





Wat doet een
baksteen boog in
een structuralistisch
gebouw?



Louis Kahn

“You say to a brick,
‘What do you want, brick?’
And brick says to you,
‘I like an arch.’
And you say to brick, ‘Look, I want
one, too, but arches are expensive
and I can use a concrete lintel.’
And then you say, ‘what do you think
of that brick?’
And brick says,
‘I like an arch!’”



The Future of Structuralism



Ik wil leven!



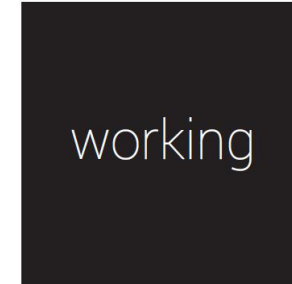
structuralisme



CIAM



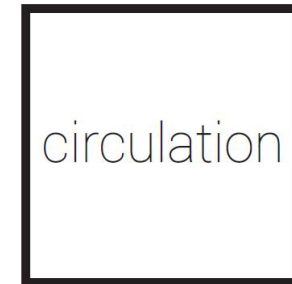
dwelling



working



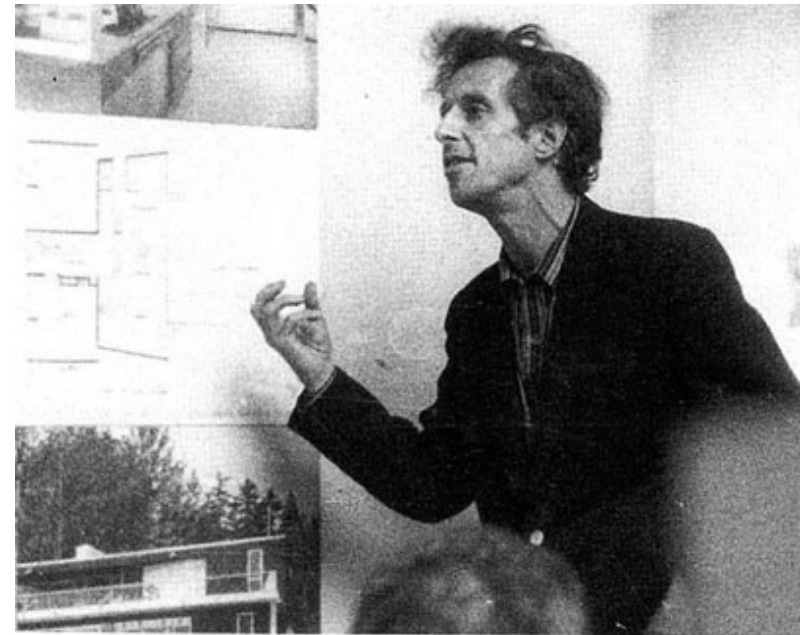
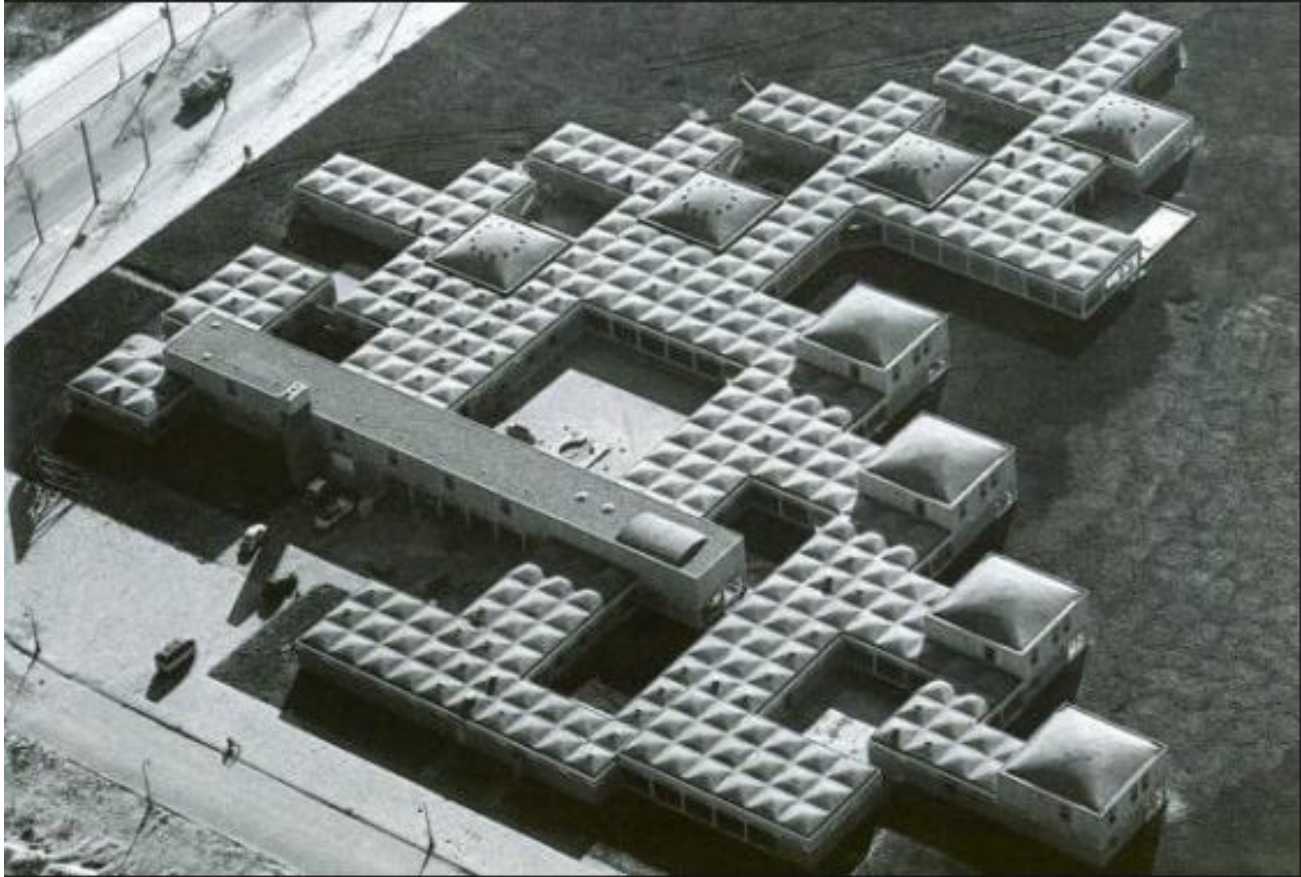
recreation



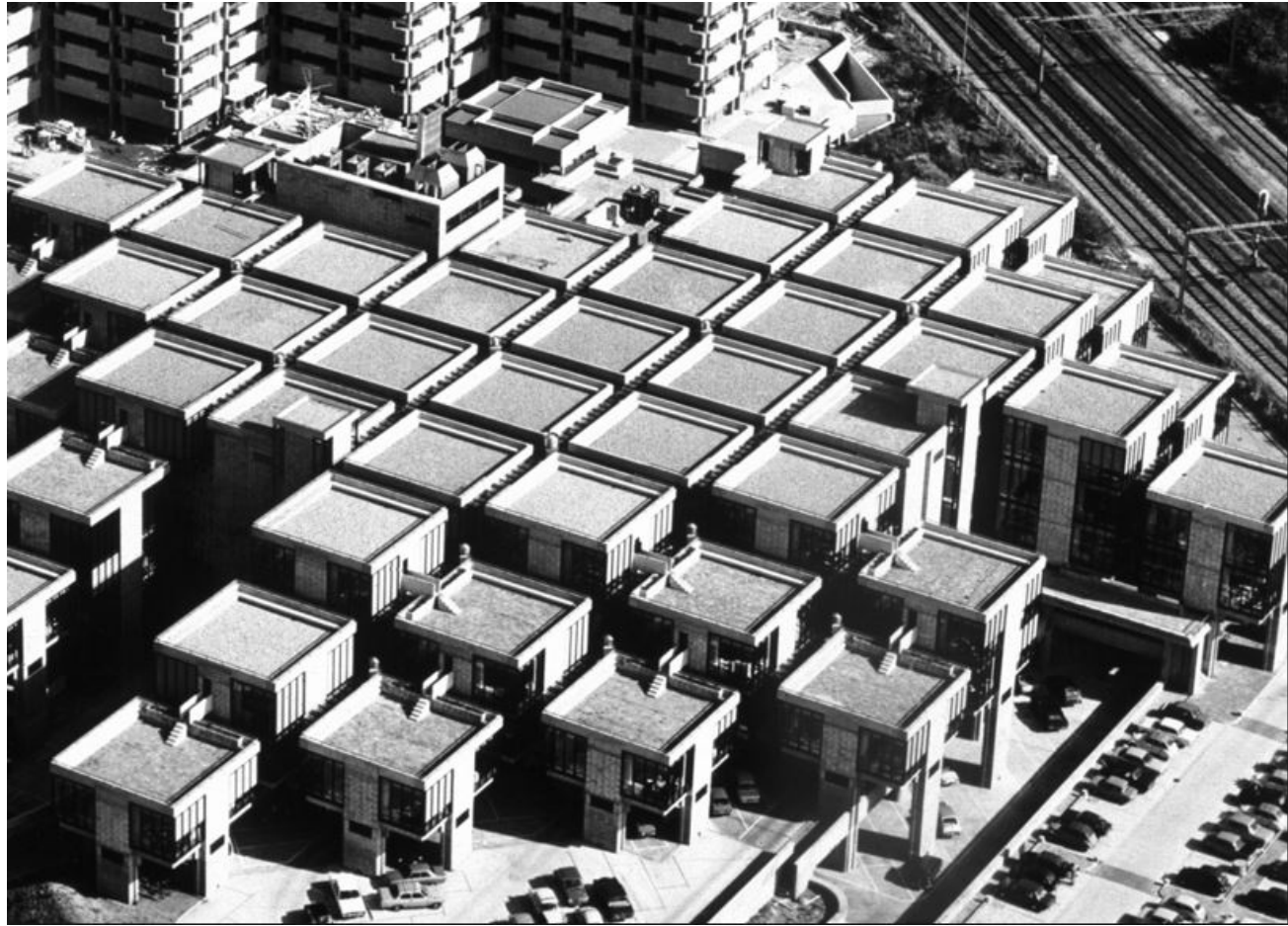
circulation

1928-1959

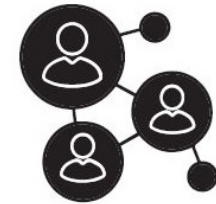
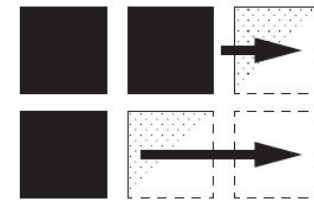
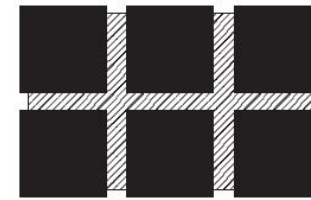
Team 10

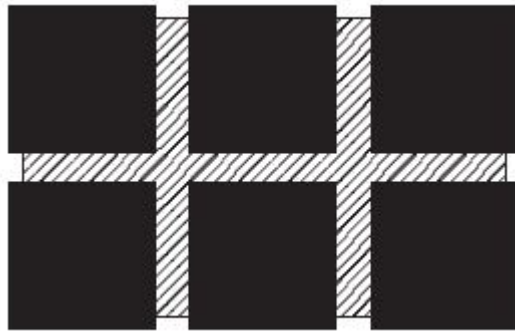


Aldo van Eyck



Structuralisme

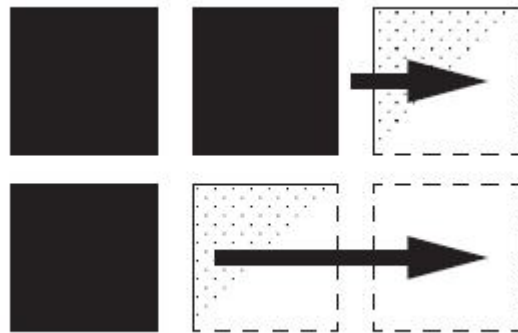




Units



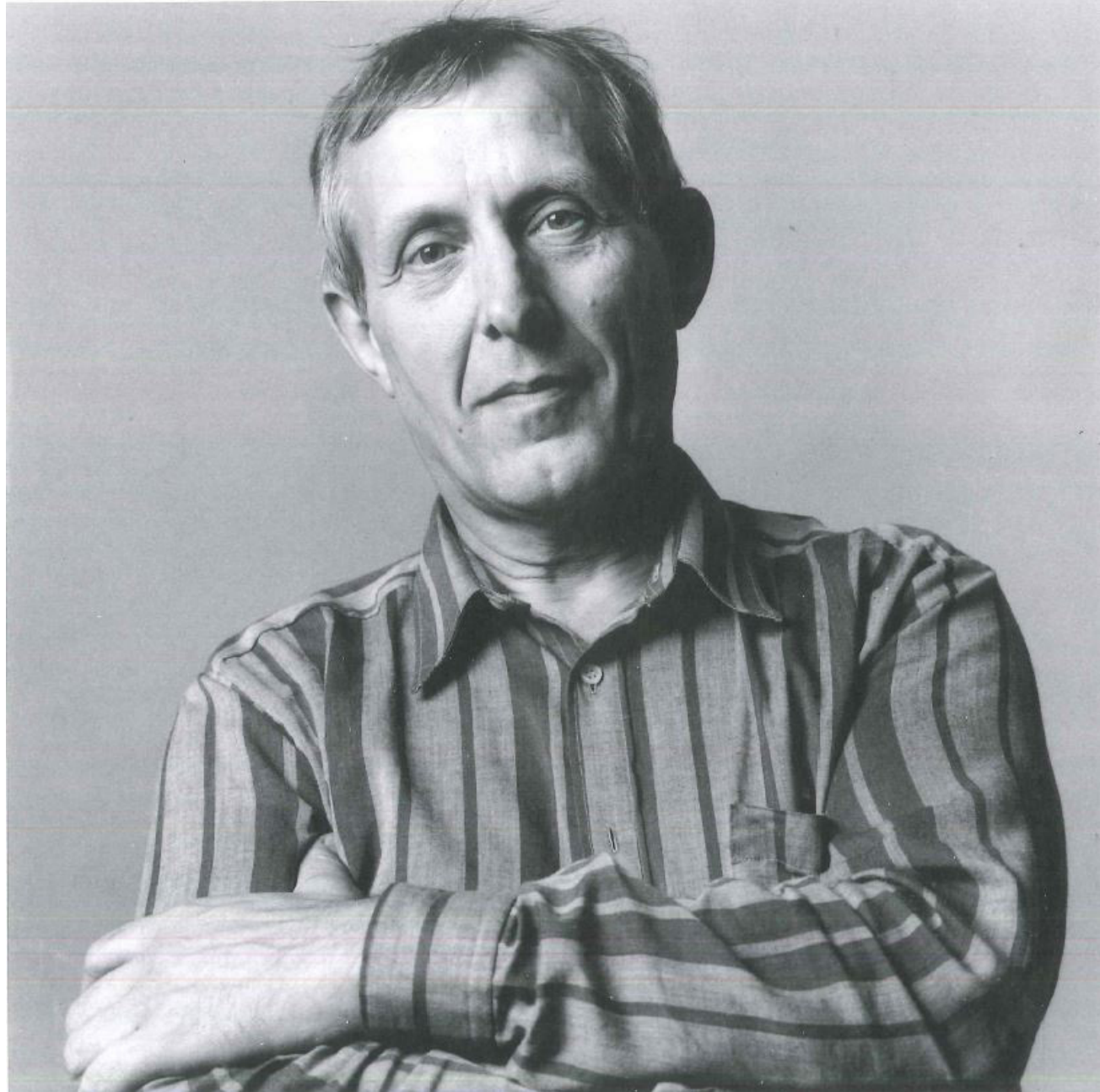
Stad als gebouw



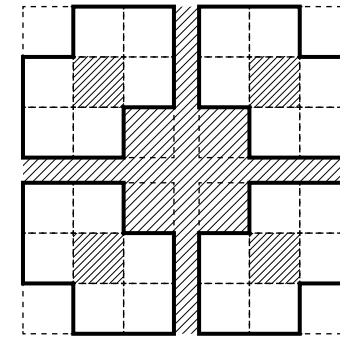
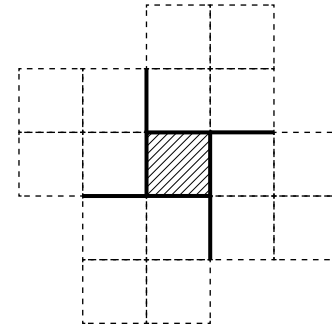
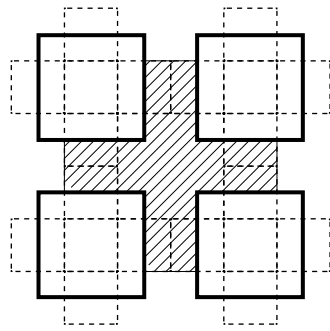
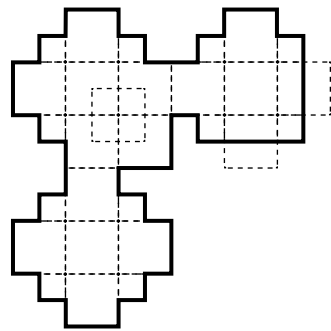
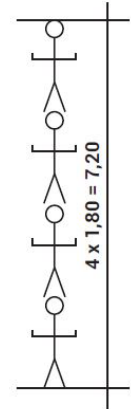
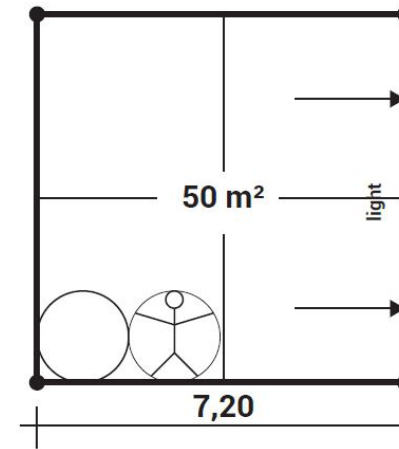
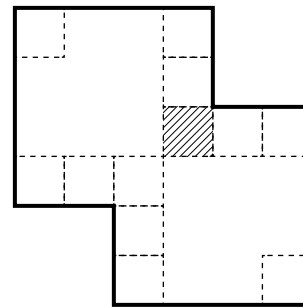
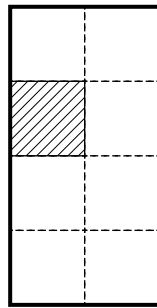
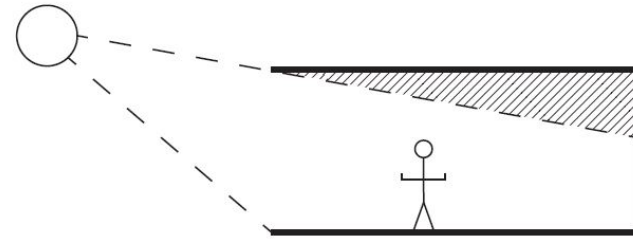
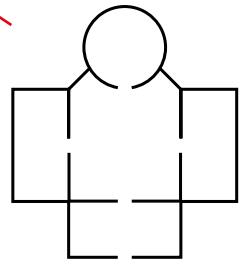
Uitbreiding

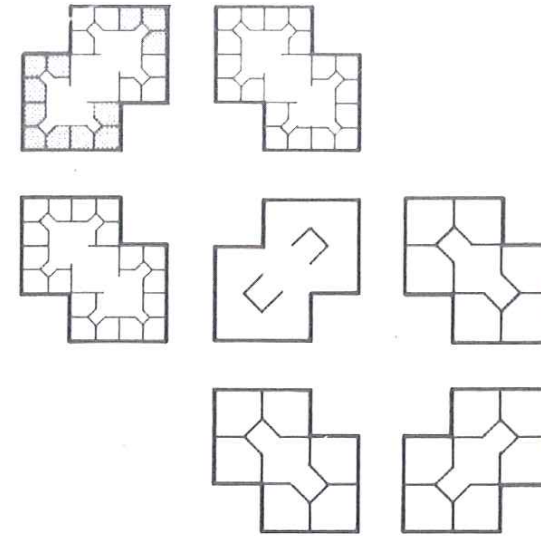
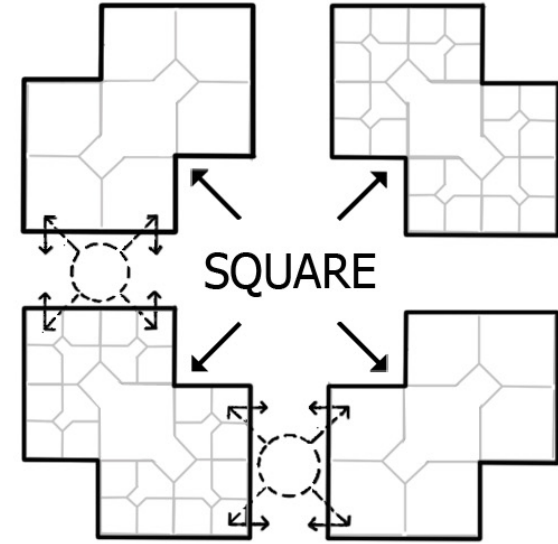
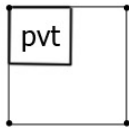
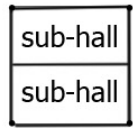
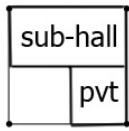
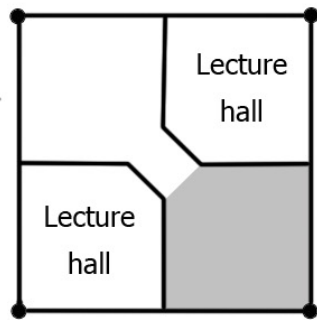
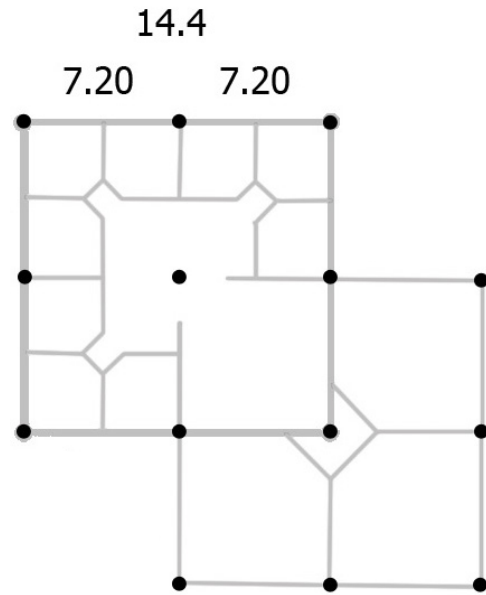
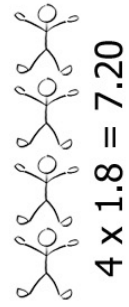
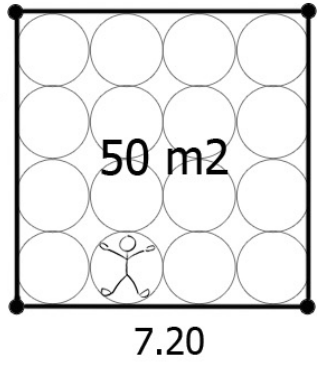


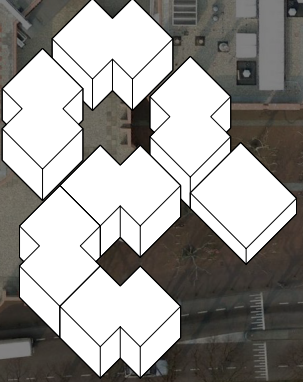
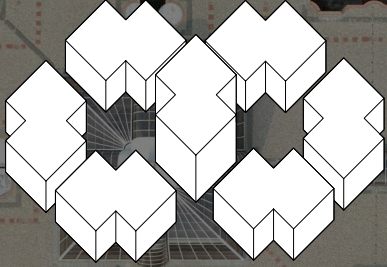
Sociale interactie



Joop van Stigt

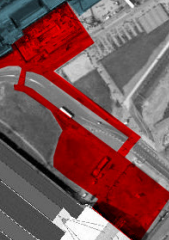
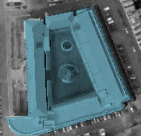
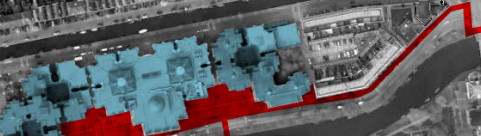
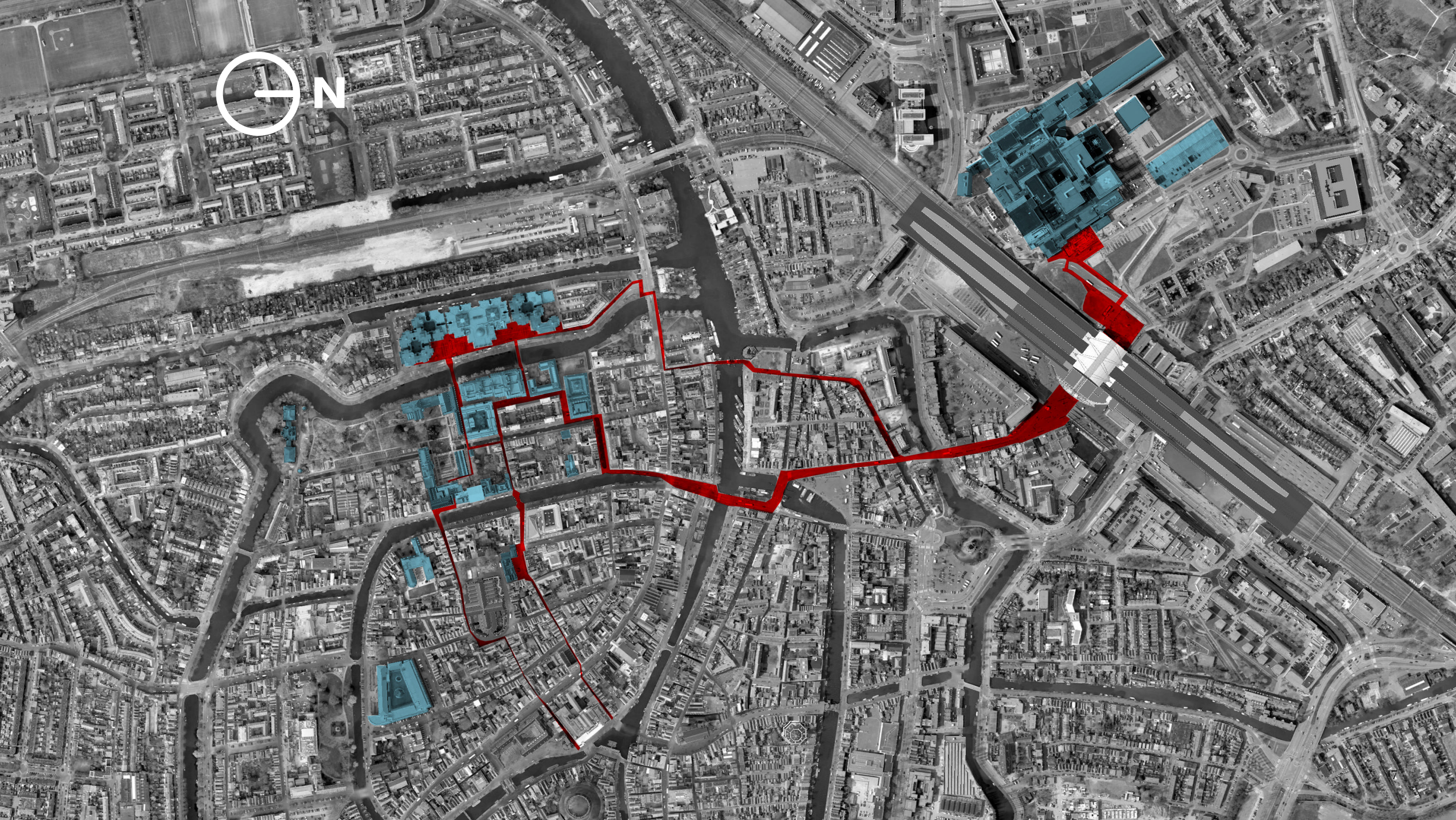


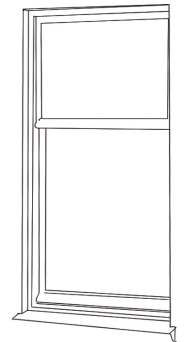
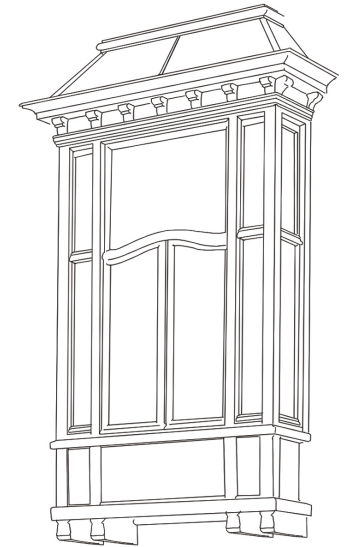
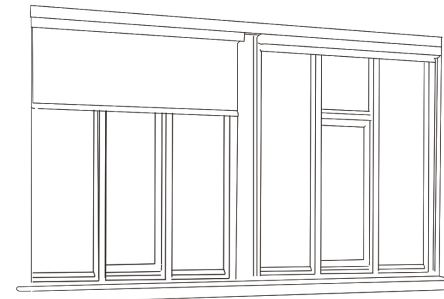
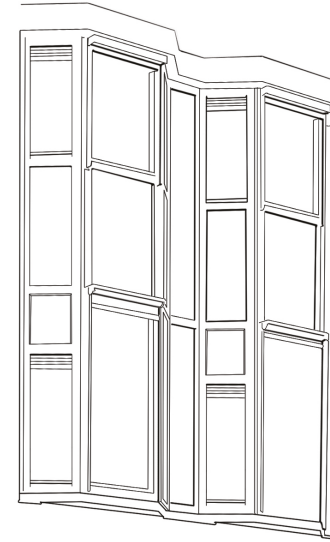
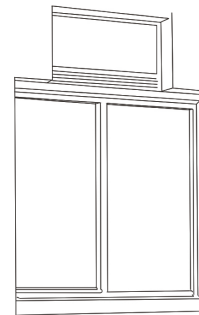
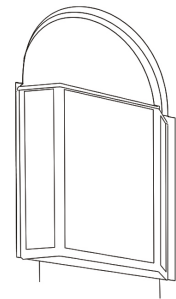
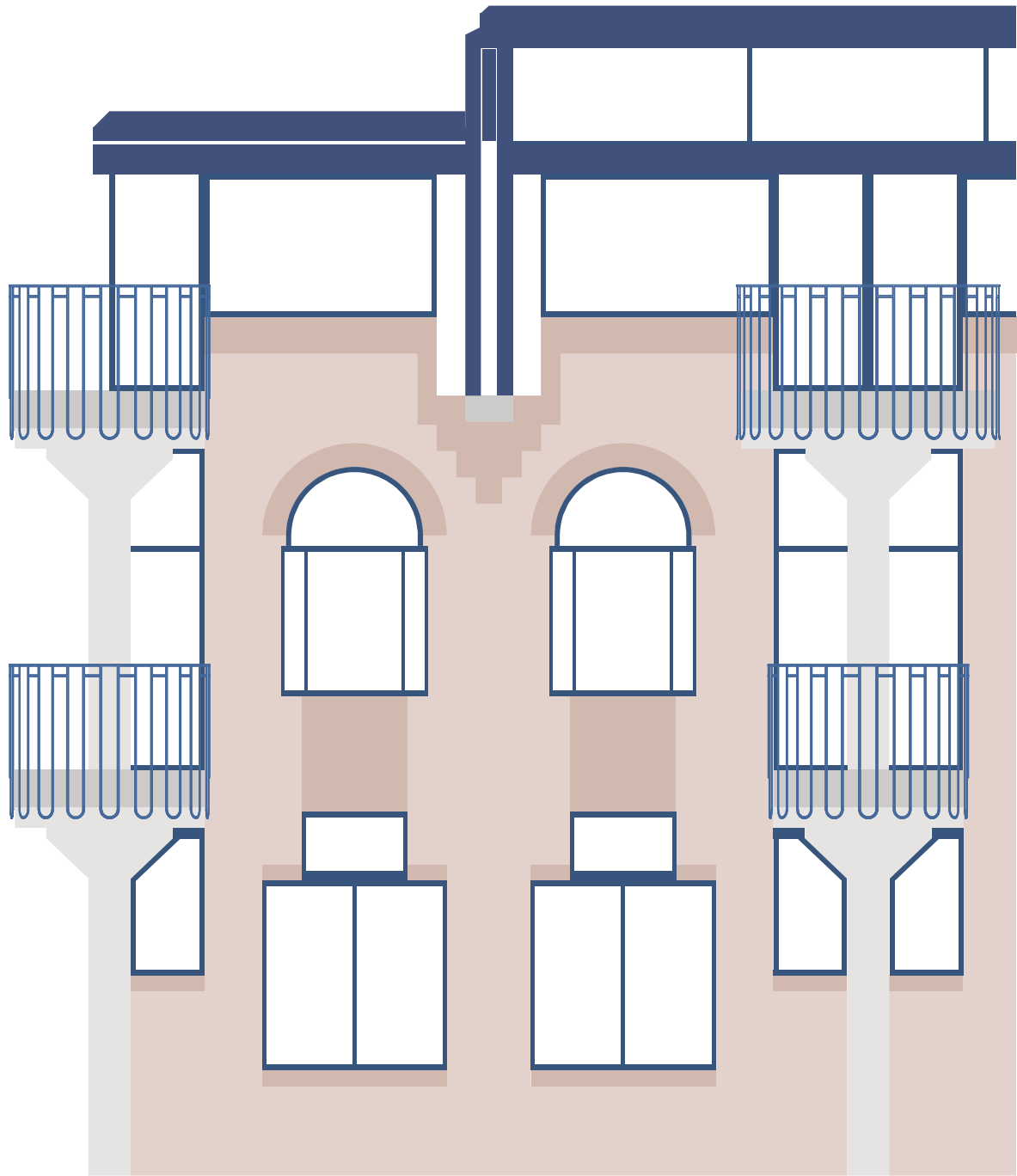






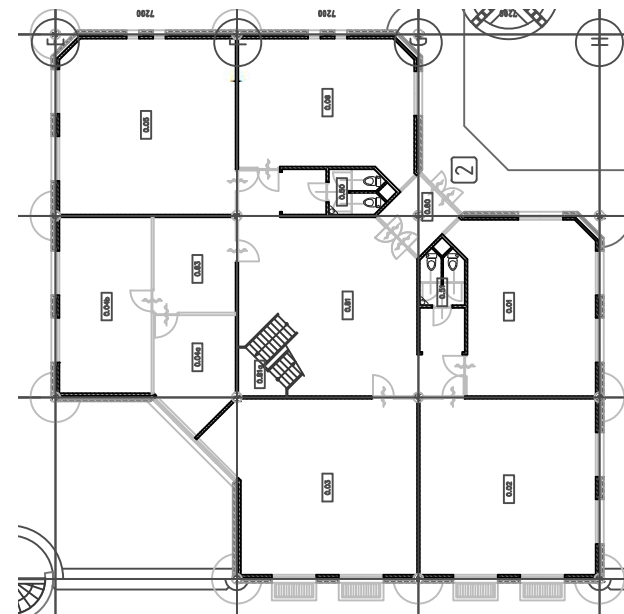
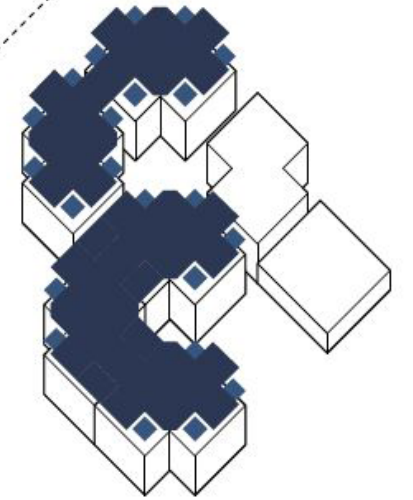
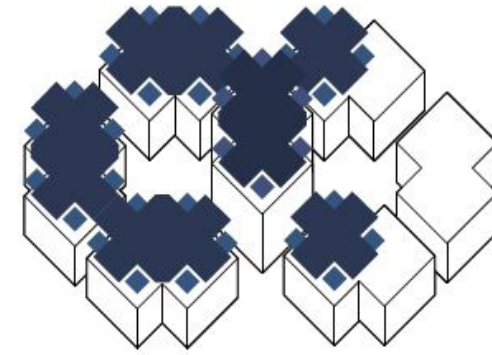
Leiden

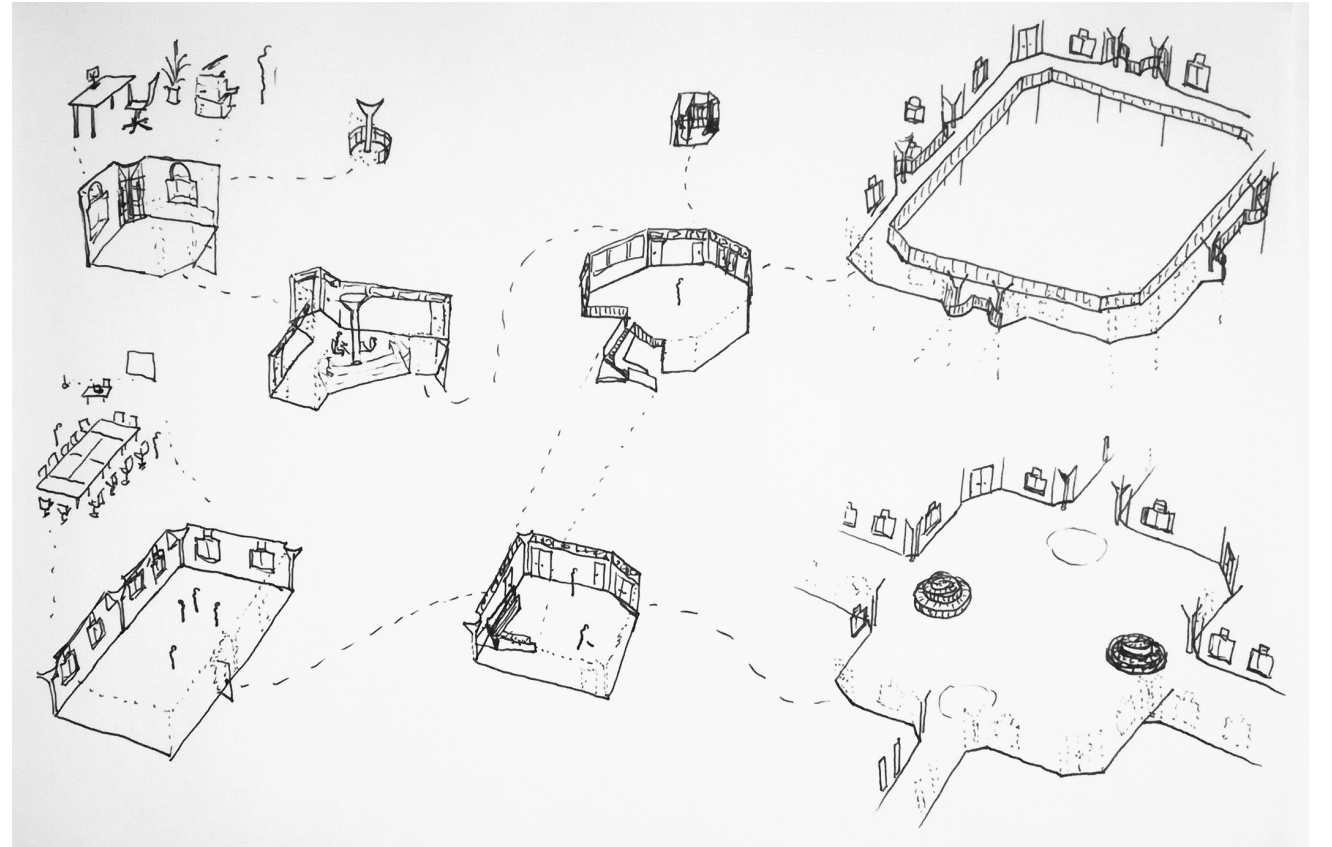
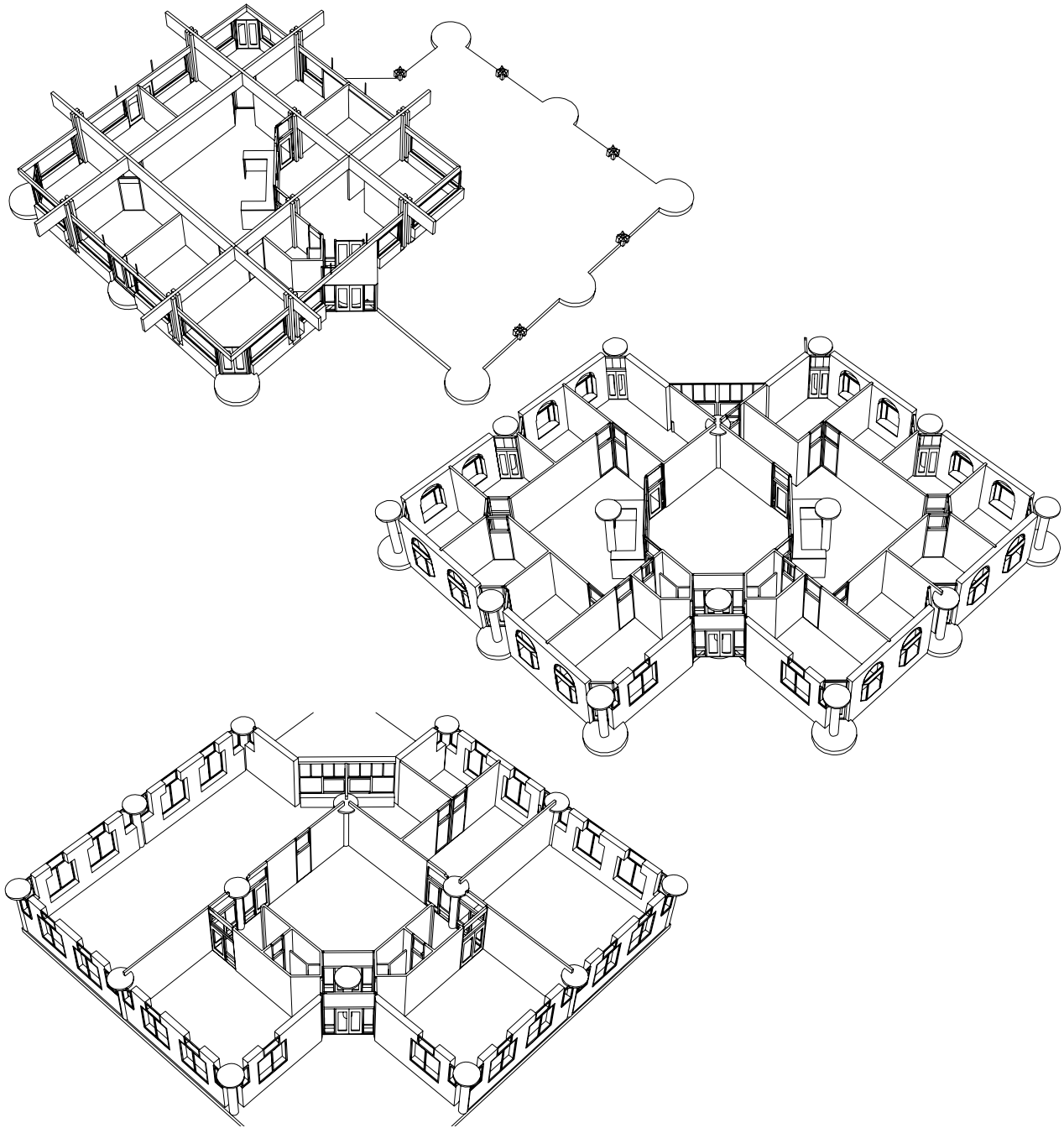




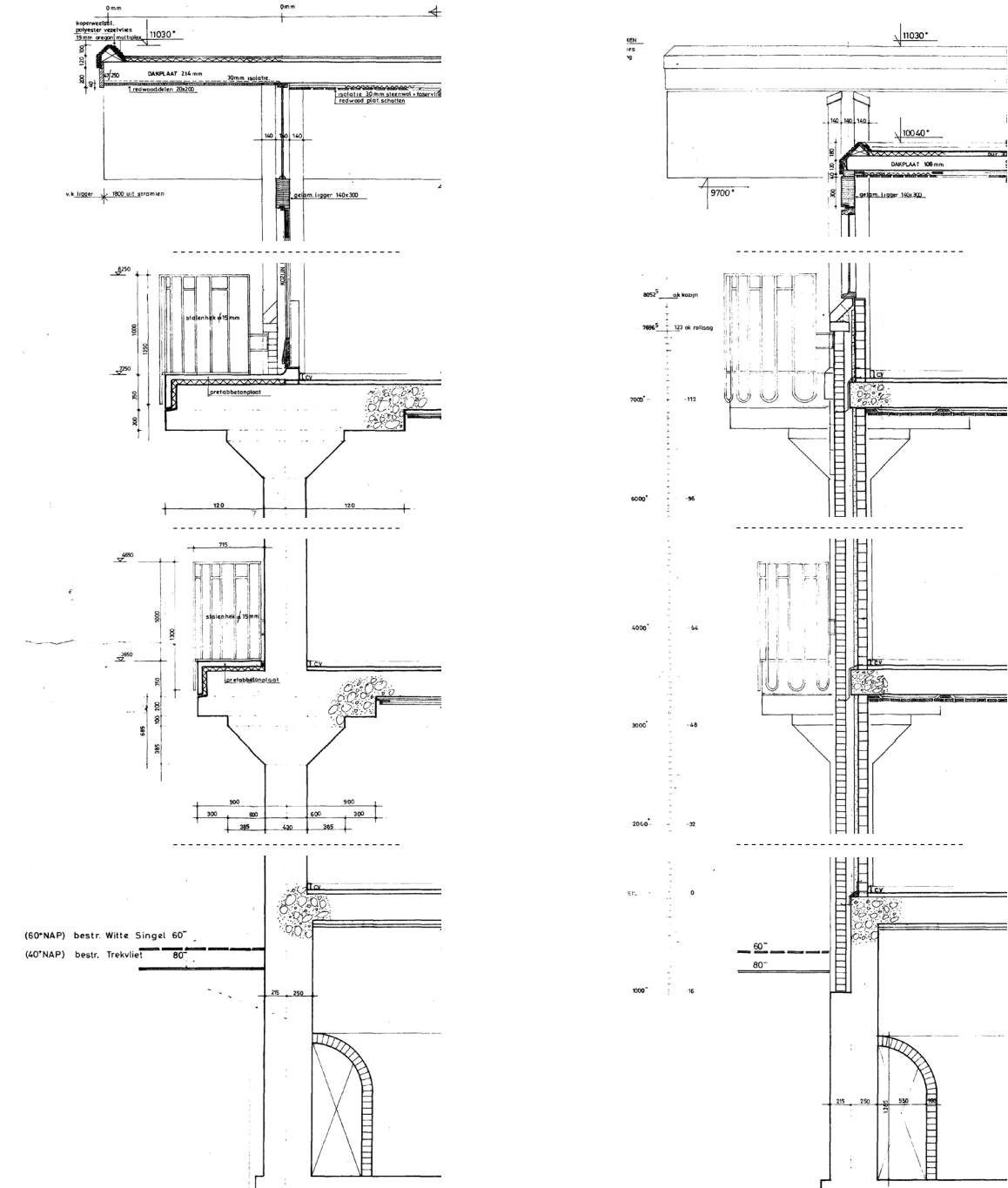


probleem

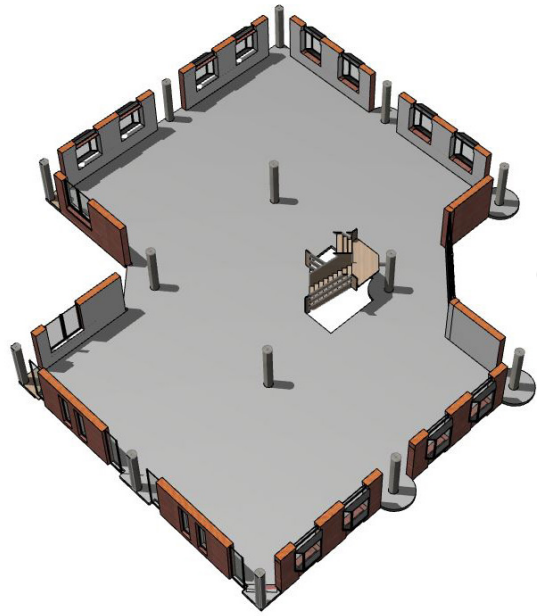




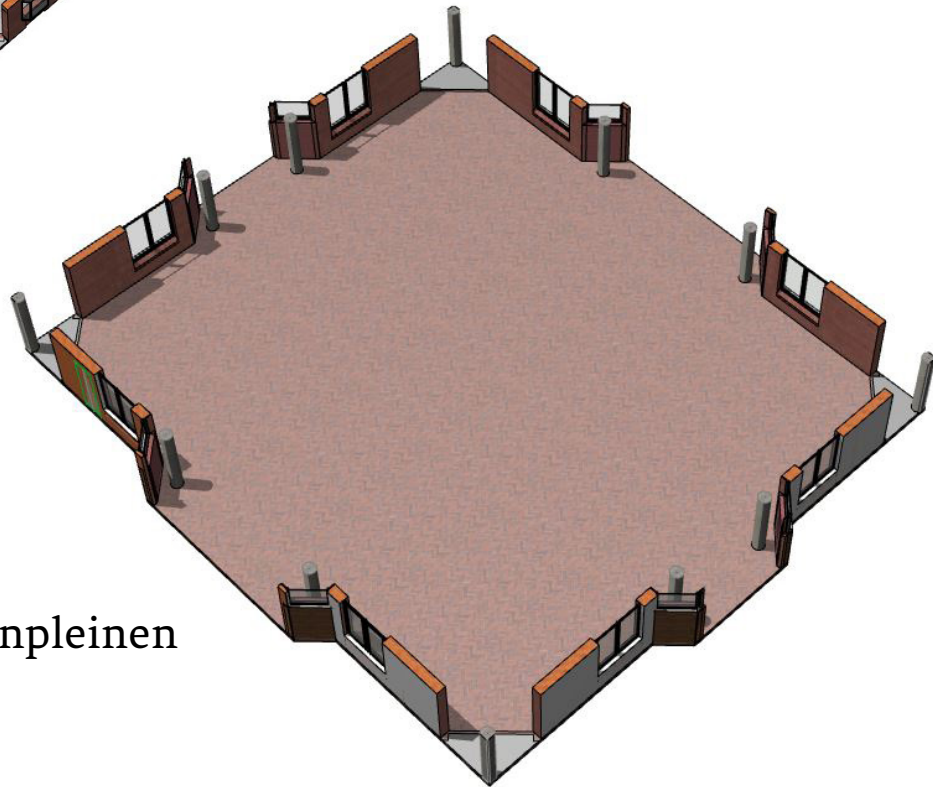




mogelijkheden

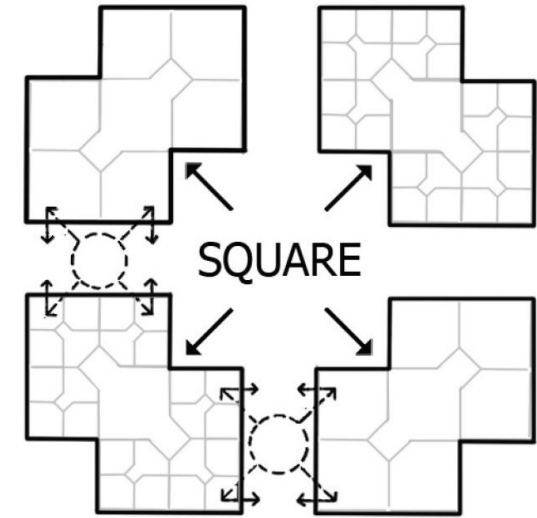


Open blokken



Binnenpleinen

Uitbreidings-
mogelijkheden



programma

Universiteit als levende omgeving



>>



Studieplekken

Diversiteit in ruimten

Plek voor sociale interactie

Program - existing

Spaces, users, and problems

Interior

Rooms 10-15 m ²	233
Rooms 16-70 m ²	65
Rooms 100 m ²	4
Canteen 125 m ²	1

Library & NINO 750m²

Total 17.000m²

Garage south 5.500m²
Garage North 3.000m²

Total (garages) 8.500m²

Students

Bachelor	150-200
Master	150
Research	50

Total 400

Staff

Academic staff	100
Affiliated researchers	30
Support staff	10
PhD	120

Total 260

Office users 310

Possible projection

Students

Bachelor	150 > 250
Master	150 > 225
Research	50 > 75

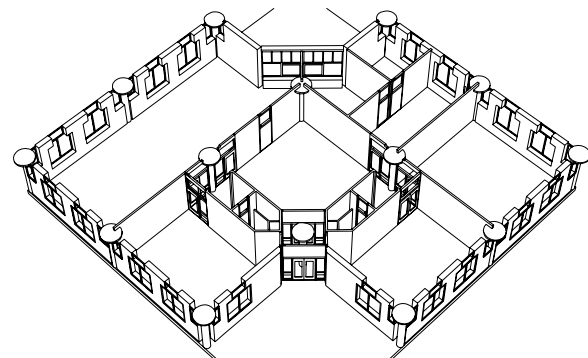
Total 400 > 550

Staff

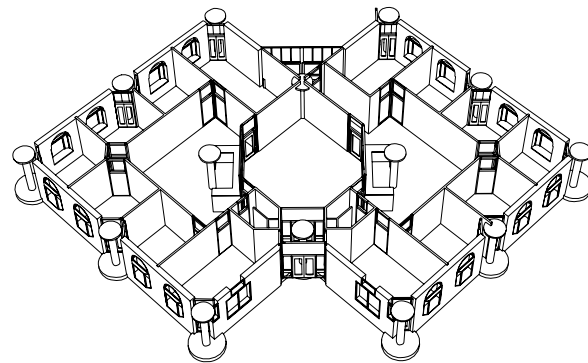
Academic staff	100 > 150
Affiliated researchers	30 > 45
Support staff	10 > 15
PhD	120 > 180

Total 390

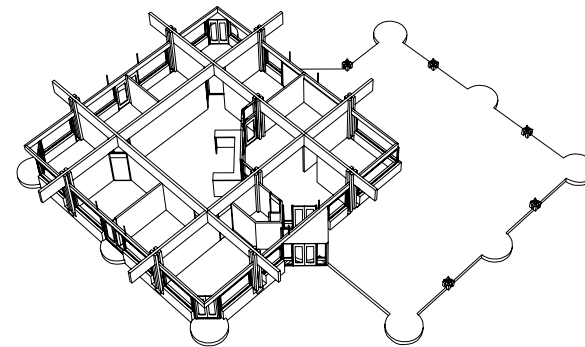
Office users 465



0.



1.



2.

Average floor space

Office	17,82m ²
Staff/researcher	13,39m ²

Vier scenario's

1. Minimal users, minimal floor space

Functions	Amount (users)	Surface per user	Floor space in m ²	Totals
Work group offices				2.520
- working space	310	8	2.480	
- private discussion room	31 x 3,5	4	440	
Meeting rooms				1.000
- meeting room	200	4	800	
- irregular access room	50	4	200	
Open study spaces				1.400
- studio	150	6	900	
- open study hall	100	5	500	
Lecture halls				500
- main lecture hall	200	2	400	
- secondary hall	50	2	100	
Library				825
- library	-	-	500	
- NINO institute	-	-	250	
- work space	25	5	125	
Cafeteria				200
- main canteen	100	2	200	
- secondary stand	20	2	(40)	(40)
User space				6.450
Sanitary facilities				270
- toilets	108	2,5	-	
Garage				4.500
- two clusters combined	90	-	4.500	
Functions				11.220
Circulation etc.	25%			2.805
Total				14.025

2. Minimal users, maximal floor space

Functions	Amount (users)	Surface per user	Floor space in m ²	Totals
Work group offices				4.625
- working space	310	13,5	4.185	
- private discussion room	31 x 3,5	4	440	
Meeting rooms				1.050
- meeting room	200	4	800	
- irregular access room	50	5	250	
Open study spaces				1.800
- studio	150	8	1.200	
- open study hall	100	6	600	
Lecture halls				500
- main lecture hall	200	2	400	
- secondary hall	50	2	100	
Library				1.150
- library	-	-	600	
- NINO institute	-	-	400	
- work space	25	6	150	
Cafeteria				300
- main canteen	100	3	300	
- secondary stand	20	2	(40)	(40)
User space				9.425
Sanitary facilities				392
- toilets	157	2,5	-	
Garage				4.500
- two clusters combined	90	-	4.500	
Functions				14.320
Circulation etc.	25%			3.580
Total				17.900

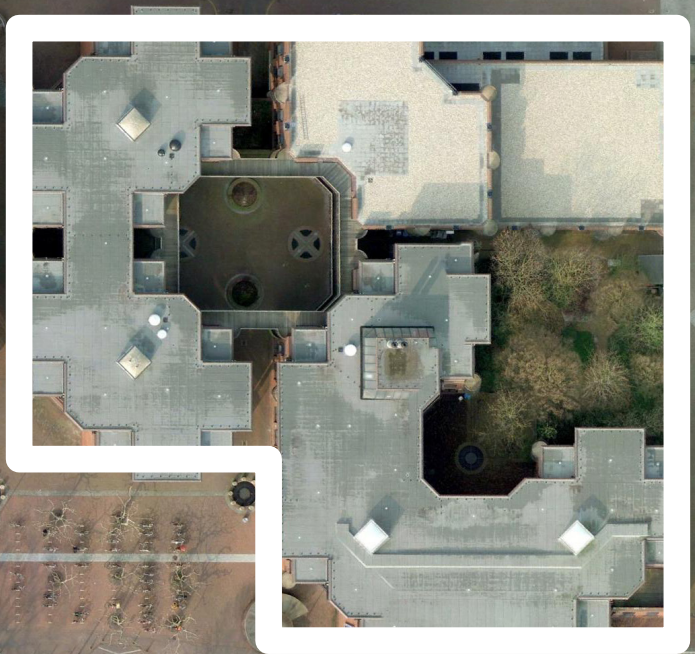
3. Maximal users, minimal floor space

Functions	Amount (users)	Surface per user	Floor space in m ²	Totals
Work group offices				4.380
- working space	465	8	3.720	
- private discussion room	47 x 3,5	4	660	
Meeting rooms				1.400
- meeting room	275	4	1.100	
- irregular access room	75	4	300	
Open study spaces				2.250
- studio	250	6	1.500	
- open study hall	150	5	750	
Lecture halls				650
- main lecture hall	250	2	500	
- secondary hall	75	2	150	
Library				925
- library	-	-	500	
- NINO institute	-	-	250	
- work space	35	5	175	
Cafeteria				300
- main canteen	150	2	300	
- secondary stand	30	2	(60)	(60)
User space				9.900
Sanitary facilities				415
- toilets	165	2,5	-	
Garage				4.500
- two clusters combined	90	-	4.500	
Functions				14.820
Circulation etc.	25%			3.705
Total				18.525







4. Maximal users, maximal floor space

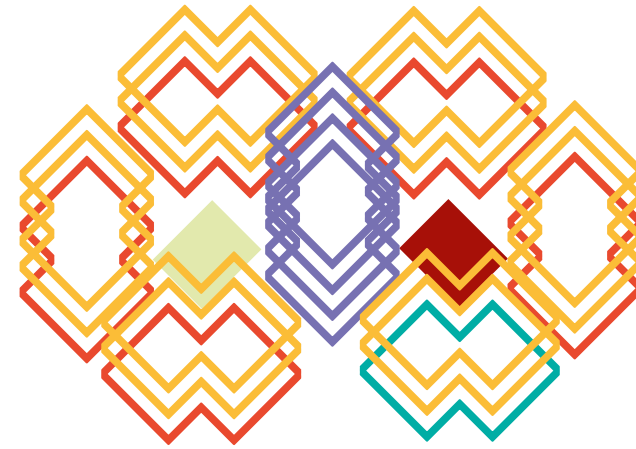
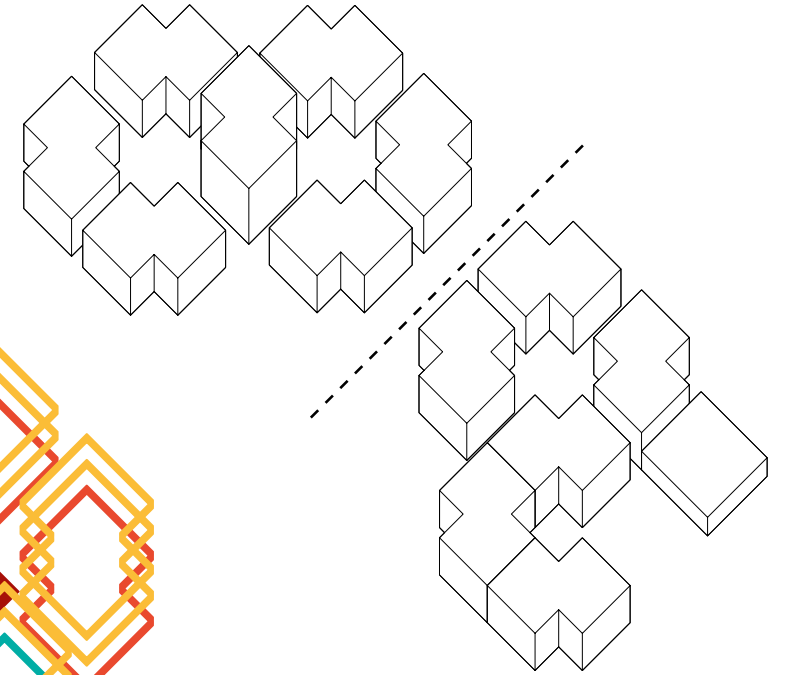
Functions	Amount (users)	Surface per user	Floor space in m ²	Totals
Work group offices				6.940
- working space	465	13,5	6.280	
- private discussion room	47 x 3,5	4	660	
Meeting rooms				1.475
- meeting room	275	4	1.100	
- irregular access room	75	5	375	
Open study spaces				2.900
- studio	250	8	2.000	
- open study hall	150	6	900	
Lecture halls				650
- main lecture hall	250	2	500	
- secondary hall	75	2	150	
Library				1.175
- library	-	-	600	
- NINO institute	-	-	400	
- work space	35	6	175	
Cafeteria				450
- main canteen	150	3	450	
- secondary stand	30	2	(60)	(60)
User space				13.590
Sanitary facilities				560
- toilets	225	2,5	-	
Garage				4.500
- two clusters combined	90	-	4.500	
Functions				18.650
Circulation etc.	25%			4.660
Total				23.310

Er is genoeg plek

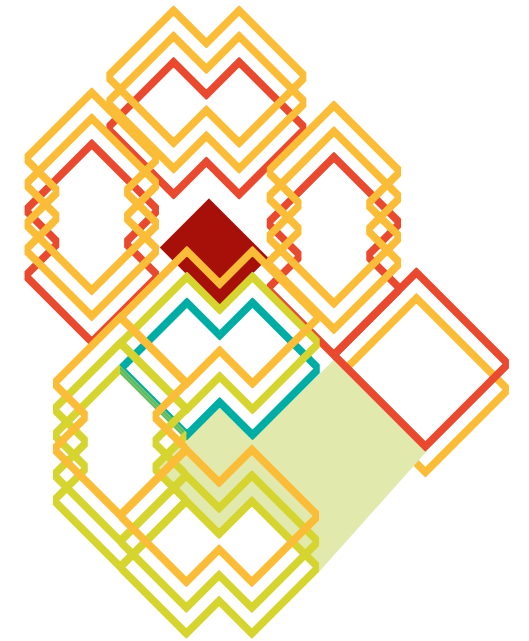


Functions

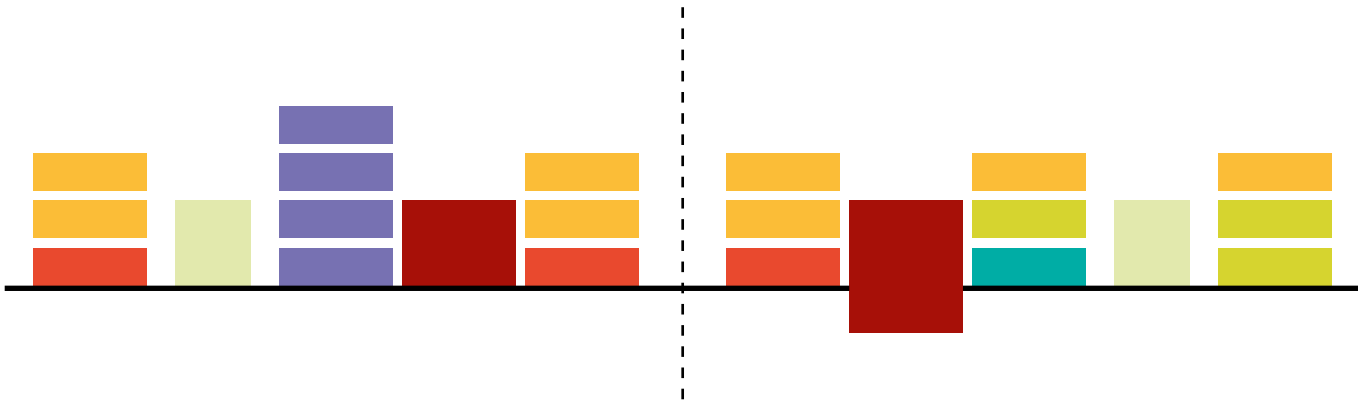
	Lecture rooms	22 x 80m ²
	Work group studios	25 x 200m ²
	Library/NINO institute	1.150m ²
	Lecture Hall	100m ² & 400m ²
	Cantine	300m ²
	Open study hall	3 x 400m ²



South



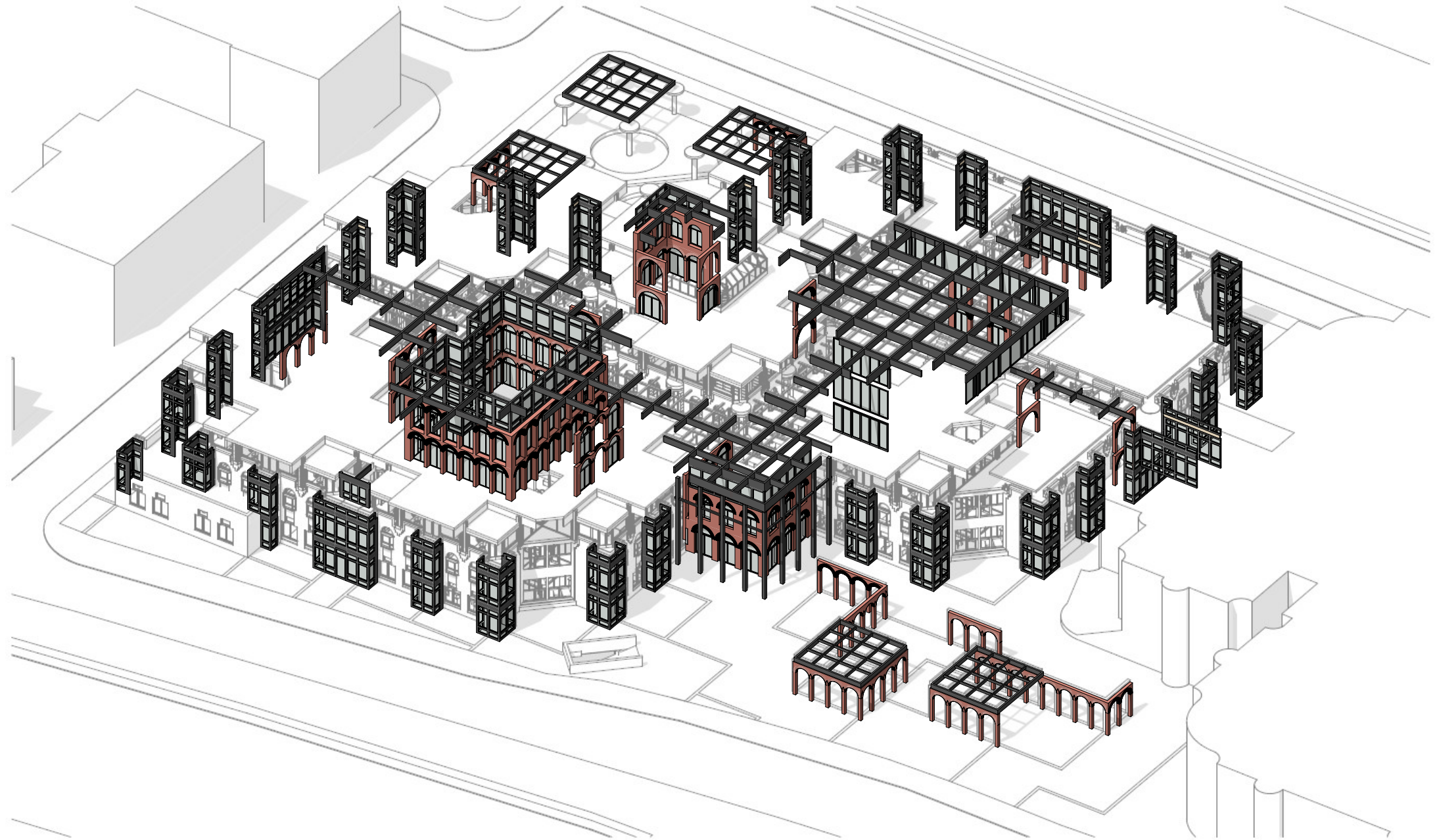
North

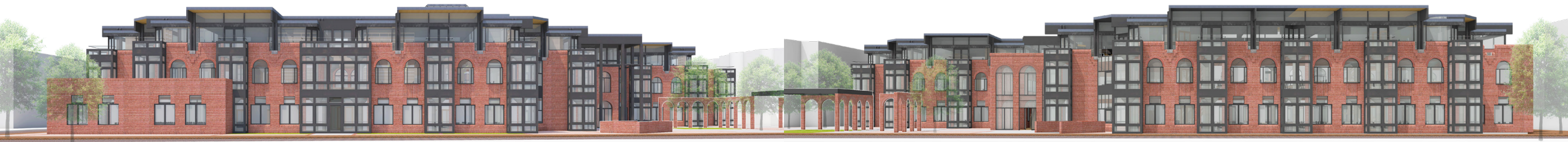


South

North

ontwerp







Aanpak

Uitgangspunten

Gebruik maken van potenties

Niet slopen waar het niet hoeft

De betekenis van het gebouw ontrafelen

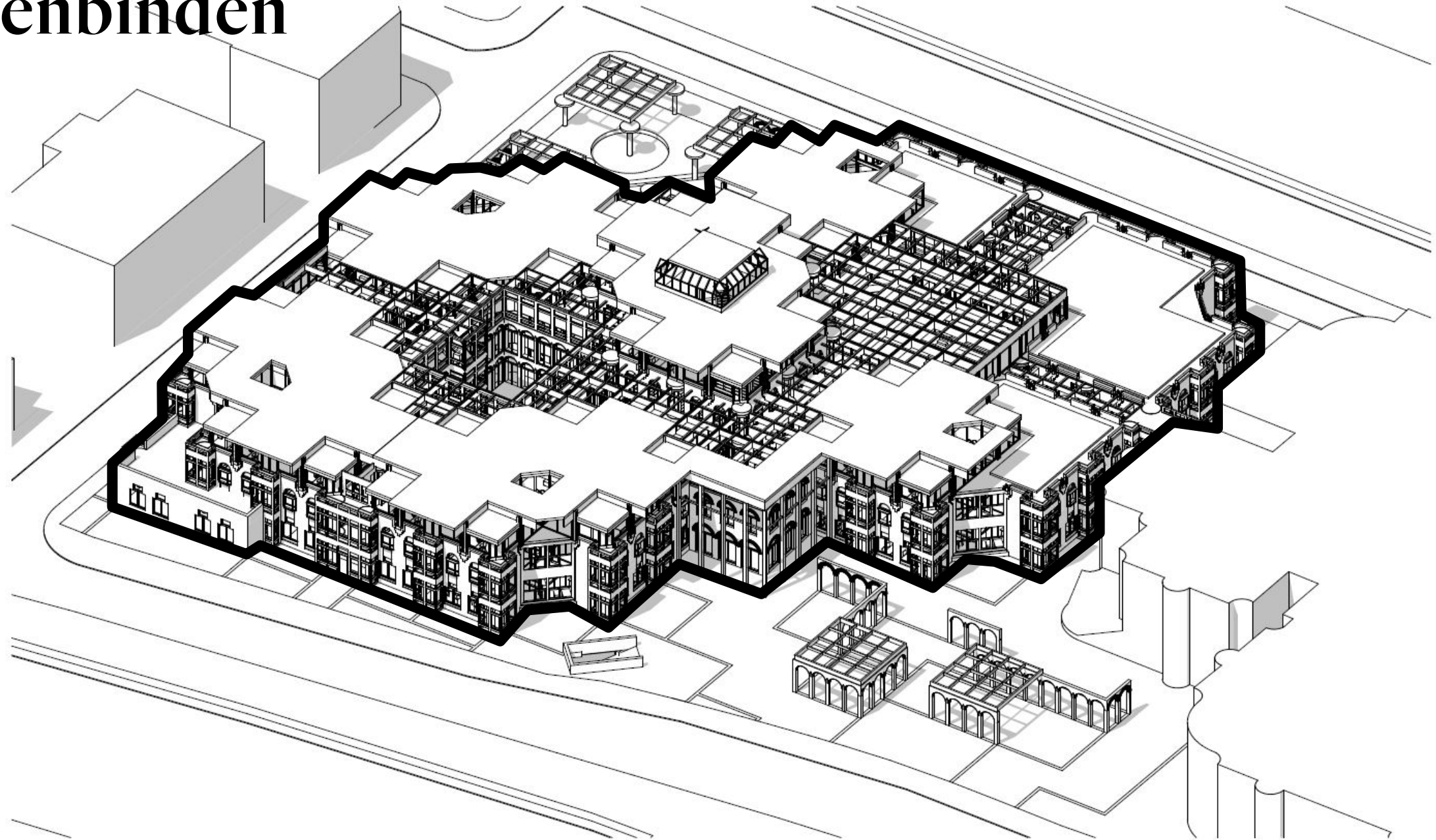
Eisen

Noord en Zuid functioneren op zichzelf

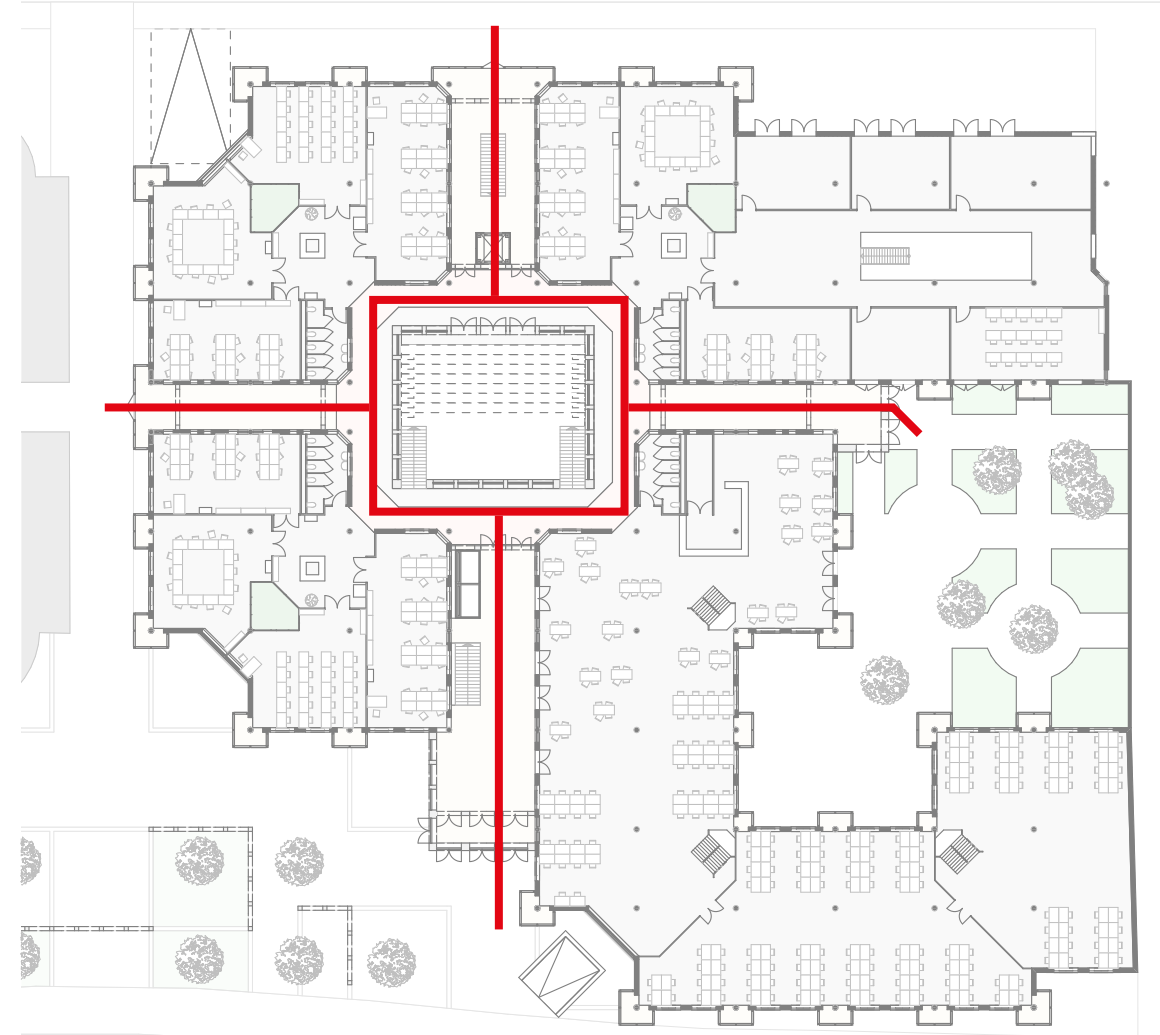
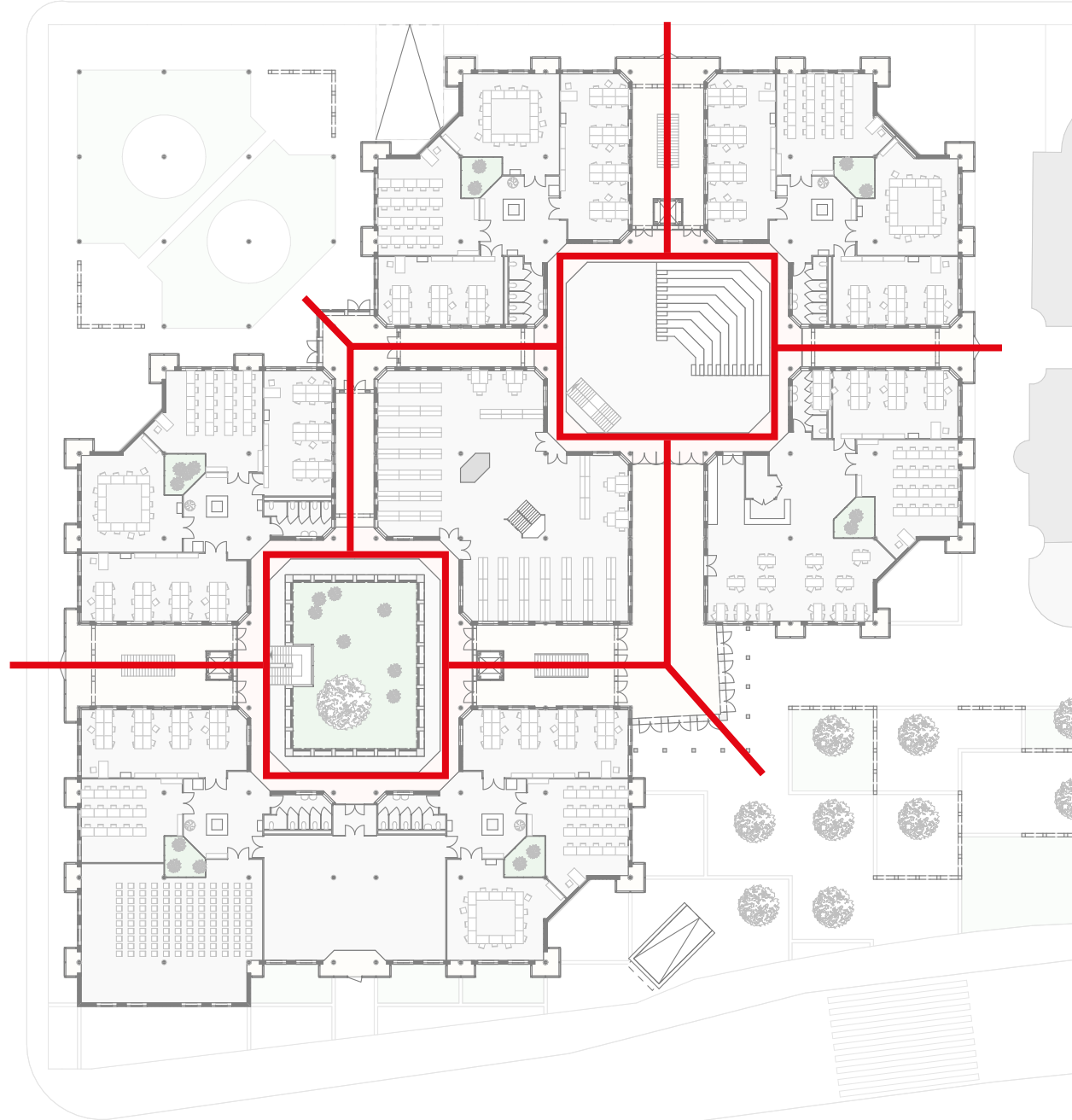
Alle gebruiksruidten aan de buitengevel

Verhoudingen in interieur en exterieur behouden

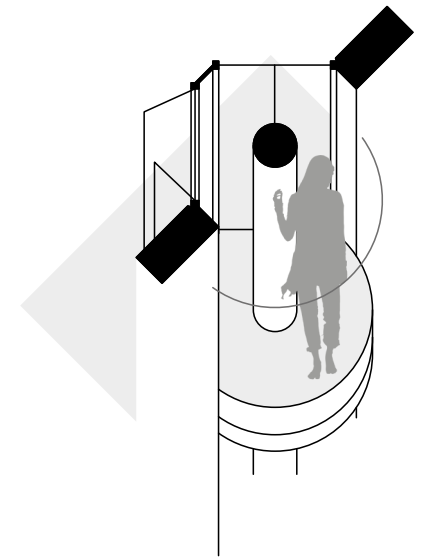
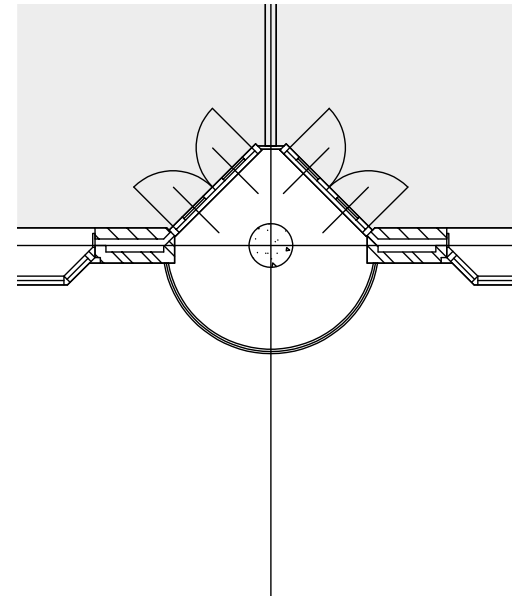
Samenbinden



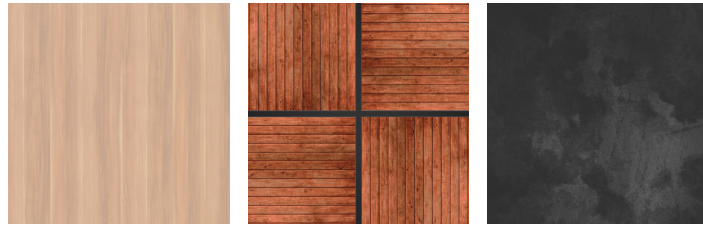
Rationaliseren



Adaptatie

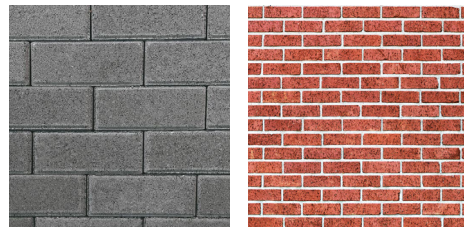


Interpreteren



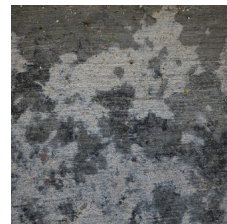
Wood

Replaceable



Brick

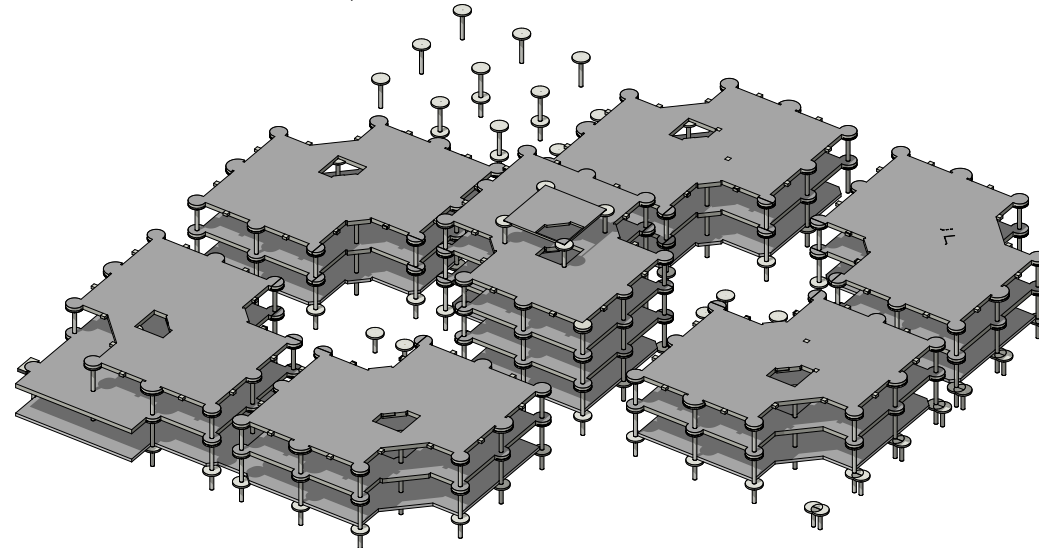
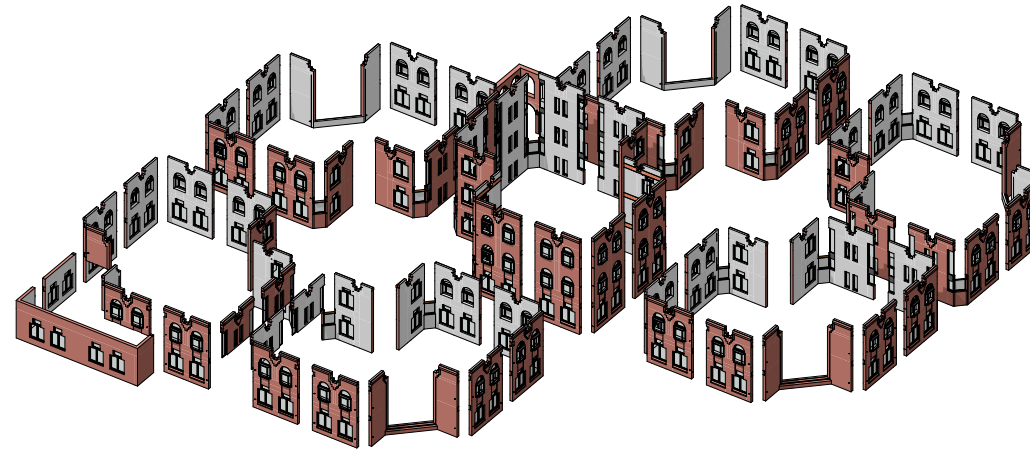
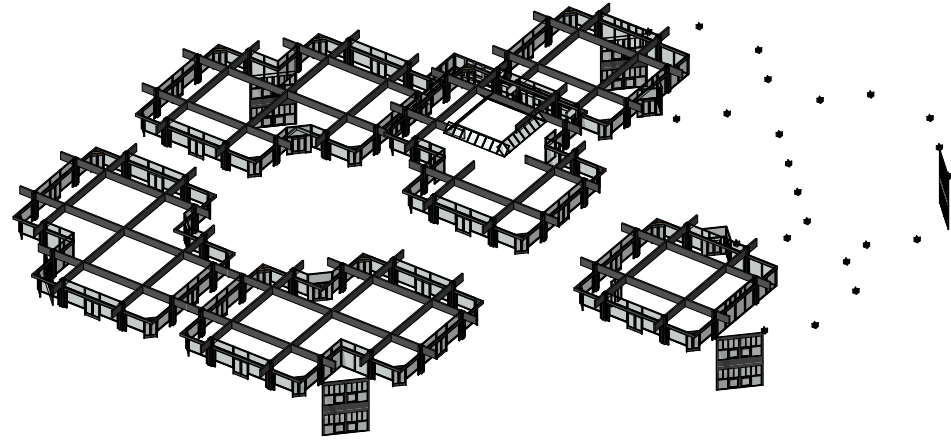
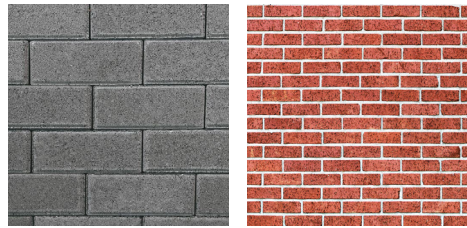
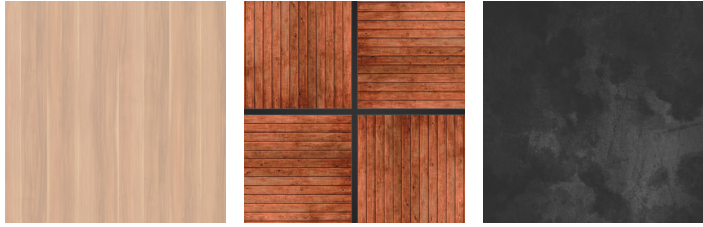
Long term facade

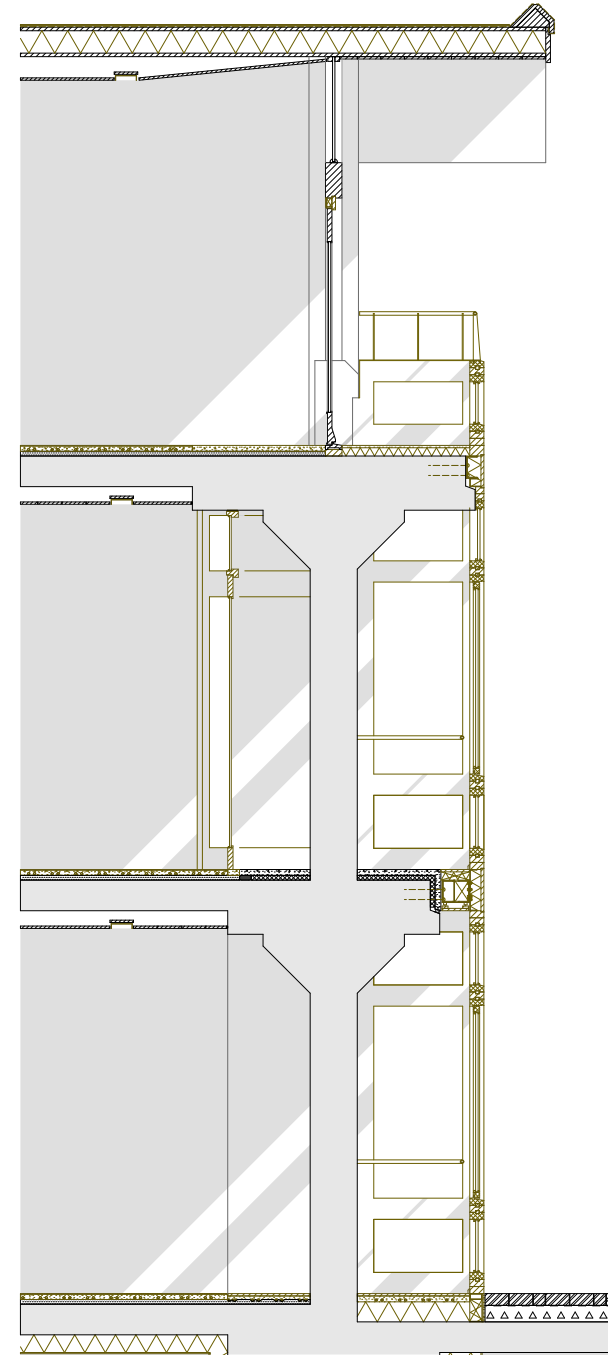
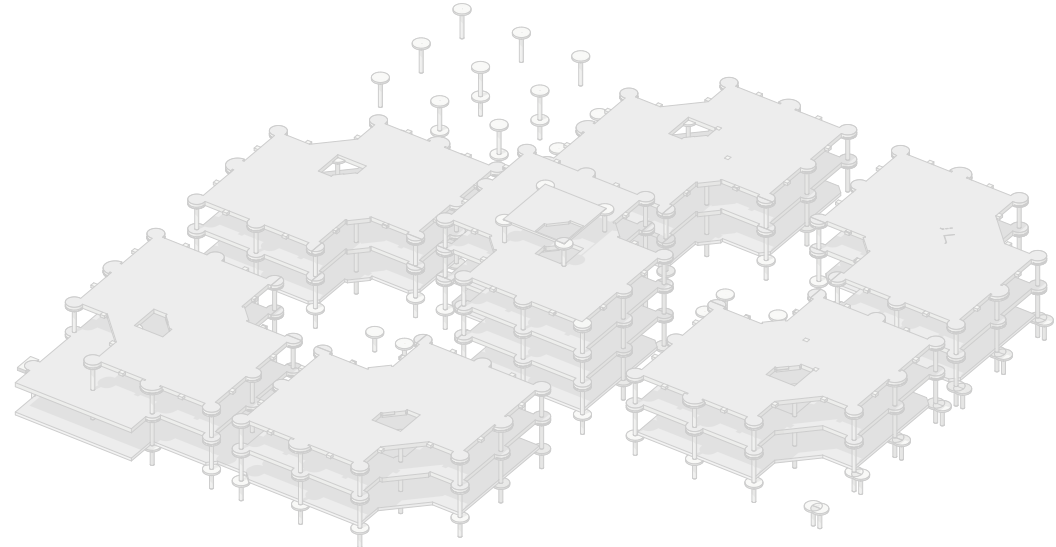
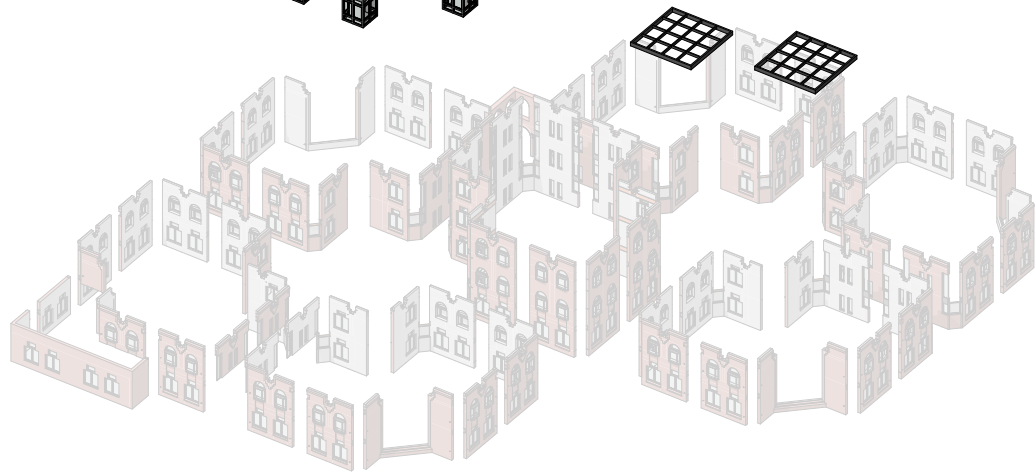
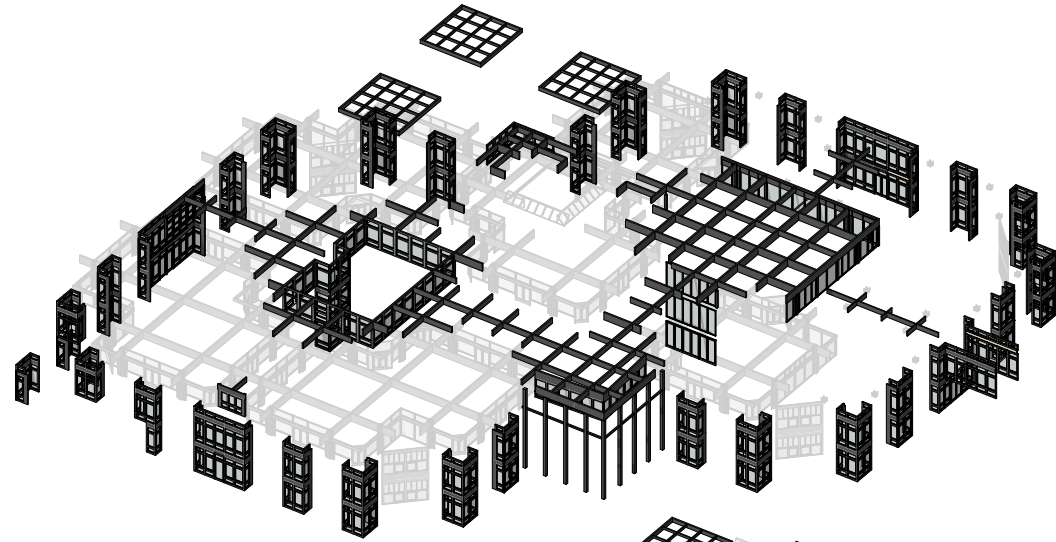


Concrete

Permanent / solidity

Interpreteren

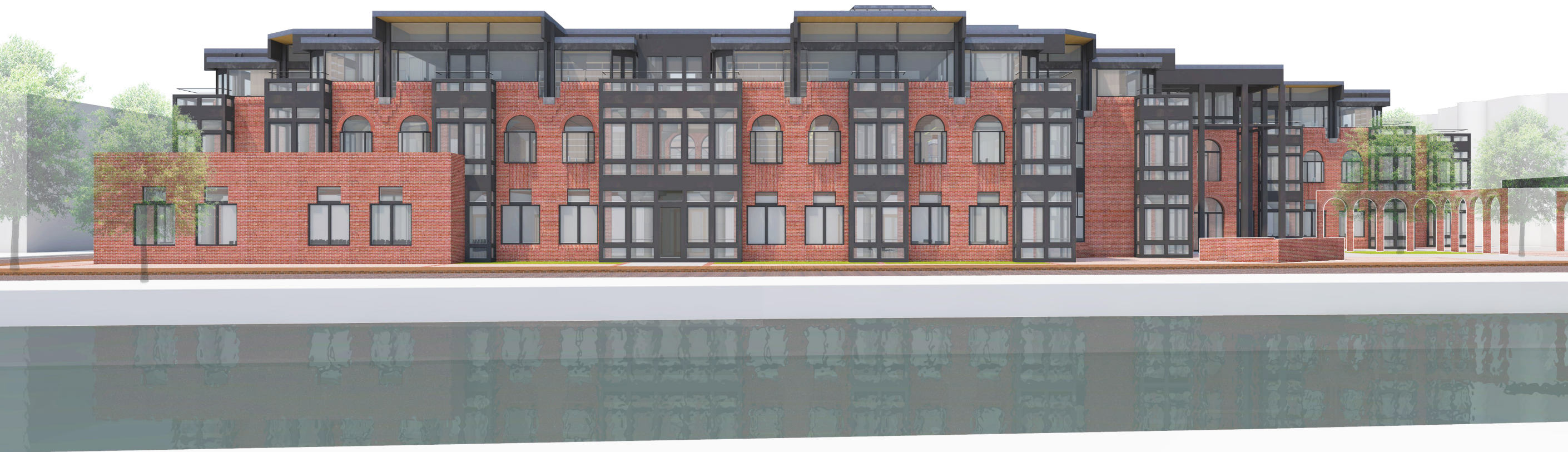




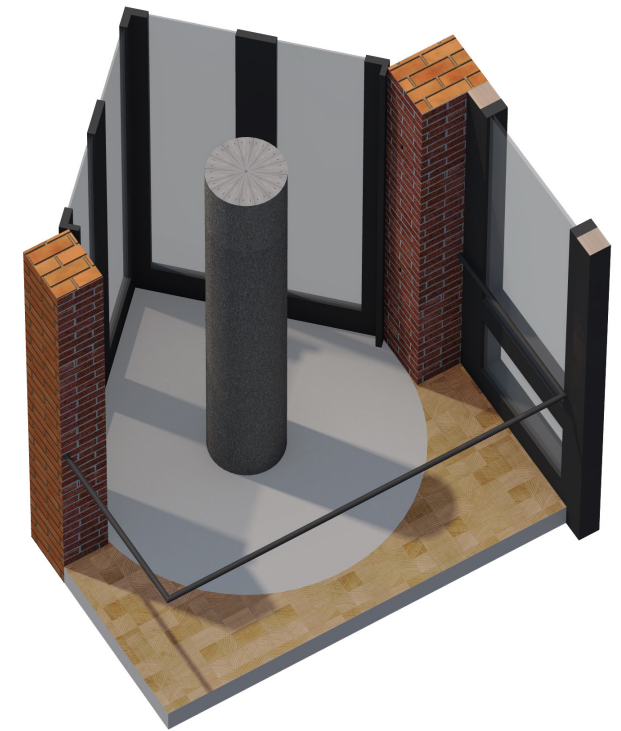
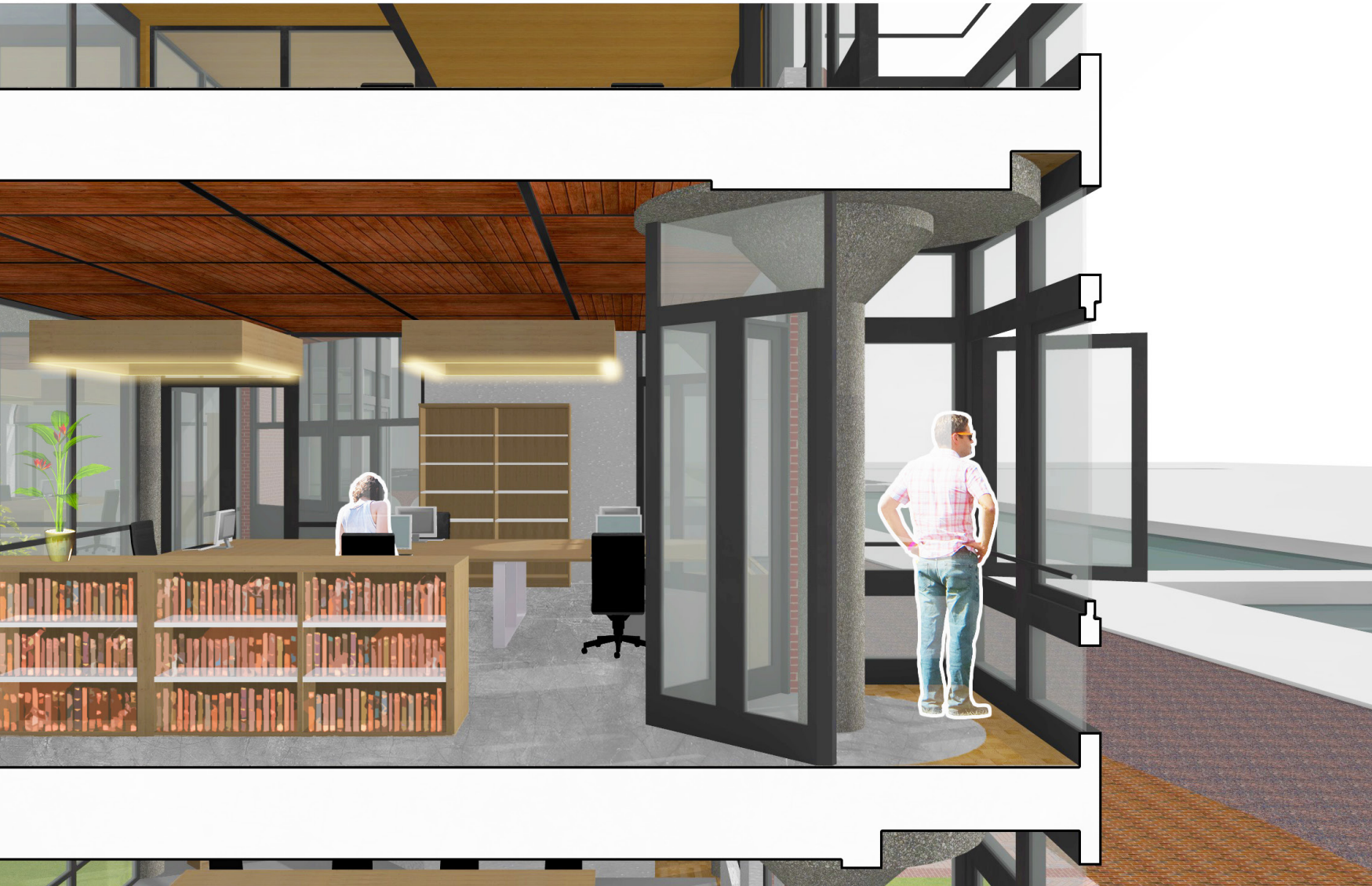
Samenbinden



Samenbinden



Adapteren

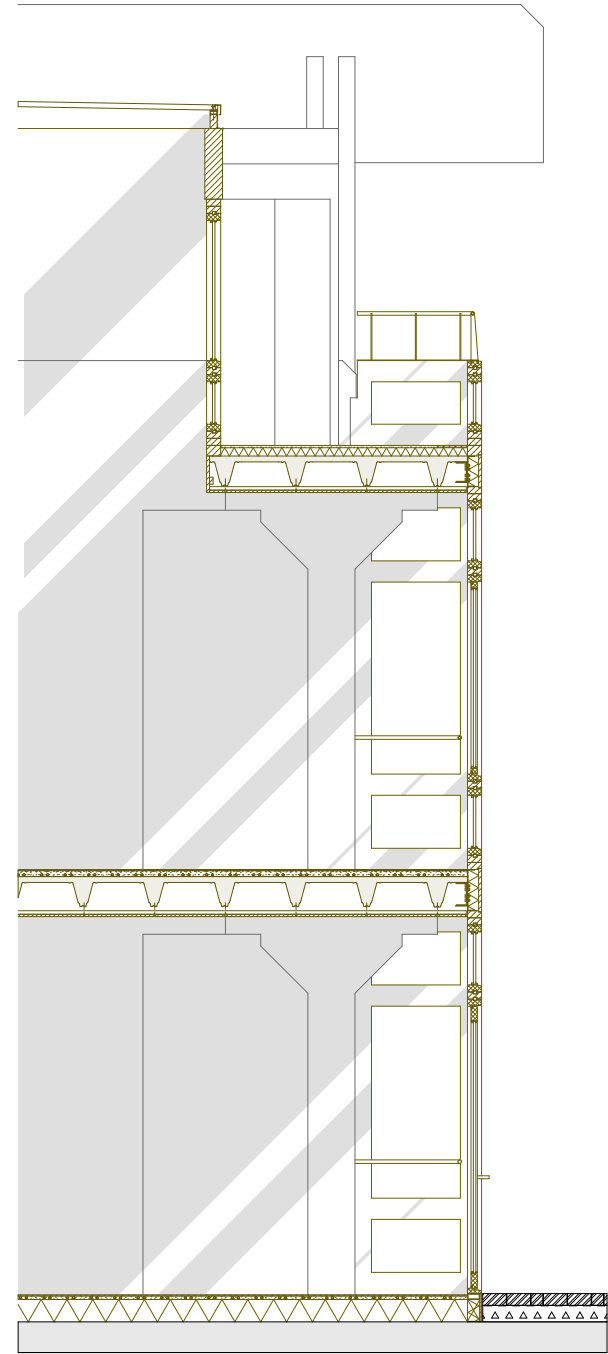
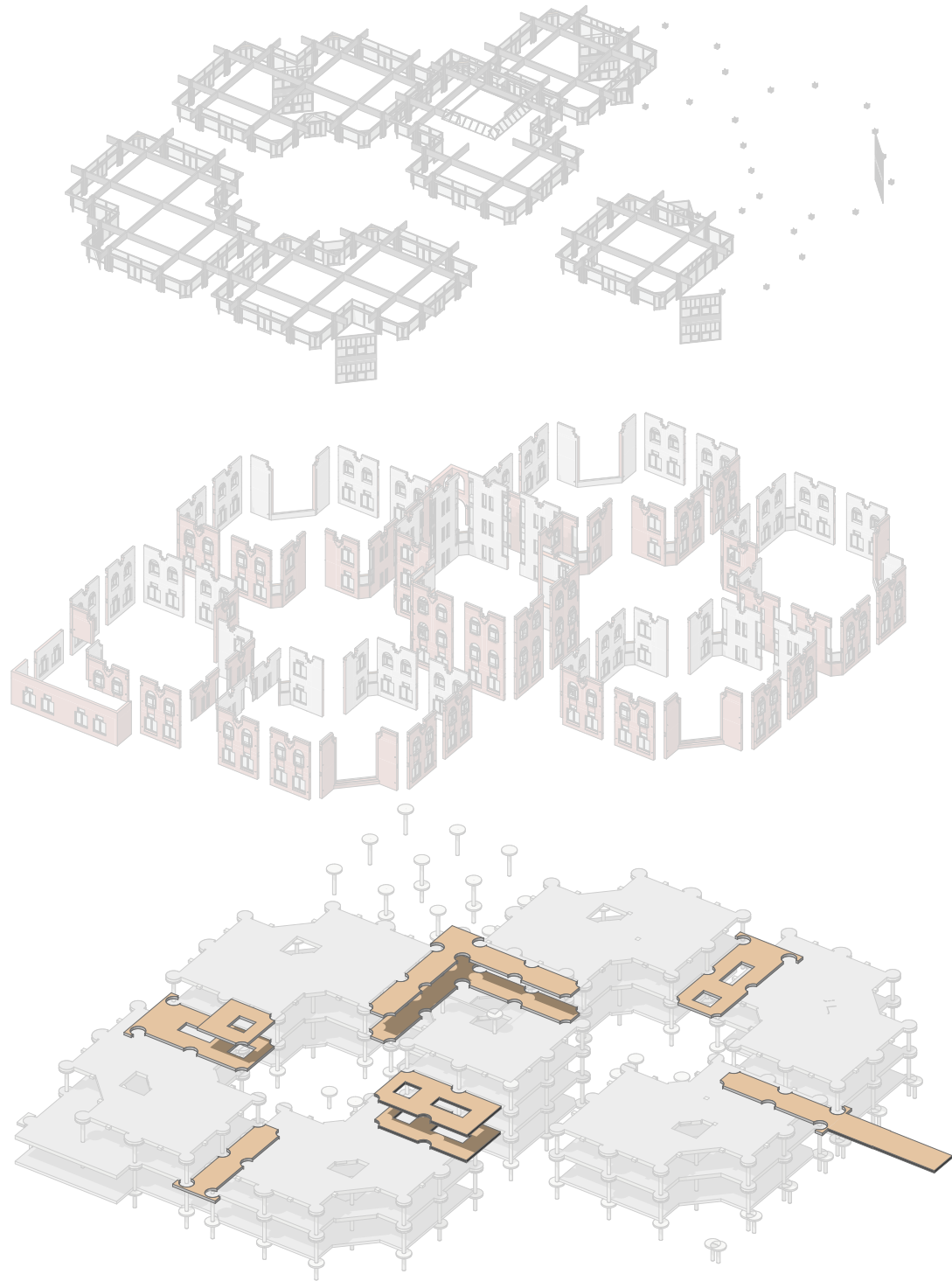


Rationaliseren



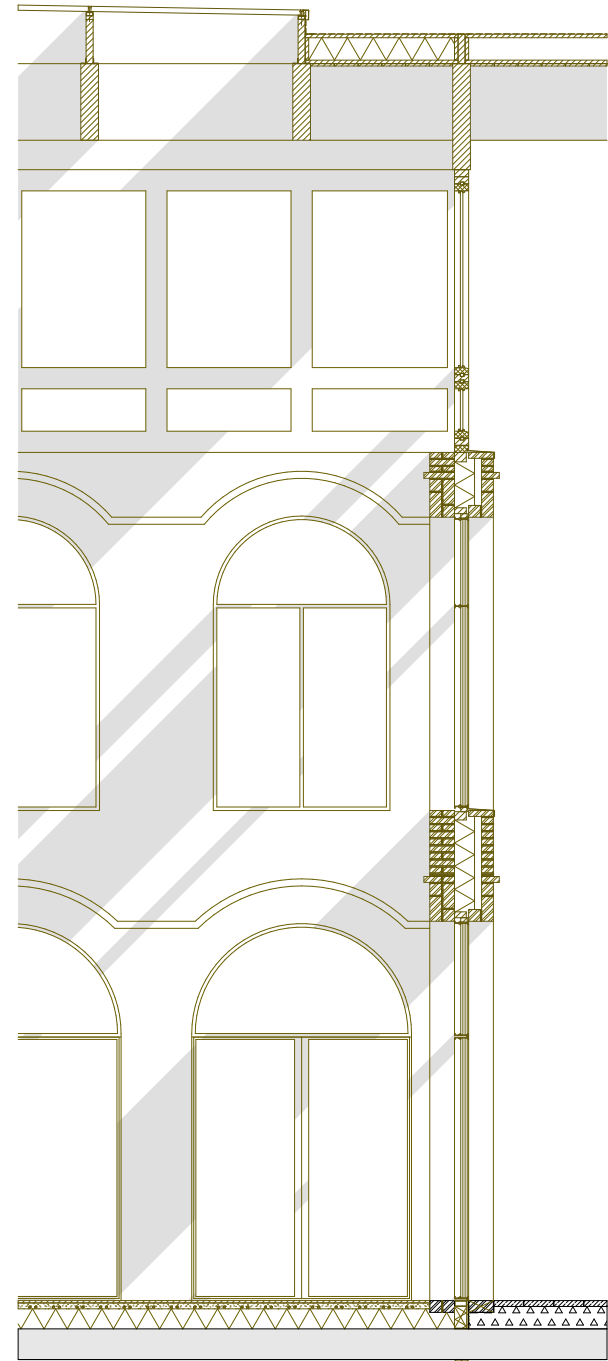
Rationaliseren

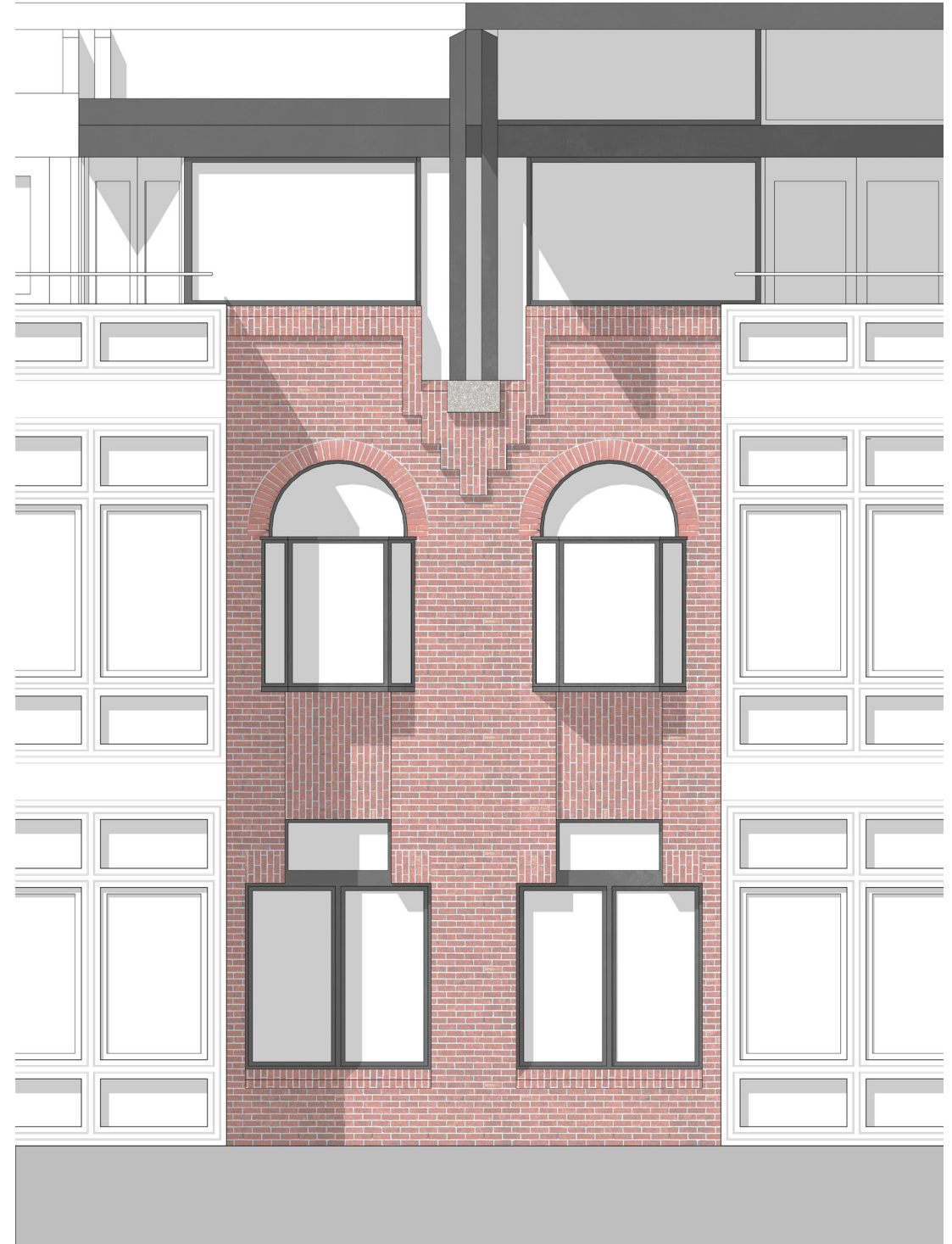
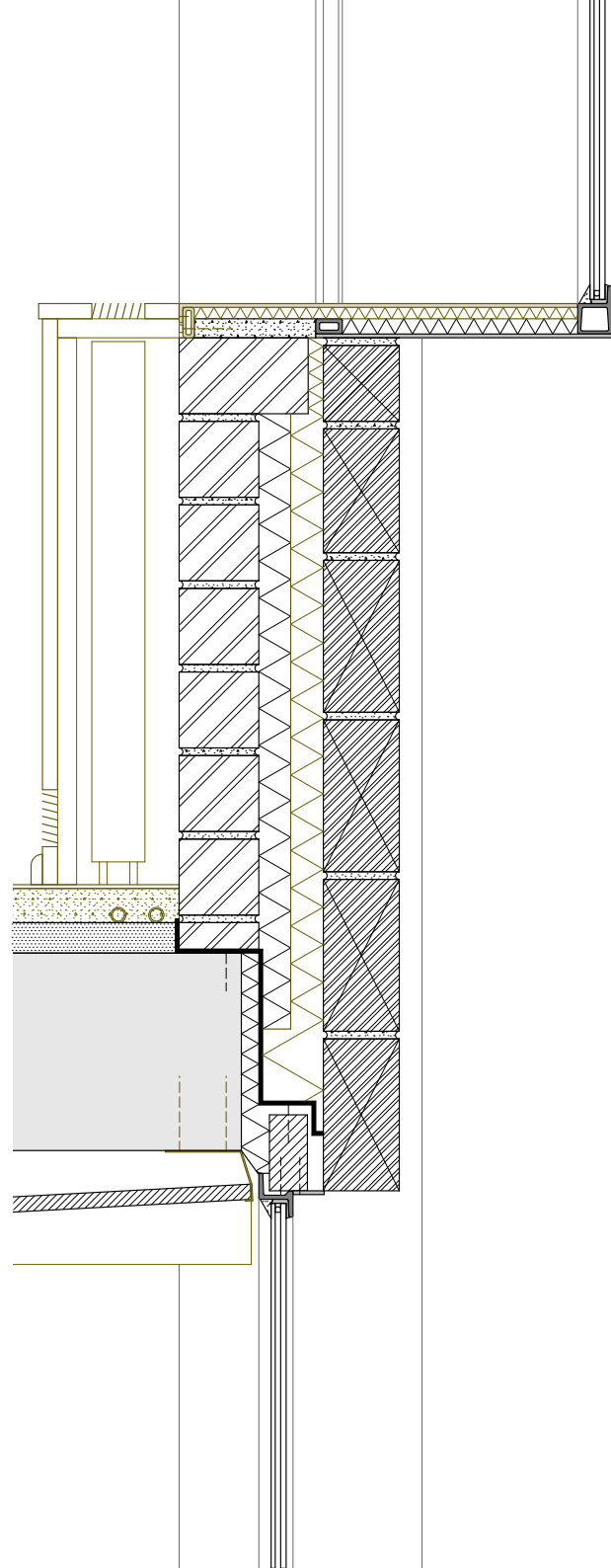


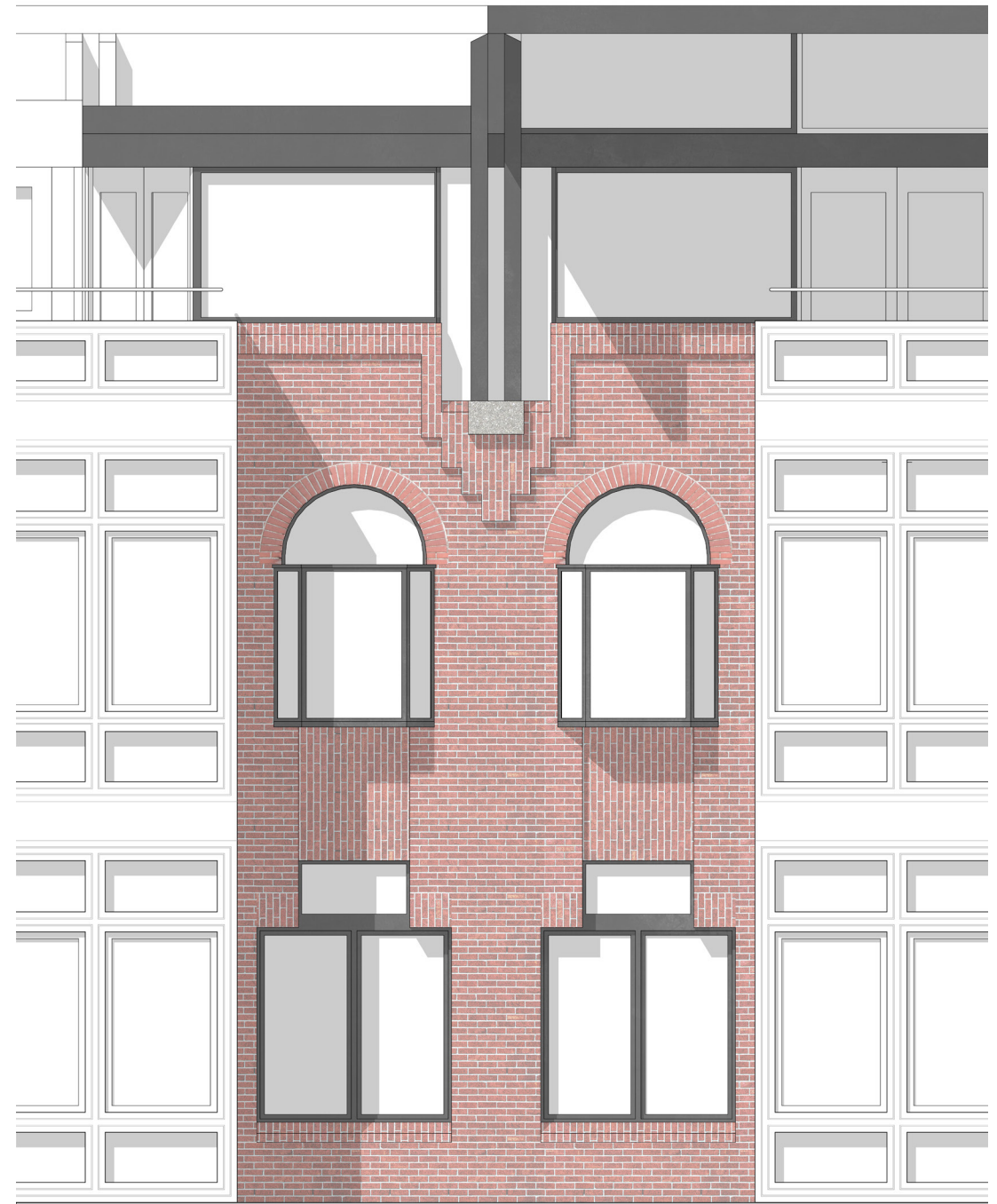


Rationaliseren





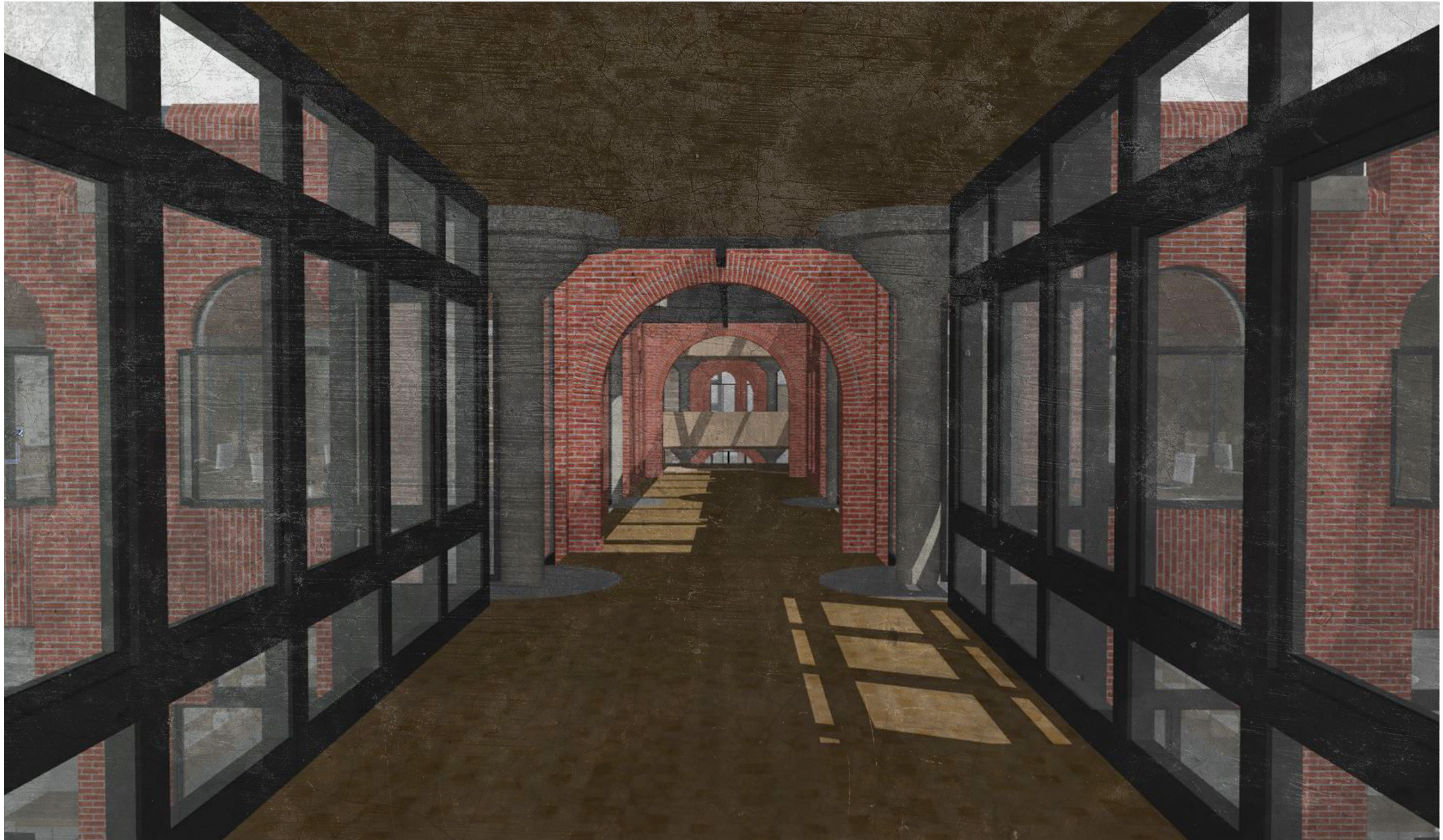




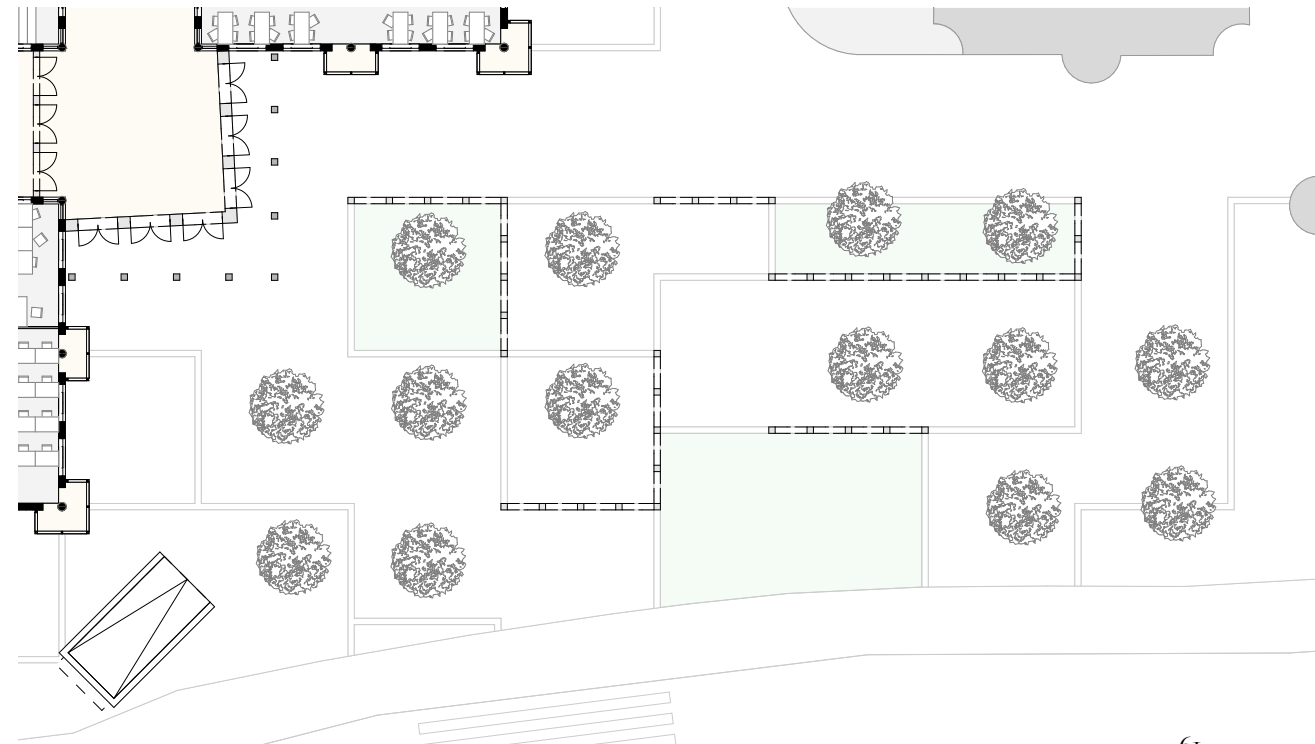




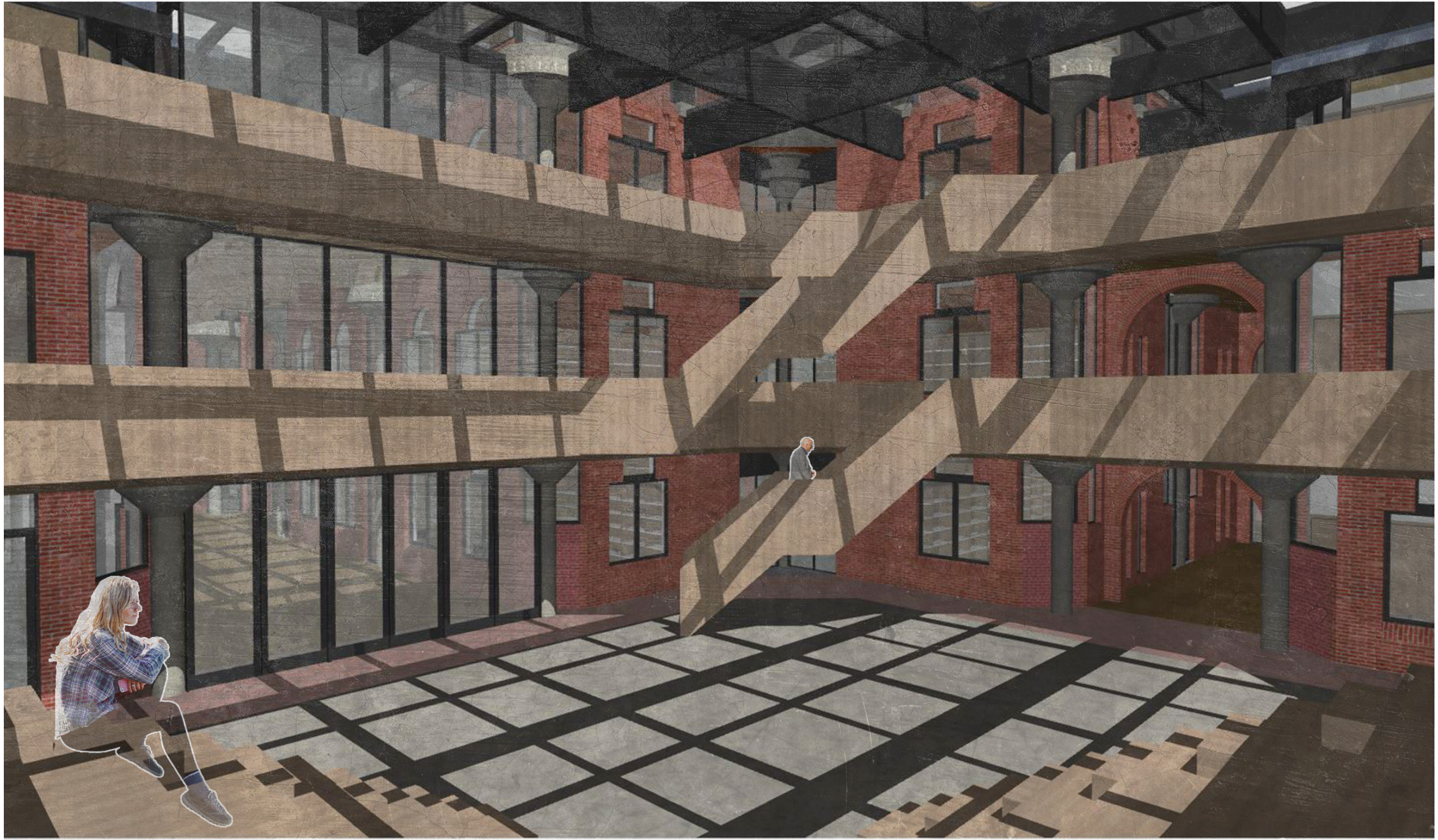




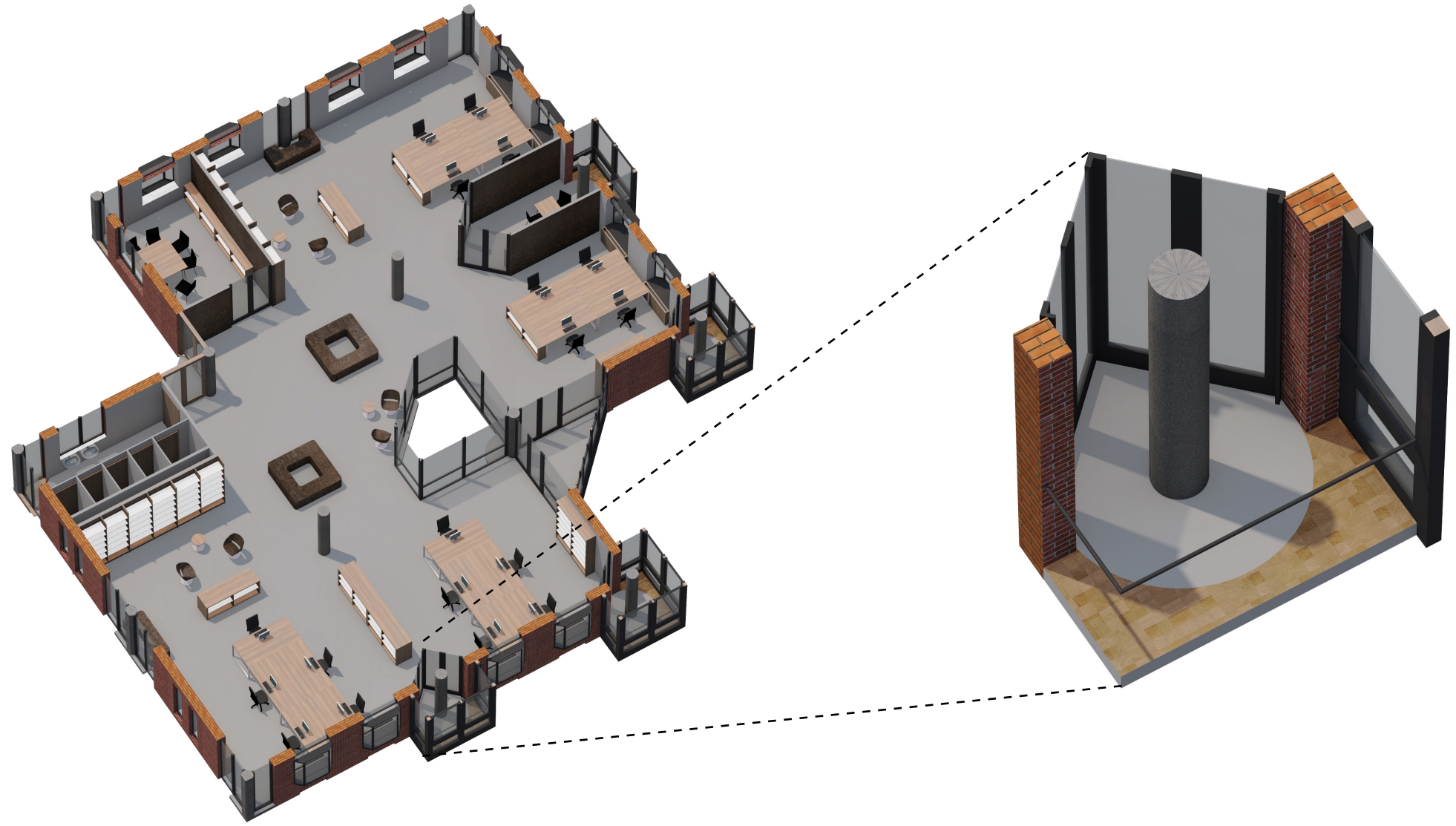








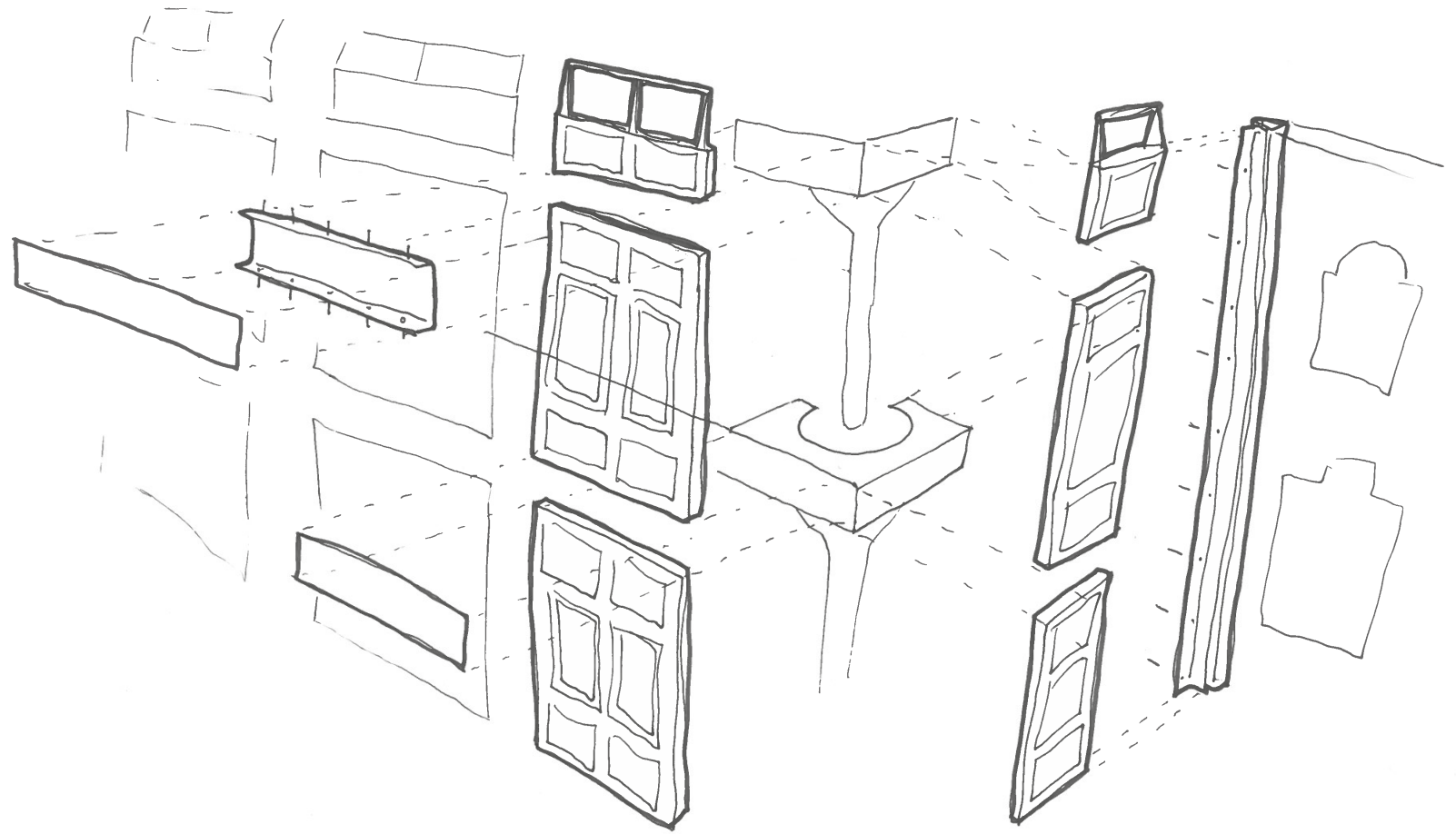
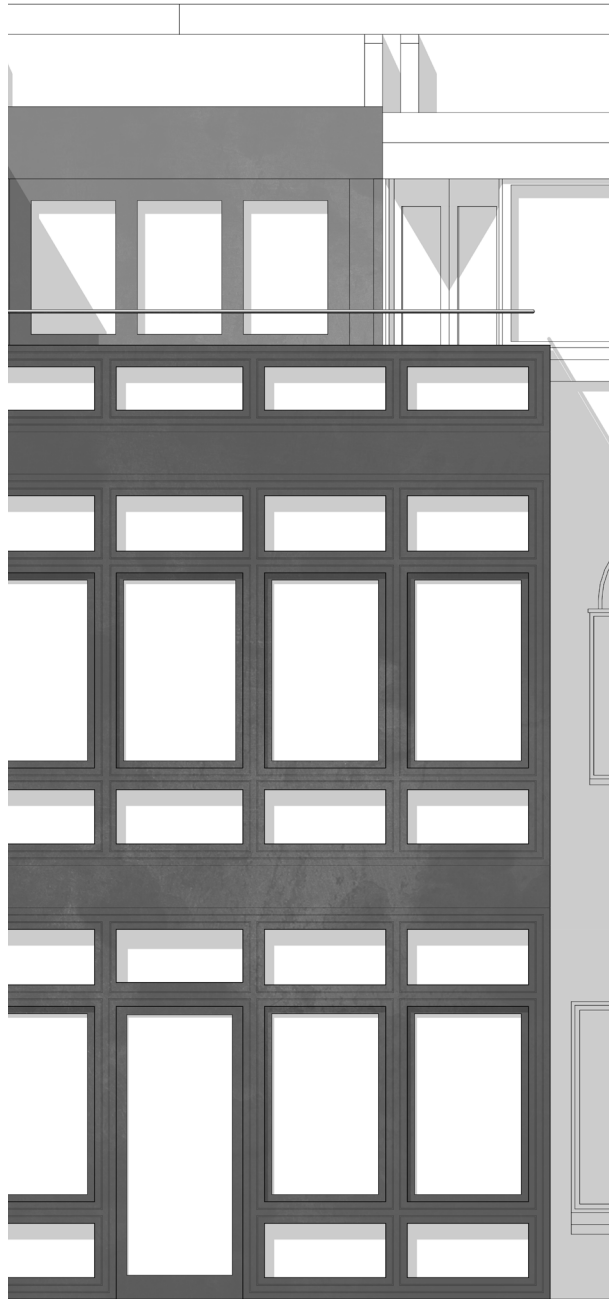


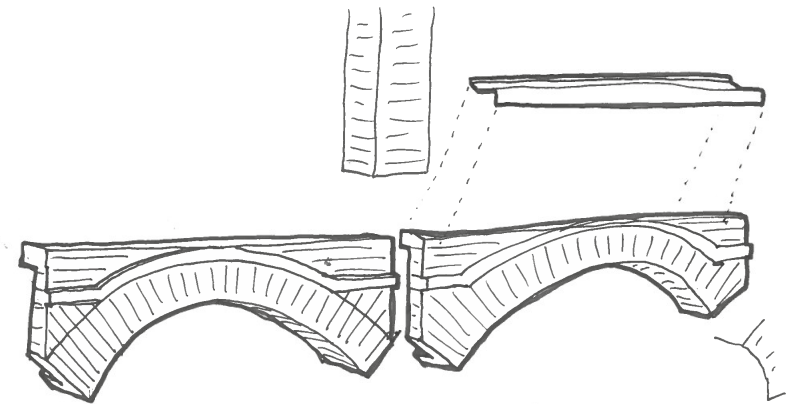
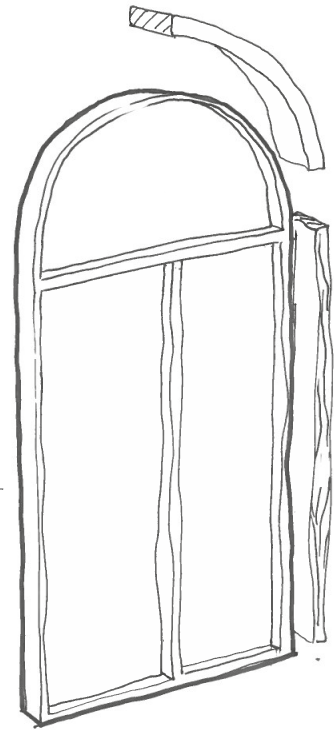
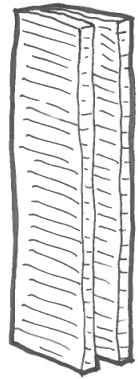
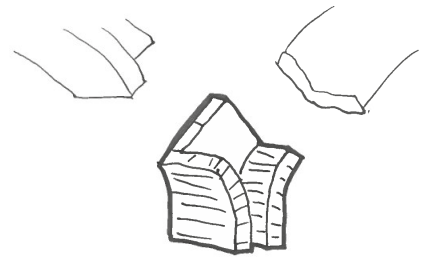
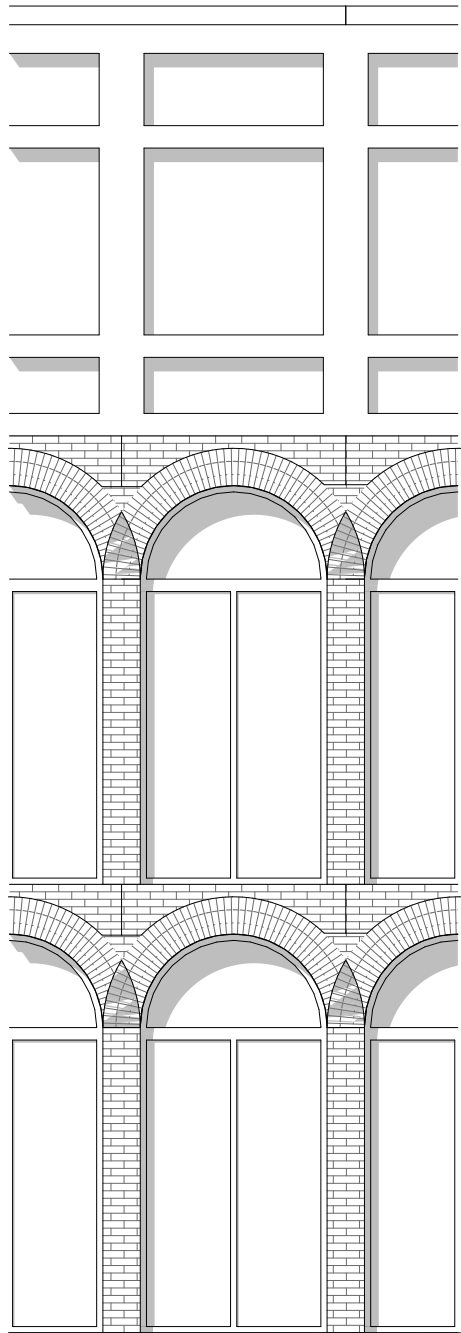


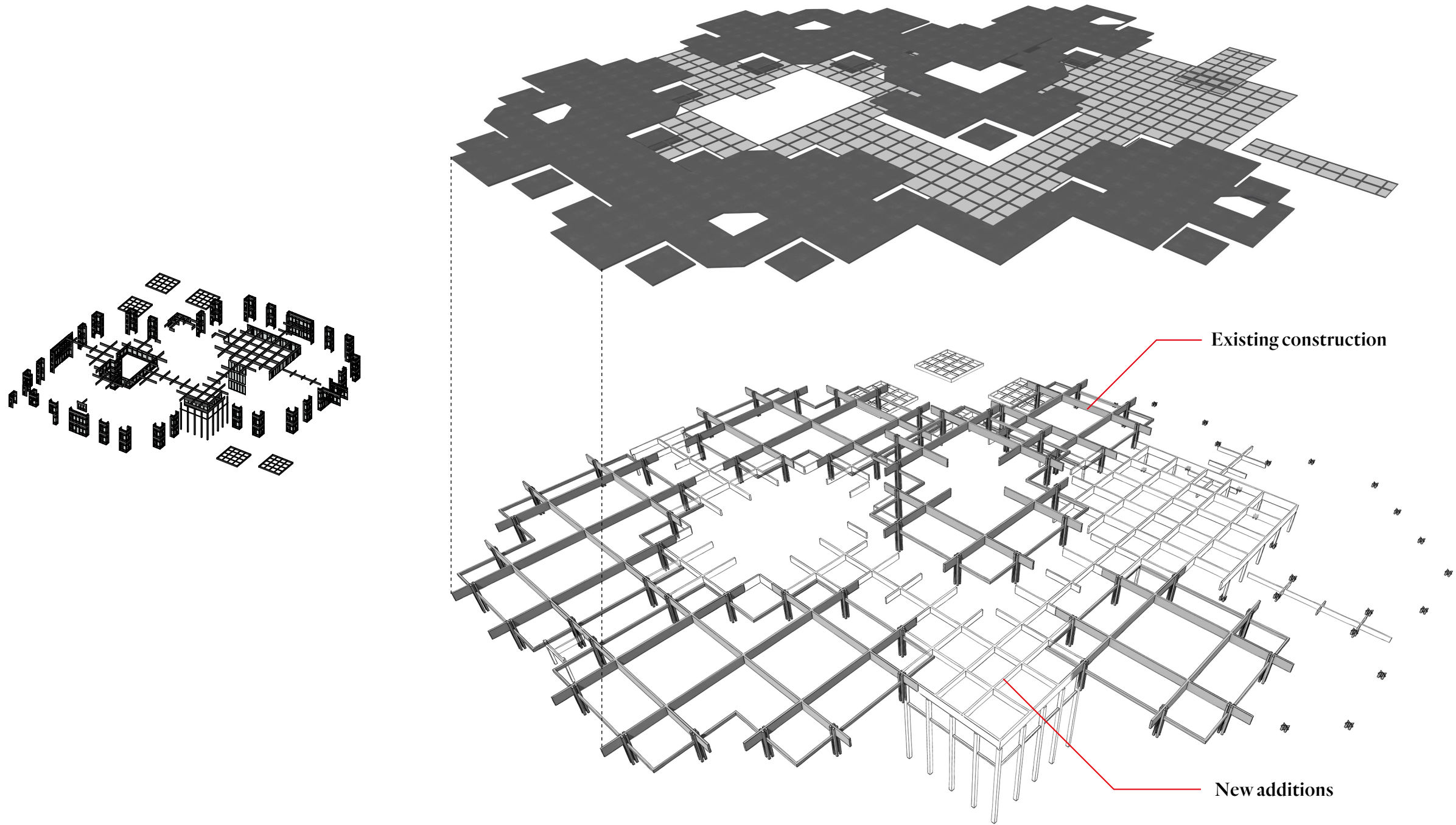


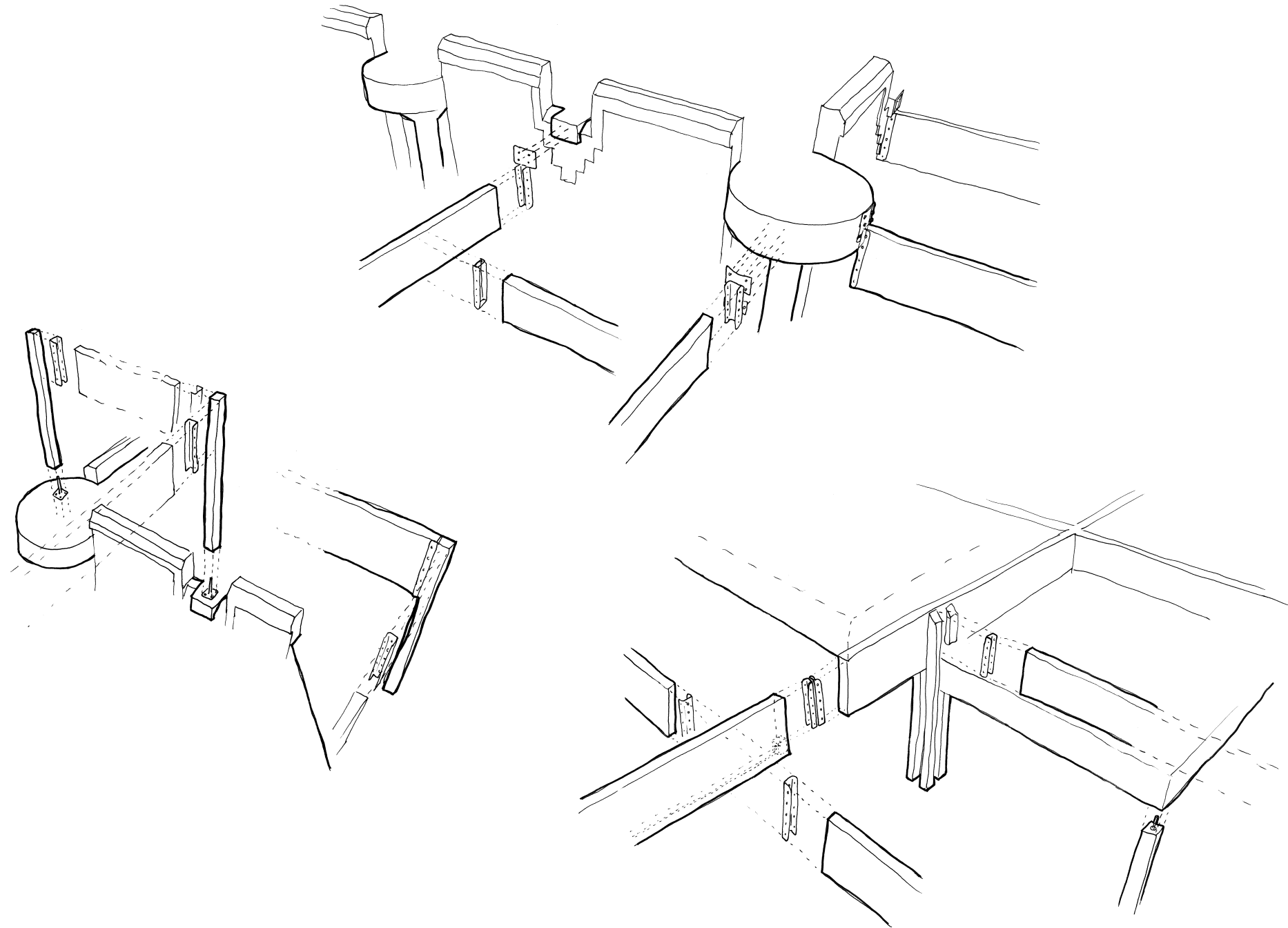


technik

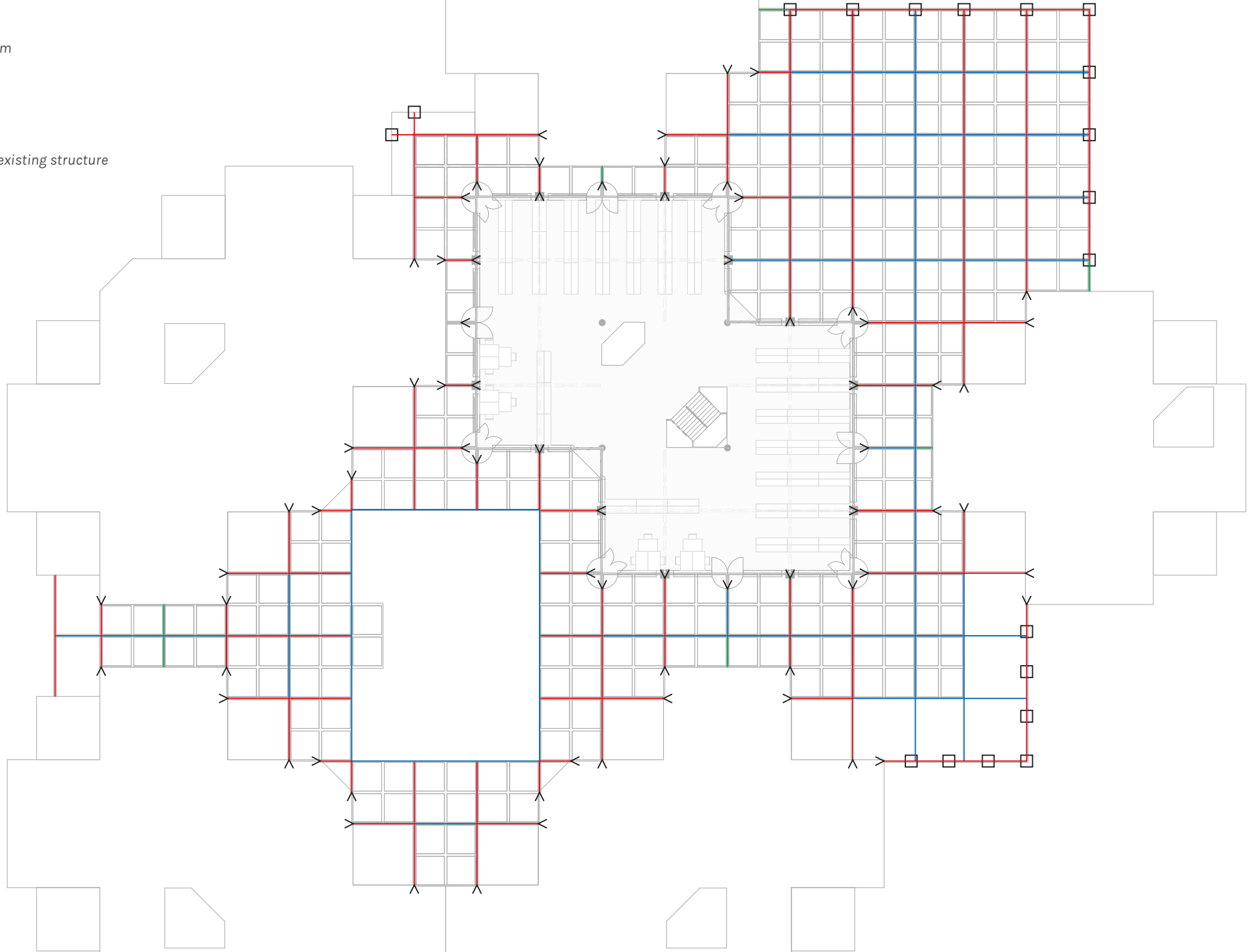


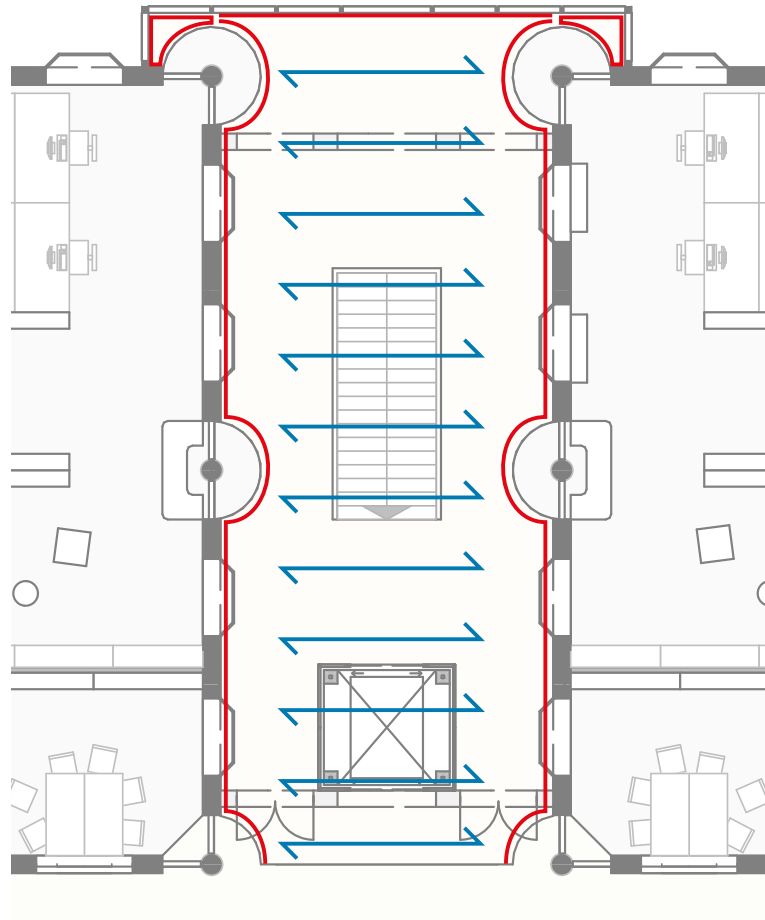




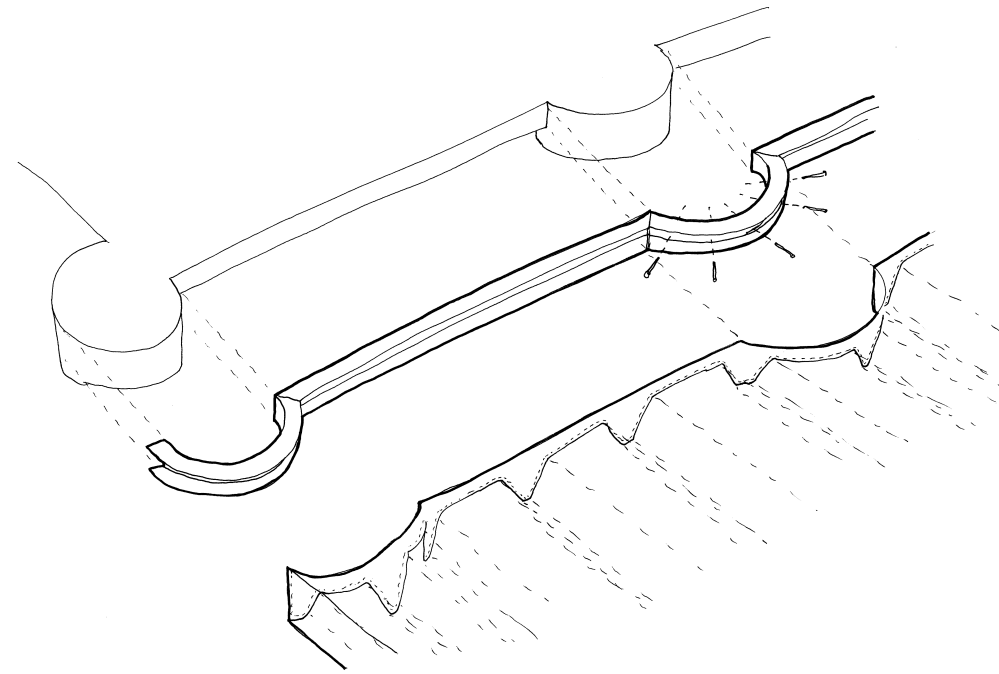


- Primary beam
- Secondary beam
- Bulging out
- On column
- Connecting to existing structure

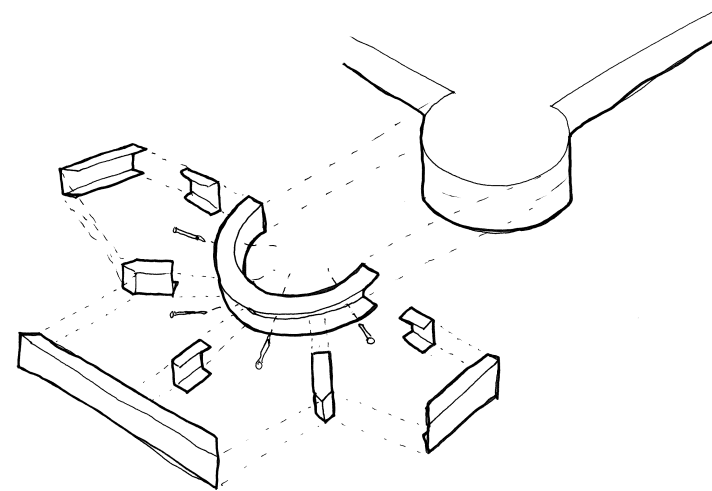




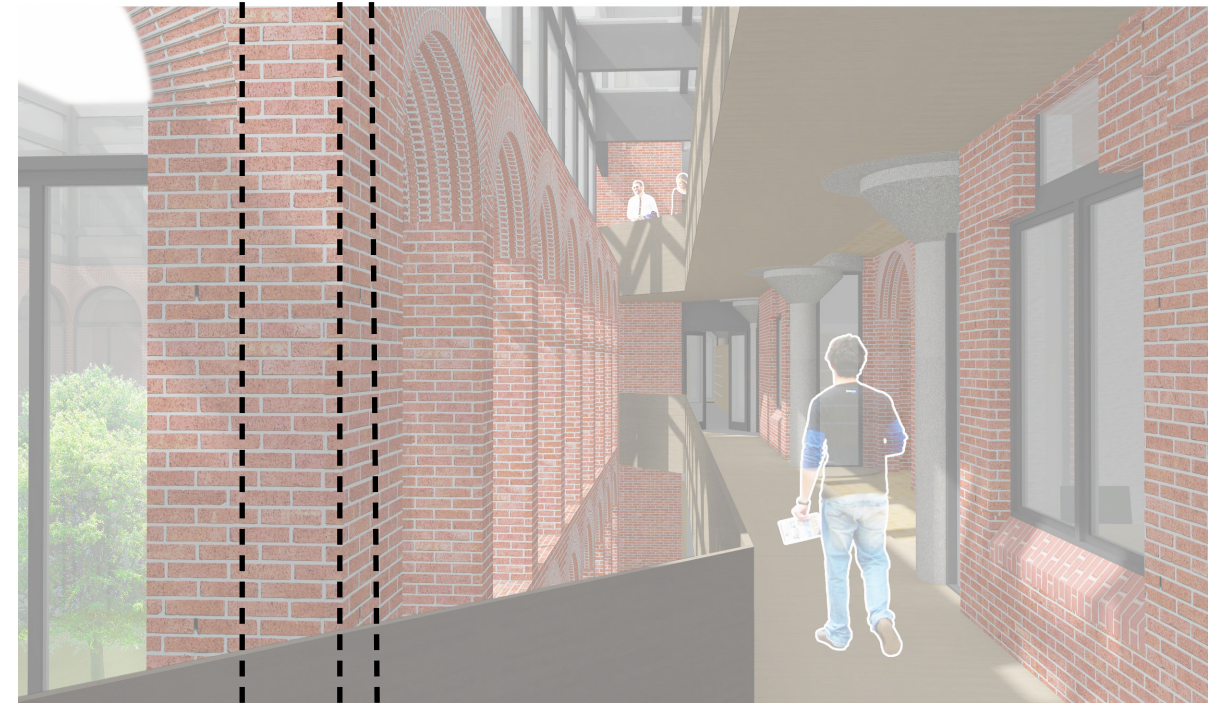
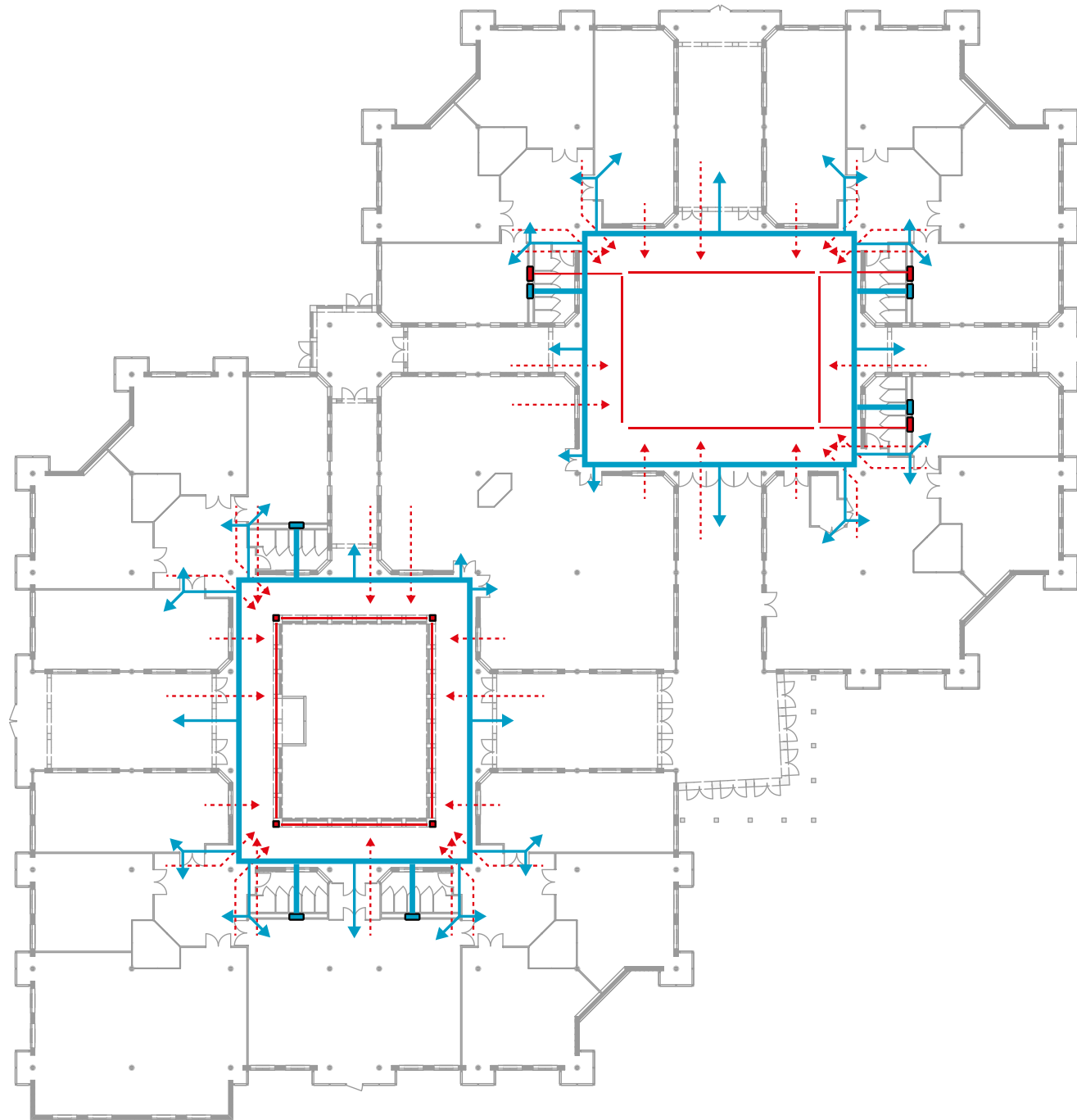
Span of street floors

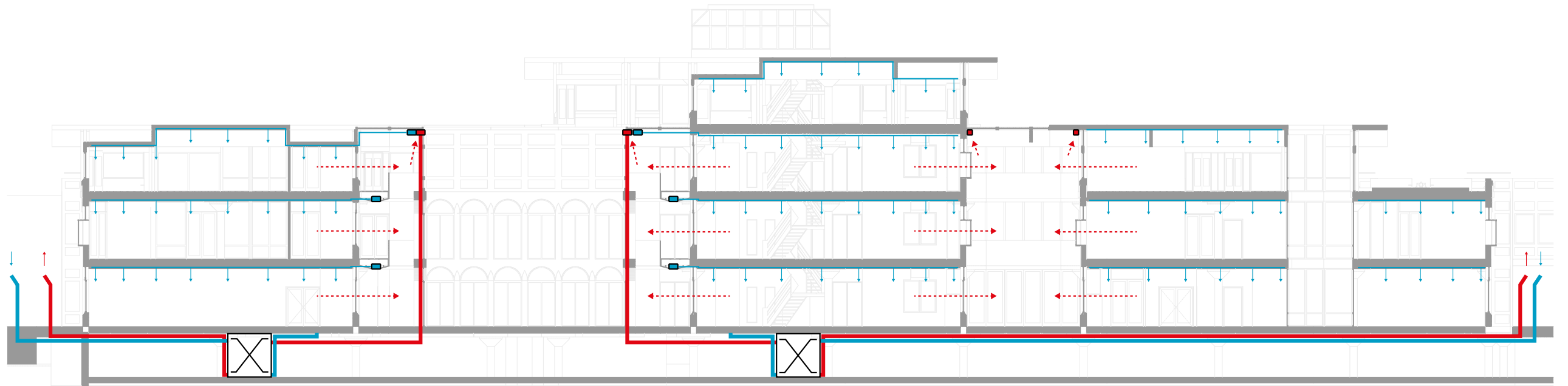


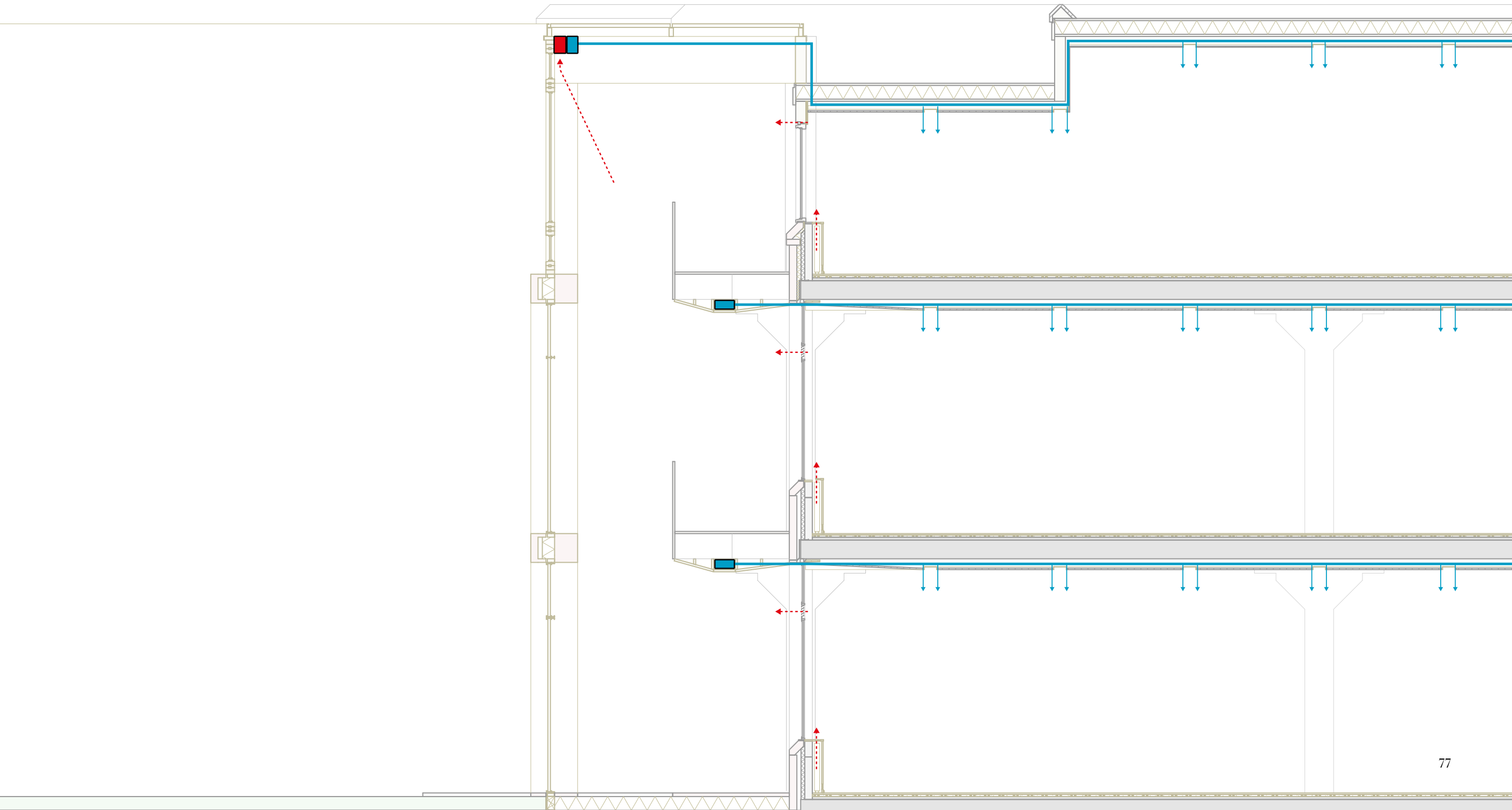
Floor construction

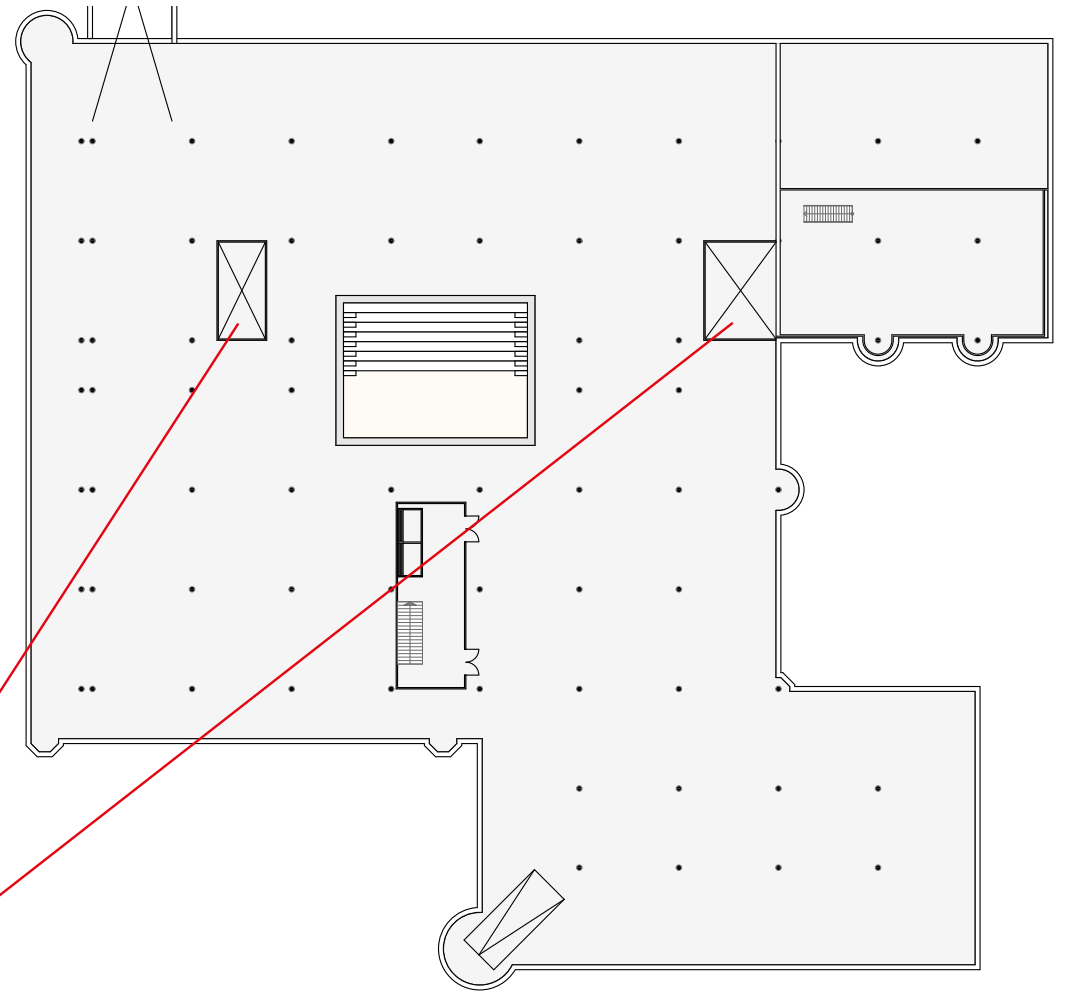
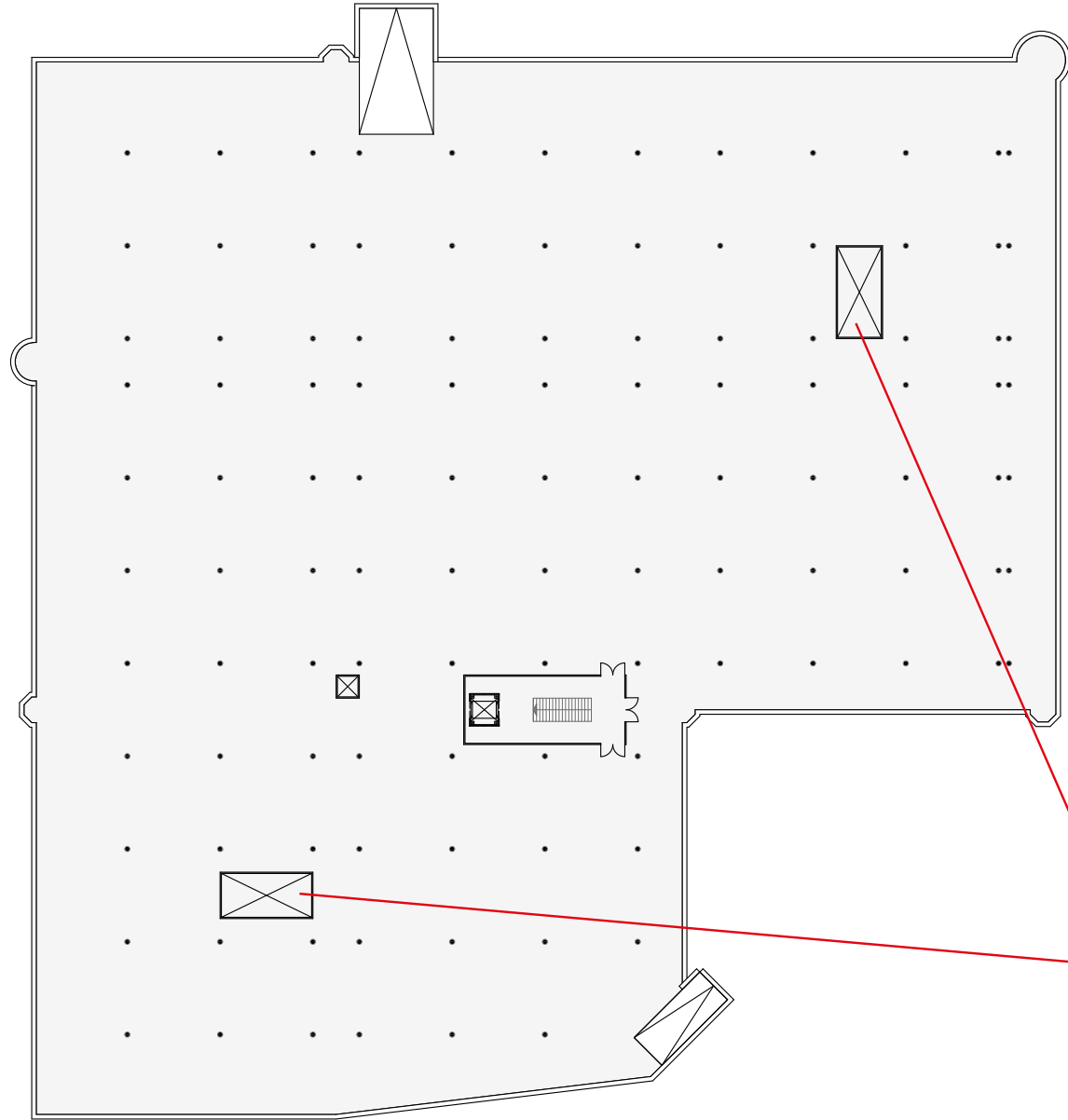


Construction column embrace









Ventilation units

conclusie

