

# NHV Academy

Handball center for  
innovation and education

## P5 PRESENTATION

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4161882

24-01-2019



INTRODUCTION

RESEARCH & ANALYSIS

DESIGN AMBITIONS

DESIGN

REFLECTION

**INTRODUCTION**

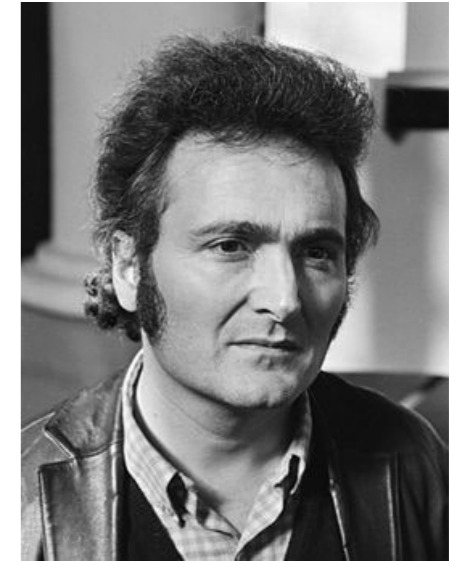
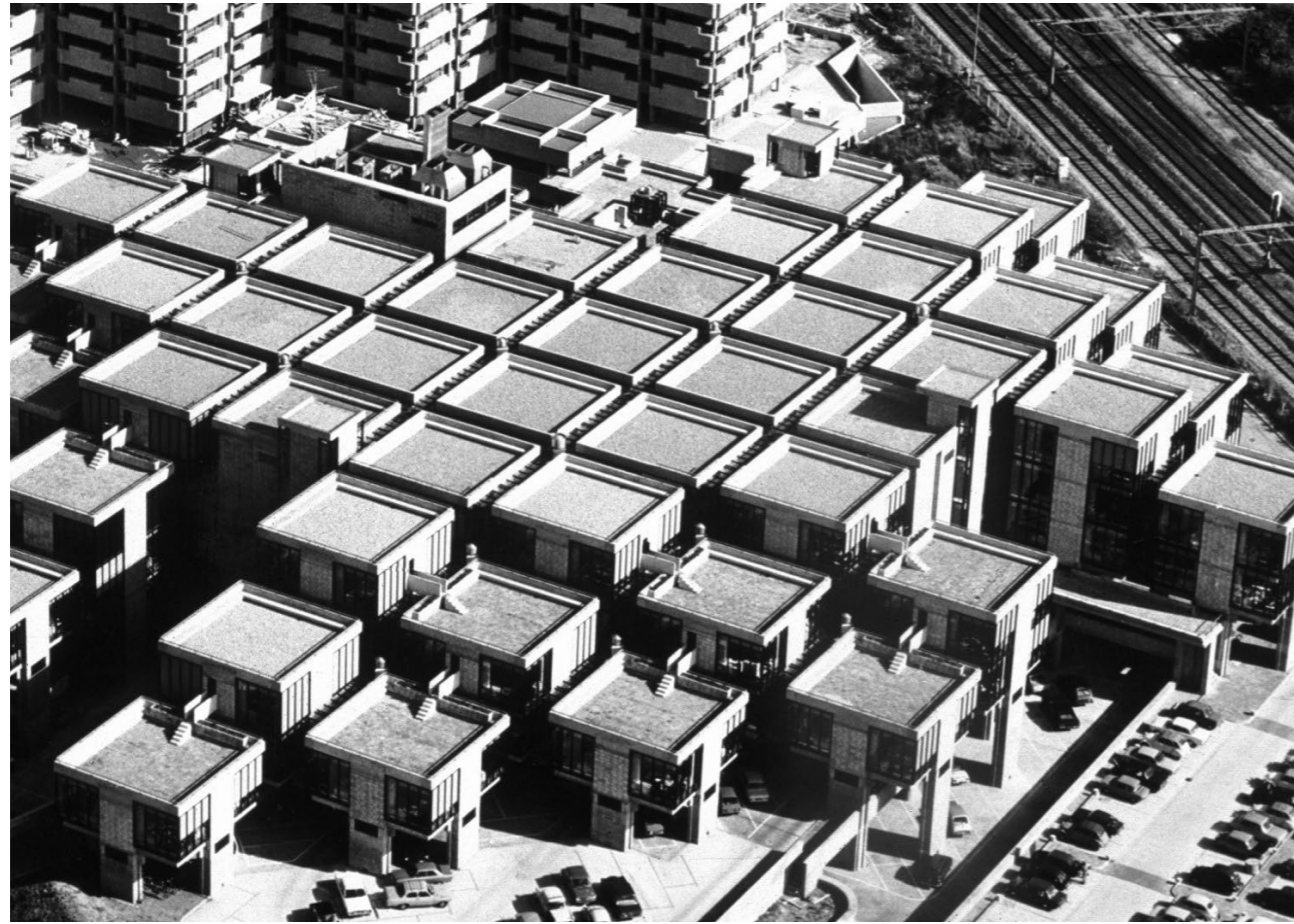
RESEARCH & ANALYSIS

DESIGN AMBITIONS

DESIGN

REFLECTION

# CENTRAAL BEHEER APELDOORN



Herman Hertzberger, 1972



INTRODUCTION

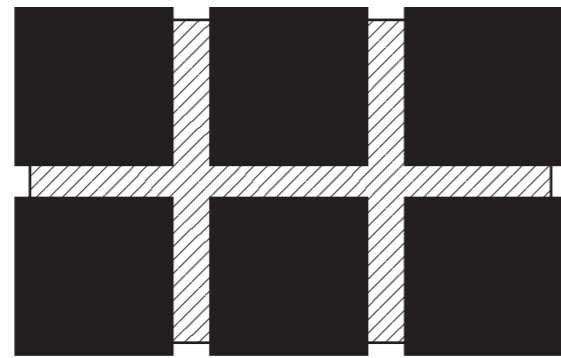
**RESEARCH & ANALYSIS**

DESIGN AMBITIONS

DESIGN

REFLECTION

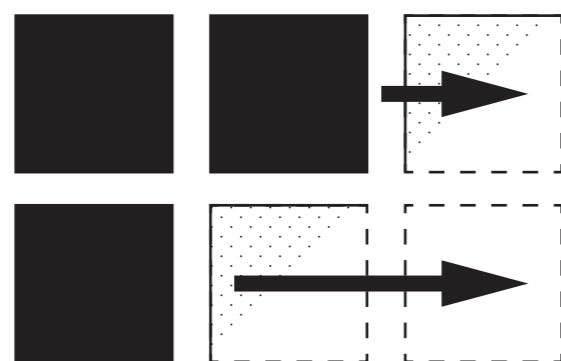
Four core principles of structuralism



Use of units



Building as a city



Open ended



Social interaction

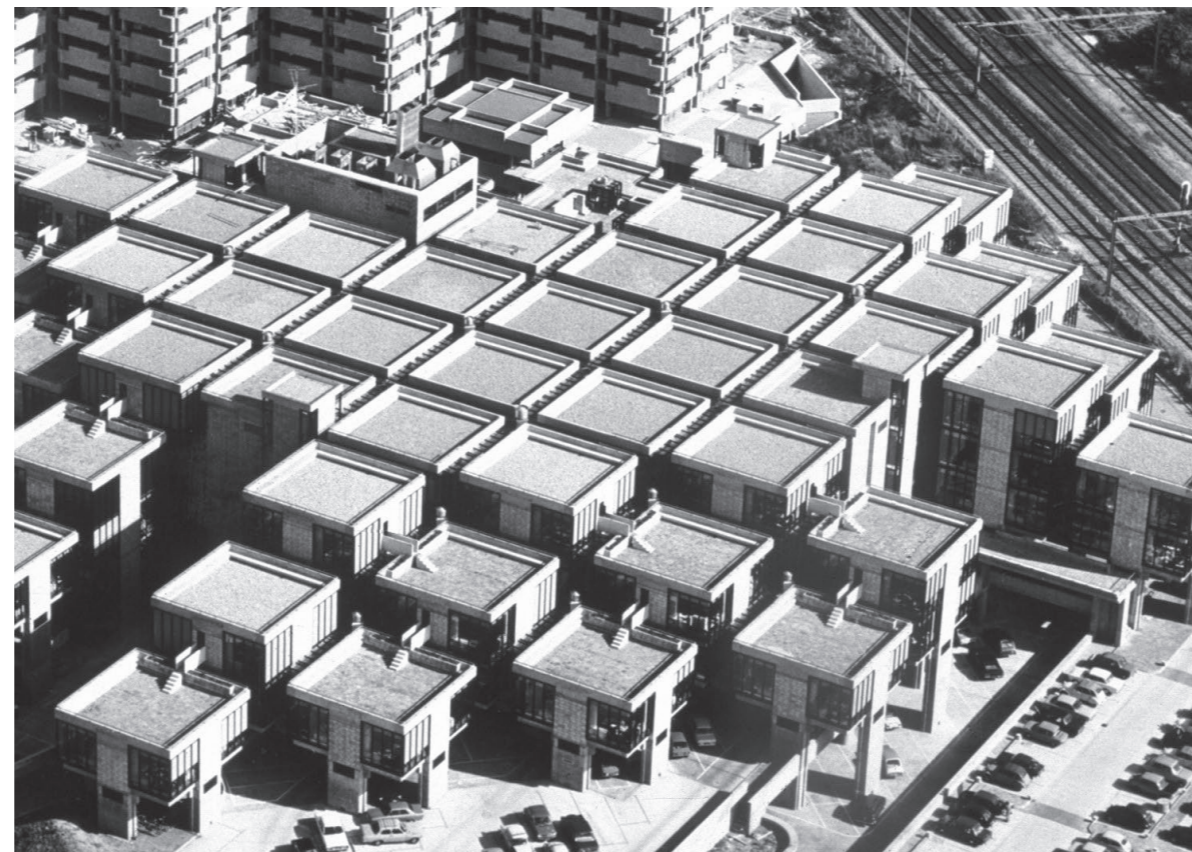
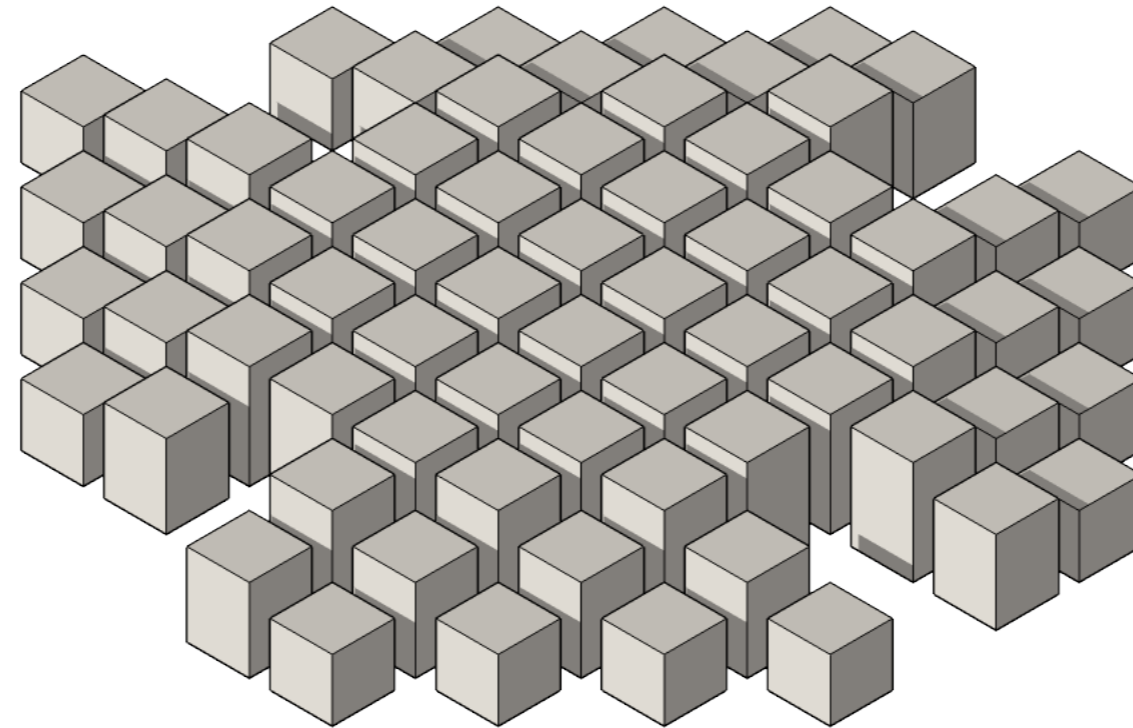
# EXISTING CONTEXT





# BUILDING ANALYSIS

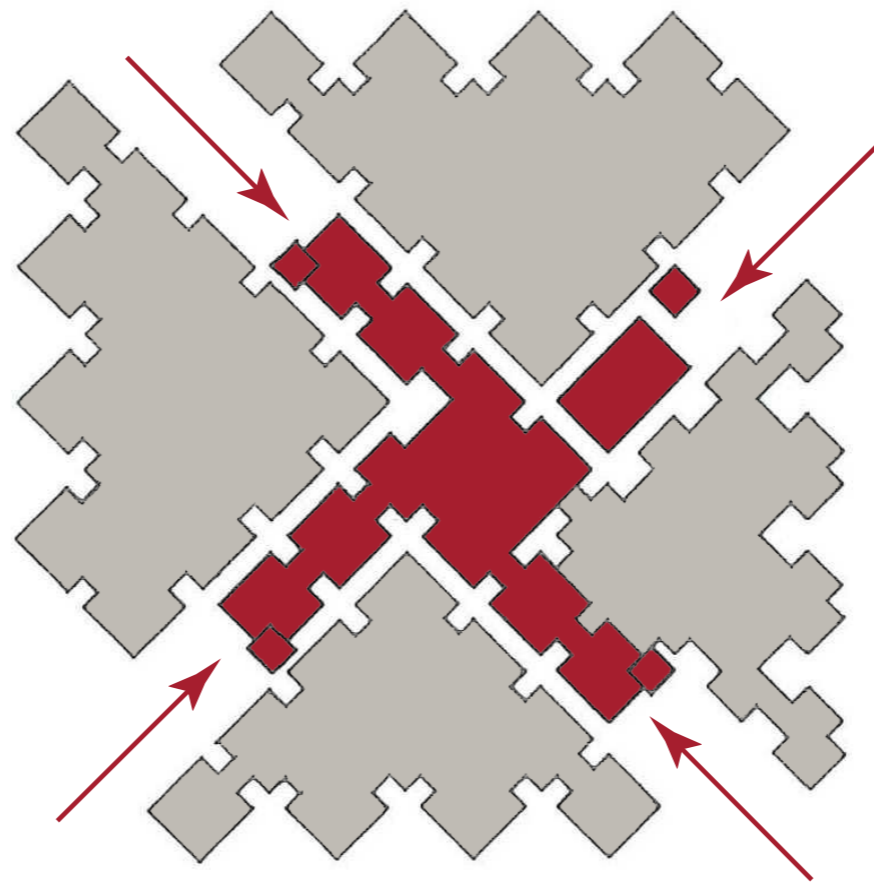
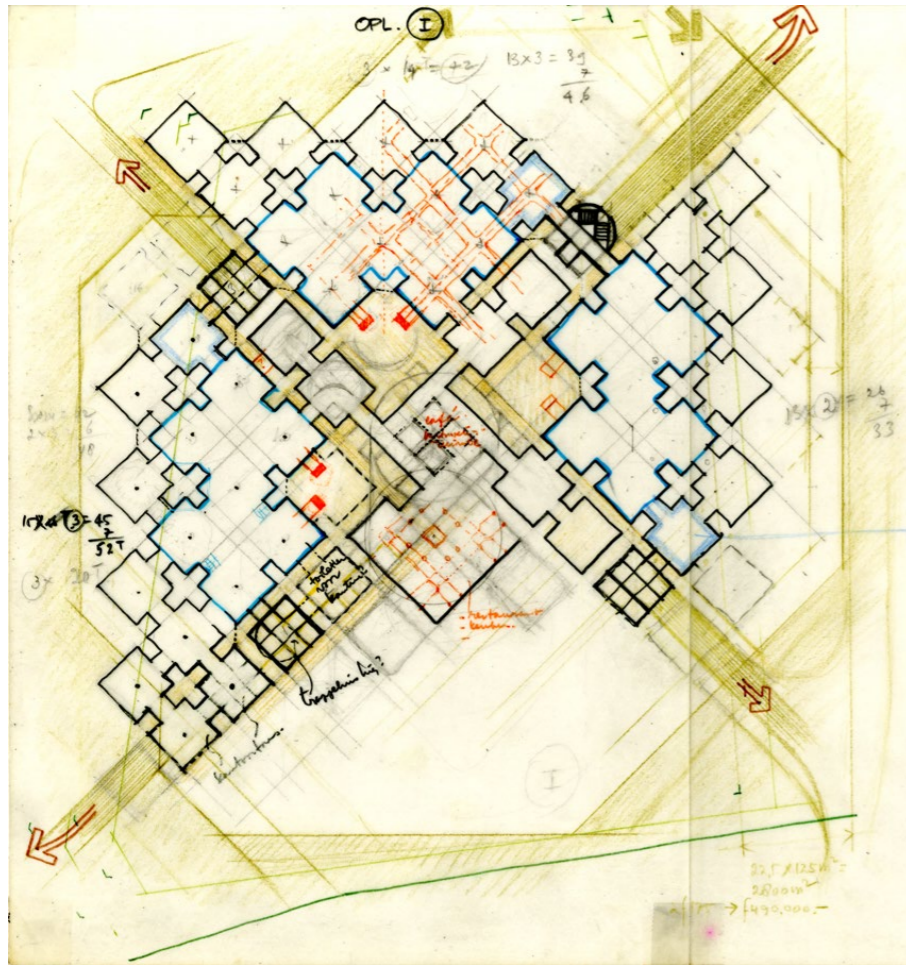
Building consists of 58 units  
increasing in height towards the center  
creating the iconic exterior of the building



# QUADRANTS AND INNER STREET

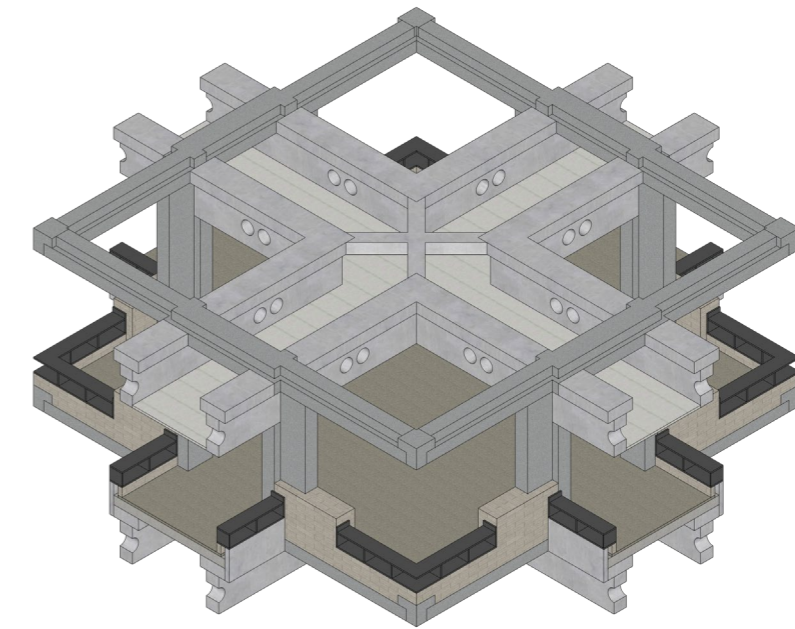
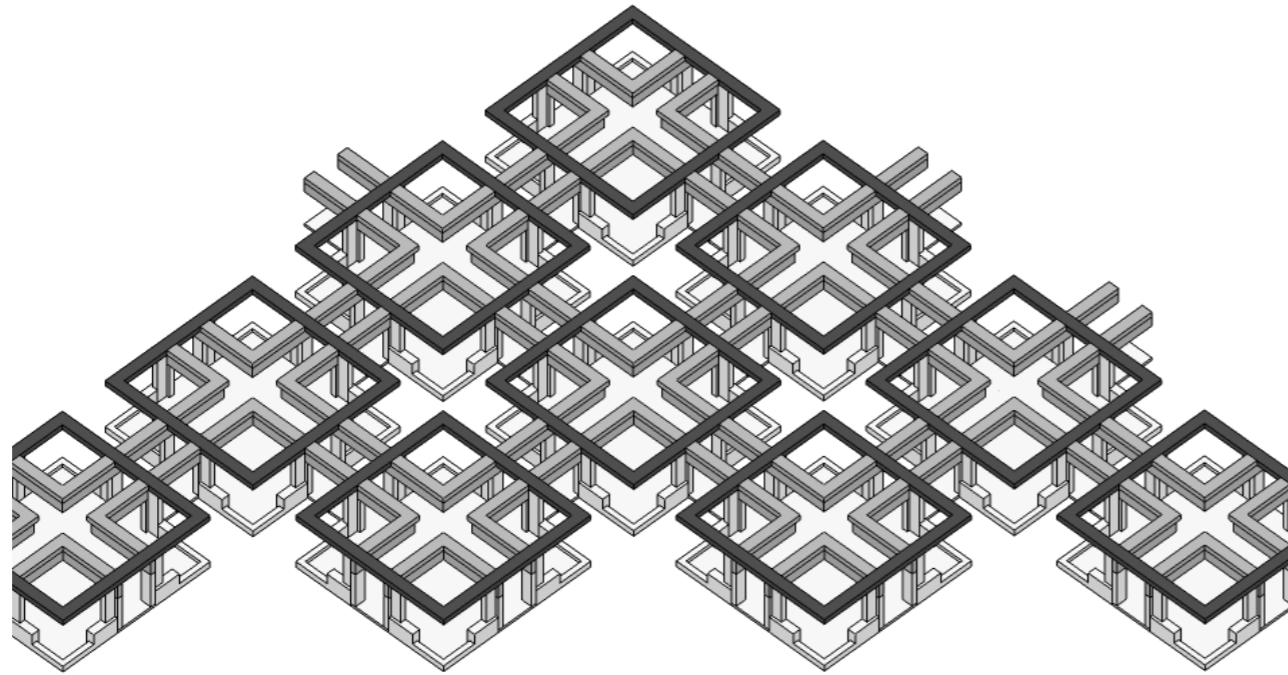
4 quadrants  
divided by inner street

-social interaction  
-city within a building

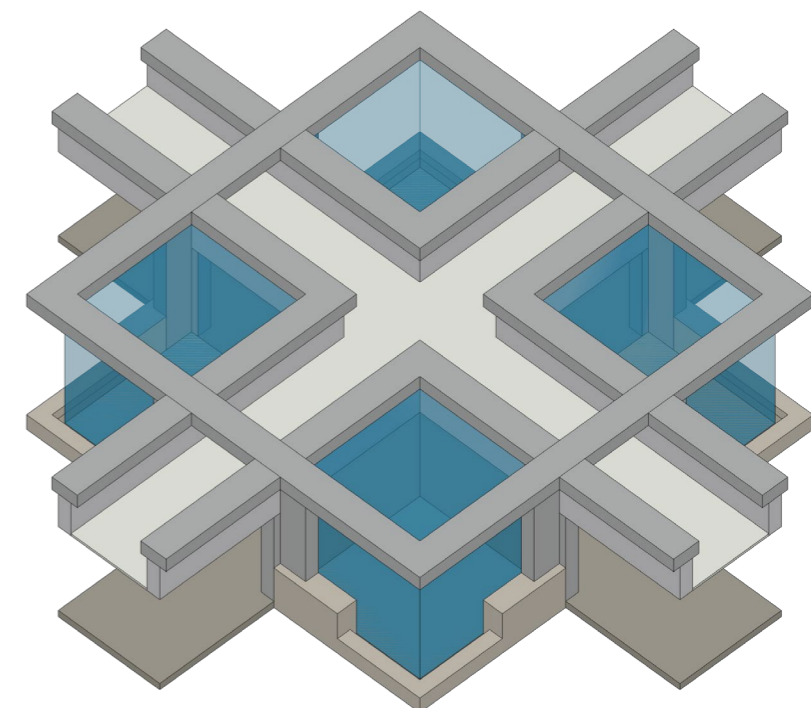
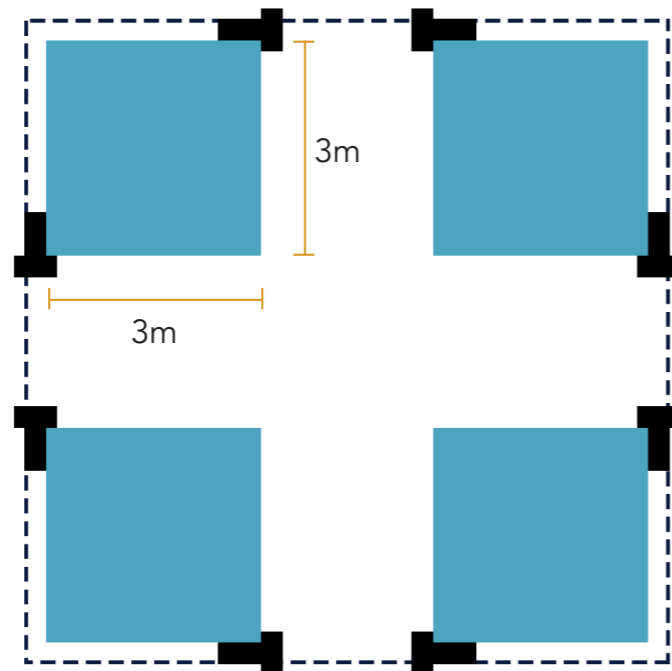


# BUILDING ANALYSIS

Primary beams  
-main construction  
Secondary beams  
-floor bearing construction



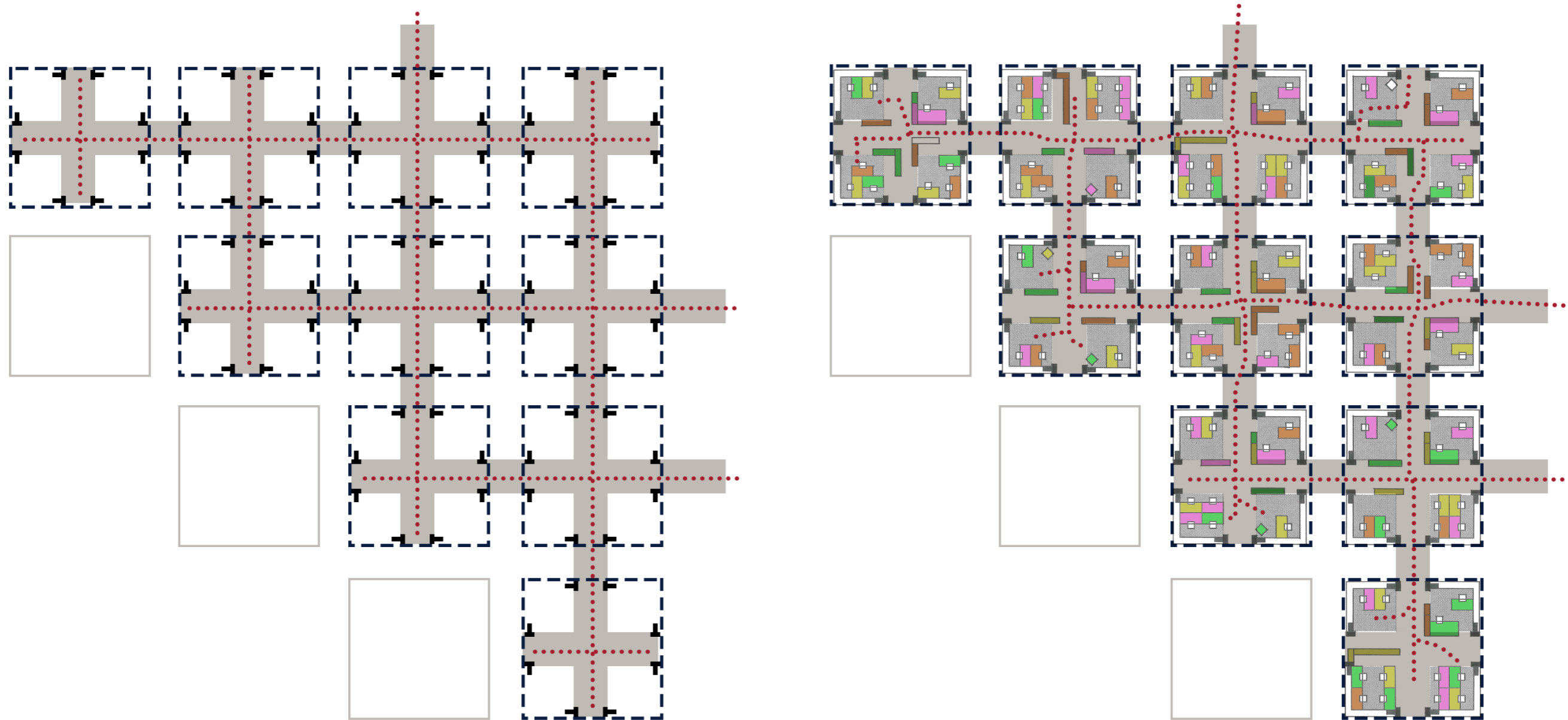
Construction creates 'rooms' for workspace



# OPEN OFFICE FLOORS AND ORIENTATION

Open office plan  
-lack of orientation  
-lack of hierarchy

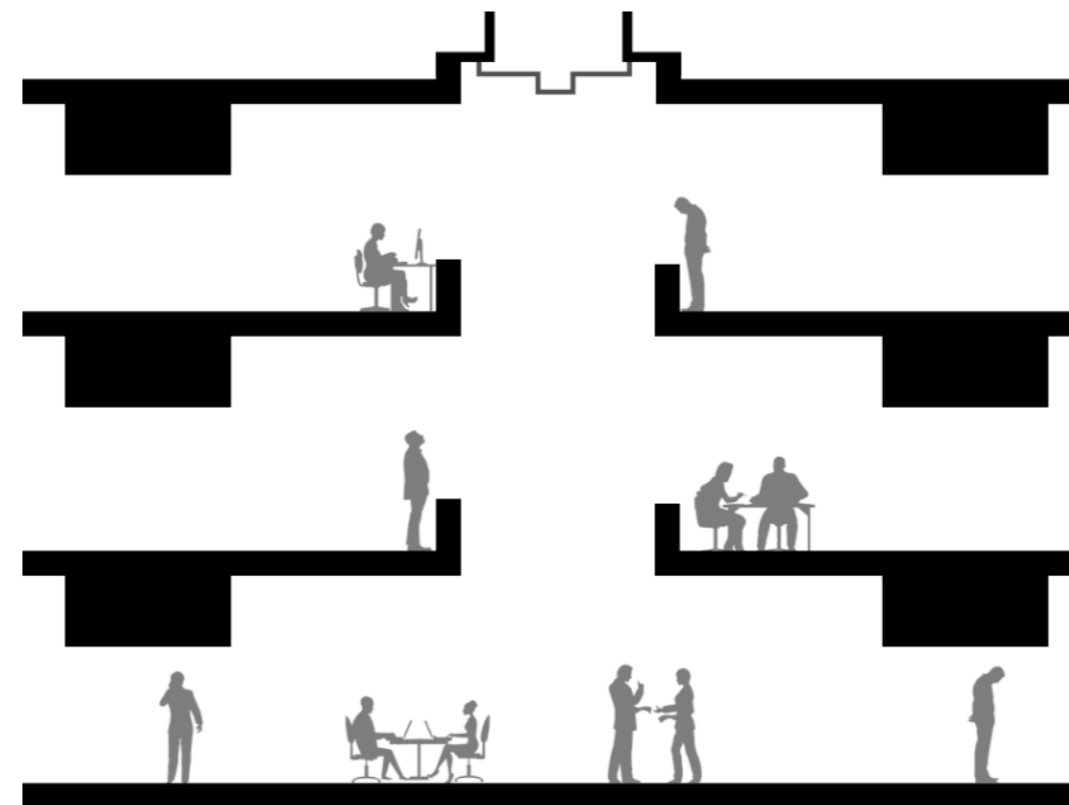
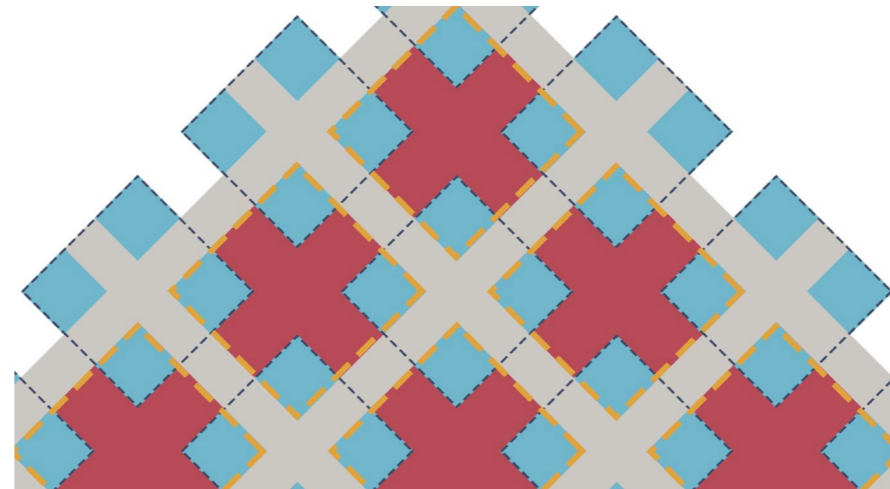
Freedom of interpretation  
-creates personal 'landmarks'



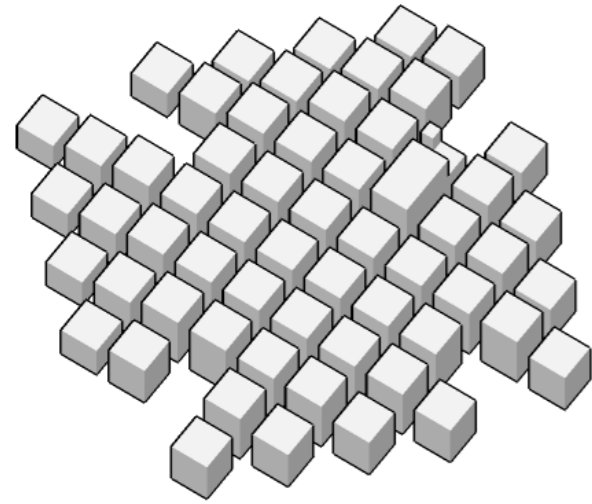
# VERTICAL CONNECTIONS - VOIDS

Floor inbetween the units is open  
creating voids

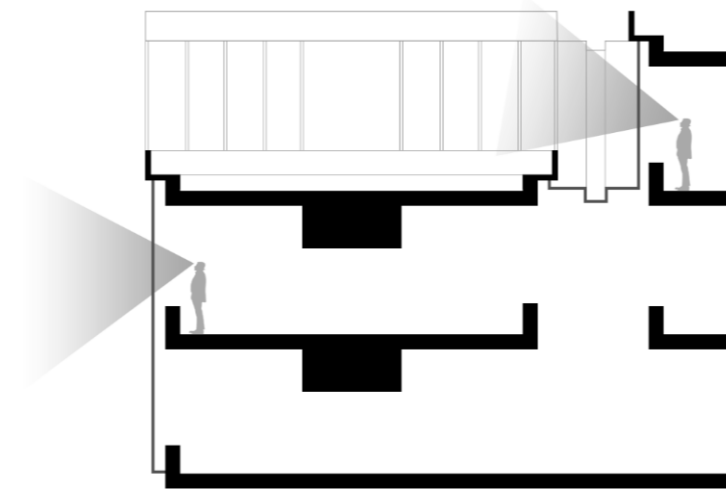
Vertical connection between seperate floors



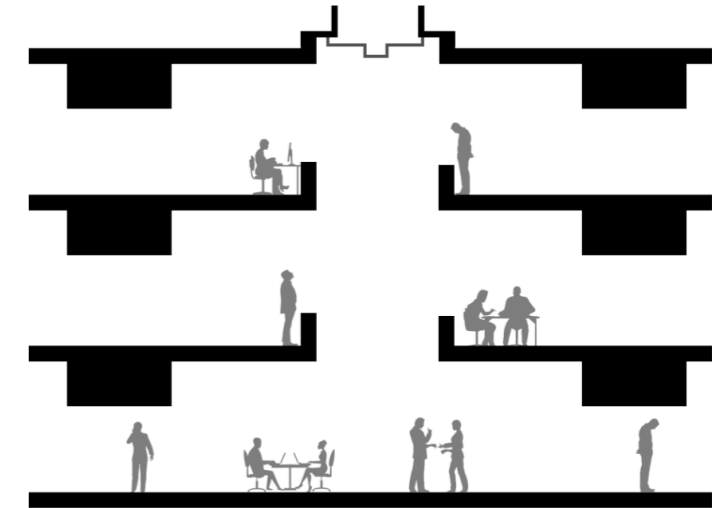
# CULTURAL VALUE



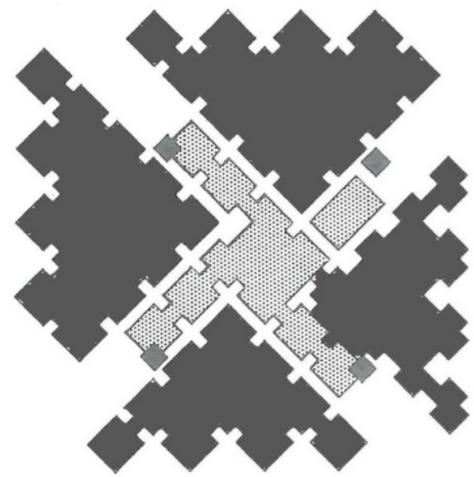
Iconic exterior composition



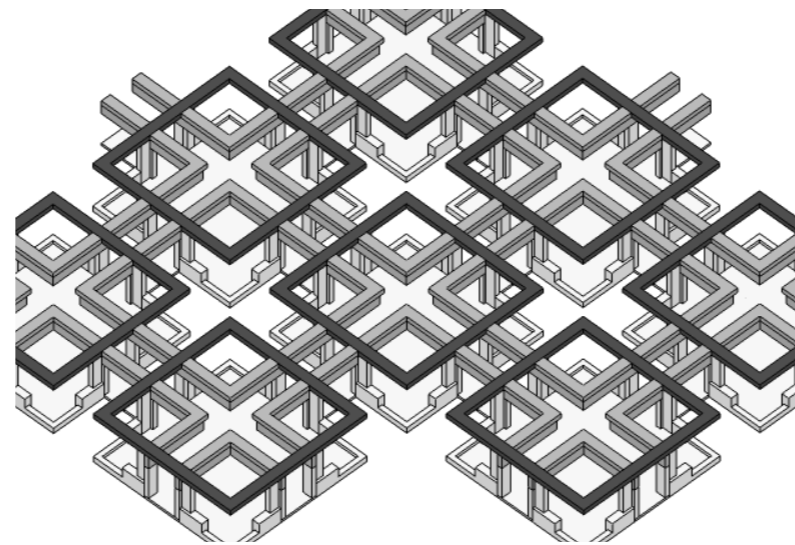
Connection outside/inside



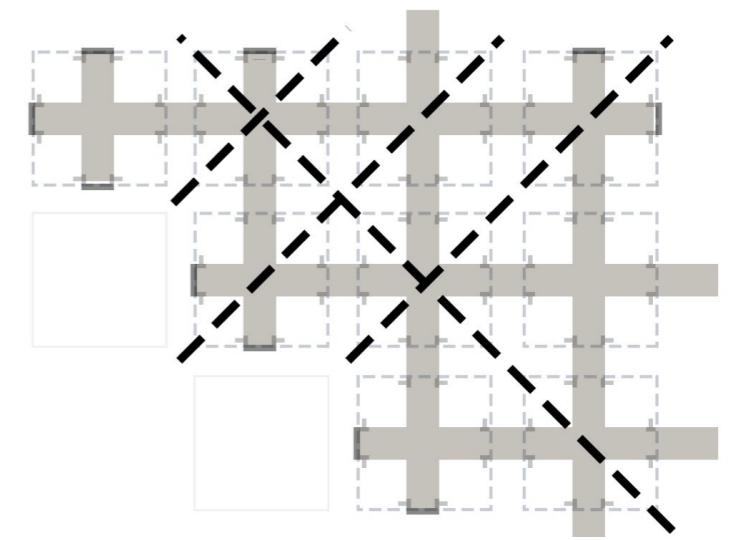
Vertical connections



Quadrants/inner street



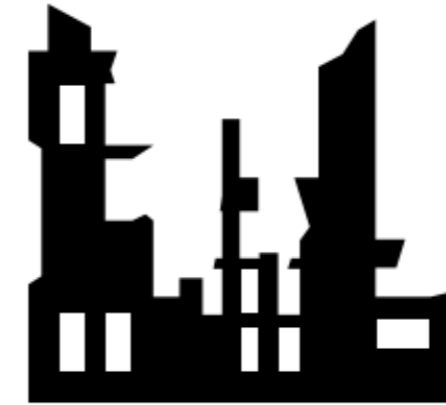
Primary/secondary construction



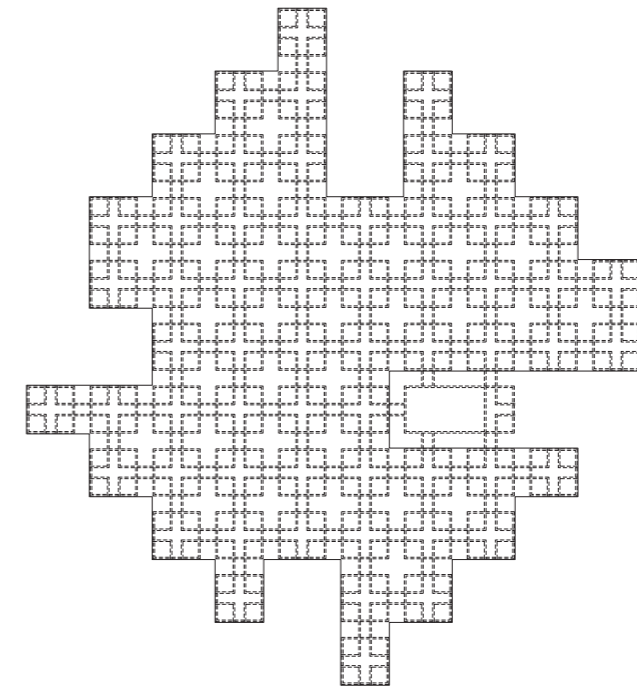
Diagonal sightlines

## PROBLEM STATEMENT

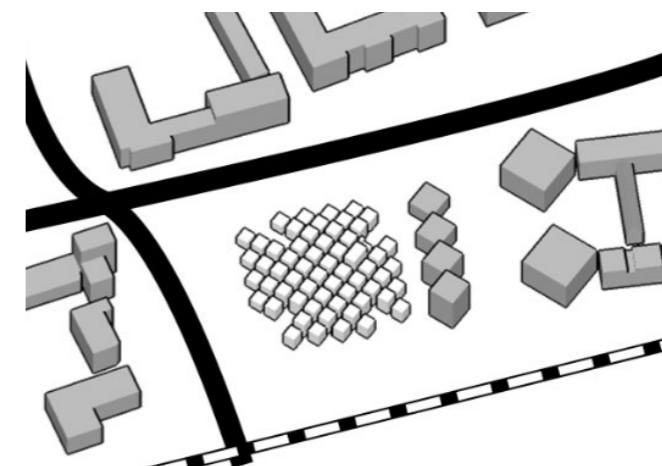
Building is aging, vacant  
and not maintained:  
It's quickly deteriorating



Tight, overdimensioned grid of construction  
leads to:  
Lack of hierarchy, orientation and  
spaciousness



Isolation of the building by  
lack of connection to its context



What are the possibilities and limitations of a structuralist building when transforming to a new function, without detracting from its iconic, cultural and structuralist values?



INTRODUCTION

RESEARCH & ANALYSIS

**DESIGN AMBITIONS**

DESIGN

REFLECTION

## NEW FUNCTION

### NHV (Nederlands Handbal Verbond) Academy Handball center for innovation and education

#### Why handball?

- Internationally popular
- Growing in popularity in the Netherlands
- Recent success of national teams
- The Netherlands have no excellent facility that focuses on handball

#### Combine functions into one building:

Dutch handball center for development of the sport on national and international level.



## NEW FUNCTION PROGRAMME

### NHV Academy: Handball Center for Innovation and Education

#### Sports:

- full size training hall
- personal fitness/gym

#### Sports science and innovation:

- innovation lab
- research center
- office space
- sports medical research

#### Education:

in cooperation with colleges/universities

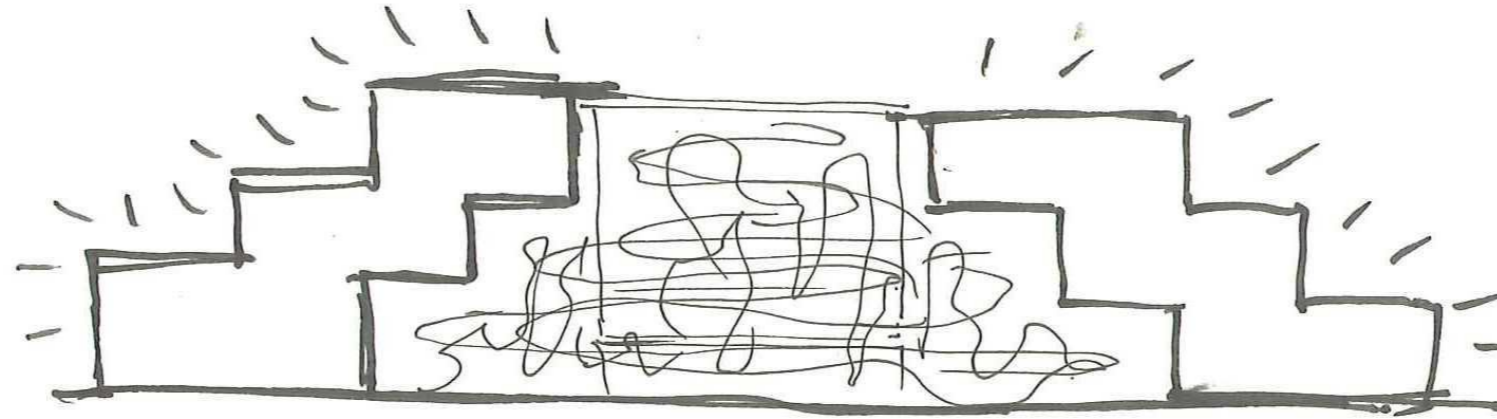
- studyspace/selfstudy facilities
- 6 classrooms/group education
- office space

#### Restaurant:

- specialized in food for sports

# CONCEPT

Exterior appearance  
vs. interior experience

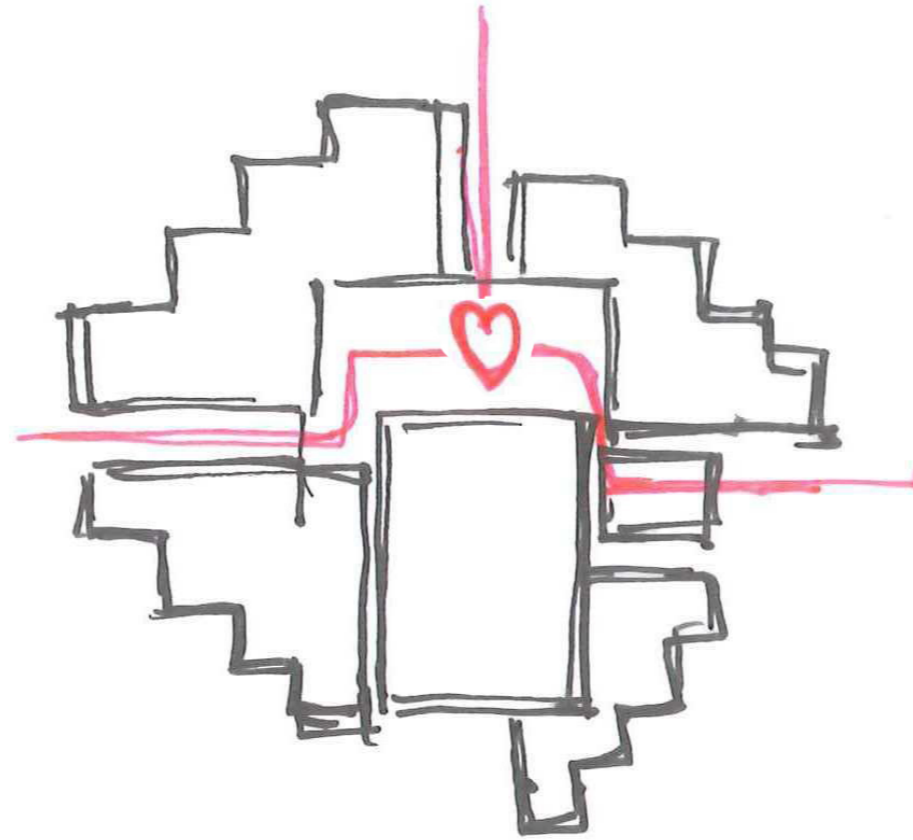


City within a building

*-combine all functions within the building, internally  
connected*

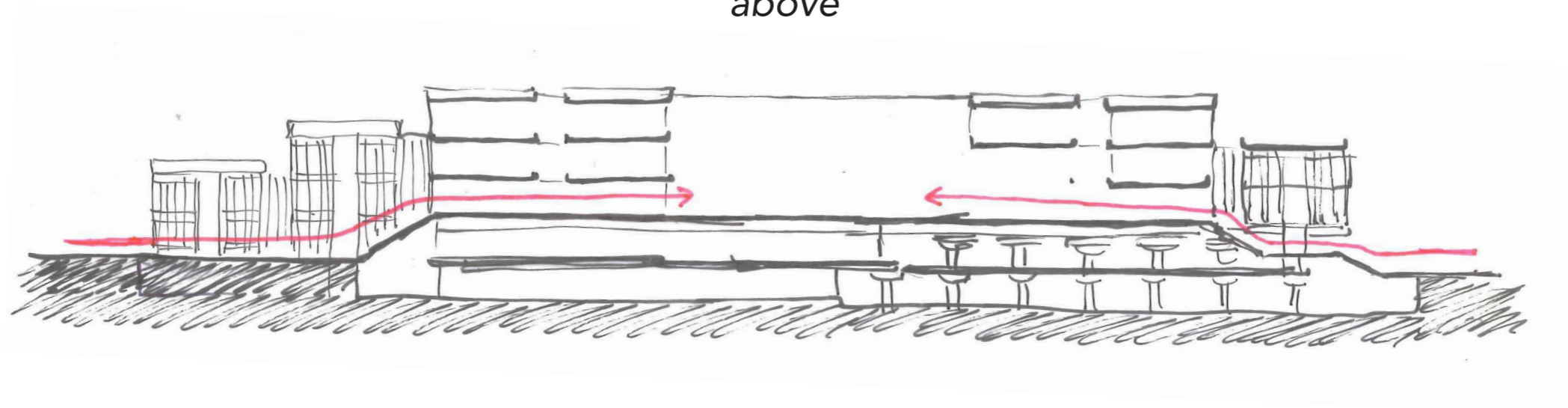


## Redefine heart of the building

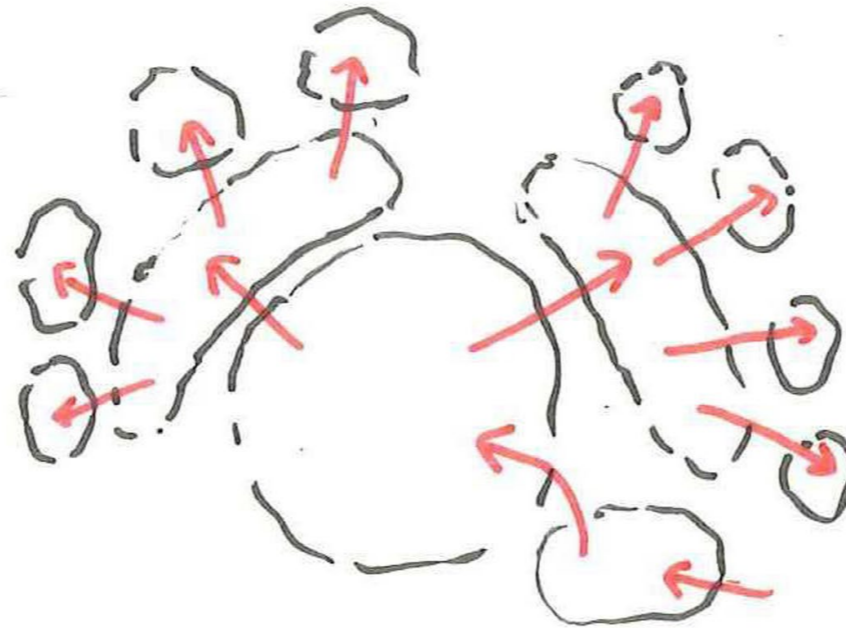


## Raise inner street to layer 2

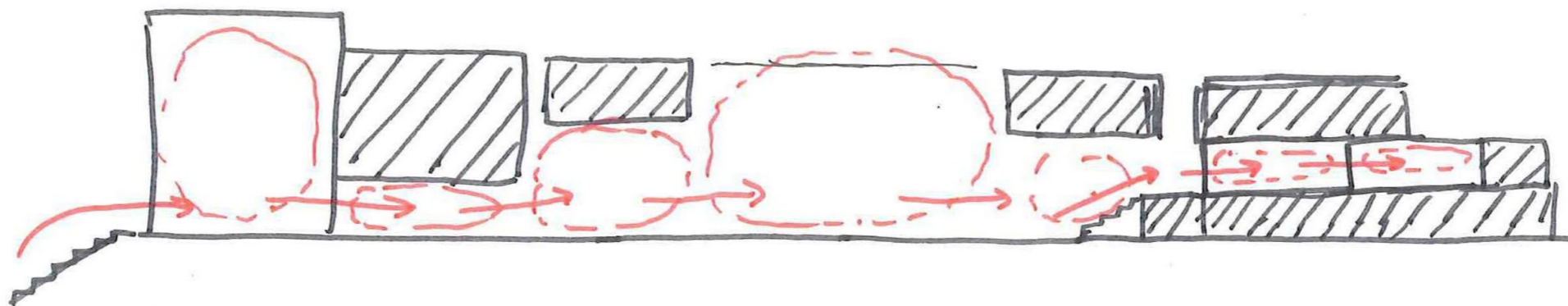
*-essence of the building can be found on layer 2 and above*



### Implement Hierarchy



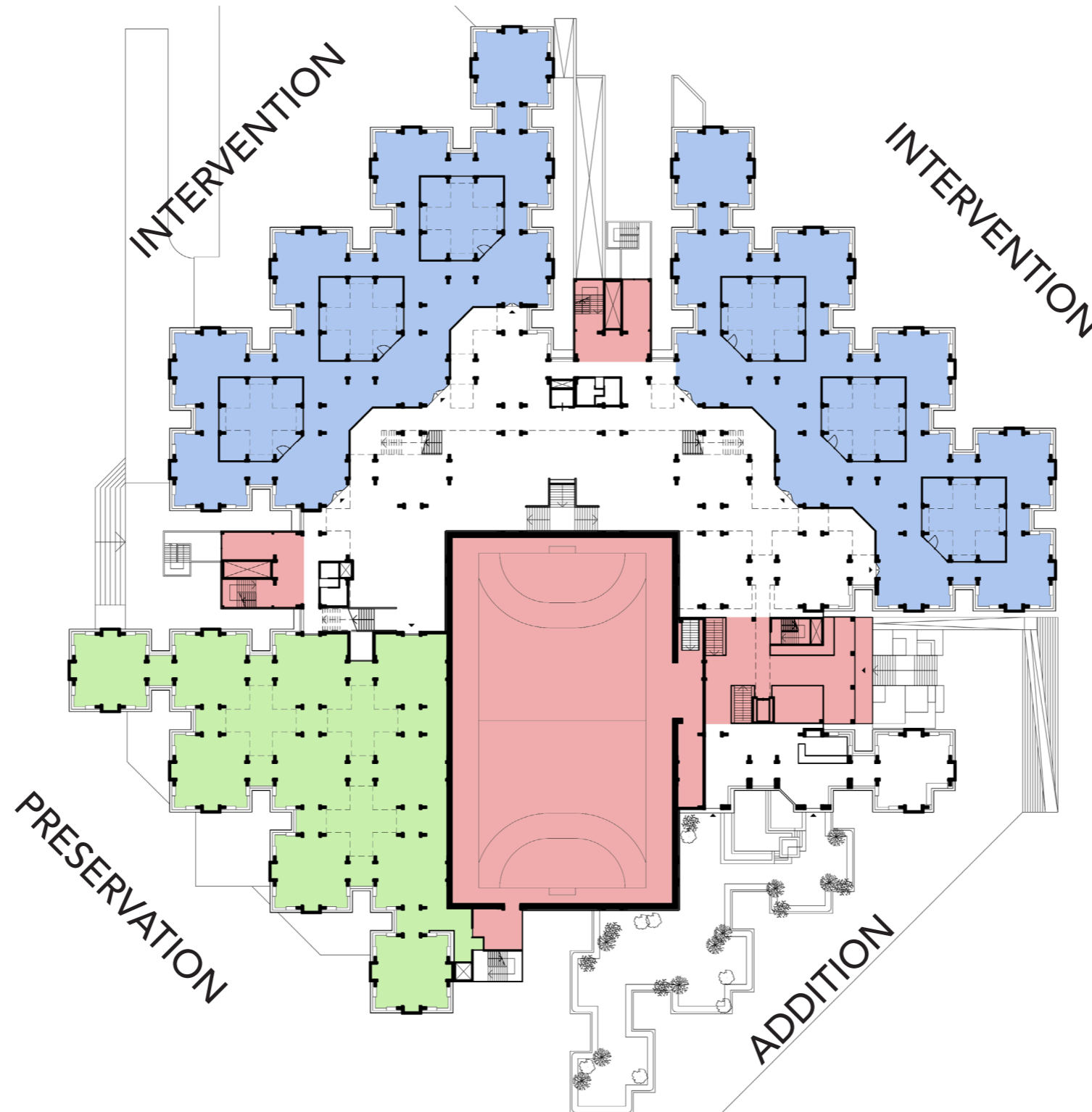
### Sequence of space



# HERITAGE POSITION

Three different approaches:

- preservation
- intervention
- addition



INTRODUCTION

RESEARCH & ANALYSIS

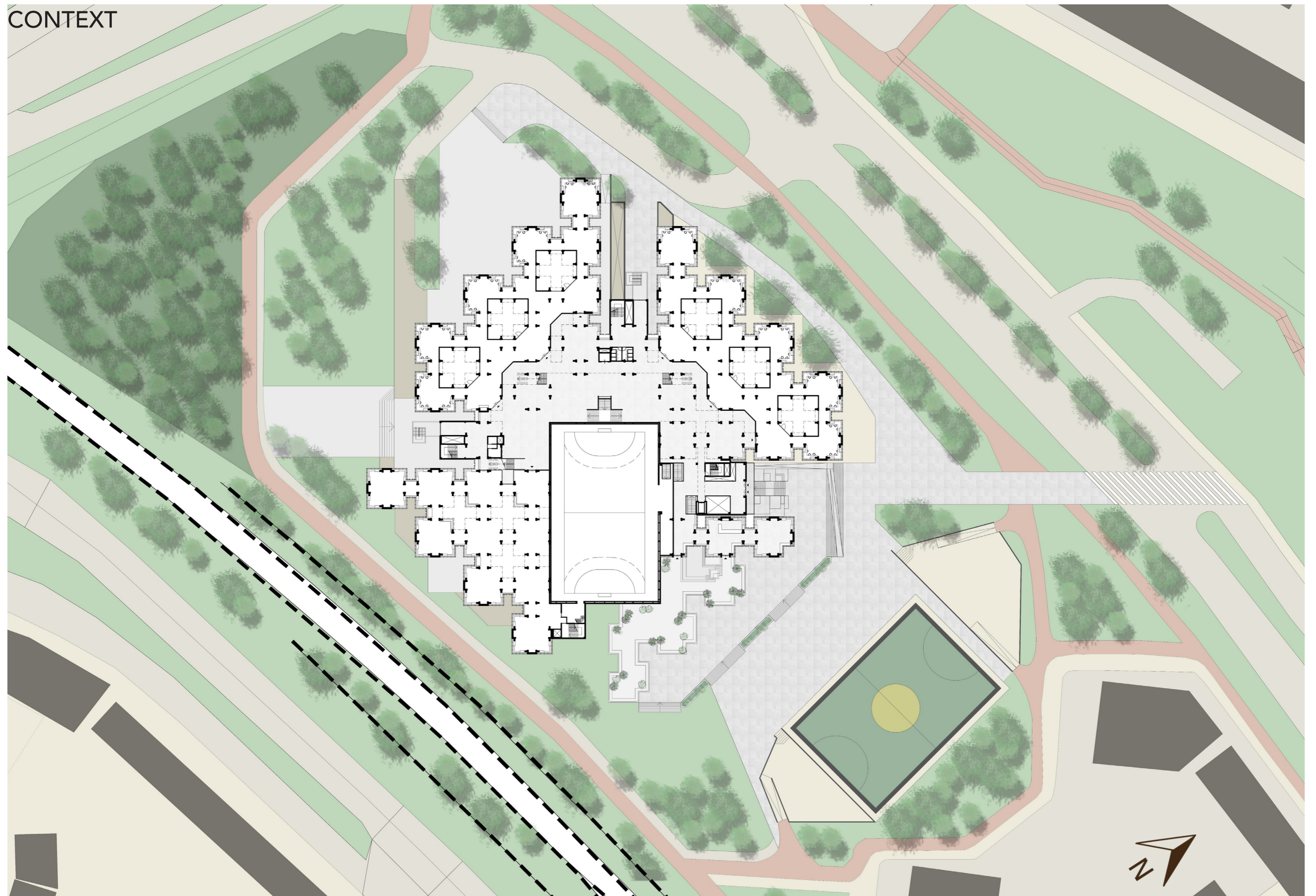
DESIGN AMBITIONS

**DESIGN**

REFLECTION



CONTEXT





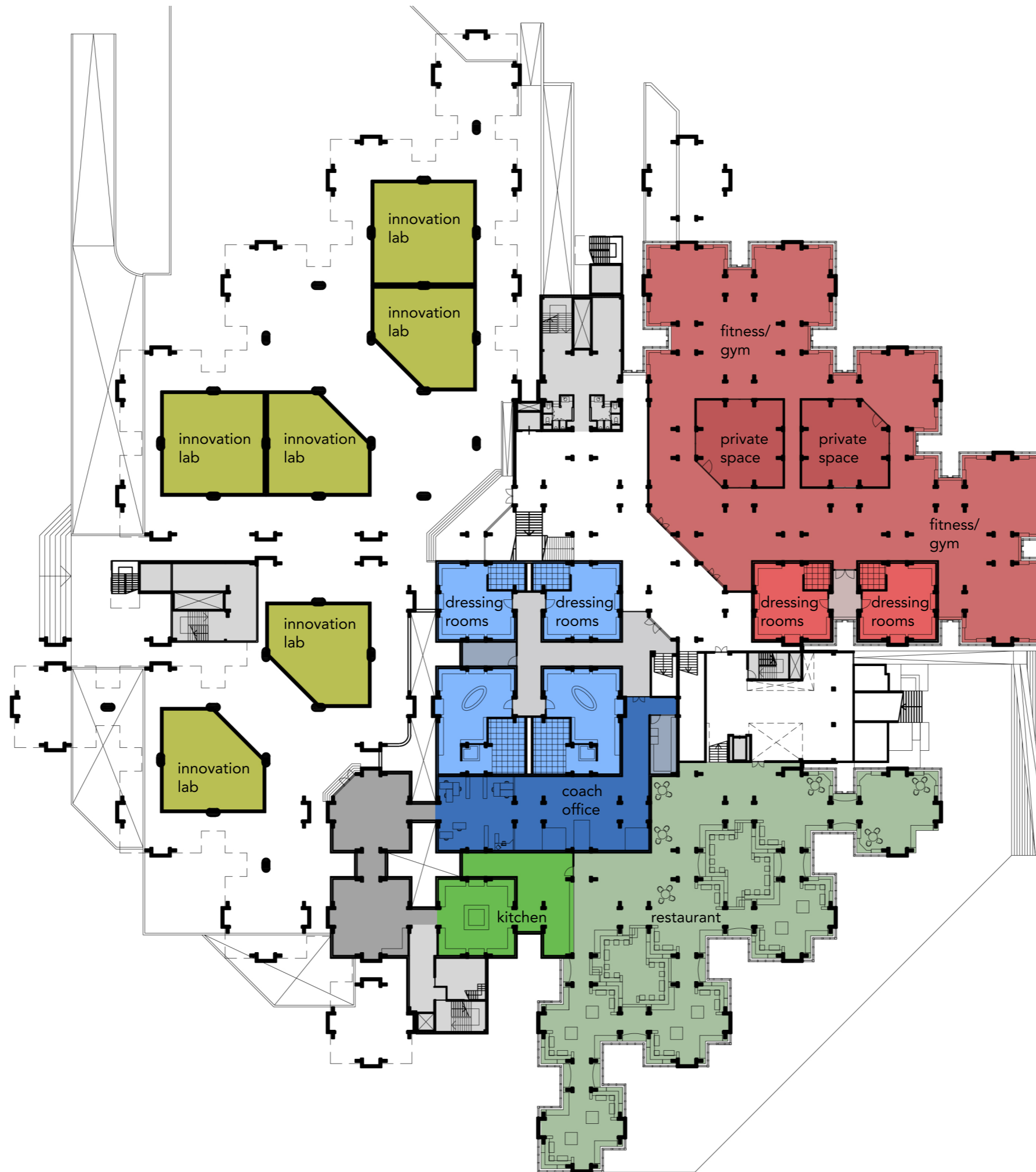
LAYER 3



LAYER 4



# LAYER 1

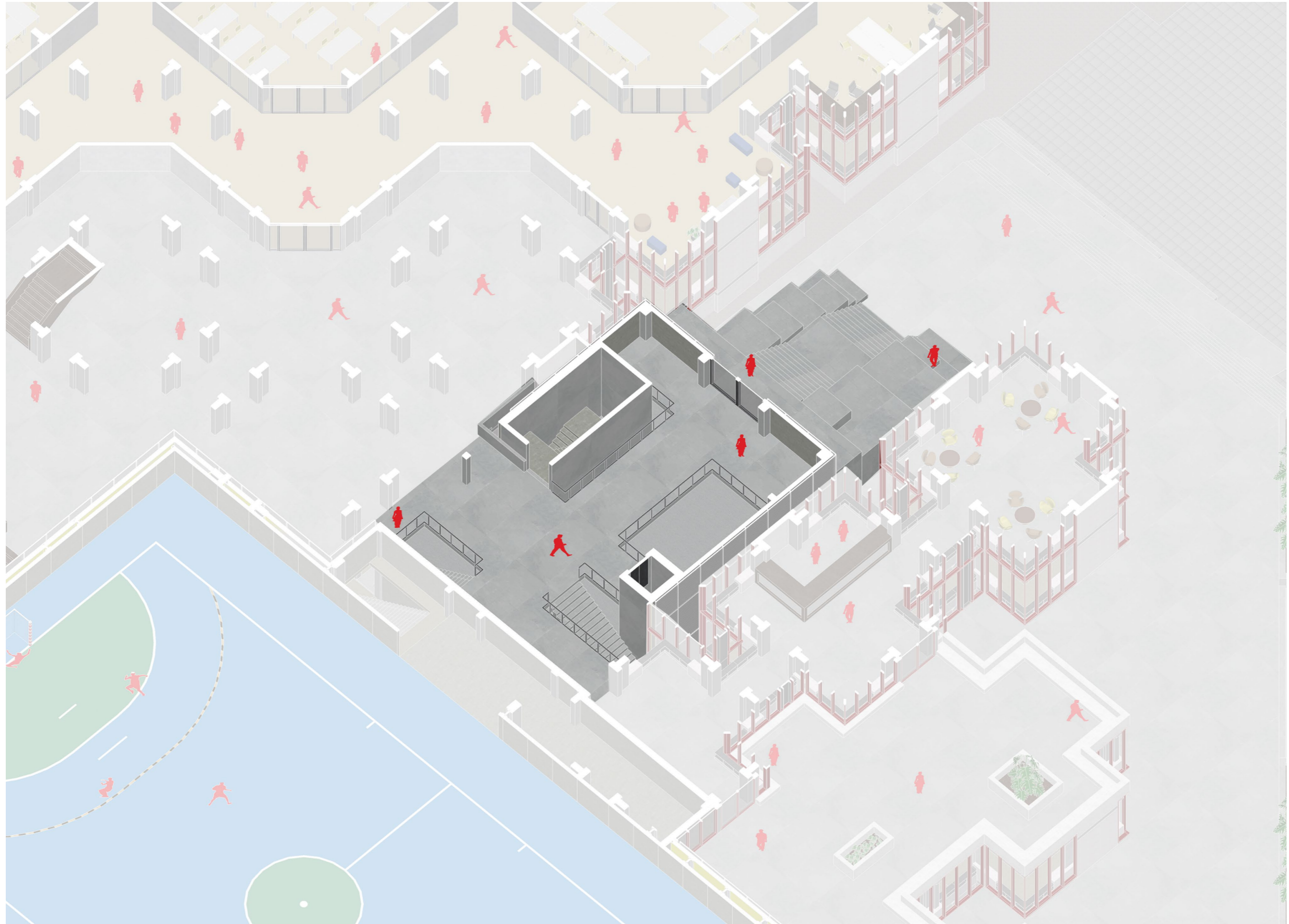


# Public space

# ENTRANCE TOWER - IMPRESSION

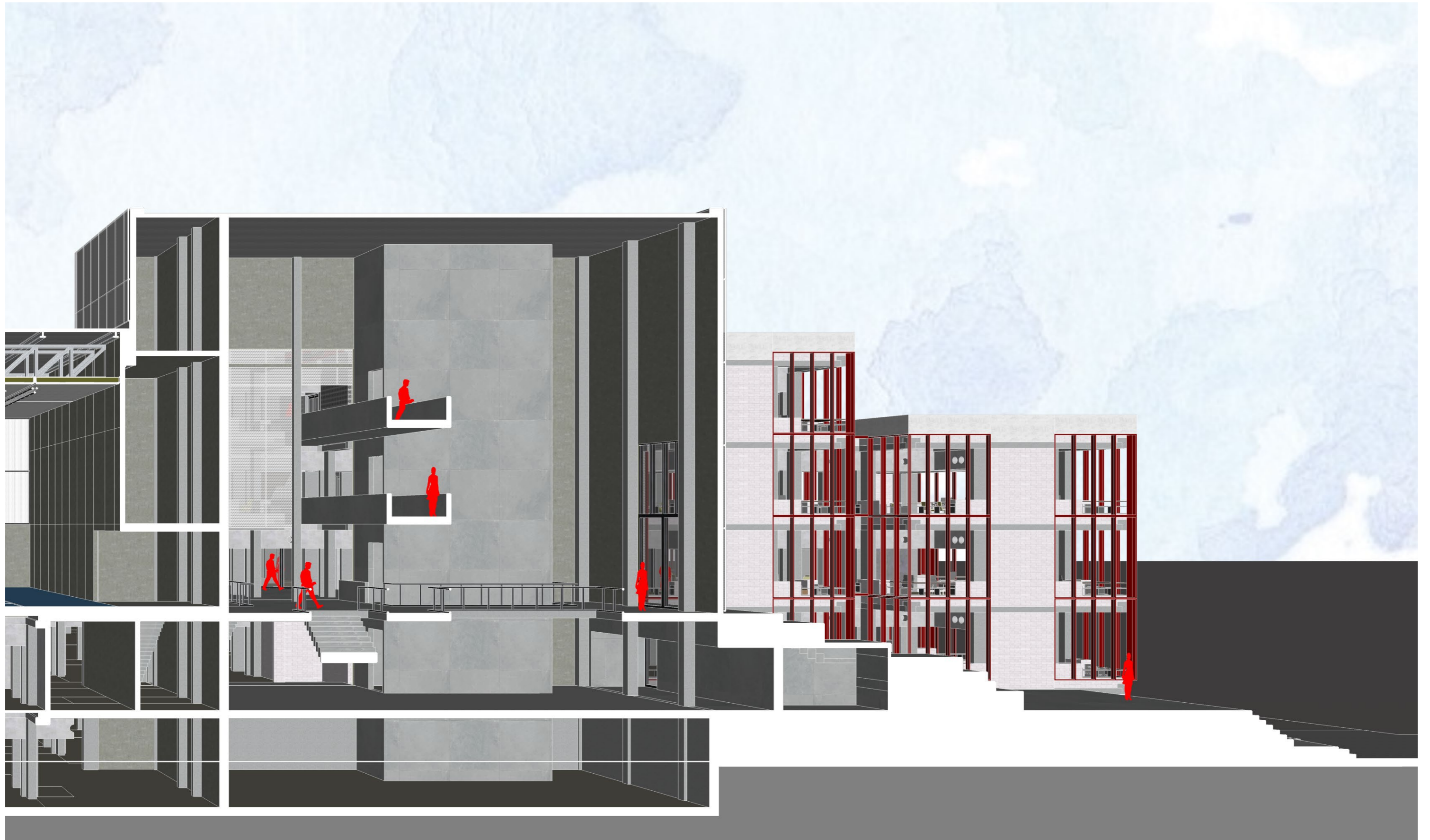


# ENTRANCE TOWER





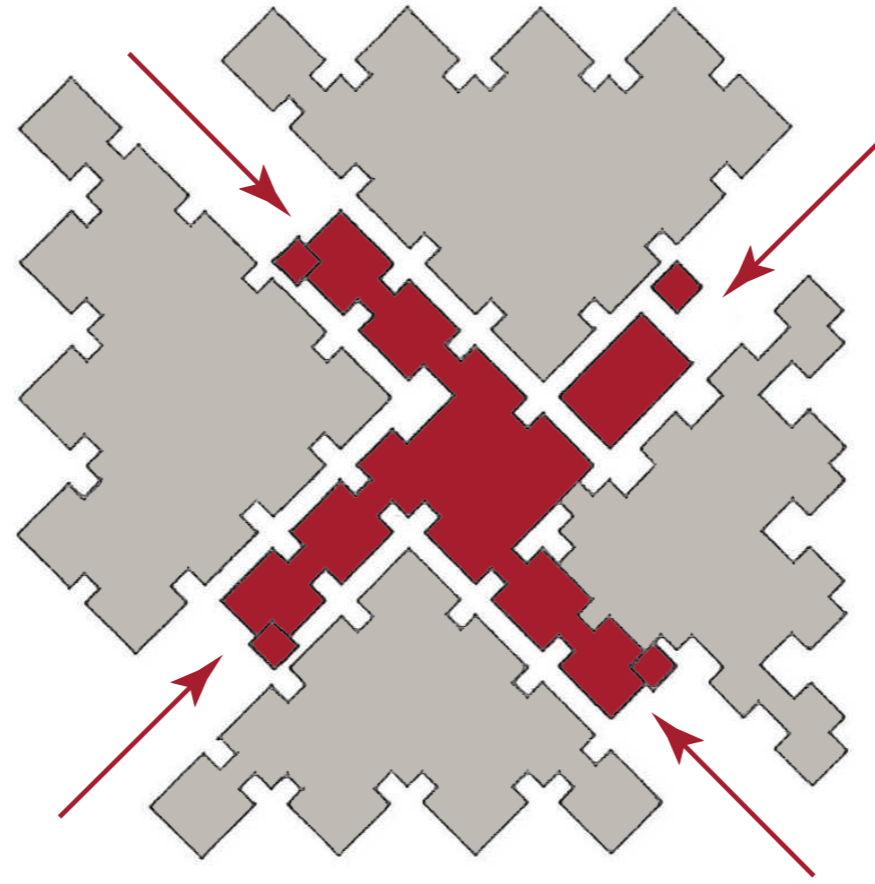
# ENTRANCE TOWER



# MOVE INTO THE INTERIOR PUBLIC SPACE

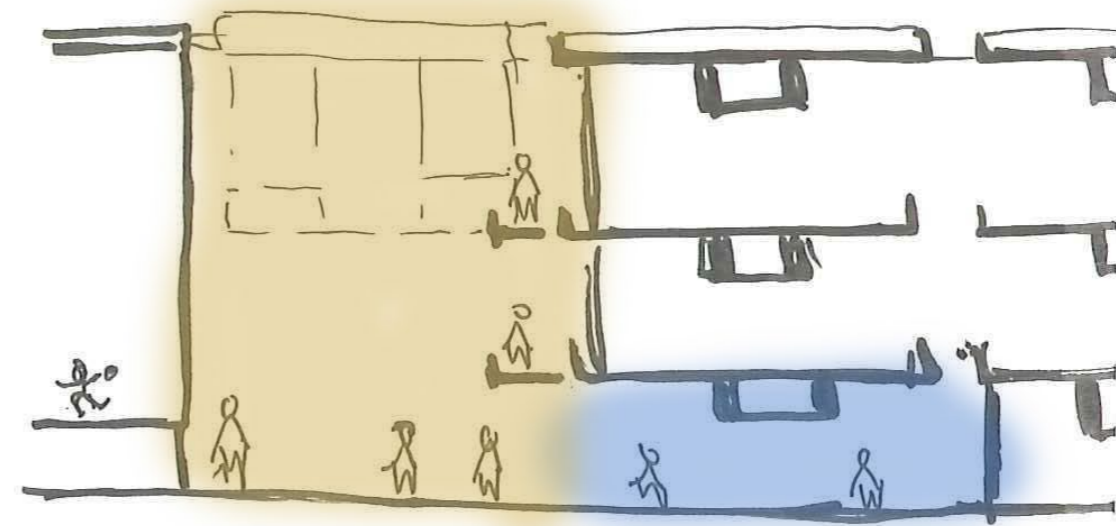
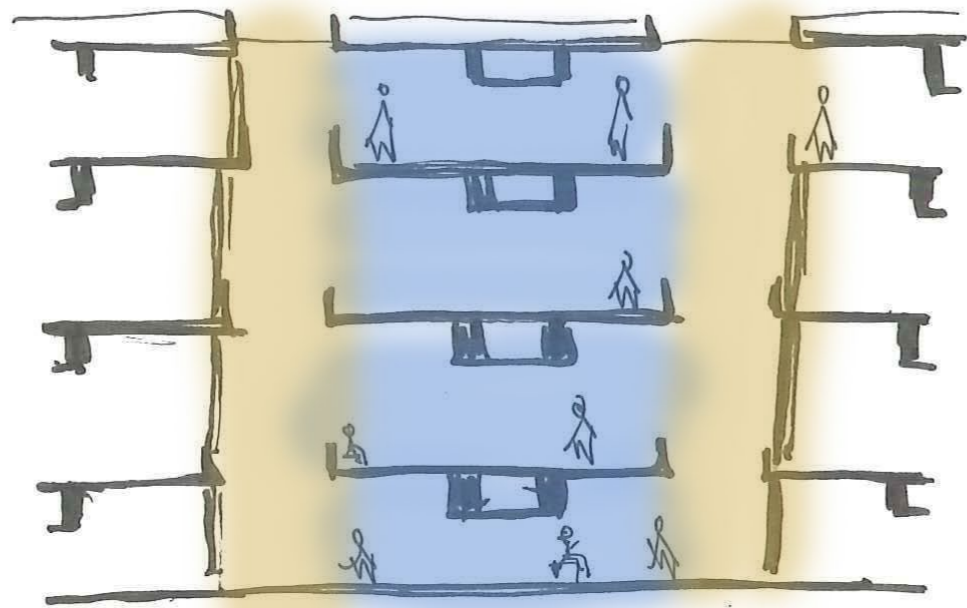


# EXISTING INNER STREET



## NEW INNER STREET

Redefine and widen the inner street  
opposed to the narrow and filled street in  
the existing building



# INNER STREET - IMPRESSION



# SEQUENCE OF SPACE





Three different approaches:

**Preservation**

Intervention

Addition

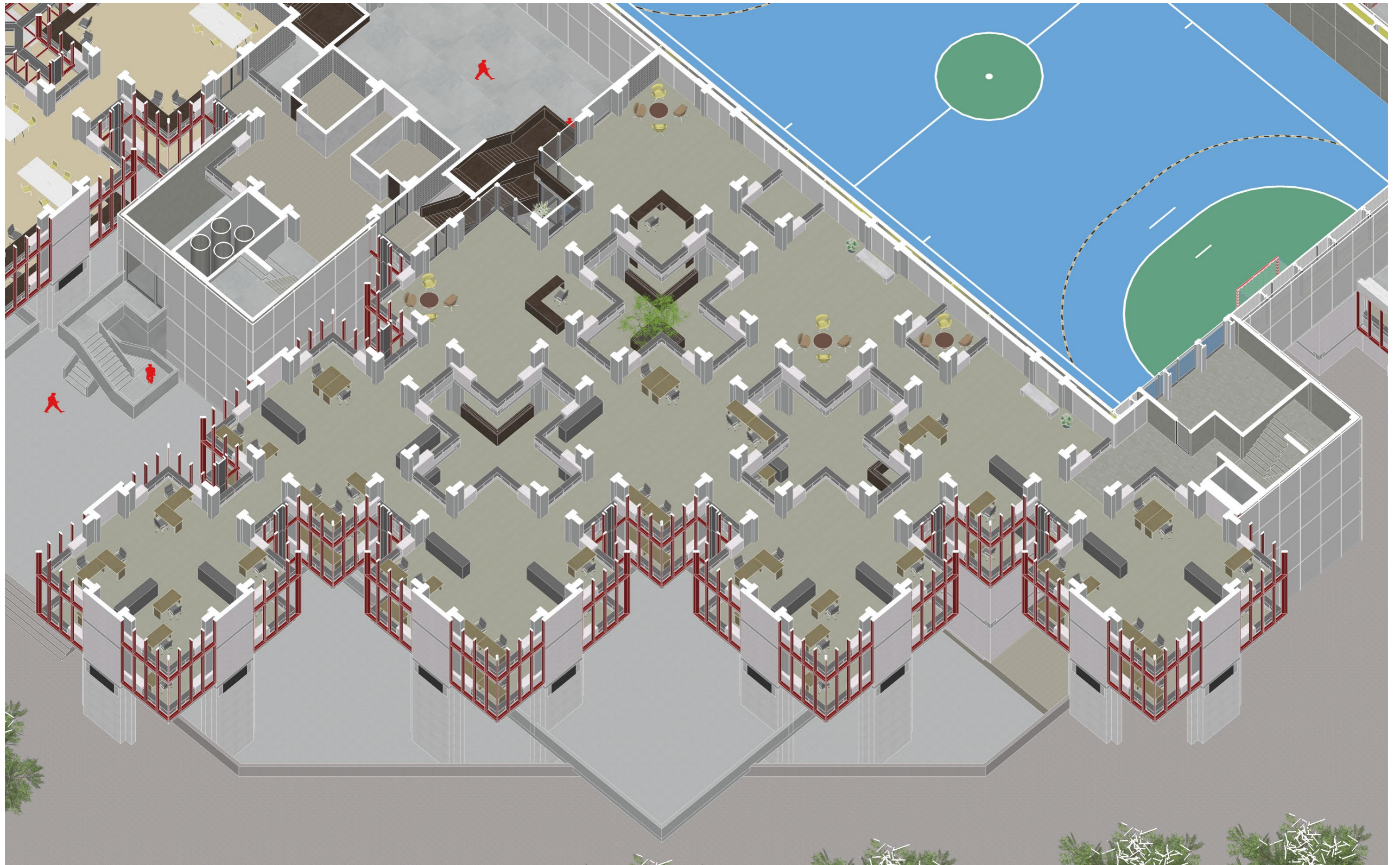


# ORIGINAL EXPERIENCE

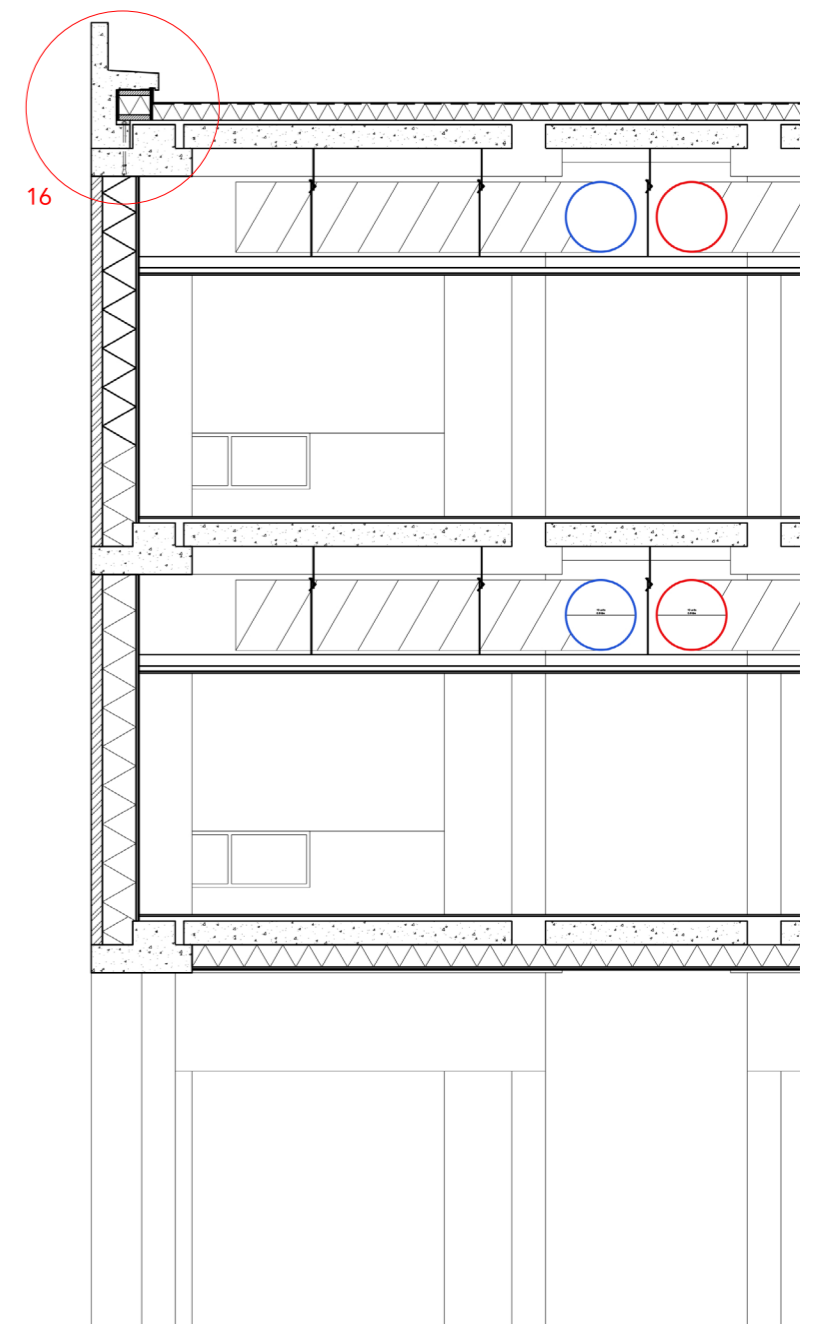
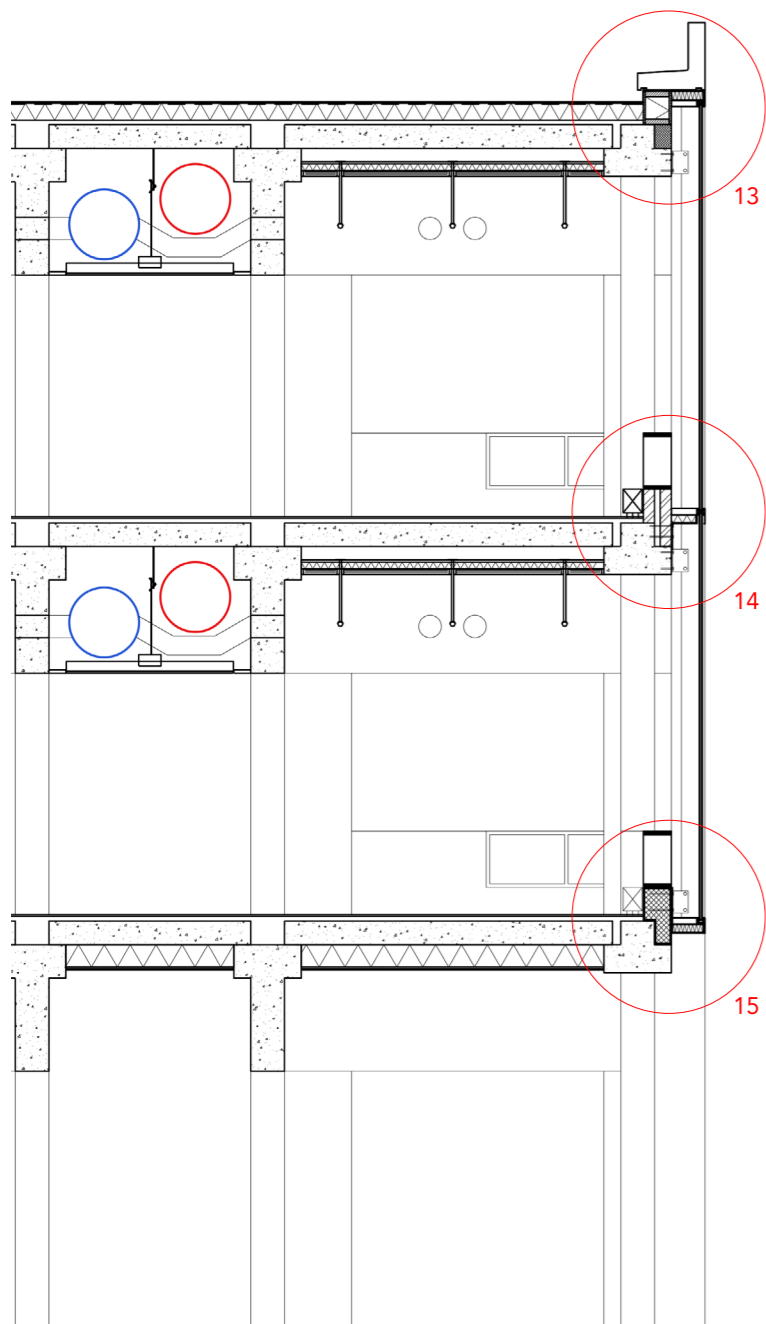
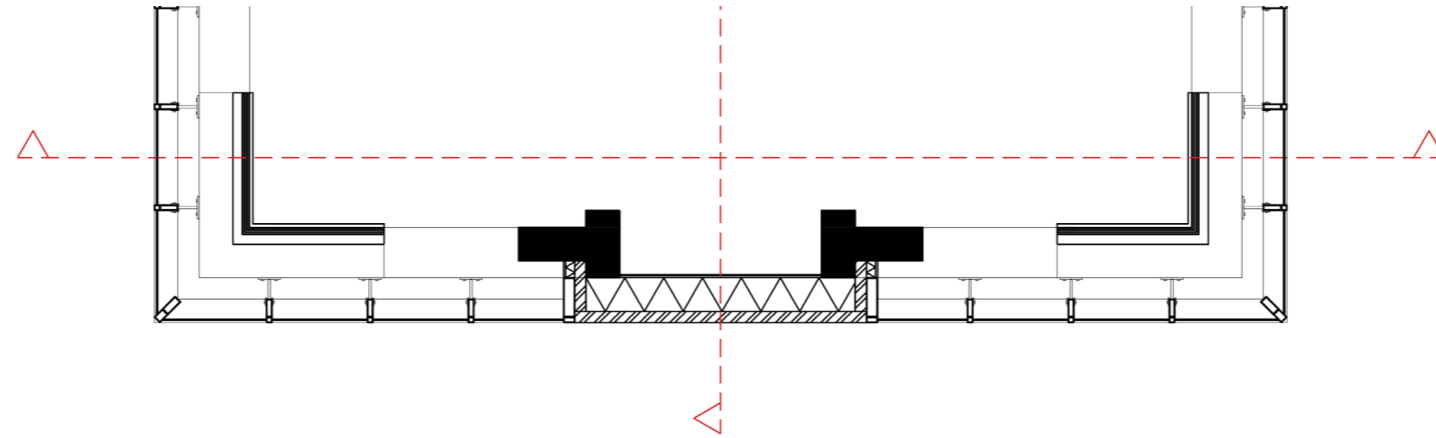


# PRESERVATION QUADRANT

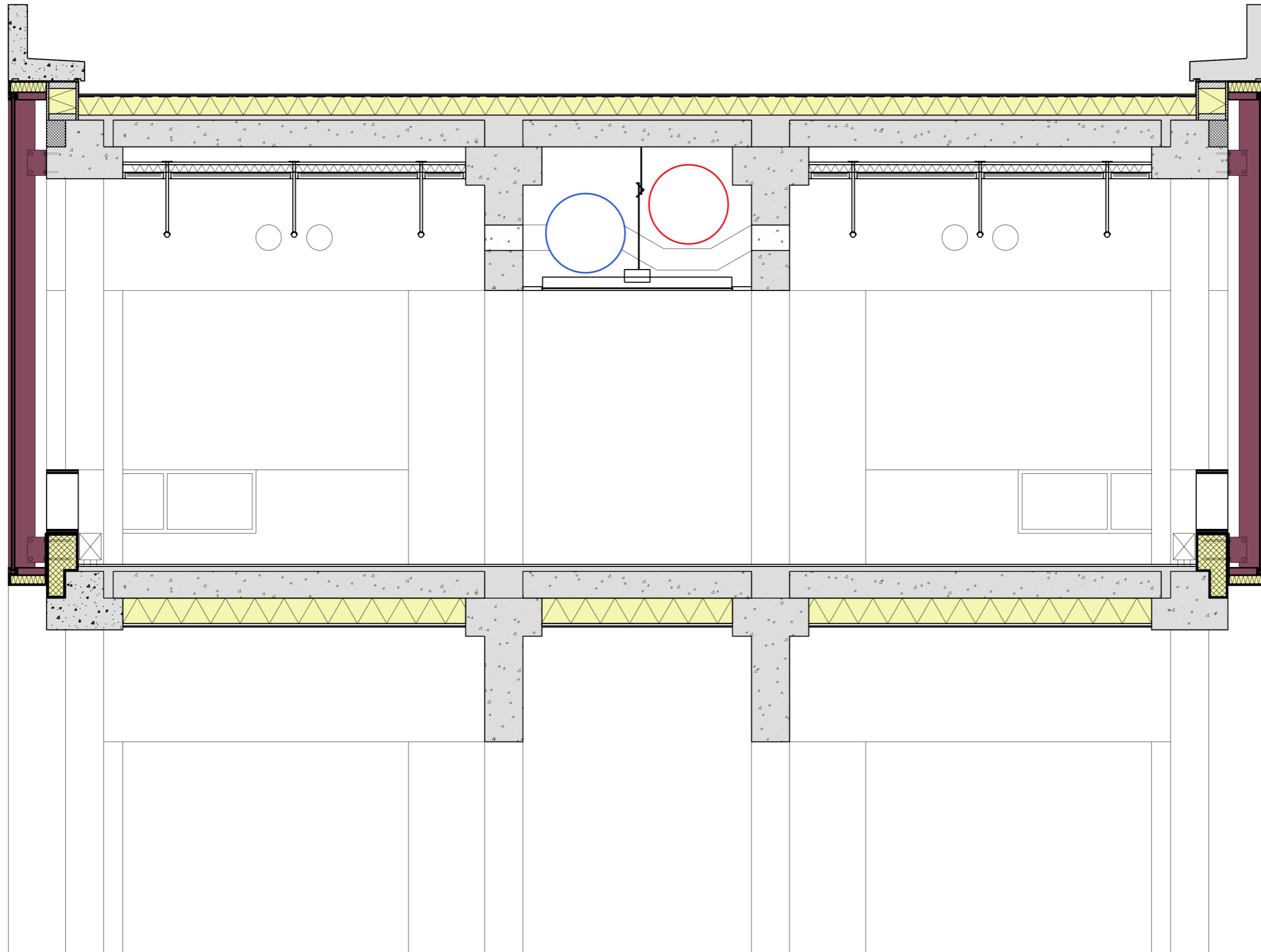




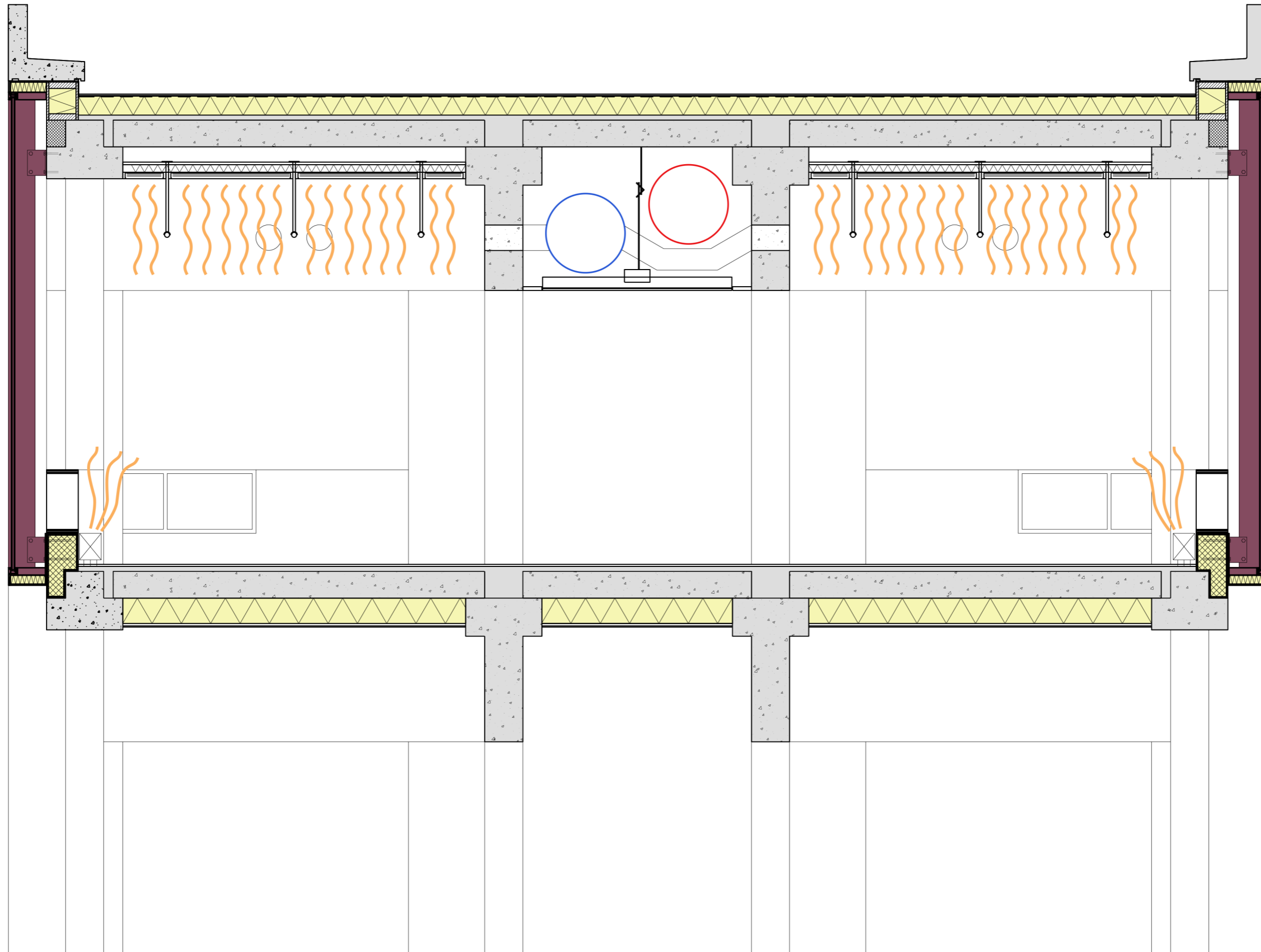
# EXTERIOR COMPOSITION AND APPEARANCE



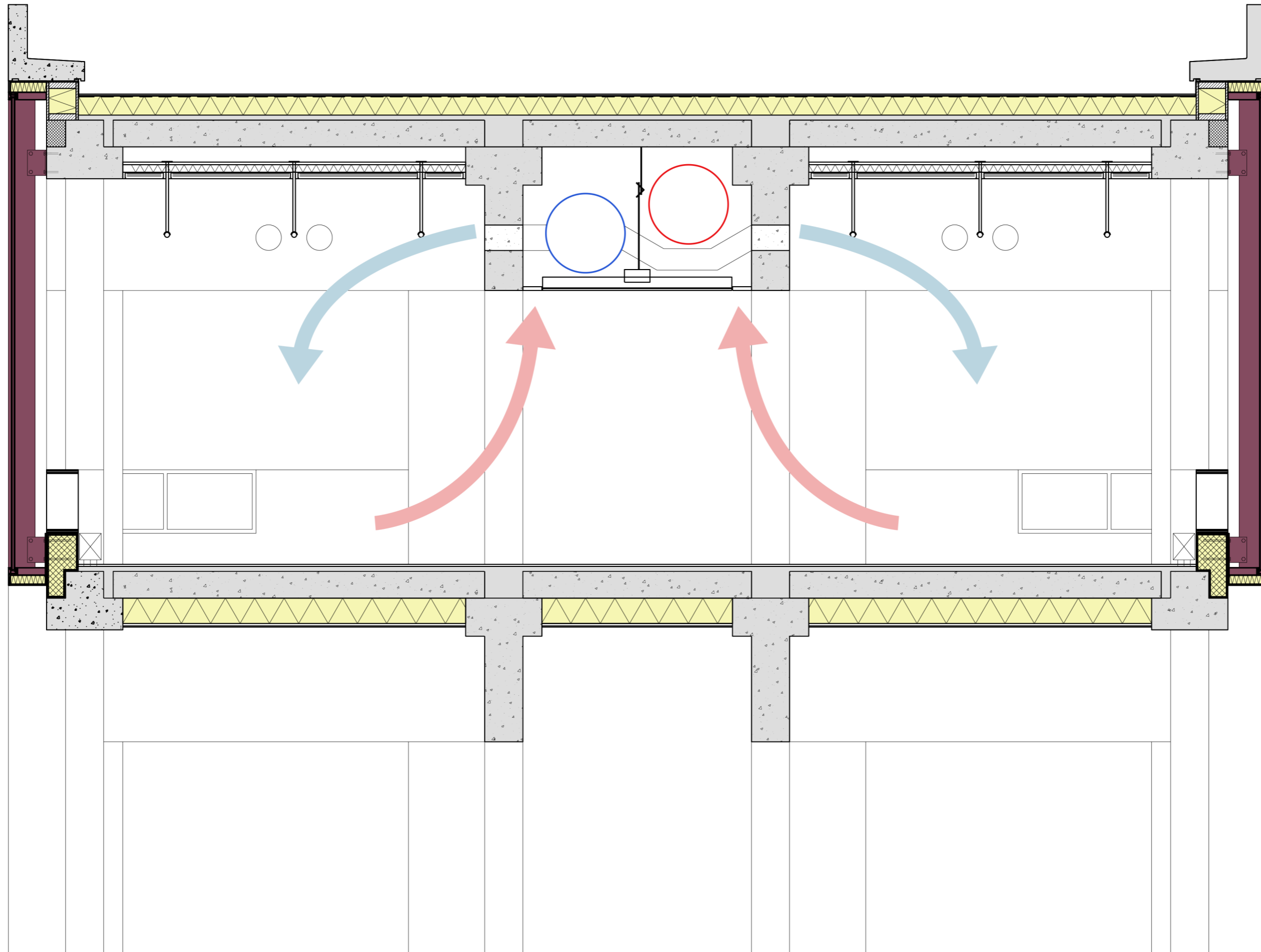
# COMFORT - INSULATION



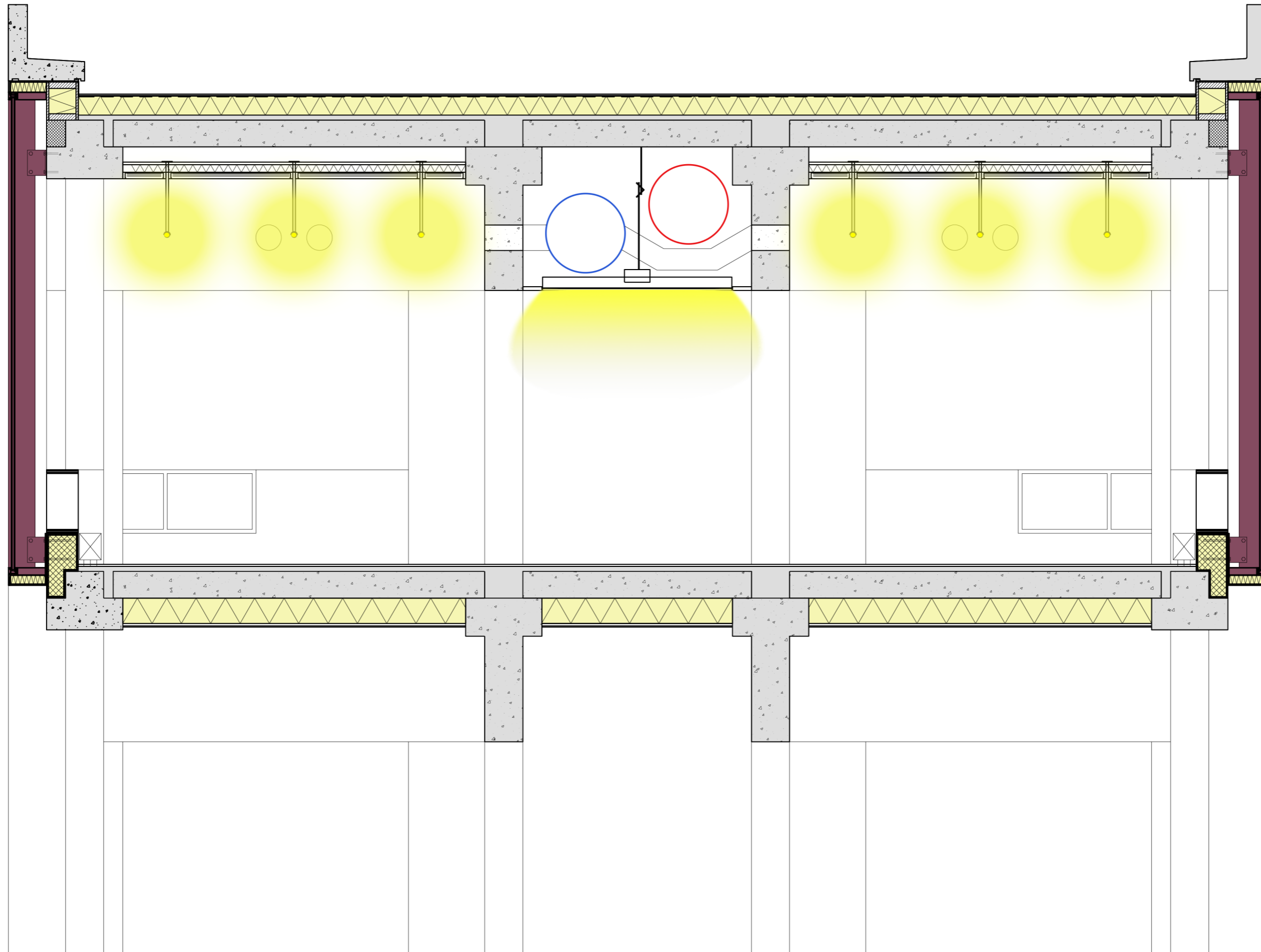
# COMFORT - HEATING



# COMFORT - VENTILATION



# COMFORT - LIGHTING





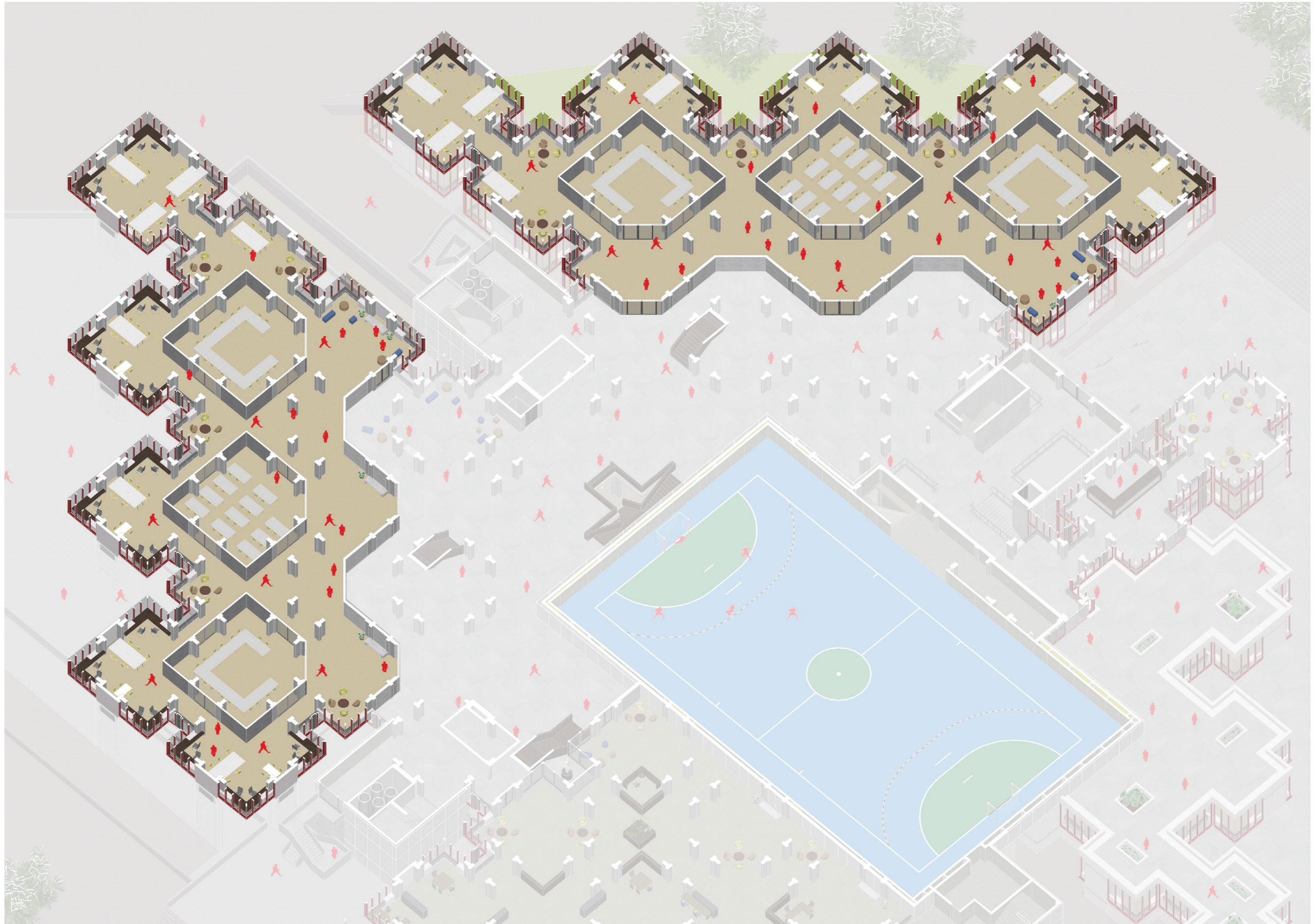
Three different approaches:

Preservation

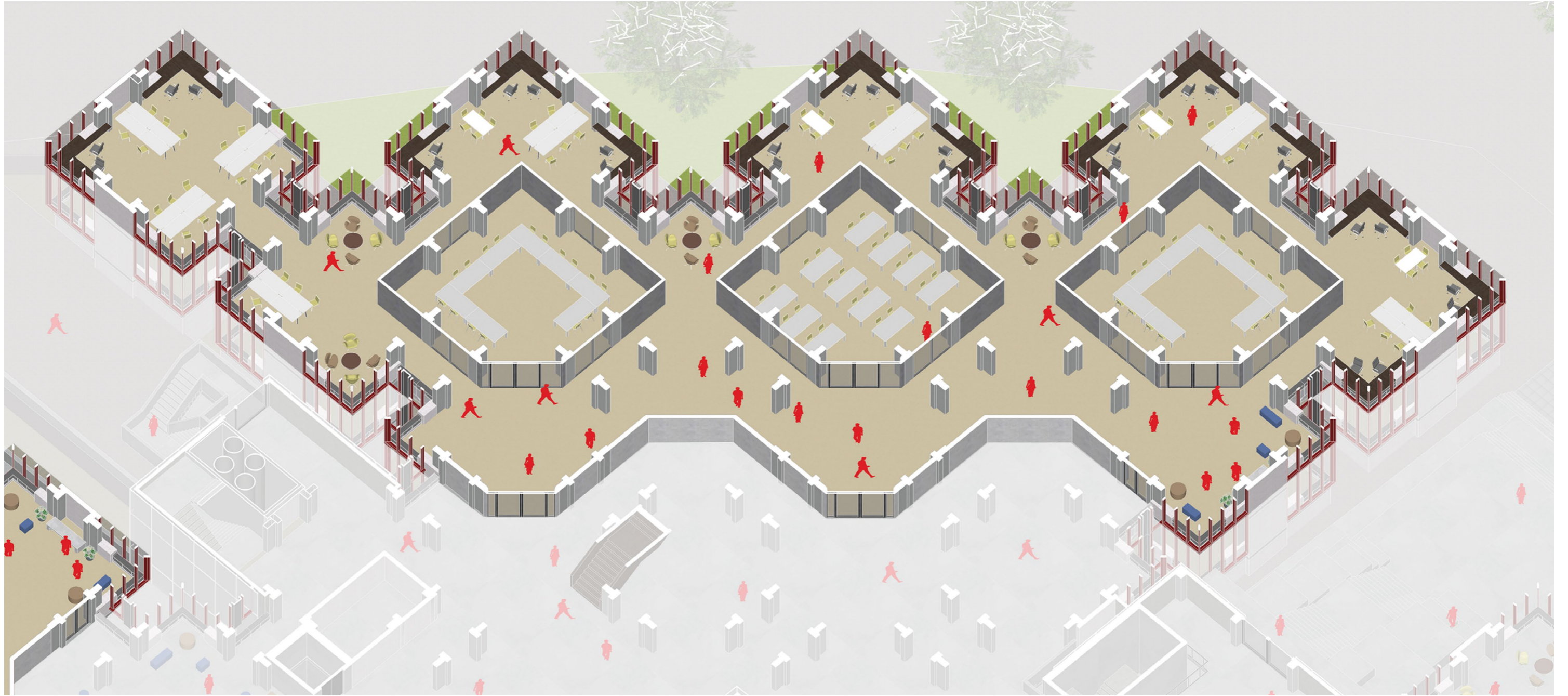
**Intervention**

Addition

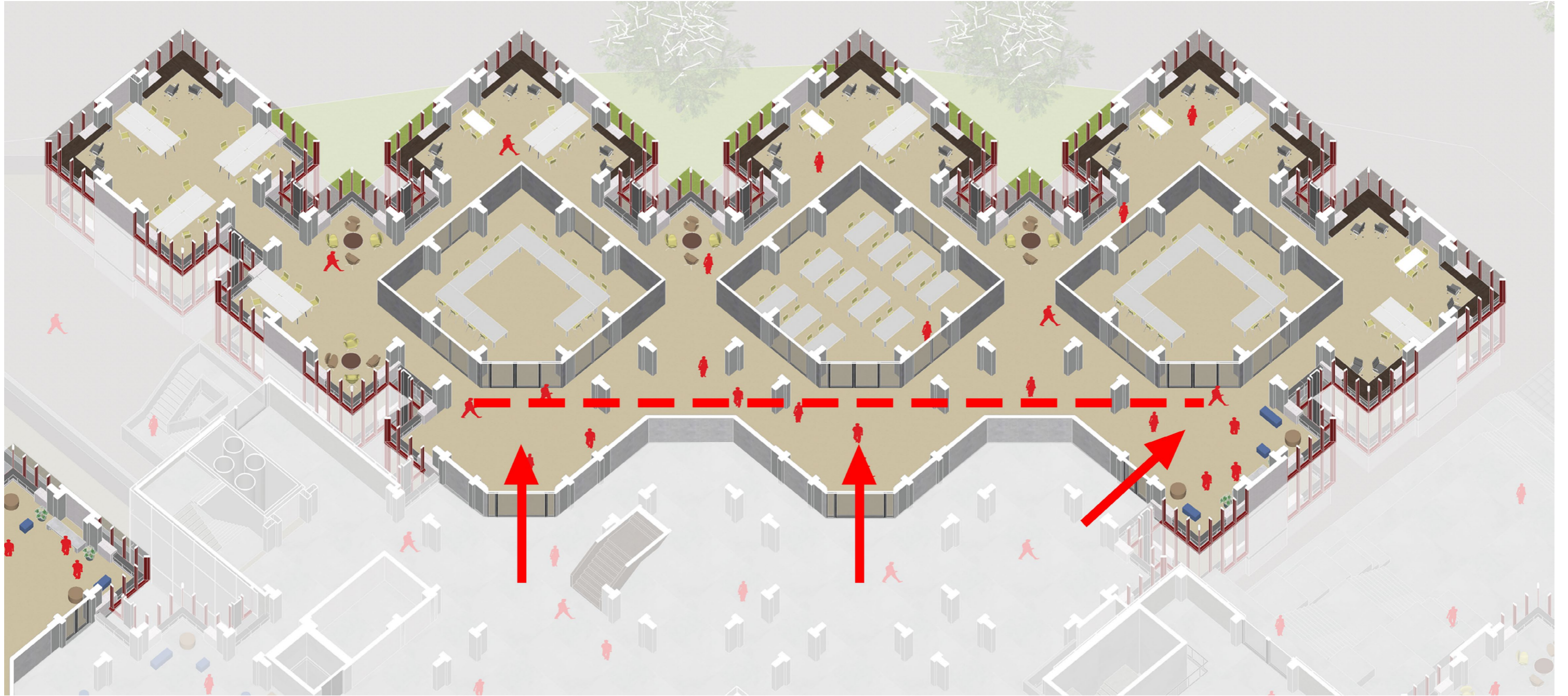
# EDUCATION QUADRANT



# EDUCATION QUADRANT



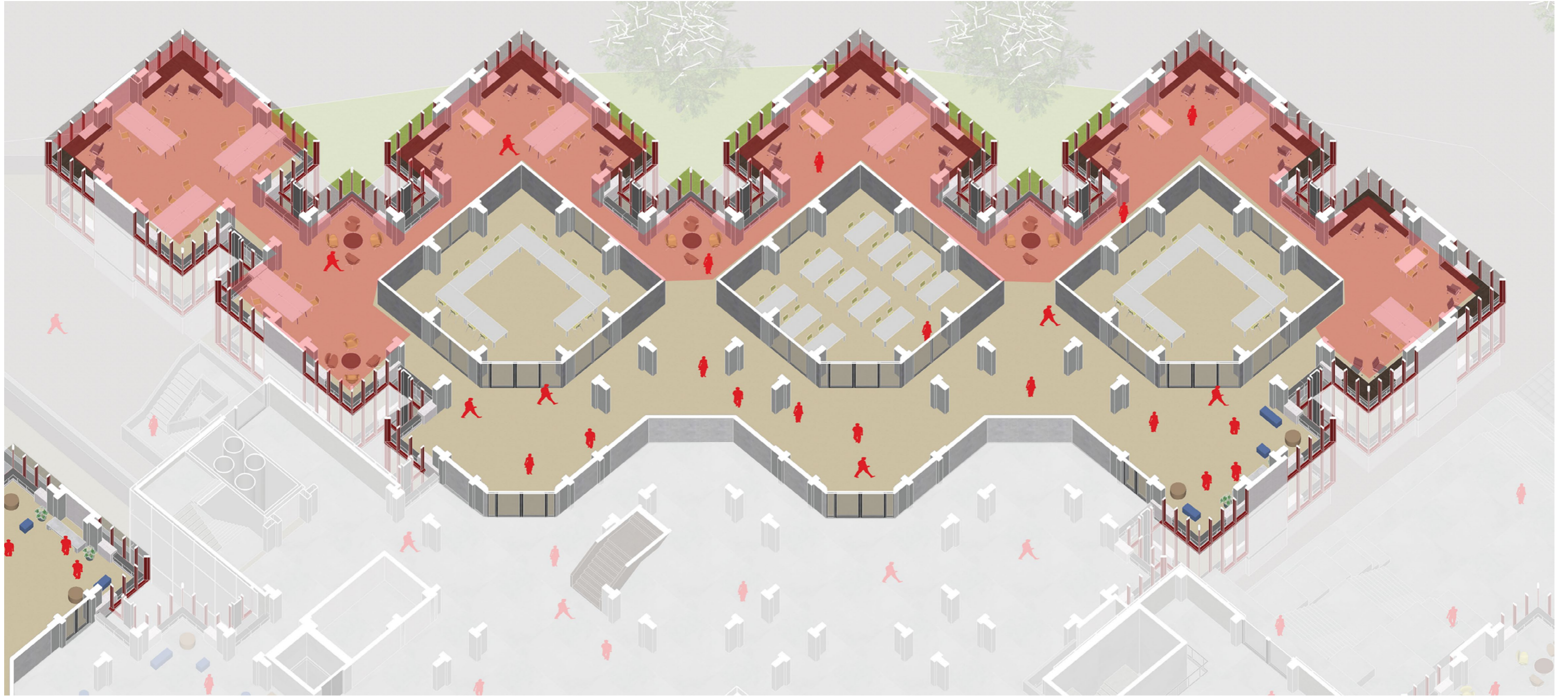
# DIAGONAL AXIS



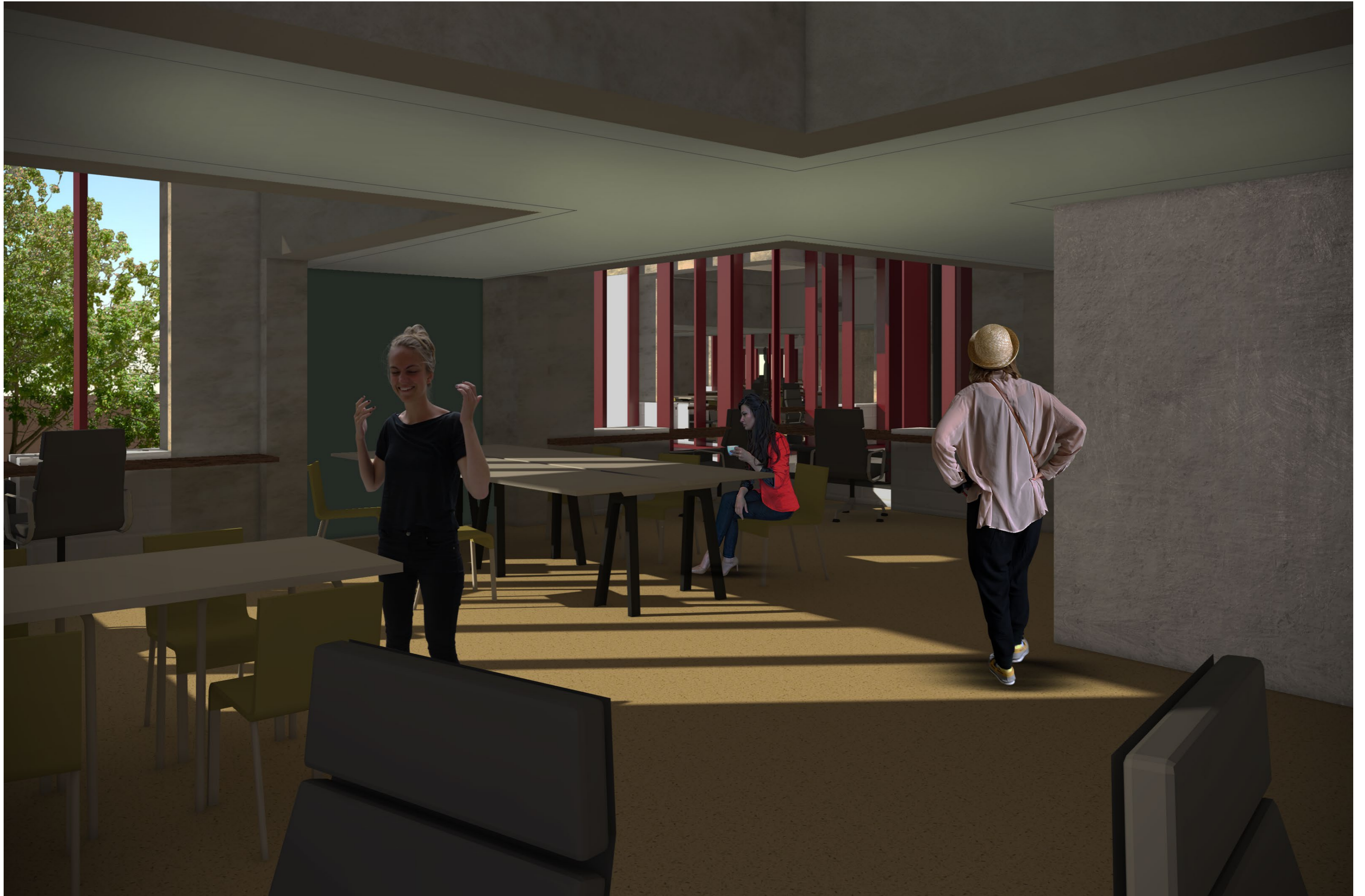
# NATURAL BARRIER



# NATURAL BARRIER



# STUDY SPACE - IMPRESSION



# CLASSROOM - IMPRESSION





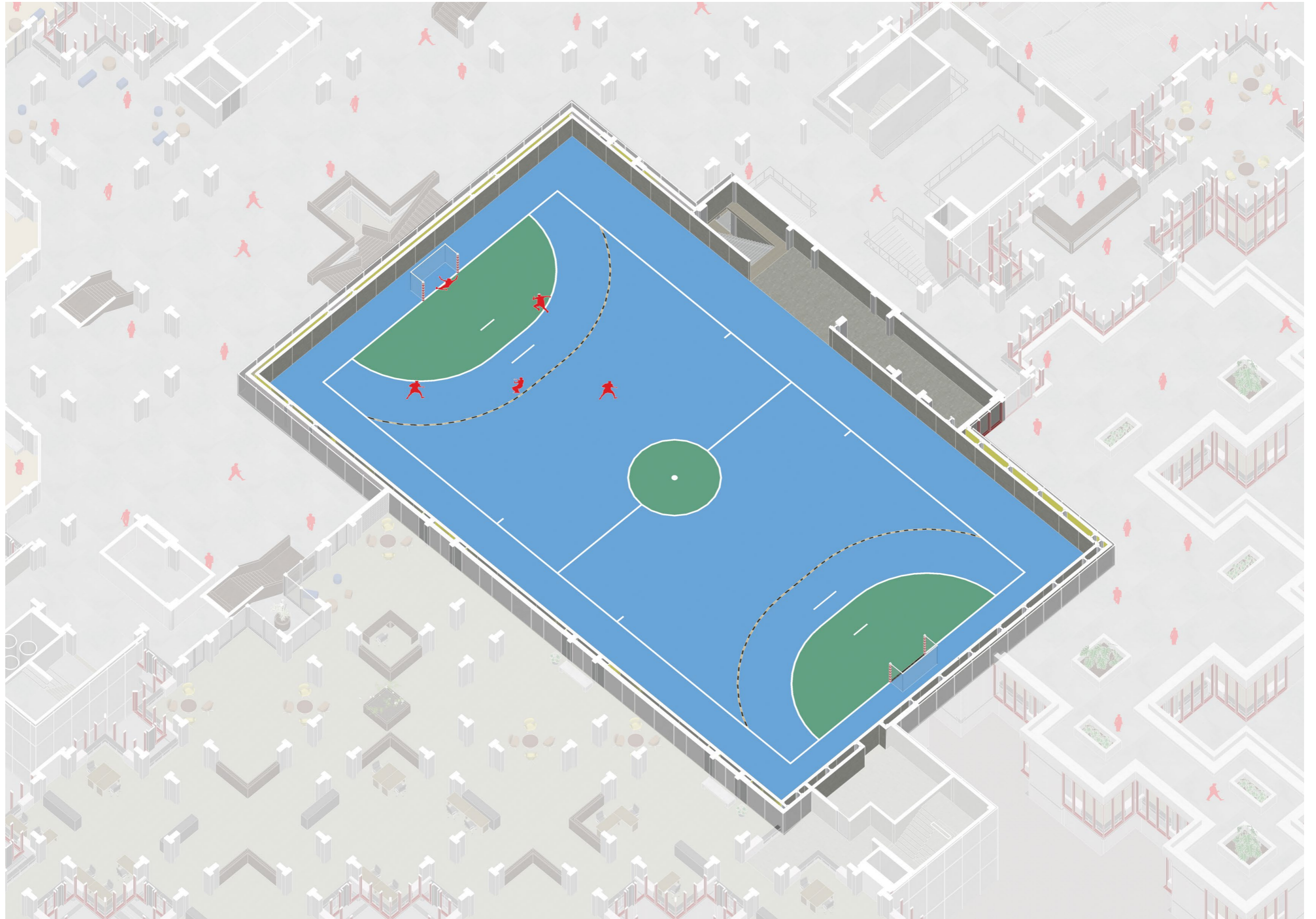
Three different approaches:

Preservation

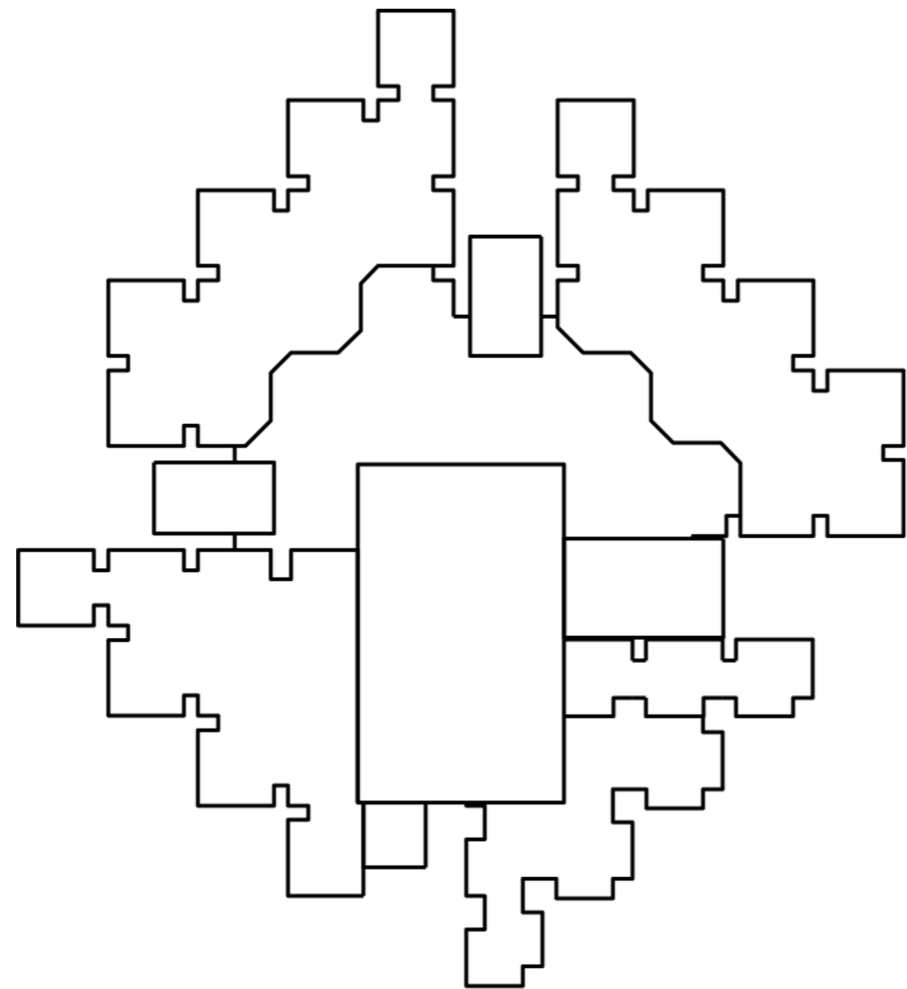
Intervention

**Addition**

# SPORTS HALL

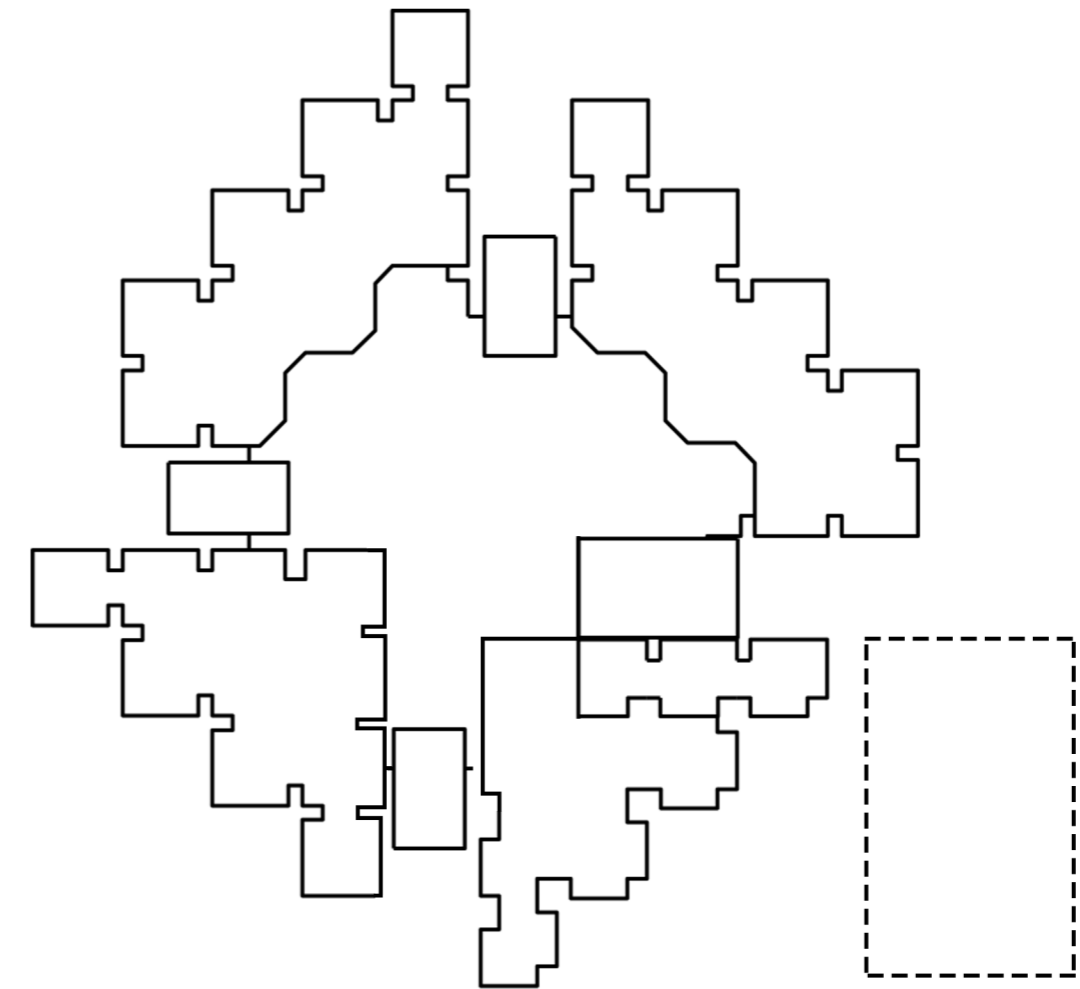


# WHY?



NHV ACADEMY  
handball center  
for education  
and innovation

vs.



Research and education facility + Sports hall

## INTERIOR vs EXTERIOR

Interior experience focused on creating ideal internal environment.

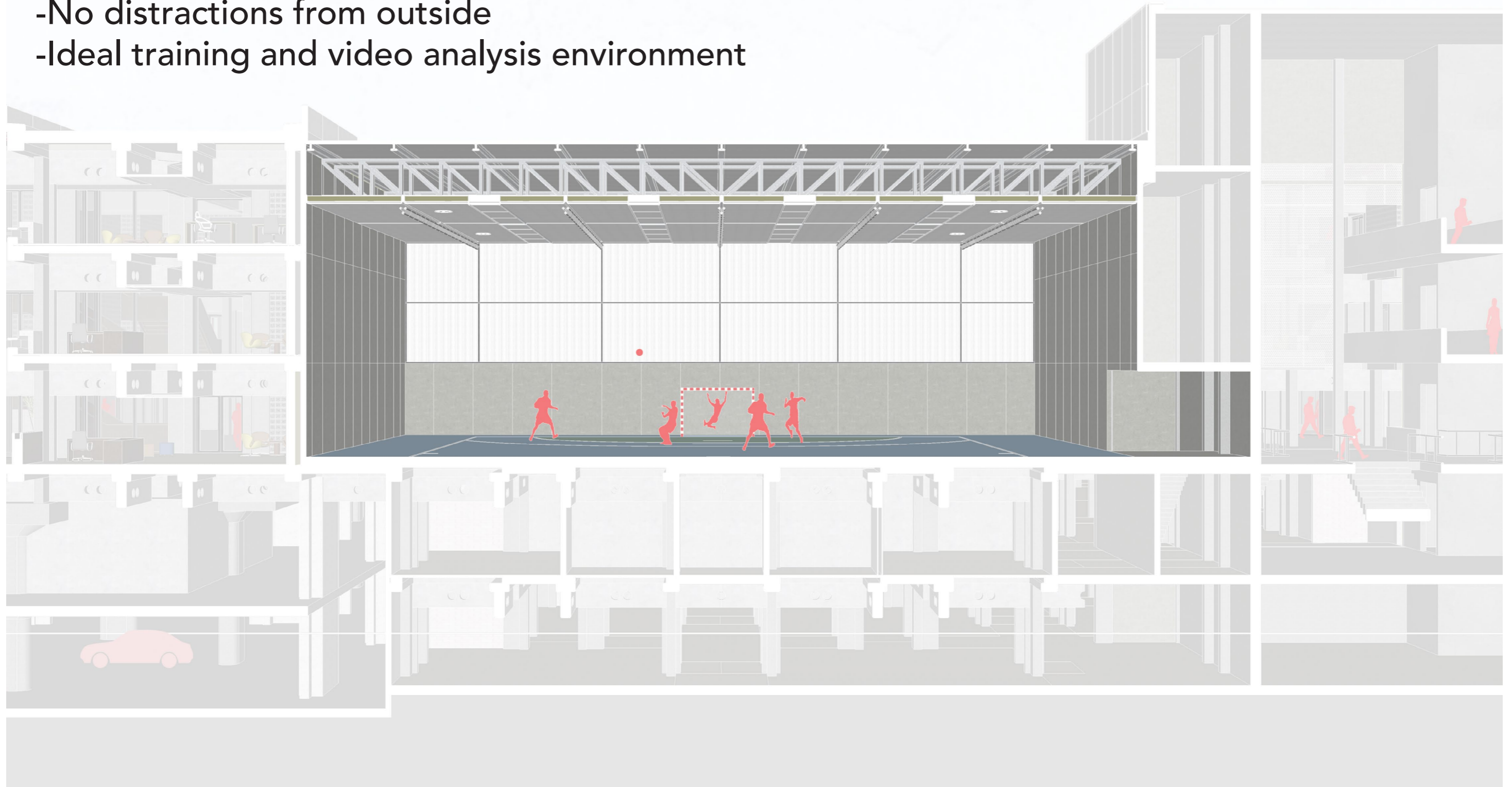
Exterior appearance that defines the volume and allows for transition of light.

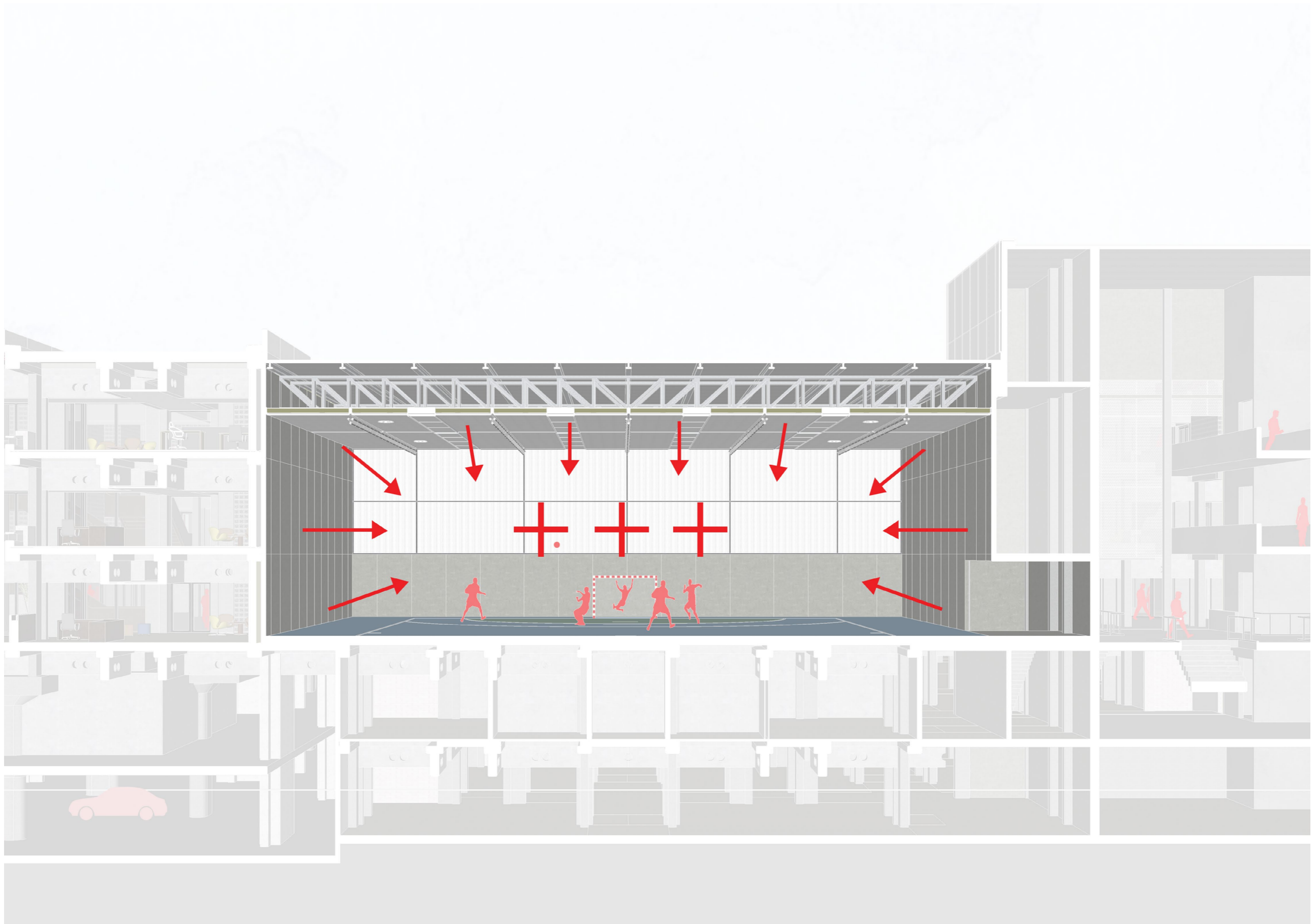


# INTERIOR

## Focus on handball

- Create your own perfect conditions
- No distractions from outside
- Ideal training and video analysis environment





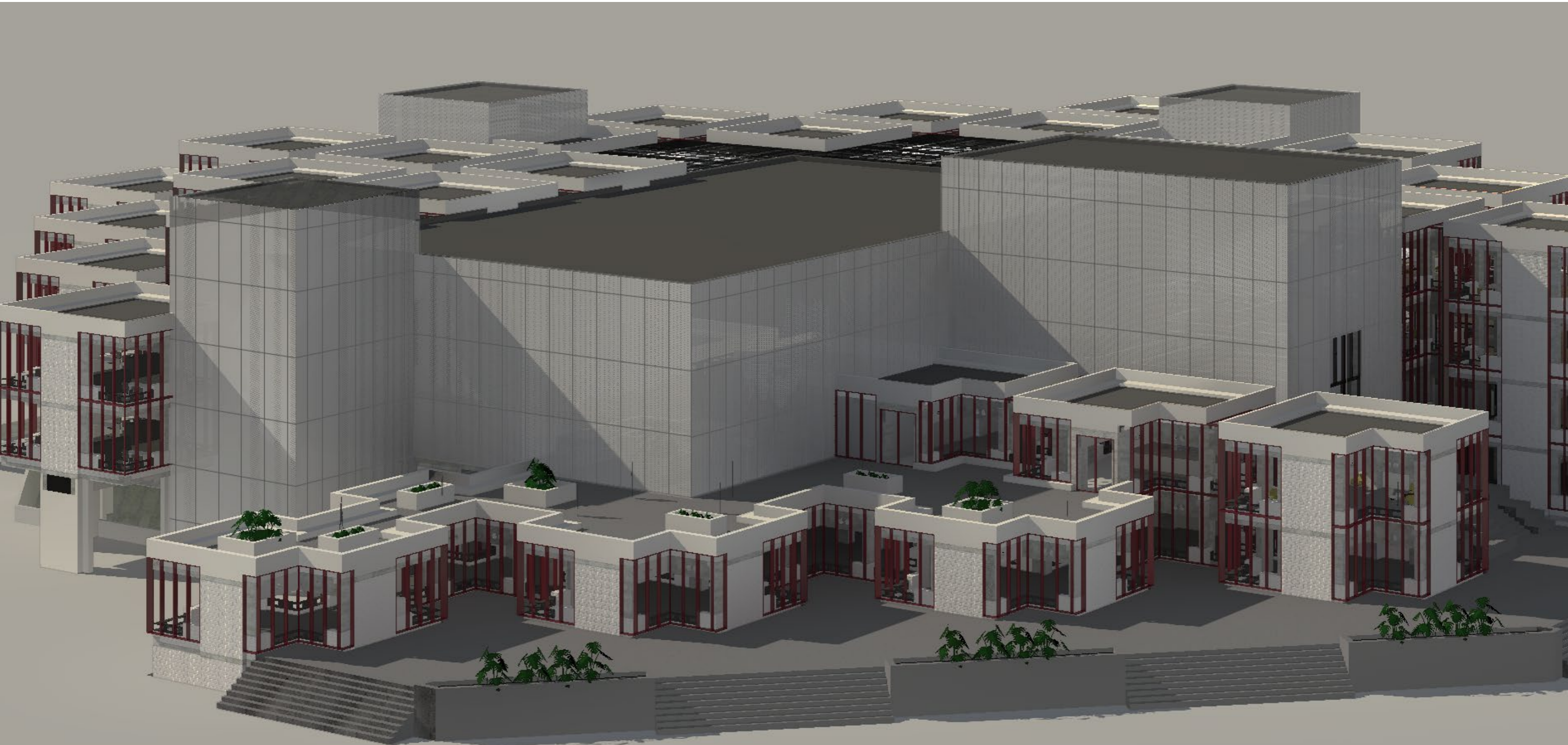
# SPORTS HALL



## EXTERIOR

The centerpiece of the building

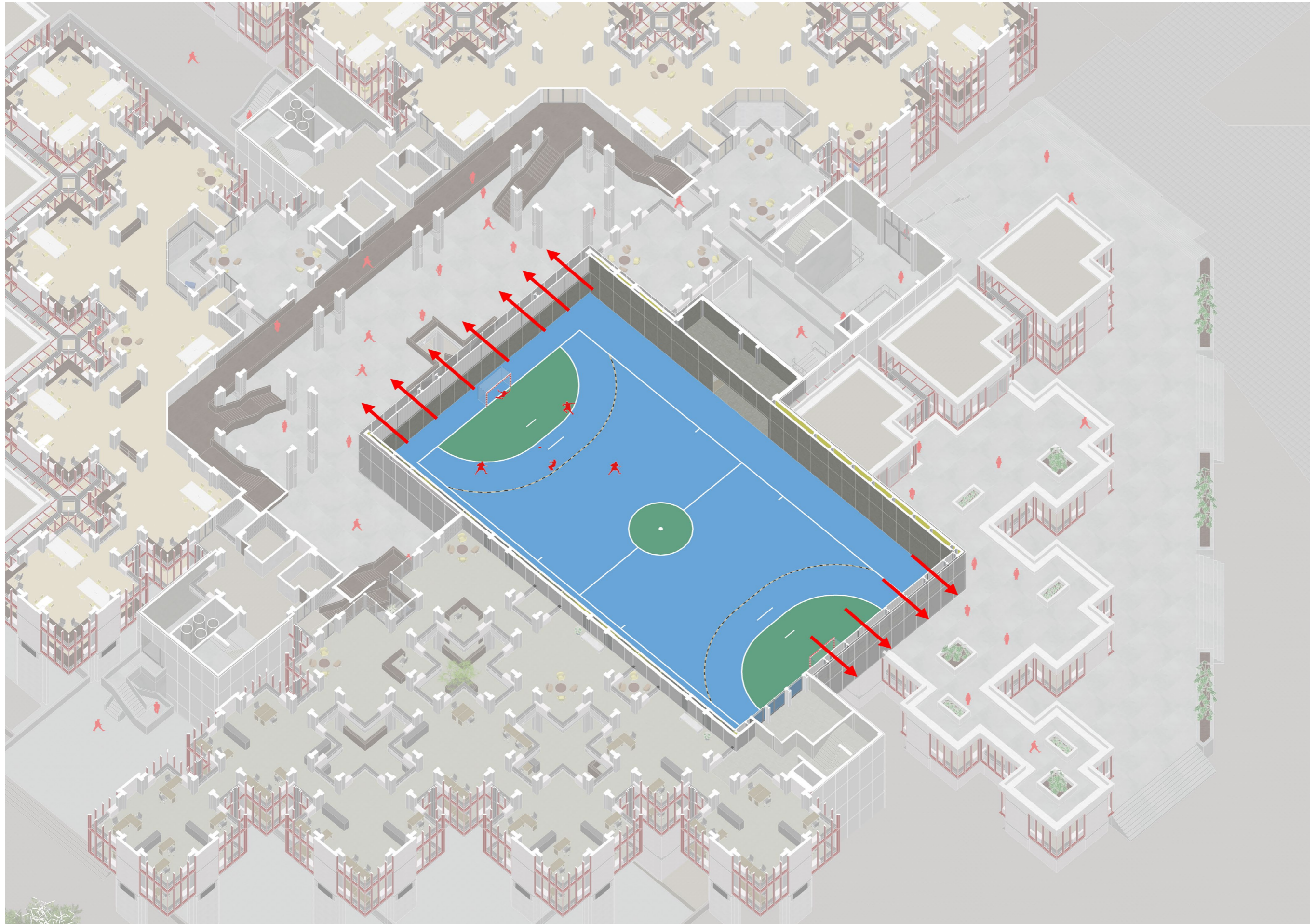
- Practice of the actual sport in the building
- Uniform appearance, defining the presence of the hall
- Transmission of faded light creates interaction and awareness of hall being in use







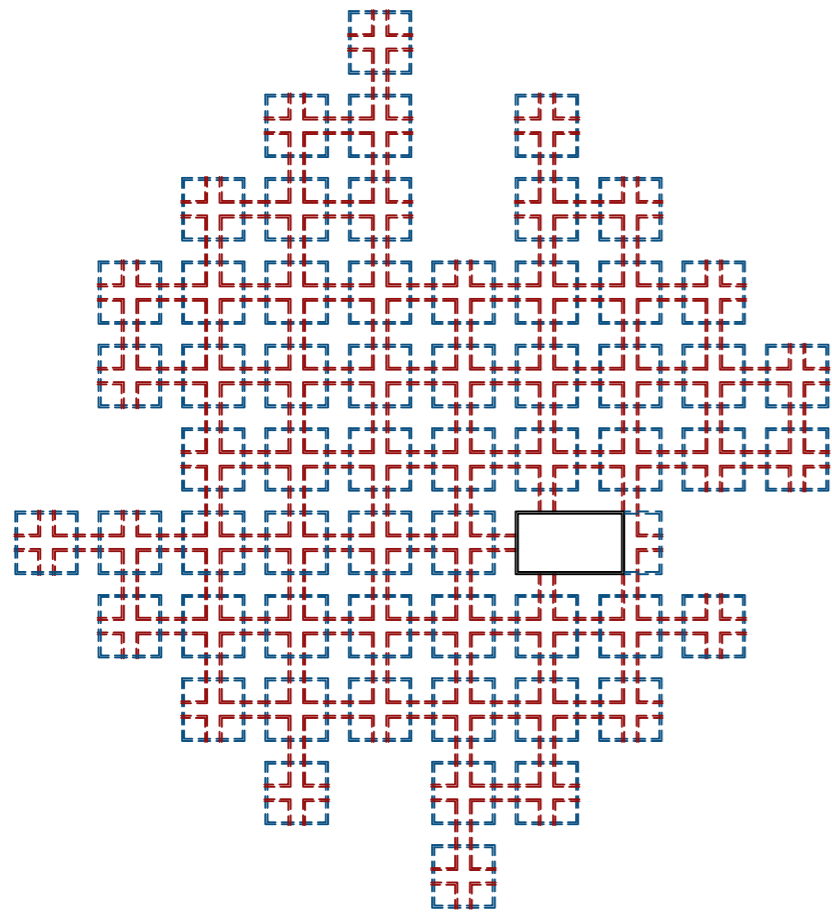
# LIGHT TRANSMISSION THROUGH FACADE



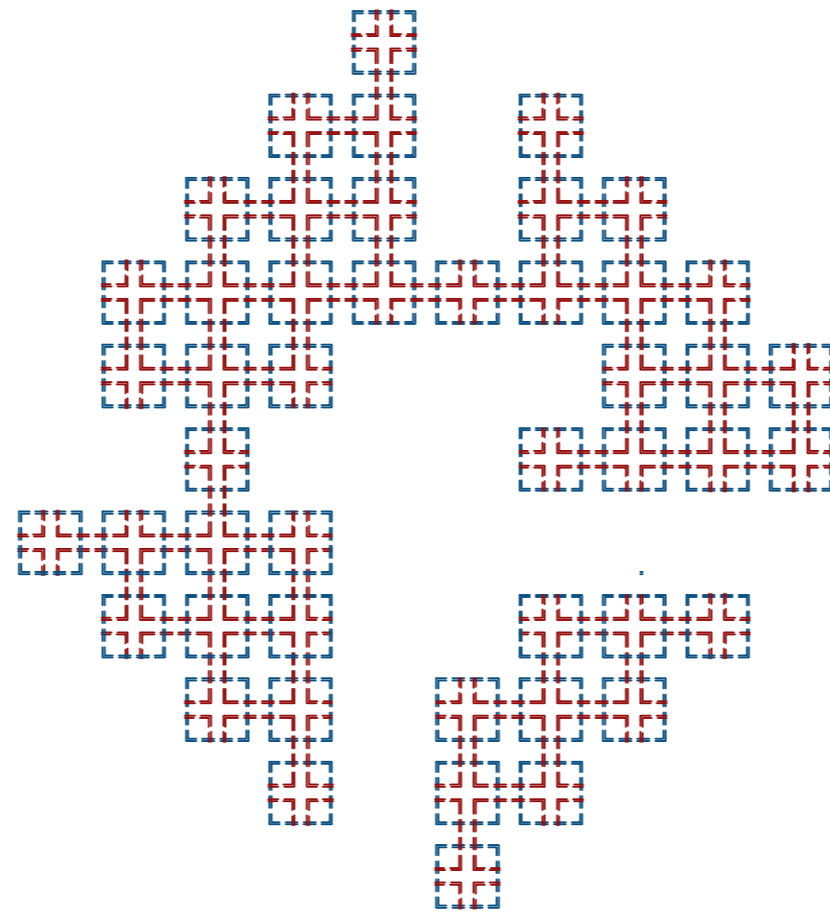
# LIGHT TRANSMISSION - IMPRESSION



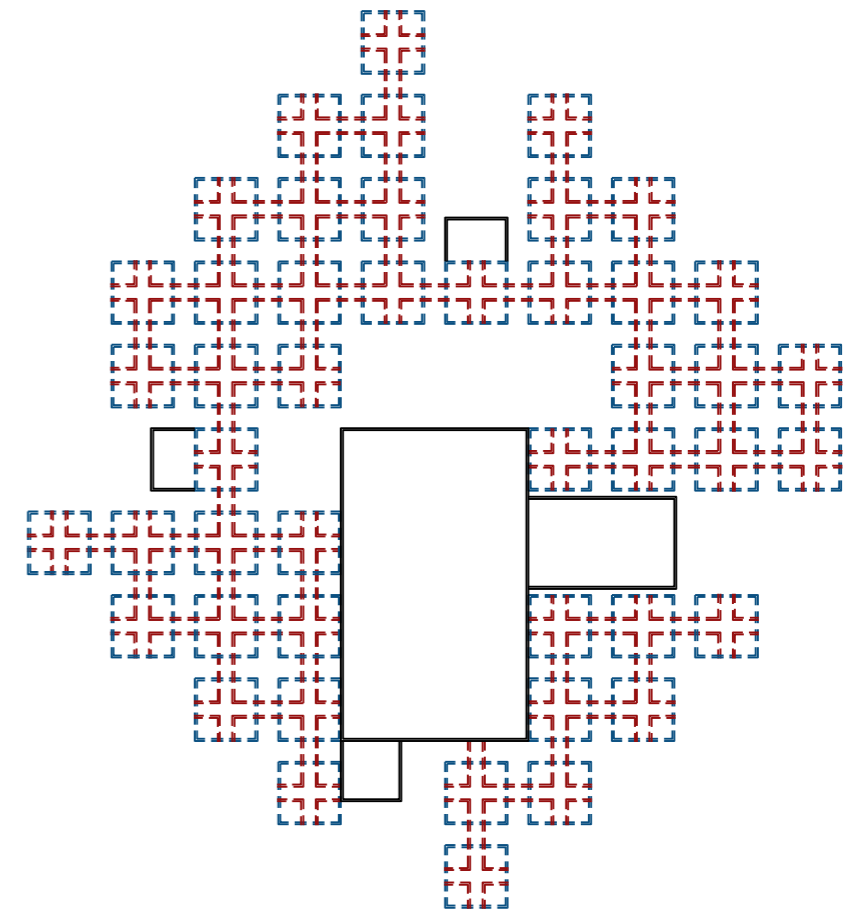
# DEMOLITION PLAN



existing structure

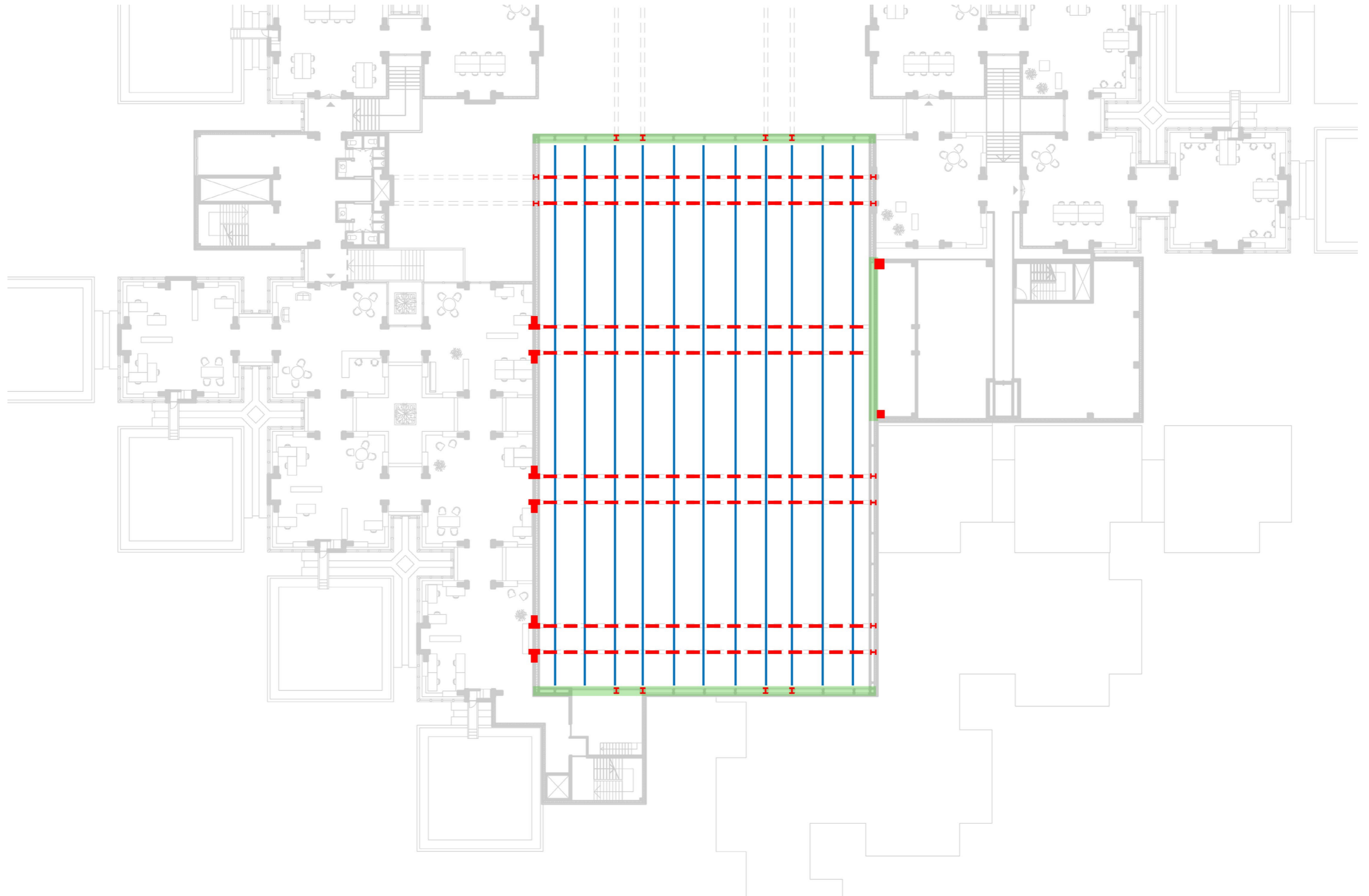


after demolishing

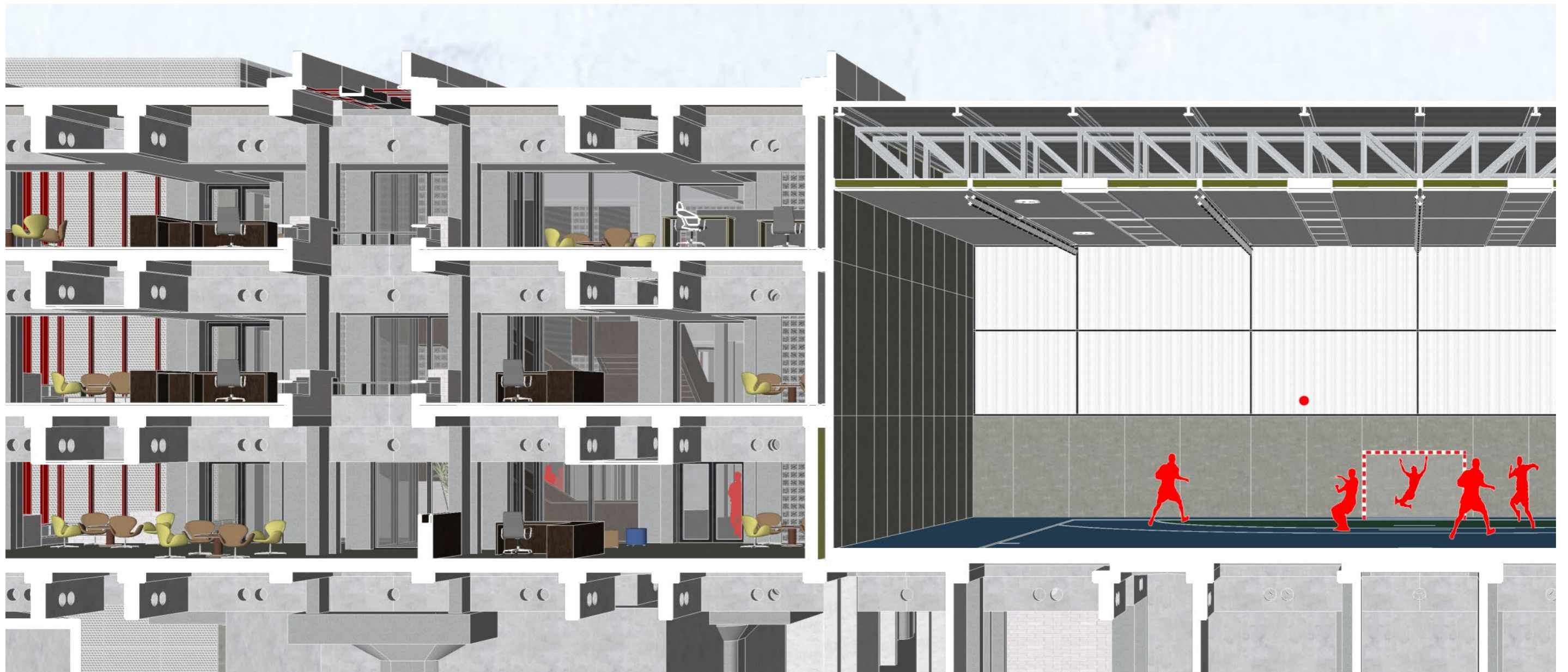


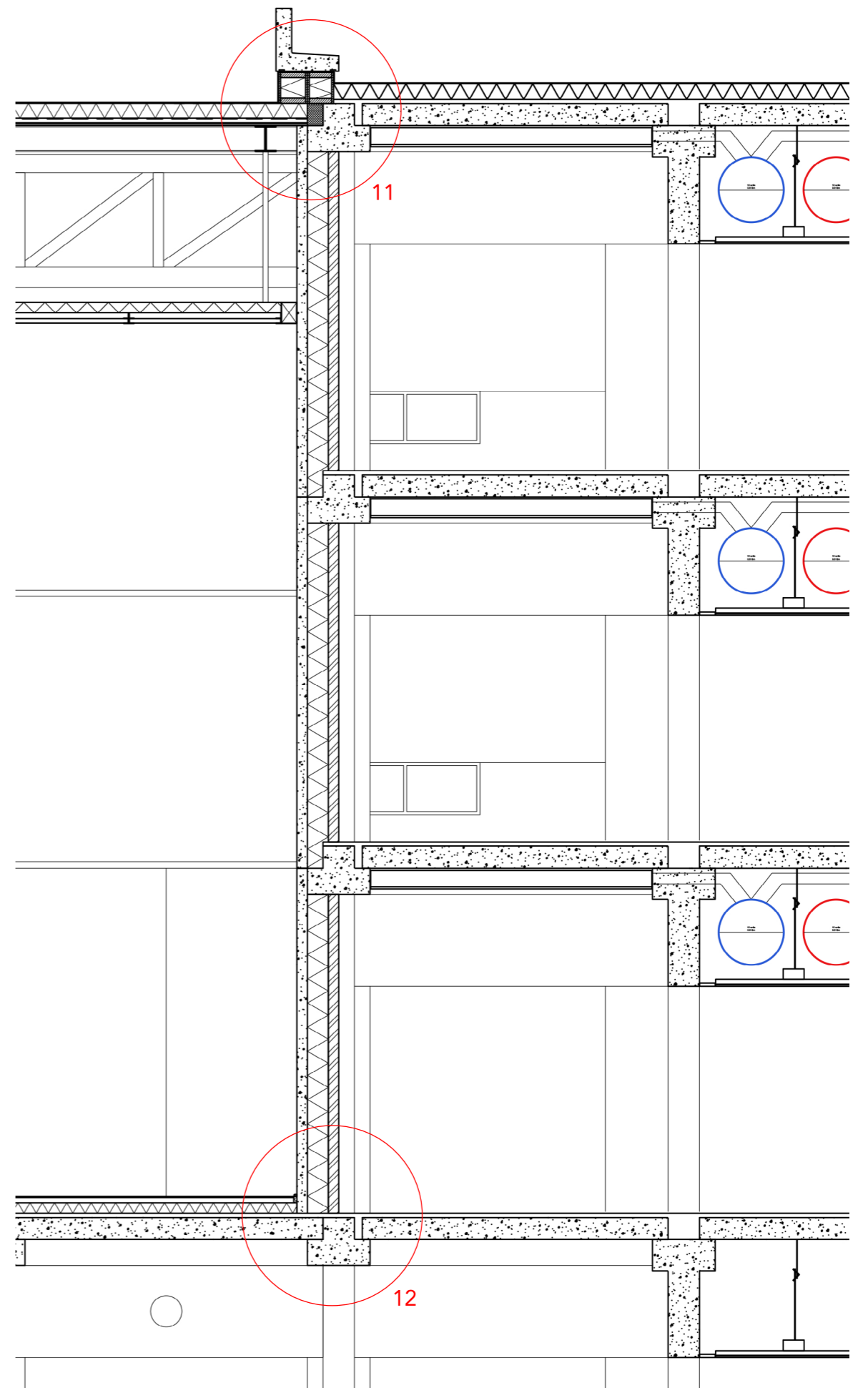
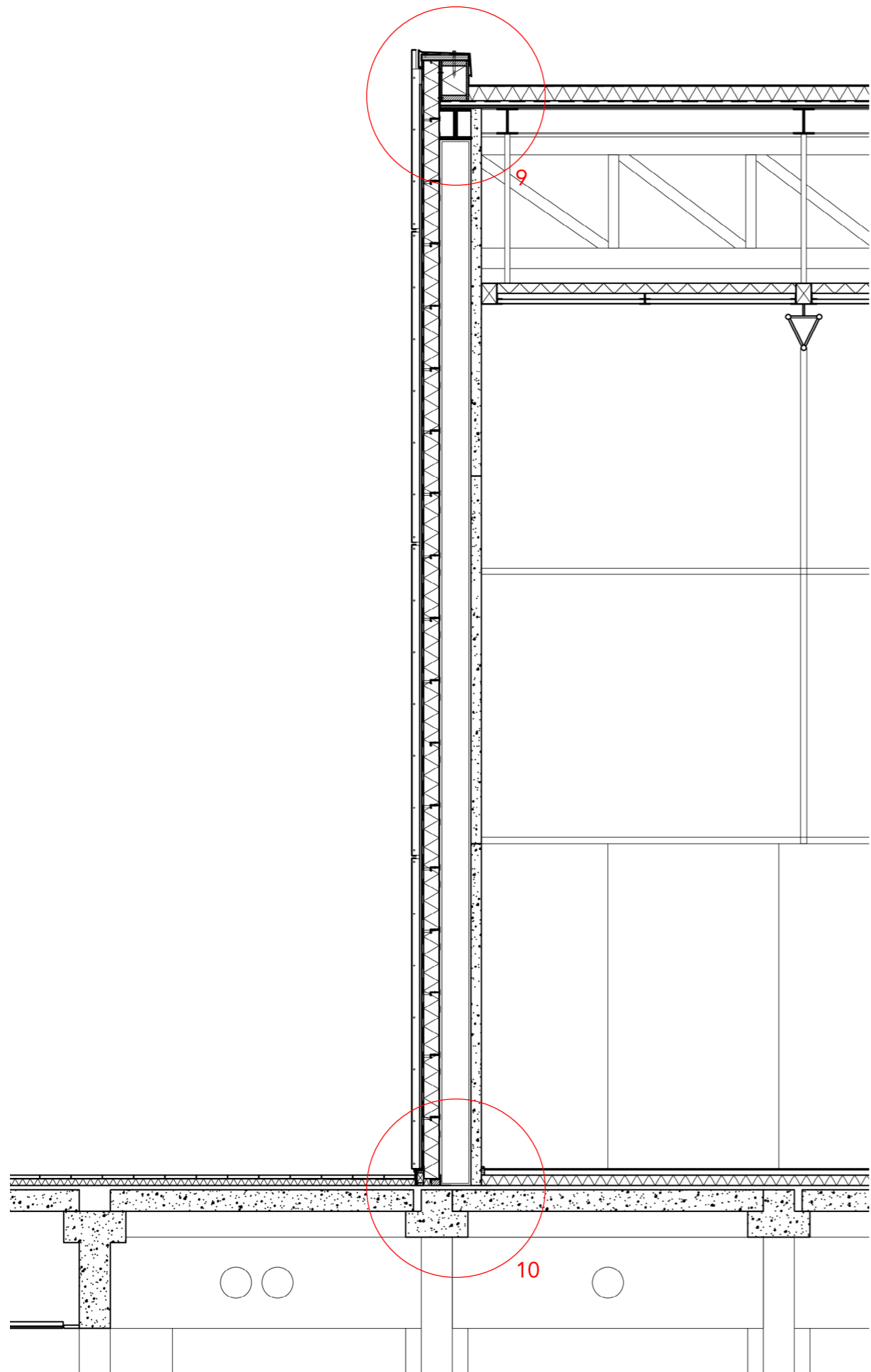
additions

# CONSTRUCTION SCHEME - STRUCTURE

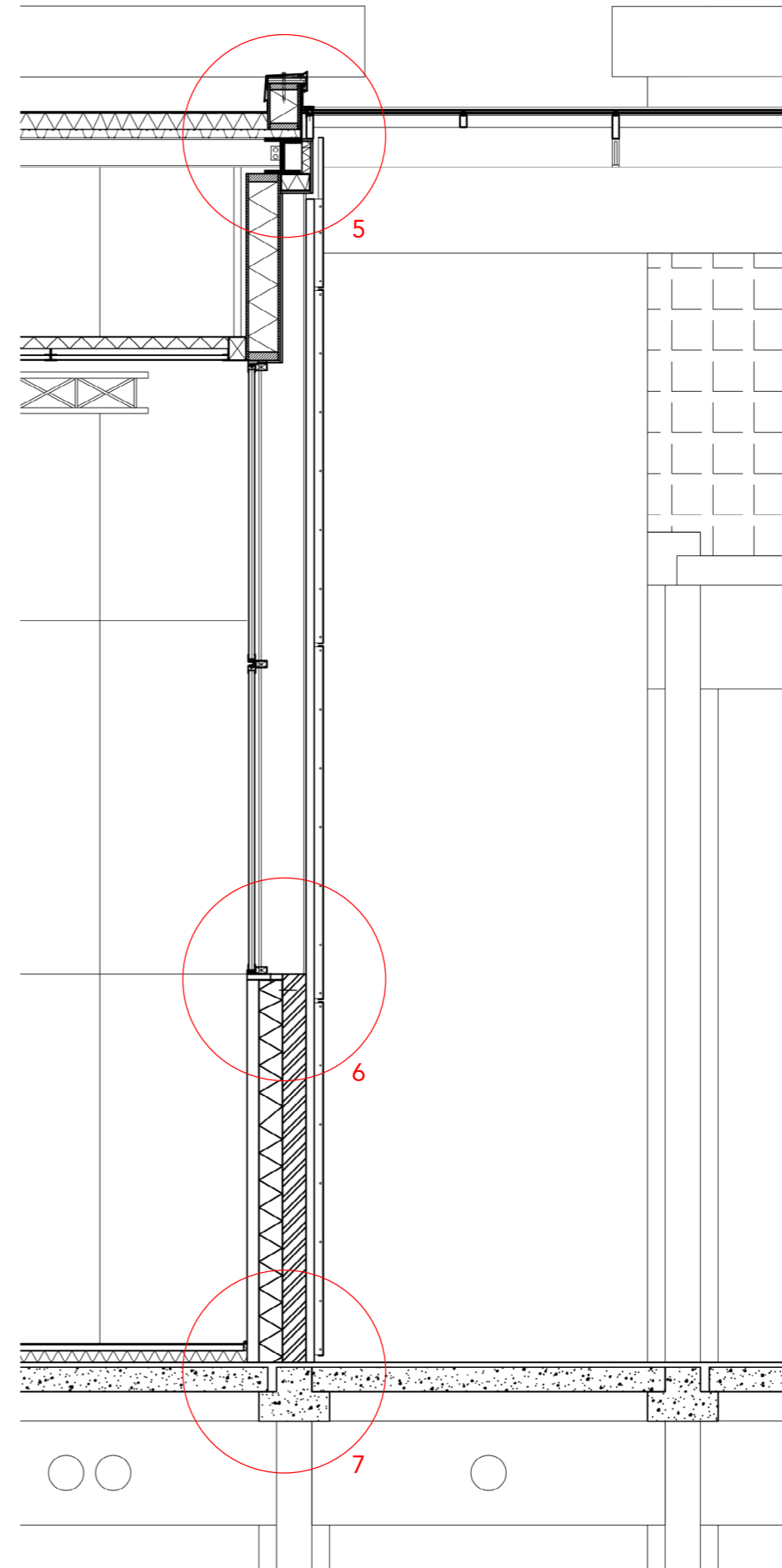
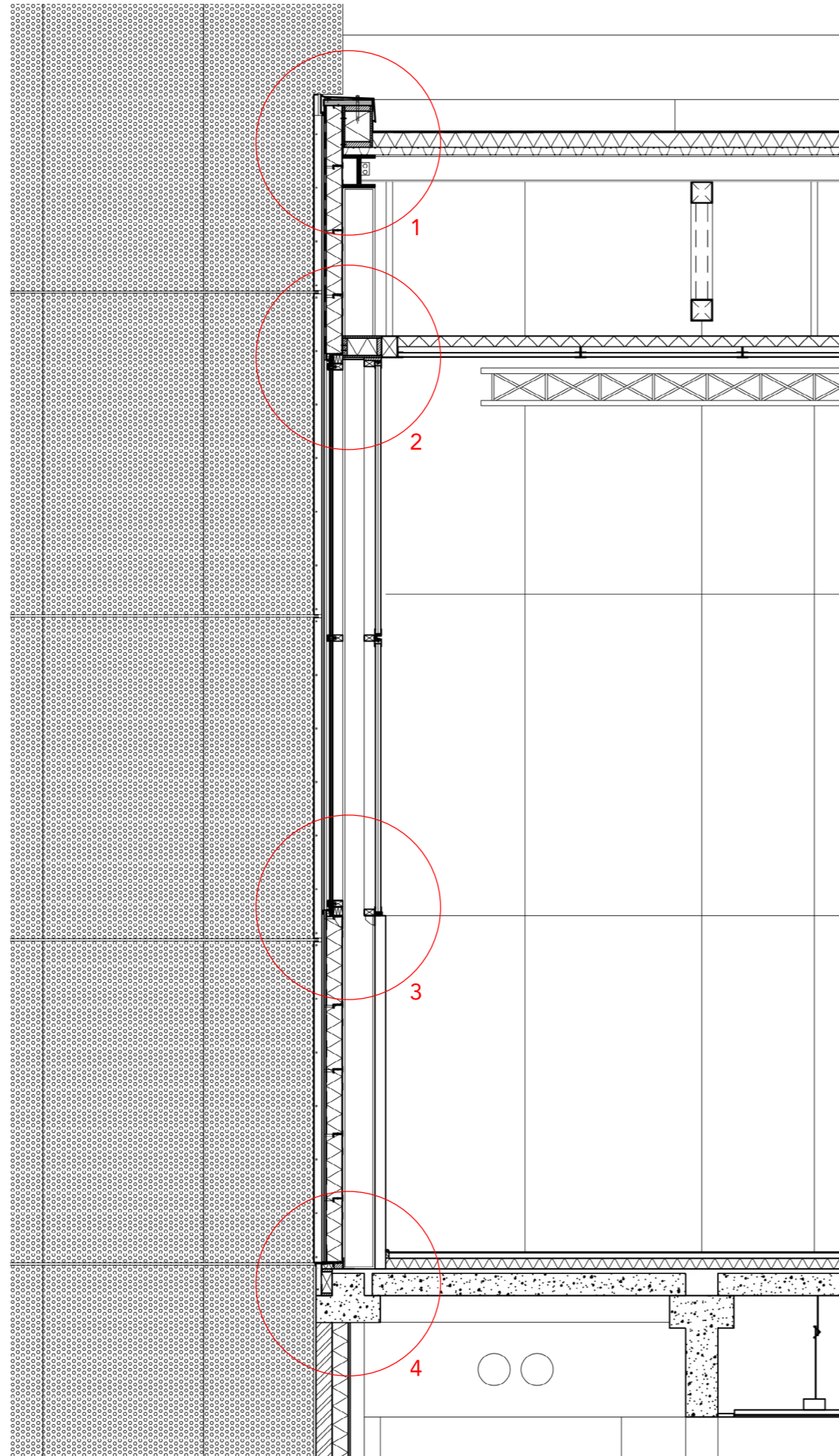


# EXISTING VS NEW





# FRAGMENT





# SERVICE TOWERS / SECONDARY ENTRANCE



# FOUR SERVICE TOWERS



Preservation

Intervention

Addition

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+

**NHV Academy**

# INTERIOR



# EXTERIOR



## EXTERIOR COMPOSITION

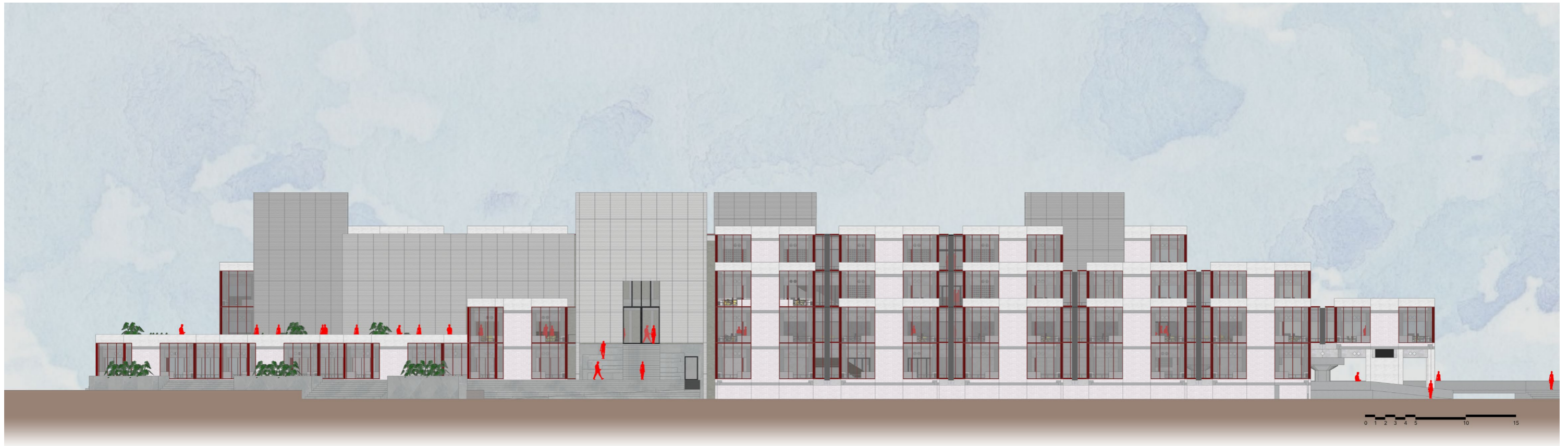
Use of two idioms:

- Existing facade, as close to original as possible
- New volumes, clear difference in material expression

# EXTERIOR



# EXTERIOR COMPOSITION





# ENTRANCE TOWER



# EXTERIOR COMPOSITION



# EXTERIOR COMPOSITION



INTRODUCTION

RESEARCH & ANALYSIS

DESIGN AMBITIONS

DESIGN

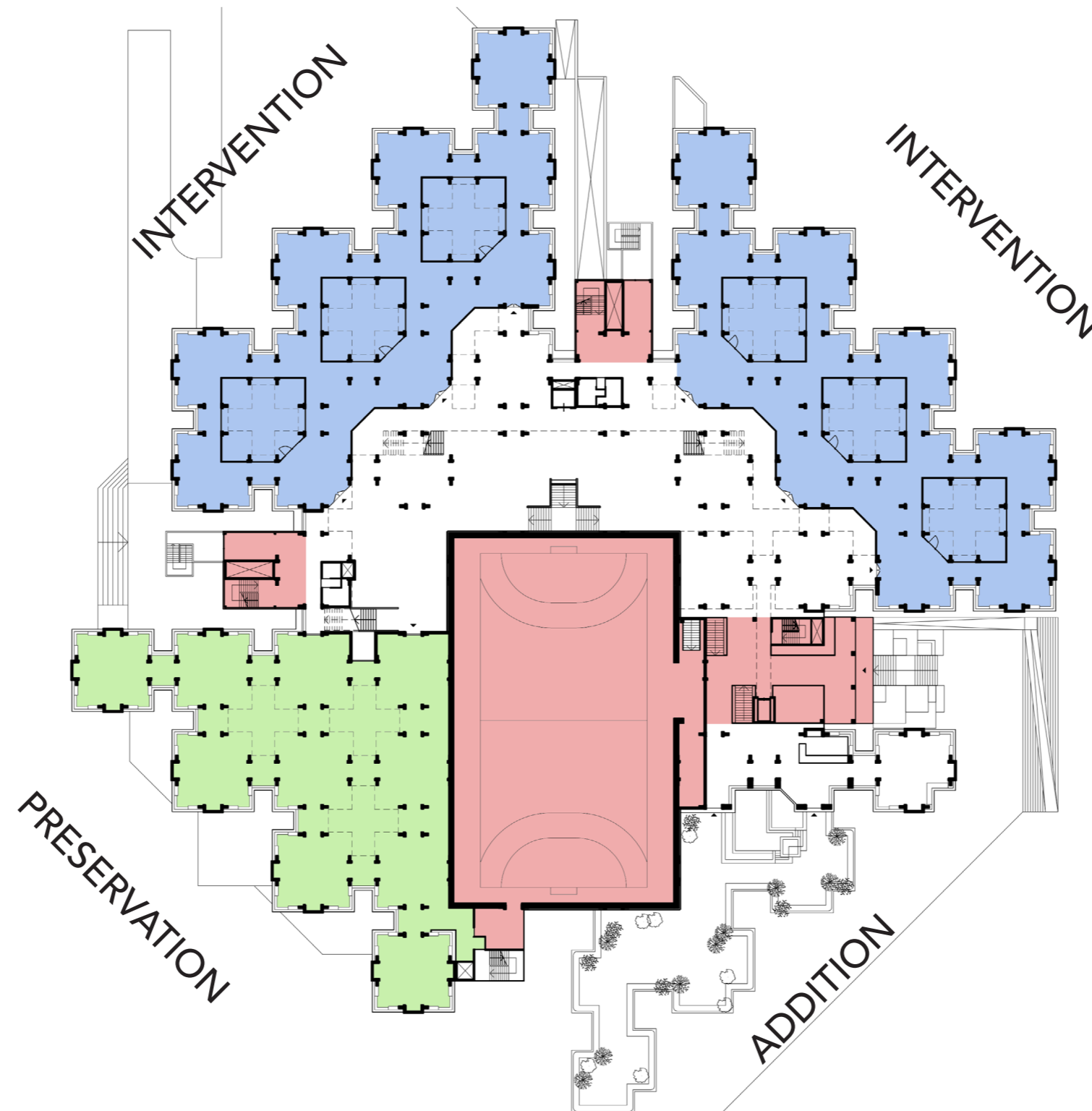
**REFLECTION**

What are the possibilities and limitations of a structuralist building when transforming to a new function, without detracting from its iconic, cultural and structuralist values?

# REFLECTION

Three different approaches:

- preservation
- intervention
- addition



## REFLECTION

### PRESERVATION:

preserve the original state of the building without affecting its original appearance or experience.

shows a glimpse of revolutionary architectural history, yet also exposes its practical problems such as lack of orientation

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use existing qualities such as diagonal sightlines and improve on negative aspects by creating natural privacy and hierarchy.



## REFLECTION

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### ADDITION:

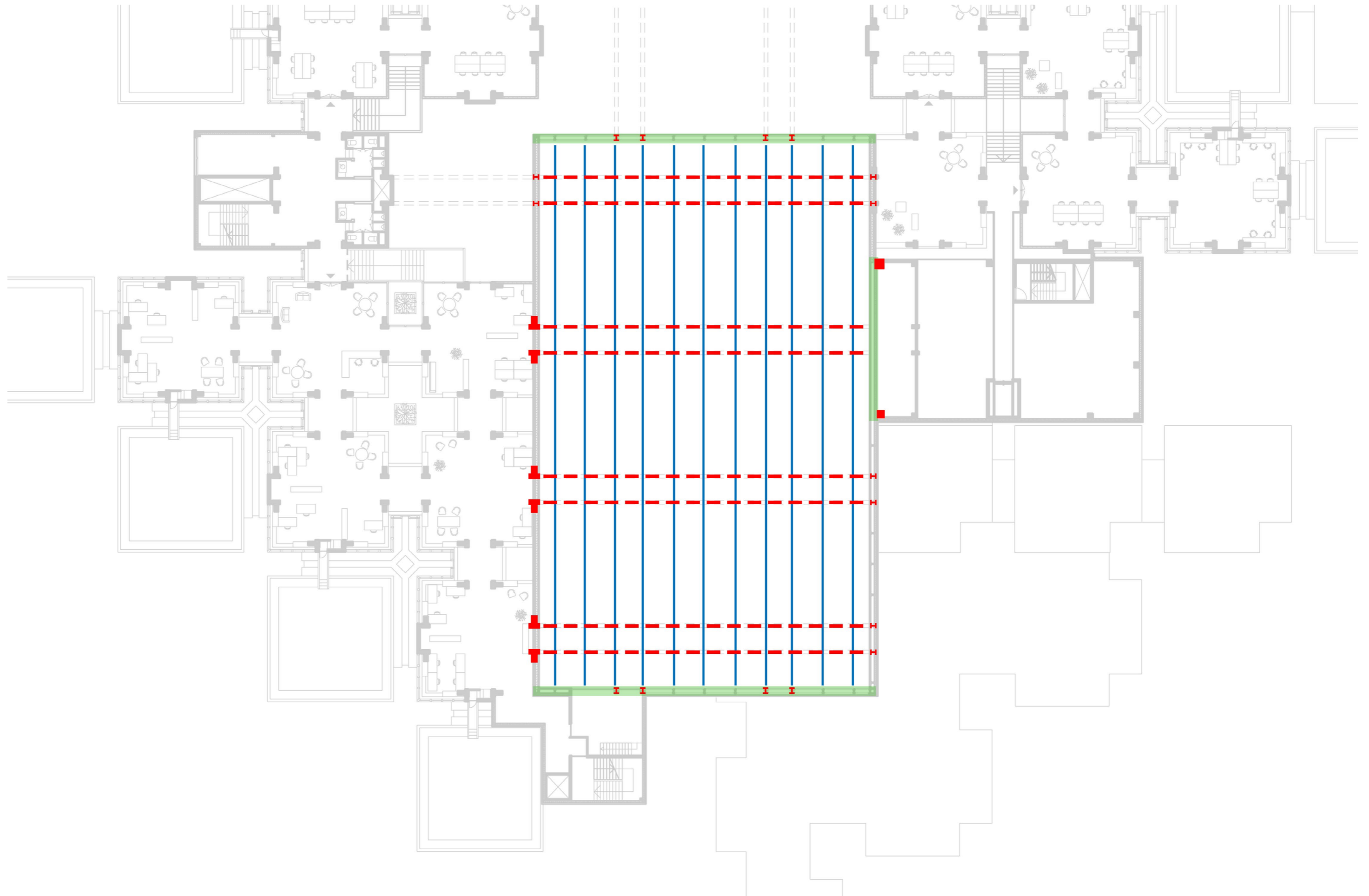
create a new experience without having to work with highly defining construction.

allowing for freedom of interpretation of the grid

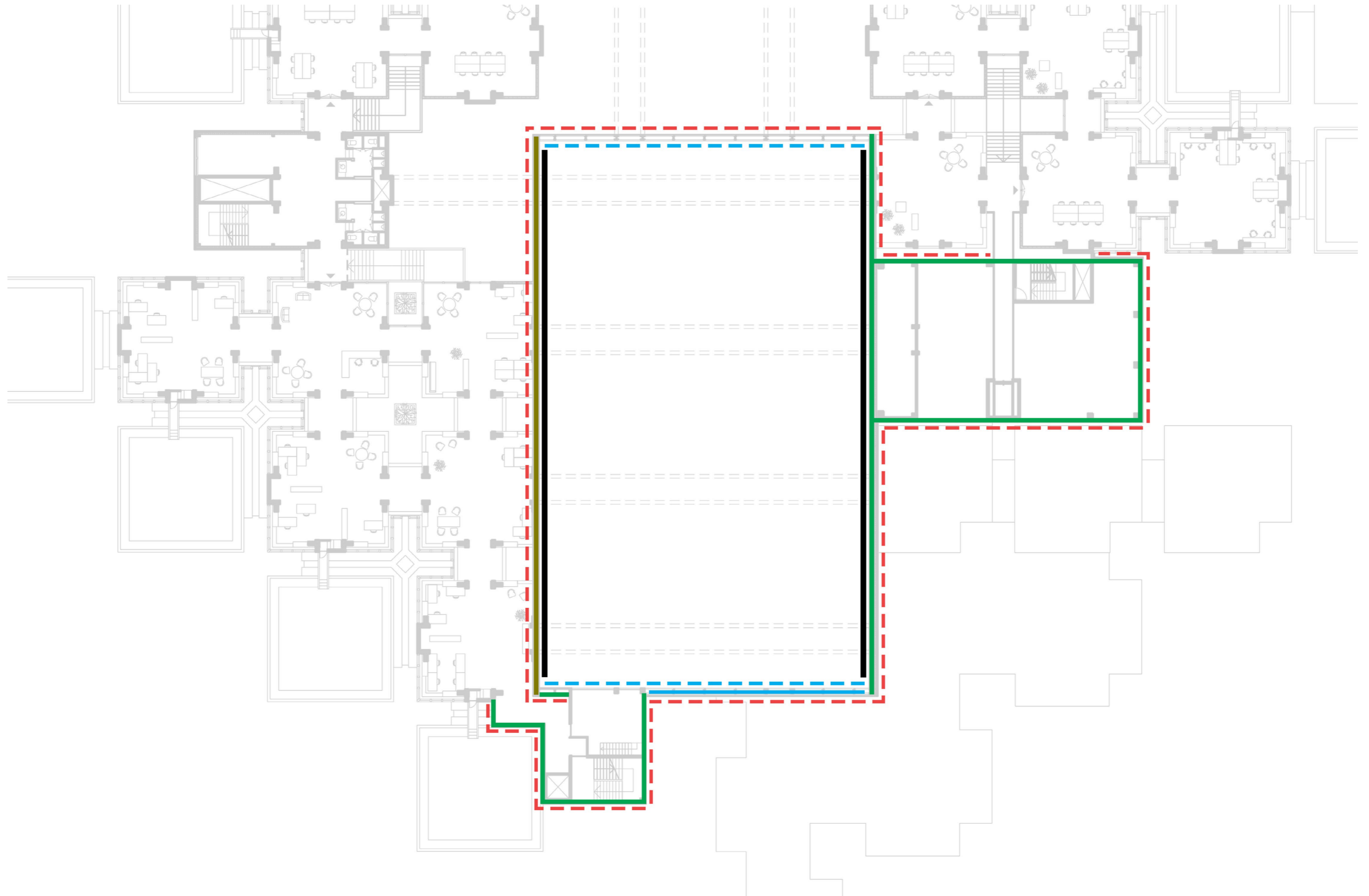
An architectural rendering of a modern school building. The building features a mix of light-colored brick and large glass windows with dark frames. A prominent feature is a central staircase with a wide, flat top section. The building is surrounded by lush green trees and a paved plaza. Several people are depicted in the scene: a man in a dark jacket and cap walking away from the camera, a woman pushing a stroller with a child, and a few other figures near the building. The overall atmosphere is bright and clean, suggesting a well-maintained educational environment.

**THANK YOU**

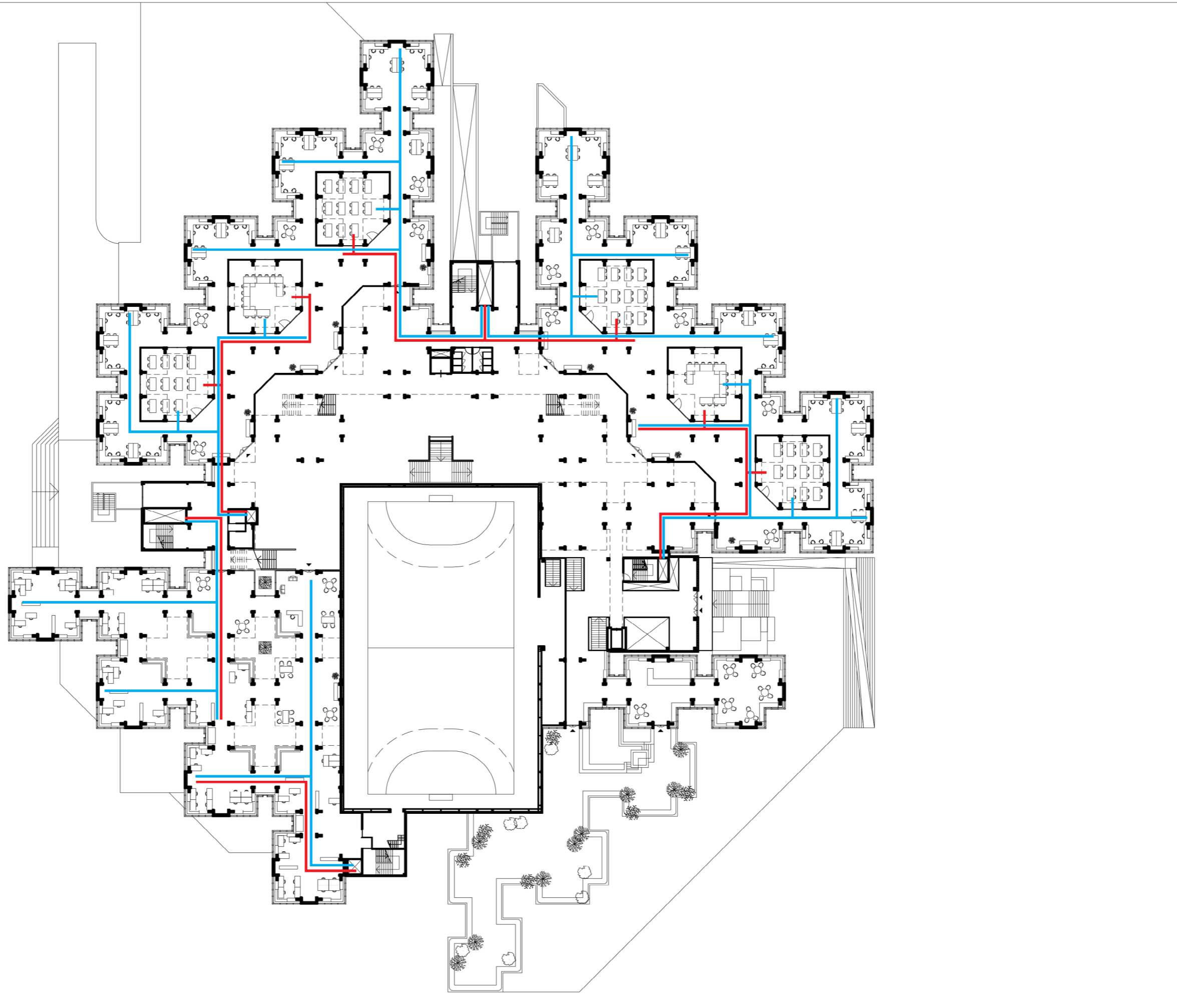
# CONSTRUCTION SCHEME - STRUCTURE



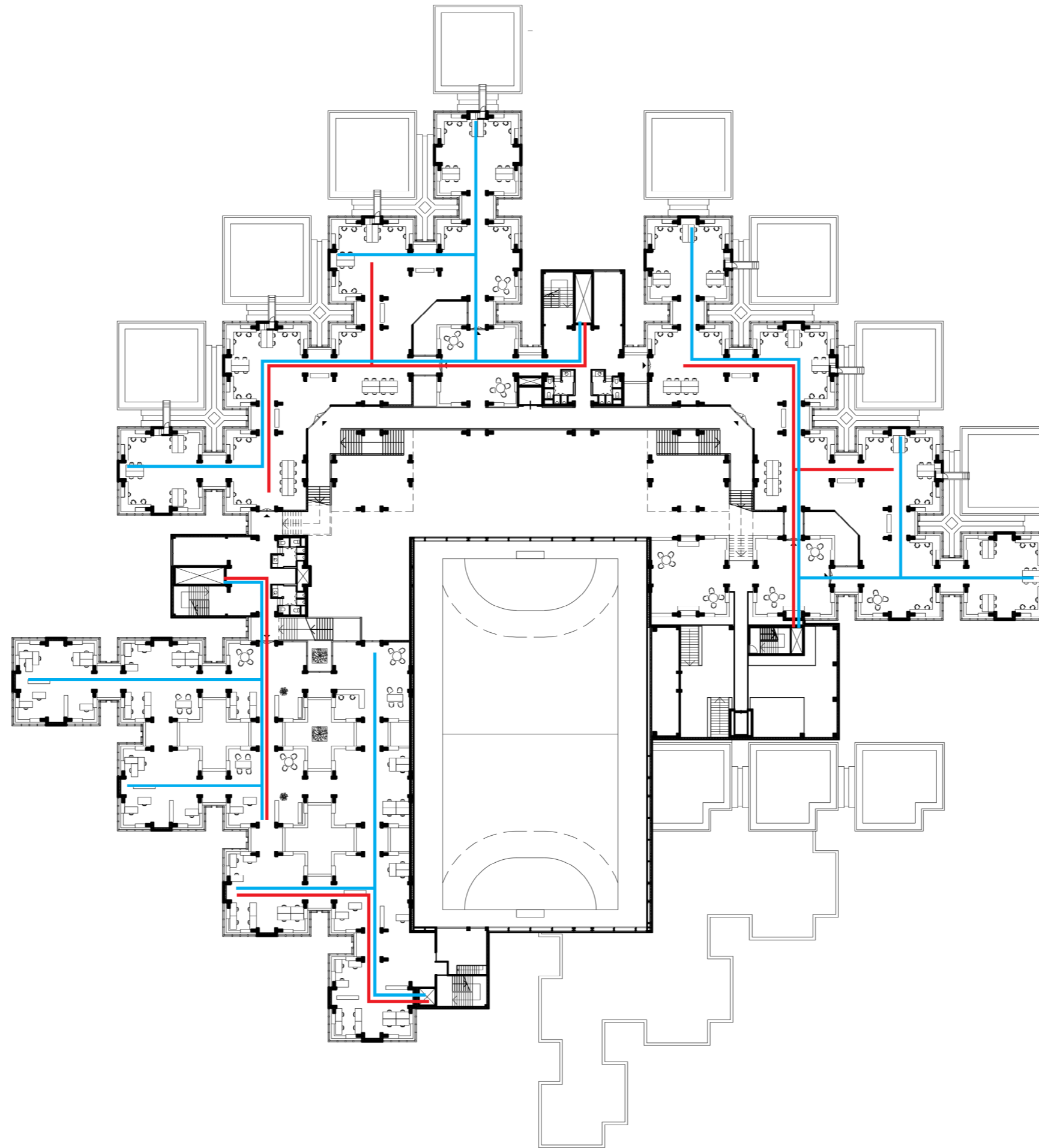
# CONSTRUCTION SCHEME - FACADE



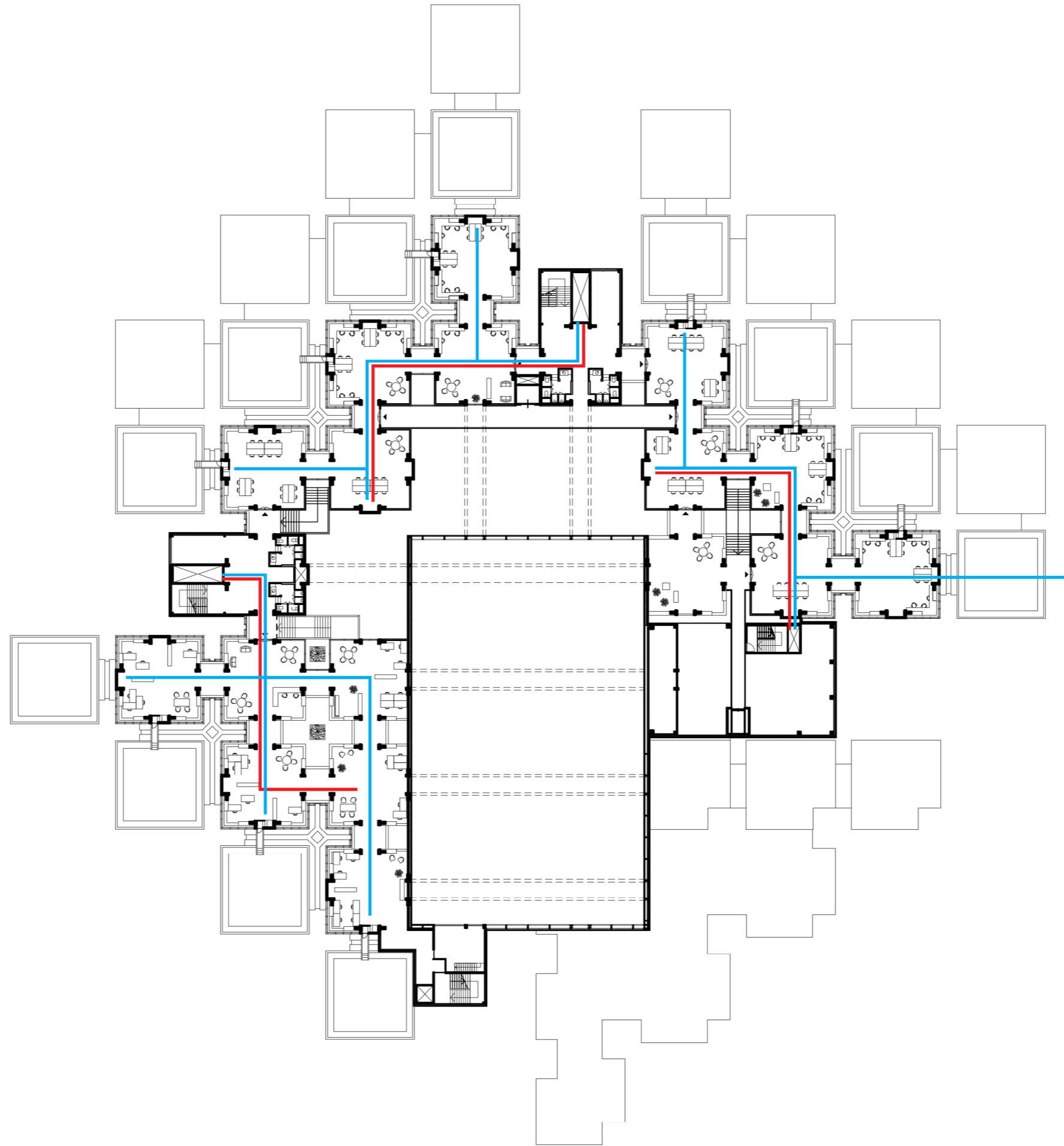
# VENTILATION LAYER 2



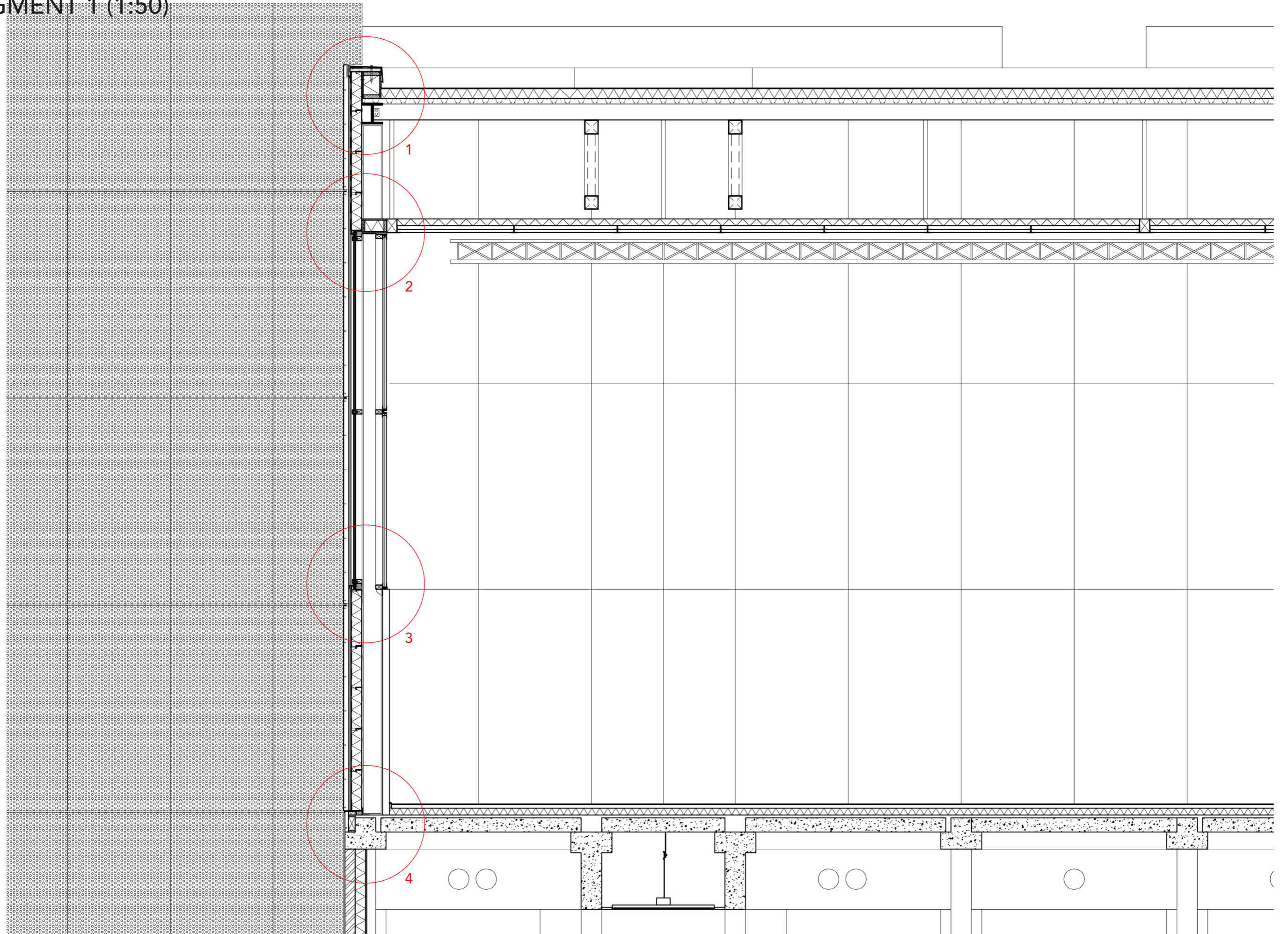
# VENTILATION LAYER 3



# VENTILATION LAYER 4

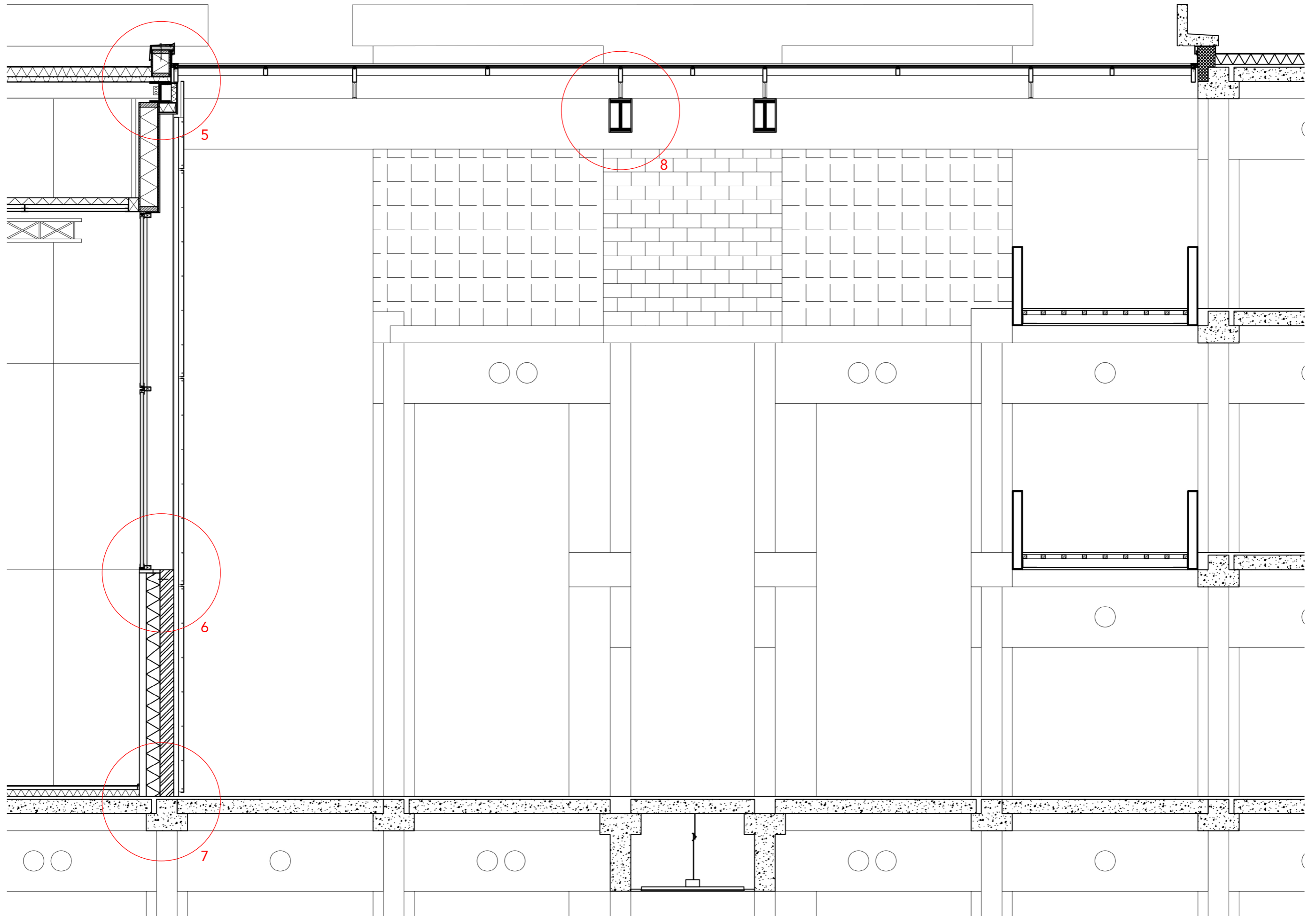


FRAGMENT 1 (1:50)

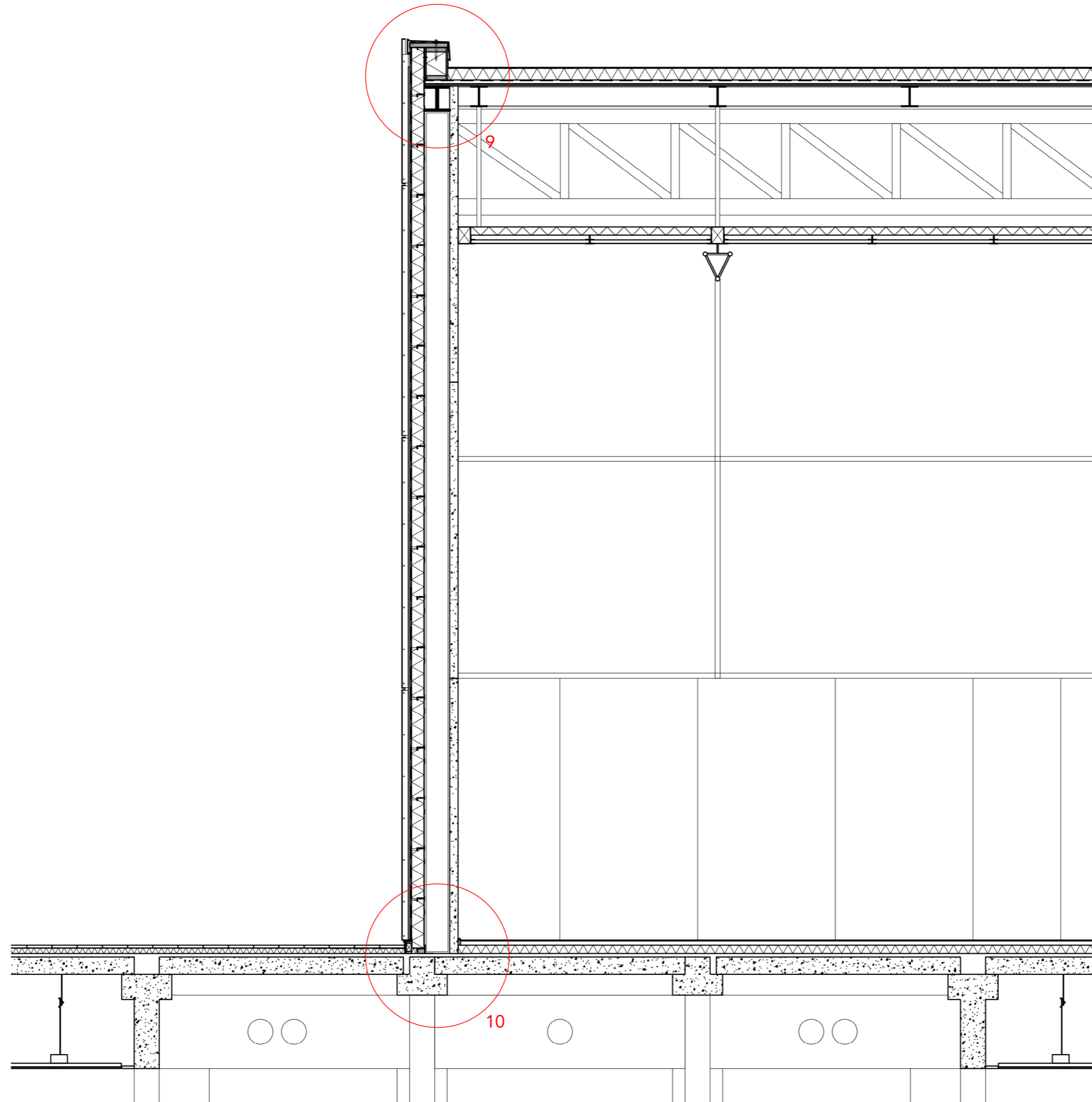




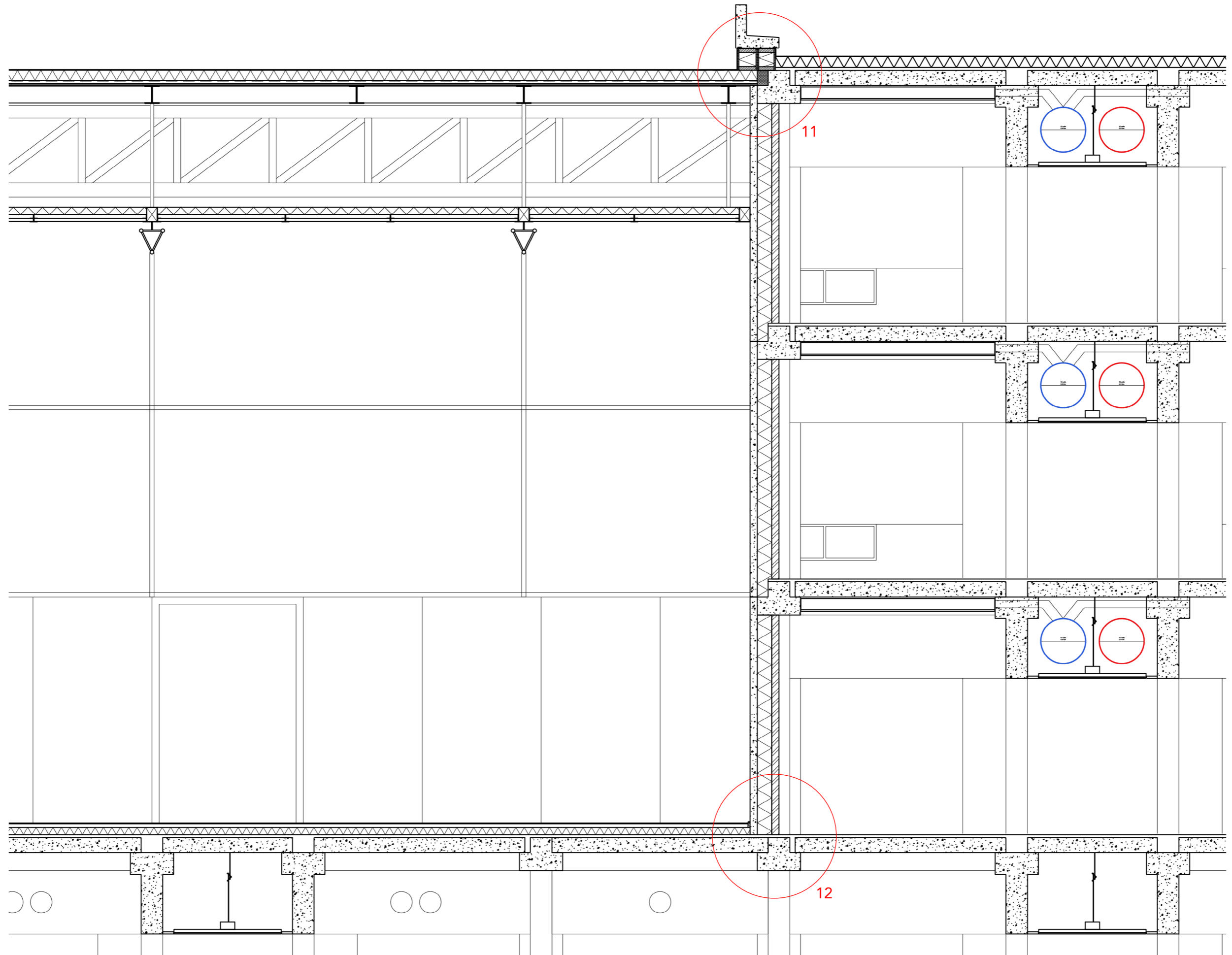
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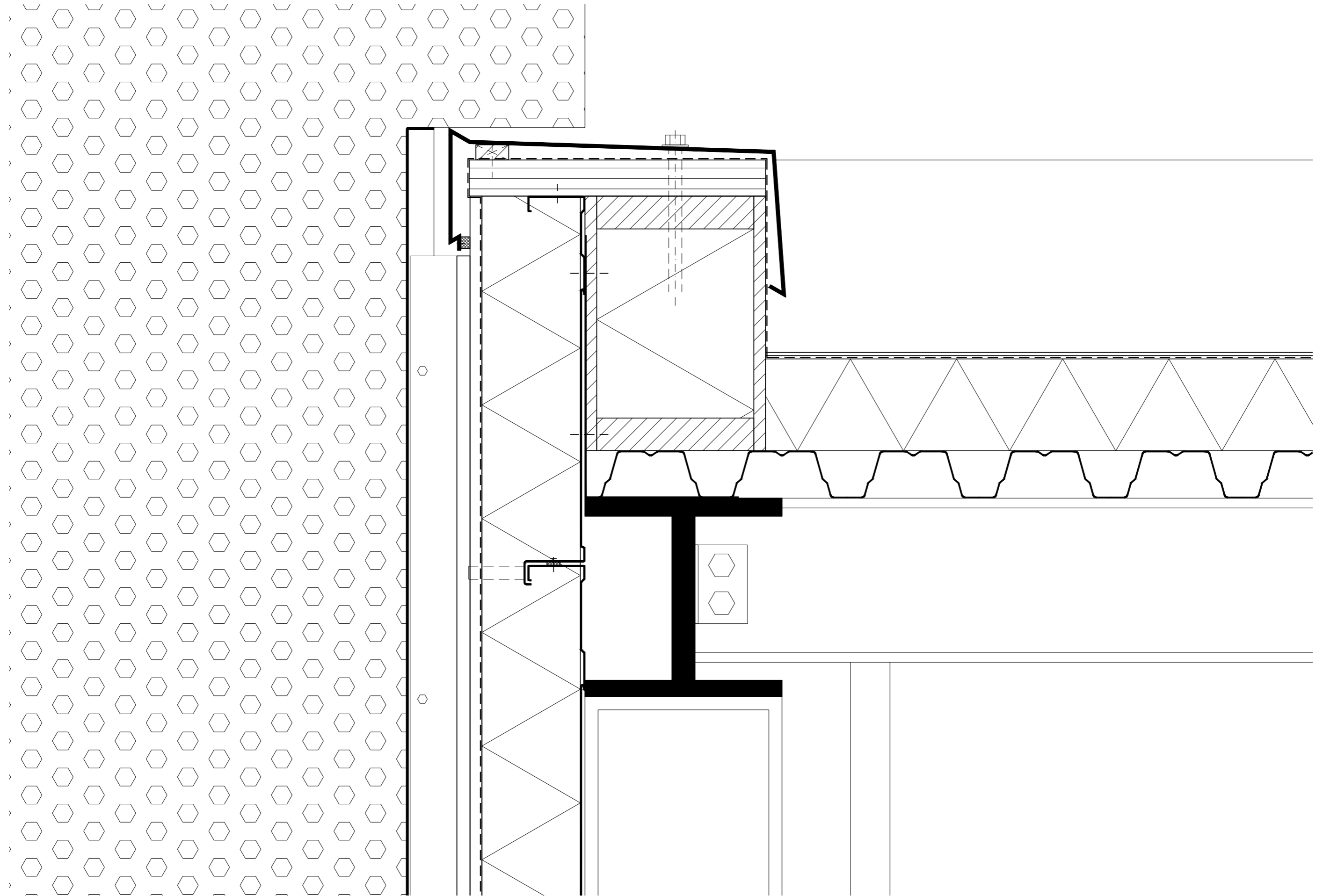
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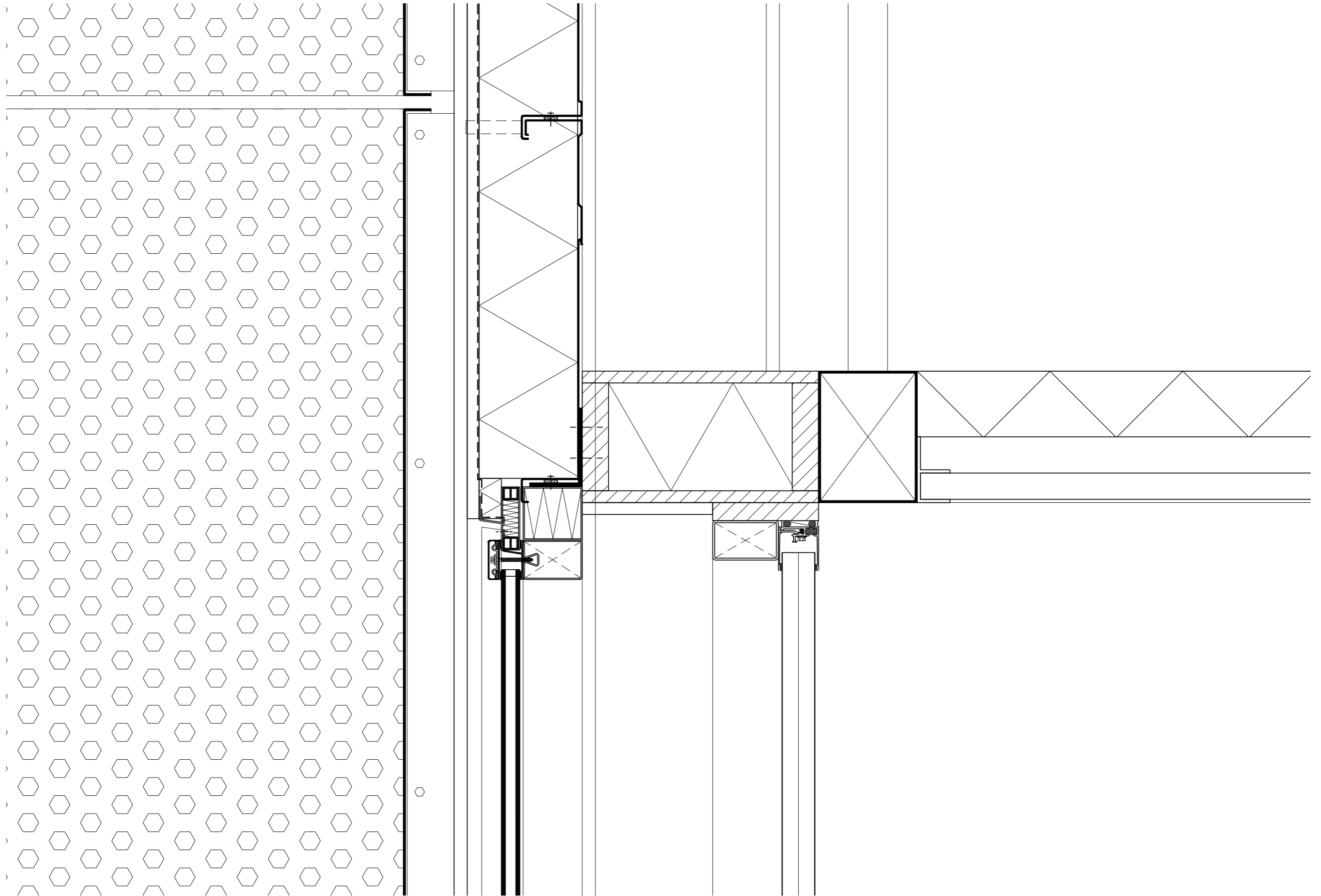
FRAGMENT 4 (1:50)



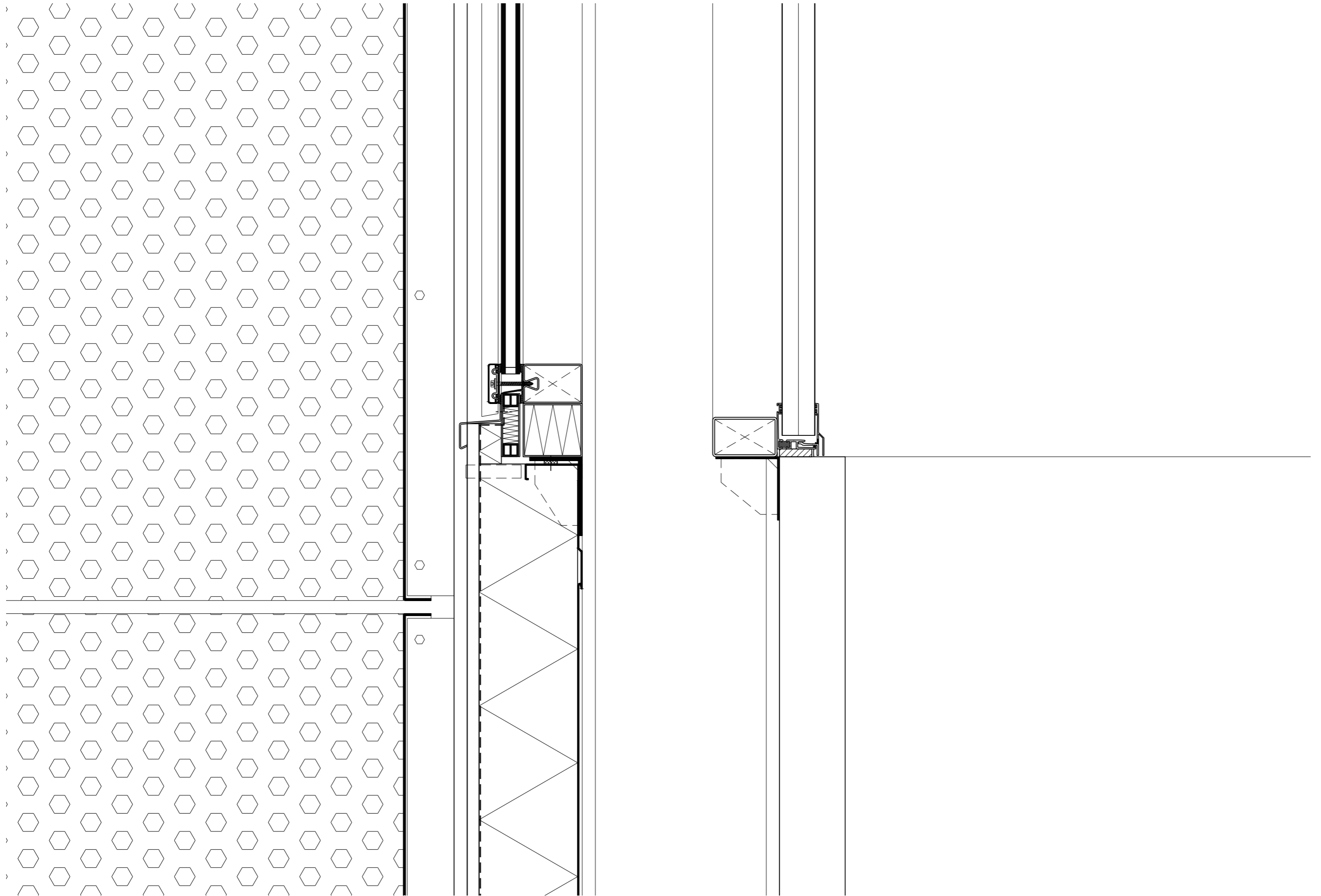
# DETAIL 1



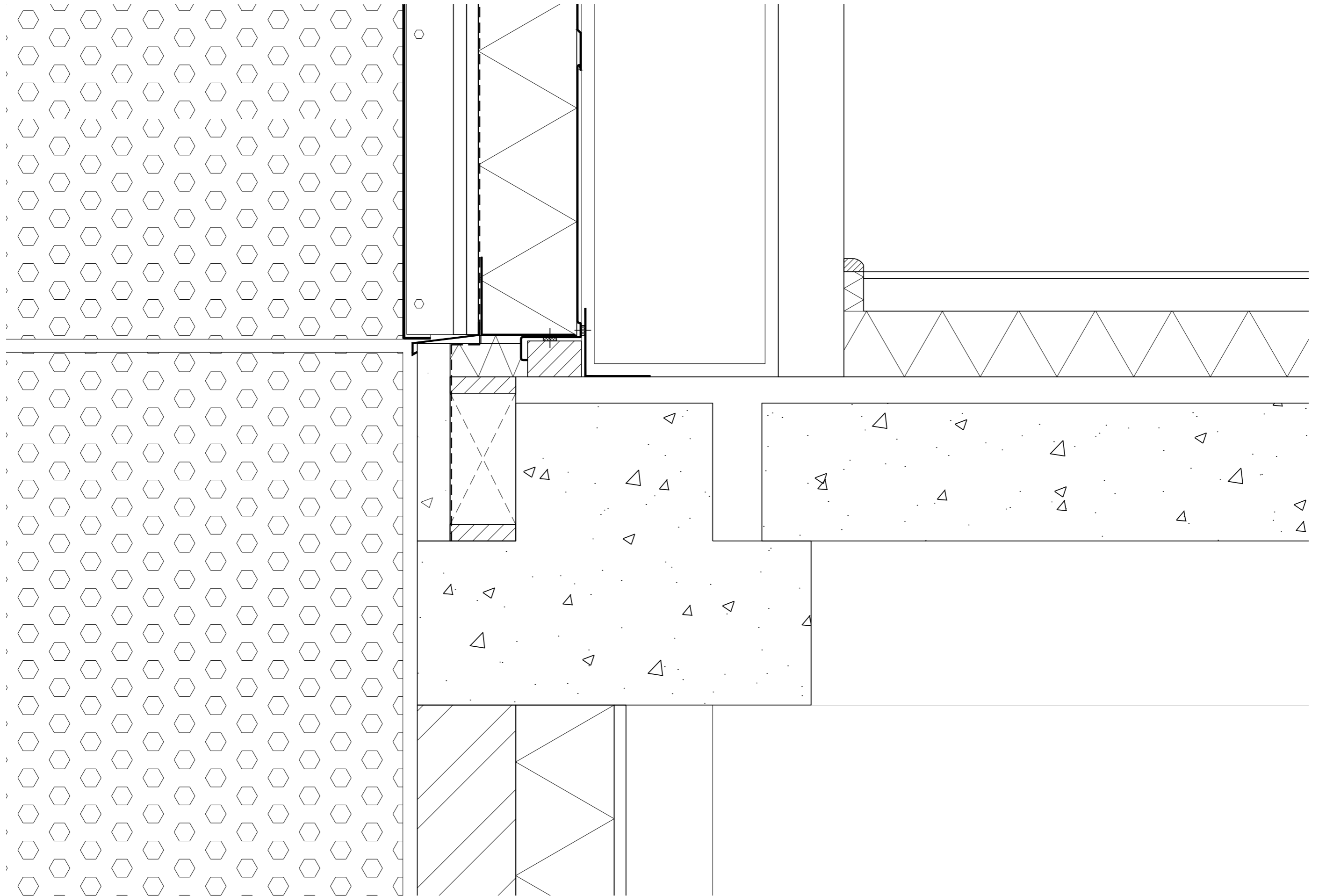
# DETAIL 2



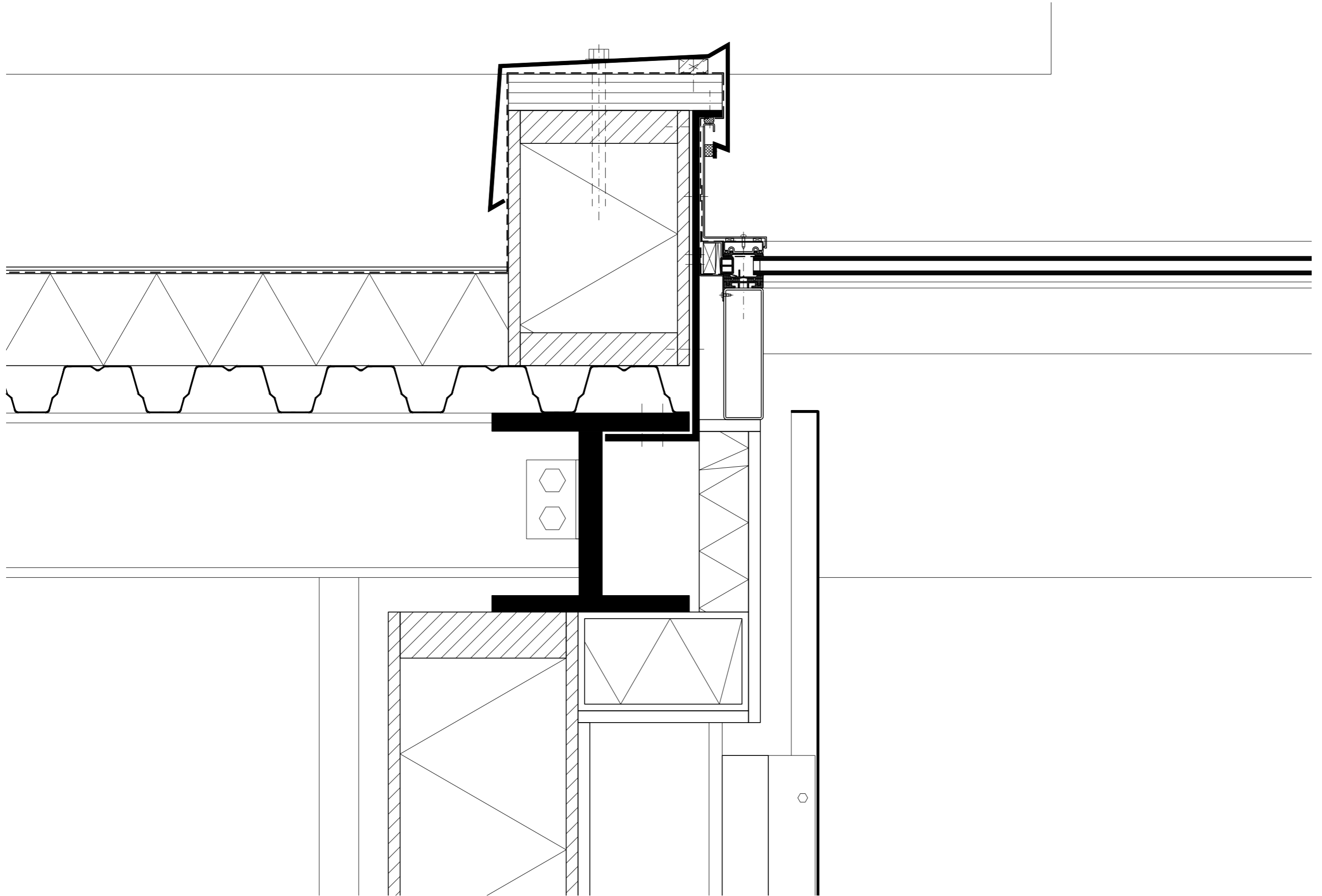
# DETAIL 3



# DETAIL 4

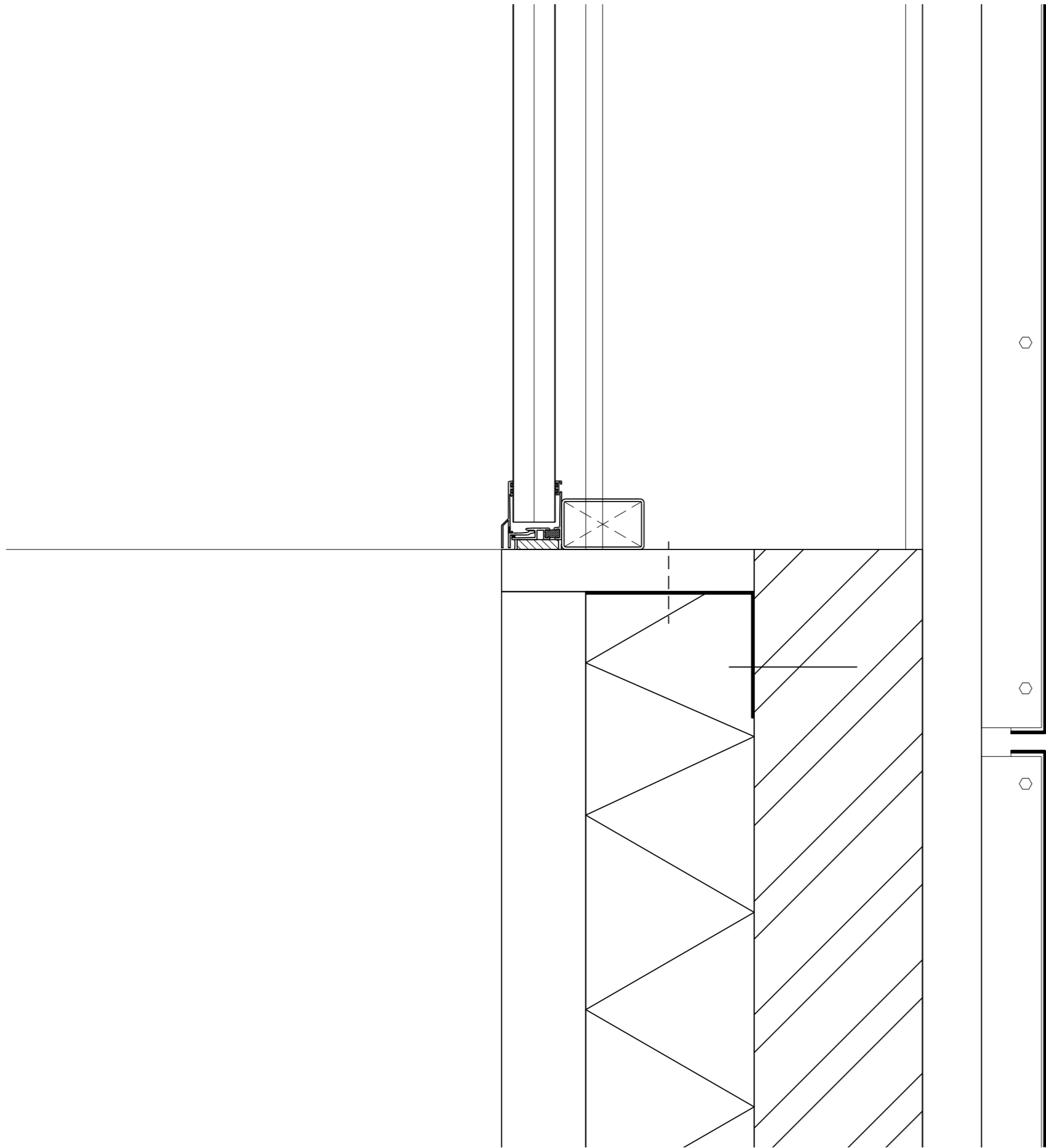


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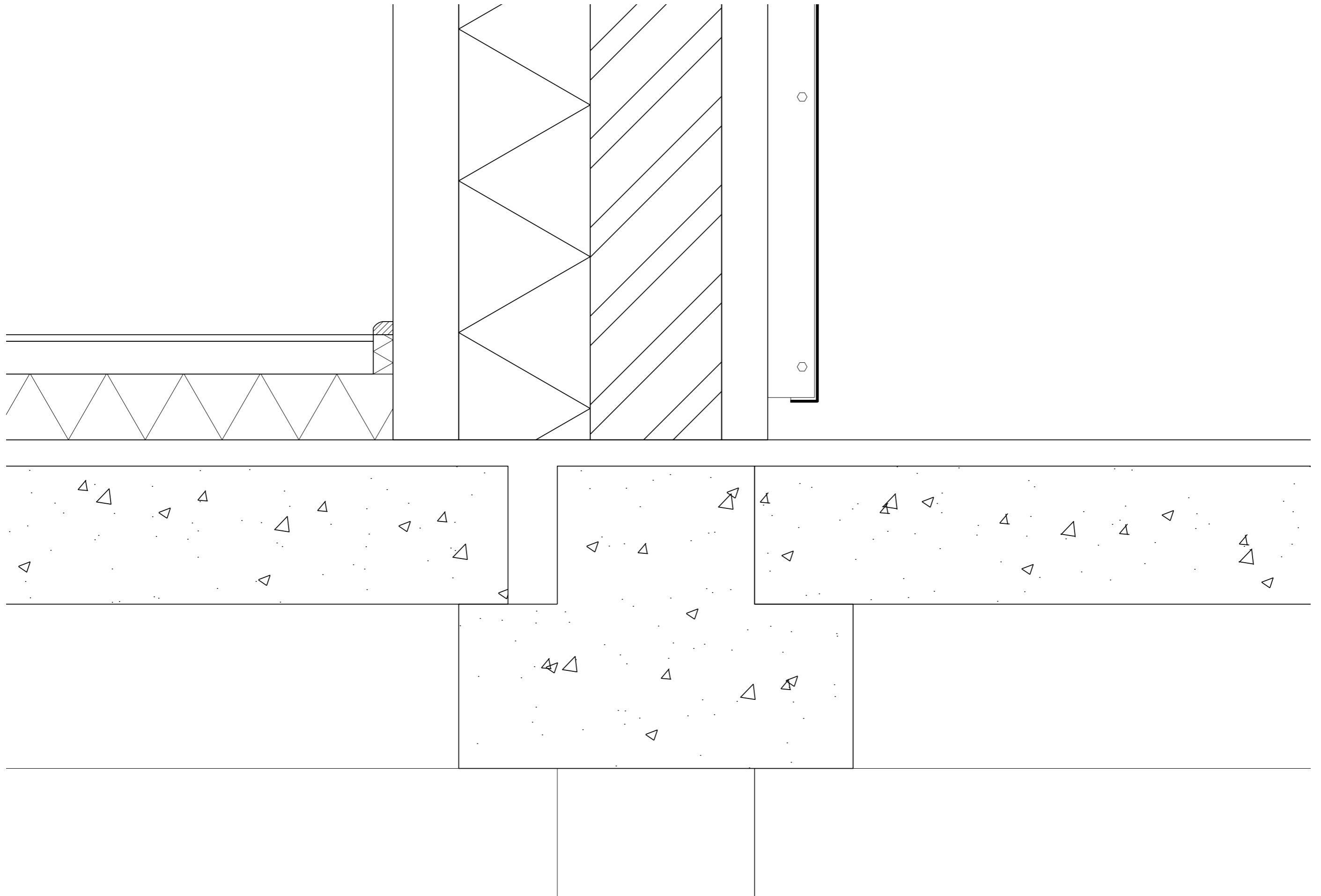




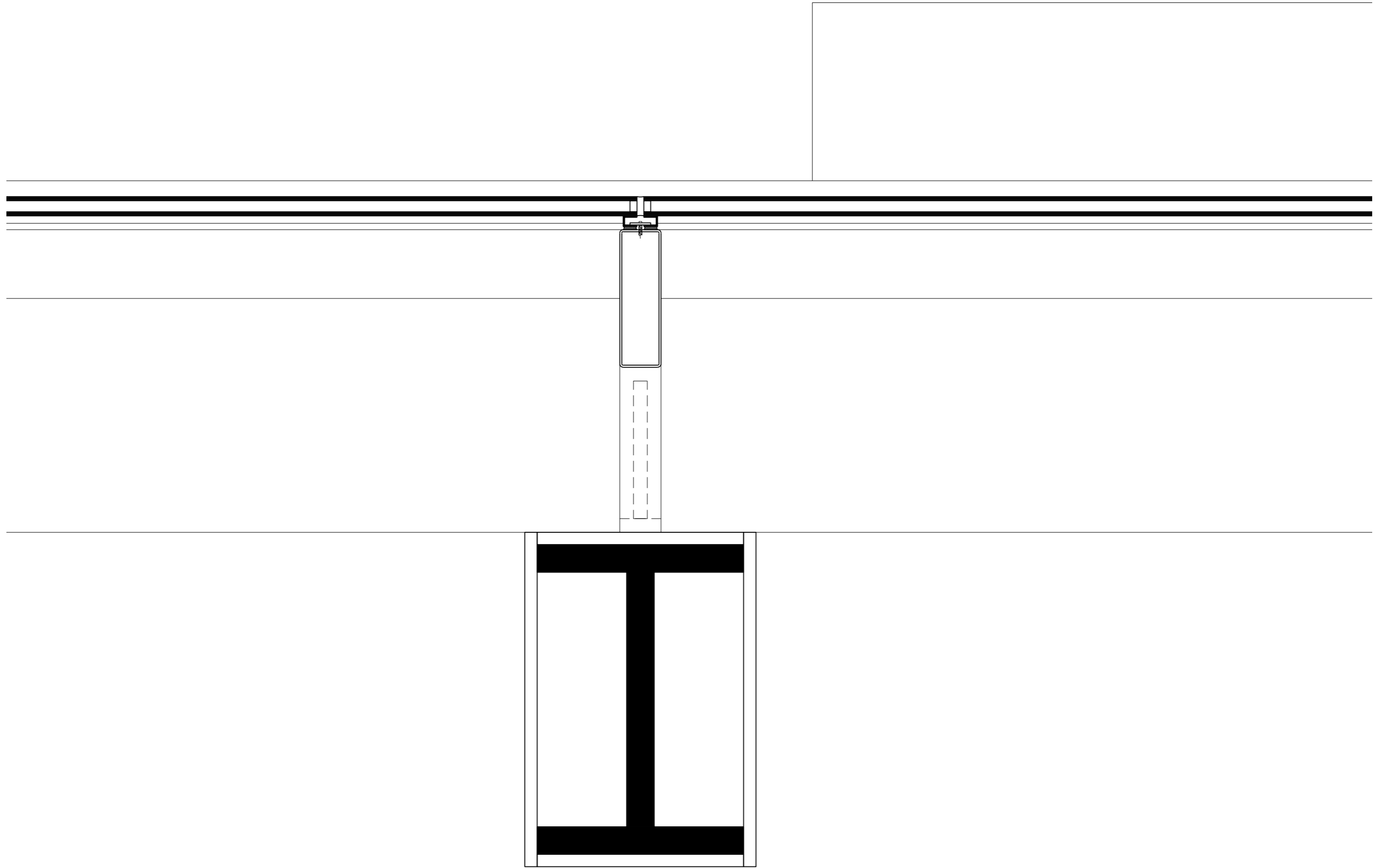
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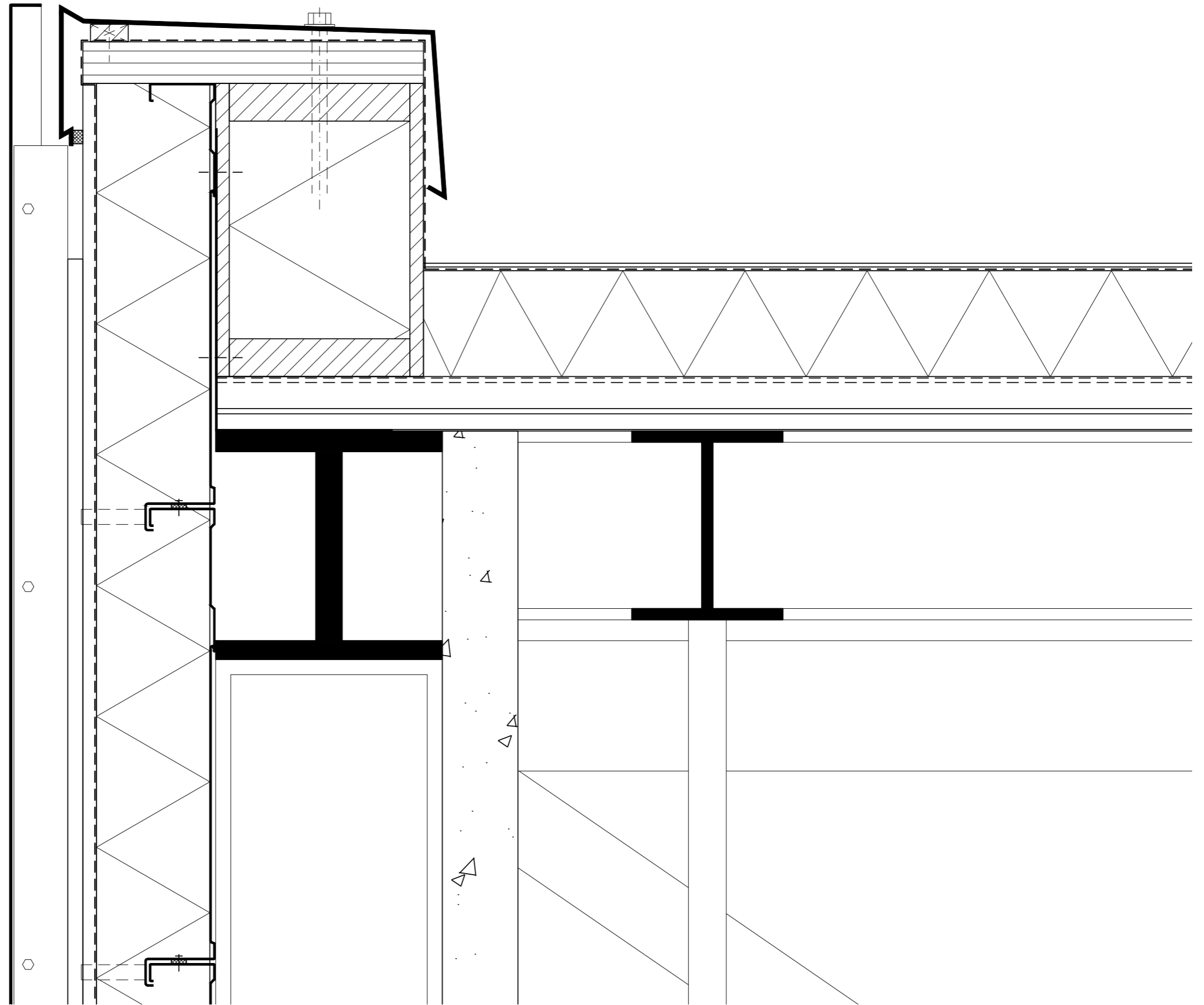
DETAIL 7



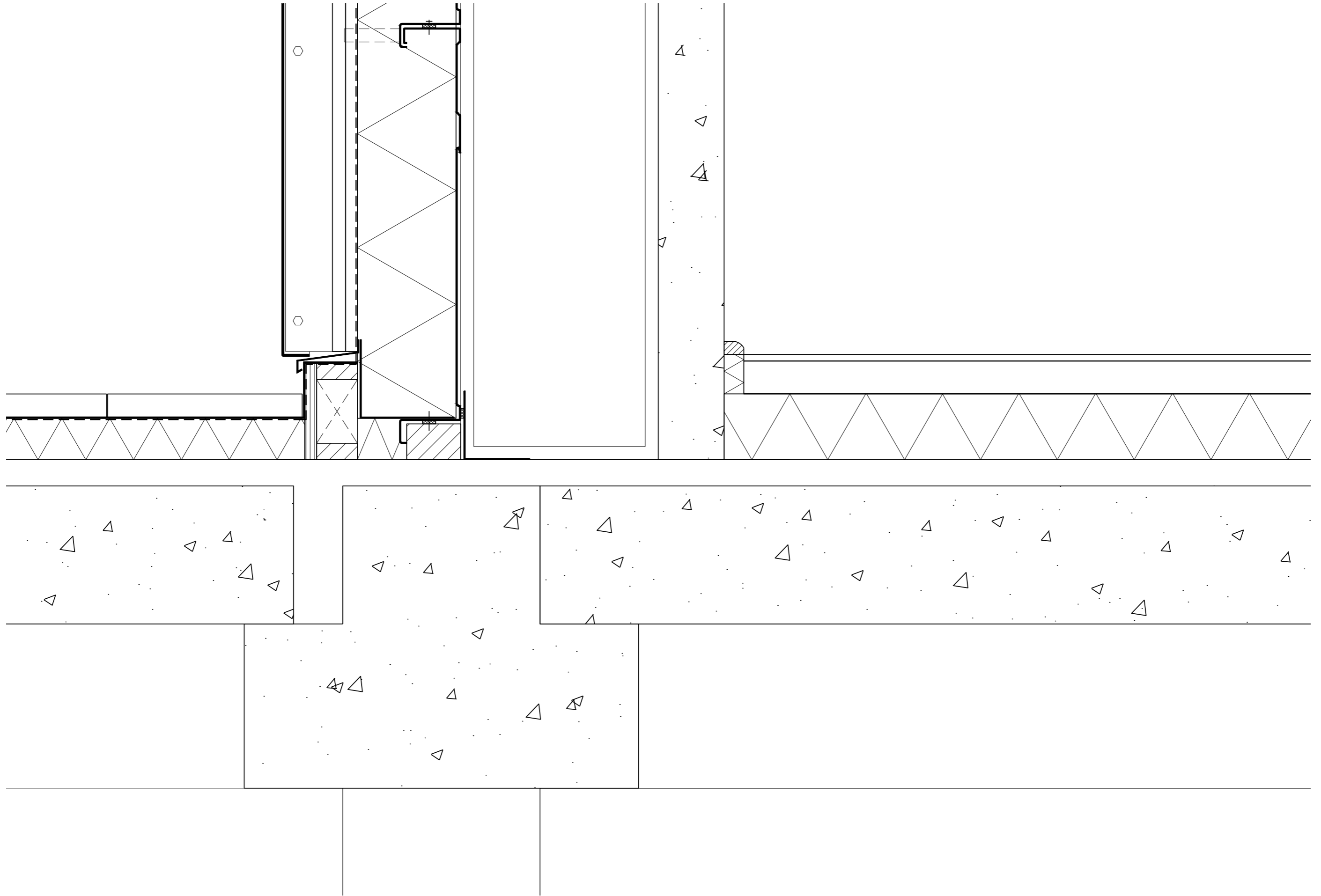
DETAIL 8



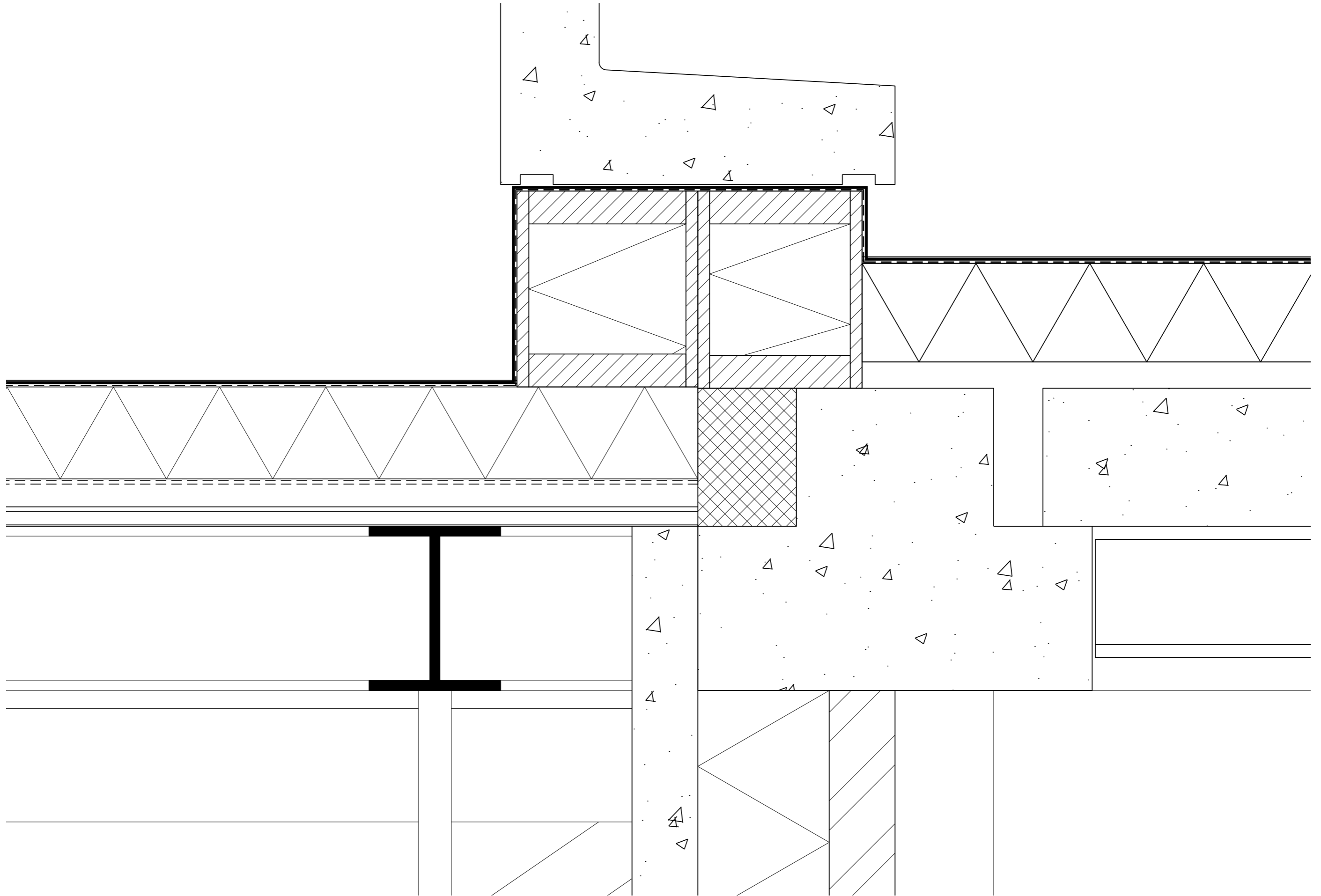
DETAIL 9



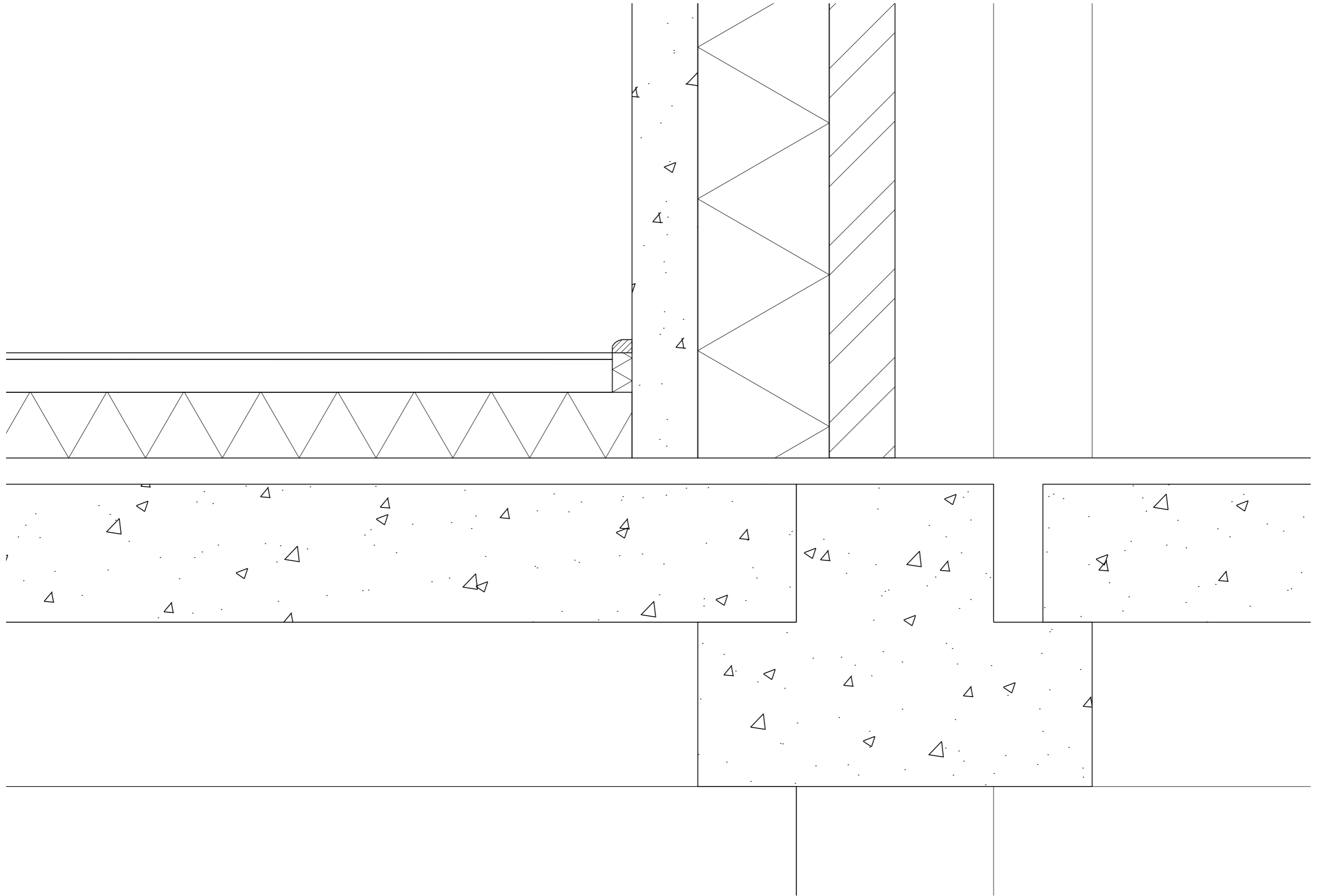
# DETAIL 10



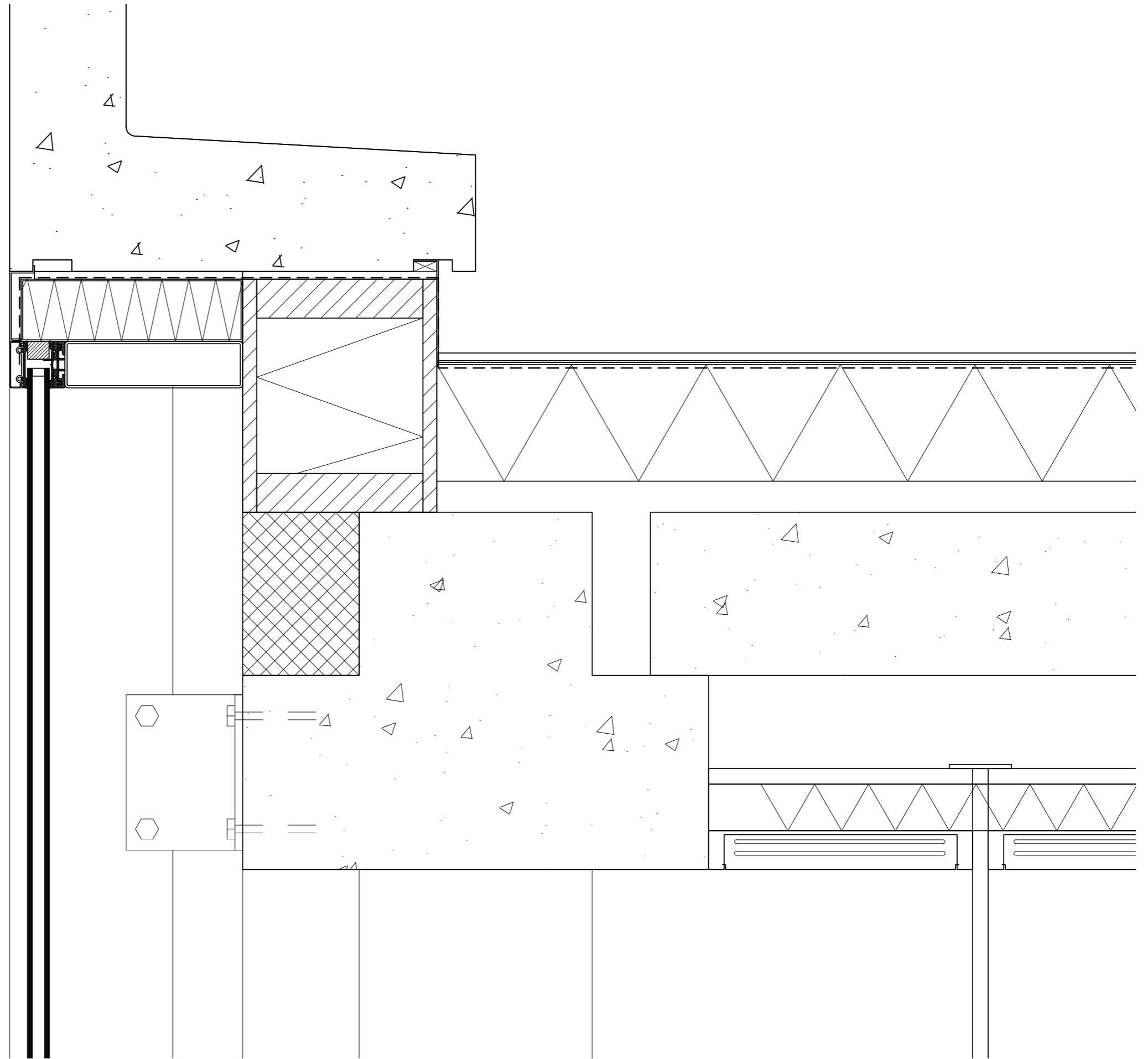
DETAIL 11



# DETAIL 12

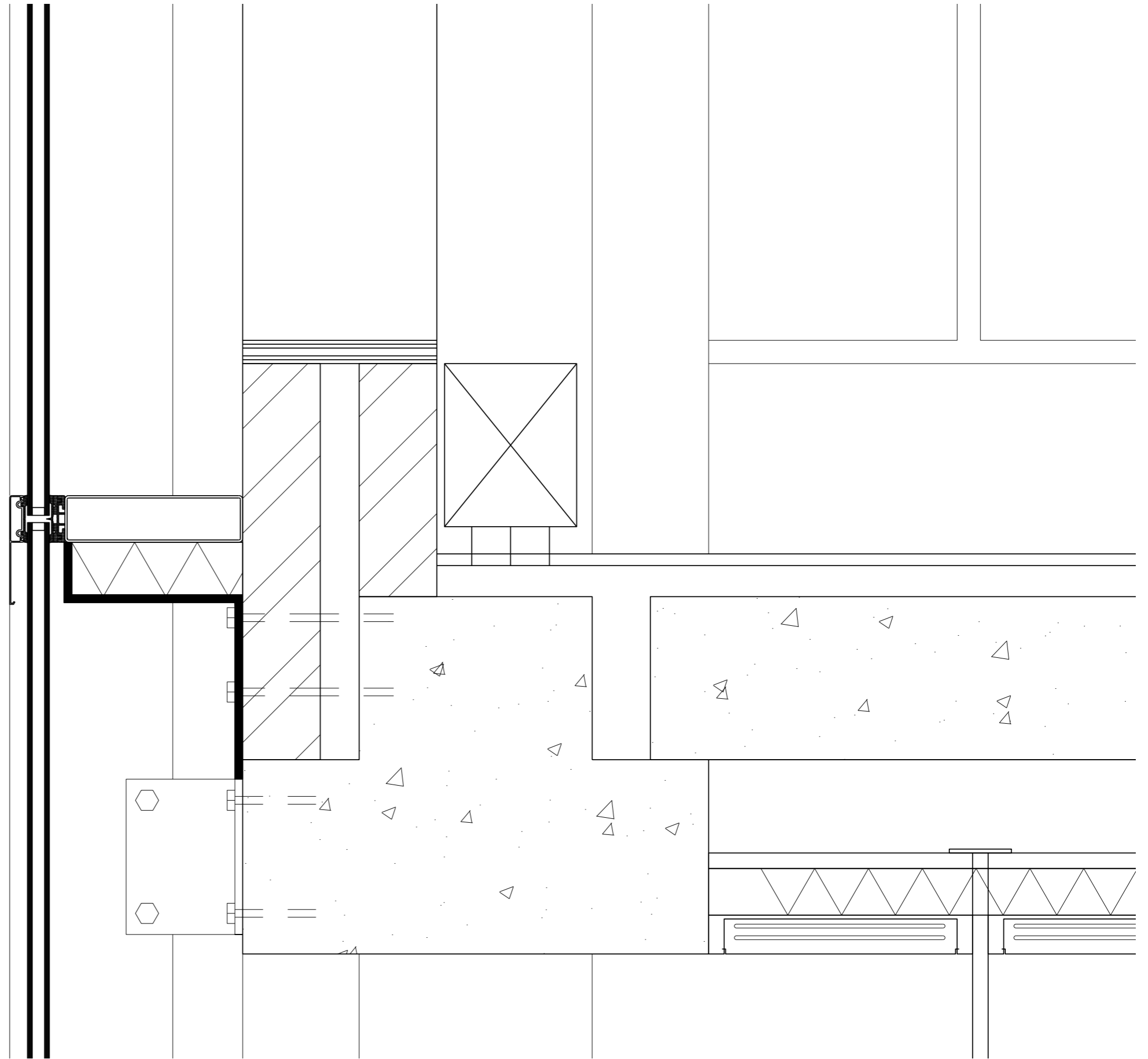


DETAIL 13

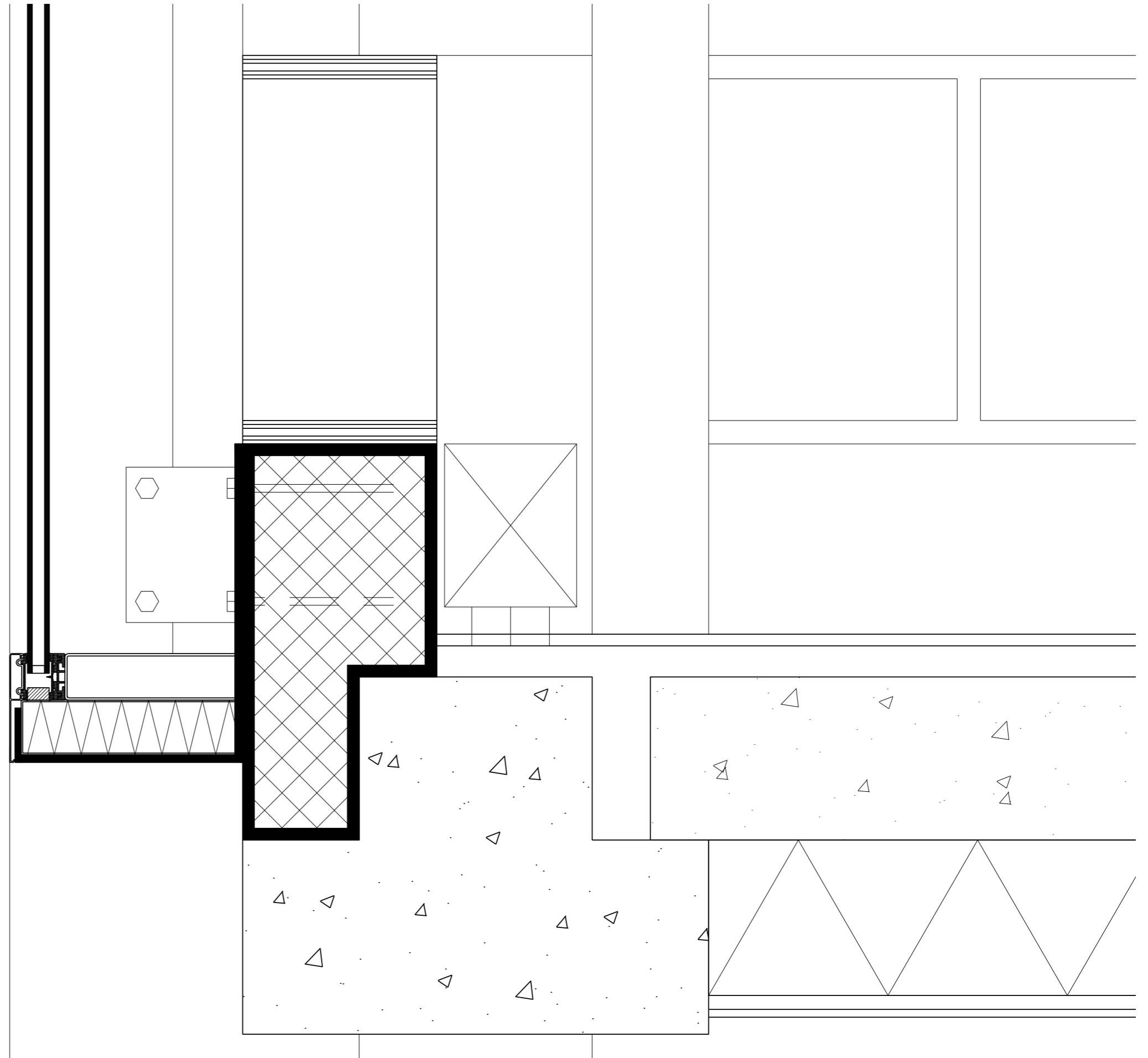




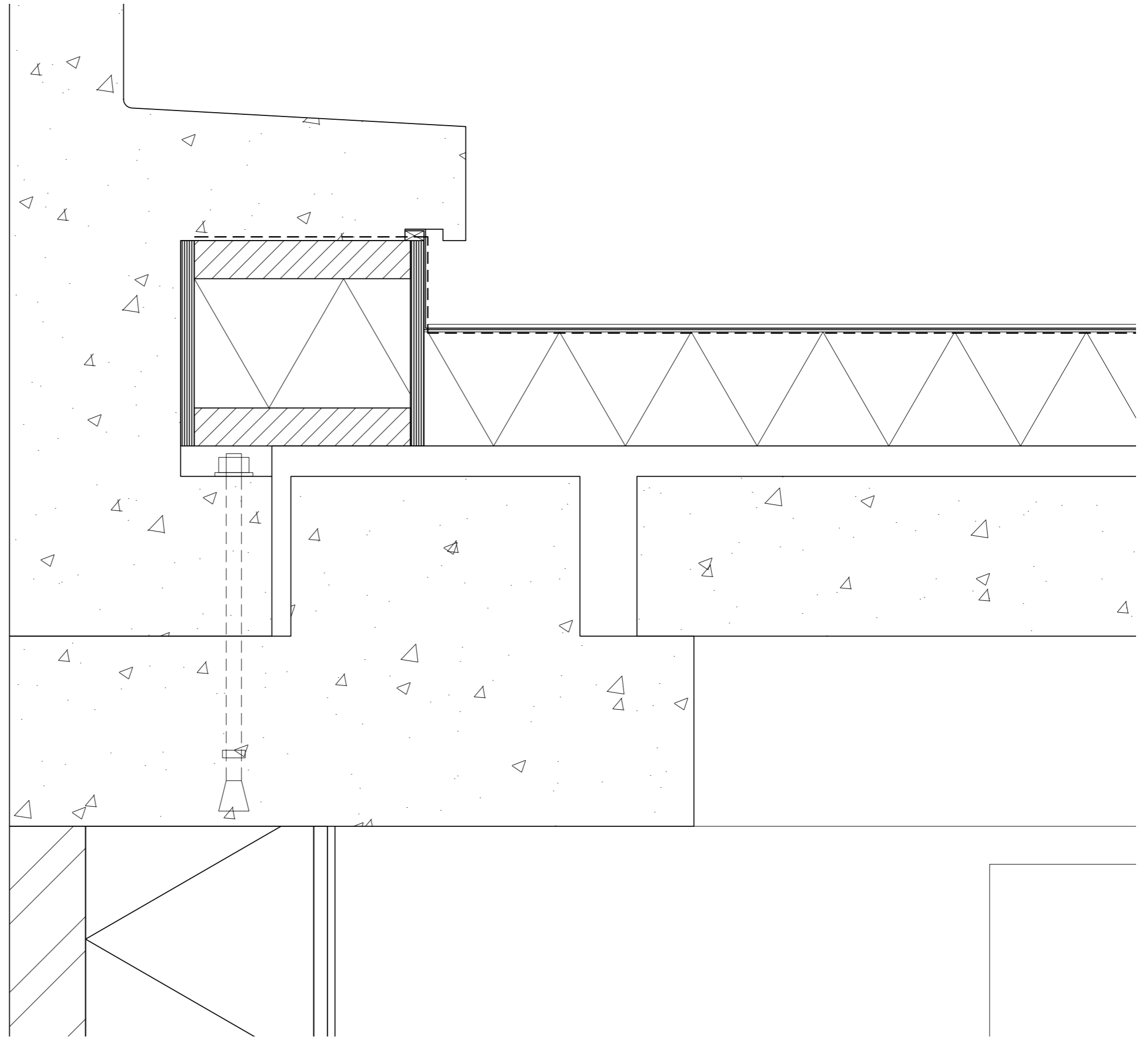
DETAIL 14



DETAIL 15



# DETAIL 16



DETAIL 17

