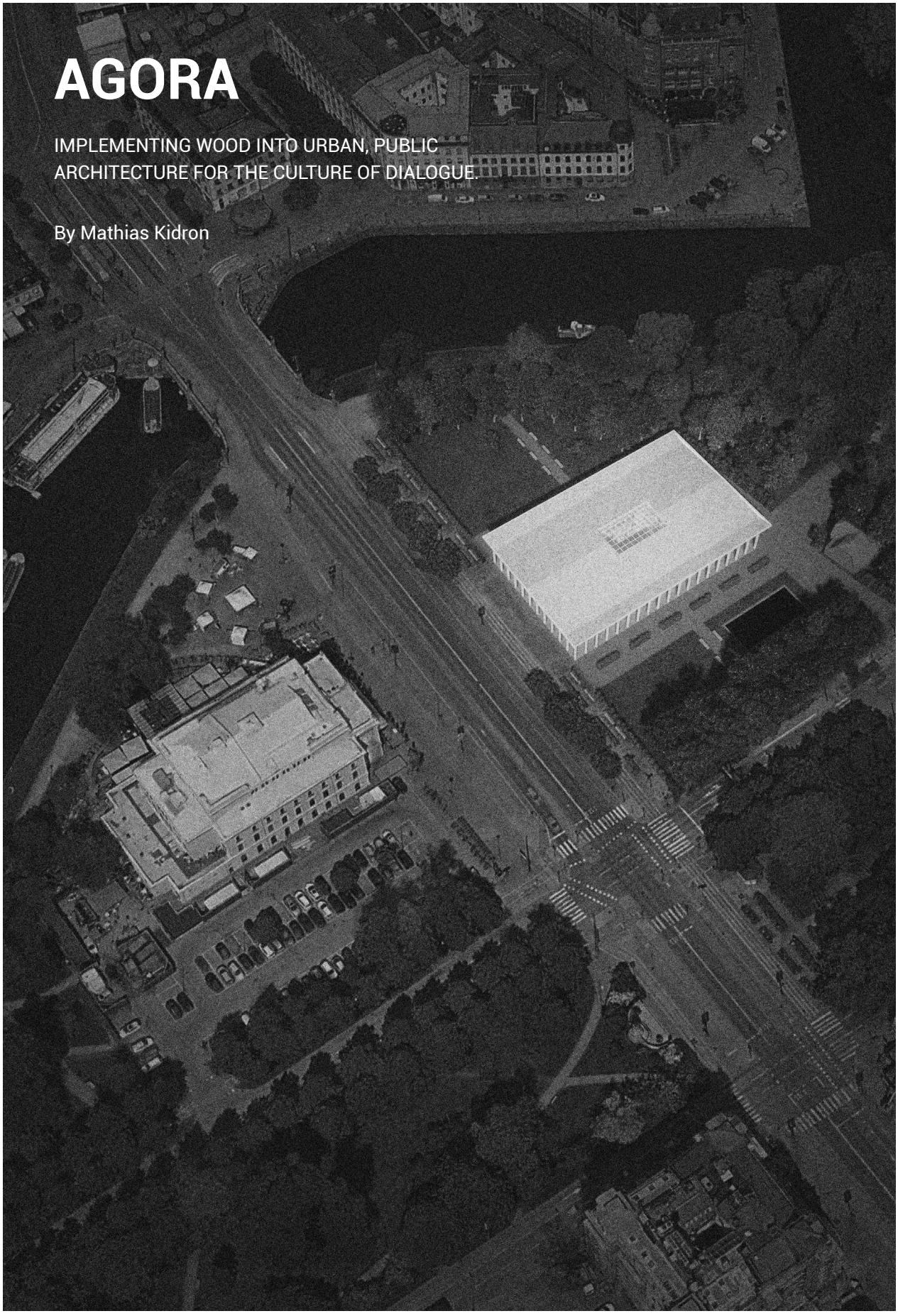
AGORA

IMPLEMENTING WOOD INTO URBAN, PUBLIC ARCHITECTURE FOR THE CULTURE OF DIALOGUE.

By Mathias Kidron



Chalmers School of Architecture
Department of Architecture and Civil Engineering

Tutor: Mikael Ekegren
Examiner: Björn Gross

CHALMERS
UNIVERSITY OF TECHNOLOGY

AGORA

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Year of graduation: 2021
Chalmers School of Architecture
Department of Architecture and Civil Engineering
Master's Programme of Architecture and Urban Design (MPARC)
Master's Thesis Direction: Building and Tectonics
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ABSTRACT

In the ancient civilizations of Greece and Rome, the heart of every city was the Agora or the Forum. Public spaces where people met, socialized, traded, got their news, discussed, debated and made decisions. Places where ideas, knowledge and goods were exchanged. Today, the format of these interactions have gone from analogue to digital. What once was a specific physical space is now available everywhere and anywhere, with both positive and negative consequences. With the degeneration of the public debate and discussion climate, along with polarization and threats towards freedom of speech, both digital and in real life, could architecture play a role in improving the state of these subjects?The aim of this master thesis project is to investigate how the antique forums and the modern internet forums and social media platforms could be combined and converted into a modern, wooden, free standing public building. Wood has for long been seen as a material for smaller scales such as villas, summerhouses or smaller apartment buildings. A material for cheap or rural projects. Stone on the other hand, has always been considered the public, urban material. A material that symbolizes the strength, wealth and robustness of the eternal city. Traditionally, free standing public buildings made out of stone were often inspired by the classical architecture of Rome and Greece. However, the origins of these classical orders has its roots in early archaic wooden architecture.

The proposal strives to create a sustainable architecture, both in terms of architectural robustness as well as the use of sustainable materials. A wooden construction has therefore been chosen as the main material for the thesis investigation. With this in mind. How could wood be used to resurrect the lost typologies of ancient Rome and Greece. Furthermore, how could these classical references be translated into a contemporary, wooden, freestanding public building, made for the freedom of speech and the joy of conversing.

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STUDENT BACKGROUND

1994	Born in Uppsala
2010-2013	Natural Science Program, Procivitas Privata Gymnasium
2013-2015	Swedish Armed Forces
2015-2018	Bachelor in Architecture, Chalmers
2018-2019	Internship at Nordström Kelly Arkitekter
2019-2021	Architecture and Urban Design Master Sustainable development Matter, Space, Structure I Nordic Architecture Matter, Space, Structure II Master Thesis Prep Course I Housing for Seniors Master Thesis Prep Course II

AIM

The aim is to design a physical forum for the city of Gothenburg at Bältesspännarparken. The proposed building strives to provide a public space for debate and discussions, both in small and large scale. As well as provide a space where freedom of speech is celebrated and guarded.

This master thesis will investigate how massive wood could be implemented in a contemporary, freestanding, public building made for debate and freedom of speech. By taking inspiration from ancient Greek and Roman references, and combining them with contemporary wooden architecture, the thesis aims to resurrect and develop the ancient typologies into a contemporary one.

THESIS QUESTION

How can a traditional, freestanding, public building be translated into a contemporary, wooden building made for public debate?

READING INSTRUCTIONS

The master thesis consists of theory and the proposal. The theory, part one of the thesis, concerns wood, debate climate as well as reference projects and historical contexts. The proposal, part two of the thesis, is presented through drawings, images, visualizations and text.

METHOD

The thesis will primarily be investigated and developed though a research by design method. This will be done by designing a wooden public building at Bältesspännarparken in Gothenburg. The initial phase of the project will be focused on the theoretical framework. This will be done by researching important historical references related to the theme of debate and free speech. Contemporary references concerning classical relation, wood techniques, wood tectonics, detailing and design will also be investigated. Apart from the references the site, Bältesspännarparken, will be well studied and analyzed to determine its limitations and possibilities. The design process will be conducted by creating sketches, models and iterations. Each sketch or model will be analyzed to develop the work further and each design choice will be a careful evaluation of aspects concerning spatial experience, structure, climate control, tectonics etc.

DELIMITATIONS

The thesis aims to design a contemporary wooden building, inspired by classical references, for public debate and freedom of speech. The focus in the thesis will be on the building, its architecture, detailing and purpose. Since the thesis is conducted in the building and tectonics studio, the work will not dig deep into whether or not architecture actually can help to improve debate climate, decrease polarization and defend freedom of speech. Rather, the thesis proposes the building as one of many solutions for the issues concerning debate climate and freedom of speech. The focus and final discussion will concern the quality of the proposed building. The thesis will neither focus on developing new wooden joints or technical solutions but rather investigate historical and contemporary ones to develop further. Eventual future plans by Gothenburg or the city's detail plan for Bältesspännarparken will neither be taken into account for this thesis.

BACKGROUND

Today, the freedom of speech is something that we all take for granted. It gives us the opportunity to express ourselves, our opinions and beliefs, without the fear of retaliation. In a way, this freedom could be seen as the keystone for our democracies, and our ability to grow as a society. The history of this freedom is discussed but it is believed to originate from ancient Greece, which granted its citizens the freedom of speech in certain areas (Weidmo Uvell, 2020). However, the early Greek freedom was still limited, which is clearly exemplified by the execution of Sokrates due to his "heretical" teachings. In the 16th century, the printing press was invented thus leading to the public accessibility of books that we know today. Knowledge was not only something for those who could afford hand written books anymore. The church and the courts of Europe soon realized the problem of this and regulated the rights to print and banished those who did not obey. The story of the Swedish freedom of speech dates back to the mid-18th century and the Tryckfrihetsförordning (Freedom of the Press Act). Since then, the state of this freedom has had both ups and downs until today, where it is almost unlimited.

In recent years however, the state of this freedom has deteriorated. With the introduction of the internet and social media, free speech has never been easier to use. Similar to the printing press, the internet has made information more available and easier to spread for everyone. However, just as the reaction against the printing press, free speech has been facing similar reactions in recent years.Today, free speech faces many challenges, both from private and state initiatives (Weidmo Uvell, 2020). Deplatforming, cancel culture and victimhood culture. Threats towards academic freedom, as well as governments and media trying to control the social media with regulations or laws. On top of this there are the threats from extremist organisations, both political and religious. Most recently exemplified by the murder of a french teacher after a lecture about freedom of speech.

Closely related to the challenges regarding freedom of speech is the deterioration of the debate climate. Today, the internet and its social media could be seen as the main infrastructure regarding debate and discussion. While it has made it possible for people to meet all over the world, it has also created problems and a distance between people with different views. In the long term, this could lead to polarization and distrust between people. The online culture and debate climate also seems to spread into real life, with negative consequences. These trends are quite observable today, exemplified by the recent U.S. election.

This master thesis will try and address some of these problems by providing a public building for the city of Gothenburg. The building aims to provide a safe space, where people can meet each other physically, discuss, listen to or debate different topics and questions. A place where a culture of dialogue can grow and knowledge and opinions can be exchanged. The building will also serve a purpose in itself by showing that we care for this freedom, and that it is something worth protecting. Could architecture in itself solve the problems concerning freedom of speech and debate climate? Probably not, but every opened door is one step closer.

WOOD CRAFT

For many years, concrete, steel and masonry were seen as the main materials when constructing robust urban architecture in Sweden. Strong and durable materials that could withstand the test of time. With the introduction of these materials, wood, the most common material for hundreds of years, was rejected as a cheap material for smaller scales and rural architecture. Examples of this can be seen both in the city and the countryside. In Gothenburg, the workers' housings, the landshövdingehus, were made in wood and often tried to imitate the stone facades with their decorations and forms. All to appear more exclusive and hide the wood. The falu red color was originally used to paint wooden houses with the intention to imitate the continental masonry houses or copper (Falurödfärg, n.d.). Wood was something you covered up for the house to appear more exclusive. During history, the risk of city fires due to wooden buildings was also one of the reasons for the decline and rejection of wood in urban settings.

In recent years however, wood has been on the rise again. Climate degeneration and the need for sustainable materials have sparked a new interest in the versatile material that is wood. Glu-lam has been used since the early 20th century, however mostly in industrial buildings, train stations or sport halls (Svenskt Trä, n.d.). It wasn't until the 1990s, when Austrian researchers developed cross laminated timber, that the boom for wood began once again (Borgström & Fröbe, 2017). Today, wood is the most used structural material in residential architecture in Sweden and the trend continues (Svenskt Trä, n.d.).

In this master thesis, the interplay between contemporary wooden solutions, and traditional architecture will be investigated to create a public building for knowledge exchange, discussion and debate. Traditionally, buildings made for these purposes were often made out of stone or brick.

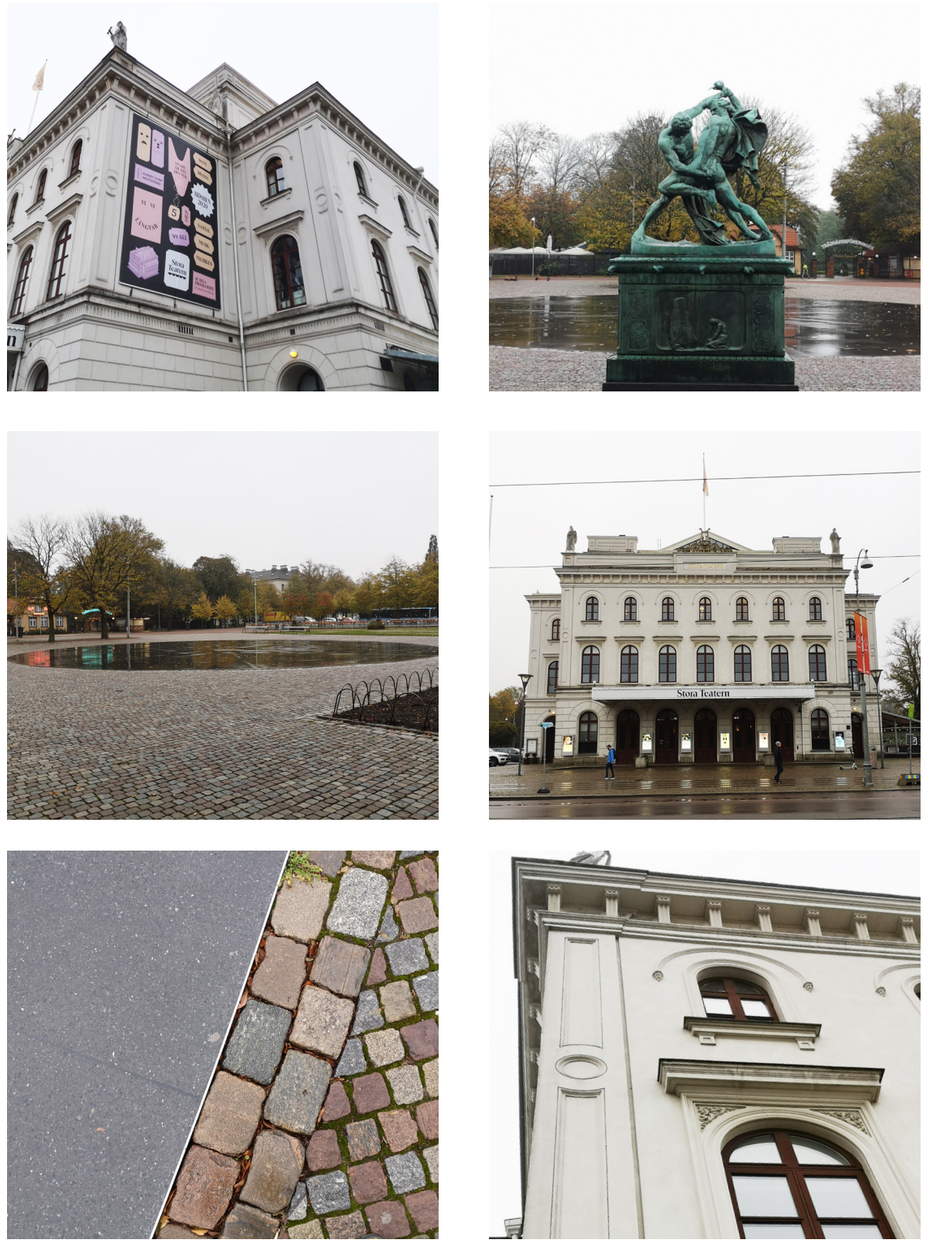
Majestic public buildings with colonnades, porticos, arcades and richly decorated columns and entablatures, all made in different kinds of stone. The origins of these buildings however, begins with the story of wood in greek architecture during the 7th century B.C. (Miles, 2016). With inspiration from vernacular residential architecture, the early greek temples were made almost entirely out of wood. At times, thatch, mud bricks and terracotta were also used to supplement the wooden structure. However, by the end of the 7th century B.C., stone had replaced almost all structural elements of the greek temple, yet the influence of wood lingered on. In Vitruvius book 10 Books on Architecture, Vitruvius argues that many details of the greek doric and ionic orders originate from wooden references (Miles, 2016). The tapered doric columns, the cornices, the architraves, the triglyphs and metopes are all, according to Vitruvius, derivatives from wooden technical solutions . With this in mind, could wood be the natural way to go when reviving this ancient typology? A solution looking both to the ancient times before stone, as well as towards a wooden future.

With many of the classical architectural elements deriving from wooden references, could the natural solution when reviving the greek and roman typology be the use of wood?

SITE ANALYSIS

Bältesspännarparken is an ideal place for a built forum. It is a centrally positioned open site with a relevant and appropriate context. The area works as a connector between the well attended areas inside the moat, and the avenue. Two districts that serve as commercial, business, recreational, administrative and cultural areas. The park at the moment, mostly serves as a forecourt to trädgårdsföreningen. The park in itself has few attractions and the reasons to stay in the park for a longer time are few. The fountain located at the spot is mostly used in the summertime. Before, it was surrounded by a pond and a stone circle enclosing it, which created places to sit. This feature however, was removed in 2013. The rather empty site, with a small architectural context also enables the possibility of a free architectural expression for the new building, without the risk of disturbing the order.

The built forum would be placed as a sister building to the theatre, with its entrance facing the theatres. The scale of the building will be close to the theatres in terms of width, length and height. These free standing buildings would create a "gate" between the area inside the moat and the avenue. The majority of Bältesspännarparken would remain unbuilt, but the green areas could be rearranged to better suit the new buildings and flows. Close to Bältesspännarparken lies Kungsportsplatsen and further up, brunnsparken and Gustaf Adolfs Square. It is not uncommon that these places are temporarily used as speakers' corners or for political manifestation. This could be incorporated into the new plan for Bältesspännarparken, with a space made for these activities.



Bältesspännareparken and the Theatre. (Authors own images).

STORA TEATERN

Southwest of Bältesspännarparken, across Kungsportsavenyn, Stora Teatern is situated. The theatre was built as a replacement for the older Segerlindska Teatern that had become timeworn and eventually burned down in 1892 (Schönbeck, 2004). During this time, the site was located on relatively unbuilt land, outside the moat and on the previous land of the fortifications. However, trädgårdsföreningen, the park northeast of Bältesspännarparken and the new alley had already been constructed some years before (Caldenby et al., 2006). It was built between 1855-1859 and was designed by Bror Carl Malmberg with the help of contractor August Krüger.

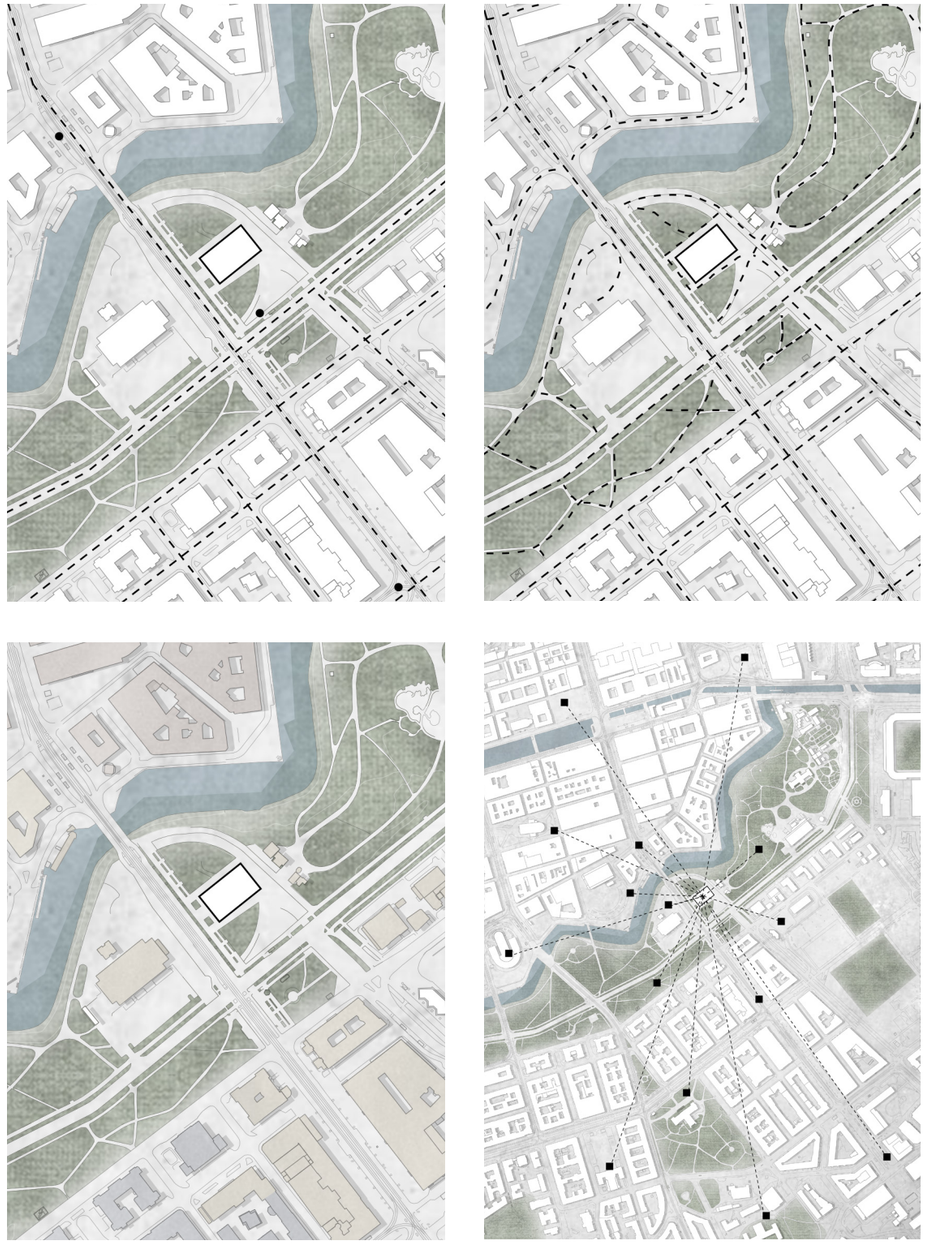
The theatre was designed in a new renaissance style with four stories and a height of thirty meters. It follows the basic principles of the renaissance style with a rusticated bottom floor and round-arched windows that become smaller with the stories. From the second to the fourth floor, the sparsely decorated facade is covered with white plaster, giving it the appearance of a bright lantern in the loomy park landscape. The rather discrete frontispiece entrance is facing northeast towards Bältesspännarparken and is crowned at both ends of the entablement with two statues. Overall, the theatre contains 6350 square meters, spread out over four floors (Stora Teatern, n.d.).

TRÄDGÅRDSFÖRENINGEN & BÄLTESSPÄNNARPARKEN

Trädgårdsföreningen was laid out during the 1840s (Schönbeck, 2004). Just as the later theatre, the park was created on the previous land for the city's fortifications. Victor von Gegerfelt and Heinrich Kaufmann were the head architects for the project that took inspiration from the english gardens. With loomy greenery, natural flows and swirling pathways along the moat. The park contains several buildings. Among these the palm house, inspired by the Crystal Palace, some smaller wooden buildings and a restaurant built in the 1990s (Caldenby et al., 2006). At the southwest entrance, facing the theatre and Bältesspännarparken, a small wooden building, Grindstugan, built in the 1890s is located. Its facade is colored with ochre and decorated with wooden ornaments colored in brown and ochre. Today it serves as a cafe but as the name suggests, it was once used by the caretaker.

Bältesspännarparken is situated in between the theatre and the southwest entrance of trädgårdsföreningen. It is a small park that mostly contains open spaces with grass or pathways of gravel. Trees are placed along in between the walking and bicycling pathways. The middle part of the park is covered with cobblestone and in the centre, a fountain surrounded by dark terrazzo. The unofficial entrance to bältesspännarparken is crowned with a statue by Johan Peter Molin from 1863. The name of the park originates from the name of the statue, in which the two male figures are "buckling belt", an old form of trial by combat.

Site plan 1:5000. Proposed site at Bältesspännarparken.



Top left, Trafic & Public transport. Top right, Pedestrian pathways. Bottom left, Commercial (red), Recreational (yellow), Residential (blue). Bottom right, Close connections.

REFERENCES

The Agora of Athens
Ancient Greece, Athens

Parthenon
Ancient Greece, Athens, Iktinos & Callicrates

Forum Romanum
Ancient Rome, Rome

Curia Iulia
Ancient Rome, Rome

Northwestern National Life Building
United States, Minneapolis, Minoru Yamasaki

Yusuhara Town Hall
Japan, Yusuhara, Kengo Kuma

Won Dharma Center
United States, Claverack N.Y., Hanrahan Meyers Architects

The references chosen for this project are both historical as well as contemporary ones. The proposal's main reference is the greek temple, in this case the Parthenon, which has been used as a foundation for the design. The columns, the peristyle, the politico and the cella are all parts that somehow have been interpreted into a contemporary design proposal. Regarding the Roman Forum and especially the Athenian Agora, these references have mainly been used to understand the space and purpose of it. The stoas located at the Agoras, have been placed inside the building, surrounding an atrium; it is also interpreted and combined with the peristyle. The contemporary references, Northwestern National Life Building, the Yusuhara Town Hall, Wuddhouse1 and the Won Dharma Center have all been helpful tools in one way or another. The construction takes inspiration from the Yusuhara Town Hall while the shading rib facade system is derived from the Won Dharma Center. In conclusion. The historical references have been used both as a tool for understanding but also as a foundation for the design. The contemporary references have mainly been used as a way to translate the historical references into a contemporary, wooden, public building.

THE AGORA OF ATHENS

Location: Greece, Athens

Year of construction: 6th century B.C. (Thompson, 1954)

Architect: Various

Building typology: Public Space

It is estimated that the development of the Athenian Agora started in the 6th century B.C., during the reign of Solon the lawgiver (Camp II, 2015). Located northwest of Acropolis, the Agora was developed for hundreds of years as the centre of public life in Athens. What started as a huge square soon became surrounded and filled with public buildings of different kinds. Market places, workshops, stoas, courthouses, senate halls, concert halls among other buildings. On the south and west side of the Agora, two large stoas defined the square. These huge public buildings were made to offer a shaded walkway for the visitors of the Agora. However, apart from providing shade, the stoas were mostly used as a meeting place. Here people met and discussed various topics. Ranging from philosophy to politics (Camp II, 2015). Zeno, the creator of Stoicism, named by the Stoa, and Platon are two examples of great men of ancient Greece who regularly visited the Stoas to discuss and teach (Camp II, 2015; Thompson, 1954). The stoa itself was an oblong building in various lengths. One long side of the building was made up of an open colonnade in one or several rows, while the other was closed and sometimes offered private rooms which one could reach from the colonnade (Thompson, 1954

Figure 1. Plan of the Athenian Agora. Note. From Plan Agora of Athens Roman. [Drawing], by Tomisti, 2016, Wikimedia Commons. (https://commons.wikimedia.org/wiki/File:Plan_Agora_of_Athens_Roman.svg). CC BY-SA 4.0

Figure 2. The stoa of Attalos in the Agora of Athens. Note. Stoa of Attalos, Ancient Agora, Athens, Greece. [Photography], by Efthimiadis, T., 2009, Wikimedia Commons. (https://commons.wikimedia.org/wiki/File:Stoa_of_Attalos,_Ancient_Agora,_Athens,_Greece_(3966275331).jpg) CC BY-SA 2.0

PARTHENON

Location: Athens, Greece

Year of construction: 448 - 432 B.C. (Fazio, 2008, p.47)

Architect: Iktinos & Callicrates

Building typology: Sacral / Treasury

The Parthenon is perhaps one of the most famous buildings and temples of the ancient world. Located in Athens on the Acropolis hill, it was designed by architects Iktinos and Kallikrates, and constructed between 448 - 432 B.C. (Fazio et al., 2008). Like most greek temples, the exterior consists of a colonnade surrounding the solid walls inside. The exterior measures eight columns wide and seventeen columns long. In its design, the parthenon incorporates many features to deceive the eye and create a perfect perspective for the viewer. For instance columns gently leaning inwards and a convex platform (Fazio et al., 2008). The parthenon, as well as other roman and greek temples, came to be the symbol and the face of a public building. The eastern facade of the parthenon can be seen as an obvious reference in a vast amount of buildings during the second millenium B.C. The white house, the Capitolium, the Gothenburg city hall or the Finnish parliament house among others. The thing that makes the greek temple, in this case the Parthenon, so special is its sense of welcomingness. It is a free standing solitaire with lots of open space surrounding it. It is placed to quickly attract the eye of the visitor and the colonnade surrounding it also helps to create a welcoming and open feeling. It is a building that wants people to visit it and enjoy its shaded colonnades.

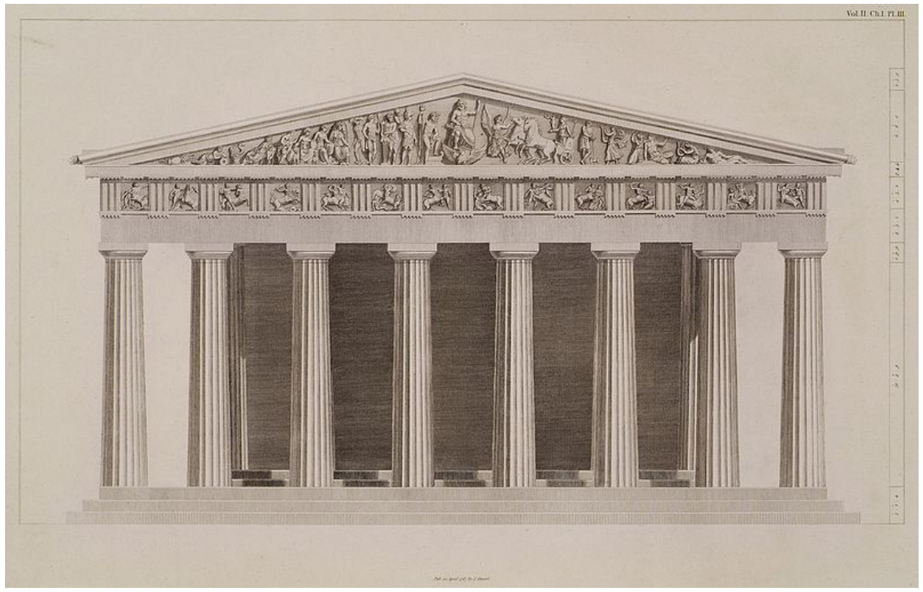


Figure 3. Parthenon facade drawing. (Stuart & Revett, 1794). Public Domain.

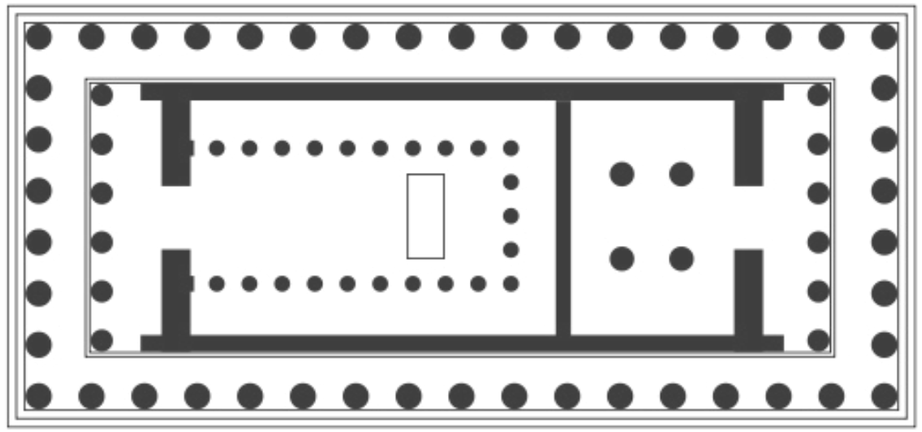


Figure 4. Parthenon plan drawing. (Argento, 2006). Public Domain.

FORUM ROMANUM

Location: Rome, Italy

Year of construction: ~ 700 B.C. - ~700 A.D. (Claridge, 2010)

Architect: Various

Building typology: Public Space

During the days of the Roman republic, the Roman Forum was the heart of the city. Not just physically, but also in practice (Favro, 1988). Just as the Greek Agoras, the forum was an open public space where people traded, socialized, teached and learned and debated. During the democratic republic, the forum played its major role and was the main gathering point for public debates and speeches (Favro, 1988). As a large, free, open space, its boundaries defined by majestic buildings, the forum symbolized democracy and the free citizens' possibility of public speech and debate. Votings, lobbyings and debates all took place outside. Everything was transparent to the public. However, when the republic fell and became an empire, the Roman Forum drastically changed. The debates and votings moved inside closed doors and the once large open space slowly transformed into a denser imperial forum, its original role now outplayed. Overall the forum consisted of many different buildings, both of scale and function. Basilicas, curias, open forums, temples and treasuries. Similar to the Athenian temples and stoas, the forum consisted of temple-like buildings, open spaces surrounded by colonnades offering shade and the huge basilicas with it's typical style that later came to be the church template (Favro, 1988) .

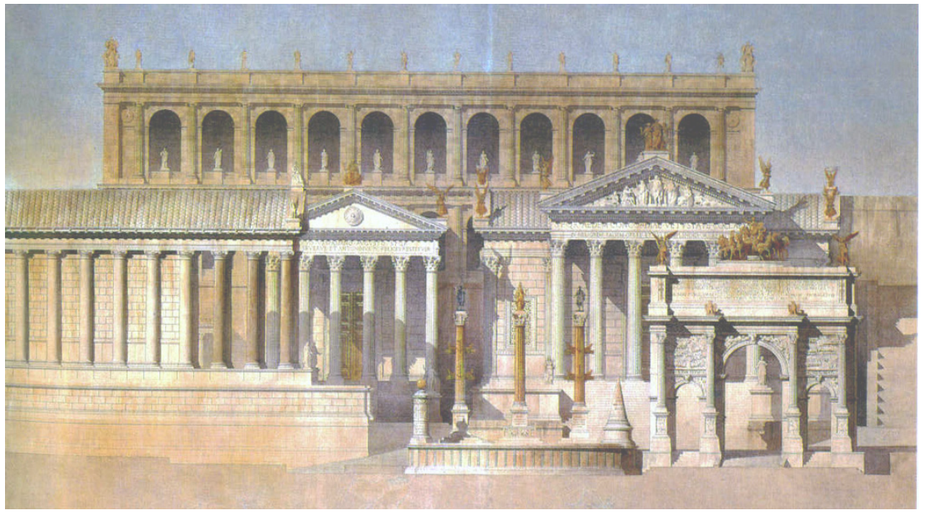


Figure 5. View on the Forum Romanum (Moyaux, 1866). Public Domain.

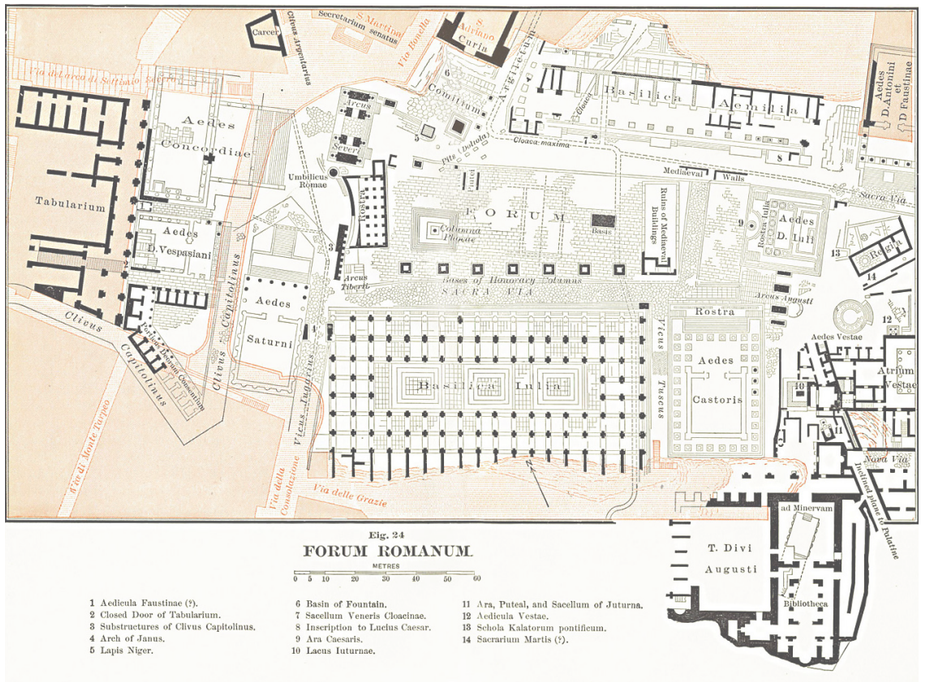


Figure 6. Plan of the Forum Romanum. (Platner, 1904). Public Domain.

CURIA IULIA

Location: Rome, Italy

Year of construction: Finished 29 B.C.

Architect: Unknown

Building typology: Government

The Curia Iulia is located in the Roman Forum, close to the Basilica Aemilia (Fazio et al., 2008). It was finished in 29 B.C. by emperor Augustus, however the construction was started by his Uncle Julius Caesar (Claridge, 1998). The curia is designed with a rectangular plan and is as high as it is wide. The entrance was crowned with a single row corinthian colonnade, serving as an anteroom to the senate hall which could fit the three hundred senators. The senate hall itself was richly decorated and the senators were placed on the long sides of the room, in three levels. Each level not higher than a step, but high enough to offer a better view for the people in the back rows (Claridge, 1998).

The rectangular shape of the room meant that the senators were placed in two camps, facing each other. A modern example of this would be British parliament which is designed in a similar way. This creates an obvious division between the people debating, a black and white design, where the circular theatre shape would perhaps offer more shades of grey in between. Nevertheless, the Curia was used for many hundreds of years and serves as one of the first and most used spaces for debate in history (Claridge, 1998).

Figure 7. The interior of Curia Iulia. (Authors own image).

Figure 8. The exterior of Curia Iulia. (Authors own image).

NORTHWESTERN N.L. BUILDING

Location: Minneapolis, United States

Year of construction: 1965

Architect: Minoru Yamasaki

Building typology: Office

Planned and constructed between 1961-1964, the Northwestern National Life Building was designed by Minoro Yamasaki (SAH, 2020). It is located in central Minneapolis and has since its opening served as an office building. With its slender columns and arches, inspired by roman and greek temples, it clearly stands out as a focal point in the otherwise high rise area. The building consists of sixty three columns rising twenty four meters high. On top of this, a thin roof resembling a simplified cornish. Much like a greek or roman temple, the entrance is retracted from the portico of the northwestern facade. The portico serves both as an anteroom to the lobby, but also as a shaded part of the park in front of it. The inspiration for the building is fairly obvious, however in this case, the classical orders and rules have been disregarded to create a modern version. It follows the same symmetrical and repeated sequences, however the basic elements have been simplified and slimmed down. Thanks to reinforced concrete, the columns have been made taller and slimmer. The bent, upside down, pyramid capitals connect to each other to form pointed arches in between each of the columns. Just as the greek and roman models, the columns, the arches and the beams serve as the main elements to create tectonic architecture.

Figure 9. The Northwestern National Life Building. Note. DSCN5365. [Photography], by ya3hs3, 2011, Flickr. (https://www.flickr.com/photos/ya3hs3/5592439420/) CC BY-NC-SA 2.0

YUSUHARA TOWN HALL

Location: Yusuhara, Japan

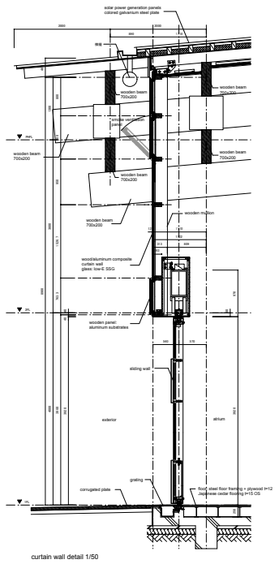
Year of construction: 2006

Architect: Kengo Kuma

Building typology: Town hall

Finished in 2006, the Yusuhara town hall was designed by Kengo Kuma and associates (kkaa, n.d.). It is located in the small town of Yusuhara, a town that traditionally has been using wood as its main material for urban development.

It's main feature is the large atrium, serving as a town square for different purposes. The construction is inspired by traditional japanese wood (cedar) construction. Puzzling with posts and beams creating not only a functional structure, but also a beautiful, tectonic architecture. The posts are split into four smaller ones. In between the gaps, beams are secured in several layers and in two directions. The atrium span is eighteen meters long, but thanks to Kumas' way of handling the construction, the roof structure feels elegant and the structure visualizes the excellence of this building method. It showcases the beauty of wood, simply by dividing it into smaller parts, while at the same time creating a robust structure.



Left: Figure 10. Wall section (KKAA & Fujitsuka, 2020) Reprinted with permission.
Right: Figure 11. Glulam columns/beams (KKAA & Fujitsuka, 2020) Reprinted with permission.

Figure 12. Yusuhara Town Hall (KKAA & Fujitsuka, 2020) Reprinted with permission.

WON DHARMA CENTER

Location: Claverack, NY, United States

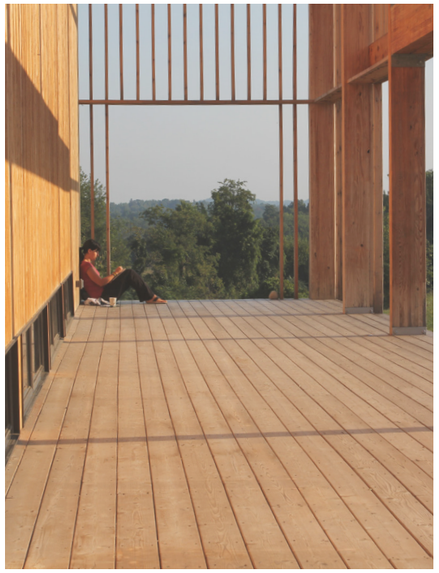
Year of construction: 2007-2011

Architect: Hanrahan Meyers Architects

Building typology: Sacral

The Won Dharma Center is a buddhist retreat center located in Claverack, NY, in the United States. It was finished in 2011 and designed by Hanrahan Meyers Architects. Situated in a beautiful surrounding, with creeks, forests and fields, it consists of five buildings with different purposes (Hanrahan Meyers, n.d.). Three of them are for temporary and permanent residents, while the other two are for meditation and administration. The meditation building is also the main building of the retreat. This building is constructed entirely out of wood, in this case glulam beams and posts. It is a quite simply volume, a cuboid with openings and voids of different sizes. The facades are mainly covered with thin wooden studs placed with some distance to the other. This makes the building feel light, and connected to the surroundings. The building also has "colonnades" on three sides, almost like a greek temple, with different openings, sizes and sun protection features. The detailing is quite straightforward. The wooden construction and the sun shadowing features are the main focal point regarding the architectural language. Overall it has a sacral feeling over it and is clearly inspired by ancient sacral references. However, in this case it has been done with contemporary wooden architecture.

Figure 13. Won dharma center exterior. (Won Dharma Center, 2020). Reprinted with permission.



Left. Figure 14. The peristyle. (Won Dharma Center, 2020). Reprinted with permission.
Right. Figure 15. The ribbed wooden facade. (Won Dharma Center, 2020). Reprinted with permission.

DESIGN PROPOSAL

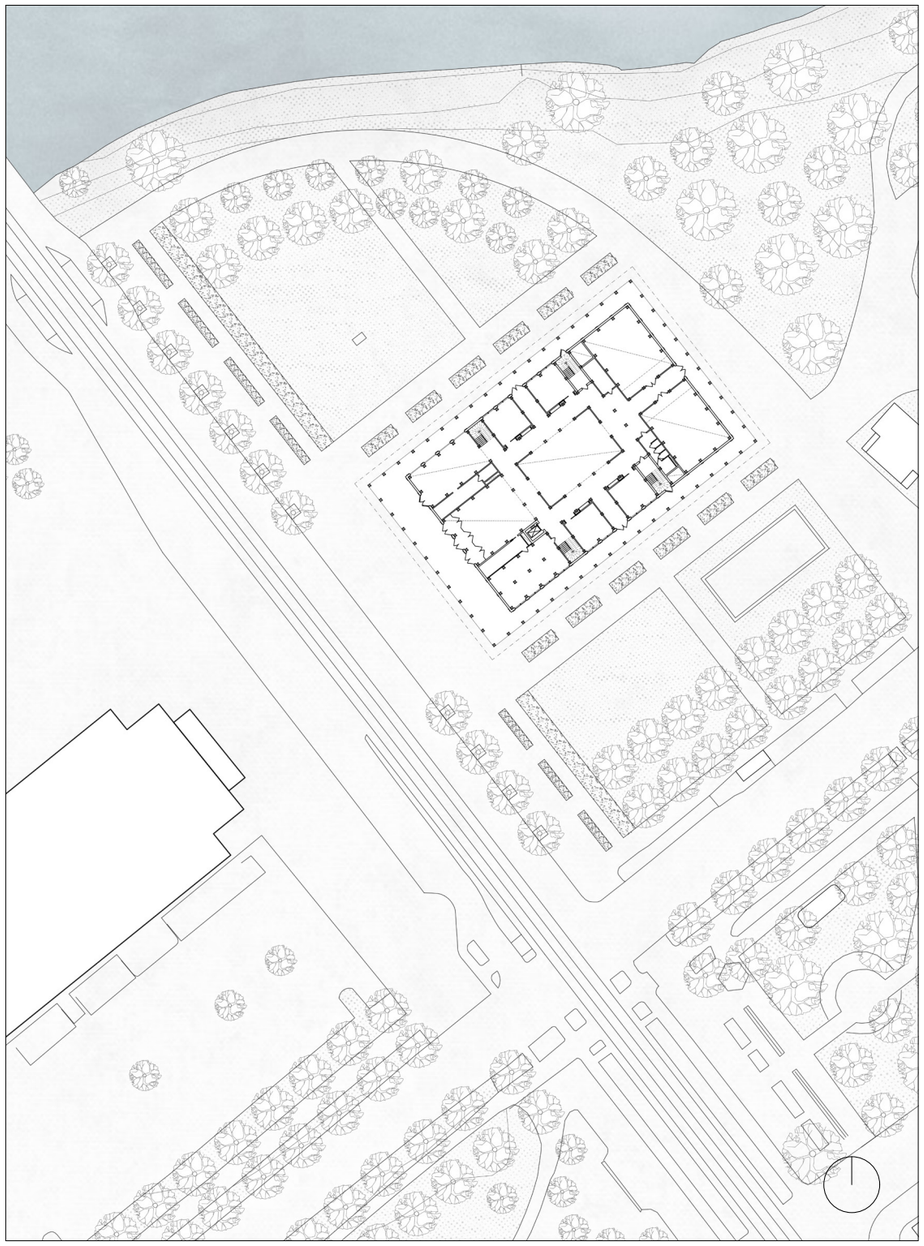
The basic form and structure of the proposal is heavily inspired by the greek temple, in this case the Parthenon, using it as an archetype for a public building. It is placed in the opposite direction of the theatre across the street, creating a balance at the site with one solitaire on each side of the Avenue. The purpose of the building is to serve as a local space in Gothenburg, dedicated to democracy, free speech and simply the joy of discussion and debate. The proposal is designed with a guiding grid system made up of glulam beams and columns in a three times three meter grid. Surrounding the building shell is a colonnade or peristyle, which offers a shaded walk but also a clear entrance portico to the interior of the building, clearly referring to the peristyle of a temple. The shaded portico leads the visitor to the large, two story main entrance lobby which continues into a corridor surrounding an atrium. The two story atrium offers light to the core of the building but also serves as the heart to which everything is connected by the corridor surrounding it. Along the atrium colonnade walk, smaller meeting rooms are placed, both on the ground and first floor, which can be used by the public for meetings, discussions and debates. Small benches incorporated into the wall are placed outside each of this room, offering a nice, shaded view towards the atrium. Further north, larger auditoriums are placed. These two story high spaces can be used for larger gatherings such as lectures, public debates or panel discussions. First floor balconies also offer extra audience space for these rooms.

The facades are designed to create a sense of balance and harmony to the large building. Due to the issues of privacy for the meeting rooms, a wooden rib system has been used to shield these rooms. The entrances and more general spaces are transparent with large tall windows,

while the smaller windows and enclosed walls are fitted with a wooden rib system. Together with the exterior columns and pilasters, this system also creates a level of detailing, rhythm and a play of shadows in the facade. The structure is made up of a glulam column and beam system placed in a three times three meter grid. The glulam column consists of four smaller ones (140x140mm) with a spacing of 140mm in between. Due to the height of the columns, horizontal supports are placed along the vertical length of the column to support it against bending. The glulam beams (140x315) are fitted in the columns gap in two or several layers perpendicular to each other, depending on the dimension of the span. Larger spaces, such as the entrance, use four four layers of beams placed perpendicular, while smaller spaces use two or one. Overall this system serves as the main architectural expression of the building, and is always visible, both inside and outside. The spacing in the column creates a relief and shadow, while the intersection of column/beams creates the capital of the column.

The area surrounding the building has been carefully transformed with the park's current layout as a foundation to build up on. The northwestern and southeastern parts of the park have been enlarged and slightly reshaped with better green spaces, more trees and a pond. Two pathways are placed on both sides leading into the two side entrances of the building. The entrance of Trädgårdsföreningen has been slightly pushed southeast to enable a sight line from the street and a clear path by the southern colonnade of the building.

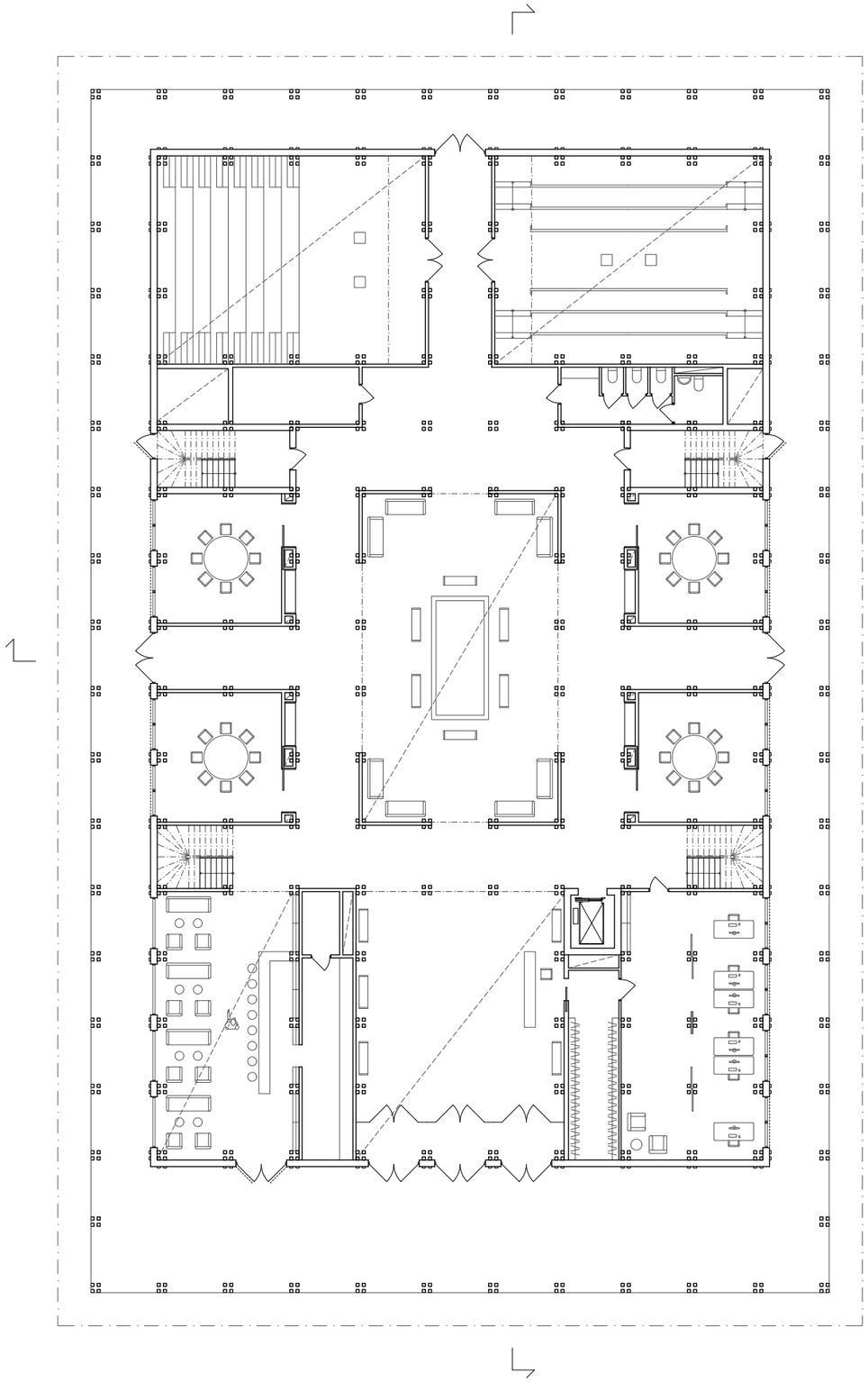
QUANTITY	ROOM	AREA	TOTAL AREA
1	Lobby	110 sqm	100 sqm
1	Reception	6 sqm	6 sqm
1	Wardrobe	20 sqm	20 sqm
1	Back office	78 sqm	78 sqm
1	Staff conference	19 sqm	19 sqm
1	Staff area	59 sqm	59 sqm
1	Staff changing room	14 sqm	14 sqm
1	Staff RWC	5 sqm	5 sqm
1	Bar	12 sqm	12 sqm
1	Bar seating area	66 sqm	66 sqm
1	Bar mezzanine/library	32 sqm	32 sqm
1	Preparation/Kitchen	21 sqm	21 sqm
1	Kitchen storage	5 sqm	5 sqm
8	Meeting rooms	33 sqm	264 sqm
2	Auditoriums	130 sqm	260 sqm
1	Atrium	132 sqm	132 sqm
2	Storage	15 sqm	30 sqm
2	RWC	5 sqm	10 sqm
6	WC	1,2 sqm	7,2 sqm
2	Restroom	9 sqm	18 sqm
1	Communication	682 sqm	682 sqm
1	Basement/Technical	716 sqm	716 sqm
			TOT: 2566 sqm
	EXTERIOR		
1	Portico	190 sqm	190 sqm
1	Peristyle / Stoa	338 sqm	338 sqm
			TOT: 528 sqm



0 50m

SITUATION PLAN 1:11000

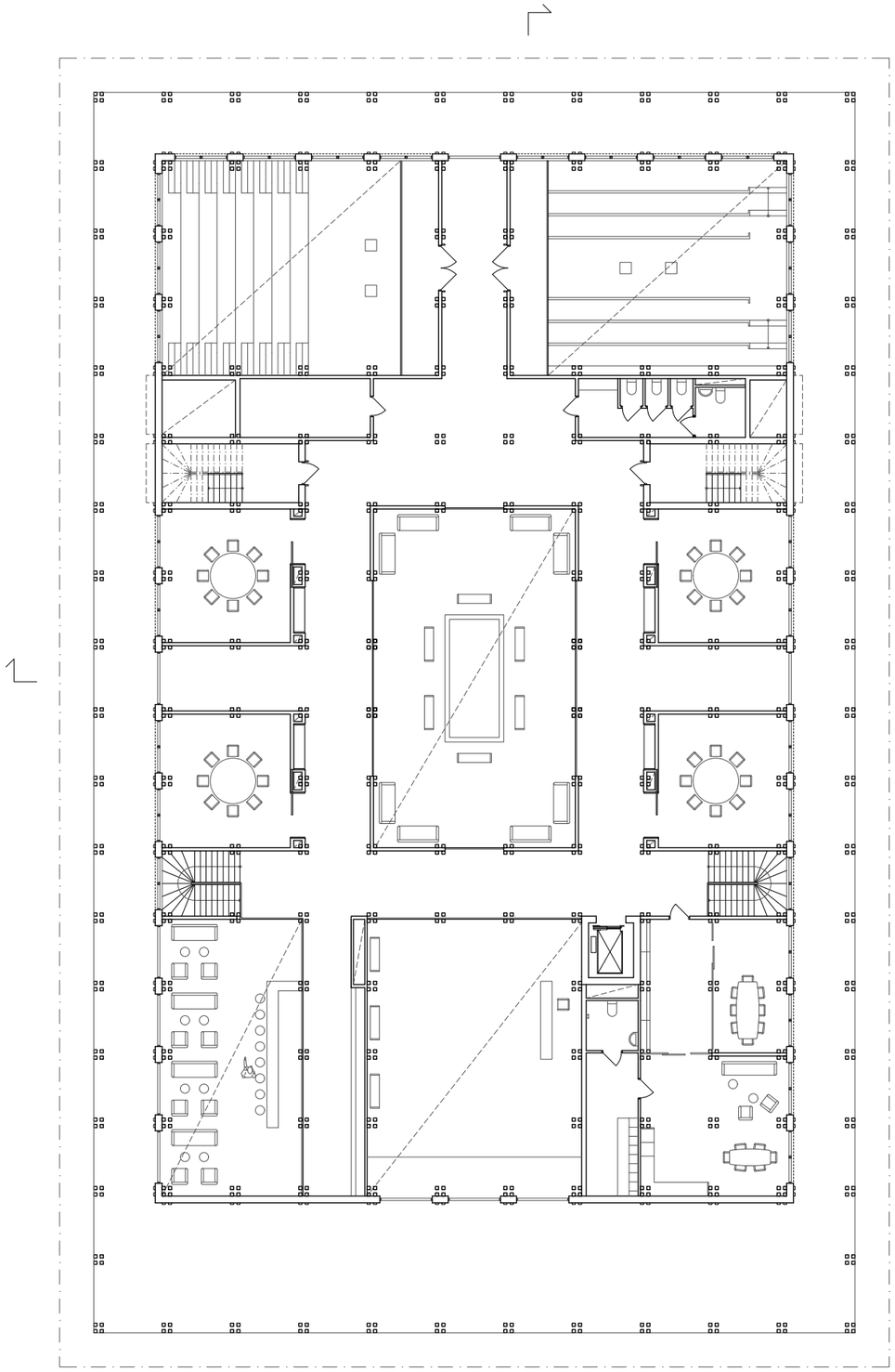
SECTION 1:1000



0 2,5 5 7,5 10m

GROUND FLOOR PLAN 1:250

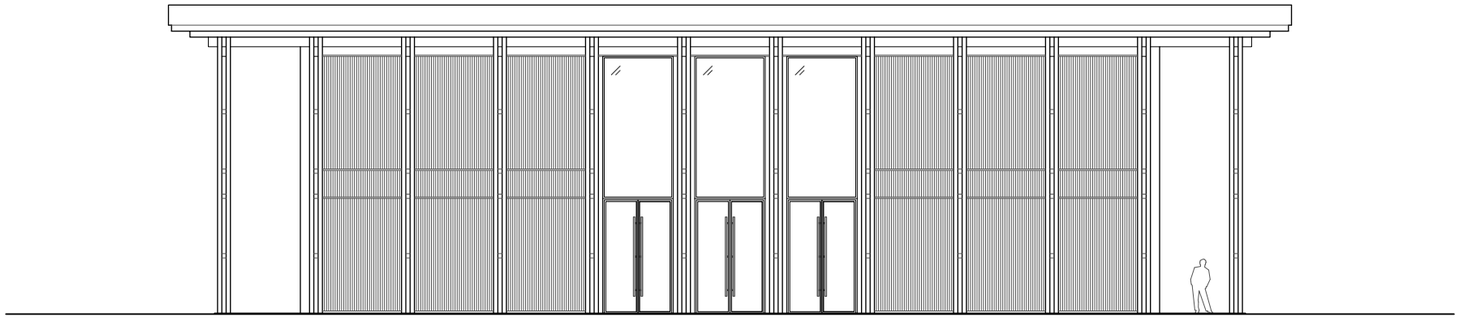
BAR / MEETING ROOM

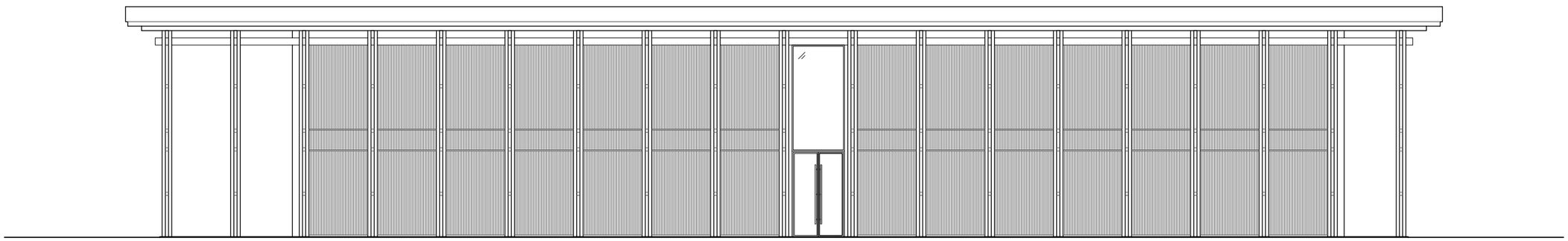


0 2,5 5 7,5 10m

FIRST FLOOR PLAN 1:250

VIEW TOWARDS TRÄDGÅRDSFÖRENINGEN

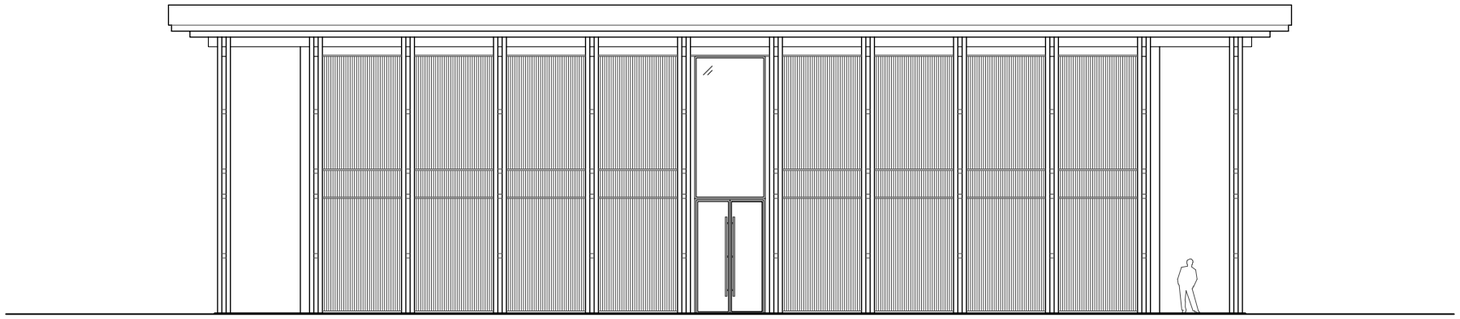


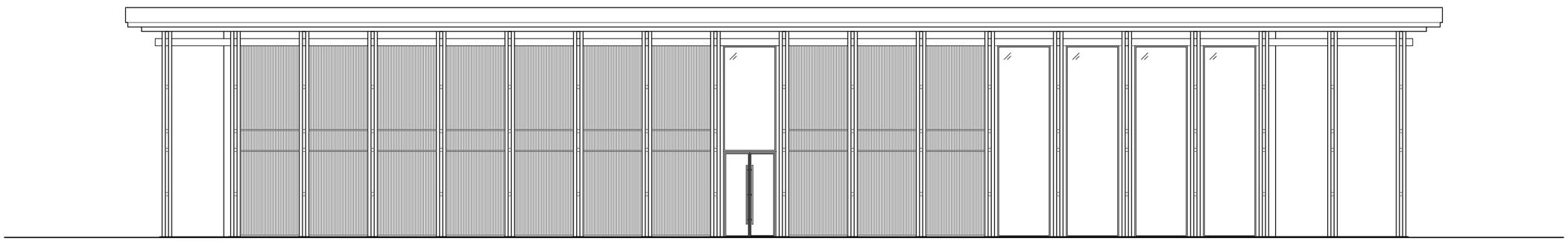


0 2 4 6 8 10m

SOUTH FACADE 1:200

EAST FACADE 1:200



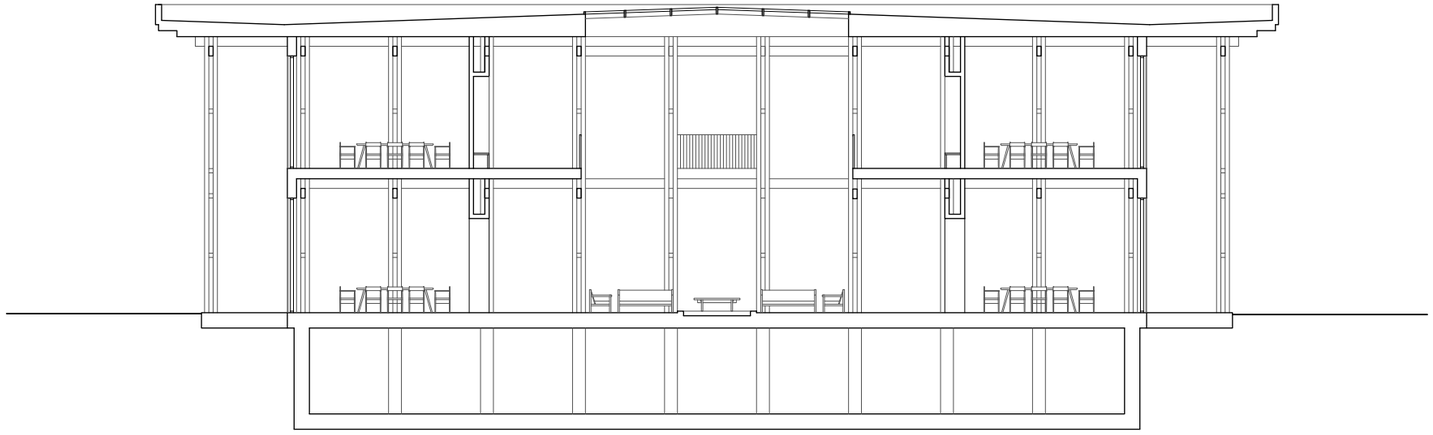


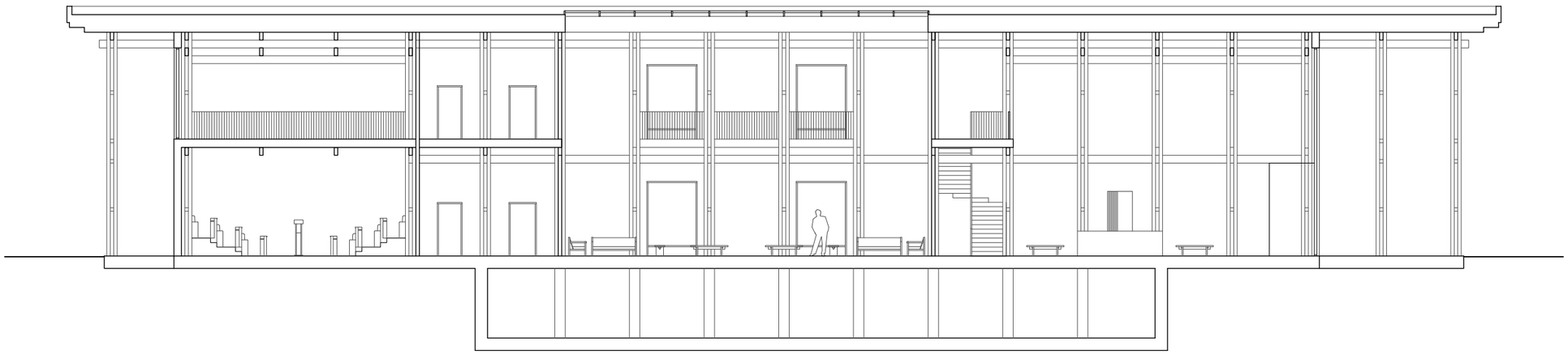
0 2 4 6 8 10m

NORTH FACADE 1:200

WEST FACADE 1:200


Stora Teatern
Stora Teatern

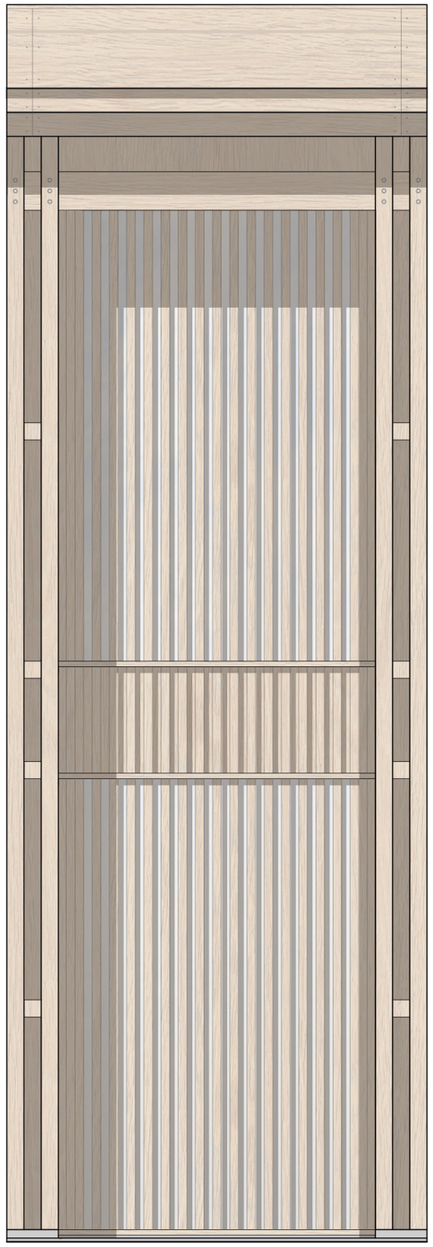




0 2 4 6 8 10m

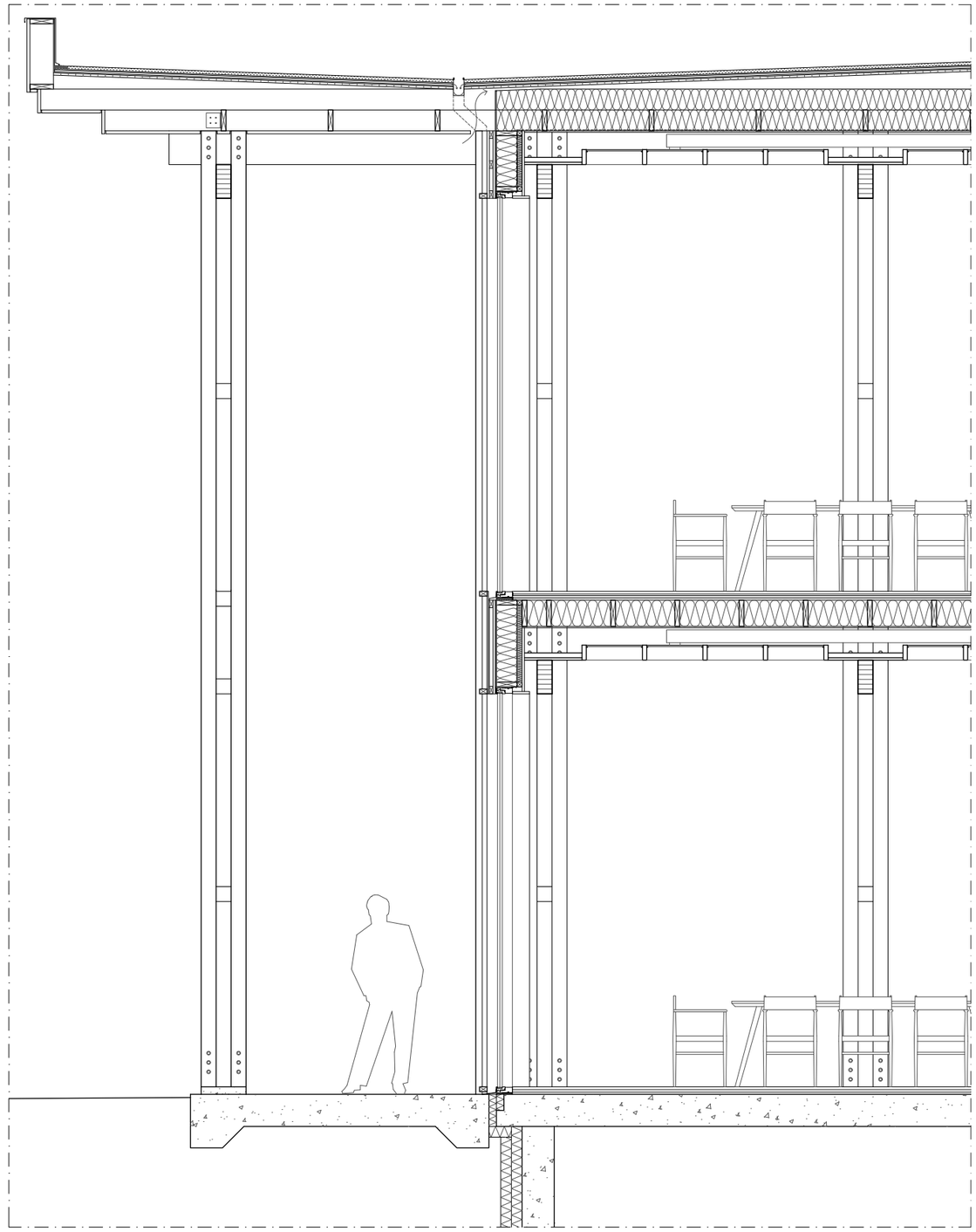
SECTION SOUTH/NORTH 1:200

SECTION EAST/WEST 1:200



0 0,5 1 1,5 2 2,5m

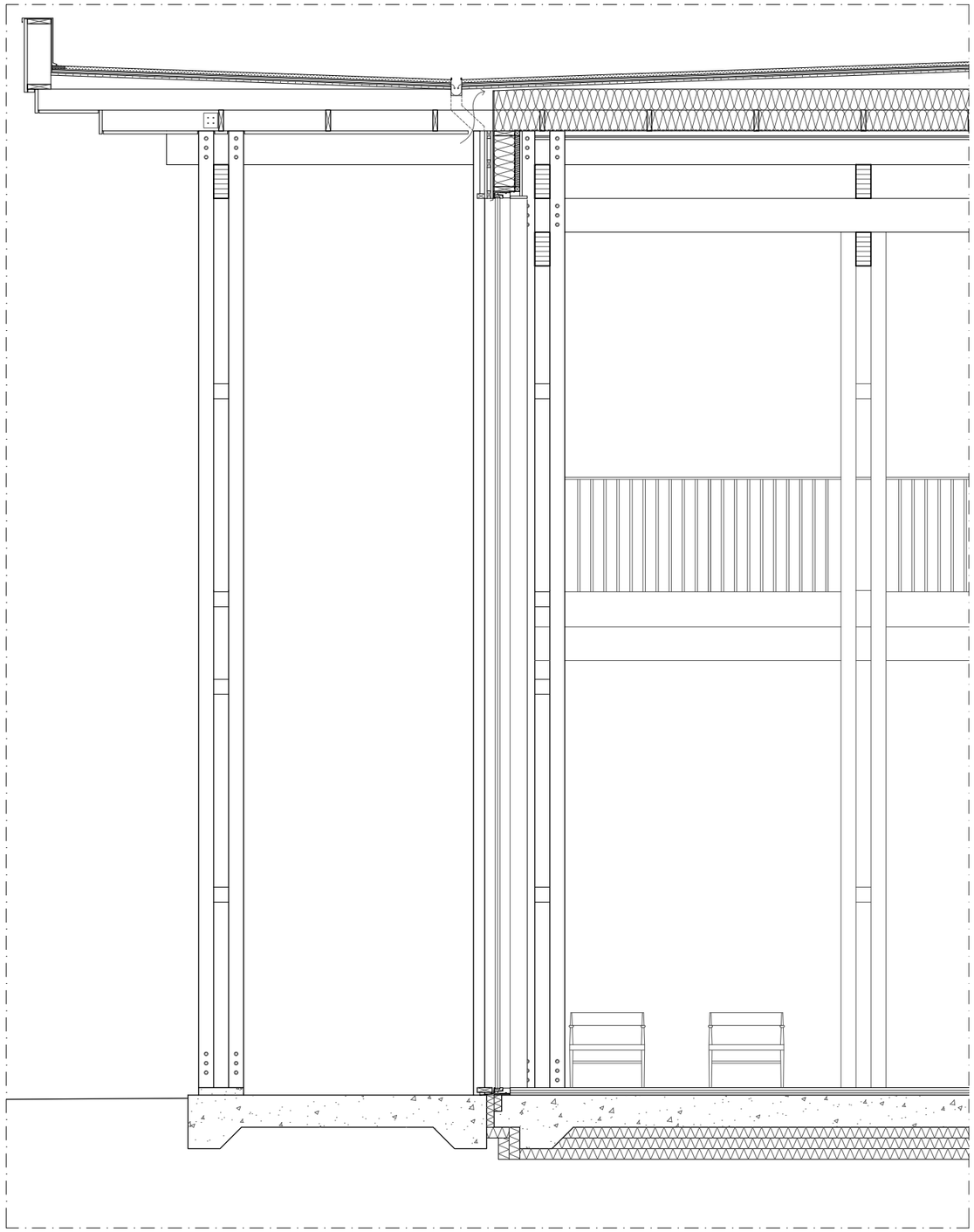
FACADE DETAIL I 1:50



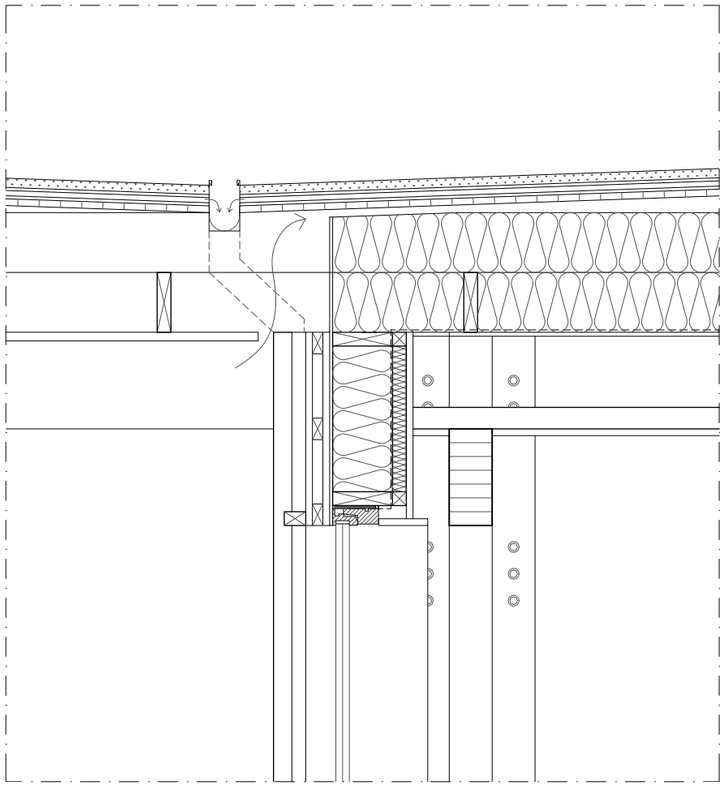
DETAIL SECTION I 1:50

0 0,5 1 1,5 2 2,5m

FACADE DETAIL II 1:50



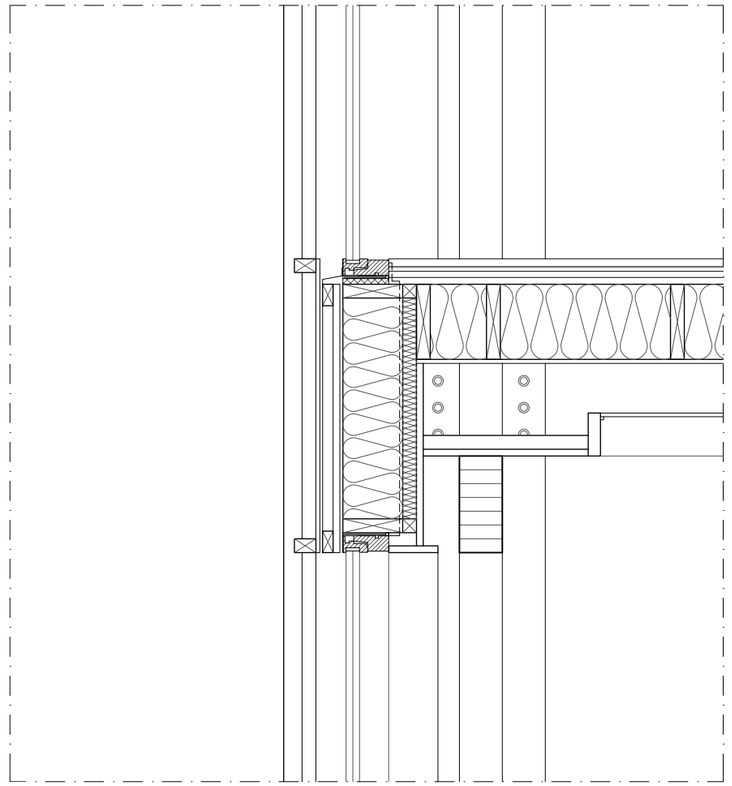
DETAIL SECTION II 1:50



ROOF CONSTRUCTION

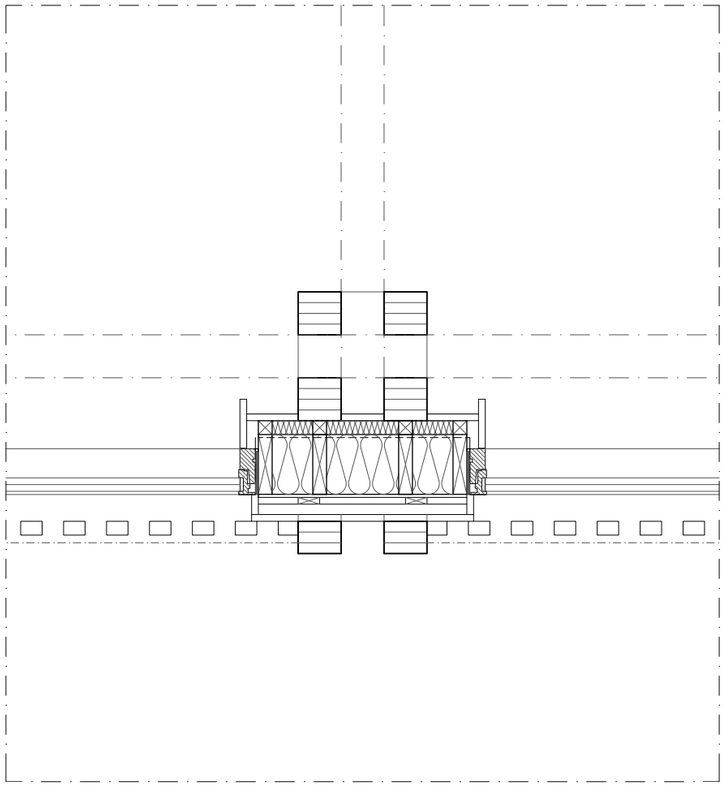
30 VEG TECH MOSS-SEDUM
10 VT-CARPET
17 XERODRAIN
10 WATER RESISTANT SHEET
1 UNDERLAY ROOF PAPER
22 GROVED BOARD
30 AIRGAP
195 JOIST/INSULATION
195 JOIST/INSULATION
VAPOR LAYER
12 GYPSUM
315X140 GLULAM BEAM / INSTALLATIONS / INTERIOR CEILING

0 0,2 0,4 0,6 0,8 1m



WALL CONSTRUCTION

420 GLULAM COLUMNS
22 WOOD PANEL
45 JOIST/INSULATION
1 VAPOR LAYER
195 JOIST/INSULATION
10 WIND BOARD
28 BATTENS
34 AIRGAP/BATTENS
22 WOOD PANEL
105 GLULAM COLUMN



WALL CONSTRUCTION

420 GLULAM COLUMNS
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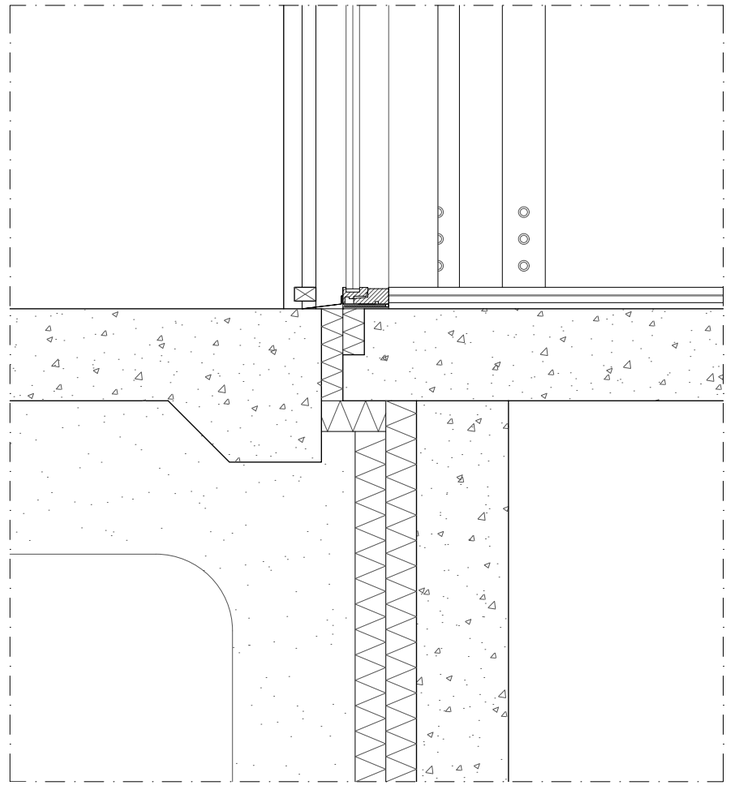
28 BATTENS
34 AIRGAP/BATTENS
22 WOOD PANEL
105 GLULAM COLUMN

0 0,2 0,4 0,6 0,8 1m

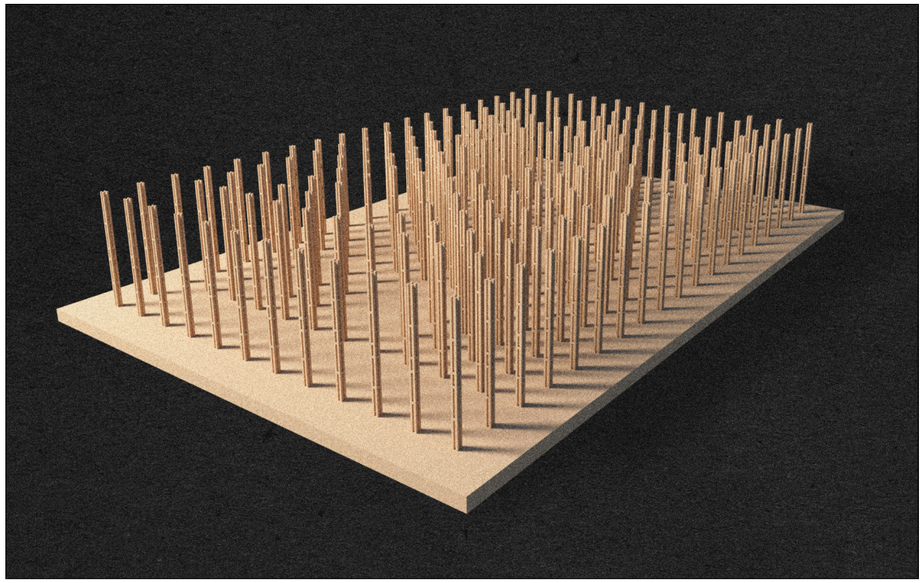


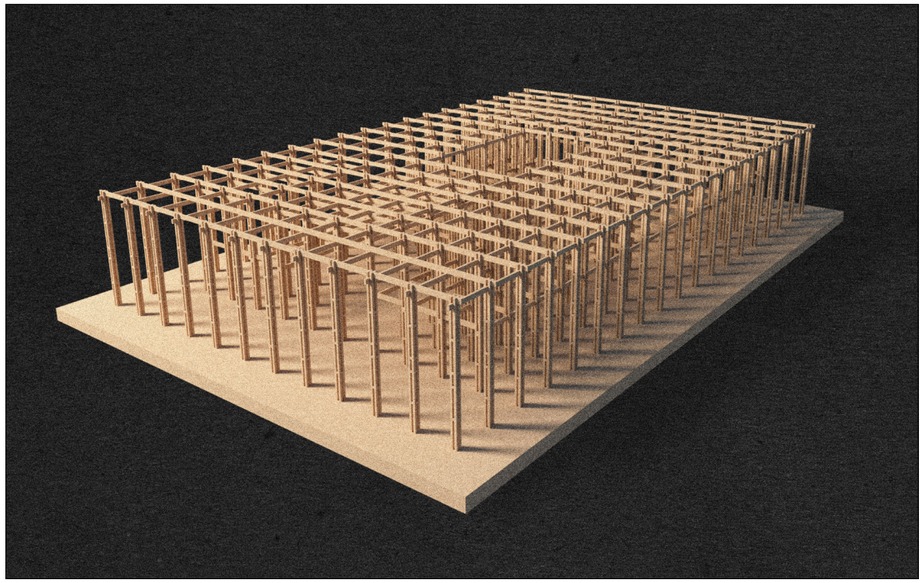
FLOOR

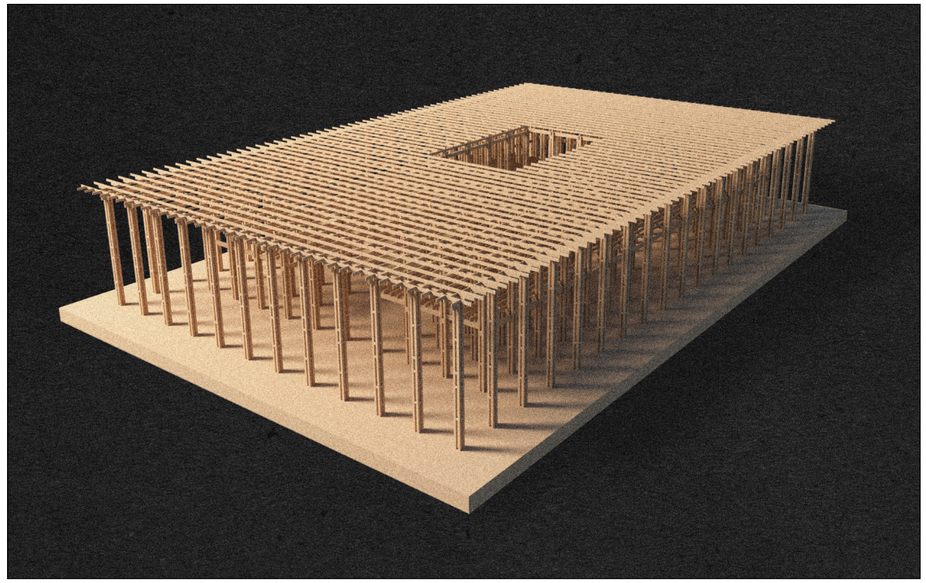
25 PINE FLOORING
3 UNDERLAY FOAM
22 FLOOR CHIPBOARD
20 IMPACT SOUND INSULATION
VAPOR LAYER
300 CONCRETE

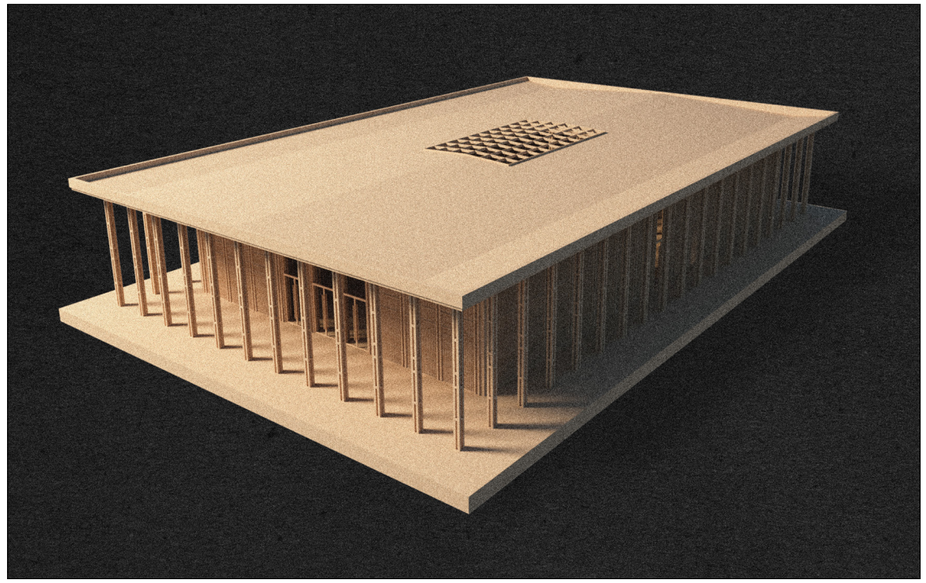
WALL

300 CONCRETE
200 INSULATION









DISCUSSION

This master thesis aimed to answer the question of how a traditional, freestanding, public building could be translated into a contemporary, wooden building made for public debate. Originally, the idea was to focus more on the theoretical parts concerning free speech and debate. However these subjects would have led the project further away from built reality and more focused on the theory itself. Free speech and debate thus came to be investigated as a purpose for the thesis, rather than the aim of it, presenting it as background theory and focusing more on the building itself.

A major part of the thesis was to investigate historical references, thus connecting to one phrase of the research question; "A traditional, freestanding, public building". What is a traditional, freestanding, public building? In the end and after consultation, the definition of this came to be what could be considered as an archetype of a public building, the greek temple. In this thesis, Parthenon was chosen as a main reference to symbolize the traditional, freestanding public building. Together with the Agora of Athens (specifically the Stoas), Forum Romanum and the Curia Iulia, the main historical framework for the thesis was drawn. The foundation of the new proposal was the parthenon, with parts and spaces of the other references put on top of this foundation.

With the choice of a wooden construction, the aim was to create a structure that would be inspired by the classical orders and match its beauty. Some of the classical components were used and translated in a way, such as the column, the capital and the entablature. While some of the components were left out, the base and the roof.

Due to the different properties of wood versus stone, the proportions are also changed even though some classical proportions have been used throughout. The main structure of the building was inspired by the works of Kengo Kuma, a Japanese architect who works with the wooden structure as a piece of art. This was also the aim for this thesis. To create a wooden structure with good structural properties, beautiful enough to stand on its own thus serving as the main architectural expression of the building, interior as well as exterior. The column was divided into four with a spacing in between them, creating a relief and shadow in the column. This also enabled the beams to be placed inside the column in several layers perpendicular to each other. The beams placed on top and perpendicular of each other inside the column created the capital of the column, while at the same decorating the interior ceiling.

Regarding the nature of this public building, the aim was to create a place for debate and free speech, where the culture of dialogue can grow. The stoas of Athens were incorporated into the interior as smaller rooms around an open space or square, the atrium. Places both for planned as well as unplanned meetings and discussions, a public space. Due to the nature of the rooms, were one might want some kind of privacy, the design of the facades become tricky due to the contradicting factors of privacy and openness. A lot of work were put into this to create facades that still felt transparent and public while at the same time creating an interior semi privacy, sun shading and an aesthetically pleasing and harmonized facade. The wooden rib system in front of these rooms creates a level of detailing for the facade, with shadows playing. At the same time it creates a rhythm together with the exterior

Cont. Discussion

colonnade and the pilasters closely referring to the greek temple. With the more general and open spaces of the building, I tried to blur the feeling of inside contra outside, with large windows and lots of light. Contrasting to the meeting rooms and auditoriums and thus trying to connect to the public space of Agora, with open and enclosed spaces.

Overall this master thesis work has been a very challenging and enriching process. The work of translating a traditional, freestanding, public building was certainly made harder by choosing wood as a structural material, due to its different properties versus stone. However, it proved to be very fun and it also enabled a freer mindset than choosing stone would have done. I hope that anyone reading this will enjoy the thesis as much as I did, without having any prior knowledge about the subject.

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Figure 10, 11, 12. From Kengo Kuma and Associates. (2020). Yusuhara Town Hall. [Photography & Drawing] Reprinted with permission.

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