

2021

nari kim

MARU: space connecting people

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maru children center in Seoul

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acknowledgements

abstract

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An orphanage is an institution where children who are not protected by their families are housed in groups. Many orphanages remain in South Korea although there are problems of collective children living. The project intends to redevelop an orphanage in Seoul to give children a better life through architectural design and to correct the prejudice toward orphanages. In the design process, the geometries and materials from the local context were applied. Also, the continuity of new children center and community was increased by using maru, a traditional Korean architectural element, along with the design of the exterior

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1. orphanage and children



History of orphanage

The definition of the term Orphanage is:

‘a home for children whose parent(s) are dead or unable to care them.’ ¹

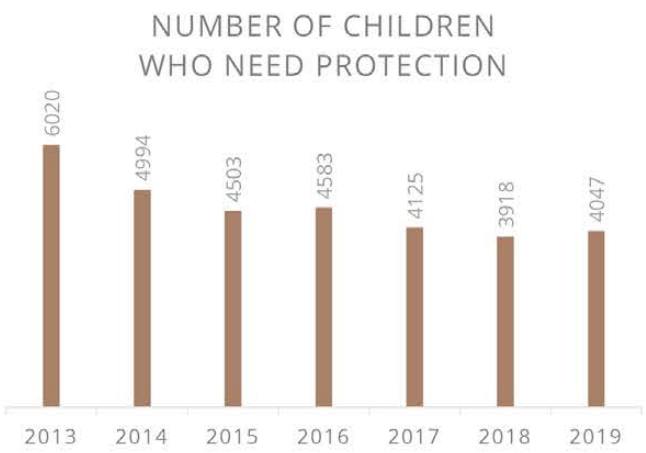
‘a residential institution for the care and education of orphans.’ ²

The oldest orphanage was in Rome around 400 AD. There are records of laws prescribing care for orphans. Plato says “Orphans should be placed under the care of public guardians. Men should have a fear of the loneliness of orphans and of the souls of their departed parents. A man should love the unfortunate orphan of whom he is guardian as if he were his own child.” ³

In the 1700s, the earliest form of orphanage emerged in modern society. The first orphanage in the United States was established in 1729 to care for White children, orphaned by a conflict between Indians and Whites at Natchez, Mississippi. In the 1800s, private charitable groups established more

organized forms of institutions for orphans. These orphanages were established in response to a variety of reasons: health epidemics, wars, an influx of immigrants into a particular geographical area, growing urbanization, and poor economic times.

The role of an orphanage is to support those children, but the specific action differs internationally. United States, Canada, United Kingdom, and the countries in the EU phased out government-run orphanages during the latter half of the 20th century. The child welfare system has been developed from the orphanage to a ‘foster care system’. As the government understood the orphanage is not the best form of living for children who are out of their family, they aim to keep the children in facilities as short as possible and send them to foster family. Nowadays, instead of the word orphanage, the following terms ‘residential center, residential institution, group home, residential group home’ are used because of the negative perception of the old word.

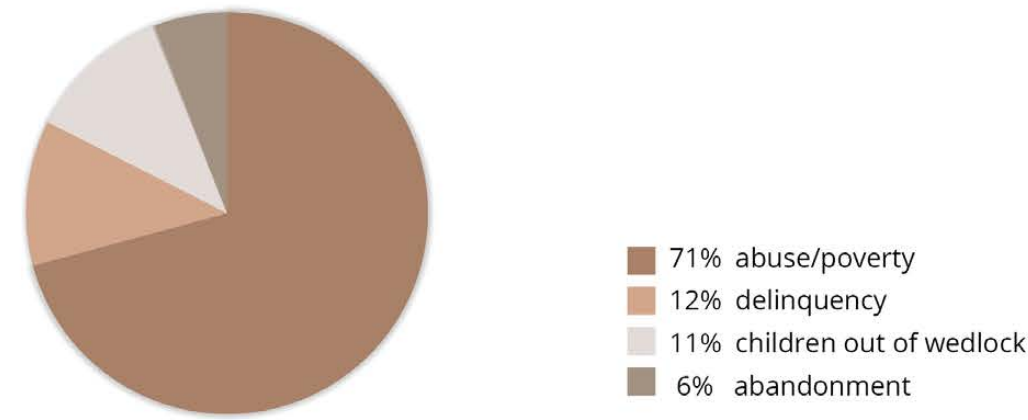


Orphanage in South Korea

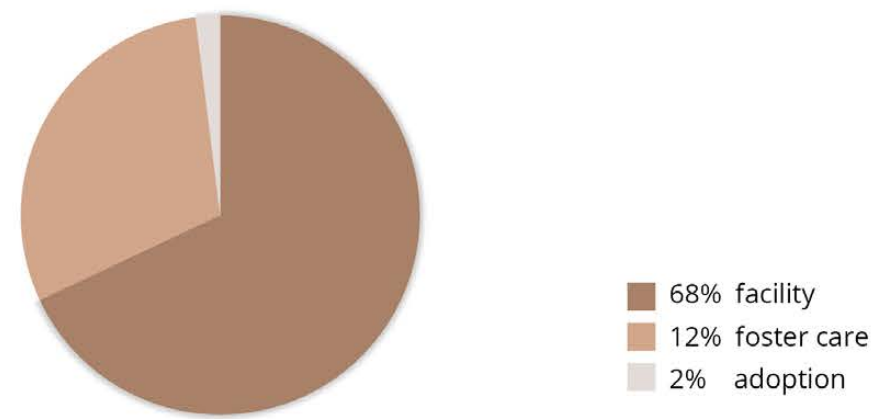
In South Korea, the first modern form of orphanage was established by a French missionary in 1885. After that, many facilities were created to protect war orphans, which were rapidly increasing due to the Korean War in 1950. Those facilities were developed to today's children's residential centers. Unlike most western countries, many children's centers still remain in South Korea. It has been hard for the foster care system to settle down in Korea since Koreans tend to stick to blood-relationship. The number of existing children's centers is around 300 and there are 15 thousand children living in the center.

The number of children who need protection reduces over the recent 10 years. There were 4,047 children who need protection in 2019. Among them, the biggest cause of occurrence was abuse or poverty at 71 percent. The majority percentage of them goes to the facilities. The 75 percent of children who go to the facilities have their family, but they do not meet each other very often. This means that regardless of the presence of family, the children in the facility need some relationship that makes up for the absence of family.

THE CAUSE OF OCCURRENCE OF CHILDREN WHO NEED PROTECTION



PROTECT ACTION FOR THE CHILDREN



¹ Cambridge dictionary

² Oxford languages

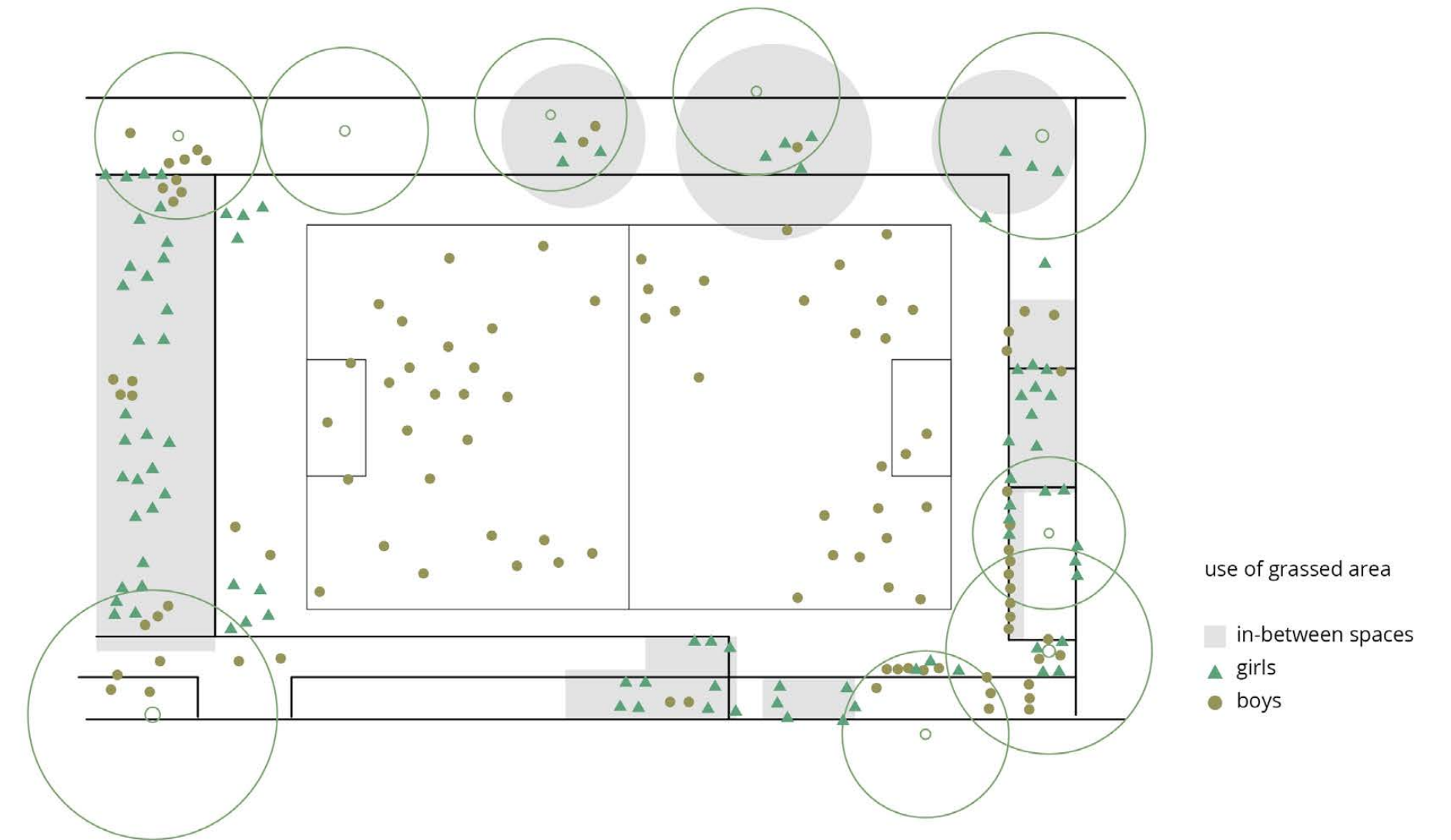
³ Plato, Laws, 927



Improvements for future orphanage

What is the biggest difference between living in a family home and living in a children center? The first answer is the absence of a family relationship. The children living in a facility have a lack of opportunities for socialization with adults and in a small group since they are living with peers in a large group. According to research, teachers in a children center are the most influential factor for the satisfaction of children because the teachers do a similar role to parents in the facility. Therefore, it is important to form a small intimate subgroup although the facility accommodates a large number of children.

The relationship between society and children center is another one to be improved. The prejudice against children residential facilities still remains in the society, so many children feel shame at living in a facility. This is also related to the exclusiveness of children facilities. Many children centers are being closed to the society with lacking connection. It arouses the children to feel they are isolated from normal society. Therefore, the children center needs to be a part of an infrastructure of the community to bring on the community attachment of children. Connecting with the community can also help reduce the socialization difficulties resulting from the absence of a family.

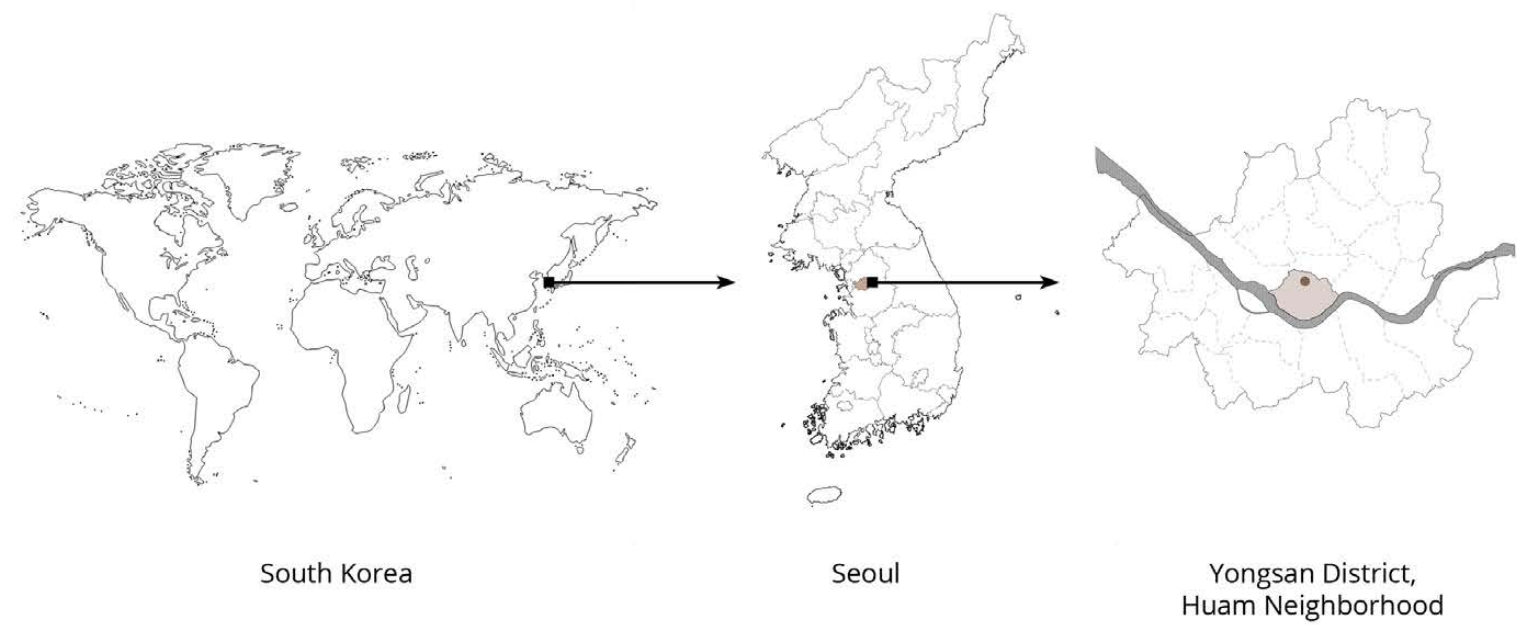


Positive space for children : green space and in-between space

According to environmental research, the public and private natural space influence children's social, emotional, and behavioral development. Especially for 4-6 years old children, having access to a garden is related to sizeable mental health benefits. Private gardens are more strongly linked to improved mental health outcomes such as hyperactivity, peer problems, and conduct problems. Public spaces have an important role as well in facilitating socially-beneficial interactions because children and adults are more likely to be encountered.

Also, the value of in-between spaces for children in outdoor school environments is meaningful according to recent research. The study results revealed that children's preferred in-between spaces support their self-directed play. These spaces offered children an opportunity to redress gender imbalance and mitigate the impact of overcrowding, problems that often inhibited children's self-directed play in the formal spaces of school grounds. The diagram above shows how in-between spaces are actively used by children.

2. renovation to children center



Site

The site is in Seoul, South Korea. The city of Seoul is located at 36.5 degrees north latitude, which is about the same as the border between Texas and Oklahoma. Seoul has a temperate climate with four distinct seasons. Seoul is one of the most densely populated cities; the population density is 8 times higher than that of New York City. The project site is in Yongsan district, located in the center of Seoul. There is a Seoul Station and the N Seoul Tower, one of the most popular landmarks of the city, but Yongsan district has not been developed a lot compared to the other districts. This is because the U.S. army occupies a large part of Yongsan district since 1945. This background of the area explains why Youngrak children center was situated there: Orphanages were usually built in backward and deprived areas due to high land prices and NIMBY syndrome.

Districts are subdivided into neighborhoods, which is an actual unit of a living sphere. Huam neighborhood, the location of the project, is on the slope of Namsan mountain. There is a restriction on the height of the building for protecting the view of the mountain, so the neighborhood is densely populated with a large number of low-rise houses and apartments.



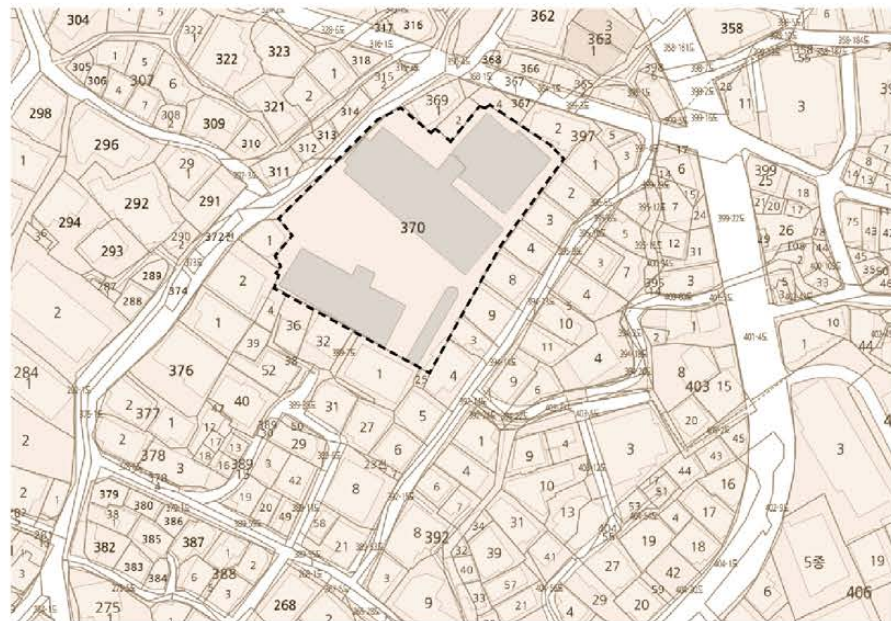
road map with photo locations
(from left to right)

- ↗ photo 4
- ↘ photo 1
- ↑ photo 2
- ↙ photo 3



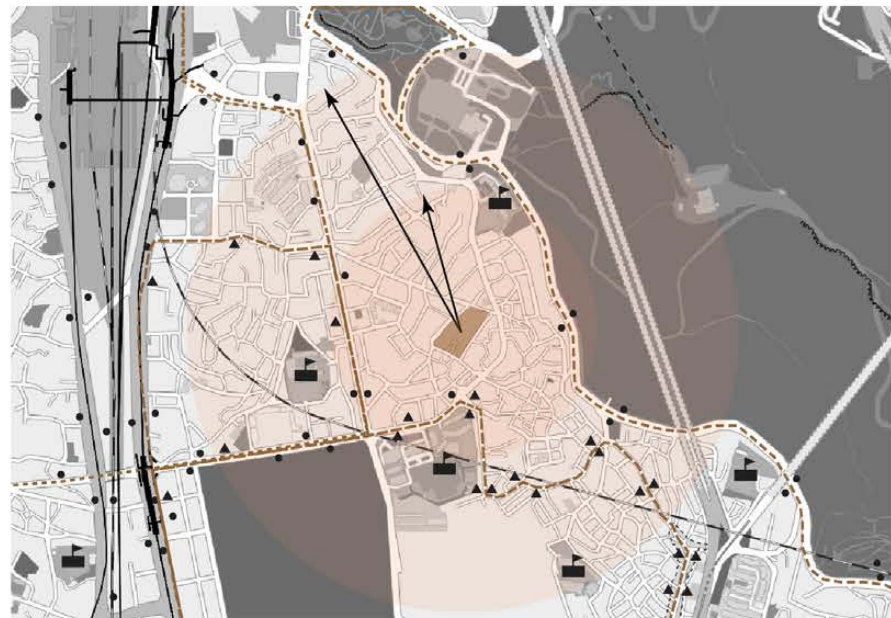
land registration map

- type 2 general residential area
- existing buildings
- site boundary



transportation analysis map

- site
- 10 minutes walk
- 15 minutes walk
- bus stops for long route
- ▲ bus stops for local shuttle



1



2



3

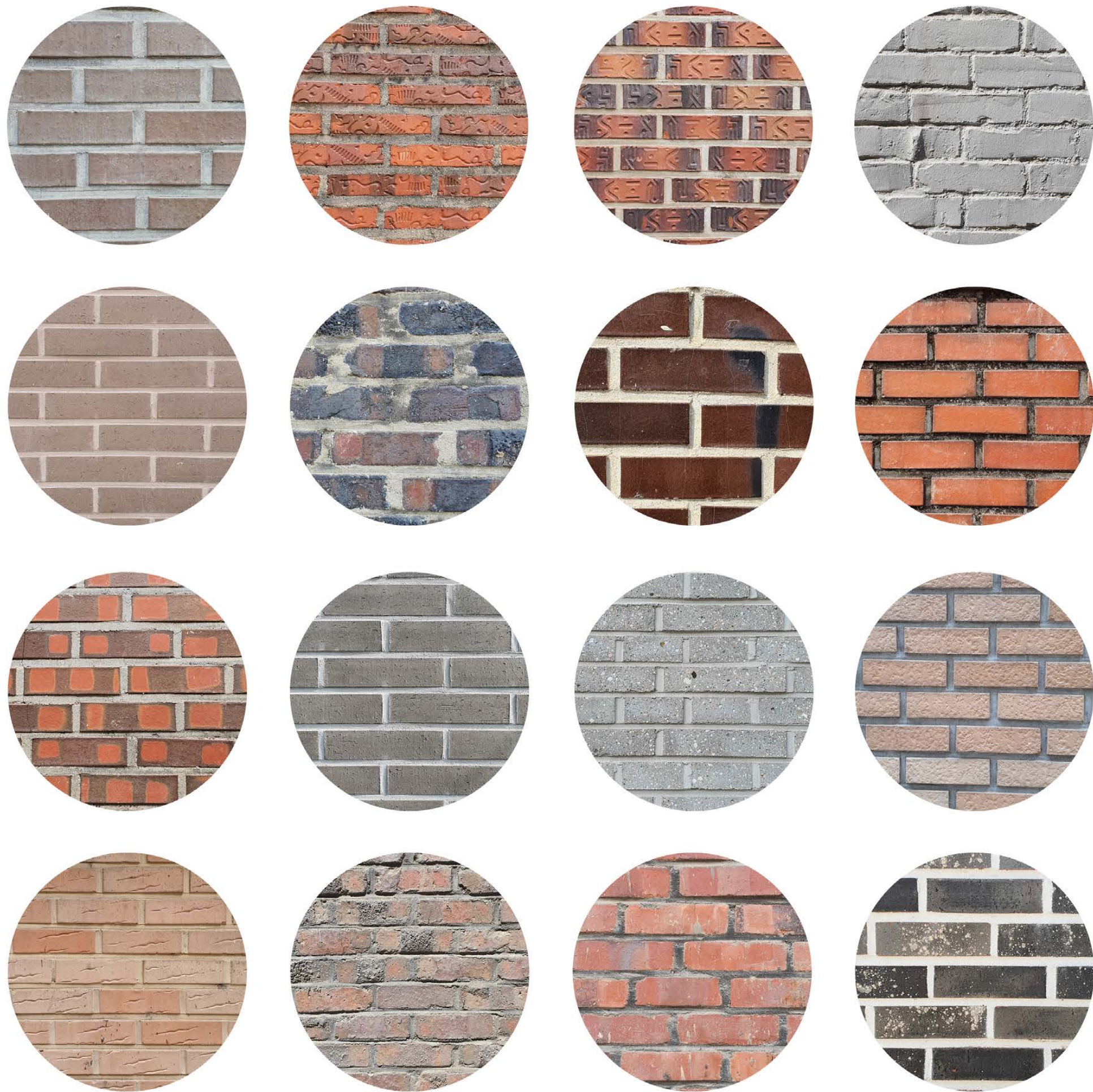


4

Existing Children Center

Youngrak children center was founded by a pastor in 1939. The children center is comprised of two buildings; the first building was built in 1990, the second building was built a few years later, and there were some extensions to them as the need arises. The main purpose of the center is a residence for children who need protection out of a family; 56 children living in the center and 34 workers support them. The children center also has a small toy library for the local community and a daycare center which accommodates around 30 preschoolers. The project is to demolish all existing buildings and design a new children center.

- 1 the courtyard between the existing buildings
- 2 the existing main building
- 3 road to the east of the site
- 4 road next to the main entrance

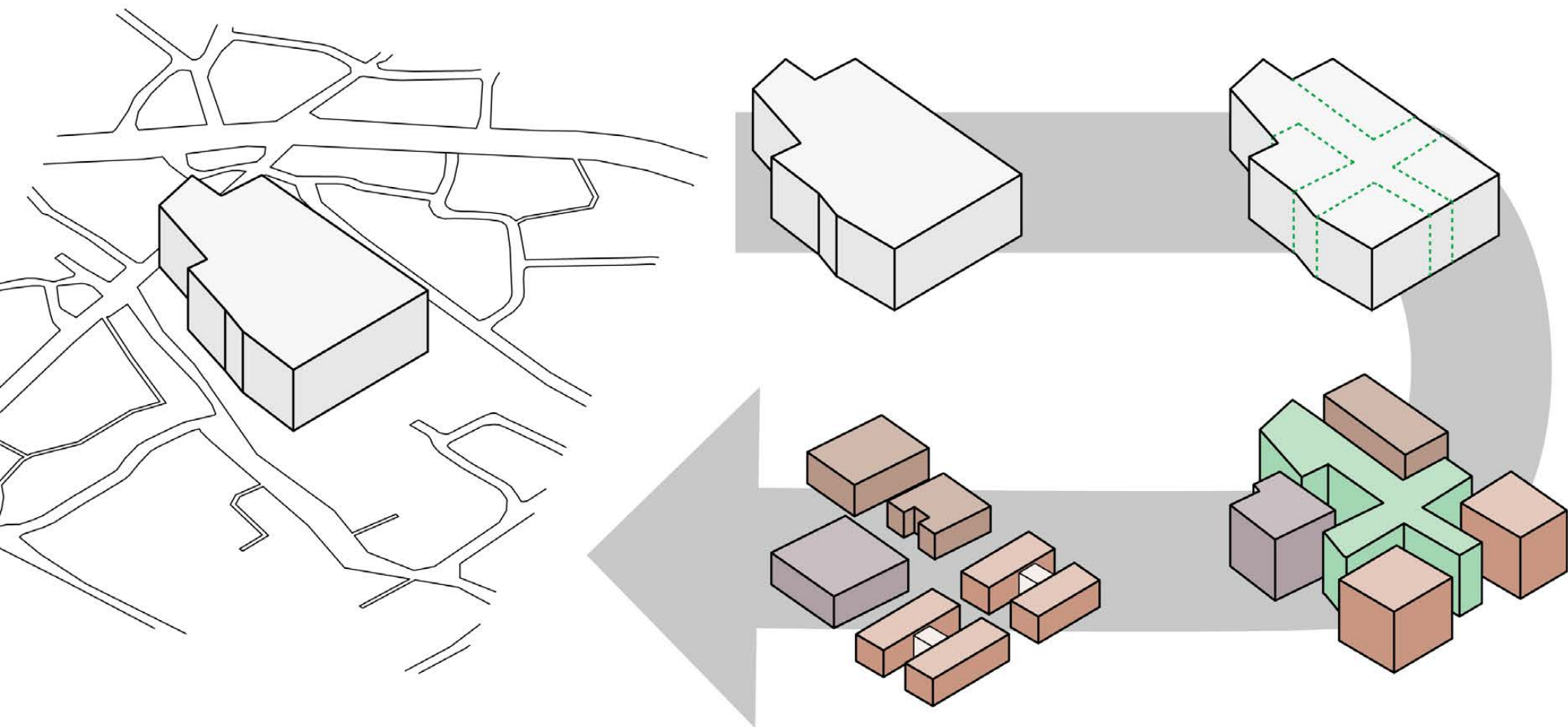


Architectural context from the town

The material context in the Huam neighborhood is brick. The row-rise residential buildings such as houses or small apartments are finished with brick envelopes. The color of bricks varies. They are mostly in a brown tone, but there are some recently built in grey tones or painted in white. Due to the steep topography and the densely located buildings, there are many retaining walls and fence walls around the buildings. Those walls are in various sizes. Some of the retaining walls are more than 3 meters above the ground, but most fence walls are about a human height. Those brick envelopes and various sizes of walls generate the atmosphere of the town.

- 1 69, Huam-ro 4-gil
- 2 78, Huam-ro 28-gil
- 3 9-2, Duteopbawi-ro 53-gil
- 4 8, Duteopbawi-ro 47-gil
- 5 22, Duteopbawi-ro 47-gil
- 6 17, Duteopbawi-ro 47-gil

3. design concept



Design Parti

The design parti begins with extruding the site to mass. The mass is split into four corner pieces and one cross-shaped piece along with the surrounding geometry. The four corners become buildings, and the cross-shaped mass becomes void as a road. This void space continues the road from the town to the new building complex and integrates them. The four building masses are developed in their shape while keeping following the geometry from the town.



Geometry

The shape of the buildings follows the existing geometry of the context to blend the new building complex in the town.

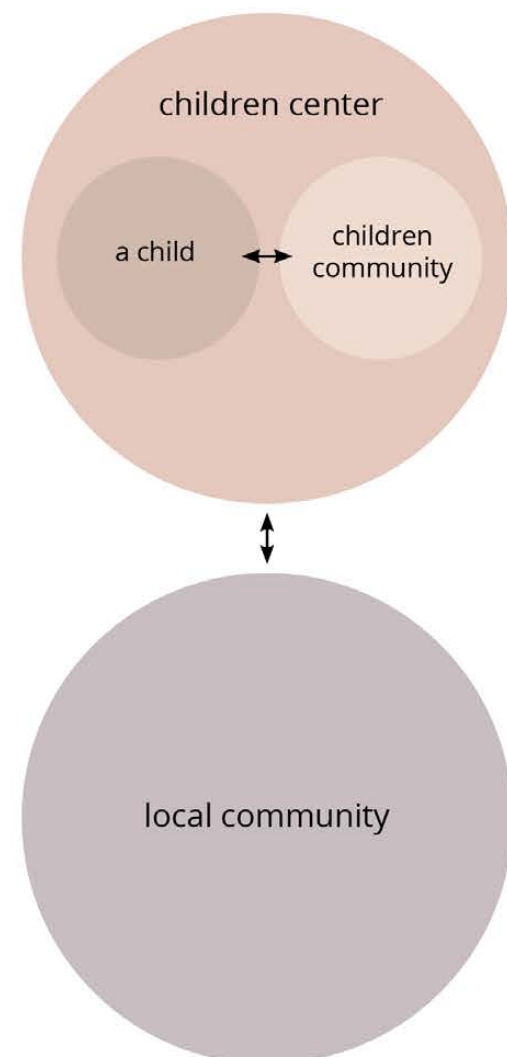


Circulation

Unlike the existing center has only one entrance at its west, the new children center opens its north as another access, so the center is accessible from two different directions. The access path for cars and humans are separated.

- general circulation
- car circulation
- human circulation

1 most public
2
3
4
5
6 most private

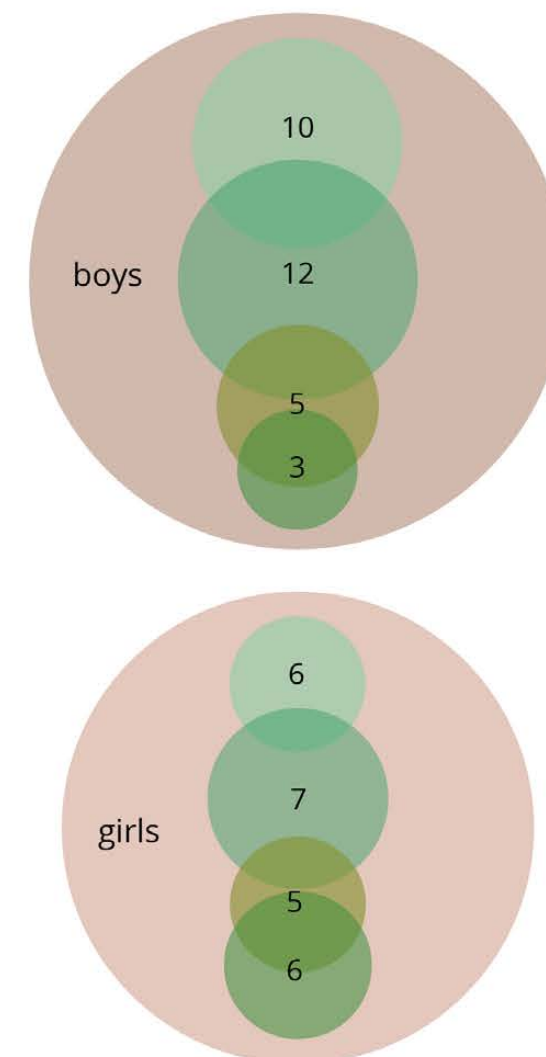


Private and Public Space

One of the primary purposes of the design was to be both private and public. The children center should be more public to the local community, but also should protect the children's privacy as a dwelling space. Thinking of children center itself, the spaces should encourage children's interactions but also guarantee some privacy for individuals.

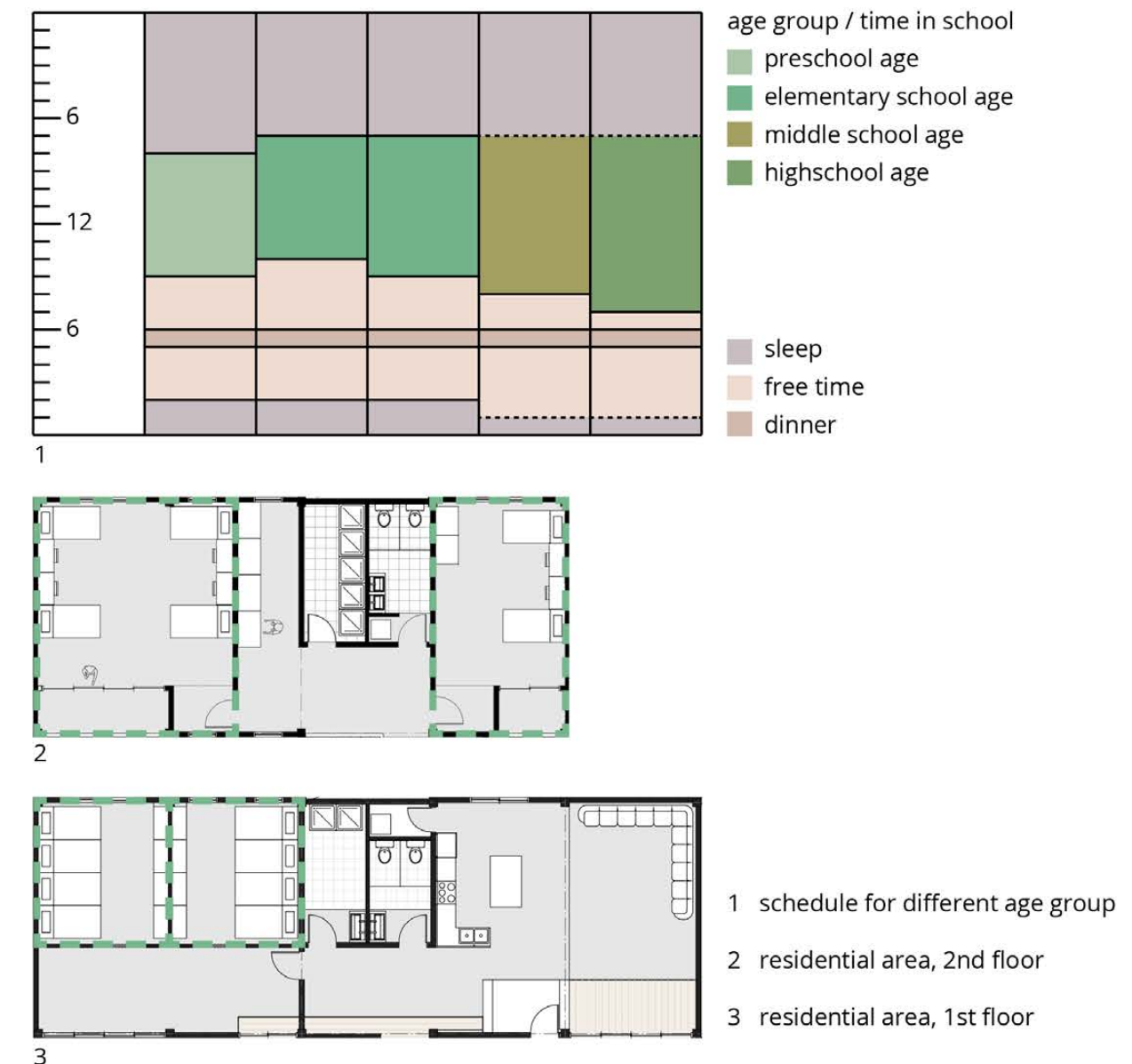
Level of privacy

The outdoor areas of the children center are not a simple one open space. They are either surrounded by the buildings, covered with sunshades, or closed by a wall. These different conditions generate different levels of privacy. Some of the spaces are a part of a sidewalk of the street, but some others are only for children living in the facility. It provides various options of outdoor activities for people.



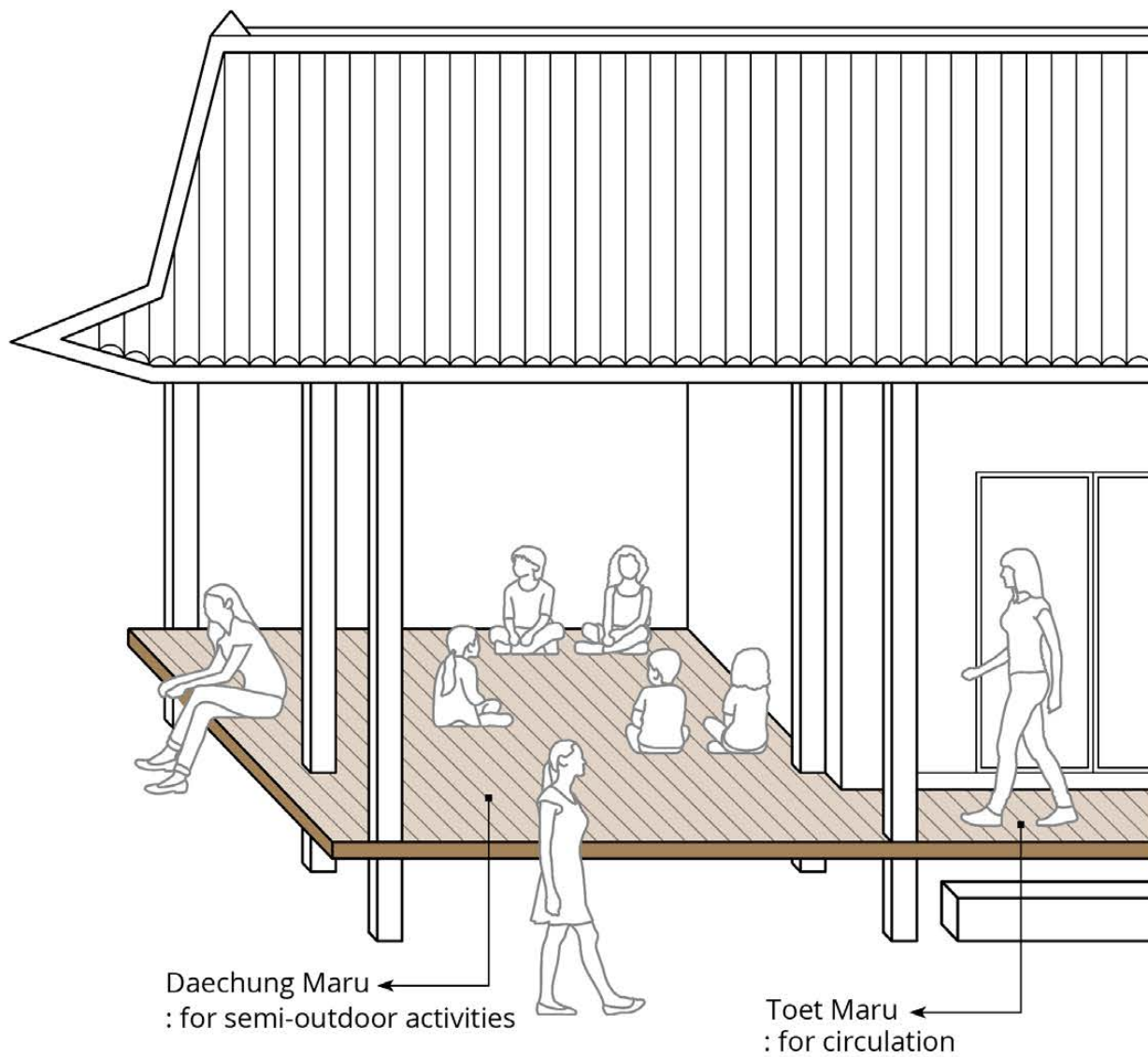
Age Group

There are 30 boys and 24 girls living in the Youngrak children center. There are many boys under preschool age(10) and elementary school age(12), but there are more high school students(6) among girls. The children residence was designed to allow children of similar age to live in one room, taking into account both positive interactions from age differences and possible harassment from the big age gap.



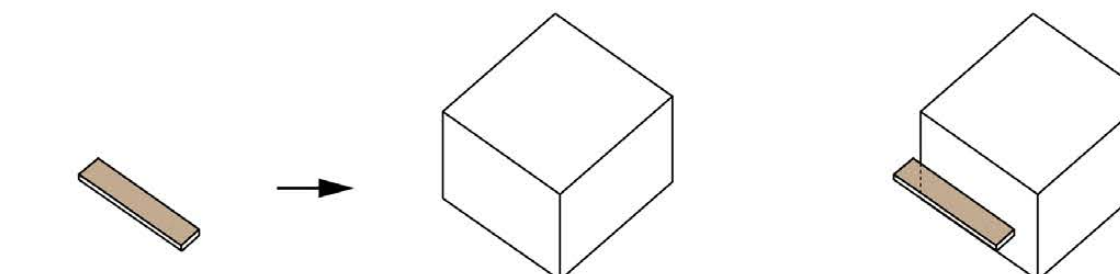
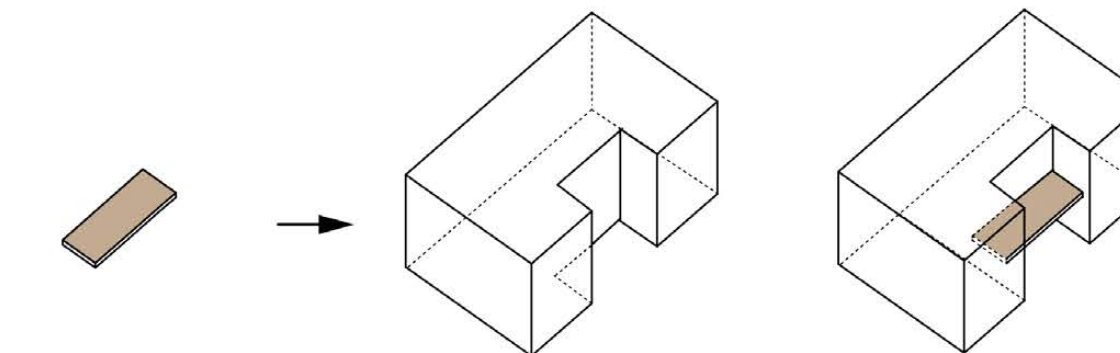
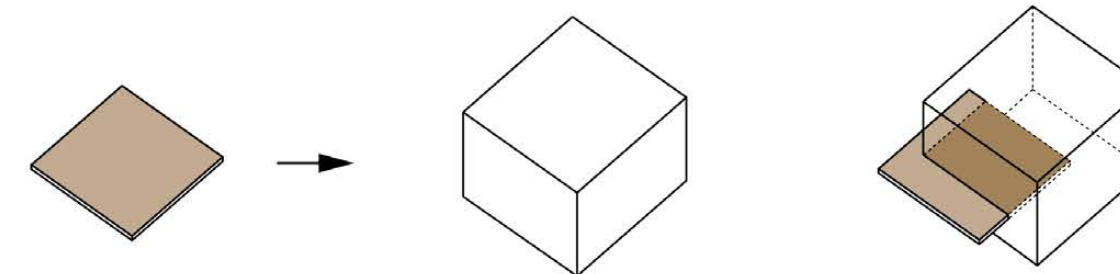
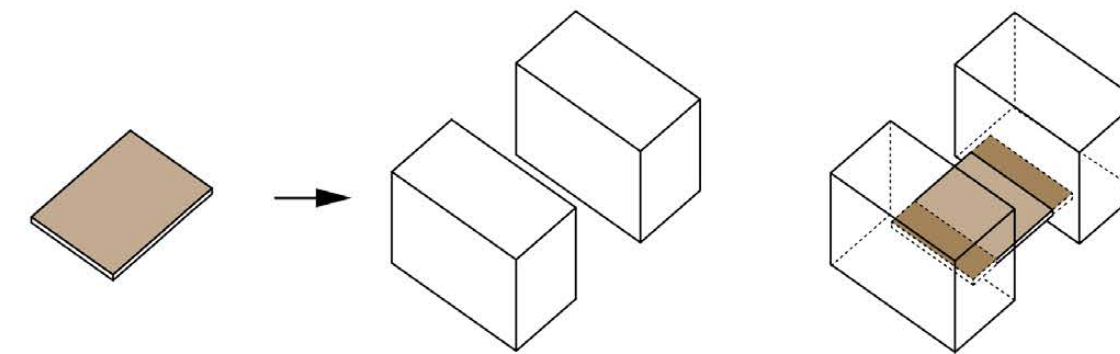
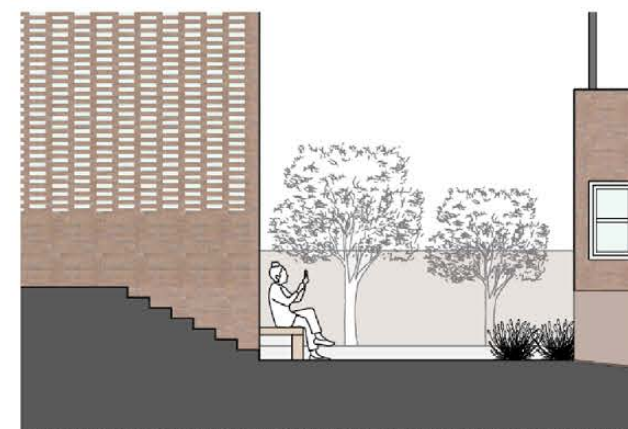
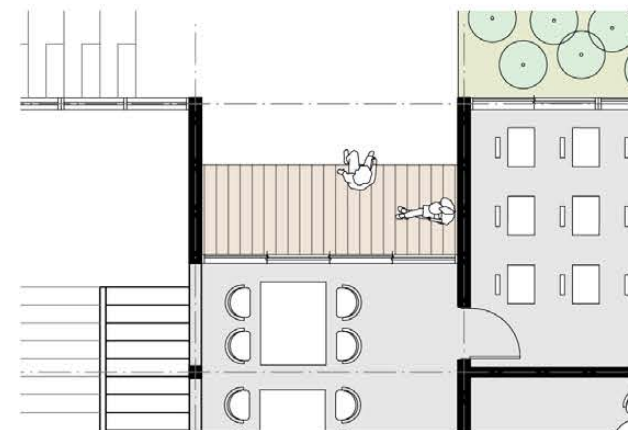
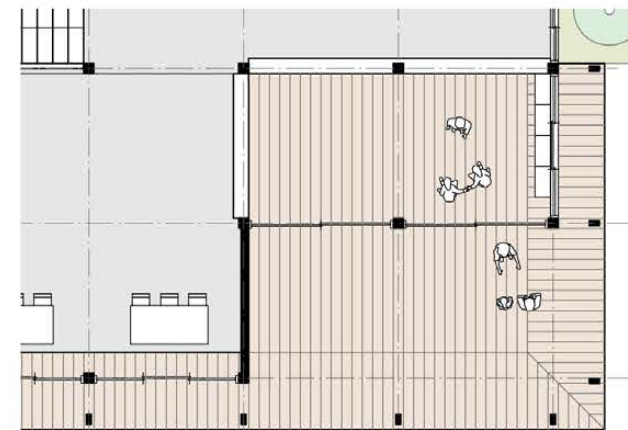
Space distribution by age

The daily life of children is significantly different depending on the children's age. The youngest children, infants, would live on the second floor of daycare. The children age between 3-11 would share a room on the first floor of the residence. The rooms are for sleeping, and the spaces for education are separated as a daycare and multipurpose building. The rooms on the second floor of the residence would be for children over middle school age since they have more flexibility and autonomy for their time.



Maru: space connecting people

Maru is one of the Korean traditional architectural elements. It is an elevated linear or rectangular wood floor used for circulation or semi-outdoor activities. Maru has a different name depending on where the floor is located and how it is used. Maru can be a transitional area from outside to inside, a covered outdoor area for rainy days, or a sitting area for visitors. Having maru spaces in the building blends the boundary between the community and children center.



Children Residence

Maru is connecting two residential buildings. The stairs are located there. The children living in two different buildings are not completely separated because they share the maru space.

Daycare

The square maru makes large in-between areas that can be used for a welcoming lobby and semi-outdoor activities. The linear maru along the building becomes a sitting area for both inside and outside.

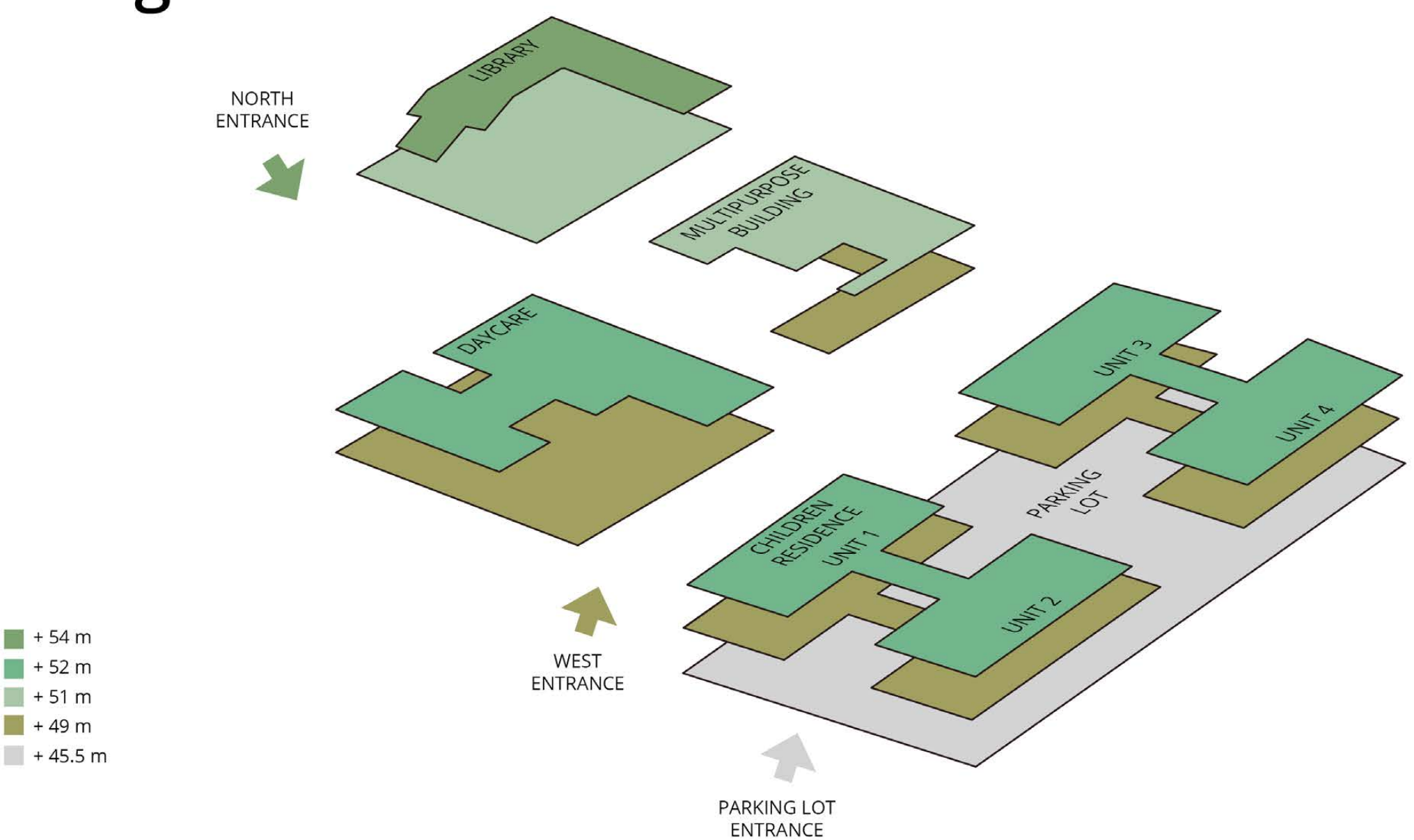
Multipurpose Building

The small maru space enclosed with a building volume is a nice space for taking a rest. It also can be an entrance to the building as it has sliding doors on its building side.

Library

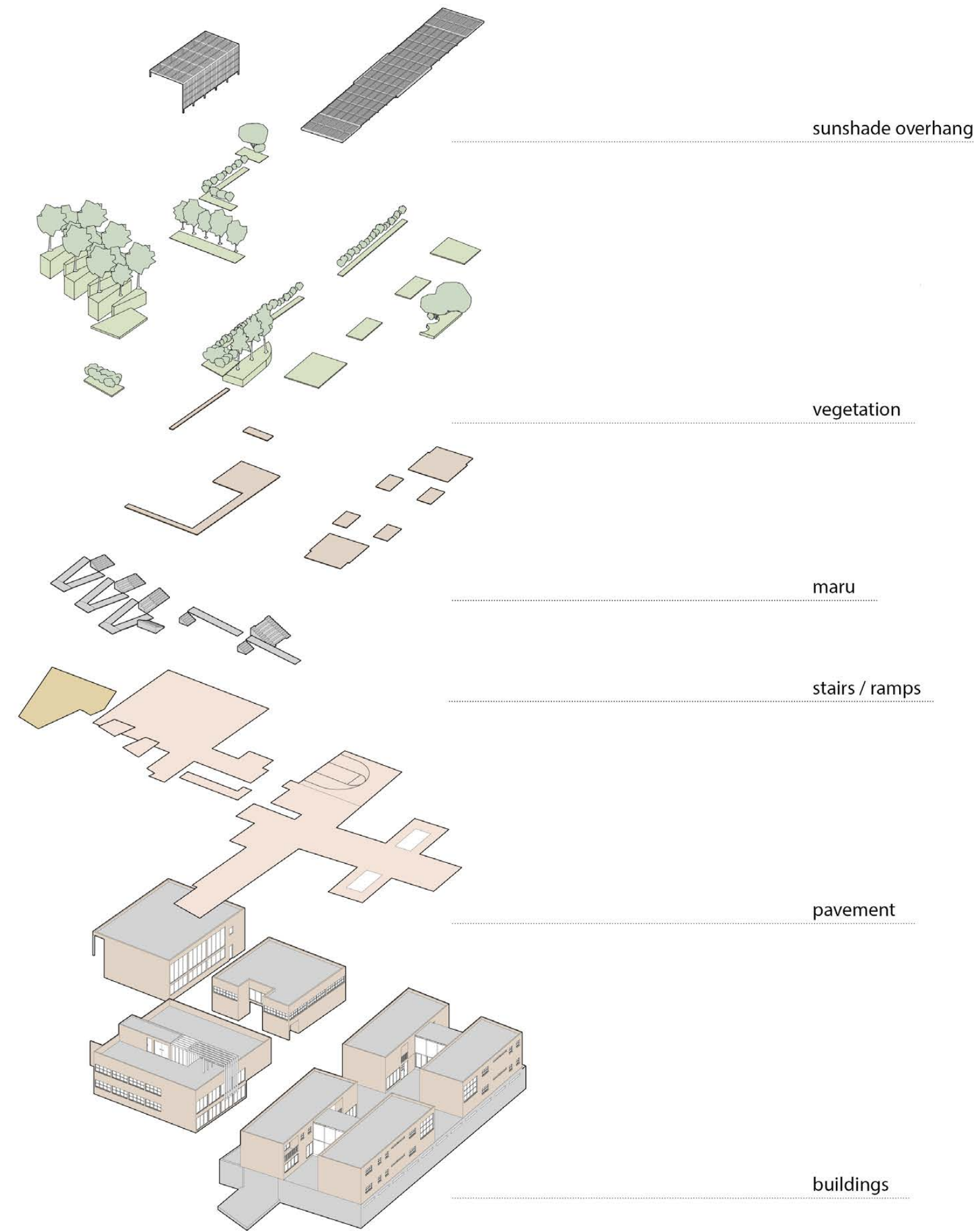
The maru of the Library building is intended to be a sitting area for library users. Unlike the maru to the other buildings, it does not be used as an entrance.

4. design



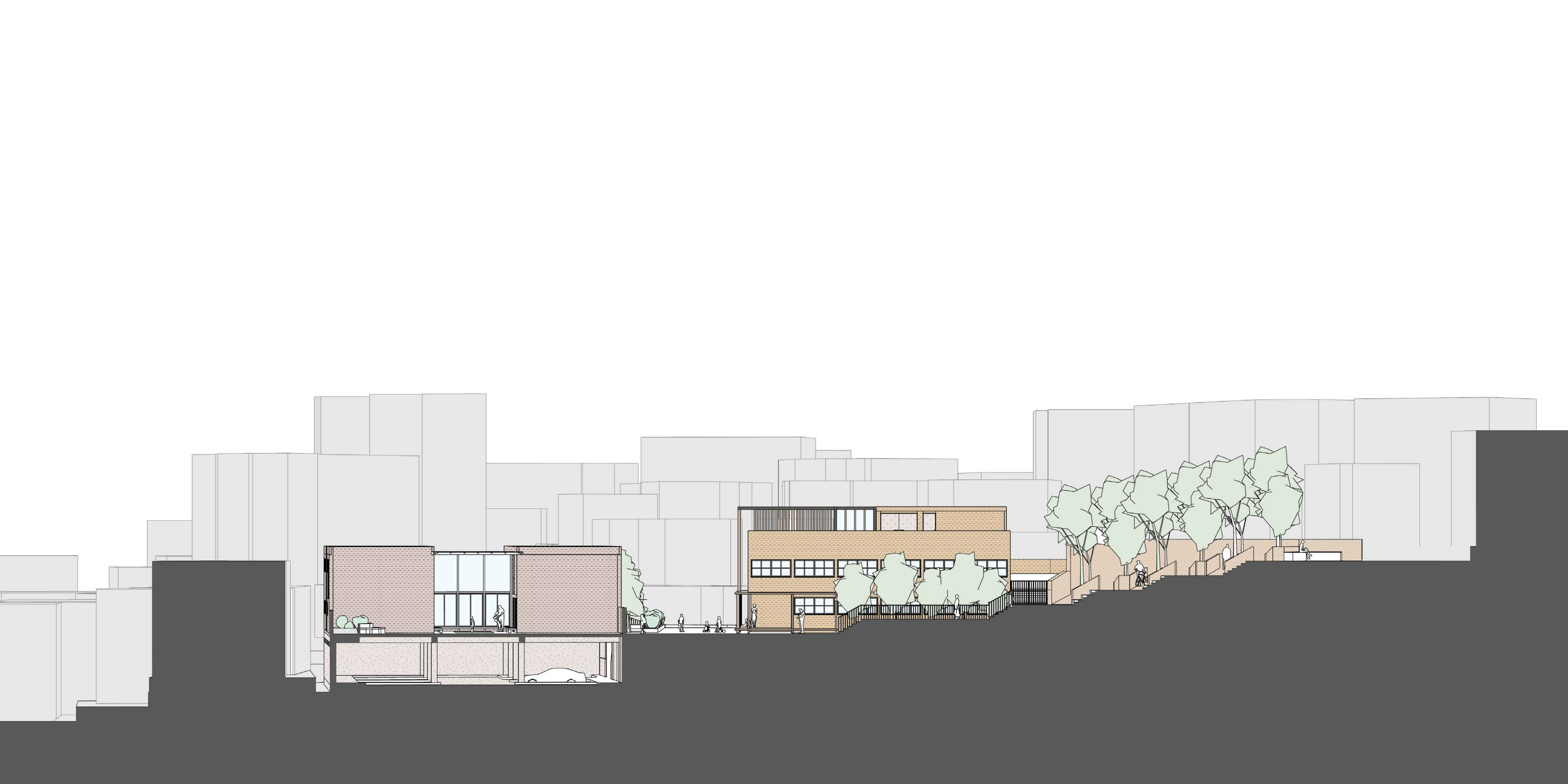
Program

The children center has four different functions. Children residence buildings are only for children living in the facility. Each unit of the building accommodates about 14 children, and two building units for the same gender are joined by the maru space at the center. Multipurpose building is for the center's office and children's classroom after school. The library opens for everyone and it is especially for the community. Daycare is for children from a local town and center.

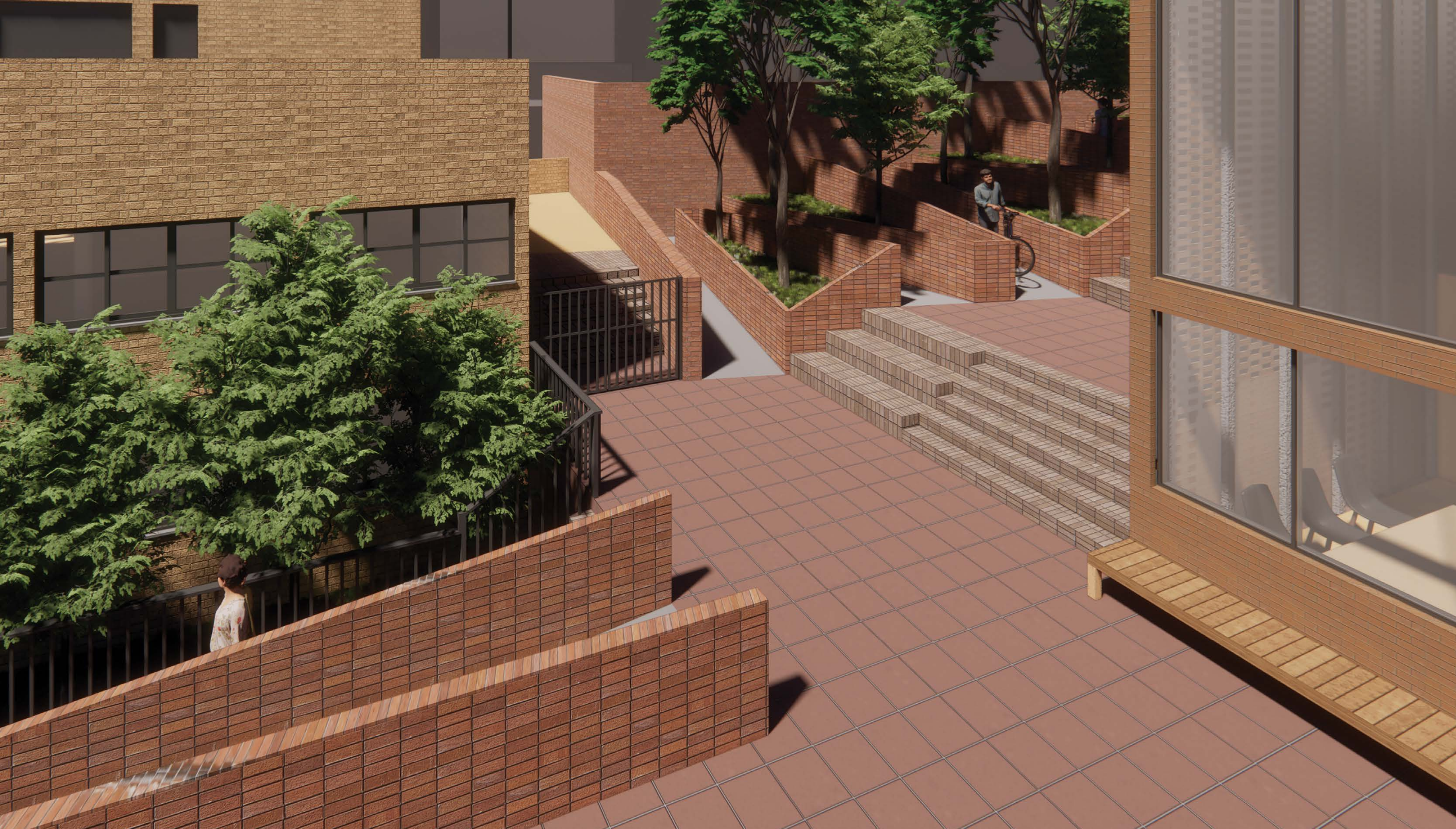








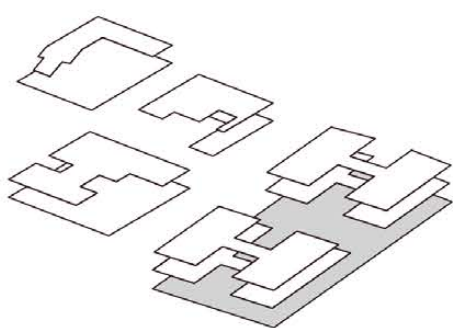




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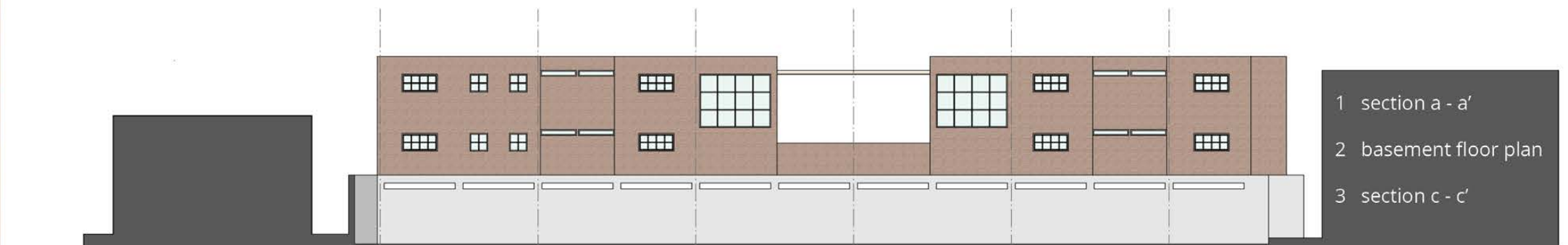
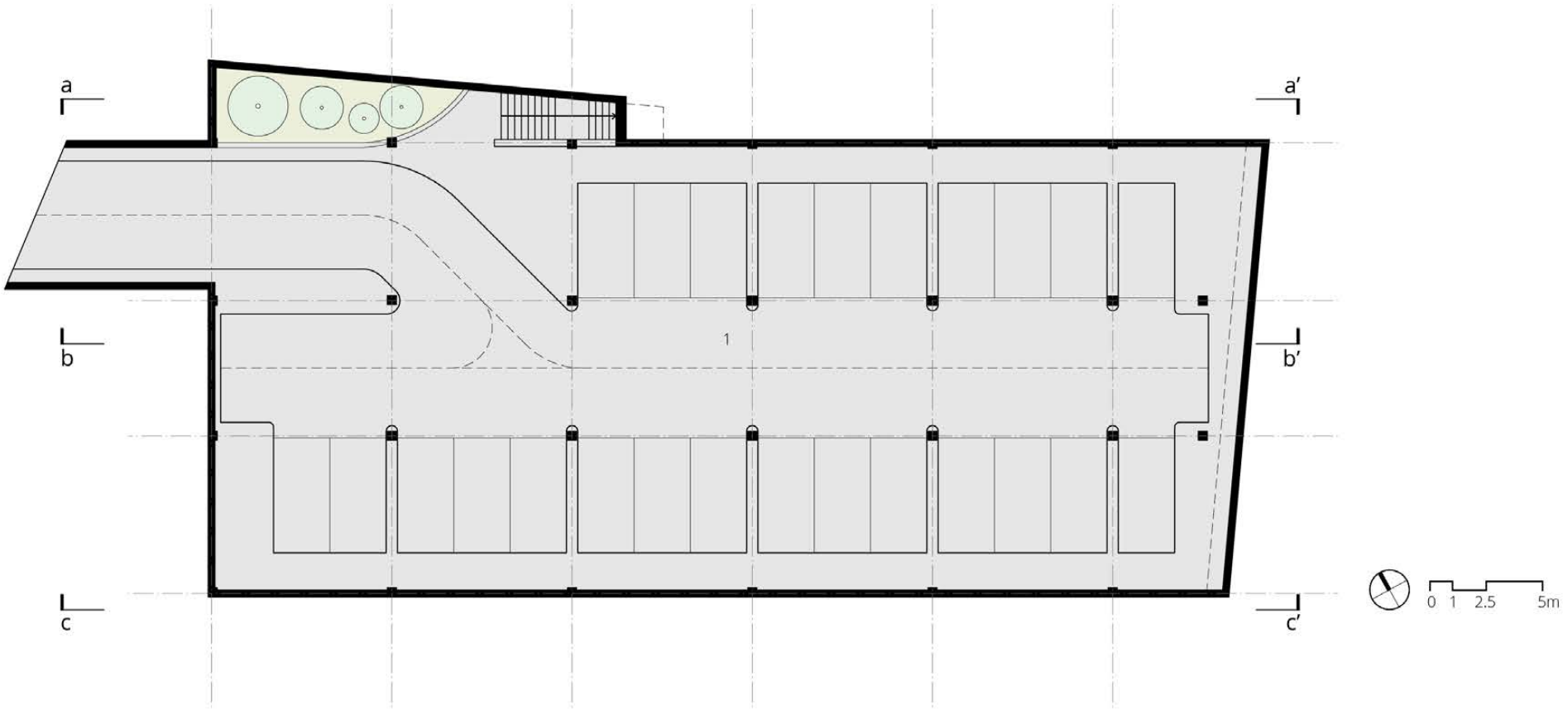
At an altitude of fifty-one meters, three buildings are approachable. The second floor of the multipurpose building and the first floor of the library are on the same level. The second floor of the daycare and its sand play space are located up the stairs. People can go to the building they want or keep walking down to the main courtyard.

children residence

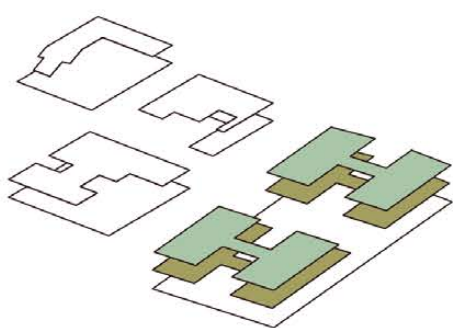


The children residence has its own central courtyard inside of the fence wall. This courtyard has a small green area between the buildings. It is the scenery at the end of the view from the north entrance. The courtyard is a safe outdoor space for children all the time, either night or day.

- B1 1 Parking Lot
- 1F 2 Common outdoor area
3 Entrance Hall
4 Living room
5 Kitchen
6 Laundry room
7 Bathroom
8 Shower room
9 Playroom
10 Bedroom
11 Backyard
- 2F 12 Bathroom
13 Shower room
14 Closets
15 Bedroom
16 Bedroom



children residence

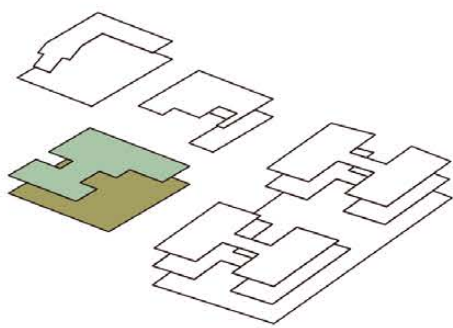


The children residence can be said to consist of 4 buildings or 2 buildings. This is because the two buildings are connected to the maru in the middle and become a single H-shape building. The middle space is for vertical circulation and directly accessible from outside with its sliding doors. The continuously extrude maru and building volumes form an enclosed outdoor area.

- B1 1 Parking Lot
- 1F 2 Common outdoor area
3 Entrance Hall
4 Living room
5 Kitchen
6 Laundry room
7 Bathroom
8 Shower room
9 Playroom
10 Bedroom
11 Backyard
- 2F 12 Bathroom
13 Shower room
14 Closets
15 Bedroom
16 Bedroom

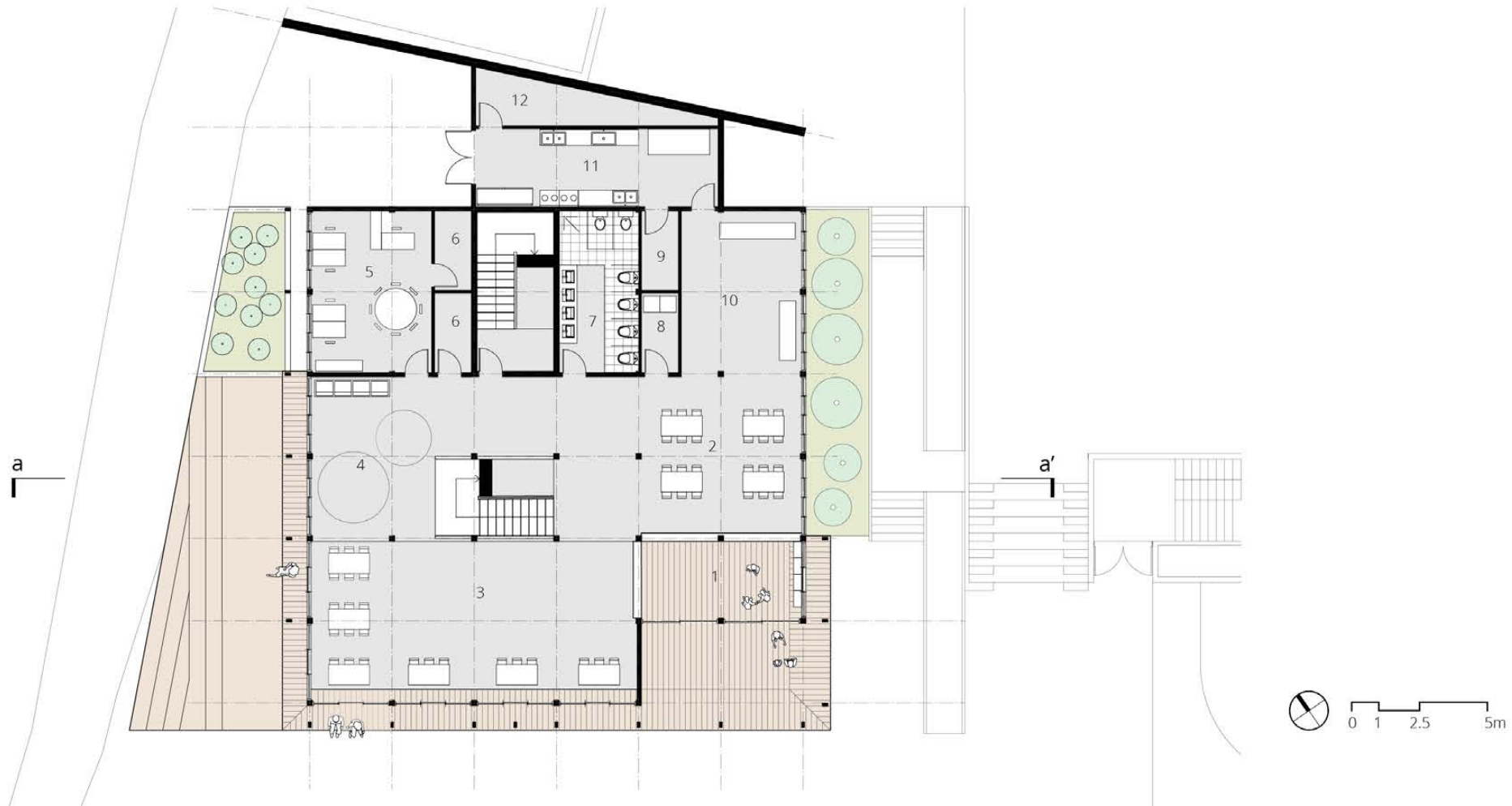
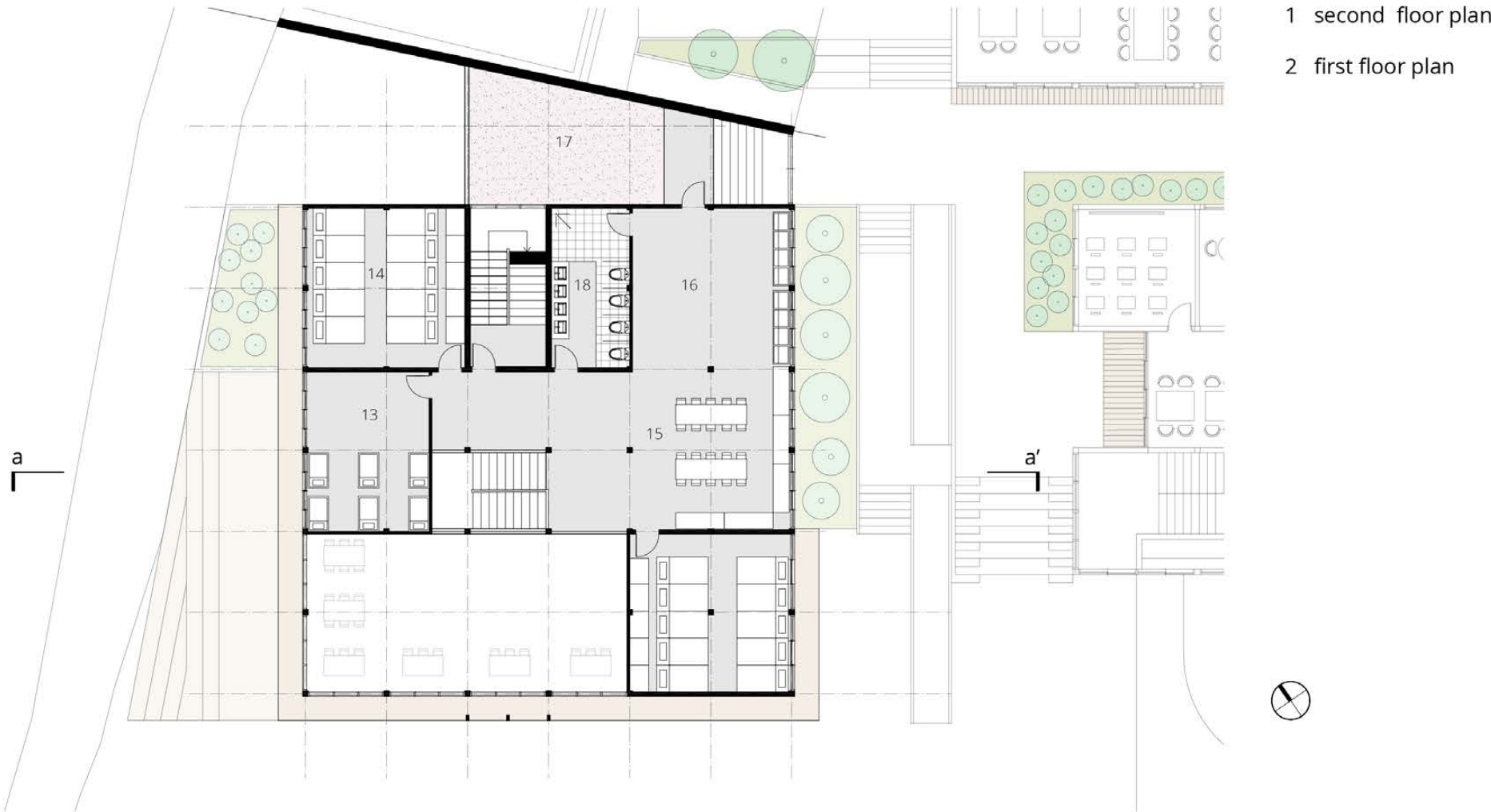


daycare

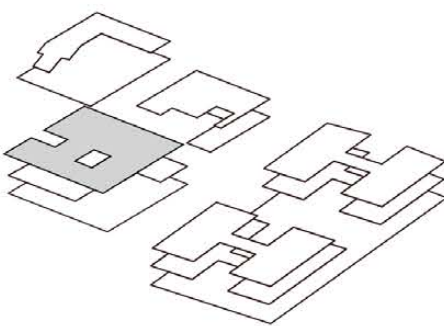


The maru at daycare is a welcoming lobby for kids and a sitting area for everyone. The maru floor extends from outdoor to indoor.

- 1F 1 Lobby
- 2 Class room
- 3 Class room
- 4 Playroom
- 5 Office
- 6 Storage
- 7 Restroom
- 8 Laundry room
- 9 Pantry
- 10 Dining room
- 11 Kitchen
- 12 Kitchen stroage
- 2F 13 Infant room
- 14 Nap room
- 15 Reading room
- 16 Playroom
- 17 Sand playground
- 18 Restroom
- RF 19 Rooftop garden
- 20 Stroage



daycare

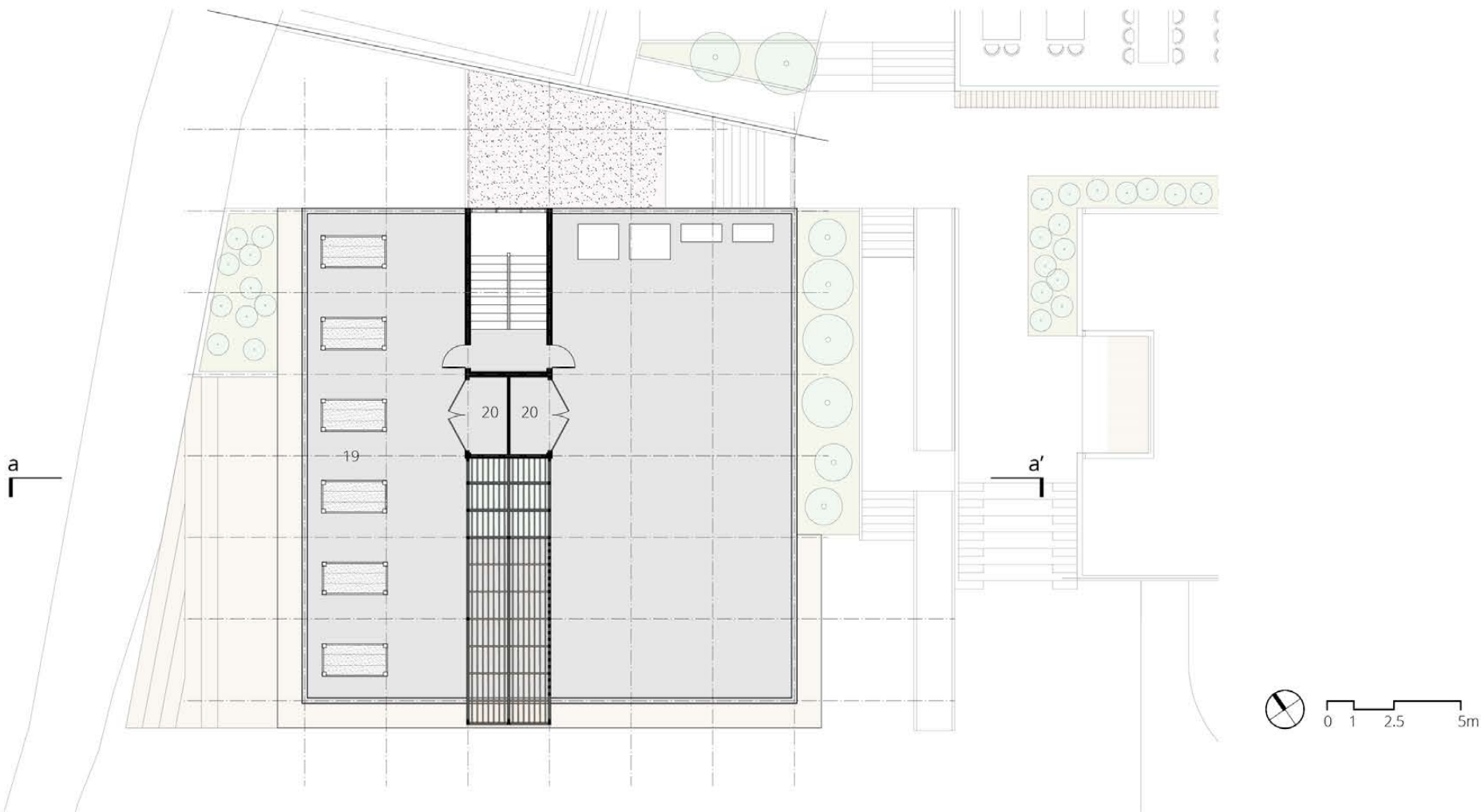


For bringing the natural light to the center of the building, the skylight is at the top of the main stairs. The frame structure of the skylight goes to the ground splitting the rooftop area into two. The west area is used as a rooftop garden for children, and the east area is used for building equipment system, which is not accessible to kids.

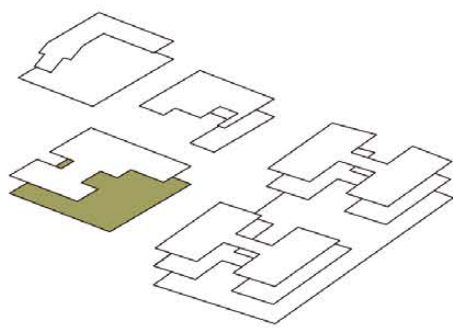
- 1F 1 Lobby
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- 10 Dining room
- 11 Kitchen
- 12 Kitchen stroage

- 2F 13 Infant room
- 14 Nap room
- 15 Reading room
- 16 Playroom
- 17 Sand playground
- 18 Restroom

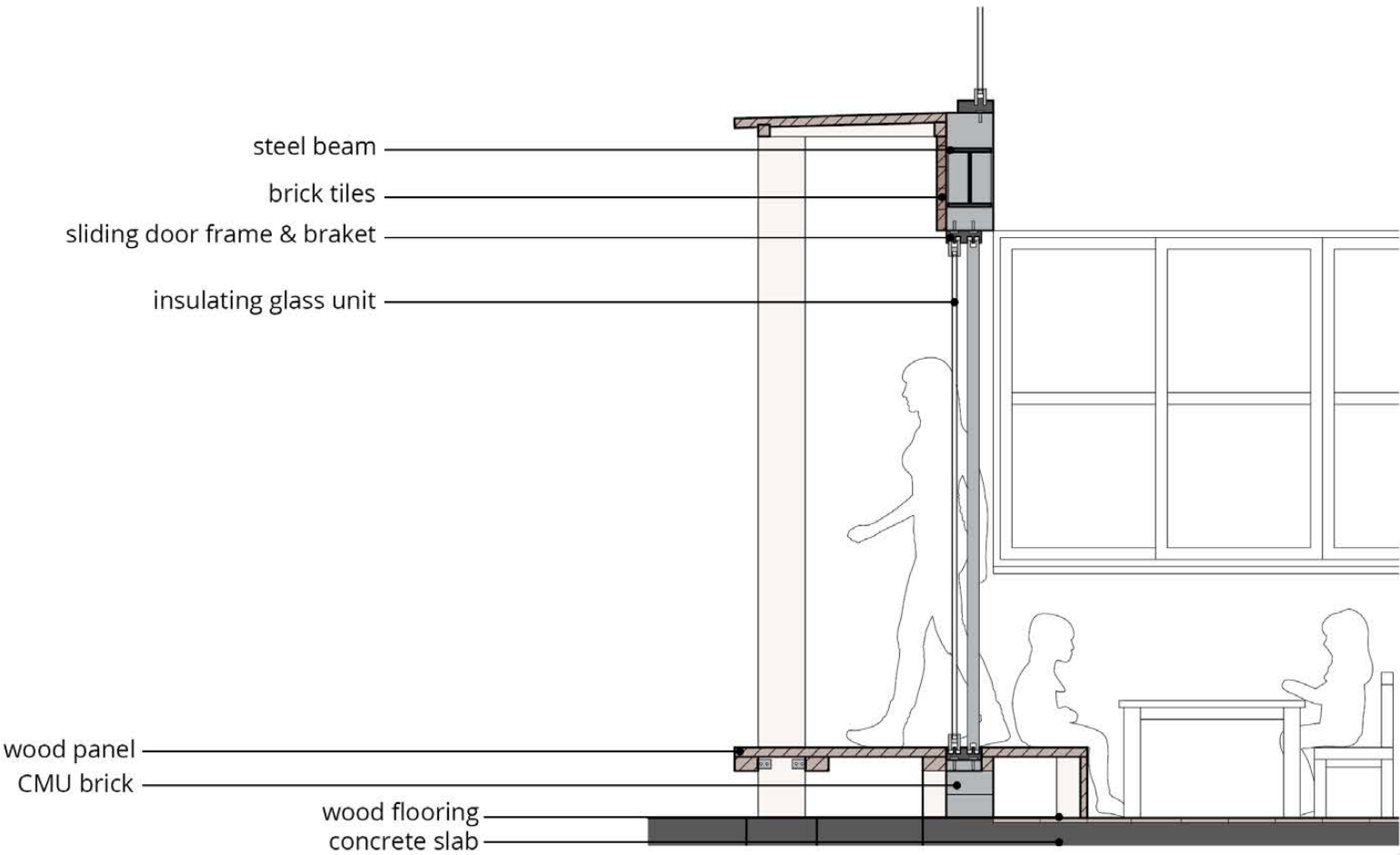
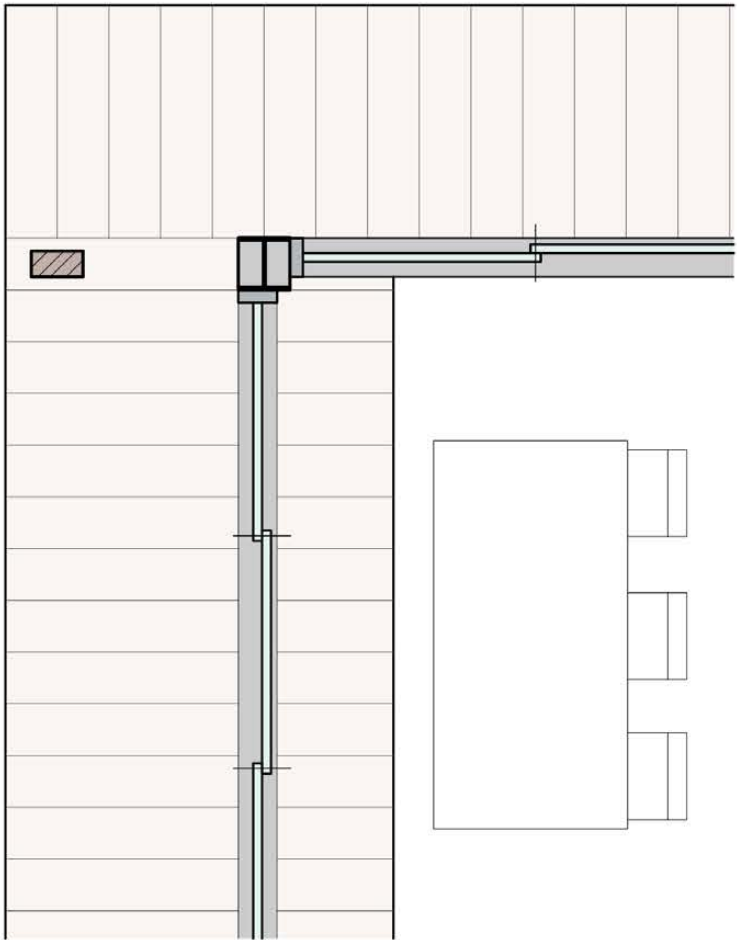
- RF 19 Rooftop garden
- 20 Stroage



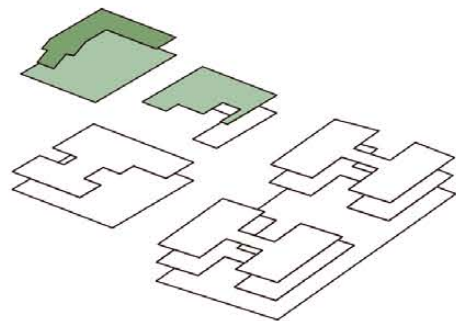
daycare



The south façade, which is facing the main courtyard of the daycare, has sliding glass doors along with the maru. It enhances the continuity of indoor and outdoor space.



library and multipurpose building



The library has a void space, and the perforated brick wall lets the light into there. The geometry of the town switches to the geometry of the children center walking down the stairs.

- BF

1 Auditorium

2 Stroage

1F

3 Entrance

2F

4 Books

5 Reading area

6 Classroom

7 Counselling room

8 Office

9 Lavatory sink

10 Restroom

Multipurpose Building
- 1F

1 Entrance

2 Restroom

3 Stroage

4 Reading area

5 Books

6 Book storage

2F

7 Restroom

8 Storage

9 Toy Library

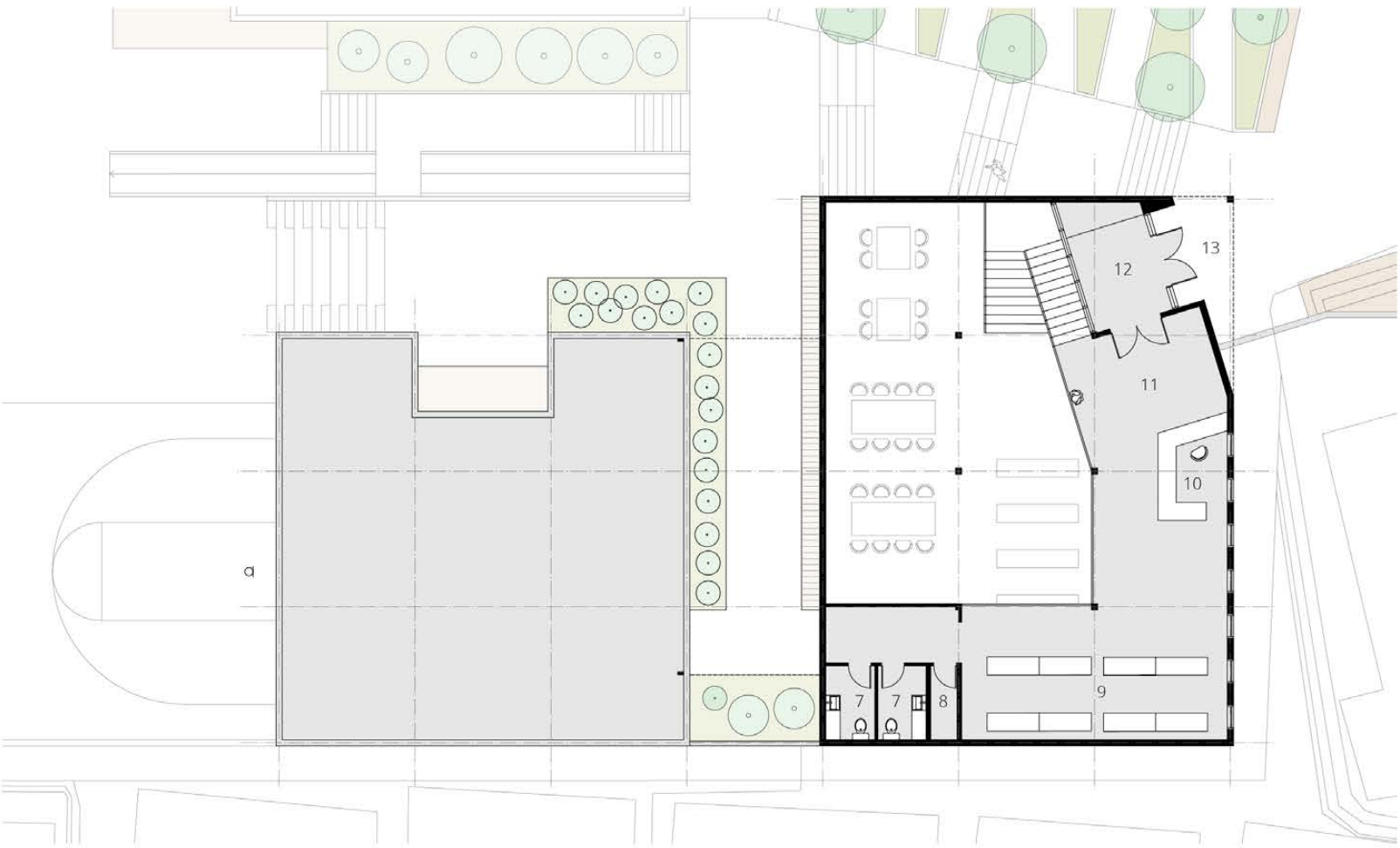
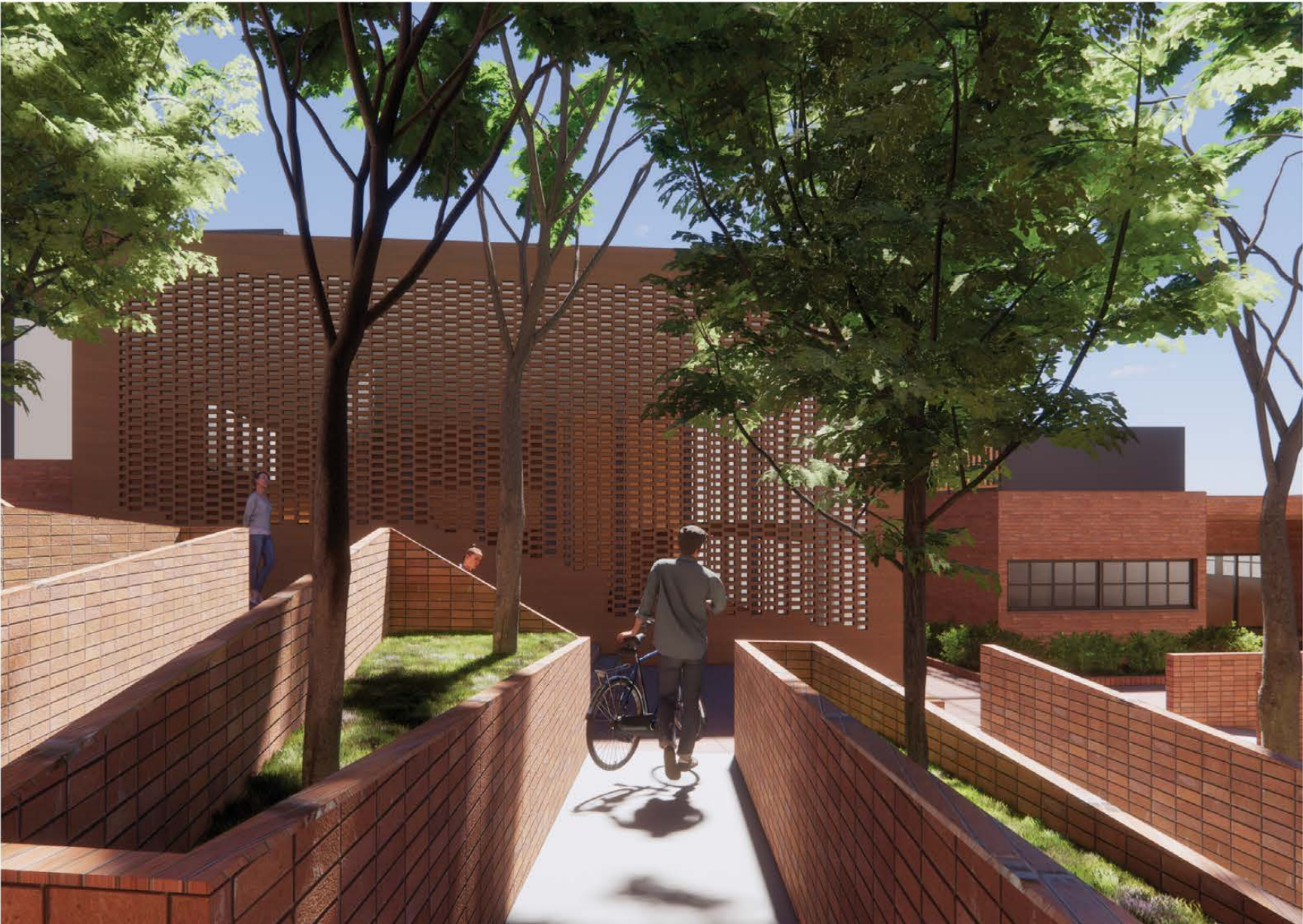
10 Information desk

11 Lobby

12 Vestibule

13 Main entrance

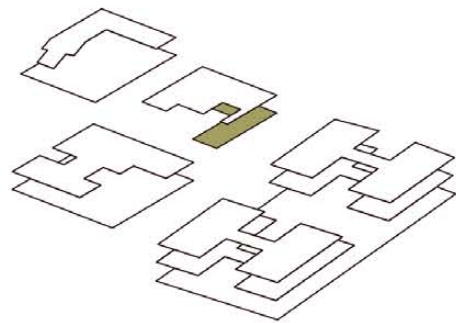
Library



- 1 second floor plan library
- 2 first floor plan library & second floor plan multipurpose building



library and multipurpose building



The entrance area leads people to two different spaces: one is the small auditorium below the ground level, and the other one is the second floor which has all the other functional spaces.

- BF

1 Auditorium

2 Stroage

1F

3 Entrance

2F

4 Books

5 Reading area

6 Classroom

7 Counselling room

8 Office

9 Lavatory sink

10 Restroom

Multipurpose Building
- 1F

1 Entrance

2 Restroom

3 Stroage

4 Reading area

5 Books

6 Book storage
- 2F

7 Restroom

8 Storage

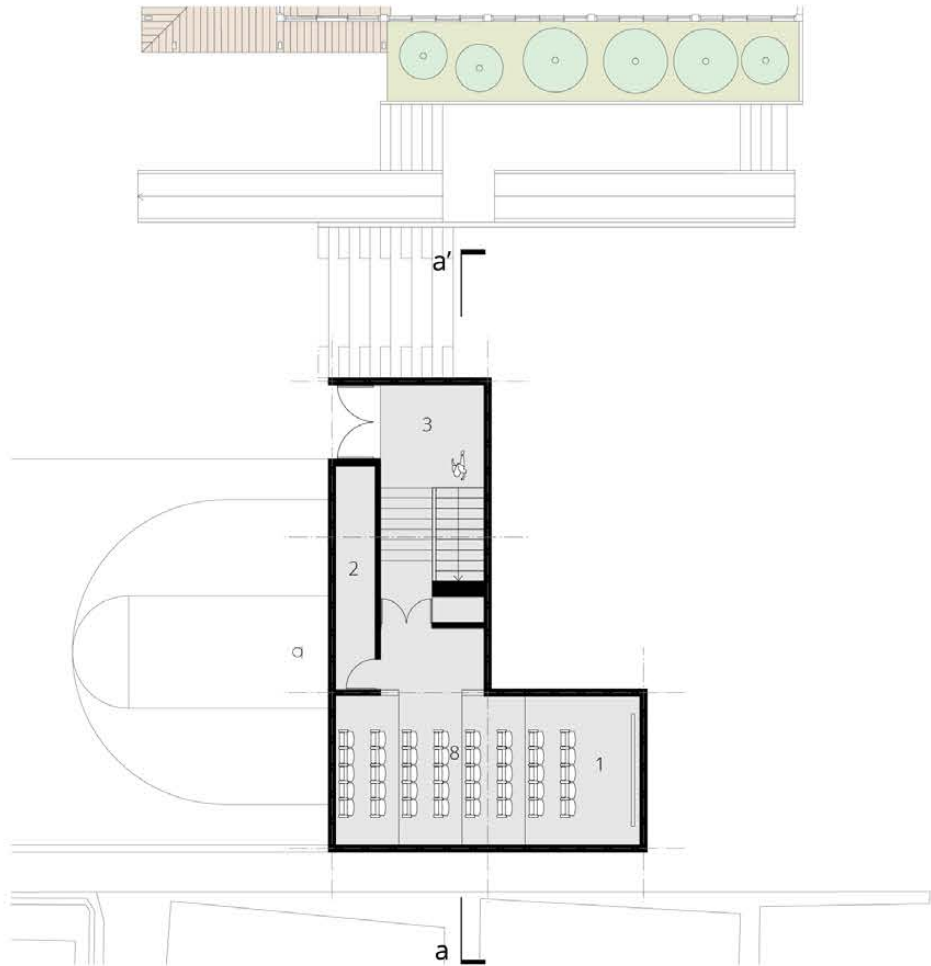
9 Toy Library

10 Information desk

11 Lobby

12 Vestibule

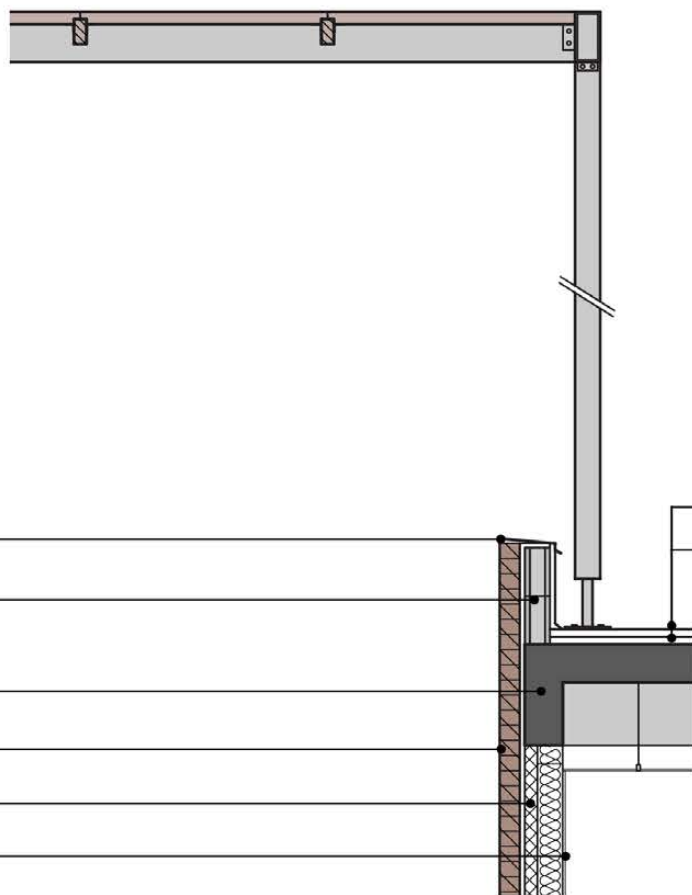
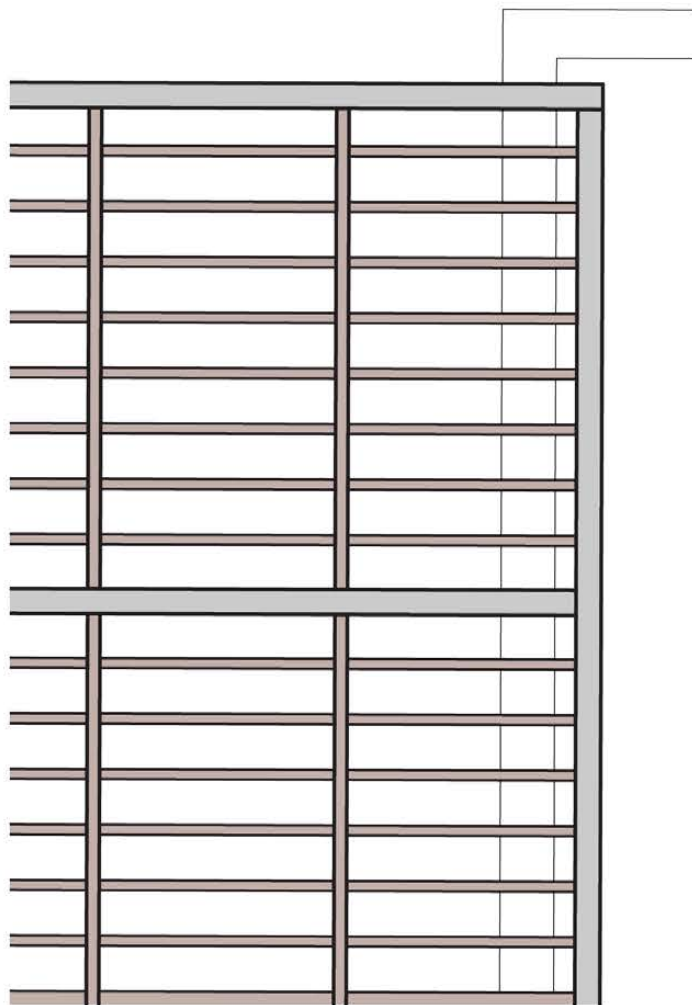
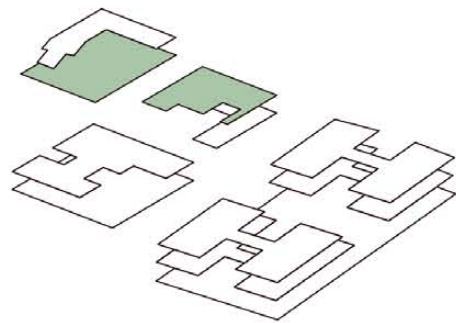
13 Main entrance
- Library



- 1 first floor plan
multipurpose building
- 2 section a - a'

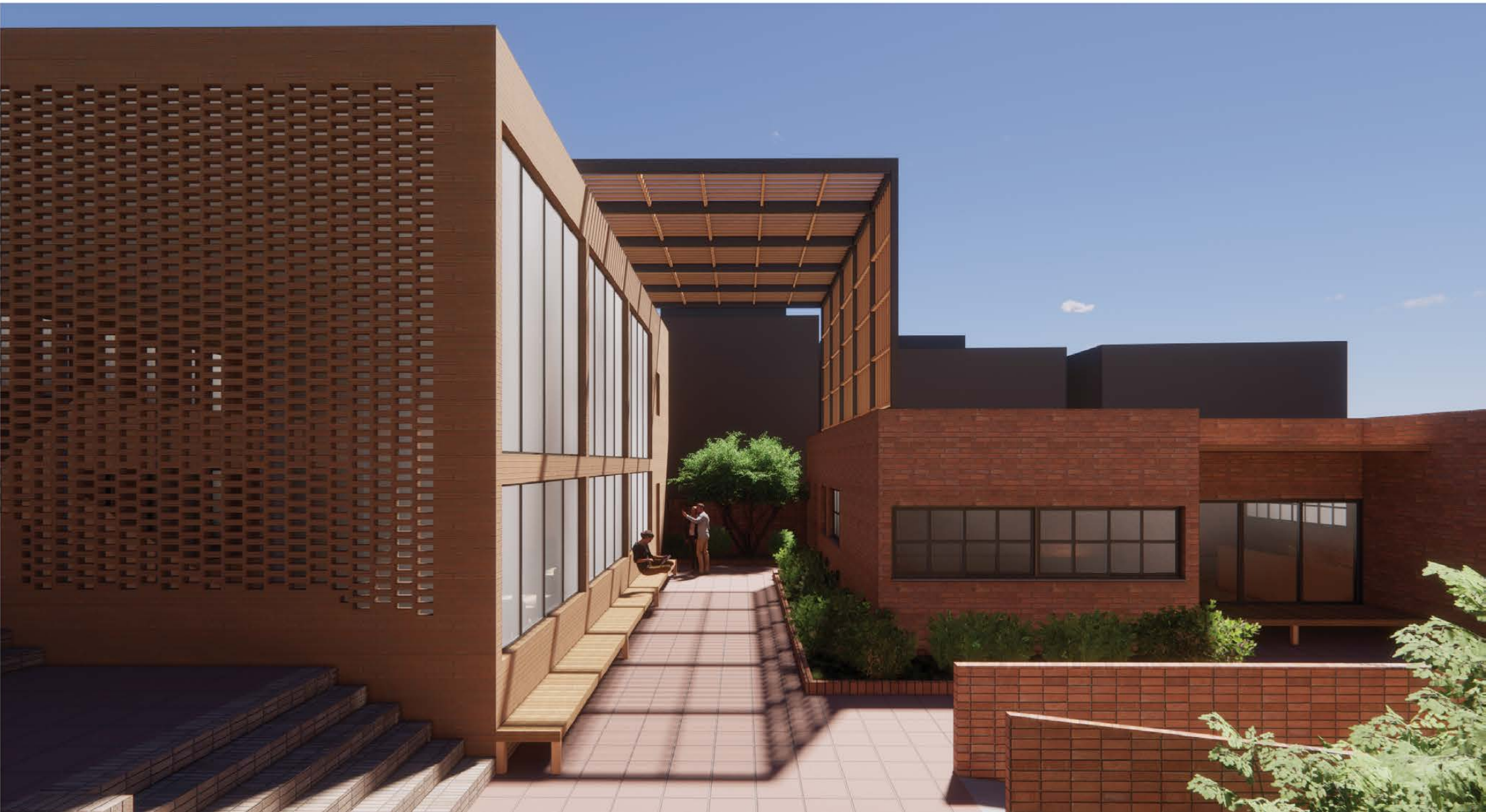
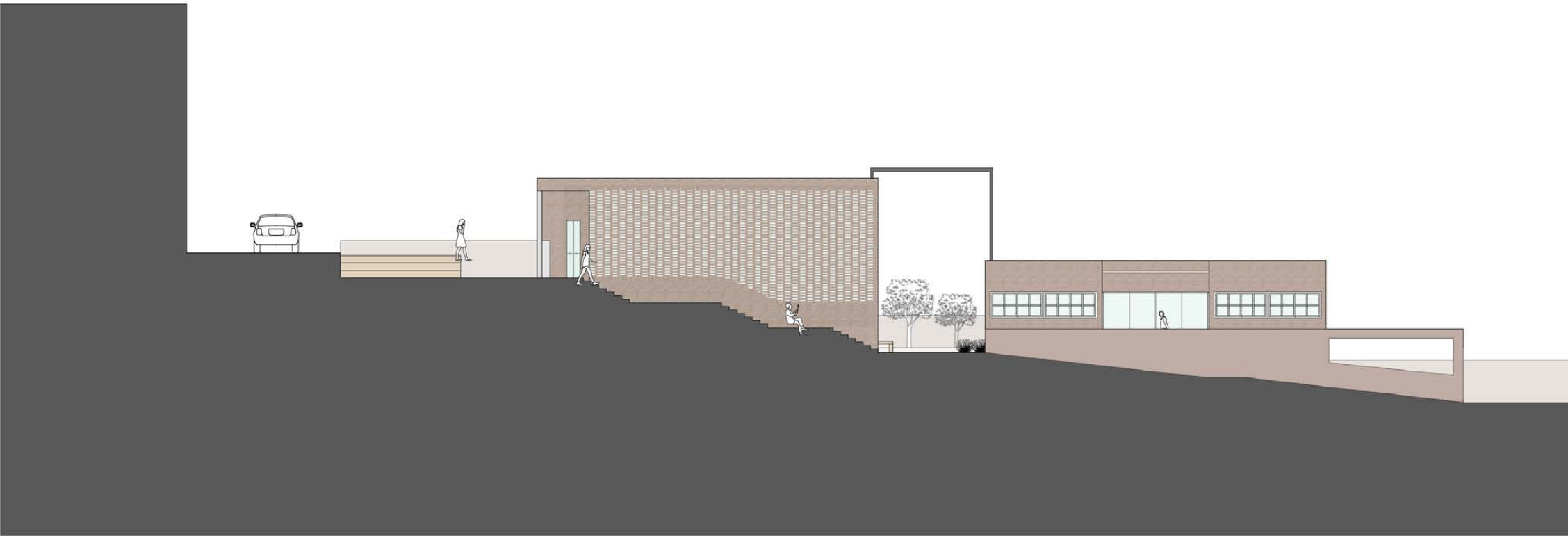


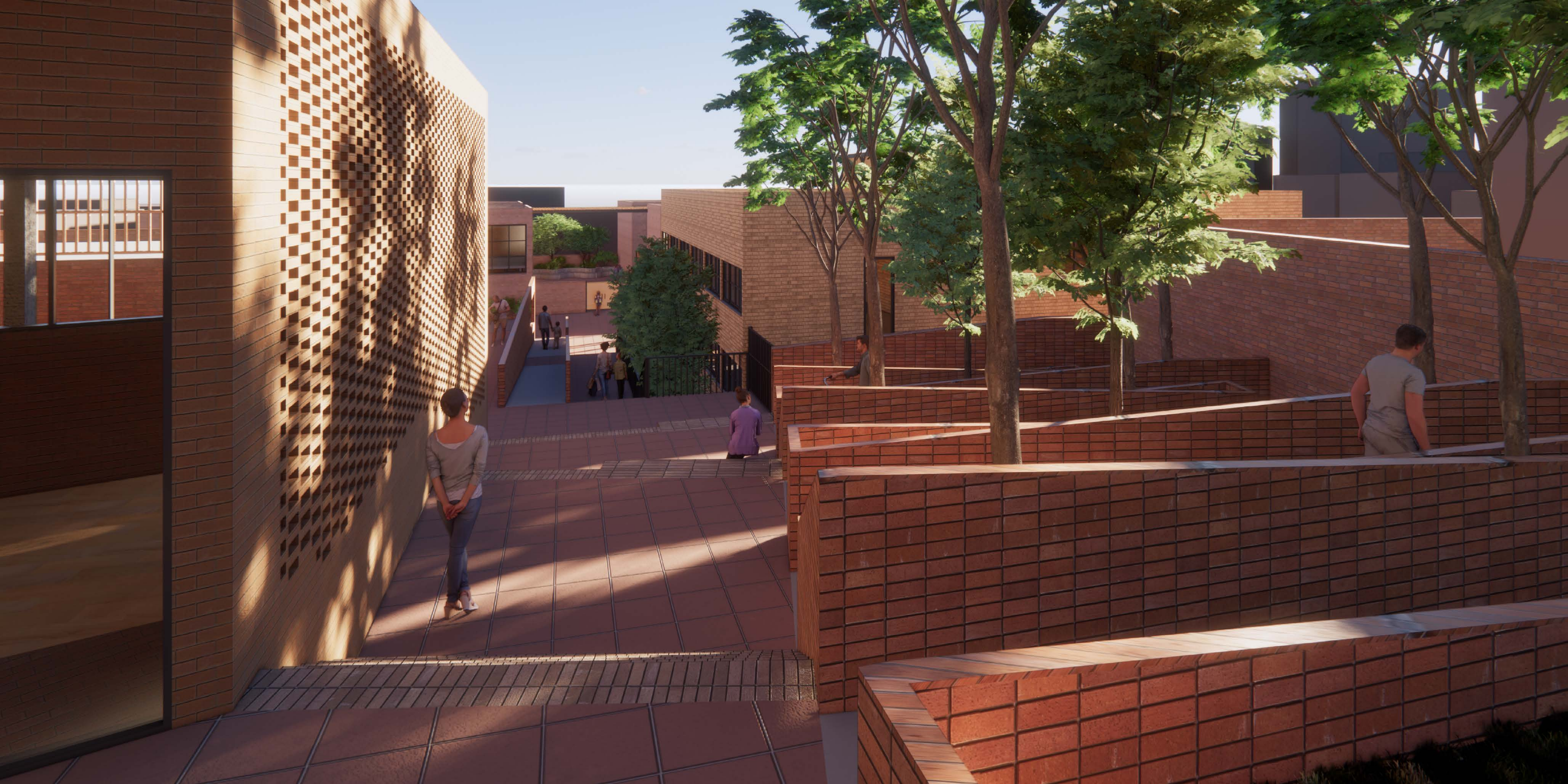
library and multipurpose building



Two buildings and the sunshade structure
create an outdoor nook space for reading.

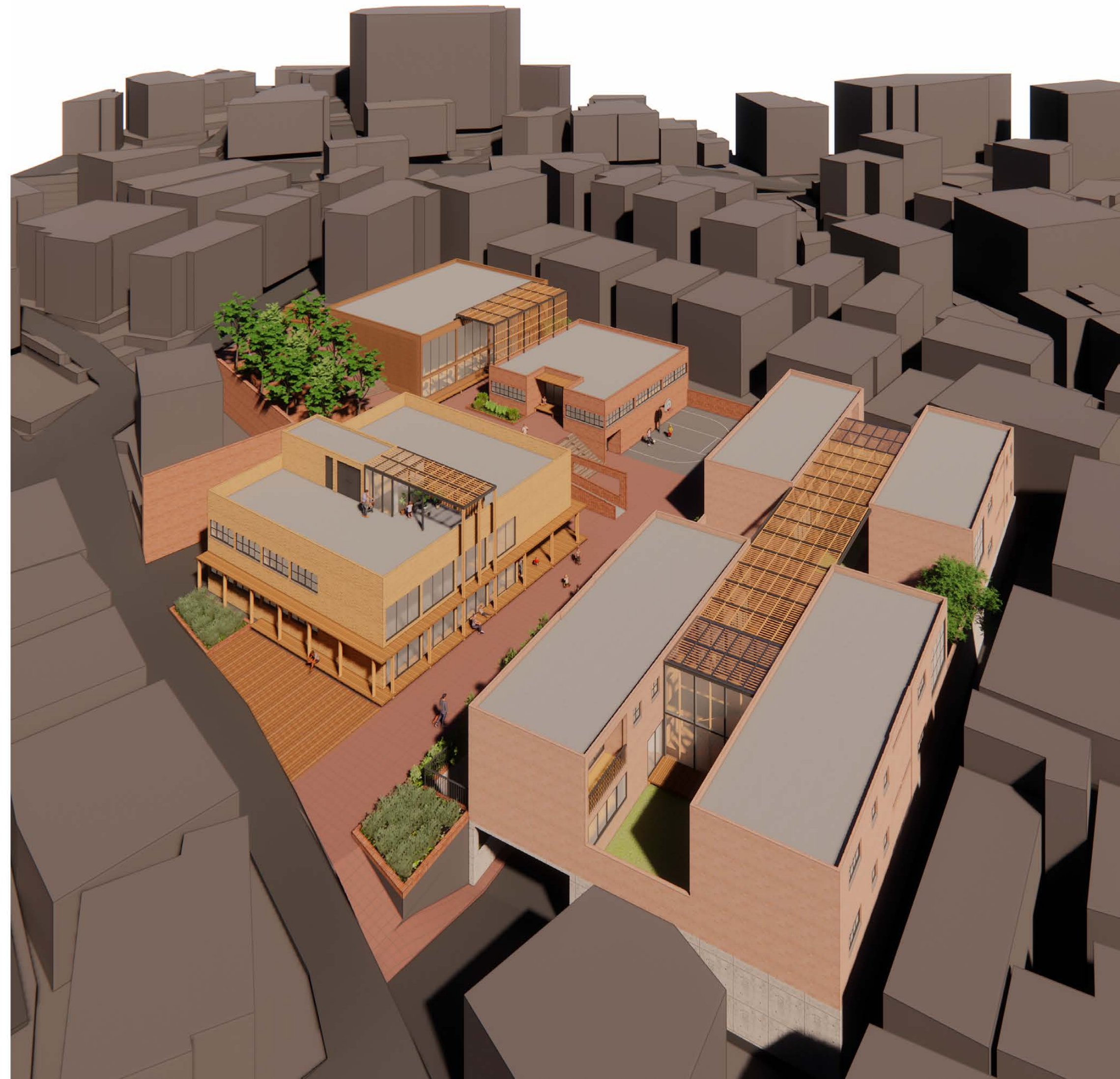
- parapet flashing
- CMU brick
- concrete slab and beam
- brick envelope
- rigid insulation
- gypsum board
- waterproof paint
- two layers of insulation





5. conclusion

People exist in physical space wherever they are. This project is intended to create a better life by changing the space when the situation cannot be changed. Based on the study of needs of children, who are the main users of the children center, the goal was to make the children center to be a part of a town with keeping children's privacy as a residence. The functions for the community brought into the center, and outdoor space was designed for them to access, and maru was placed between the buildings and the outdoor space to allow people to stay. Through the achievement of privacy and publicity of the space, it gives children who are out of their family a place-oriented belonging. It revealed architectural possibilities for the positive influence of space.



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