

**LEARNING LAB**  
Rethinking Økern secondary school

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The Oslo School of Architecture and Design 2021  
Supervised by Gro Bonesmo and Johanne Borthne

We want to extend a special thank you to our deeply knowledgeable supervisors - architects Gro Bonesmo and Johanne Borthne for the inspiring discussions throughout the process, architects Karl Otto Ellefsen and Halvor Ellefsen for their valuable input for our mid term reviews, architects Erik Langdalen and Ingrid Dobloug Roede for fascinating discussions on values and preservation issues, city antiquarian Janne Wilberg for her interest in our diploma thesis, operations technician Helge Bakko for showing us every corner of the building, The Oslo School of Architecture and Design for providing a solid academic framework and to our enduring families for their loving support.

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## LEARNING LAB

### - rethinking Økern secondary school

Learning Lab is a proposal for a new secondary school at Økern in Oslo. The project explores the potential of inhabiting a building from the past with a program for the future, and is a counter-proposal to the practice of building new before exploring the potential of existing structures in the locality.

#### Building schools

Oslo's School Needs Plan for the period 2022-2031 shows that eight out of ten planned school projects in Oslo are either delayed or postponed.<sup>1</sup> The budget for building and rehabilitating schools in Oslo is only half of what it was ten years ago.<sup>2</sup> With the capitol's rapid population growth, the need for schools is increasing beyond the current capacity. The strategy to solve this problem is currently to build temporary barrack buildings, with a planned service life of only 25-40 years.<sup>3</sup> These types of buildings have few to no requirements for architectural and spacial qualities.

As we know that our physical surroundings affect our wellbeing and behaviour, we question what consequences the downscaling and neglect of one of society's most important social infrastructures will have on future generations, local communities and society in general. How does the idea of the temporary school affect their sense of pride and belonging?

Through the project Learning Lab, we will rethink and explore the potential of what a future oriented school might look like. A school dimensioned for growth

and flexibility. Through reusing a structure where the main idea has been to last and expand into the future, we wish to make a proposal for a new culture hub for the local community.

#### Case study - Two opposing ideologies

In 2019 Refstad primary school in Oslo was demolished, only 14 years after completion. The school is now being rebuilt as a new structure on the same plot.

On the neighboring site lies a 20.000 square-meter building from 1967. The building is a good representative of the post-war industrial buildings which have been characteristic of the area. Designed by the renowned Norwegian architect Geir Grung to serve as the new headquarter for the rapidly growing fur industry, the project holds great architectural and cultural-historical values. Grungs idea was to design a building that could expand and grow - a building for the future. As the fur industry is today a tradition of obsolescence, the building met the same faith. Many of its intended qualities are today well hidden behind added light structures, as the building currently serves as a temporary media production center. The property was recently bought by OBOS, Norway's largest housing developer. Their wish is to demolish the building and use the plot for housing development. The tabula plena approach to the urban site seems questionable due to the buildings large CO2 footprint as well as the fact that it is in good condition. We think there will be lost potential if the

demolition proposal is put into practice.

The two neighbouring building sites, Refstad primary school and The former Center for Fur are clear representatives of two opposing ideologies. While one has little to no intention of future life and architectural qualities, the other is future oriented and built with the intention of lasting and expanding. They both were/are situated in Oslos largest urban development area where extensive growth is expected and where more schools are also being planned at the moment. One of them is Økern secondary school. As the project is still in the planning process we see this as a good opportunity for a counter proposal.

Our base is an existing building in need of a suitable program and a school program in need of a suitable structure.

What if one could benefit from the already existing resource: The former Center for Fur, and create cultural capital as well as preserve the the identity of place through adaptive reuse? Utilising the size of the 20.000 square-meter structure enables us to create added value as the size allow for adding more program and create a culture hub in the locality.

#### Design process - Add and elevate

As the urban area is undergoing drastic development plans, we have chosen not to focus on the immediate context of the site. We have designed the project with an inside-out approach, focusing on the

inherent qualities of the building and what it could possibly represent in the local community.

The 20.000 square-meter building offers an overcapacity of space in relation to the school program, leading us to ask how the school could play a central role in the city. What does the school represent as a social infrastructure? The surplus space allows for the school to give back to the community in the form of extra space to offer a broader range of activities.

The structure is a five-story pre-fabricated concrete column- and beam structure, organised in a 12x12 meter grid. The deep plan measures 82x48 meters with large parts built into the sloping terrain. Grung designed the building for the then prosperous fur industry, with high quality materials and an idea of a building that would be able to adapt to the changing premises of the future. This means that we have a flexible general building base with specific architectural qualities.

The very heart of the building is the auction hall. A 400 square-meter room with a grand skylight hanging freely from large concrete girders that run across the building's roof. Another immediate quality is the two driveways that open up the basement floor, making it possible to create a drive in flexible basement.

Through our studies and analysis of the building we have discovered qualities and opportunities we wish to evolve on

and celebrate in the project. We believe that combining our findings with new interventions can create spatial richness and add value to the new school. Our ambition has been to intervene with minimal changes to create maximum effect. Interventions are made on the inherent premises and logic of the building.

#### 1. Remove

Our first intervention was a grand cut in the roof, first floor and ground floor in order to bring daylight into the plan. The cut will follow the 12x12 meter grid and the logic of the construction. This intervention makes it possible to fit a multi-purpose hall and create spacious areas with daylight.

#### 2. Replacing infrastructure

Two existing cores are replaced and another one added as an efficient layer of vertical circulation, washrooms and technical shafts. The main staircases are kept as they are in great condition and valued as material gems in the project.

#### Organisation

The project lies in a sloping terrain and meets the ground at three levels; the basement, the ground floor and the first floor. We have placed all program that will be publicly accessible on the lower areas of the building and more specific school areas on the upper areas.

With the idea of the lower part being accessible to the public outside school hours for sports events, courses and social gatherings. The upper part contains classrooms and communal areas and has a quieter atmosphere fit for concentration and work. Each floor is given a different character, both celebrating the existing qualities and adding new spatial connections.

#### A walk through

Basement: The former janitors apartment

is turned into a new public entrance and leads the way into a large multi purpose hall - a triple-height construction free space carved out in the center of the mass. A stage is added and support areas pushed out to the periphery of the plan. A new roof enables large hanging installations such as lighting and technology in addition to room-dividing elements. The existing car ramps are kept allowing for a wide range of events to take place underground. Sports events, concerts, fairs and other large public gatherings.

Ground floor: At the ground floor the cantina area overlooking the multi-purpose hall has a seamless flow out in the schoolyard. The non-heretical free plan with flexible furnishing is a landscape in constant movement and change. The furnishing can be quickly remodelled and used for the local community on weekends and evenings. Three smaller boxes can be closed off. One for storing furniture and exhibition materials, a reception at the main entrance and the canteen kitchen.

Middle floor: Workshops in a row that can be used for educational purposes both during school hours and in the evenings by the greater community.

First floor: This floor has classrooms along the facades, encircling a common space in the middle with a library and open auditorium, liberating the existing auction hall hanging from above. A new glass roof draws light down into the open auditorium and learning landscape.

#### Learning Lab

The organisation of the main educational plans have derived from researching the school as a typology. While it has long been clear in office and housing that the typologies from 100 years ago no longer correspond to contemporary working and

living requirements, school buildings are still being planned and constructed based on outdated model space allocation plans. The current model is often manifested physically as rigid spaces, unsuitable to meet the need for a more diverse and inclusive education for our time.

Bartles & Pampe states in the book «Sustainability in School buildings» from 2021

«If the individually diverse talents and needs of all children and adolescents are to be accommodated, learning environments today must be able to meet dynamically changing user requirements. Functionally rigid spatial concepts, as represented by «one classroom = one class = one subject = one teacher» is no longer sustainable».

The old learning model is based on a 70%-80% teacher-centred learning, 15 % homework, 5-20% studying in pair or group-work. In today's learning model there is only 30% teacher-centred learning, then 30% individual learning, 30% learning in small groups, and 10% learning within the class. This new model opens for rethinking the school building and introducing new ideas for educational spaces. The learning landscape is an answer to contemporary ways of learning, with clusters of furniture, spaces for group work and single studying.

The second floor is primarily dedicated to the learning landscape with a variety of spaces and situations to choose from. The hanging auction hall - the former heart of the building - can be made into a grand auditorium. The space is opened up in an axis across the plan, emphasised by a new spacious balcony. A retracted balcony towards the south creates a new quality and moment in the learning landscape.

The variety of spaces in these two

educational floors allow for a more dynamic learning environment, flexible enough to meet the changing needs of the students. The open auditorium connects the two floors into one learning landscape, creating a gathering space centred around the hanging auditorium.

The roof can be turned into an educational roof garden as an extension of the learning landscape. This landscape contains a greenhouse and educational areas in close connection to the experimental gardens.

#### Conclusion

In the process of rethinking Økern secondary school, we have discovered that the school is a program well suited for fitting into existing structures. We think that the strategy of reusing built structure for new school buildings could be a win win both in terms of sustainability and preservation of the local history as well as the possibility of spatial richness and added value to the school.

We believe in the idea of a Learning Lab as the new culture hub at Økern, as a place both the locality and the future generations can benefit from.

1 - The total budget was 1,7 billion in 2021 against 3,5 billion in 2013-2015. Ruud, Marianne. "Oslo Høyre foreslår en milliard mer til skolebygg hvert år" Utdanningsnytt. 11.11.2021 <https://www.utdanningsnytt.no/hoyre-osloskolen-skolebehovsplan/oslo-hoyre-foreslar-n-milliard-mer-til-skolebygg-over-to-ar/302558>

2 - Intisaar, Ali. "Oslo-skole må rives 14 år etter at den ble bygd". NRK. 02.05.2019 <https://www.nrk.no/osloogviken/oslo-skole-ma-rives-14-ar-etter-at-den-ble-bygd-1.14536138>

3 - "OBOS har kjøpt stor eiendom i Oslo" Fremtidens Byggenæring. 15.12.2020 <https://www.fremtidensbygg.no/obos-har-kjopt-stor-eiendom-i-oslo/>

# PROGRAM

## ARCHITECTURAL PROGRAM

Adaptive reuse of a concrete building from 1967. Through our studies and analysis of the building we have discovered qualities and opportunities we wish to evolve on and celebrate in the project. We believe that combining our findings with new interventions can create spatial richness and add value to the project. Our ambition has been to intervene with minimal changes to create maximum effect. Interventions are made on the inherent premises and logic of the building.

## FUNCTIONAL PROGRAM

Through the project Learning Lab, we will rethink and explore the potential of what a future oriented school might look like. A school dimensioned for growth and flexibility that also serves as a social infrastructure in the local community. How can the new grand school be a recourse for more than just the students? The surplus space allow for the school to give back to the community. Through reusing a structure where the main idea has been to last and expand into the future, we wish to make a proposal for the school as a new culture hub for the local community.

*Right side: Funtional program. Existing requirements for school buildings has been our starting point for developing Learning Lab. Grey boxes describe the standard area requirements for a secondary school, dimentioned for 1080 students. The white boxes are our notes and modifications from early in the prossess.*

| Area description  | Quantity    | m² per     | Total          | Notes   | Our notes   | Ceiling height min   | Noise  | Connection to   | Malleable/Non-malleable  | Introvert/extrovert                       | Light/dark | Modifications  |
|---|-------------|------------|----------------|---|---|--|--------|---|--|---|------------|--|
| General learning areas (class- and group rooms)                       | 1080        | 2,5        | 2700           | x   |   | Normal - 2,7   | Low    | Additional area home area   | Malleable, but needs space for traditional lectures with teacher and 30 students   | Introvert                                 | Light      | Avoid the traditional hallway classroom solution. Create diverse spaces in-between                       |
| Additional area home area   | 1           | 180        | 180            | x   | Should there be home zones at all? Pupils or different ages could benefit from mixing, like siblings do. They learn to take care of the younger and learn from the older. | Normal - 2,7   | Medium | General learning areas (class- and group rooms)                               | Malleable  | Introvert                                 | Medium     | Common space used for diverse activities   |
| Student wardrobes and bathrooms                                       | 1080        | 0,525      | 613            | x   |   | Normal - 2,5   | Medium | General learning areas (class- and group rooms).                              | Malleable. Some requirements (see standard requirements document for more details) | Introvert                                 | Dark       | Exposed placement to avoid bullying  |
| Workplace for educators   | 98          | 7          | 686            | Work place/team room, 11 students per teacher   |   | Normal - 2,7   | Low    | General learning areas (class- and group rooms)                               | Malleable. 1,4m desk. Groups of 4-6 teachers.                                      | Introvert                                 | Light      | Accessible for students, easy to reach out to a teacher with problems                                    |
| <b>Total - Home area</b>  |             |            | <b>4179</b>    | x   |   | x  |        | x   | x  | x   | x          | x  |
| Auditorium  | 1           | 160        | 160            | x   |   | Tall - 2,7   | High   | Free placement  | Malleable, partly  | Extrovert                                 | Dark       | Could be rented out to the public and used for large gatherings of students. Possibly for culture events |
| Library   | 1           | 420        | 420            | x   |   | Normal - 2,7   | Low    | Free placement  | Malleable  | Extrovert                                 | Medium     | Open to public in the evenings. Media services (3D print, sewing machines etc)                           |
| Music   | 1           | 260        | 260            | x   | Open for band rehearsal and small concerts outside school hours.  | Hey - 4,0  | High   | Free placement. Needs support storage areas etc.                              | Malleable. Acoustic requirements.  | Extrovert                                 | Dark       | Diverse rooms and additional program in connection to stages.  |
| Arts and crafts   | 1           | 440        | 440            | x   | Open for the public. Amplify.   | Normal - 2,7   | Low    | Free placement. Close to library?   | Malleable  | Extrovert                                 | Medium     | Amplify this program. Make a ceramics room with oven. NB heat and pipe. Technical                        |
| Technology and design   | 1           | 186        | 186            | Co-use with science   |   | Normal - 2,7   | Low    | Common space/canteen  | Malleable  | Extrovert                                 | Medium     | Think about possible use after school hours  |
| Science   | 1           | 186        | 186            | Co-use with technology and design   |   | Normal - 2,7   | Low    | Preparation and growth  | Malleable, partly  | Extrovert                                 | Medium     | Think about possible use after school hours  |
| Preparation and growth room   | 1           | 50         | 50             |   |   | Normal - 2,7   | Low    | Science   | Malleable, partly  | Extrovert                                 | Medium     |  |
| Food and health, including dry goods storage and laundry-ironing room |             | 260        | 260            | Space for 5 groups of 4 students in kitchen. Dining space make up 80 m² and added to common space |   | Normal - 2,7   | Medium | Common space/canteen  | Malleable, partly  | Introvert                                 | Medium     |  |
| Heating kitchen for the Activity school and canteen                   | 1           | 76         | 76             | x   |   | Normal - 2,7   | Medium | Common space/canteen  | Malleable, partly  | Extrovert                                 | Medium     | Think about possible use after school hours, especially for sports- and culture events                   |
| Common space/canteen  | 1           | 400        | 400            | x   |   | Tall   | High   | Food and health   | Malleable  | Extrovert                                 | Light      |  |
| Sports  | 4           | 340        | 1360           | x   |   | Tall - 7,0 free height above the whole sports court                | High   | Front desk and some food supply   | Non-malleable  | Extrovert                                 | Dark       | Can be joined into one multi-purpose sports hall   |
| Areas for specially organised teaching                                | 1           | 100        | 100            | x   |   | Normal - 2,7   | Low    | Free placement  |  | Extrovert                                 | Medium     |  |
| <b>Total - Common learning areas</b>                                  |             |            | <b>3872</b>    | x   |   | x  | x      | x   | x  | x   | x          | x  |
| Lobby   | 1           | 60         | 60             | x   |   | Normal - 2,7   | Medium | Main entrance   | Malleable  | Extrovert                                 | Light      |  |
| Front desk  | 1           | 60         | 60             | x   |   | Normal - 2,7   | Medium | Main entrance   | Malleable  | Extrovert                                 | Light      |  |
| Offices   | 1           | 180        | 180            | x   |   | Normal - 2,7   | Low    | Staff wardrobes   | Malleable. 1,4m desk. Groups of 4-6 teachers.                                      | Introvert                                 | Light      |  |
| ICT operation and assistance  | 1           | 18         | 18             | x   |   | Normal - 2,7   | Low    | Accessible for both staff and students  | Malleable  | Extrovert                                 | Light      |  |
| Rest room   | 1           | 16         | 16             | x   |   | Normal - 2,4   | Low    | Offices   | Malleable  | Introvert                                 | Medium     |  |
| Meeting room  | 1           | 40         | 40             | x   |   | Normal - 2,7   | Medium | Offices, easy access for parents  | Malleable  | Extrovert, used for meetings with parents | Medium     |  |
| Copy room   | 1           | 20         | 20             | x   |   | Normal - 2,2   | Medium | Offices   | Malleable  | Introvert                                 | Dark       |  |
| Staff room  | 1           | 120        | 120            | 40 m² dining space is added to common space/canteen   |   | Normal - 2,7   | Medium | Offices   | Malleable  | Introvert                                 | Medium     |  |
| Staff wardrobes   | 1           | 110        | 110            | x   |   | Normal - 2,2   | Medium | Offices   | Malleable  | Introvert                                 | Dark       |  |
| Remote storage archive  | 1           | 20         | 20             | Can be removed if electronic archives   |   | Normal - 2,2   | Medium | Free placement  | Malleable  | Introvert                                 | Dark       |  |
| <b>Total - Administration and common areas</b>                        |             |            | <b>644</b>     | x   |   | x  | x      | x   | x  | x   | x          | x  |
| School health services  | 1           | 80         | 80             | x   |   | Normal - 2,7   | Low    | Accessible for students and public for meetings with parents, but not exposed |  |   | Light      |  |
| <b>Total - Supportive services</b>                                    |             |            | <b>80</b>      | x   |   | x  | x      | x   | x  | x   | x          | x  |
| Storage   | 1           | 40         | 40             | x   |   | Normal - 2,2   | Medium | Free placement  | Malleable  | Introvert                                 | Dark       |  |
| Workshop  | 1           | 40         | 40             | x   |   | Normal - 2,2   | High   | Tool shed   | Malleable  | Introvert                                 | Dark       |  |
| Tool shed   | 1           | 32         | 32             | x   |   | Normal - 2,2   | Medium | Side entrance   | Malleable  | Introvert                                 | Dark       |  |
| Waste room  | 1           | 60         | 60             | x   |   | Normal - 2,2   | High   | Side entrance   | Malleable, partly  | Extrovert                                 | Dark       |  |
| Cupboard  | 1           | 20         | 20             | x   |   | Normal - 2,2   | Medium | Free placement  | Malleable  | Introvert                                 | Dark       |  |
| Cleaning center   | 1           | 40         | 40             | x   |   | Normal - 2,2   | Medium | Side entrance   | Malleable, partly  | Introvert                                 | Dark       |  |
| <b>Total - Supportive areas</b>                                       |             |            | <b>232</b>     | x   |   | x  | x      | x   | x  | x   | x          | x  |
| <b>Sum</b>  |             |            | <b>8,33981</b> | <b>9007</b>   |   | x  | x      | x   | x  | x   | x          | x  |
| <b>Area per student, rehabilitation</b>                               | <b>1080</b> | <b>7,9</b> | <b>8532</b>    | x   | This means that the program will meet the area norm for m² per student.   | x  | x      | x   | x  | x   | x          | x  |
| Culture room/black box/theatre stage/cinema/concert room              |             |            |                | x   | Invite the public into the building after school hours. Create more creative spaces for the students the learn and evolve in the daytime.                                 | Tall   | High   | Needs supportive areas. Wardrobes, rehearsal room, storage, music             | Non-malleable?   | Extrovert                                 | Dark       | Stage opening 12m.   |
| Workshops and supportive rooms for theatre stage                      |             |            |                | x   |   | Normal - 2,7   | High   | Same as above   | Non-malleable?   | Extrovert                                 | Medium     |  |
| Garden/kitchen garden   |             |            |                | x   | Added program to Food and Health subjects   | Outdoor. Some indoor rooms with low to normal ceiling height - 2.2 |        | Basement or ground level, easy access   |  |   | Dark       | Roof top garden. Not available outside school hours to avoid vandalism                                   |
| Bike parking  |             |            |                | x   | Promote a healthy activity level and green transport  | Outdoor  | Medium | Entrances and wardrobes   | Malleable  | Extrovert                                 | Light      |  |
| Skateboard and scooter ramps  |             |            |                | x   | Promote a health activity level   | Outdoor  | High   |   | Malleable  | Extrovert                                 | Light      |  |

## STRUCTURE

### WORK PLAN

#### Base

We started the diploma semester continuing our investigative work from the prediploma. Through modelbuilding, reference studies and drawing we will get to know both the school program and the case study building and established a base for the upcoming project.

#### Project

With a base in our investigative work and findings we continued the semester with analysing both the existing building and the school program through drawings and models, exploring what possibilities lie within the existing building as well as in the educational program. First mid term review discussing our findings and directions for the next project phase.

#### Development

Developing the school project through sketches, working model in 1:100, 3D model. Second midcrit, followed up by the last phase of project development. Axonometric drawings of new elements.

#### Presentation

In the presentationphase we will be producing the material to best possible explain the project work.

### STRATEGY / WORKING METHOD

#### Drawing and model making

Both drawing, diagram- and modelmaking has been important working methods, both for illustrating our discoveries but also as a working tool. We have been working both in 2D-drawings, 3D-modeling as well as in physical models.

#### Writing

Return to writing to ground our arguments, discuss our findings and conclude on our decisions.

#### Supervision

Make a clear structure in frequency of supervision and keep a close dialogue with our supervisor throughout the semester.

#### References

In the prediploma we have established a reference catalouge where we will continue collecting material that we have find inspiring terms of the project; ideas, existing schools transformation projects, office buildings, kindergartens, city planning, etc.

#### General

In order to push our project forward we will work parallel in all the different mediums to keep a steady creative working process and keep making discoveries throughout the whole semester.

### MATERIAL DELIVERY

Plans 1:200

Sections 1:200

Elevations 1:200

Axonometric drawings of structures

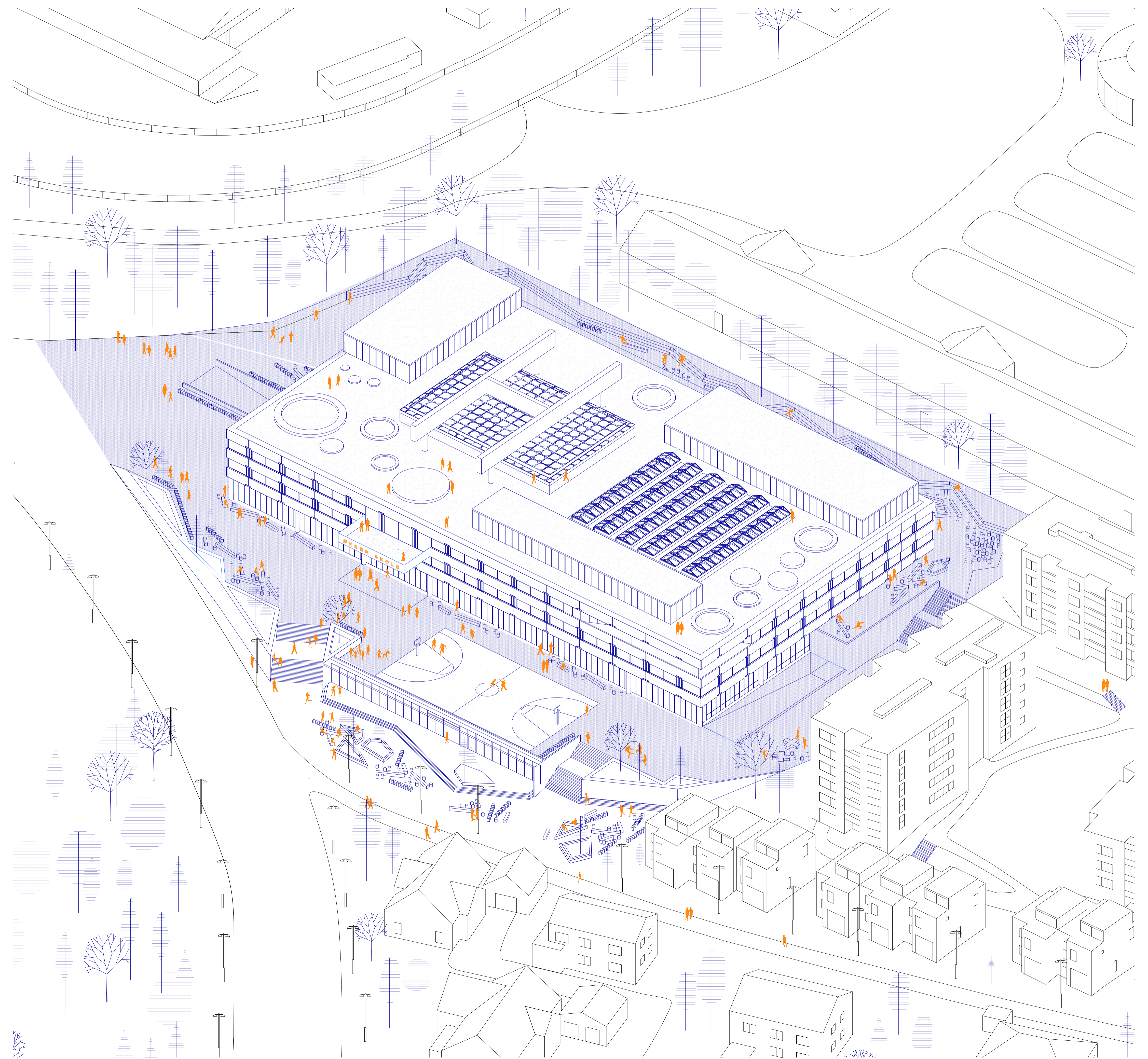
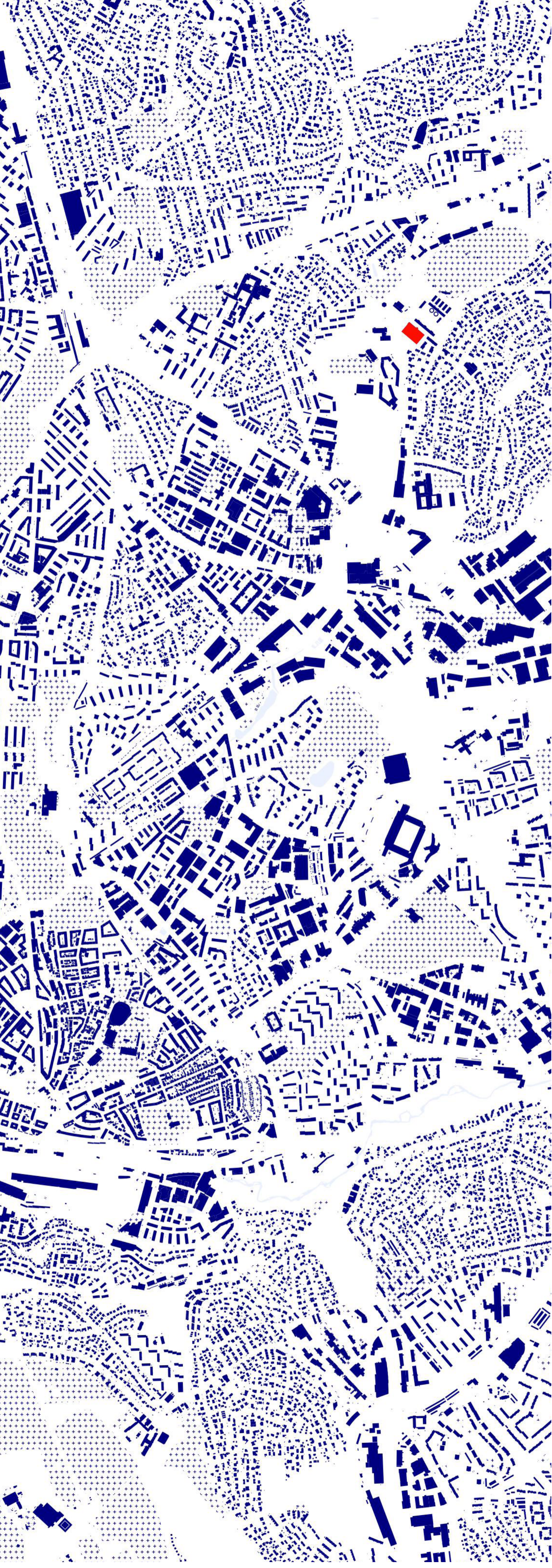
Context model 1:500

Model 1:100

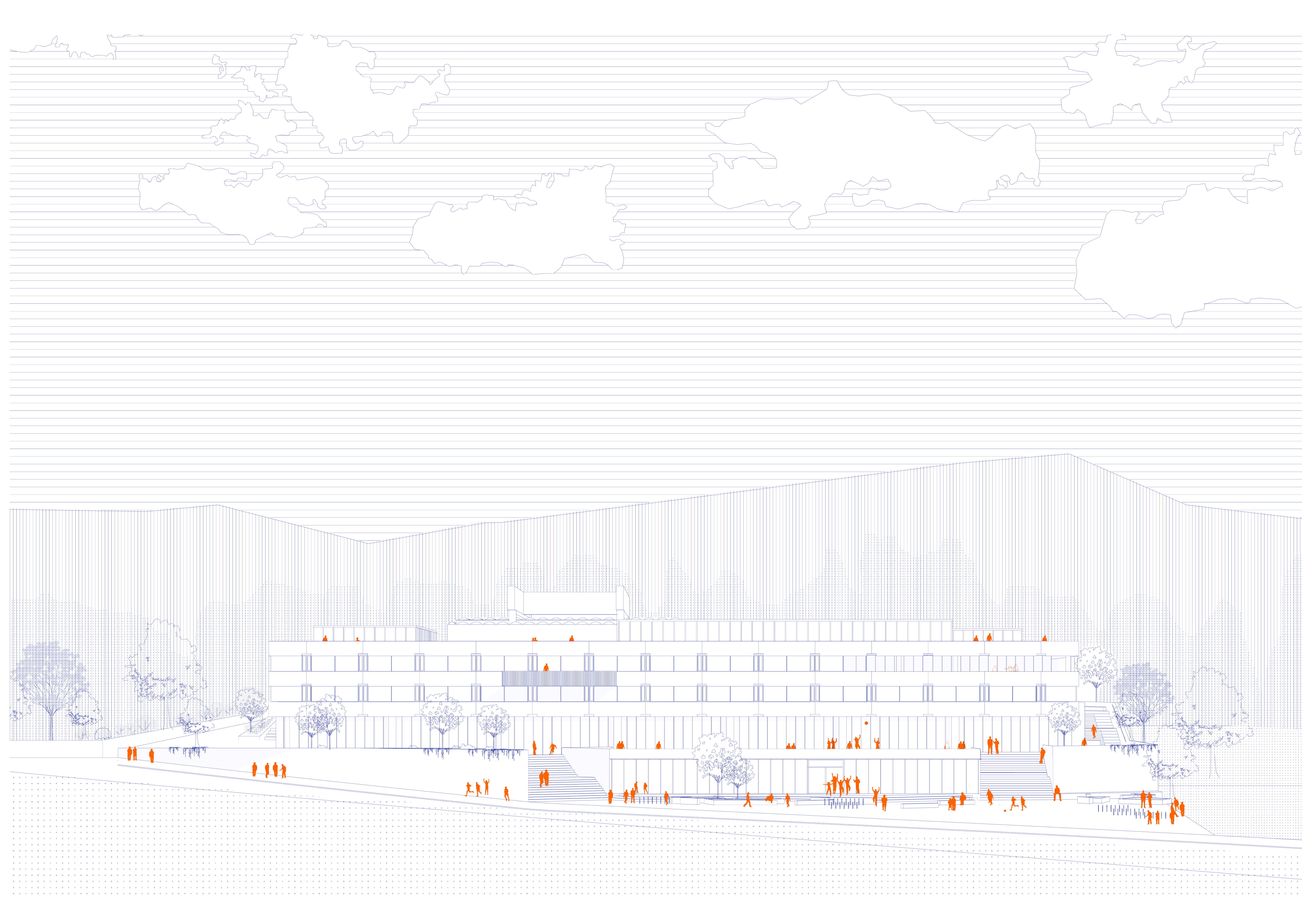
Building element models 1:100

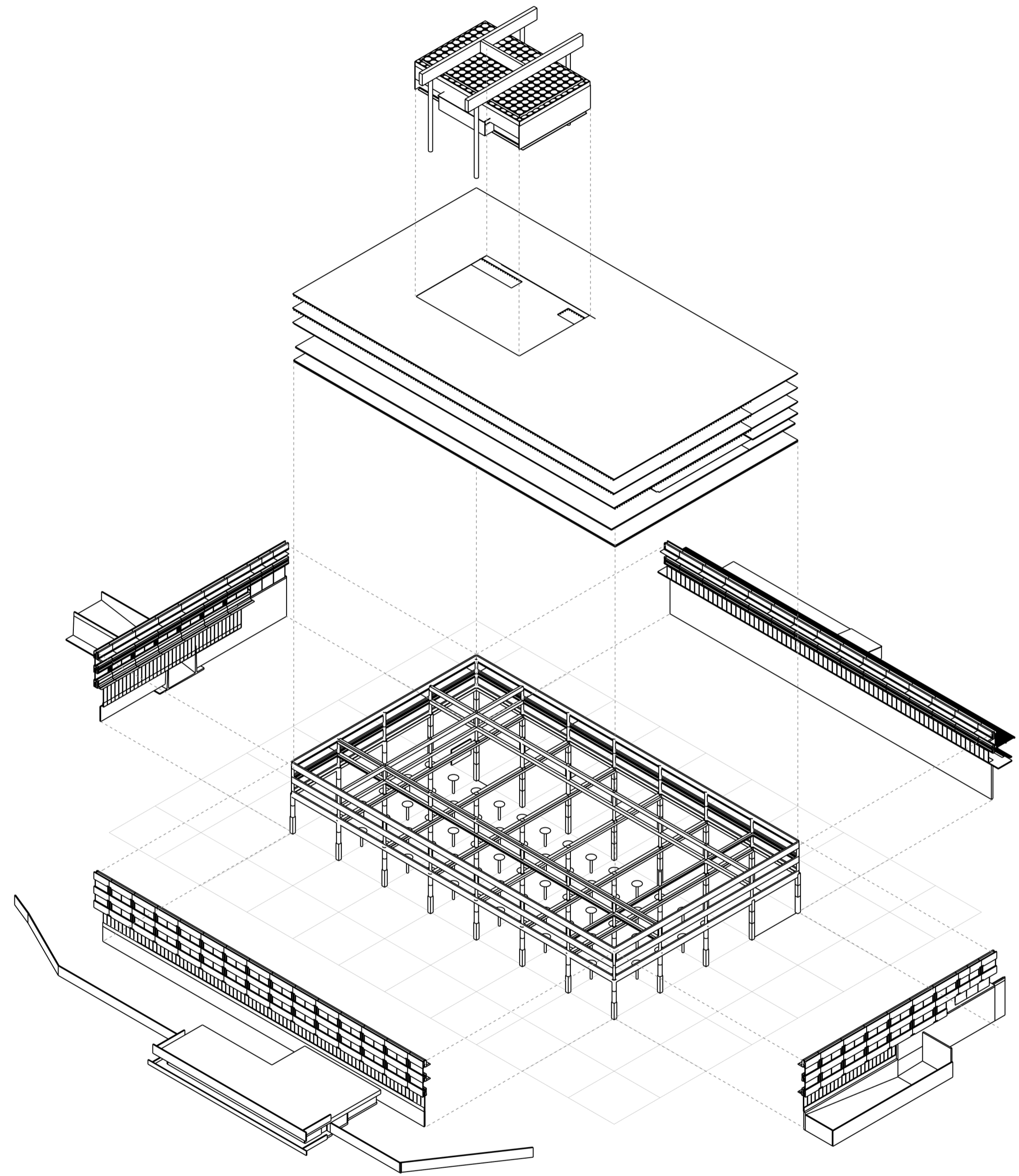
Model photos

Perspective views



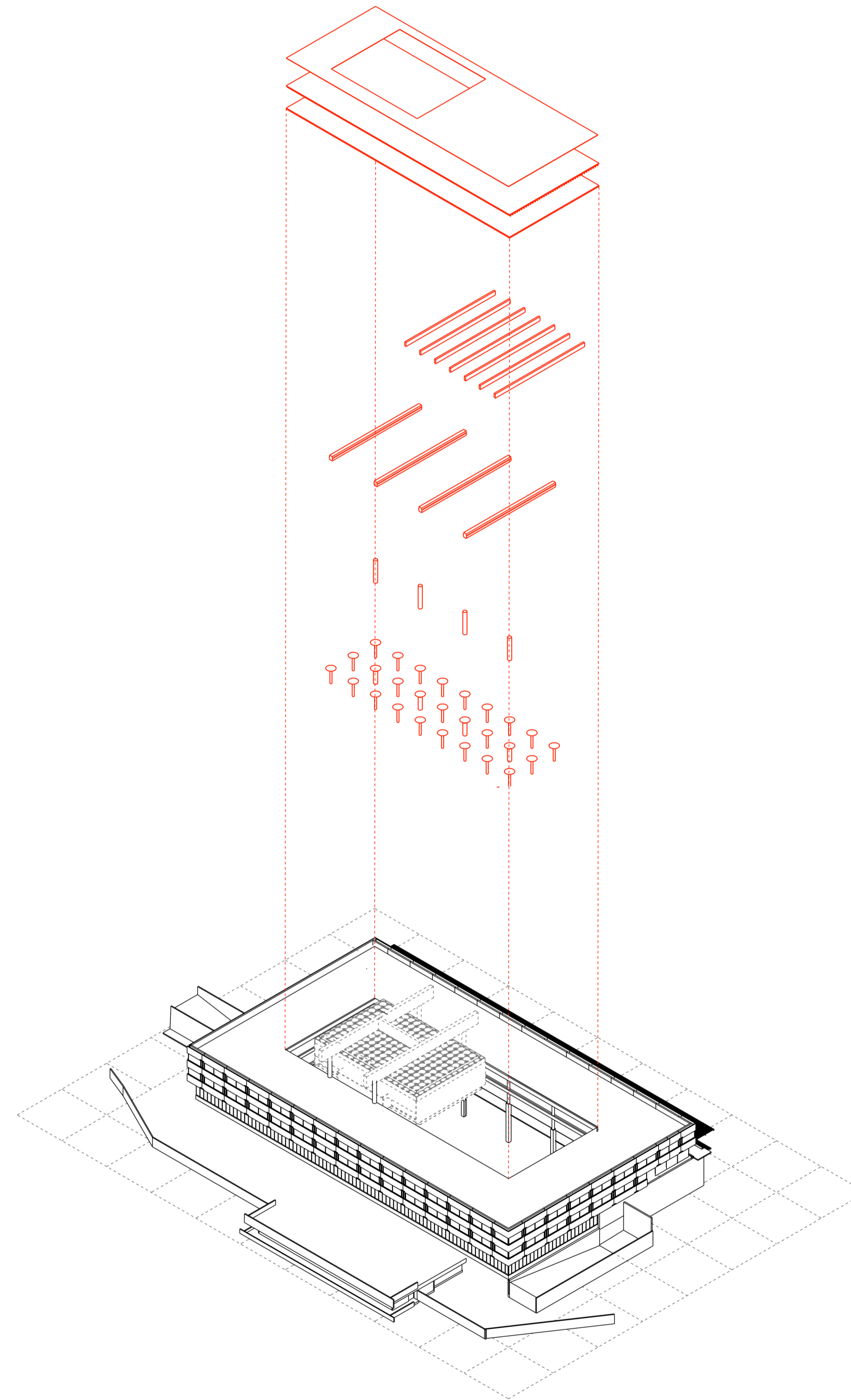






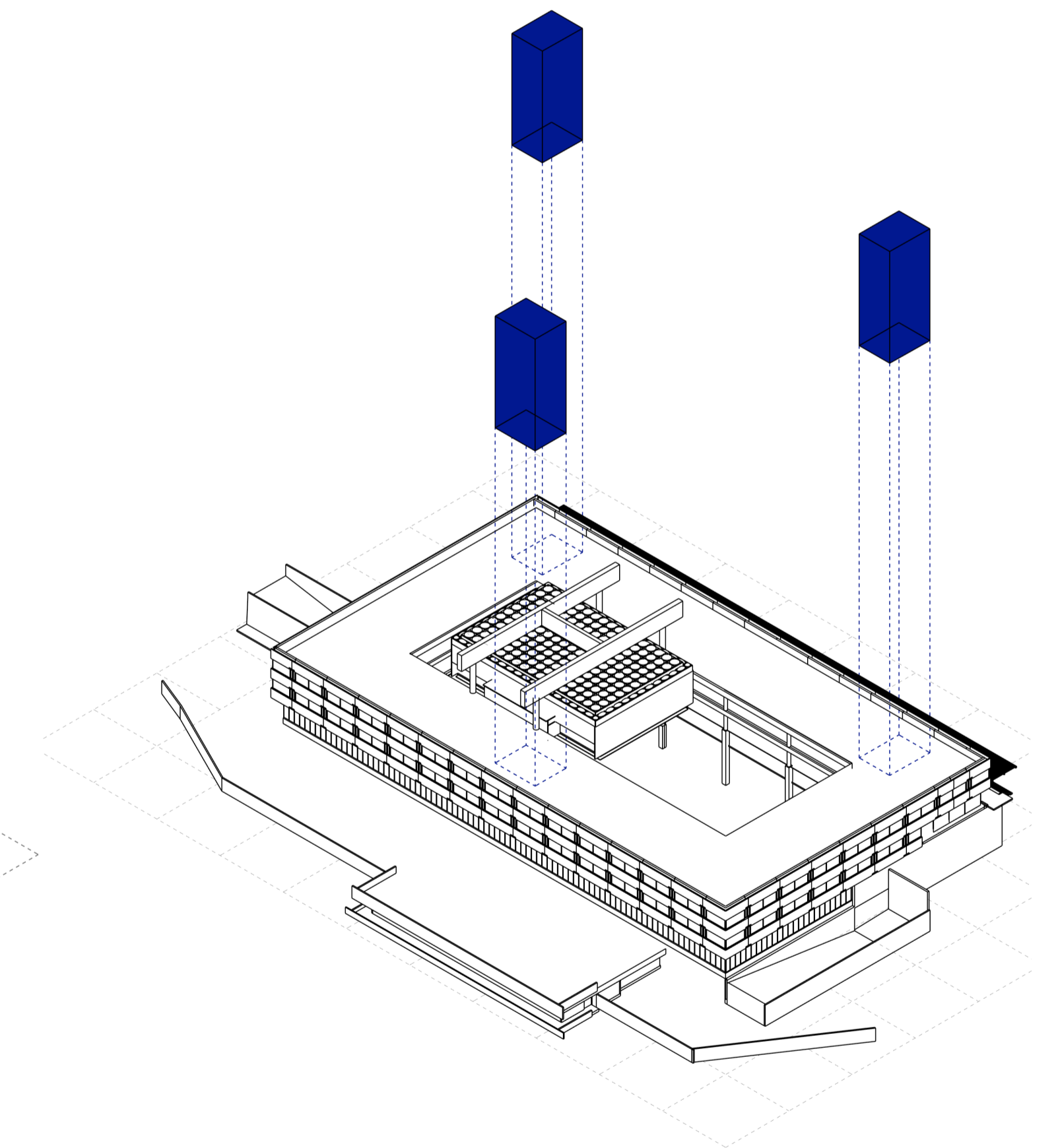
**EXISTING STRUCTURE**

The structure is a five-story pre-fabricated concrete column- and beam structure, organised in a 12x12 meter grid. The deep plan measures 82x48 meters with large parts built into the sloping terrain.



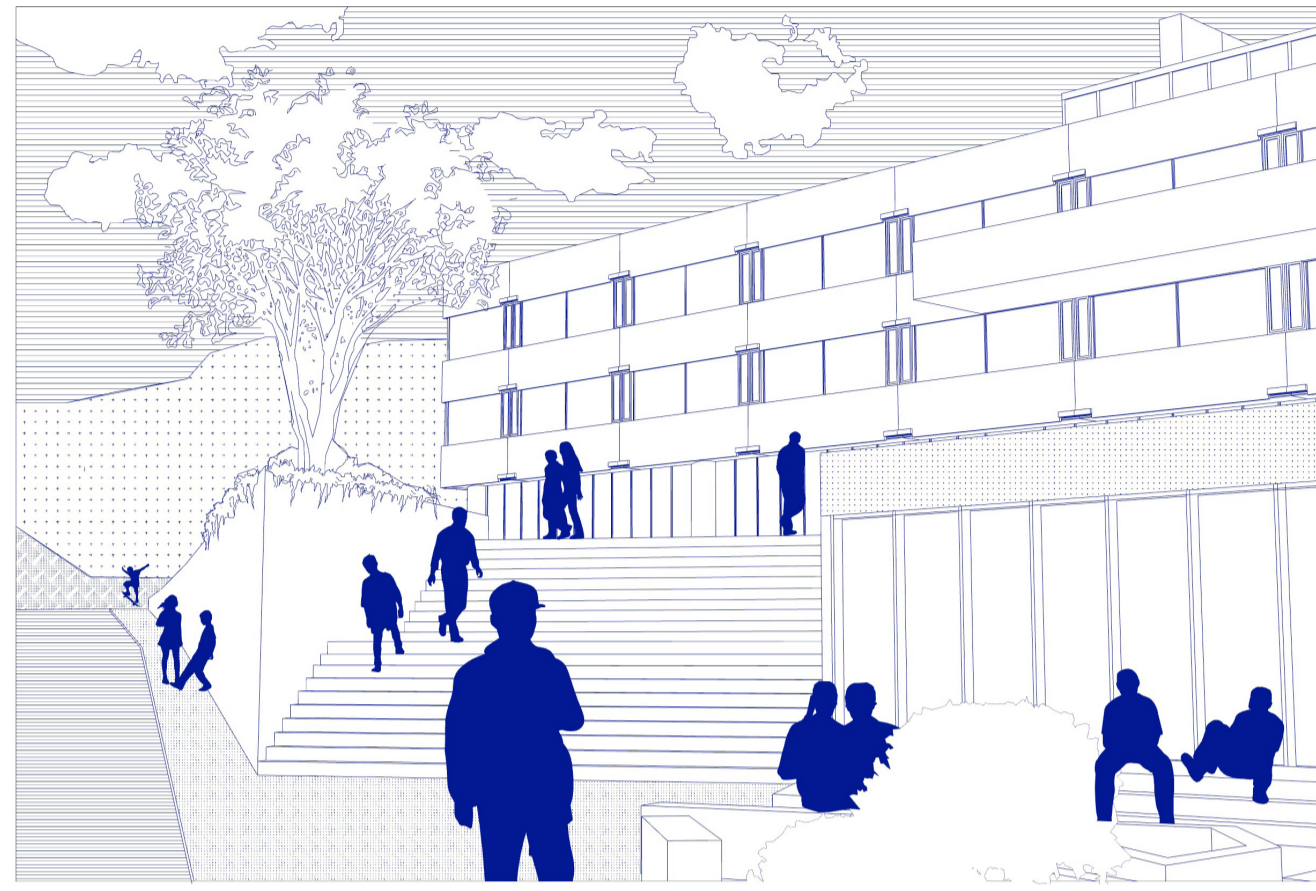
**REMOVE**

Our first intervention was a grand cut in the roof, first floor and ground floor in order to bring daylight into the plan. The cut will follow the 12x12 meter grid and the logic of the construction. This intervention makes it possible to fit a multi-purpose hall and create spacious areas with daylight.



**REPLACING INFRASTRUCTURE**

Two existing cores are replaced and another one added as an efficient layer of vertical circulation, washrooms and technical shafts. The main staircases are kept as they are in great condition and valued as material gems in the project.



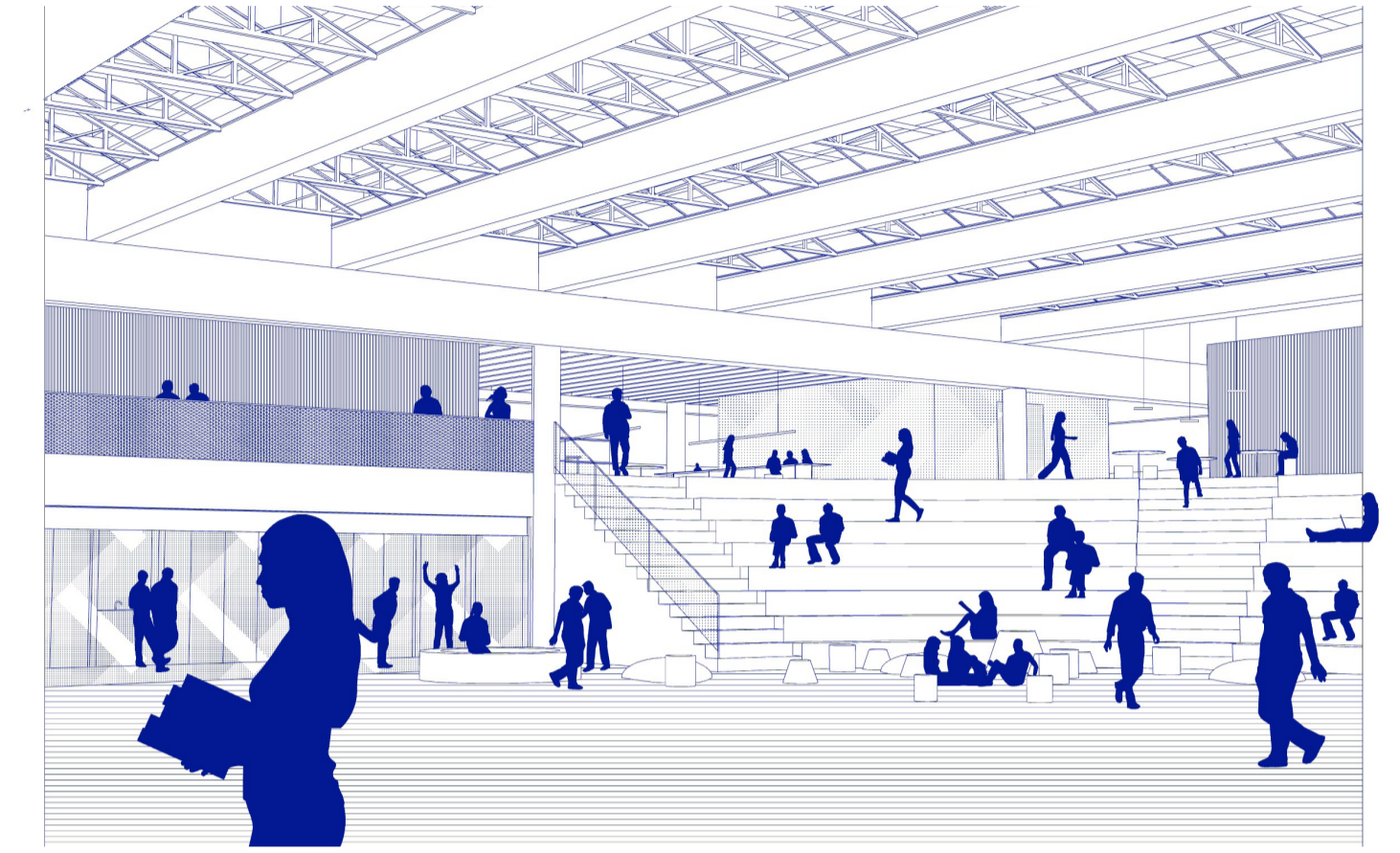
ENTRANCE



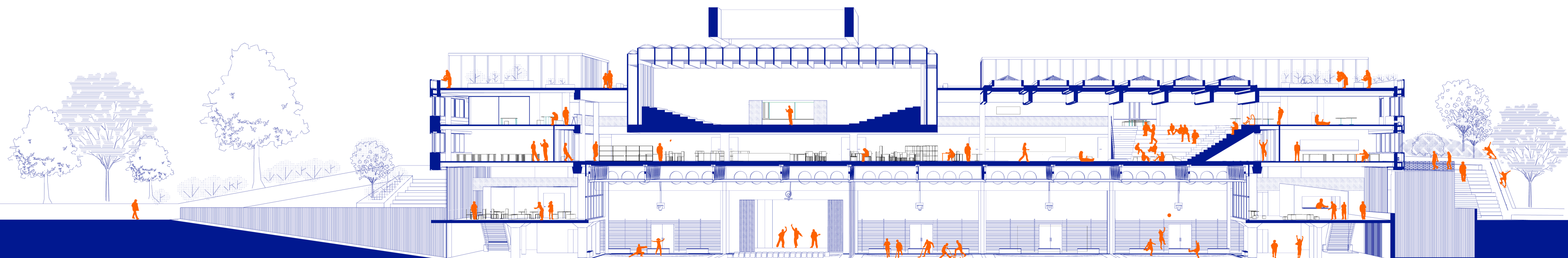
BASEMENT



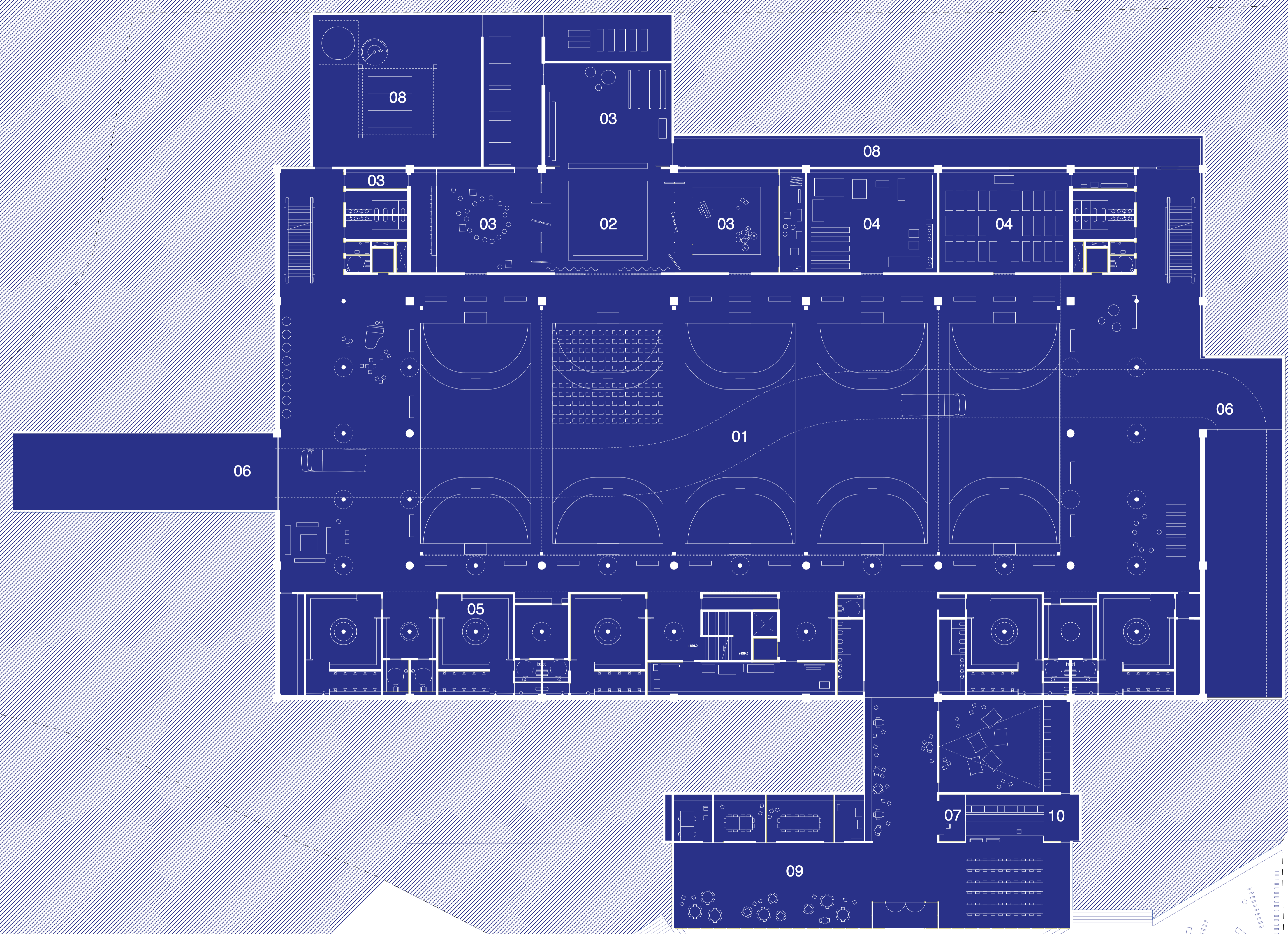
GROUND FLOOR CANTEN



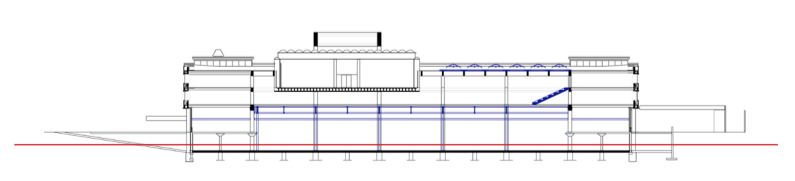
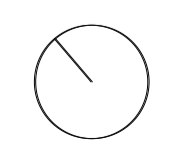
LEARNING LANDSCAPE



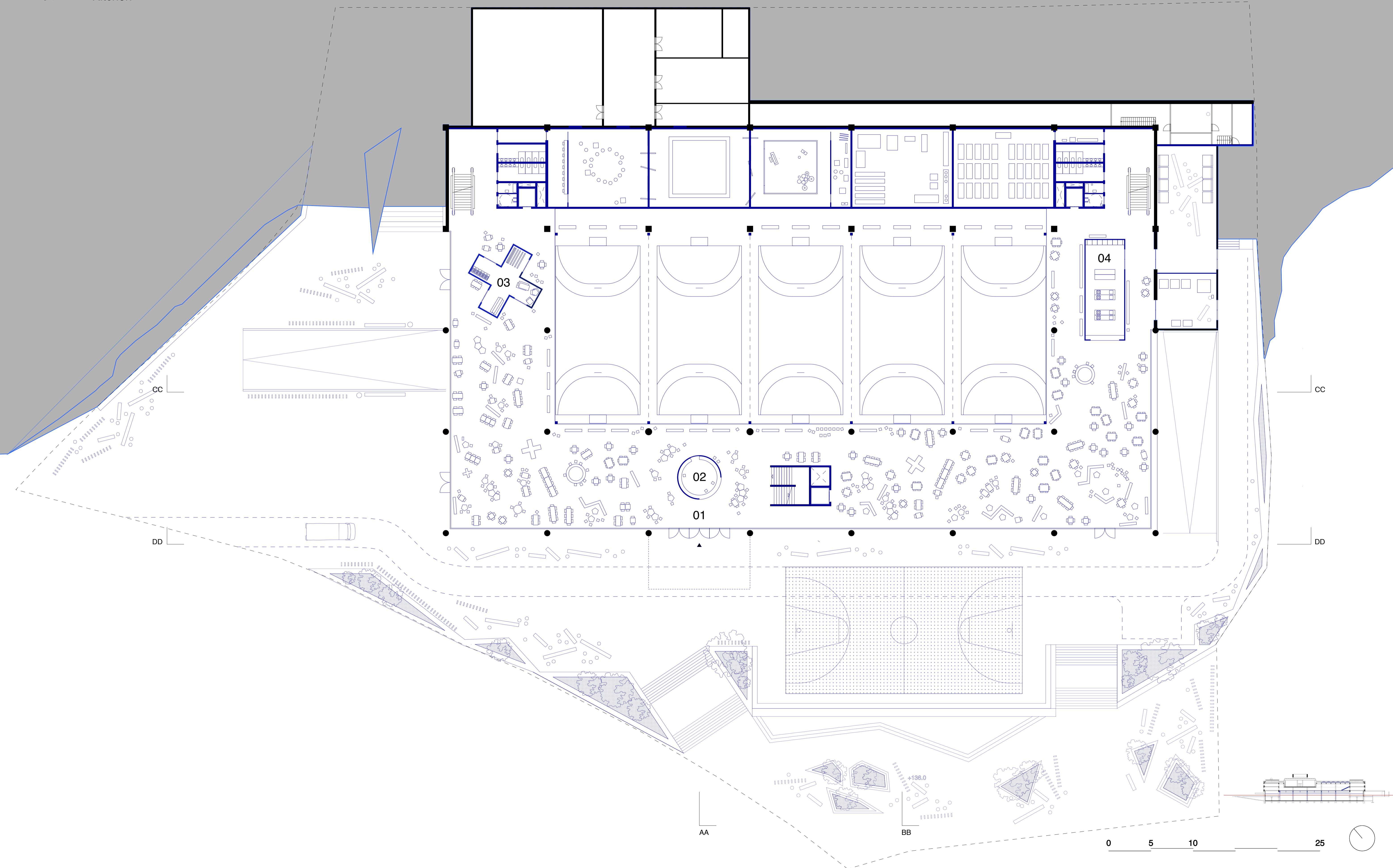
- 01 Multi-purpose hall
- 02 Stage
- 03 Support areas stage/Music rooms
- 04 Support areas sport
- 05 Wardrobes
- 06 Driveways
- 07 Front desk
- 08 Technical
- 09 Youth-club
- 10 Kitchen



BASEMENT



- 01 Canteen
- 02 Front desk
- 03 Equipment storage
- 04 Kitchen



AA

BB

CC

CC

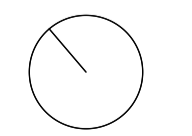
DD

DD

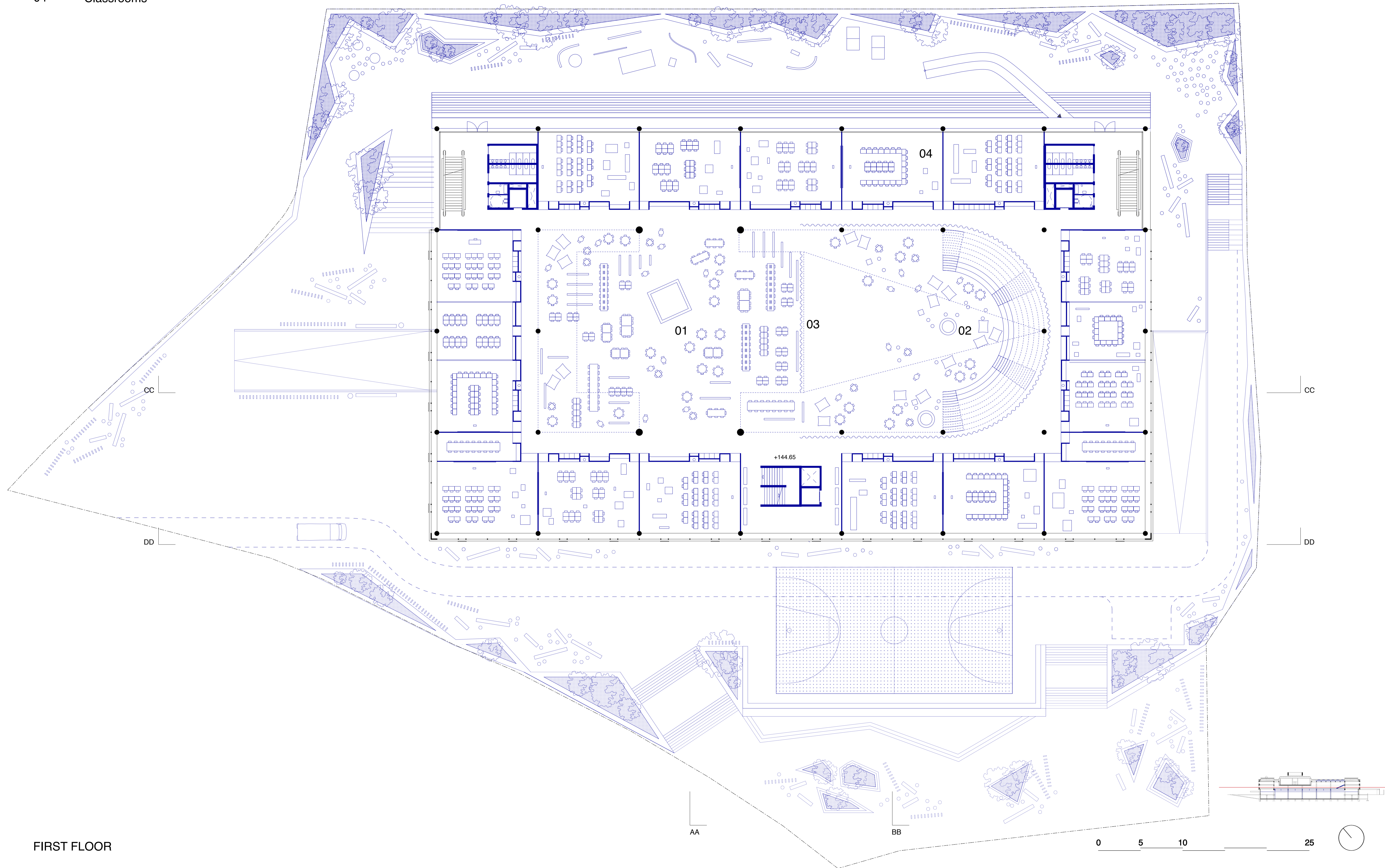
AA

BB

0 5 10 25



- 01 Library
- 02 Open auditorim
- 03 Screen
- 04 Classrooms



FIRST FLOOR

AA

BB

CC

CC

DD

DD

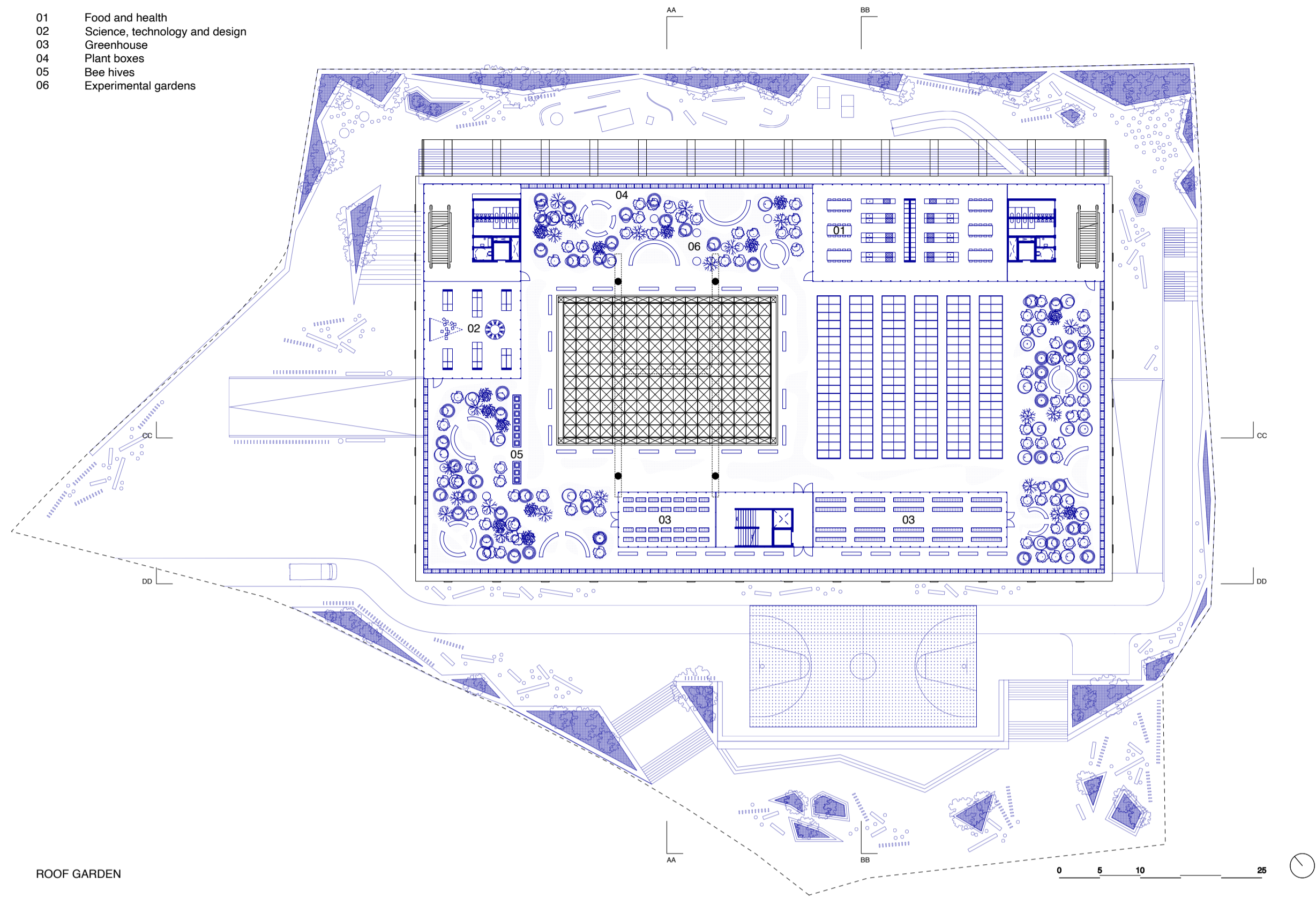
AA

BB

0 5 10 25

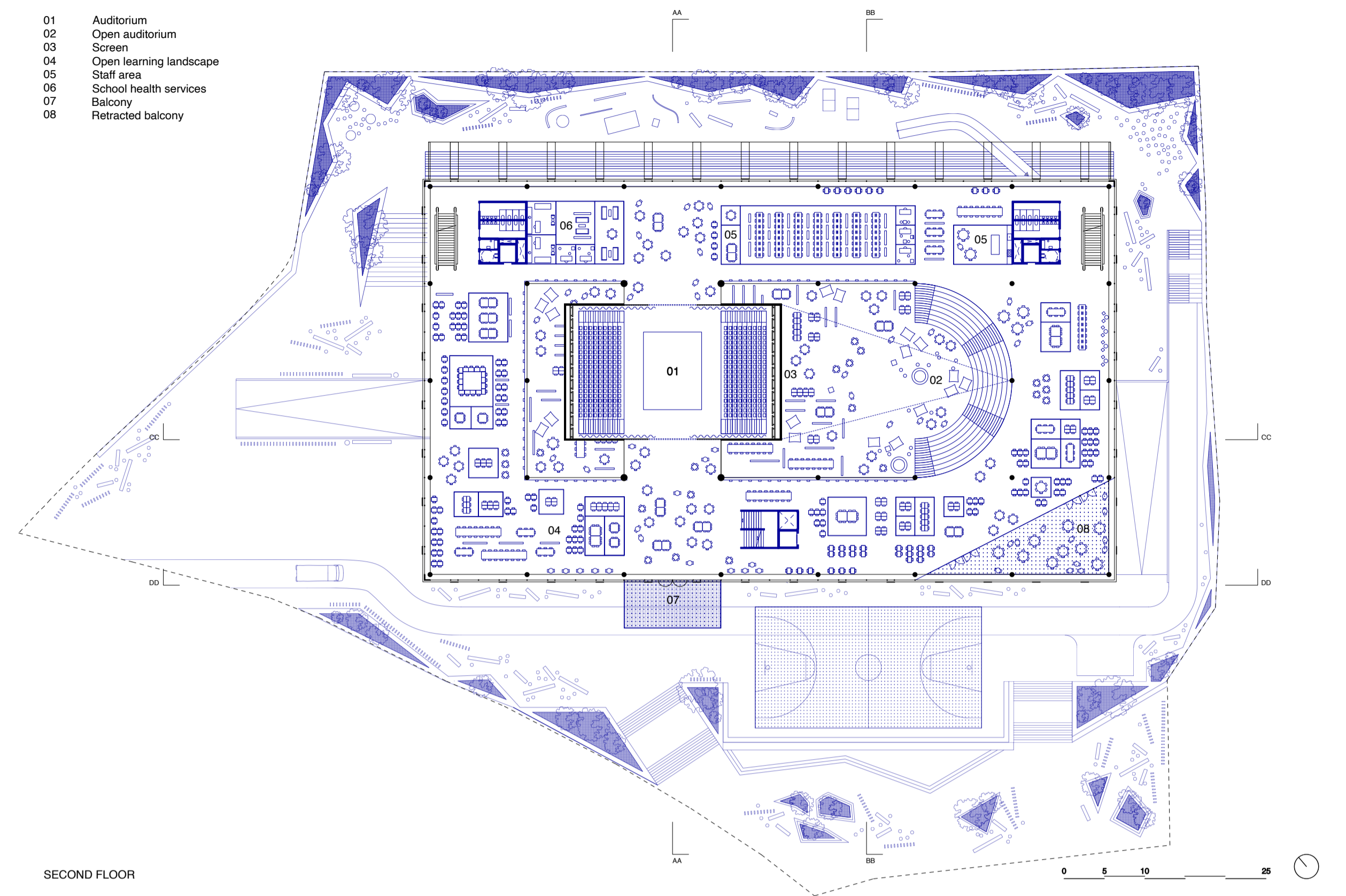


- 01 Food and health
- 02 Science, technology and design
- 03 Greenhouse
- 04 Plant boxes
- 05 Bee hives
- 06 Experimental gardens



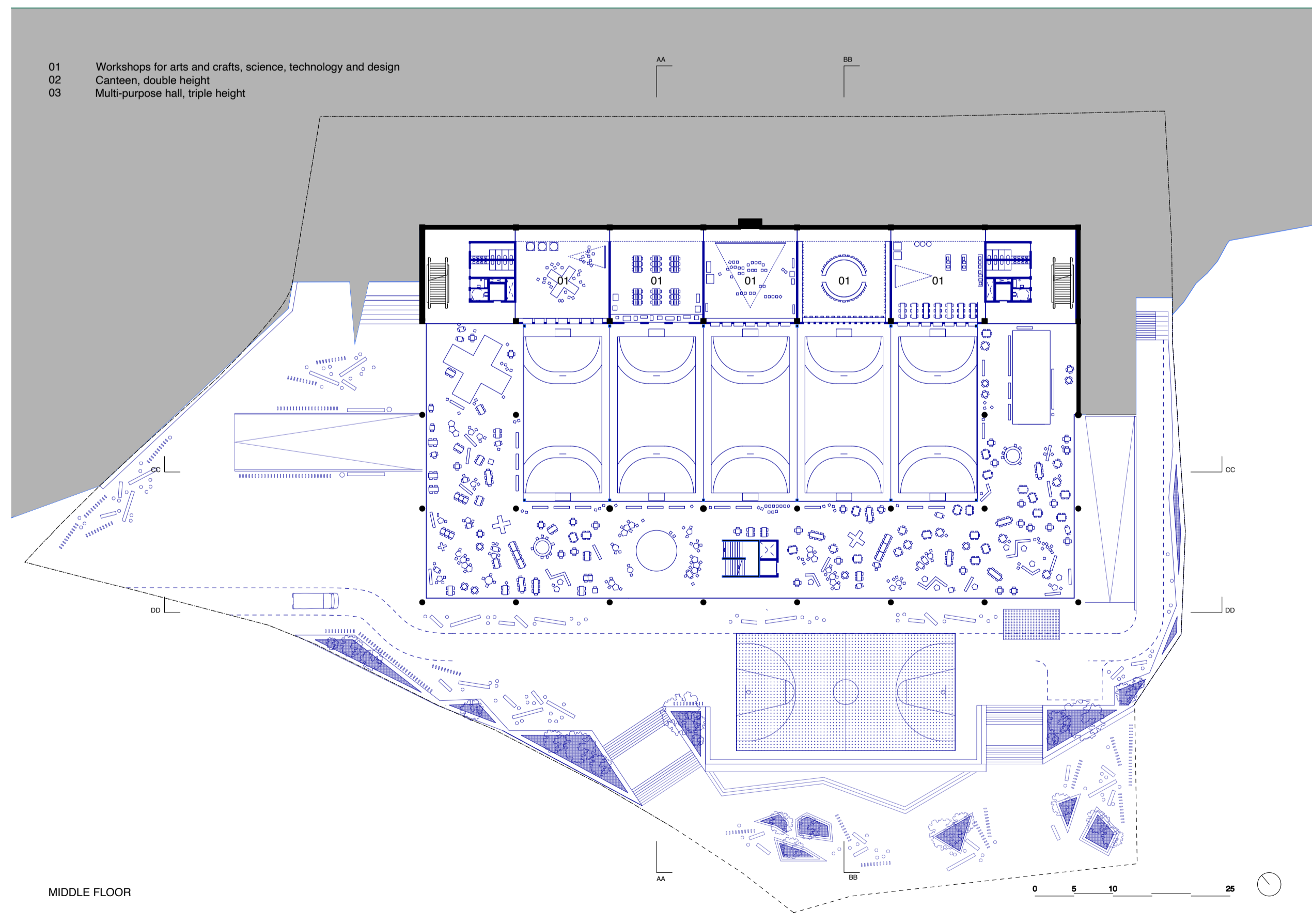
ROOF GARDEN

- 01 Auditorium
- 02 Open auditorium
- 03 Screen
- 04 Open learning landscape
- 05 Staff area
- 06 School health services
- 07 Balcony
- 08 Retracted balcony

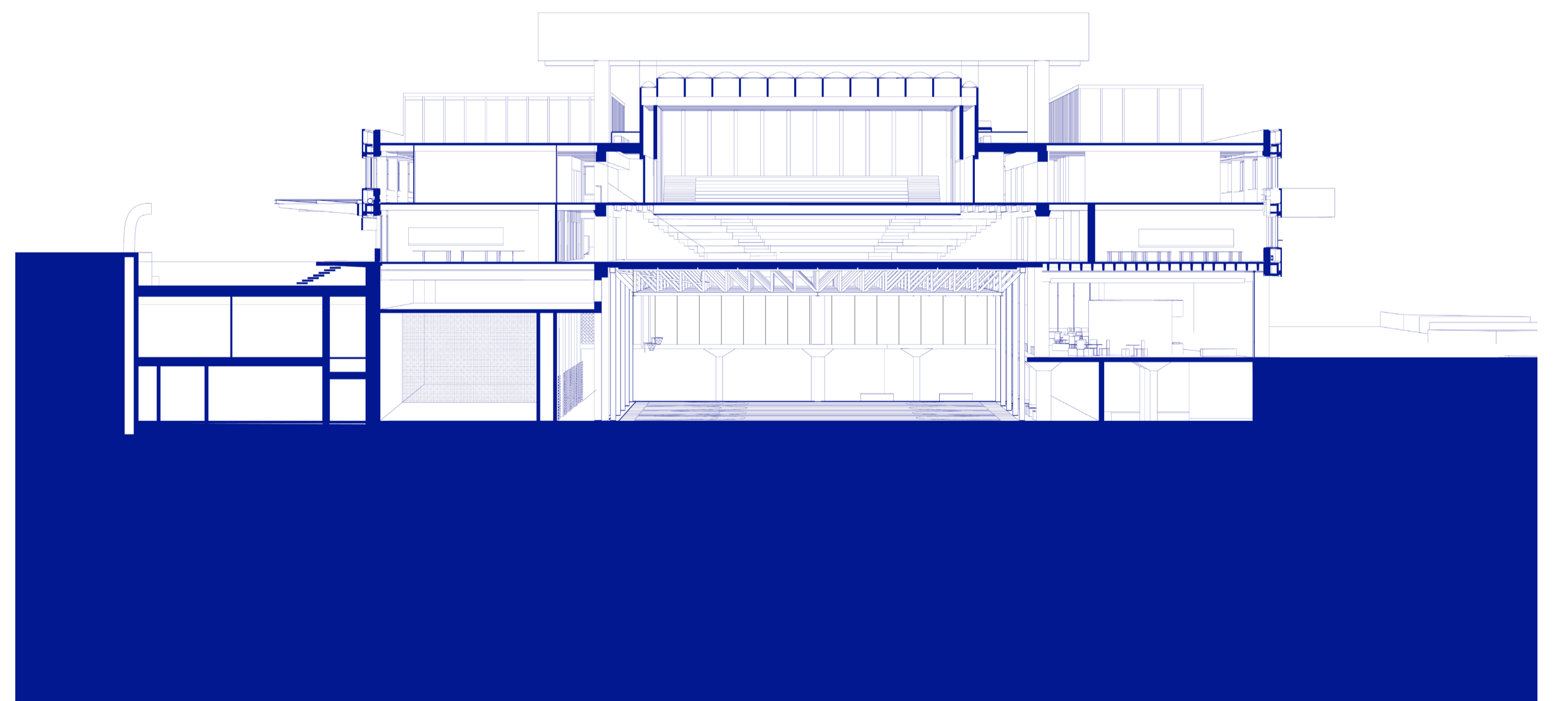


SECOND FLOOR

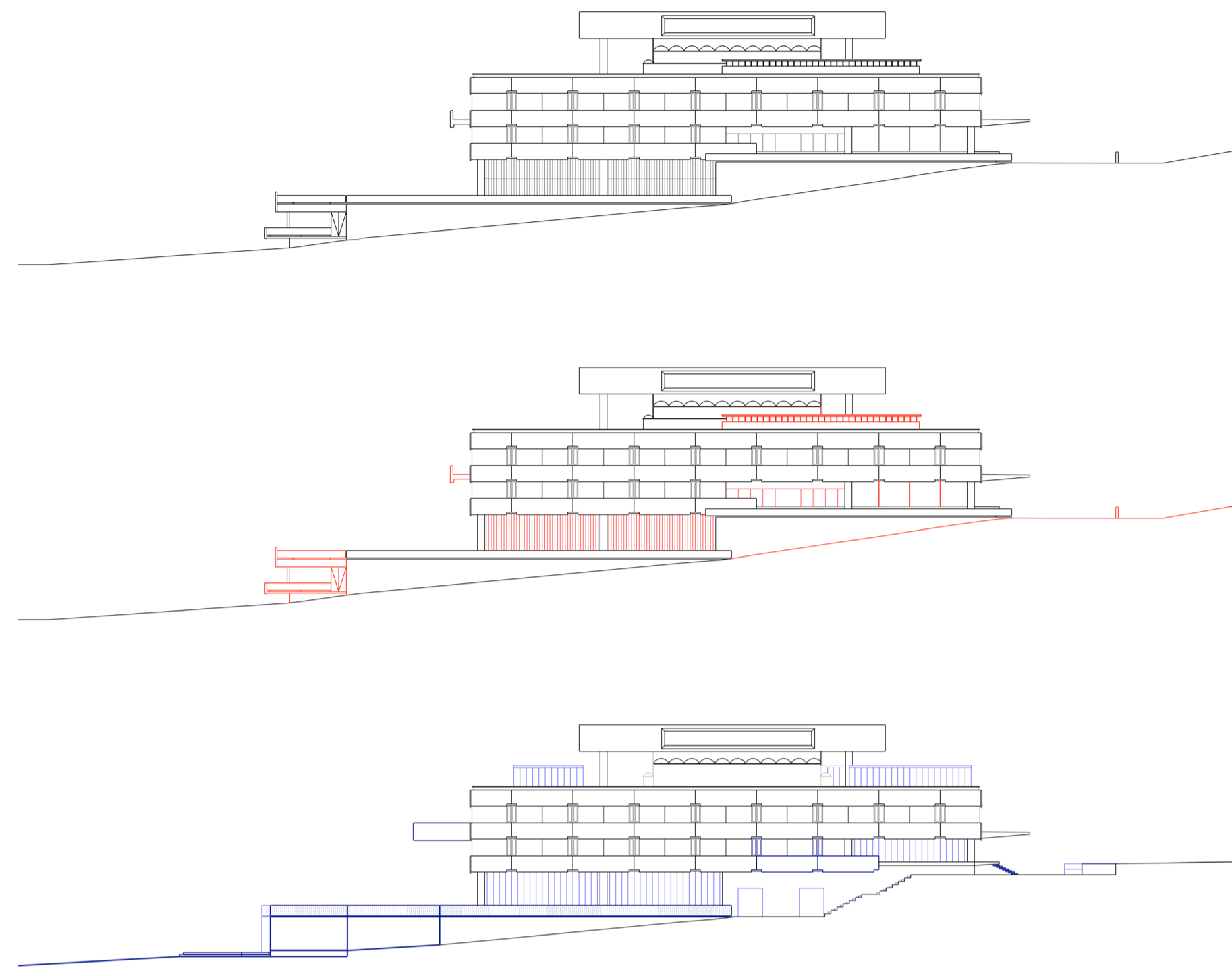
- 01 Workshops for arts and crafts, science, technology and design
- 02 Canteen, double height
- 03 Multi-purpose hall, triple height



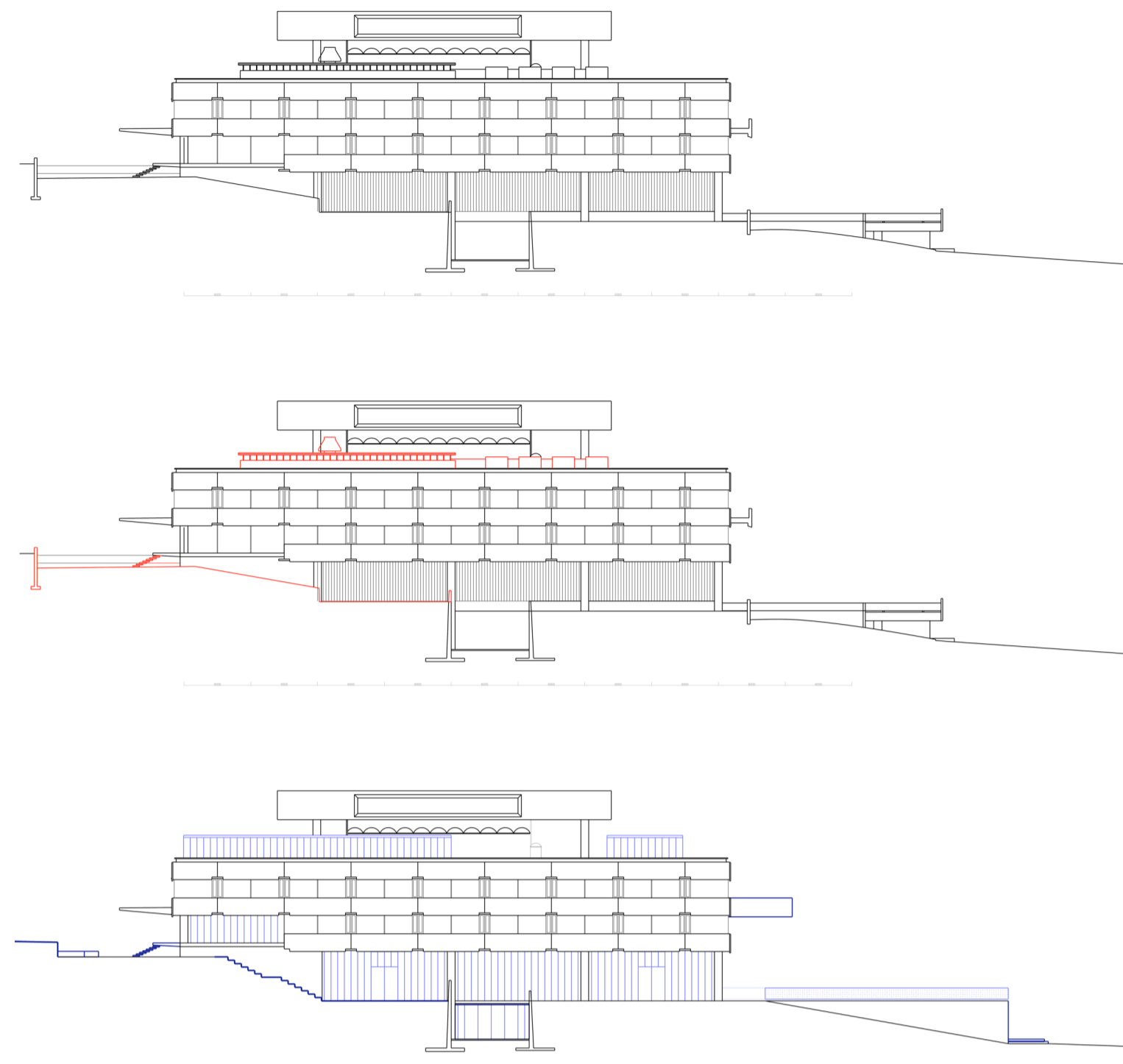
MIDDLE FLOOR



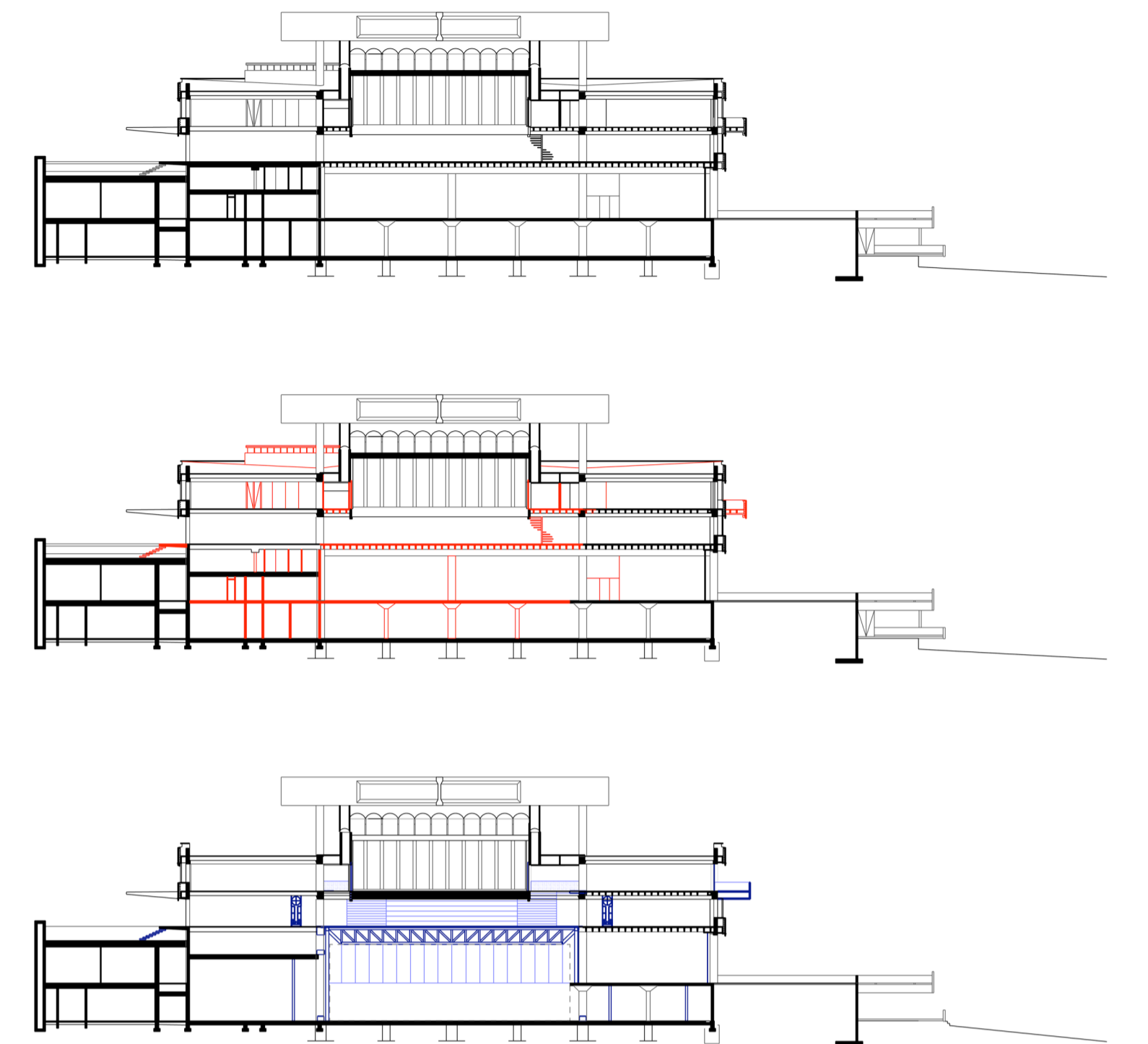
Existing  
Remove / remodel  
Add / replace



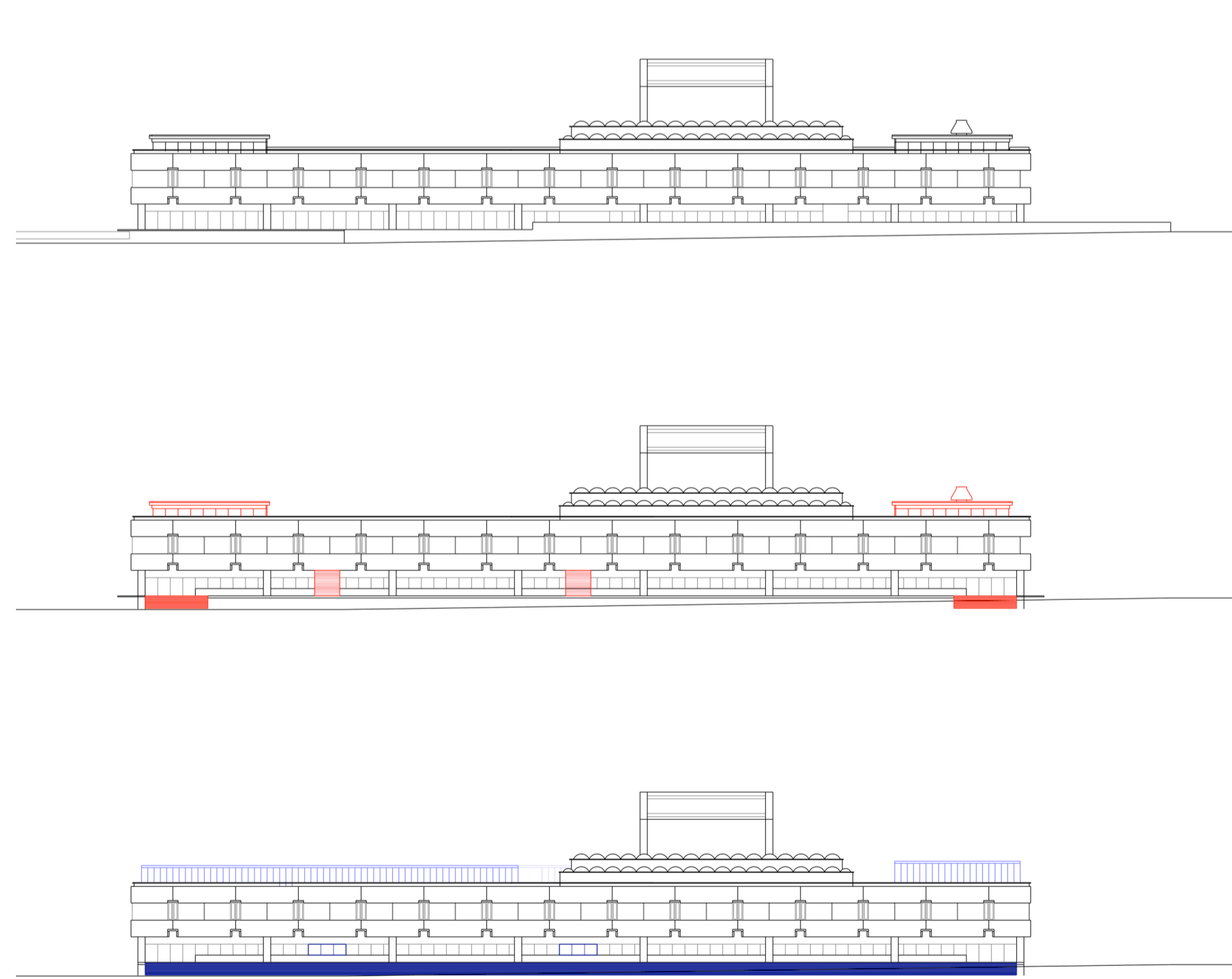
ELEVATION EAST  
1:500



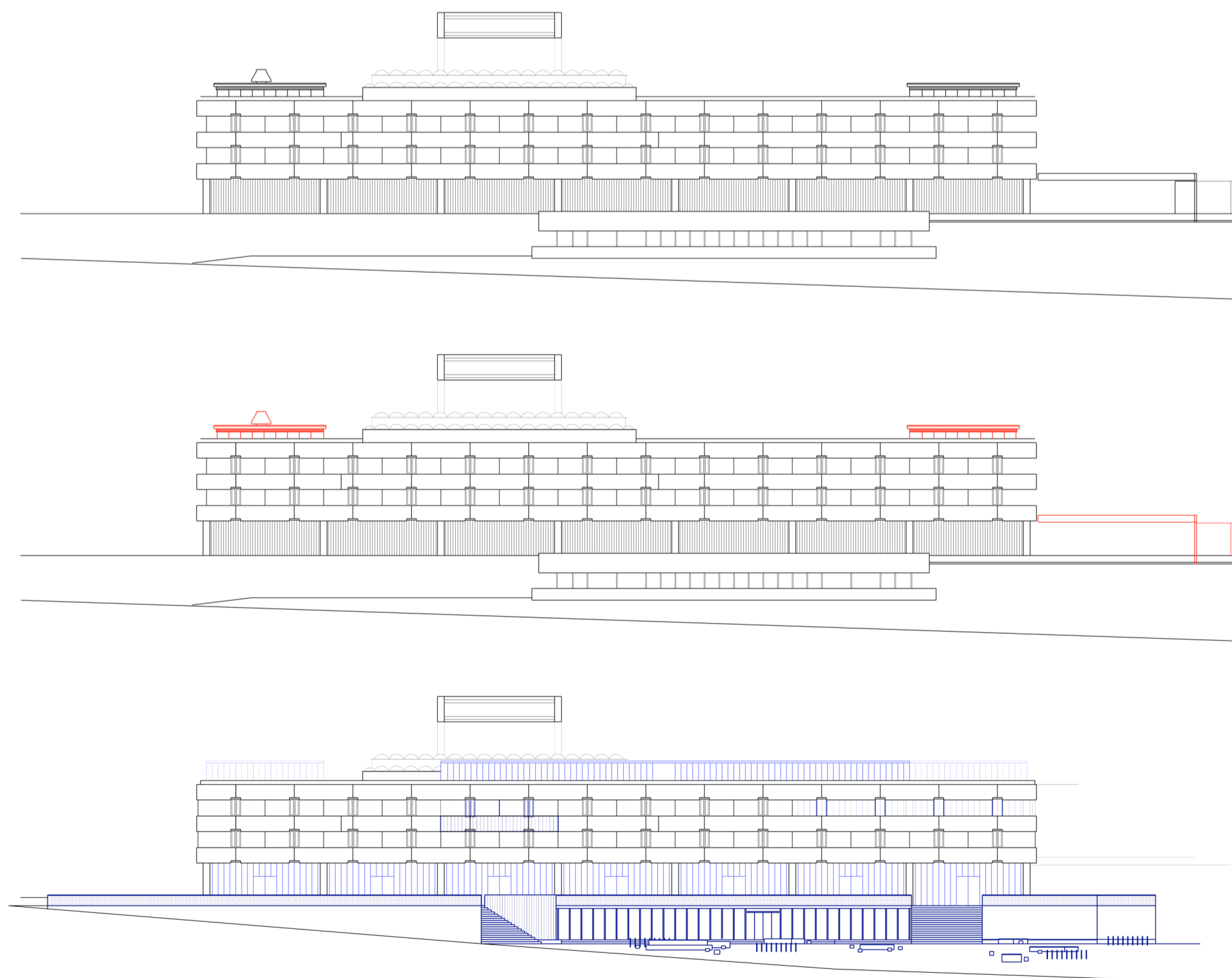
ELEVATION WEST  
1:500



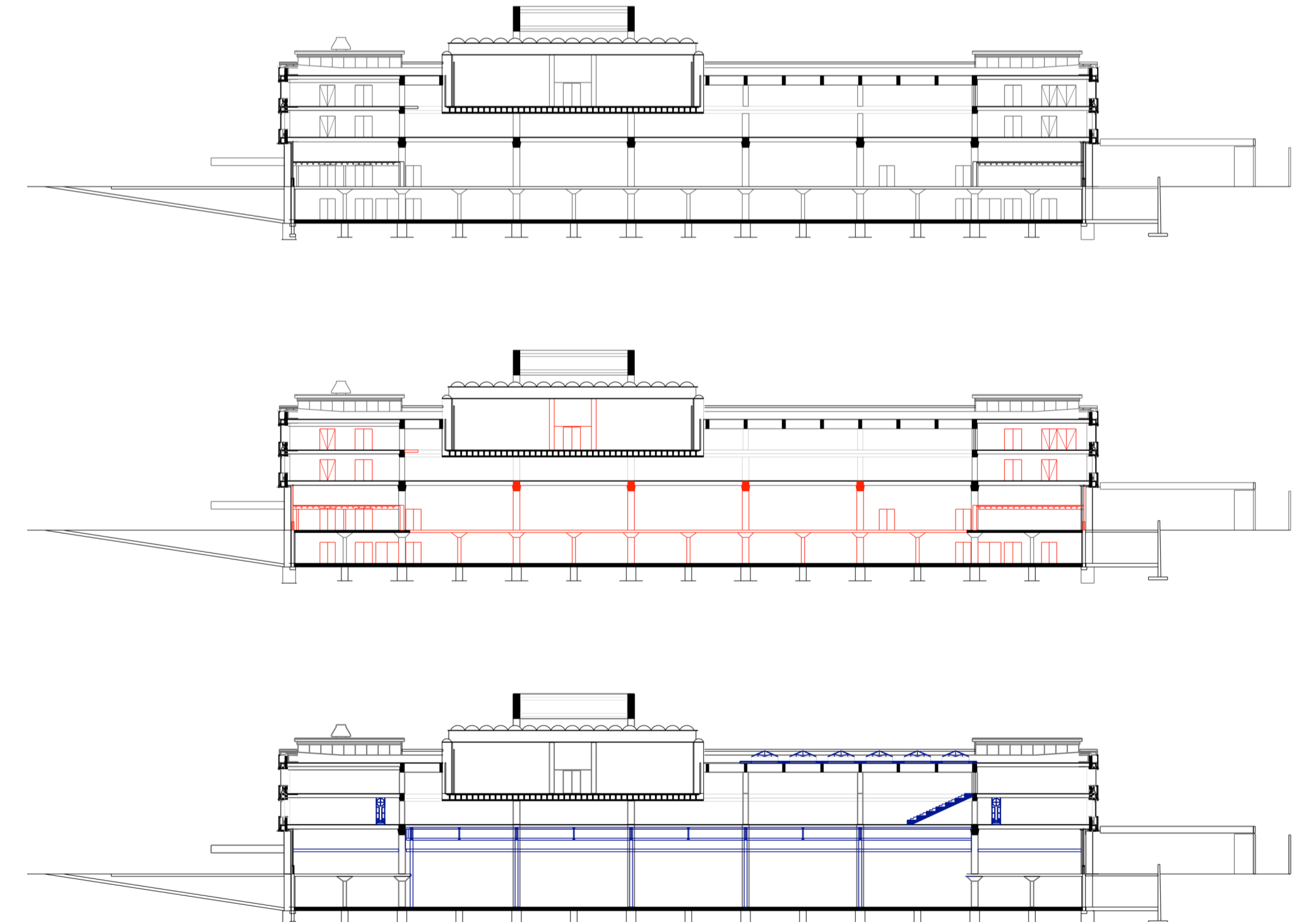
SECTION AA  
1:500



ELEVATION NORTH  
1:500



ELEVATION SOUTH  
1:500

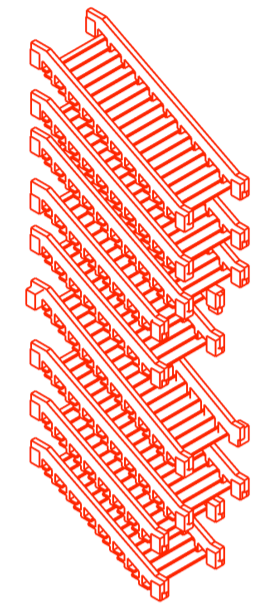


SECTION CC  
1:500

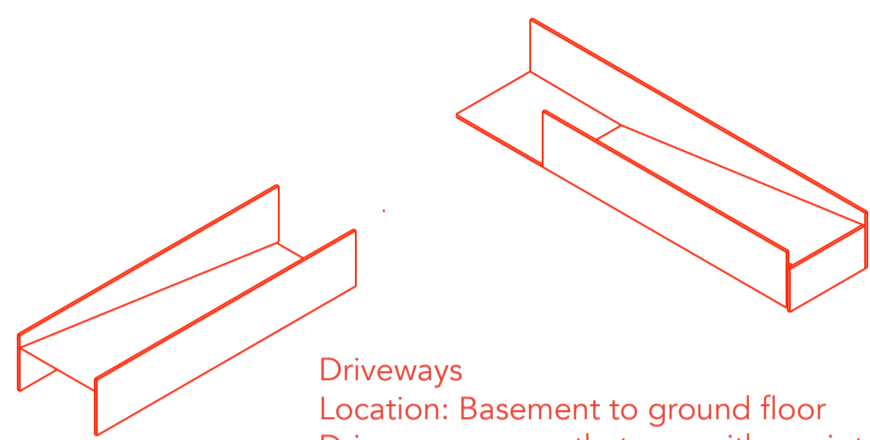


EXISTING ARTIFACTS TO KEEP

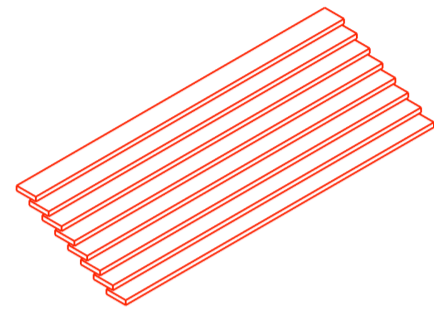
ADDED ARTIFACT



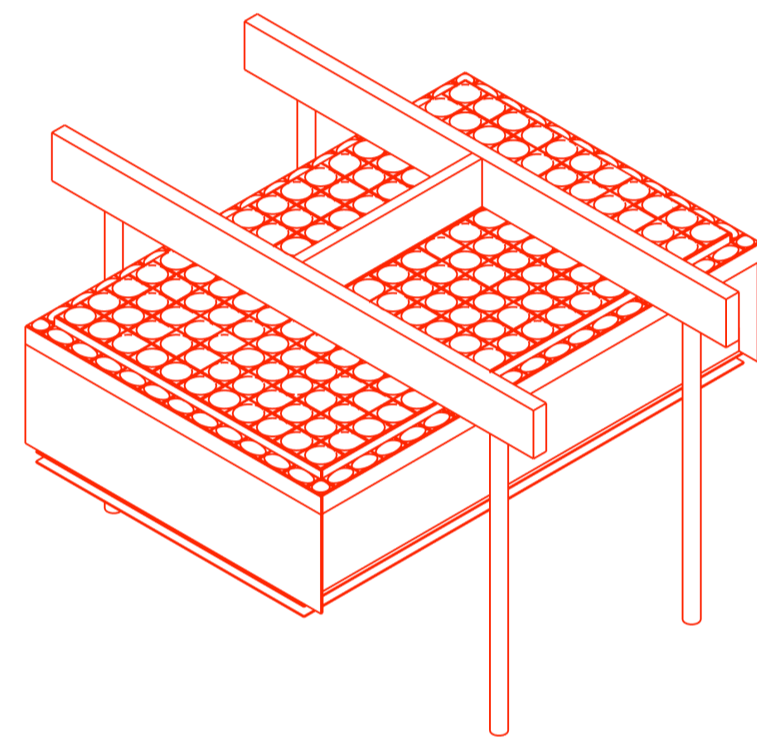
Main stairs  
Location: basement to second floor  
Stairs in high quality materials are kept in good condition and represents material value



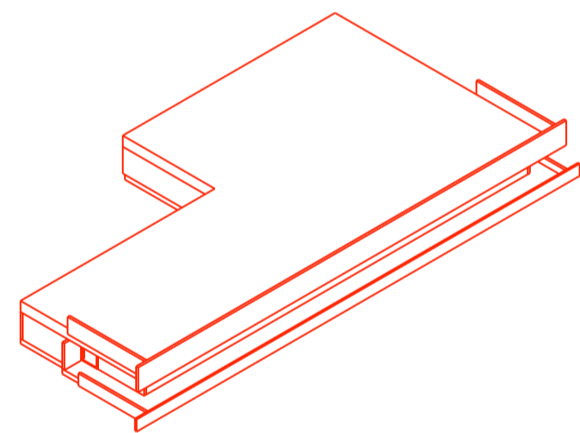
Driveways  
Location: Basement to ground floor  
Driveways means that cars with equipment can drive through the building



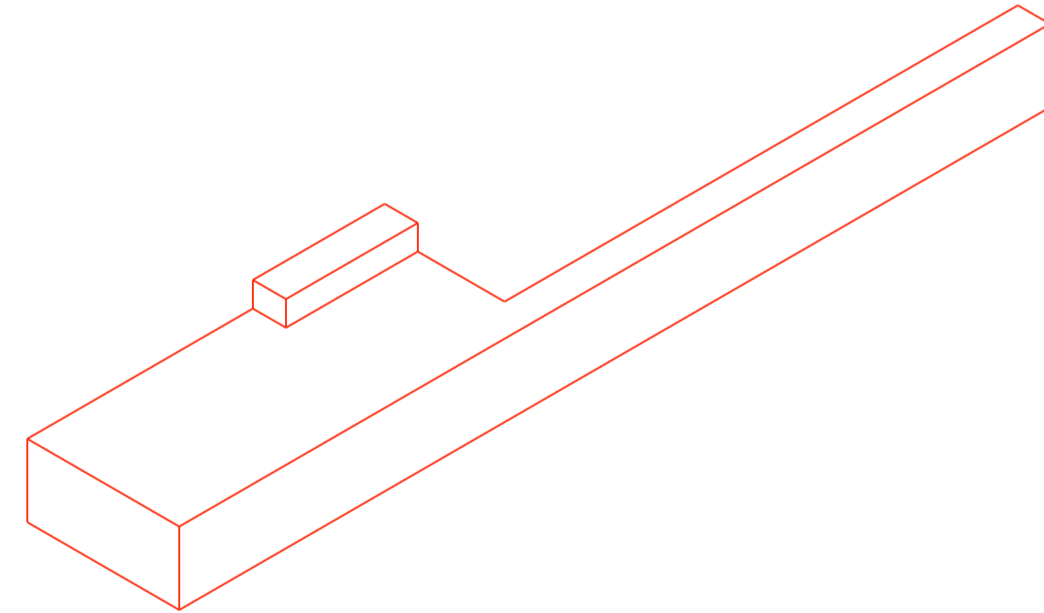
Outdoor stairs  
Location: Basement to ground floor  
These stairs were used as main entrance stairs from the north side.



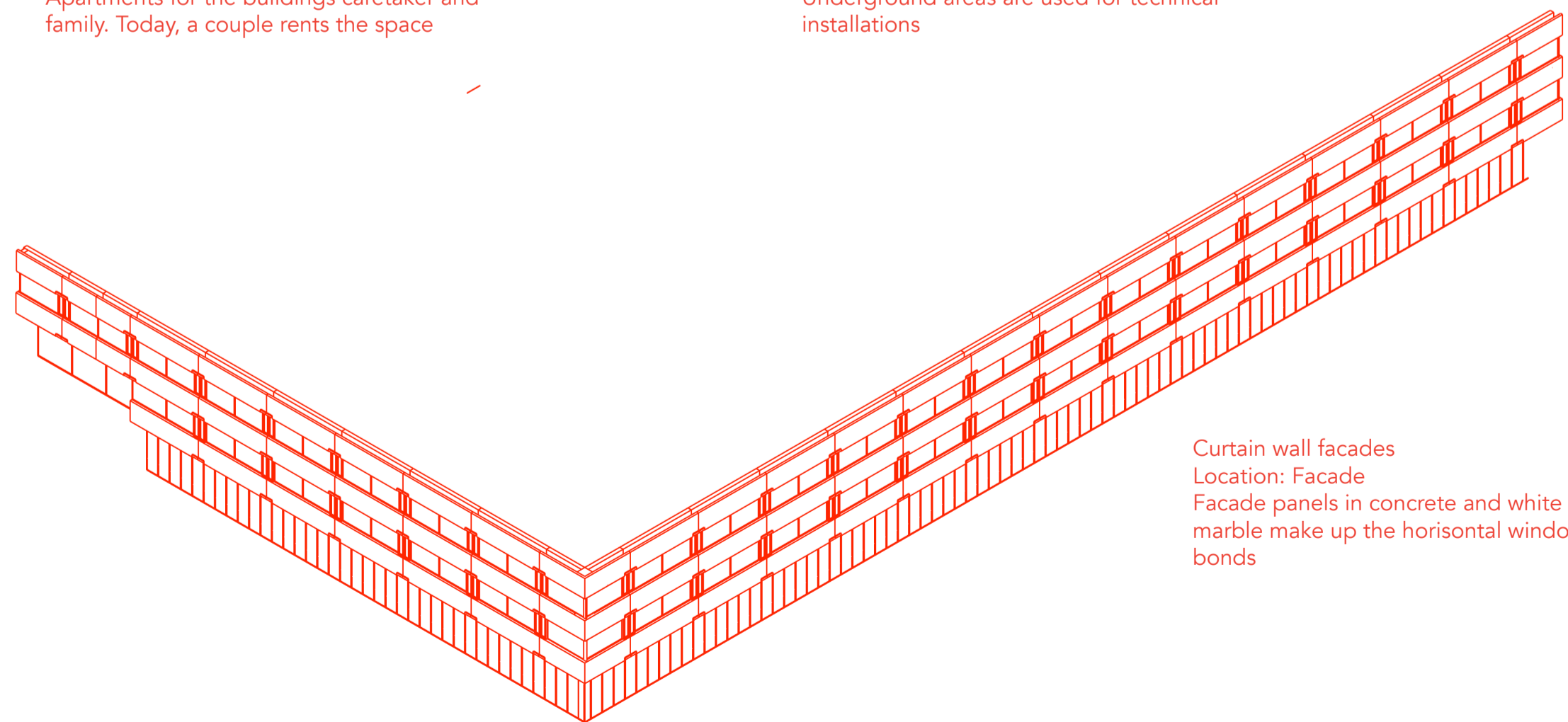
Roof girders and hanging auction hall  
Location: Second floor to roof  
A grid of skylights provide lighting to the former auction hall - the heart of the building



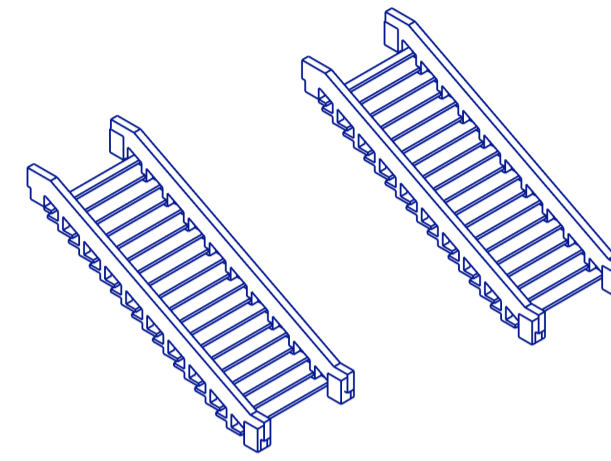
Penthouse  
Location: basement facing south  
Apartments for the buildings caretaker and family. Today, a couple rents the space



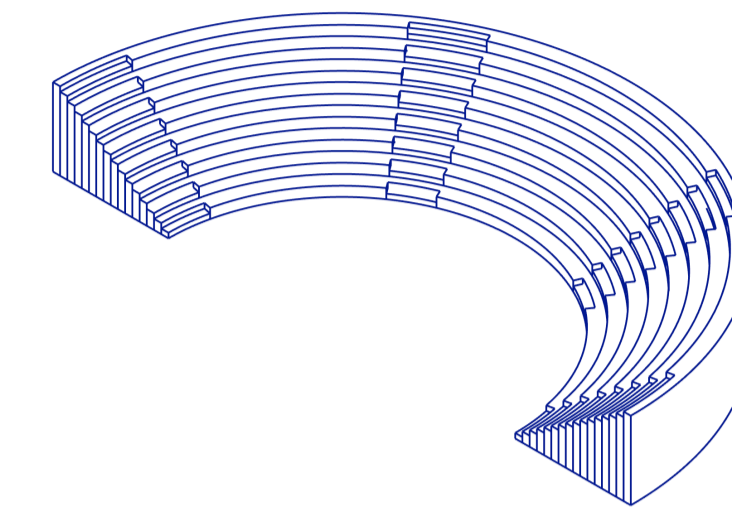
Technical rooms  
Location: basement and ground floor  
Underground areas are used for technical installations



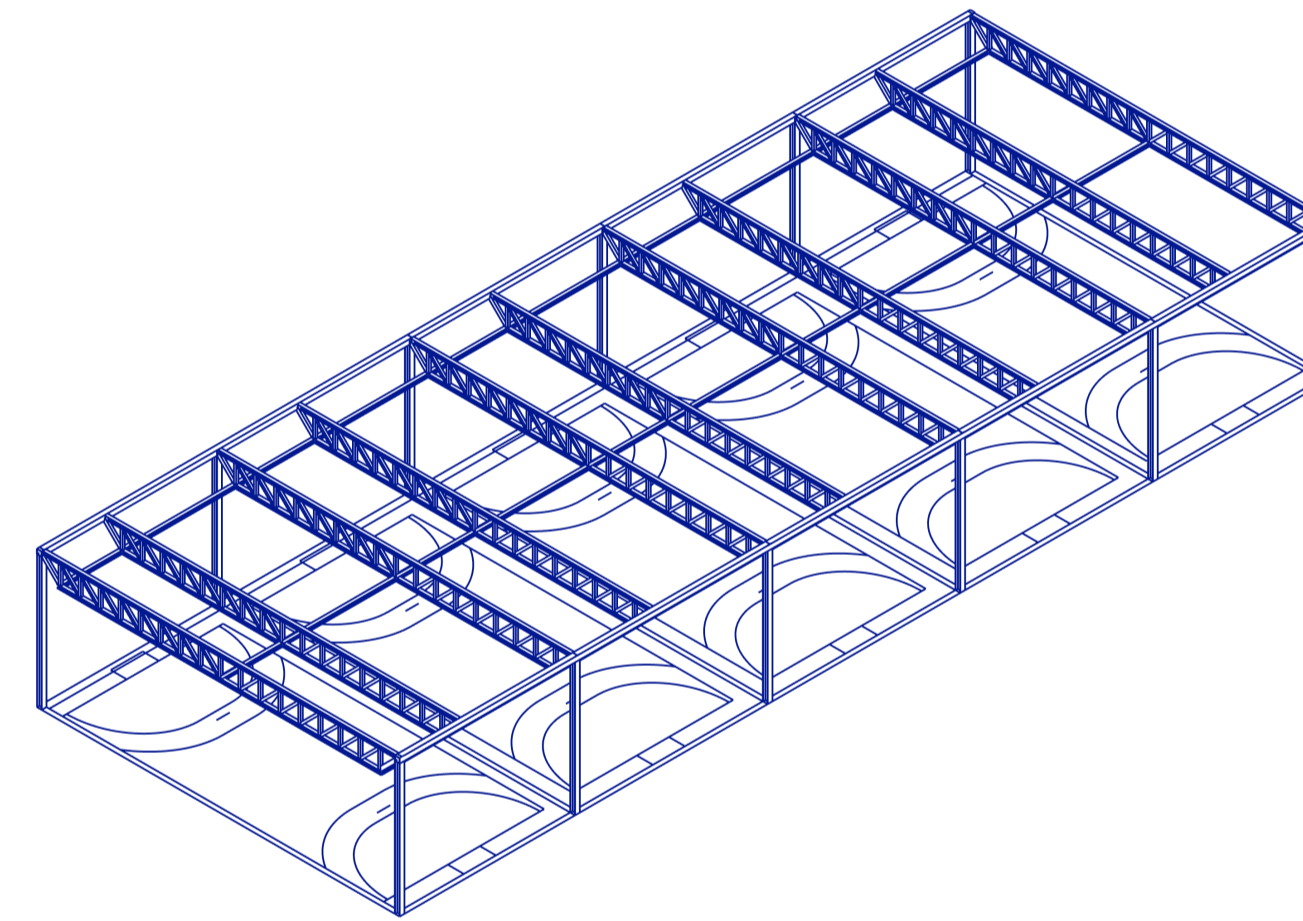
Curtain wall facades  
Location: Facade  
Facade panels in concrete and white marble make up the horizontal window bonds



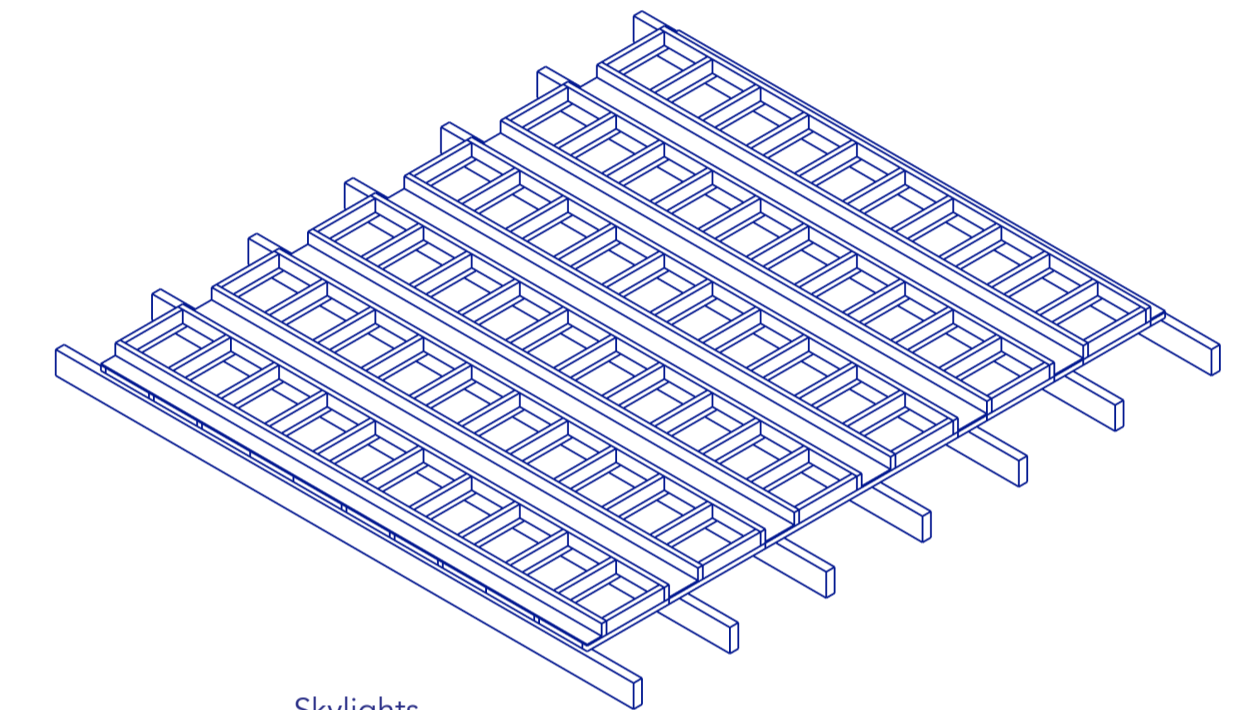
Main stairs  
Location: second floor to roof  
A new set of staircases are added to access the roof top



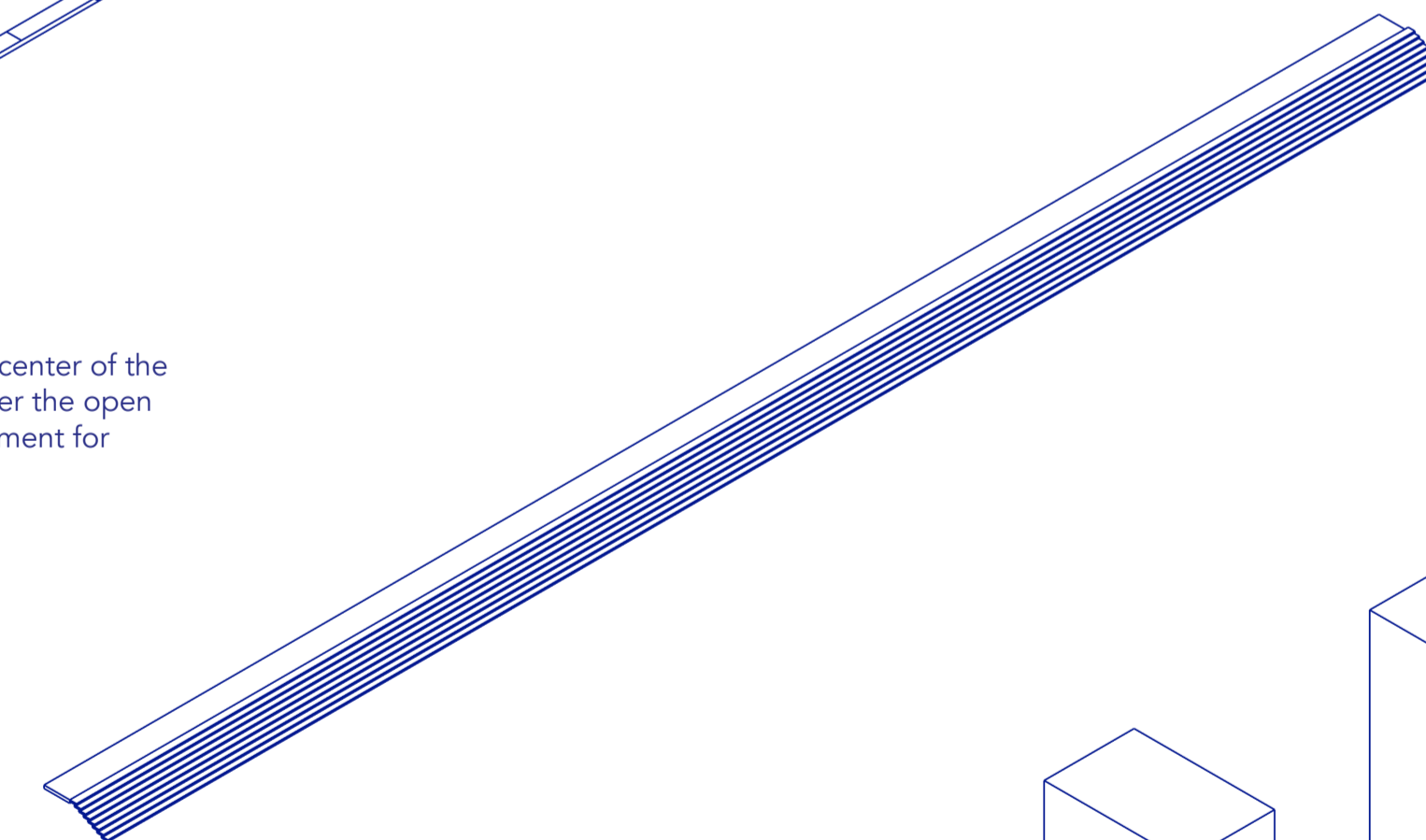
Amphi stairs  
Location: first to second floor  
Acting both as vertical circulation and seating area, the new amphi stair defines the open auditorium



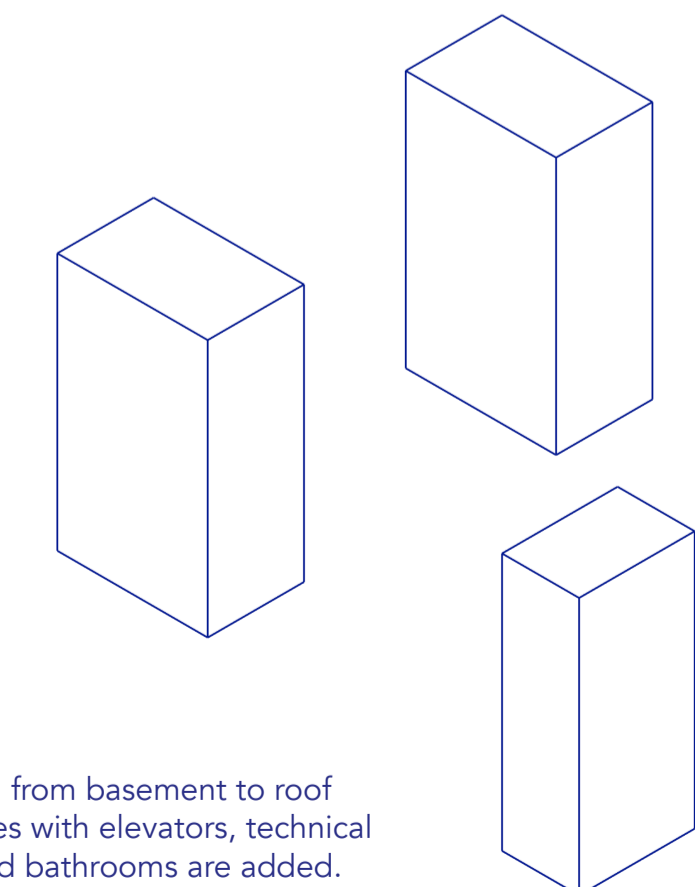
Multi-purpose hall  
Location: Basement  
A generous hall is cut into the center of the building. Steel trusses span over the open floor, carrying technical equipment for sports and culture events



Skylights  
Location: roof  
Inspired by Grungs original drafts of the building, more skylights are added over the open auditorium



Outdoor stairs  
Location: north entrance first floor  
The former delivery ramp with stairs is turned into one wide. This can also be used as seating towards the outdoor areas



Cores  
Location: from basement to roof  
New cores with elevators, technical shafts and bathrooms are added.