINUOUS BEAMS. THE LOAD OF THE TRUSS IS TRANSFERRED TO THE COLUMN THROUGH THE BEAMS. THE JOINERY IS CHAMFERED TO MAKE THE STRUCTURE STIFF.



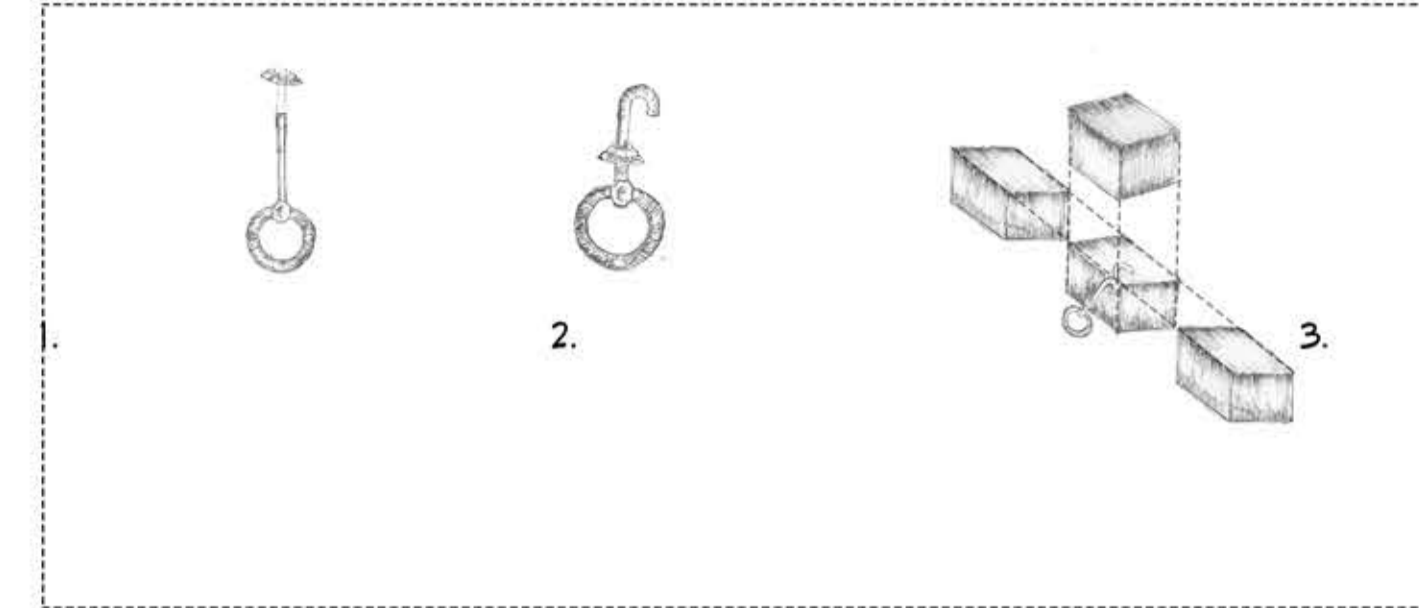
COMBINATION OF RAILING CONSISTS OF TOP AND BOTTOM RAIL ALONG WITH TWO SIDE STYLES. BALUSTERS ARE ENGROVED INTO TOP AND BOTTOM RAIL BY TENON AND MORTISE JOINT. FOR BETTER RIGIDITY THESE JOINTS ARE CHAMFERED.

### FOUNDATION

THE FOUNDATION IN THOSE DAYS WAS DONE BY DIGGING A TRENCH WHICH WAS FILLED IN WITH BOULDERS.

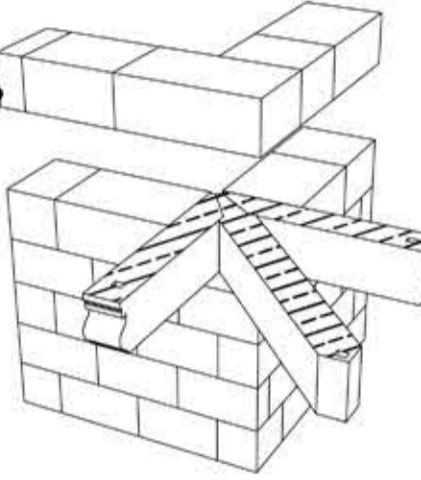


THE BOULDERS WERE GROUTED WITH RAMMED EARTH. TO MAKE THE SOIL COMPACT WATER WAS SPRINKLED AT LAST.

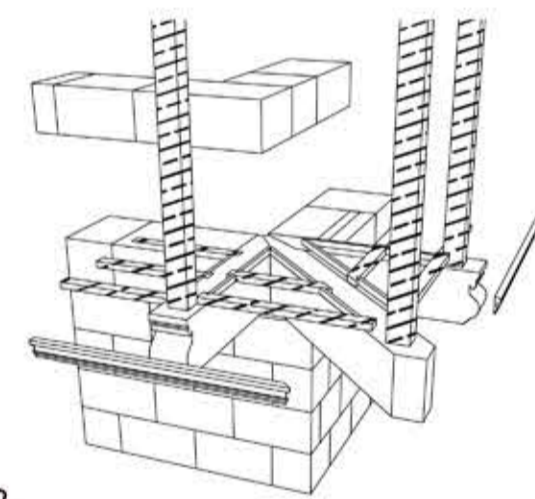


### BALCONY

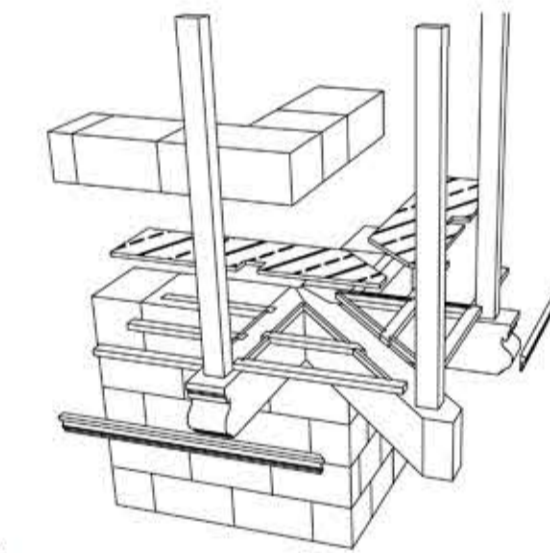
THE GIRDER EXTENDED FOR THE BALCONY IS SUPPORTED BY THE WALL ACTING AS A COUNTERWEIGHT.



1. THE BEAMS ARE DIRECTLY INSERTED IN THE WALLS BY PROVIDING SUPPORT ON THREE SIDES HENCE GIVING MORE CANTILEVER WITH LESS OVERLAP.



2. WOODEN PLANKS ARE LAID OVER BATTENS ON WHICH A LAYER OF RAMMED EARTH IS LAID WHICH IS FINISHED BY COWDUNG.



3. WOODEN PLANKS ARE LAID OVER BATTENS ON WHICH A LAYER OF RAMMED EARTH IS LAID WHICH IS FINISHED BY COWDUNG.

CORRUGATED SHEET (2400 x 1200)

FURLIN (100 x 100)

PRINCIPLE RAFTER (80 x 100)

BEAM (110 x 100)

TIMBER POST (100 x 100)

BALUSTRADE (170 x 40 MM)

CALCEROUS SANDSTONE WALL (100 MM THICK)

MUD PLASTER

BRICK BAT COBA (15 MM THICK)

WOODEN PLANKS (300 x 300)

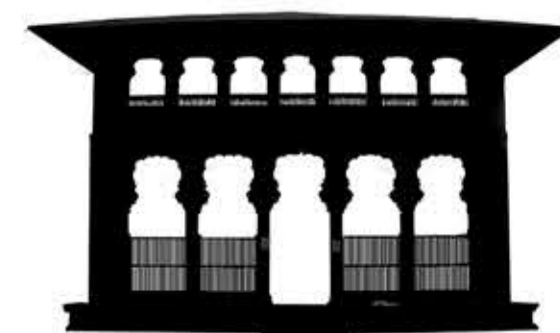
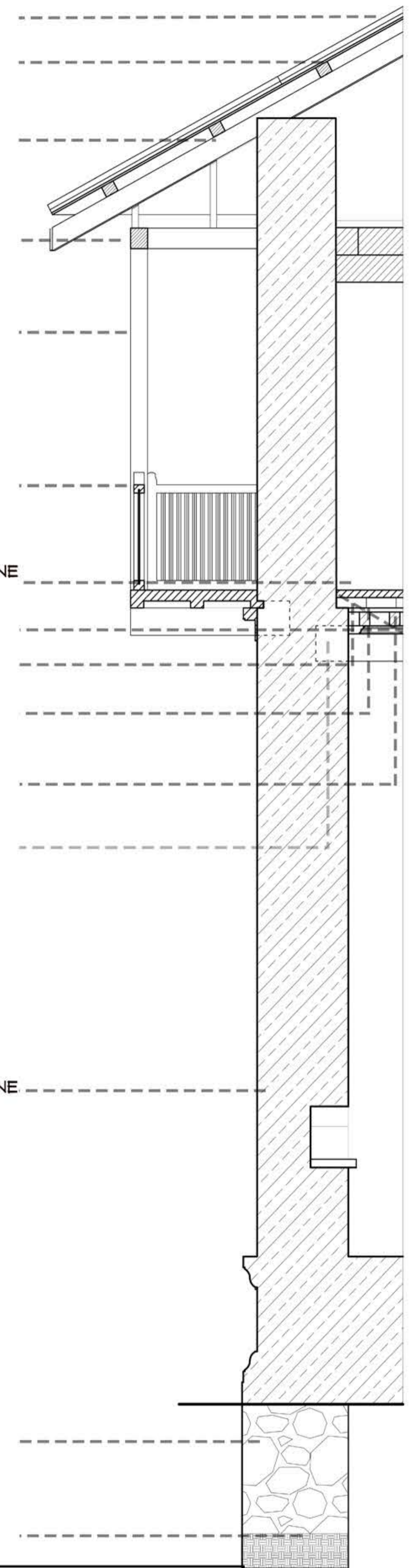
JOIST (80 x 100)

GIRDER (170 x 200)

CALCEROUS SANDSTONE WALL (150 MM THICK)

BASALT STONE

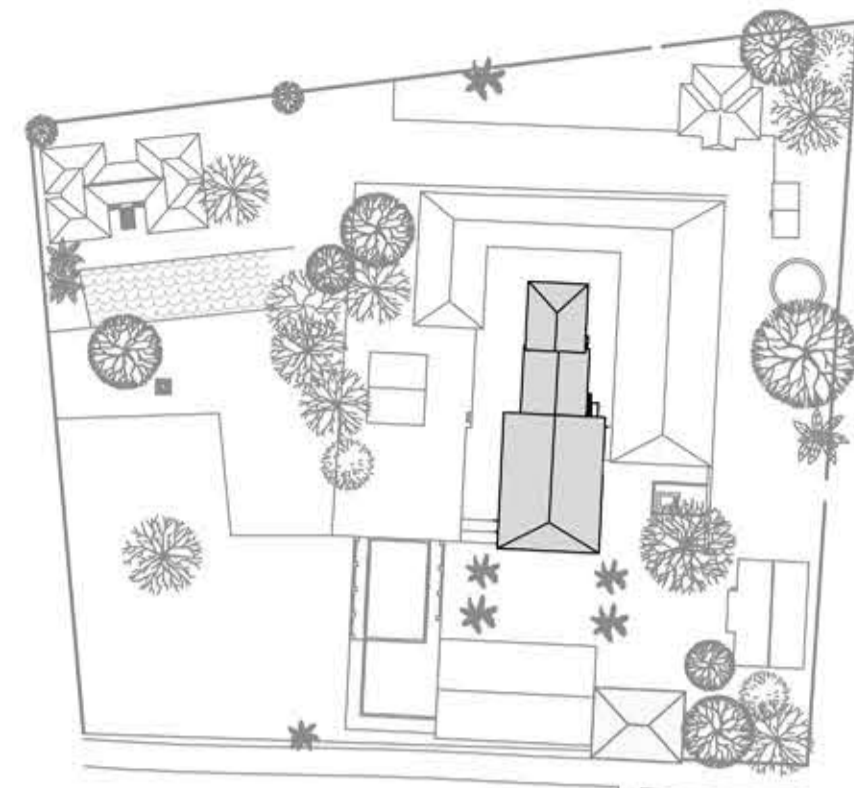
RAMMED EARTH



# SABHA MANDAPA

## INTRODUCTION

TOTAL AREA :- 508.63 SQ.M  
 SABHAMANDAP WHICH MEANS A 'GATHERING HALL' WAS BUILT AS AN EXTENSION OF THE SAMADHI MANDIR.  
 - IT WAS BUILT BY RAMGIRI UNDER BRITISH ORDERS IN 1814.  
 - IT WAS USED FOR WORSHIPPING ACTIVITIES.  
 - ARCHITECTURAL STYLE: WADA ARCHITECTURE  
 - CENTRE OF SOCIAL GATHERINGS AND RELIGIOUS ACTIVITIES THE UPPER FLOOR WAS USED FOR ROYAL GATHERINGS.  
 DUE TO THESE ACTIVITIES THE STRUCTURE SERVES ITS SEMI SACRED PURPOSE  
 - THE ROYAL FAMILY PERFORMED THEIR WORSHIPPING RITUALS IN ANTRALAYA WHILE THE UPPER



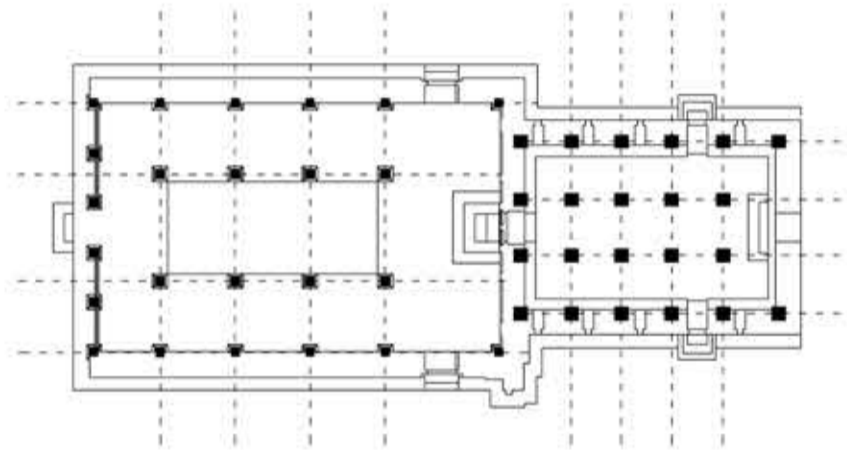
KEY PLAN (SCALE :- 1:1000)



## SPACE FUNCTIONALITY

### COLUMN GRID:

WITHIN THE AVAILABLE LAND AREA, A STRUCTURAL GRID COMPRISING OF A CONFIGURATION OF SQUARE UNITS WAS EXPRESSED IN LOCAL PARLANCE AS KHANN(THE SQUARE GRID) AND GHAAE(THE BAY FORMED BY TWO OR THREE KHANN).



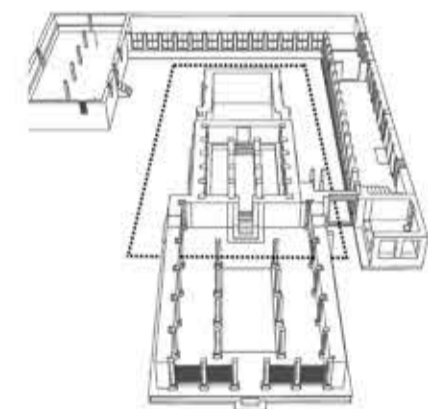
### SPACE FOR CIRCULATION :

HUGE SPACE IS PROVIDED IN THE MIDDLE WHERE BHAJANS ARE PLAYED WITH SIDEWAY CIRCULATION SPACES TO REACH THE ANTRALAYA. ARCHES ERECTED ON THE BEAMS AND COLUMNS AT THE ENTRY AND EXIT POINTS.



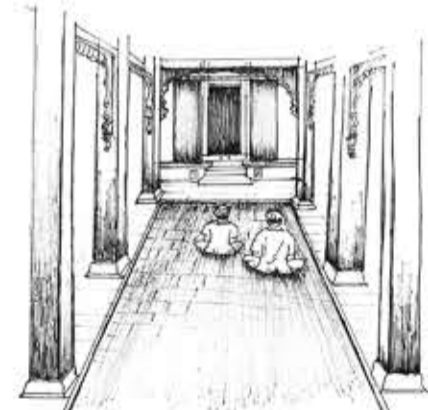
### PRADIKSHANA PATH

THE DOOR IN THE ANTRALAYA AND SABHA MANDAPA ACT AS ENTRY AND EXIT POINT OF THE PRADIKSHANA PATH, WHOSE CIRCULATION IS ALWAYS IN CLOCKWISE DIRECTION.



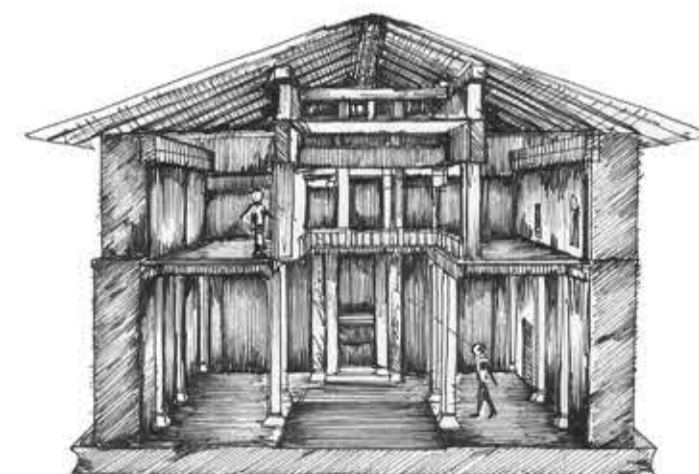
### TILE DROP IN CENTRE:

DROP OF 100MM CREATED IN CENTRE OF SABHA MANDAP FOR SEPARATION OF CIRCULATION SPACES. IT SEGREGATE THE FUNCTION OF SPACE CREATING A SITTING SPACE FOR BHAJANS AND WORSHIPS AT THE SAMADHI



### MID-LOCATED DOUBLE HEIGHT SPACE:

THIS SPACE ACTED AS A VISUAL CONNECTION OF THE ROYAL WOMEN AT THE UPPER FLOOR, TO THE ACTIVITIES BELOW.

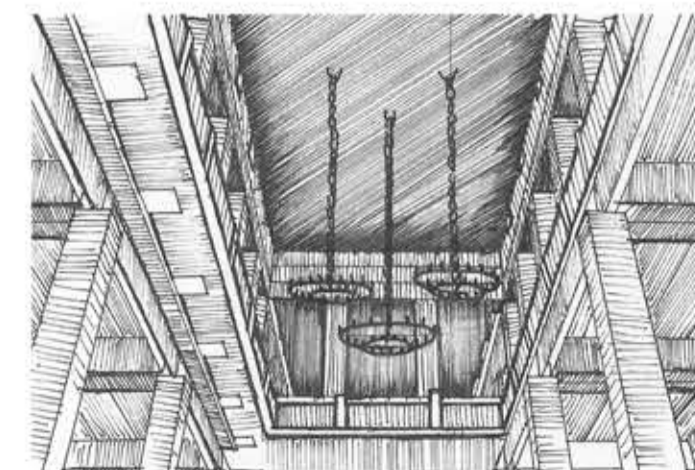


### INCREASED FLOOR TO FLOOR HEIGHT:

THIS INCREASE IN HEIGHT ADDS TO THE GRANDEUR OF THE STRUCTURE AND GIVES A FEELING OF WELCOME TO THE VISITORS.

### FALSE CEILING:

AS THE COPPER SHEETS ON THE ROOF ABSORB HEAT READILY, THE FALSE CEILING PROVIDES HEAT INSULATION TO THE SPACES UNDERNEATH.

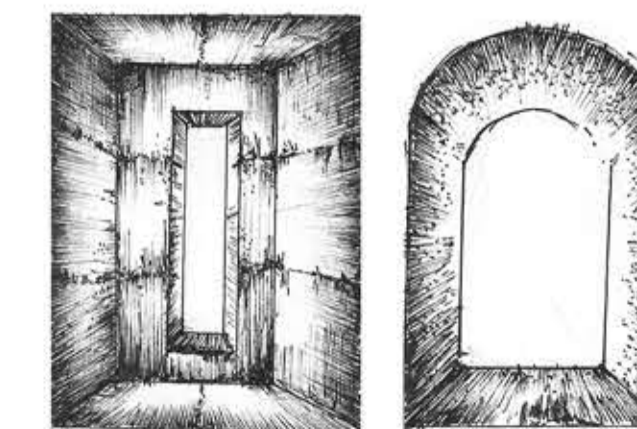


### LIGHTING:

HOOKS PROVIDED IN THE FALSE CEILING TO HANG THE CHANDELIER'S ADORNED WITH LAMPS OR DIYAS.

### VASTU:

PROVISION OF OPENINGS TOWARDS THE EAST CHANNELISES POSITIVE ENERGY THROUGHOUT THE DAY AND DOORS ARE PROVIDED ALONG THE EAST-WEST DIRECTION TO DIRECT THE PRADAKSHINA

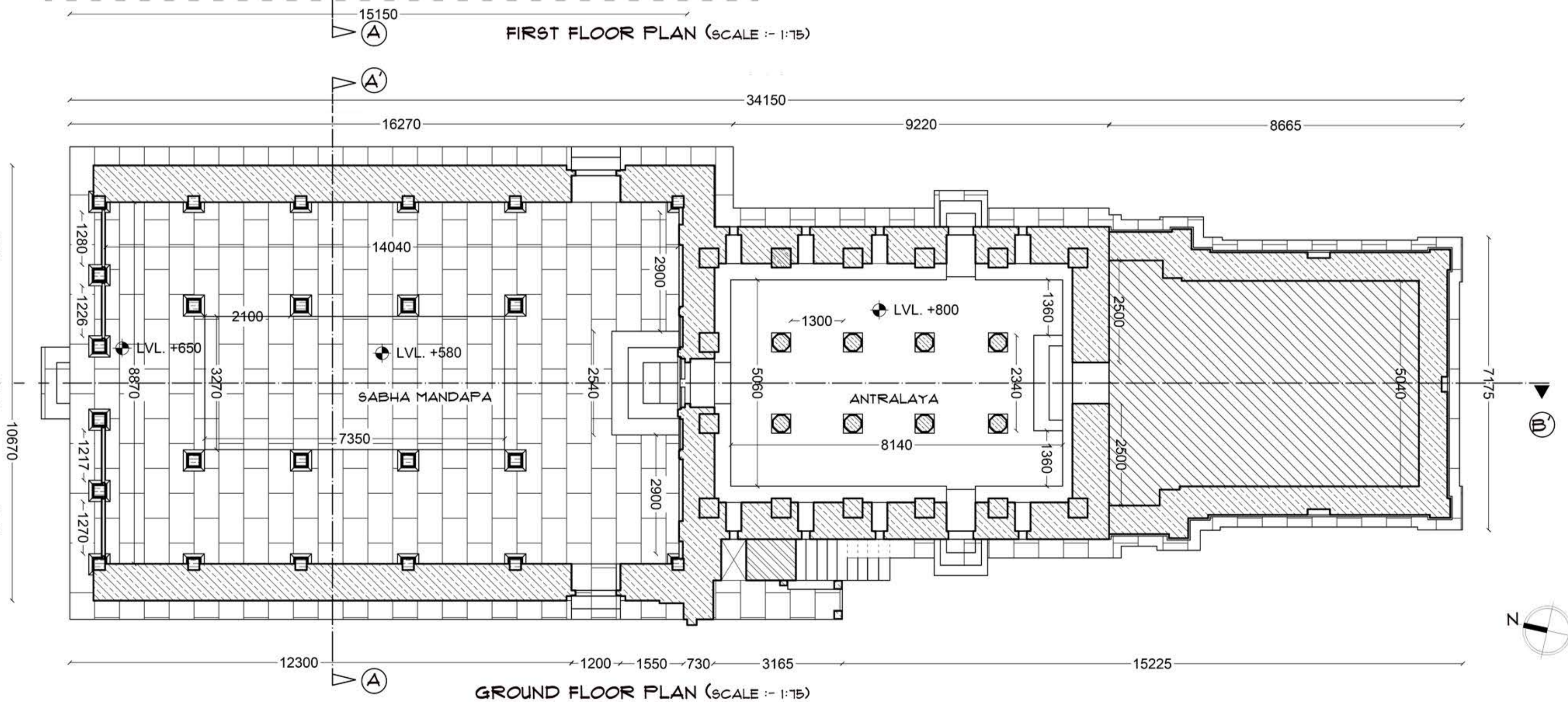
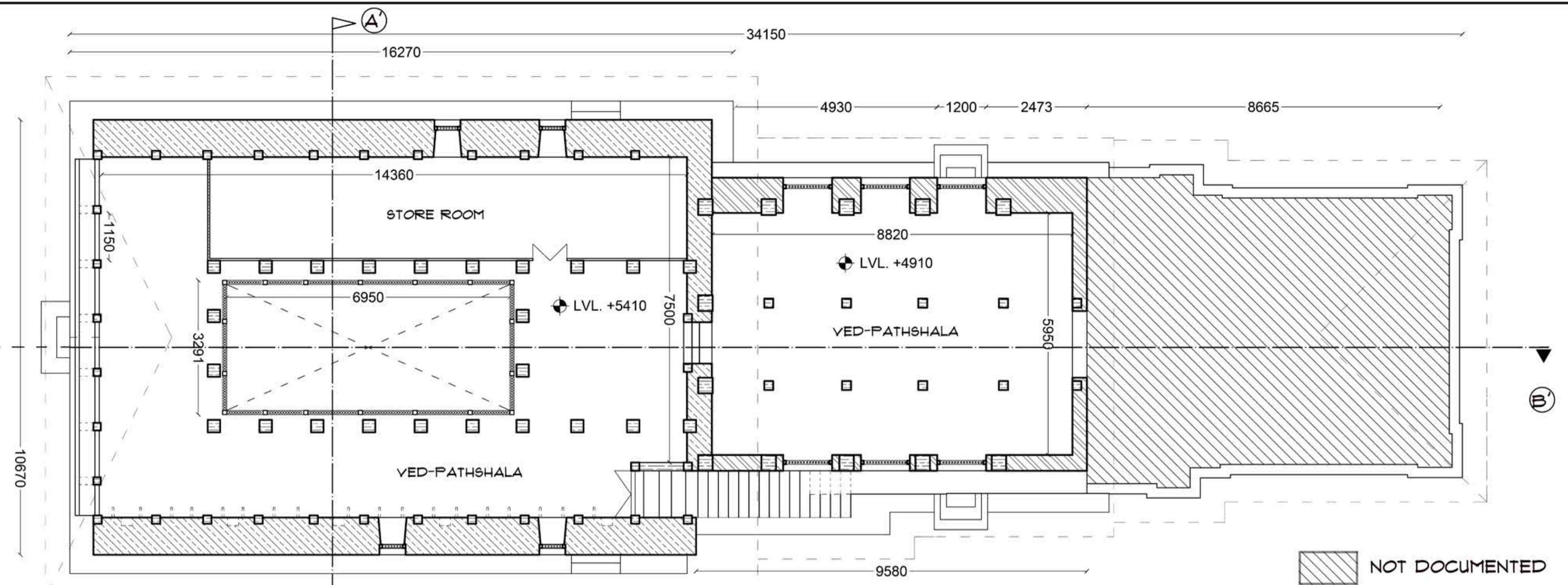
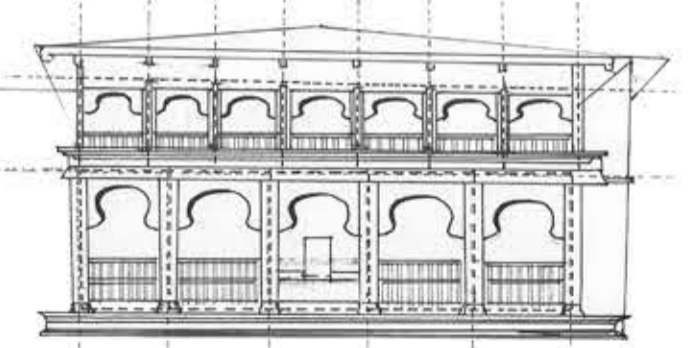


### AXIS:

THE STRUCTURE IS ORIENTED ALONG THE NORTH-SOUTH AXIS.

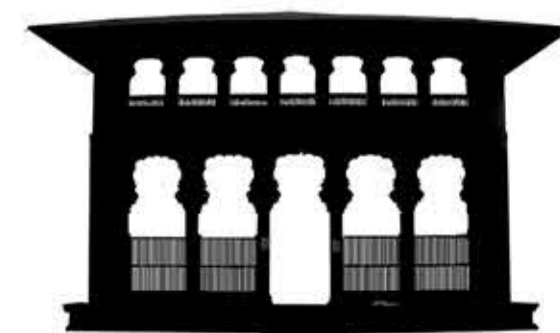
### FACADE DESIGN:

FACADE OF THE BUILDING PROFOUNDLY ECHOES THE STRUCTURAL GRID WHICH CONSISTS OF A SERIES OF BAYS WITHIN WHICH OPENINGS IN THE SHAPE OF ARCHES WERE PUNCTURED.



NOT DOCUMENTED

ALL DIMENSIONS ARE IN MM



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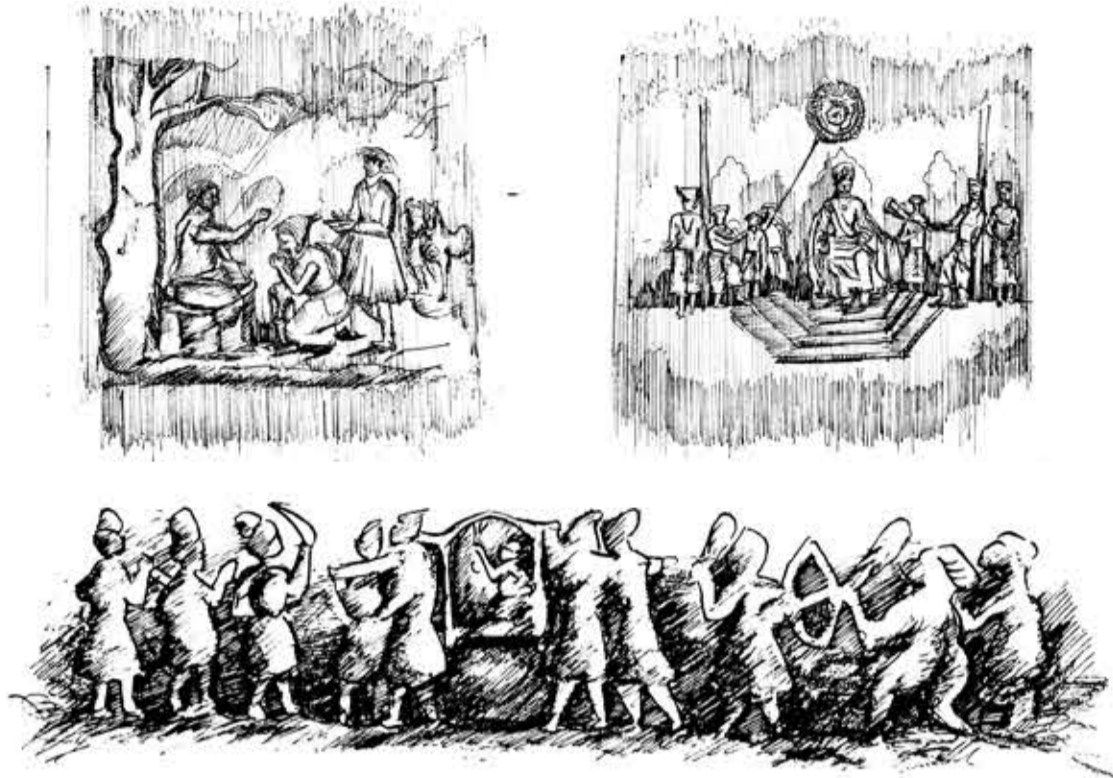
8





# SABHA MANDAPA

THE LATEST MURALS INSTALLED IN THE SABHA MANDAP DEPICTS THE STORY ABOUT CHATRAPATI SHIVAJI MAHARAJA'S LIFE EVENTS.



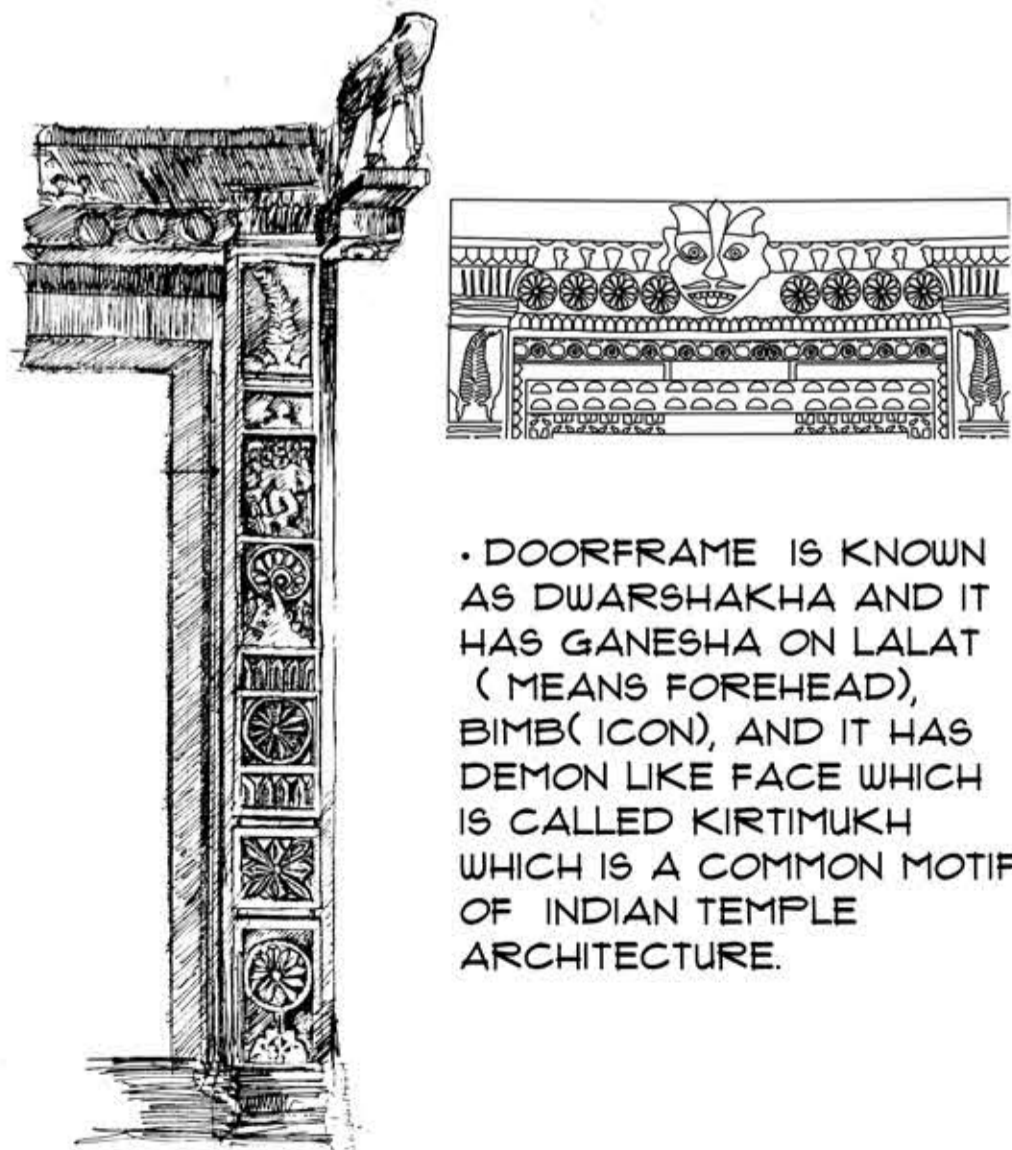
INDIAN HISTORY FLOURISHES IN STORIES OF WARS, TALES OF KING'S LIFE, MYTHOLOGICAL ASSUMPTIONS. THESE WERE USED TO GET REPRESENTED THROUGH CARVING.



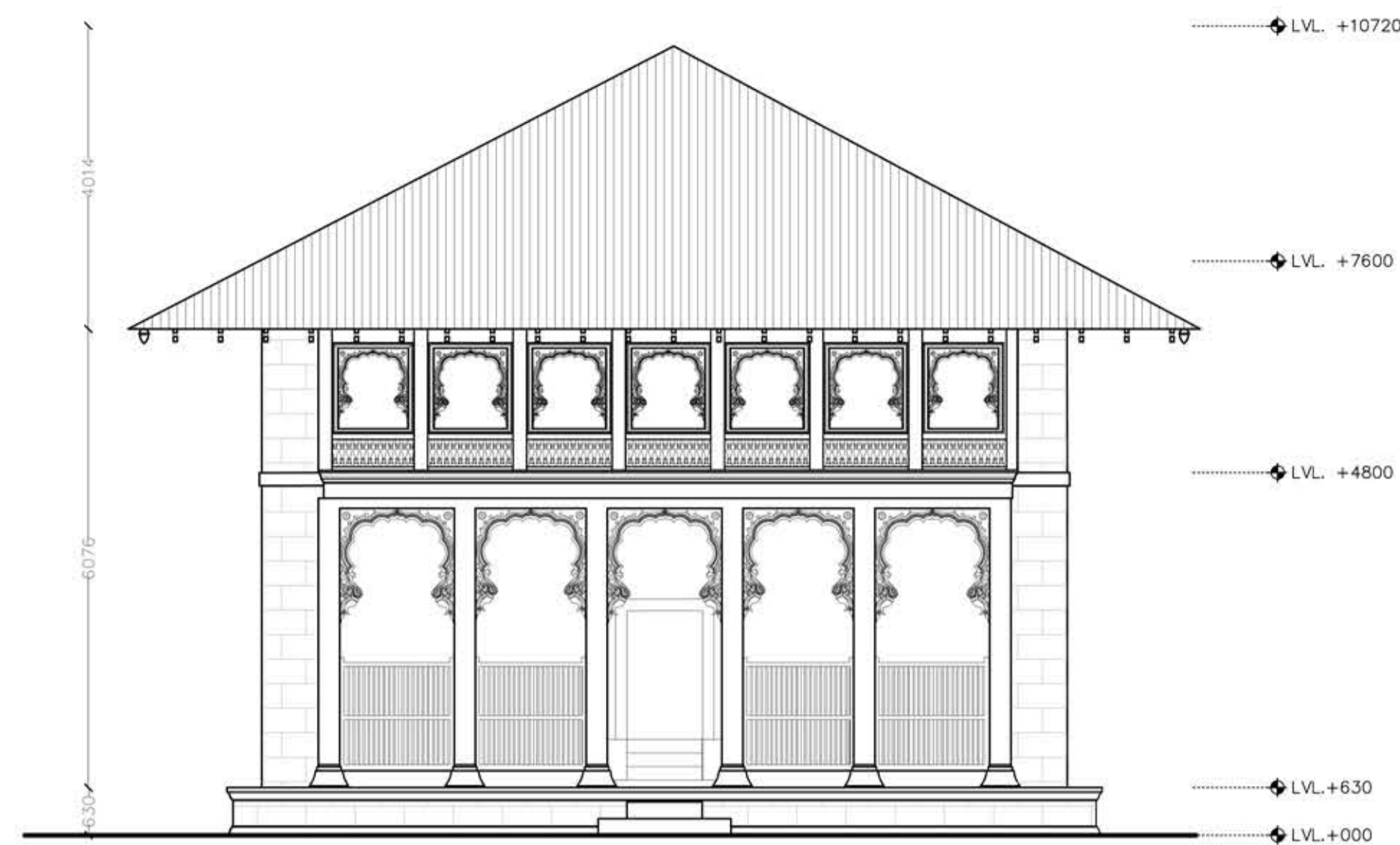
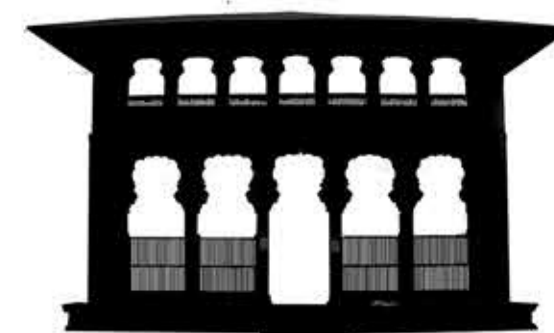
• SHARABHA, A MYTHICAL ANIMAL FOUND HOLDING ELEPHANTS IN ITS TAIL LEGS AND MOUTH. IT IS DEPICTED TO SHOW POWER, DOMINANCE AND WARD OFF EVIL SPIRITS WHICH CAN BE SEEN ON FORT ARCHITECTURE.



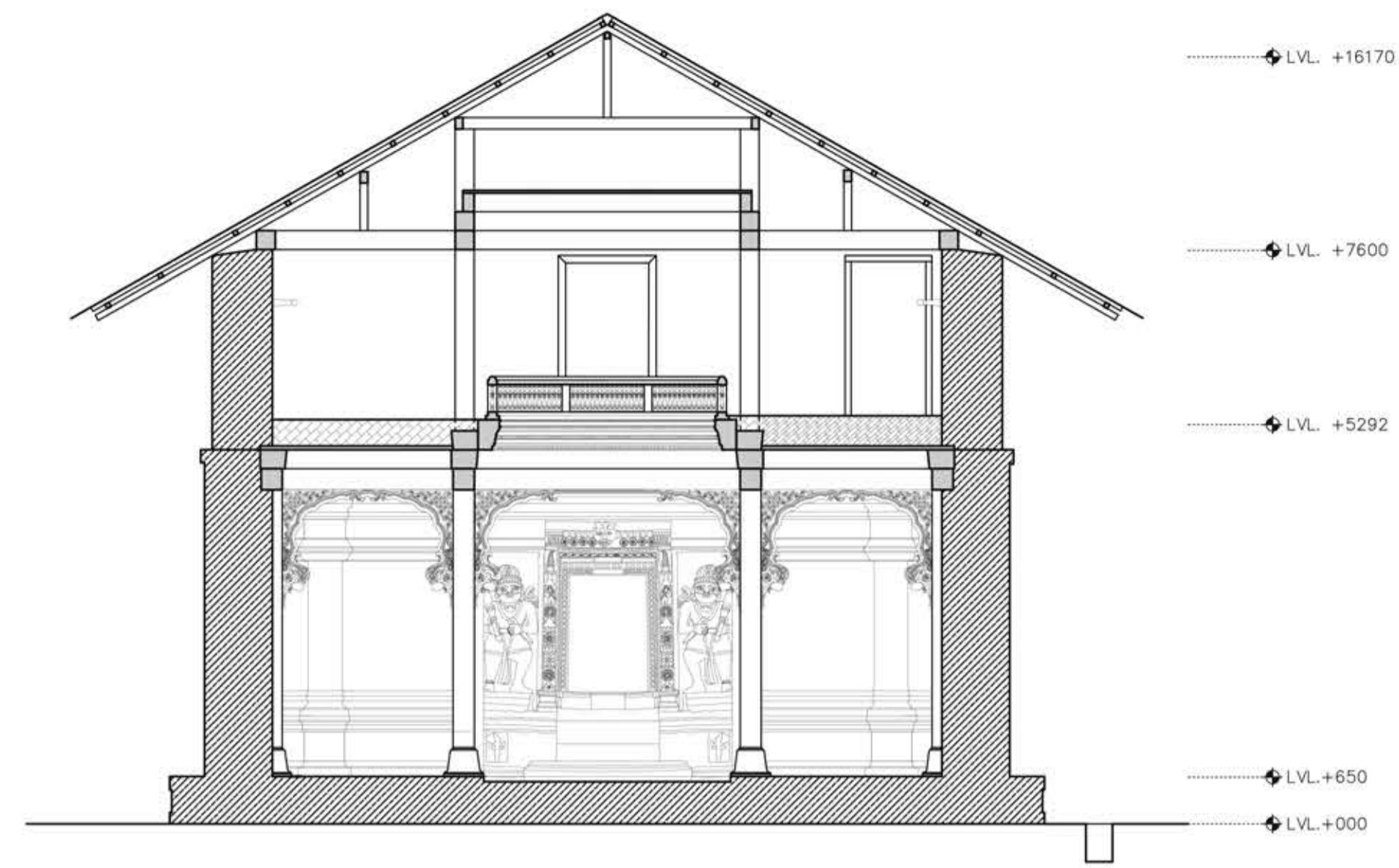
IT IS DEPICTION OF VARIOUS DEITIES. THE THIRD LAST IS KALI AND CORPSE. THERE IS A COW WHICH IS KAMDHENU. BELOW IT IS ANOTHER BAND OF DECORATIONS.



• DOORFRAME IS KNOWN AS DWARSHAKHA AND IT HAS GANESHA ON LALAT ( MEANS FOREHEAD), BIMB ( ICON), AND IT HAS DEMON LIKE FACE WHICH IS CALLED KIRTIMUKH WHICH IS A COMMON MOTIF OF INDIAN TEMPLE ARCHITECTURE.



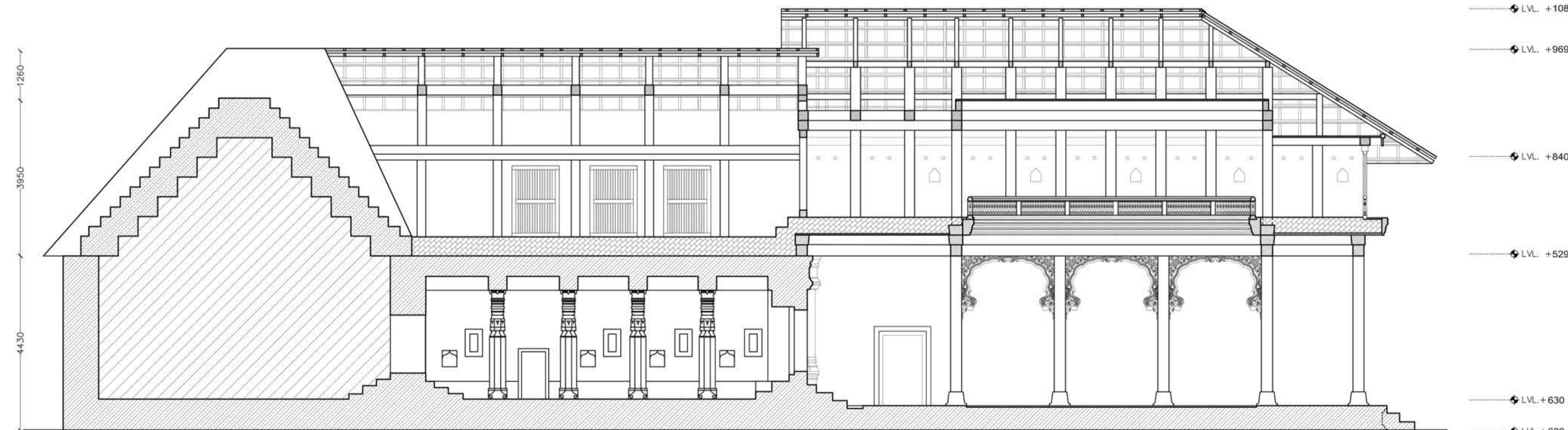
FRONT ELEVATION (SCALE : 1:15)



SECTION AA' (SCALE : 1:15)



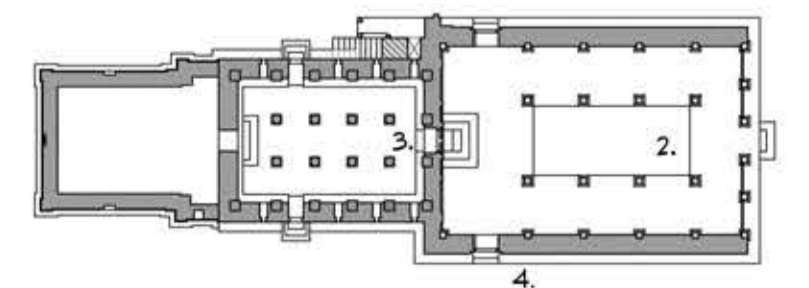
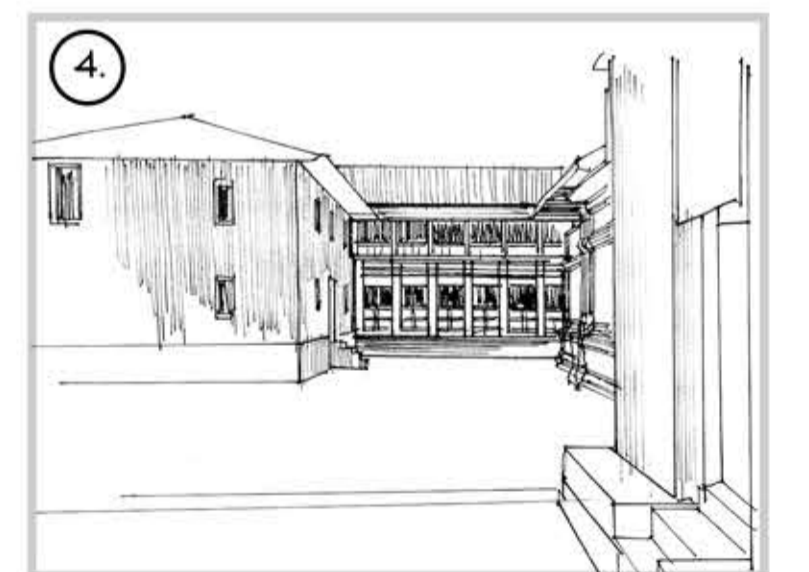
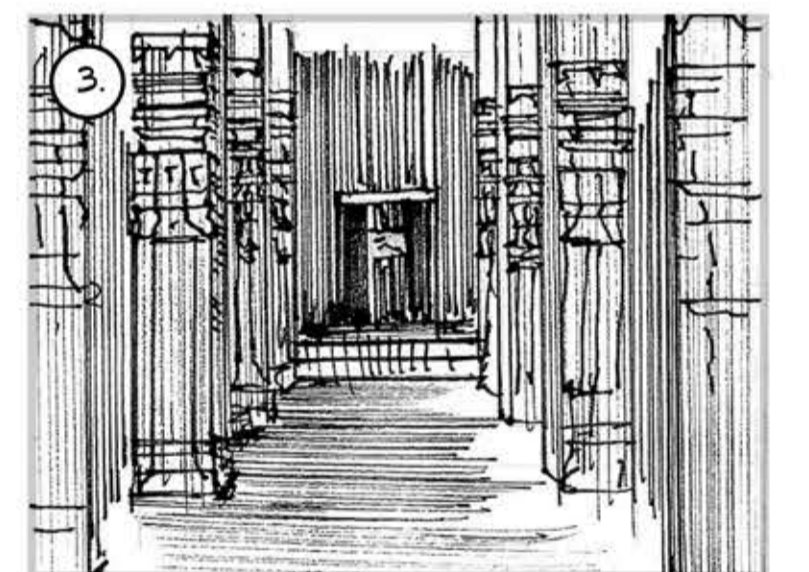
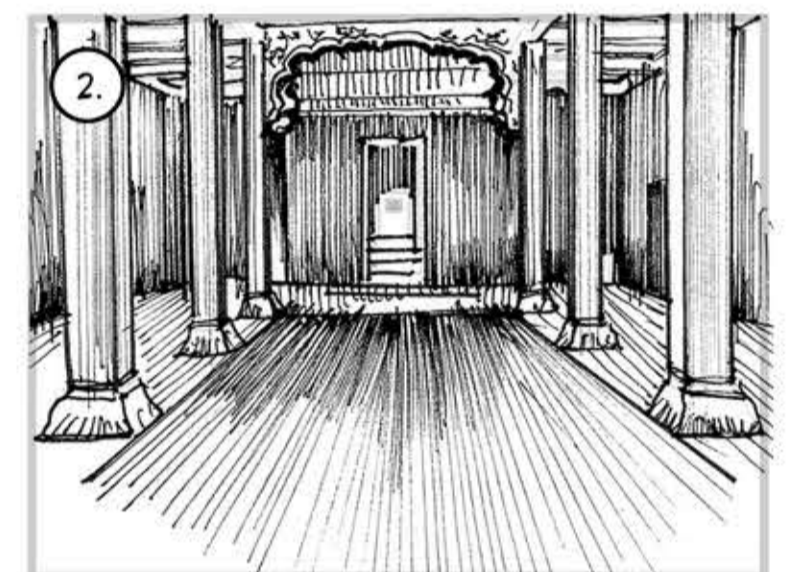
EAST SIDE ELEVATION (SCALE : 1:15)



SECTION BB' (SCALE : 1:15)

## FEATURES OF ANTRALAYA:

- SIZE OF DOORS: SMALLER SIZE OF OPENINGS TO MINIMIZE THE CHANCES OF THREAT.
- SEATING EXTENDED FROM THE WALL.
- SHORTER RAILINGS ON FIRST FLOOR FOR BETTER VISION OF ACTIVITIES TAKING PLACE IN THE GROUND FLOOR.



ALL DIMENSIONS ARE IN MM

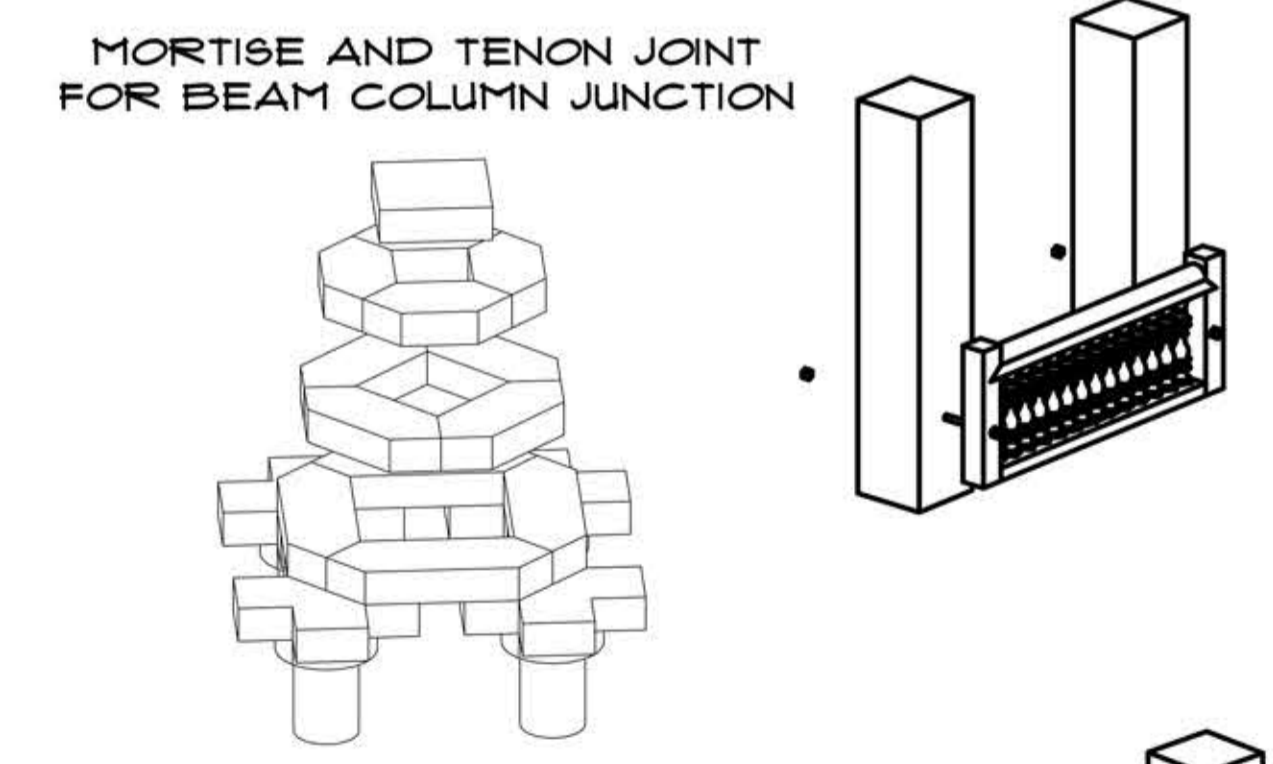
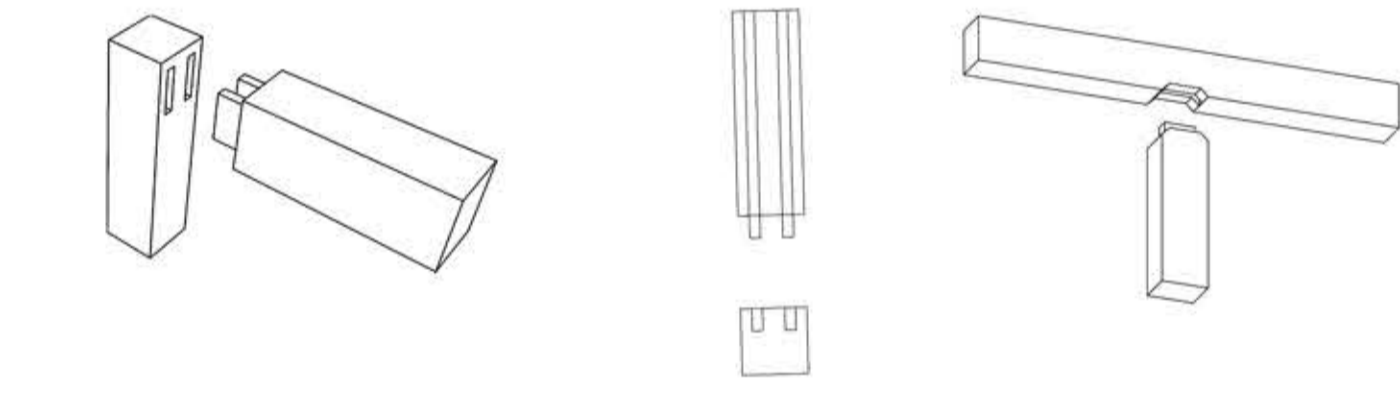
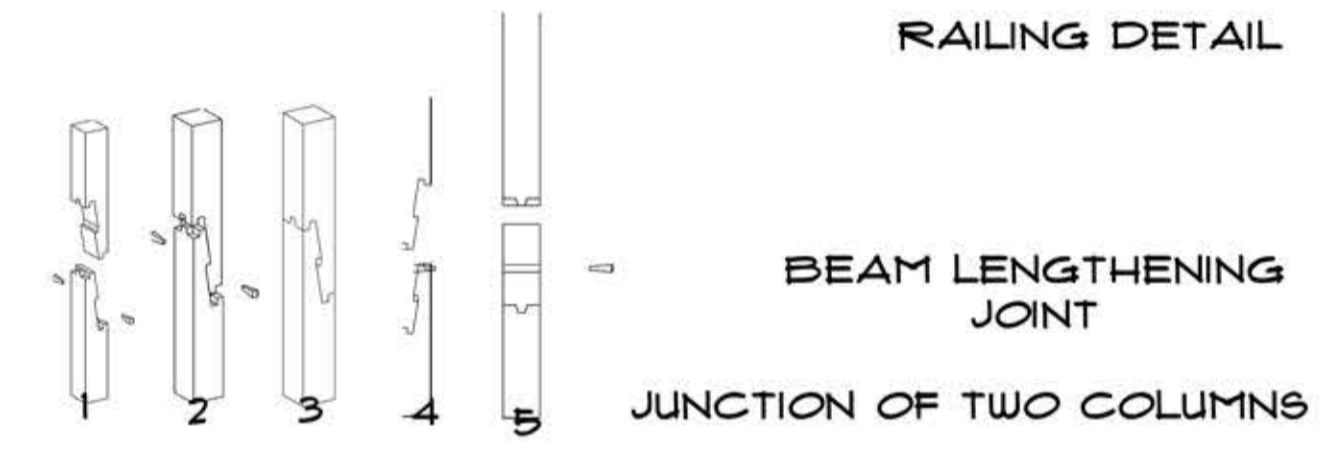
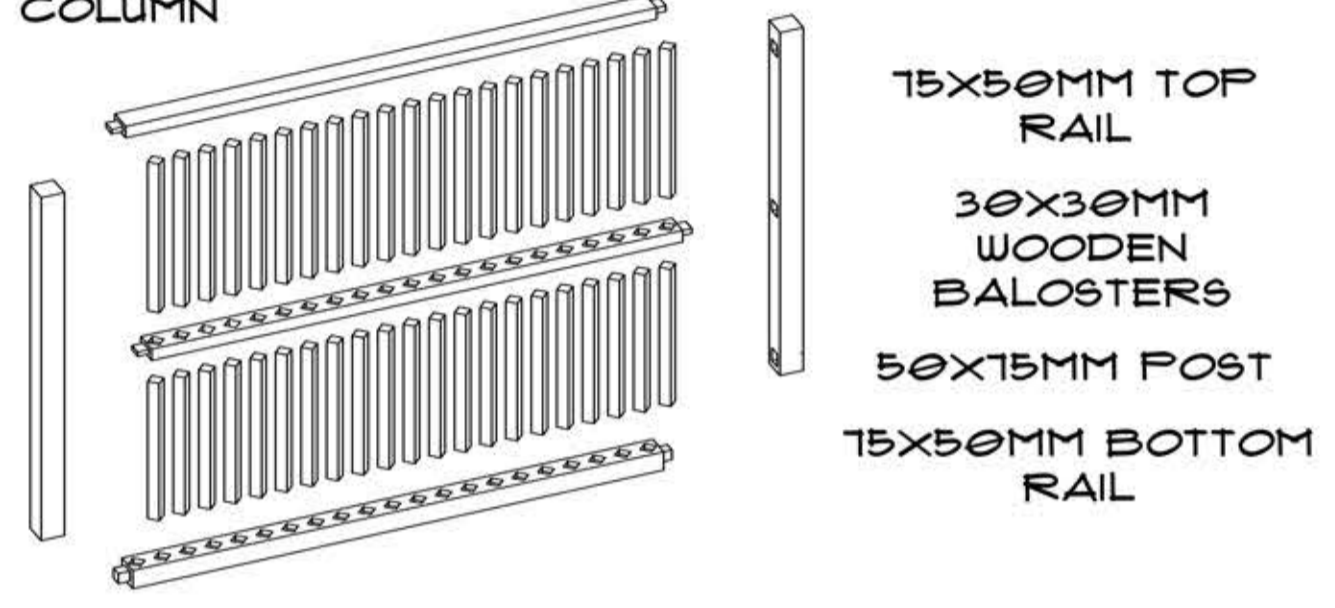
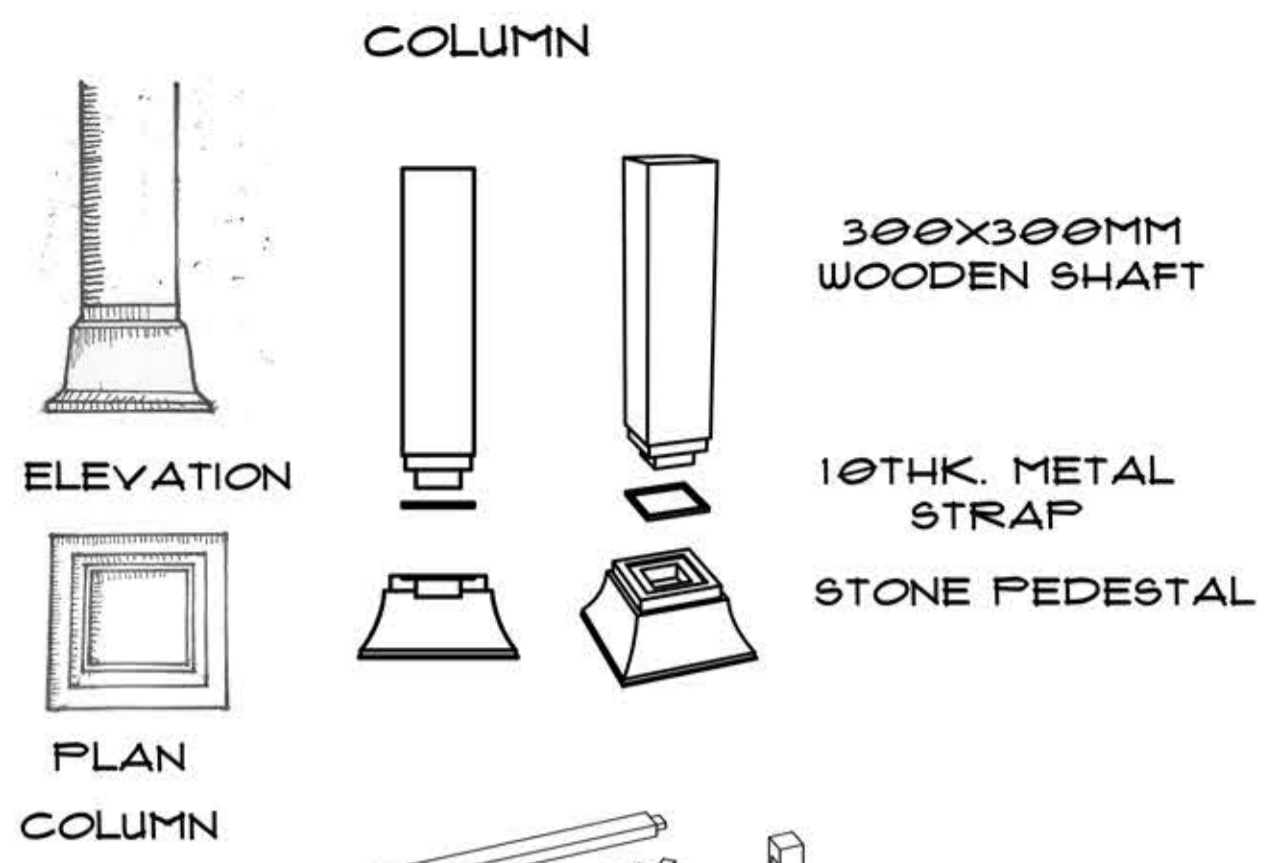
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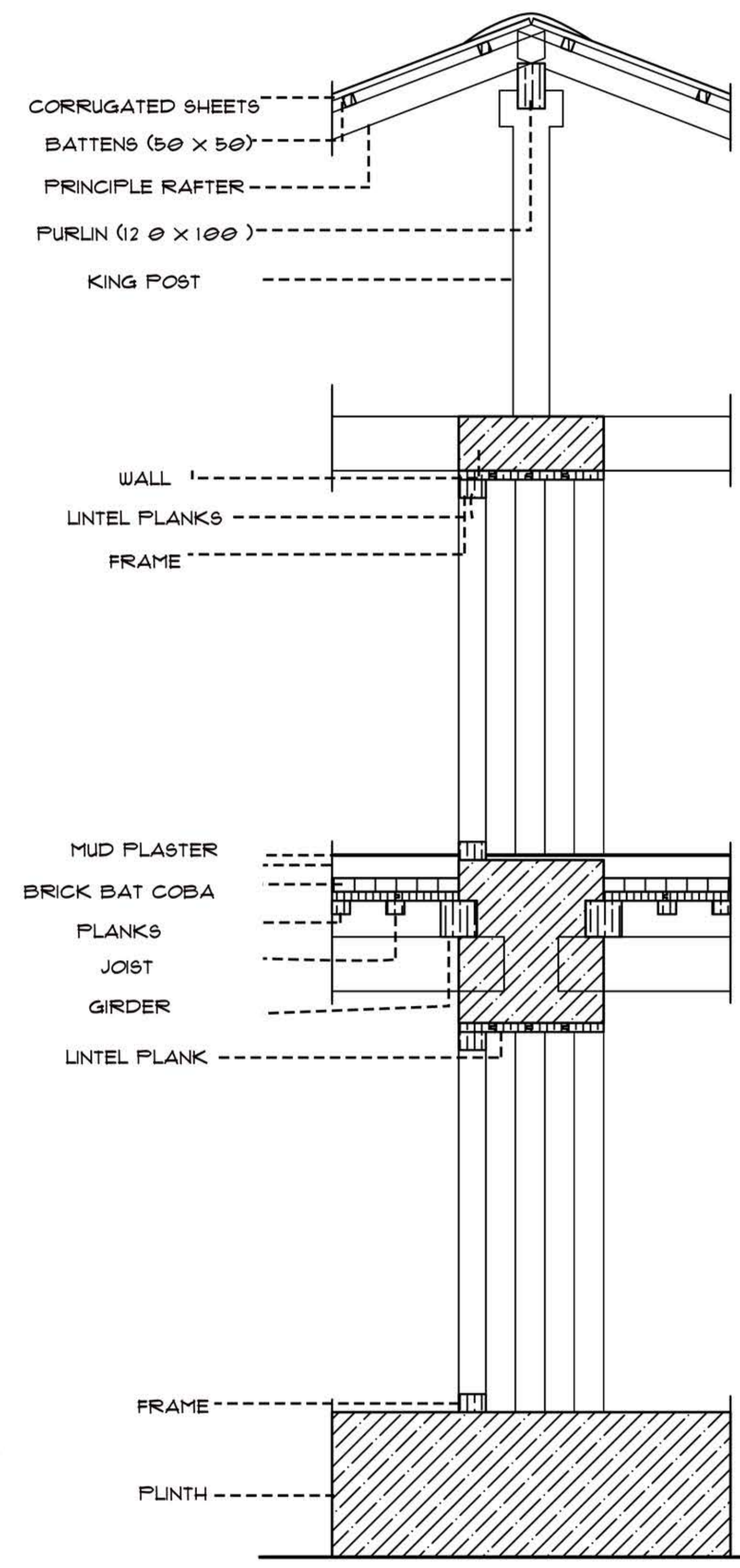
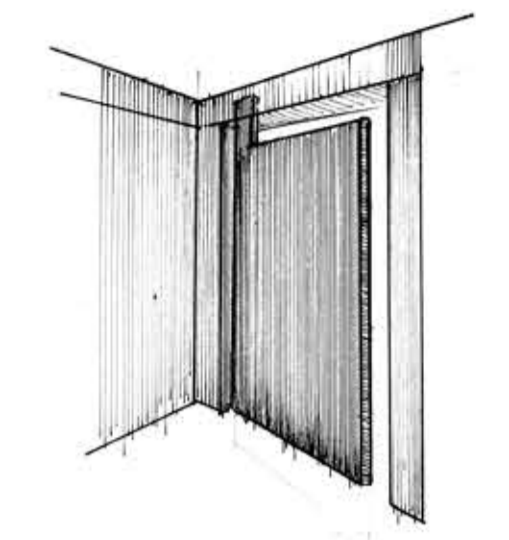
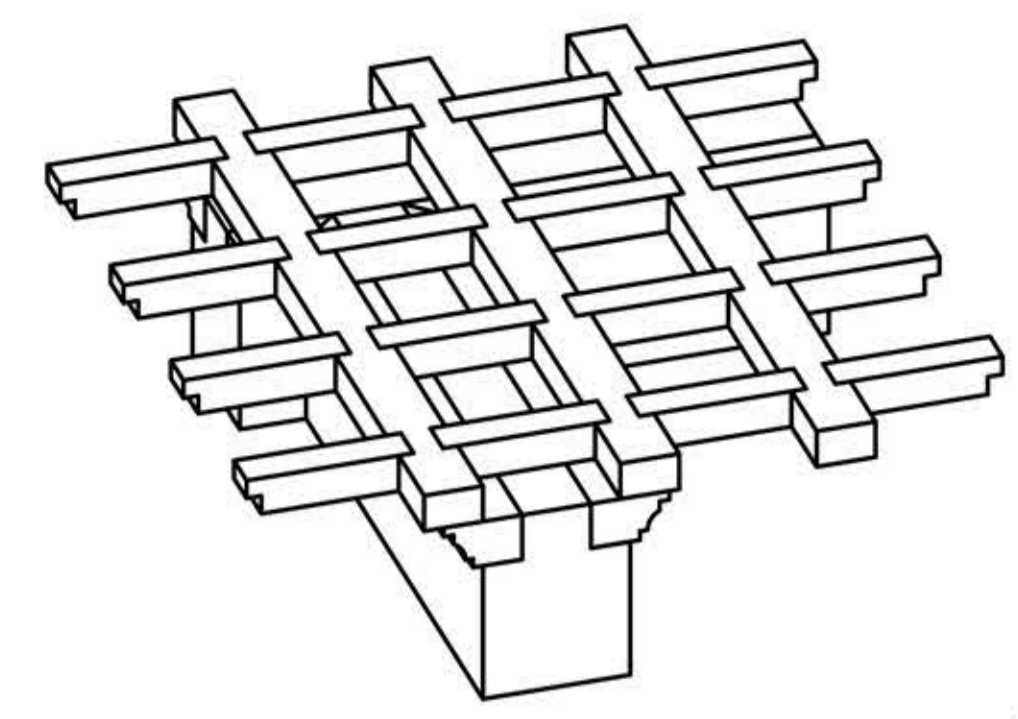
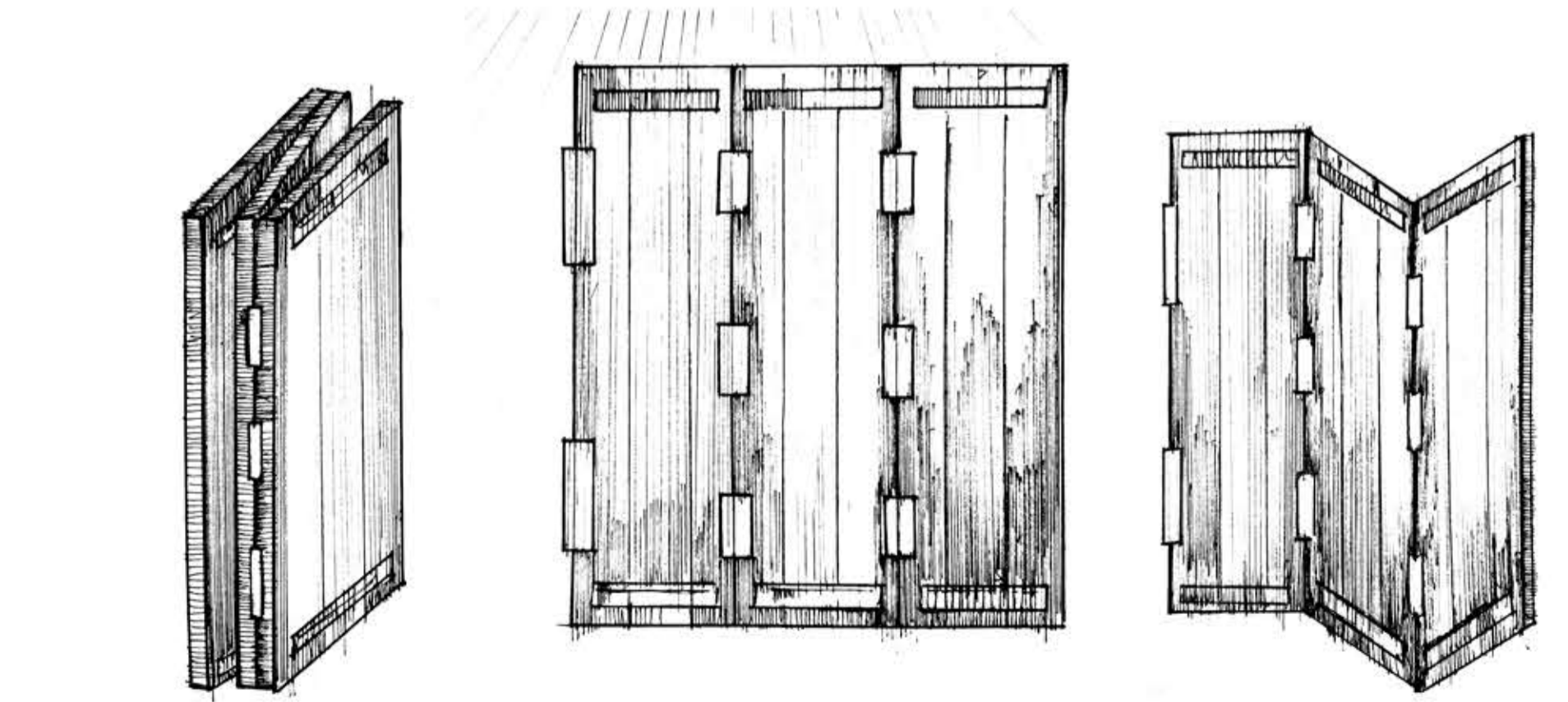
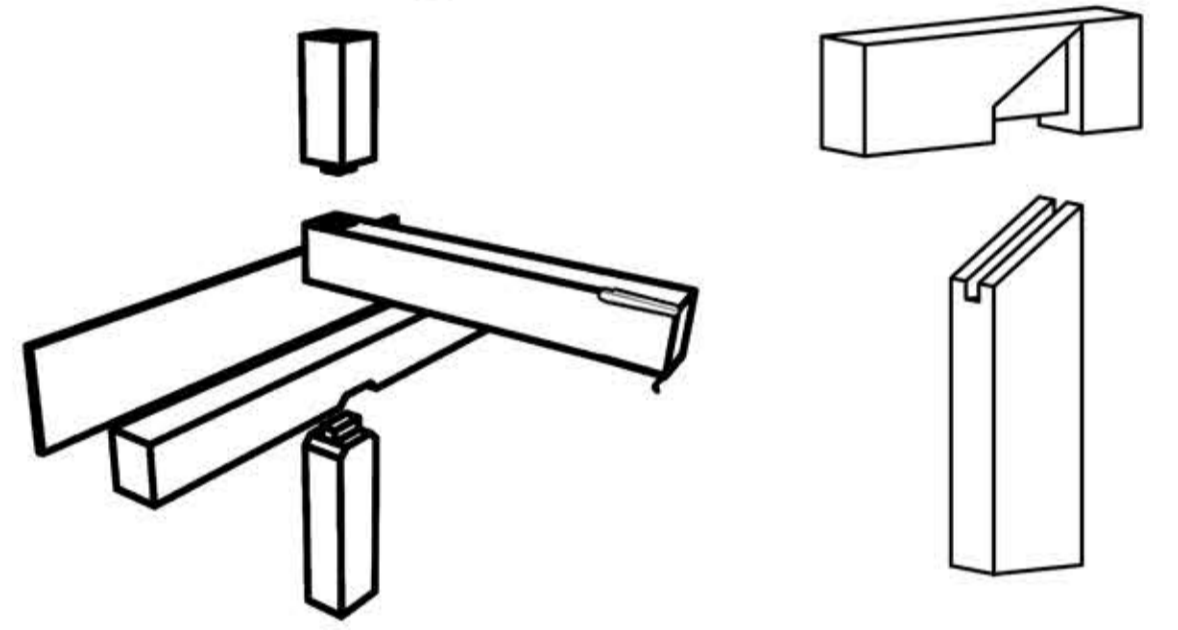
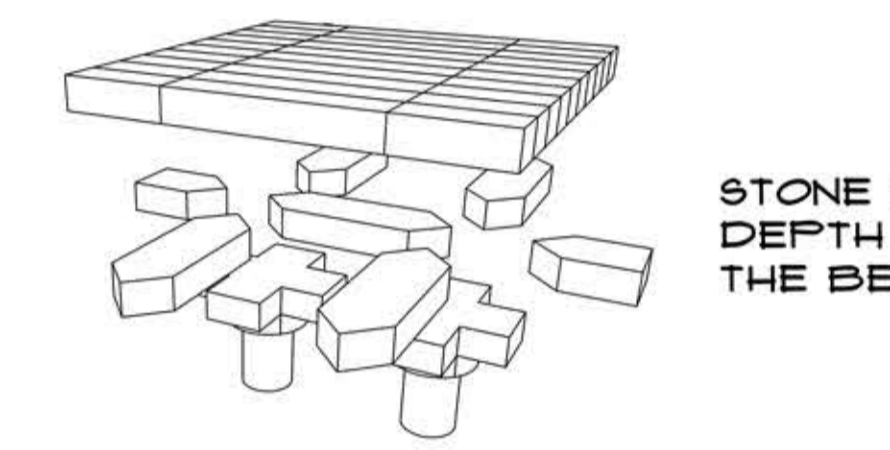
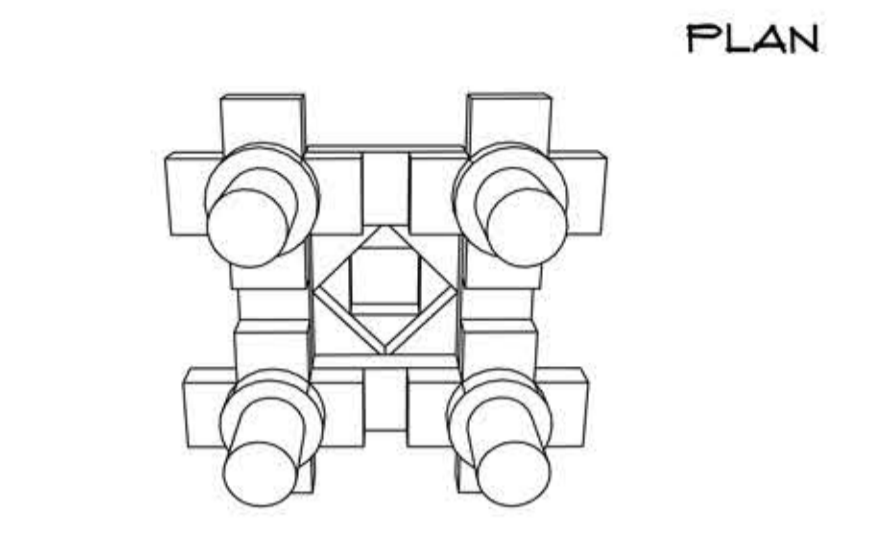
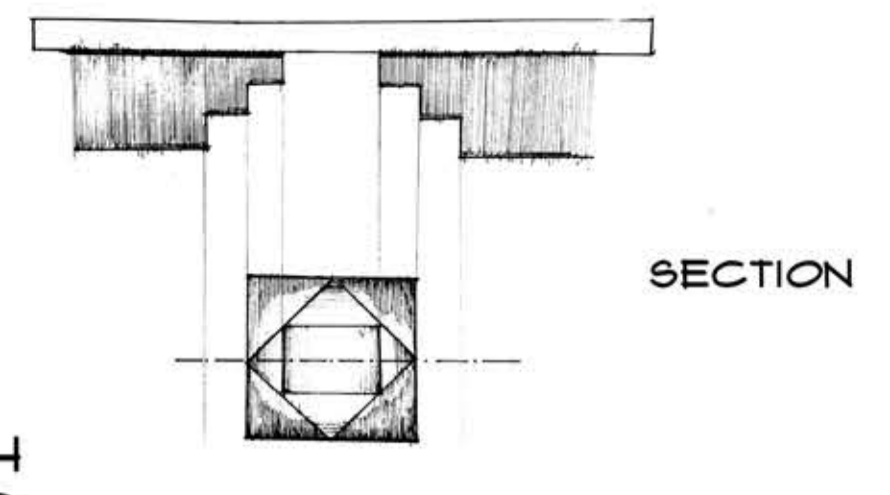
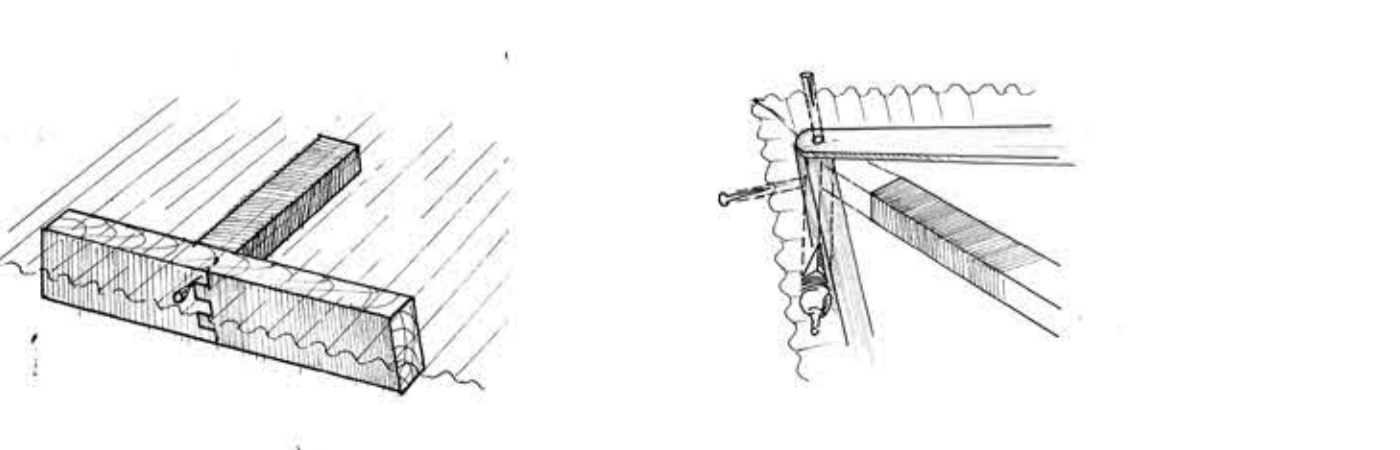
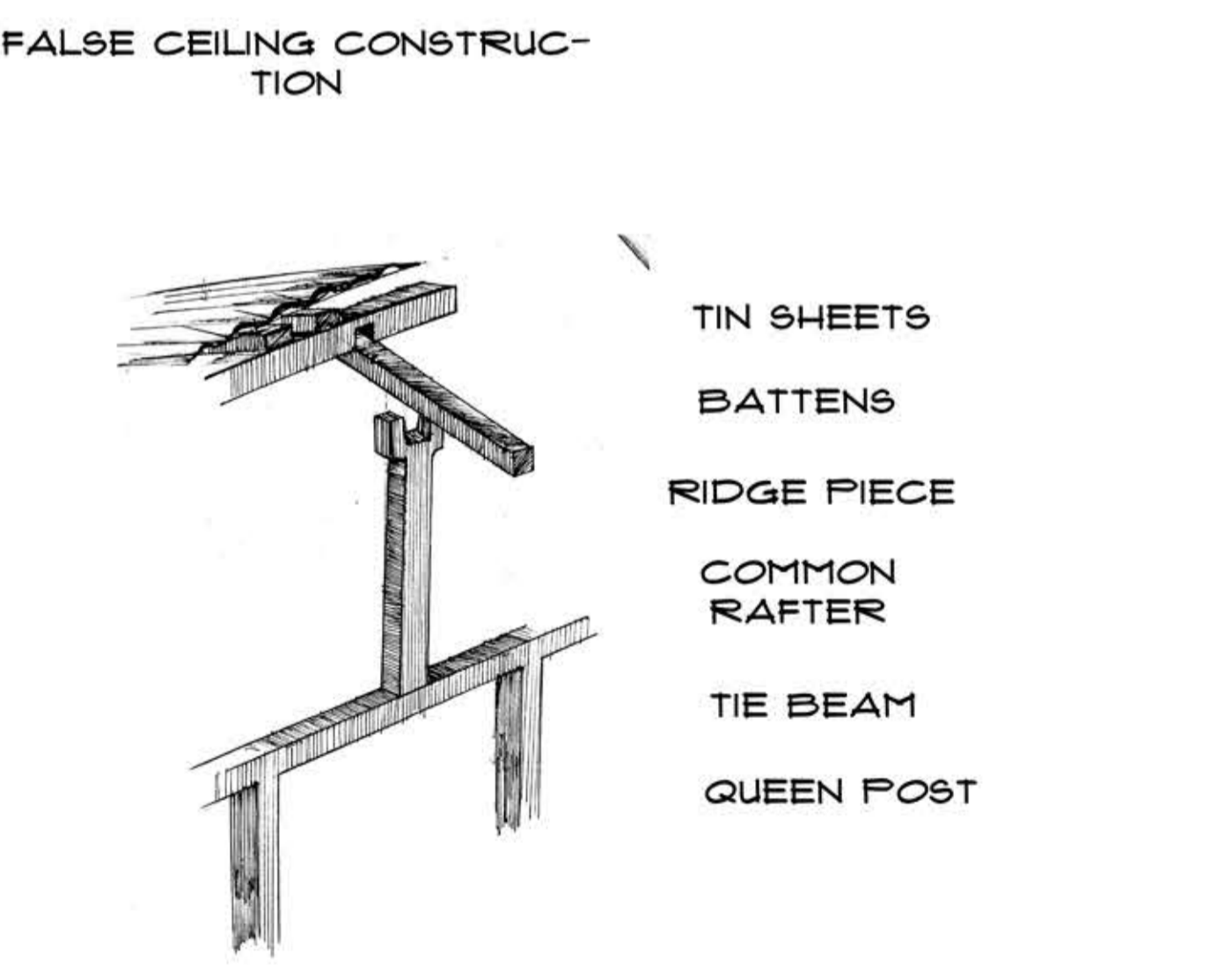
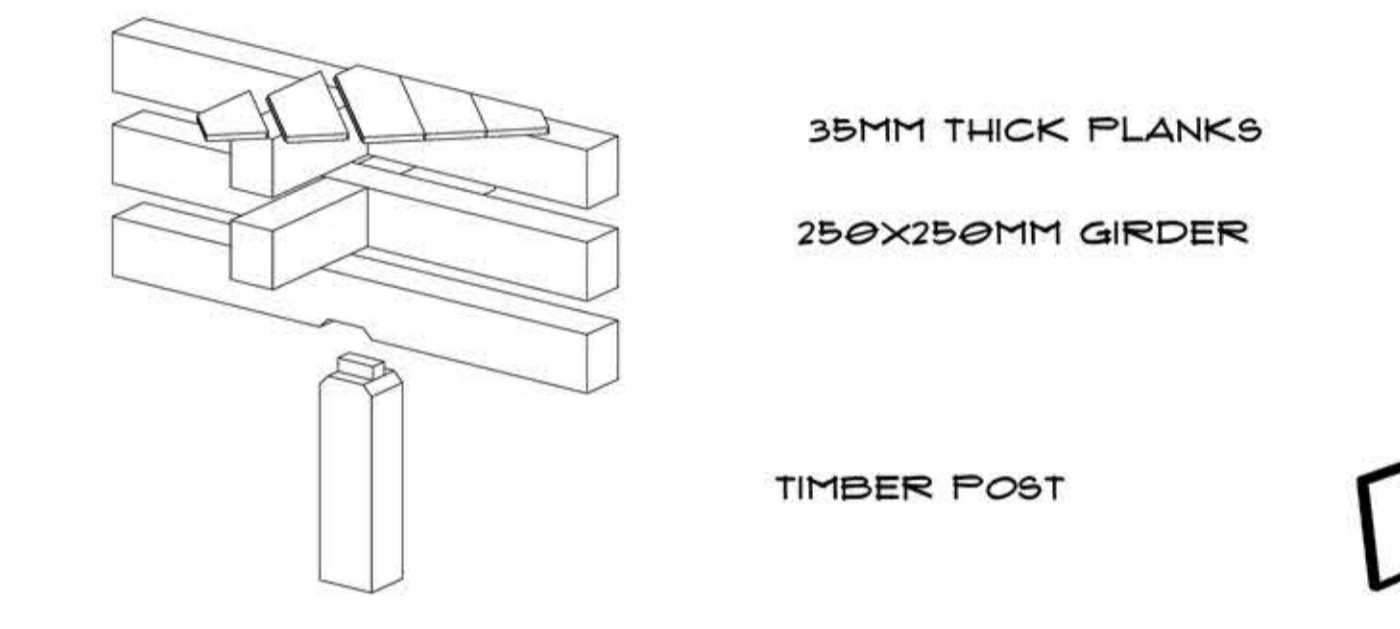
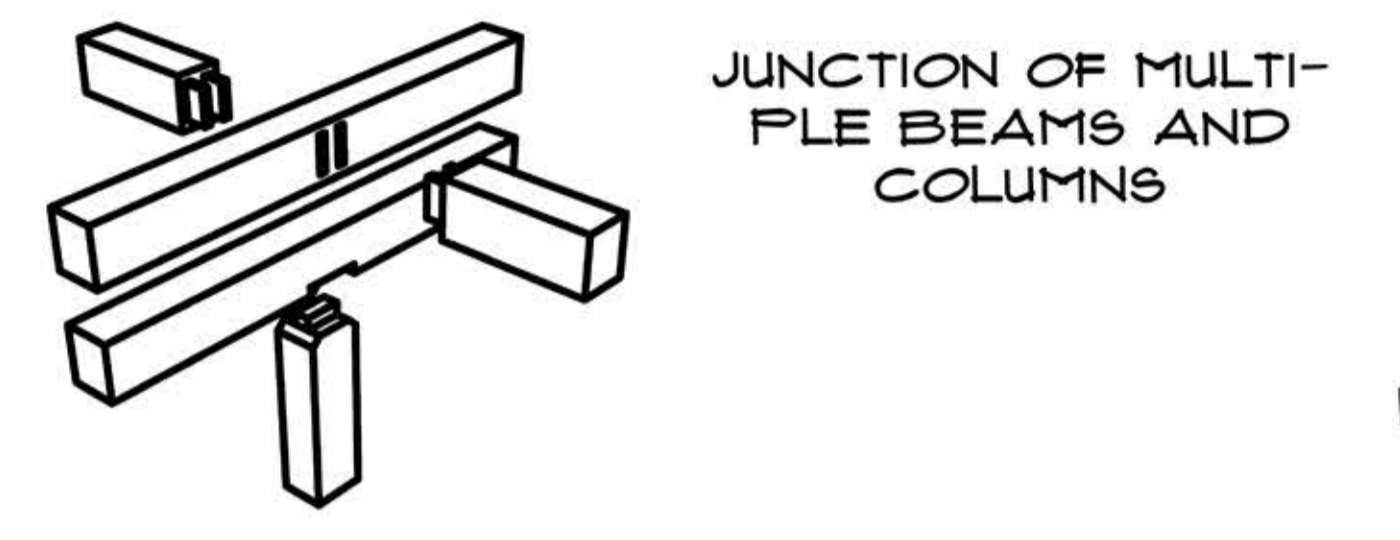
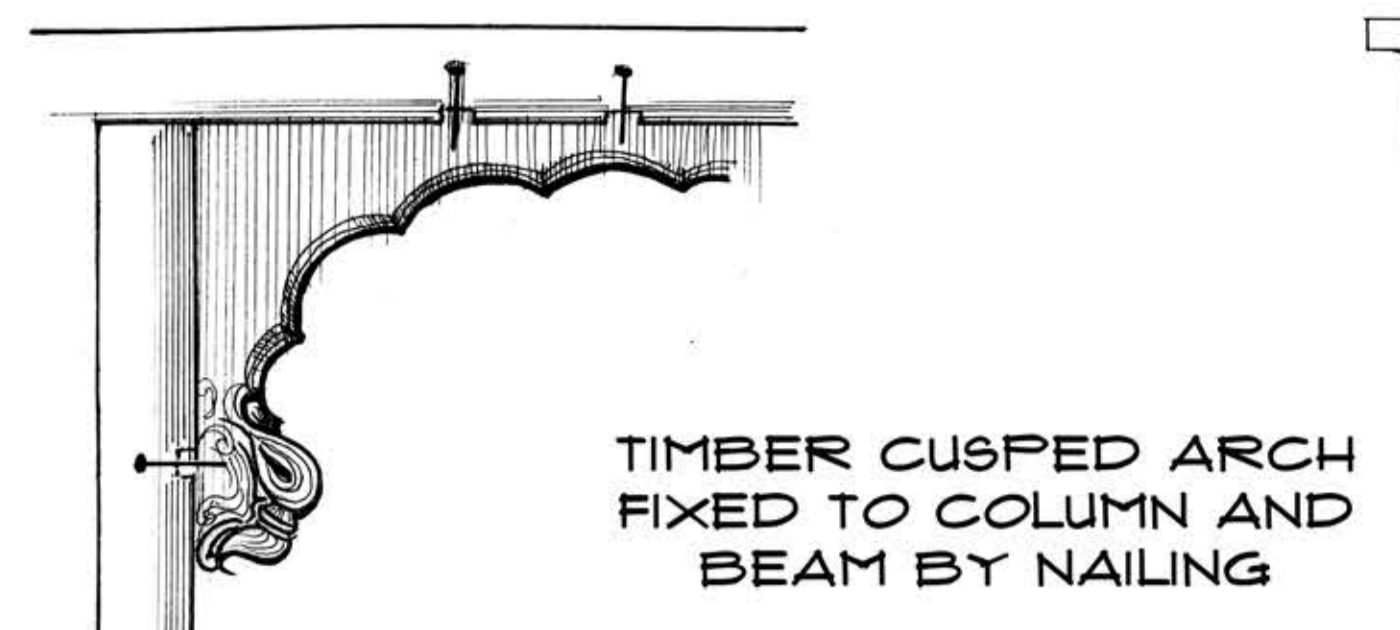
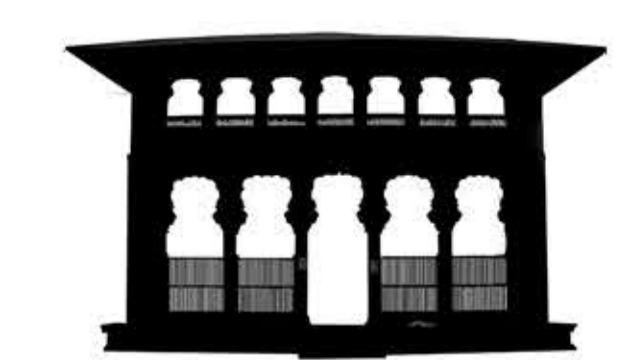
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# CONSTRUCTION DETAILS



THE STONE PIECES ARE PLACED IN LAYERS, ONE OVER THE OTHER IN A FASHION SUCH THAT THE UPPER STONE IS PLACED DIAGONALLY TO THE UNDERLYING STONE TO FORM A CONICAL VOID IN A SLAB



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# YATRI GHAR

## INTRODUCTION

TOTAL BUILT-UP AREA :- 1286.2 SQ.M  
THIS STRUCTURE IS AT THE RARER SIDE OF THE SITE  
IT WAS BUILT IN 1920  
ARCHITECTURAL STYLE :- WADA ARCHITECTURE

## PILGRIM HOUSE

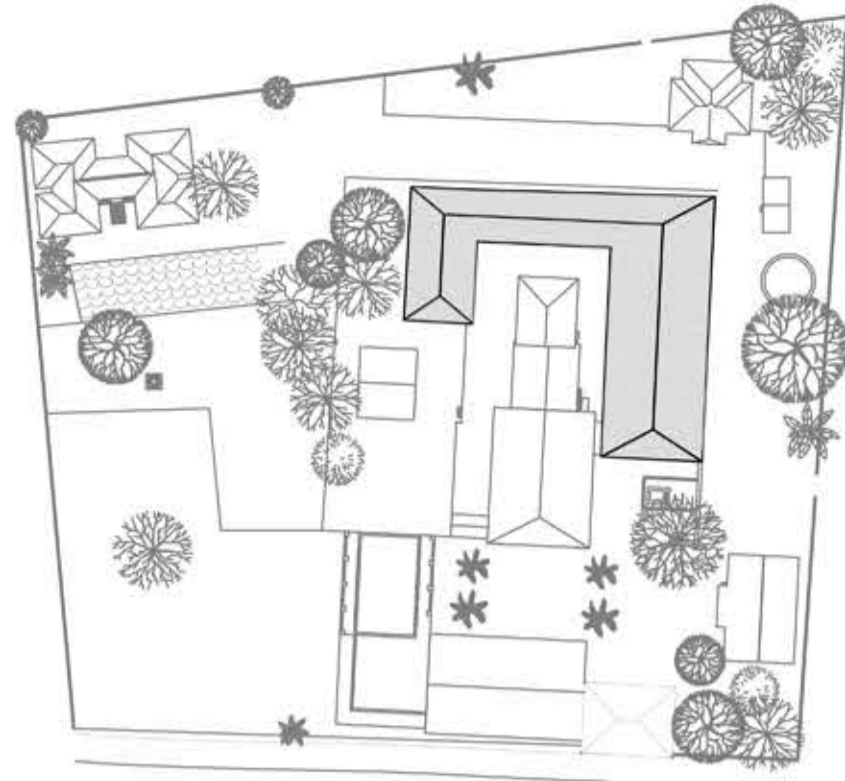
WAS ORIGINALLY BUILT AS AN ASHRAM WHICH NOW ACCOMODATES THE PILGRIMS.

## OSARI

SINCE FORMER TIMES THE OSARI SERVED AS A PLACE FOR PROVISION OF FOOD FOR PILGRIMS.

## COURT

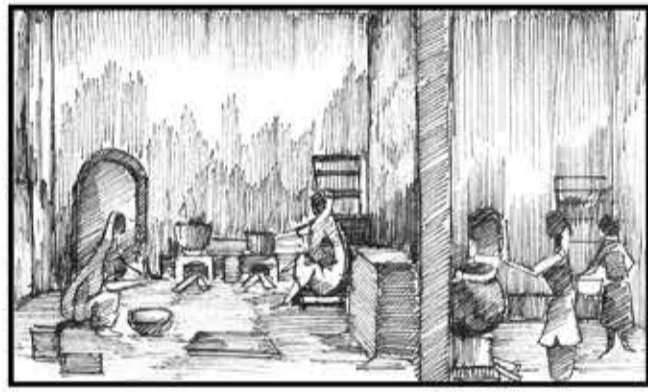
THE STRUCTURE SERVED AS A COURT WHERE THE DISPUTES AMONG THE VILLAGERS WERE RESOLVED. PILGRIMS IN THE UPPER FLOOR WHEN THE YATRA COMMENCED.



KEY PLAN (SCALE 1:1000)

THE AUGMENTATION OF CIVIC ACTIVITIES TO AN ENVISIONED RELIGIOUS STRUCTURE TO BRING ORDER AND BETTERMENT TO THE VILLAGE. MAKES IT A SIGNIFICANT SEMI-SACRED STRUCTURE.

## FUNCTIONALITY OF SPACES



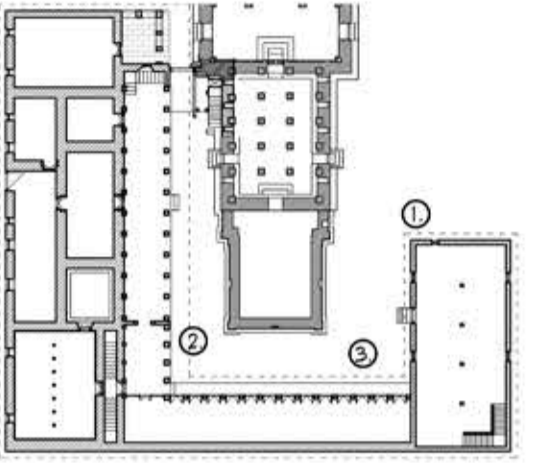
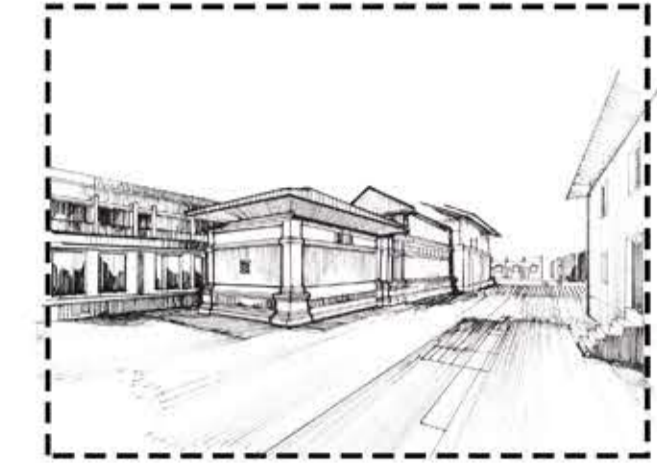
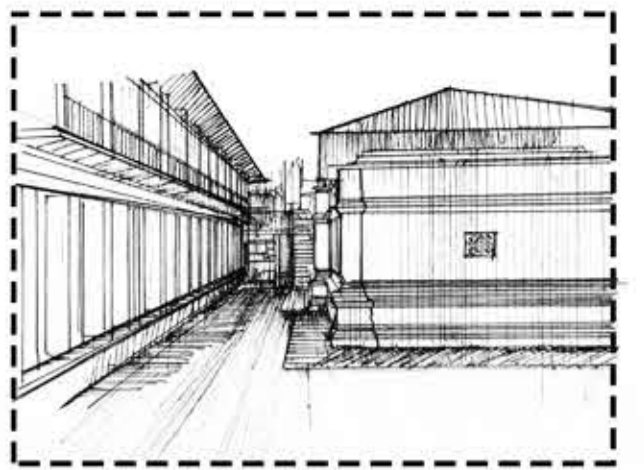
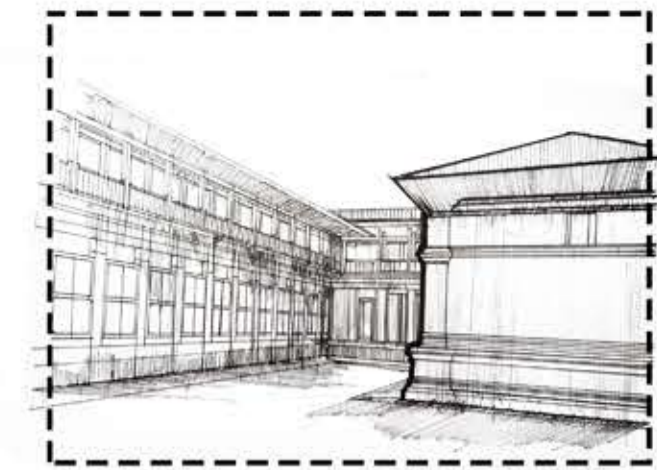
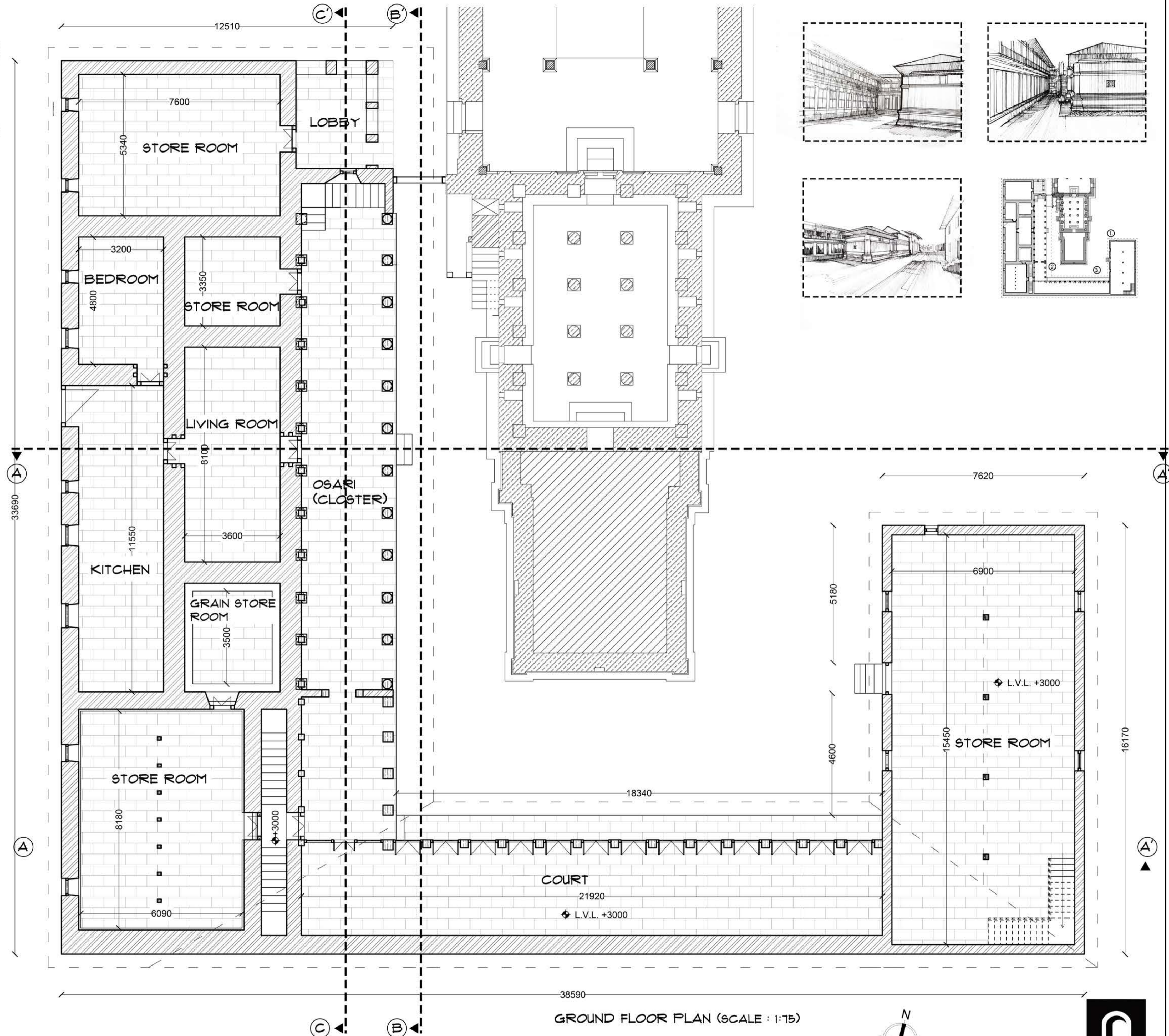
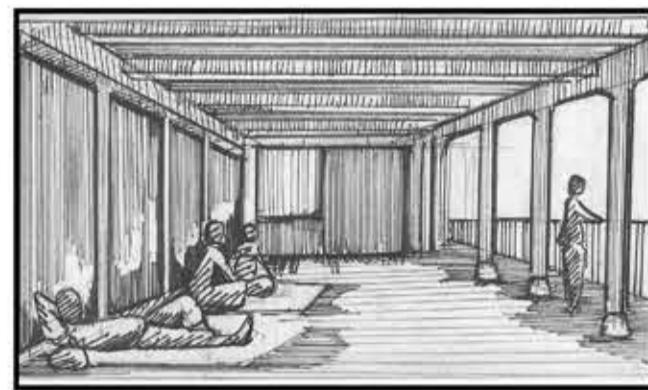
KITCHEN WAS USED BY THE WORKERS, DEVOTEES, OR HELPERS FOR PREPARING THE PRASAD.

STORE ROOM HAD MINIMAL VENTILATION AND WAS USED TO STORE GRAINS. THE TRADITIONAL GRINDING EQUIPMENTS LIKE THE STONE FLOUR MILL WAS SEEN HERE.



USE OF OSARI  
THIS SPACE WAS USED BY THE DEVOTEES TO HAVE THEIR PRASAD.

RESIDENCE FOR DEVOTEES  
THE DEVOTEES HALTED IN THE UPPER FLOOR OF THE ASHRAM. THE BALCONY AND SEMI OPEN SPACE ACTED AS AN INTERACTIVE PLACE FOR THESE DEVOTEES. DURING YATRA WHEN THE NUMBER OF PEOPLE INCREASES THE SEMI OPEN SPACE IS ALSO OCCUPIED.



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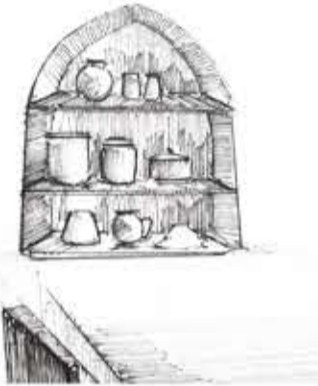
# YATRI GHAR

TECHNICAL ADVANCEMENT  
KHUNTI

KHUNTIS WERE USED TO HANG THE LAMPS. THESE WERE FOUND ADJACENT TO DOORS, LANDINGS AND OTHER PLACES WHERE ILLUMINATION WAS REQUIRED.



NICHES IN THE WALL  
NICHES IN THE OSARI WERE MUCH LARGER THAN THE OTHER NICHES. THESE WERE INTENDED TO STORE KITCHEN UTENSILS.



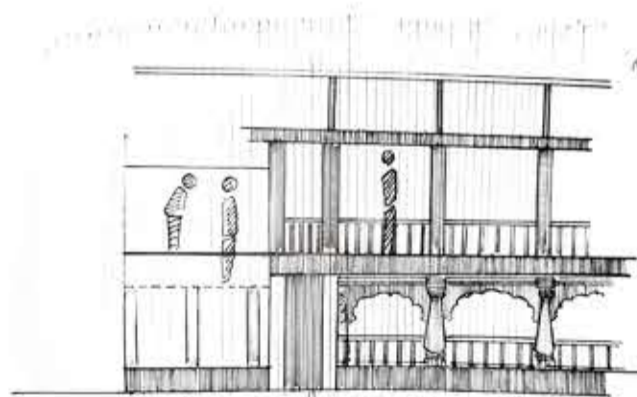
THE DECORATIVE OSARI

FOR BEAUTIFICATION OF THE OSARI IT IS HIGHLY EMBELLISHED WHICH MAKES IT VISUALLY APPEALING TO THE DEVOTEES.

BEHAVIOUR ANALYSIS



BEAMS AND COLUMNS WERE DETERIORATING RAPIDLY DUE TO TERMITE ACTION AND CLIMATIC EFFECT.

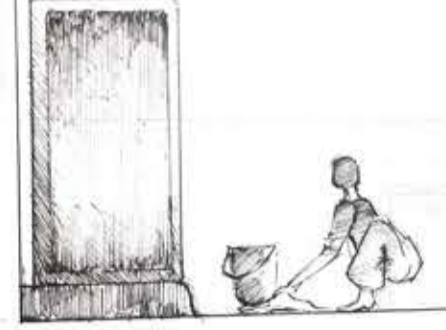


EFFECTS DUE TO RETROFITTING

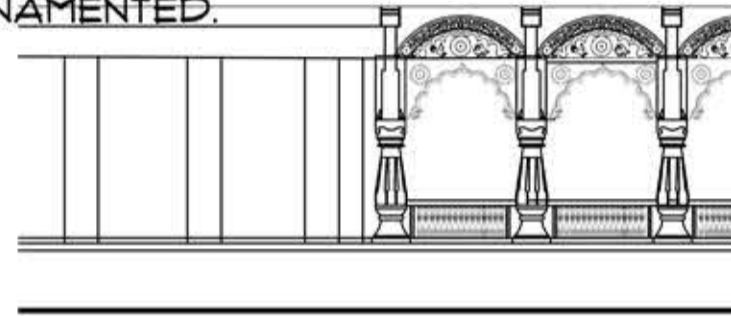
A LAYER OF P.C.C BED IS PROVIDED TO PREVENT THE SLAB FROM COLLAPSING. DUE TO INCREASE IN THE THICKNESS OF SLAB, THE CLEAR HEIGHT OF THE UPPER ROOM HAS REDUCED.

RAISED PLATFORM FROM F.F.L

TO AVOID ANY DAMAGE OR LEAKAGE AND FOR THE EASE OF CLEANING, THE CUPBOARDS WERE PLACED AT A RAISED PLATFORM.



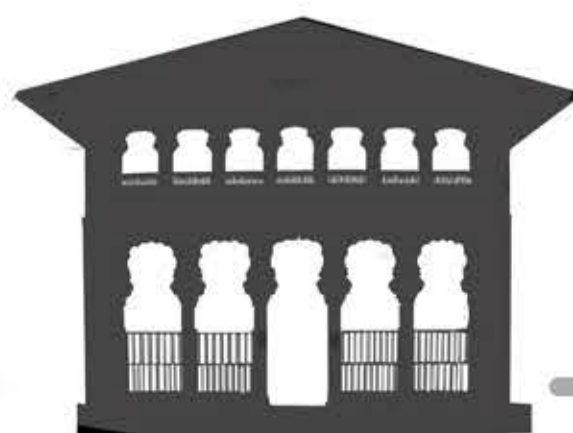
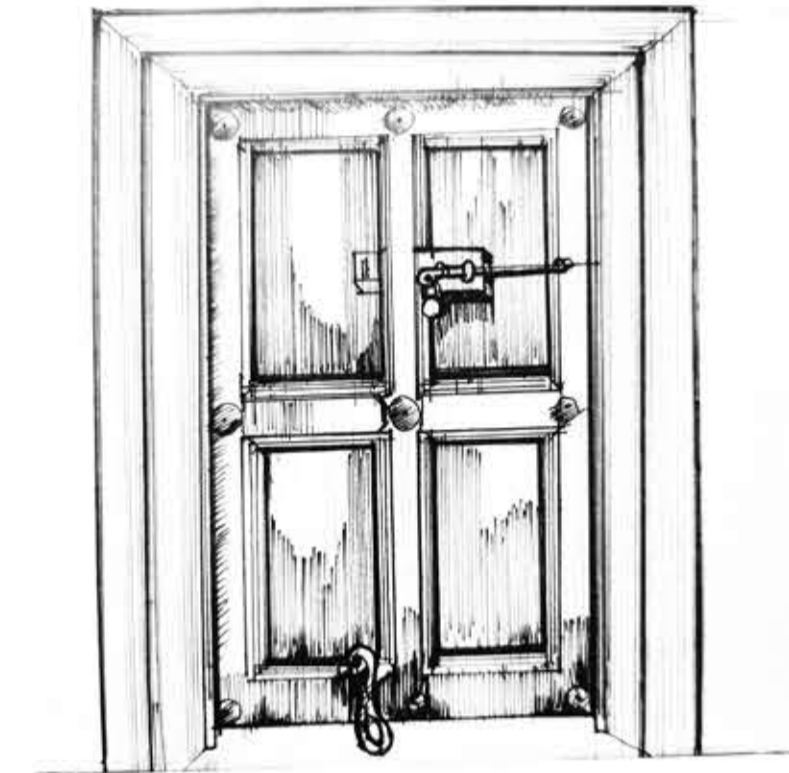
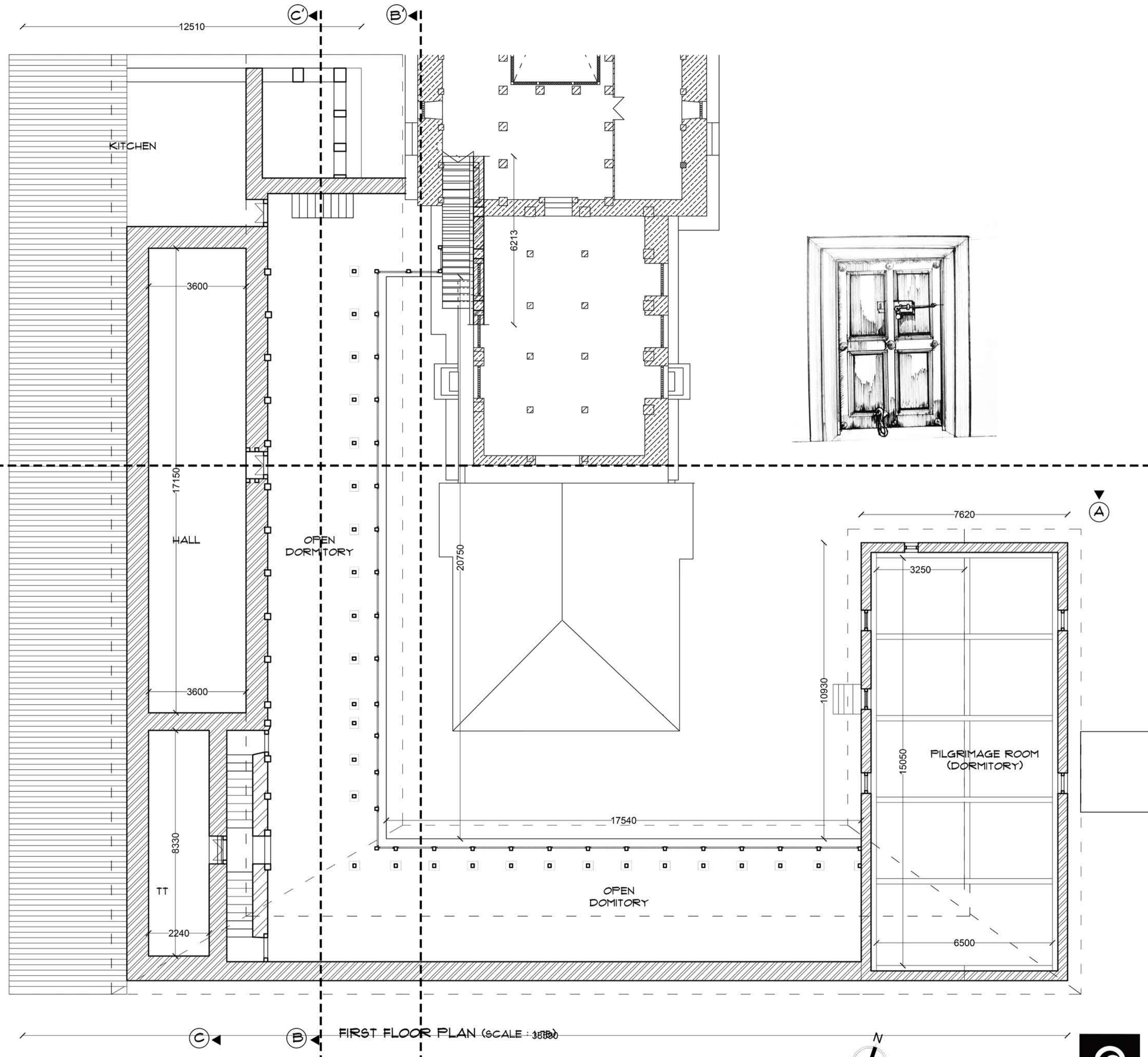
FRAME DIVIDING THE SPACE  
THE INTERMEDIATE OPENING FRAME CREATES A TRANSITION THAT CAN BE OBSERVED ON COLUMNS. IN THE CIVIC REGION THE COLUMNS WERE UNEMBELLISHED AND IN THE NEXT REGION THE COLUMNS WERE ORNAMENTED.



CYPRUS COLUMN



HORIZONTAL DEMARCATIONS



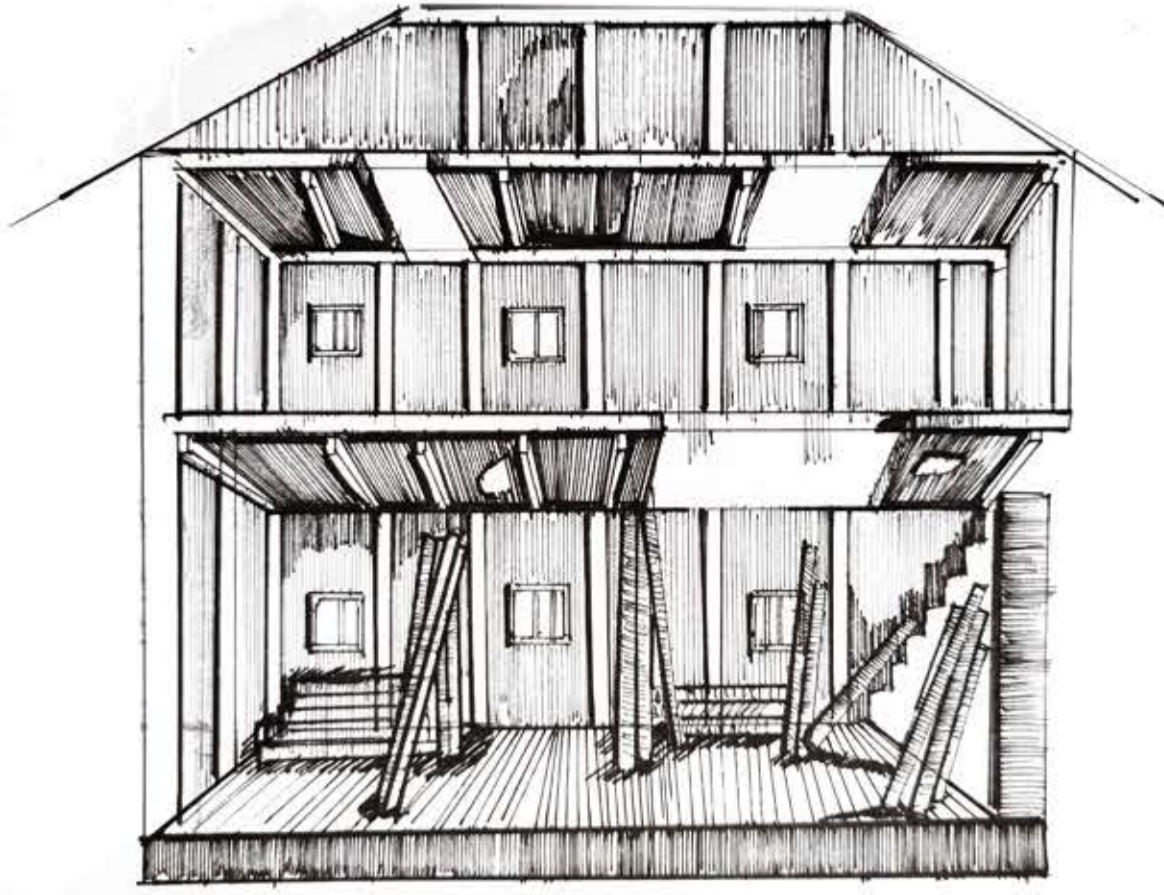
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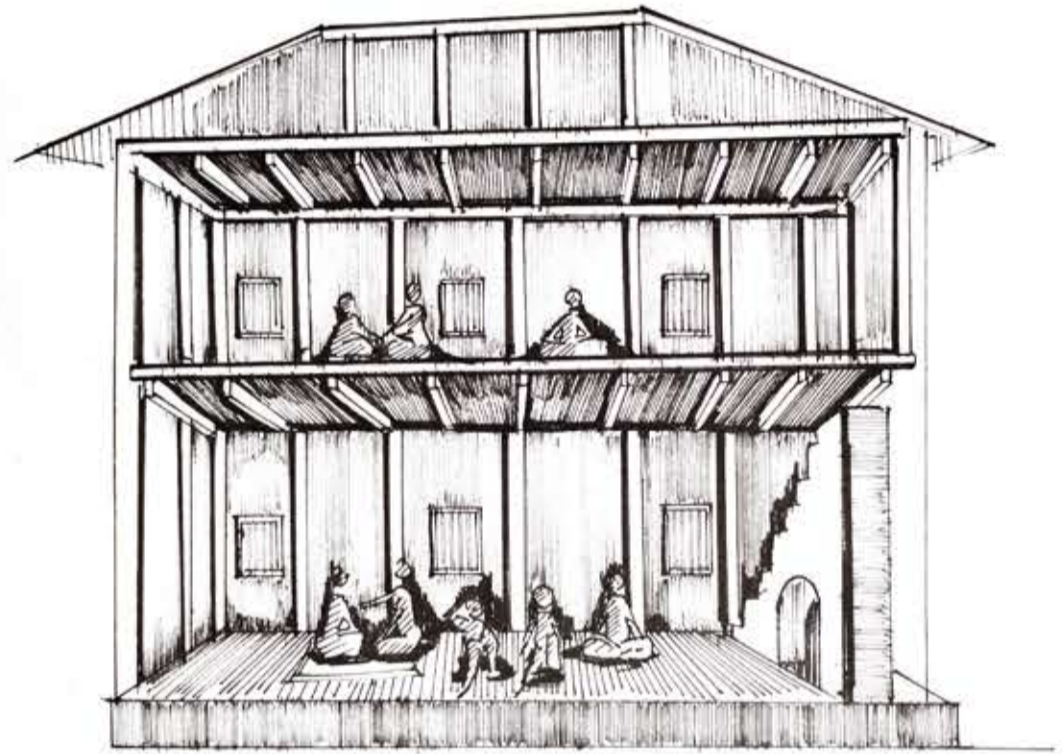


# YATRI GHAR



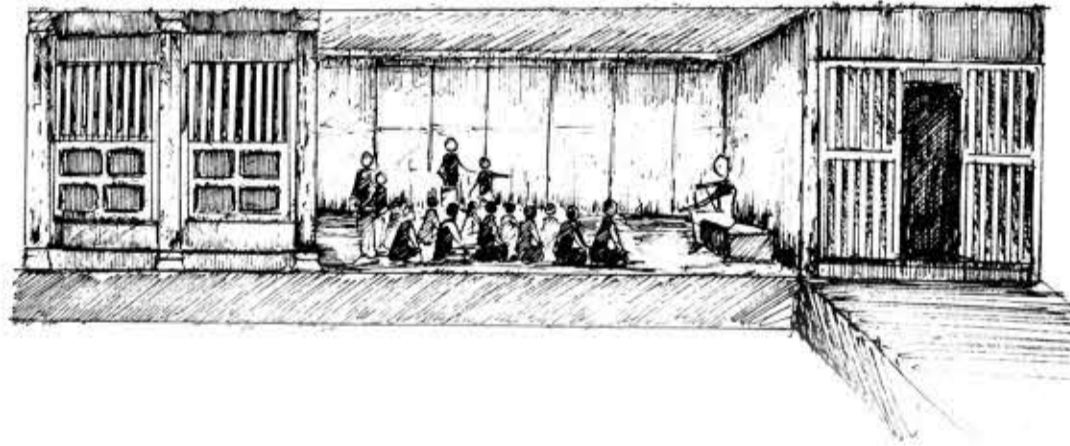
THEN :

THESE WERE USED TO STORE THE CROPS PRODUCED BY THE VILLAGERS.



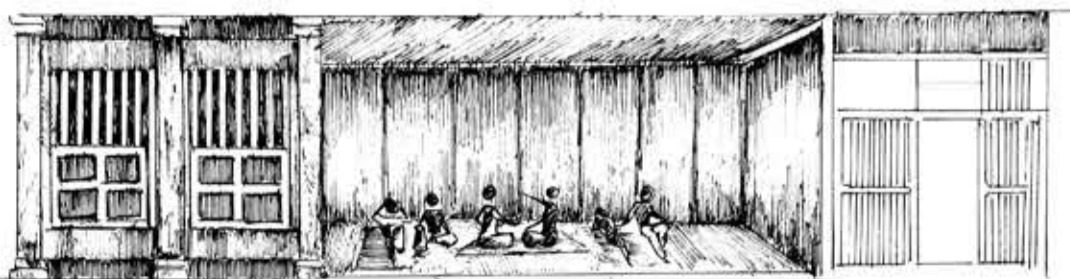
NOW:

IT IS USED TO STORE MATERIALS LIKE MATTRESSES AND BLANKETS WHICH ARE REQUIRED BY THE PILGRIMS DURING FESTIVE SEASON.



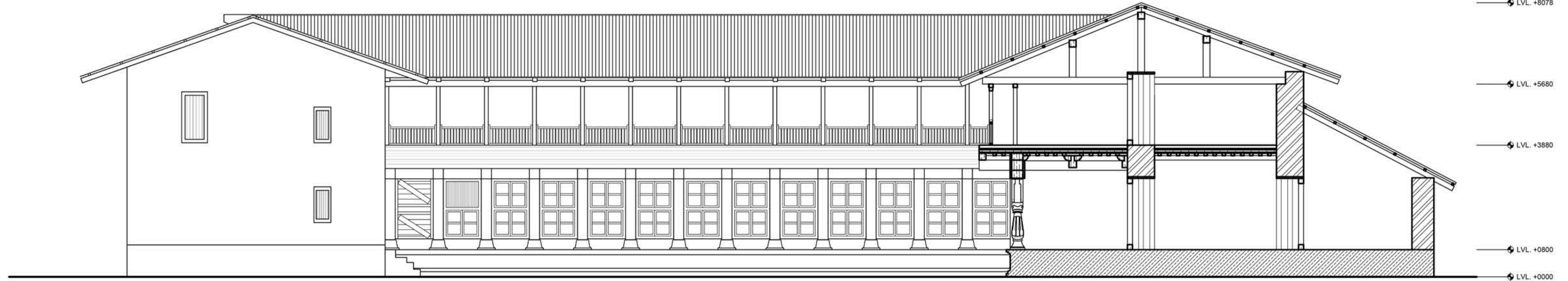
THEN:

IT WAS SERVED AS A COURT WHERE DISPUTES AMONG THE VILLAGERS WERE RESOLVED BY RAMGIRI .

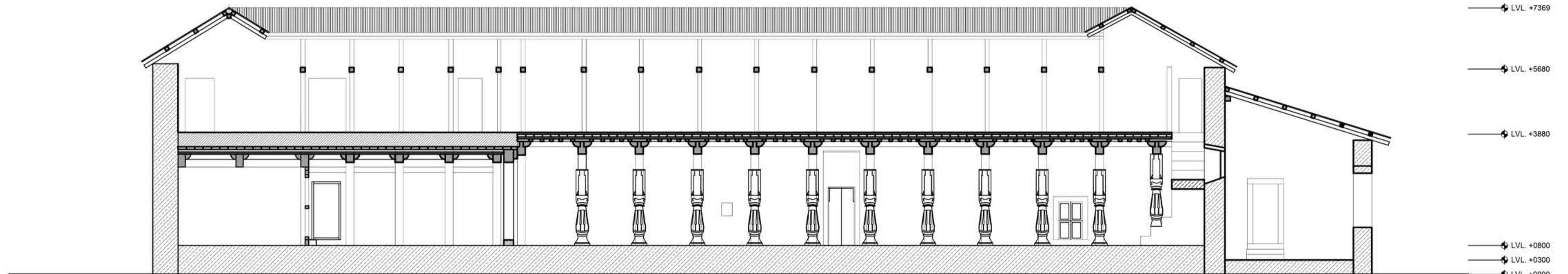


NOW :

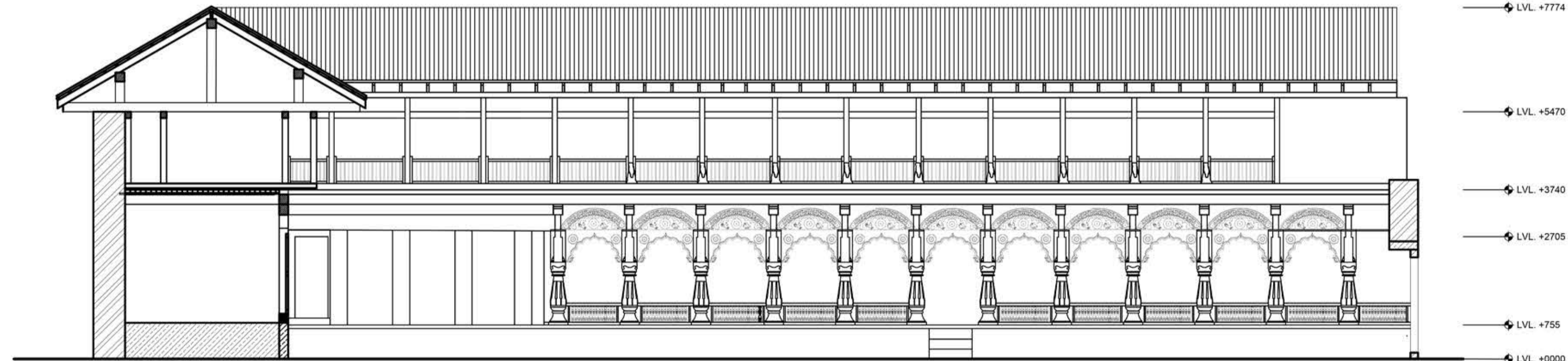
IT IS USED AS PILGRIM RESIDENCE



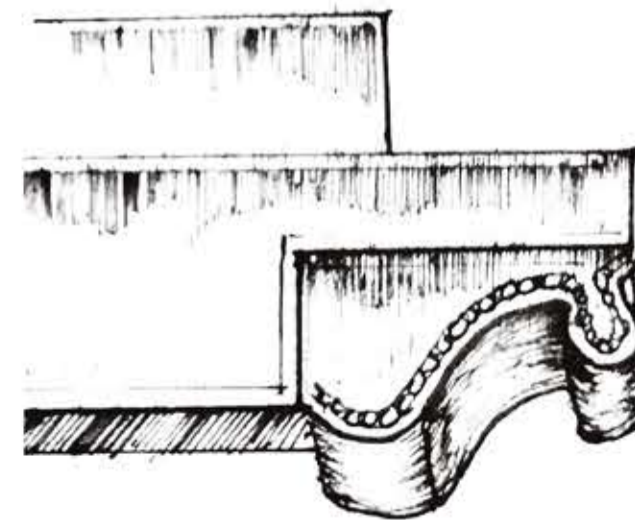
SECTIONAL ELEVATION BB' (SCALE : 1:15)



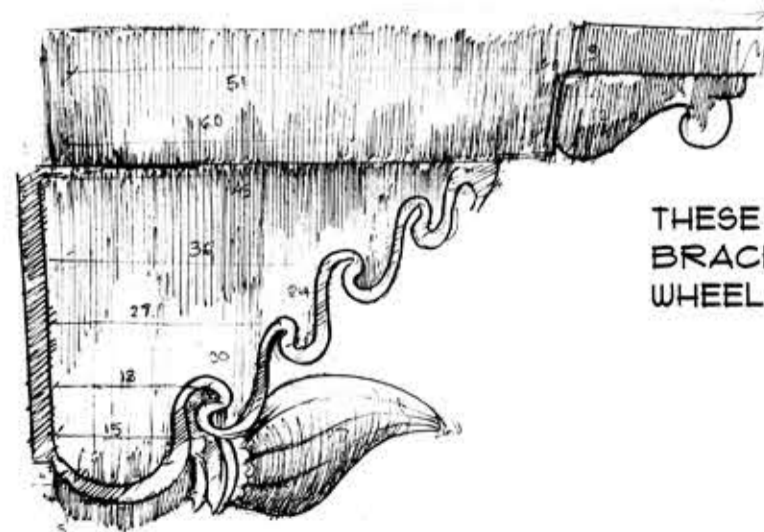
SECTION CC' (SCALE : 1:15)



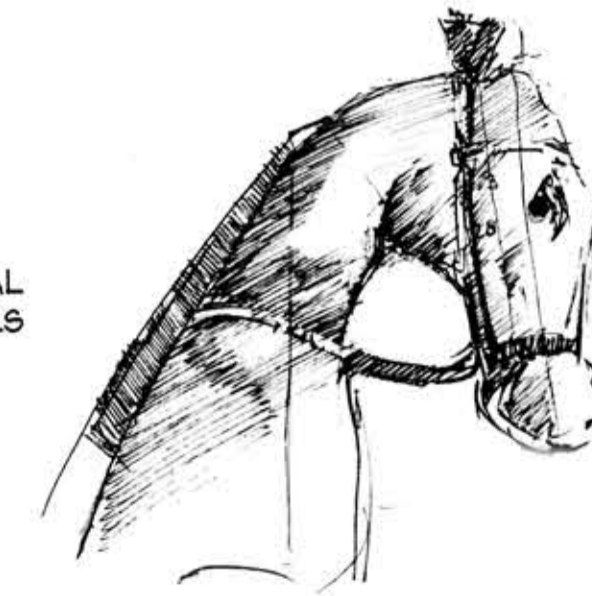
SECTIONAL ELEVATION AA' (SCALE : 1:15)



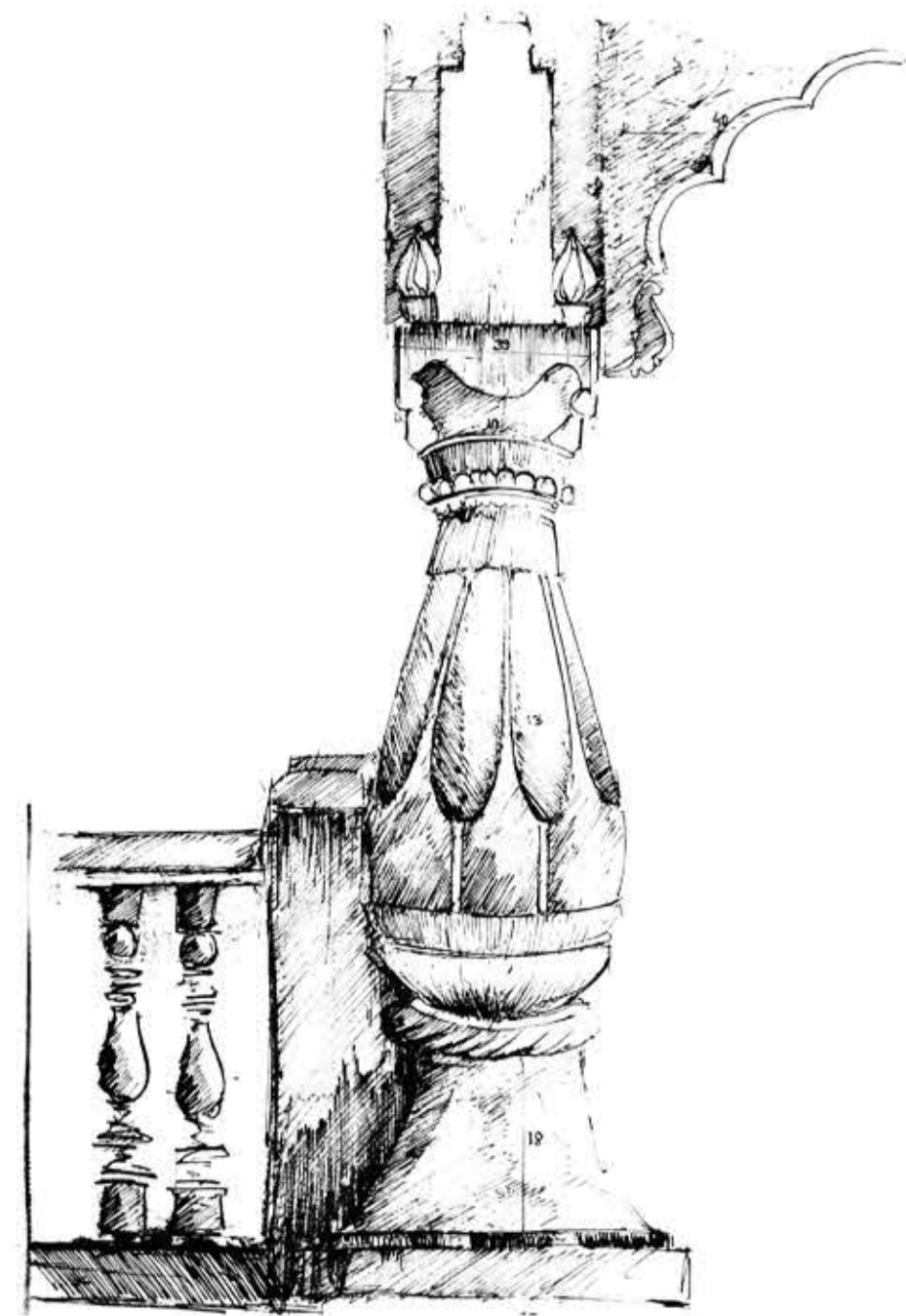
THE END PART OF THE BEAM IT IS VISIBLE IN THE SIDE ELEVATION CONSISTS OF DECORATIVE CARVINGS AND THE COMPLEMENT OTHER STRUCTURAL ELEMENTS .



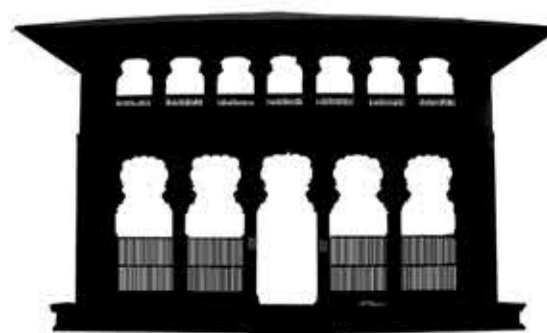
THESE ARE NON STRUCTURAL BRACKETS OF 1000 PETALS WHEEL ON IT.



THESE HORSES DEPICT THE MEDIEVAL PERIOD, WHEN WARS WERE WON ON HORSE BACK.



THESE ARE CYPRUS COLUMNS. THE STYLE POST IS ATTACHED TO THE COLUMN IN SUCH A MANNER THAT IT LOOKS LIKE A SINGLE UNIT.



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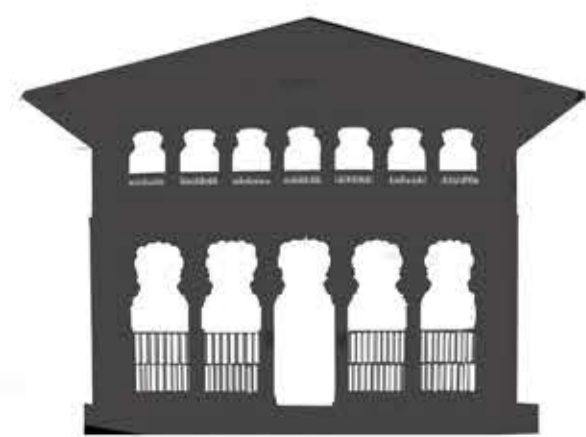
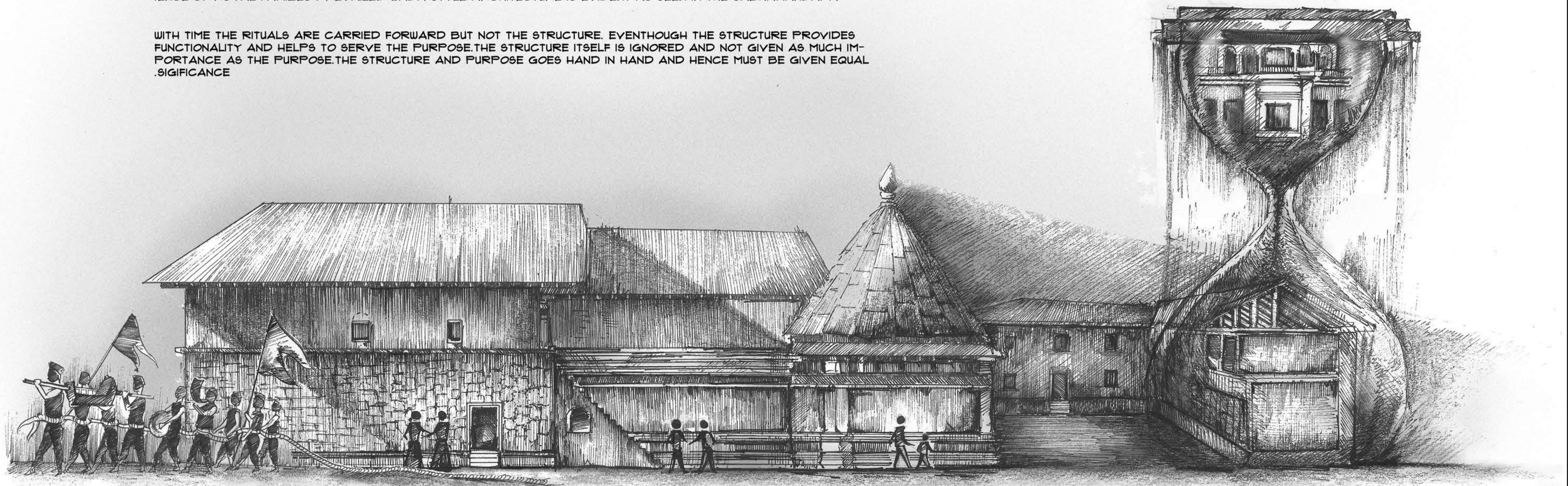


## CONCLUSION

THE STRUCTURE WAS A FUSION OF TEMPLE, SABHAMANDAPA AND A HALL OF A PALACE MAKING IT A GRANDEUR EDIFICE. IT IS A SELF EVIDENT PART OF ITS SURROUNDING AND IT SEEMS TO BELONG THERE BECAUSE OF THE USE OF LOCAL DESIGN IDEAS AND PLANNING PRINCIPLES, BUT AT THE SAME TIME THE STRUCTURE HAS ITS OWN UNIQUE IDENTITY BECAUSE OF THE USE OF A COMBINATION OF MATERIALS. DIFFERENT THEMES WERE EMOIDIED THROUGH ELEMENTS LIKE COLUMNS, FEDESTALS, BRACKETS, NICHEs AND ARCHES IN A VERY DISTINCT WAY. THE UNIQUE IDENTITY IS SEEN BECAUSE THE TEMPLE WAS OPERATED BY THE ROYAL FAMILY OF BHOSALE'S MAKING IT A NECESSITY TO MAKE THE STRUCTURE IMPOSING

BEING A PART OF THE HISTORY OF PATGAON DEPICTING VARIOUS ARCHITECTURAL STYLE OF DIFFERENT ERA AND UNITING THESE DISCRETE STYLES INTO A SOLE UNIT. EACH ERA CREATES A DIFFERENT IMPACT ON THE STRUCTURE AND IT EVOLVES WITH THE NEED AND TIME. AS SEEN IN OUR STRUCTURE THE CORE SAMADHI WAS BUILT IN ANCIENT ERA IN HEMADPANTI STYLE OF ARCHITECTURE BUT WITH EVOLUTION THE STRUCTURE HAD TO BE EXPANDED FOR BETTER FUNCTIONALITY LEADING TO THE CONSTRUCTION OF ANTRALAYA. DUE TO DIFFERENCE IN THE ERA THERE IS A SLIGHT CHANGE OBSERVED IN THE ARCHITECTURAL STYLE AS SEEN IN THE COLUMNS OF ANTRALYA FURTHER WHEN THE INFLUENCE OF ROYAL FAMILIES PREVAILED WADA STYLE ARCHITECTURE IS EVIDENT AS SEEN IN THE SABHAMANDAPA

WITH TIME THE RITUALS ARE CARRIED FORWARD BUT NOT THE STRUCTURE. EVENTHOUGH THE STRUCTURE PROVIDES FUNCTIONALITY AND HELPS TO SERVE THE PURPOSE. THE STRUCTURE ITSELF IS IGNORED AND NOT GIVEN AS MUCH IMPORTANCE AS THE PURPOSE. THE STRUCTURE AND PURPOSE GOES HAND IN HAND AND HENCE MUST BE GIVEN EQUAL SIGNIFICANCE

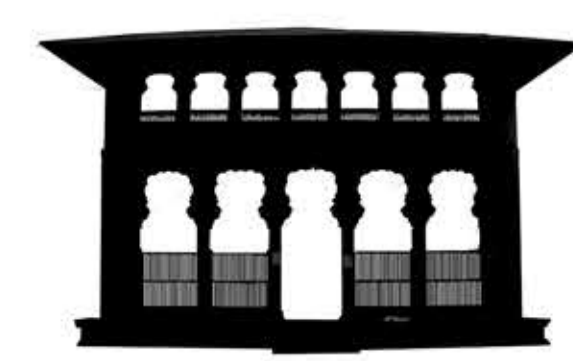
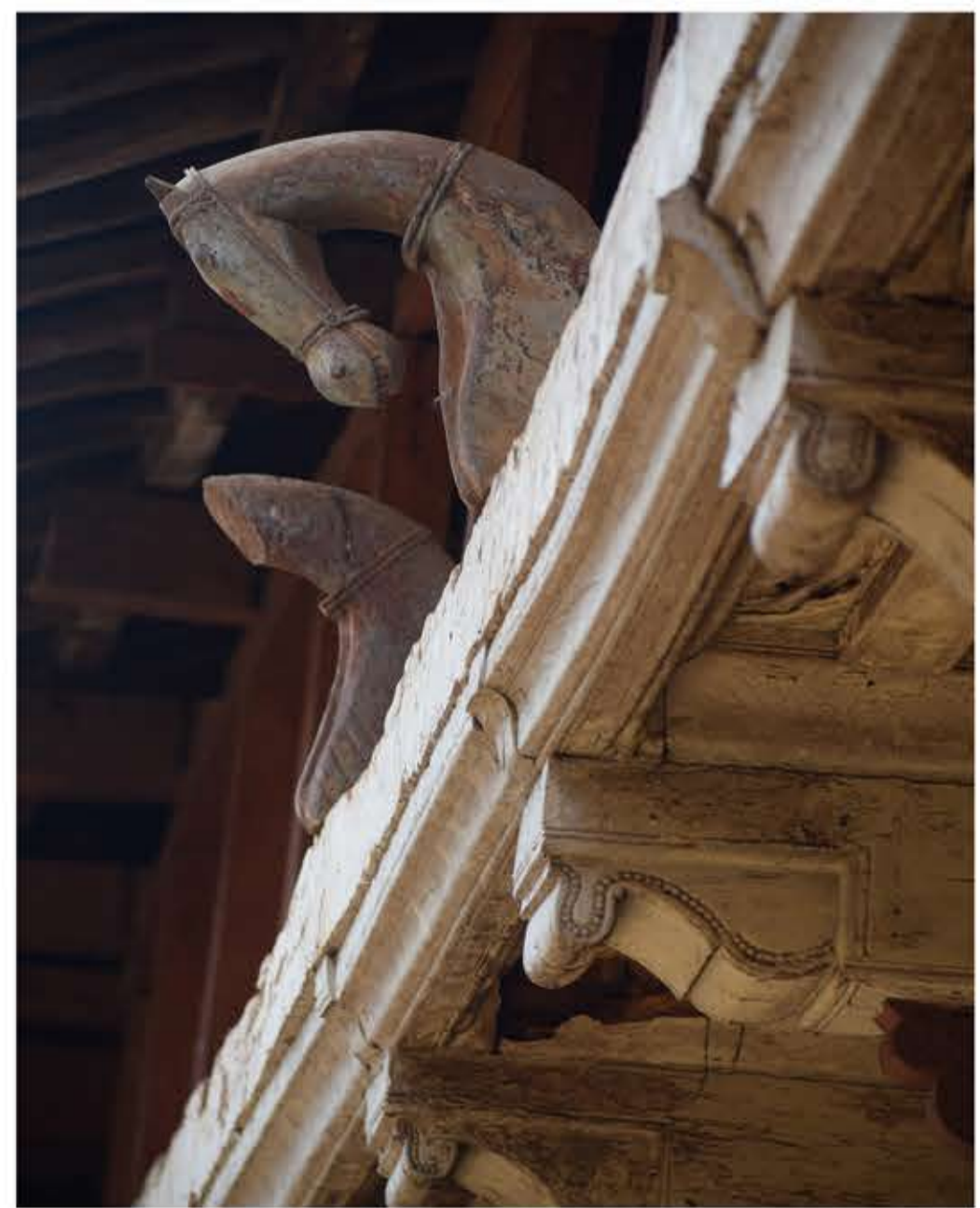


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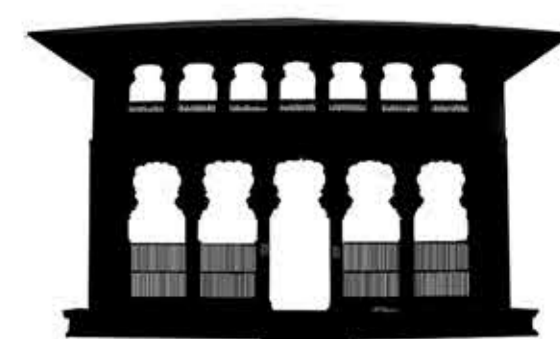
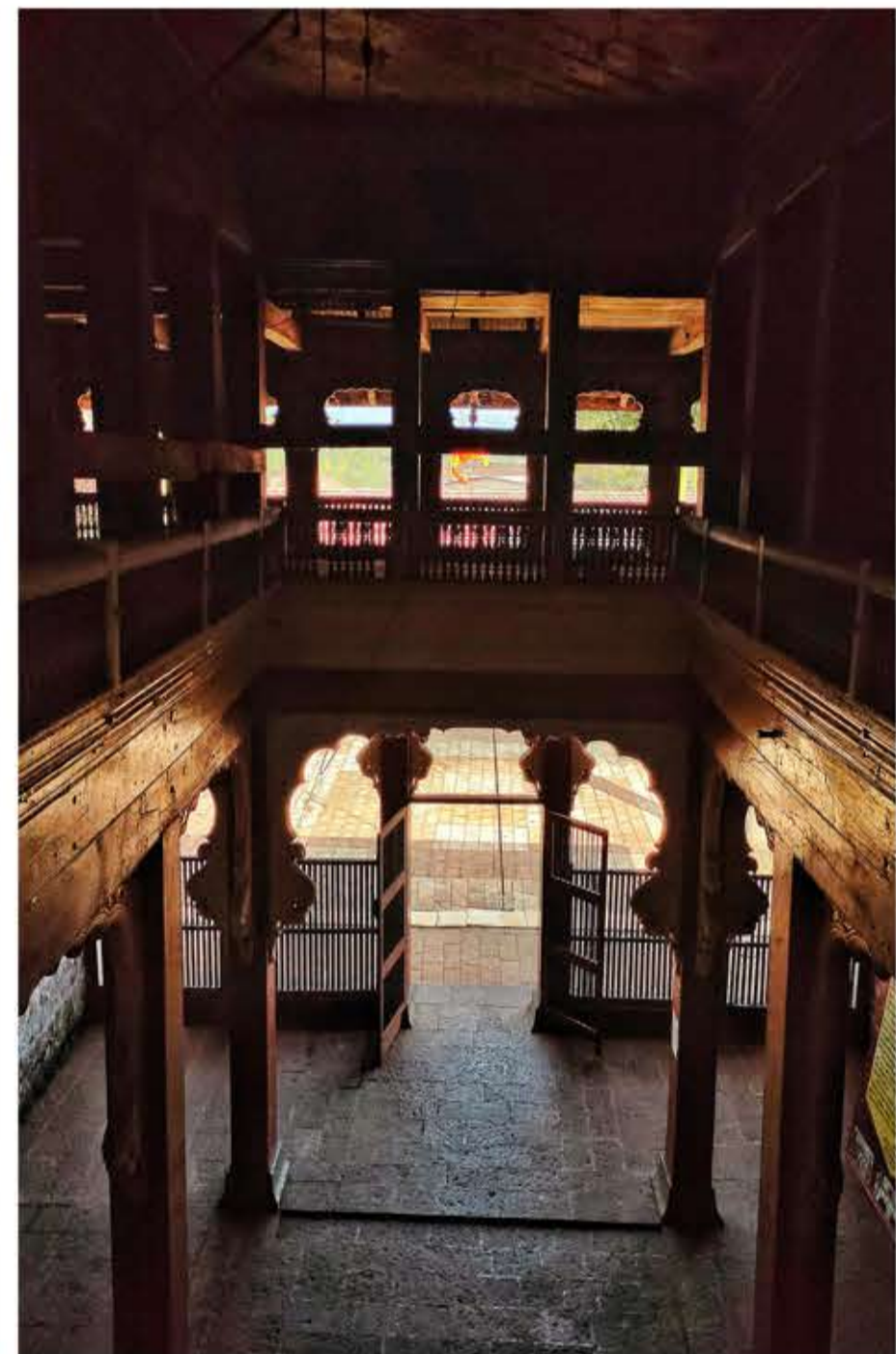


# SHREE MOUNI SAMADHI MANDIR

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1





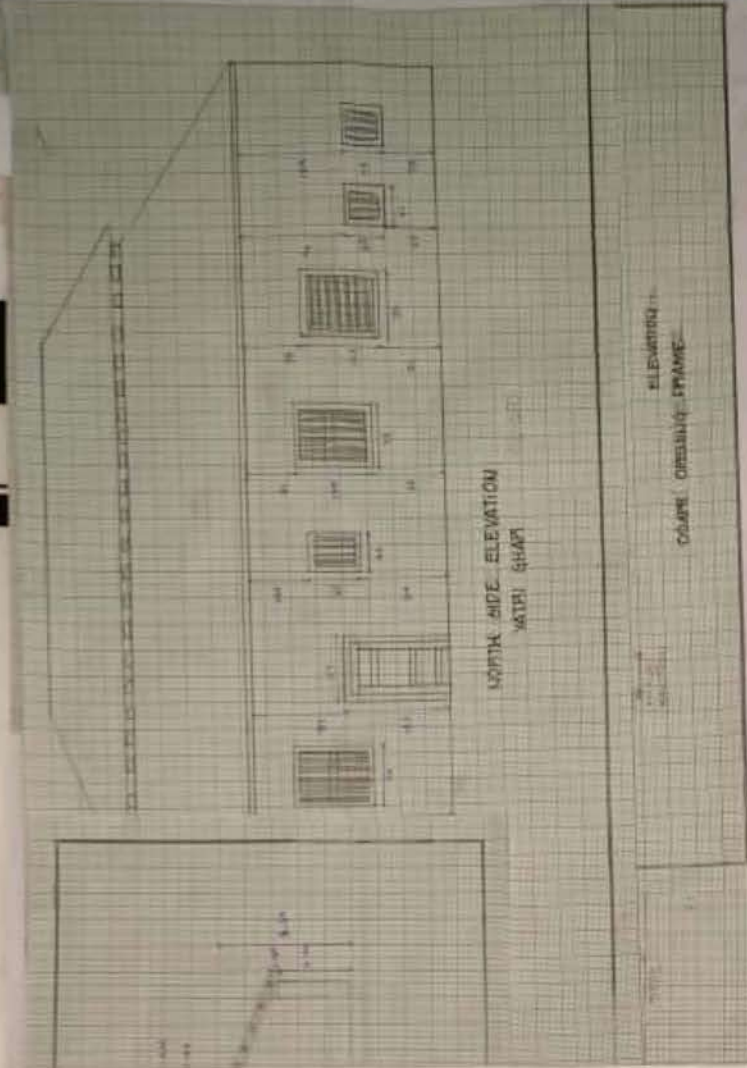
# SHREE MOUNI SAMADHI MANDIR

LOUIS.I.KAHN TROPHY 2019-20

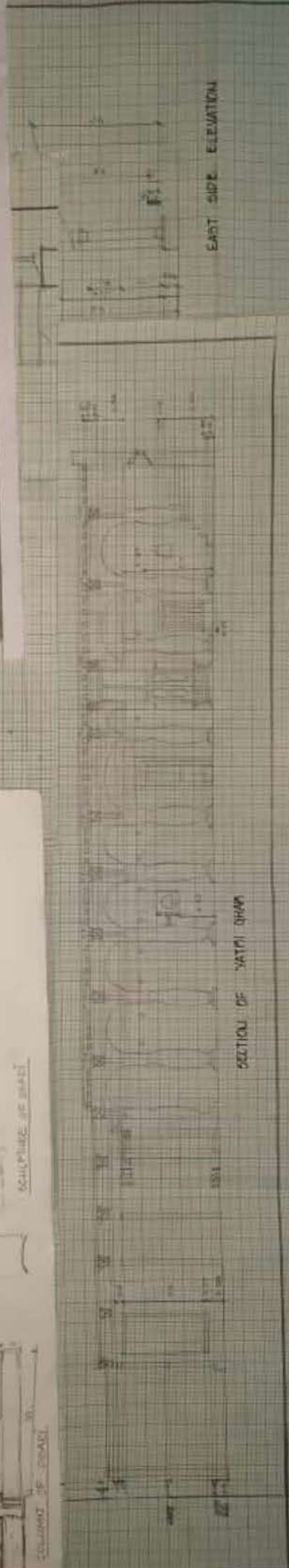
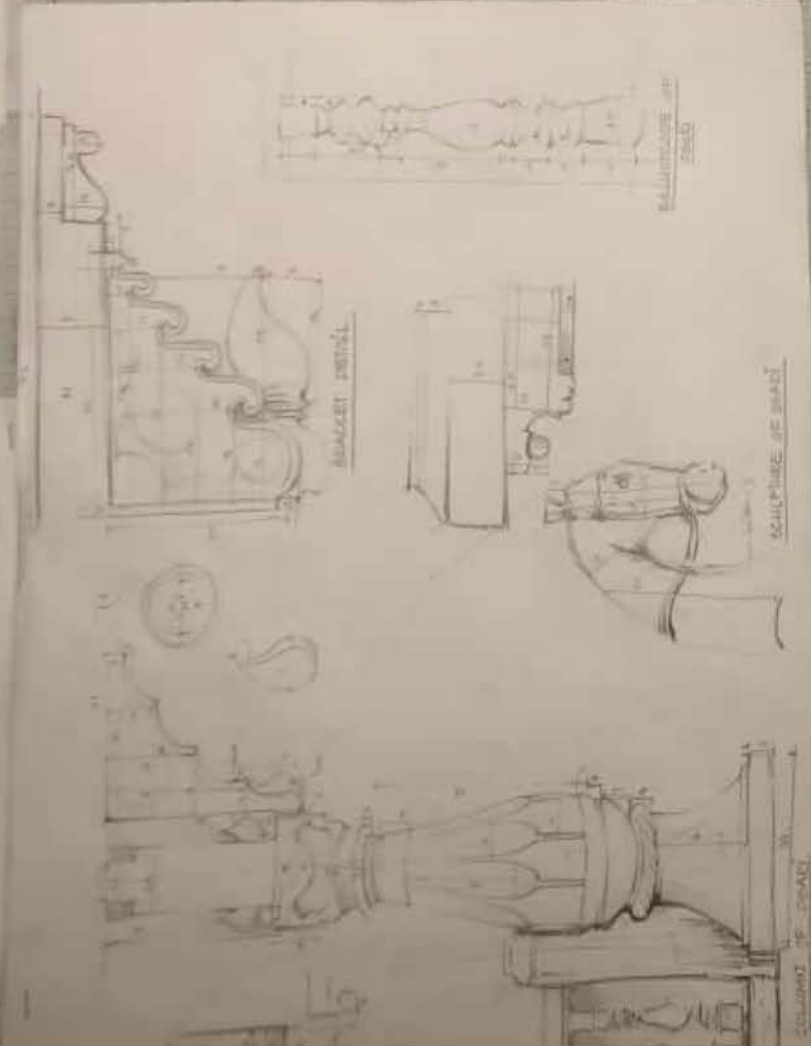
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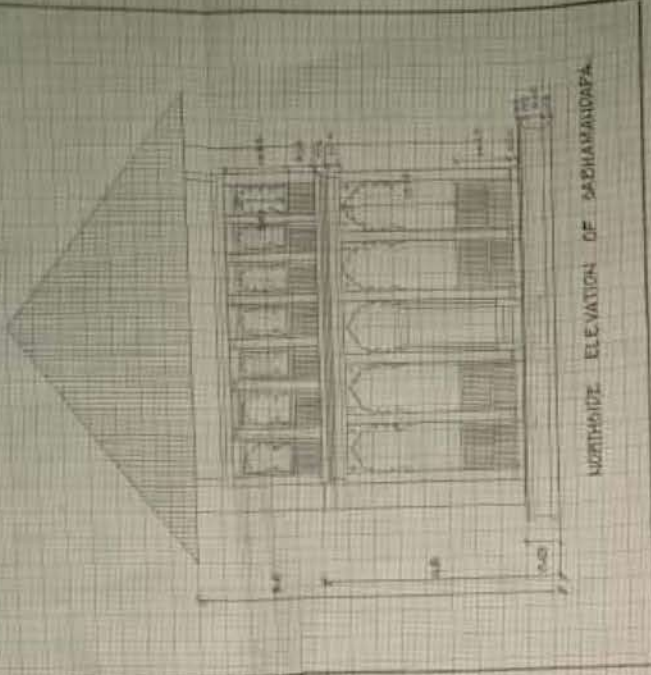




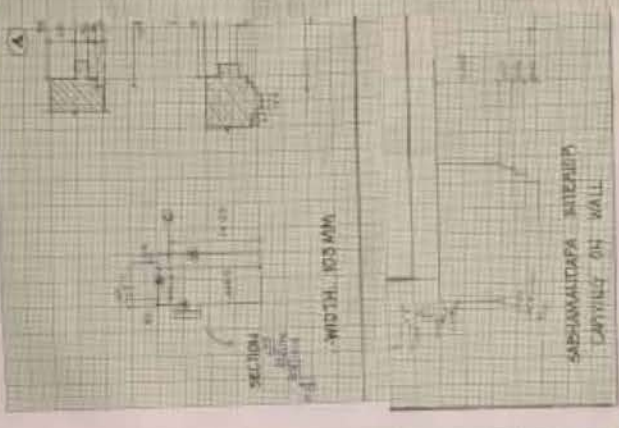


ELEVATION  
COLUMN ORIENTATION FRAME

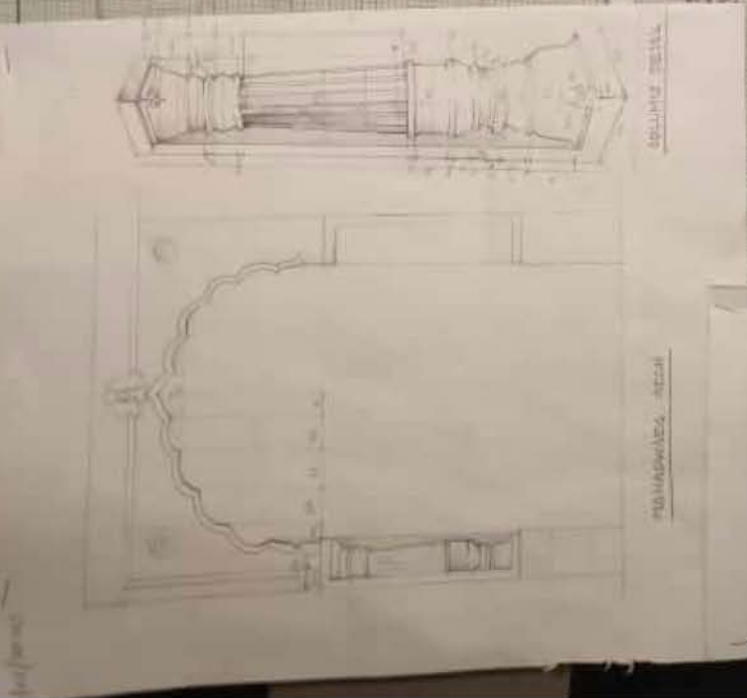




NORTHSIDE ELEVATION OF SAKHAMBHAYA

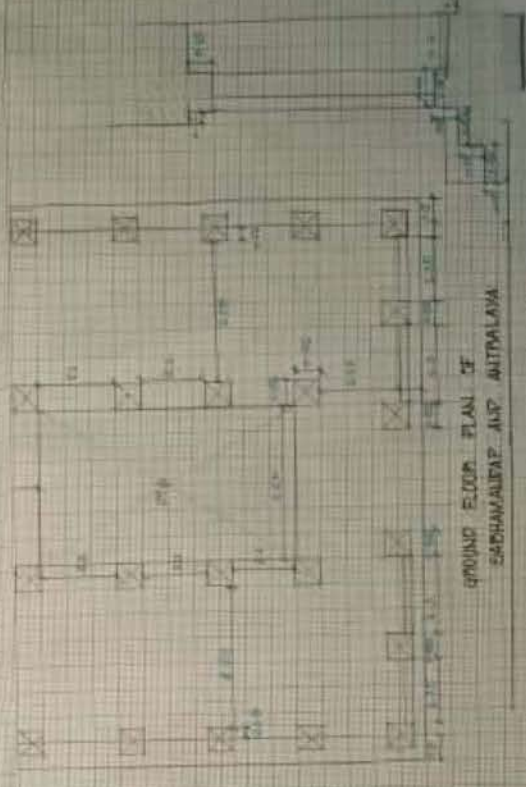


SAKHAMBHAYA INTERIOR CARVING ON WALL

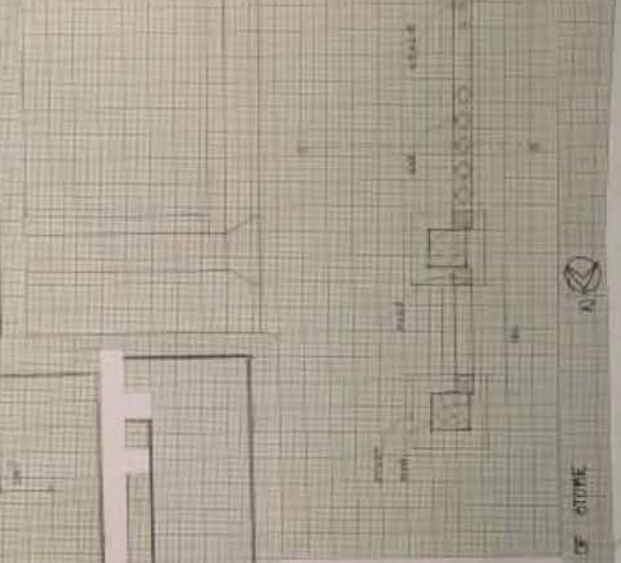


PRABHAWALI

SOUTH SIDE



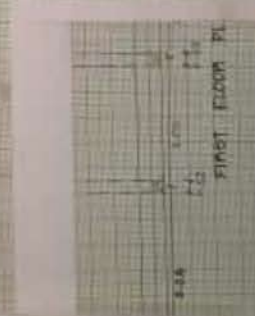
GROUND FLOOR PLAN OF SAKHAMBHAYA AND ANTIKALAYA



FIRST FLOOR PLAN OF SAKHAMBHAYA



ELEVATION OF GATE



FIRST FLOOR PL

PLAN OF GATE



PLAN OF GATE