

# portfolio

& cv

Ellen Heikkilä  
Architect

2024

## In this portfolio

### CV

Library in Toyosu, Tokyo

Aalto University, Spring 2021  
Advanced Building Design Studio

Hus Rapia

Aalto University, Autumn 2021  
Construction documents (Rakennusten toteutussuunnittelu)

Sörnäisten Kruununmakasiini

Aalto University, Autumn 2021  
Building Conservation, studio

Porin lyhytaaltoasema

Aalto University, Spring 2021  
Historical survey

Measurement drawings

Strömfors iron works, 2023 & 2024

Vuosaari C Bioenergy heating plant

Completed in 2023, Helen Oy

Hanhikivi nuclear power plant

Cancelled, Fennovoima Oy

Art & graphics

2015—2022

# Ellen Heikkilä

Contact:  
ellen.hei@gmail.com  
+358505321563

## Architect & communicator

I am an architect, an information junkie with a knack for problem solving. I am proficient at **architectural drafting** (from big scale to small detail), **3D-modelling (CAD, BIM)**, and can also create **visualisations & miniatures**. I have worked mainly with Revit but am fast at mastering different software. I enjoy teamwork, but I also work well alone.

<b>education</b>	<b>Master of Science (Architecture)</b> Aalto University, GPA 4.2 (out of 5.0) Masters thesis: <i>Contemporary posthumanist discussions in architecture: a critical analysis</i> Other foci: restoration, theory and building design		Chairperson, Aalto-yliopiston Arkkitehtikilta ry Graphic design, freelance, various projects Kipsari Oy, board of directors Campus/architecture guide at Aalto University Member and chairperson of Youth Committee at Tekniikan Akateemiset Member of AYY representative council, active in my own group's leadership and the council's committees Graphic design for Teknologiföreningen, incl. layout of four issues of their member magazine per year Board member, editor in chief of Paperi-magazine at Arkkitehtikilta	2018 2018— 2022— 2017—2022 2019—2020 2016—2021 2016, 2018 2017
	Studies Hanken School of Economics			
	<b>International Baccalaureate</b> Diploma programme (37p.) Helsingin Suomalainen Yhteiskoulu			
<b>experience</b>	<b>Project manager</b> Aalto University student union (AYY) <ul style="list-style-type: none"><li>· managed contact with the developer and other stakeholders in a construction project with an exceptionally challenging project stakeholder structure</li><li>· coordinated and negotiated all aspects of construction design of the 4000+ sqm community building</li><li>· researched, mapped and analysed spatial needs of the Aalto-community</li><li>· communicated and reported internally, held multiple orientation trainings about the project and weekly internal meeting</li></ul>	2022—2024	<b>software</b>	Revit, professional Autodesk, good Archicad, moderate Rhinceros, familiar Microsoft 365: user-side professional skills as user at mostly Sharepoint, Word, Powerpoint, Excel, Onenote, Outlook Adobe creative suite: professional with Ps, Ai and Id Google products
	<b>Architectural assistant</b> Virkkunen & Co architects <ul style="list-style-type: none"><li>· created finished construction and permit documents on all levels of architectural design</li><li>· did complex modelling and visualisation work in challenging industrial and smaller scale projects</li><li>· collaborated on large scale industrial projects with diverse professionals, e.g. Hanhikivi nuclear power plant, Helen oy Vuosaari bioenergy heating plant, HSY sorting station in Kivikko</li></ul>	2020—2022	<b>language</b>	Swedish (native) Finnish (native, second language) English (fluent, strongest academic language)  Rudimentary skills in: French, Russian
	<b>Member of the executive board, full time</b> Aalto University student union (AYY) <ul style="list-style-type: none"><li>· developed sustainability practices in our 14 000 -member community, created our first sustainability guidelines &amp; coordinated our sustainability reporting</li><li>· advocated for accessible and student-friendly campus development in Aalto University steering groups &amp; with the City of Espoo</li><li>· developed the long-term real-estate strategy (2000+ student apartments)</li></ul>	2019	<b>Skills</b>	Project management, meeting & workshop facilitation, strategy work, visual design, graphic design, layout design, sustainability process development, research, interviewing, communication, problem solving, stakeholder management, social media strategy, business development
	<b>Student liaison, part time</b> The union for finnish architects / Suomen arkkitehtiliitto SAFA <ul style="list-style-type: none"><li>· developed the student activities of SAFA</li></ul>	2018		



Aalto University, Spring 2021  
Advanced Building Design Studio

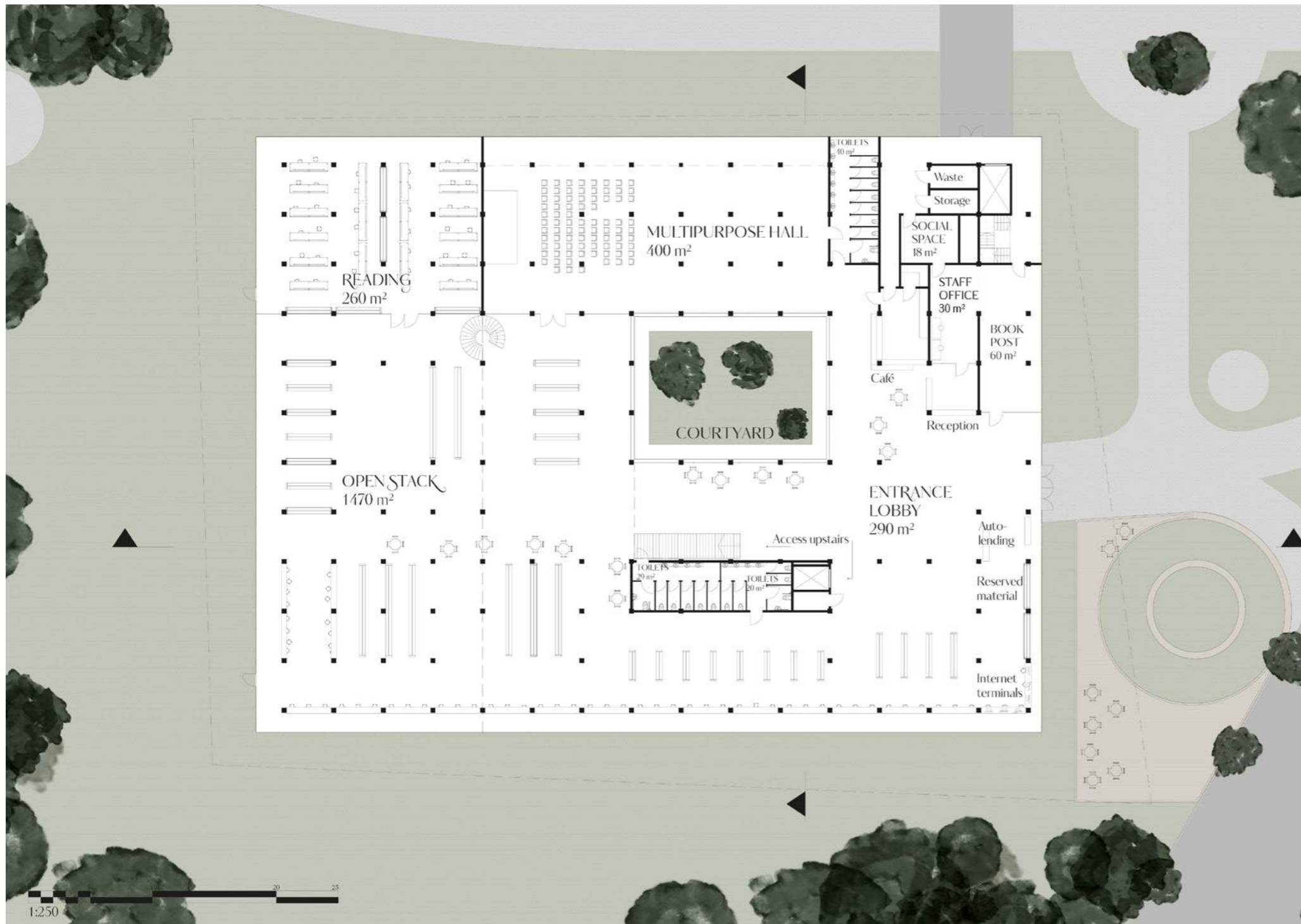
Instructors: Antti Ahlava, Selina Antti-  
nen, Eero Lundén

## Library in Toyosu, Tokyo

This library's design was based on generational analysis, specifically looking at traits and needs of the Satori-generation, born between 1997 and 2004 in Japan. Despite growing up with the internet and social media, many reject modernity and contemporary culture. To incorporate this, I especially studied traditional Japanese architecture and Japan's complicated relationship between

nature and humanity. The results from the generational analysis was then translated into architecture.





The design was structurally and aesthetically inspired by Sambuchi Hiroshi's Naoshima Hall and Kuma Kengo's Nest we grow, with additional ideas borrowed from Japanese vernacular architecture, such as the steep-sloped roof being thatched. The thatching also continues on the inside of the roof as sound insulation from the road and as an acoustic feature, making sure the main stacks and reading hall is pleasant to be in.

The main module in the building is a 4m by 4m by 4m cube, created by timber elements. These cubes can easily be divided visually or structurally with furnishings, bookshelves or plants, creating smaller intimate spaces in the large library. This feature partly inspired by Ito Toyo's TAMA art university library, which uses a repeating arch motif as a spatial divider.

## Satori + architecture = ?

minimalism, simplicity & e.g. rejecting ownership



diverse functionality, providing services & spaces to use/borrow stuff you don't have at home

minimalism + appreciation for the little things



values of traditional Japanese architecture

social media, appearances, reluctant to leave home

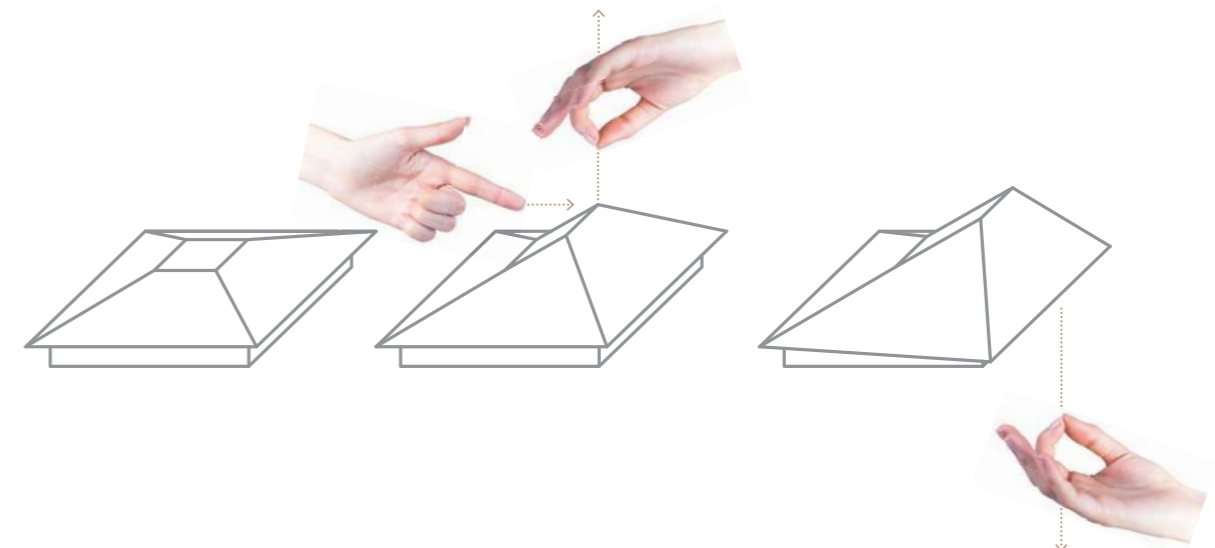


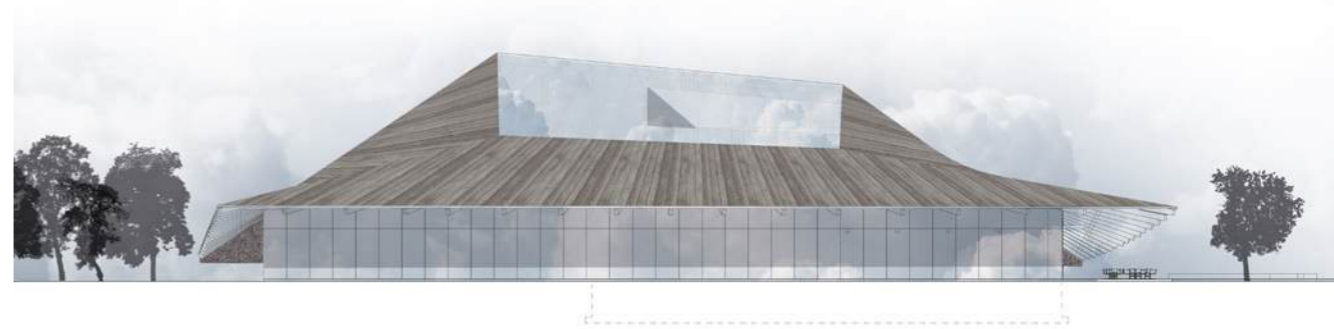
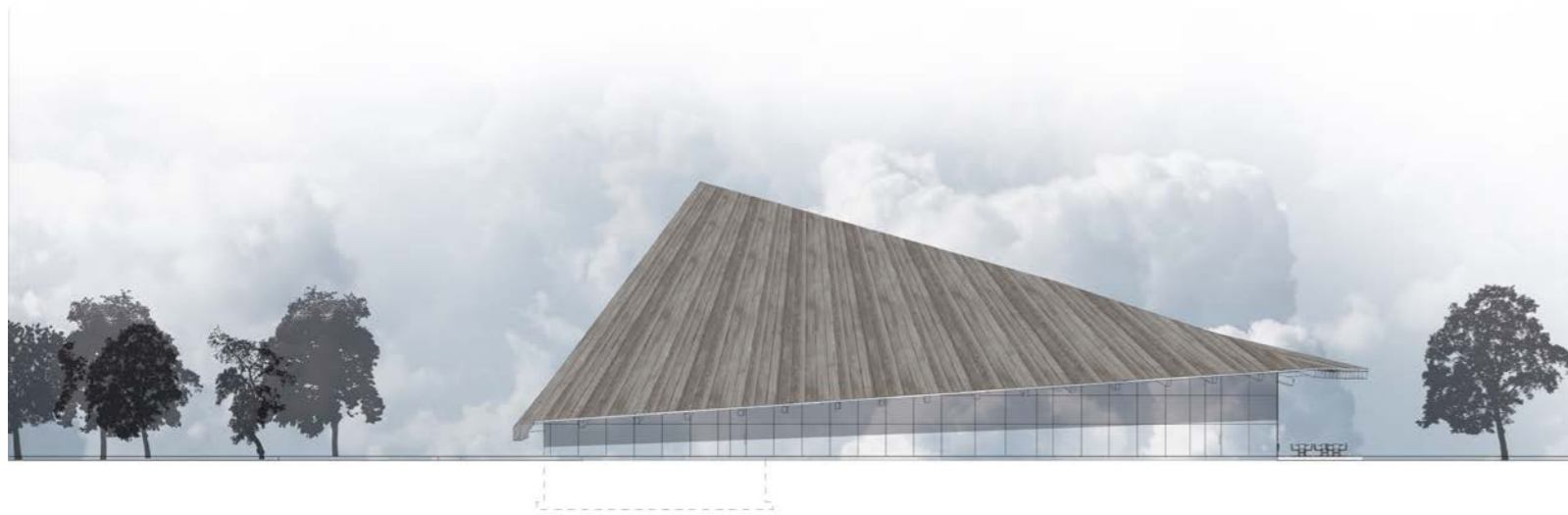
photogenicity, beauty, an environment you'd rather be than online or at home

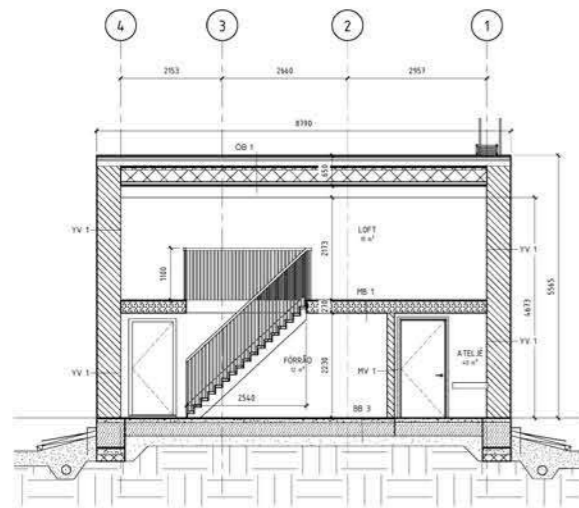
small social circles, apathy



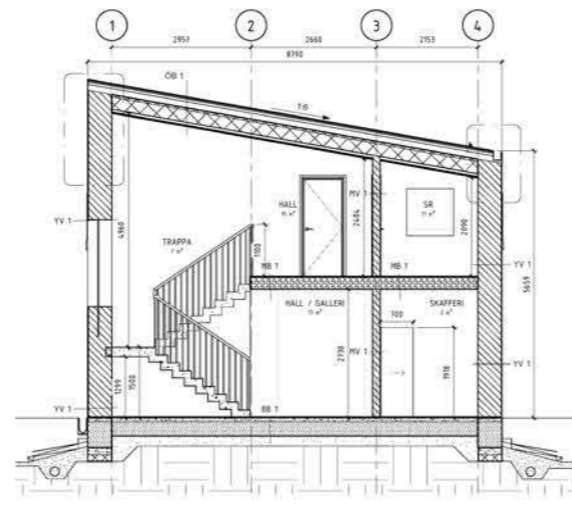
comfortable spaces with a familiar & welcoming atmosphere



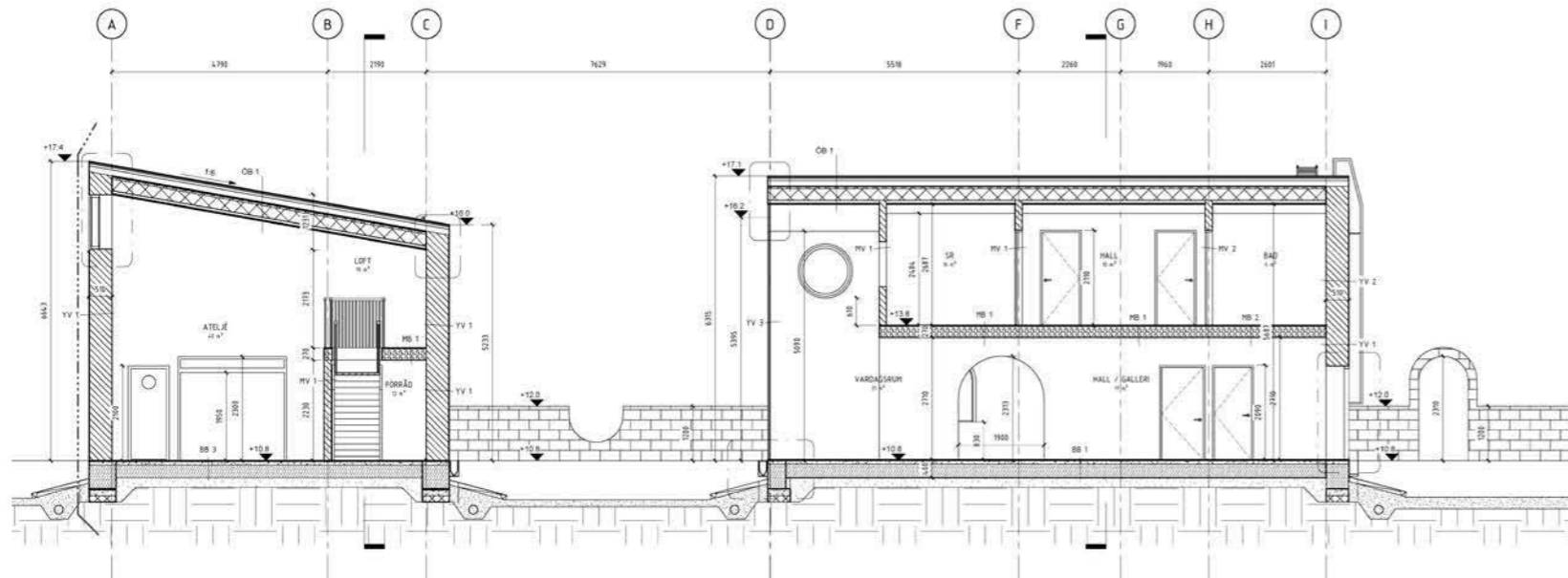




SEKTION 3  
1 : 50



SEKTION 2  
1 : 50



SEKTION 1  
1 : 50

**Strukturtyper**

- ÖB**  
 25mm Maskinfälsad plåt  
 5mm Dämpningsband  
 22mm Timmer, takläkt  
 50mm Timmer + vädring  
 2mm Taktäckning  
 125mm Timmer + vädring  
 50mm Vindskydd + glasull + timmer  
 250mm Glasull + timmer  
 Fuktspärr  
 9mm Fiberskiva  
 50mm Timmer  
 15mm Gipsskiva (brandsäker)  
 15mm Gipsskiva (brandsäker)

**YV 1**

- 15mm Dubbelputs  
 490mm Poroton block  
 5mm Spackel  
 Målfärg

**YV 2**

- 15mm Dubbelputs  
 490mm Poroton block  
 13mm Våtrumsskiva  
 Fuktisolering  
 Kakel

**MV 1**

- Målfärg  
 5mm Spackel  
 150mm Poroton block  
 5mm Spackel  
 Målfärg

**MV 2**

- Målfärg  
 5mm Spackel  
 150mm Poroton block  
 13mm Våtrumsskiva  
 Fuktisolering  
 Kakel

**MB 1**

- 10mm Ekparkett  
 Dämpningsmembran  
 20mm Golvvärmning  
 250mm Lättbetong  
 Dammbindande medel, ljus

**MB 2**

- Kakel  
 Fuktisolering  
 Golvvärme  
 20..35mm Golvvärmning  
 250mm Lättbetong  
 Dammbindande medel, ljus

**BB 1**

- 20mm Ekparkett  
 80mm Betongelement  
 Filtertyg  
 300mm Lättgrus

**BB 2**

- Kakel  
 Fuktisolering  
 Golvvärme  
 20..35mm Golvvärmning  
 80mm Betongelement  
 Filtertyg  
 300mm Lättgrus

**BB 3**

- 80mm Betongelement  
 Filtertyg  
 300mm Lättgrus



Statistik	Kurser	Timmar	Hyönteidenkierros
7	182	13	
Projektointi		12345	
NYISYSSÉ			Genetförändring
Projektointi			SEKTIONER
HUS RAPIA Petergränden 6 00150 Helsingfors			
Ark		104 001	
			Ellen Heikkilä 14.12.2021

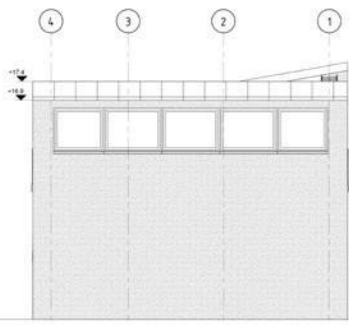
Aalto University, Autumn 2021  
 Construction documents (Rakennuksen toteutussuunnittelu)

Instructors: Mikko Raatikainen

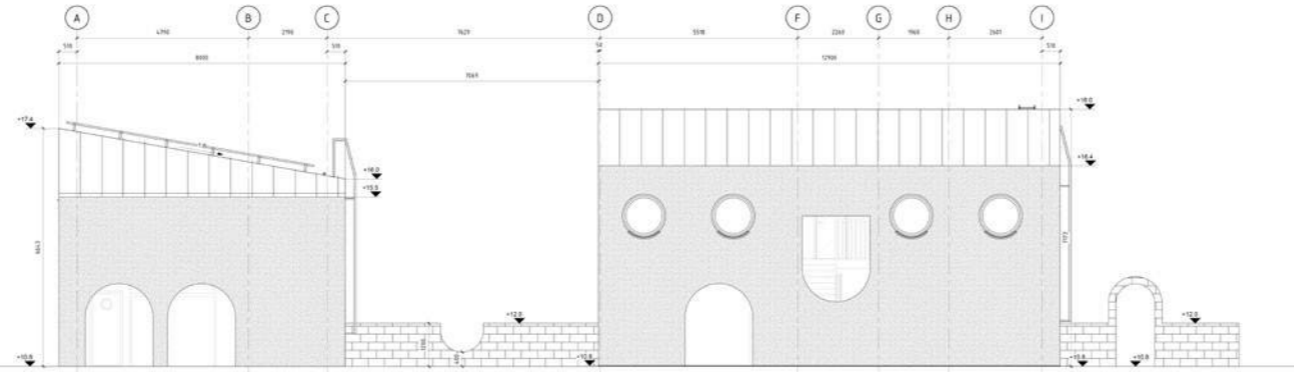
# Hus Rapia

To practice clear and legible construction documents, I completed this course at Aalto University, despite not doing my thesis in building design. I used an old project from my second year of studies back in 2016, a home and atelier for an artist in Helsinki, and developed the design for this course. The design includes separating the home and atelier with differently shaped windows towards the

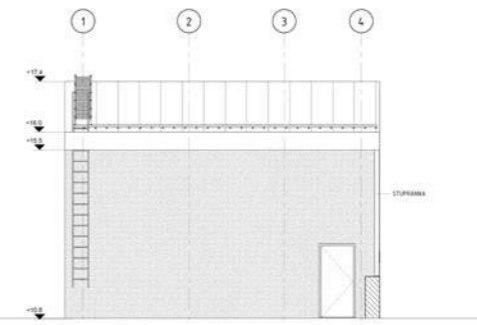
street and incorporating arches and round shapes in the facade and yard wall, honoring my playful and maybe a bit naïve early design.



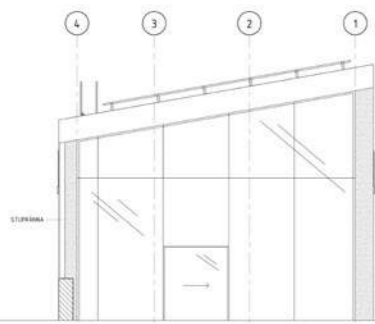
ATELJÉN FRÅN NORR  
1:50



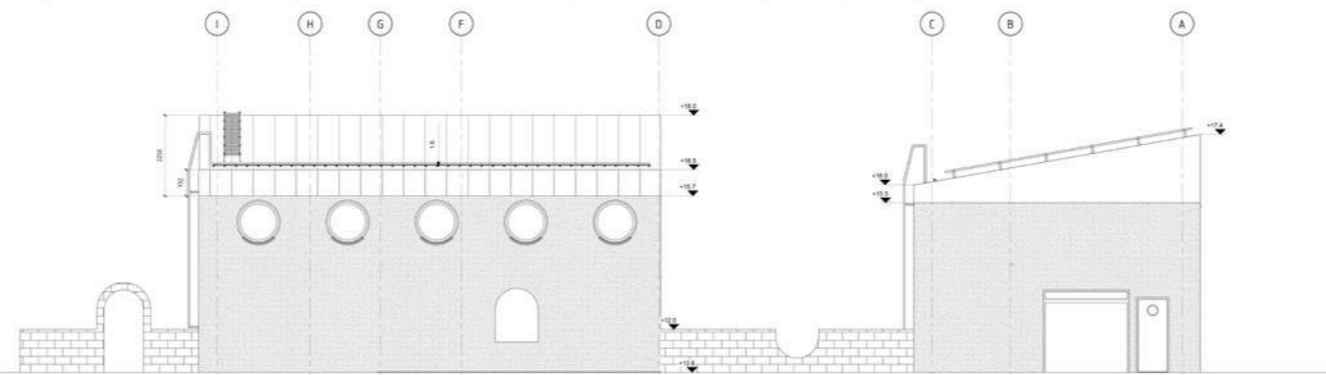
VÄST  
1:50



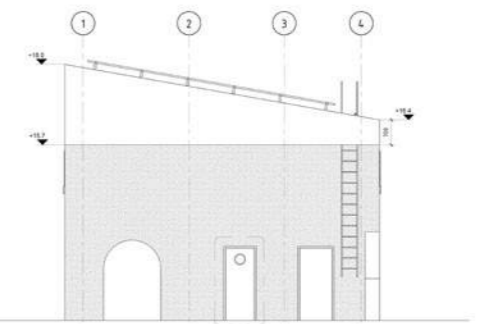
ATELJÉN FRÅN SÖDER  
1:50



BOSTADEN FRÅN NORR  
1:50



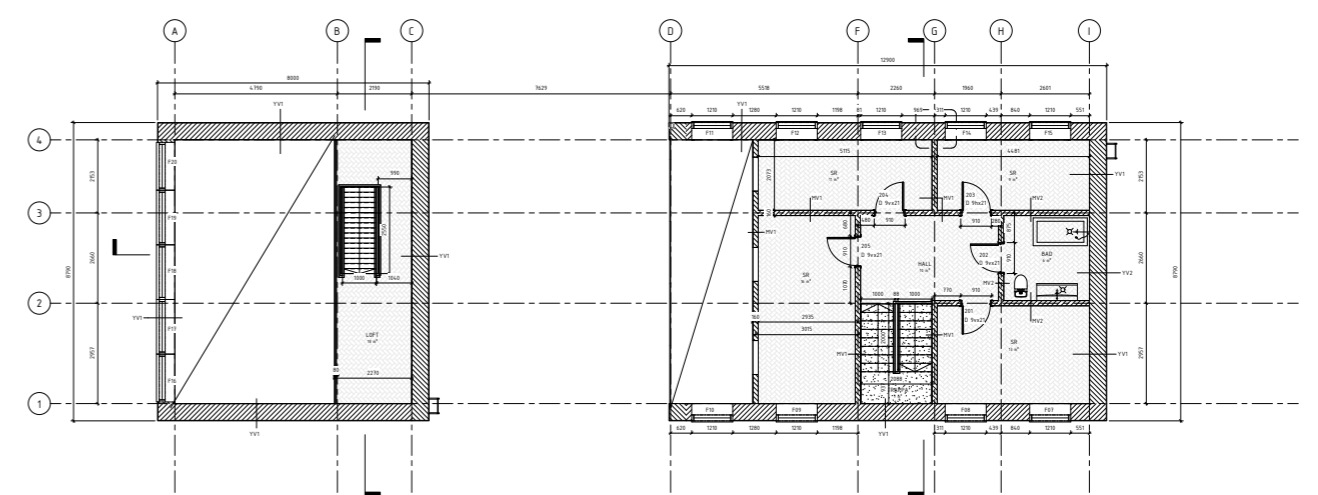
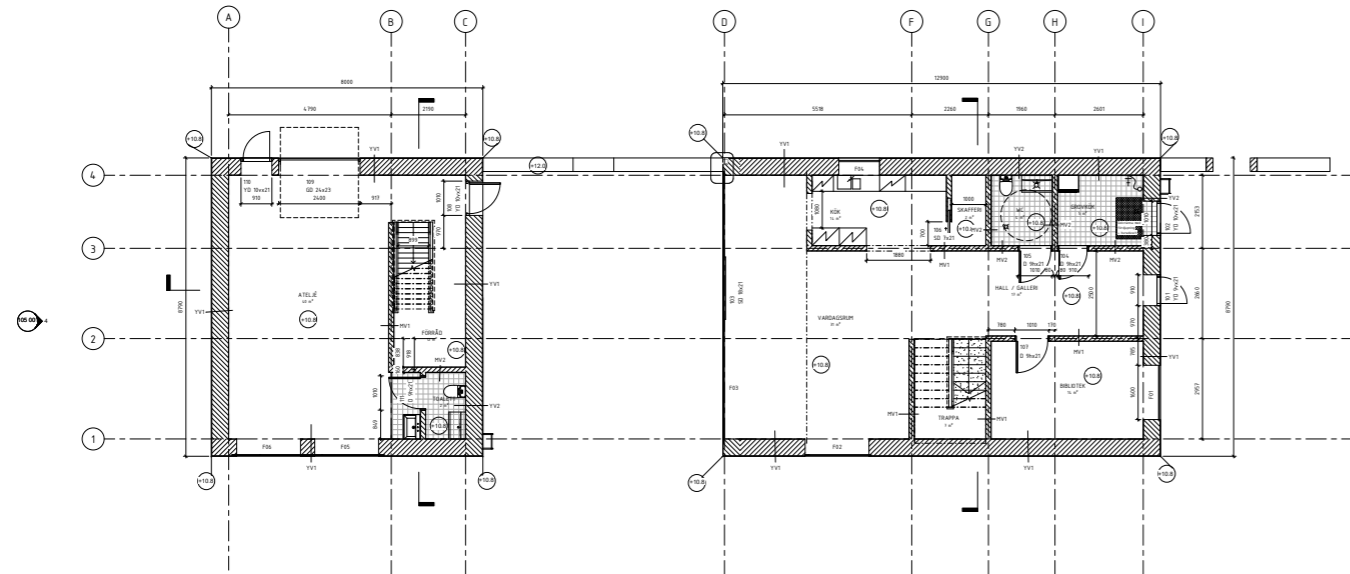
ÖST  
1:50



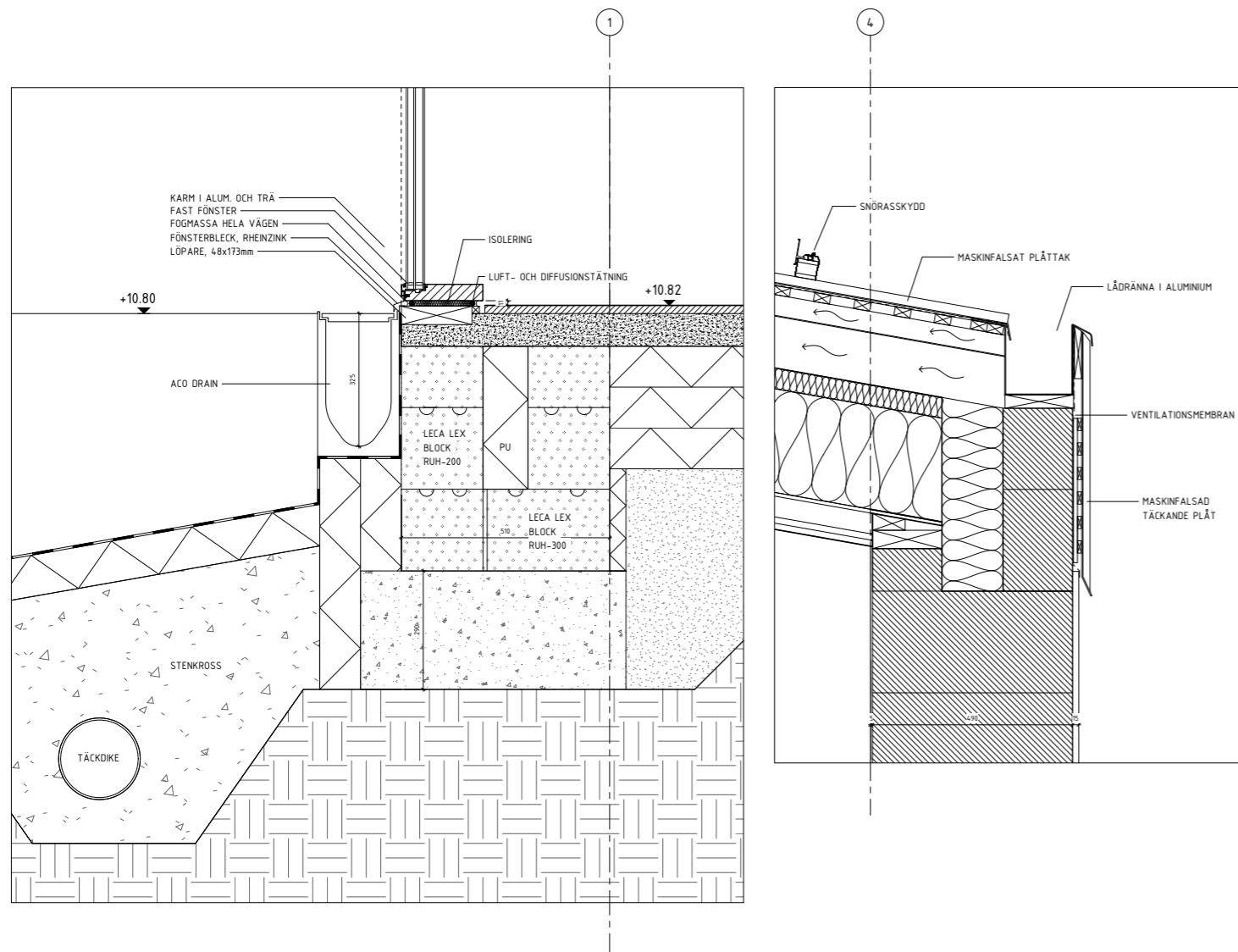
BOSTADEN FRÅN SÖDER  
1:50



Titel	Konst	Typ	Projekt
7	ME2	Ö3	12345
Fasadtyp			Genomförandokument
NYBYGGDE			Arkitekt
Projekt			FASADER
PROJEKTANT			1:50
HUS RANKA			
Petersgränd 6			
08750 Helsingfors			
Planeringsnivå			Arkiv
ARK			MS 001
			Eden Arkitekter
			Eden Arkitekter
			14.12.2021

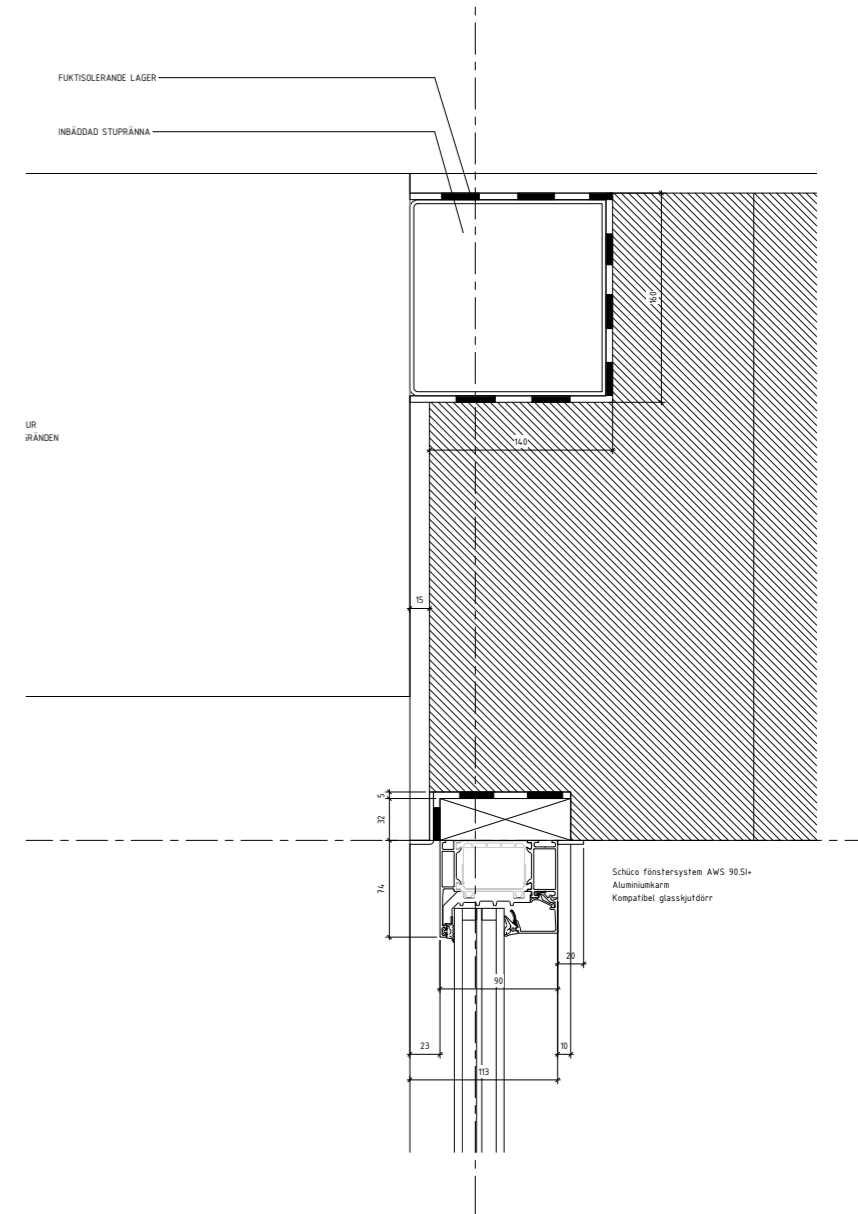






ETRS-GK25  
KONSTRUKTIONSPROJEKT  
N2000

Stråket	Nummer	Fäst	Bygghandlingsnummer
7	182	13	
Byggsäte	Byggsedel	Byggsedel	Byggsedel
NYBYGGE	12345		Genomförandedokument
Byggsedel			Skala
HUS RAPIA Petersgränden 6 00750 Helsingfors			LODRÄTA DETALJER 1 : 5
Planeringsansök		Byggsedel nummer	Ändring
ARK		1241 001	
		Planering	Datum
		Ellen Heikkilä	14.12.2021
		Projektledare	
		Ellen Heikkilä	

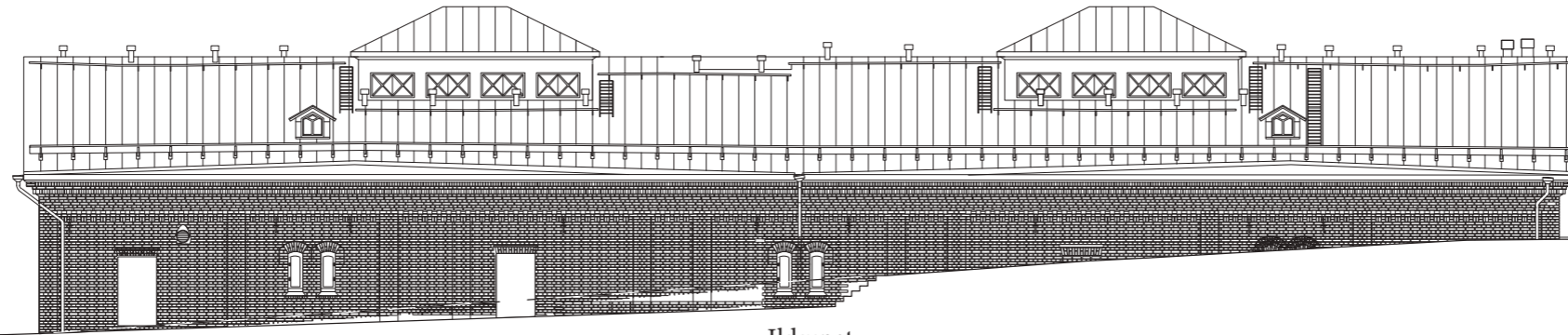


## Hidden rainwater management

One challenge I wanted to solve in this design was hidden rainwater management in order to achieve a cleaner look. Above are three details, the two to the right are of the gutter and the downspout, respectively. In my design the gutter is hidden by the metal roofing, and the downspout is partly hidden by embedding it in the corner of the outer wall.

Another important detail was the arched windows which go all the way to the ground, with an almost seamless transition from glass to ground. A gutter follows the outer walls all the way, and connect to the drain at the same corner with the downspout. The ground gutter is easily opened for cleaning.

Kattopellit  
uusitaan

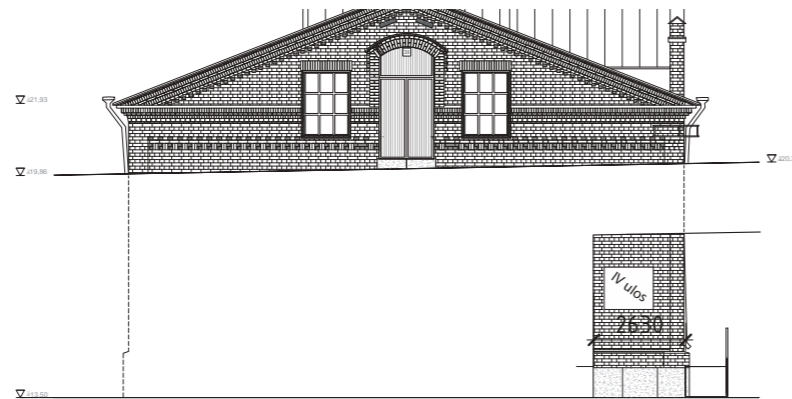


Uusi oviaukko  
puhkaistaan

Vanha oviaukko  
puhkaistaan

Ikkunat  
palautetaan

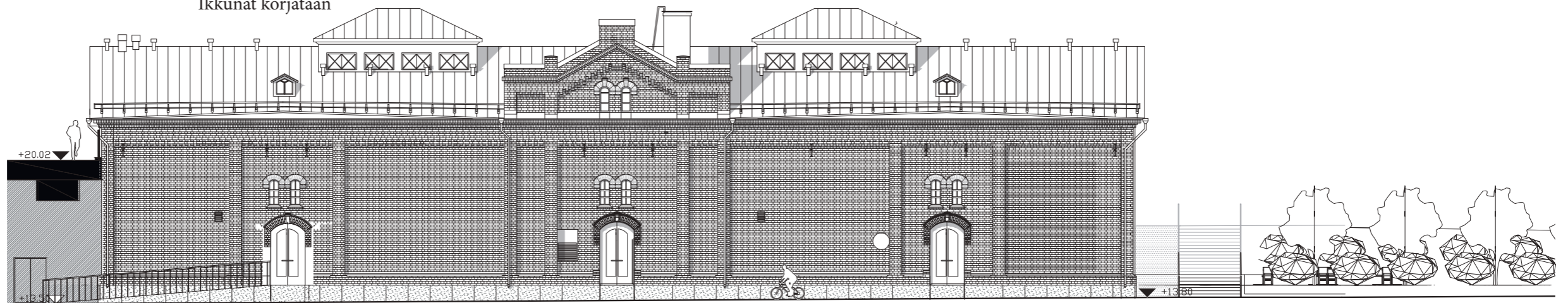
Hissin KH  
poistetaan



As part of the project I was particularly interested in the structural brick wall, which turns into an ornamental brick facade. I 3D-modelled the entire facade with individual bricks, including all windows and doors.



Ikkunat korjataan



Sillan alta puhkaistaan  
IV-koneistolle luola.

Liuska tehdään samasta materiaal-  
ista kuin kivijalka

Oven tiilet korjataan ja ovi  
palautetaan

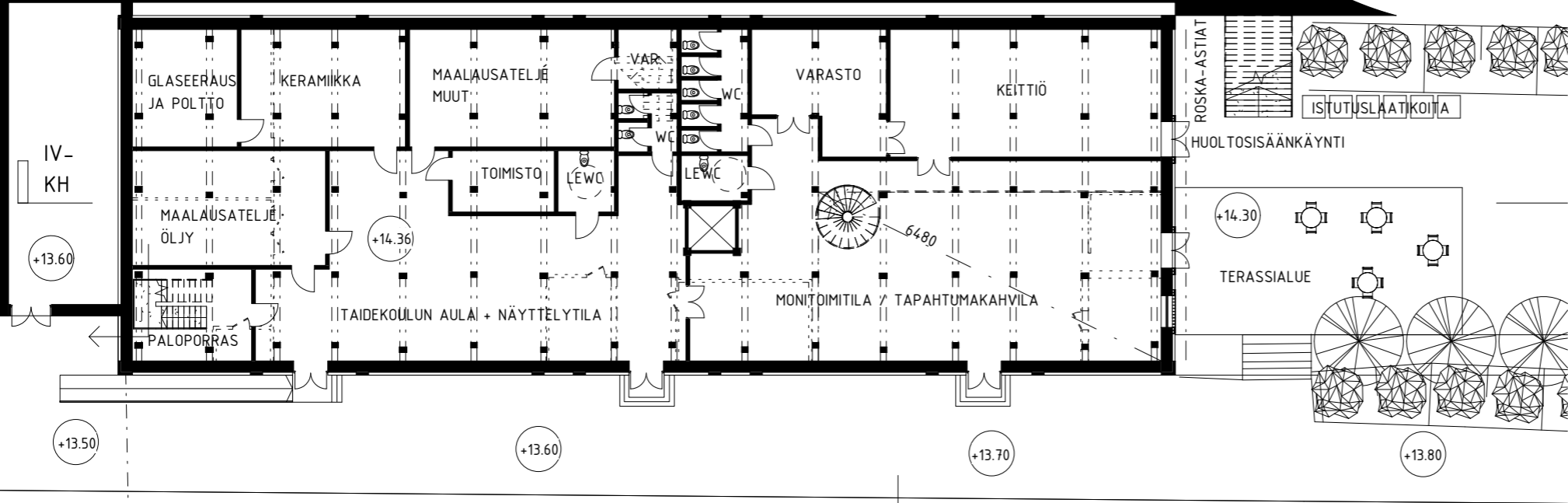
Aalto University, Autumn 2021  
Building Conservation, studio

Instructors: Özlem Özer-  
Kemppainen, Niina Svartström

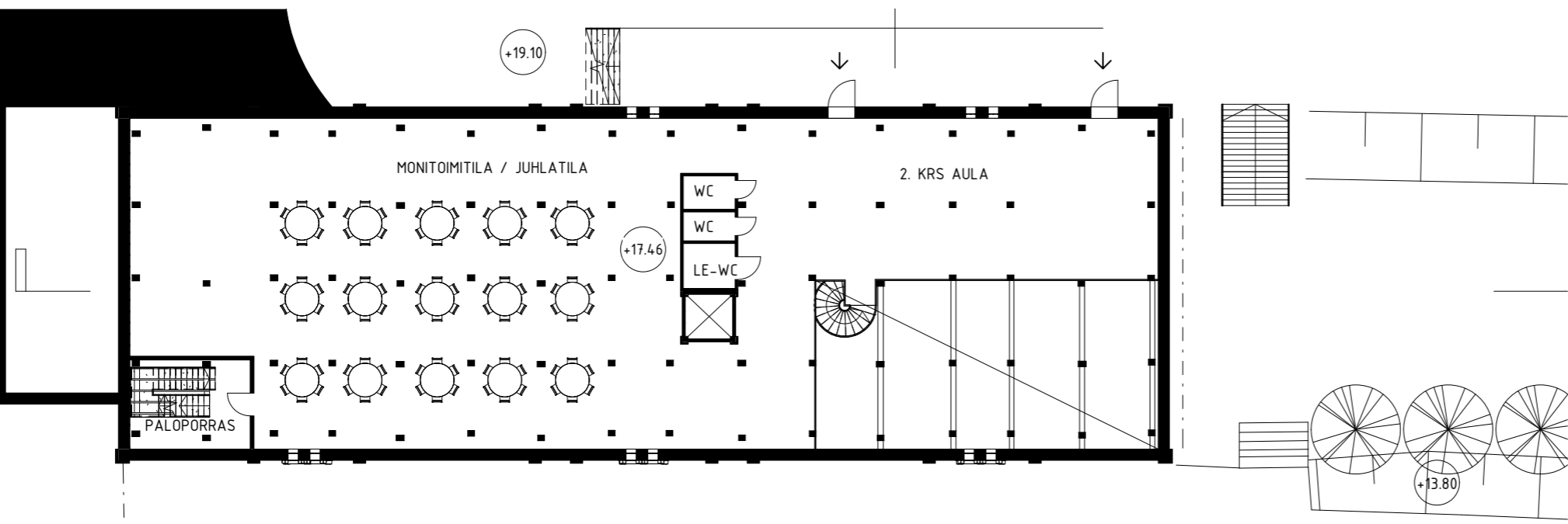
# Sörnäisten Kruununmakasiini

During the studio, we first researched and drew the current state of "The Crown's Grain Storage," a building owned by the city of Helsinki. I contributed by researching similar buildings in Finland throughout history, dating back to the Swedish imperial times. For the individual part of the project, I conceptualized a multi-use space with a youth center on the top floor, event and exhibition spaces on the lower two floors, and art spaces on the lowest floor. My goal was to

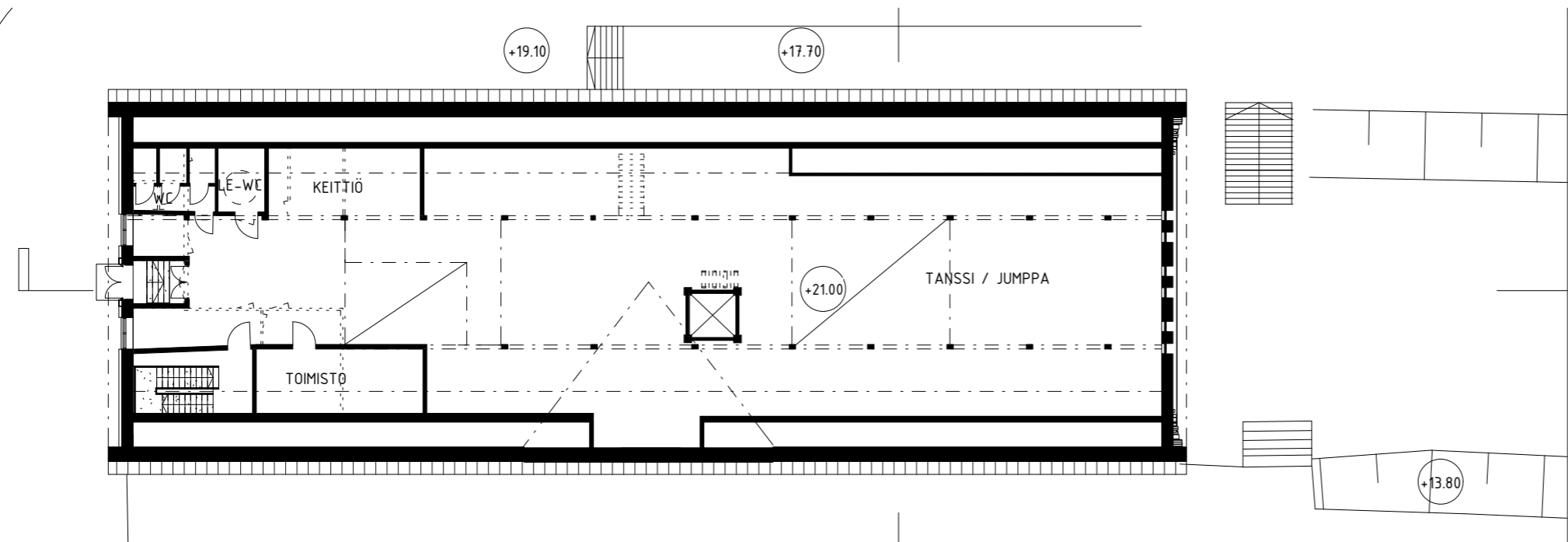
give the building a permanent resident while making it also accessible for the wider community. I combined the lower two stories' into a partly two-story space with a new main entrance to the backyard, offering a café and exhibition space with the option to rent for events. Structurally, I wanted to restore old windows and doors, which would also help in bringing the building up to contemporary fire codes.



Lowest floor. The building is blocked from north and west. The space is divided in two main functions on this floor, with half being art-school facilities and half being the event space's main entrance, also housing the kitchen and toilet facilities.



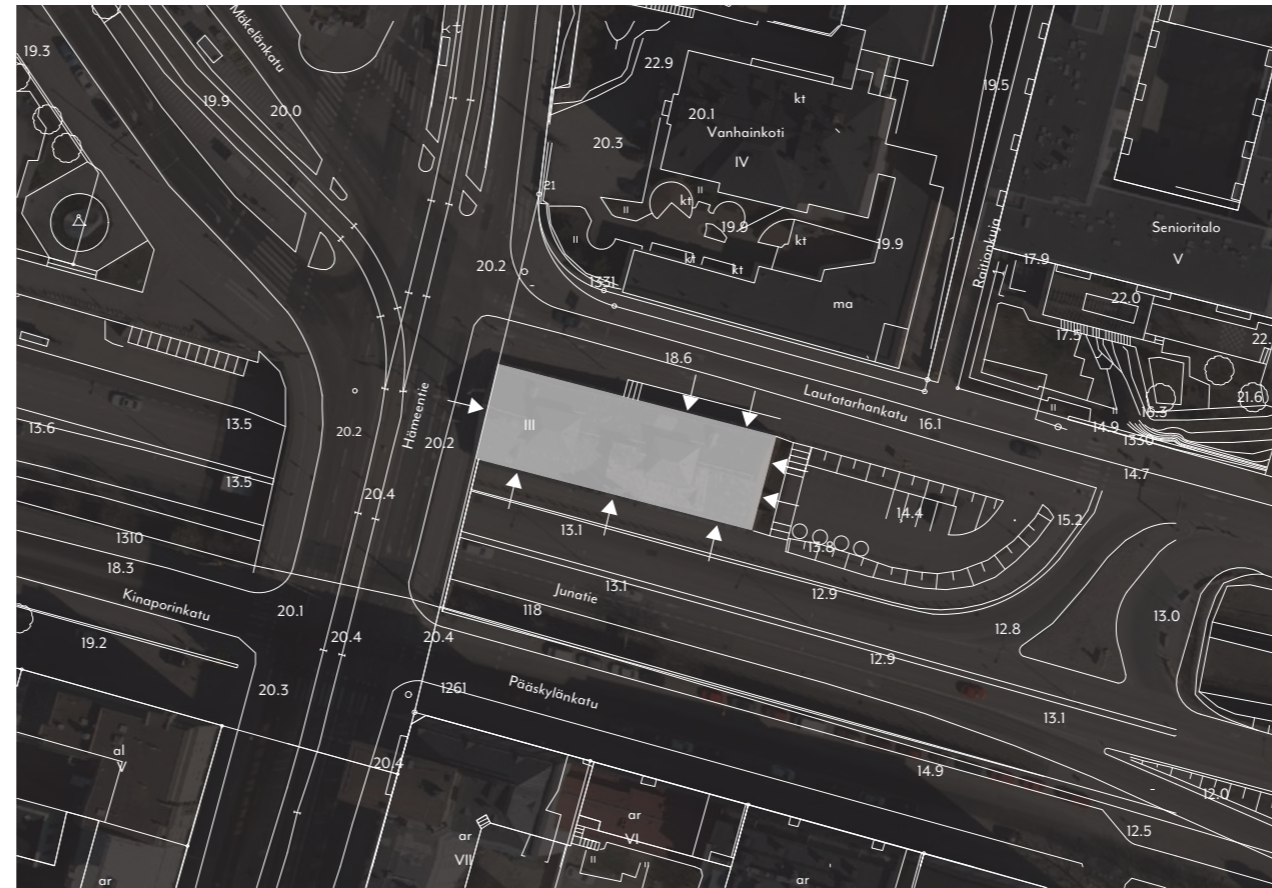
The middle floor. This is an extension to the event space from the bottom floor, making it possible to host a multi-program event or exhibitions etc.



Top floor with access from Hämeentie. This floor has a big space with possibilities for some subdivisions, and the main function is to function as a low threshold youth community space.

HÄMEENTIE

+20.20

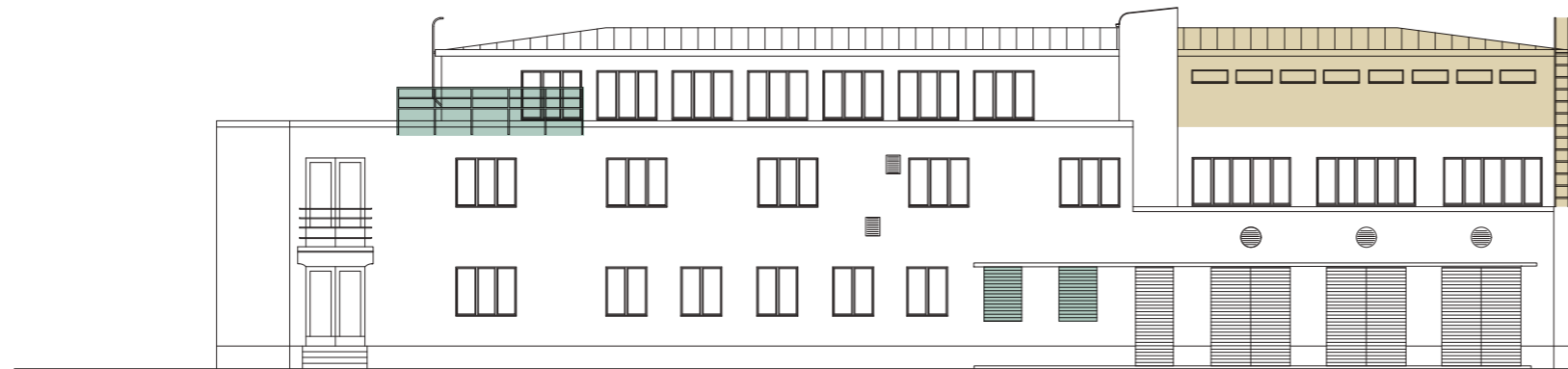


Site plan.

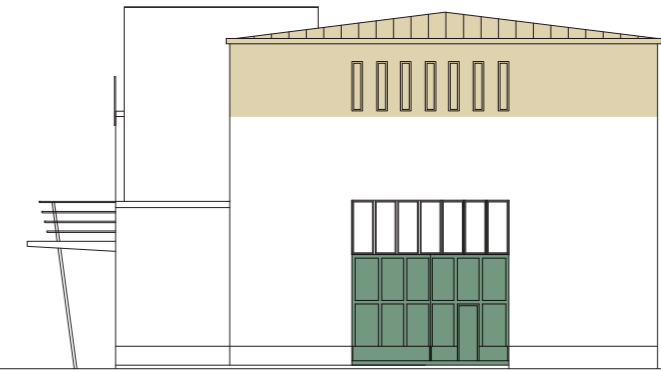


As Helsinki has developed around the building, the terrain around the building is quite curious and means that two of the facades are covered by added concrete and earth.



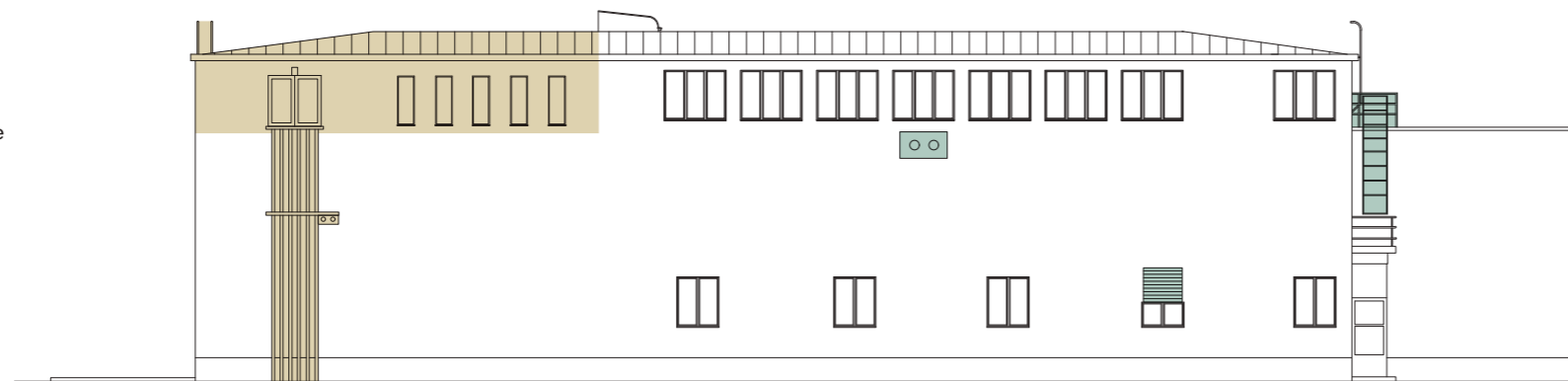


Koilliseen 1:200

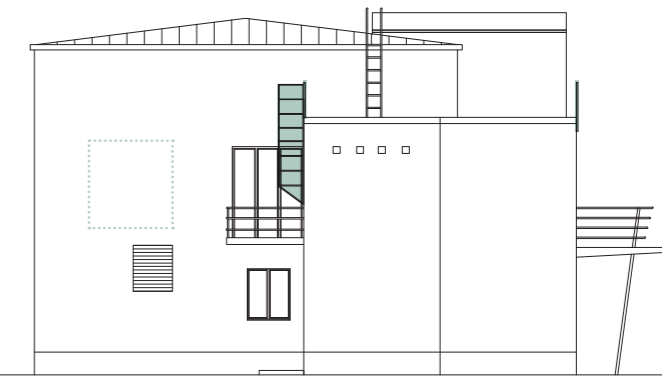


Luoteeseen 1:200

- uudisrakennusvaihe  
1939–1948
- ullakkolaajennus  
1948–1975
- muutosvaihe  
1975–1987
- uusiokäyttövaihe  
1987–2021



Lounaaseen 1:200



Kaakkoon 1:200

In this course we collaborated on a historical survey of Pori short-wave radio station. As part of the course we spent a week on-site. We produced a finished and published document for the city of Pori.

The short-wave station was built before the second world war, and has since then fallen into bad shape. More recently it had worked as a space for band practice and as a home to a classic car club, but was overall in very decrepid shape.

My task for the course were producing the facade drawings of the building, researching and writing a piece on the historical context of the building, inventory of all spaces on site (along with two other students), and creating diagrams for changes made to the building. I additionally collaborated on the layout of the publication, contributing more than the average course participant.

Aalto University, spring 2021  
Historical survey, building

Instructors: Laura Laine, Mia Puranen, Panu Savolainen

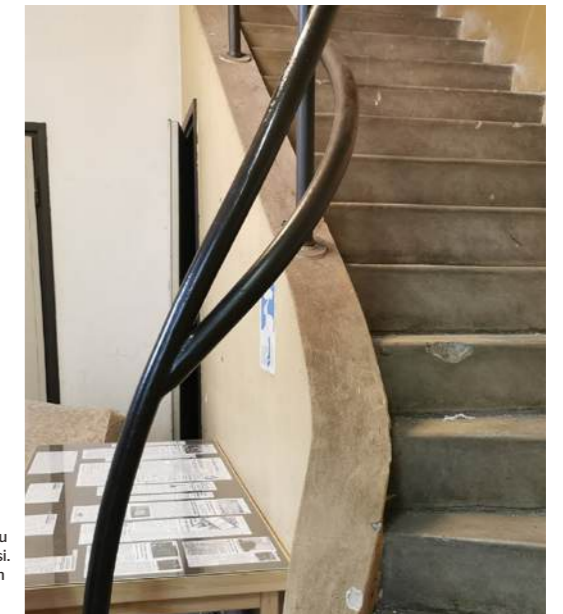
# Pori short-wave radio station



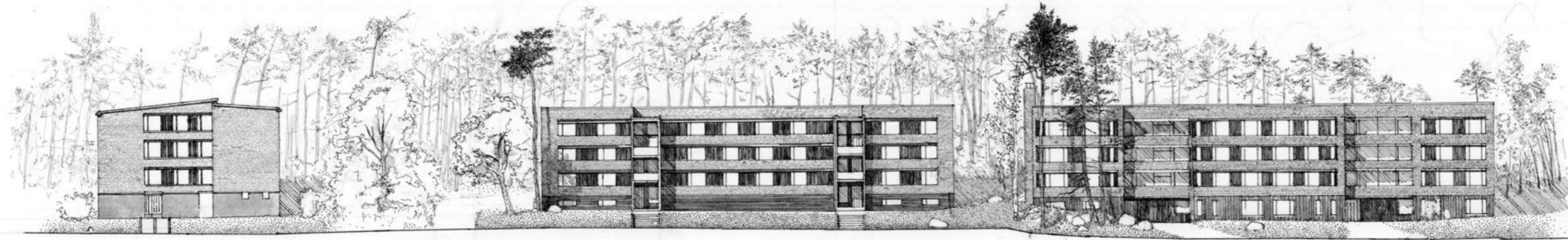
Portaan alla on kaksi varastoa, joista toinen on kokonaan ja toinen osittain sen alla. Kuvassa näkyy kauniisti kaareva kaide. Takaseinän maali lohkeilee jonkin verran.

## Porrashuone 119

Porras on kaareva, U-muotoinen, ja johtaa hallista ylös parvelle. Kaide on ruskeaksi maalattua metallia, ja epätavallisen muotoinen. Askelmat ovat sileällä betonilla pinnoitettu, ja niissä on joitakin lohkeamia. EH



Kaide on maalattu tummanruskeaksi. Askeleiden joitain lohkeamia näkyy kuvassa.



# STRÖMFORSIN RAUTARUUKKI KOIVULANMAENTIE 5, 7 & 9

ALUEJULKISIVU 1:300  
ELLEN HEIKKILÄ  
KESÄKUU 2023  
RUOTSINPYHTÄÄ LOVIISA

I went on two consecutive measurement drawing camps in Strömfors iron works in Ruotsinpyhtää, Loviisa in the summers of 2023 & 2024.

On this page are two drawings I made on my first camp, as first examples of my skill in measurement drawing. My main work was of an unconventional building in this genre, a group of three residential buildings built in the 70's. As I was quite quick, I completed a detail drawing of the altar painting in the village church, a rare example of ecclesiastical painting by Helene Schjerfbeck. I opted to also create a small gouache replica of the painting in my detail drawing.

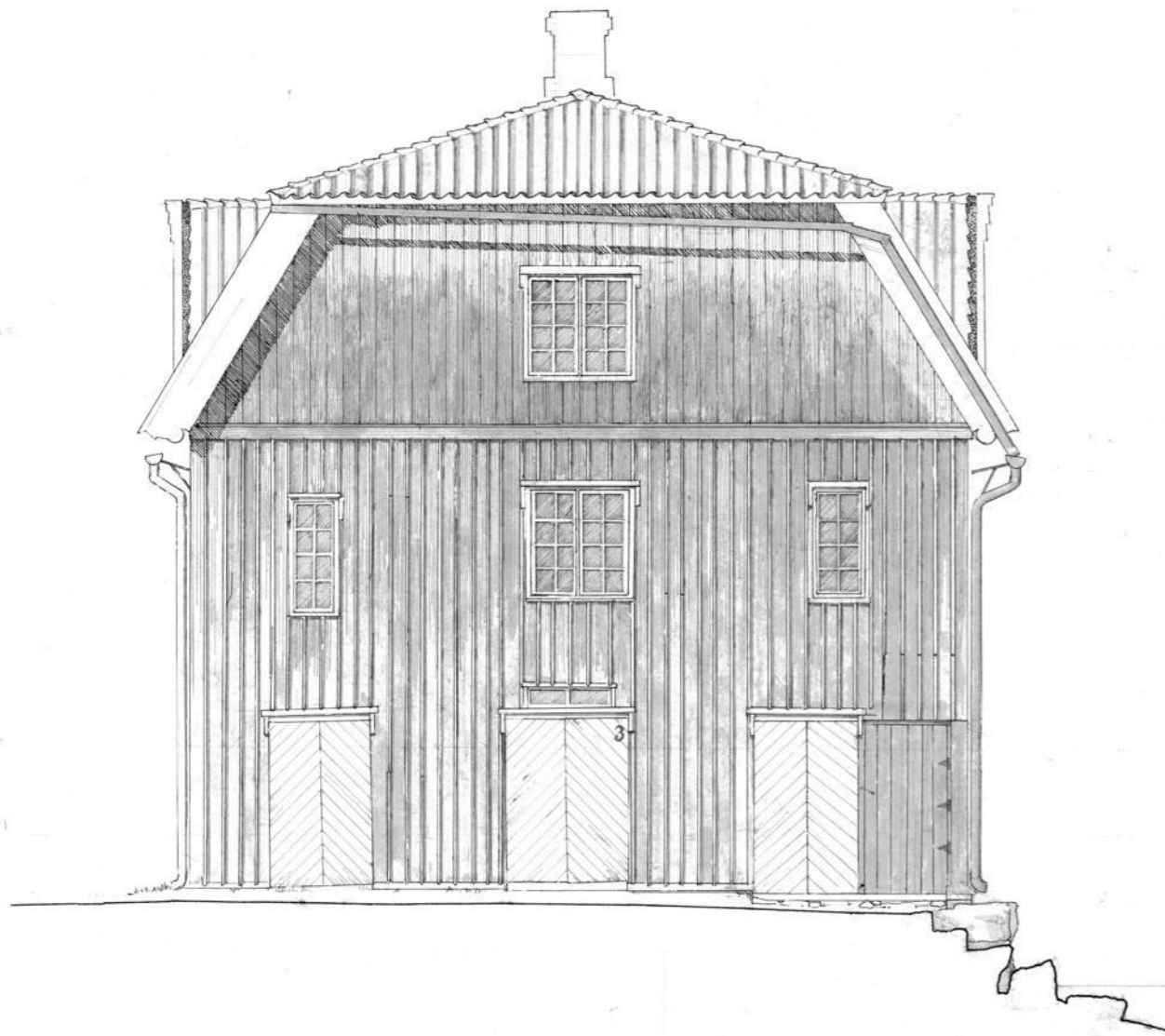
The drawings are not replicated to scale in this portfolio.



Strömfors iron works, summers  
2023 & 2024

Instructors: Astria Excell

## Measurement drawings



STRÖMFORSIN RAUTARUUKKI  
ARMONLINNA

JULKISIVU ETELÄÄN; LEIKKAUS 1:50  
ELLEN HEIKKILÄ  
ELOKUU, 2024  
RUOTSINPYHTÄÄ, LOVIISA

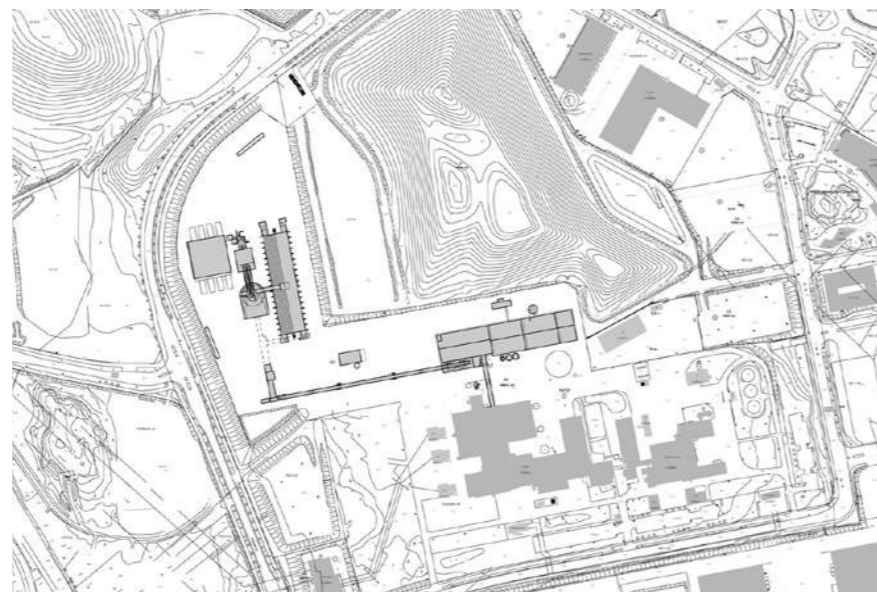
On this page is my latest full measurement drawing of a facade and section of an old residential building in Strömfors. My style is lighter than the previous year, and the drawing was much more time-consuming, with its various textures and diverse milieu.

Recently completed, I collaborated on the Vuosaari C Bioenergy heating plant during 2020-2021.

The plant complex consists of several buildings, many of which are connected by conveyor belt tunnels for fuel transportation. At the time I worked with the project, there was a lot of detail work made and coordination with other contractors, for example in the main boiler building (picture to the right). I matched our architectural model with the internal structure and boiler designs (picture below), which was very challenging. I also worked with designing the facade structure of the boiler building, which has a second skin aluminium composite structure, creating a quite clean look.



Photos by Tuomas Kivinen, site plan courtesy of Virkkunen & co architects



The nuclear power plant in Pyhäjoki is as a whole been cancelled due to the geopolitical situation with Russia, but I had some valuable experience working with Fennovoima on the main security gate building as well as the main administration building.

The security gate building was a sketch so far, but in 2020 I was tasked with designing the building further together with Fennovoima's security coordinators. This was an interesting task, as nuclear power plants are highly regulated. Solving the building, so that the internal logic is sound, security requirements are met and keeping the building to code was a very interesting challenge.

As part of the security gate building was initially a space that took up considerable space in the basement, where the security staff also had their changing rooms and gym spaces. This large space was later set to move to the administration building, requiring a second basement. As the admin building's design was further along, this late-stage augmentation was an interesting exercise in communication and design.

The administration building was quite far along. Photo courtesy of Fennovoima



Virkkunen & co architects  
Completed in early 2023

Client: Helen Oy

Vuosaari C Bioenergy heating plant

Virkkunen & co architects  
Cancelled

Client: Fennovoima Oy

Hanhikivi Nuclear plant, various





A plaster "sink" where I cast a clay face I made. The face created an optical illusion of extrusion when moving around the piece.



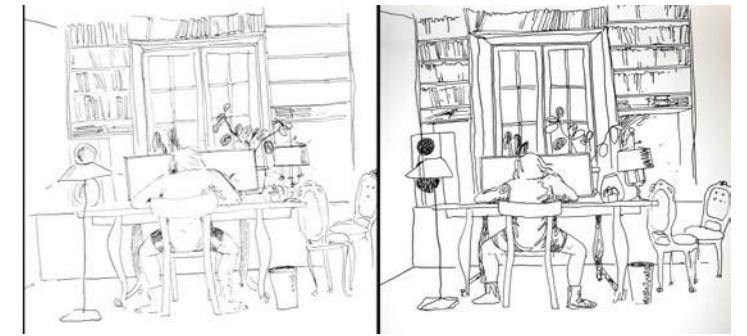
Branches gathered from outside, stripped and painted, placed as if yearning to go back outside.



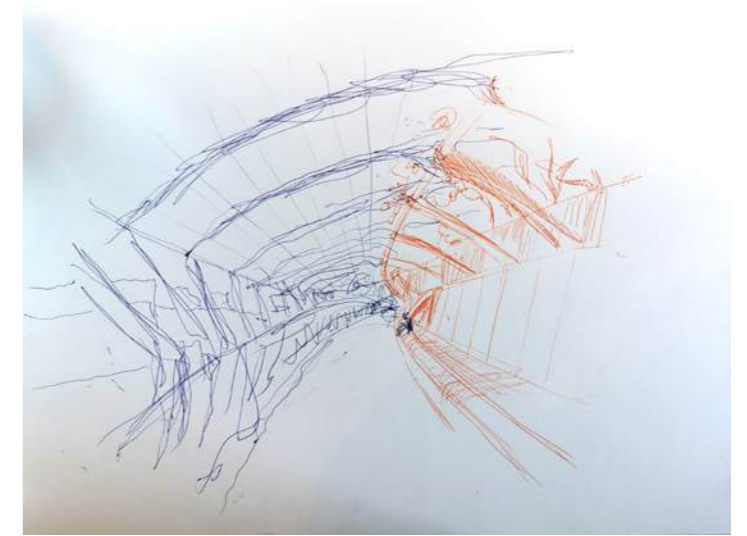
1x1m, acrylic on board. Quote is from the film "24 hour party people", a film about the punk-rock scene in 1970's Manchester.



Above, still life study in ink. Right, studies from a course in free-hand drawing.



Nude studies, various materials and techniques.



2015—2022

Instructors: various, independent work

Art & graphics



### Juomat

Cembrit	2
Gin, triple sec, sitruunamehu, jäätä	
Talvi-illan tumma	2
Koskenkorva, glögi, alkoholiton inkivääriolut, karpaloita, rosmariininoksa, jäätä	
Tuttu tunne	2
Gin, tonic, karpaloita, rosmariininoksa, jäätä	
Koroilleni jään	2
Non alcoholic - Glögi, alkoholiton inkivääriolut, karpaloita, rosmariininoksa, jäätä	
Skumppapullo	6
Miedot ja alkoholittomat	1

A.le.coq  
Lahden erikois IPA  
Oranssi lonkero  
Lonkero  
Omenasiideri  
Heineken 0.0 %  
Sunn cream soda  
Sunn ginger beer



To the left and above, graphical concept for Arkkitehtikilta's annual ball 2022. The final products included event banners, menus, song booklet, guides, templates for social media and a media packet for sponsorships.



I have had a long time interest and hobby in classical calligraphy, especially Italic, but also Gothic styles.



I created a lot of posters and event graphics for Teknologiföreningen and their restaurant, Täffä, when I volunteered as graphic designer in 2016 and 2018. Here is a selection. During this time I developed my skills in graphic design from beginner to advanced. I also learned how to use indesign through laying out their membership magazine (4 issues/year).



Lots of folks, look to look these concrete buildings. They're not the typical concrete, they're not the typical concrete. But as hard as it may look, concrete is an extremely soft building material. Philosophically, concrete was seen as humble, malleable, and honest—used in all its rough glory, not being hidden away from sight. At the same time, it was also seen as a symbol of strength and power. It's a material that's been used for centuries, and it's still going strong. It's a material that's been used for centuries, and it's still going strong. It's a material that's been used for centuries, and it's still going strong.