ARCHITECTURAL PORTFOLIO

CHINMAY MANNIKAR
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Believe.Become

CHINMAY MANNIKAR

CONTACT

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Linkedin - Chinmay Mannikar

26 / 11 / 1998

EDUCATION

Tender Care Home School, Aurangabad (2001 - 2015)
CBSE CLASS X

Deogiri College , Aurangabad (2015 - 2017)
SSE CLASS XII

MM College of Architecture , Pune , Maharshtra (2017 - 2018)
B-ARCH IST YEAR

SMEF'S Brick school of Architecture , Pune , Maharshtra (2018 - 2021)
B - ARCH 2nd YEAR - B - ARCH 4TH YEAR

OTHER INTRESTS

PLANTING
TRAVEL
PHOTOGRAPHY
COOKING
SWIMMING
GRAPHICS
PETS
SOFTWARES
MUSIC
CYCLING

ABOUT ME

I am an architecture student strongly influenced by global architectural designs , trends and materials .
I like to create habitats for people with respect to enviornment .

Seeking an internship that allows me to apply the knowledge gained at university and obtain experience in the development , detailing and approval of projects and learn about application of new materials , negotiating with clients and visiting construction sites .

SOFT SKILLS

SOFT SPEAKING
TEAM SPIRIT
HARD WORKING
INNOVATIVE
HARD WORKING

LANGUAGES

MARATHI
ENGLISH
HINDI
GUJRATI
GERMAN

WORKSHOPS AND COMPETITIONS

- CONSERVATION DESIGN (2020)
- ARCHITECTURAL PHOTOGRAPHY (2021)
- CHILD FRIENDLY CITY (URBAN 95) (2019)
- FENICULAR ROOF
- ECONIWAS SAMHITA

SOFTWARE SKILLS

AUTOCAD
LUMION
IN-DESIGN
PHOTOSHOP
SKETCHUP
DIMENSIONS
VRAY
REVIT
RHINOCEROS

CONTENTS

AFFORDABLE HOUSING

AFFORDABLE HOUSING

Sr.no	F.S.I. calculations	in Sq.m	Remarks
1	Area of Plot	19185.00	Basic plot area
2	area under road	205.20	considering 136.8 mts frontage and 1.5 mts width
3	Net Gross Plot	18975.80	A (1-2)
4	Amenity Space	948.90	5% of AC public utilities or amenities like Fire Station, Police Station etc.)
5	Net Plot	18030.81	net gross plot- amenity
6	Open Space (10%)	1803.08	10% of net plot in which club house or support activities
7	Net Plot Area	18030.81	to be considered for FSI
8	F.S.I. Permissible	19833.89	it is 1.1 of Net Plot Area
9	Add for		
10	TDR 40% of NPA (3)	7212.32	**40% of Net Plot Area to be considered as TDR**
		7308.38	Area to be handed over to local body
		4803.64	Area to be purchased
11	Premium F.S.I (50%)	2409.24	30% of Net Plot Area as premium paid to Government
12	Total Addition	**12621.57**	10 + 11
13	Total potential add. FSI	12621.57	
14			Maximum of 1.5 of net plot area
15	Max. Building potential	**32455.46**	13 + 8 Total: (1.8 FSI)
	Housing Categories		
	20-35 sq.mts.	11859.41	35% of max building potential
	No Of Units (Avg. 35)	**270**	considering Carpet area of 35 sq.mts. and Built up of 42 sq. M
	40-50 sq.mts.	11859.41	35% of max building potential
	No of Units (Avg 48)	**210**	considering Carpet area of 45 sq.mts. and Built up of 54 sq. M
	70-80 sq.mts.	9736.64	30% of max building potential
	No. Of Units (75 sq.mts.)	**113**	considering Carpet area of 75 sq.mts. and Built up of 86.2 sq. M
	Total no of Units	**594**	

FSI CALCULATION

	NO.OF BUILDINGS	BUILT UP AREA (SQM)	FLOOR	EPI(KWH/SQM/YEAR)	TOTAL EPI(KWH/YEAR)
35 SQM BUILDINGS	3	409.2	15	45	828630
45 SQM BUILDINGS	2	584.10	10	45	525690
75 SQM BUILDINGS	2	750.9	15	45	1013715
				TOTAL	2368035
	PER DAY ENERGY CONSUMPTION(KWh/DAY)				6487.76712

RENEWABLE ENERGY CALCULATION

SITE LOCATION : PISOLI ,PUNE ,MAHARASHTRA

MICRO CLIMATE : HOT AND DRY REGION

NEARBY LANDMARK : BEHIND SMEF'S BRICK SCHOOL OF ARCHITECTURE

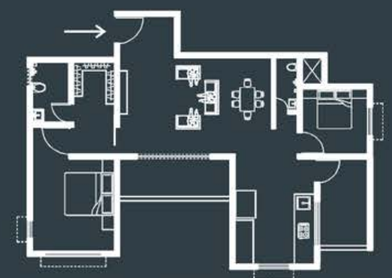
ABOUT SITE : SITE IS LOCATED 1.5 KM AWAY FROM MAIN STREET , AT THE FOOTHILL OF HILLOCK WHICH CREATES A OPPURTUNITY FOR STREAMS RUNNING DOWN THROUGH SITE.

	NO.OF BUILDINGS	ROOF AREA (SQM)	TOTAL ROOF AREA(M2)	EFFECTIVE ROOF AREA (75%)
35 SQM BUILDINGS	3	449.2	1347.6	1010.7
45 SQM BUILDINGS	2	626.1	1252.2	939.15
75 SQM BUILDINGS	2	802.5	1605	1203.75
			TOTAL	3153.6
	energy produced on effective roof area in one hour			315.36
	energy produced on effective roof area in one day (available sun hours i.e. 5.6hrs x energy produced in one hour)			1766.016

EPI CALCULATION

SITE PLAN

UNIT PLANS



80 SQ M UNIT PLAN

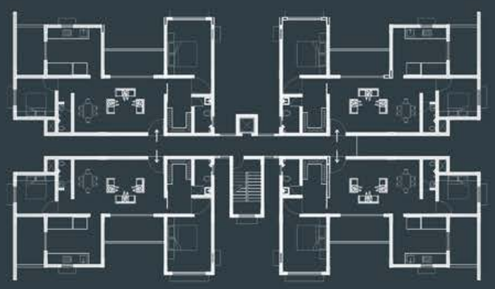
50 SQ M UNIT PLAN

35 SQ M UNIT PLAN

FLOOR PLANS

35 & 50 SQ M FLOOR PLAN

50 SQ M PLAN



80 SQ M FLOOR PLAN

50 SQ M FLOOR PLAN

LONGITUDNAL SECTION

SENIOR LIVING RETIREMENT HOME

PROLOGUE

The center for senior living and retirement home is a concept which includes the seniors, rather than isolating them from the community.It started with a concept of retired senior people coming together with a thought of sharing experiences and spending quality time with people of similar age, ability and of course the need of person to person interaction

The centre houses short and long term living lac ty for seniors, retirees and visitors, interactive, skill based, hobby and play spaces, library, sports, media centre for performing and visual arts, food and dining, medical and para-medical facilities, gardens, built-unbuilt-semi open spaces for interaction and sharing with a solid backing of efficient and happy support staff and administration.

DESIGN PRINCIPLES

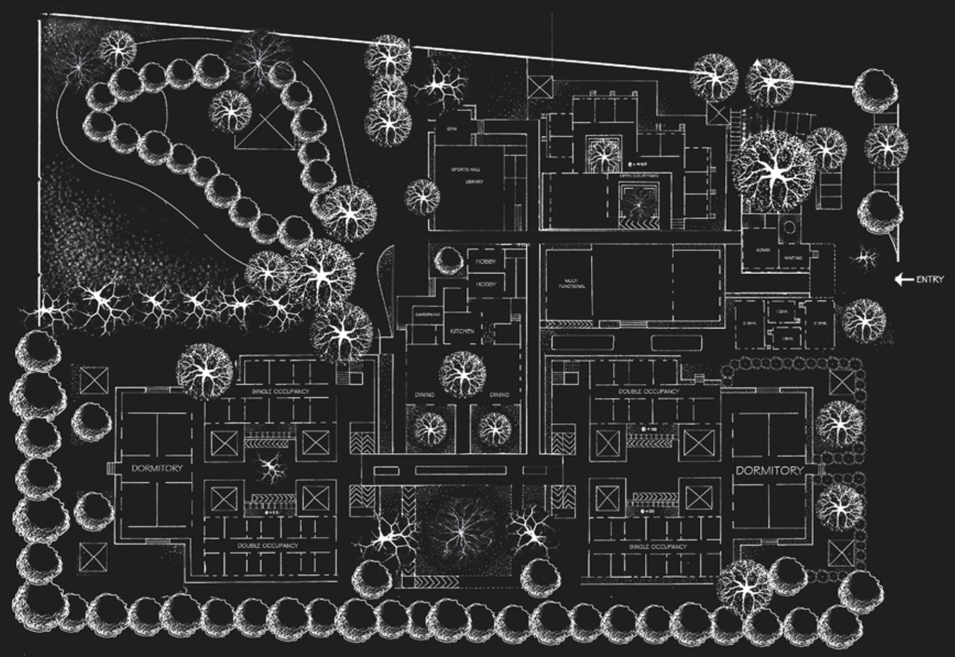
SYMMETRY

BALANCE

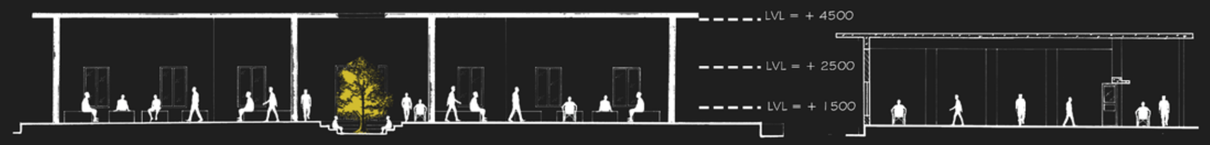
REPETITION

DOMINANCE

ALLIGNMENT

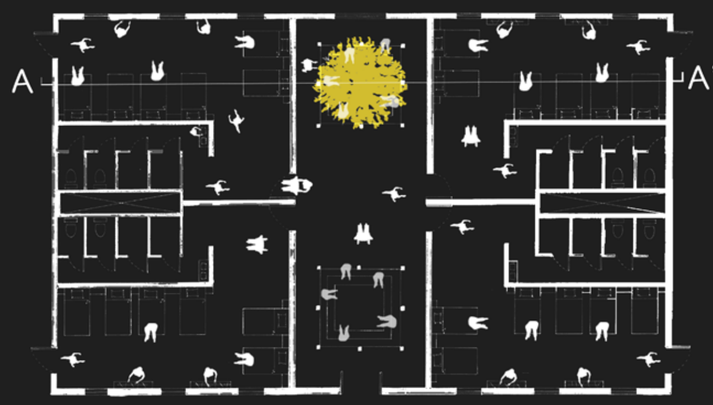


SITE PLAN

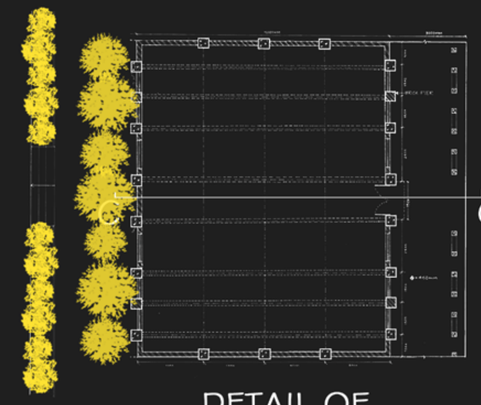


SECTION AA'

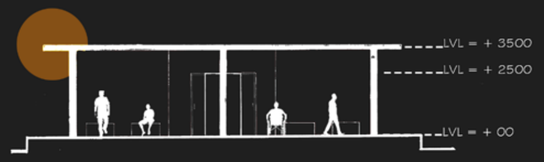
SECTION CC'



PLAN OF DORMITORY



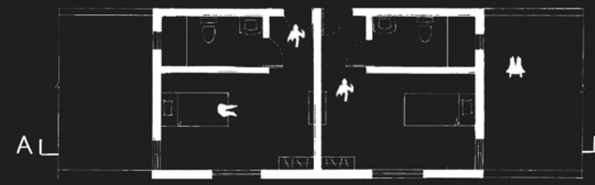
DETAIL OF MULTIFUNCTION SPACE



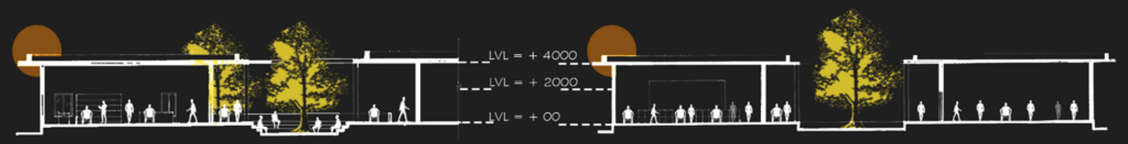
SECTION AA'

SECTION AA'

PLAN OF DOUBLE OCCUPANCY

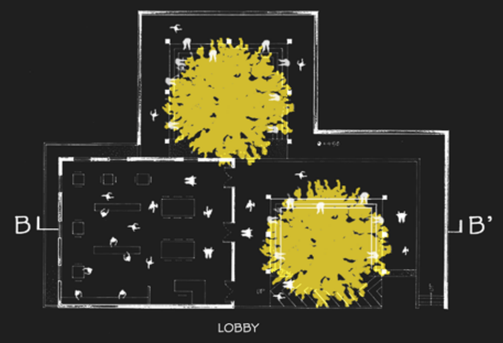


PLAN OF SINGLE OCCUPANCY



SECTION BB'

SECTION CC'



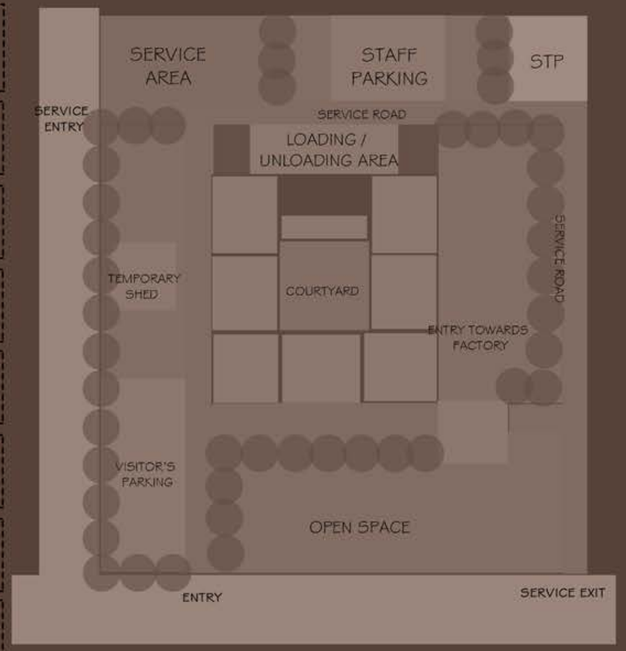
PLAN OF SINGLE OCCUPANCY

PLAN OF MULTIFUNCTIONAL SPACE AND LIBRARY

SENIOR LIVING AND RETIREMENT HOME

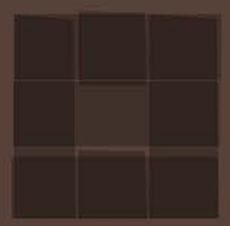
INDUSTRIAL SHADE - CHOCLATE INDUSTRY

STORAGE OF RAW MATERIAL	Storing - sugar, milk powder,cocoa beans.
ROASTING	Roasting takes place at usually 210 F for about 10-35 minutes.
WINNOWING	The dried beans are cracked and a stream of air separates the shell from the nib, the small pieces used to make chocolate.
GRINDING	The beans are then usually grounded in a milling or grinding machine called a melangeur
COUNCHING	It is continuously mixed at a certain temperature to develop flavor remove moisture and break down large pieces.
TEMPERING	The next step is tempering the chocolate is slowly heated and cooled allowing the cocoa mass to solidify and stabilize.
MOULDING	Chocolate is left to set in desired moulds
PACKAGING	Packing the final product
STORAGE	Storage of the finished product Ideal storage temperatures are between 15 and 17 °C.



EVOLUTION OF PLAN

CHOCOLATE MODULE

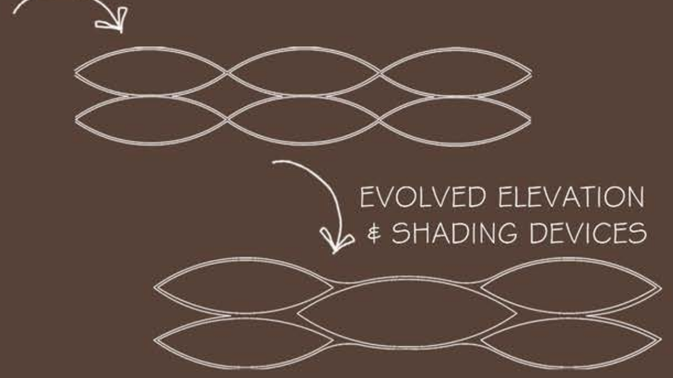


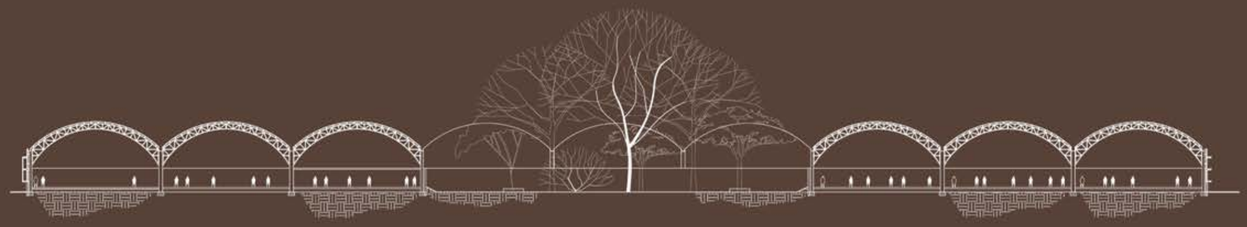
SITE PLAN

INDUSTRY PLAN

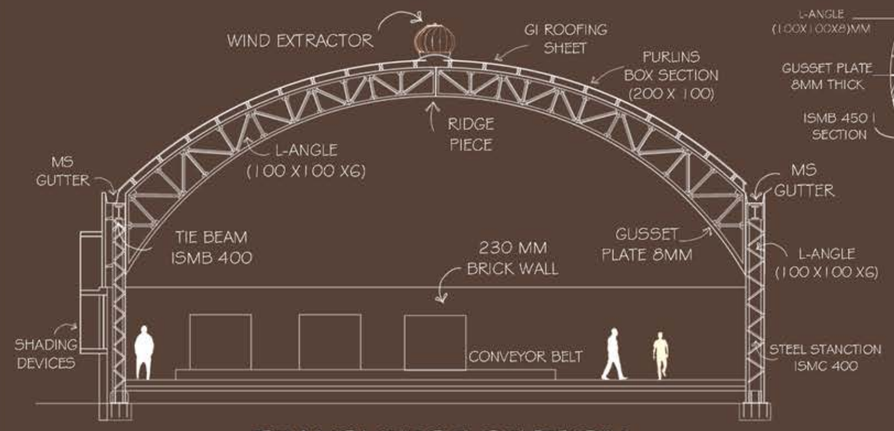
EVOLUTION OF ELEVATION

COCOA FRUIT

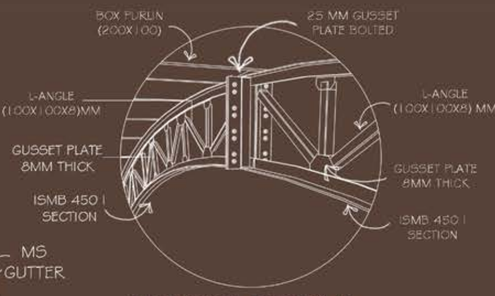




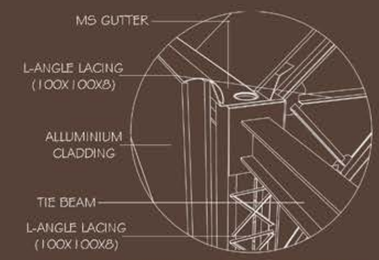
LONGITUDNAL SECTION

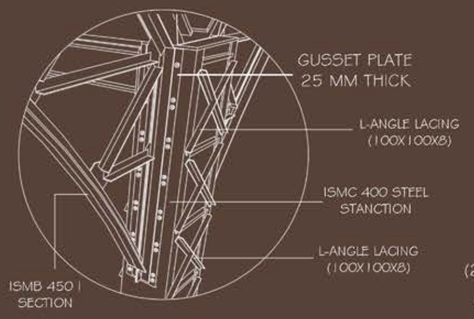


TRANSVERSE SECTION



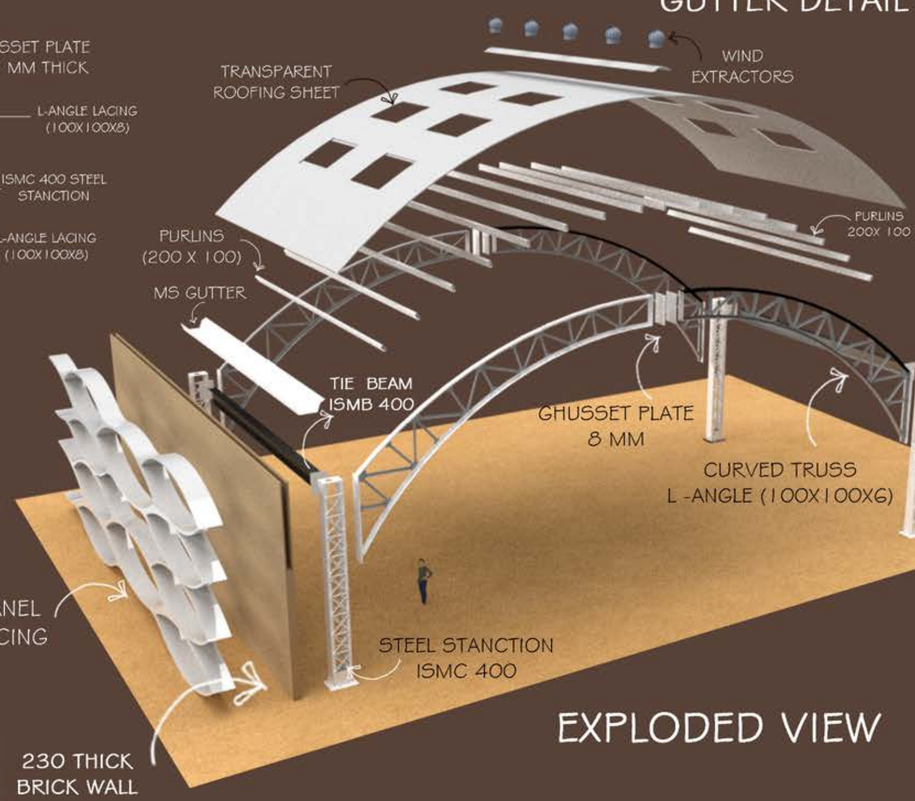
TRUSS DETAIL





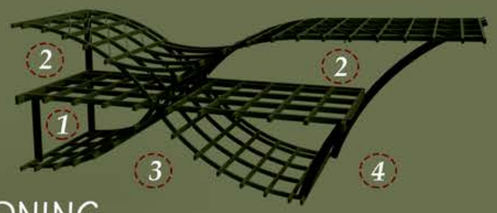
DETAIL OF TRUSS - STANCTION JOINERY

GUTTER DETAIL



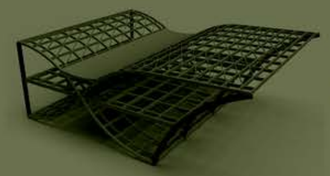
EXPLODED VIEW

INTERNATIONAL EXPO - SINGAPORE PAVILLION



ZONING

1.Indoor farming area
2.Exhibition area
3.Childrens play area
4.Landscape area



ISOMETRIC VIEW

ELEVATION

Orientation of structure is in north south direction, thus the Loo winds coming from south west direction are not perpendicular to the structure and south side of the facade is blocked to reduce the heat gain

FORM EVOLUTION

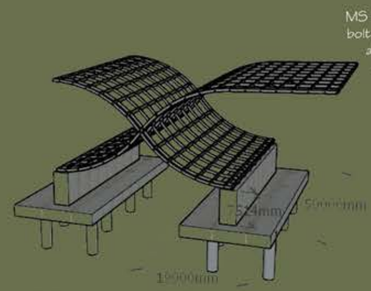
Land with smaller malay house farm in front of the house and a landscaped front yard

After invasion of Britain, colonies started qthe farmlands to build the structures

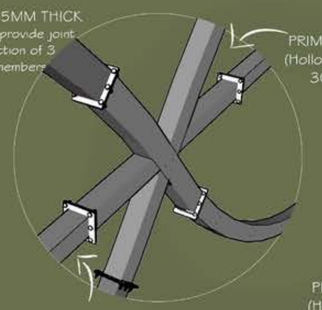
After British left, Singaporeans were left with very less land and started facing natural resource scarcity So they started developing indoor farming technology

Evolution of spaces & technology in construction to give the space contemporary look

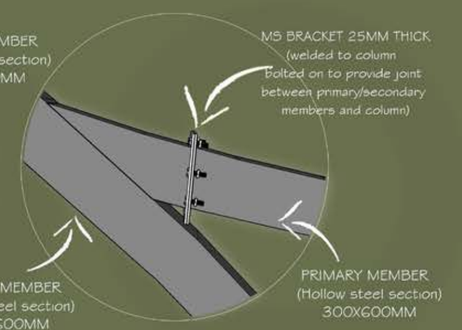
Following the history of Singapore's settlement and the form evolved



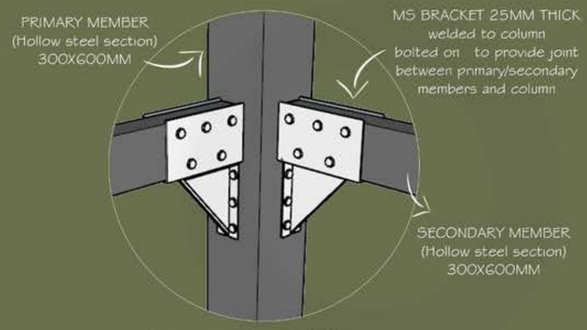
FOUNDATION DETAIL



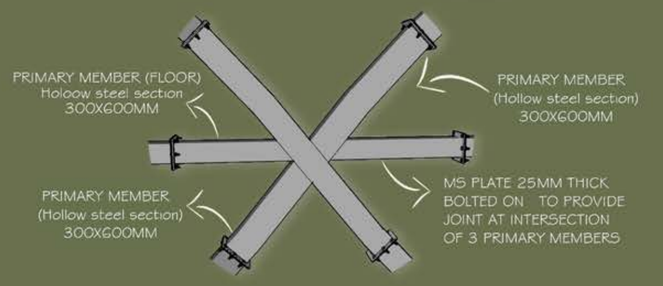
JOINERY DETAIL



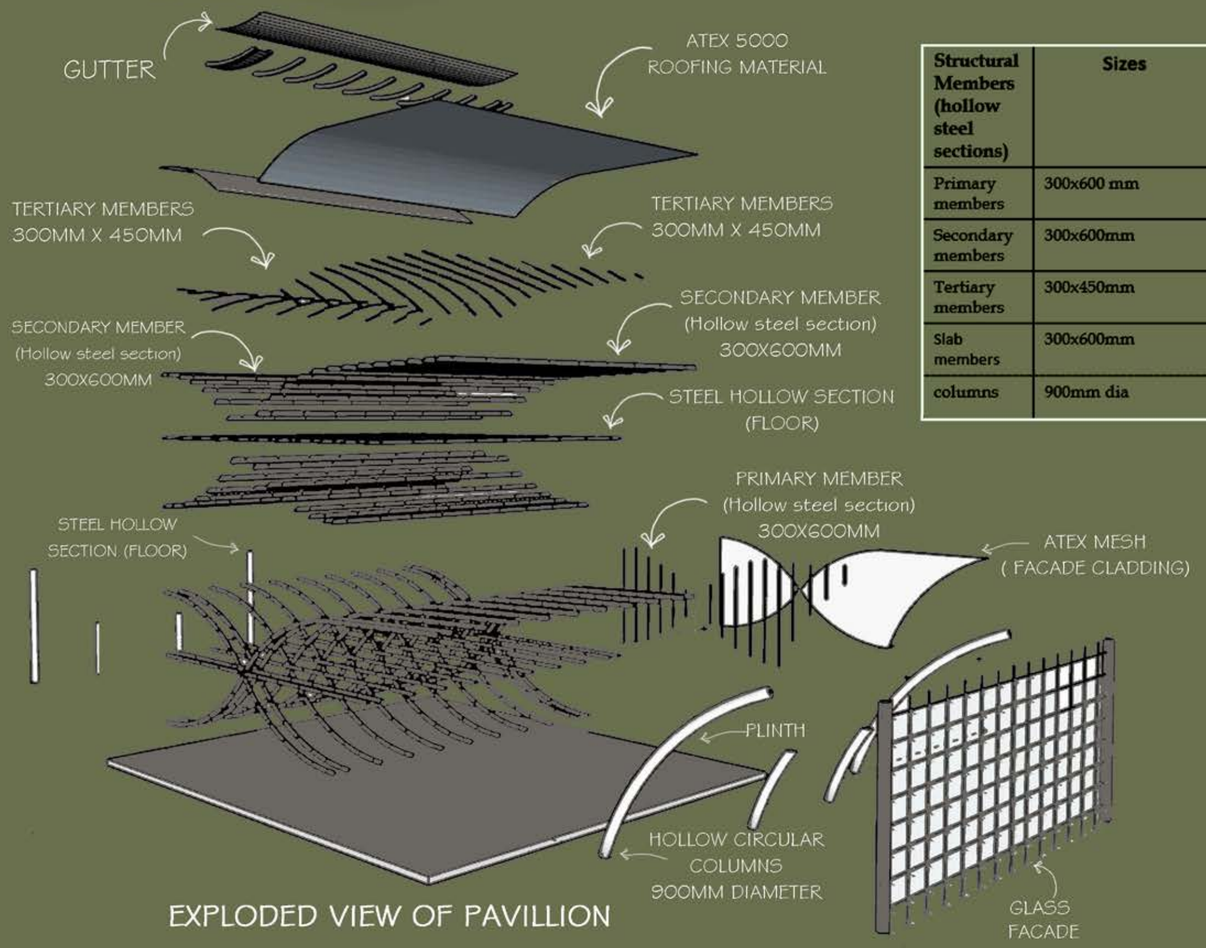
JOINERY DETAIL



JOINERY DETAIL



JOINERY DETAIL



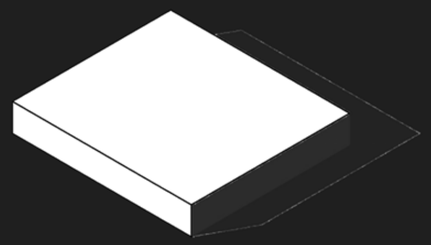
EXPLODED VIEW OF PAVILLION

Structural Members (hollow steel sections)	Sizes
Primary members	300x600 mm
Secondary members	300x600mm
Tertiary members	300x450mm
Slab members	300x600mm
columns	900mm dia

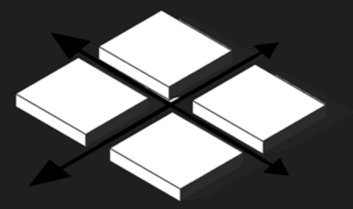
ECONIWAS SAMHITA COMPETITION

SHORTLISTED IN TOP 10

FORM EVOLUTION

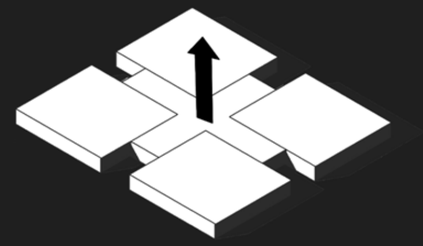


LONGER FACADE TO NORTH- SOUTH



MAIN BUILDING BLOCK SEGEREGATED INTO FOUR UNITS TO ENABLE EFFIECIENT VENTILATION AND DAYLIGHTING.

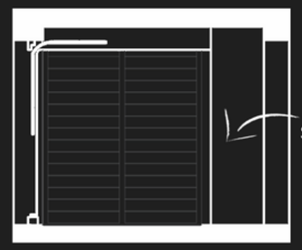
FINAL BUILDING OUTPUT



NICHES FORMED ALONG THE TWO AXIS TO TAKE WIND TO THE INSIDES OF THE BUILDING

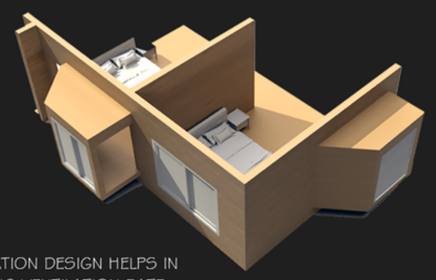
SITE PLAN

ECONIWAS SAMHITA TEAM CODE - ENS-DC-74

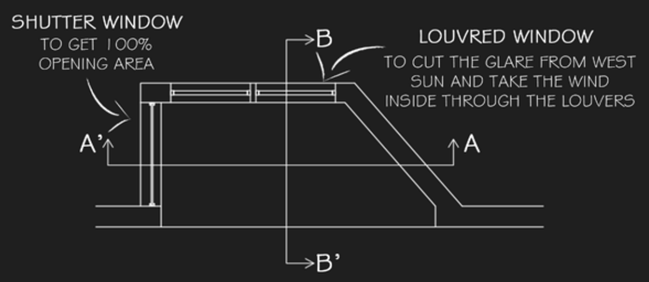


SECTION AA

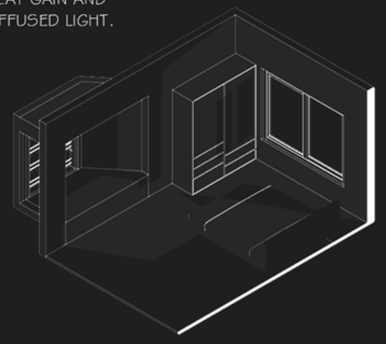
SECTION BB'



FENESTRATION DESIGN HELPS IN OPTIMIZING VENTILATION RATE, REDUCES HEAT GAIN AND PROVIDES DIFFUSED LIGHT.

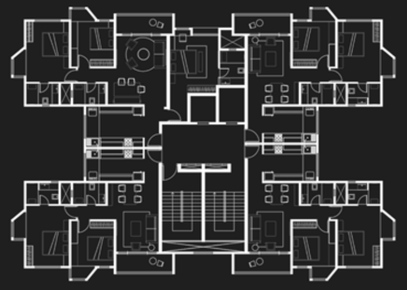


PLAN OF BAY WINDOW

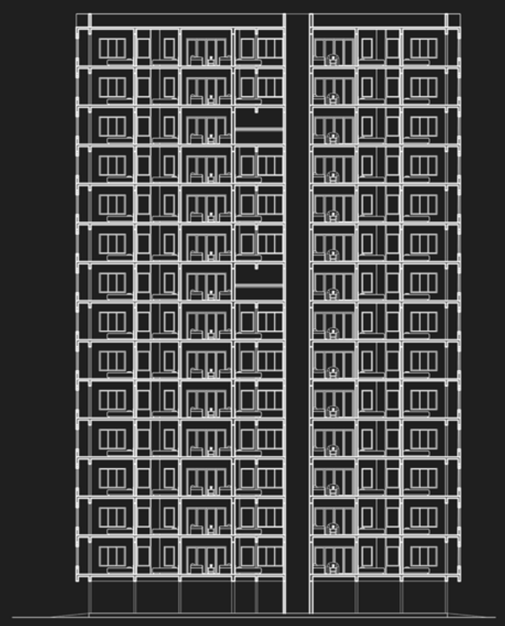


SECTIONAL VIEWS OF BEDROOM

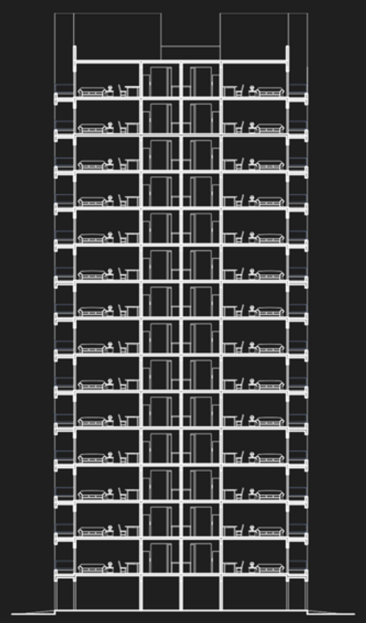
PLAN OF 2 BHK



PLAN OF 3 BHK



SECTION AA



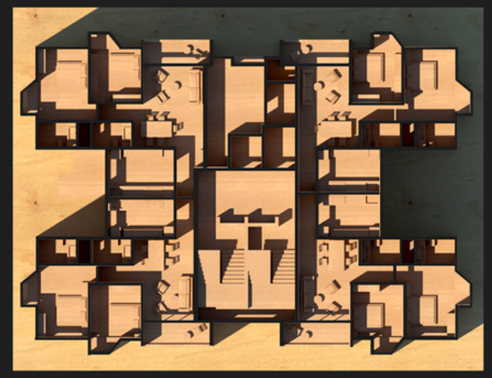
SECTION BB'

ECONIWAS SAMHITA TEAM CODE - ENS-DC-74

U- VALUE CALCULATION FOR ROOF & WALL

Table 1 : Calculation for Wall

Sr. No.	Material of layer	Thickness m (t)	Thermal Conductivity	Thermal resistance	
1	Internal plaster	0.012	0.72	0.016666667	
2	Foam concrete panel	0.1	0.15	0.333333333	
3	Air (considering avg temp 30 degree C)	0.12	0.022	5.454545455	
4	Foam concrete panel	0.05	0.15	0.333333333	
5	External plaster	0.025	0.72	0.034722222	
	TOTAL-R			6.17260101	m2.K/W
	Thermal conductivity(U-value) =1/R			0.162006259	W/m2.K



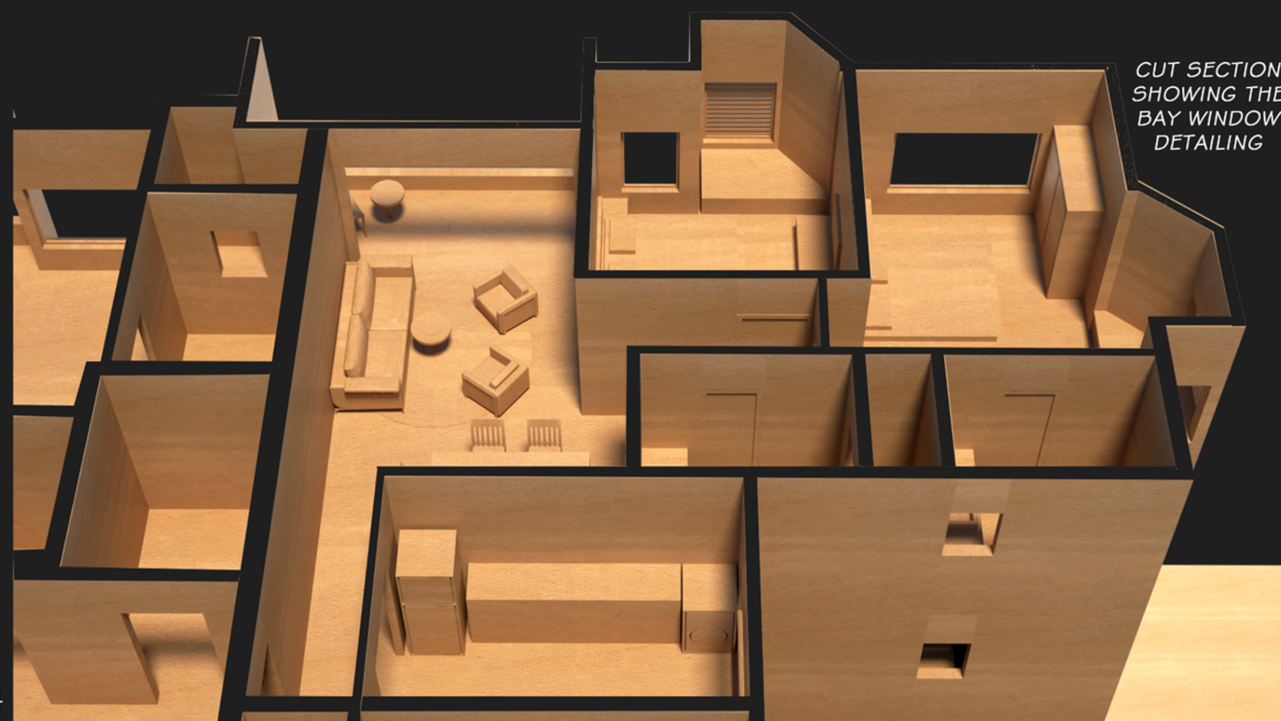
PLAN OF THE ENTIRE FLOOR SHOWING THE SHADING

Table 2: Calculation for Roof

Sr. no.	Material of layer	Thickness m (t)	Thermal conductivity -	Thermal resistance
1	Internal plaster	0.012	0.72	0.016666667
2	RCC slab	0.18	1.58	0.113924051
3	Screed (cement)	0.025	0.72	0.034722222
4	PUF insulation	0.05	0.023	2.173913043
5	Concrete (laid to slope)	0.05	1.74	0.028735632
6	China mosaic tiling	0.008	1.5	0.005333333
			TOTAL	**2.373294949**

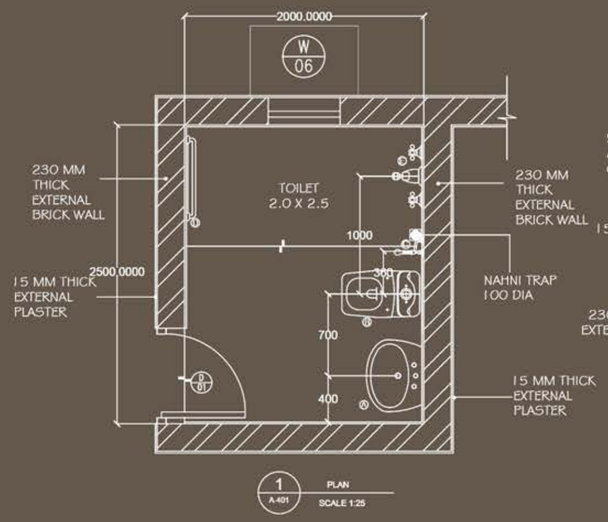
Thermal resistance		
Internal surface	0.17	
External surface	0.04	
Material resistance	2.37	
TOTAL (R)	**2.58**	m2.K/W

Thermal Transmittance		
U-value = 1/R	0.38	W/m2.K
Maximum permissible	1.2	W/m2.K

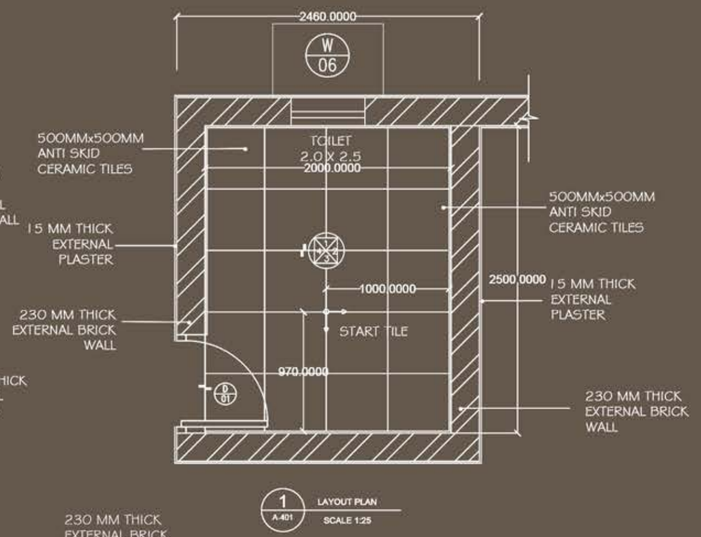


CUT SECTION SHOWING THE BAY WINDOW DETAILING

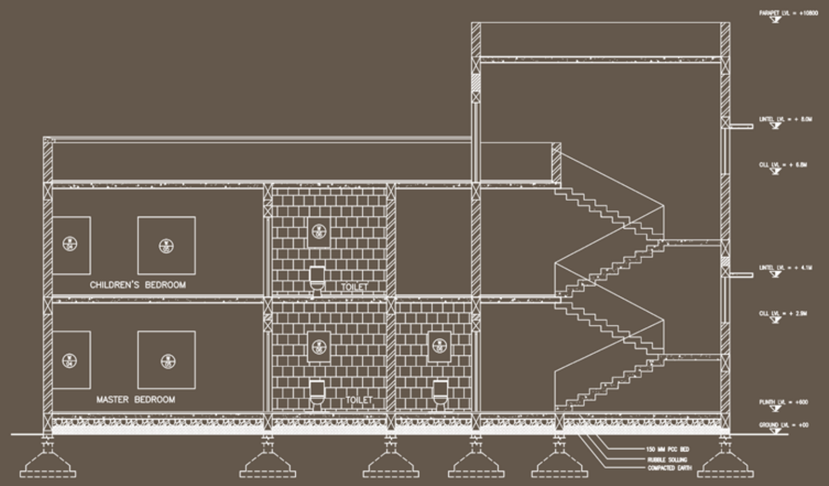
WORKING DRAWING



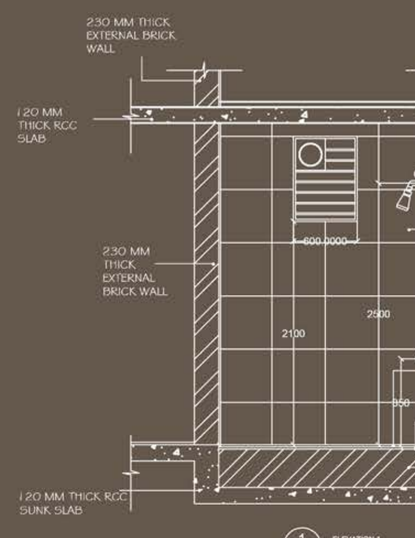
1 A-401 PLAN SCALE 1:25



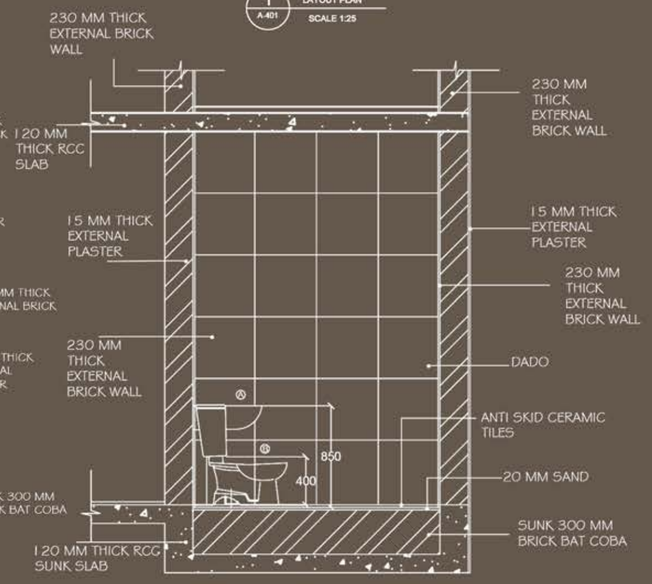
1 A-401 LAYOUT PLAN SCALE 1:25



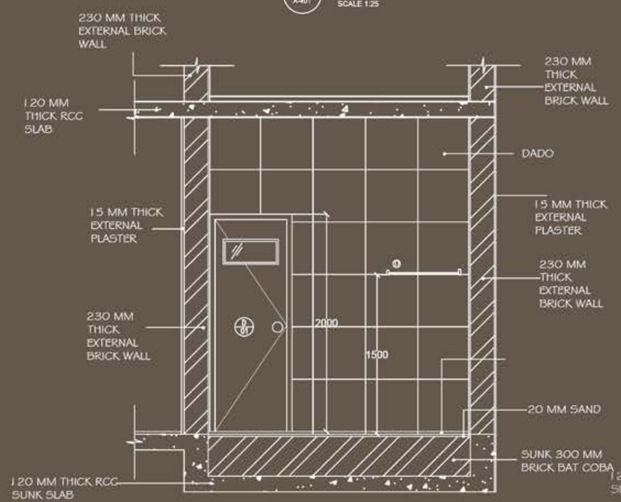
A A-201 SECTION AA' SCALE 1:50



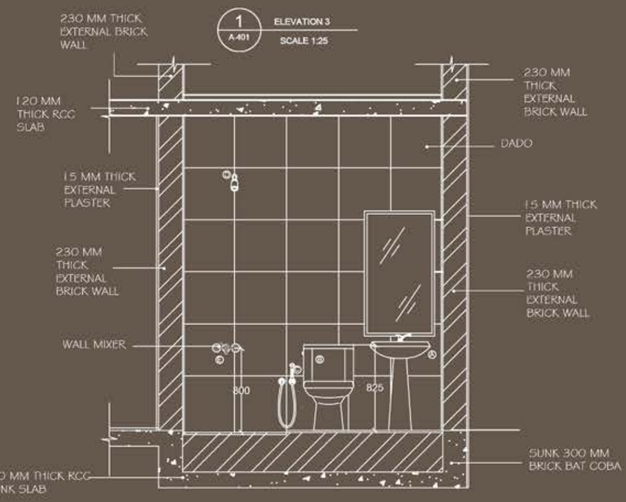
1 A-401 ELEVATION 1 SCALE 1:25



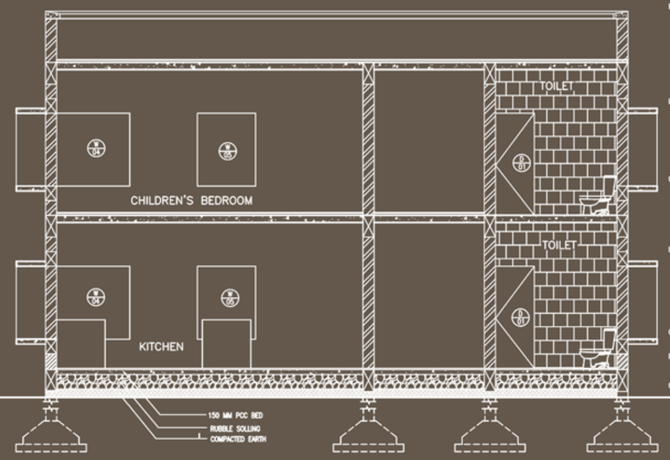
1 A-401 ELEVATION 3 SCALE 1:25



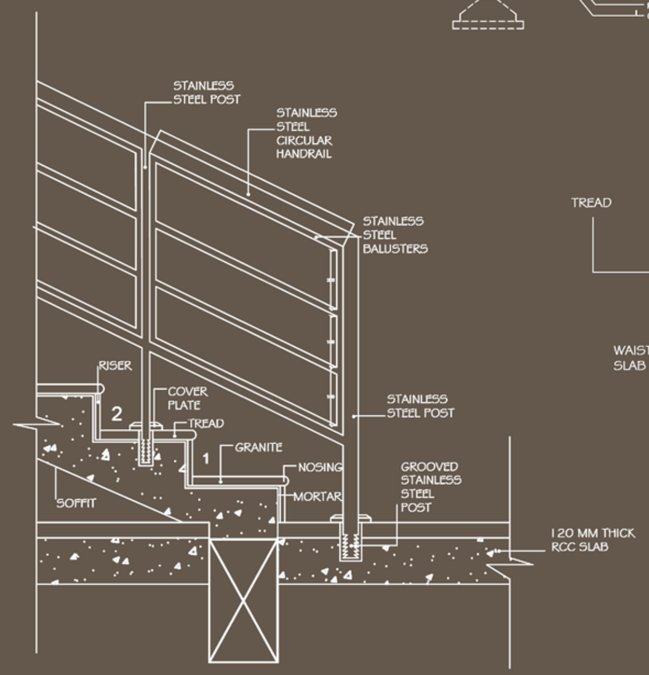
1 A-401 ELEVATION 4 SCALE 1:25



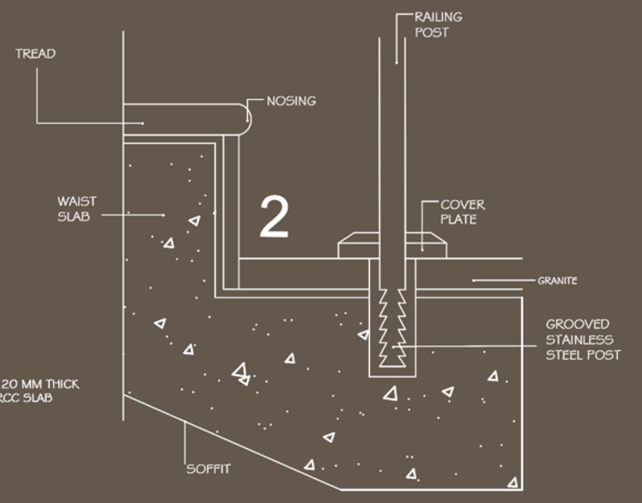
1 A-401 ELEVATION 2 SCALE 1:25



A A-201 SECTION BB' SCALE 1:50

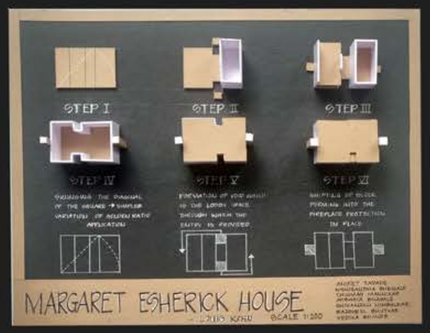


A A-201 POST FIXING DETAIL SCALE 1:1



A A-201 RAILING DETAIL SCALE 1:10

HAND DONE



ESHRICK HOUSE *(GROUP)*

PALLAVA DYNASTY *(8 X 4 PANEL) (GROUP)*

RENDER

FENICULAR ROOF

CALENDAR(2020)

TACTICAL INTERVENTION (URBAN 95)

WILDLIFE PHOTOGRAPHY

FLAMINGOES (BHIGWAN)

PAINTED STORK (BHIGWAN)

CLAY WORK (POTTERY)

INDUSTRIAL SHADE *(GROUP)*

SPOTTED DEER (KABINI)

BRAHMINI KITE (KABINI)

PAINTED STORK (BHIGWAN)

BLUE TIGER BUTTERFLY (PUNE)

SKY IS THE LIMIT

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