

## **MULTI-FUNCTION COMPLEX IN NORTHERN AREA**

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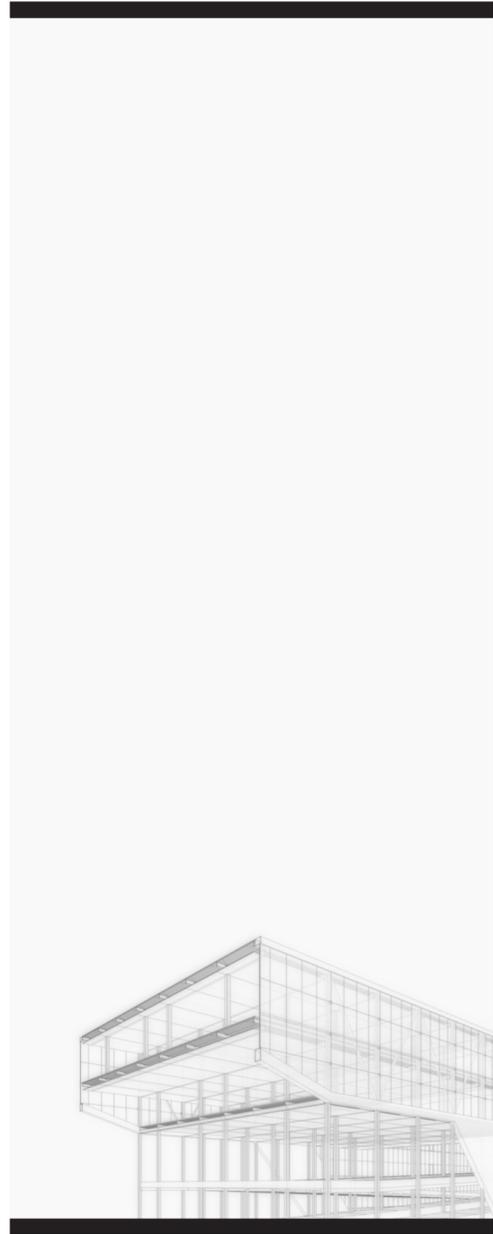
# 1

## INTRODUCTION

The Thesis project is directed toward the design of a building complex that is located in Anchorage, Alaska. The building is used as a multi-function complex in the city to play an important role as the second center area in the Anchorage.

The building will provide a large area of space for reading, exhibition, shopping, exercising and amusement. In addition, the building has a parking garage inside the building to shelter the people and prevent the car from being damaged in the cold weather.

The steel structure system has been used as the primary structure to provide the large and flexible open area for multi-use. This will also reduce the time of construction in a serve climate and will resist large siesmic forces. The open frame will allowe people to enjoy the natural light through the curtain wall system.



## THE ANCHORAGE

Anchorage Alaska is a unified home rule municipality in the U.S. state of Alaska. With an estimated 298,192 residents in 2016, it is Alaska's most populous city and contains more than 40 percent of the state's total population.

Anchorage has gone through four significant improvements: the city grew from its happenstance choice as the site in 1914; construction of the Alaska Railroad until 1923; Massive growth of air transportation and the military between the 1930s and the 1950s and the oil boom in 1975, Though Anchorage experienced the world's second-largest earthquake in March, 1964, the city is still the most populous and wealthy city after the rebuilding.

Unlike other big cities, the downtown area of the city is in the northern part of the city instead of the center. Most of the public buildings, schools, restaurants, banks are in the downtown area, on the other side, most of the residential areas are located in the southern part of the city. There is a big loop in the center that connects the circulation of the whole city. Though to some extent, I still believe there is a demand to activate the vitality and diversity of the community by adding an essential pivot through the research of nature figure, circulation, industry distribution , human activity, surrounding environment to form a system of building type which can be widely used.

DOWNTOWN



ANCHORAGE MUSEUM



SULLIVAN ARENA



UNIVERSITY OF ANCHORAGE



CAMPBELL LAKE



MALL CENTER(TARGET)



EARTHQUAKE PARK



## THE SITE

The site is located on the edge of the main circulation loop of Anchorage, Alaska. The west view shows the residential area which is near the seashore; the east area shows the commercial area along the circulation loop; the north view is surrounded by the landscape (forest), the tree in this direction is about 10 meters high, so it is a good protection from the dominant wind coming from the north-east.

The location of the site is particularly important in its accessibility to the people living in neighboring residential areas and the staff, employees working in the nearby commercial facilities, thus attracting the public to the site. Also, the building would provide paths or bridge connecting the nearby spaces, so the easy accessibility to the main circulation loop would be an important feature to put into consideration.

Impressed by the interplay between the site and surroundings, I started out by extending lines of the surrounding buildings to the site plan to form a graphic full of parallel and intersecting lines in different directions as a guide for the further development.

CENTRAL CIRCULATION

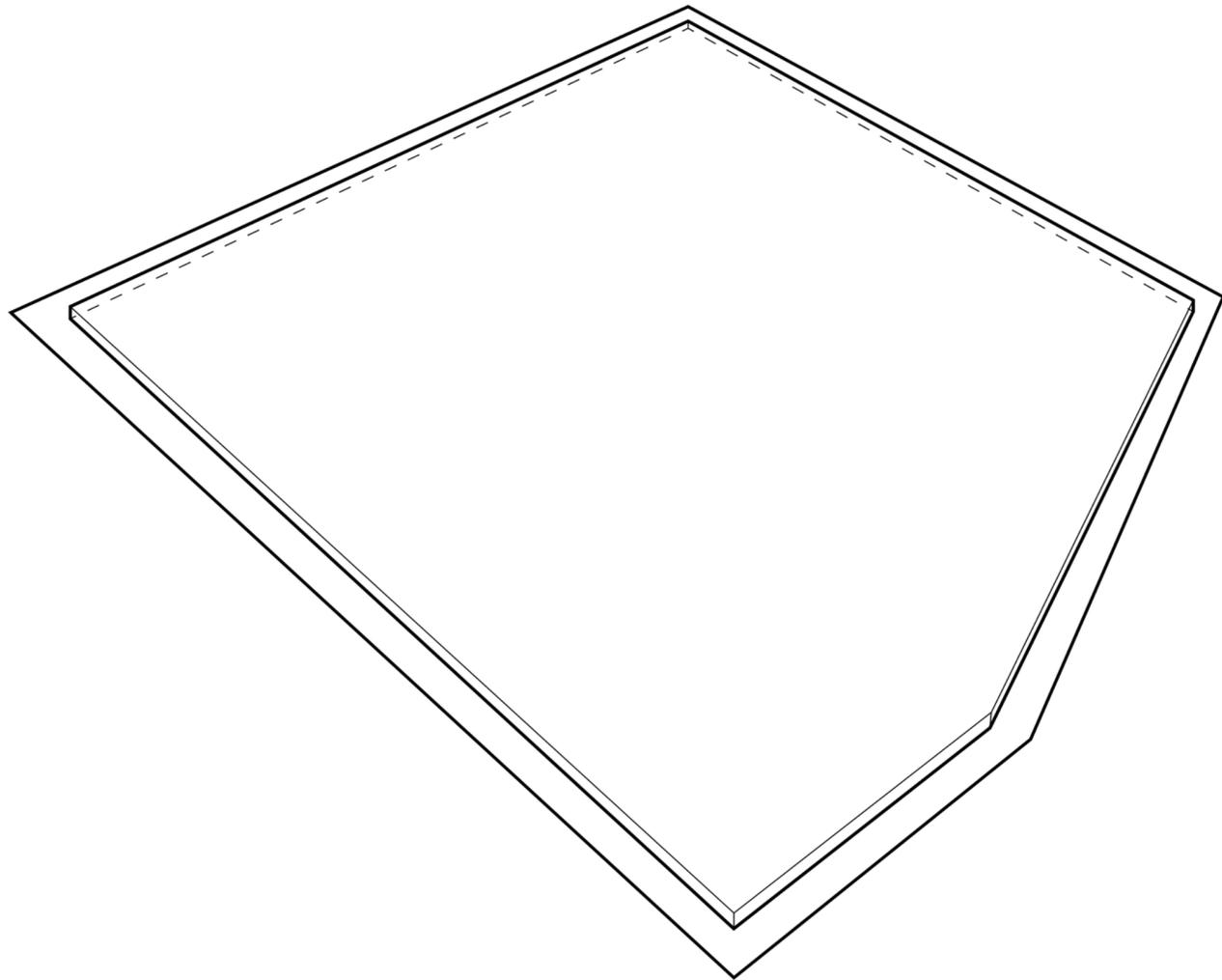
COMMERCIAL AREA

RESIDENTIAL AREA

SITE

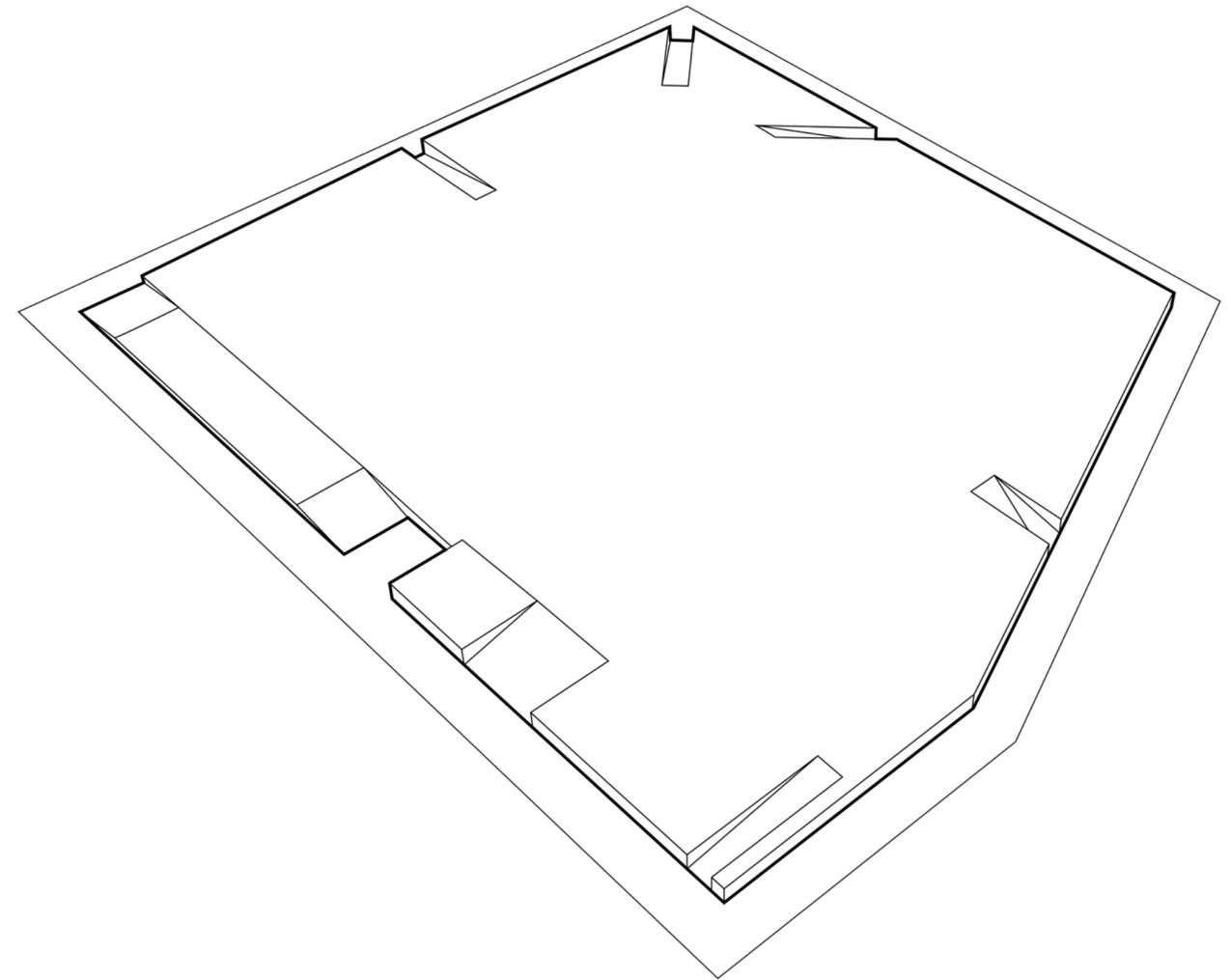
## ANCHORAGE

When I pick the proper space for the site, there are several crucial points for my choice: large open space, near the residential area and convenient transportation. As the site is along the main road, I am willing to make full use of the site convenience, the bridge to the commercial area and the bicycle path through the forest to the site so that the building can be connected properly with the surroundings. It is always the first step to activate the community by adding joints and bridges inside the net system.



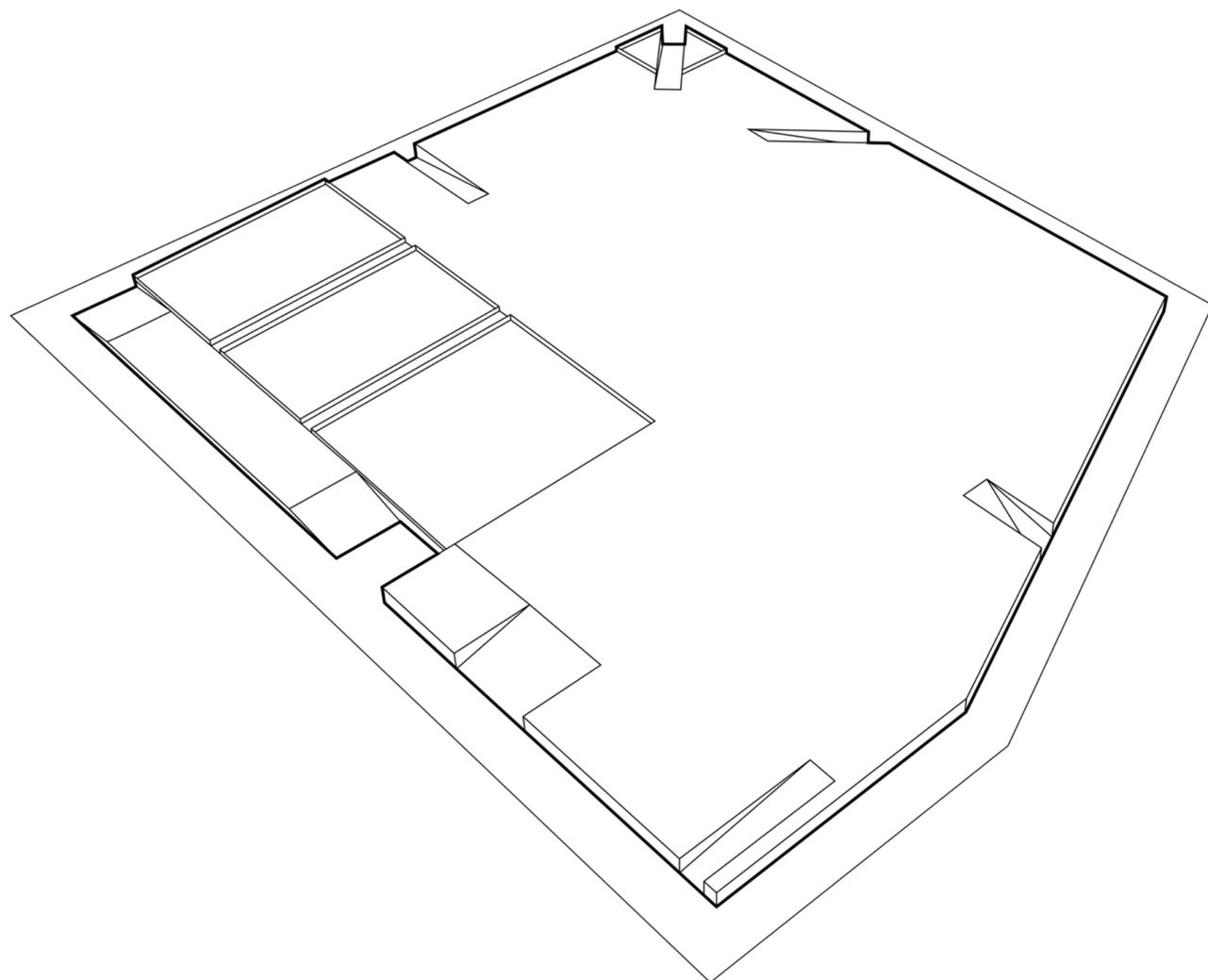
1

Because of the permafrost soil type in the Anchorage, the foundation should be elevated to form a square in order to insulate the heat to transfer from the building to the ground.



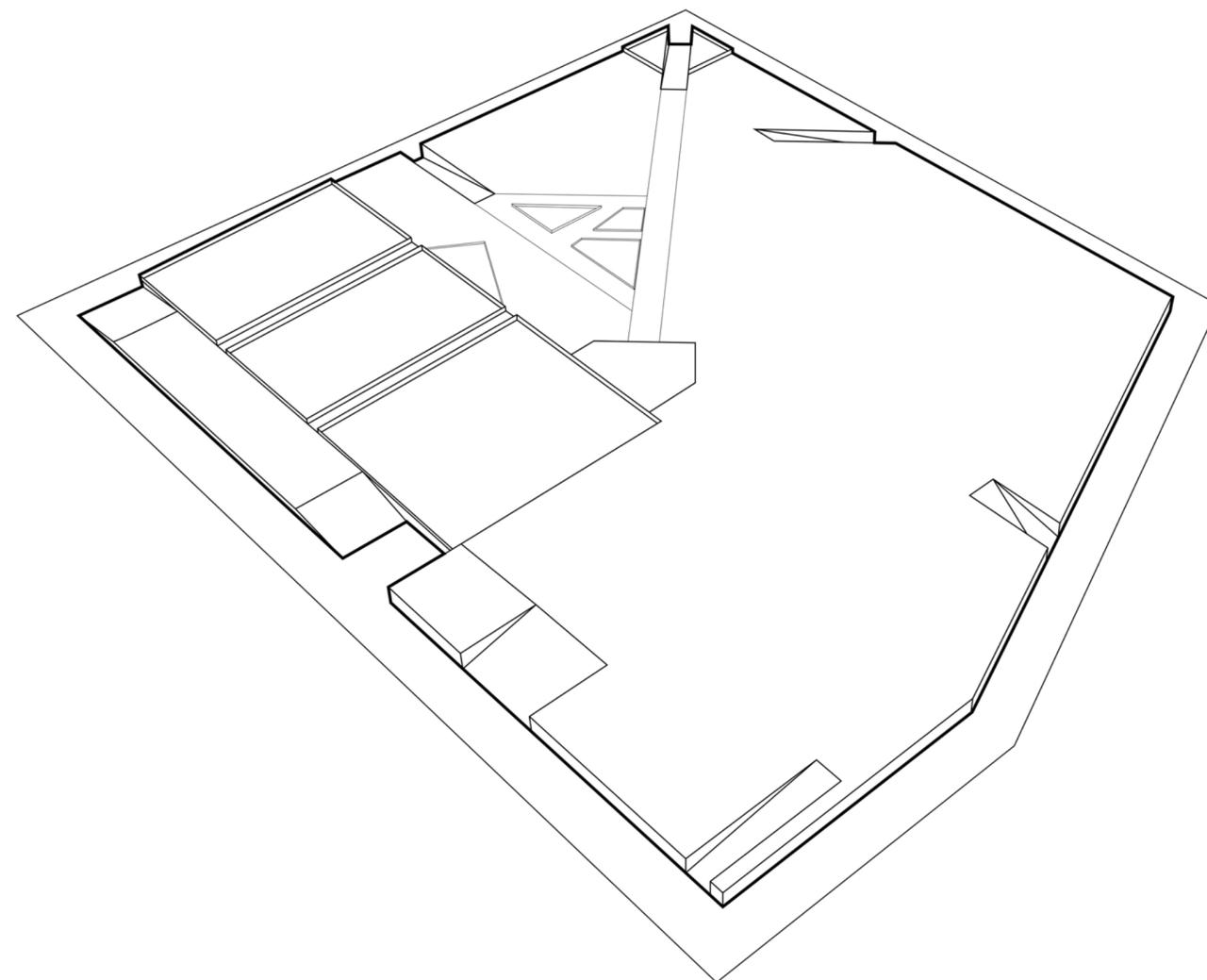
2

Different types of entrances are set to depend on the different types of transportations including pedestrian entrance, vehicle entrance and bicycle entrance.



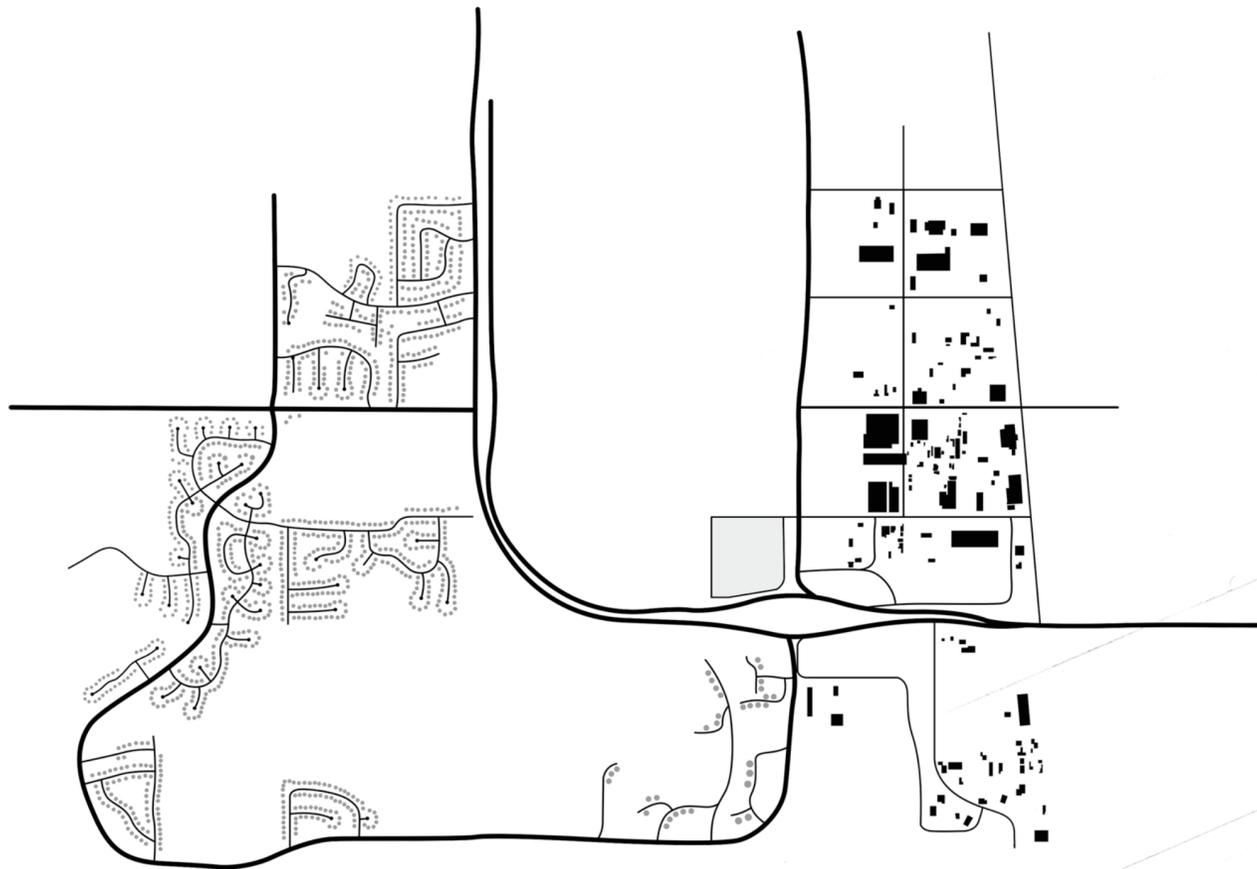
3

Large area of green space is added to the square in order to attract public visiting the building and providing a pleasant scenery for people staying on the square.



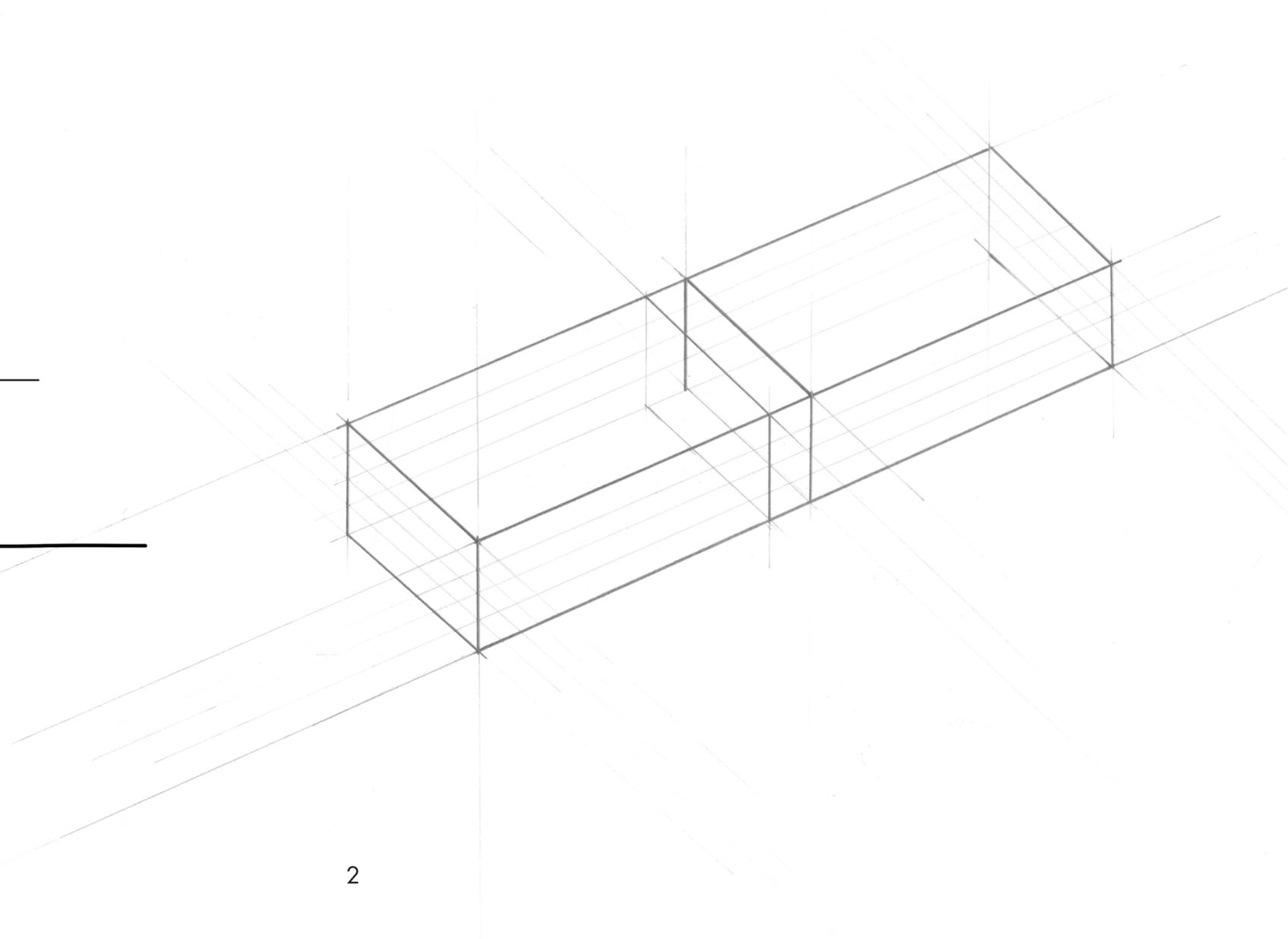
4

The square is detailed divided into several parts aiming to guide different streamlines reaching the site with no interference and to provide some leisure area for people staying on the square.



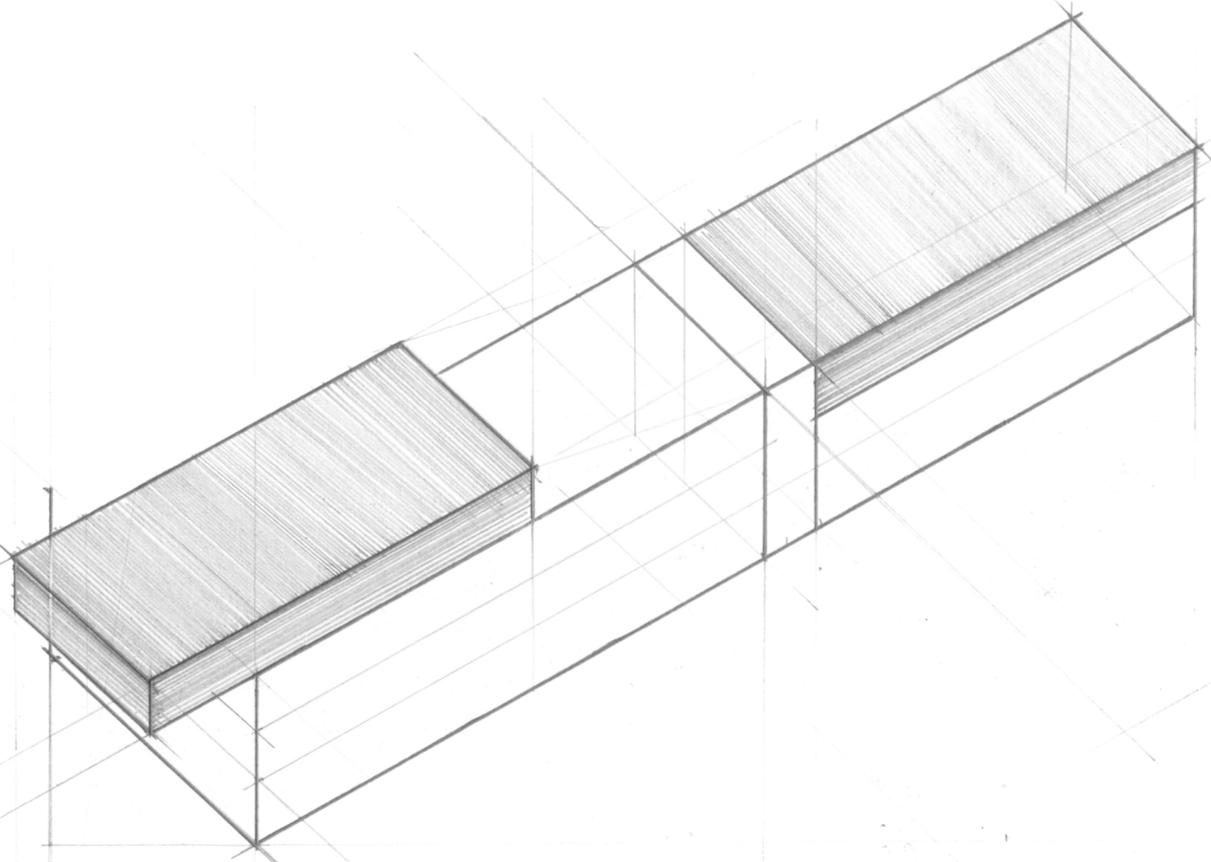
1

The areas surrounding the site will be an important consideration to determine the function distribution of the building.



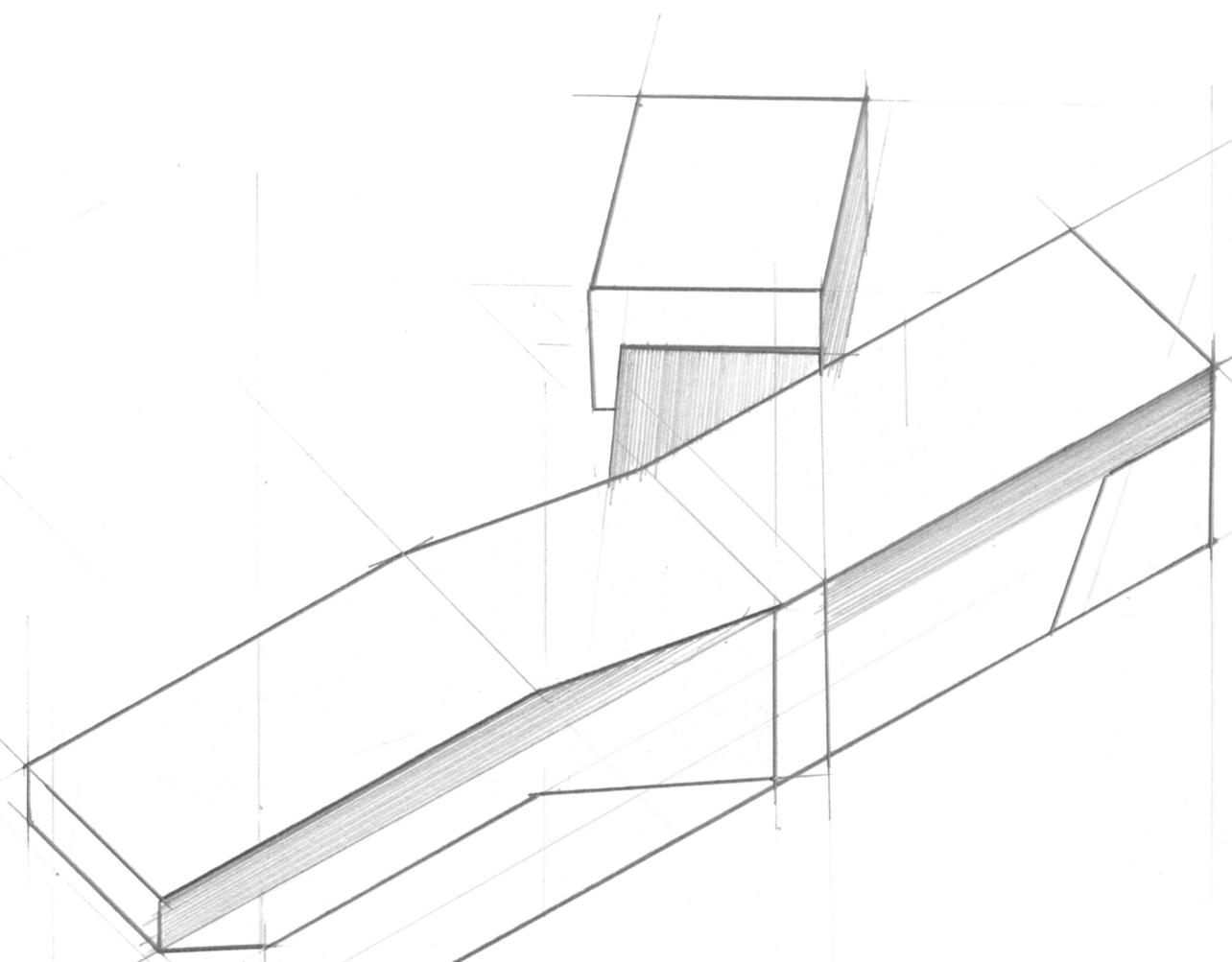
2

The first two blocks are set to providing different functions according to the areas surrounding the building. The left part will be museum and library space in cooperation with the residential area in the west; The right part will be shopping space respond to the commercial area in the east.



3

Some parts of the block are extended to better communicate with the environment and form a semi-isolated space for people spending a comfortable and quiet period of time here.



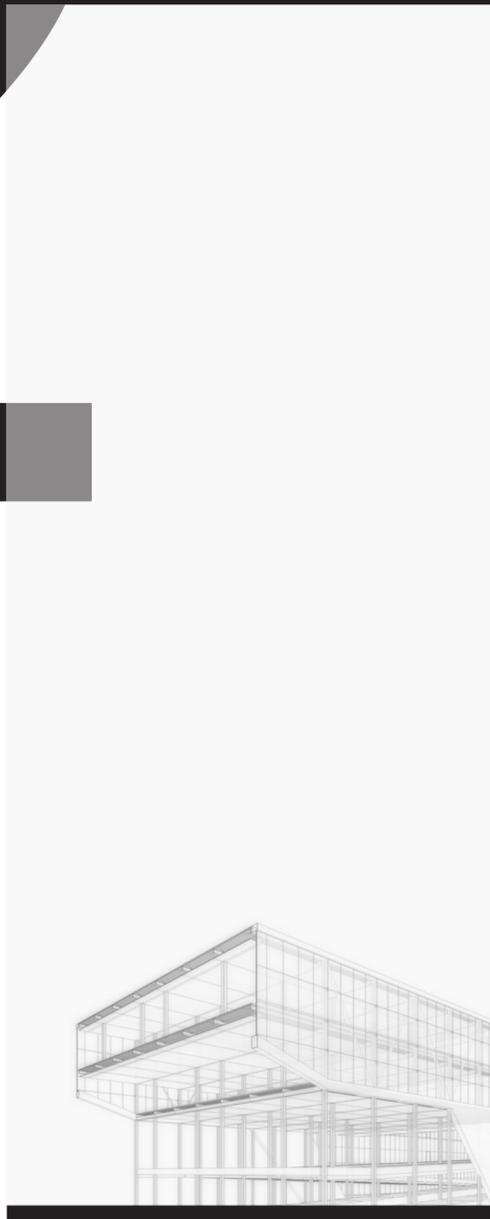
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The shape of the elevation has been modified to make a strong contrast with the regular steel-column structure inside the building.

# 2

## PROJECT DRAWINGS

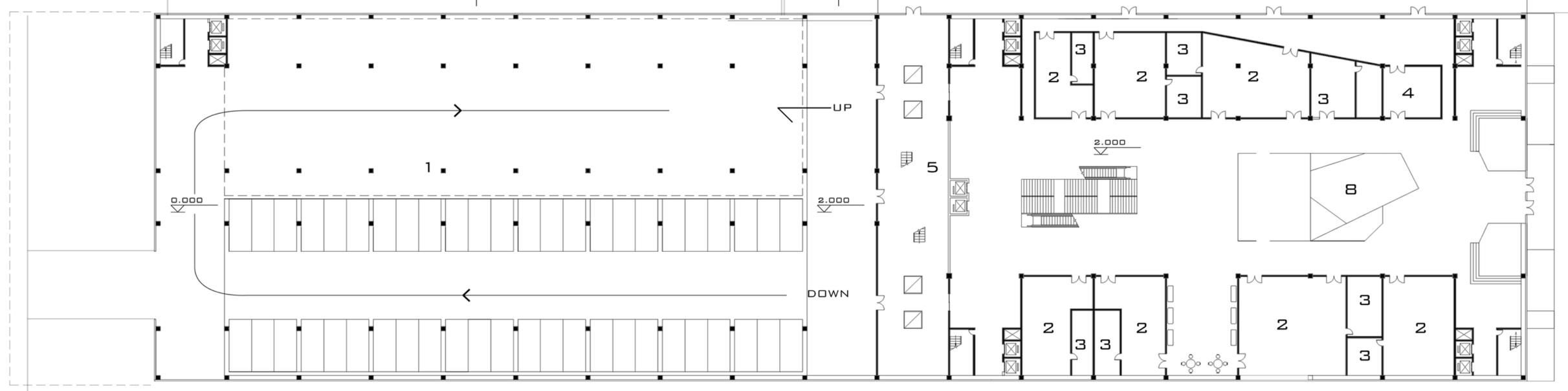
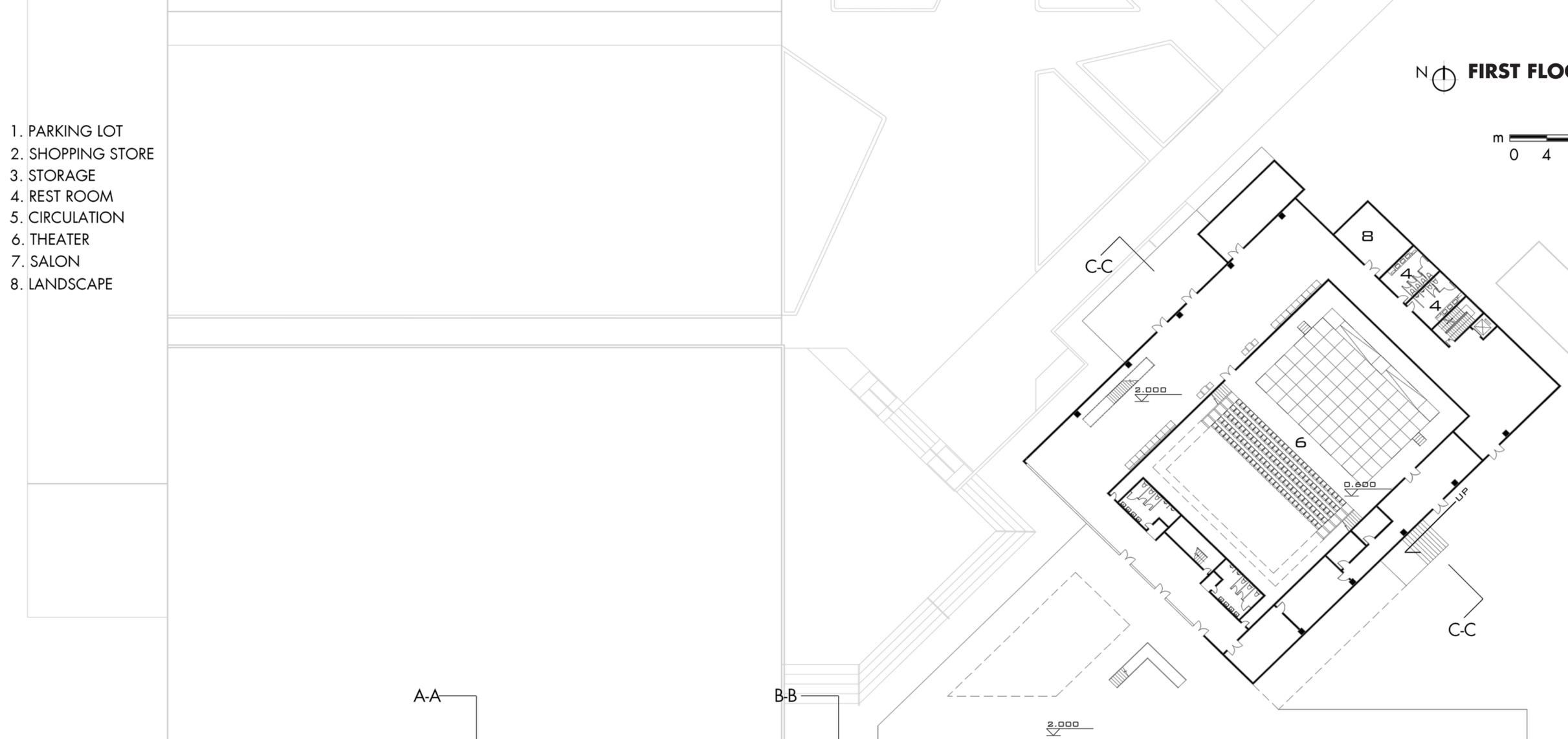
This part shows the technical drawings of the final scheme and two isometric drawings of the two essential function space in the building: Library space and Museum space.



N **FIRST FLOOR PLAN**

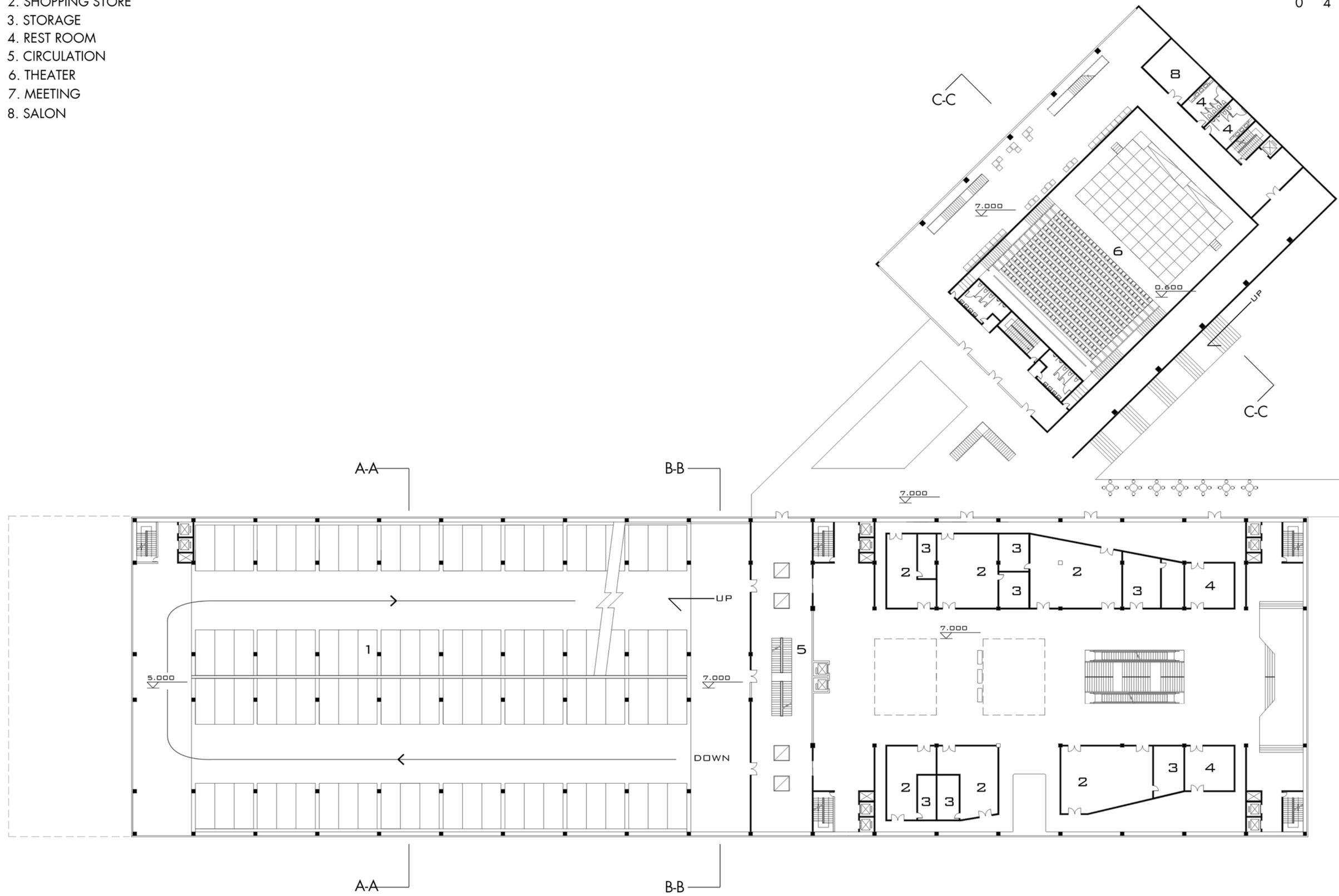


- 1. PARKING LOT
- 2. SHOPPING STORE
- 3. STORAGE
- 4. REST ROOM
- 5. CIRCULATION
- 6. THEATER
- 7. SALON
- 8. LANDSCAPE



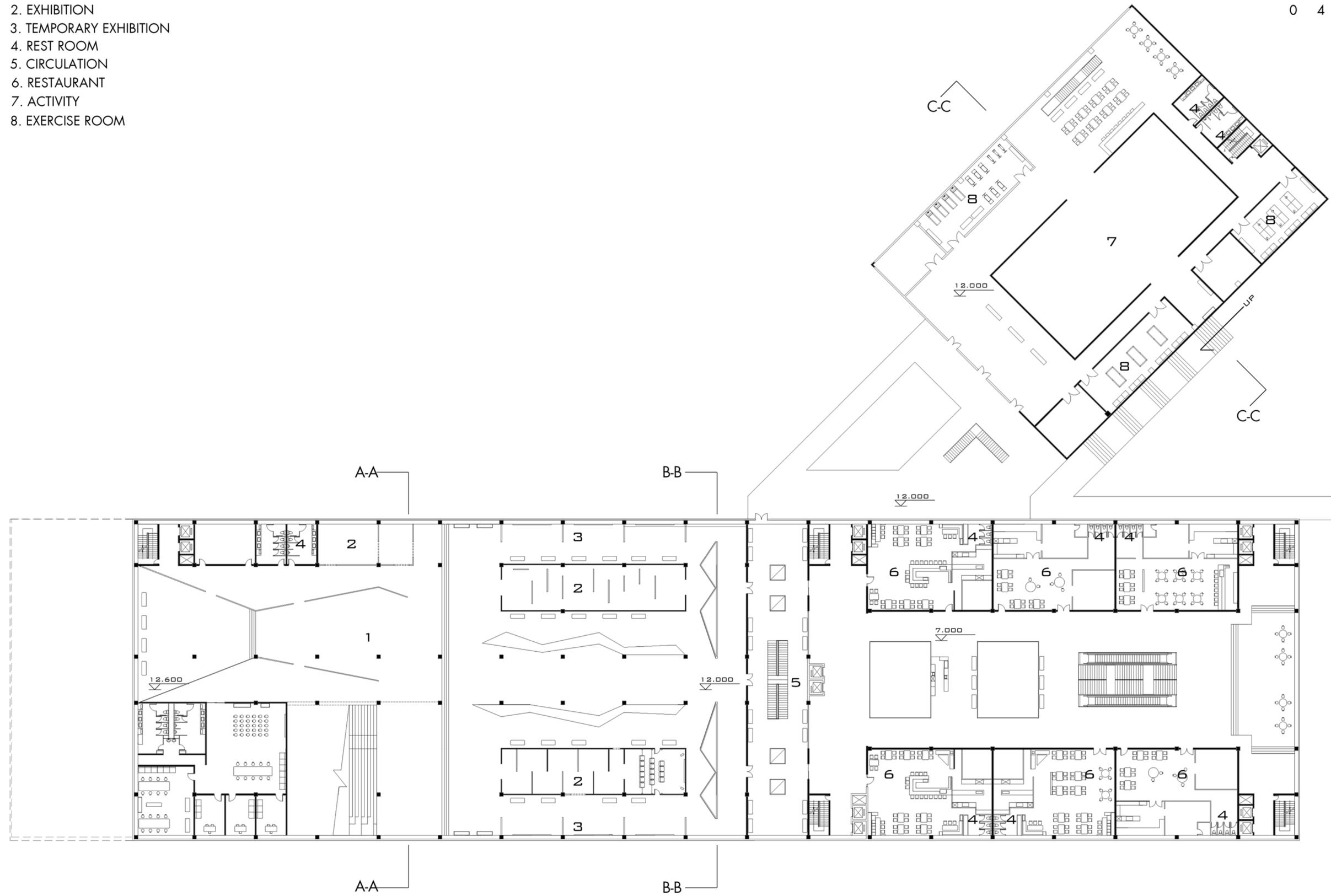


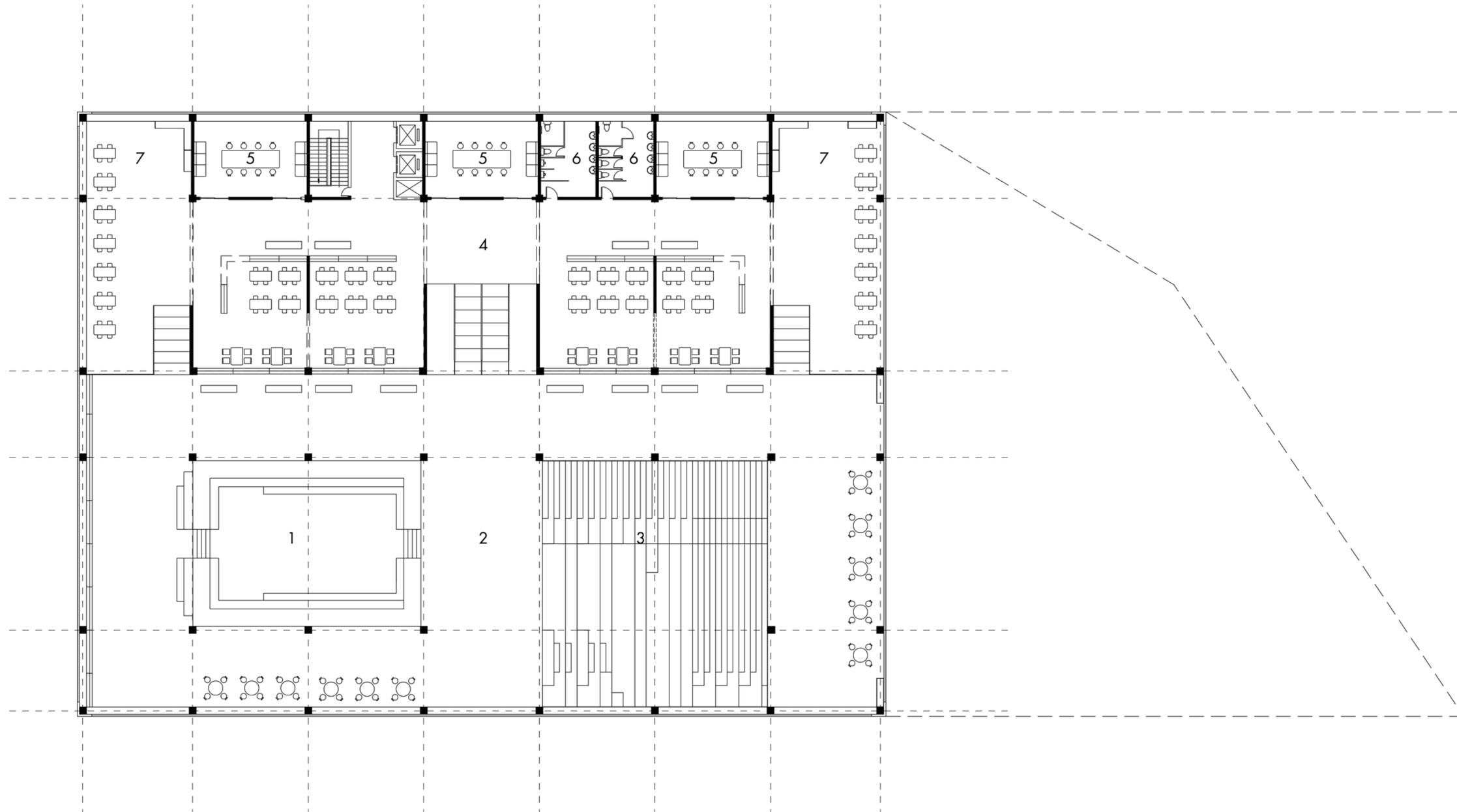
- 1. PARKING LOT
- 2. SHOPPING STORE
- 3. STORAGE
- 4. REST ROOM
- 5. CIRCULATION
- 6. THEATER
- 7. MEETING
- 8. SALON



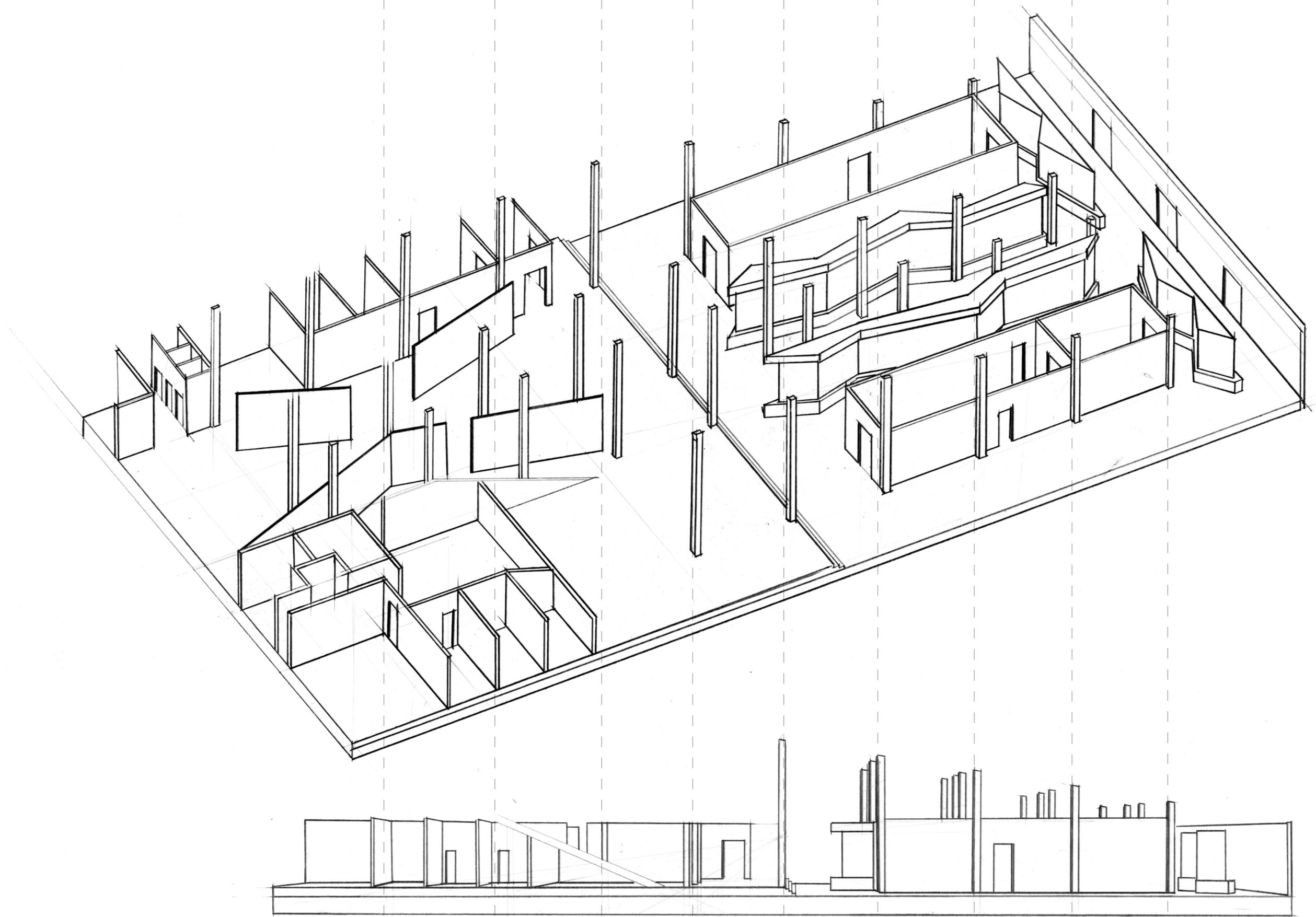


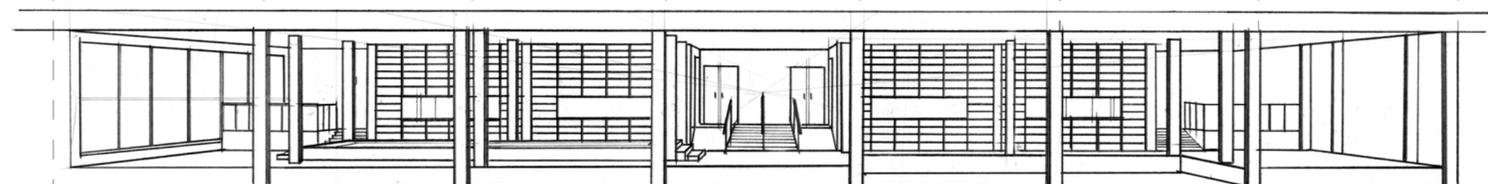
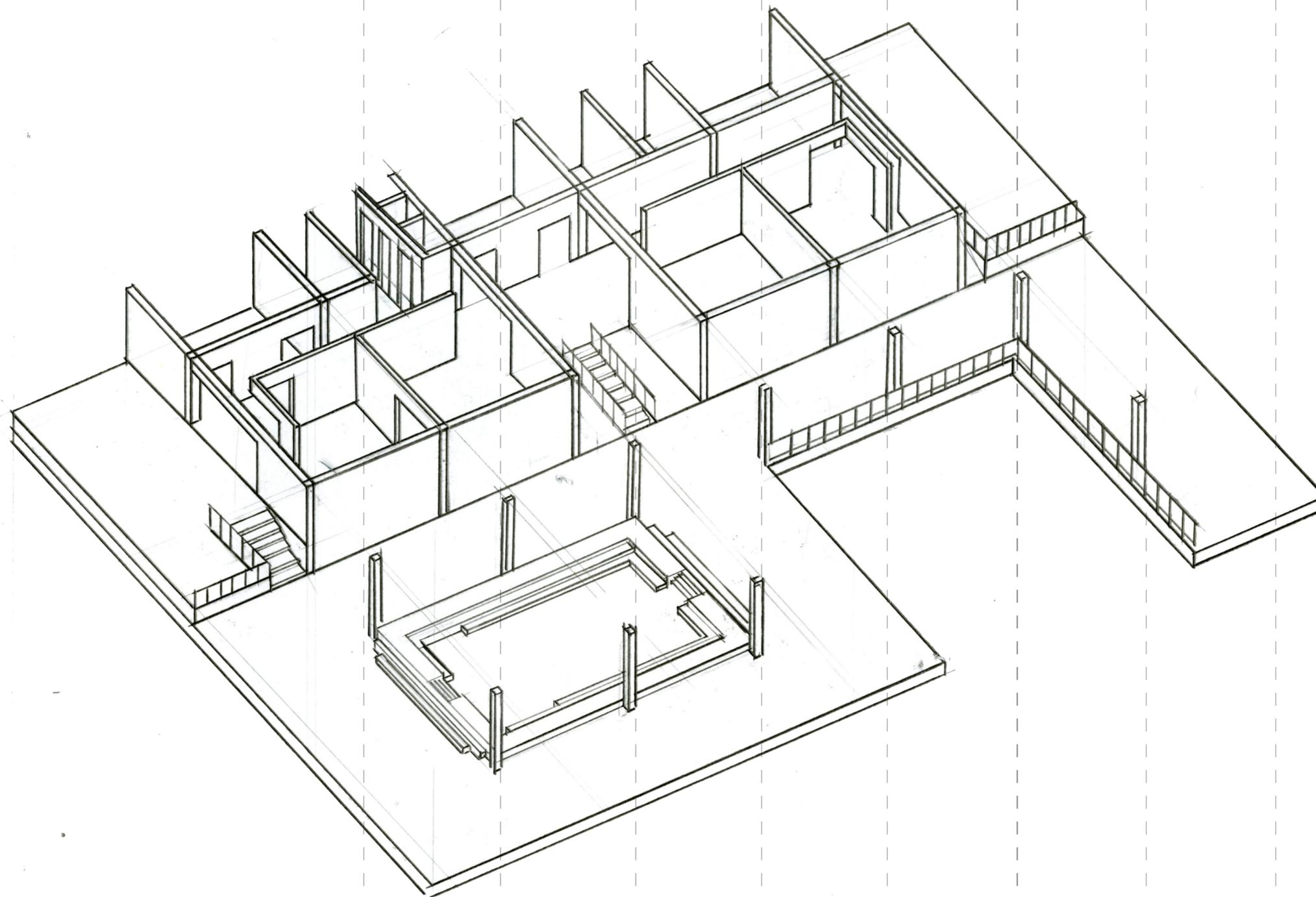
- 1. MUSEUM
- 2. EXHIBITION
- 3. TEMPORARY EXHIBITION
- 4. REST ROOM
- 5. CIRCULATION
- 6. RESTAURANT
- 7. ACTIVITY
- 8. EXERCISE ROOM

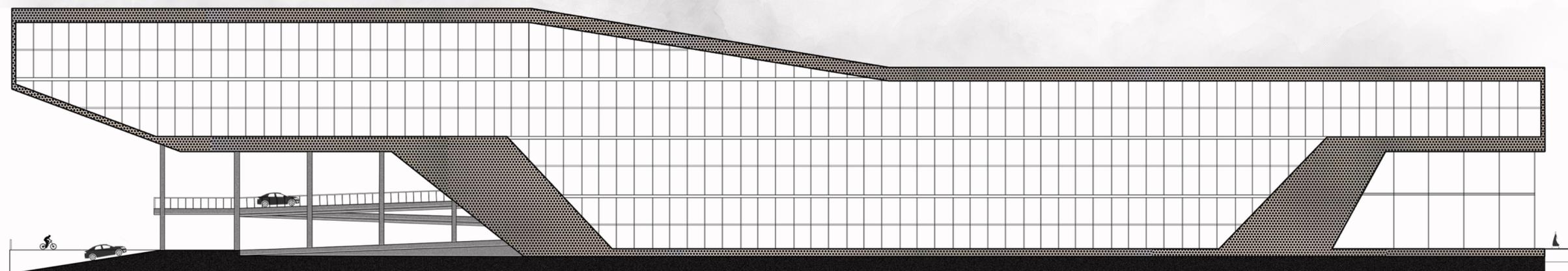


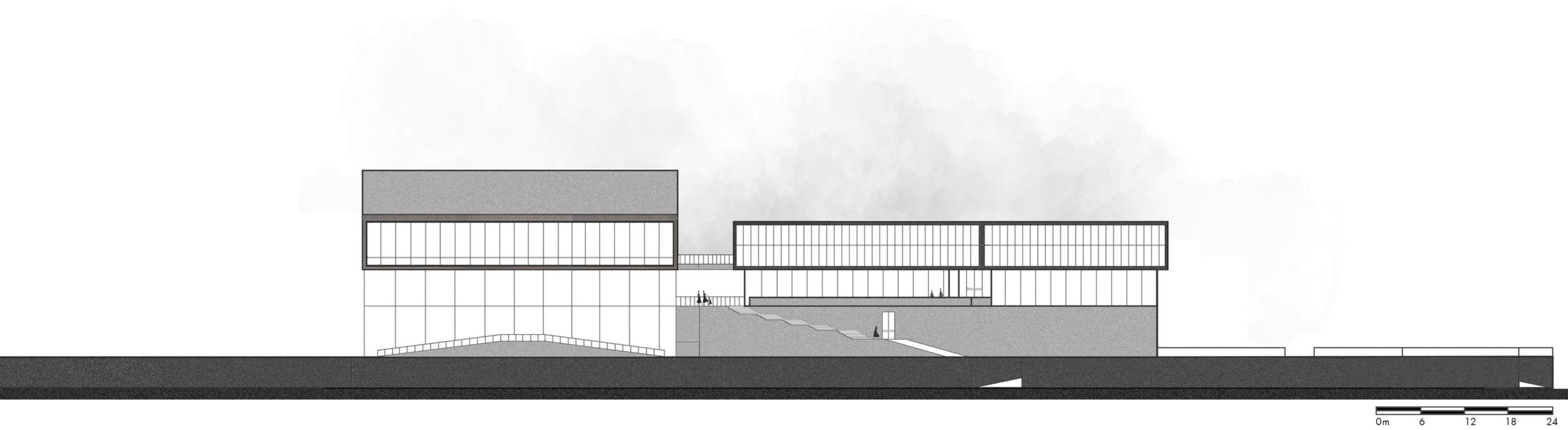


- 1. SINK REST AREA
- 2. LIBRARY
- 3. STAIR
- 4. UPPER STUDY SPACE
- 5. SALON
- 6. RESTROOM
- 7. LEISURE SPACE
- 8. READING SPACE



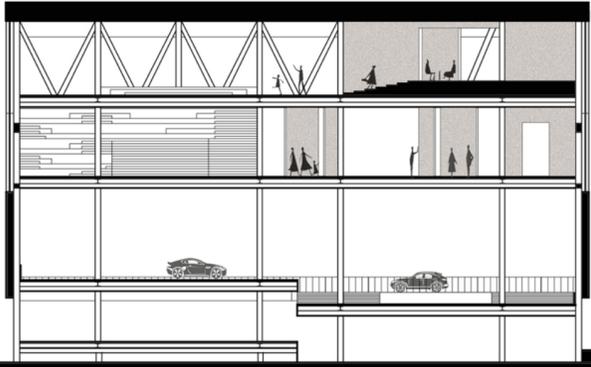


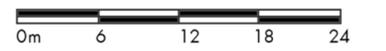
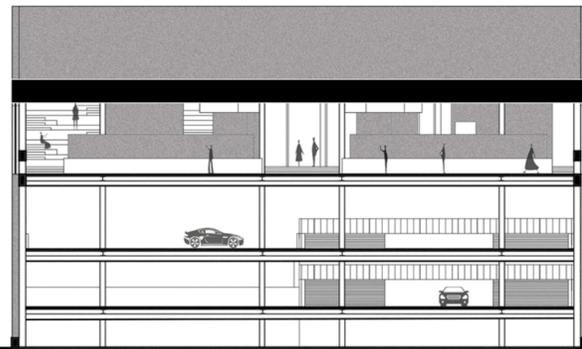


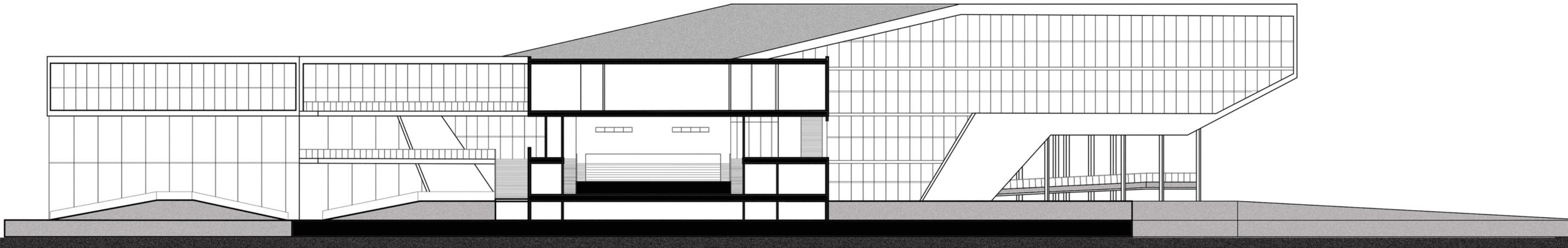












# 3

## SPACIAL EXPRESSION

This part shows the different views of the building from the outside and interior space. The building has the steel structure as the primary structure and concrete covering for the floor slab. For the elevation, the metal perforated board is used to balance the heavy sense of the building itself.

