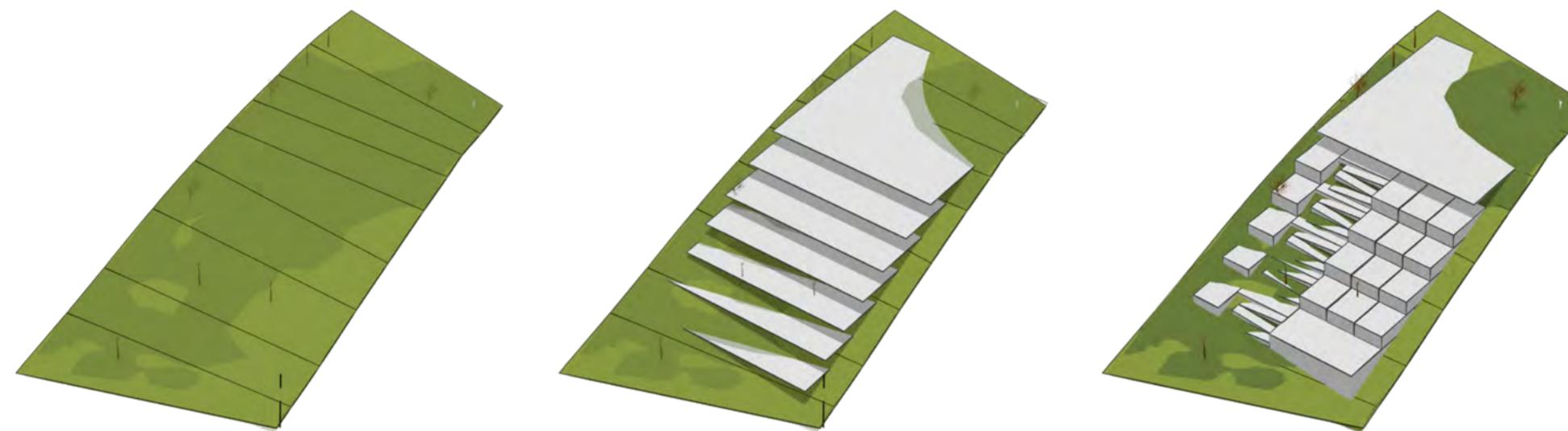


‘25



*sabiq ali's
portfolio.*

I'm Sabiq Ali

Karuvally Pathikkal



CV.

Generative and computational designer with a strong foundation in parametric design, immersive technologies, BIM Automation and digital fabrication. Proficient in advanced tools like Grasshopper, Rhino, Unity 3D, and Python scripting to deliver data-driven, sustainable, and community-focused design solutions. Recognized for delivering immersive VR experiences and leveraging computational tools to optimize sustainable, urban, community-oriented projects.

Work Experience

Architect

Palavara Architecture
Jan 2019 - Oct 2024

Assistant Professor
Atrium School of Design
June 2020 - July 2021

Content Creator
CreativHeads
Dec 2017 - Sept 2020

Architectural Intern
Vault and Walls
Feb 2017- Mar 2018

Unit Secretary
National Association of Students of Architecture, India
July 2016 - July 2017

Education

University of Liverpool
MA Architecture | Score : 7.12 CGPA
Sept 2022 - Sept 2023
VR Design Studio:
Immersive Design and Collaboration
Research by Design Thesis:
Empathy through Immersive Storytelling.
Elective Module:
Parametric Design & Digital Fabrication.

University of Calicut
B-Arch | Score : 7.17 CGPA
Jun 2014 - July 2019
Thesis Project:
Shelter for Urban Homeless - Mumbai.
Urban Design:
Enlivening Valiyangadi, Calicut.

Languages

English (fluent)
Malayalam (native)
Hindi (beginner)

Software Skills

Generative Design & Parametric Modeling:
Grasshopper, Dynamo, Rhino 3D.
Computational BIM Workflows:
Revit, Python scripting, Automation.
CAD / Modelling:
AutoCAD, Blender, Sketchup, Gravity Sketch VR.
Visualization & Storytelling:
Unity 3D, Lumion, Adobe Suite, VR Gamification
Data Analysis & Performance Optimization:
GIS tools, Ladybug, Power BI, Honeybee.
Digital Fabrication:
3D printing, CNC machining, parametrics

Certification

Registered Architect
Council of Architecture - India
CA/2022/14378

Achievements

The Dharavi Project by Archdais - Shortlisted in top 50
Sept 2021
Jury Panel : Foster + Partners & Bandra Collective
Vice-Chancellor's International Attainment Scholarship
Sept 2022
High-achieving international student - University of Liverpool
Thesis Project - Jury Best
July 2020
Project : Shelter for Urban Homeless
Unit Secretary
July 2016
National Association of Students of Architecture, India

Workshops Attended

Decoding Parametric Architecture
March 2022
Workshop on Rhino + Grasshopper by Design Interventions.
Beyond Vernacular - Travel Workshop
August 2021
Workshop by Studio Adda at the foothills of Sahayadri for the study of community architecture.
Rammed Earth Hands-on Workshop
March 2021
Workshop by Co-earth & ila foundation for earth construction techniques.

content.

01 Anti-Urban |
Redefining
Urban Living



02 Udaaan |
The Dharavi
Project



03 Pehchan |
Shelter For Urban
Homeless



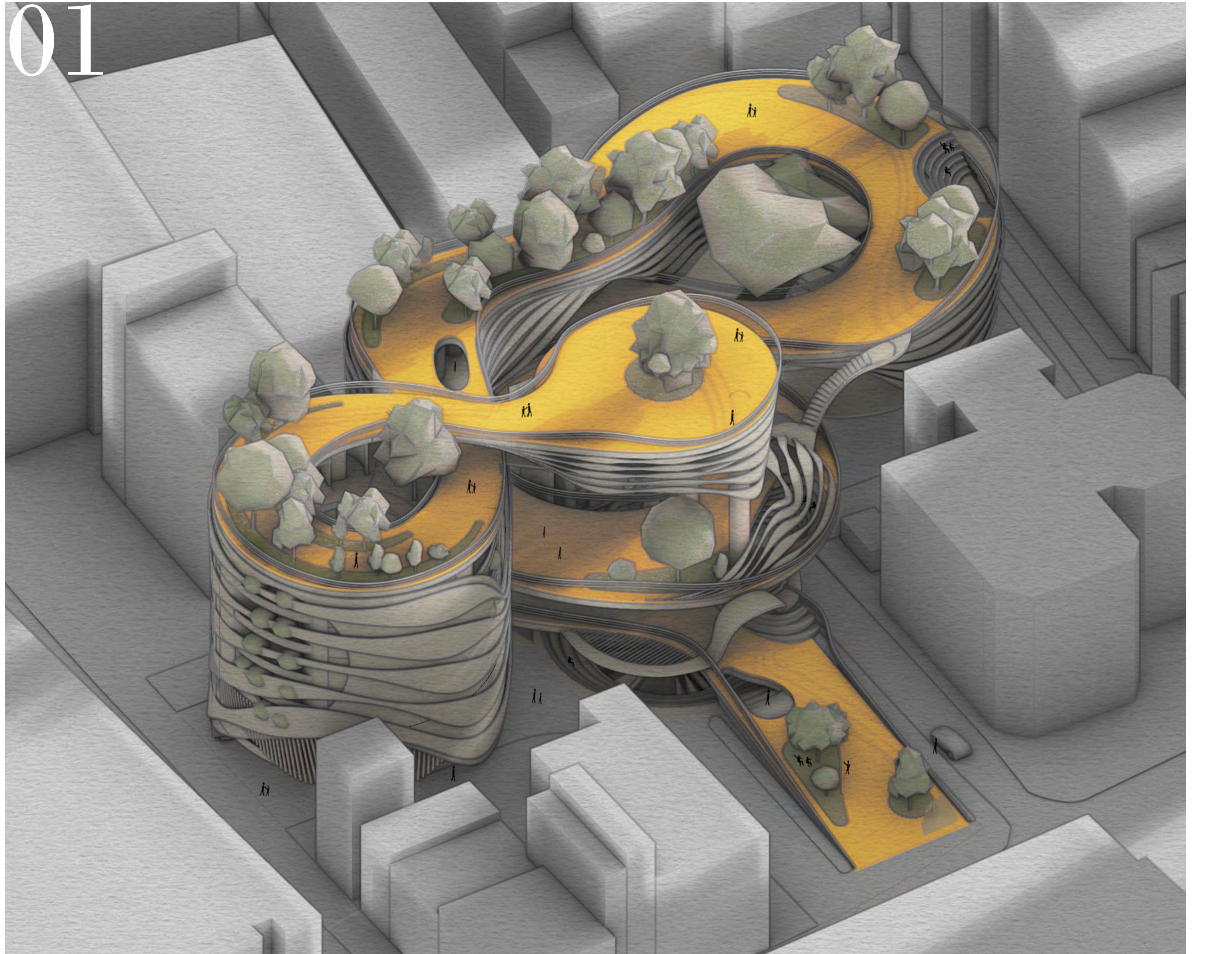
04 VR, AI & Gamification for
Immersive Storytelling |
Research by Design



05 Miscellaneous |
Working Drawings &
Renderings



01



anti-urban.

Project : Anti-Urban, Co-housing in Urban Setting
Location: Liverpool, England
Project type: MA Design Sem02 Project

Revolutionizing the concept of urban living, this co-housing project challenges traditional urban norms. Nested in the heart of Liverpool, it reimagines urban structures, carving out a harmonious blend of private retreats and communal recreational areas. This innovative design fosters a sense of neighborhood camaraderie while transforming public spaces into delightful walking havens, encouraging social interactions and a shared sense of joy.

the thought.

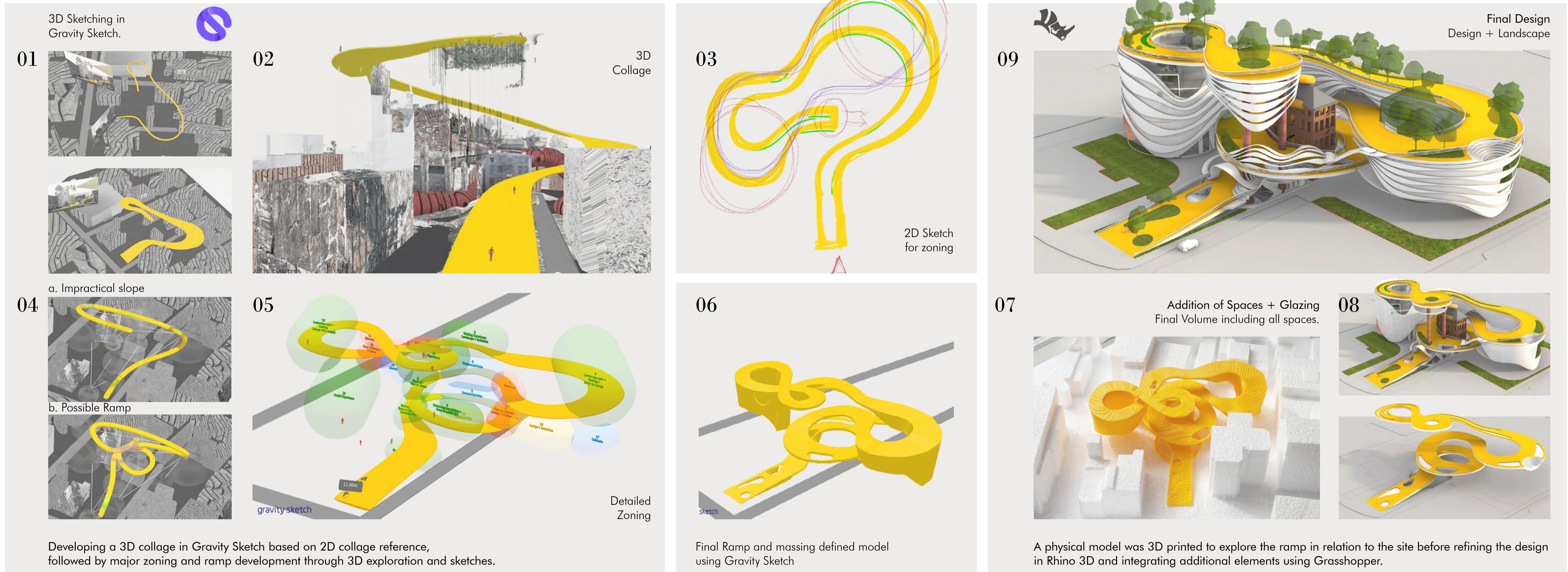


Contrast:
Perspective through
artistic expression

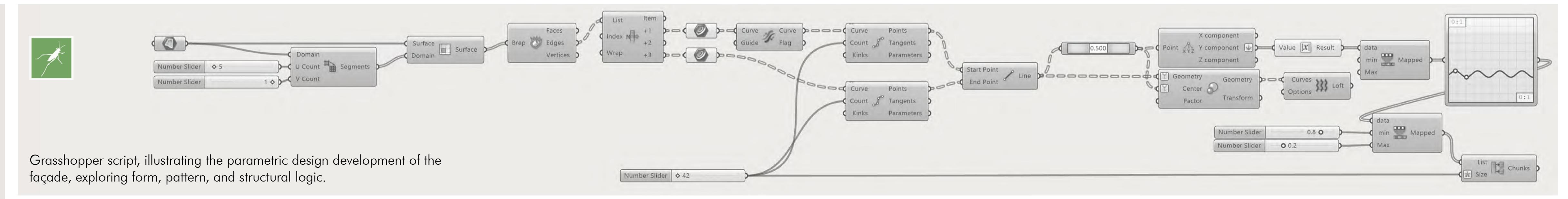


Context:
The urban brick boxes
in and around the site

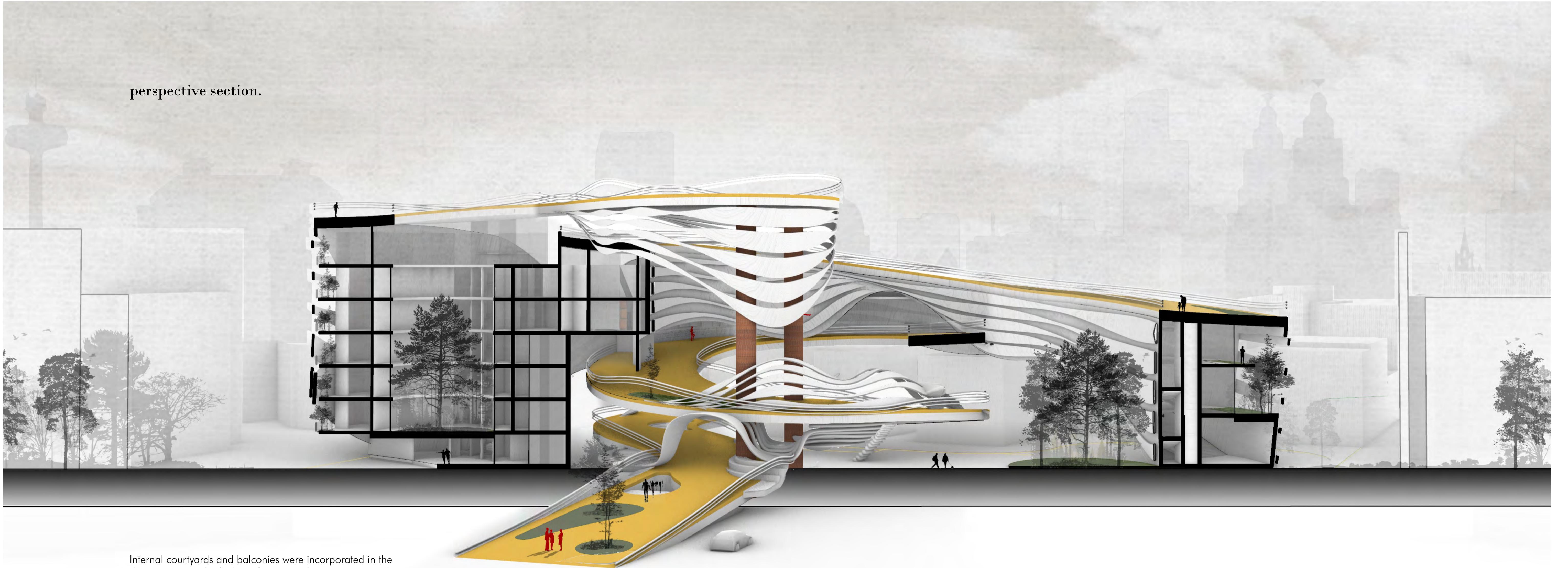
development process.



1. Basic 3D shape development.
2. Attaining 3d Collage.
3. Sketch for zoning.
4. Ramp Slope practicality.
5. Final Zoning.
6. Attaining final ramp mass.
7. Physical Model.
8. Refinement stage.
9. Final Model.



perspective section.



Internal courtyards and balconies were incorporated in the design adapt to the feeling of nature in the interiors as well. In the residential area, every units are given proper balcony spaces that can be converted into a lush garden later. Although the structure is single in vision, the design vision drafted the separation as if they are standalone buildings. To maintain a sense of joy in the design, a slide-through is designed starting from the base level of viewpoint, the shaded viewpoint, towards the amphitheater. This slide-through is going through the existing building structure. The multi-purpose digital space incorporated in the existing building will cherish along with the transparent slidethrough going through its interiors, which itself will become a part of the immersive experience.

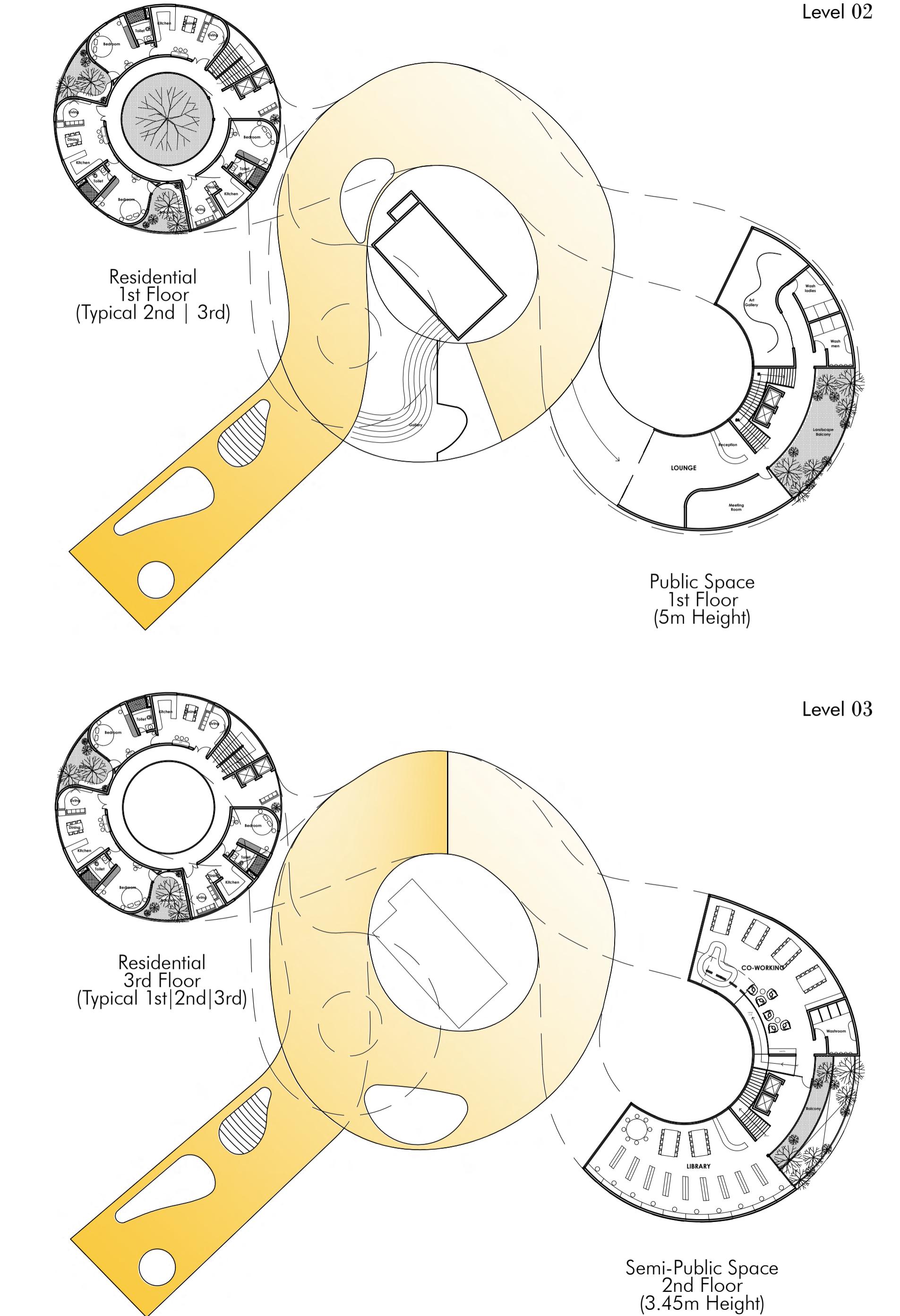




site plan.
Level 01

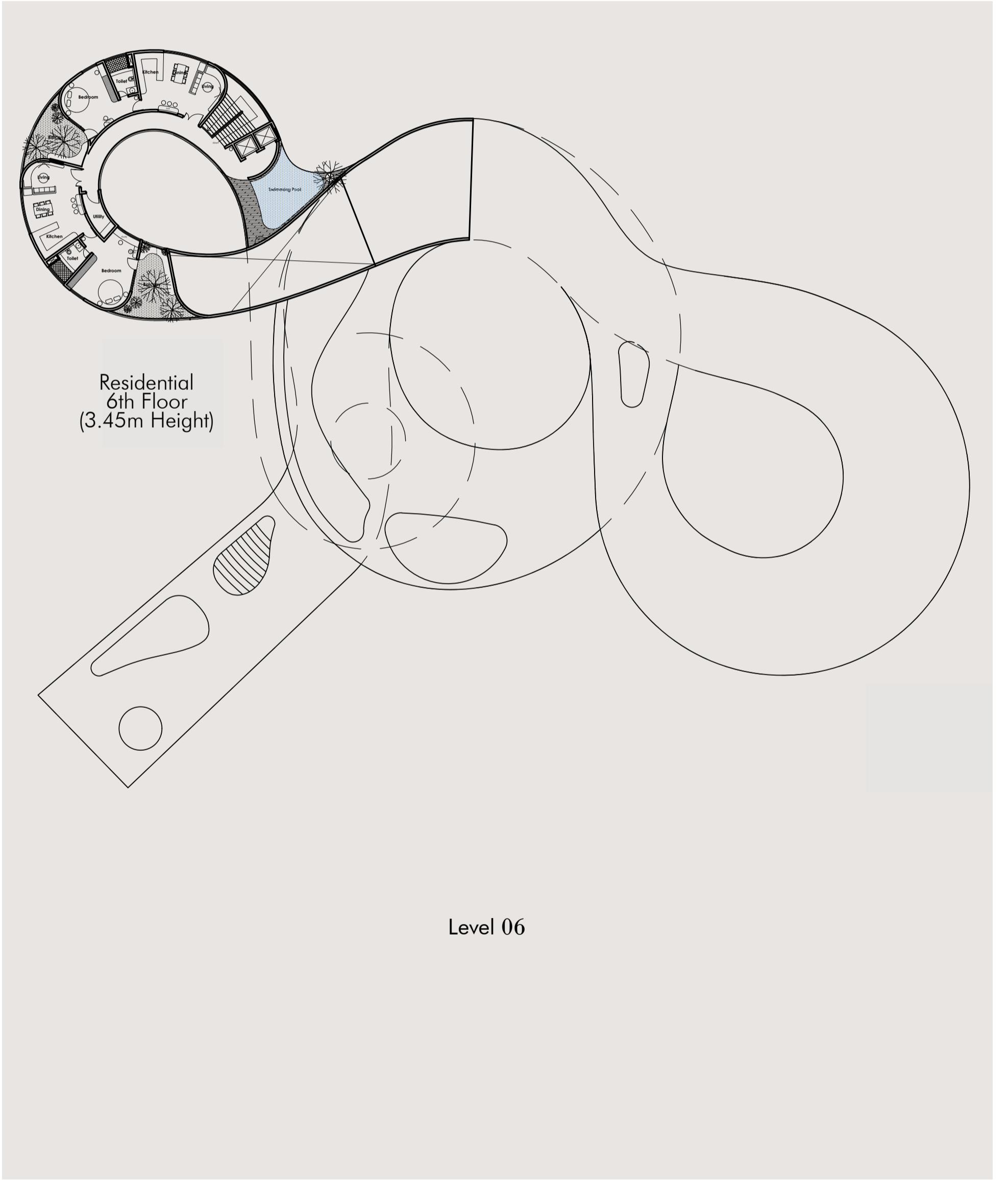
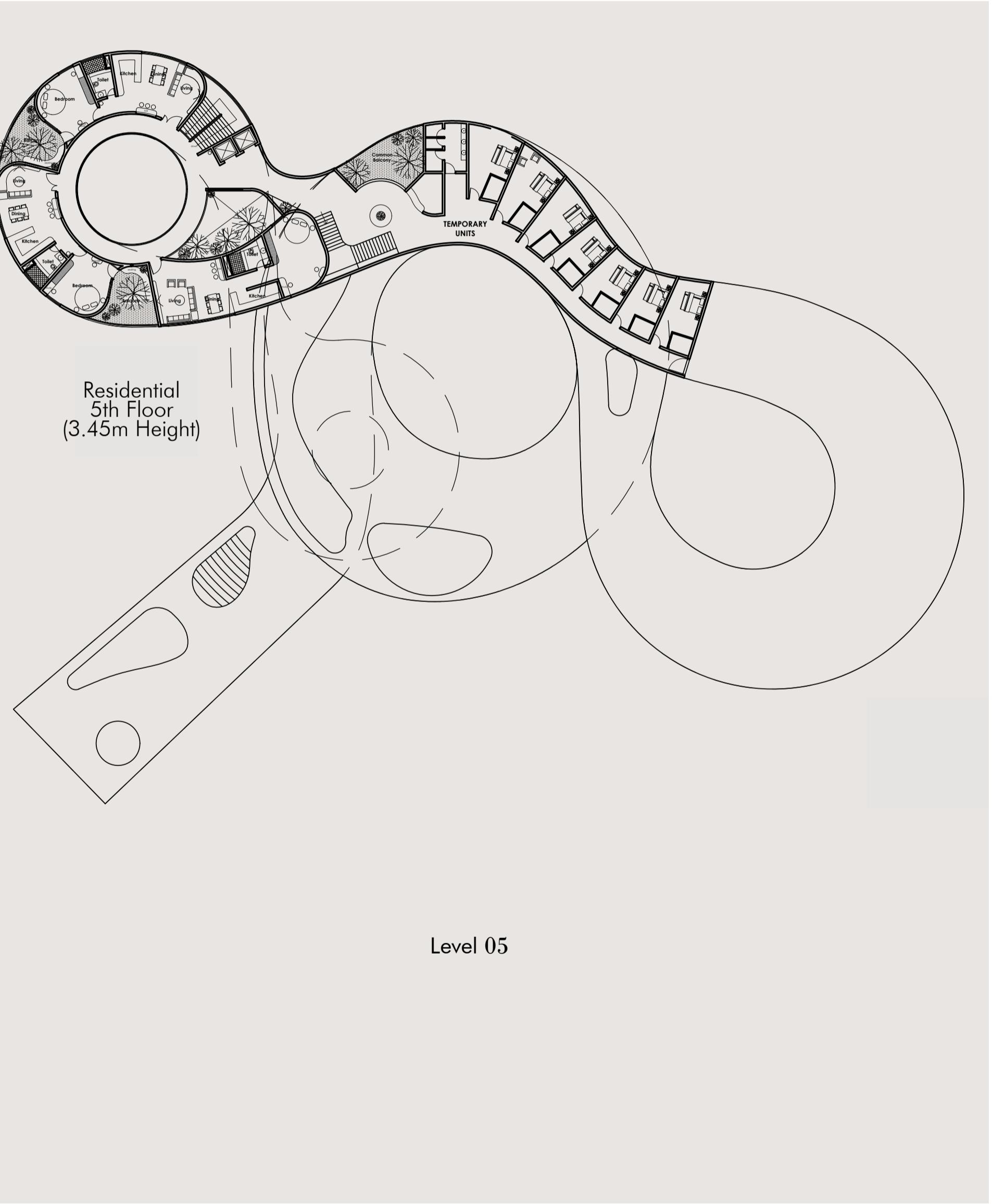
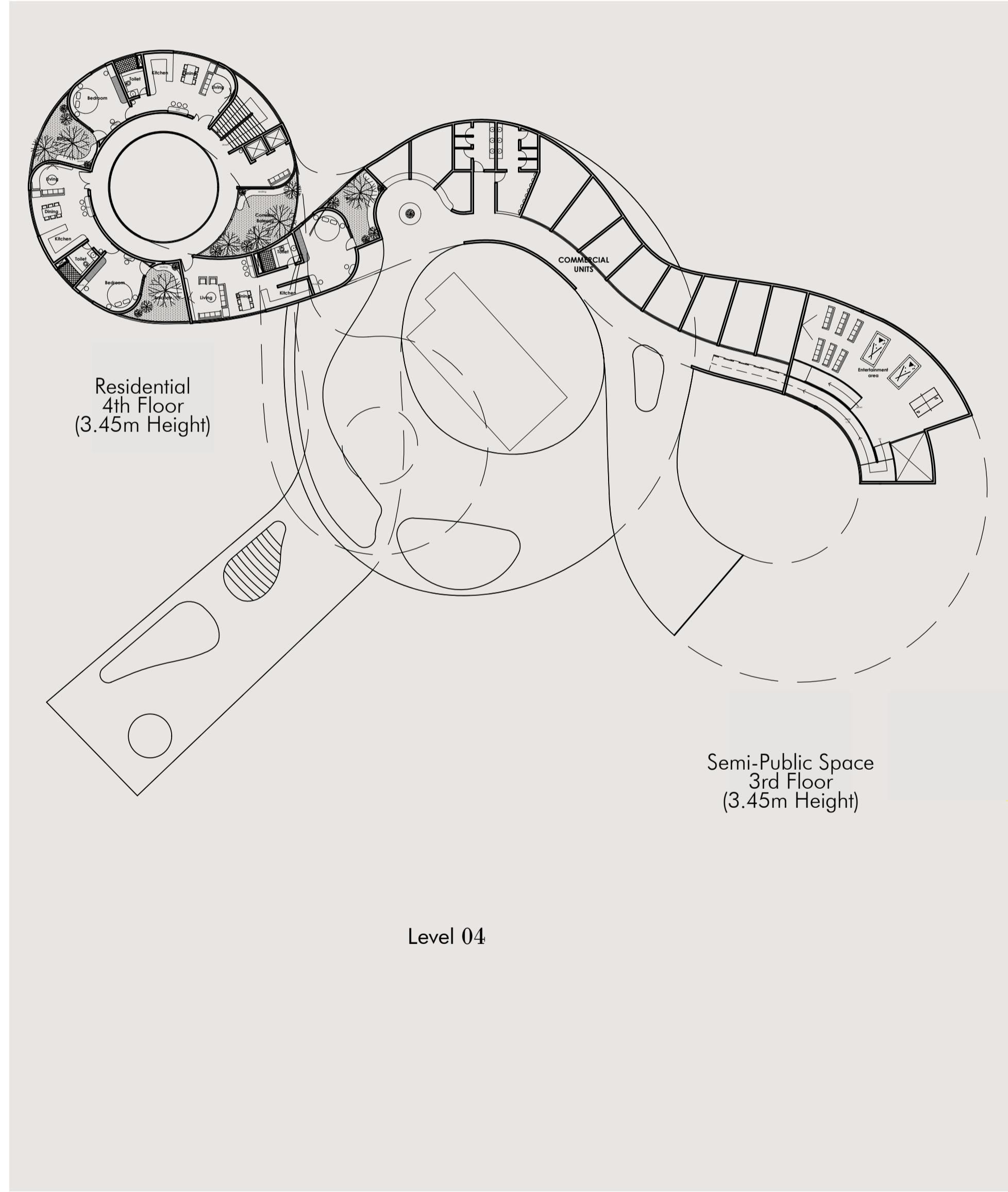
planning.

The planning is done in such a way that there is a separation for public, semi public and private spaces. Access to the residential portion for the public is restricted, even though the major access points are by the same landscaped ramp. The ramp levels are then carefully designed to incorporate different activity typologies like Commercial spaces, Library, Lounge and Amenity spaces, Cafeteria, Art gallery, Multi-purpose hall, etc. The shades of ramp are used as common gathering spaces, children's play area, parking spaces, outdoor seating for cafeteria, etc. The existing building in the site is converted into a multi-purpose digital gallery which gives immersive experiences to the public.

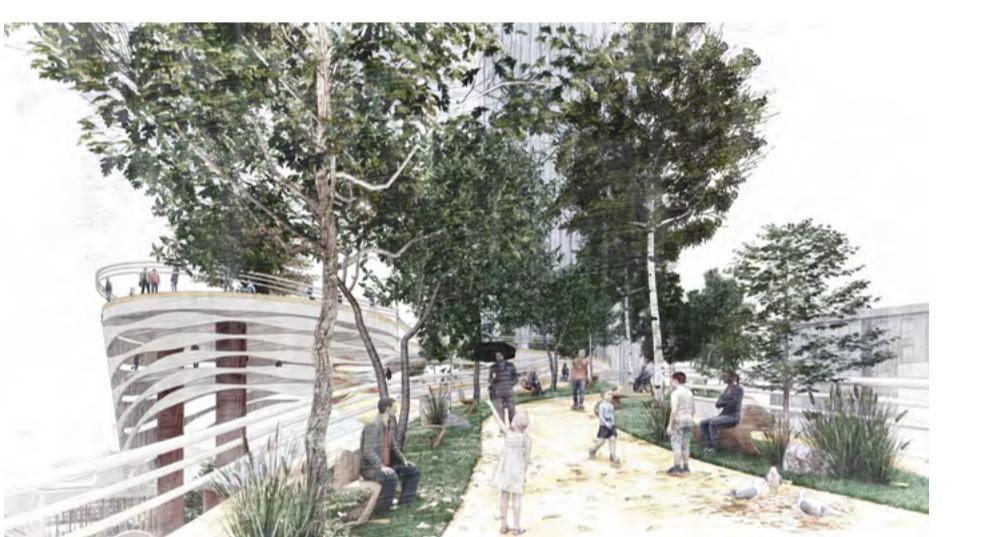
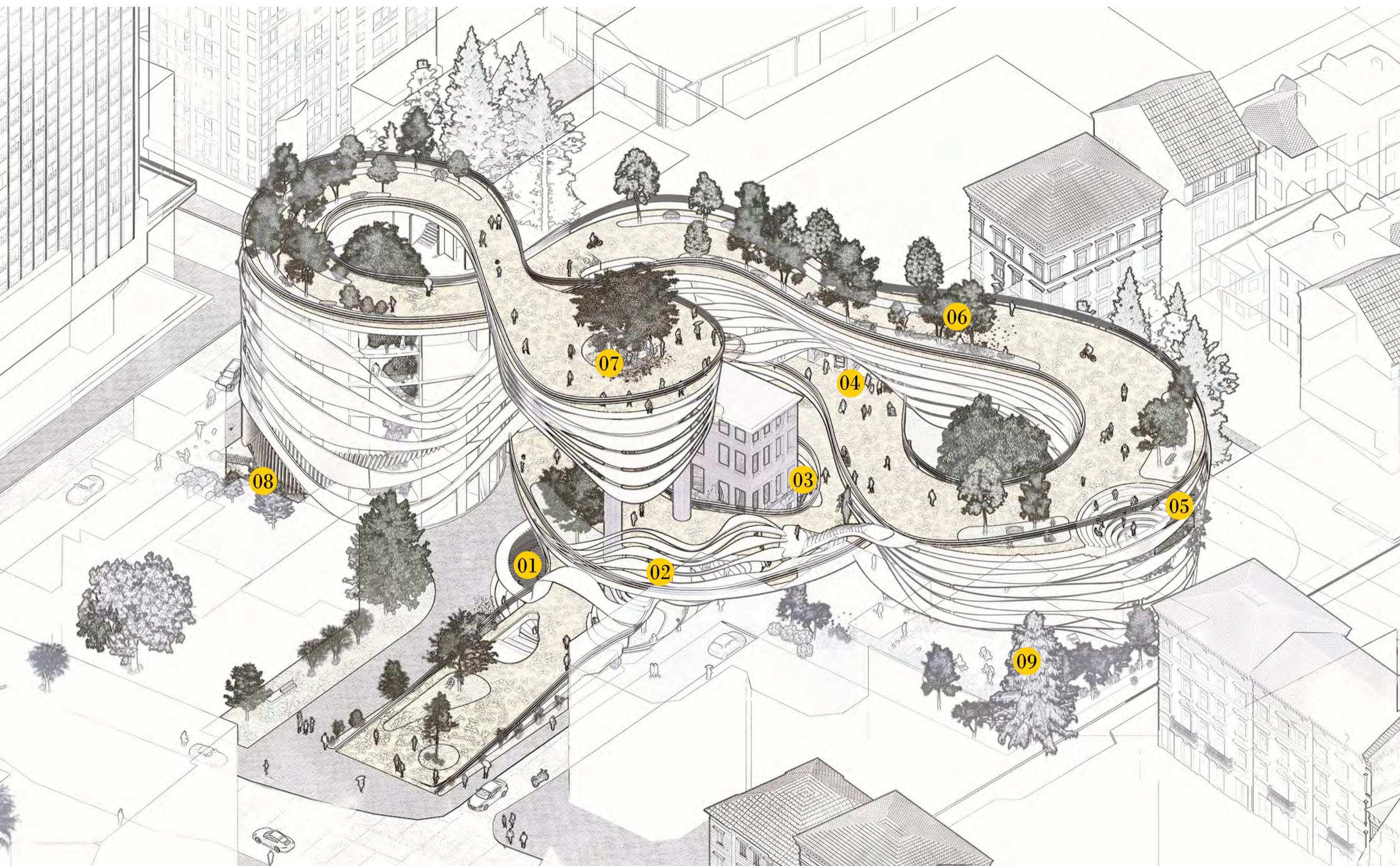


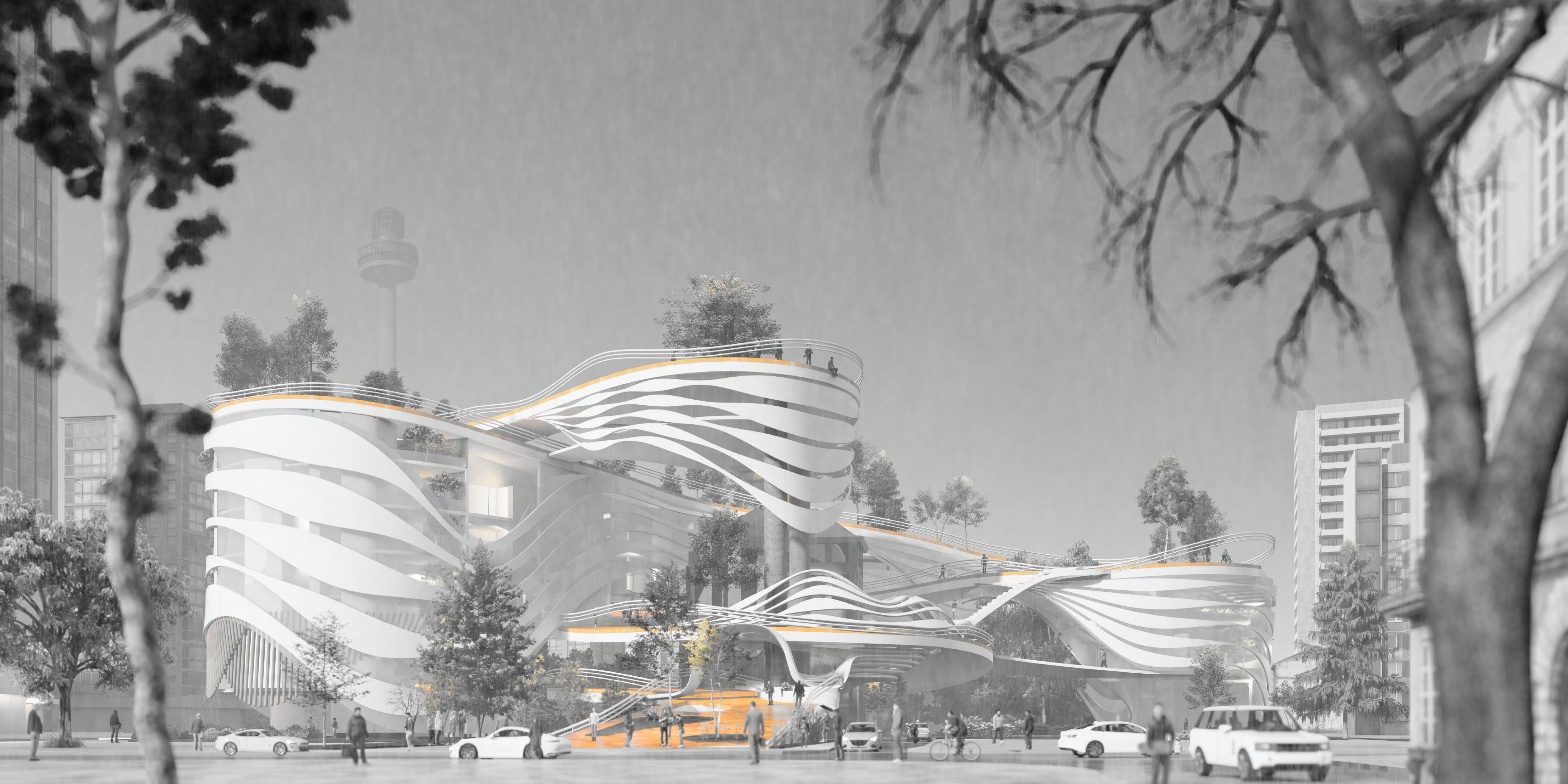
Level 02

Level 03



key spaces.





02

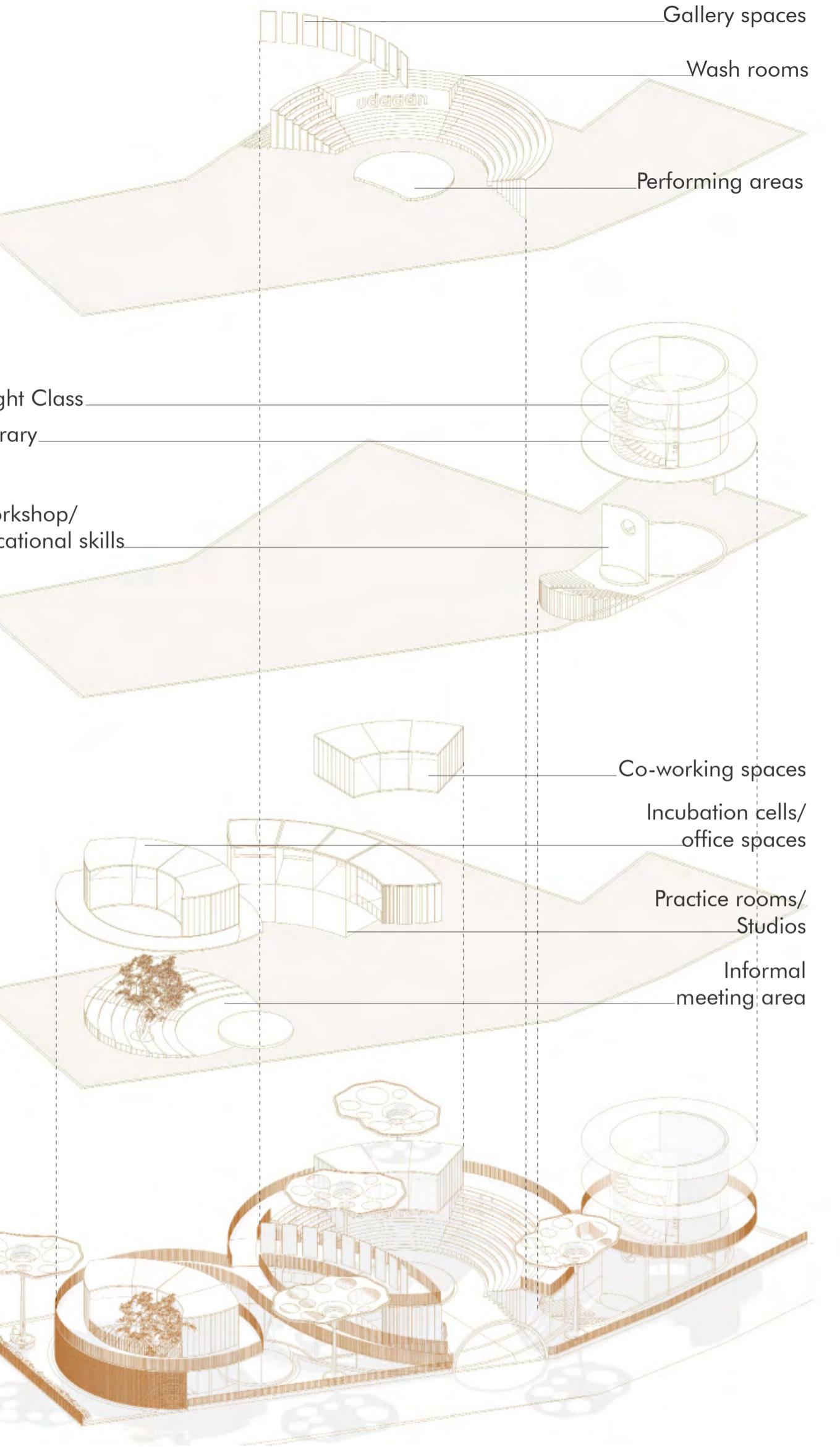


udaaan.

Project : Udaaan, The Dharavi Project
Location: Dharavi - Mumbai, India
Project type: Competition
Website: Archdais - Winners

Udaaan aims to blur the futile boundaries between people of Mumbai and the people of Dharavi. Dharavi itself, as an example of unity, co-existence, and of pure talent. The proposal is envisioned to depict an ideal reflection of their soul, by which they can provide, seek and learn in their own platform to show the world what are they made of.

Community
Economic
Social
Recreational



Cultural Upliftment.
Performance areas connected with the practice rooms, studio & amphitheater can increase public gatherings and guide towards showcasing Dharavi's culture. Open art gallery for exhibitions are also provided to open up their born artistic abilities.

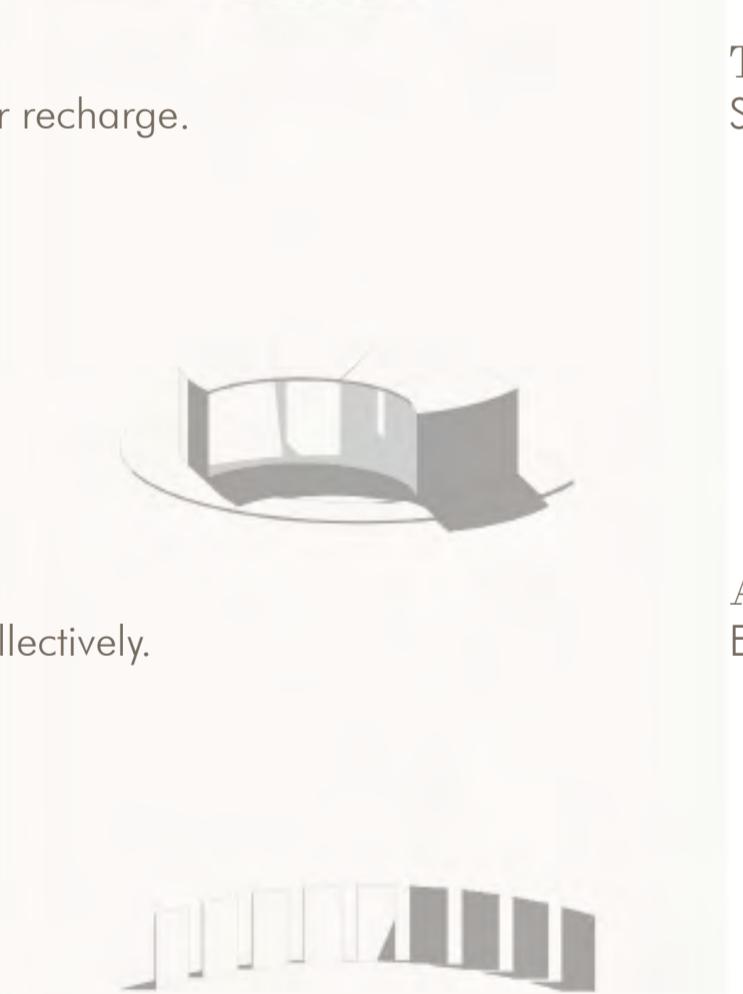
Community Nourishment.
The core part of the community centre in-order to uplift the people to the next phase. Workshop and vocational skill development spaces along with multi-functional classrooms surrounded between the Library can contribute to a better community.

Facilitator.
This part of the community contributes to be the generator. Incubation cells, small office spaces, co-working spaces & meeting areas are included. Small businesses are major revenue of Dharavi. This part provides a platform to work collectively.

The Centre.
A community formation is a slow pace process. Dharavi have become one with its long history of settlement timeline. To channelize this process, community centers for empowerment & gatherings plays a vital role, to enliven through economic, social & recreational spaces.



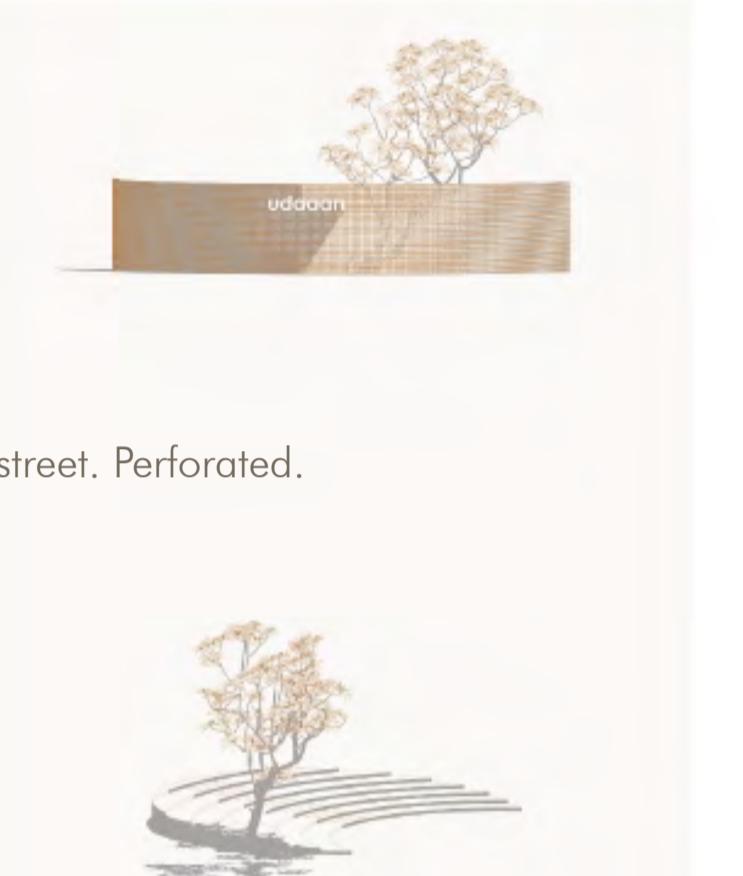
Ramp.
Easy access. No more stairs.



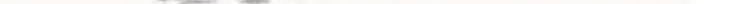
Co-working spaces.
Empower. Engaging collectively.



Gallery.
Inspiration. Exhibiting talents.



Facade.
Veil from the busy street. Perforated.



Trees.
Shade. Freshness. Point of gathering.



Amphi.
Exhibiting Culture. Gatherings.



Workshop.
Educate. Skill development.



The facade. Giving a sense of privacy from the main street.



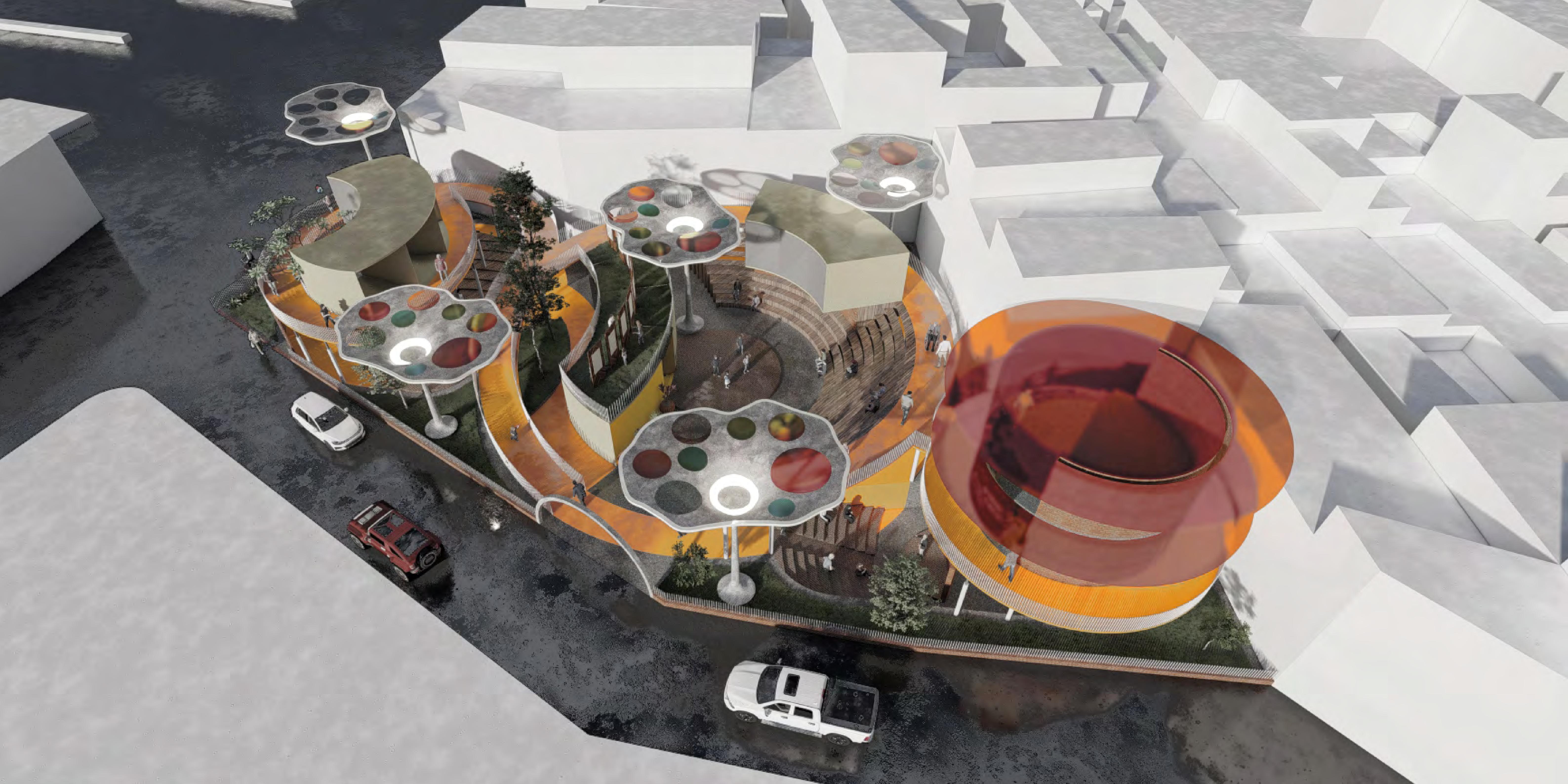
Entrance. Open to the major activity area - The amphitheater.



Library + Classroom + Workshop for skill development



Informal Meeting area + Incubation cells + Office spaces



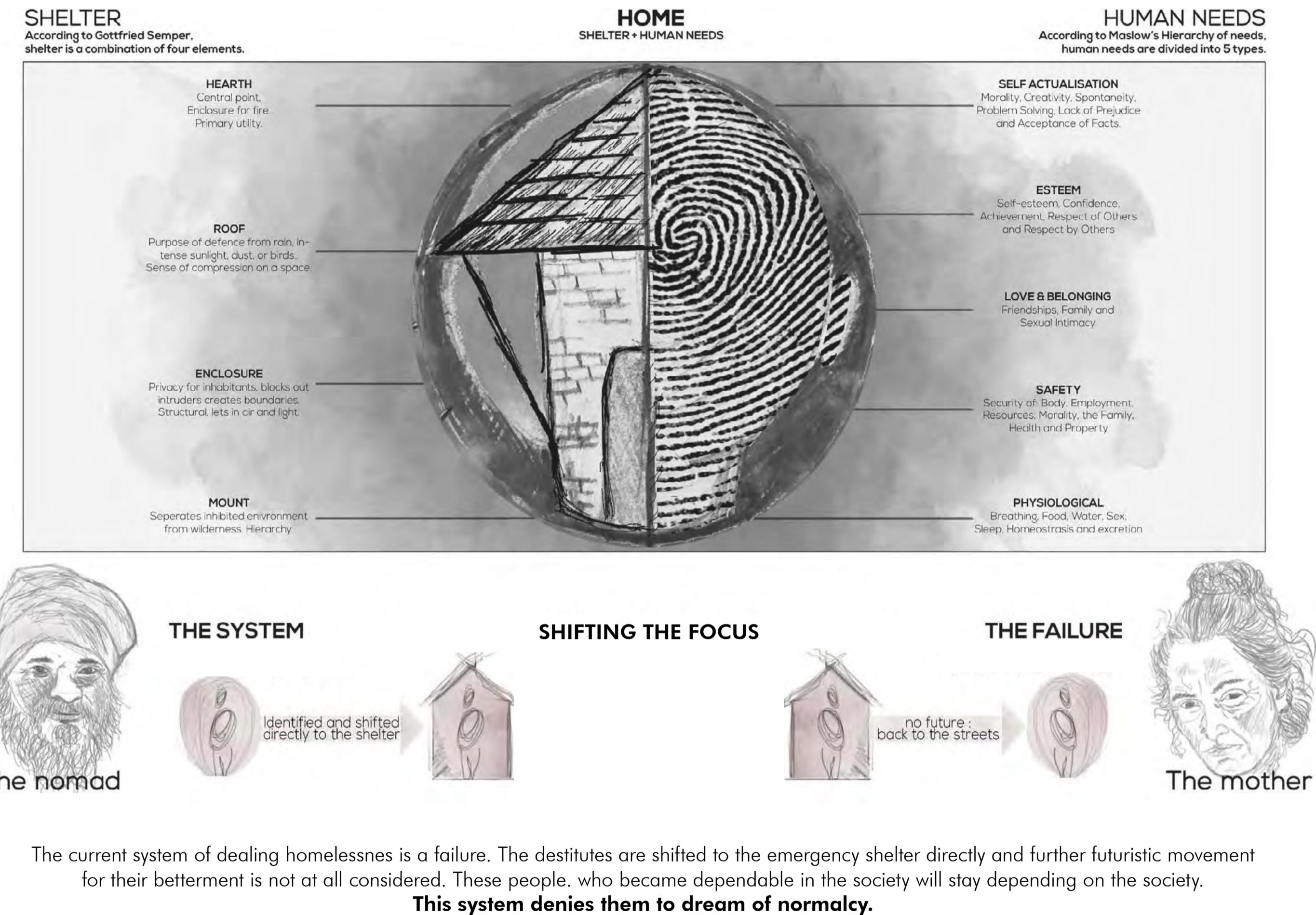
03



pehchaan.

Project : Pehchaan, Shelter for Urban Homeless
 Location: Bhandra - Mumbai, India
 Project type: B-Arch Thesis Project

The project stands for the rights and needs of homeless people around the world. The courage, fortitude & sheer enterprise that allows the homeless to survive on the streets is not recognized. In placing homeless people outside the society of 'legitimate urban residents', we are in effect supressing a large, vulnerable population. Changes are urgently needed.



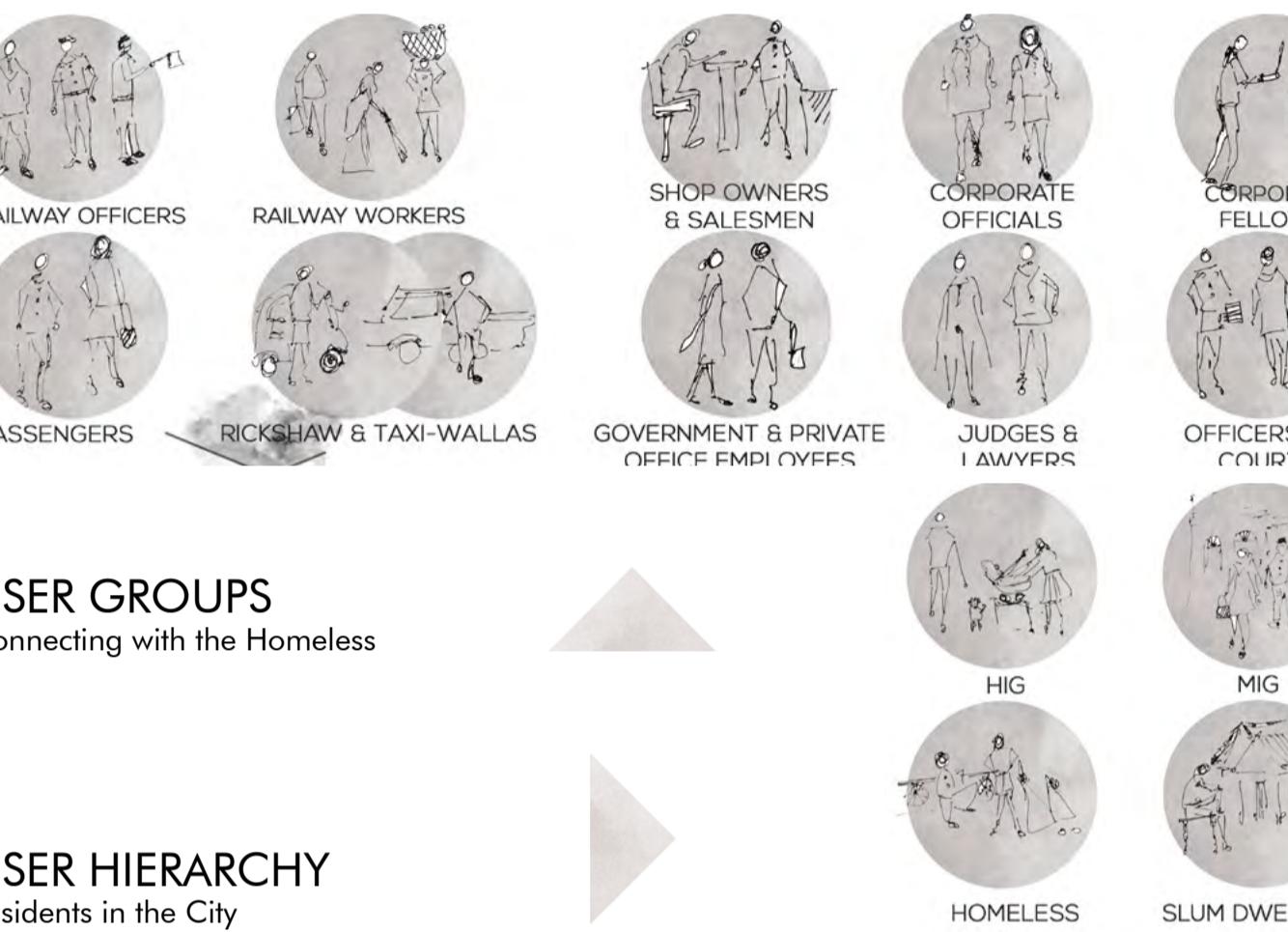
The current system of dealing homelessness is a failure. The destitutes are shifted to the emergency shelter directly and further futuristic movement for their betterment is not at all considered. These people, who became dependable in the society will stay depending on the society.

This system denies them to dream of normalcy.



Mumbai

The Urban Capital of India



USER GROUPS

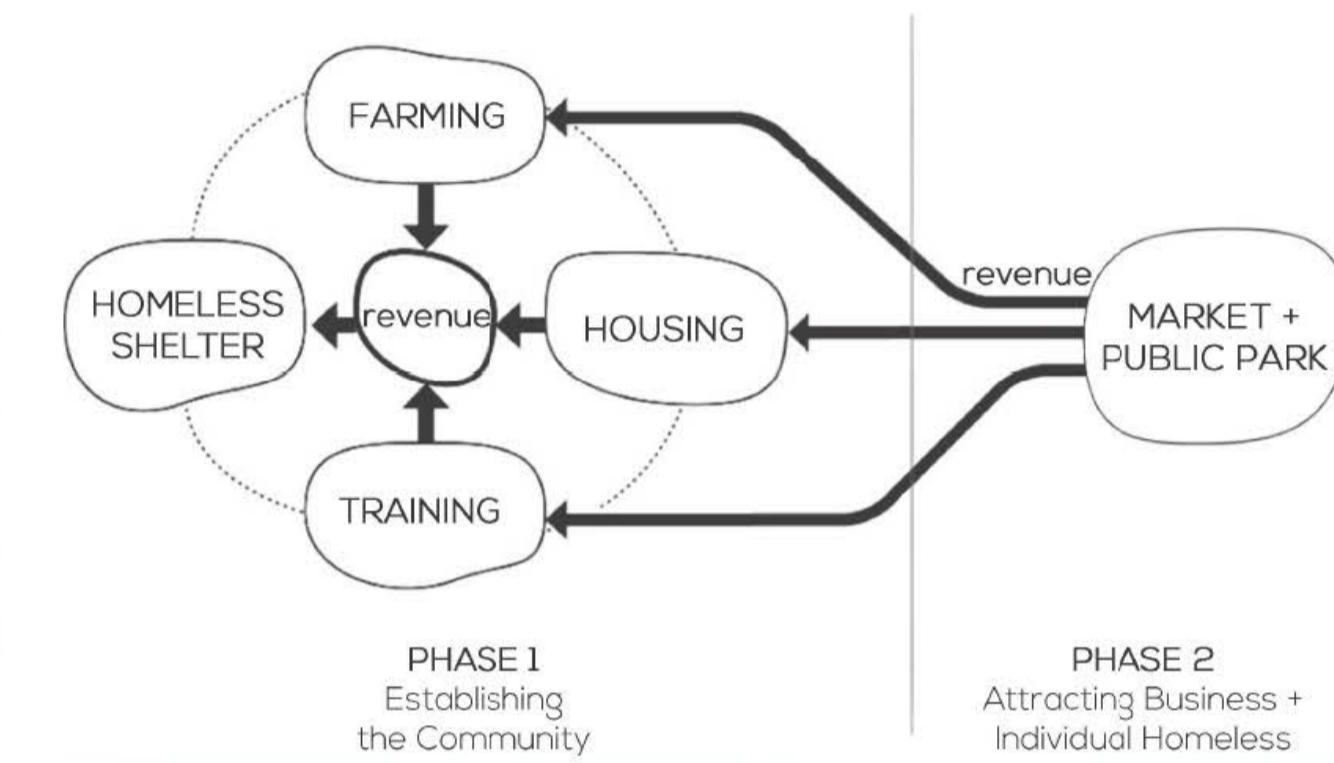
Connecting with the Homeless

USER HIERARCHY

Residents in the City

PROGRAM

Phase 1 - Establishing the Community
Phase 2 - Attracting Business + Individual Homeless



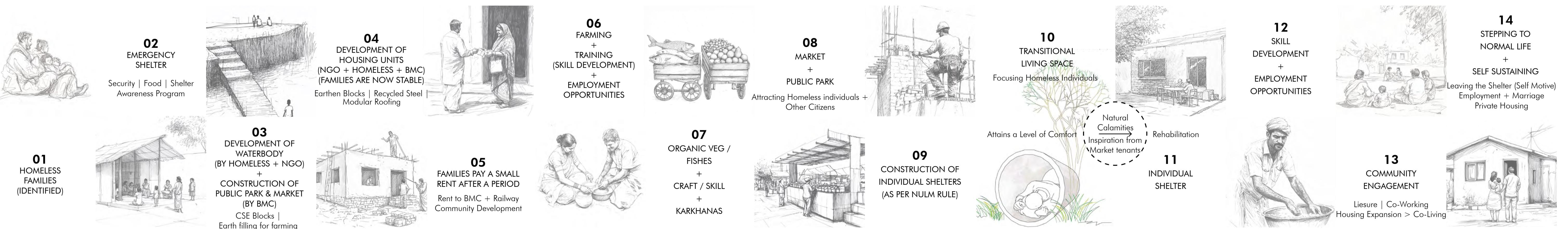
SUPPORT + FUNDING

BMC - BrihanMumbai Municipal Corporation
Pehchan - NGO empowering homeless citizens



PROGRAMME TIMELINE

USER JOURNEY



Design Development.

PROSPECT & REFUGE

KEY CONCEPT

Prospect - Refuge is a theory of Landscape Aesthetics proposed by Human Geographer 'Jay Appleton' win his wider thesis called 'Habitat Theory'.

Prospect :

- Seek out opportunities.
- To perceive or acquire visual information.
- To explore environments.
- To see without being seen.

Refuge :

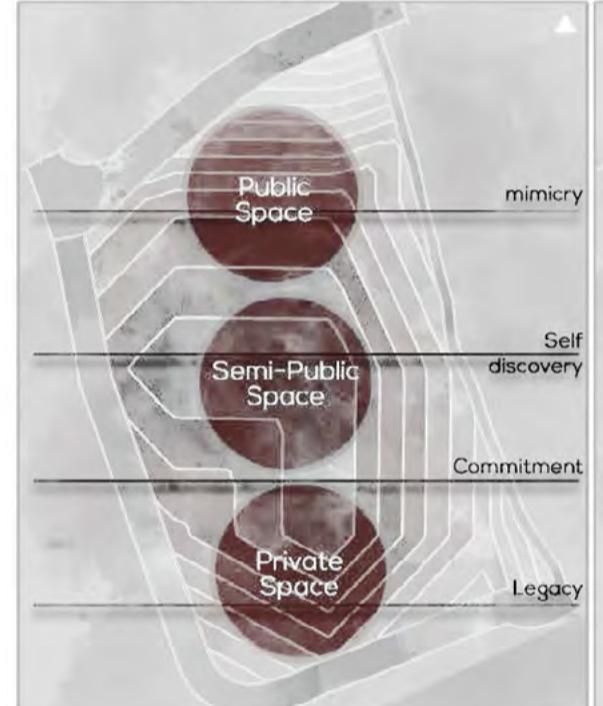
- To seek out shelter.
- In search of protection.
- Environments for hide away.
- Desire to be comfortably safe.

The theory will act as the key concept in the design. The homeless, who are in need a safe place to rest, exploring the outer environments.

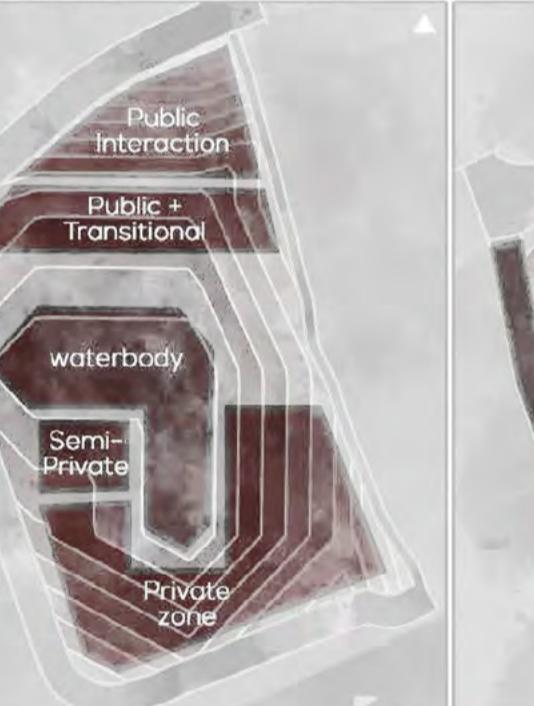
PROXIMITY

Extend of connection between spaces

CHARACTER AREAS



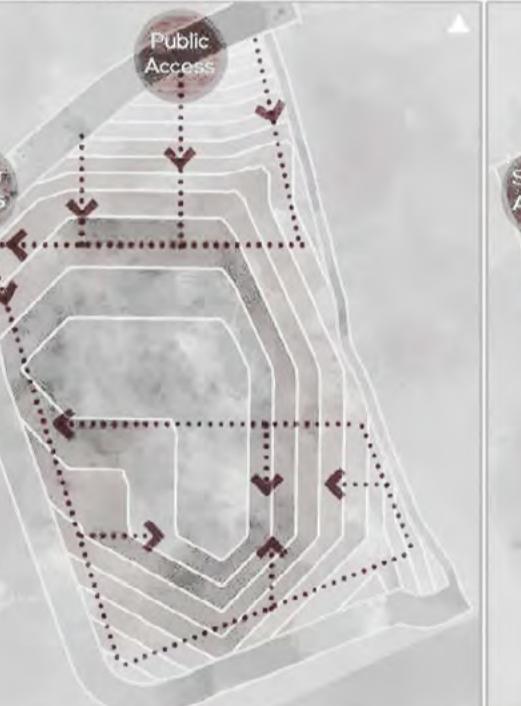
FUNCTIONAL DIAGRAM



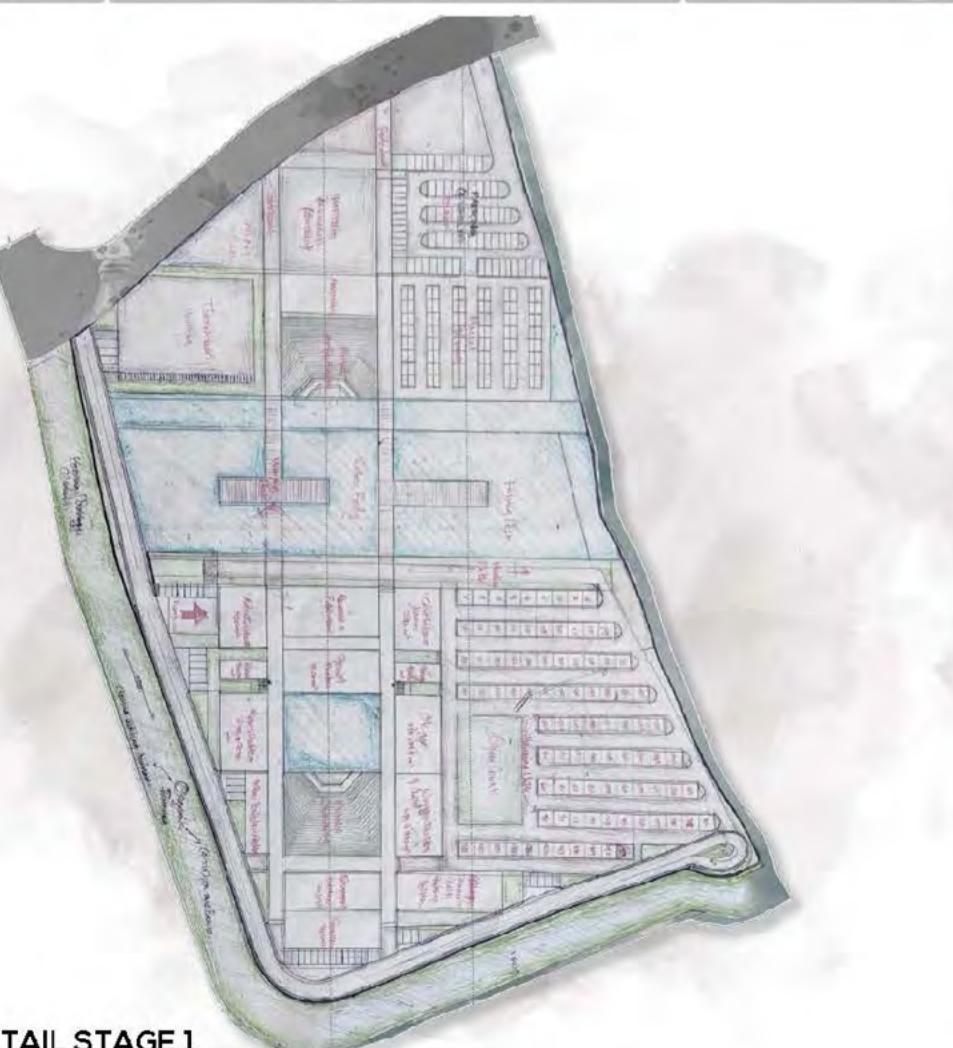
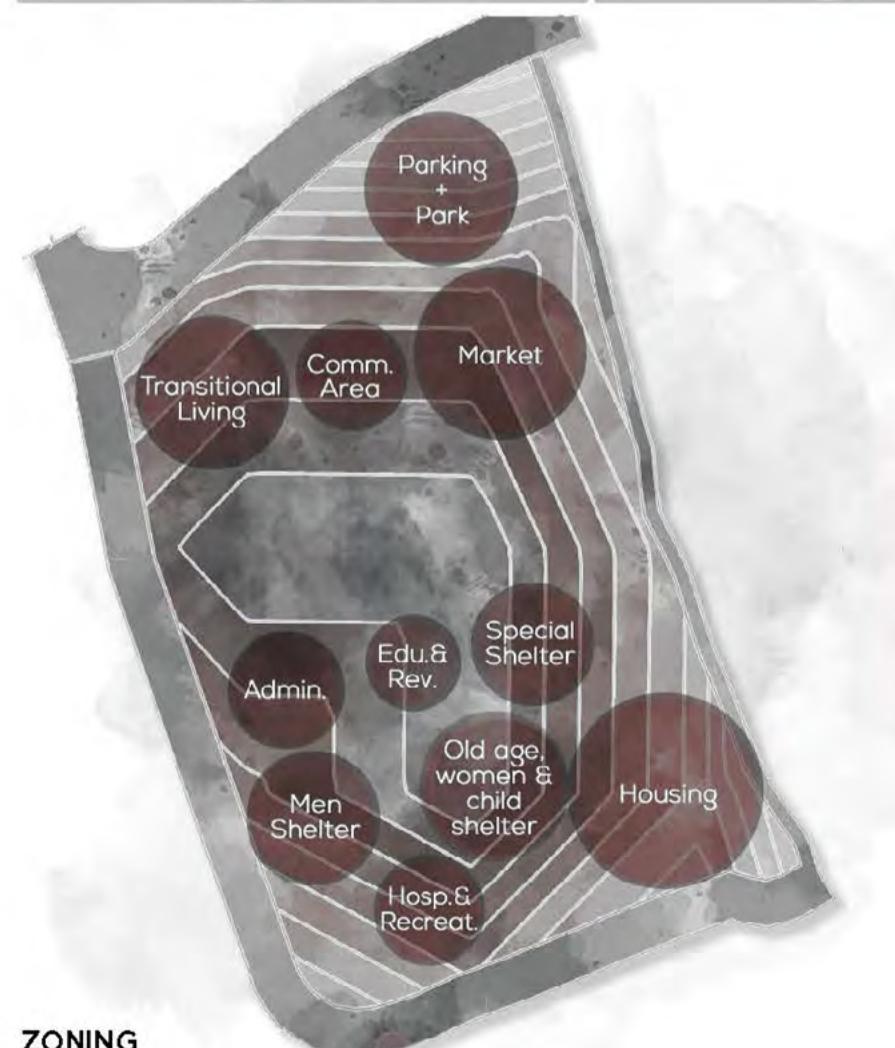
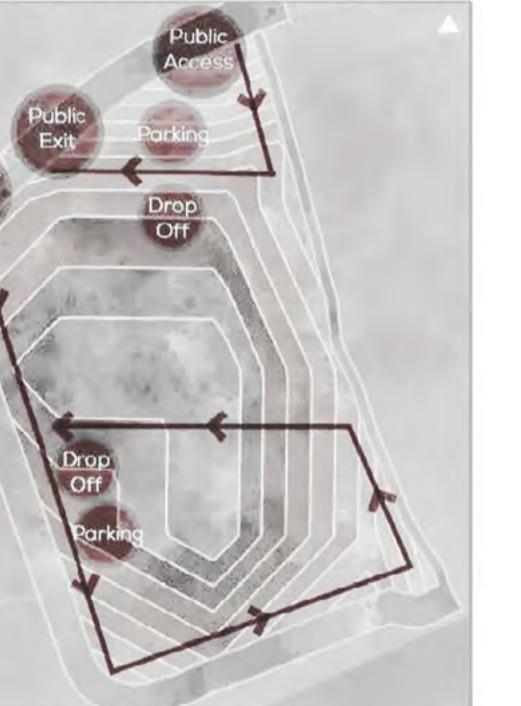
OPEN SPACE HIERARCHY



PEDESTRIAN MOVEMENT



VEHICULAR MOVEMENT



ZONING

DETAIL STAGE 1

DETAIL STAGE 2

1. The Homeless

public space > shelter refuge

They dont have a shelter or safe place, making their refuge visible. The present dilemma.

2. The Transformation

waterbody

Waterbody will act as a bridge between prospect and refuge. A sense of inspiration.

3. The Resident

public space prospect < shelter refuge

There is no visibility from prospect to refuge. ie. Safer atmosphere created.

PHASES OF LIFE ZONING CONCEPT

The attain the concept, to psychologically accommodate the homeless, is achieved through the division of the whole site to the phases of how living beings transform to its nurtured form and live a better life.

CONNECTIVITY Physical connection between spaces

PEDESTRIAN MOVEMENT



VEHICULAR MOVEMENT

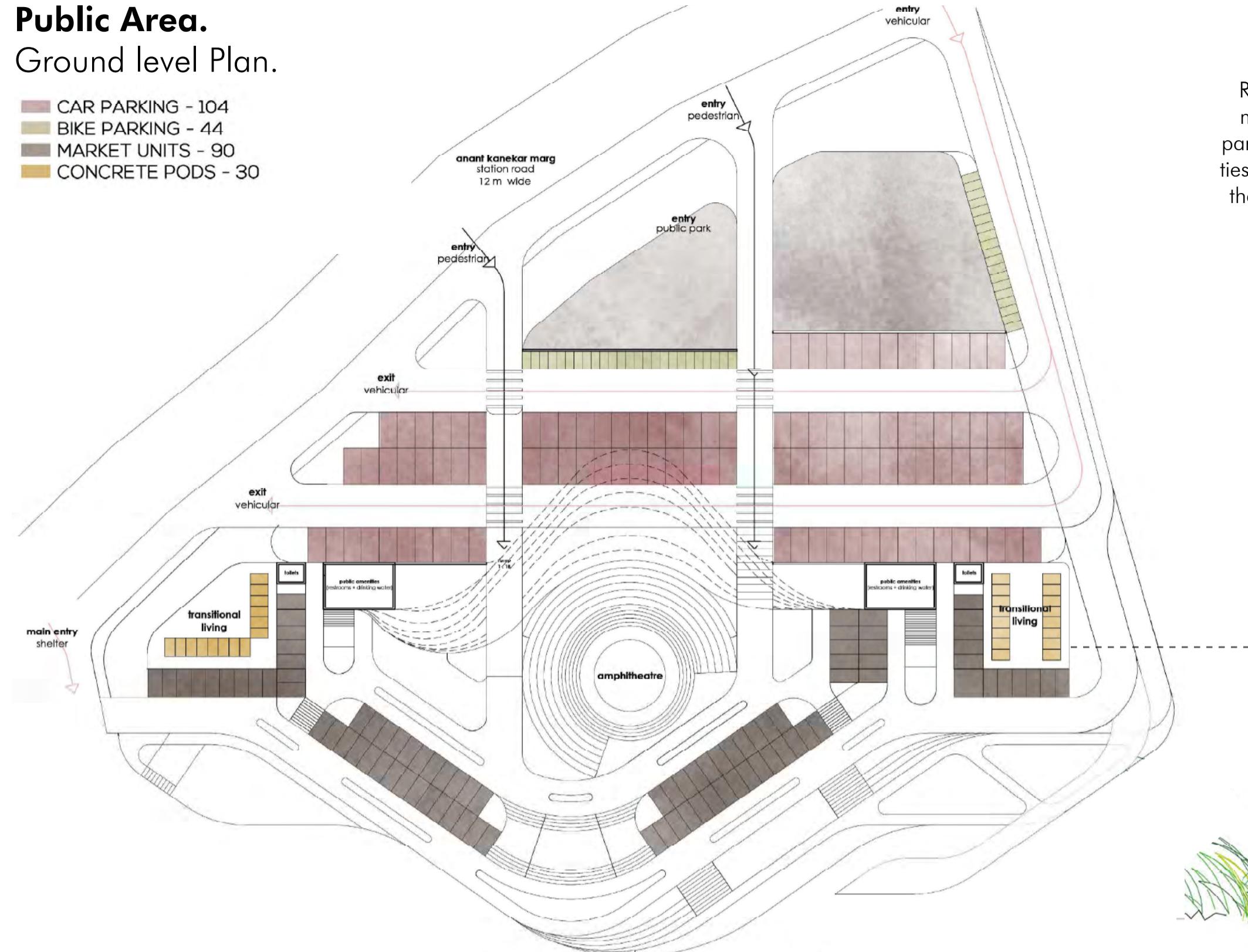


Master Plan.

Public Area.

Ground level Plan.

CAR PARKING - 104
BIKE PARKING - 44
MARKET UNITS - 90
CONCRETE PODS - 30



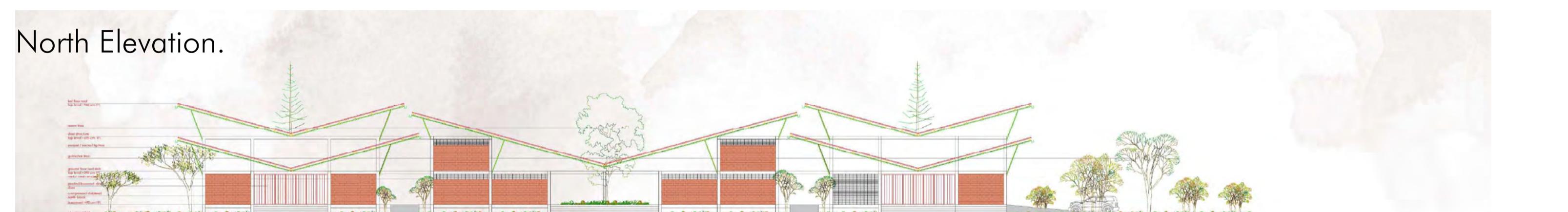
TRANSITIONAL LIVING Concrete Pods

Recycled from unused concrete pipelines, these pods accommodate transitional homeless individuals visiting markets and parks. The layouts are strategically planned near public amenities. Separate toilets ensure privacy and proper maintenance of the public space. This transitional living area serves as the first level of comfort for the homeless.

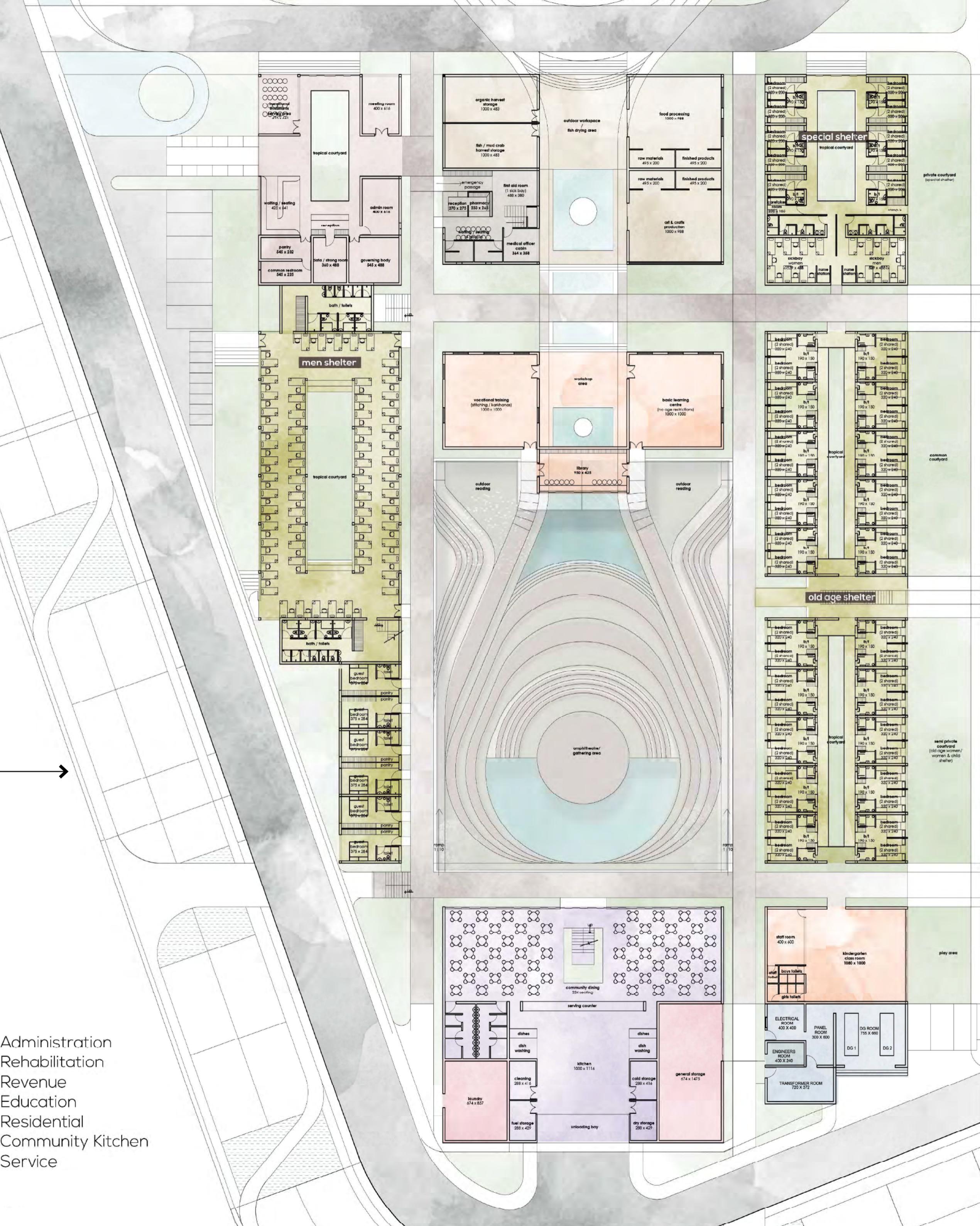
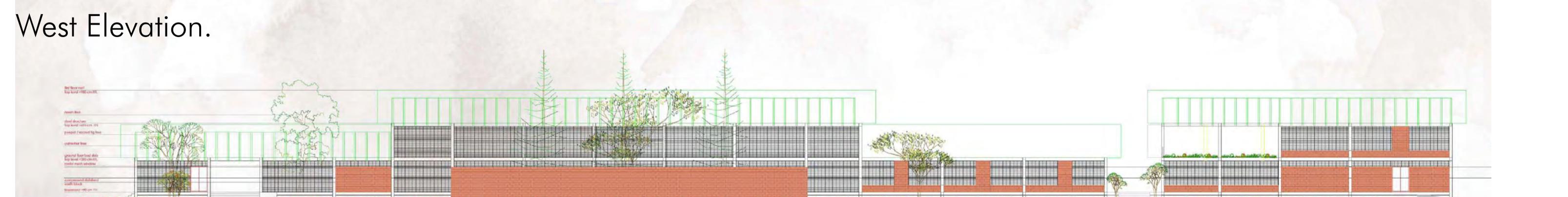


Shelter.

Ground Floor Plan.



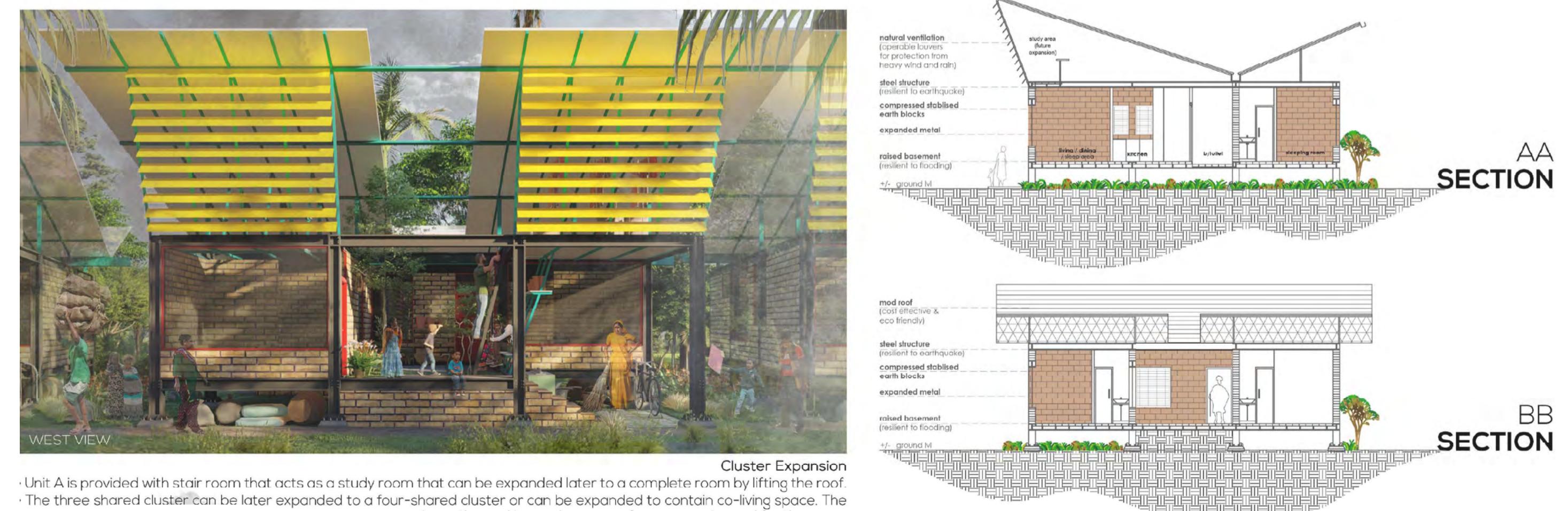
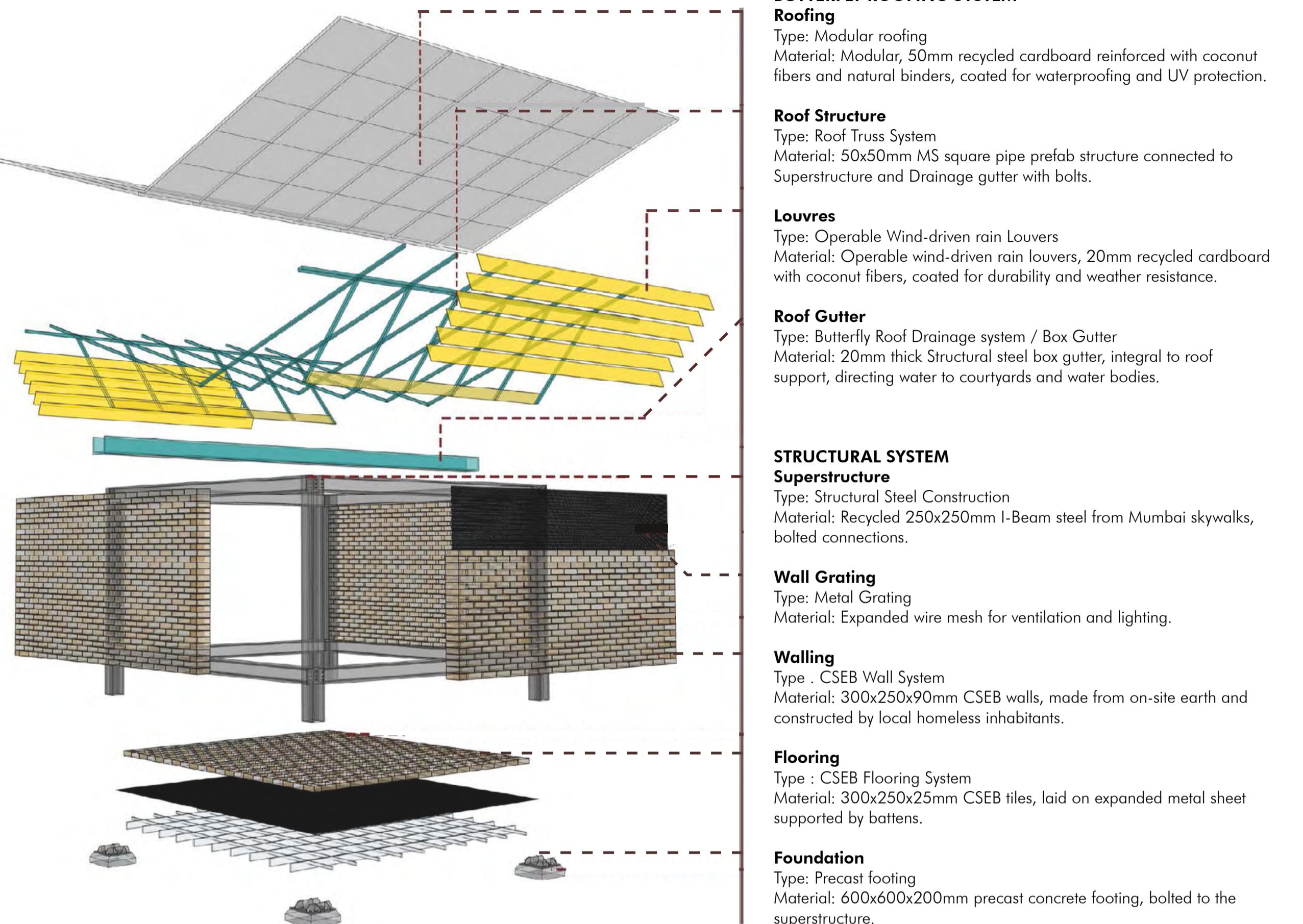
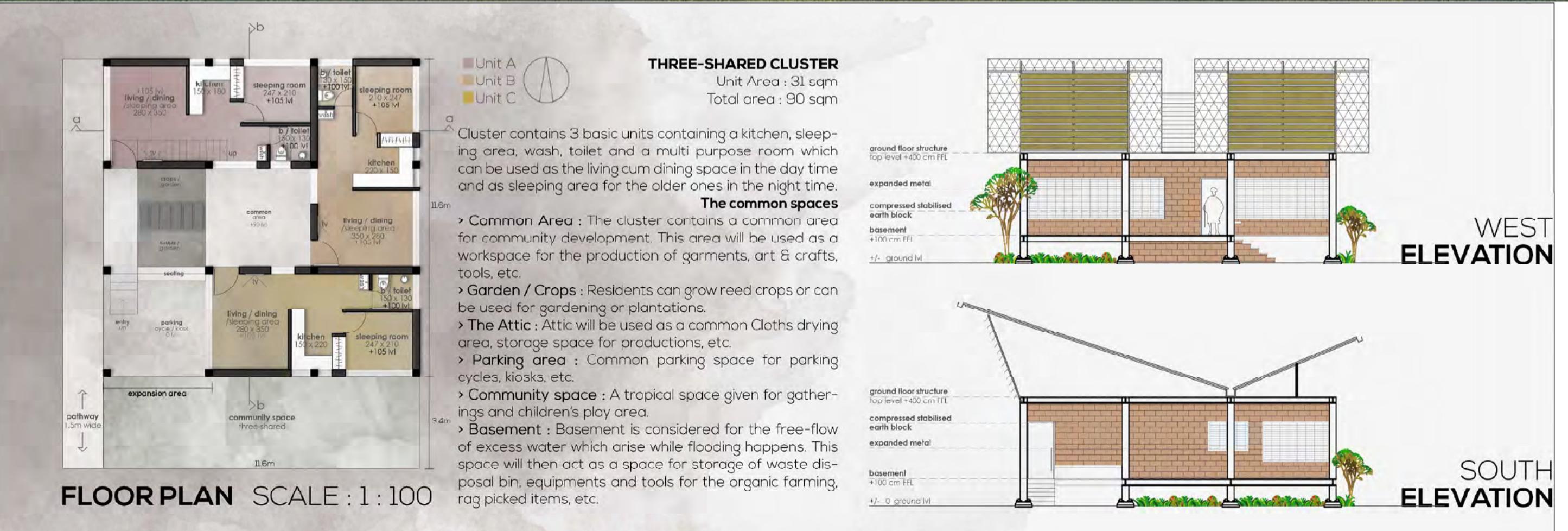
West Elevation.



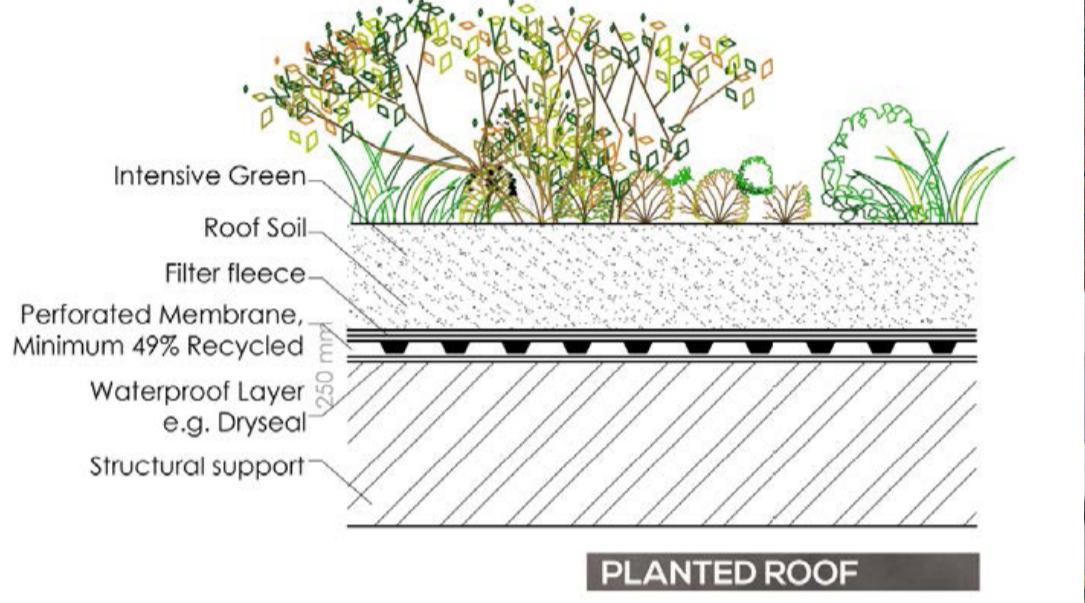
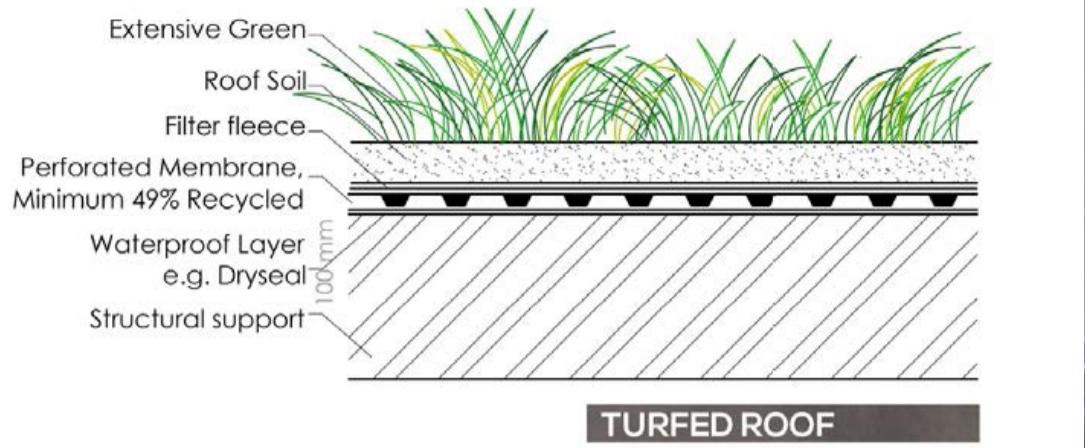
Administration
Rehabilitation
Revenue
Education
Residential
Community Kitchen
Service

Housing.

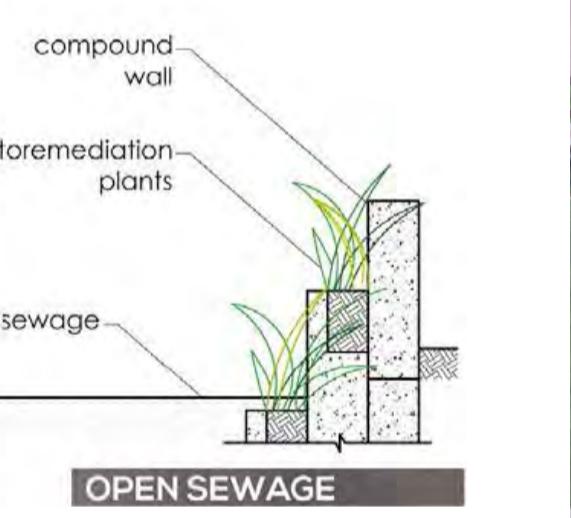
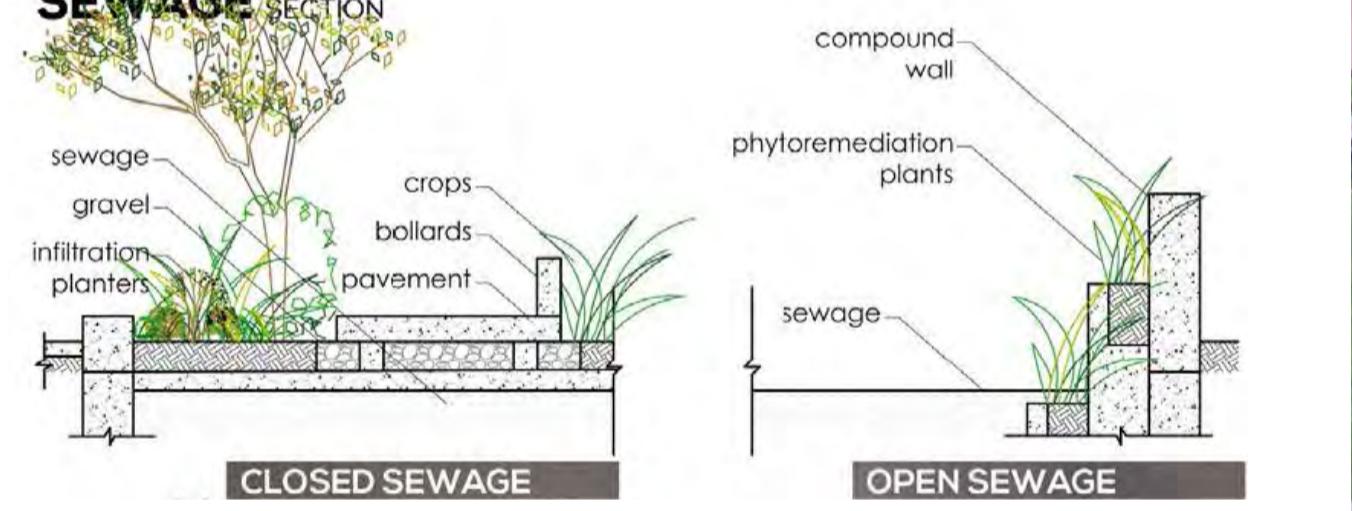
तीन THREE-SHARED CLUSTER



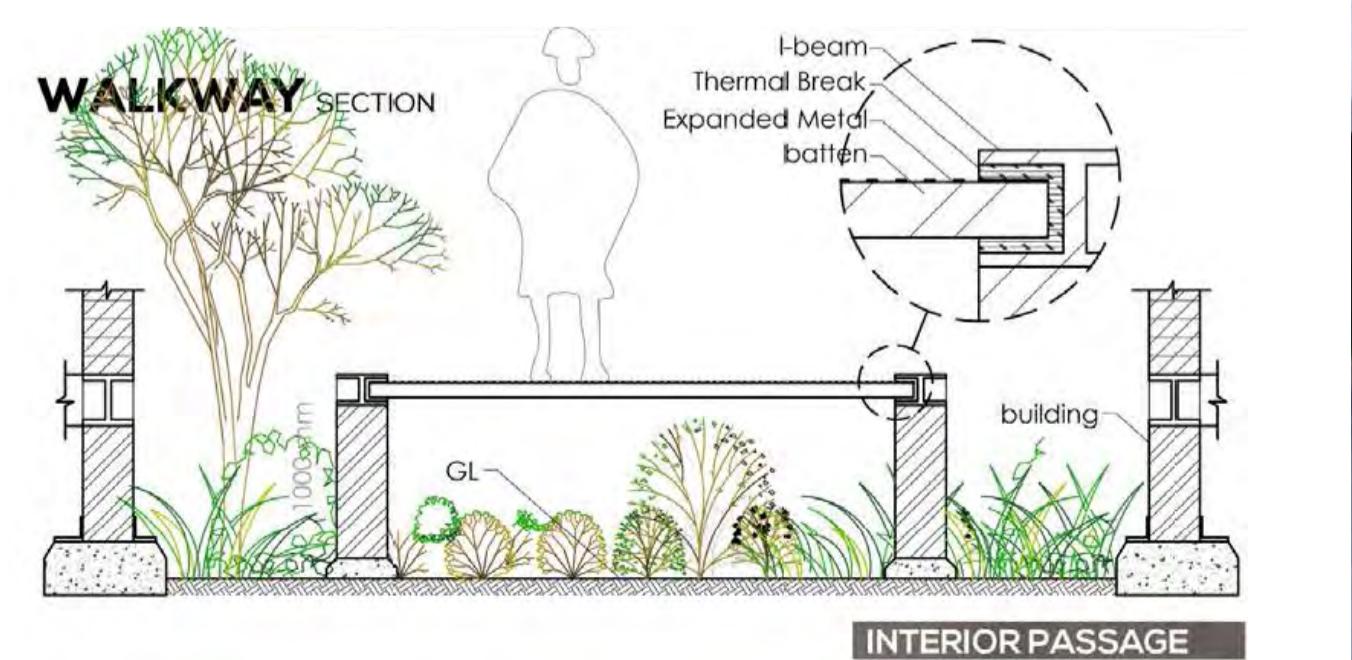
GREEN ROOF SECTION



SEWAGE SECTION



WALKWAY SECTION



04

*how do we address
homelessness in this
digital world?*



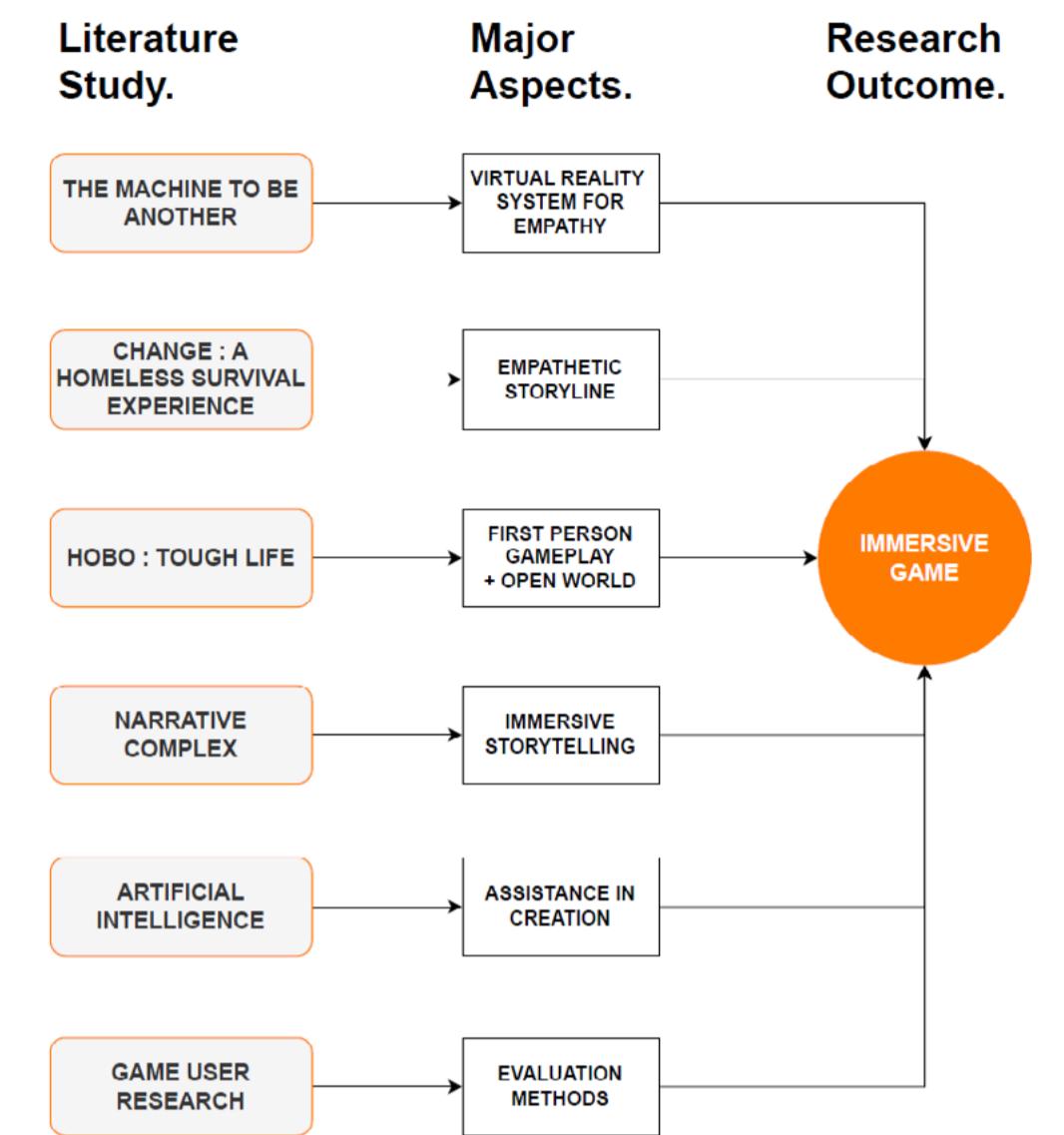
ARCH 722
Research by Design Thesis on Portraying
Homelessness in Urban India.

201672955 | University of Liverpool

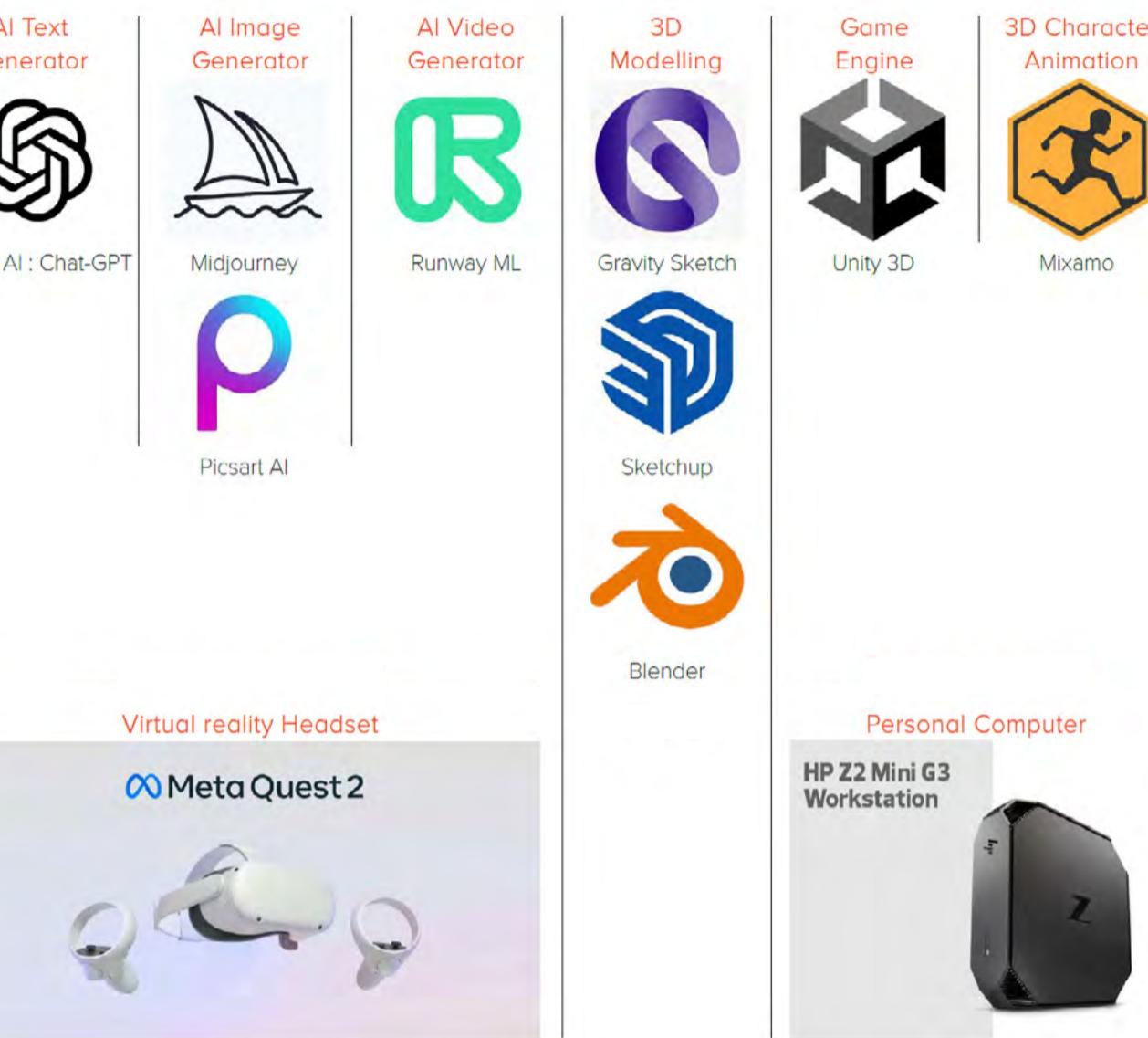
research questions.

- How can a virtual reality game be designed with an effective storyline assisted by modern technologies to portray homelessness?
- How can architects and designers incorporate usercentric design principles to create more empathetic and inclusive built environments?
- How can immersive storytelling be used to create empathy and how effective is virtual reality and gamification as a tool to address social issues?

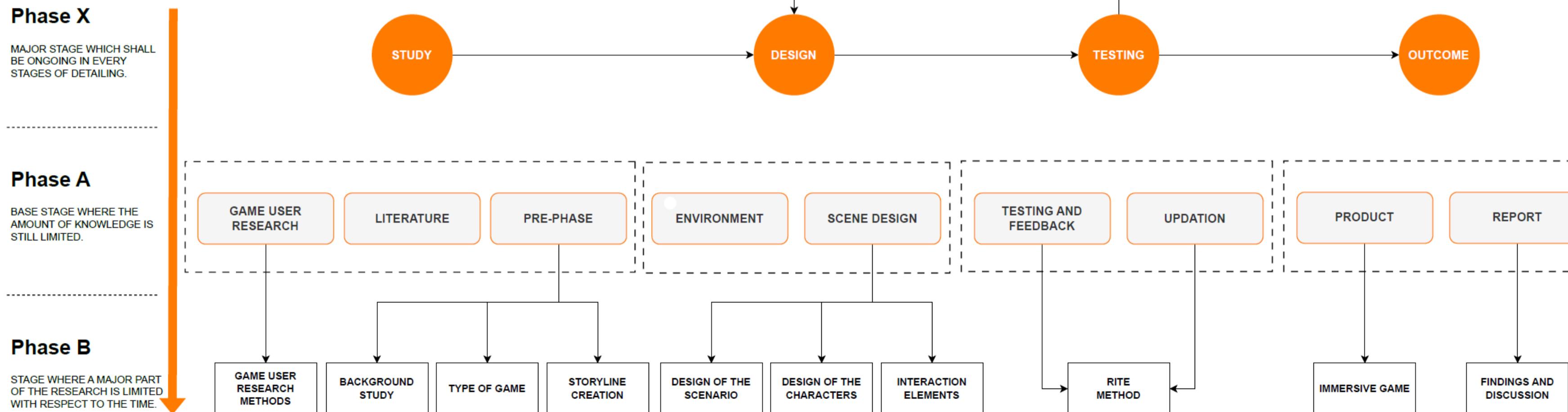
literature review outcome.



toolkit introduction.



research methodology.



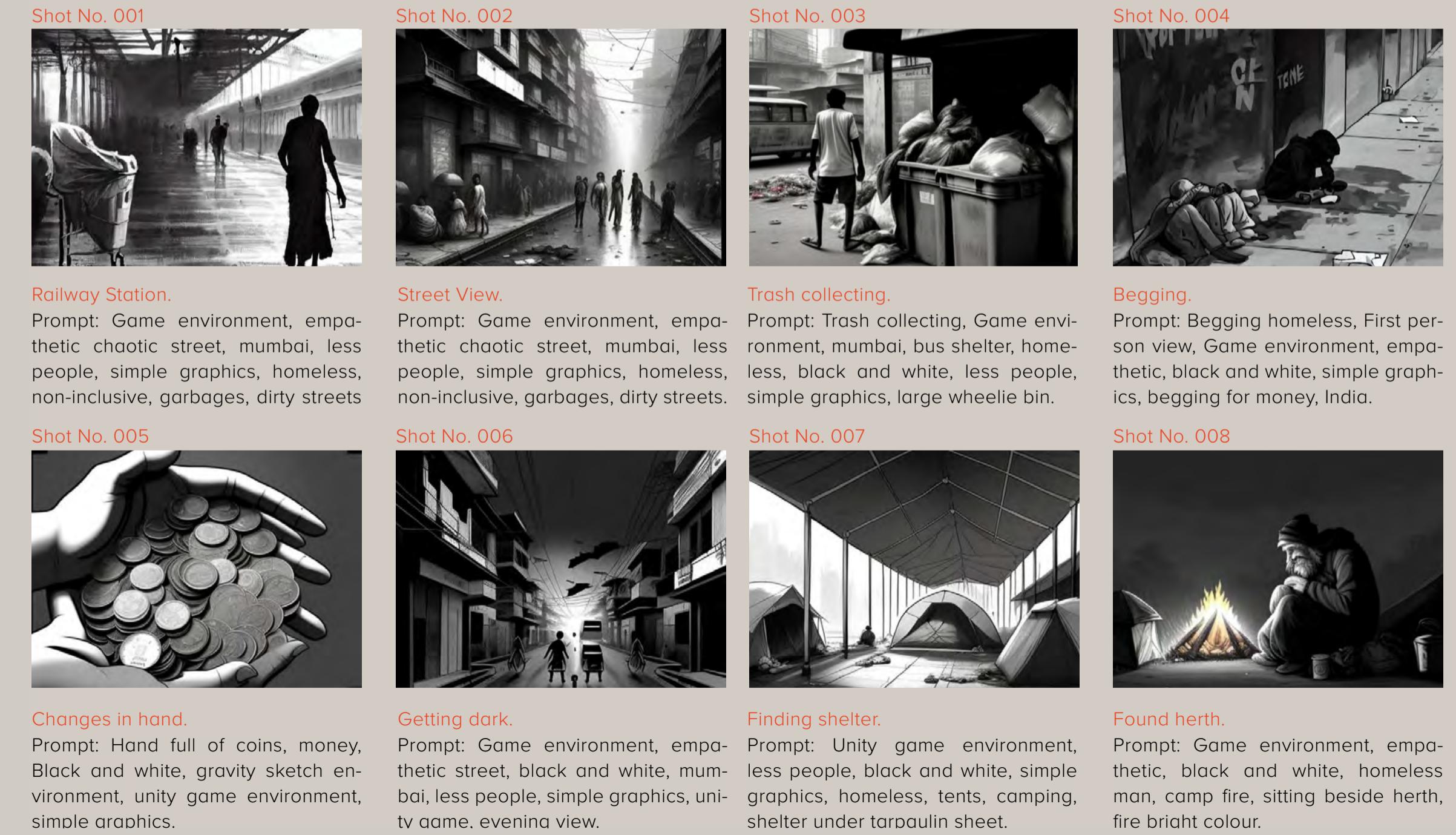
product development.

1. Context identification.
2. Storyline creation.
3. Storyboard - conceptualization.
4. Storyboarding using AI image generation.
5. Referencing game 3D environment using AI.
6. 3D Environment design using Sketchup & Gravity sketch.
7. Real-time 3D development in unity3D.
8. Continuous VR Playtesting.
9. Continuous PC Playtesting.
10. Final VR Game.

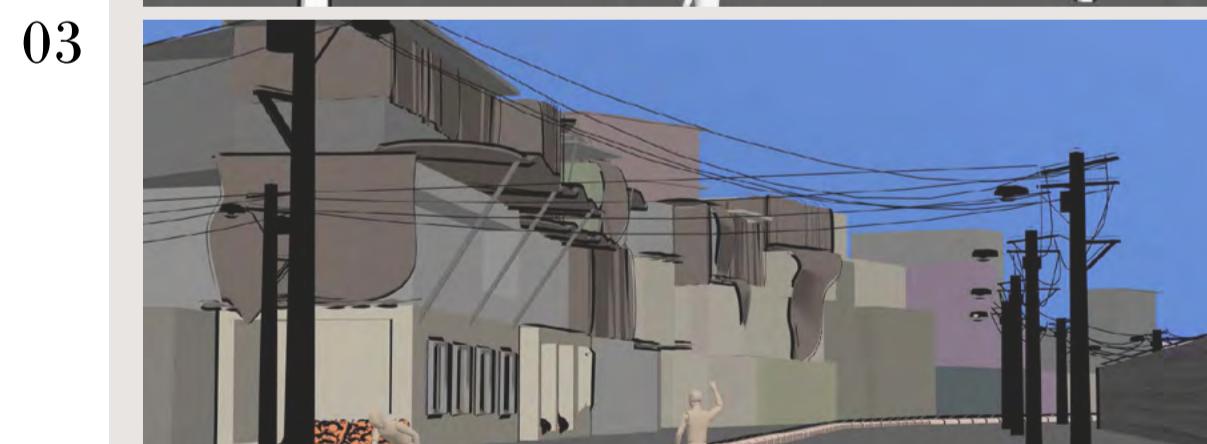
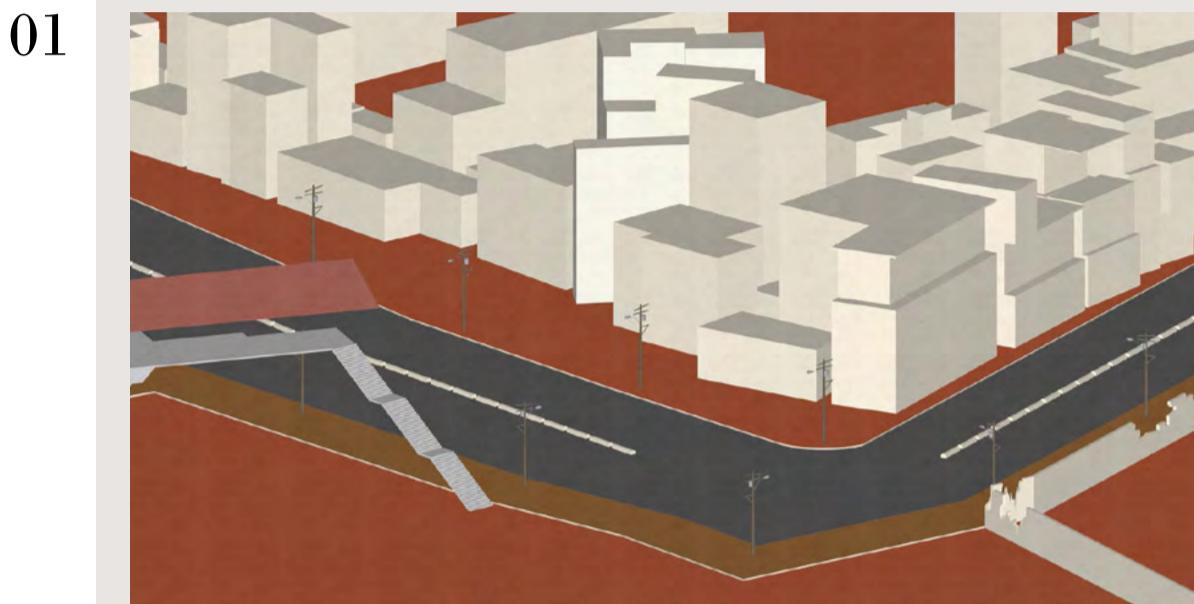
context.



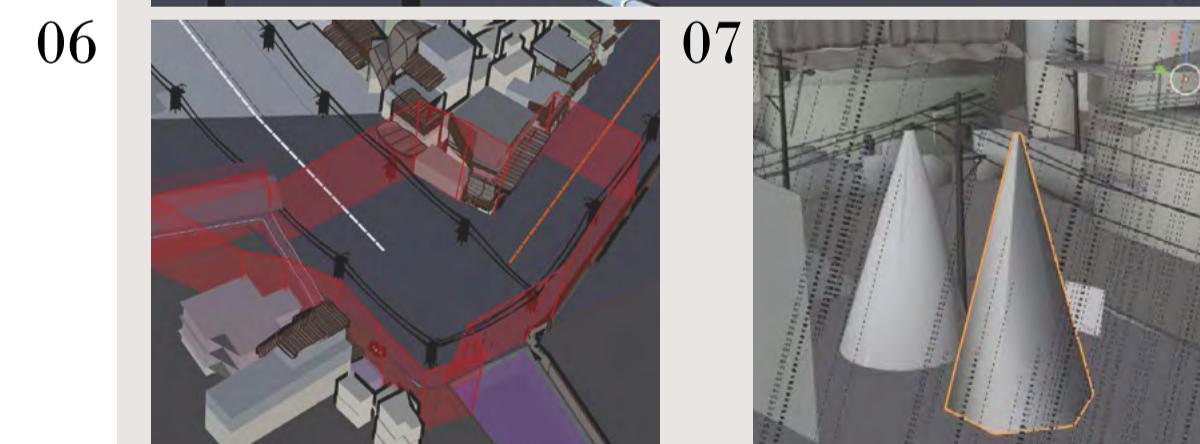
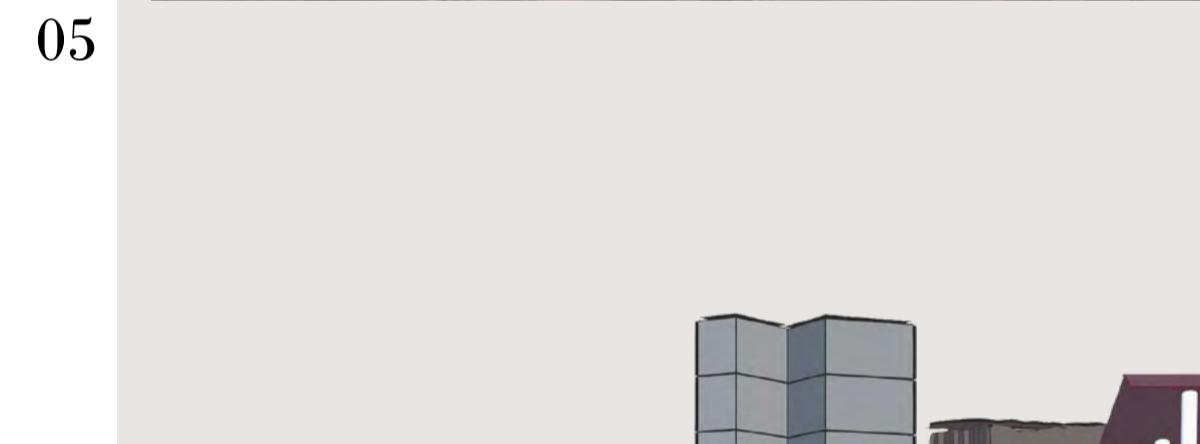
story board.



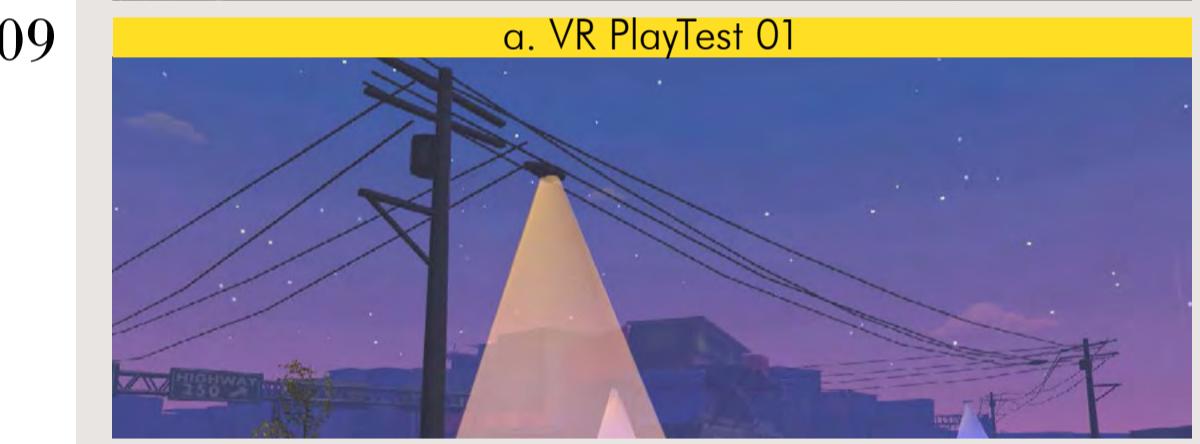
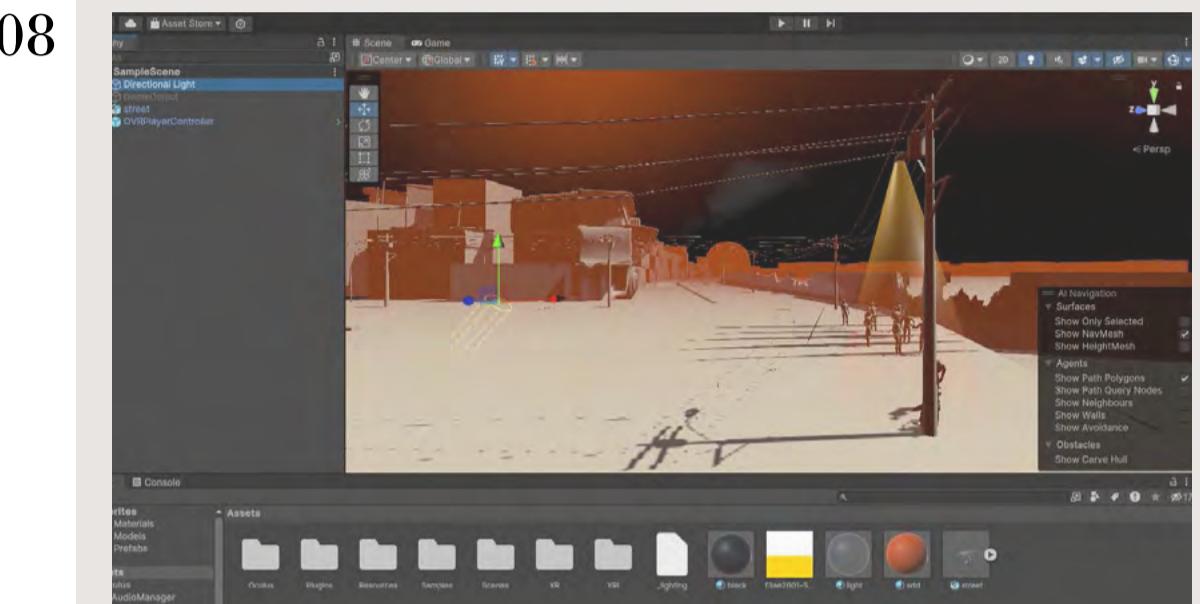
3D environment development.



Sketchup x Gravity Sketch



Sketchup x Gravity Sketch x Midjourney x Blender



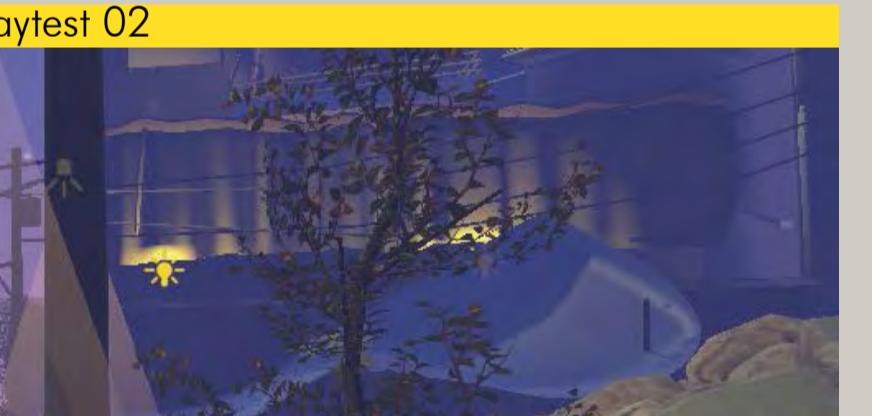
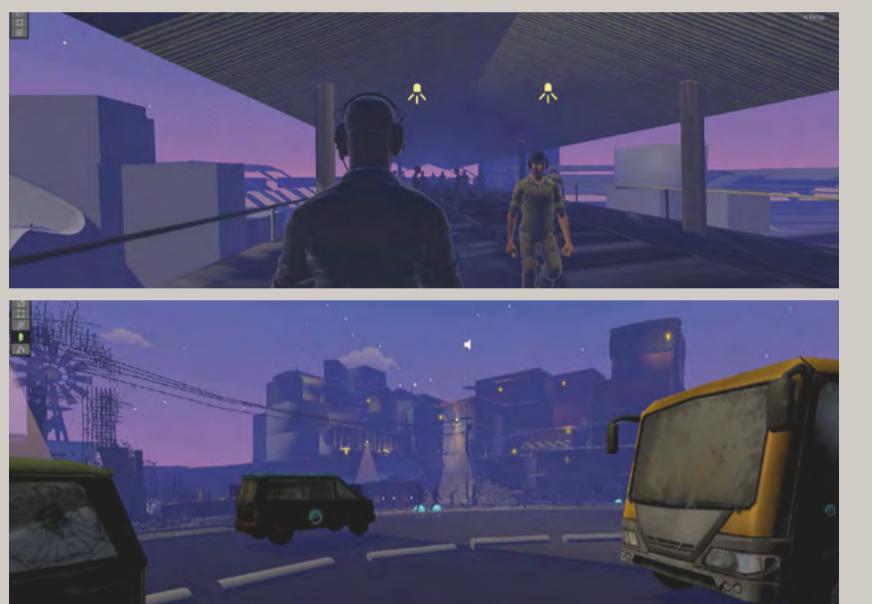
Oculus Meta VR x Unity 3d



1. Base model in Sketchup.
2. Detailing in Gravity Sketch - Phase I.
3. Detailing in Gravity Sketch - Phase II.
4. Midjourney image experiment.
5. Detailing in Gravity Sketch - Phase III.
6. Addition of boundary for limiting access.
7. Basic refinement in Blender.
8. Real-time 3D development.



Oculus Meta VR x HP Z2 Mini Workstation x Unity 3d



a)**VR 01 playtest**

The research project involves practical testing using the 'VREmpathy.apk' file on the Oculus Quest 2 via the Meta Quest Developer Hub and Quest-Link connection to the PC. It assesses immersion, storyline and storyboard effectiveness, 3D environment quality, empathy communication, VR adaptation, headset experience, and playability.

**b)****VR 02 playtest**

The same self-playtesting process of playtest 01 is conducted with the refined build which assesses immersion, storyline and storyboard effectiveness, 3D environment quality, empathy communication, VR adaptation, headset experience, and playability.

**c)****VR 03 playtest**

For the comparison of platforms and immersiveness, a practical testing is conducted using the 'PCEmpathy.exe' file on the PC via .exe build. Like VR Playtest, it assesses immersion, storyline and storyboard effectiveness, 3D environment quality, empathy communication, PC adaptation, PC gaming experience, and playability.

**PC 01 playtest**

Final self-playtesting using the same process of playtest 01 and playtest 02 is conducted with the refined build which assesses immersion, storyline and storyboard effectiveness, 3D environment quality, empathy communication, VR adaptation, headset experience, and playability.

**PC 02 playtest**

Same process of PC playtesting 01 is conducted with the updated build of the game. This test also assesses immersion, storyline and storyboard effectiveness, 3D environment quality, empathy communication, PC adaptation, PC gaming experience, and playability.

**Feedback**

1. Improving Color Grading and 3D Environment.
2. Detailed Atmosphere for Empathy.
3. Incorporating People and Real-World Objects.
4. Aligning Spaces with Storyboard Images.
5. Animating Vehicles, NPCs, etc
6. Incorporating Weather conditions like rain, etc.
7. Extending export options for comparison.

Feedback

1. Detailing empty spaces for chaotic environment.
2. Populating further with people and vehicles.
3. Incorporating more empathy-driven interaction with NPCs.
4. Post-processing to improve the visuals.
5. Background sound like people communicating & vehicle horns can increase immersiveness level.

Feedback

1. When comparing with VR experience, the PC version could only achieve a very slight level of immersiveness.
2. Self adaption is no longer valid in this specific PC experience scenario but might improve if more empathy-driven interactions are included.
3. Post-processing could improve the visuals in PC.

Feedback

1. Urban street scenarios like street vendors selling items, working people, taxi stands, etc. can be incorporated to bring the real picture.
2. Empathy-driven interactions with NPCs can be further improved.
3. Further Post-processing to improve the visuals.
4. Background sound can be given specifically for different scenes and characters.

Feedback

1. Slight improvement is seen in immersiveness after refining. But still, when compared with the VR experience, the PC version is not able to achieve a certain minimum level of immersion.
2. Self-adaption and empathy communication are still very poor since proper interaction is not happening directly in the PC version.

findings.

The research project aimed to explore the potential of virtual reality (VR) game design, modern technologies, and immersive storytelling to portray homelessness effectively while fostering empathy. The findings from the playtests, conducted at various stages of development, provide crucial insights into the project's progression and its impact on users' empathy levels.

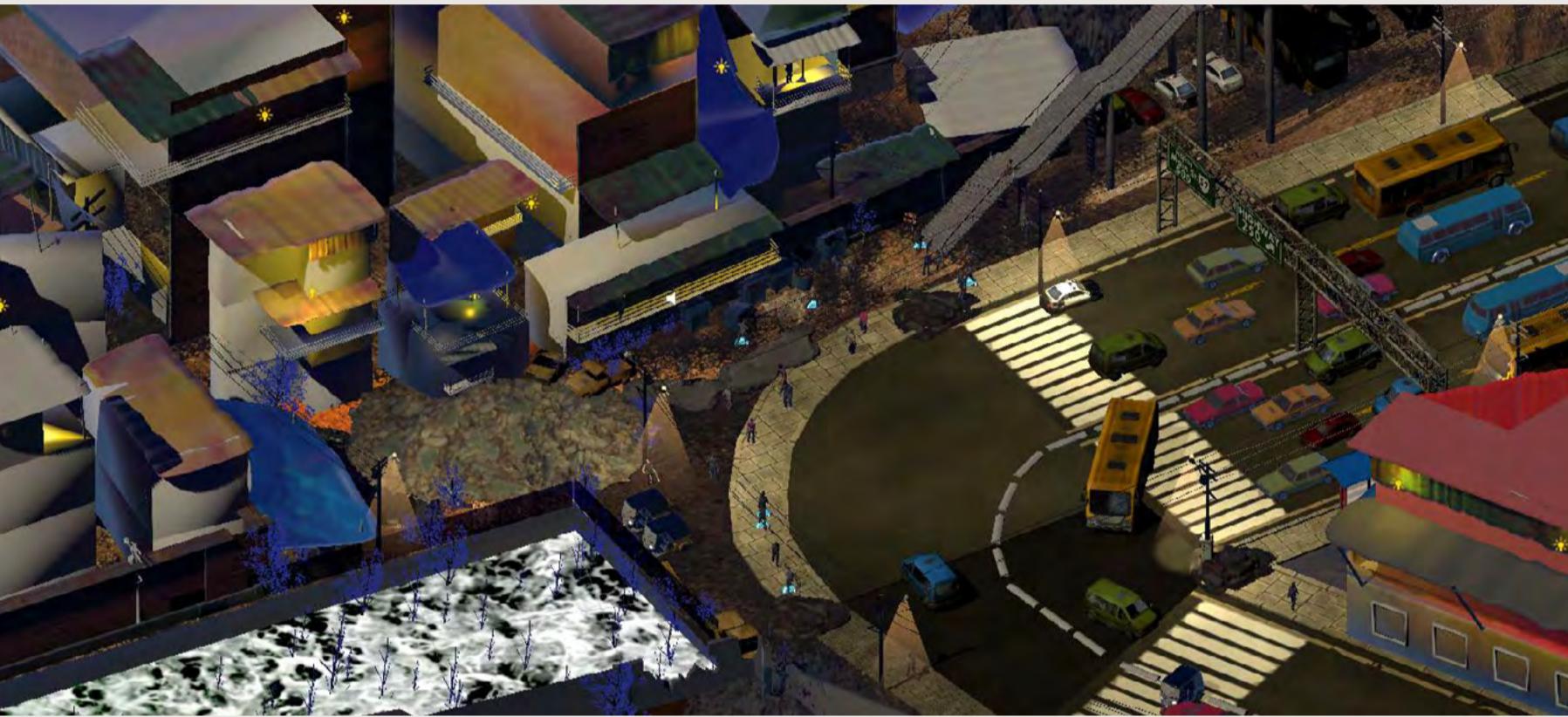
Playtests	VR Playtest01	VR Playtest02	PC Playtest01	VR Playtest03	PC Playtest02
Immersiveness Level	Below Average	Above Average	Very Poor	Excellent	Below Average
Storyline Establishment	Very Poor	Above Average	Above Average	Above Average	Above Average
Storyboard Establishment	Very Poor	Average	Average	Above Average	Average
3D Environment	Below Average	Average	Average	Excellent	Excellent
Empathy Communication	Very Poor	Below Average	Very Poor	Average	Very Poor
Self-Adaptation	Below Average	Below Average	Very Poor	Average	Very Poor
PC Experience Level	Above Average	Above Average	Excellent	Above Average	Excellent
Playability	Below Average	Excellent	Excellent	Excellent	Excellent

A day without.

Homeless survival game.



Interactive Video Link.



Isometric view of the whole environment



Trying out "A day without"



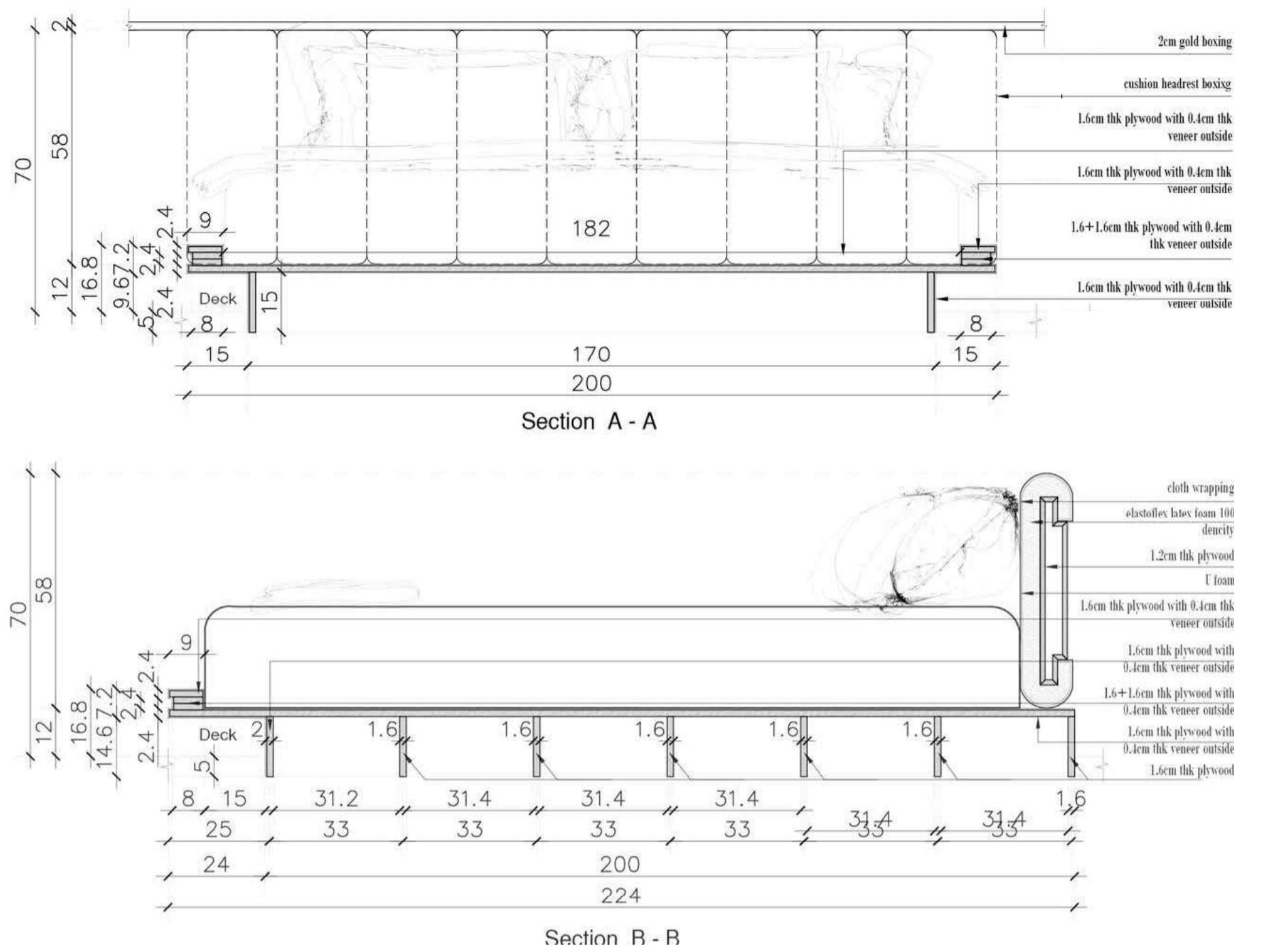
Gameplay



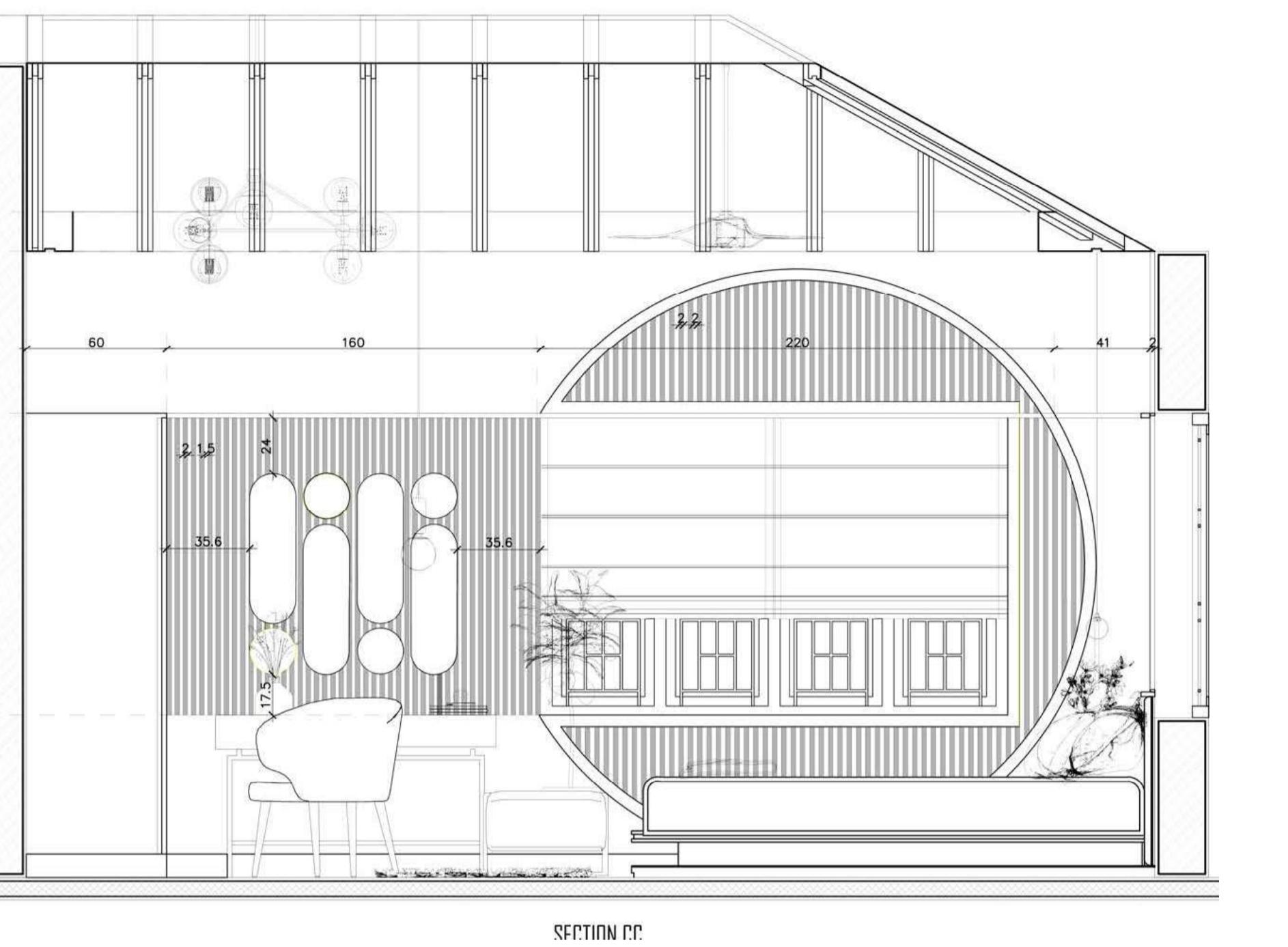
Conclusion.

In summary, this research by design produced an immersive virtual reality video game offering a first-person gameplay experience that sensitively and accurately depicts the struggles faced by homeless individuals. It's crucial to acknowledge the resilience and resourcefulness of the homeless community, often overlooked and undervalued. While the game cannot provide a comprehensive solution to homelessness, its potential impact lies in captivating society's attention and fostering empathy towards the homeless.

Detail drawing : Bed Coat.



Isometric Drawing : Section.



Bedroom Interior ; Kubra Residence.

The bedroom interior designed for a stereotypical 90's house transforms to a modern space with wooden design elements. The traditional wooden ceiling is introduced to reduce the room temperature. Golden borders are given in-order to introduce a sense of luxury.

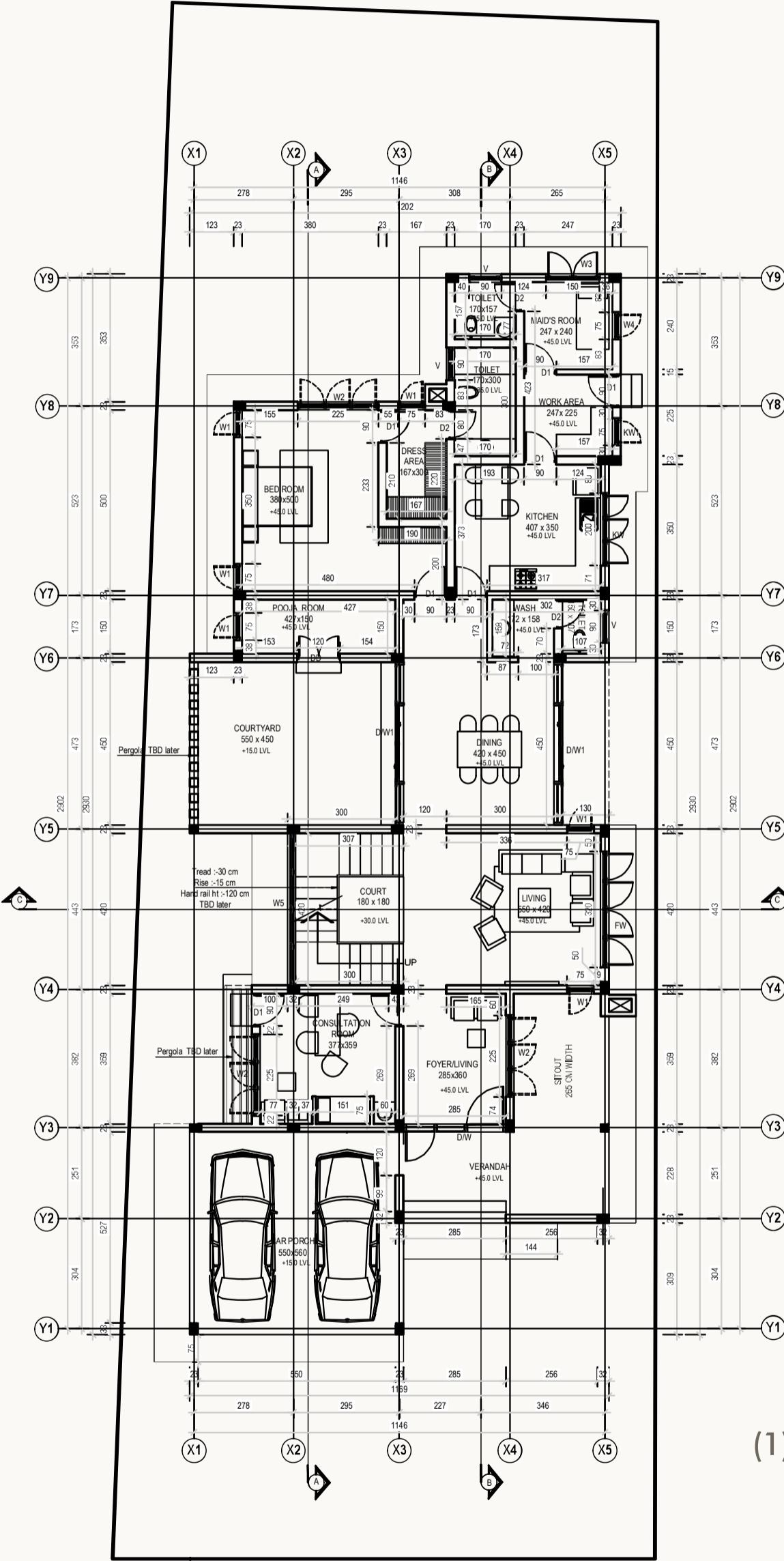
05

miscellaneous.



WORKING DRAWINGS

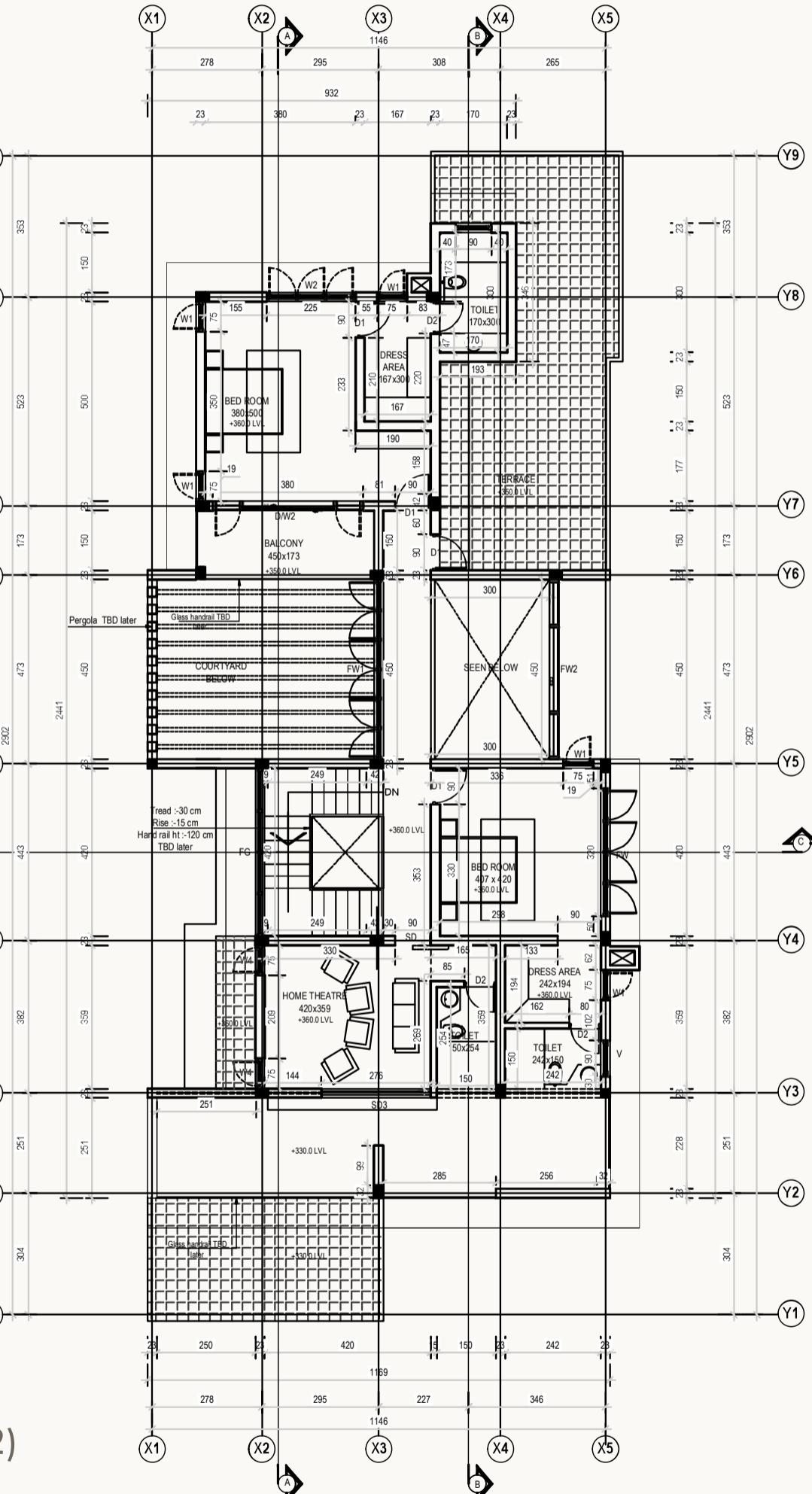
Selected detailed drawings from Specific projects during Professional Experience.



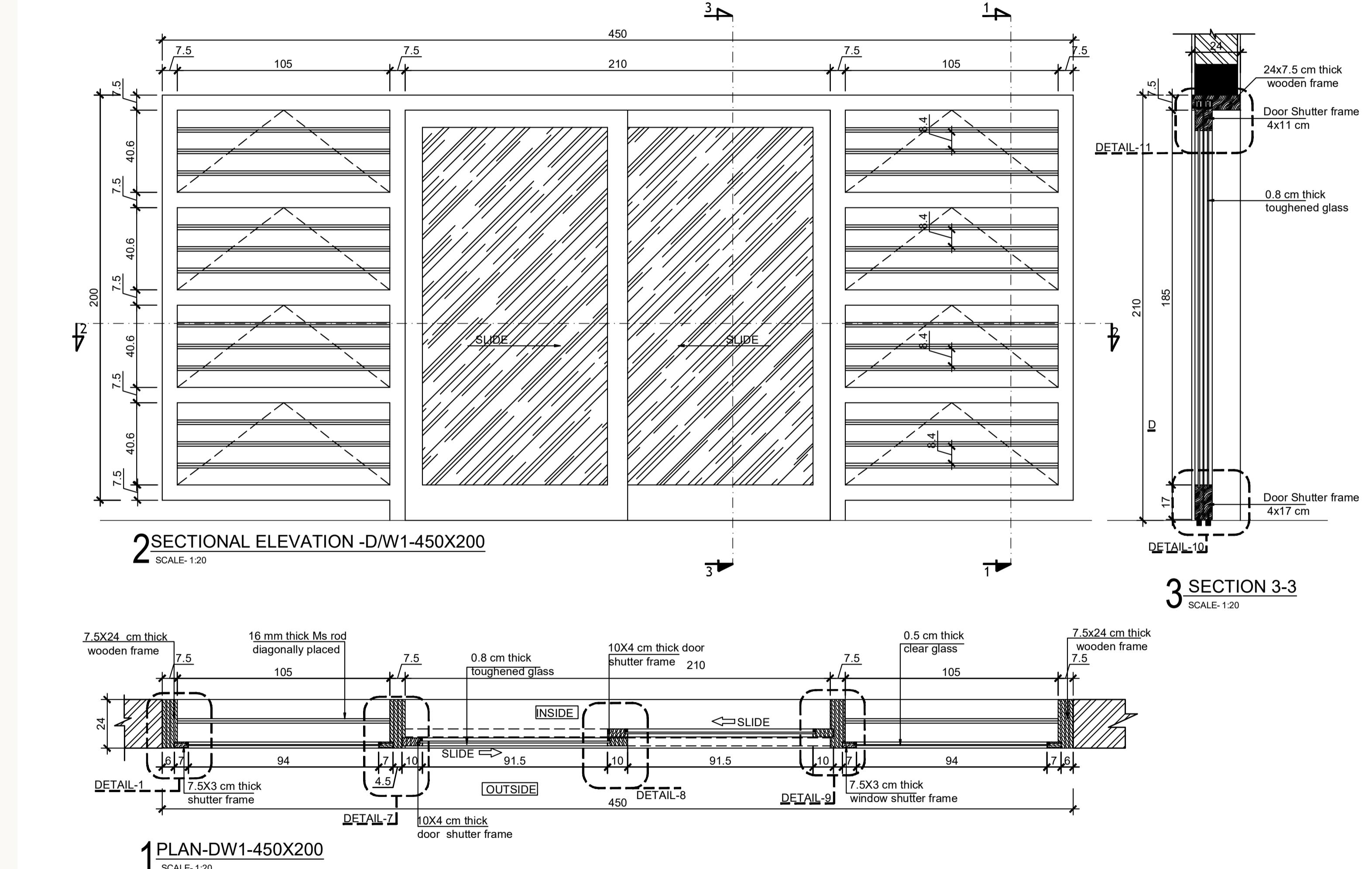
(1)

>Construction Detail Plan:

- 1) Masonry Drawing - Ground Floor Plan
- 2) Masonry Drawing - First Floor Plan



(2)

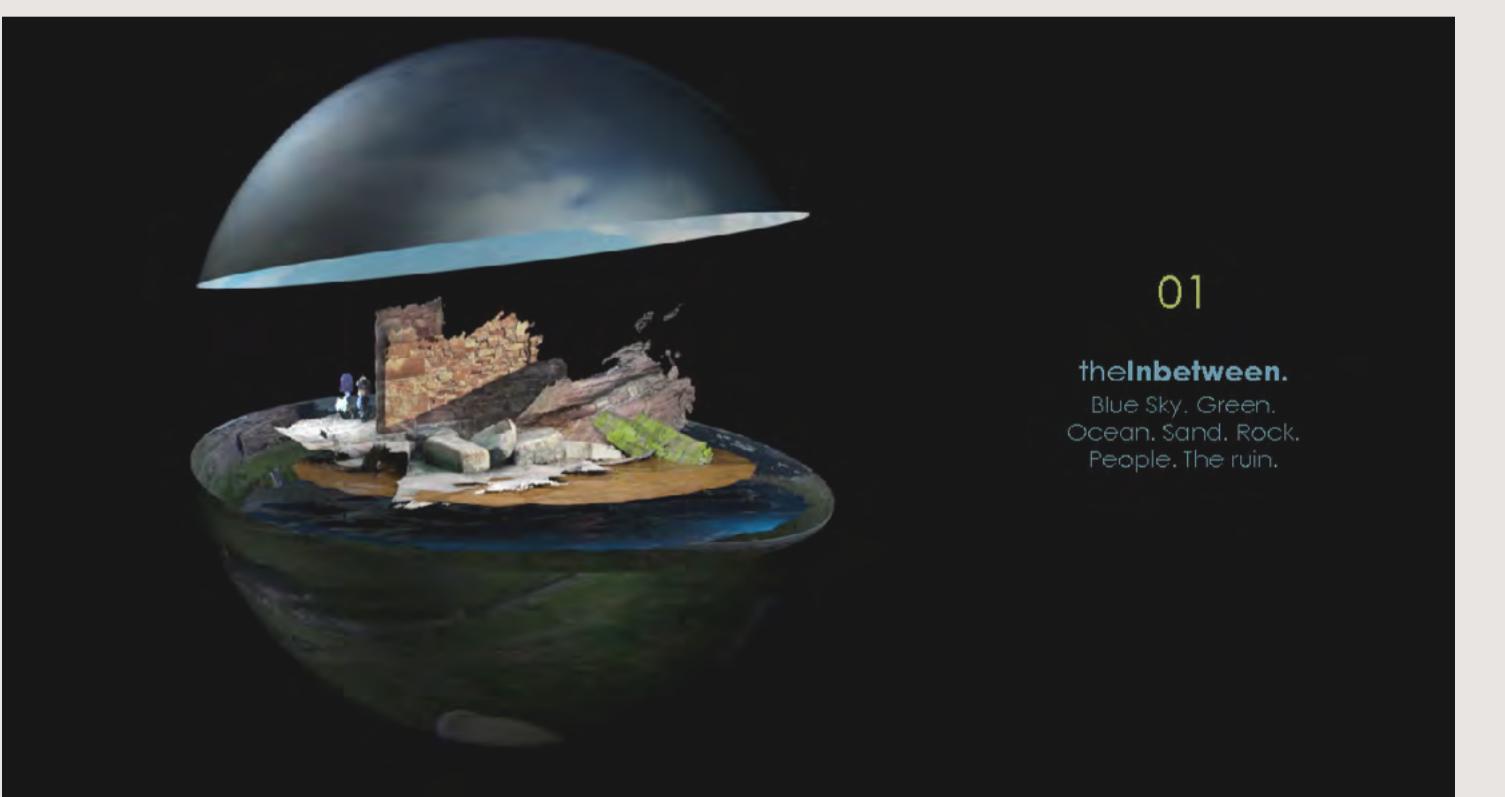


>Joinery Detail :

Sliding Door cum Window detail.

Renderings.

The renderings are categorized into: **minimalist conceptual visual** for early design exploration, **detailed**, and highly **realistic**. Additionally, a campus landscape plan rendering from the bachelor's project is included.



MINOR PROJECT SEMESTER-NINE





sabiqalikp@gmail.com
Dubai, United Arab Emirates
+971544389169
linkedin.com/in/sabiqali

*thank
you.*