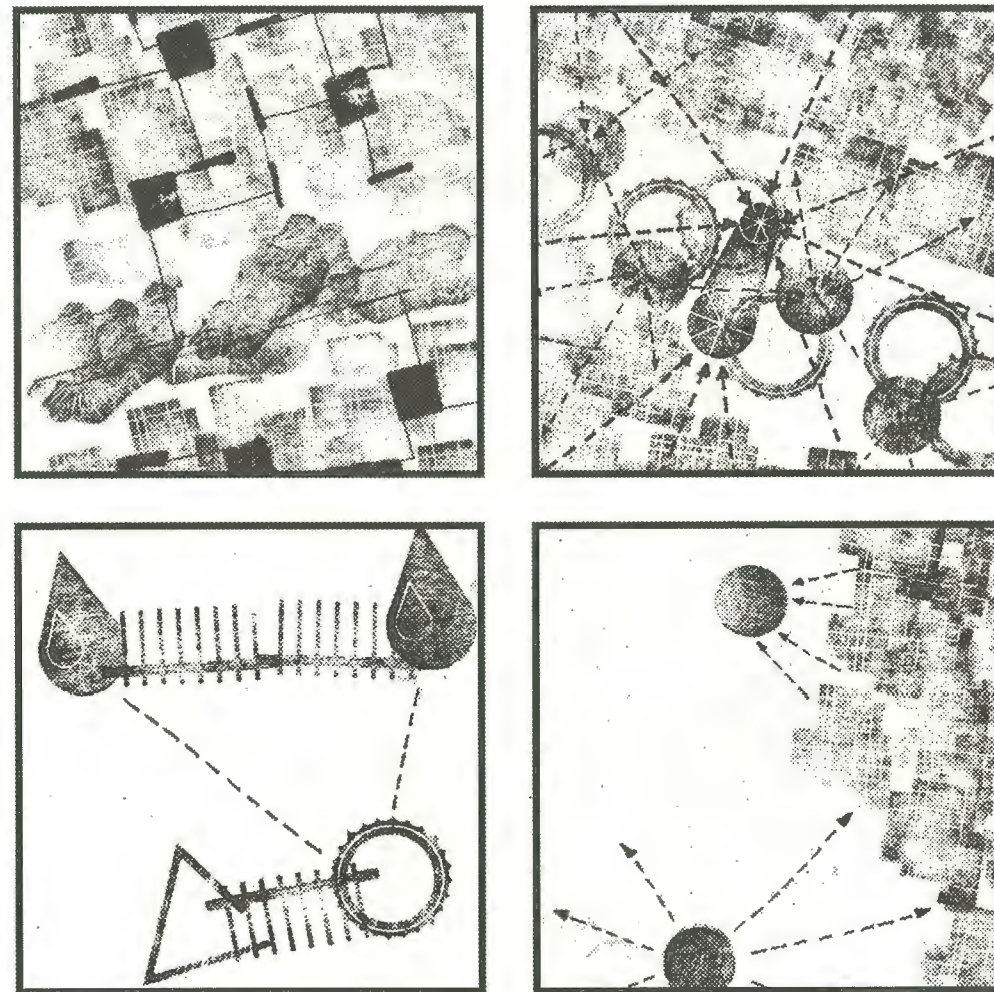


RIO: PROJECT 2

CHARGED VOIDS: ENSURING QUALITY OPEN SPACES

Could a generic MCMV development, inserted into an existing urban fabric, somehow contribute to the overall notion of public space and street life within a city? Despite the monofunctional orientation of the development's current schemes, strategic interventions could allow it to adapt and improve upon the existing urban qualities in Barra da Tijuca. After an analysis of the existing spatial qualities of the district, specific public spaces are proposed as voids within the site of the MCMV development, intervening with the standard development logic to allow it to complement and enhance the district at large. Networks of pedestrianized streets are proposed between the plazas and open green spaces, charging the area with a sense of community. Additionally, two housing solutions are proposed that could be used in conjunction with the network of open spaces. This activated network would serve as a backbone allowing the standardized layout of the MCMV program to spread throughout the site, while anticipating scenarios of incremental growth and informal extensions.

What factors shape a city's development?



Abstract spatial development diagrams: A multitude of forces engage and shape a city's development and spatial qualities. The void can be used as a design tool to unify the city and create moments of interaction among the differing forces.

Could the standard MCMV layouts be implemented in a way that allows them to contribute to the surrounding urban environment?

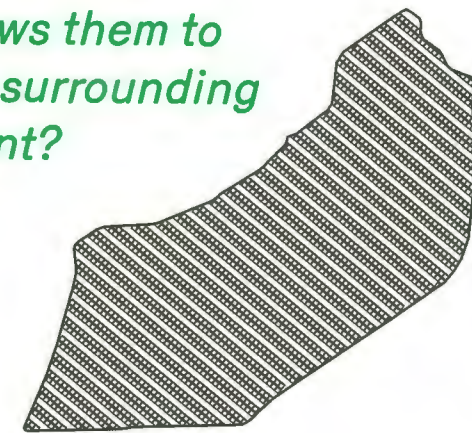


Fig. 1

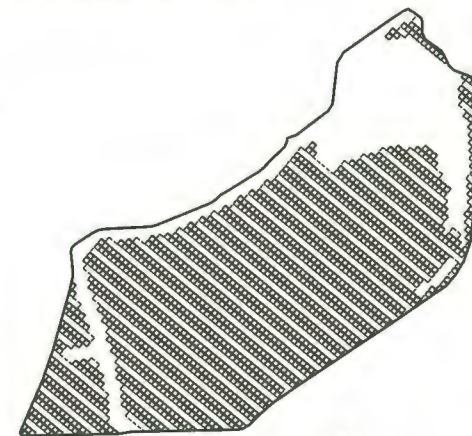


Fig. 2

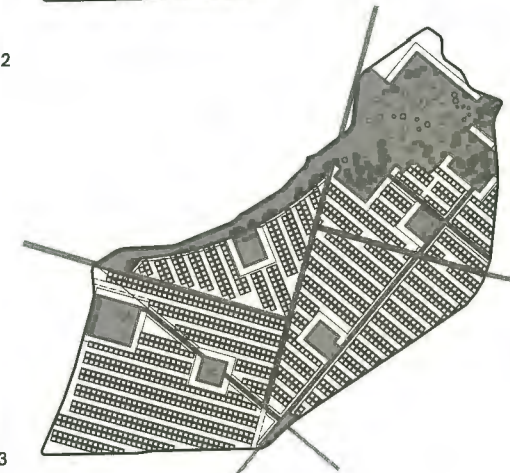


Fig. 3

Fig. 1: MCMV site plan: Standard, hyperrational construction logic of MCMV spread over the site.
 Fig. 2: MCMV site plan: Responding to site-specific, topographical conditions.
 Fig. 3: Charged voids site plan: MCMV development reorganized around program-specific public spaces introduced as voids within the standard MCMV logic. A network of paths links those voids together, enriching the sense of community and connecting the site with the surrounding topography and district at large.

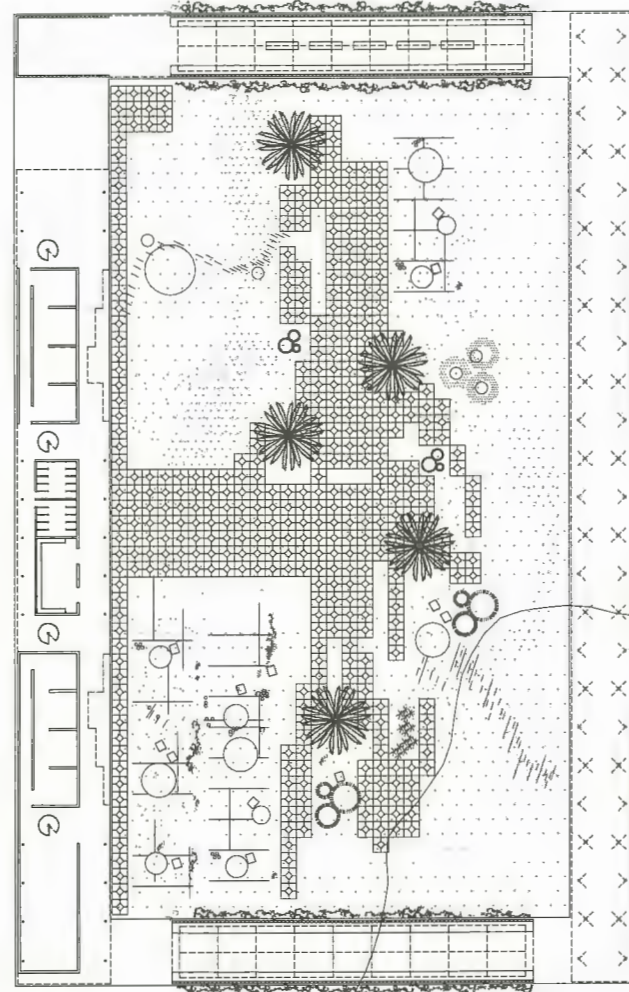
A network of voided spaces are implemented within the site ...

1. Open market
2. Tropical park
3. Stage
4. Playground
5. Athletic square
6. Cultural center
7. Ramp square
8. Herb garden

Master plan indicating the program-specific public spaces within the site.

... allowing the standard MCMV layout to interact with the surrounding context.

A number of public spaces are developed, mostly along the peripheries, which are implemented based upon the area's existing programmatic and topographic conditions. The spaces are carefully networked together by introducing the new programmatic voids along linear structures.



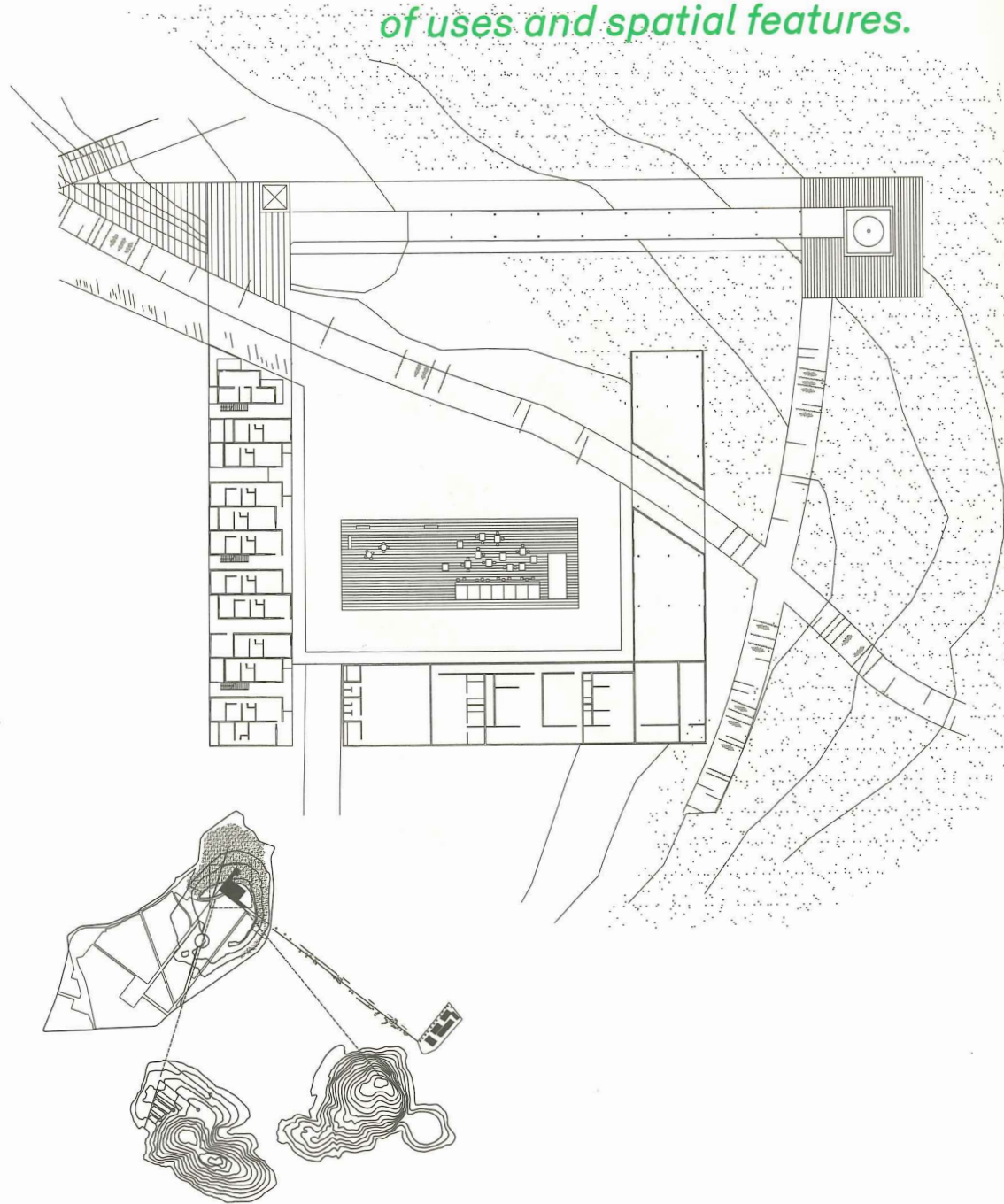
*The first charged void
is a tropical garden.*

Collective garden plan: The tropical park responds to the surrounding context formed by the existing neighborhoods. A large open space placed in the south entrance of the site, in continuation of a main route, acts as a catalyst of social activation. The space is maintained and appropriated by different members of the community through a variety of approaches, blurring the boundary between collective space and private garden. An assemblage of tiling would allow vegetation to grow only in specified areas, allowing elements such as shading and flooding to be controlled.

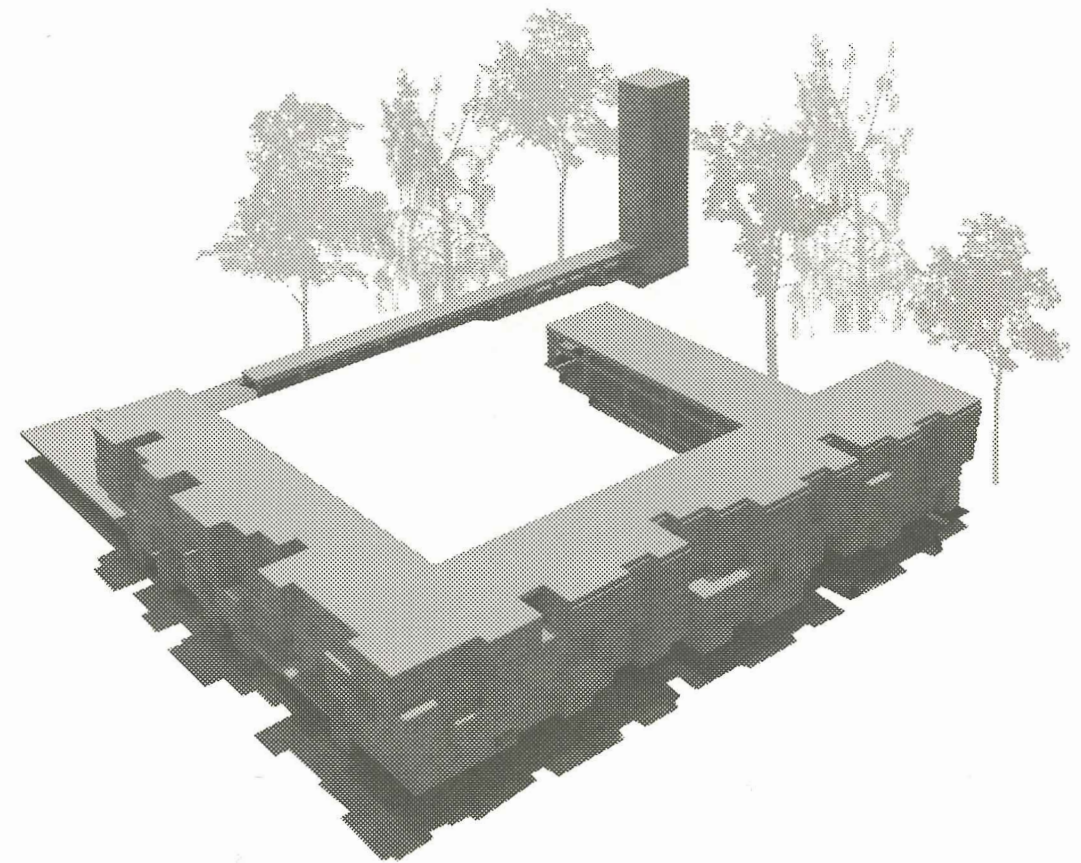


Collective garden collage: A variety of uses is proposed along the park's perimeter, such as a chess club, a workshop for women's arts and crafts, a dormitory, and the community center, to facilitate the garden's maintenance.

The second one contains a cultural center with a large variety of uses and spatial features.

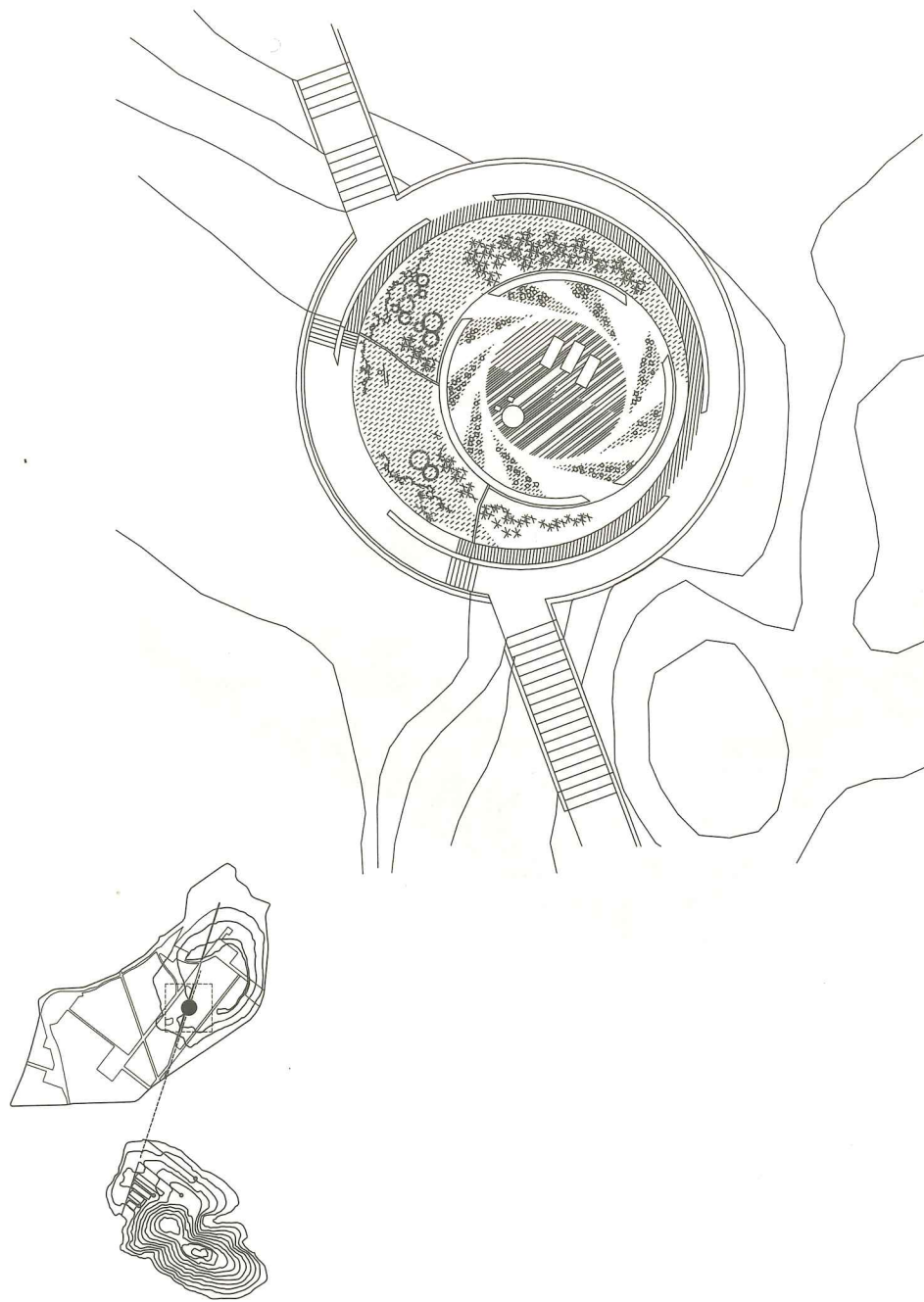


Cultural center plan: The cultural center is located near a eucalyptus forest, at the highest topographical location within the MCMV development. It's connected with the social center at the end of Juranda Road provided by the municipality. The building consists of a cultural hall, workshops, and open public spaces on the ground floor, and a housing complex and exhibition space on other levels. The building gives a false sense of enclosure when viewed from its southwestern entrance, as it opens up to the forest when viewed from other sides.

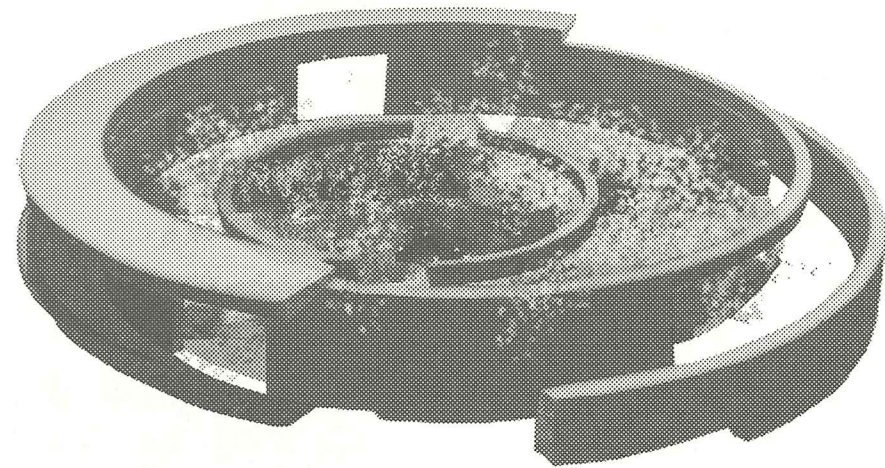


Cultural center collage: From dark paths to elevations with open perspectives and from introverted spatial impressions to building volumes that merge with the natural topography.

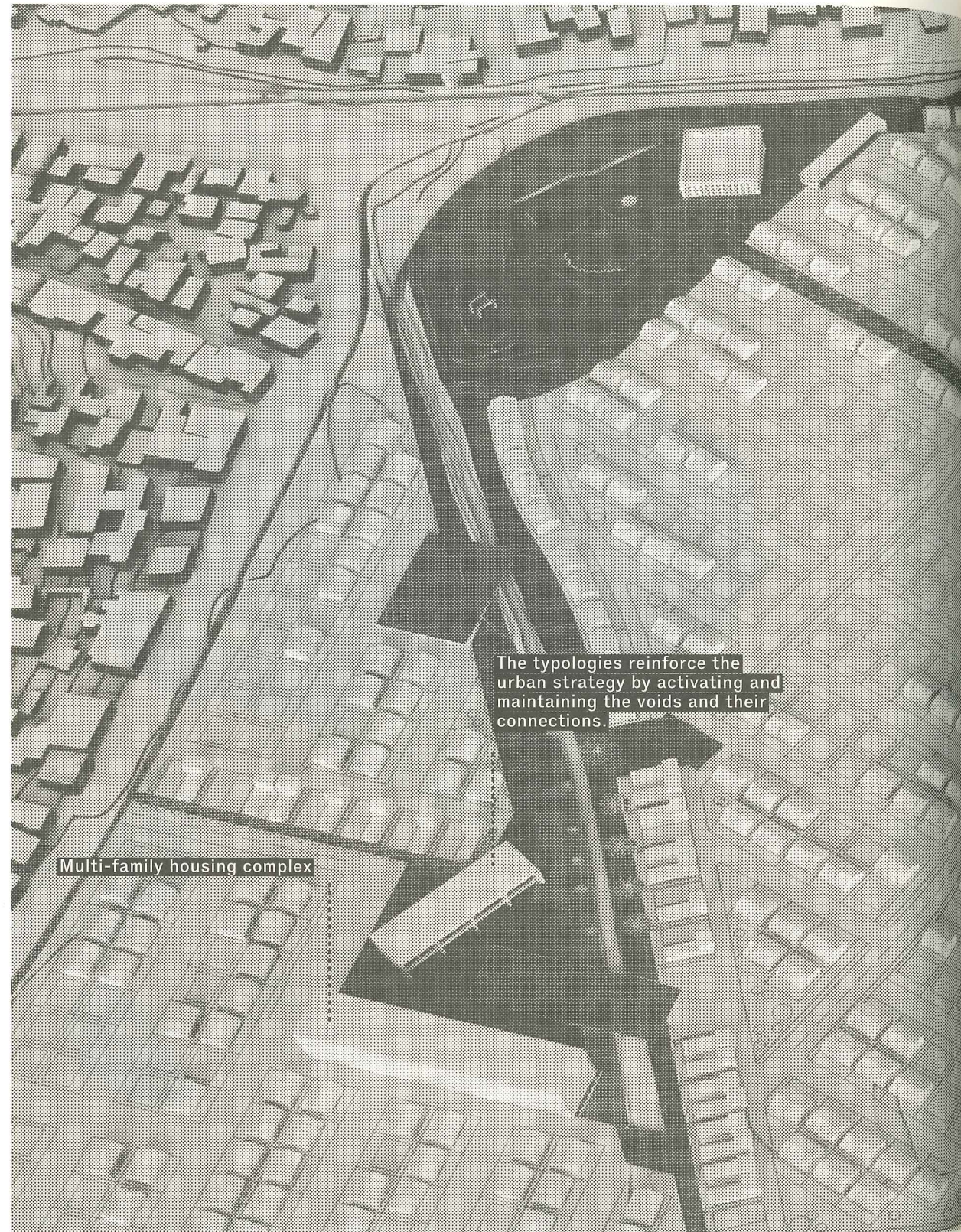
*The third one is a
circular herb garden.*



Herb garden plan: The herb garden is situated on a particular walking path, the visibility of which surpasses the borders of the site up toward a southern hill. Inspired by the history of Barra da Tijuca as a traditional plantation region, the space exists as a circle of serenity in the city's fierce omnipresent rhythm.



Herb garden collage: The space has no specific use other than stimulating a passerby's sense of smell, and enticing them off of their usual track.

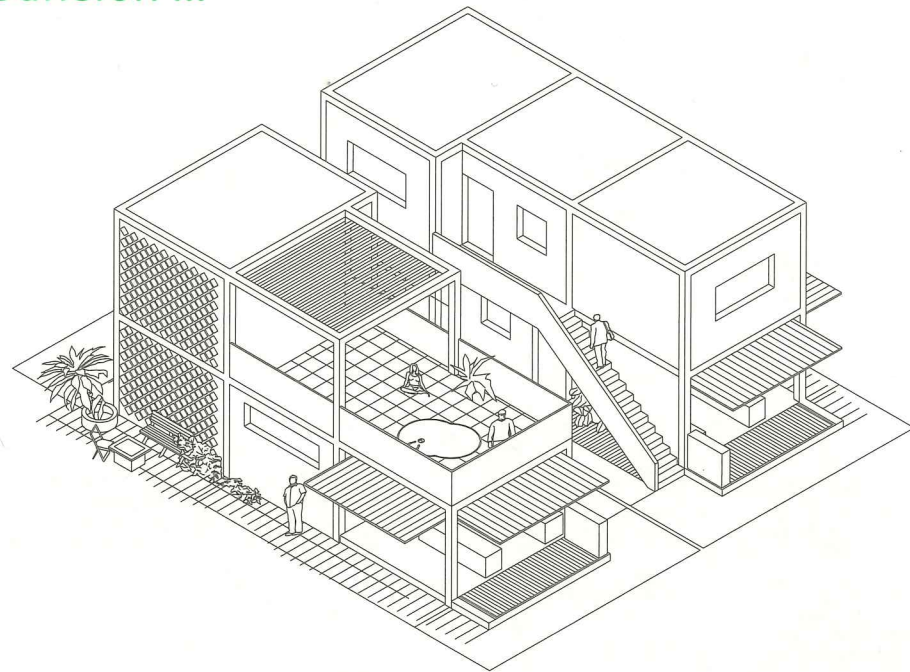


Two additional housing solutions would enhance the new network of public voids.



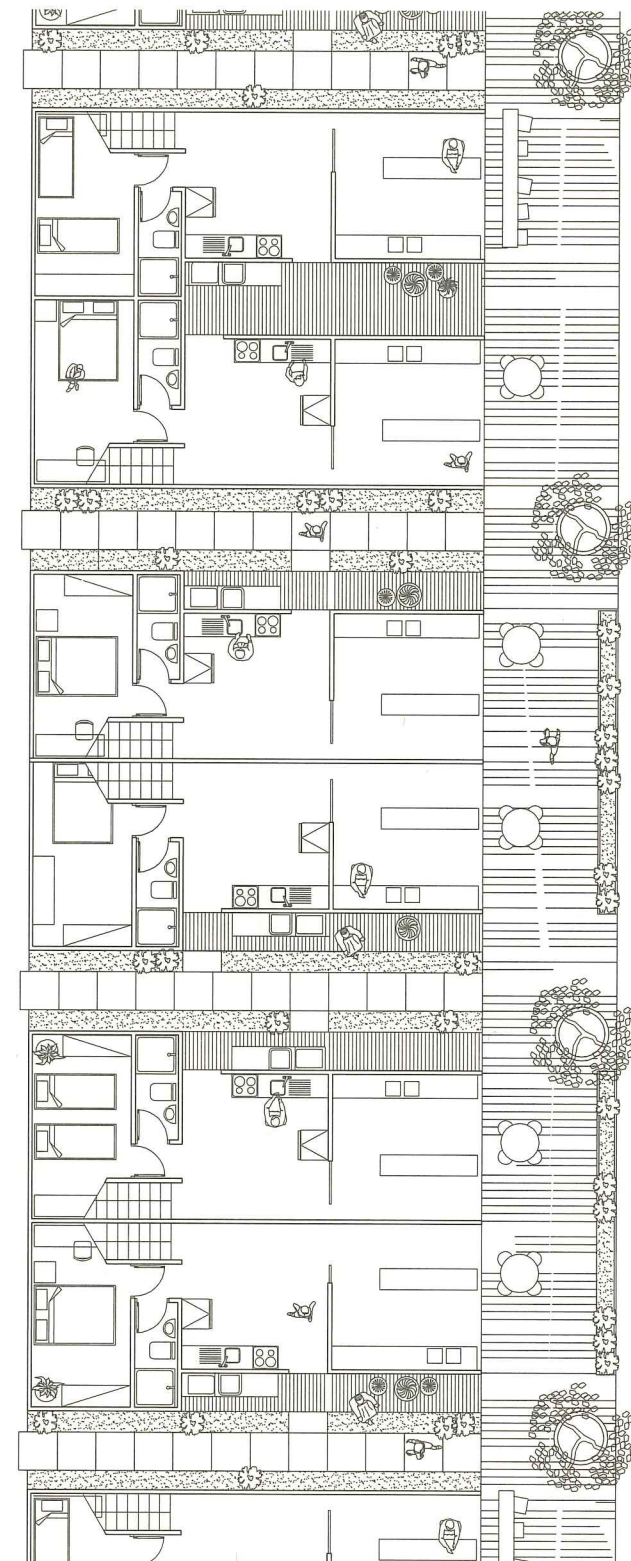
*In terms of housing,
there are two basic typologies:*

*The single-family home
allows for various types of
expansion ...*



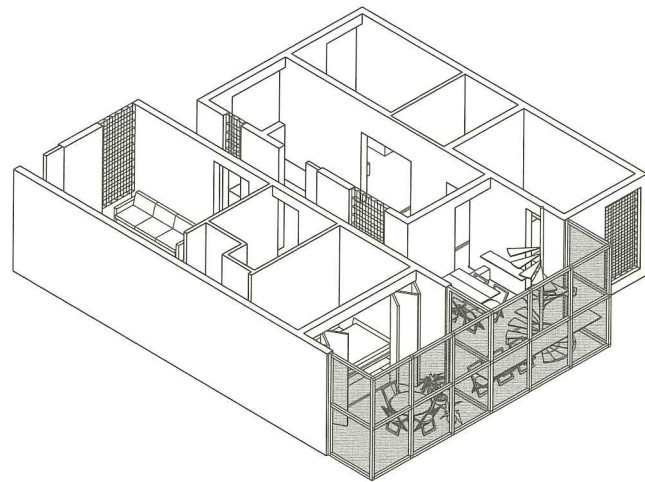
*... promoting micro-commerce
and entrepreneurship.*

Single-family housing unit with expansions: The housing unit operates on two floors, with the family business attached to the ground floor. Expansion can happen either within the housing volume or vertically, keeping the continuity of the streetscape. Expansion toward the street can happen with portable or foldable building components.



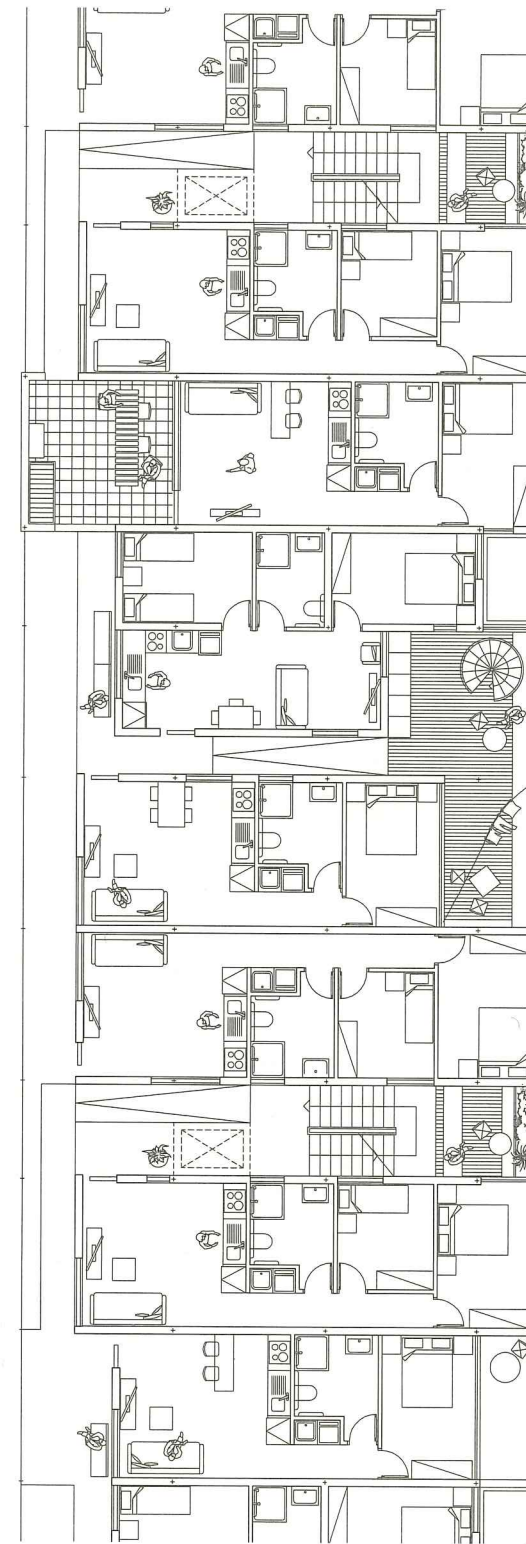
Single-family housing unit prototype without expansions,
1:200 ground-floor plan

Then there is the multi-family housing typology, which introduces common spaces ...



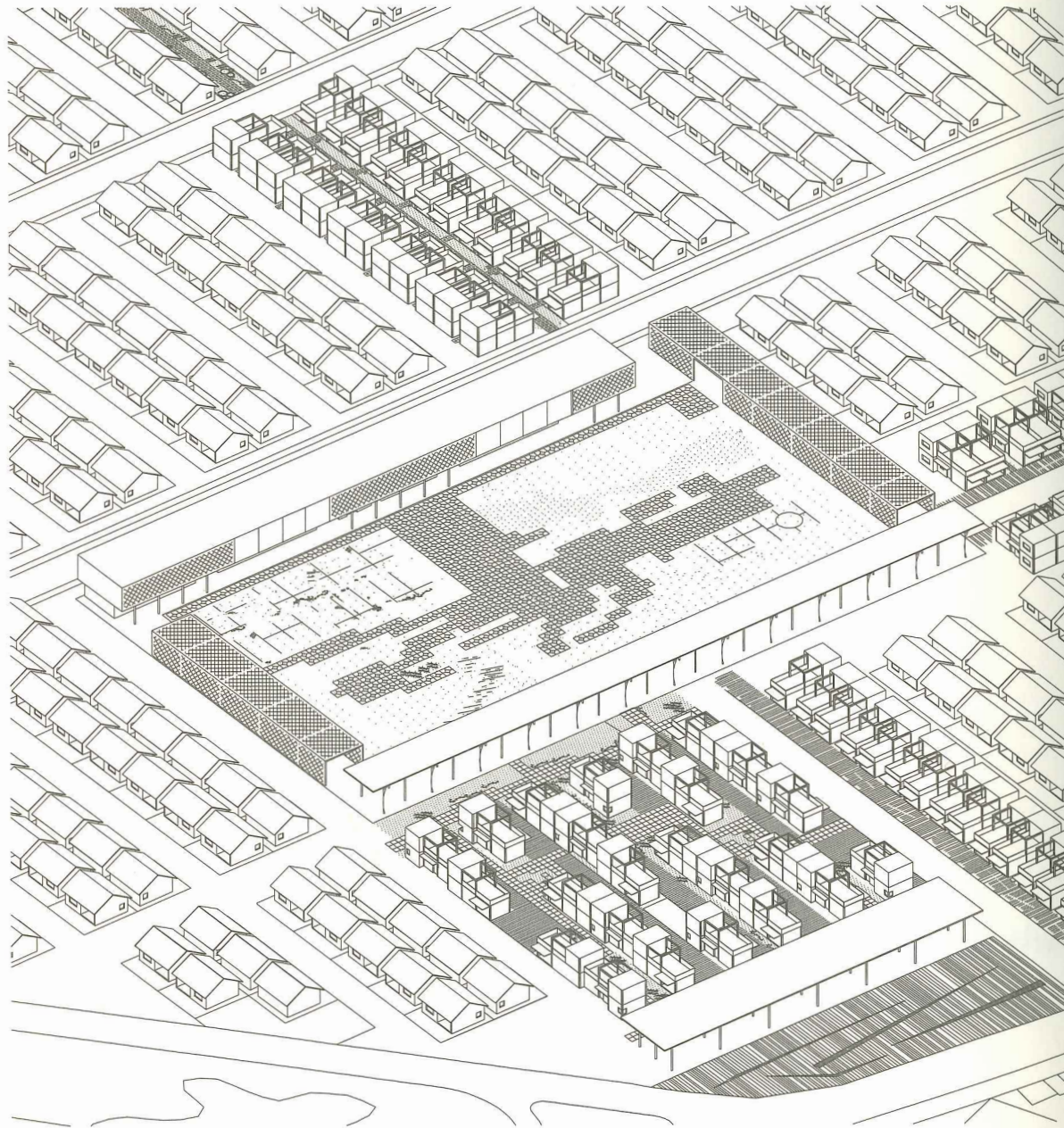
... shared by two to four housing units to broaden the scope of social housing.

Multi-family housing unit model: The multi-family housing typology exists in conjunction with the open spaces. The high-density multistory housing complex is characterized by the peculiar mix of shared spaces and amenities among the residents.

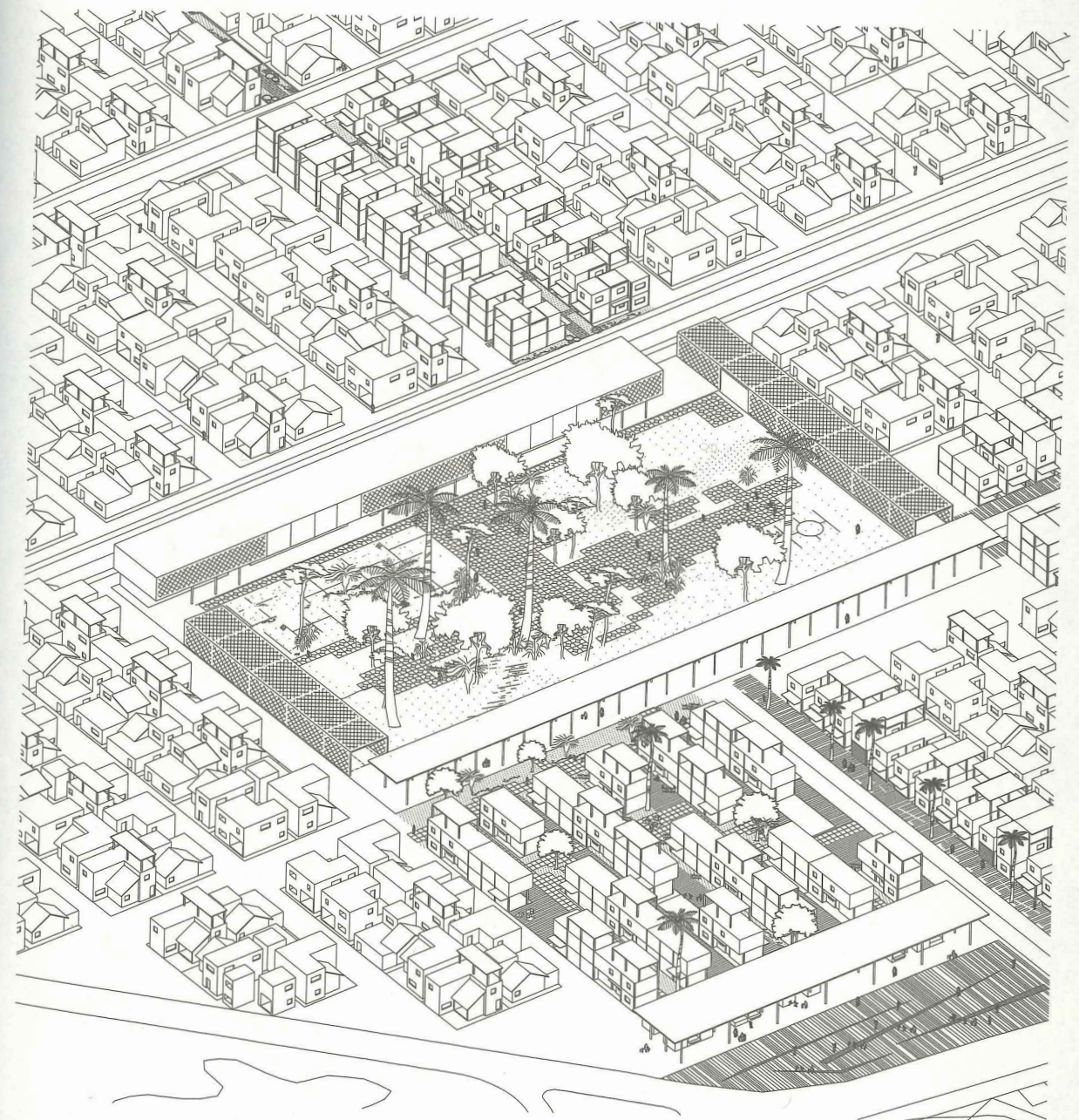


1:200 first-floor plan: The typologies in this category always function in a linear arrangement with a series of interlocked shared facilities between the housing units, such as office spaces and libraries.

With the establishment of a network of public, programmed voids, even standardized MCMV developments built "as usual" ...



Urban void and standard MCMV development, right after implementation and after a period of use and informalization.



... can allow for the necessary informalization and help integrate the new community into the urban fabric.