

FERNANDA TELLEZ
PORTFOLIO

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Rock House

Residential Building

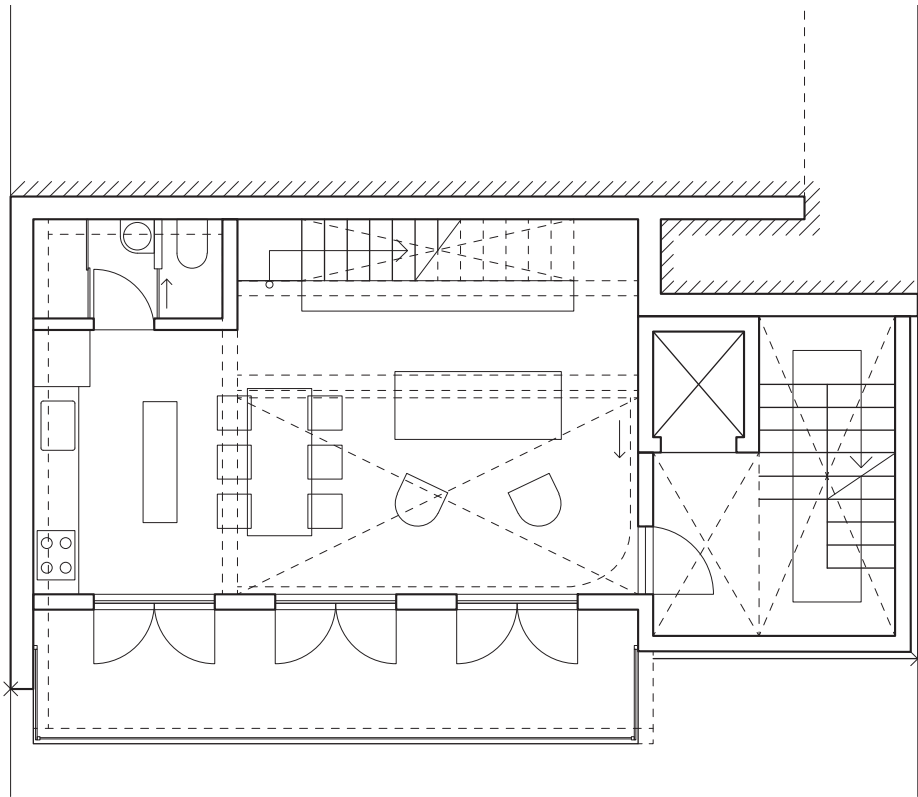
Mexico City

Rock House is a small 200 m² single family house on a steep mountain site in the west of Mexico City. The house was developed with flexible usage in mind both in regard to inhabitant constellations and the opening or closure of the rooms towards various balconies and terraces.

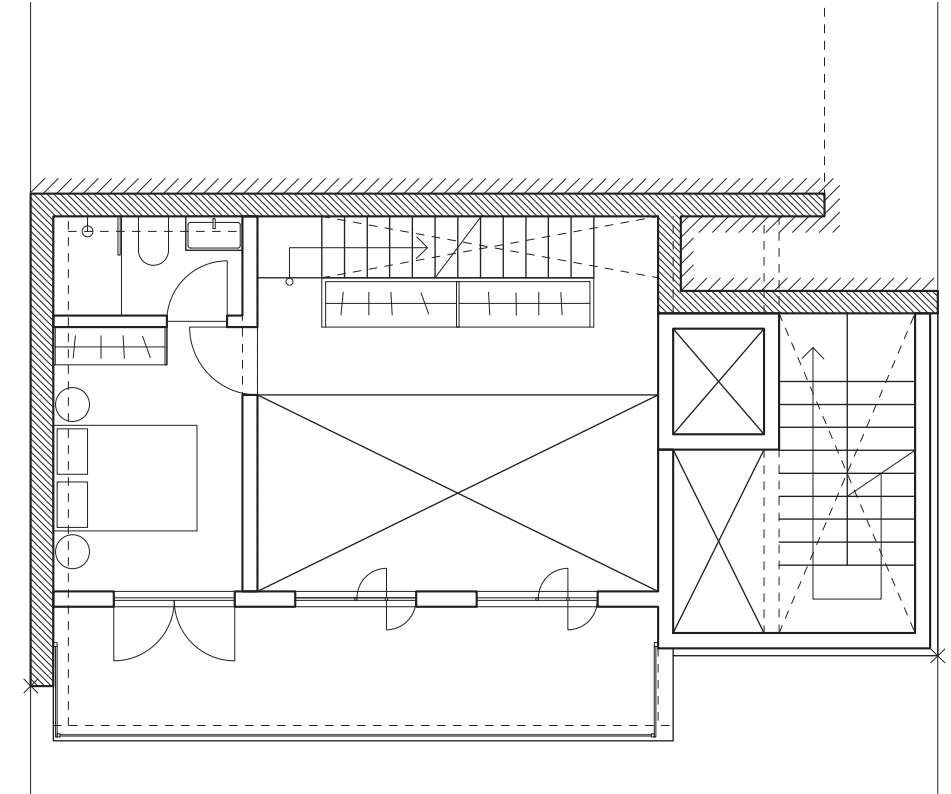
The house has entrances on two levels which enables its use by two inhabitants providing both communality and privacy.



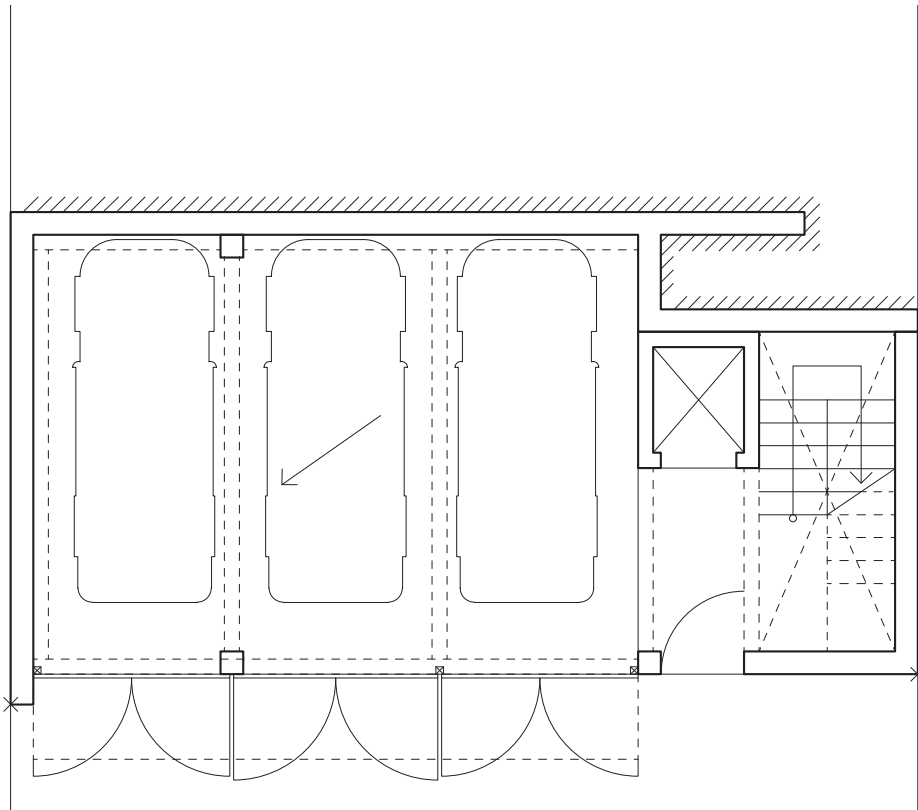
+1



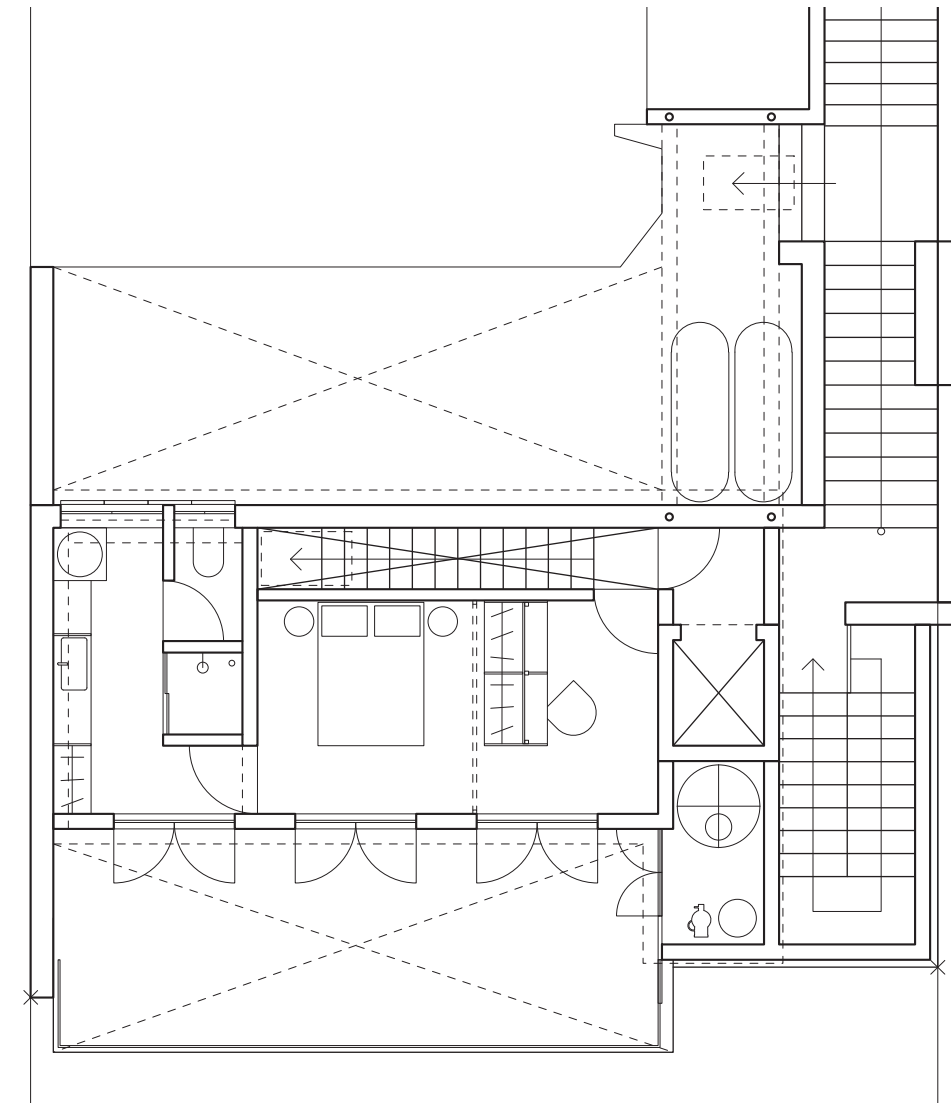
+3



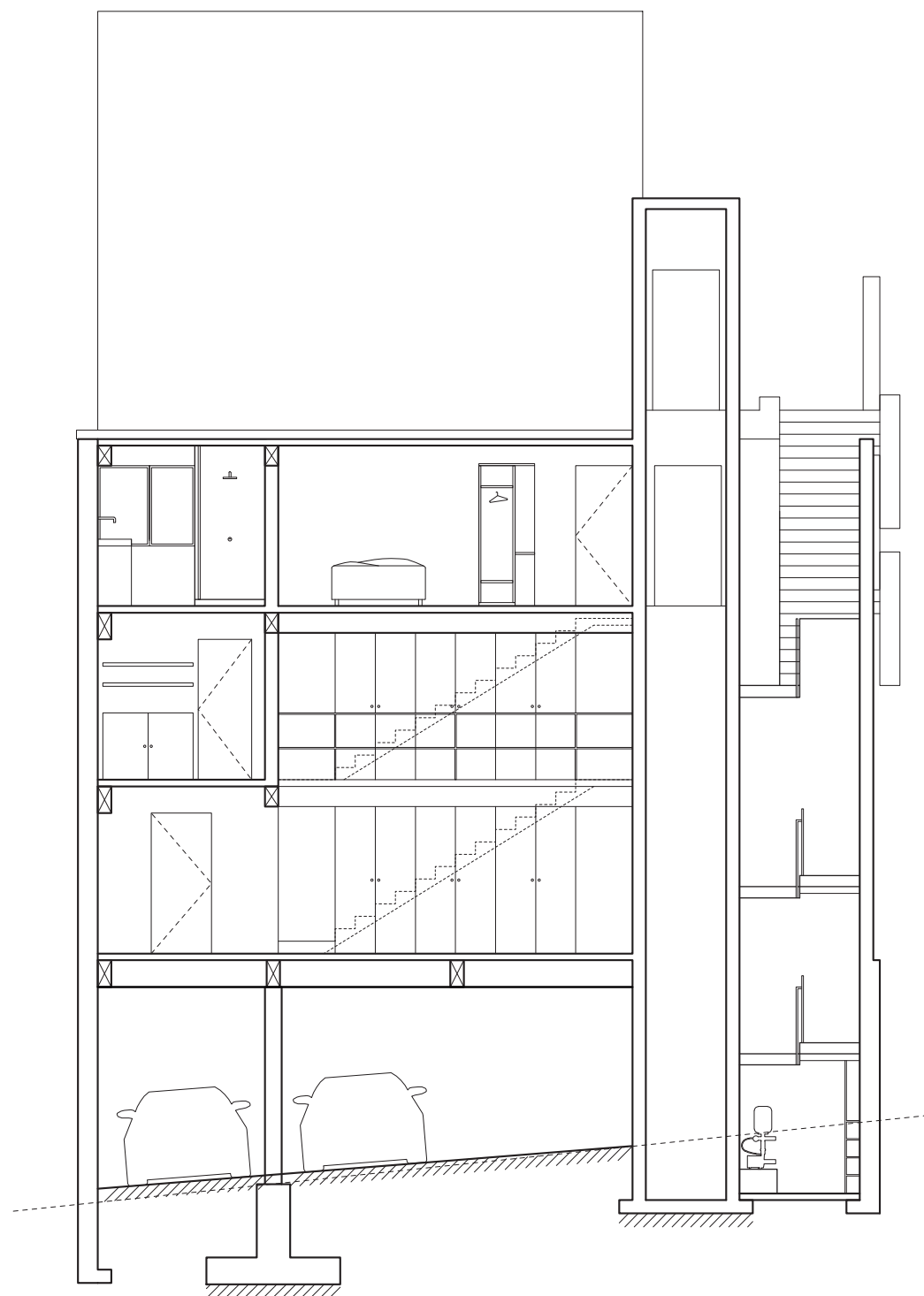
0



+2



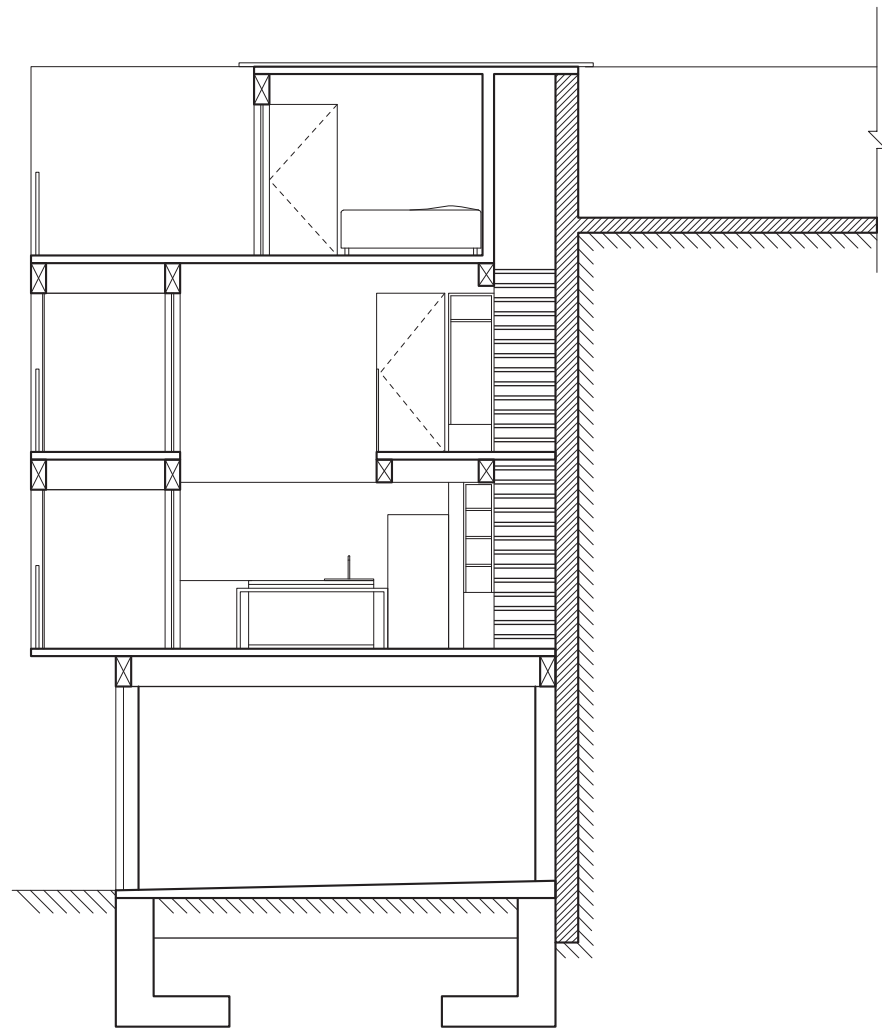
0.) The ground floor was determined by the need to fit 3 cars, unfortunately being an essential tool for Mexicans. +1.) The main room of the house partially has a double high, and on beautiful days can be opened up to the terrace. +2.) The second floor has a one bedroom and again a generous terrace that doubles the usable area. +3.) The top floor is accessible through the inside and through the main staircase making its use more flexible. The Terraces work as climatic and acoustic buffer.



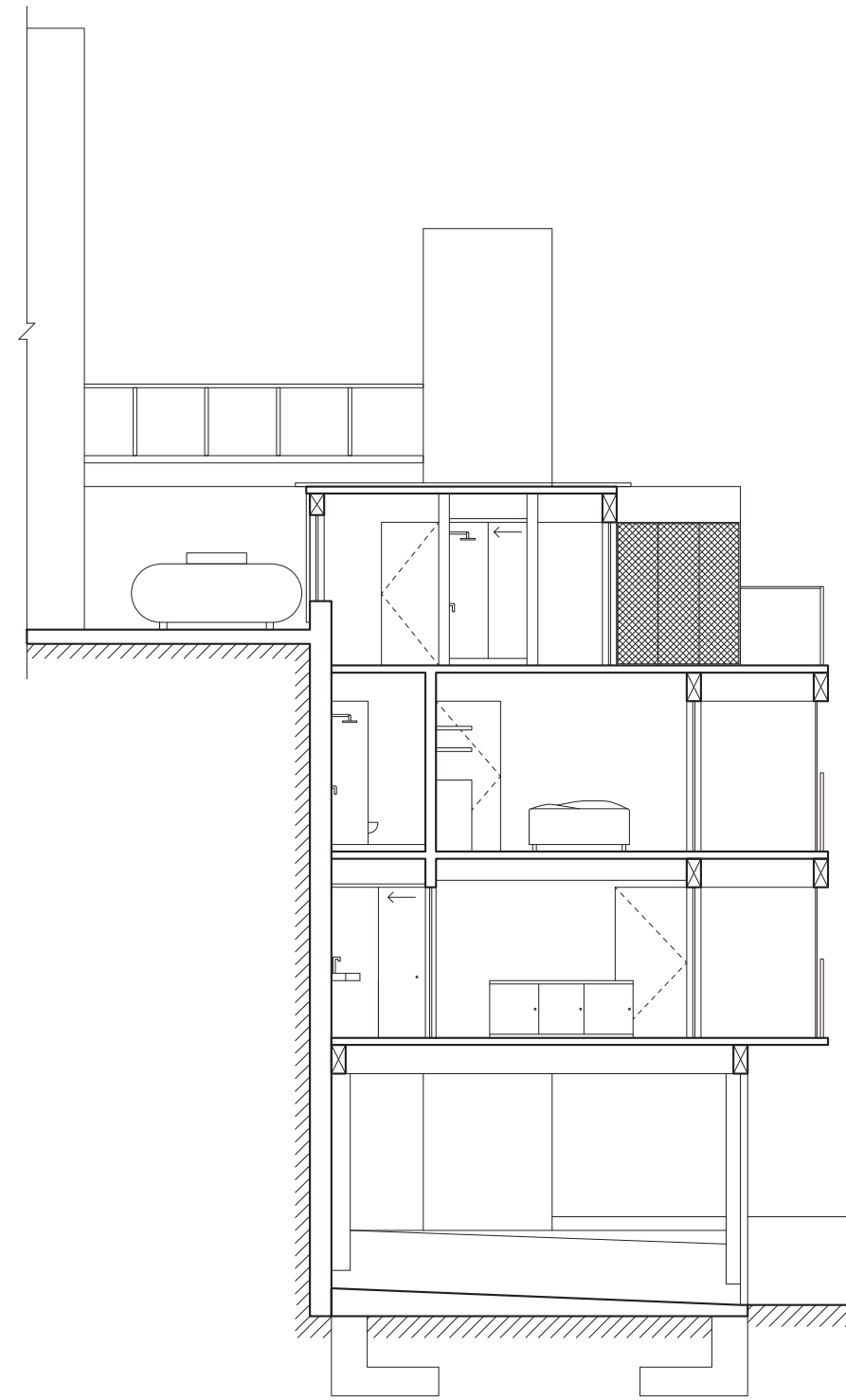
Section South



Elevation South



Section East



Section West

1+1=3

Social Housing

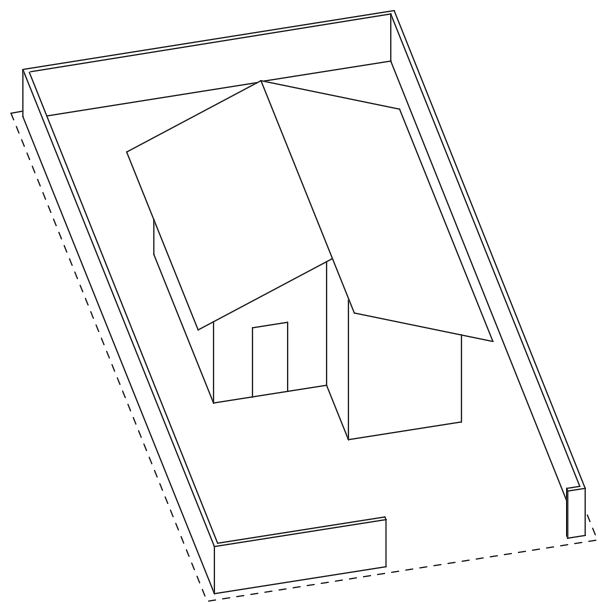
Various Locations, Brazil

1+1=3 is a study and update proposal for the single family house type constructed under the Brazilian Mass Housing program “Minha Casa, Minha Vida.”

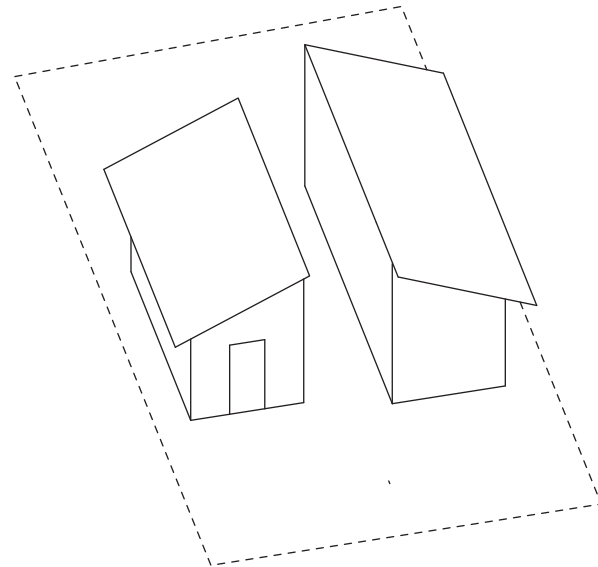
Developed at ETH Zurich for the Brazilian Housing Ministry, the proposal suggests a simple split of the house currently produced and a reduction of the standard plot size, paradoxically increasing the living quality, the felt size of the house and the urban condition it creates and fosters.



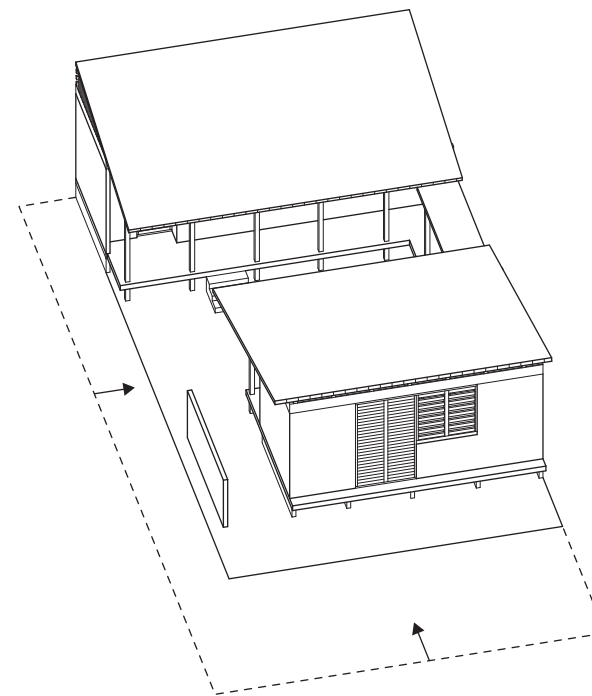
MCMV settlements are established where land is cheap; the repetitive patterns follow the laws of the current building economy. The lack of integration with existing urban settings makes them prone to becoming ghettos.



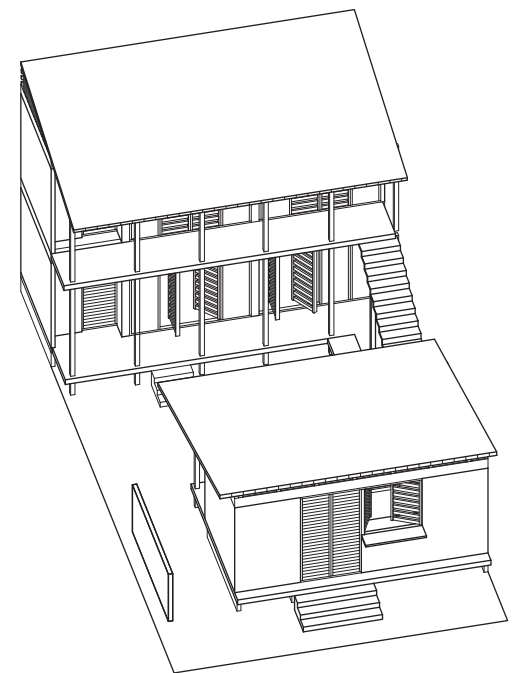
1.)
Current Brazilian
Mass housing
Standard



2.)
Proposed Update 1:
Seperate the
house in two halves

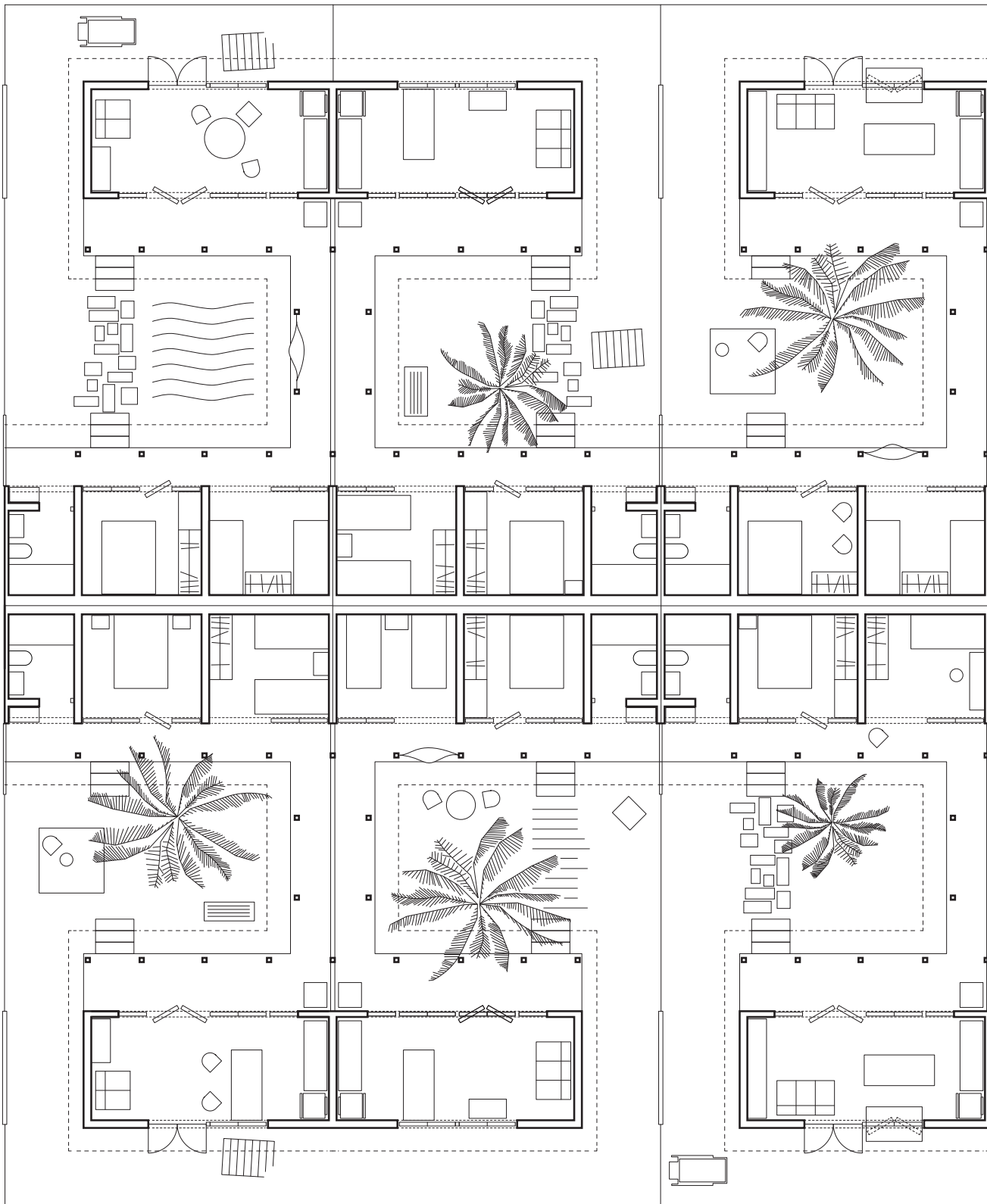


3.)
Proposed Update 2:
Shrink
the plot size



4.)
Final Result:
A type that A.) creates
an urban rather than a
suburban dwelling structure
B.) is better suited for adaptation
C.) Makes the house
feel bigger without increasing
floor space and D.) makes
outdoor areas usable due to
increased privacy

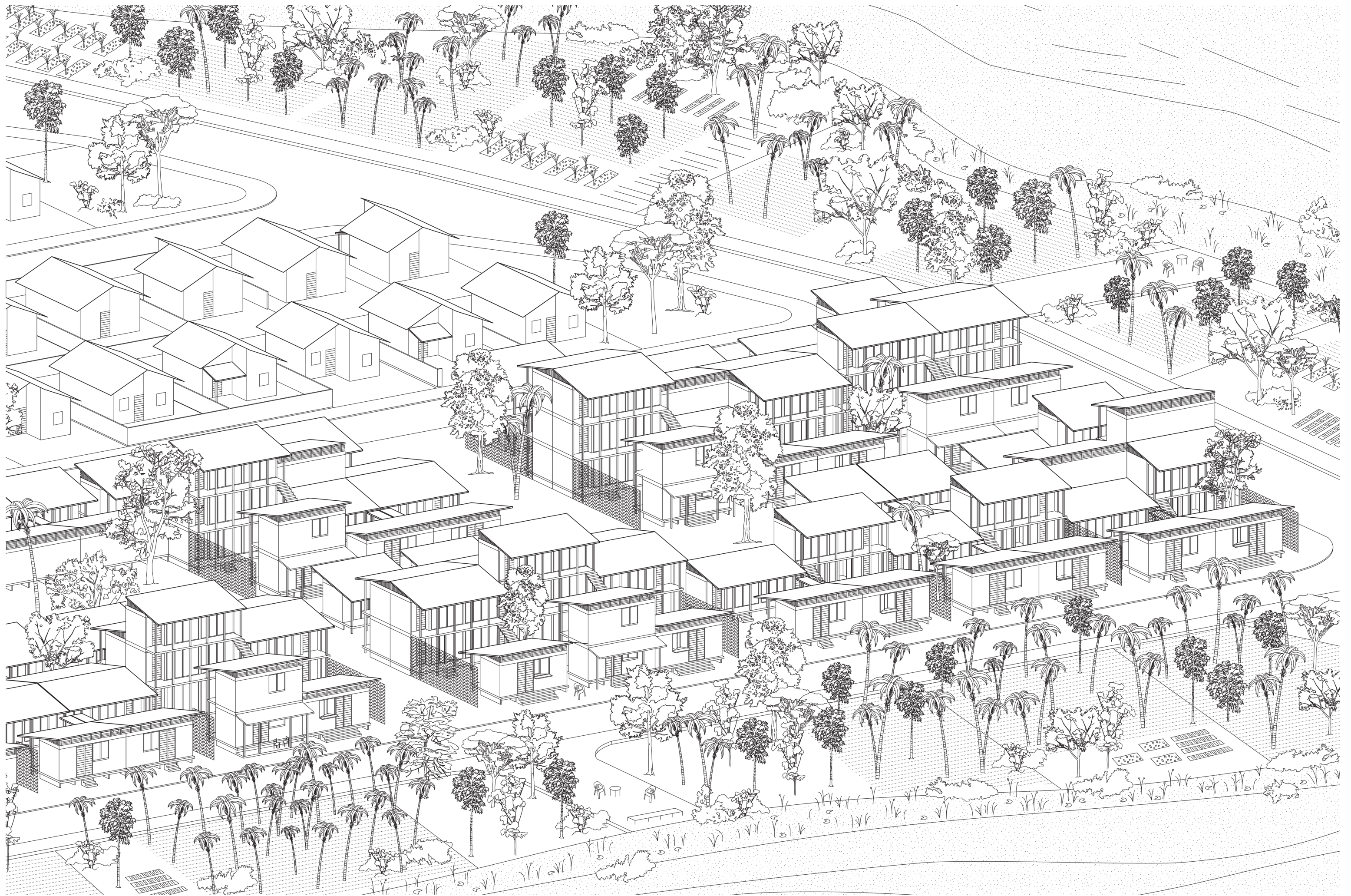
Splitting the original MCMV volume and decreasing the plot size creates an architectural type that feels much more spacious while on an urban level a shift from a suburban structure to an urban structure is performed, creating a much more potent type for the creation of mixed-use neighbourhoods.



A back-to-back arrangement and smaller plot sizes of the single family units levels out the extra costs occurring due to the increased outer facades that are necessary for splitting the original type.



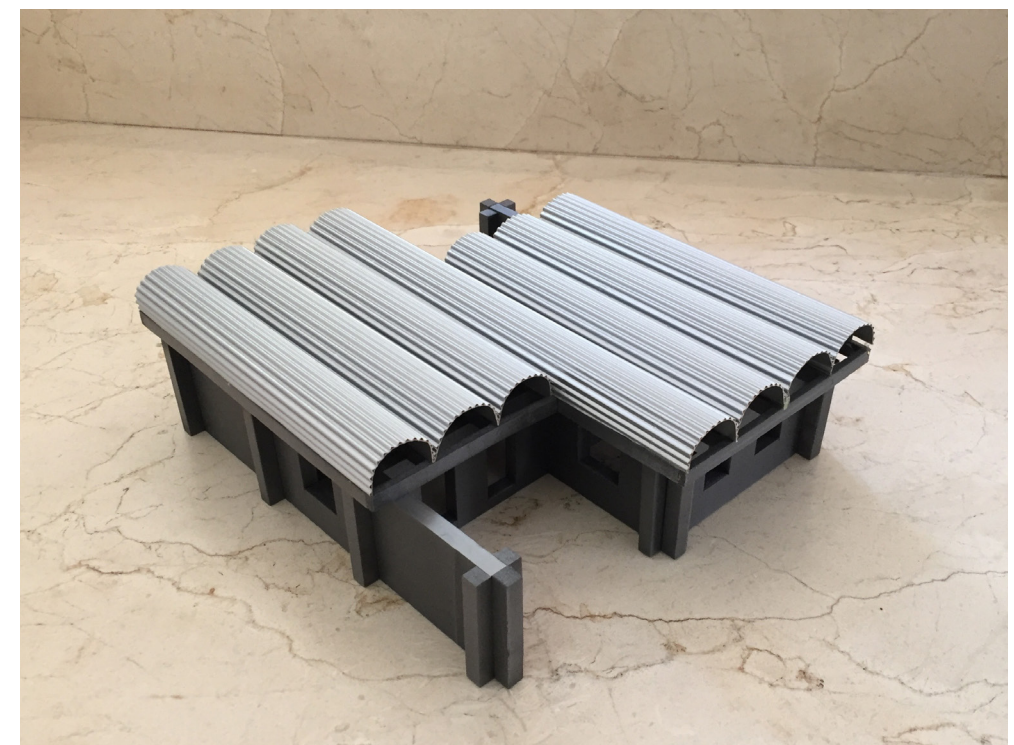
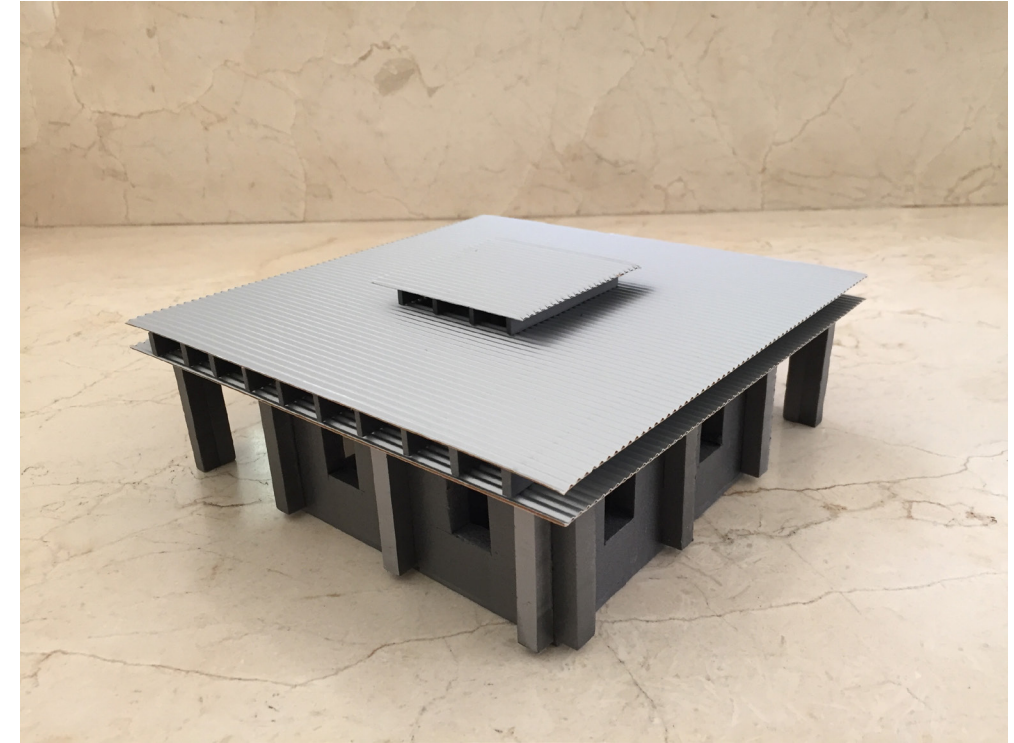
The “exterior room” created by splitting the house

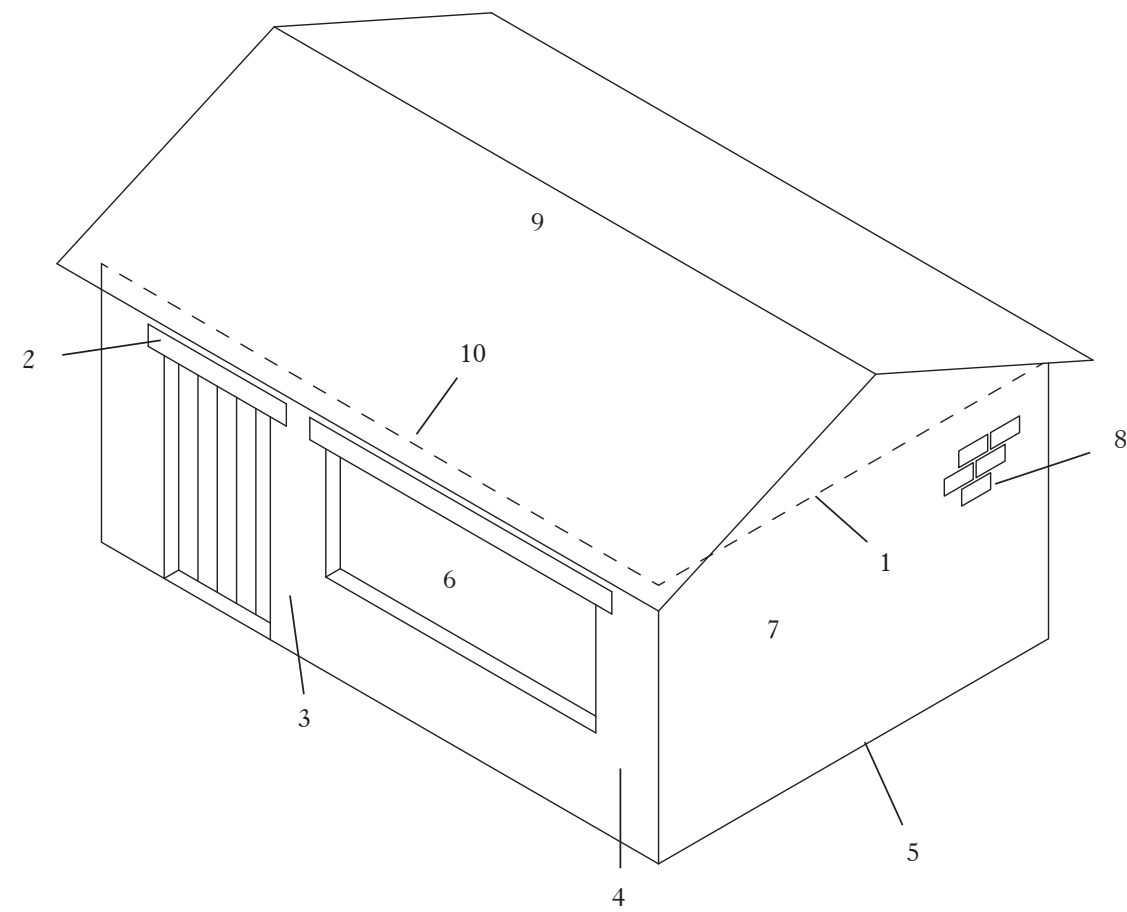


Axonometric showing the urban impact of 1+1=3 versus the current MCMV type in the back of the drawing. The suburban morphology is transformed to an urban one.

Casa de Tierra

Casa de Tierra are earthquake resistant prototypes made out of adobe or mud-brick for Jojutla, a rural town of 57,000 residents in the state of Morelos, recently devastated by a 7.1 earthquake in central Mexico. Adobe construction is an underestimated material; it is an economic, ecological and quake-resistant solution if certain design principles and quality measures are followed. The project highlights these principles for the community and suggests to building types that make use of them.

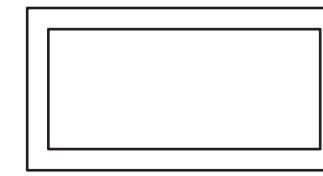




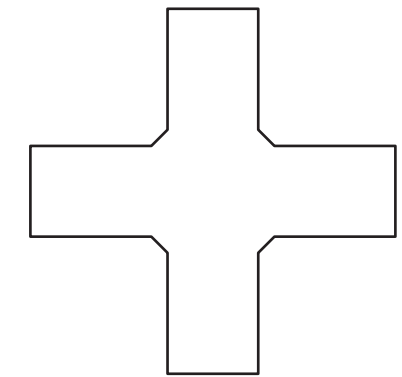
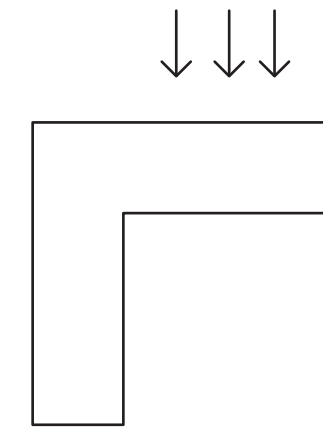
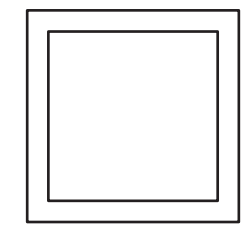
1. No ring beam (concrete)
2. The lintels (window beam) do not overlap enough over the wall.
3. Not enough distance between doors and windows.
4. Not enough distance between openings and corners.
5. Lack of foundation
6. Long openings.
7. Long and thin walls without supporting elements.
8. Poor quality of the soil used for joints and bricks.
9. Heavy roof.
10. The connection between roof and wall is unstable.

1.)

Unstable



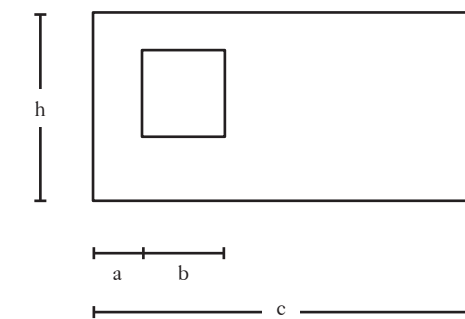
Stable



2.)

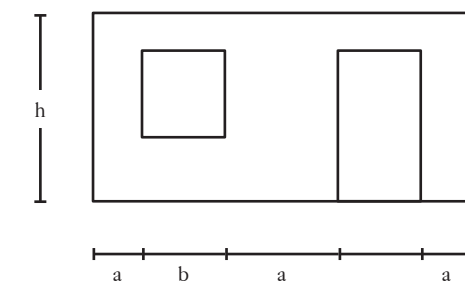
$$a \geq h / 3 \geq 100 \text{ cm}$$

$$b \leq c / 3 \leq 120 \text{ cm}$$

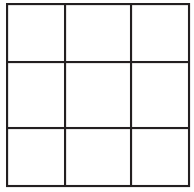


$$a \geq h / 3 \geq 100 \text{ cm}$$

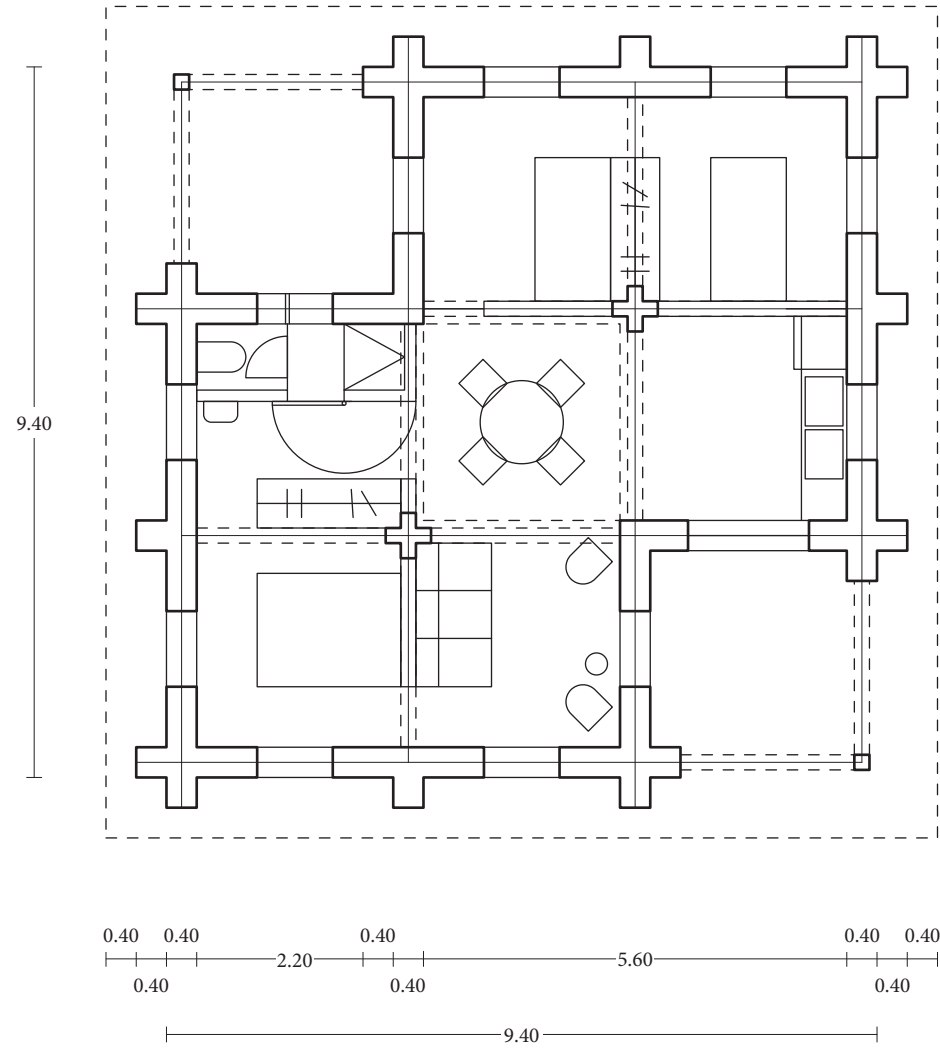
$$b \leq h / 2 \leq 120 \text{ cm}$$



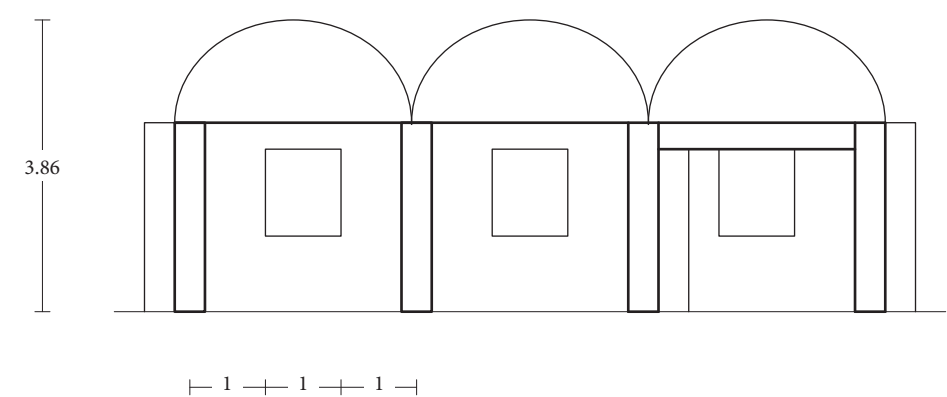
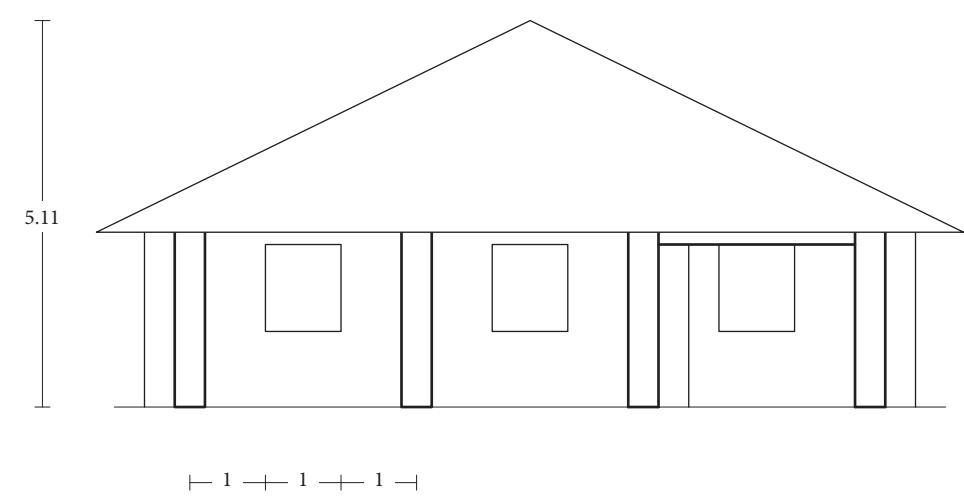
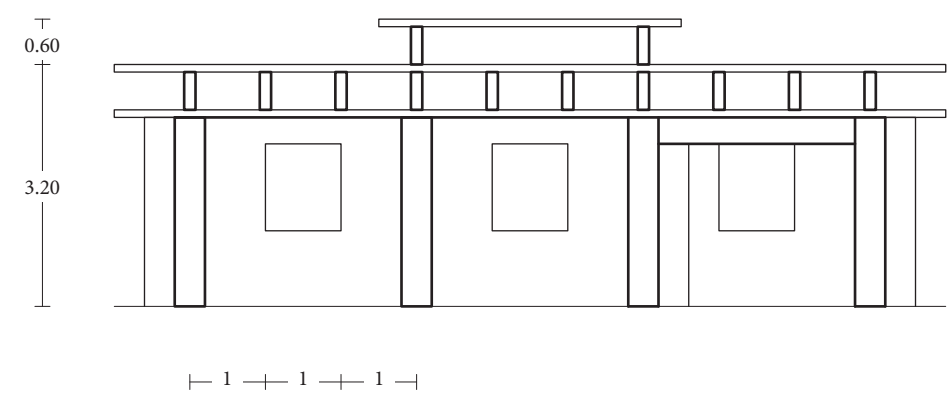
3.)



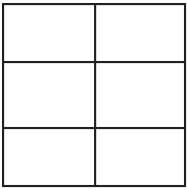
Prototype 3x3



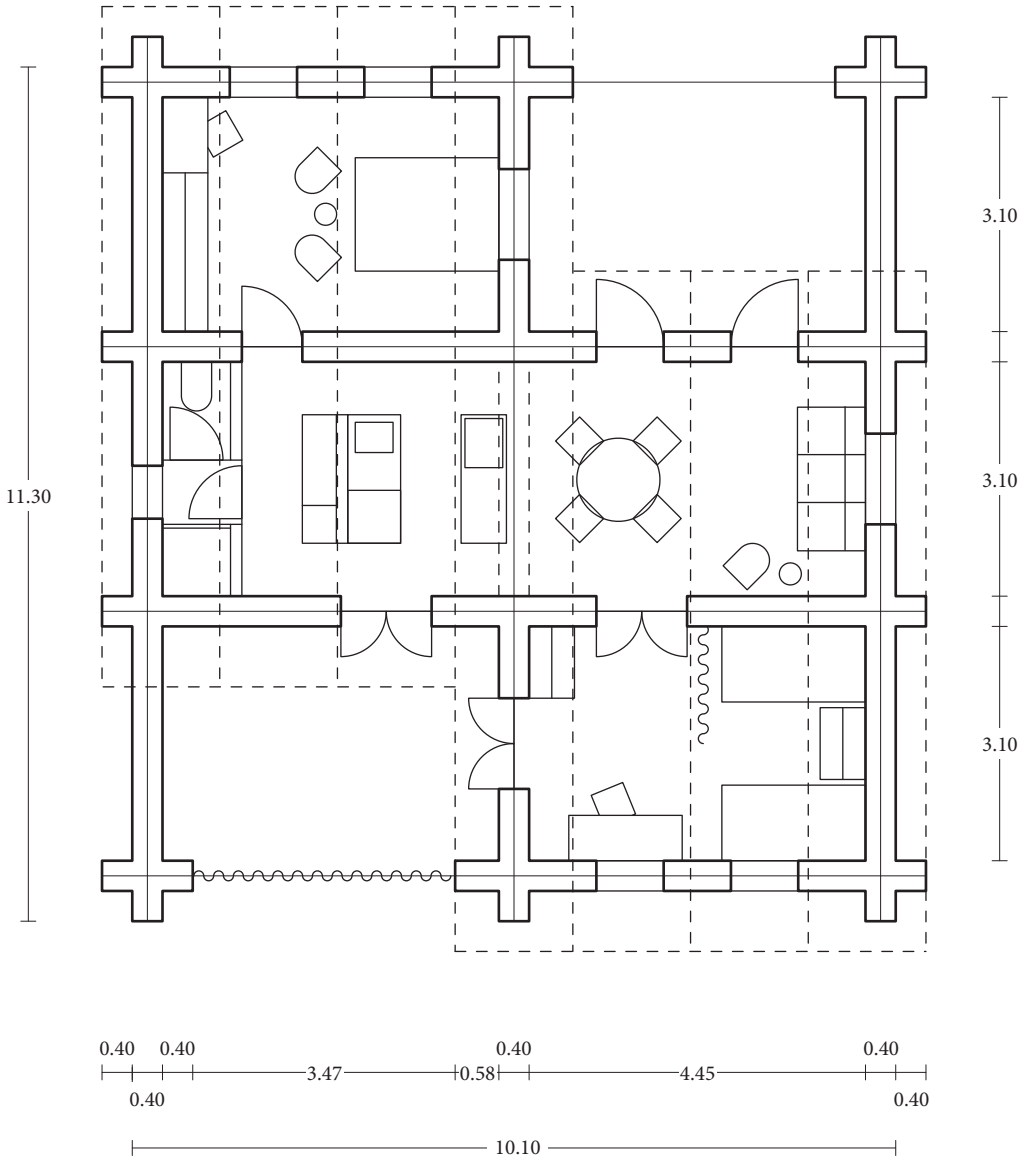
1.)



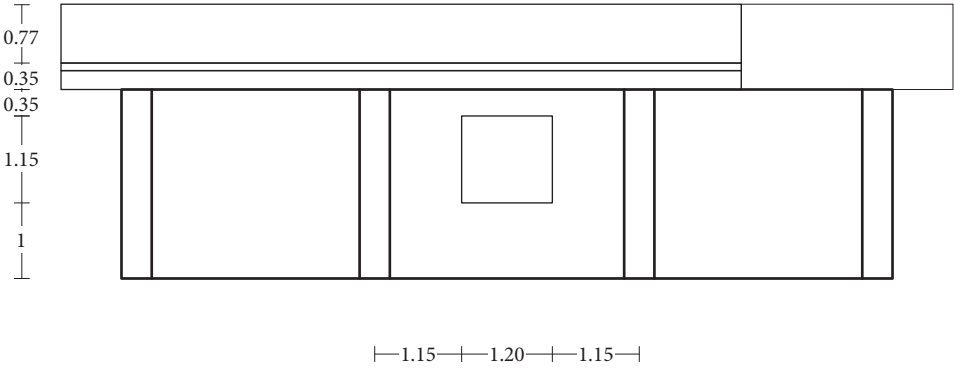
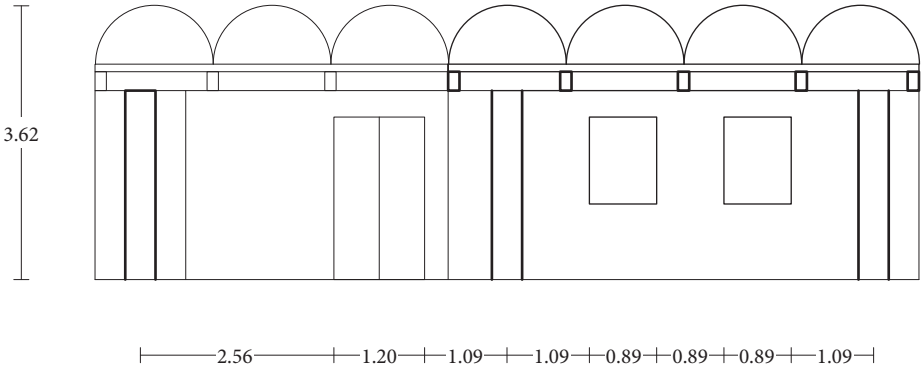
2.)



Prototype 2x3



1.)

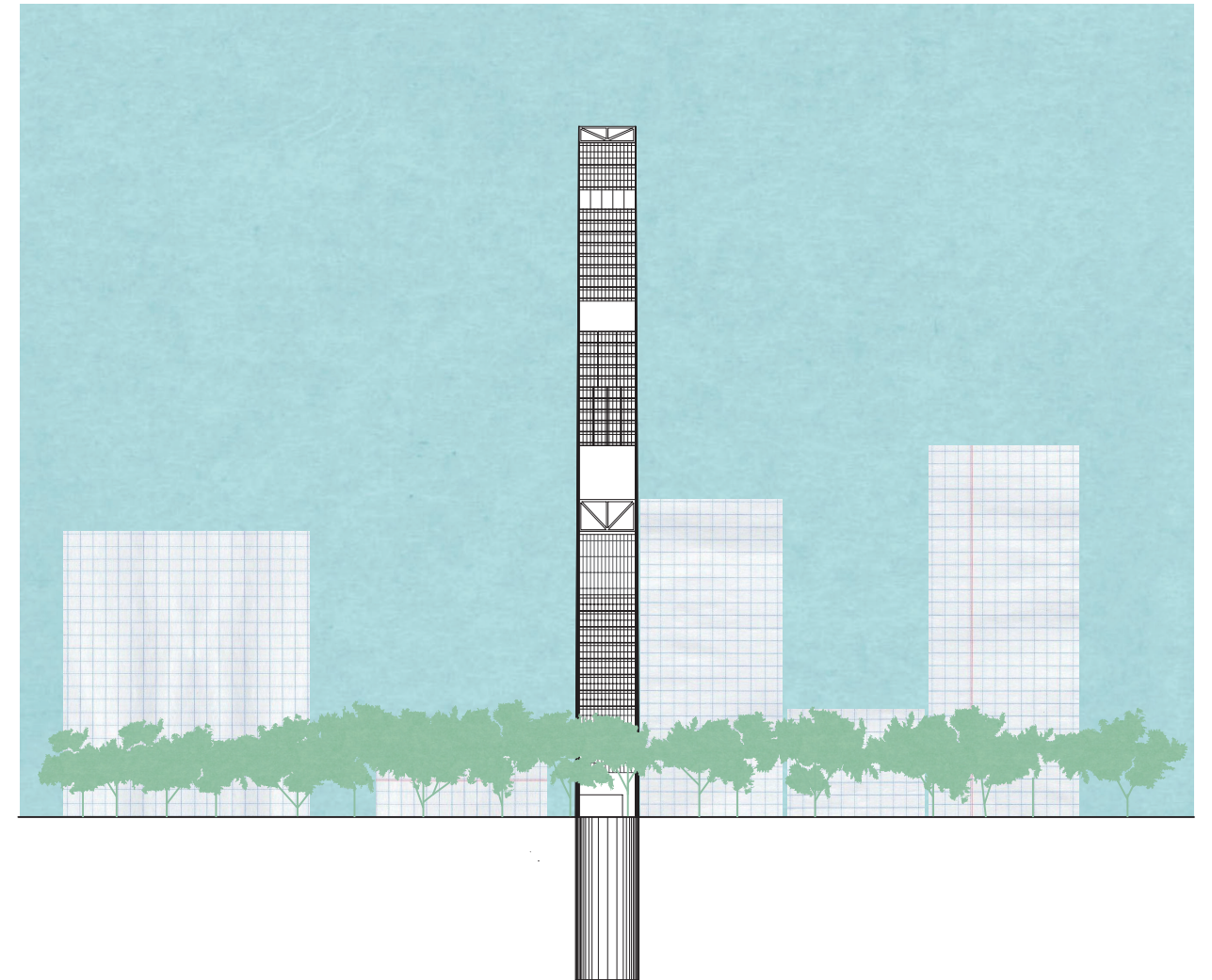


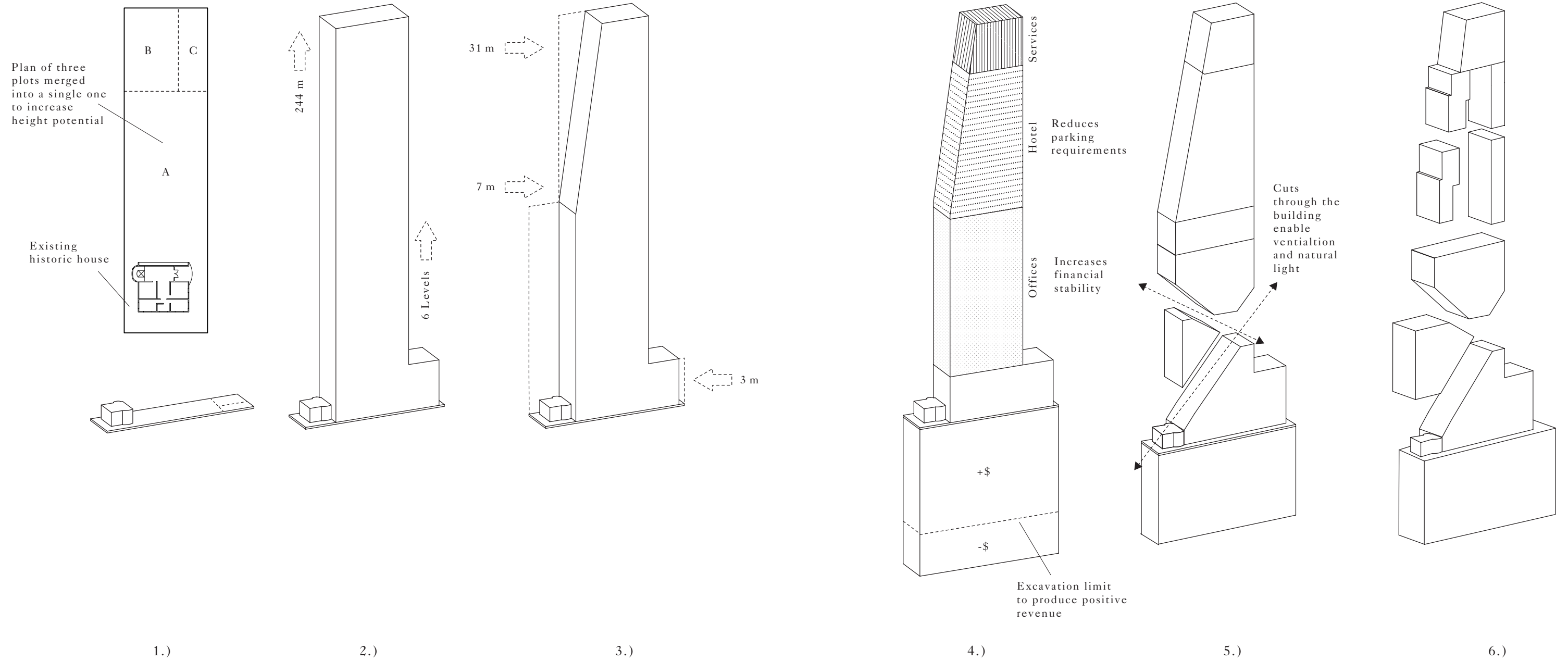
2.)

Torre Reforma Highrise Building Mexico City

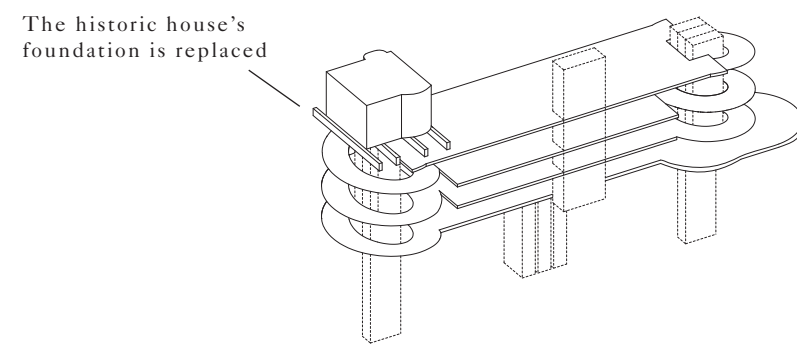
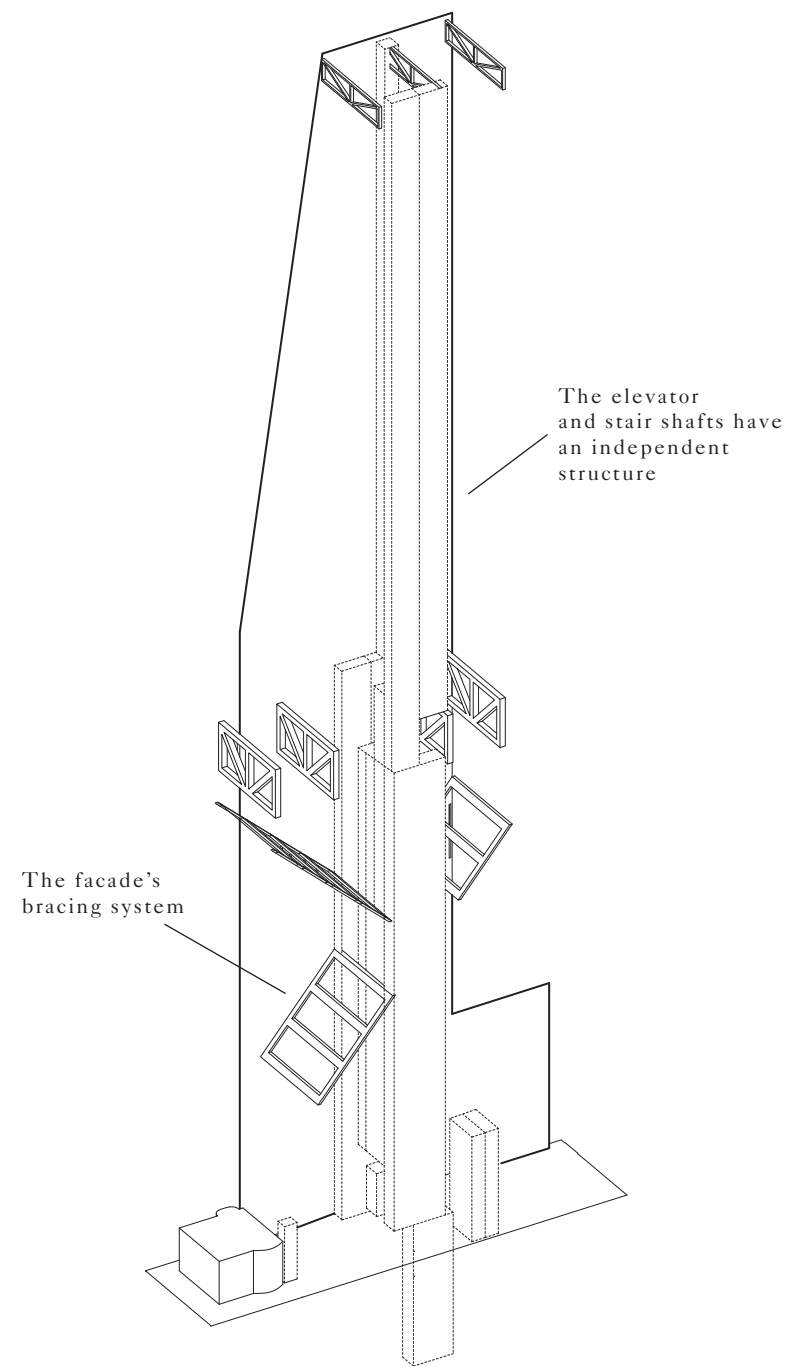
Torre Reforma is a very slender tower proposed for one of the only open sites left on Avenida Reforma in Mexico City.

With a facade width of only 20 meters, a plot depth of 78 meters a height of 244 meters, and a listed historic house on the site, the mixed-use building tries to introduce public accessibility while balancing the real estate pressure on sites and projects as this.

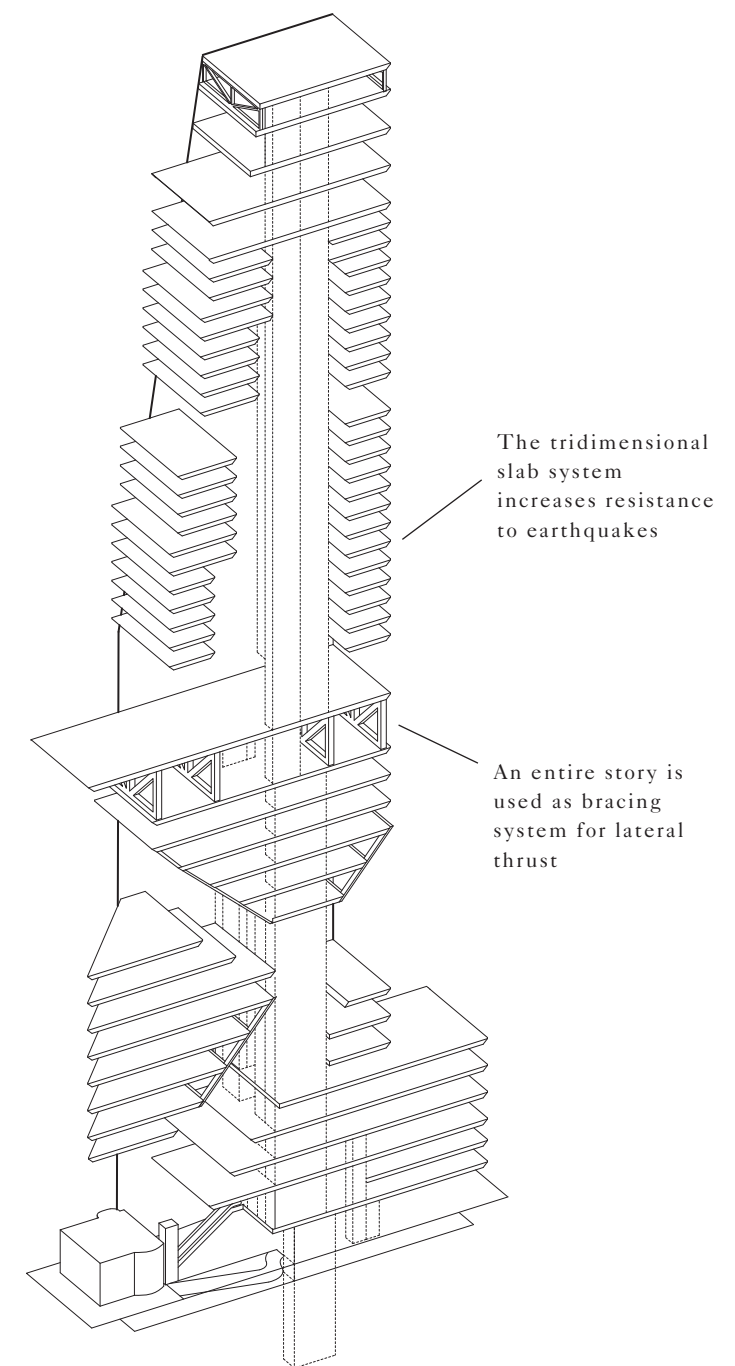




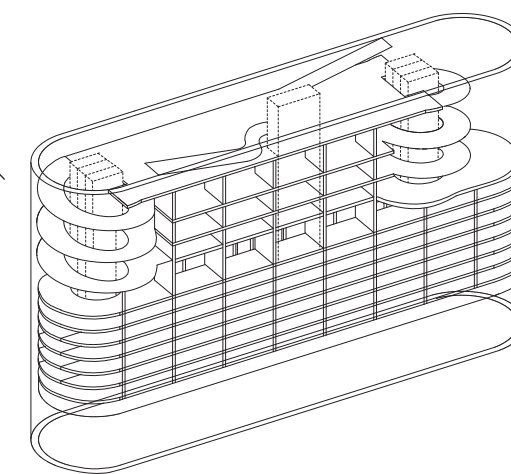
1.) Plot and listed building 2.) Maximum height 3.) horizontal restrictions
 4.) Mixed-used program (47,000m², 1050 parking lots) 5.) Natural light and ventilation cuts
 6.) Final volume 27,000m², 580 parking lots)



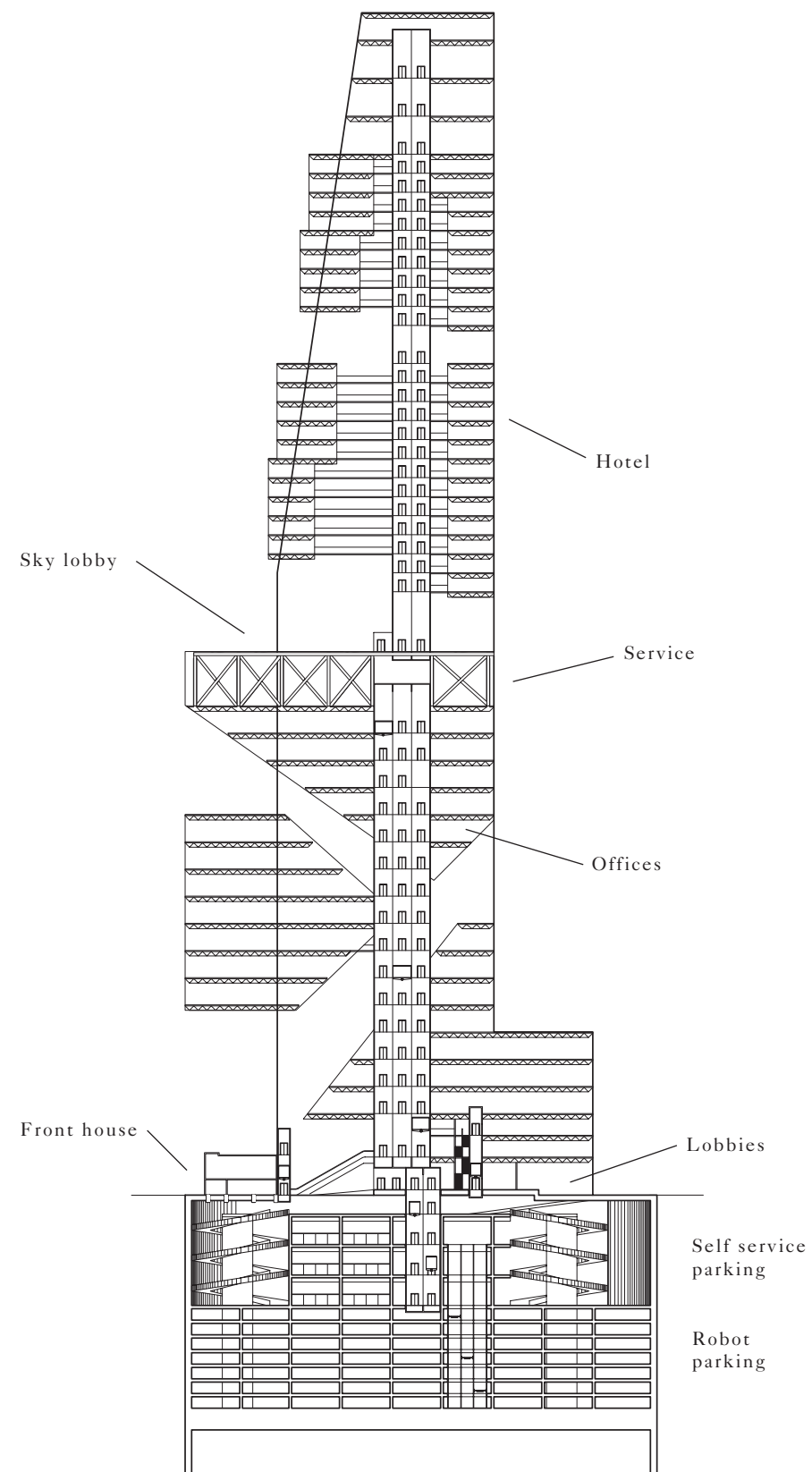
7.)



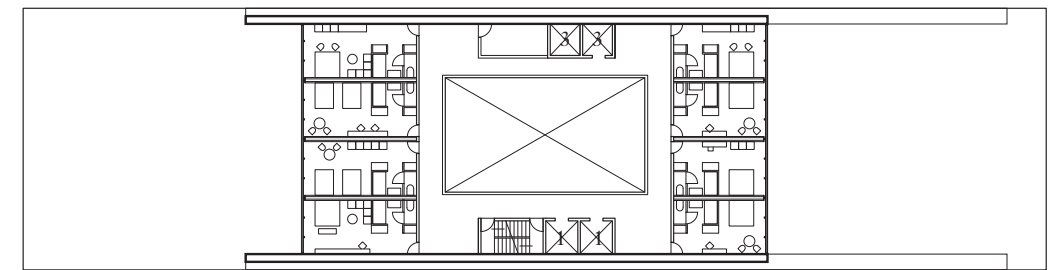
The column system and the diaphragm wall resist the lateral earth pressure



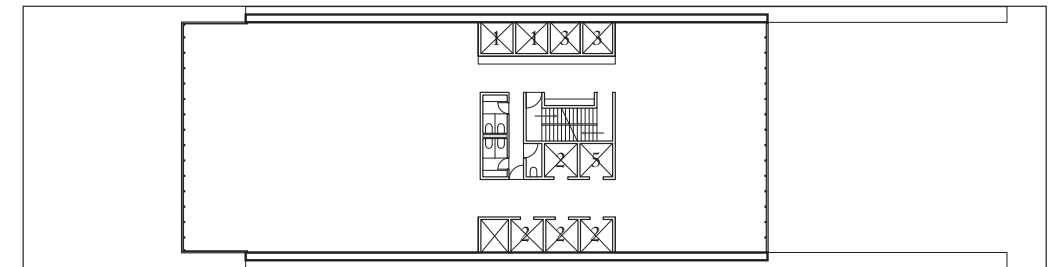
8.)



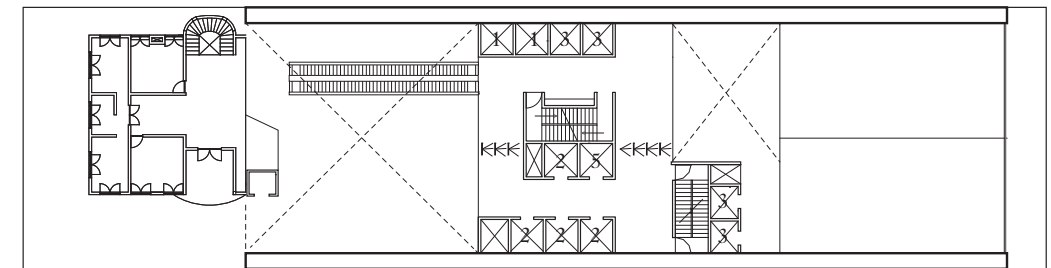
9.)



General Hotel Plan, Floor 37, +174.00 m



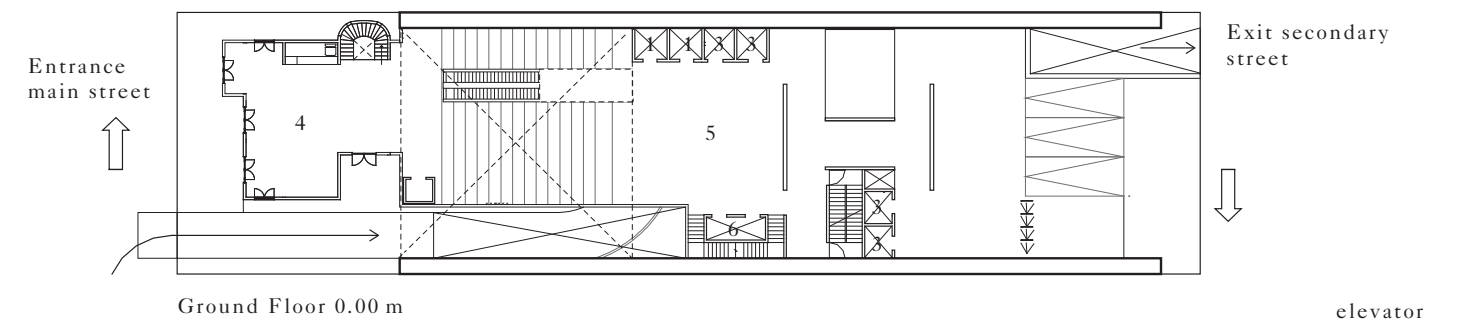
General Office Plan, Floor 17 +85.00 m



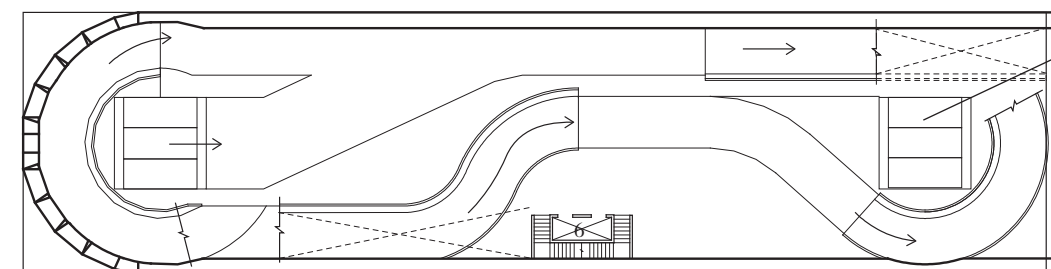
2nd Lobby +7.00 m

Elevators

1. Hotel
2. Offices
3. Service and emergency exit
4. Front house
5. Lobby
6. Parking

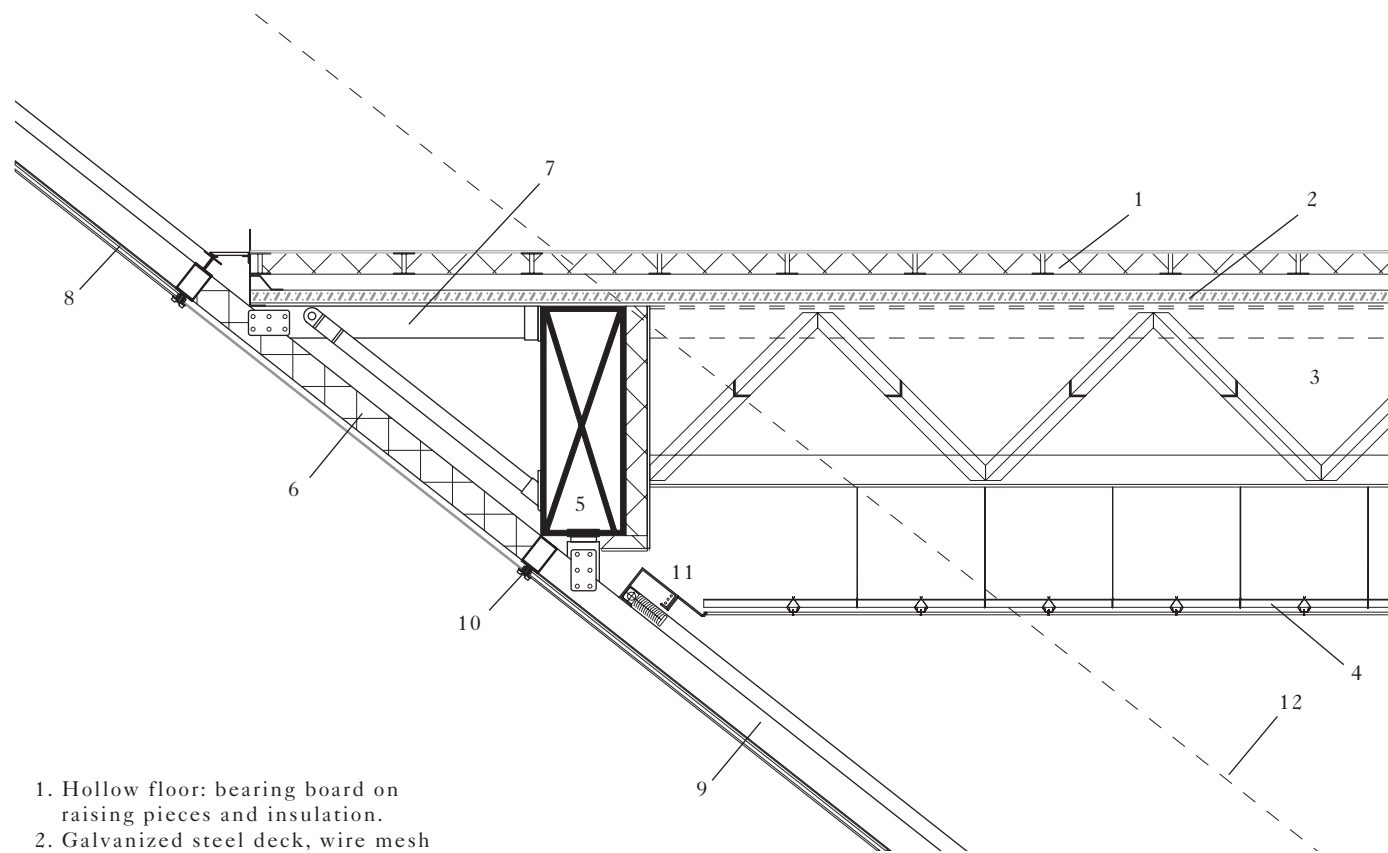


Ground Floor 0.00 m



Motor Lobby -3.50 m

10.)



1. Hollow floor: bearing board on raising pieces and insulation.
2. Galvanized steel deck, wire mesh merge in concrete.
3. Tridimensional-structured slab system made of steel angles.
4. Sheetrock floating ceiling.
5. Bearing beam made of steel angles.
6. Glass facade with outer pane printed white and insulation.
7. Facade bearing steel bracket.
8. Double glazing (8+16+10mm).
9. RHS facade post with fixing groove.
10. Aluminium glazing strip, flush.
11. Aluminium louvre sunblind with guide track.
12. Steel facade's bracing system

11.)



12.)

Y Bridge

Pedestrian bridge

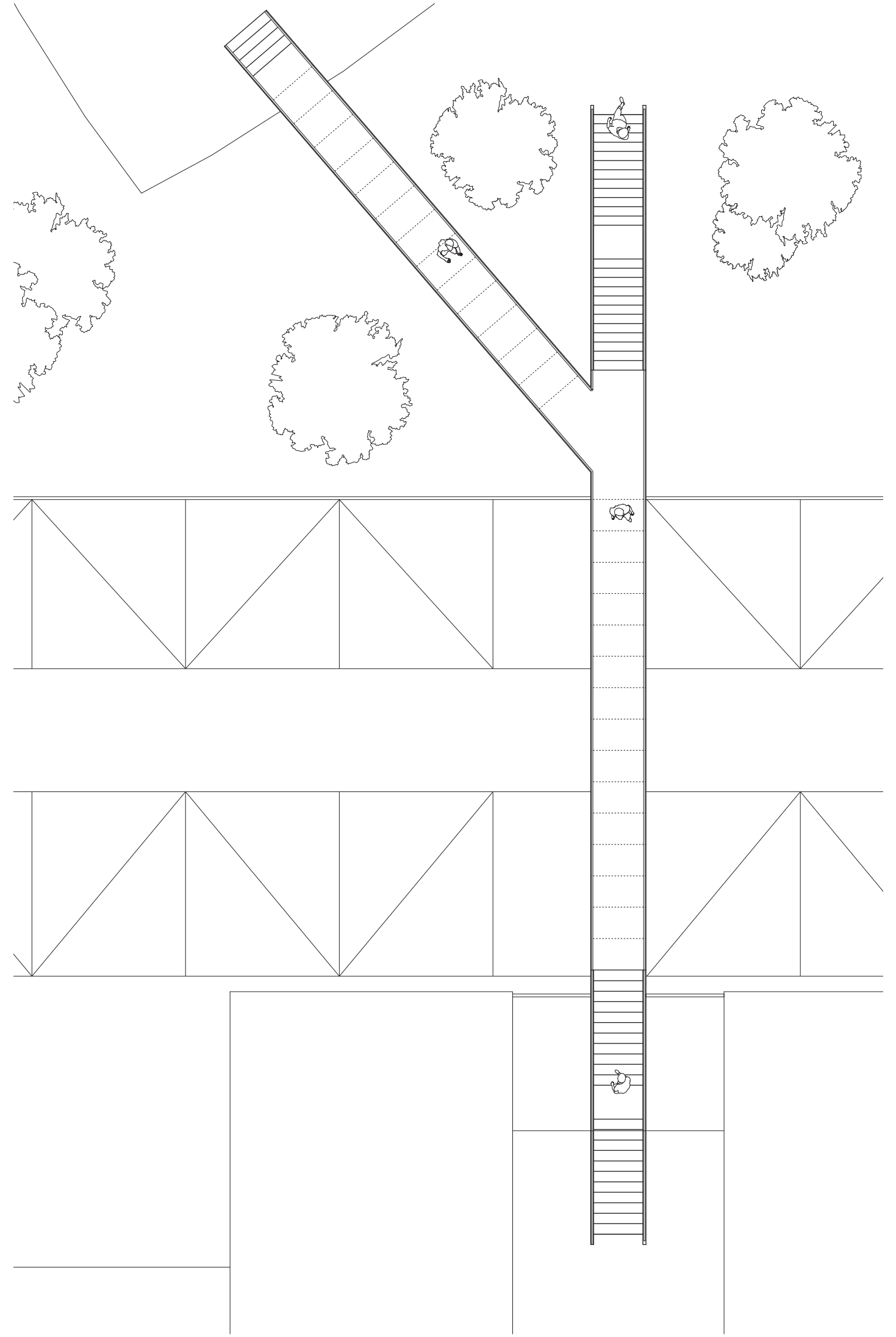
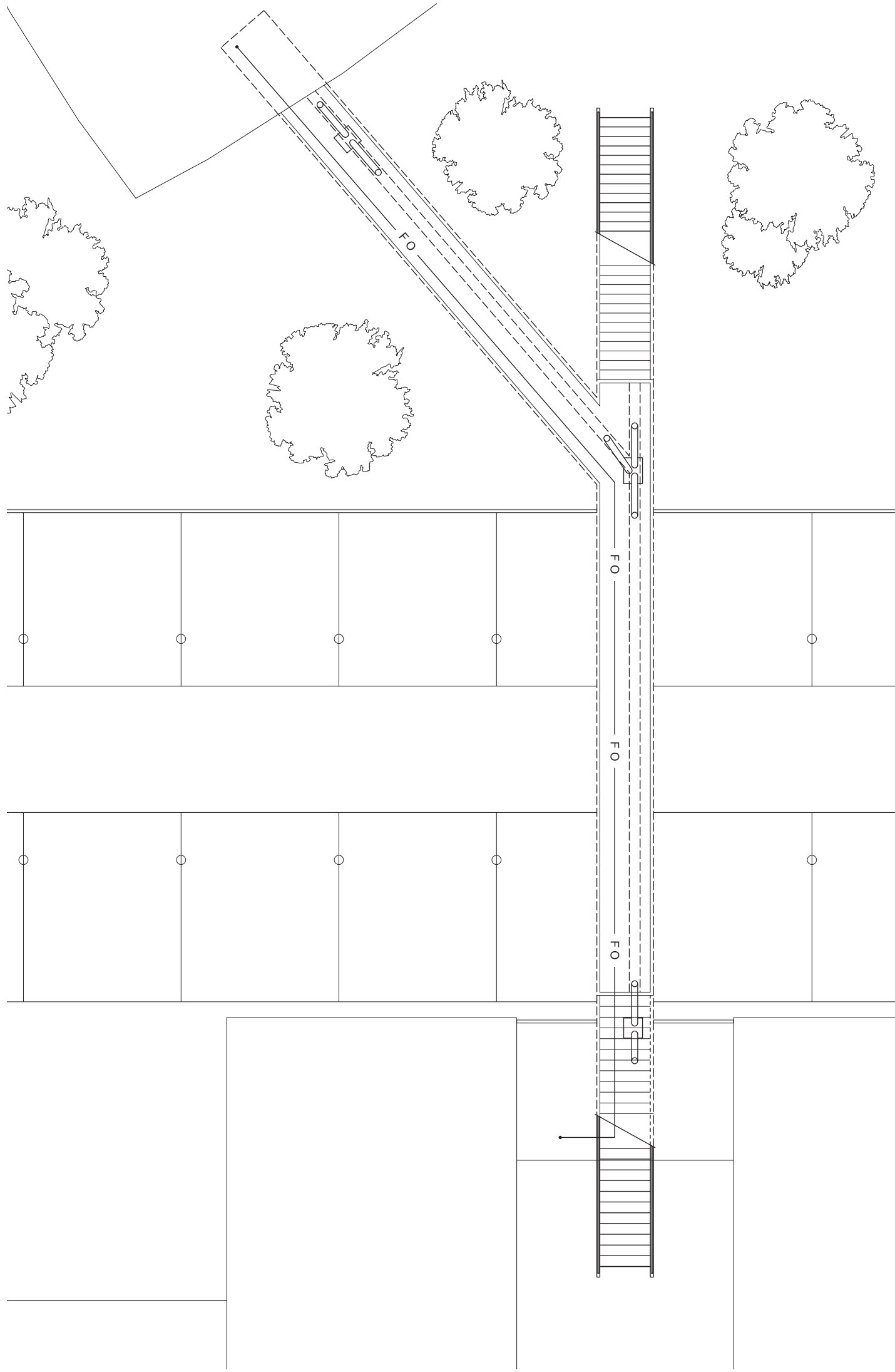
Aguascalientes

Y Bridge connects a data center of Infotec, a state operated research and innovation center with the school for economy Cide. The elevated pedestrian bridge, also represents the synergy between both institutes by sharing electronic infrastructure, researchers and knowledge.

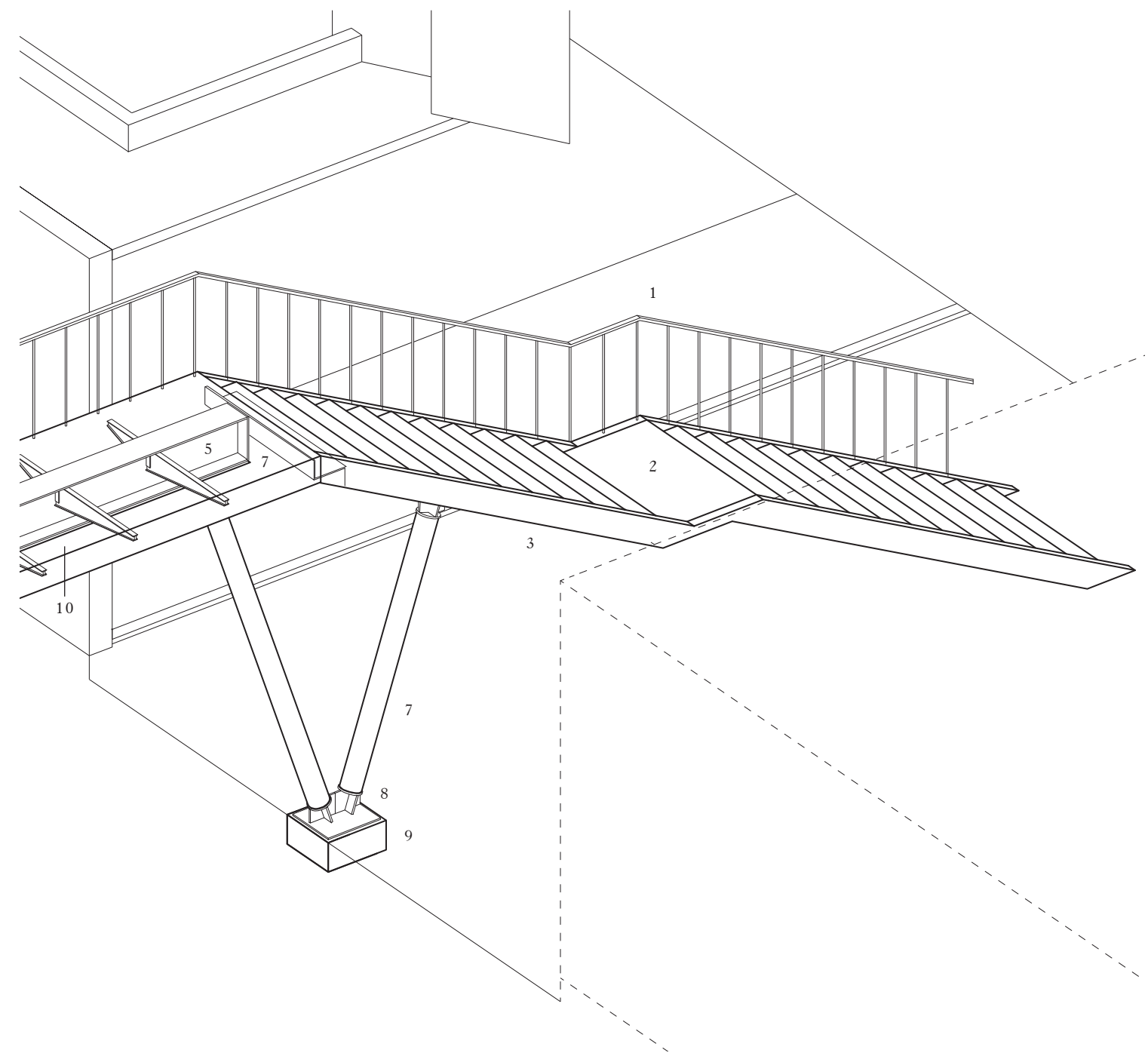
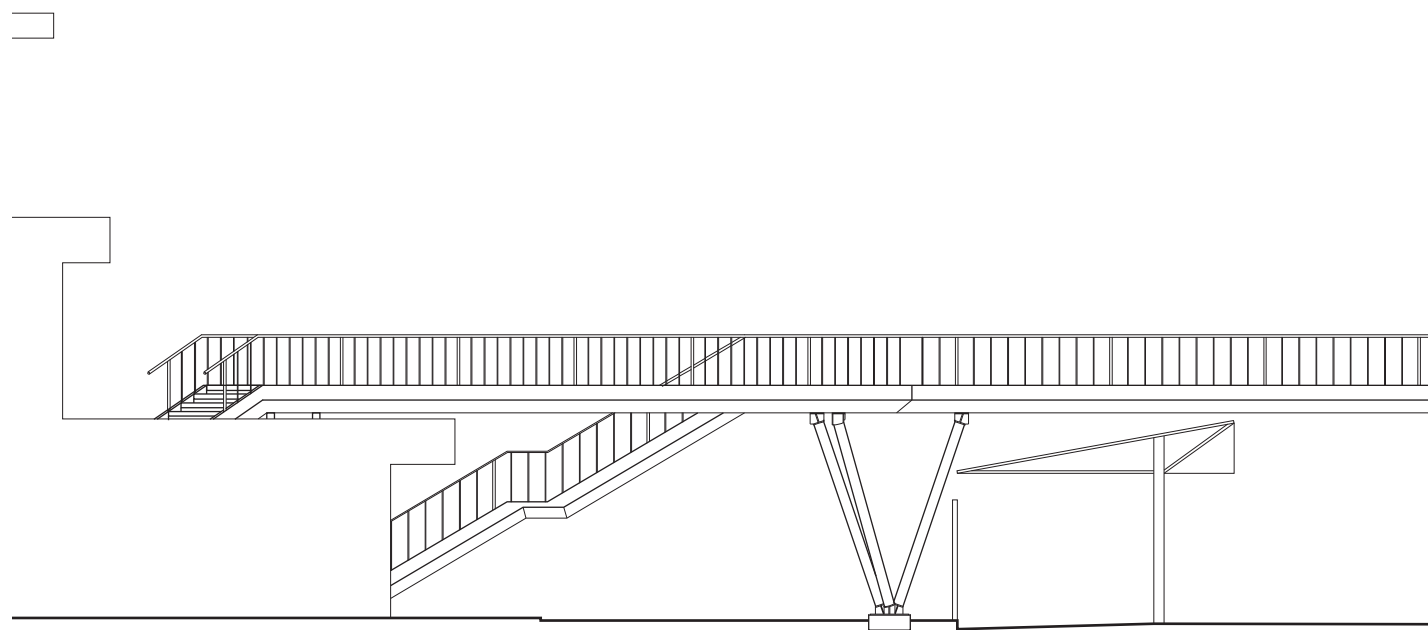
The bridge overpasses the parking. Its slender form is highlighted by a black coating of the lower surface.

The bridge was a project done in retribution for a grant by Mexico's government to study in Switzerland.





From left to right: 1.) Data flows under the bridge 2.) People flow on the upper floor from Cide courtyard to Infotec terrace with the possibility of exiting to the green areas

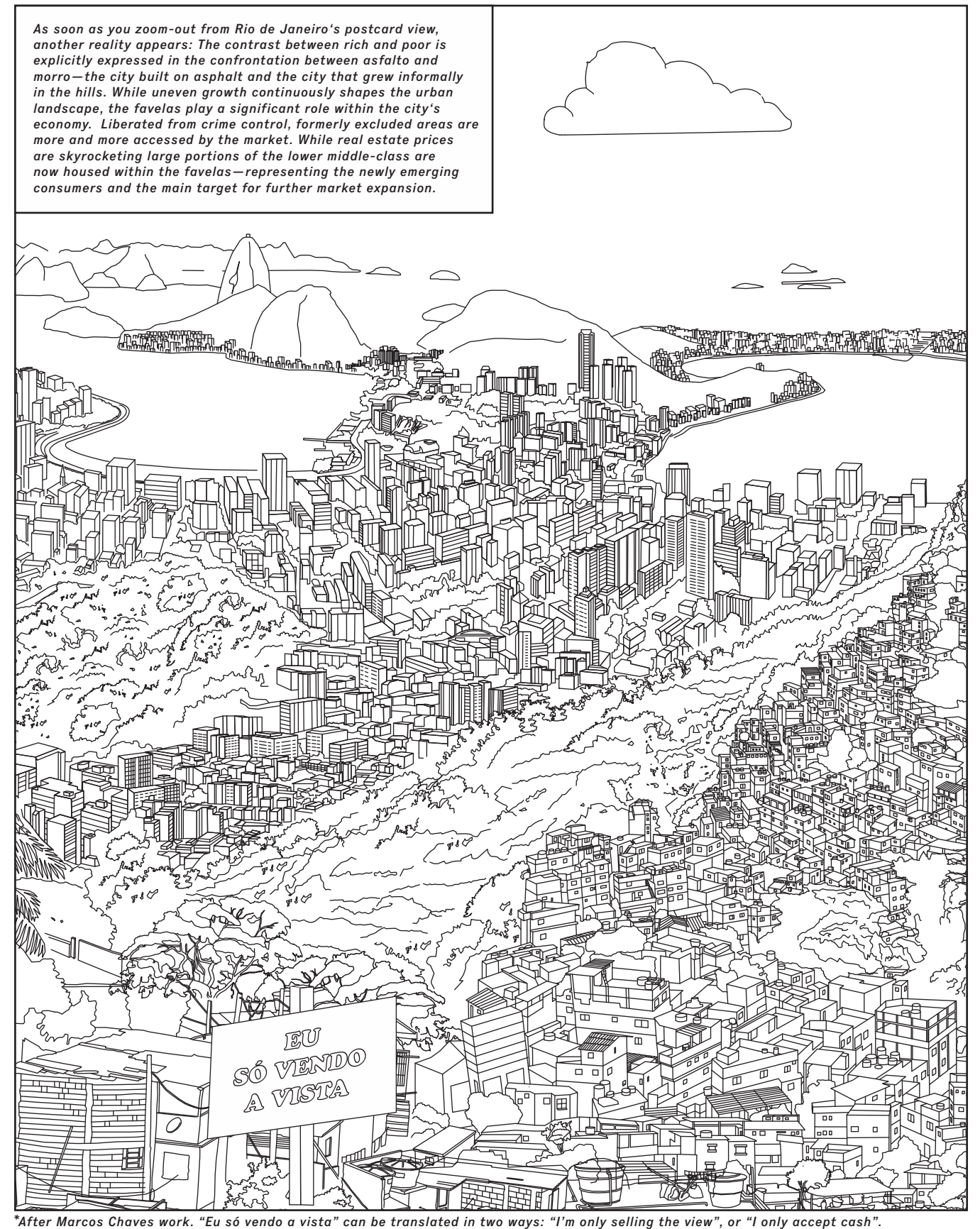


1. Stainless steel handrail with white coating (high temperatures)
2. Precast concrete steps with local coarse aggregate for non-slippery finish
3. Precast concrete beam
4. Steel plate preparation for beam
5. "I" profile steel beam with intumescent paint finish (45cm height)
6. Cantilever steel beam with intumescent paint finish
7. Steel round column with intumescent white paint finish (20 cm diameter)
8. Steel plates connection system with intumescent "Charcoal" paint finish
9. Concrete foundation
10. Electric and data cables

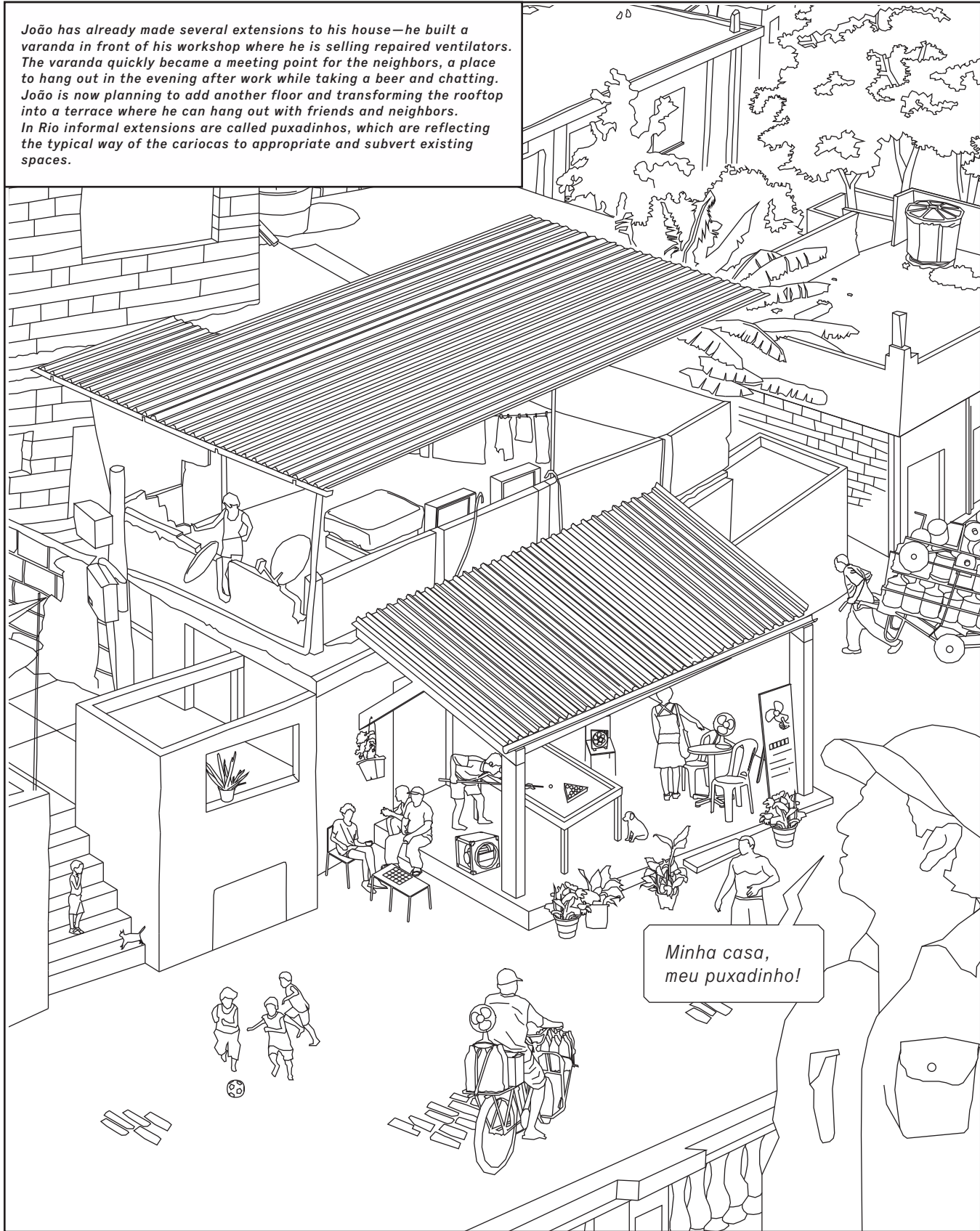
Varanda Products
Exhibition Project
Museum of Modern Art
New York

How to intervene in urban conditions as a planner that don't get planned? Varanda Products is a project that was conceived for an exhibition at the Museum of Modern Art entitled "*Uneven Growth, Tactical Urbanism*".

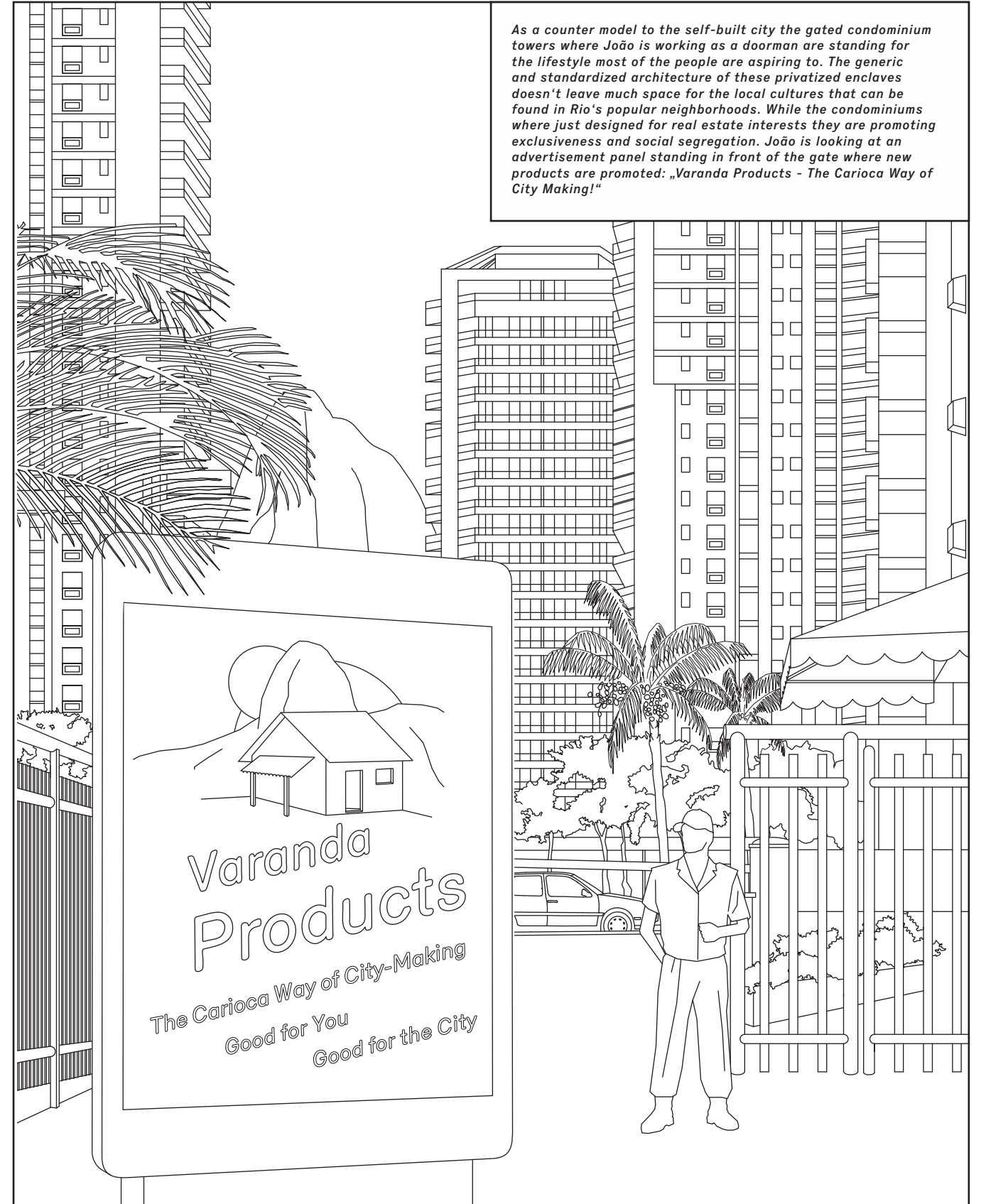
It proposes a set of "products" with individual benefits that could be sold at hardware stores but that if bought by many, would have a positive effect also on an urban level in informal contexts. In the exhibition the products were displayed in a 10 by 4 meter drawn panorama of Rio de Janeiro. The following drawings are zoom-ins into this panorama.



João has already made several extensions to his house—he built a varanda in front of his workshop where he is selling repaired ventilators. The varanda quickly became a meeting point for the neighbors, a place to hang out in the evening after work while taking a beer and chatting. João is now planning to add another floor and transforming the rooftop into a terrace where he can hang out with friends and neighbors. In Rio informal extensions are called puxadinhos, which are reflecting the typical way of the cariocas to appropriate and subvert existing spaces.



As a counter model to the self-built city the gated condominium towers where João is working as a doorman are standing for the lifestyle most of the people are aspiring to. The generic and standardized architecture of these privatized enclaves doesn't leave much space for the local cultures that can be found in Rio's popular neighborhoods. While the condominiums were just designed for real estate interests they are promoting exclusiveness and social segregation. João is looking at an advertisement panel standing in front of the gate where new products are promoted: „Varanda Products - The Carioca Way of City Making!“



Varanda Products give a personal benefit but are engineered to potentially also enrich or benefit the city in general.

Keep you **R\$ 19.99**

SILVER SHADE
INSTANT VARANDA

silver Shade

Instant Varanda
100% Shade!
20% Heat Reduction!

MoMA
The Museum of Modern Art

Keep you **R\$ 19.99**

SILVER SHADE
INSTANT VARANDA

silver Shade

Instant Varanda
100% Shade!
20% Heat Reduction!

MoMA
The Museum of Modern Art

Reflecting Tiles

MoMA
The Museum of Modern Art

Effect:

Reflective Tile® is an easy solution for dressing your facade. Its pyramidal shape allows you to set them in the best way to reflect sunlight on your street. At the same time, keep your house cooler.

Use the Reflective Tile® to create your own pattern by spinning it in four different ways.

Measurements:

50 mm
8 mm
200 mm

MoMA
The Museum of Modern Art

REFLECTIVE TILES

R\$ 59.99

REFLECTIVE TILES

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Reflective Tile® is an easy solution for dressing your facade. Its pyramidal shape allows you to set them in the best way to reflect sunlight on your street. At the same time, keep your house cooler.

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Measurements:

50 mm
8 mm

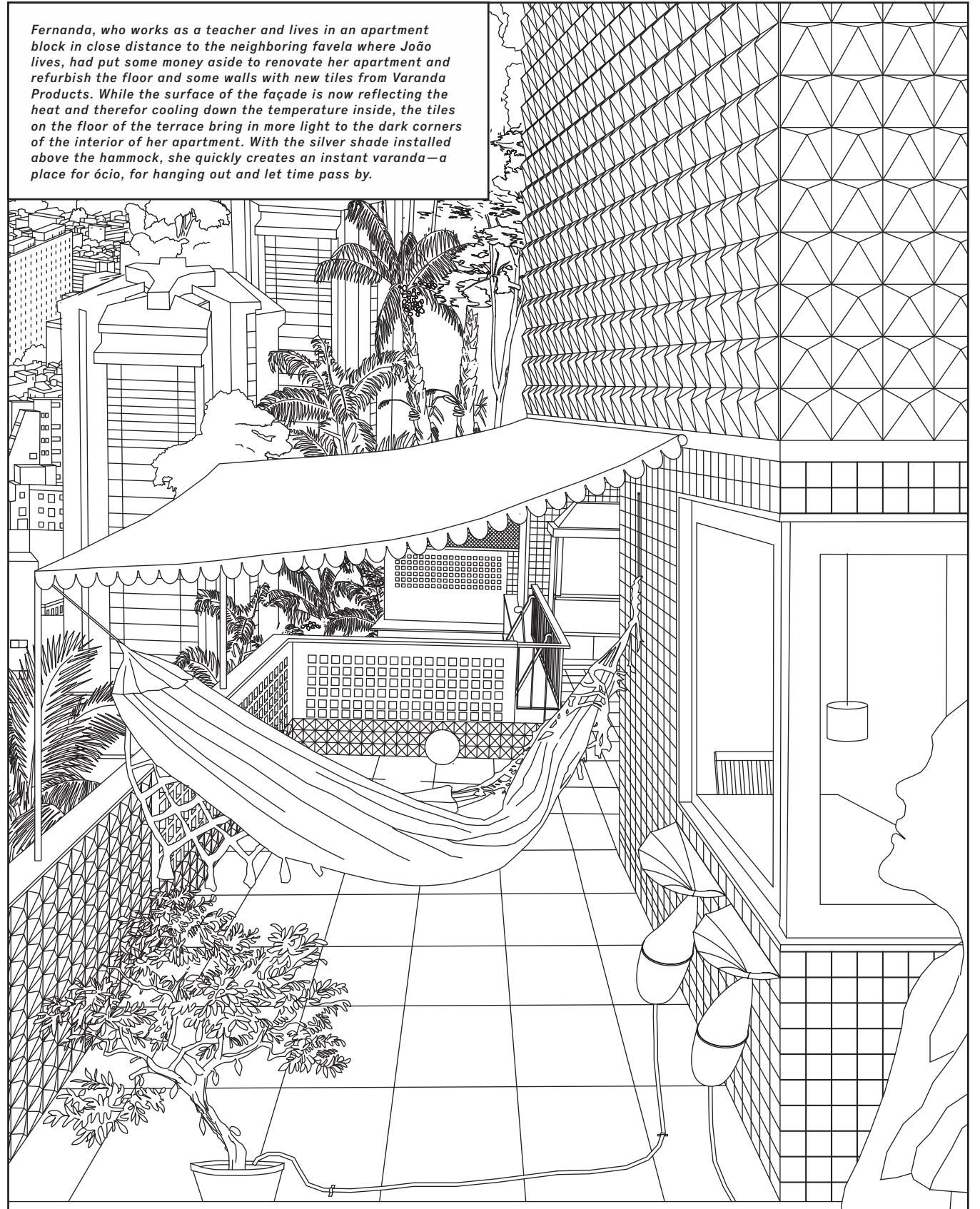
59,99

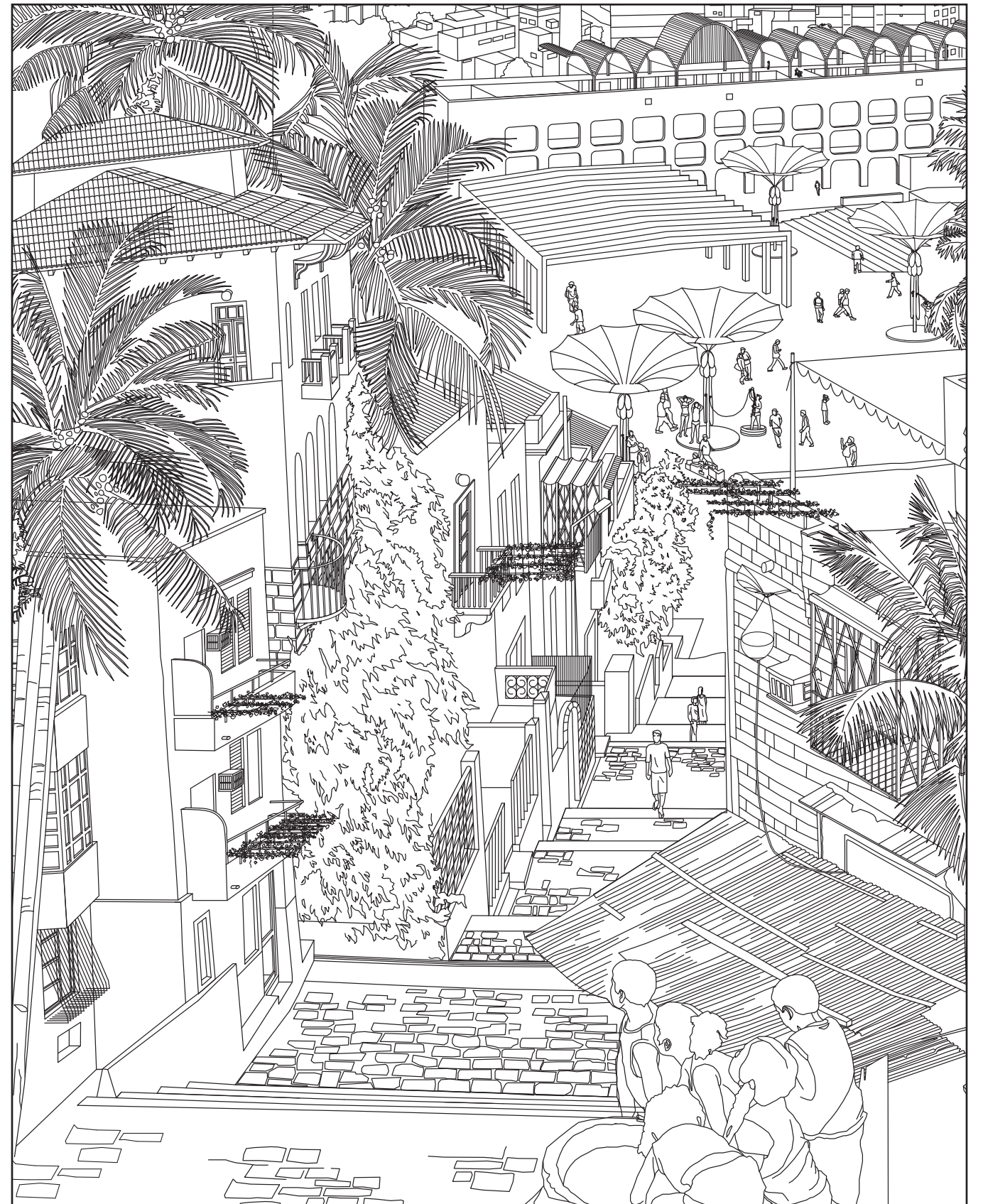
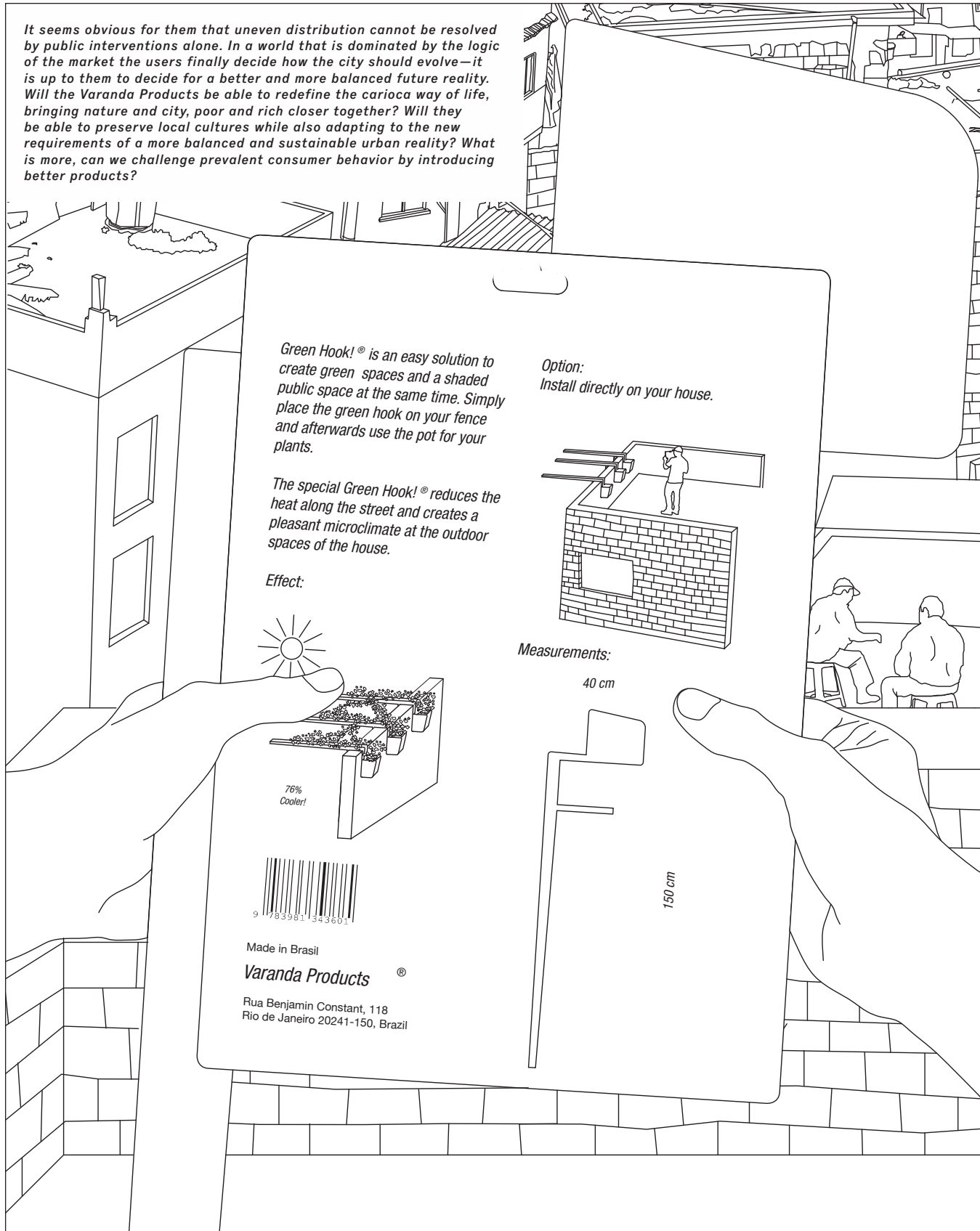
Reflecting Tiles

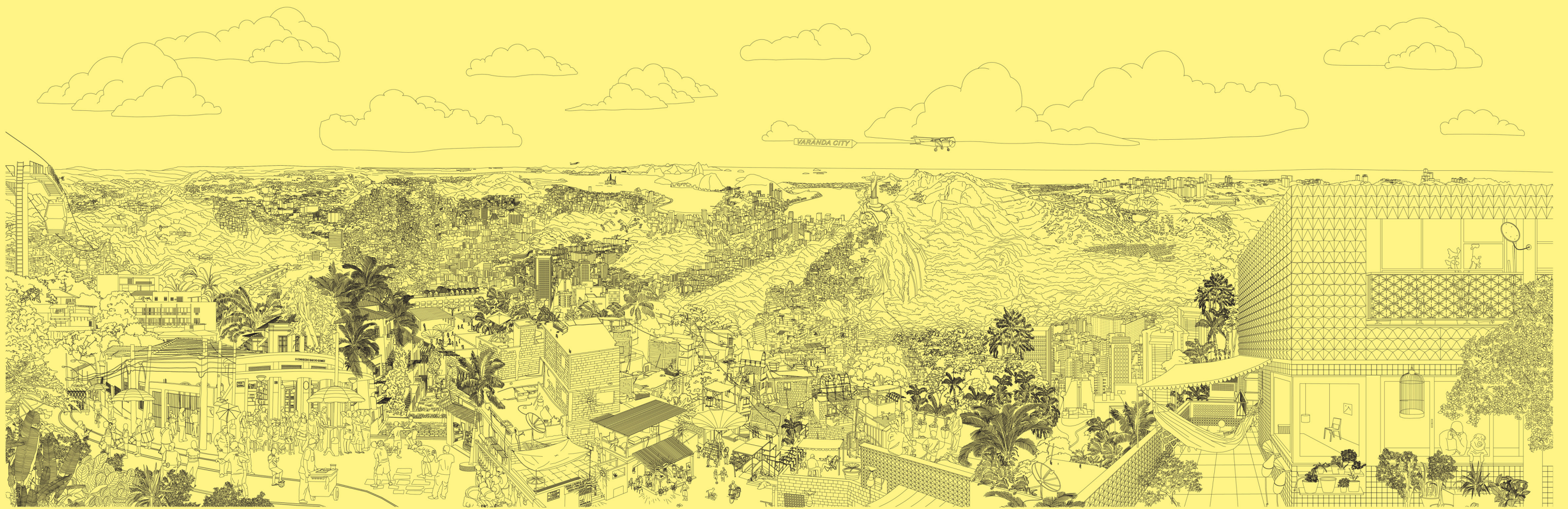
59,99

Refl

Fernanda, who works as a teacher and lives in an apartment block in close distance to the neighboring favela where João lives, had put some money aside to renovate her apartment and refurbish the floor and some walls with new tiles from Varanda Products. While the surface of the façade is now reflecting the heat and therefor cooling down the temperature inside, the tiles on the floor of the terrace bring in more light to the dark corners of the interior of her apartment. With the silver shade installed above the hammock, she quickly creates an instant varanda—a place for ócio, for hanging out and let time pass by.



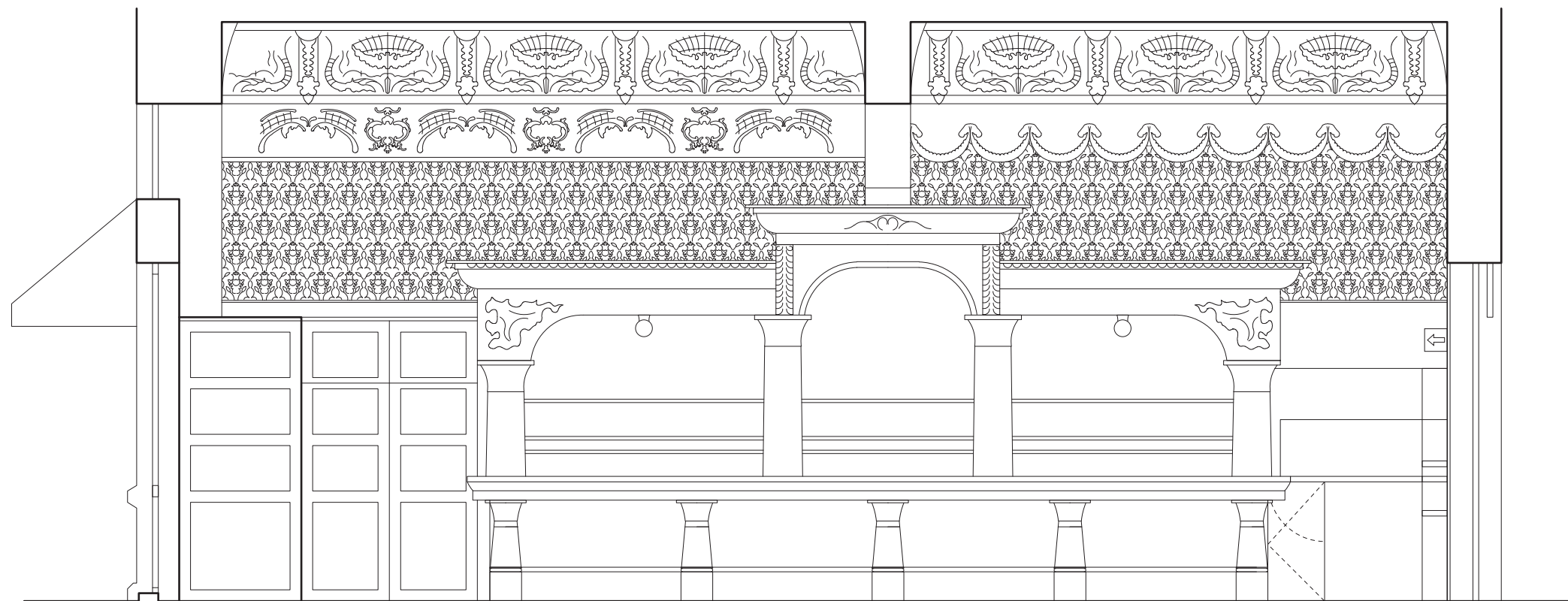


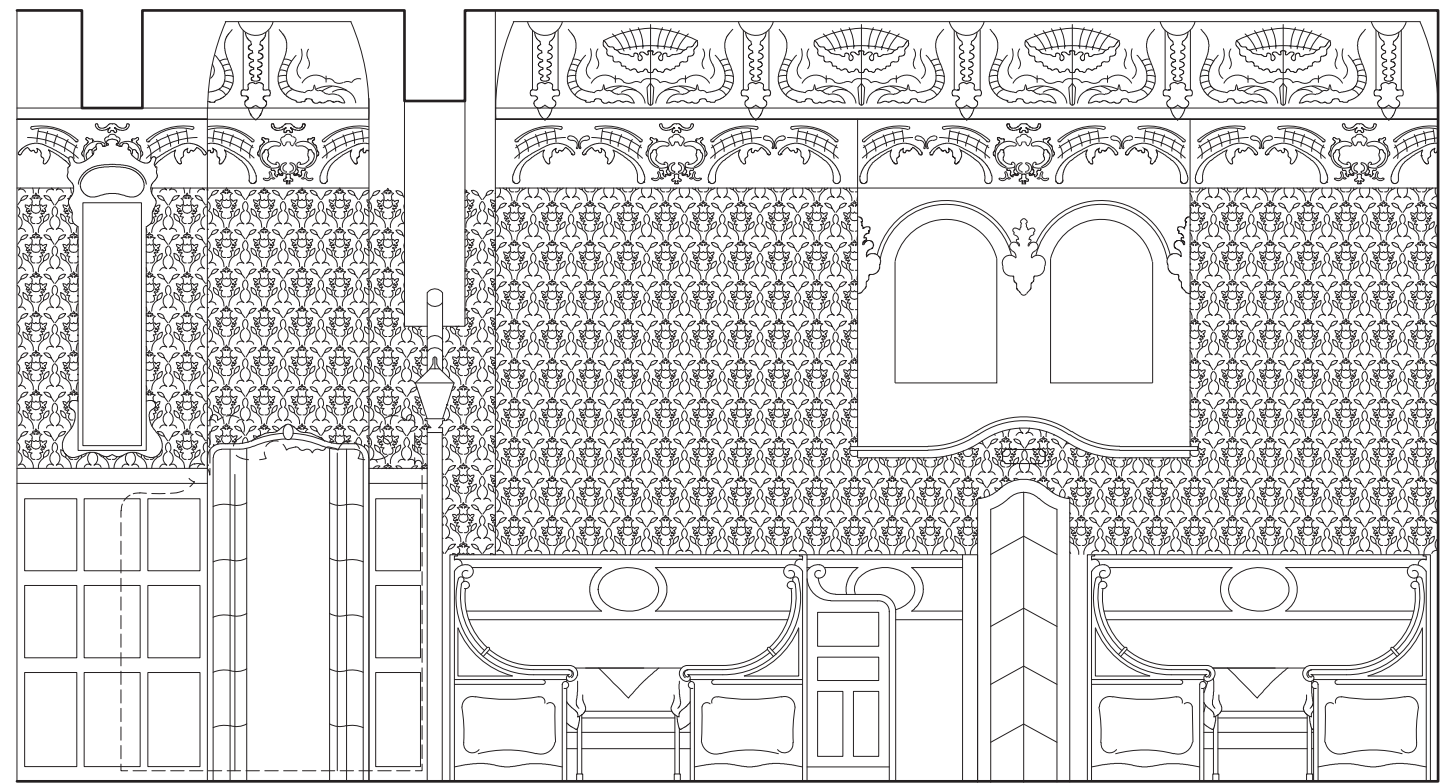
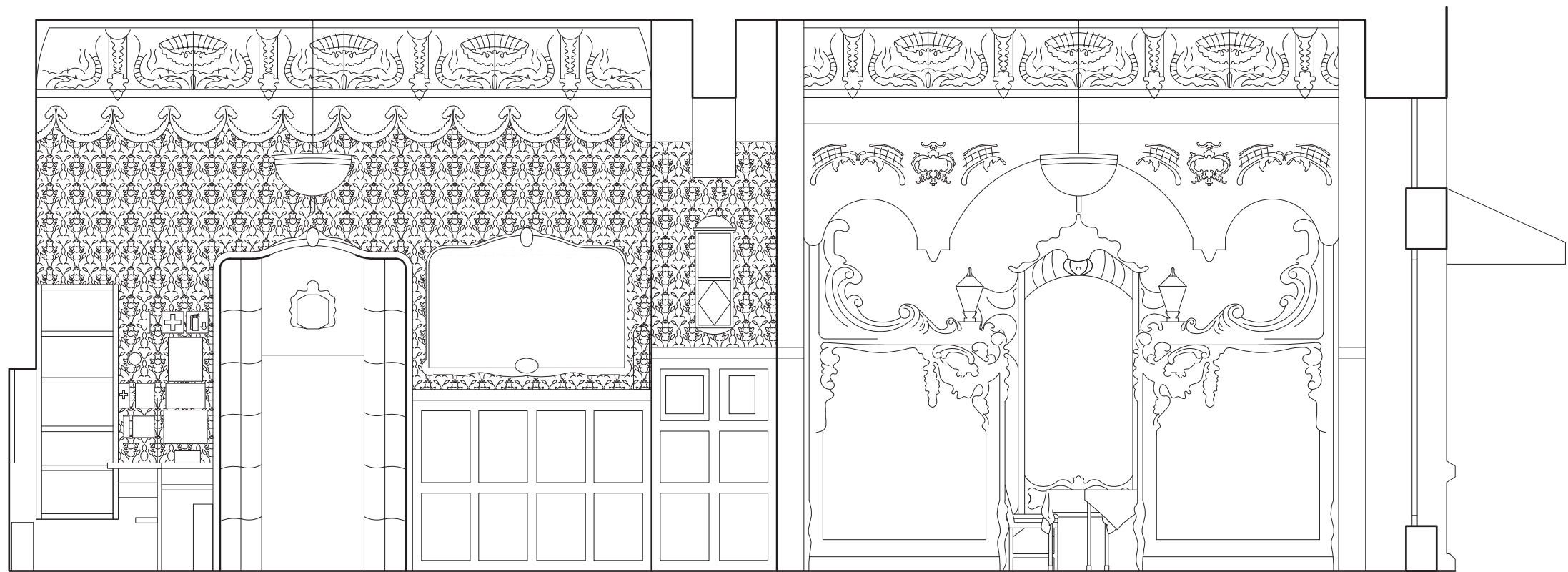


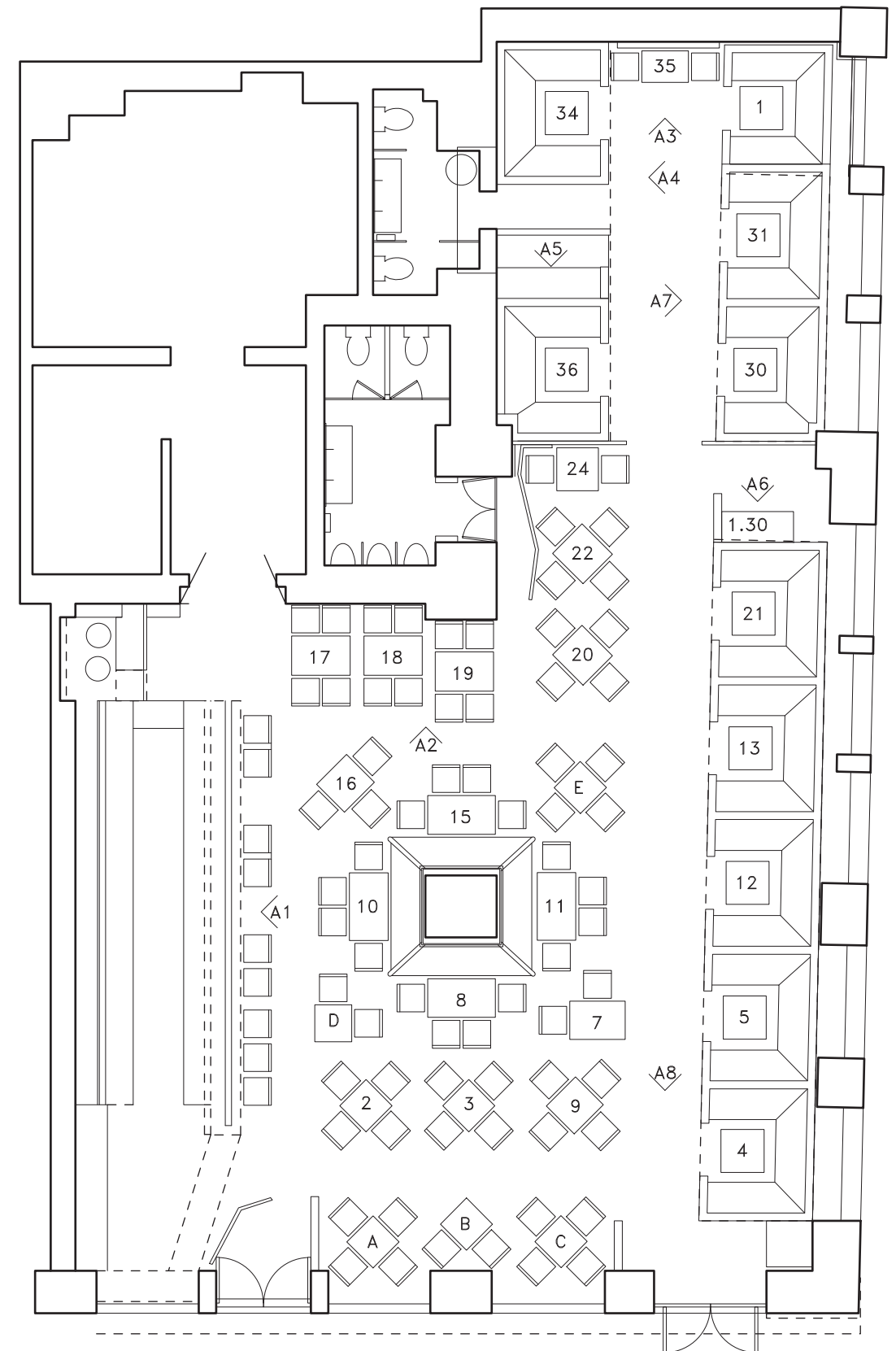
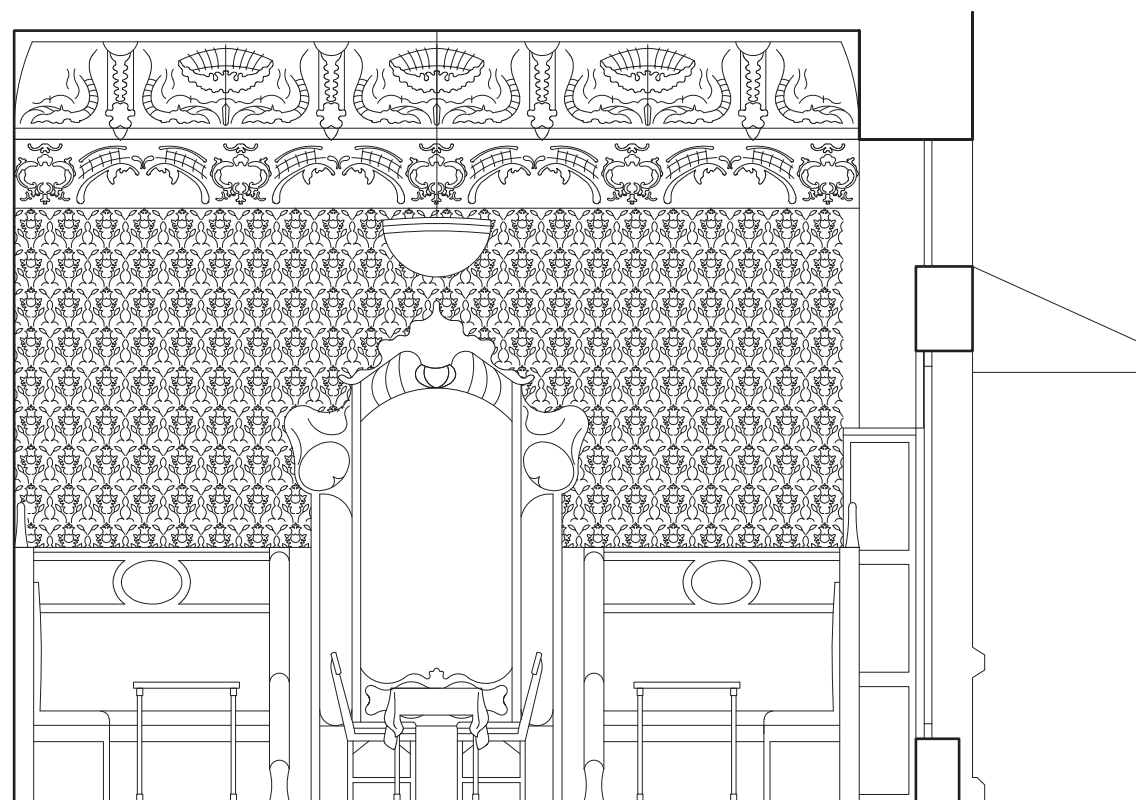
La Opera, Restaurant Renovation Mexico City

La Opera is one of the oldest Restaurants in Mexico City. The Mexican Revolutionary Pancho Villa shot a hole into the ceiling of it which is still visible today. The renovation happened under strict scrutiny of the local preservation department and gave the restaurant a gentle make-up in tune with Giuseppe Tomasis quote from *Gattopardo*:
“Everything has to change, in order for everything to stay as it is”.









Central de Abastos

Research Study (ongoing)

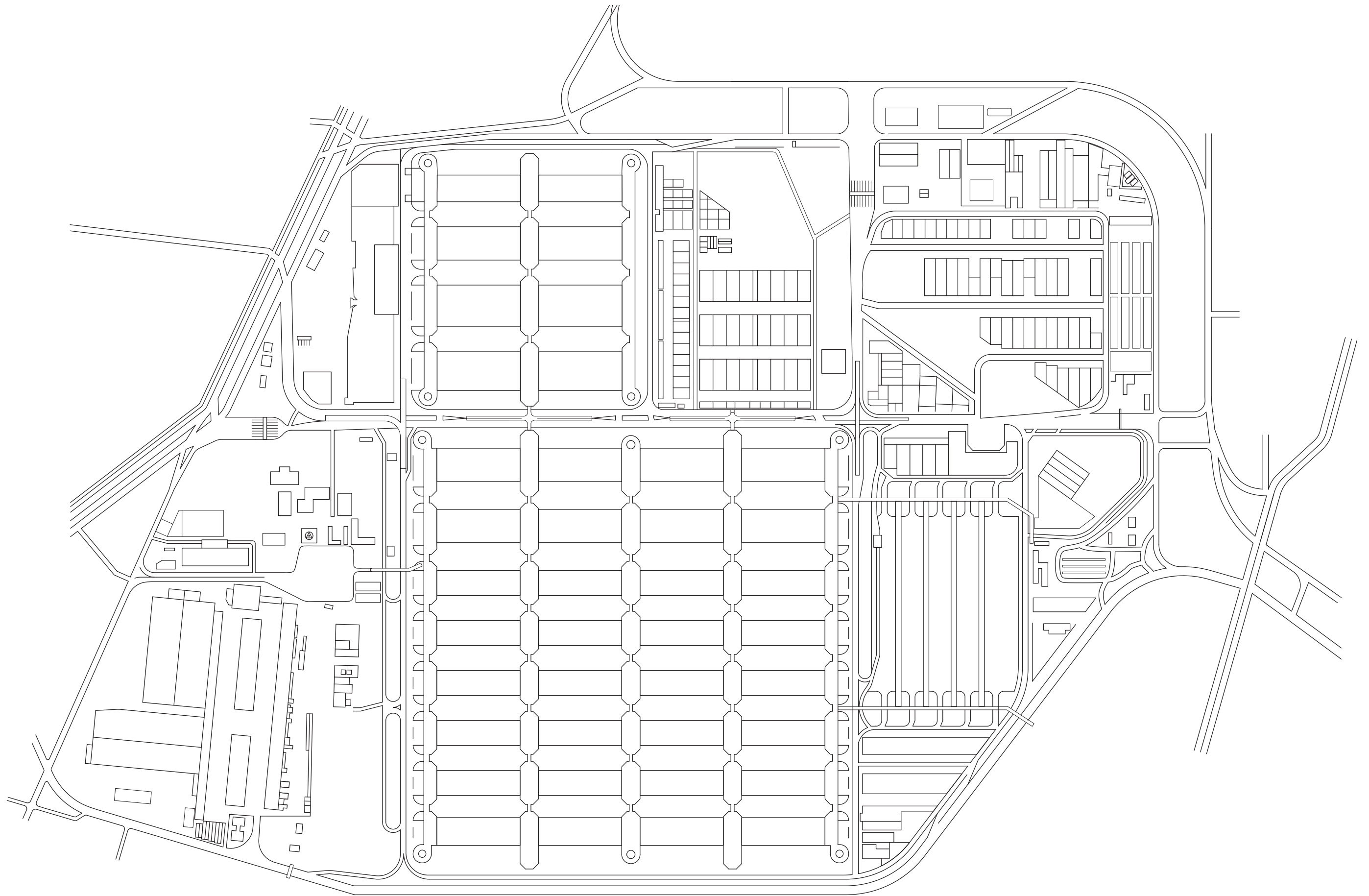
Mexico City

Central de Abastos is a research project on the world's largest wholesale food market, designed by Abraham Zabludovsky in 1982.

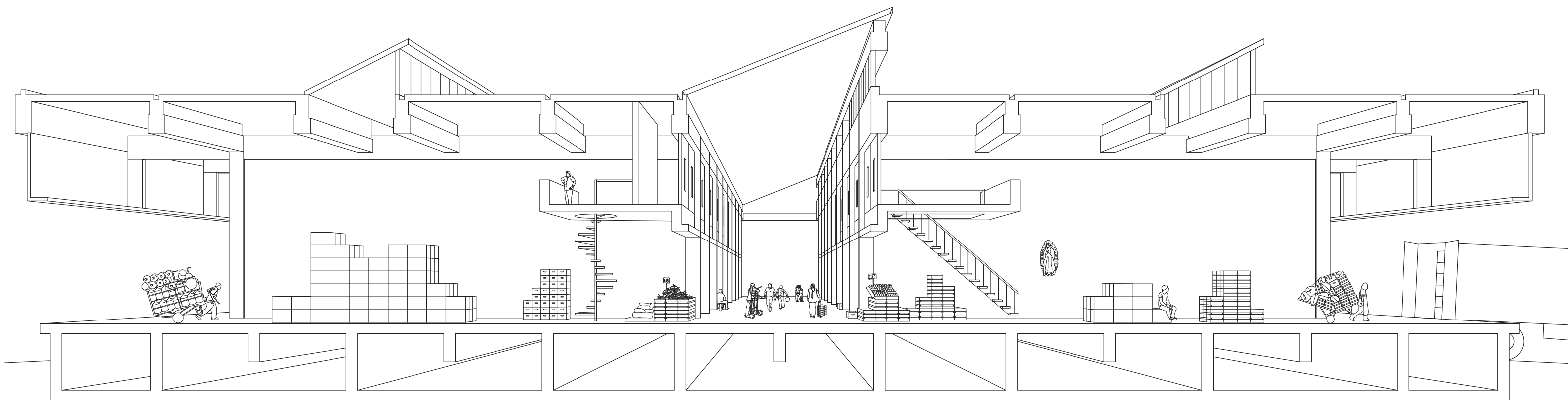
30% of Mexico's food supply flows through it each day. Being the size of a neighbourhood, it is an architectural and urban design showcase in which organisational, sociological and political complexities get played out each day ranging from a macro to a micro scale.



From top to bottom: A wholesale booth, the flower market by Abraham Zabludovsky and fruits on a pick-up on the top-floor car park of Central de Abastos.



Total area: 327 Ha. (7 times the Vatican City)
Volume of handled food and basic products: 30,000 tons
Storage capacity: 122,000 tons
Number of employees: 70,000
Informal carriers “diablos”: 10,000
Number of visitors: 500,000 daily
Number of vehicles: 57,000 daily
Parking lots: 3,224
Purchase and sale operation value: 9 billion dollars per year.



The wholesale market creates a grid with inside corridors in which traders walk from booth to booth. The products are delivered into courtyards that have loading ramps at the outer sides of the selling booths. The visitor car park is situated on top of the longitudinal market halls.

