

JIAQI
RUAN

P o r t f o l i o



Constitution Library Study



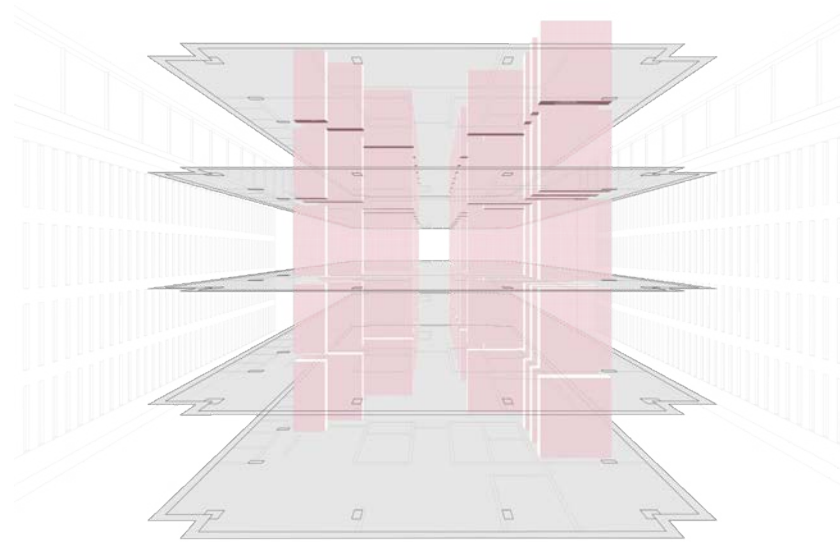
Structure is not just the physical substance that supports architecture. Itself is part of the design. In fact, I believe structure represents the most pioneer aspects of architecture that is associated with mathematics, physics, and material.

This project is a research on Constitución Library, designed by Sebastian Irarrazaval. I believe the best way to study architecture is to realize it on a large scale model, no 3D print, no lazer cut.

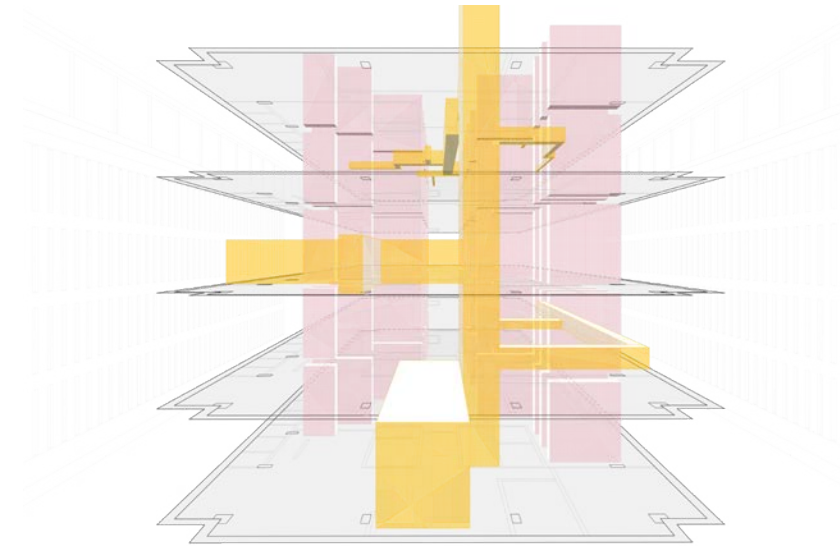


Pseudo Tree Library

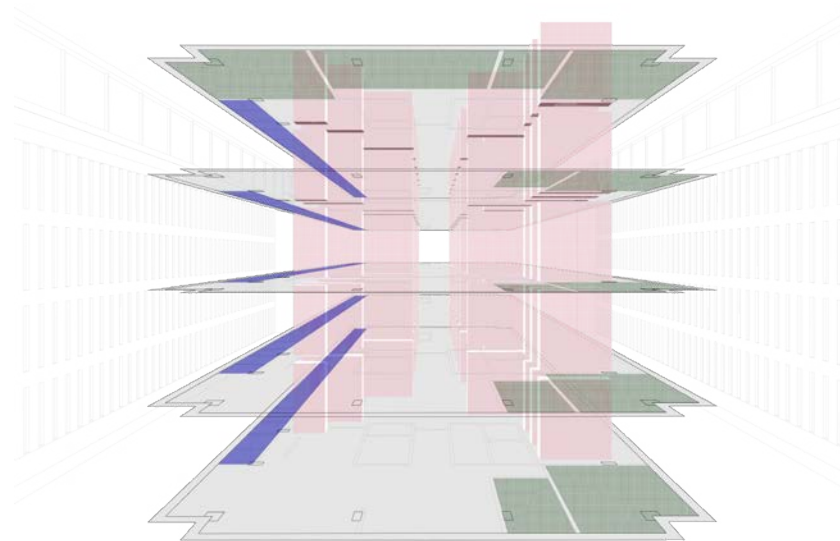
Library Precedent Analysis



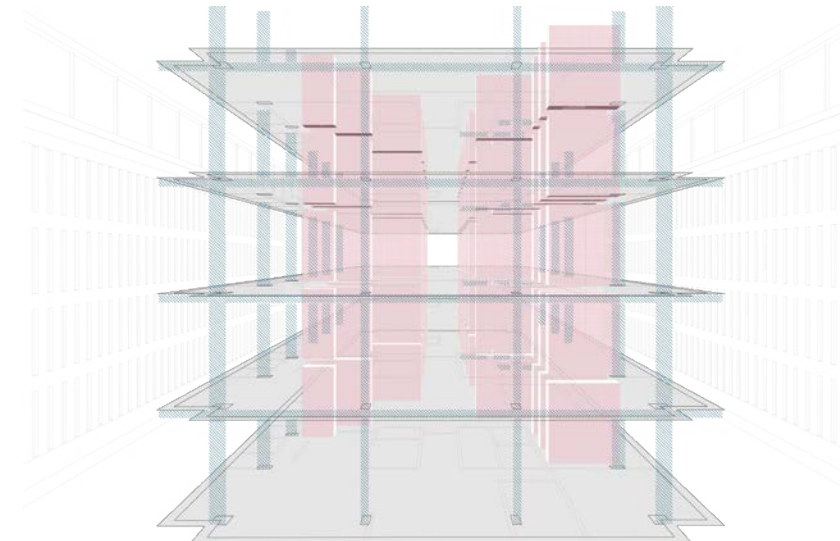
Bookshelf



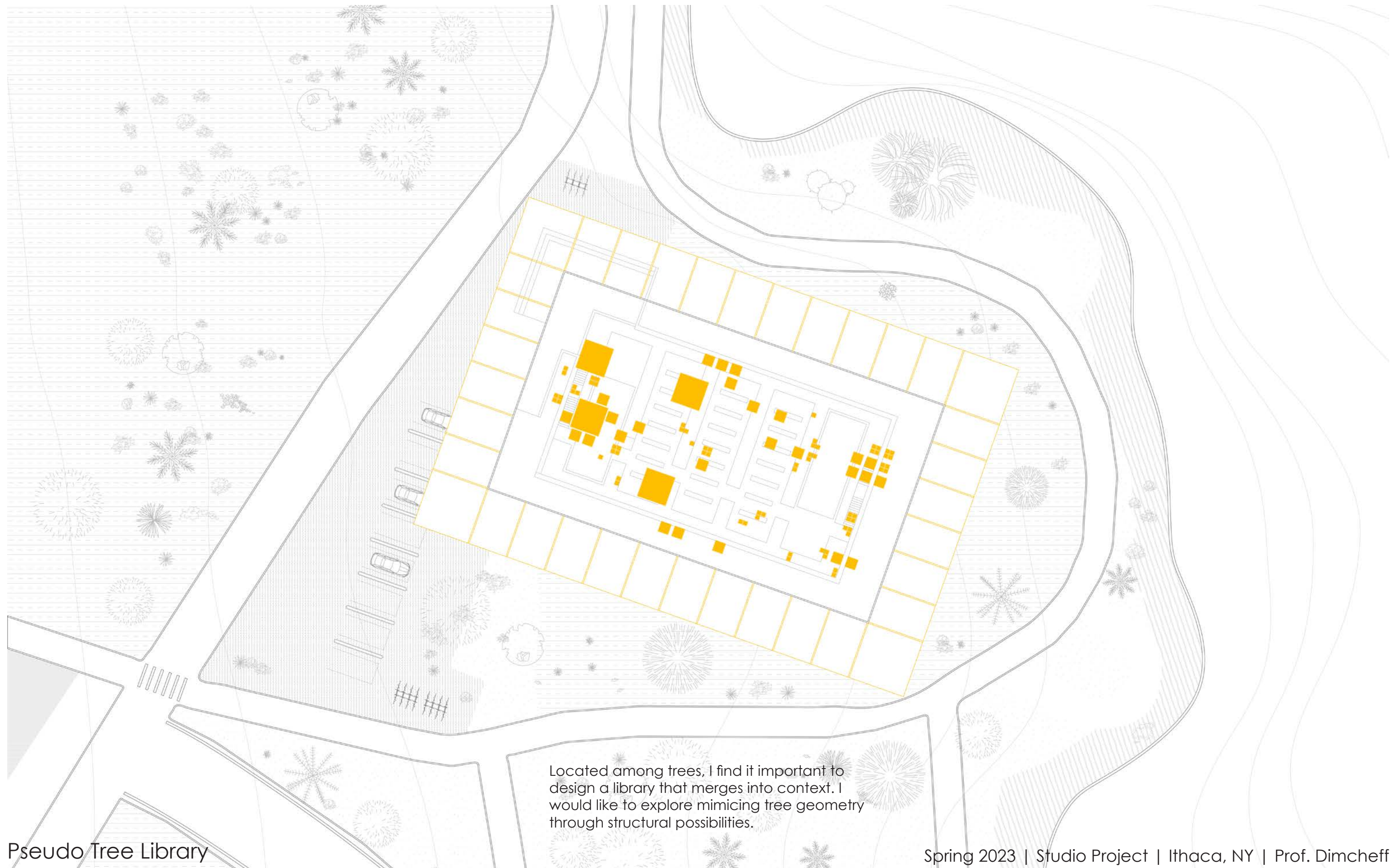
Circulation



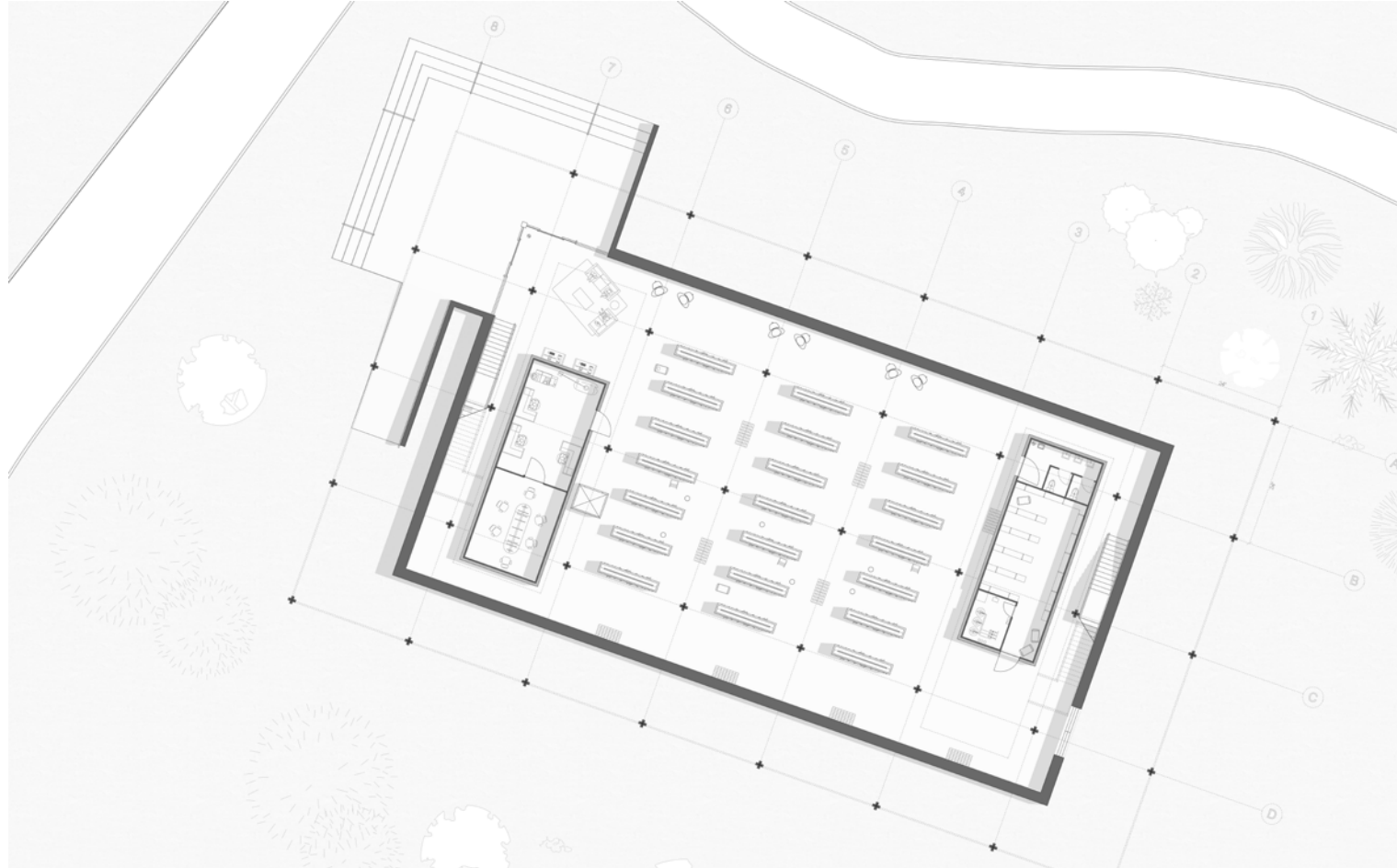
Carrel & Study Space



Tectonics



Located among trees, I find it important to design a library that merges into context. I would like to explore mimicing tree geometry through structural possibilities.

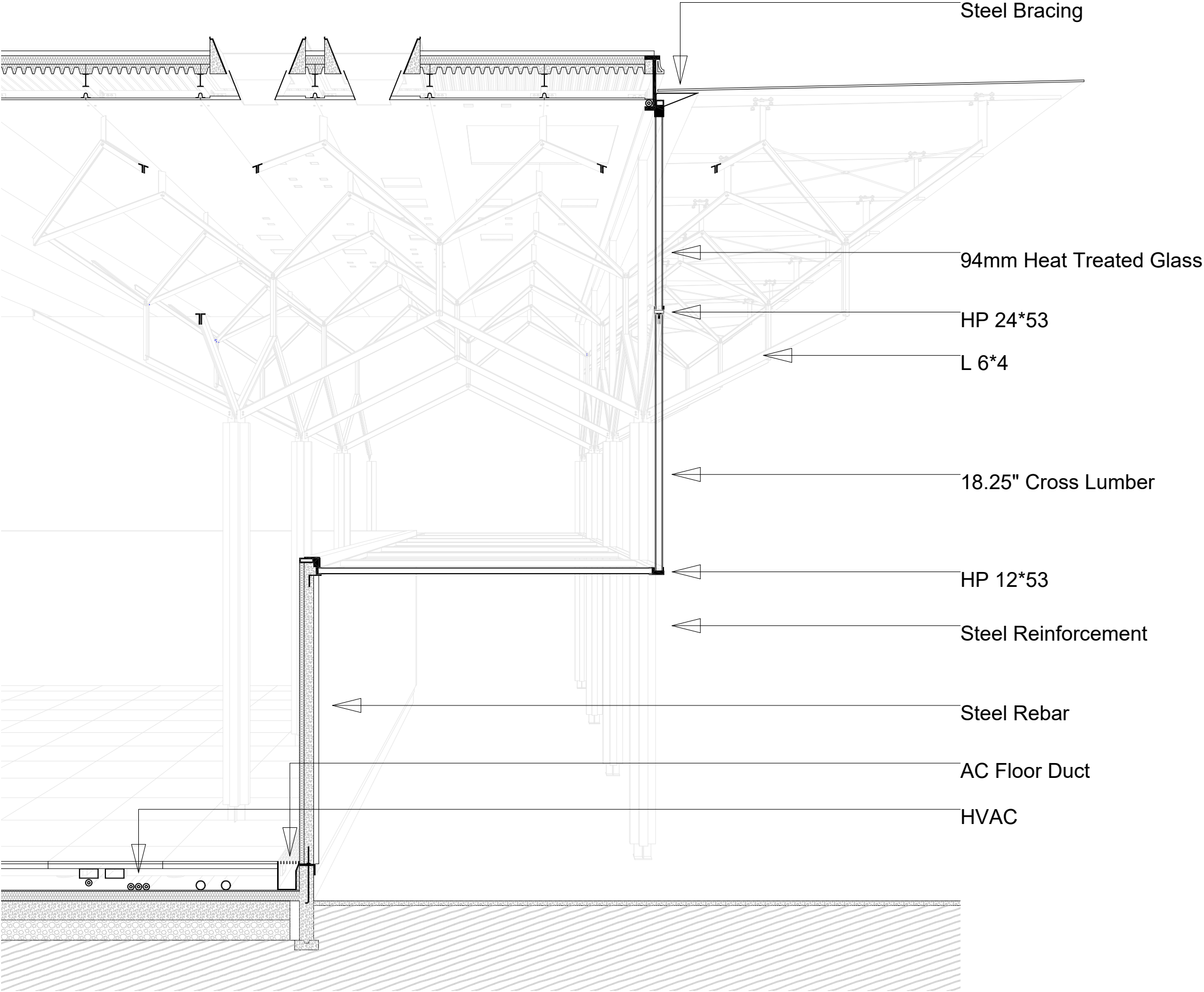


Ground Floor

Similar to precedent, stacks are placed in the center, with all other programs surrounding.



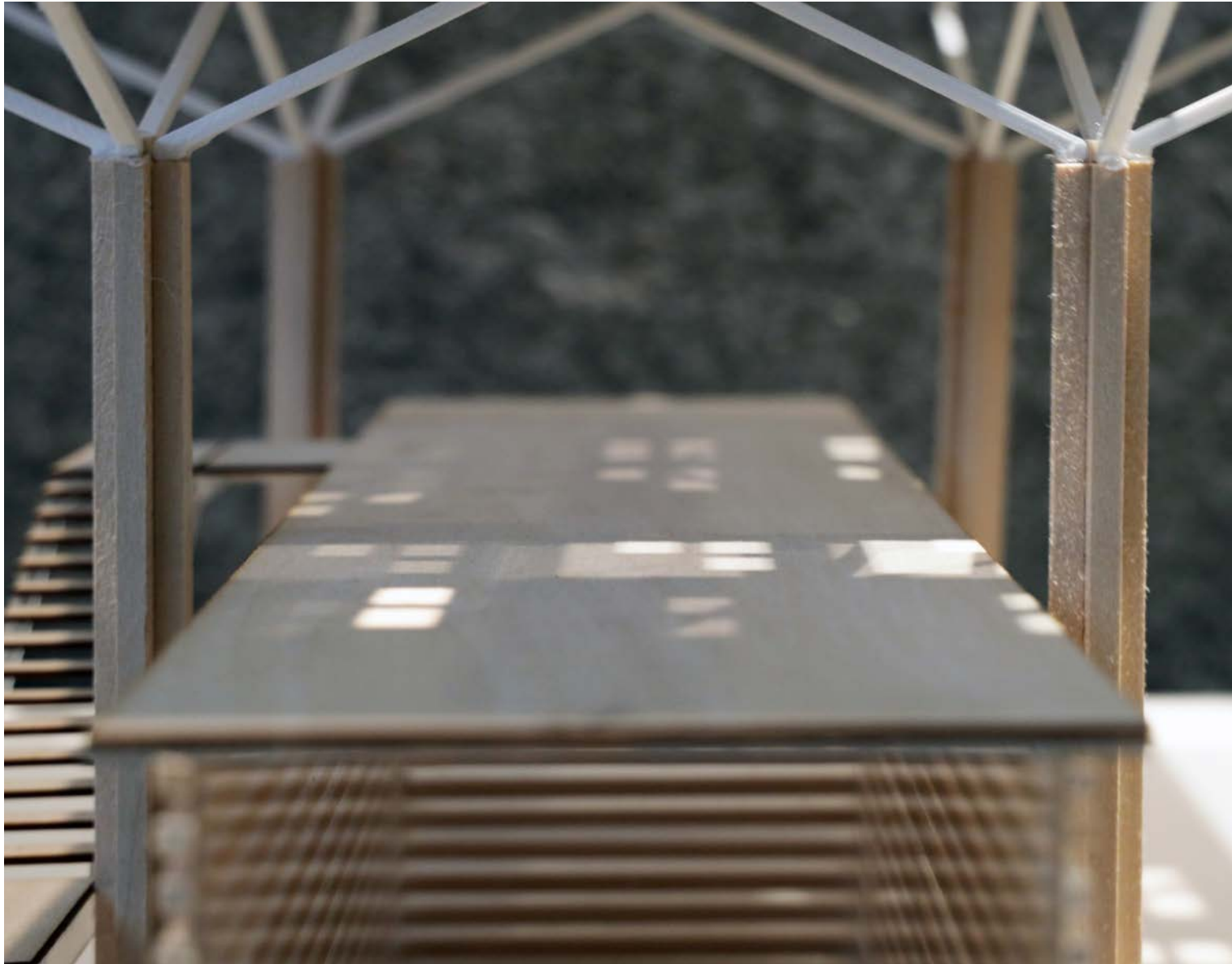
Mezzanine Floor

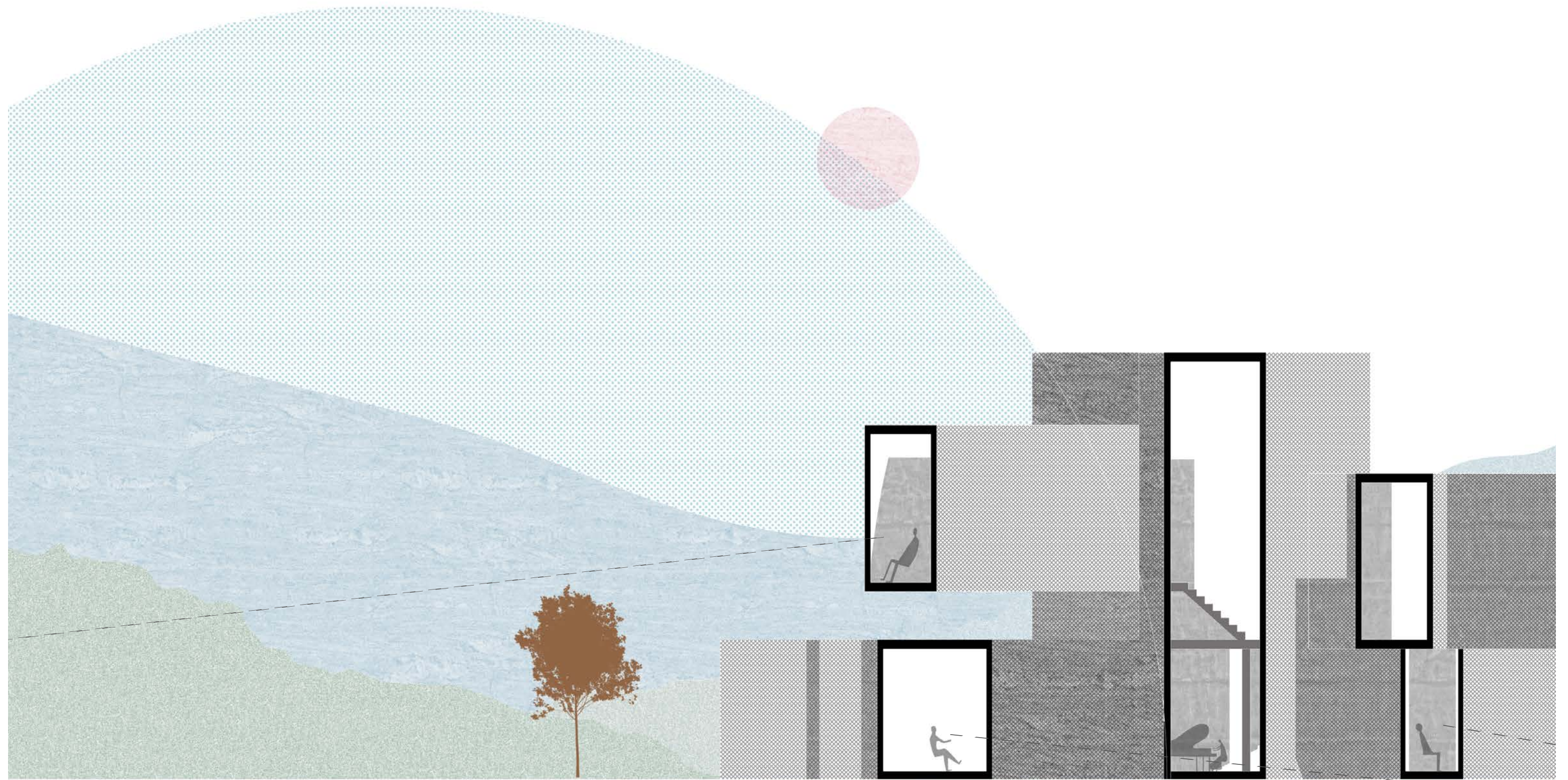


Structure in this project is my concept. One important mathematical idea inspired by trees is fractal geometry: a system involves similar patterns recurring at progressively smaller scales.

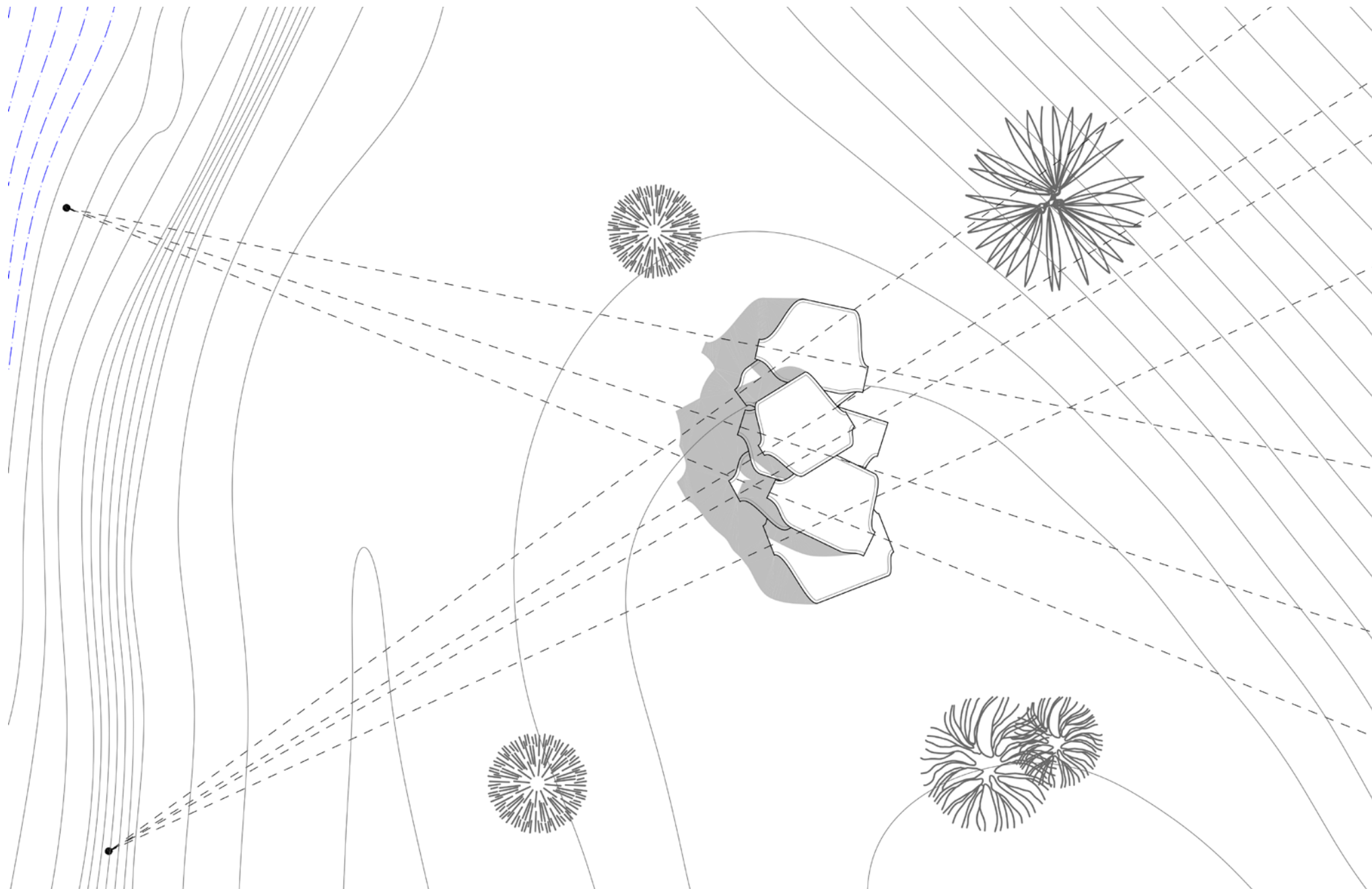
My structure exemplifies such concept.

"Now, start reading under trees."





House for Chair Sitting

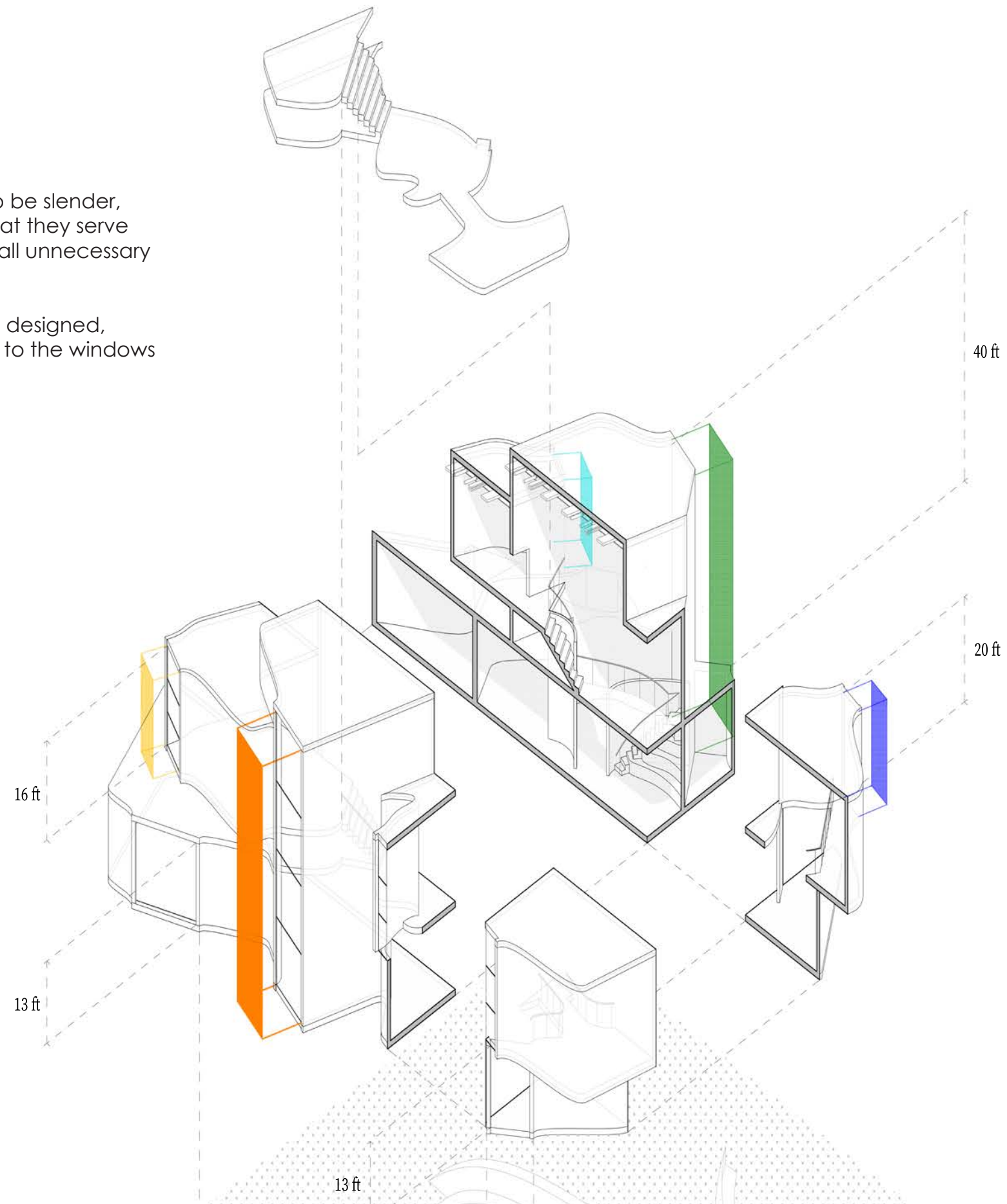


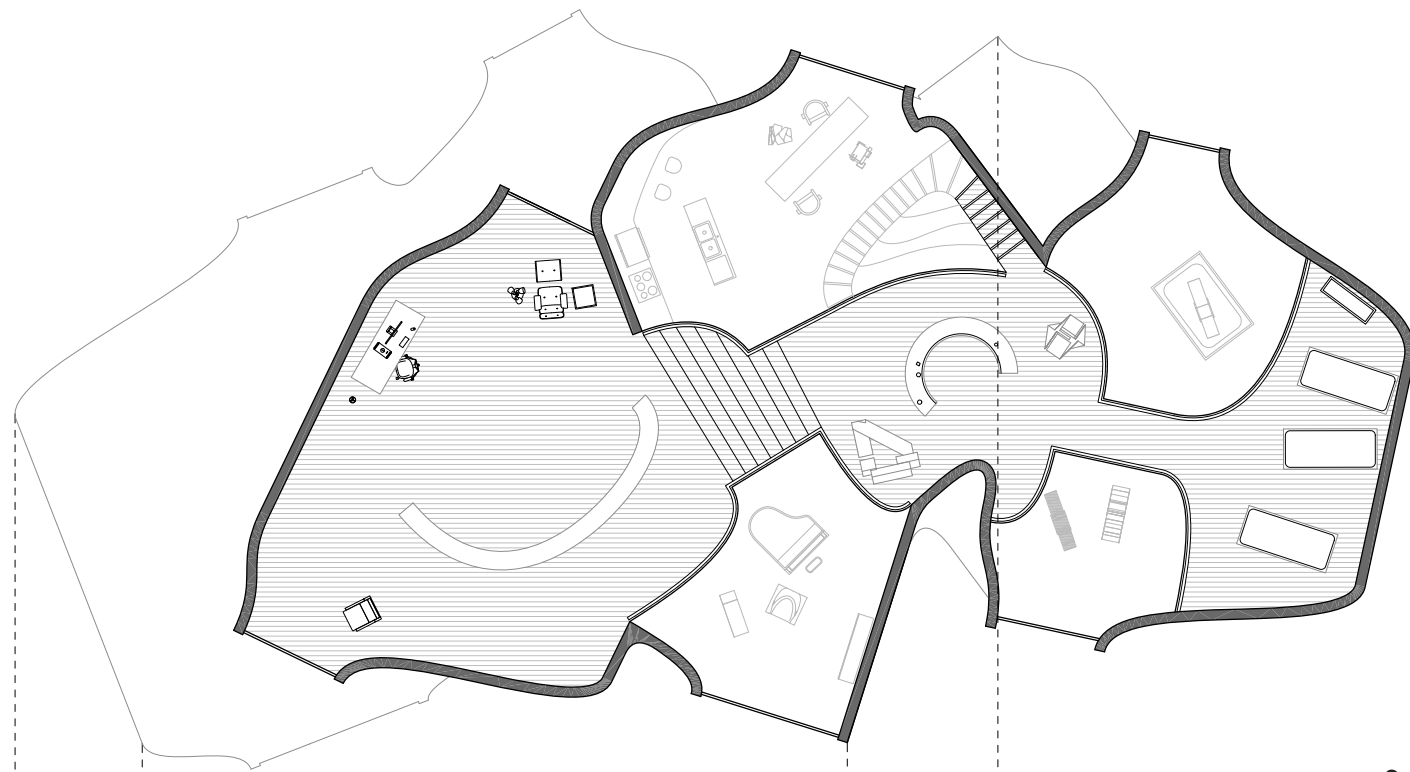
"Numerous renowned architects have a fervent interest in creating furniture, particularly chairs."
— A Signature, A Chair, A House.

I envision crafting a house that serves as a gallery for chair creations. This contemplation led me to ponder the essential purpose of chairs: the act of sitting. Consequently, I have conceived a house not merely for chairs but for the experience of SITTING. Chairs are purposefully positioned before narrow windows that frame and accentuate selected vistas. To sit in one of these chairs is to immerse oneself in the extraordinary views the site offers.

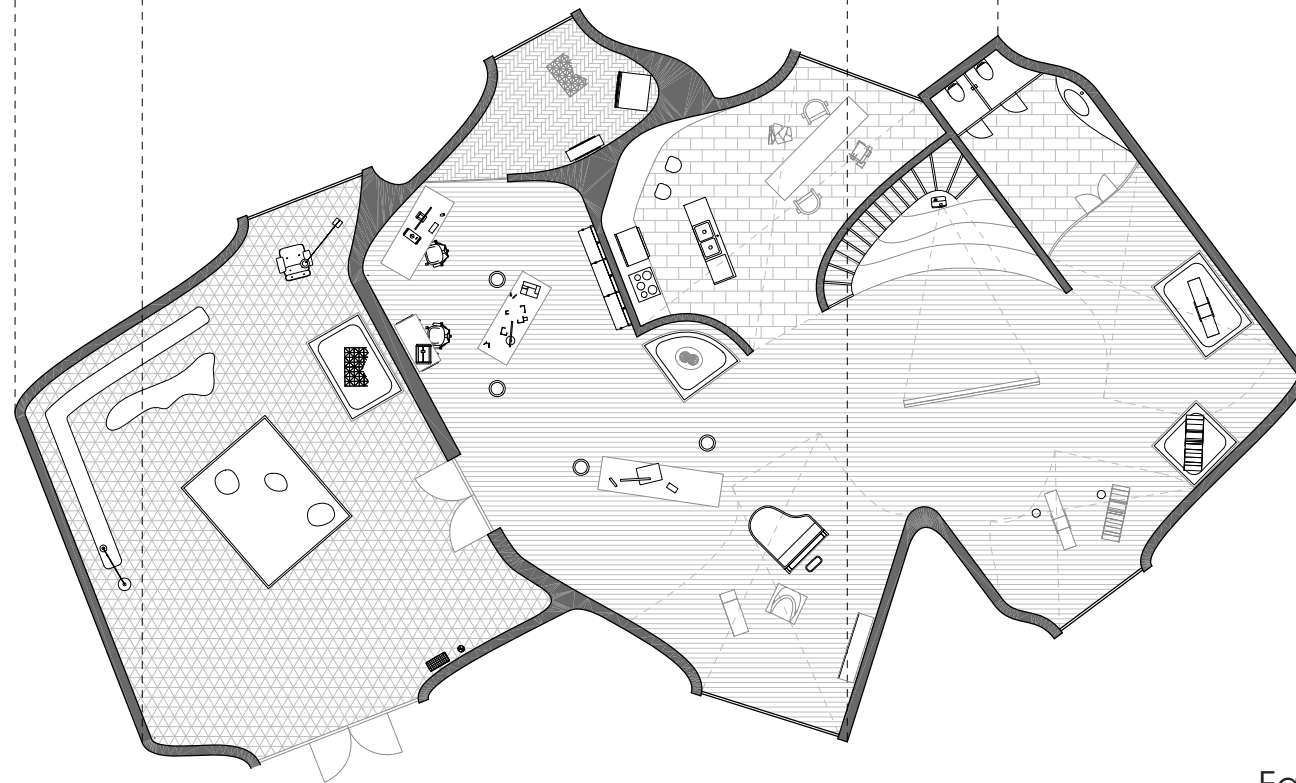
Windows are designed to be slender,
with an understanding that they serve
as “viewfinders”, filtering all unnecessary
views.

Minimal Internal walls are designed,
ensuring maximized view to the windows
from interior





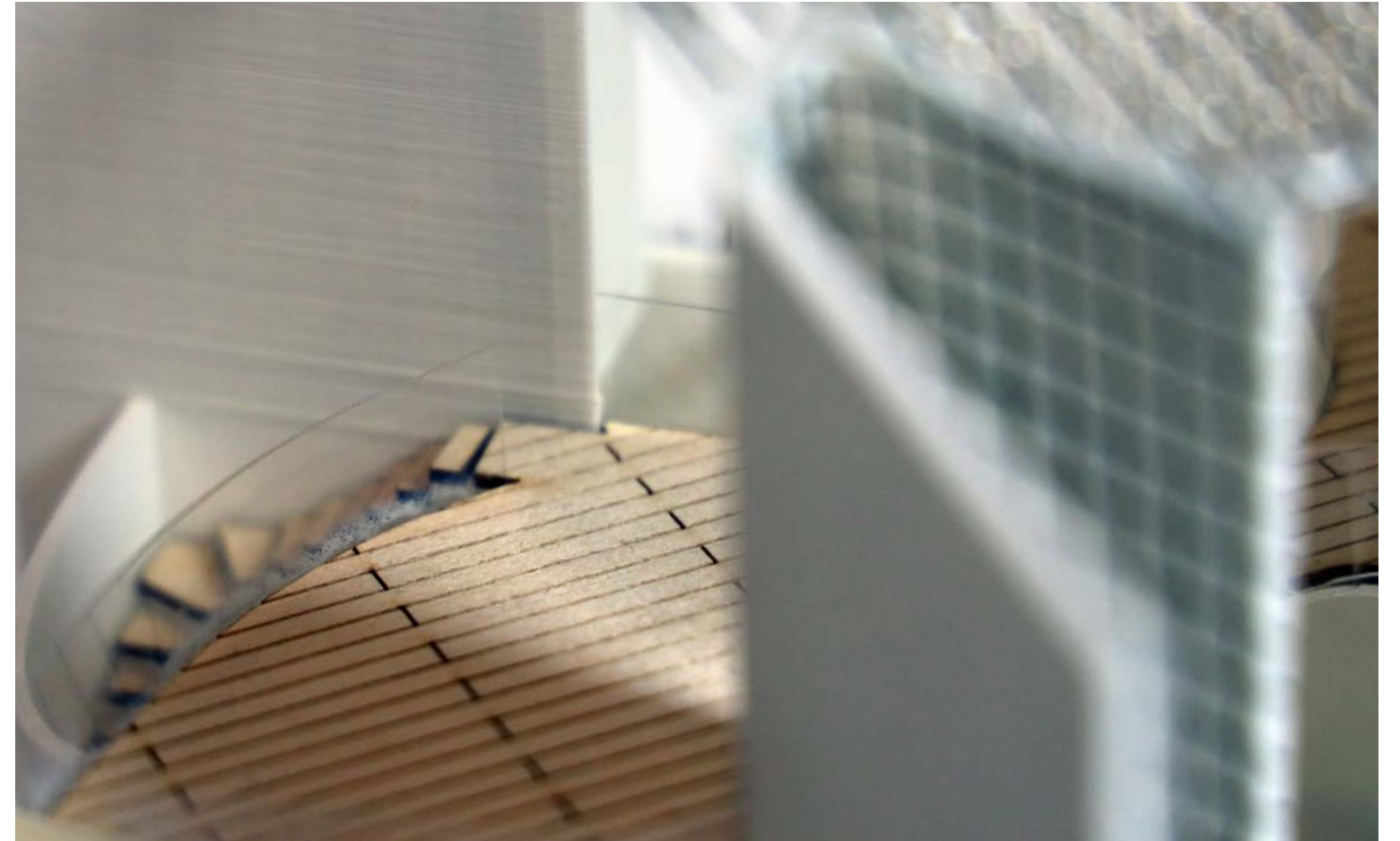
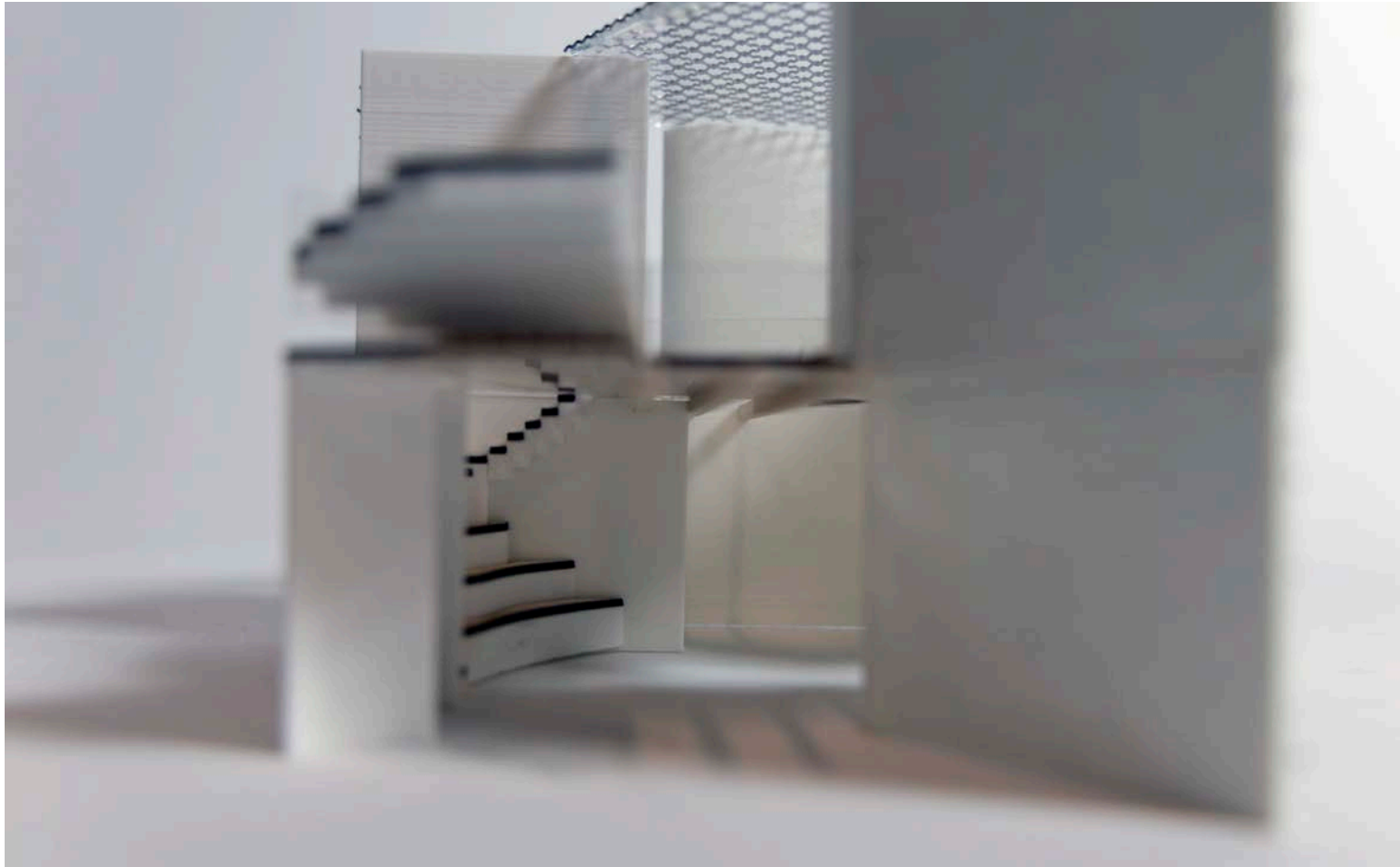
Second Floor



First Floor

What I believe about chairs is that they are meaningful only when people are sitting on them.

Similarly, a house for chair is designed as a house for sitting experience.

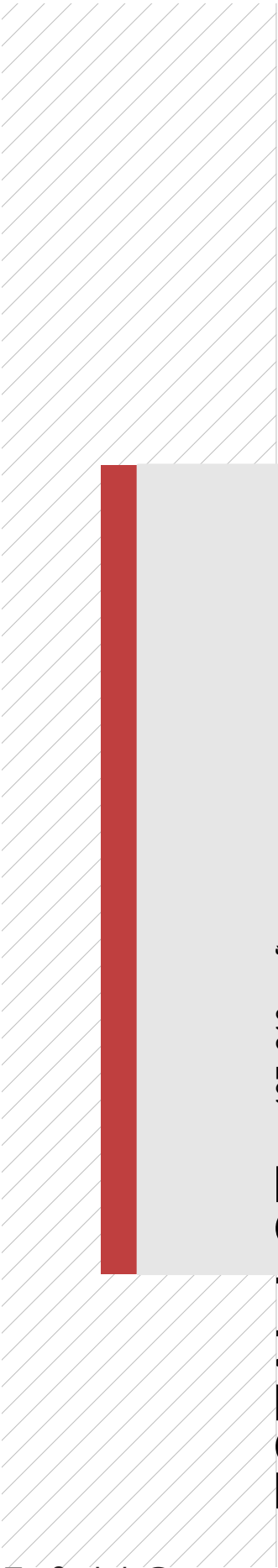




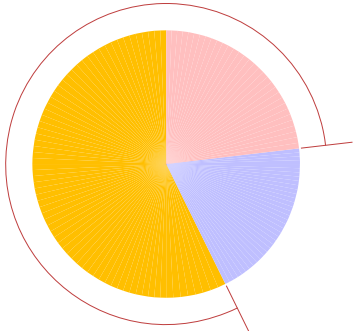
Enfield's farmland area has sextupled since the 19th century, leading to a significant reduction in natural bird habitats. Birds and nature have therefore become pivotal elements in my design. The building is strategically positioned at the southern end of the site, near the treeline.

I aim to bridge the gap between food shoppers and locals seeking community engagement. My design facilitates movement from the food pantry to the community area with a deliberate sense of directionality.

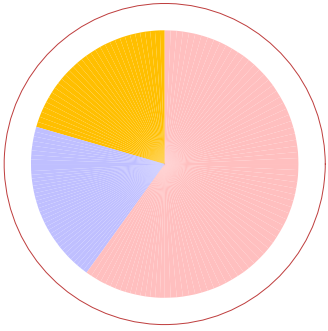
Enfield Community Center



TOTAL LOT
197, 210 sq. ft.

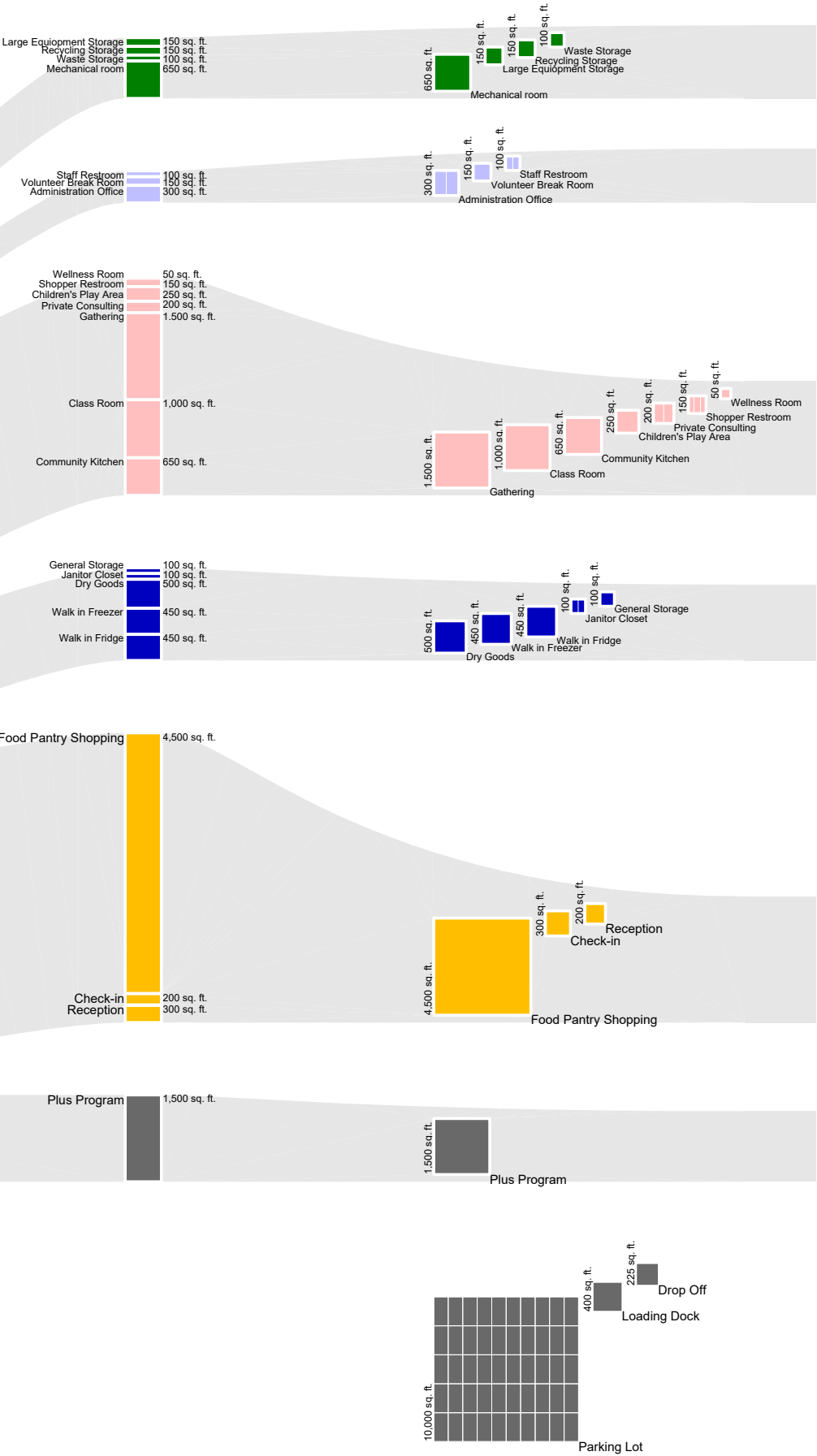
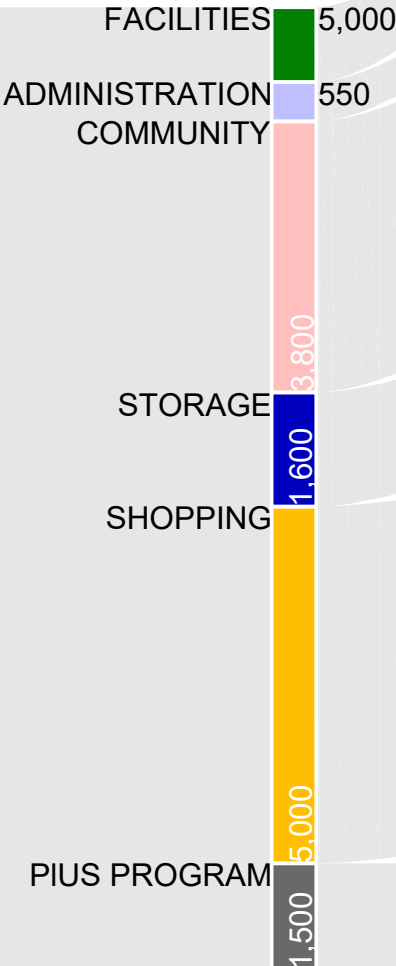


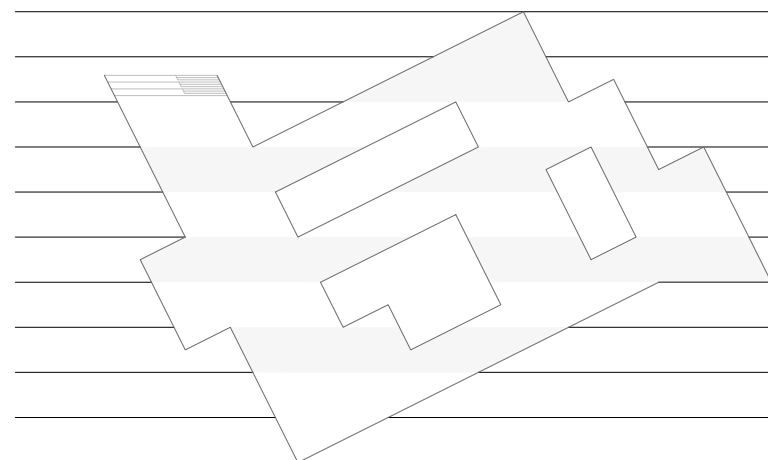
Food Pantry
Consumers



Local Resident

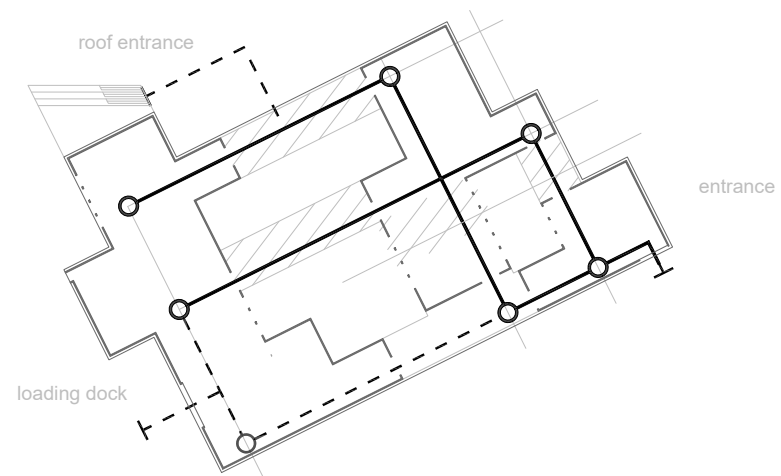
TOTAL BUILDING
12, 000 sq. ft.



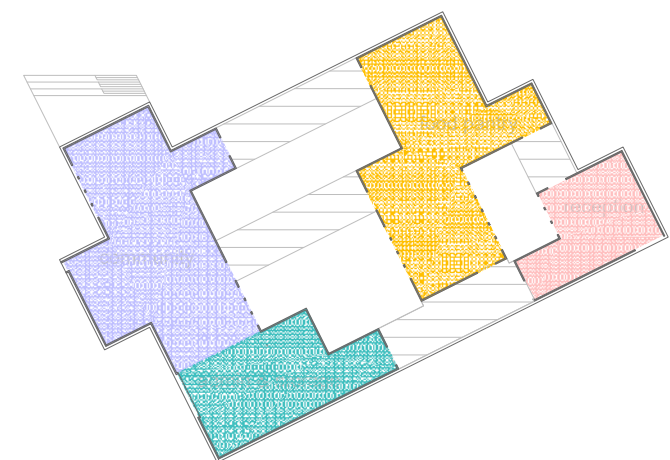


LAND TEXTURE

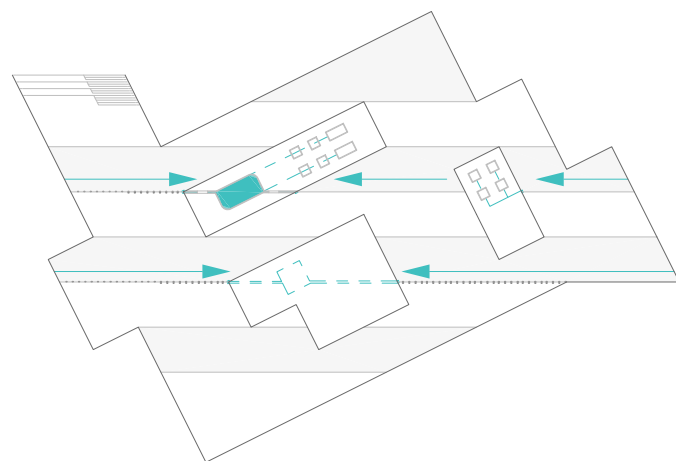
Diagram Matrix



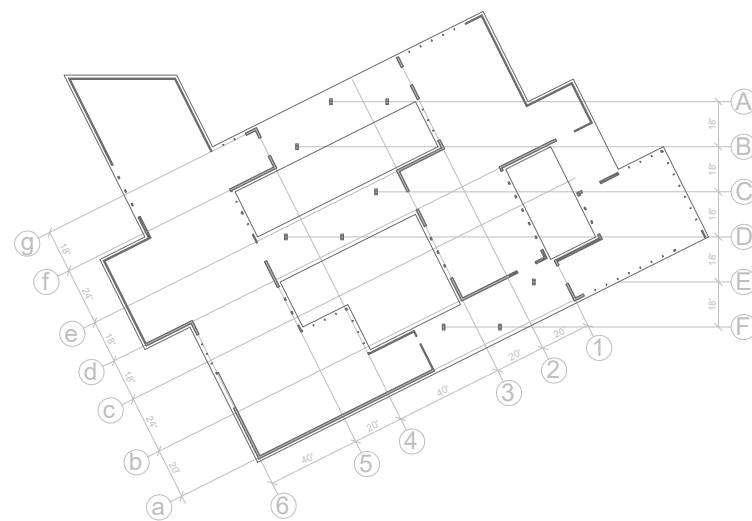
CIRCULATION



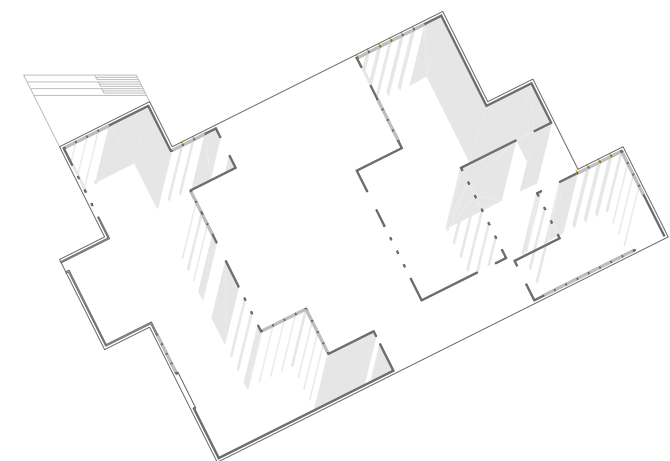
PROGRAMME



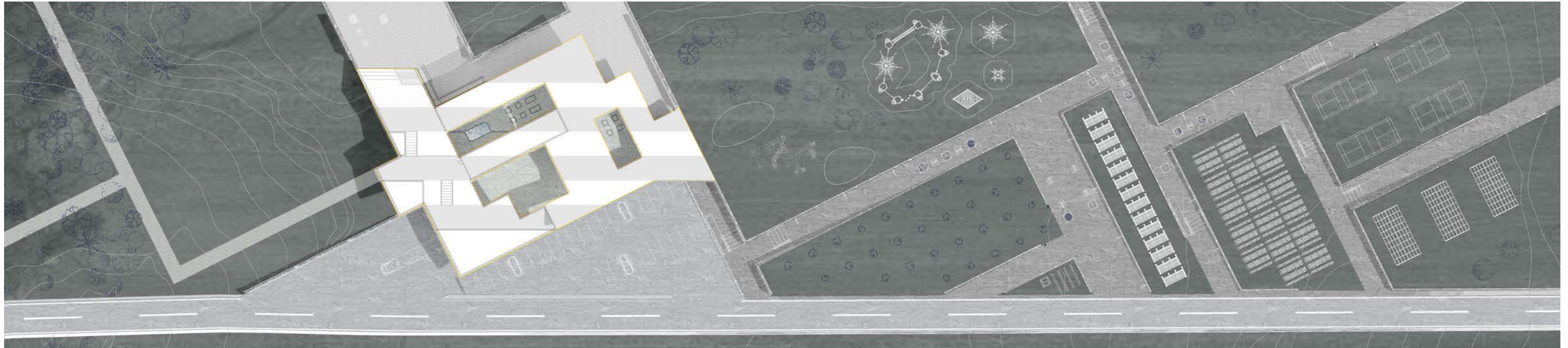
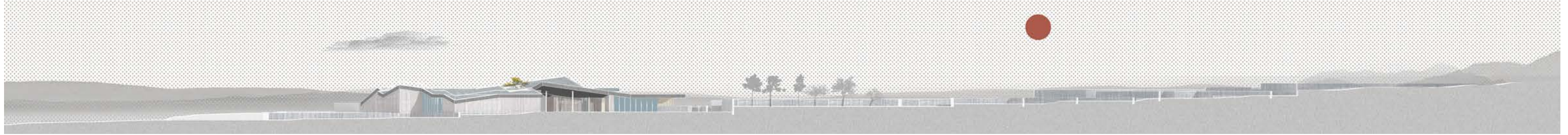
RAIN COLLECTION



STRUCTURE GRID



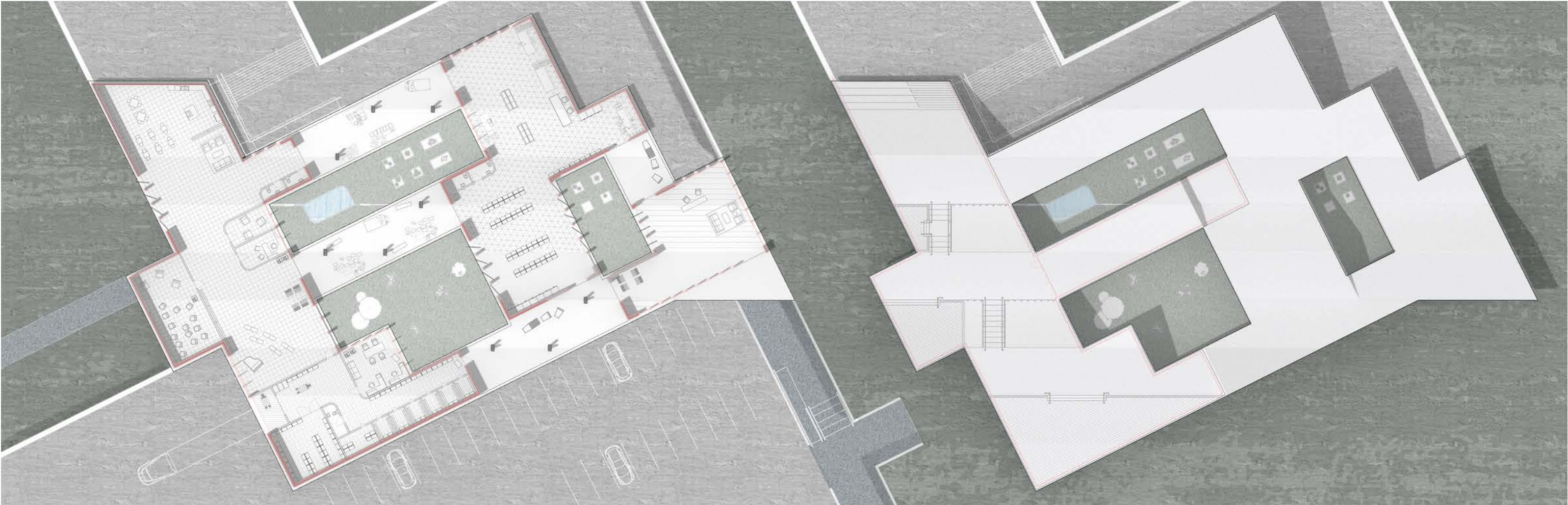
SOLAR ANALYSIS



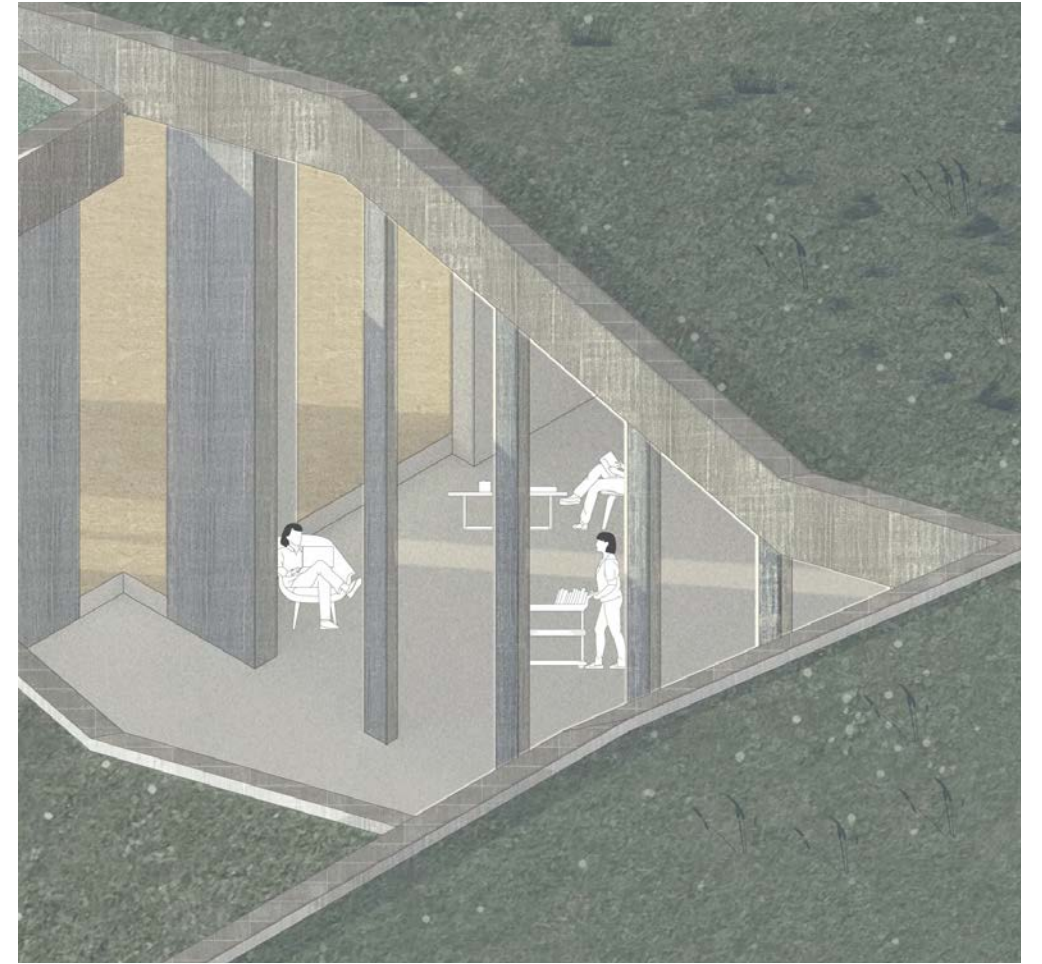
Site Plan & Site Section

The principle of 'path optimization' suggests people prefer routes with fewer turns. My design ensures a seamless transition from the pantry to community spaces with minimal turns. Open courtyards and rotating panels create a versatile and interconnected environment, replacing traditional walls. The design of the connecting corridors could provide a sheltered yet open transitional space.

The roof is a key design aligns with the site's natural contours and facilitating rainwater collection for irrigation. The roof includes bird-watching spots, a staffonly breeding area for endangered species, and small community gardens, emphasizing daylight availability.



Plan & Roof Plan

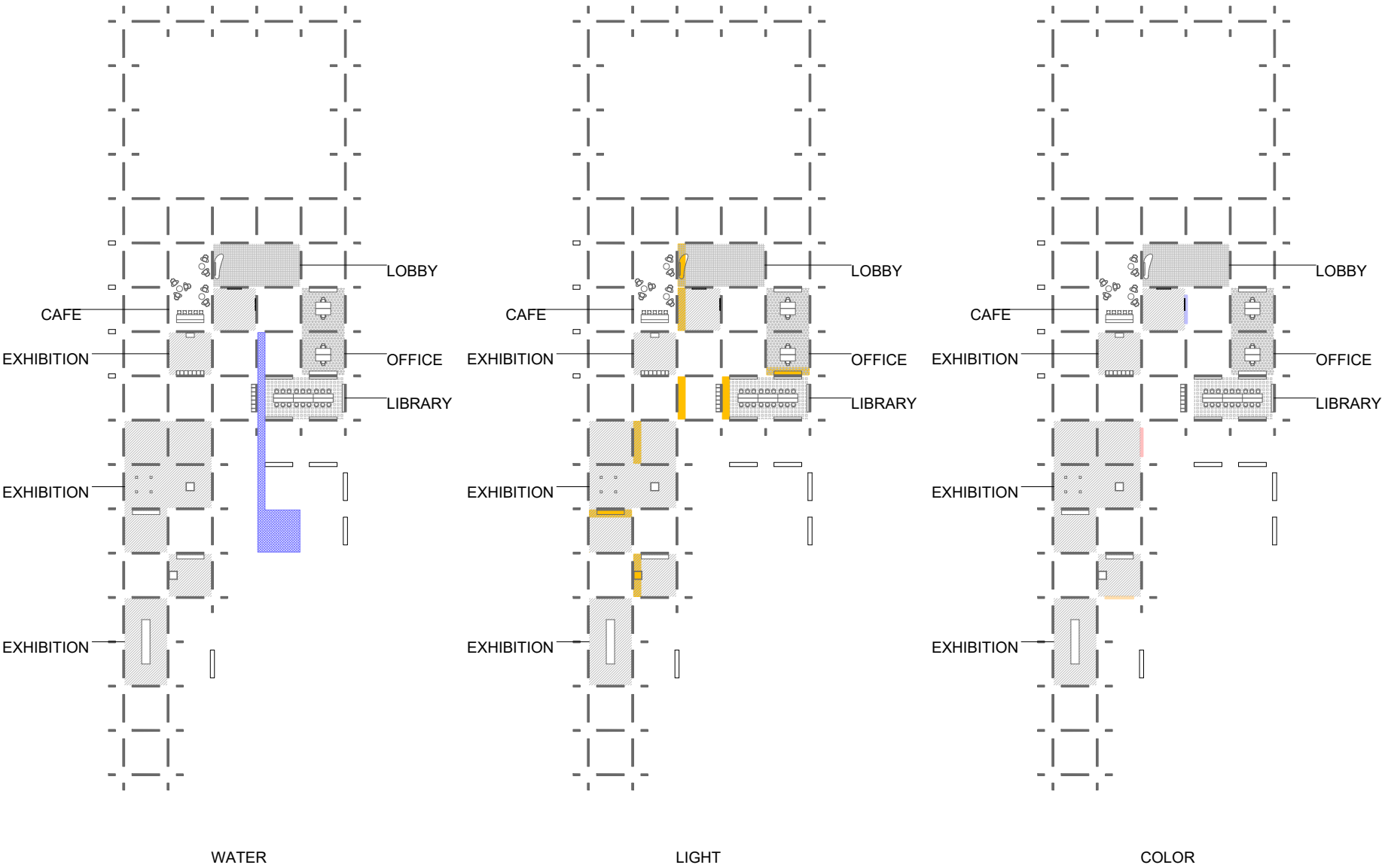


Enfield Community Center

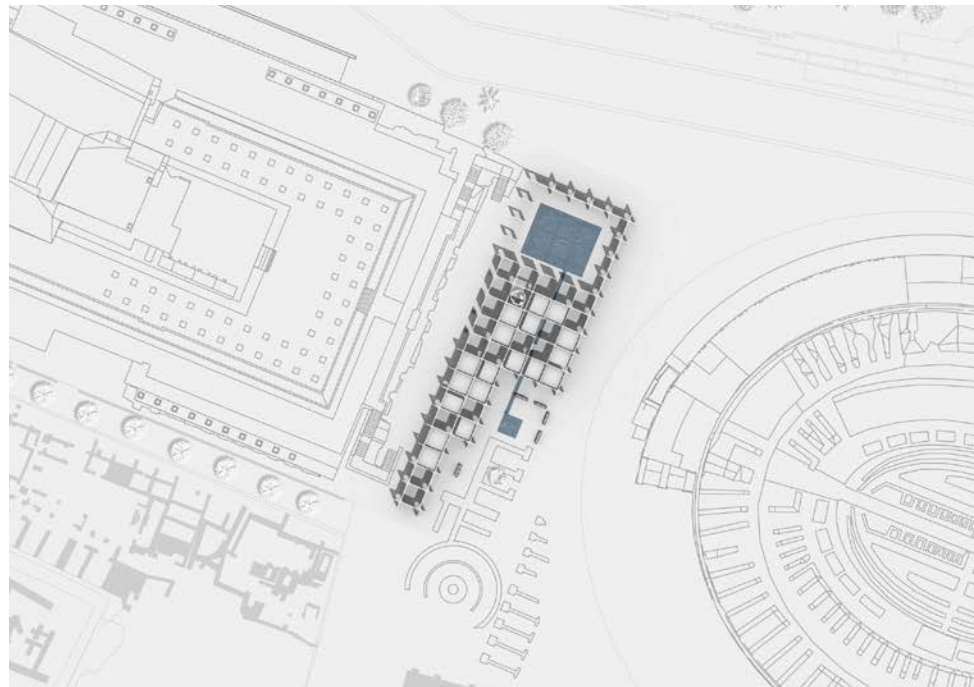
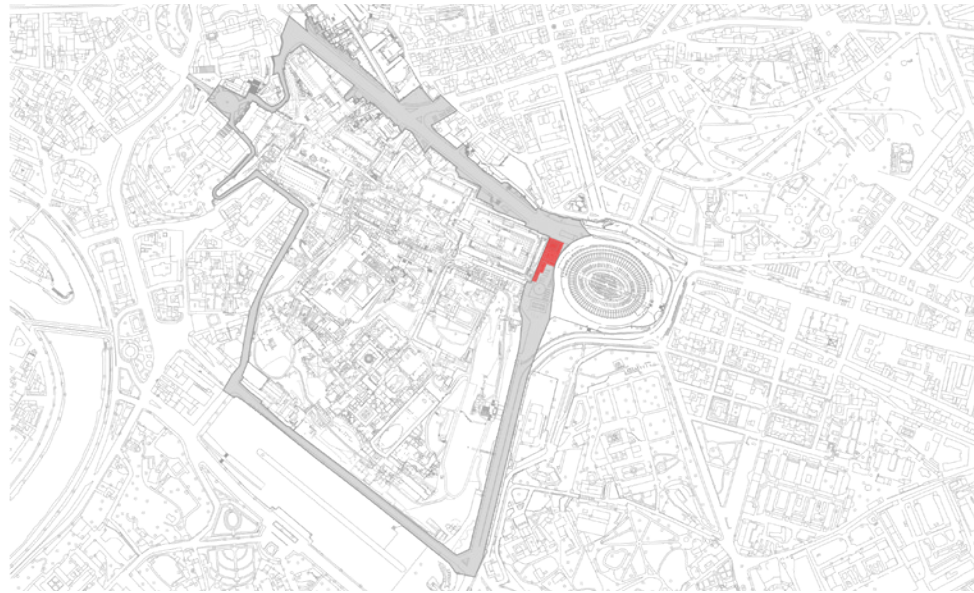


Roman Forum Museum

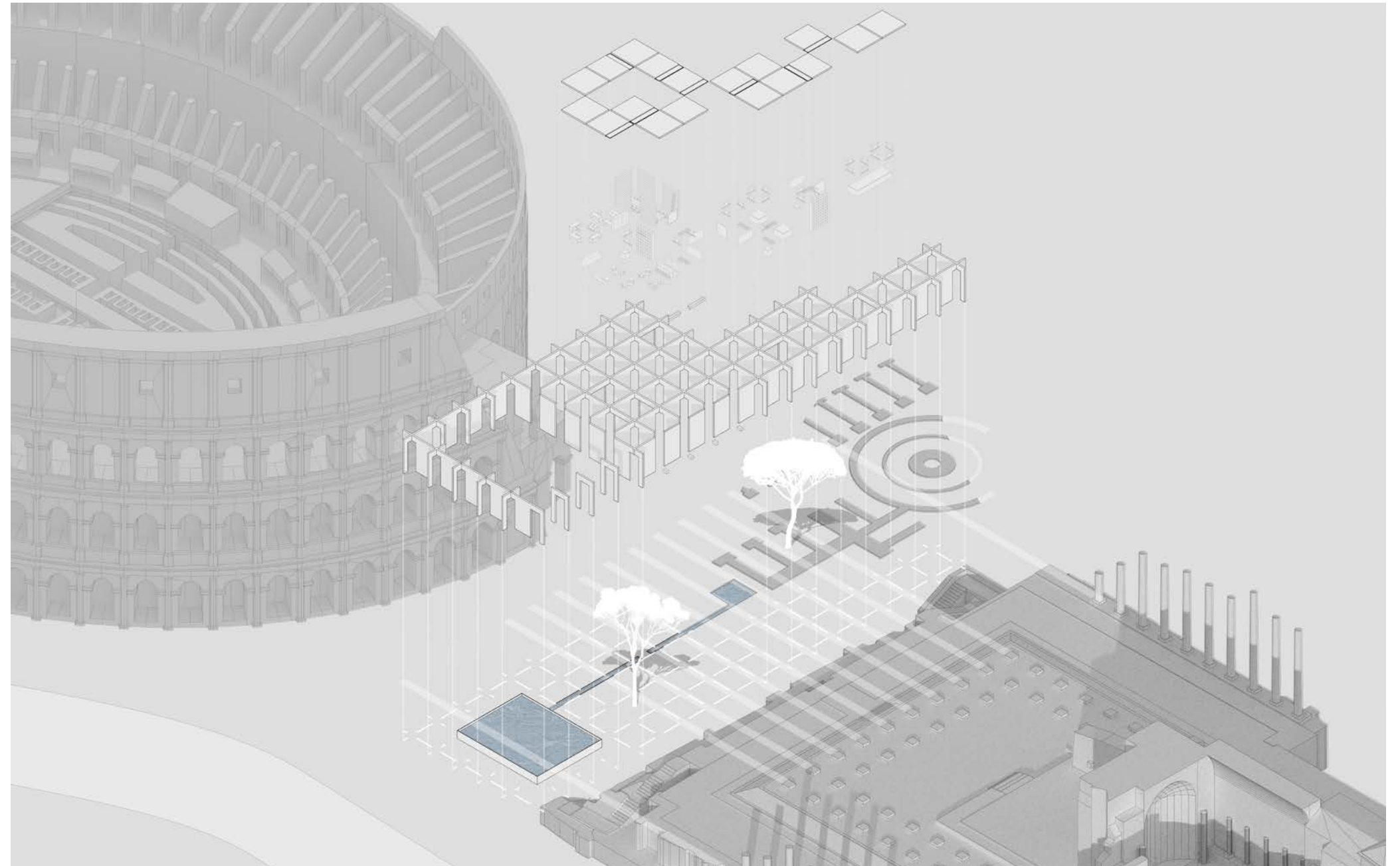
Navigation System



A navigation system is designed. It is made of three elements: water, light, and color. Water divides quiet space, office, and library, from commercial area. Skylights mark exhibition space.



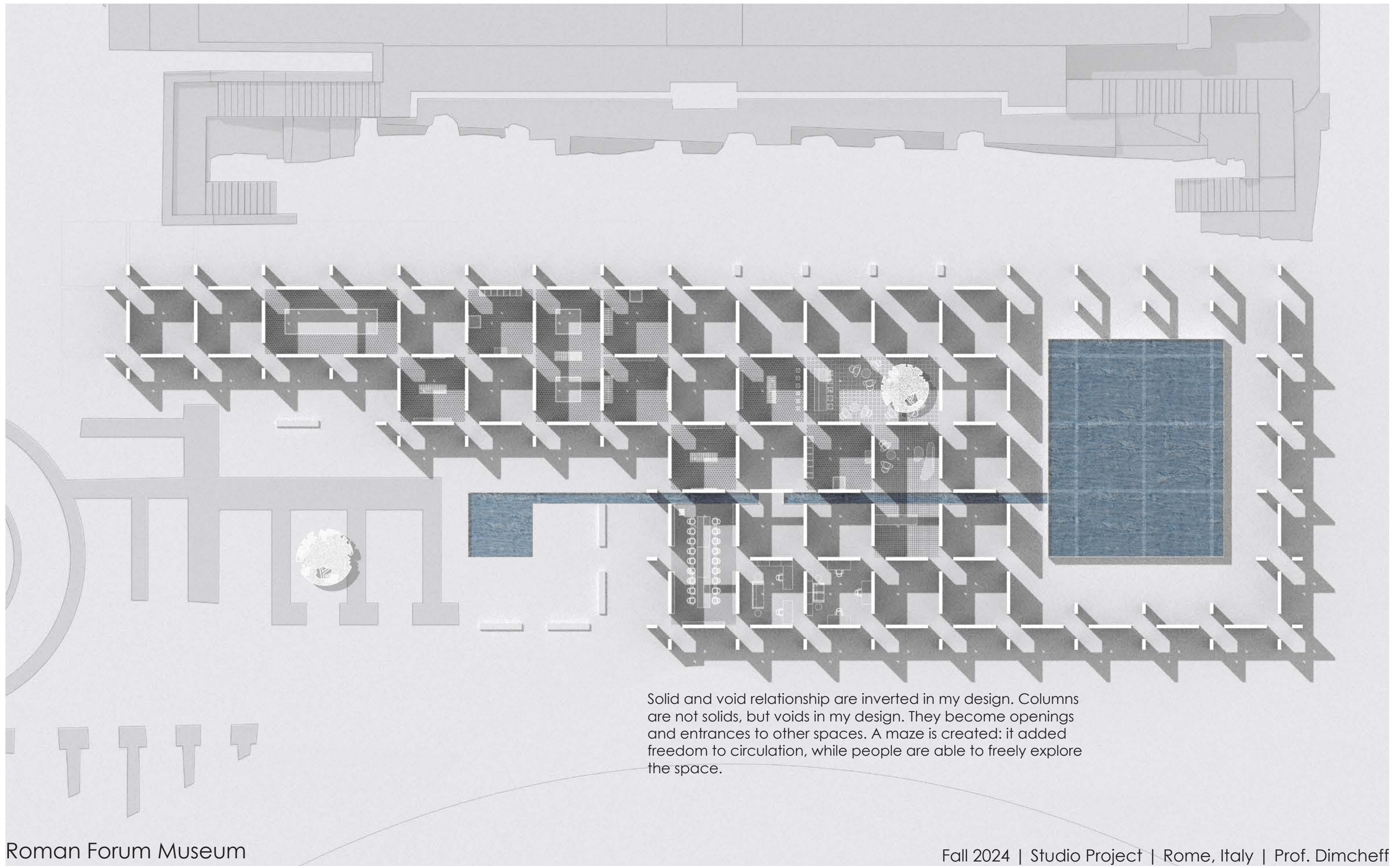
Site Plan

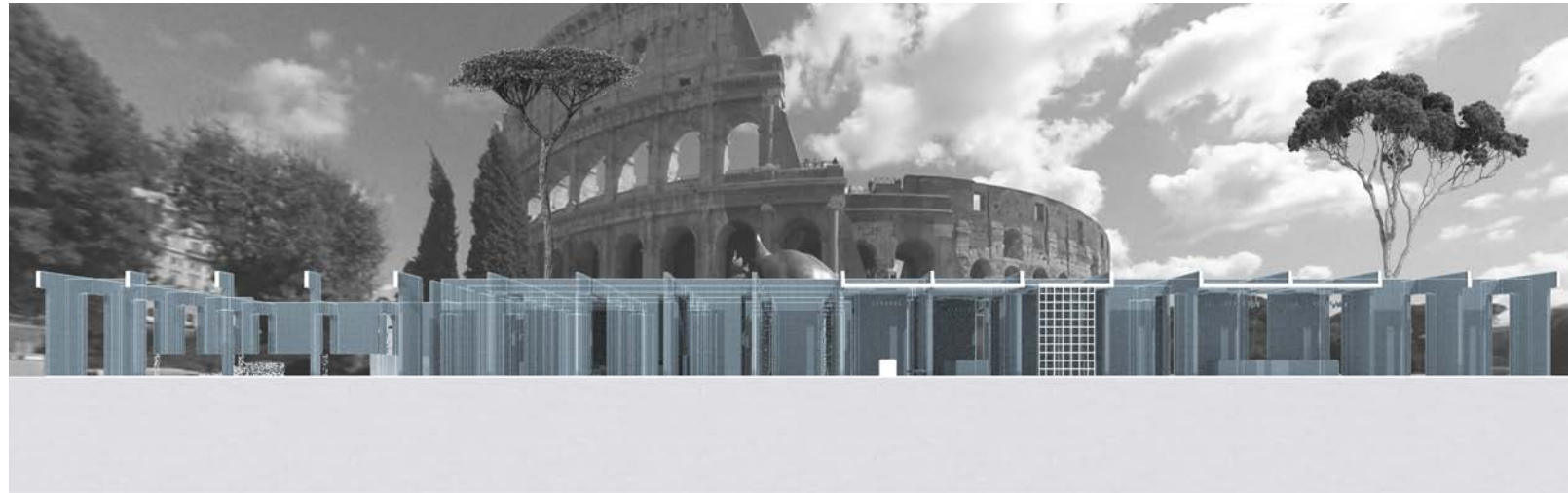


Axonometric Diagram

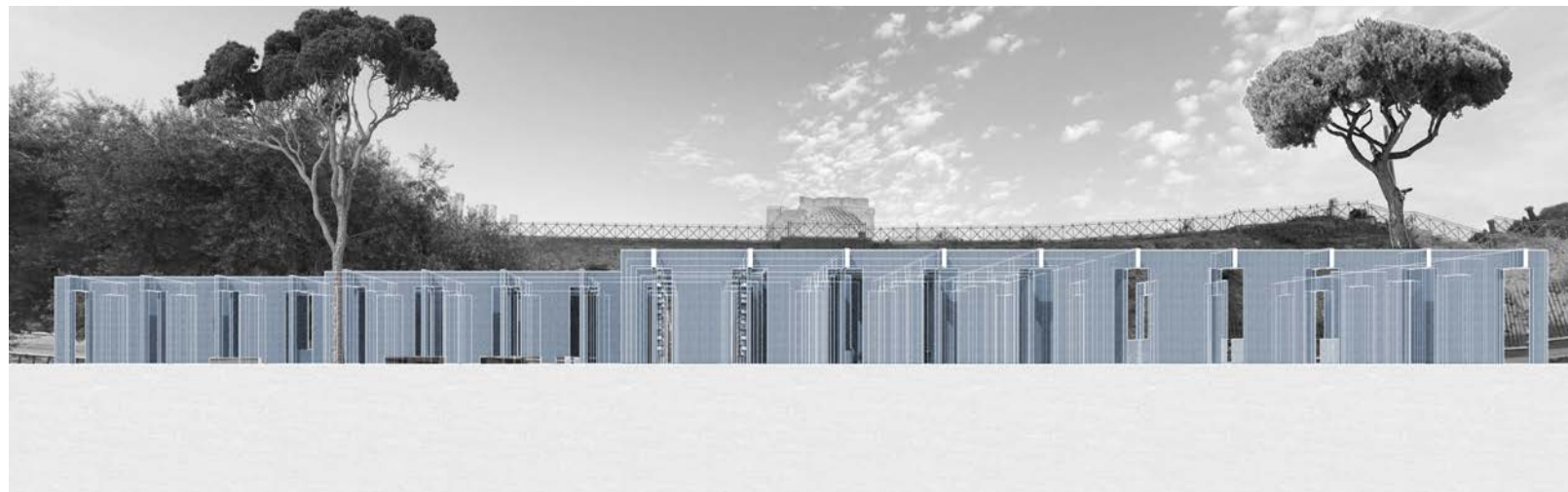
My design is located in Rome, Italy. The project is situated between the colosseum and the Temple of Venus and Rome along the imperial way. It also surrounds the base of Statue of Nero, turning it into a surface of water.

A grid system, inherited from the temple of Venus and Rome, is applied. It extends visual element from the temple, and multiplies the grid element.





Section N



Section S



"I Found Rome a city of columns.
Strength, Utility, Beauty."