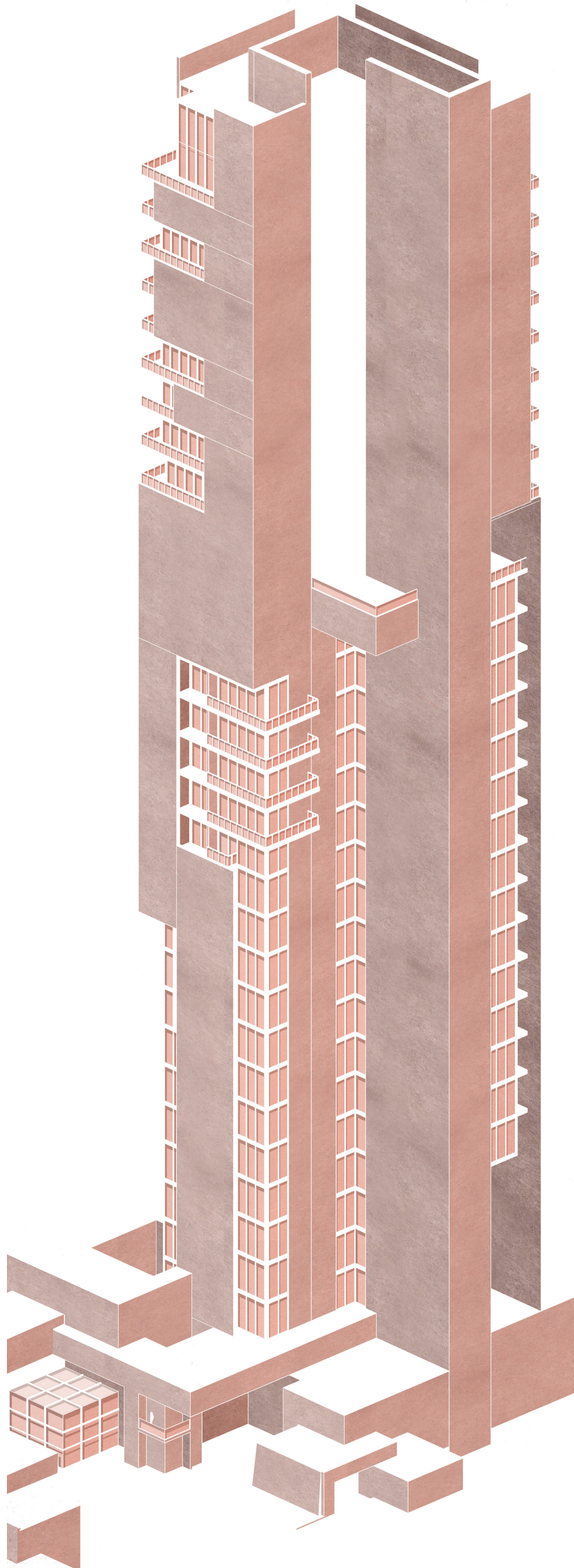
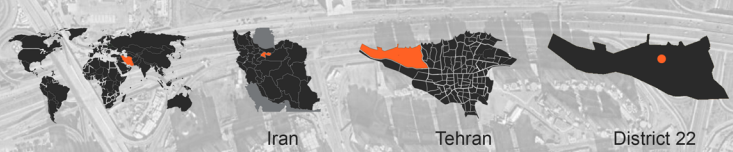


CHITGAR TOWER

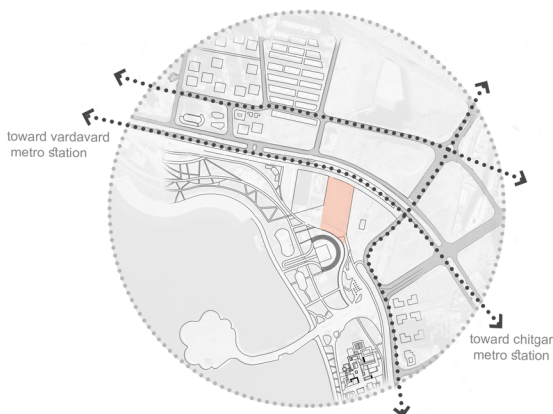
Mohsen Masoudnia





District 22 of Tehran

District 22 of Tehran is located on the north west of Tehran and in the south of catchment Kan and Vardavij river. This region is limited to Alborz mountains from north, Kan river from east, Tehran-Karaj expressway from south and Vardavard man made forest from west. The district is also contiguous to district 5 and 21 of Tehran therefore the borders of district 22 has been broadened to the southern hillside of Alborz mountain with the height of 1800m. The area of this district is nearly 54000 hectares and the length and width of the region is 26 to 17 kilometer, respectively. This region with 6000 hectares of urban area, 30000 hectares of boarders. This area with its special environmental and regional specifications, has been known as a potential spot for tourism and has a bright future from this point of view. Back in the time the development of this region is referred to 1349. In the other word thus district is suffering from dense not standard architecture urban planning due to its environmental and land structure potential on one hand and its huge area of un-manipulation on the other hand. therefore the region has been always of circle of attention of experts in this field. comparing this district with other 21 districts of Tehran (70750 hectares) reveals that 8.4% of the whole area belongs to this region and demonstrates its importance of development of the city (Tehran) specially the western part of it.



Main access

These are the main access which connect two main subway stations west (vardavard station) to the southern east (chitgar station). also they connect to the main highway (hemmat highway) which reach to the Tehran city and karaj city.



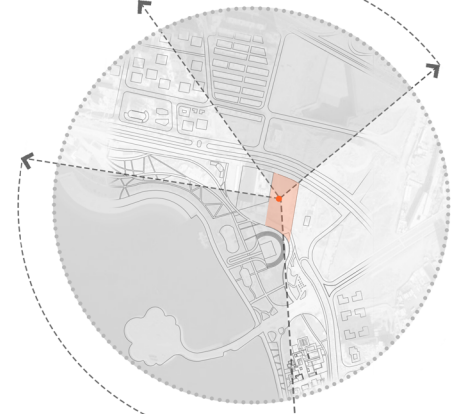
Green area

The artificial Chitgar lake surrounded by a massive green margin which works as a big green public space. our intended site reach this green belt from southern part, this green belt already has been designed. I tried to somehow connect the landscape of our project to this existed green margin. this green belt has a great pedestrian and bike road which pass by our siteplan.



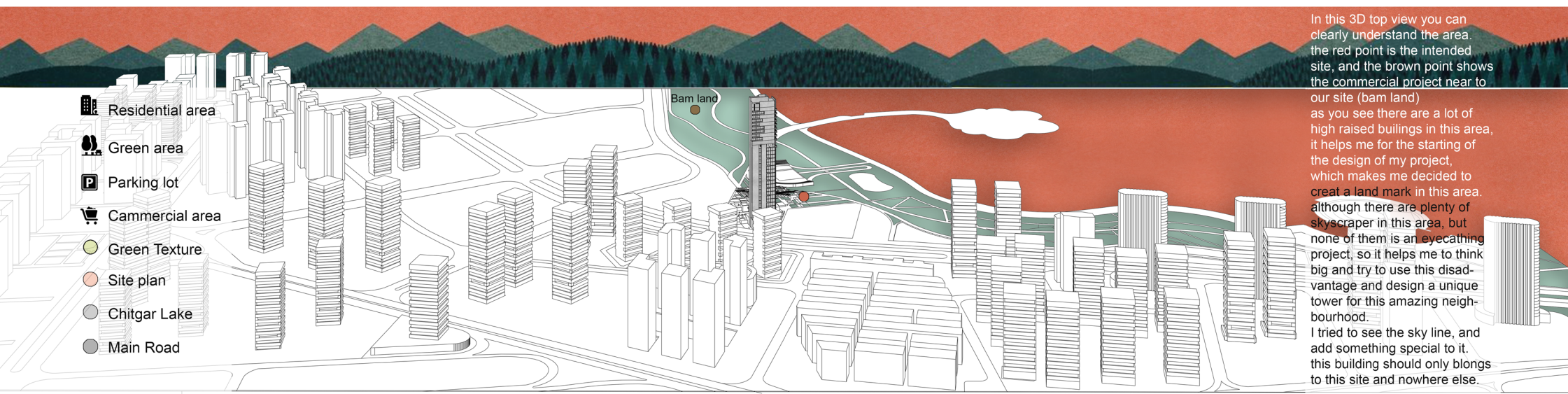
Functions

22nd district of Tehran is one of the areas which high raised buildings are allowed to be built. so there are plenty of residential towers in this neighbourhood which means there are a lot of people live here, according to this there are so many shops and facilities in this area, one of the most famous commercial project (Bamland) is close to our siteplan. which also is the most interesting project of this area.



Views

our site plan has great views from north and south. it faces to the mountain from the north part. and also faces to the lake and green area from the south part, from the east and west it faces to the residential towers and other buildings which makes it somehow interesting. we have both urban views and views from the nature which is a very interesting point of this site area.



In this 3D top view you can clearly understand the area. the red point is the intended site, and the brown point shows the commercial project near to our site (Bamland) as you see there are a lot of high raised buildings in this area, it helps me for the starting of the design of my project, which makes me decided to create a landmark in this area. although there are plenty of skyscrapers in this area, but none of them is an eye-catching project, so it helps me to think big and try to use this disadvantage and design a unique tower for this amazing neighbourhood. I tried to see the sky line, and add something special to it. this building should only belong to this site and nowhere else.

- Residential area
- Green area
- Parking lot
- Commercial area
- Green Texture
- Site plan
- Chitgar Lake
- Main Road



site plan



Bam land

Chitgar forest park
Chitgar park with an area of nearly 950 hectares has been the centre of attraction for Tehran residents from past. The park is located between Tehran and Karaj and the around town. The park is limited to Tehran-Karaj highway and underground line from south, under construction Hakim highway from north, Paykan Shah and Botanical Garden from west. Chitgar forest park and the lake are predicted to be the biggest promenades on the city.

Important and influential features of the site

- Unique accessibility to urban and suburb areas
- Spectacular view and landscape with the view of mountains in the north direction
- Close to Chitgar forest park and "Shohadaye Khali Fars" lake, the two biggest promenades of the city
- Close to "Chahar Bagh" Boulevard commercial center
- Close to points and places which are accounted as attraction for the majority of the population (Taat Mall, Hezar o Yek Shah, Mega Mall)
- Close to bus stations, terminals and airport
- Close to the biggest sport complex of the country (Azadi stadium)
- Having the advantage of the seasonal winds from west to east, which counts for a factor to smoothen the air and lessen the air pollution.
- Close to the industrial importance sites and plants (car manufacturing companies and other industrial and manufacturers)

Shohadaye Khali Fars lake
Due to the unique and exceptional location of the site, the project is profited from all advantages of the area around, such as:

- Easy accessibility to the urban and suburb areas
- Mountains and highland areas on the north with spectacular view
- Having the advantage of seasonal winds for decreasing the level of the air pollution

As well as all the mentioned items, the "Shohadaye Khali Fars" lake which is among the best top ten projects in year 2015 and can rise the ecological potential for tourism and counts as one of the best attractions of the area, is on the short distance from the project.

VIEWS AND LANDSCAPES

360-degree view
Southern parts of Alborz Mountains
"Shohadaye Khali Fars" lake
Chitgar forest park
Southern part of Tehran
West to East compass

LOCATION IN TEHRAN

Tehran
District 22
Region 4
Close to Shohadaye Khali Fars Lake
Close to Chaharbagh Axis

FEATURES

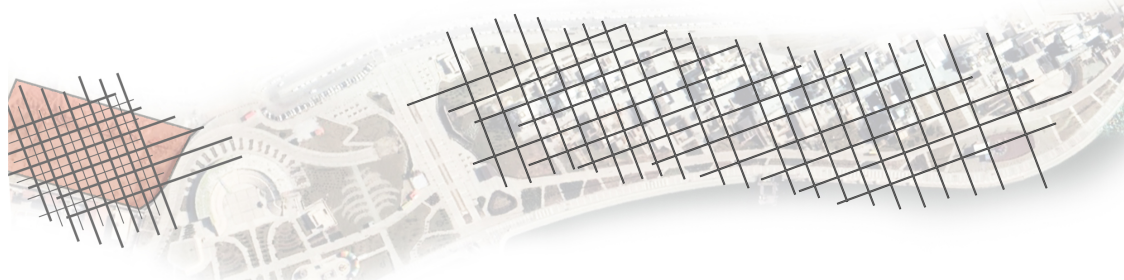
Close to the lake
Chitgar forest park view
Located in the "Chaharbagh" axis
360 degree landscape and view
The one and only sky scraper in the southern area of "Chahar bagh"
Accessibility to the most important highways



Concept Idea

After analysing and studying about the main location, the next step was trying to find eye catching and interesting buildings near the site plan such as residential, commercial and ... buildings, (the main purpose of finding these buildings was to find a clue for starting the design, since this area is a quite new zone of Tehran and we do not have too many volumes and accesses around the site plan)

so after doing some researches and visiting the area, I found a quite interesting recreation commercial complex along the lake which was close to the site plan as well, and it is a quite big project which became a landmark for this area, so we decided to study more about this project and try to give some access to it and continue them to our site plan, in this way we could find the first idea of main boundary of our project, the main design idea of Bam Land project was cubic design, so we extract a grid pattern of the base of the project and use it as our base design, the grid idea helped us also for designing the open space around our building, combining the grid pattern and the curve line of the lake was an interesting idea along the lake,



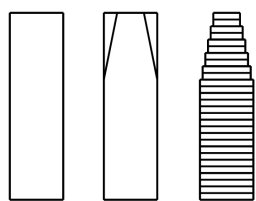
Tower Position:

At this point I tried to find the right position for the main tower, so I decided to choose this orange spot as the location of main tower, first of all because I wanted to consider it in the closest part to the main street, since I did not want to let the vehicle get inside the site plan, the second reason is that I want to combine the main open space with the existed park and make an integrated area as public area of the project, in this way I also could consider the commercial buildings in the middle part which works with the tower and public space parts at the same time.



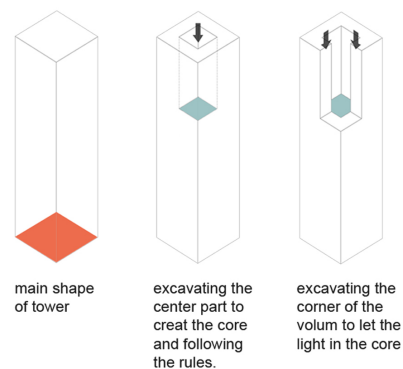
Following the rules:

The idea of the volume of the main tower is according to the rules that we have in Iran for high-rised building (skyscrapers) which is, if we want to build more than 25 floors we should reduce the area of each following floors in a progressive way which makes the volume like pyramid in the top.



so as I didn't want to have this volume on the top, and wanted to follow the rules as well, so I decided to do the reverse idea which is excavating the volume from inside and give it a function.

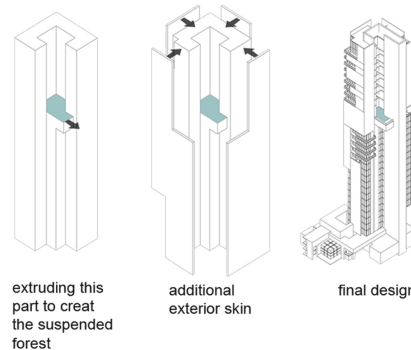
the Green core (opposite of bosco verticale that we have here in Milan), so in this way we have a tower with a green core, and we also followed the constructional rules as well.



main shape of tower

excavating the center part to create the core and following the rules.

excavating the corner of the volume to let the light in the core



extruding this part to create the suspended forest

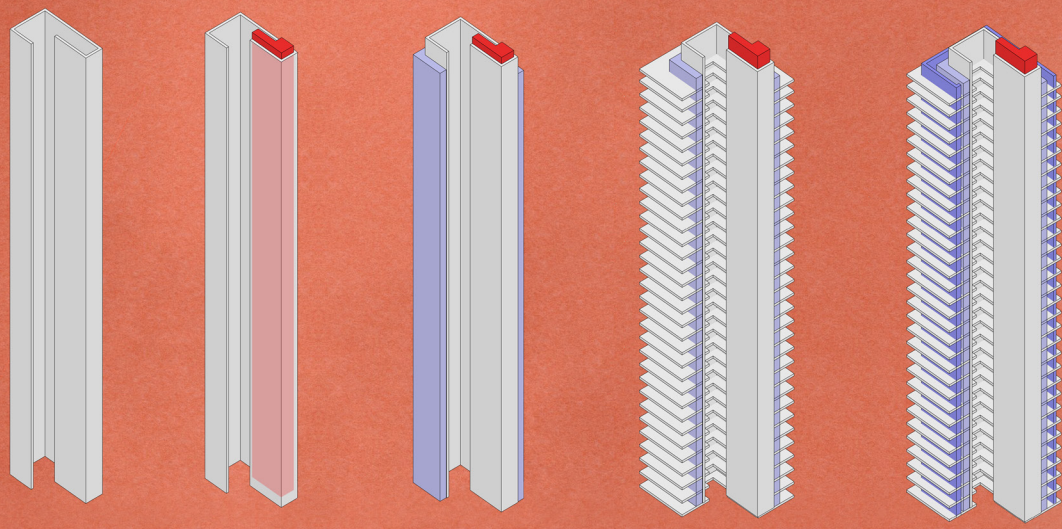
additional exterior skin

final design

Master Plan

scale: 1/500





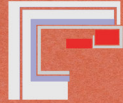
concrete core

vertical access

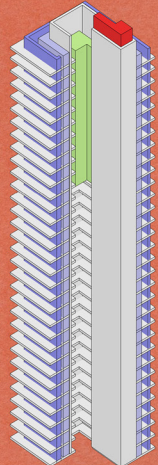
Wet ring

Floors

Transparent skin

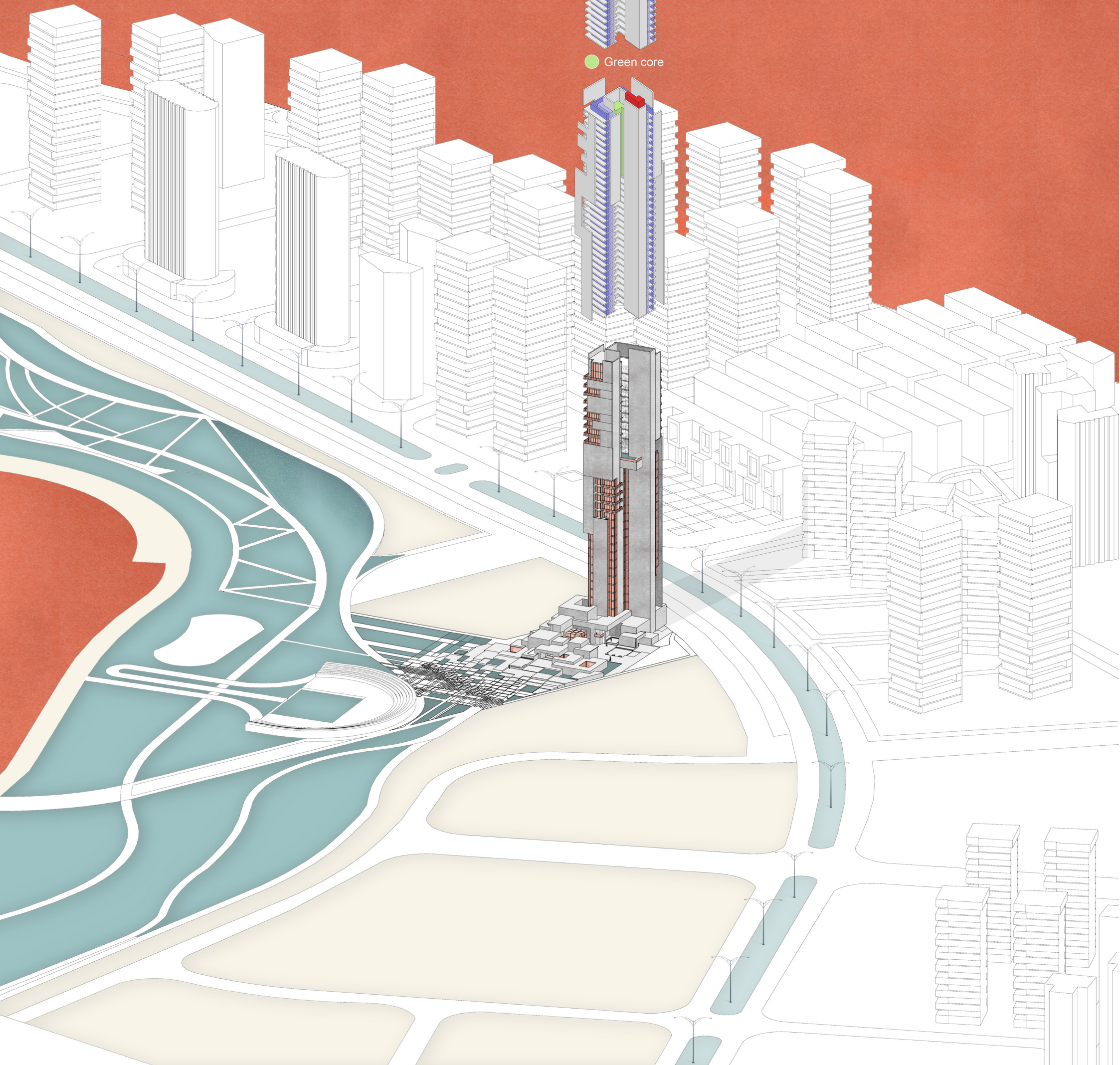
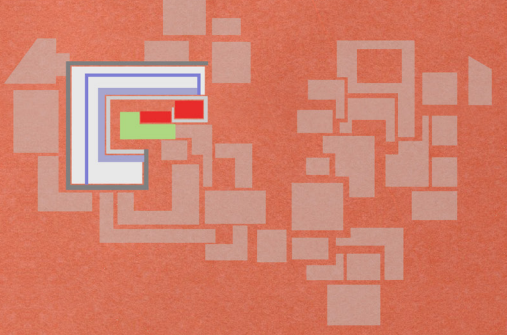


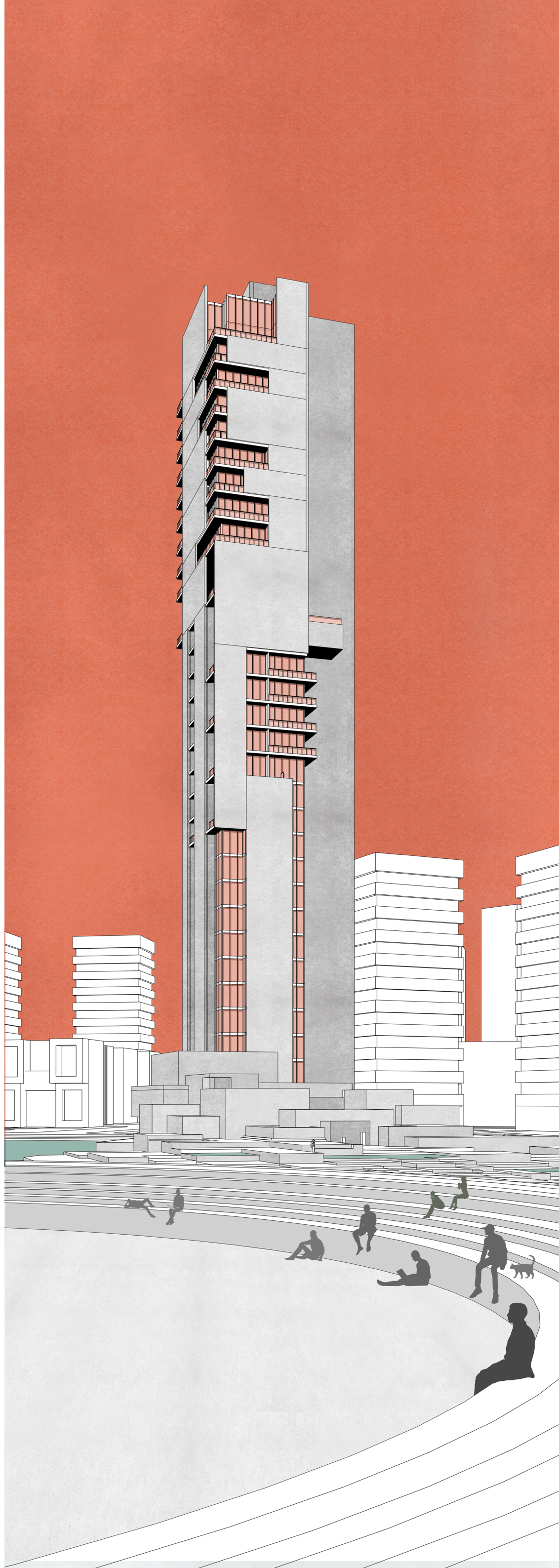
All the wet area such as kitchen, toilets, laundry and ... are located in this part



Green core

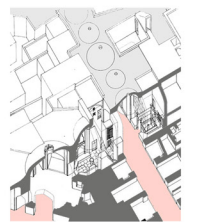
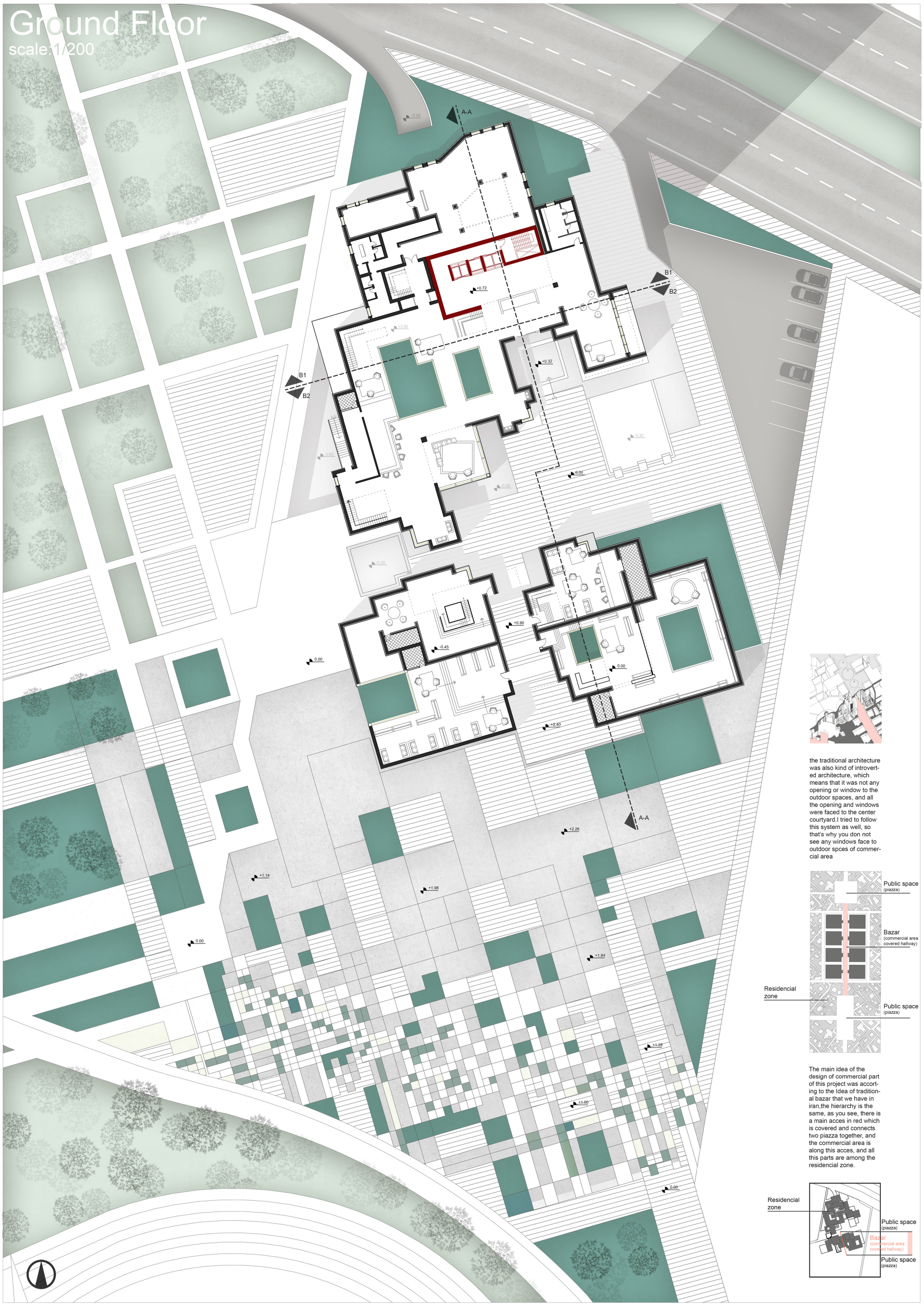
The main Idea of the design of this tower is a coreal design. I considered a main concrete core as the construction base and every other part is attached to this main core as a ring , such as vertical access (stair cases and elevators which connect the parking to the rooftop), wet ring (toilets and kitchens and all the area connected to water), floors which go through the concrete core (32 floors) transparent skin (all the windows), Green core (extruded from the main levels) and in the end final non transparent skin as the elevation and covering part to control the light,this final skin also has the constructional role as well.the main idea of using a transparent and non-transparent materials was turning abmonumental tower to a domestic building by choosing two different family of material.



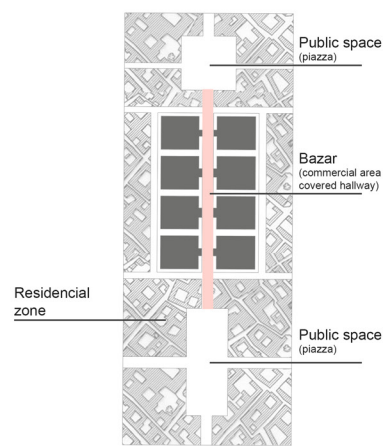


Ground Floor

scale: 1/200



the traditional architecture was also kind of introverted architecture, which means that it was not any opening or window to the outdoor spaces, and all the opening and windows were faced to the center courtyard. I tried to follow this system as well, so that's why you don't see any windows face to outdoor spaces of commercial area

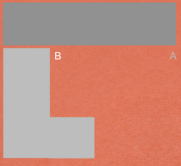


The main idea of the design of commercial part of this project was according to the idea of traditional bazaar that we have in Iran. The hierarchy is the same, as you see, there is a main access in red which is covered and connects two piazza together, and the commercial area is along this access, and all these parts are among the residential zone.

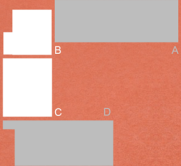
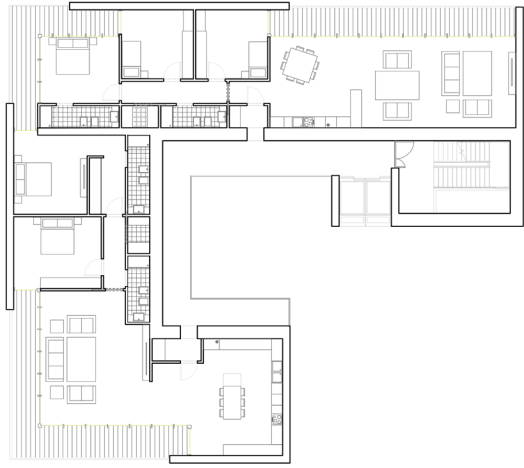


Floor Plans

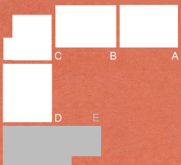
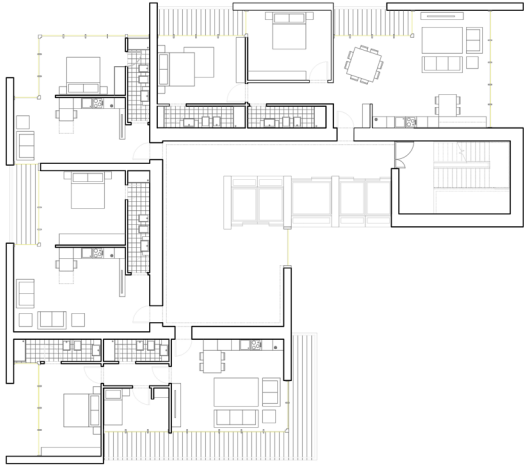
scale: 1/200



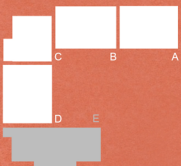
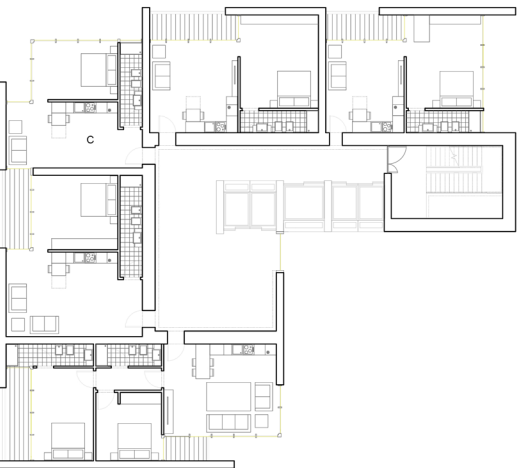
23-26-29-30
there are 2 flats in each floor, one flat with 3 bedrooms
type A (172 sqm),
and the other one with 2 bedrooms
type B (170 sqm)



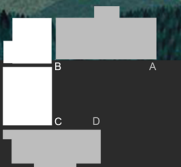
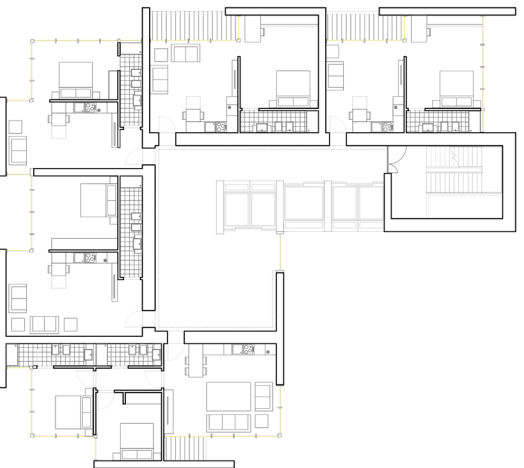
14-19
there are 4 flats in each floor, two flats with 1 bedroom (studio)
type B (44 sqm)
type C (62 sqm)
and two other with 2 bedrooms.
type A (112 sqm)
type D (95 sqm)



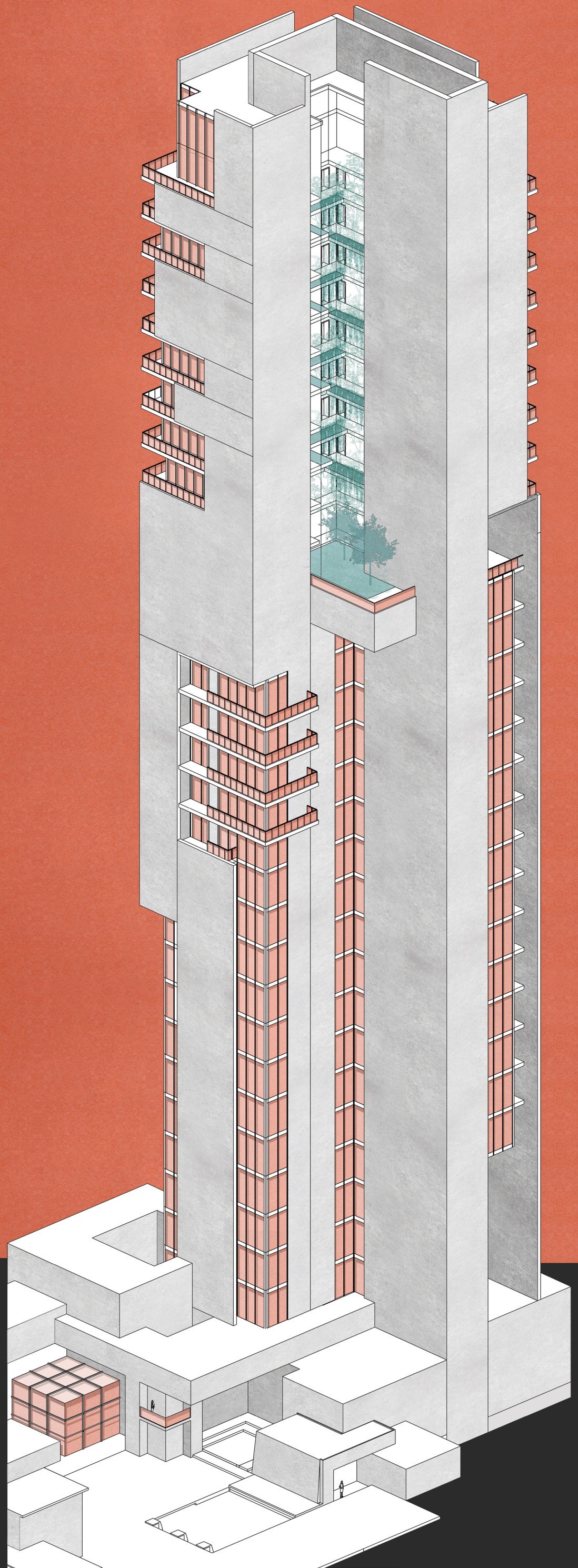
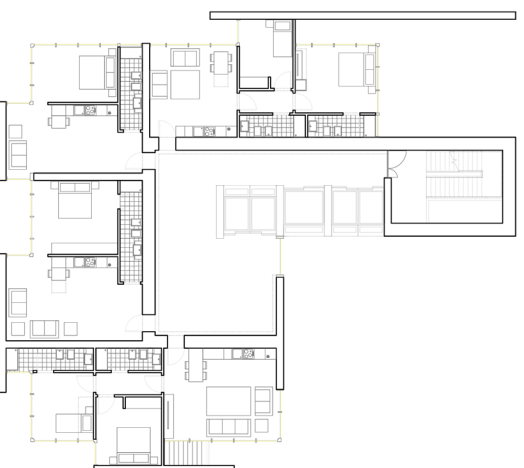
12-13
there are 5 flats in each floor, 4 flats with 1 bedroom (studio)
type A (52 sqm)
type B (56 sqm)
type C (43 sqm)
type D (56 sqm)
and the other one with 2 bedrooms.
type E (85 sqm)



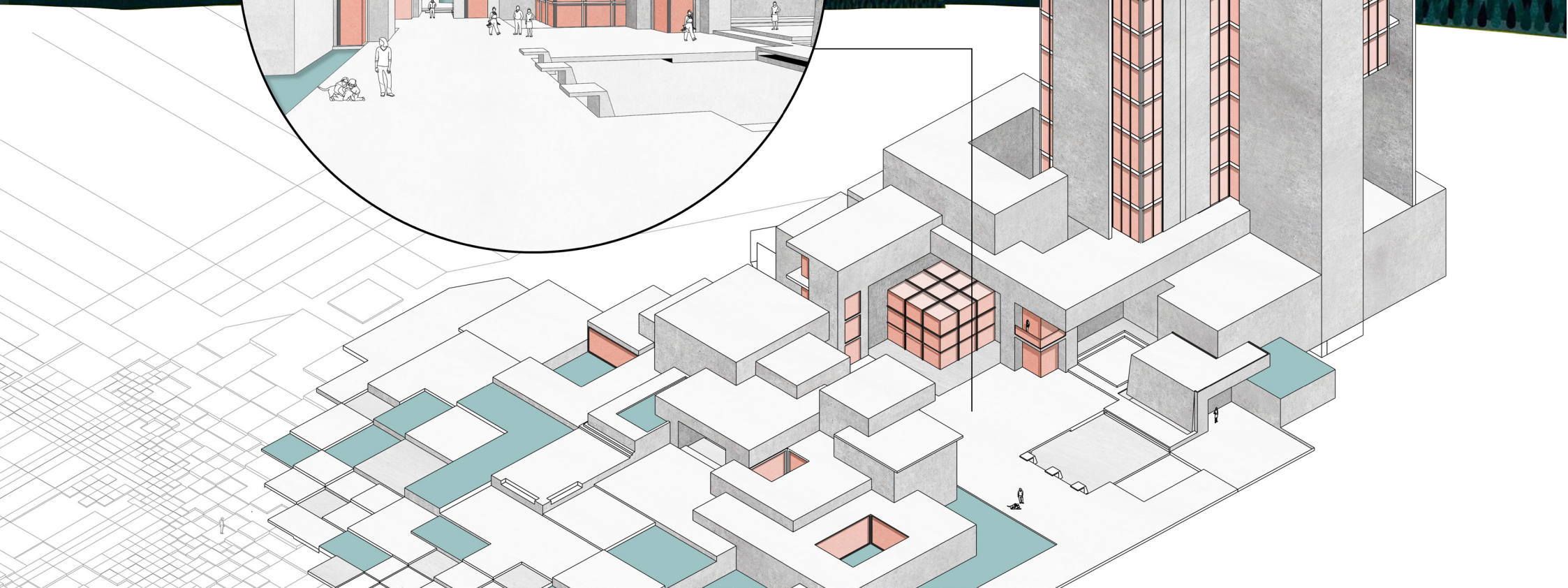
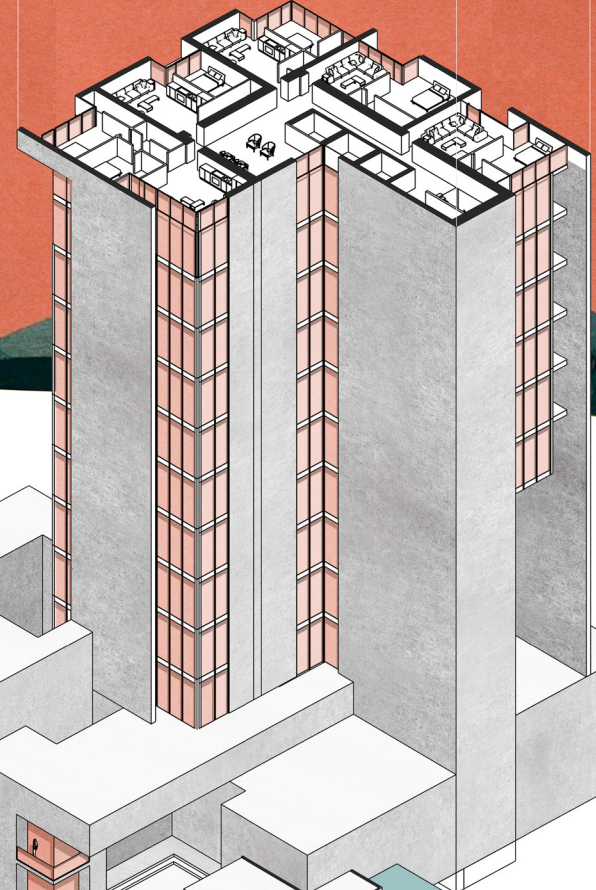
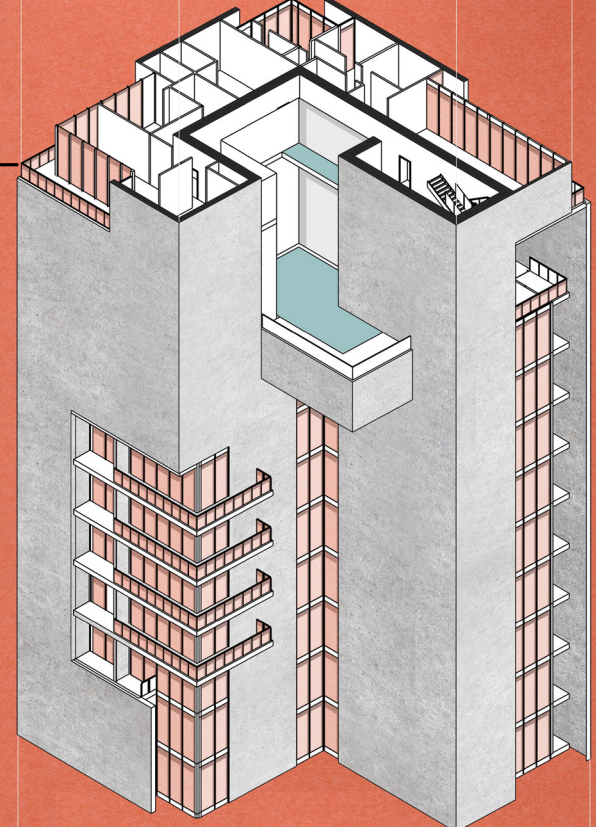
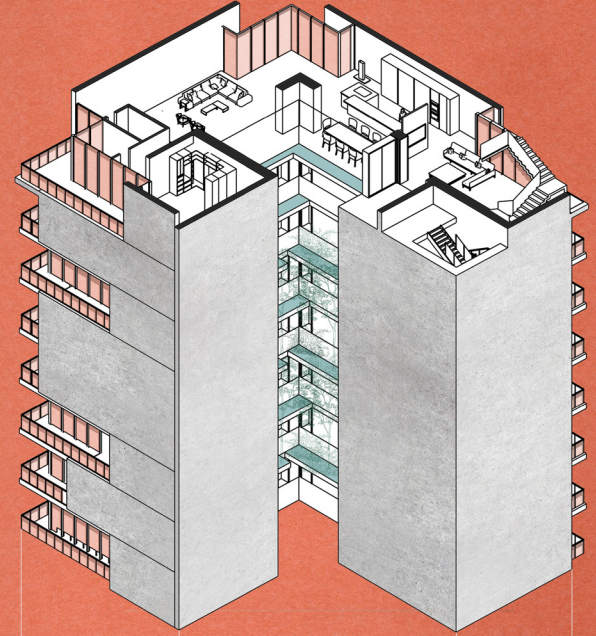
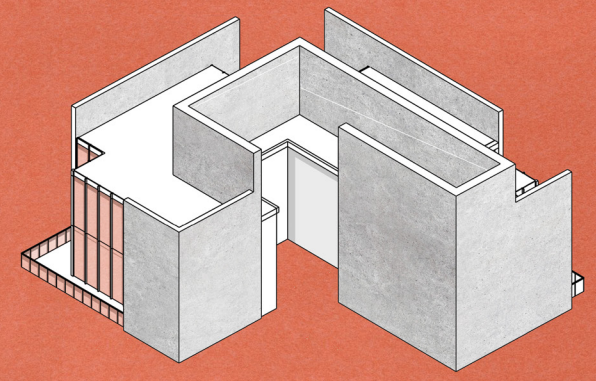
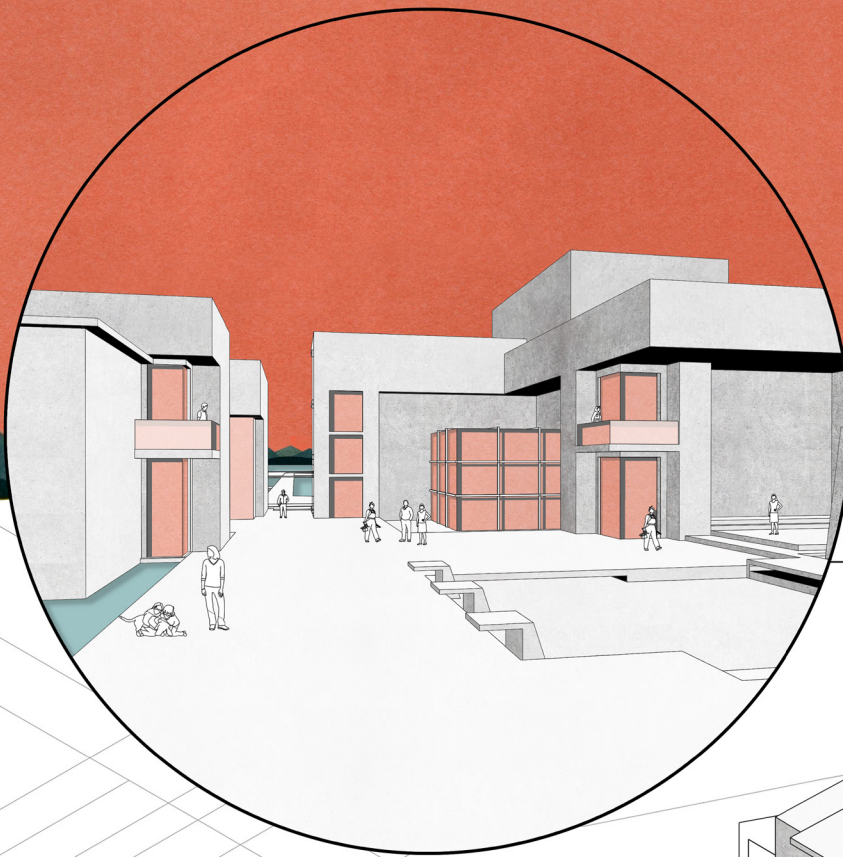
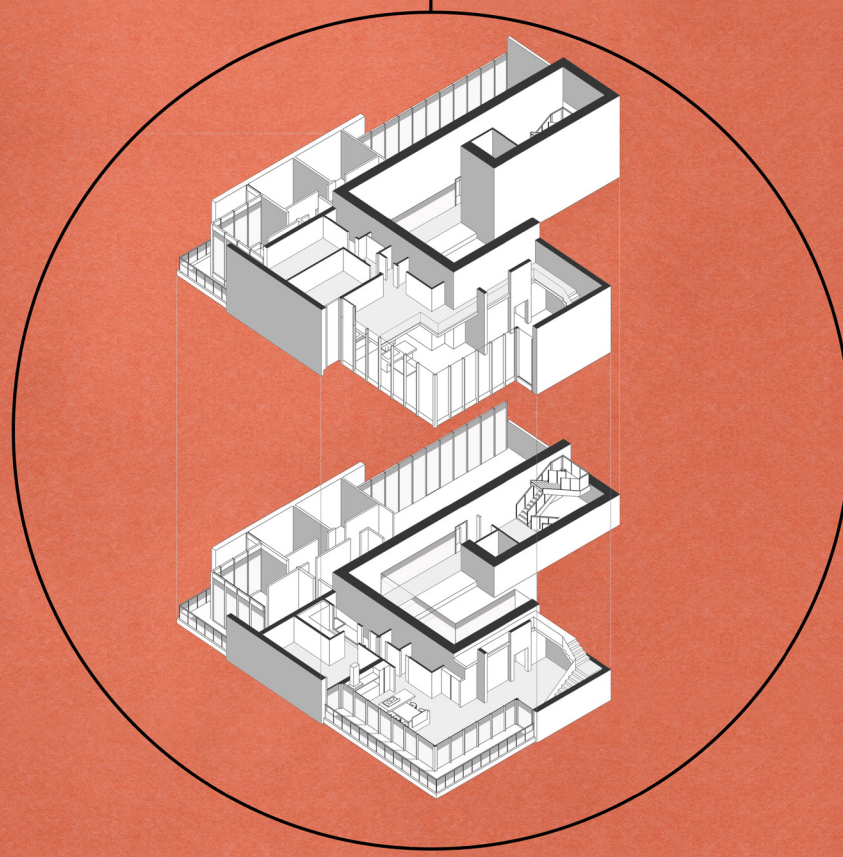
5-11,
there are 5 flats in each floor, 4 flats with 1 bedroom (studio)
type A (52 sqm)
type B (56 sqm)
type C (43 sqm)
type D (56 sqm)
and the other one with 2 bedrooms.
type E (73 sqm)



2-5,
there are 4 flats in each floor, 2 flats with 1 bedroom (studio)
type B (45 sqm)
type C (55 sqm)
and two other with 2 bedrooms.
type A (62 sqm)
type D (75 sqm)



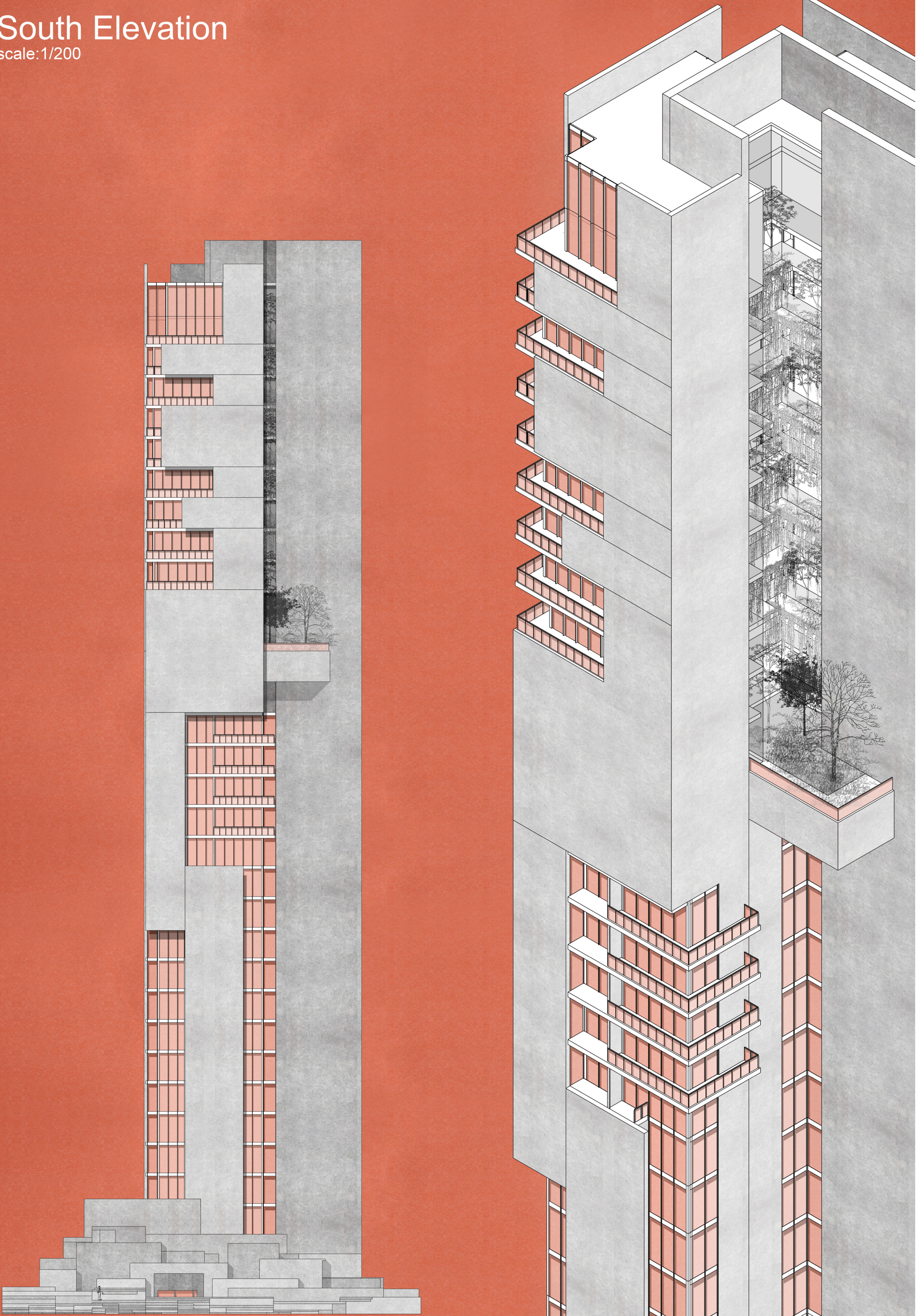
Double floors





South Elevation

scale:1/200



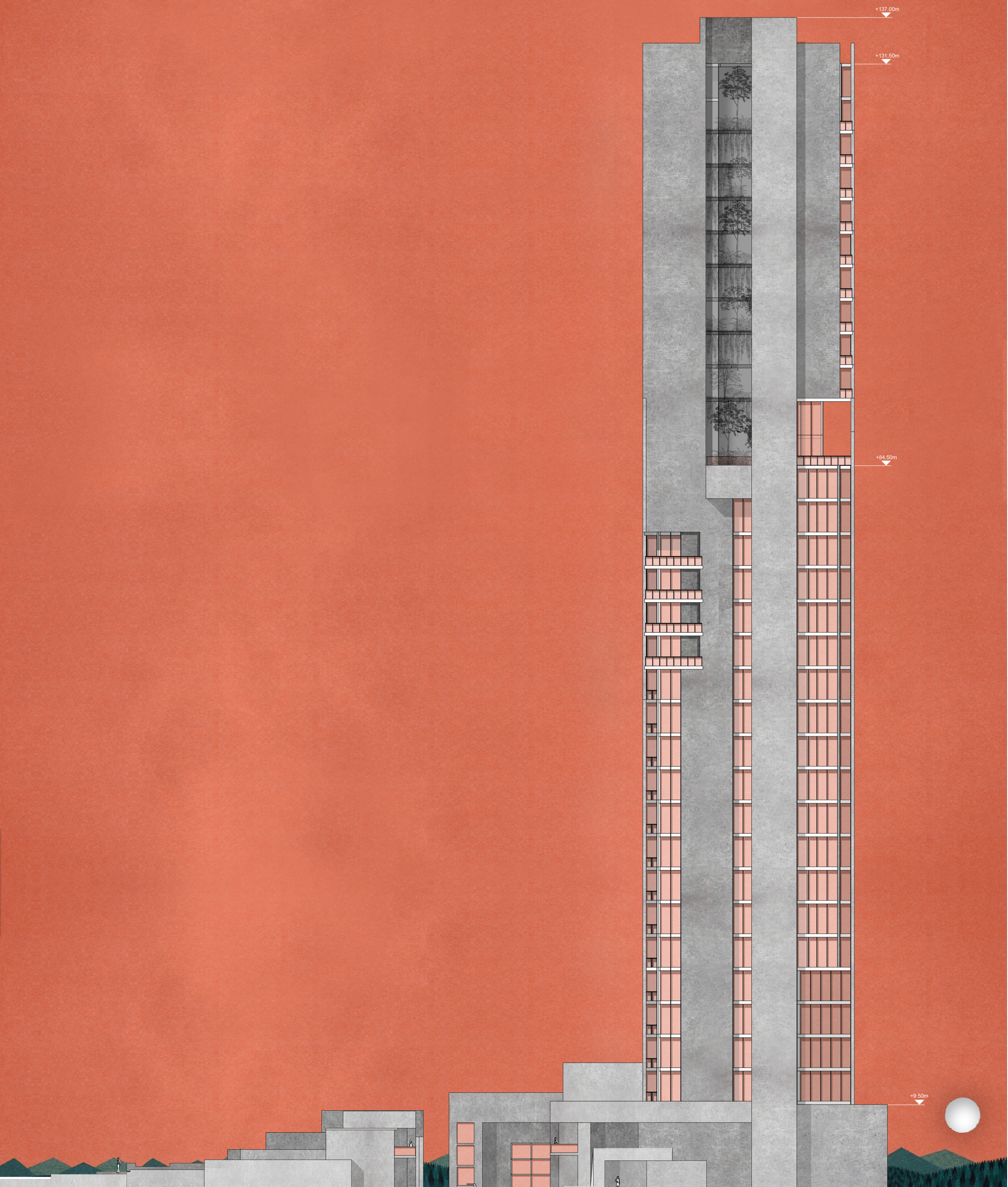
Detail section

scale: 1/40



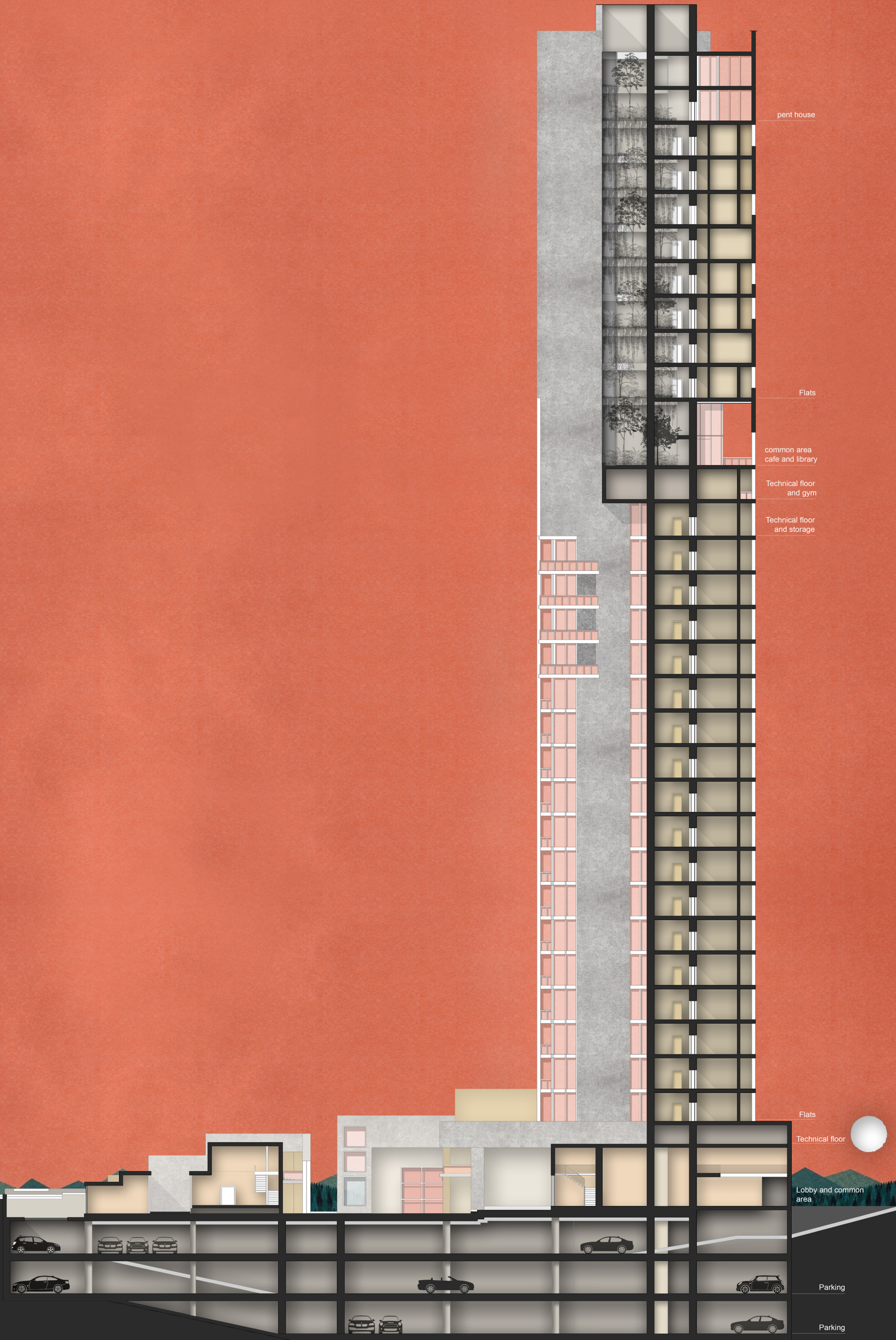
East Elevation

scale: 1/200



Section A-A

scale: 1/200



pent house

Flats

common area
cafe and library

Technical floor
and gym

Technical floor
and storage

Flats

Technical floor

Lobby and common
area

Parking

Parking

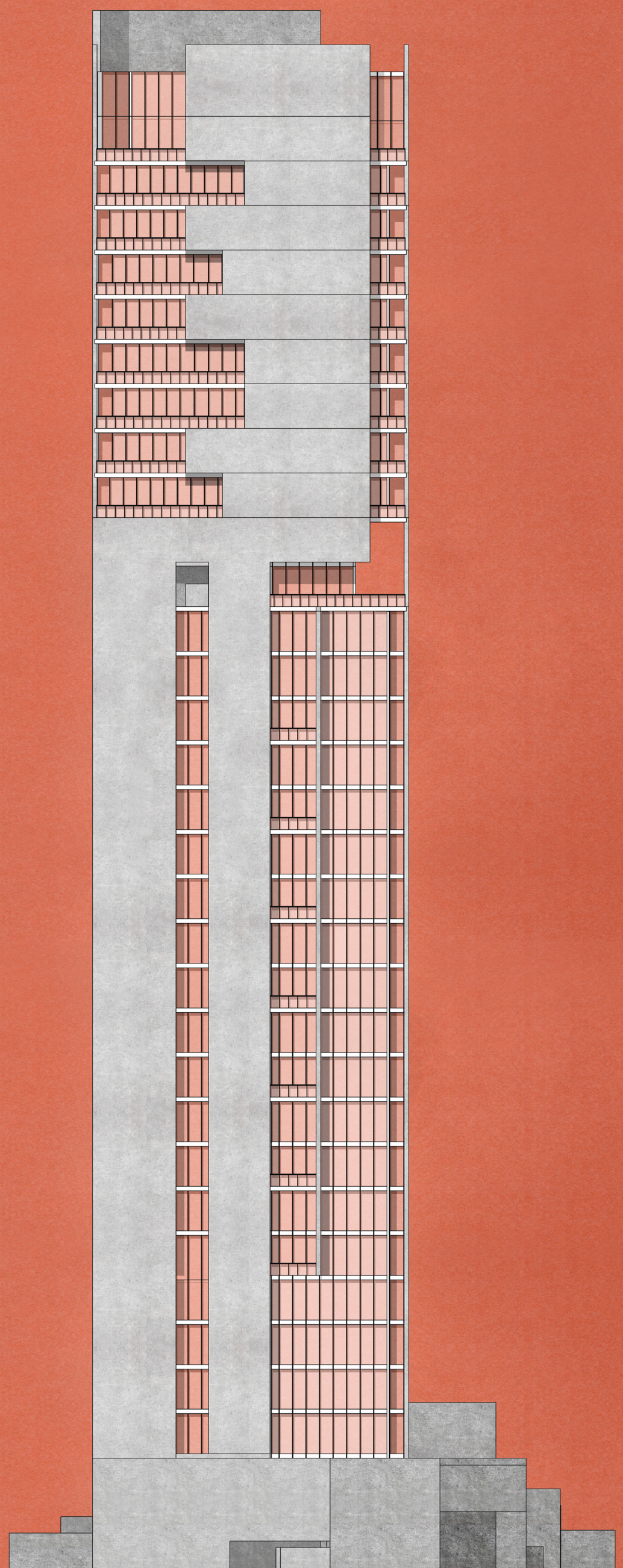
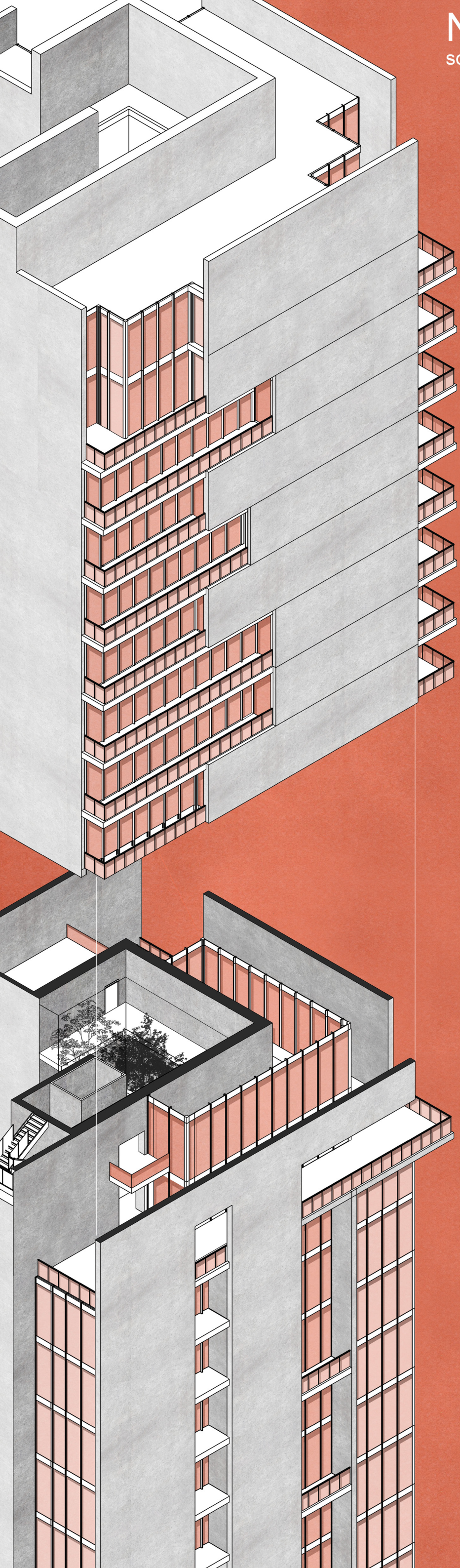
Detail section

(common spaces)



North Elevation

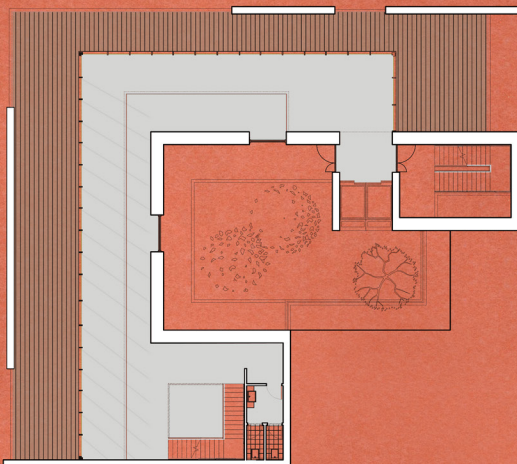
scale: 1/200



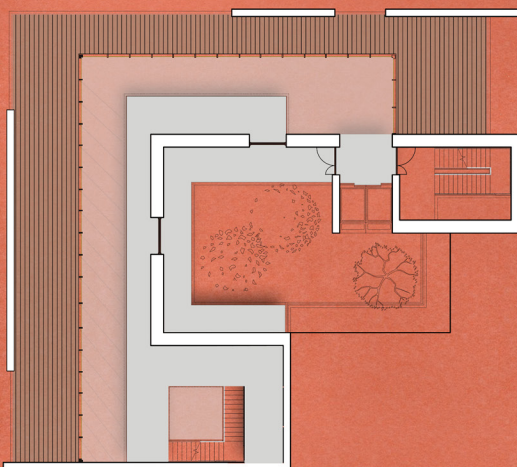


Common area

scale: 1/200

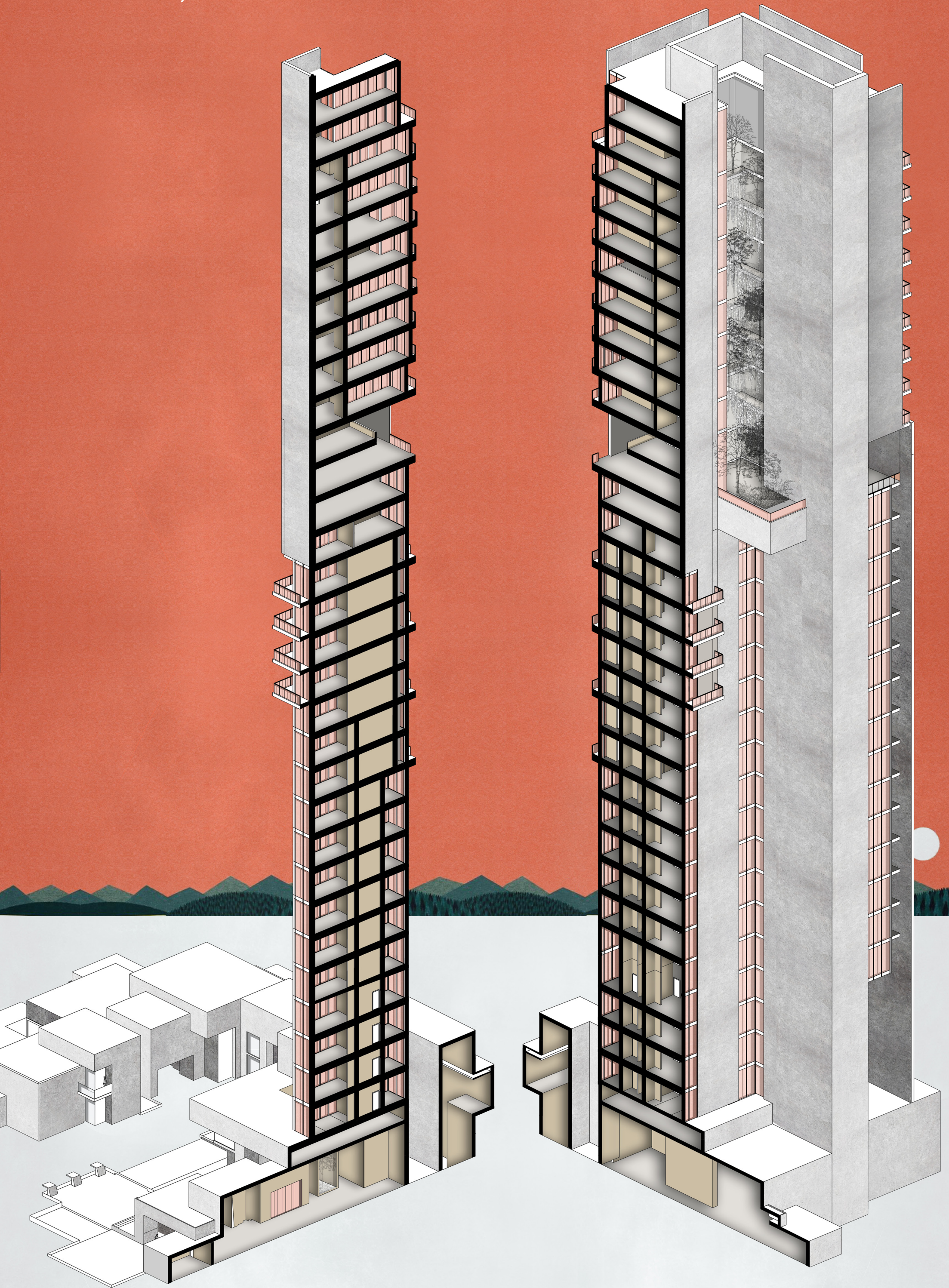


21st floor
scale: 1/200



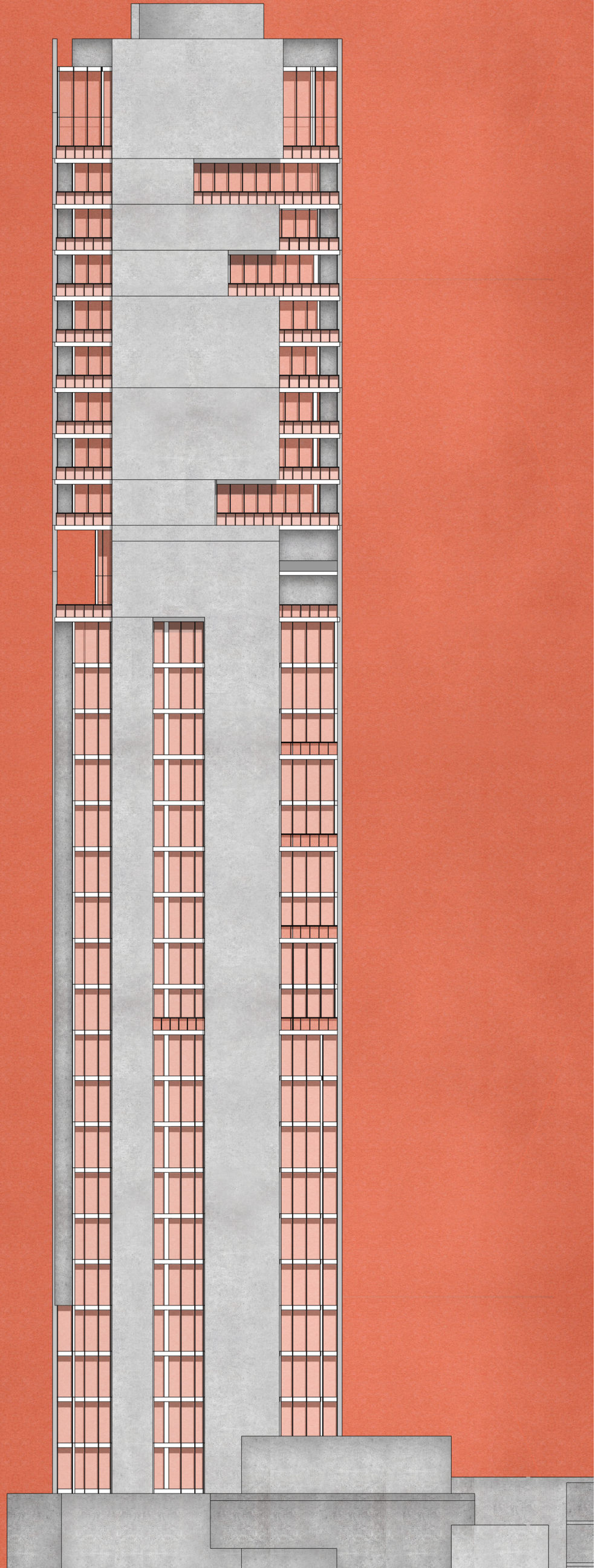
21-22
in these two floor we have common area, wich located in the middle of the tower, from this point the vertical forest strats, this common area consist all 3 kind of spaces, close space, open space and semi open space
the area of first floor is 500 sqm and the second floor is 250 sqm,

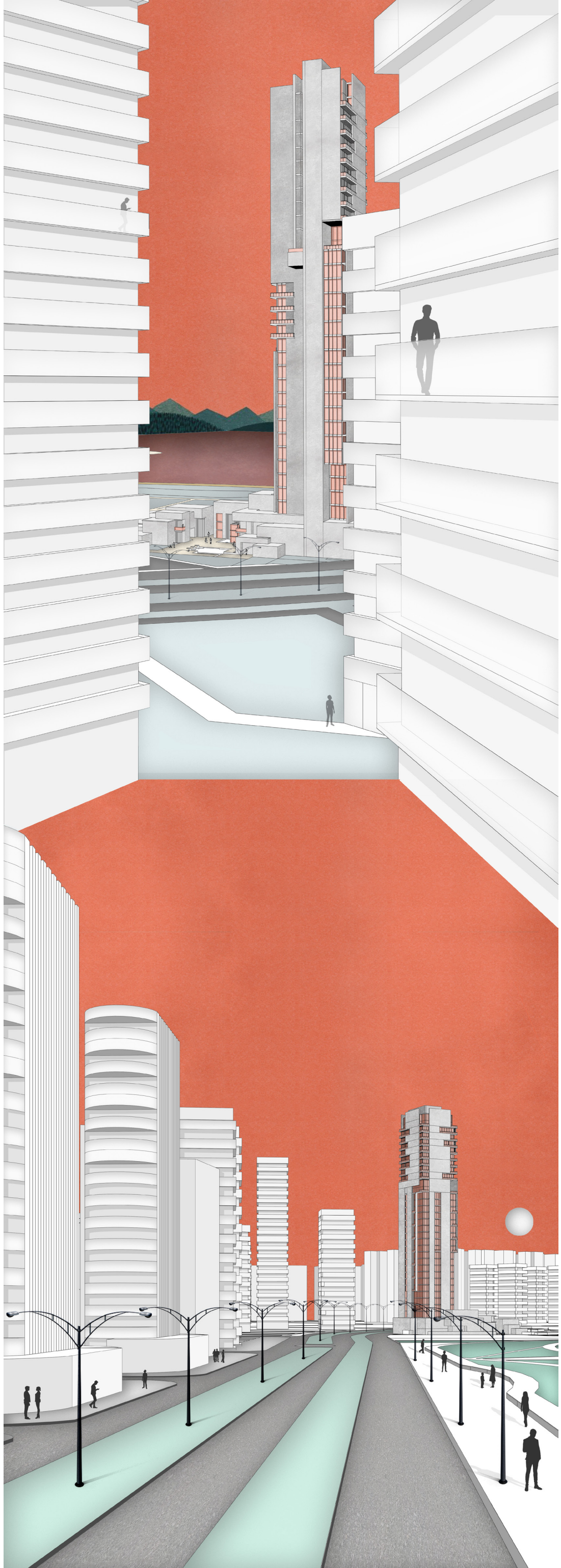
Section B1,B2

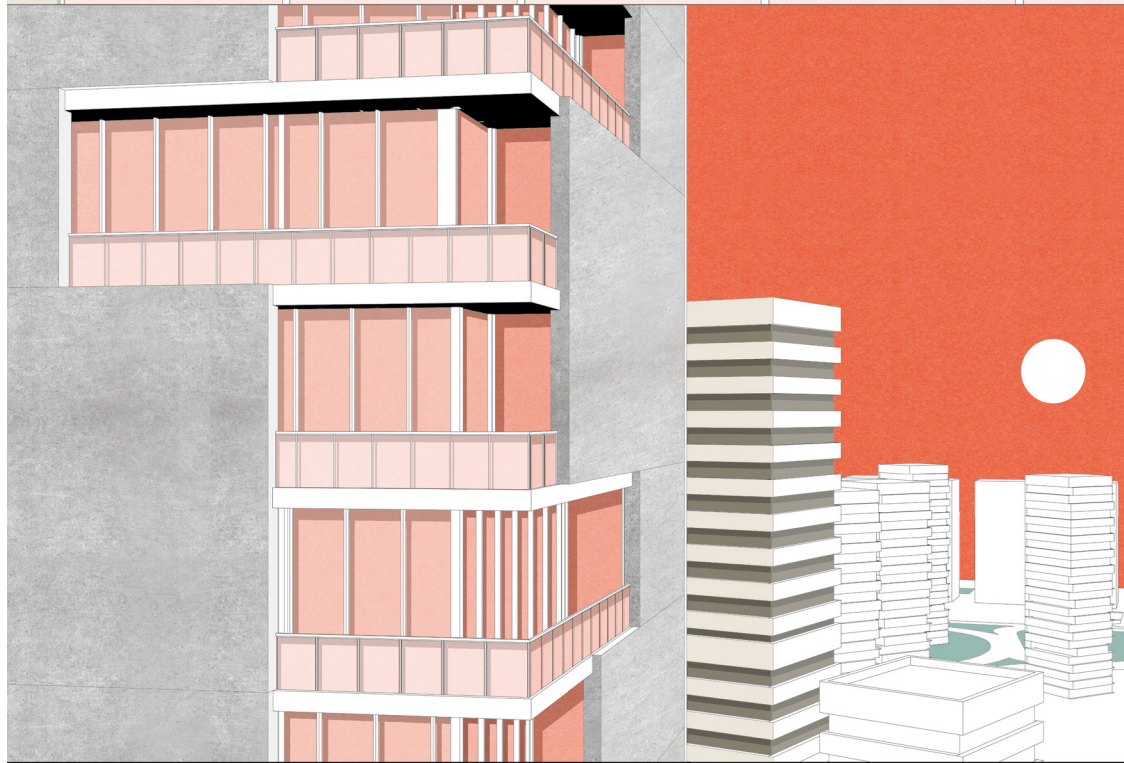


West Elevation

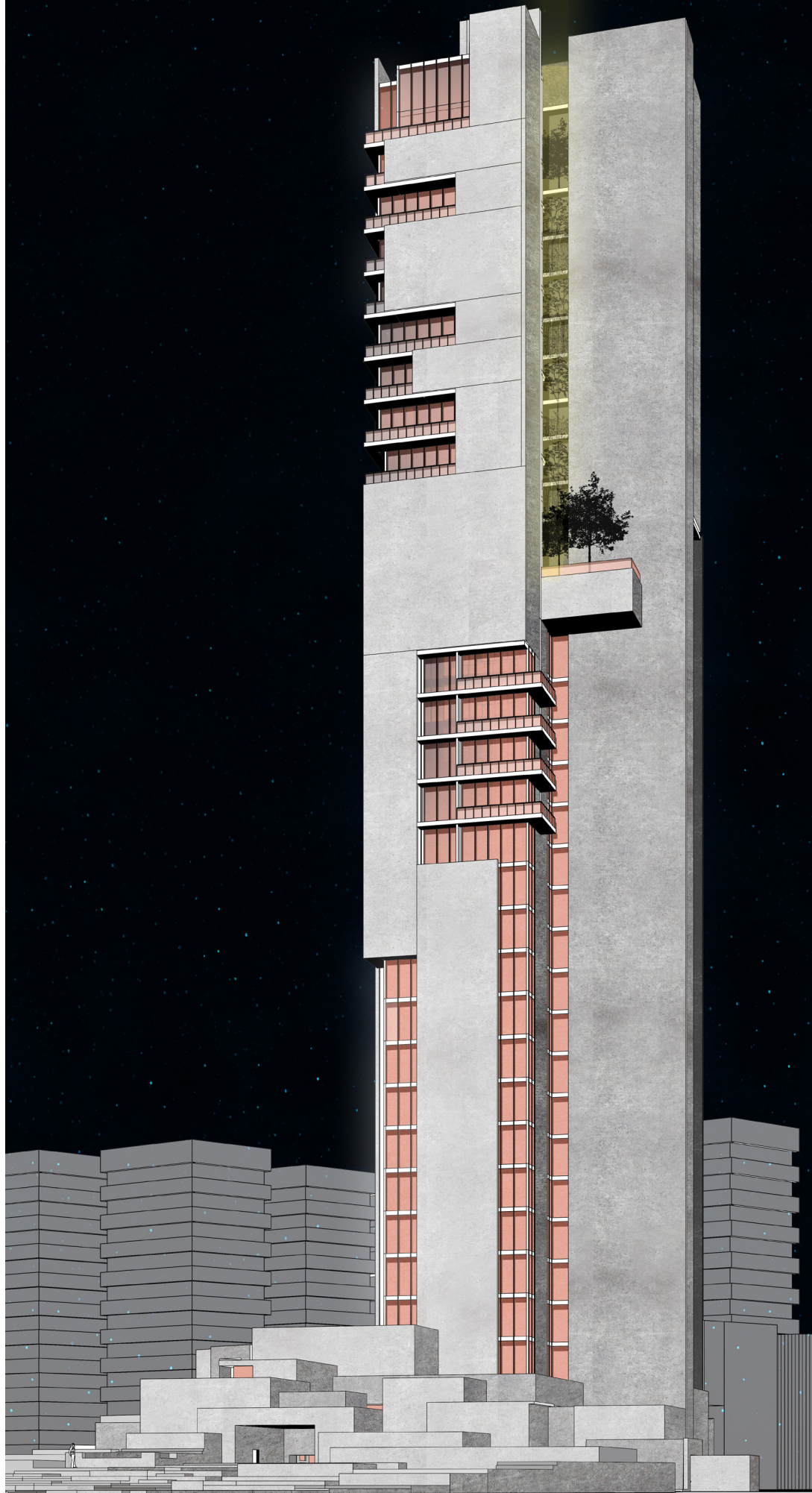
scale:1/200







Chitgar Tower



Student: Mohsen Masoudnia
Professor: Paolo Mazzoleni
summer 2019
politecnico di milano