

# ARCHITECTURE STUDENT CONTEST

18<sup>th</sup> INTERNATIONAL EDITION, LISBON 2023

# THE WAVE



## Our Team:



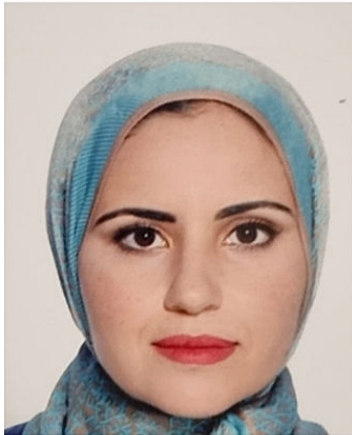
Oumayma  
Babakhouya



Saad  
Benlabhili



Hajar  
El ammari



### **Dr. ES-SELLAK NADA**

Architect, researcher in  
urbanism, planning, policies  
and action systems of urban  
manufacturing



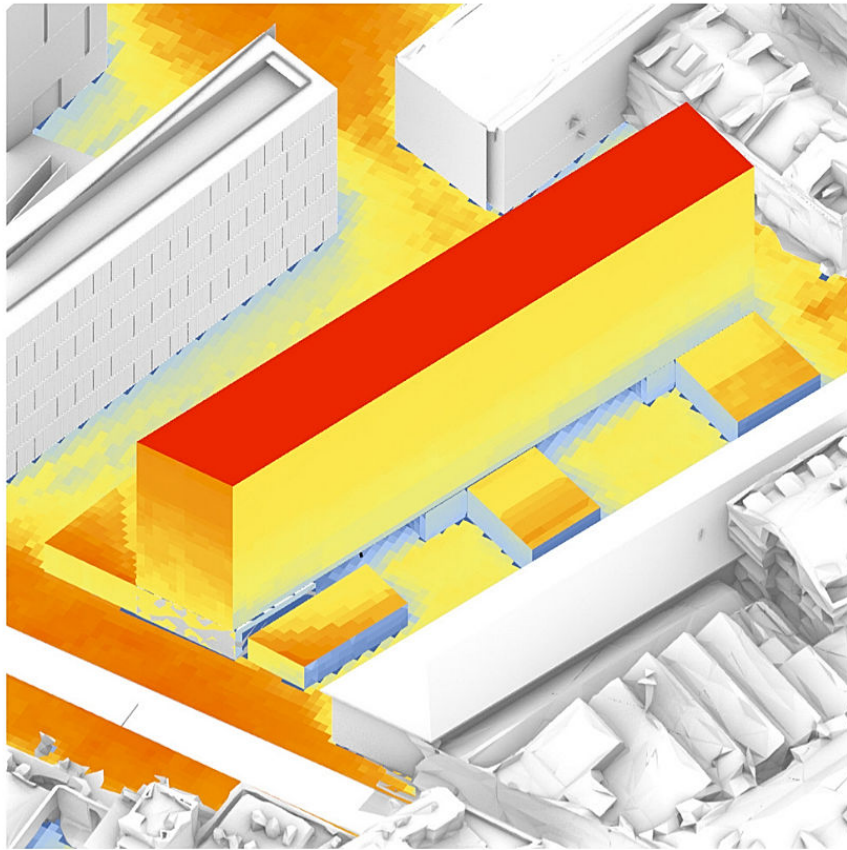
Lisbon...



**The entire area was carefully crafted to ensure that it seamlessly fits into the local landscape of Lisbon, with colors and materials adding to the aesthetic appeal.**

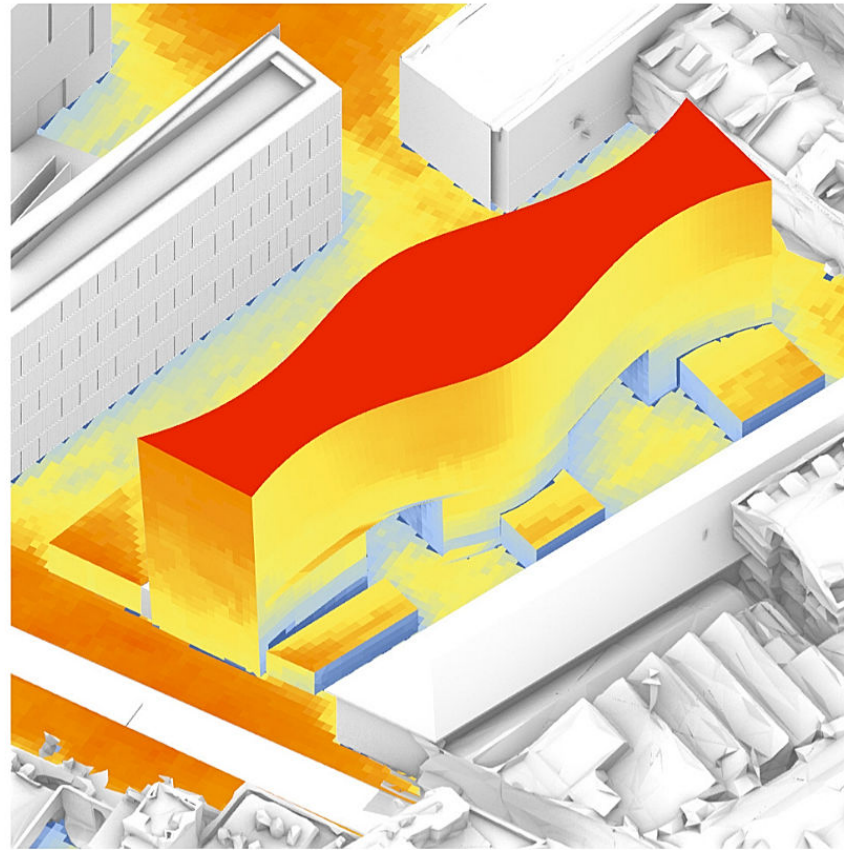


1



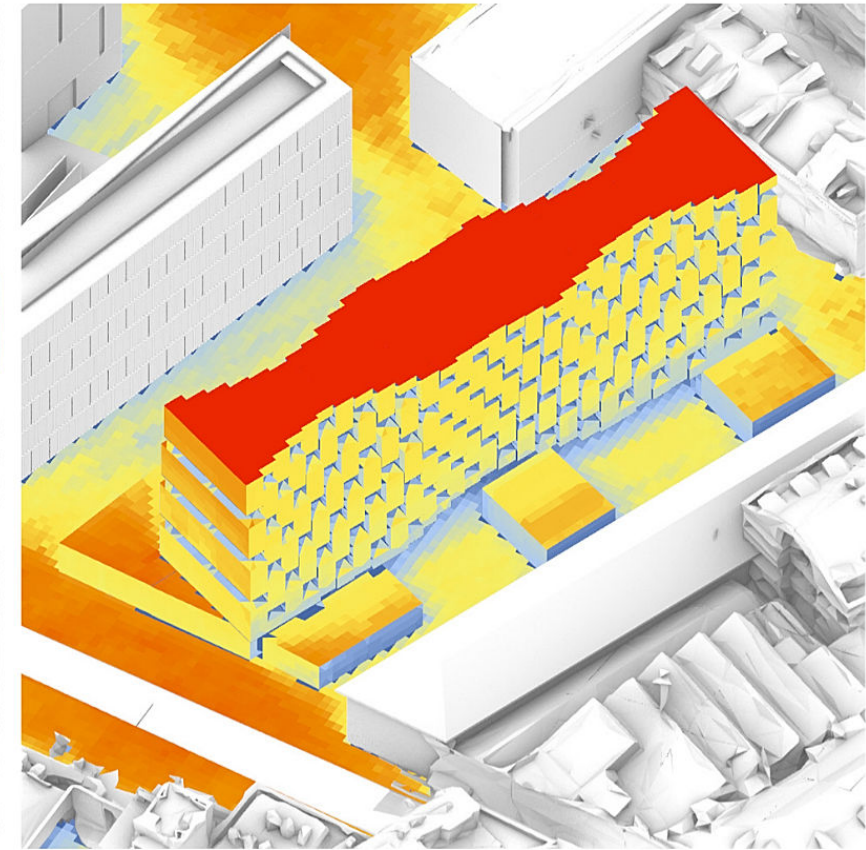
**Solar analysis of the volume in its context and with Lisbon's climate data**

2



**Bending and stretching the form to optimize solar exposure in certain areas and shading in others**

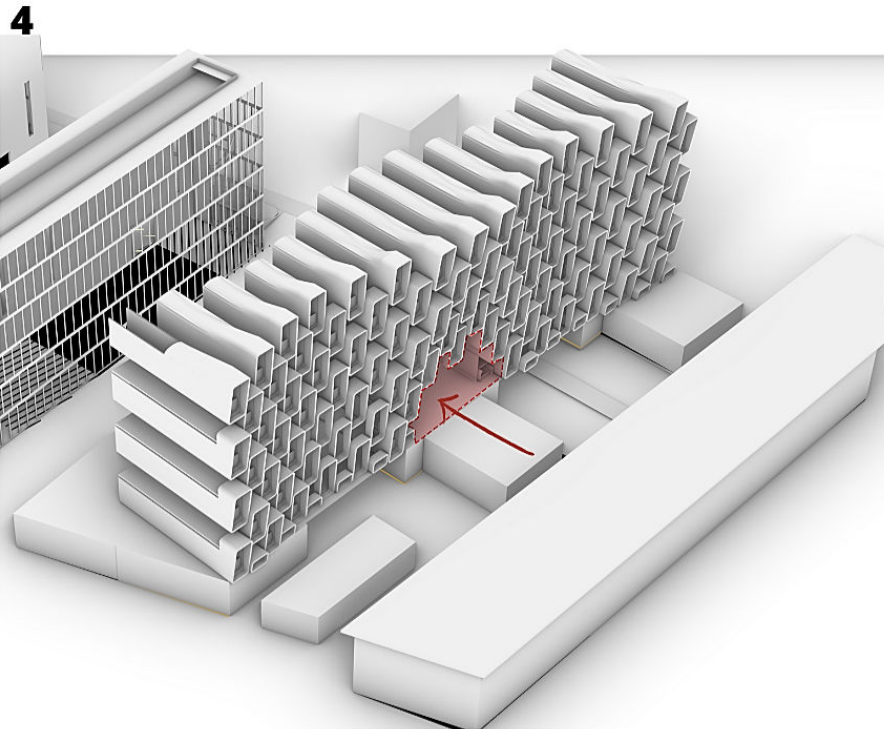
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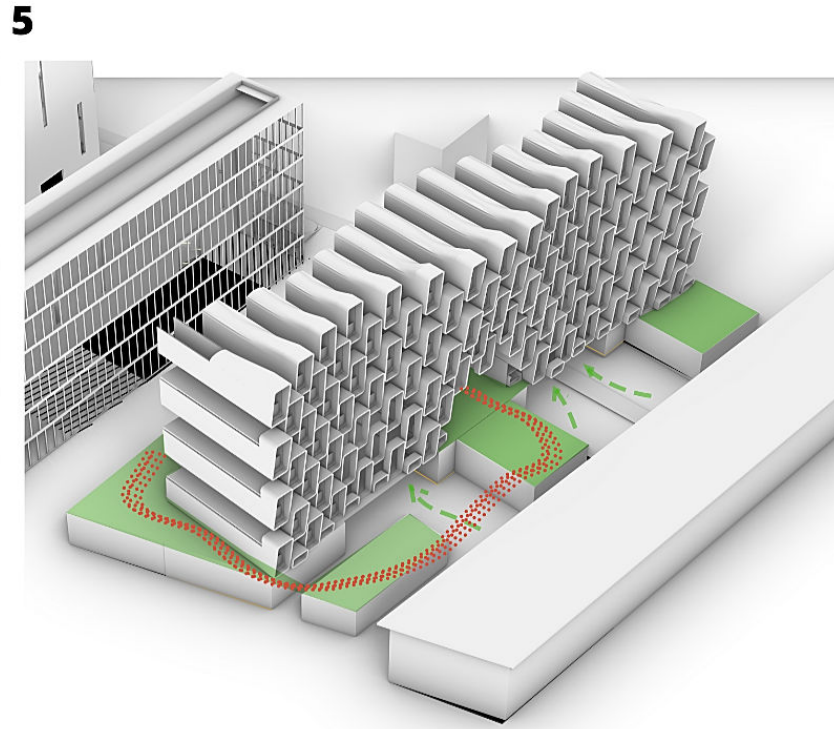
**Dividing the volume into small boxes that are transformed into balconies to create shaded areas during summer that can be used by the inhabitants**



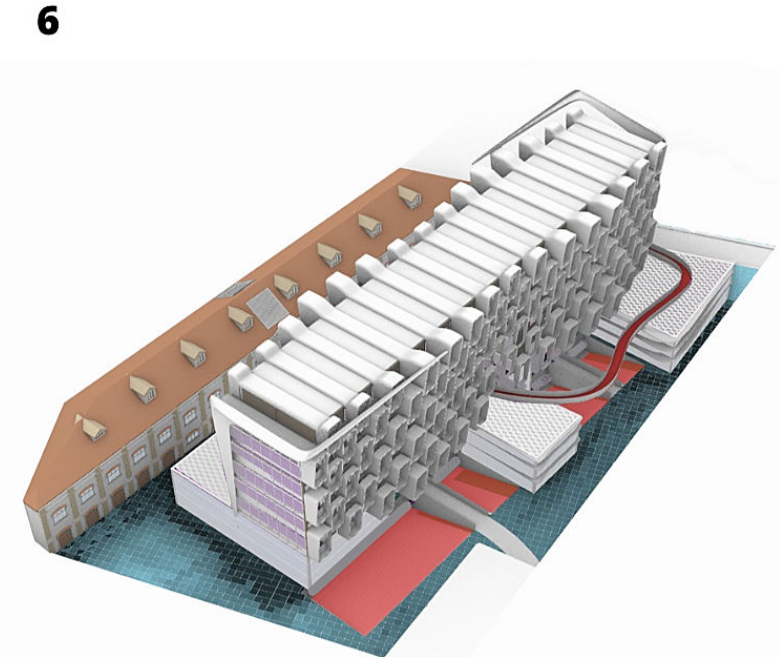
## Concept:



**Retrieving some modules to create a communal green space inside the building that also provides housing units with extra sunlight and clean air.**



**Extending the green space to commercial terraces and creating an enjoyable and therapeutic green area for the users. The covered patio located at the core of the building features lush vegetation and a bridge that goes through and around the building connecting the terraces as a floating promenade.**

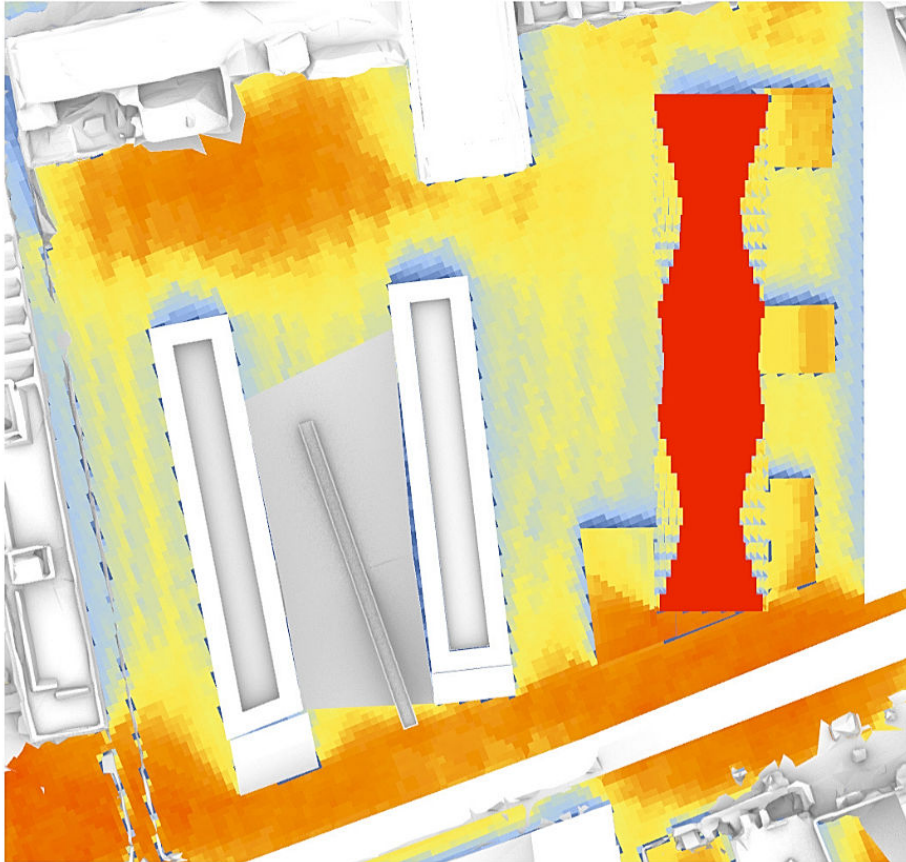


**In order to bring life to the underground levels, a landscaped terraced slope runs alongside Building B. This slope provides natural light and ventilation and creates a space protected from noise and activity within Zone C.**

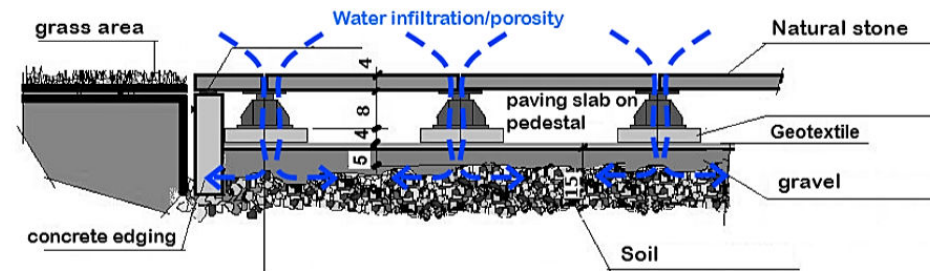
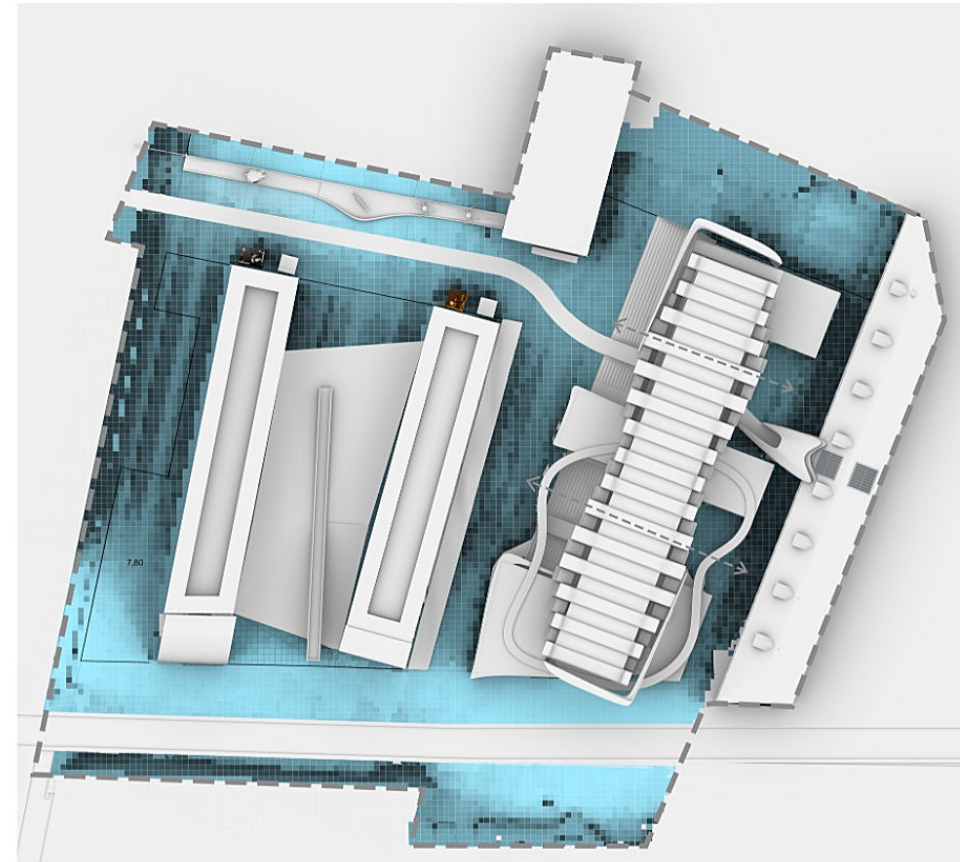


## Concept: sun analysis and solar exposition

7

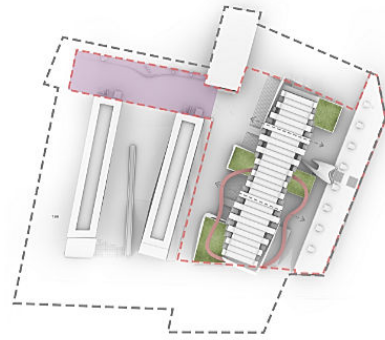


This design draws inspiration from the heritage of the land, which originated from the old "boqueirões" - river inlets that flooded during high tide and provided boat access to the industries and warehouses located there, mainly associated with riverside activities. The design incorporates subtle shades of the blue of the Tagus river to create **the illusion that the buildings and the entire area are floating on water once again...**

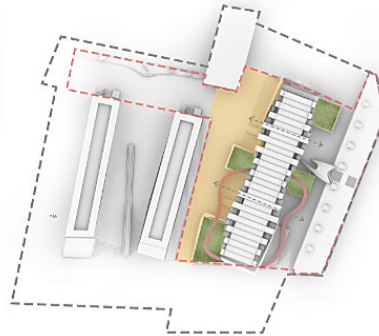




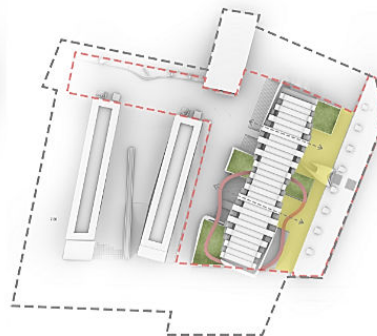
## Concept:



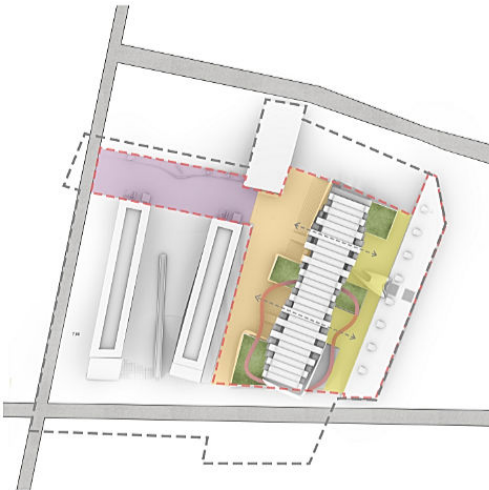
**Sequence 1: Open-Air Studios and Interactive Spaces**



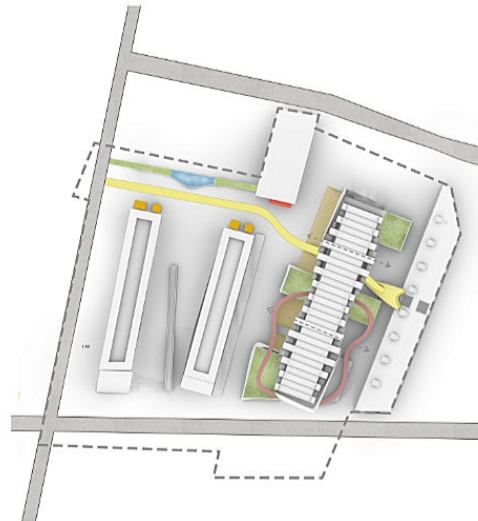
**Sequence 2: Relaxation and Reflection Zone**



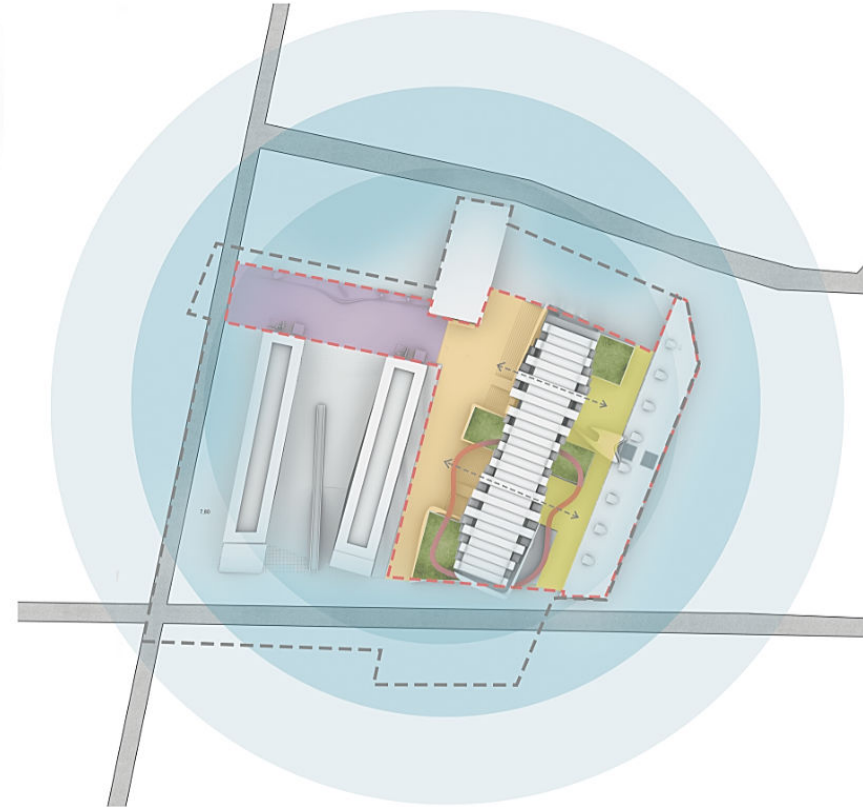
**Sequence 3: Entrance and Immersive Zone**



**The sequences are connected with urban events that animate them.**

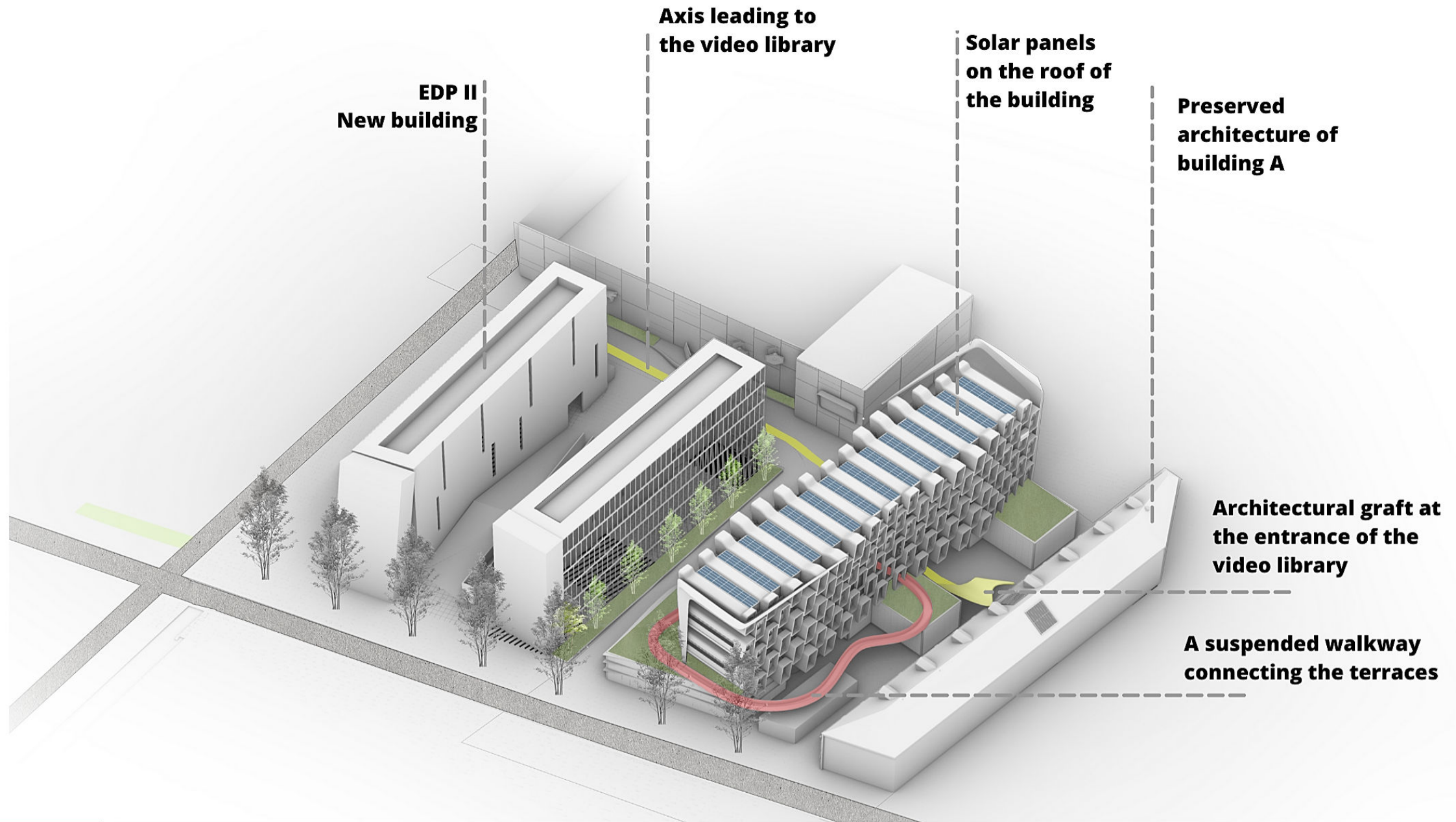


**To enhance the entrance of the historic building from the street facing the river, we have arranged an axis that leads the visitor to it.**



**The center's external area is designed with three distinct sequences, including the dynamic and engaging Entrance, the heart of the external space, the Open-Air Studios and Interactive Spaces, and the Relaxation and Reflection Zone, which offers a comfortable and immersive experience for visitors. The design features strategically placed movie-themed furniture, seating, and props throughout the area, providing an interactive and engaging experience for visitors.**

## Concept:





The wave:



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## Master plan: 1/500



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Top view:



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Axonometric view:



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## Cinematic promenade:



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## Reflection Zone:



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Relaxation area:



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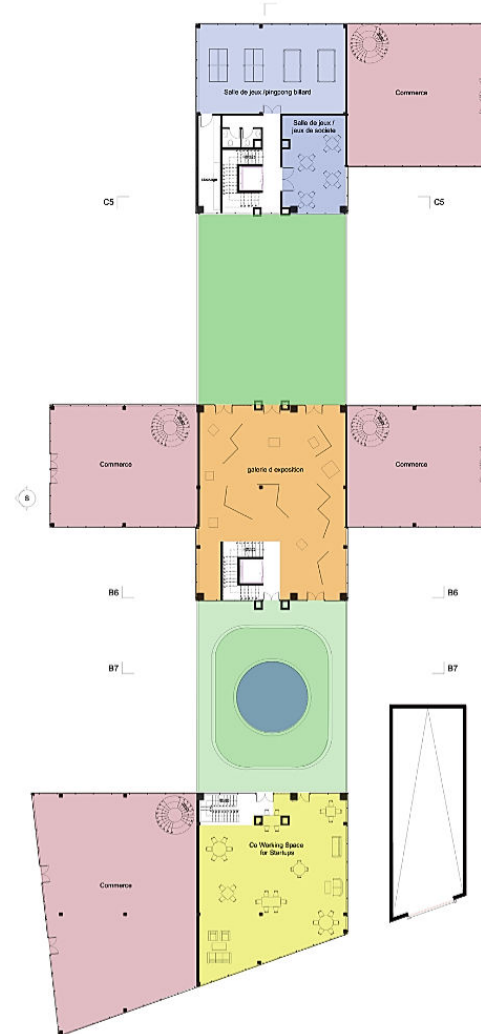
The aquatic element regulates the atmosphere:



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# Floor plan distribution: Building B

Ground floor:



Legend:

- commerce
- Play room
- galleries
- green space
- fountain
- innovation businesses

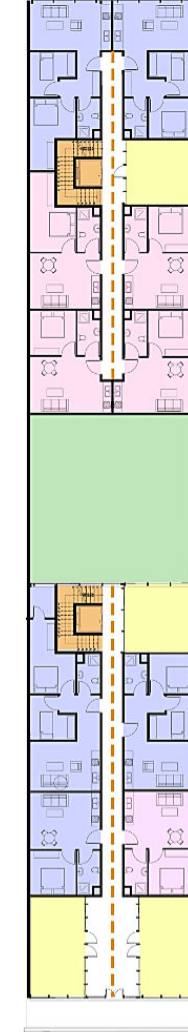
Typical floor plan type I:



Legend:

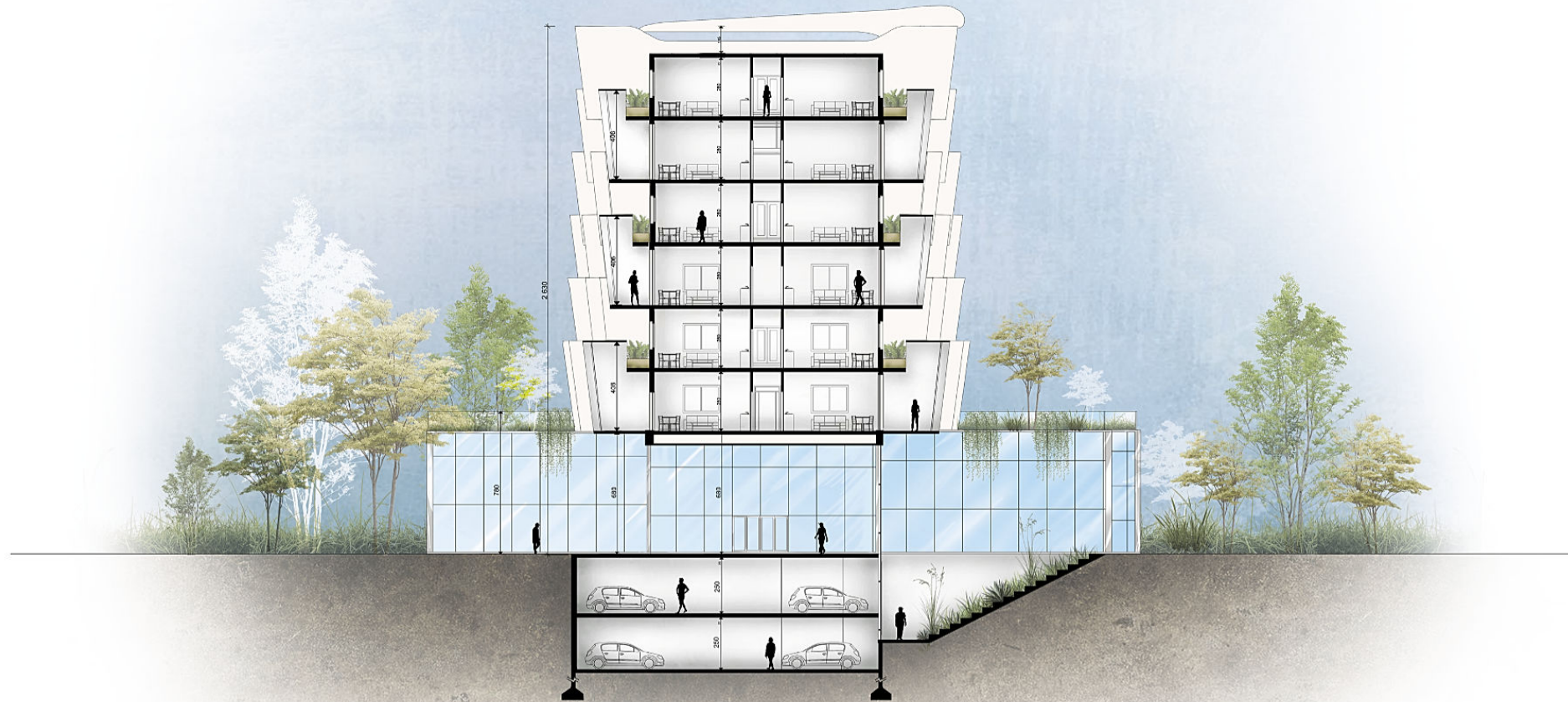
- Studio type I
- Studio type II
- Vertical circulation
- Green space
- Coliving Space

Typical floor plan type II:





## Section: Building B



## Section: Building B





SOUTH:

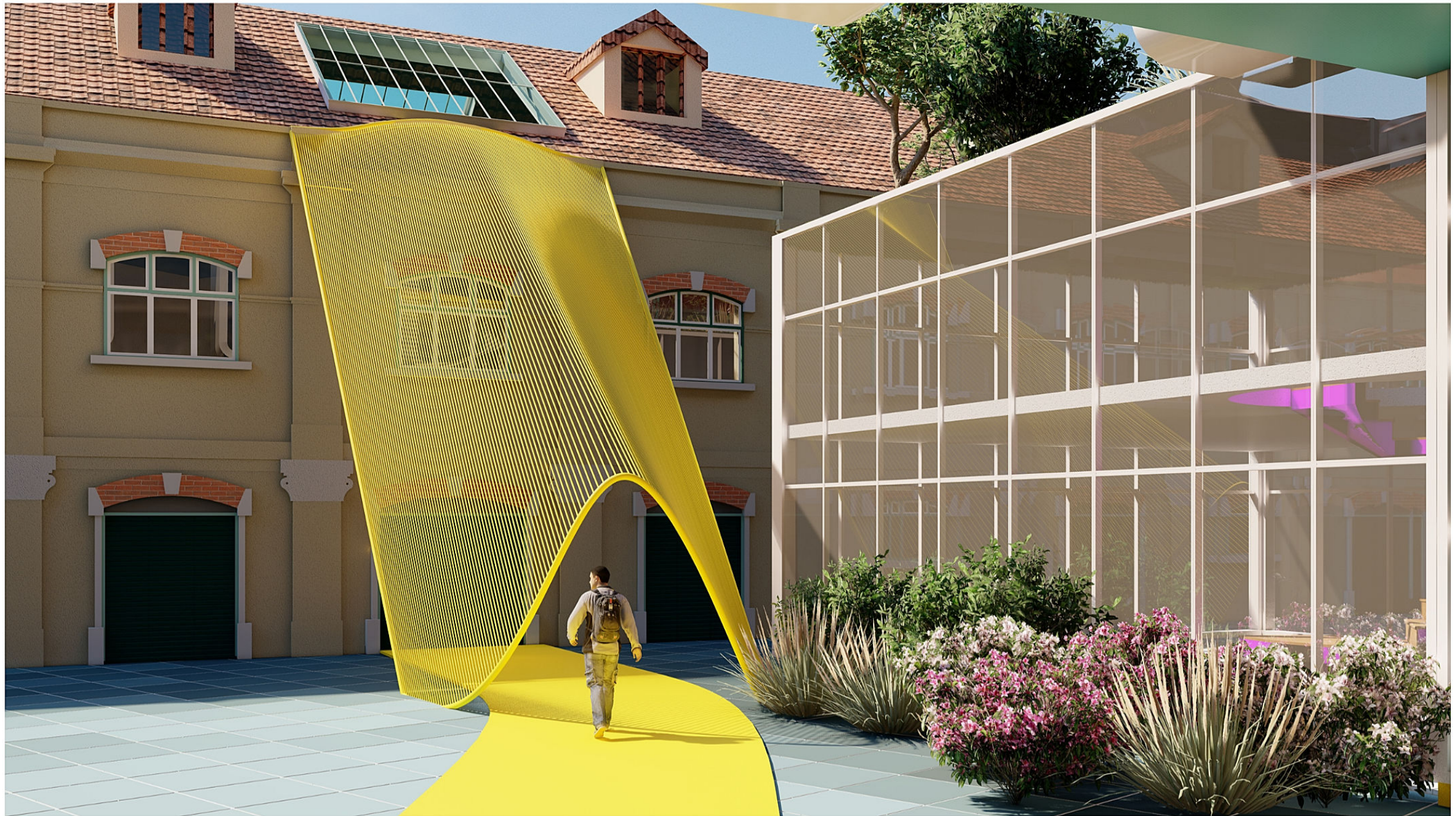


EAST:





## Building A:Graft

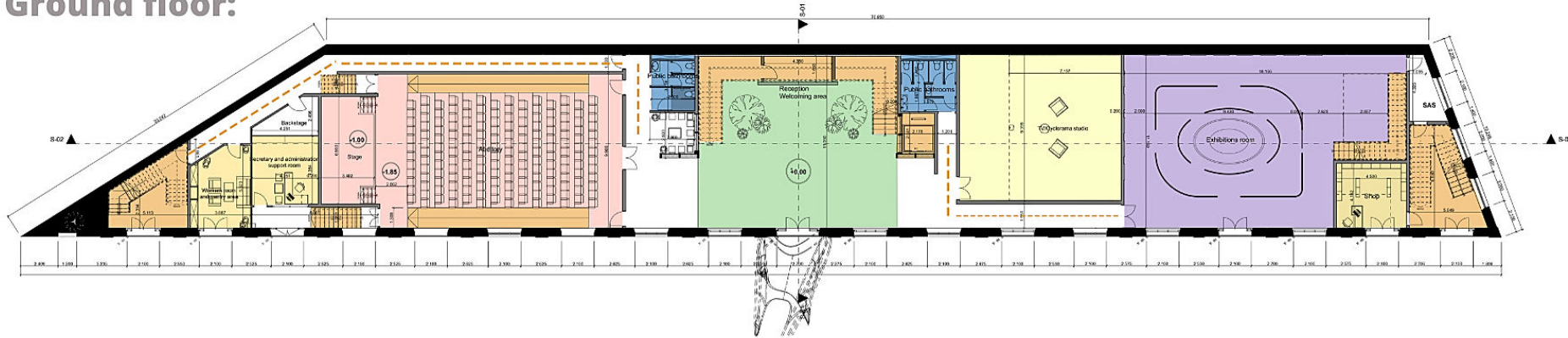


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# Floor plan distribution: Building A

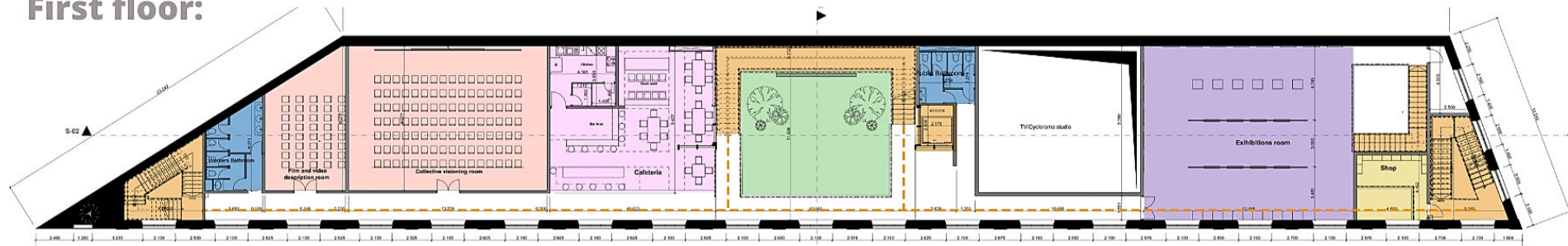
## Ground floor:



### Legend:

- Patio
- Auditory
- Exhibitions room
- Vertical circulation
- Cyclorama studio
- Shop, Common spaces, Backstage..

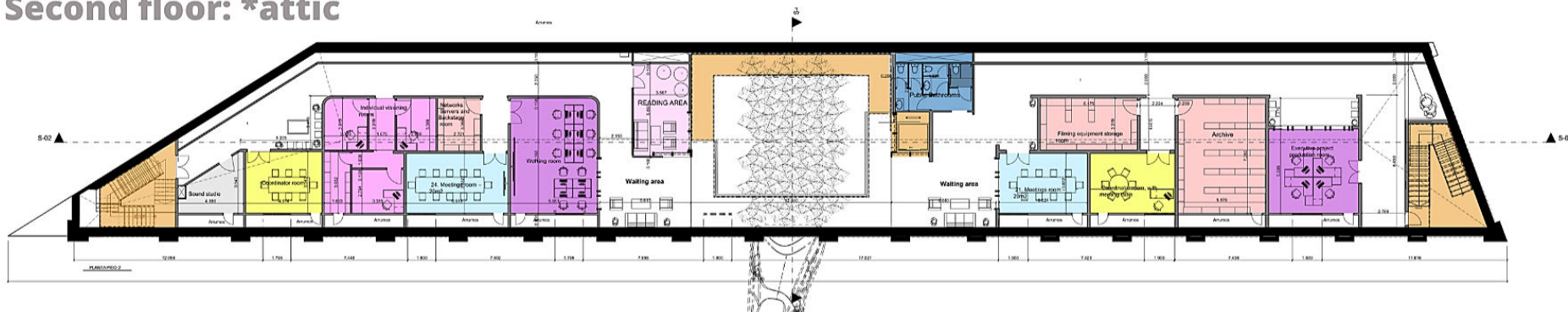
## First floor:



### Legend:

- Patio
- Visioning areas
- Exhibitions room
- Vertical circulation
- Cafeteria
- Shop

## Second floor: \*attic



### Legend:

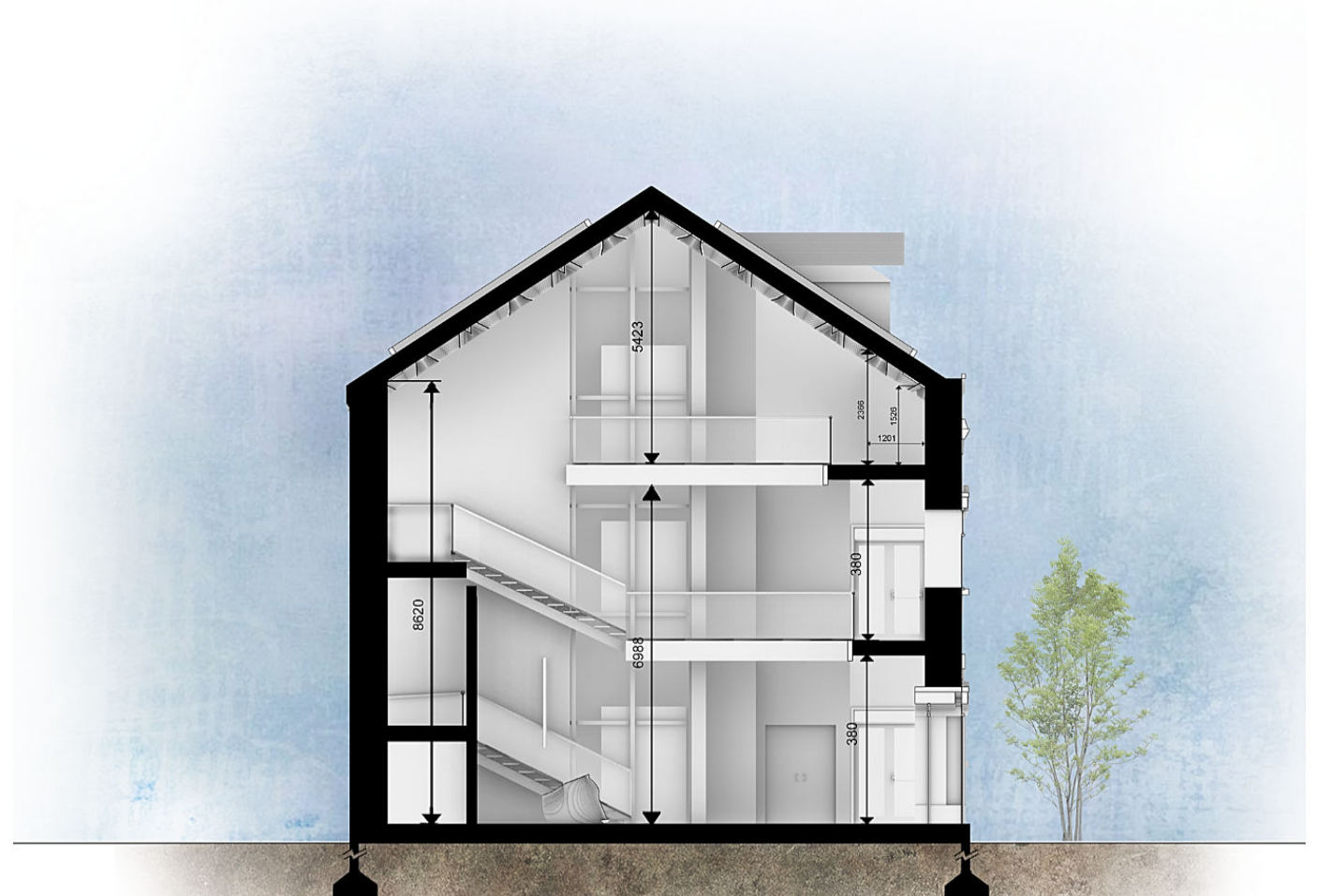
- individual visioning units
- Coordinators room
- Working space
- Vertical circulation
- Meeting space
- Archive and storage
- Sound studio



## Sections: Building A 1/200



**The attic: Before**



**The attic is now usable thanks to the lowered slab**



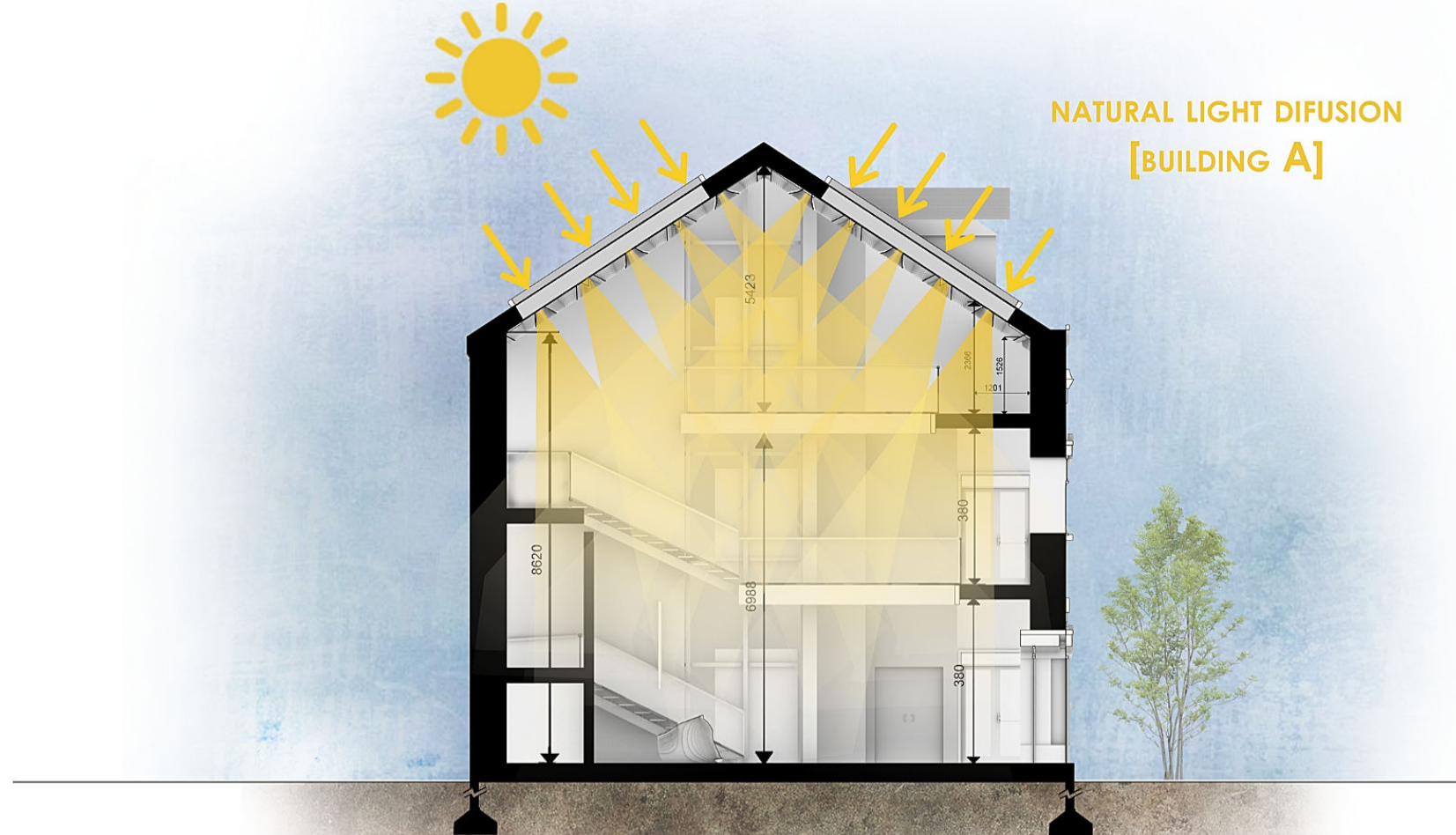
## Interiors: Building A Patio



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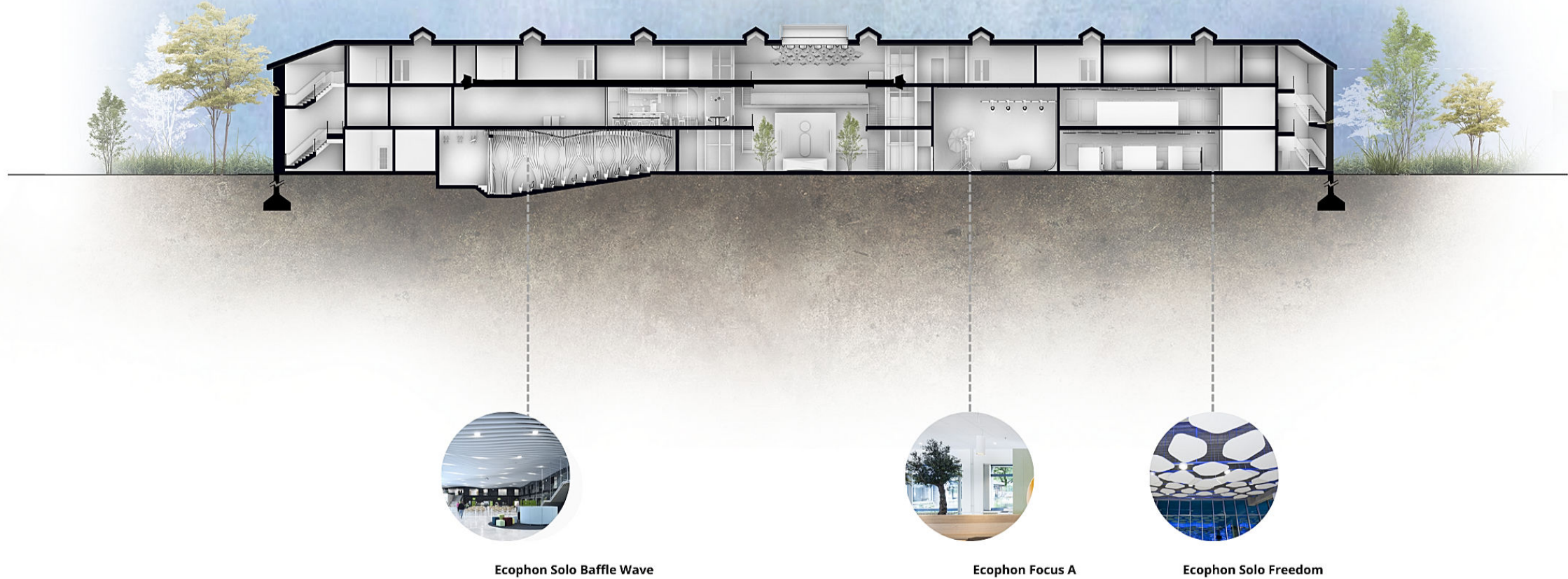
## Building A Patio: Natural light diffusion strategy



**The axis culminates in a triple-height central space that maintains an interior-external atmosphere thanks to the zenithal openings at the roof level. These openings are covered with a double skin that provides visual and thermal comfort by diffusing the sun's rays throughout the patio.**



## Building A Patio: Natural light diffusion strategy 1/200





## Interiors: Building A Auditory



The Wave



## Interiors: Building A Auditory



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## Interiors: Building A Cafeteria





## Interiors: Building A Cafeteria



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## Interiors: Building A Exhibition room





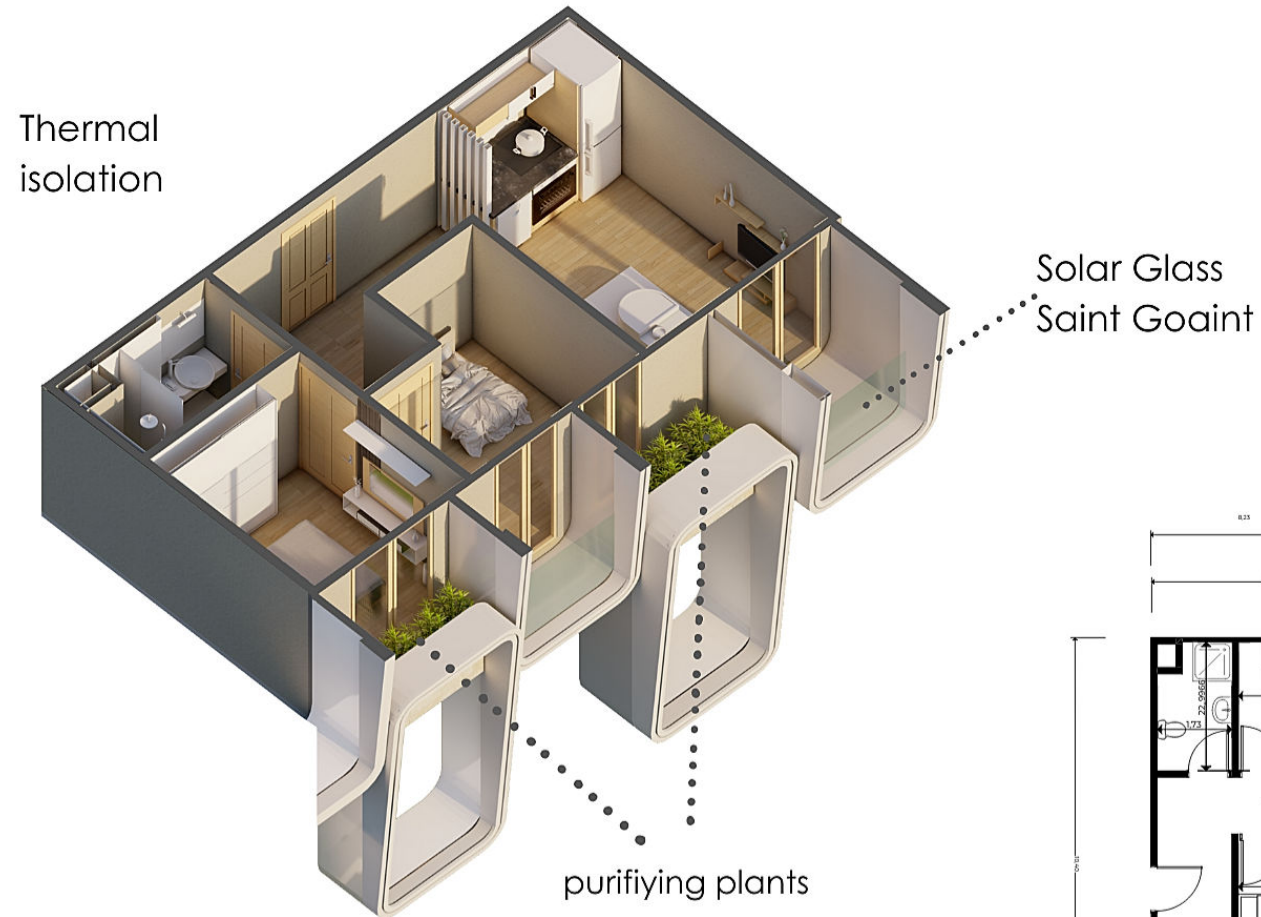
## Interiors: Building A TV/Cyclorama studio



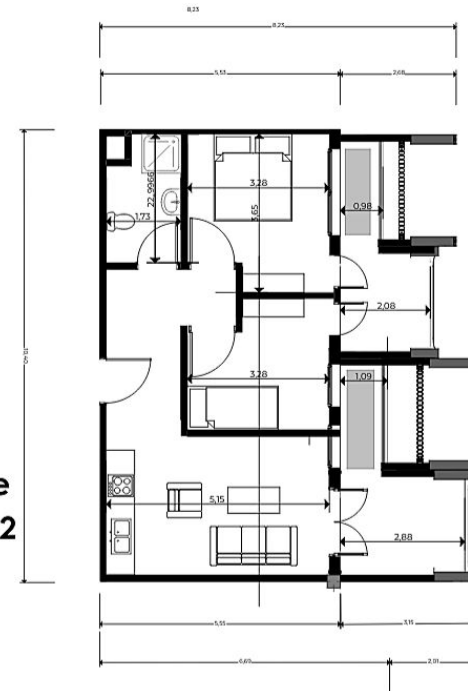
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## Studio two bedroom:



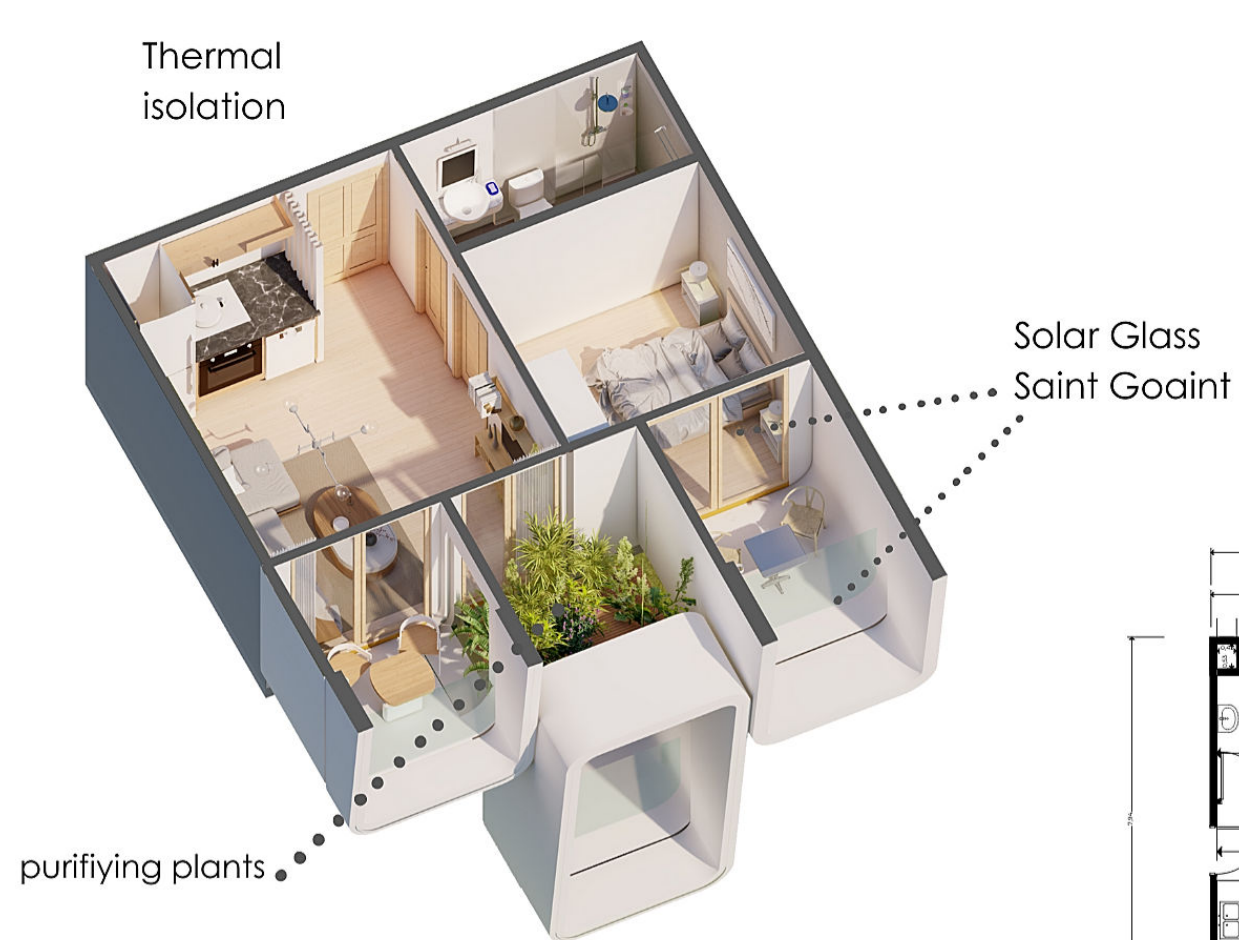
**"This type of two-bedroom apartment is composed of: two bedrooms, one toilet, a living space with kitchenette, with an area ranging between 50 m2 and 60 m2. This type represents 40.9 percent of apartments, which is equivalent to 27 apartments of this type."**



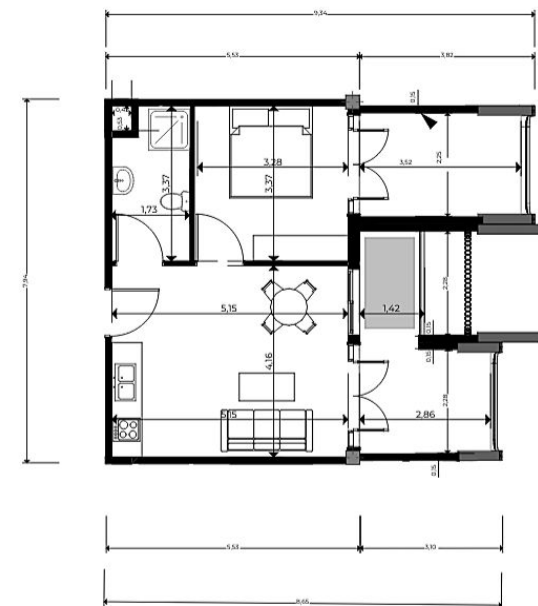
PLAN



## Studio one bedroom:



**"This type of one-bedroom apartment is composed of: one bedroom, one toilet, a living space with kitchenette, with an area ranging between 35 m2 and 41 m2. This type represents 59.09 percent of studios, which is equivalent to 39 studios of this type."**



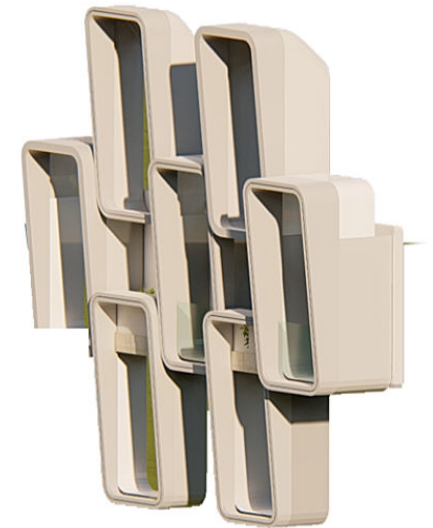
PLAN



## Studio one bedroom:



**The balconies themselves are not just functional, but also artistic, featuring sun blockers that were designed based on the sound signatures of Lisbon. The idea of incorporating an outdoor living area into each housing unit emerged as a response to the urgent need to reinvent housing in the wake of the COVID-19 pandemic, which highlighted the importance of having a natural space at home.**





## Studio interiors:



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## Studio interiors:



The Wave



## Studio interiors:





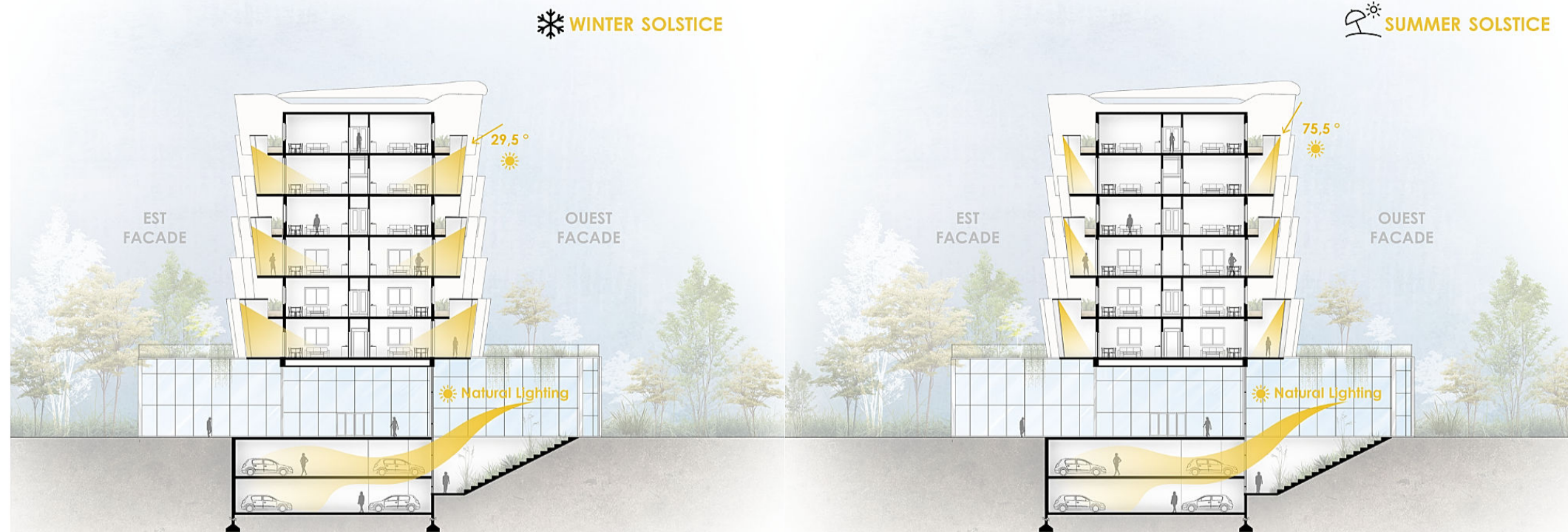
## Studio interiors:



The Wave

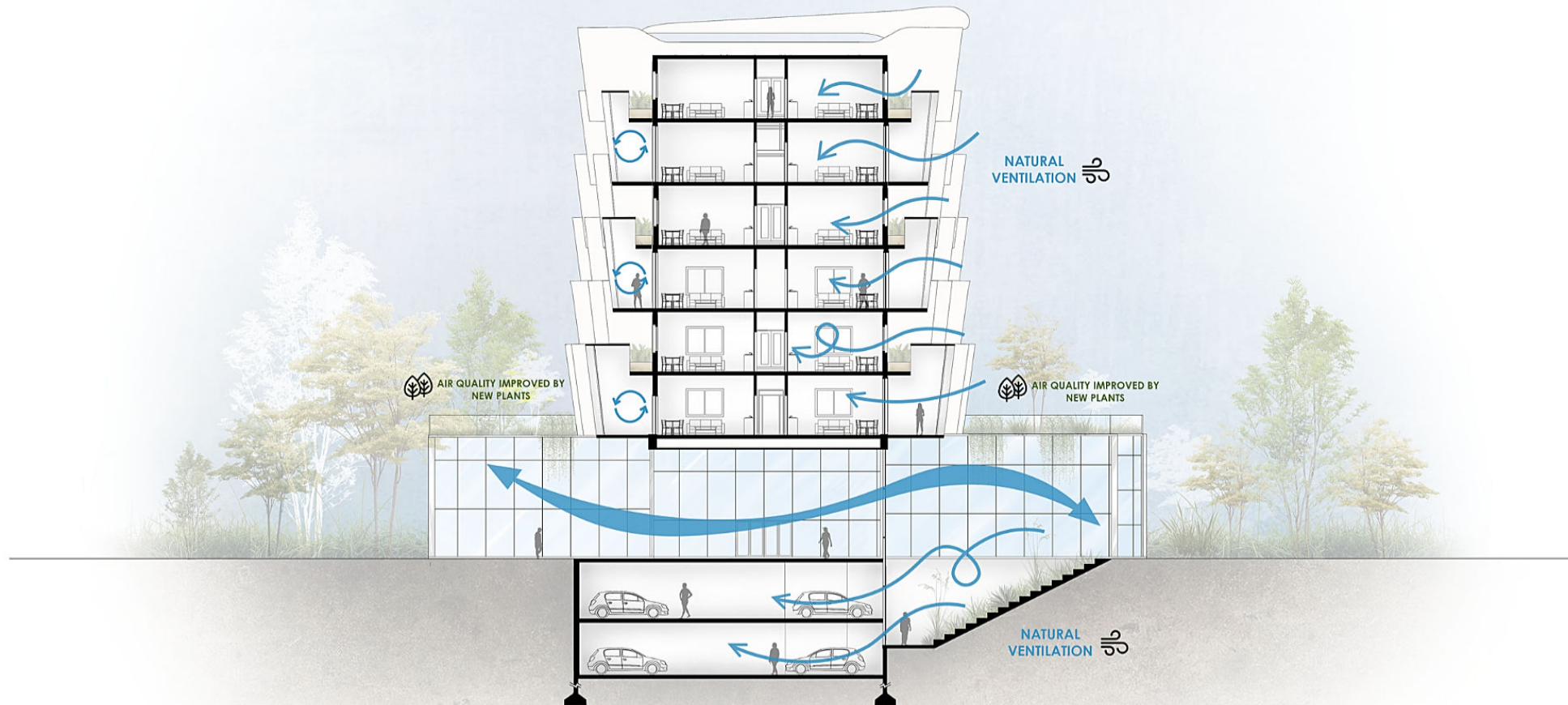


## Comfort strategy: Solar exposure building B



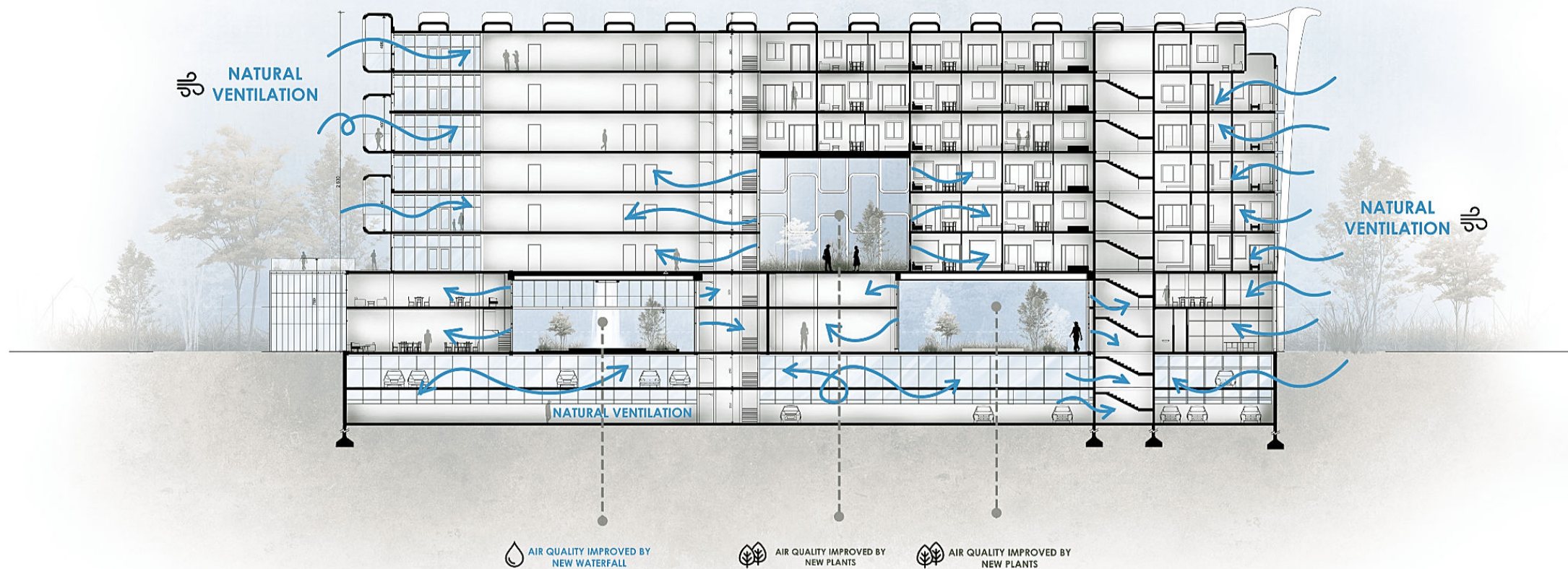


## Comfort strategy: Ventilation Building B



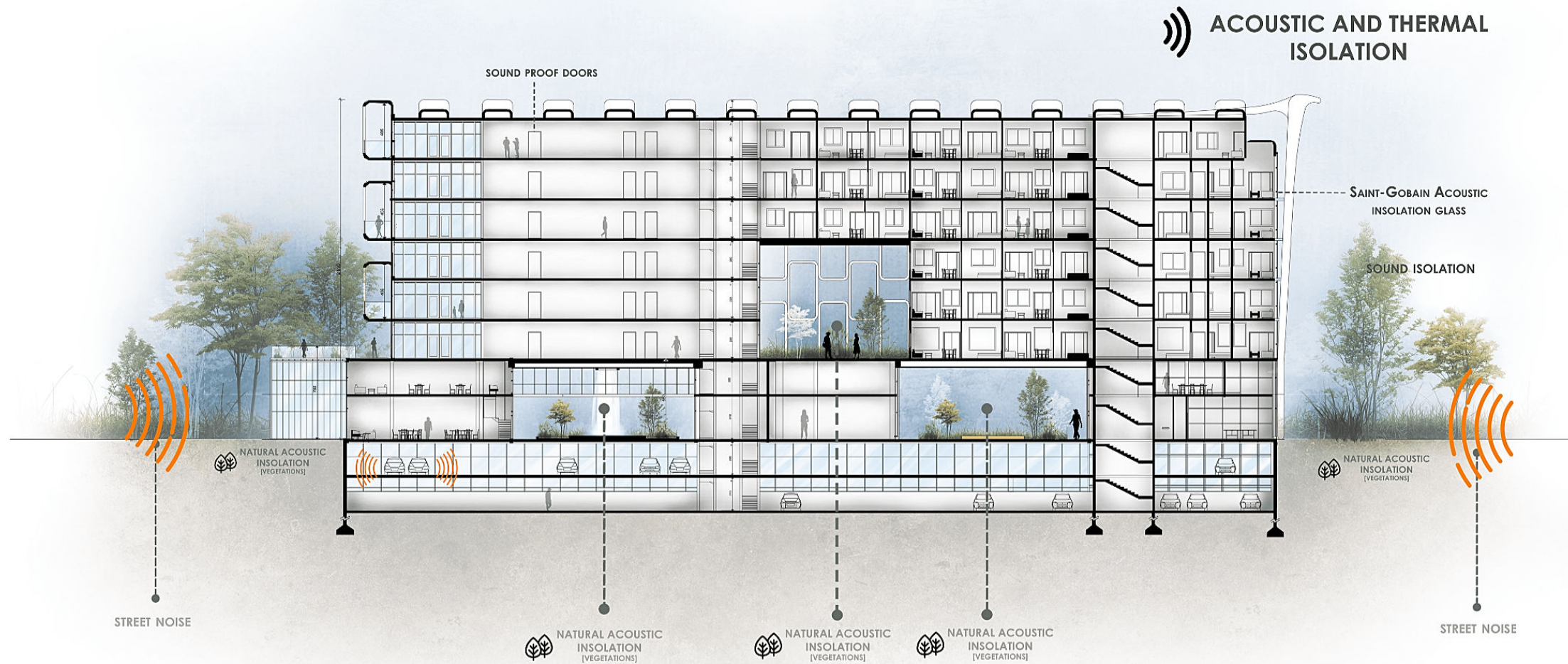


## Comfort strategy: Ventilation Building B



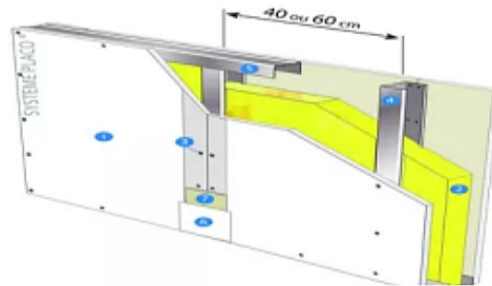


## Comfort strategy: Ventilation Building B

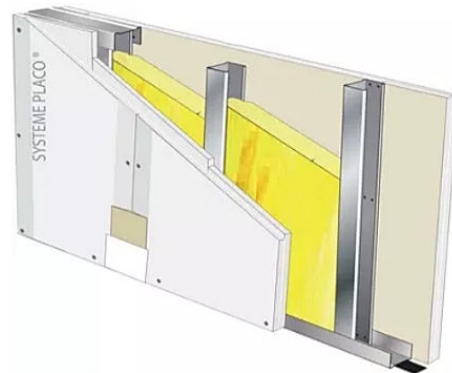




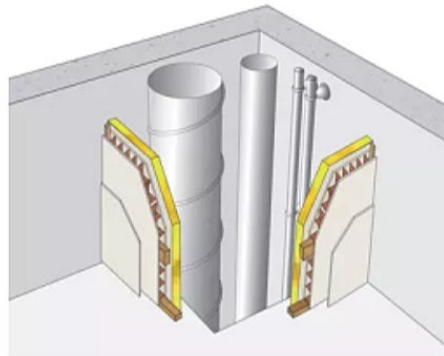
## Construction details:



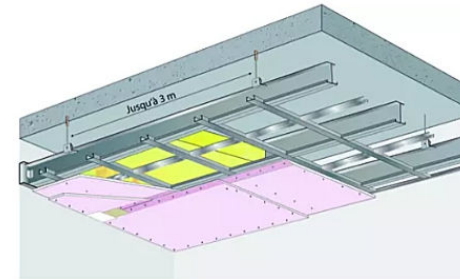
**Cloison distributive Placostil® 72/48 -  
1x Lisaplac®  
BA 13 avec M 48 - EI30 - 36dB - max  
3,45m  
Épaisseur d'isolant laine minérale  
(mm)  
45 mm**



**Cloison séparative Placostil® SAA  
120 - 2x Placoflam® BA 13 - EI120 -  
58dB - max 3,05m  
Cloison séparative Placostil® SAA  
120 2x Placoflam® BA 13 - EI120 -  
58dB - max 3,05m  
Épaisseur d'isolant laine minérale  
(mm) 60 mm**

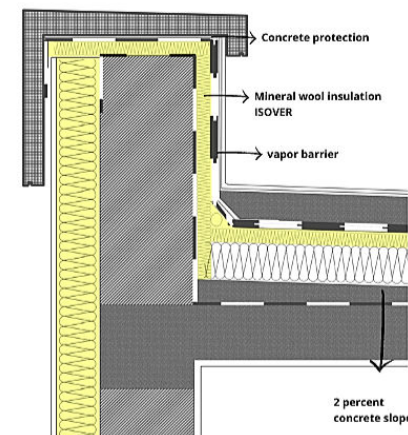


**Gaine technique verticale cloison  
alvéolaire + plaque - 1x Placopan®  
Marine 50 + 1x Placomarine® BA 18 -  
EI30 coupe feu de paroi - 34dB**

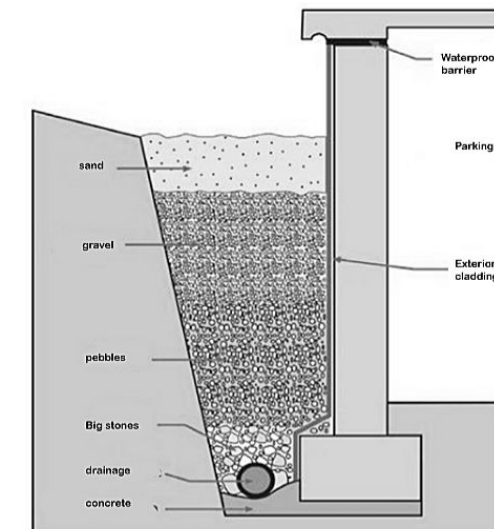


**Plafond longue portée Stil Prim®  
Tech - montage PRF avec entretoises  
sous plancher béton - 2x Placoflam®  
BA 15 - REI120 - portée max 3,30m**

### Roof detail:

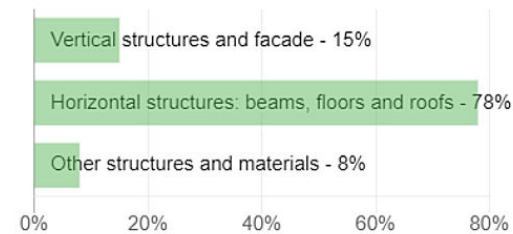
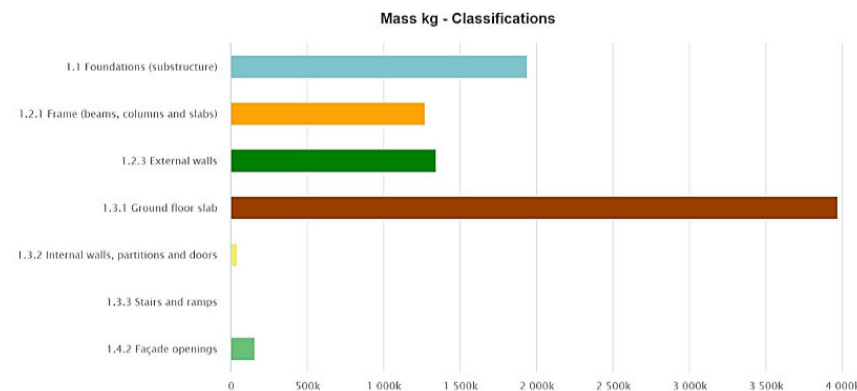
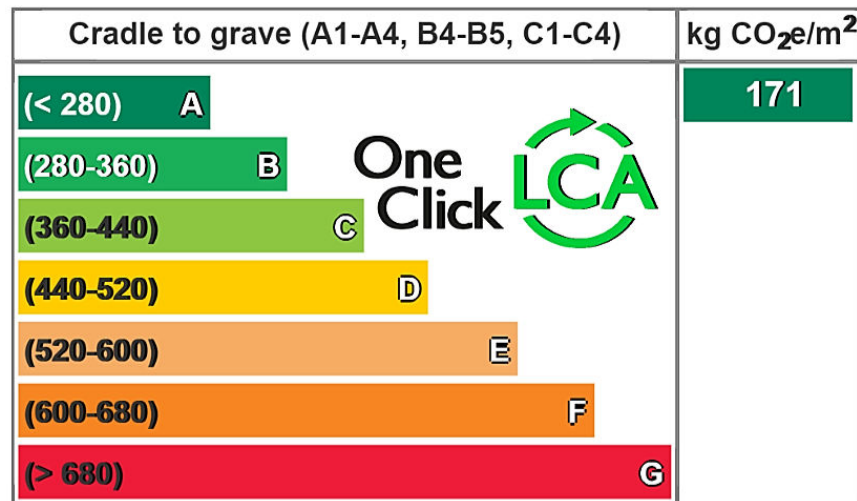


### Foundation drainage

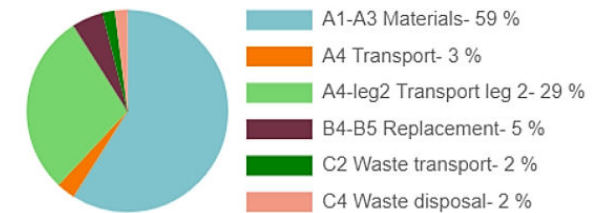




# Energy efficiency: LCA Results

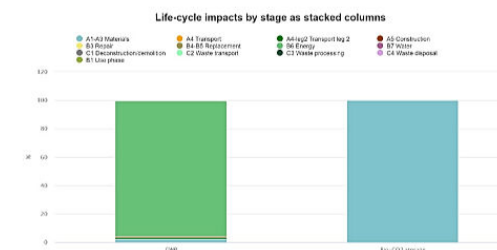
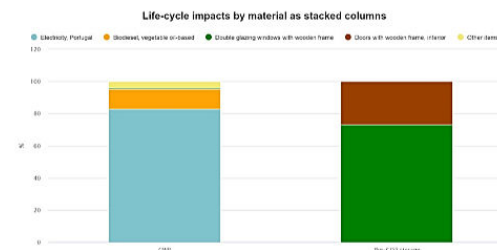
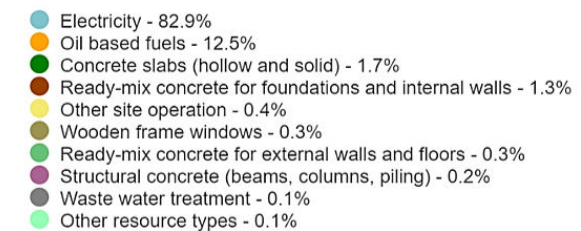


## Global warming potential:



## Global warming kg CO<sub>2</sub>e - Resource types

This is a drilldown chart. Click on the chart to view details

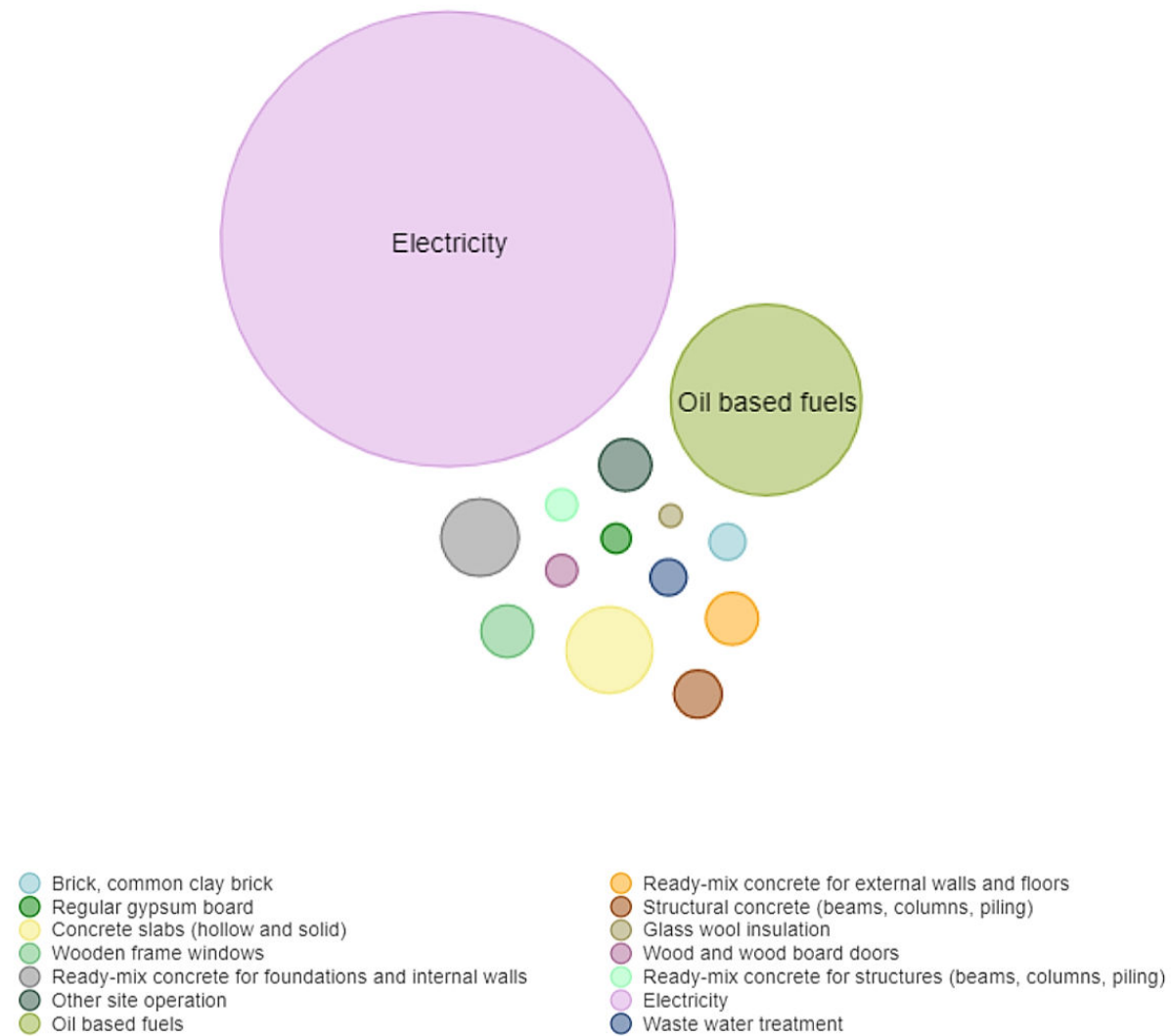




# Energy efficiency: LCA Results

## Bubble chart, total life-cycle impact by resource type and subtype, Global warming

Hover your mouse over legends or the chart to highlight impacts. Bubble minimum and maximum sizes constrained for readability





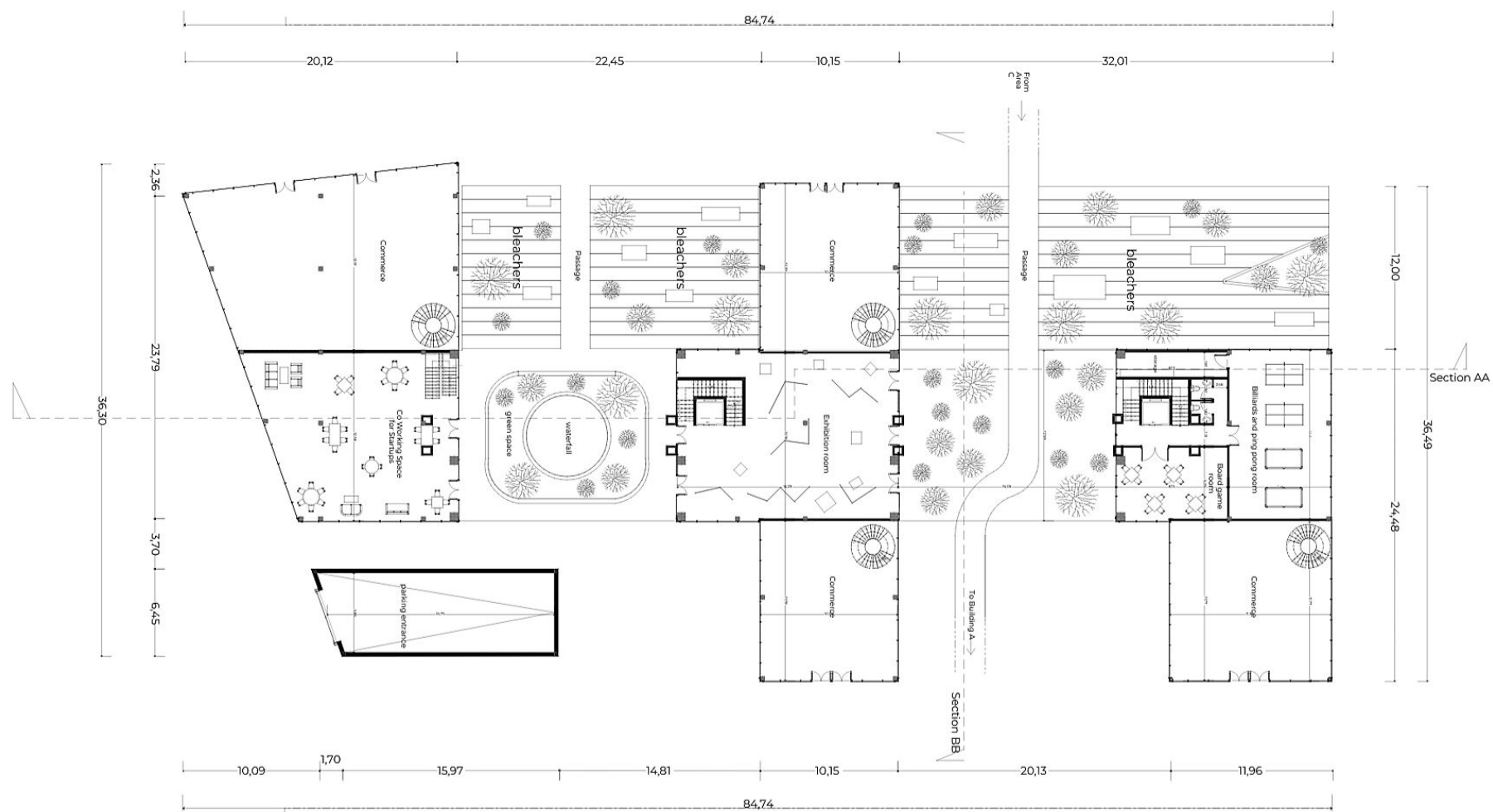
## View from Boavista Avenue



The Wave

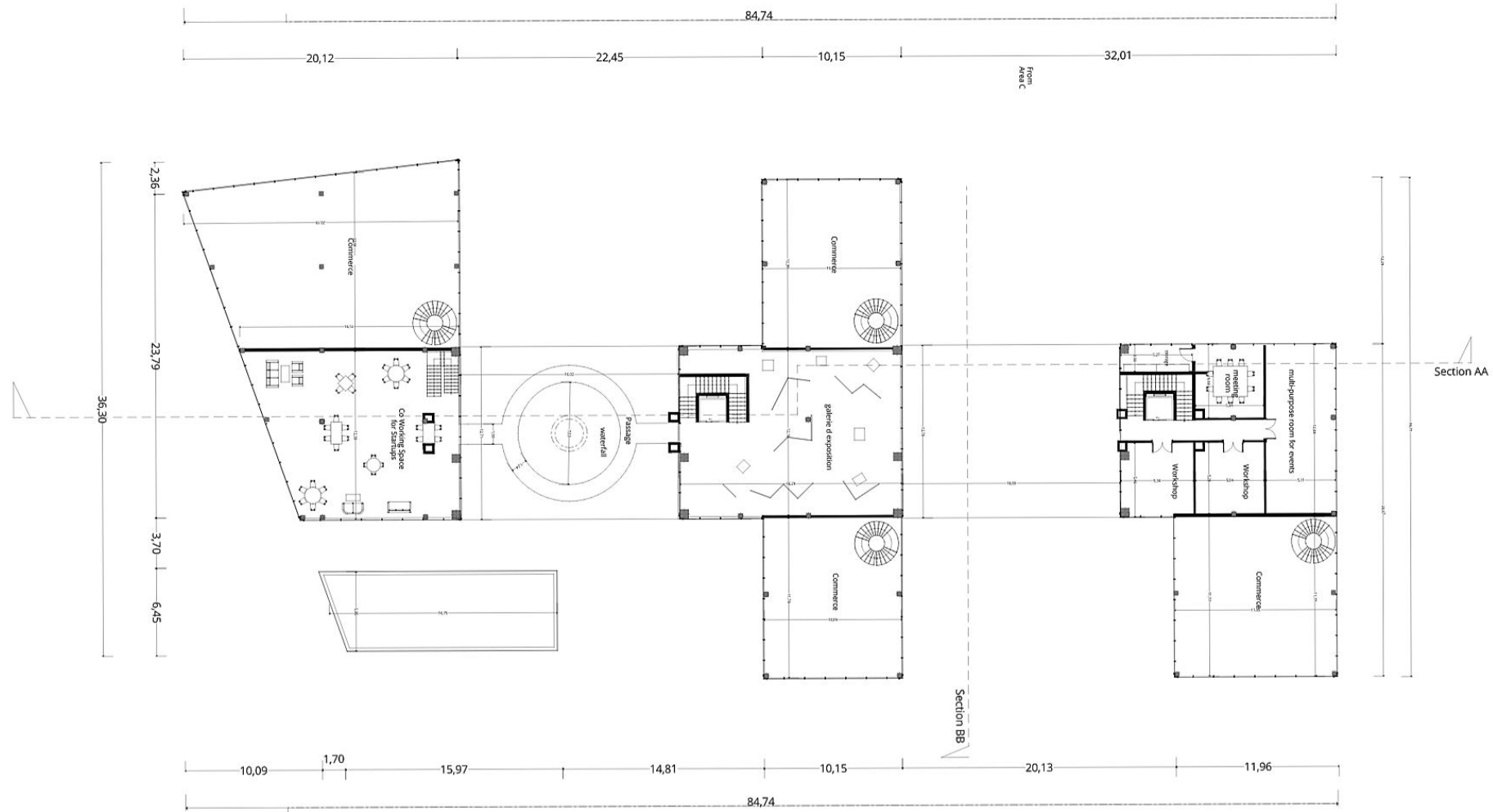


## Floor plans: building B : Groung floor 1/200

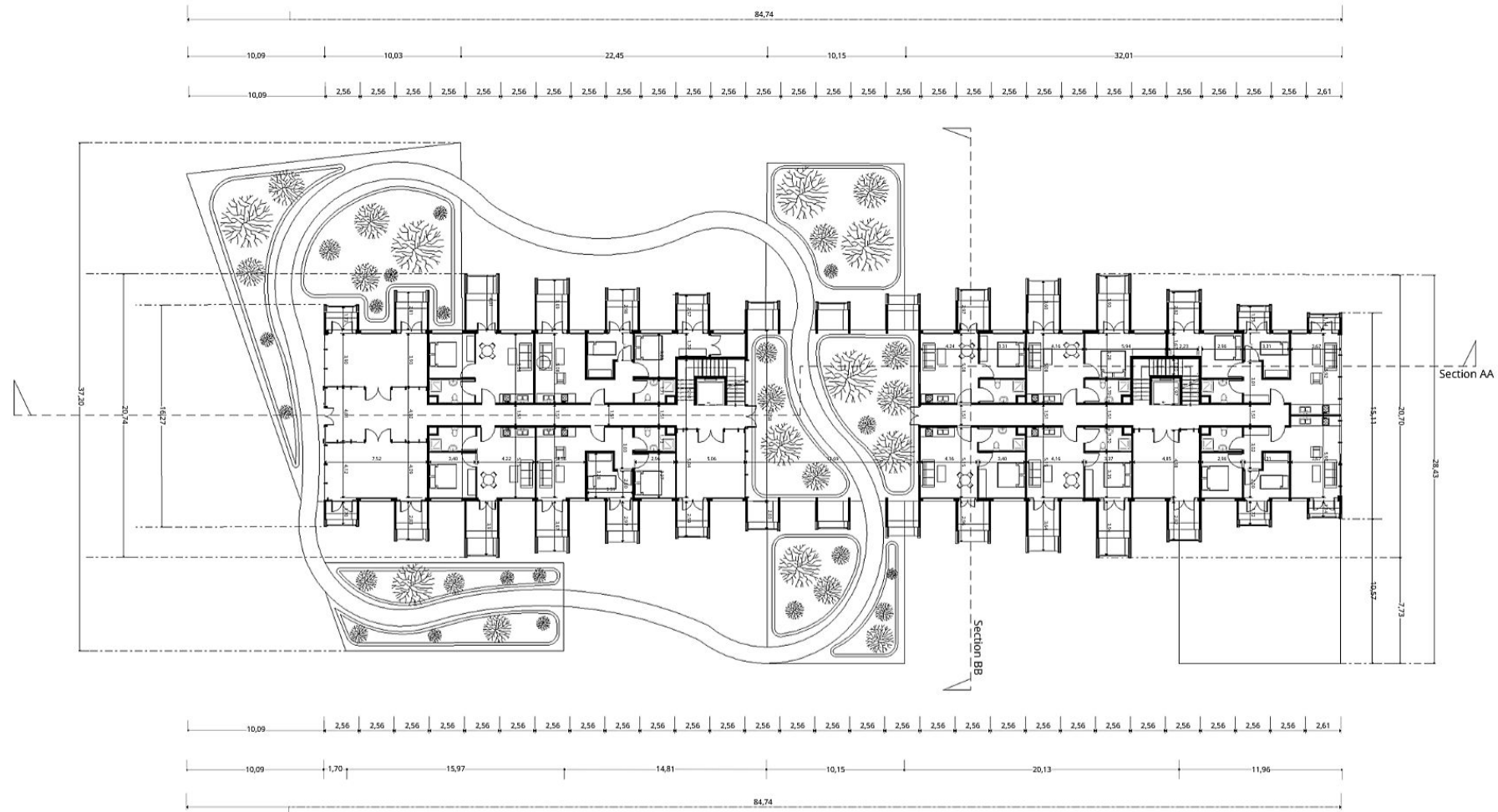




## Floor plans: building B : Mezzanine 1/200

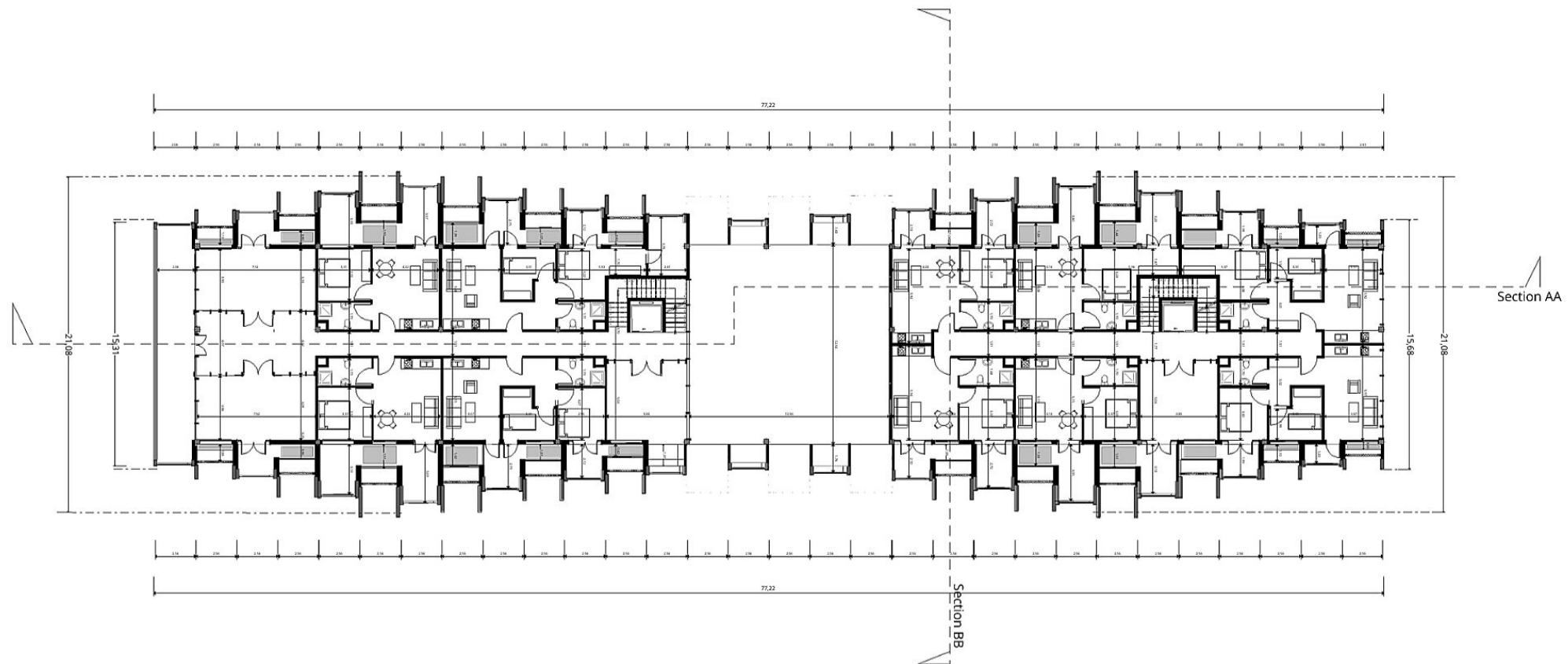


Floor plans: building B : 1st floor 1/200

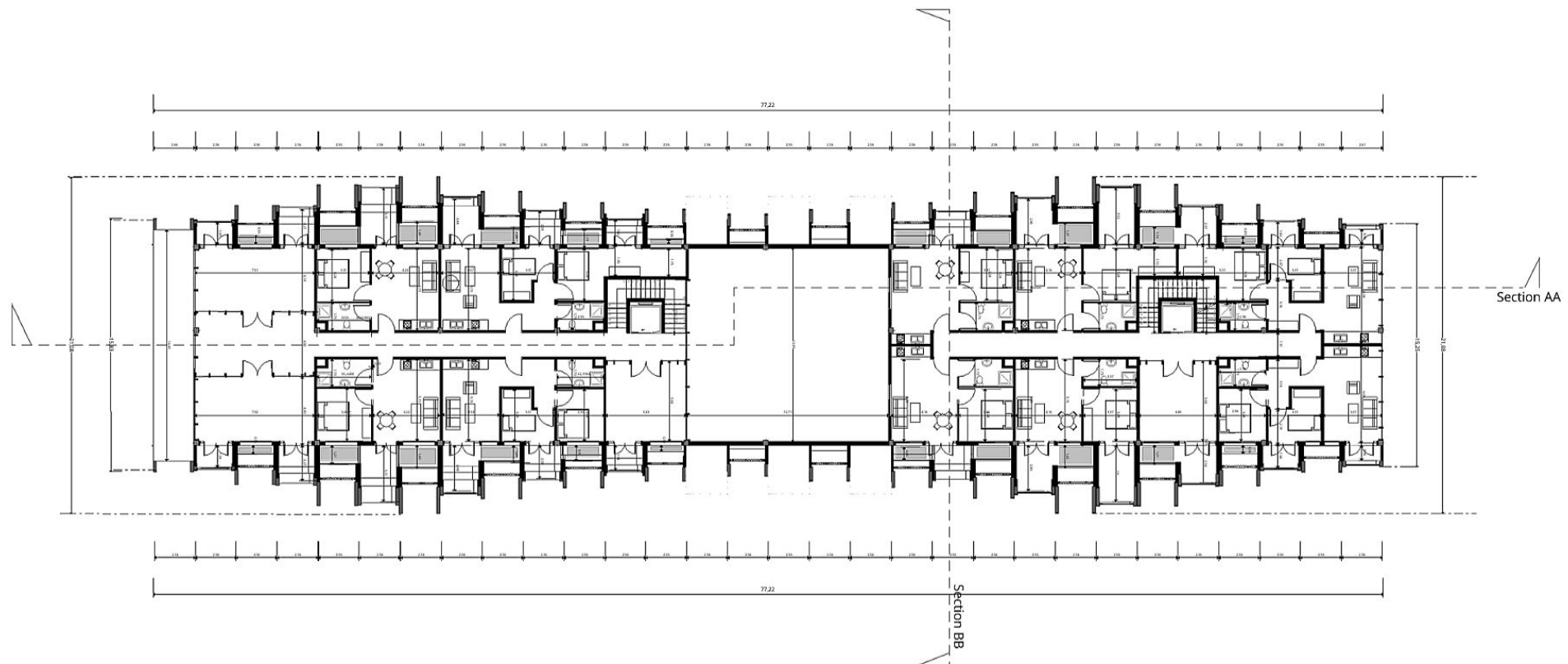




## Floor plans: building B : 2nd floor 1/200

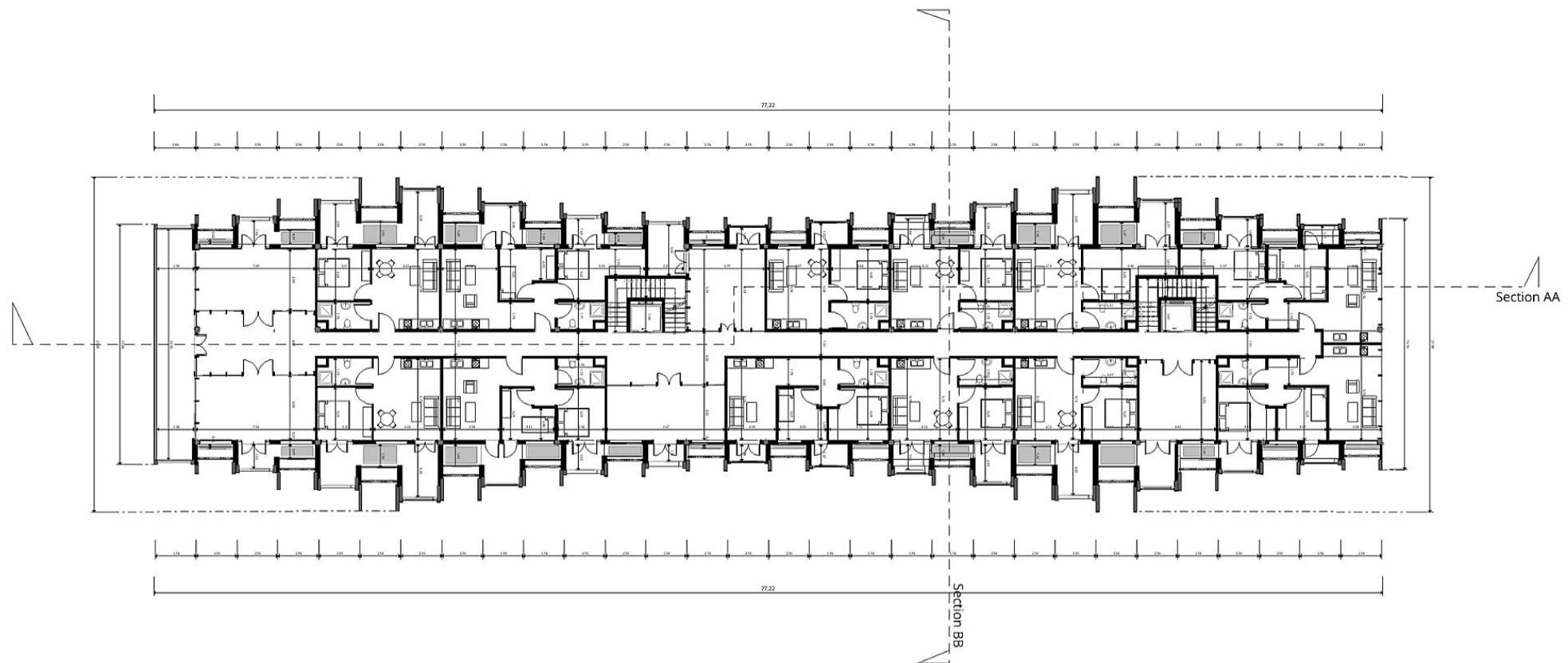


## Floor plans: building B : 3rd floor 1/ 200

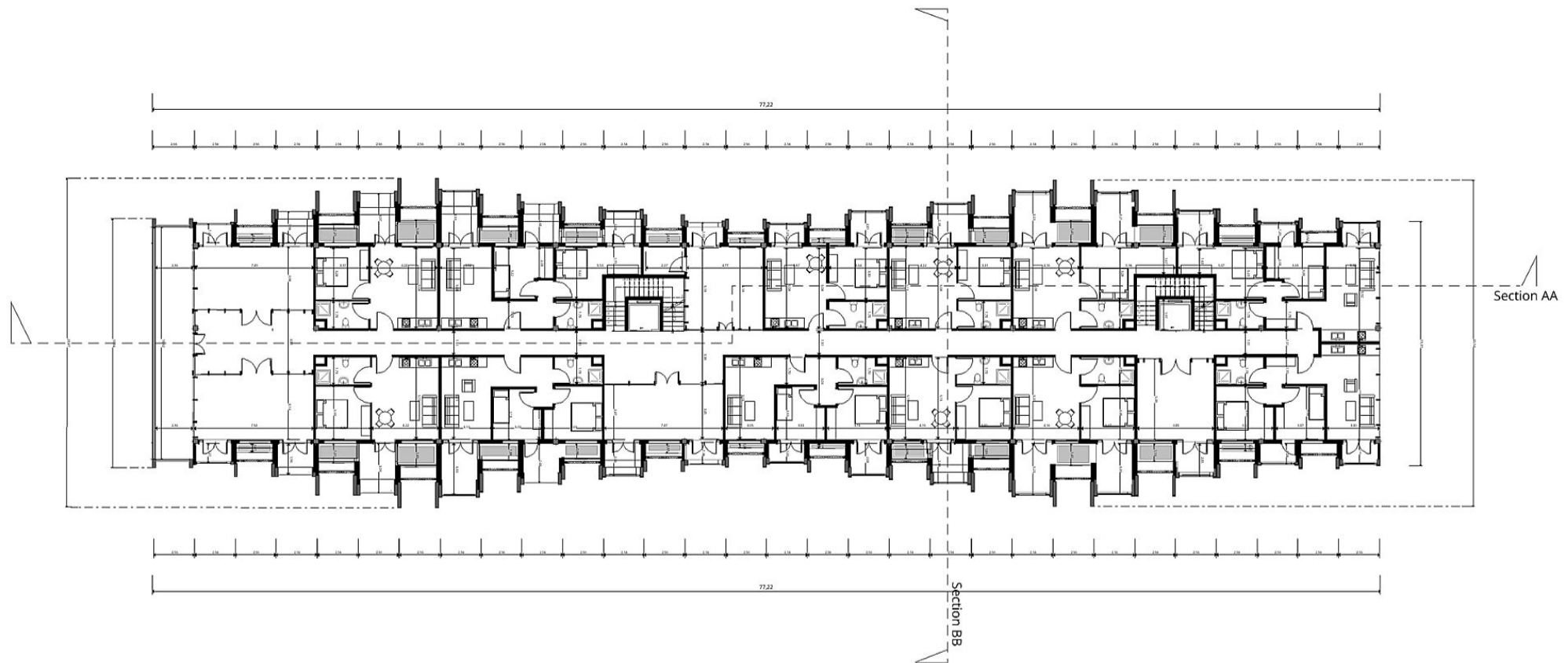




## Floor plans: building B : 4th floor 1/200

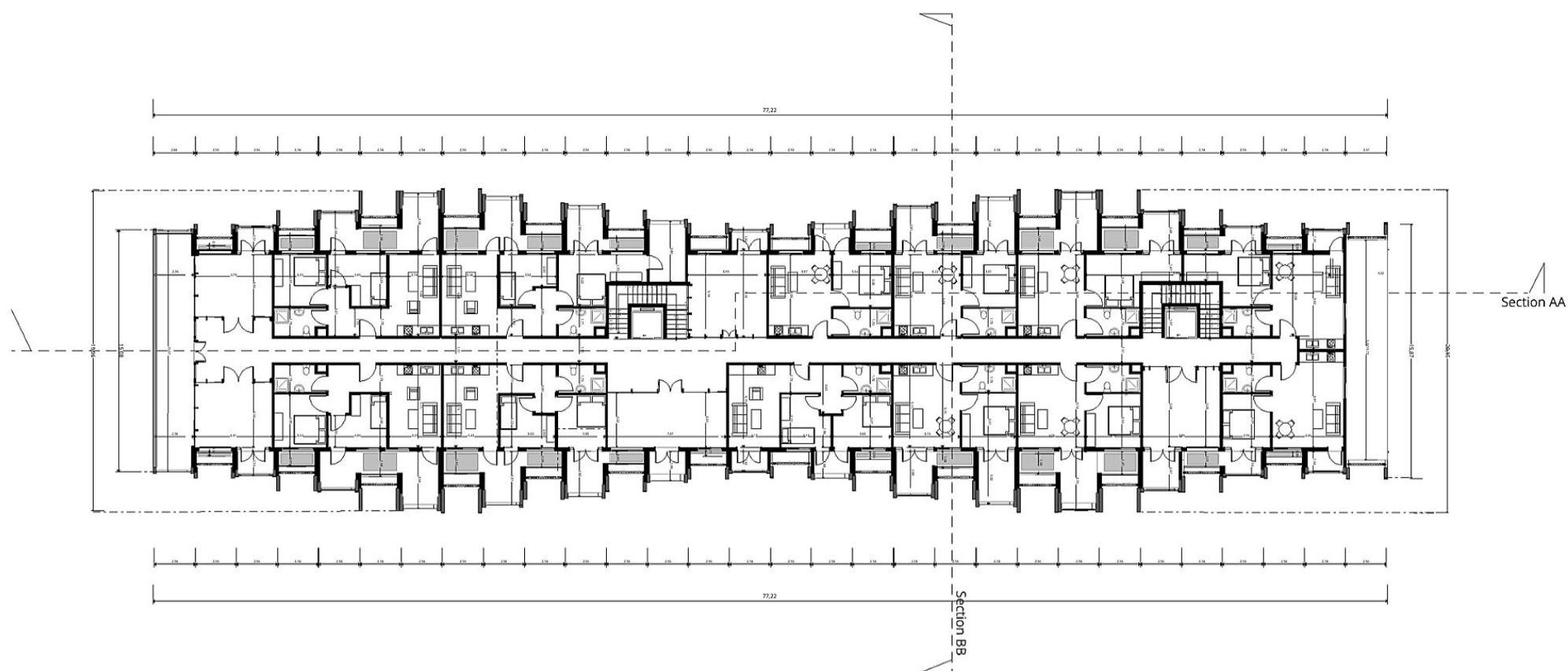


## Floor plans: building B : 5th floor 1/200

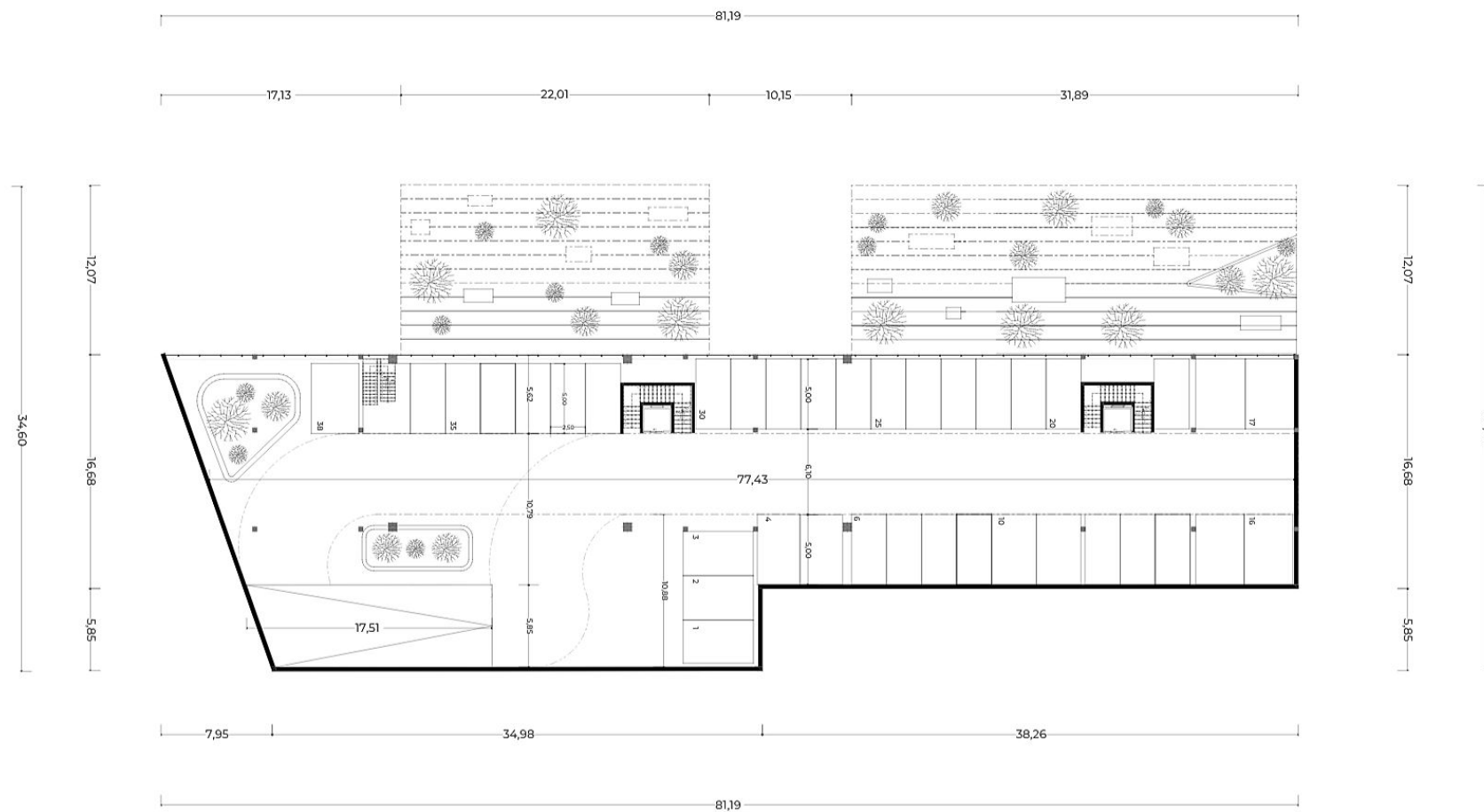




## Floor plans: building B : 6th floor 1/200

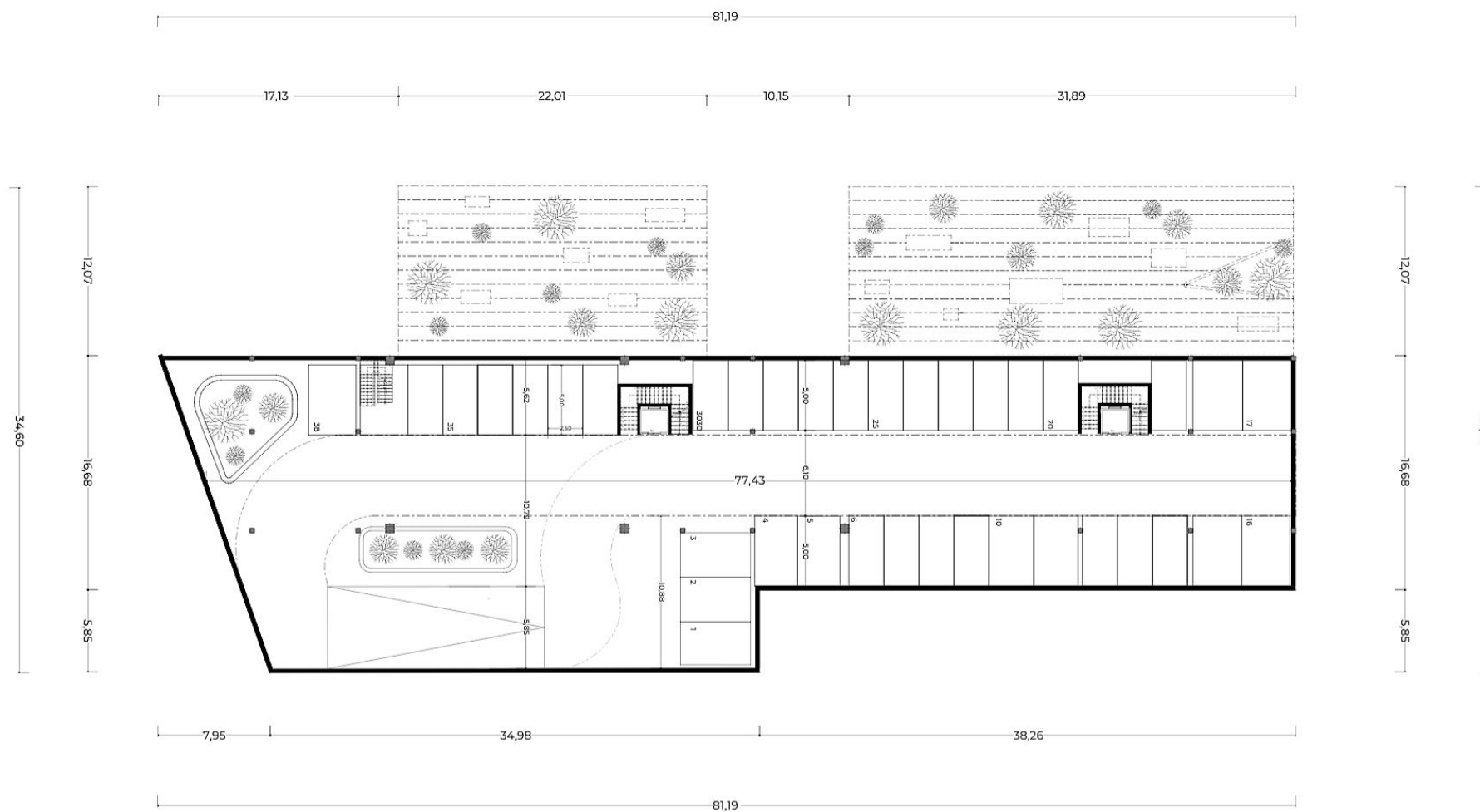


## Floor plans: building B : Parking -1 1/200

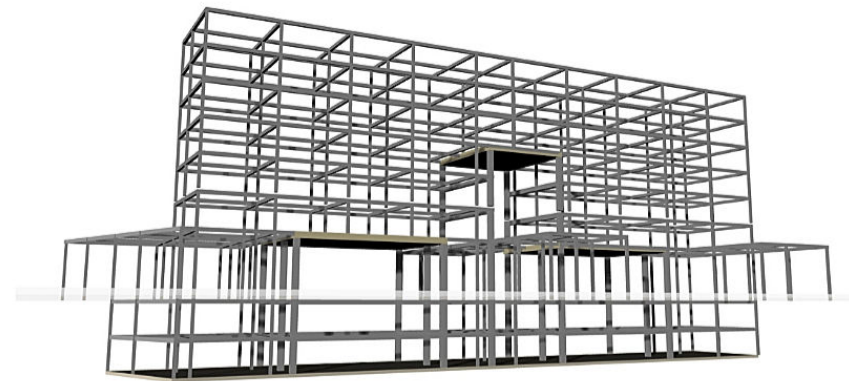
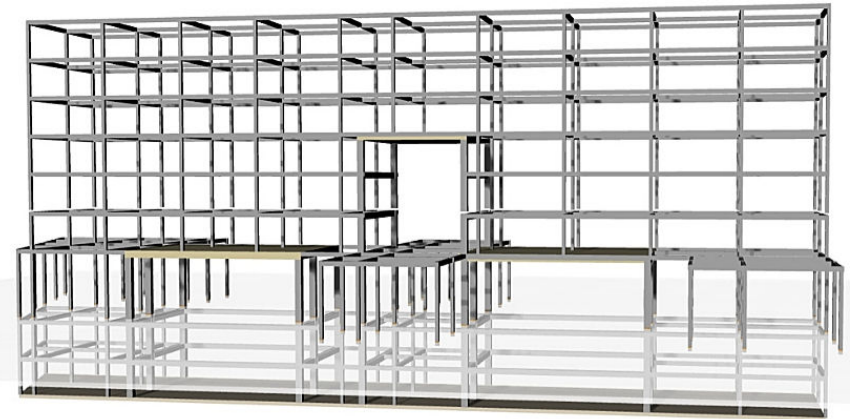
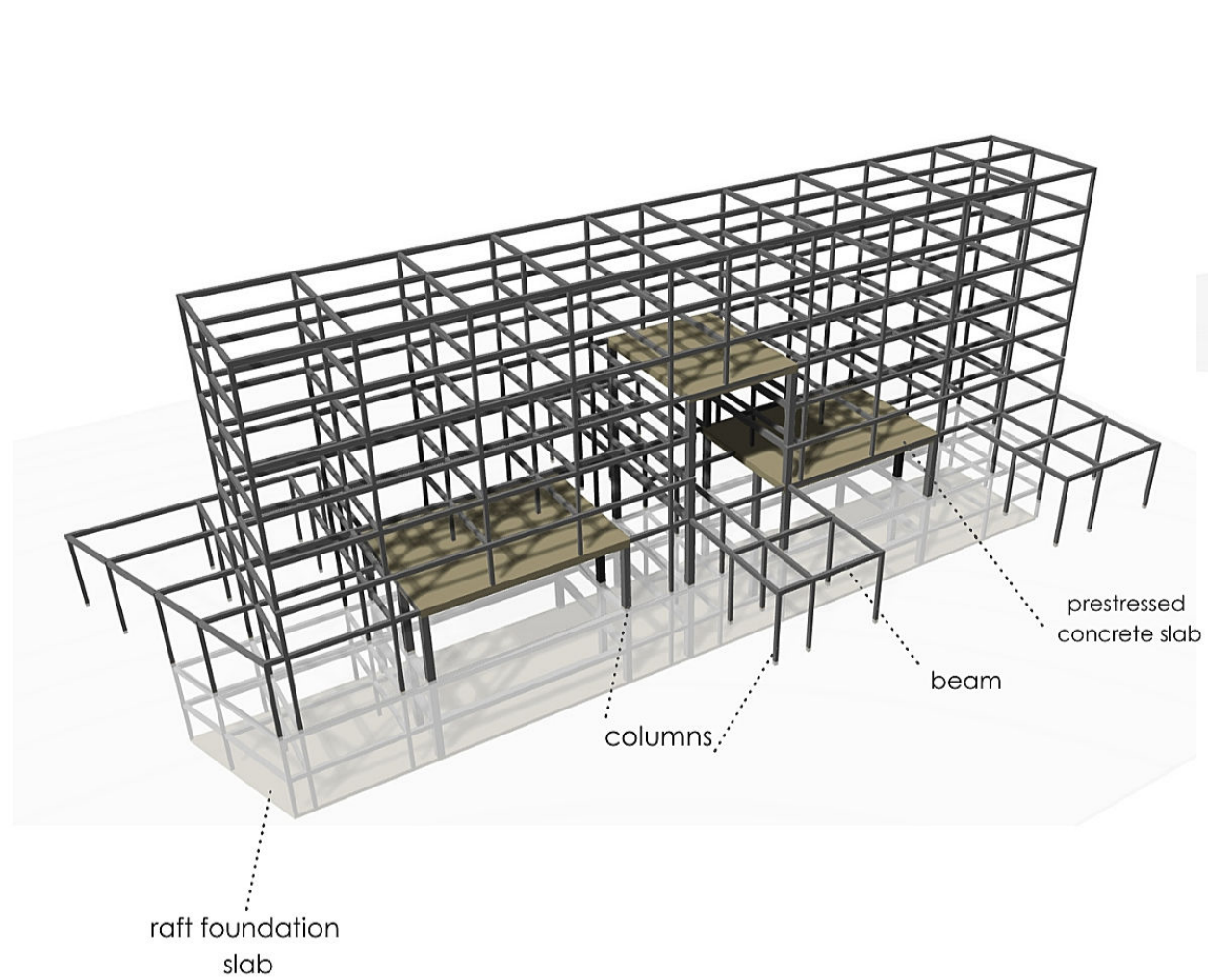




Floor plans: building B : Parking -2 1/200



## Structure detail:







## THE WAVE



THANK YOU