



STUDIOBRIEF

Climate change is making the majority of pre-/alpine skiing infrastructure obsolete. Freestanding steel structures – often seen as abandoned relics of leisure culture and landscape blemishes – have become a controversial issue. What if we collected these demountable constructions from our region and designed something beautiful, useful, and enduring with them for Liechtenstein?

We will investigate how the obsolete ski lifts can be creatively reimagined and architecturally reused and repurposed. Rather than starting from scratch, we begin with the physical inventory, explore alternative structural strategies and narratives, and focus on large-scale steel construction, resource efficiency, material and immaterial values. Our guiding idea envisions the hypothetical design of a new museum in Vaduz dedicated to the lost collection of the unique and outstanding Ski Museum Liechtenstein. The project is intended to be a contribution to further establish the prestigious museum quarter in the capital of Liechtenstein.

Re-Use & Upcycling # Disassembly & Assembly # Circular Construction # Entrepot Building # The House as Inventory & Material Bank

*Lecturers: Pascal Gnädinger (Models); Stephan Zimmerli (Atmosphere & Presentation)
Martin Walch (structural engineer)*

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		KICK-OFF
# 1	03.09 + 04.09	welcome I intro in S7 I briefing on site I guided tour art museum model building with Pascal Gnädinger
		PHASE I - ANALYSIS
# 2	10.09 + 11.09	studio I presentation of first analysis submission : model & analysis
# 3	17.09 + 18.09	input I steel expert I workshop submission : built inventory
# 4	24.09 + 25.09	studio I pin up submission : concept & idea of construction
# 5	29.09 -- 03.10	SEMINAR WEEK
		PHASE II - DESIGN
# 6	08.10 + 09.10	studio I table critic input I grafics, layout etc.
# 7	15.10 + 16.10	studio I pin up submission : all plans in 1:100 & detailed section 1:20
# 8	22.10 + 23.10	MIDTERM
		PHASE III - DETAILS
# 9	29.10 + 30.10	studio I table critic workshop atmospheric model I stephan zimmerli
# 10	05.11 + 06.11	studio I pin up I stephan zimmerli feedback online
# 11	12.11 + 13.11	studio I table critic
# 12	19.11 + 20.11	studio I pin up
# 13	26.11 + 27.11	studio I table critic
# 14	03.12 + 04.12	studio I pin up
# 15	10.12 + 11.12	FINALS BACHELOR THESIS & REGULAR STUDENTS
# 15	17.12 + 18.12	FINALS MASTER THESIS



SUBMISSIONS & TOOLS

All analysis documents are presented physically and digitally on moodle. Documents for table critiques are uploaded weekly on moodle.

The files are put in a folder with the following name:
Nr. hand-in_exercise title_groupX (eg: A3_site analysis_A)

The files are named according to the folders:
Nr. hand-in_exercise title_groupX_document title
(eg: A3_site analysis_A_axonometry)

For individual works:
Nr. hand-in_exercise title_groupX_surname name_document title
(eg: A3_site analysis_A_Dupont Jean_axonometry)

When not indicated otherwise:

- drawings are saved as high resolution PDF with a resolution of 300dpi
- images are saved as JPG with a resolution of 300dpi (no PSD, TIFF etc.)

You document your design research and thoughts in a sketchbook that you bring to the discussions. This will be part of your process portfolio.

You need to bring to every table critique the following tools to help express your arguments with drawings and to help to create a dialogue.

- sketch roll, 24 gr, max 30gr.
- pencils 0.5/0.7/1.0 mm, 2B
- pencils 2mm, 5mm, 6B

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PHASE I - ANALYSIS

1.1

surrounding Model of our Plot 1:100 | City Center of Vaduz

1.2

Inventory of ski lift elements

editing the existing plans | building elements in 1: 20

1.3

research of reference buildings | floorplans & sections | diagrams of system 1:100

1.4

the needed building | the story behind the need

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PHASE I - ANALYSIS

1.1 the plot & the neighbourhood



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www.tagblatt.ch/burgenland/liechtenstein/liechtensteinische-landesbibliothek-in-vaduz-steht-fest-33029

PHASE I - ANALYSIS

1.1 the future library

The former Post and Administrative Building in Vaduz has been repurposed into the new Liechtenstein National Library following a European-wide architectural competition held in 2021. In July 2022, Morger Partner Architekten AG (Basel) was awarded first prize for their sensitive design that retains much of the existing concrete structure, thereby reducing approximately 2,800 tonnes of CO₂.

The revitalized structure features a new wooden façade, generous glazing, a rooftop terrace, and a redesigned main plaza with stairs linking directly to nearby bus stops and pedestrian zones. Spanning about 4,900 m², the library will house roughly 96,000 media items and over 140 reading and workstations, including enlarged areas for children and youth, a café, and event spaces.

The project is funded by the state, the Municipality of Vaduz (initially CHF 3.0 M, later increased to CHF 3.3 M, then CHF 5.43 M in 2025), and private donors.

This project is a prime example of sustainable heritage reuse, honouring architectural history while enhancing public space and ecological responsibility.

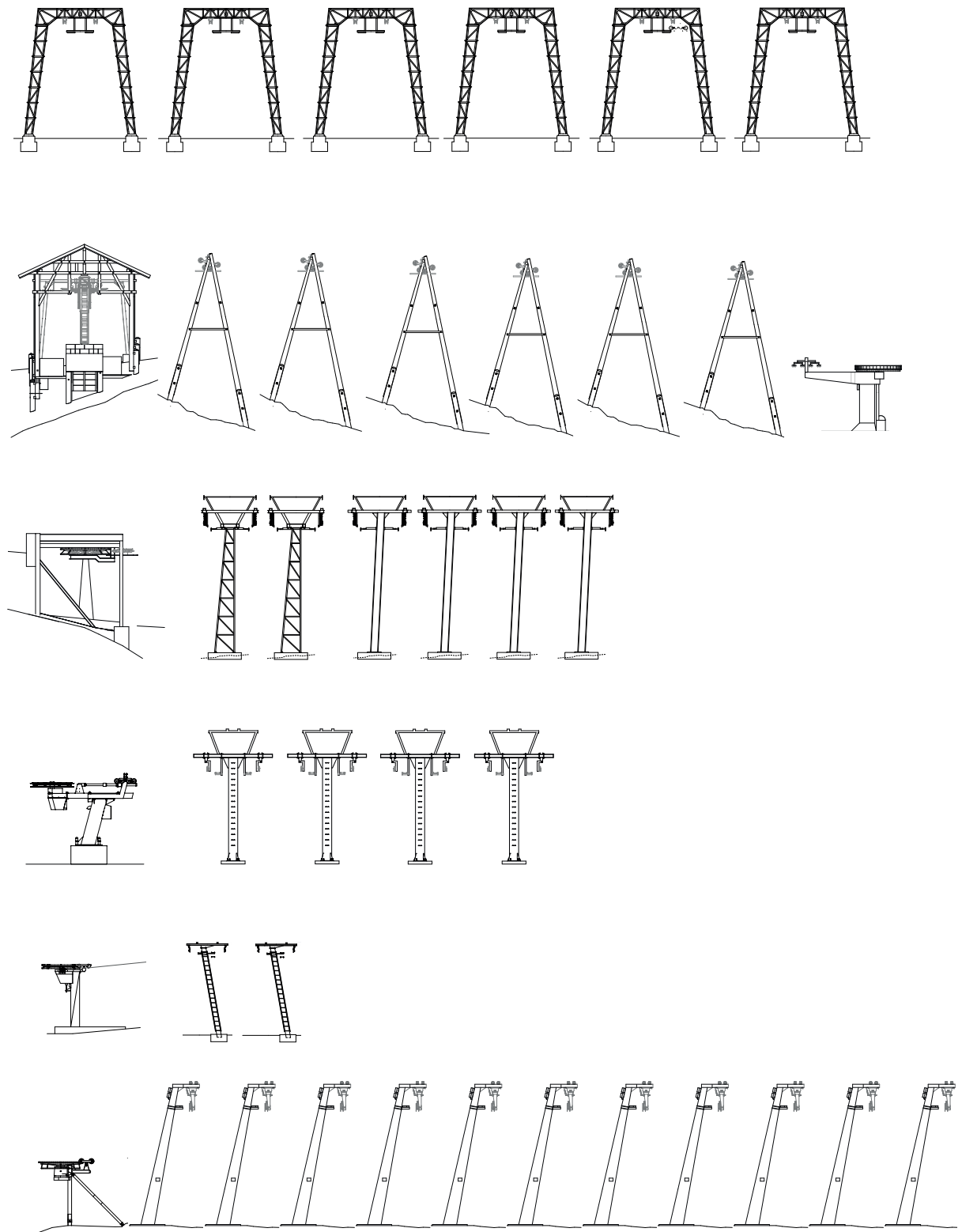
the bibliography

1. Liechtenstein Government Media Release (15 July 2022): *Architekturwettbewerb für die neue Liechtensteinische Landesbibliothek abgeschlossen*. Vaduz. Available online: <https://www.llv.li/de/medienmitteilungen/architekturwettbewerb-fuer-die-neue-liechtensteinische-landesbibliothek-abgeschlossen>
2. Fischer Architekten (n.d.): *Liechtensteinische Landesbibliothek, Vaduz*. Available online: <https://www.fischer-architekten.ch>
3. Morger Partner Architekten AG (n.d.): *National Library of Liechtenstein, Vaduz*. Available online: <https://www.morgerpartner.ch>
4. Liechtensteinische Landesbibliothek (n.d.): *Über uns – Warum ein neuer Standort? Das Projekt*. Available online: <https://www.landesbibliothek.li>
5. Beitrag im Landesspiegel (11 July 2023): *Vaduz erhöht Unterstützungsbeitrag für den Bau der Landesbibliothek*. Available online: <https://landesspiegel.li/2023/07/vaduz-erhoeht-unterstuetzungsbeitrags-fuer-den-bau-der-landesbibliothek/>
6. Tagblatt (21 July 2022): *So soll die neue Landesbibliothek aussehen*. Available online: <https://www.tagblatt.ch/ostschweiz/werdenberg/bibliotheksprojekte-liegen-auf-ld.2319947>
7. Espazium / TEC21 (13 October 2022): *As found – Projektwettbewerb Liechtensteinische Landesbibliothek (LiLB), Vaduz*. Available online: <https://www.espazium.ch>

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PHASE I - ANALYSIS

1.2 the inventory



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PHASE I - ANALYSIS

1.3 the references



wien museum - certov, winkler, ruck
zhengzhou - christian kerez



european school center - atelier kempe thill
centre pompidou - renzo piano, richard rogers
garage museum of contemporary art - oma



school leutschenbach - christian kerez
bmw factory - zaha hadid



art depot - gigon guyer
timmerhuis - oma
office building - urs hettich



collection goetz - herzog de meuron
museum langen foundation - tadao ando
new nationalgalerie - mies van der rohe



foundation cartier - jean nouvel
museum of transportation - gigon guyer
ewz power plant - christian kerez



foundation prada - oma
extension of art museum winterthur - gigon guyer
louvre lens - sanaa



artmuseum - peter zumthor
actelion research and laboratory building - herzog de m.
floating farm - goldsmith

PHASE I - ANALYSIS

1.4 the story of the ski museum

The Ski Museum in Vaduz was founded in 1993 by former ski racer Noldi Beck. Over many years, Beck passionately collected artifacts related to the history of alpine skiing. The museum included historic skis, trophies, photographs and equipment. The collection eventually comprised around 15,000 items and was displayed in a dedicated exhibition space in Vaduz. Beck saw his collection as a cultural legacy of alpine skiing and preserved it with great dedication. He was supported by companions such as Hans Walter Schädler, Andreas Wenzel, and other wellknown figures from the worlds of sports and culture in Liechtenstein.

After Noldi Beck's death in the summer of 2014, the future of the museum became uncertain. Despite considerable efforts from Beck's personal network and ski clubs in the region, no lasting solution was found to preserve the collection. By the end of 2015, the entire inventory was removed from Liechtenstein. According to reports, large parts of the collection may have ended up in Kitzbühel, Austria. The alleged buyer was Signe Reisch, president of the Kitzbühel Ski Club and chair of the Kitzbühel Museum Association. The reported purchase price was approximately €400,000.

To this day, the whereabouts of the collection remain unclear. While some sources suggest it is in storage or has been disassembled, there is no public exhibition or official statement confirming its new location. Even loaned items are considered missing. The disappearance of the museum is now regarded not only as a material loss, but also as a missed opportunity for preserving and sharing.

the bibliography

1. the cultural history of alpine skiing in Liechtenstein and beyond.
Tages-Anzeiger (2024): *Das verschwundene Museum* [The Disappeared Museum]. Zurich, 02.02.2024.
Available online: <https://www.tagesanzeiger.ch/das-verschwundene-museum-252566068524>
2. International Society of Olympic Historians (2008): *The Ski Museum of Liechtenstein*, in: *Journal of Olympic History*, Vol. 26, No. 1, pp. 29–31.
Available online: <http://isoh.org/wp-content/uploads/JOH-Archives/johv26n1k.pdf>
3. Historical Lexicon of Liechtenstein (n.d.): *Ski Museum*.
Available online: <https://historisches-lexikon.li/Skimuseum>
4. Mamilade Liechtenstein (n.d.): *Ski Museum Vaduz – Museum for Alpine Skiing*.
Available online: <https://www.mamilade.ch/liechtenstein/liechtenstein/ausflugstipps/museum/ski-museum-vaduz>
5. St. Galler Tagblatt (2016): *Mysterious Disappearance – Skis from Toggenburg Lost Without a Trace*. Available online: <https://www.tagblatt.ch/ostschweiz/werdenberg-obertoggenburg/toggenburg-mysterioeses-verschwinden-ld.968444>



PHASE I - ANALYSIS

1.4 the need of the building

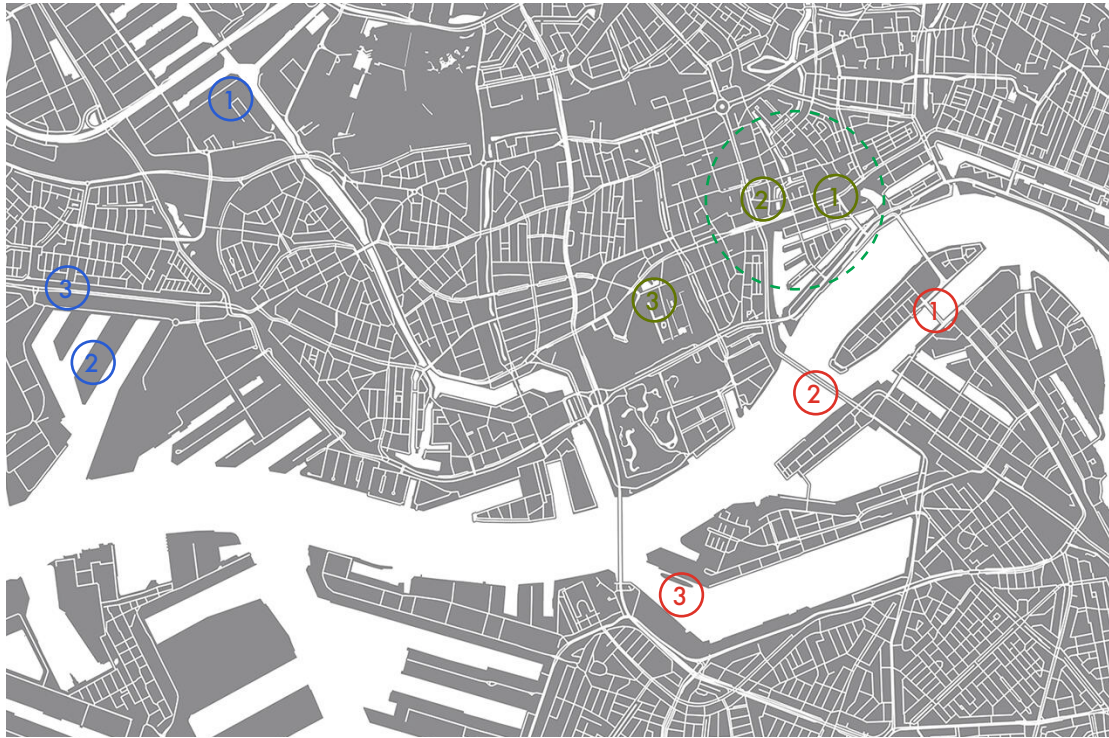
Ski Museum

- square meters at the old site for the exhibition | 04.09
- infrastructure for the visitors
- infrastructure for employees
- storage rooms

Liechtenstein Marketing

- square meters that are documenten in the inventory plans
- additional needs explained during our site survey | 03.09

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SEMINAR WEEK

29.09	individual arrival in Papenburg
30.09 morning	meyer werft 09:15 meeting point : gate 1 , Industriegebiet Süd-Rheiderlandstr. 09:30 - 11:00 guided tour no public transport to the site walking distance 45 min. from hotel
	afternoon
	----- departure individual arriving at rotterdam individual stay in Rotterdam
01.10 morning	1. Van Nelle factory (unesco) (1 pax) 09:45 meeting point : will be announced 10:00 - 11:30 guided tour
	afternoon
	2. m4h district (2 pax) 3. floating farm 15:00 - 17:00 guided tour
02.10 morning	1. koninginbrug (2 pax) 2. erasmus bridge ben van berkel (2 pax) 3. ss ship (1 pax)
	afternoon
	onderzeebootloods heijplaat (2 pax) de trotterdam oma (2 pax)
03.10 morning	1. cube house piet blom (2 pax) 2. market hall mrvd (2 pax) 3. bowl mrvd (2 pax)
	afternoon
	train station (2 pax)
04.09	departure

tour lead by you

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Alvar Aalto, Villa Mairea, Noormakku, 1939 | student work TU Berlin, Pool Architekten

PHASE II - DESIGN

IMPLEMENTING IDEAS

Essential qualities of the analysed references, spatial and atmospheric, start now to inform the design process.

The restrictions resulting from the inventory are used as an opportunity to explore shifts in structural and spatial qualities and to give the buildings their own expression.

New elements can be added for connectors or where new parts make more sense.

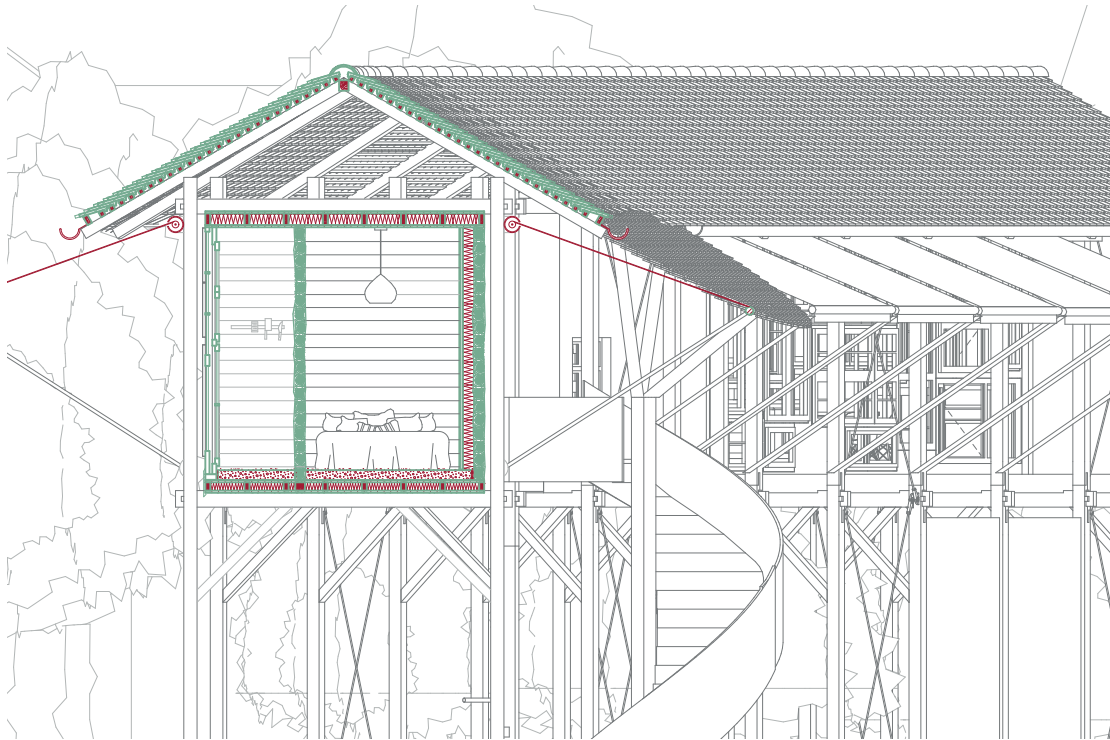
The degree of legibility of the deconstructed building is one of the specific questions of the design project.

The building physics requirements are those of the current Swiss standard for new construction.

Show your first design intention in a collage model of your favorite situation. To do so, you first have to create a mental image of a concrete situation.

Diagrammatic drawings of the structural principles and synthetic schemes of the functional program, the relation of its parts, including sizes of the individual spaces explain the design intentions in an analytical way.

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MIDTERM

The results of Phase I (Analysis) are pinned up and are part of the review.

Layout:

All plans, illustrations and visualizations are to be presented on min. 6 horizontal A0 sheets. The number and layout of the sheets is adapted to the individual project.

Color code for architectonic drawings: black and grey.

Color code for construction drawings:

Demolition: yellow; new: red; reuse elements: green; repair: blue; vegetation: grey

1. 1:500 site plan (Schwarzplan) always including the site and its surroundings
2. 1:100 site model (group model)
3. 1:100 model of the project
4. 1:100 floor plans, sections, elevations, always including context!
5. 1:20 section, using the color code
6. rendering | photo of model
7. sketch book



PHASE III - GOING INTO DETAIL

MODEL

The model is like the stage of a theatre made of the inventory: it creates an illusion from a certain perspective. It may contain furniture, persons. Everything that influences light, reflects and colours it, casts shadow, must be in the model.

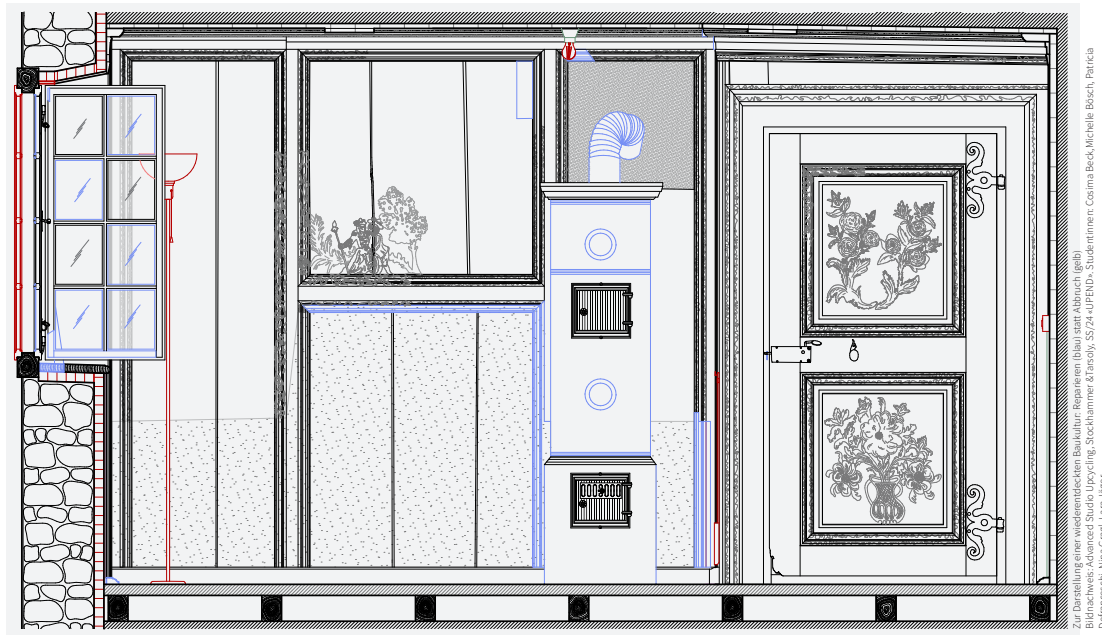
To achieve the effect of real materials several methods are possible:

- x print in scale a copy of the material (from a book, photo or internet)
sheets of paper or cardboard: aquarelle paper can get close to plaster, grey cardboard to concrete etc. The surfaces can be treated with graphite, oils, white glue etc., joints sealed with black duct tape.
- x real materials can be used when their texture does not reveal the scale of the model (wood-grain for example)

If there is a view, a background is printed and hung in front of the window, carefully levelling the horizon and the scale of the image. Sometimes the simplest models give the best result.

When shooting the photo: The appropriate light condition is consciously chosen or created. You may find natural light the easiest to handle. To avoid incoming light from the position of the camera a black blanket or similar should cover the opening.

Minimal corrections are left to Photoshop: Verticals are corrected, brightness, contrast, tonality etc. adjusted. The inserted persons are substituted with the original image.



PHASE III - GOING INTO DETAIL

COLOUR CODE FOR PLANS

EXISTING = BLACK

Preservation, maintenance, and care of the existing
Avoiding demolition and preserving existing building fabric as extensively as possible, continuing to use and care for it on site (through cleaning and refreshment).

REPAIR = BLUE

Refurbishment (from Latin reparare = to restore) Refurbishment refers to the process of returning a damaged or defective object or building component to a functional state.

REUSE & REPURPOSING = GREEN

Describes the principle of saving raw materials and reducing harmful emissions by using materials that are no longer needed in one place in another context. Reuse means that a building component is used again in the same way as before; it retains both its shape and function. Repurposing means the component's shape is preserved, but its function changes.

RECYCLING & REPROCESSING = ORANGE

Describes the principle of dissolving form and function through production processes.
Raw materials can thus be saved, but the energy consumption and emissions are comparable to those of new production (example: CO2 footprint of recycled concrete).

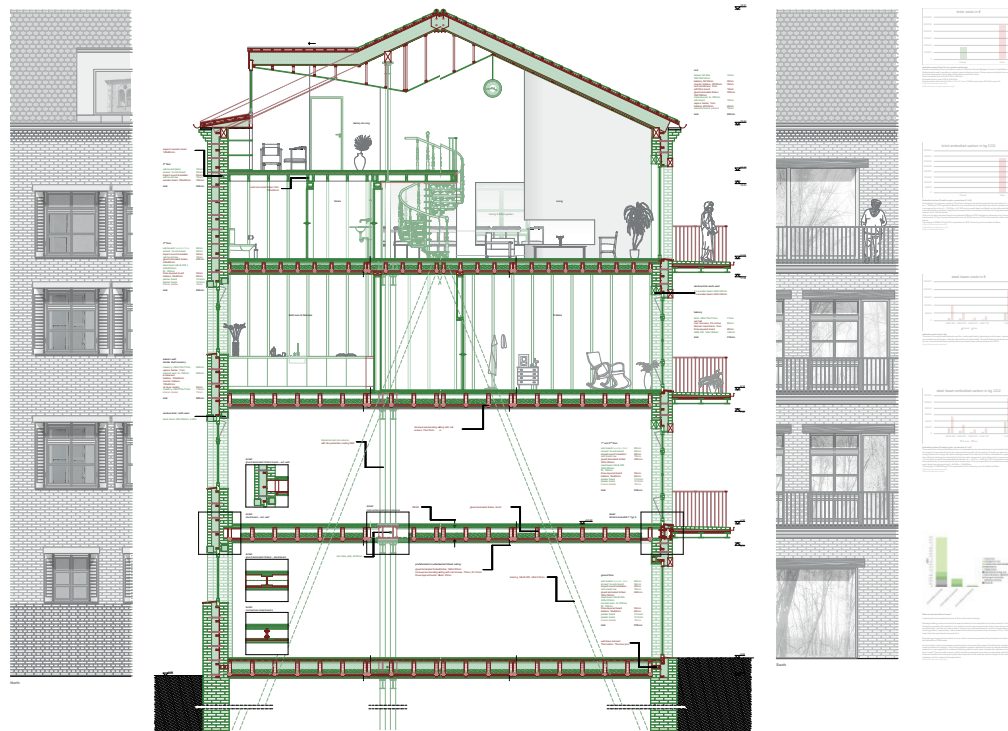
NEW = RED

Newly manufactured components and building materials made primarily from virgin raw materials.

DEMOLITION = YELLOW

Describes the dismantling and removal of building components and materials.
The goal is to enable reuse and repurposing wherever possible.

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FINALS

1. 1:500 site plan (Schwarzplan) always including the site and its surroundings
2. 1:100 structural model
1:100 object model
3. 1:50 floor plans, sections, elevations, always including context!
4. Anatomical model 1:20
5. 1:20 section and elevation, using the color code
6. min. 1 Exterior visualization (A1) Showing relation to context. Photoshop collage.
7. min. 1 Interior visualization (A1) (model photo) showing light and spatial atmosphere.
8. sketch book / thesis book draft

Layout:

All plans, illustrations and visualizations are to be presented on min. 8 A0 sheets.