

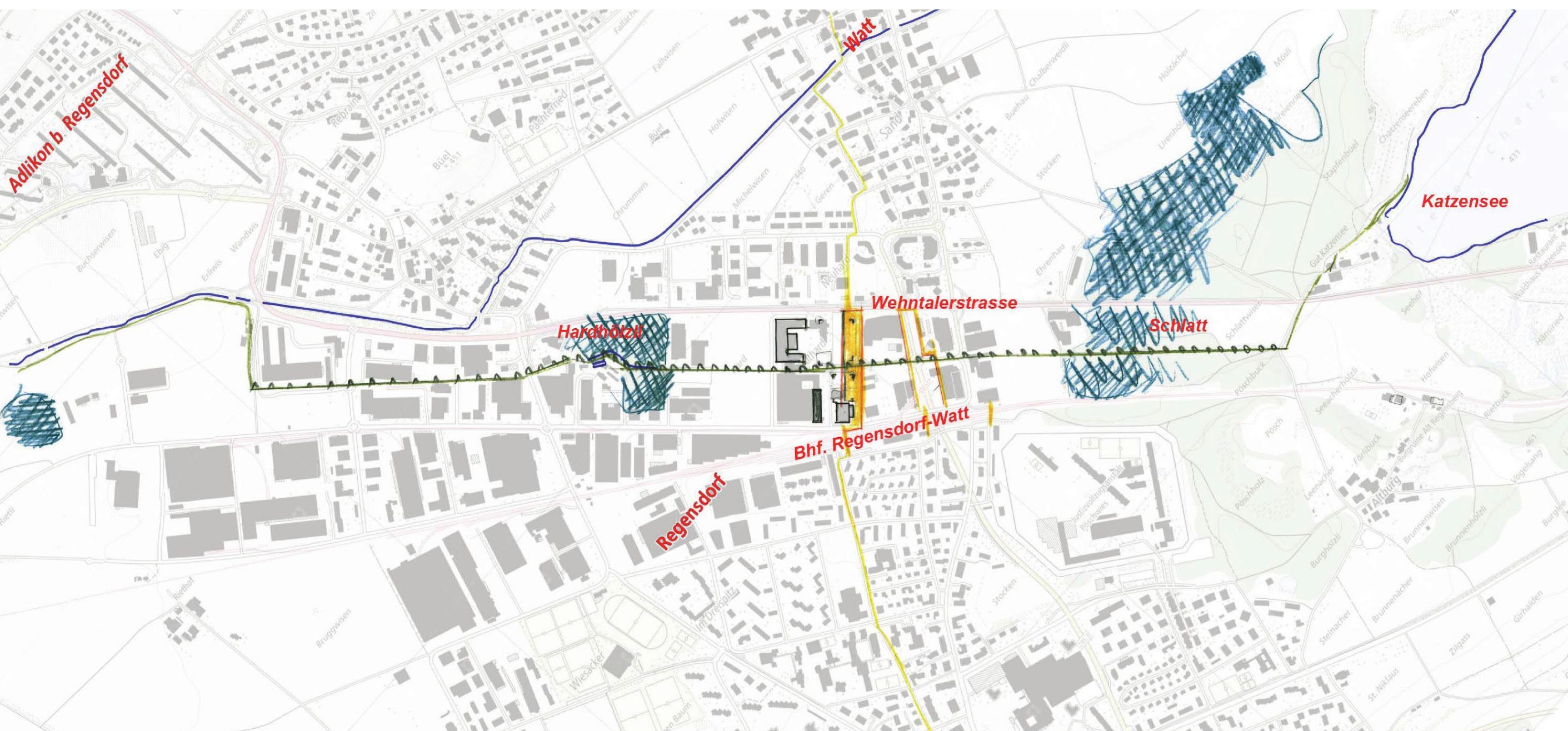
Boltshauser Architekten

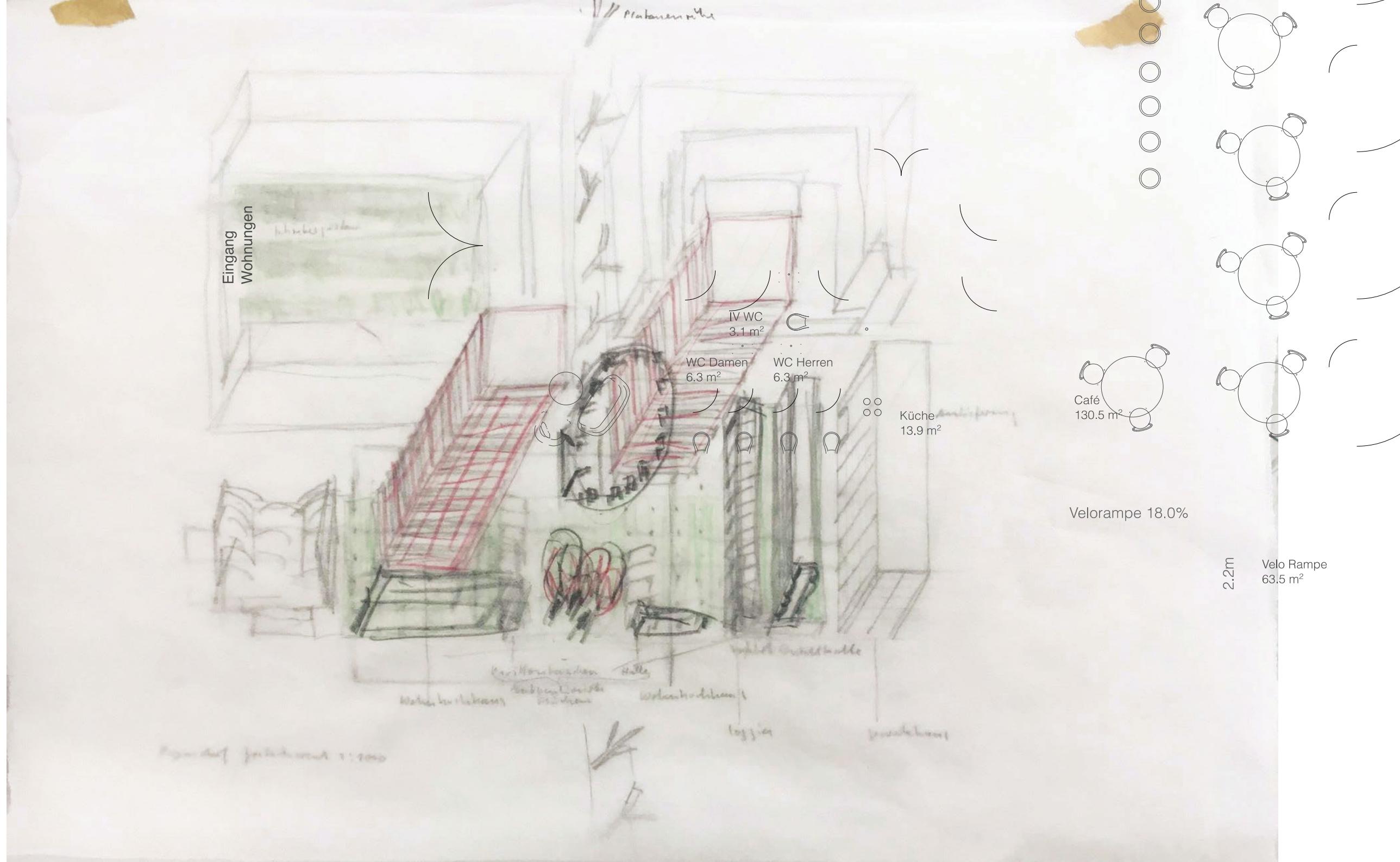
# Holzhochhaus H1 auf dem Zwhatt-Areal

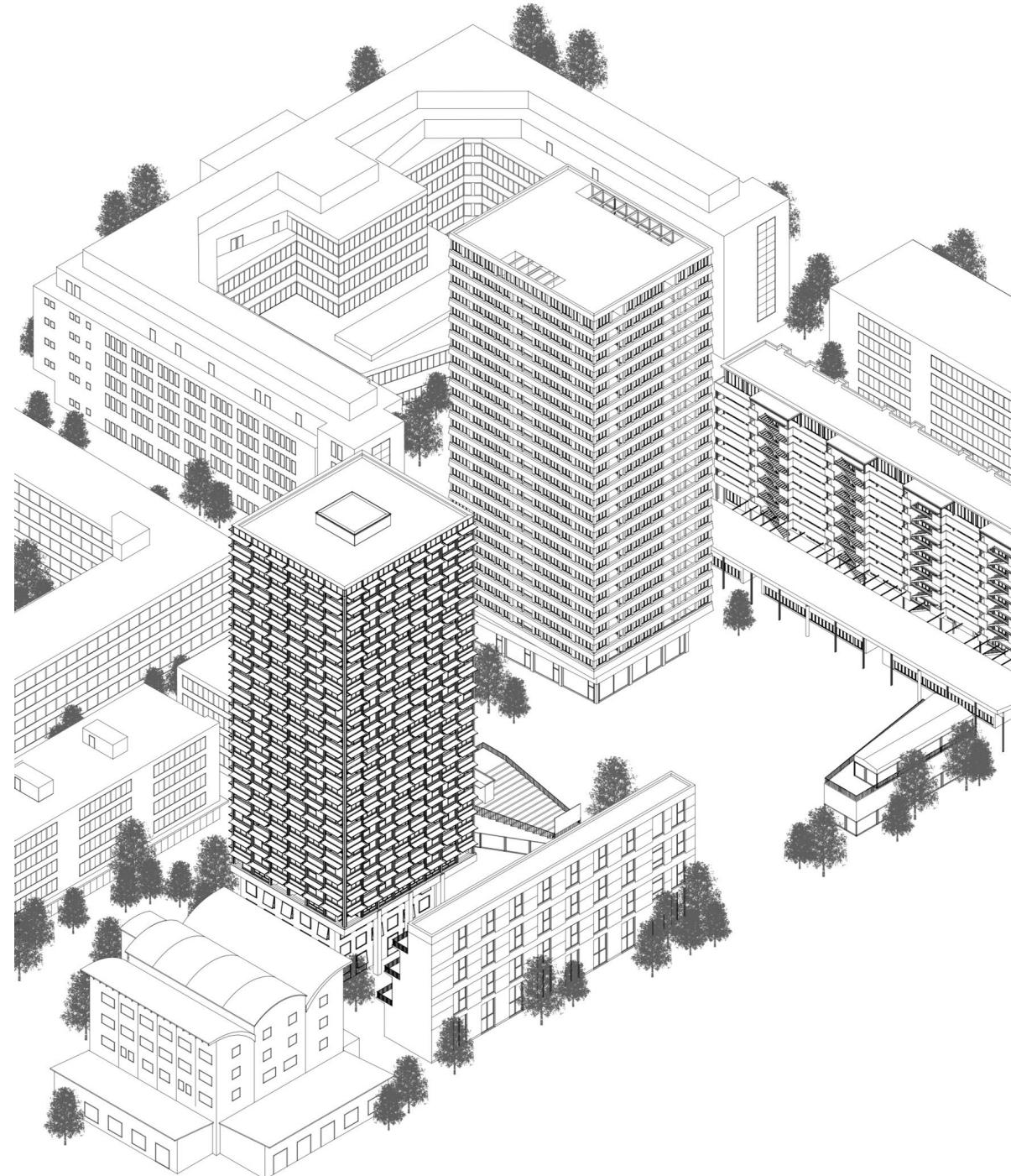
Energieapéro 2024  
Bauen mit erneuerbaren Baustoffen

Mathias Stocker







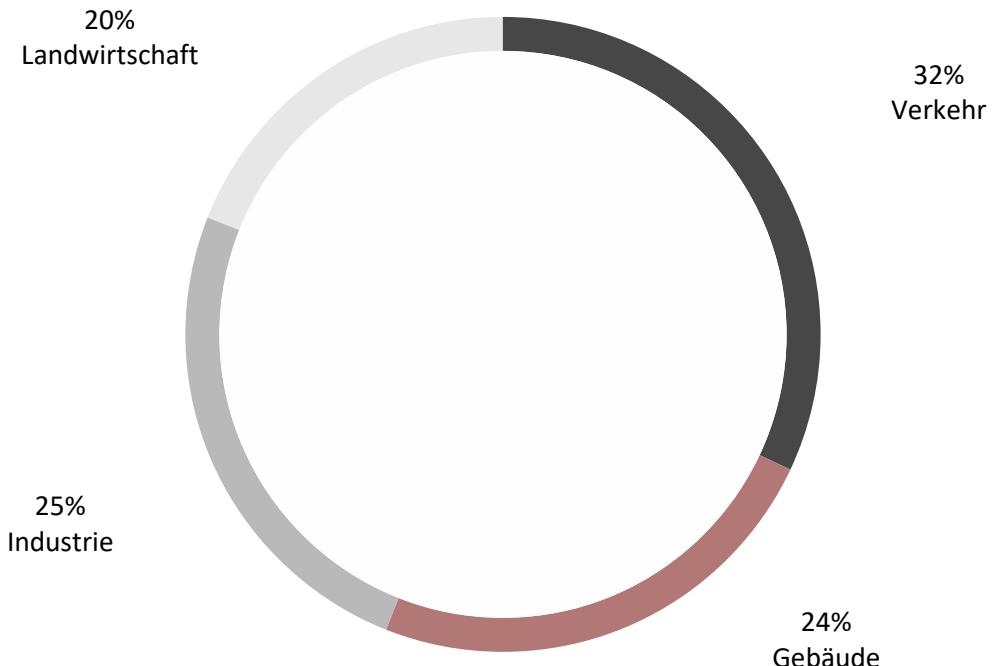


# Entwerfen mit dem Faktor Klima

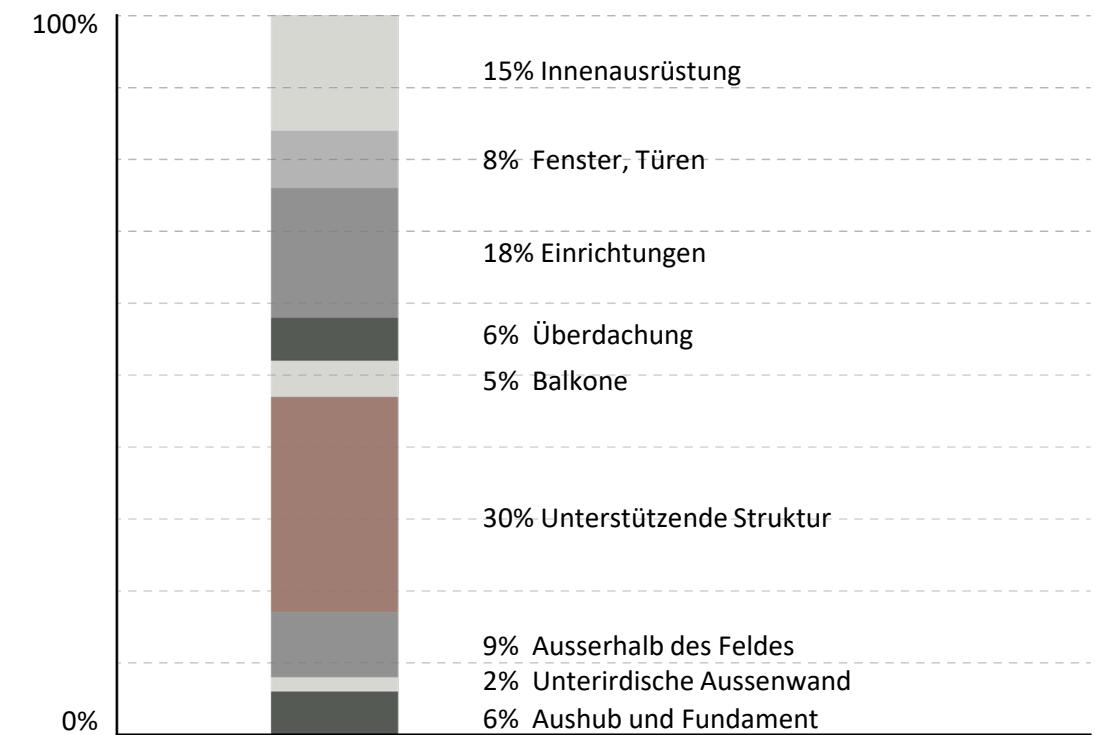
# Emissionen Treibhausgase

Wo ansetzen?

Schweiz 2020

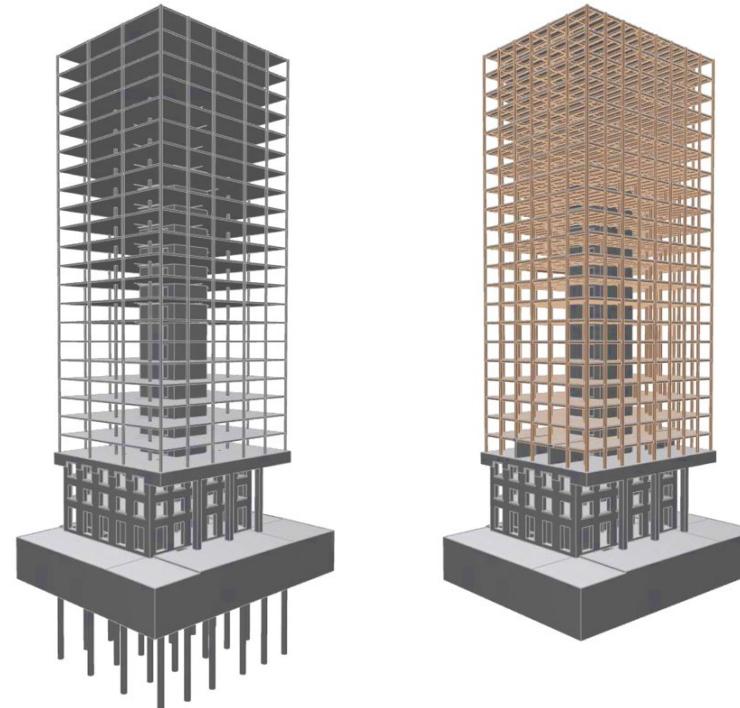


Durchschnitt jährliche THGE von CH Gebäuden  
in [%<sub>tot.</sub>]



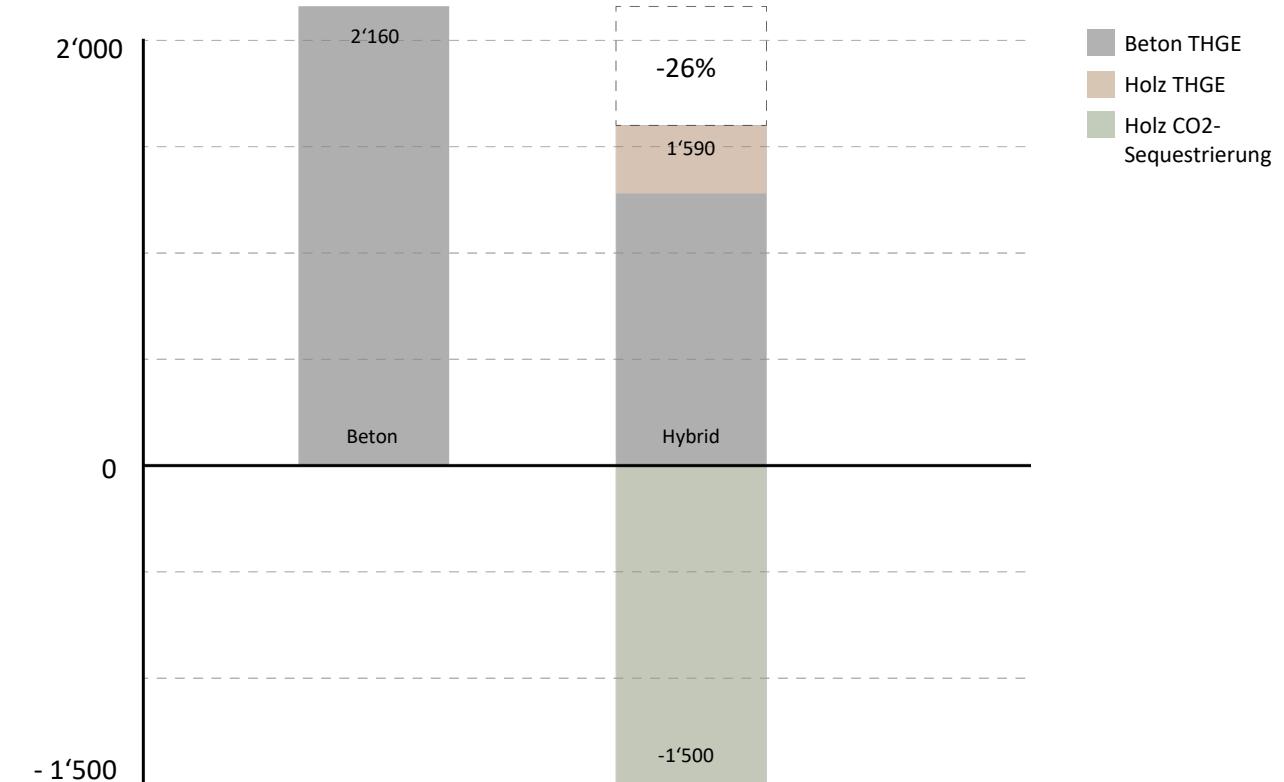
# Varianten Tragstruktur

Visueller Vergleich von konventionellem  
und Holzbaukonzept



# Strukturelle Emissionen

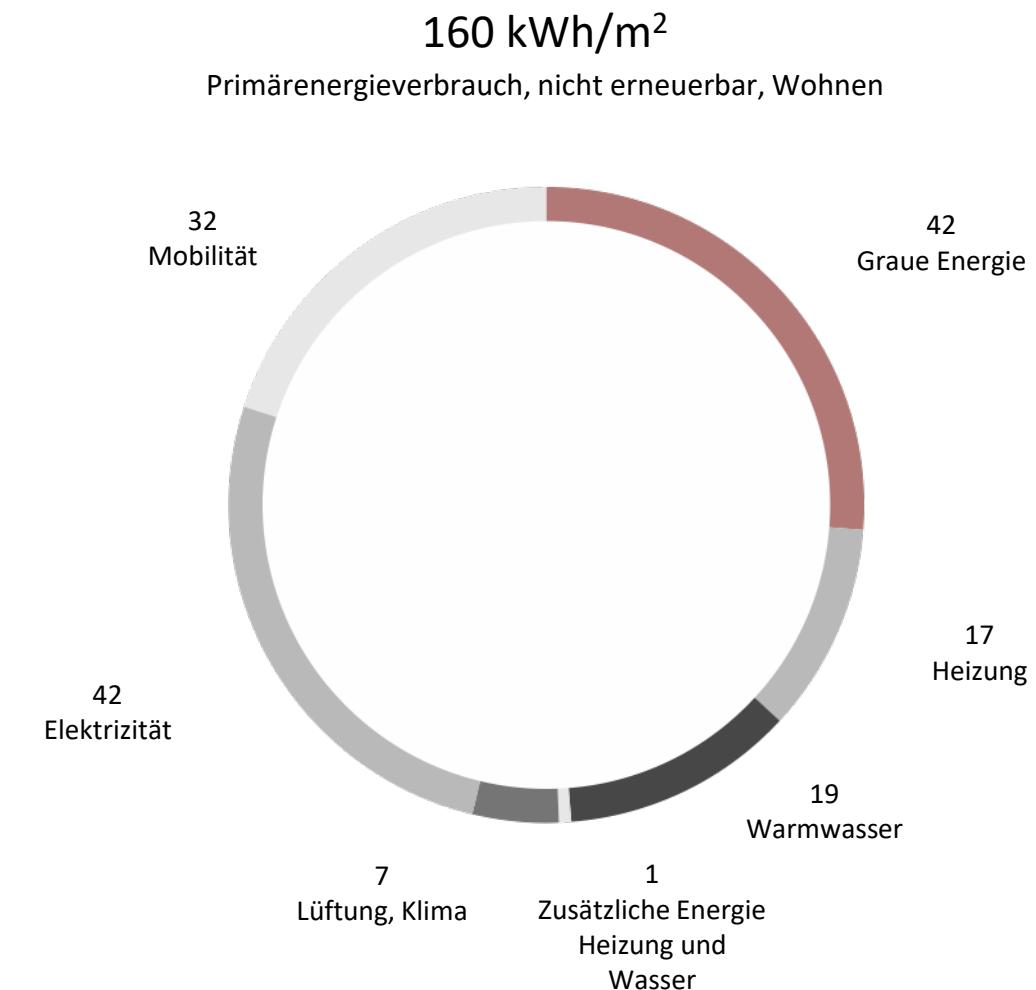
Treibhausgasemissionen über Lebenszyklus  
Ab Sockel, in [t CO2-eq]



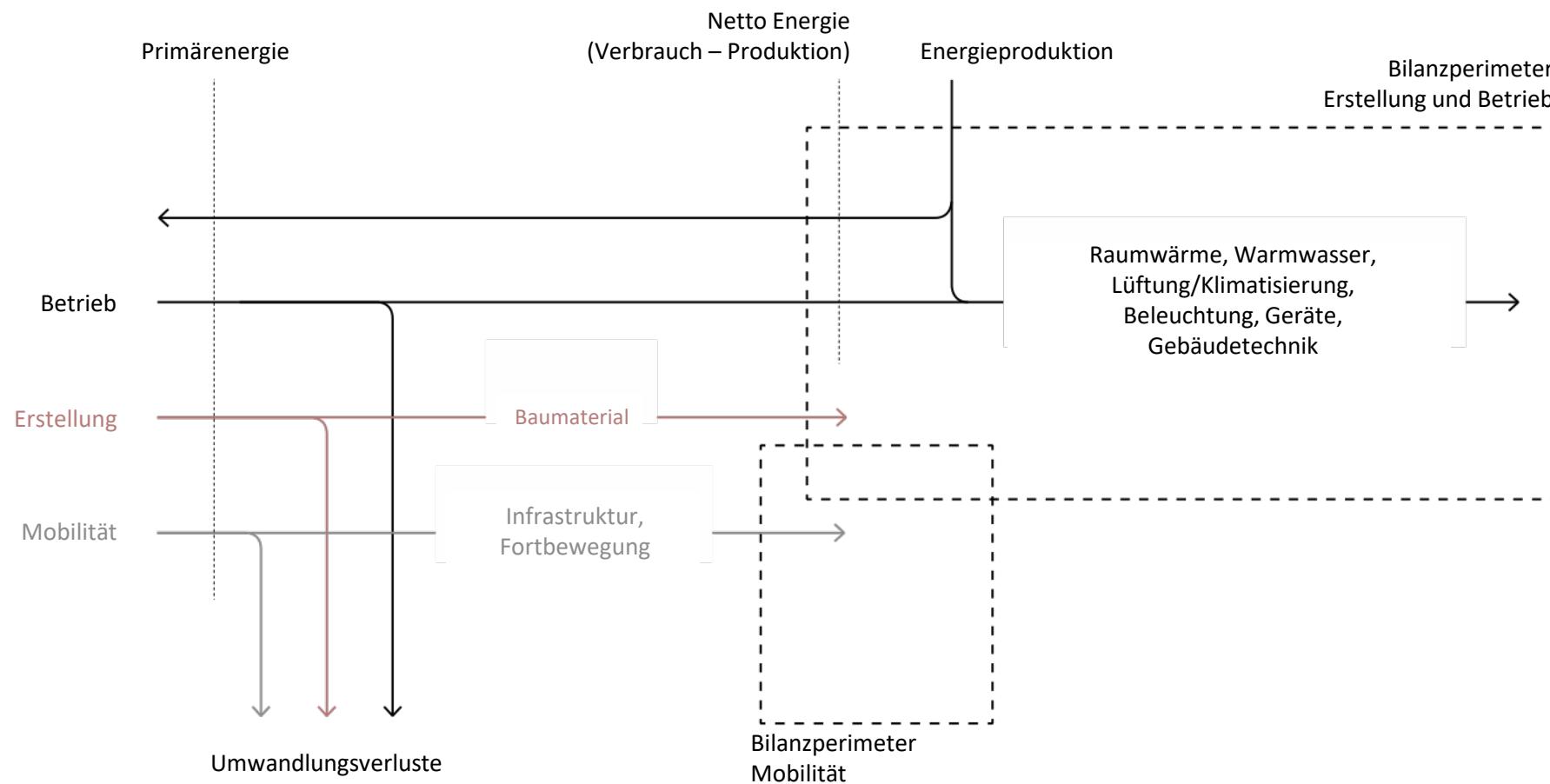
Tragwerksmodelle für die Beton- und Hybridvarianten von Zwhatt, Quelle:  
Schnetzer Puskas Ingenieure, Boltshauser Architekten

Emittierte und sequestrierte CO2-Äquivalentmasse für die Beton- und Hybridvariante  
Von Zwhatt, Quelle: Boltshauser Architekten

# Entwerfen mit dem Faktor Klima

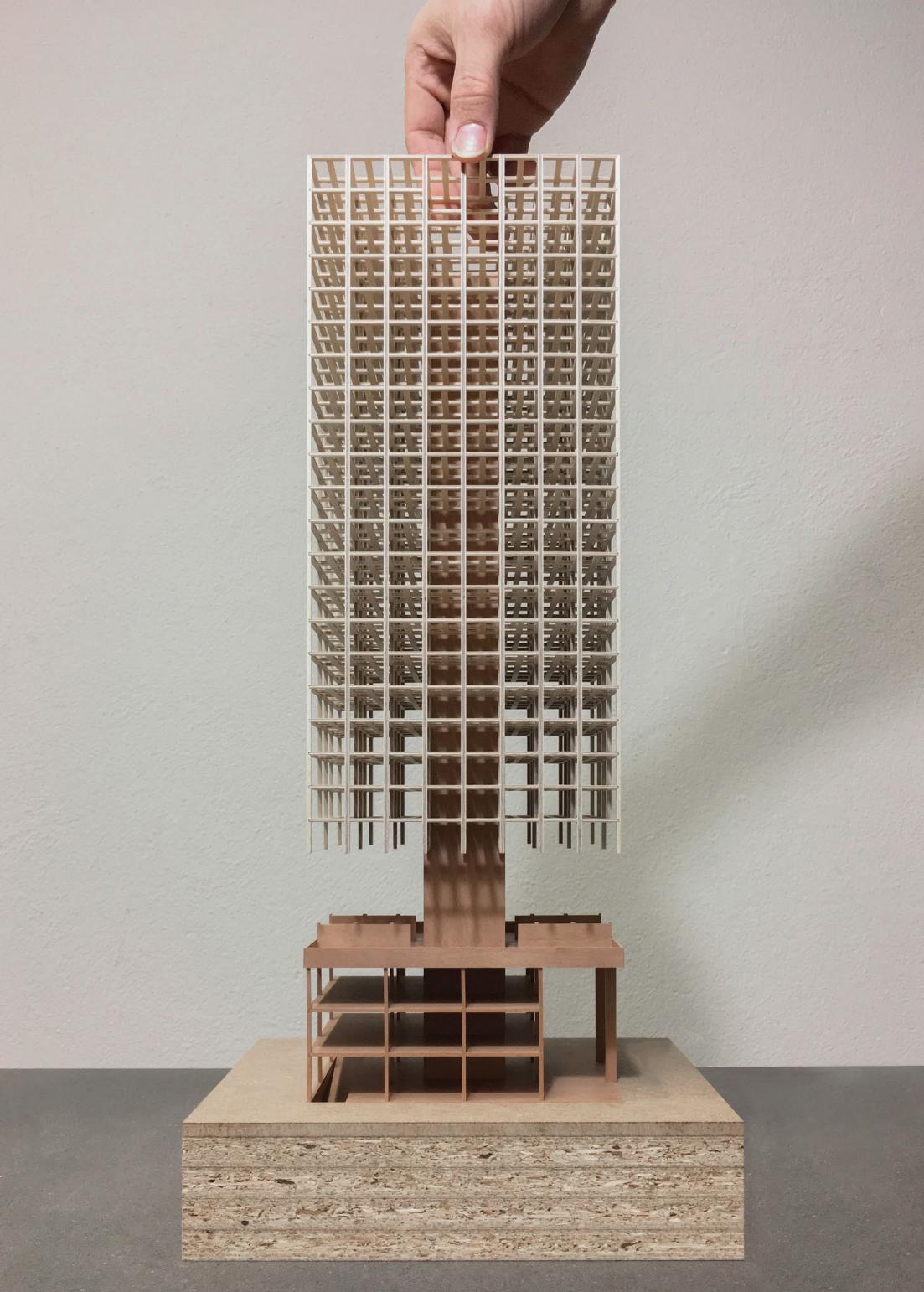
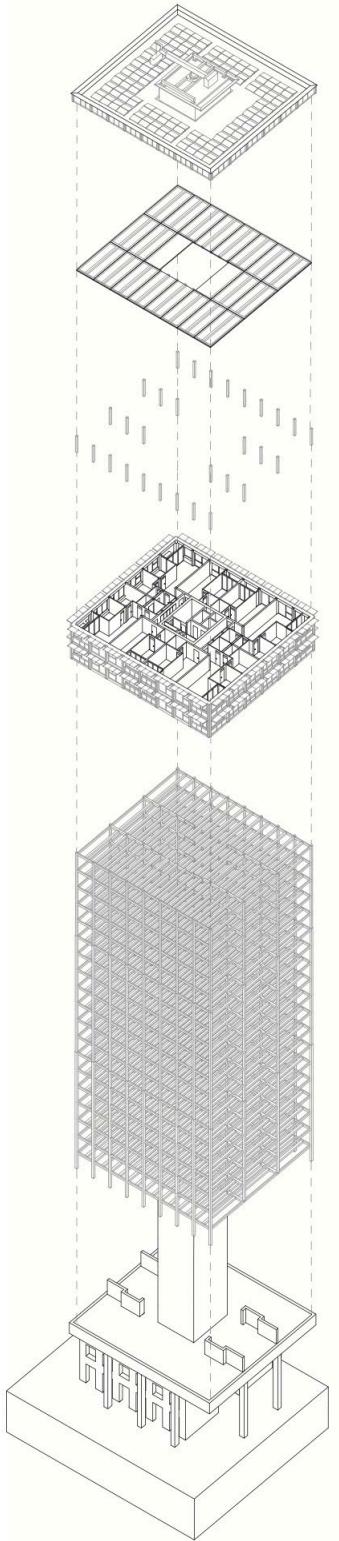


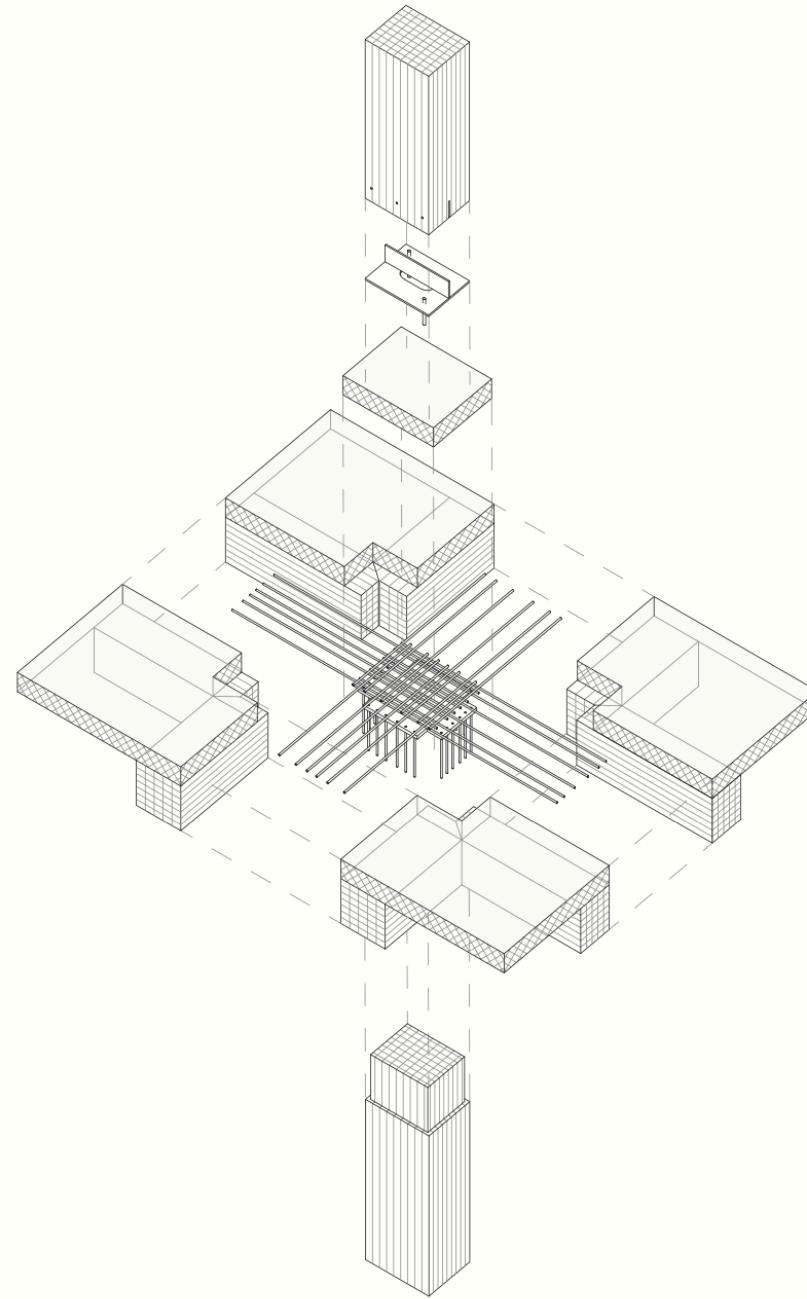
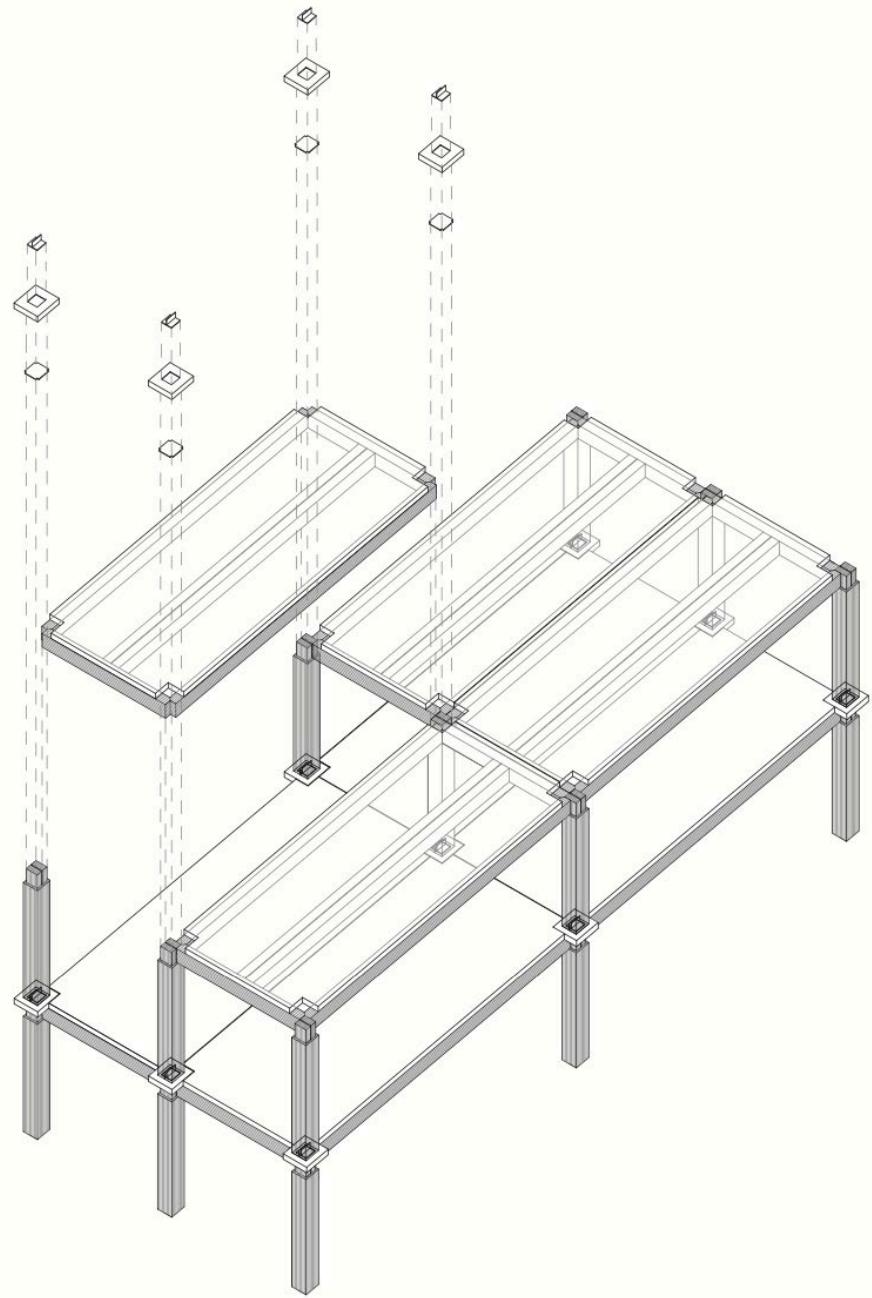
# Energieflüsse im Gebäudesektor



# Hybride Strukturen















DAV-E

REVATIVE KPA

SWF  
KRANTTECHNIK

Fabr.Nr. 2211888/01  
**2 x 10t**  
Baujahr 2022

SWF  
KRANTTECHNIK

**DEMAG** 8t

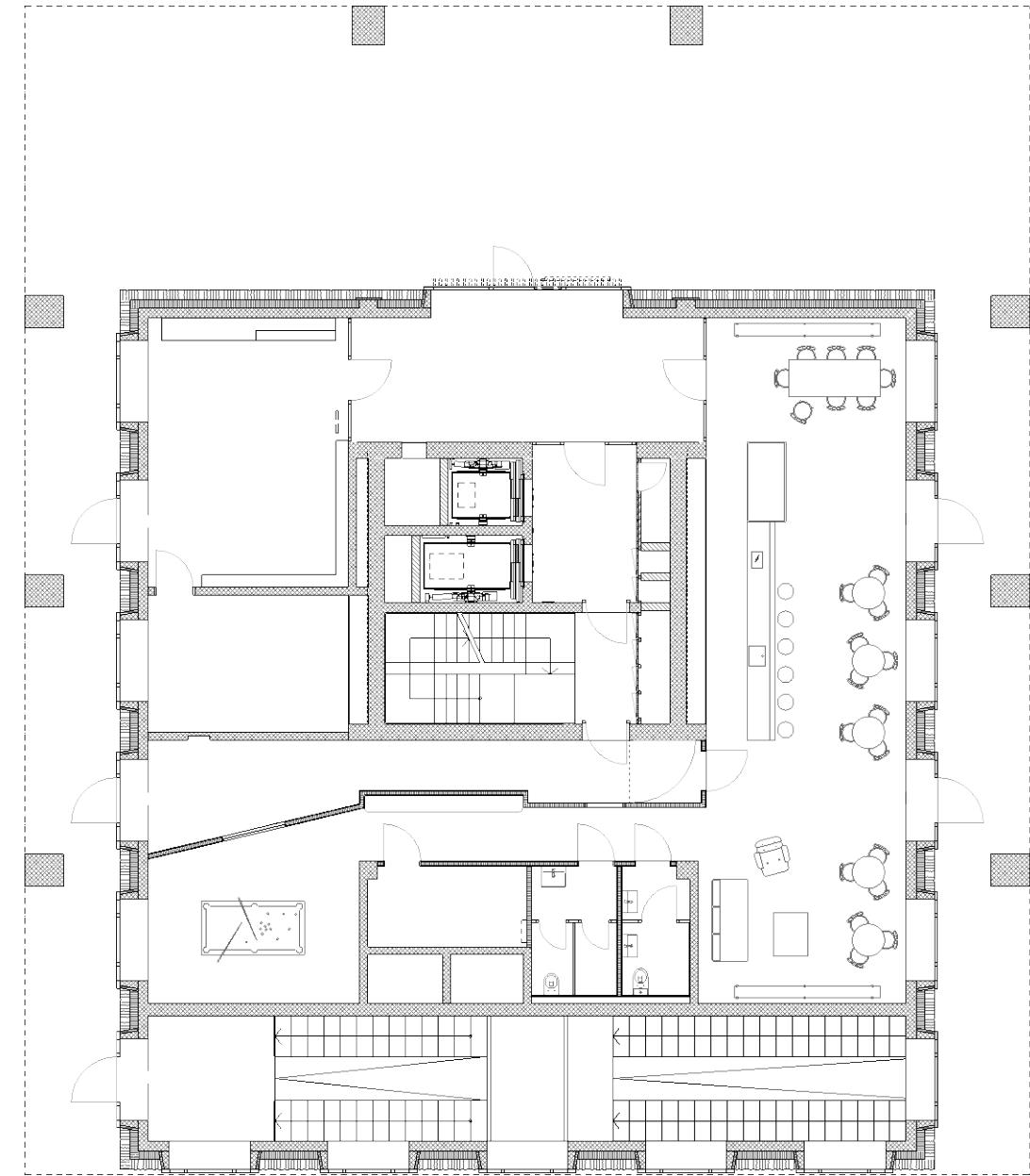
GERSAG

SWF

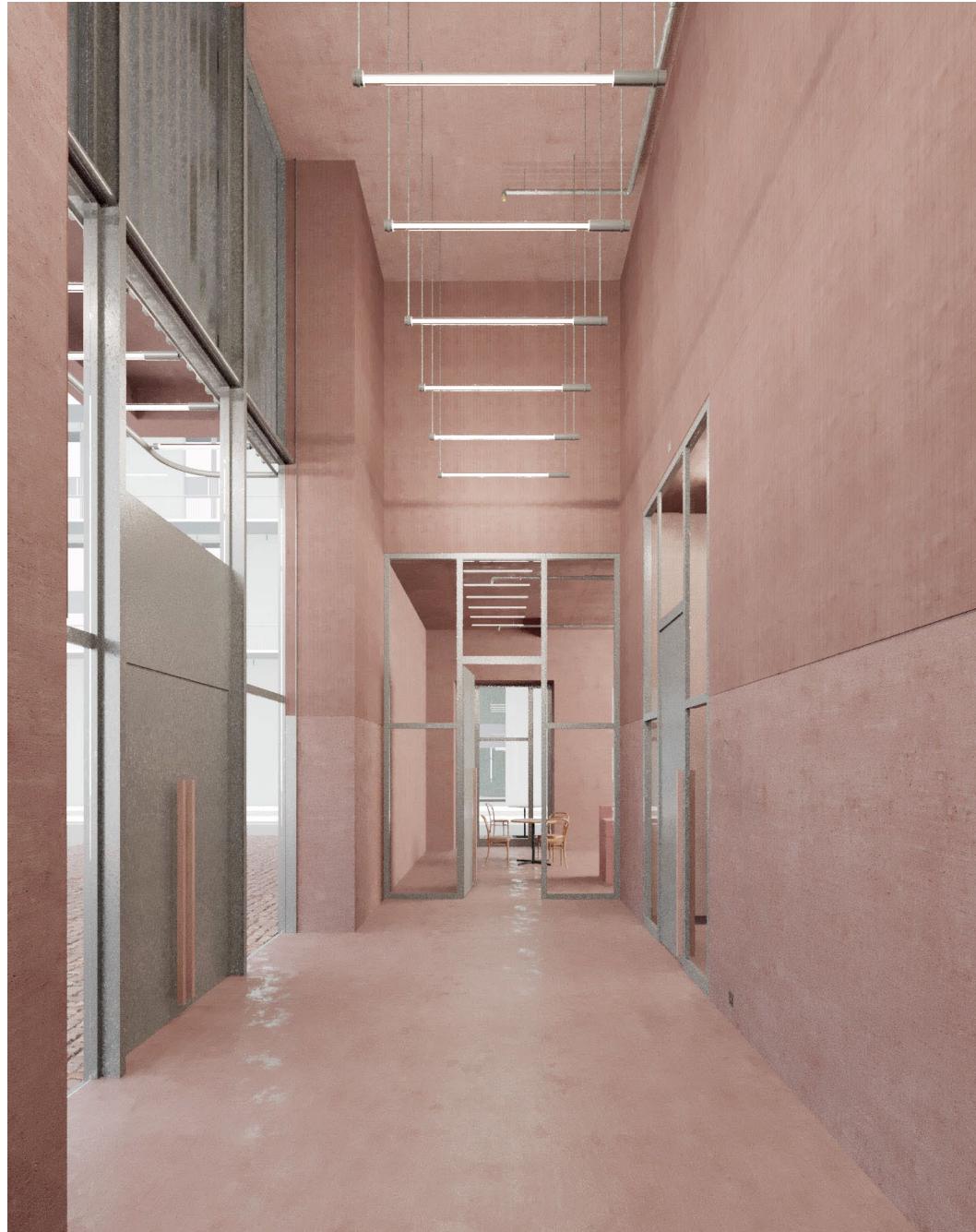


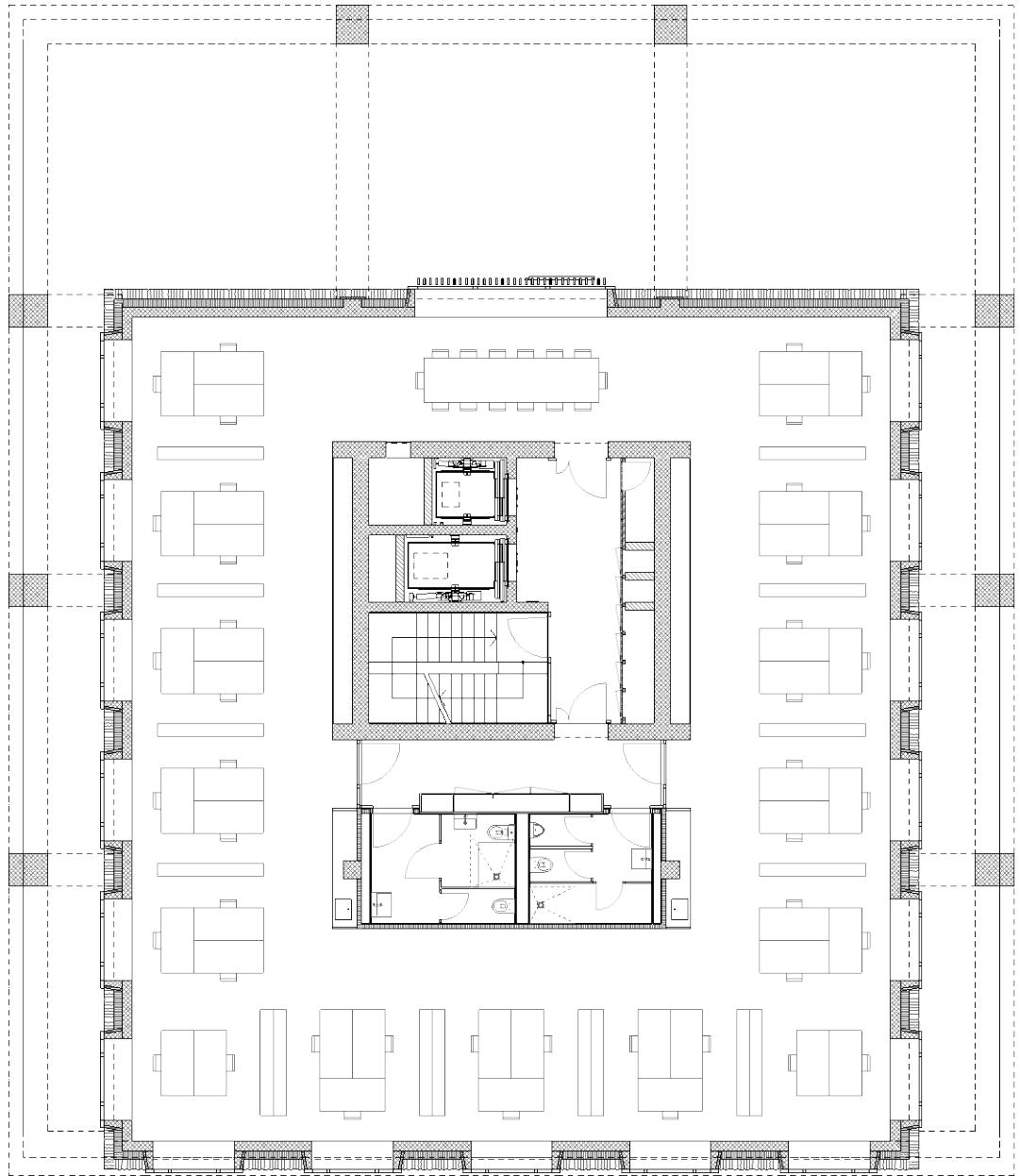


# Wandelbare Vielfalt



Eingang / Bistro  
**Erdgeschoss**



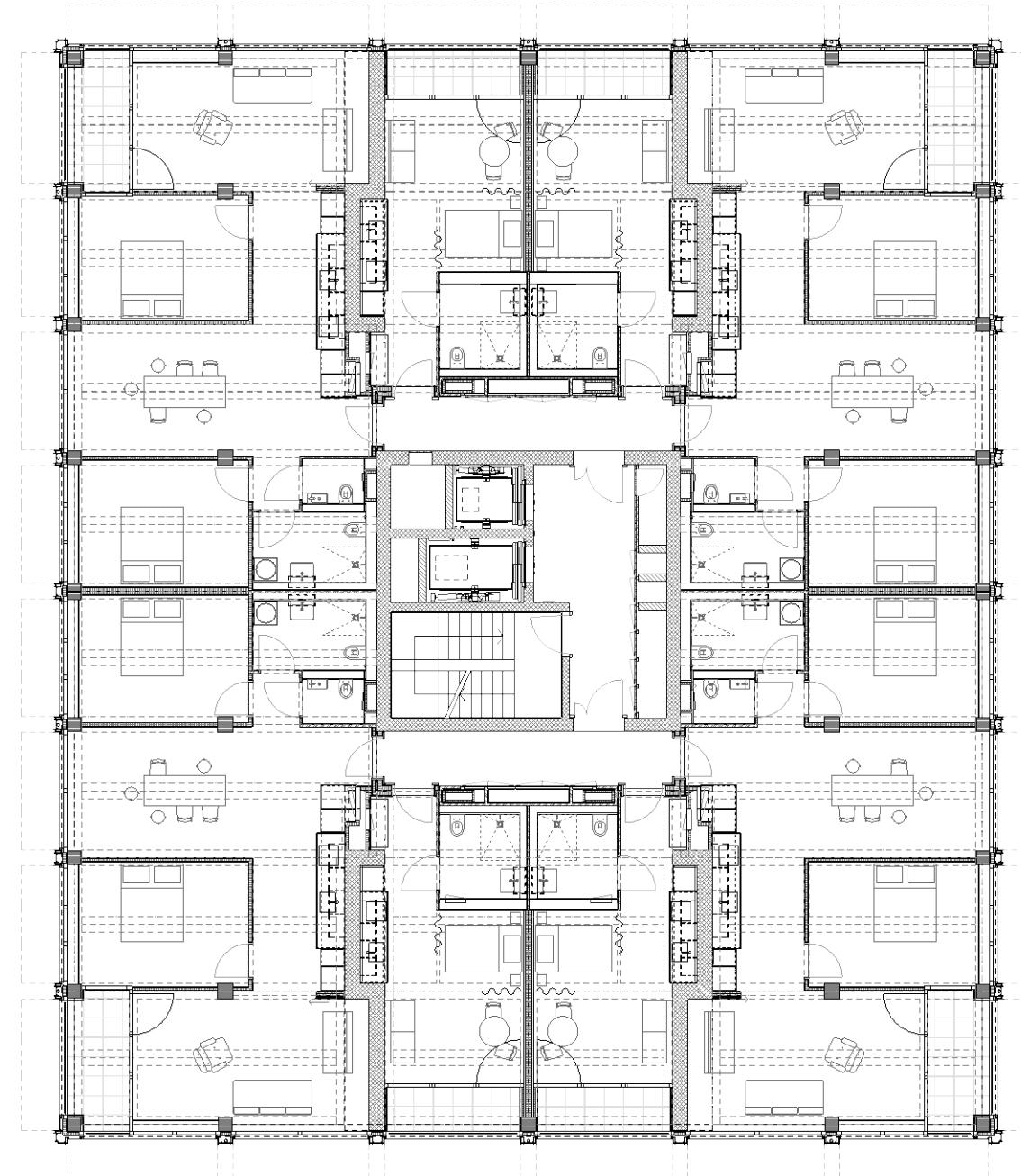


Co-working  
**2. Obergeschoß**

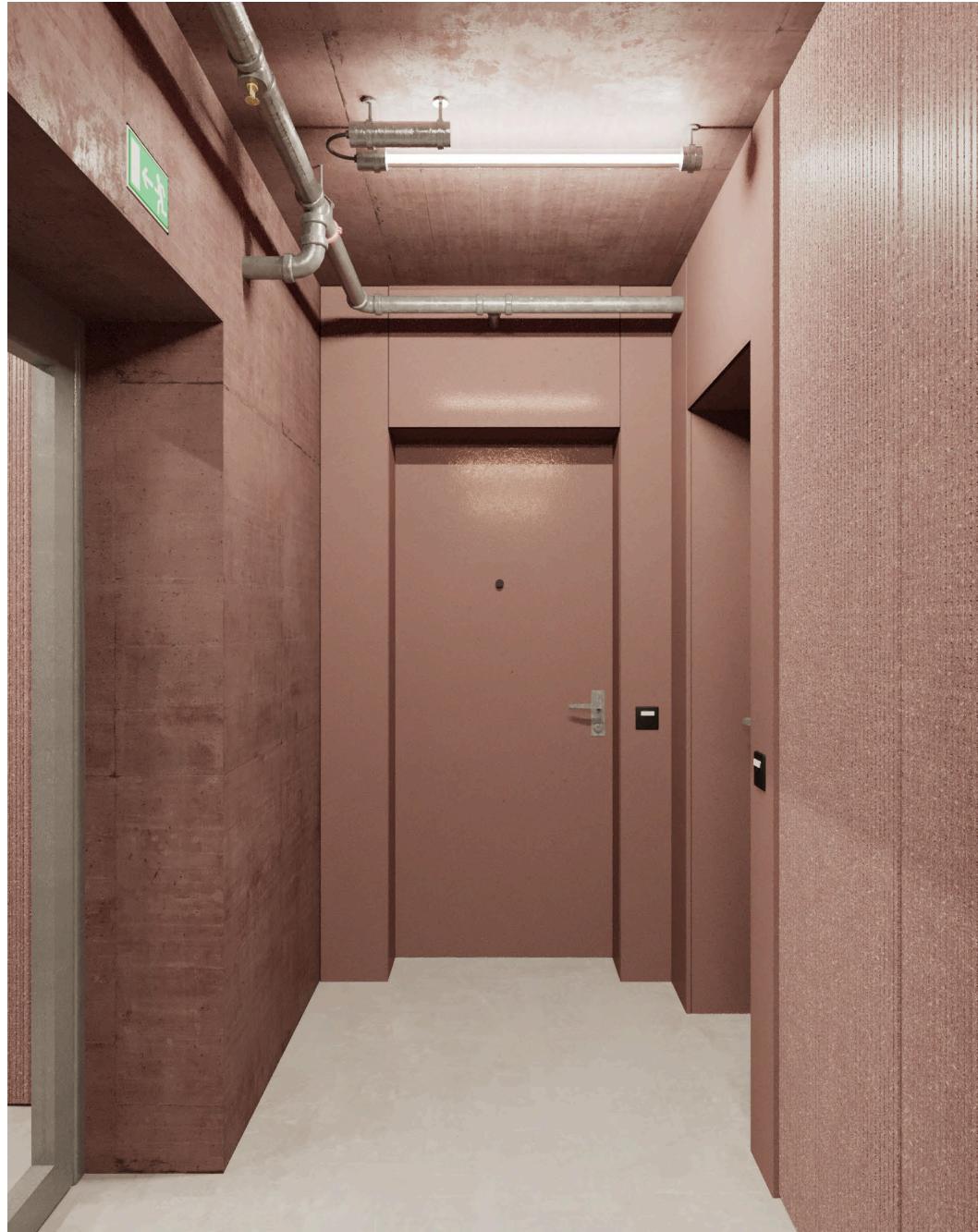




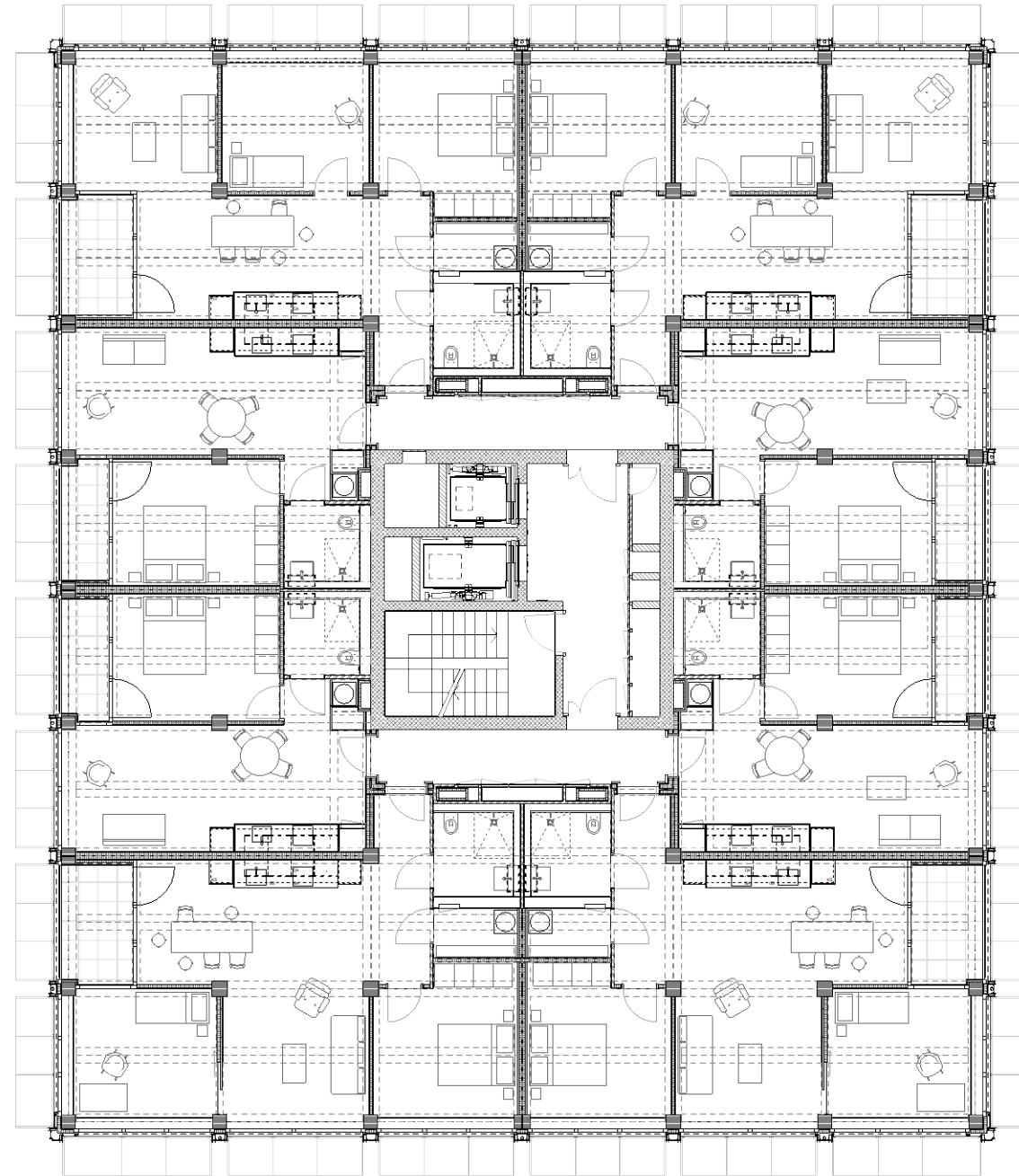




Abfanggeschoß  
**3. Obergeschoß**

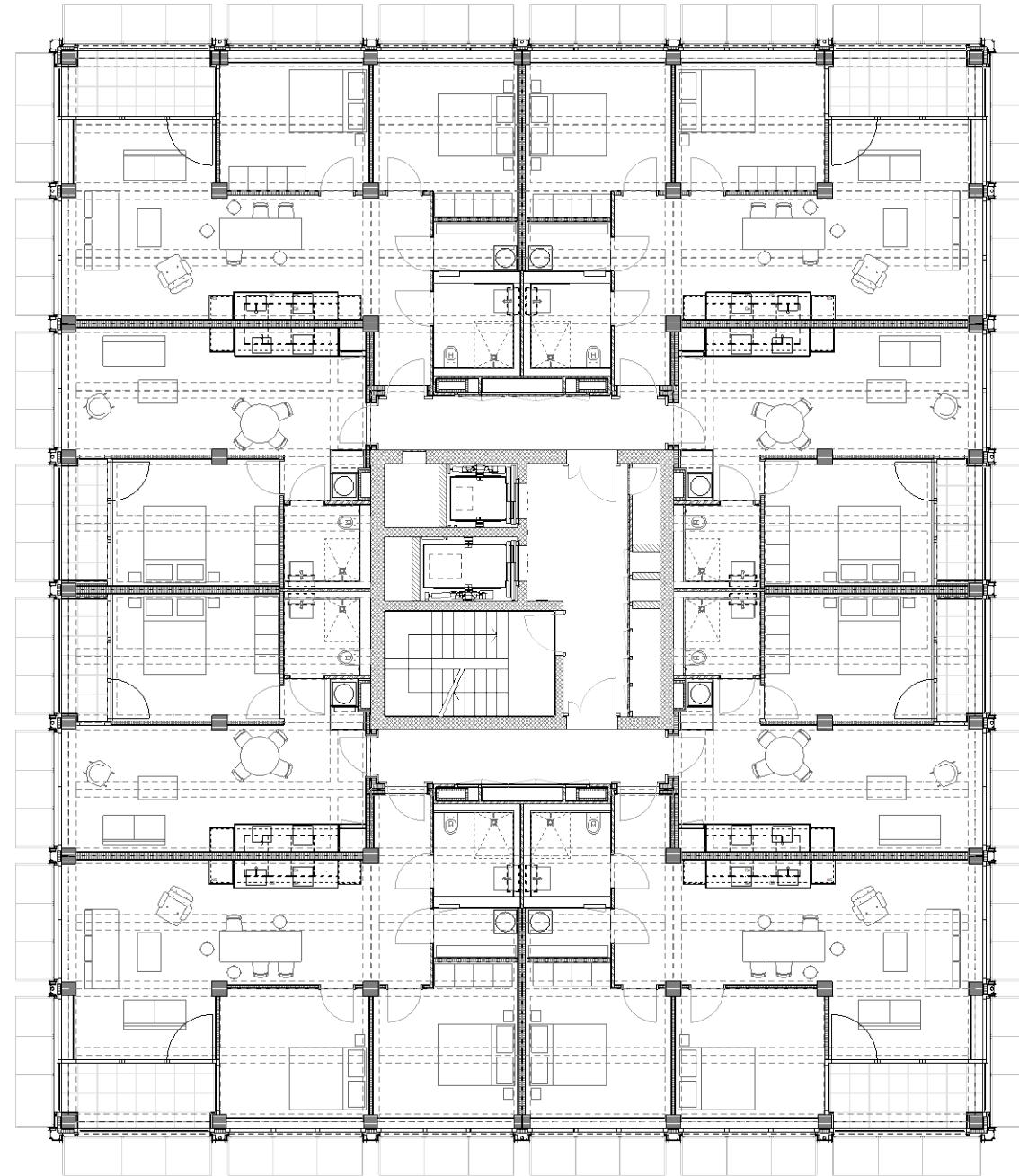




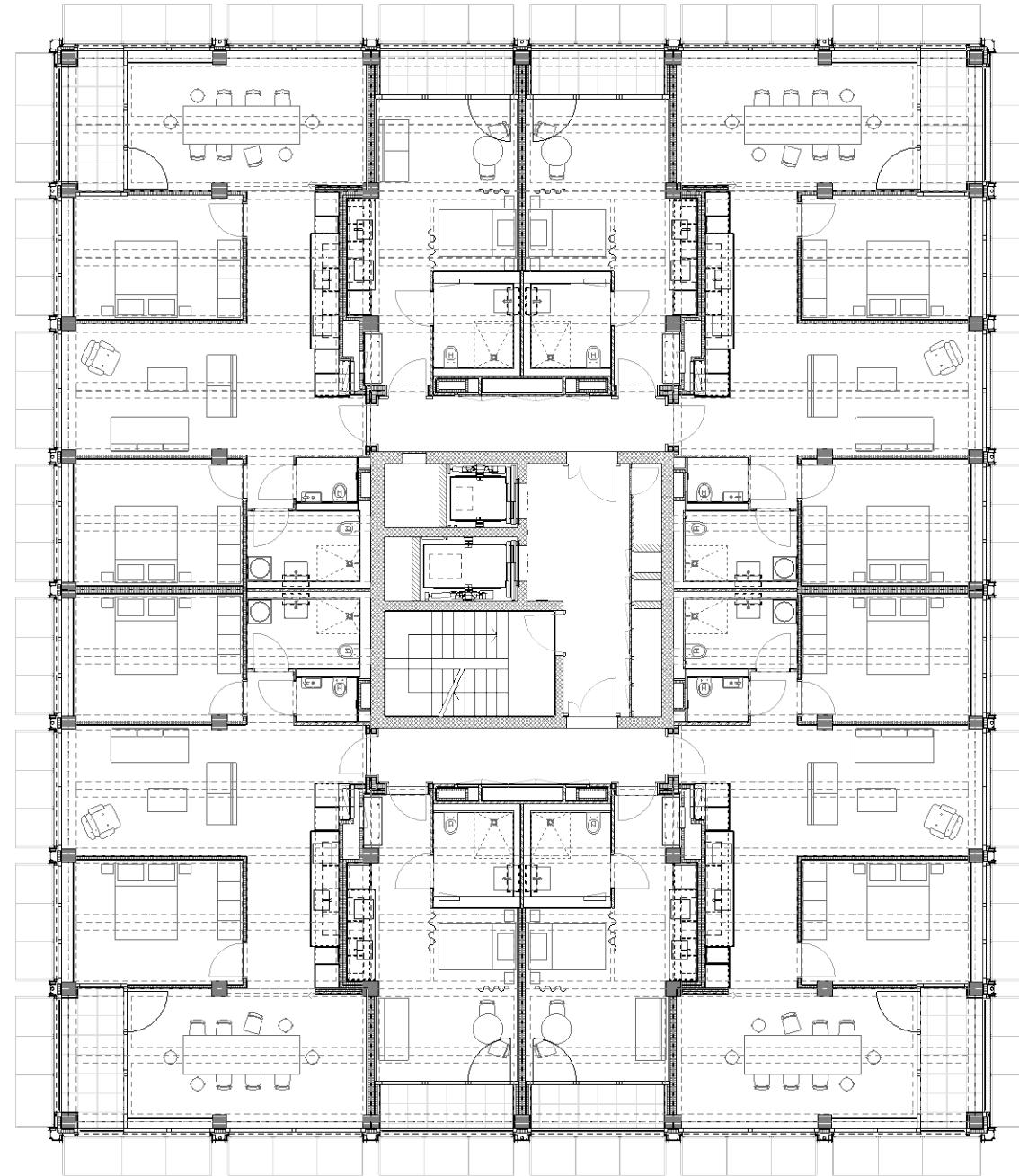


**Regelgeschoß 1**



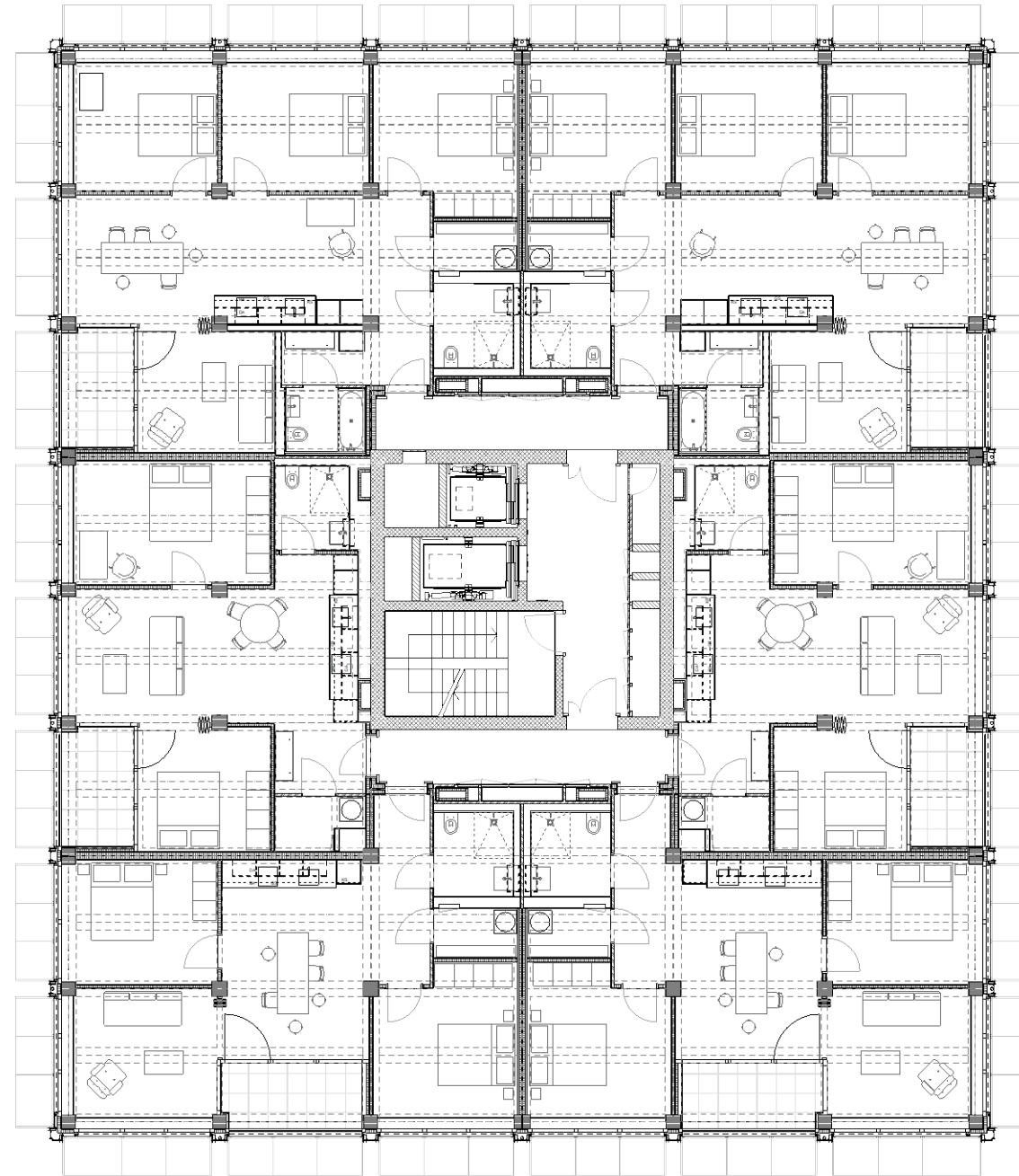


**Regelgeschoss 2**



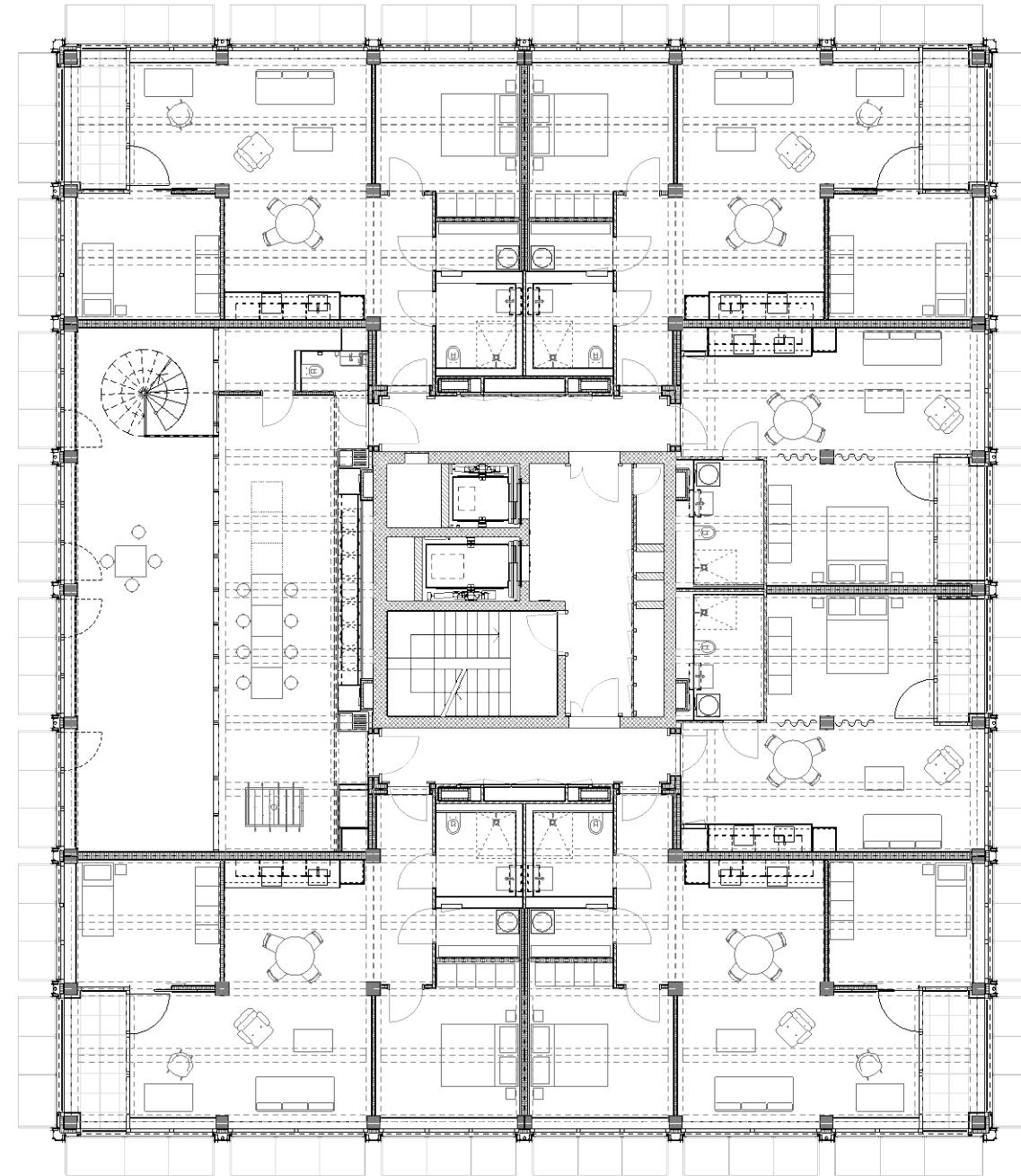
**Regelgeschoss 3**



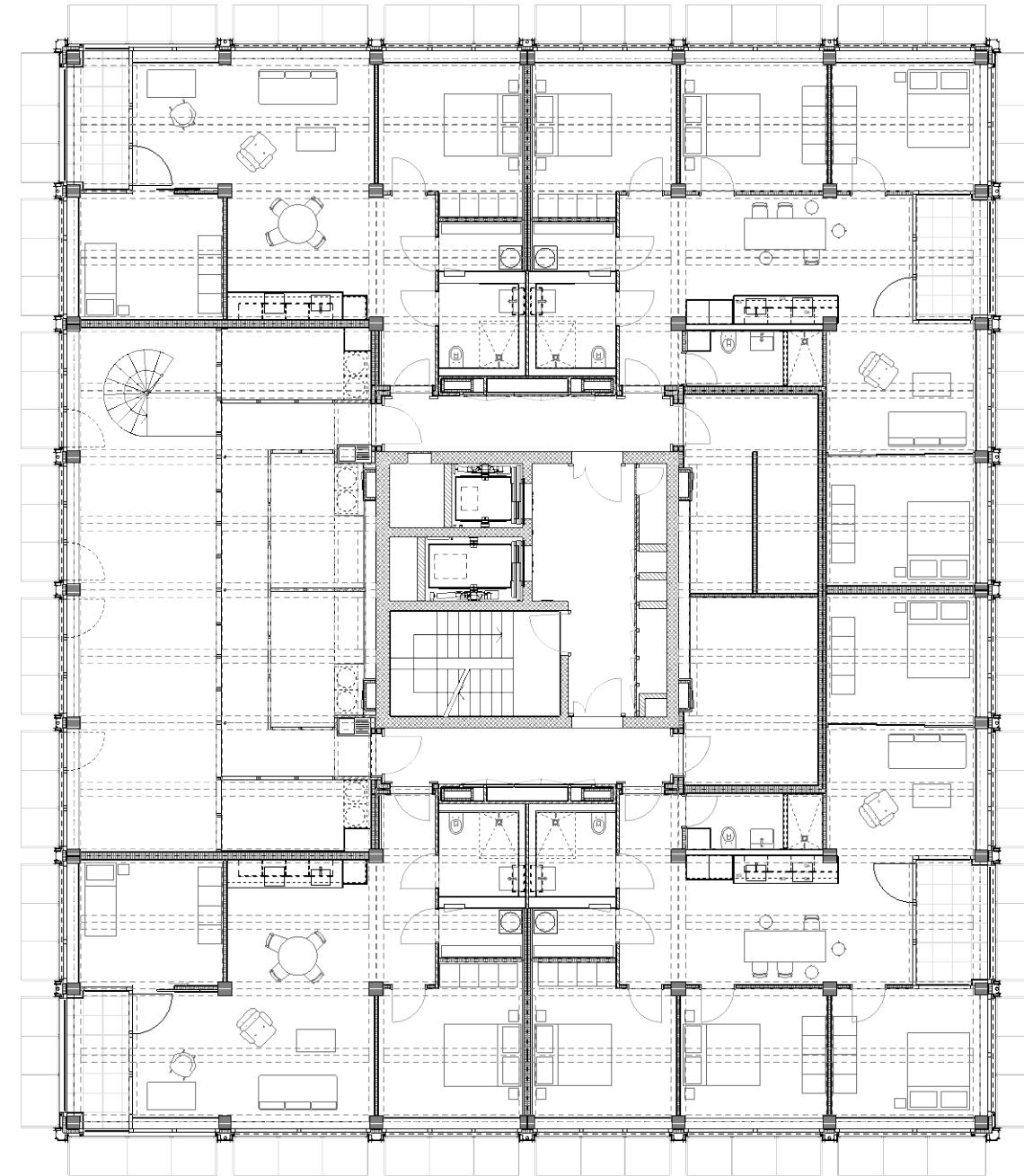


**Regelgeschoss 4**





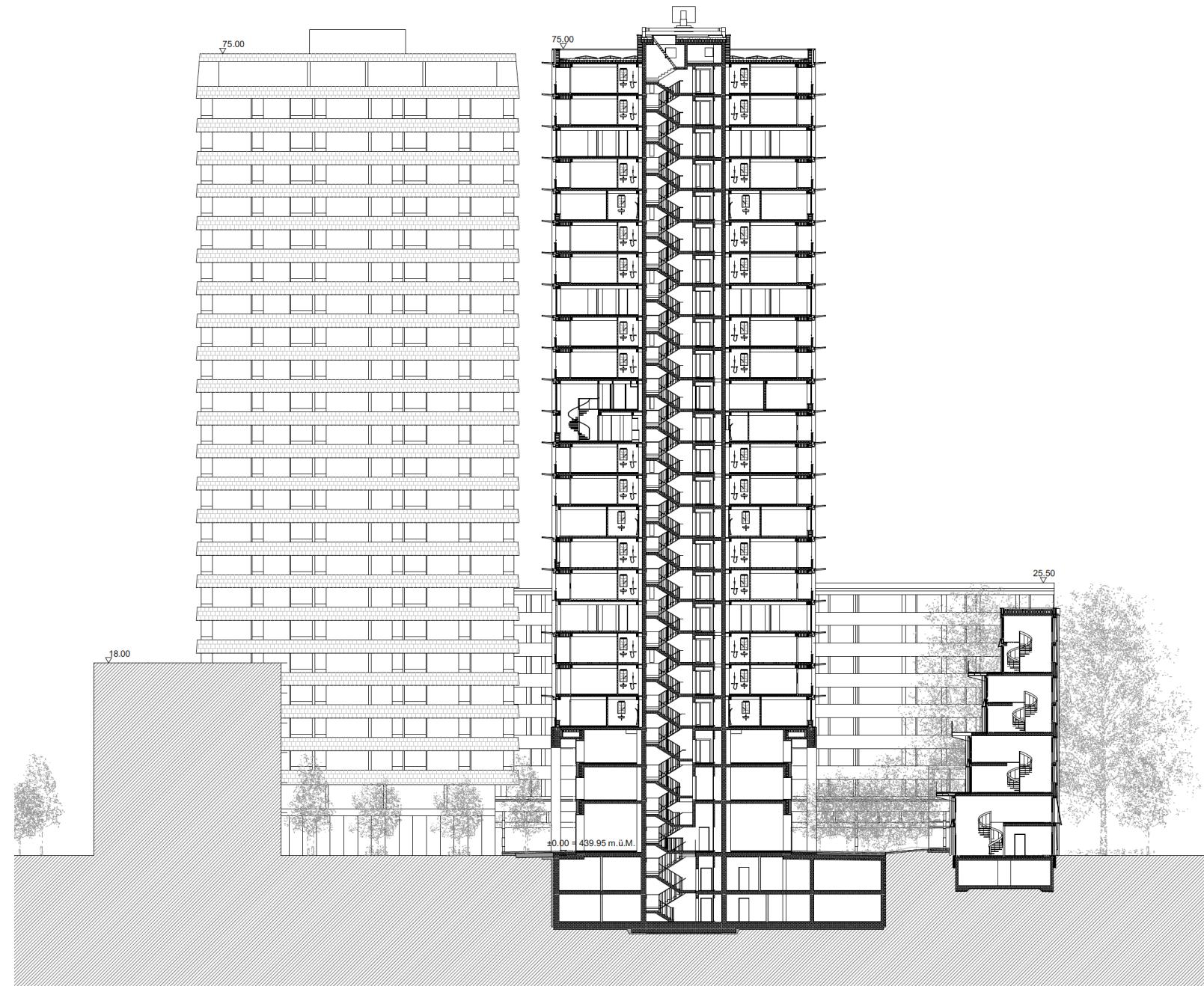
Gemeinschaftsgeschoss  
**12. Obergeschoss**



Gemeinschaftsgeschoß / Technik  
**13. Obergeschoss**



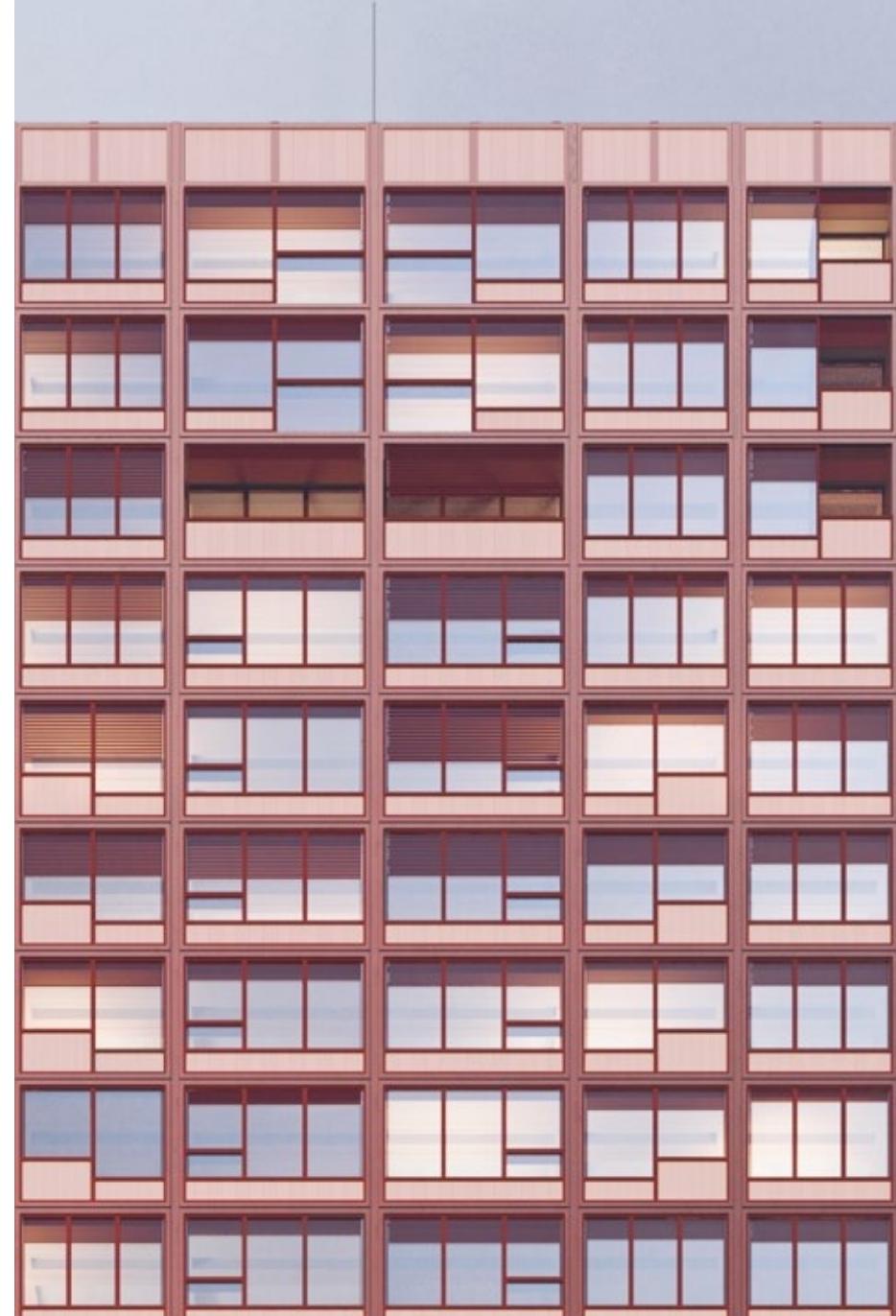


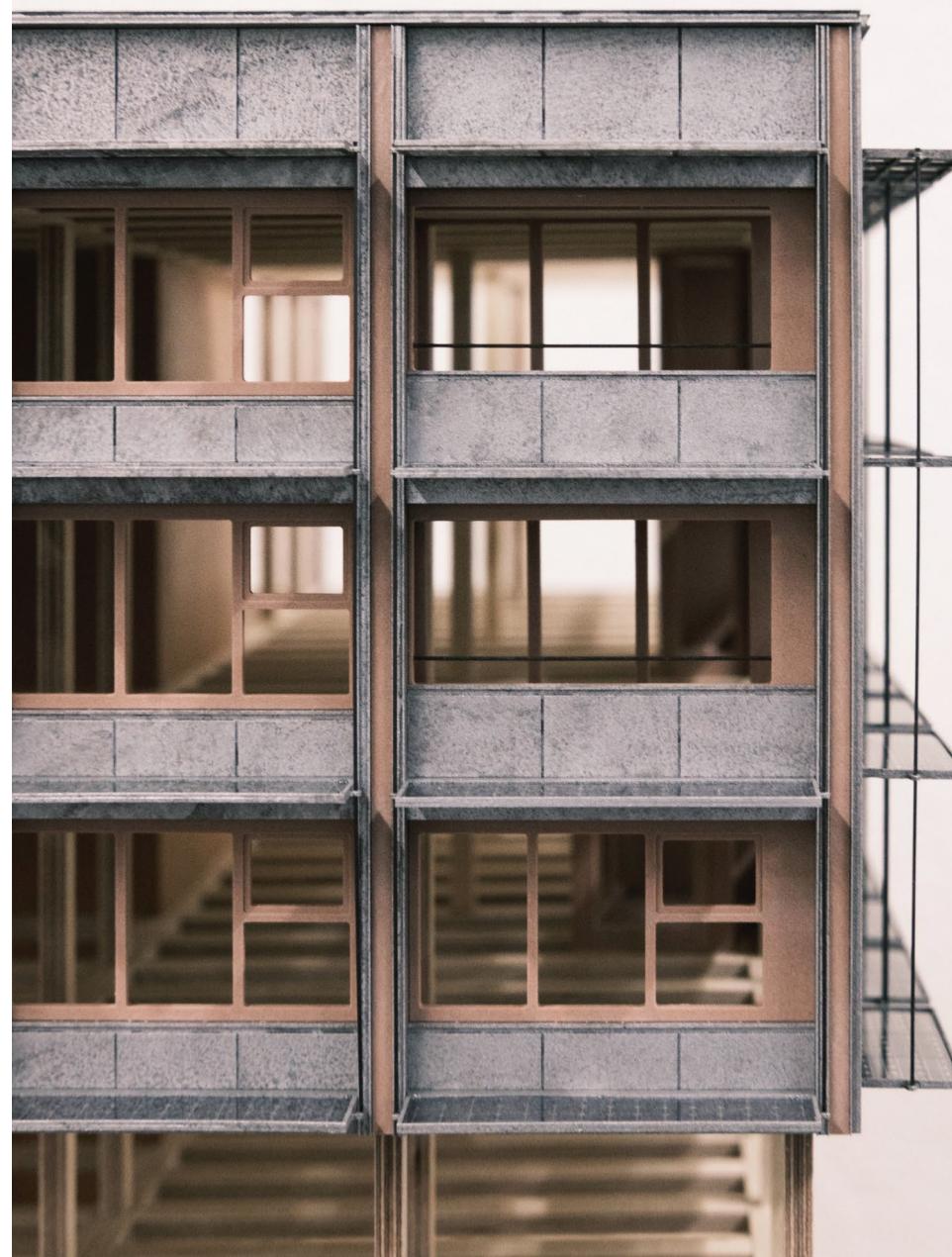




Vertikal wird  
horizontal







# Eine PV-Fassade zur Beschattung



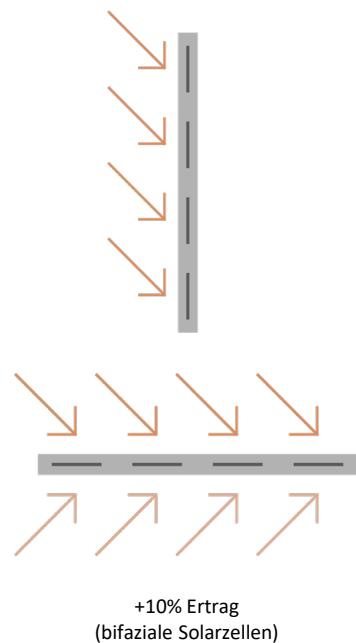
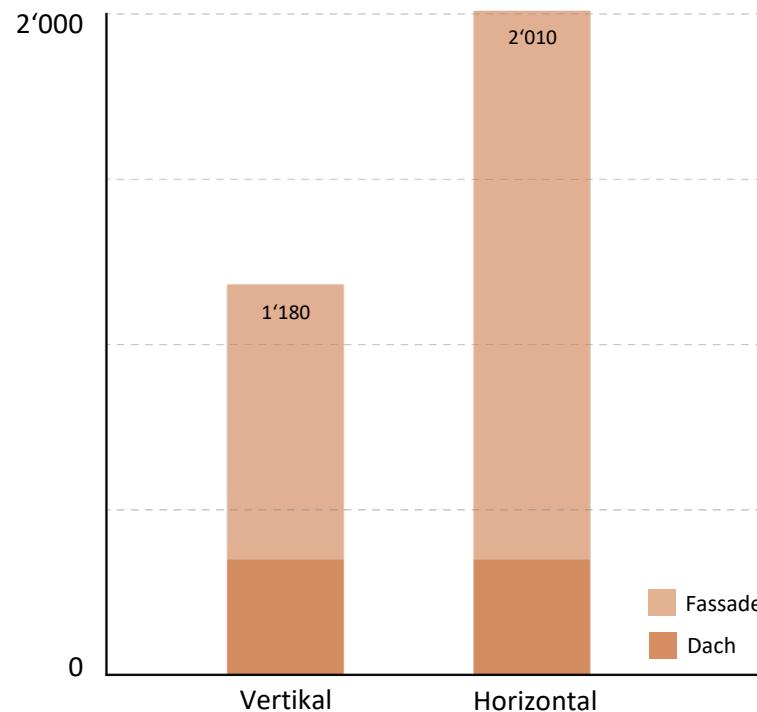


# Photovoltaik Verteilung

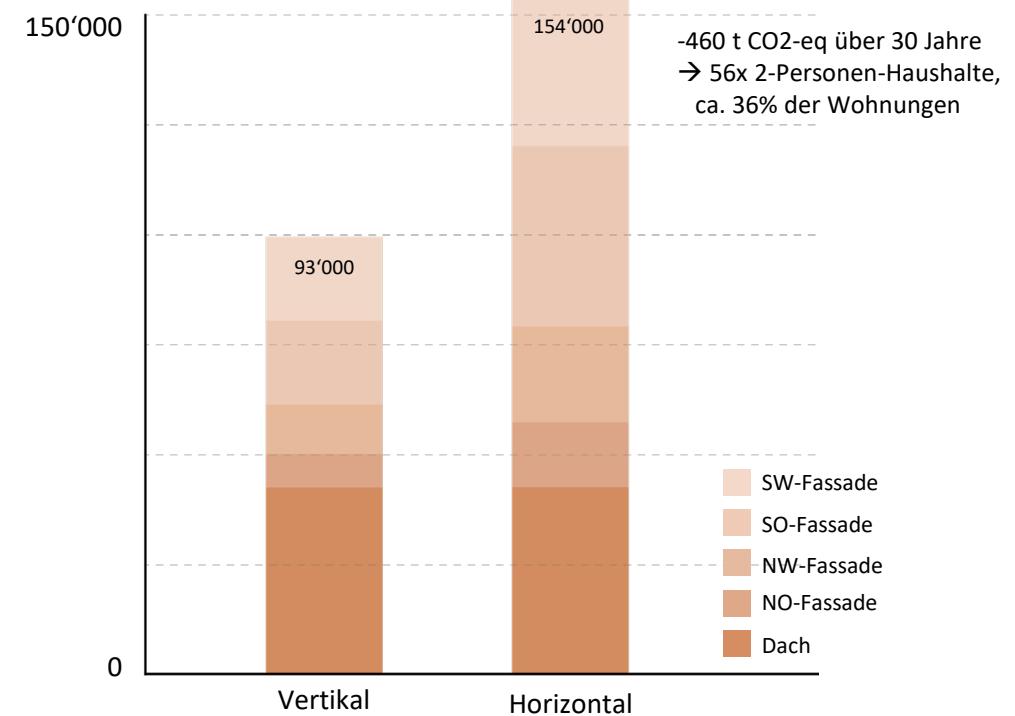
# Energie Produktion

Vergleich PV-Flächen für Varianten  
vertikal und horizontal

in [m<sup>2</sup>]



Jährlicher PV-Ertrag  
in [kWh]



# Übersicht Module und Leistungen

Modelltyp	Leistung	Anzahl
Typ A	95 Wp	672
Typ B	130 Wp	84
Typ C	150 Wp	84
Typ D	115 Wp	924

Fassade	Leistung
Nord - Ost	38 Wp
Nord - West	61 Wp
Süd - Ost	38 Wp
Süd - West	61 Wp
Total	198 Wp

Dach	Leistung
Total	51 Wp



# Boltshauser Architekten

**Mathias Stocker**

Co-Lead des Leadership Board  
Projektleiter Zwhatt