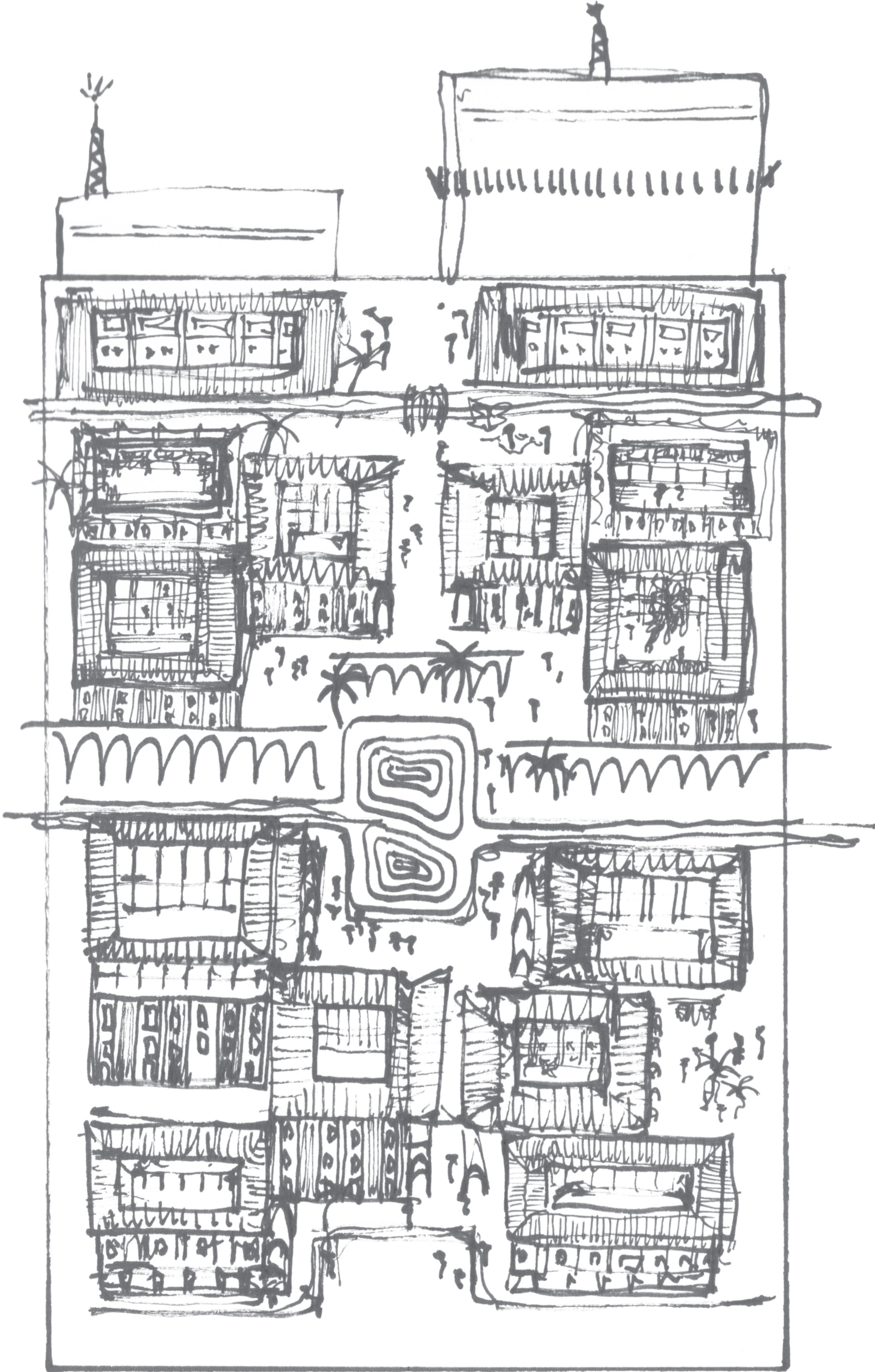


An Assembly of Livelihoods



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“How can the different stages of internal migration to Sylhet inform urban housing models that help mitigate the social impact of climate-induced displacement?”

Bangladesh is a country of extremes. Of extreme weather, extreme density and extreme headlines. It's a place full of noise, pollution and endless traffic. It's a place of extreme beauty, lush vegetation and human resilience. It's a nation with an extreme amount of people living countless personal stories. And this might just be the biggest extreme the country is facing: the difference in living conditions. The inequitable opportunities its people face when it comes down to housing.

This creates a cityscape marked by contrasts — contrasts that are also reflected in who serves and who benefits from the city. While a significant part of Bangladesh's rural poor depend on urban areas to earn a minimal income, they are the very people building the new concrete towers arising from their skylines. The faces behind big-scale construction sites like these are mostly migrant workers that left behind their villages to live on-site for several months. They often lack meaningful connections or access to social benefits within the city. Most of them are 'circular' migrants who come to the city during non-monsoon seasons to find a livelihood and return to take care of their families during the monsoons. Seasonal workers, such as those in construction or on the market, lack affordable, dignified housing closer to their livelihood opportunities during their stay in the city. This happens in Dhaka, but can equally be observed in smaller regional cities such as Rangpur or Sylhet.

It falls in line with the overall migration trends from rural to urban areas. While Bangladesh is used to yearly flooding, the changing climate is making floods more intense and less predictable, making it impossible for families to stay safe, let alone plan ahead. Rural populations of the haor regions — the wetland areas surrounding Sylhet — have lived with the rivers for generations, moving along with the shifting water as it shapes their land. But with the growing frequency of extreme

weather conditions, these established ways of 'living with the seasons' seem to have reached their limit. With crop cultivations tending to fail, fishing stocks declining sharply and riverbanks eroding, this makes sustaining a livelihood in rural areas near to impossible, forcing even more people from their homes to seek alternative sources of income in urban areas.

It would need another city the size of Dhaka to house all these people seeking safe living conditions. Seeing this as an inevitable reaction to the changing climate, how can cities like Sylhet prepare itself for the upcoming streams of migrating families, of (low-)skilled workers, of people trying to build a livelihood from scratch? How could we generate spaces of assembly that empower the marginalised to work towards better living conditions as a collective endeavour?

Cities will have to accommodate people that have left behind not only their physical shelter, but also their deeply embedded organisation of life as part of a community. Together, these challenges urge us to question how the community-based dwelling patterns that people left behind could inform urban housing models that help mitigate the social impact of climate-induced displacement.

This requires thorough insight of the different causes for internal migration, to generate a more inclusive and culturally sensitive approach to housing displaced communities. Could traditional dwelling patterns, centred around community, offer a framework for housing that doesn't only *accommodate* the urban poor but is also supportive of their social well-being?

It's about trying to find common ground between displacement and rootedness, guilt and empowerment, and — at 'the intersection of necessity and dignity' — between crisis and hope.



Ahmed, 20
Zogali — construction



Shihab, 17
Trainee — tiles



Imran, 29
Mistri — welding



Emon, 18 — Zogali/ construction assistant
(more personal stories are included in the graduation booklet)



Mariyam, 40 — Soil worker



Riaz, 24 — Fish vendor

CONSTRUCTION PROCESS

The construction process should give workers immediate access to vocational training in masonry, carpentry, and other trades, turning the building process itself into a generator of skills, income, and agency.

Training is viewed as an integral part of the larger housing system—not an add-on, but a structural component. Therefore, low-skilled workers are equally invited to become active participants in the construction of their future homes. The newly acquired skills create pathways for household or community-based enterprises, allowing participants to contribute to the project while building foundations for their future livelihoods.

From the start, the building process should create an enabling environment where masons, carpenters—and the rest of the community—can grow from strength to strength.

The embedded approach ensures that the construction phase already begins to fulfill the deeper goals of housing: security, belonging, and equitable opportunity.

INTEGRATION

As internal migrants arrive in the city, whether to look for seasonal employment or for a more permanent stay, they often start off as outsiders—either by being socially secluded or by having no economic foundation to build upon. Hence, the main challenge after construction lies in integrating both the newly built neighbourhood as well as its inhabitants into the established urban fabric.

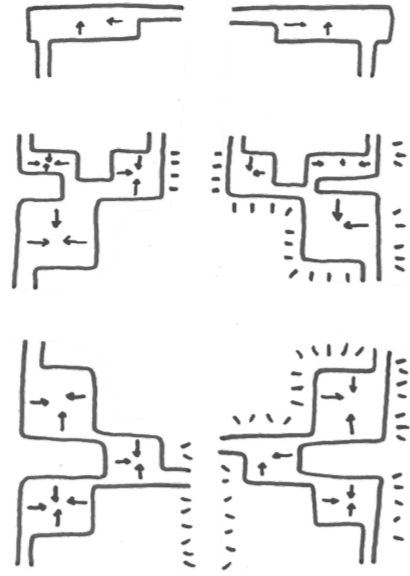
By creating a “condensed village” within the dense city, inspired by ‘informal’ models like Geneva Camp, the process should enable (rural) migrants to maintain social cohesion while also integrating economically. This implies a translation of the social qualities of informal settlements into the dense inner-city setting of the Hawker’s Market, generating a neighbourhood founded on an ethos of care and anticipatory action for the future.

Only with an integration of these social ambitions could housing move beyond the mere provision of shelter.



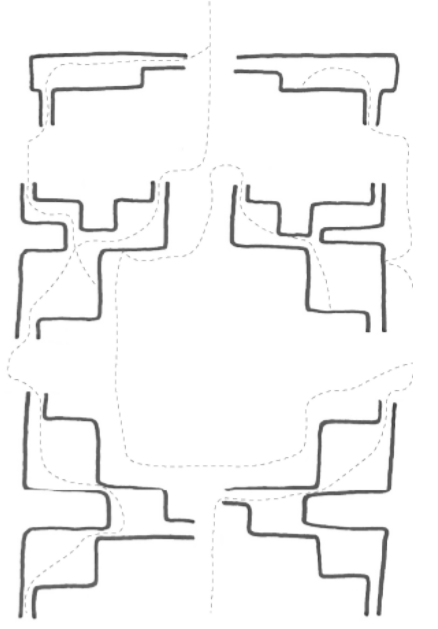
The building clusters are organised along and around an elaborate network of courtyards. Coming from the bustling market streets, the public arcades next to the water will guide residents and visitors from the commercial area toward the more private, serene inner courtyards.

Open, outward facing facades toward the streets are counterbalanced by the more intimate, inward facing courtyards,



creating a much-needed gradient from lively commercial activity toward calm residential clusters.

Nevertheless, the labyrinthic network shouldn't hinder its residents to reach all their daily activities easily, allowing for short routes to job opportunities, running errands at the market or washing clothes in the river. Residents can choose between a public or more private route to reach their home.



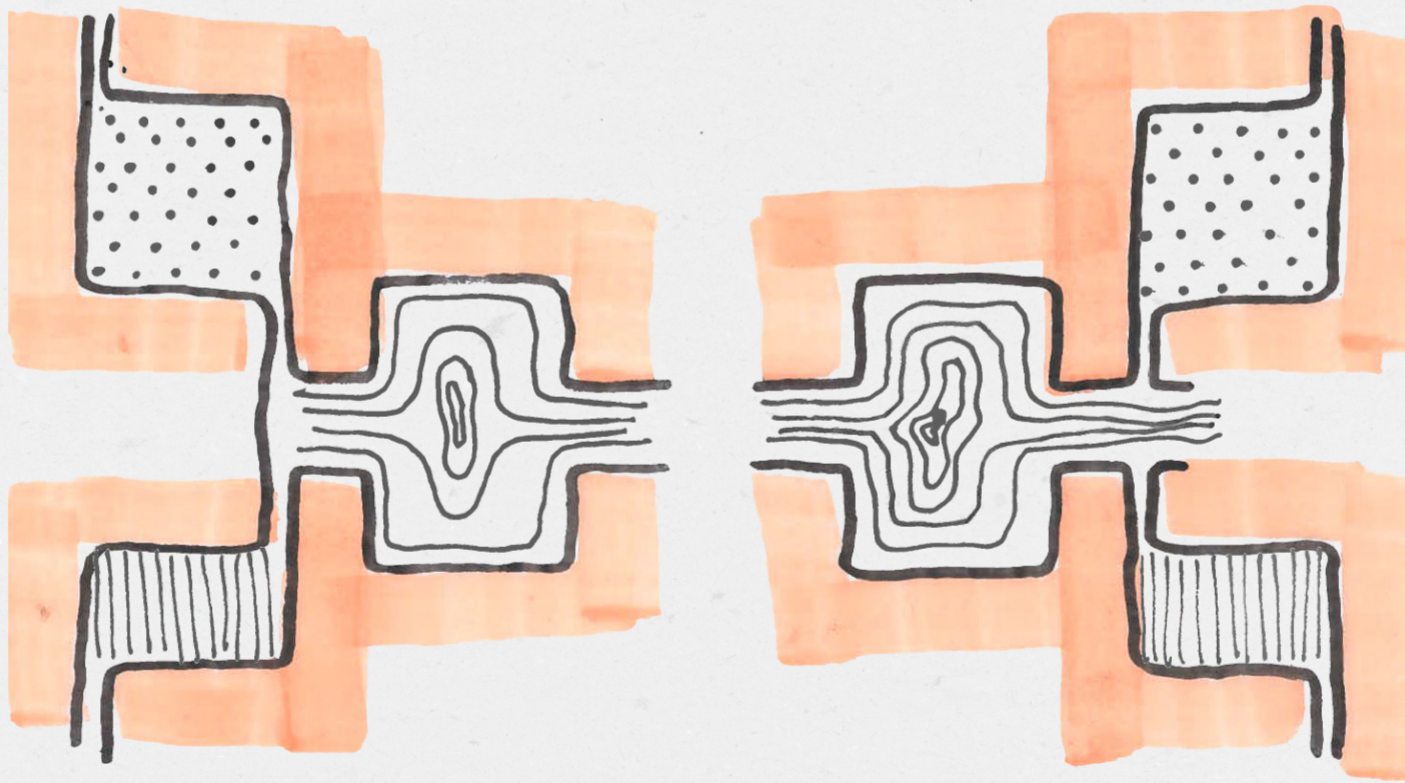
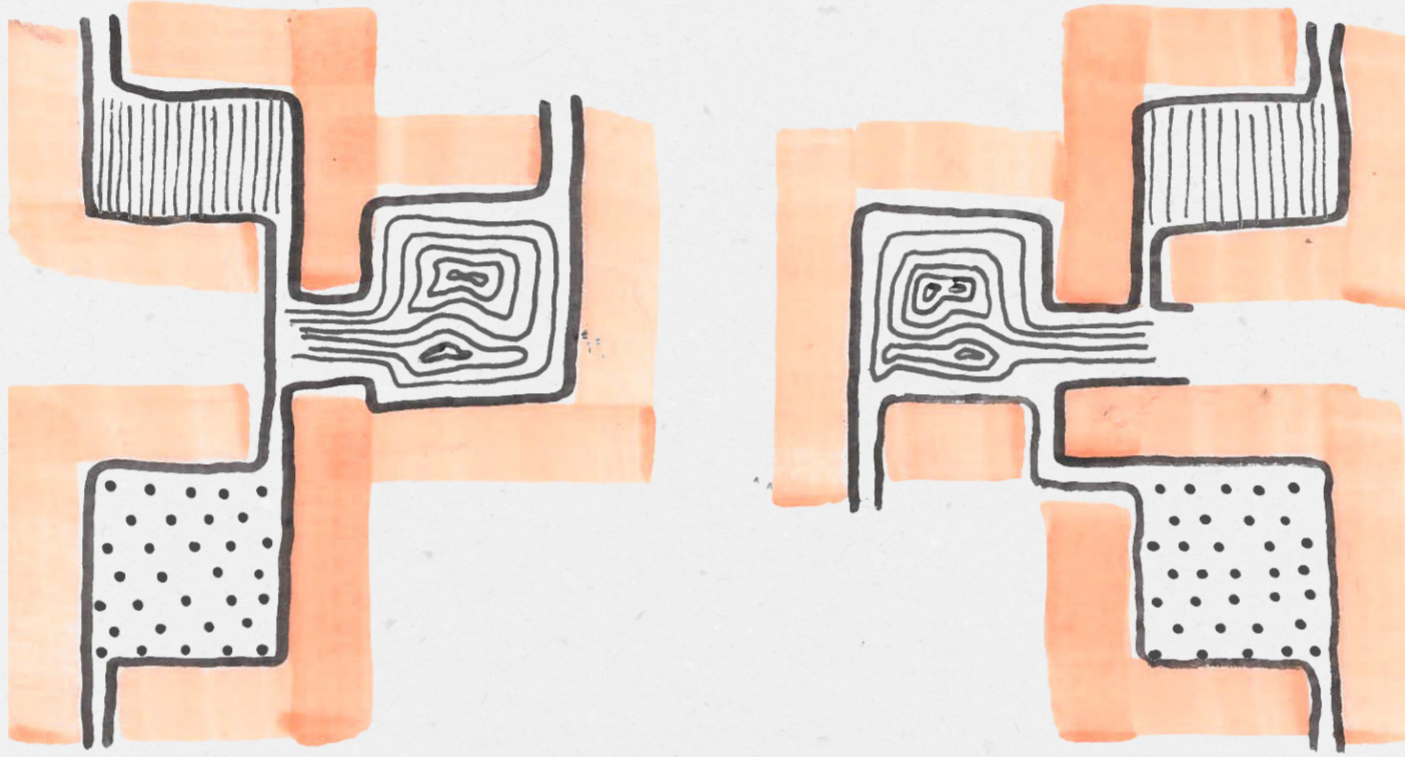
Scale 1:1000

Plot area = 2 ha
 Number of dwellings = 620
 Density = 310 dwellings/ha

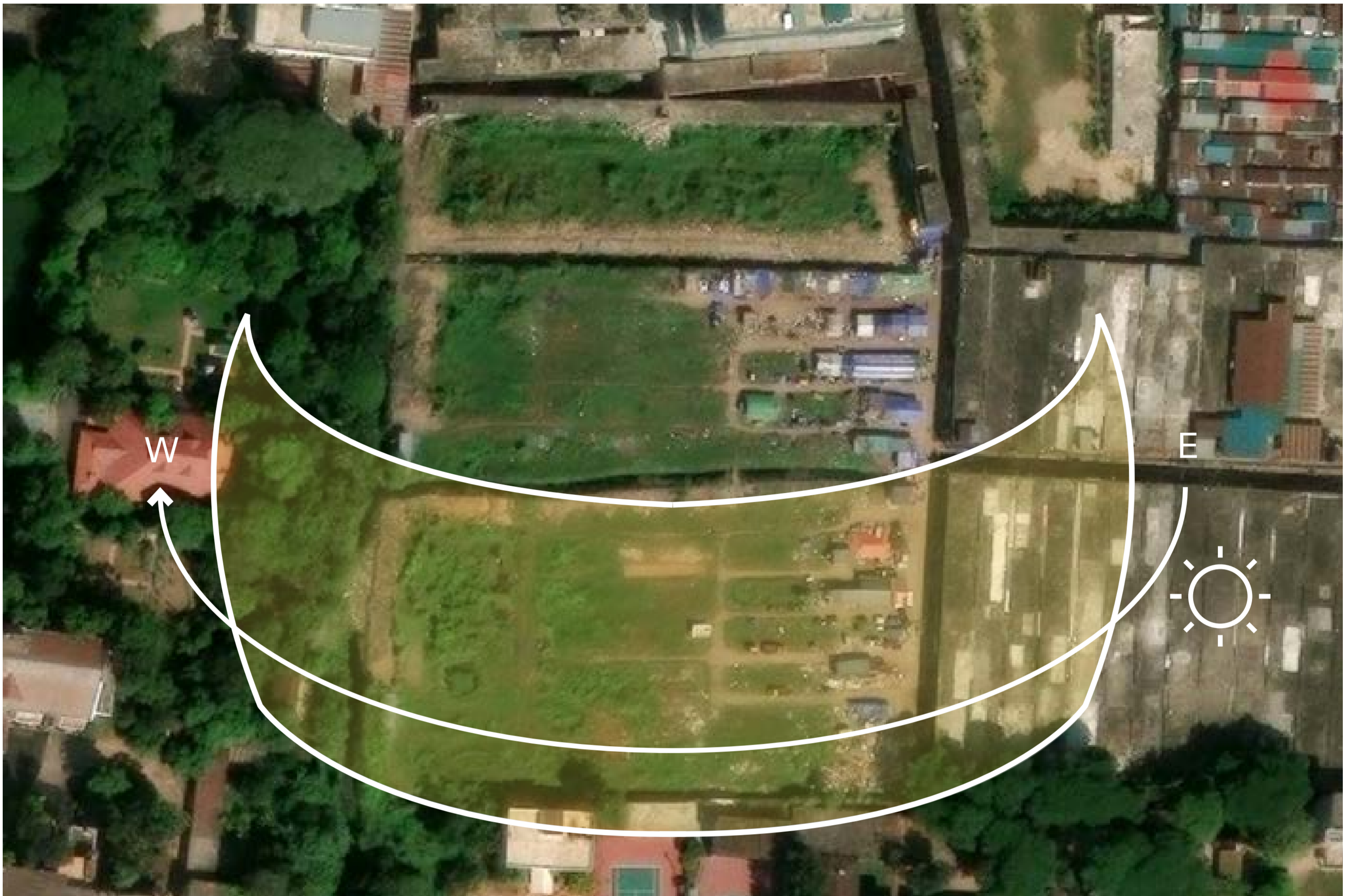
FSI = 1,4
 GSI = 0,45

Unit Sizes = 22 m² > 82 m²
 Scheme = Public Housing

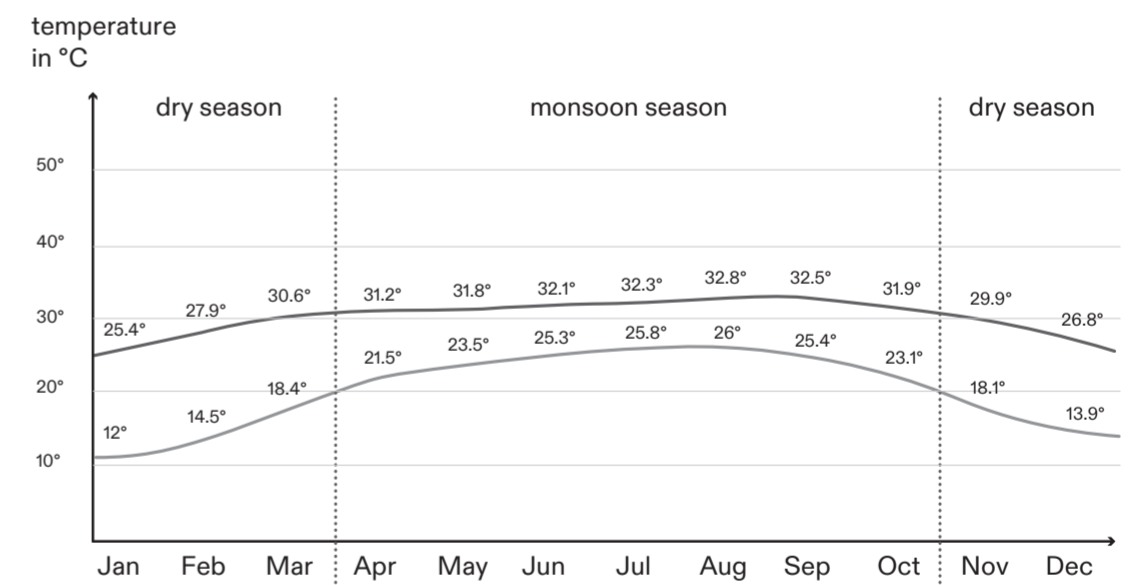
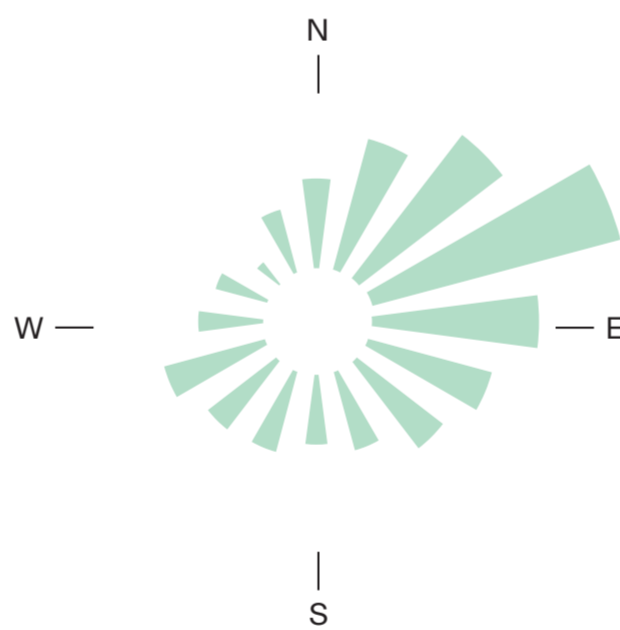
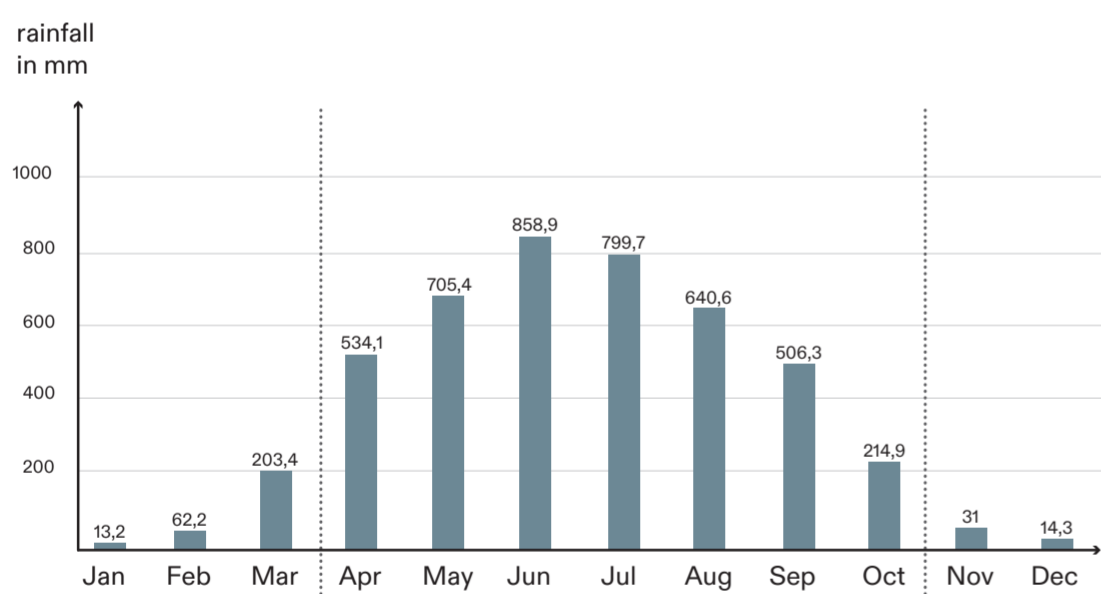
Tenure = Rent via employer or through sweat equity (seasonal) or Home/Shop Ownership with delegated responsibilities for the community



II SITE



(Source: Google Earth and World Weather & Climate Information, 2025).



Flood risk

The site sits close to the Surma river, which poses flood risks during monsoon seasons. It has seen yearly floodings, although not as severe as in the low-lying haor regions. Excess water on site can easily run off to the riverbank. In case the inner city does flood, it is mostly due to waterlogging and insufficient draining possibilities.

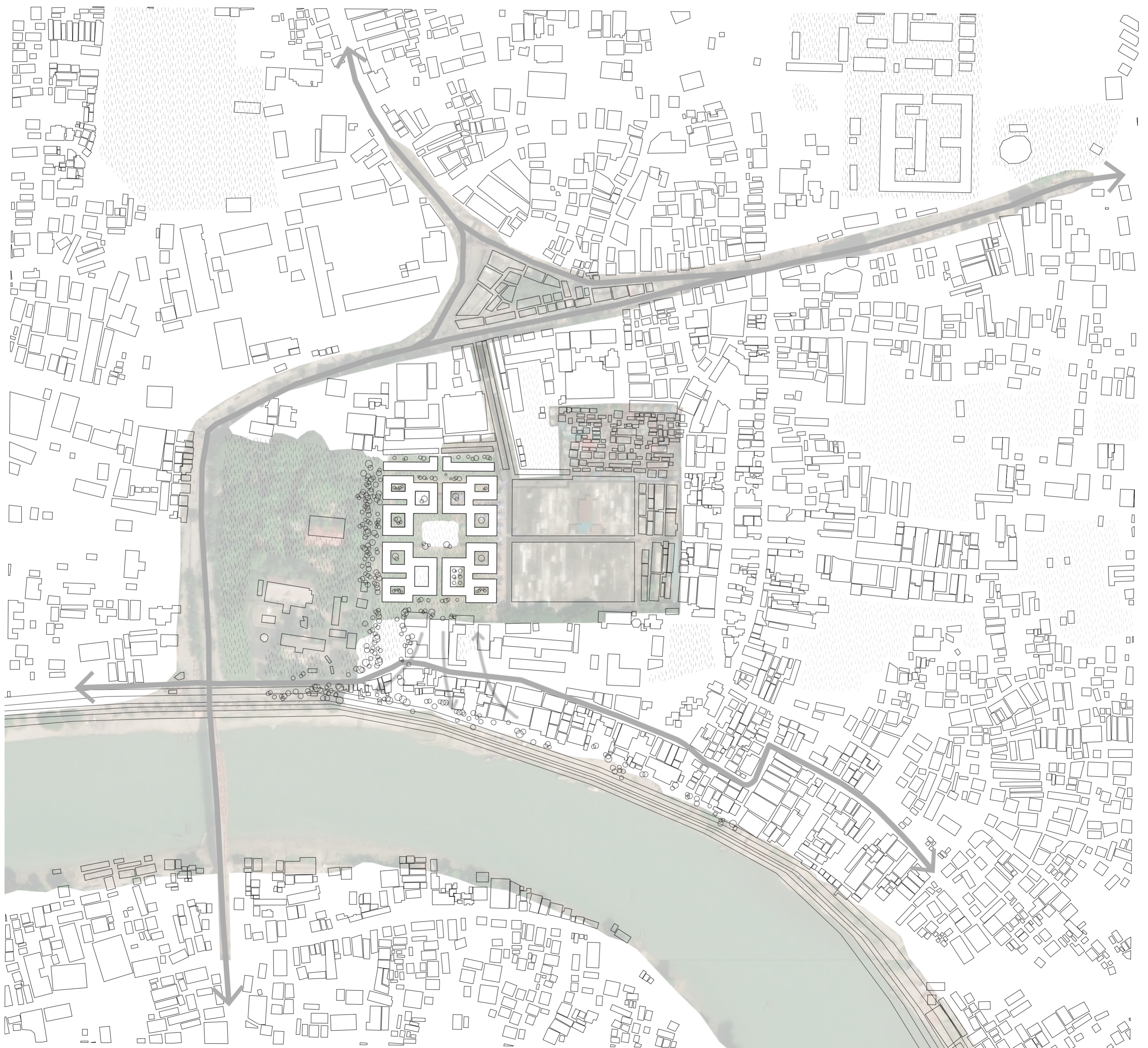
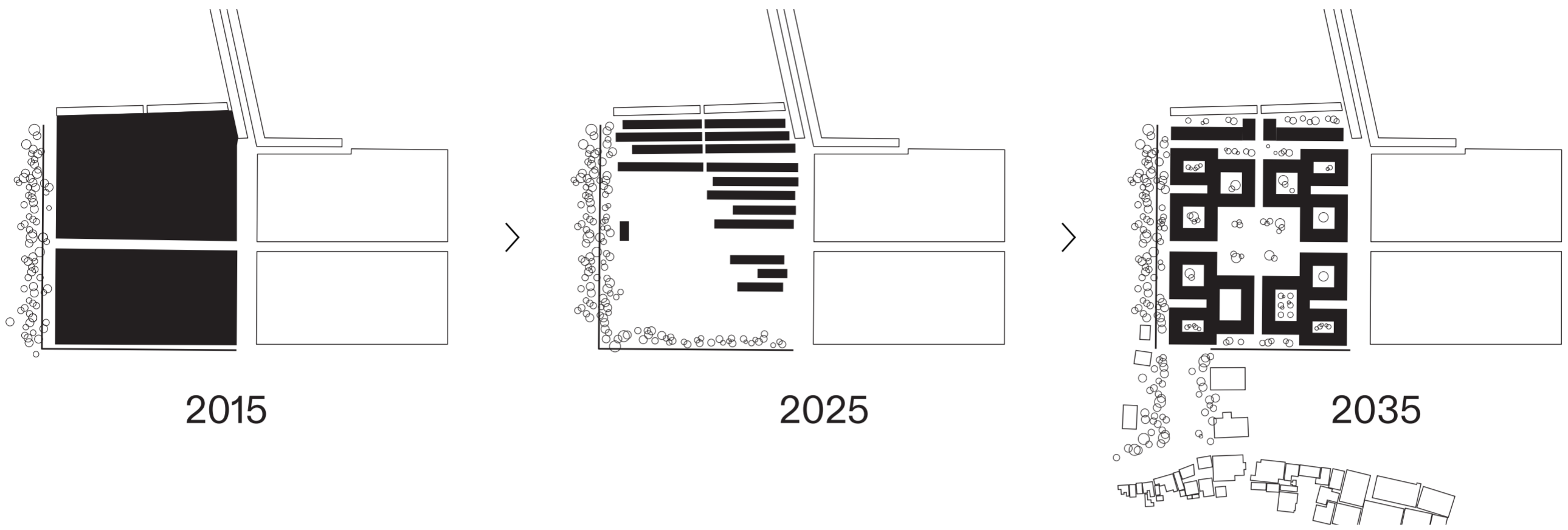
Temperature

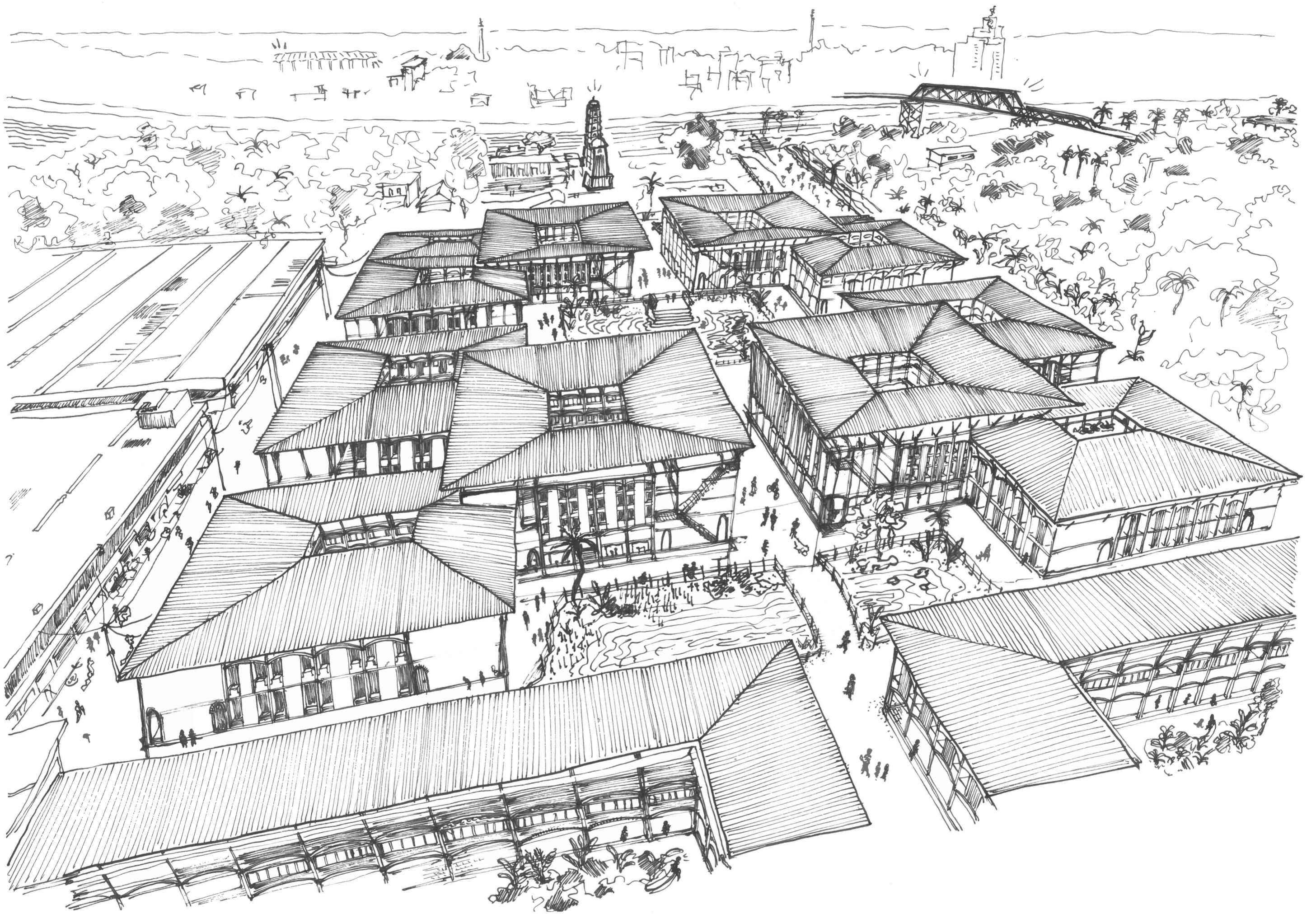
Although temperatures in Sylhet are quite constant throughout the year, days can feel a lot warmer during monsoon season due to the high humidity.

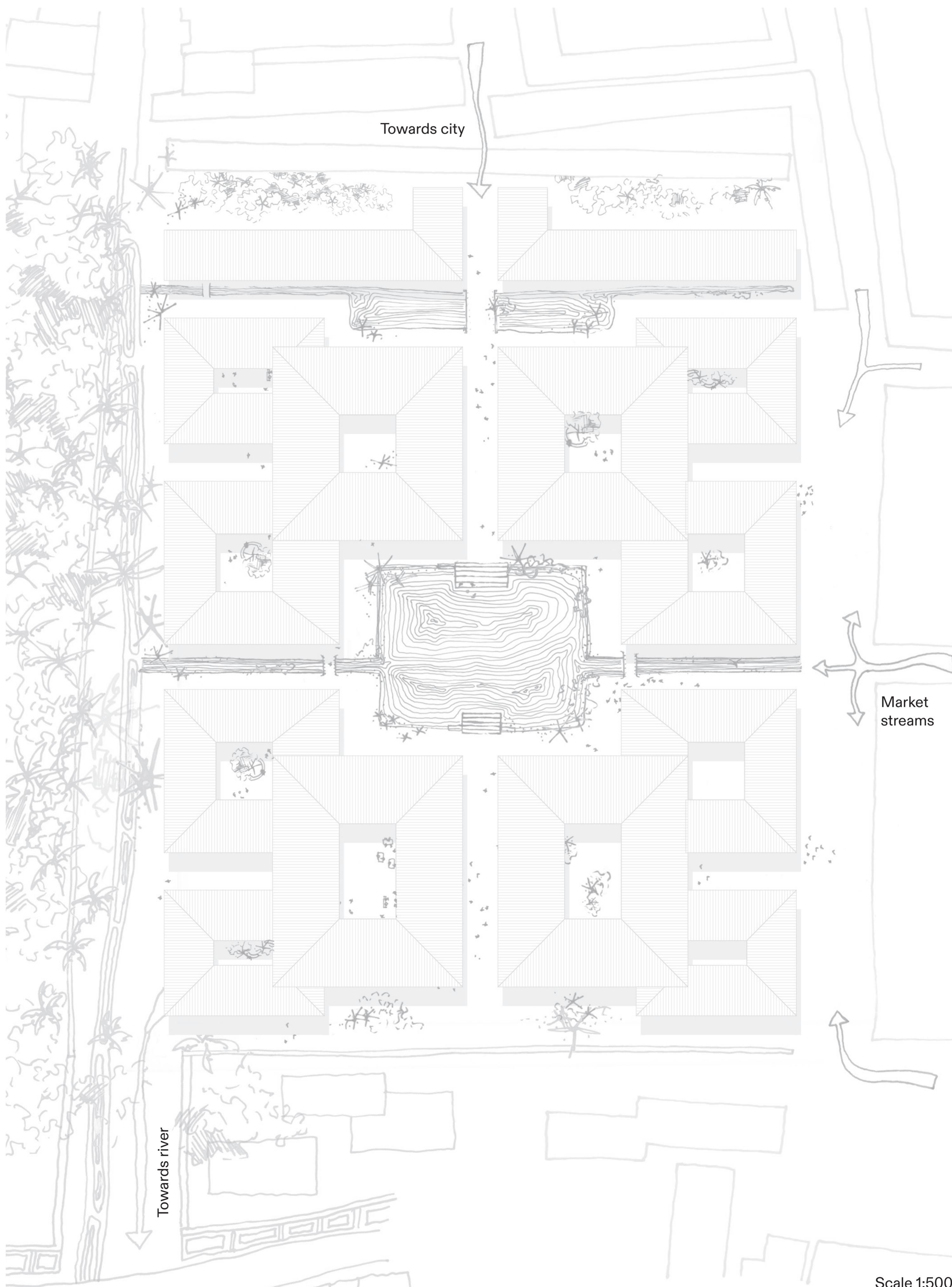
Precipitation

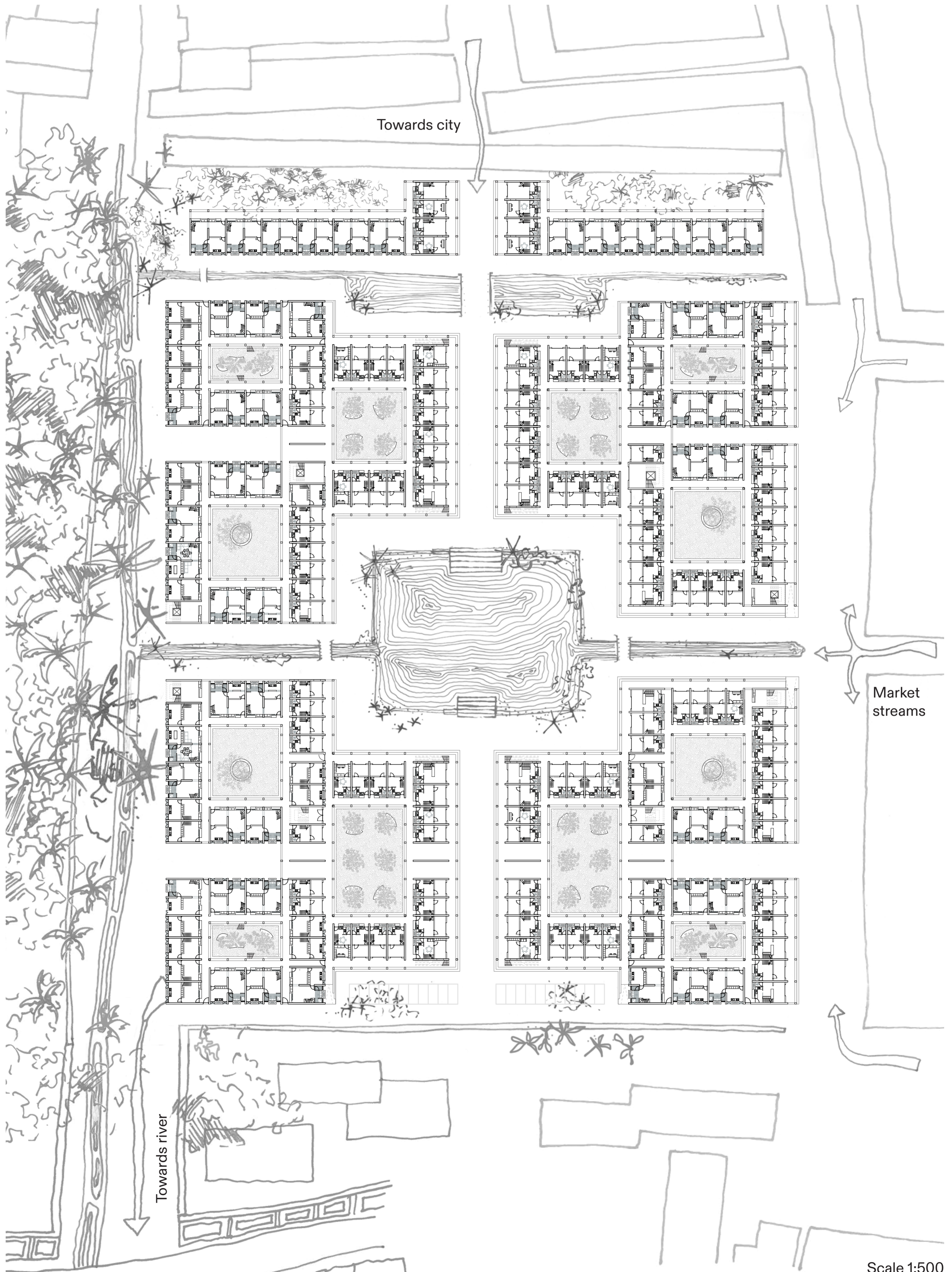
During monsoon season, the site receives a lot of rain, which is quickly diverted to the river. Sylhet is the wettest city of Bangladesh, with an annual rainfall precipitation of 4584 mm. In comparison: Dhaka sees about 2048 mm per year. Throughout the year, significant seasonal changes occur. While the wettest month, June, receives an average rainfall of 859 mm across 18 rainy days, January only sees around 13mm over a single rainy day.

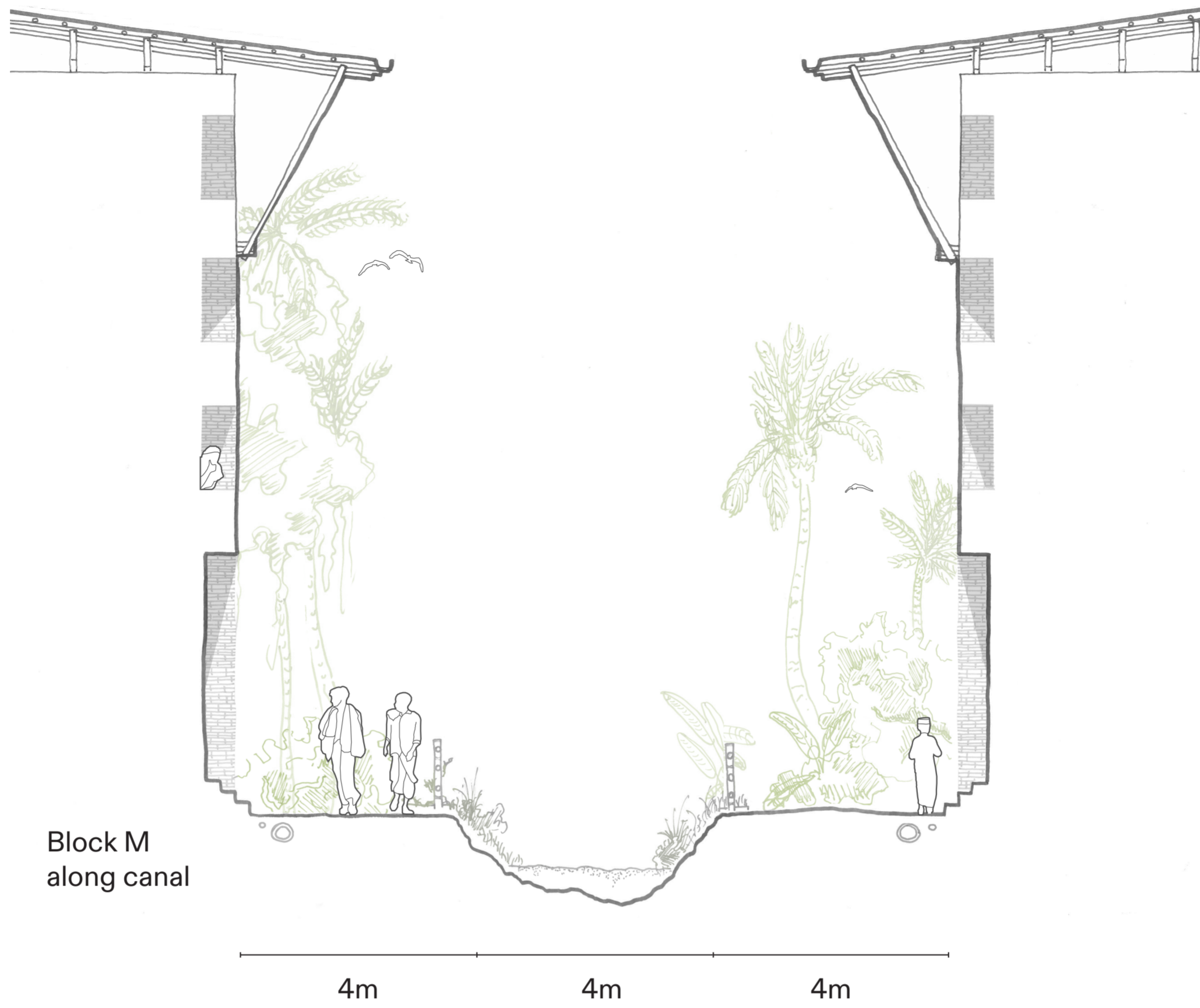
(Source: World Weather & Climate Information, 2025).



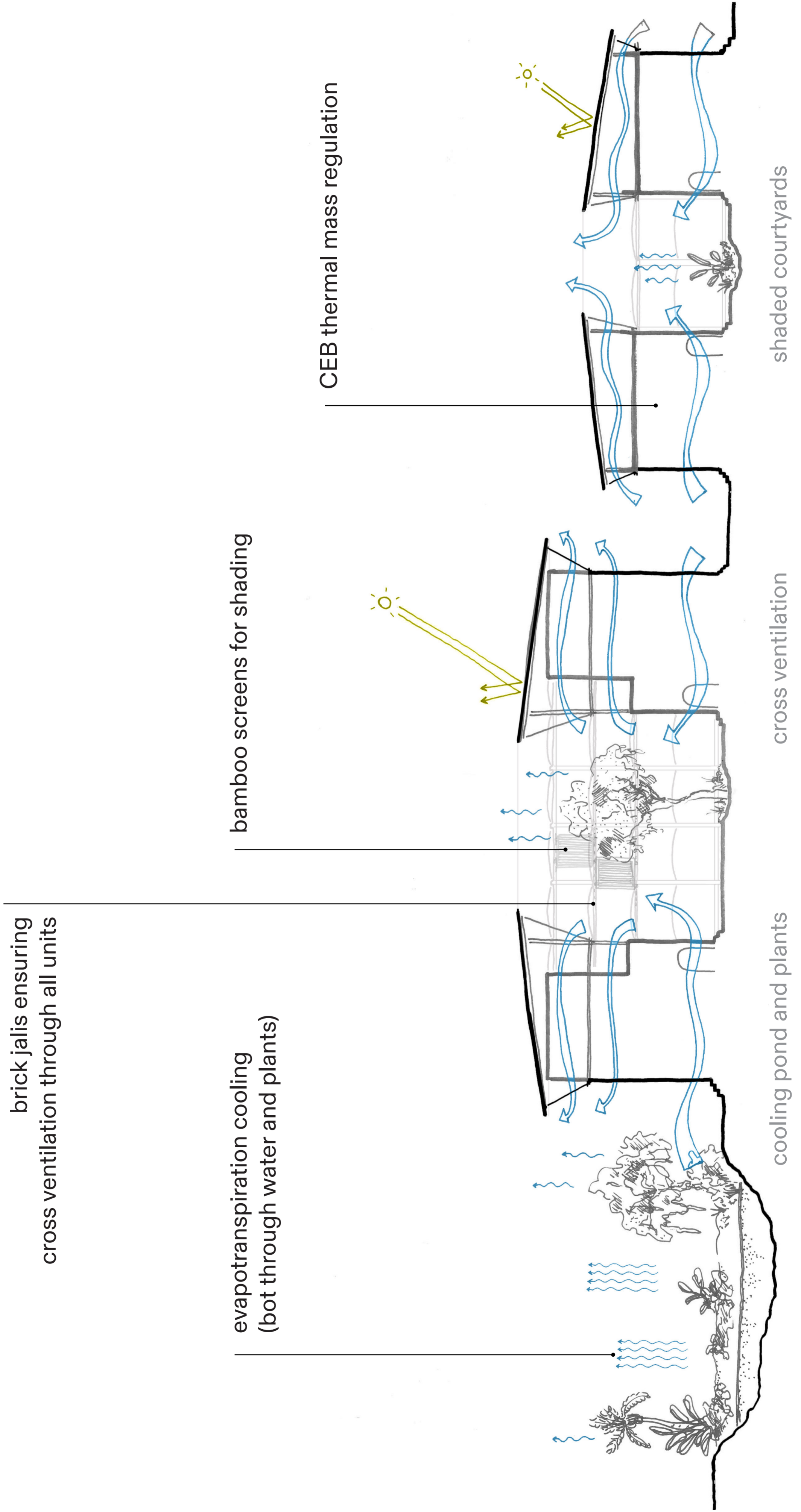












brick jalis ensuring
cross ventilation through all units

evapotranspiration cooling
(bot through water and plants)

bamboo screens for shading

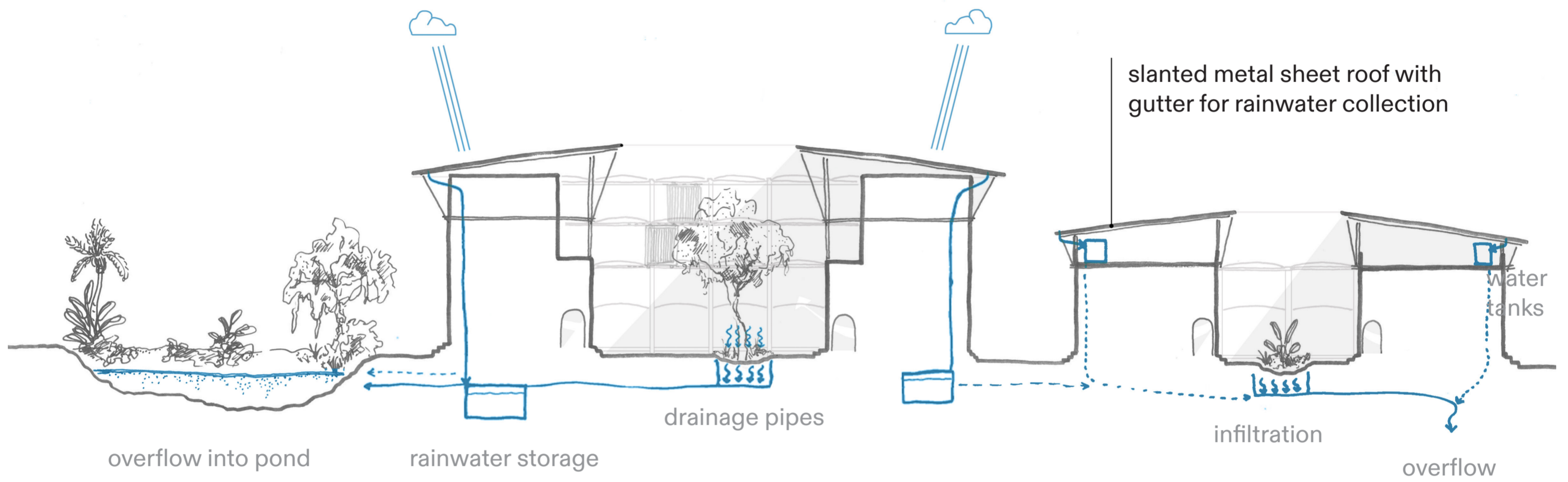
CEB thermal mass regulation

cooling pond and plants

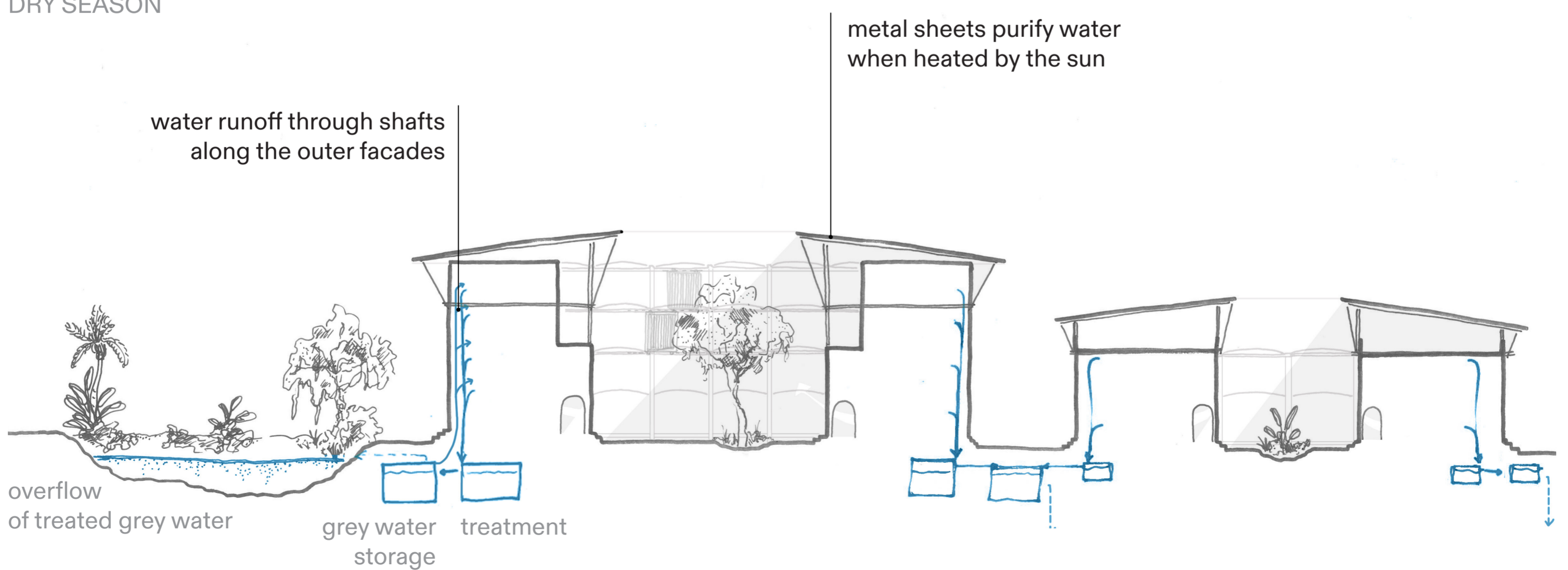
cross ventilation

shaded courtyards

RAINY SEASON (MONSOON)



DRY SEASON



Season	Toilet flushing water source	Cleaning / garden use	Overflow destination
Monsoon	Primarily rainwater	Rainwater/ overflow	Central pond
Dry season	Greywater, topped up with stored rainwater	Greywater (if treated accordingly) or none	None (minimal rainfall)

Rainwater harvest (for monsoon efficiency)

For a slanted metal sheet roof, around 80% of the rainwater can be collected (Runoff Coefficient 0.8), and go to the storage tanks. As it would be very expensive to install private rainwater treatment facilities per cluster, and maybe slightly unrealistic for the current situation in Sylhet, the rainwater will mainly be used for toilet flushing and as reserve for cleaning and (rooftop) gardening.

Assumptions:

- Rainfall in Sylhet (monsoon season) $\approx 2,500$ mm = 2.5 m
- Runoff coefficient ≈ 0.8 (for concrete or metal roofs)
- Roof area of a cluster: ca. 768 m² (M block)
- Average rainfall during rainy season: 2,500 mm
- Runoff Coefficient 0.8 (80%)

Formula:

Volume = Roof Area \times Rainfall (per season) \times Runoff Coefficient
 $768 \text{ m}^2 \times 2.5 \text{ m} \times 0.8 = 1,500 \text{ m}^3$ (or 1.5 million litres per season)

This means that around 1,500 m³ of water potentially harvestable per monsoon season! This could never all be stored in rainwater tanks, so *efficient overflow to the pond and the river* is needed!

Greywater recycling (for dry season resilience)

During dry season, the stored rainwater from the monsoon can still be used but will quickly run out. Therefore, the reuse of grey water will be essential to save water and ensure a resilient neighbourhood.

Assumptions:

- Avg. flushing need per person $\approx 30\text{--}40$ litres/day
- Average household size (Bangladesh urban average): ~ 5 people

Formula:

$28 \text{ households} \times 5 \text{ people} \times 35 \text{ L/day} = 4,900 \text{ L/day} = 4.9 \text{ m}^3/\text{day}$
 Dry season ≈ 6 months ≈ 180 days
 $4.9 \text{ m}^3/\text{day} \times 180 \text{ days} = 882 \text{ m}^3$

Roughly 880–900 m³ of stored water to cover toilet flushing needs through the dry season for the average 28 households of a housing block (M block).

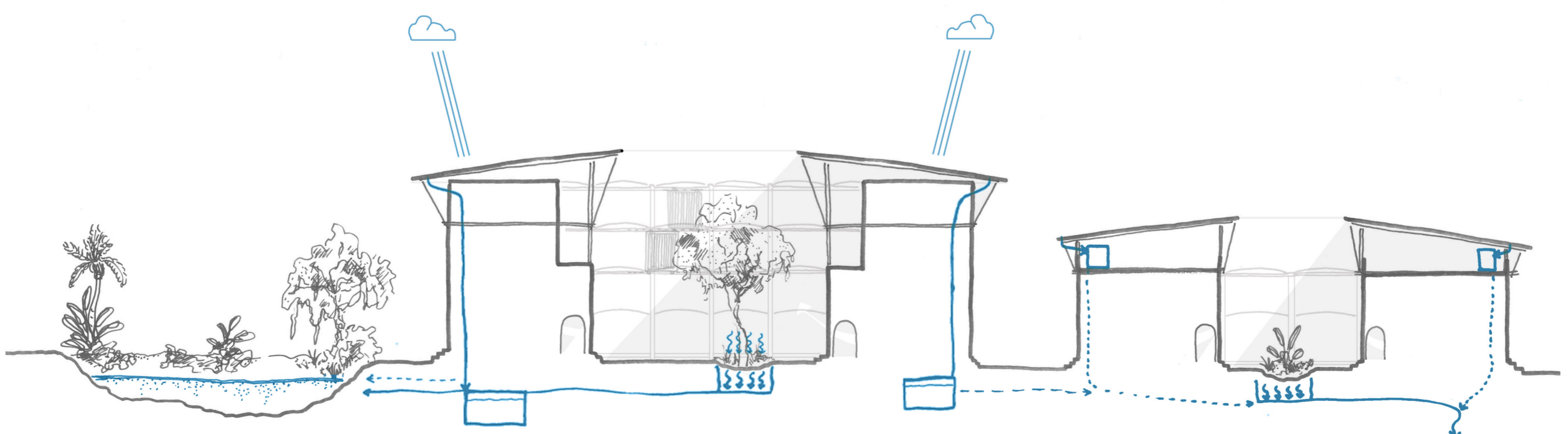
As water is only reused for flushing and as a reserve for gardening or cleaning, the water strategy on site will mainly serve efficient water use during dry season and controlled runoff through the pond and canals during rainy season.

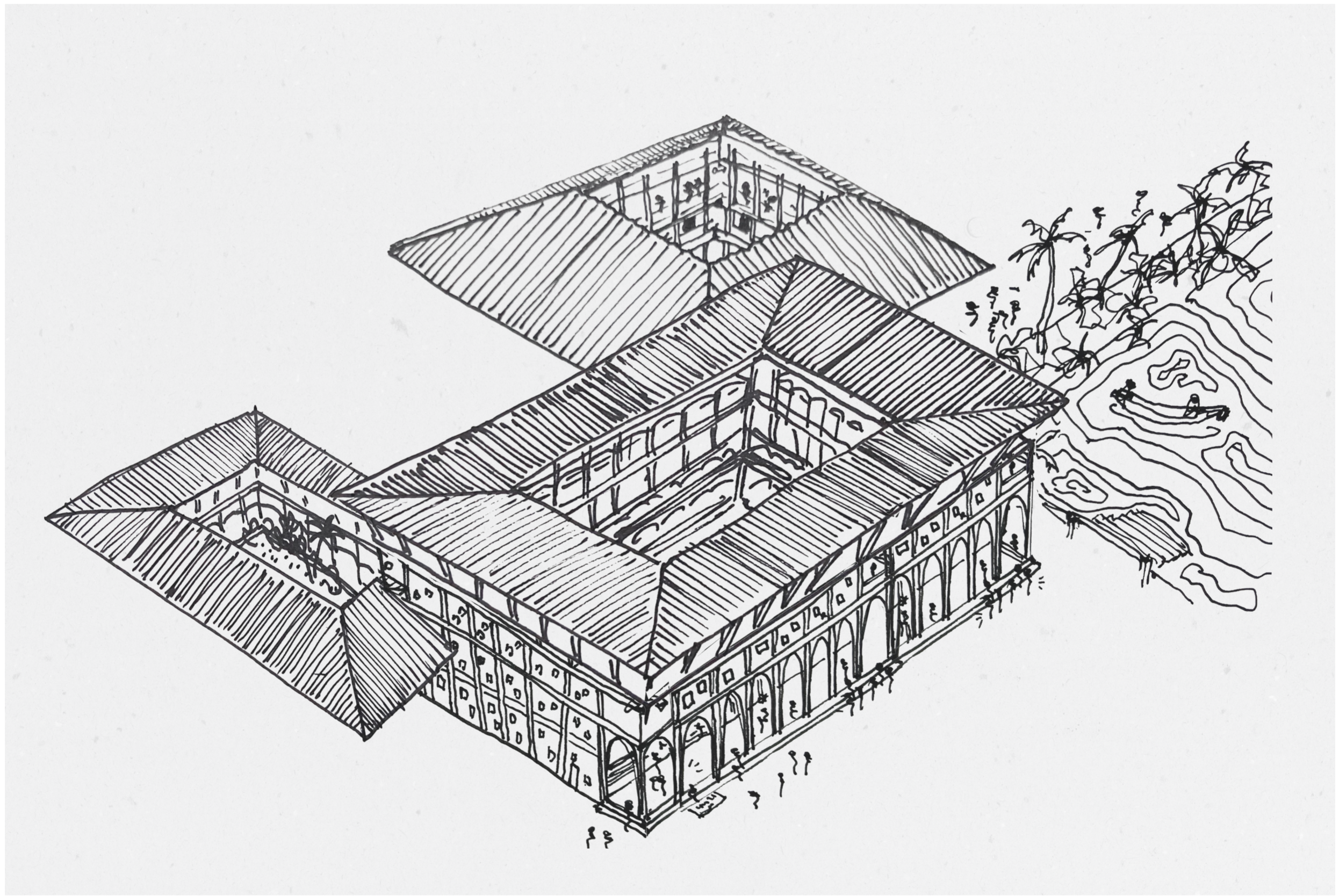
Storage strategy (water tanks and overflow)

As storing all 900 m³ might be too expensive in terms of big scale water tanks, the strategy includes efficient overflow of the tanks towards the central pond, which leads the excess water via the canals to the Surma river.

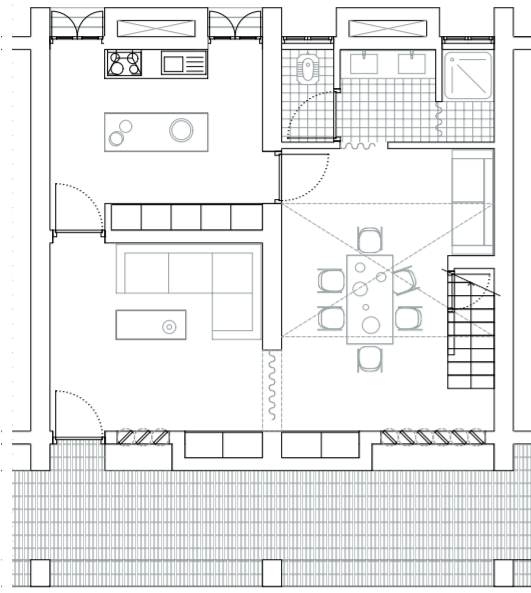
System	Suggested size	Notes
Rainwater tanks	200–300 m ³ , spread out over the blocks	Split across rooftop/underground tanks, can handle daily needs + short dry spells
Greywater tanks	Recycles $\sim 50\%$ of household water	Can offset part of flushing use
Central pond	Store overflow from roof + treated greywater	Also provides ecological, groundwater recharge and fire-fighting benefits

By combining ~ 250 m³ of tank storage per block + greywater reuse, the average storage need over the rainy season might not be more than $\sim 500\text{--}600$ m³ total, with the central pond serving both as a buffer or as a seasonal reserve.



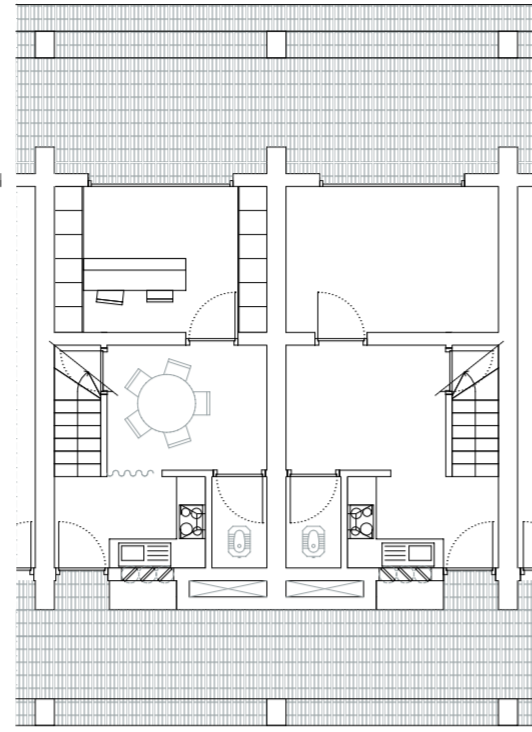


III CLUSTER



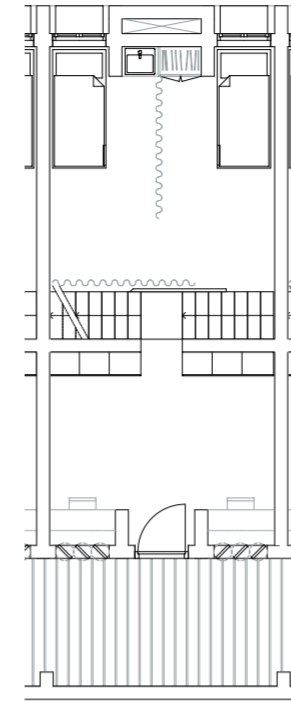
FAMILY DUPLEX
up to 10 people,
preferably 6

82 m²



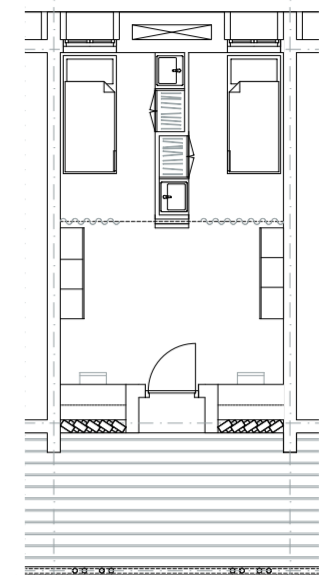
SHOP HOUSE
duplex with commercial
space along arcade

12 m² commercial with
extension possibilities



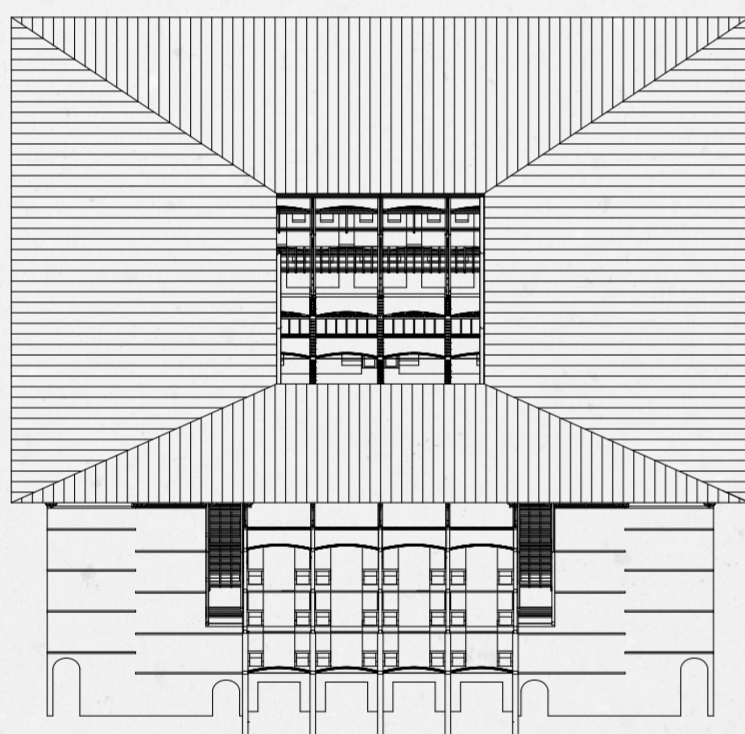
SEASONAL L
shared by 8 workers
split level

33 m²



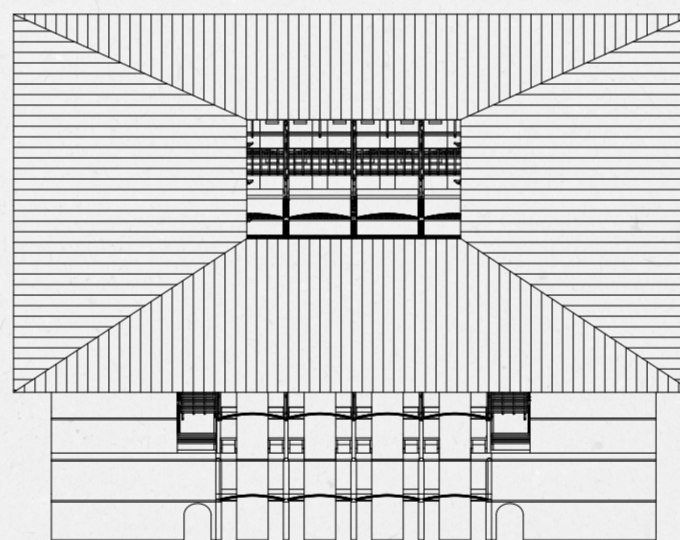
SEASONAL M
shared by 4 workers

22 m²



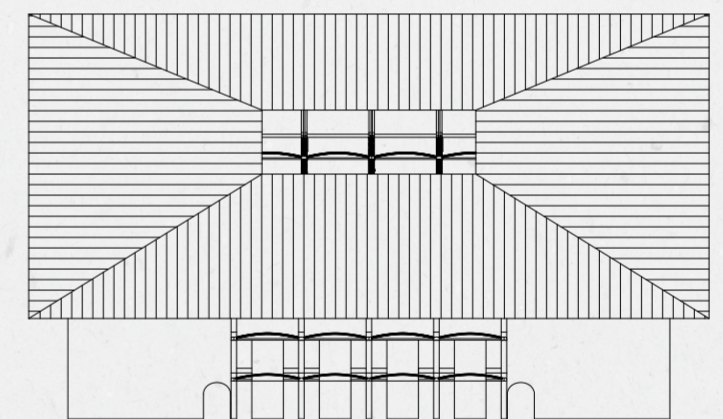
L

5 floors with split levels
family duplexes around courtyard
elevated seasonal apartments



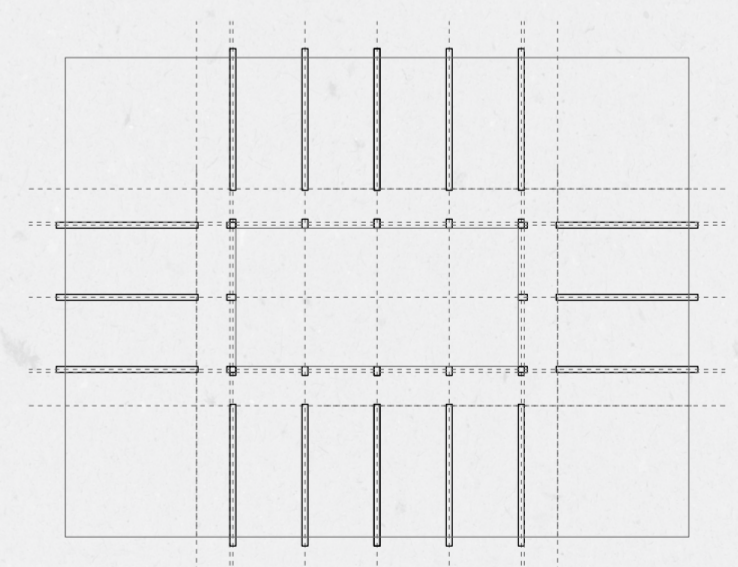
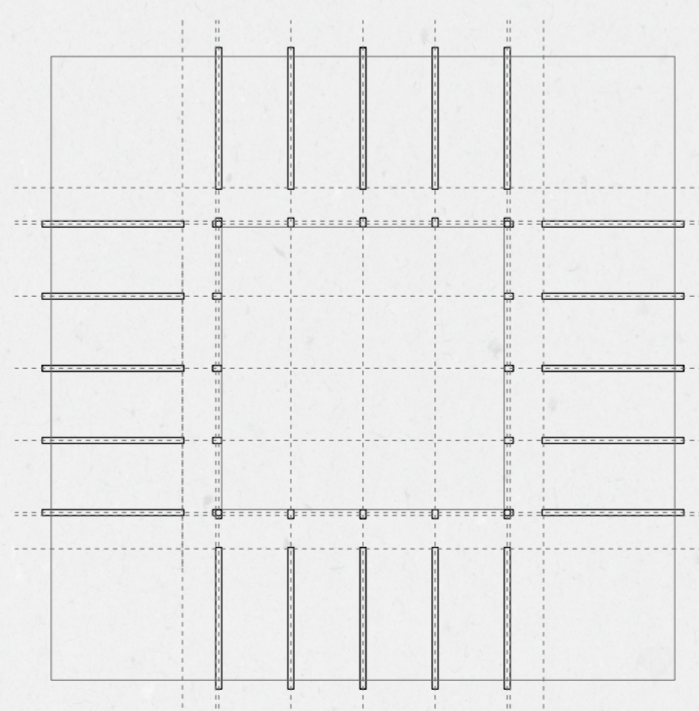
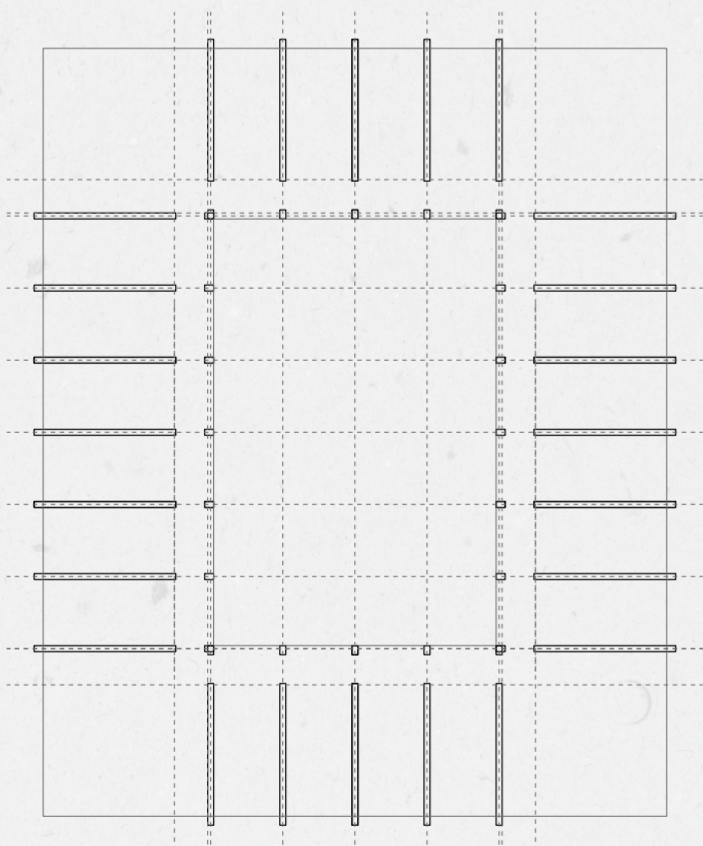
M

4 floors
family duplexes around courtyard
elevated family apartments

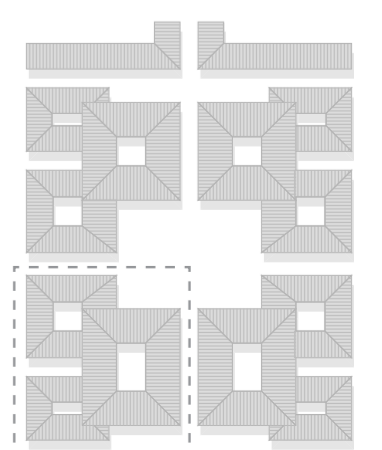
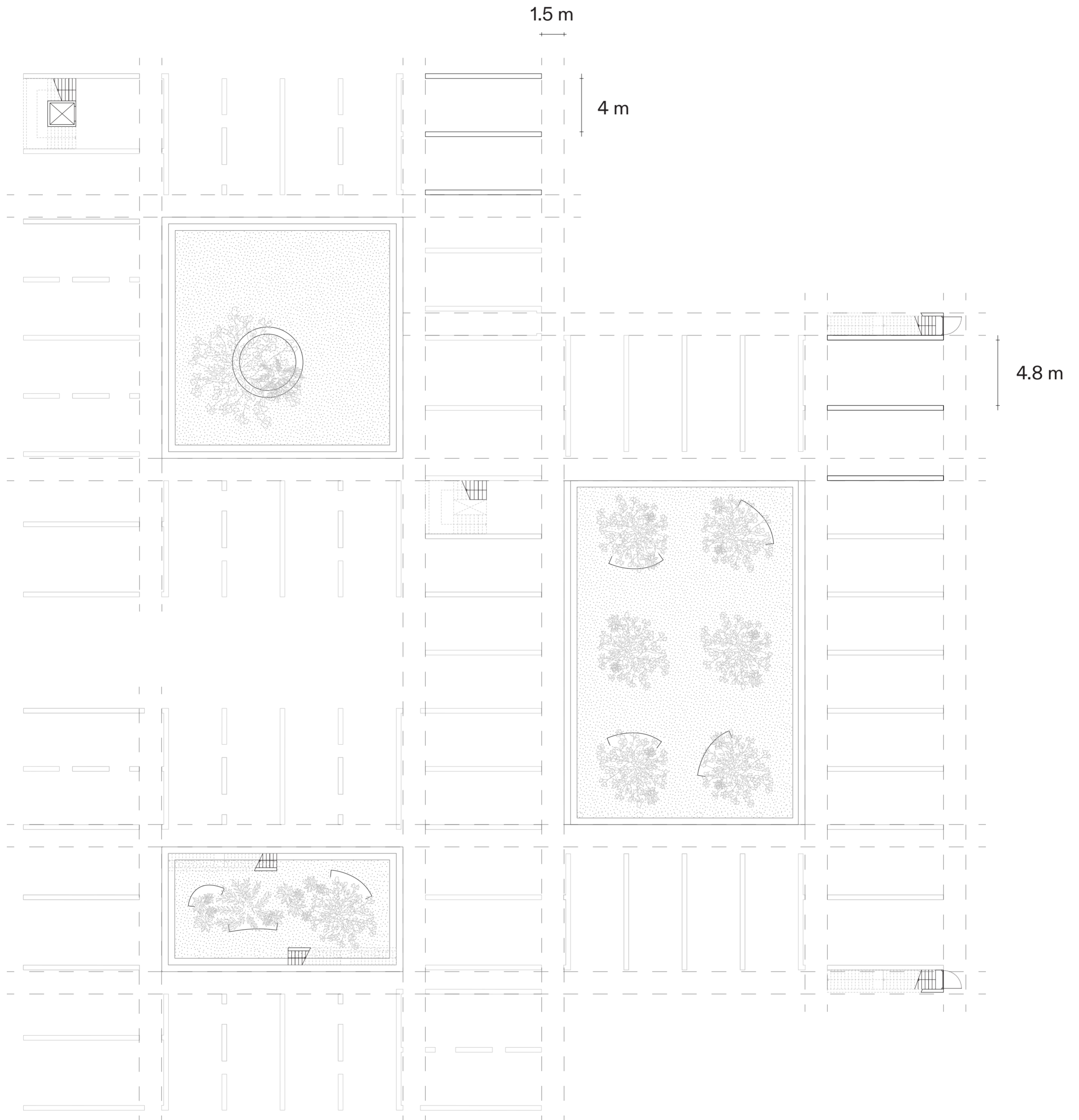


S

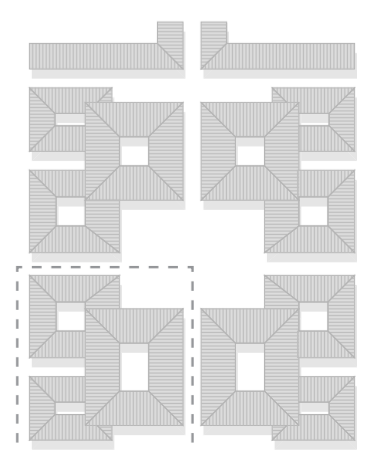
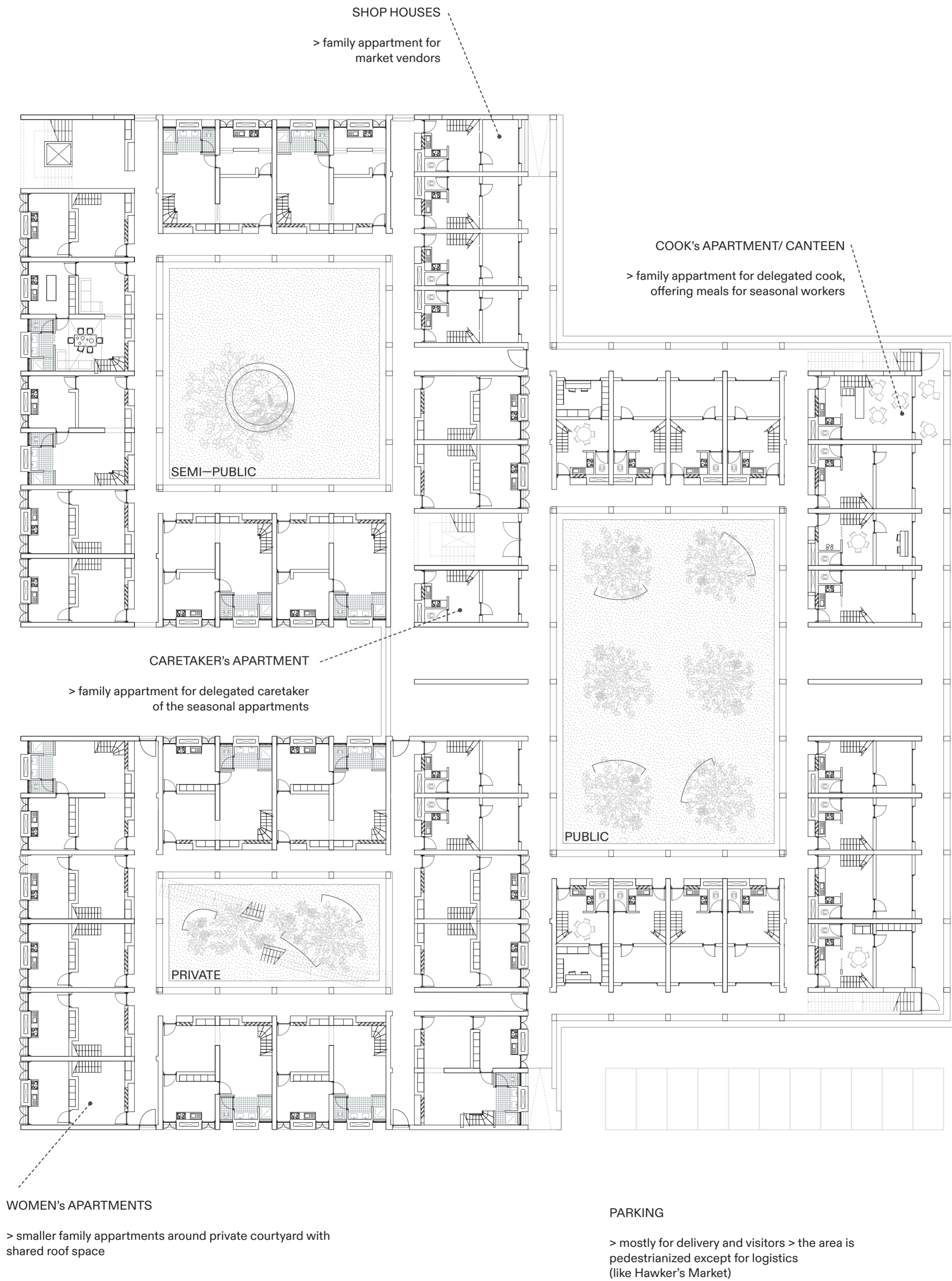
2 floors with shared roof space
family duplexes around courtyard
private option for women



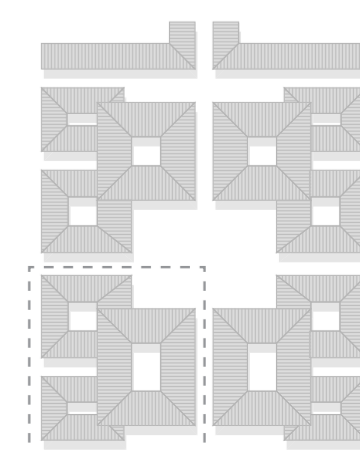
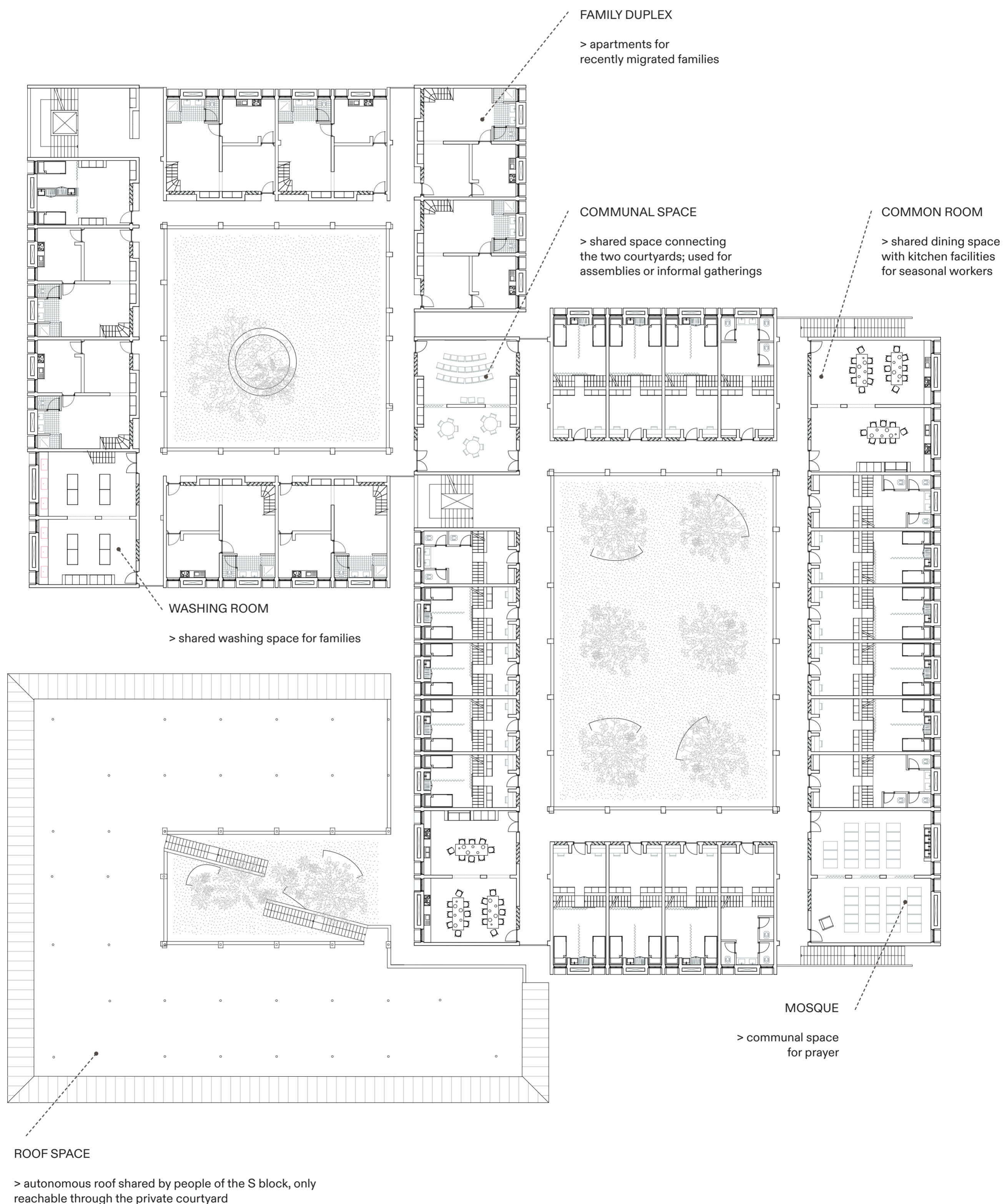
The courtyards are surrounded by evenly wide galleries, which in some points create see-throughs from one courtyard to the other. The wall-to-wall span for the dwelling units is either 4 m (the standard module) or 4.5 m (the wider corner variant).



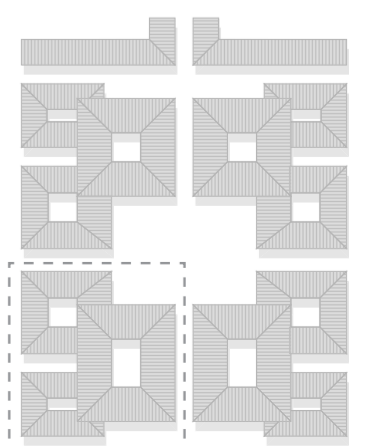
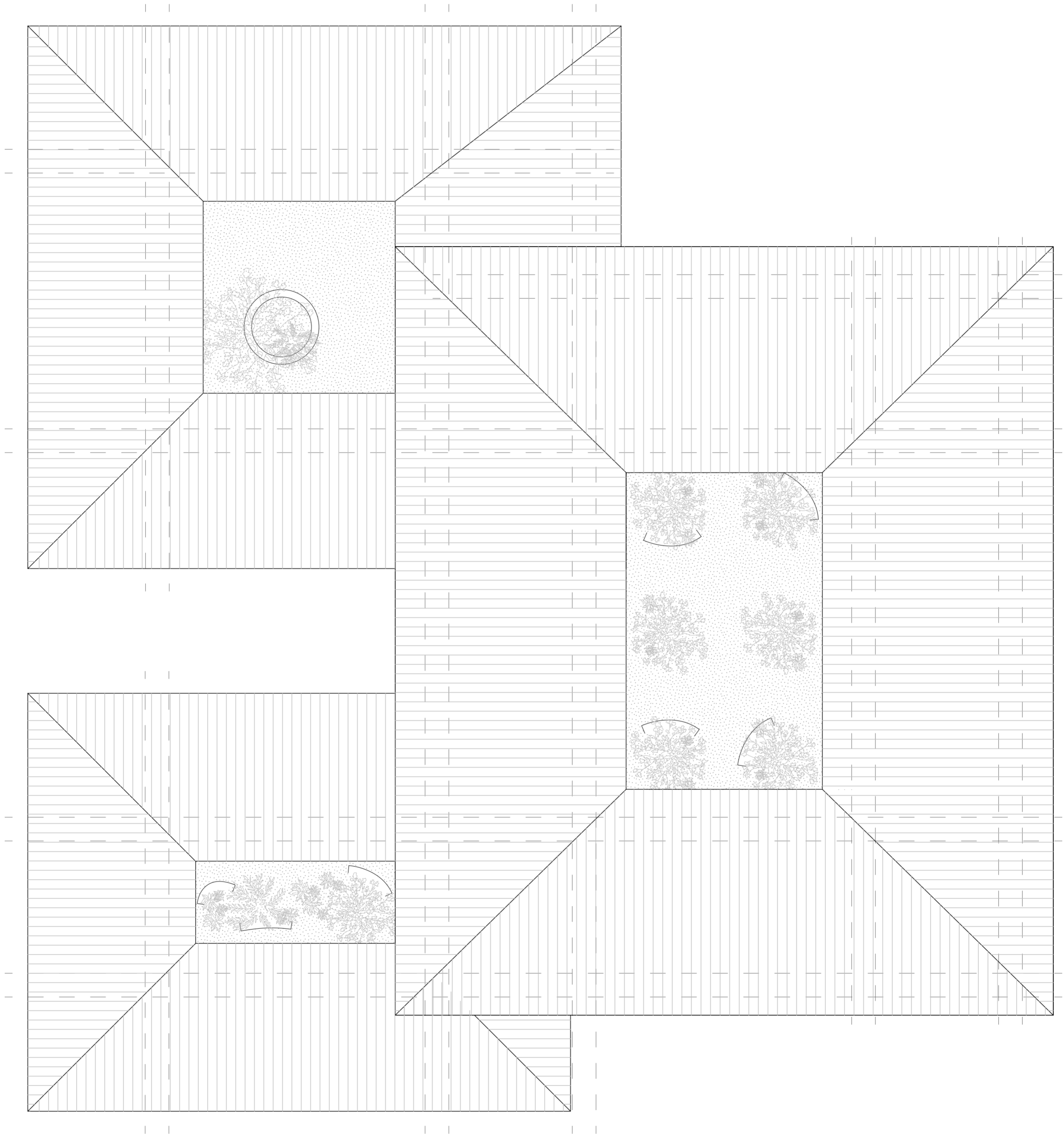
The gradient from public to residential space continues when entering the cluster. Three courtyards are assembled in such a way that each of them has a distinct level of openness towards the main streets. Visitors and shopkeepers inhabit the edges/arcades and give the community its life.



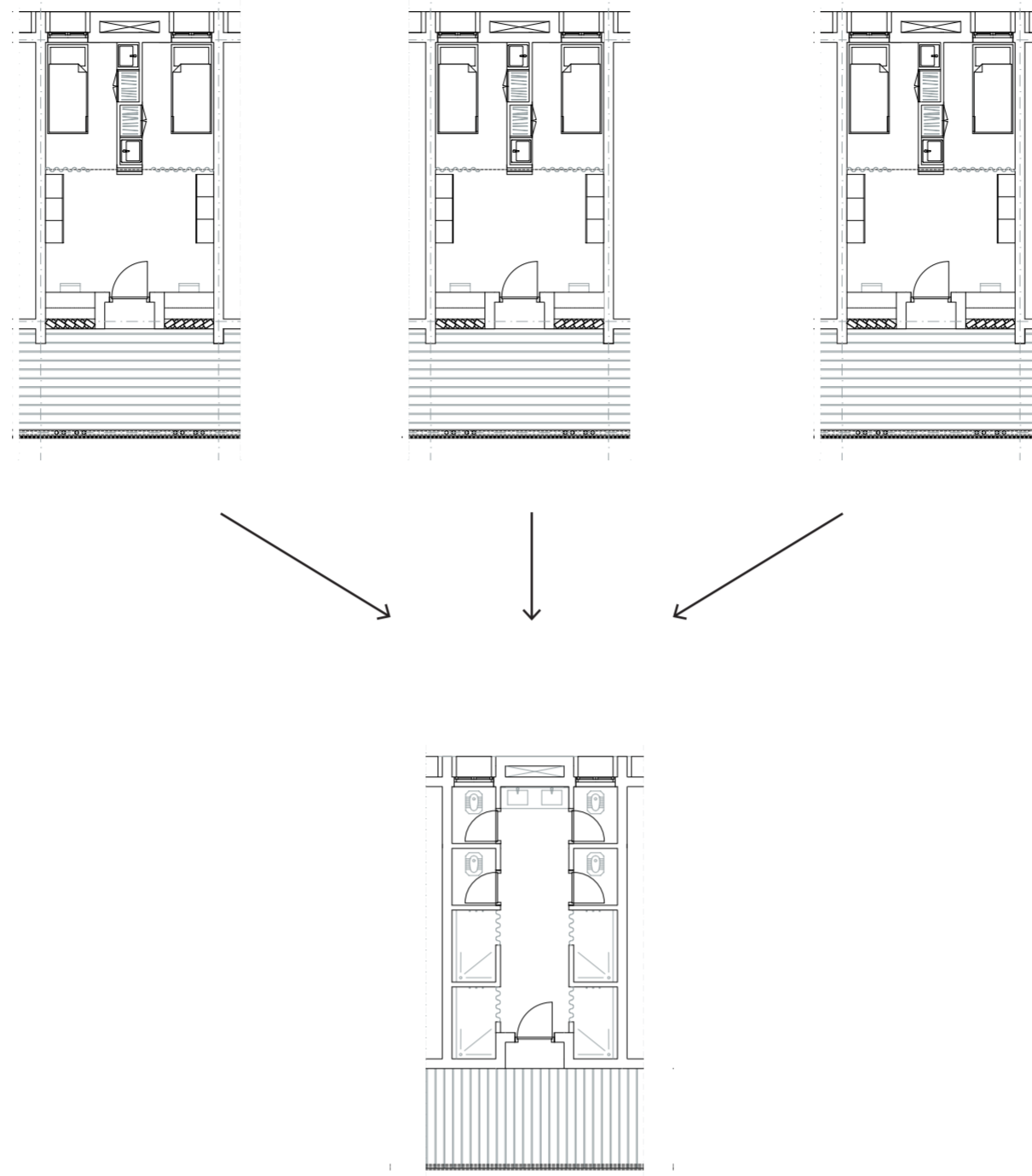
Two autonomous galleries around the courtyards. The L block has apartments for remote workers facing the public square, whereas the M block has smaller family apartments around the shared semi-private courtyard. The two are only connected through the community space in the middle, forming the heart of the cluster where people in different stages of migration come together.



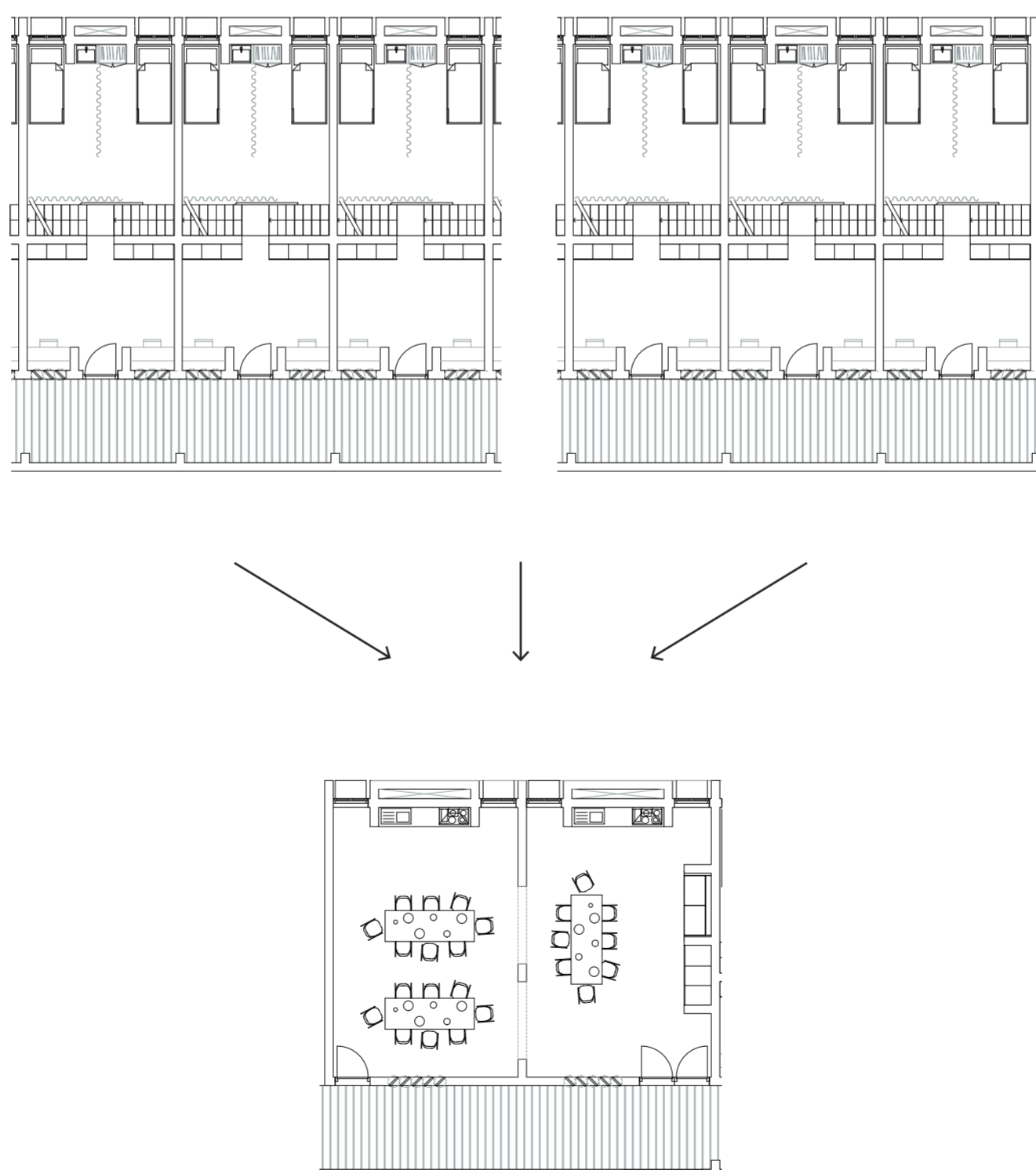
The roof of the L block forms the upper roof and partly covers the two lower ones.



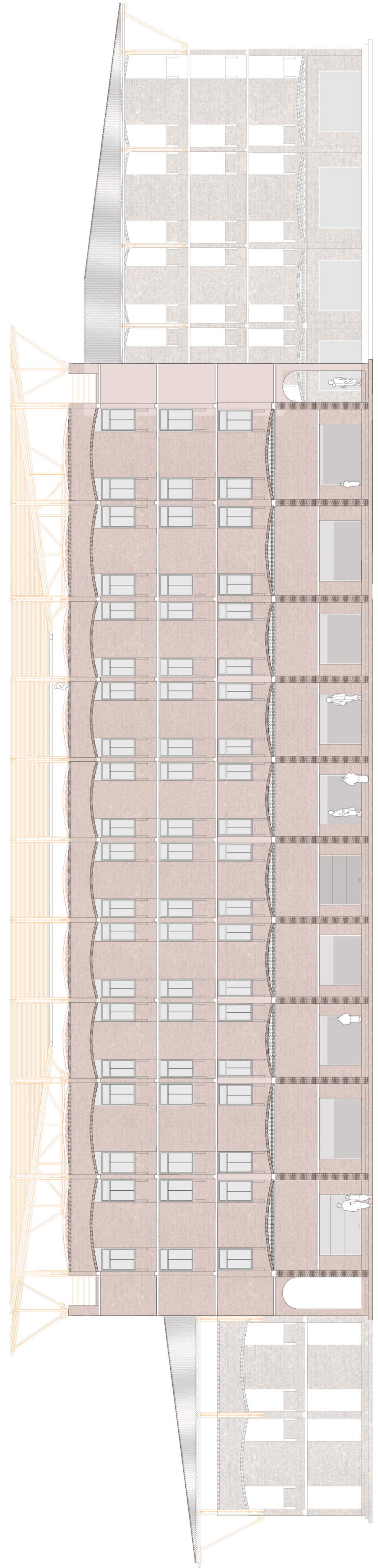
Distribution of shared facilities



sanitary unit
> shared by 3 apartments, max. 24 people



common room
> shared by 6 apartments, max. 48 people

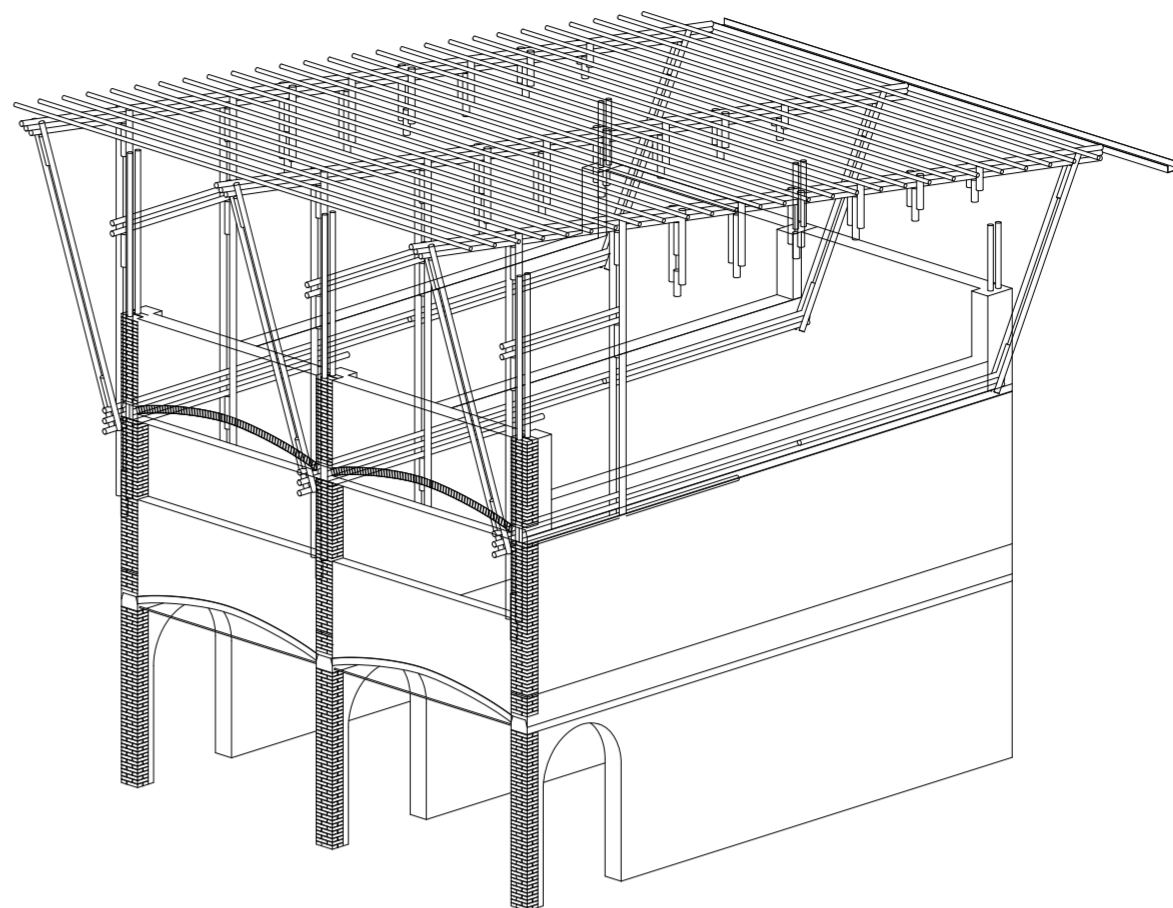


Street Elevation



Solid brick with light-weight bamboo structure covering the whole

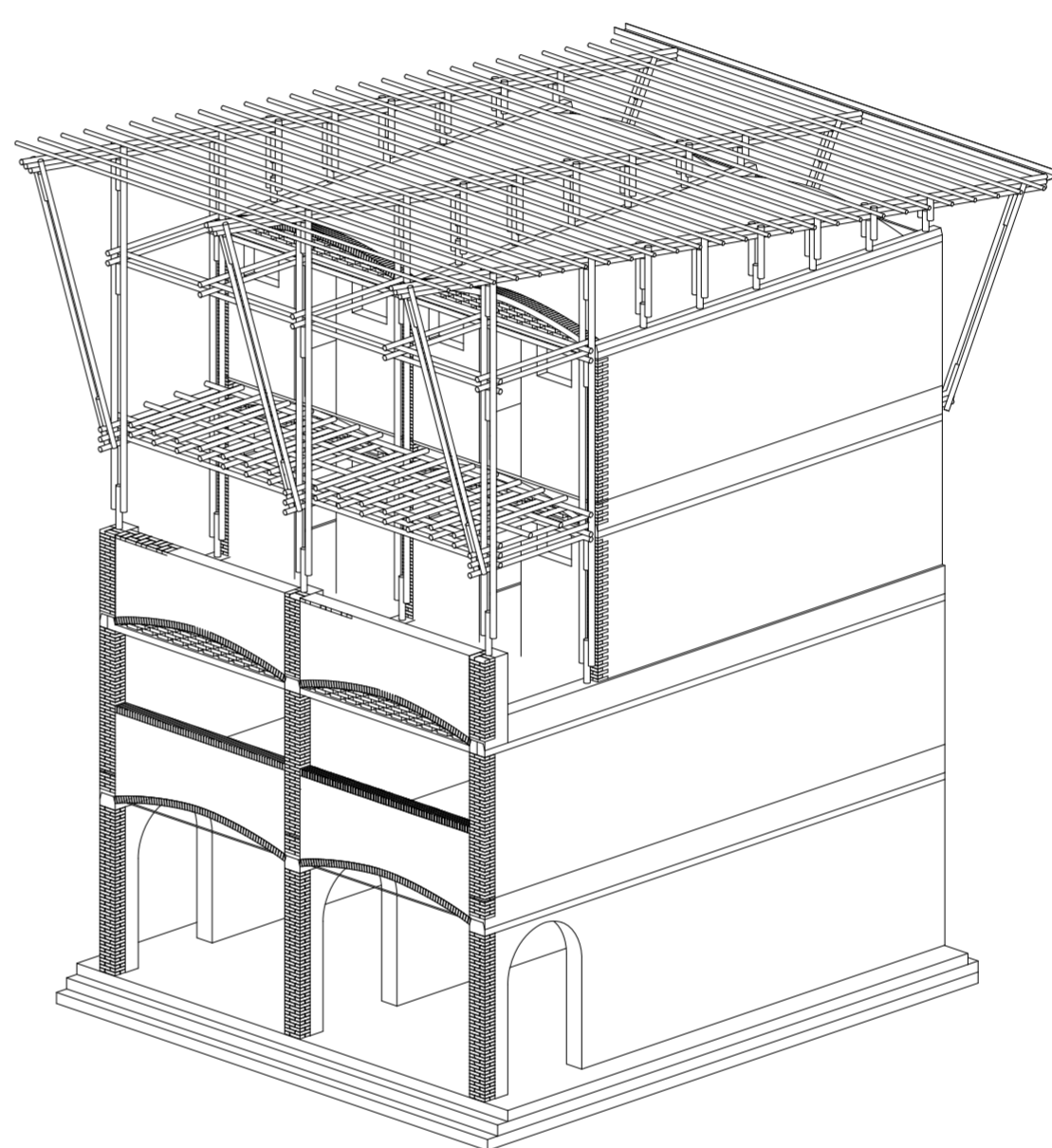
S Block



CI sheets as roofing (partly reclaimed)
Bamboo structure supporting roof and galleries
Bamboo shutter systems
CEB inner structural walls and vaults
Baked brick outer walls
Baked brick foundation (partly reclaimed)

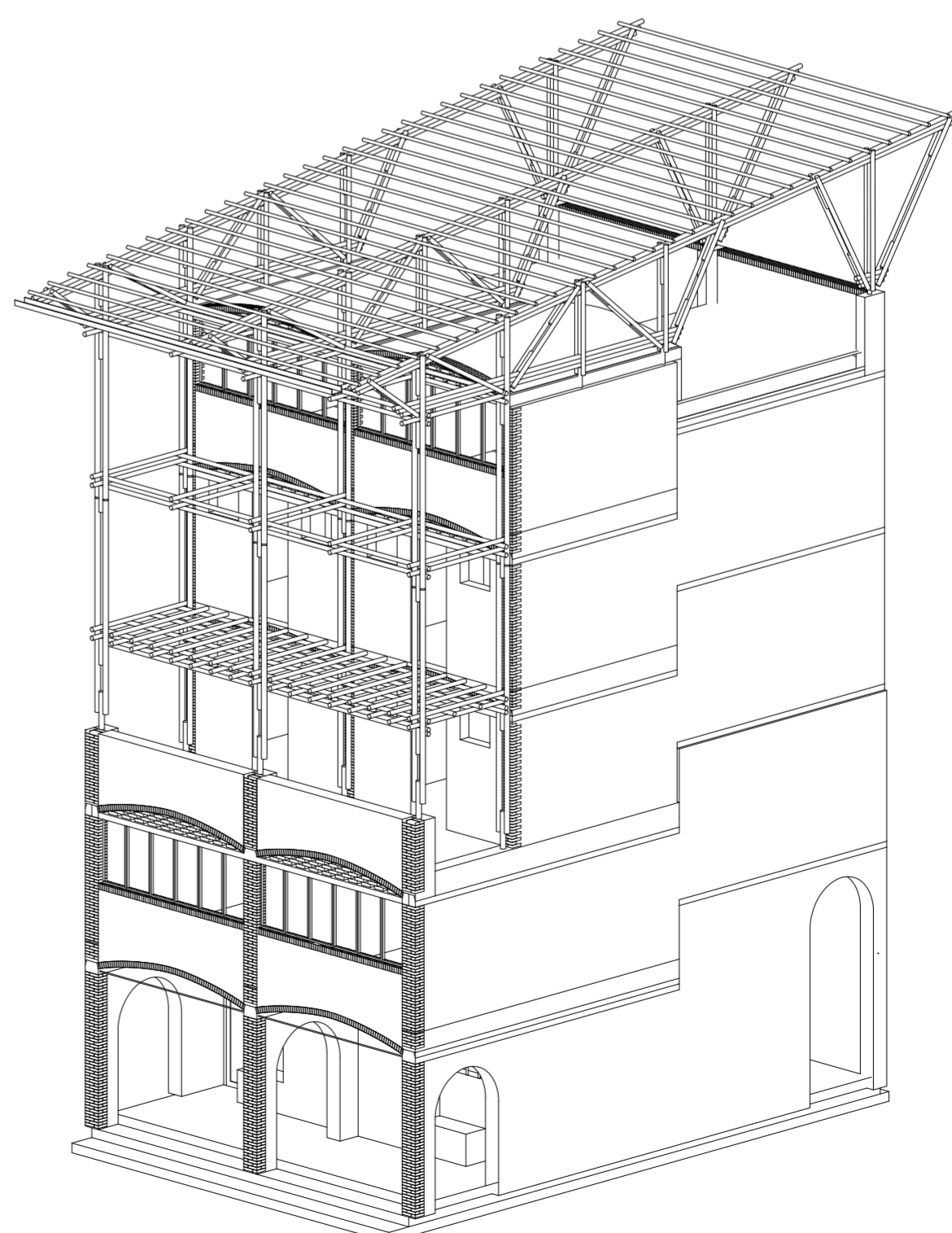
Foundation with landfill from digging out pond

M Block

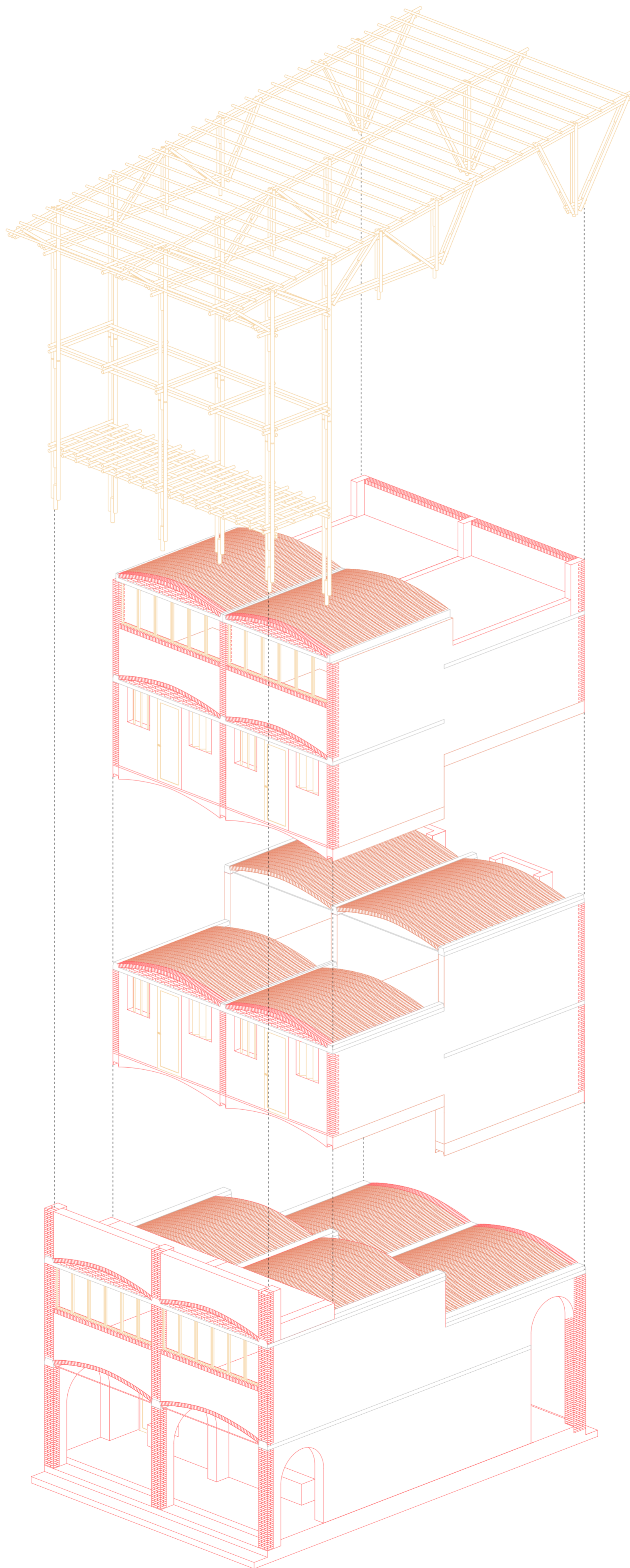


Delegated construction workers getting a full-time maintenance job for the cluster they built and they live in

L Block



IV BLOCK

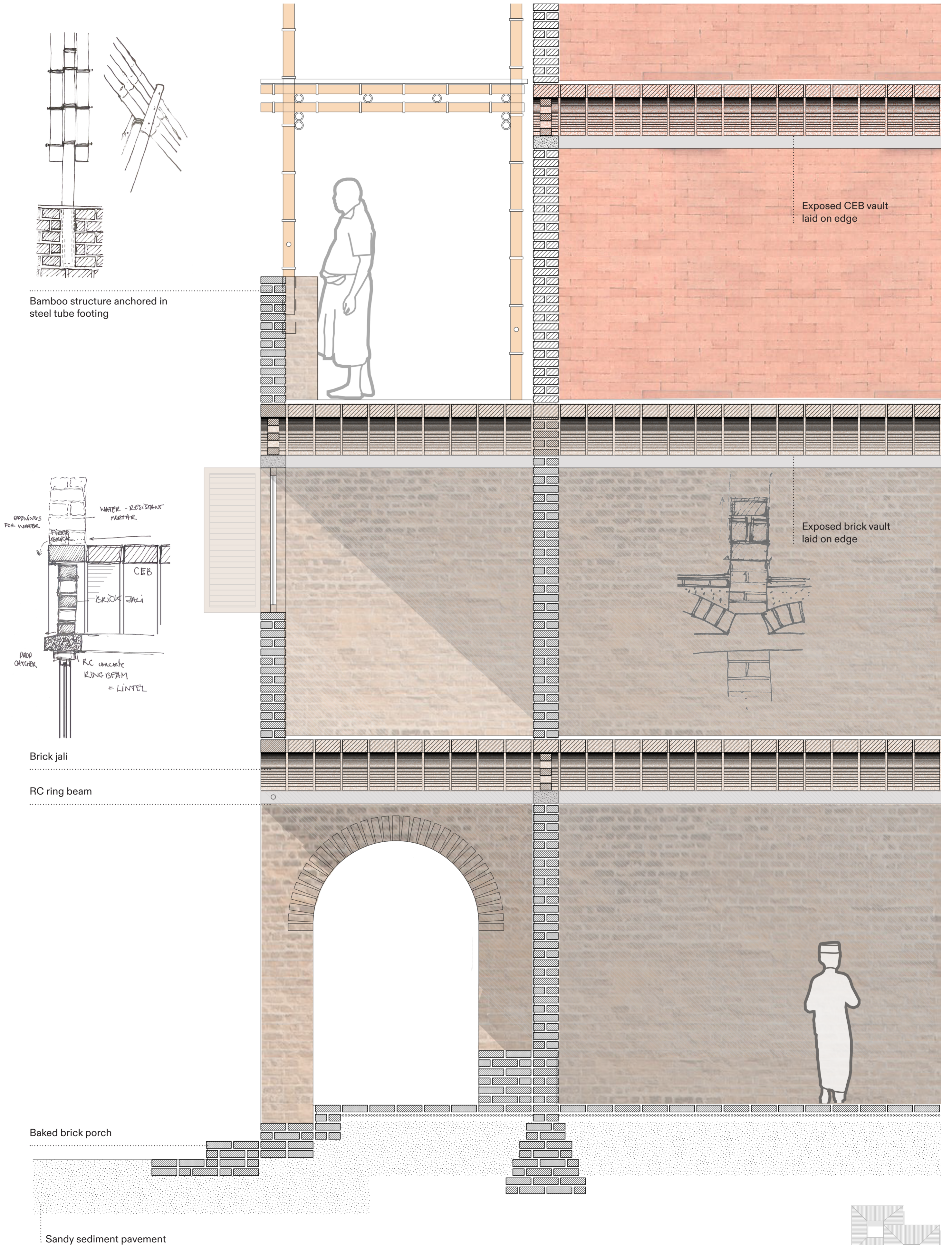


seasonal apartment

seasonal apartment

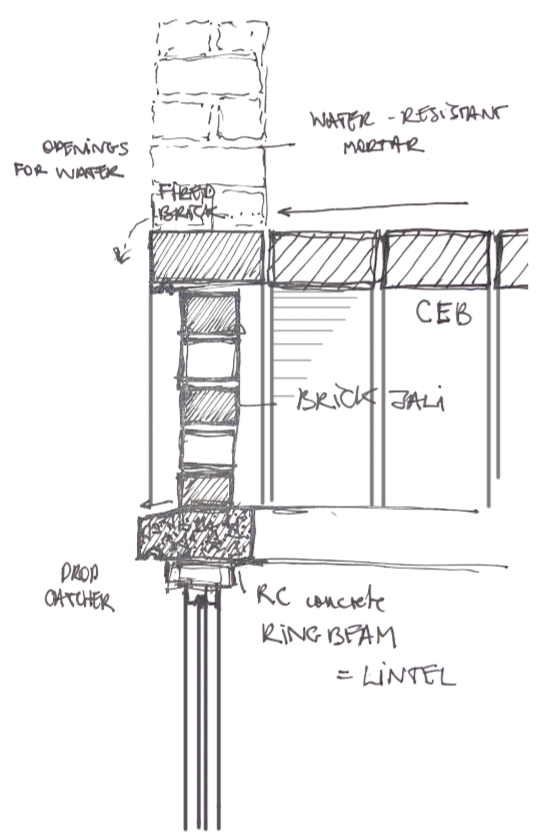
shop house/
family duplex

Bamboo,
CEB,
RC concrete,
Fired brick



Bamboo structure anchored in steel tube footing

Exposed CEB vault laid on edge



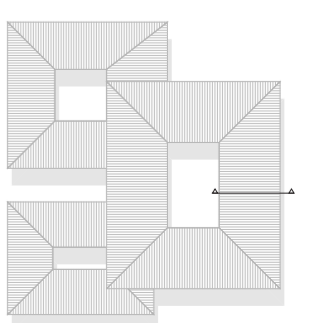
Exposed brick vault laid on edge

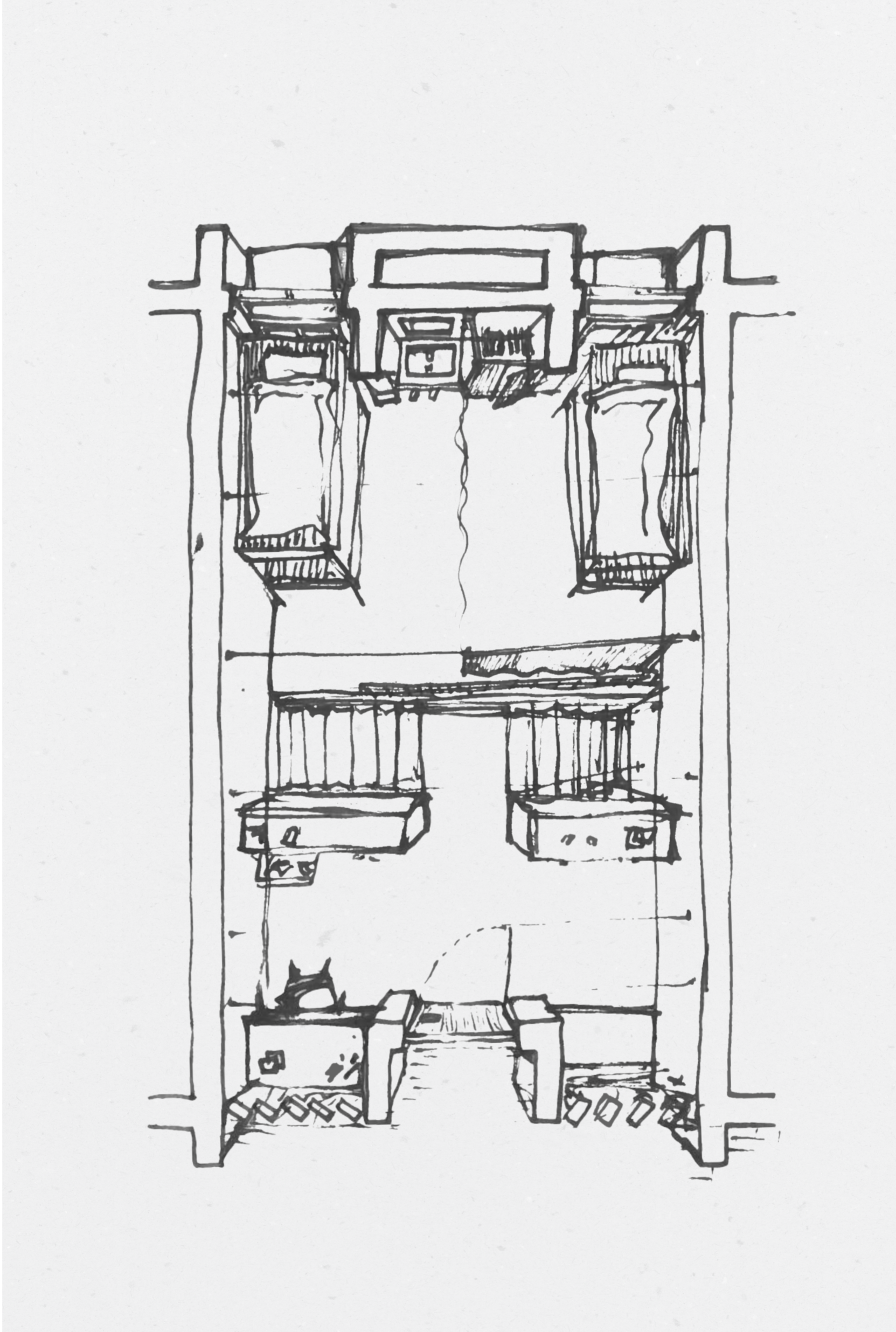
Brick jali

RC ring beam

Baked brick porch

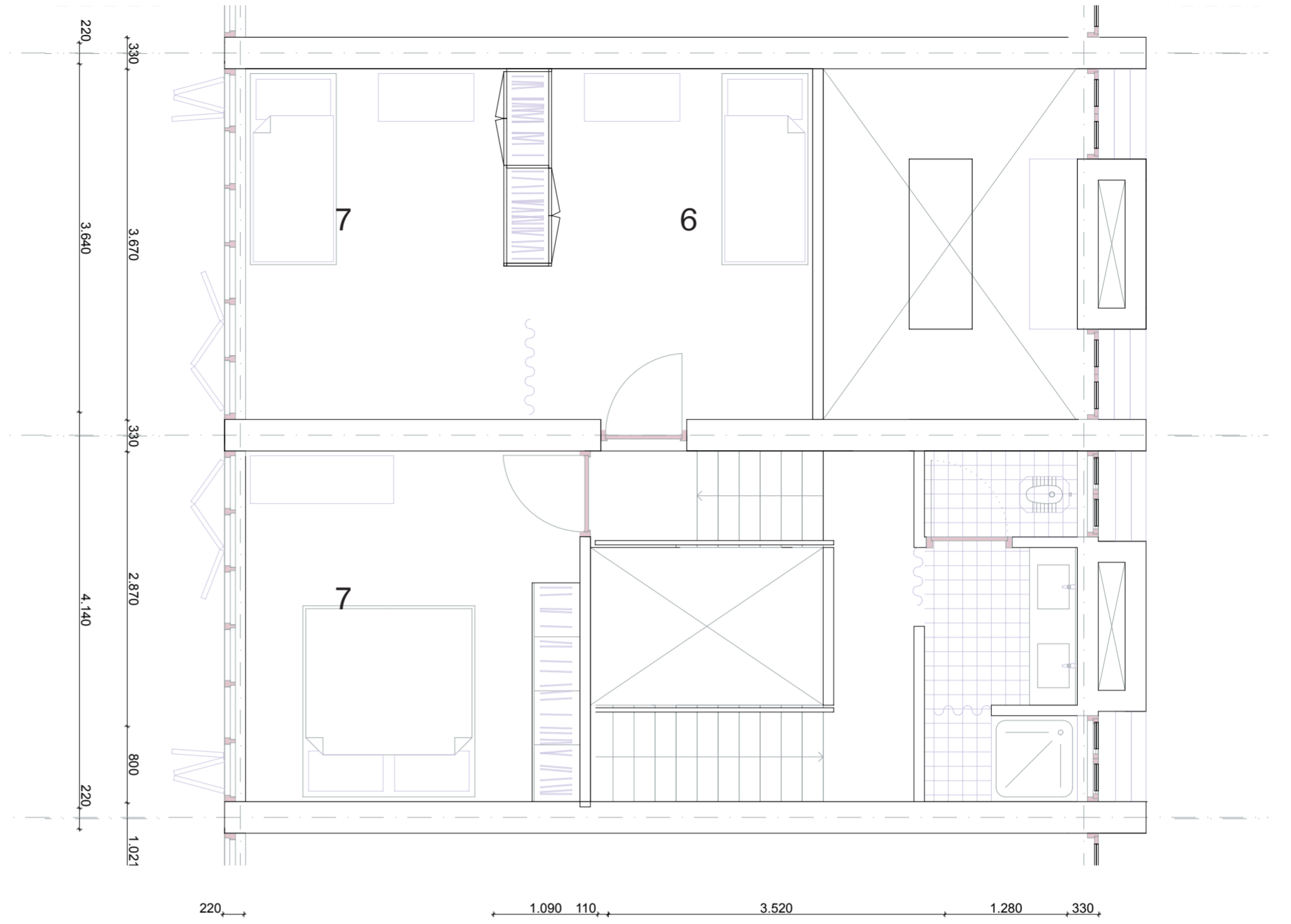
Sandy sediment pavement



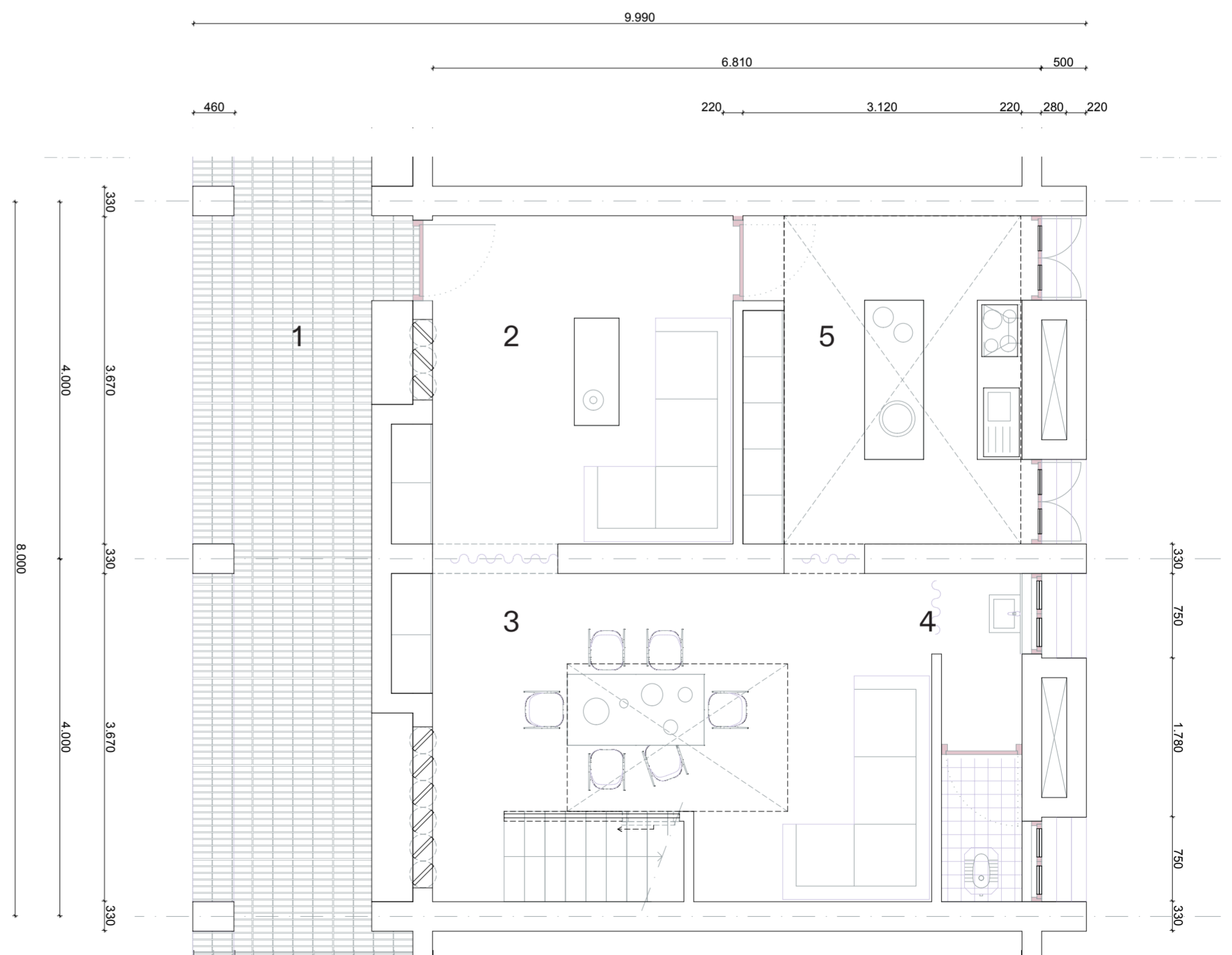


V DWELLING

1st floor

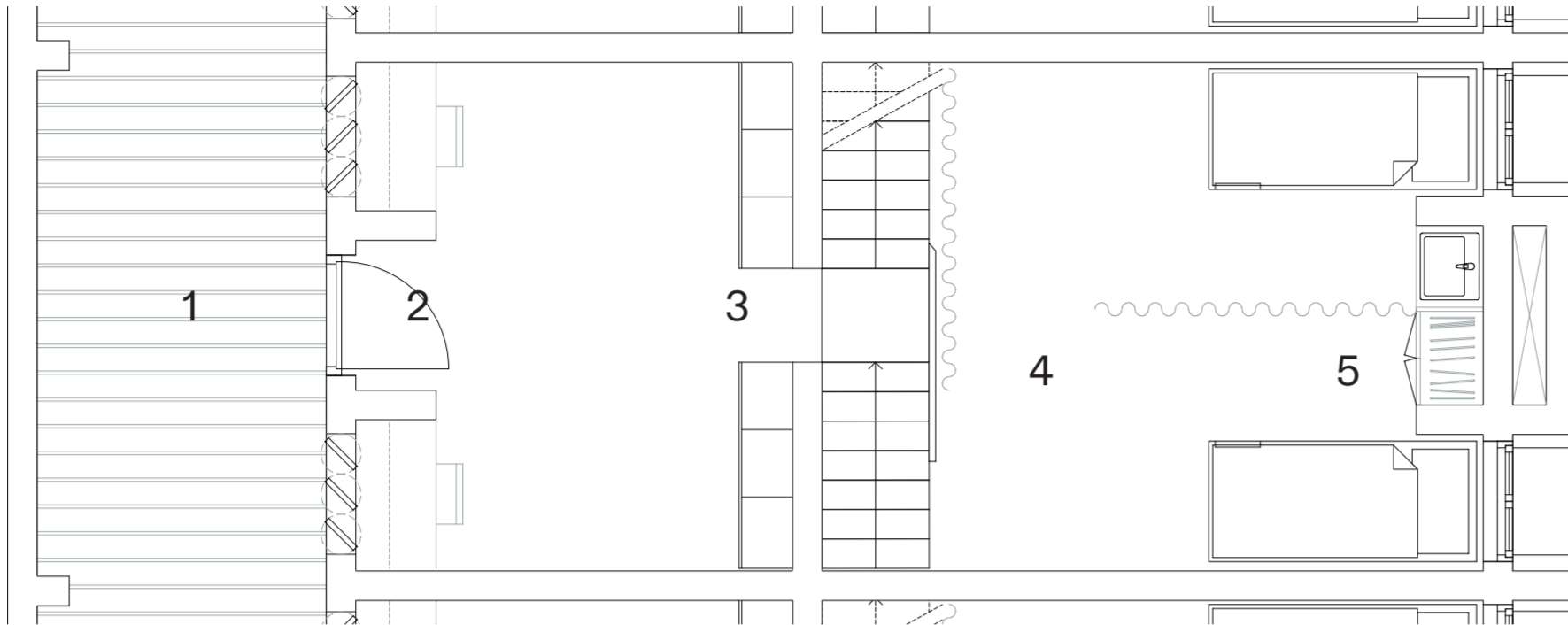


ground floor

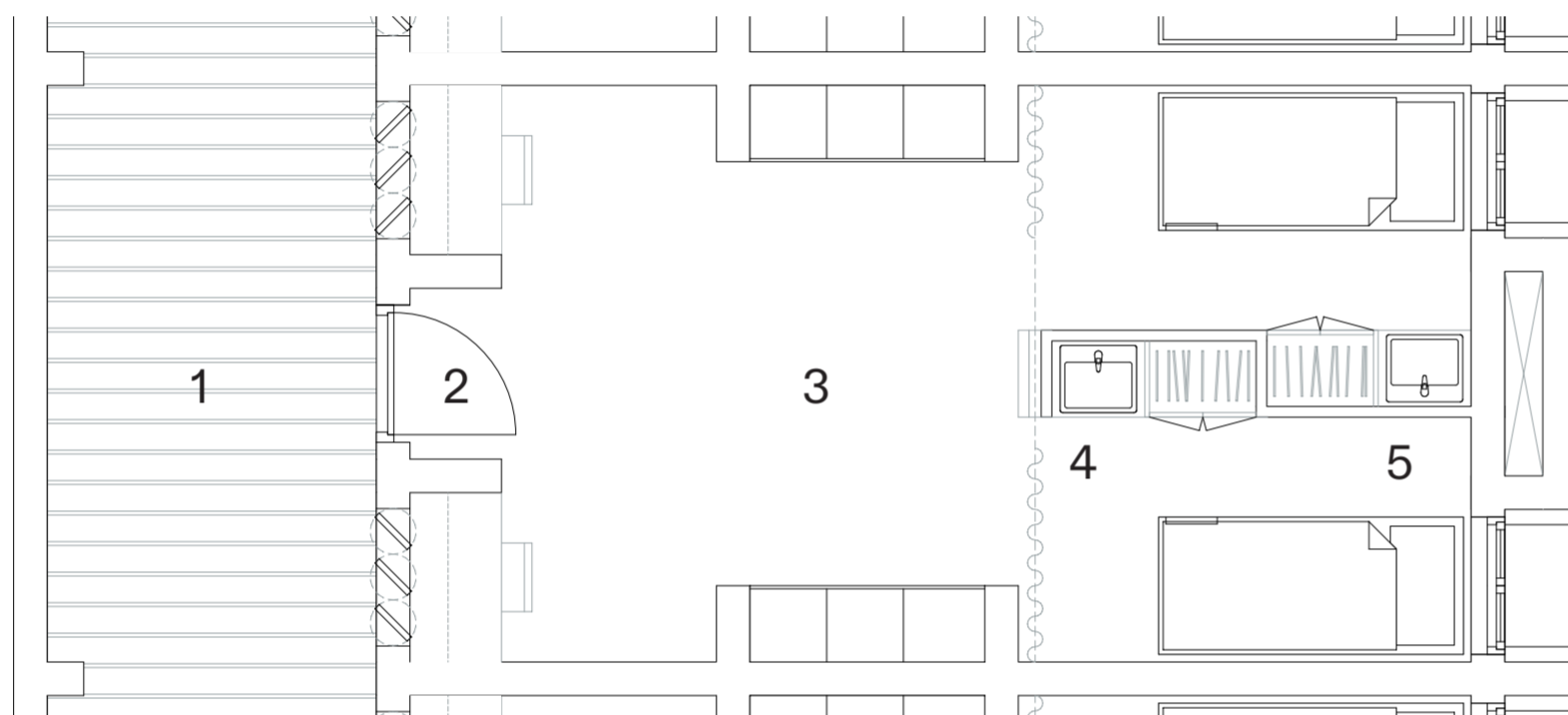


- Porch facing courtyard 1
- Guest living room 2
- Family living room 3
- Bathroom 4
- Kitchen 5
- Parents bedroom 6
- Children's bedroom 7

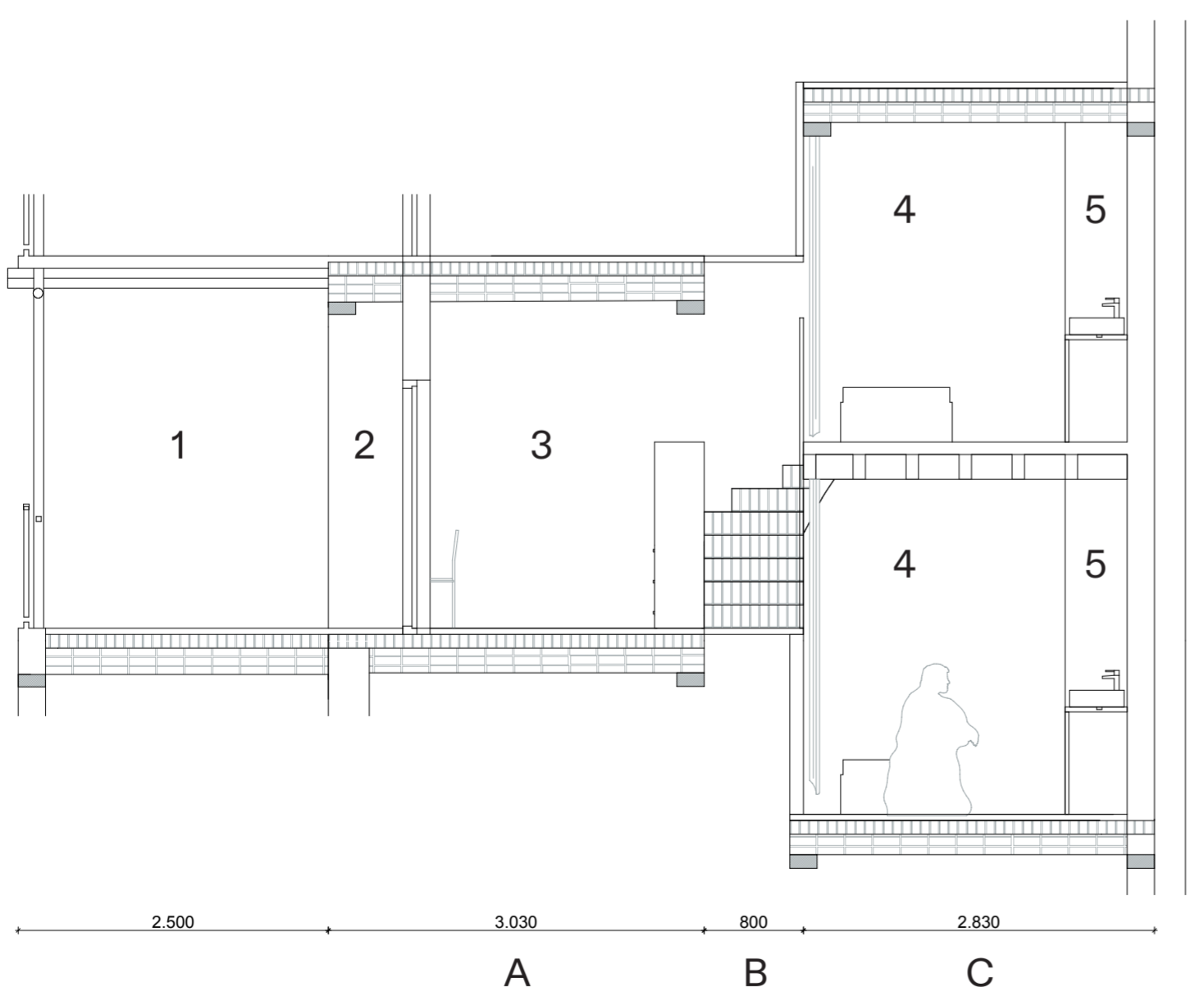
Scale 1:20 (scaled down to 1:50)



2nd floor - block L



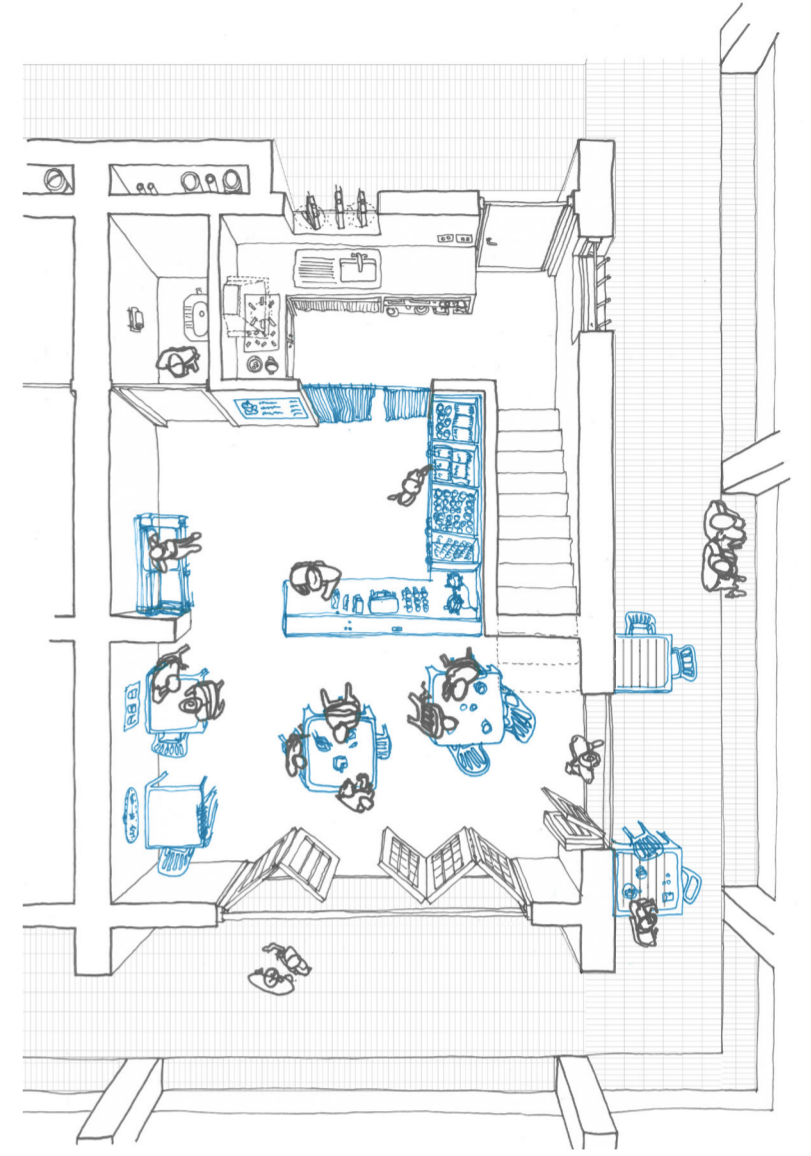
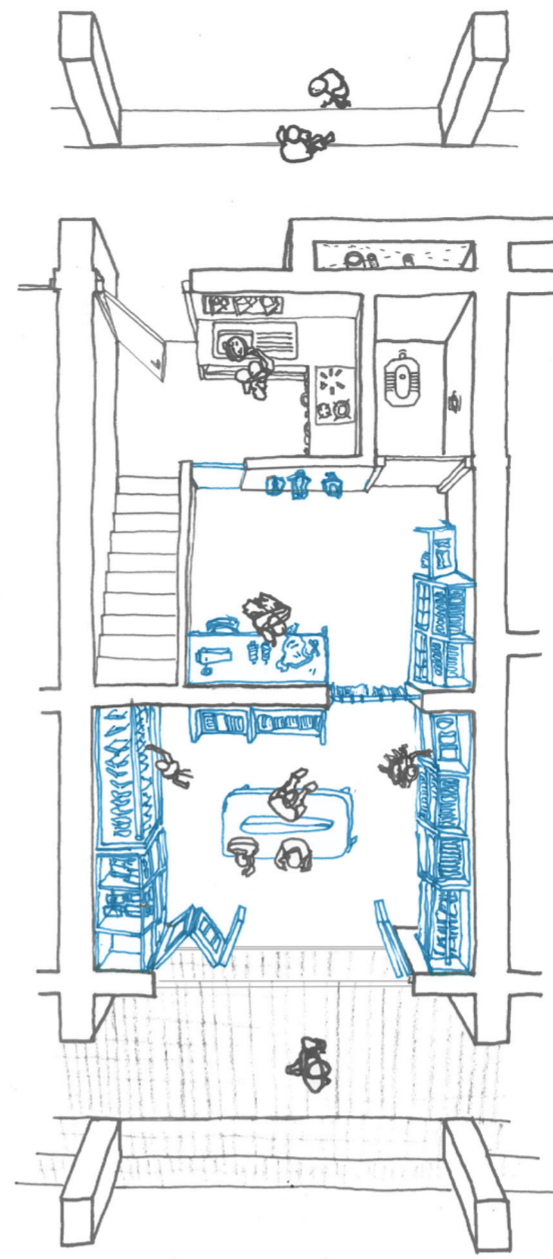
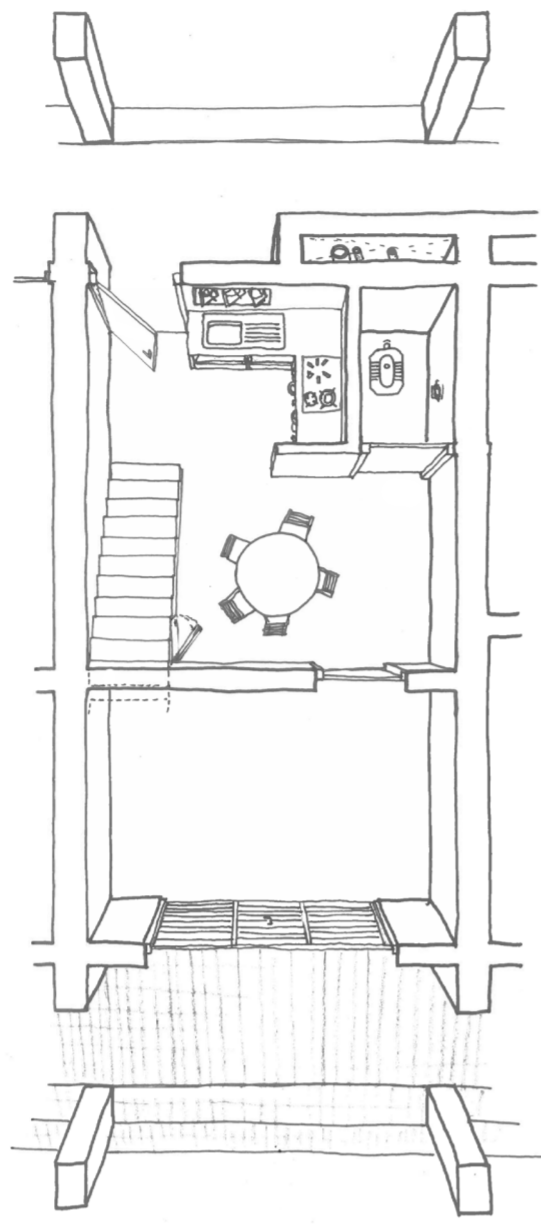
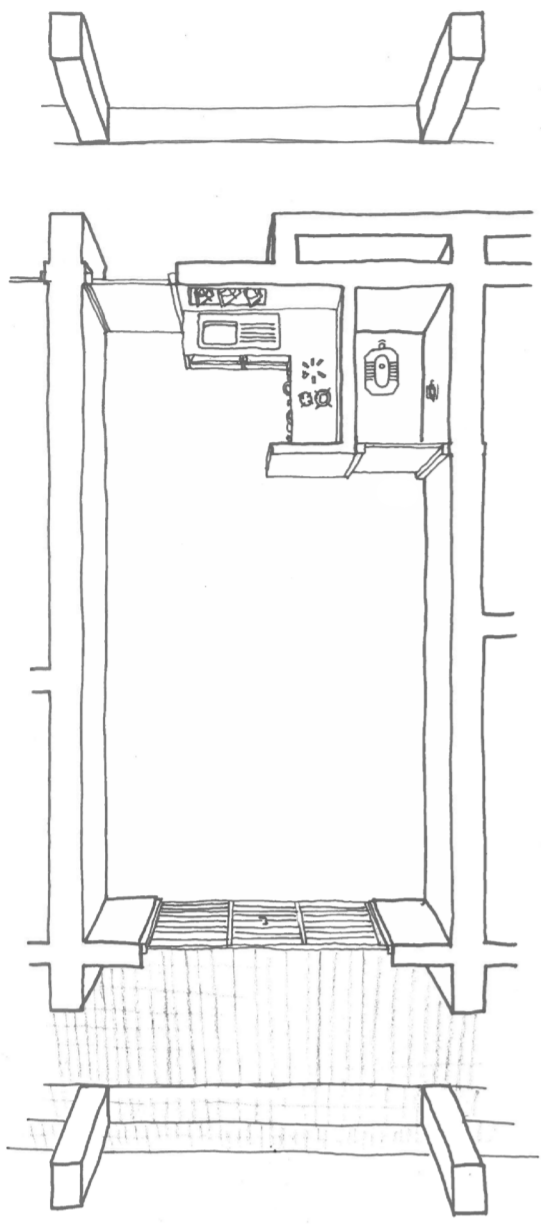
2nd floor - block M



Section

- Gallery 1
- Setback as porch 2
- Shared entrance area 3
- Sleeping area 4
- Niche for sink + clothes 5

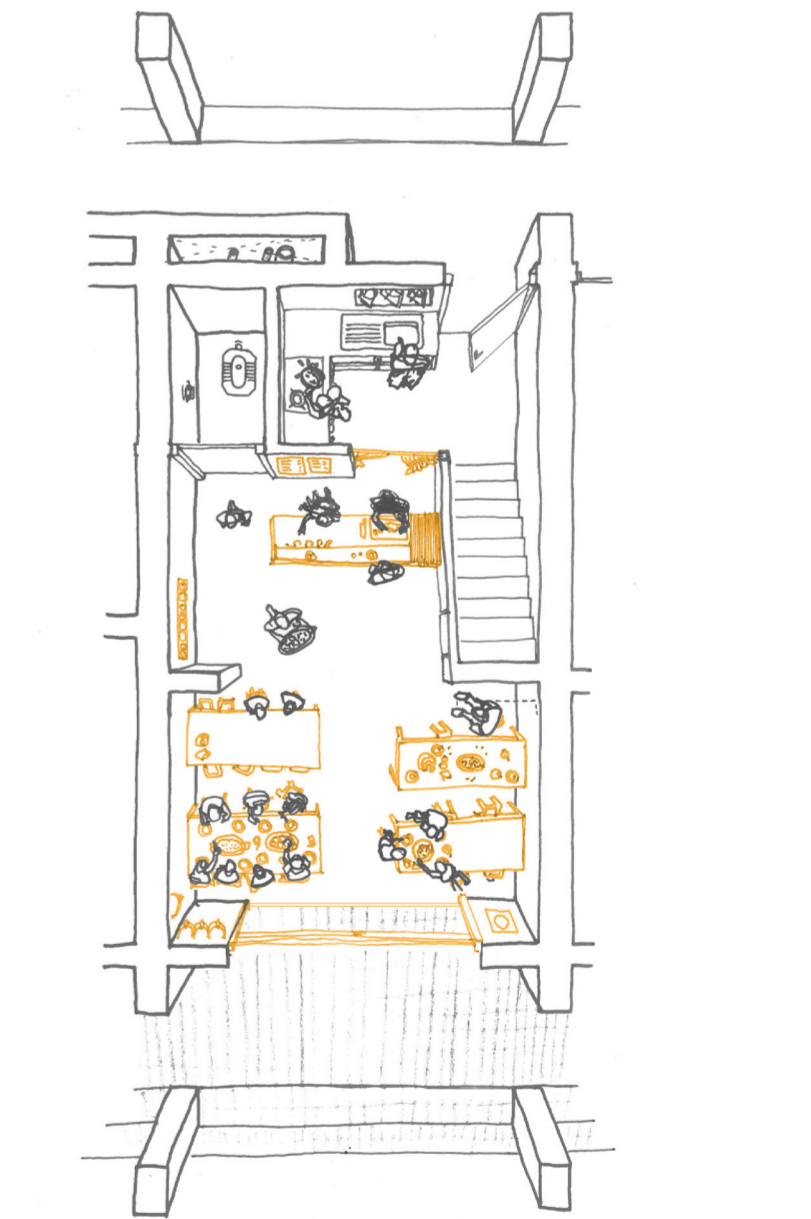
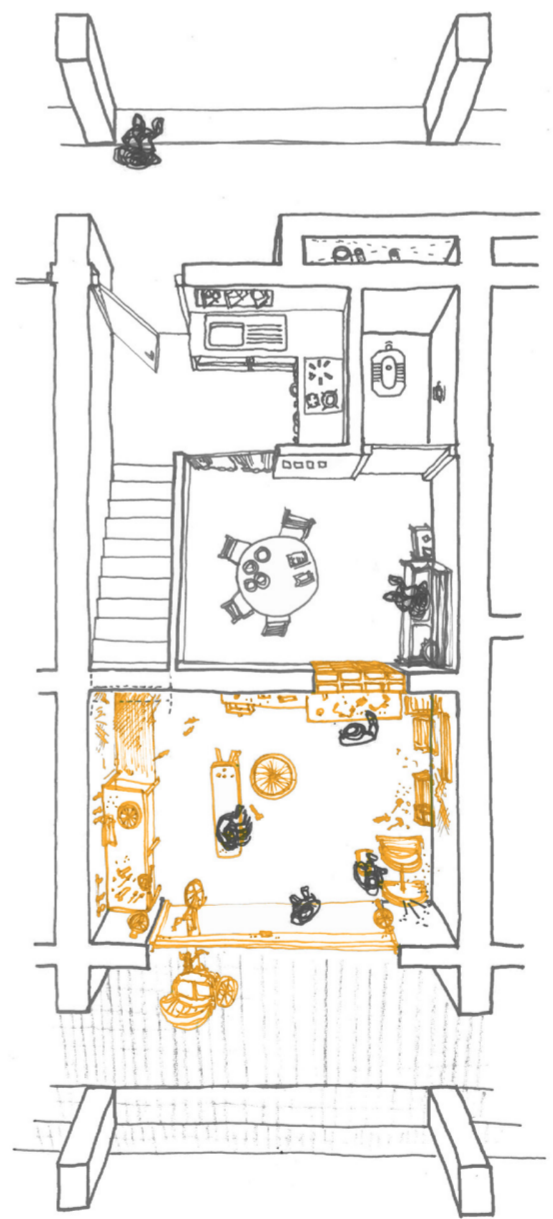
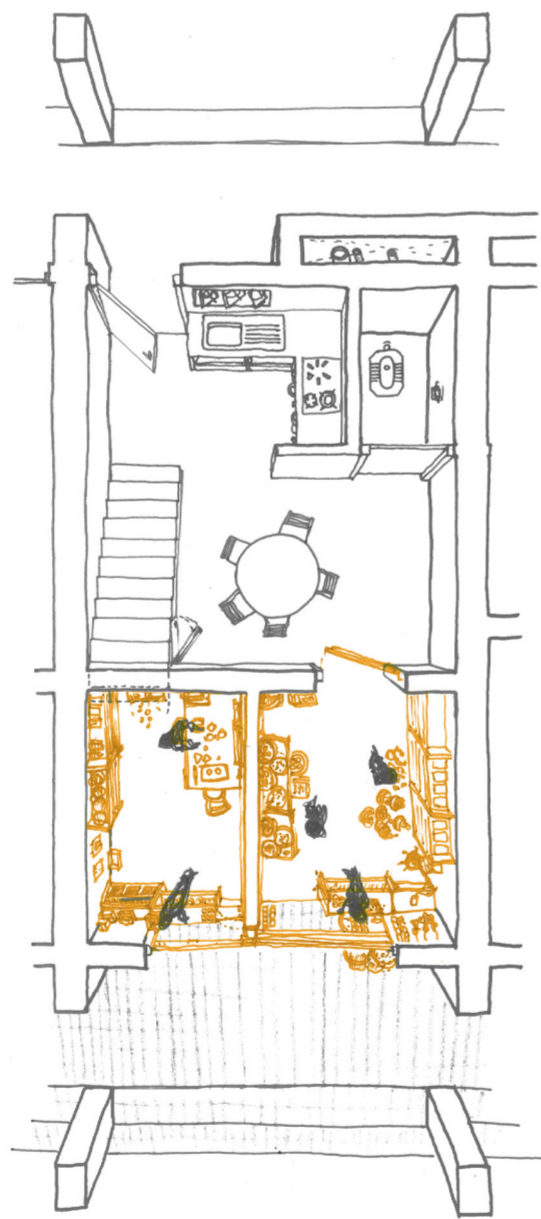
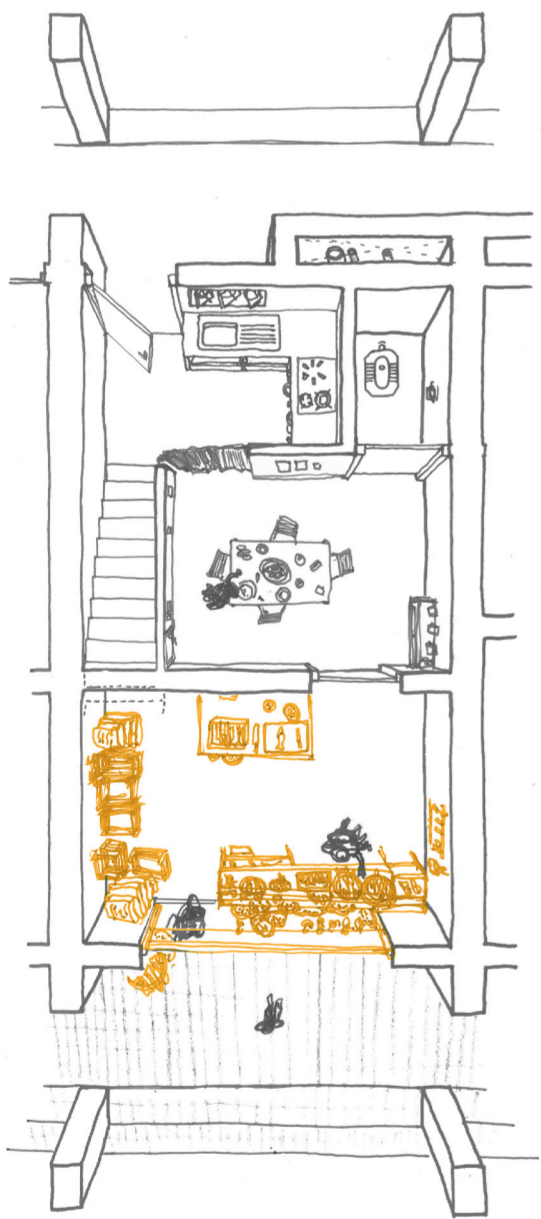




basic infill

sari store

tea house



workshop

restaurant

workshop

restaurant