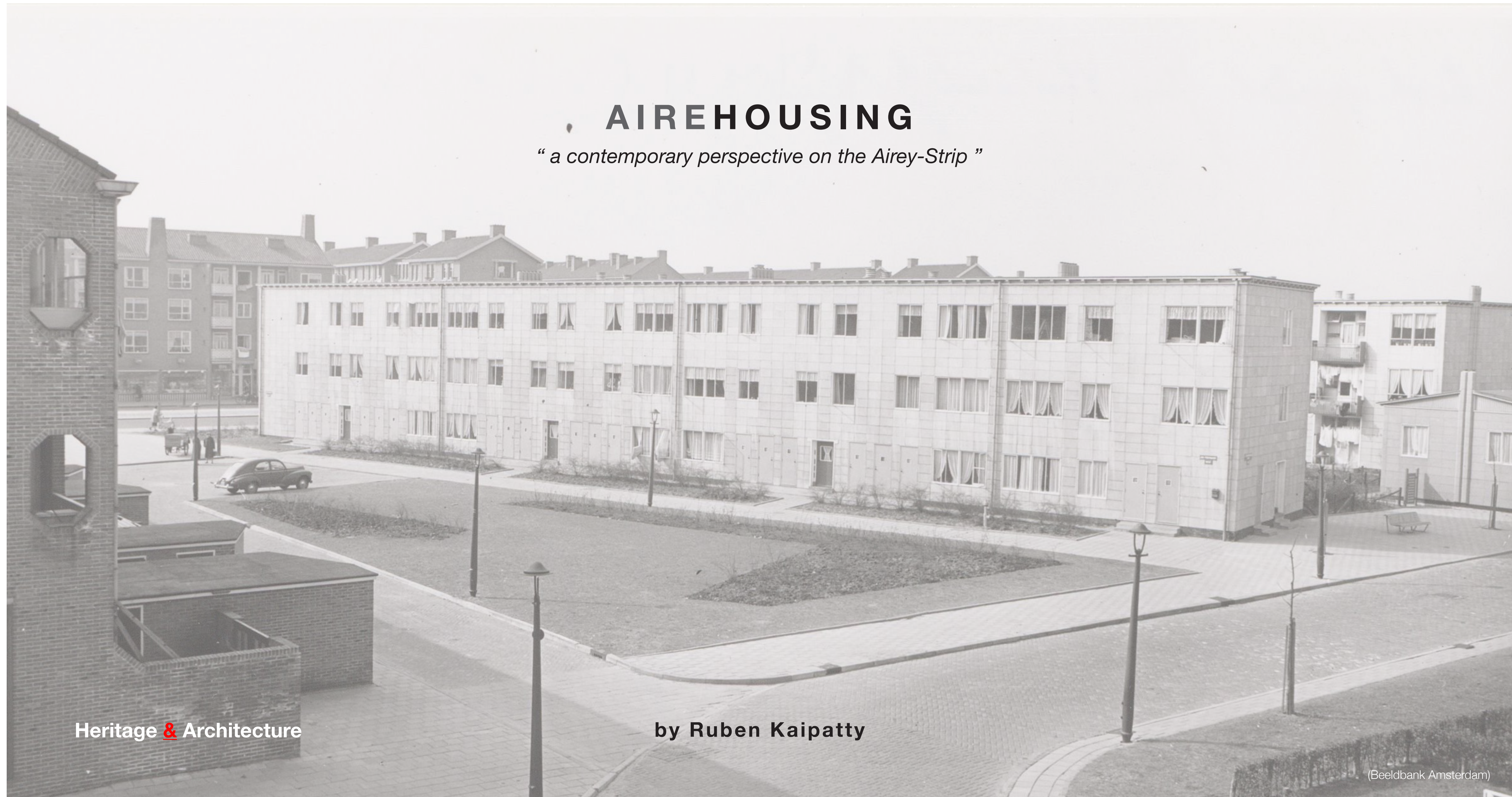


AIREHOUSING

“ a contemporary perspective on the Airey-Strip ”



Heritage & Architecture

by Ruben Kaipatty

(Beeldbank Amsterdam)

01	THEME <i>Rehousing Post-war Housing Stock</i>
02	CONTEXT <i>Housing in Amsterdam</i>
03	CASE <i>Amsterdam, Airey-Strip</i>
04	STRATEGY <i>Collective Private Commissioning</i>
05	DESIGN PROPOSAL <i>Exterior, Interior, Site, Building Tech.</i>
06	CONCLUSION



01 THEME

REHOUSING



(Historisch Centrum Amsterdam-Noord)

1900 - 1945

INDUSTRIAL REVOLUTION + WORLD WAR II

Increasing Housing Shortages



(Beeldbank Amsterdam)

> 1950

WEDEROPBOUW

New Construction Systems (subsidized)

REHOUSING



(Beeldbank Amsterdam)

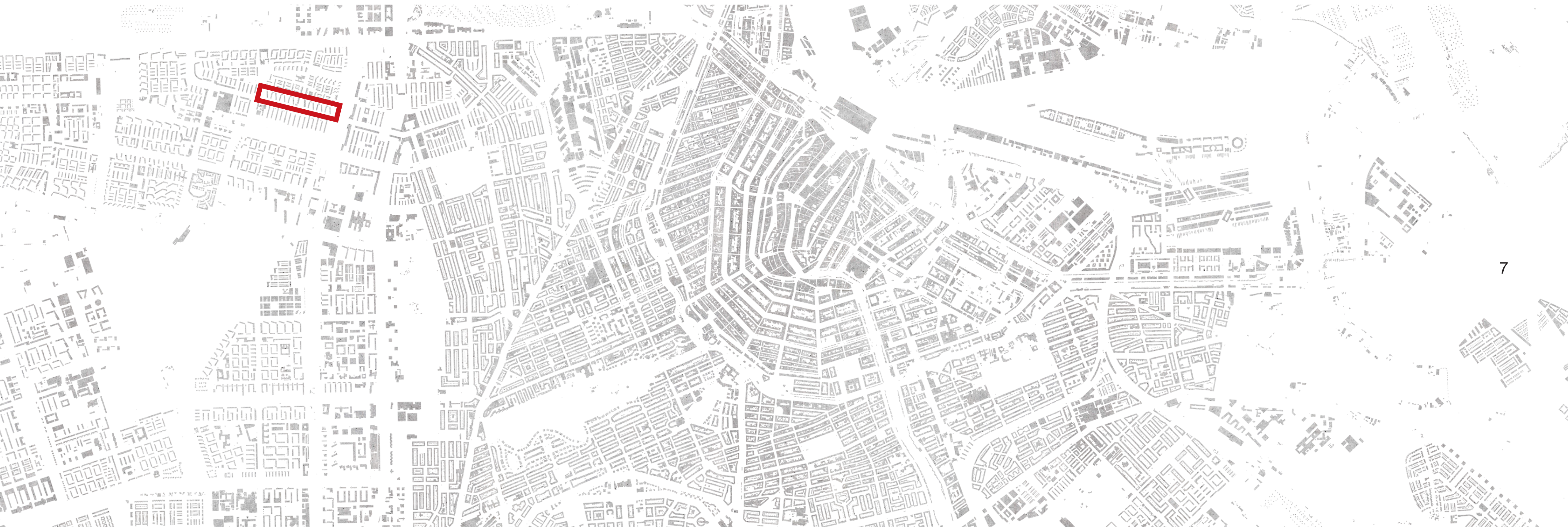
AIREY-STRIP (1952)
Nieuw-West, Amsterdam



02

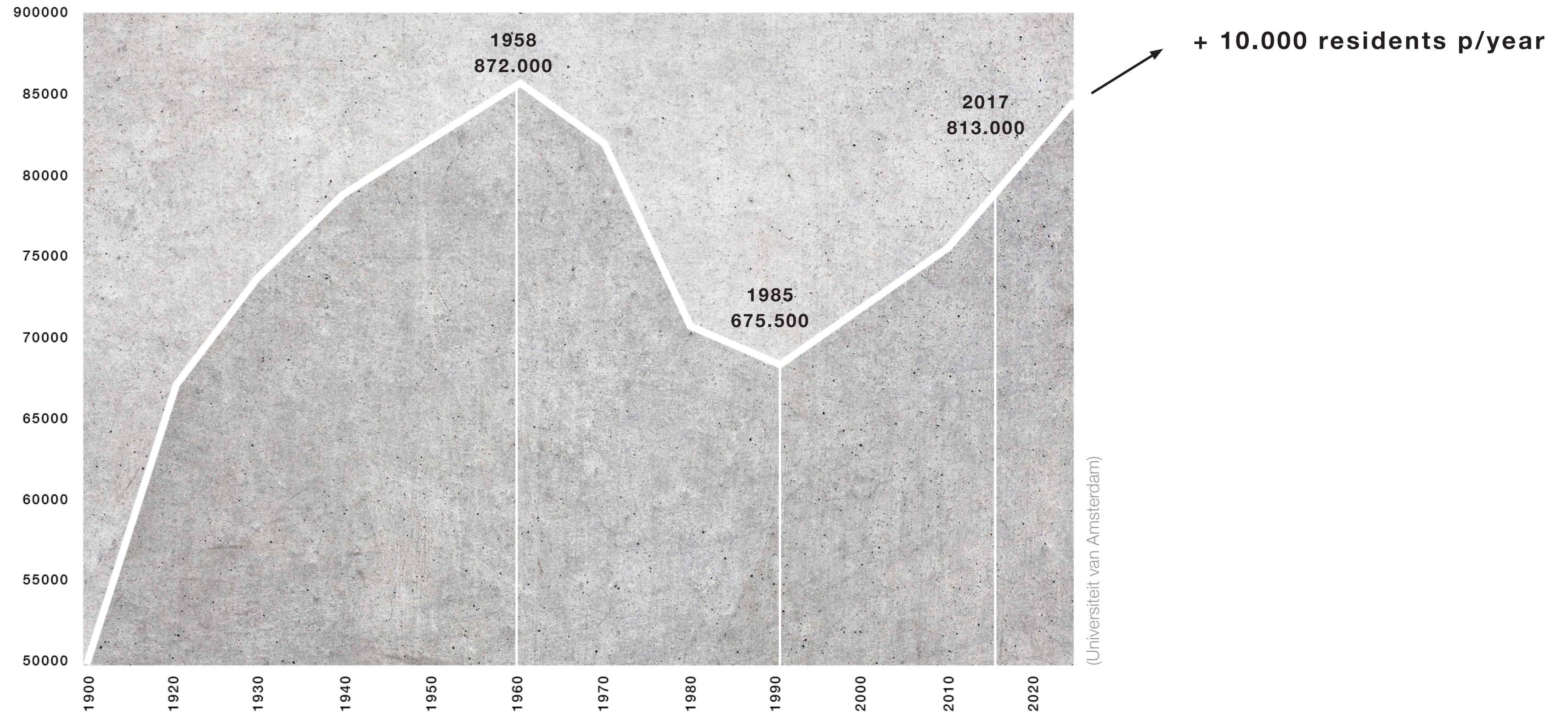
CONTEXT

CASE



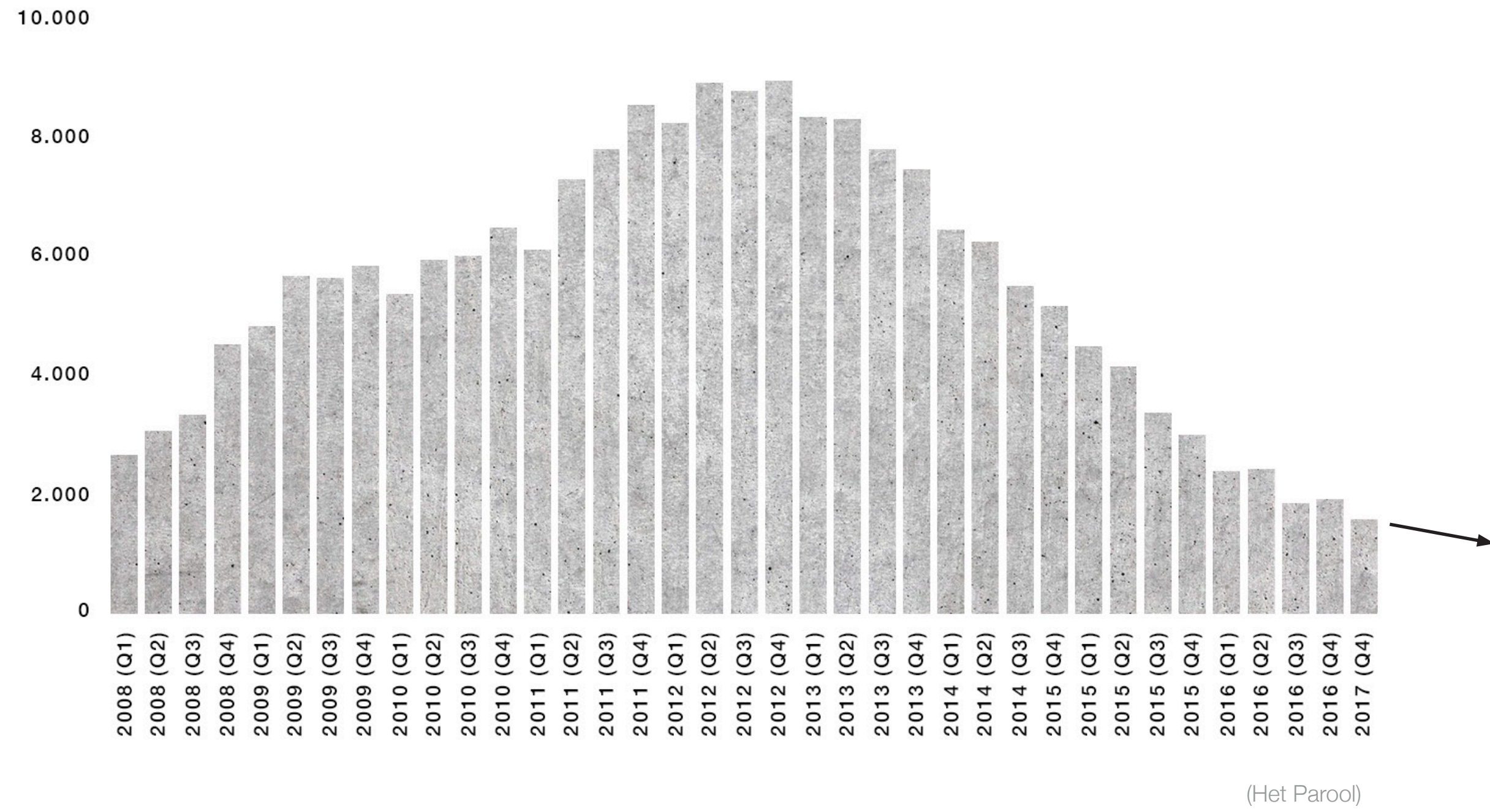
HOUSING IN AMSTERDAM

CONTEXT



INCREASING POPULATION

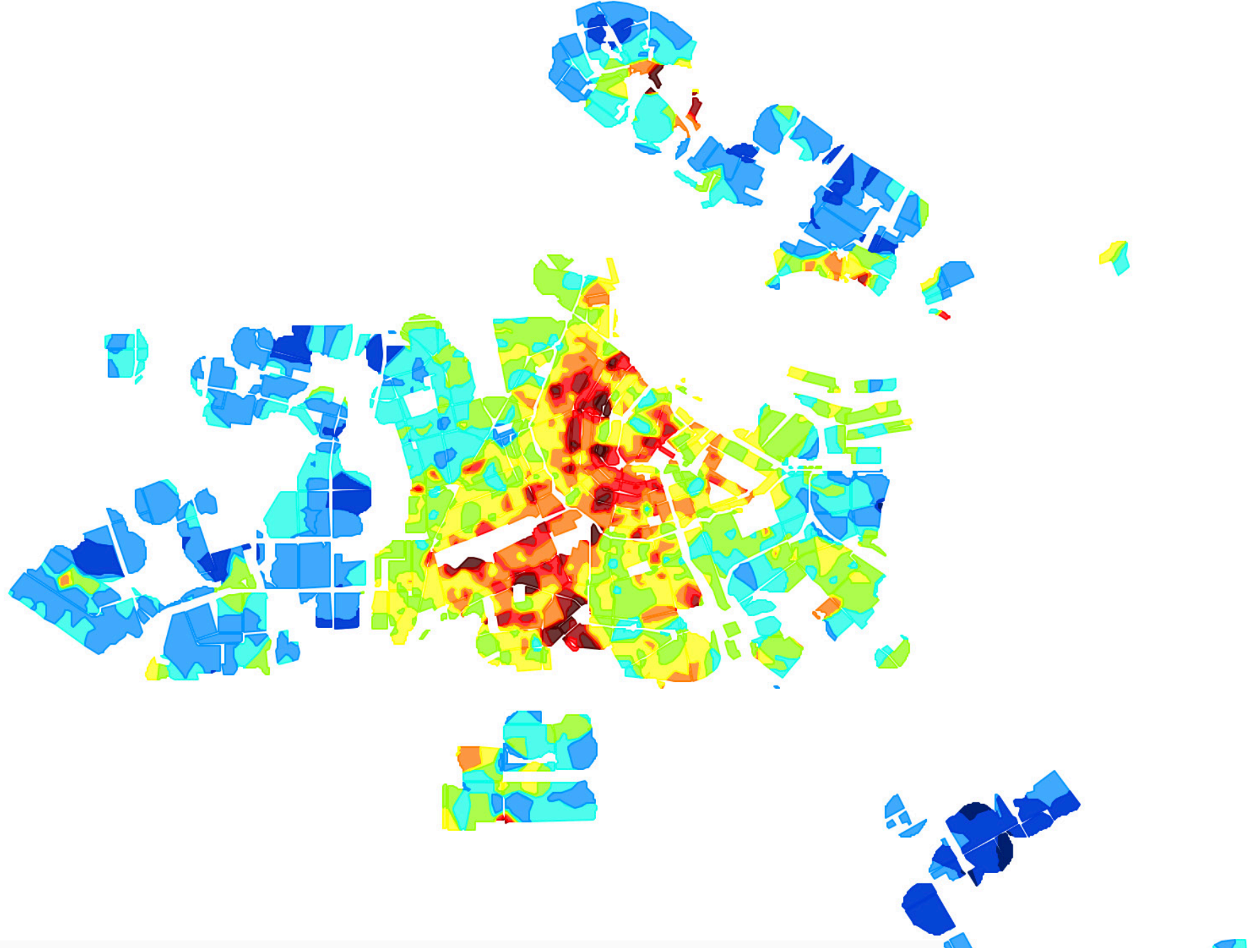
CONTEXT



(Het Parool)

DECREASING HOUSING OFFER

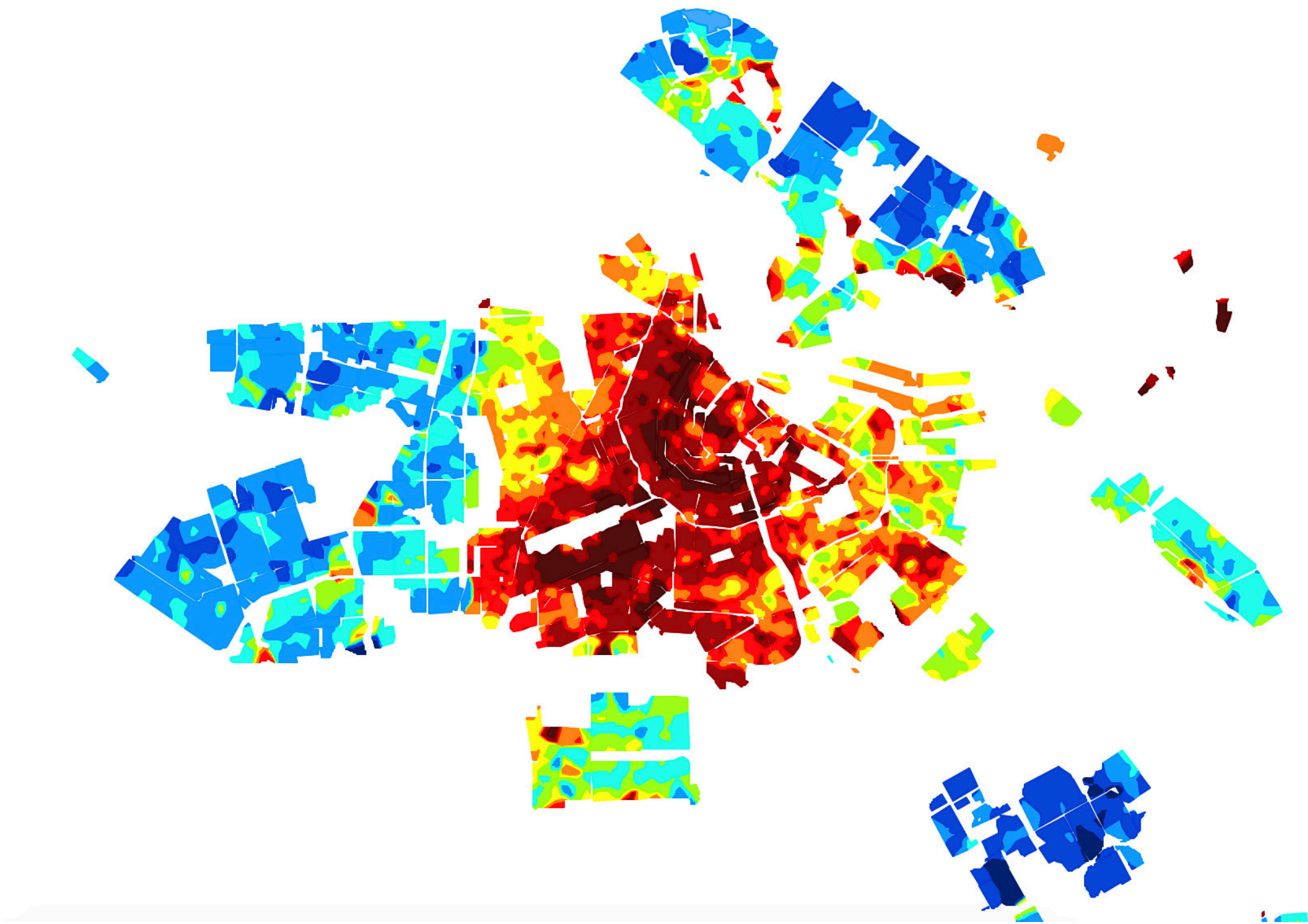
CONTEXT



(Gemeente Amsterdam)

M² VALUE IN 2000

CONTEXT



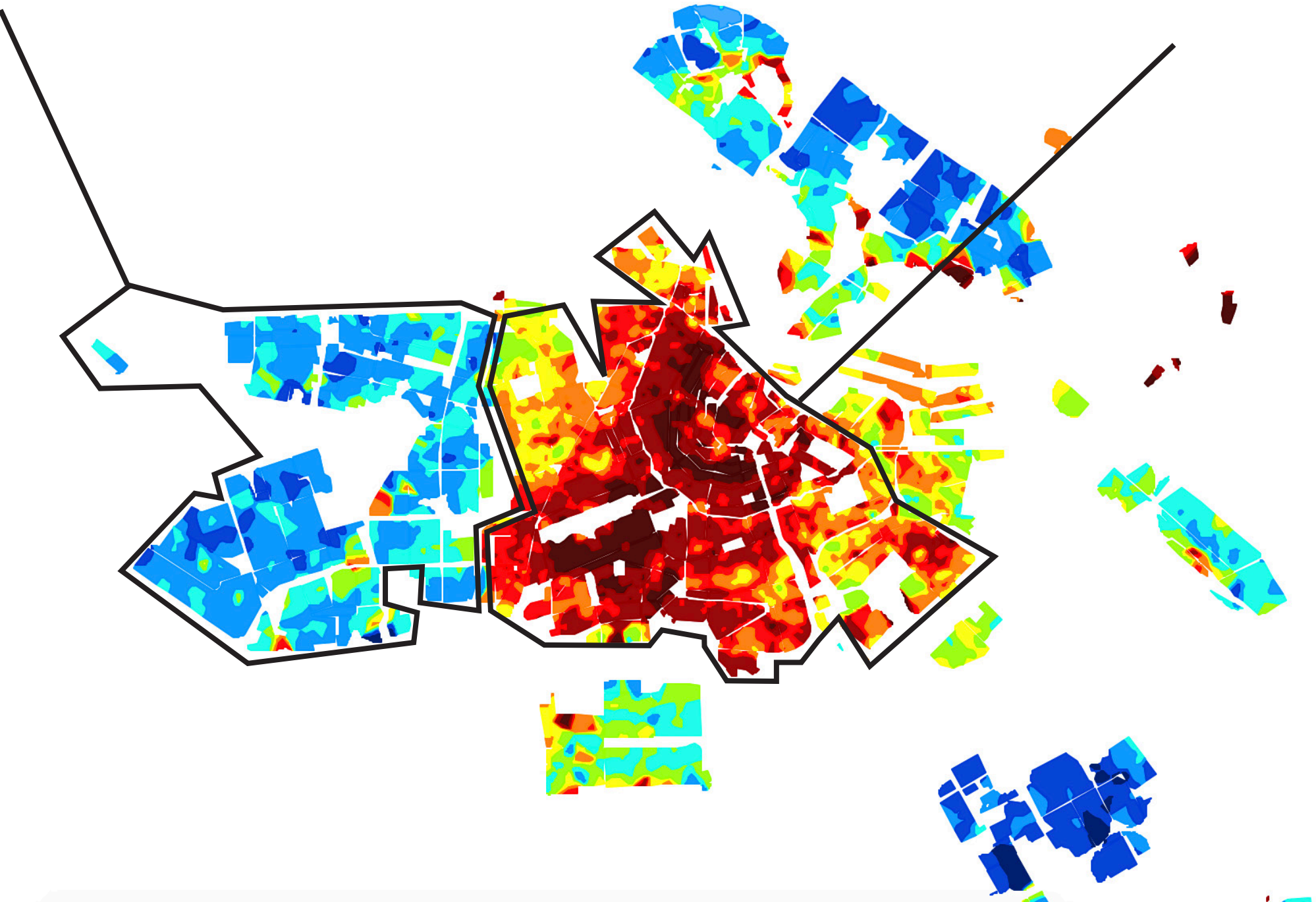
(Gemeente Amsterdam)

M² VALUE IN 2015

CONTEXT

LOWER-CLASS
(63% social housing)

UPPER-CLASS
(elite city centre)



Gemeente Amsterdam

RISING PRICES & MORE SEPERATION

CONTEXT



MIDDLE-CLASS?

Gemeente Amsterdam

CONTEXT

‘Amsterdamse huizen onbetaalbaar voor middeninkomens’

De woningprijzen in Amsterdam zijn zo hard gestegen dat de woningmarkt onbereikbaar is voor starters met een middeninkomen. Zij kunnen alleen nog heel kleine appartementen betalen. Met een bruto-inkomen van € 50.000 koop je in Amsterdam gemiddeld een huis met een oppervlak van 49 m². De gemiddelde vierkante meterprijs is € 4.565. Dat concludeert Dynamis op basis van onderzoek naar de woningmarkt dat donderdag verschijnt. De makelaarsvereniging noemt de situatie ‘zeer verontrustend’ en pleit voor opvoeren van de bouw van nieuwe

Top 10 krappe woningmarkt Q2

- 1 Amsterdam
- 2 Utrecht
- 3 IJsselstein
- 4 Diemen
- 5 Vianen
- 6 Groningen
- 7 Haarlem
- 8 Zaanstad
- 9 Leiderdorp
- 10 Amstelveen

Volgen vi

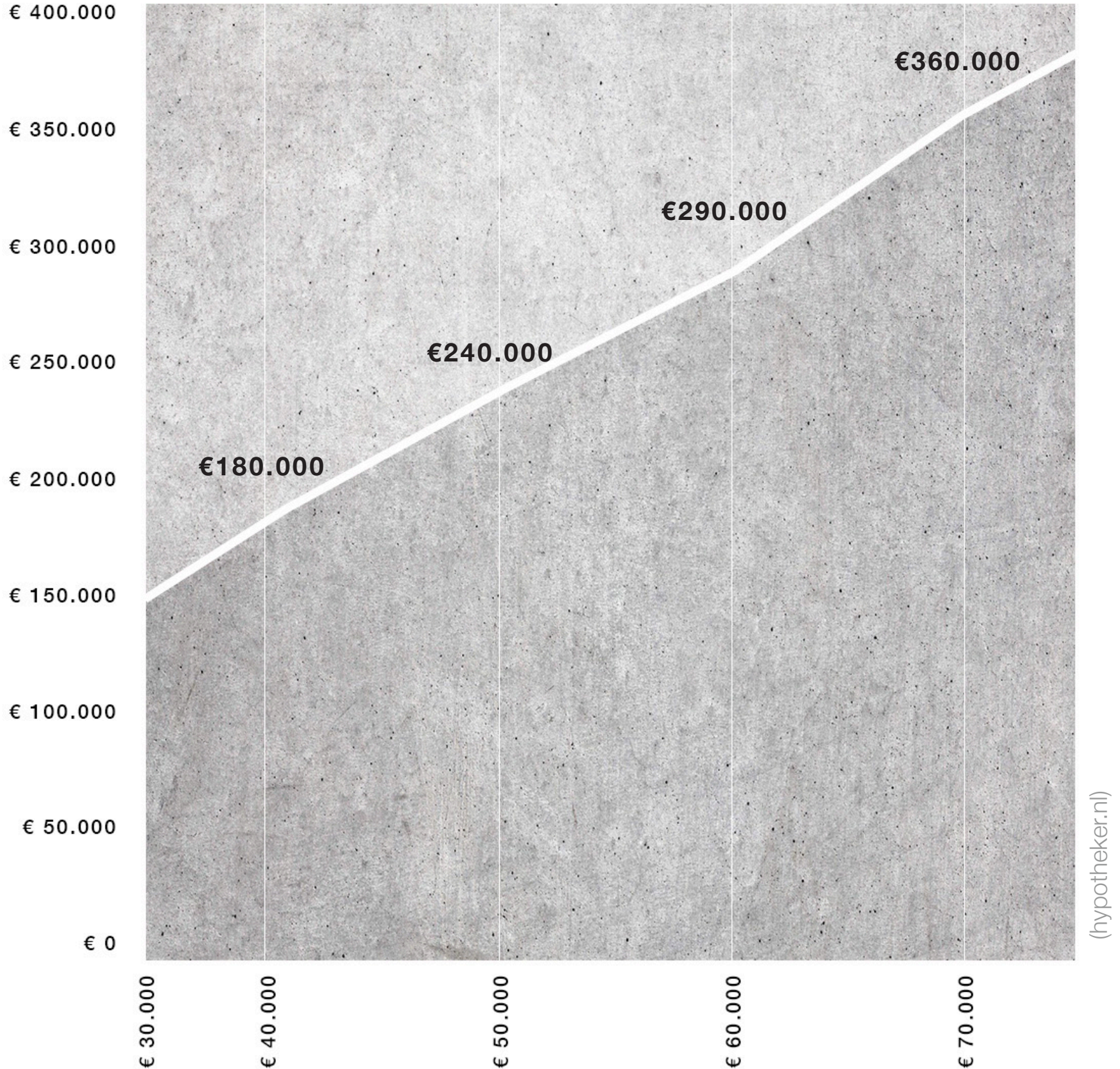
- ♡ Vastg
- ♡ Groot
- ♡ prijsbe
- ♡ Rente
- ♡ Wonir

Laatste ni

- 13:00 Randstad e Damrak
- 12:31 Booking.cc rechtzoek

(Het Financieel Dagblad)

CONTEXT



MORTGAGES RANGE

Middle-class earns between € 35.000 - € 70.000

CONTEXT



(source: DIY Klarenstraat)

A middle-class household

- **Wide group of households (singles/couples/families)**
- **Earns not enough to afford quality housing in Amsterdam.**
- **Earns too much for social-housing.**
(max income social housing €35.739)
- **Looking for appartement with >2 bedrooms >50m²**

(source: AM.nl)



03 CASE

SITE

CASE



13 STRIPS OF WALK-UP STAIR APARTMENTS

CASE



GENERAL EXPANSION PLAN (1934)

(Van Eesteren Museum)

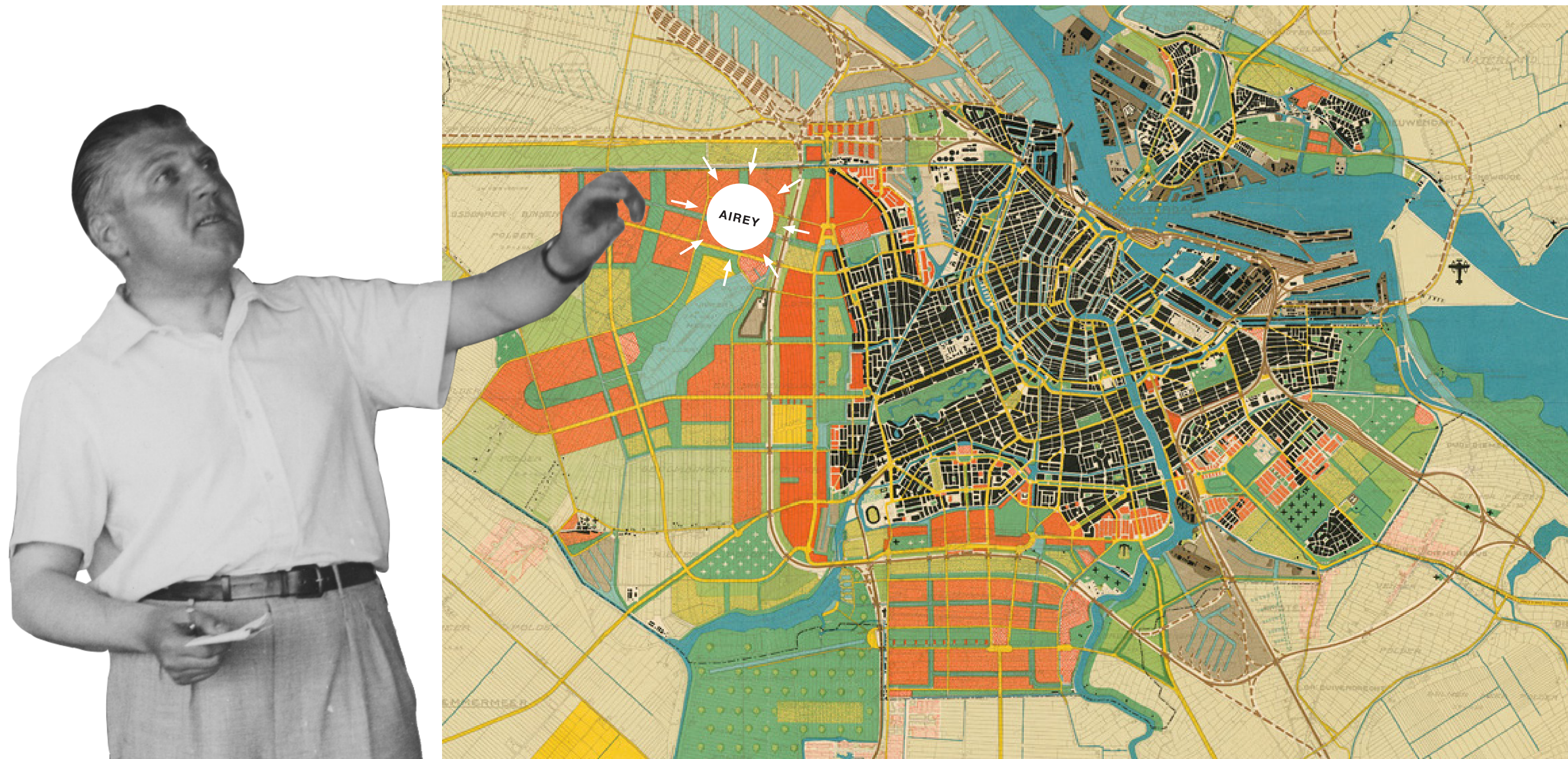
CASE



GENERAL EXPANSION PLAN (1934)

(Van Eesteren Museum)

CASE



CORNELIS VAN EESTEREN
Light, Air & Space

(Van Eesteren Museum)

CASE



AIREY-STRIP, AMSTERDAM



CITY CENTER, AMSTERDAM

CASE



AIREY-STRIP, AMSTERDAM



CITY CENTER, AMSTERDAM

CASE



GREENERY SUPERVISOR - MIEN RUYSS

Due abundance and wide range of species problems with maintenance

(newly developed)

CONSTRUCTION SYSTEM

CASE



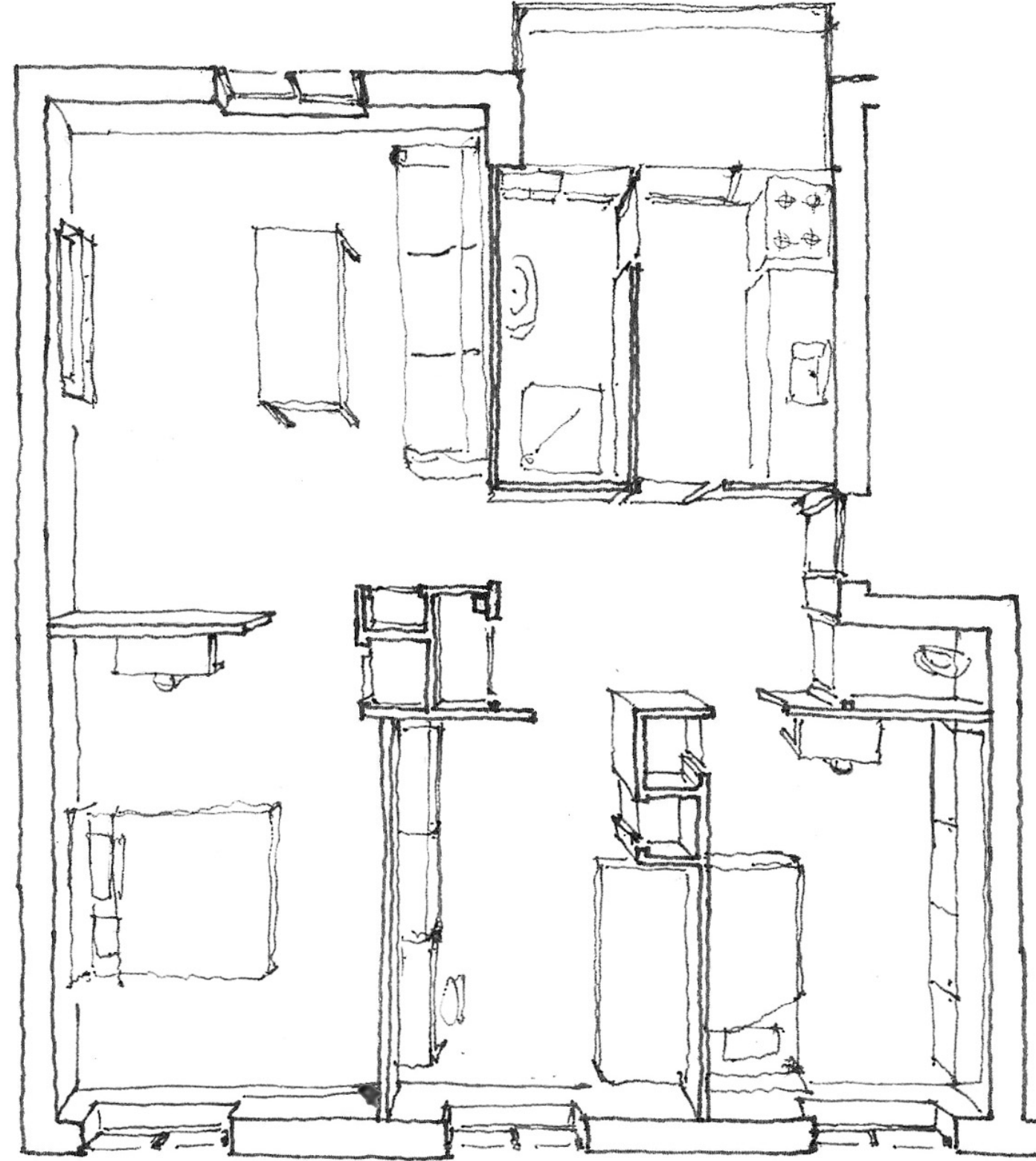
CALL FOR NEW CONSTRUCTION SYSTEMS

CASE

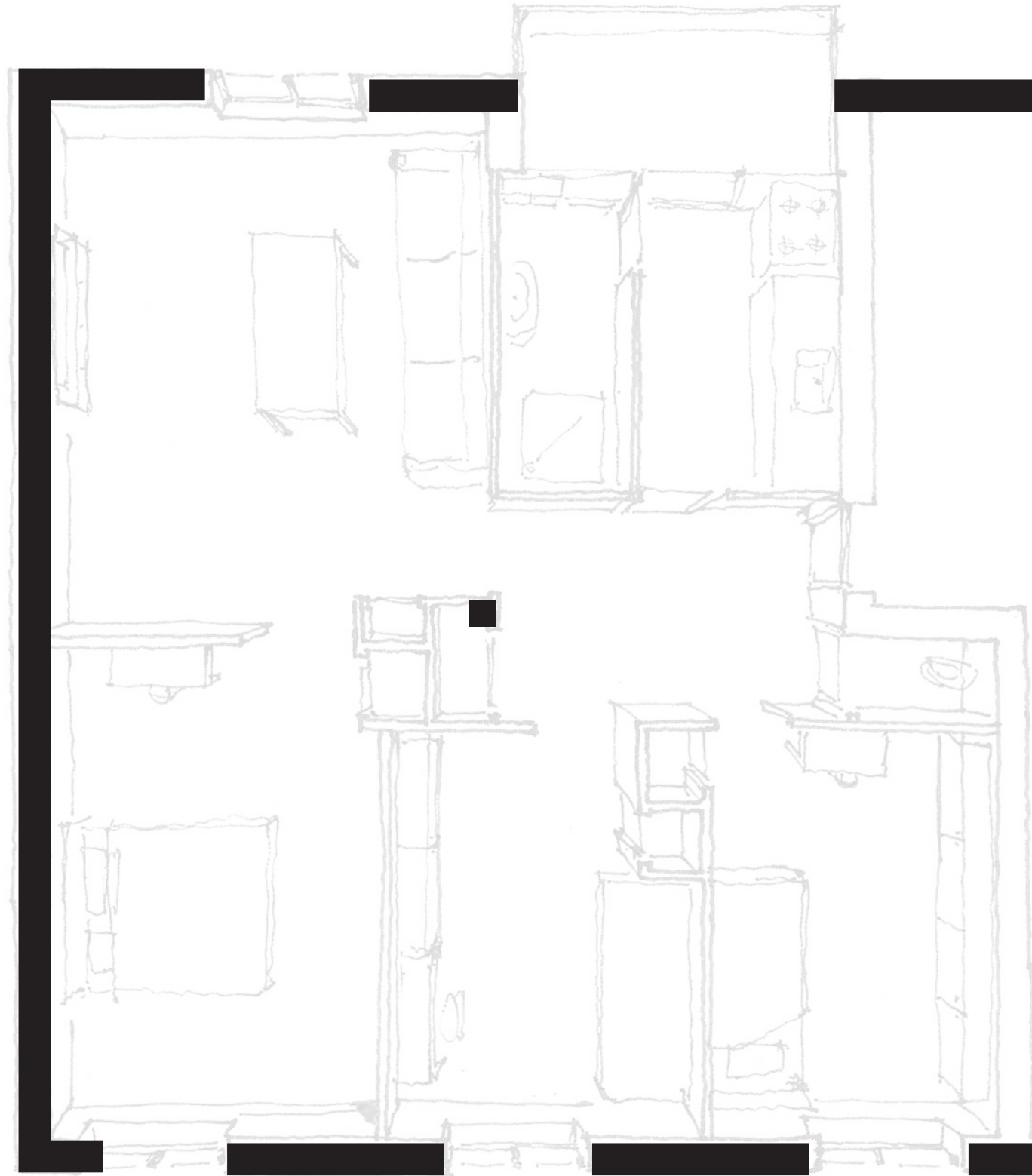


ARCHITECT: JOHANNES BERGHOEF

CASE



CASE



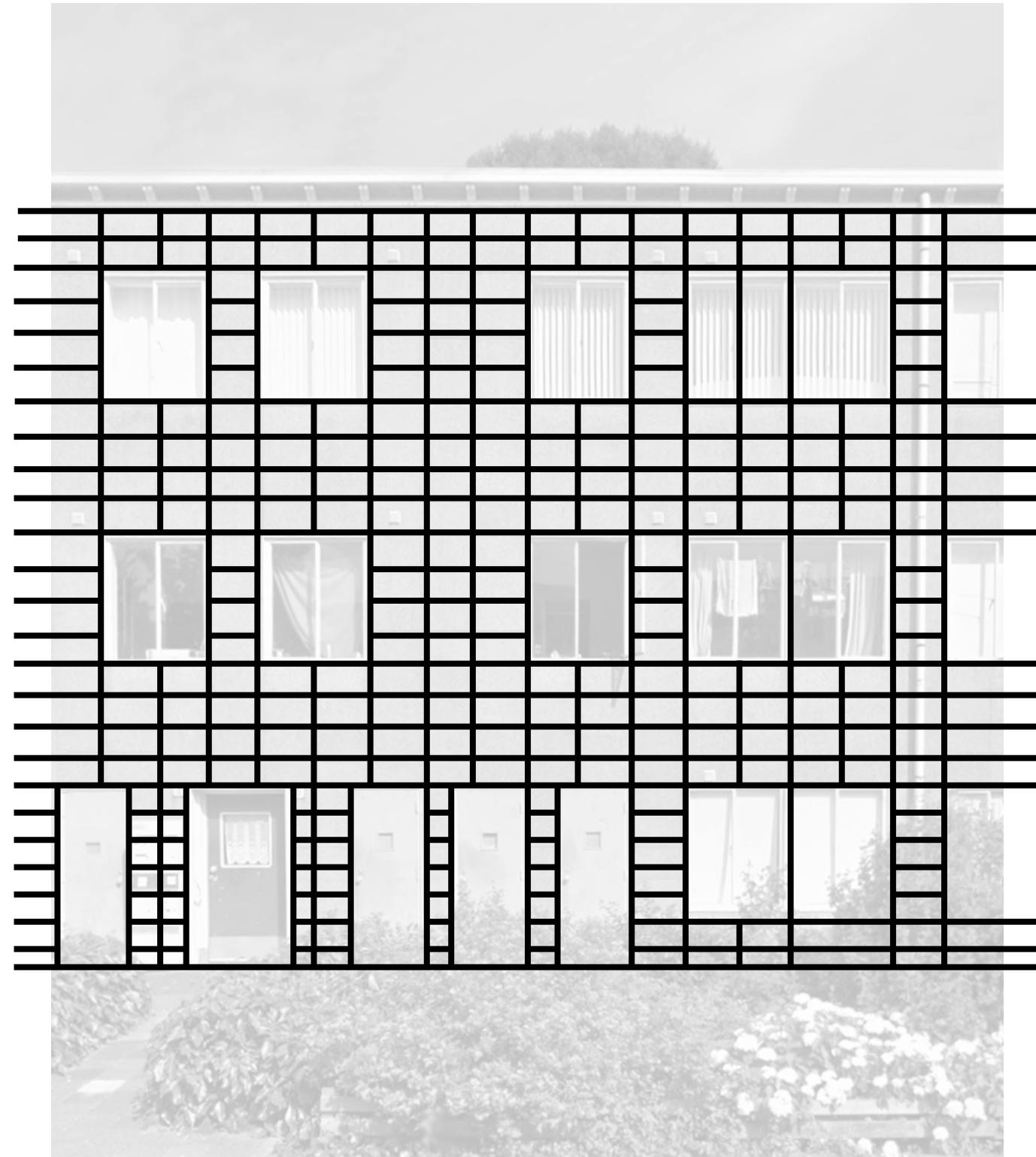
OPEN SPACE PLAN = USE VALUE

CASE

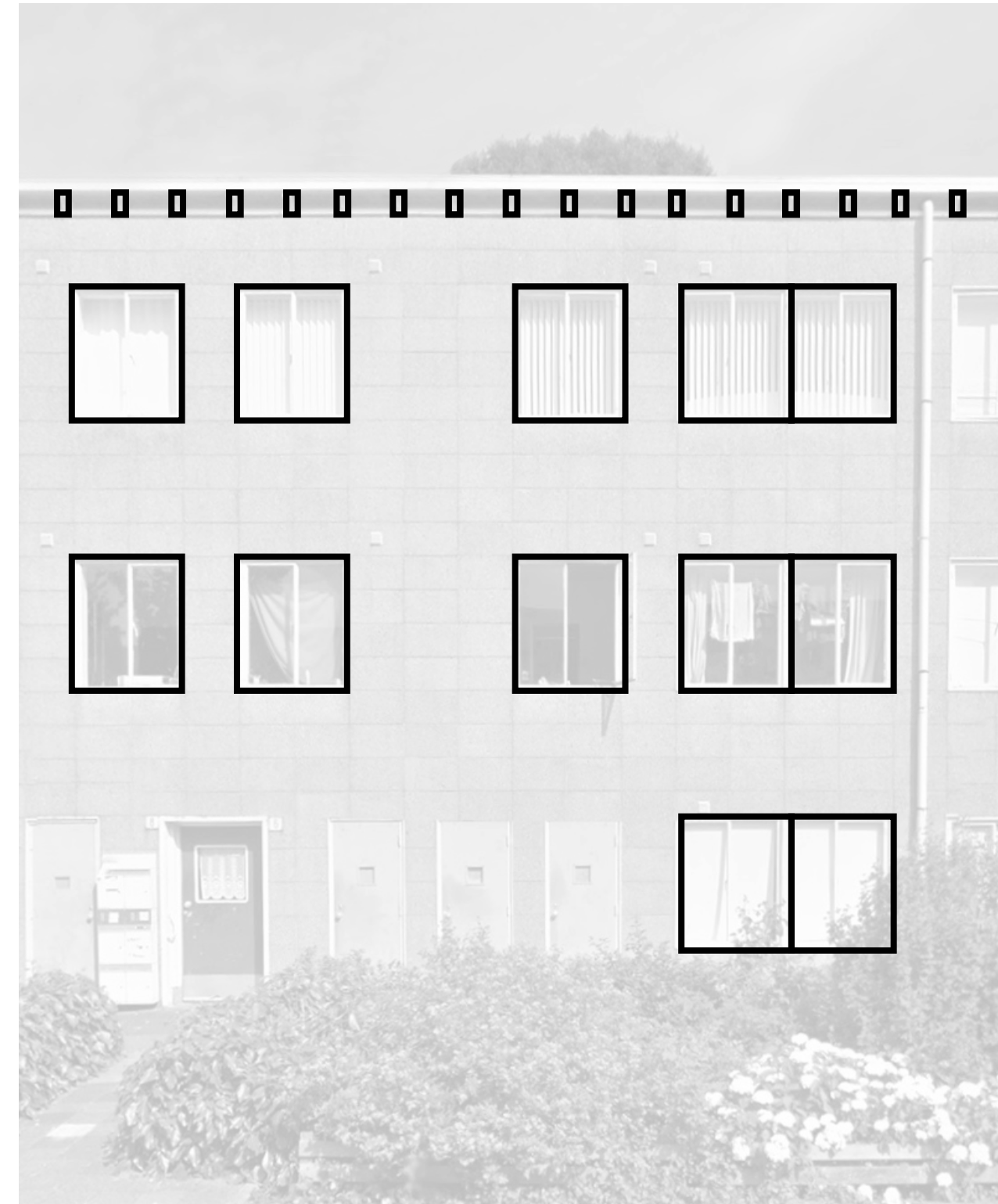


FACADE = HISTORIC VALUE

CASE



RIGID & MONOTONOUS



SUBMISSIVE TO GRID

FACADE = HISTORIC VALUE

CASE



CATALOGUE OF ELEMENTS

CASE



FLAT APPEARANCE

Berghoef did not appreciate the flat appearance

CASE



ECLECTIC APPEARANCE
Represents background of Berghoef

CASE



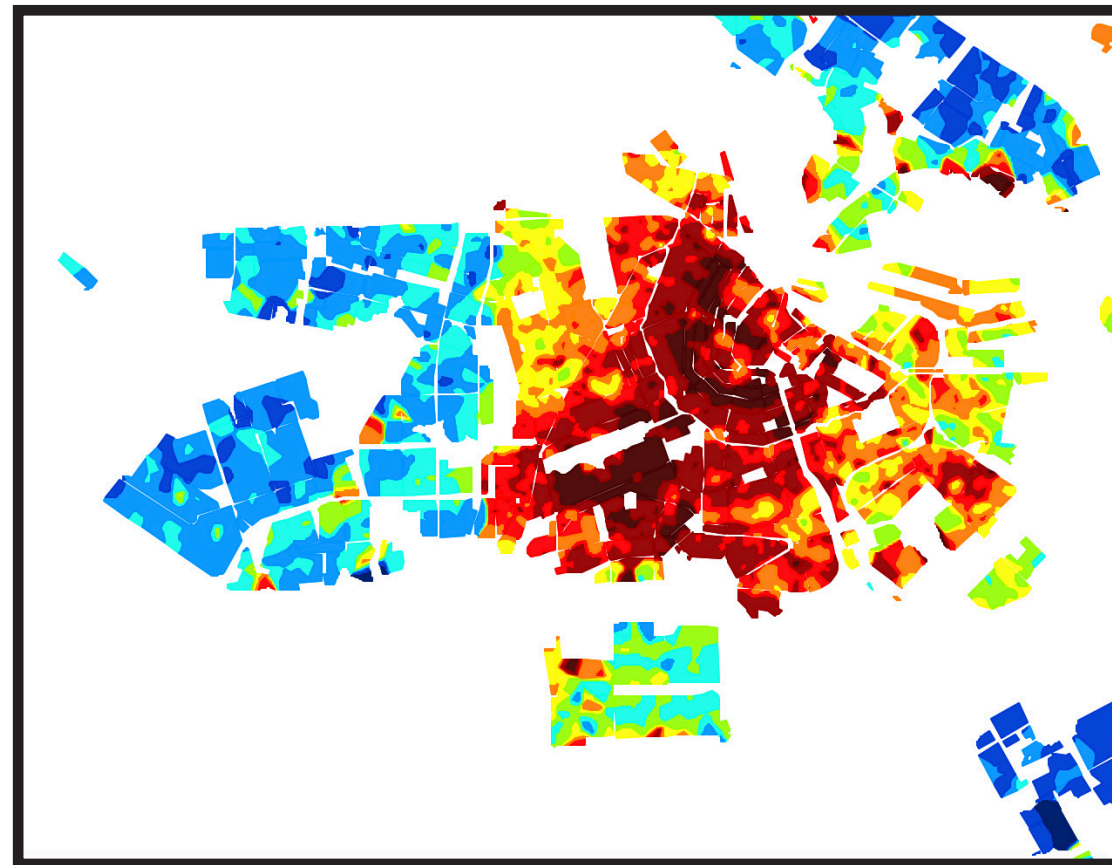
PROTECTED TOWN-SCAPE '07

Valuable/unique qualities > need to be preserved



04 ASSIGNMENT

ASSIGNMENT



“How to transform the Airey-Strip into good quality housing for middle-class households?”

ASSIGNMENT

Ambition for 2025 by A'Dam Municipality

“in 2025 is er behoefte aan **70.000 woningen extra in de stad; een kwart** van de totale opgave moet **via transformaties** worden gerealiseerd”

“Vier gebouwen per jaar voor kluswoningen, ofwel collectief particulier opdrachtgeverschap”

Bron: Gemeente Amsterdam, Programma Transformaties 2015-2018

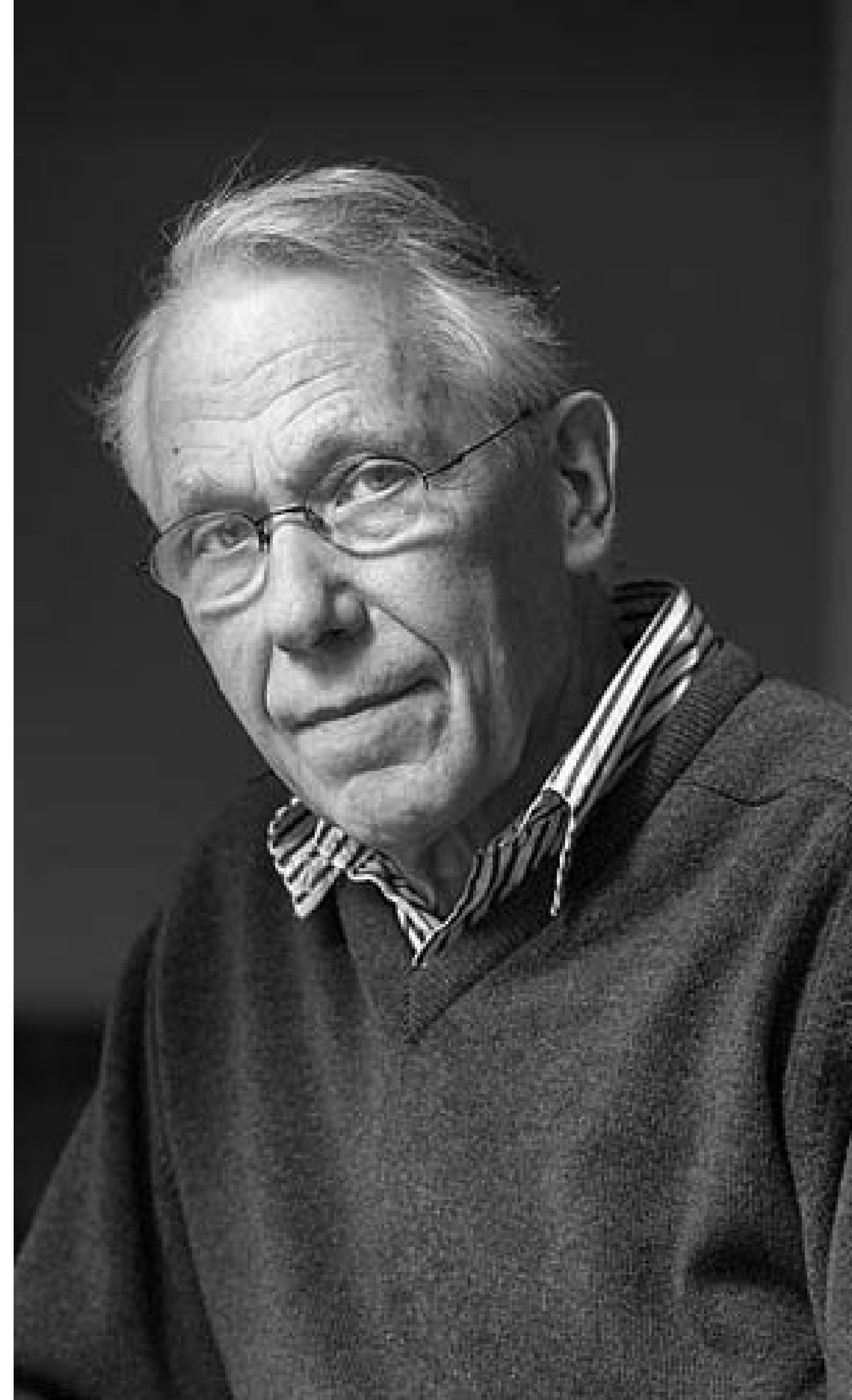
ASSIGNMENT

How?

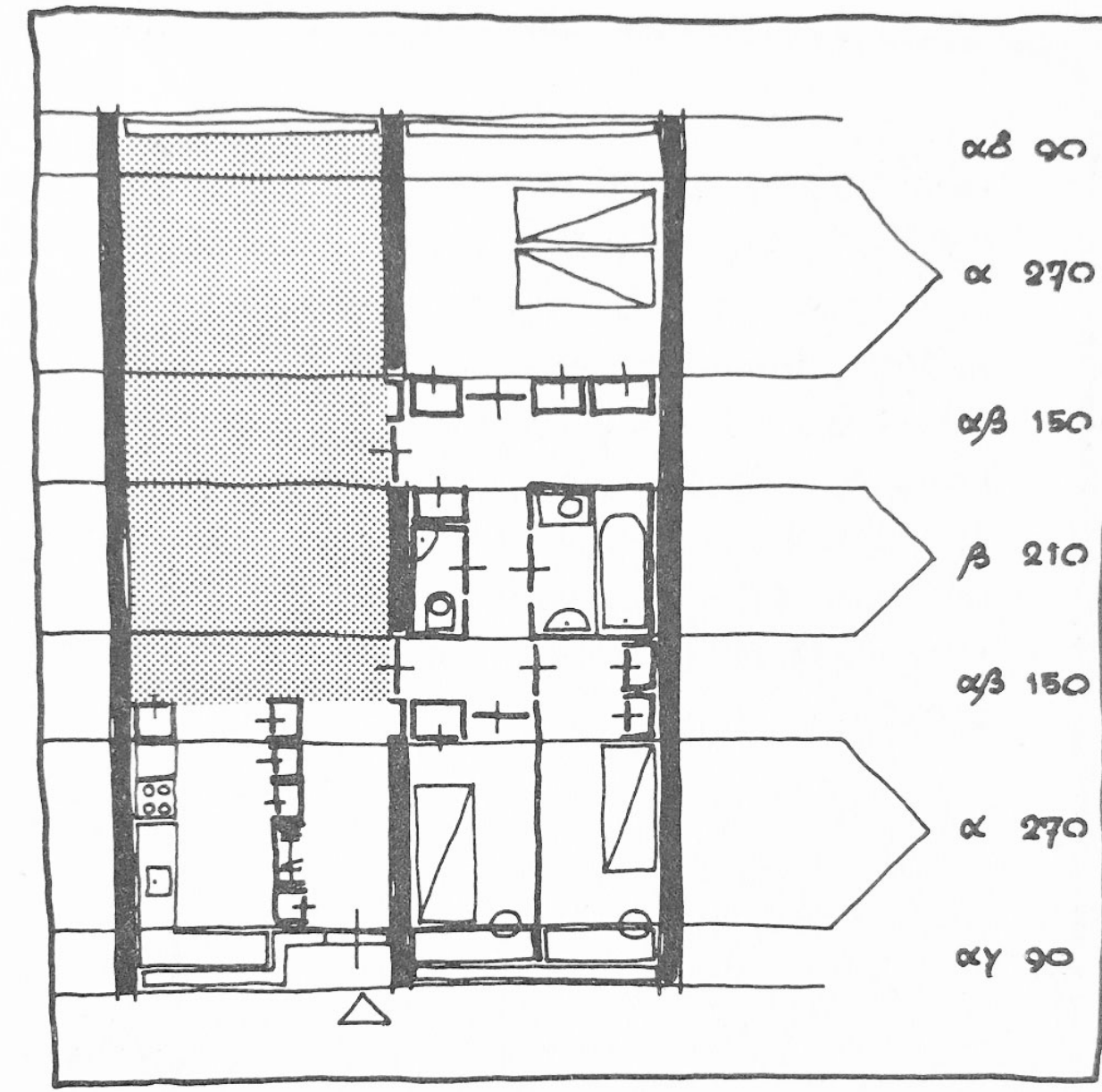
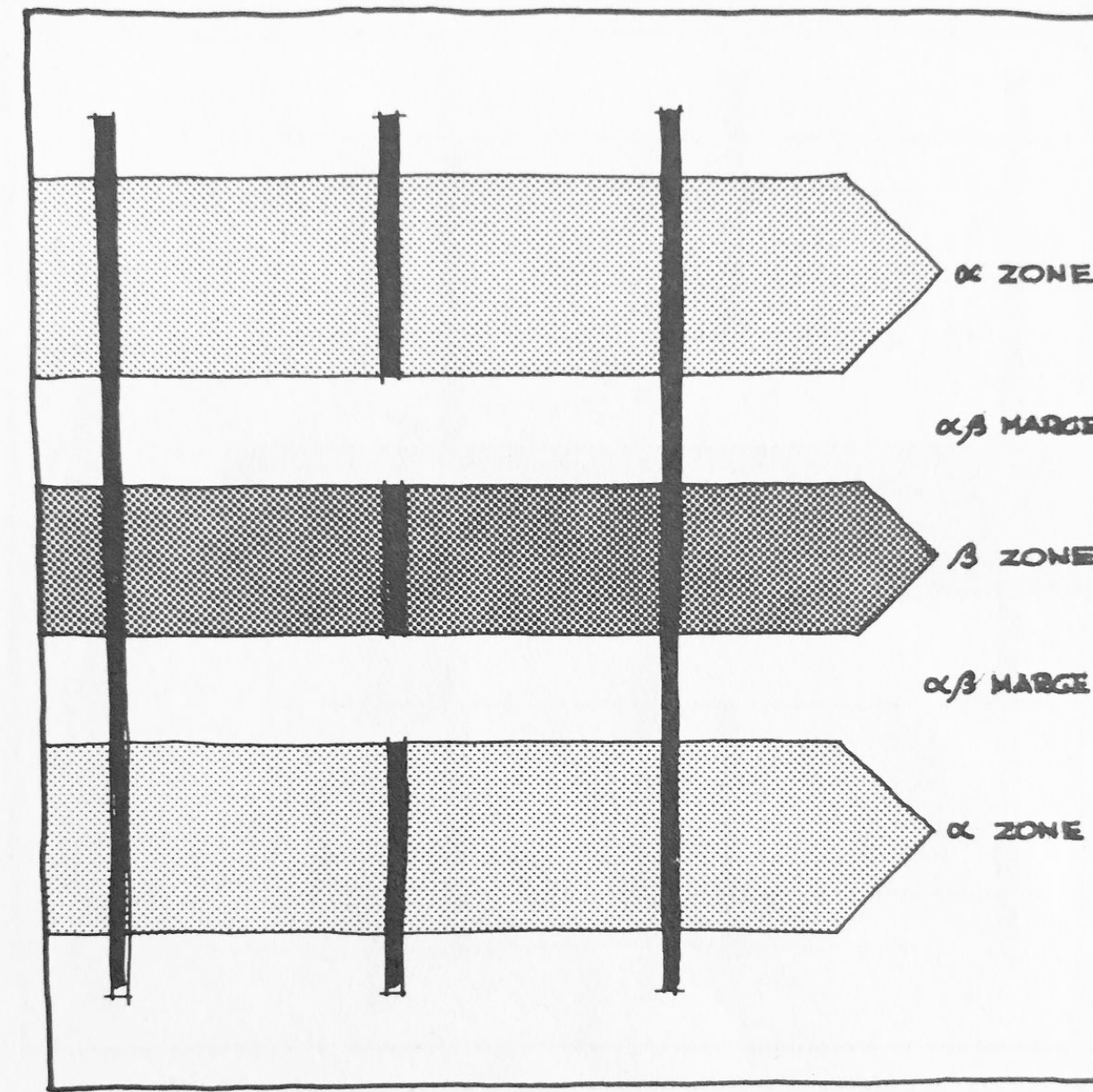
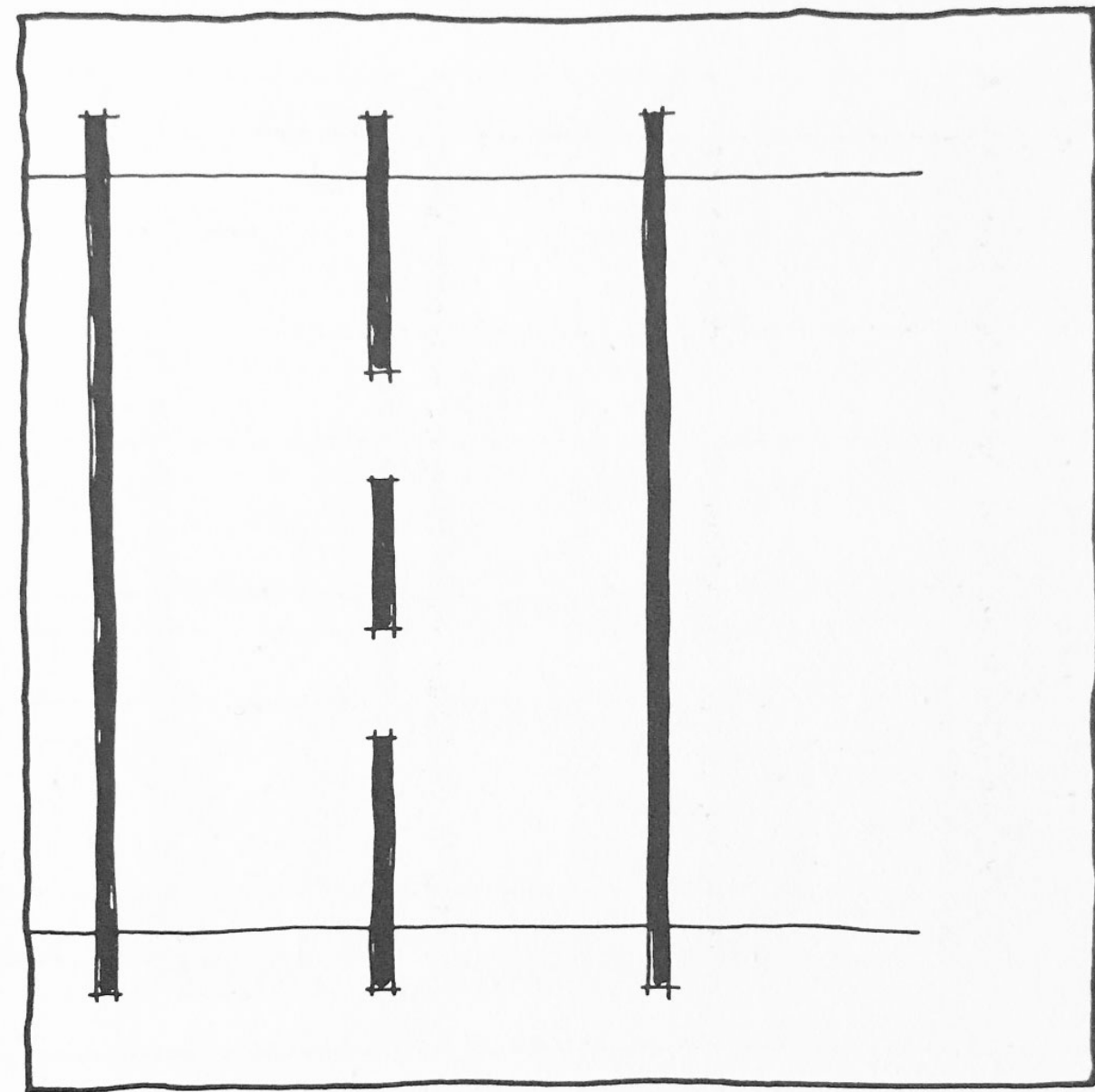
Support & Infill

Strategy by John Habraken (1972)

Counter-movement towards monotonous post-war architecture

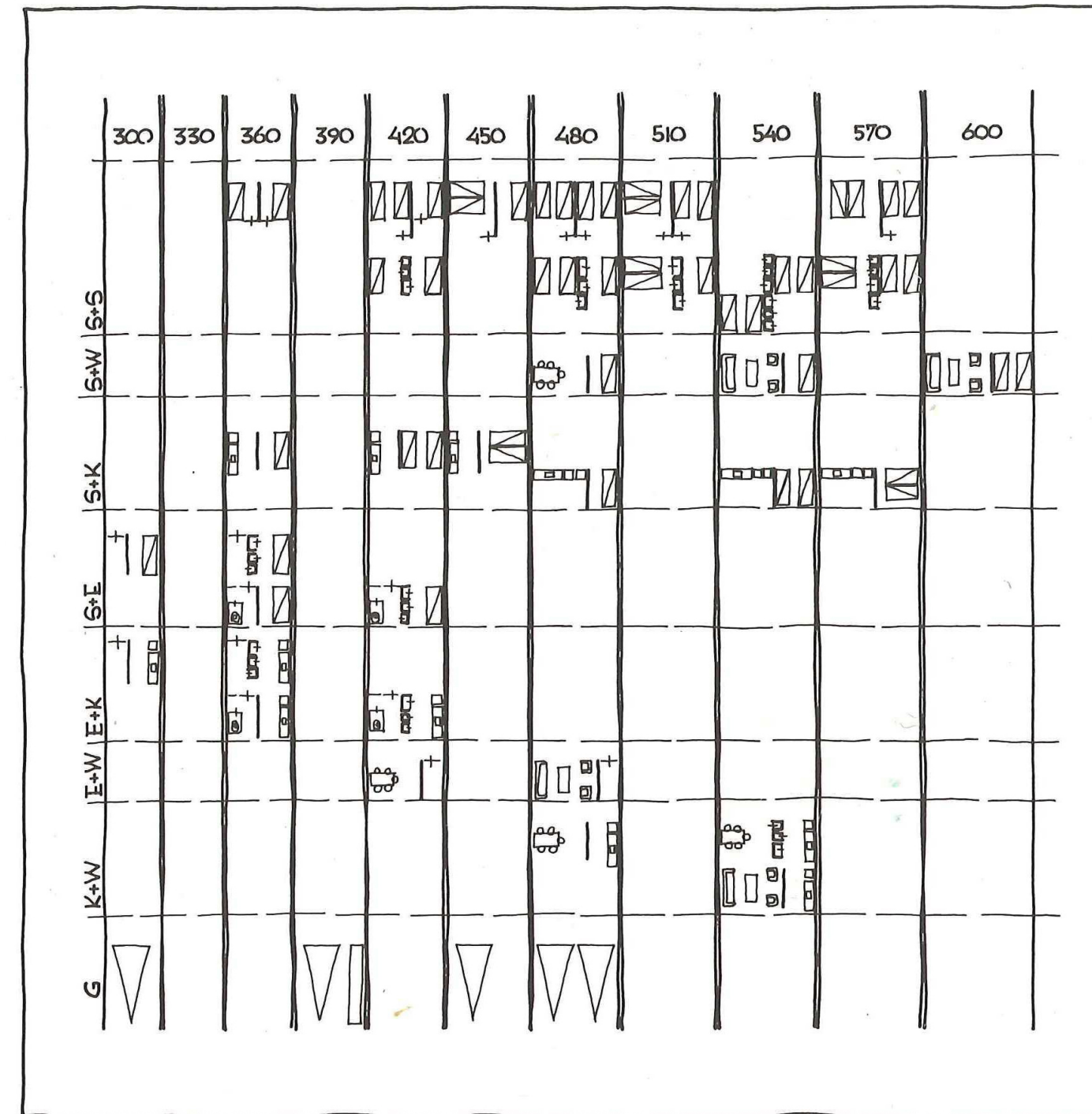


ASSIGNMENT



(Source: Denken in varianten, John Habraken 1972)

ASSIGNMENT

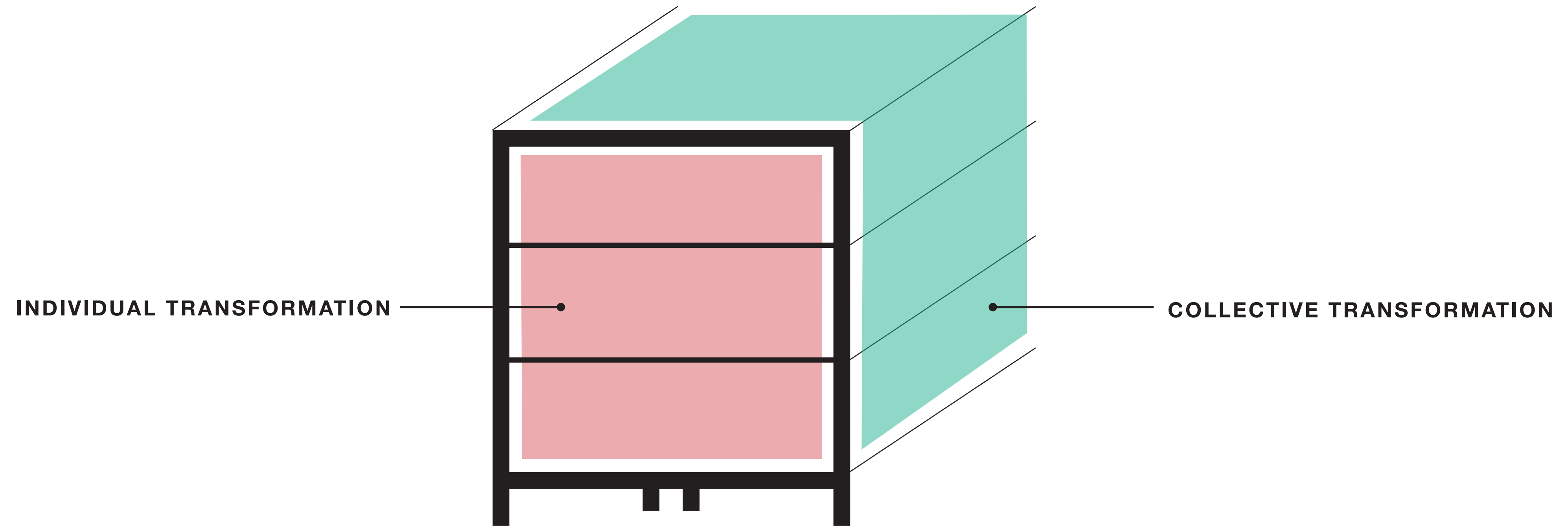


(Source: Denken in varianten, John Habraken 1972)

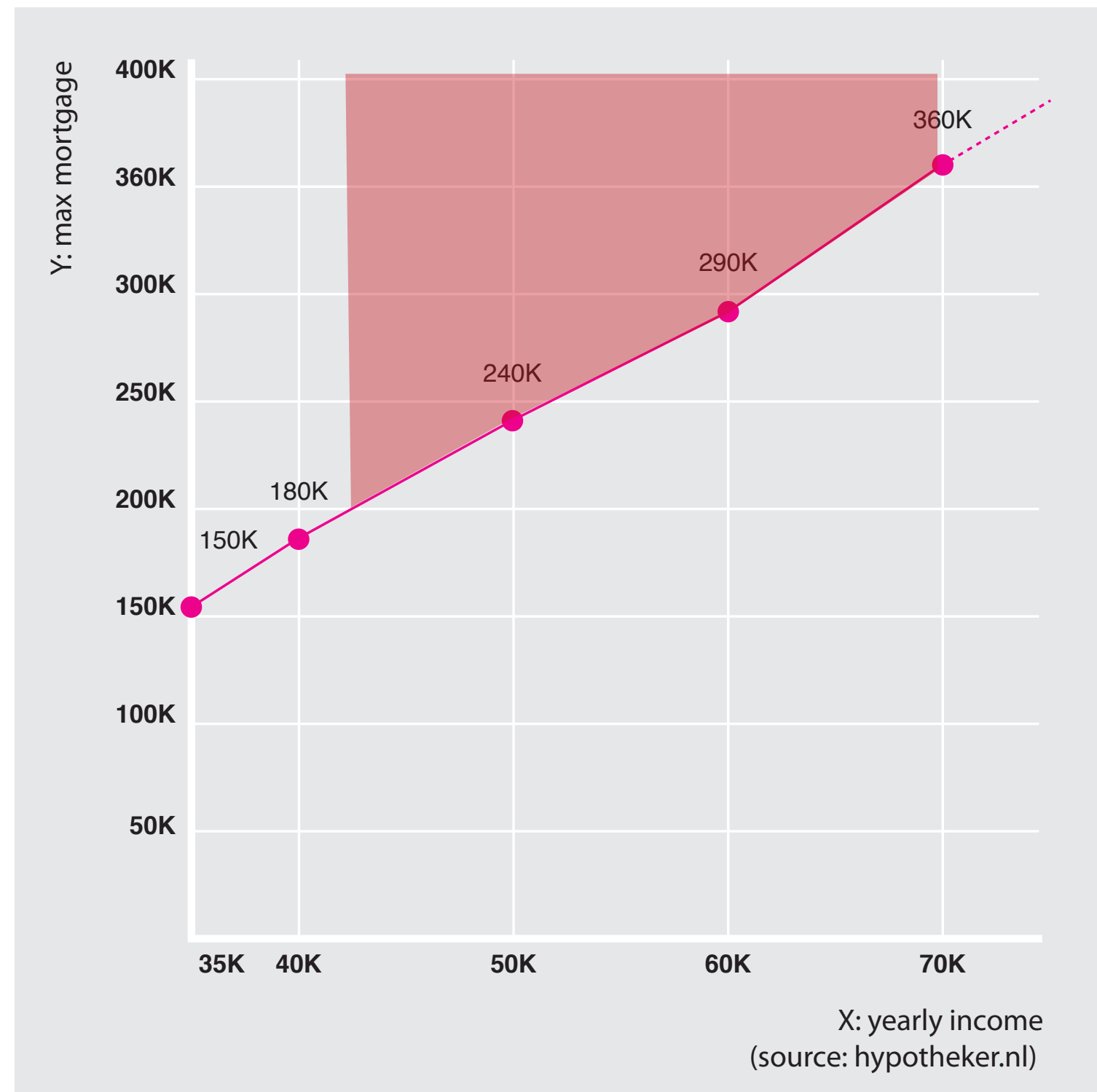
ASSIGNMENT



ASSIGNMENT



ASSIGNMENT

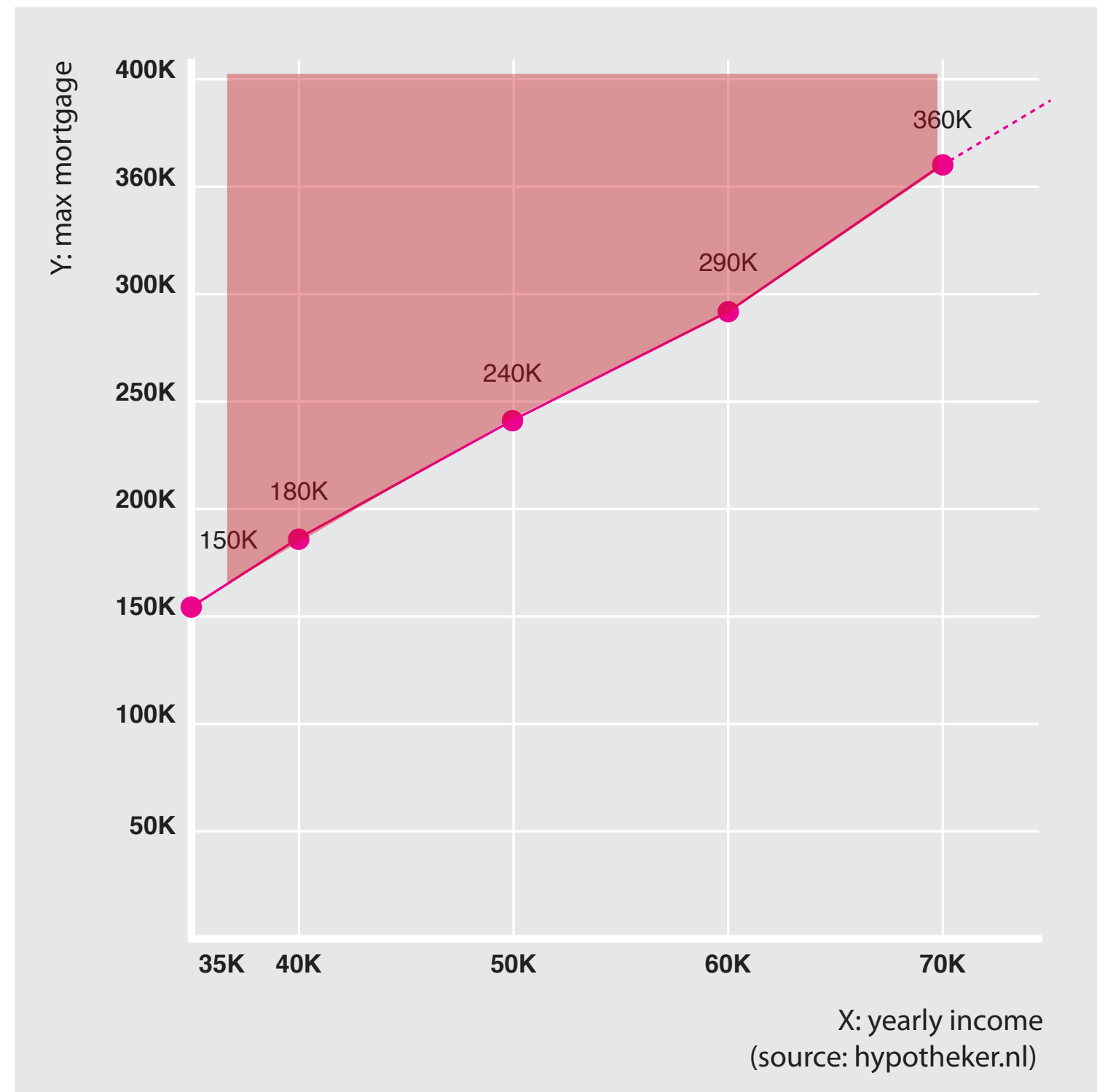


Transformatie Klarenstraat | 40 units

	exclusief tuin	per m2	%	per oude woning 74m2
Aankoop casco inclusief tuinen	€2.260.200	€661	30%	€56.505
Verbouwing casco (collectief)	€2.625.727	€768	35%	€65.643
Bijkomende kosten	€353.480	€103	5%	€8.837
Afbouw en inrichting	€2.355.357	€689	31%	€58.884
totaal	€7.594.753	€2.222	100%	€189.869

(source: DIY Klarenstraat: A new perspective on the post-war social housing)

TITEL



46

Transformatie Airey 18 units	exclusief tuin	per m2	%	per oude woning 60m2
Aankoop casco inclusief tuinen	€774.956	€661	27%	€40.321
Verbouwing casco (collectief)	€1.134.000	€1.033	42%	€63.000
Bijkomende kosten	€180.000	€328	13%	€20.000
Afbouw en inrichting	€486.000	€443	18%	€27.000
totaal	€2.574.956	€2.464	100%	€160.321

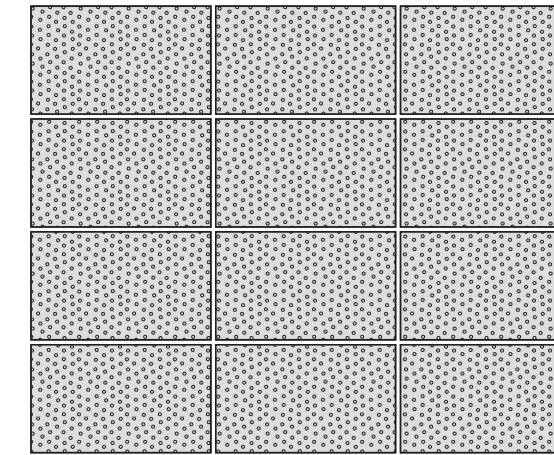
(source: Eigenhaard)

ASSIGNMENT

TO PRESERVE
(protected townscape)



footprint & greenery



rational image

TO DESIGN



infill guide



improve flat image

CONSTRAINTS



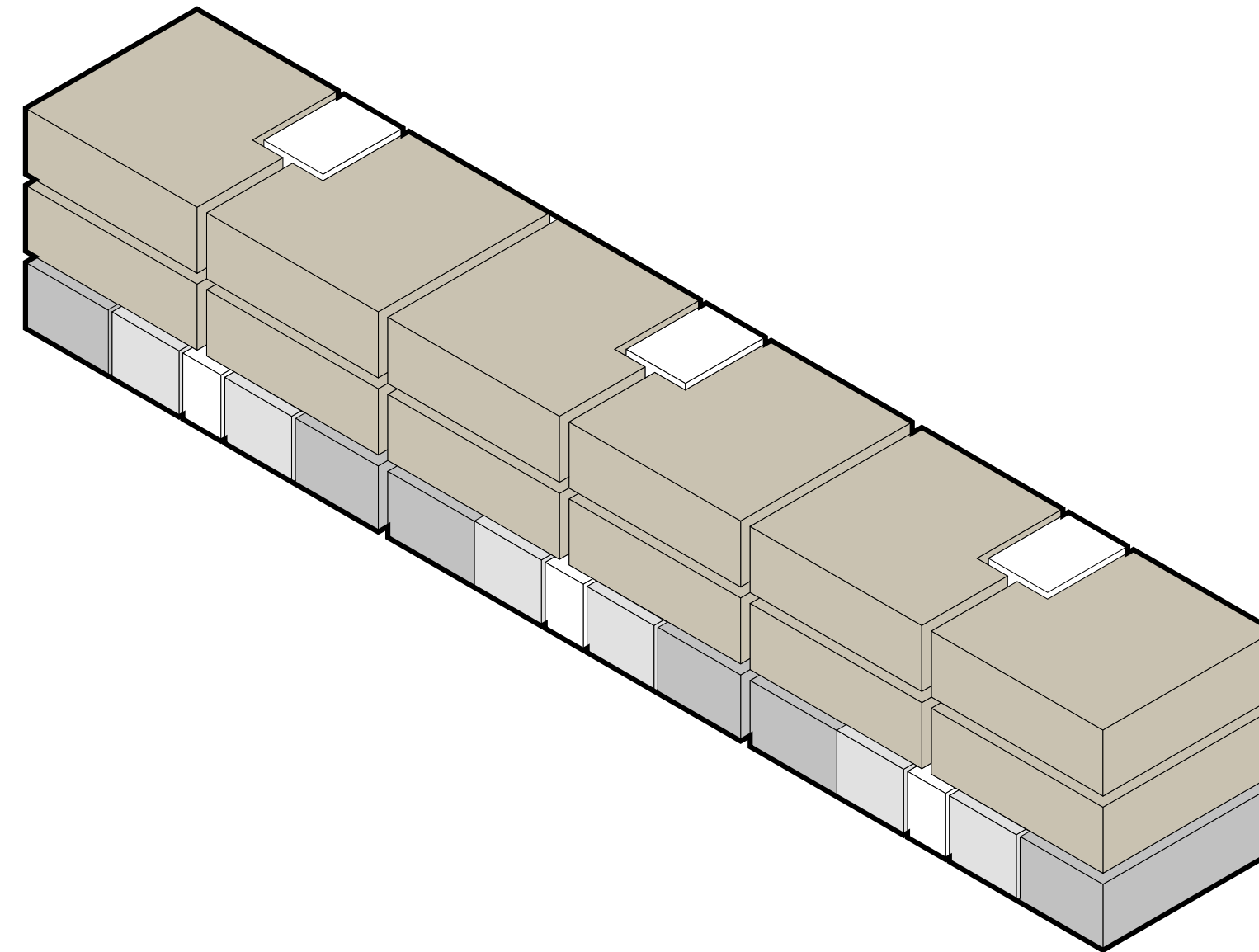
DESIGN



**DESIGN INFILL
GUIDE**

INTERIOR

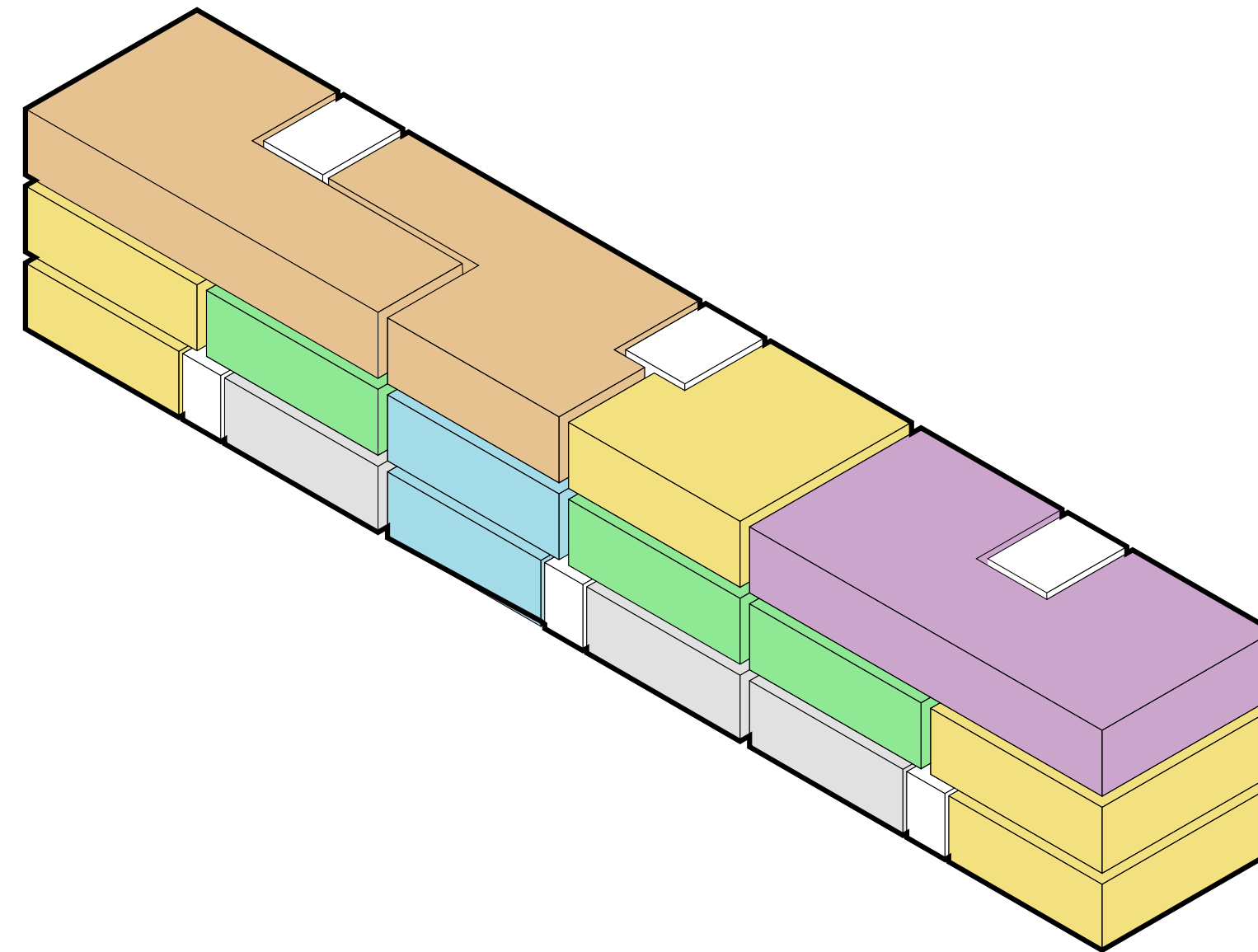
INTERIOR



CURRENT OFFER

Singular offer of 42m² and 57m².

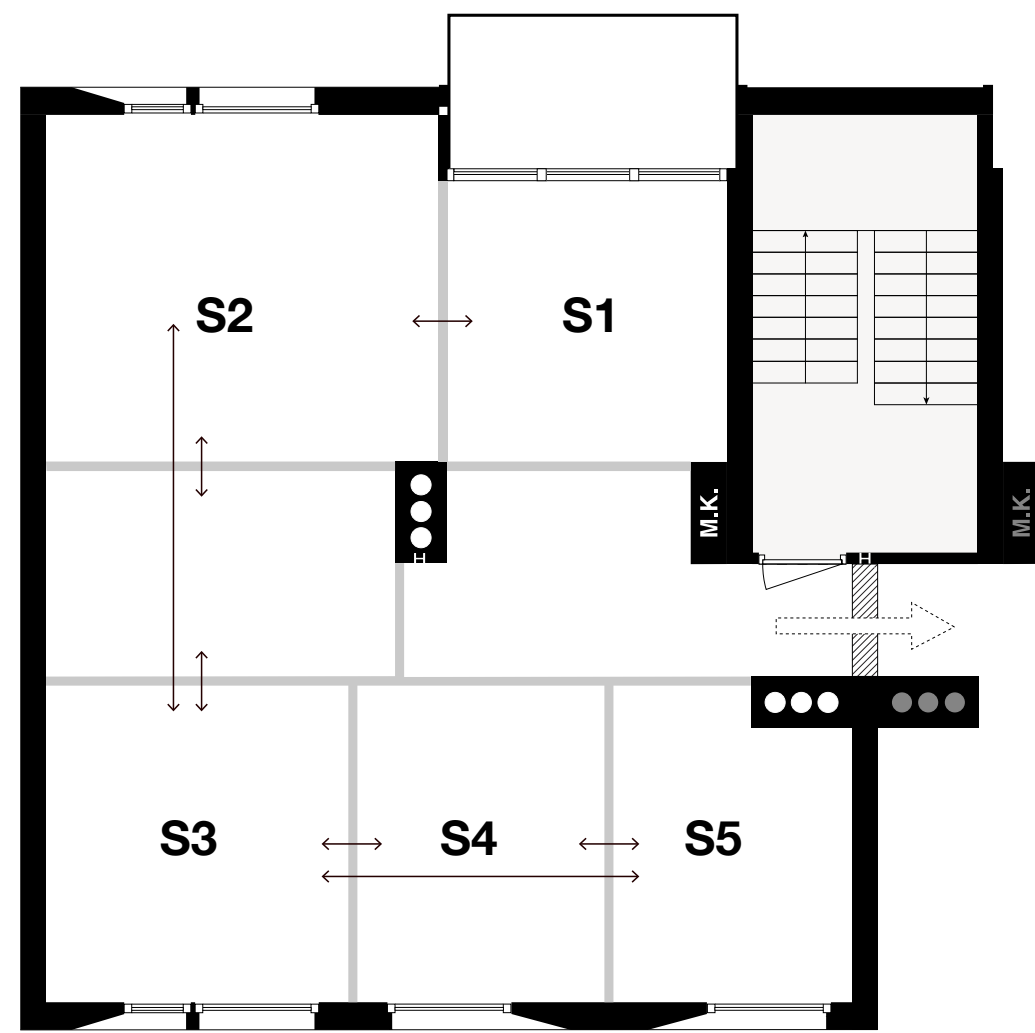
INTERIOR



NEW OFFER

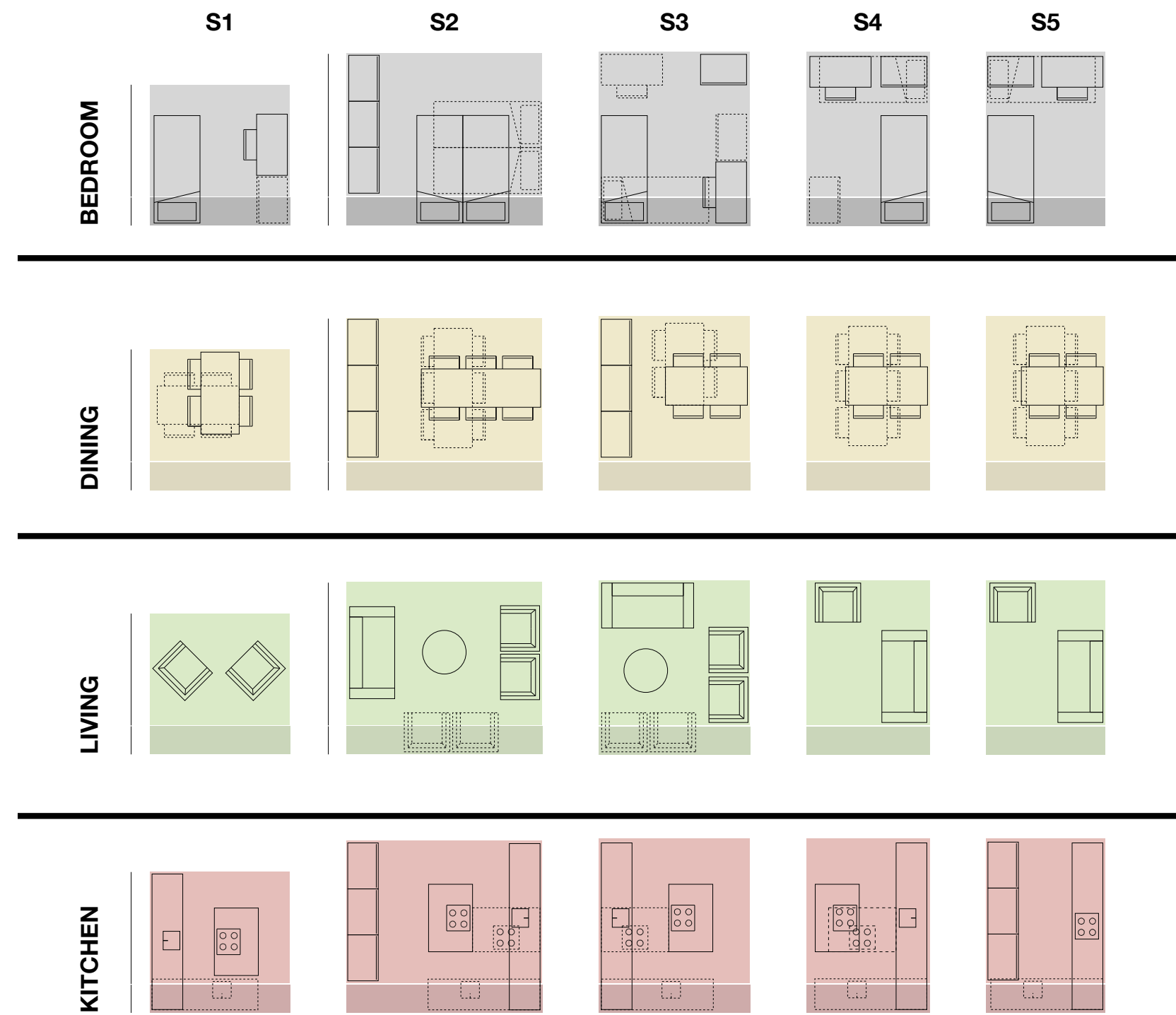
Merge units to accomodate the wide range of
(middle class) households.

INTERIOR



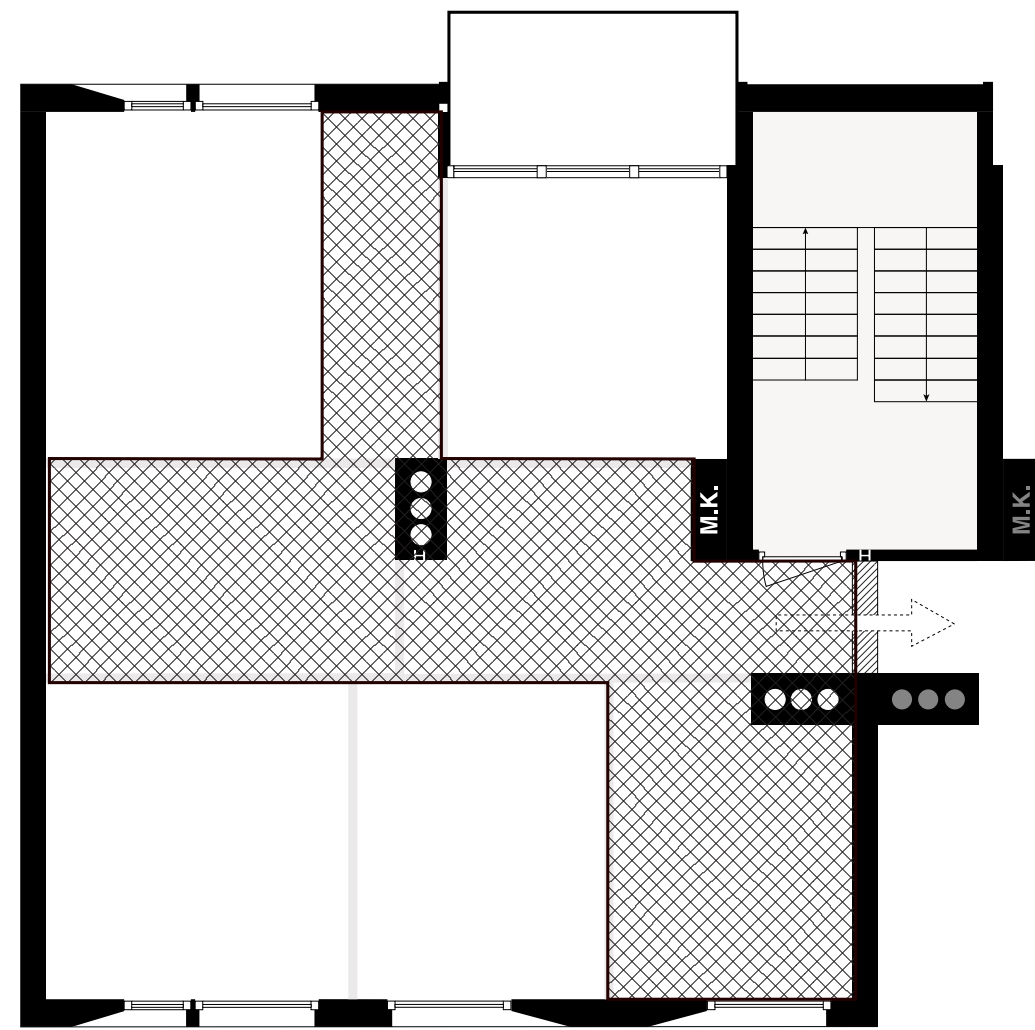
DETERMINE 'ALPHA' ZONES

INTERIOR



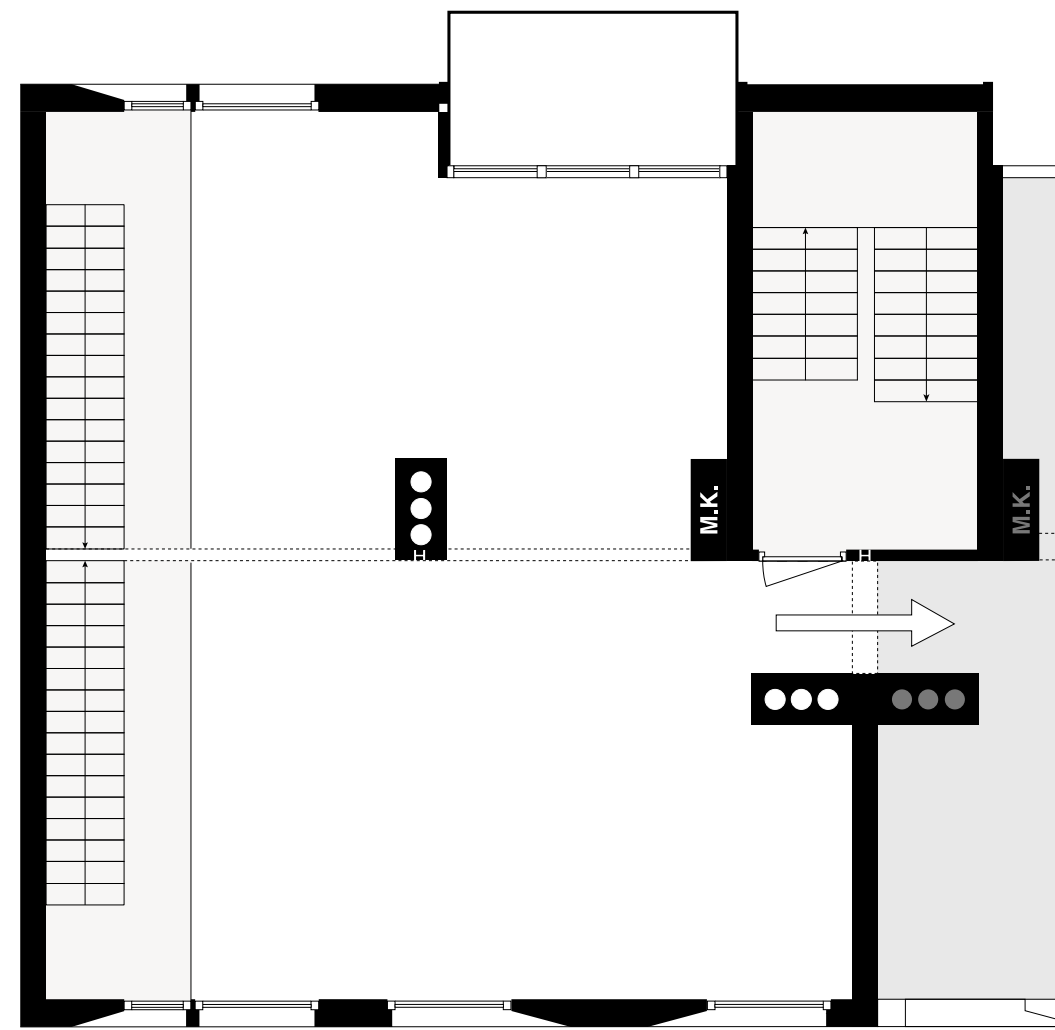
SECTOR OPTIONS

INTERIOR



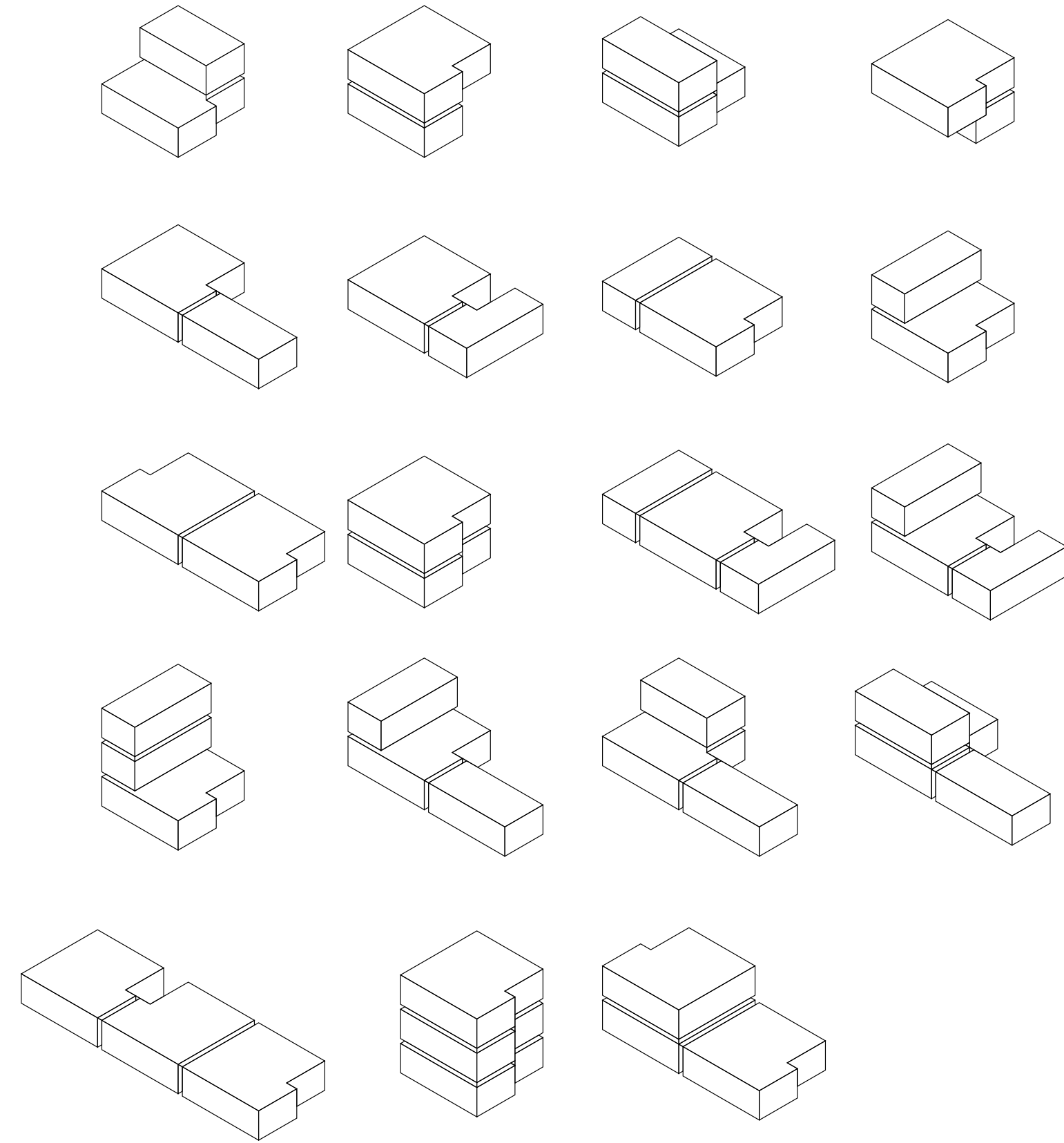
DETERMINE 'BETA' ZONE

INTERIOR

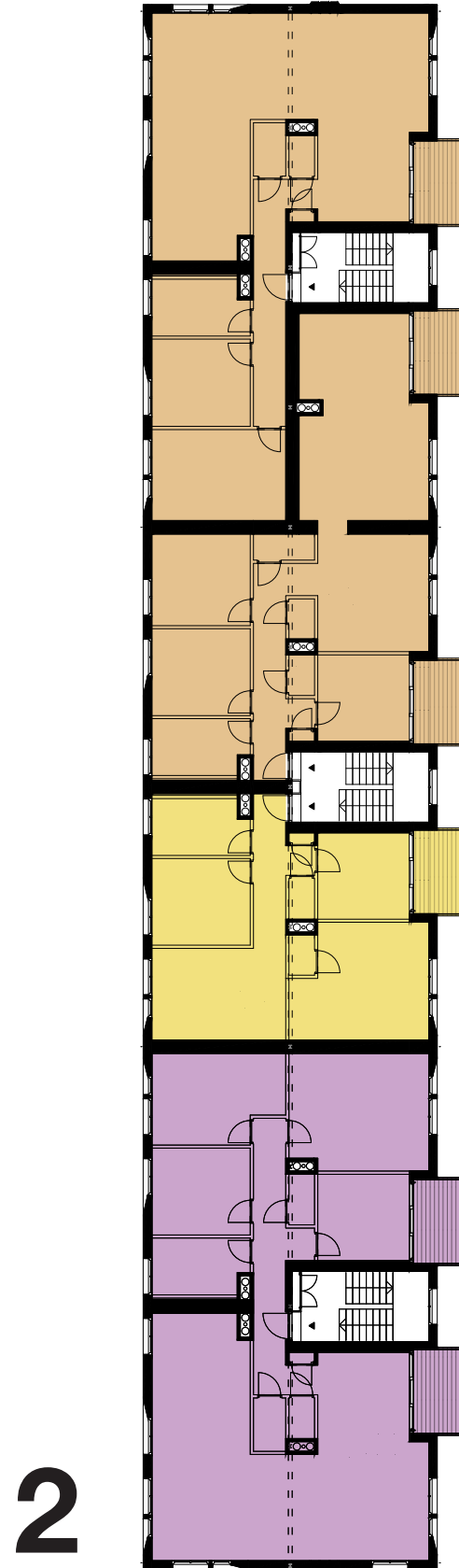
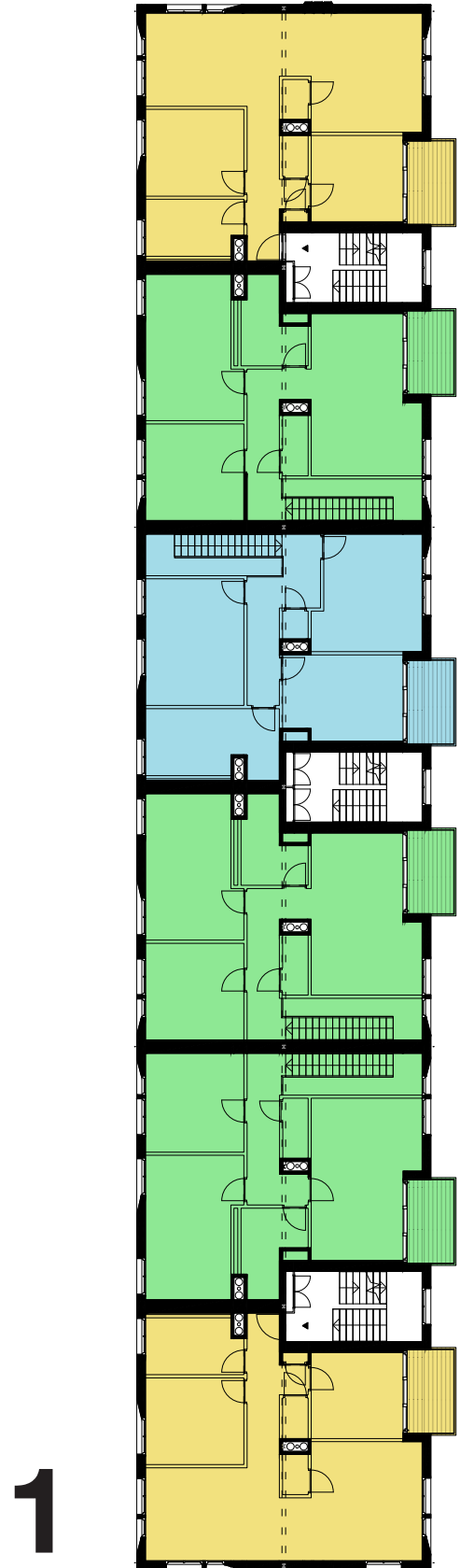


MERGING UNITS

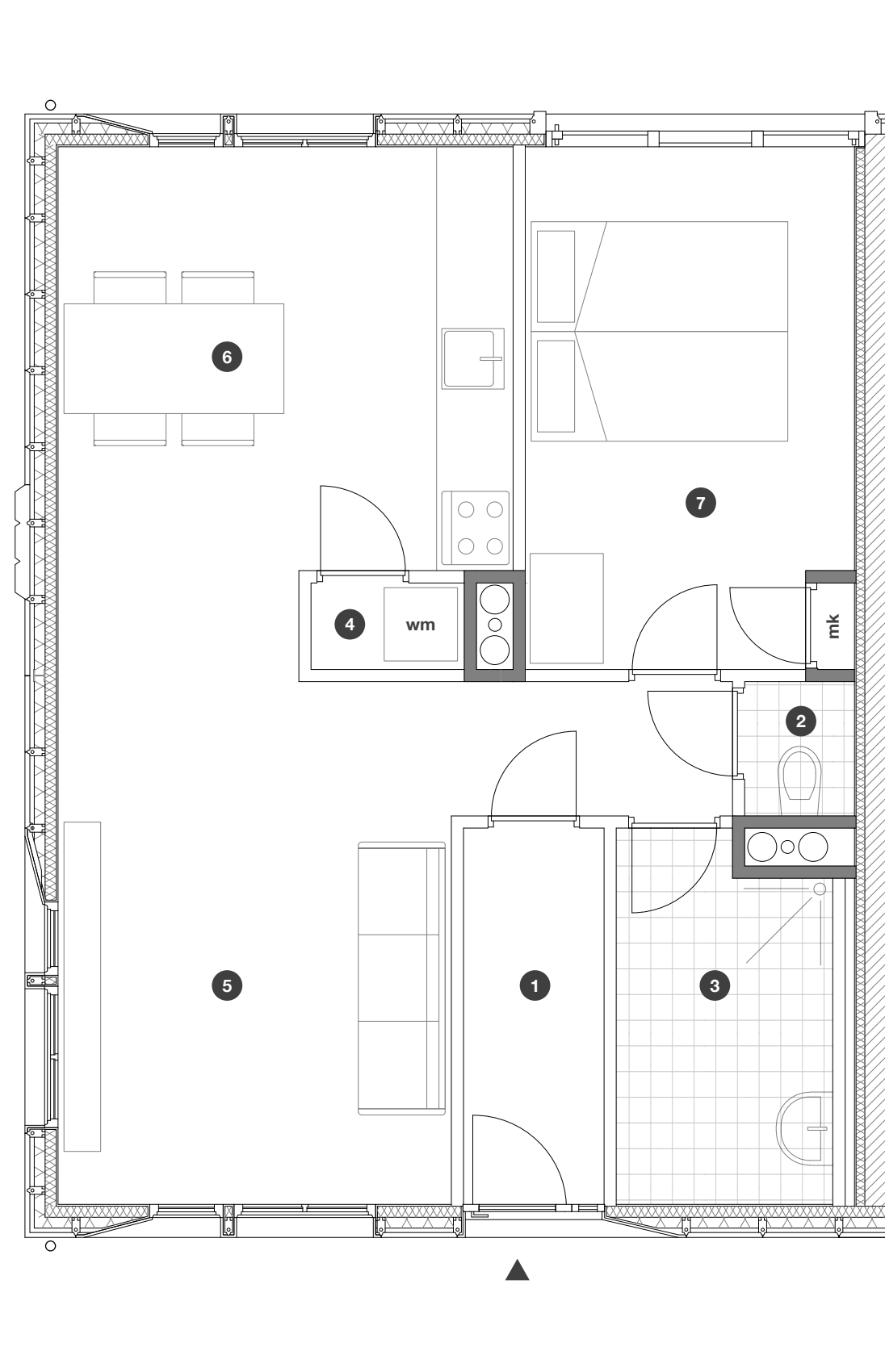
INTERIOR



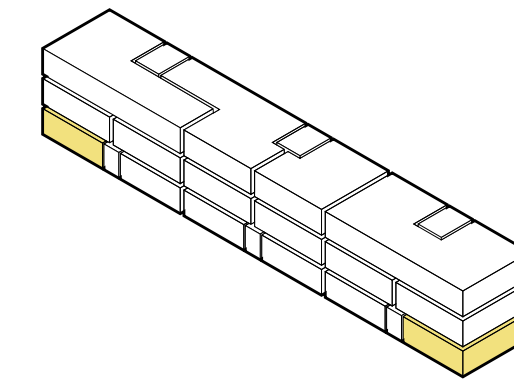
INTERIOR



INTERIOR



SINGLE / COUPLE

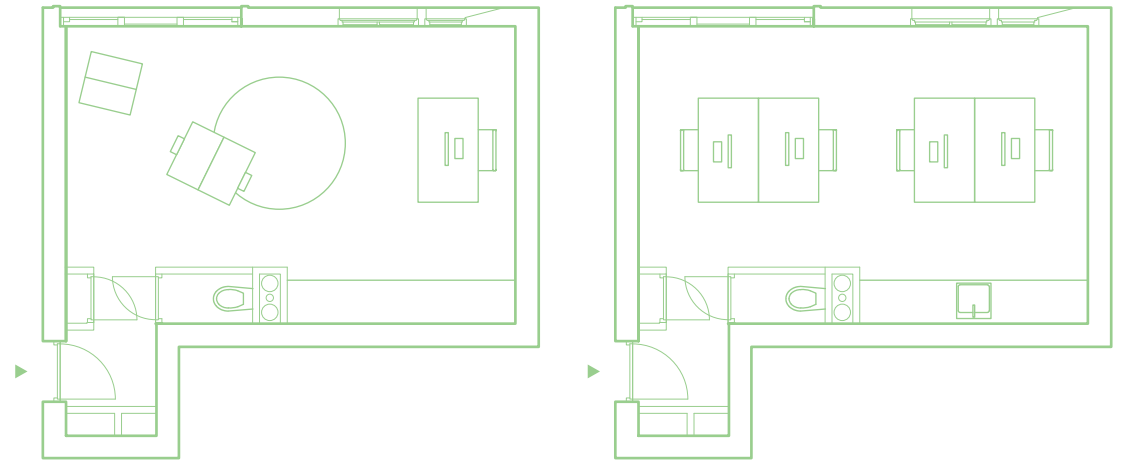
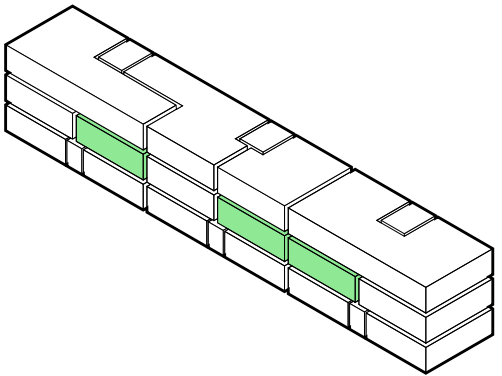
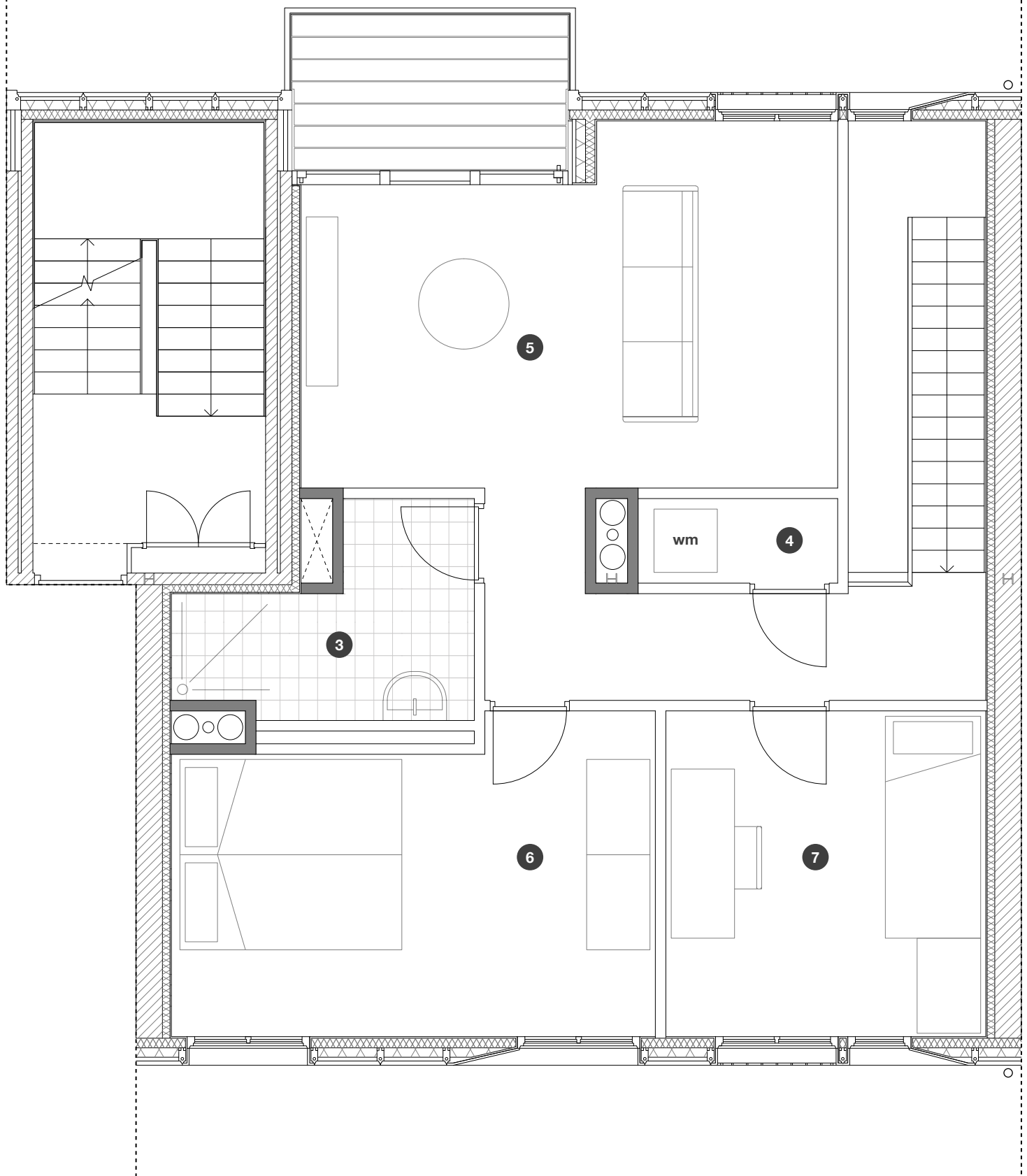
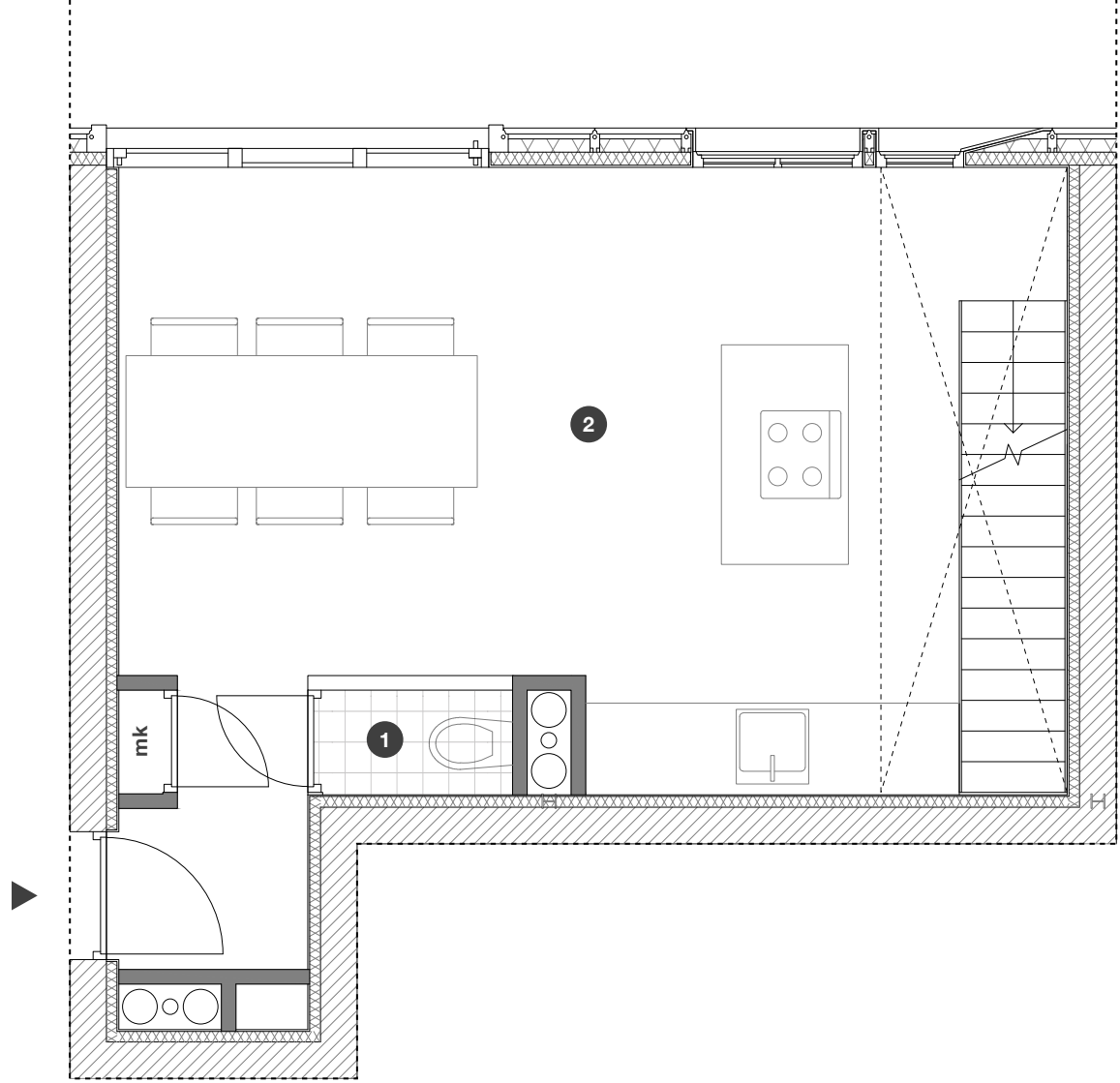


TYPE 1A

58m² | starters

- 1 Entrance Hallway
- 2 Toilet
- 3 Bathroom
- 4 Storage
- 5 Living Area
- 6 Kitchen + Dining Area
- 7 Bedroom

INTERIOR



Day-care

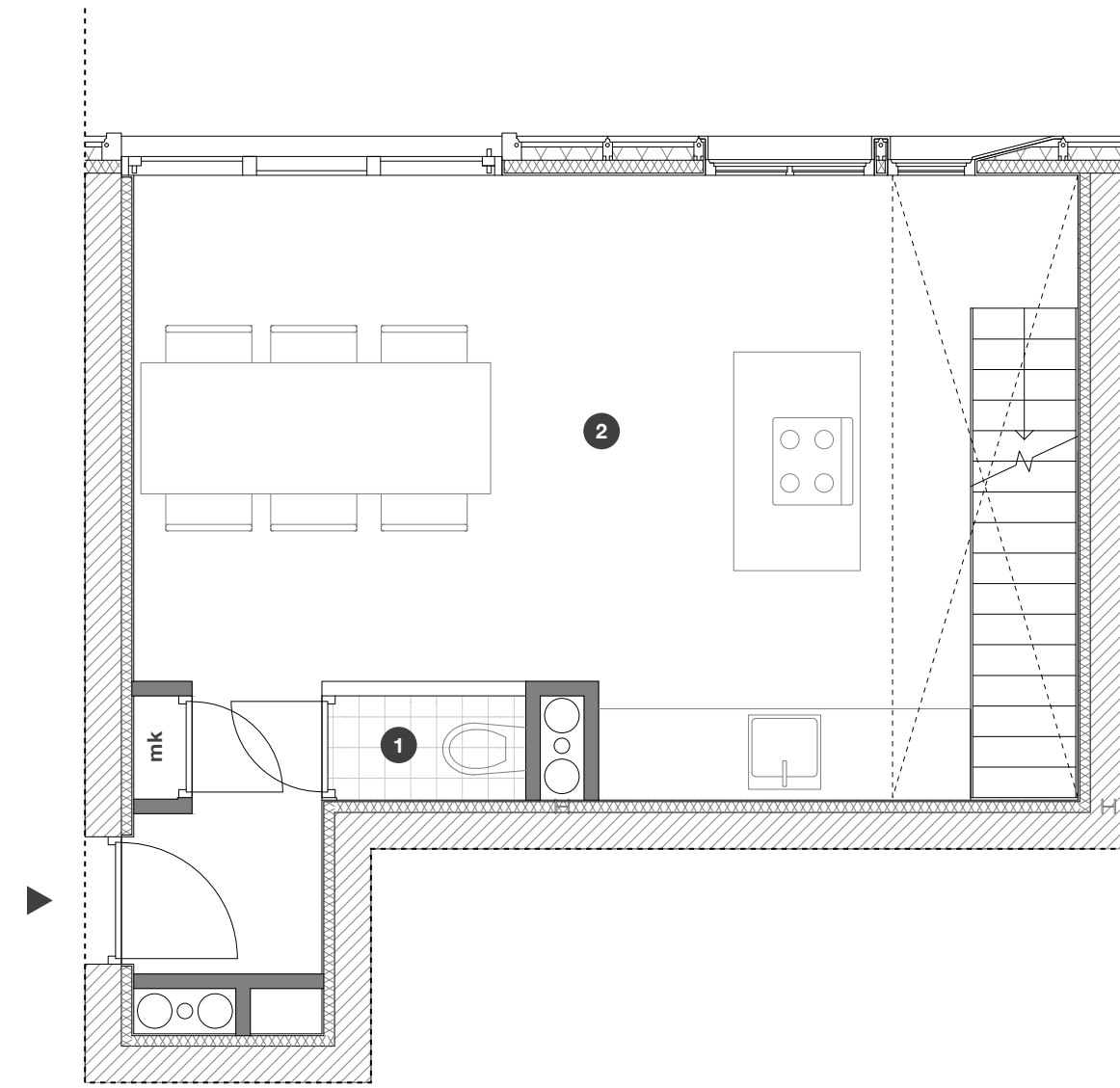
Office

TYPE 2
75m² | young family

- 1 Toilet
- 2 Kitchen + Dining Area
- 3 Bathroom
- 4 Storage
- 5 Living Area
- 6 Bedroom 1
- 7 Bedroom 2

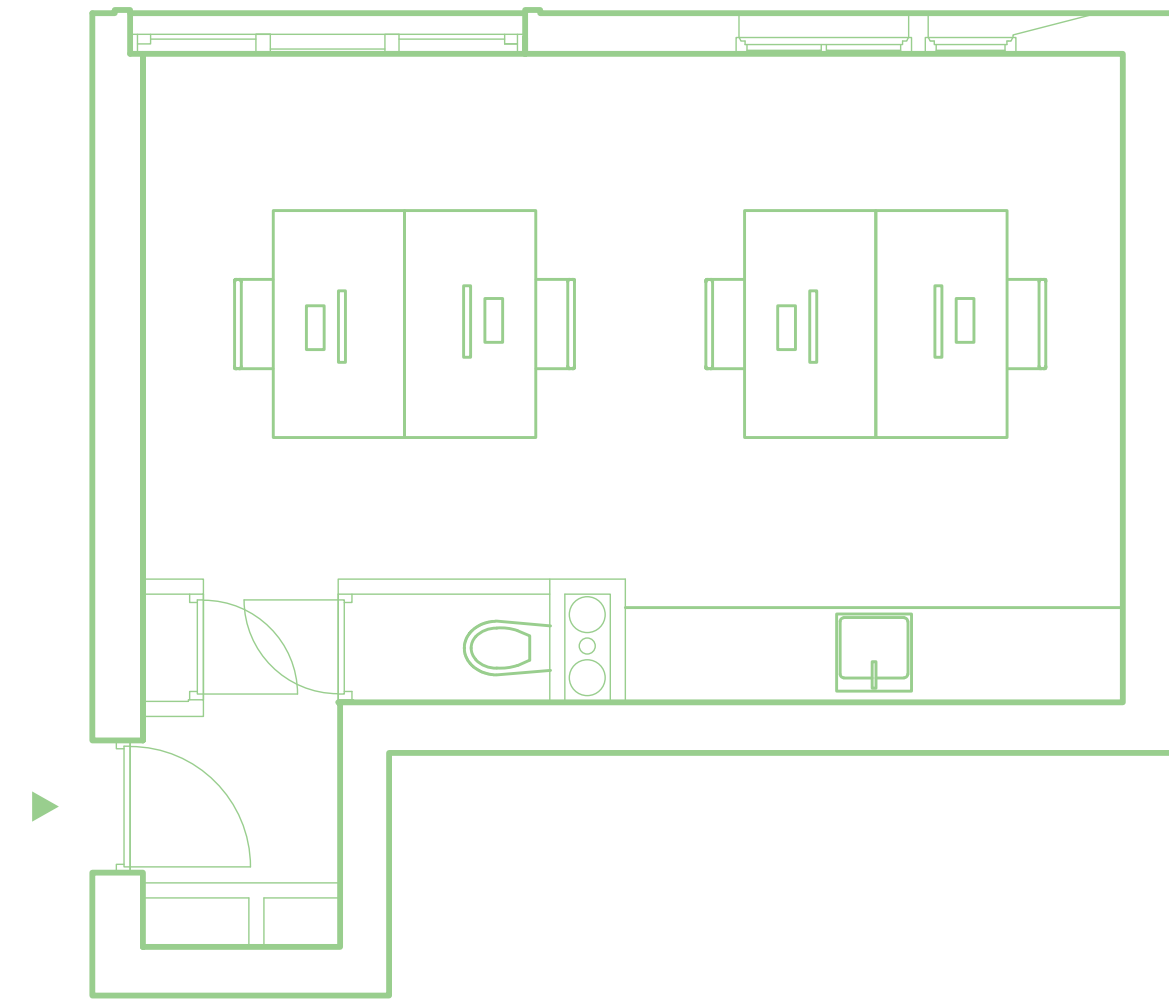
YOUNG FAMILY (3 PERS)

INTERIOR



KITCHEN

KITCHEN

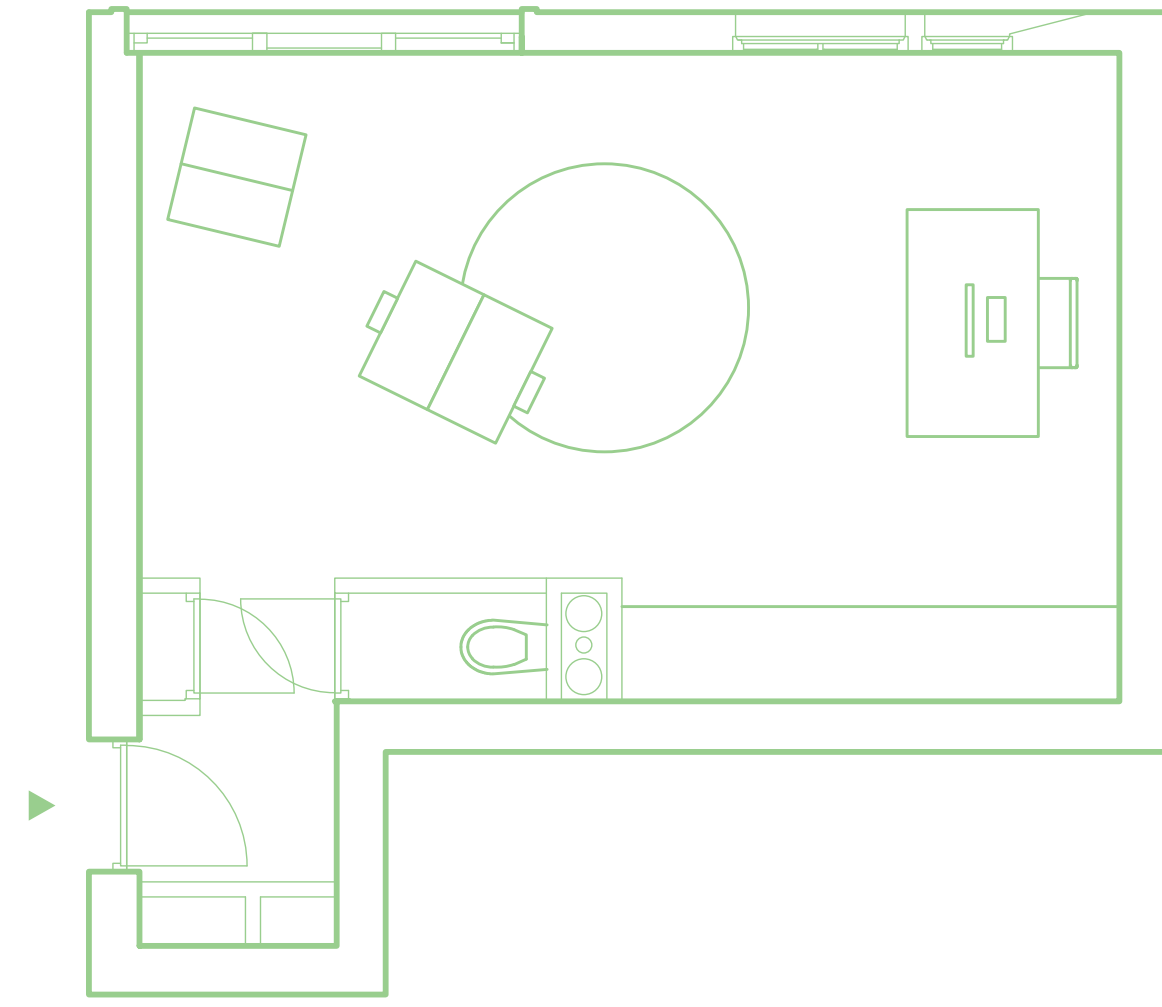


Office



OFFICE SPACE

INTERIOR

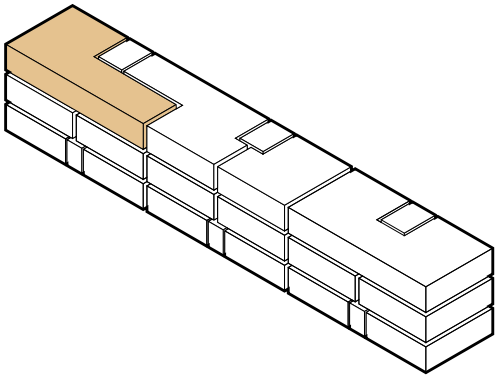
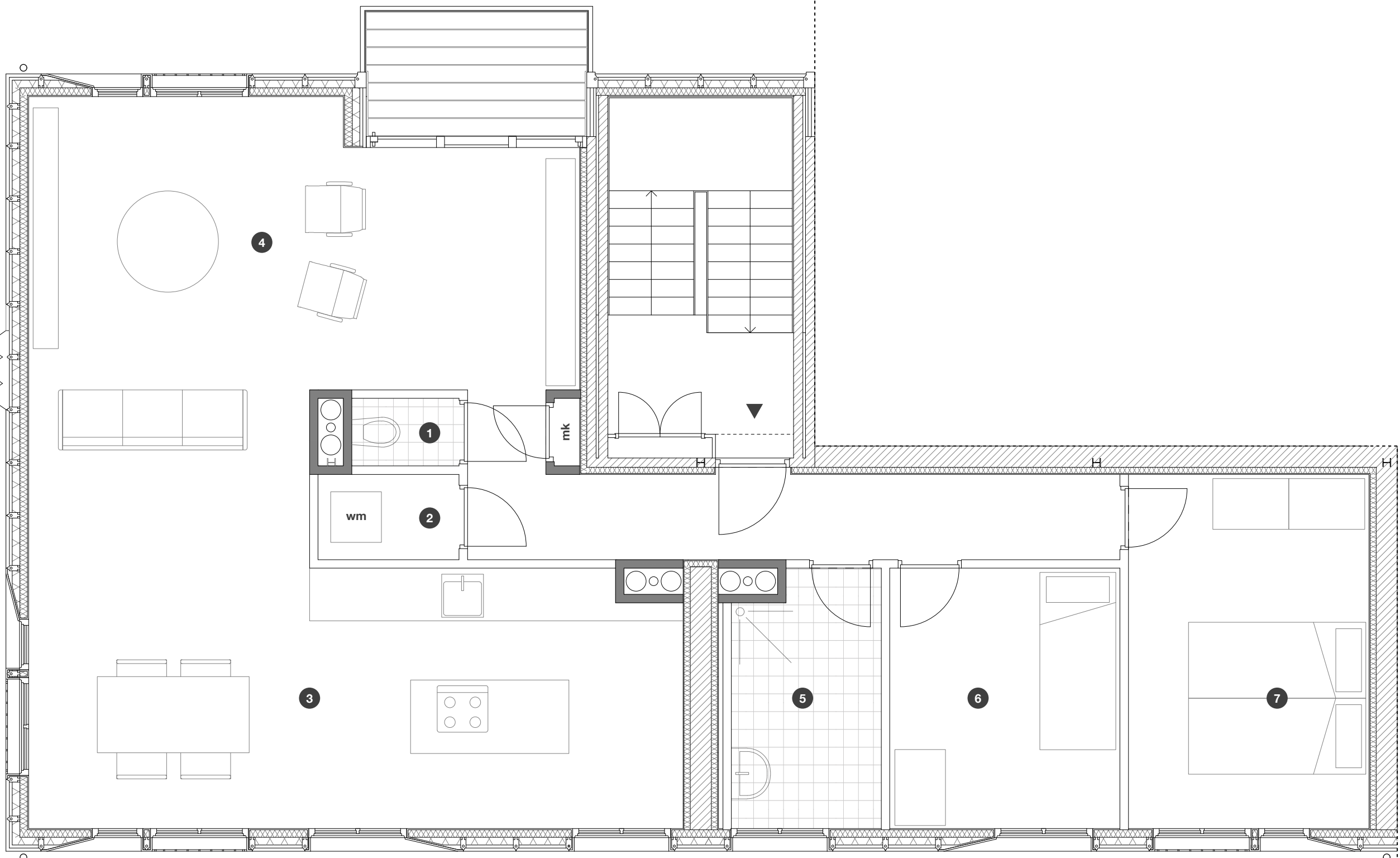


Day-care



KINDER GARTEN

INTERIOR

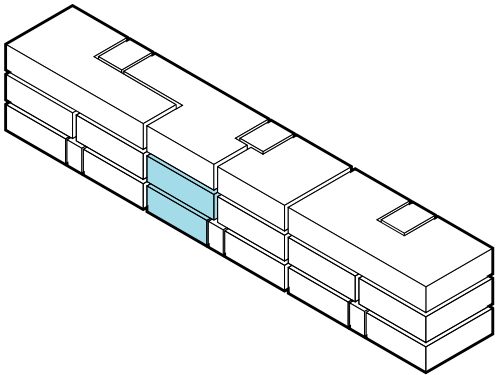
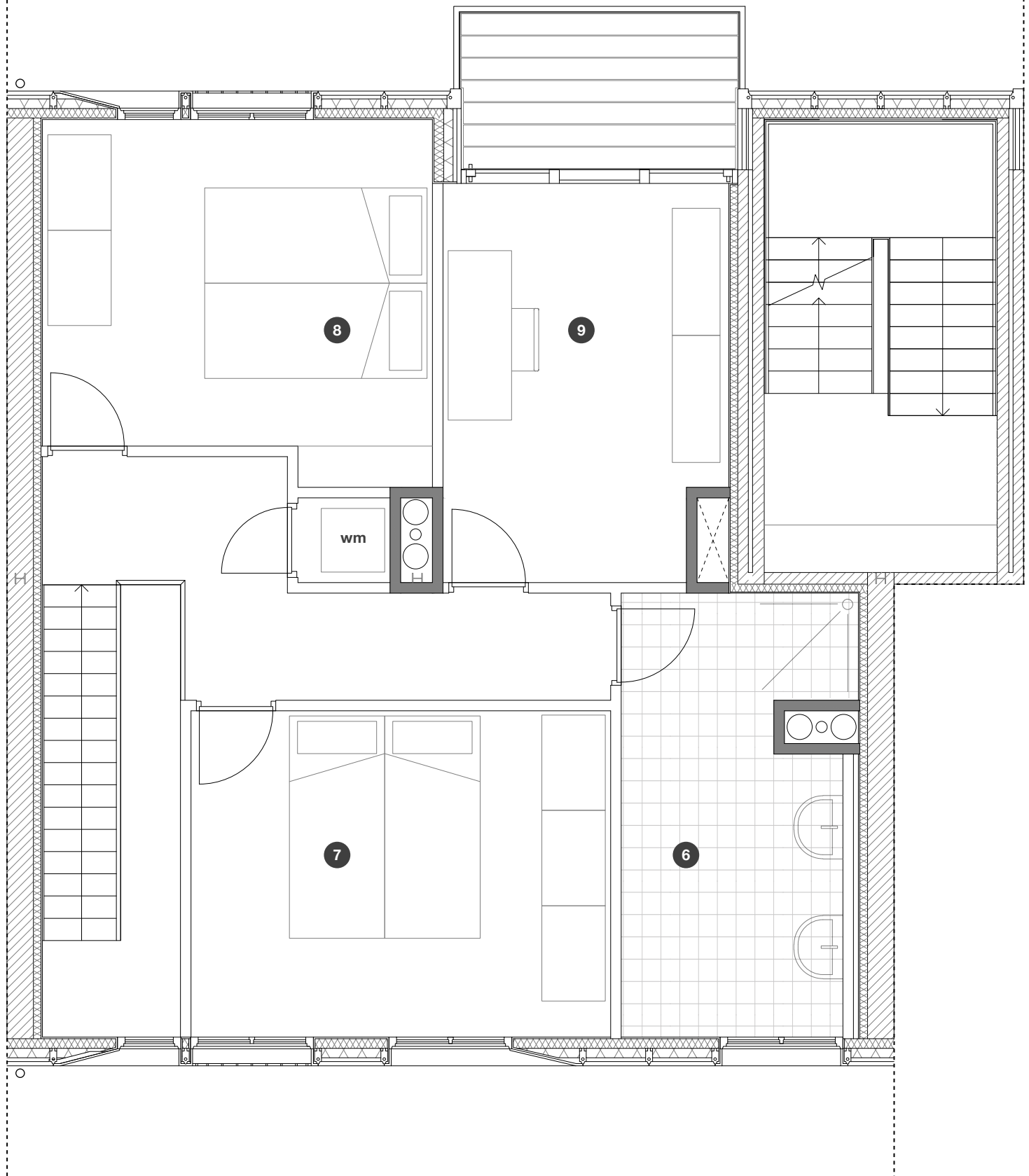
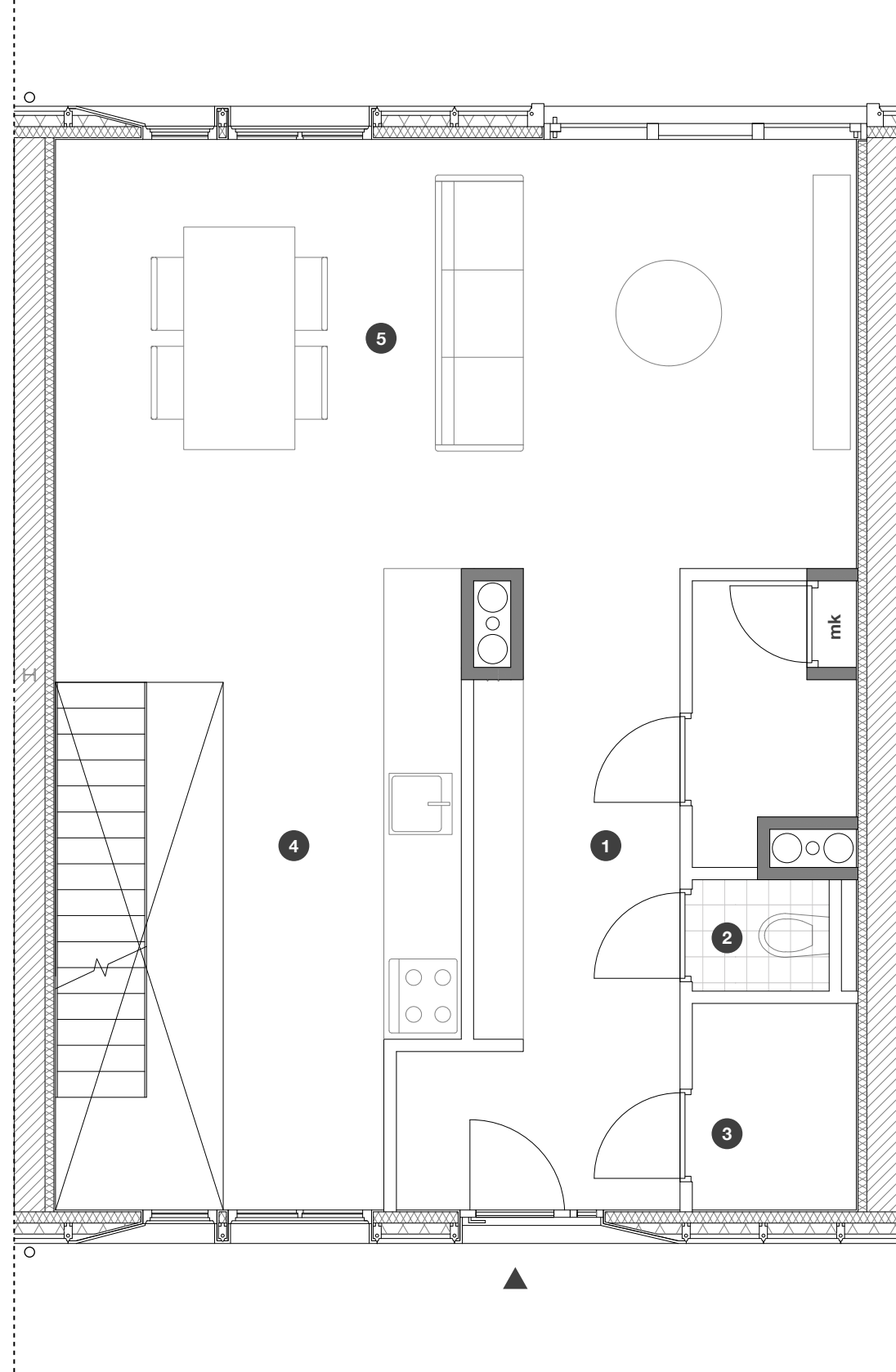


TYPE 3A
75m² | young family

- 1 Toilet
- 2 Storage
- 3 Kitchen + Dining Area
- 4 Living Area
- 5 Bathroom
- 6 Bedroom 1
- 7 Bedroom 2

YOUNG FAMILY (3 PERS)

INTERIOR

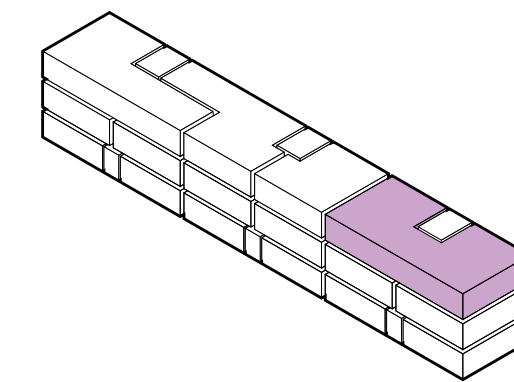
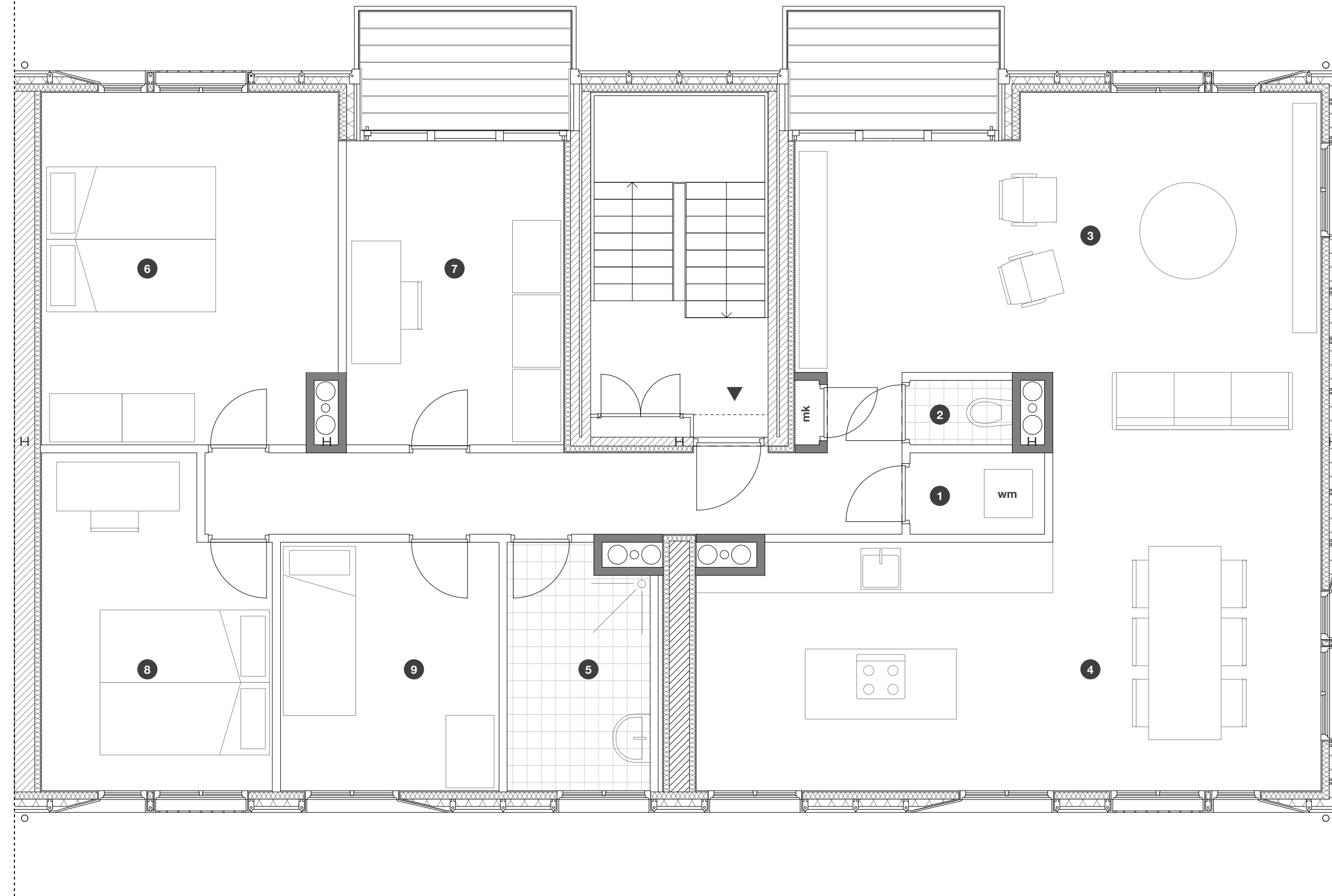


TYPE 4
110m² | family

- 1 Entrance hallway
- 2 Toilet
- 3 Storage
- 4 Kitchen
- 5 Living Area
- 5 Bathroom
- 6 Bedroom 1
- 7 Bedroom 2
- 8 Bedroom 3

FAMILY (4 PERS)

INTERIOR



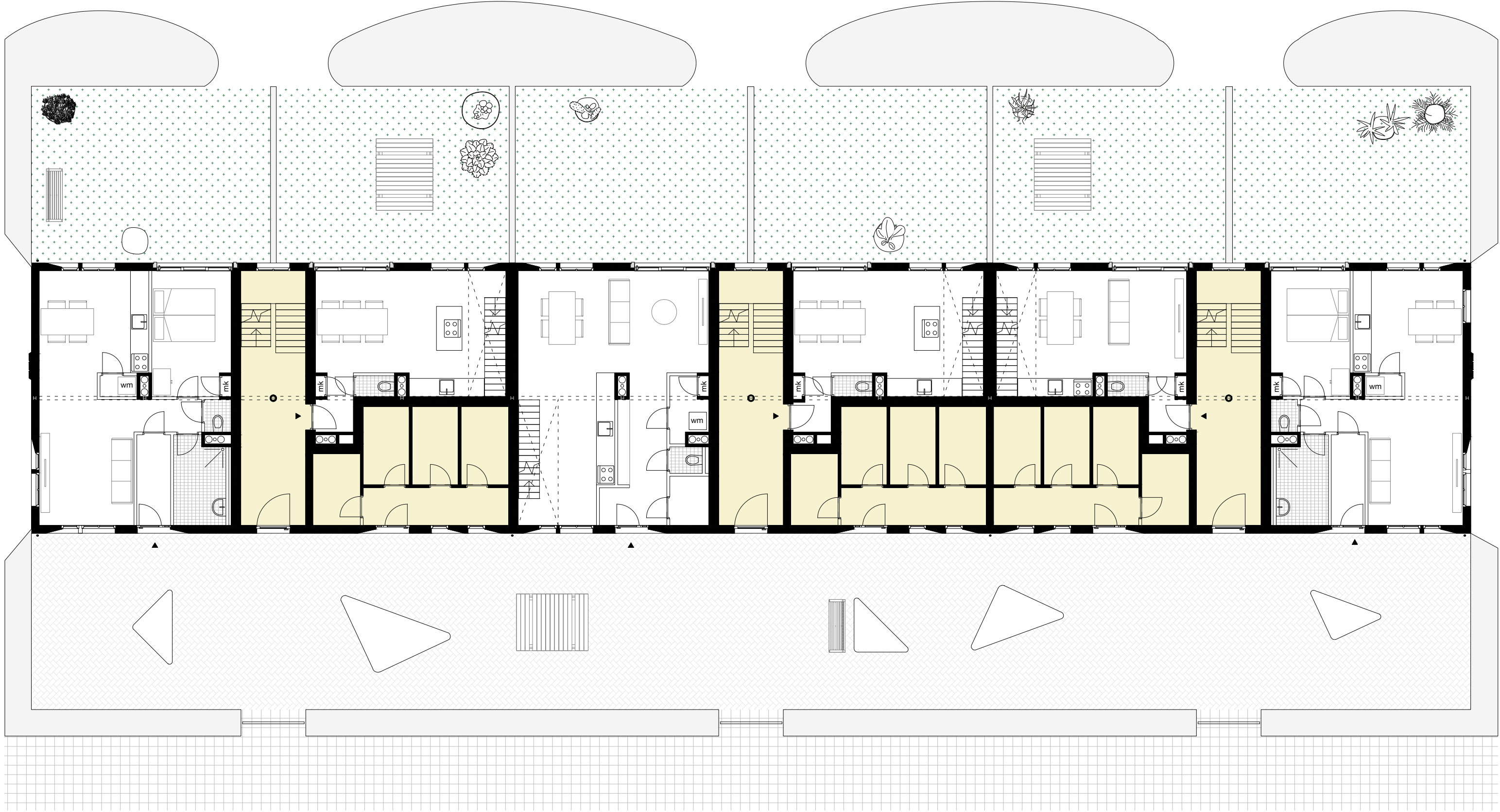
TYPE 5

120m² | family apartment

- 1 Storage
- 2 Toilet
- 3 Living Area
- 4 Kitchen + Dining
- 5 Bathroom
- 6 Bedroom 1
- 7 Bedroom 2
- 8 Bedroom 3
- 9 Bedroom 4

FAMILY (+ 4 PERS)

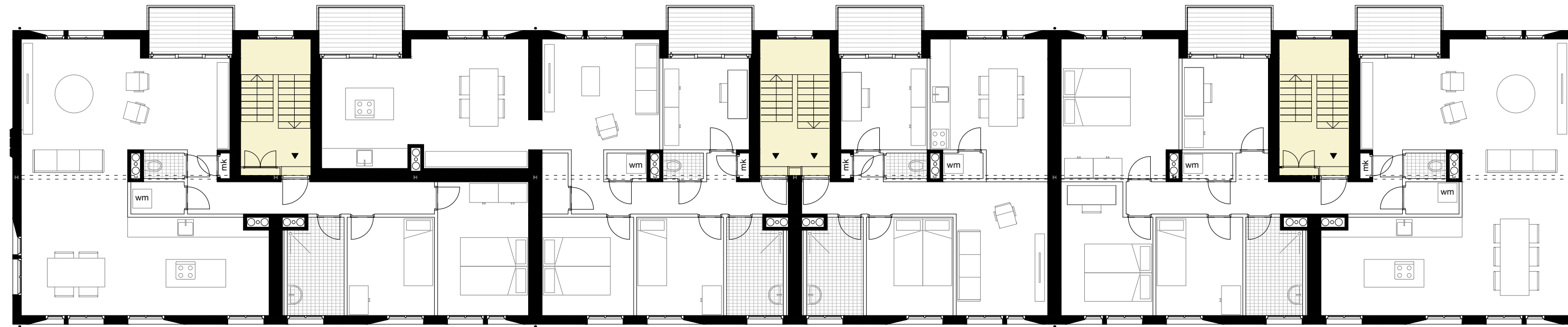
INTERIOR



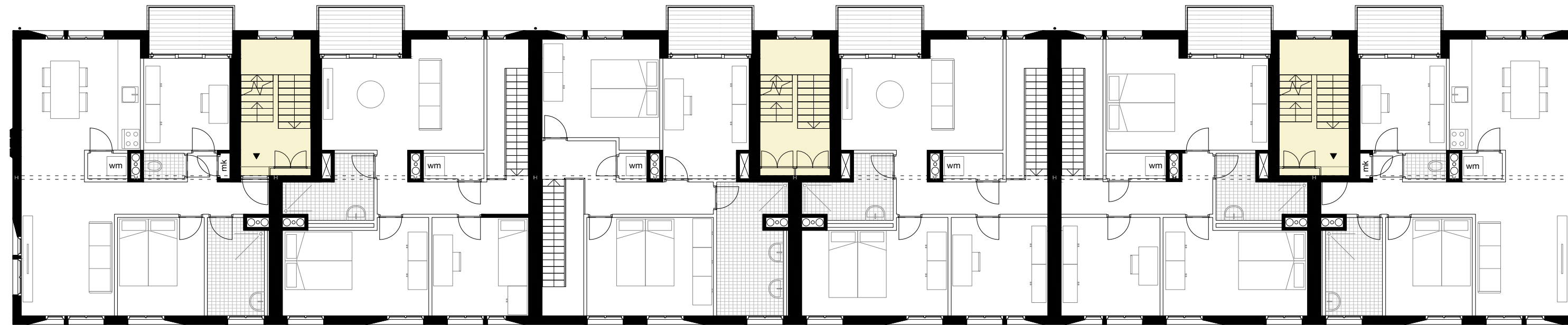
ground floor
larger storages / entrances /



INTERIOR



second floor



first floor



INTERIOR



EXISTING PORTIEK APPROPRIATED FOR STORAGE

INTERIOR



NEW INVITING ENTRANCE INCLUDES STORAGE SPACE

INTERIOR



before

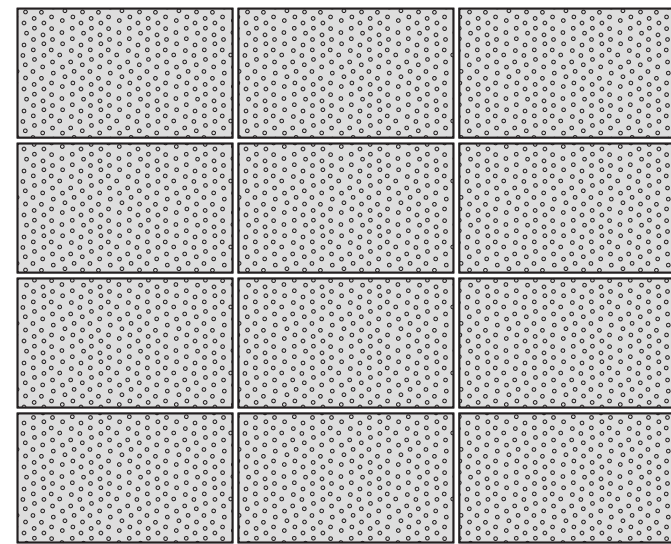


after

INTERIOR



THE PRESENCE OF THE *PORTIEK*?



**PRESERVE GRID &
CONCRETE APPEARANCE**



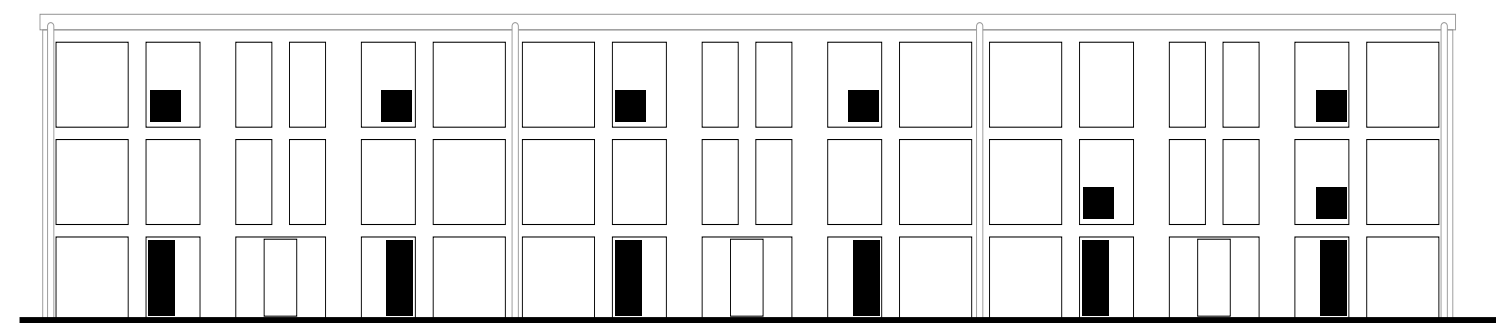
SOLVE FLAT IMAGE

EXTERIOR

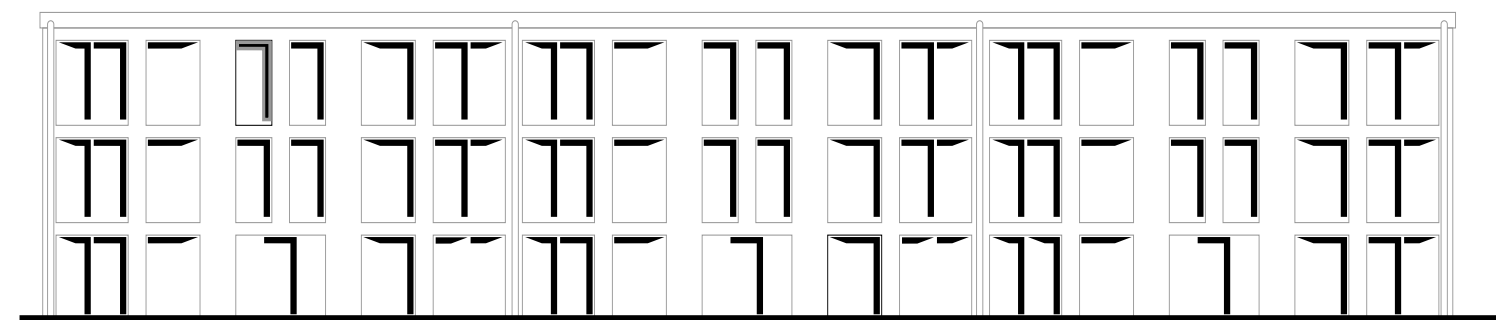
EXTERIOR



RAIN PIPE DIVISION

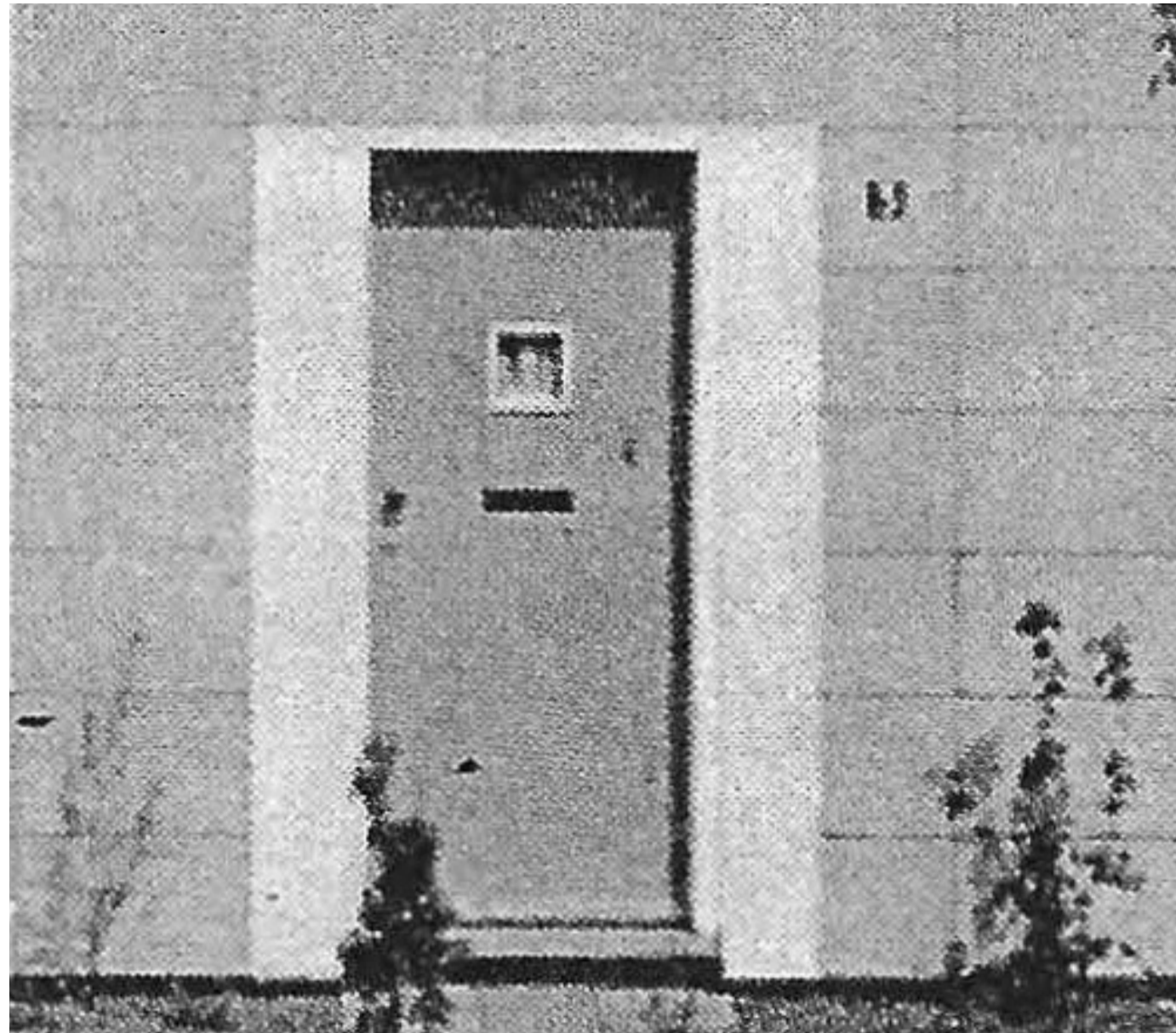


CLOSED PANELS



CREATE DEPTH

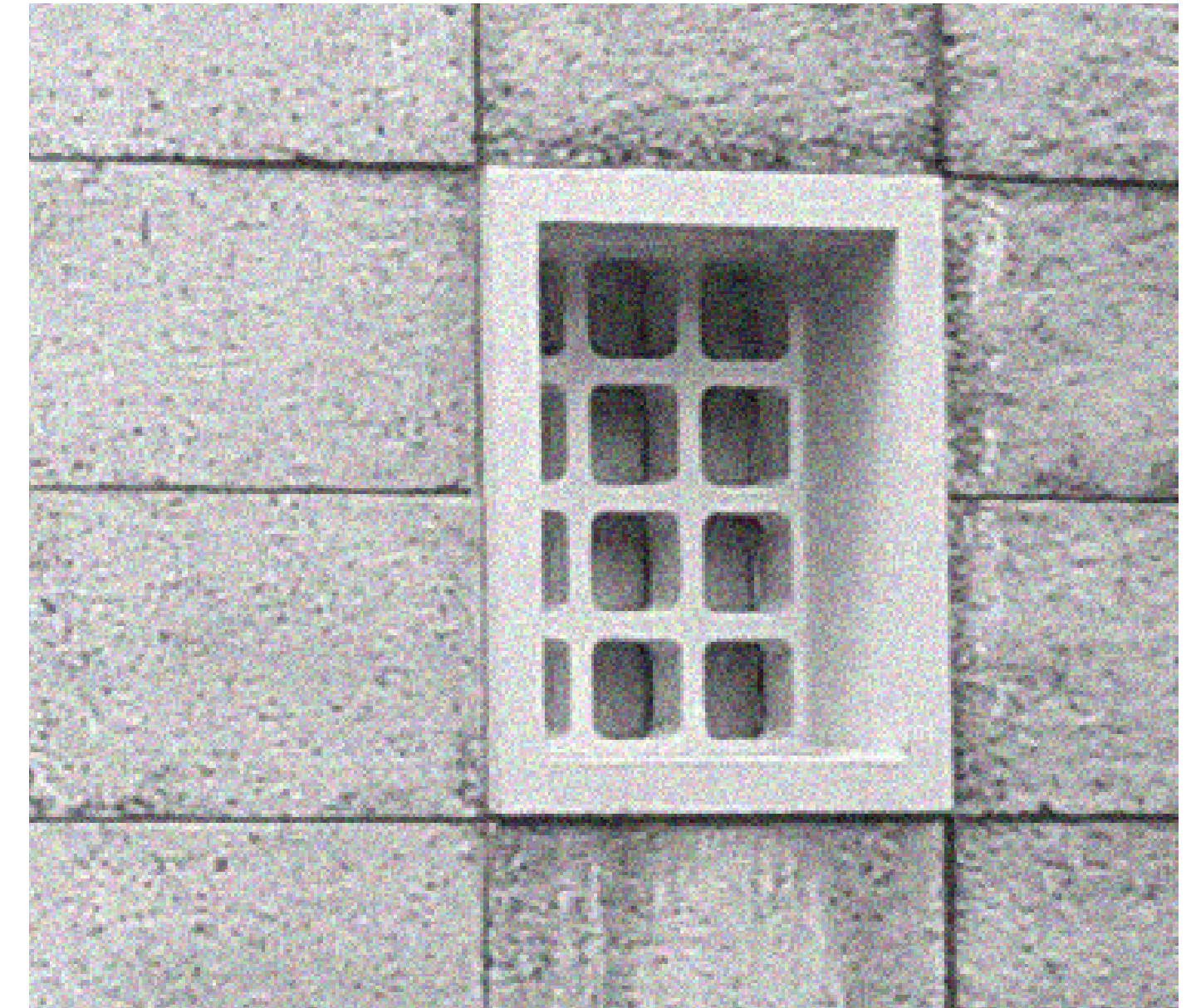
EXTERIOR



PANELS MARK ENTRANCE



FRENCH BALCONIES



(THICK) CONCRETE FRAME

EXTERIOR



EXISTING ENTRANCE
Entrance is not clearly marked

EXTERIOR



NEW ENTRANCE

Wide panels mark presence of main entrance.
Street name and mailboxes are integrated.

EXTERIOR



before



after

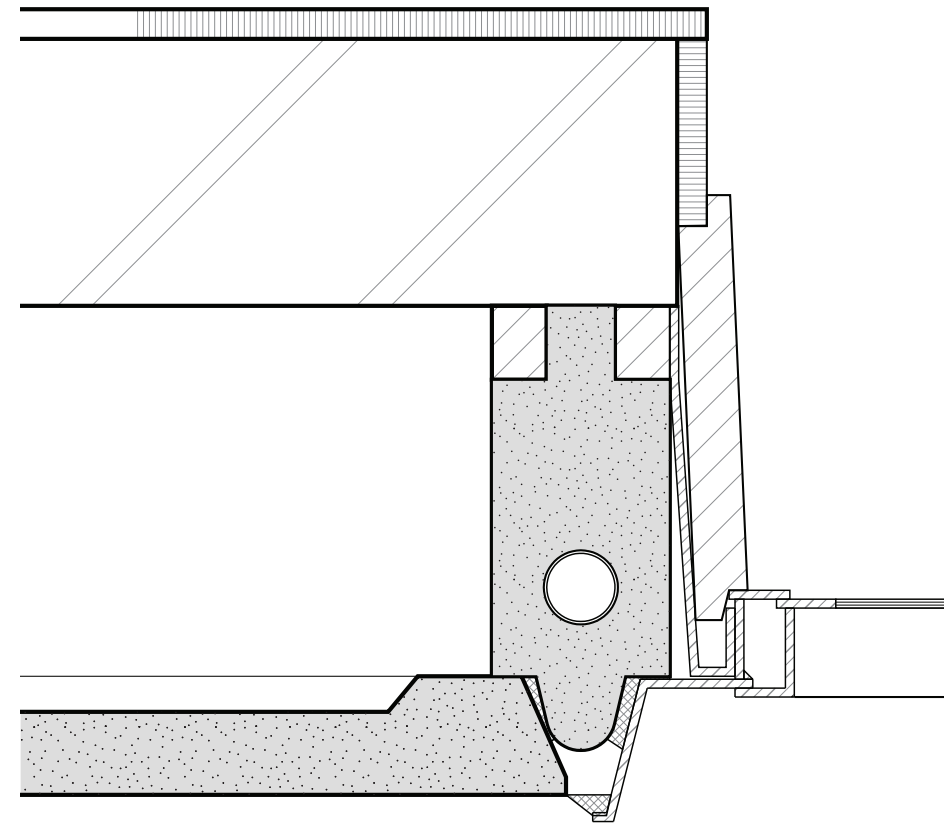
EXTERIOR



EXISTING WINDOW FRAMES

Slender steel profiling. Show rust and leakage problems.

EXTERIOR



EXISTING DETAILING

Slender steel profiling. Show rust and leakage problems.

TITEL



thick framing

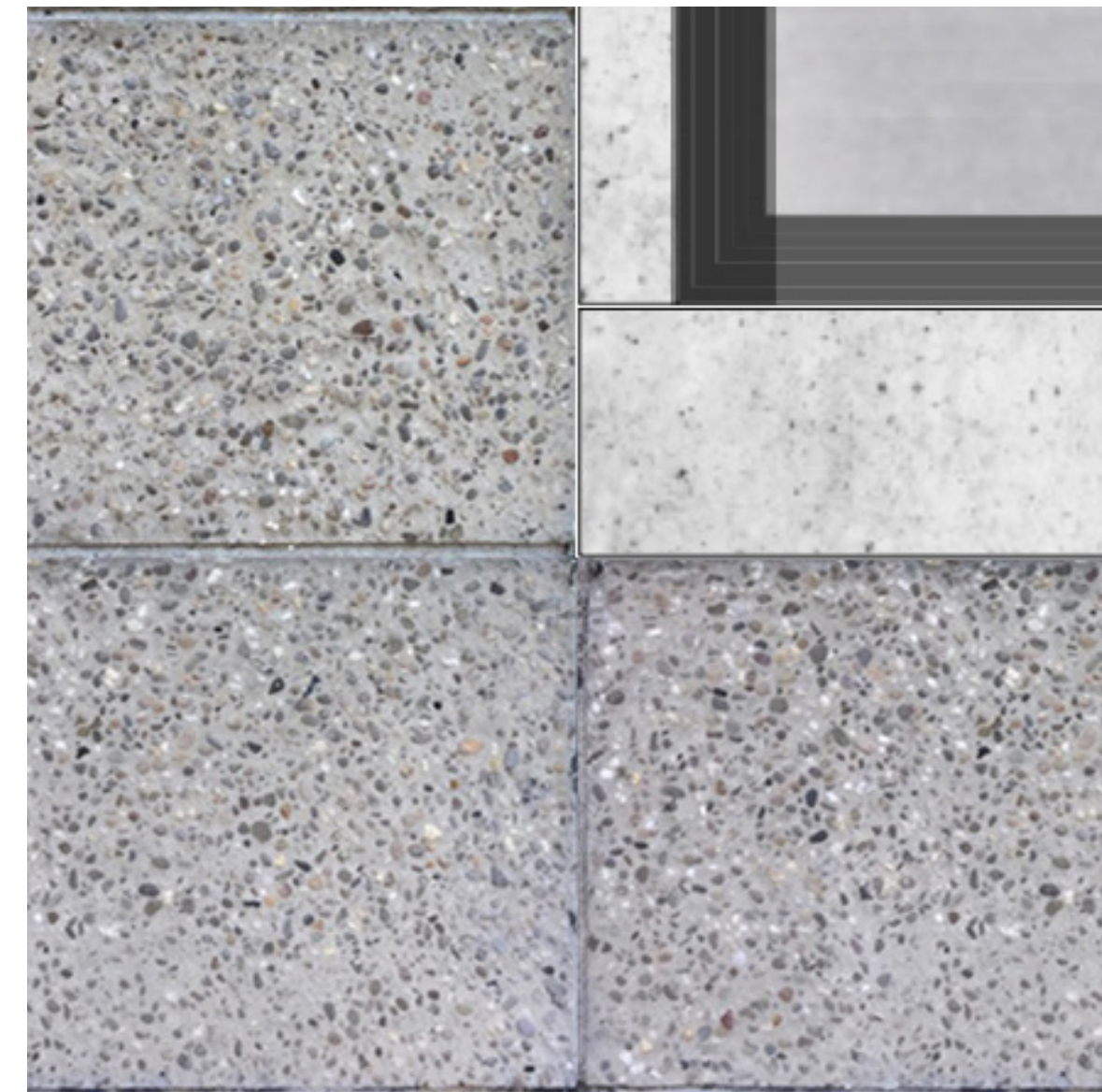
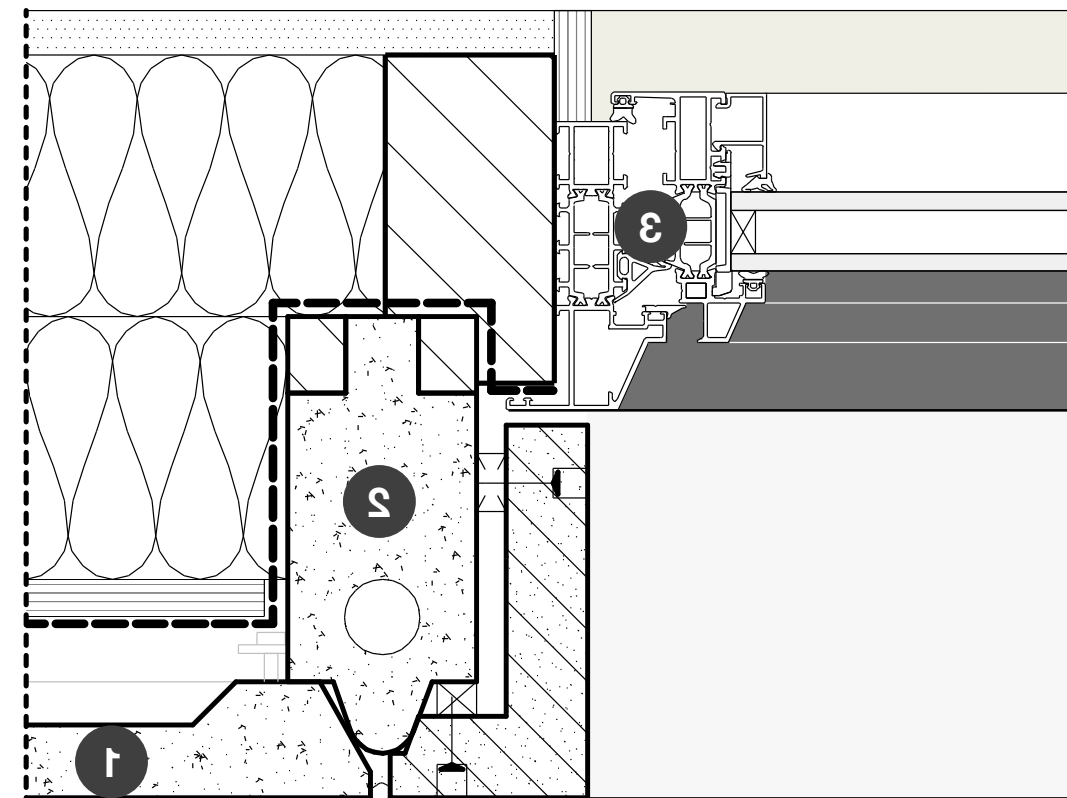
dark & rough

light & smooth

NEW WINDOW FRAME

Larger openings for improved relation with environment.

EXTERIOR



EXTERIOR



before



after

EXTERIOR



OPTIONAL PANELS

FIXED

OPTIONAL FRENCH BALCONY

EXTERIOR



OLD BALCONY (2650 X 1100)
Not functional, too small, rotten

TITEL



NEW BALCONY (2650 X 1600)
Enlarged for functional use

TITEL



before



after

EXTERIOR



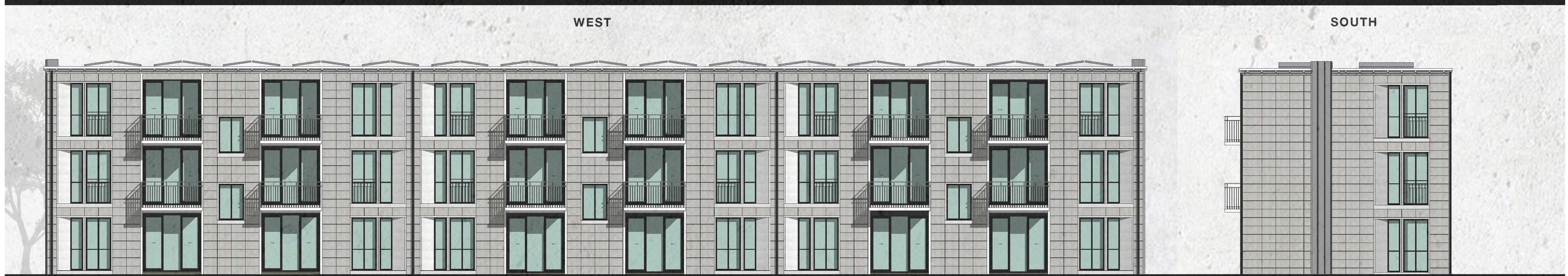
OLD FACADE

EXTERIOR



WEST

SOUTH



EAST

NORTH

NEW FACADE

EXTERIOR



before



after

EXTERIOR



before



after



FOOTPRINT & GREENERY

GARDEN

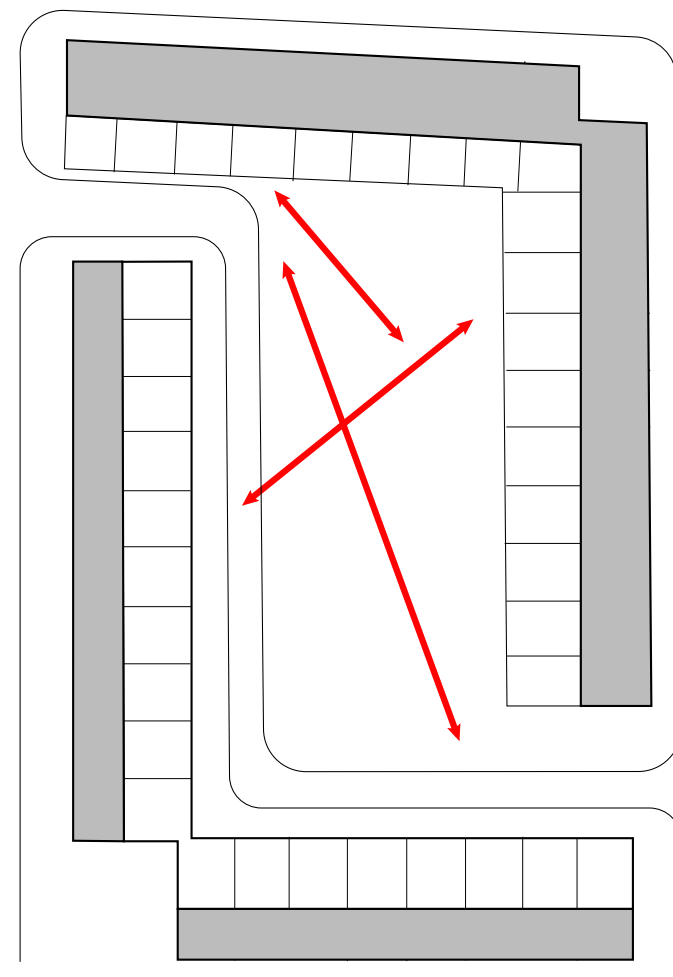
GARDEN



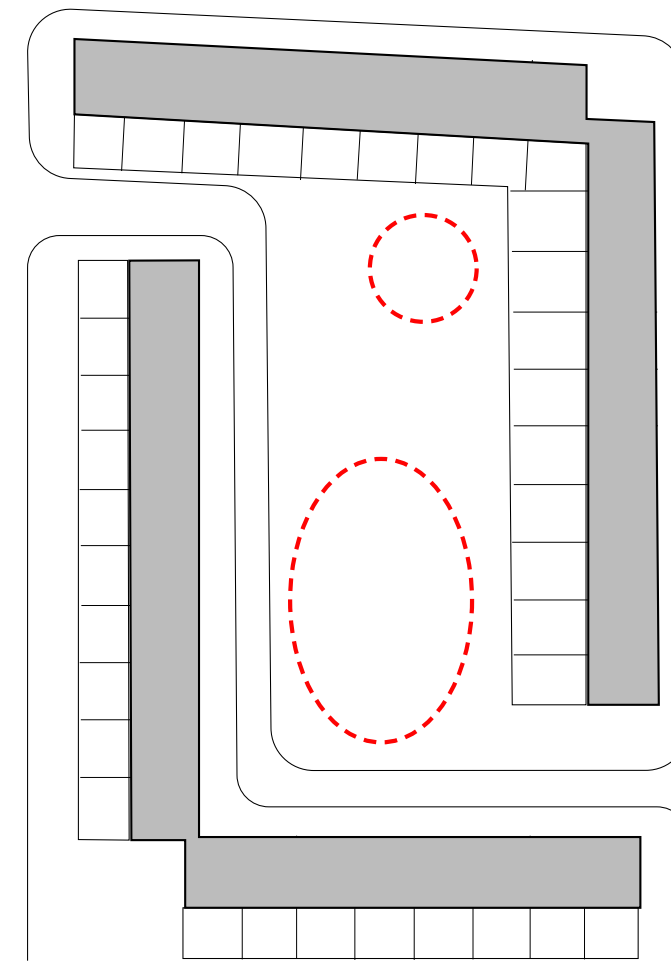
COURTYARD IN JARUZALEM, AMSTERDAM

Courtyards designed by "Schuine" Mien Ruys

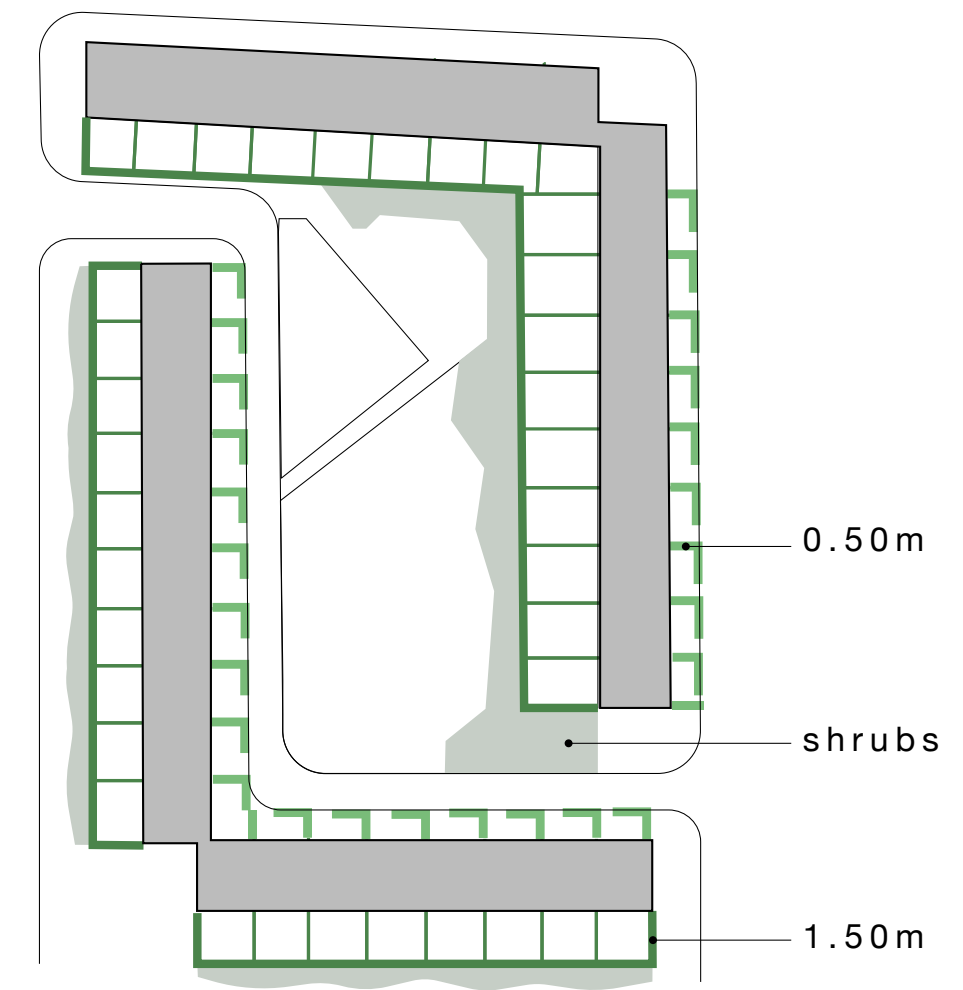
GARDEN



DIAGONAL LINES

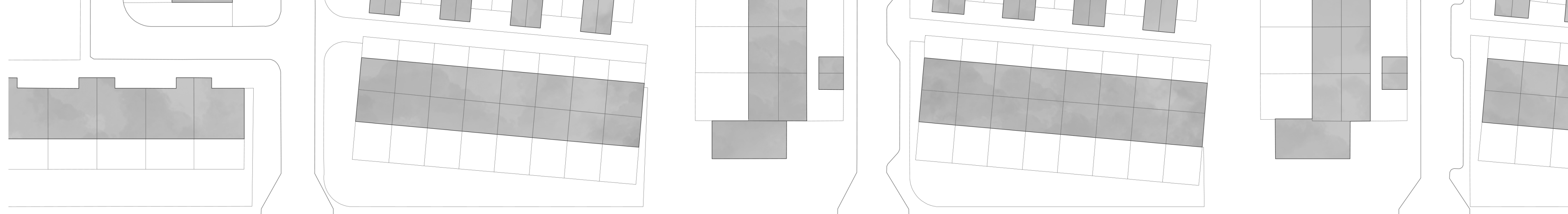


S & L ZONES



BORDERS

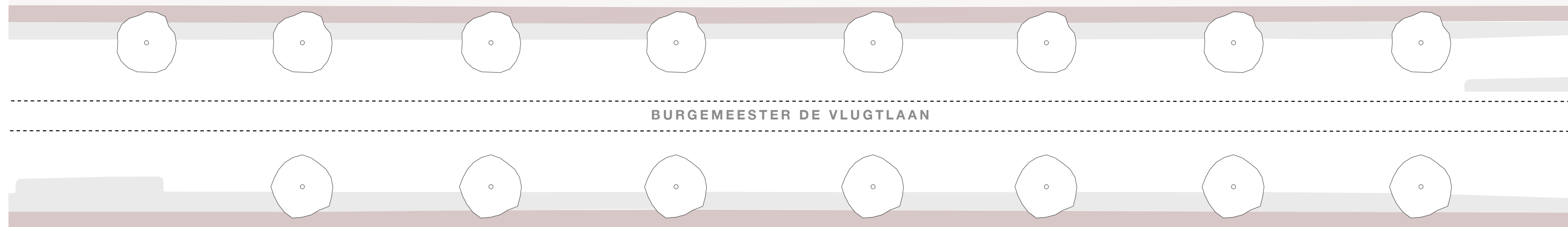
MIEN RUYS PRINCIPLES



DE TOURTON BRUYNSSTRAAT



BURGEMEESTER DE VLUGTLAAN



GARDEN



Borders blur connection with courtyard

GARDEN



Mitigated borders

Courtyard accessible from private garden

GARDEN



before



after

GARDEN



CLOSED AREA / LACKING MAINTENANCE / BURGLARY

GARDEN



PUBLIC AREA / LESS MAINTENANCE / IMPROVED SIGHT (CONTROLL)

GARDEN



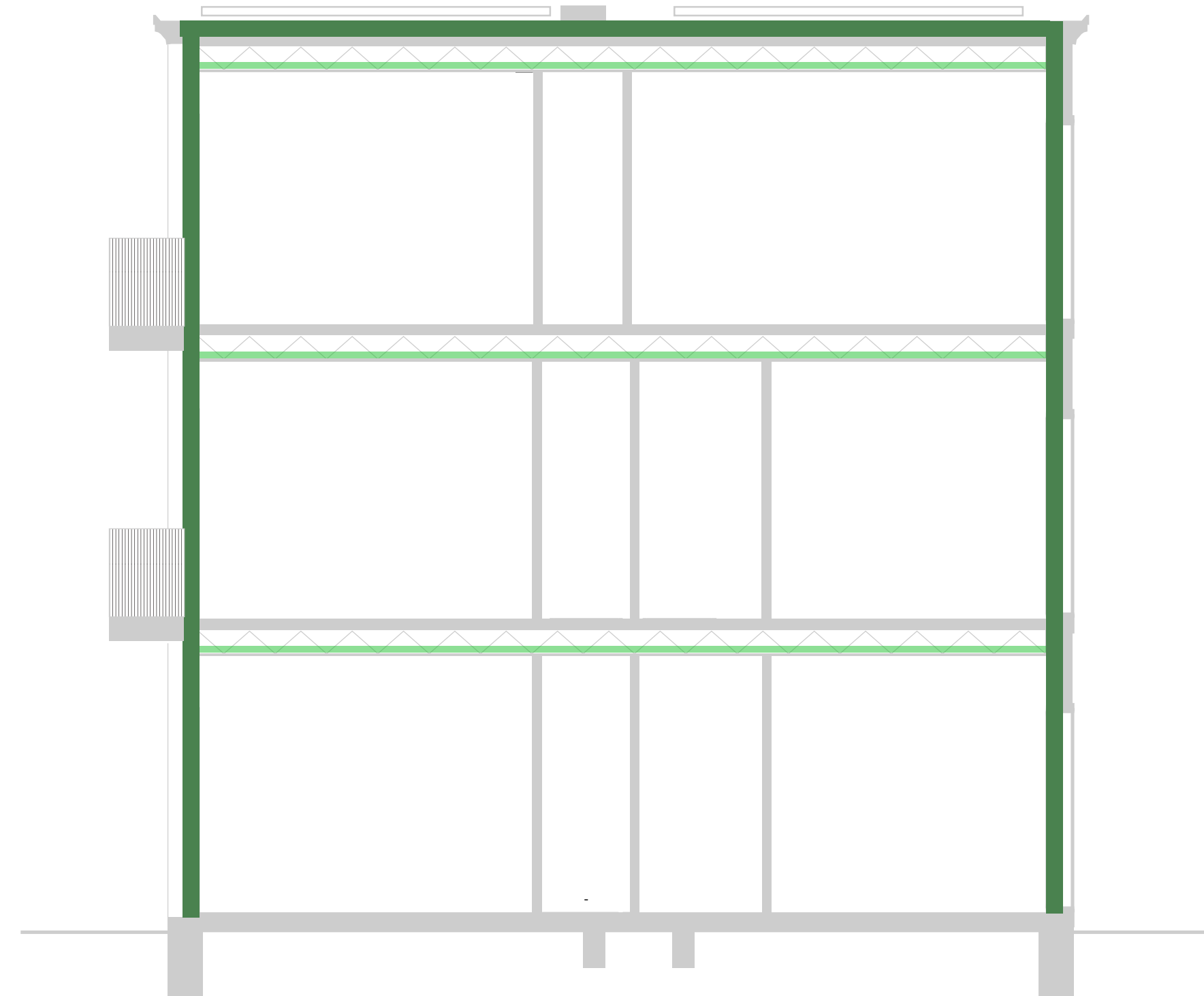
before





after

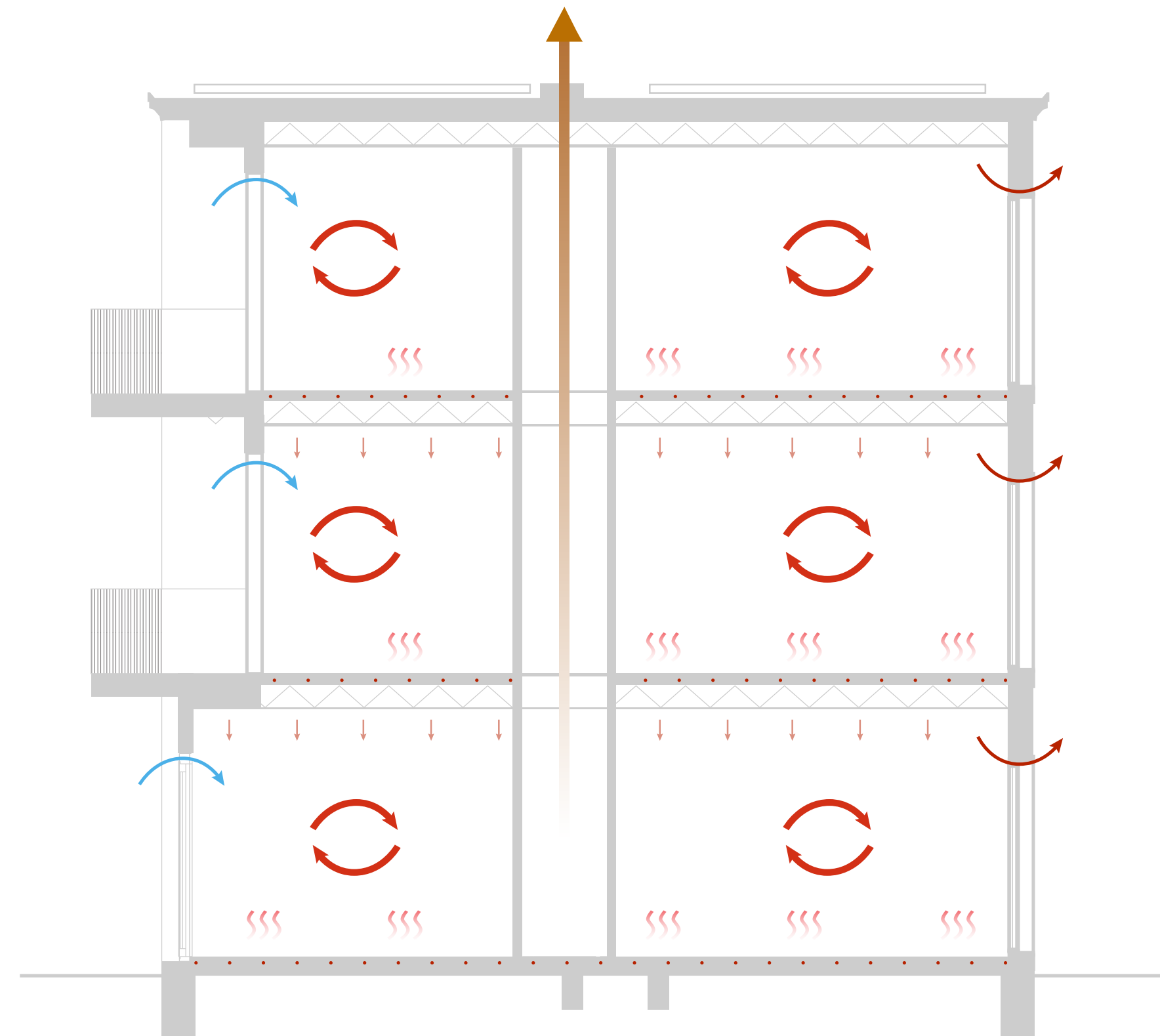
BT ASSEMBLY

CLIMATE



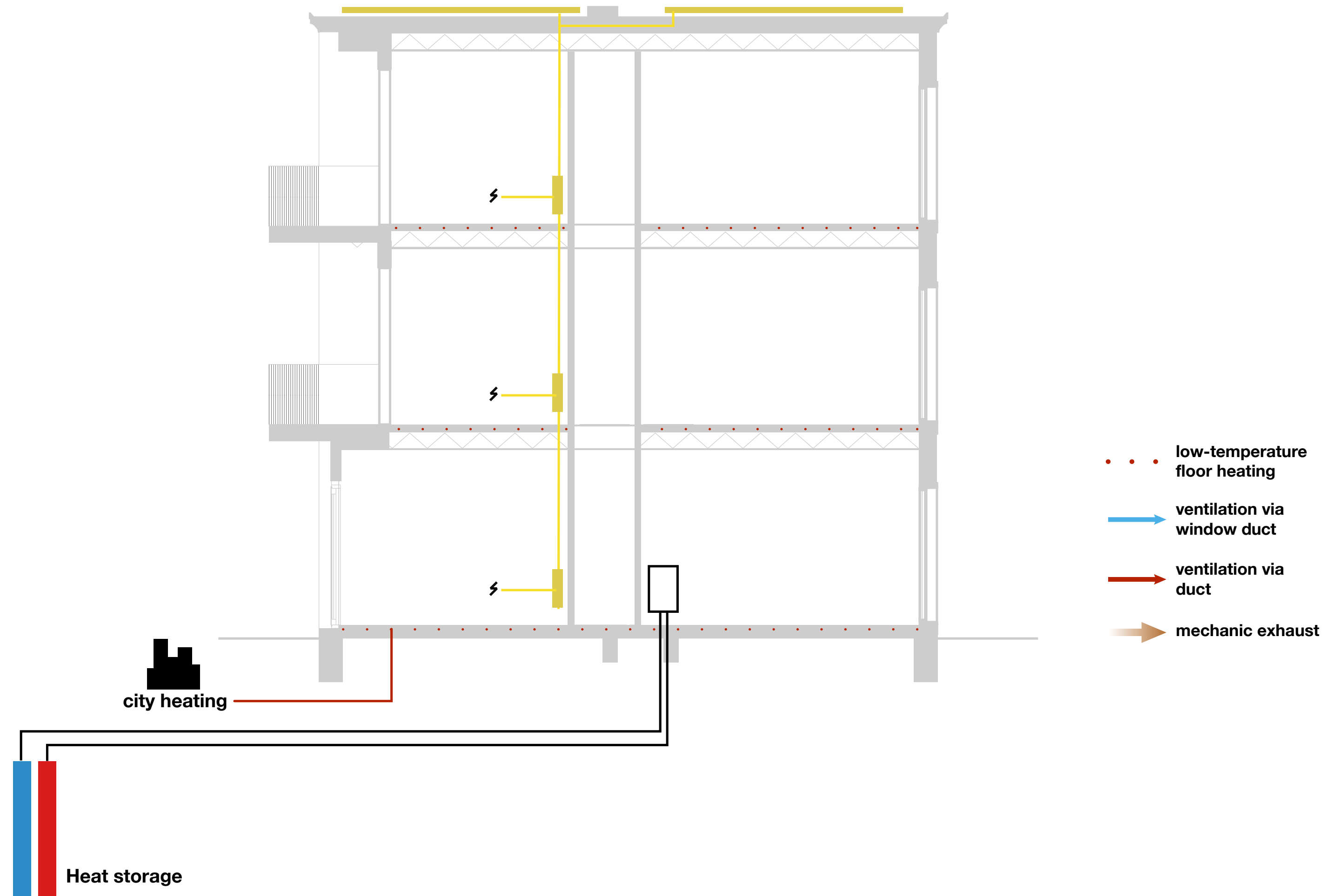
-  acoustic insulation
-  thermal insulation

CLIMATE

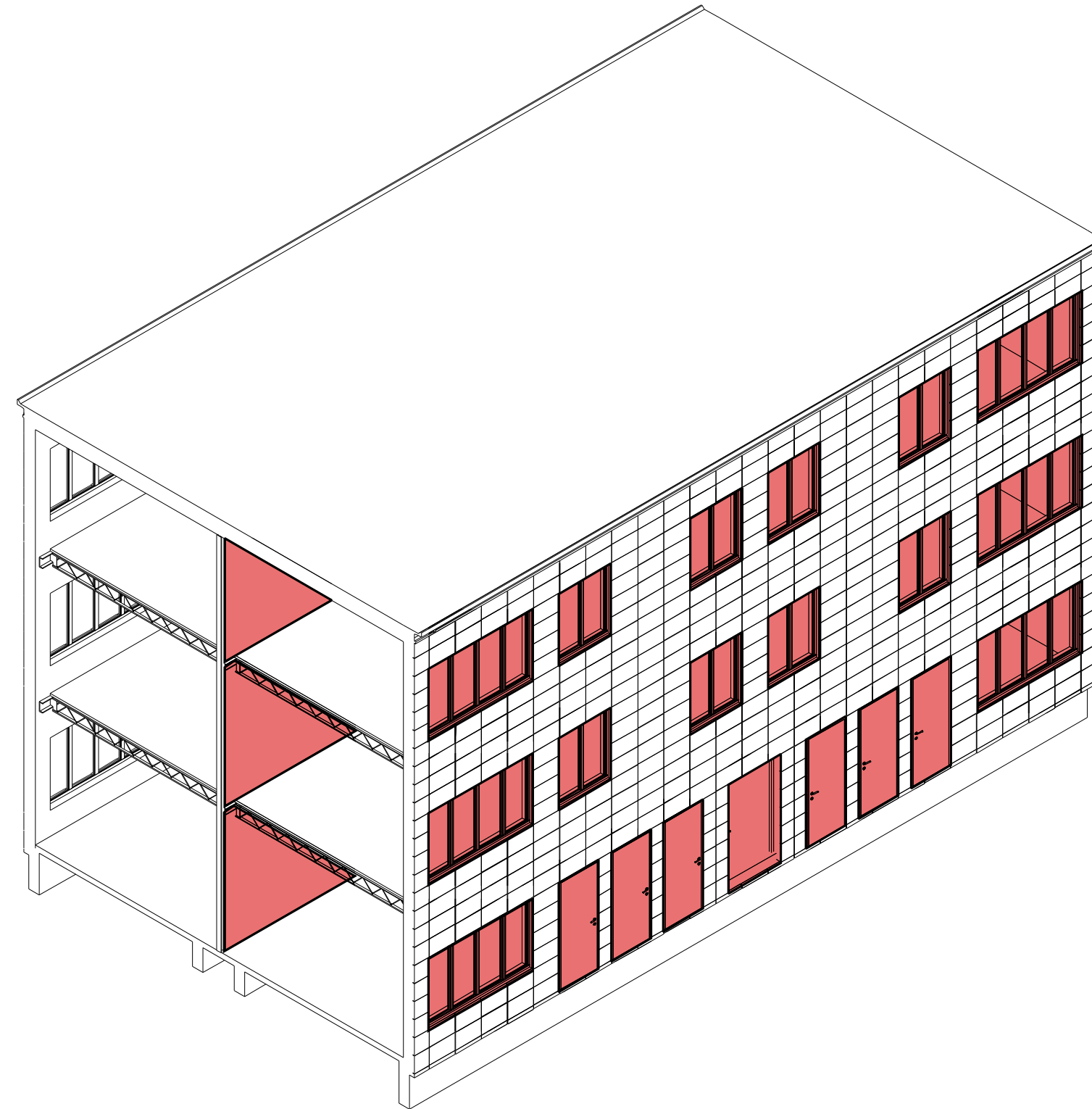


- • • low-temperature floor heating
- ventilation via window duct
- ventilation via duct
- mechanic exhaust

CLIMATE

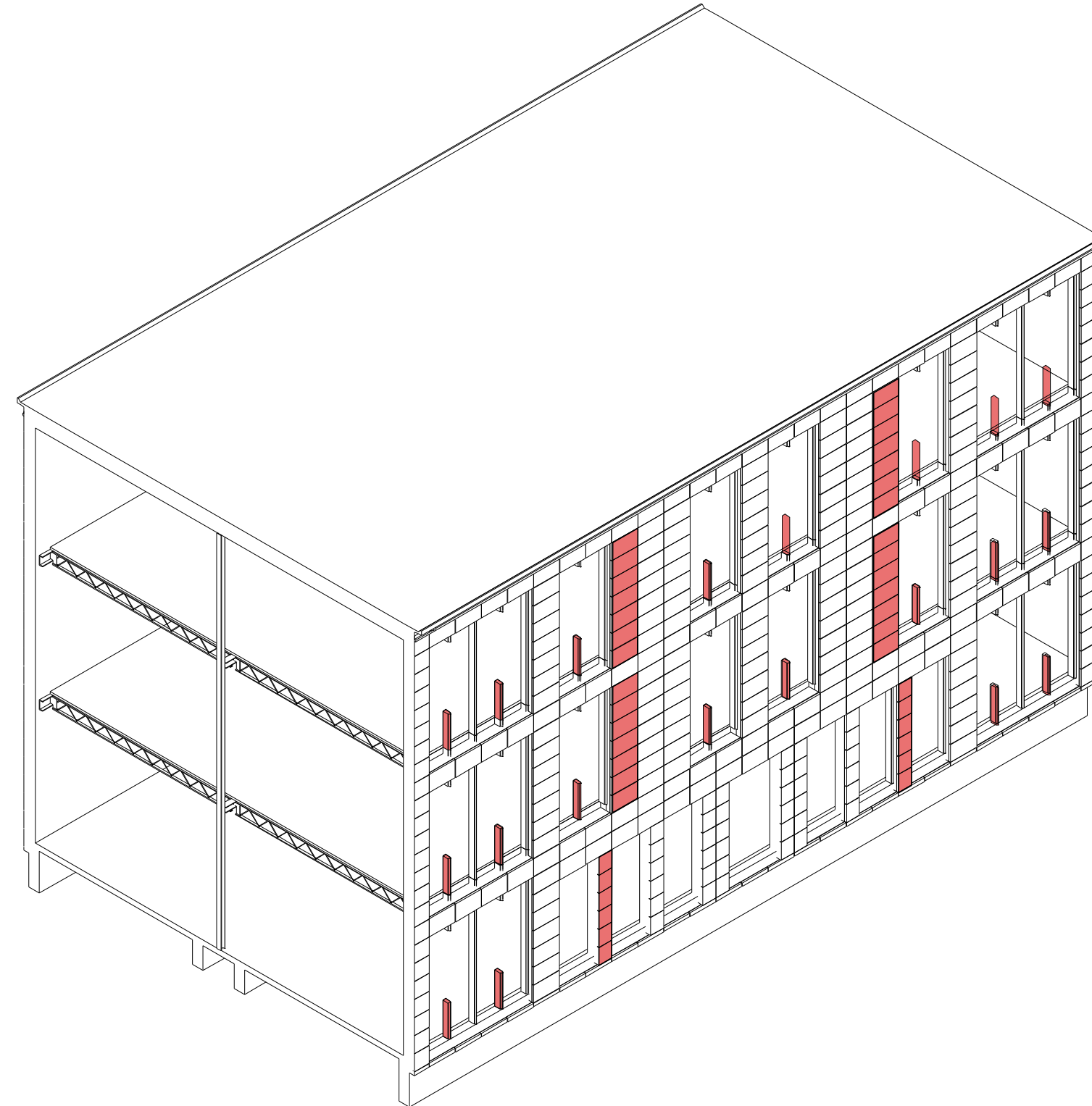


DESIGN



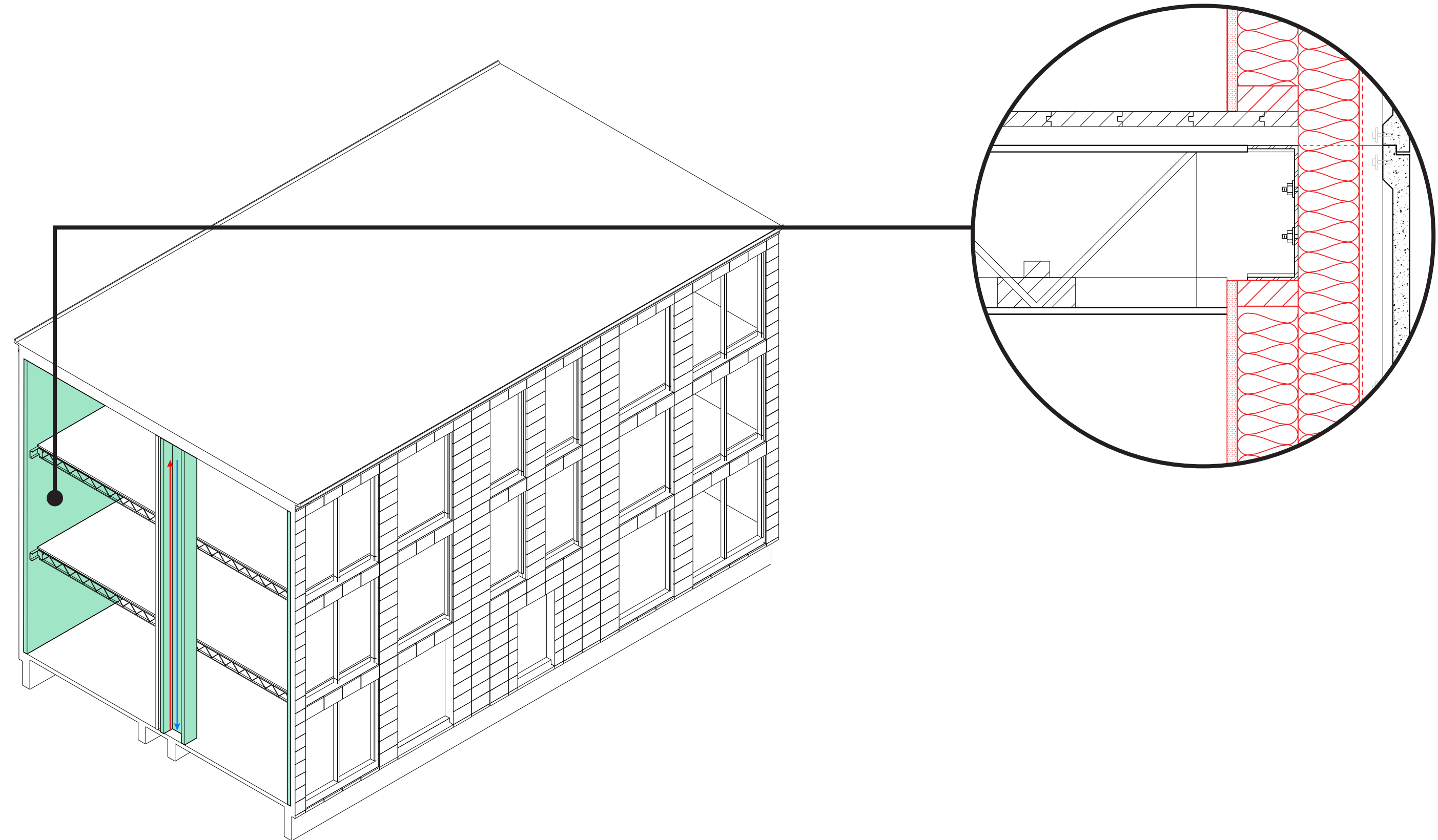
1. REMOVE EXISTING WINDOWS & INNER WALLS

DESIGN



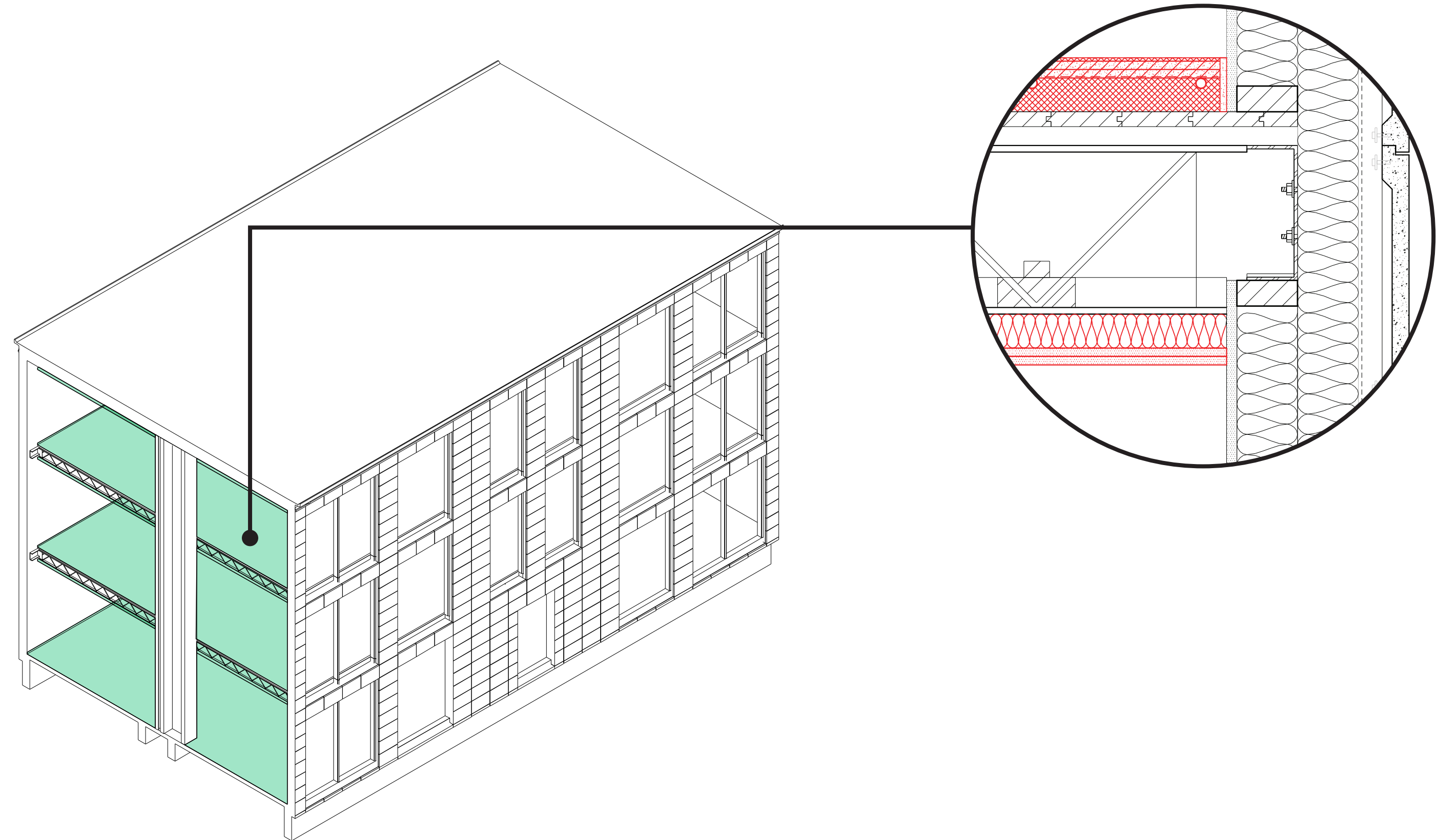
**2. REMOVE NON-BEARING COLUMNS &
ENLARGE WINDOW OPENINGS**

DESIGN



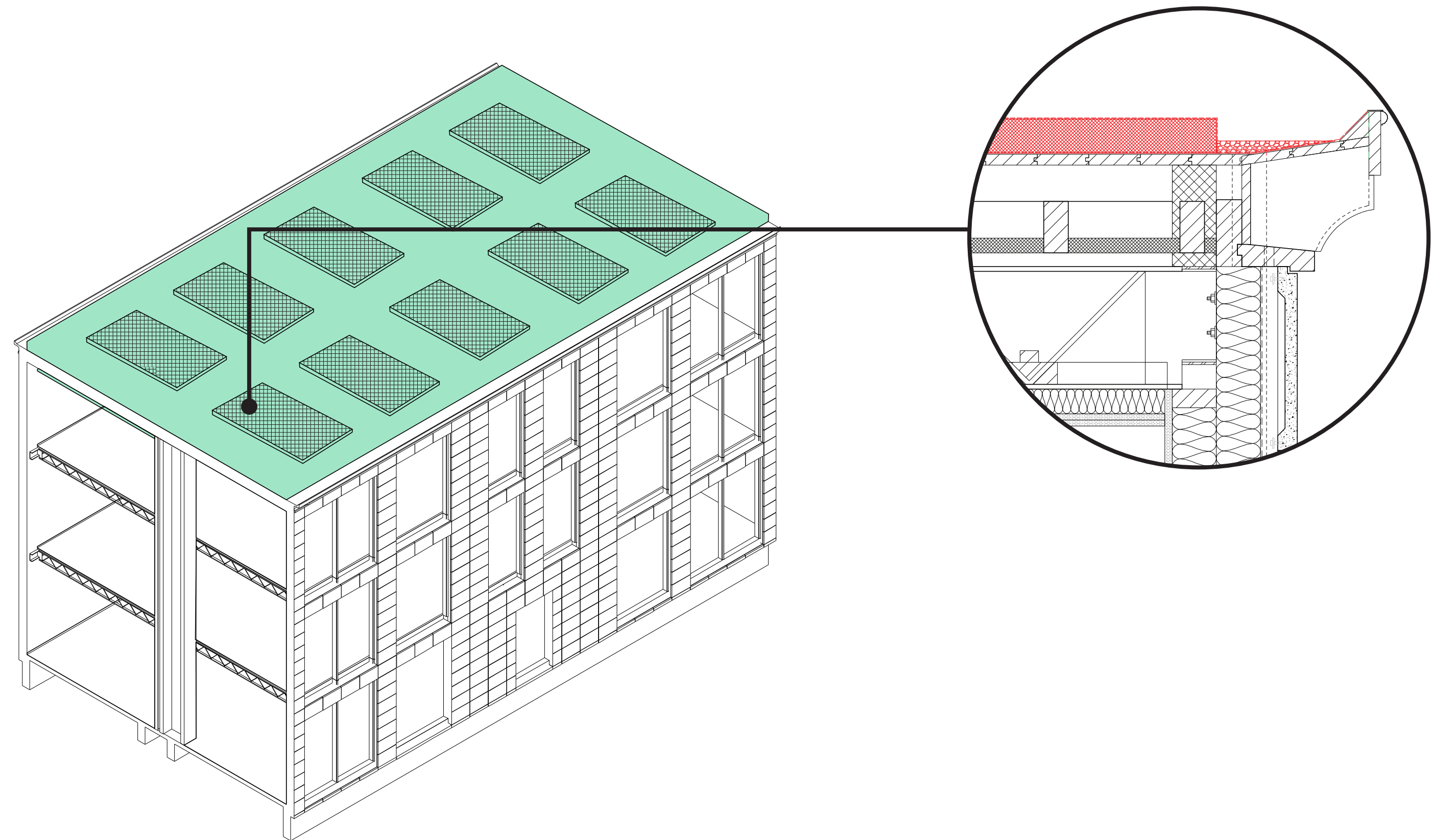
**3. PLACE INSULATION IN BETWEEN CAVITY
& CREATE SHAFTS**

DESIGN



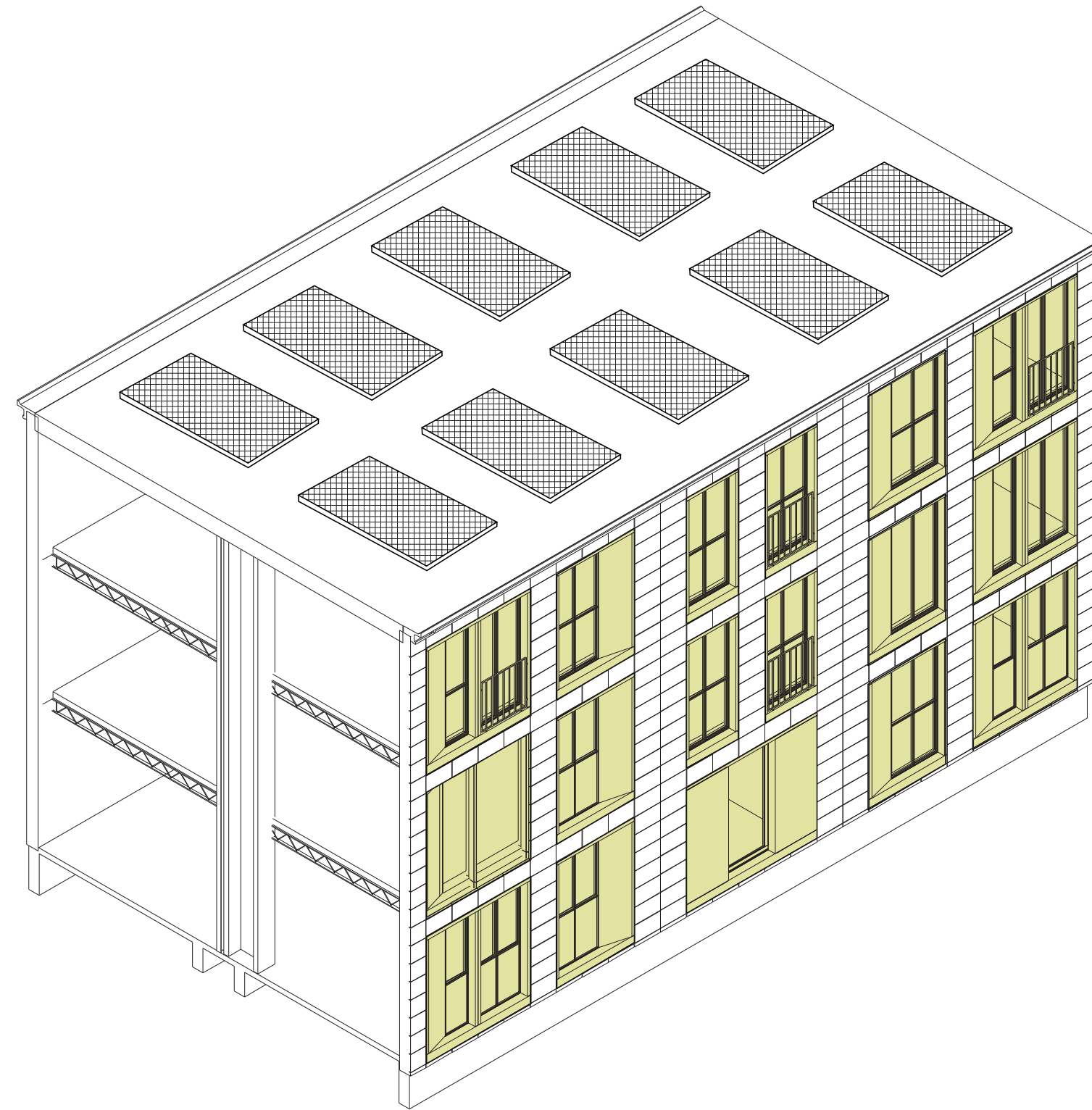
**4. PLACE NEW TOP FLOORS AND CEILINGS
(INC. INSULATION & FLOOR HEATING)**

DESIGN



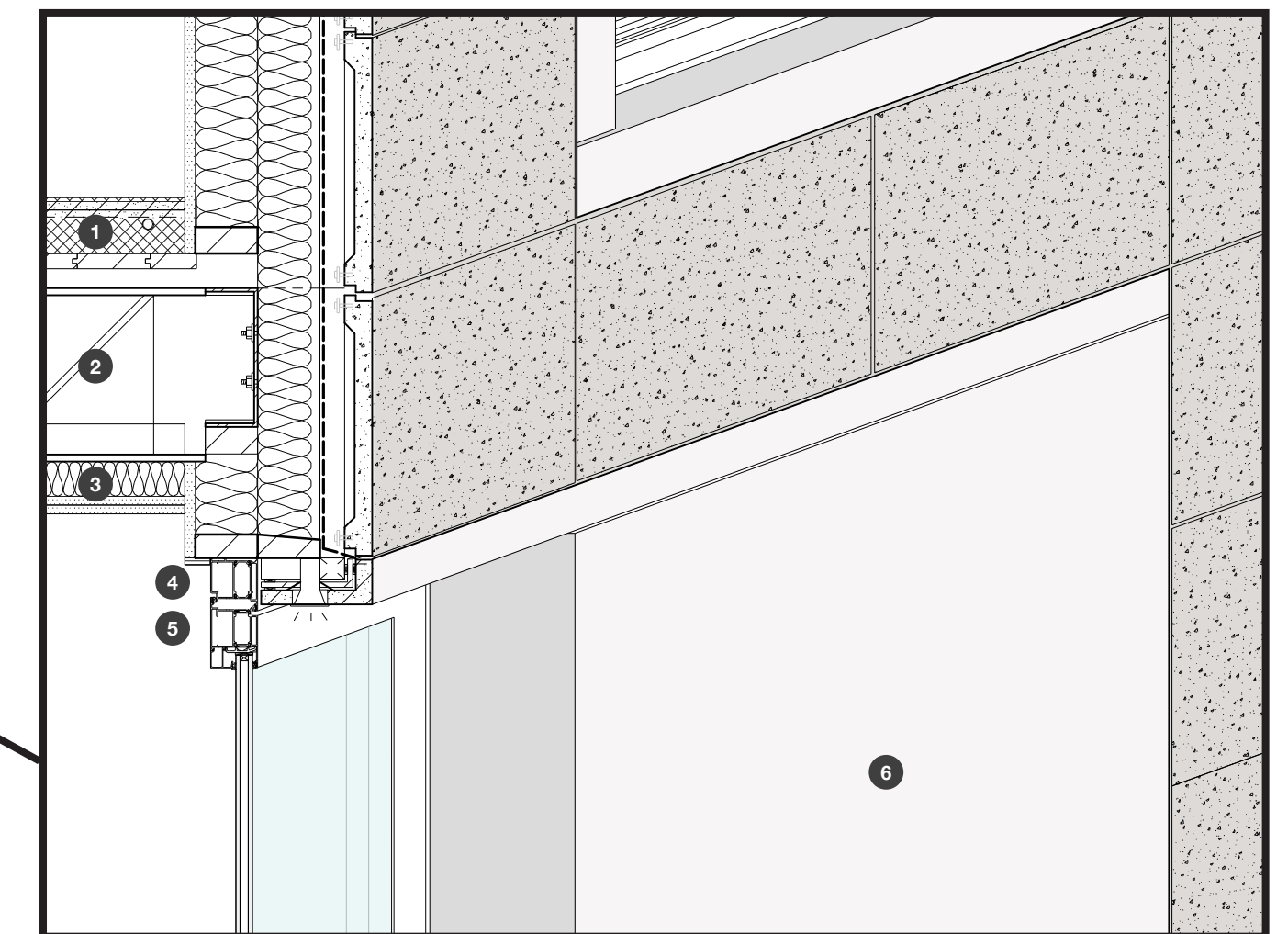
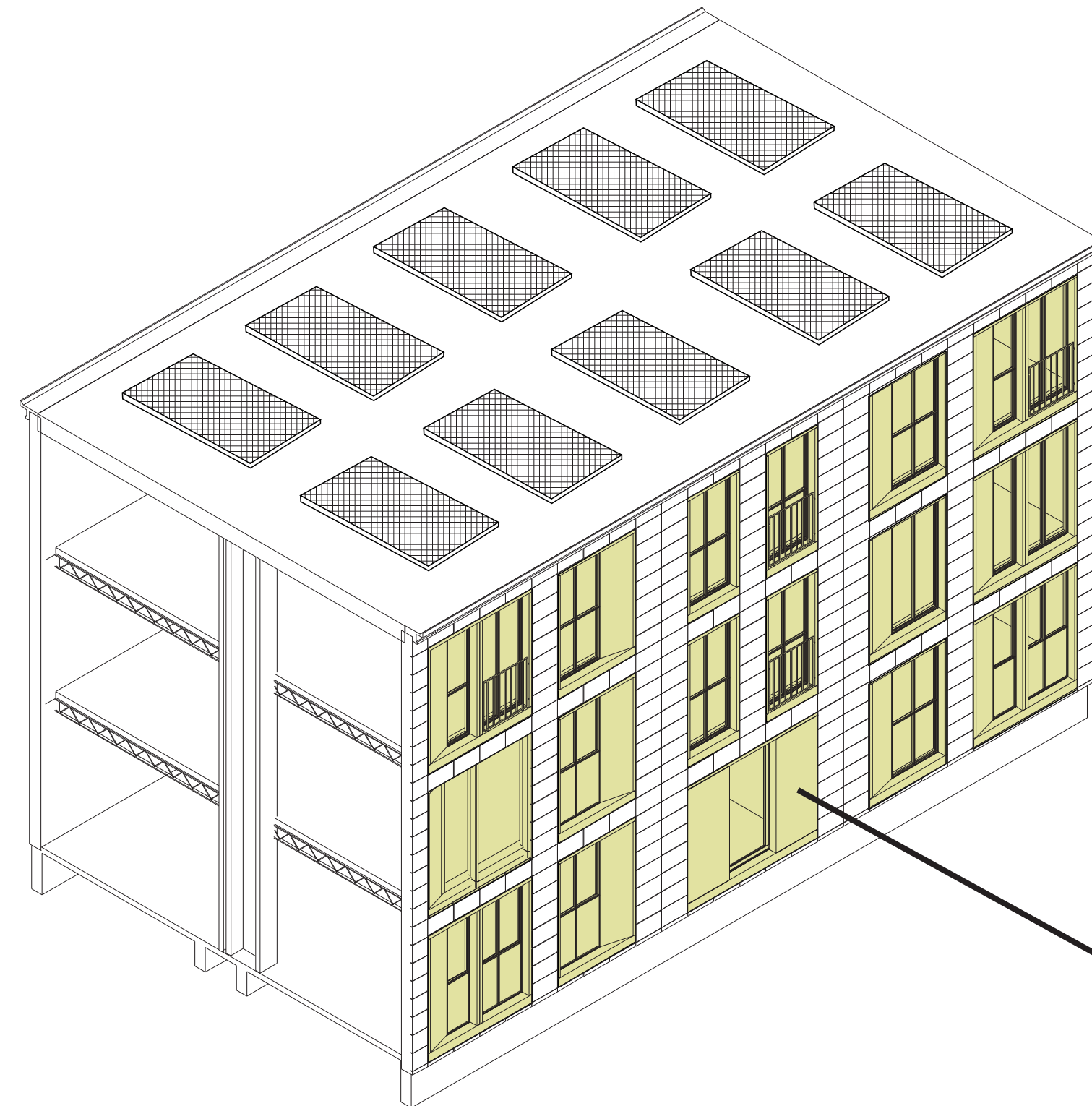
4. APPLY INSULATION ON TOP OF EXISTING ROOF.

DESIGN



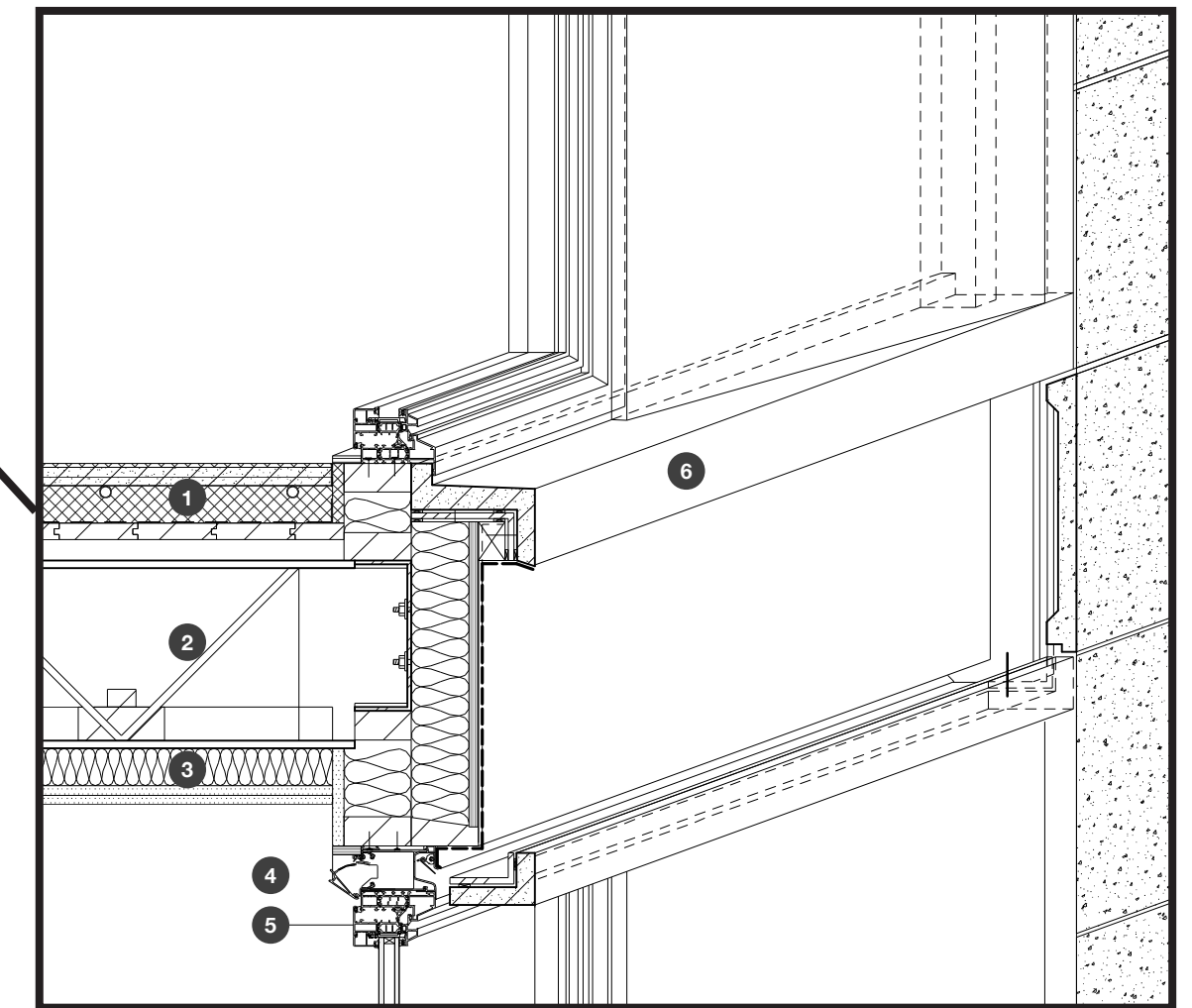
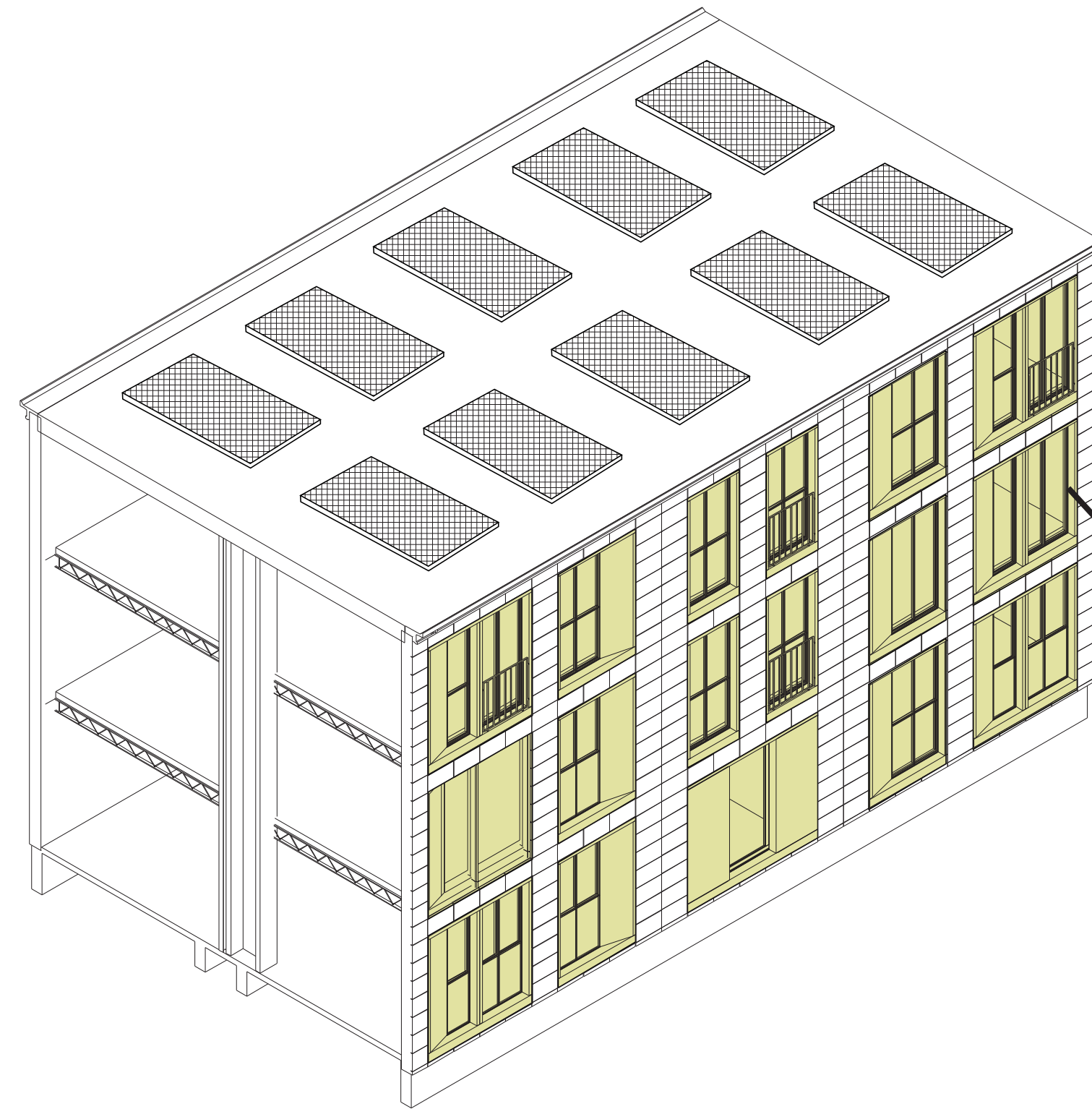
5. PLACE NEW WINDOW FRAMES.

DESIGN



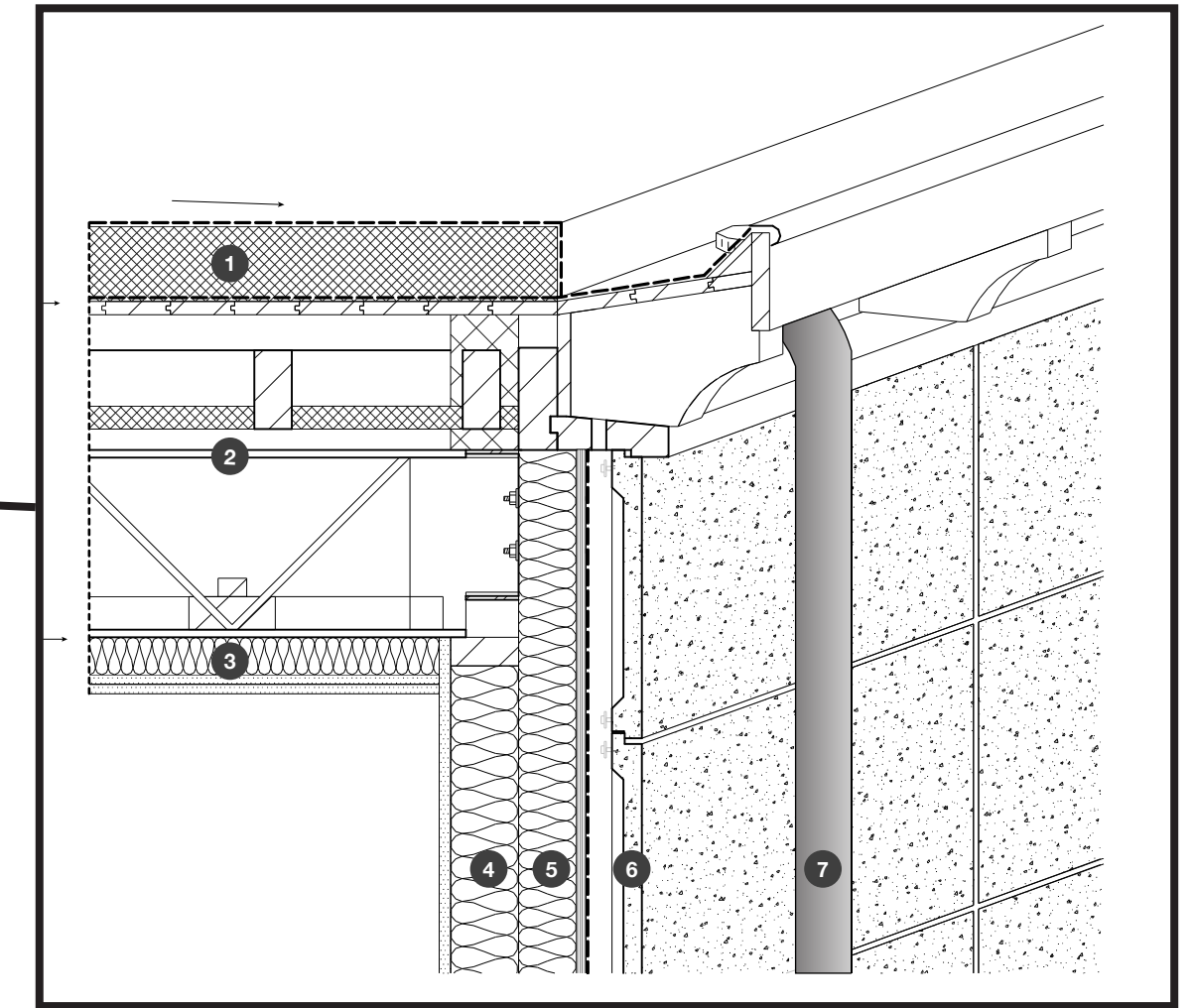
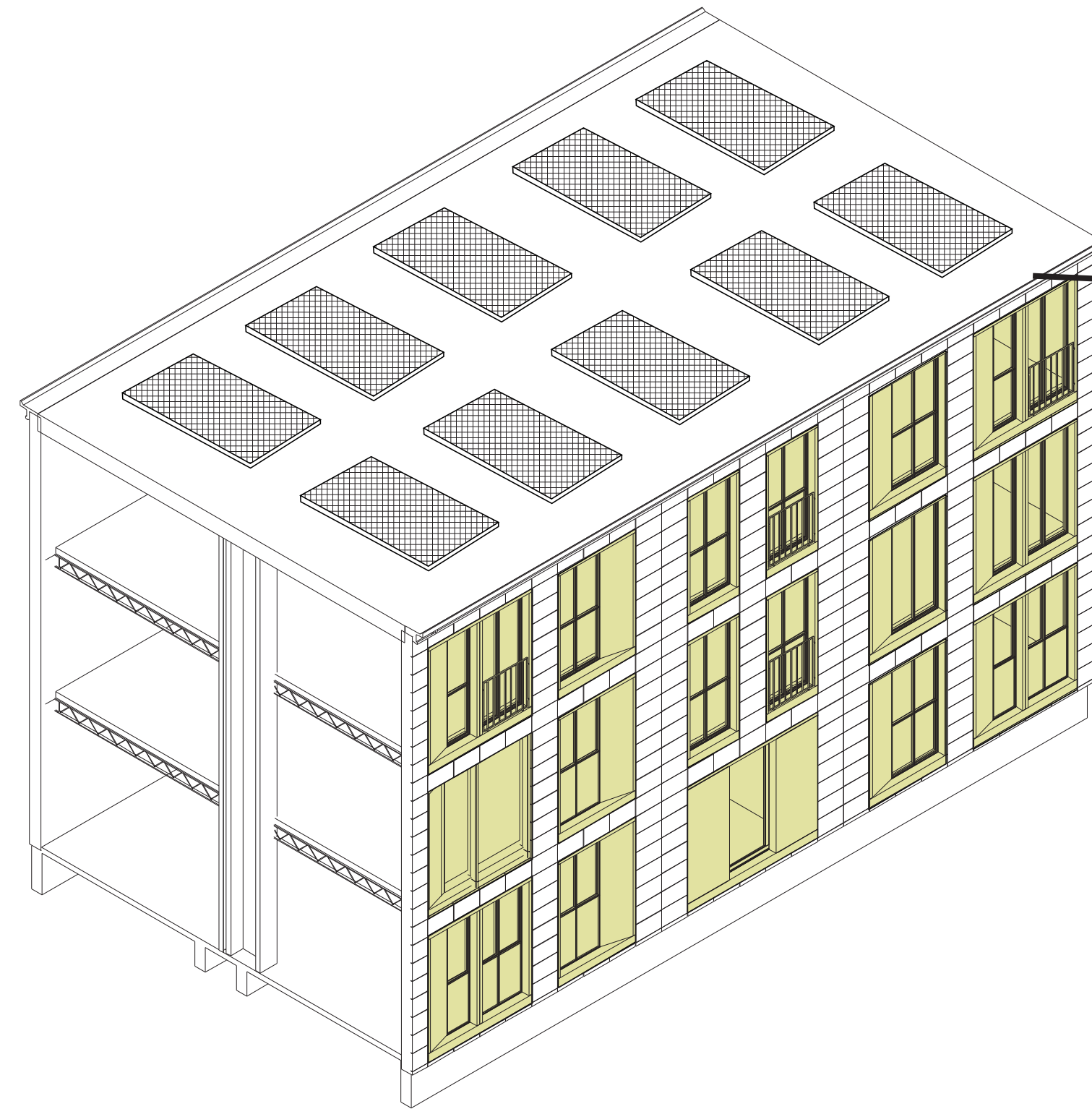
5. PLACE NEW WINDOW FRAMES.

DESIGN



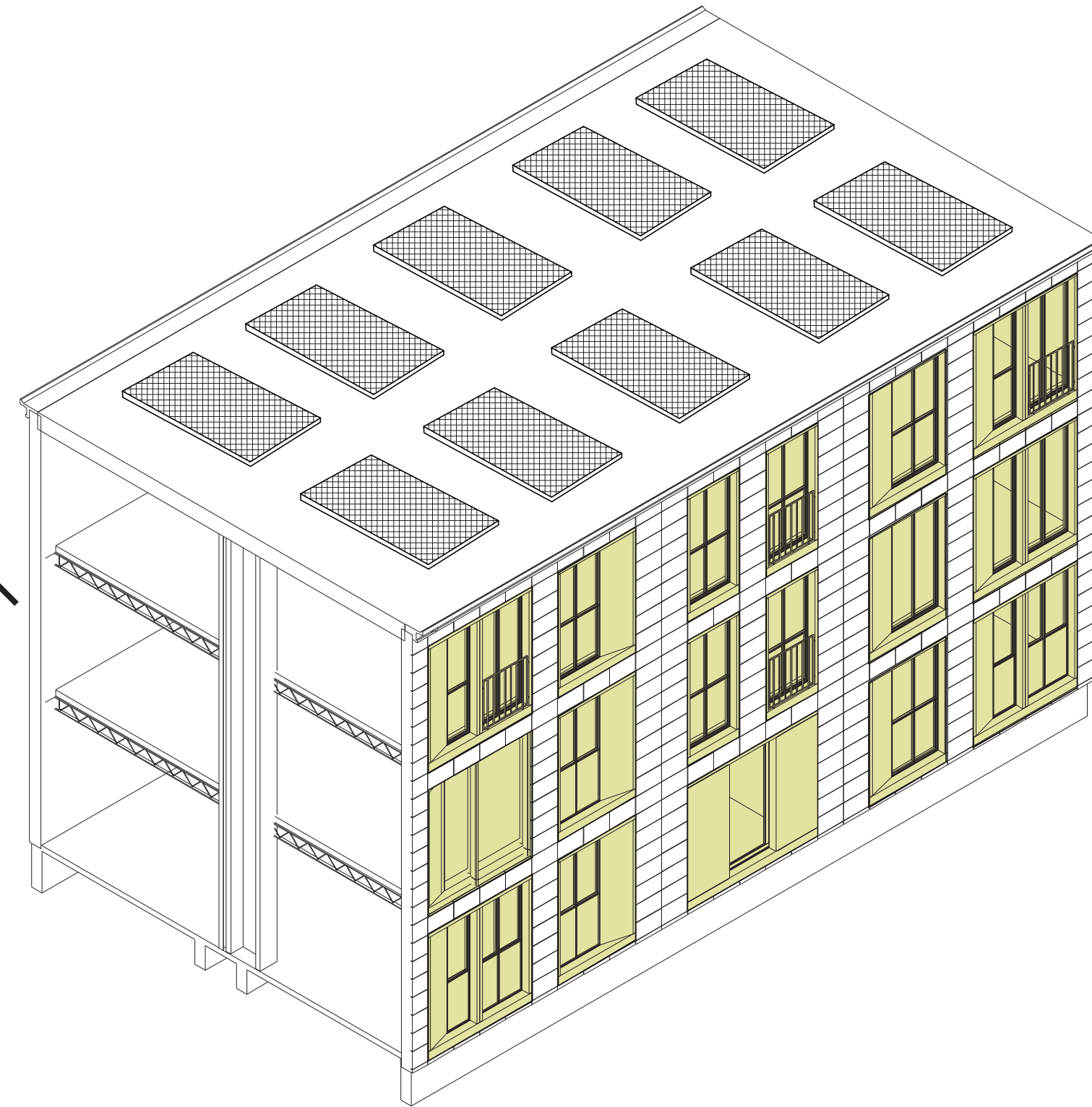
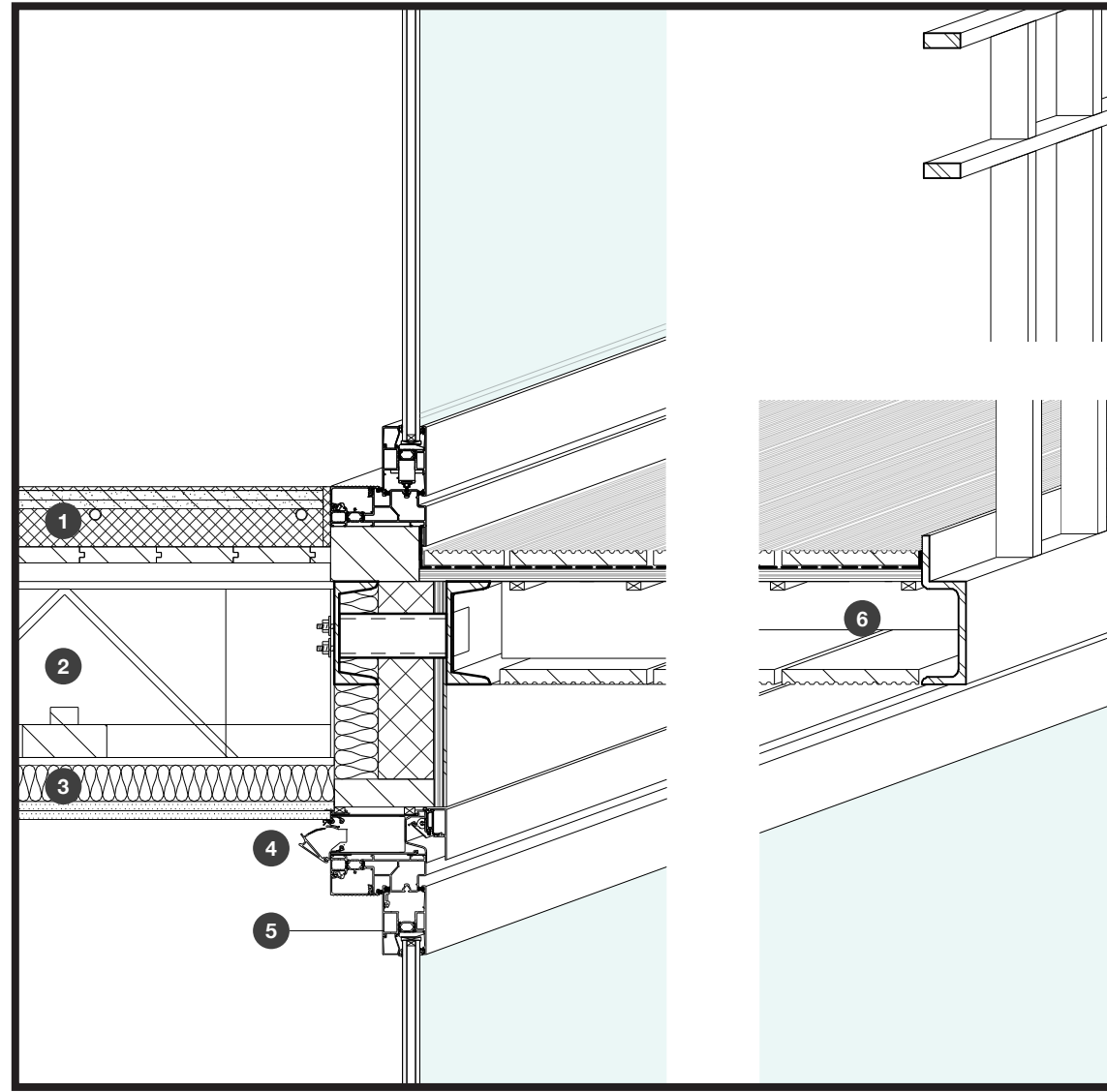
5. PLACE NEW WINDOW FRAMES.

DESIGN



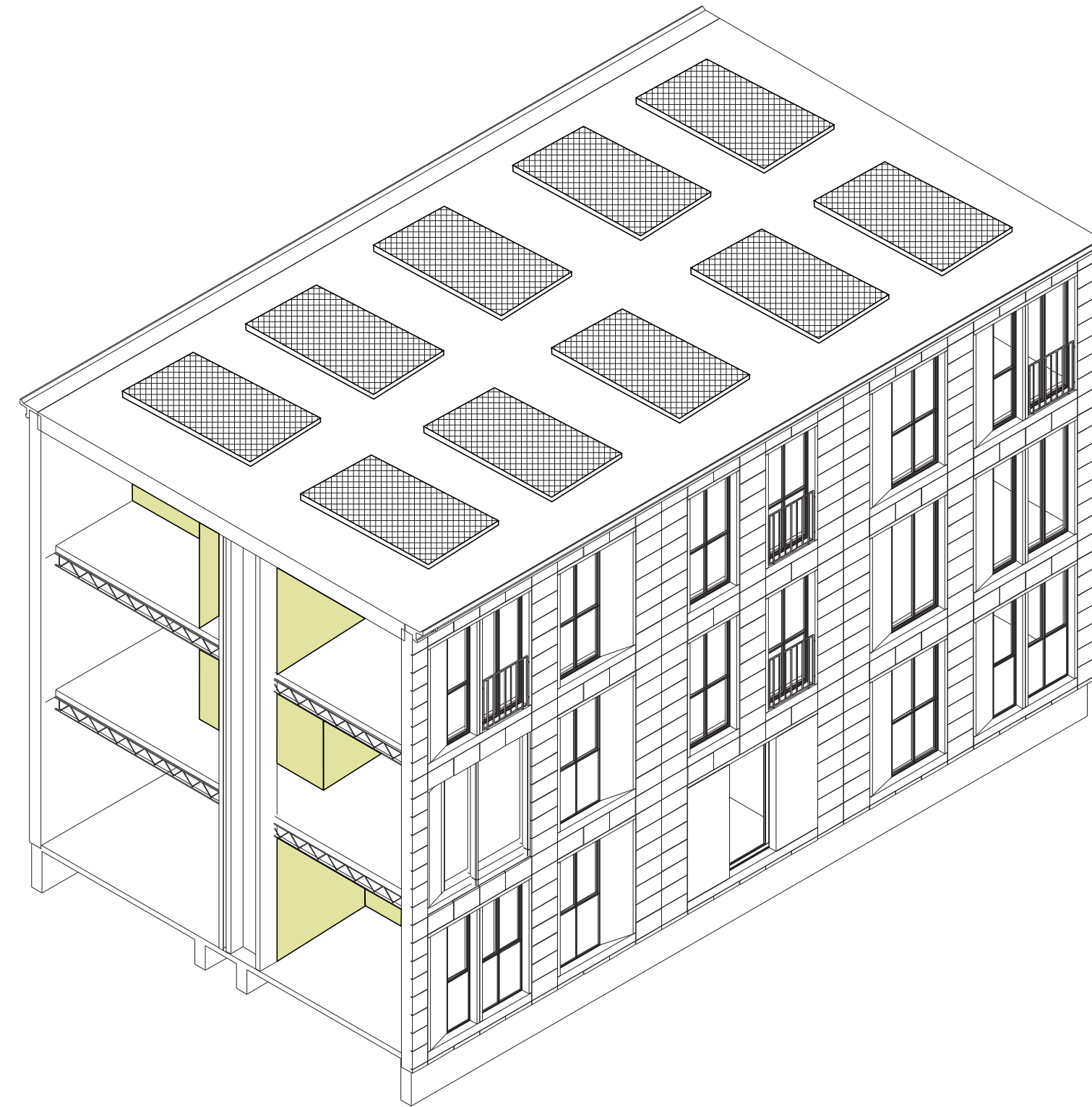
5. PLACE NEW WINDOW FRAMES.

DESIGN



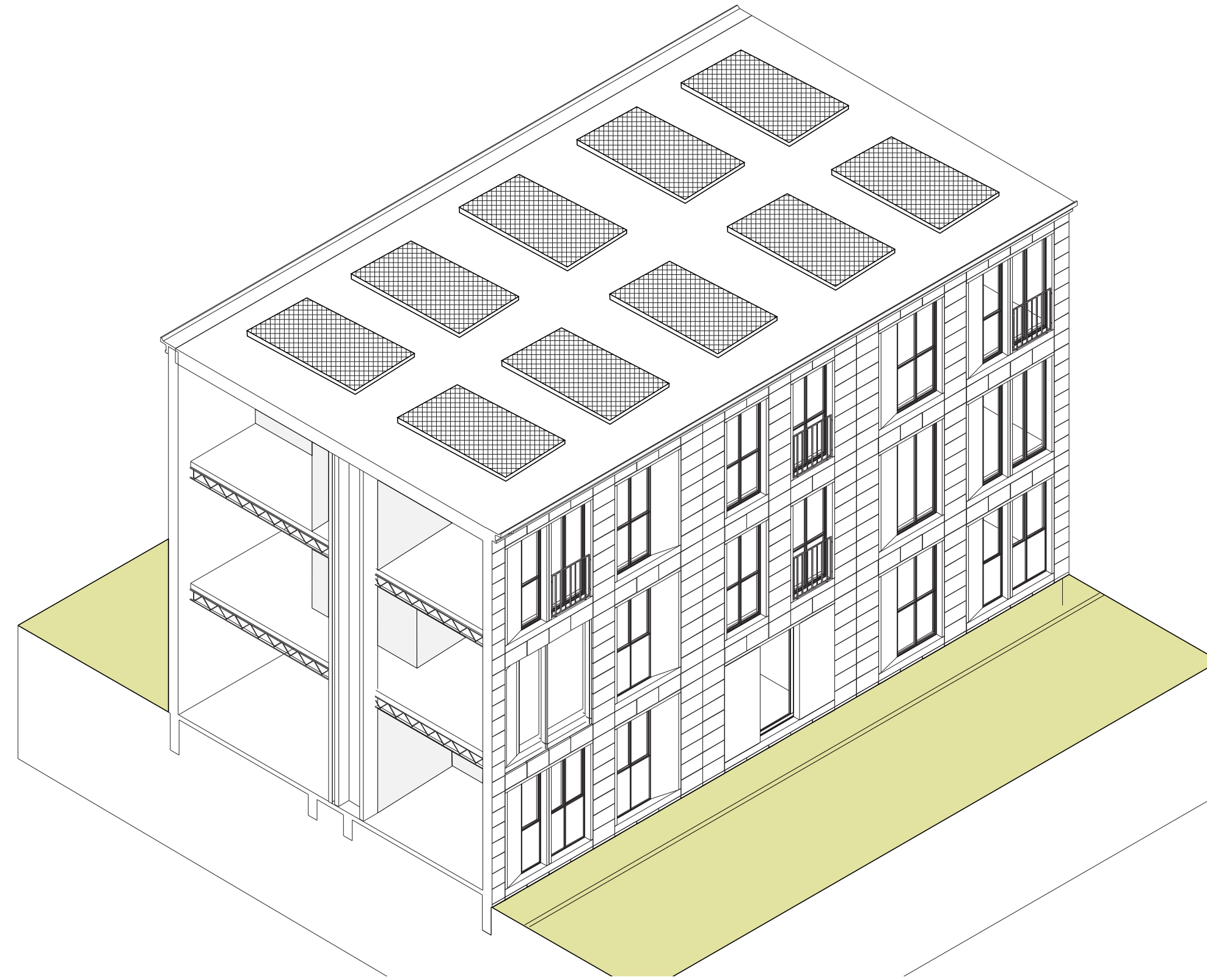
5. PLACE NEW WINDOW FRAMES.

DESIGN



6. RESIDENTS START MAKING INTERIORS

DESIGN



7. SITE BY MUNICIPALITY

CONCLUSION

How to transform the Airey-strip into good quality housing for middle-class housing?

- **Offer wide range of typologies.**
- **Offer place for self-expression and personal demands and wishes.**
- **Reinterpret details & ornaments in contemporary manner.**
- **Delicate set of changes.**



THANK YOU!!