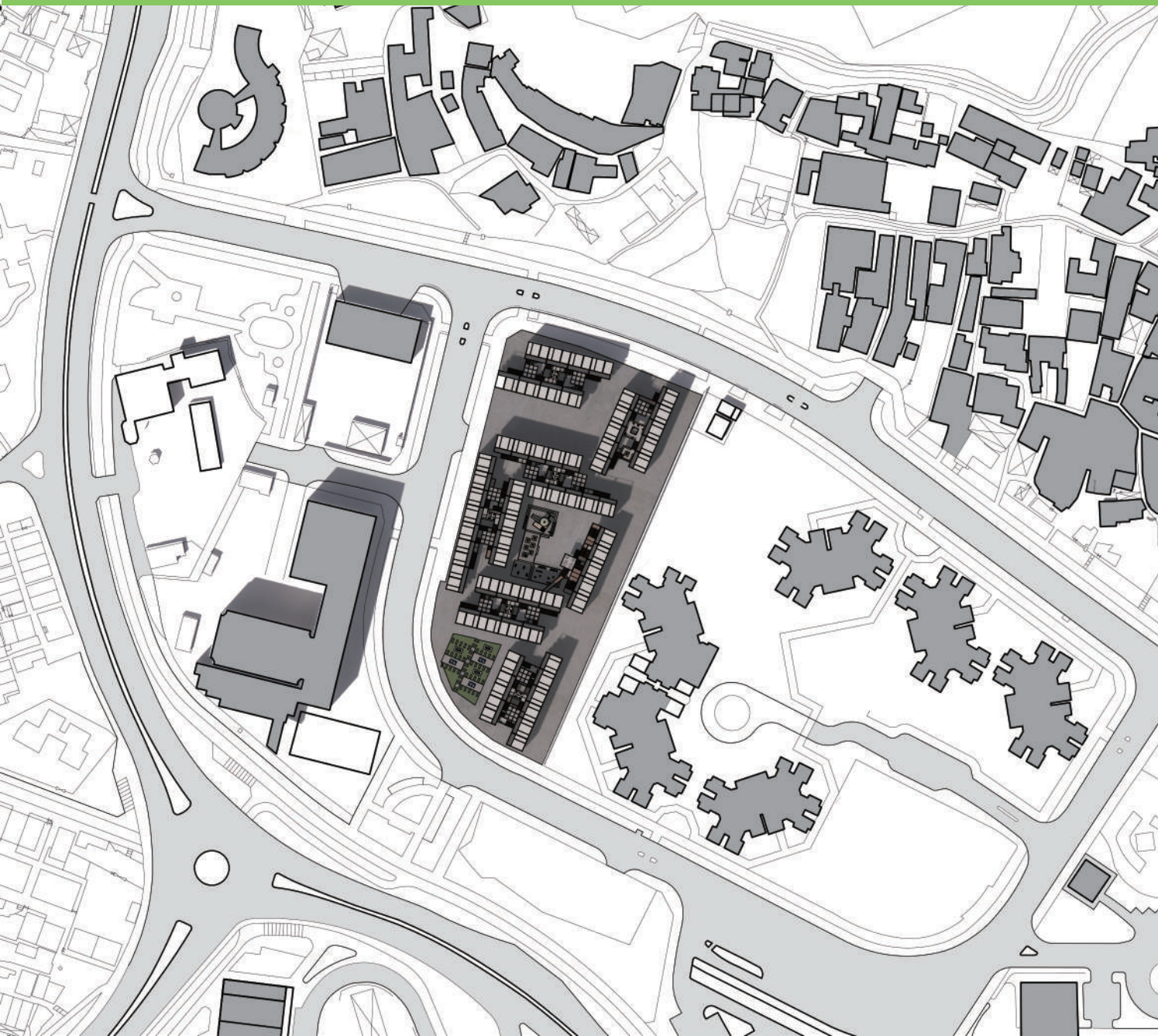


# CIC BIM Competition 2022 – Submission Poster Template



**Design Concept:**  
Our design concept is 'Linkage', Public Social Space is very important to build the relationship between neighborhood through modern housing (not just transitional housing). We guise the living distance very close but the relationship distances very far from the local community. The formerly strong neighborhood relationship disappears. By using stairs as the main theme of the project, the connections will be made, which are convenient for people to access different parts or levels. Through the concept, these benefits are hoped to bring into the community and increase human linking and interaction. Besides, public spaces on half-landings, loft design and transforming furniture in units are supportive to achieve the purpose of living area and the connection between people respectively.

**Building Form:**  
Our design is mostly surrounded by residentials, schools and parks. Since it is next to the Tsui Lai Garden, which is a 28-storey estate. However, our design are limited as 4-storey transitional housing.

**Spatial Arrangement:**  
A multi-purpose playground, such as children playground, elderly fitness area, will be placed in the courtyard that surrounding by the housing. Moreover, different kinds of platforms are designed on the half-landings of the stairs on each floors, included meditation area, reading area, seating are and chess tables. These playgrounds and platforms are hoped to help connecting the people living in the housing.

**Connectivity:**  
As the site is next to the fire station, we decide to keep the original vehicle access spot and spare the right side for the evacuation to ensure each faces of the transitional housing can allow evacuation access. Besides, actually the site is surrounded by pedestrian and roads, so we decide to break down the enclosures of the site and allow people to come and connect to the surroundings.

**BIM Uses in Design, Collaboration, Engineering, Analysis and Optimisation:** What is the defined BIM uses in carrying out design, collaboration, engineering, analysis and optimisation?

**BIM Collaboration approach:** What is the approach and BIM tools for design collaboration?

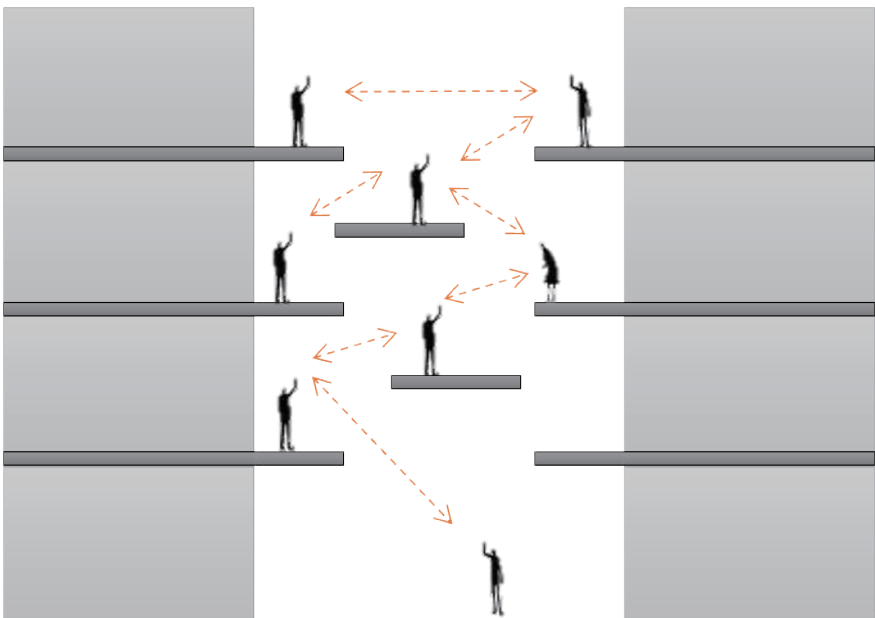
**Quality of Design:**  
By using BIM, grids and levels are set up before design, and parameters are standardize, so the model can not only be more accurate, but also avoid generating different quality of modeling when editing by different people or software. Moreover, the drawings of plans, sections and elevations can be generated easily and sync with the model, which do not need further editing. As a result, using BIM can save more time during designing and improve the quality of design.

**Sustainability:**  
As the Tsui Lai Garden is a 29-storey high-rised building next to the site, it can provide shading for the transitional housing. But on the other hand it will block the daylight. With the help of solar analysis, we try to arrange the blocks in different ways to find the better arrangement to ensure both shading and daylight to the units. Also, as the blocks are arranged in parallel, hot air will rise and air will be dragged to form a ventilation.

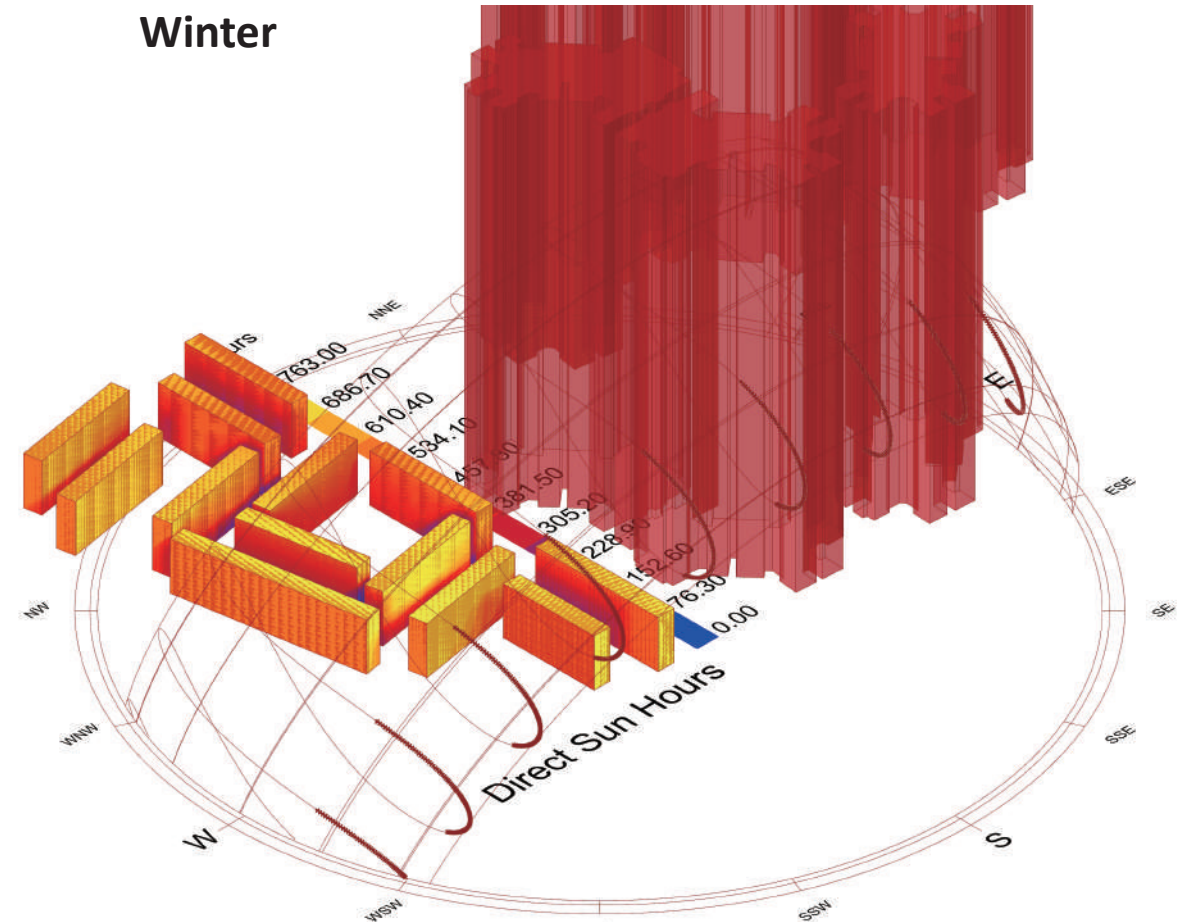
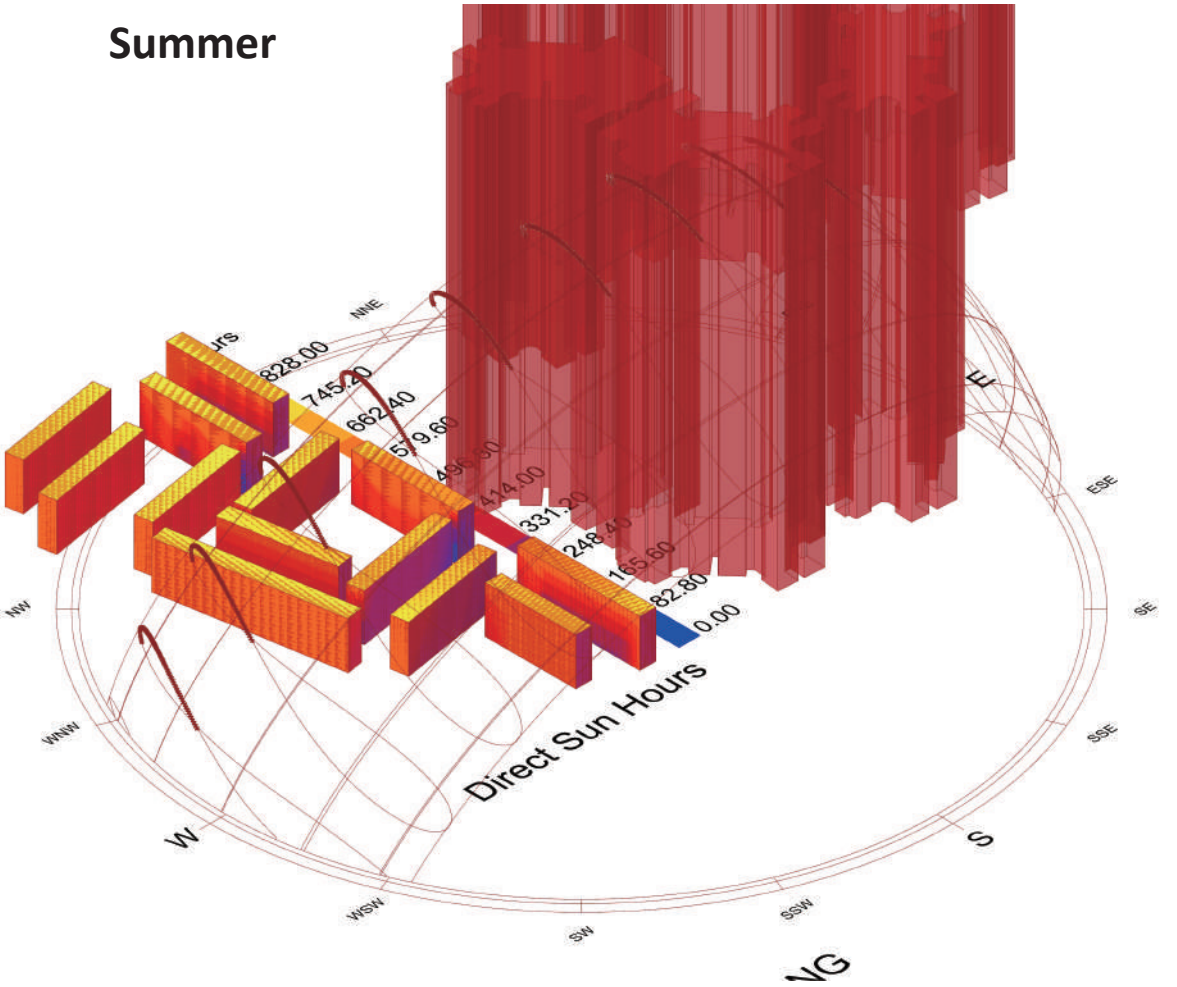
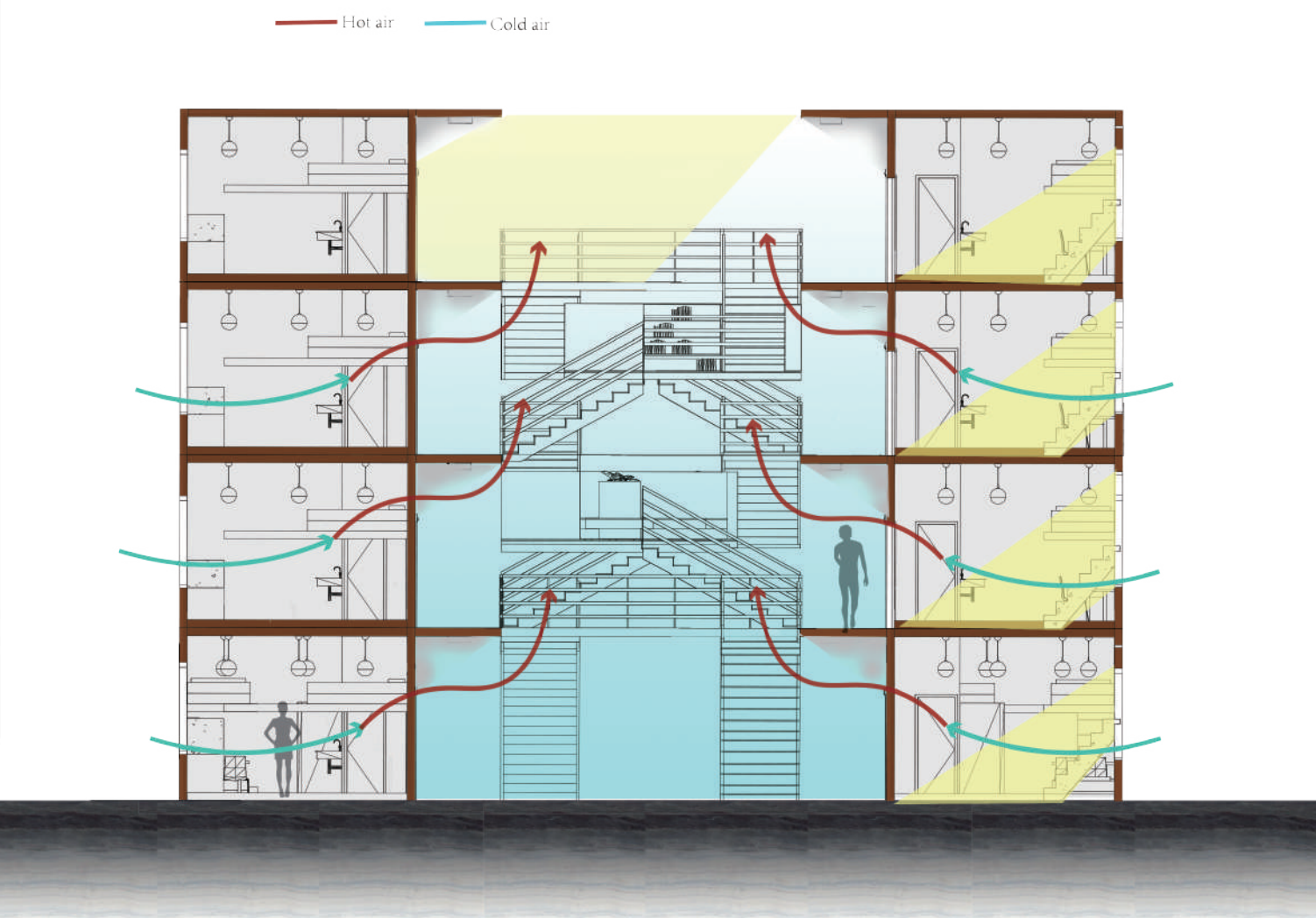
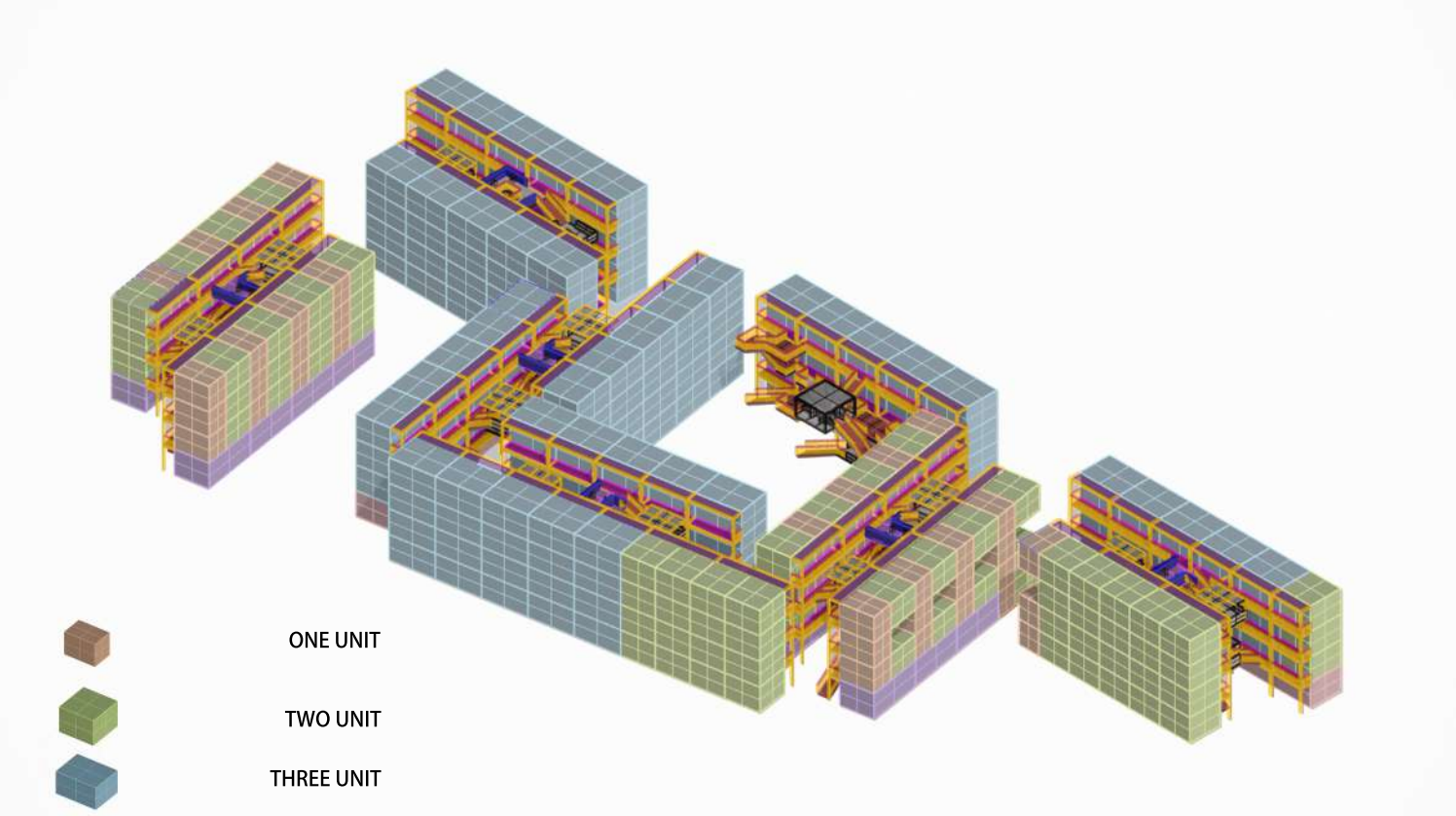
**DfMA:**  
Since the all components should be reusable and replaceable for the future, also be easy to assemble and disassemble. Therefore, we design those components, such as units, stairs, platforms rationally and systematic to optimize the structure design. We design the unit frame based on the multiply of 1.5 meters not only to fit the requirement of unit area, but also the structure.

**Constructability:**  
We decided to use I-beam to form the basic steel frame for the units. With the use of the I-beam, different kind of panels, such as walls, windows, etc., will be intalled on the frame.

**Summary:**  
BIM allows users to set up most of the categories of buiding components, such as walls, columns, and even detailed structures, to standardize the components in a project. As a result, different parties, such as designers, engineerers, can use the same modeling tool to work on different fields by the same modeling language. This can avoid some deviations after passing the works. Also, users can set up families or groups, which can edit mutiple components for one time only. Especially for the Modular Integrated Construction



**Overall View**  
The building form and arrangement are shown by this bird eye view. To ensure sunlight can pass through at least one face of every units during daytime and create different kinds of common space for the connection of neighborhoods by the arrangement.

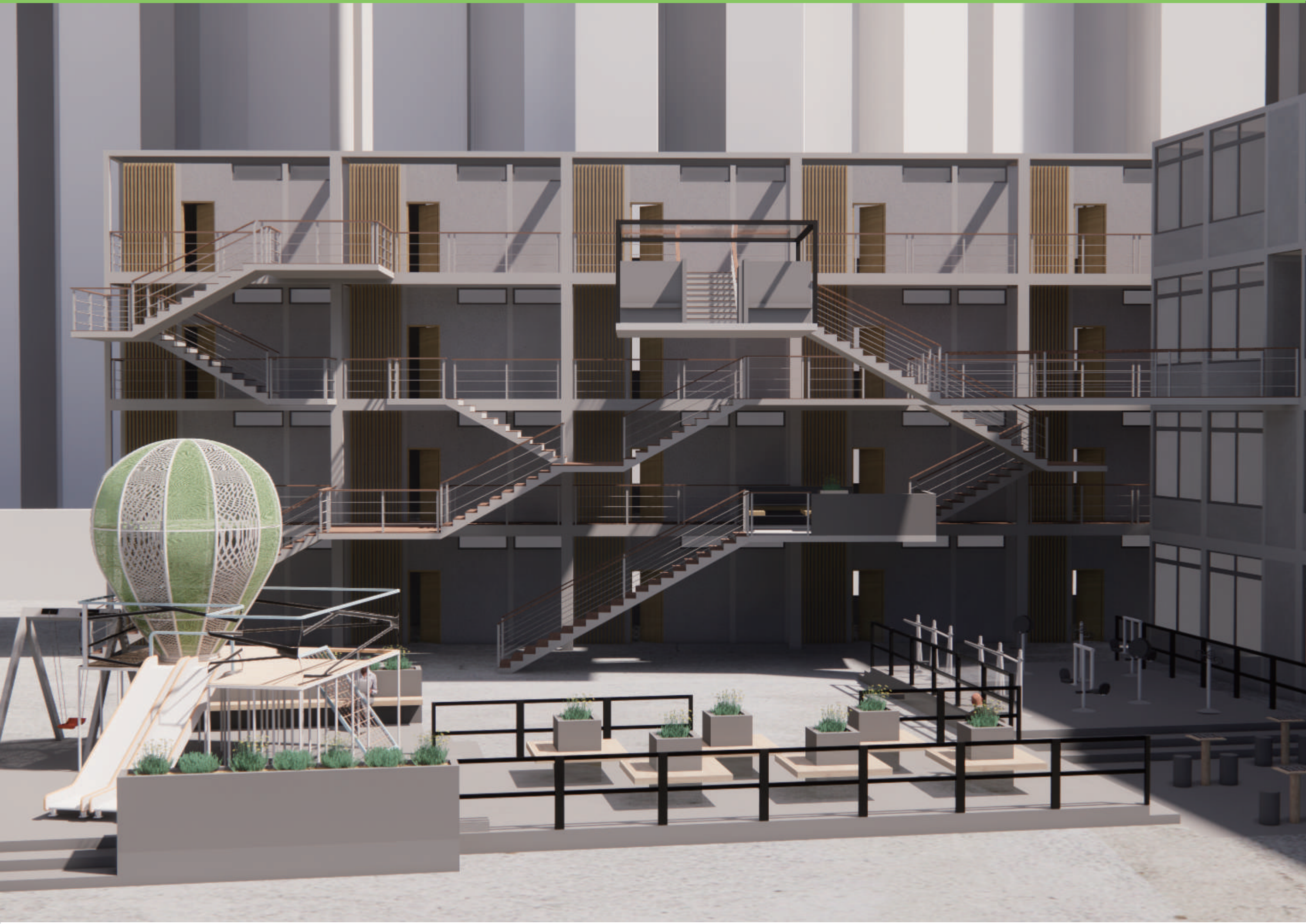
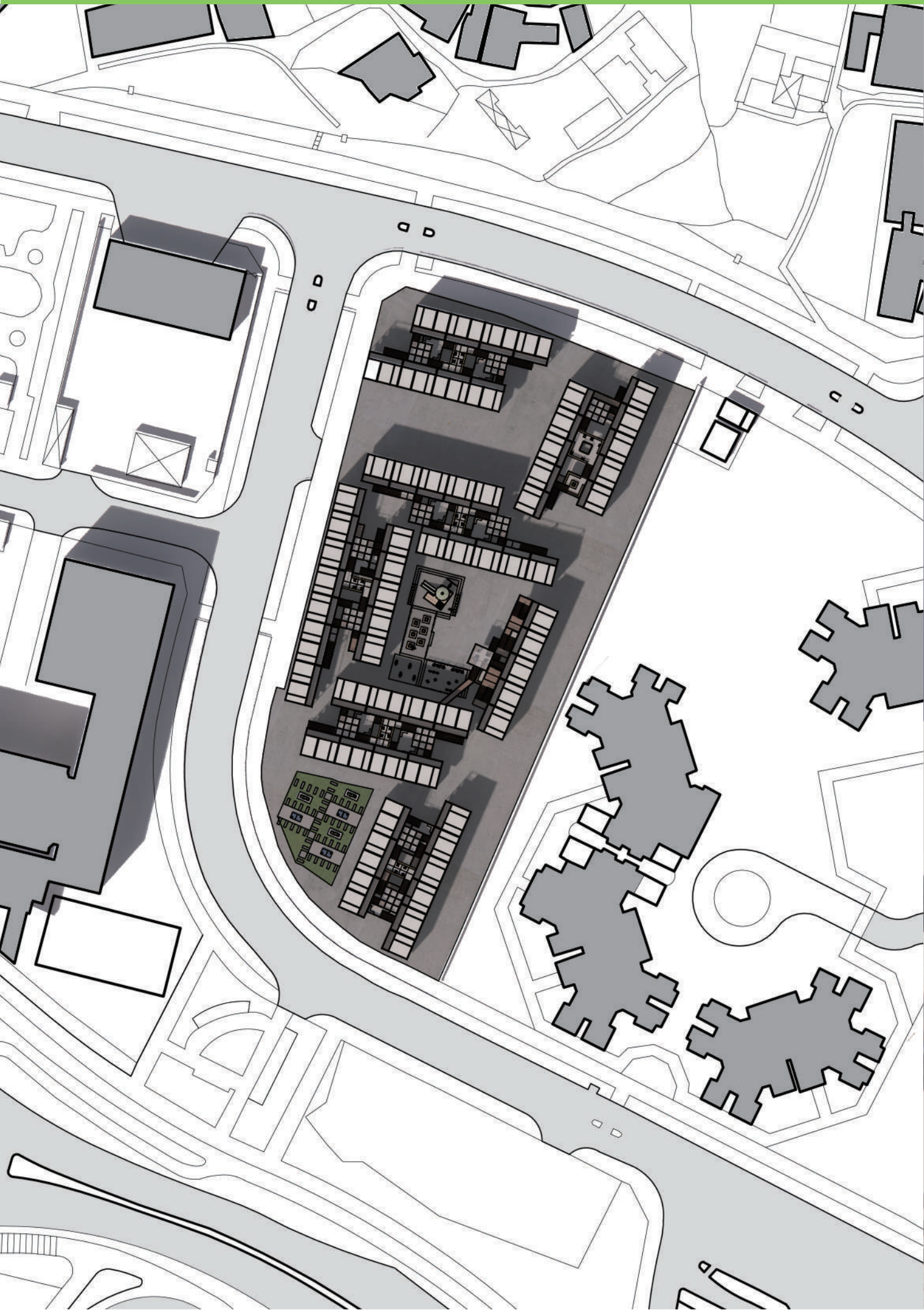


**Solar Analysis**  
With the help of solar analysis, better position for blocks and courtyard can be arranged to control the shading of space and ensure the daylight enters every unit .

**CIC BIM Competition 2022**  
**Modularity & Adaptability in Transitional Housing Design with Use of BIM**



# CIC BIM Competition 2022 – Submission Poster Template



**Courtyard Perspective View**

The perspective view of the courtyard surrounds by the building blocks. The biggest common space served as multi-purpose playgrounds for the users. Building blocks can provide shading for the users during playing inside.



**1-ppl Unit**  
D x L: 4500 x 3000 mm  
Area: 13.5 sq.m



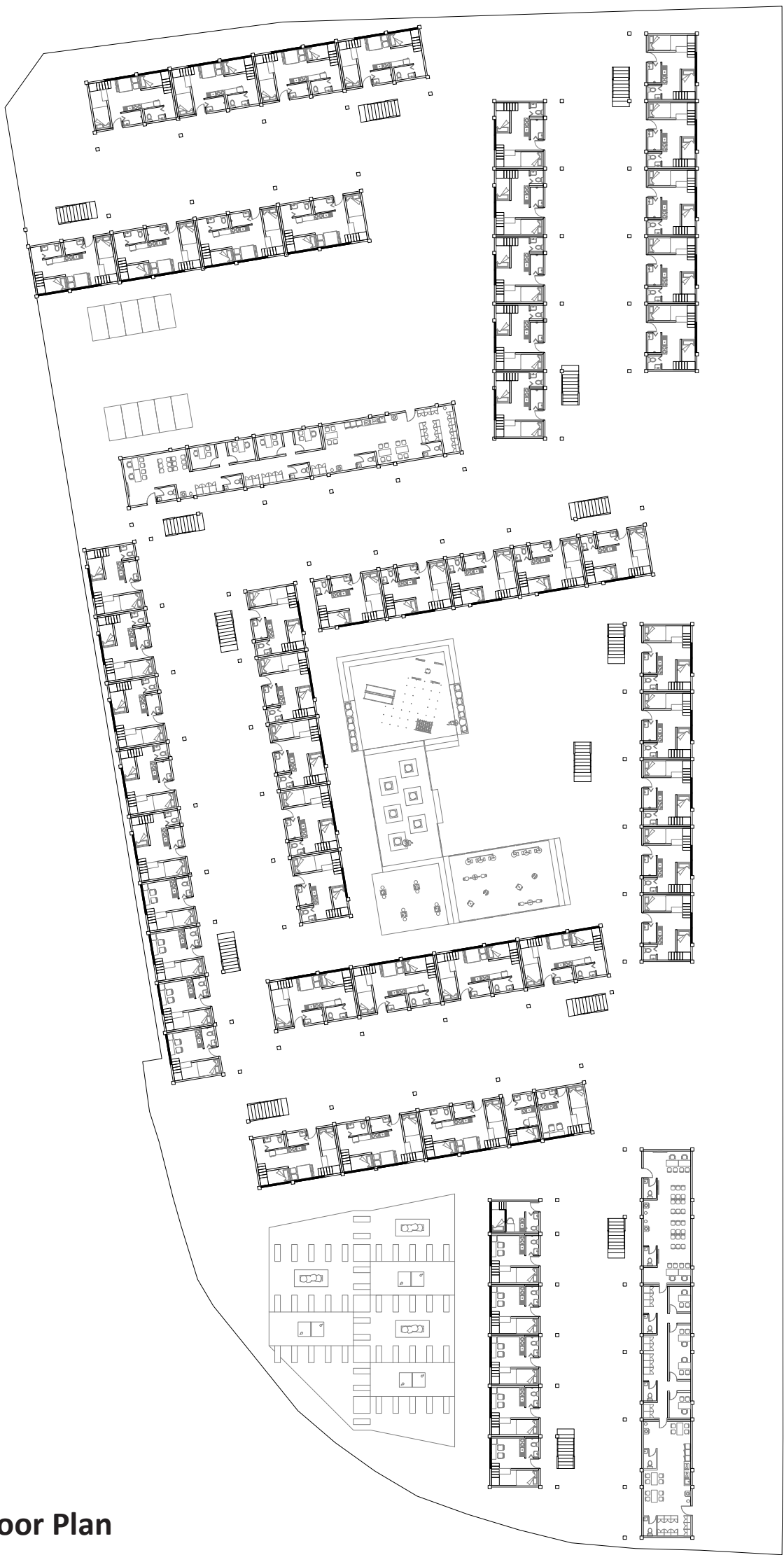
**2-ppl Unit**  
D x L: 4500 x 4500 mm  
Area: 20.75 sq.m



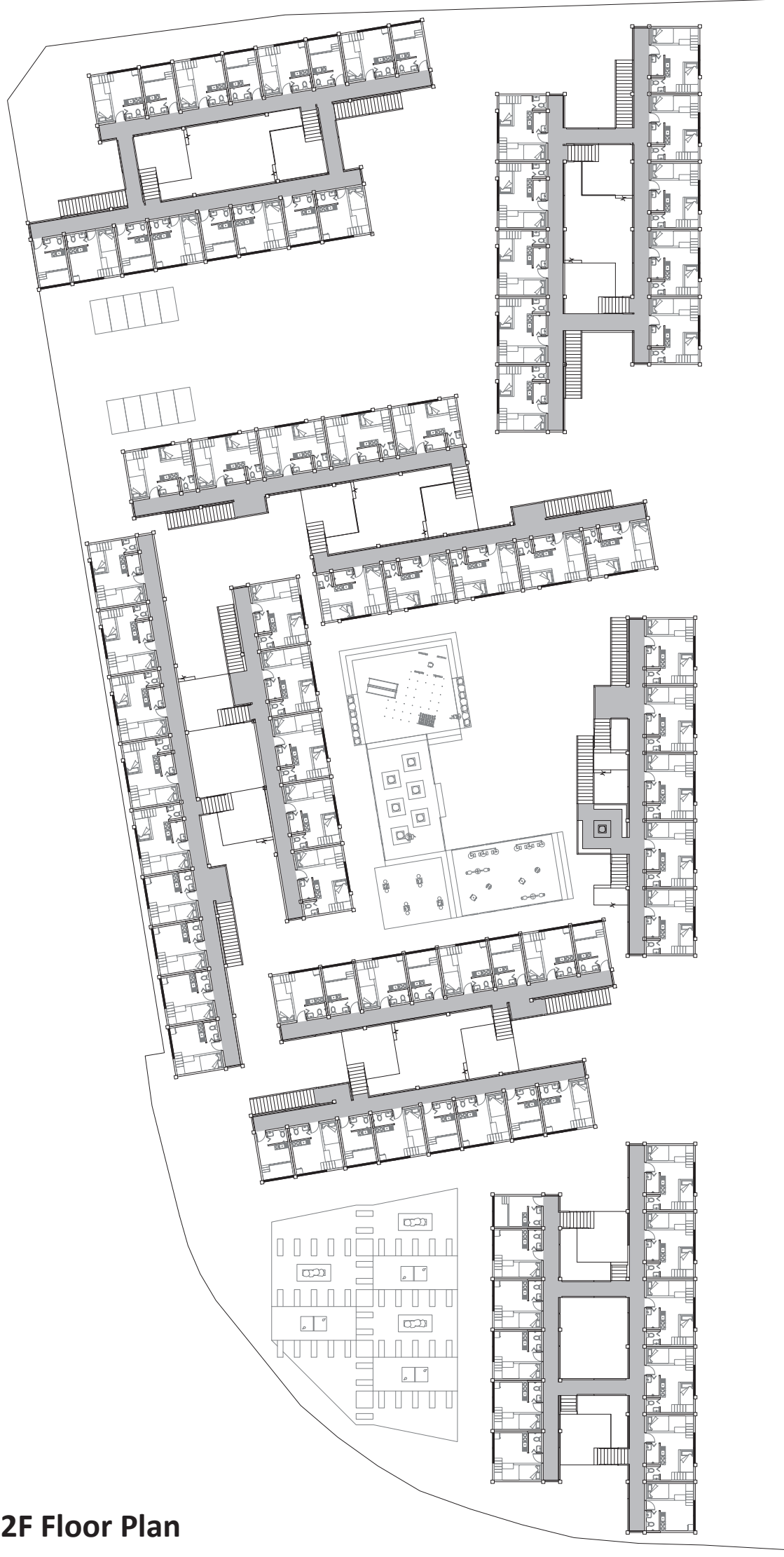
**3-ppl Unit**  
D x L: 4500 x 6000 mm  
Area: 27 sq.m



**4/5-ppl Unit**  
D x L: 4500 x 7500 mm  
Area: 33.75 sq.m



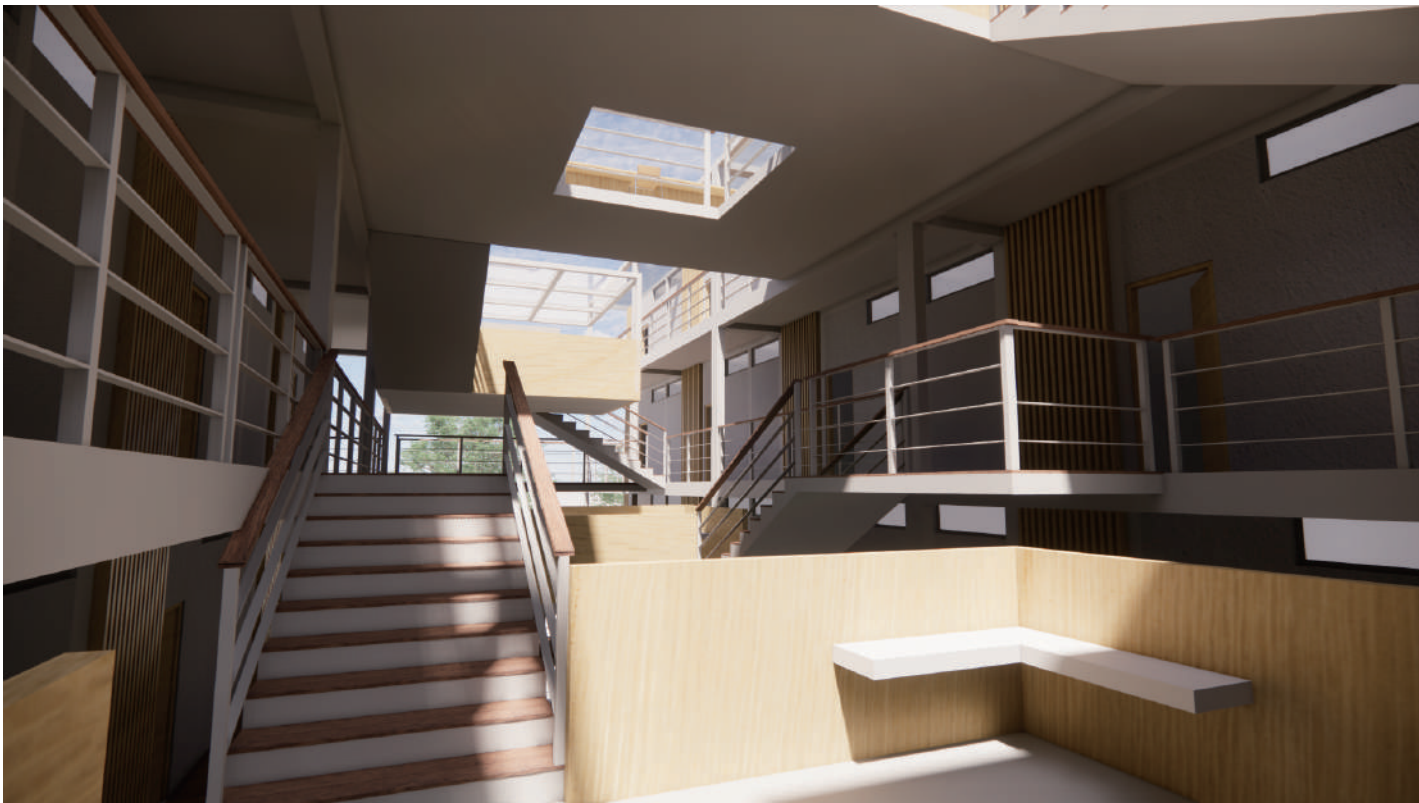
**GF Floor Plan**



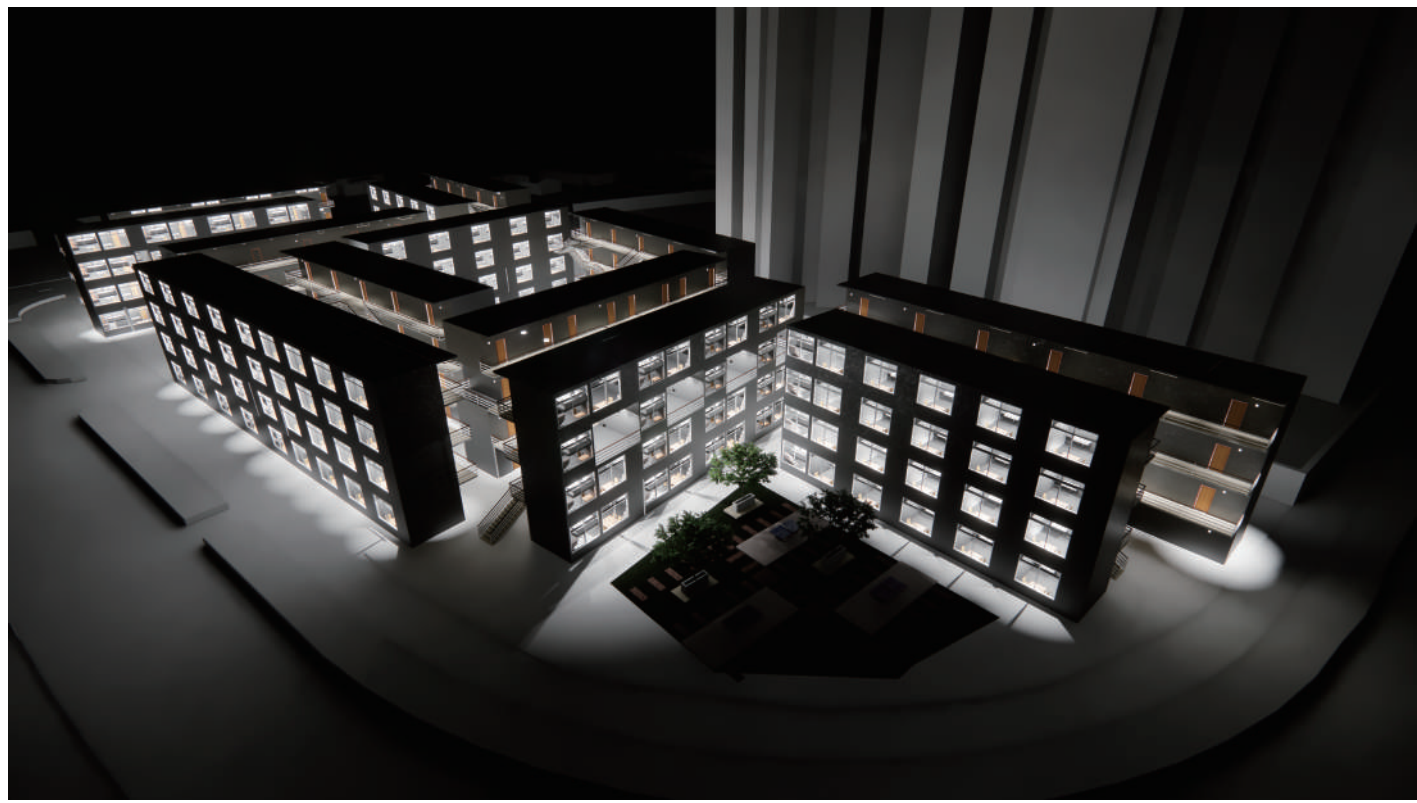
**2F Floor Plan**



**Experience of Units**



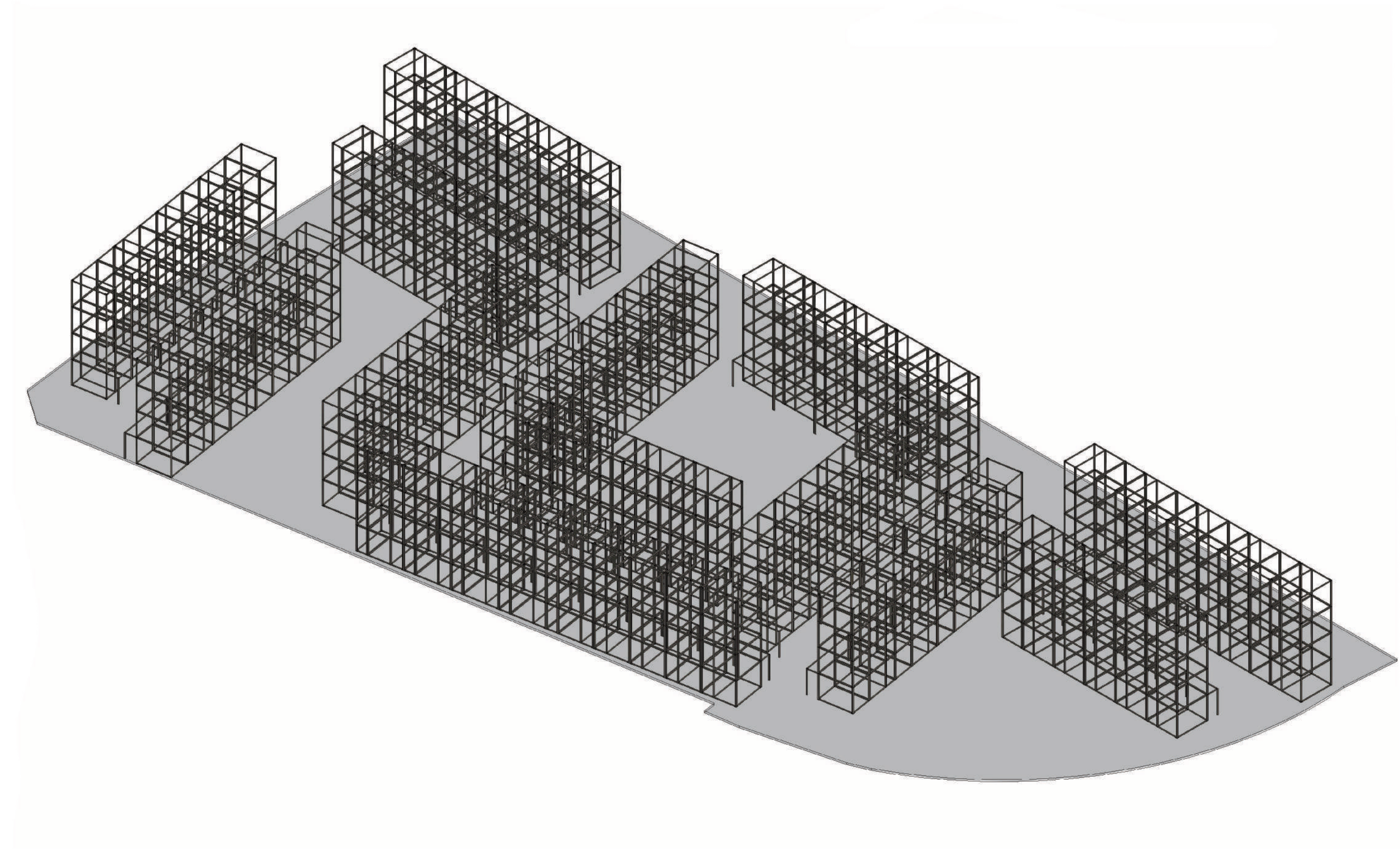
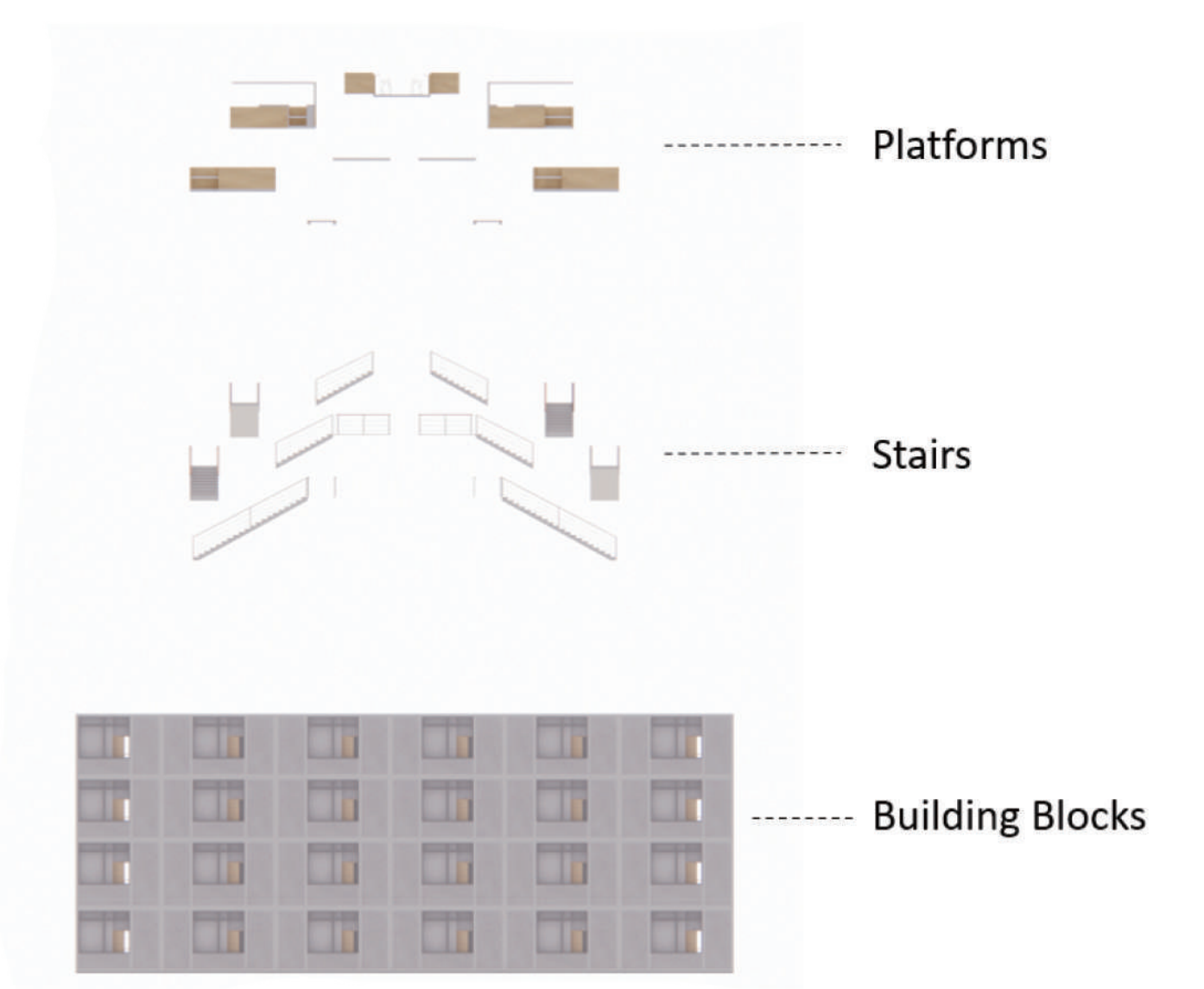
**Experience of Seating Area Platform**



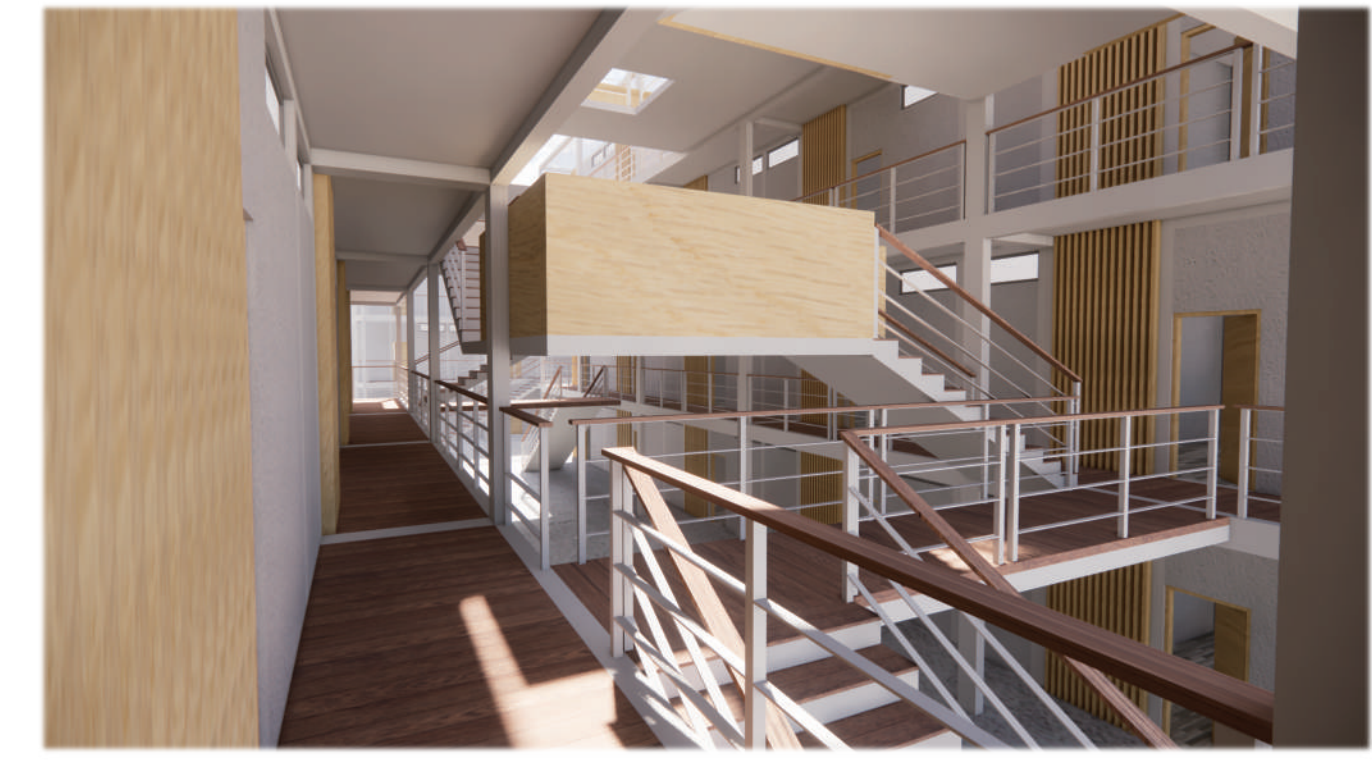
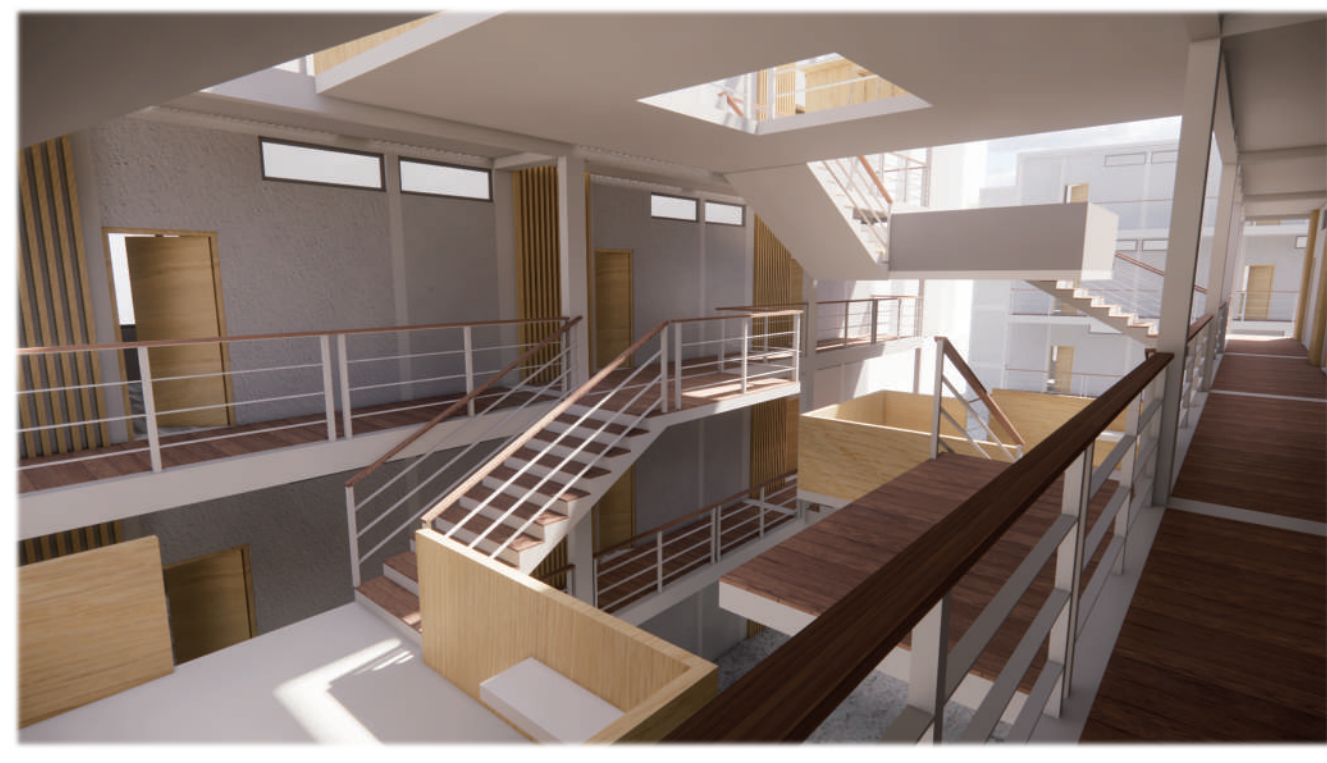
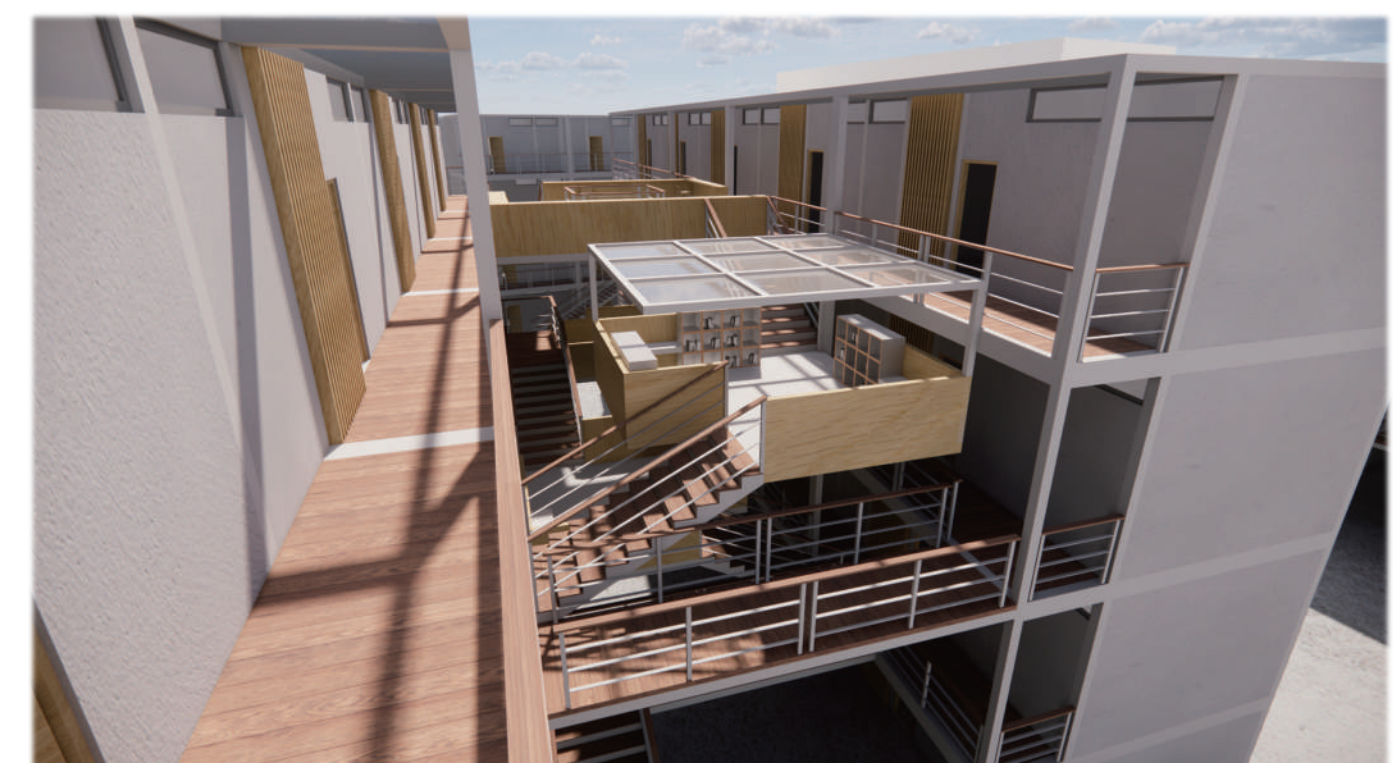
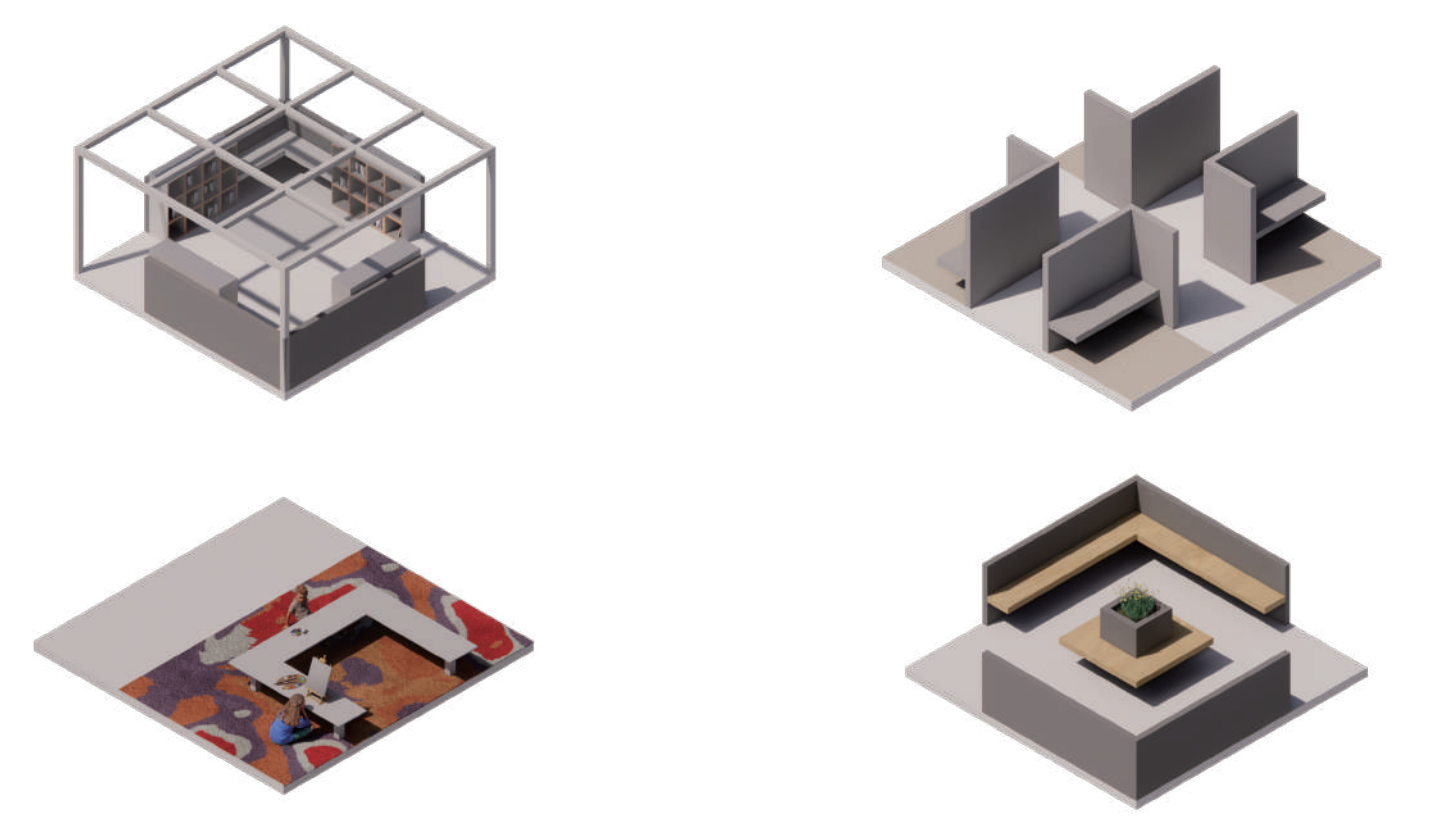
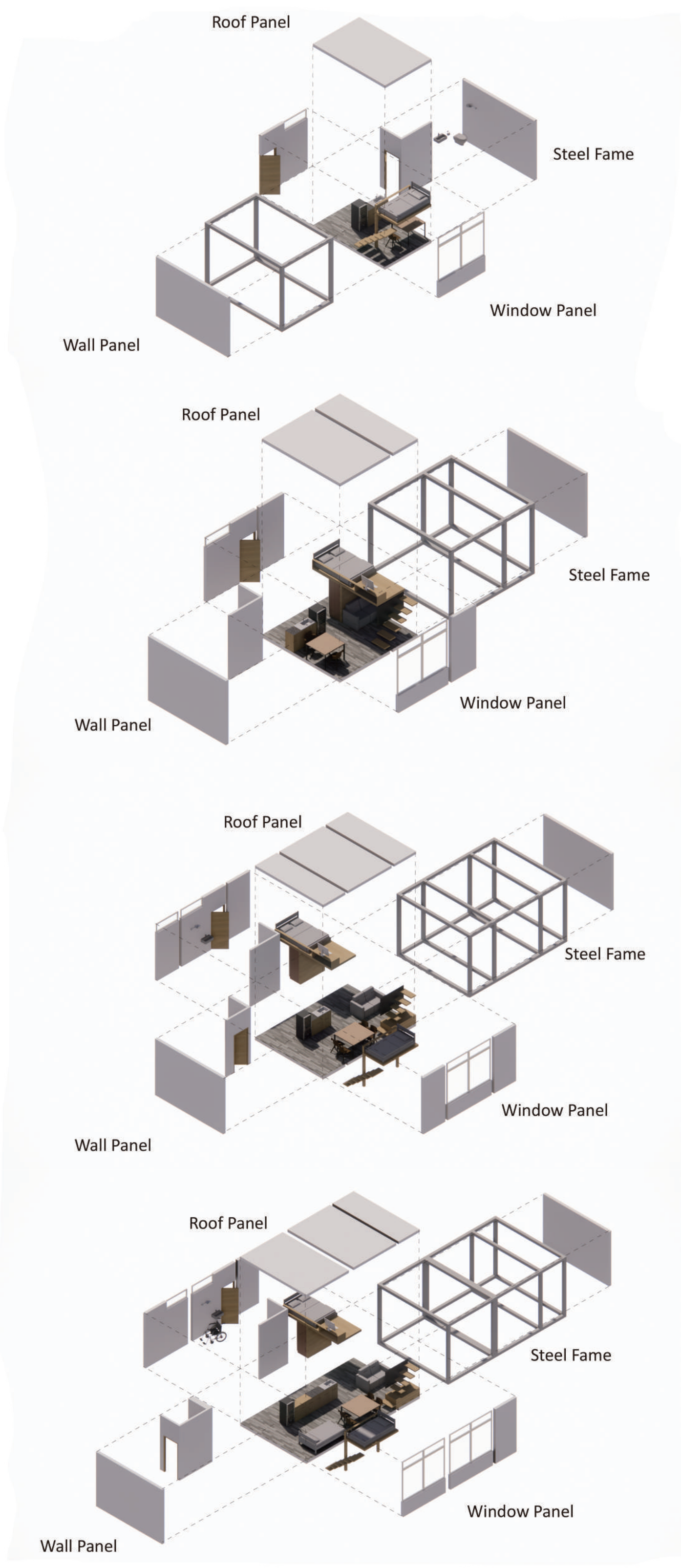
**Overall Bird Eye View (Night)**

**CIC BIM Competition 2022**  
**Modularity & Adaptability in Transitional**  
**Housing Design with Use of BIM**

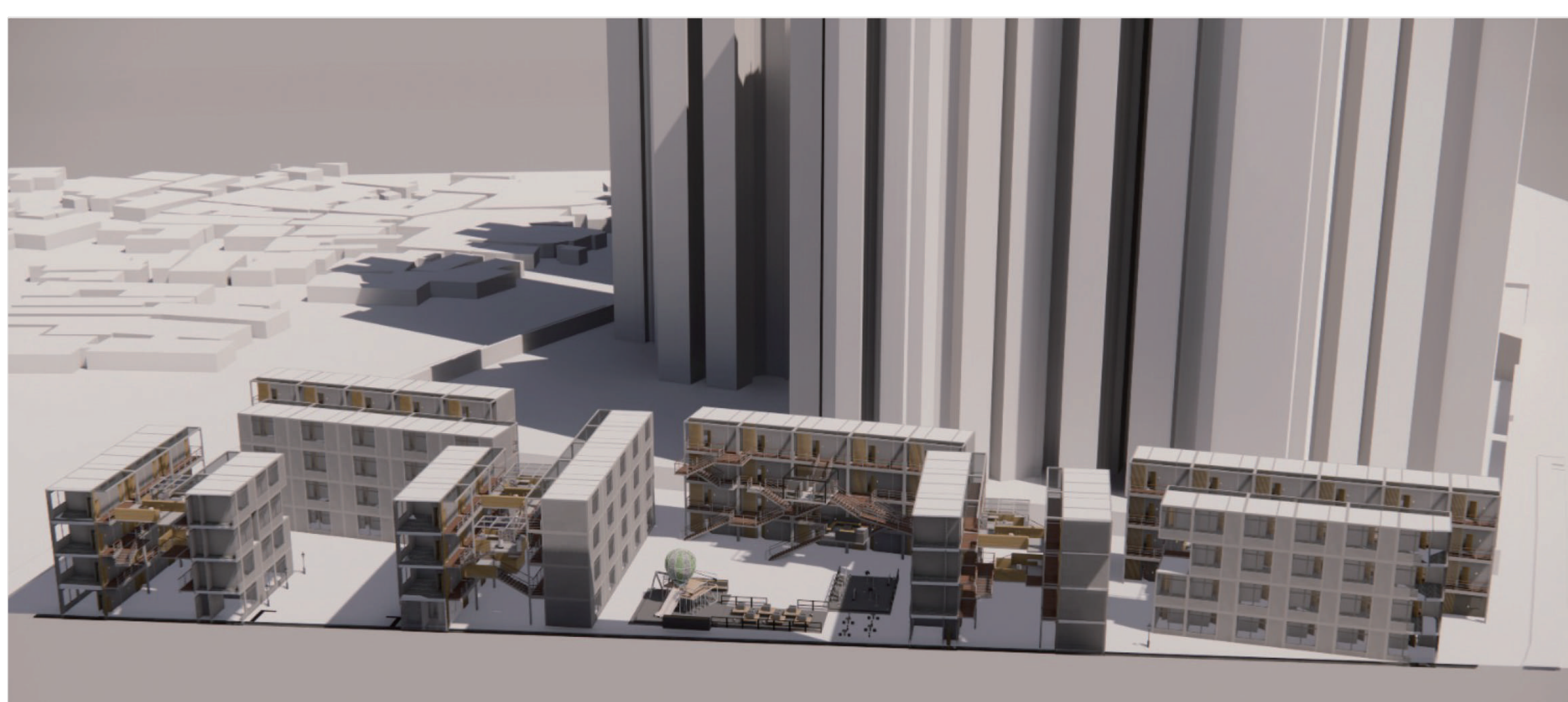




**Overall Perspective View**  
The view that shows the steel frames of different units assemble together.

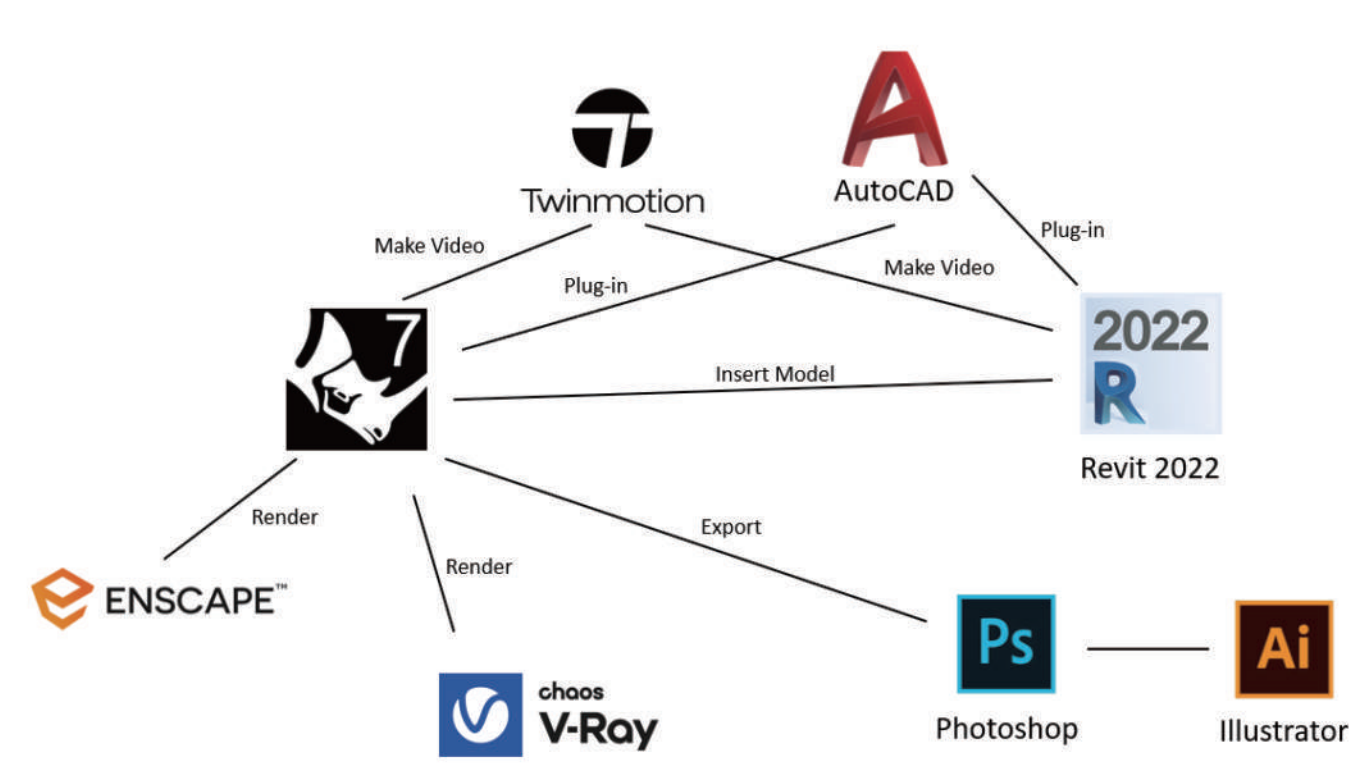


**Experience of Stairs and Corridor**



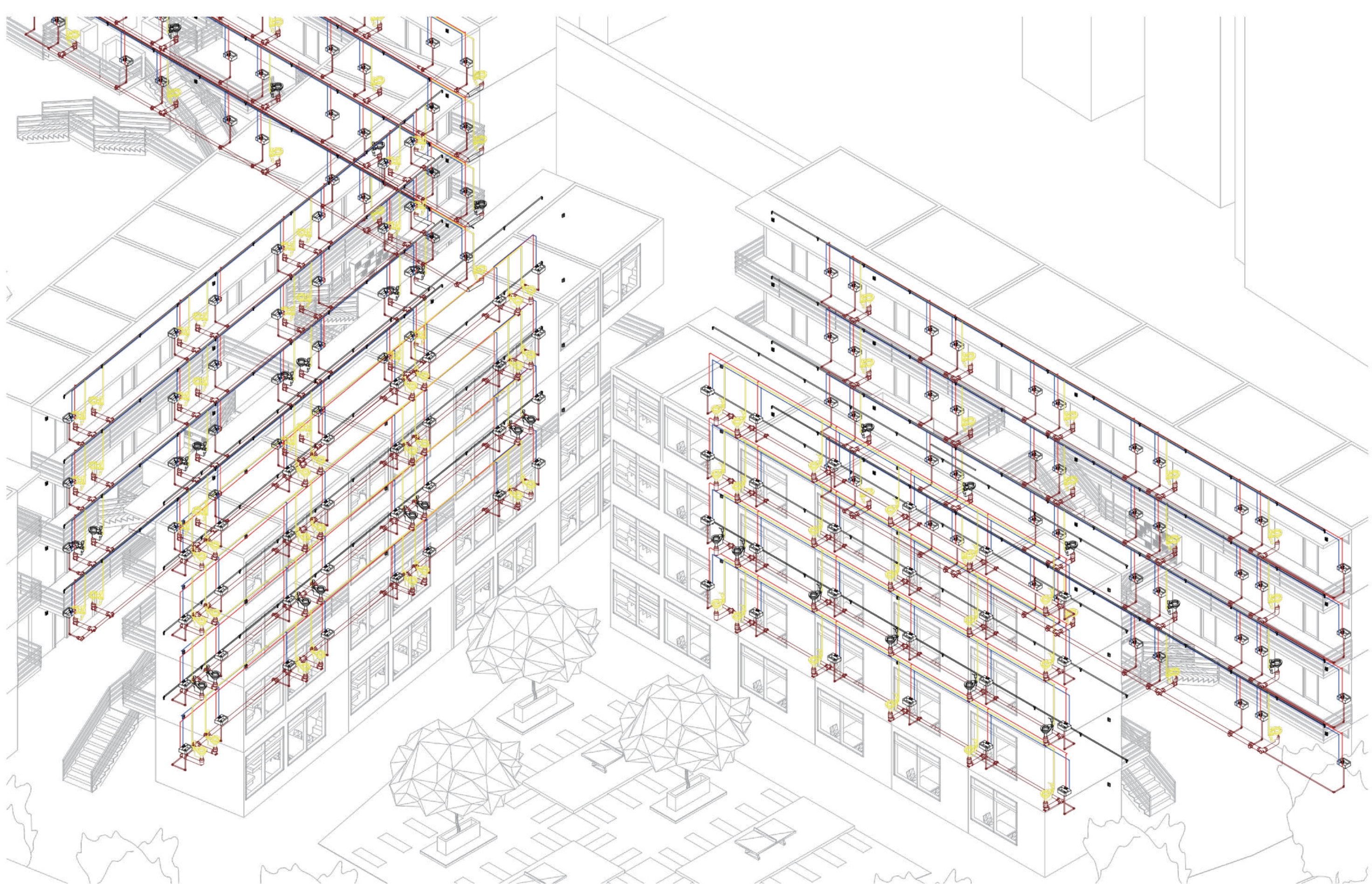
**Sectional Perspective**





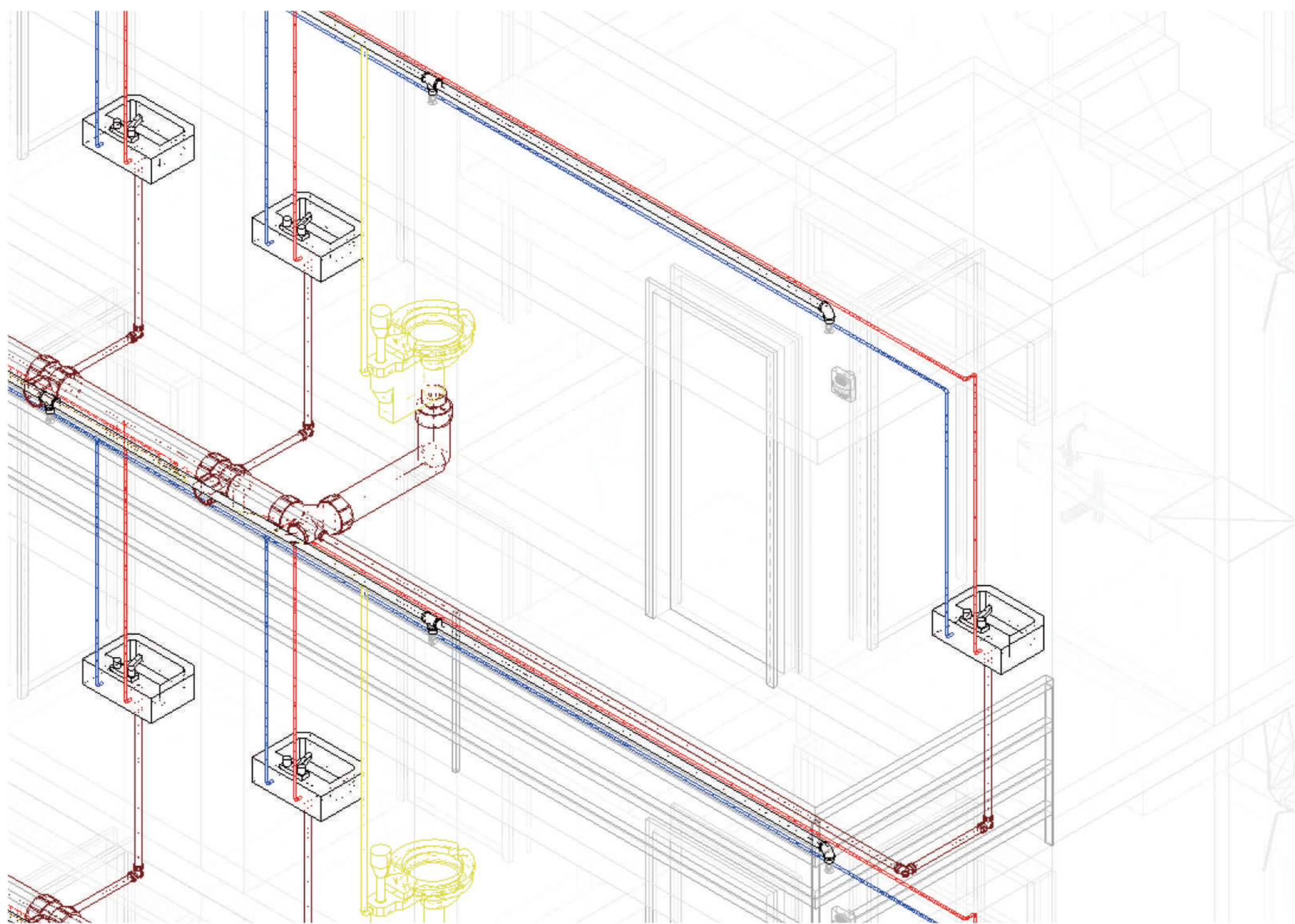
**Design Coordination**

By using BIM to build the model and basic render. Then, generate plans, section, elevation. and Rhino to do al render. Twinmotion top make the experience movie

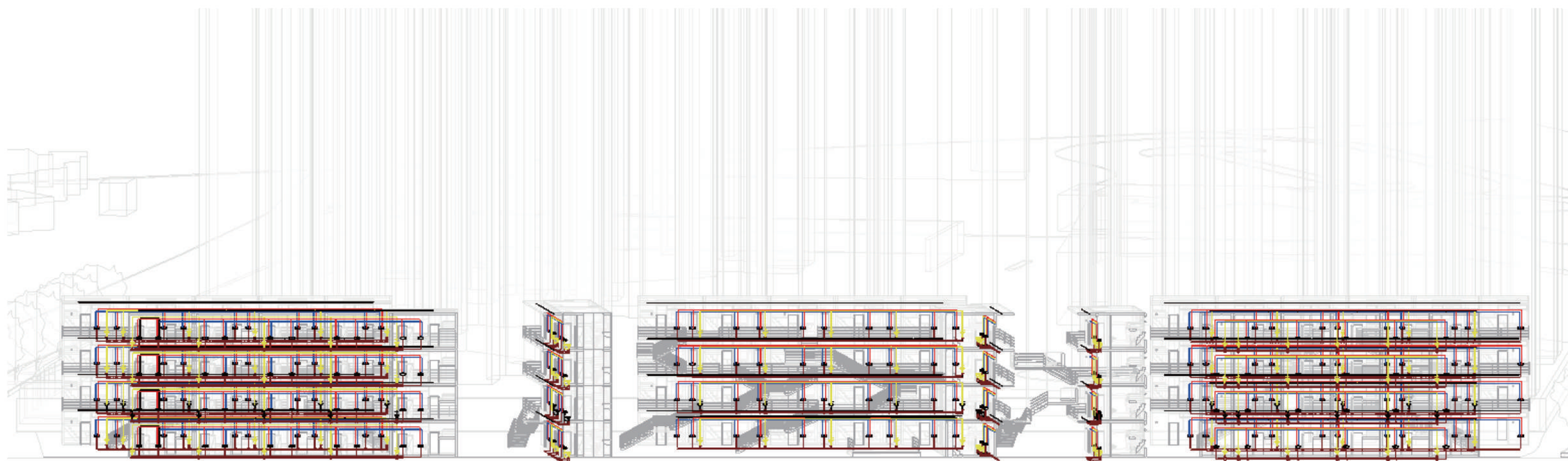


**Partial Perspective View**

Perspective of two pairs of block with water supply and drainage system.



Perspective View of Water and Drainage System in Units



Overall Perspective View of Water and Drainage System