



Exploratory School

a Progressive Approach to Learning

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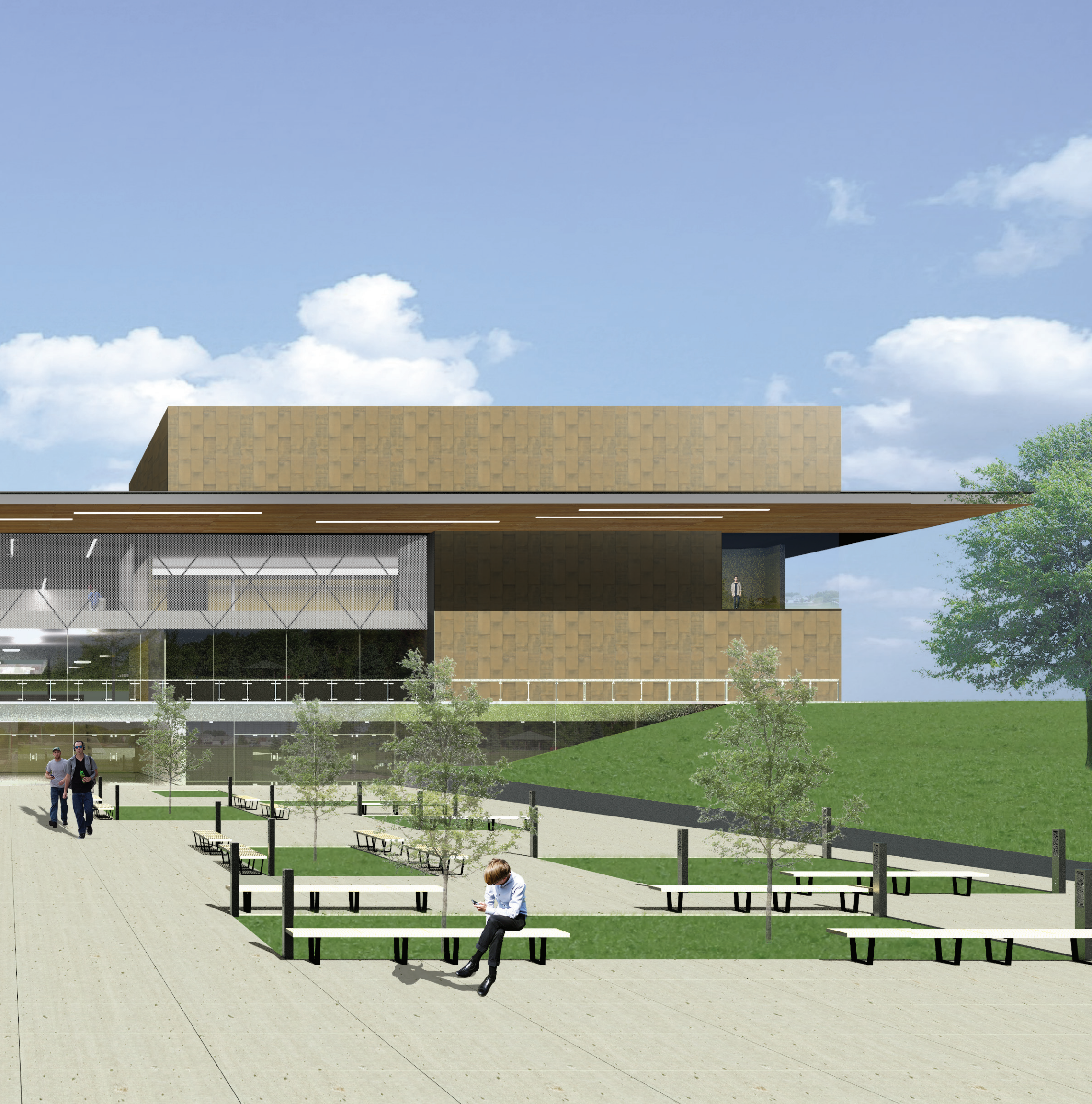
Detail drawing of the canopy that creates a 25' overhang around the entirety of the building.

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Images showing some of the material and physical qualities of the spaces on the exterior and interior of the building.









Site Analysis

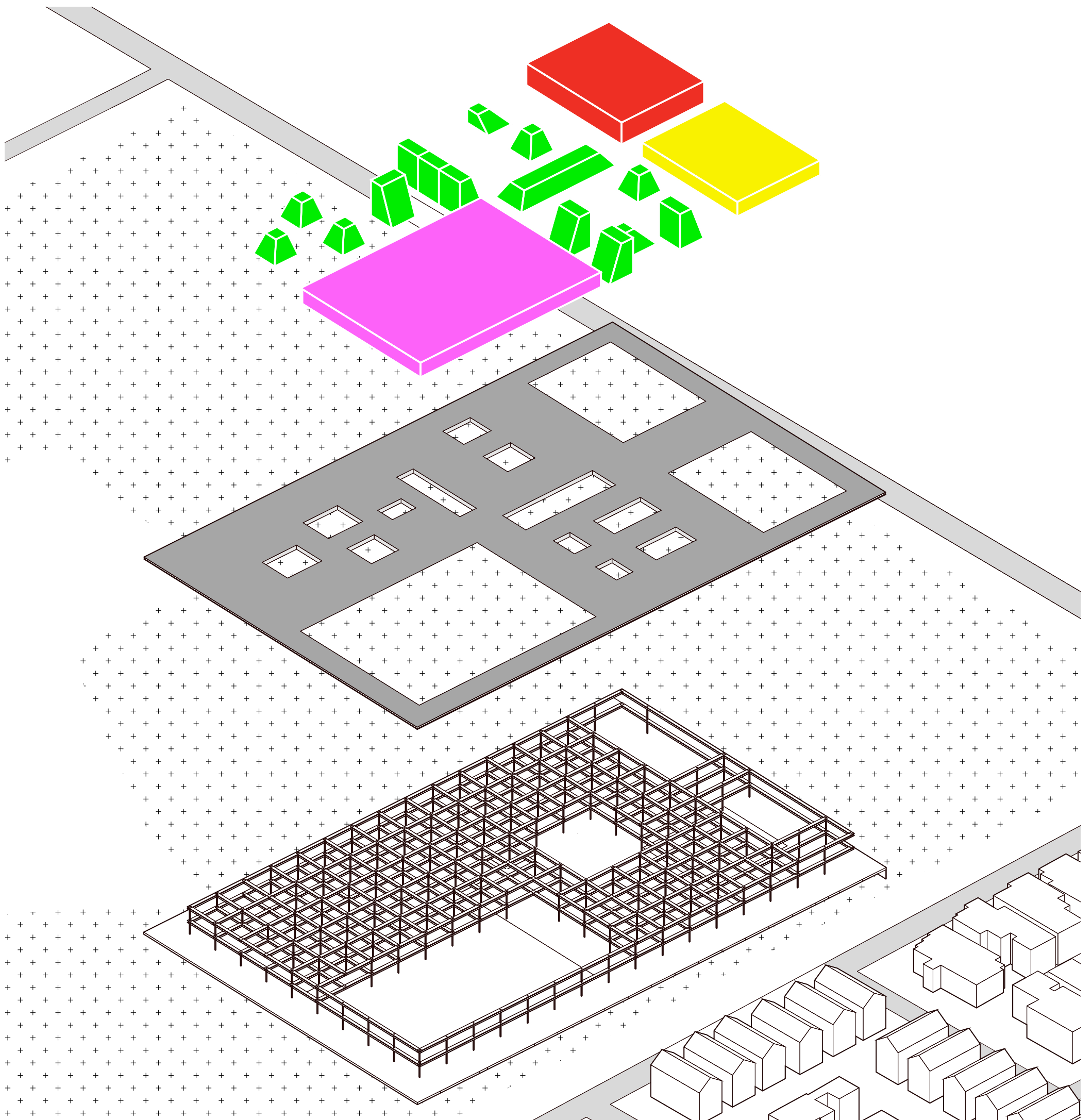
The Muller site is one with a long history that began in 1930 as Austin's first civilian airport. This airport was later replaced by Austin Bergstrom International Airport leaving this site unused. In 1984 a task force of 16 people articulated their vision for the Mueller District that we know today. Currently, the Mueller District in Austin, Texas is zoned to house a middle school on its east end. The Mueller District is a mixed use neighborhood

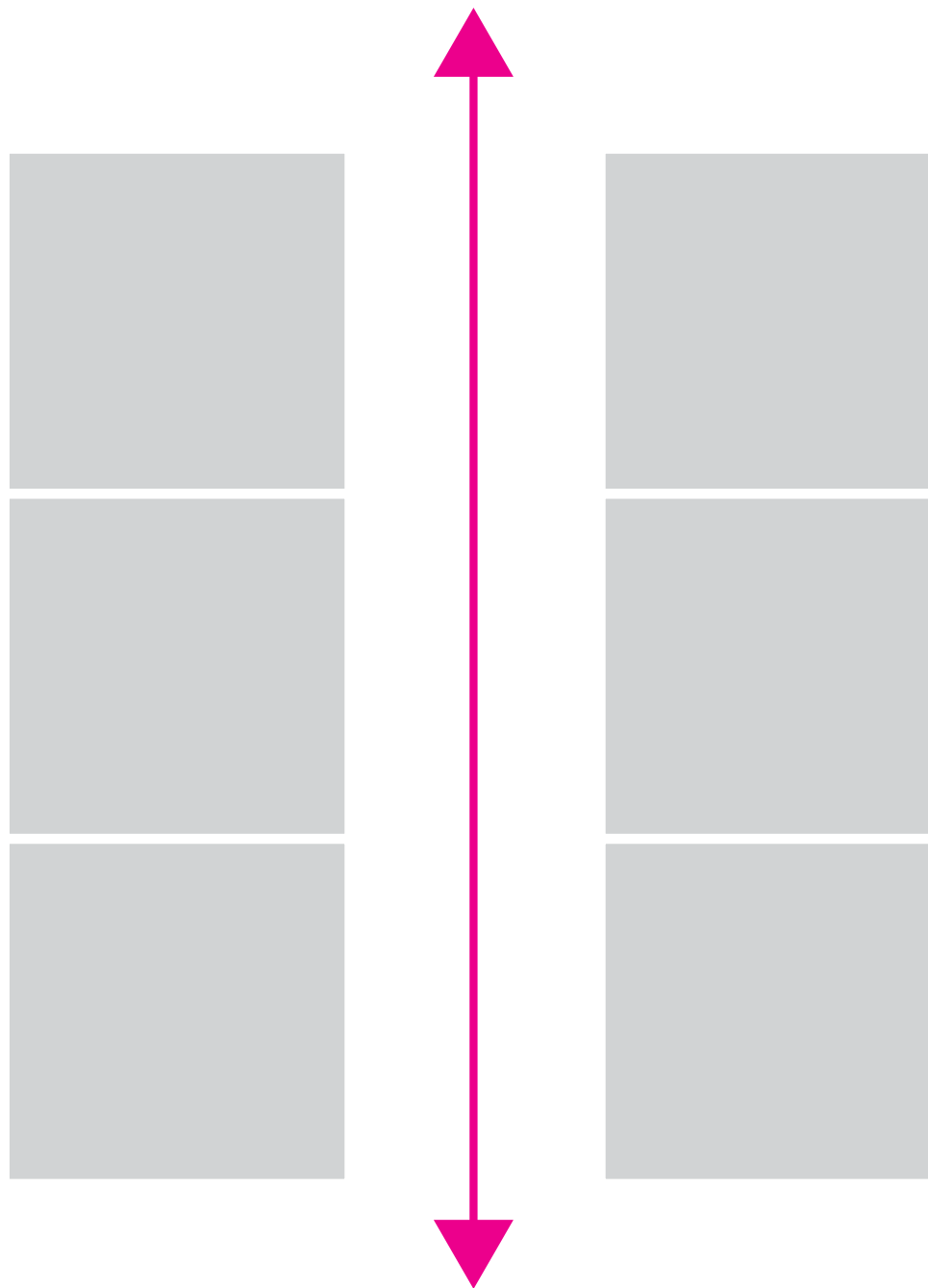
that includes, housing, shopping, healthcare, and work in one neighborhood. This development also has plans to become less auto dependent and more sustainable in the way in which people commute. The West end of Mueller houses shopping and entertainment, the north end houses healthcare and commercial retail while the southeast region of Mueller is primarily residential.

Parti

Throughout the design of Exploratory School the idea that learning can occur through independence has always been a factor. The initial parti was developed through a series of questions. How can design change school from a destination to an atmosphere or state of mind? How can the architecture of a space influence learning through exploration? How does the inward facing idea of a school become more outward facing? All of these ideas begin to inform the parti of this project along with create some constraints.

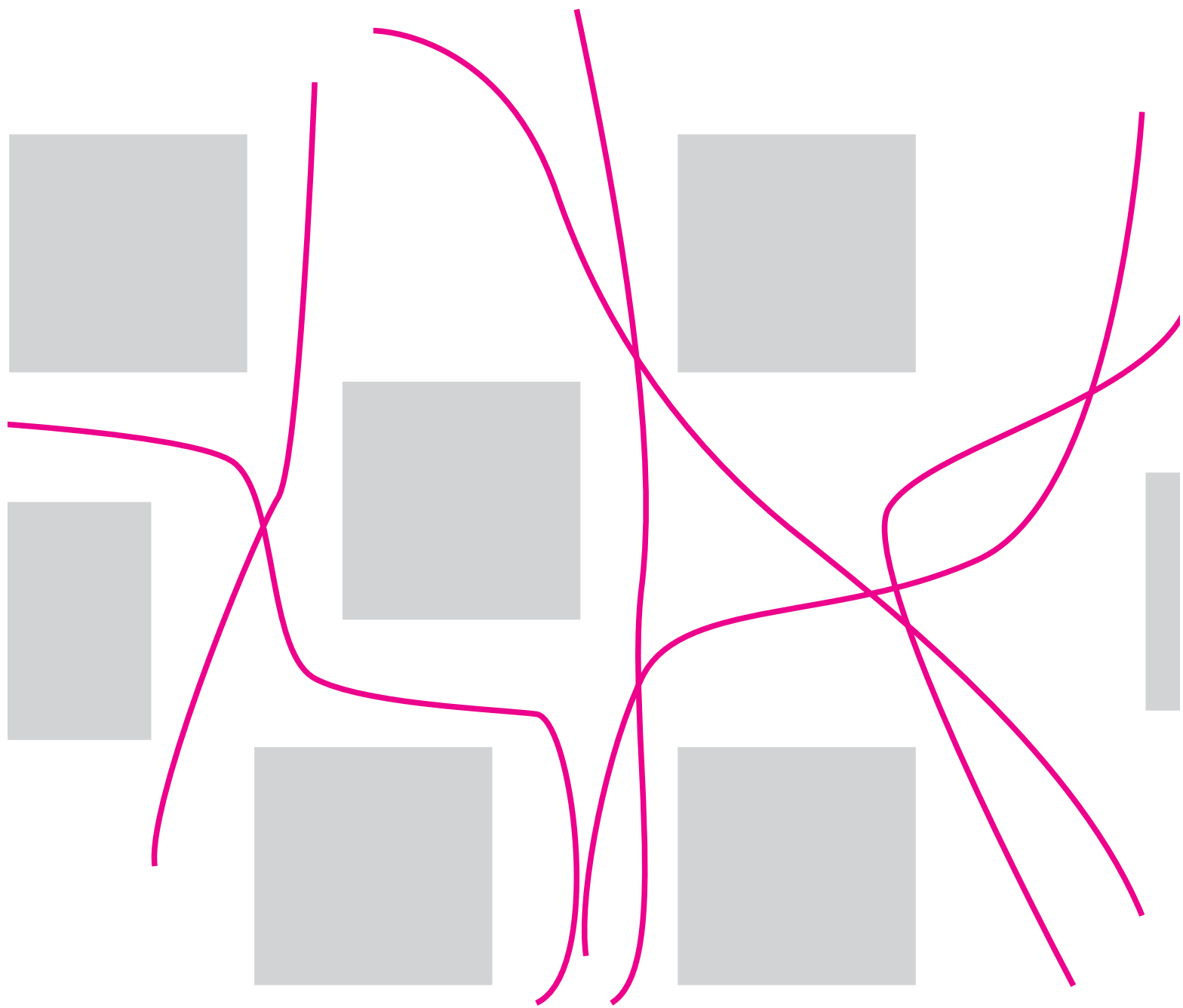
In response to these questions a more articulated vision for the project is produced. Learning is implemented differently between every person and this parti responds as such. Some of the mass becomes more porous and transparent and activities from the interior will be visible on the exterior. While other areas of the massing are more opaque and more private. The structure begins to respond in a similar way and is expressed in these areas of high transparency and hidden in areas of privacy. All circulation meanders and there will be no straight path to one space. Rooms take on a modular shape and fill the mass of the building. This produces "leftover space" which becomes both circulation and programmed space. This area of circulation is then articulated in a way that promotes these ideas of interaction and learning through exploration.





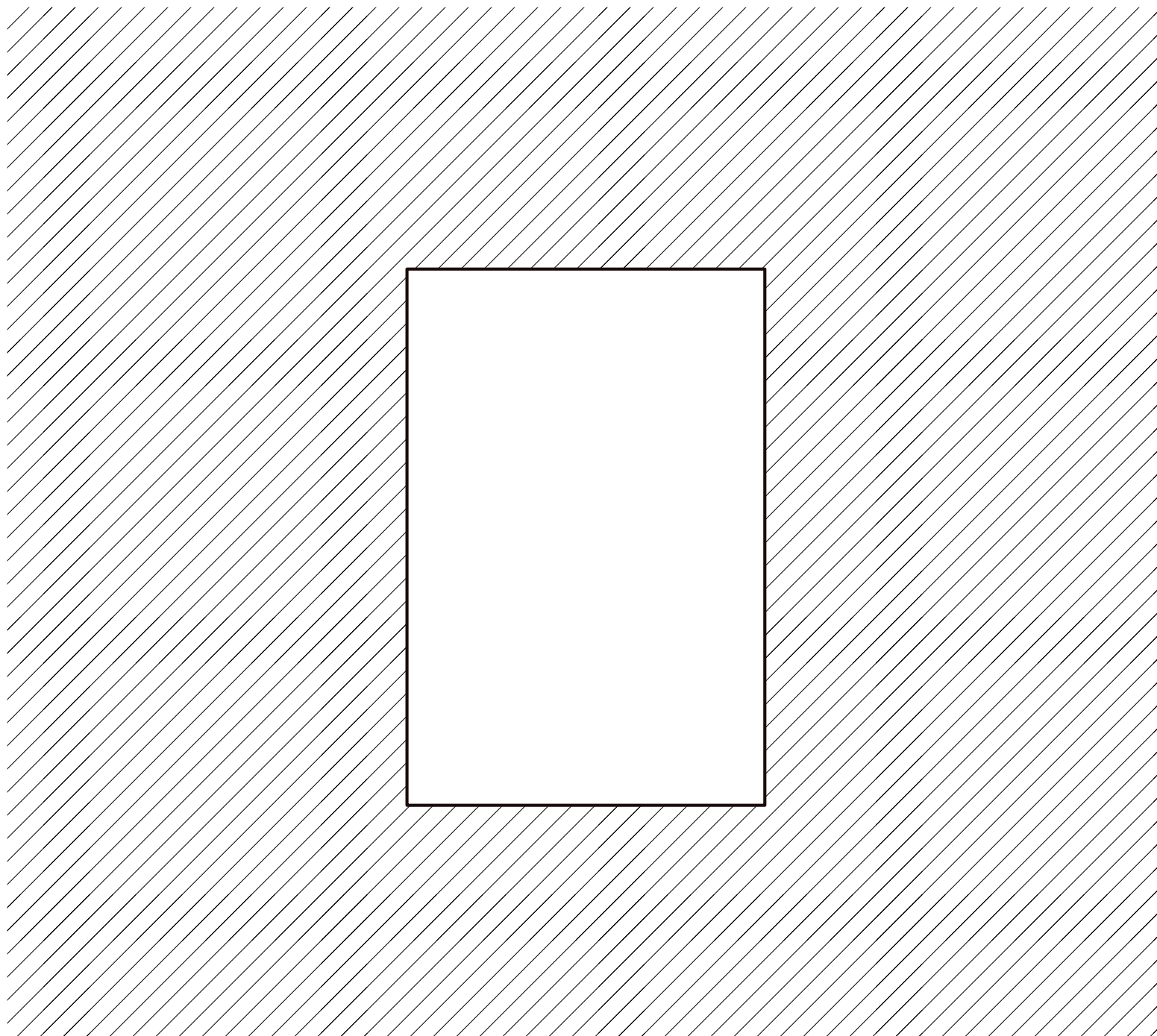
Modularity

The idea for this flexible school originated from a simple idea of each space within the building being a piece of a module. In turn, this module produced square spaces which could be programmed to the school's current needs. When organizing these "cubes", having corridors that were linear took away from the flexibility of the overall design and only allowed circulation in two directions (North and South).



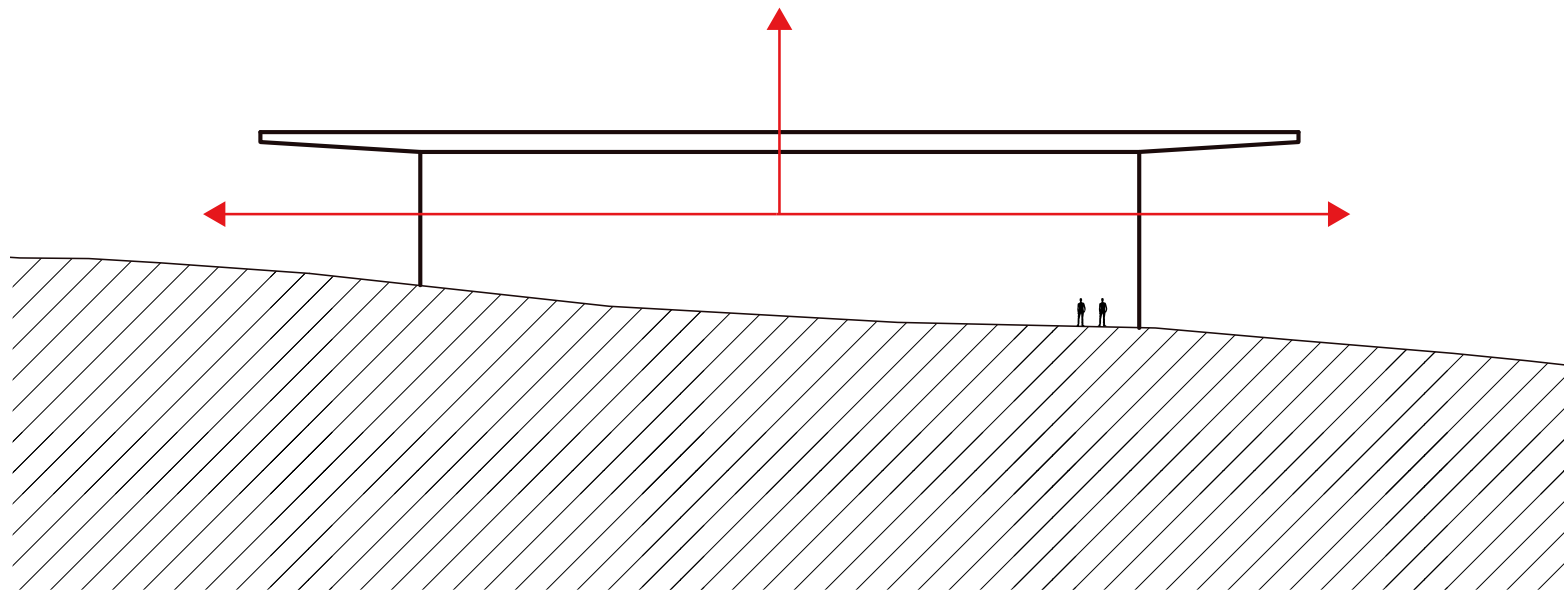
Flexibility

With the module in place the rooms are then scattered to create more organic circulation in between the spaces. This produces an idea in which there are no direct paths to one destination and reinforces this idea of learning through exploring in both a physical and mental sense. These circulation spaces now become an extremely crucial aspect of the students learning experience as they act as both circulation and programmable space for learning.



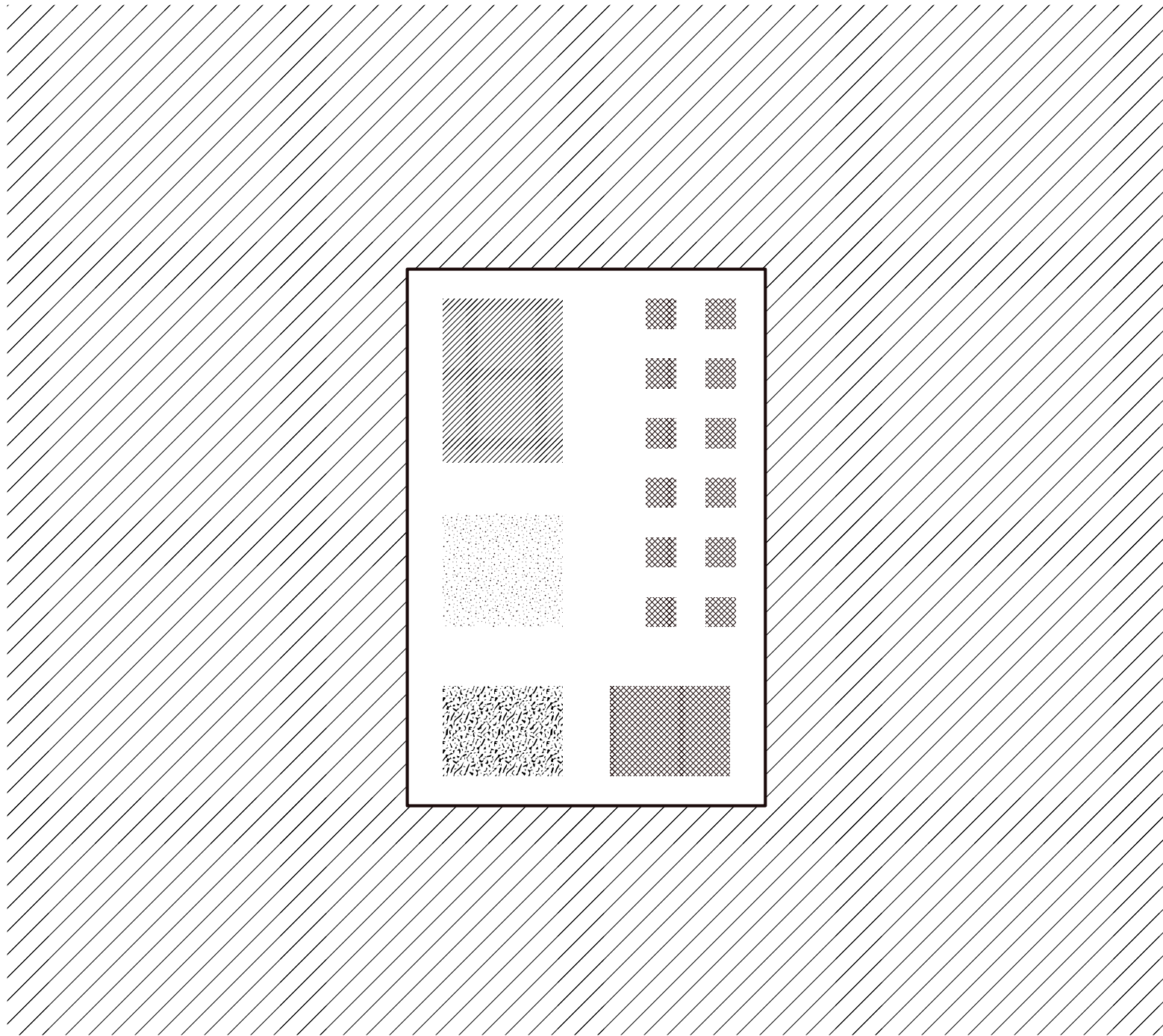
Footprint

First, the parti began by taking the programmable space for the school and generating a building footprint.



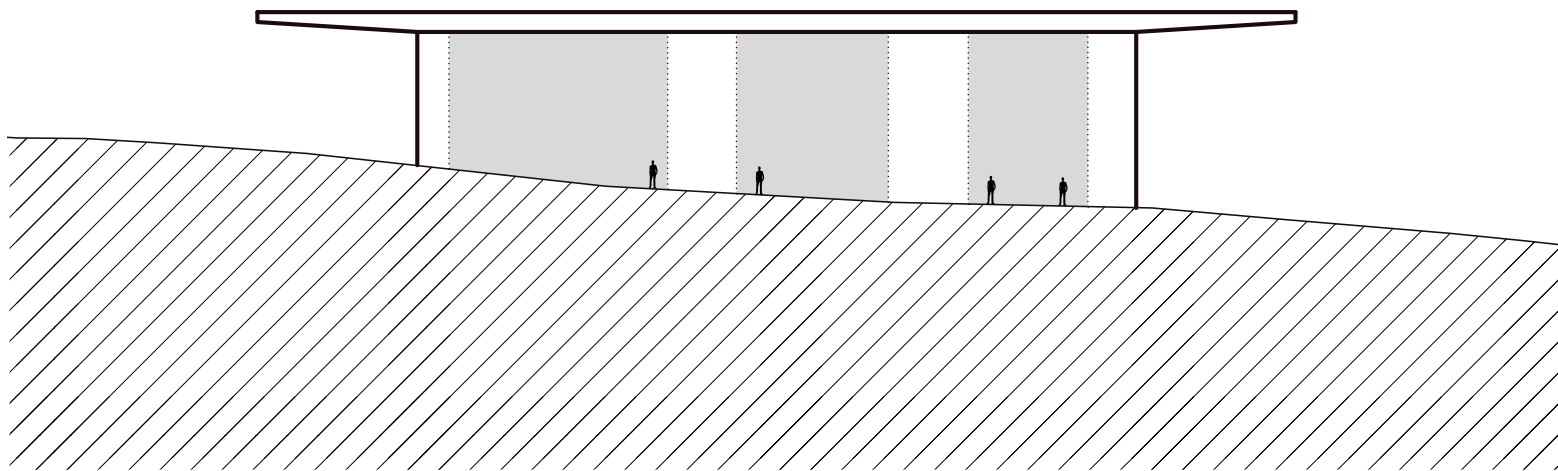
Pavilion

This footprint was then extruded and a pavilion was created. The pavilion creates a sense of impermanence in which the user feels as if they are moving through or briefly stopping by.



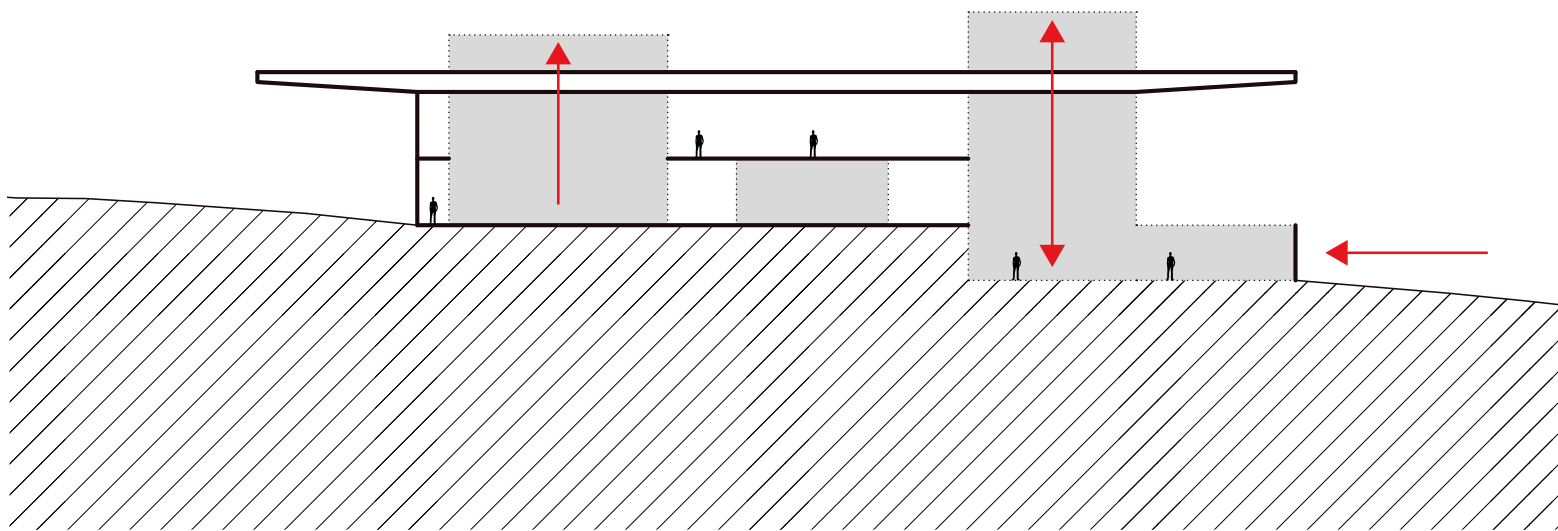
Program

From here the program was analyzed and compared to that of the modern day school. It was adjusted according to the module and allows the space underneath the pavilion to be populated. Placing these spaces in plan allows for intuitive programmatic adjacencies.



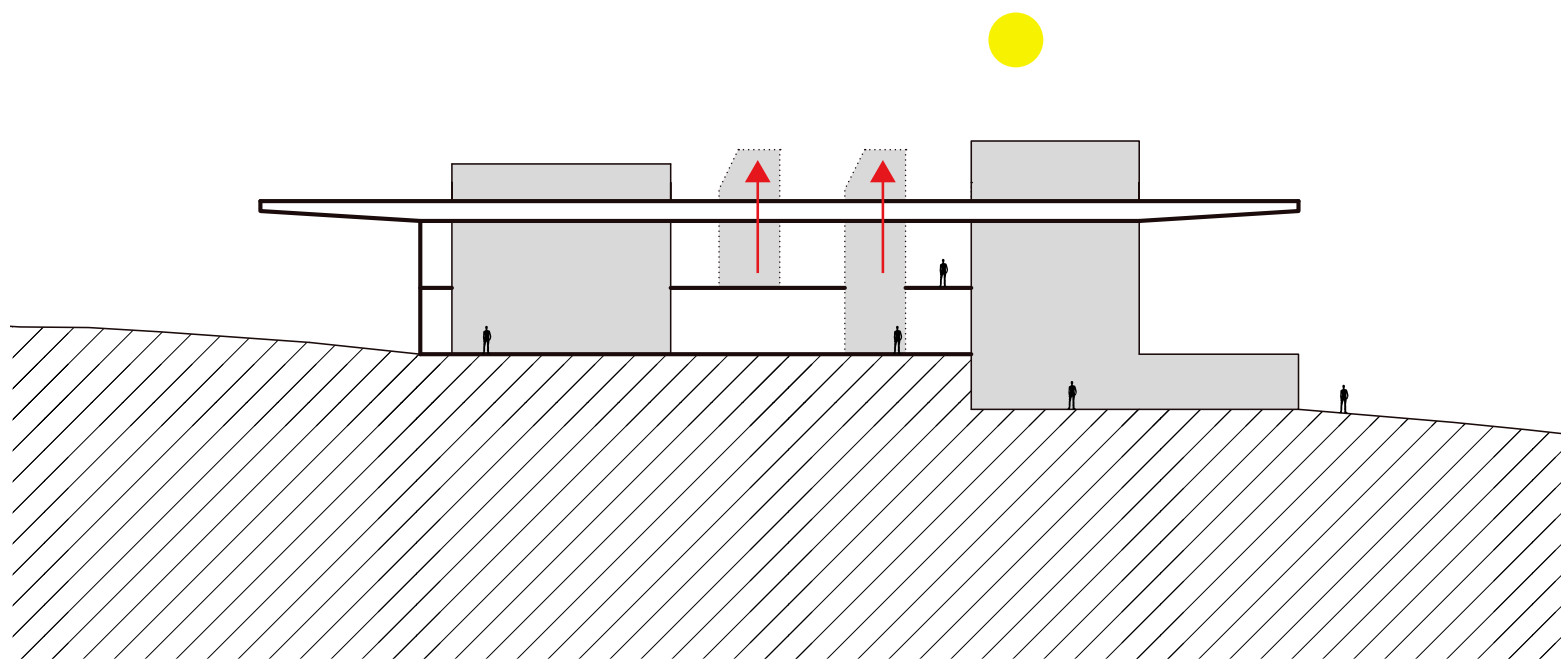
Disperse

From here this pavilion was populated with the given program underneath its canopy. The programmatic spaces are now floating underneath the pavilion and create a sense of flexibility within the "pavilion".



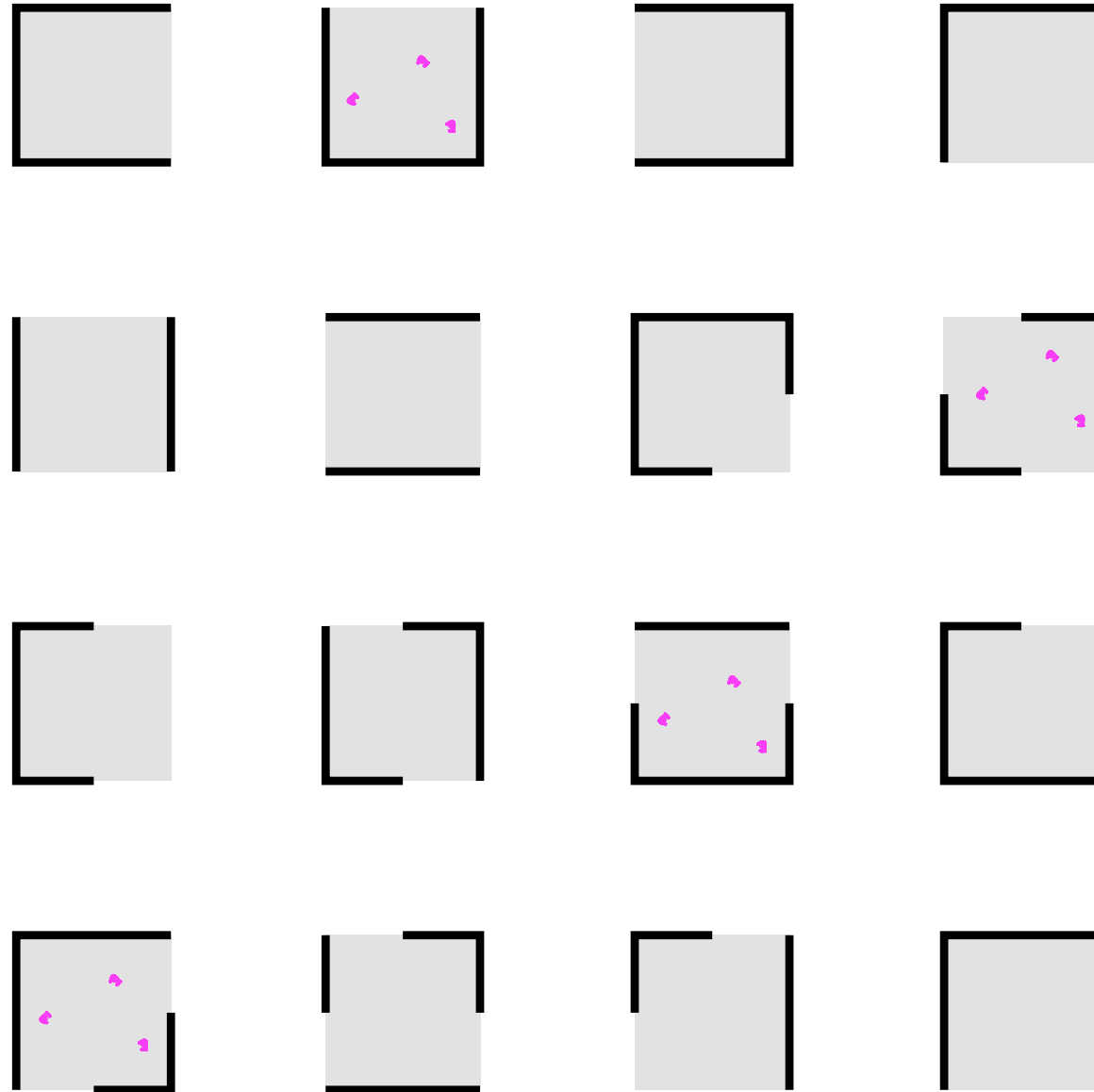
Extrude

After dispersing these programmatic elements in plan in section the next step was to create an interaction between the two. The larger programmatic spaces that needed are then extruded through the roof or ground plane, puncturing it, while engaging the topography and creating a main plaza space and entrance towards the right.



Light Wells

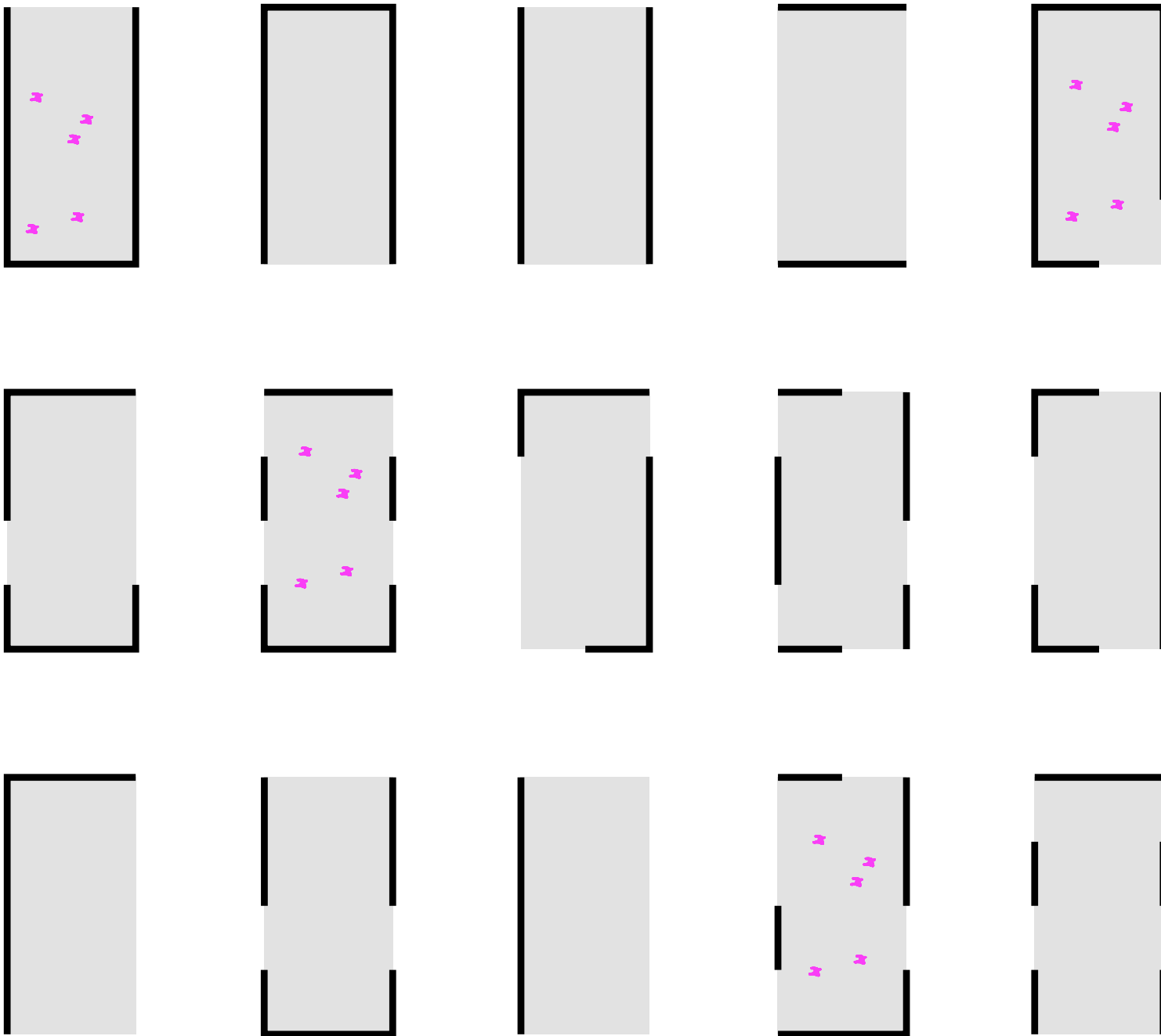
Using this same method Light wells were added in order to provide natural lighting and further sectional interaction. This removes the sense of human scale and creates double heights spaces in which light can spill into a space in some of these areas.



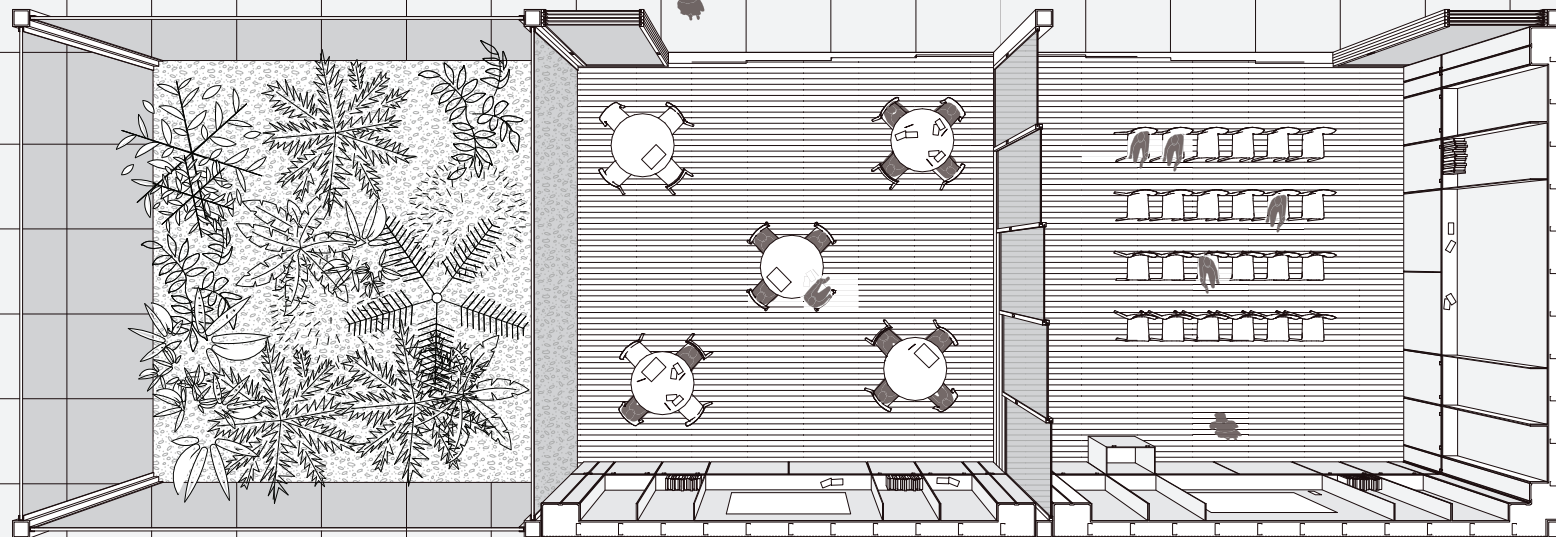
Spatial Variations

The design of the school and the modularity were influenced by the current trends of flexible classroom and learning space. These trends brought upon the notion of the module and how it may be implemented into education. The module could be used to create interchangeable space while retaining their architectural qualities. This idea of a “plug in” module allows for quick

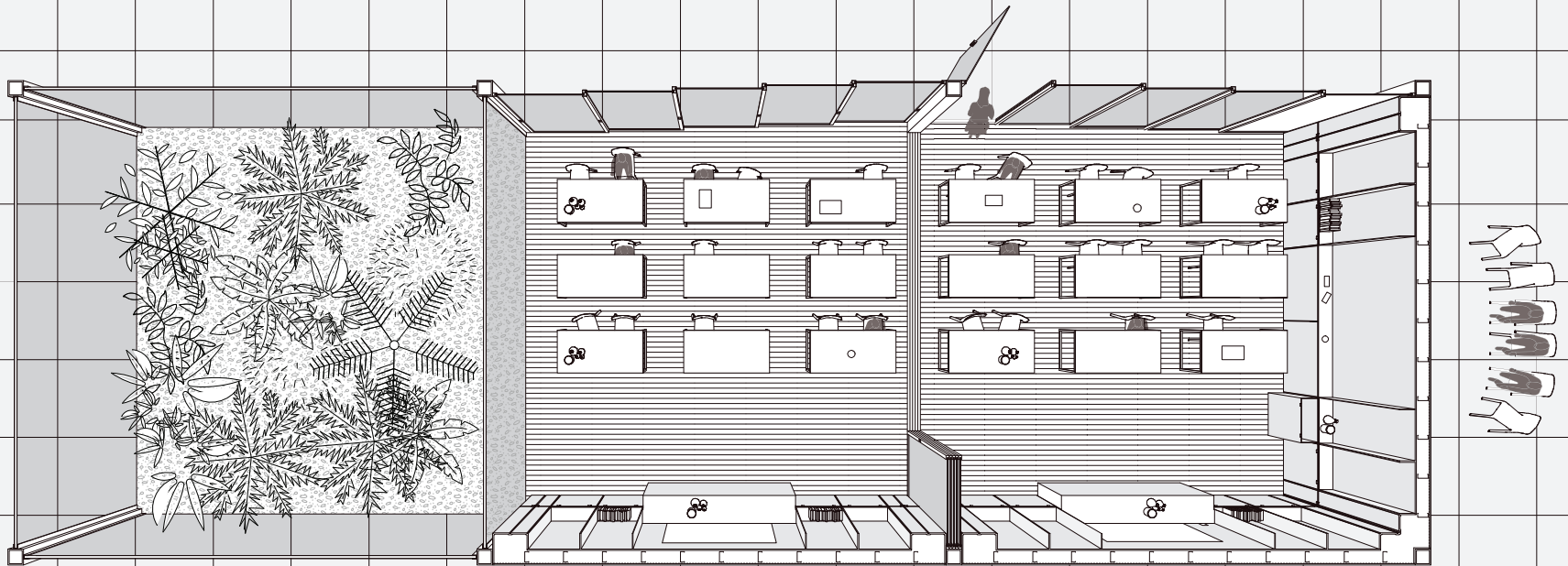
additions and replacements of rooms and spaces within the building. With student population growth this school can rapidly expand and plug these modules in for future development. Above are a multitude of different spatial variations that were created for the school to showcase it's flexibility. Modularity not only allows for flexibility in plan but flexibility in the way one teaches and learns.



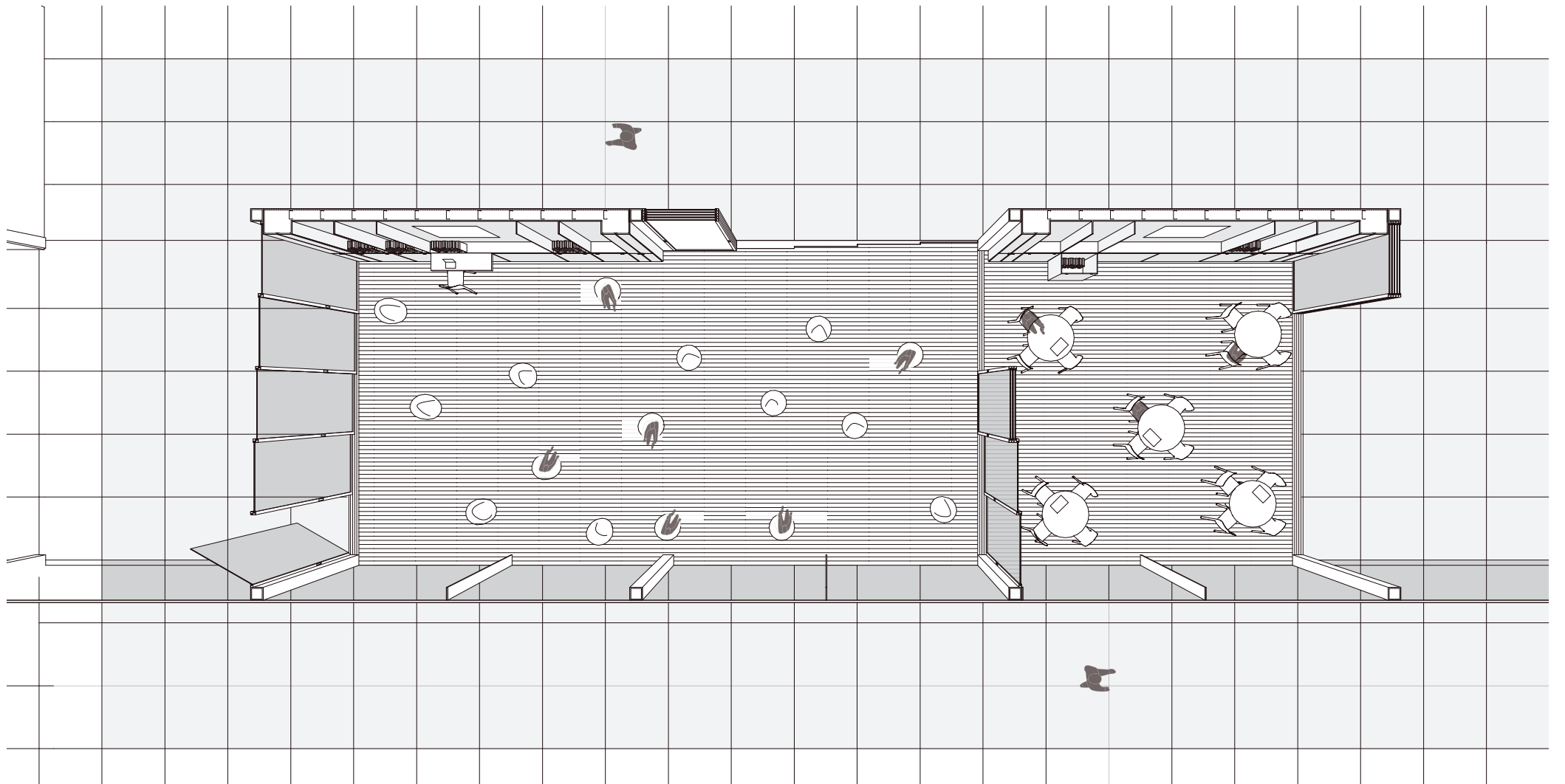
These spaces can also be connected to create larger spaces according to the need of that specific classroom. In a field that is constantly in flux this modularity in the classroom gives a unique user experience to both the teacher and the student giving them the freedom to learn as they please.



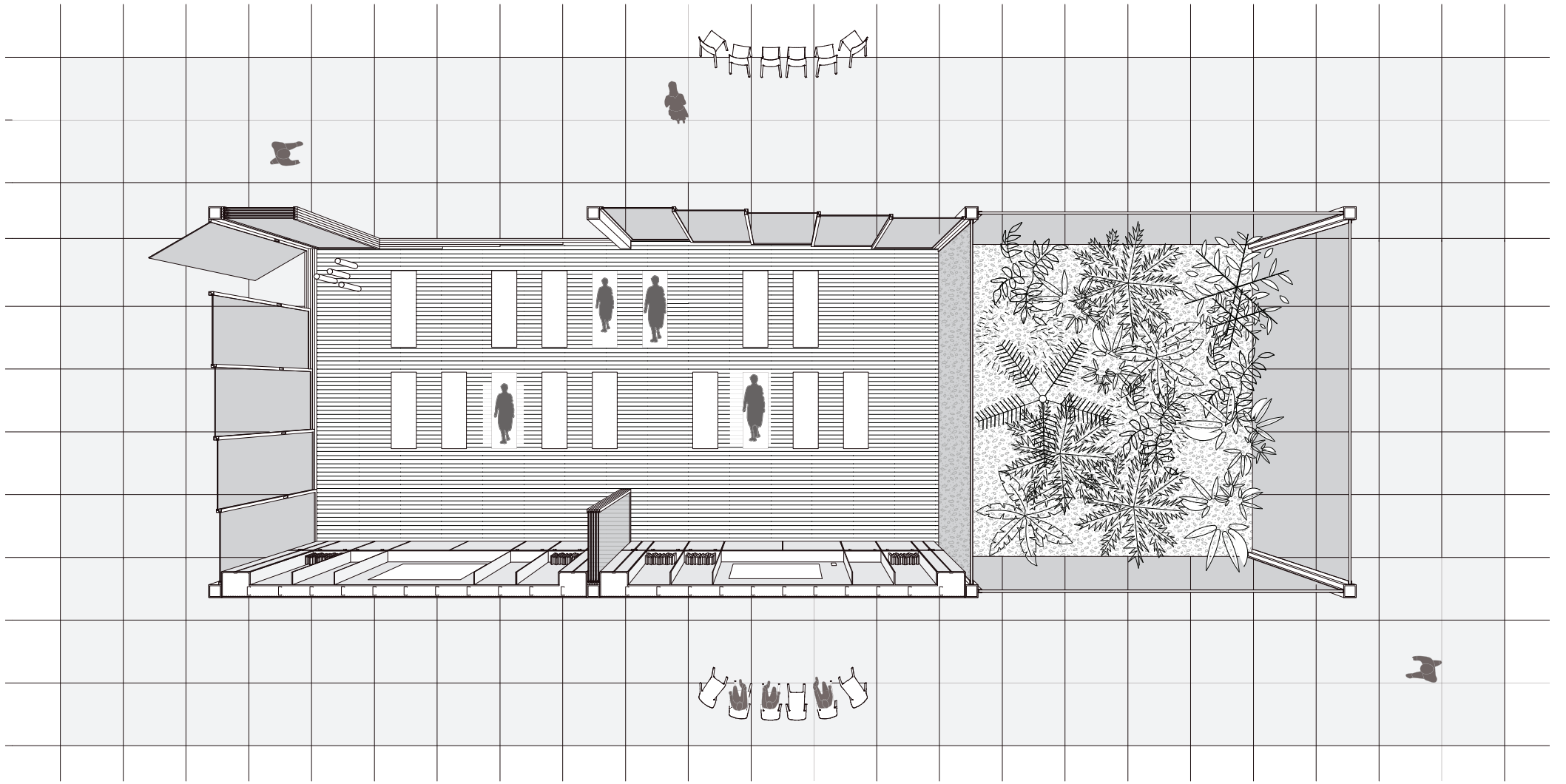
Mixed Learning



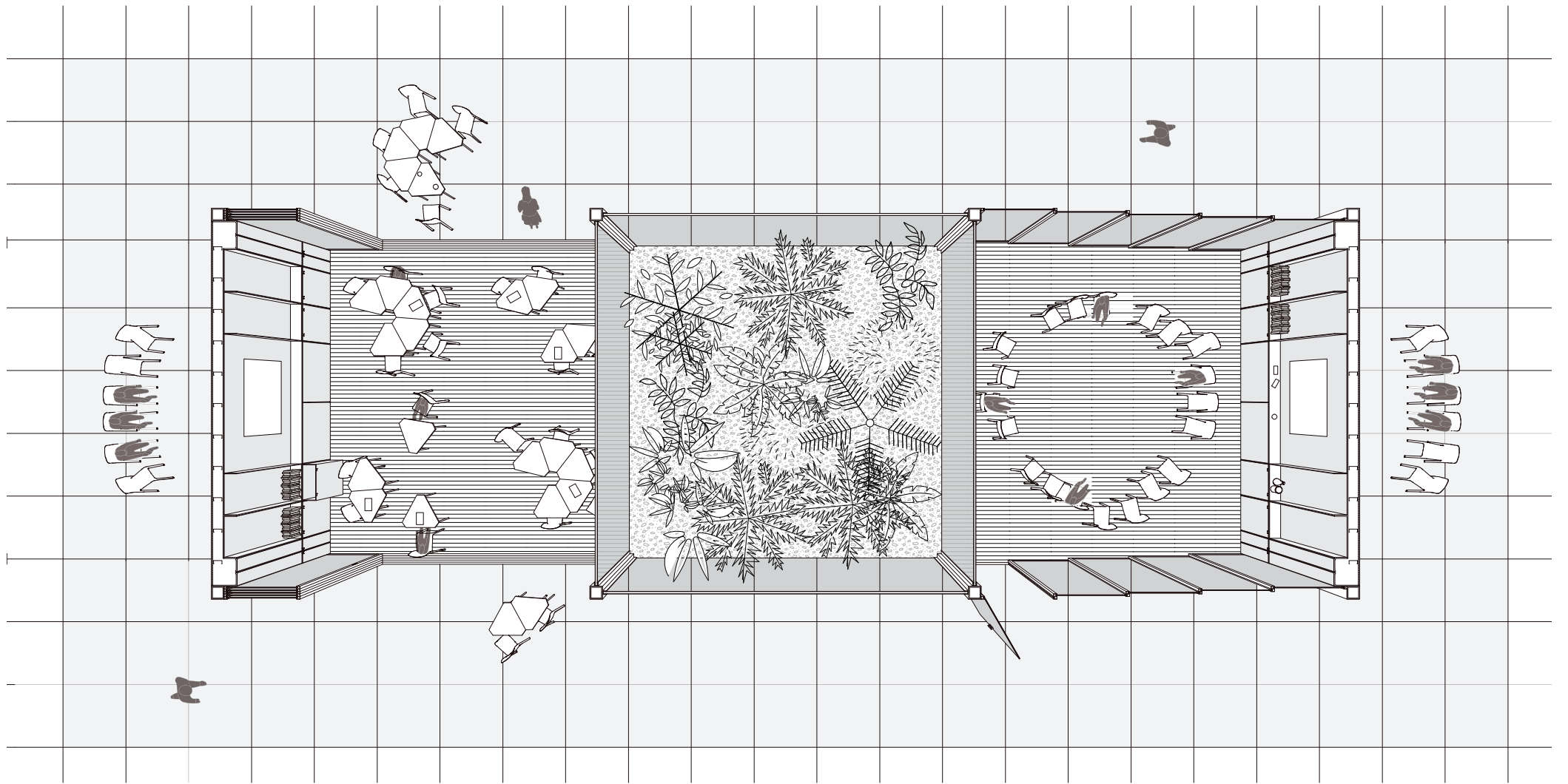
Laboratory



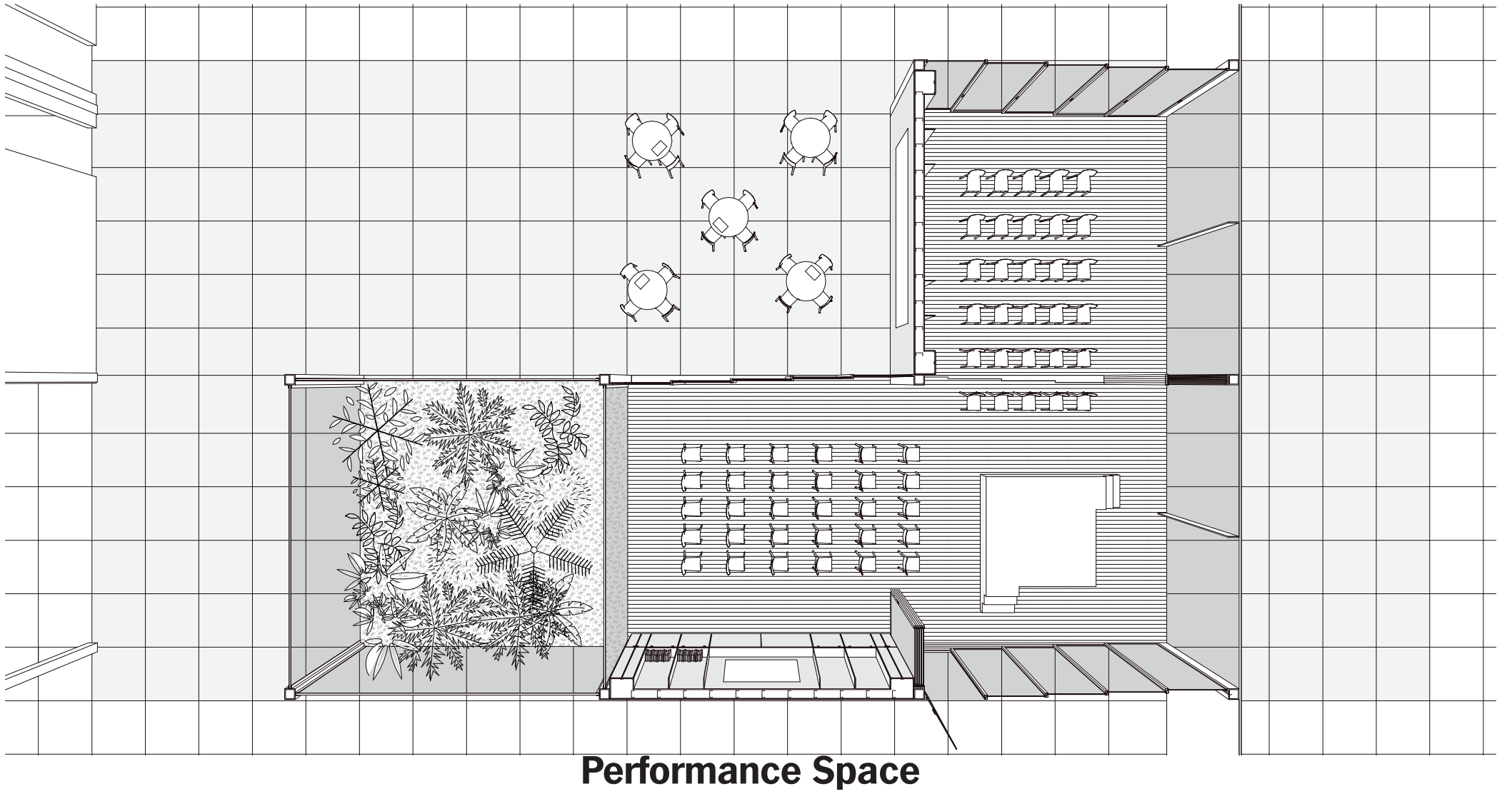
Reading Room

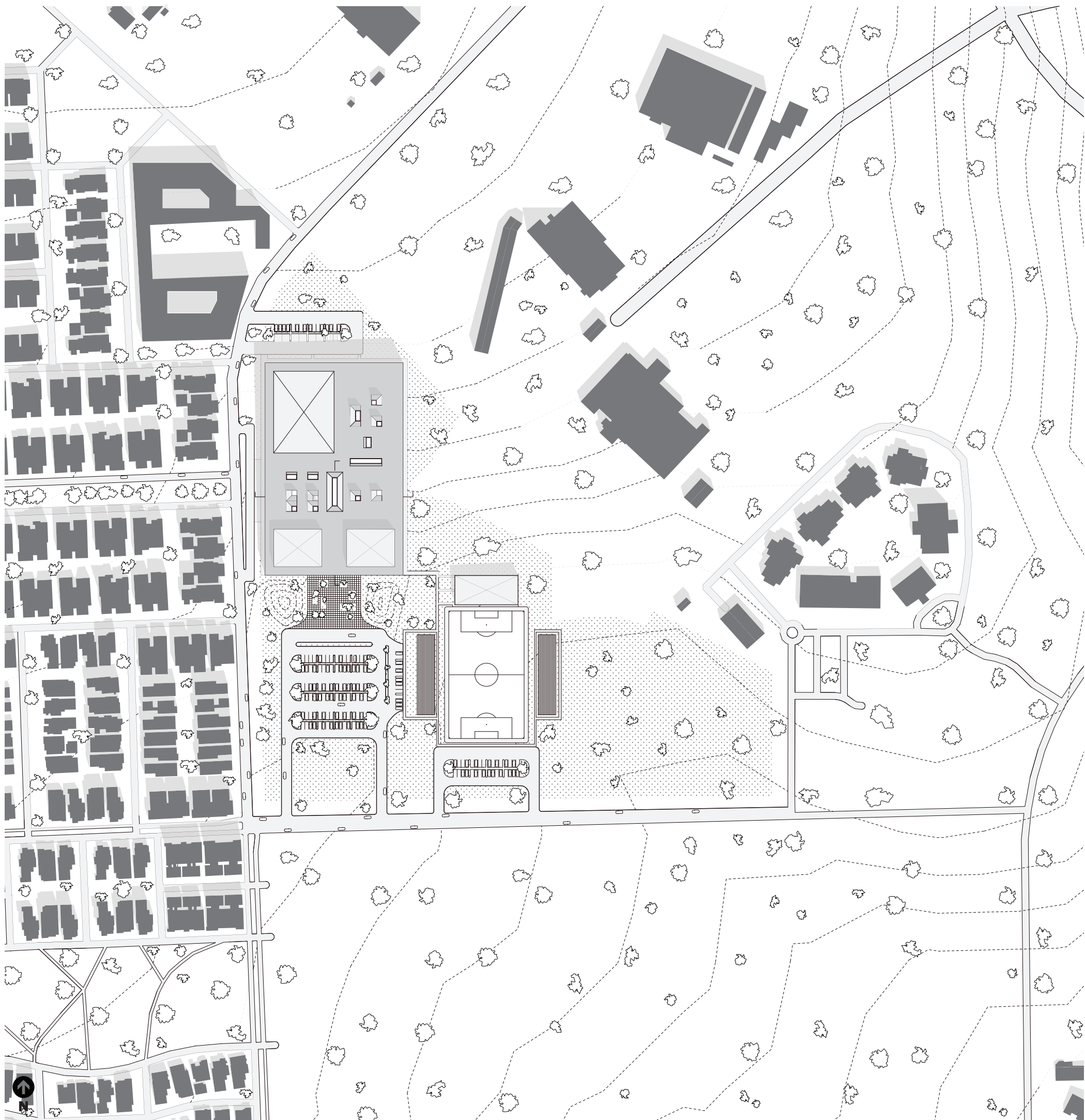


Fitness Room



Split Group Learning



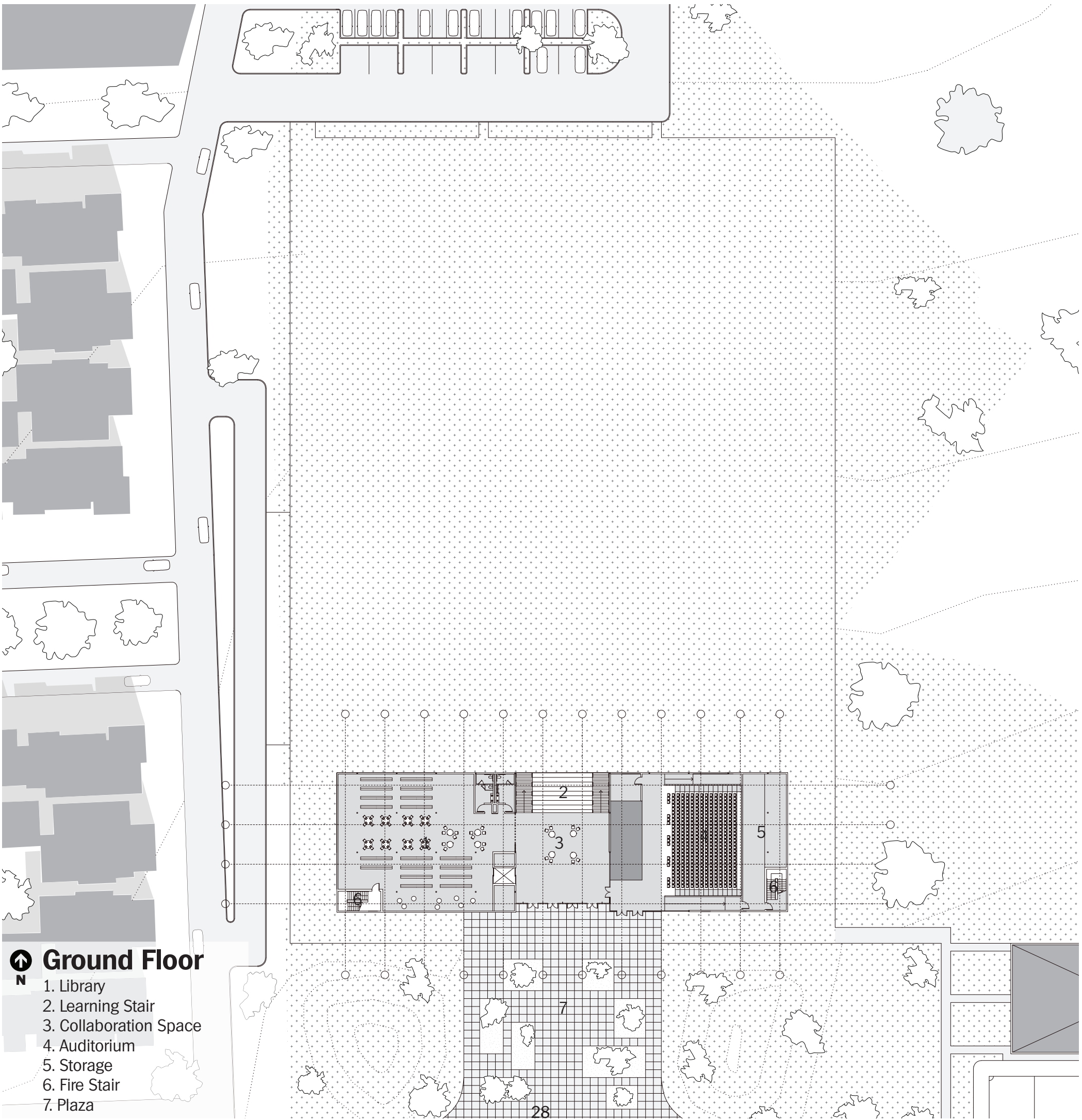


Plans & Sections

The notion of the grid is also used in the site plan in order to create different zones and relationships. The parking is placed towards the North and the South of the building in order to create a main circulation path that also runs from North to South inside the building. Any tertiary circulation or temporary parking is located on the East of the site near the field and track while remaining drop off is located on the Western face of the building.

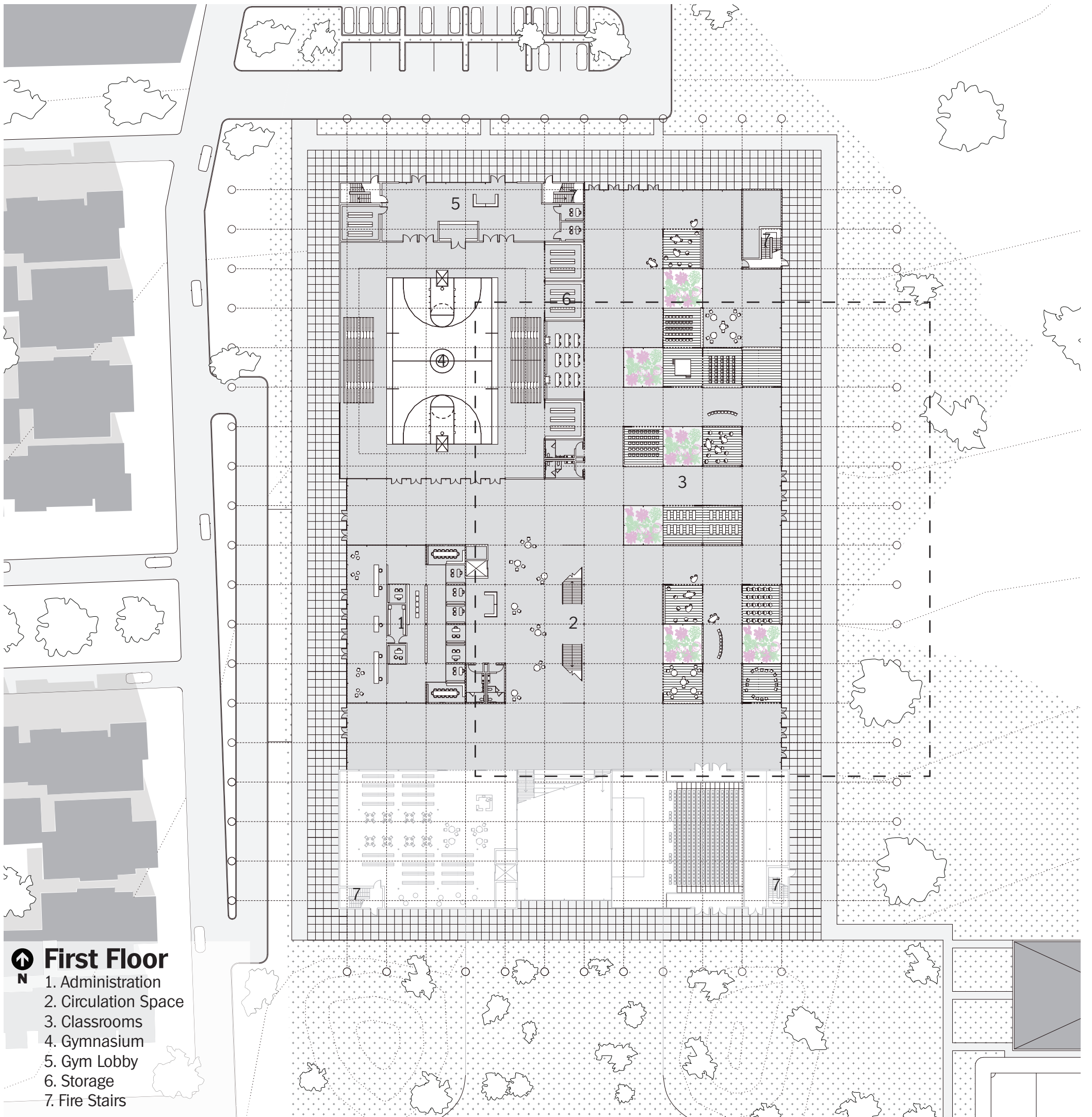
Your journey through this building begins when you approach the building from the South and enter into the plaza space. This space holds a multitude of activities from, outdoor concerts, outdoor classes, relaxation, and parties. From here the user moves to the interior of the building and enters on the Ground Floor. You enter into a large interior lobby that includes a Library, Learning Stair, and Theater. Users of the school continue their journey and progress up the learning stair into the "School". After this the main circulation path continues to be articulated and the user is given freedom to choose where they would like to go. In creating this axial circulation path that runs North to South in plan the user is able to quickly access different parts of the building to their right or left while progressing through the space.

In section some of the spaces begin to be articulated such as the Main Lobby, Light Wells, and the Classrooms. Not only is the grid used in plan but sectionally the grid begins to organize the spaces as they take on a third dimension. Throughout these sections the volumes begin to interact with the roof plane and create moments where the volumes puncture multiple floor planes.

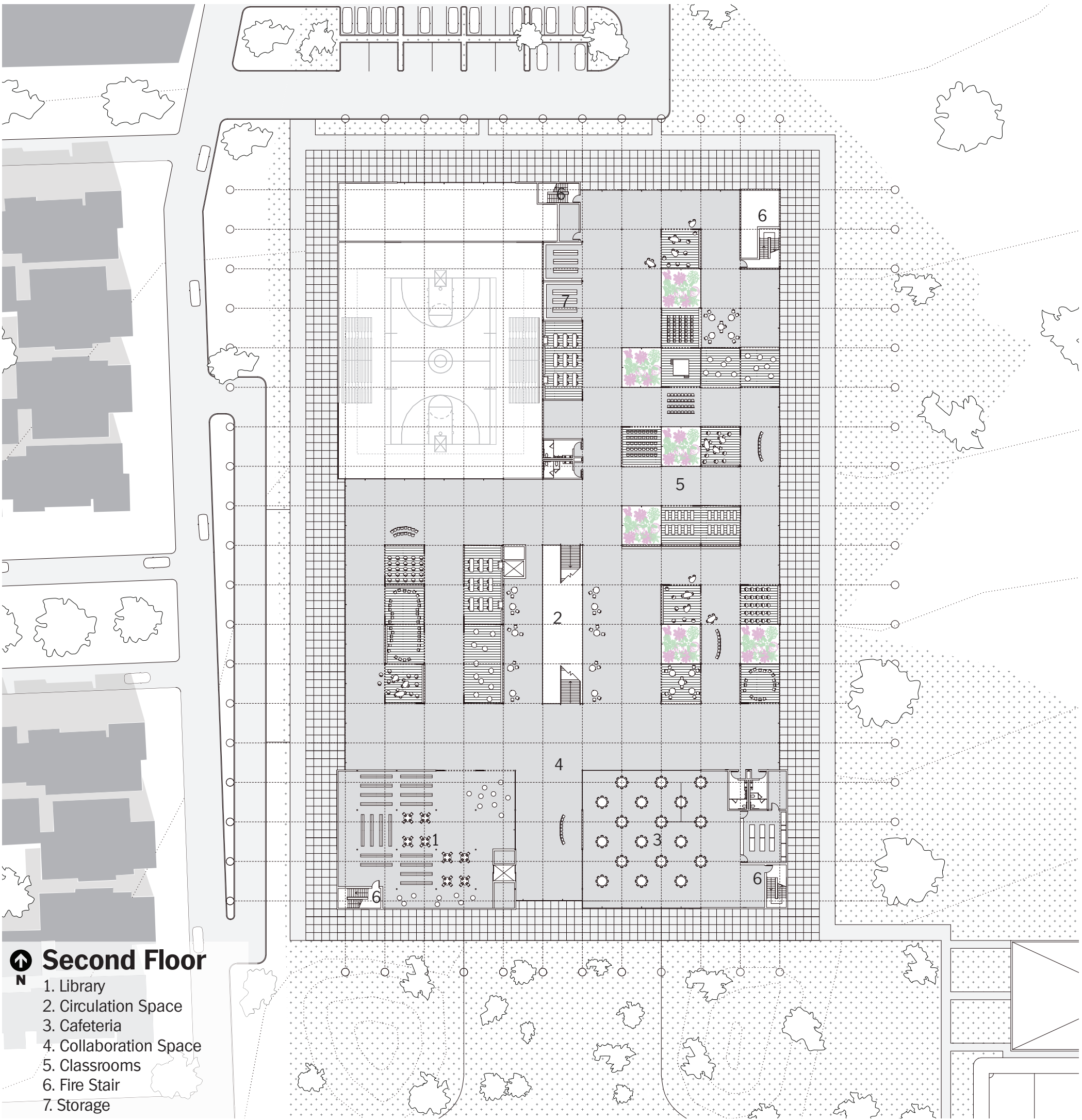


Ground Floor

- 1. Library
- 2. Learning Stair
- 3. Collaboration Space
- 4. Auditorium
- 5. Storage
- 6. Fire Stair
- 7. Plaza

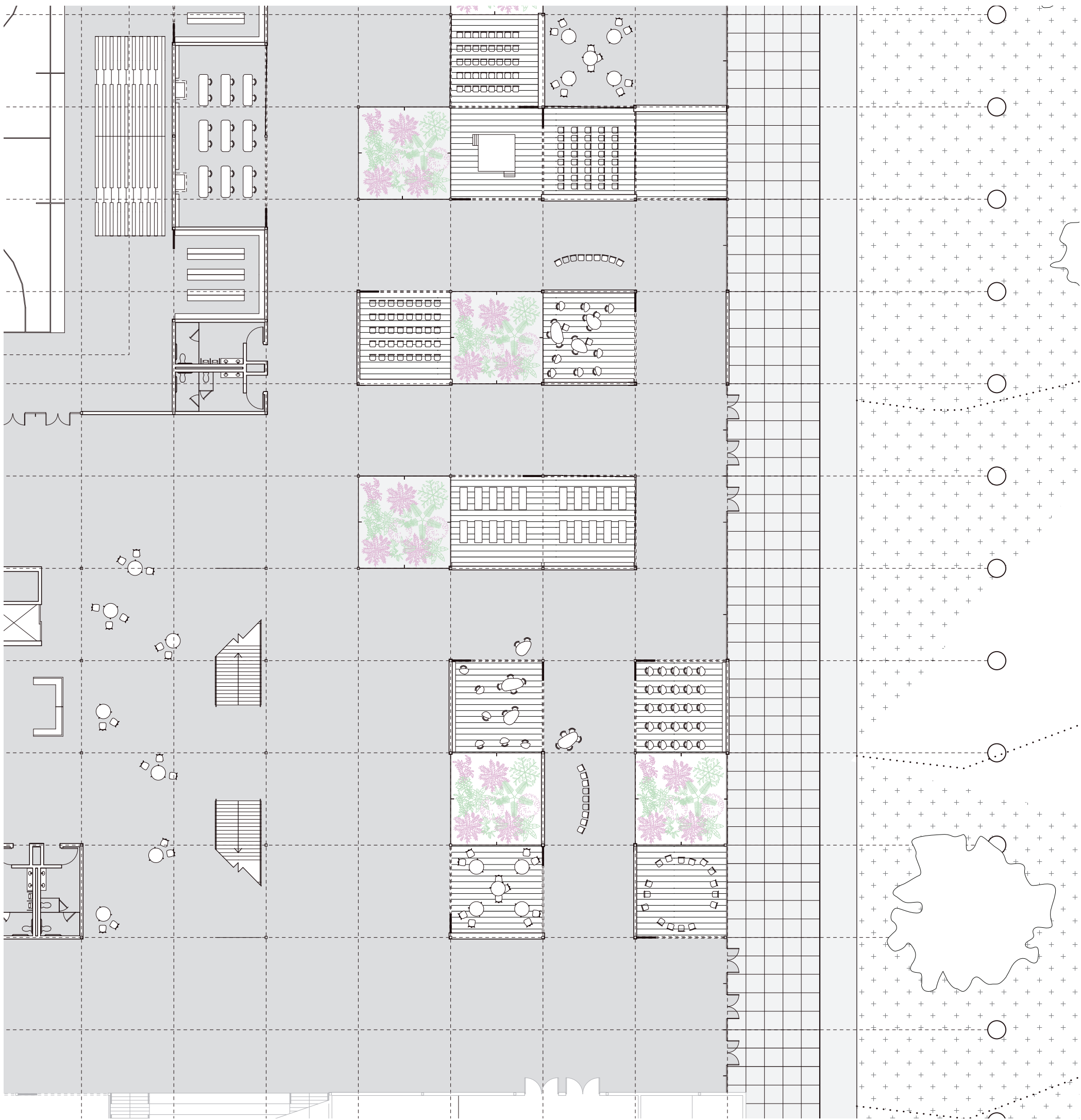


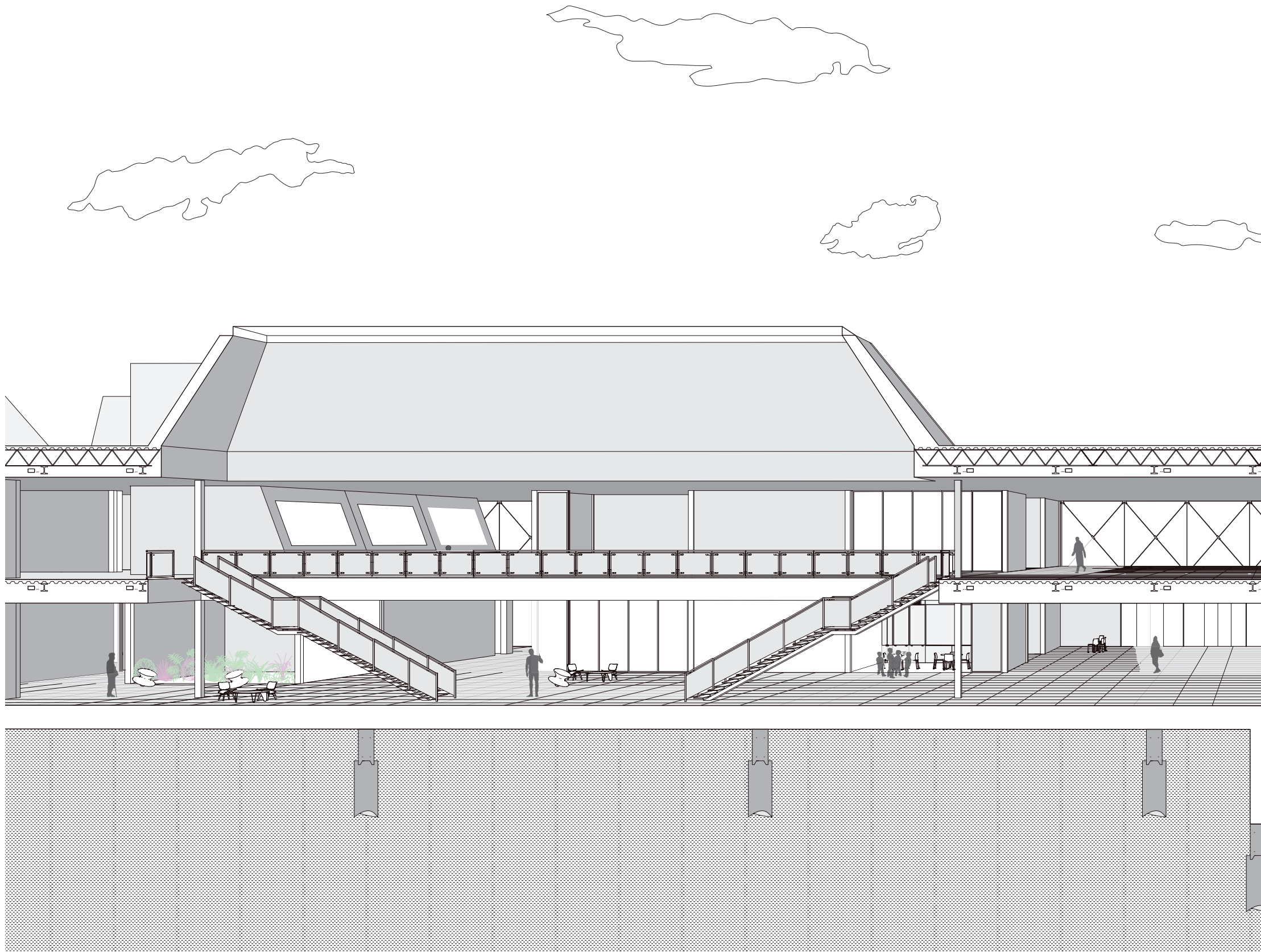
- First Floor**
- 1. Administration
 - 2. Circulation Space
 - 3. Classrooms
 - 4. Gymnasium
 - 5. Gym Lobby
 - 6. Storage
 - 7. Fire Stairs

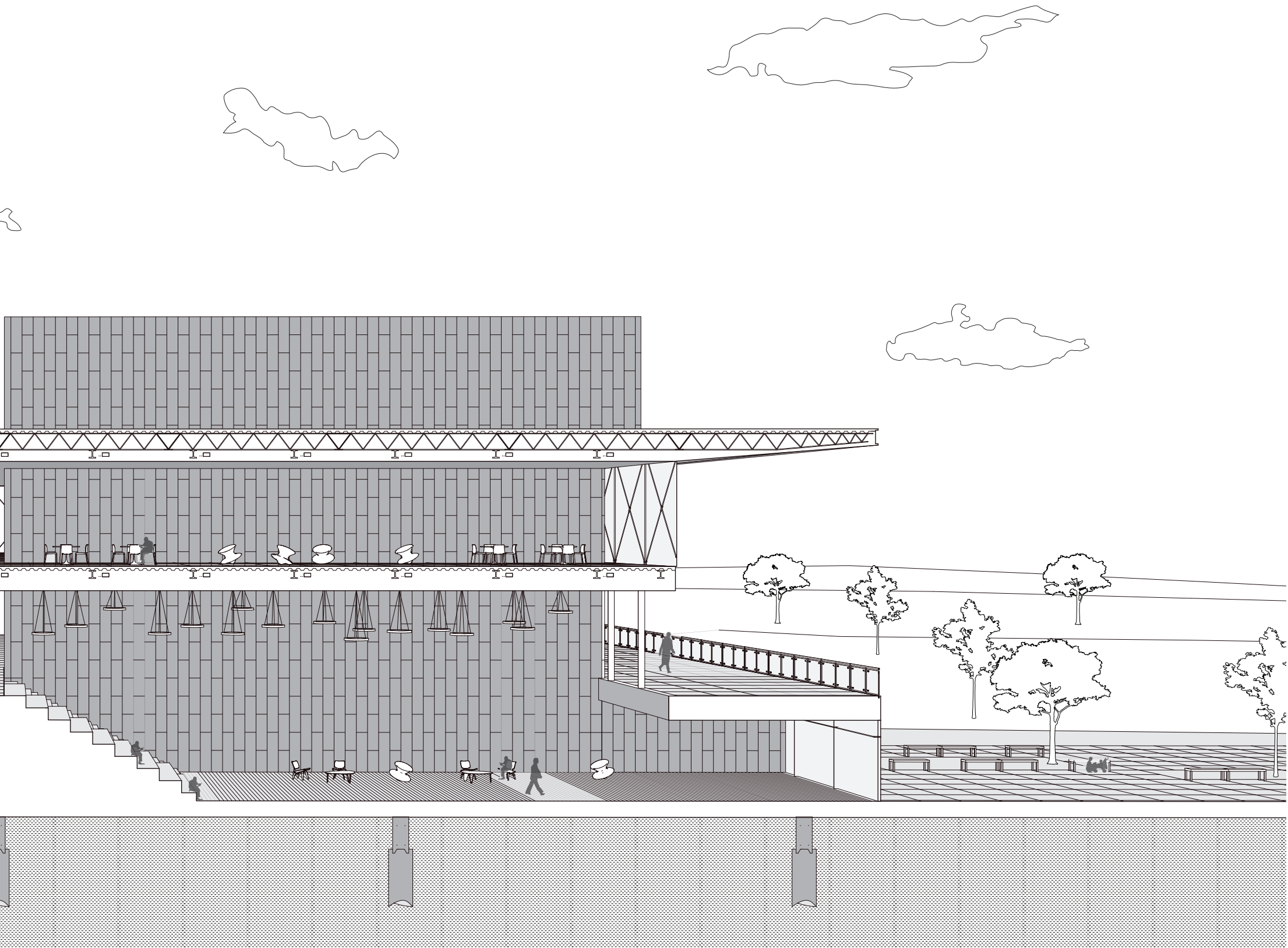
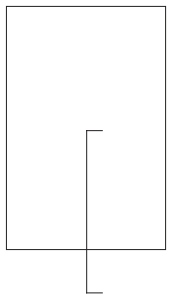


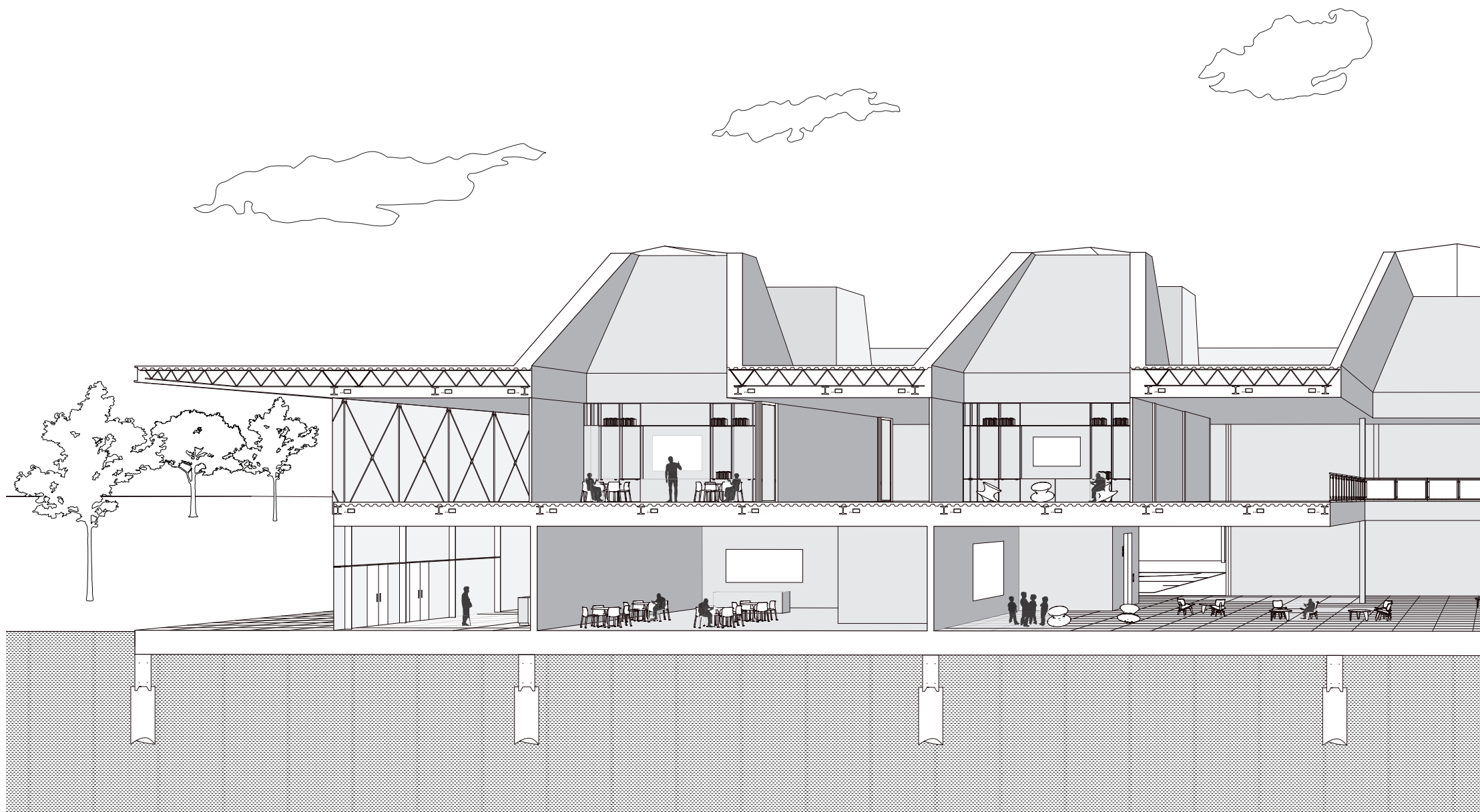
Second Floor

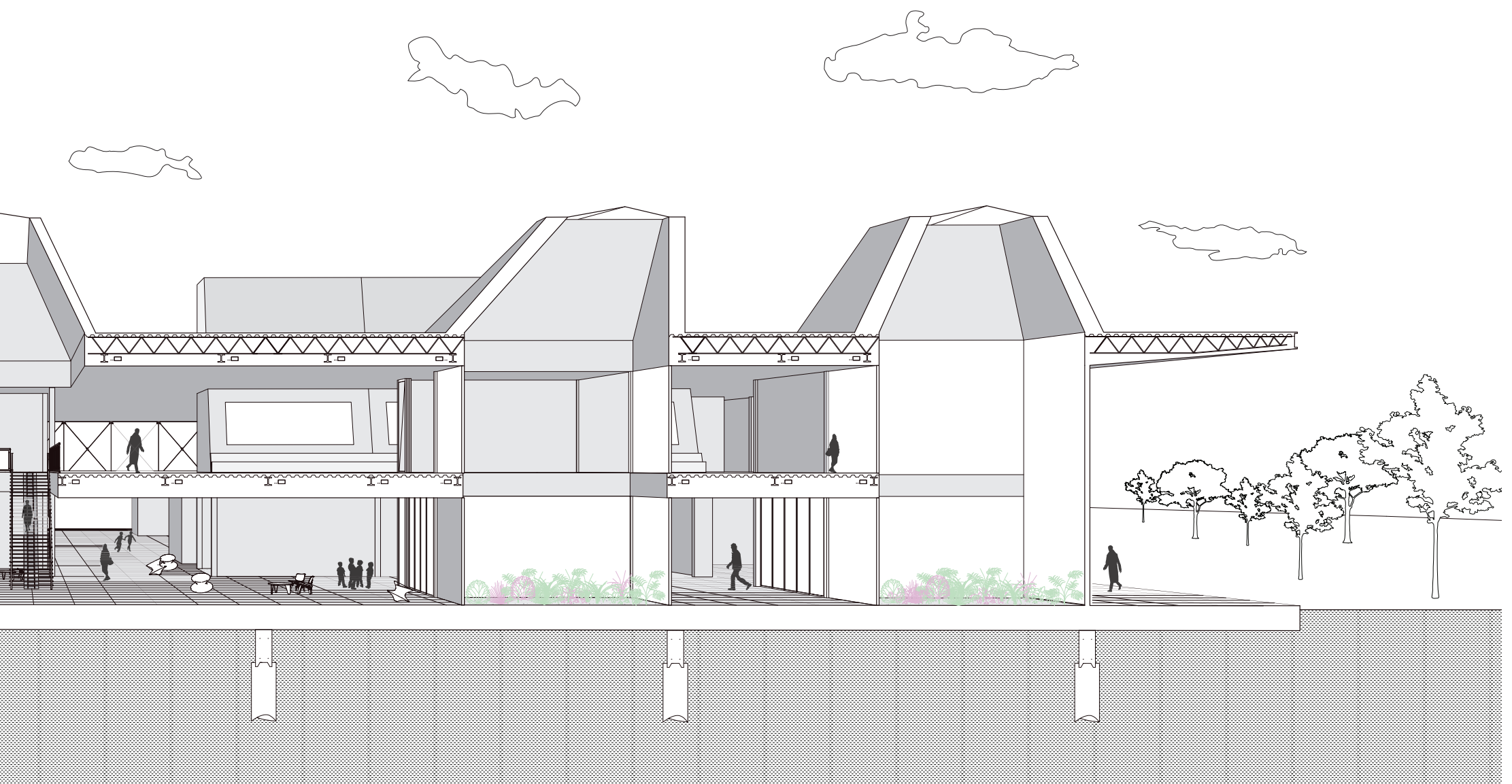
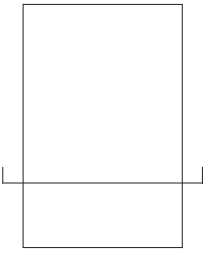
- 1. Library
- 2. Circulation Space
- 3. Cafeteria
- 4. Collaboration Space
- 5. Classrooms
- 6. Fire Stair
- 7. Storage













Frosted Glass



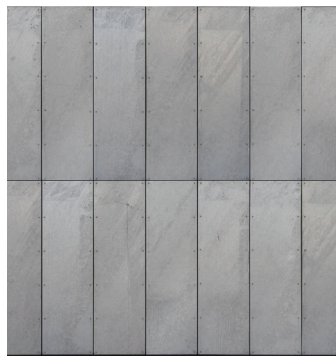
Baltic Birch Plywood



Resilient Foliage



Polished Concrete



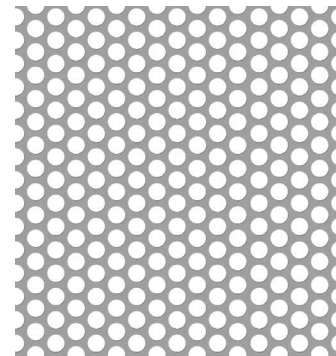
Cement Fiber-board
Paneling



Brick



IPE

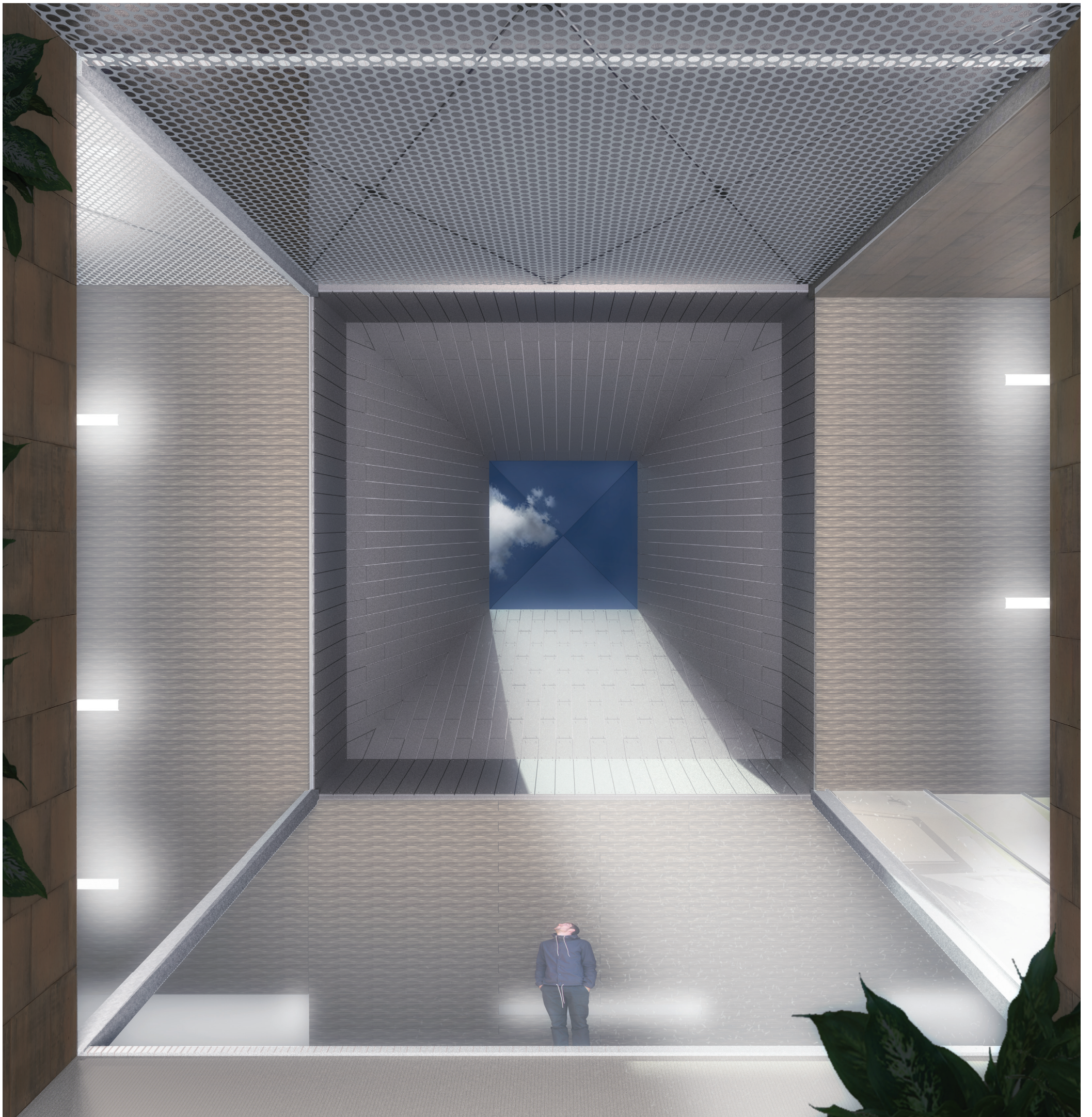


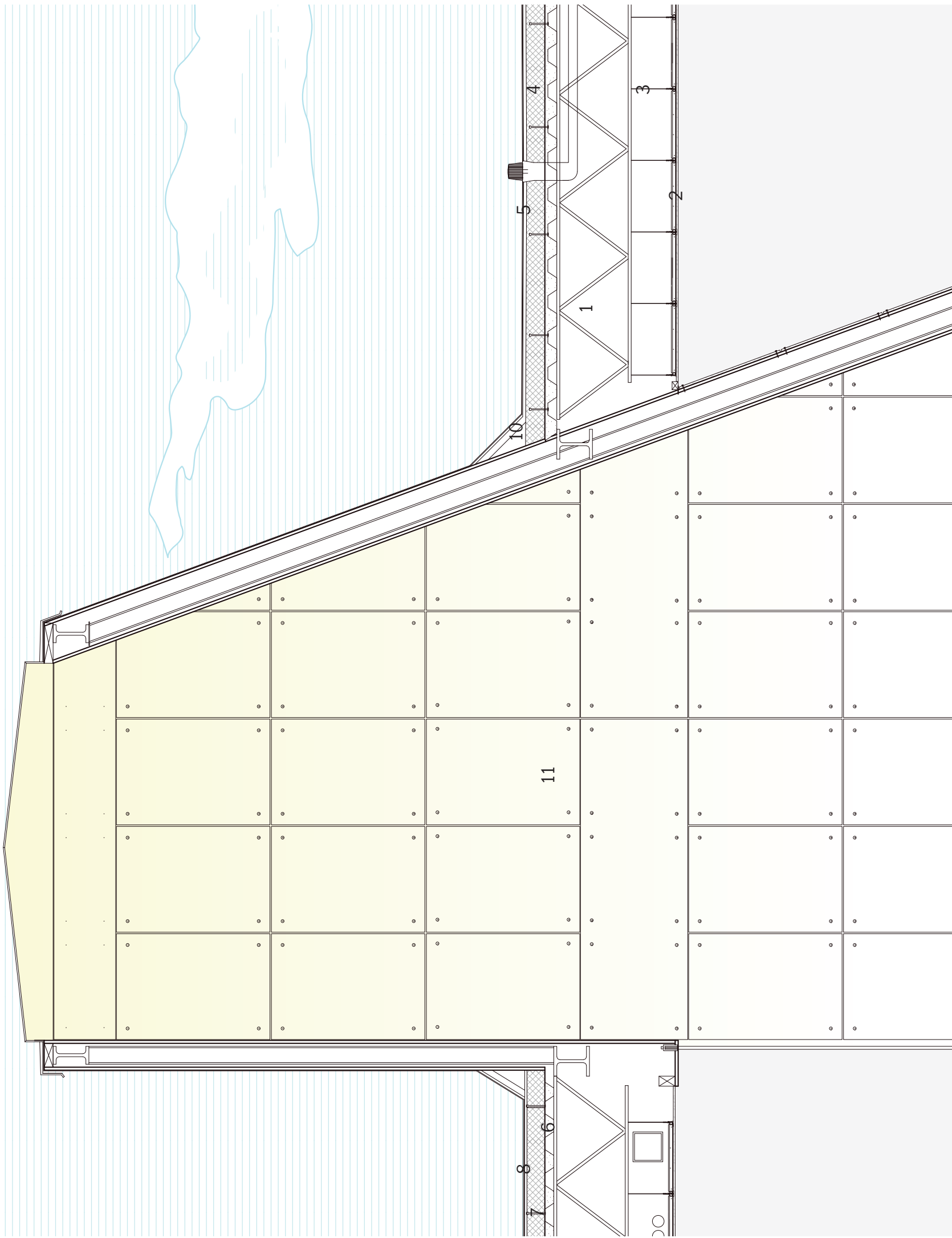
Metal Mesh

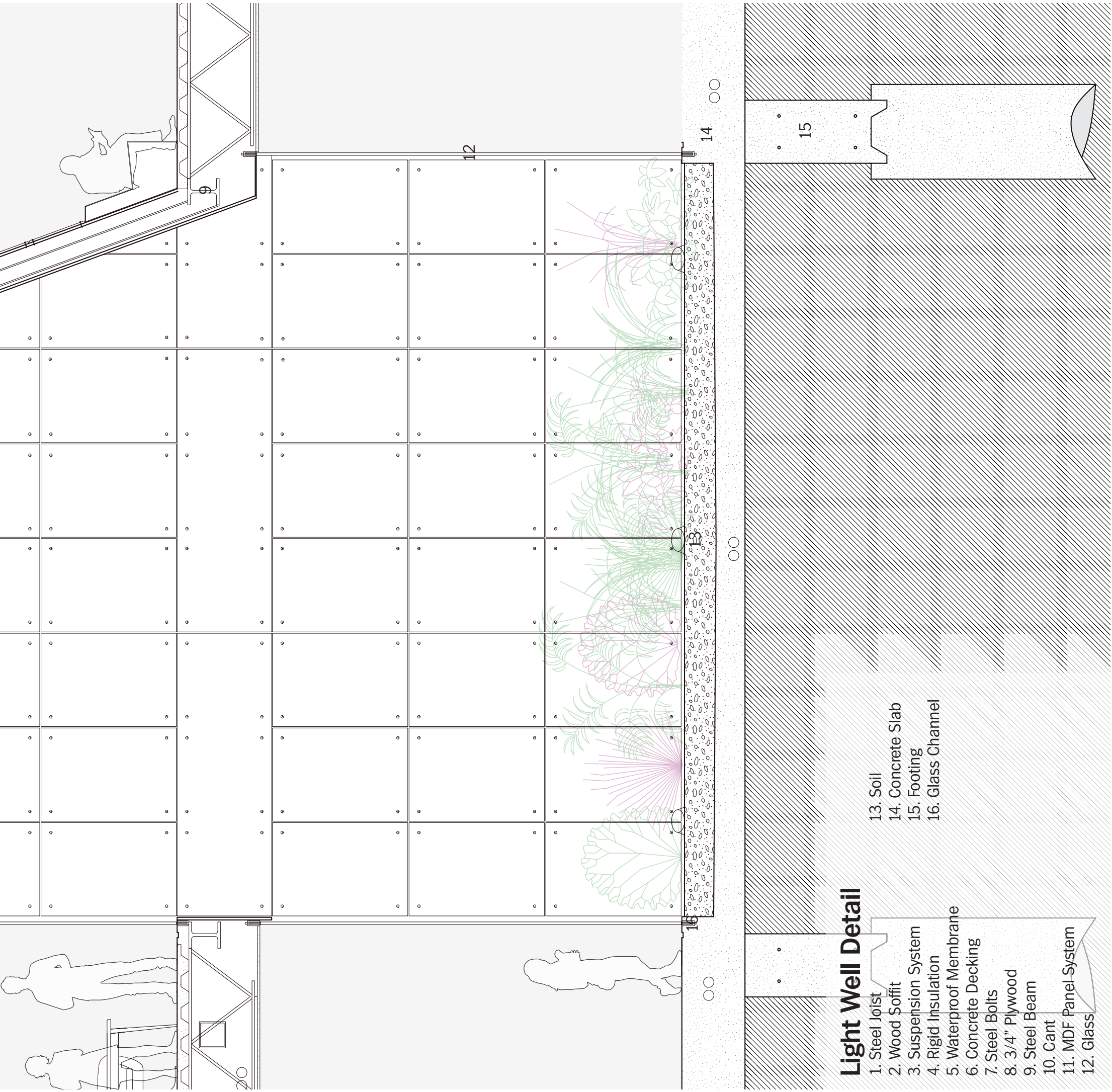
Materiality

Interaction was a word that was prominent during the design of the building along with its many iterations. It is imperative for the student in this “exploratory school” to have an interaction with the space and an interaction with the architecture itself. This is achieved through the use of materials. Each of the large masses (Theater, Cafeteria, Library, Gymnasium) is articulated with a specific material in order to achieve this sense of interaction. Brick is used on the Library space while a Zinc Metal Panel system is used on the remaining two masses. By wrapping these volumes in one material and articulating them on the interior and exterior of

the building the masses begin to become landmarks within the space. In order to provide more shading for the second floor a Perforated Metal panel system is used which allows for distinction between levels while acting as a shading device. Wood is used in the soffit of the canopy that runs over the top of the building while polished cement is used for the floor. Due to the materials wrapping most of the masses this allows for continuity when on different floors. In turn, this leads to simple way finding and a navigable building.





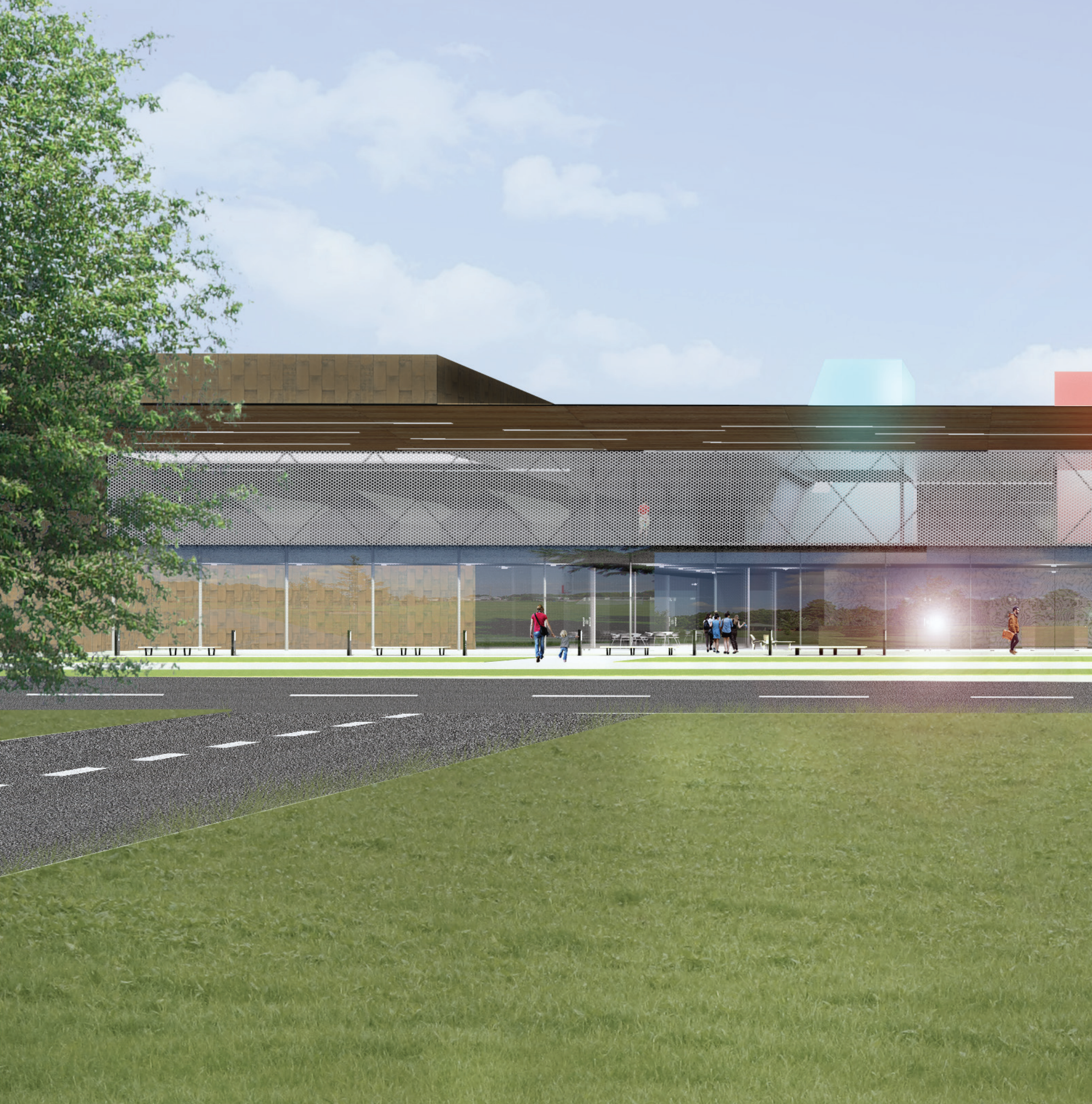


Light Well Detail

1. Steel Joist
2. Wood Soffit
3. Suspension System
4. Rigid Insulation
5. Waterproof Membrane
6. Concrete Decking
7. Steel Bolts
8. 3/4" Plywood
9. Steel Beam
10. Cant
11. MDF Panel System
12. Glass

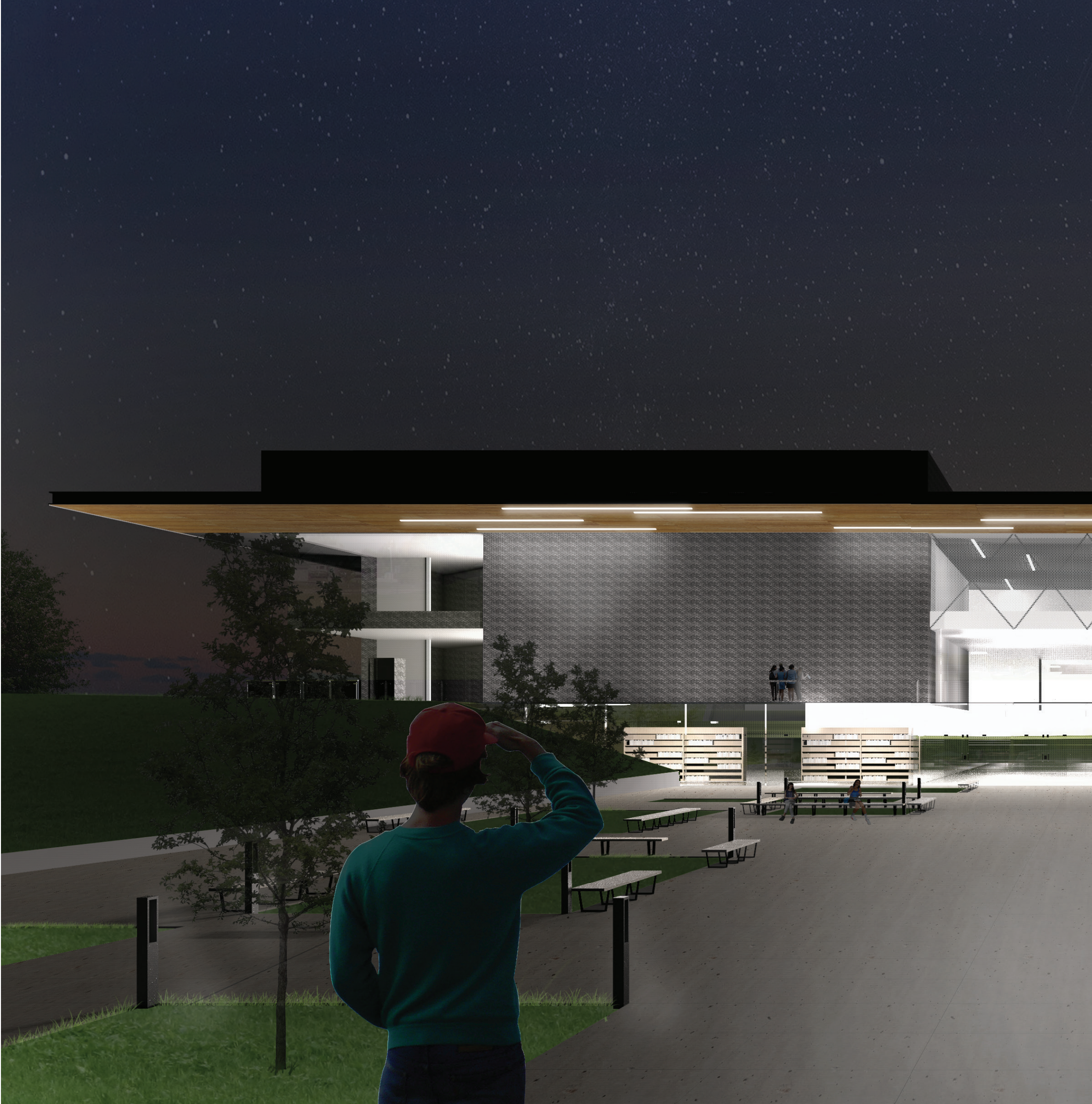
13. Soil
14. Concrete Slab
15. Footing
16. Glass Channel







**Mueller
Middle
School**





Credits

Eisenman, P., Allen, S., & Lourie, A. (2008). Ten canonical buildings: 1950-2000. New York: Rizzoli.

Hooks, B. (2014). Teaching To Transgress. Routledge.

Illich, I. (2012). Deschooling society. London: Marion Boyars.

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Ravitch, D. (2016). The death and life of the great American school system: How testing and choice are undermining education. New York: Basic Books.

Zumthor, P. (2015). Atmospheres: Architectural environments, surrounding objects. Basel: Birkhäuser.

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