

Interiors
Buildings
Cities

MSc4 Palace
Yueyi Liang

PROJECT JOURNAL

Transformation of De Singel
- Incorporating the VAI archive into the existing cultural complex

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Architecture Archive

What constitutes an archive in architecture? What forms does it take? What epistemology does it perform?

Object
drawings, models, letters, books, reports, videos, materials
from: architects, engineers, site workers, users...

People(behind its operation)
curators, cataloguers, conservators, technicians, archivis
architects, researchers, students, historicans,

Archive as both a noun and a verb.
rchive involves from personal collection to more public space.
From the morst scared to the most ordinary,
Private house as an archive reflects personal taste, knowledge, experience, acquisition; what is important to the owner. It is a day to day life space/living laboratory.

Visually abundant
preservation, conservation,
research
sequence, category, logic, flow
intimacy, public behavior
power, wealth, acquisition

- (1) Archive case studies
- (2) The world fair of 1851 (Mitchel 1865)
- (3) A watercolor painting depicting Sir John Soane's projects (Gandy 1818)
- (4) The drawing office in Sir John Soane's Museum
- (5) Illustration of a natural history cabinet (Imperato 1599)



(2)



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Architect-Hugh Strange Architects

Location- agricultural barn in Somerset, England

Function-Two connected building, one for archive and the other for office.

Material-CLT surrounded by dense spruce walls dates back to the 19th century store structure, covered by a fibrous cement roof, sitting on a continuous concrete base.

My first impression of this archive is that it is warm and cosy. Imagine a group of people observing and discussing the drawings in this cabin on a slightly chilly day, with the warm yellow light giving the room a more intimate atmosphere. Open the door and you can smell the mixture of grass, leaves, timber and paper. It feels like visiting your grandparents' countryside house.



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- (6) Interior view of the archive(Grandorge 2014)
- (7) Artists Russell and Eleanor's visit (Watts 2021)
- (8) Views when entering the archive (Google Earth 2024)



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How people enter, what they see, how they feel? The sequence creates unique experience.

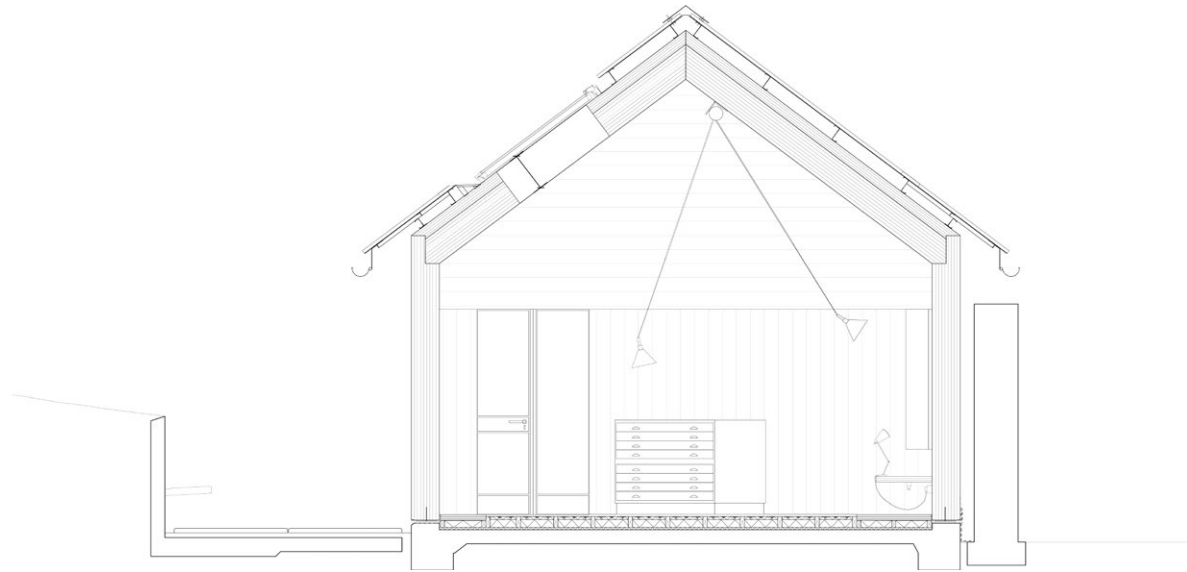
'This (the Architecture Archive) is a part of a complex that has a new function, but also belongs to another function that still exists there – agriculture – and it fits well. You did not have the temptation to make here a monument, and that I appreciate very much ...'
Alvaro Siza's response to the archive

(1) Site plan of Shatwell farm (Hugh 2014)
(2) Looking towards the archive (Barr 2024)

A place where landscape and architecture merged.

Passing through the formative processes of nature and then stepping into the buildings, you will find the specifically human power of design – that is, art.
Erwin Heerich

(3) Site plan of Insel Hombrioch (Insel Hombrioch Museum 2024)
(4) Cafeteria by Erwin Heerich (Riehle 1987)



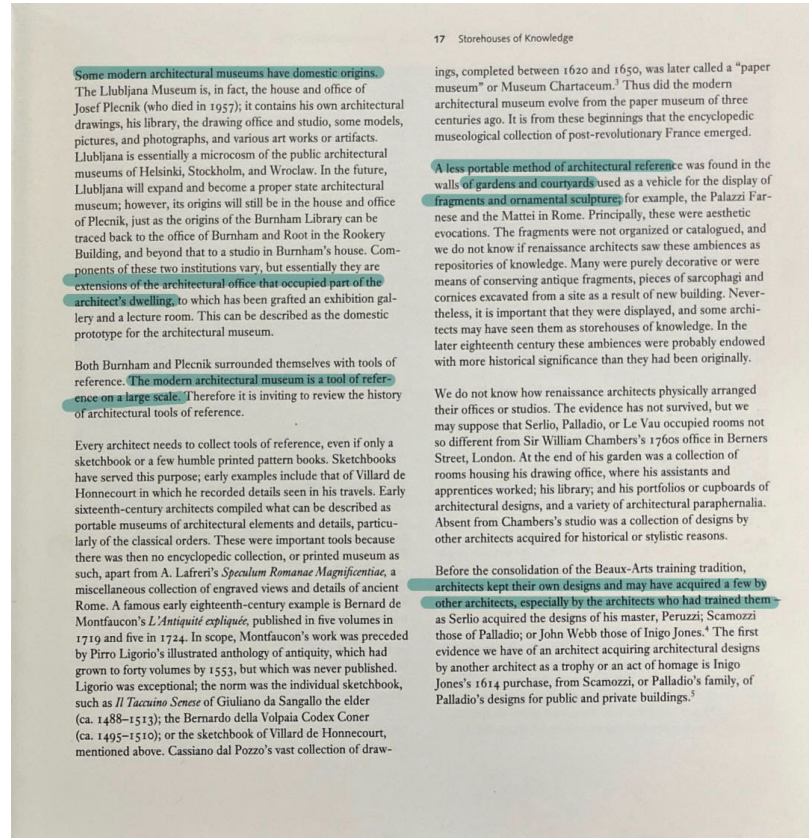
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Maintaining optimal temperature and humidity levels is fundamental to the preservation of archival materials. The use of CLT is unique in the setting of an archive. The architects minimize the material use but still reach a desirable climate control effect. It is a simple and clever solution to thicken CLT to control temperature change. With remaining stone walls, concrete base and metal roof, it greatly reduces energy consumption than what archives or museums usually do with electronic devices.



(6)

(5) Section of the archive office (Hugh 2014)
 (6) Section to show relationship of the archive and the surrounding



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-It is worthy noticing how an archive organize their collection and the way they present it. This tells a lot of what archives do and determine how we see and what with feel within archives. In the drawing matter archive that our group is researching, it has a more domestic feeling inside the wooden house, (sometimes even like an upper class club)where you can examine documents and have intimate talks.

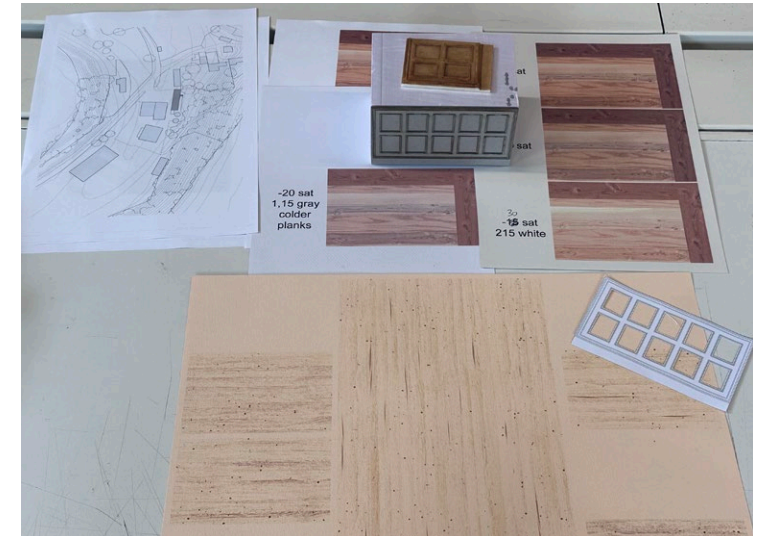
-History of architecture museums also relates to the professionalization of the architect. Interestingly, this means to include and also exclude certain things in defining the term.

ings, completed between 1620 and 1650, was later called a "paper museum" or Museum Chartaceum.³ Thus did the modern architectural museum evolve from the paper museum of three centuries ago. It is from these beginnings that the encyclopedic museological collection of post-revolutionary France emerged.

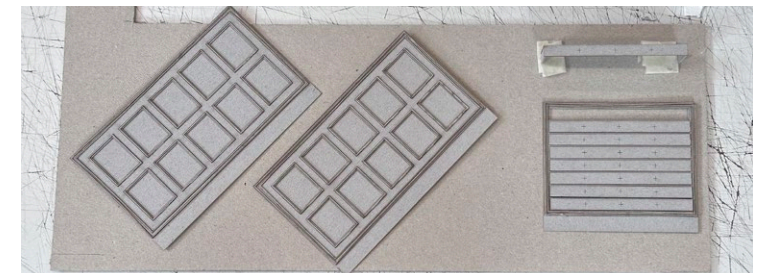
A less portable method of architectural reference was found in the walls of gardens and courtyards used as a vehicle for the display of fragments and ornamental sculptures for example, the Palazzi Farnese and the Mattei in Rome. Principally, these were aesthetic evocations. The fragments were not organized or catalogued, and we do not know if renaissance architects saw these ambiences as repositories of knowledge. Many were purely decorative or were means of conserving antique fragments, pieces of sarcophagi and cornices excavated from a site as a result of new building. Nevertheless, it is important that they were displayed, and some architects may have seen them as storehouses of knowledge. In the later eighteenth century these ambiences were probably endowed with more historical significance than they had been originally.

We do not know how renaissance architects physically arranged their offices or studios. The evidence has not survived, but we may suppose that Serlio, Palladio, or Le Vau occupied rooms not so different from Sir William Chambers's 1760s office in Berners Street, London. At the end of his garden was a collection of rooms housing his drawing office, where his assistants and apprentices worked; his library; and his portfolios or cupboards of architectural designs, and a variety of architectural paraphernalia. Absent from Chambers's studio was a collection of designs by other architects acquired for historical or stylistic reasons.

Before the consolidation of the Beaux-Arts training tradition, architects kept their own designs and may have acquired a few by other architects, especially by the architects who had trained them as Serlio acquired the designs of his master, Peruzzi; Scamozzi those of Palladio; or John Webb those of Inigo Jones.⁴ The first evidence we have of an architect acquiring architectural designs by another architect as a trophy or an act of homage is Inigo Jones's 1614 purchase, from Scamozzi, or Palladio's family, of Palladio's designs for public and private buildings.⁵



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-Difference between museum and archive:
a museum creates its own narrative through one exhibition while archives discover and produce different narratives; it takes more time in archives to understand an object than in museums.

- How could architecture museums/archives reach a broader range of audience, not just people related to the architecture field, how to raise public interest? One possible way is to combine more function and activities in one space? The change of name from 'museum/archive' to 'center' ?

(7) Storehouses of Knowledge (Harris 1988)

(8) Wooden pattern with various transparency, saturation and color tones for testing

(9) Wooden cabinet was laser cut in cardboard with multipul layers

What is the power of the archive?

As stated in the article, the archive holds significant power in relation to state power, but this power is paradoxical. The archive is essential to the state's existence because it preserves records that constitute the state's memory, legal framework, and authority. But it also poses a constant threat. This is because archives, by preserving the past, keep a record of debts, injustices, and unresolved conflicts.

The state's ability to control, manage, and access its archives is crucial in this sense. For example, Archives created by colonial governments often highlight the administrative and legal aspects of colonization but omit or minimize the experiences and resistance of indigenous populations.

What are its limits?

Archives are powerful tools for preserving history, but their narratives are not neutral or comprehensive. And it is never possible to collect materials from all different voices,

Many archives are maintained by governments, corporations, or other powerful entities, meaning that the records often reflect the perspectives of those in power. Archivists must choose which materials to preserve

based on appraisal criteria (e.g., historical significance, legal value). This selection process can inadvertently privilege certain narratives over others.

There are many related questions that can be generated around the archive's collections that can be explored. Why are certain objects considered valuable and collected by archives while others are abandoned? Who are the people who specify these selection rules, for whom do they work, and are they neutral in the positions they take and the views they export?

The narrative of an archive is also shaped by how individuals access and interpret the materials. Each researcher brings their own biases, questions, and frameworks, which can influence the story that emerges. ' It is this subjective experience that places limits on the supposed power of the archives.' Furthermore, the information gets changed when it is researched, developed, transformed and read again by other individuals. It is adding more layers of understanding during this process.

Many archives buildings, by their design features, give a feeling of inaccessibility. Take the Beinecke Library as an example. The giant temple-like shelf standing in the middle of the building can give users a feeling of unwelcoming. It seems like this is not a real public space inside a public building. Or take a look at the endless metal shelves in CCA, the shiny and monochromatic visual effects make the space austere and imposing.

Users need to make inquiries or appointments, register upon arrival, get security checks, and step into a world of shelves and cabinets in a scale much larger than the human body.

But why should it always be like this? How can we design an archive more like a public space rather than a secure warehouse?

INFORMATION

POWER

INTERPRETATION



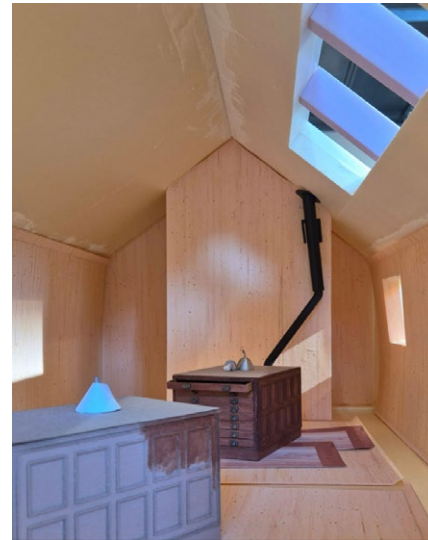
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(1) Beinecke Library (Esto 2008)

(2) CCA (CCA 2019)



(3)

The building is assembled in a clear logic of layers. From the CLT walls, to opening components, stone walls and finally the metal roof on top, how can we also convey the message of the layer in our model?
 We also got inspiration from tutorials to make a series of photos with more objects taking up the space. The room will become messy after use and it's interesting to show how the building really comes alive by human activities.



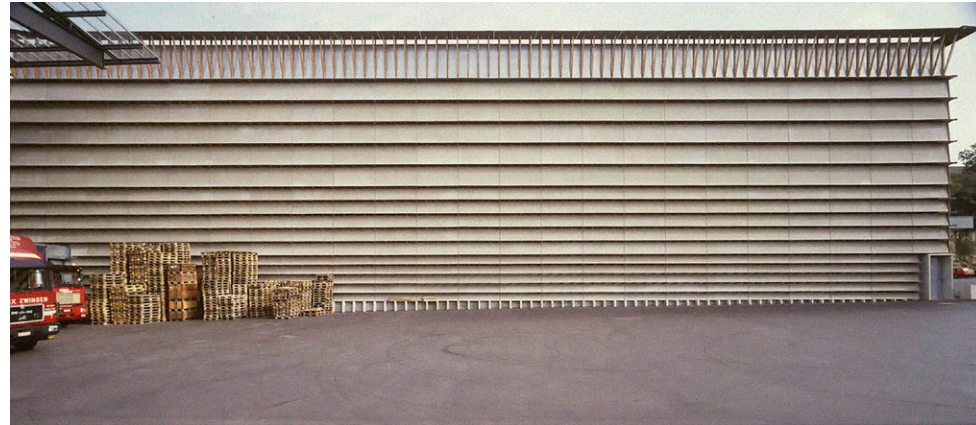
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Comparing photos of the Beinecke Library and HdM Kabinett, we can notice different atmospheres determined by how architects lit up the space.
 By giving light on the ground floor, the upper space in the library seems to be lifted up in the air, giving a stern feeling. In contrast, the ceiling is lit in the cabinet. The entire space is more airy and bright with natural lighting coming from the side window.

- (3) Work in progress
- (4) Beinecke Library (Esto 2008)
- (5) The Kabinett (Hasenböhler 2015)



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'The space is closed off, stuffed and filled up. The warehouse displaces space.'

Archives, libraries, warehouses have the same set of actions. They collect, stack, and fill up the space. And then objects are taken out to be used. In and out. It is a process of two complementary movements.

'That is what motivated us architecturally to try to shift the space to the outside. In the facade - in the space between the building and the cliff -one can still experience a sense of space despite the restrictions of the brief.'

Facade as the intermediate space between building and surrounding, conveys message of foam, texture, and more importantly, a hint of its storage function. In the storage building and winery that HdM design, facade comes from local habit of stacking wood panels and stones.

- (1) Ricola Storage Building(Ruff 1991)
- (2) Dominus Winery(Shinkenchiku Sha 1998)
- (3) Biblioteca Vasconcelos(Stoller 2007)
- (4) Depot Boijmans Van Beuningen(Duivenbode 2021)



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STORE

ACCUMULATE

USE

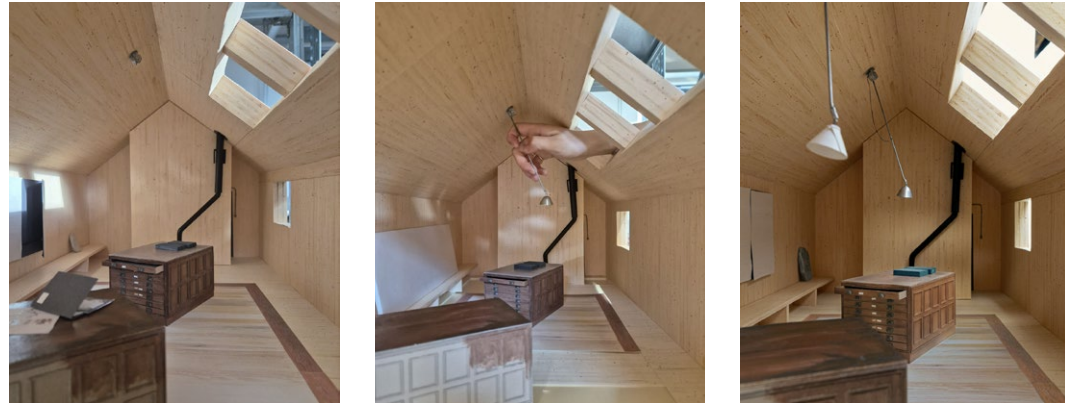


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Modeling Process



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Final comments:
Not finishing the model at the edge area actually adds a feeling of 'realness'. As you zoom out from the inner area, marks of handcrafting reveal and turn the illusion back to the real world.

- (5) Setting up the space
- (6) Final Photo- Model 1:12.5
- (7) Archive space after use



(6)



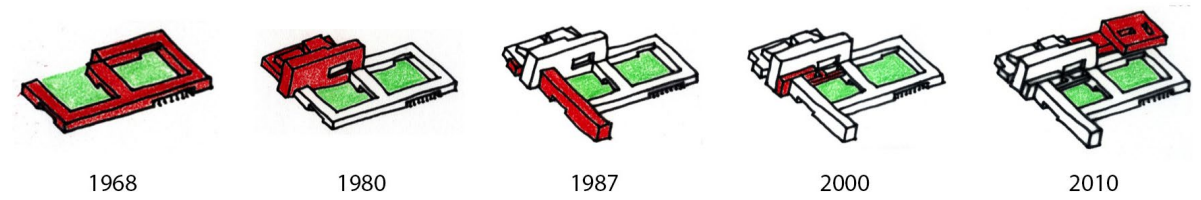
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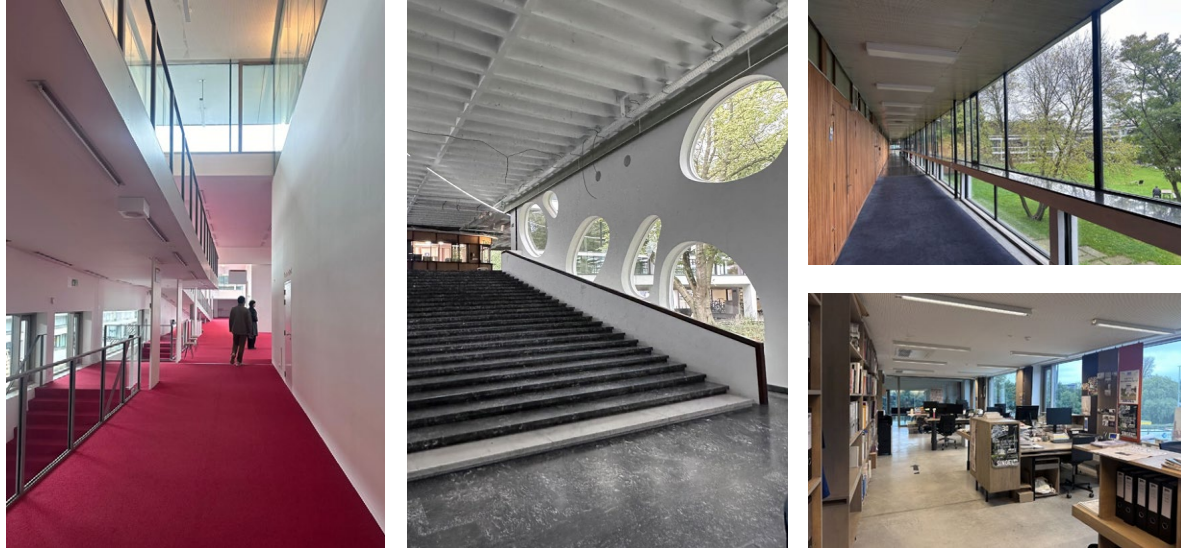


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Address: Desguinlei 25, 2018, Antwerp
Original use: Royal Conservatory of Antwerp
Year: 1964-1987, 2000-now
Architect: Léon Styne, Stéphane Beel

- (1) Air view of the site(Google Earth 2024)
- (2) Photo taken from B&P Building rooftop
- (3) Construction phrases (deSingel)
- (4) Surrounding view



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Notes during visit:

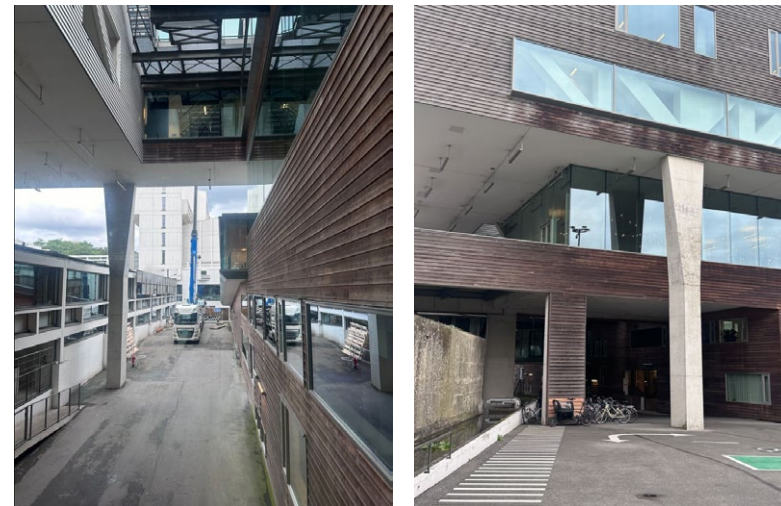
The lower levels of the conservatory are more active during the day while the Vai building is more like a back side of this complex. Surrounded by busy highways. An internalized architecture.

The 8-shaped low-rise building with inner garden feels bright and airy to walk in between. The high-rise building makes space under it a bit dim and unwelcoming. As a first-time visitor, circulation routes inside are confusing with complicated volume connections and visual guidance is also not clear.

Atmosphere changes a lot when activities happen during night time. People who go to musicals and theater also come by to the expo space. A public building without a ticket, Sunday families day, kids use the space differently.

Ramps and exterior stairs at the Vai building seem redundant.

- (5) Interior view
- (6) Exterior view



(6)



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Main Issues

- No temperature control room for photos
- Dense column make space hard to use
- Small elevator makes transfer difficult

(7) Storage area
 (8) Reading room



(9)



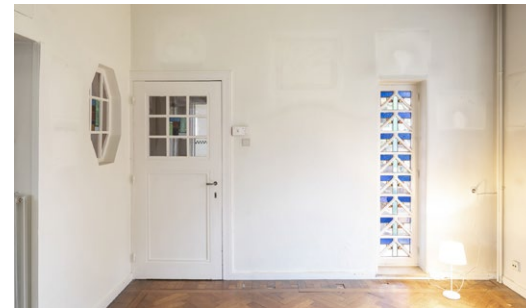
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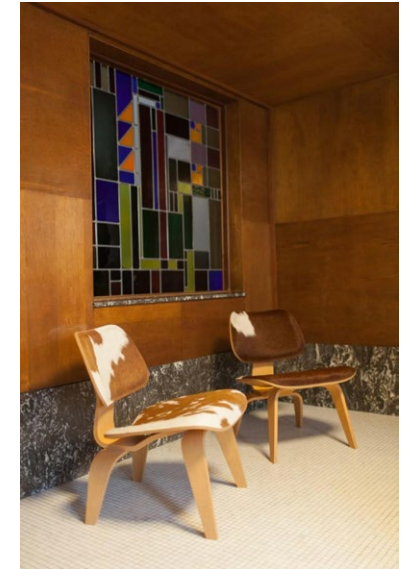
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Design Features:

- dutch-inspired brick construction
- art-deco style
- visible concrete structures
- stained-glass window
- designed furnitures and fittings

- (9) Architect's house (Pauwels 1993)
- (10) Art Deco multi-family house (Vandevorst 2008)
- (11) Districtshuis Deurne (Pointes 2008)

- Dark wood
- Brick facade and flooring
- Pale yellow and bright blue

- (12) Villa Peirman (WowHaus2015)
- (13) Villa DM (architectenwoning 2024)
- (14) Masion B (architectenwoning 2024)
- (15) Strijdhoflaan 91 (De Laet 2021)



(16)

(16) Material overview
(17) Individual objects

Architect : Edueward van Steenberg
 Materials:
 Architectural drawings, including sketches, plans, sections,
 construction details in diiferent design phrases
 Model, photos
 Letters, contracts, price lists, regulations, check lists

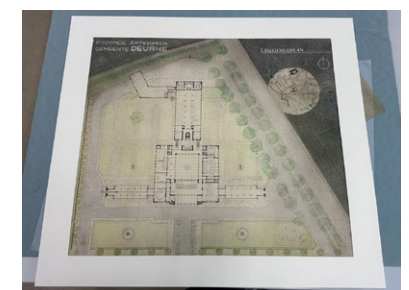
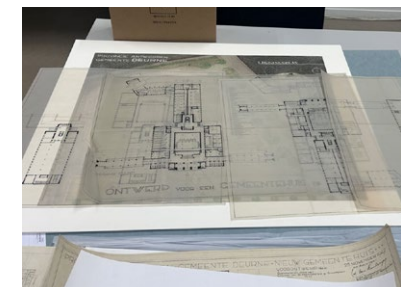
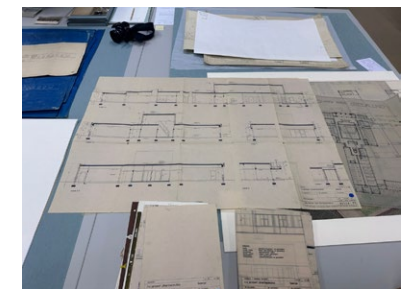
What materials are chosen to display?
 How can they be stored and displayed?
 Is there a narrative within?
 How to design a space for paper materials?
 How to view the materials?
 Do they need physical environment control?
 How to balance the environment for objects and people?

The architecture design process is not linear at all.
 It is always a result of back and forward thinking,
 negotiating, questioning and changing. Can the archive
 space, that inherited with a clear logic of categorization,
 somehow express the 'messy' sequence of architecture
 design?

the 'boring' side of design vs attractive visual contents

There is a limitation of presenting every aspect of a
 design.
 Put focus on the process rather than the final outcome.

What if... a study room for all? Domestic space in the
 archive?
 Producing an intimate study space to display sketches
 and documents. Large table, shelves, sky light...



(17)



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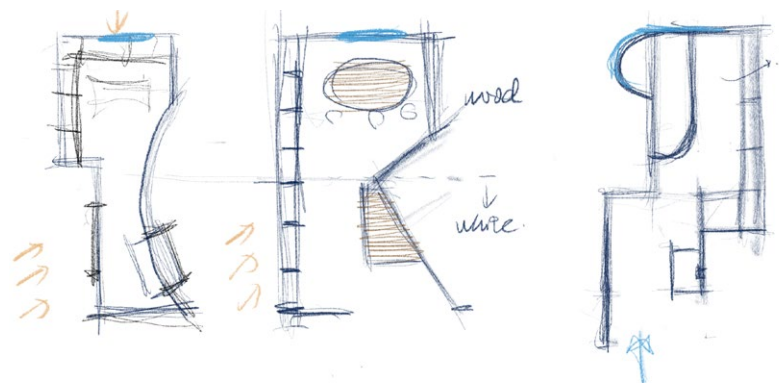
Often, archive spaces are sub-basements that are climate-controlled and artificially lit. They are environments that prioritize the preservation of the objects over the experience of the researcher, which in turn strongly dictates how drawings are studied.

During the visit, the archivist in VAI expressed her fondness of the archive design of the CIVA library and the RIBA library, both of which are infused with natural lighting into a large reading room.

Can the archive become a more public-inviting space, like a library or a study room? In Aalto's studio, daylight streaming in through the high windows illuminates the drafting table, and the chest of drawers for storing drawings is used just as an archive would be. But the space is more open and expansive, with enough large tables for viewing and discussion.

- (1) Drawing hall in the 1950s. (Alvar Aalto Museum)
- (2) Drawing hall now
- (3) The CIVA library (CIVA)
- (4) RIBA Library (Wright&Wright 2004)

First Sketches



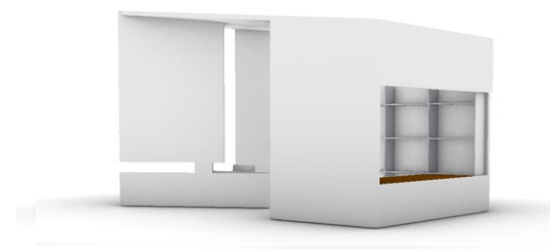
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Feedback

- Your position can be using these materials to exemplify the space/system you design.
- A specific architectural element that invites you to sit down, that feels nice to stay and work.
- Make an active space that reaches a broader public, where you can make copies, drawings, or even models in the process of studying archive materials.
- What is important is to design the relationship between materials and people.

Basic Elements:

- chair and table
- a shelf
- a cabinet
- a window
- archive materials



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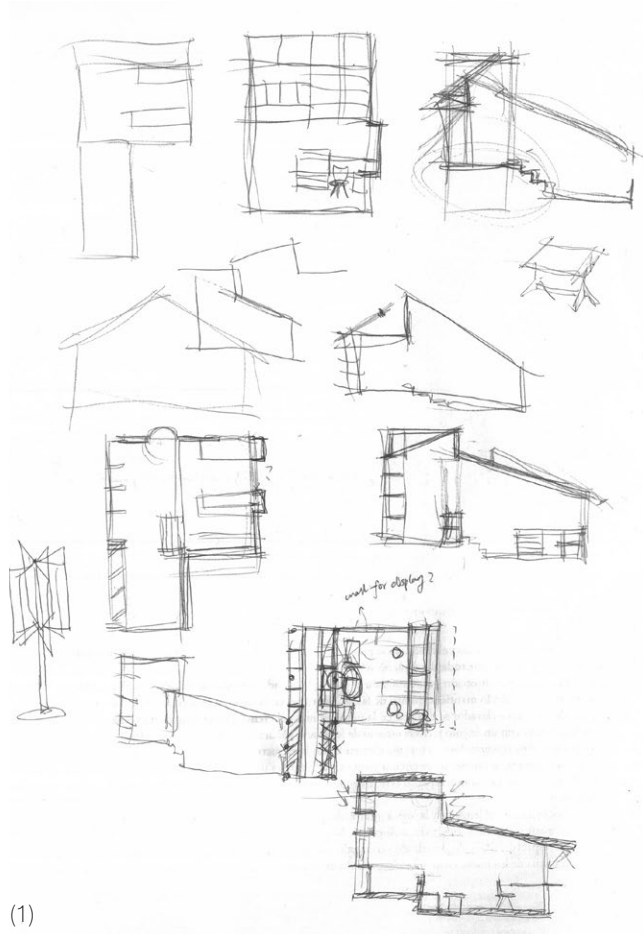


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(5) Sketches

(6) Option 1: tiled roof, seat by the window

(7) Option 2: coner round window inspired by Steenbergen



(1)

Current public events in archives:
Exhibitions, workshops, educational programs, public talks, panel discussion, public reading rooms, cultural events, crowdsourcing projects, movie screenings

Current consultation room regulation:
Use only pencils and laptops.
Handle documents with care.
Support the documents as much as possible
View only one issue at a time and never change the internal arrangement.
Photo copies are allowed under certain scenarios.

How can a space encourage a more active use of archive?
What is a possible identity of such a place?

Be specific:

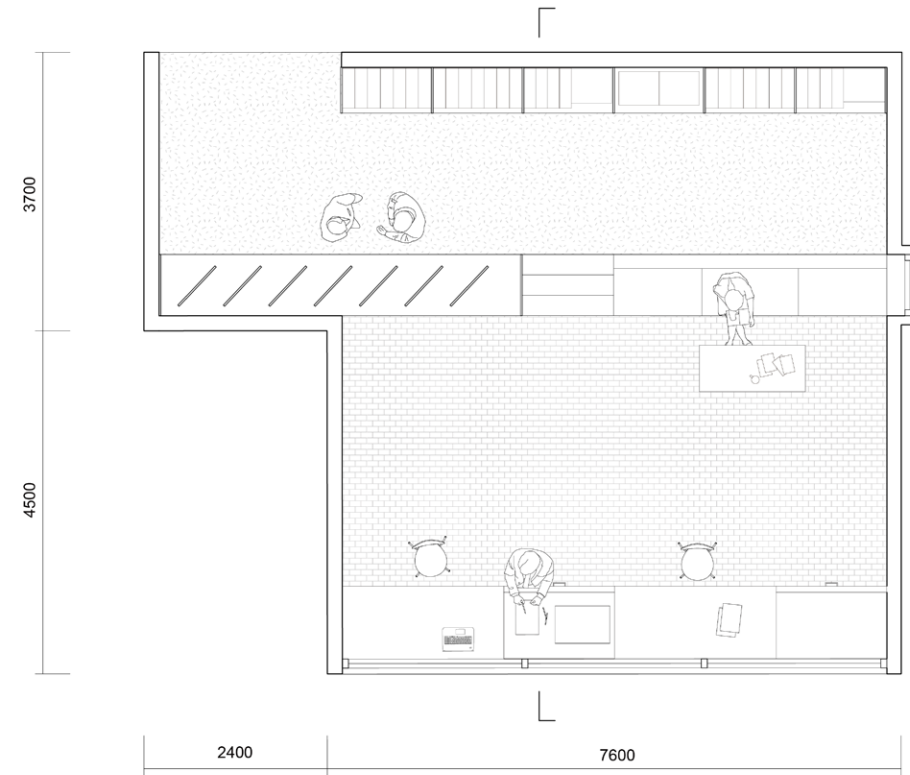
Users:
architects, researchers, students, volunteers from architecture and design related disciplines

On display:
sketches, preliminary drawings, development drawings, one final watercolor plan

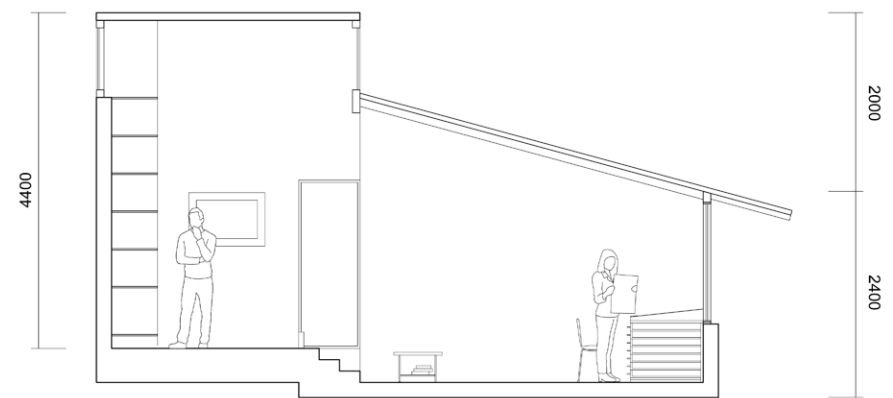
Function:
storage, display, study, drawing, discussion

Environmental characteristics:
furniture as the centerpiece for research activities
natural lighting
domestic feeling in institution space

- (1) Sketches
- (2) Plan 1:200
- (3) Section 1:200



(2)



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(4) 3D Model
(5) Summary drawing



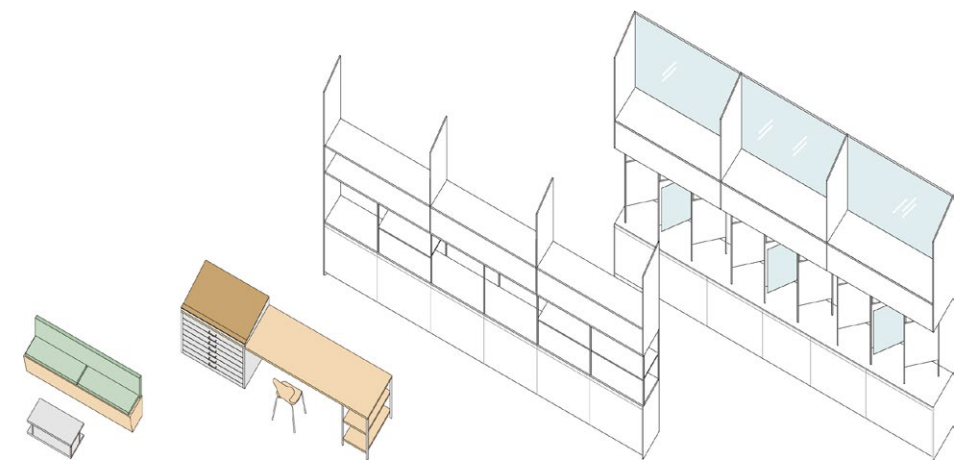
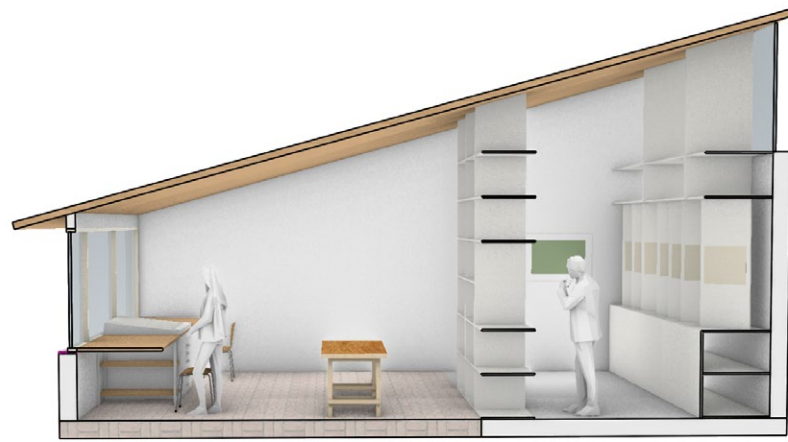
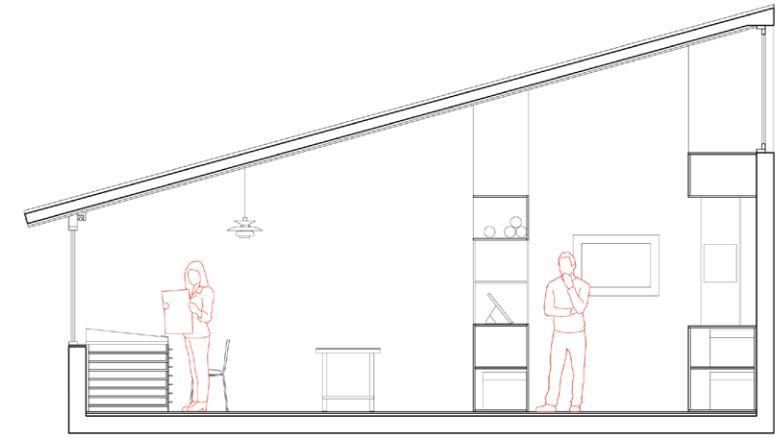
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Feedback:

Height difference brings accessibility problems, roof heights change and floor material elements are already separating two zones.

Use the diagram to think about design again. Zoning is interesting.

There's a 1920s house feeling inside.



(1)

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Simplified the form into a continuous roof and switched the storage with display area so that researchers have a direct connection to artifacts.

- (1) Before and after arrangement change
- (2) A clearer layering effect in section created by furniture.

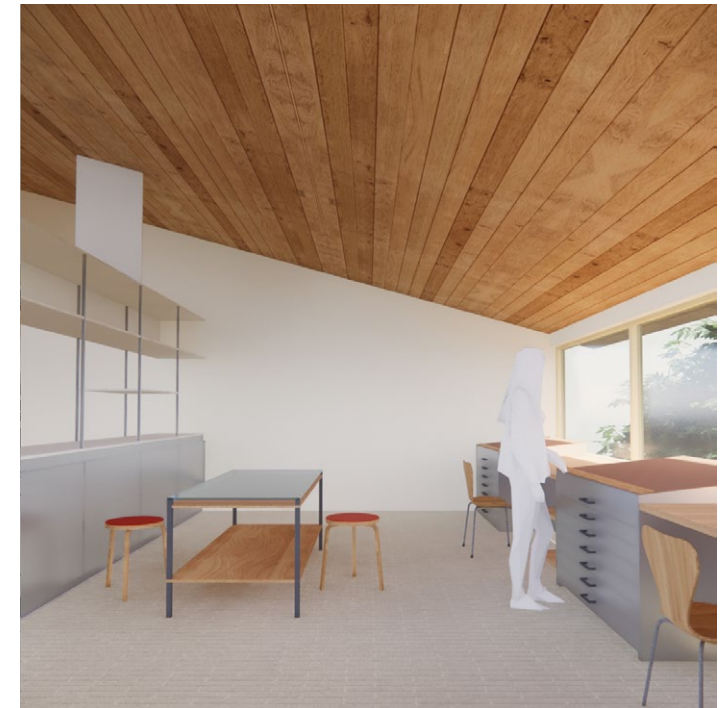


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Feedback:

More detailed design of the display shelf. Think about practical issues.
 Climatize different areas.
 Put the room in a larger hallway system, rethink how people enter the space.

(3) Revised summary drawing
 (4) Testing interior views



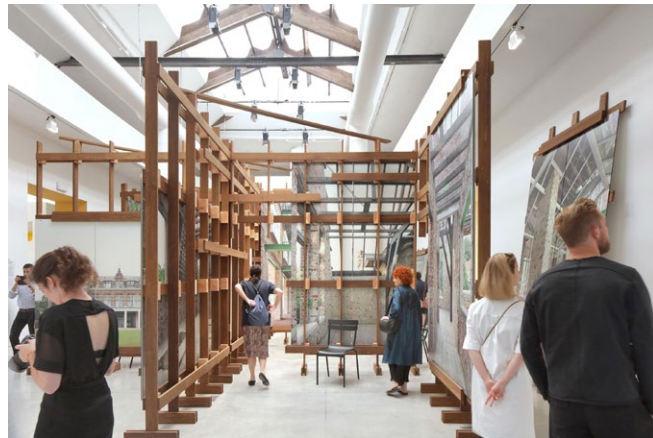
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Researching into different ways of display by architecture institutions. Tables to sit down, large models to walk around and panels to be moved, these interactive elements is a more playful way of exhibition to attract visitors and increase interaction between people and objects.

This inspire me to design the display shelf in a more simple and practical way for reading and installing.

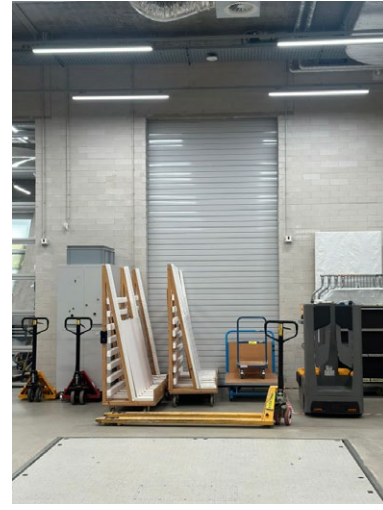
- (1) ArkDes exhibition 2024 (Marco Cappelletti 2024)
- (2) AS FOUND exhibition by Vai (Stijn Bollaert 2023)
- (3) La Biennale di Venezia 2018 (DDVT 20218)
- (4) The Triennale archives in Milan (DSL Studio 2024)



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Observations:

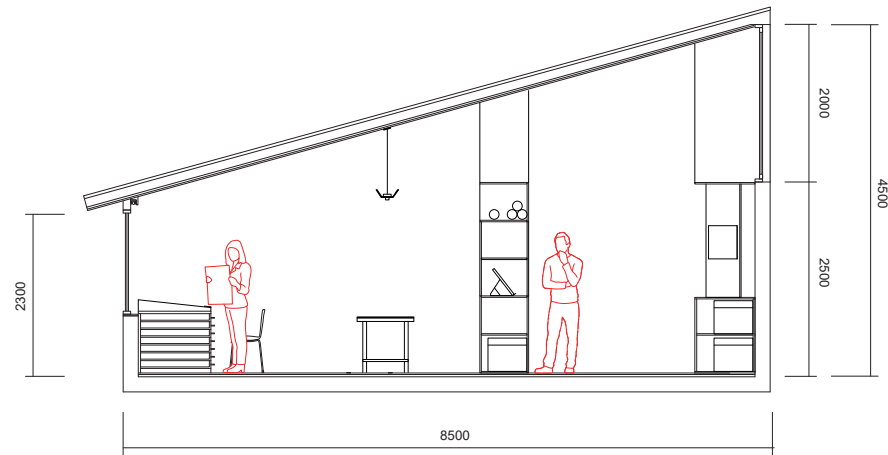
Sandstone is used as a main material of walls.

Very strict regulation of entering the storage room.

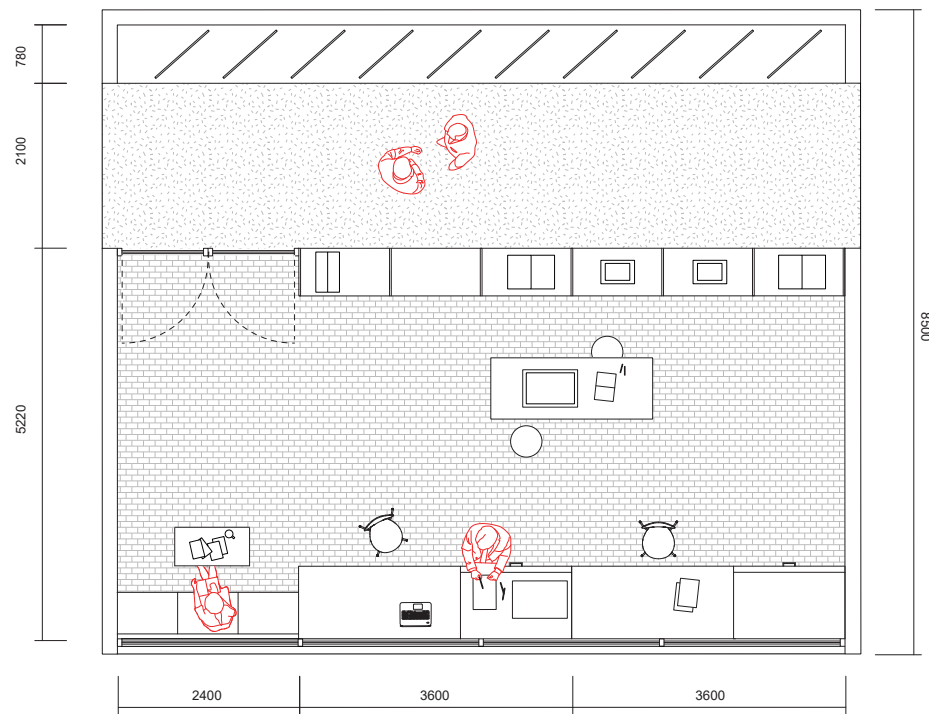
Reflective surface on the top floor ceiling invites more greenery view inside.

Archive shelves move on rails which are almost invisible inserted in the floor. Open and close neatly.

- (5) Conference room at top floor
- (6) Storage room
- (7) Underground logistics area
- (8) Archive objects
- (9) Building the model



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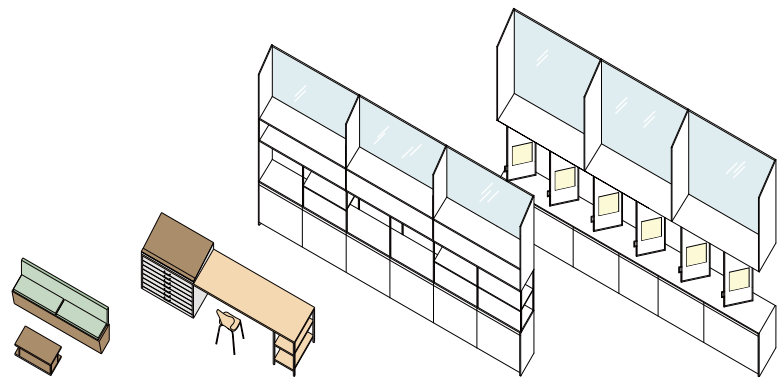
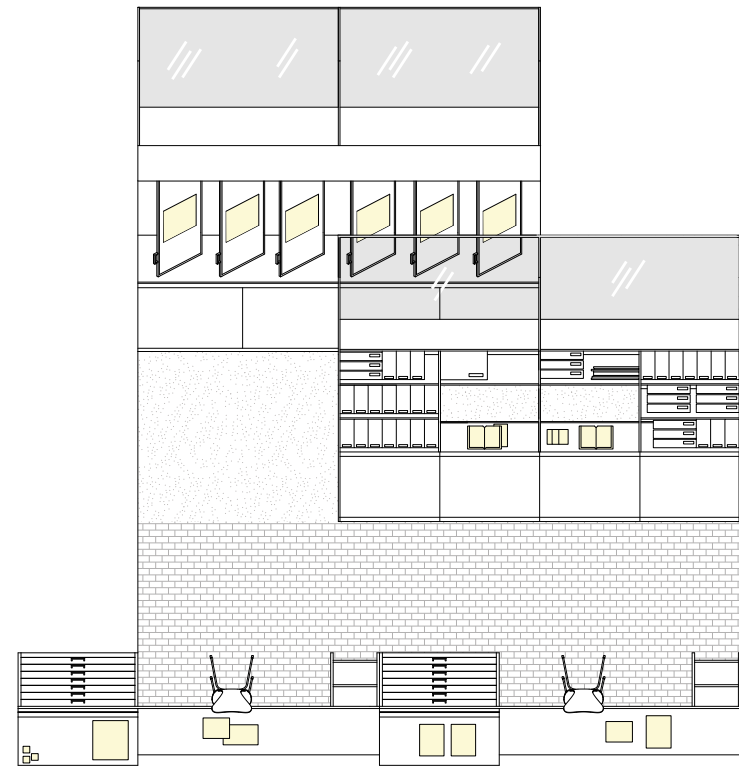


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- (1) Section 1:200
- (2) Plan 1:200
- (3) View from desk
- (4) View from entrance

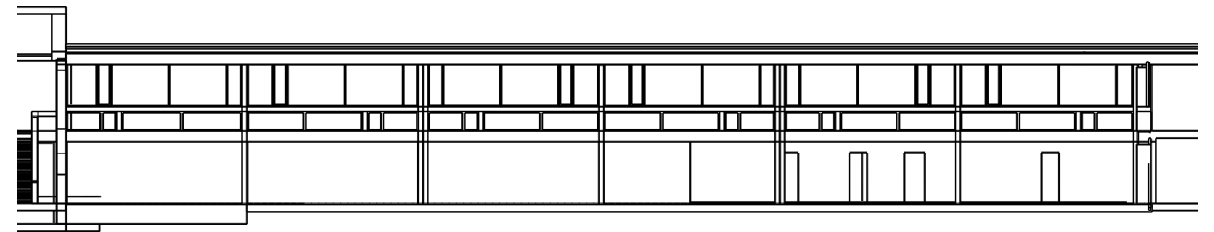
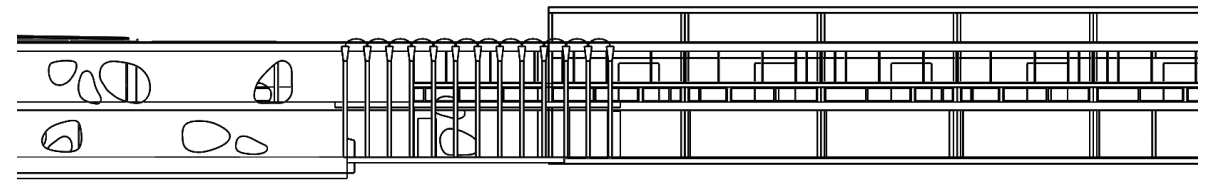
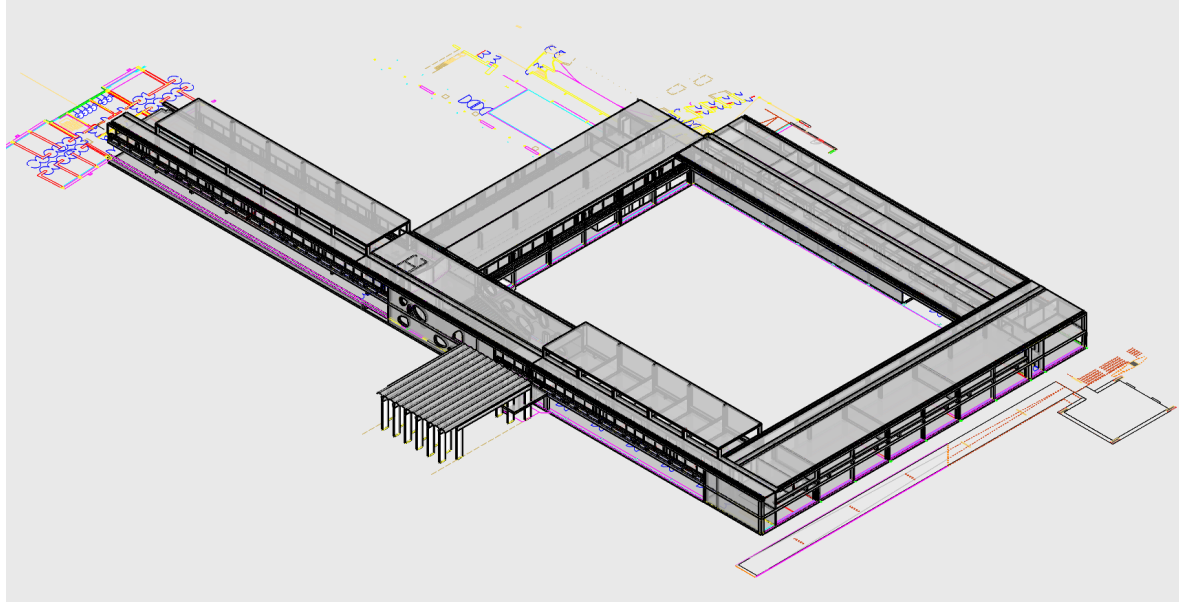


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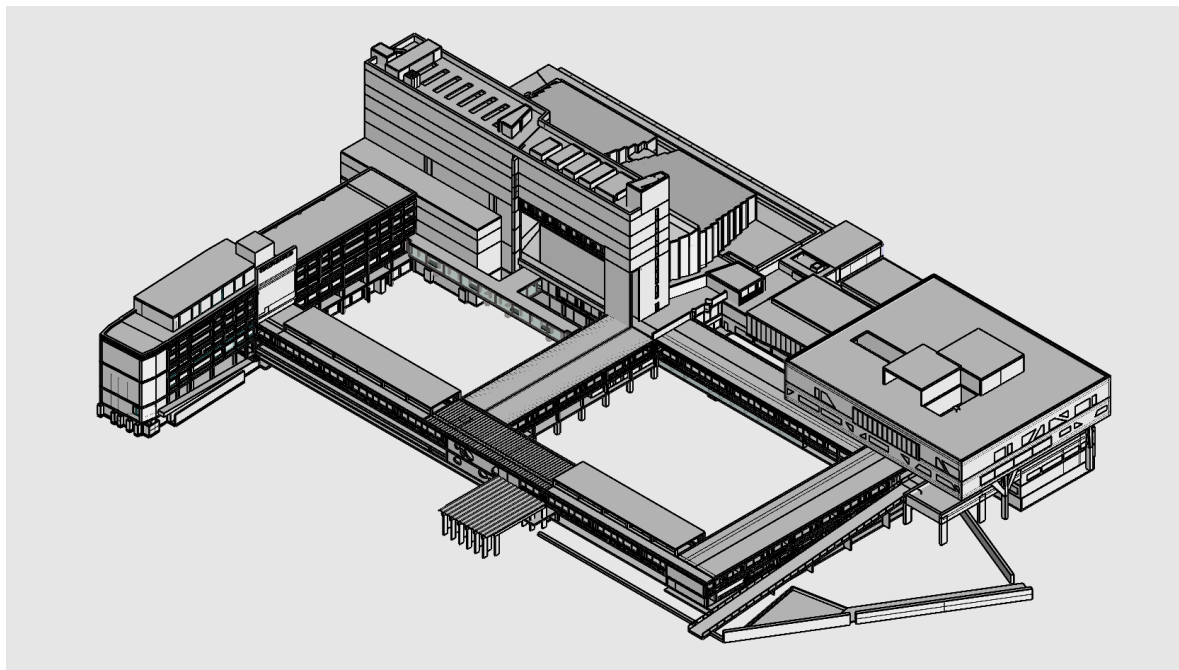
(5) Final Diagram
 (6) View towards study area



(6)



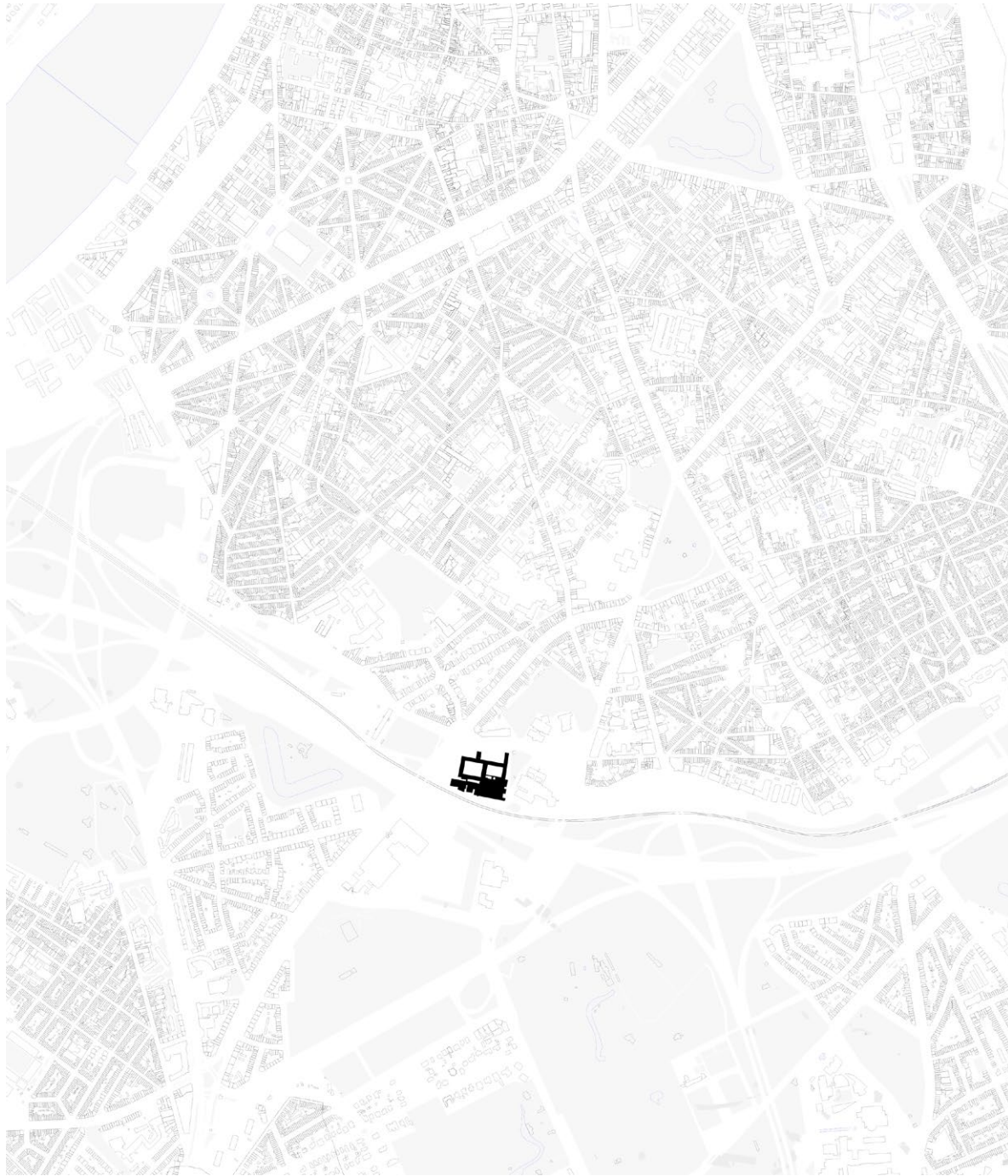
(2)



(3)

(1) The first two weeks are spent on the 3d model group work of the entire site, in which I mainly in charge of the courtyard building and fountain area. A facade study of Beel's extension is also produced.

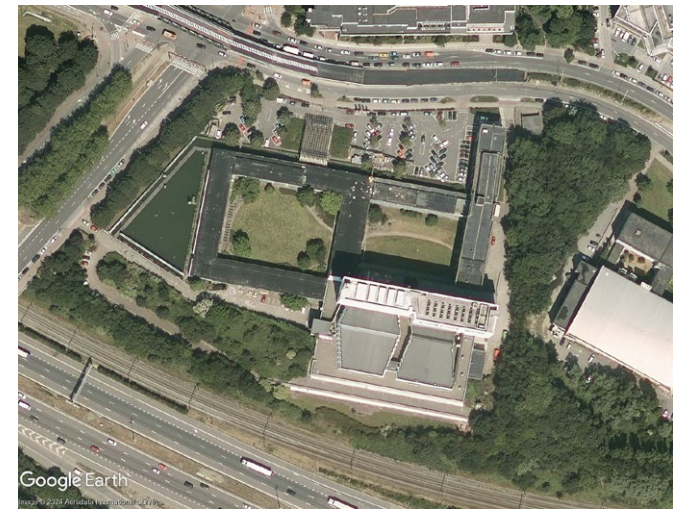
- (1) Leon Stynen low building
- (2) Facade Diagram
- (3) Material finish study



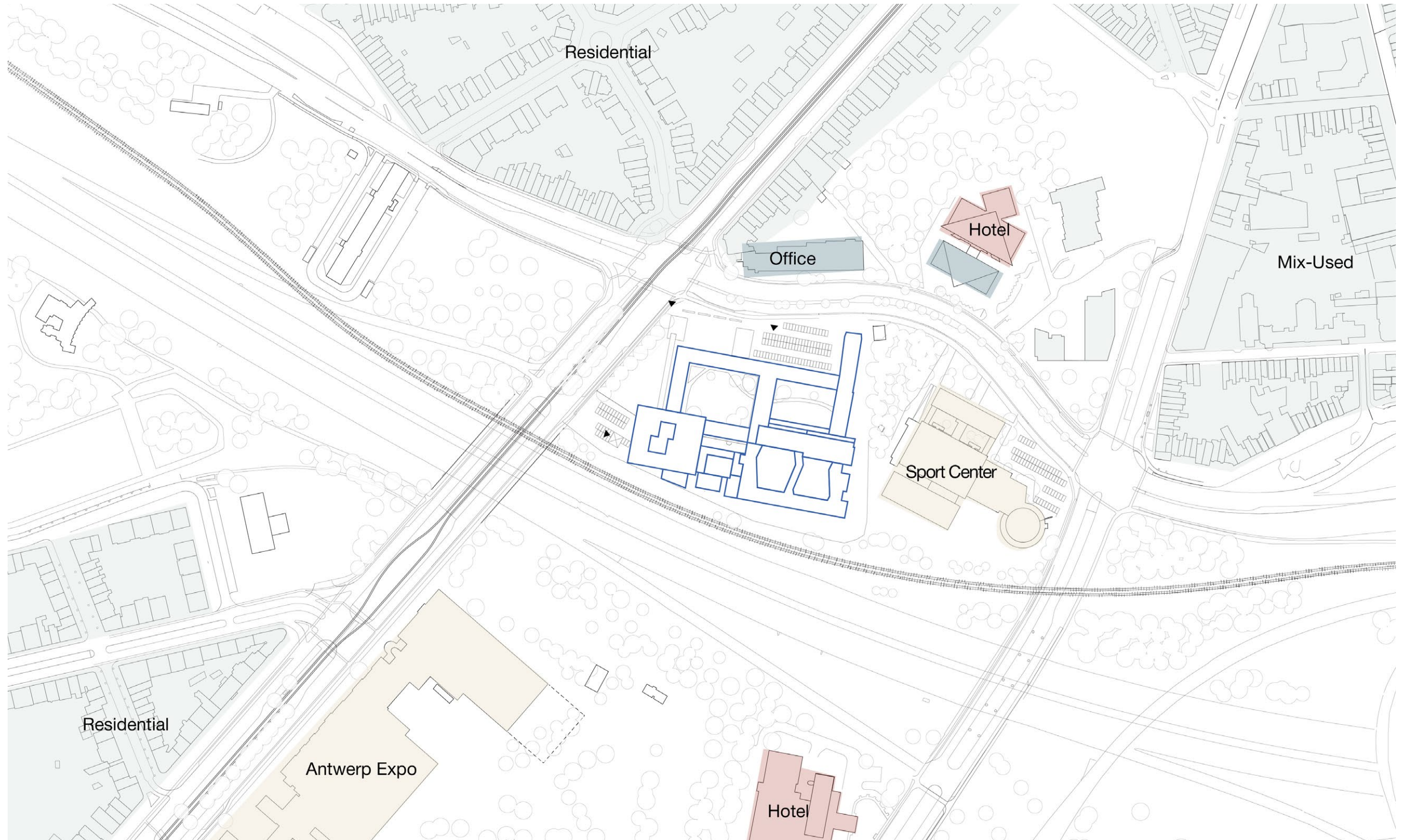
(4)

(4) Map of Antwerp showing the location of de Singel

(5) Satellite view between 2004 and 2022

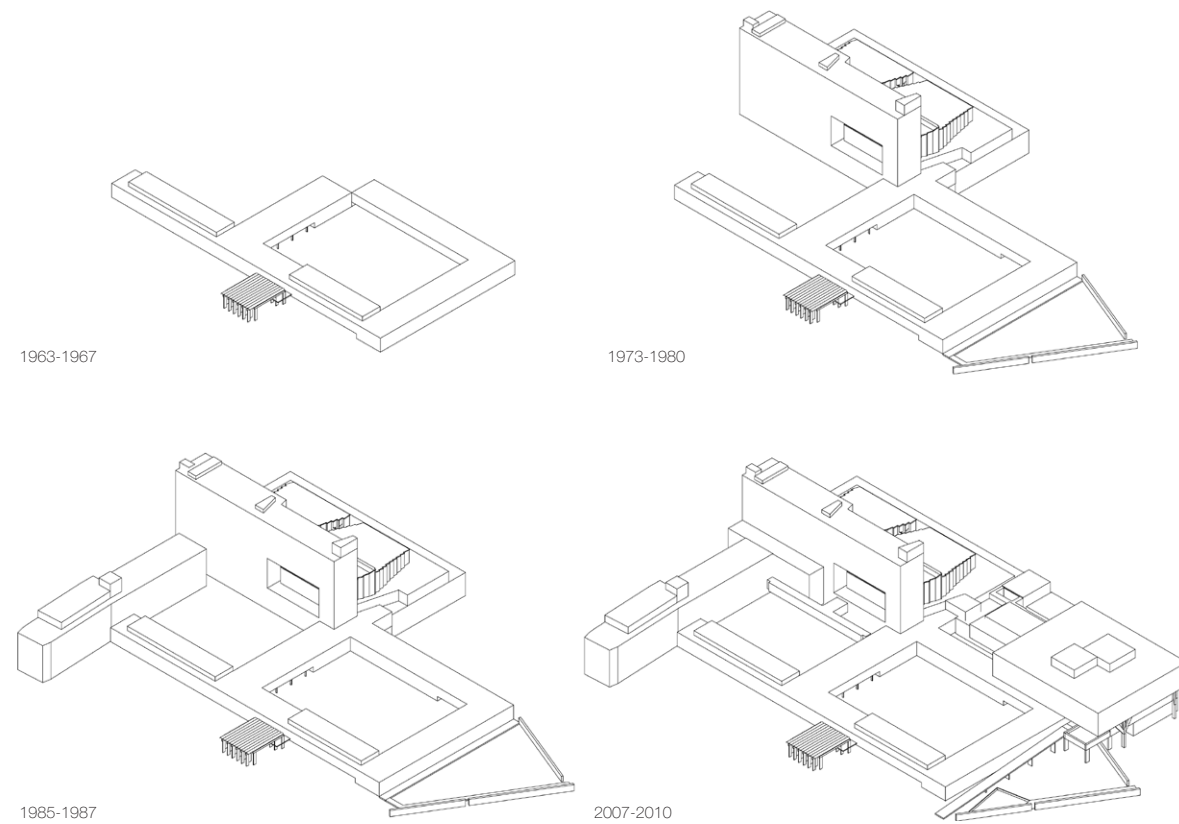


(5)



(6) Function analyse of surrounding buildings

Historical Development



(7)

The site is located at the edge of the Antwerp city centre, adjacent to the ring road and a railway.

The construction of the ring road, railway and swimming pool changed the surroundings of the site drastically.

Beel oriented the new building to the ring road: a beacon along the river of cars.

(7) Construction Timeline

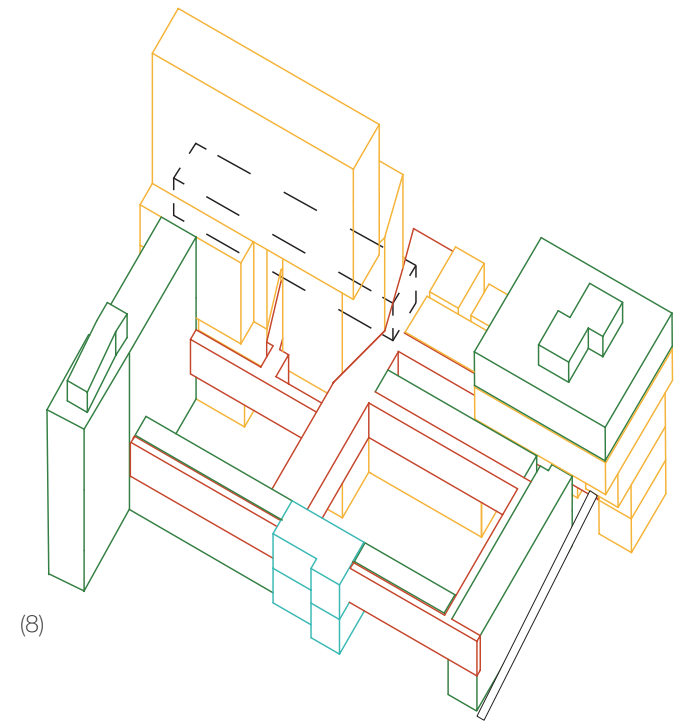
(8) Location of organizations

(9) Central circulation and gathering space

Main User Groups

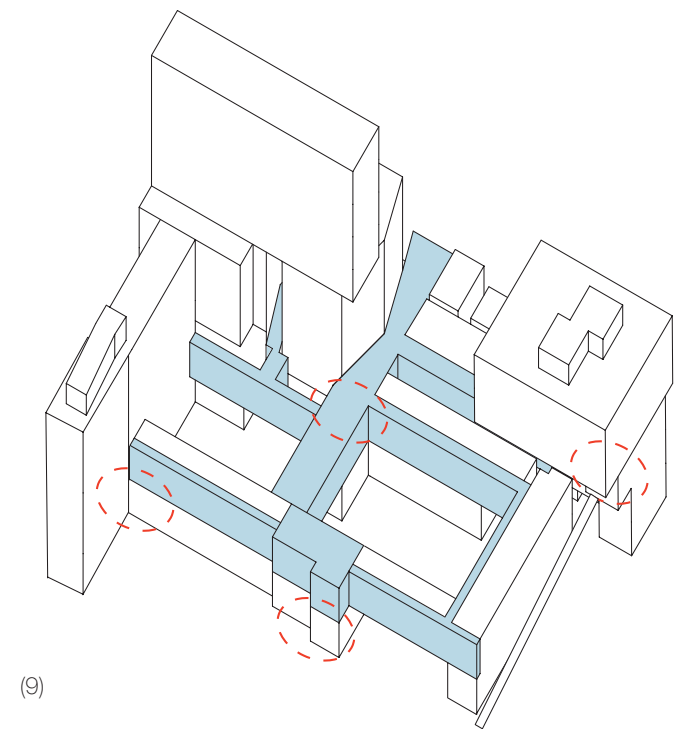
- Students and staffs
- Audience of performances
- Musicians, dancers in the studios
- VAi staffs and visitors
- Nearby residents

- deSingel
- Conservatory of Antwerp
- Radio 2
- Common
- Entrance Hall



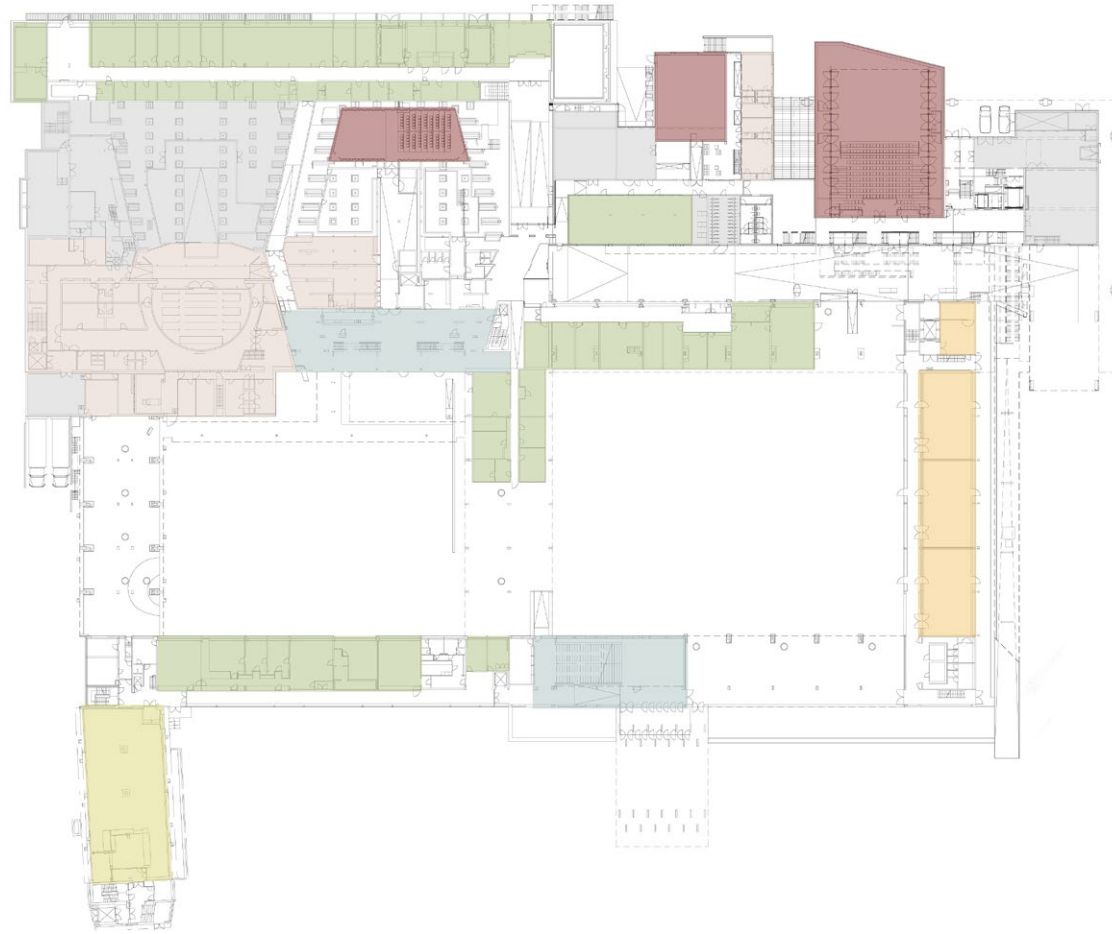
(8)

The biggest interaction zone of the complex exists in the central hallway of the original building. The hallway is the entrance and main circulation axis for both the students of the Conservatoire, the staff of deSingel and the visitors of the building.



(9)

Function Analysis

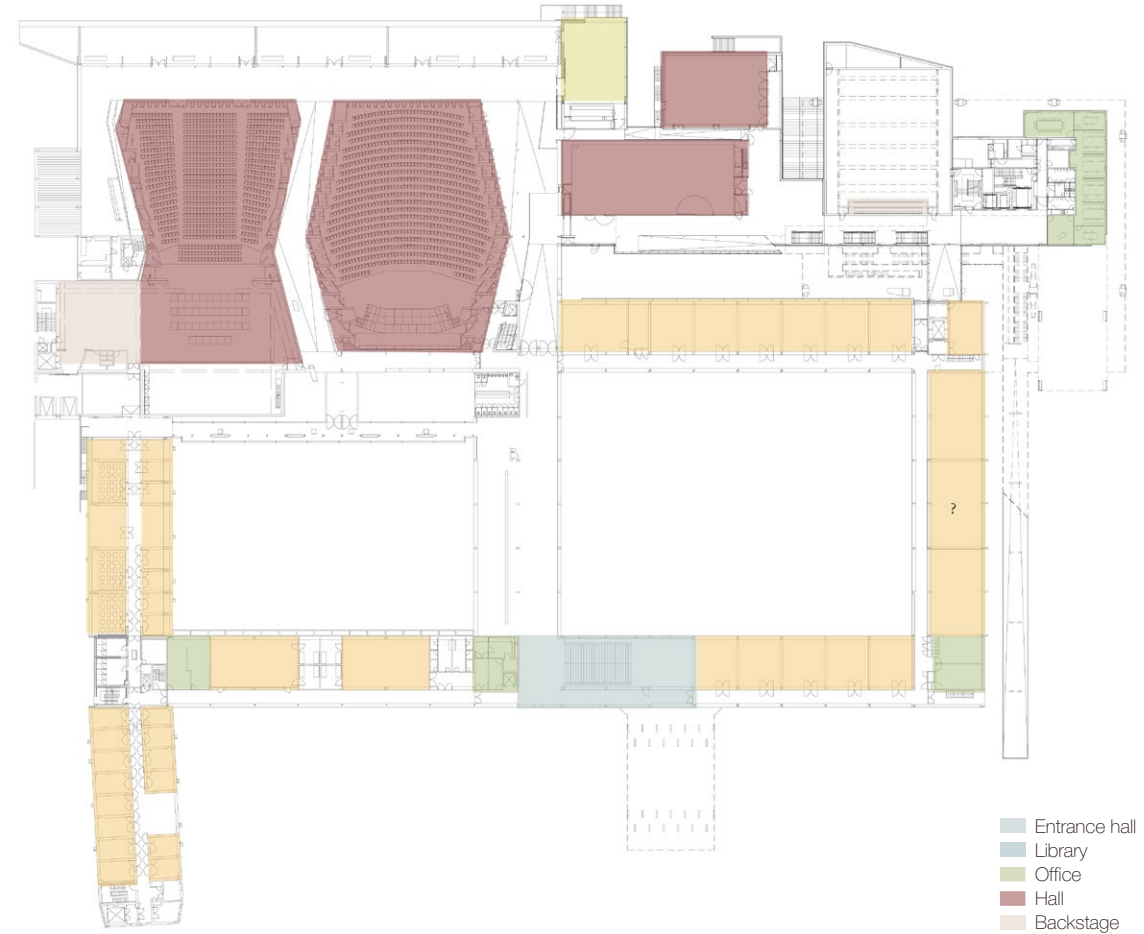


(10)

The clear routing of the building has disappeared due to the different extensions. Many dead ends exist in the building and functions blend into each other. To make it to some extent possible to orientate yourself in the building, the different building blocks got a name.

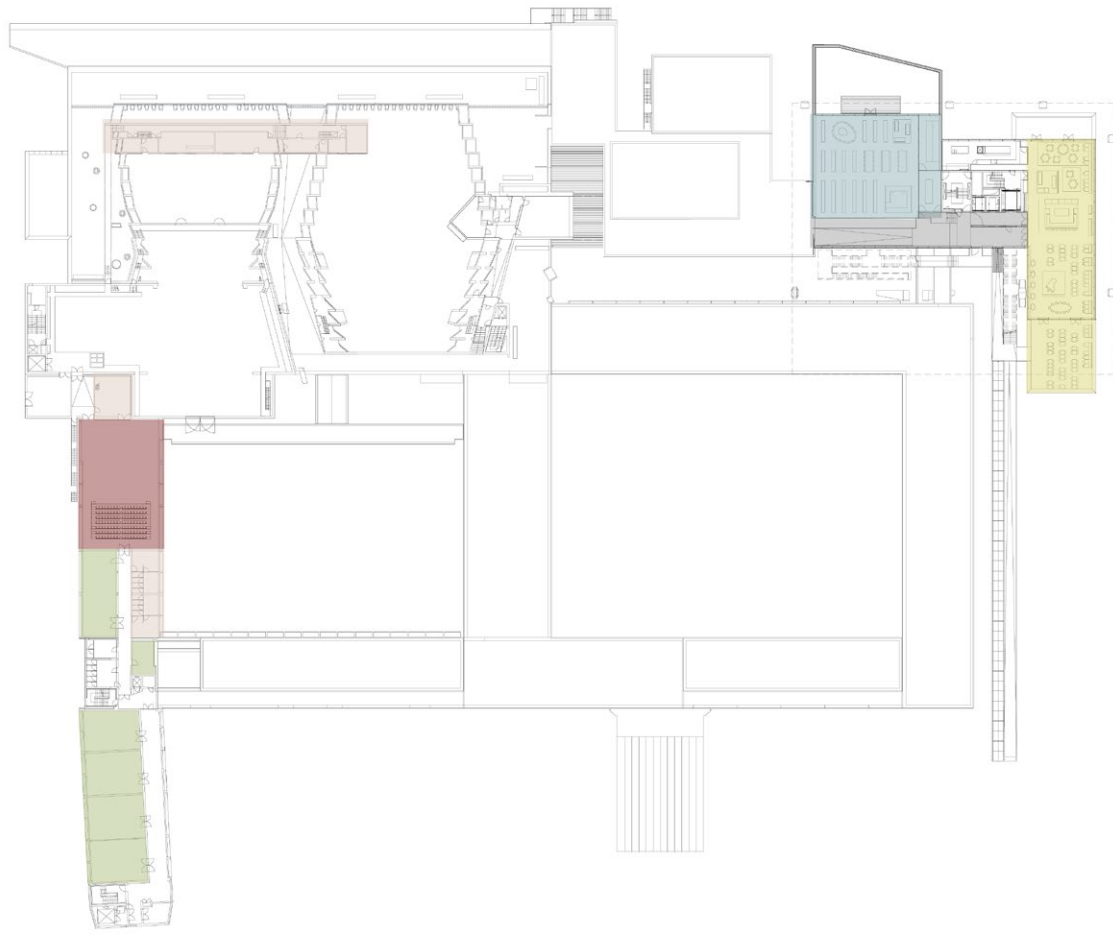
The reception of the Conservatoire is located on the first level and directly visible from the entrance hall. The reception of deSingel is positioned near the logistic entrance of deSingel on level 0 and somewhat hidden.

(10) Function Level 0
(11) Function Level 1



(11)

- Entrance hall
- Library
- Office
- Hall
- Backstage
- Classroom
- Restaurant
- Logistic

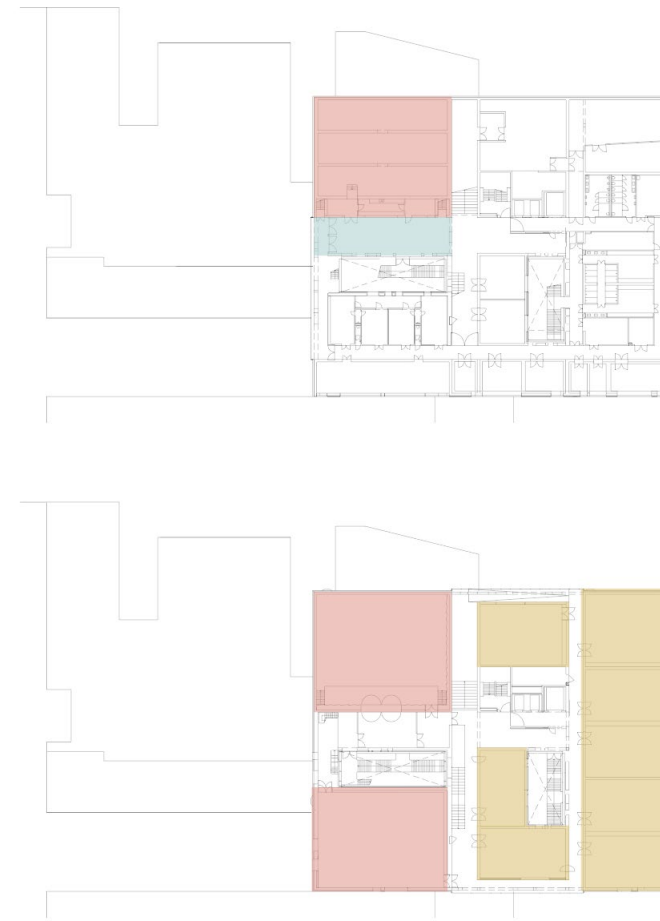


(12)

Functions remain unchanged:
Performance halls, auditoriums, classrooms

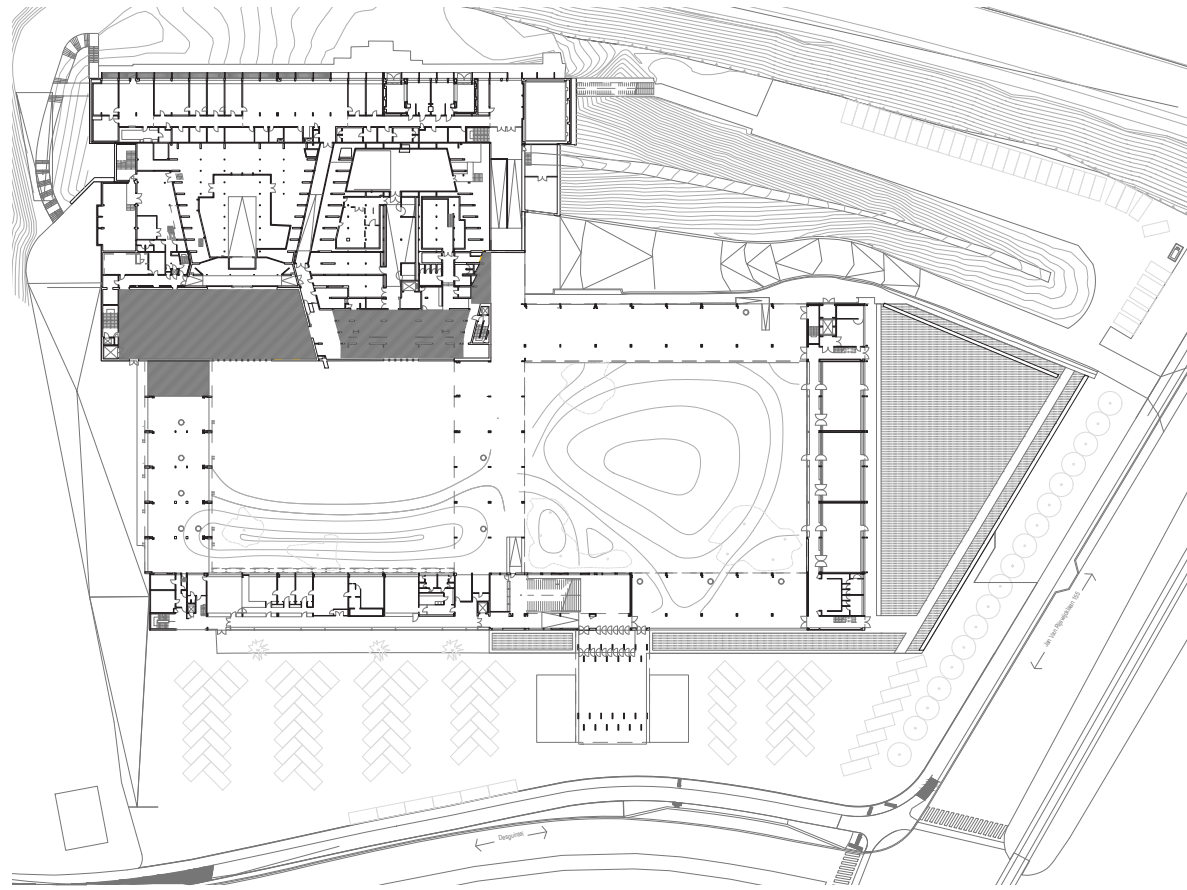
Functions can be moved/reduced:
offices, restaurant, storage area

(12) Function Level 2
(13) Function Level 3 and 4



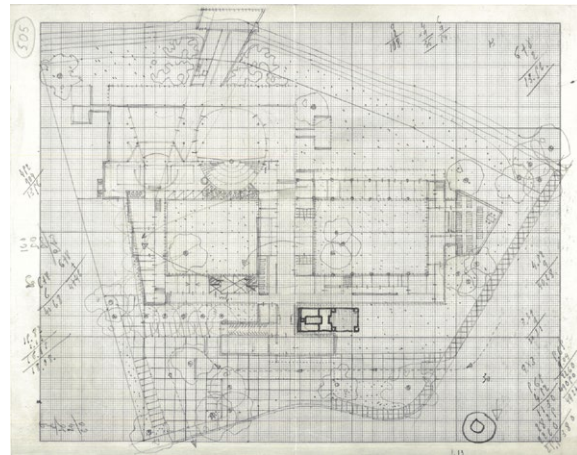
(13)

- Entrance hall
- Library
- Office
- Hall
- Backstage
- Classroom
- Restaurant
- Logistic



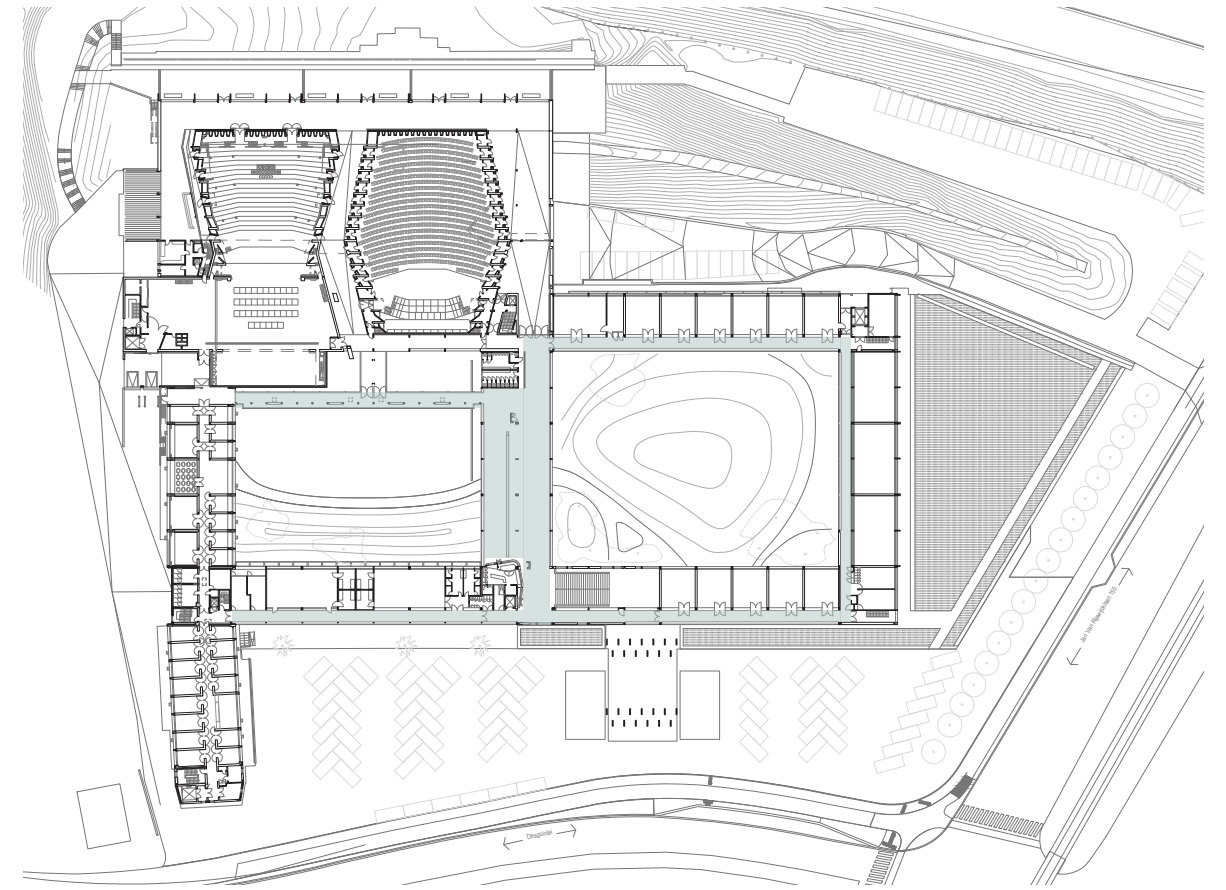
(1)

Already in Stynen's first drawings he takes advantage of the exceptional location of the site, and groups the classrooms around two inner gardens, each 40 by 40 metres in size. He provides for a single level for the entire complex, 2.5 metres above street level, built on piles in order to provide the ground floor to keep the land free and to safeguard the play of perspectives on the architecture combined with the landscape.



(2)

- (1) Ground floor plan after phase 2
- (2) Sketch of the ground floor plan
- (3) Ground floor plan after phase 5
- (4) Looking from hallway to courtyard

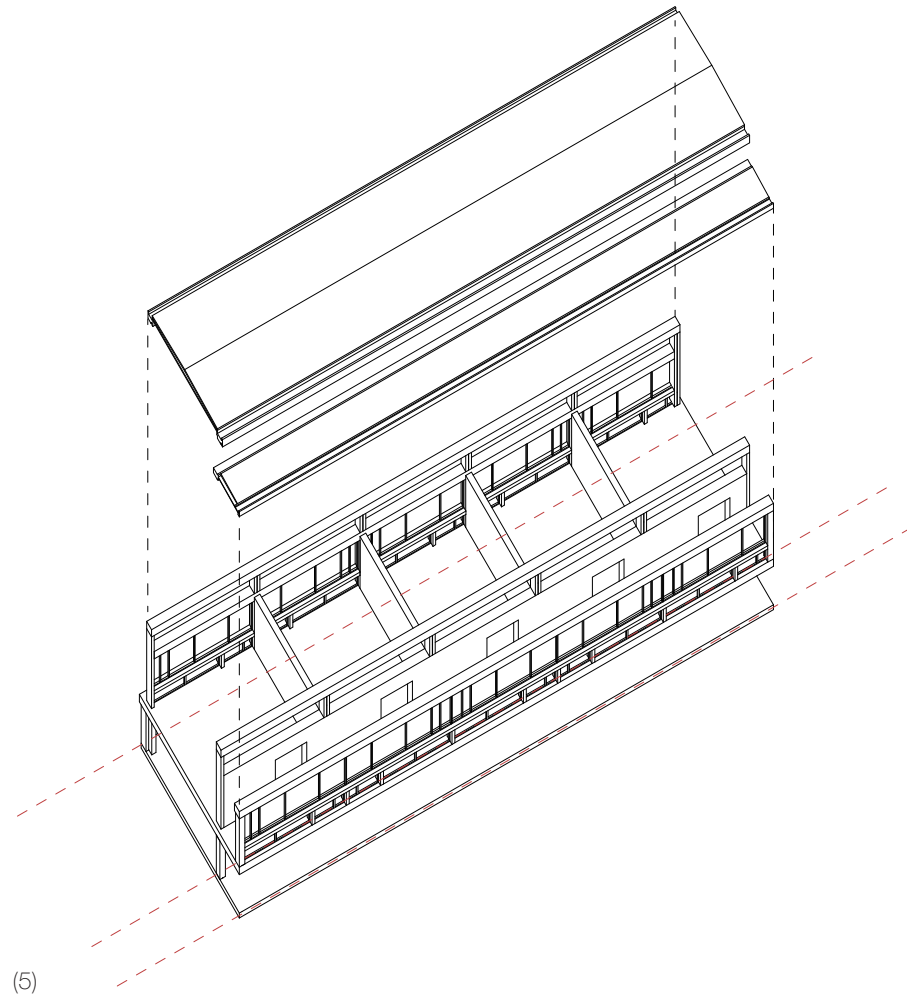


(3)

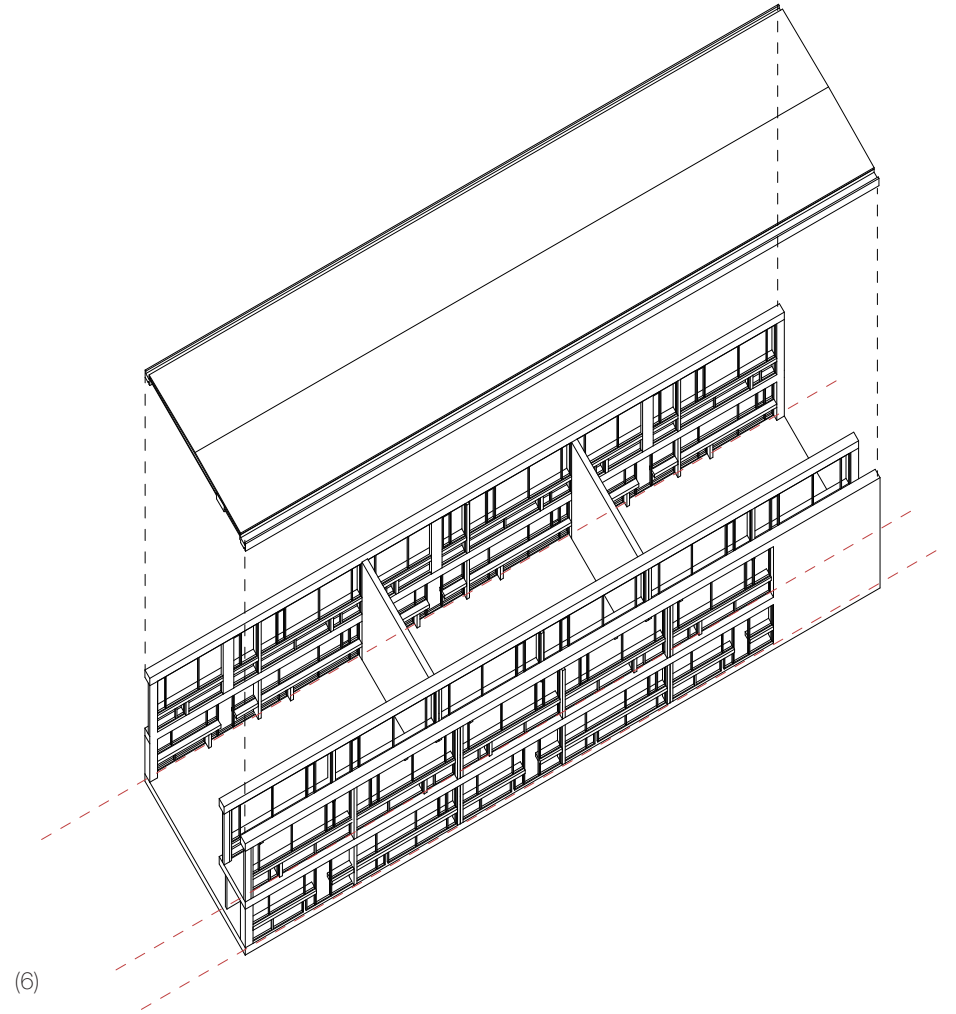
The hallways have varying relations to the surroundings; they pass along the courtyards but also switch to the street side at the north side of the building (Desguinle). By this the classes are never opposed and always have perspective on a peaceful setting.



(4)



(5)



(6)

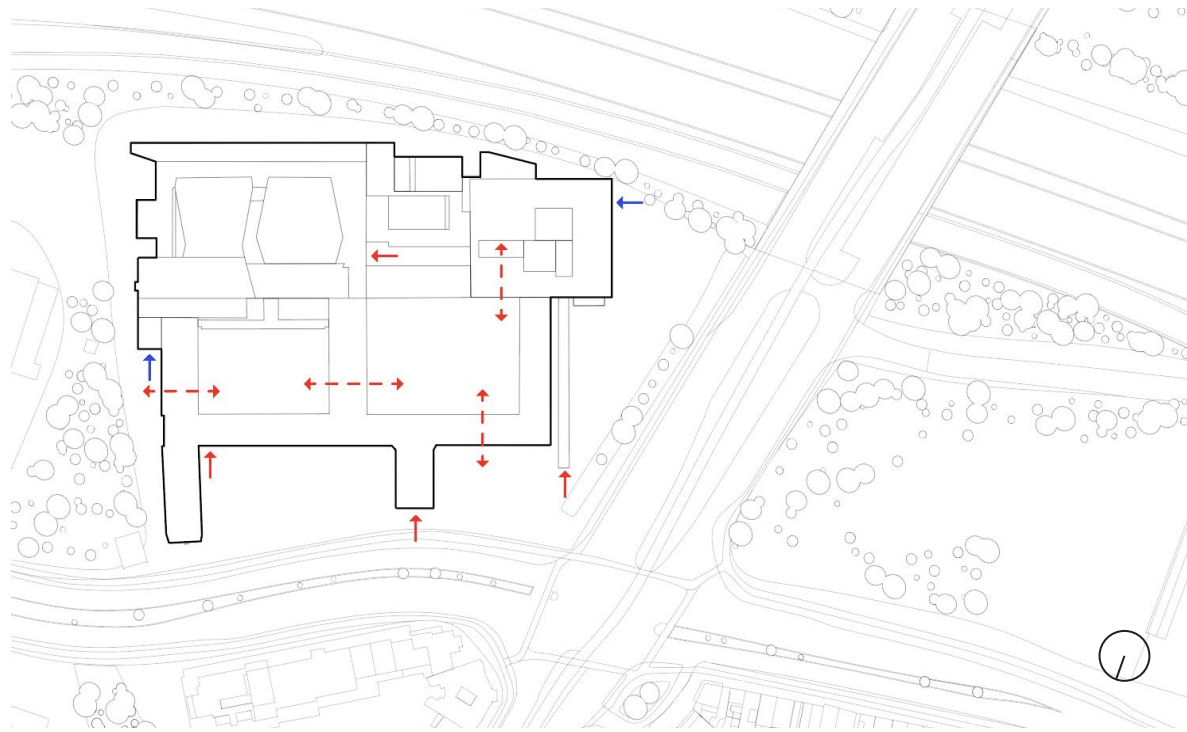
The courtyard wing in phase 1 consists of music classrooms and studios. The primary bearing structure is an in-situ concrete framework following the same grid as the foundations (7,40m x 8,40m), and the floor and roof plates are in-situ concrete ribbed plates.

A typical structure feature is that the functional space is directly supported by columns while hallways are suspended. The width of hallways is 2.3m, wider than typical school designs, which is suitable for students carrying big instruments and also function as a meeting place, a waiting room, or even a rehearsal room.

(5) Axo view of classrooms

(6) Axo view of double-height rehearsal rooms

Preliminary Design



(7)

VAl in De Singel

1. A meeting place for people in and around the complex
2. Provides more public service - large reading room and library
3. Better working environment, better archival management

Two main issues leading design

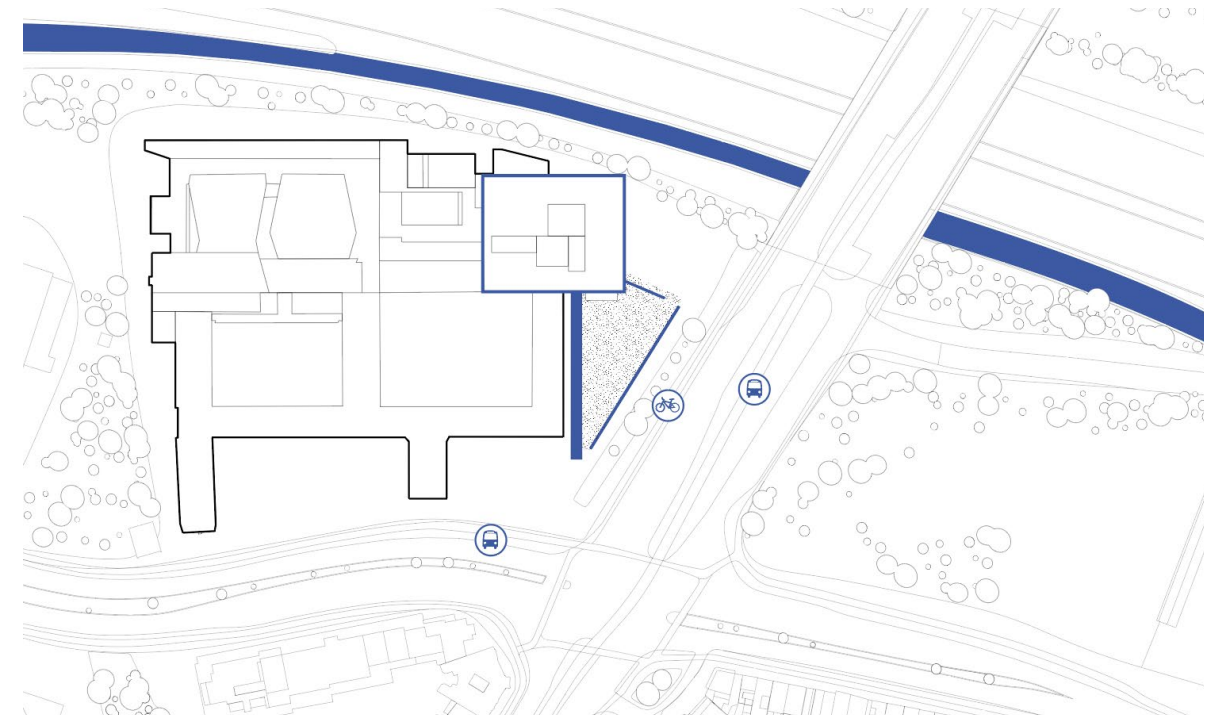
1. The fountain area and the overhanging extension is not friendly for visitors and make the site
2. Provides more public service - large reading room and library
3. Better working environment, better archival management

(7) Entrance to deSingel

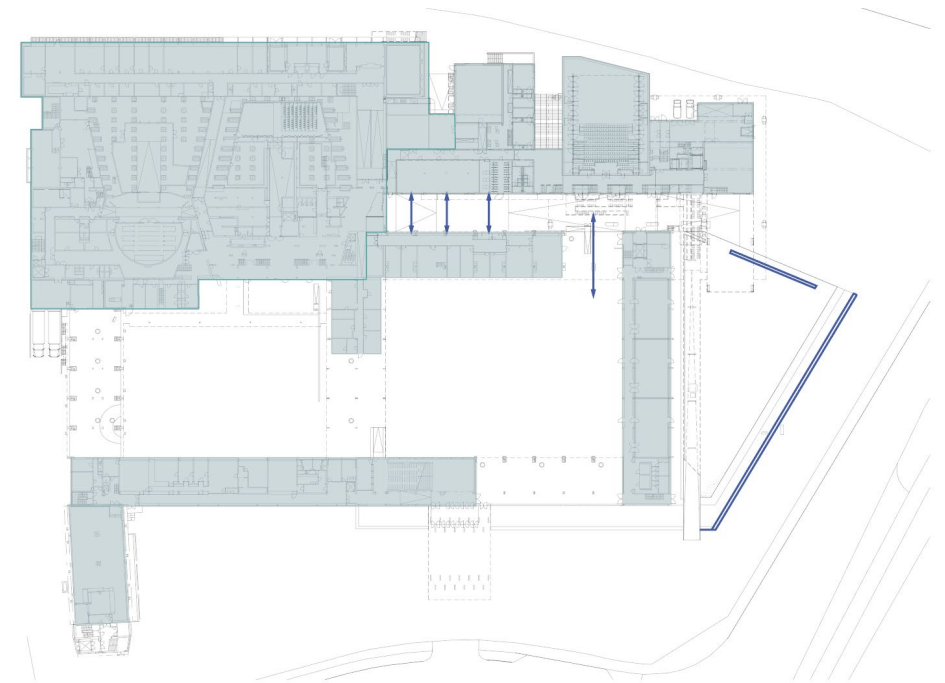
(8) An introvert character

(9) The blocked ground floor

To Change the Introvert Character



(8)



(9)

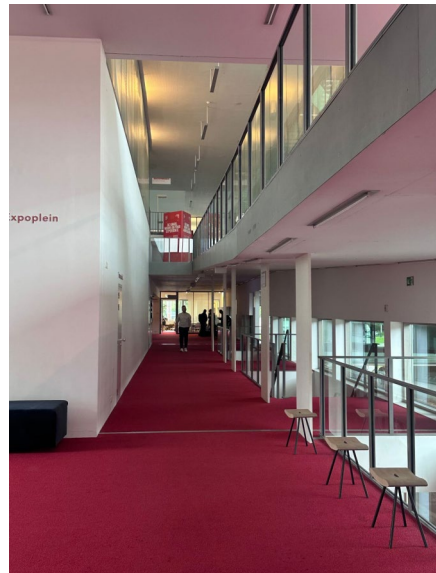


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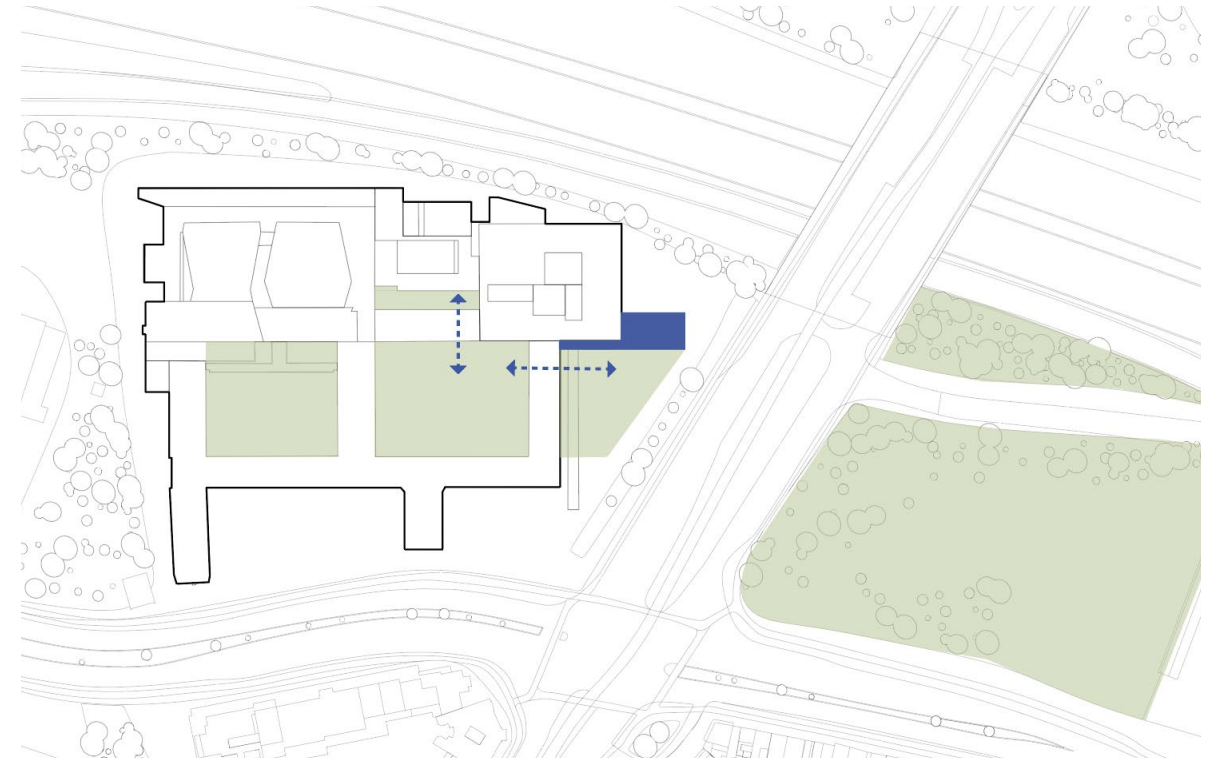
(10) The back alley between new and old building

(11) The hallway on level 1

(12) Proposed site plan



(11)



(12)

Starting Points

Excessive circulation space

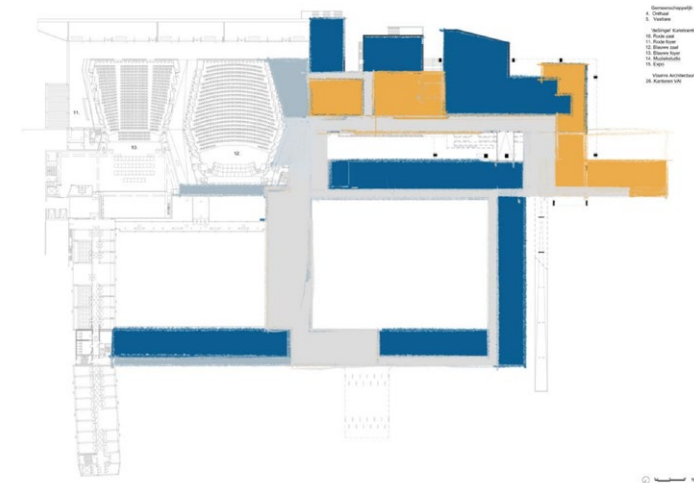
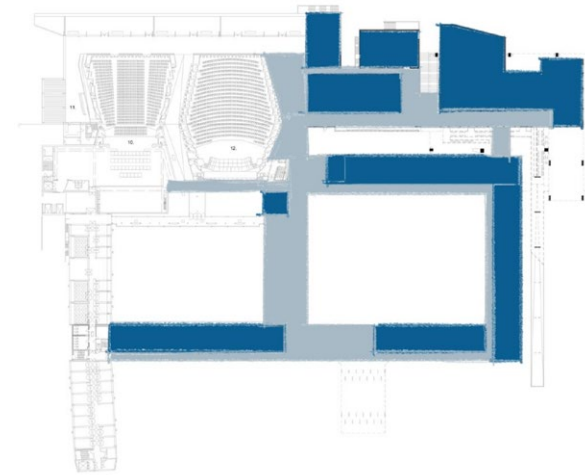
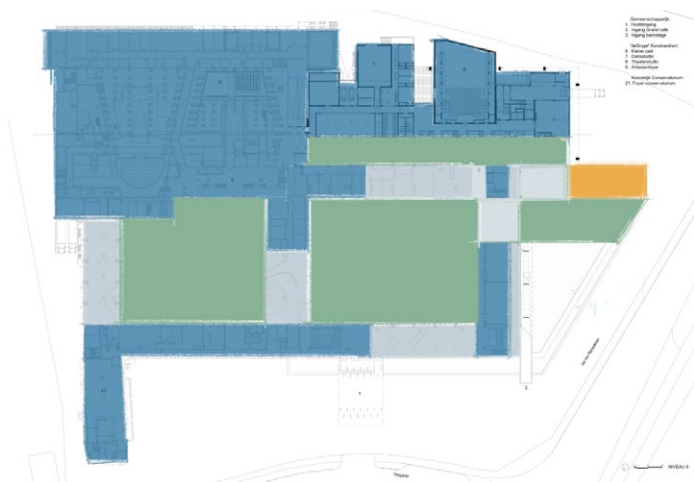
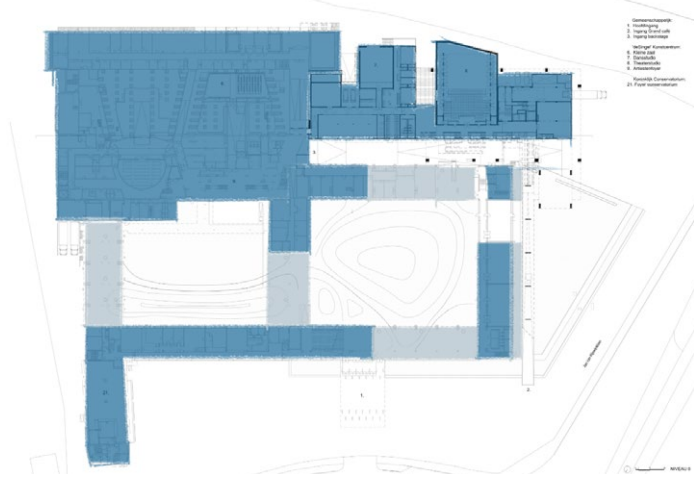
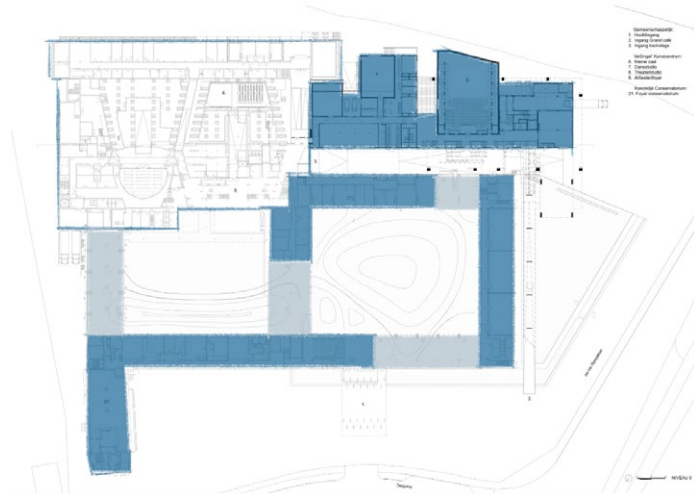


Transform excessive circulation space into library and study room

A new entrance area



Extend the original courtyard, more transparency on groundfloor



(13)

A master plan vision for the entire building complex is first developed. The proposition of a new wing offers the opportunity to better organise the entire site, to relieve pressure from the main entrance area and to complement old and new in a targeted way.

The idea is to open up more space on the ground floor to create connections with city surroundings and extend the garden towards the west where new entrance will be built.

Focus on making the back alley more comfortable by bringing greenery and public function, as well as making use of the central circulation route.

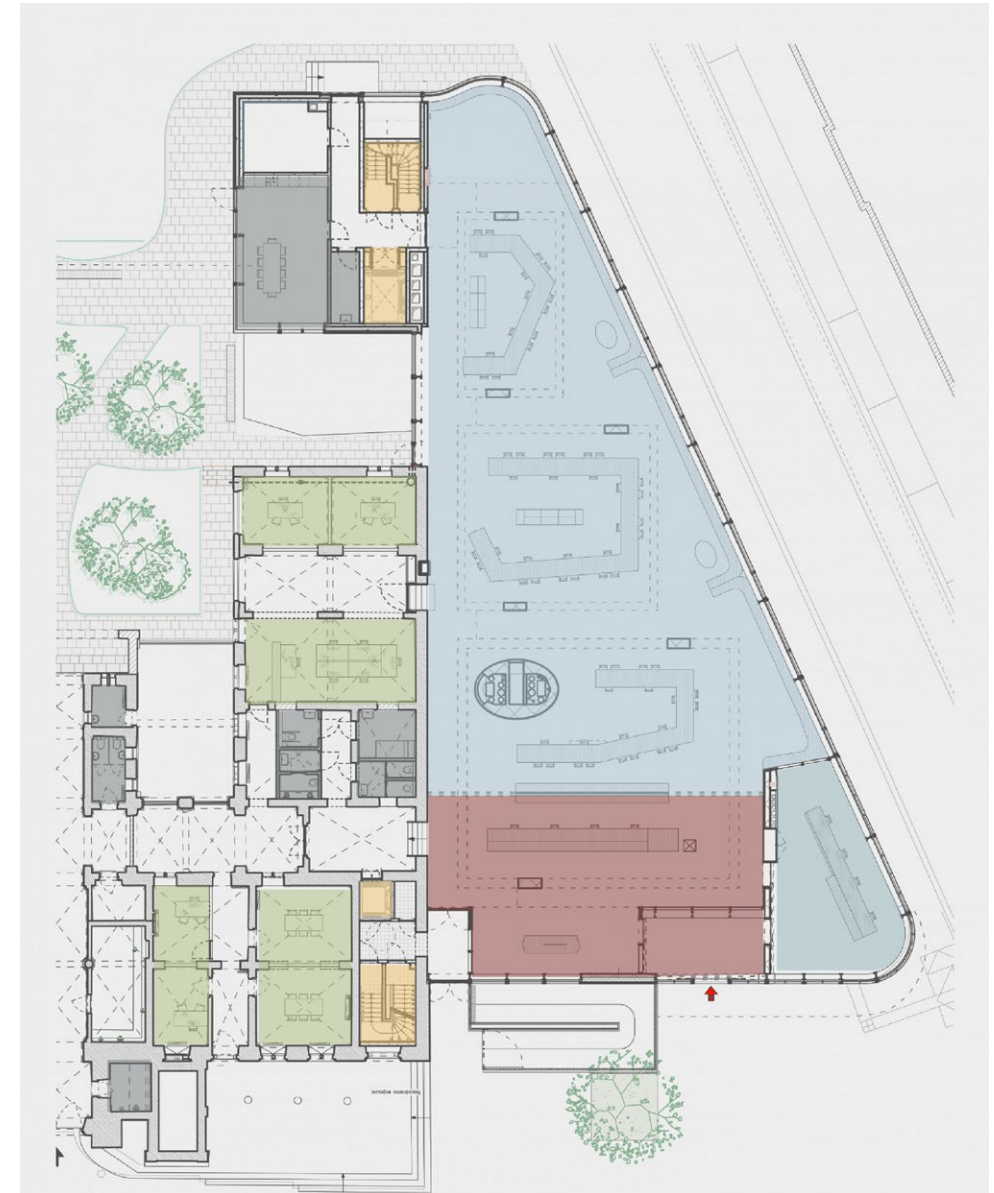
For the existing space I tried to make maximum use of what is usable and can contribute qualitatively to the experience of the entire building complex. Library and study room are placed on level 1 near the ramp, so activities happening inside can also be viewed from the more public atrium area.

(13) First Sketches



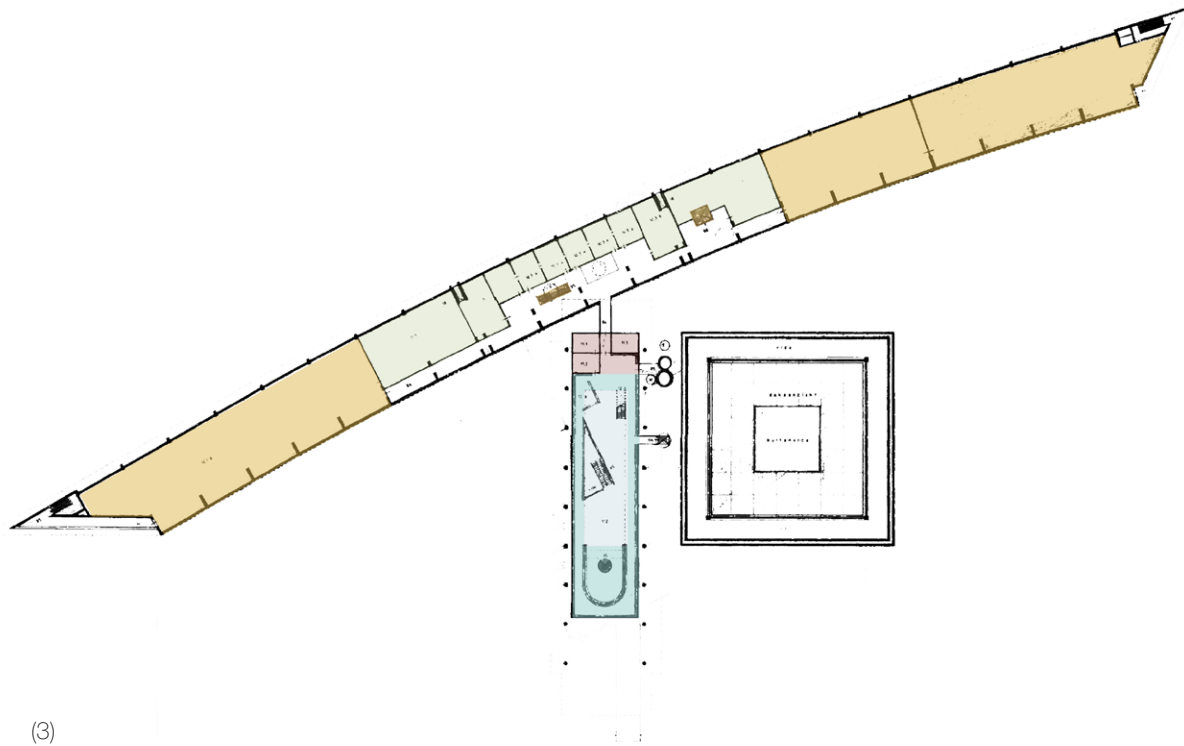
(1)

- Exhibition
- Public space
- Reading room
- Library
- Workshop
- Office
- Circulation
- Depot
- Technical/ Service



(2)

(1) City Archives, Sint-Niklaas (Robbrecht en Daem architecten 2022)
 (2) State Archives, Ghent (Robbrecht en Daem architecten 2014)



(3)

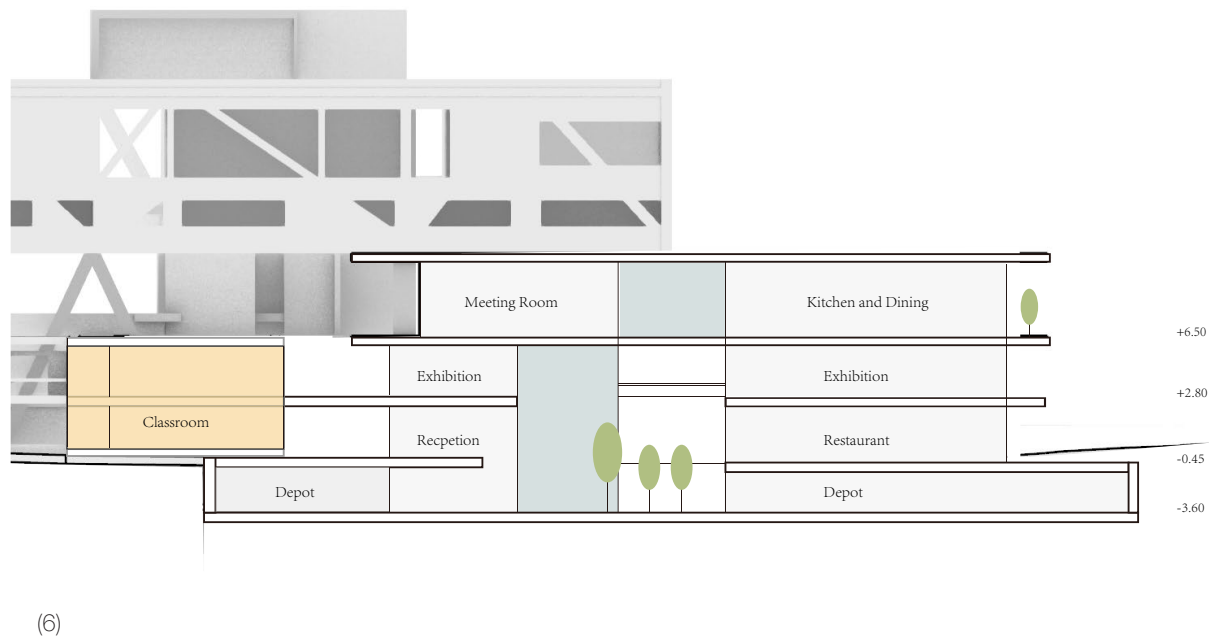
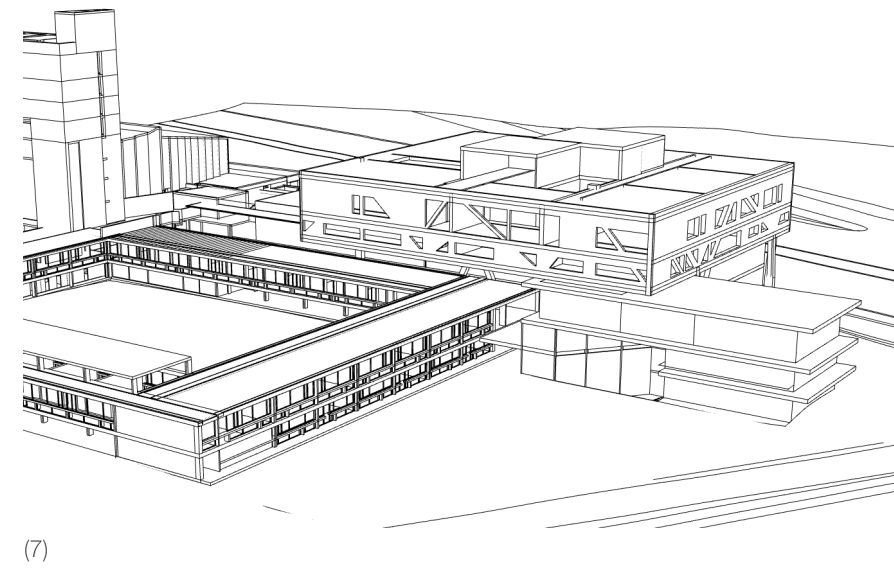
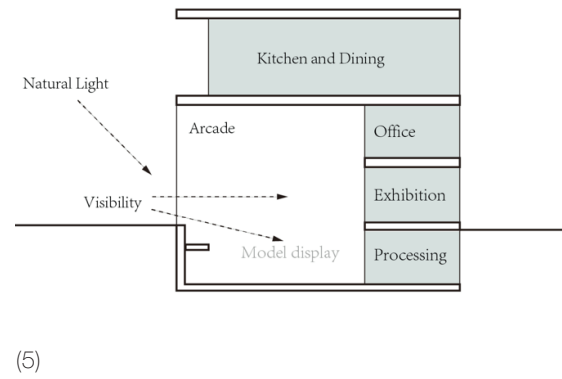
- Exhibition
- Public space
- Reading room
- Library
- Workshop
- Office
- Circulation
- Depot
- Technical/ Service

In these modern archives, public and office/ services areas are always separated clearly, which support the archival activities to run uninterruptedly. Near the entrance are public areas including exhibition space, public reading room and workshops, which also act as encounter points between the general public and professionals.

(3) Het Nieuwe Instituut (Jo Coenen 1988)
 (4) Narbo Via Museum (Foster + Partners 2021)



(4)



After analyzing current function of the complex. I found it difficult to arrange depot in the original level-1 floor area. Rather than adding up a new big volumn on top of the site, I decided to put it underground. Then the question comes. how can archival activies still be visible and engaging to the public? I came up with the idea of a sunken garden situated in the west of the complex, close the main road, where people can see the archival works through floor to celing glazing.

- Feedback 11.28
1. Work on the section to sort out circulations between old and new
 2. Rethink ground floor layout, how the new garden connects to the inner part and what benefits it bring to the entire site, so that a real porous ground is created
 3. Produce plans that clarify the original and the extension

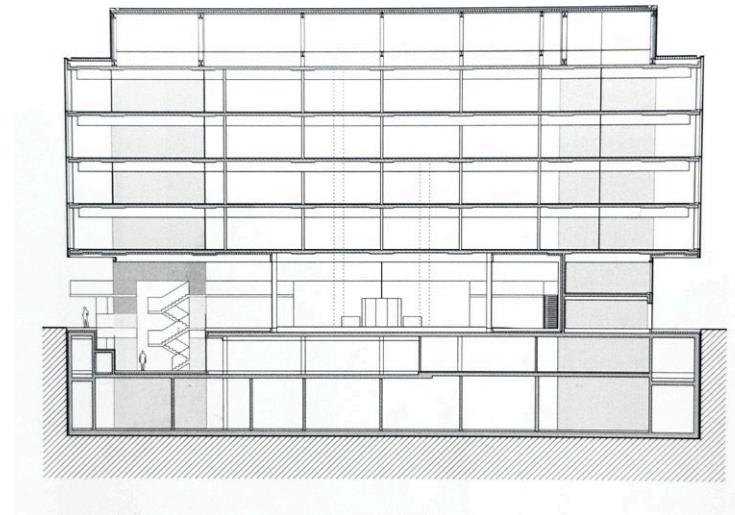
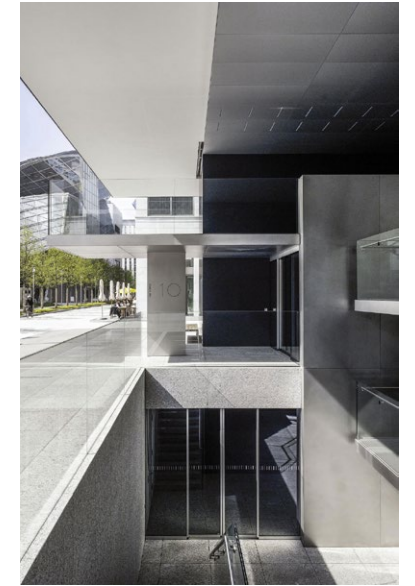
(5) Concept Diagram
 (6) Sections of sunken garden
 (7) Air-view of the new volumn



(8)

10 Fabrikstrasse by Taniguchi and Associates

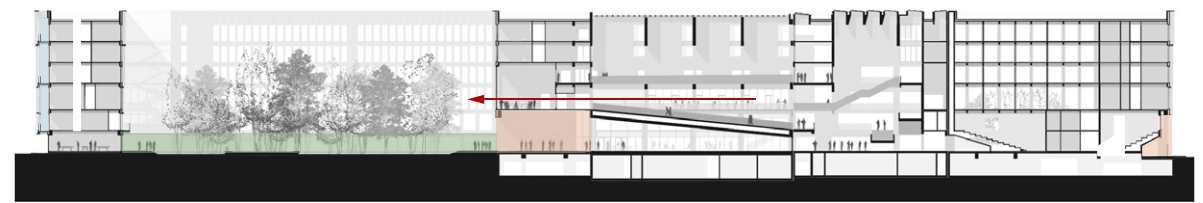
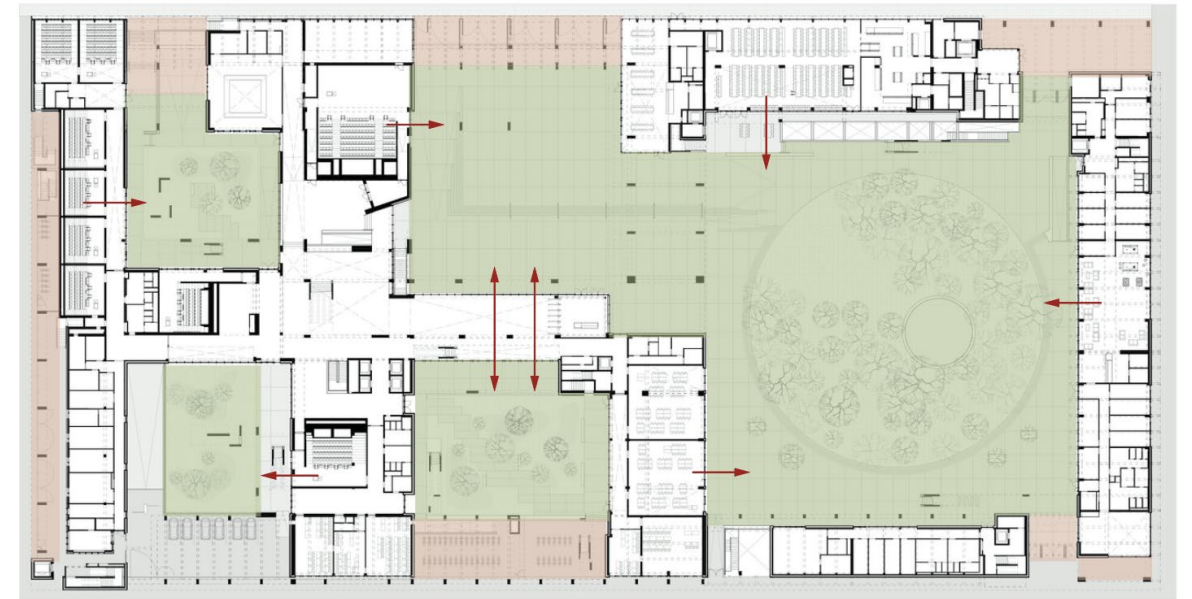
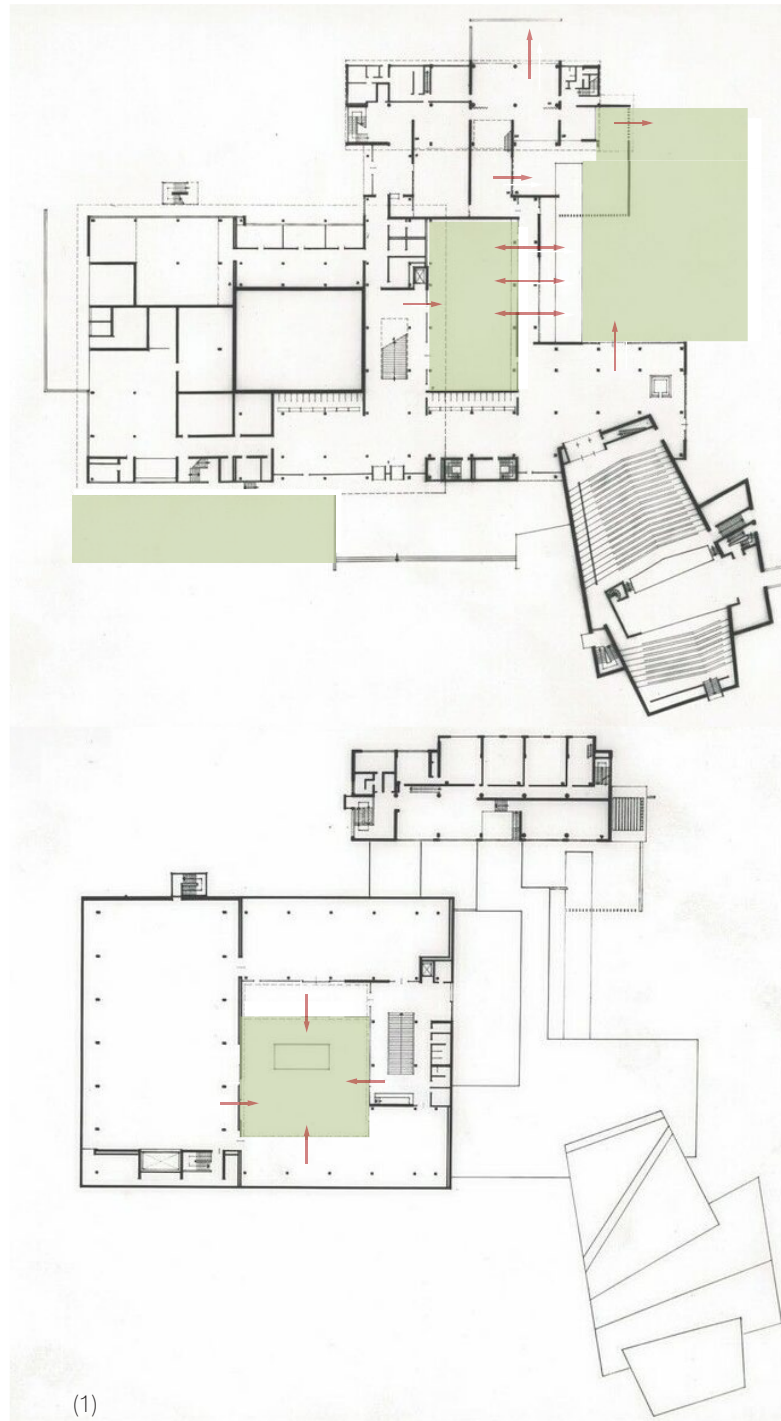
The ground floor has a free pilots space and allow employees and visitors to freely see research activities happening in the glass box. A sunken space which opens to the street is designed to closely tie the architecture with the entire Novartis campus.



(9)

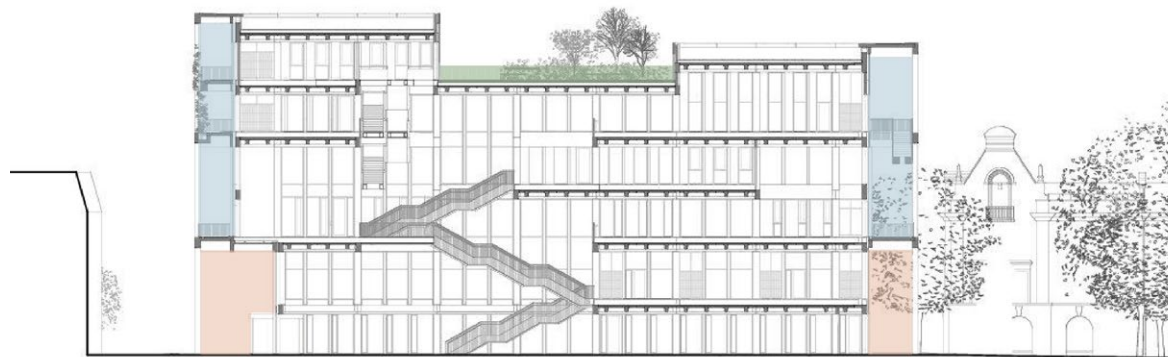
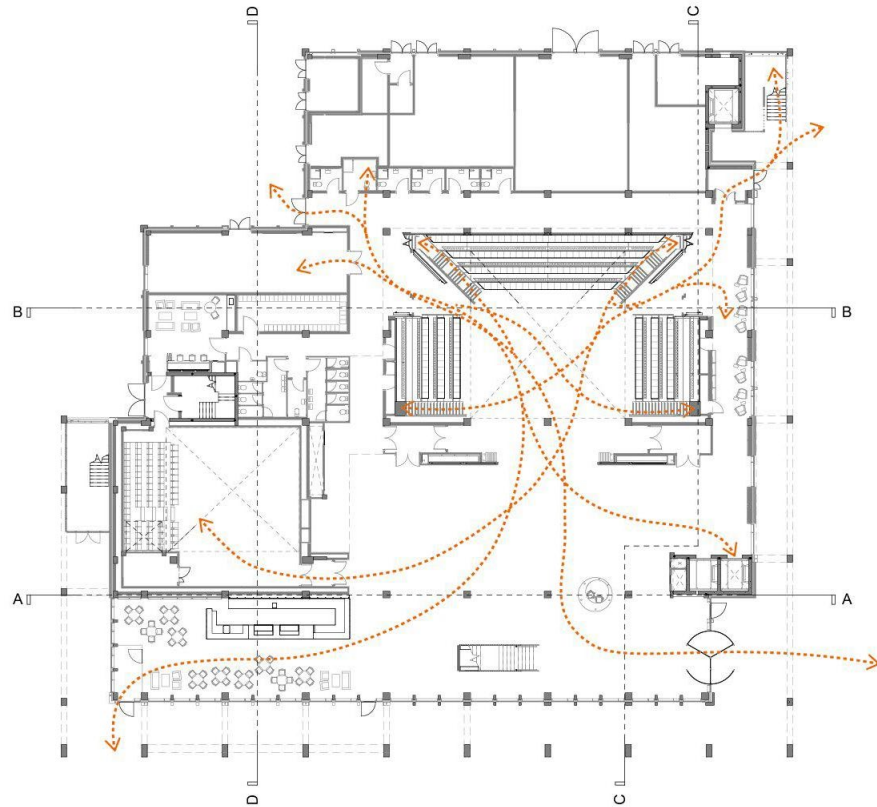
(8) Views towards the sunken space (Johannes Marburg 2010)

(9) Section (Taniguchi and Associates 2010)



- (2)
- View
- Aracde
- Garden
- Hallway

(1) Hanseatenweg 10 Akademie der Künste (Werner Düttmann 1960)
(2) Institut Mines-Télécom (Grafton Architects 2019)



(3)

- Arcade
- Garden
- Hallway

(3) Town House, Kingston University London(Grafton Architects 2019)

Some common features

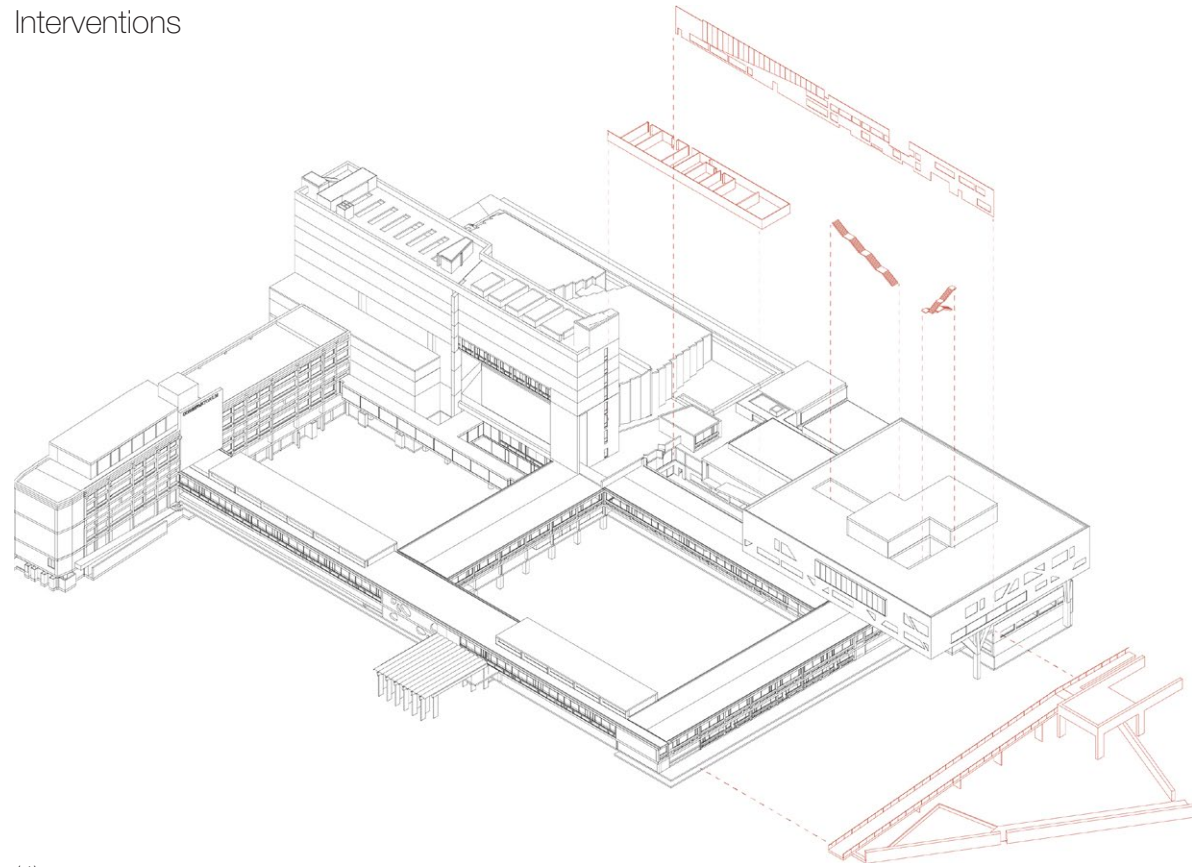
1. The space that gathers people always has view to the outside.
2. Arcade/hallway areas act as in-between space leading people from city to campus.
3. The gardens are diagonally distributed, allowing for more routes and sight through them.

A porous ground for the modern campus improves its connection to the city and states its identity of a public space. Leon Stynen's idea of courtyards can be improved by the new plaza and sunken garden on the west,

Notes about Grafton architects's design:

The atrium not only extends upwards but also gives a horizontal extension of the view at anyone's point of view. This means that the atrium is always connected to the neighbouring public spaces in different ways. The result is a rich layering of interior spaces.

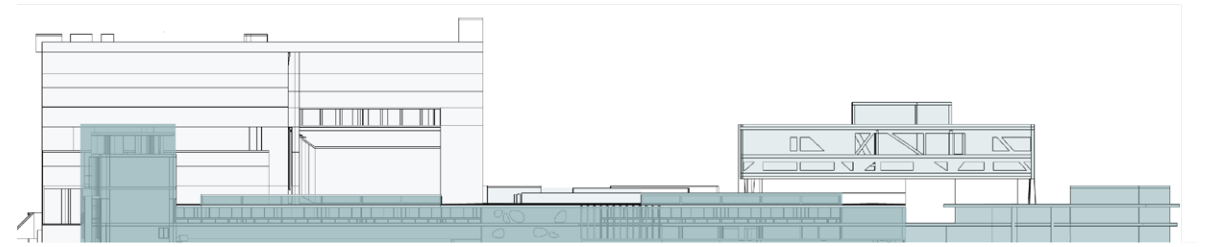
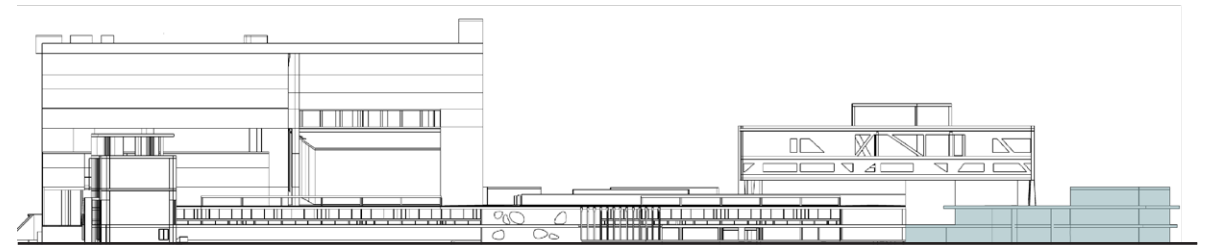
Along the longitudinal profile of the building, successive staircases connect public terraces that rise floor by floor, and aisles cross the atrium at different heights, creating a contrast between the permeability and concealment of the view and generating depth of vision.



(4)

I started from removing the pond area to situate the new archive building and new entrance. This will open up another courtyard facing the city street and decongest the existing main entrance. Parts of the ground floor area is also removed to create better connection between the courtyard and the inner street.

(4) Removal of stairs, fountain and space
 (5) City profile before and after new volumn

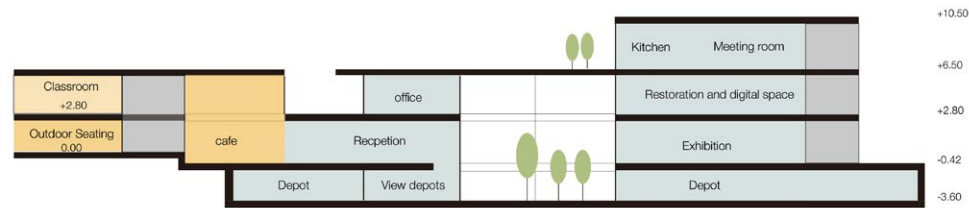
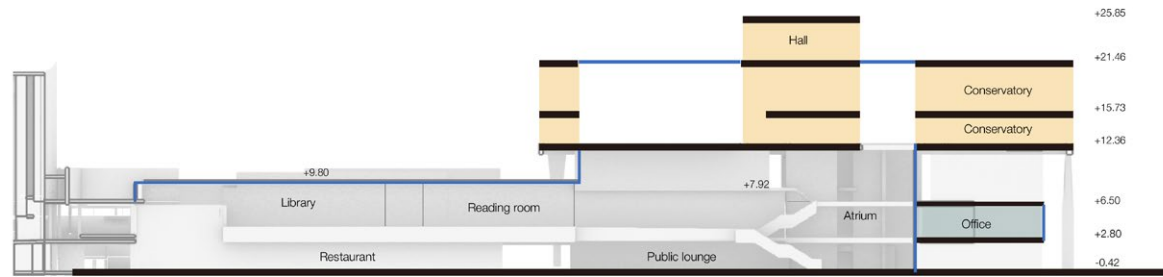


(5)

near to far 

By forming a collection of diversly sized volumes, punctured in their arrangement by courtyards and opening to the surroundings, Stynen created a low and rather light profile to the building towards the city. Meanwhile towards the Singel river, the volumes extend upwards, with an opaque a closed expression.

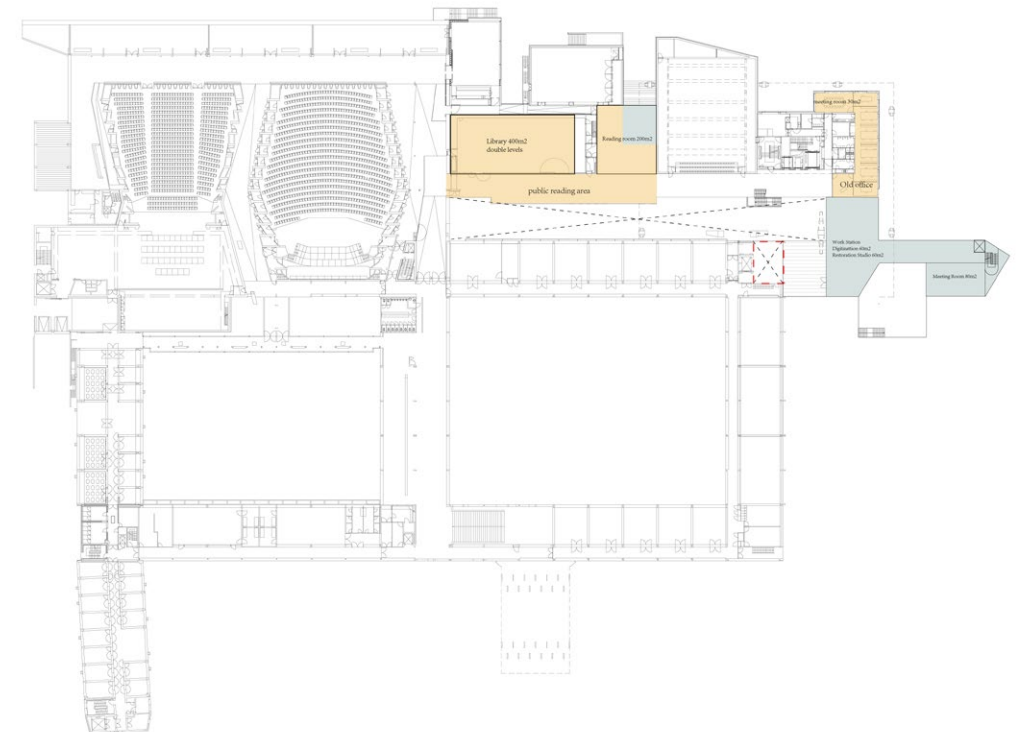
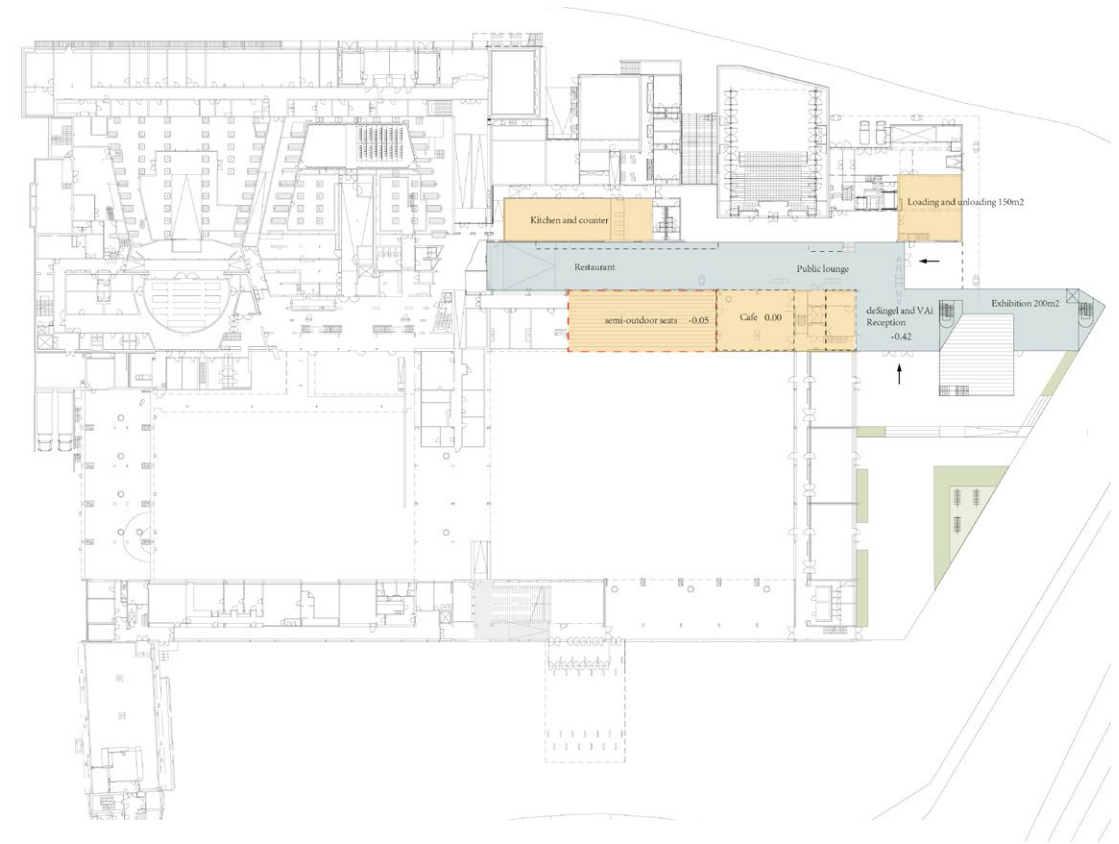
The new volume includes new entrance for deSingel and VAI, as well as other functional spaces for the archive. The depot area will be fully underground, but with visibility provided by sunken garden. Only three levels above ground, the new building is a modest addition to the entire campus, following Leon Stynen's original high and low profile vision for the complex.



(6)

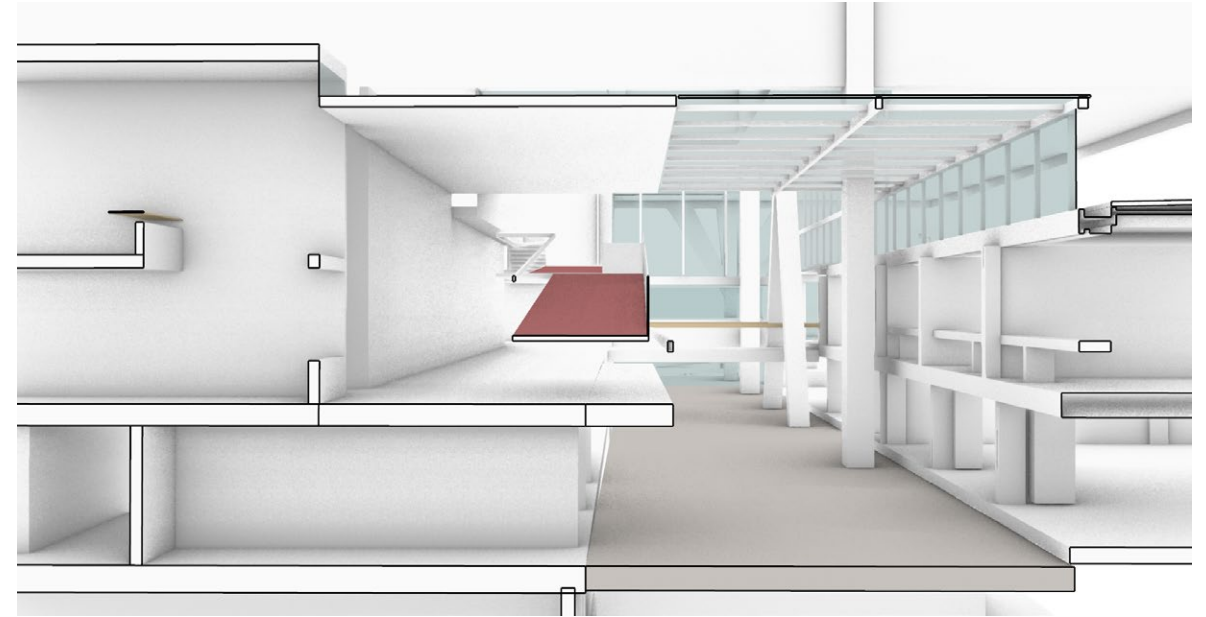
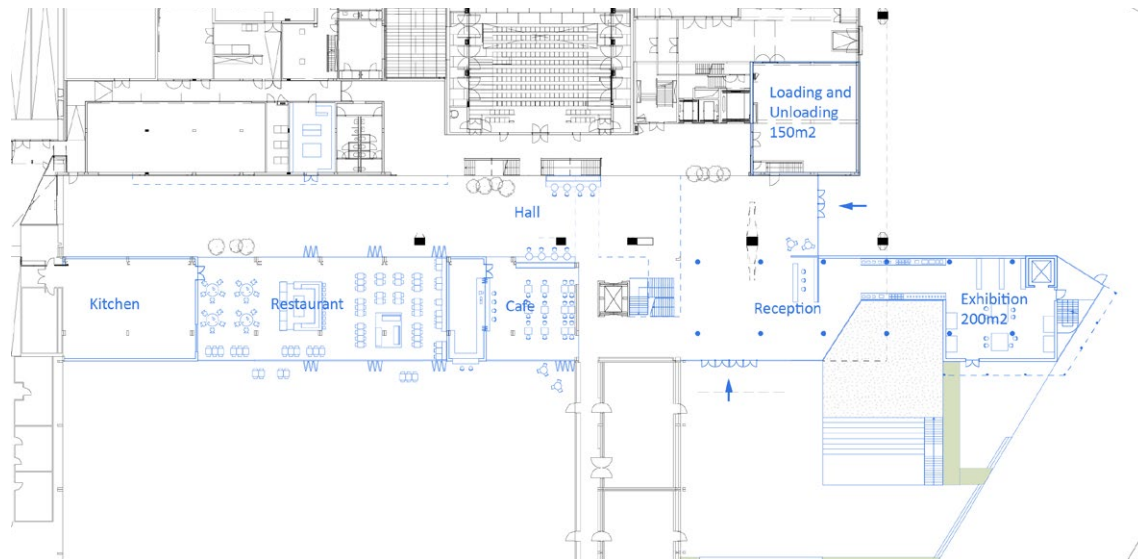
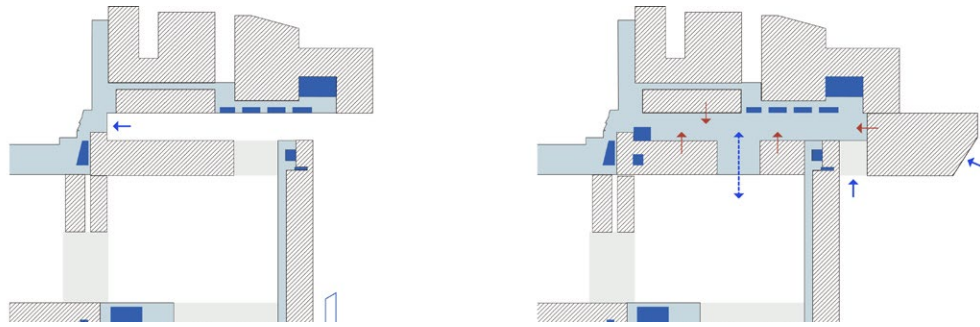
Besides the new volume, another main intervention is to transform the inner street between courtyard wing and Beel's extension into a central passage that unifies the existing buildings in different levels. The new space will serve as the main passage and atrium for deSingel, where public activities take place and connect. It aims at activating the left over space and bringing light and visibility back.

- Reprogramed
- Original Space
- New Space
- Traffic
- Glazing



(7)

(6) Long sections
(7) Level 0 and level 1

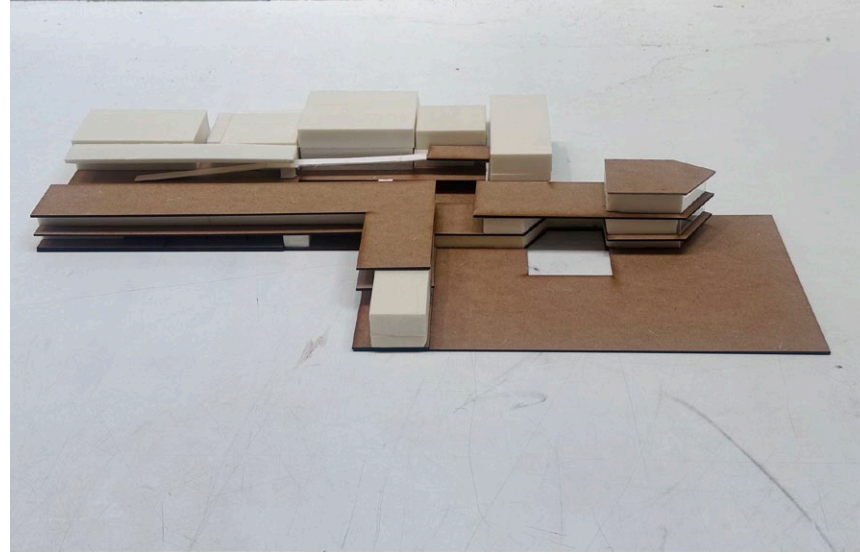
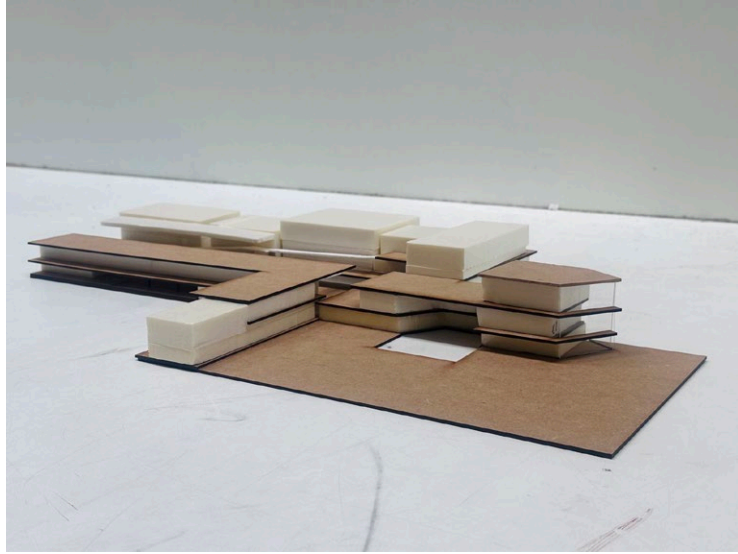


A kind of passage that during the building's operating hours will become like another street in the city from where all the circulations and activities of deSingel are organized. The public condition of this passage reinforces the idea of opening the complex to the city and allows citizens to use the same spaces and interact with users. This interior pedestrian street will allow a much more porous relationship between the entity and the city.

Feedback:
The overall logic and intervention are clear, but more detail study should be done in the circulation part, like where to put elevators, whether there can be a new stair linking to upper floor in the hall complex. Public functions should find a better location that attract public and link to courtyard. The street is a large space, what will be at both ends, what people can see through are to be considered.

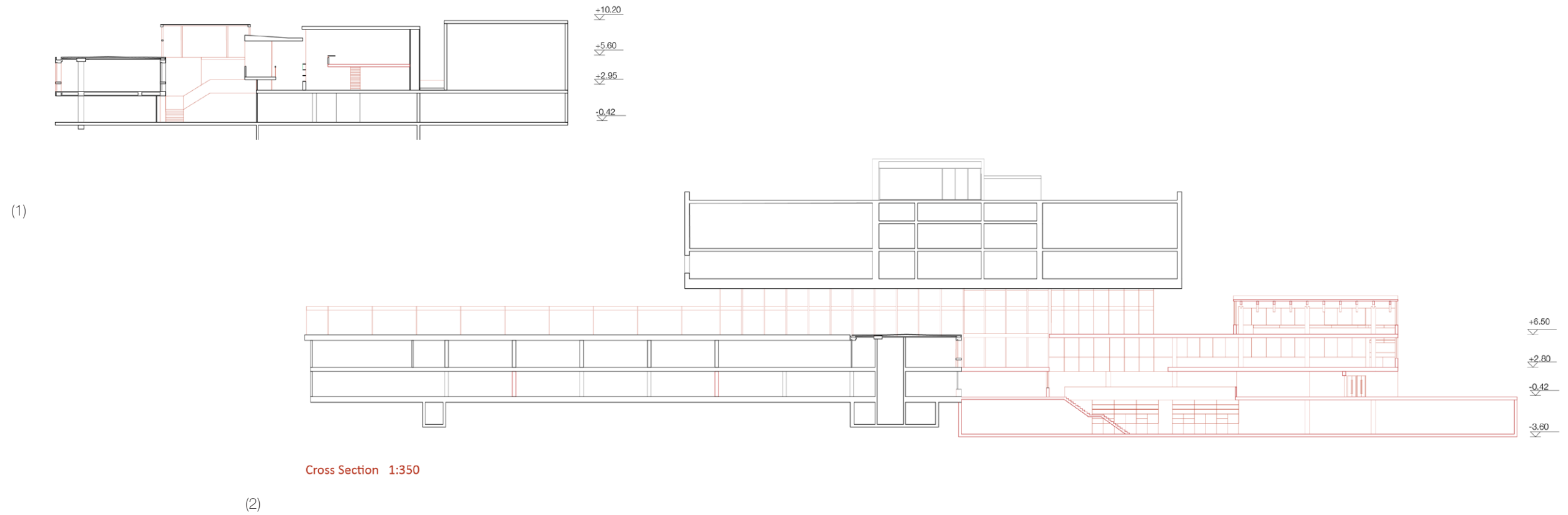
- (1) Concept Diagram
- (2) Ground floor plan focus on the atrium

Study Model



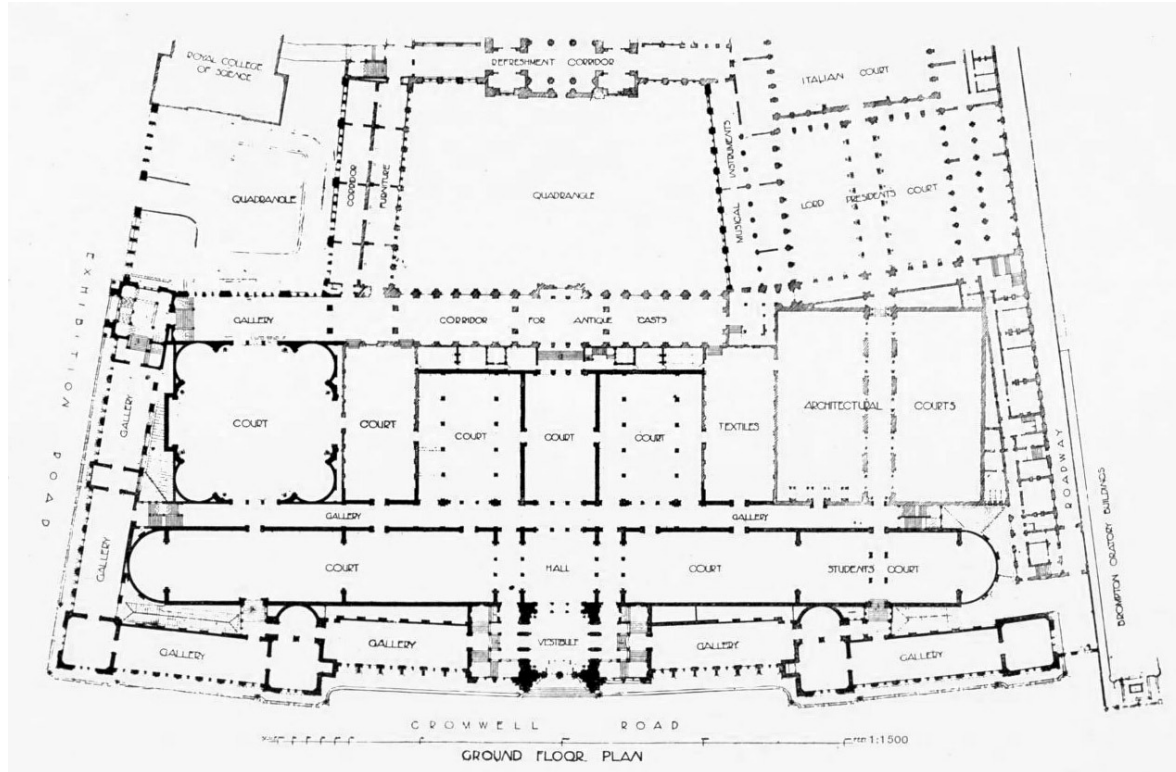
(1)

(1) The study model for new volumn and interior space



The new hall that acts as a central street will also provide connections to two halls on level 1, leading the audience to the ground floor with more public services. Through the long section, the double-height space in the exhibition area enhances engagement with the underground display collection and depot. This design also offers glimpses of the archivists' daily activities, adding an interactive element to the visitor experience.

- (1) Section through the central street
- (2) Long section through new volume

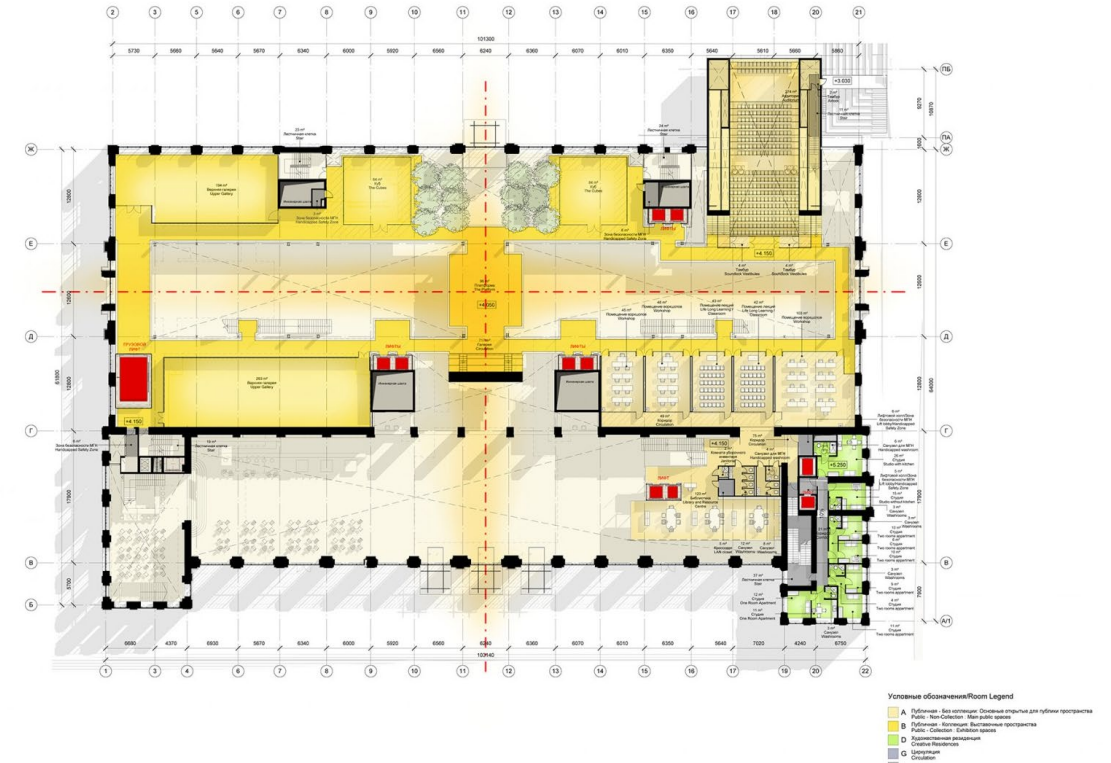


(3)

V&A Museum-Charles Jones
 GES 2 House of Culture -Renzo Piano

The entrant atrium in these cases act as a passage to connects different rooms or programs. It is like a street within the building where various audience groups can meet and connect.

When there's exhibition for large models, the atrium can also be a space for display.



(4)

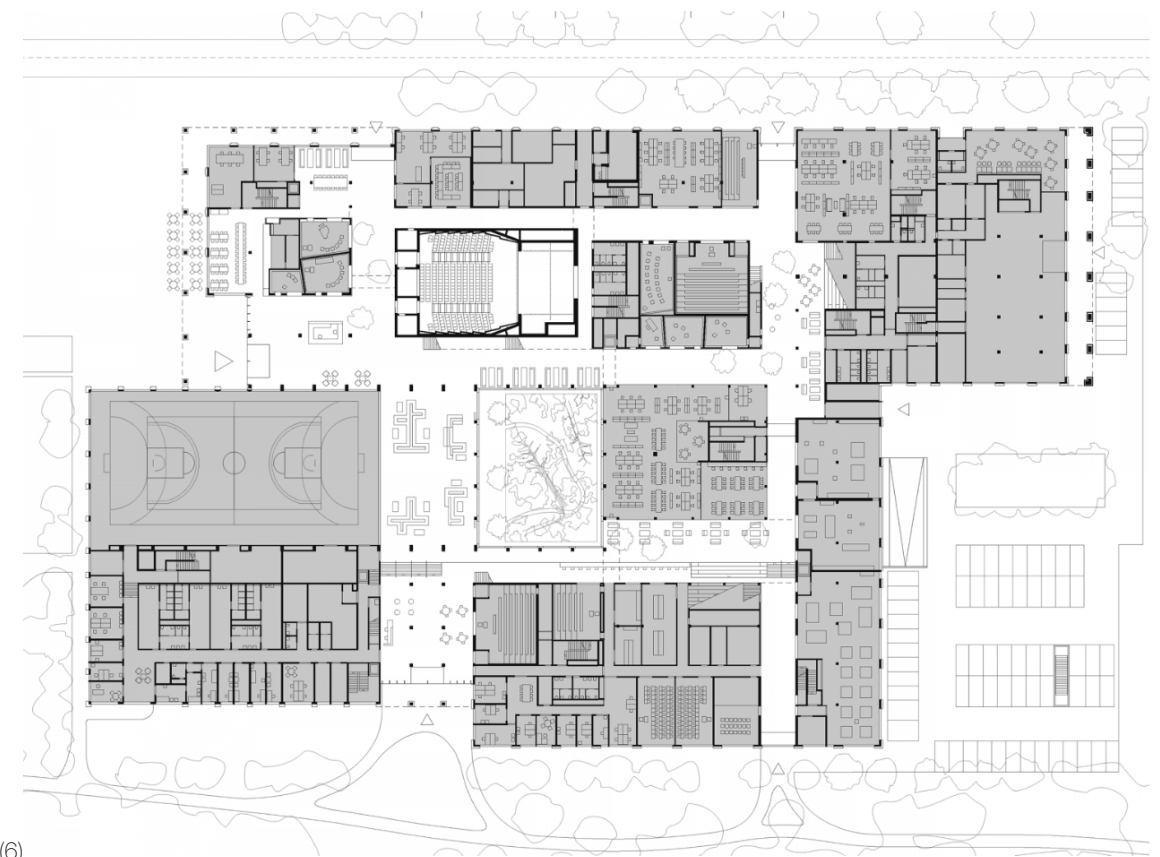
(3) V&A Museum ground floor plan (Charles Jones, 1912)
 (4) GES 2 House of Culture ground floor plan (Renzo Piano 2021)



(5)

Francis Bouygues Building - Gigon Guyer

"The school is organized around a large, three-storey hall as a public space that connects the three departments and lends the building its identity. The departments, or Univers as they are called, are conceived as neighbourhoods with streets, lanes and squares, representing the motif of the city. The hall resembles an artificial topography that links the work areas and common areas on the ground floor and the upper levels, additionally creating a flowing, differentiated space that accommodates places of varying intimacy."

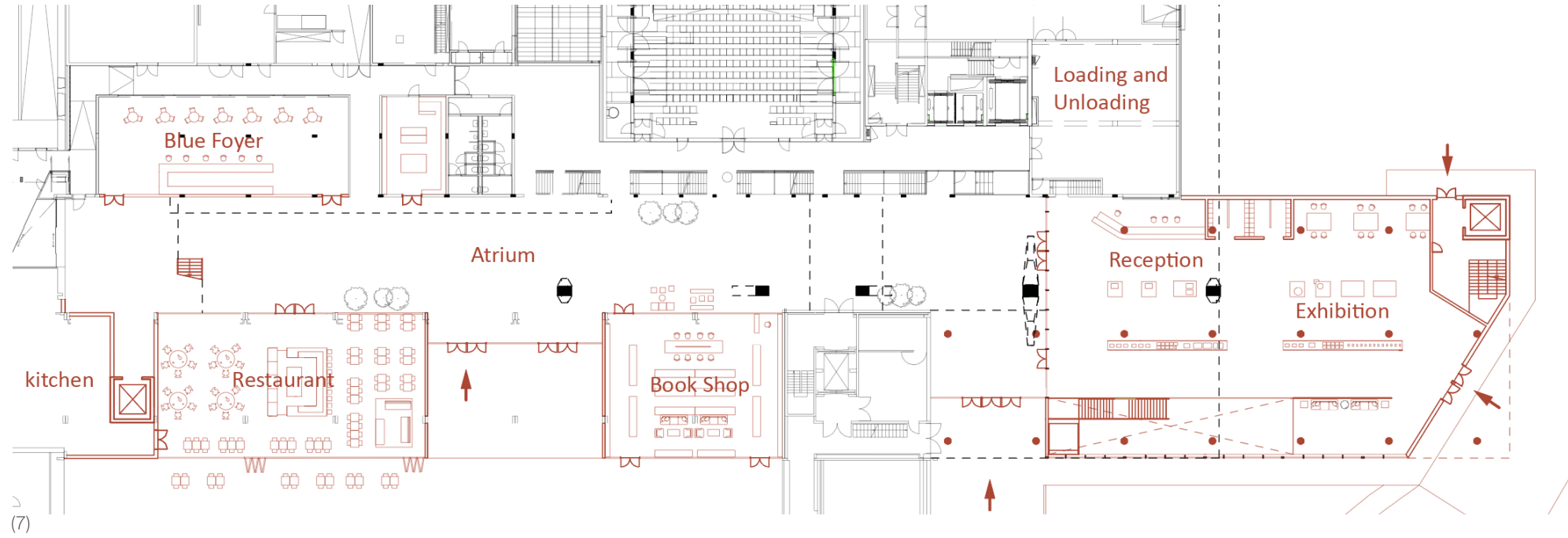


(6)

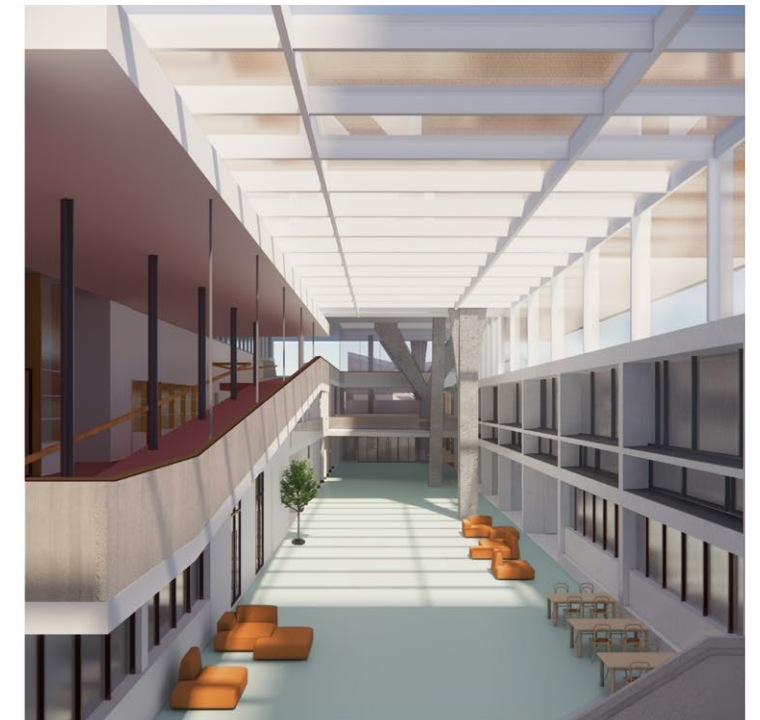
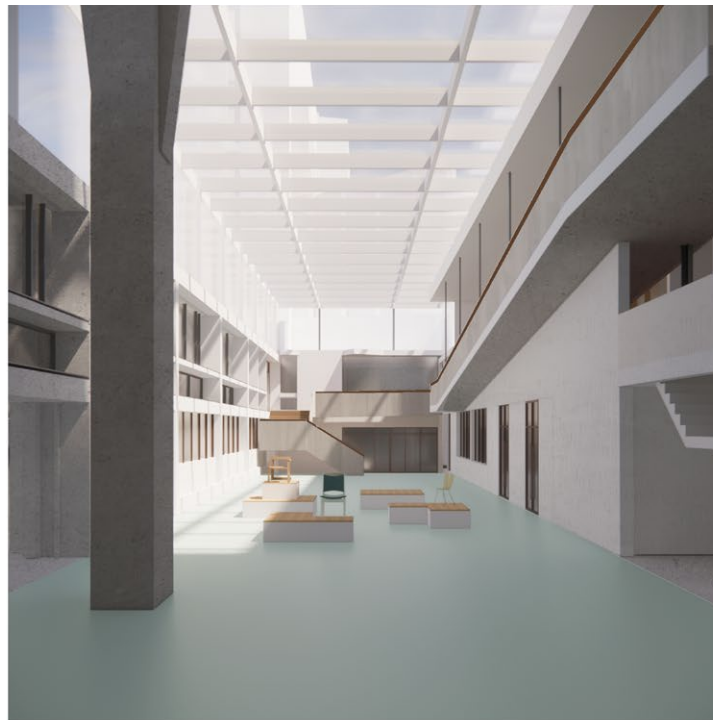
(5) Francis Bouygues Building (Philippe Ruault 2017)

(6) Ground Floor Plan (Gigon Guyer 2014)

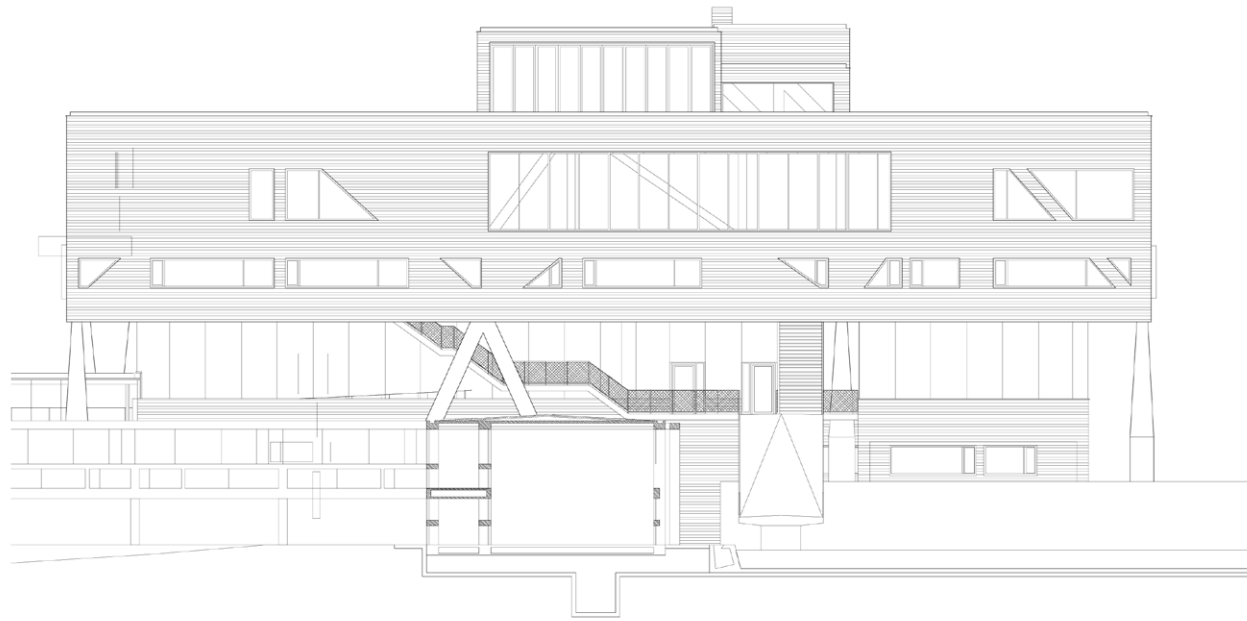
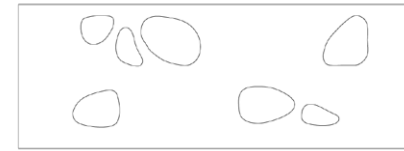
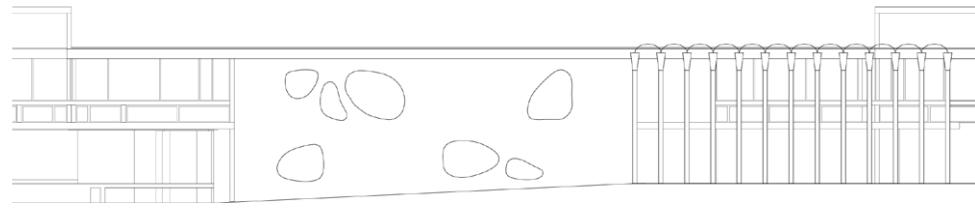
The Atrium



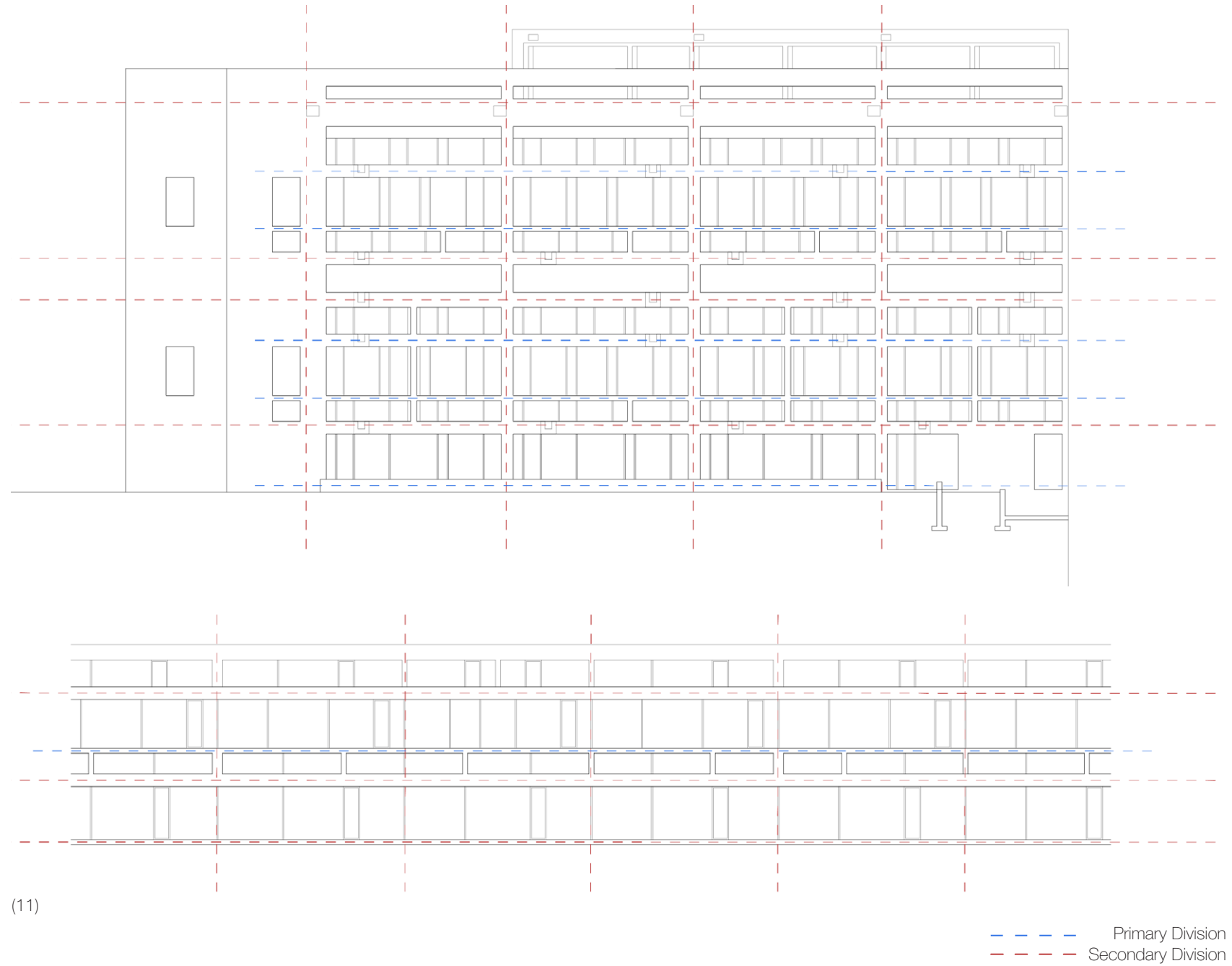
The central atrium, a linear space, within the building that links all functional rooms. The original alley will be covered and turned into an atrium that can be used for public programs surrounding the atrium. The archive, deSingel, the conservatorium can use the space as an extension for a variety of activities and exhibitions, connecting and merging different fields of audience.



(7) Atrium Plan
(8) Renders of the atrium from two ends

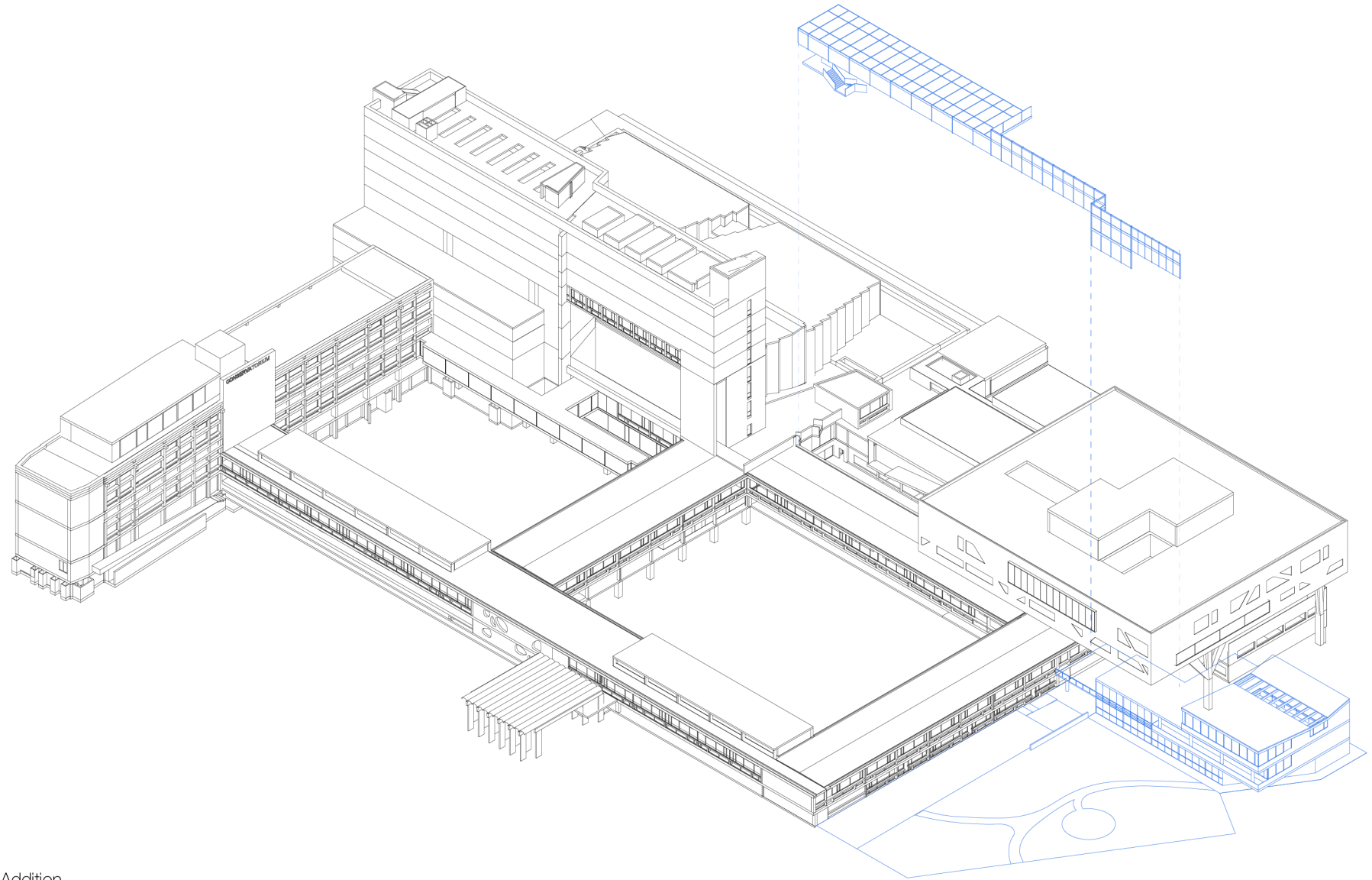


In Styren's entrance, the organic-shape opening is the main feature while Beel's extension adopted a more orthogonal design. But the contrast between the two allows the characteristics of each to be emphasised. The common feature is that two parts both extend the volume horizontally.



(11)

(10) Facade rhythm of the conservatory
(11) Facade rhythm of the entrance side



Addition

The question that has been given the most thought is to what extent the new building will blend in with the existing complex, and to what extent will it emphasise its different identity?

When determining the appropriate volume for the new addition to the site, the primary considerations are size and scale. As an extension of the existing wing, the new building should serve as a transitional element, mediating the height between the courtyard and the imposing hanging mass above. By maintaining the horizontally oriented design language, the structure's three levels are visually stacked, creating a natural progression toward the taller building at the rear.

Should the focus be on lightness or a sense of substantiality? Given the site's already diverse and intricate composition, my aim is to ensure the new building feels concise and sharp, enabling the public to intuitively grasp its relationship with the existing architecture.

(1) Addition of courtyard, new wing and atrium

Old Office



(2)

(3)

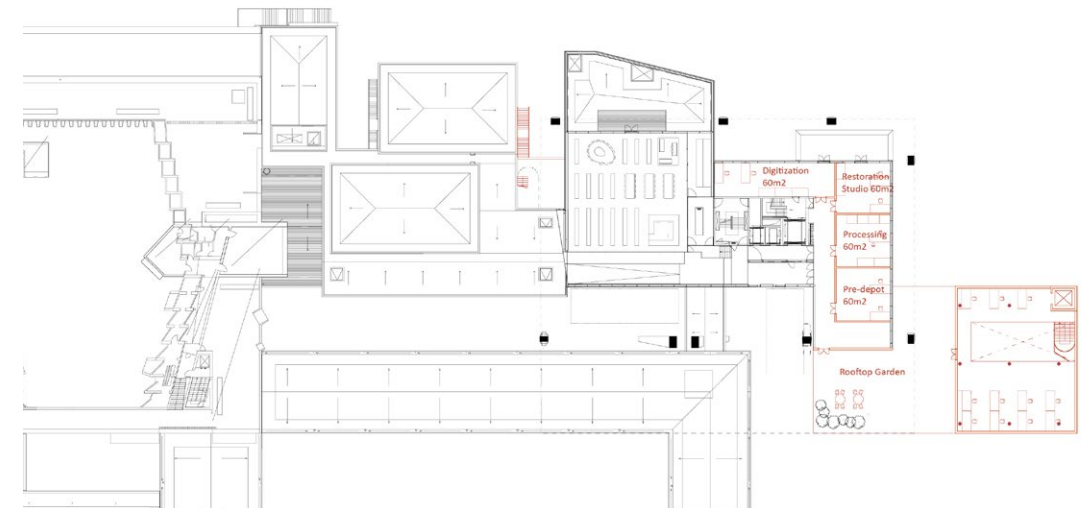
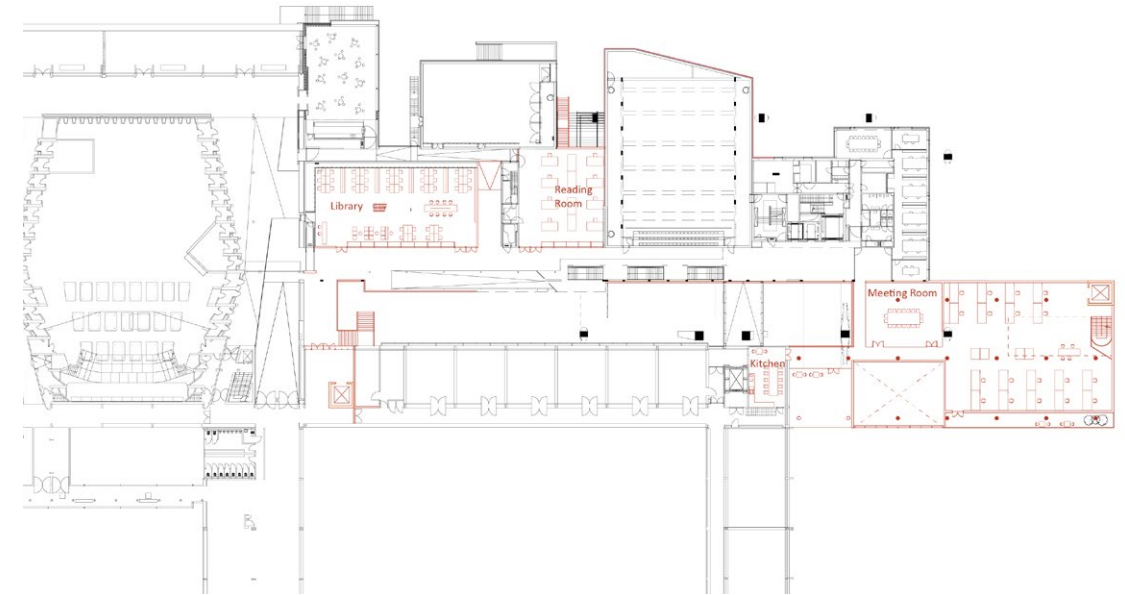
(2) Existing office in Antwerp center
(3) Existing office in DeSingel



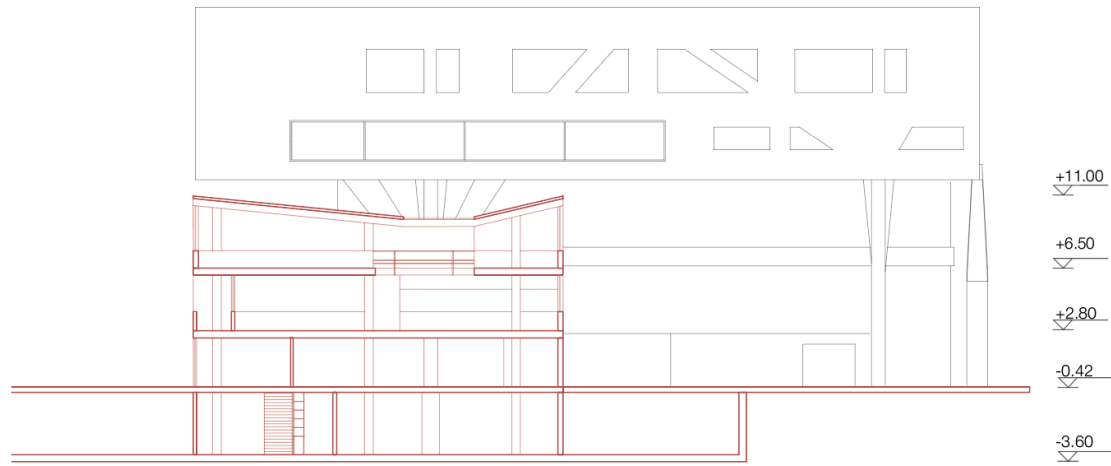
(3)

In addition to being more spacious than the existing offices, elements of a better working environment for the archive staff included ample natural light. The roof of the new volume is raised slightly to the south and north, together with the skylights, is sufficient to bring sufficient light to the office environment on both floors.

(2) Renders of office
(3) Plans of office



(4)



(5)

The connection to the public space an important design condition. This connection is both visual and physical, so in the proposal I inserted a small atrium in the exhibition space that connects the archive, the exhibition space and the offices on the first floor from bottom to top. The activities of all three can happen together, perceiving but not influencing each other.

Feed back on Pre-P2:

Diagrams which more clearly explain the strategies of the project. Explaining what exists, what you take away and what you add.

Explain what the advantages of working in this place is.

What is the nature of the building landscape – could it remain a water body? Can the underground archive have a presence?

What is the role of geometry – you cut the corner of your new building to follow the geometry of the street. Why and how does this resolve itself in three dimensions?

Work on the architectural character of the new building, which forms a significant new element of the singel as seen from the street.



(6)

(5) Section of the new building
(6) Render of the exhibition hall

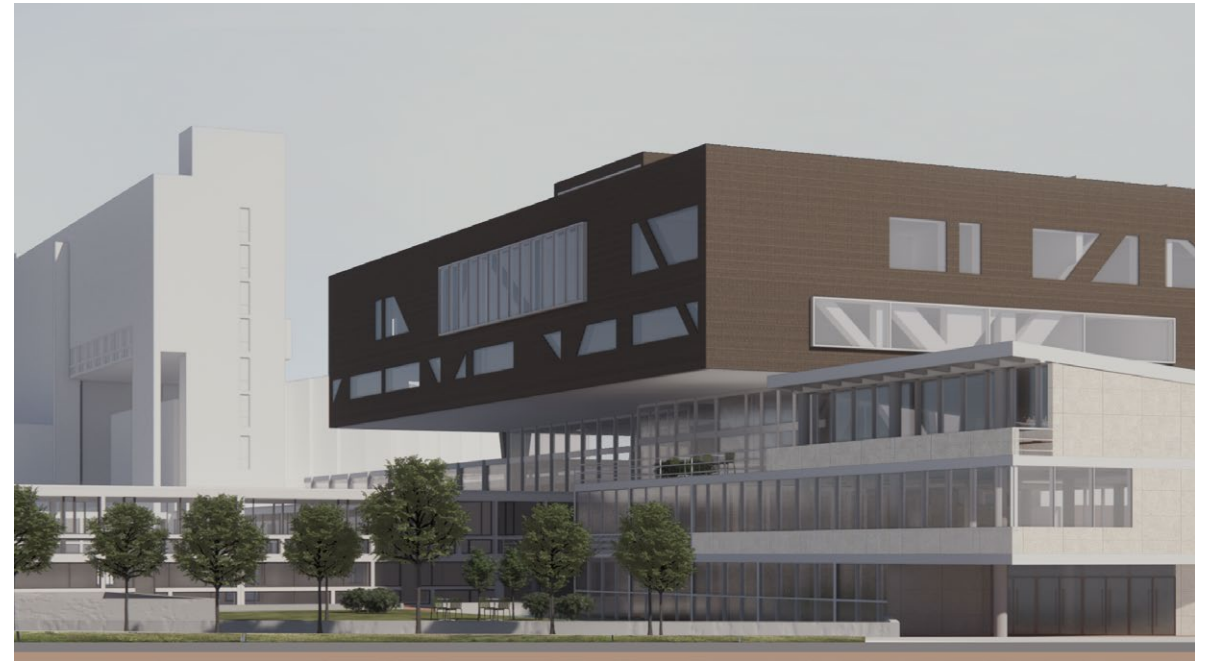


(1)

The conversion of the Veemgebouw by Caruso St John Architects.

The relationship between the old and new expressed in the facade design. They are united in the use of material and design language, yet the new part has a more modern character.

"The external façades of curving brickwork form a new more dramatic top to the building, in a language that refers to the 1930s styling of the existing listed building."

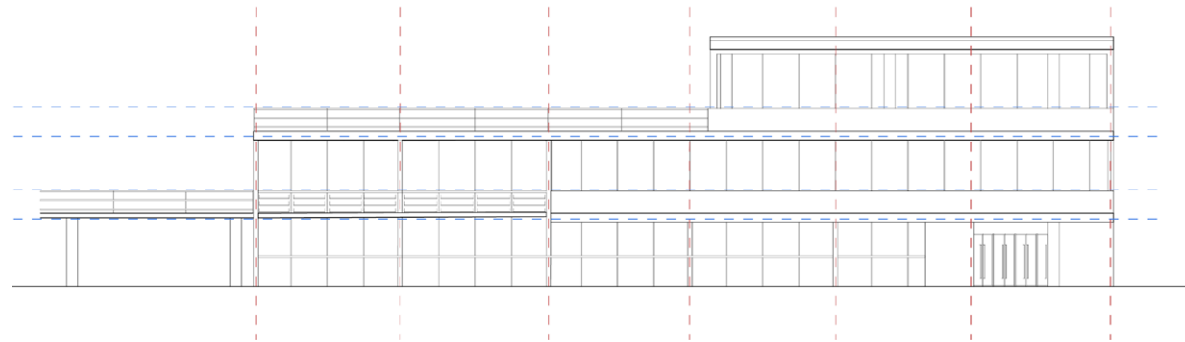
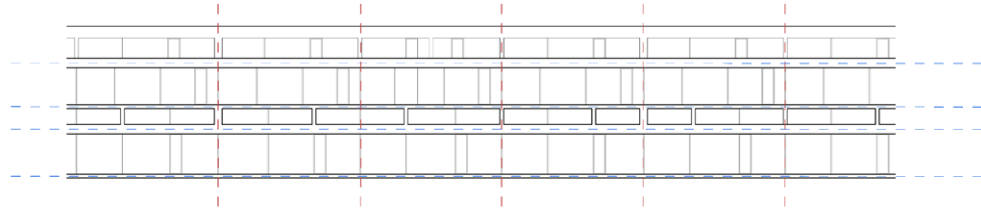


(2)

The horizontal feature is emphasized in the original facade design. In the proposed volume, new façades will continue with this language, incorporating more transparency in public areas. A balcony walkway on the second floor will act as a transitional space, connecting the building to its urban surroundings. This gesture also continues the original concept of a corridor facing the city street, fostering a seamless interaction between the building and its context.

(1) Facade of Veemgebouw (Caruso St John Architects 2022)
(2) Render of New Entrance

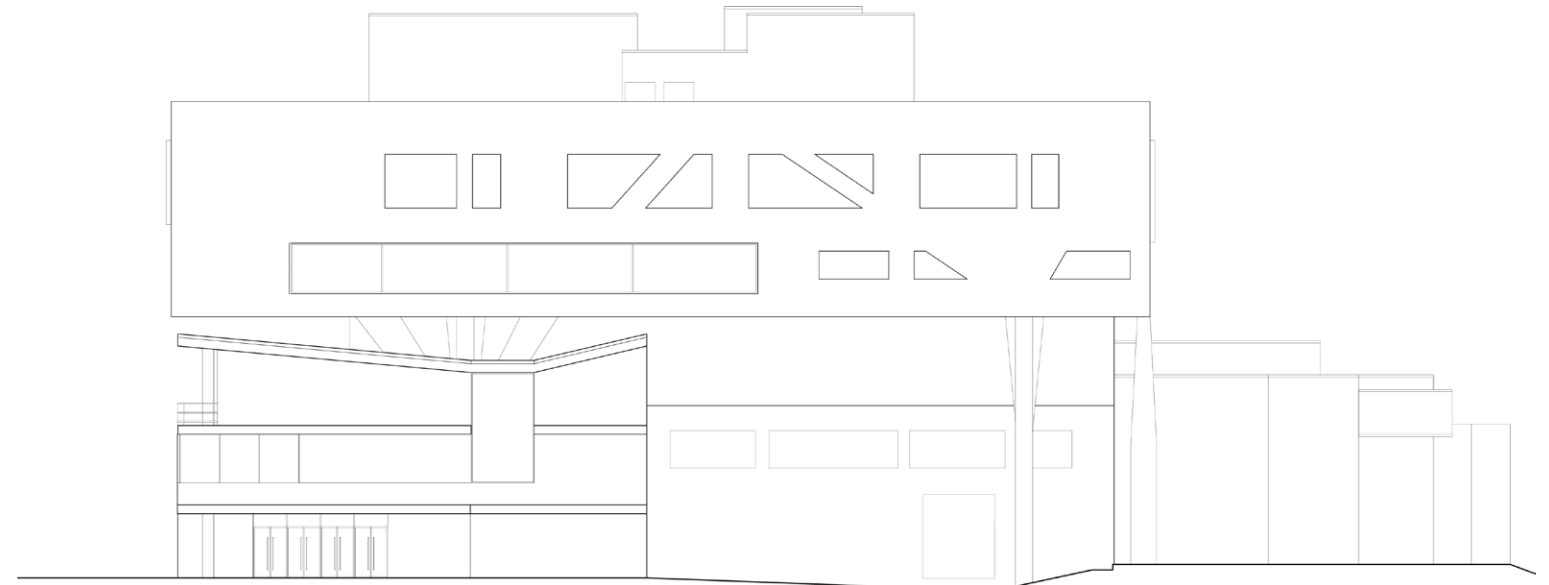
Facade Dialogue



(3)

The north facade of the new building which directly connects to the courtyard wing, follows the same grid as Stynen. It presents its identity as an open and transparent building that connect the complex to the city.

The west facade, facing another city road, has a more volumetric appearance, so as to present itself under the horizontal tower by Beel.

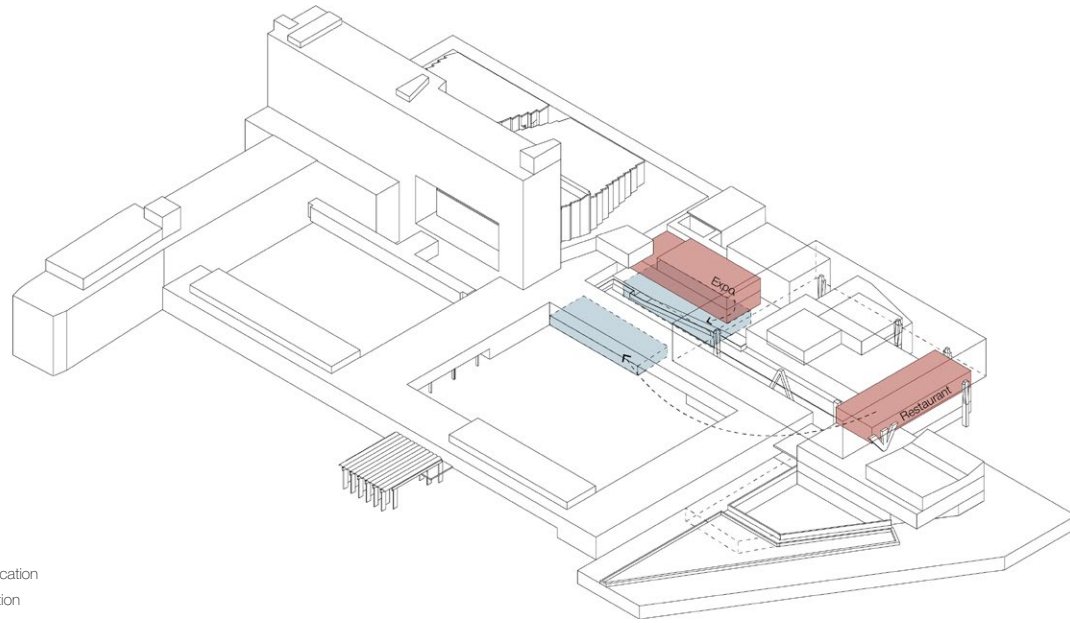


(4)

(3) Comparison of old and new facades

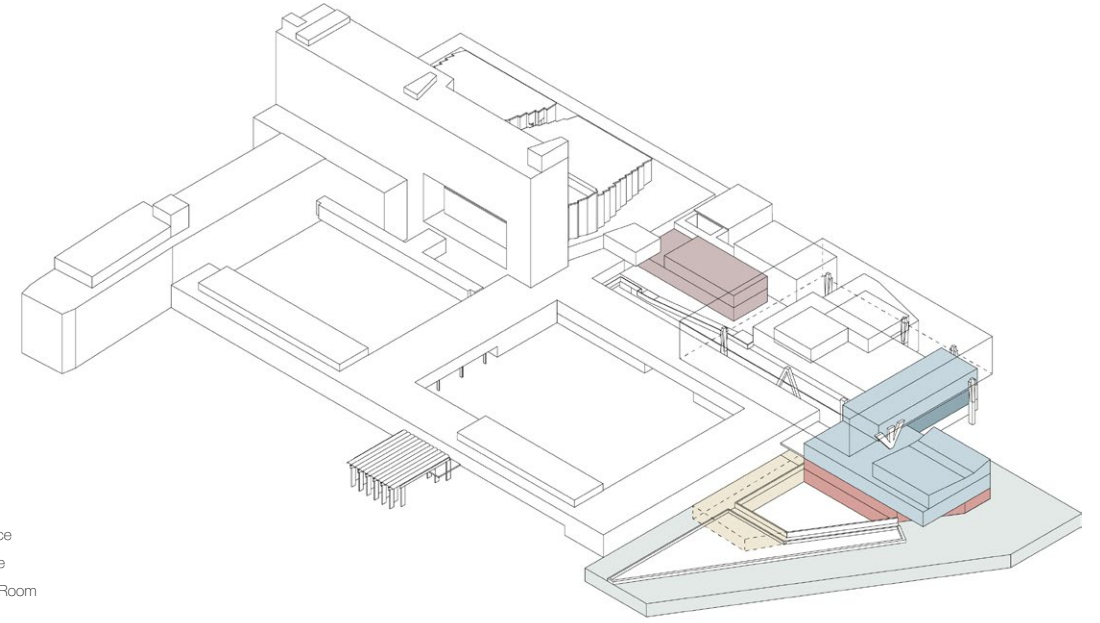
(4) West Elevation

Program Distribution



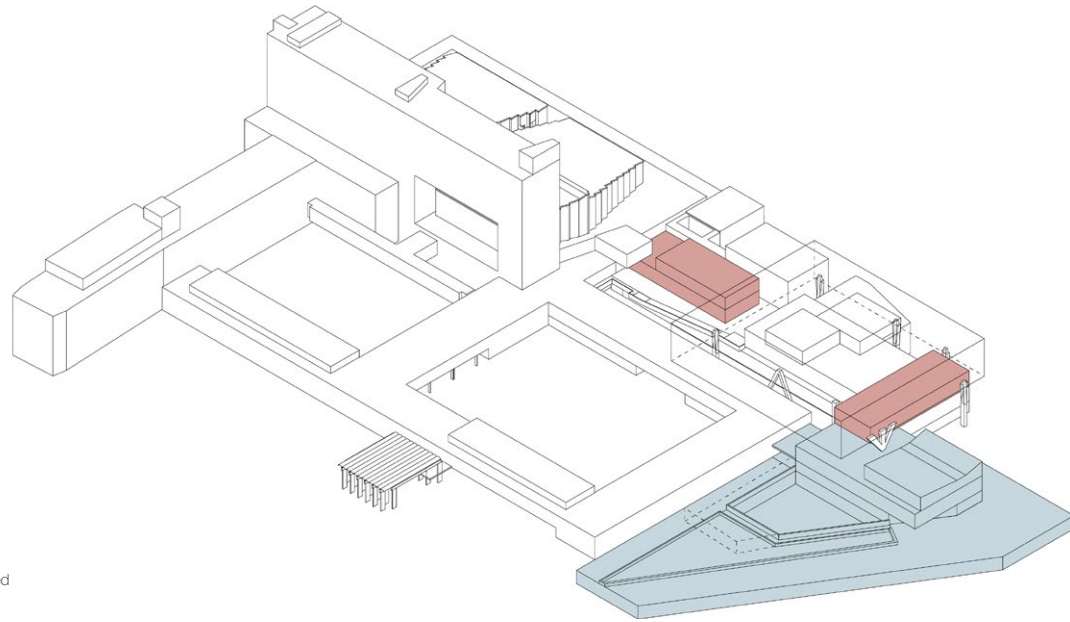
Original Location
New Location

(5)



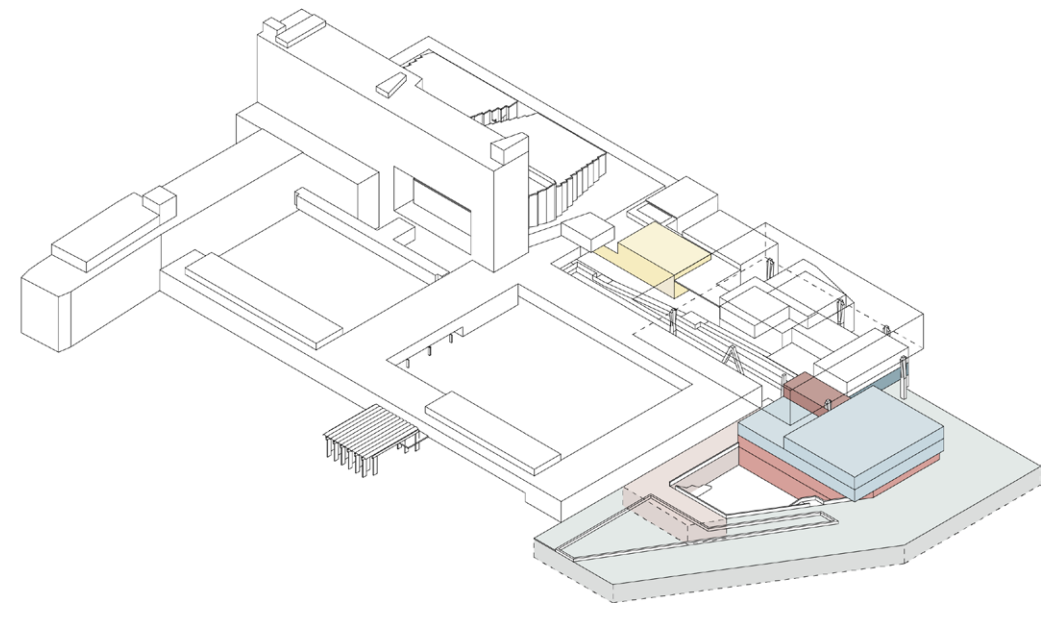
Depot
New Office
Old Office
Reading Room
Libaray
Exhibition

(7)



Repurposed
Addition

(6)



Level 2
Level 1
Level 0
Level -1

(8)

- (5) Reorganizing programs
- (6) Comparing repurposed and additional space
- (7) New programs location in the complex
- (8) New programs and surrounding programs



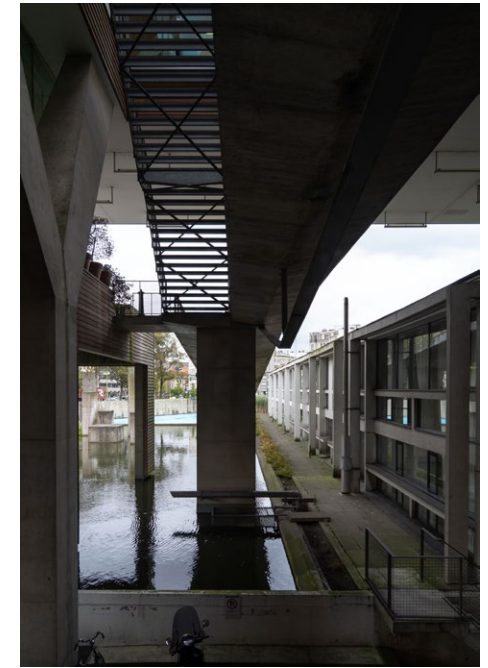
(1)

After P2 critic, I started to reconsider the pond area, which is part of the original design feature, try to find a better way to keep but improve its experience. The pond was designed by Stynen under the concept of a quiet, green campus- a modern enclave sheltered by hills, and large water surfaces. But urban planning during the years has dramatically changed the landscape. The hills are gone, the highway and railway sit right next to the site. Surrounded by old concrete walls and without landscape around, the pond has now lost its original vibrancy. How to keep the feature of water while making this new entrance area more pleasant to use by public? I think the water surface can be reduce and make rooms for greenery that people can stay, and a sunken plaza providing connection to the underground study room and depot, which also function as another escape route for the depot area.

(1) View of the pond before phase 4(Library Royal Conservatory Antwerp)
(2) Situation of the pond today



(2)



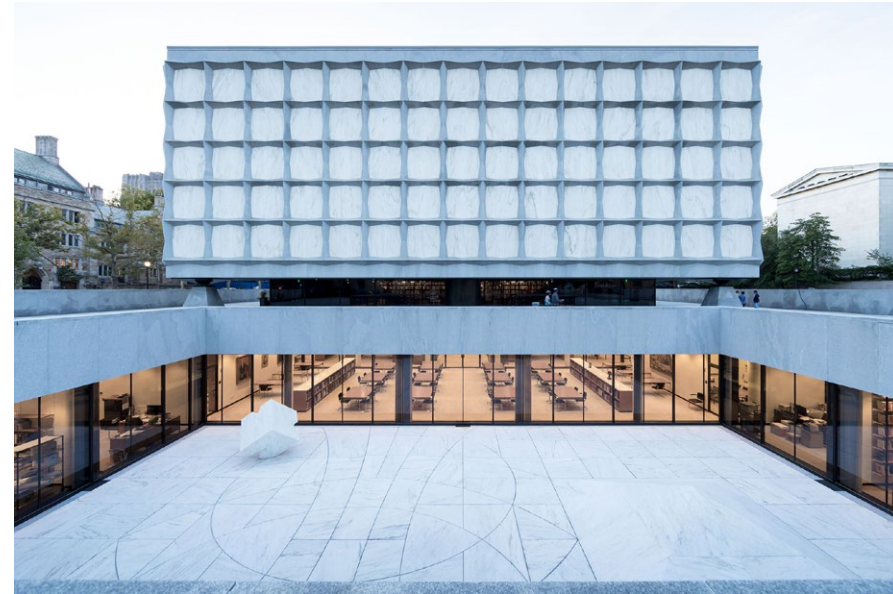
Reference



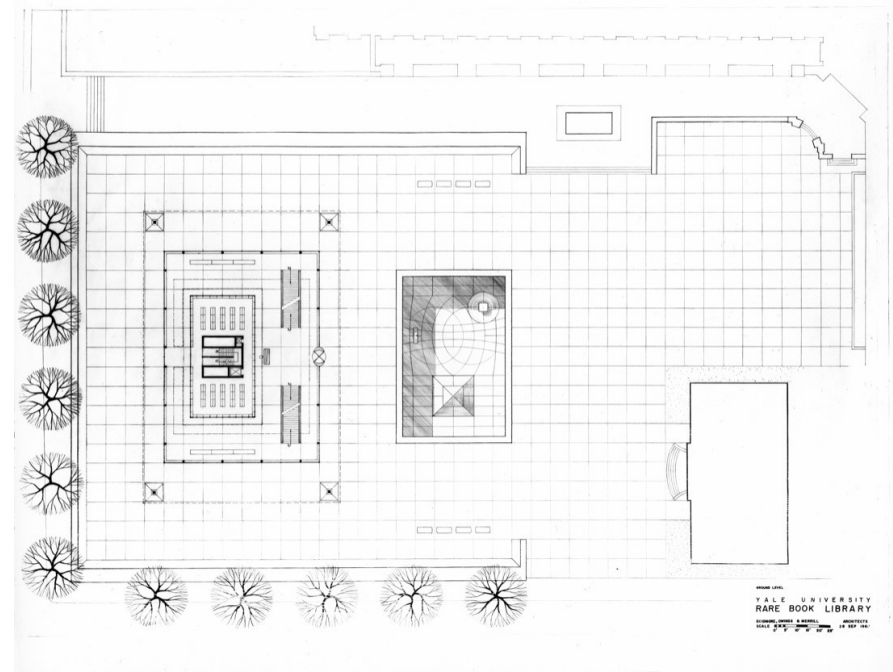
(3)

Beinecke Rare Book and Manuscript Library by SOM

Underneath the library's plaza are two additional floors containing the rest of the collection. These subterranean levels also house the working areas of the library, including a reading room, offices, and classrooms. Natural light enters the basement levels through a sunken court reminiscent of a cloister scriptorium.



(4)

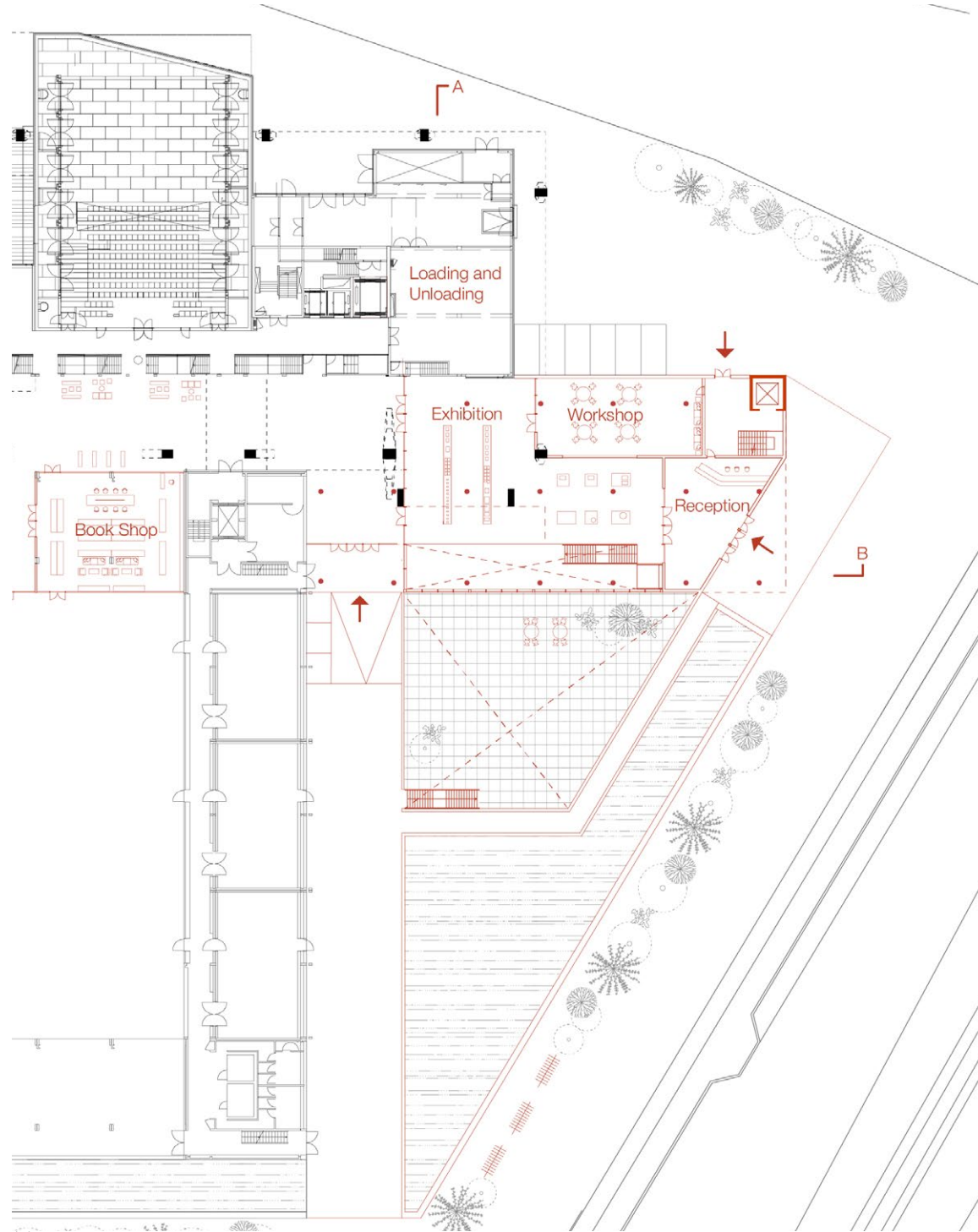


(5)

(3) View of the courtyard (Ezra Stoller 1963)

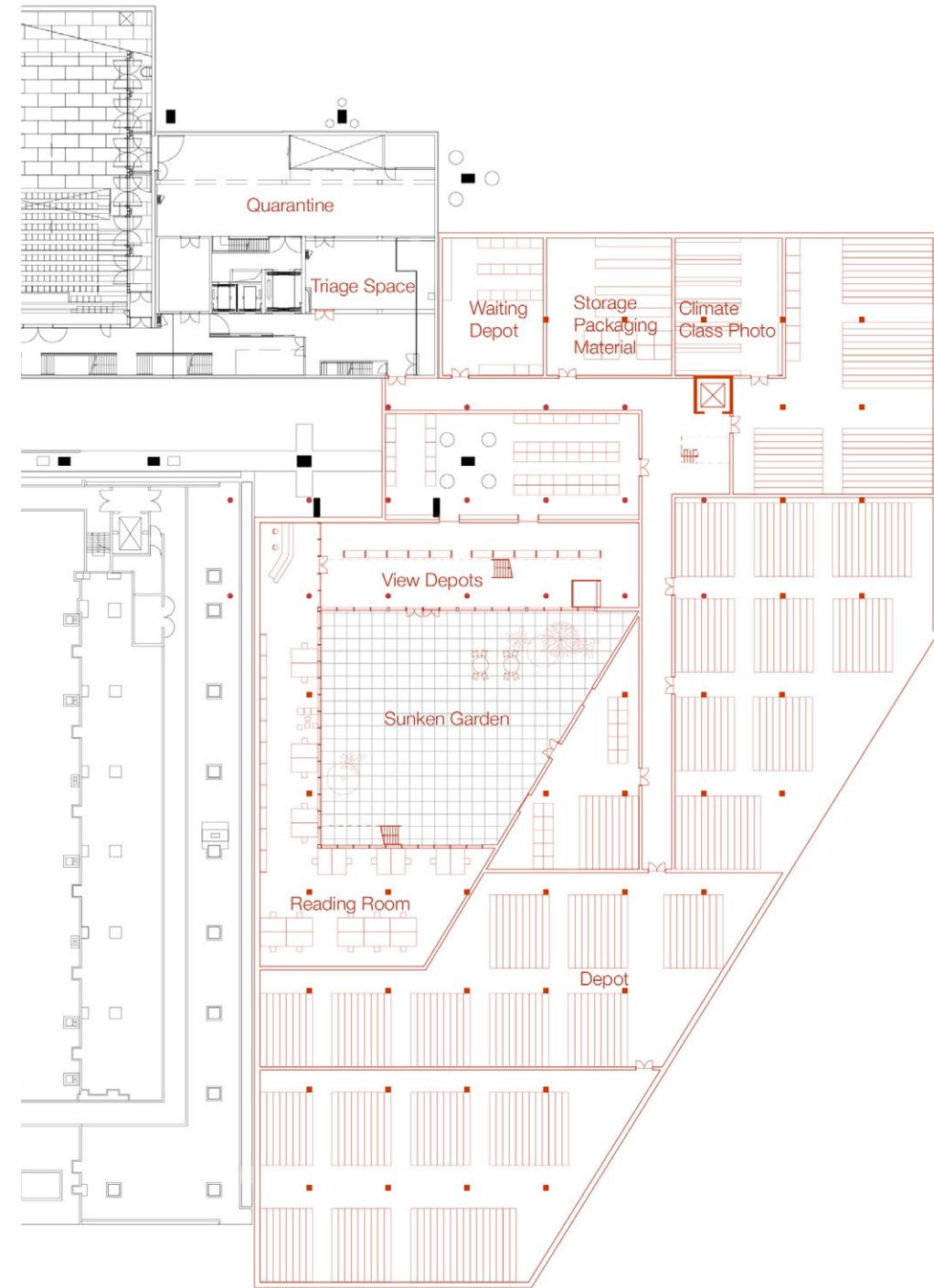
(4) Looking into the sunken garden (Michael Morand 2021)

(5) Ground Floor Plan (SOM 1963)



(6)

(6) Ground Floor Plan
(7) Level -1 Plan



(7)



(8)

(8) Render of exhibition all looking to sunken garden
(9) Render of new entrance



Archive	4000
Storage packaging material	120
Loading and unloading space	150
Waiting depot	100
Tirage space correct - contaminated material	60
Quarantine	120
Cleaning	60
Pre-depot	60
Processing	60
Digitization space	60
Restoration studio	60
Depot storage	2500
Climate class photo storage	100
Bulk storage	
Storage in racks and planning cabinets	
View depot	125
Server space	10

Additional	560
Staff workspace	300
1 large meeting room	80
1 small meeting room	30
kitchen, bathroom, dressing room	150

Public	700
Reception	100
Exhibition	200
Reading Room	200
Library	200

Total	5260
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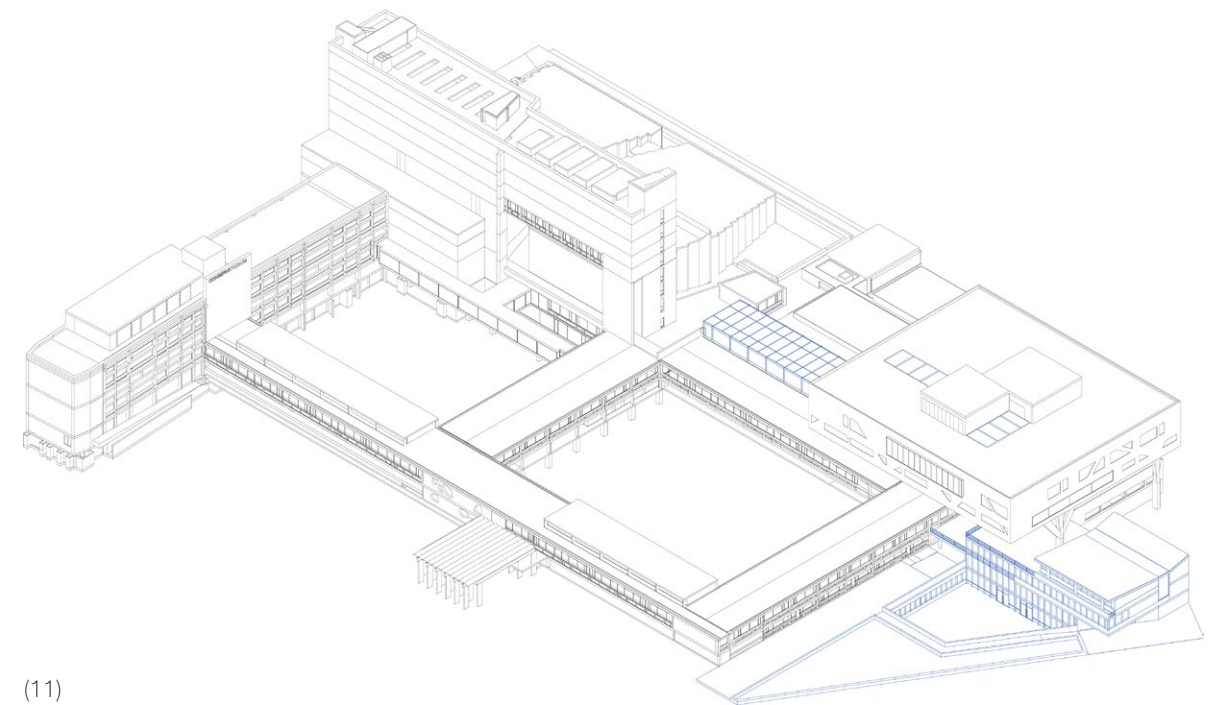
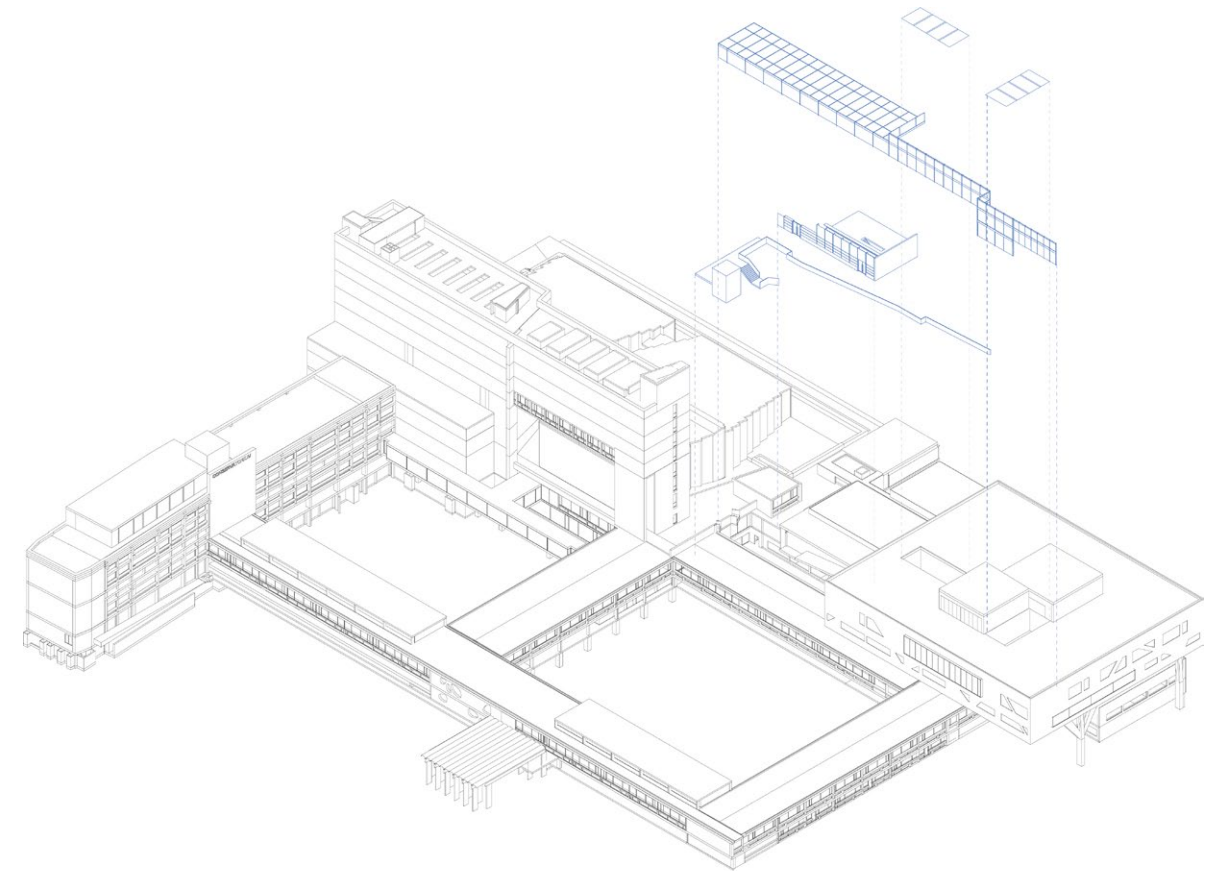
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Bulk storage	
Storage in racks and planning cabinets	
View depot	125
Server space	10

Additional	560
Staff workspace	300
1 large meeting room	80
1 small meeting room	30
kitchen, bathroom, dressing room	150

Public	880
Reception	100
Exhibition	200+160
Reading Room	200
Library	200+100
Workshop	120

Total	5440
--------------	-------------

Repurposed	900
Addition	4490



(10)

(10) The original brief and proposed brief
 (11) New intervention diagram

(11)

P2	Liang, Yueyi
	30-1-2025



Notes from mentors:

A very well organised and complete presentation. Your analysis of the situation is clear and your design approach is coherent. The products you have shown are comprehensive and have been formulated in great detail, perhaps almost a little too far for this moment.

You now have a very good basis for the further development of the project and we hope that you take the liberty of exploring the possibilities of this approach with an open mind. We see particular potential in the development of the relationship between the building parts, especially the new head of the building in relation to the Beel part. Currently, the new part forms an echo of it, but clearly subordinates itself. What message is being conveyed? Are other hierarchies conceivable? Also in relation to other areas? We think it is worthwhile to experiment here again.

Further Questions:

- What will be the relationship between the new building and the Beel part?
- How to express its new form without losing the spirit of being a part of the complex?
- How to solve the problem of collecting rainwater in the sunken garden, to protect the depot area?
- What structure system will be the best choice economically and environmentally?
- The new pond area serves multipule uses, are there hierachies in them?

Research on Fire Control

General Requirement:

Maximum Compartment Size (Fire Compartments)

- Belgium: Fire compartments for storage areas are typically limited to 400 - 1,000 m² depending on the fire resistance and suppression system.
- EN 1047-2: Individual rooms should not exceed 500 m² unless protected by automatic suppression (sprinkler or gas systems).

Shelving & Aisle Space

- Minimum 1.2 meters aisle width for emergency access.
- Storage racks should allow heat and smoke ventilation.

Firewalls in underground archive storage must be constructed using non-combustible, fire-resistant materials that comply with Belgian fire safety regulations. The materials should provide high fire resistance.

3 Masonry Materials that is suitable for underground archive storage:

- Concrete (Reinforced or Precast)
High fire resistance (up to 4 hours or more).
Excellent structural integrity even under high temperatures.
Common in underground archives due to its durability and low maintenance.
- Concrete Blocks (CMU - Concrete Masonry Units)
Fire-resistant depending on density and thickness.
Often combined with fireproof coatings for enhanced protection.
- Brick (Solid or Hollow Clay)
Natural fire-resistant properties.
Fire rating depends on thickness (typically 2 to 4 hours).

Location of the emergency stairs

- The **escape stairways** should go in **opposite areas** of the space.
- The **maximum distance from the escape route to the stairway** is fixed (not for technical rooms):

	Use of the buidling	
	By day	By night
To the road that connects the two stairs	<= 30m	<= 20m
To the nearest stair	<= 45m	<= 30m
To the other stair	<= 80m	<= 60m
Maximal distance for a dead-end evacuation road	<= 15m	

(1)

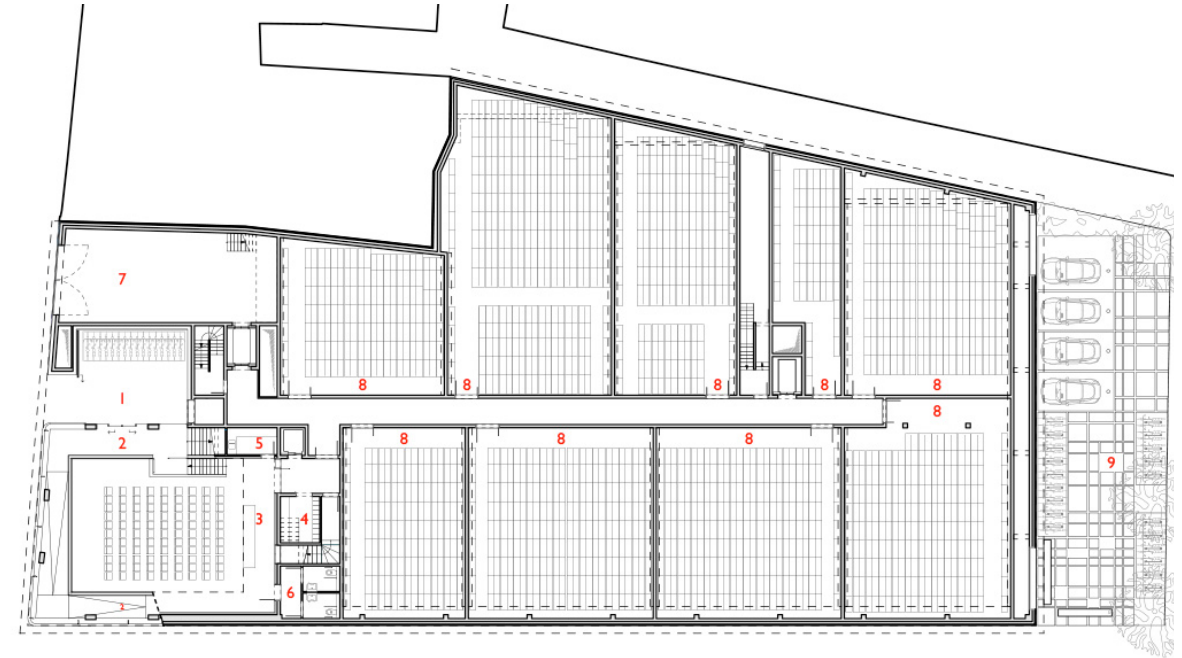
(1) Fire evacuation regualtion in Belgium
<https://www.jomy.be/en-BE/solutions/fire-egress>



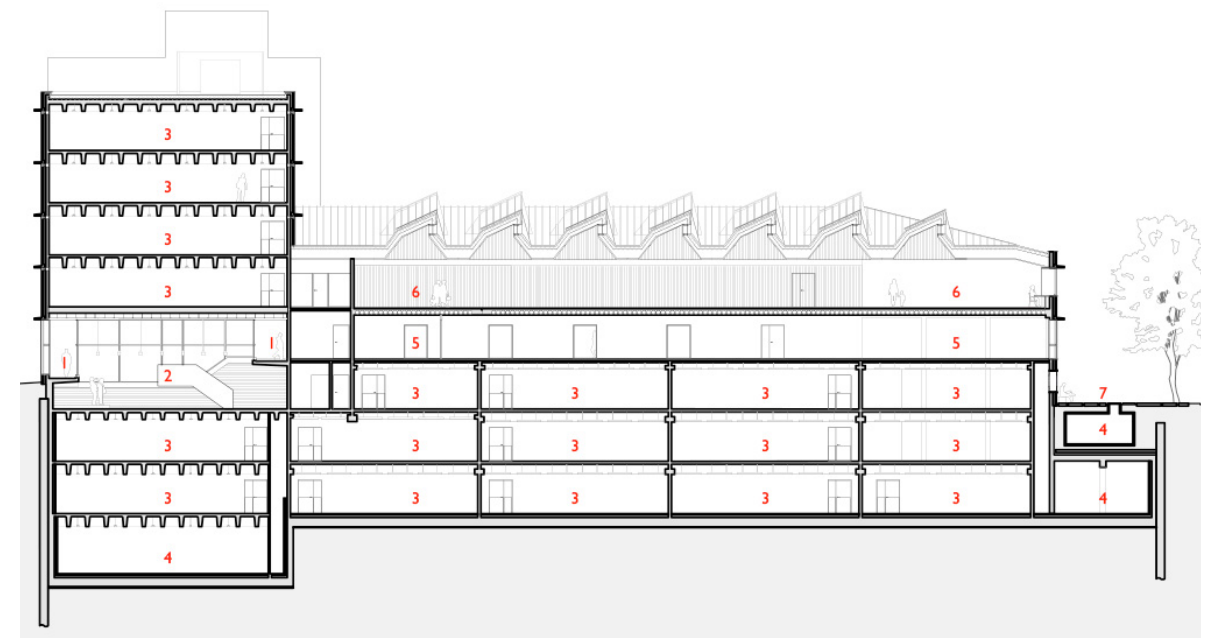
(2)

State archive Ghent / Robbrecht en Daem architecten

The mass of the over 40km worth of archival documentation is stored in two identical underground levels. The underground archive is placed in a doubled concrete shell that forms the foundation of the building and allows for specific climatic conditions to be maintained.



(3)



(4)

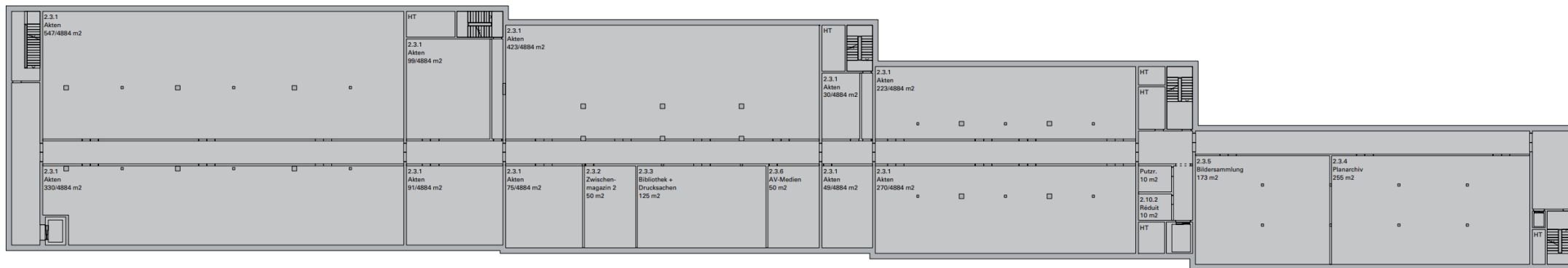
- (2) Street view (Filip Dujardin 2014)
- (3) Ground Floor Plan (Robbrecht en Daem architecten)
- (4) Cross Section (Robbrecht en Daem architecten)



(5)

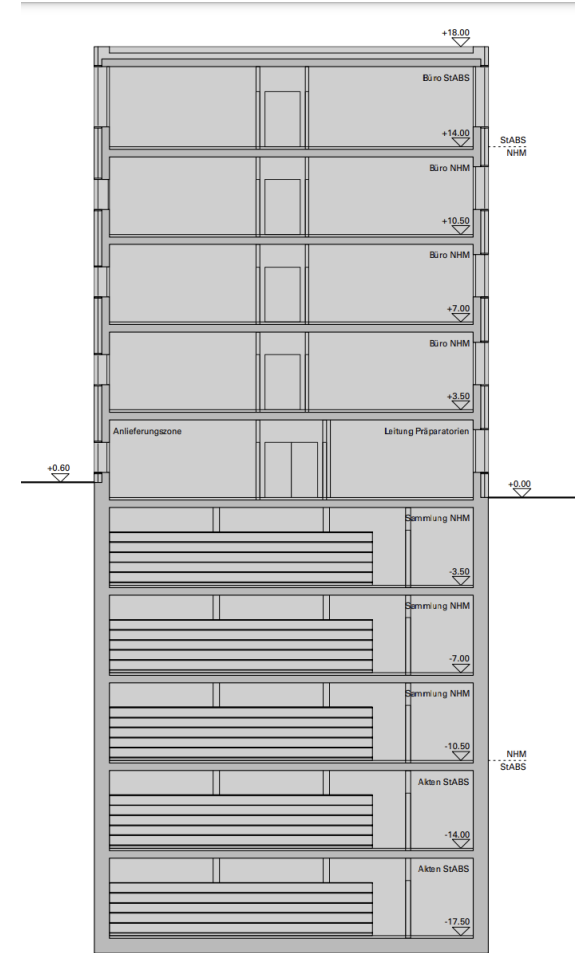
New Museum of Natural History Basel and State Archives
Basel-City / EM2N

The structure system of the basement floors is stiffening load-bearing wall panels from ground to ceiling. Typical floor height is 3.5m with storage room area ranges from 90m² to 550 m².



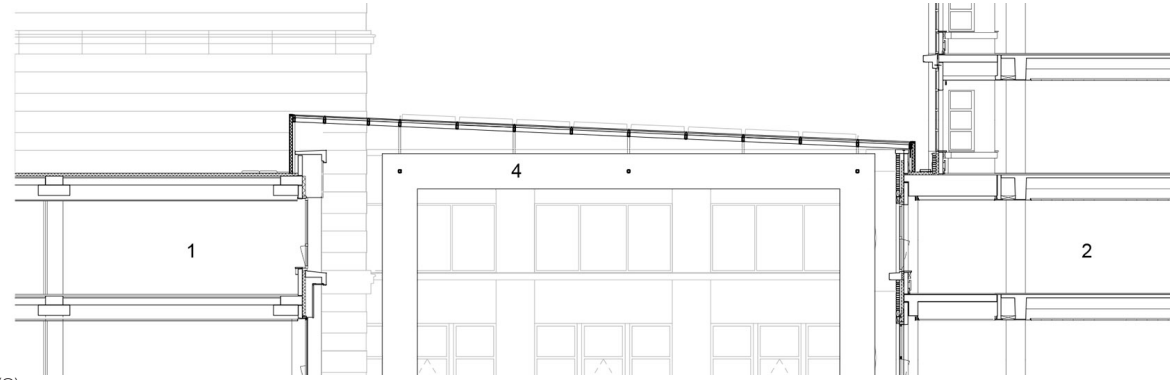
(6)

- (5) Render (EM2N)
- (6) Ground Floor Plan (EM2N)
- (7) Section (EM2N)



(7)

Roof Structure



(8)



(9)

De Resident / Cepezed Architects

The atrium of De Resident The over seventy metres long and twenty metres high atrium is constructed of large steel portals topped by a glass roof. The composite portal profiles have a depth of as much as one metre and are clad in white with steel flashing and fabric coverings.

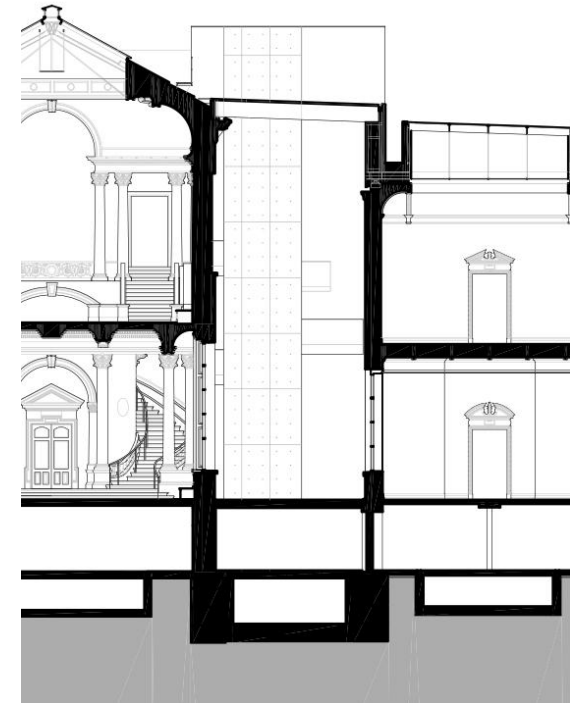
- (8) Roof section (Cepezed Architects 2015)
- (9) Central atrium (Leon van Woerkom 2015)
- (10) Interior view (Marie-Louise Halpenny 2016)
- (11) Section (Heneghan Peng Architects 2016)



(10)

The National Gallery of Ireland / Heneghan Peng Architects

The Glass Roof is supported on triple laminated toughened glass fins that span the 7 meter gap between the two historic wings.



(11)

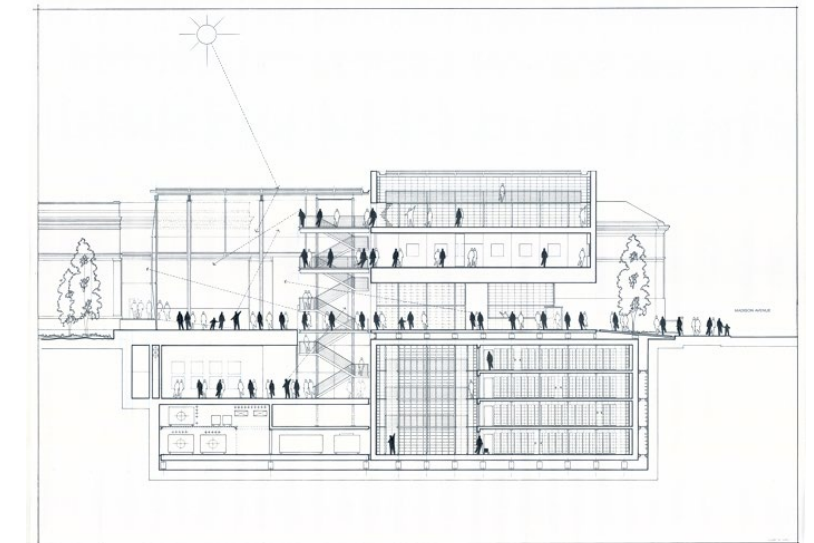


(12)

The Art Institute of Chicago - The Modern Wing /Renzo Piano Building Workshop



(13)



(14)

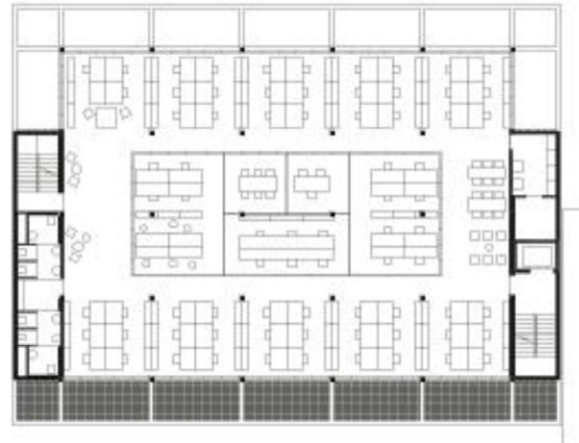
Renovation and expansion of the Morgan Library /Renzo Piano Building Workshop

In the center of the new complex a piazza articulates the space, resolving the inadequate circulation between the different parts of the complex. This is the place where all the activities of the institution converge, and it is covered by a transparent glass roof that also marks the connection with the adjacent buildings.

(12) Interior view (Christian Richters 2009)

(13) Interior view (Renzo Piano Building Workshop 2001)

(14) West - East section (Renzo Piano Building Workshop 2001)



(1)

Until now, the new building's relationship with its urban surrounding and an openness to the public have been reached in the design. But I feel like the core identity, or expression of the building is still missing in terms of VAI's identity in the complex.

Instead of merely trying to change the design to reach an ideal form, after talking with Susanne we agreed that a better way is to rethink what qualities I want to bring in for the institution and how these reflect back on its identity. To fine the core of the design and guiding principles, such as function, structure, flexibility, material. How much of these principles are bond to its form?

Can I started from one interior view of the office to refine the design?

How do we want to work tomorrow?

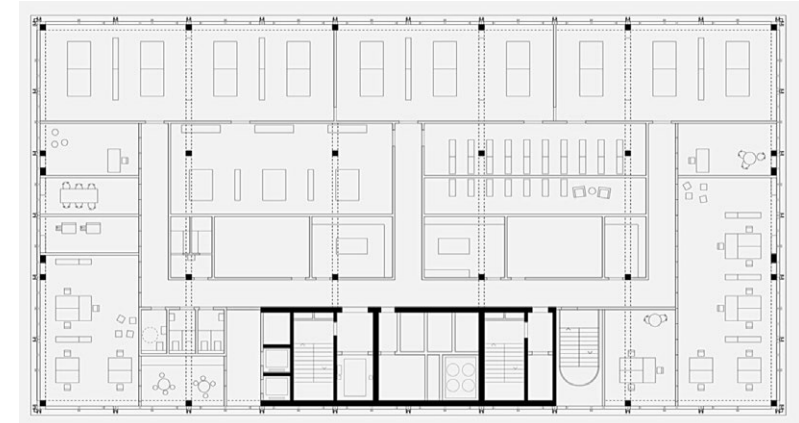
I researched on several office building that have similar grid system and scale, and rearrange floor plans so that the interior space is more flexible under the grid system allowing adjustable partitions of shelves or glass.

The idea of a central linear space is kept to provide openness and connection of two office floors, also as a continue elements from the central atrium in the complex.

The new plan works like a sandwich layout that has green balcony as a buffer from city, to office area and the central sky-lit flexible working space.



(2)



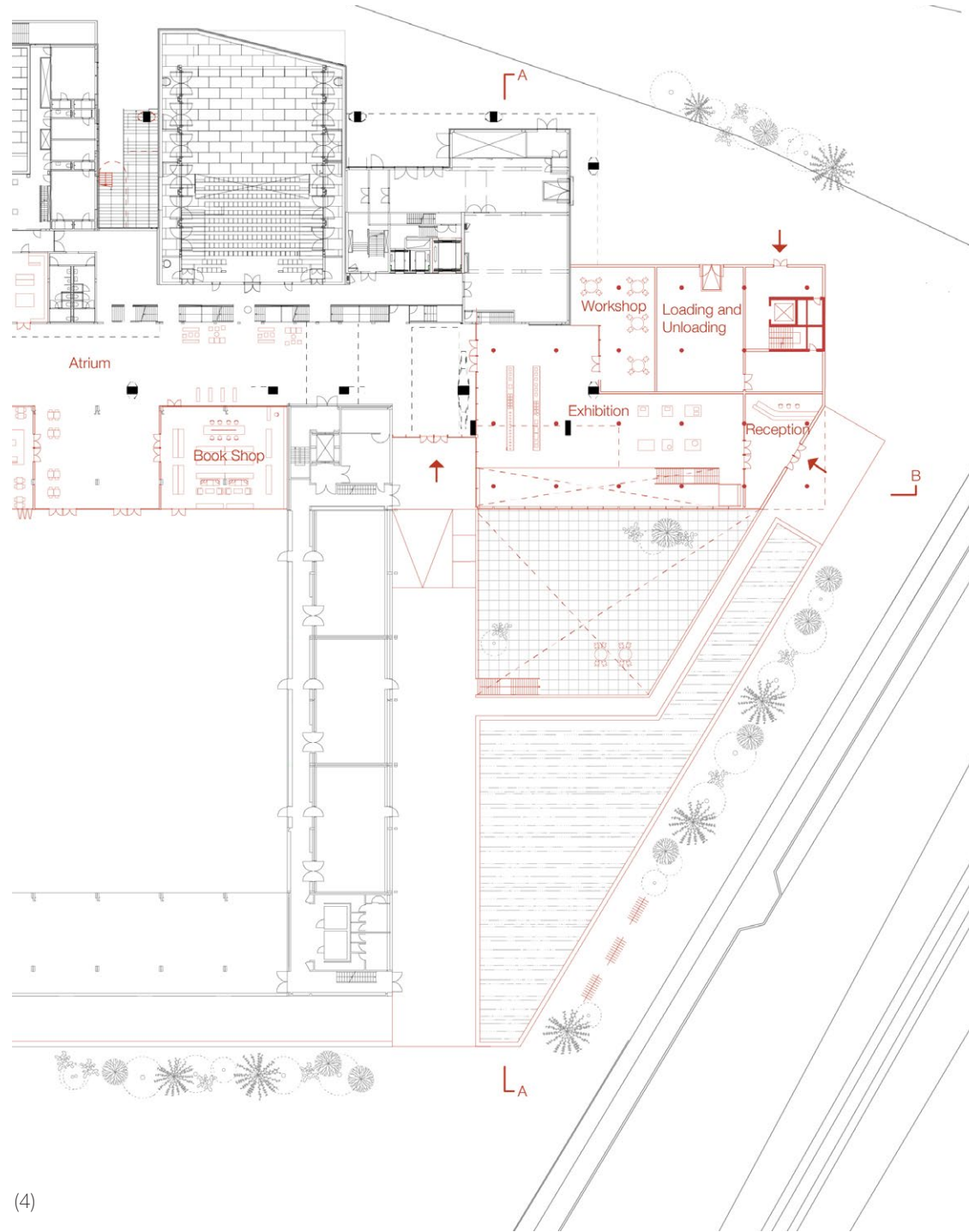
(3)

(1) Office floor plan (Carlana Mezzalira Pentimalli 2025)

(2) Office and Commercial Building Binzstrasse (EM2N 2017)

(3) Wache West and City Archive (EM2N 2023)

New Floor Plans

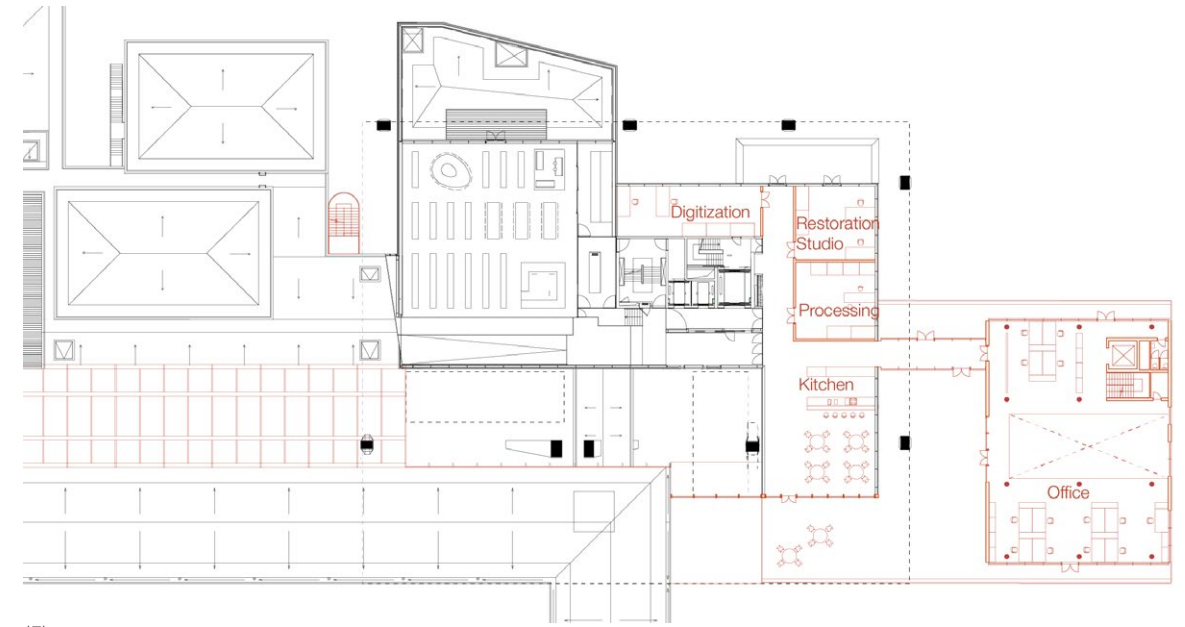


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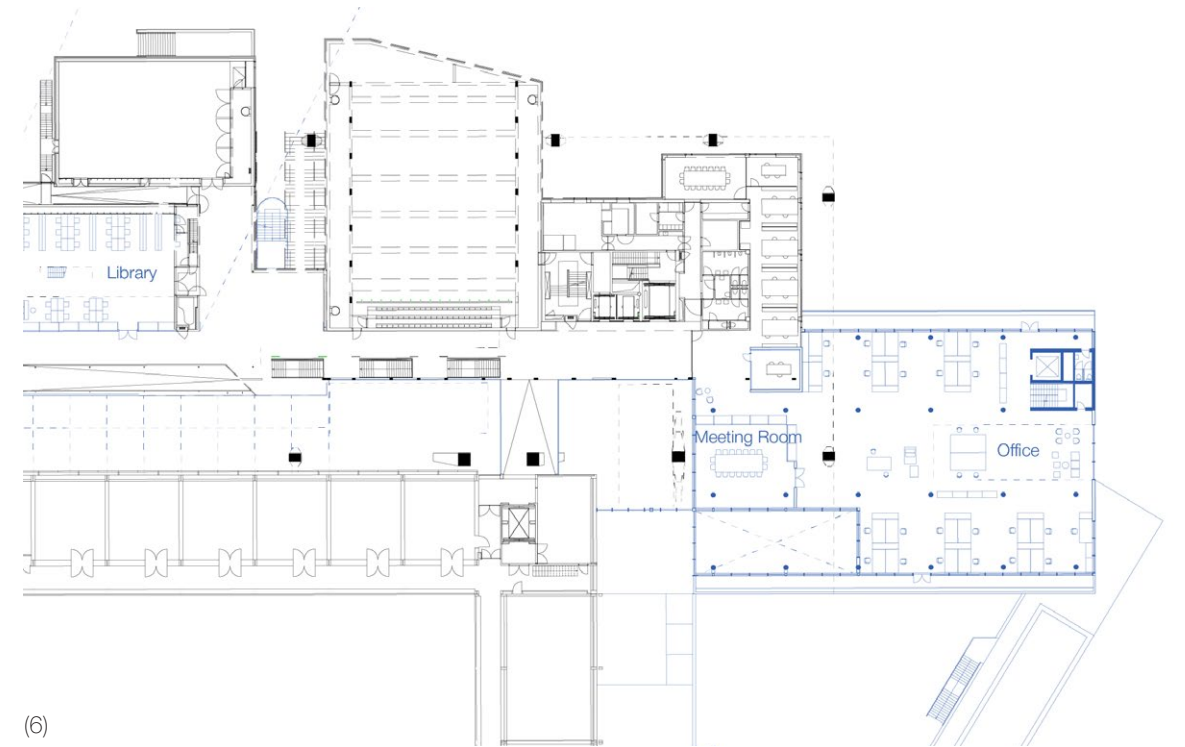
(4) Ground floor

(5) Level +1

(6) Level+2

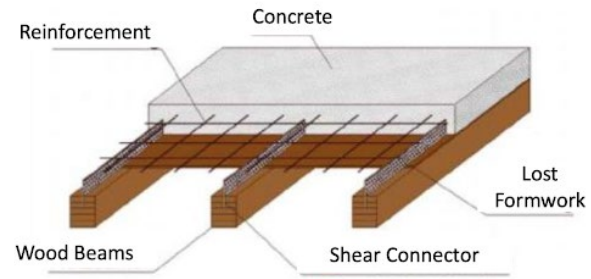


(5)



(6)

Structure System



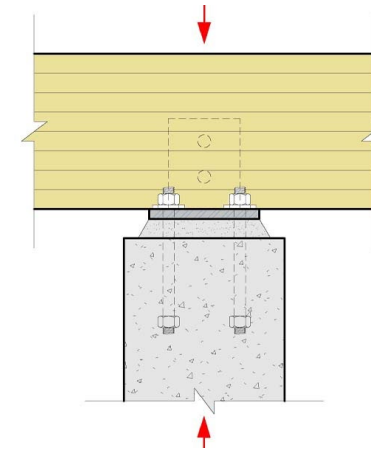
(7)



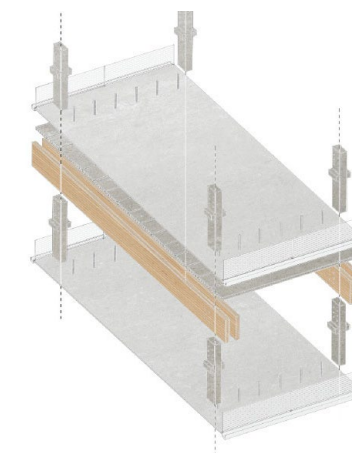
(8)

Office and Commercial Building Bahnhofstrasse / EM2N

The structure of the extension is made of a timber concrete hybrid structure. The timber beam structure is fixed to the concrete column. The flat reinforced precasted concrete panels are rest on top of the timber structure and could be bolted in to further stiffen the structure.



(9)



(10)



Park+Ride Antwerp / HUB

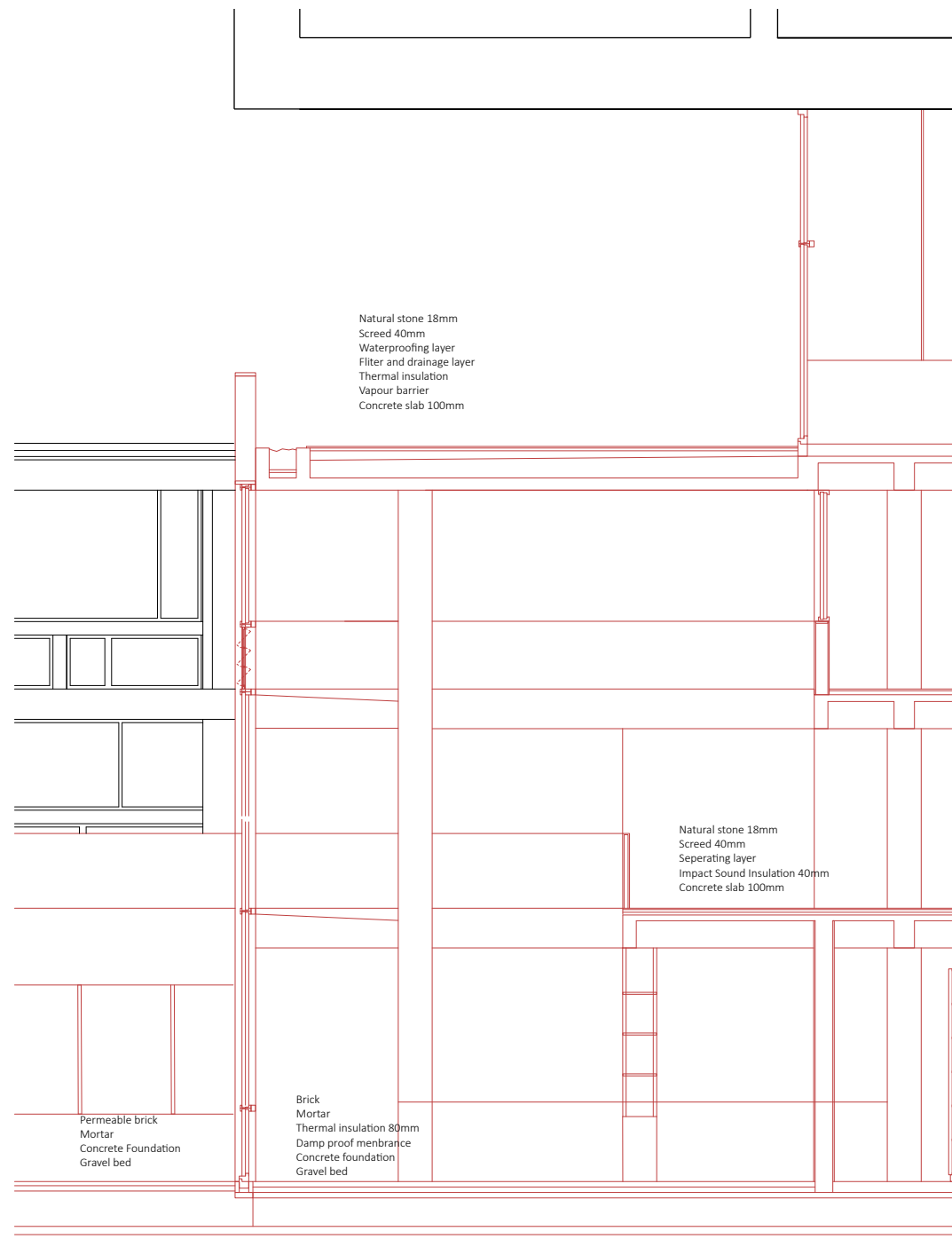
(7) Timber Concrete Composite Floors (lightwood.org)

(8) Interior view (Bernd Druffel 2018)

(9) Timber - GLT BauBuche (HESS TIMBER)

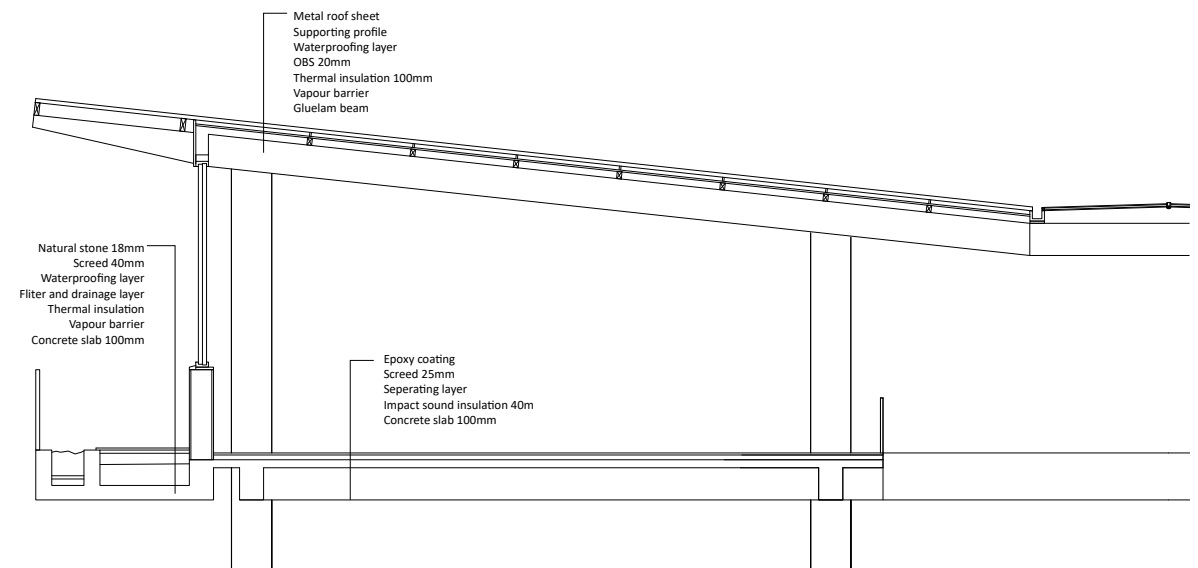
(10) Materials assembly (HUB 2022)

1:50 Section Draft



(11)

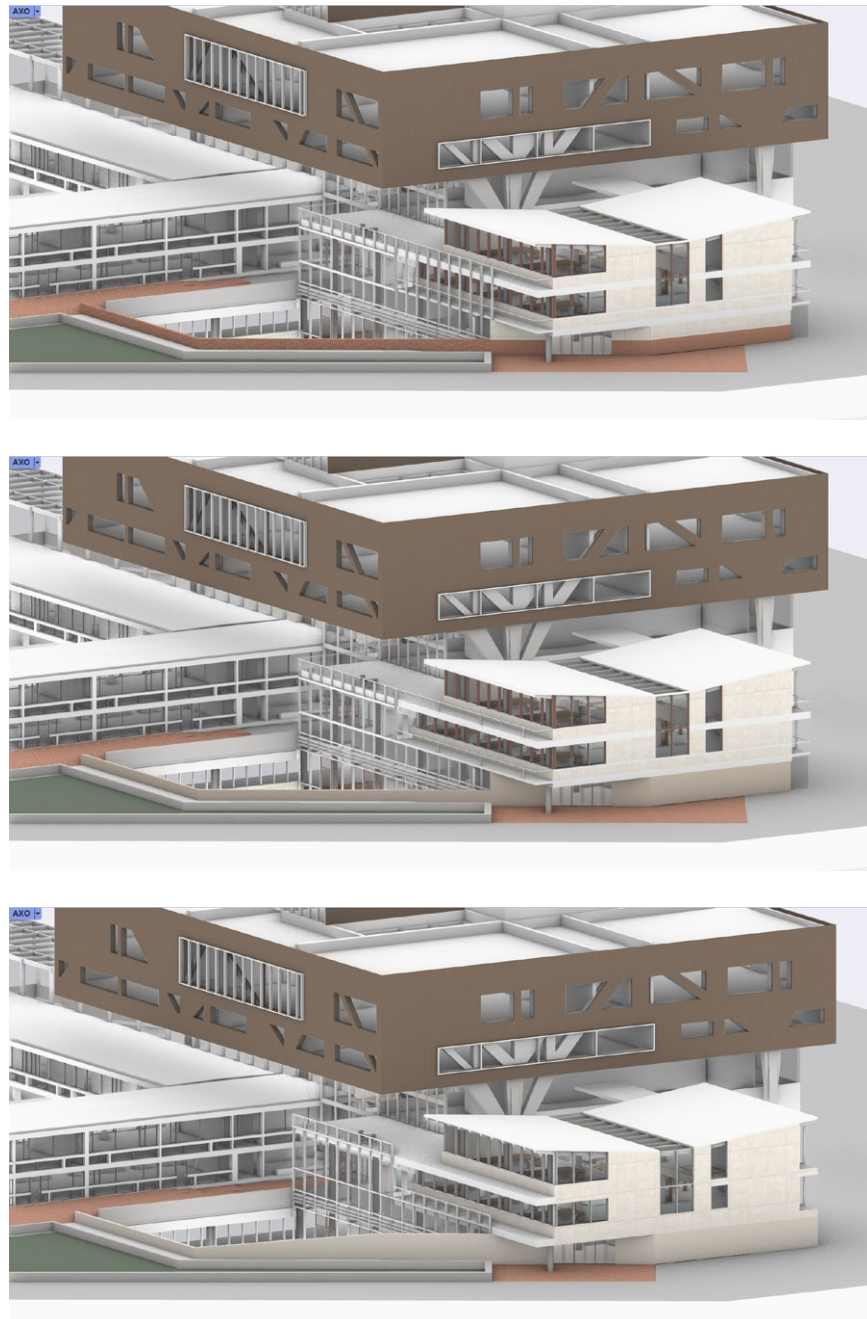
(11) Section through the exhibition hall
 (12) Section through office



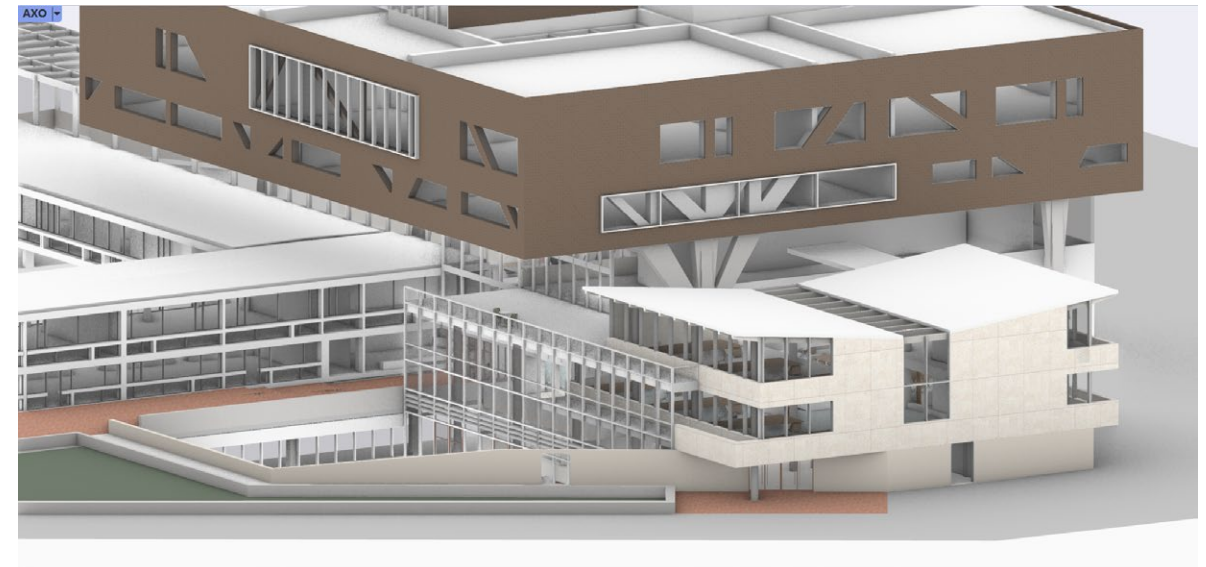
(12)

BT Feedback

Balcony structure in the office doesn't need insulation since it's fully outside. Consider another way to deal with plant pot.
 Connection between inside and outside roof should be clear.
 There should be floor panels under the flooring materials. Refer to online product detail for glass roof.



(1) A variation of balcony design



(1)

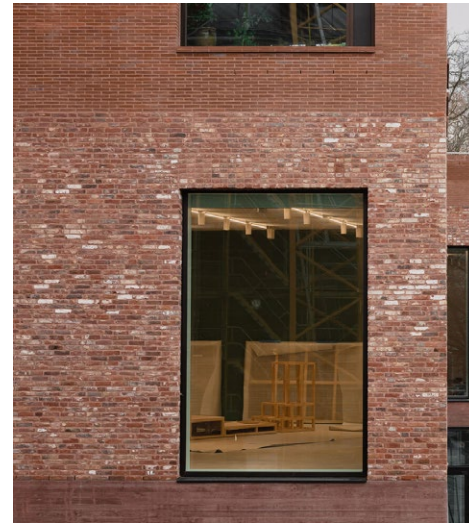
Feedback

Reclaiming the character of the building rather than considering the details of the façade materials.

The spatial feature of the new building is characterised by the outdoor balconies, which respond to the original design but emphasise their own identity by setting back the façade. The horizontal and lateral continuity needs to be maintained. And the extruding entrance echoes the large volume above.

The key is how the extension negotiates between both Stynen and Beel's design.

Facade Pattern



(2)

Spore Initiative / AFF Architekten

The entire façade and all mineral components are monolithic and layered with finely coordinated materials - such as reddish-coloured exposed concrete in board formwork, Re-use clinker bricks and fine-grained new-fired bricks.



(3)

Stone Garden Housing / Lina Ghotmeh

The sturdy corrugated facade of cement and earth recalls striations in rocks or layers of soil laid down over time

(2) Main entrance (Tjark Spille 2023)

(3) Facade detail (Laurian Ghinitoiu 2021)

(4) Facade detail (François Dantart 2022)

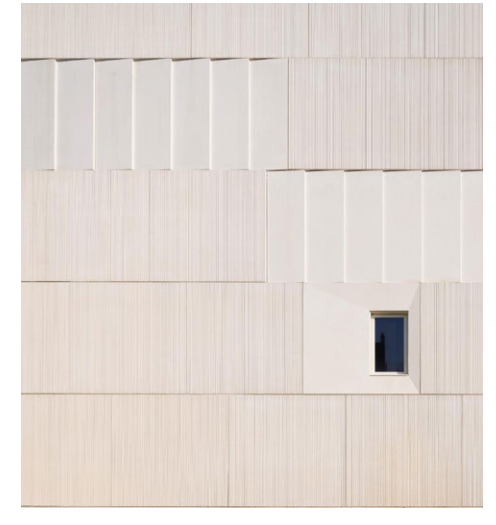
(5) Facade detail (Olivier Di Giambattista 2021)



(4)

Maine-et-Loire Archives storage extension / MAGNUM Architectes

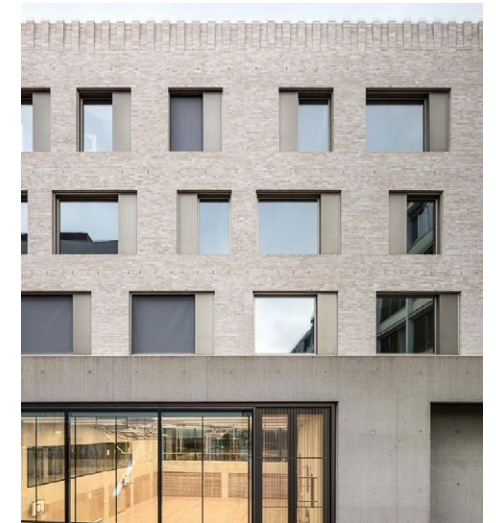
Precast concrete panels with subtle variations define the simplicity of the overall volume. Negative stripes on the facades occasionally give way to either flat or ridged surfaces, allowing for a play of light and shadow.



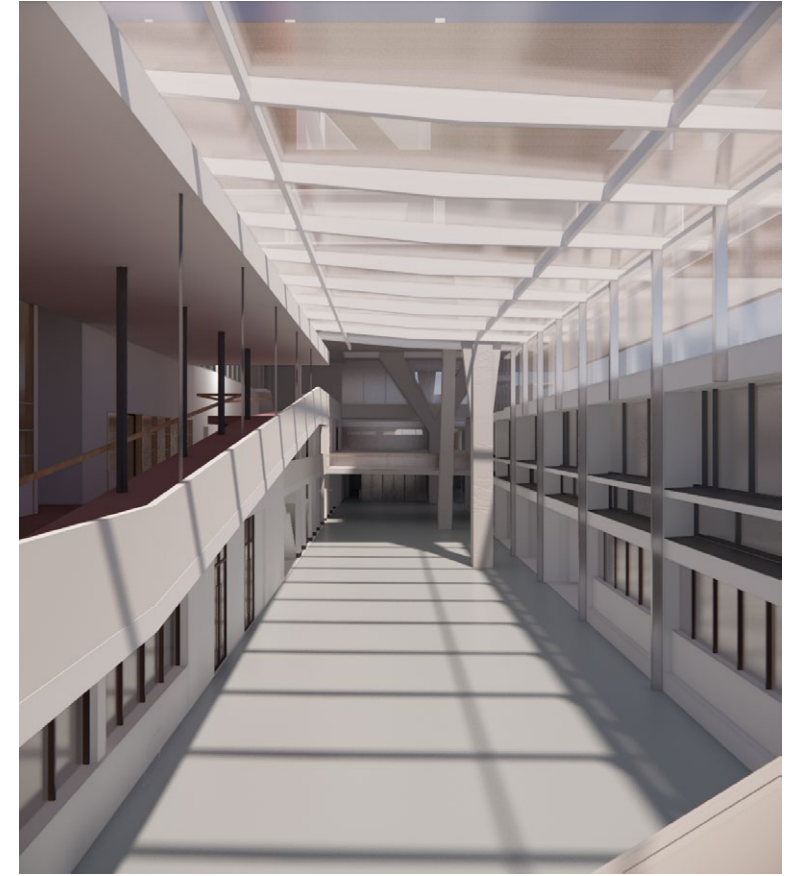
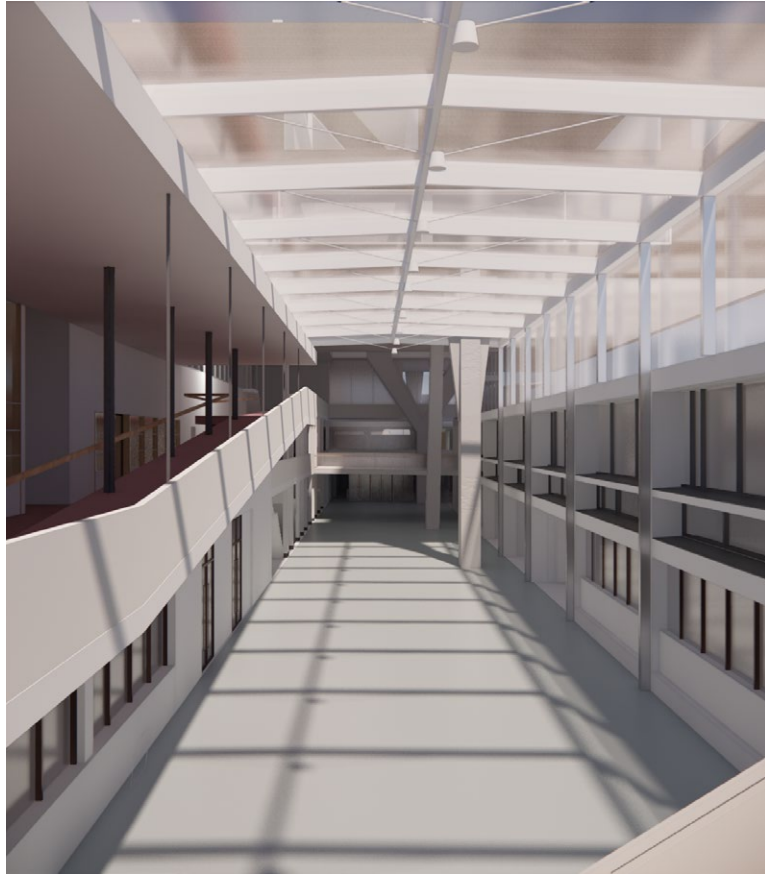
(5)

Public Facilities Building at Jonction / Lacroix Chessex

The sturdy corrugated facade of cement and earth recalls striations in rocks or layers of soil laid down over time

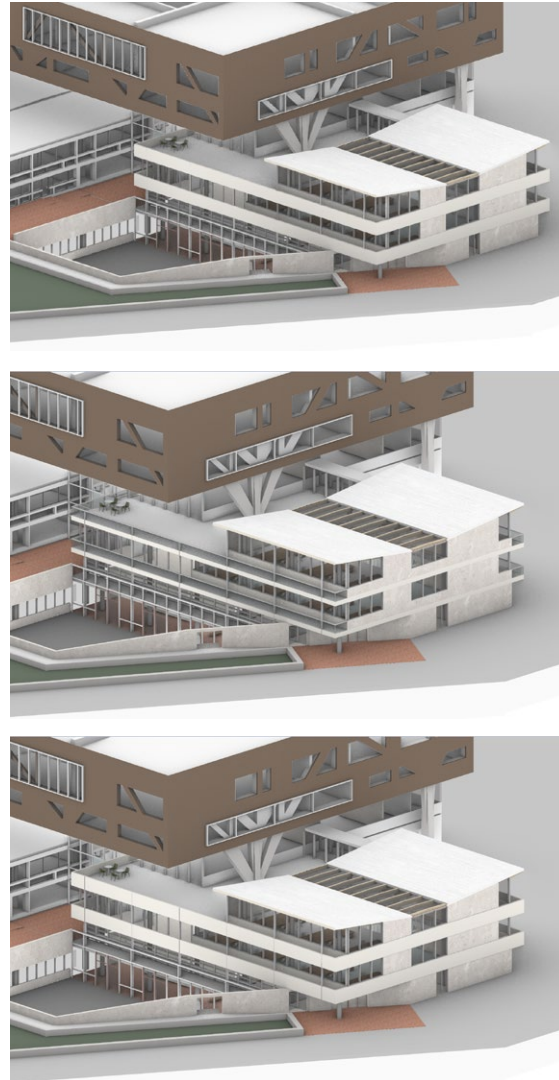


Glass Roof Structure



(6)

(6) Comparing different structures for glass roof



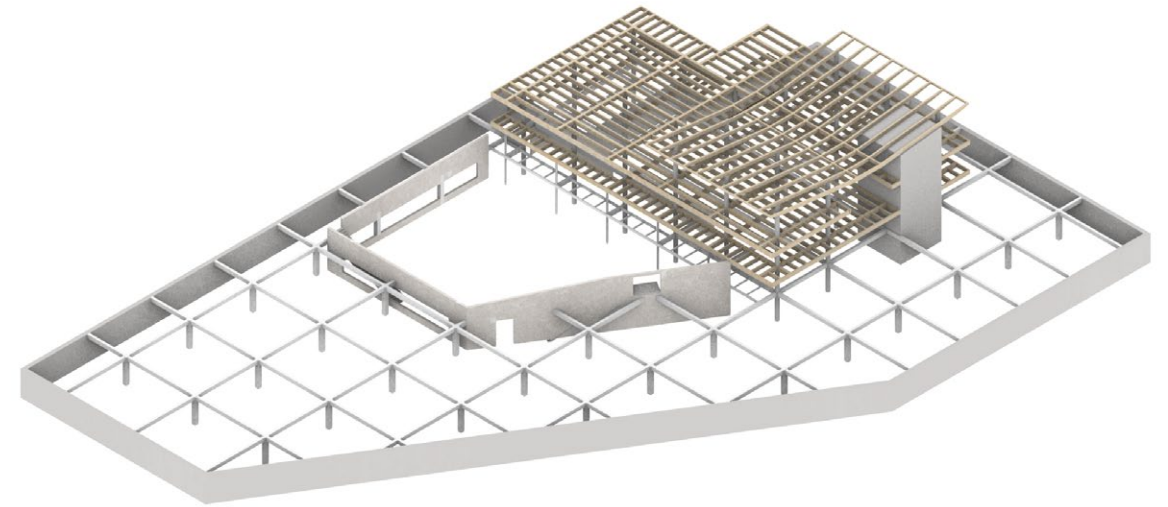
(1)

An exterior balcony layer that unifies the image of the building. The balconies become the informal spaces of coffee breaks. At the same time, they invite appropriation and the extension of archival activities to the outside. What is usually hidden becomes part of the urban setting.

The difficulty lies in how to maintain the wrapping gesture without a solid and volumetric appearance caused by the handrail.

(1) Comparing different designs
(2) Construction Diagram

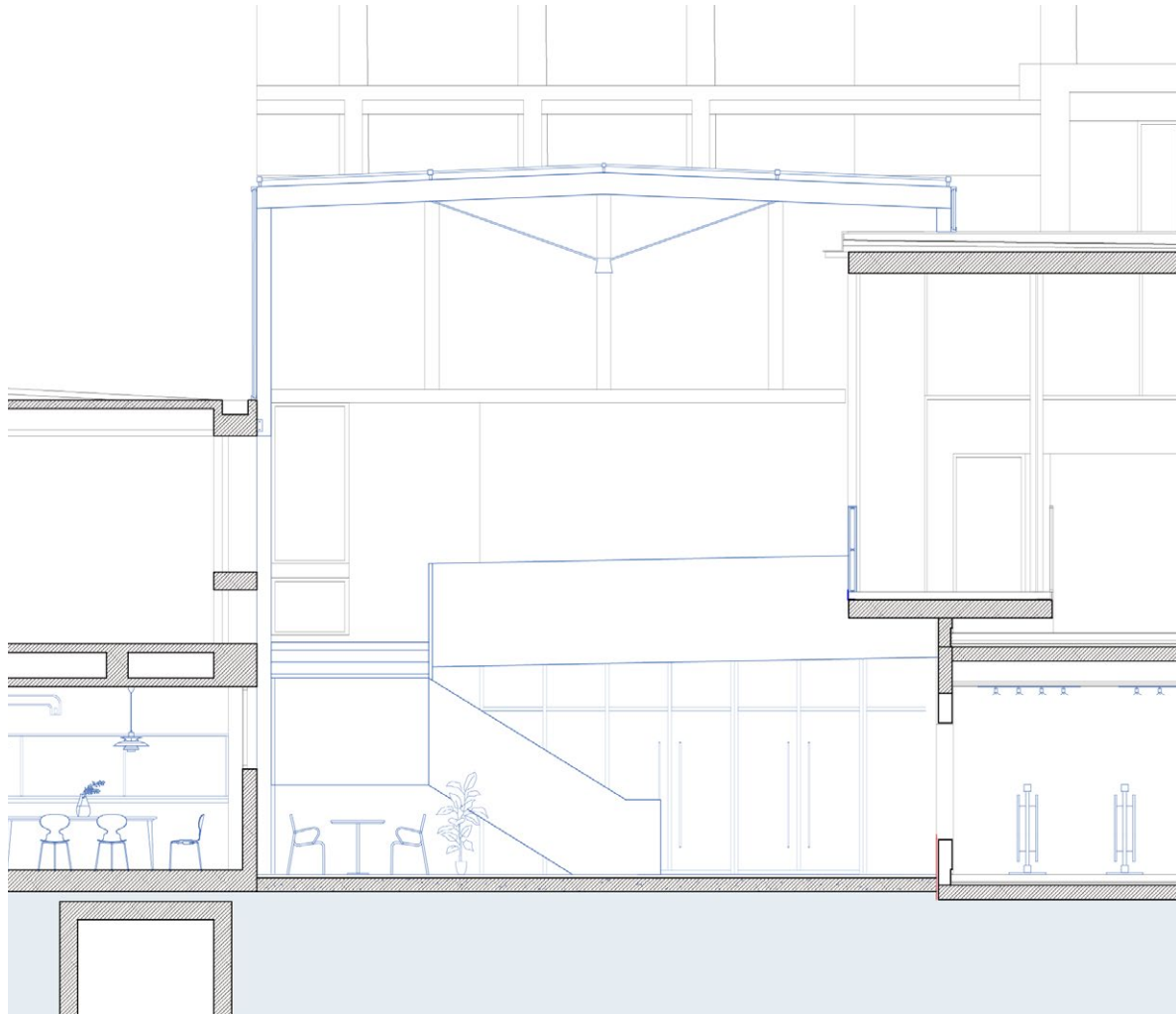
Construction Idea



(2)

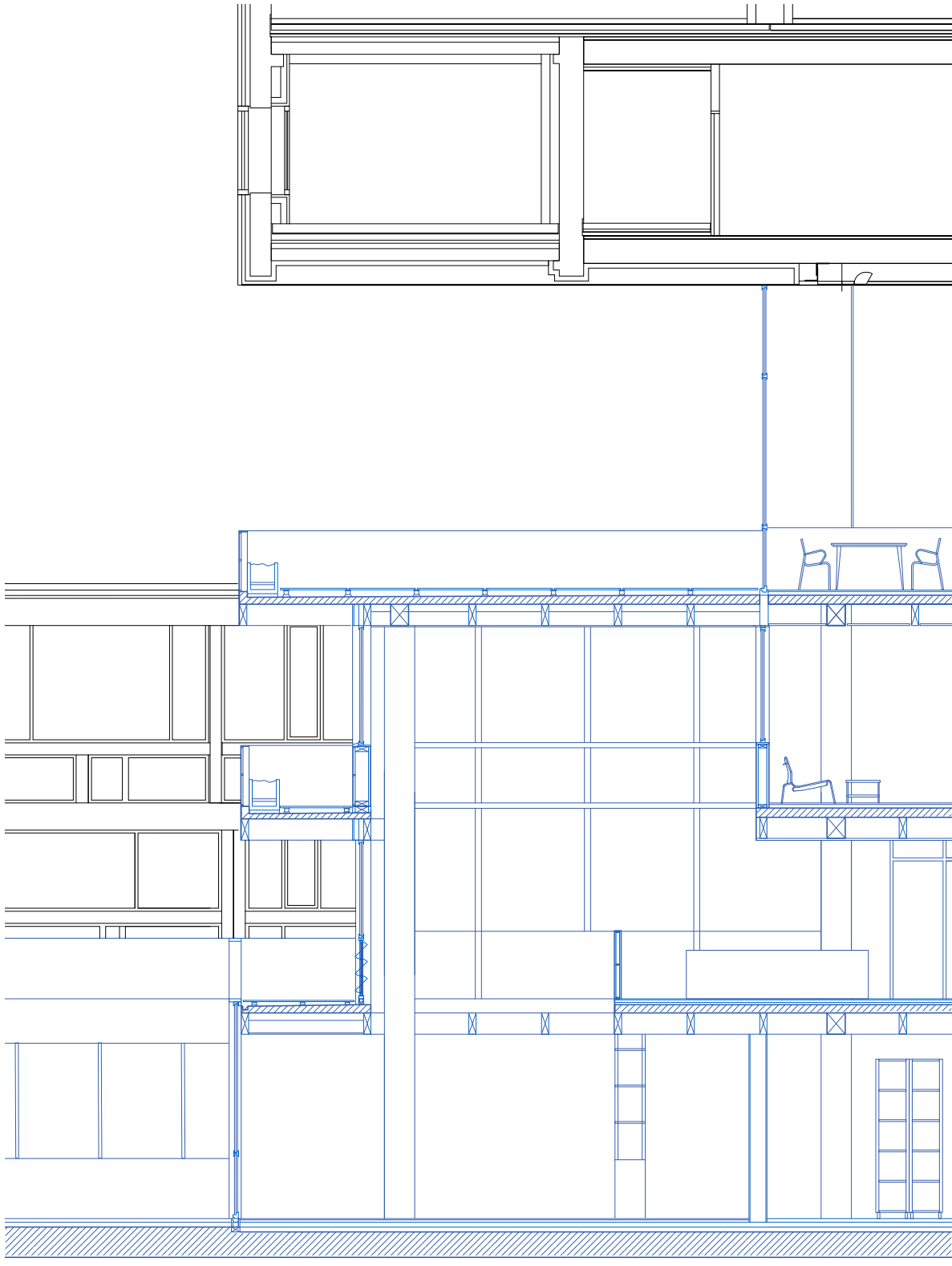
Concrete column
Timber Concrete Composite Floors
Concrete core
Concrete walls on underground for stability
Concrete depot basement

The basement floor creates a solid base for the lightweight structure above and, together with the ceiling above the basement, form the anchoring horizon for the earthquake-stabilizing cores. The floor slabs are ribbed timber-concrete composite construction consisting of glued laminated timber ribs and concrete slabs.

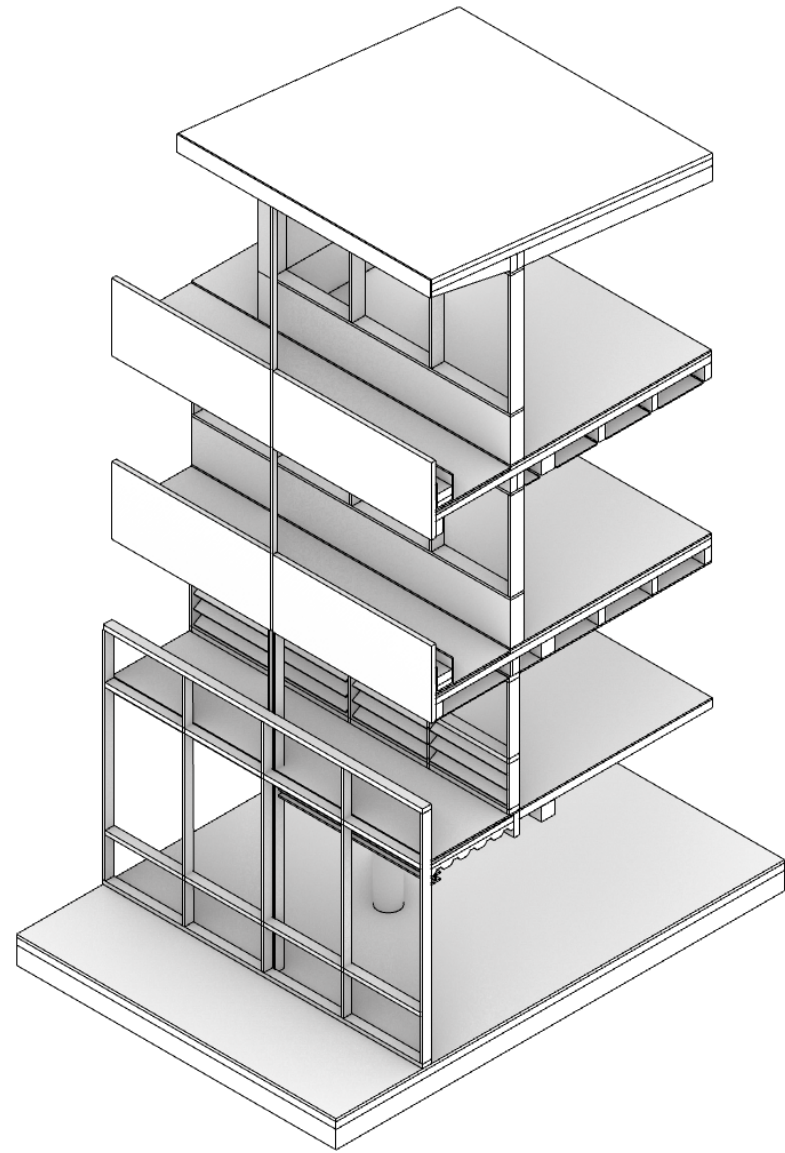


(3)

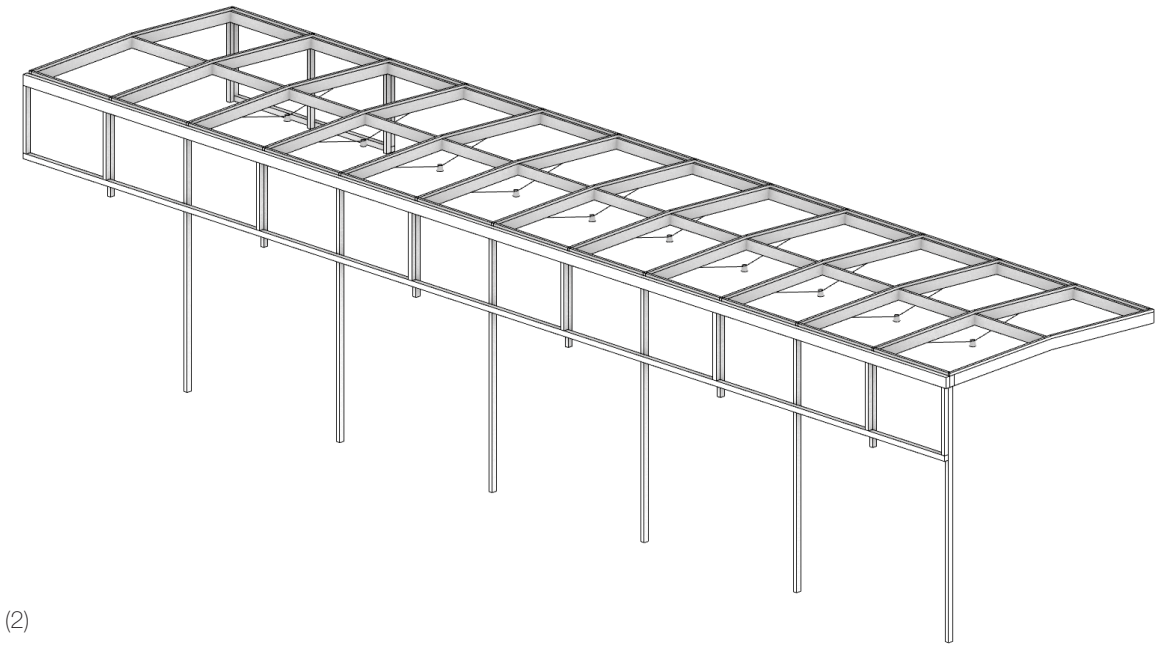
(3) Atrium Section
 (4) New atrium section with walkway looking under



(4)



(1)



(2)

A cut of the entire new building is selected to be the typical fragment that shows the main identity.

- (1) Facade fragment
- (2) New glass roof in the atrium

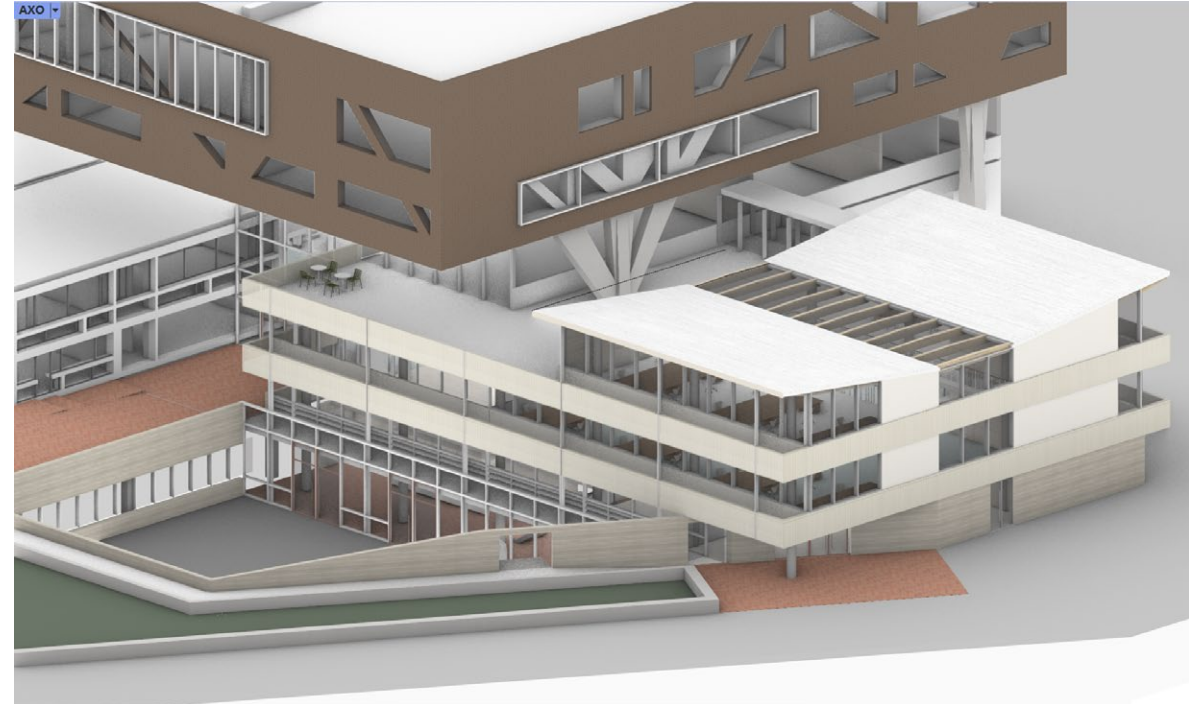


(3)



(4)

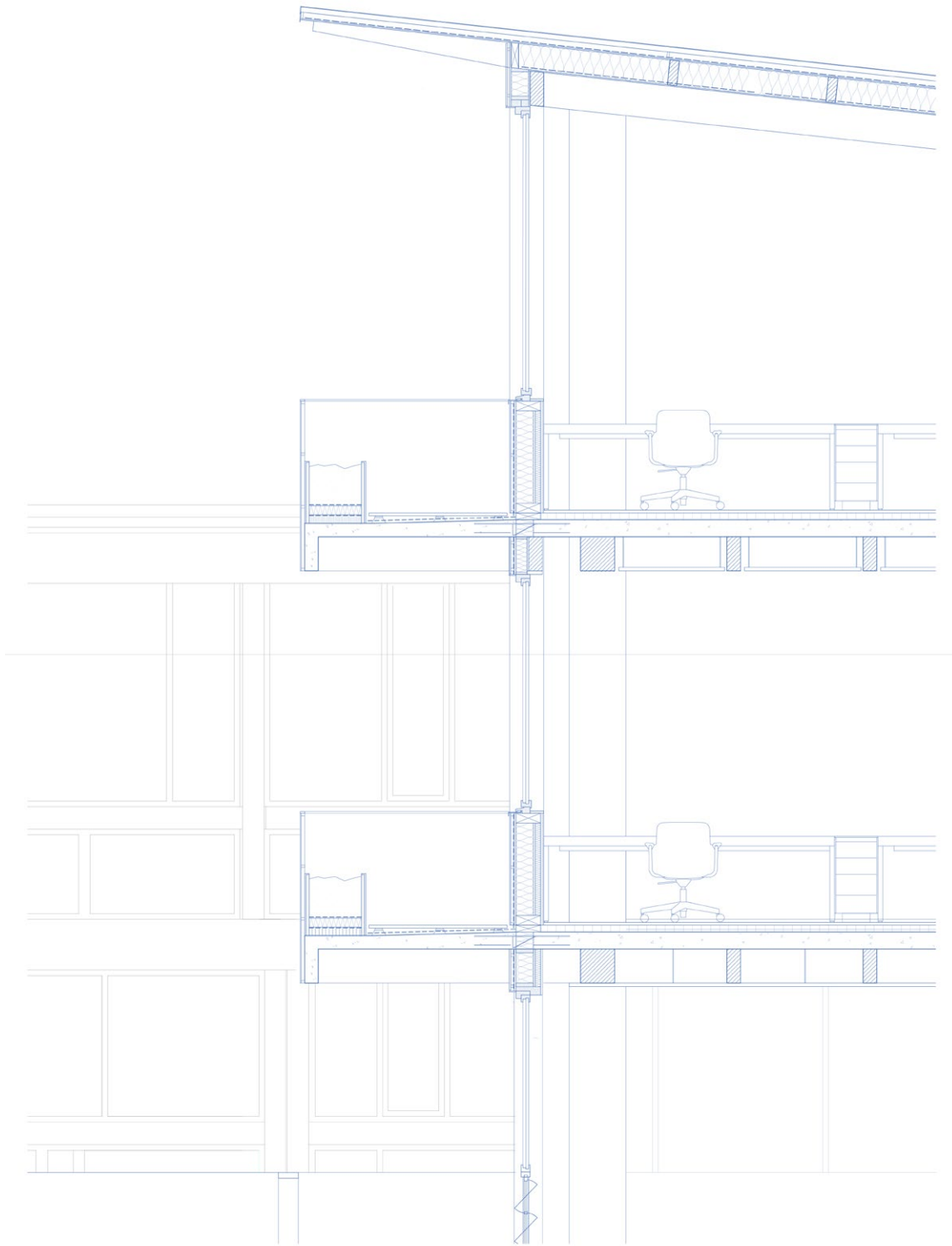
- (3) Facade
- (4) Office with timber elements
- (5) Axo view



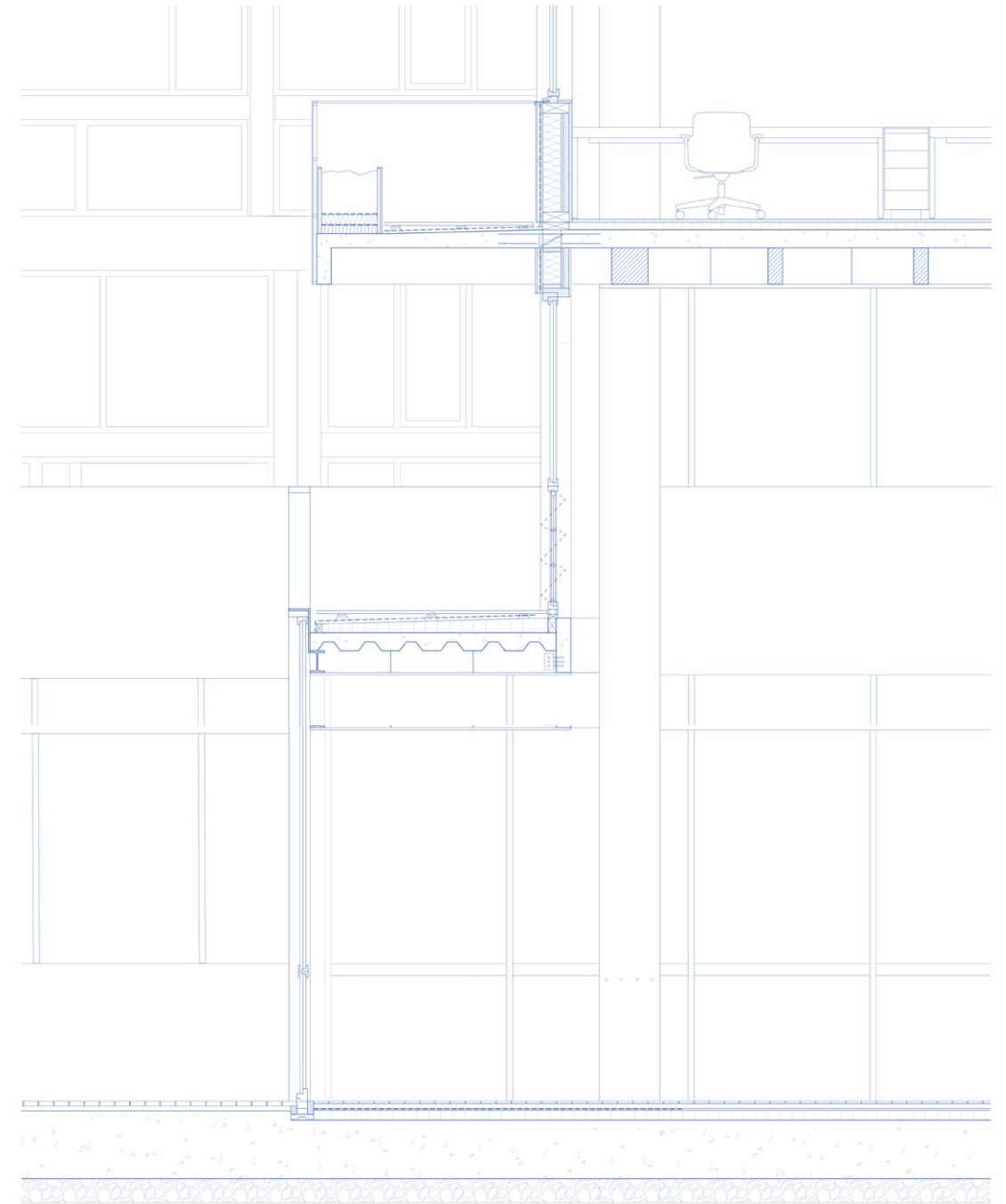
(5)

Feedback:

Vertical elements can be the outset element on the facade. The same facade language should continue all three sides, instead of ending towards the city street as a rather solid panel. Balcony wraps around the entire building. This also differentiate itself from the Beel's part and the balcony becomes a soft in-between space.



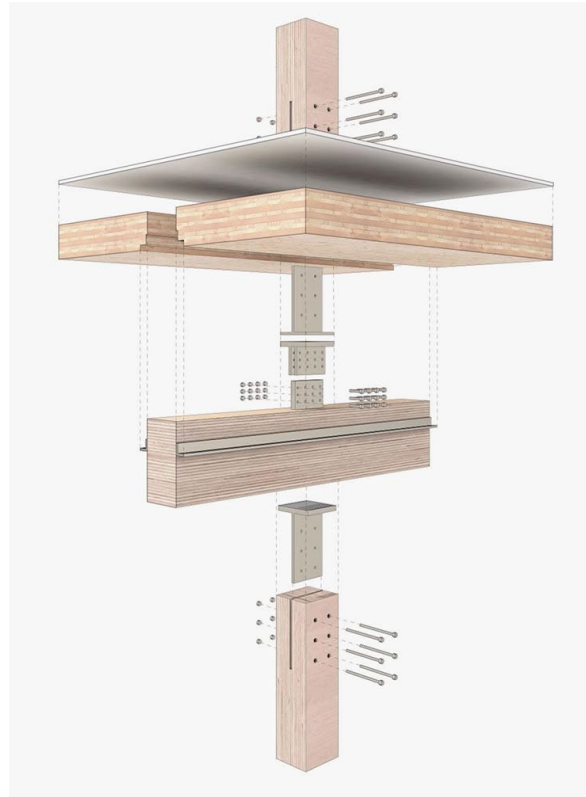
(6) Draft detail ideas



(6)

Feedback:

The floor structure is too complicated, and the upper levels can be timber structure.
Detail of window frame needs to be more precise.



(1)

Floor structure type	Material (mm)	Total height (mm)	Weight (kg/m ²)	Vertical sound insulation (dB)	
				Impact sound level, L	Airborne sound insulation, D
	Floor structure type 1 110 CLT slab 220 fixed joists 2 x 95 insulation 34 battens 2 x 13 plasterboard	390	92	63 (+7)	56 (-6)
		Residential houses sound insulation class ²⁾	–	–	D
	Floor structure type 2 80 concrete 30 impact sound insulation, dynamic stiffness ≤: 9 MN/m ³ 200 CLT slab	310	266	52 (+5)	63 (-8)
		Residential houses sound insulation class ²⁾	–	–	C
	Floor structure type 3 80 concrete 30 impact insulation, dynamic stiffness ≤: 9 MN/m ³ 200 mm CLT slab 120 suspended ceiling joists 80 insulation 2 x 15 plasterboard, density ≥ 1050 kg/m ³	460	207	33 (+17)	79 (-14)
		Residential houses sound insulation class ²⁾	–	–	B
	Floor structure type 4 80 concrete 30 mm impact insulation, dynamic stiffness ≤: 12 MN/m ³ 30 mm impact insulation, dynamic stiffness ≤: 12 MN/m ³ 120 washed gravel 200 CLT slab 2 x 15 plasterboard, density ≥ 1050 kg/m ³	460	450	40 (+4)	75 (-7)
		Residential houses sound insulation class ²⁾	–	–	A
	Floor structure type 5 13 mm plasterboard, floating 3 foam 200 CLT slab 50 heavy insulation, density ≥ 100 kg/m ³	266	130	64	¹⁾
		Residential houses sound insulation class ²⁾	–	–	–
	Floor structure type 6 CLT slab 50 heavy insulation, density ≥ 100 kg/m ³	250	106	68	¹⁾
		Residential houses sound insulation class ²⁾	–	–	–
				Not suitable for offices	–

(2)

Floor structure type	Material (mm)	Total height (mm)	Weight (kg/m ²)	Vertical sound insulation (dB)	
				Impact sound level, L	Airborne sound insulation, D
	Floor structure type 7 14 wood flooring 3 foam 22 fibreboard, floating 12 impact insulation, damping 4 dB 13 plasterboard, screwed 200 CLT slab 50 heavy insulation, density ≥ 100 kg/m ³	334	160	60	¹⁾
		Residential houses sound insulation class ²⁾	–	–	–
	Floor structure type 8 14 wood flooring 3 foam 22 fibreboard, floating 20 impact insulation, damping 4 dB 22 fibreboard 95 floor joists 95 insulation 25 syldyn 200 mm CLT slab	401	145	54 (+6)	52 (-4)
		Residential houses sound insulation class ²⁾	–	–	D
	Floor structure type 9 14 wood flooring 3 foam 13 plasterboard 22 fibreboard 20 impact insulation 80 washed gravel, 8-11 mm 200 CLT slab	352	235	44 (+6)	63 (-1)
		Residential houses sound insulation class ²⁾	–	–	B
	Floor structure type 10 14 wood flooring 2x13 plasterboard 22 fibreboard beams with struts 200 insulation 130 CLT slab 13 plasterboard	413	130	56	52
		Residential houses sound insulation class ²⁾	–	–	C
	Floor structure type 11 14 wood flooring 2x13 plasterboard 22 fibreboard beams with struts 260 insulation 160 CLT slab 13 plasterboard	493	145	56	56
		Residential houses sound insulation class ²⁾	–	–	B
				Offices sound insulation class ³⁾	A

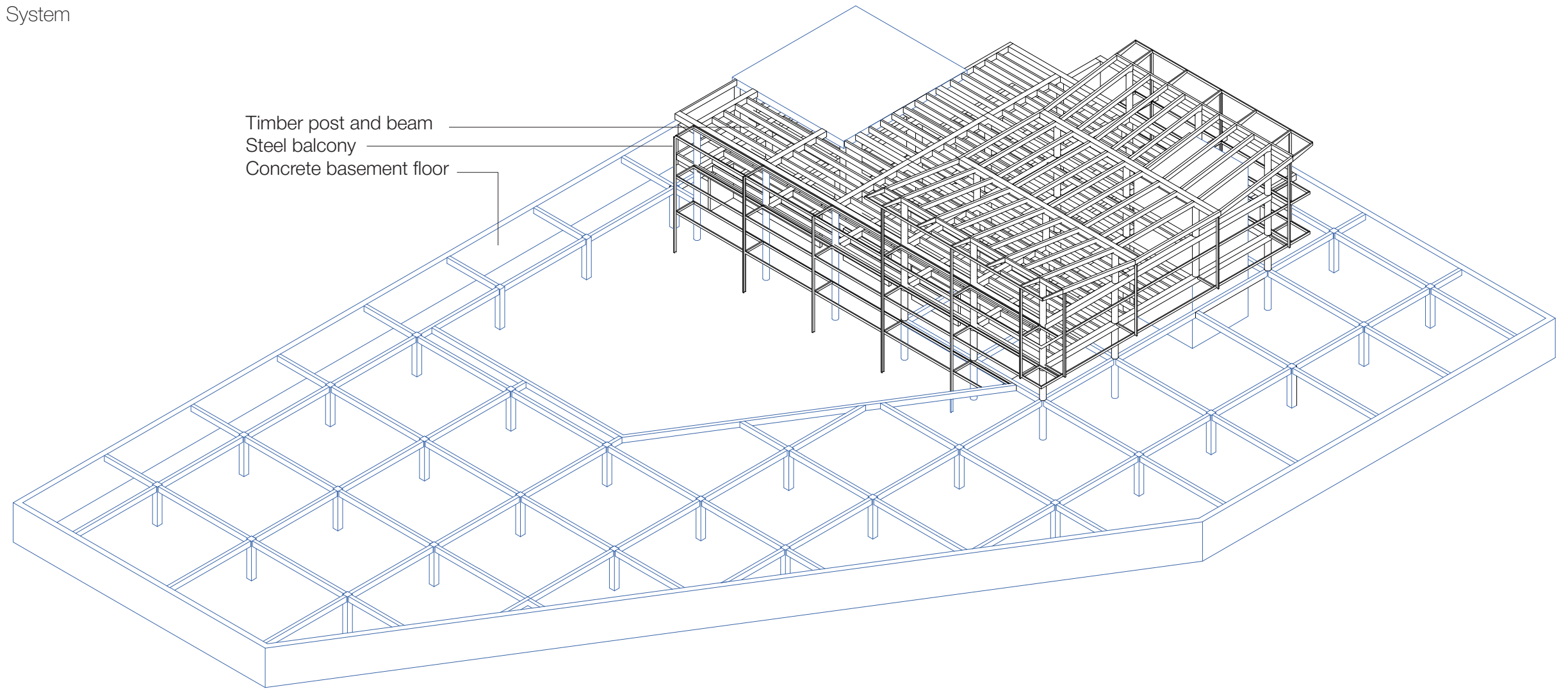
¹⁾ Value not available.

²⁾ Space outside home to space inside home.

³⁾ From space to space for private work or conversations.

(1) Timber structure connection
(2) Flooring build-up

Structure System



(3)

Above the concrete base in underground level, the rest is designed as a post-and-beam traditional wooden frame. Balcony surrounding the space is supported both by the timber and steel post.

The post and beam system facilitates larger spans which increases the flexibility of the internal layout. As such, it is ideal for open plan inside the archive office.

(3) Structure diagram



(4)



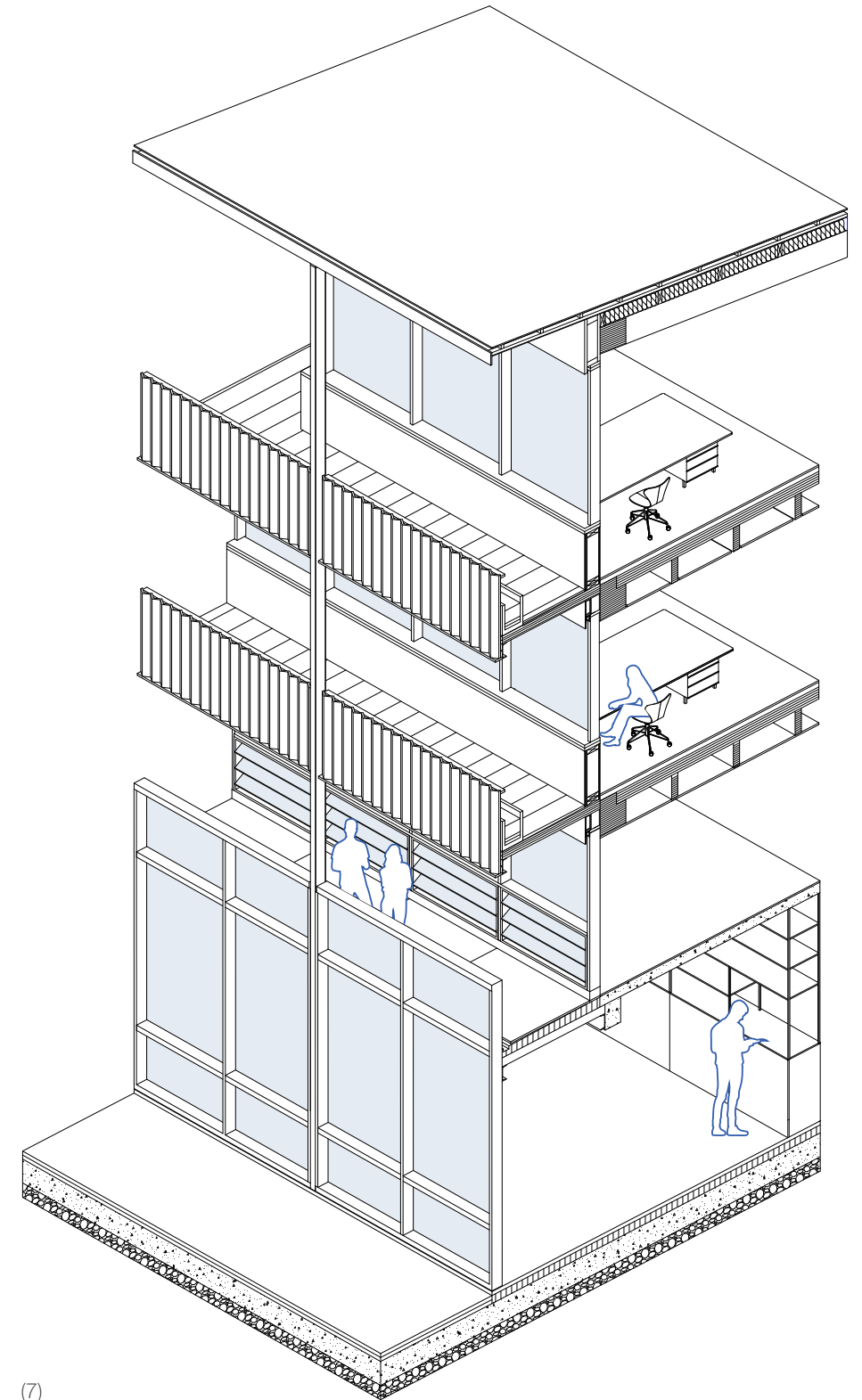
(5)

(4) P2 render of the exhibition hall
(5) P3 render of the exhibition hall

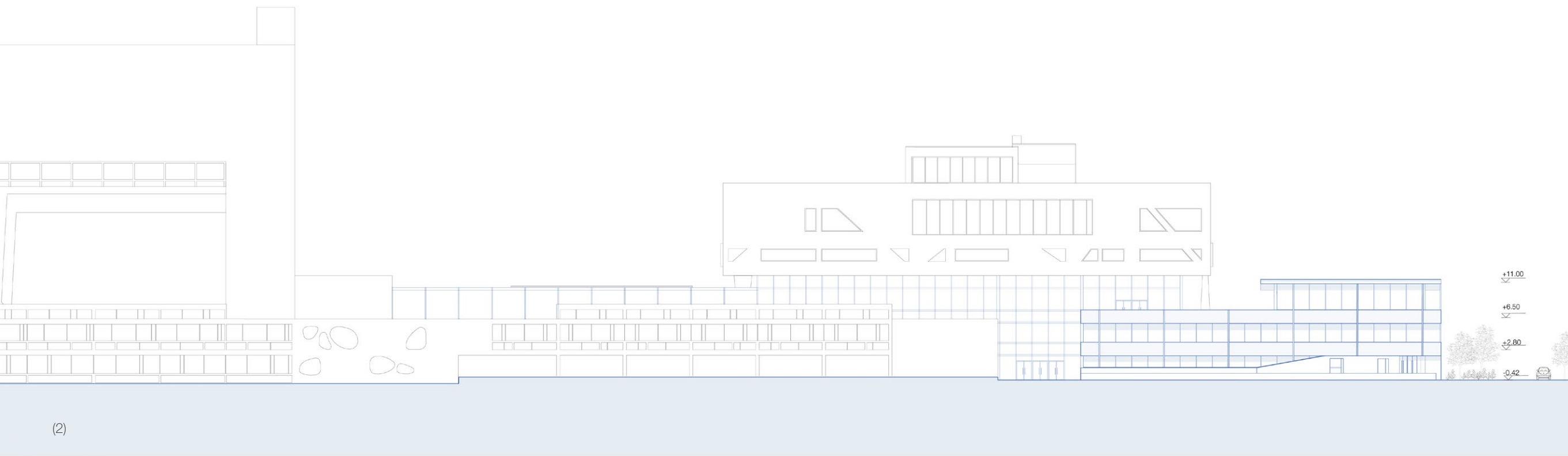
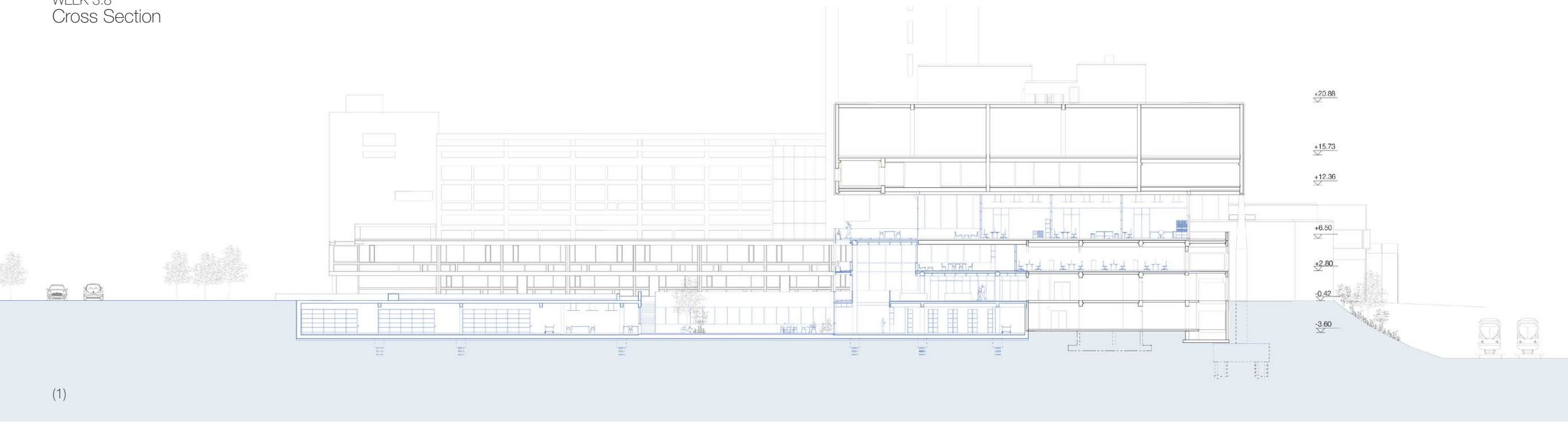


(6)

(6) Facade render
(7) Fragment diagram

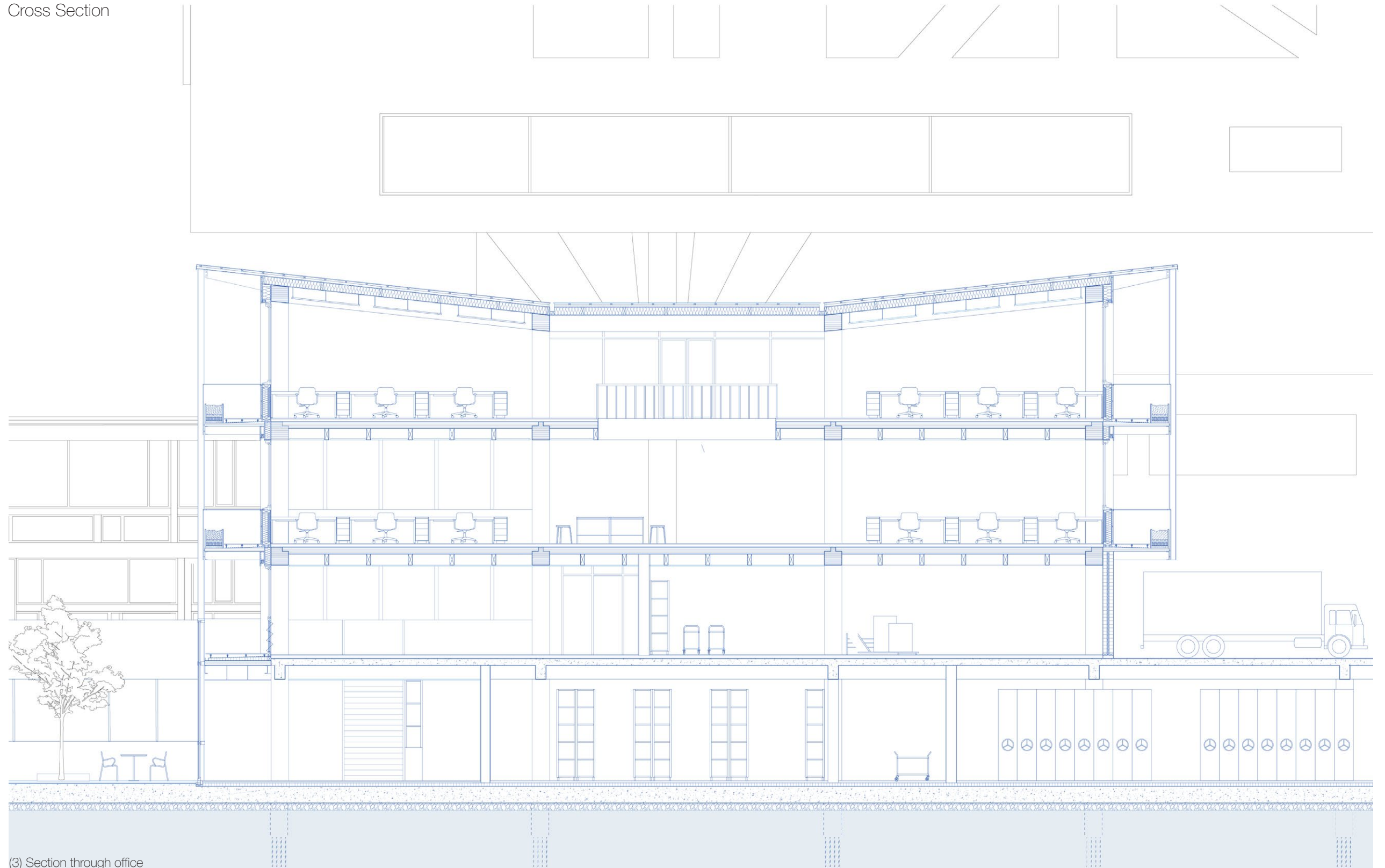


(7)

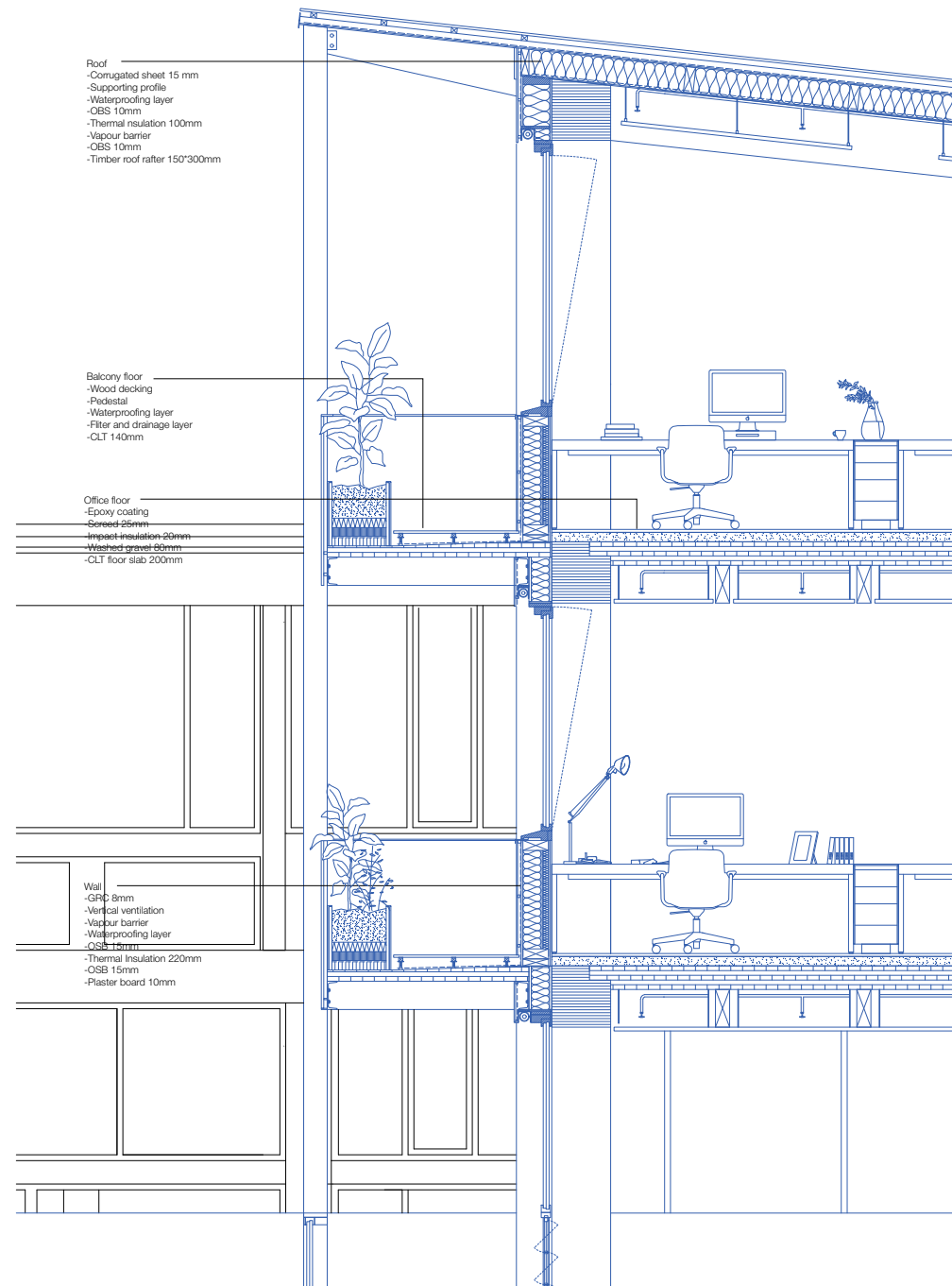


(1) Section through exhibition hall
(2) Main facade

Cross Section

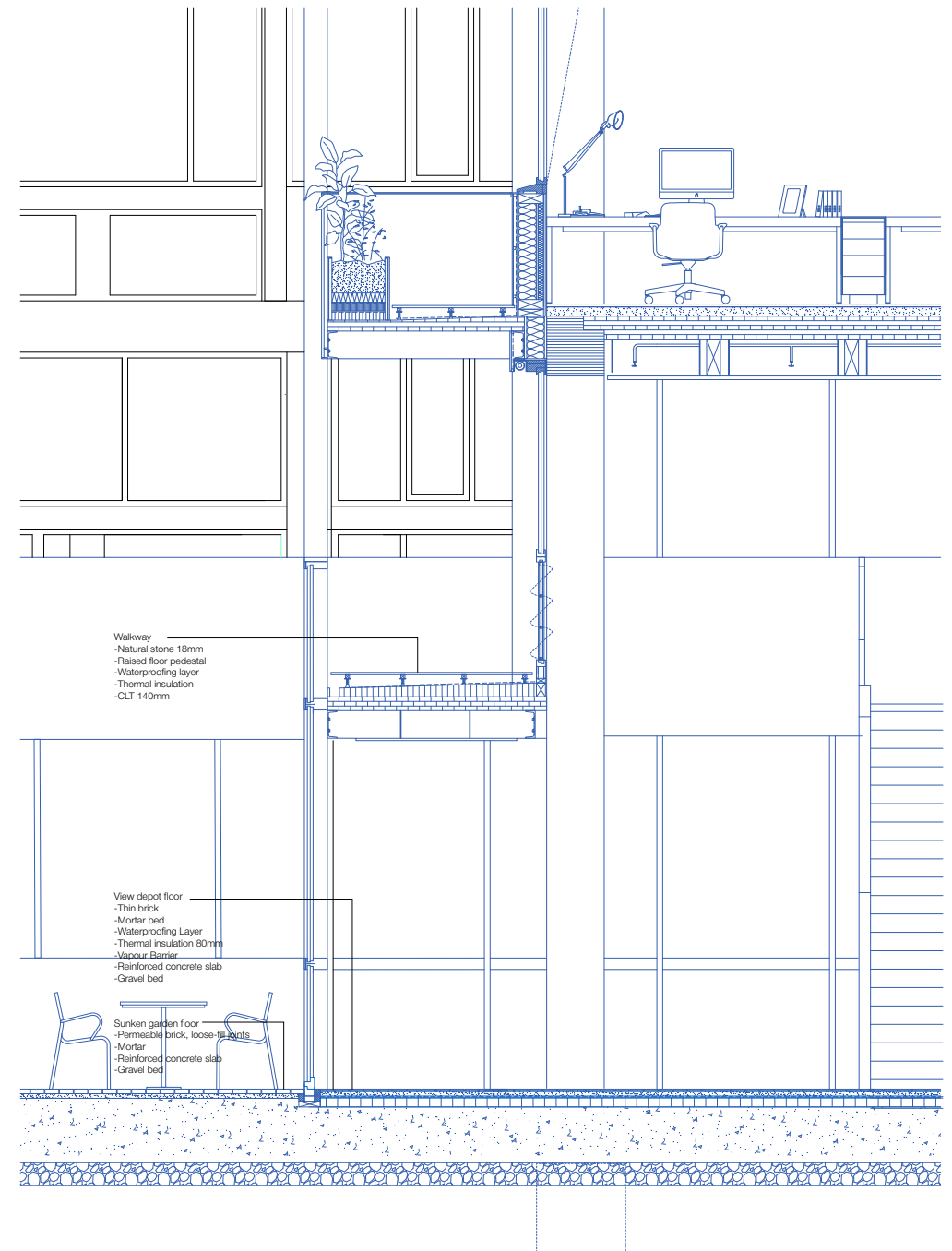


(3) Section through office



(4)

(4) Detail Section



P3 Exhibition

Feedback

The project depends on the precision in the relationships between the Stynen, Beel and your addition, formally and spatially. There are many well-chosen moments in your proposal, but you need to be more critical about how you deal with the relationship between the three parts. Currently, it is not clear where things come from. Be consistent in terms of rhythms, organisation and space.

In Stynen there is a clear layout of the corridors. How do you respond to this?

Can you make your exhibition space a conclusion of the atrium?

Could you extend the qualities of the exterior spaces?

The reception hall on one floor: spatially different from the existing one. What kind of entrance situation does this offer?

Why is the roof not orthogonal?

What materiality does your extension have and how does it relate to the other two parts?

The moment of connection between the buildings is crucial. It is strange that your fragment model does not address the spatial moment of connection. Could it be expanded to do so?

You really need some diagrams to explain the key ideas of the project, but perhaps also to clarify them for yourself.



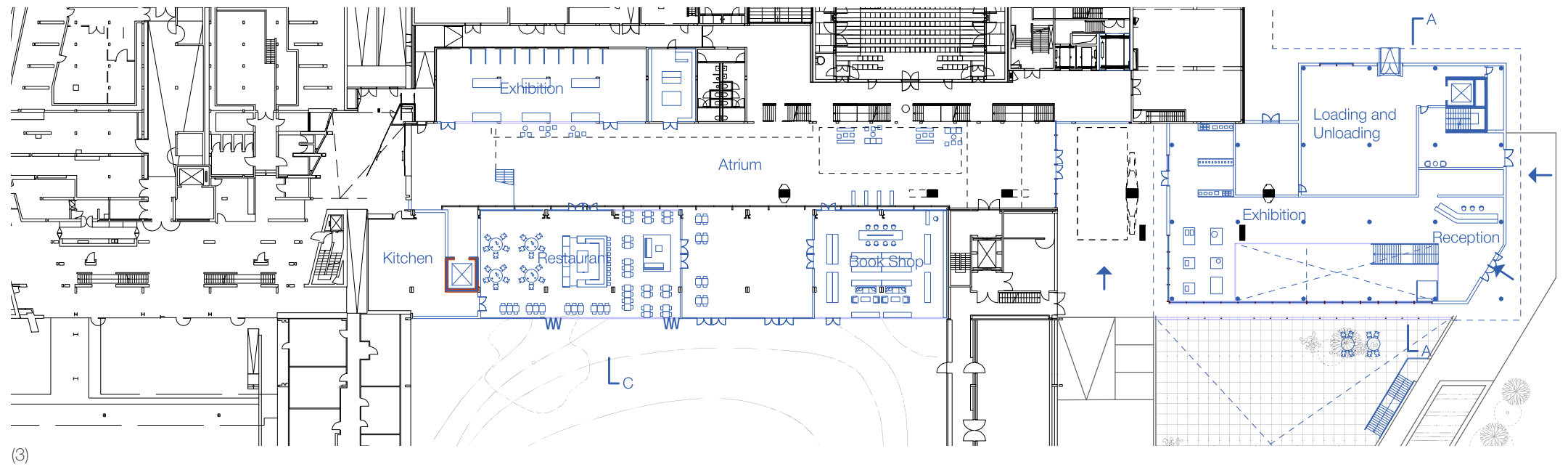
(5)



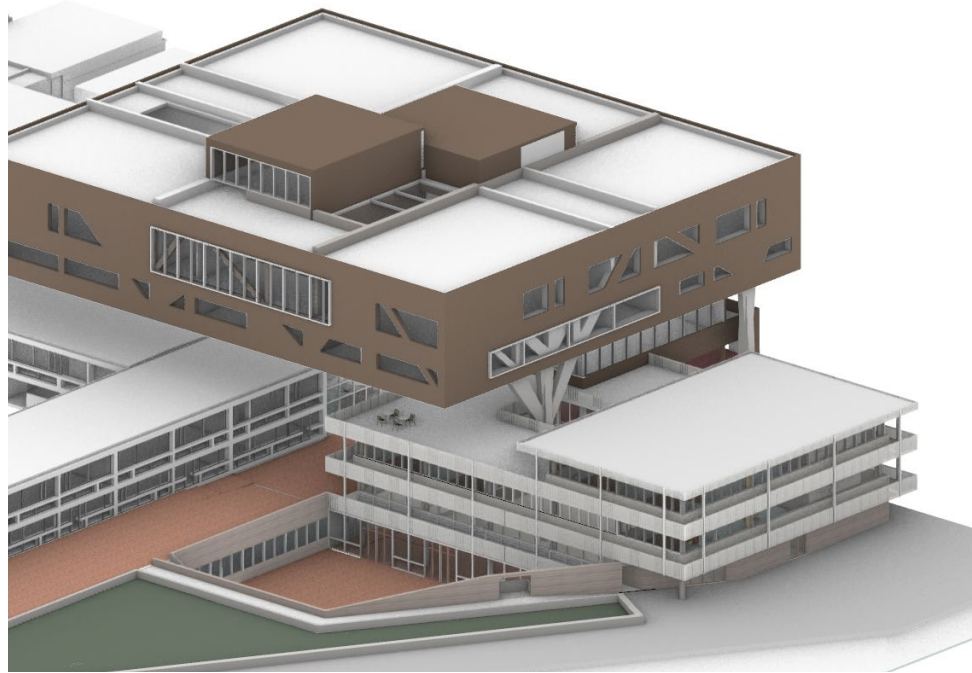
(5) Fragment model



- (1) Changing the position of the atrium's glass curtain wall enclosing the space, so that the original rectangular tree-like columns become free-standing objects in the entrance aisle.
- (2) In order to make the correspondence between the different axis grids clearer, the position of the walls on the first floor has been adjusted accordingly.

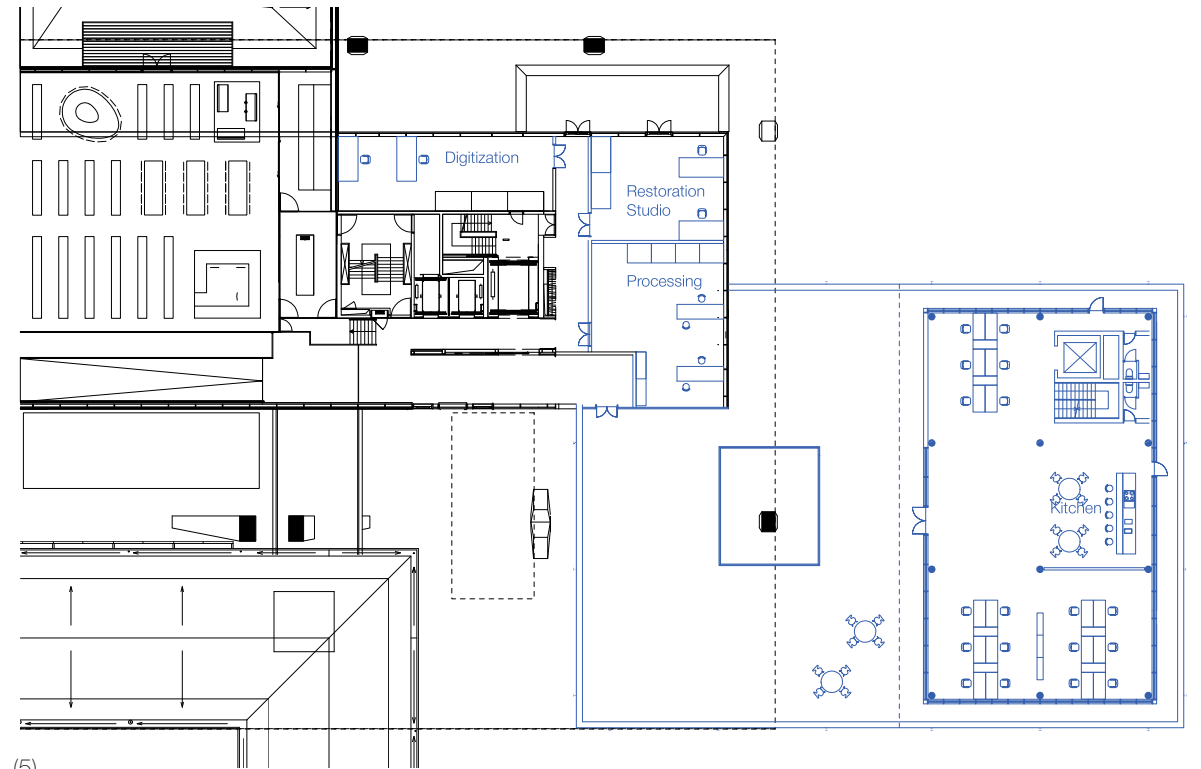


- (1) Previous Beel's facade
 (2) After opening up more facade
 (3) Ground floor

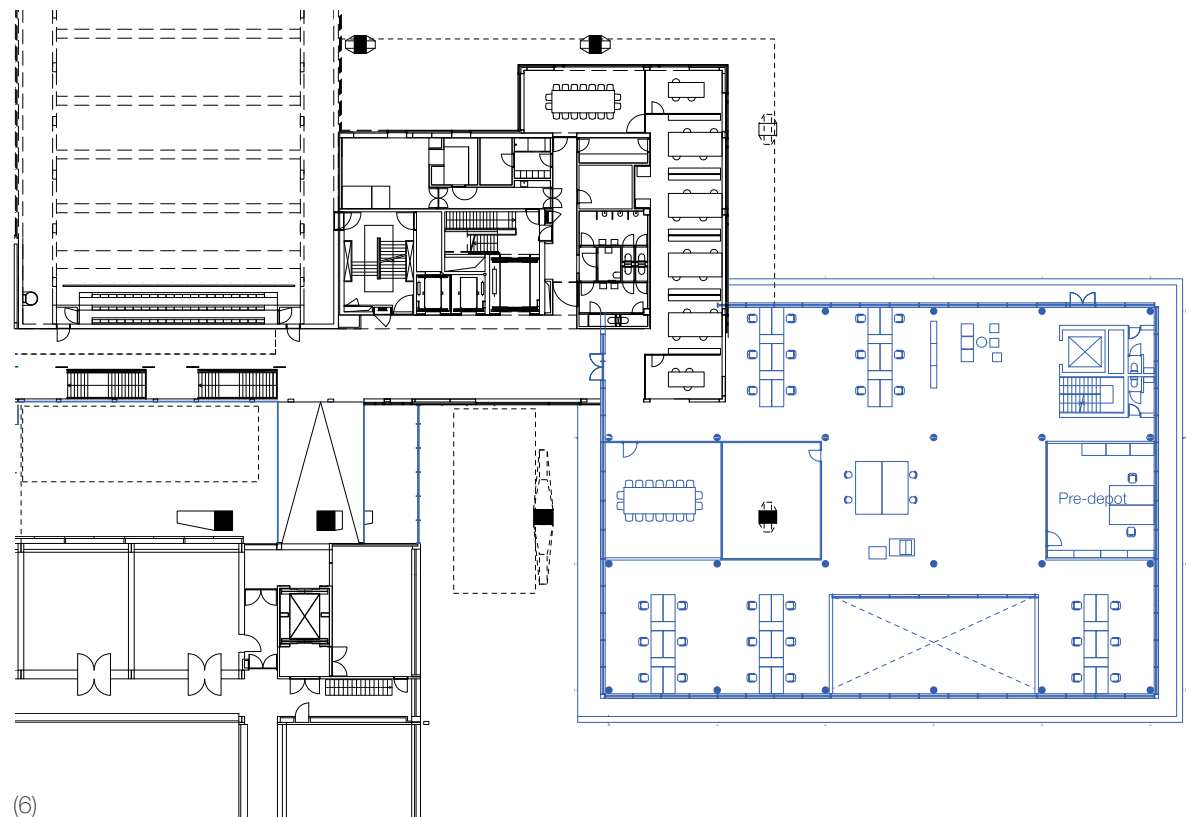


(4)

The Beel's column is also given a place by the opening of office floor. More natural lighting is also brought into the deep plan.



(5)



(6)

- (4) Airview
- (5) Level 1
- (6) Level 2

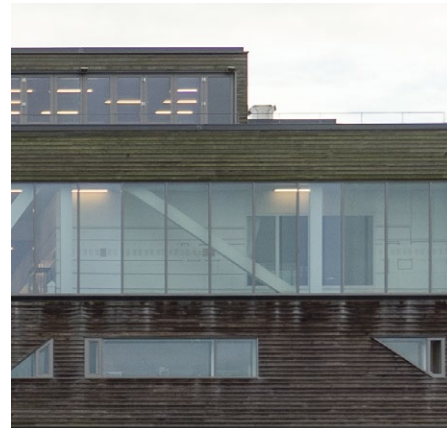
Material Study



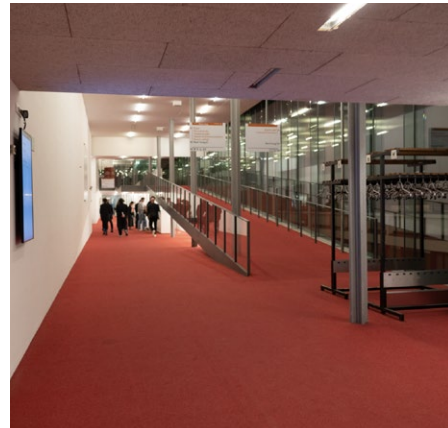
Concrete (painted)



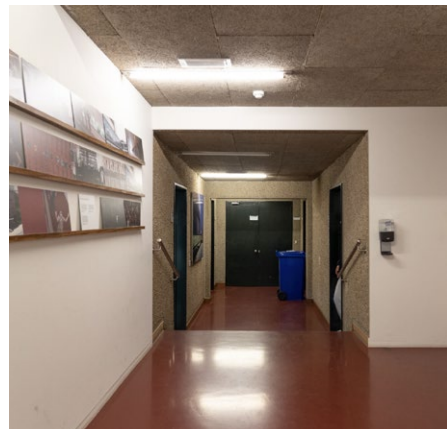
Cement Panel



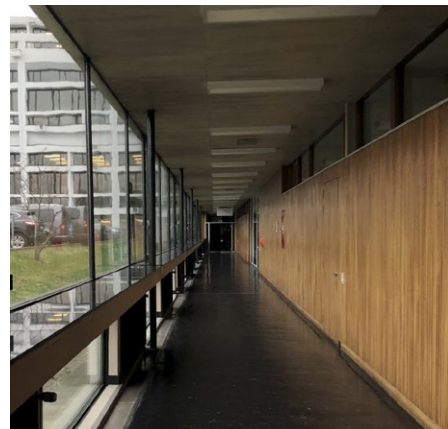
Wood



Red Carpet



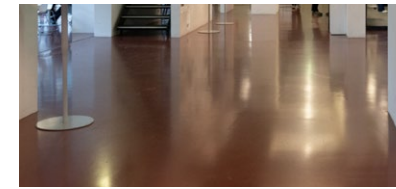
Resinous Flooring



Wooden Lamella

(7)

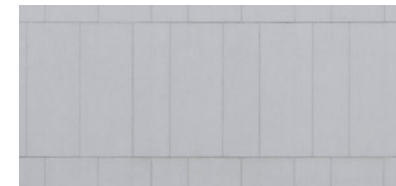
(7) Existing materials
 (8) Corresponding new materials



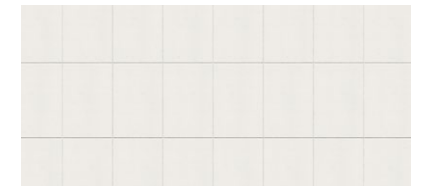
Resinous Flooring



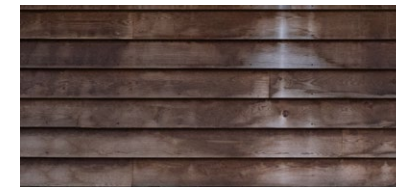
Resinous Flooring



Cement Panel



GRC Panel



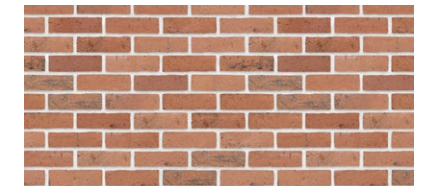
Wood Panel



Ramped Earth

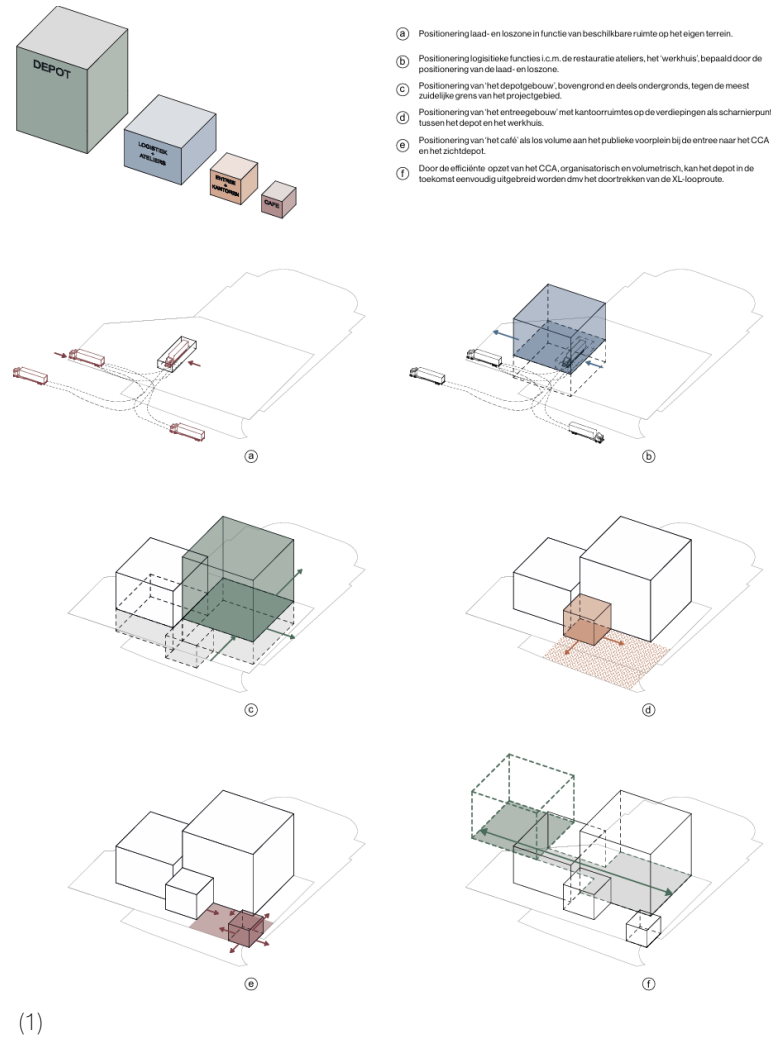


Red Carpet

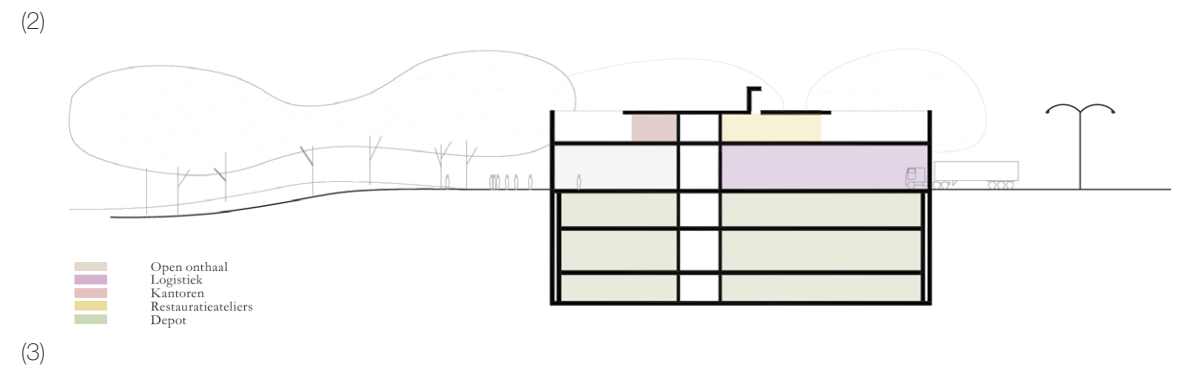
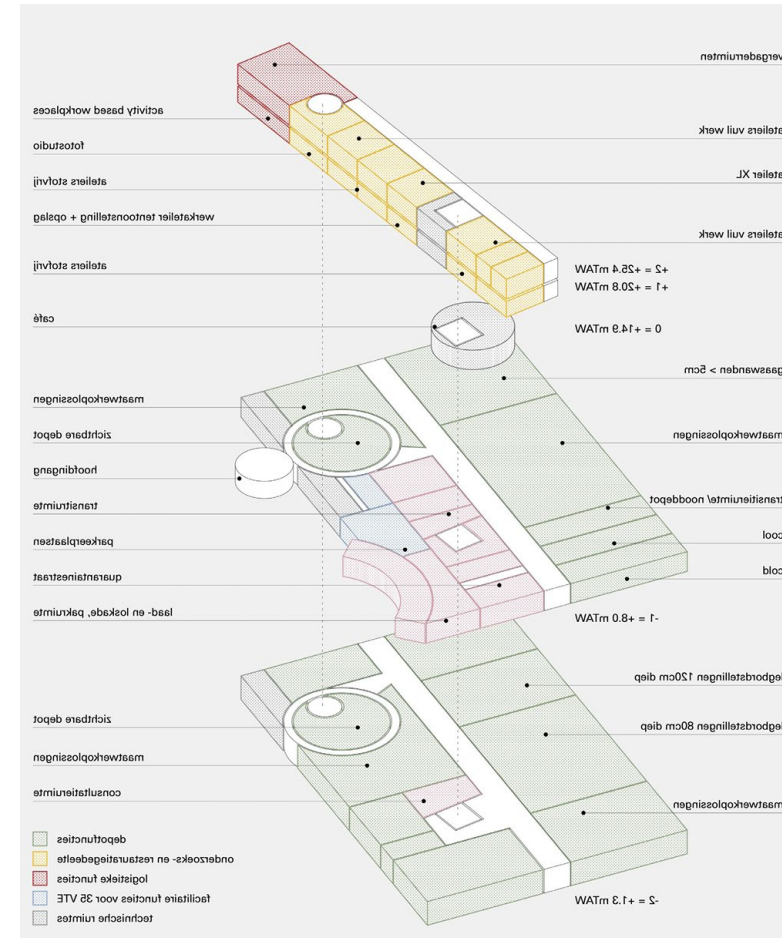


Red Brick

(8)

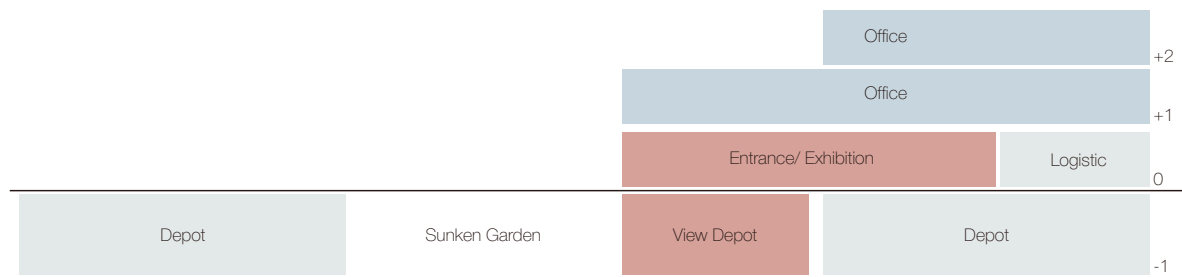


- a Positionering laad- en loszone in functie van beschikbare ruimte op het eigen terrein.
- b Positionering logistieke functies (i.c.m. de restauratie ateliers, het 'werkhuus', bepaald door de positionering van de laad- en loszone.
- c Positionering van 'het depotgebouw', bovengrond en deels ondergronds, tegen de meest zuidelijke grens van het projectgebied.
- d Positionering van 'het entreegebouw' met kantoorruimtes op de verdiepingen als scharnierpunt tussen het depot en het werkhuus.
- e Positionering van 'het cafe' als los volume aan het publieke voorplein bij de entree naar het CCA en het zchildepot.
- f Door de efficiënte opzet van het CCA, organisatorisch en volumetrisch, kan het depot in de toekomst eenvoudig uitgebreid worden om het doorbreken van de XL-looproute.



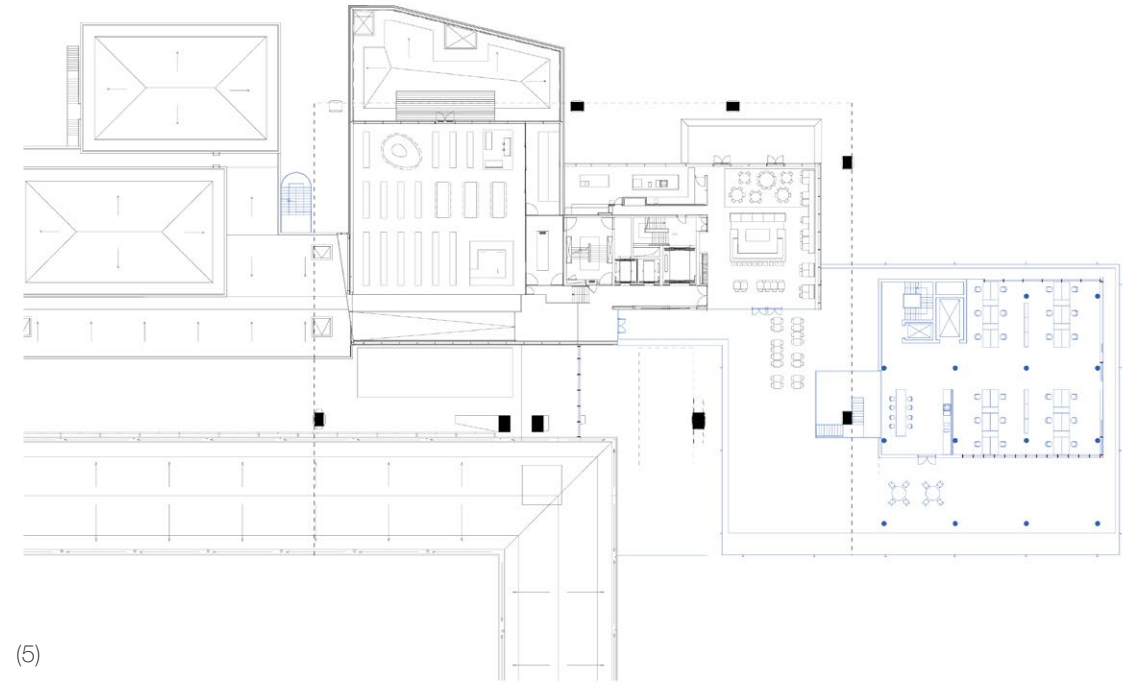
Studying the competition proposals for the CCA Archive near deSingel, I noticed that the spatial separation between the public areas and the research/storage functions is very clear. Reflecting on my own floor plans, I realized that the office program is scattered across both Beel's existing section and the new volume over two floors. I feel that the connection between these spaces could be made more efficient.

- (1) Design proposal by Office Winhov
- (2) Design proposal by Boltshauser Architekten & Bovenbouw Architectuur
- (3) Design proposal by Barozzi Veiga & Tap Architects

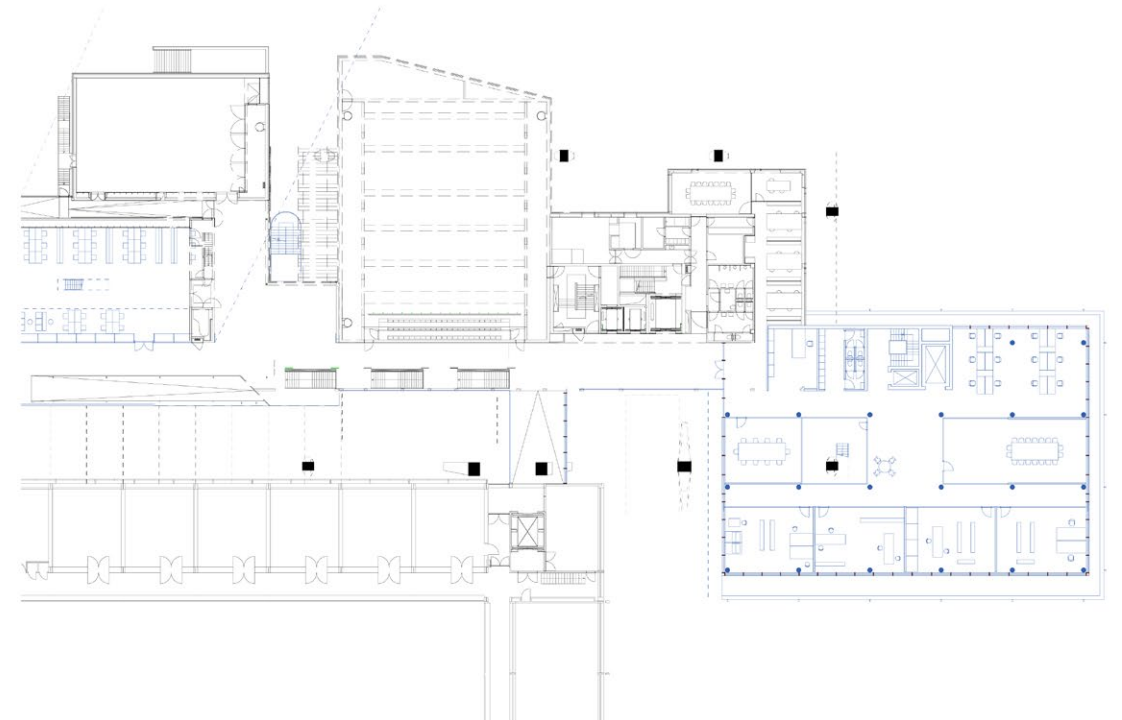


(4)

The restaurant on the second floor is retained but reduced in size to create a direct route from the interior to the exterior for the public. As a result, the new rooftop becomes accessible to everyone, rather than being limited to restaurant customers. This approach also allows visitors to catch a glimpse into the archive offices and share the same greenery on the roof.



(5)



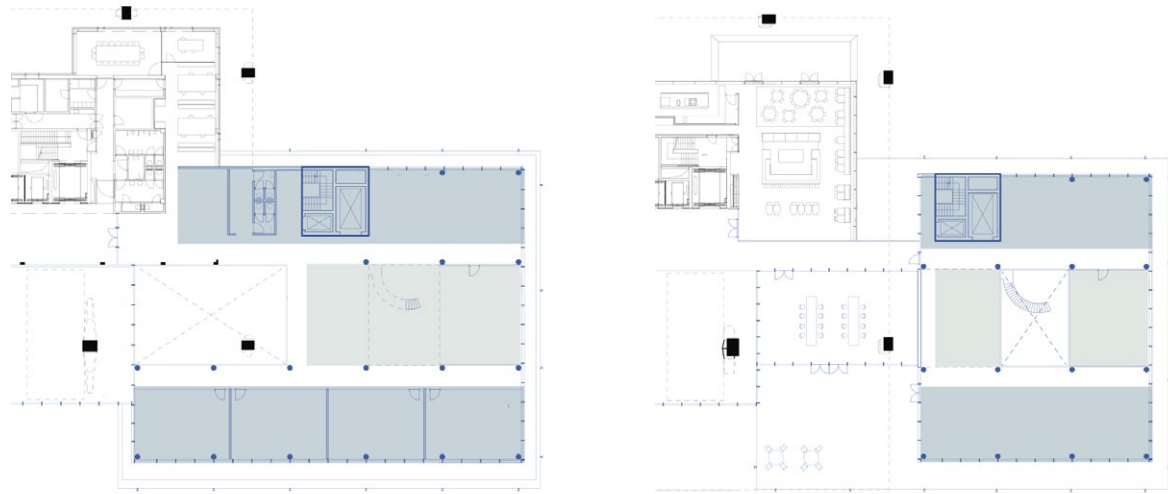
(6)

(4) New program distribution

(5) Level 2 floor plan

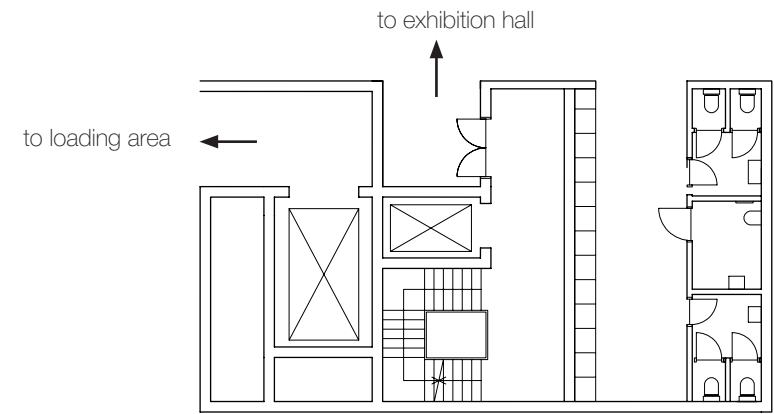
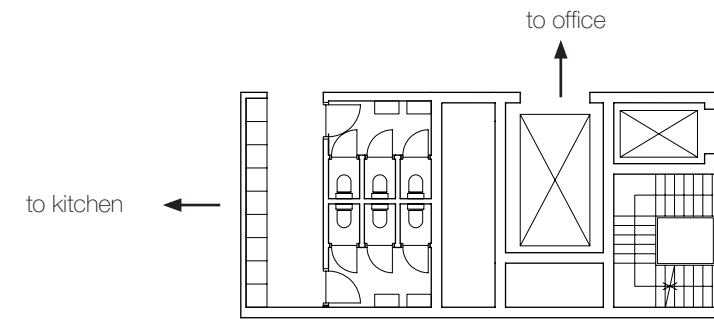
(6) Level 1 floor plan

Office Layout



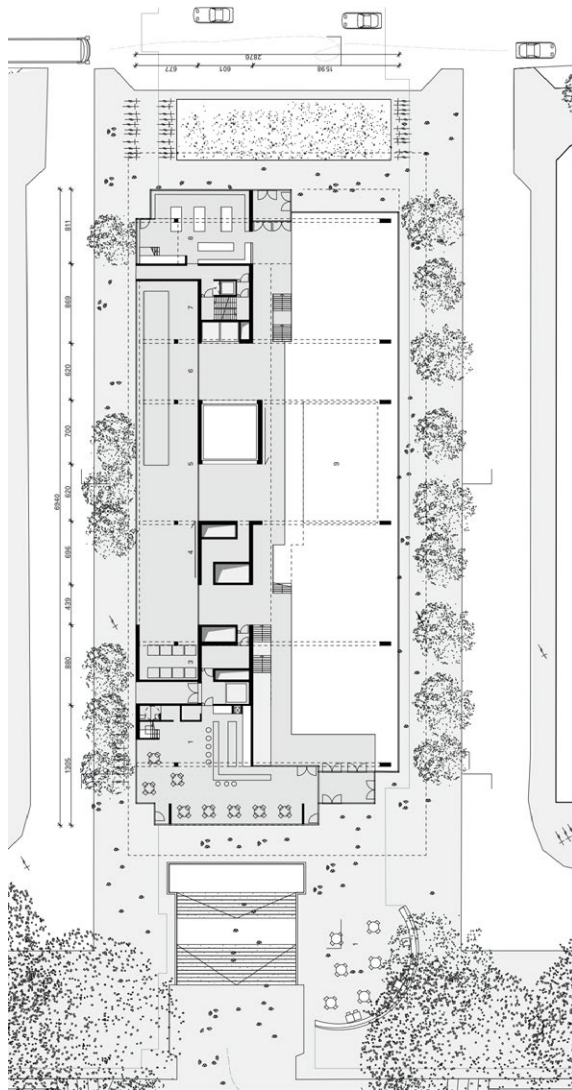
(7)

By aligning with the structural axis, the new building's interior space naturally integrates with the original design. The office interior is divided into three simple zones, also connected by a corridor. Office spaces on both sides flank a flexible central working area.

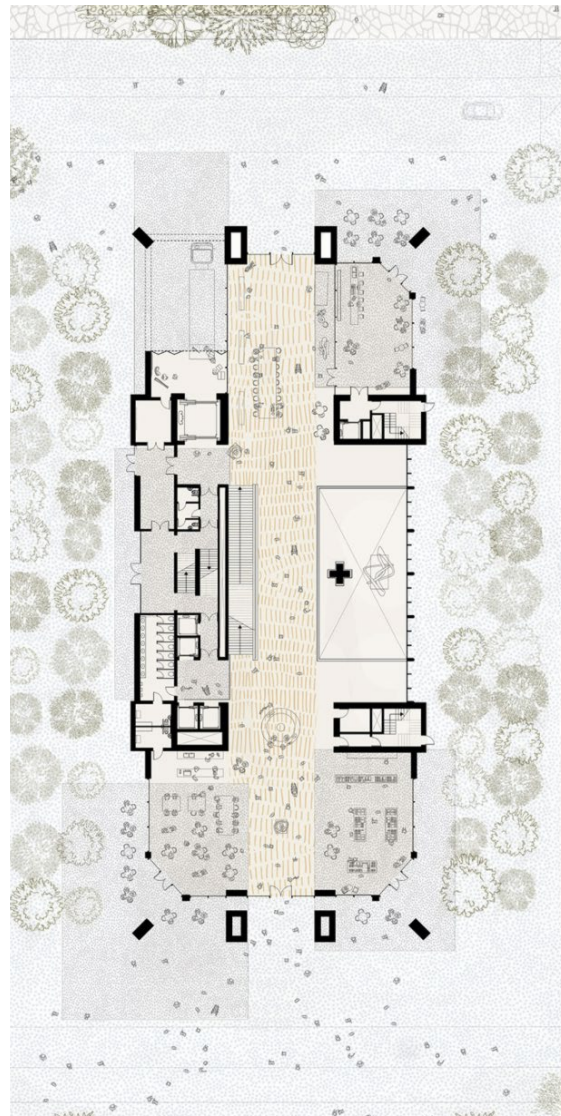


(8)

(7) Office Layout Diagram
 (8) Finding optimal solution for circulation



(7)



(8)



(9)

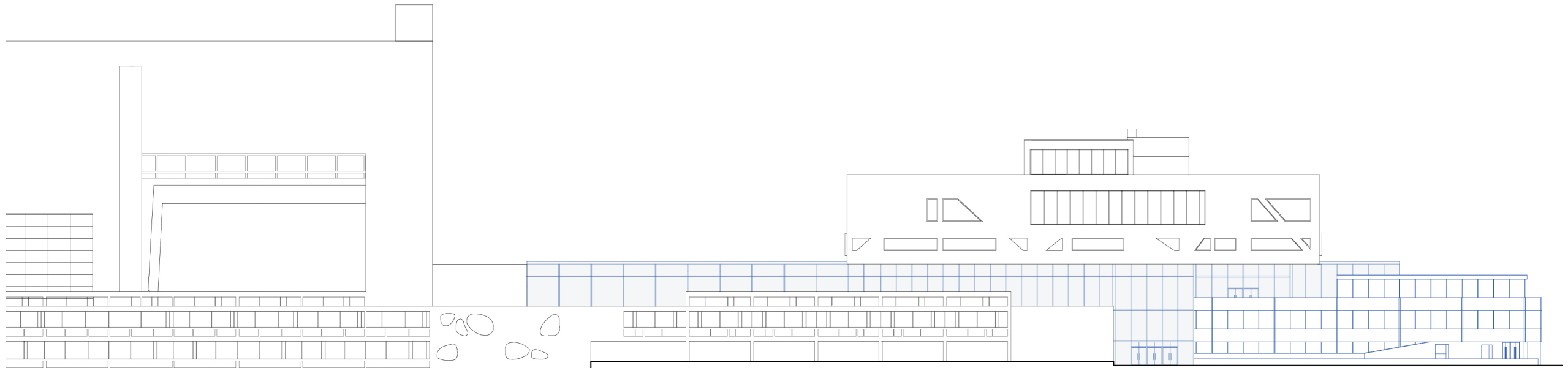
Common features learning from the floor plans for MHKA design competition.

The sunken area can create an impressive spatial effect when designed at a generous scale. The viewing depot on the underground level should become a more prominent feature in my design, serving as a center for public engagement. It forms part of the sunken garden that extends into the building.

(7) Floor 1 (Marie-José Van Hee 2024)

(8) Ground Floor (Studio Nauta 2024)

(9) Section through exhibition hall



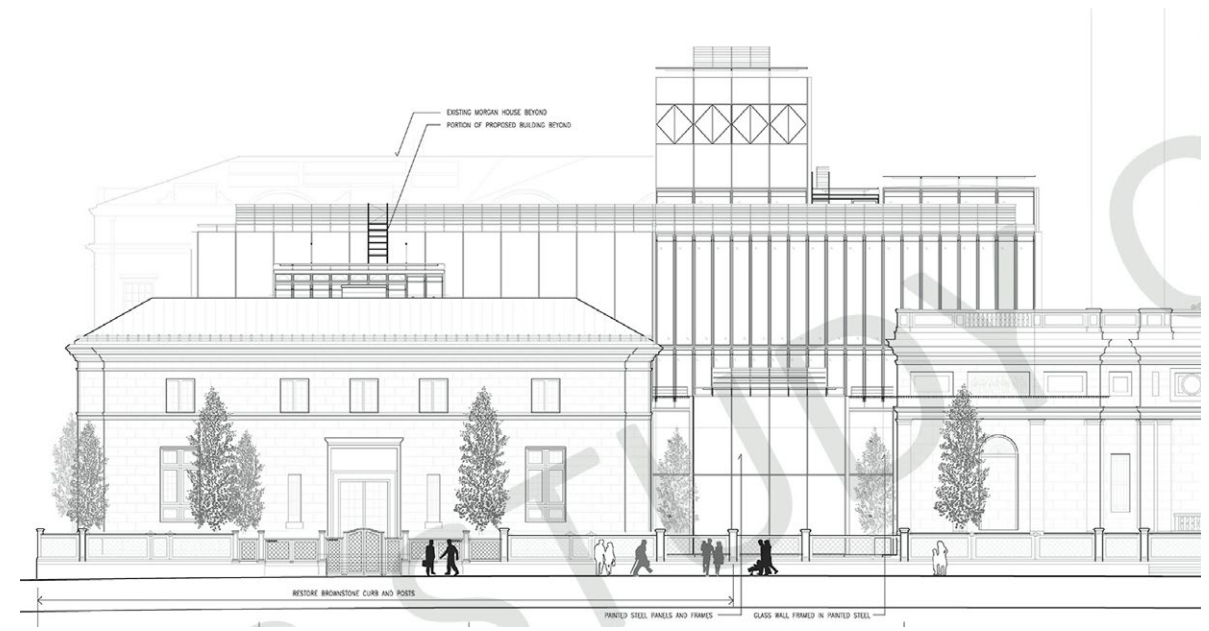
(1)

Feed back from Daniel

"Rather than merely attempting to unify the three buildings from different periods through a consistent façade expression, the design should be approached from a spatial perspective. The newly constructed glass atrium within the complex establishes a strong horizontal axis, encompassing key public spaces — so why not extend the glass curtain wall in the same direction, continuing it into the new building? At the same time, this structural approach more logically encloses all the columns within the interior.



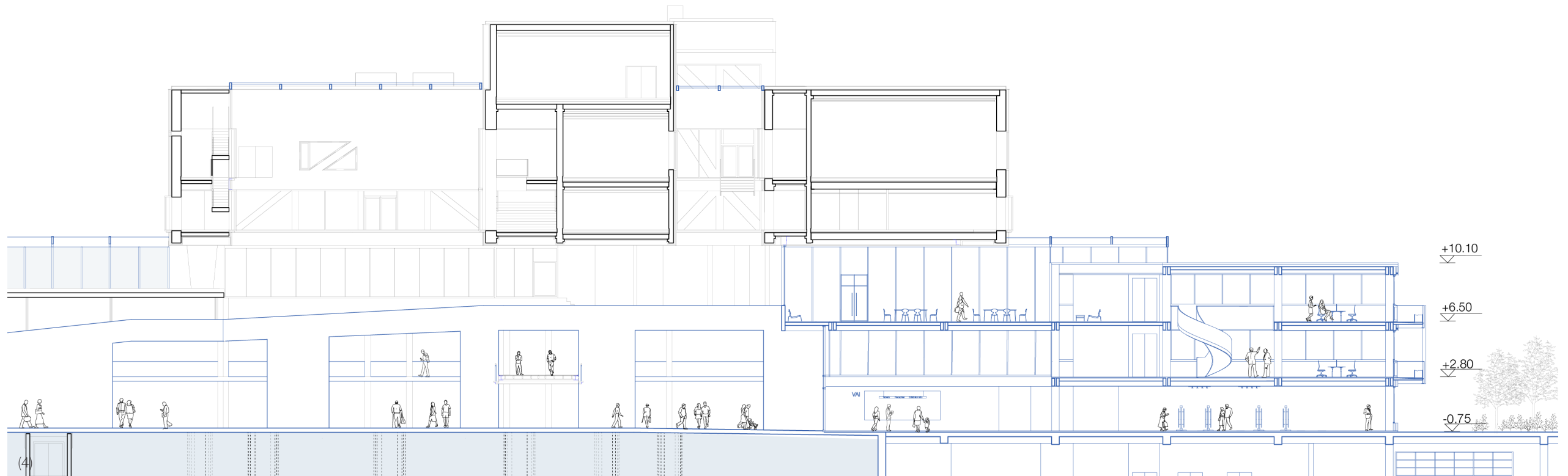
(2)



(3)

Renovation and expansion of the Morgan Library/ RPBW

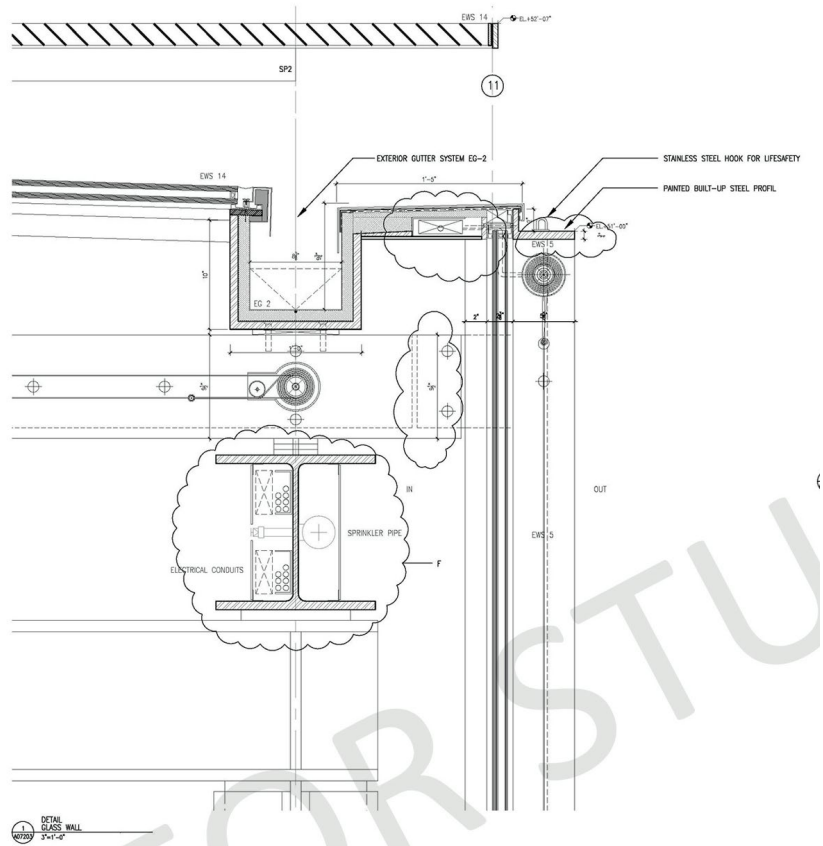
- (1) North Elevation
- (2) Glass atrium
- (3) South Elevation (RPBW 2004)



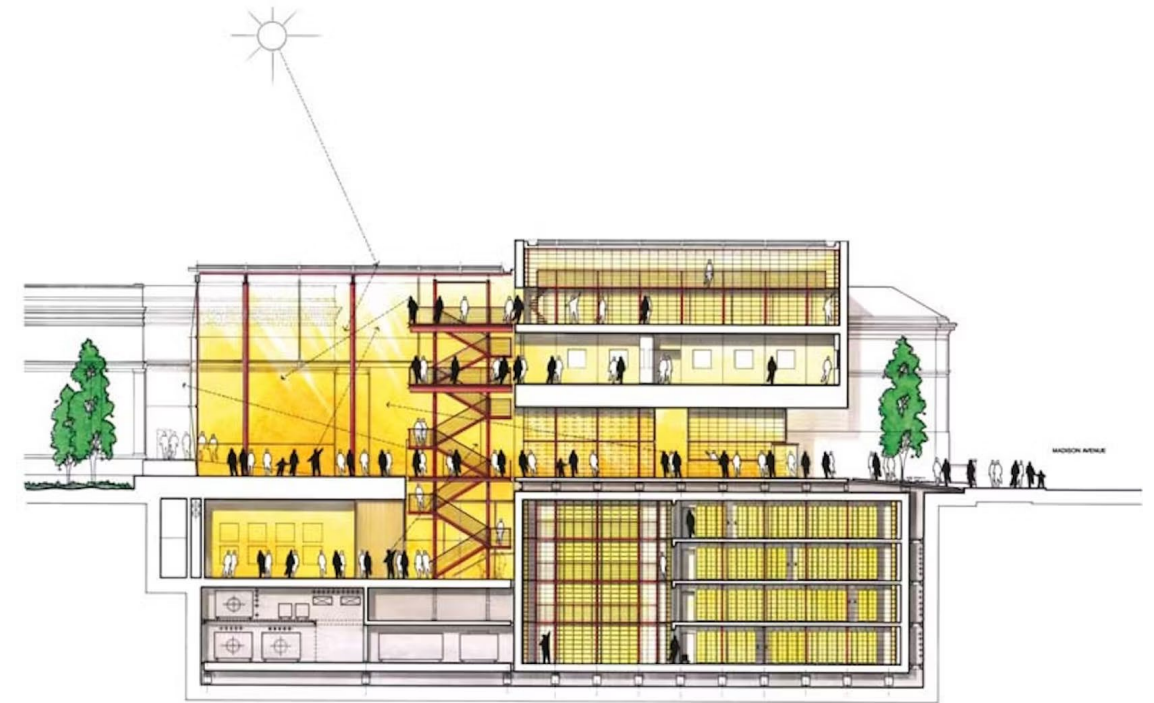
The double high space continues all the way through the atrium and the entrance area of the archive building as a spatial element that connects them all.

For the interior of the glass atrium, the structural concrete columns of Beel's extension are retained and revealed, demonstrating the coexistence of old and new. The original wood grille walls were replaced with lighter white wood grain panels, creating a lighter and united look with the courtyard wings.

(4) Long section through central passage



(5)



(6)

-Ventilation

Openable window at the top creates a vertical chimney effect, driving hot air up and out. The atrium itself is a ventilating and regulating core, which can be flexibly managed according to the needs of different functional spaces.

Through the combined effect of ventilation and shading, the reliance on cooling equipment is minimized, reflecting the concept of sustainable design.

-Lighting Control

A metal louver shading system is used on the top, combined with a glass roof to control the angle of sunlight entry through angle-adjustable louvers. Fabric sunshade curtains are used in some interior areas to prevent glare and localized overheating.

Utilizes light guiding and filtering strategies to allow light to enter the interior space in a soft, controlled manner

-Thermal Insulation

The curtain wall is made of high-performance insulating Low-E glass, which effectively reduces heat transfer. The atrium constitutes a thermal buffer, forming a protective layer between the internal "skins" of the building.

(5) Glass atrium detail (RPBW 2004)

(6) Cross section (RPBW 2004)

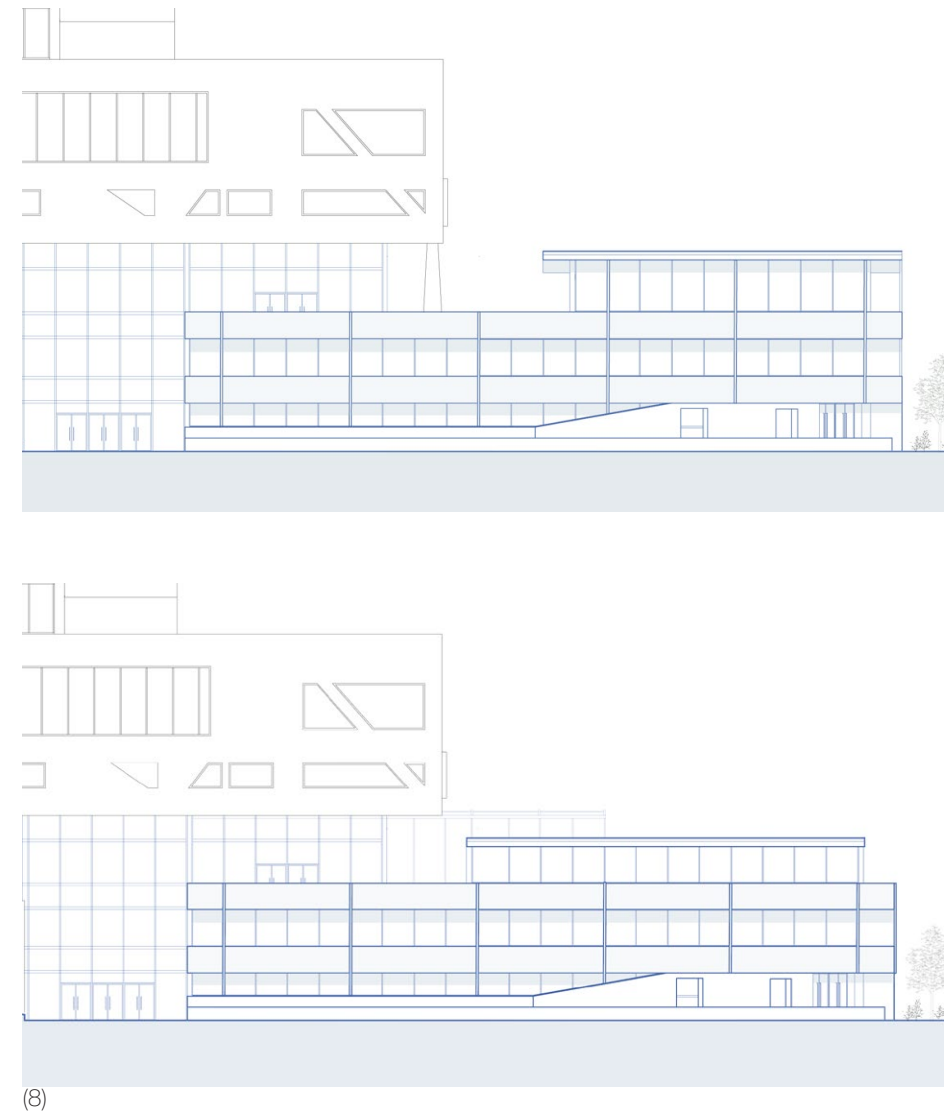
Following the Rhythem



(7)

Stynen's facade appearance has a strong rhythm following a 7.2m spacing of column. On top of this, the horizontally oriented long windows further accentuate the flattened characteristic of the architecture. Additionally, variations in the rhythm of the window openings create a third level of complexity. As the deep-set windows are recessed into the massing of the wall, they add a sense of three-dimensional depth. I follow the rhythmic structure established by the column grid and the horizontal language, but the window divisions are more concise and easier to read.

(7) Comparing facades
 (8) Before and after atrium extending to archive building

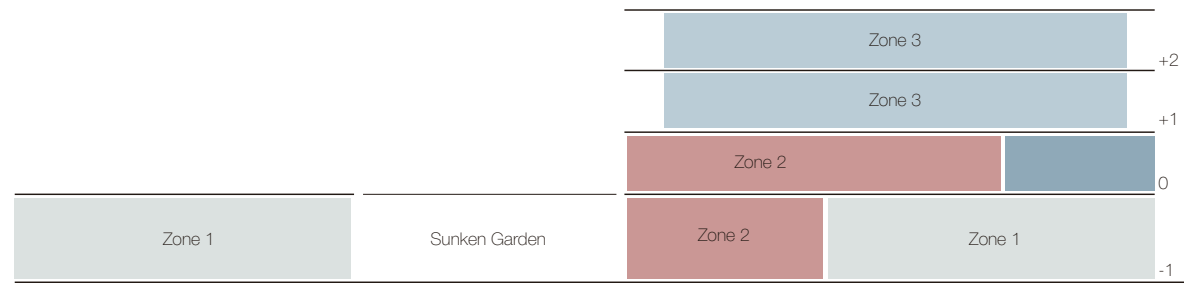


(8)

How to connect the top floor office to the atrium simply and logically, with functional connectivity as the main focus.

Introduce a rhythmic height difference between the atrium glass facade and the office to create a sense of hierarchy rather than absolute unity.

Spatial transition and buffer: Between the bottom floor of the atrium and the top office, a transition layer or half-layer platform can be set up, such as a platform in the building or a mezzanine rest area, to provide visual and functional buffers.



(1)

ZONE 1- Depot
Temperature $18^{\circ}\text{C}\pm 2^{\circ}\text{C}$
Relative humidity $50\%\pm 5\%$

Highly sealed building structure is used to reduce external climate impact.
Independent HVAC system is used to ensure precise control.

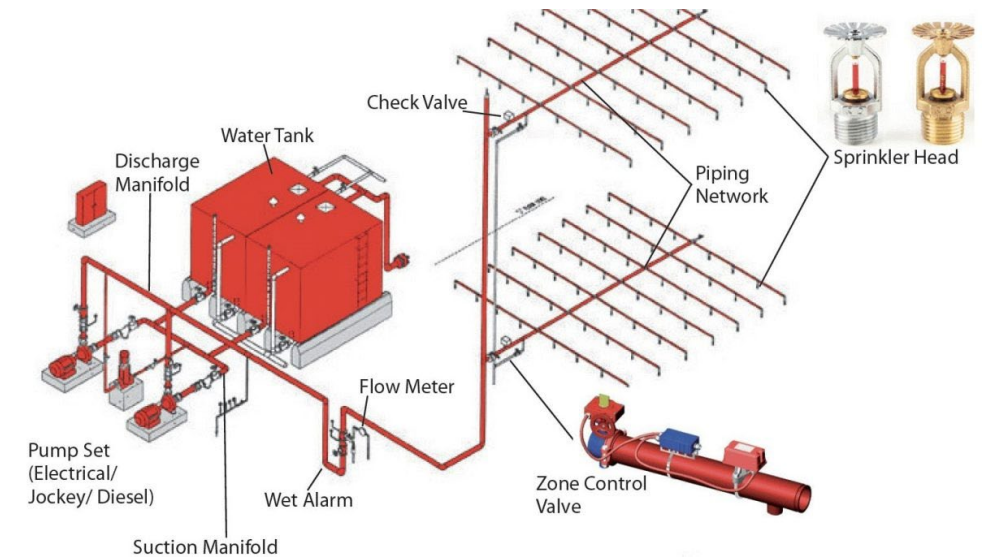
ZONE 2- Exhibition and view depot
Temperature $22^{\circ}\text{C}\pm 2^{\circ}\text{C}$
Relative humidity 35%-70% dynamic occupancy

Glass partitions are used to achieve visual display while maintaining environmental control.
Visiting passages are set up to ensure a safe distance between visitors and collections.

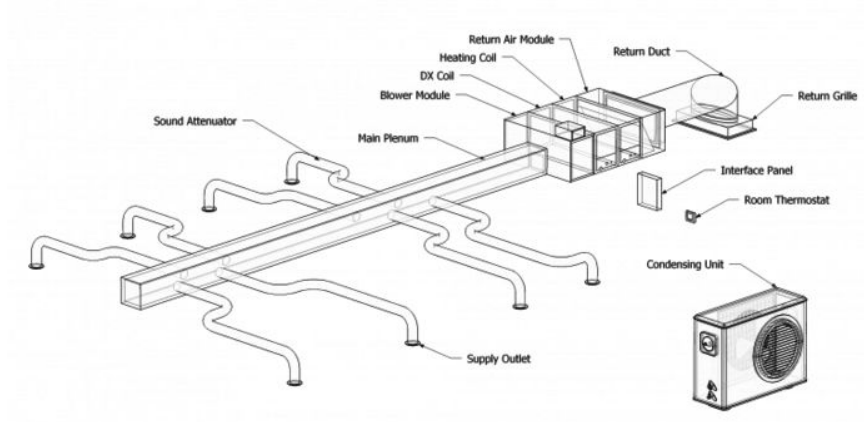
ZONE 3- Office and reading room
Temperature $22^{\circ}\text{C}\pm 2^{\circ}\text{C}$
Relative humidity 35%-70%

Improve employee comfort by using natural ventilation and lighting.

- (1) Climate zones division
- (2) Sprinkler System Typical Arrangement Drawing (Zod Security)
- (3) Air handling unit for office

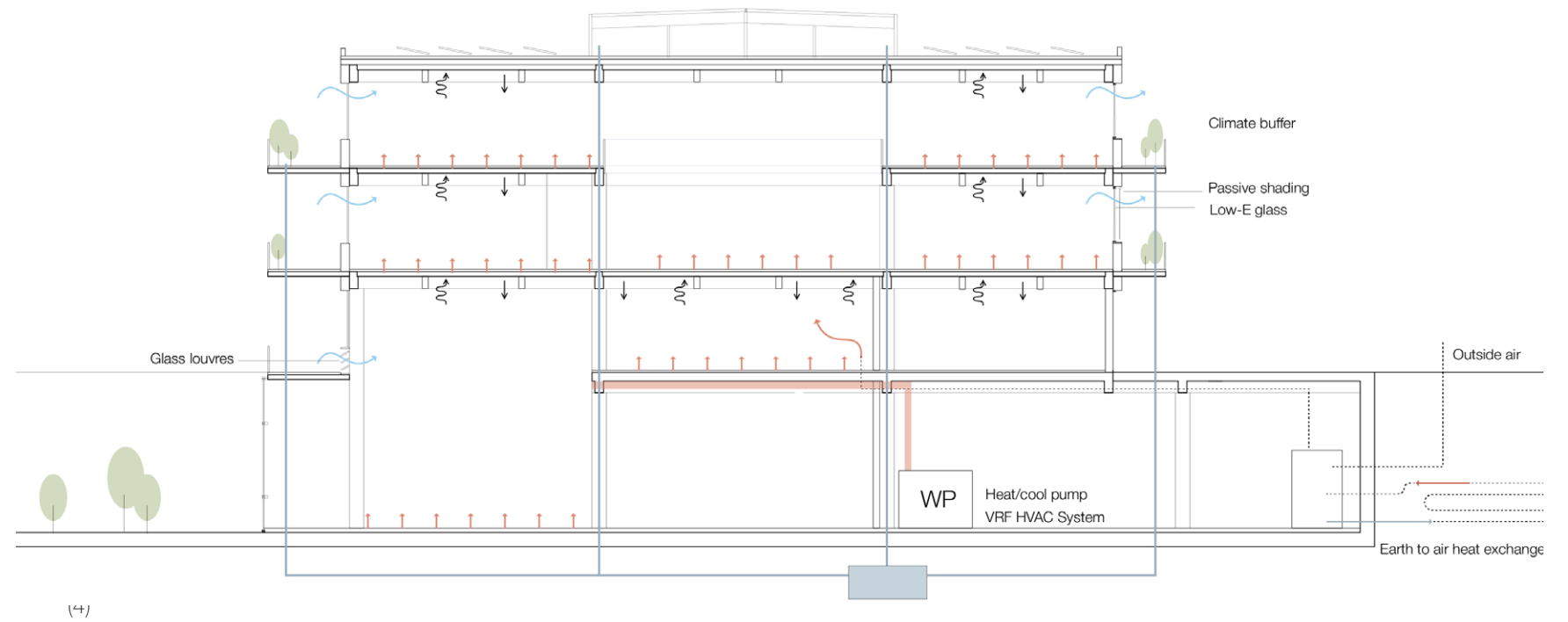


(2)



(3)

For a small to medium size office area, a central pipe for air handling will be desirable. It is usually arranged following the office hallway



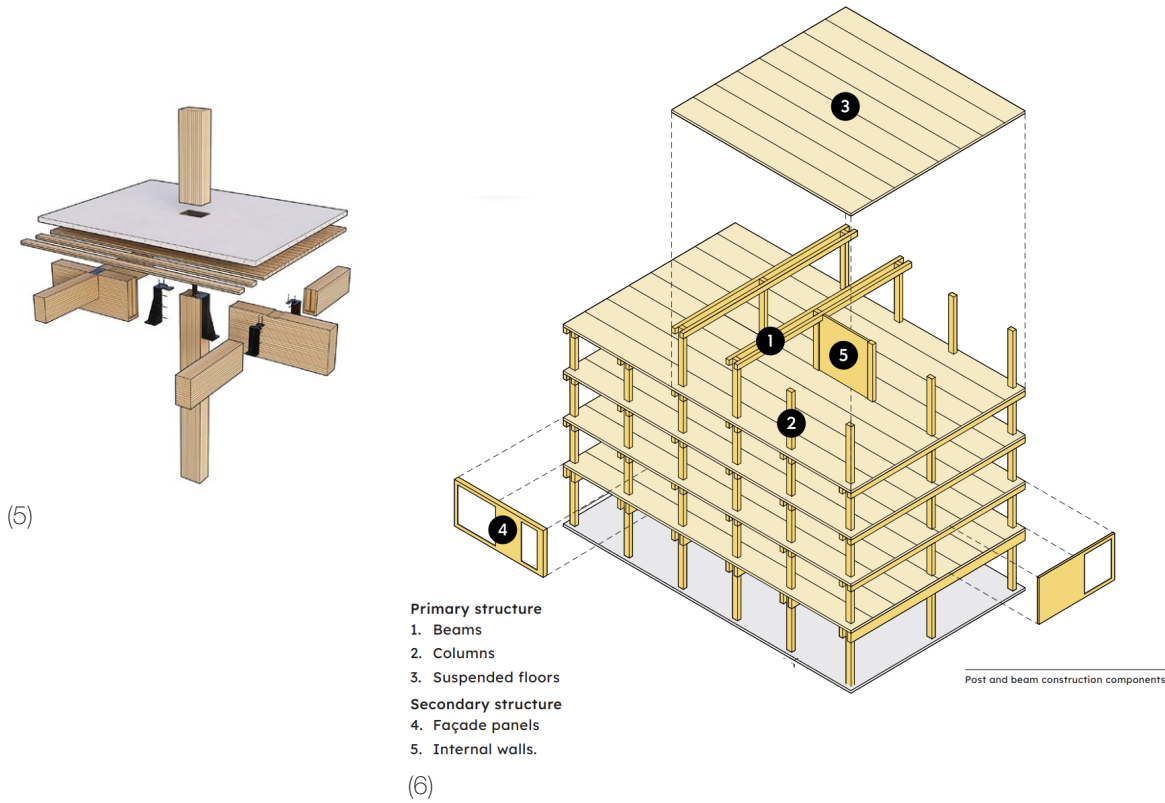
Basement Depot
 -Ground source heat pump
 -Independent temperature and humidity control

Exhibition Hall
 -VRF
 -Fresh air system (with heat recovery)

Office Floors
 -VRF
 -Heat Recovery Ventilation System (HRV)

Other
 -Rooftop solar photovoltaic system
 -Rainwater recovery
 -Underground heat exchange
 -Low E glass

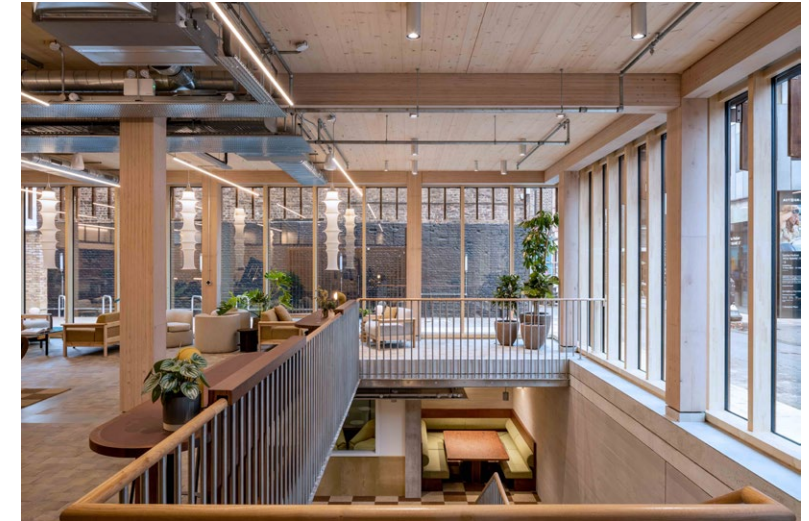
(4) Climate control diagram



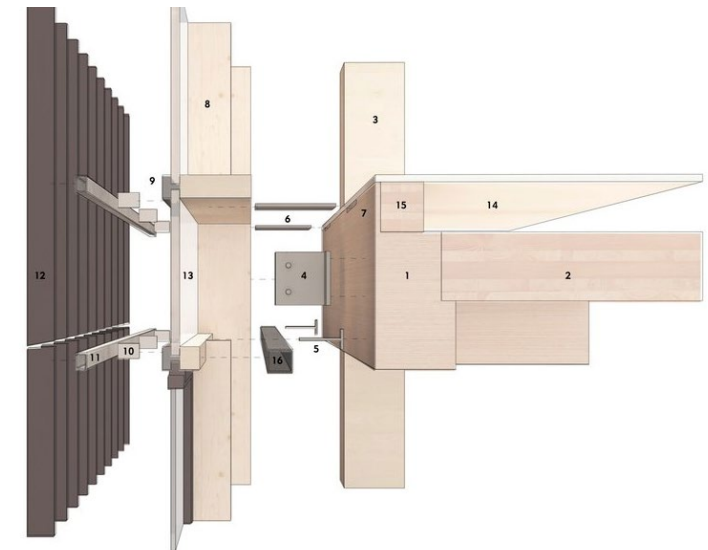
Ways to reduce beam depth:

- Use two shallow beams at each column line rather than a single, deep beam
- Secondary beams break up long spans, allowing thinner, lighter CLT panels to be used.
- Integrate CLT into the Beam System
 Use composite action between CLT panels and beams: CLT + beam connected via screws or adhesive to act as one structural unit.
- Use Stronger Materials
 Engineered wood (LVL/PSL) have higher strength-to-size ratios than glulam.

- (5) Secondary beam structure
- (6) Post and beam construction elements (Waugh Thistleton Architects)
- (7) Interior view (Waugh Thistleton Architects)
- (8) Structure exploded diagram (Waugh Thistleton Architects)



(7)



(8)

The Black & White Building / Waugh Thistleton Architects
 A hybrid structure comprising a beech LVL frame with CLT slabs and core has been designed to create vast open workspaces. With no structural internal partition walls and the MEP carefully coordinated to minimise visual intrusion, the layout can be easily adapted as future demands change.

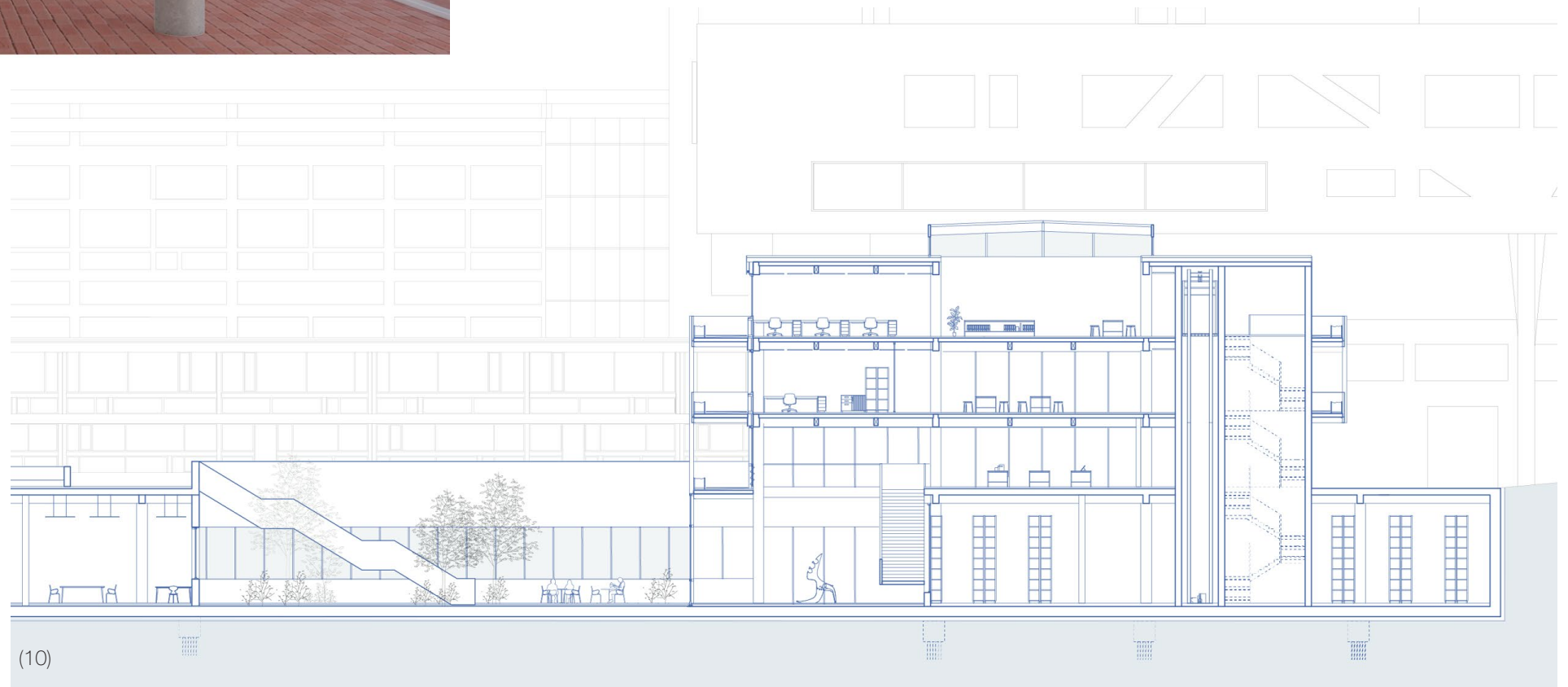
View Depot



(9)

The view depot can be used for exhibiting large scale architectural objects, and offer a glimpse into the depot area through windows that also serve as model shelves. The manipulation and the bringing in and out of art objects becomes visible there.

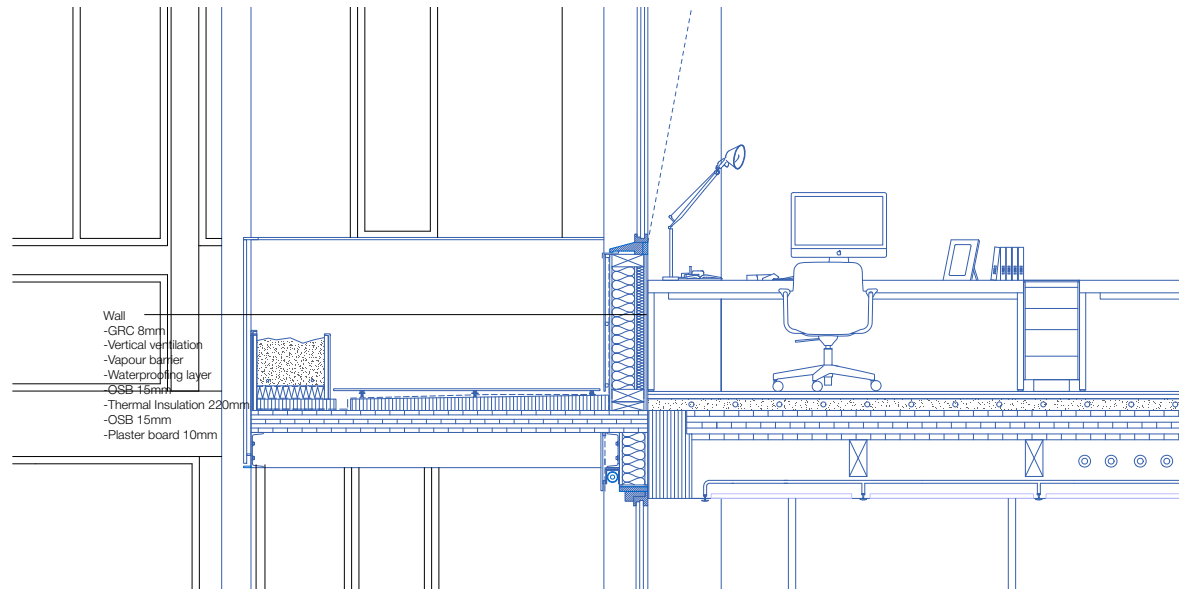
There is a direct visual relationship via a large glass to the outdoor garden. This oversized space gets a specific spatiality that reinforces the idea that this building is part of the sunken garden, part of the city.



(10)

(9) Render of the view depot

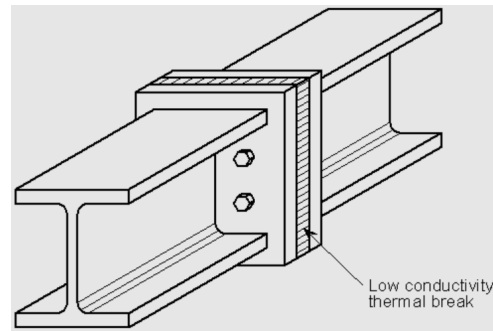
(10) Cross section through sunken garden



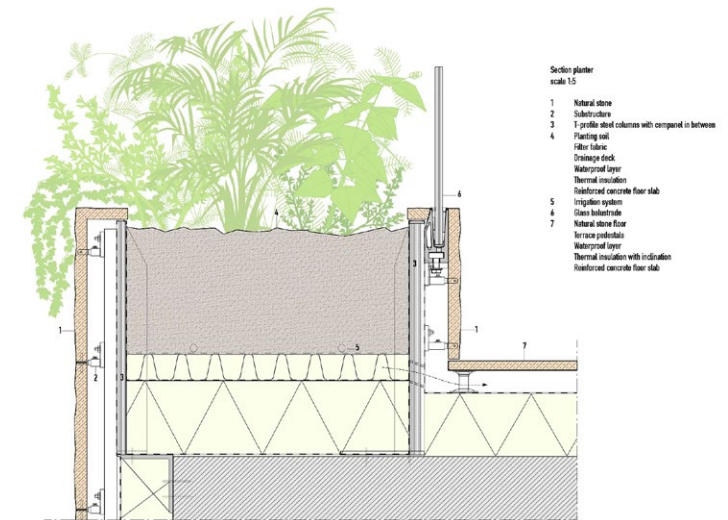
(1)

Feedback on detail
A thermal break between the steel profile and timber beam should be added. Under the balcony 1 meter long insulation also helps to prevent heat change.

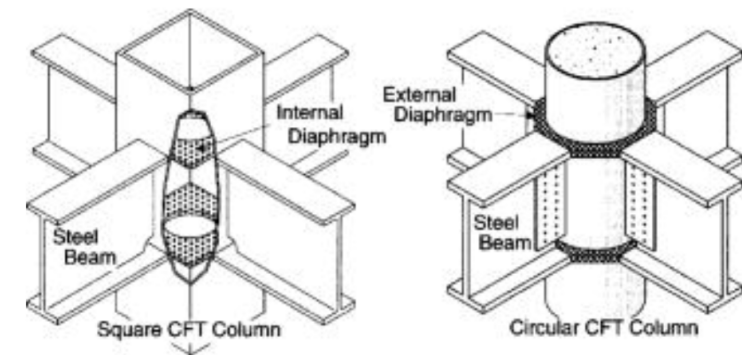
At the same time I was also wondering if current structure for the balcony is too complicated.



(2)

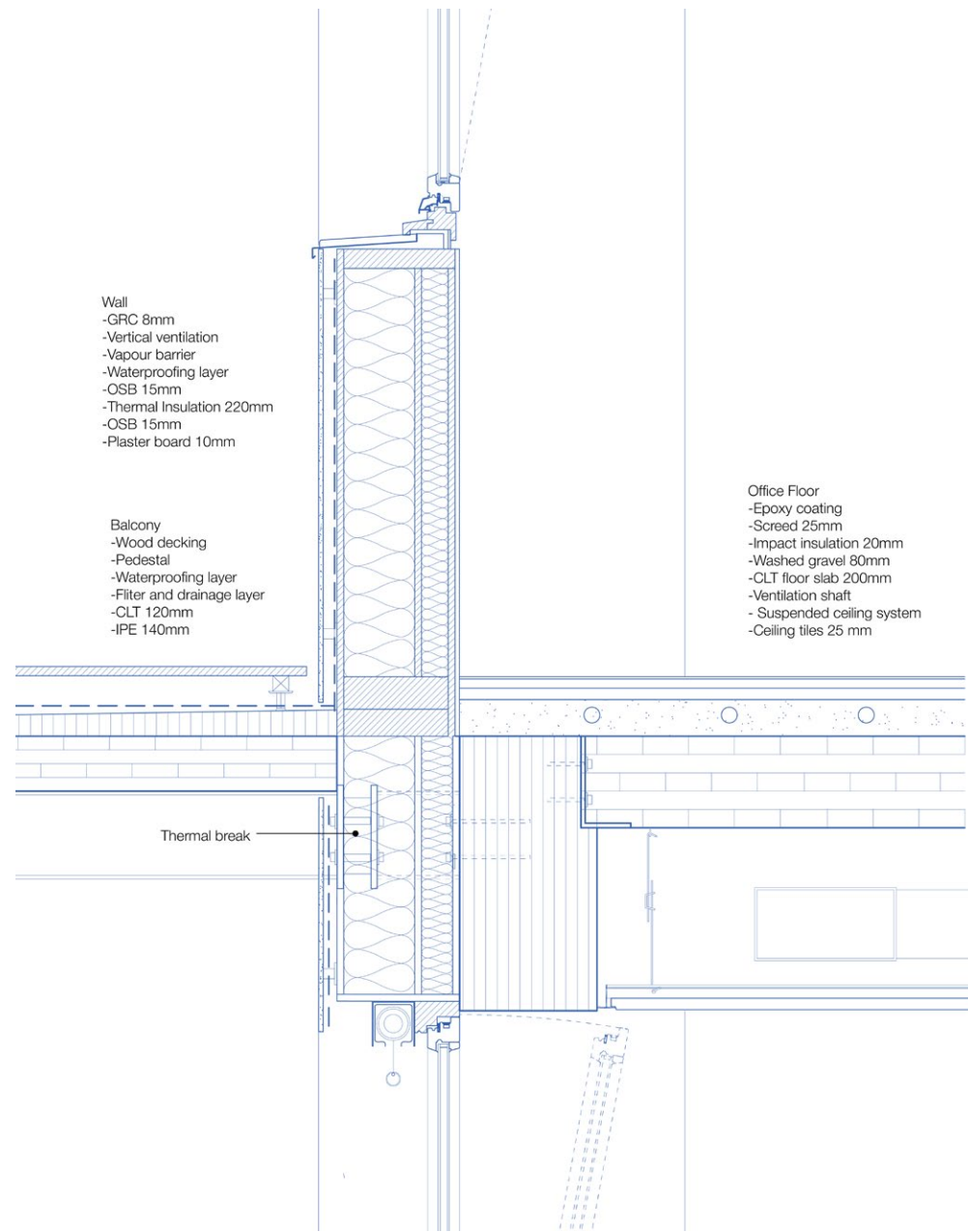


(3)



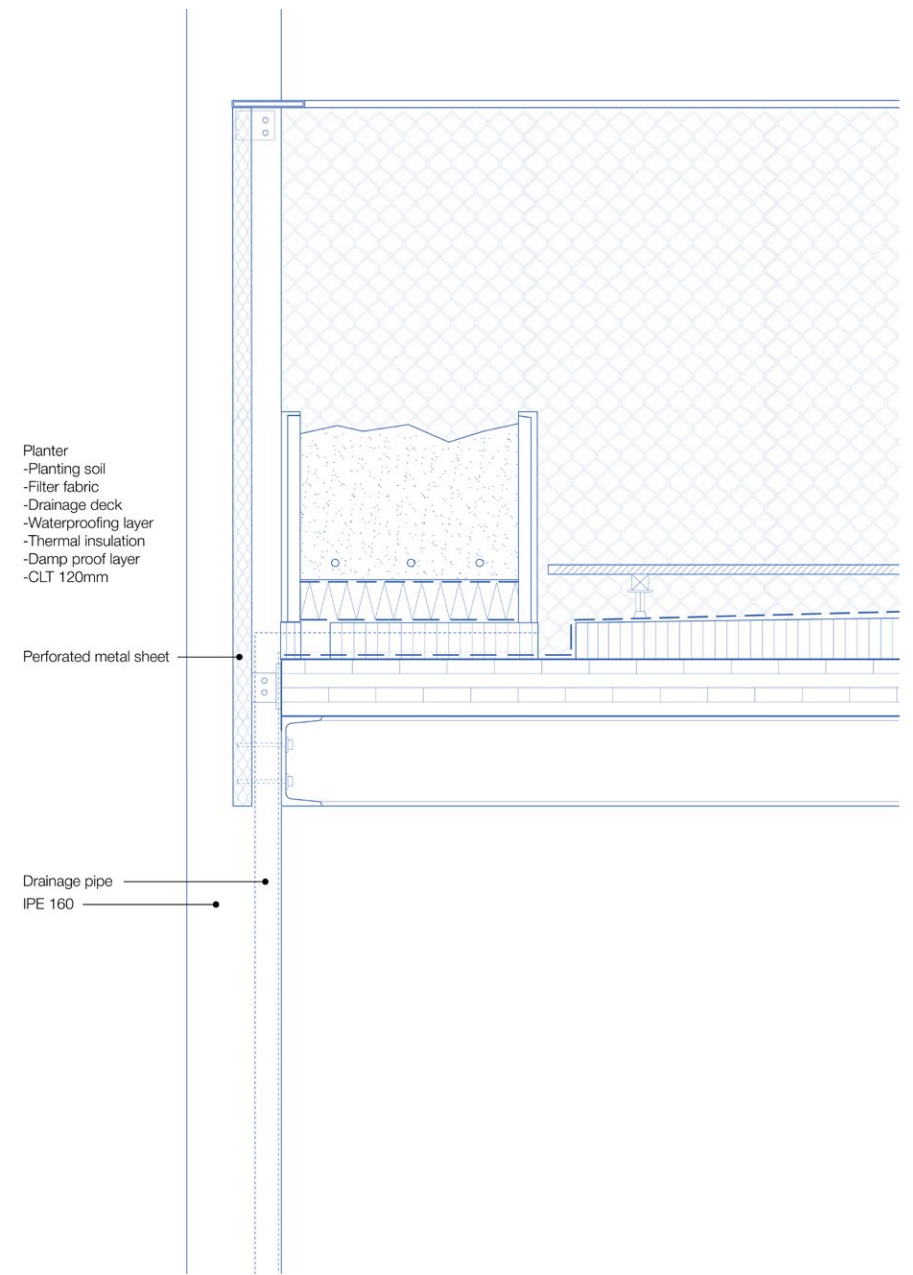
(4)

- (1) Facade Section Detail 1:50
- (2) Typical thermal break for steel structure
- (3) Plantation detail in Valley (MVRDV)
- (4) Connection between steel and round column

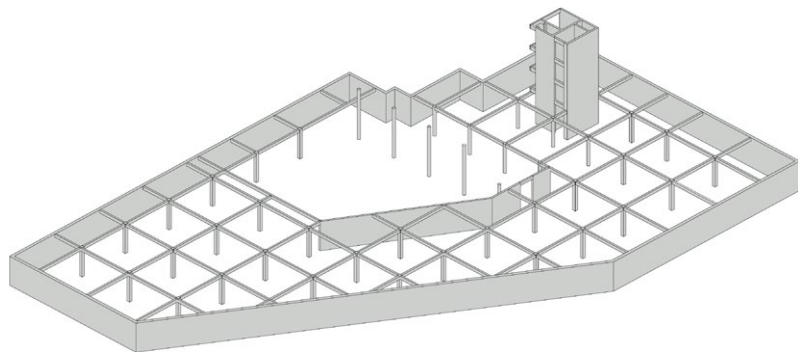


(5)

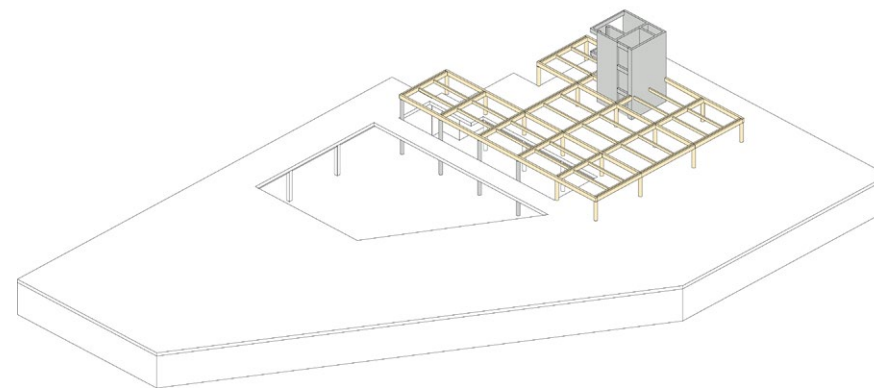
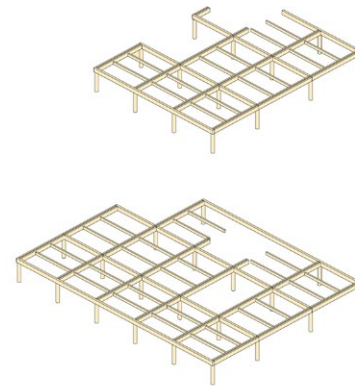
(5) Office Wall Detail 1:5
 (6) Balcony Detail 1:5



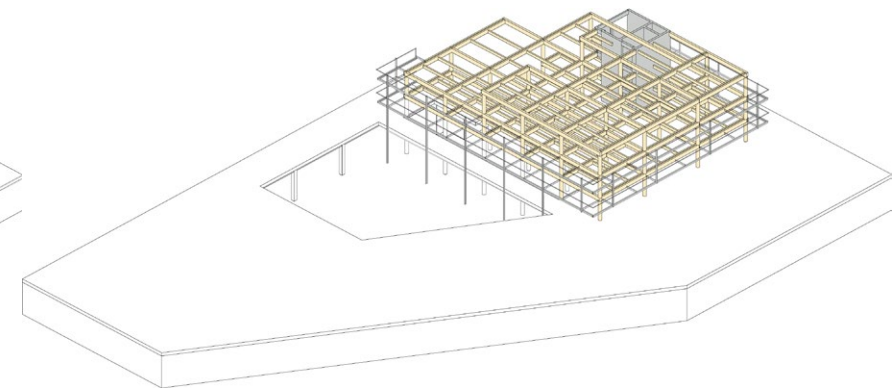
(6)



Concrete basement and core
(7)



Post and beam structure



Steel structure for balcony



(1)

As the first view into the new archive building, the exhibition space creates a spatial connection to the offices above and to sunken area through voids on different area.



(2)

This image is trying to show how the glass atrium is used on a daily basis. Commercial functions such as restaurants and bookstores can expand their activities into the internal street. Students from the music school, employees and tourists wandering around freely in this space.

(1) Exhibition Render
(2) Atrium Render



An angle looking across the street toward the complex was chosen for this rendering. The addition of trees, trolleys and other elements emphasize the sense of integration of the buildings with the public life of the city.

(3) Render view from across street



(4)



(5)

(4) Atrium holding open concert
(5) Atrium holding book fair