



**DISSERTATION
SEMESTER 9th
Academic Year
2022-23**

**DAYANAND COLLEGE OF ARCHITECTURE
LATUR**

ADS BRIEF:
Subject ARCHITECTURAL DESIGN
– 5TH YEAR –
Semester IX – AY 2022-23
Subject Faculty: -Ar. Renuka Shivalkar

THEME- HOUSING

Course Objectives: Understanding typologies of housing in Urban Areas. Understanding quantitative and qualitative aspects of mass housing. Understanding user aspirations and user affordability Expected Course Outcome Design of housing schemes in urban area, along with necessary infrastructure, services, and amenities.

Housing Scenario – Latur Through this project we will gather systematic information of existing and proposed housing in Latur. We will analysis peoples' aspirations, needs, affordability, preferences in terms of housing.

PROCESS: Students will arrive at answers for the questions below from their case studies, research and survey. These answers should then be concluded in a Vision Statement, which will become the guiding point of design for the semester.



- Key Questions to initiate the pre study inquiry:
- Context and Current demography:
- Collection of data and preparation of socio-economic profile
- Answer through Literature review Research Design - Via

B. Architectural Case Studies:

- a. SUBLIME ORDINARINESS: Housing Project by DCOOP Architects
- b. House 8 by Bjarke Ingels
- c. SOS Children Village in Tadjourah, Djibouti Urko Sanchez Architects
- d. Peter Pichler's figure-of-eight-shaped housing complex
- e. Kanchanjunga apartments
- f. Seoul apartment block by Archihood WXY
- g. Unite'd habitation, Le Corbusier.
- h. Habitat 67
- i. The Interlace by OMA / Ole Scheeren
- j. Monterrey Housing – Nuevo León, Mexico

Points to consider in Case Study

Note: These case studies are to be done on A3/A4 size tracings with Print of Drawings below. Use different color markers / Pencil colors to mark following things. Each pointer will have different sheet (Tracing and Print)

- Concept of Design
- Contextual Harmony (Site Location with neighboring buildings marked)
- Topography if any and how architect uses this topo.
- For structure design
- Program Detail
- Access-Circulation
- Corridor and passages on all floors
- Services areas on all floor (Staircase, Toilets, Service rooms)
- Light in all spaces
- Ventilation of all spaces (With use of Plan, Section or sketches whichever is relevant)
- Section analysis for program, Light, Ventilation, Height with reference to human height.
- Materials used of Building
- Typology of structure

Books for reference:

- New Concepts in Apartment Buildings [architecture] Book by Annette Gigon (PDF Available)
- The Sustainable Tall Building By Philip Oldfield
- Apartment Buildings Book by Chris van Uffelen Mane : a new initiative in public housing for Karnataka's middle income and weaker sections.
- Multifamily Housing: Creating a Community

Indirect Reference books:

- Paris Mansions and Apartments 1983 (PDF Available)
- Tall Buildings Structural design of concrete buildings up to 300 m tall (PDF Available)
- Precedents in Architecture (Available in DCA Library)

C. Housing Site Visits in Latur

Sr. No	Site Name	Site Location	Typology
1	Police Colony	Babhalgaon	EWS/ LIH Housing
2	MHADA Housing	Near Harangul Railway Station	EWS/ LIH Housing
3	Lahoti Row Houses	Ausa Road	Row Houses Typologies
4	Ajinkya City: Phase 2	Near D Mart	Row Houses Typologies
5		Near D Mart	MIG Housing
6	Navandare Housing	Ausa Road	Township

Pointers for Site Visit: Make scaled Sketches in A3/A4 Plan sheet note book.

Minimum 2 plan, 2 Section, 1 elevation and 2 details sketches per site is expected from each student.

Sketches of Floor Plan, Section (With Approx Dimension)

Sketches of special Details observed (Example: Firefighting, Refugee Area, Compound, Podium, Toilet etc)

D. Site: Indraprasta , Latur Ausa Road, Latur



Cad File of the Site is attached with this draft.

- Site Area to be considered : 16000 Sq.M
- Maximum FSI to be considered: 2.55 (Basic FSI - 1.1 + Premium FSI- 0.30 + TDR Loading -1.15)

- Therefore Max. Built up Area: 40,800 Sq.M

Note: It is not compulsory to utilize complete given FSI, But your design should not exceed the max FSI. You also need to fulfill all given Program requirements

E. Program Requirement :

- Land for Roads 25-30%

Amenities Required

- Recreational Ground – Min 10% of Site area
- Community Center/ Club House: 500 Sq.M
- Shops: Min 10 (15- Sq.M Each Min)
- Other Leisure spaces (Swimming pool, Temple etc) As per your design and concept

Parking:

	4 Wheeler		2 Wheeler	
	Parking Req	No of Parking	Parking Req	No of Parking
EWS	1 per 4	20	1 each	20
LIG (Low Income Group Housing)	1 per 2	60	1 each	60
MIG	1 Each	80	2 per 1	160
Row Houses	2 per 1	20	2 per 1	40
Total		180		280

Typology of Apartments:

- EWS (Economically Weaker Section) Housing – Maximum Area 350 Sq.M
- LIG (Low Income Group) Housing
- MIG (Middle Income Group) Housing
- HIG (High Income Group) Housing

	Min Area Per Apartment	Max Carpet Area per apartment Sq.M (Carpet Area)	No of Apartments
EWS	As per Bylaw	35	70-80
LIG	Room req.	60	100-120
MIG		150	70-80

HIG		200	5-10
Total			245-290

Note: Program /Space / Room requirement per family is not provided. You can decide what spaces/ rooms to provide. Follow above table for total apartment area requirement and No of Apartments to be provided from each section on given site.

Schedule:

Sr.No	Date	Day	Details of Topic to be covered	Submission
1	17-Oct-2022	Monday	<ul style="list-style-type: none"> Introduction to Topic and Discussion of program in detail Lecture on Pre Study and Data Collection Site Visit to Ausa Road Site 	
2	18-Oct-2022	Tuesday	Pre Study Surveys	
3	19-Oct-2022	Wednesday	<ul style="list-style-type: none"> Report Preparation of Pre Study and Analysis Discussion on Architecture Case Studies 	Submission of Pre Study – 10 Marks
4	20-Oct-2022	Thursday		
	21-Oct-2022	Friday		
	22-Oct-2022	Saturday		
	24-Oct-2022	Monday		
1	25-Oct-2022	Tuesday		
2	26-Oct-2022	Wednesday		
3	27-Oct-2022	Thursday		
4	28-Oct-2022	Friday		
	29-Oct-2022	Saturday		
	31-Oct-2022	Monday	Preparation of Architecture Case Study Report	Submission of CS Sheets – 10 Marks
1	1-Nov-2022	Tuesday	Site Visits to Latur Housing Projects and on-Site sketching . Part 1	
2	2-Nov-2022	Wednesday	Site Visits to Latur Housing Projects and on-Site sketching. Part 2 Compilation of all Site Visit Sketches	Submission of Site Visit Sketches sheets – 10 Marks
3	3-Nov-2022	Thursday		
4	4-Nov-2022	Friday		
	5-Nov-2022	Saturday		
	7-Nov-2022	Monday	Discussion on Literature Review for	

			Housing. Division of work per Student Working studio	
1	8-Nov-2022	Tuesday	Presentation of Literature Review by each Student	Presentation – 10 Marks
2	9-Nov-2022	Wednesday	Introduction to ADS Project Doubt solving Evolution of Concepts by Each Student	
3	10-Nov-2022	Thursday		
4	11-Nov-2022	Friday		
	12-Nov-2022	Saturday		
	14-Nov-2022	Monday	Presentation of Concept Sheets by each student to the class	Sheet and Presentation Marking – 10 Marks
1	15-Nov-2022	Tuesday	Working Studio: on Bubble Diagrams, Rough Sketches , Line Diagrams, Site Plan	
2	16-Nov-2022	Wednesday	Presentation of Bubble Diagrams, Line Diagrams, Site Plan	Marking – 10 Marks
3	17-Nov-2022	Thursday		
4	18-Nov-2022	Friday		
	19-Nov-2022	Saturday		
	21-Nov-2022	Monday	Working Studio: For Development of Plans	
1	22-Nov-2022	Tuesday	Working Studio: For Development of Plans	
2	23-Nov-2022	Wednesday	Presentation and Submission of Plans	Plans' Marking – 10 Marks
3	24-Nov-2022	Thursday		
4	25-Nov-2022	Friday		
	26-Nov-2022	Saturday		
	28-Nov-2022	Monday	Working Studio: For Development of Sections	
1	29-Nov-2022	Tuesday	Working Studio: For Development of Sections	
2	30-Nov-2022	Wednesday	Presentation and Submission of Section	Sections' Marking – 10 Marks
3	1-Dec-2022	Thursday		
4	2-Dec-2022	Friday		
	3-Dec-2022	Saturday		
	5-Dec-2022	Monday	Working Studio: For Development of	

			Elevations	
1	6-Dec-2022	Tuesday	Working Studio: For Development of Elevations	
2	7-Dec-2022	Wednesday	Presentation and Submission of Elevations	Elevations' Marking – 10 Marks
3	8-Dec-2022	Thursday		
4	9-Dec-2022	Friday		
	10-Dec-2022	Saturday		
	12-Dec-2022	Monday	Working Studio: For Development of Details	
1	13-Dec-2022	Tuesday	Working Studio: For Development of Details	
2	14-Dec-2022	Wednesday	Working Studio: For Development of Details	Details' Marking – 10 Marks
3	15-Dec-2022	Thursday		
4	16-Dec-2022	Friday		
	17-Dec-2022	Saturday		
	12-Dec-2022	Monday	Working Studio: Pre Final Sheet Rendering	
1	13-Dec-2022	Tuesday	Model Making	
2	14-Dec-2022	Wednesday	Internal Jury Marking – 25 Marks	Internal Jury Marking – 25 Marks
3	15-Dec-2022	Thursday		
4	16-Dec-2022	Friday		
	17-Dec-2022	Saturday		
	19-Dec-2022	Monday	Working Studio: Discussion, Rectification, Final Rendering and Model Making	
1	20-Dec-2022	Tuesday	Working Studio: Discussion, Rectification, Final Rendering and Model Making	Final Jury: 125 Marks
2	21-Dec-2022	Wednesday	Final Jury	
	Total Marks			250 Marks

CONTEXT STUDY

PROPOSED SITE LOCATION : LATUR

INDIA MAHARASHTRA LATUR

PRECIPITATION

- The rainy period of the year lasts for 7.1 months, from April 16 to November 20, with a falling 31-day rainfall of at least 13 millimeters. The month with the most rain in Latur is September, with an average rainfall of 148 millimeters.
- The rainless period of the year lasts for 4.9 months, from November 20 to April 16. The month with the least rain in Latur is February, with an average rainfall of 3 millimeters.

Average Monthly Rainfall in Latur

TOPOGRAPHY

- Total area of Latur district is 7157sq km
- Total area of Latur city is 32.56 sq km
- Latur district is in the Marathwada region in Maharashtra in India.
- The entire district of Latur is on the Balaghat plateau.
- Minimum elevation from sea level: 388 m
- Maximum elevation from sea level: 725 m
- Average elevation from sea level: 590 m

WORKING POPULATION - LATUR

	Total	Male	Female
Main Workers	104,528	86,330	18,198
Cultivators	2,756	2,475	281
Agriculture Labourer	3,038	2,228	810
Household Industries	2,802	1,557	1,245
Other Workers	95,932	80,070	15,862

POPULATION

Latur City	Male	Female
City Population	185,446	161,737
Male	103,227	103,639
Female	82,219	58,098
Average Literacy (%)	84.22 %	75.22 %
Sex Ratio	807	752
Child Sex Ratio	875	815

SEISMIC ZONING

POPULATION GROWTH RATE

- During the of census 2011 the population of Latur city is 382940.
- Now in 2022 population of Latur city is 501664.
- The population growth rate of Latur city is 2.309%

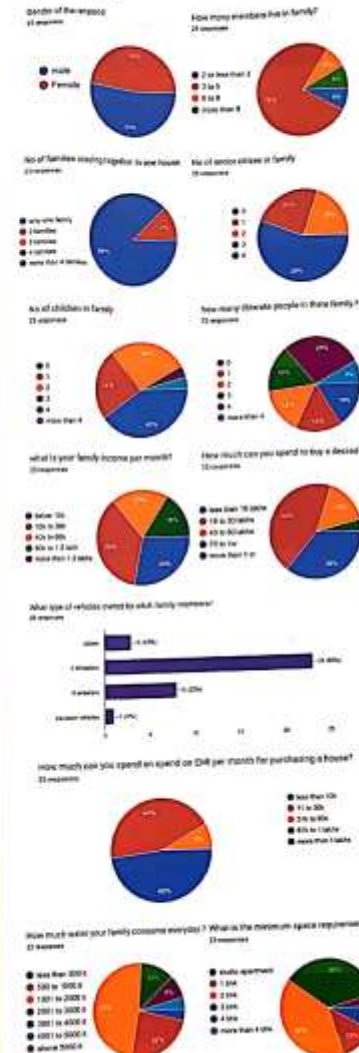
Average High and Low Temperature in Latur

SEISMIC ZONING

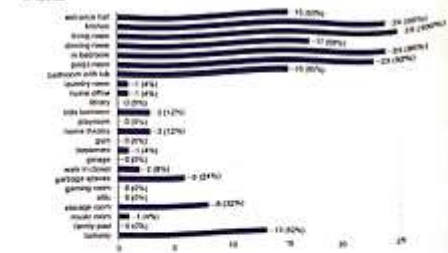
DAYAND COLLEGE OF ARCHITECTURE, LATUR
NAME: Rushikesh H. Kotwad
5TH YEAR SEM : IX 2022-2023 ROLL NO. : 01
SUB : ARCHITECTURAL DESIGN

SURVEY DATA ANALYSIS

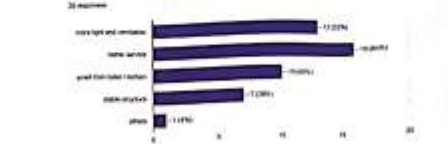
- The purpose of the survey is to understand about the basic housing needs of individuals from various income groups.
- A data analysis from the survey that was conducted is provided below.



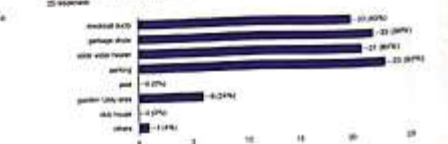
ASPIRATIONS What all spaces do you feel are relevant for your desired housing?



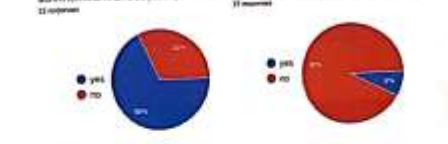
What is your current housing that you would like to modify to meet one?



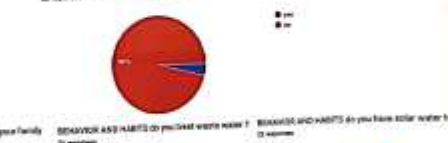
What all amenities are expected in good housing aspirants?



BEHAVIOR AND HABITS Do you smoke weed?



BEHAVIOR AND HABITS do you drink your beer in your apartment / house?



BEHAVIOR AND HABITS do you heat water heater?



EXTERNAL JURY



INTERNET BASED CASE STUDY

1. SEOUL APARTMENT BLOCK BY ARCHIHOOD

INTRODUCTION

LOCATION: ~~Seoul~~ SOUTH KOREA



- ARCHITECTS: Archihood WXY
- AREA: 536 m²
- YEAR: 2013
- PHOTOGRAPHS: Woohyun Kang

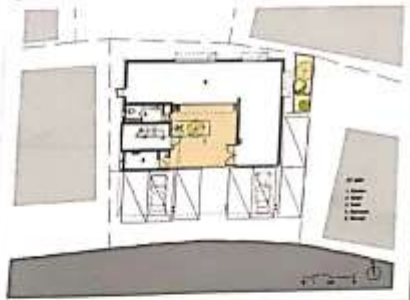
- The project is located in Bakjeong-dong, South Korea.
- Being an area that has a couple of universities nearby, a demand for student studio-type accommodations have significantly risen in the past years.
- Being contiguous with Seoul, the office working, white-collared demographic has also joined the frenzy and has been a factor in the demand for residential units as well.
- Because of this, the area has become very crowded with multi-dwelling units, studios and student accommodations.



- The concept of the Gap house is to support new life style of the young, single demographic household by sharing common spaces such as the living room, kitchen, and dining area.
- Archihood WXY focused on a design that creates a balance between the common and private spaces deeply considering the 'share house' amenity. The balance is coordinated by the outdoor space which is defined to 'The Gap', a design which helps bring in nature to the residents and encourage interaction and mingling amongst housemates.



PLANS



INTERNET BASED CASE STUDY

2. MONTERREY HOUSING / ELEMENTAL

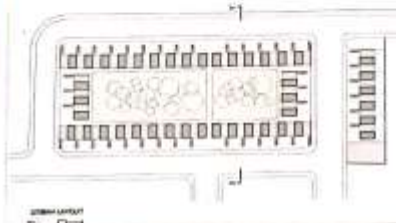
INTRODUCTION

LOCATION: MEXICO

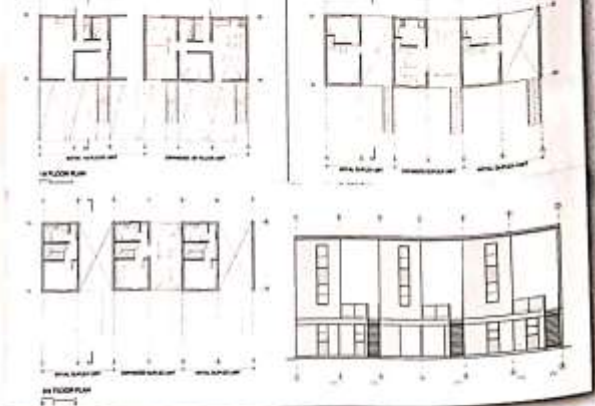


- ARCHITECTS: Elemental
- AREA: 6522 m²
- YEAR: 2013
- PHOTOGRAPHS: Bamiko Ramirez

- Santa Catarina is a city of 230,000 inhabitants, located in the state of Nuevo León, in the northwest of Mexico.
- This project is Elemental's first outside of Chile.
- The Government of Nuevo León, México, commissioned them to design a group of 70 houses on a site of 6 hectares in a middle class neighborhood in Santa Catarina.
- The required density suggested the application of the typology developed for lodges.
- However, the climate in Santa Catarina is very different from the northern desert climate of Chile.
- The 600 mm of annual rainfall required them to adapt our proposal to this new question.



PLANS



DAYANAND COLLEGE OF ARCHITECTURE LATUR

- NAME - RUSHIKESH HANMANT KOTWAD. ROLL NO - 04.
- CLASS - B. ARCH. FOURTH YEAR 2022 - 2023.
- SUBJECT - ARCHITECTURAL DESIGN. TOPIC - NET CASE STUDY FOR HOUSING PROJECT.

SIGN

STAMP

EXTERNAL JURY



CASE STUDY

❖ SITE LOCATION : LATUR



LATUR

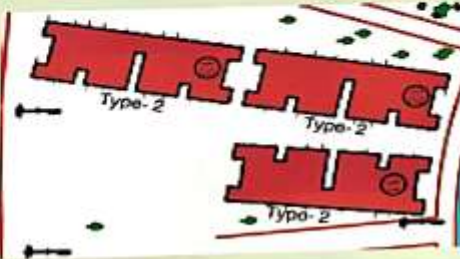
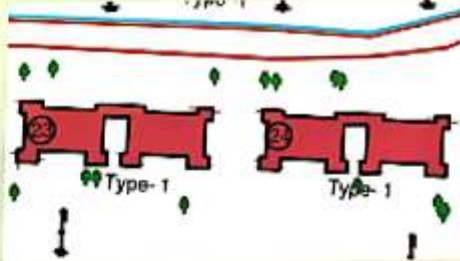
❖ TOPOGRAPHY OF LATUR

- Total area of Latur district is 7157sq.km
- Total area of Latur city is 32.56 sq.km
- Latur district is in the Marathwada region in Maharashtra in India.
- The entire district of Latur is on the Balaghat plateau.
- Minimum elevation from sea level: 388 m
- Maximum elevation from sea level: 725 m
- Average elevation from sea level: 590 m

○ SITE CONTEXT :

- Site location : 23 acres site located in babhalgion, latur.
- Approach : 100 ft ring ational Highway Road, . It is easy to approach from nanded naka.
- Topography : The site is almost flat.

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DEMERITS

- ROOM SIZES: For trying to be increase in number of rooms standard room sizes were compromising.
- NEGATIVE SPACES : percentage of Construction in the site is very less.
- Inadequate Fire safety.
- No Proper provision of lift services.
- no enough space for recreational areas.
- bad quality of construction as well as construction material used.
- No Rain water harvesting.
- NO STP plant or west water treatment plant provided



EXTERNAL JURY

The site will be demolished in future.
There will be a new praposer for the police housing society, with the all design aspect and proper provision of at least basic services.





EXTERNAL JURY

SITE PLAN



SIGN	SIGN	DAYANAND COLLEGE OF ARCHITECTURE, LATUR		STAMP
	<i>Rushkesh</i>	NAME - RUSHKESH HANMANT KOTWAD	ROLL NO - 04	
	<i>for 25/12/2022</i>	CLASS - 6TH YEAR 2022-2023	DATE - 25/12/2022	
		SCALE - 1:300		



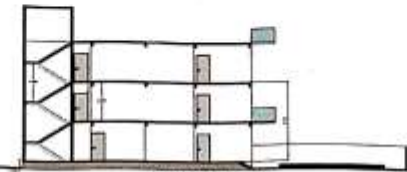
NORTH SIDE ELEVATION



WEST SIDE ELEVATION



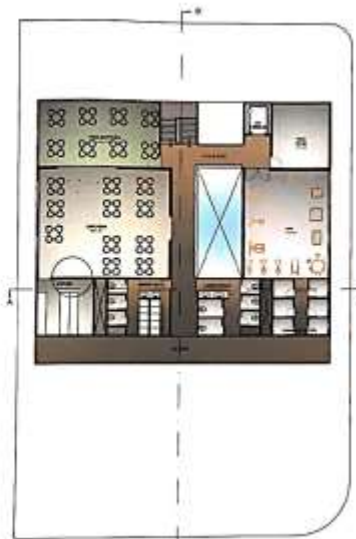
SECTION A - A'



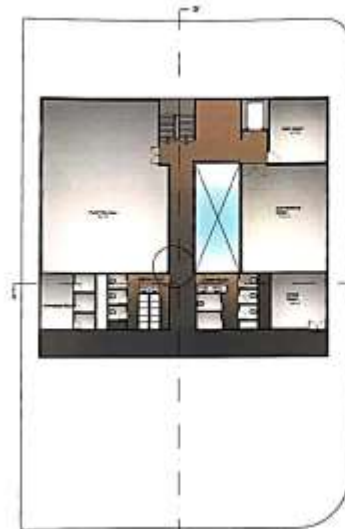
SECTION B - B'



GROUND FLOOR PLAN



FIRST FLOOR PLAN



SECOND FLOOR PLAN

BUILDING TYPE	CLUB HOUSE
NO. OF FLOOR	0 + 2
TOTAL NO. OF FLATS	-
SINGLE FLAT AREA	-
FLOOR BUILT UP AREA	590 SQ.M.
TOTAL BUILT UP AREA	590 SQ.M.
NO. OF BUILDINGS	2
NO. OF PARKING	30

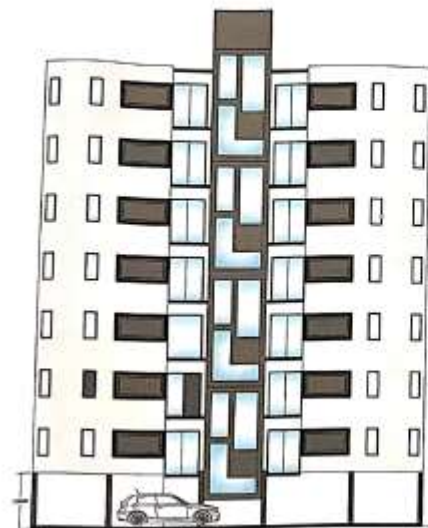


CLUBHOUSE PLANS



EXTERNAL JURY

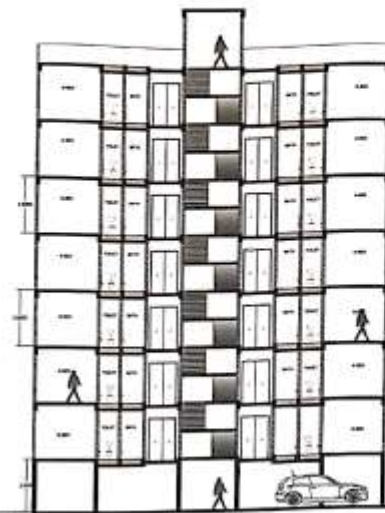
SIGN	SIGN	DAYANAND COLLEGE OF ARCHITECTURE, LATUR	STAMP
	<i>Rushikesh Hanmant Kotwad</i>	NAME - RUSHIKESH HANMANT KOTWAD CLASS - 5TH YEAR 2022-2023 DATE - 25/12/2022 SCALE - 1:200	ROLL NO - 04



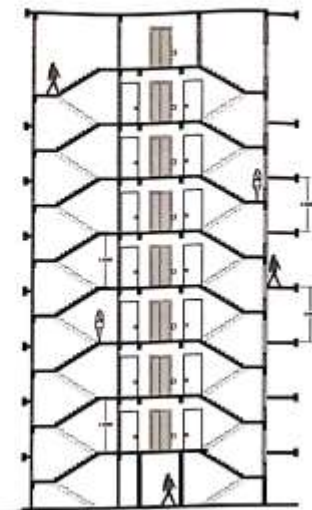
EAST SIDE ELEVATION



NORTH SIDE ELEVATION



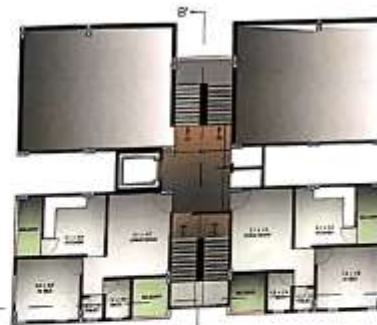
SECTION A - A'



SECTION B - B'



TYPICAL FLOOR PLAN



REFUSED AREA FLOOR PLAN



GROUND FLOOR PLAN

BUILDING TYPE	REG.
FLOOR PLAN	24-7
TOTAL NO. OF FLOORS	04
PROPOSED AREA	247.50 SQ.M.
FLOOR AREA OF AREA	247.50 SQ.M.
TOTAL AREA OF BUILDING	990.00 SQ.M.
NO. OF BUILDINGS	01
NO. OF BUILDING	01



EXTERNAL JURY

LIG PLANS



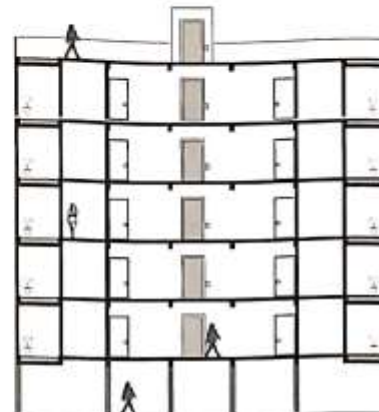
SIGN		DAYANAND COLLEGE OF ARCHITECTURE, LATUR.		STAMP
	<i>Rushkesh Hanmant Kotwad</i>	NAME - RUSHKESH HANMANT KOTWAD	ROLL NO - 04	
		CLASS - 5TH YEAR 2022-2023		
		DATE - 25/12/2022		
		SCALE - 1:200		



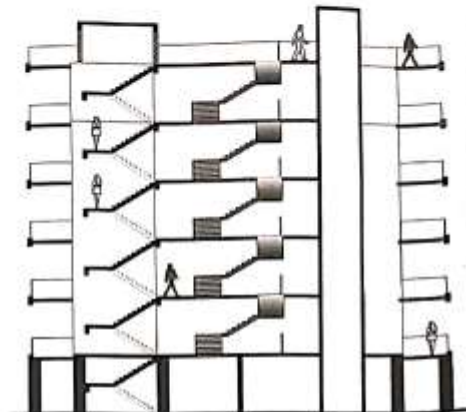
NORTH SIDE ELEVATION'



EAST AND WEST SIDE ELEVATION'



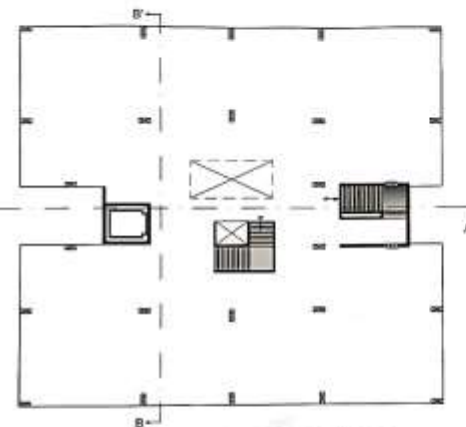
SECTION B - B'



SECTION A - A'



TYPICAL FLOOR PLAN



GROUND FLOOR PLAN



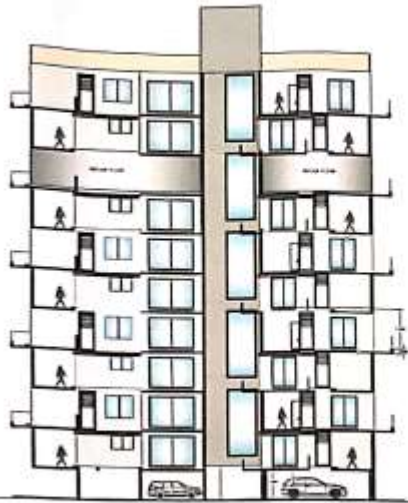
BUILDING TYPE	EWS
NO. OF FLOOR	G + 5
TOTAL NO. OF FLATS	88
GROSS FLOOR AREA	25 SQ. M.
FLOOR BUILT UP AREA	208 SQ.M.
TOTAL BUILT UP AREA	988 SQ.M.
NO. OF BUILDINGS	2
NO. OF PARKING	88

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EWS PLANS



SIGN	SIGN	DAYANAND COLLEGE OF ARCHITECTURE, LATUR	STAMP	
	<i>[Signature]</i>	NAME - RUSHKESH HANMANT KOTWAD		
		CLASS - 5TH YEAR 2022-2023		ROLL NO - 04
		DATE - 25 /12 /2022		
		SCALE - 1:125		



EAST SIDE ELEVATION



SECTION A - A'



SECTION B - B'

BUILDING TYPE	MIG
NO. OF FLOORS	10 FLOORS
TOTAL NO. OF UNITS	40
HEIGHT OF BUILDING	35 METERS
AREA OF BUILDING	1000 SQ. METERS
NO. OF BUILDINGS	01 BUILDING
NO. OF PARKING	10



GROUND FLOOR PLAN



ODD FLOORS PLAN



EVEN FLOORS PLAN



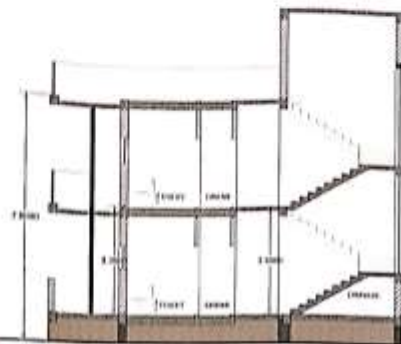
8 TH FLOOR PLAN

EXTERNAL JURY

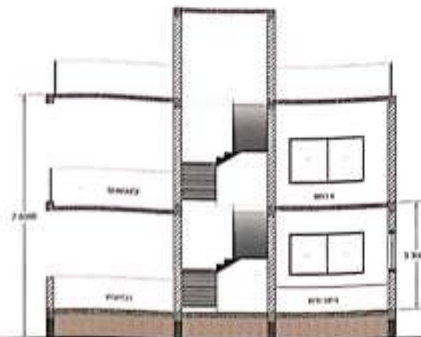
MIG PLANS



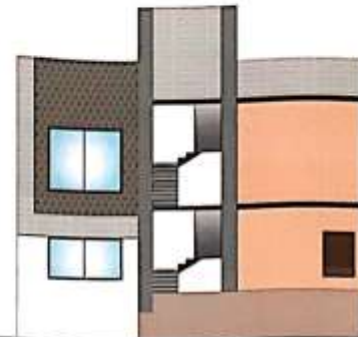
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	<i>Rushikesh Hanmant Kotwad</i>	NAME - RUSHIKESH HANMANT KOTWAD	
		CLASS - 5TH YEAR 2022-2023	
		DATE - 25/12/2022	
		SCALE - 1:200	



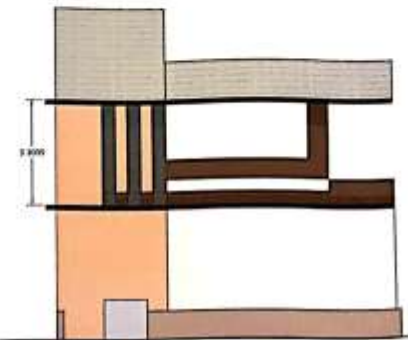
SECTION A - A'



SECTION B - B'



SIDE ELEVATION



FRONT ELEVATION



GROUND FLOOR



FIRST FLOOR



BUILDING TYPE	IND
NO. OF FLOORS	3 + 3
TOTAL NO. OF FLATS	4
SMALLEST FLOOR AREA	120 SQ.M.
FLOOR BLK. UP AREA	110 SQ.M.
SMALL BLK. UP AREA	110 SQ.M.
NO. OF BUILDINGS	1
NO. OF PARKING	40

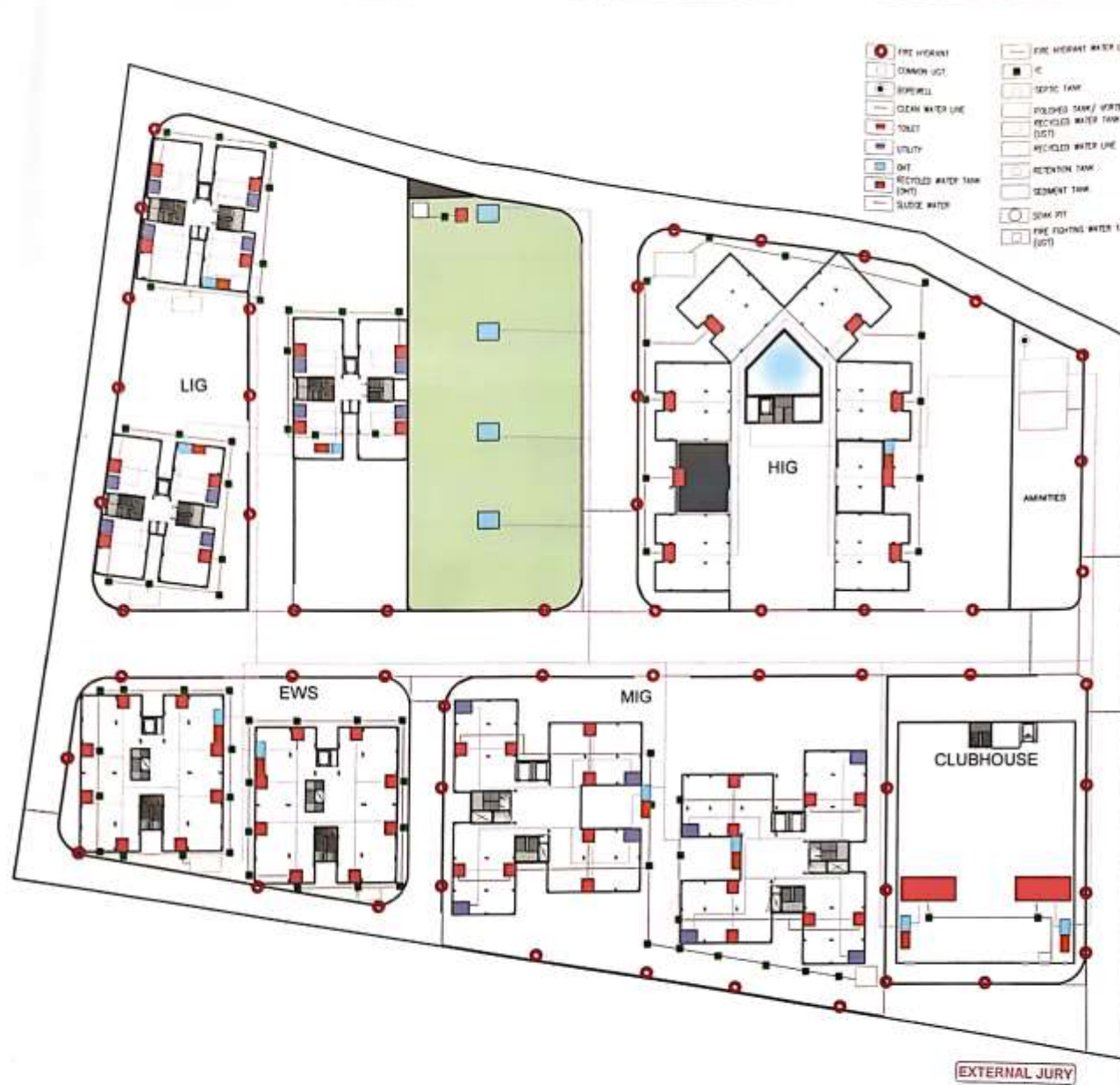


EXTERNAL JURY

HIG PLANS



SIGN	SIGN	DAYANAND COLLEGE OF ARCHITECTURE, LATUR	STAMP
	<i>Rushikesh Hanmant Kotwad</i>	NAME - RUSHIKESH HANMANT KOTWAD	
		CLASS - 5TH YEAR 2022-2023	
		DATE - 25/12/2022	
		SCALE - 1/75	



SERVICE LAYOUT



EXTERNAL JURY

SIGN	SIGN	DAYANAND COLLEGE OF ARCHITECTURE, LATUR		STAMP
	<i>Rushikesh Hanmant Kotwad</i>	NAME - RUSHIKESH HANMANT KOTWAD		
		CLASS - 5TH YEAR 2022-2023	ROLL NO - 04	
		DATE - 25.12.2022		
		SCALE - 1:300		