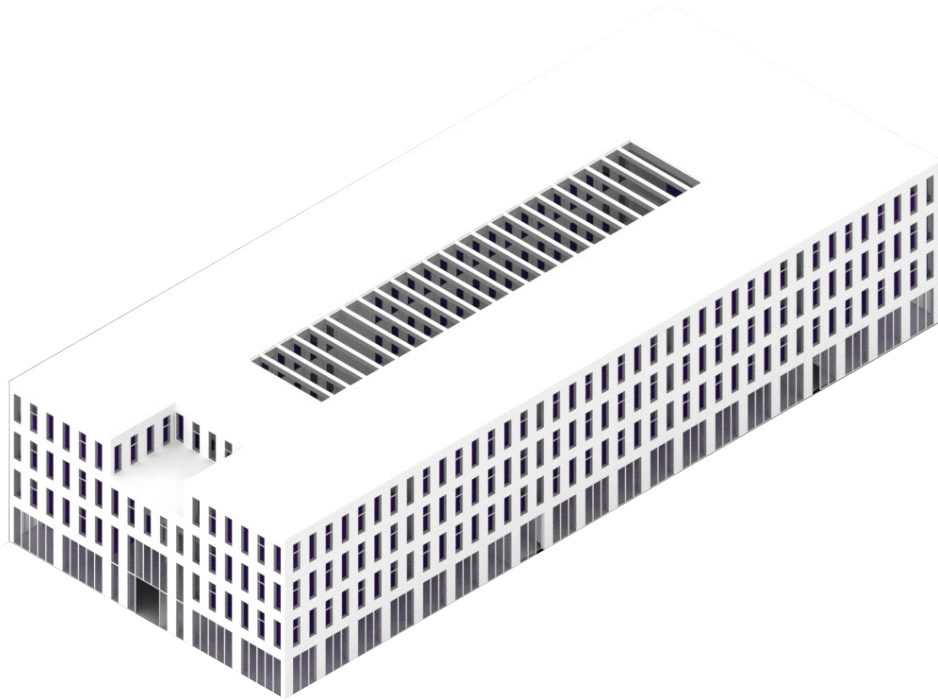


# Aedificum

- Or how i learned to stop worrying and love the box



# Abstract



**CHALMERS**  
UNIVERSITY OF TECHNOLOGY

AEDIFICUM 2022

MISKA LAINE

CHALMERS UNIVERSITY OF TECHNOLOGY  
DEPARTMENT OF ARCHITECTURE AND CIVIL ENGINEERING  
MASTER'S PROGRAMME OF ARCHITECTURE AND URBAN DESIGN

SUPERVISOR: BJÖRN GROSS  
EXAMINER: MIKAEL EKEGREN

Urbanisation is one of the growing trends of the 21st century, and seems to be picking up speed again post-pandemic. It has its downsides, with the death of the countryside cited as one of the worst case scenarios, but it comes with significant upsides too. Dense population centers decrease travel distances which decreases fuel consumption. Even with the advent of the affordable electric car upon us, the stock of vehicles on our roads is still decades away from being sustainable. The sustainable course of action seems to be embracing urbanisation, and seek solutions within the urban fabric.

To continue building our cities responsibly and sustainably, experts in planning the built environment are in growing demand. This expertise, while not limited to, is most often found in architects. Architects are needed to both maximize the benefits of urbanisation as well as to mitigate the negative impacts. In Finland employment rate of architects is 99% with a larger number set to retire in the coming years that are being graduated from the three active schools across the country. This highlights a necessity to increase education of new architects.

Turku is Finland's third largest university city (by number of students), but has so far no program for architecture. In fact only as recently as of 2019 has there been a technical science board as a collaboration between Turku University and Åbo Akademi. And there are plans to expand the technical science education by adding more programs. This makes the campus uniquely suitable for a new school of architecture.

This master thesis explores contemporality and the ideological and philosophical basis for building our environment. It examines current architecture education facilities, and other similar buildings and attempts to create a proposal for a building that offers the foundation for the future education of this complex subject. A building that houses all the necessary locales and inspires the future generation of Finland's architects.

Keywords: Metamodernism, education, minimalism, Finnish design, zeitgeist

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# Student background

Miska Laine

**Bachelor of architecture:**

Chalmers university of technology 2017-2020

**Master of architecture:**

Chalmers university of technology 2020-2022

**Master studios:**

Architecture and Urban space design

Nordic Architecture

The Hybrid Practice of Architecture:  
Uniting Arts, Crafts and Technology

Matter Space Structure 2

Matter Space Structure 3

## AIM

The aim is to design a building for a future architecture program in the city of Turku. The thesis examines the nature and needs of architectural education based on my own experience. It strives to create a building that not only fulfills the needs the program, but is respectful to and enriches its context. The result being a building that brings architecture closer to the citizens of Turku.

## METHOD

The method used is an iterative design process based on observations and information gathered on site and on the iterations themselves, in true metamodernist fashion. I will create and analyze many variations on the same themes to find which elements make a difference both in functionality and in the expression of the built space.

## THESIS QUESTION

How should a metamodernist school of architecture function and be constructed?

## DELIMITATIONS

In this thesis work I have not calculated the validity of the structure, but I have used table-values available in Swedish Trä, and overdimensioned the load bearing structures.

# Metamodernism

## Death of postmodernism

Kirby (2006) claims that postmodernism has been dead or dying for a while now. In the same text he coins the term “pseudo-modernism” as a pejorative term to define what he sees as a “vapid” culture where “A triteness, a shallowness dominates all” as the successor for postmodernism. I agree with his conclusions about the reasons the age of postmodernism should be considered over, but I have to say he paints a rather dystopic picture of our present and future.

With the benefit of hindsight, having experienced these past 16 years (since he wrote his text) and seen the cultural evolution I can confidently say that his hasty conclusions about the emptiness of contemporary culture are misguided to say the least. Aggressively and intentionally misunderstood to be a bit more blunt about it. He has since taken a more moderate stance too, and published a book in 2009 where he too had changed the term to digimodernism.

Far from being the only one to call time of death on postmodernism, Kirbys text is referenced often. And while a consensus seems to have been reached that the curtain has fallen on postmodernisms time in the limelight, it doesn't seem to extend on what the torch is being passed unto.

To further illustrate the point, I gathered just a few of the proposed terms for the postpostmodern era. (the ones readily available on Wikipedia): “... Raoul Eshelman (performatism), Gilles Lipovetsky (hypermodernity) and Nicolas Bourriaud (altermodern). (...) Nina Müller-Schwarze offers neostructuralism as a possible direction. “

I personally believe that the reason no clear successor for postmodernism hasn't entered the zeitgeist can be partly attributed to the all-permeating cynicism of said movement. If the core tenet of the previous philosophy is “nothing is real, there is no truth” it is extremely hard to gather larger support for a system that wants to believe in something specific again. A fragmented society built on deconstruction is difficult to glue back together again.

Nevertheless, I think that a way out from the apathy of meaninglessness that is the postmodern condition can be found by doubling down on it. Questioning “the universality and truthfulness of old modernism and the fragmentation and skepticism of postmodernism“ as Yousef (2017) claims metamodernism does.

## Metamodernism

The term metamodernism was adapted to its current meaning over a decade ago in an essay “Notes on metamodernism” by Dutch cultural theorists Timotheus Vermeulen and Robin van den Akker (2010). They defined it as an oscillation between modernist fanaticism and postmodernist irony. And while metamodernism is still very much ironic in nature and action, they posit that the metamodern irony is anchored in desire in contrast to postmodern apathy. That it is permeated by a yearning for meaning that was the goal of modernism, while also having the cynicism of postmodernism that attaining a utopia is a folly. Metamodernism is thus built out of contradiction and paradox.

A quote from a 2005 movie “Star wars: Return of the Sith” works to illustrate the fundamental differences between meta-, post- and modernism. In a scene towards the end of the movie Anakin Skywalker, now known as Darth Vader confronts his mentor Obi-Wan. Anakin tries to convince Obi-Wan of his cause, but his language convinces Obi-Wan that he has become an evil Sith.

Anakin: “Don't make me kill you.”  
Obi-Wan: “Anakin, my allegiance is to the Republic, to democracy!”  
Anakin: “If you're not with me, then you're my enemy!”  
Obi-Wan: “Only a Sith deals in absolutes.”

The reason I use this scene to illustrate the differences between the ideologies is the paradoxical reply of Obi-Wan. “Only a Sith deals in absolutes.” is in itself an absolute statement. Which in modernist tradition would be construed to mean Obi-Wan must also be a Sith, making the end of the movie a fight for supremacy between two Siths. Postmodernists would say that as no absolute truth exists, it is inherently pointless to try to make any kind of absolute statements, and thus neither Anakin nor Obi-Wan can be proven to be anything. Metamodernism is the way to see the movie as (probably) intended: Obi-Wan makes an absolute statement that is true, since Anakin is a Sith, while also being not true, since he himself is not.

I think the comparison evoked between the different ideologies is apt, while also acknowledging the absurdity of making comparisons based on the absolute logical extremes of the ideologies.

Lene Andersen (2019) divides our future paths broadly to metamodernity and hypermodernity, in quite a naivistic way, perhaps to pander to a broader public. In her text, hypermodernity is a sort of catch-all that represents everything that can go wrong in our future (and the path it seems humanity is on), and metamodernity is the panacea to all of the problems facing us now and in the future.

# Metamodernism in architecture

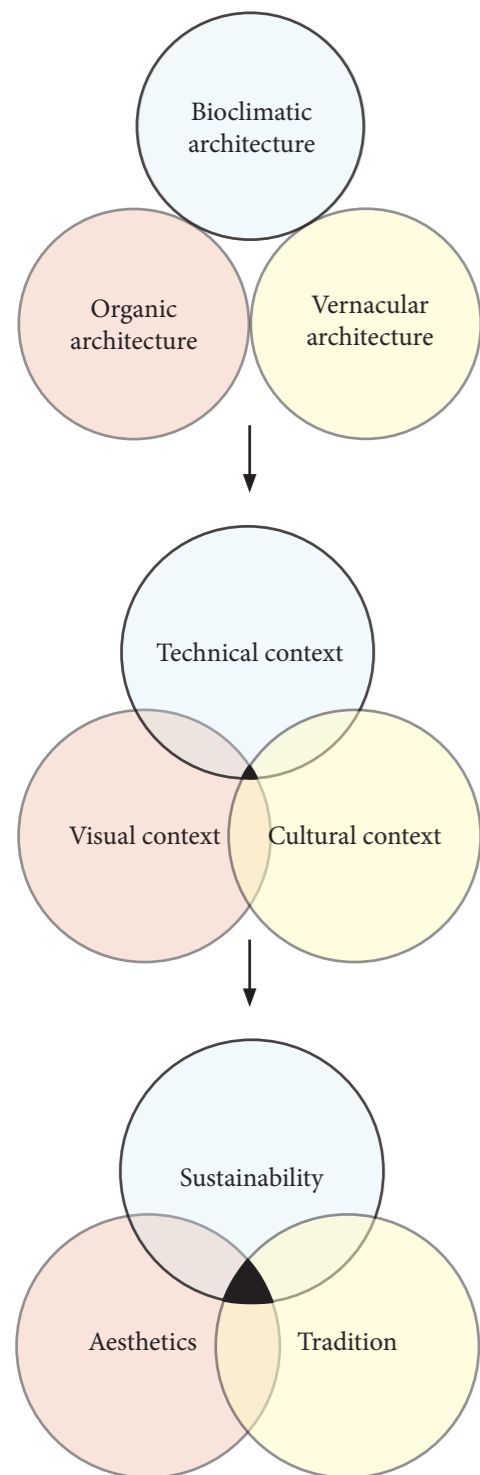


Figure 2.  
Illustration of the evolution of my theory

## The evolution of my theory of architecture

As illustrated in figure 2, initially my thoughts were to find architectural directions or styles to find inspiration and to anchor myself to an architectural tradition. The problem was, I couldn't find a single existing theory I could stand for or believe in, and in a rejection of postmodernism, I didn't want to only define myself in opposition of something. So I chose several different styles that together might encapsulate my idea of successful architecture.

As claiming to combine three different architectural theories only creates confusion, I thought of representing the theories in terms of the context they most respond to. This representation, while being more descriptive of my thought-process, sadly only gives a foundation for one, instead of a complete comprehensive theory. The validity of any one of these contexts in a given project is also determined by many factors, and they cannot encompass any kind of generality in architecture.

A result of my research in the MSS - studios was an understanding that the relative success of a project is measured individually, akin to Nietzsches theory of perspectivism. My ingress to the research was to find some commonality in how success is measured, but my conclusion was that it is relative to the aim, and thus purely subjective. The value of a project is determined by criteria specific to all of its contexts, not limited to, and not always even including the ones taken into account by the architect. The contexts the building is evaluated in are informed by contemporary societal standards and personal bias. Therefore there is no inherent value in creating "Bioclimatic architecture", but the perceived value is created by coinciding with societal value norms. And since these values need to be vague to gain wide acceptance in our culture, the meaning is diluted to the point that anything can mean anything. For example: aesthetics as a value is generally appreciated, but what it means to any individual is so subjective, it cannot really be used to inform any kind of design choices.

## Non-referential phenomenological anarchy

In summation an architectural golden standard can't exist, as there are too many variables. What seems to be the deciding factor between a good and a bad project is the architects ability to understand the context and respond to it appropriately. But even here exceptions exist. For example the infamous (or famous) Eiffel tower in Paris, that was seen as an eyesore (a bad project) when built has been morphed into an icon of the entire country of France (excellent project) So even an understanding (read: guess) of a future context can lead to a success.

In figure 3 the different colors represent different values, and the squares different ways to relate to a project. The success of a project is measured by the overlap of each individual placing their own square in the abstract field by encircling their personal values. It follows then that the "winning strategy" is making your square as big as possible in what I call a "Non-referential phenomenological anarchy" as an homage to both Olgiati and Norberg-Schulz.

Olgiati posits in a true postmodernist fashion a need for architecture to not rely on ideologies and philosophies outside the scope of the craft itself (the rejection of metanarratives). In other words architecture should only reference itself. Norberg-Schulz talks about a place being experienced rather than just existing. Which also means everyone brings their own cultural bias and life experience into it, making a place something unique existing differently in everyones perceptions. While sounding postmodern in the departure from an absolute experience, it still assumes a semi-rigid "genius loci", that can be gleaned as a sort of amalgamation or median of the observations.

Which brings us to anarchy, the key piece in my theory of metamodernist architecture. By anarchy in this context i mean the oscillation that differentiates and defines metamodernism. I believe that the way to unite modern fanaticism and postmodern criticism is the sincere irony of metamodernism.

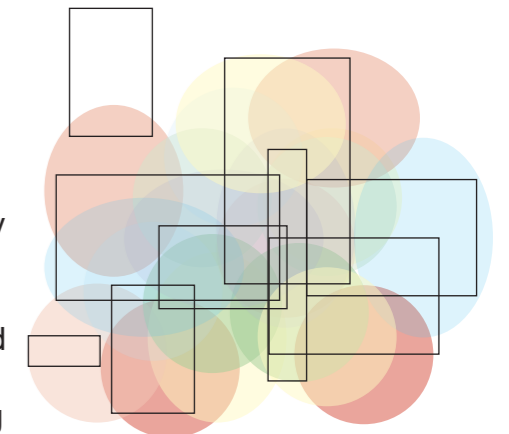


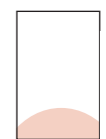
Figure 3.  
"Non-referential phenomenological anarchy"  
or Metamodern architecture



A project by a great architect/team  
Large square covering many values -  
High chance of success



"Conceptual project"  
Small square focused on a single value  
Chance of academic success



A project with no or bad architect  
Square covering a part of one value  
Small chance of success

III

DESIGN

# Site selection



Figure 4  
Satellite image of the site  
<https://www.google.com/maps/@60.4589198,22.2880317,806m/data=!3m1!1e3>

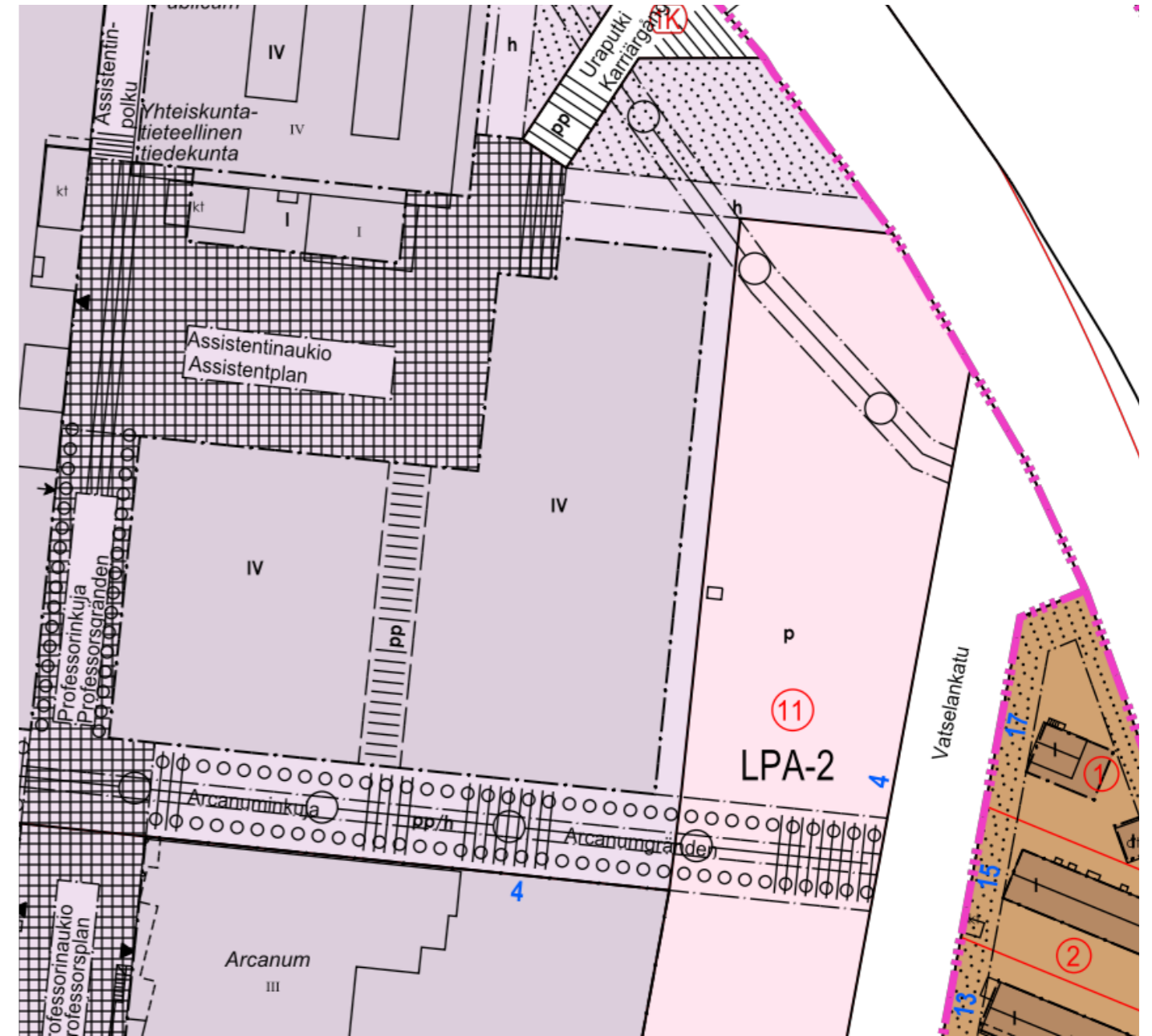


Figure 5  
Detail plan of my chosen site  
<https://opaskartta.turku.fi/ims/>

# Site visit



Northern facades of buildings around my site



The room between the existing buildings

Eastern and southern facades of buildings around my site (facing the square)



# Program references

Aalto university of technology



## “Väre”-building of Aalto university

Building area 26800m<sup>2</sup>

### Program:

Wood workshop  
Light/photography studio  
Computer labs  
Lecture halls

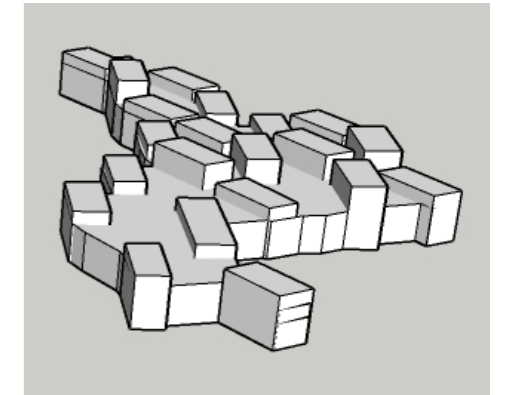
Group work spaces  
Classrooms  
Offices

Café  
Dining area

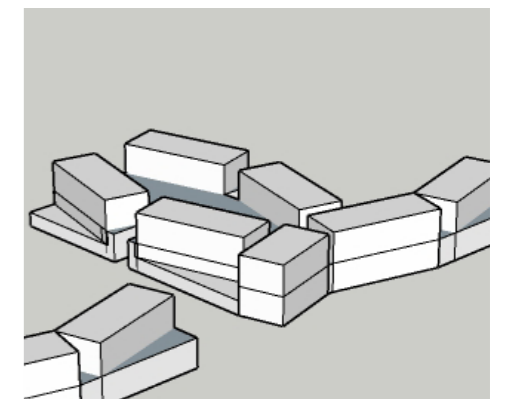
WC  
Storage

# Appropriation study

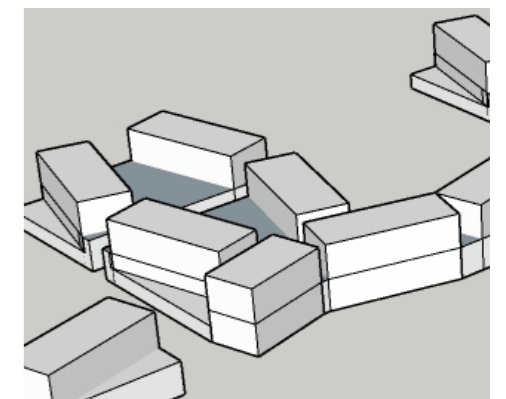
Aalto university of technology



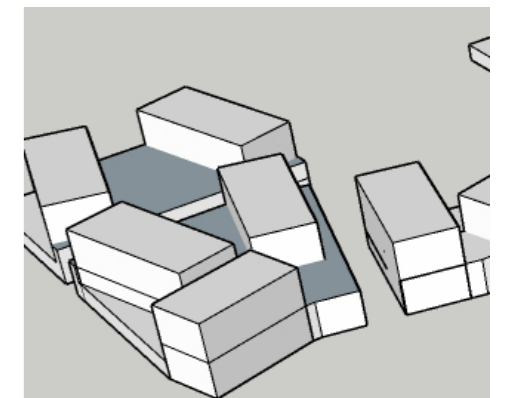
Building as-is



Building fitted into site



Building on site, divided to two volumes



Building on site, divided to three volumes

# Program references

Chalmers university of technology



## “A-House” of Chalmers university

Building area 18150m<sup>2</sup>

### Program:

Workshop  
Ateljé  
Computer labs  
Library

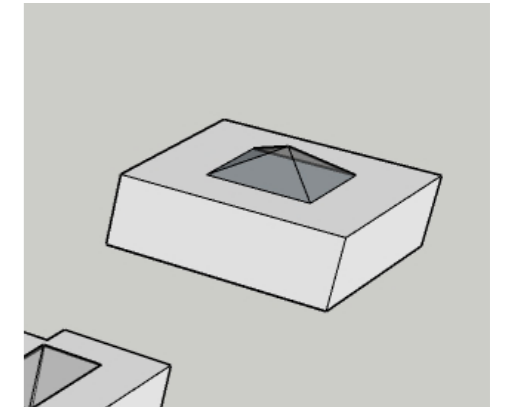
Group work spaces  
Drawing rooms  
Offices

Café  
Dining area

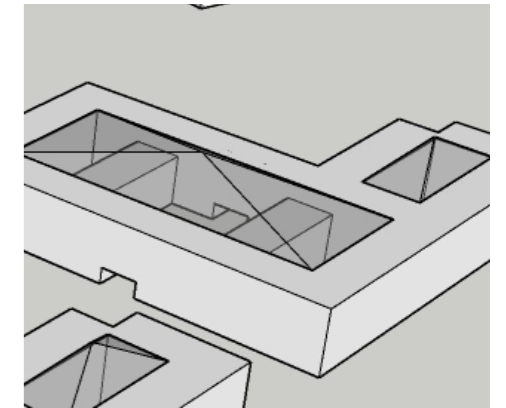
WC  
Storage

# Appropriation study

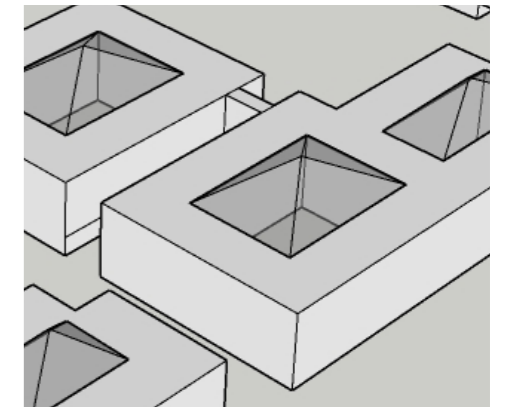
Chalmers university of technology



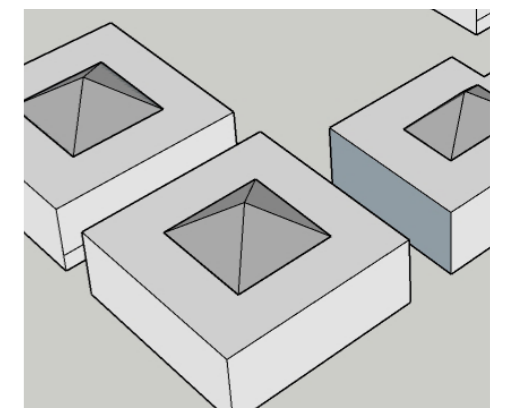
Building as-is



Building fitted into site

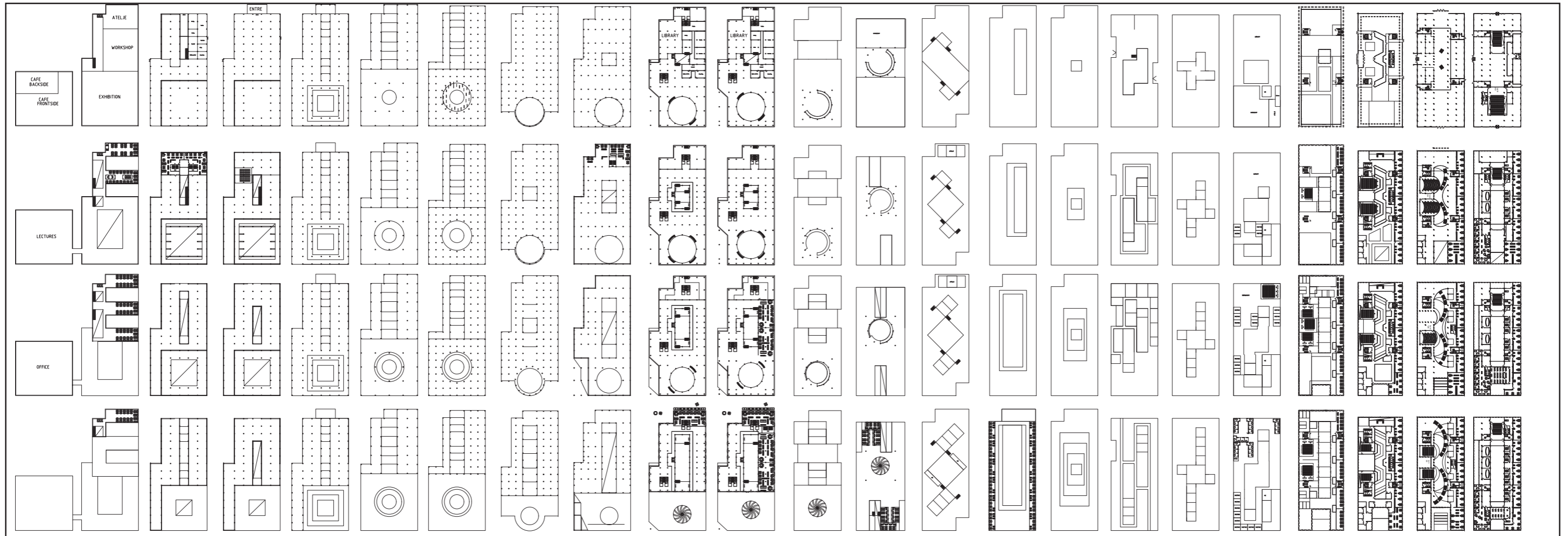


Building on site, divided to two volumes



Building on site, divided to three volumes

# Evolution of the project



Iterations of floor plans during the process      Scale 1:3158 (A3)

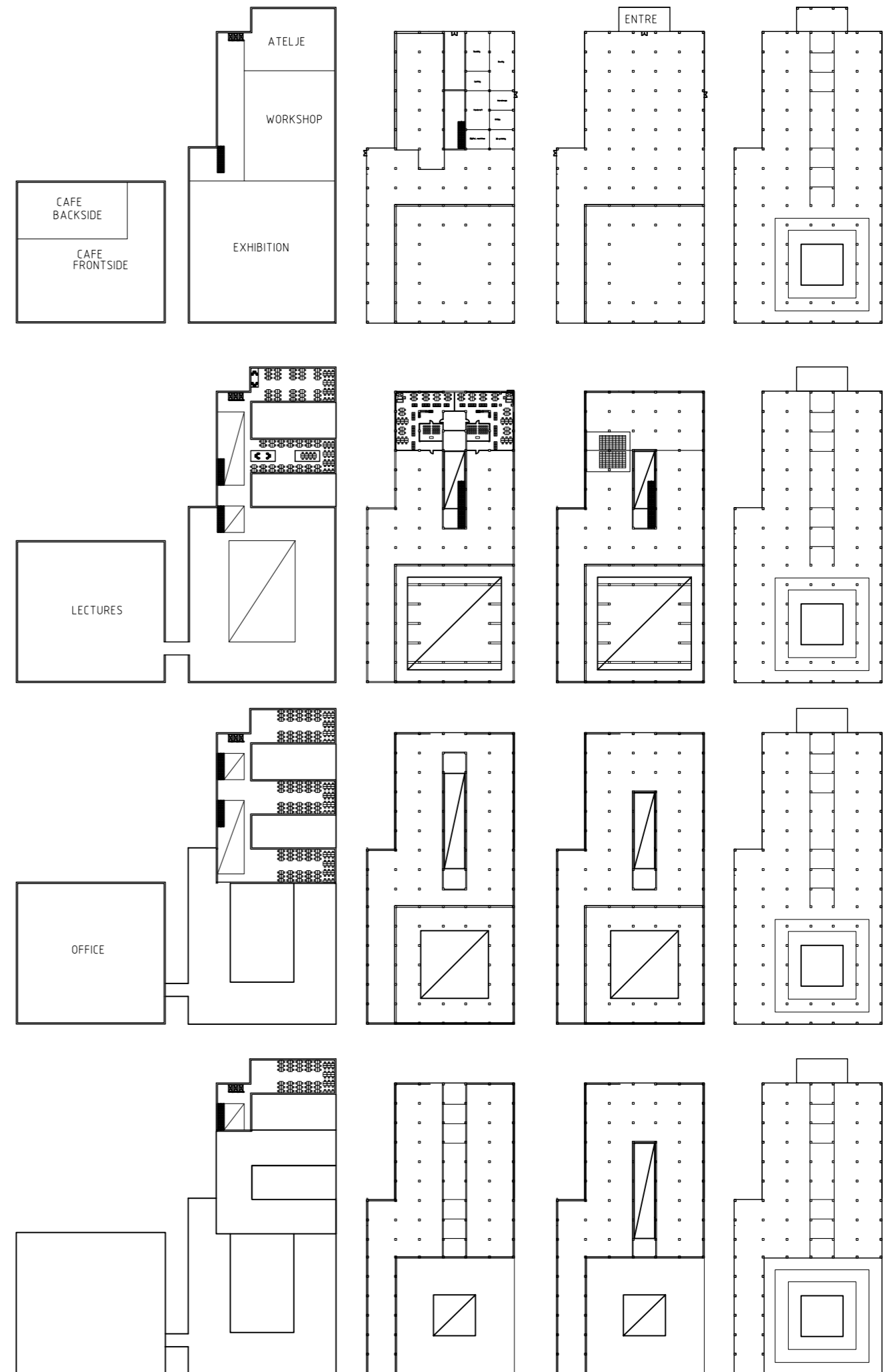
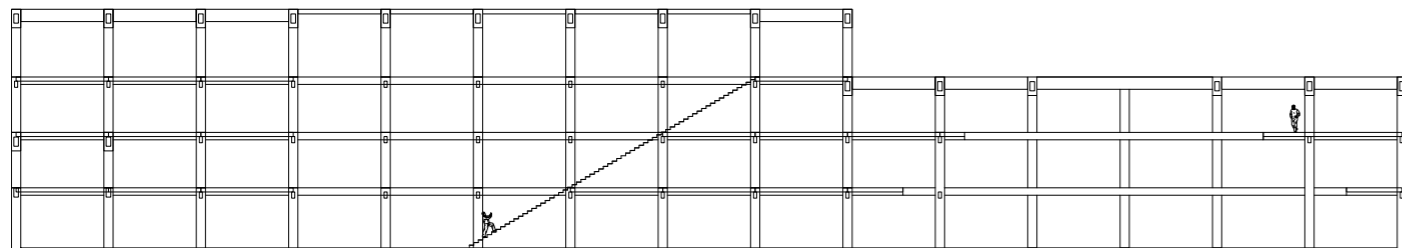
# Early iterations

A school of architecture consists of three main functions: Education, Creation and exhibition.

I further divided so that education consists of a library and lecture halls. Creation consists of drawing rooms, ateljé for art and light related studies and a workshop for model work. Exhibition takes place in a large open hall, that has an own entrance.

Coexistence of all of these different functions with differing spatial needs results in a complex program, and my early designs reflect that. Studying both Chalmers and Aalto-university gives two opposite answers to the question of dividing the volume. Aalto university has divided the building into small volumes spread out over a large area where each function can have its own little box. Chalmers has a single volume where the functions are gathered around a central motive, the Ijsgården (and V-gården for lecture halls). From early on I attempted to fuse these opposite ideas into a hybrid form, with the help of two main ideas: "The staircase" and "The pyramid".

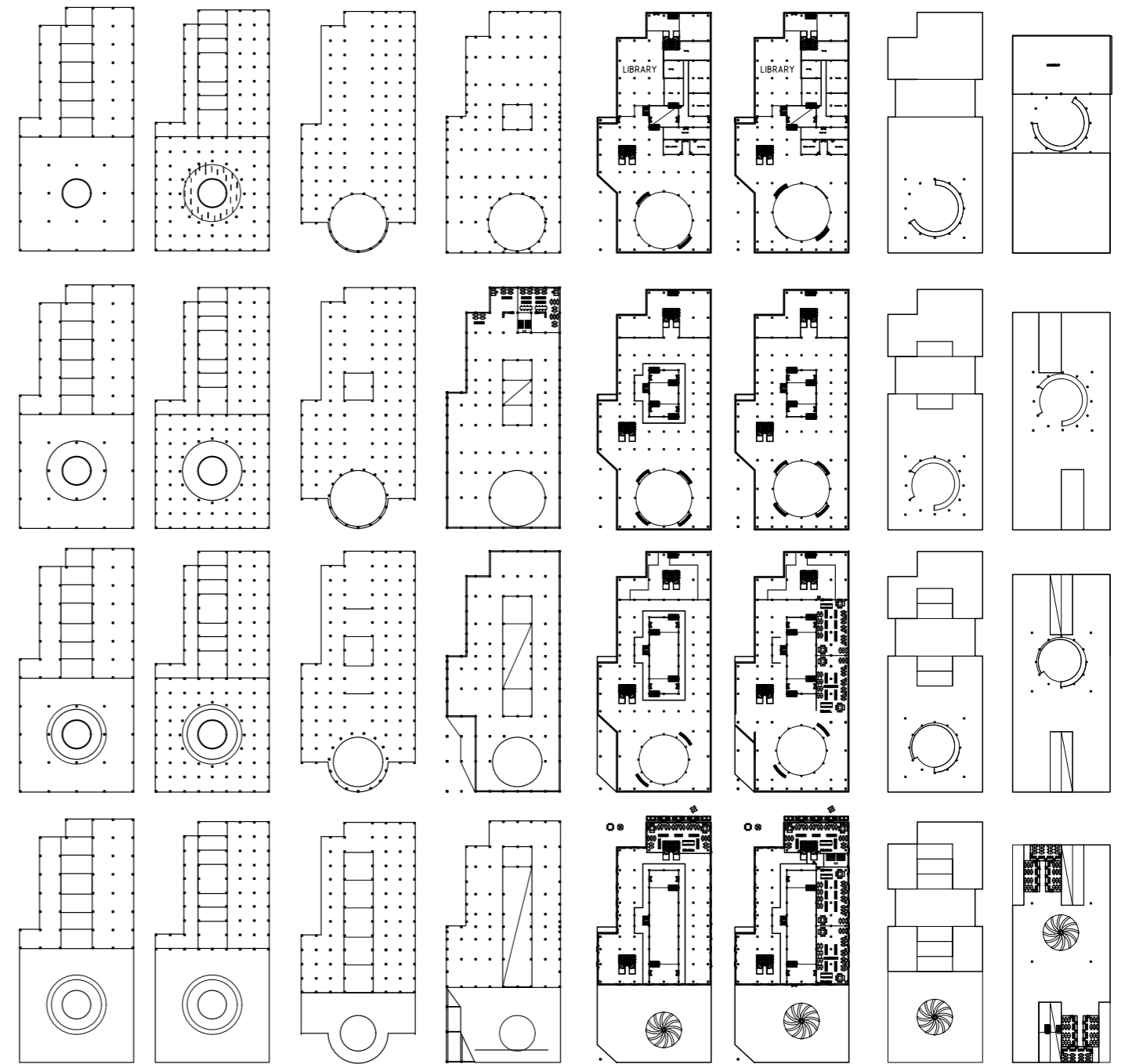
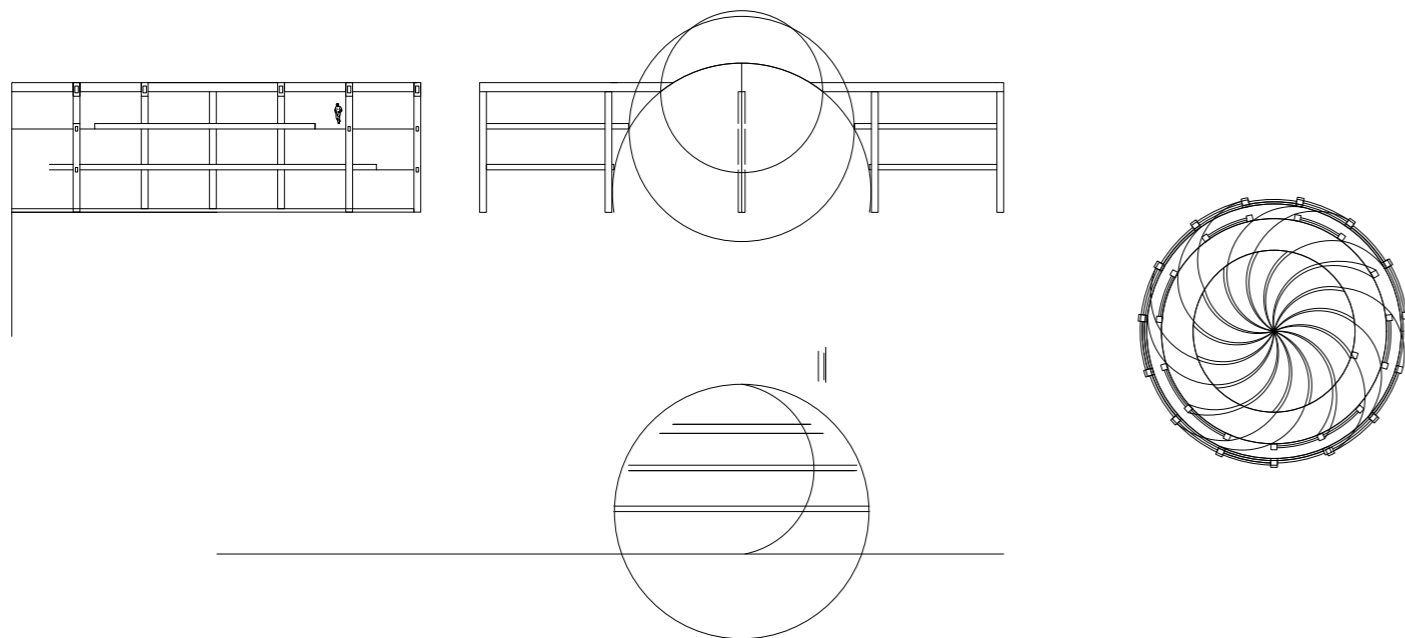
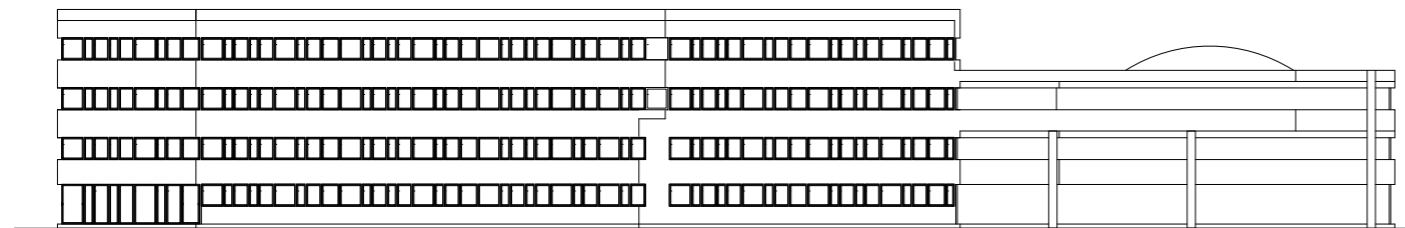
The staircase transformed into the central light shaft after the first iteration, and soon thereafter into a "valley", with cascading balconies flowing towards the middle of the atrium. (See Jacob und Wilhelm Grimm Zentrum in Berlin) Also after the first iteration the volume on the left was cut loose from the school of architecture, and it will become something else as volume studies revealed the excess space that I couldn't take advantage of within the confines of the program.



# The “Dome period”

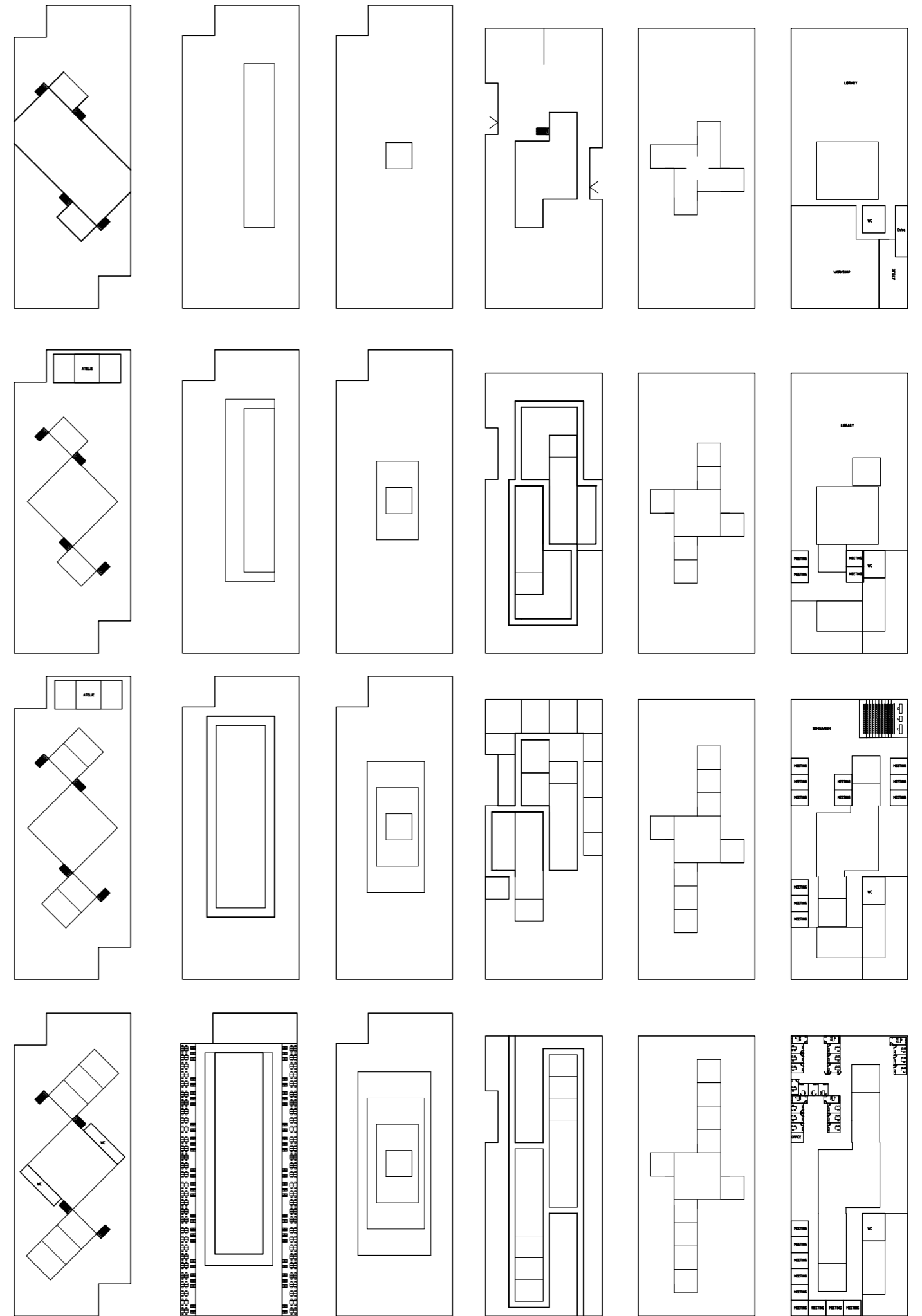
After the experimentation with the juxtaposition of the “Valley” and the “Pyramid” I felt the project was getting a bit too much like a box, and i felt it needed some round elements introduced, which felt to the appropriation of the dome structure for the exhibition hall. By studying domes around the globe, I arrived to the conclusion that the point of it is to give the unique experience of having the same distance to the walls and ceiling around you. Normally people experience space very two-dimensionally, so I thought this was a very

appropriate and inspiring space especially for a school of architecture. After eight iterations i couldn't find a way to integrate it with the “valley” in any meaningful way, which led me to finally abandon the idea. The integration attempts led also to a much more streamlined outline, as I attempted to shift the focus from the outside to the inside.



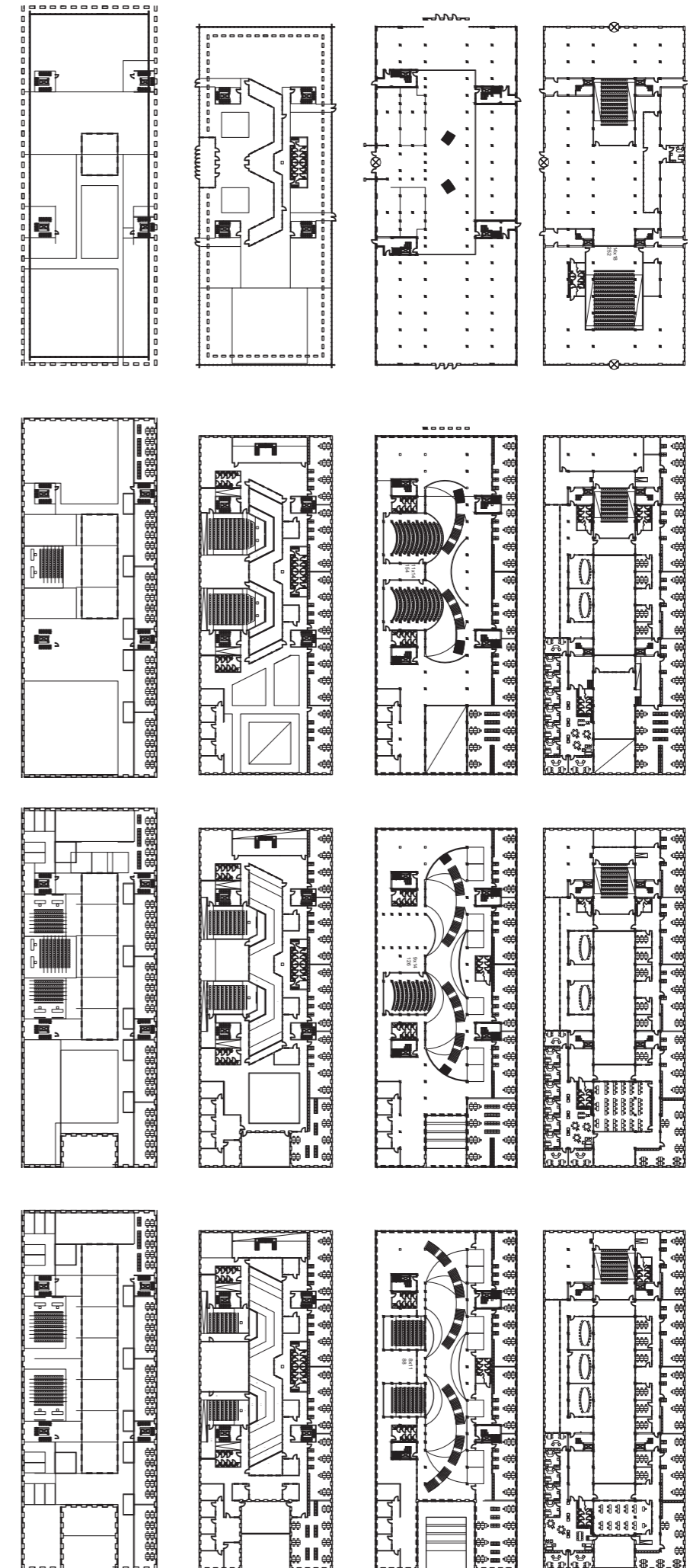
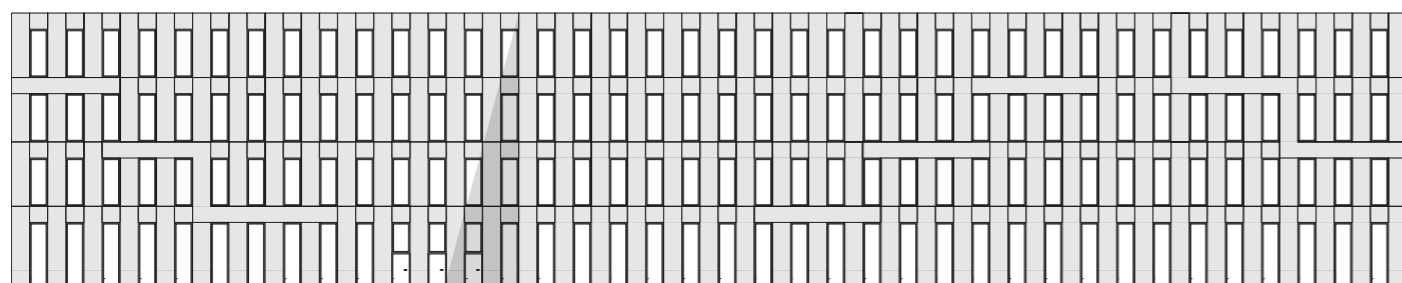
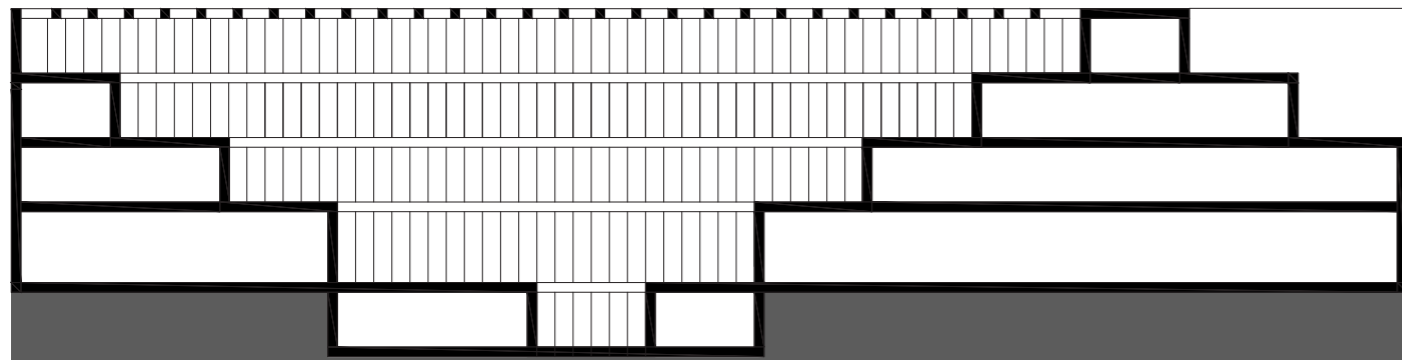
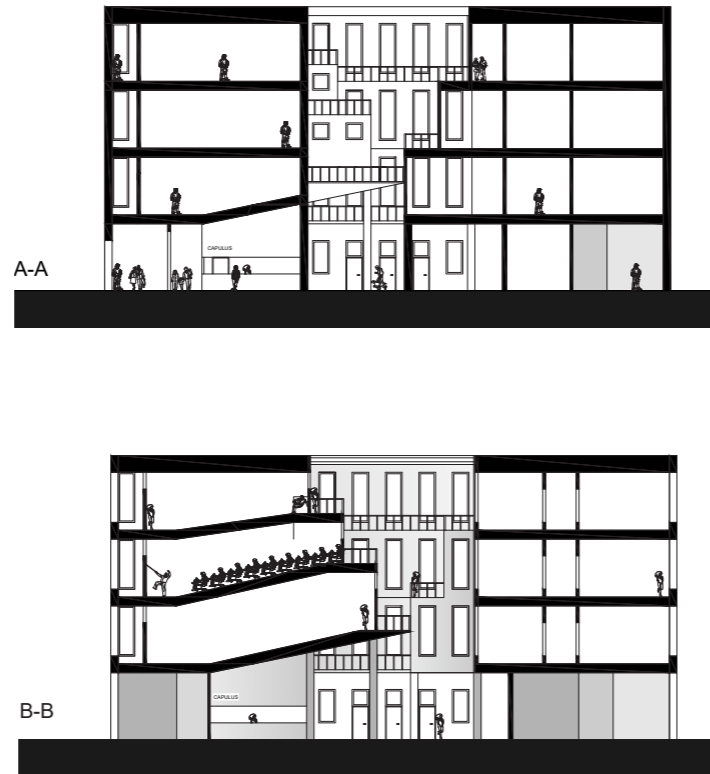
# Embracing the box

After the endless battle of synthesizing two diametrically opposing ideologies, I had a breakthrough while reading an article about kin-tsugi, the Japanese art of repairing broken pottery vessels with golden seams. The idea that there is even more value in the repaired vessel than there was in the original sparked an inspiration. That has barely anything to do with kintsugi, but that's the way of inspiration I guess. My breakthrough was that instead of trying to meld two clashing things into one, I should try to make them work for each other. Instead of the obvious juxtaposition in section, go for a more subtle approach. I soon discovered in my experiments that the more regular the "basic" structure, the more the smallest things jump out. So instead of making two distinct things, I should go for just one thing with a "knix" for lack of better word. I applied the idea to the facades and was really happy with the result. The four facades became nearly identical, and I differentiated them with only the minute distinctions, which led to the eye being drawn where I wanted to direct it. I used this effect to emphasize the entrances to make them stand out from the rest of the facade. "Unfortunately" the fire codes that require several separate emergency exits prevented me from reaching a level otherwise possible, as the monotony isn't all-permeating. I use quotes, since the advantages of fire safety far outweigh my artistic sensibilities.



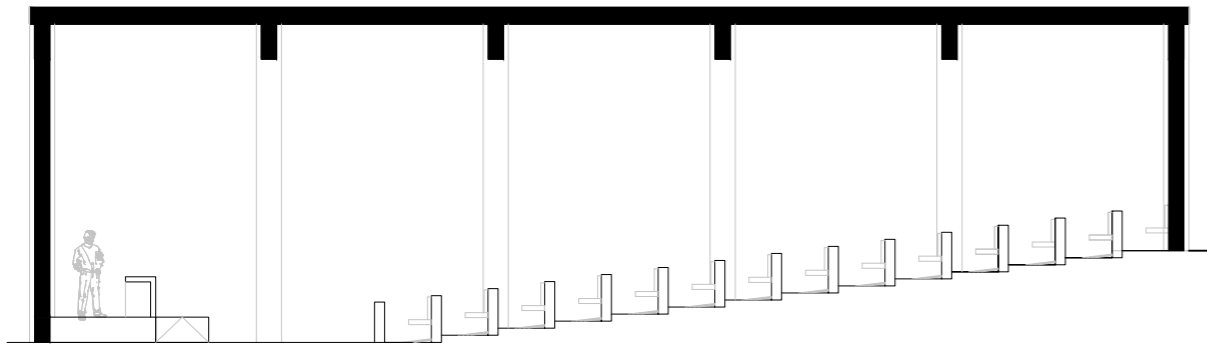
# Final iterations

The final differences between the final iterations revolve almost exclusively around the shape and function of the “Canyon” and further increasing the monotony of the outside box to make the juxtaposition more tangible. The primary function of the atrium is to bring light inside the wide volume, as it has been from the start. Secondary functions i experimented with were a vertical accessway (stairs) and as a “catcher” for the volumes too large to fit inside the regular structure of the building. But after trying out big swings in the more postmodern direction in the form of curved balconies with an opposing curved staircase I came to the same conclusion as with my facades earlier, that the synergy between monotony and the irregularity is strenghtened when the monotony is strenghtened.



# Lecture hall design

# Images

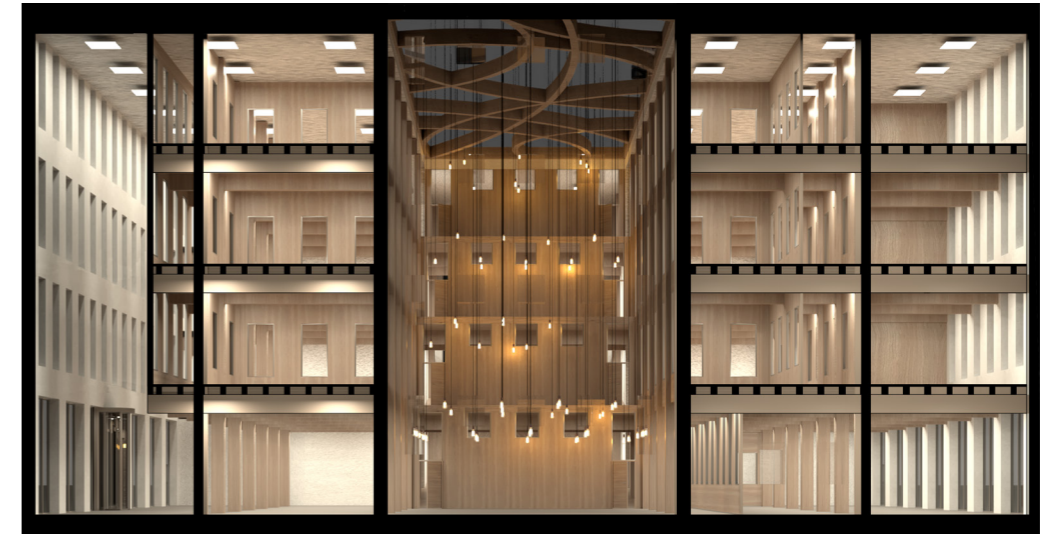


Simple section of the grand lecture hall

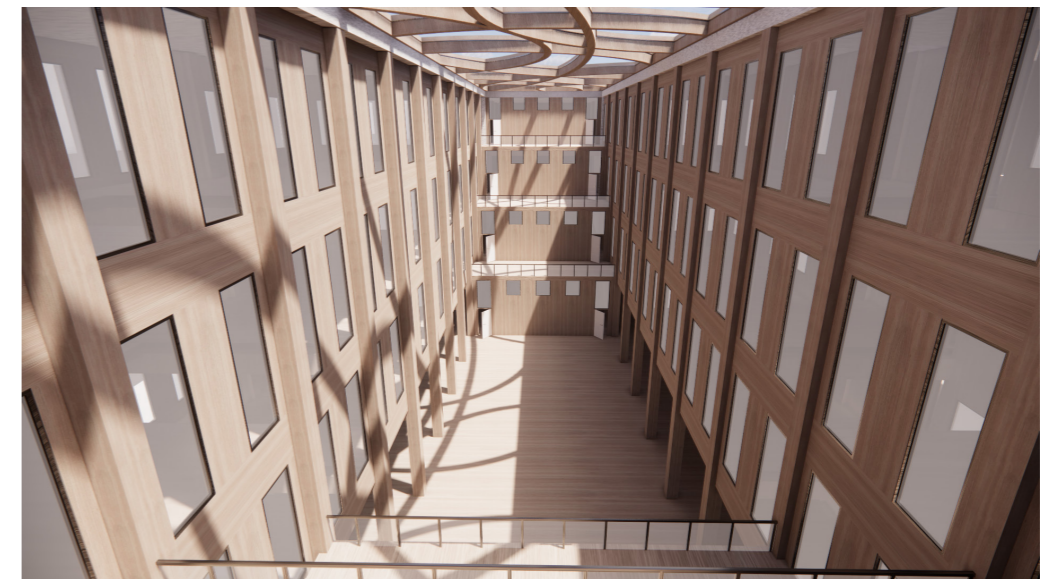
Scale 1:150 (A4)

Parameter	Neufert & Neufert	Aedificum
Floor-stage height	500- 750 mm	500 mm
Floor-eye height	1120 - 1220 mm	1125 mm
Tread of seating tier (Row spacing)	800 - 1150 mm	1125 mm
Head clearance (Every row vision)	130 mm	140 mm
Riser	60-125 mm (minimum)	140 mm

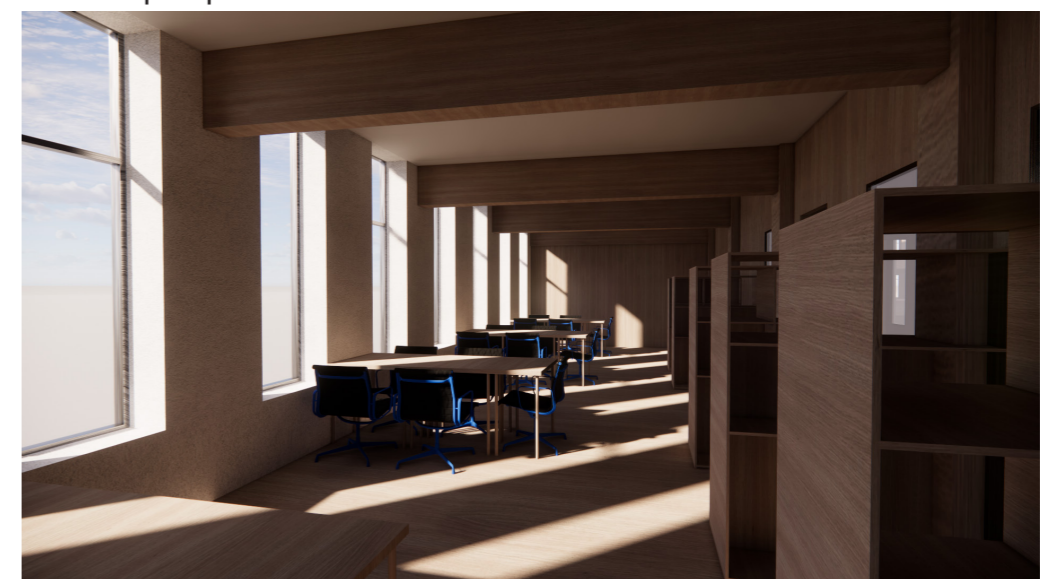
Figure 6  
Comparison between guidelines for lecture hall parameters guidelines in Neufert & Neufert (2012) and final design of the project.



Interior perspective section

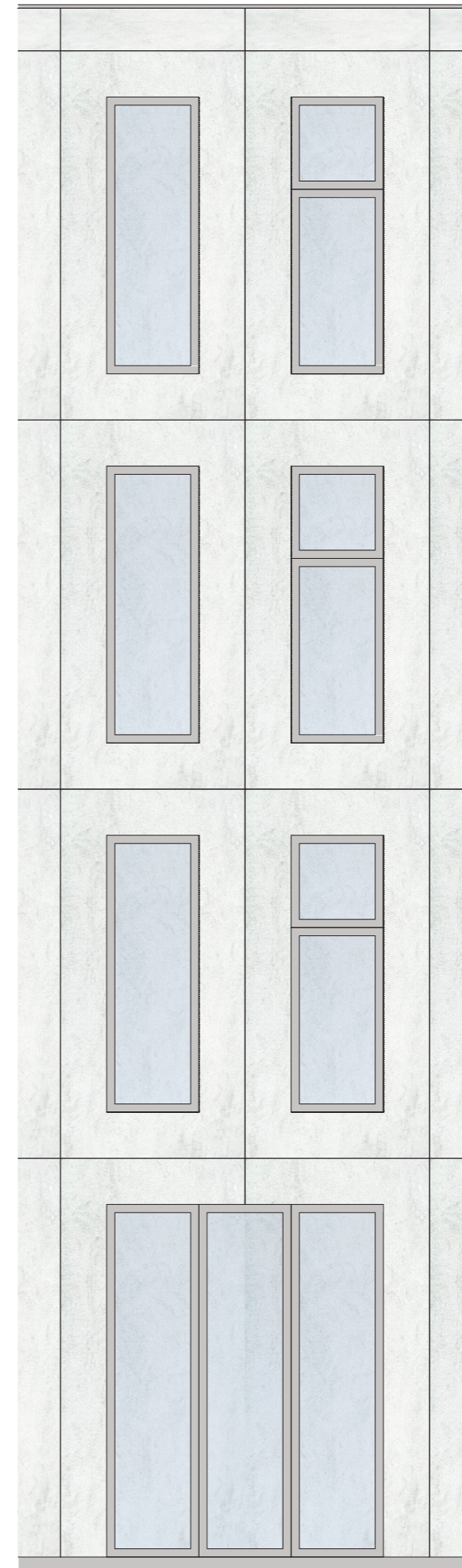


Interior perspectives





Exterior



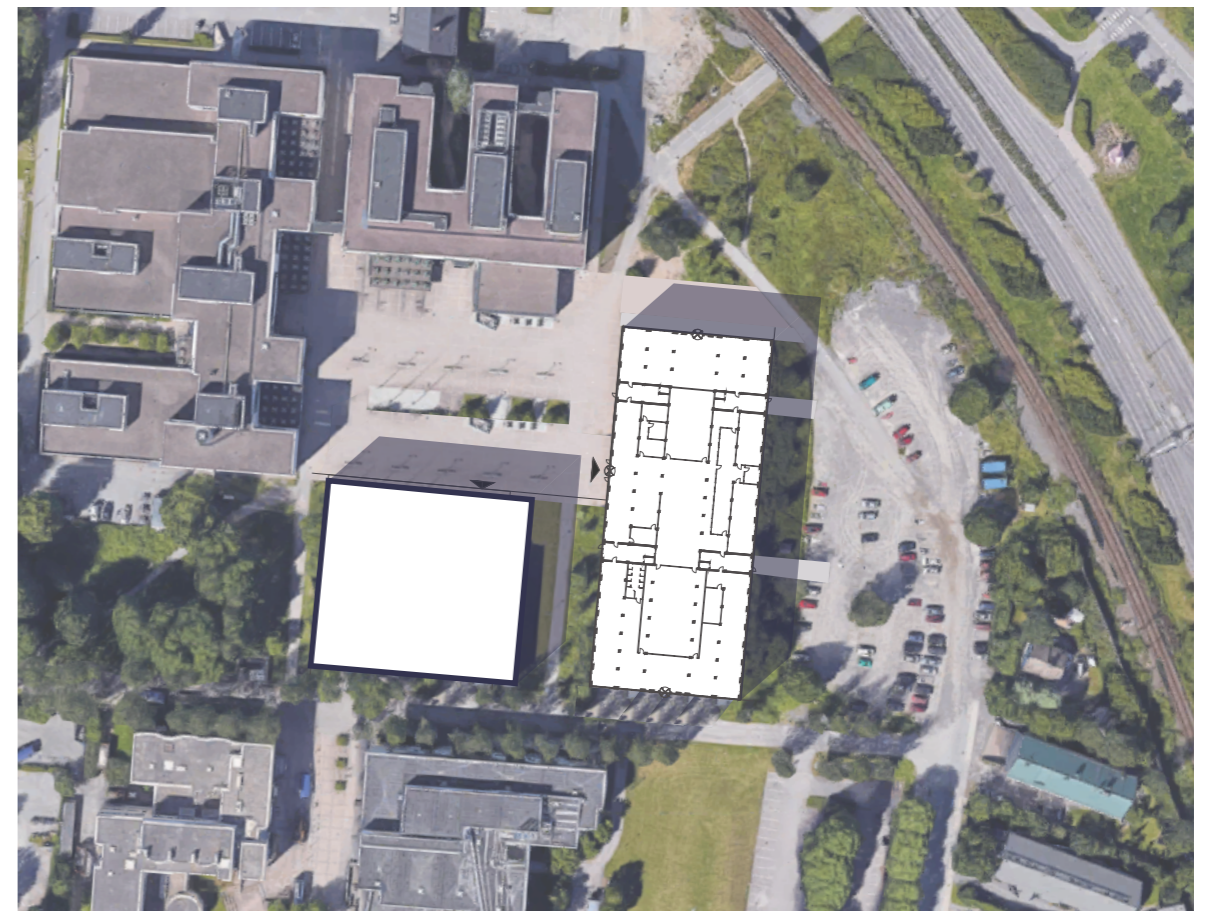
Wall part illustration



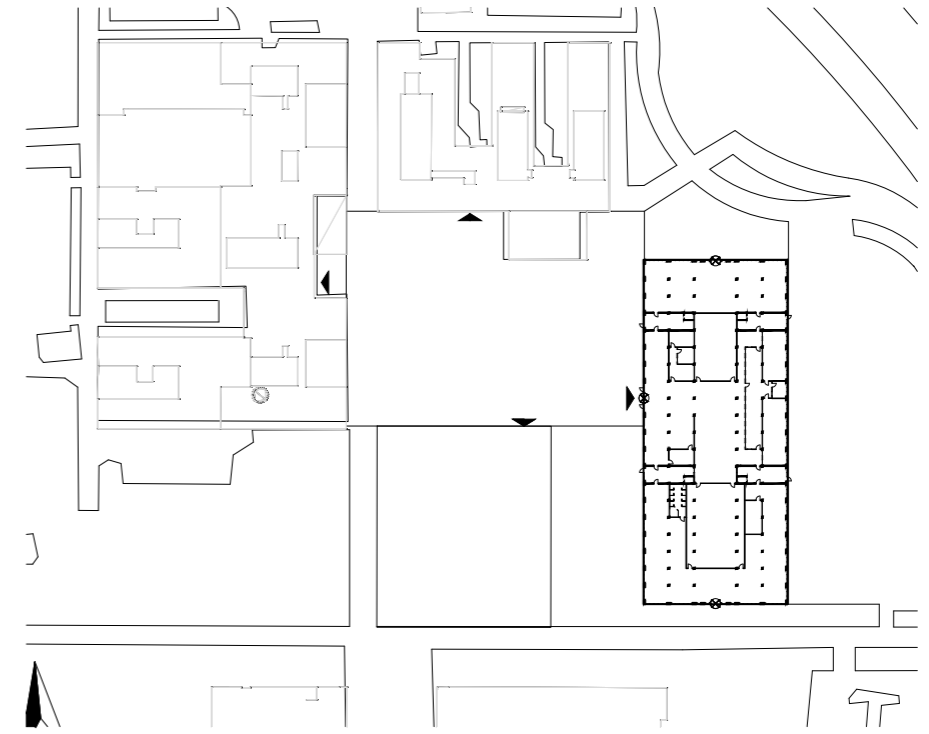
Context illustrations



Site plan 1:1000 (before)

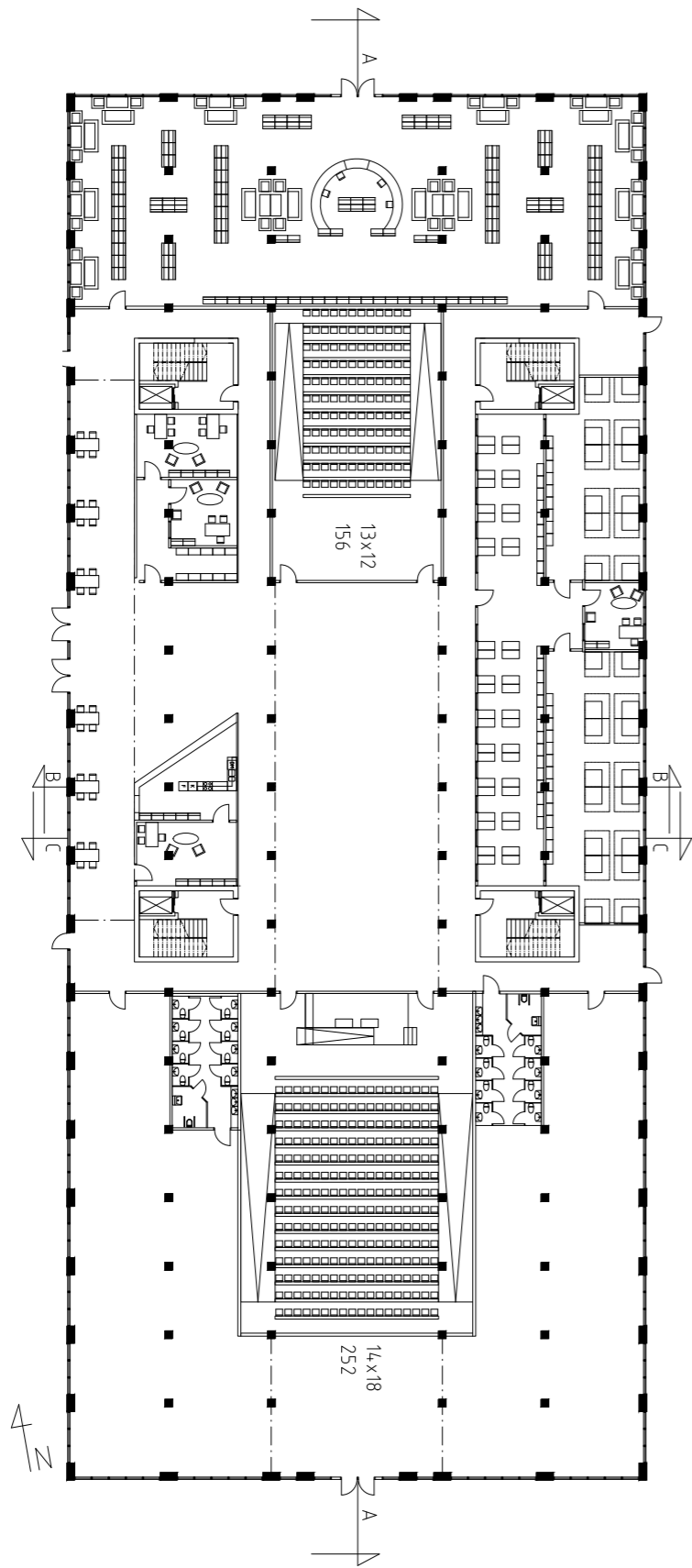


Site plan 1:1000 (after)



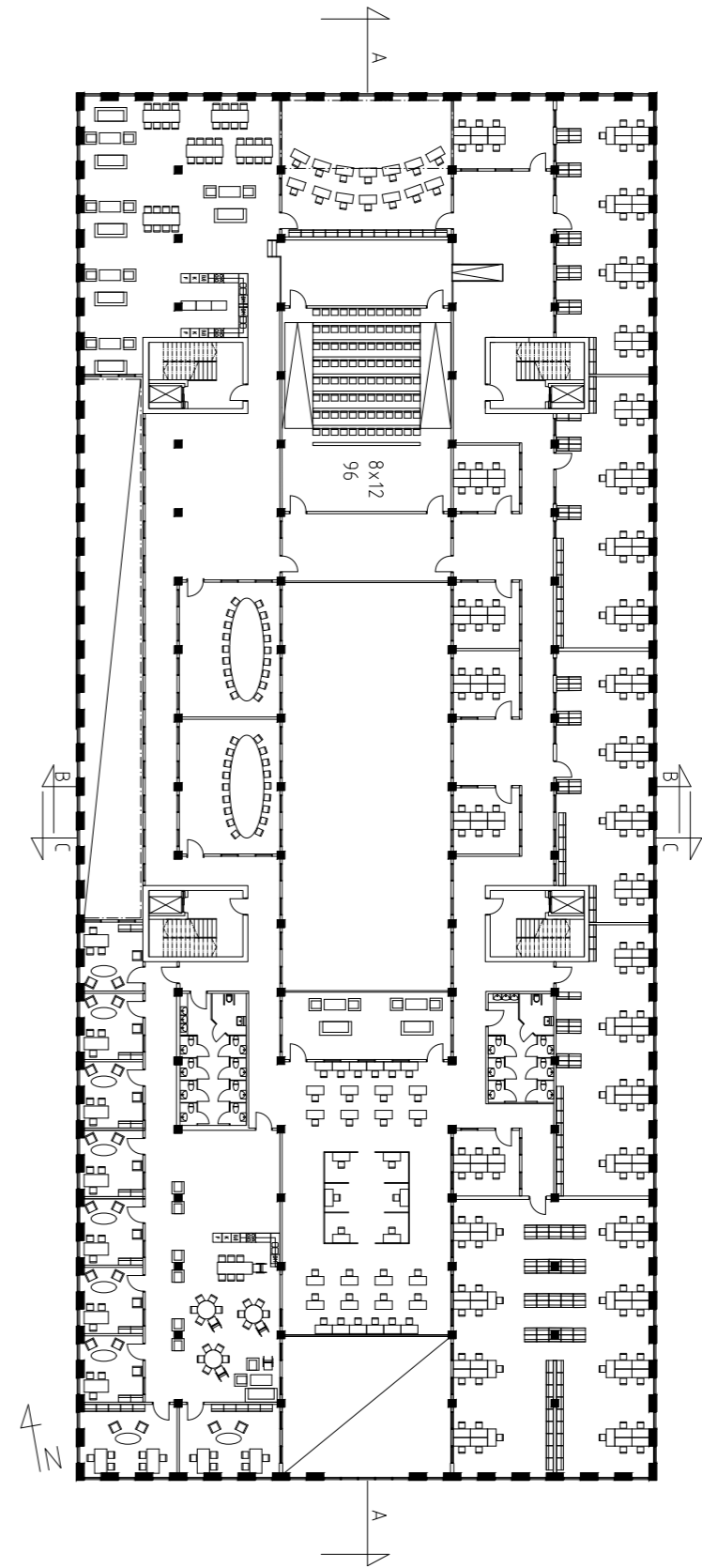
Site plan

Scale 1:2000 (A4)



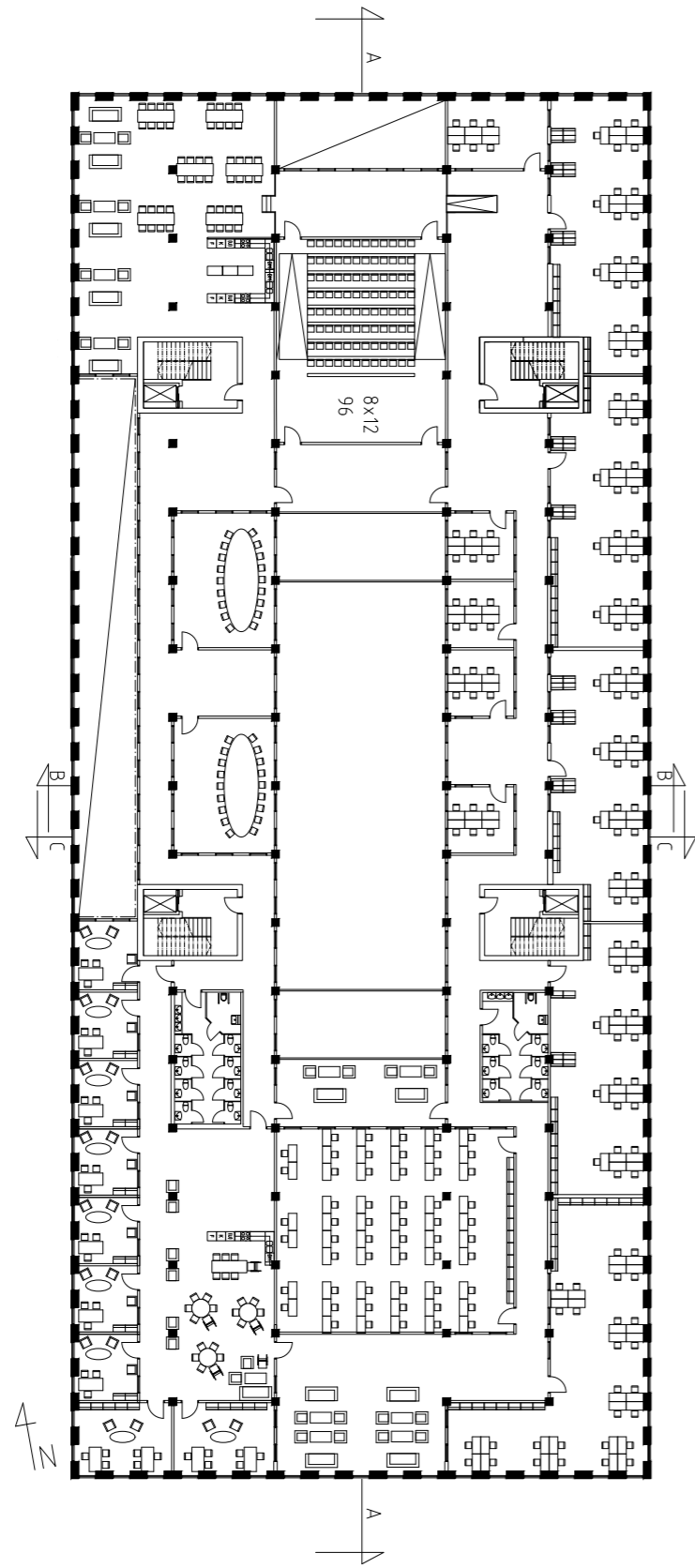
First floor

Scale 1:400 (A4)



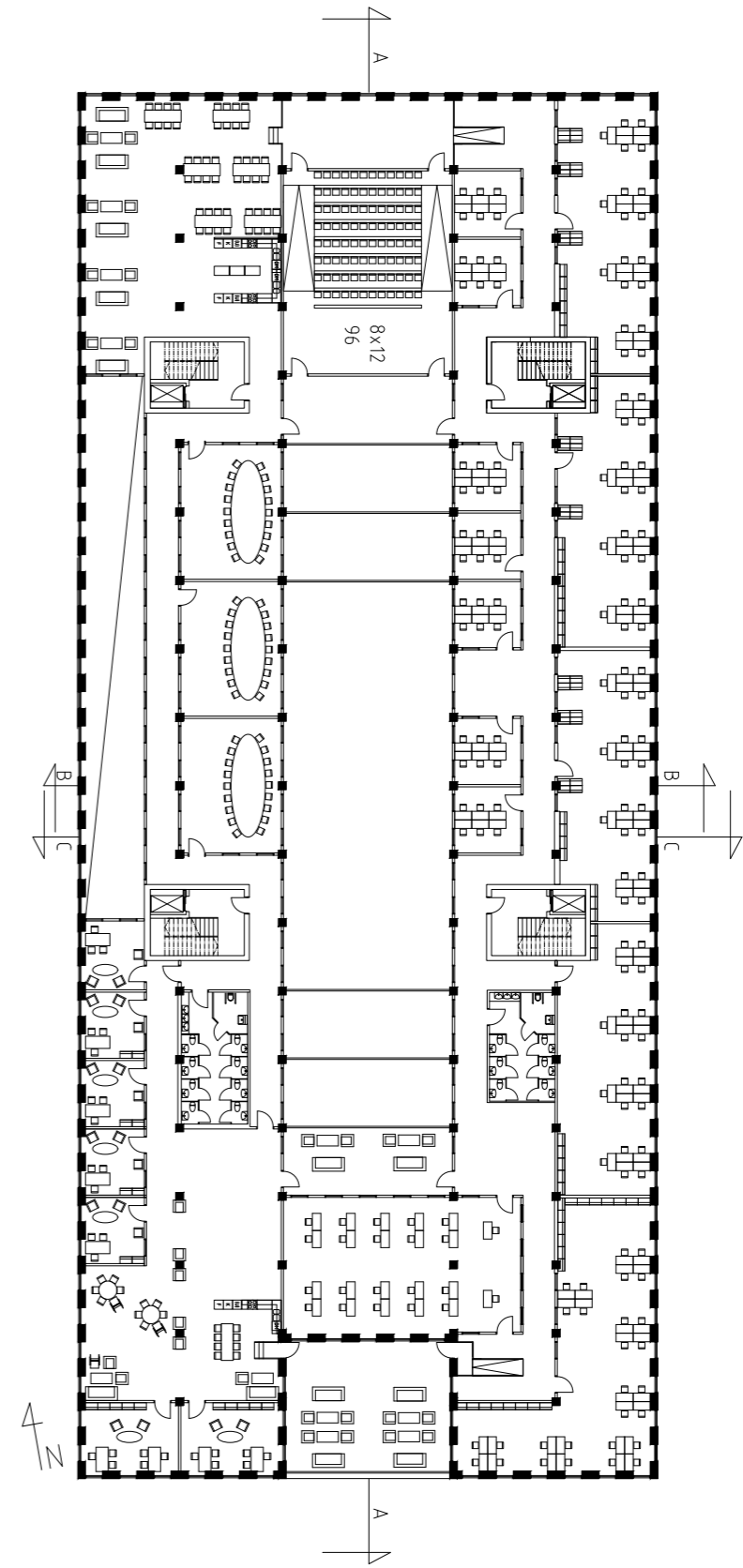
Second floor

Scale 1:400 (A4)



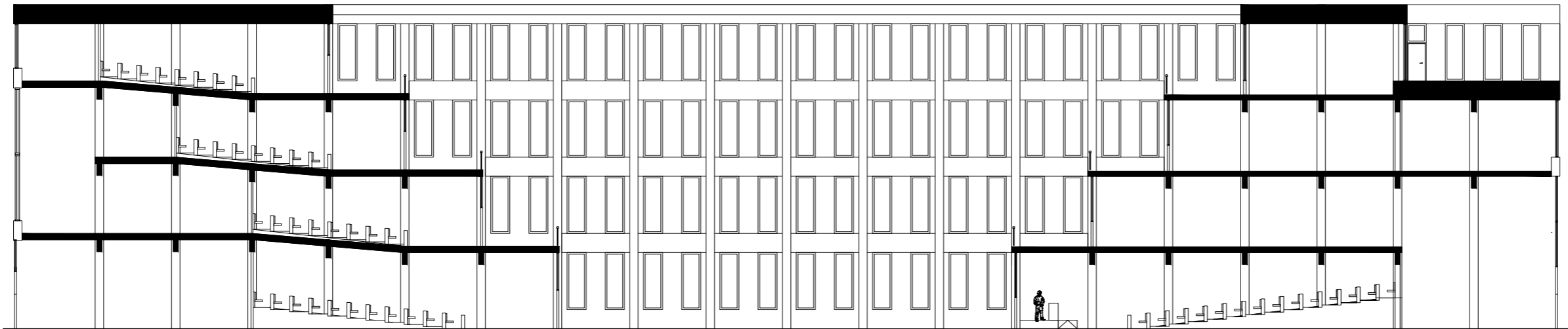
Third floor

Scale 1:400 (A4)



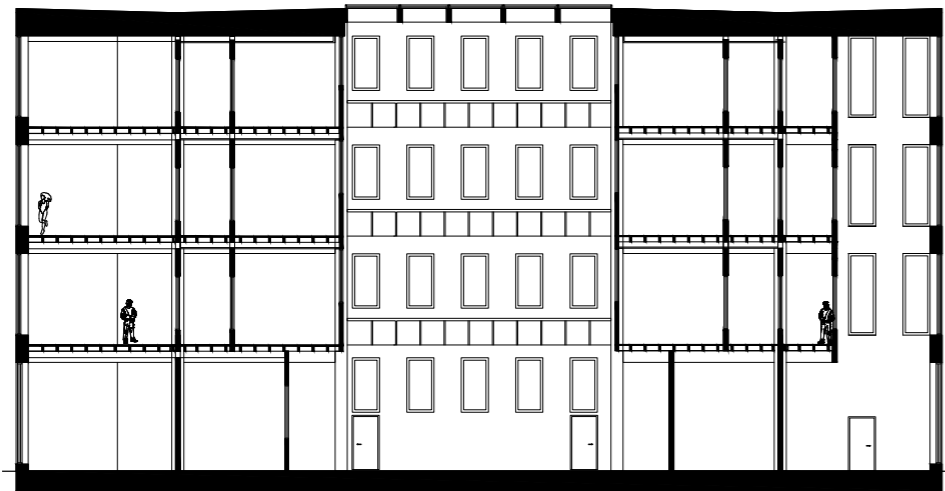
Fourth floor

Scale 1:400 (A4)



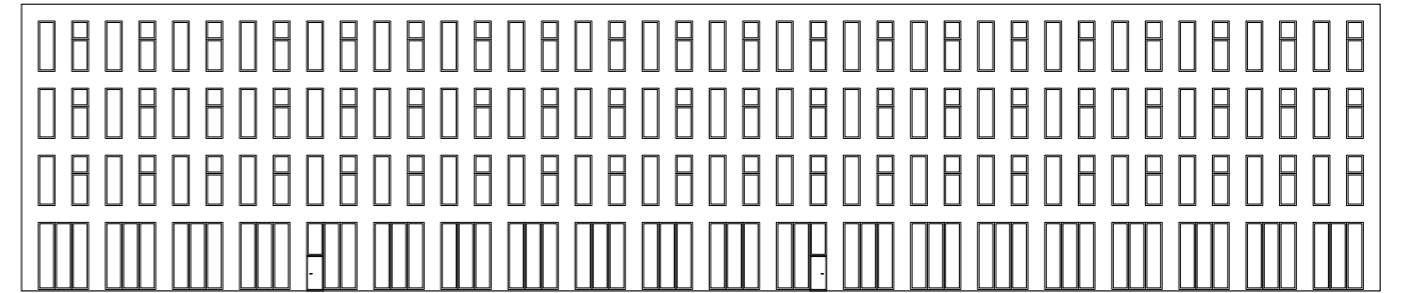
Section A-A

Scale 1:300 (A4)



Section B-B

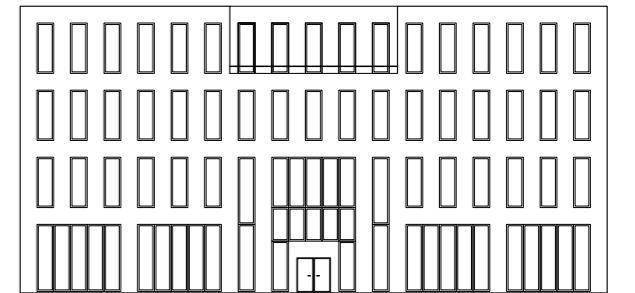
Scale 1:300 (A4)



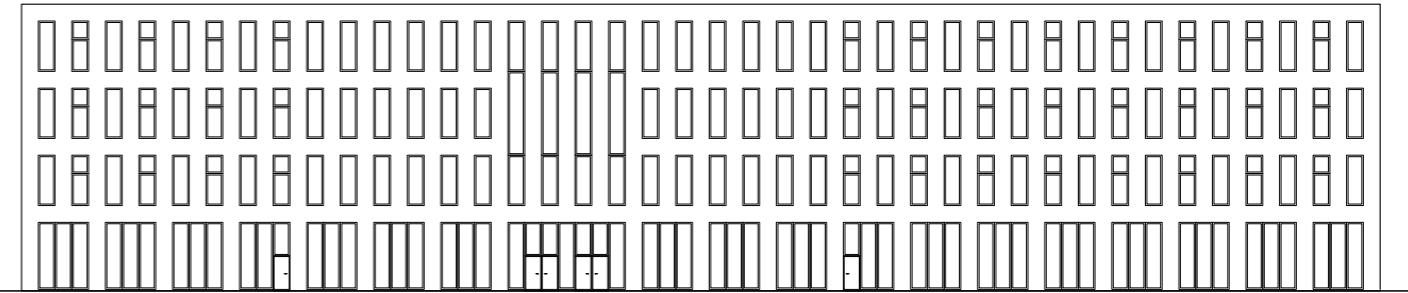
EAST 1-400



NORTH 1-400



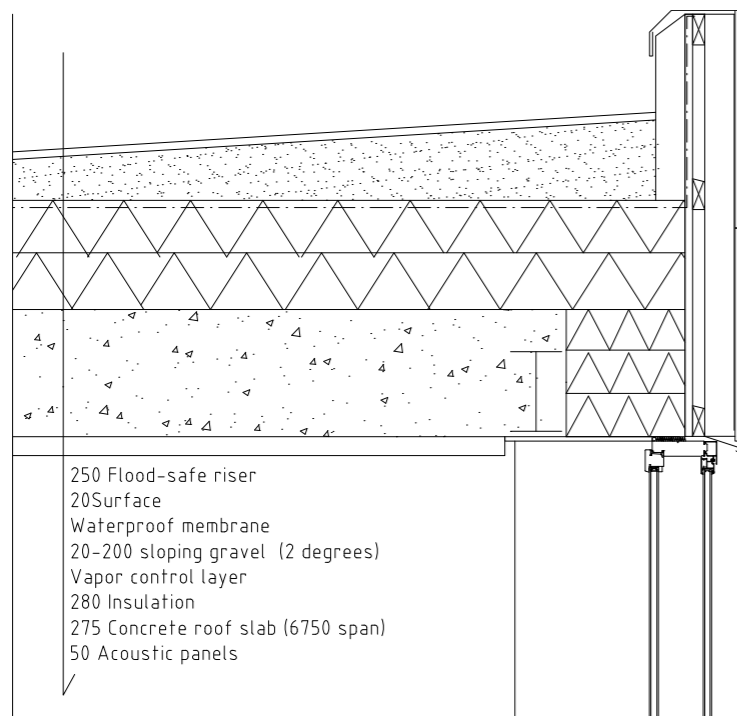
SOUTH 1-400



WEST 1-400

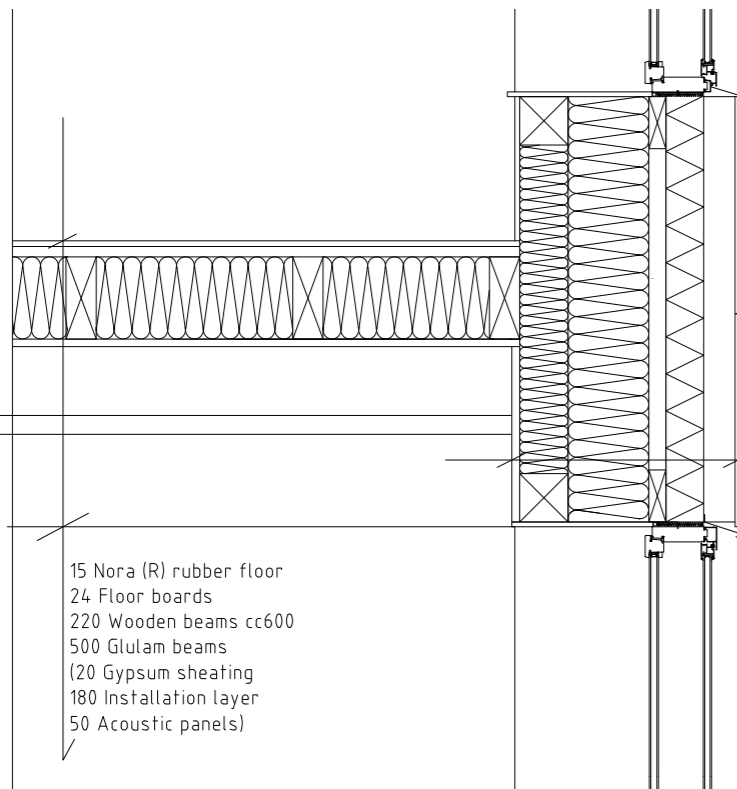
Facades

Scale 1:400 (A4)



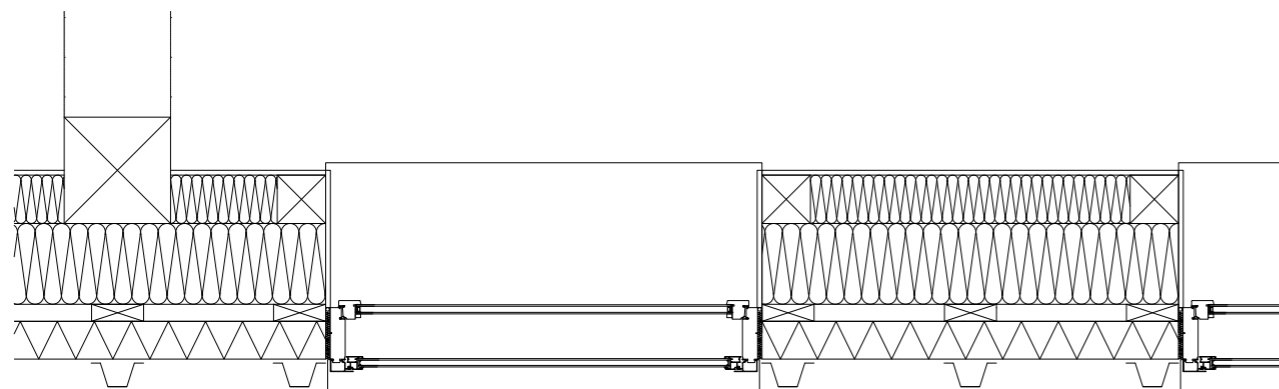
Roof detail

Scale 1:20 (A4)



Wall detail

Scale 1:20 (A4)



Horizontail detail

Scale 1:20 (A4)

# Conclusions

I would like to start by saying I think my end result turned out great, although I would have made an oscillation toward more postmodern direction on the next iteration, had I been able to continue work on this project indefinitely, and it might have turned out even better.

The starting point in what I have under this process started calling metamodernism was a source of endless inspiration. I felt a purposefulness in the design work I haven't felt before, and I believe part of it was because I was laying the groundwork for what my own architectural theory emphasizes and discusses.

As a theoretical masters thesis this project could have tested the ideas I bring up in the discussion part more, but since the goal was to create a prototype for metamodernist architecture, there was also the need for a time-consuming iterative process.

This thesis delivers a building design that embodies the ideas discussed, and acts as a basis for further discussion and examination about the future of architecture.

Metamodern architecture is but one of the possible ways the future may shape up, but it is my hope that it will prevail.

# V

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