BETWEEN house AND city

by

Rachel Admati Kallus

B.F.A. Massachusetts College of Art

1978

Submitted in partial fulfillment of the requirement

for the degree of Master of Architecture at the

Massachusetts Institute of Technology

September 1982

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Abstract

In an attempt to understand the relationships between a residential building type and the city, this thesis explores the quality of the urban spaces resulting from the assemblage of this building type. The investigation takes place in North Tel-Aviv and is conducted in three parts: Background and polemic - a discussion of the development of the urban ideas and of the physical form in North Tel-Aviv; The problem - a documentation and analysis of the existing context; and An alternative - a design exploration of a typical neighborhood.

Thesis Supervisor : Shun Kanda

Associate Professor of Architecture

The work on this thesis has been a rewarding educational experience thanks to ...
Professor Shun Kanda, my advisor, who provided guidance and direction, and Professors Stan Anderson and John Habraken, my readers, who offered constructive comments.

Many thanks also to ...
My family and friends in Israel who provided me a home while collecting material for this work.
Patty Seitz and Renee Chow whose friendship and moral support went far beyond their editorial assistance, and a group of fellow students with whom sharing this time has been an educational experience all by itself.

... but my deepest gratitude goes to Ron for sharing it all with me.

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Preface

Many Israeli cities are characterized by a street scene distinguished by a particular housing type. This characterization is a result of both private speculation and rules or ordinances governing the process of development. A process of singular isolated interventions has resulted in an environment that lacks a range of spatial and social experiences. As these buildings are popular in Israeli cities and house most of the urban popu-

lation in the country, I propose another look at their urban qualities as generator of cities, through an analysis of one Israeli city, Tel-Aviv.

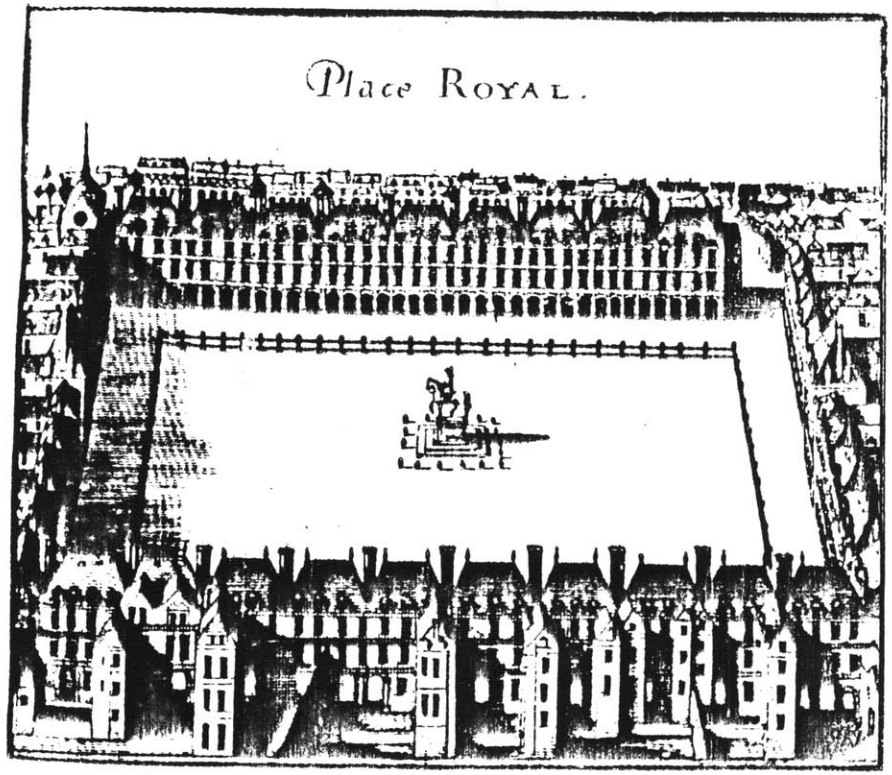
Being an Israeli, I know these houses and have personally experienced living in them. In setting out to write my thesis, I made an effort to formalize my personal experience by collecting accurate information, more objective than my own involvement. Therefore, I spent the summers of 1980 and 1981 in Tel-Aviv, accumulating material. This material includes a library search, interviews with residents,developers and city officials, and physical observations. These observations include measured plan, section and elevation documentation, and photography. Through this investigation, I discovered that there is relatively little material which discusses this particular housing type and its development. Thus, the general body of the information in this thesis comes from sparse sources, some are listed in the bibliography, other are based on personal knowledge, either mine or many others' with whom I have spoken in the course of my investigation.

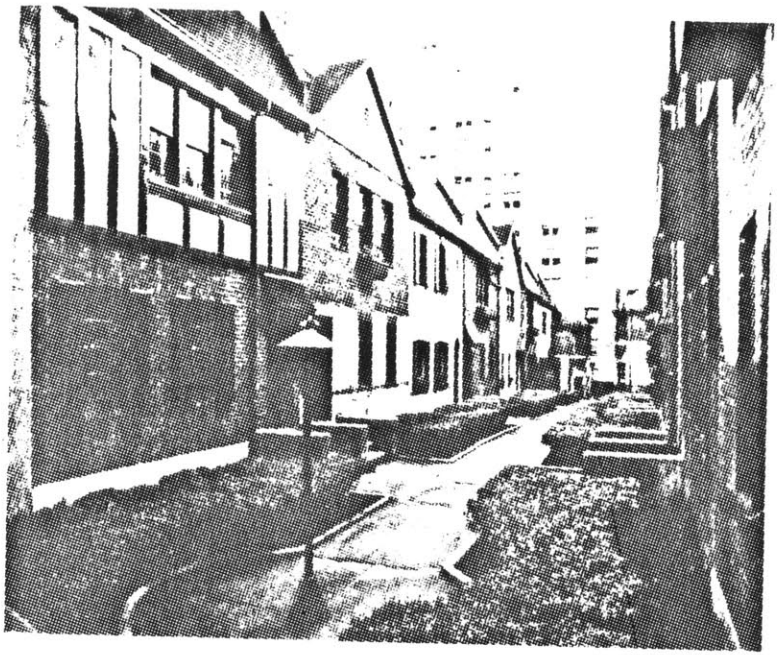
"...to us, who consider the usefulness and necessity of coverings and walls, it seems evident, that they were the chief causes of assembling men together."

Alberti, Ten books of Architecture

Introduction

A city is experienced in many different ways. Its formal nature is expressed through the public structures; through plazas, monuments, parks and boulevards. Its domestic nature appears in the residential quarters where people live; through their houses, the streets they live on, their backyards and the places where their children play. This is the fabric from which the city is made. It is the every day life which becomes the background for the special events.





The city is an assemblage of individuals: people, their families, and their neighbors, living in communities within a city. The physical system of the city, like its social system establishes a foundation for interaction between people. From one's own room to the dwelling units within the house, from the house to the blocks and streets within the neighborhood, from the neighborhood to the city, the vitality of the urban environment is found in all its different levels. Thus the city is not many houses standing up together, but an intricate system in which the houses are related to each other through a hierarchy of levels. A city then, is

experienced neither as a whole nor as individual houses, but through the way in which the individual houses make up the city, through the spaces (the streets, the alleys, the yards) that are formed between the houses. These spaces are the backbone of the city. It is there where urban life occurs, and thus the city is discovered.

This thesis studies the various relationships that occur between house and city as they appear in a specific context. The first section of the thesis, "Background and Polemic", analyzes the development of the city of Tel-Aviv, and casts light on the foundation of the city's morphology. The discussion illustrates the urban ideas, the planning steps and the actual construction which produced the urban framework, the specific building type and resulting urban spaces.

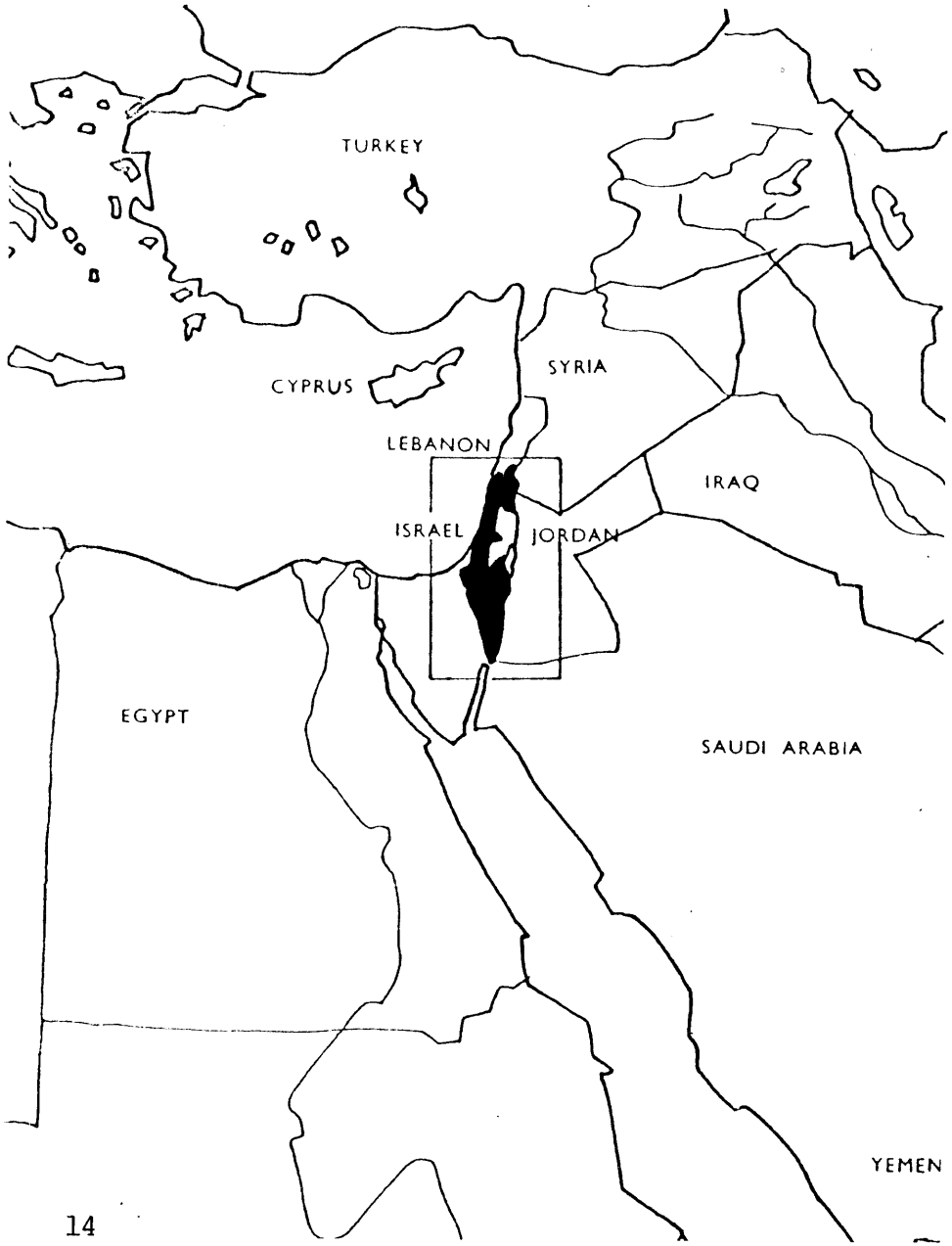
In the second section, "The Problem", the urban environment is investigated in terms of its spatial qualities. Different relationships that exist between the house and the city establish patterns which relate to the form and use of different urban spaces. These Patterns are further explored in the last section entitled "An Alternative". Through design exercise, these patterns are applied to one neighborhood in North Tel-Aviv, and the potential of the specific building type as a generator of urban space is tested.

A city was born, listen,
over night a city was born
and maybe because over night it was born
it is unattractive.
This city is full of defects
and it is a disaster and a scandal,
isn't it why all the architects wrote in the paper
that it is unsuitable for living,
that it is full of match boxes,
that there are no trees provided in its master plan
and it is congested and there is no parking...
It is too young !
It is too crowded !
But still children are born here.

Naomi Shemer
from " A song is born "

Drawing by Saul Steinberg

Background and Polemic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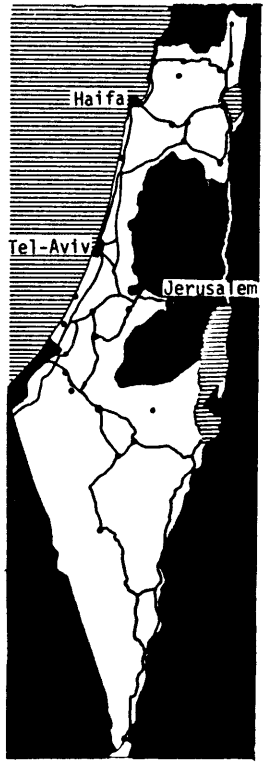
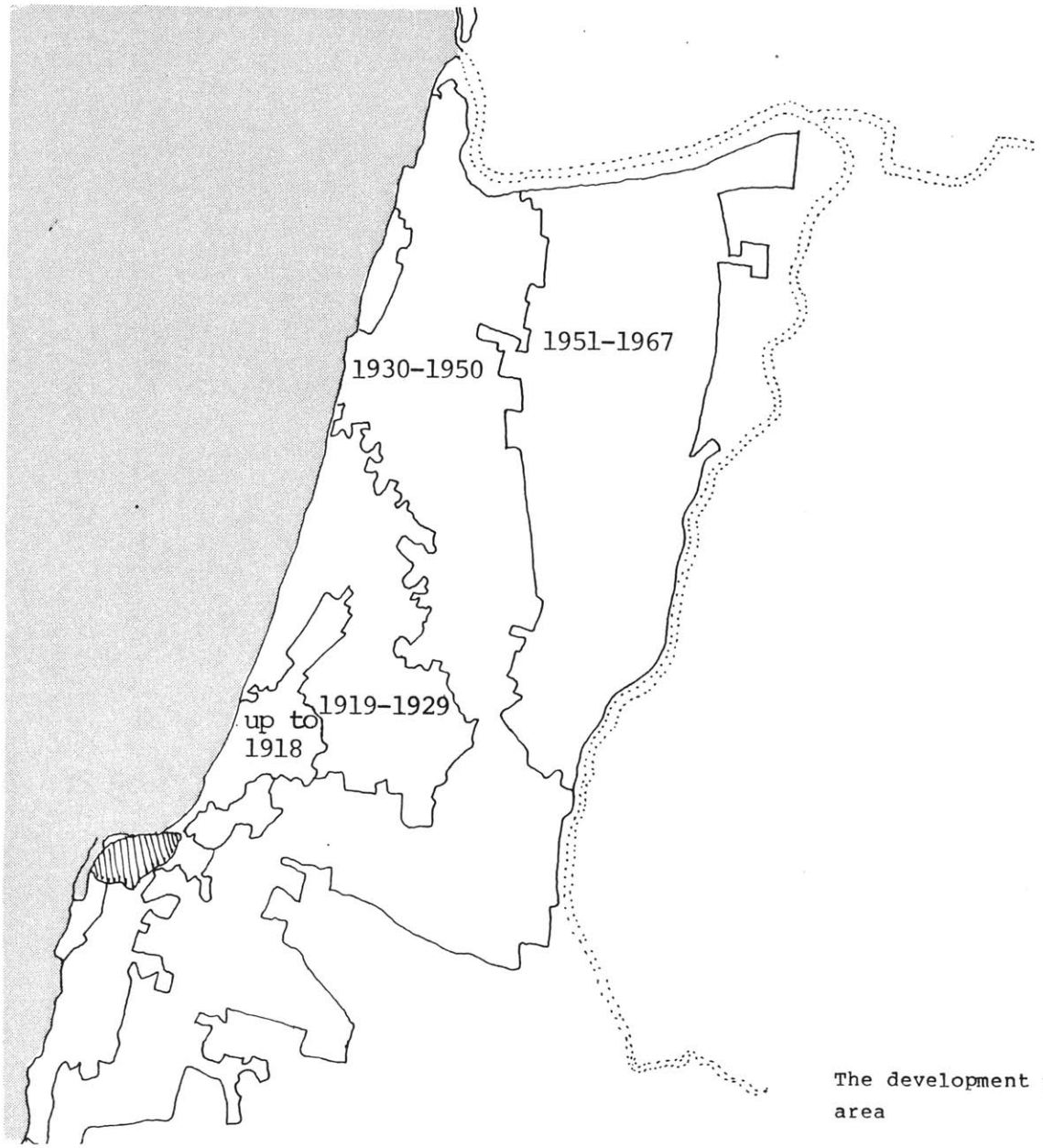

Haifa
Tel-Aviv
Jerusalem

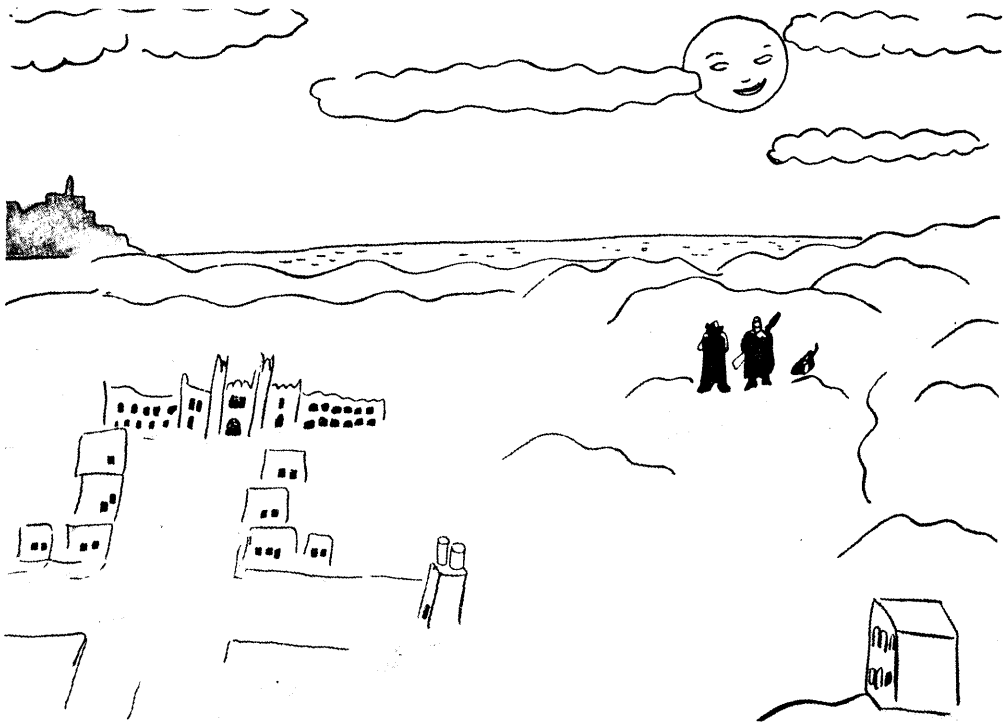
If we are to evaluate the development of Tel-Aviv as a modern city, we must understand its urban growth in relation to ideas of town planning and urban expansion in the western world in the nineteenth century.

The history of Tel-Aviv starts with the first move out of the walled city of Jaffa in the 1880's, and continues through the more planned expansion of the early 1900's. This growth coincides with large waves of European Jewish immigration to Palestine and with changing settlement patterns which occurred not only there but also all over the Western world.

So, although the city is situated in the Middle East, its foundation as well as its growth is related more to its founders and inhabitants than to its physical location.



The development of the built area

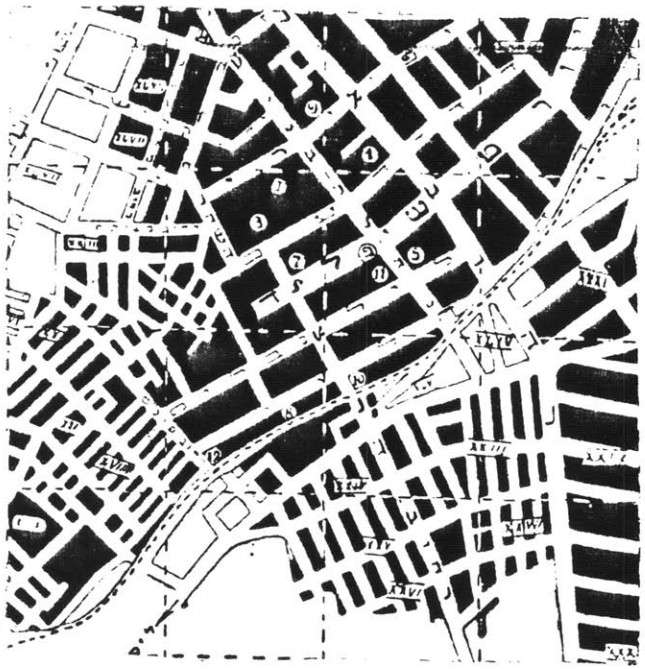


The new communities with Jaffa in the back, a drawing by Nahum Guttman

The New Communities

The first move toward the establishment of the city can be seen with the beginning of new communities outside the walls of the old city of Jaffa. These communities no longer needed a defensive system of town-walls, which, with the advance in warfare technique no longer offered protection. They represent a break from old ways of urban living in an attempt to create a modern and sanitary town, to counteract the traditional, densely built Mediterranean city. As such, the new communities can be seen as a reaction to the problems of the traditional urban model of Jaffa - i.e., the low rise continuously built environment with spaces as positive ele-

Jaffa in the turn of the century, a view from the harbor



The "new communities", figure-ground plan

Nahalat Binyamin street, 1920's

ments and buildings as space definers. This old urban model was rejected because it lacked modern living standards in terms of ventilation, light and hygiene.

The early neighborhoods of Tel-Aviv, however, tried to solve these modern problems still within the traditional model. They maintained a low rise continuously built environment but had much larger urban spaces, wider streets, and more advanced living conditions. It was still an urban environment where the space was recognized as the primary organizing element and the buildings were the space definers, but where more attention was given to the space between the buildings and to the traffic circulation.

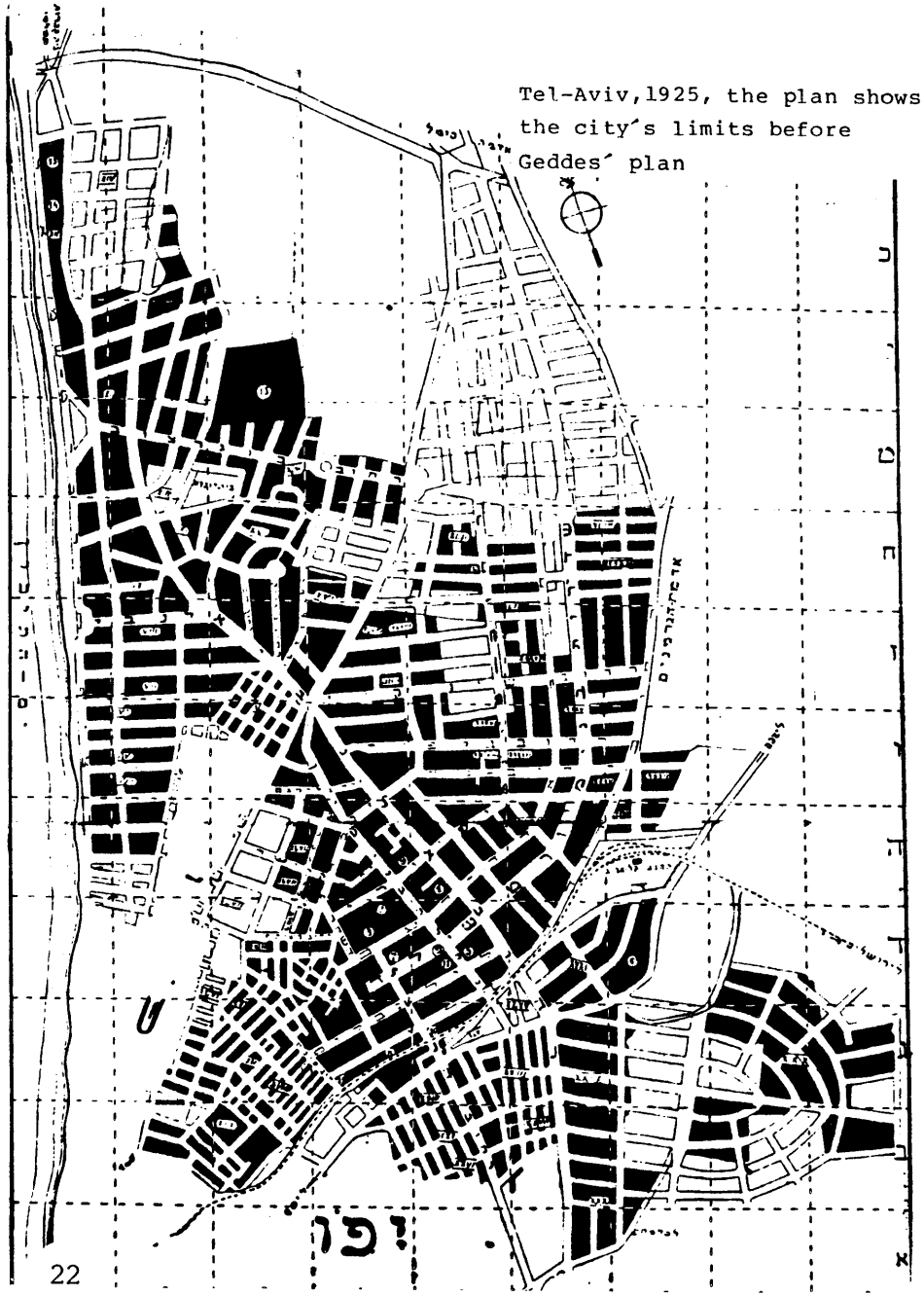
The new communities represent the effect of a

growing number of European Jewish immigrants who brought with them different urban and architectural conventions which could not be adapted to the old city of Jaffa. Both their ideas of urban living and their national and political aspirations needed a new urban setting. Thus, the model of the first communities represents contemporary urban and architectural notions, influenced by social and political ideology and manifested in traditional Mediterranean forms and materials.

In terms of their planning, the new communities were perceived as a series of individual interventions, connected to the core of the old city rather than to each other. They were generated independently to answer the somewhat specific needs of their residents. As such, they were small scale urban entities which by no means attempted to make up an overall urban system. They were supplements to a well established urban center.

Despite their individuality, these new communities shared the same characteristics, in that they all had limited growth potential. As they matured into established neighborhoods, they remained approximately the same size and did not expand to absorb more residents.

With the growing number of Jewish immigrants in Palestine at that time, it soon became clear that a different mode of expansion had to be adapted. This led to the expansion of the city toward the north, for which the first



Tel-Aviv,1925, the plan shows the city's limits before Geddes' plan

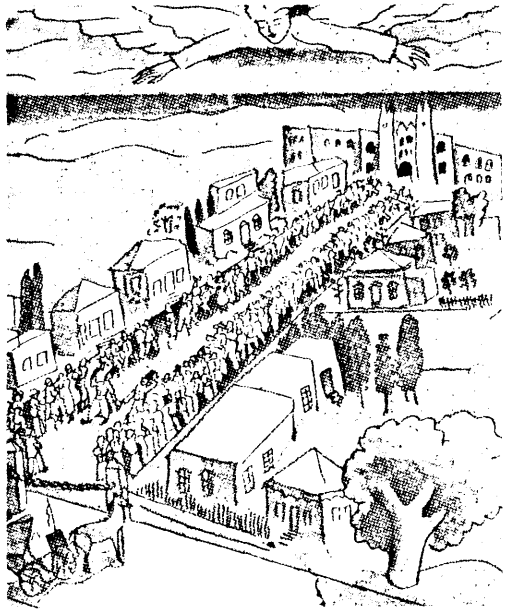
planning steps were taken in 1925.

It is important to note that these trends of expanding beyond the walled city are not unique to the development of Tel-Aviv; they are a known phenomenon which can be observed in almost all European towns. However, in Jaffa the growth of the city did not occur until the late nineteenth century and the beginning of the twentieth century, corresponding to the growth of the migratory movement of European Jews into Palestine. We can see Therefore, that the population which resided in the new communities was European, and the population that stayed within the limits of the old city remained predominantly Arab.

Another point which highlights the European nature

of the development of Tel-Aviv, is the fact that in 1918, as a result of the first World War, Palestine, previously under the control of the Ottoman Empire, became a possession of the British colonial Mandate. This shift presented another means to introduce European ways to this Middle Eastern city, since the British traditionally had a strong influence in their colonies and were undoubtedly involved in the planning development of the evolving city.

All these aspects should be taken under consideration when the growth and expansion of the north part of Tel-Aviv is explored. The attempt to understand the nature of this urban development will assume, therefore, a framework for investigation much larger than just the physical evidence of the context. As in any formal expression, the physical evidence is usually only a partial expression of social, political and economic intentions. To understand the form, these intentions have to be explored as well.

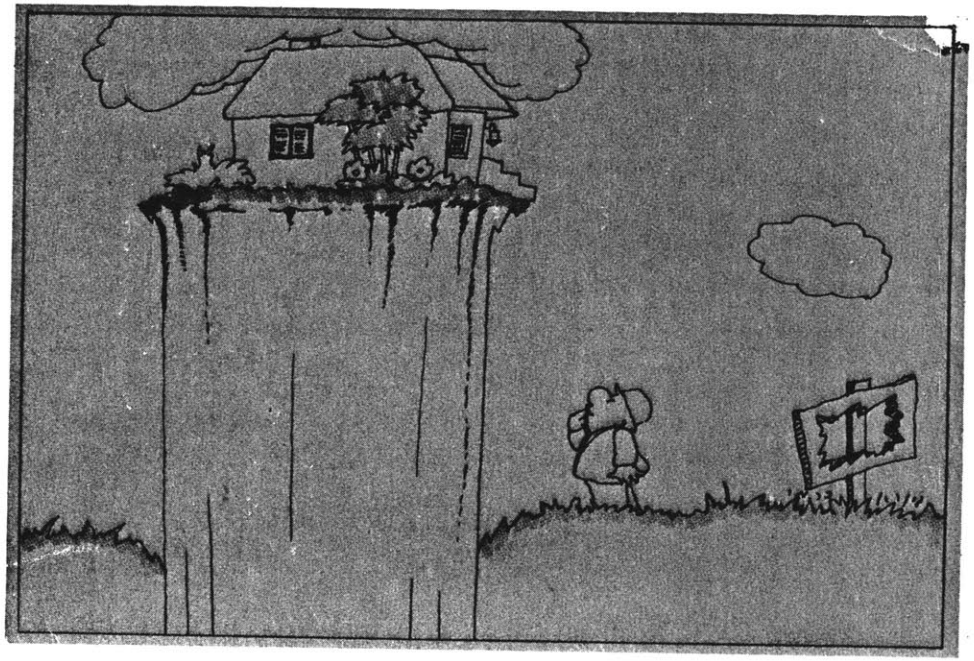


drawing by Nahum Gutman

The attempt to design the north part of Tel-Aviv in 1925, signified a new attitude toward the city by setting out to organize a complete urban area in its entirety. This was an attitude which began with a preconceived design idea that a scheme for a large portion of the city could be generated by a process that differentiated between an abstract idea, physical planning, and actual construction. This was a new notion involving "urban" understanding which previously did not exist in Tel-Aviv. Thus the expansion of the city can be reviewed, as consisting of different phases; first, a conceptual ideology which is based upon the perception of the city as an urban entity; second, a formulation of urban ideas into physical form, which materialize in planning; third, the construction phase, which is based upon the distinction of planning as the primary phase of the ordering of the land surface. This step of the ordering of land or physical development, can actually be divided also into two phases: first, the construction of the urban infrastructure, particularly roads and services, and second, the construction of the urban infill, the buildings. Thus, by understanding the process of conceptualization of urban planning, as well as the resulting physical form, the discussion of the extension of North Tel-Aviv approaches an analytical measure in terms of evaluating intentions with actual physical results.

In reviewing the development of North Tel-Aviv, I will attempt to investigate each phase of the urban development sequence individually, in order to understand its uniqueness as well as its relationship to the other phases.

Still more, in search of the specific relationship in North Tel-Aviv between building type and urban framework, I will look for clues in the development sequence, as well as in the significance of each one of its steps.



Drawing by G. Carmi from "Monitin"

Idea

Although I was not able to find any of Geddes' original plans for the expansion of North Tel-Aviv, it is a known fact that he was involved in the early stages of the city's planning. The inability to locate the actual town planning report written by Geddes in 1925[1], eliminates an accurate measure of his involvement in the project. However, various quotes and remarks in numerous books on the work and life of Geddes, and on the development of Tel-Aviv, point to the fact that in 1925 he was asked to study the possible enlargement of the city toward the north. My assumptions in regard to his actual physical influence on the city's early planning steps are based upon information in his general writings as well as upon a number of illuminating studies about him (see bibliography). These are juxtaposed with the realities of the existing physical context of North Tel-Aviv.

The conceptual model of the city as seen by Geddes was without doubt, influenced by his ideas of a city as a complex system; it was seen as a totality composed of elements at different scales and levels. Its strength relied upon both its complexity and its individual components:

"In city planning we must constantly keep in view the whole city... in all its aspects and at all levels."[2]

This aspect of planning, clearly reflects a hierarchical way of thinking. It perceives of the urban structure

[1] Patrick Geddes, Town Planning Report, Jaffa and Tel-Aviv,1925 (the only available copy of this report has been missing from the Israeli National Library in Jerusalem since 1960).

[2] Patrick Geddes, "A Report on Town Planning In Kapurthala", 1917 Jaqueline Tyrwhitt, ed., Patrick Geddes in India, Lund Humphries, London,1947, p. 27

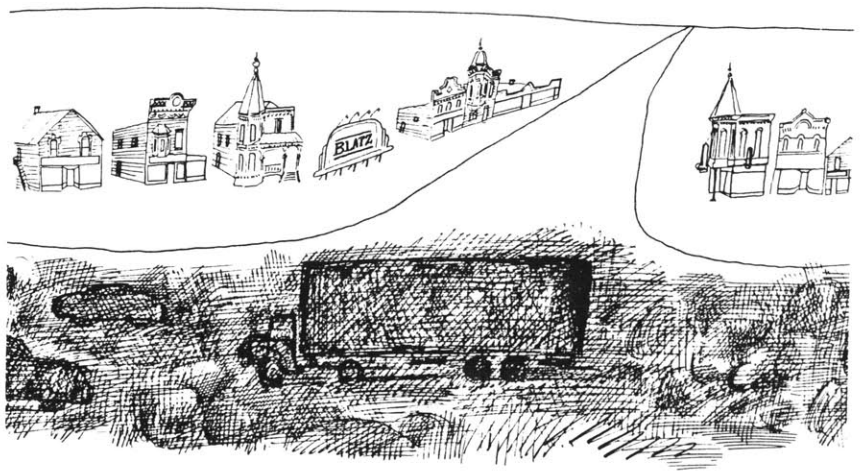
as an intricate system in which each level is interdependent with its adjacent levels.

The hierarchy of the urban structure, mainly as observed through the hierarchy of the street system, was seen by Geddes as a base for the urban environment. This is evident through his observation of the Indian cities:

"The transition in Indian cities from narrow lanes and earthy dwelling to small streets, great streets and buildings of high importance... form an inseparably interwoven structure. Once this is understood, the city plan ceases to appear as an involved network of throughfares dividing the masses of building blocks."[3]

This concept opposed very clearly the idea of the urban road as a network system which divides building land into island blocks which are separated by traffic circulation. Geddes discarded the notion of the separation between street and house. It is an acknowledgement of the strong connection between the street system and the building system which define and shape each other to form a cohesive urban environment.

[3] ibid.



Drawing by Saul Steinberg, 1953.

Edinburgh:
old High Street houses, Patrick Geddes, Cities in Evolution.

Geddes reflections about the city always consider its different levels. These levels represent the different scale of the physical urban environment. At one end of the scale is the small urban element, "the essential unit of a city is the home"[4]; a combination of a few elements makes up a higher level, a community, which for Geddes means very often a village. The city is then a system made of an assembly of villages. The strength of city living is neither in the city as a whole, nor in its elements, but always in the ability to identify the city through intermediate levels of relations. Thus, it is the relationship between groupings of elements which make communities:

"People living in the desolate individualism of nineteenth century European cities have come to be satisfied with inhabiting a number in a street; separated as though by death, from their neighbors... The constant interest of family and kindred, neighborhood and village have vanished from our western 'progressive' cities."[5]

Later he concluded that

"... the most fundamental concerns of town planning are not the care of monuments but rather the improvements of communications..."[6]

[4] ibid., p. 25

[5] Patrick Geddes, "A Report on the Towns in the Madaras Presidency", 1915, ibid., p. 60

[6] Patrick Geddes, "A Report to Durbar of Indore", 1918, ibid., pp. 34-35

This notion of communication through the relationship between groupings of elements ties to the recognition of the urban space as a focal point for urban life:

"Their (the townfolk) true meeting ground - both for children and the elders - is the village square... if we plan within the town, keeping this village life fully in view, we diminish that deterioration of the village that is a main cause for the decline and degeneration of life in cities everywhere,"[7]

Geddes' strong social awareness made him very interested in the relationship between physical form and social needs as well. He perceived physical form not as an entity by itself, but as a setting for social behavior.

"Town planning is not mere place-planning, nor even work- planning. If it is to be successful it must be folk-planning."[8]

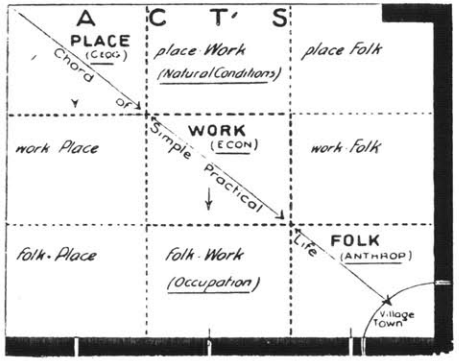
A child image of a square, drawing by nine-year-old girl. From Hans Friedrich Geist "Paul Klee und die Welt des Kindes," Werk (June,1950)

This idea ties to the urban analysis matrix, set up by Geddes, which is composed of three elements: place, work and folk. place relates to physical location,

[7] Patrick Geddes, "A Report on Town Planning in Balrampur", 1917 ibid., pp. 84-85

[8] Patrick Geddes, "A Report on the Town Planning in the Madaras Presidency", 1915 ibid., p. 22

"The valley Section", an illustration by Hendrick Willem Van Loon.



"The Notation of life", From Patrick Geddes, Cities in Evolution.

work reflects the economical aspects, while folk recognizes the social characteristics.[9] This matrix enabled Geddes to talk about the processes in the urban environment as a complex development composed of various parameters. His thinking was sensitive to dynamic changes and recognized man as the major factor in the shaping of cities.

[9] Patrick Geddes, Cities in Evolution, (Appendix 1), Williams & Morgate LTD., London, 1949.

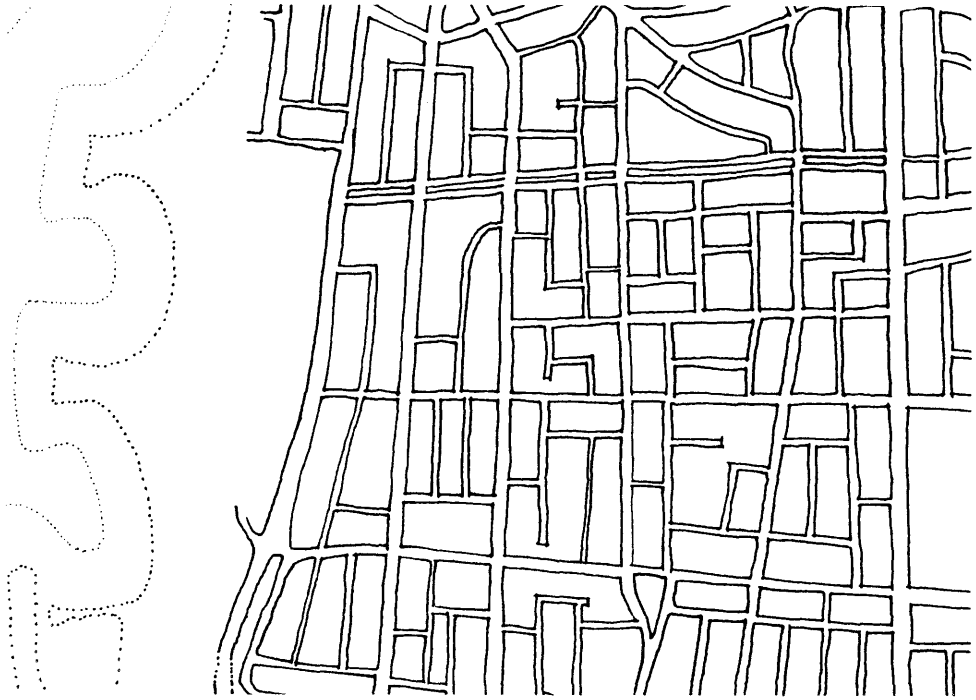
The principles of Geddes' plan for North Tel-Aviv are common knowledge among people in the city. Although there is not much written about the details of Geddes' involvement in the project, his work was conducted only 57 years ago and much of the information still comes first hand. Unfortunately I was not able to find more specific sources of information. Nevertheless, formal and informal experiences in the city helped me construct a clear picture of the extent to which Geddes' ideas reached in North Tel-Aviv.

The urban model developed by Geddes for North Tel-Aviv, called for a human and associative urban environment. Its urban fabric consisted of an assembly of block-clusters, each organized as an independent unit with four residential blocks around one central garden block. Geddes talked about his scheme describing it as a village:

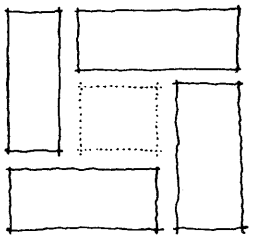
> "... every city block arranged within as something of a garden village."[10]

This suggests very strongly the sense of community which for Geddes was presented by each of these block-clusters. They are little neighborhoods with very clear physical definitions and a strong sense of identity. The garden block at the center of the "village" was seen as the focus for community life. It signifies the community and acts as its public drawing point, where different shared activities take place, either planned or unplanned.

[10] Patrick Geddes, as quoted in Philip Boardman, Patrick Geddes, Maker of the Future, The University of North Carolina Press, 1944, p. 360



Tel-Aviv - street hierarchy today



Geddes' model for a cluster of residential blocks centered around a garden

[11] Patrick Geddes, "A Report on Town Planning in Kapurthala", 1917 Jaqueline Tyrwitt, ed., Patrick Geddes in India, Lund Humphries, London, 1947, p. 26

The scheme concentrated on the street layout and developed very carefully a street hierarchy which differentiates between quiet residential streets and major throughways. It did not pay too much attention to the interior organization of the block, leaving it to later private development. It is safe to assume that Geddes, with his stress on cultural and social awareness, expected the houses (the private territories of the people), to be developed and built by the people. He clearly saw the home as a naturalization of one's own living habitat, as a form of self-fulfillment of family life:

"With the dwelling we must consider its occupants, the man, the woman and the child."[11]

However, at this time, I can not point accurately to any specific house form which Geddes might have had in mind; therefore much remain an issue for future investigation.

Even though Geddes' reflection on the city relates to physical planning, the fact that he was not a planner or an architect, a man involved in the manipulation of form, prevented him from making an effective physical intervention. As pointed out by Francoise Choay, Geddes' method of "survey", or observing the environment;

"... acted as a corrective urbanism by respecting the complexity of reality and rejecting the a-priori, it was nevertheless used by Geddes within the context of a culturalist system of values and it remained dependent on the creative intervention of a planner."[12]

This method failed to offer a relevant physical form for the extension of North Tel-Aviv by which the system of values which generated it, could be architecturally illustrated and thereafter implemented.

"Ideas are what count. The important thing is not who has them, but what is done with these ideas."

Patrick Geddes

[12] Francoise Choay, The Modern City: Planning in the 19th Century, George Braziller, N.Y., 1969, p. 109

Planning

The implementation of Geddes' idea began when his report was completed in 1925. However, even though the plans were not fully approved nor completed until 1938, housing construction by private developers was carried out as early as 1935. Growing numbers of immigrants residing in Tel-Aviv, demanded more and more housing so partial schemes were meanwhile adopted. These development based on partial schemes could not be stopped until final implementation of Geddes' scheme.

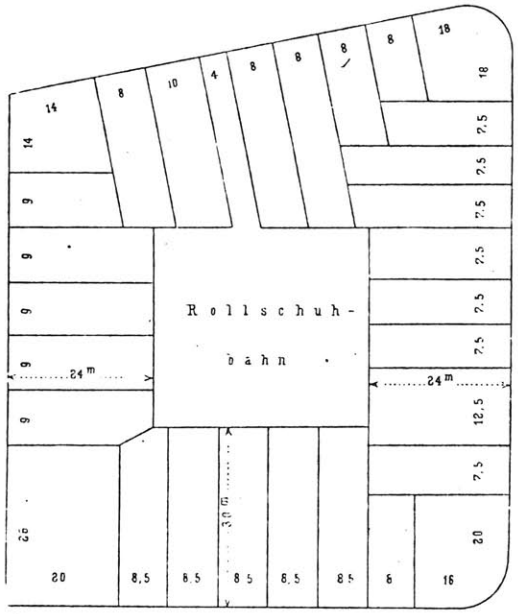
Various aspects of both the plan and the physical evidence which can be seen today lead me to suspect that the major planners involved in the implementation of Geddes' recommendations were probably architects and engineers with a German approach to town planning. This period in Tel-Aviv is categorized by a large migratory movement of European professionals. These people came to Palestine for both ideological and professional reasons, as a result of the growing Zionist aspirations among European Jews, and later on, around 1933, on a flee from the rising Nazi regime in Germany. These professionals, educated in Europe, were without doubt influenced by German planning ideas which were formulating around the turn of the 19th century.

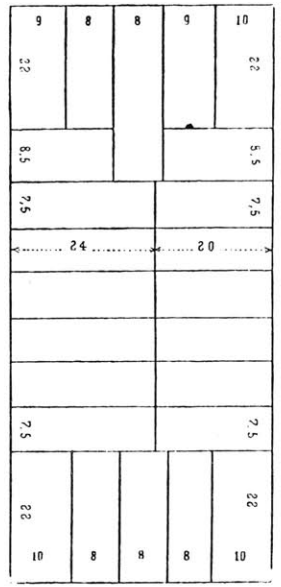
As pointed out by Manuel de Sola-Morales[14], the German town planners of the nineteenth century had two major themes: The study of problems of traffic circulation,

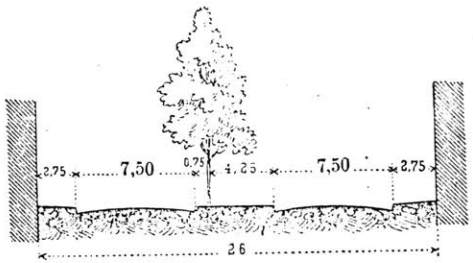
[14] Manuel de Sola-Morales, Towards a Definition", in Lotus International No. 19, 1978, pp. 28-36

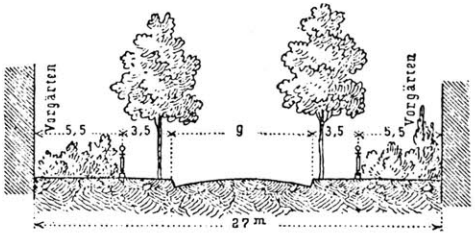
and the development of techniques of zoning and the regulation of ground use. These two themes, which are considered to be the characteristics of a new methodology of town planning, were a major influence on the implementation of Geddes' scheme in North Tel-Aviv.

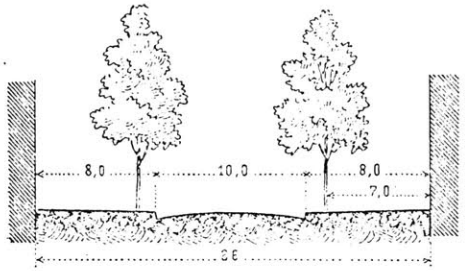
The planning stage, or the time between 1925 and 1938 in which Geddes' conceptual model for the expansion of the city materialized was based upon an idea in which city expansion was perceived as a business venture. According to this view, the production of the city was to be promoted by venture capital, and therefore prospects of capital gain were central motivations in its development. At the base of this notion was the understanding that the city's ex-



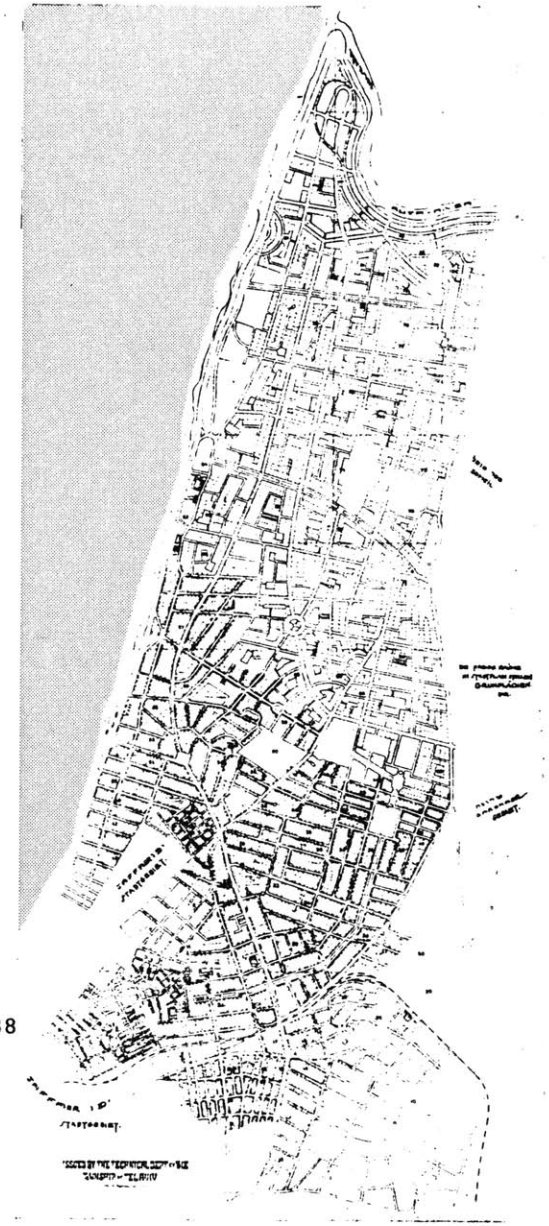








Illustrations from J. Stubben, Der Stadtebau, published in 1924



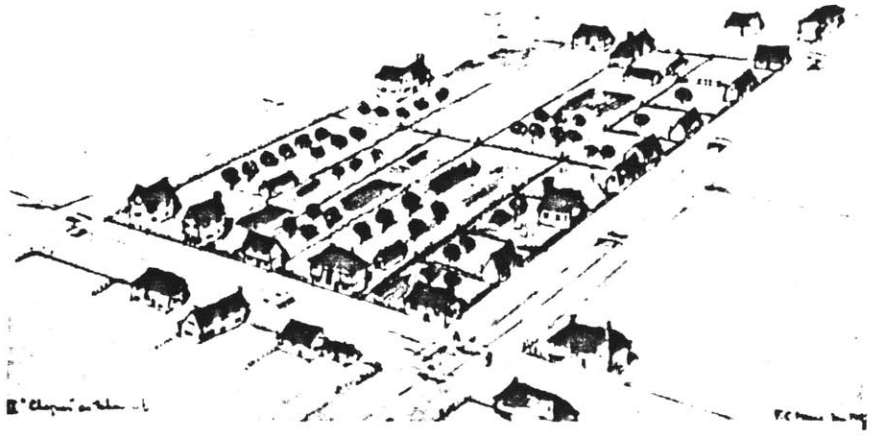
Tel-Aviv, general plan in 1938 including plan for expansion in the North

pansion could only happen as a capitalistic venture based on profit from land speculation.

This concept had a distinct bearing on the planning steps taken to implement the Geddes scheme. Planning was reduced to a series of regulation and zoning bylaws which were a means to stabilize and maintain the value of the land. This was done by separating the construction schedule for the urban framework and infrastructure (streets and services), from the urban infill (house). The former was seen as the base for the latter and was thus financed by money generated from the division of land for urban infill.

The urban framework was adapted according to the lines of the Geddes' scheme. The major streets followed some of

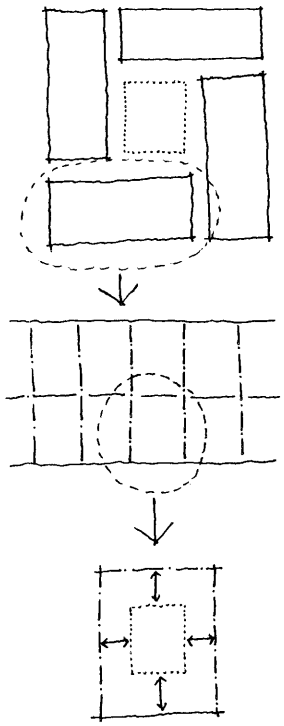
the already existing arteries; the North-South roads leading to Jaffa were intensified as commercial streets, and the East- West roads leading to the shore line from new settlements east of the city, were made into boulevards. The residential streets were less true to the original plan, since the block distribution had to account for groups of existing houses already in the area. This did not allow Geddes' basic idea of the village-like block-cluster to be implemented fully. Also, in the existing conditions of high demands for urban land, these blocks intended for the communal gardens were easily converted into more residential property. This idea of large portions of land which were not engaged in either the building process or in traffic



(a) Diagram of original layout of city block.

(b) Illustration of modern haphazard building over gardens.

Illustrations from Patrick Geddes, Cities in Evolution.

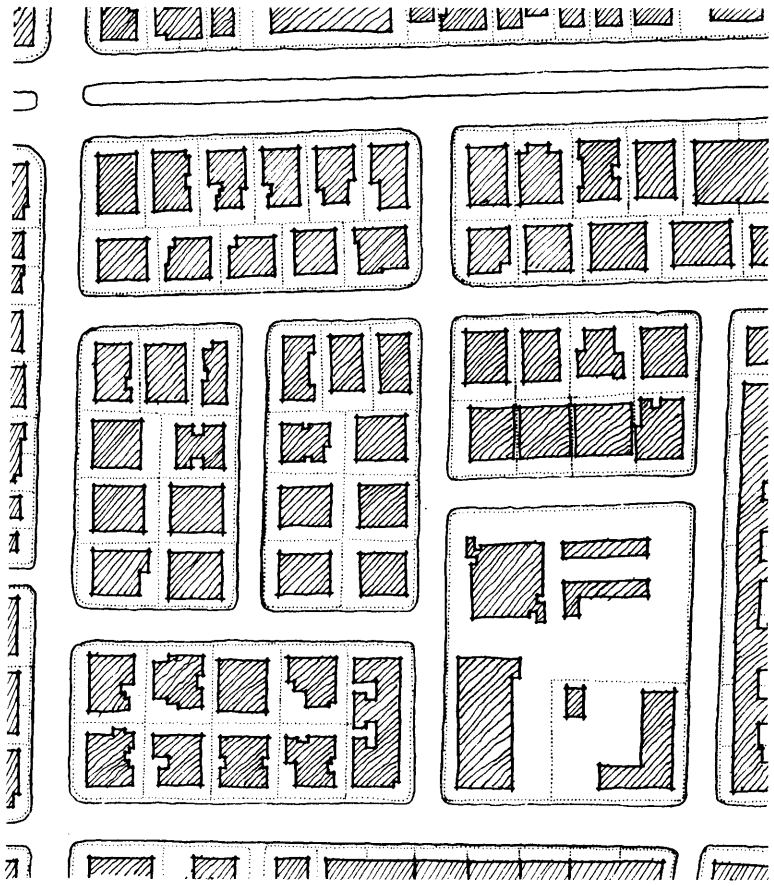


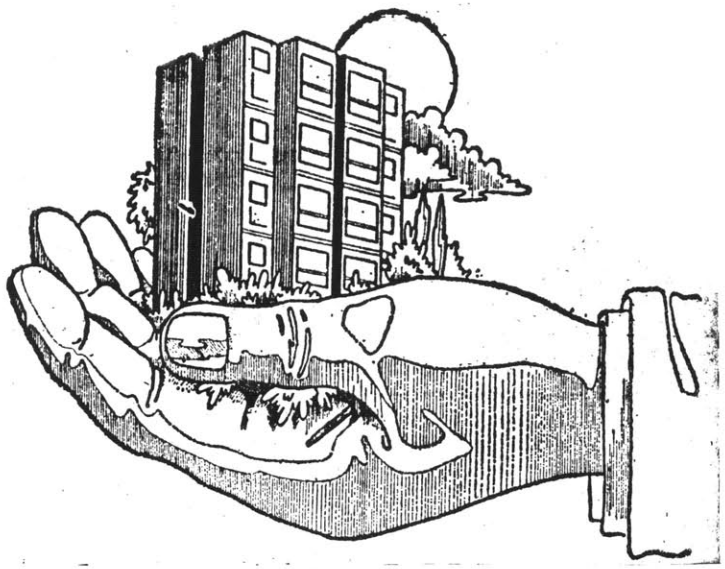
circulation, could not be supported in a capitalistic development, where profit became the major reason for any intervention.

The residential blocks were divided into lots to be sold and infilled as private ventures, and as such, the development pattern which was to be an assembly of single interventions over time, required a separation of the individual ownership units from each other. This led to the development of setback and height limitations directed toward each individual parcel. These regulations were meant to protect land owners from each other and to preserve their land values. They strove to maintain for each lot minimaly satisfactory conditions of light and air which could not be violated by the development in adjacent properties. These regulations did not come to encourage action, but were seen as a set of limitations to secure only minimum standards, by maintaining the autonomy of each parcel. The result was a series of highly isolated moves on each lot with no attempt to coordinate a development process in which useful association between the houses would be achieved. Therefore, these houses have a direct relationship with the larger urban framework and minimal association among themselves.

As an effort to implement the principles laid down by Geddes for North Tel-Aviv, the scheme failed to recognize the importance of the integration of the house in the city as an interdependent urban element which is then part of the

larger urban system. The scheme made a clear distinction between the urban skeleton and the space provided for the dwelling structures. The former was seen as a framework for the organization of public movement, while the latter was the stationary portion of the system, in which the private units of habitation were placed. These island blocks, the inter-street areas, were not seen as part of the street system but rather as independent discrete territories. Major effort went into a careful consideration of the layout of the street system since this was in the public domain. However, the attention given to the interior organization of the block represented an attempt only to coordinate development of the privately owned units. In this sense, the zoning bylaws were introduced as a mechanism by which the individual owners could be protected from each other, and as a means to safeguard the public territory from private intervention.



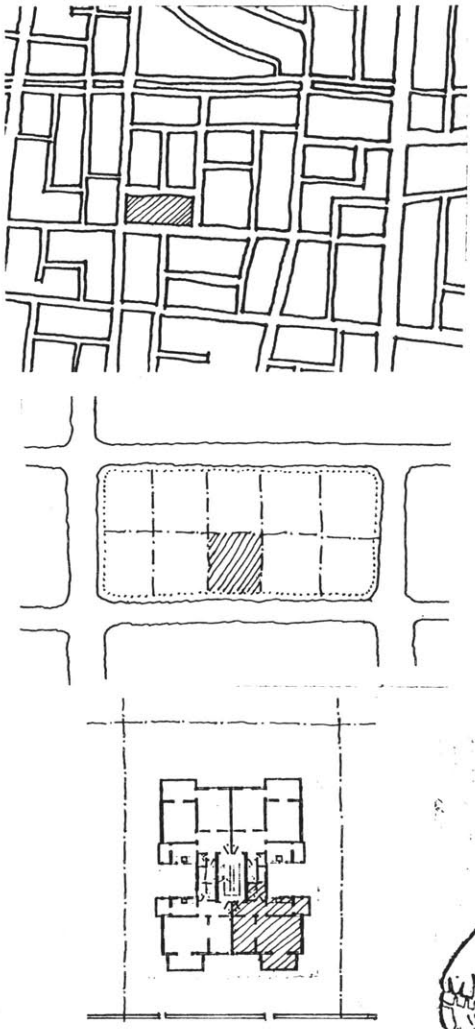


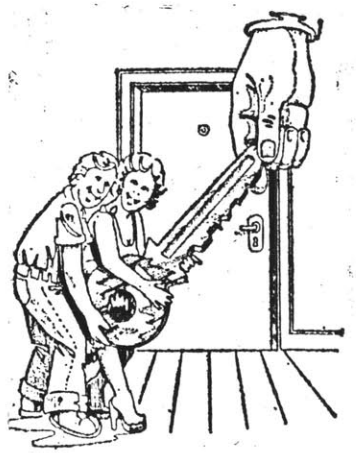
Advertisement for apartments in an Israeli newspaper.

The scheme failed to recognize the reciprocal relationships that could have developed between the building and the street or among the buildings. It eliminated any potential for expanding the variety of definitions of urban space beyond the domains of just "public" and "private". As such, it neglected the importance demonstrated in Geddes' writing, of inter-relationships between the urban levels.

A major fault in the scheme was its inability to recognize the potential assembly of the different lots and buildings into an entity larger than their summation as a block. The potential of grouping the houses into a new intermediate urban unit between the house and the block was never considered.

This of course led to an urban pattern based upon segmentation: a large entity, the city is divided into blocks; the block is divided into smaller fragments, the lots; the lot is built, and the building divided into apartments. Each segment in the pattern represents a different level of control: the municipality controls the block; the developer controls the lot; the dweller controls the apartment. This system makes a clear distinction between the urban elements and the totality of the whole. But, in a city, with its complex urban physical reality, a system like this destroys the potential for an intricate environment; an environment whose sum is always larger than the total of all its elements.



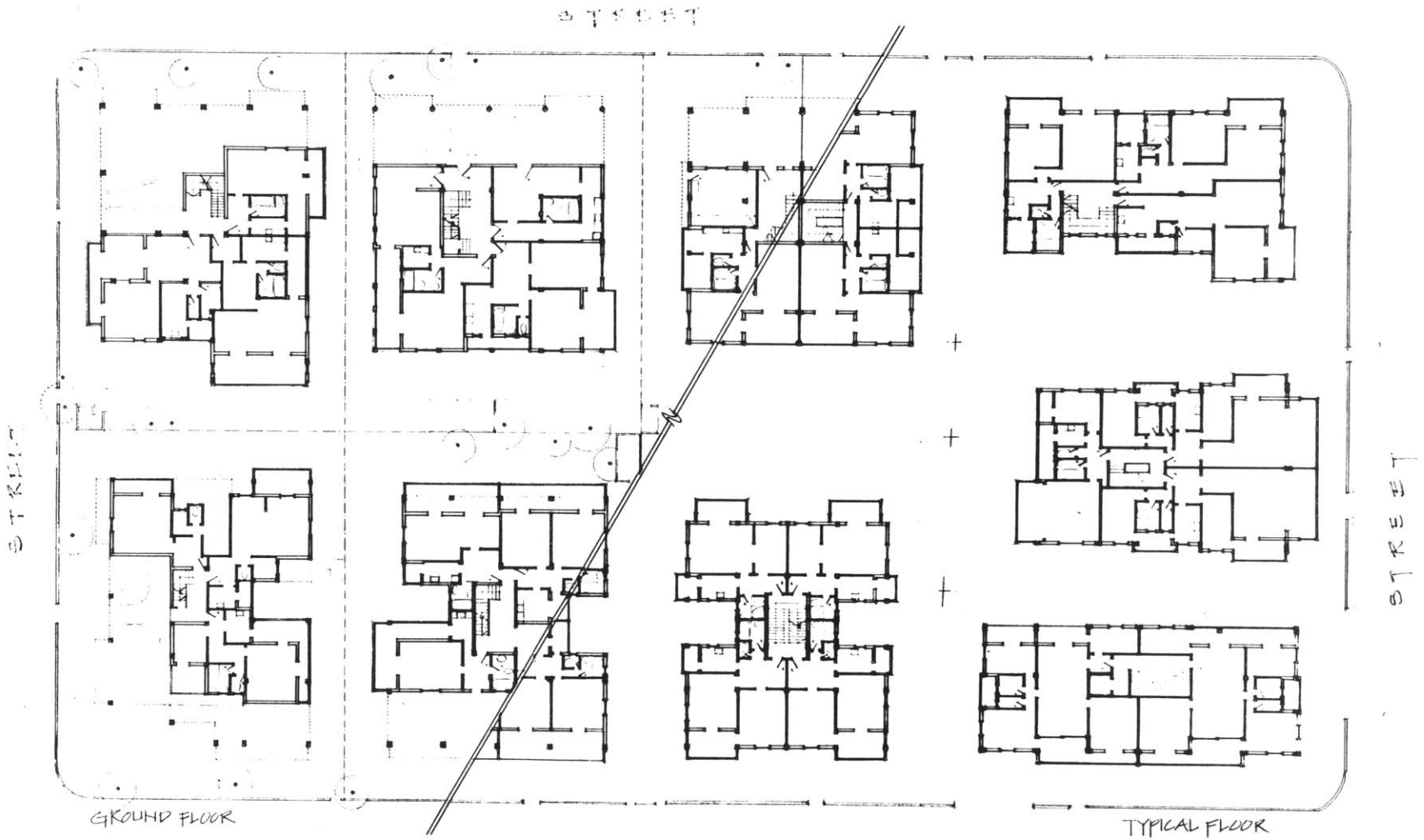


Advertisement for apartments in an Israeli newspaper.

Building

The construction of the infill part in the scheme, i.e. the houses, proceeded over a period of about twenty years (1930's to 1950's). It was carried out in a speculative manner by private developers operating on individually purchased land. In most of the cases, the developer bought a parcel of land and tried to develop it to the total maximum as accepted by the regulations - an apartment building of about 12-16 units. He then sold the building to individual dwellers, one unit at a time, and moved out of the picture, According to the law, the building then became a property co-owned by its residents. Thus each household owned a private living space within it and a share in the communal space: the stairs, roof, ground and the building envelope. This form of building came to be known as the "communal house" and even today it is the most common form of urban dwelling in Israel.

In this process of the small scale development in North Tel-Aviv, complete freedom was given to the developers, as long as they did not violate any of the regulations. In their lot, they had an absolutely free hand to build according to any kind of architectural convention and in whatever style. However, it is quite interesting to note that despite this freedom, the buildings took a very similar shape undoubtly influenced by the situation in which they were developed.



A typical block layout

The general form of the building, i.e. its overall mass, was conditioned first of all by the shape, size, and proportions of the lot. The zoning bylaws, in terms of setbacks and height limitations, regulated the relationships of the building to the street and to adjacent buildings, and similarly determined some of the interior layout decisions.

The speculative approach of the developers dictated a maximum land use to ensure a full capital return on their investment. Thus, the buildings represent a maximum of floor plan and height provided by the zoning bylaws. The space between the buildings, however, represents the minimum allowed standard of outdoor space and it is very clearly, the exterior "left over" necessary to insure light and air in the interiors.

Thus, since the houses were not seen as part of a large urban scheme, but treated as singular elements, individually developed and independent of an overall plan, there was never an attempt to coordinate the process or to share development resources. So the houses are set discretely on their respective

lot, contradicting in their form, and in the way they are used any possibility of combined access, joined outdoor space and a cooperative use of other public or communal amenities.

The ownership pattern, also, has a great deal to do with the use of the lot, and it was probably an important factor in the process of the development of the building type. It follows the block division very precisely, never allowing any tolerance for communal space among the different lots. In addition, it does not recognize any possibility for private outdoor space, which eliminates the potential for different exterior spaces among houses. Thus, all outdoor space is communal and is owned by all the house residents collec-

tively.

As for the interior organization of the houses, this too was influenced by the development process and the situation at hand. The proximity of the buildings forced a careful configuration of the apartments in the building as well as the apartments' interior layout. The three or four apartments on each floor are oriented always towards either the street or the back, since these provide the largest open space between buildings. Thus, functions requiring visual and acoustic privacy are placed at the far ends of the building. Service and utility functions are located at the sides where the distance between the houses is minimal.

The speculative approach toward the building, in which the "money-making" commodity was the apartment and the communal territories only a necessity (for access), determined the location of the vertical circulation, always at the core of the mass of the building. These secured the exterior of the building to the privacies, but made the staircase a dark unattractive hole, minimally dimensioned and completely unsuitable for any collective encounter.

As a conclusion, we can see that most of the ideas dear to Geddes, were completely lost in the development process of the extension of North Tel-Aviv. Perhaps the blame is on him for not supplying the scheme with physical guidelines sufficient to sustain the later phases, or perhaps it is on the interpetation of his concepts into economical and maybe more realistic modes, which turned over his somewhat idealistic notion into the realestate market. Or maybe the fault is in the negligent manner in which the infill steps were conducted. Both limits of more factual information and the material available, will not permit me to get into this discussion. My attempt in reviewing the development of North Tel-Aviv, was only to suggest, and mainly speculate on the intentions behind the physical evidence in the context. In an effort to understand and respond to the city as a process in time, this discussion tries to demonstrate its dynamic nature. As noted by Aldo Van-Eyck:

"... the full scope of this environmental experience cannot be contained in the present unless we telscope the part, i.e. the entire human effort into it. This is not historic indulgence in a limited sense; not a question of traveling back, but merely of being aware of what 'exists' in the present - what has traveled into it; the projection of the past into the future via the created present."[15]

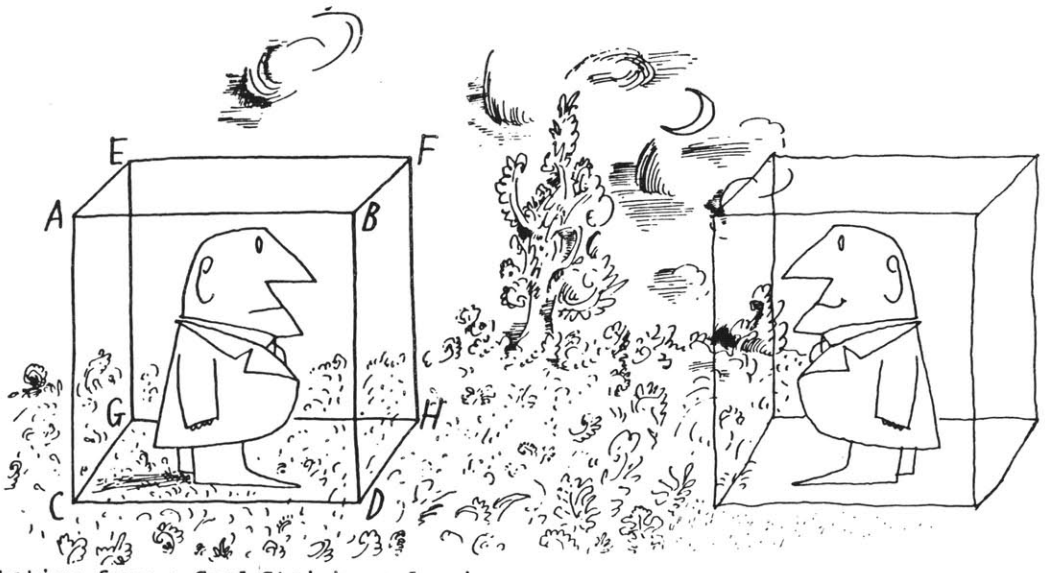
[15] Aldo Van-Eyck, Forum, 7/1967

As an architect my tools are clearly projective and not reflective. The next chapters are an attempt to crystallize the problems and the physical short-comings in North Tel-Aviv at the levels between house and city, and to explore some alternatives.

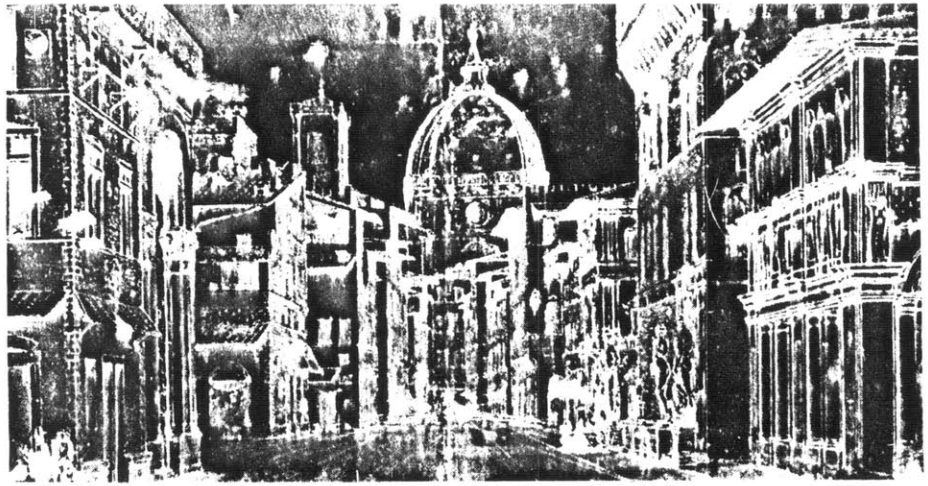
Tel-Aviv through a window, a drawing by Josef Zaritzki

All the time we are aware of millions of things around us... aware of these things but not really conscious of them unless there is something unusual, or unless they reflect something we are predisposed to see. We could not possibly be conscious of these things and remember all of them because our mind would be so full of useless details we would be unable to think. From all this awareness we must select, and what we select and call consciousness is never the same as the awareness because the process of selection mutates it.

Robert M. Pirsing, "Zen and the Art of Motorcycle Maintenance"



Adaptation from a Saul Steinberg drawing



1959 drawing by Lanci for Commedia "La Vendova" (Rotch Library visual collection).

Built environment on the scale where buildings and urban space are brought together into a coherent and unified physical existence can be called urban-scape. It is the level where recurrent and consistent patterns of form and use are established through the interplay of built and open spaces. The following discussion attempts to outline the characteristics of the existing urban-scape in the residential section of North Tel-Aviv.

The character of a city can be defined through the relationships of the house to the street, of street to other streets and house to other houses. Generally stated, the form of these three relationships shape and define the urban-scape. The relationships represent a bond between house, street and city which makes it hard to determine if streets and houses make up the city or if the city is a background setting for them. They acknowledge the existence of the city as a spatial structure made of both buildings and spaces, in which the interface between the built and the open is realized as an urban structure. They also underline the notion that the character and the quality of the urban environment is determined through the way in which buildings and spaces are assembled.

It is my belief that one can understand the character of a city by exploring the way in which the buildings comprise the urban space. Thus, the discussion will focus upon the continuity of built space as a generator of the urban experience.

In General ...

Street to street:
hierarchy of streets

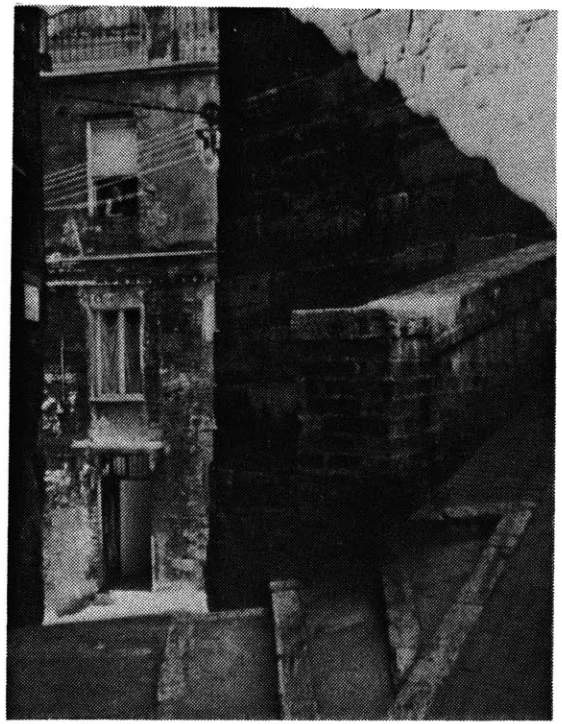
The city is a structure made of both buildings and open space, they are inseparable and defined by each other. Nevertheless, the space is recognized as the primary organizing element that enables us to comprehend the city as a physical structure.

The street is a linear urban space. It is a territory which is part of the circulation system of the city as a whole, gives access to the houses along it, and acts as a space through which needed light and air is admitted to the built zones around it. As such, it is the element in the urban structure which belongs both to house and city. It constitutes one of the major systems in the urban structure.

There are three categories of physical properties which can be used to identify the street in relation to the city. These properties are the size, configuration, and position of the street. The size refers to the dimensional quality of a street relative to other streets. The configuration describes its spatial organization and the position defines the placement of the street in the urban structure. Thus, all these properties identify the street as an element within a system.

The physical properties are usually derived from the functions associated with the street. In other words, we can find a close correlation between the size, configuration and position of the street with the function of both the space and the built zones which constitute the street. Thus, as the built areas in a city change their character from public to private, the street characteristic changes. The character of the street in the business district of a city is quite different from that of the residential street of the more domestic section of the same city.

The hierarchical relationship of the different streets is essential to the understanding of the city as a complex and intricate system. It does not necessarily mean a separation of all functions, according to street types. In the process of giving the urban environment quality and character, all the physical properties of the street take part. They all work, together to give the street its identity.



Street view, Perugia, Italy, (Rotch Library, visual collection).

House to street:
street edge

Gyorgy Kepes notes that:

"Structure in its basic sense, is the created unity of the parts and joints of entities. It is a pattern of dynamic cohesion in which noun and verb, form and to form, are coexistent and interchangeable."[1]

A similar relationship between house and street can be observed in the urban structure where the street is formed by the buildings and the building is formed by the street.

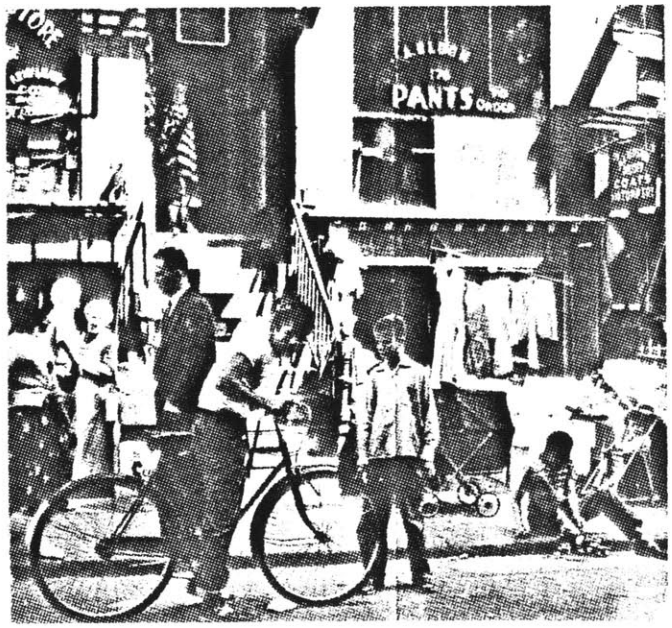
Urban and non-urban structures can be physically distinguished by the relationship between voids and solids which define the open spaces. Open space becomes urban-space when it is defined and contained by buildings. The street as an urban element is both the space and the built zone which defines it and create a structure.

The street depends on its built edge to define it and to give it shape, form and identity. This edge is not merely a line where the open space and the buildings meet. It is a three dimensional territory which constitutes a zone of transition between the built private domains and the open public space. The street edge should differentiate between public and private domains while supporting human activities of both. Distinct territorial definition should be

[1] Gyorgy Kepes, ed, introduction, Structure in Art and in Science, George Braziller, N.Y., 1965 , p. ii

associative to human needs and dimensions. When experiencing a city, the street edge becomes a major element of the city character.

The street, if observed purely functionally, is a means to routing traffic and separating building masses to bring light and air into the buildings; If viewed merely formally, it is a means to articulate the forms of the buildings around it. But by far, the most important aspect of the street is its impact on the social life of urban man. As an organizer of the buildings around it, the street becomes an intermediate territory between the built privacies. As such, it potentially can become a collective ground for social interaction.



from Christopher Alexander, A pattern Language, p. 432

House to house:
private and semi-private open space

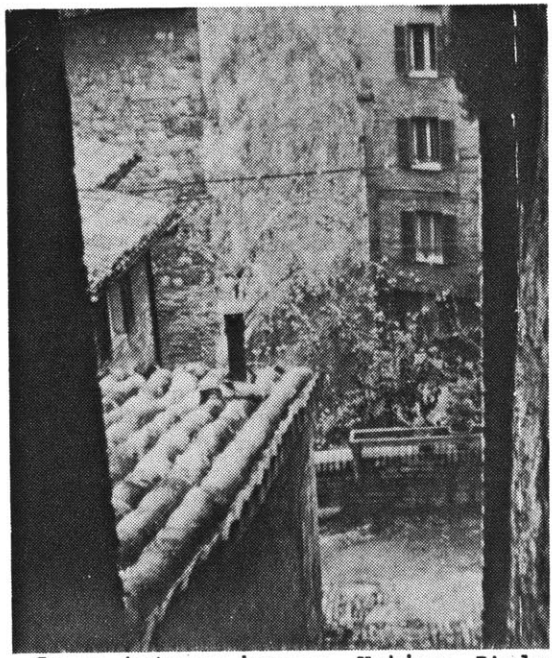
In an attempt to make a clear differentiation of exterior spaces in the city, the house plays an important role. This role depends upon the physical shape of the individual building and upon the grouping of buildings. In urban situations, this role depends upon the nature of the backs and fronts of buildings.

The fronts of buildings form the street edge. They make the built definition which articulates the space of the street. The backs of buildings relate to the interior space of the block. While the front depends upon the depth of the street as access, circulation or traffic routes, the back is usually the function of the dimensional discrepancy between the total depth of the block and the depth of the built zones. In the city, the back relates usually to demands for light and air. However, the back is typically the only provision possible in an urban situation for a more private outdoor territory.

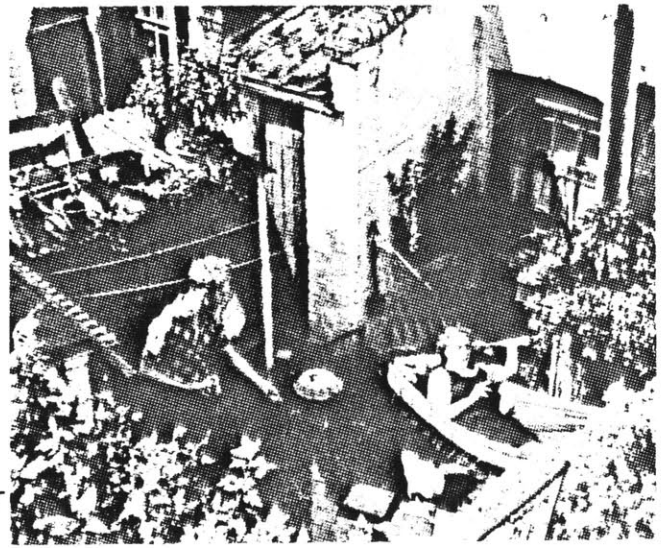
Different configurations of front and back of buildings, in relationship to the block, generate a range of exterior spaces. The fronts set up the more public territories, the backs define private, semi-private, and communal spaces. In other words, the fronts talk to the

city, and the backs talk to each other. These are two different kind of conversations.

Thus, we can say that these private, semi-private and communal spaces are generated by the buildings, they are object-like and not a mere residue or a "left over" after the positive space of the building is defined. As such they are seen as spatial objects with specific forms and functions.

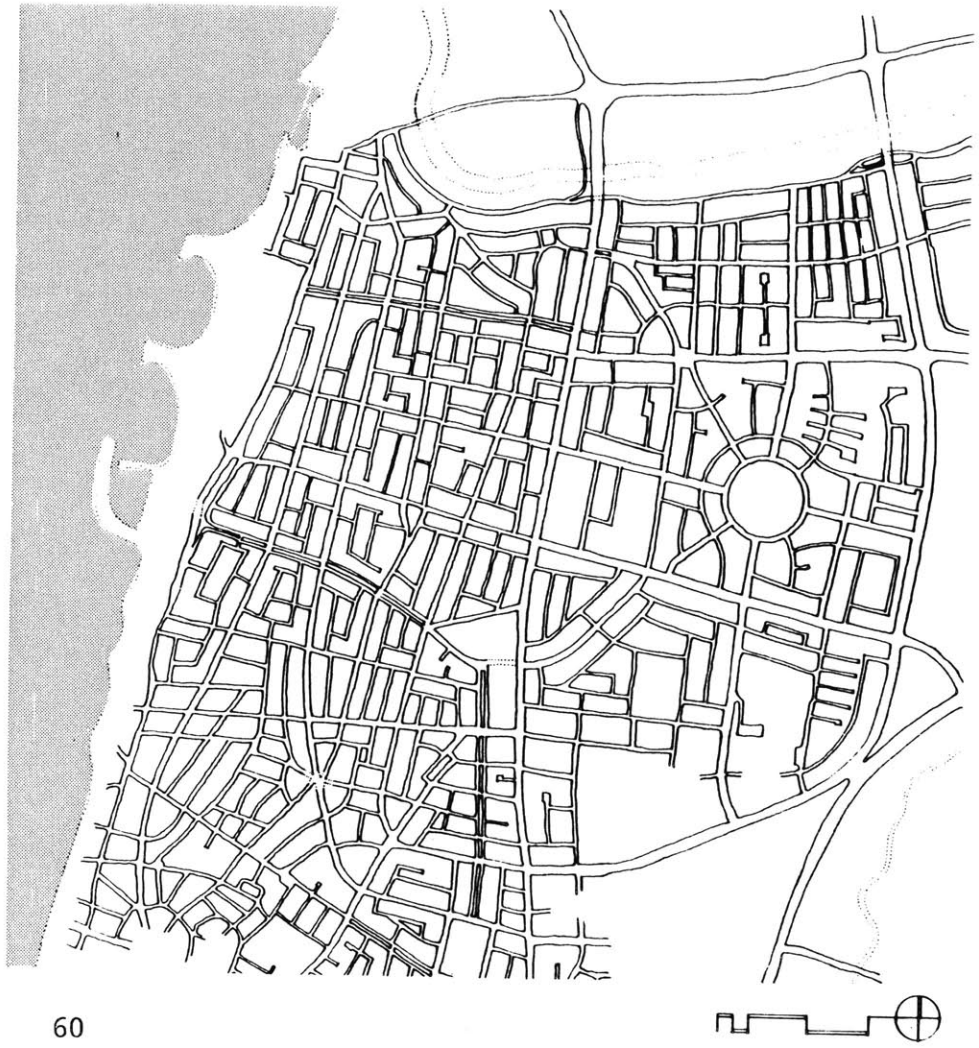


Space between houses, Urbino, Italy
(Rotch Library, visual collection)



from Christopher Alexander, A pattern Language, p. 392

In The Context ...



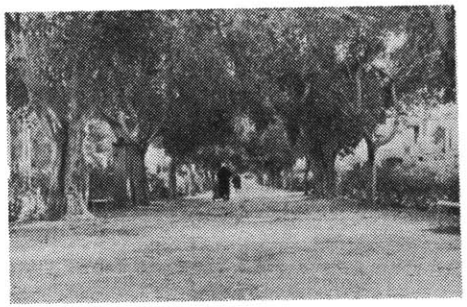
Street Hierarchy:
street to street

The streets of North Tel-Aviv are arranged in a basic hierarchical order. There is a clear correlation between the street position in the urban structure, its configuration and relative size. On the whole, two systems of street types can be distinguished in North Tel-Aviv; a major vehicular network which connects to other parts of the city, and a local street system. Thus, major streets are wide and continuous, while local streets are narrow and much shorter.

Major Vehicular Network:

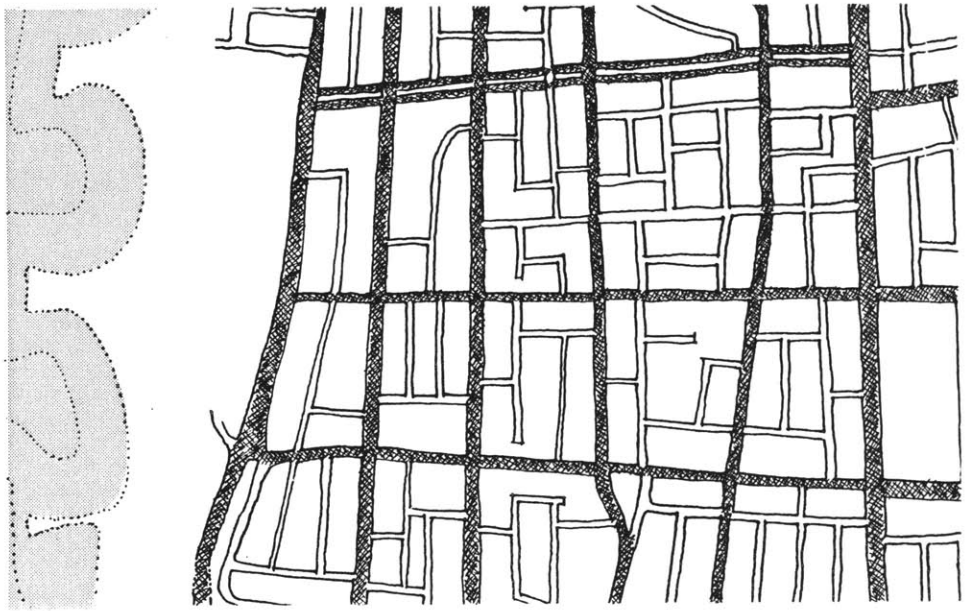
The major vehicular network consists of two types of streets: streets running north-south parallel to the water, and streets running east-west leading to the water. North- south streets are wide and tend to be the focus for commercial and institutional activities. East-west streets tend to be the focus for smaller scale commercial activities at a neighborhood scale like grocery shops, vegetable markets, pharmacies, etc. Some of the east-west streets serve as green veins in the city (boulevards).

Both type of the major vehicular streets help define the edges of the block cluster.



east-west boulevard

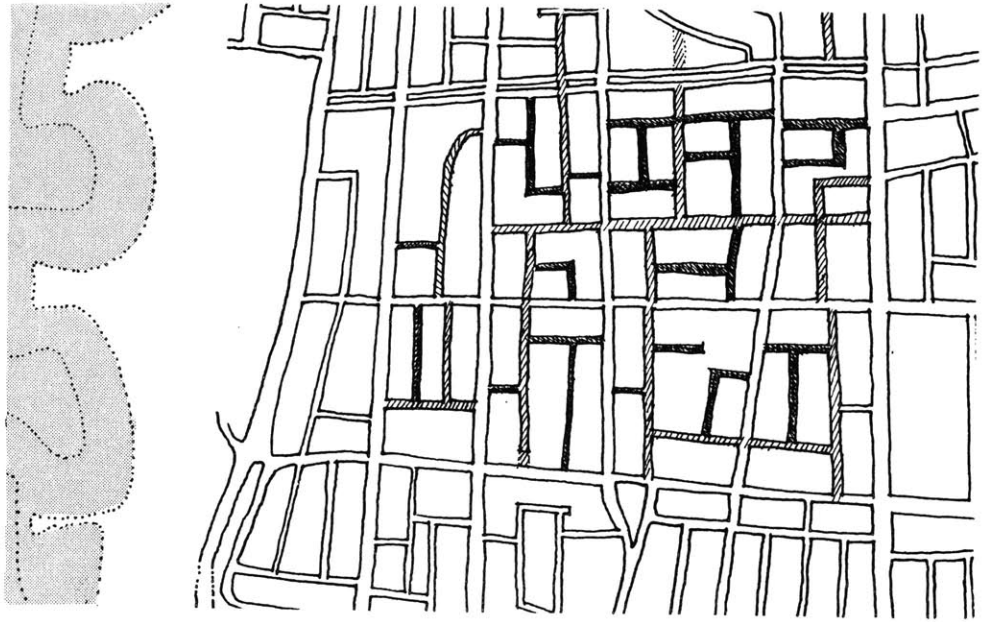
north-south street



major vehicular network

interconnecting street

innerconnecting street



local street system

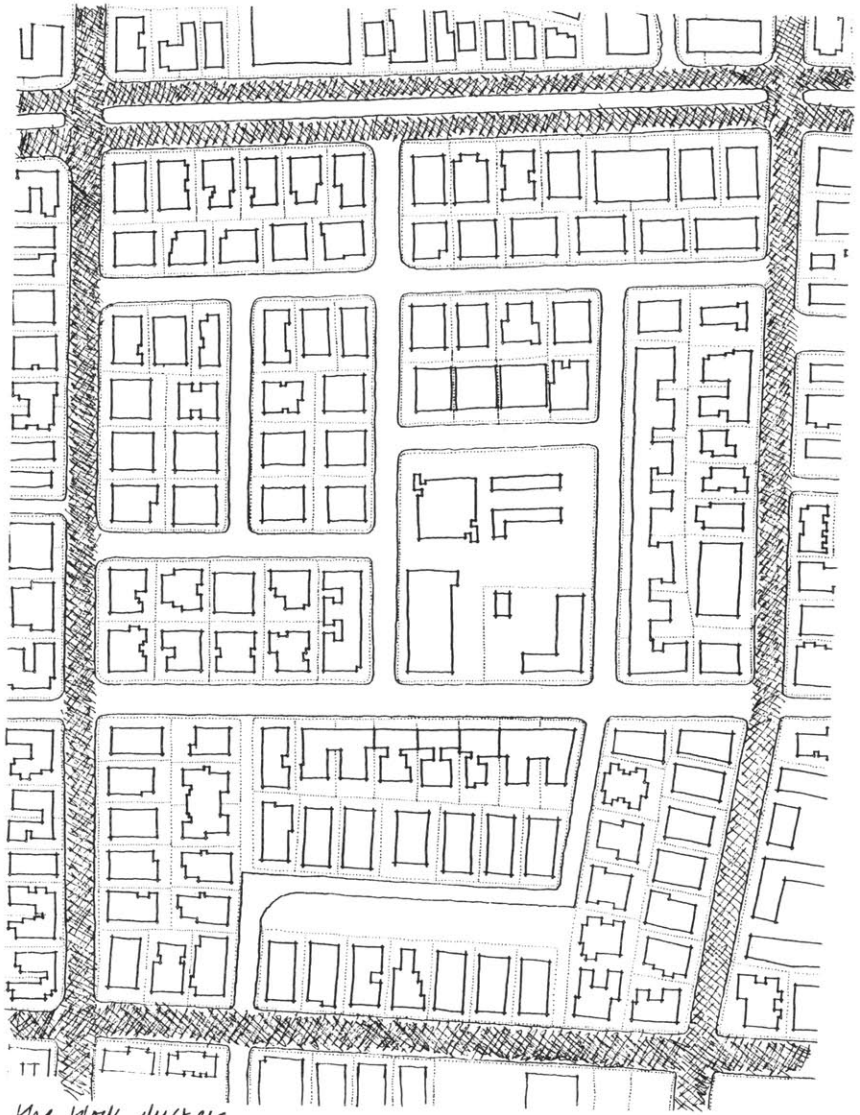
Local Street System:

The local street system is less rigid than the major vehicular network and it sets up a non-uniform grid. In this system two types of streets can be distinguished: interconnecting streets and innerconnecting streets.

Interconnecting streets are through streets which intersect the major vehicular network in a straight crossing. These streets define a secondary form of block-grouping within the block-cluster.

Innerconnecting streets join the major vehicular network by a "T" junction. These streets divide the block-grouping into blocks.

Thus, since the street division system sets up a complex block organization, it defines various relationships between the block edge and the urban structure. These give the urban system a clearly distinguished hierarchical order. In addition, as was mentioned previously, there is a definite correlation between the hierarchical order of the urban structure and the urban activities. As such, commercial and institutional activities typically occur between block-clusters. The residential activities are concentrated inside the block- cluster, in the residential block.



the block cluster

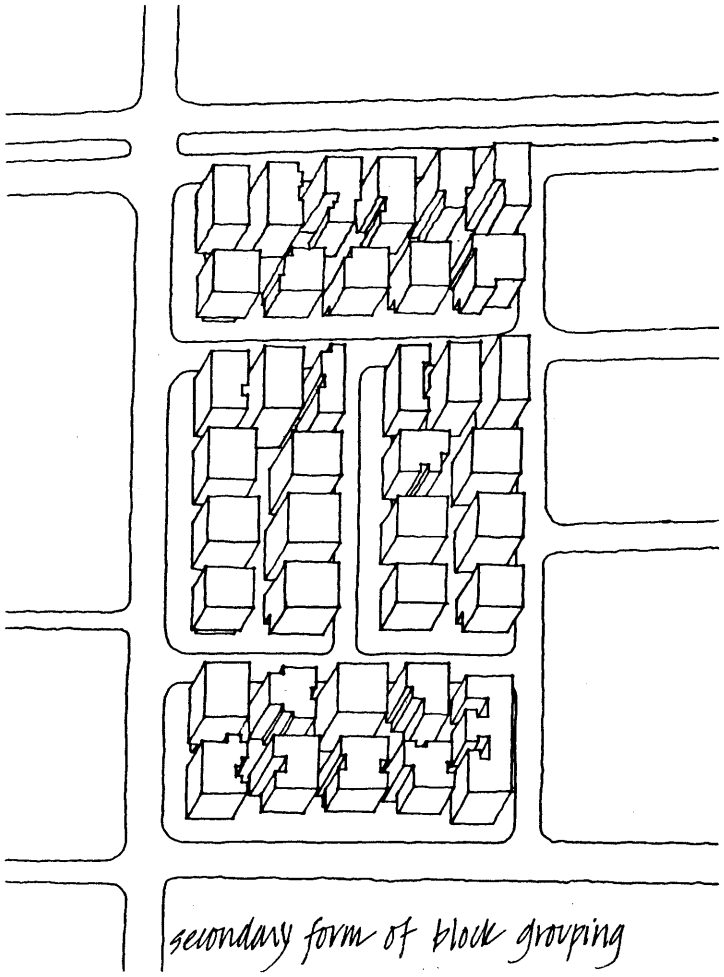
The Block Cluster:

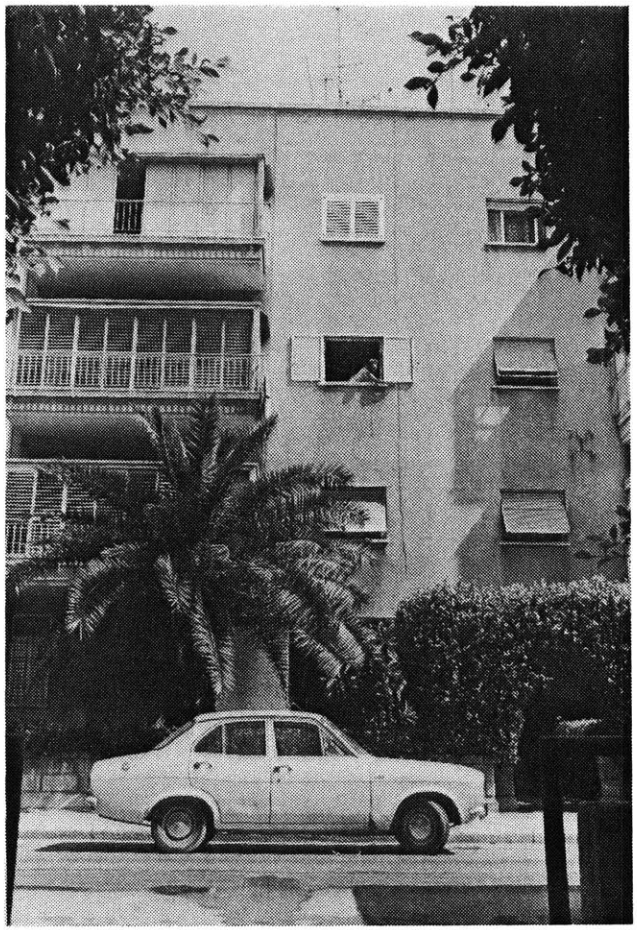
The block-cluster which is bounded by the major vehicular network, outlines a theoretical context for the neighborhood. It is a separate urban entity, but the neighborhood is not physically expressed. It has a much stronger presence on the map than in reality as a spatial structure with physical and social integrity.

A major cause for the lost sense of neighborhood is the uniform distribution of the houses. This distribution does not acknowledge nor intensify boundaries, a center, or any other kind of physical pattern which defines a community. The houses are repetitive elements which are dispersed evenly throughout

the block-cluster.

As was pointed out before, a secondary form of block-grouping is defined within the block-cluster by the interconnecting streets. These smaller sub-communities, again, are not defined spatially, but tend to stay outlined by the street system. However, the block-cluster, which at times consists of about 900-1200 households living in one square kilometer, seems to be more manageable when it is divided into smaller entities. In the example the secondary block-grouping consists of four blocks and includes about 300-400 households. Thus the organization of the block-cluster holds a real potential for the development of a meaningful and working community.



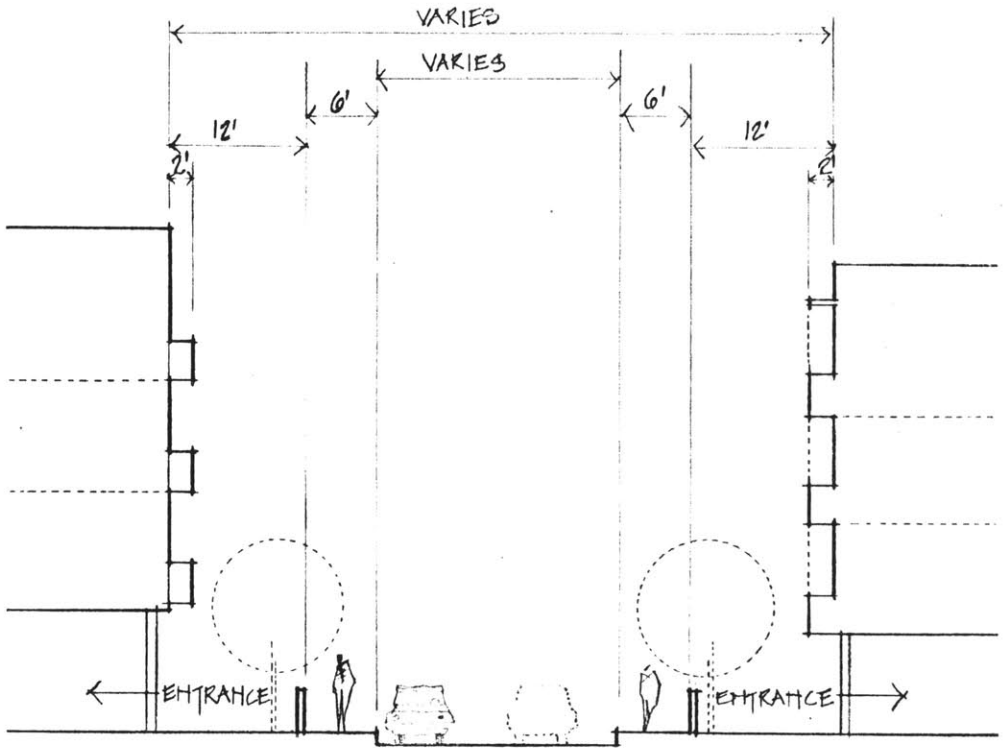


Street-Edge:
house to street

The streets in residential North Tel-Aviv are typically lined with detached four-story apartment buildings setback about four meters from the sidewalk. Low walls, trees, and shrubbery define the border between the public sidewalk and the private territory of the buildings. In relation to the previous discussions of street hierarchy and the sense of neighborhood, it is important to note that the differentiation among street conditions is achieved mainly through the

width of the road and not through different positions of the built zone in relation to the open space of the street.

The relation of the built zones to the street does not seem to correspond with the difference in street types. The buildings tend to maintain the same configuration throughout, and they do not change in accordance with their different position in the urban structure. In other words, the street system in North Tel-Aviv is somewhat divorced from the building system. Each system seems to occupy its position in the urban environment independently. This situation weakens an understanding of hierarchical order in the city and thus weakens the development of the neighborhood organization. Consequently, almost all



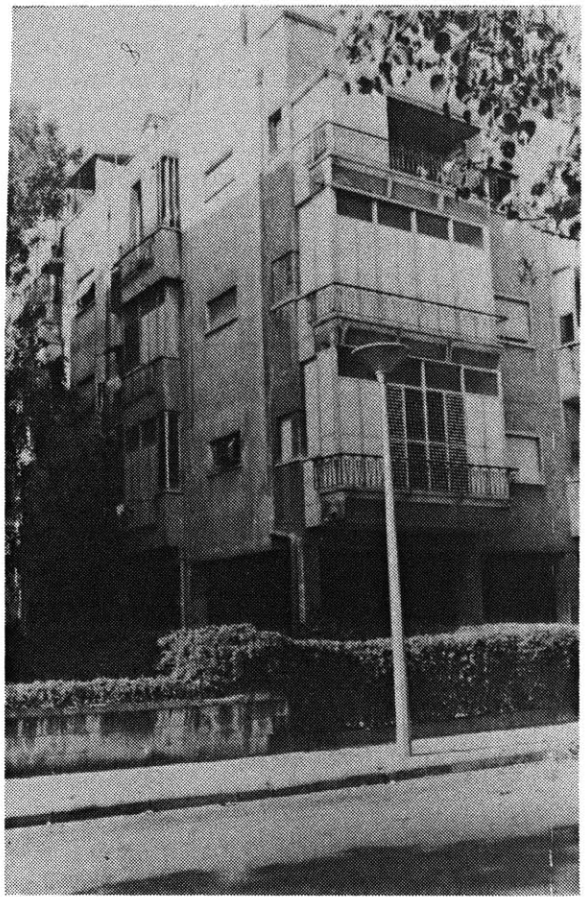
typical street section

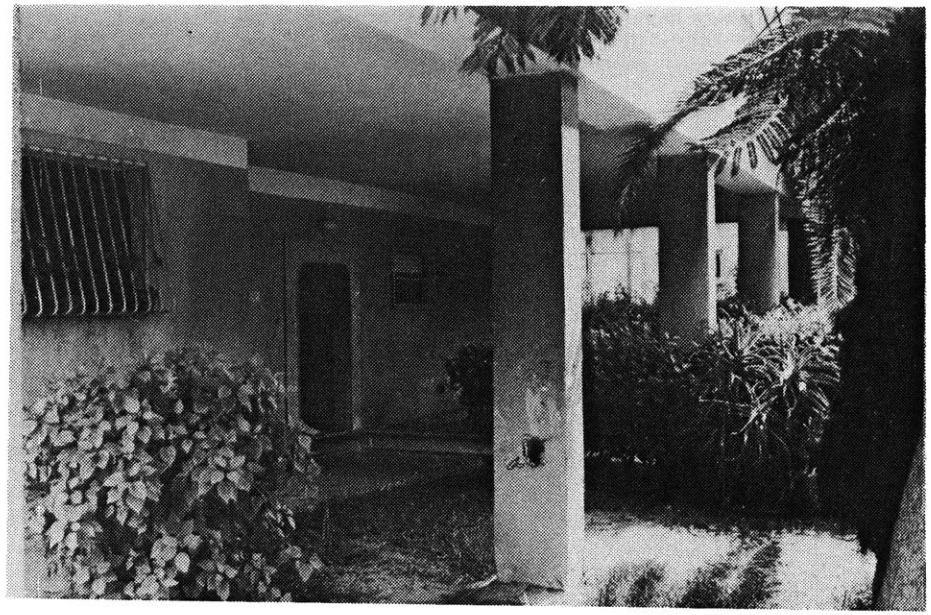
streets tend to have similar built edges, with no correlation between their spatial organization and the context.

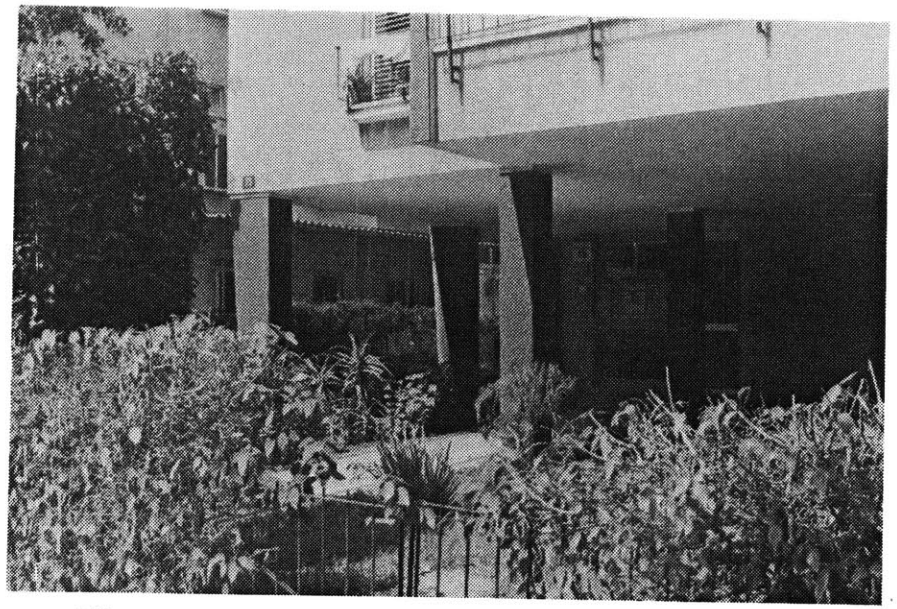
We can conclude that the built edge of the typical street in North Tel-Aviv fails to adopt and support the various street conditions which appear in the urban structure. The buildings which constitute this edge remain as independent entities, divorced from the street. Thus, we can see how the street loses its character and identity because the built edge fails to become an integral part of its physical being; the character of the street has come to rely solely on the width of the open space. The configuration, the position and the size of the built elements operate independently and do not support this space.

this situation seems to be a direct response to the setback bylaws and lot subdivision. All the buildings are set back from the street at the same distance which create a visual continuity along its edge. The visual continuity is not real, the actual feeling at the street is discontinuous: individual buildings are closely spaced, separated by side lots. Setback regulations require a three meter setback from the property line, resulting in a six meter side space between buildings.

Thus, there is a clear deficiency inherent in the confrontation between the building type and the idea of street. The building type presents a version of the pavilion building, it stands essentially free in space,





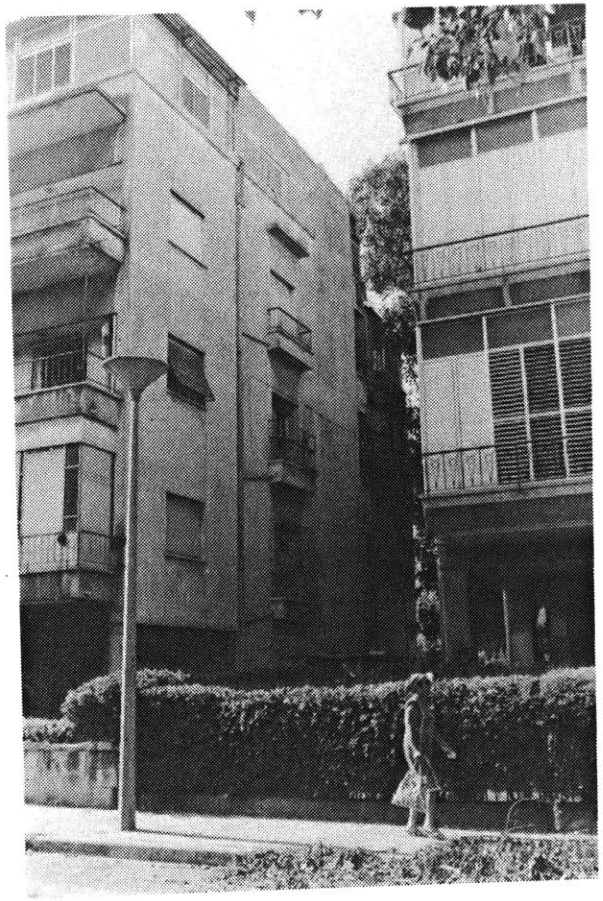


autonomous in the urban structure. As an urban element that assumes responsibility for the definition of the street, the house is removed from the street edge and exists as a discrete object separated from the life of the street.

The building is setback four meters from the sidewalk and part of the first floor is elevated to allow access, making the space between the house and the sidewalk appear even larger. This is a zone of open space which is collectively owned by all the residents. But this front space is wasted, it does not function as an extension of the street and it is not used as an outdoor extension of the private territories. It is visually connected with the street, but physically part of the house. The low wall and

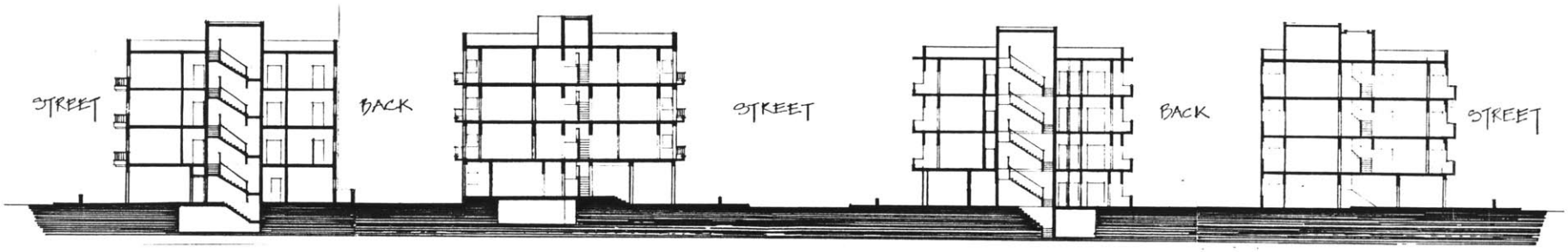
shrubbery indicate a division of the house from the sidewalk but do not offer any real visual separation. This front space is neither public nor private, as such it is a no man's land neither the public nor the private domains able to claim and use the space.

The argument which maintains that this open space serves as a transition and separation between the street and the house is not valid. In an urban situation where land is valuable, this transition must become a built zone achieved through an interplay of buildings and spaces,



Private, Semi-private Open Space:
house to house

It is clear then that the typical house in North Tel-Aviv does not attempt to define the open space around it, either by itself or together with its neighboring houses. This is true of the street, the backyard and the side spaces. Each house stands discretely on its individual lot, secured in its position only by setback regulations. As such, the open space between the houses is not enclosed or shaped by relating houses to each other, on the other hand, individual house

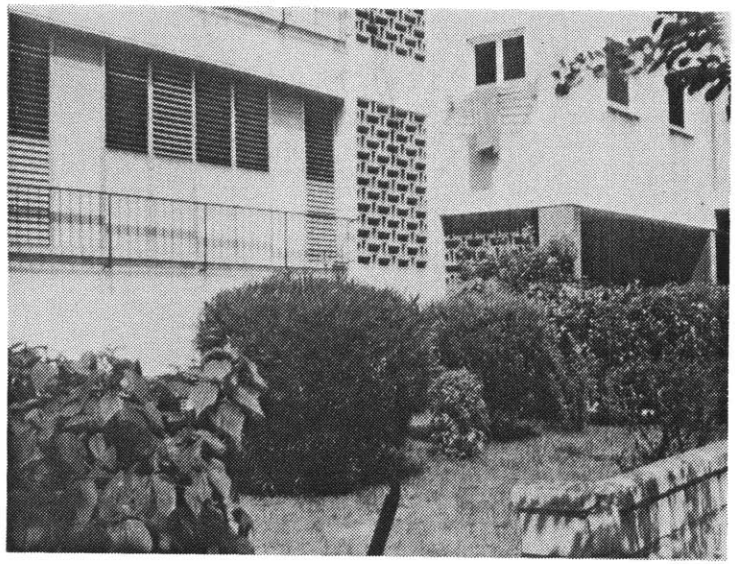


typical section through the block

is much too singular in its shape and configuration to define outdoor enclosure.

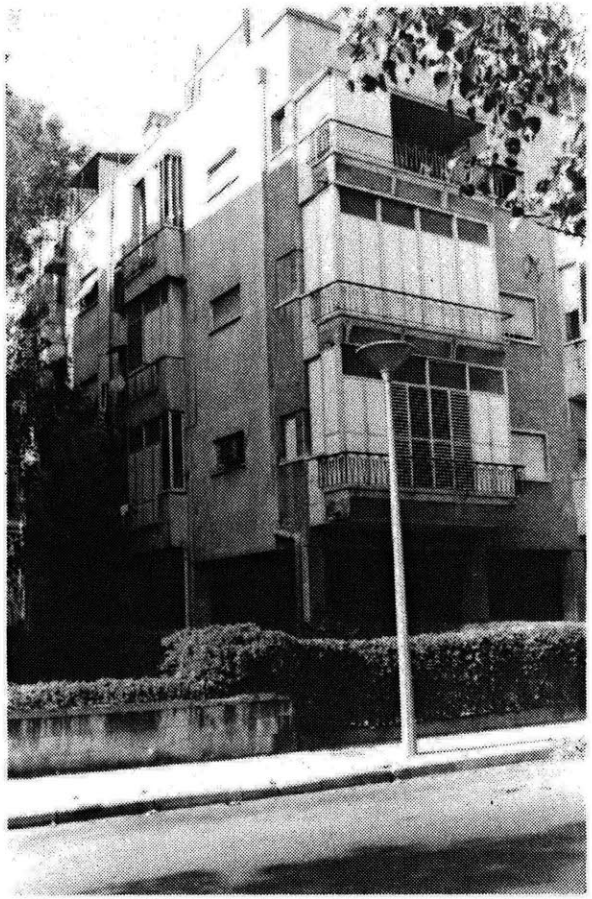
The typical residential building in North Tel-Aviv fails to acknowledge the differences between front and back. This is a critical cause in making the open space around the house an undifferentiated open space. The fault is due to both the shape of the building, its physical articulation, and its interior organization.

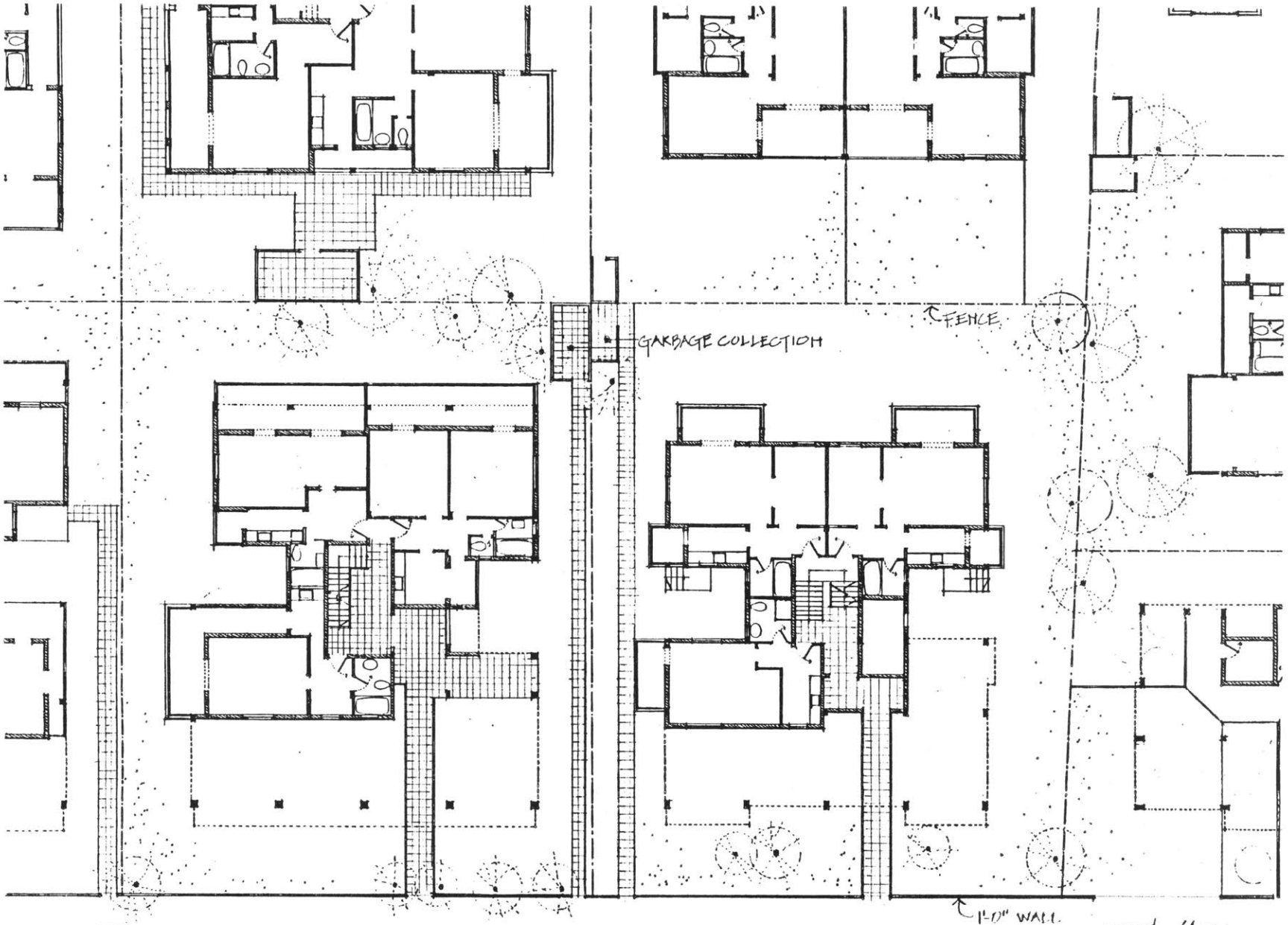
The typical structure is a four-story walk-up apartment building, with a single vertical access and three to four dwelling units per floor, situated around a single landing. The distribution of the apartments in the building is symmetrical on two sides, so back and front units are the same. This of course results in a situation where the house faces both street and backyard in the same way, and the apartments on either back or front, do not change their character in relation to their specific position. Thus, the physical articulation of the building does not give any clues to the different edge



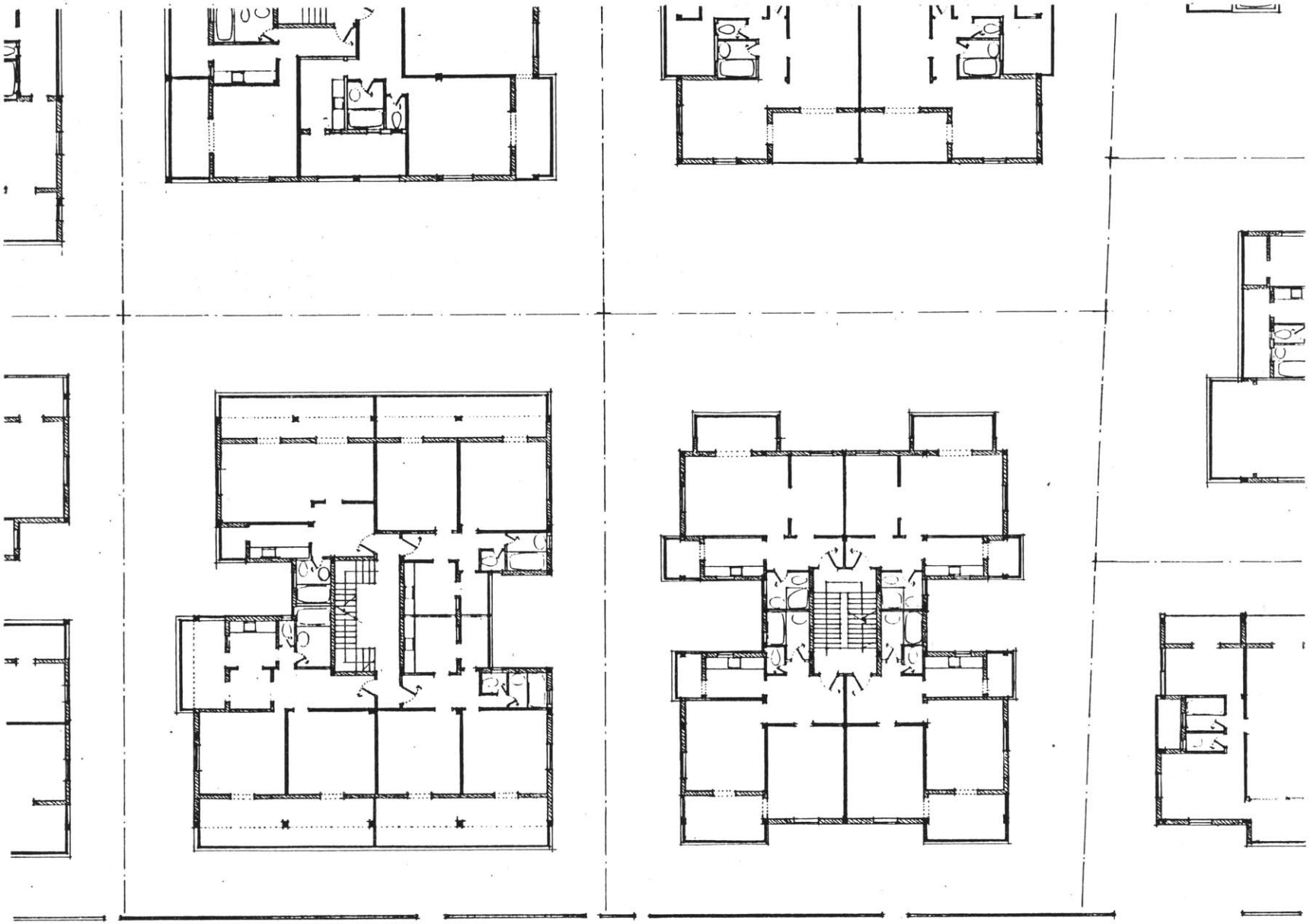
conditions, and no notice is given to either private back-yard or public street.

In fact this is a quite awkward situation, since we find balconies looking at each other across a very short distance in the back, designed in the same fashion as the ones which face the street. This lack of differentiation also makes ambiguous open spaces both in front and in back of the house, since no attention is given to the uniqueness of the specific condition. The spaces are seen, and as a result also treated as separations rather than useful territories. The space in the interior of the block is usually neglected and seen as a no-man's land between the built private territories. The front is just a passive border between street and house.

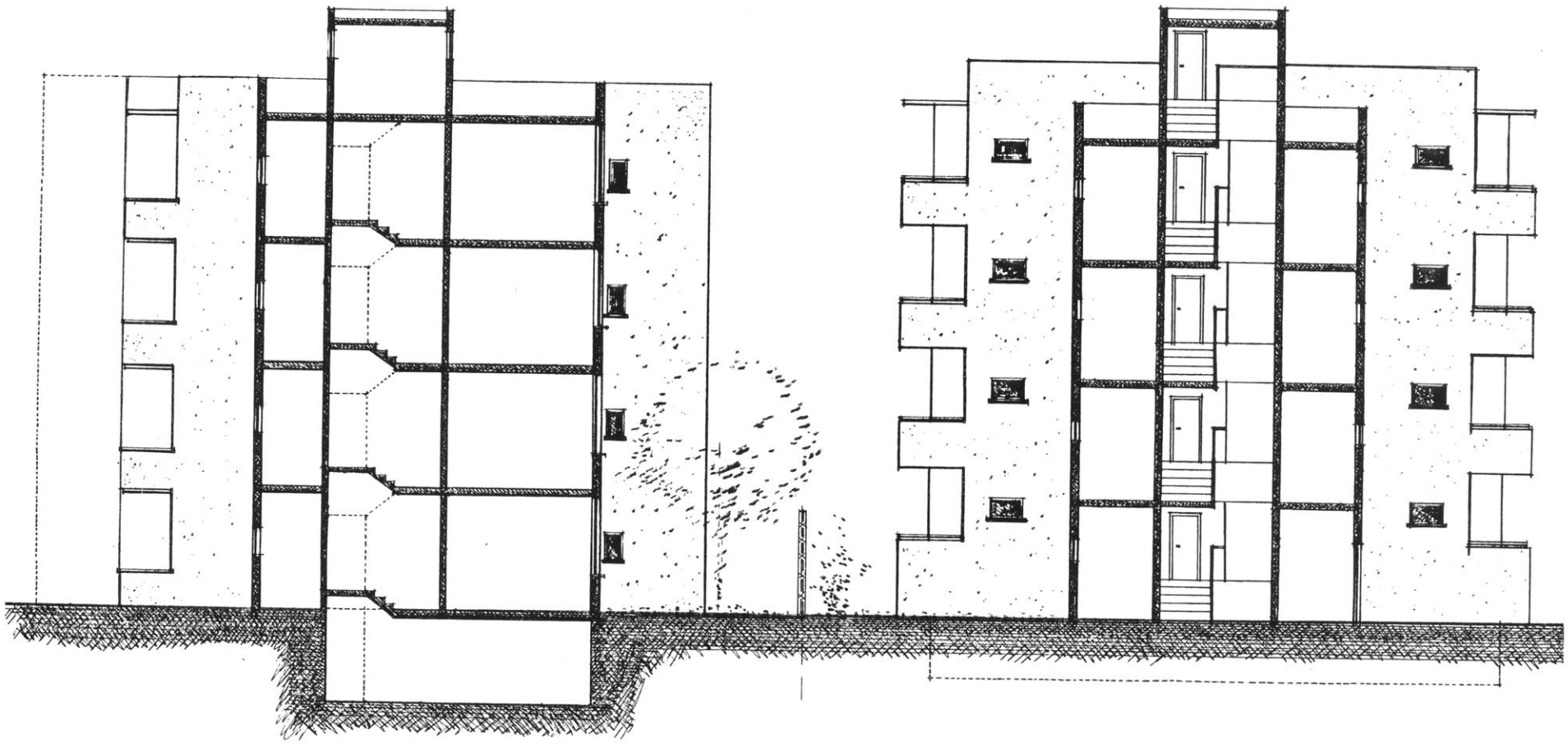




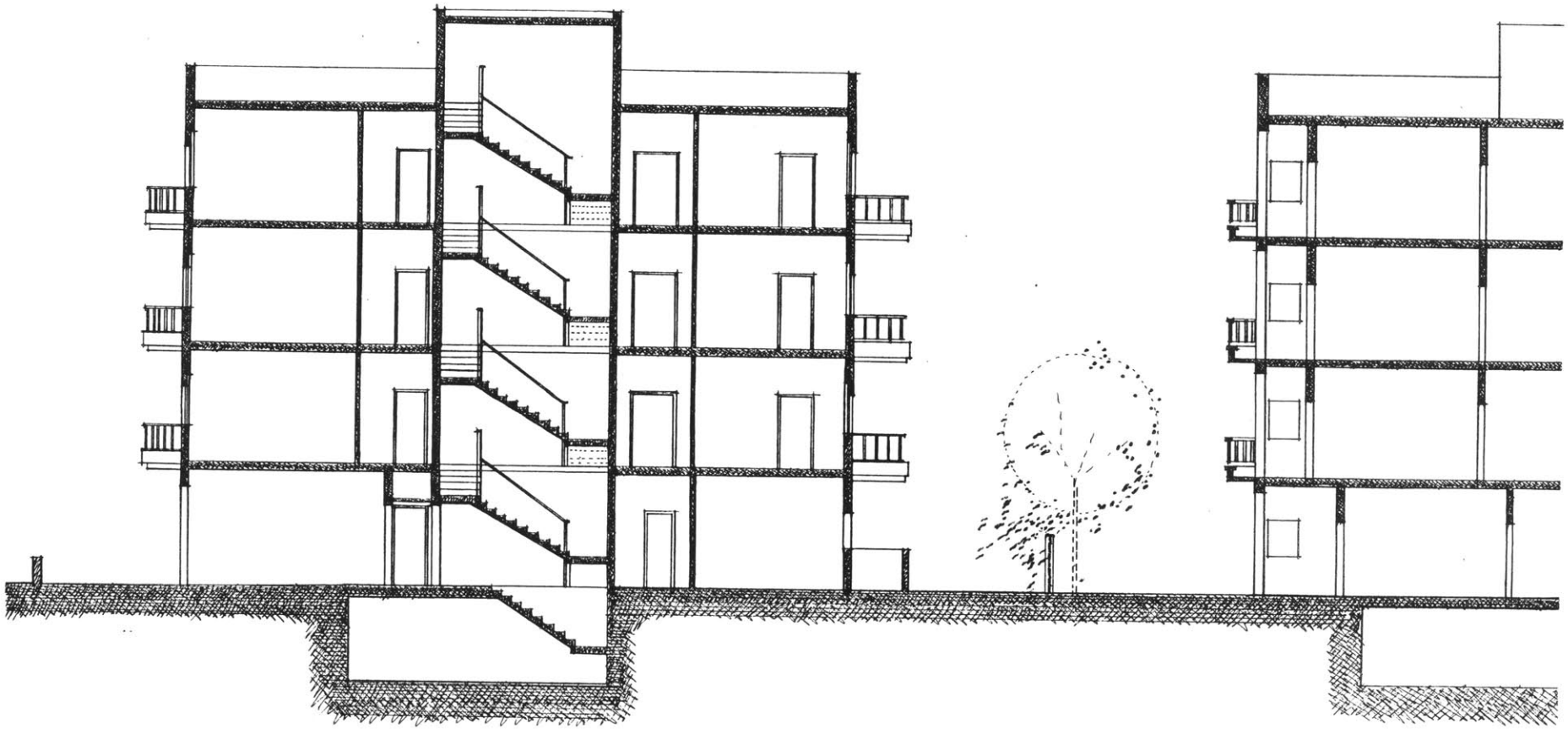
ground floor



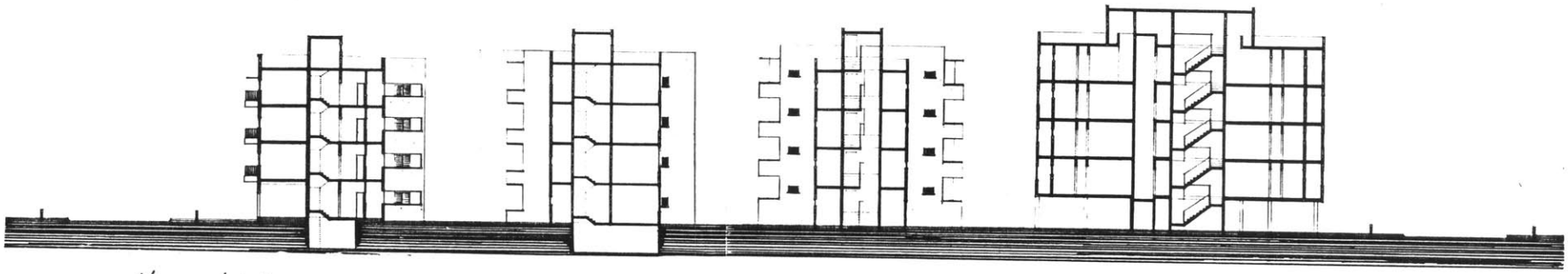
2nd, 3rd, and 4th floors



section through side space



section through back space



section along the block

The fence between the lots emphasizes the negative aspects of the space; it does not make any real physical definition in its attempt to subdivide a continuous open space. The fence prevents the space from being shared or used as one territory owned by more than one house. The fence symbolizes the ownership pattern in which the land around each house is owned and maintained (or actually neglected) collectively by all the dwellers of each building. But it does not indicate any collective or shared activity. Thus, since collective initiatives are less likely to occur, this area is left untouched and consequently unused. The area around the houses becomes what is described by Serge Chermayeff as a space where

"everything belongs to everybody with the result that nothing actually belongs to or is enjoyed by anybody."[2]

In a dense urban environment like North Tel-Aviv, open space is too precious to remain unused. These spaces, private, semi private, or communal should have enough physical definition to make them distinctly identifiable.

[2] Serge Chermayeff, Community and privacy, Anchor books Doubleday, Garden City, 1963, p. 66

Co-ordinated, not disorganized
Building, not delineating
Communities, not lots or streets
Contemporary, not obsolete
Dynamic, not static

C. Stein, Toward New Towns for America.

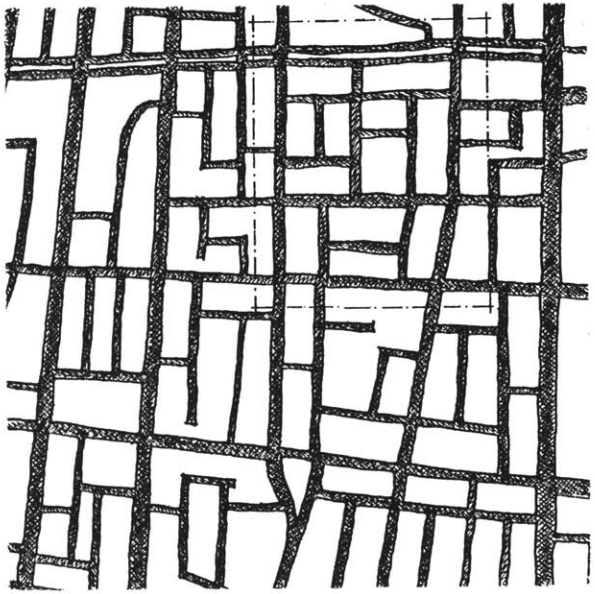
Drawing by Saul Steinberg

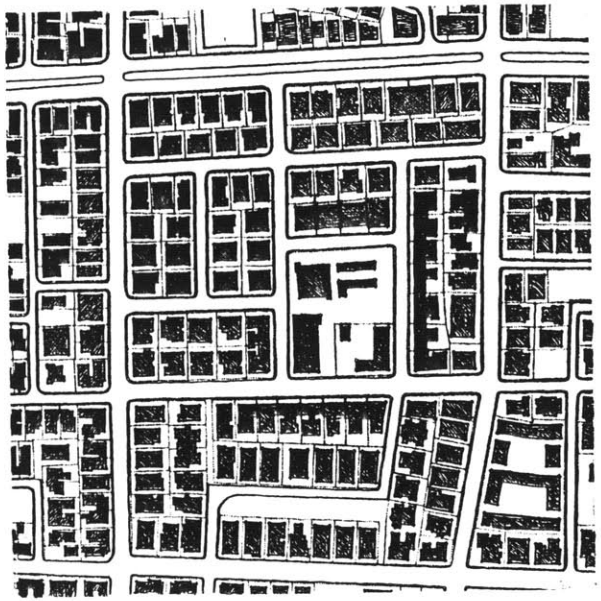
An Alternative

A design exercise presents an opportunity to explore the potentials of the building type as a generator of the urban space. It allows an investigation that responds to the problems presented in the previous discussion. These problems address the quality of the urban spaces at the scale of the residential street. They include the relationships between house and street, between streets, and between houses, as a means to create the larger environment of the neighborhood.

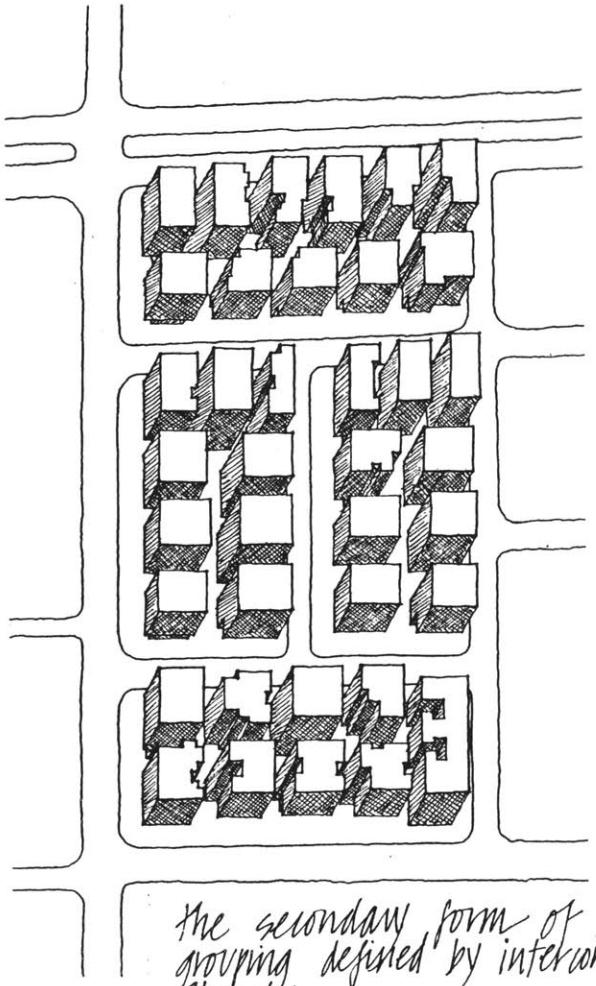
The design attempts to deal, when possible, also with unstated problems of the building type itself. This is done only as a vehicle to resolve problems of the interrelation between the building type and the residential urban space.

The goal of this exercise is to propose some alternatives to the problems of a specific residential environment in North Tel-Aviv. Through design, different issues that deal with the relationships of the house to the city are explored and some design criteria for the development of a better residential neighborhood are established. The exercise does not present necessarily the "right" answer, but illustrates an attitude toward the problem and some ideas related to it.





the block cluster defined by major vehicular network



the secondary form of block grouping defined by interconnecting streets.

Thus, within the very real need for physical growth, the design projections explore specific design objectives which will contribute to qualitative changes in the urban environment of residential North Tel-Aviv.

Design Objectives

* Physical articulation of neighborhood

The potential for a neighborly community as seen in the basic organization of the block-cluster is physically and spatially explored. The concept of neighborhood as a spatial urban unit is expressed through identifiable boundaries, a coherent organization of streets and residential blocks, and a recognizable use of elements.

* hierarchy of streets

In an effort to build-up the complexity of the neighborhood street system, the hierarchical relationship among the different streets is further explored. This is done through an investigation of the use of individual street and the function of the street with relation to other streets, an articulation of appropriate street edges, and an elaboration of the ways in which the streets connect to one another.

* Active and associative street edge

The built edge, understood as an essential part of the street's spatial structure, is

explored in an effort to improve its existing physical qualities. This exploration is seen as part of an attempt to improve the street hierarchy, define private territories,and make a differentiated open space.

* Space between buildings

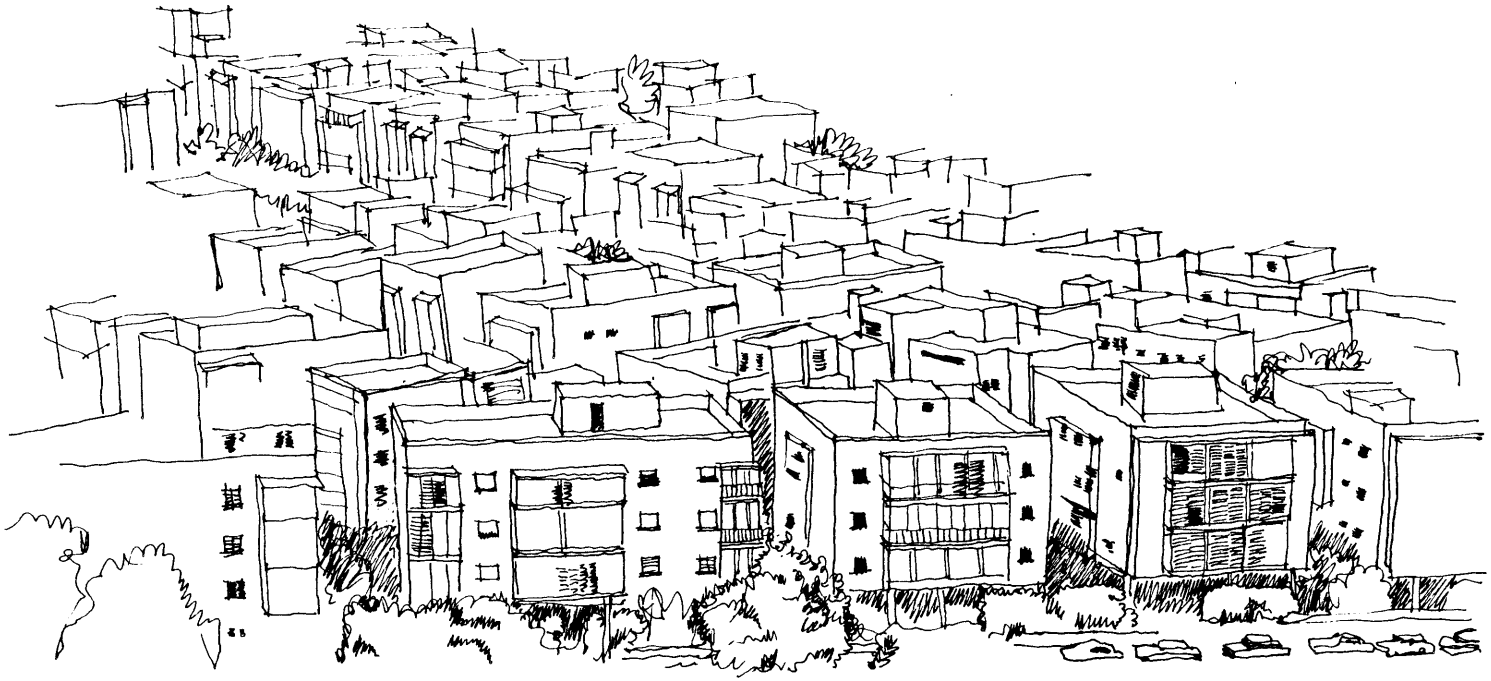
The space around and between buildings is defined and differentiated by giving it a specific form and function. This makes it an object-like space, and not a continuous open space simply interrupted by the buildings. Along with defining this space, an attempt is made to allow for private ground-related outdoor space, a better definition of semi-private and communal territories, and a clearer articulation of the boundaries between private and public domains.

* Private ground-related outdoor spaces

Seen as an important feature of urban living, the provision of private outdoor areas is emphasized. This is incorporated in the design of the space between buildings and through the definition of street edges.

* Communal spaces

Because of the collective nature of the apartment building which as it exists now has only a set of private definitions, the design explores a range of communal spaces used by people living in the building and in adjacent buildings.

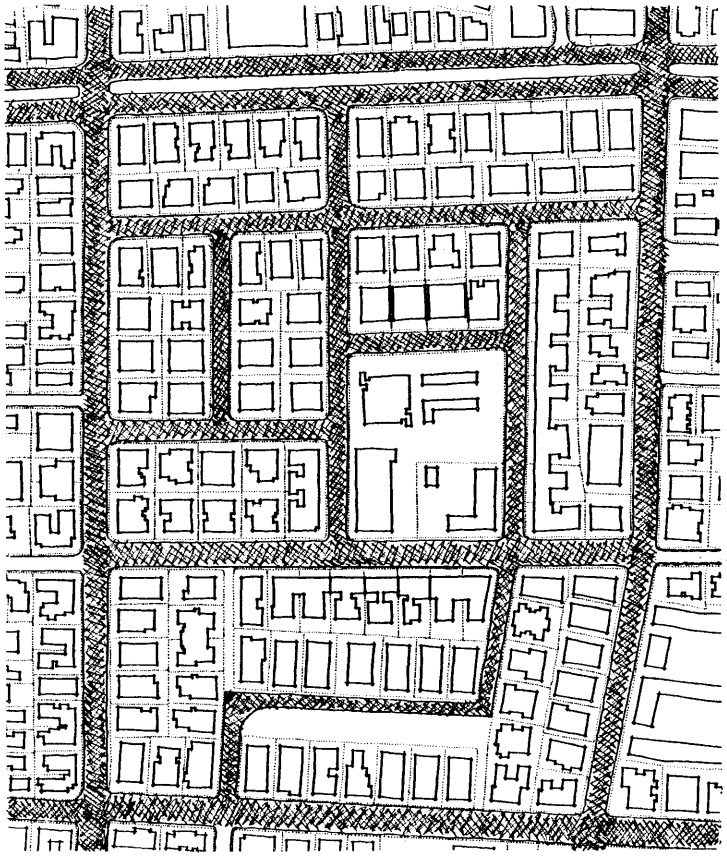


The Block Cluster

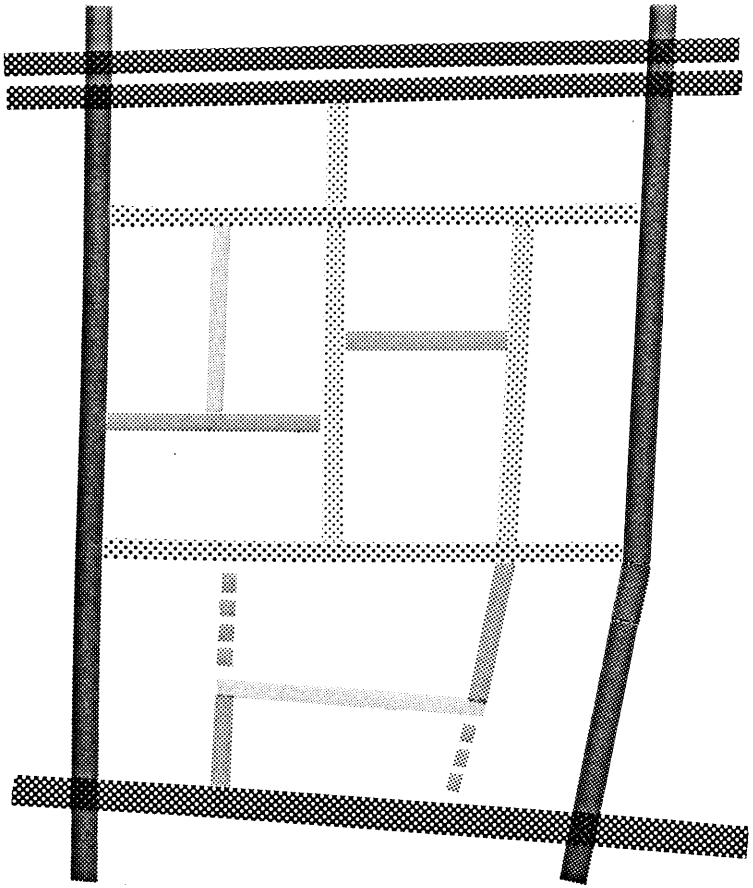
The block-cluster, bordered by major vehicular streets is an identifiable urban entity with a clear order or environmental structure which distinguishs it from other block-clusters. It is understood as an entity which in term of size, physical structure, and position in the urban system has a potential to become a neighborhood.

This neighborhood can be further defined by a hierarchy of street system. As is, there are differences among various streets which are derived mainly from their relative width, length, orientation, and destination. The neighborhood as a community is not clearly expressed nor understood by its inhabitants.

Through design exploration the relationships between these two issues: the neighborhood, and the street hierarchy are investigated. As a spatial structure, the neighborhood is articulated in terms of its boundaries, gates, vehicular and pedestrian movement patterns, parking, green spaces and communal facilities. A richer street hierarchy is proposed as a result of articulation of different street edges, variety of function and use assigned to the different streets, and the way in which the streets connect to each other.

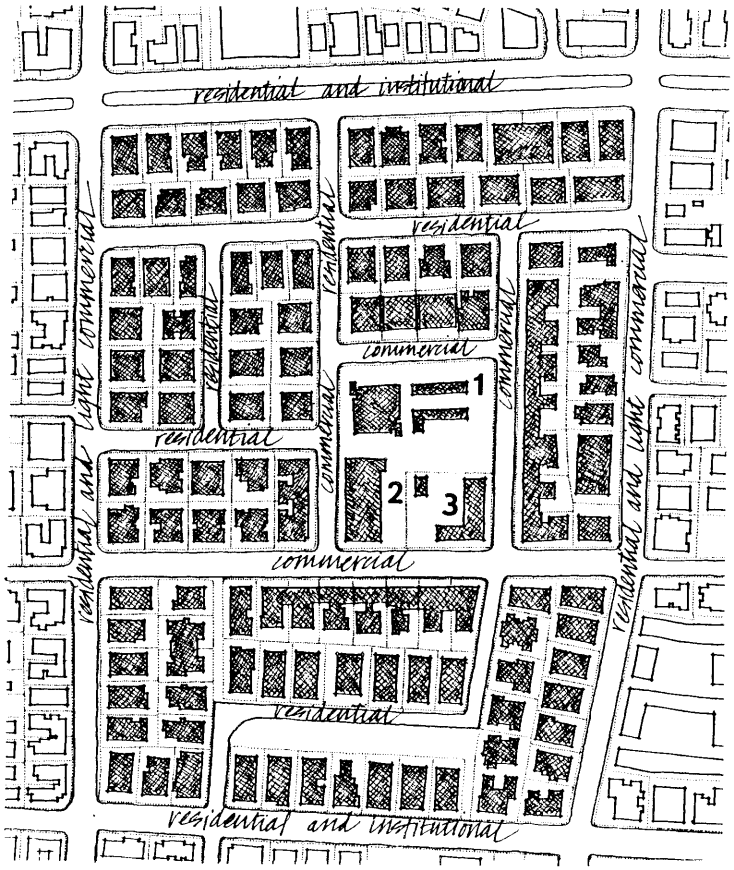


street pattern



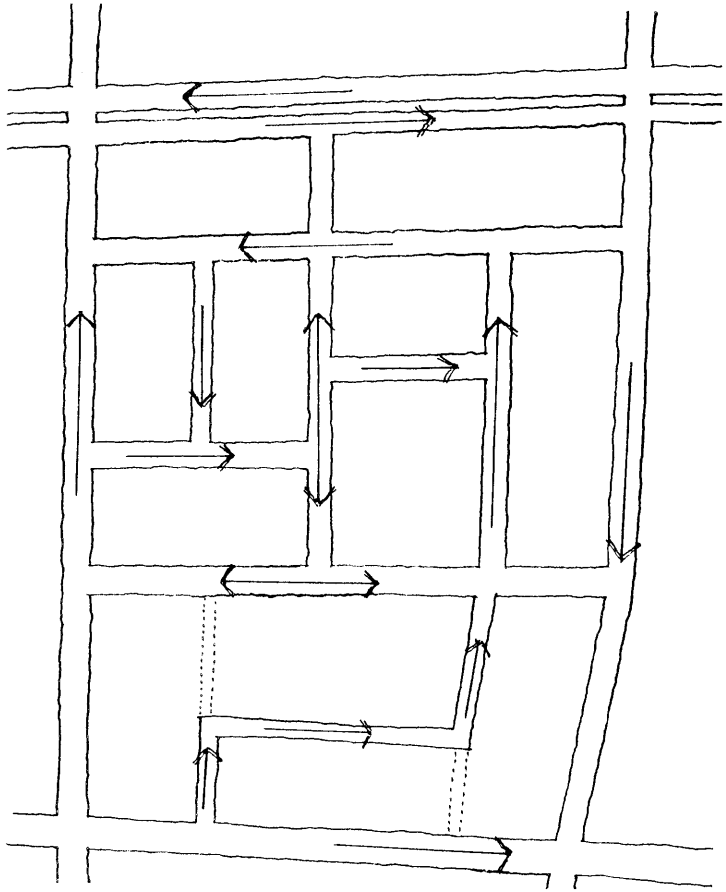
hierarchical order

existing



1 health clinic
2 market
3 fire station

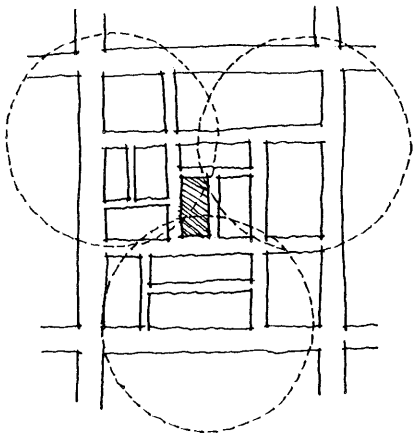
street use



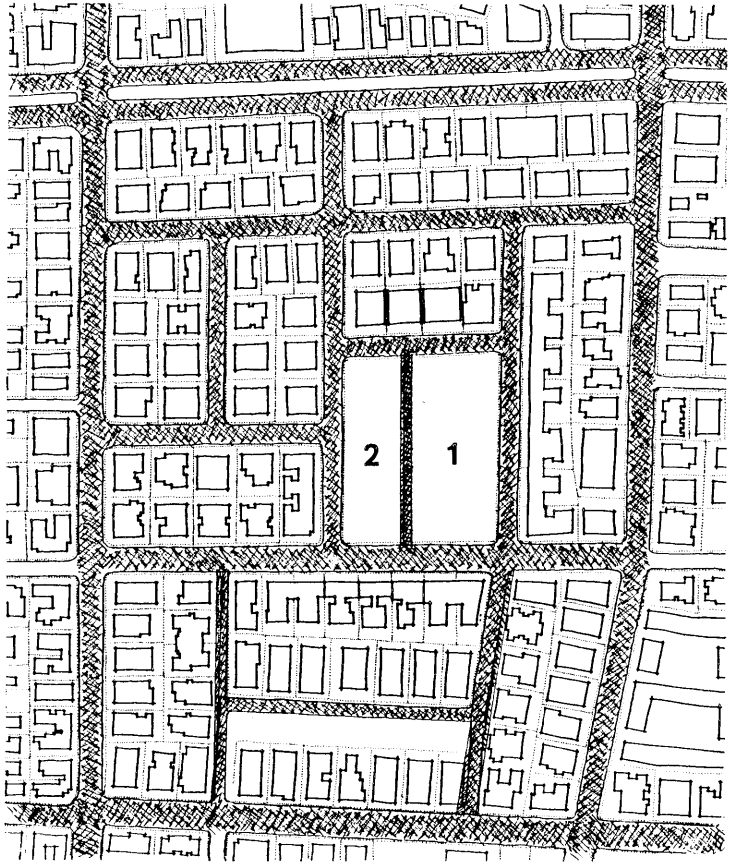
traffic pattern

The neighborhood which develops in the block cluster, is based on a new street pattern derived from the existing street organization. Three similar block-groupings are created which focus around a central block allocated for community facilities.

The proposed street system provides for multiplicity which acknowledges the different requirements of pedestrian and vehicles in the neighborhood. It consists of commercial streets at the neighborhood boundaries; neighborhood through streets which traverse the neighborhood; parking streets with only residents' car access; and residential streets for pedestrian movement and residential green space.

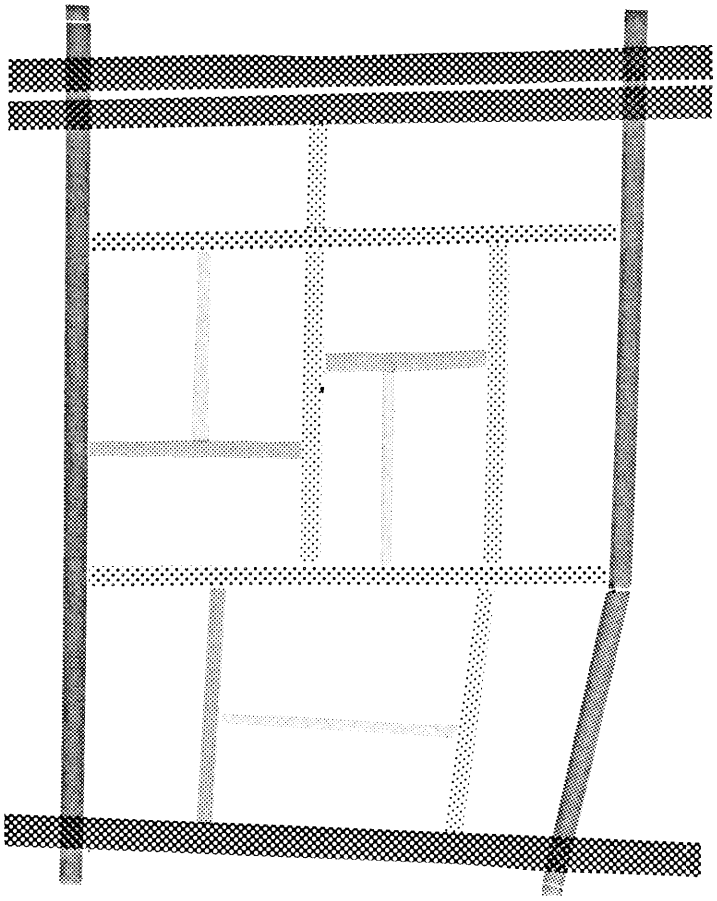


proposed

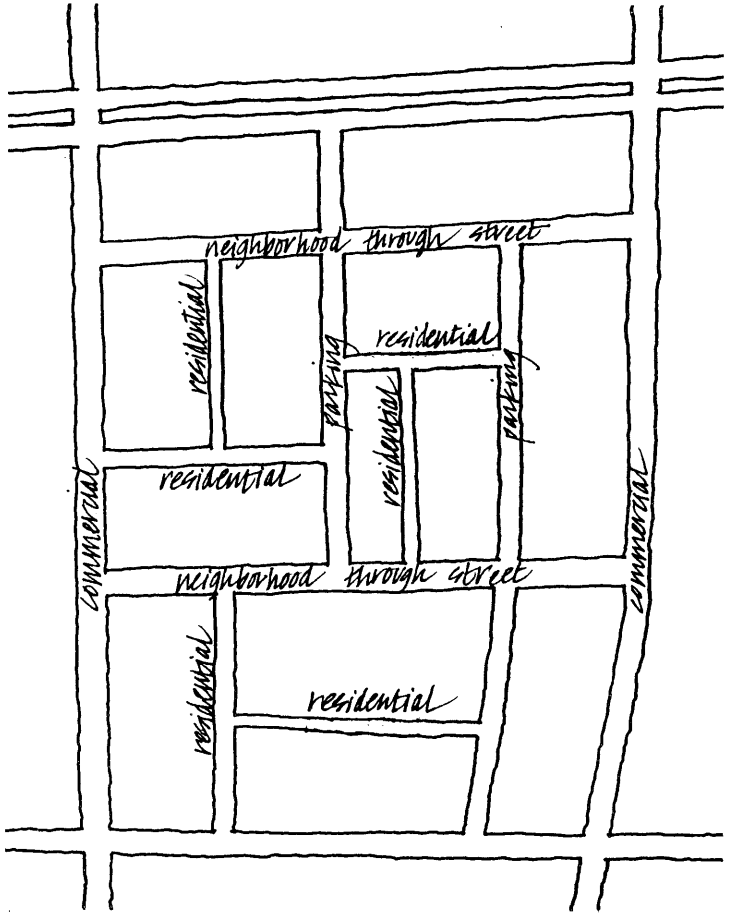


1 housing
2 communal facilities

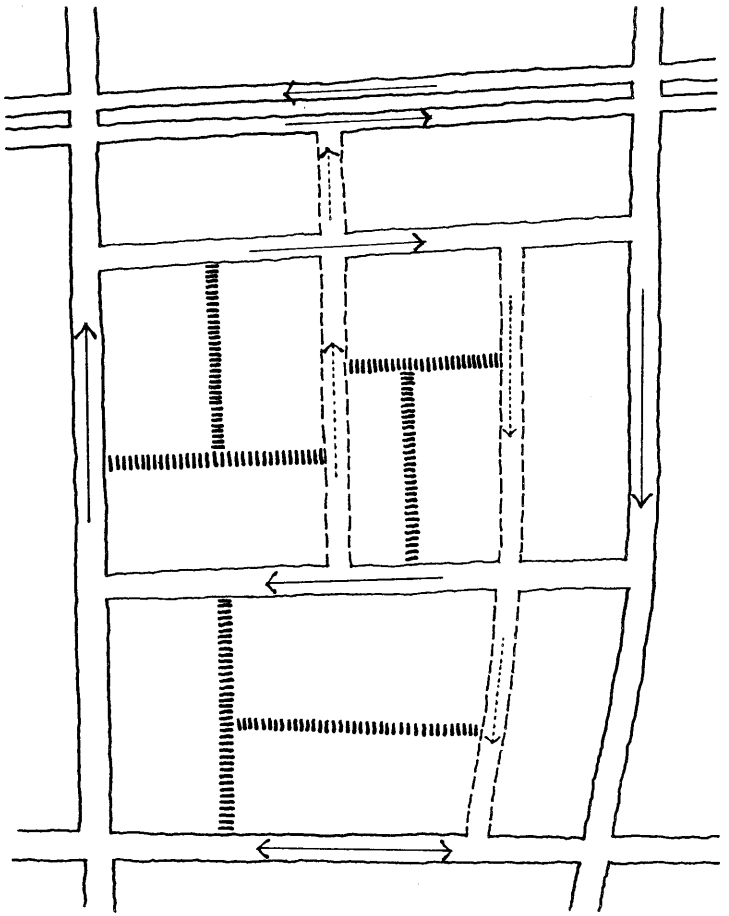
street pattern



hierarchy of streets



street types

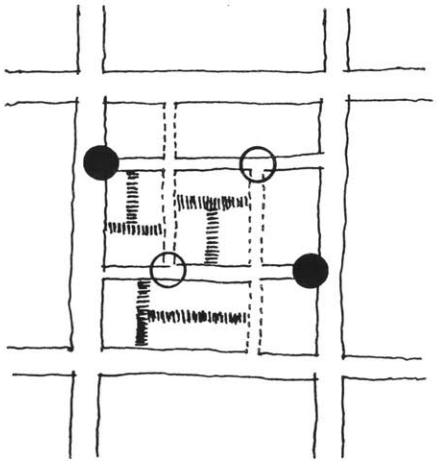


pedestrian

resident's parking

through traffic

movement pattern

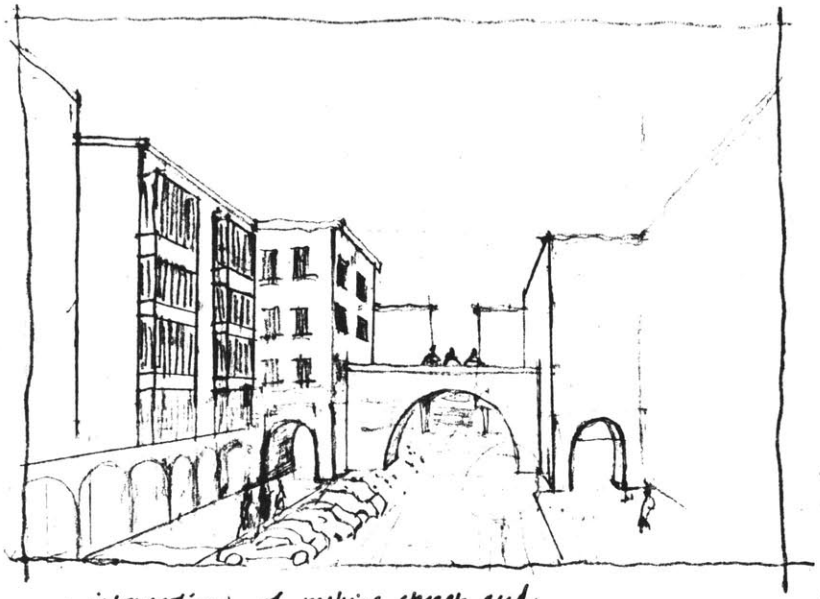


Neighborhood Gates

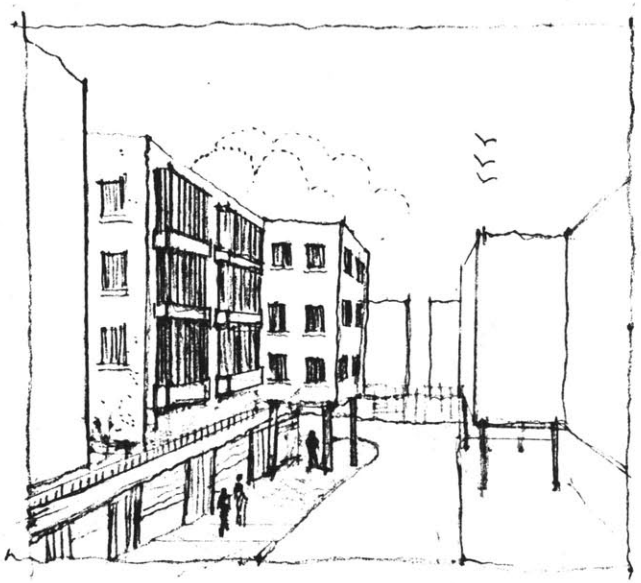
from Christopher Alexander,
A pattern Language, p. 276

Neighborhood Gate

The demarcation of neighborhood can occur in many ways. City blocks are framed by streets, while the sense of neighborhood is largely a psychological boundary defined by an imaginary wall of street. The attempt to define the neighborhood through the street system is reinforced by giving it a gate. This makes a more concrete definition of the community in the road or the path that leads through a gate into the specific area. The gate serves as a boundary marker between the familiar and the outside world. The "gate" is really a generic idea as it can be a literal gate, or a bridge, a row of trees, or indeed an urban intersection. One's sense of belongingness, security, and well-being are focused in terms of which side of the gate one is on.



· intersection of parking street and neighborhood through street



· intersection of neighborhood through street and commercial street

house to street

Street types

Each street type in the neighborhood is distinct and functions as a unique part of the street system.

Commercial streets

The east and west neighborhood boundaries are developed as commercial streets. This follows a pattern in Tel-Aviv where through streets running north-south are more commercial in nature. The width of the existing streets is maintained to allow through traffic including public transportation. The built edge is brought closer to the road and is intensified mainly on the ground level to promote commercial activities such as small stores, cafes and businesses.

Neighborhood through streets

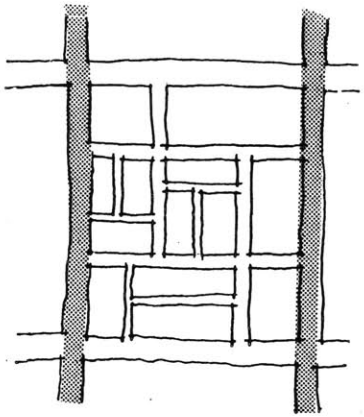
These streets carry inner neighborhood traffic, and traffic crossing the neighborhood from the east and west. An attempt is made to maintain the residential quality of these streets as part of the neighborhood.

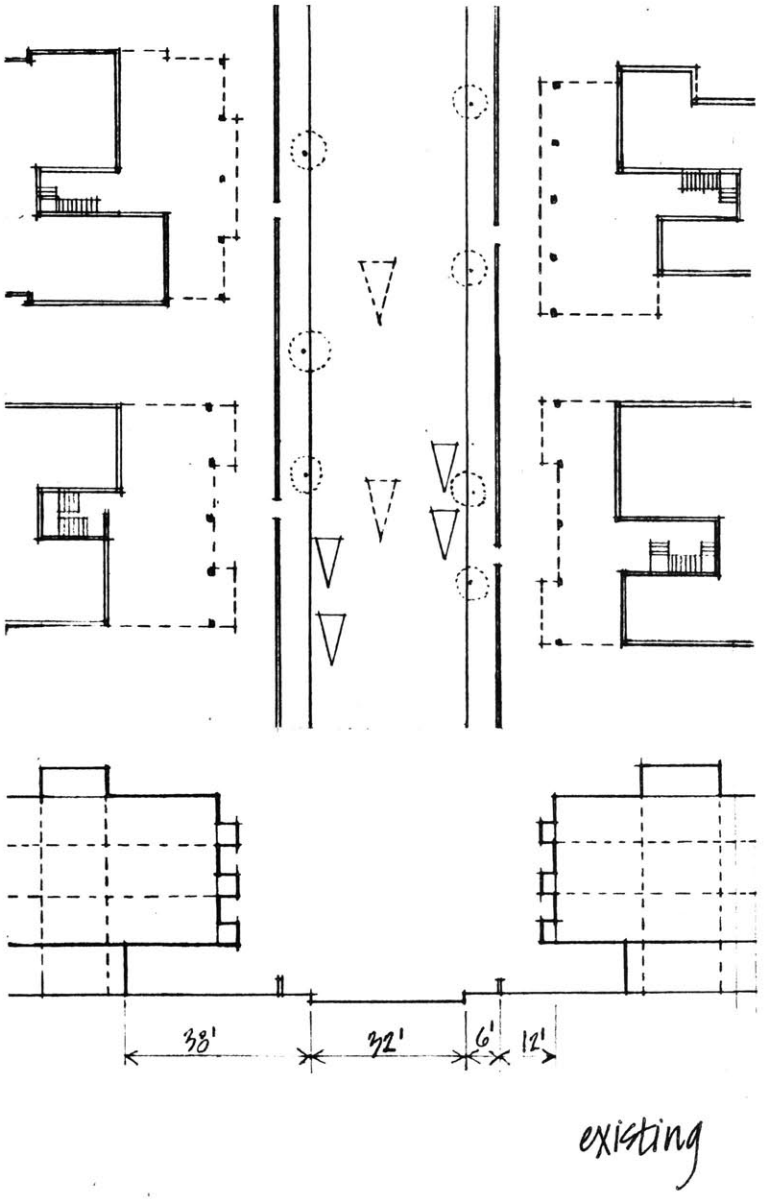
Parking streets

These streets support pedestrian use on residential streets which allow car access only for resident parking. Their layout, furniture, and pavement emphasize the prime function of these areas as places where people live. Thus, an attempt is made to avoid them turning into a "sea of cars". These streets are extensions of the dwellers private domain through their cars. They are places where people can wash or fix their cars (an activity favored by Israelies), and spend time together. They can become a focus for neighborhood activities such as strolling, informal meeting, and children playing.

Residential streets

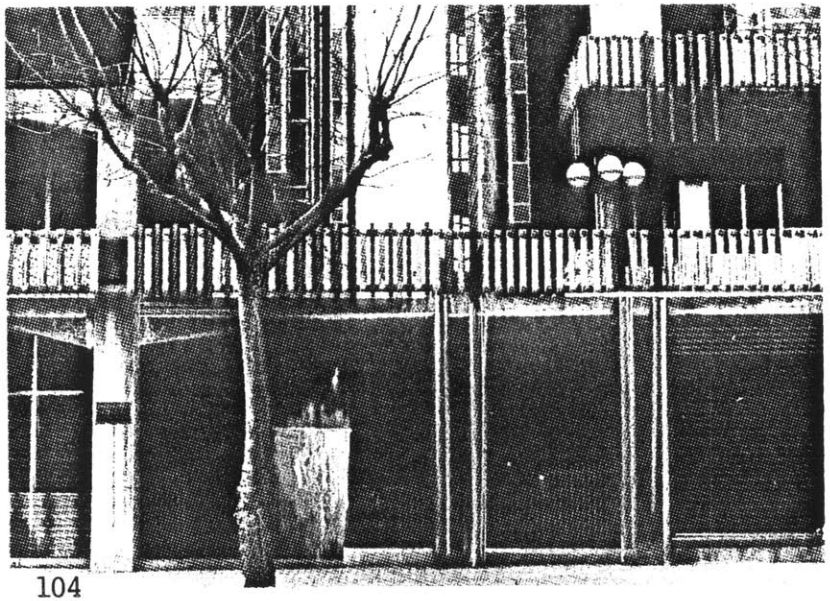
Predominantly pedestrian, these streets are the focus for residential activities containing childrens' playgrounds, small gardens, and pedestrian paths. Children play there, old people take their afternoon stroll, and youngsters meet in the evening.

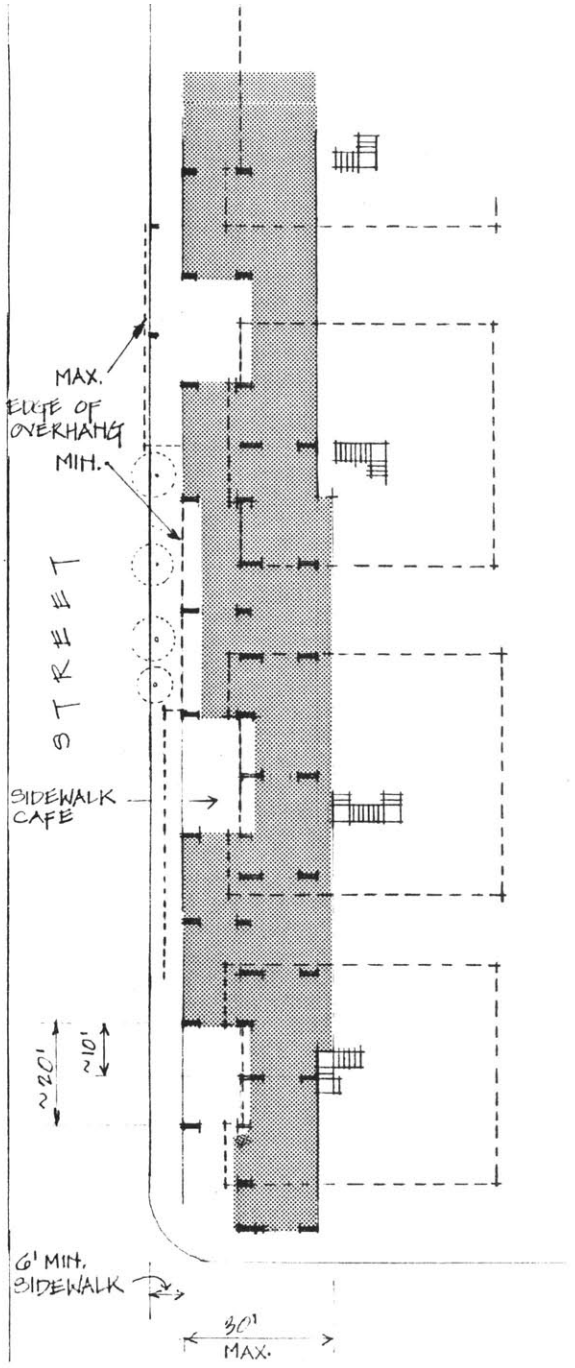


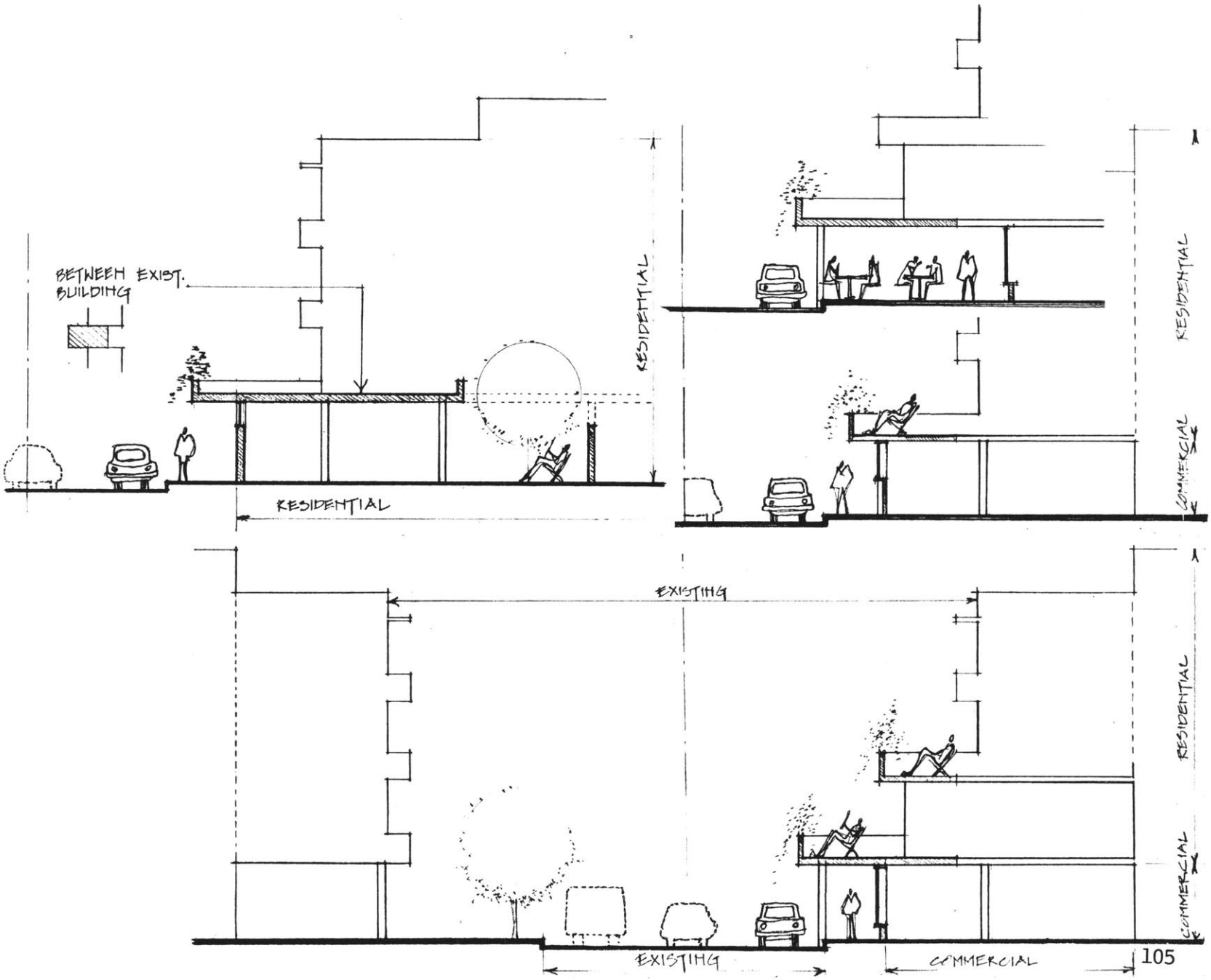


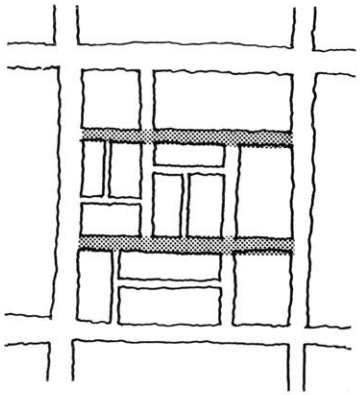
existing

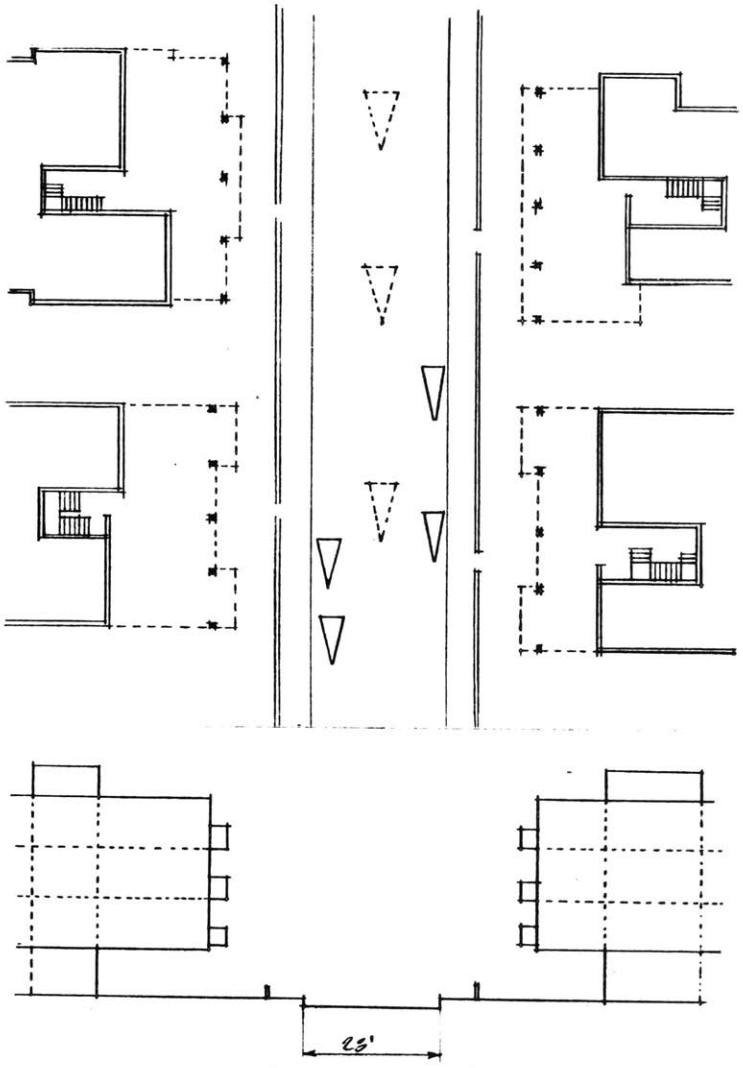
commercial street



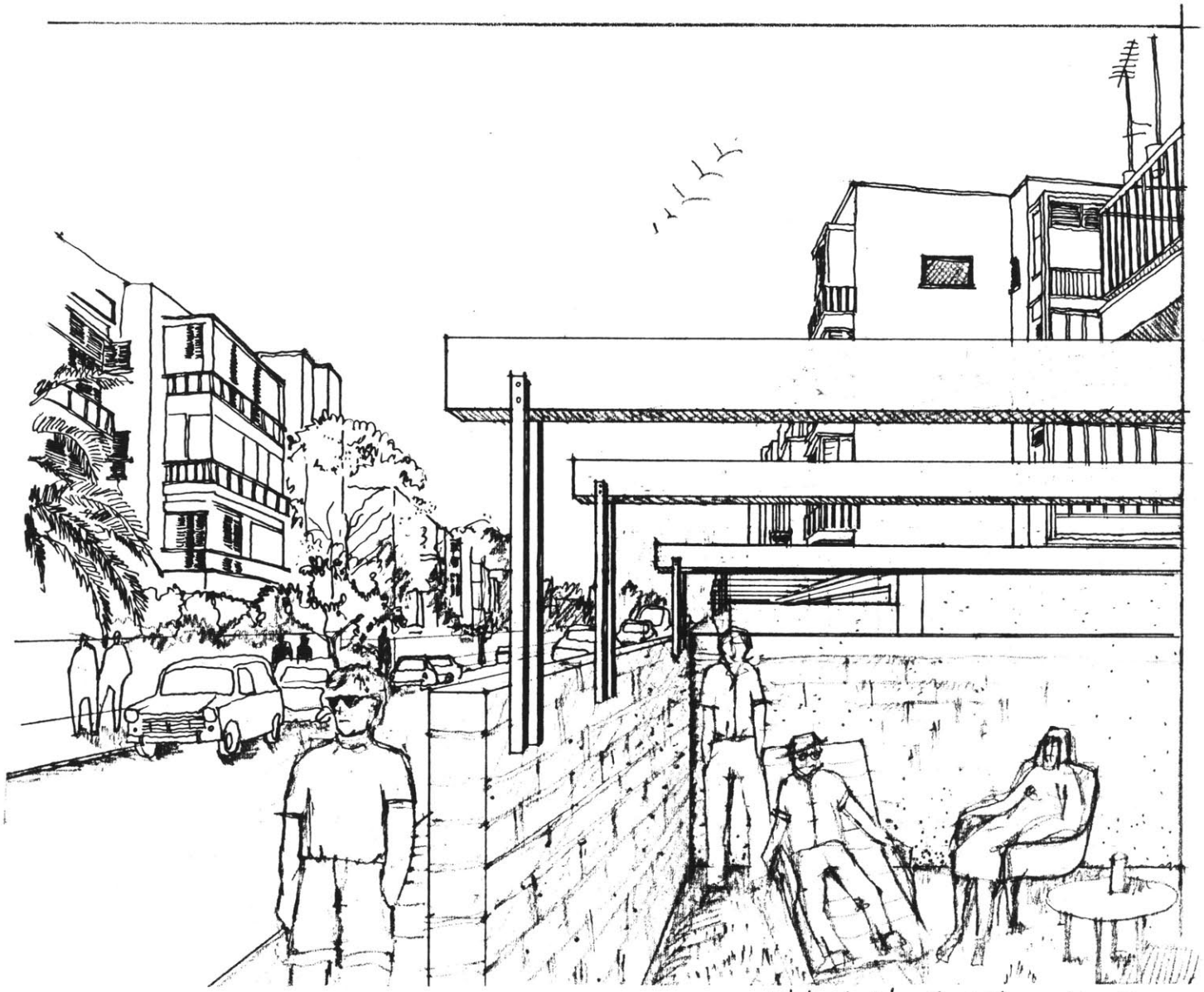

MAX.
EDGE OF
OVERHANG
MIN.
STREET
SIDEWALK
CAFE
~20'
~10'
6' MIN.
SIDEWALK
30'
MAX.


BETWEEN EXIST. BUILDING
RESIDENTIAL
RESIDENTIAL
RESIDENTIAL
COMMERCIAL
EXISTING
RESIDENTIAL
COMMERCIAL
EXISTING
COMMERCIAL





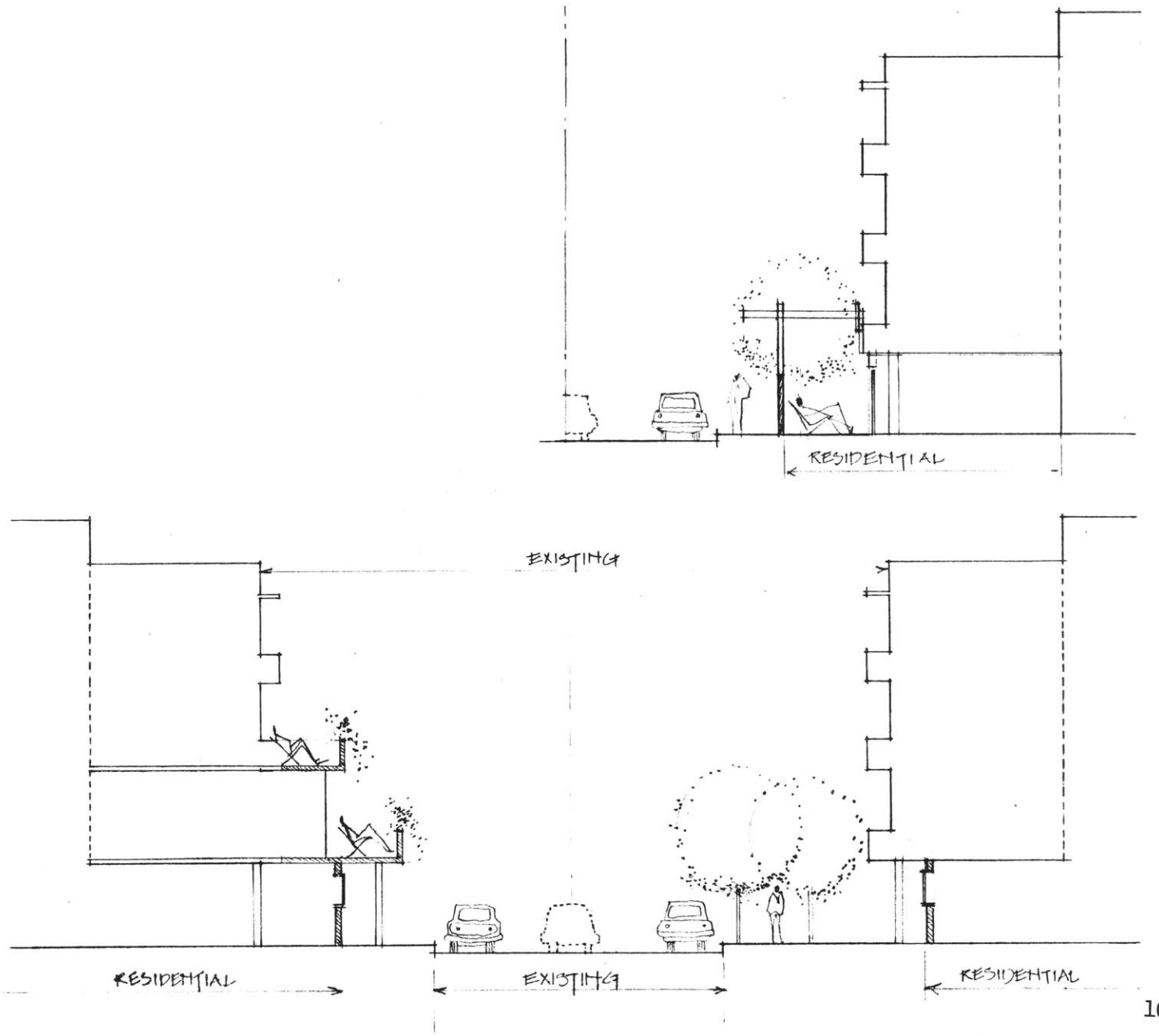
existing

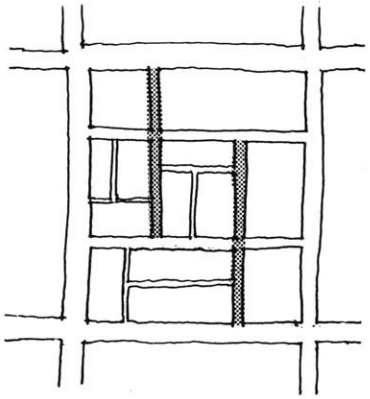


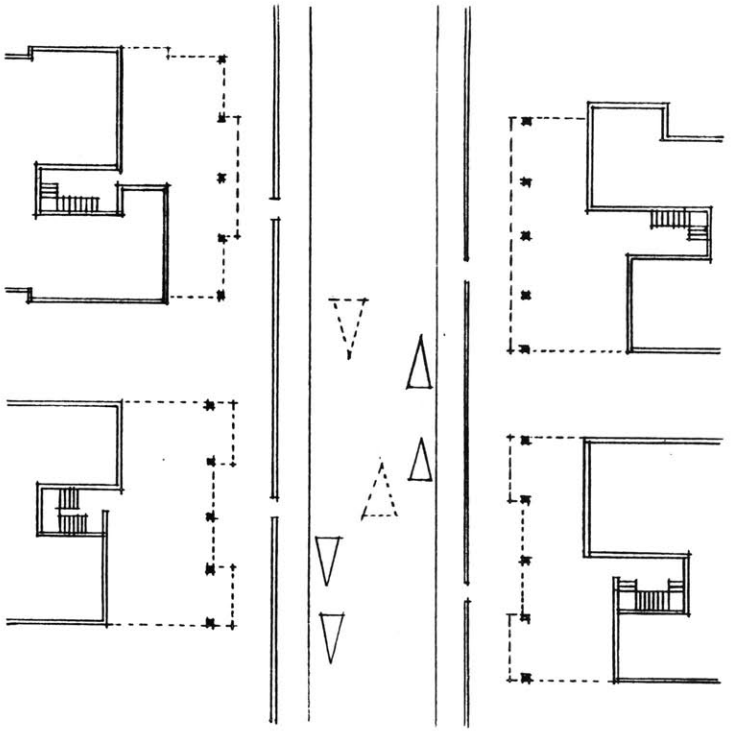
neighborhood through street

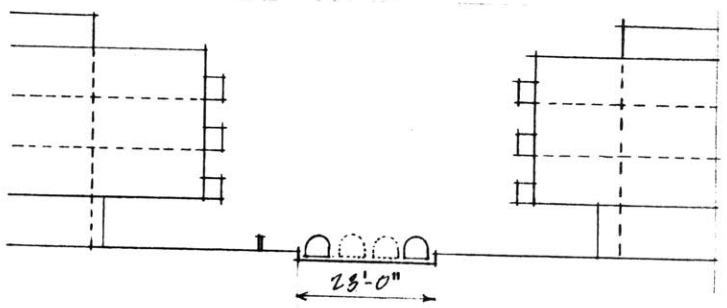
Chestnut Street, Cambridgeport, Cambridge, Mass. (Rotch Library, visual collection)

Photograph by Stan Anderson, from Stan Anderson, ed., On Streets.

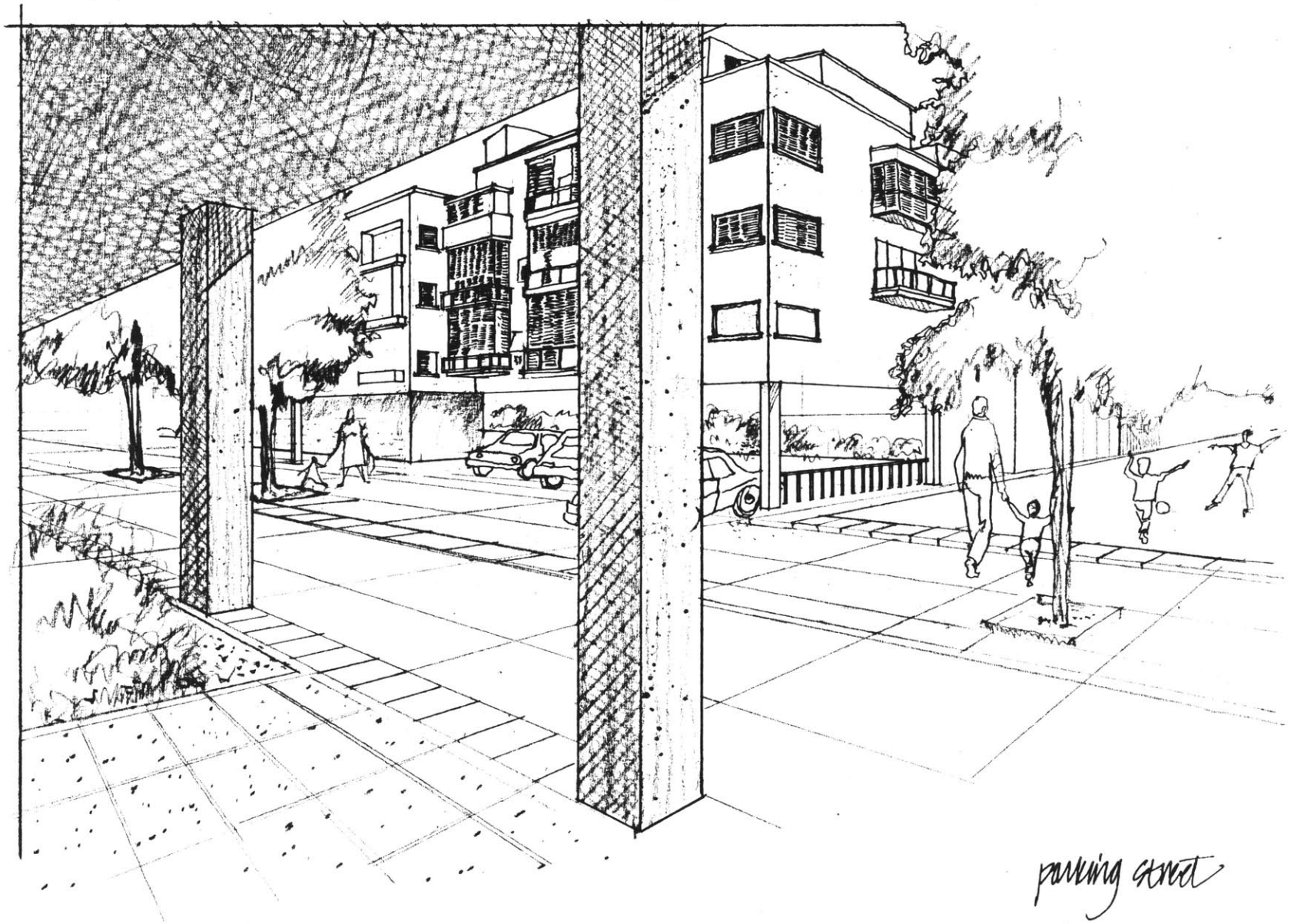

RESIDENTIAL
EXISTING
RESIDENTIAL
EXISTING
RESIDENTIAL





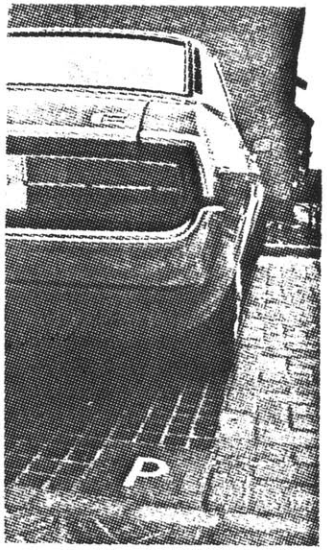


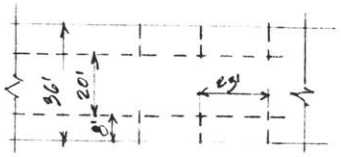
existing


parking street

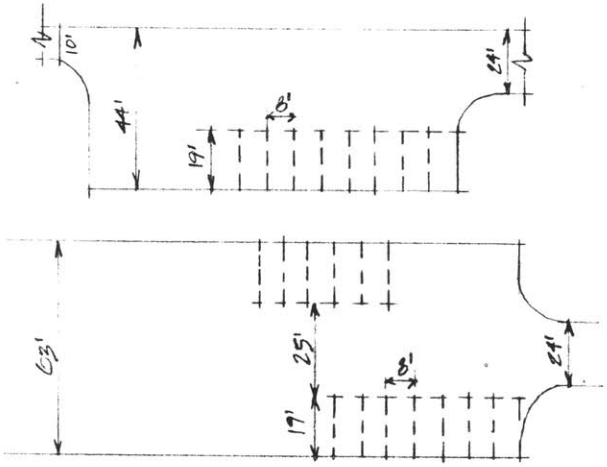
10-14 households per building
~120 buildings in a block-cluster
Parking Figures:
100% - 10-14 cars per building
50% - 5-7 cars per building } Working figure 5
33% - 3-4 cars per building } cars per building

~ 600 cars per block-cluster (resident's parking)

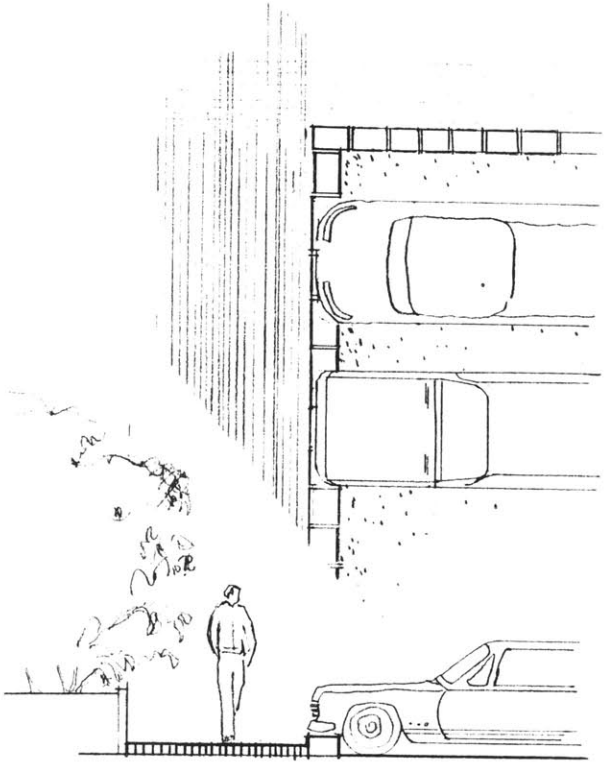




2 LANE PARALLEL PARKING



TYPICAL PARKING BAY 90° PARKING

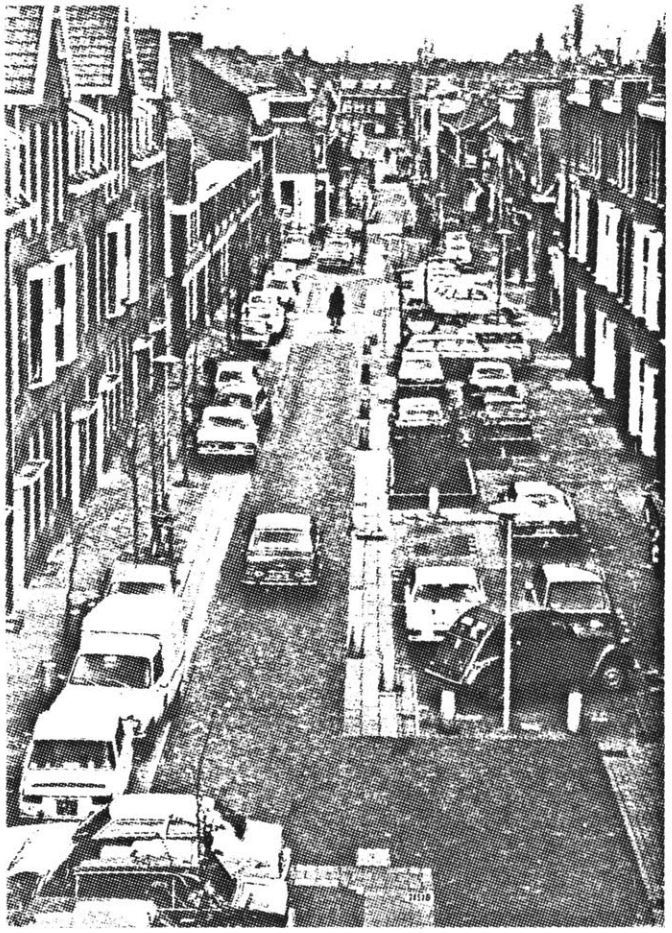


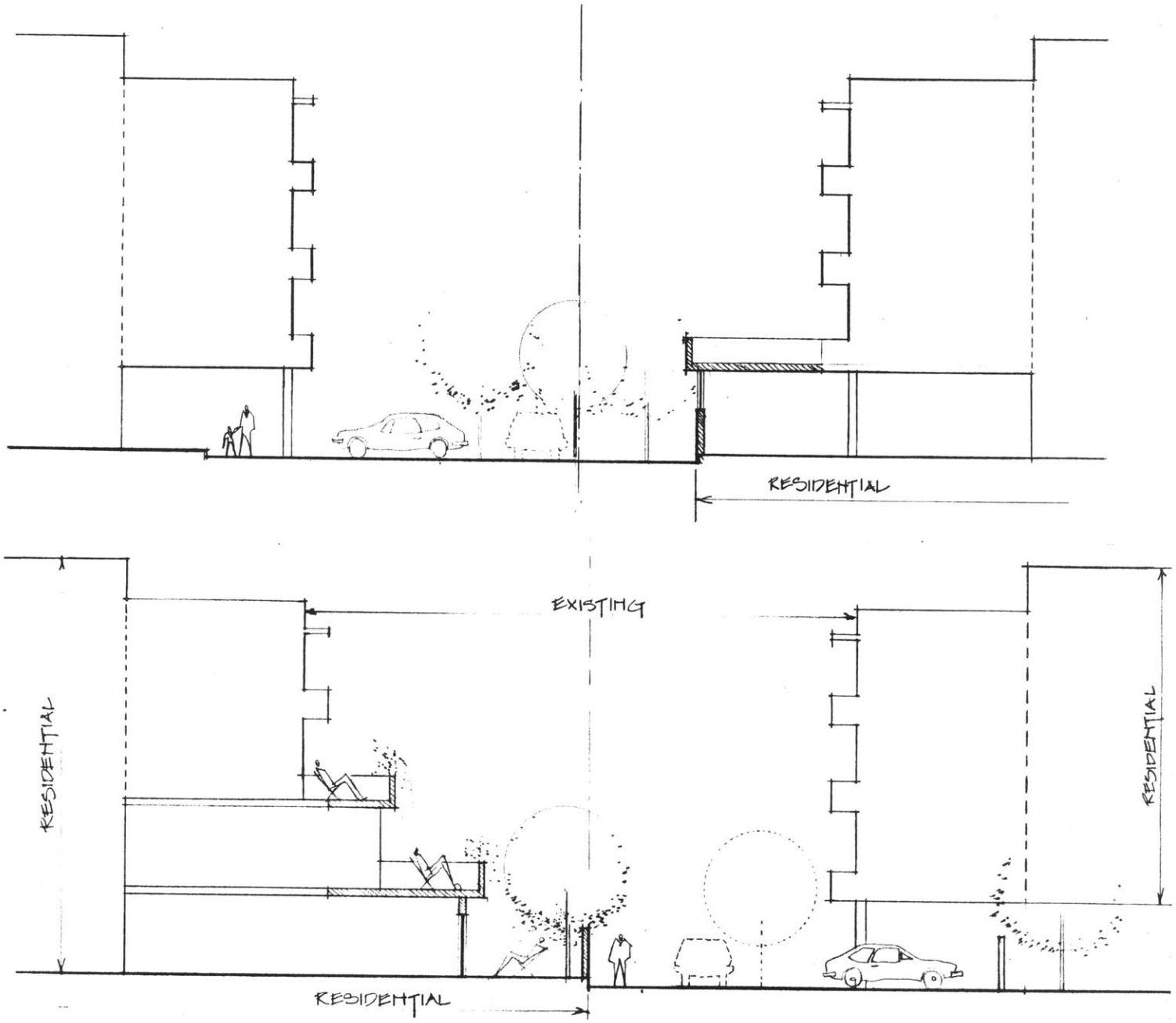
SMALL BAYS OF CARS (7-8 CARS PER BAY)

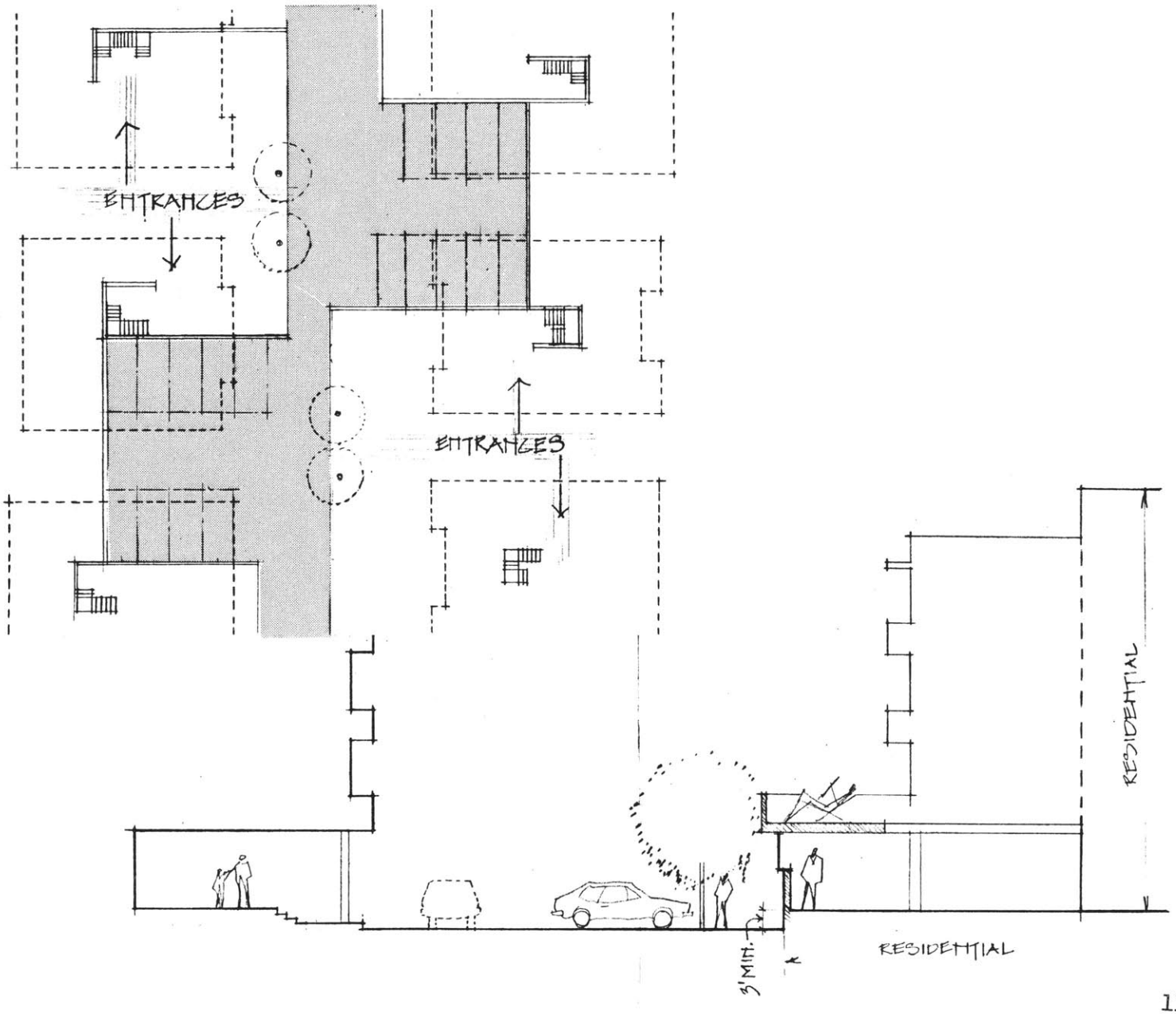
Examples of parking streets (Woonerf) in Holland:

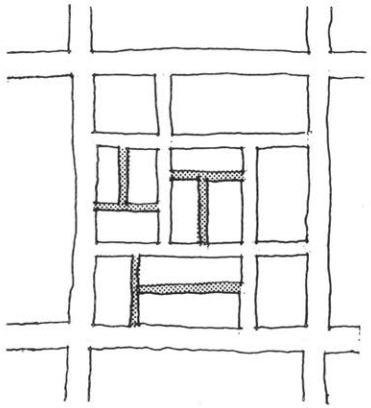
"The entrance to each Woonerf is indicated by a special sign. Within the Woonerf the usual traffic priorities are, by law, reversed. Pedestrians may use the full width of the highway and playing in the roadway is permitted. Drivers of all vehicles are restricted to walking speed and must take special heed of children at play. Neither drivers nor pedestrians are allowed to impede each other, and pedestrians must if necessary make way to allow a vehicle past. Finally, drivers can only park in areas marked for the purpose; within a Woonerf, an unmarked area means 'no parking'."

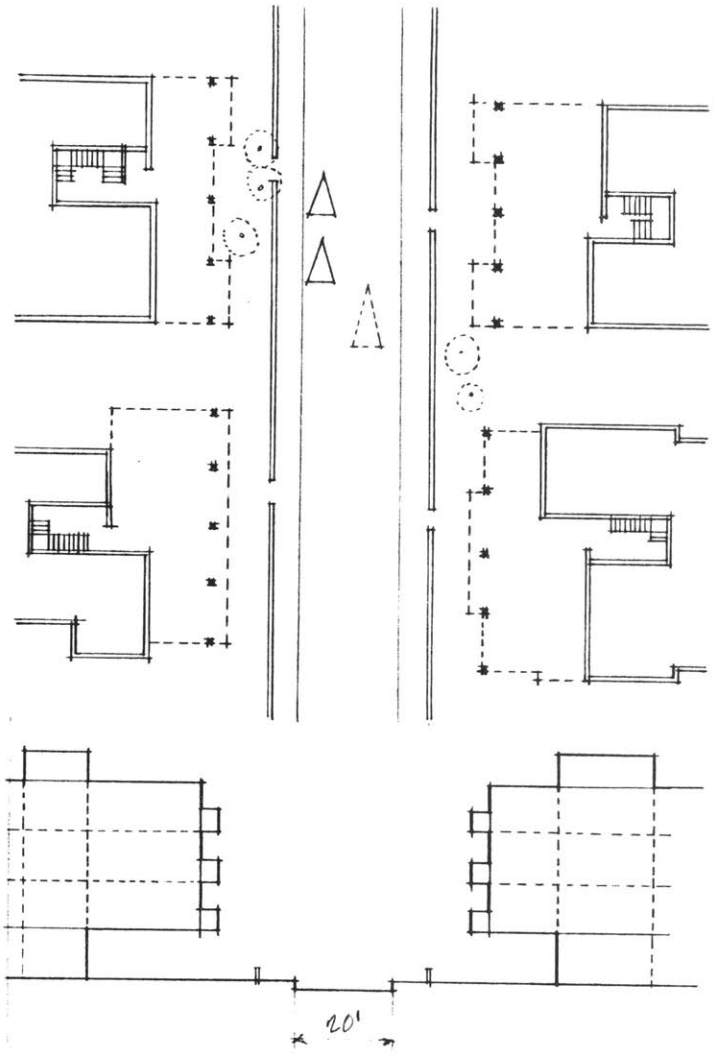
Paul Burall, "Your street: for you and your car?", Design Council, Streets Ahead, 1979




RESIDENTIAL
EXISTING
RESIDENTIAL
RESIDENTIAL
RESIDENTIAL

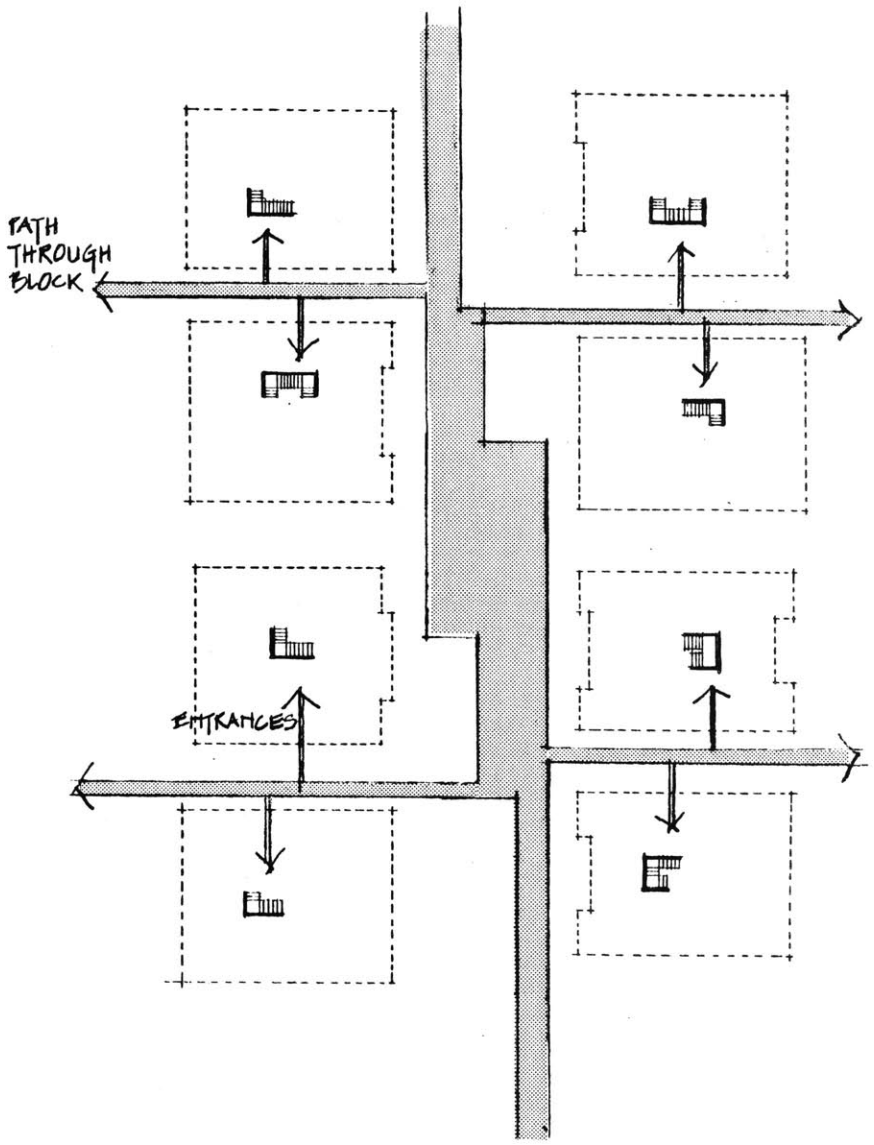

ENTRANCES
ENTRANCES
RESIDENTIAL
RESIDENTIAL
3' MIN.



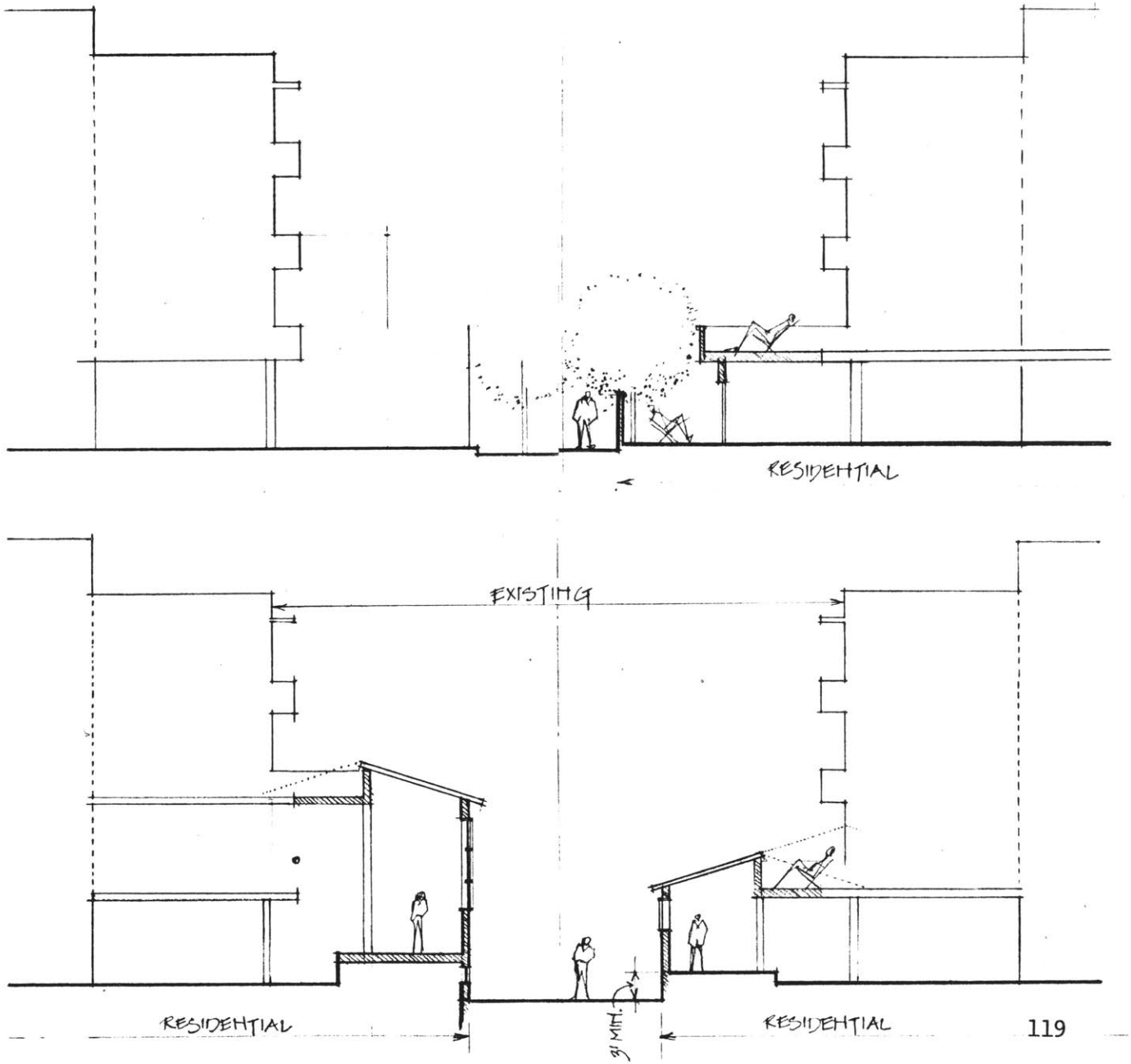


existing

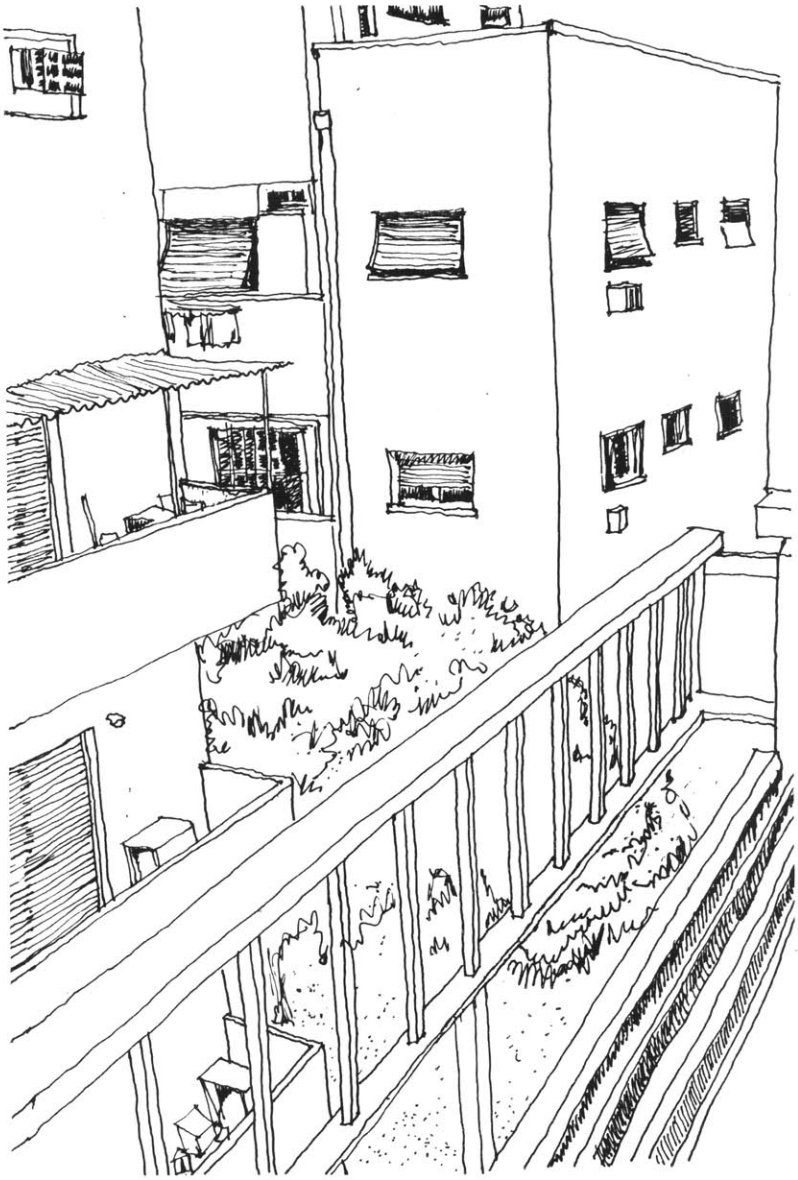
residential street



A residential street, Papendrecht, Netherlands, Frans Van der Werff Architect, 1969, Photographed by John Habraken.

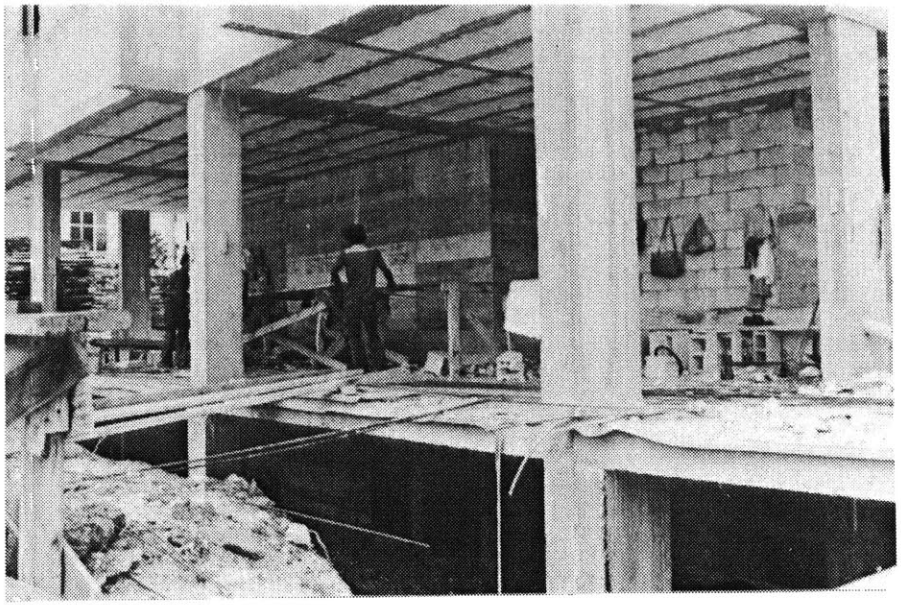

RESIDENTIAL
EXISTING
RESIDENTIAL
31' MIN.
RESIDENTIAL

house to house

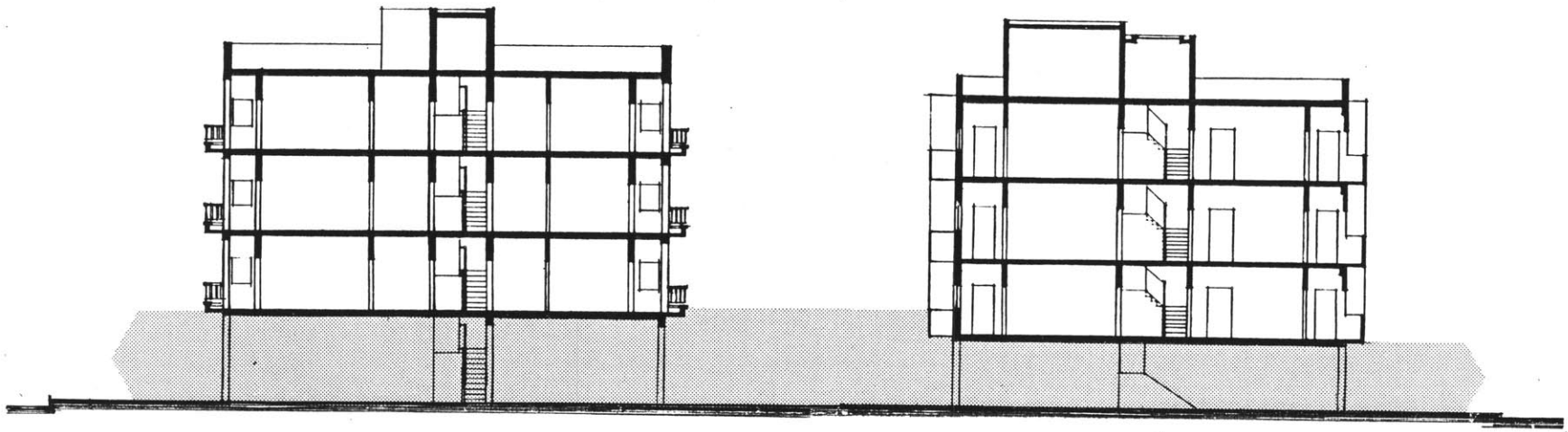


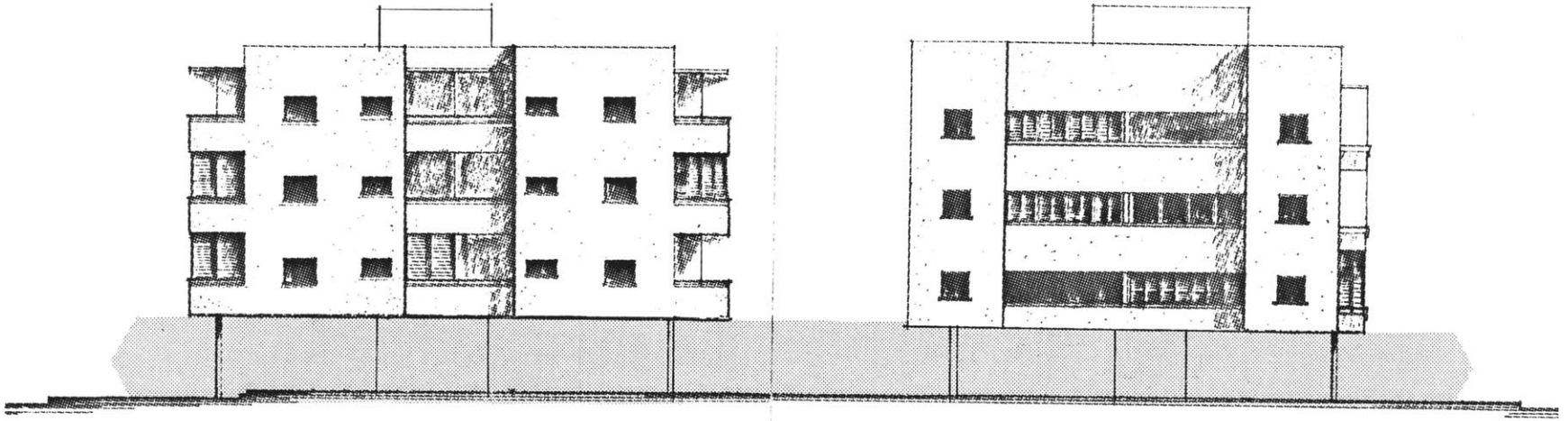
The Block

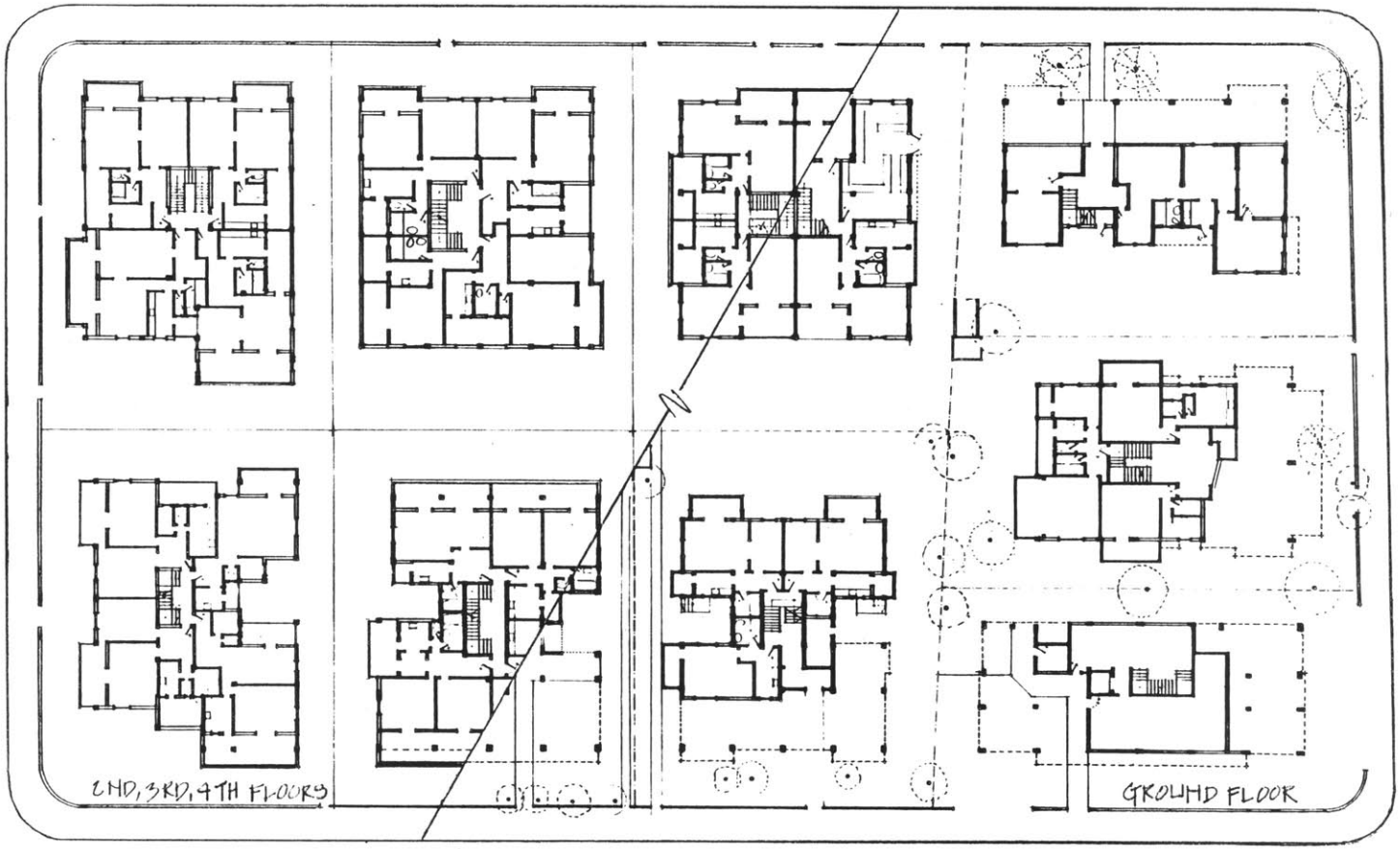
The block, a territory defined by the street system, is a level in the hierarchy of the urban structure where a distinction is being made between the city, the building and the allowable position of public and private domains. It is assumed that public and private territories are what differentiate the buildings from the city and as such have the largest impact on the street edge and the space between buildings. This area is therefore an appropriate point of departure for intervention. But, in an attempt to maintain much of the existing buildings, only the ground related built zone is touched and changed.



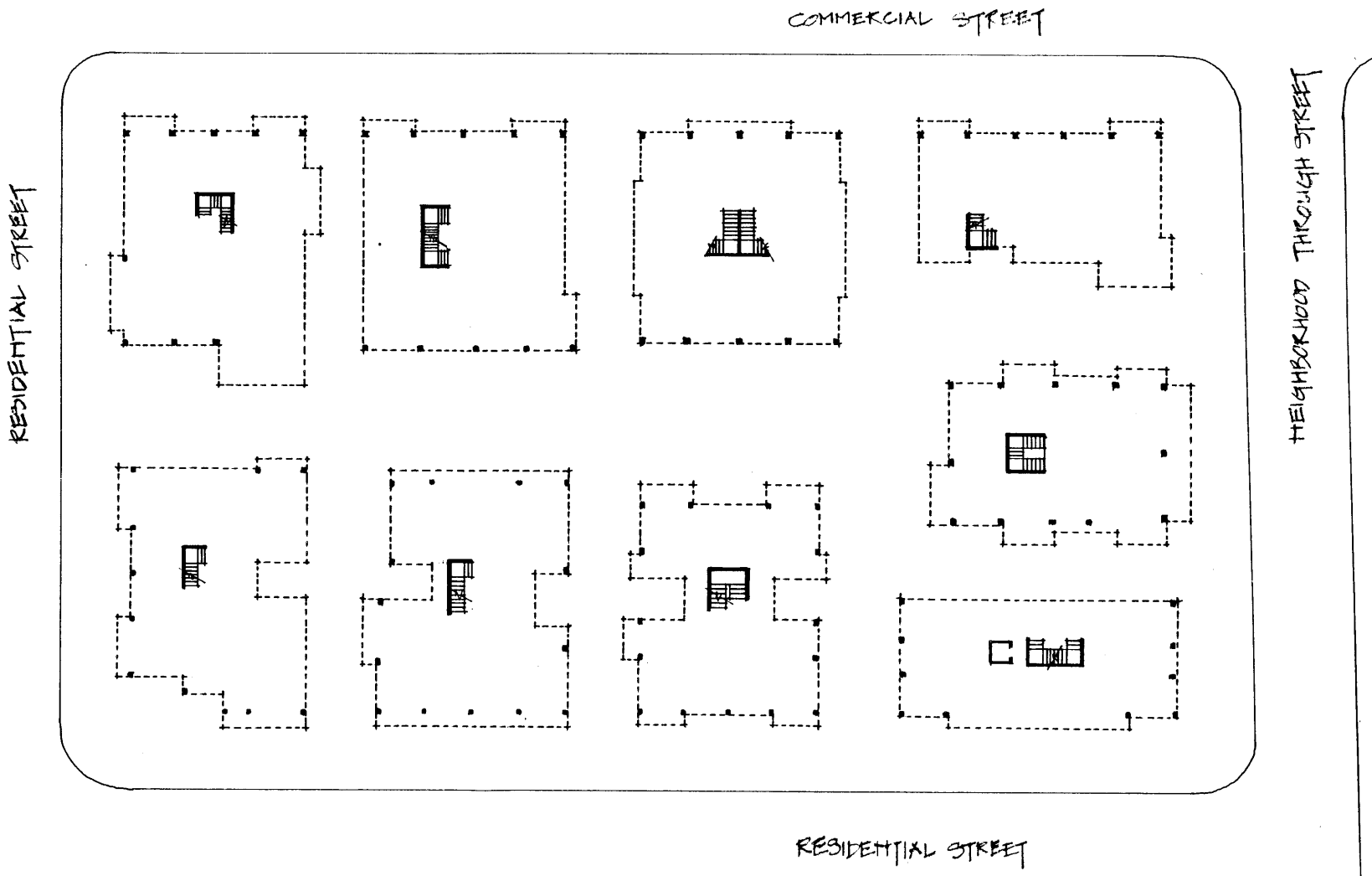
In construction of the existing buildings a reinforced concrete skeleton of columns and slabs infilled with press hollow concrete blocks (20 cm. exterior and 7 cm. interior) and plastered on both sides was used. For the purpose of this design it is assumed that all the infill elements in the ground floor are removed and the columns exposed. In addition, the vertical circulation system (stairs and sometimes an elevator) is left untouched. These remaining elements, combined with the upper floors of the buildings, provide the physical framework for the investigation of the new block organization.





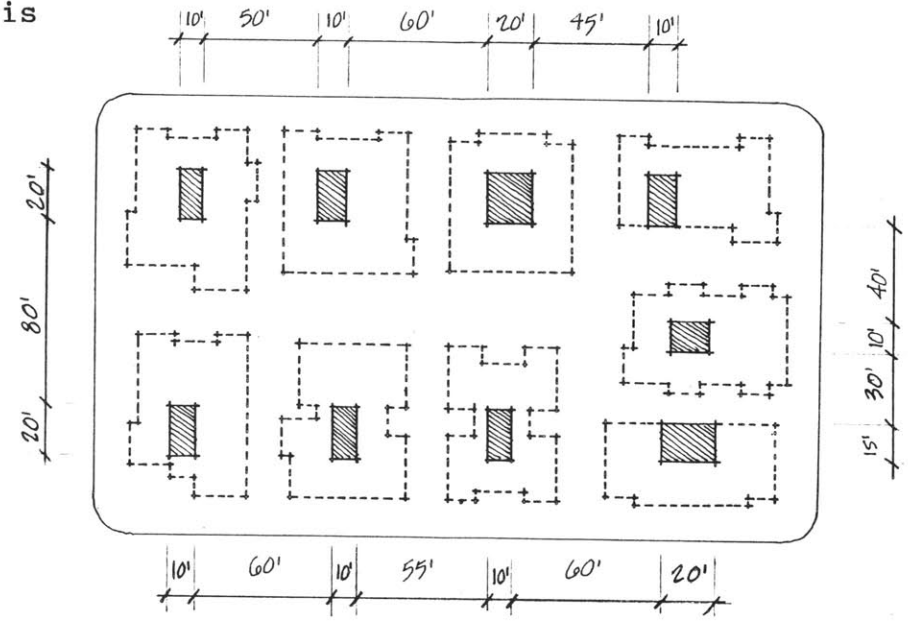


EXISTING BLOCK

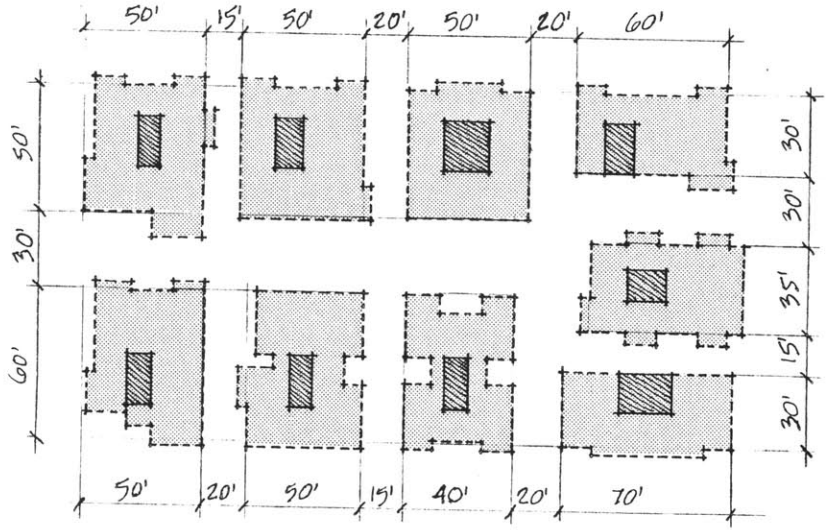


PHYSICAL FRAMEWORK OF THE BLOCK

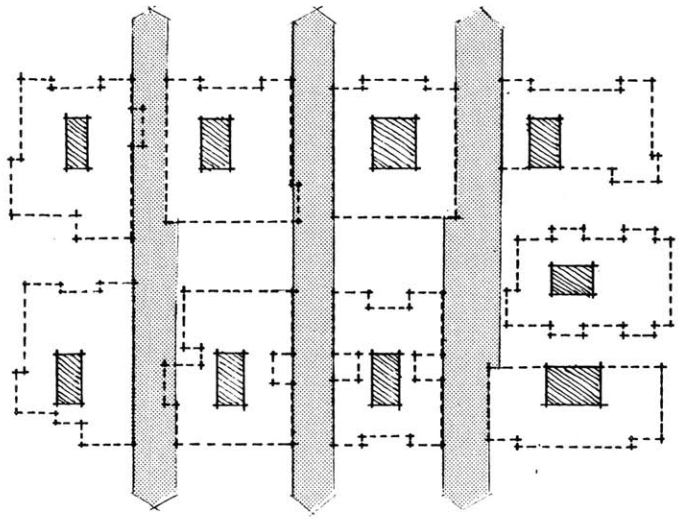
Block Analysis

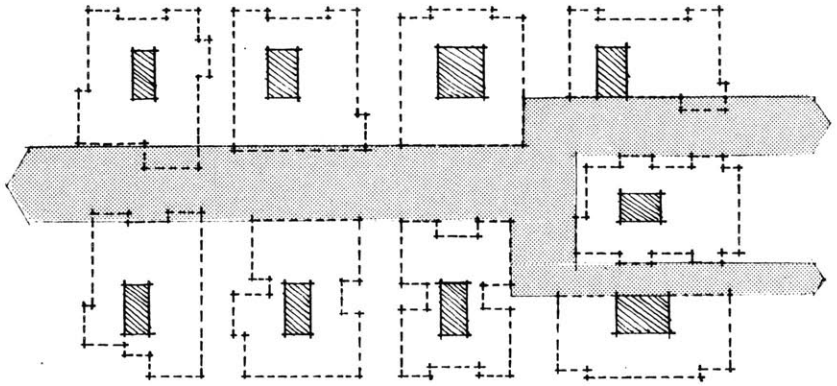


built and unbuilt

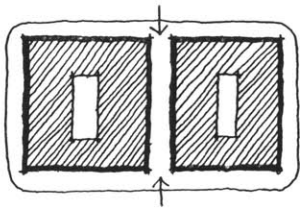


covered and uncovered

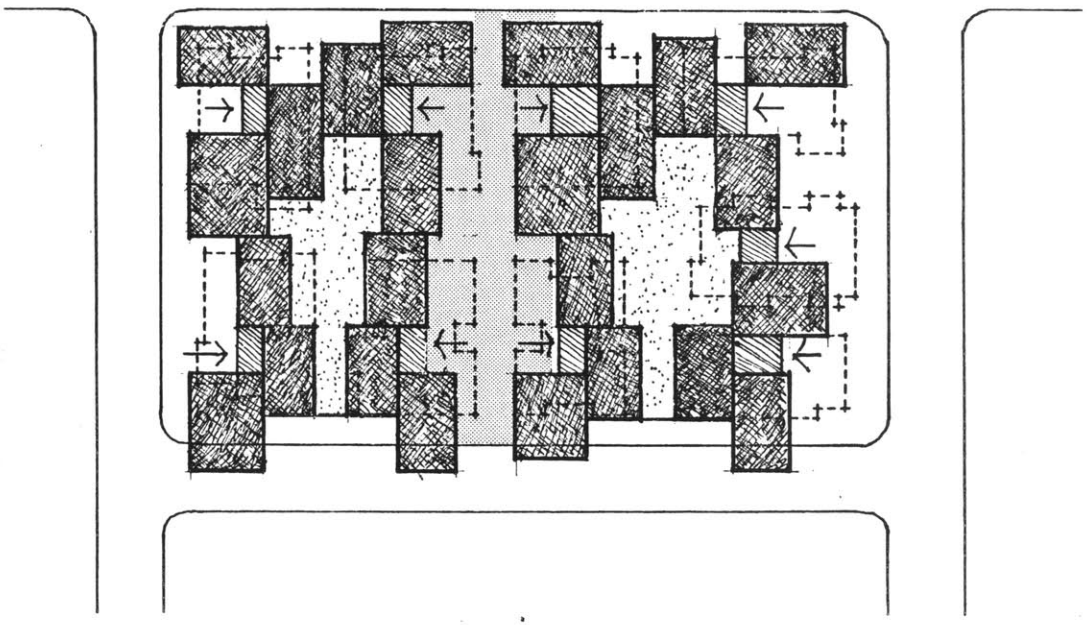


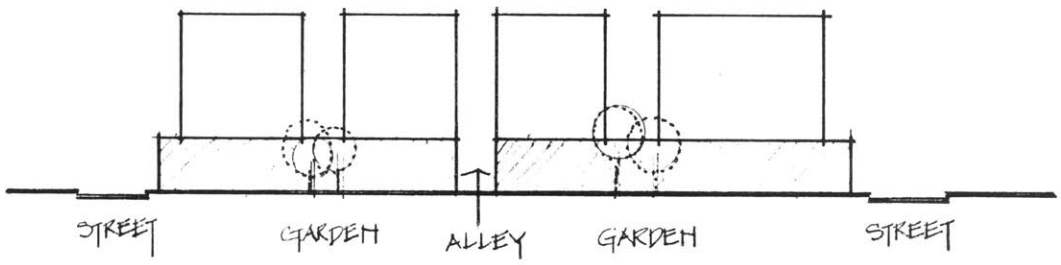


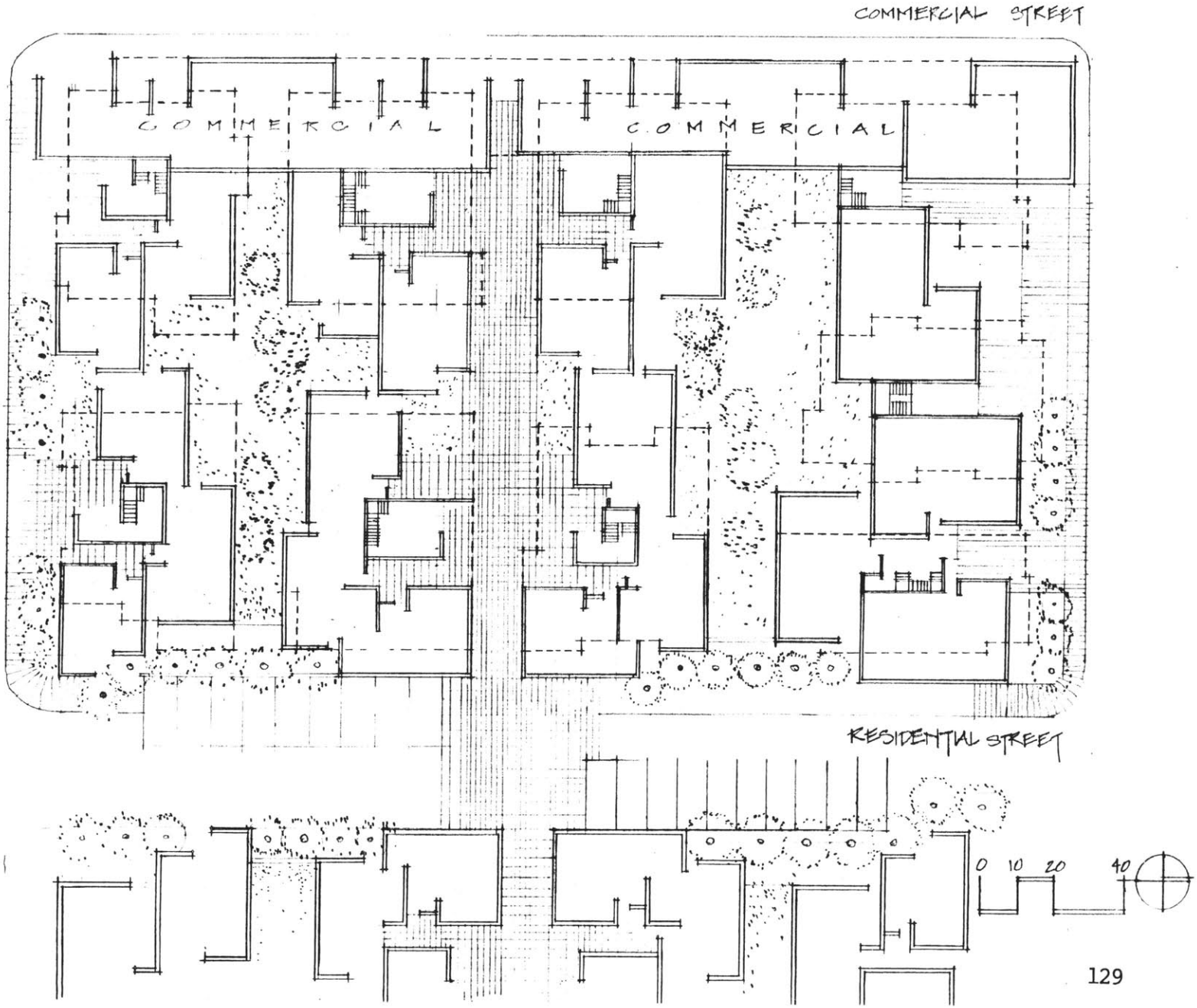
open space

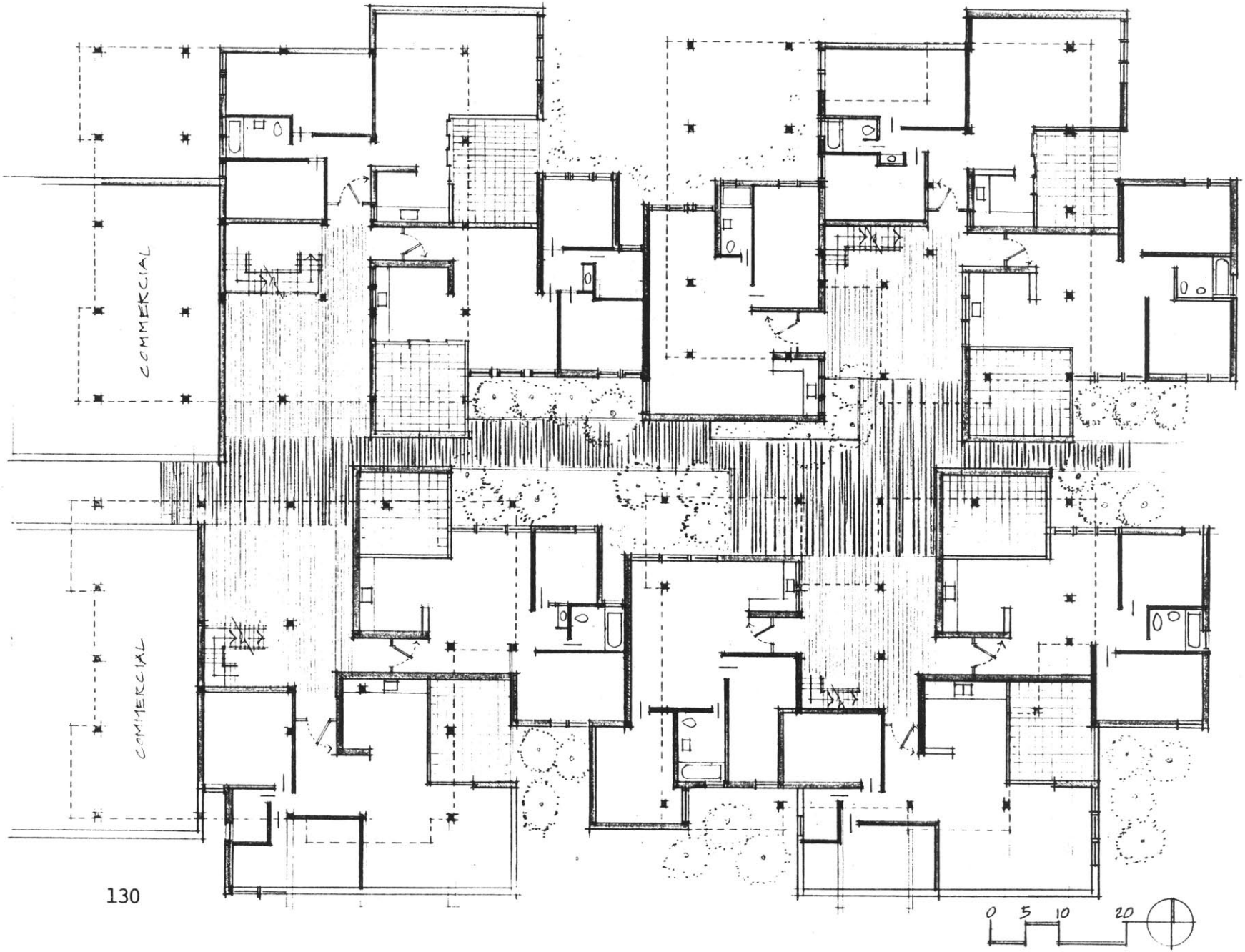


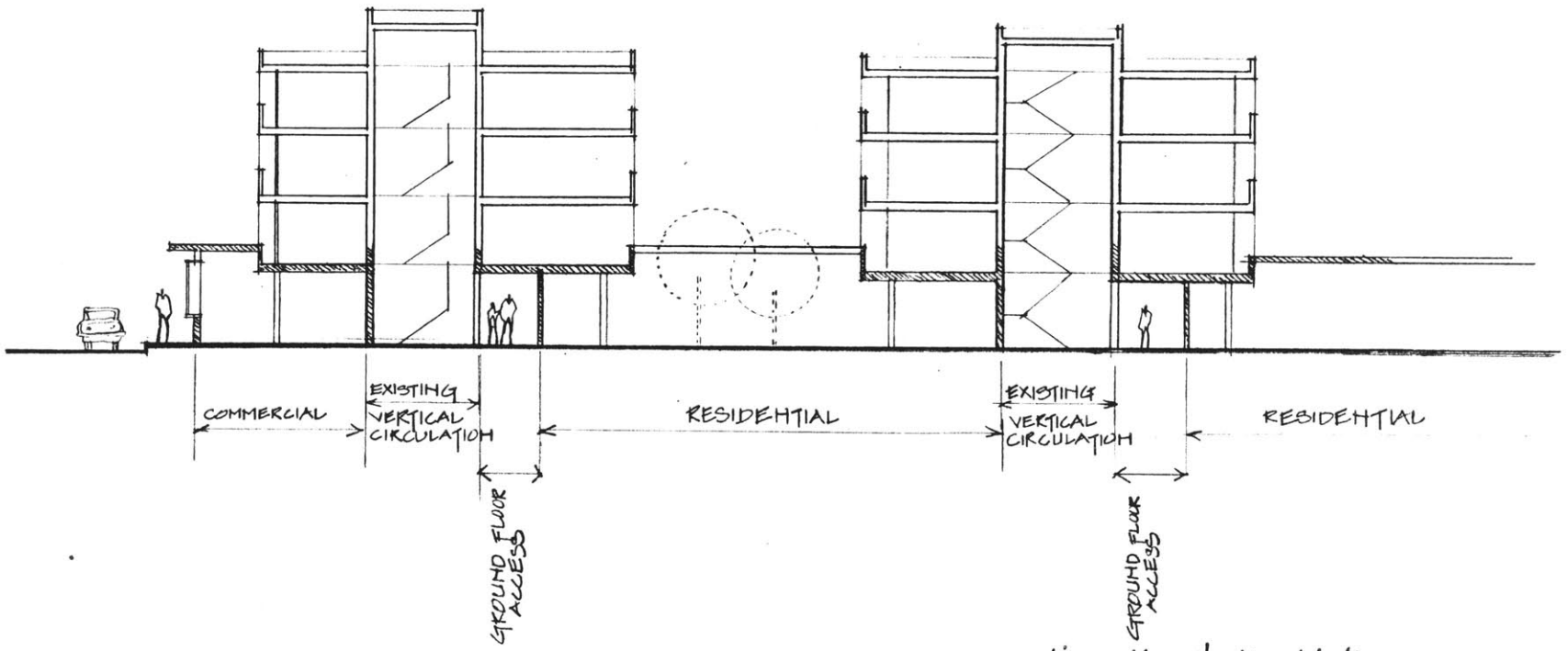
OPTION 1



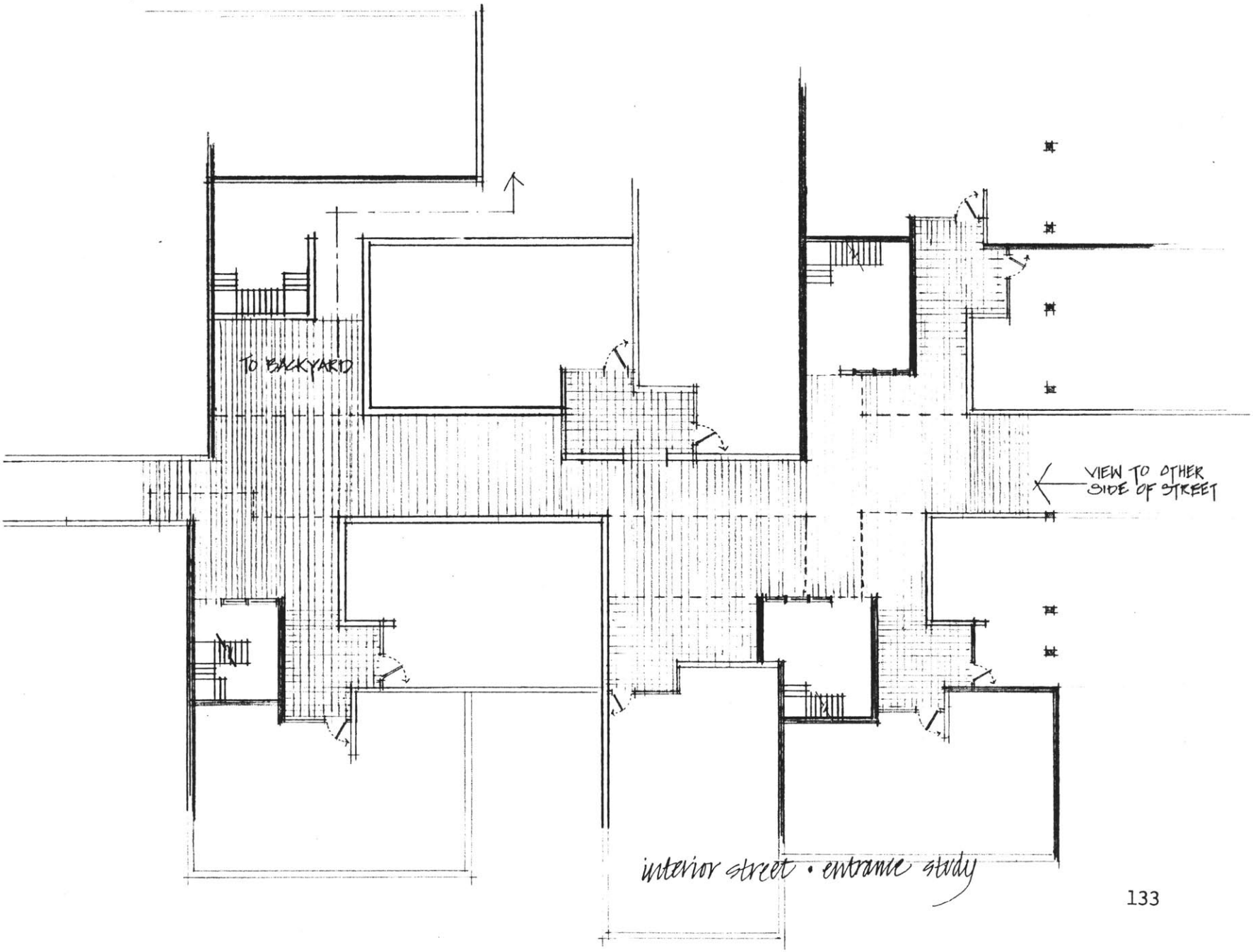



COMMERCIAL STREET
COMMERCIAL
COMMERCIAL
RESIDENTIAL STREET
0 10 20 40

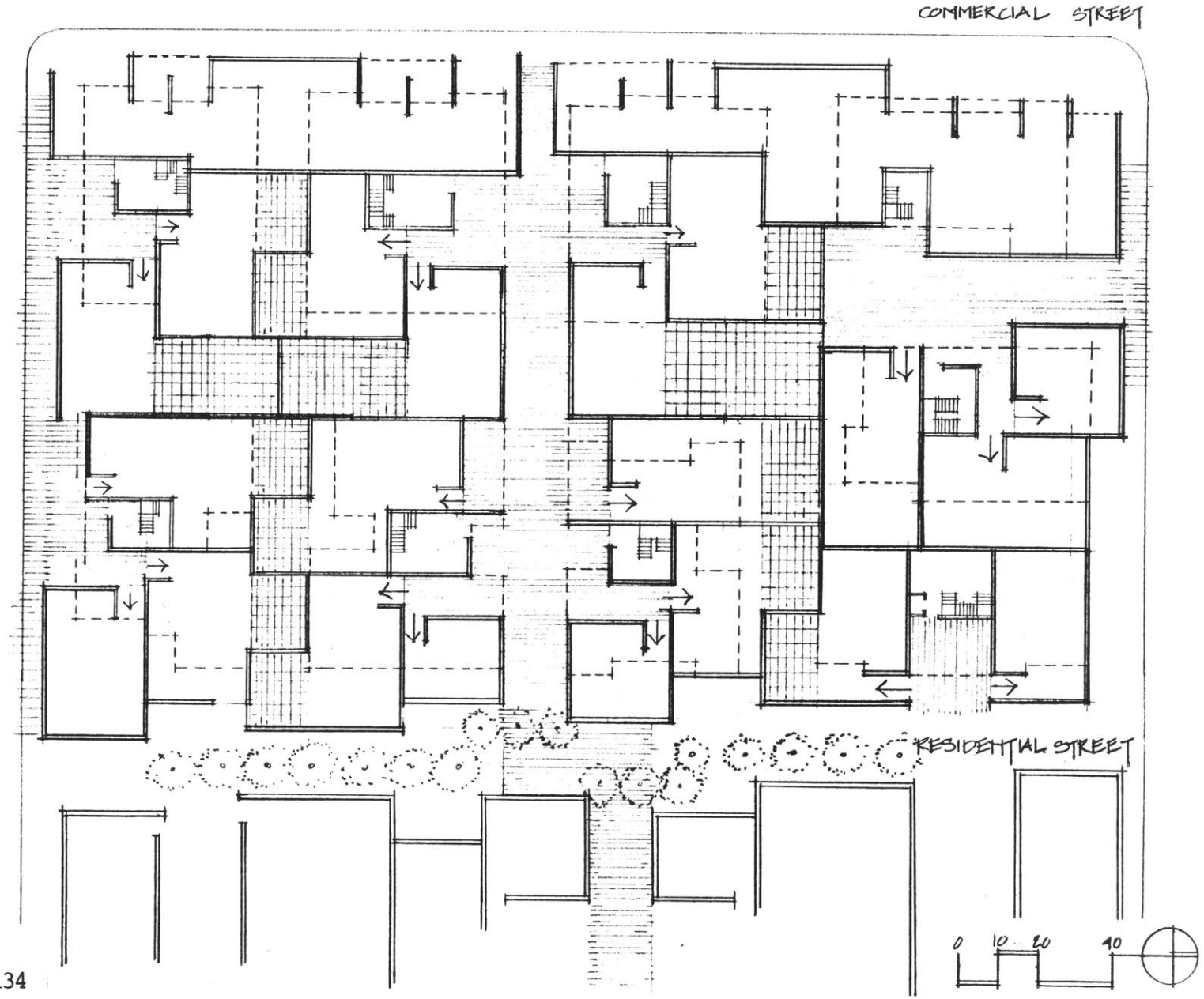

COMMERCIAL
COMMERCIAL
0 5 10 20

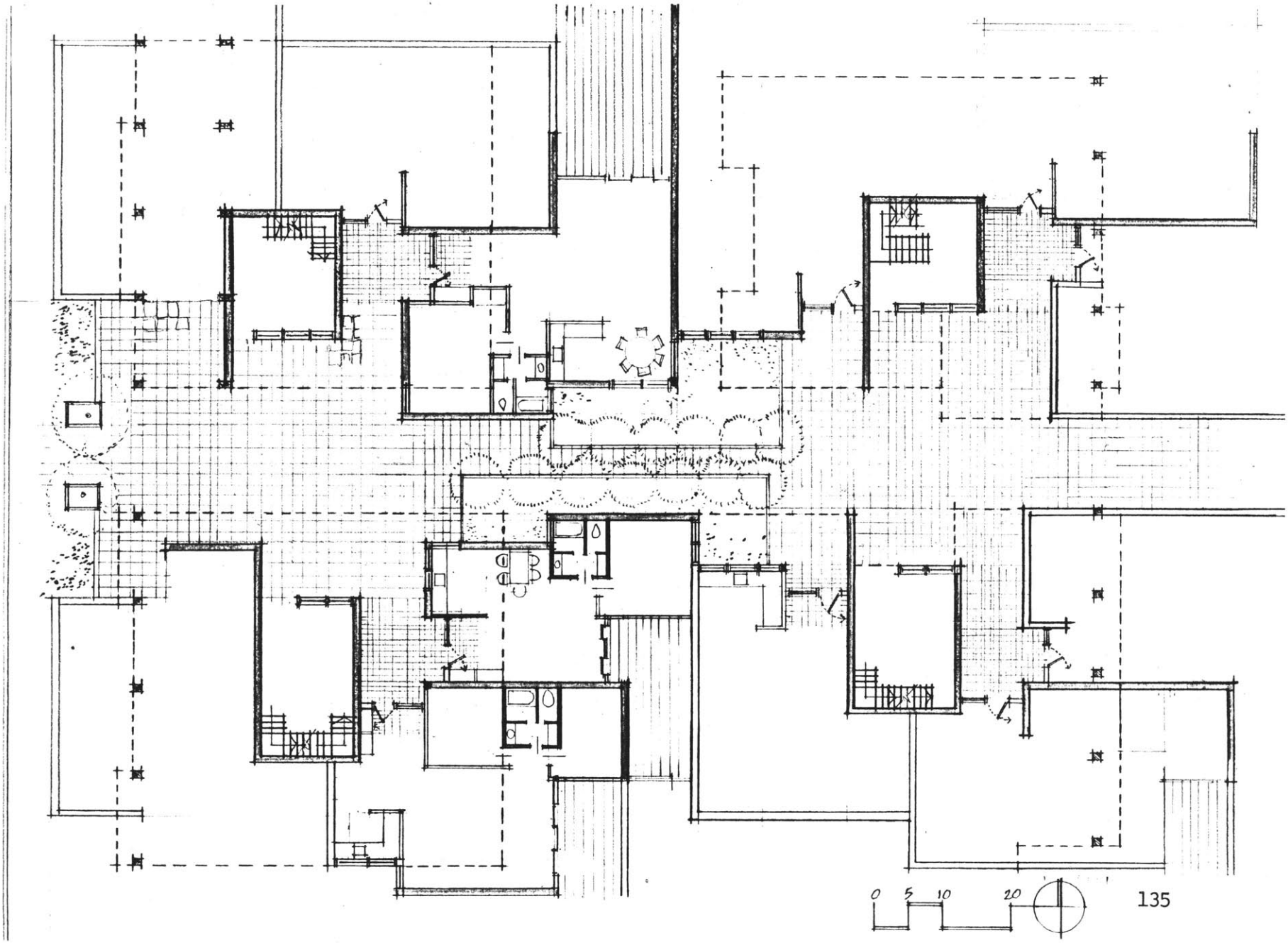


section through the block



interior street • entrance study


COMMERCIAL STREET
RESIDENTIAL STREET
0 10 20 40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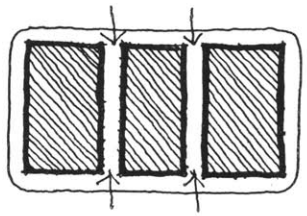

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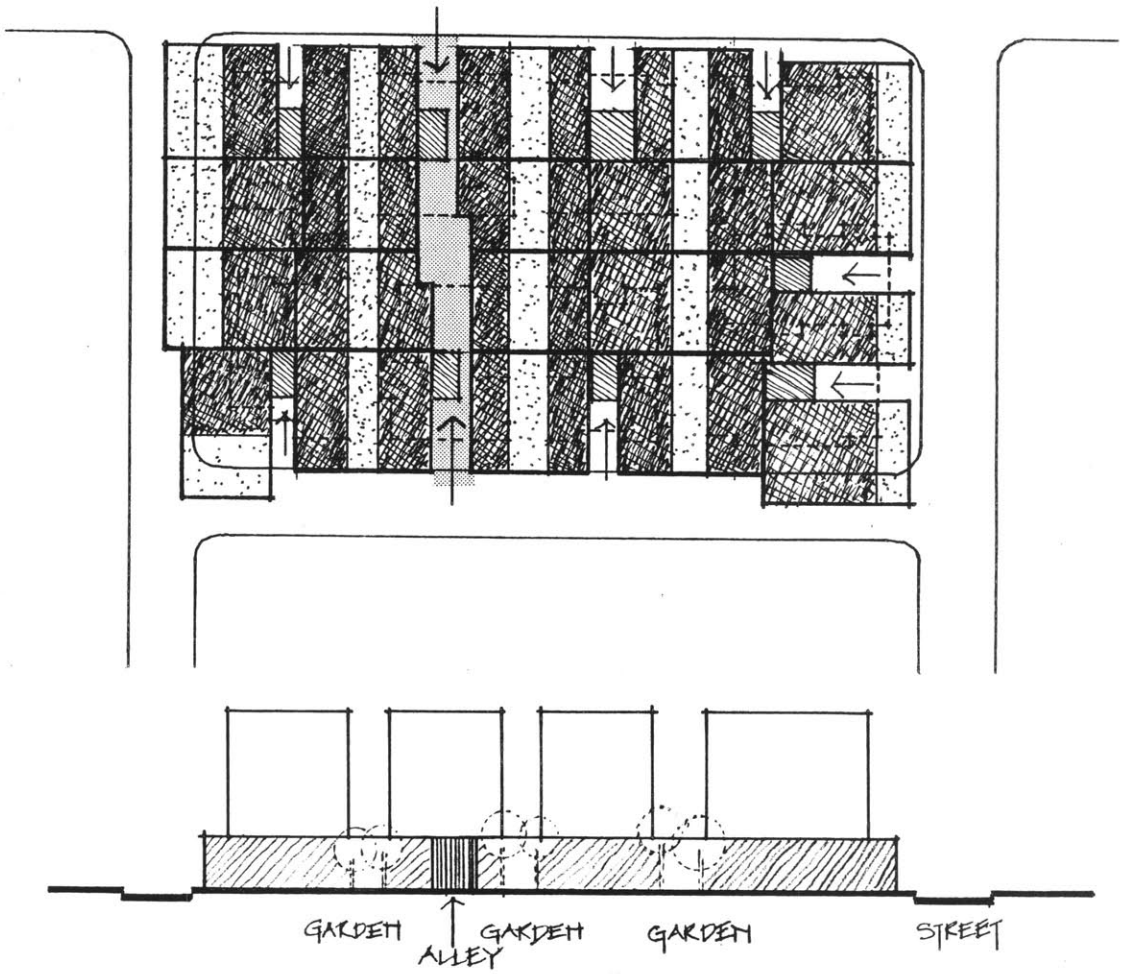

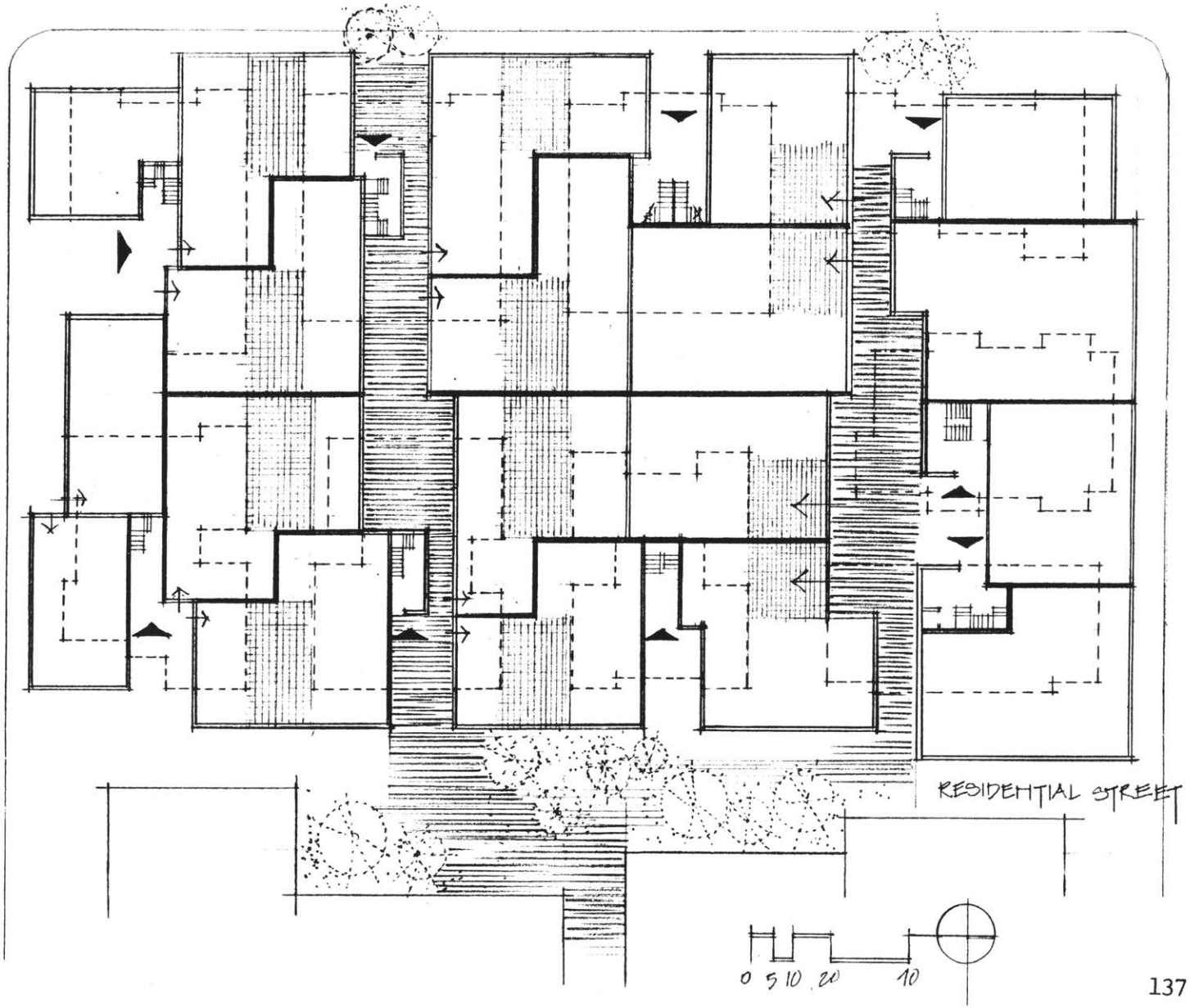
RESIDENTIAL STREET
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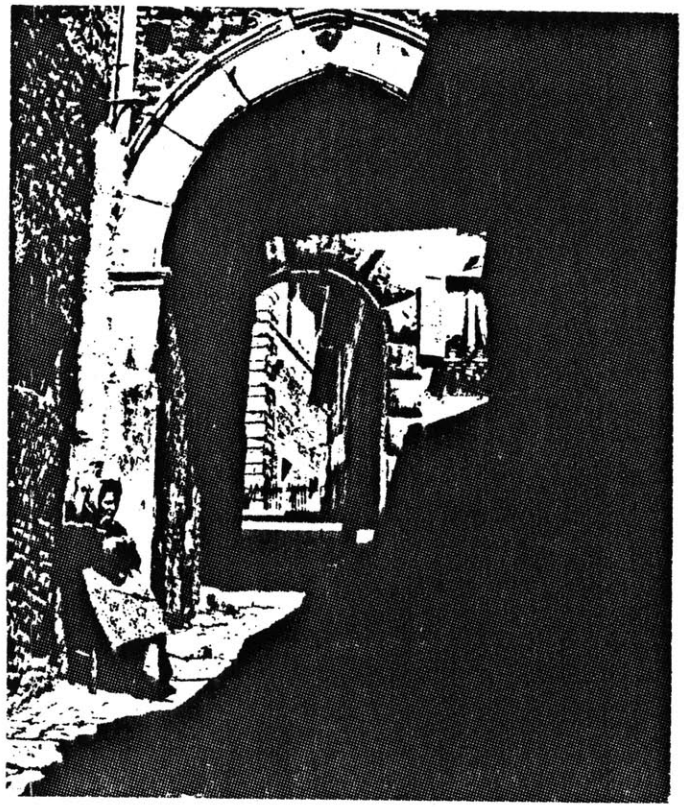

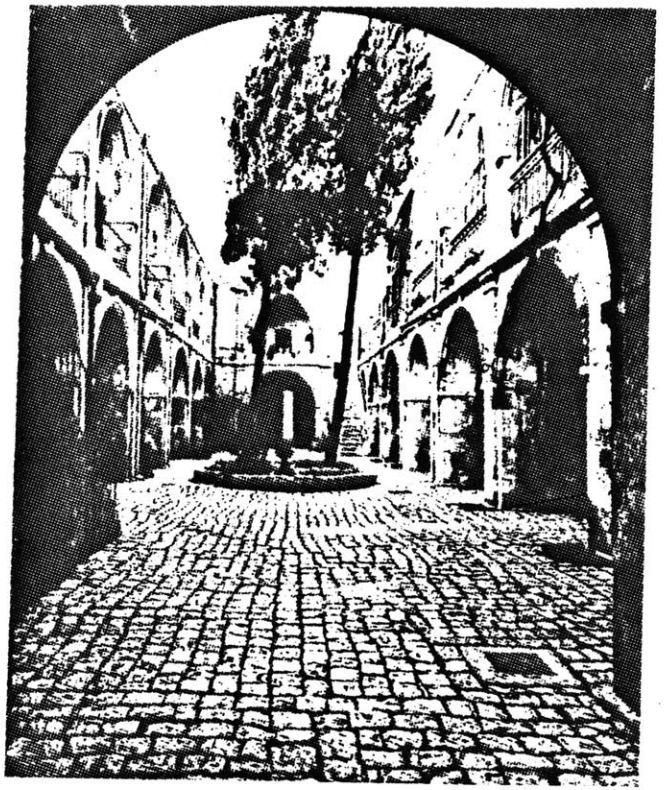

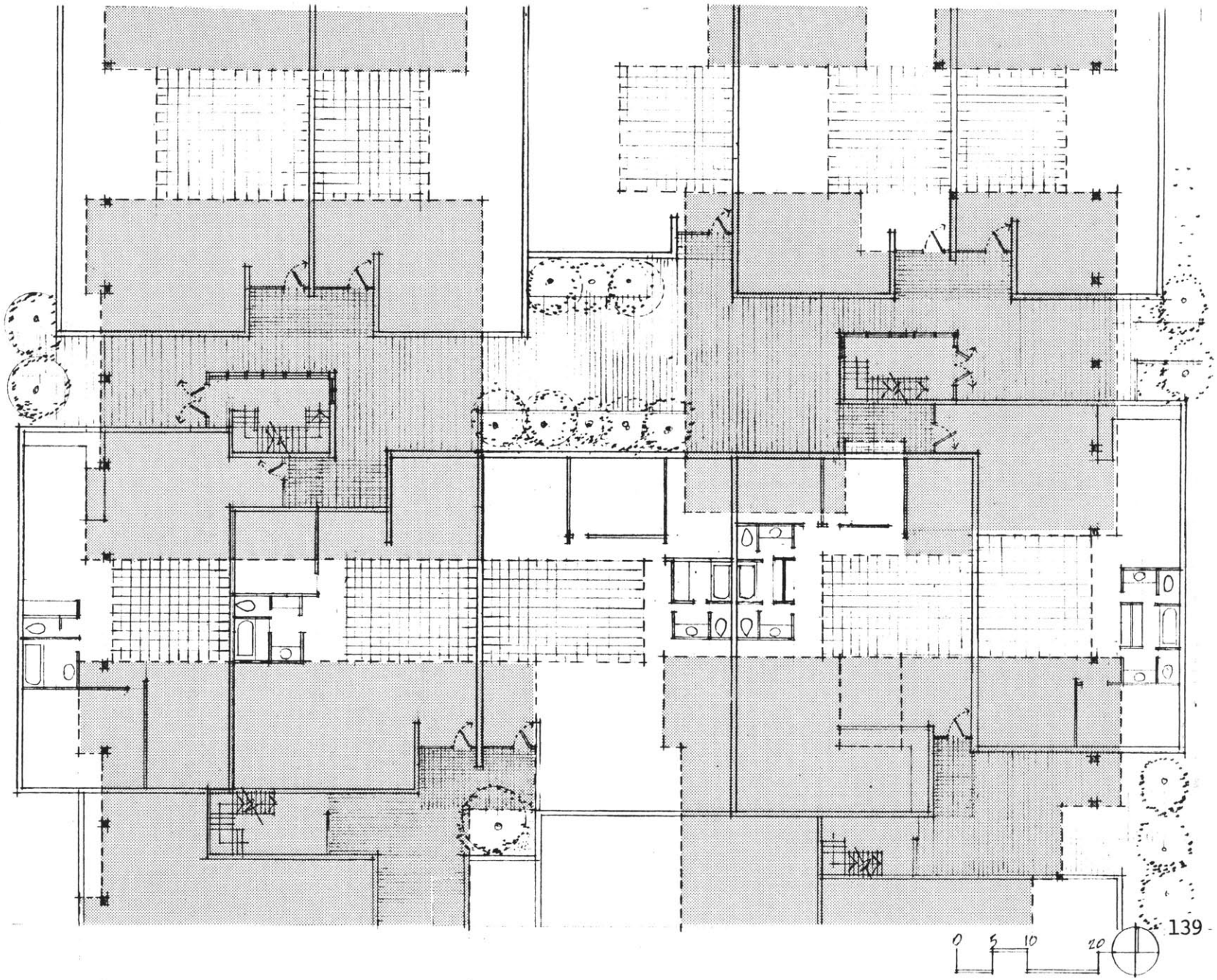
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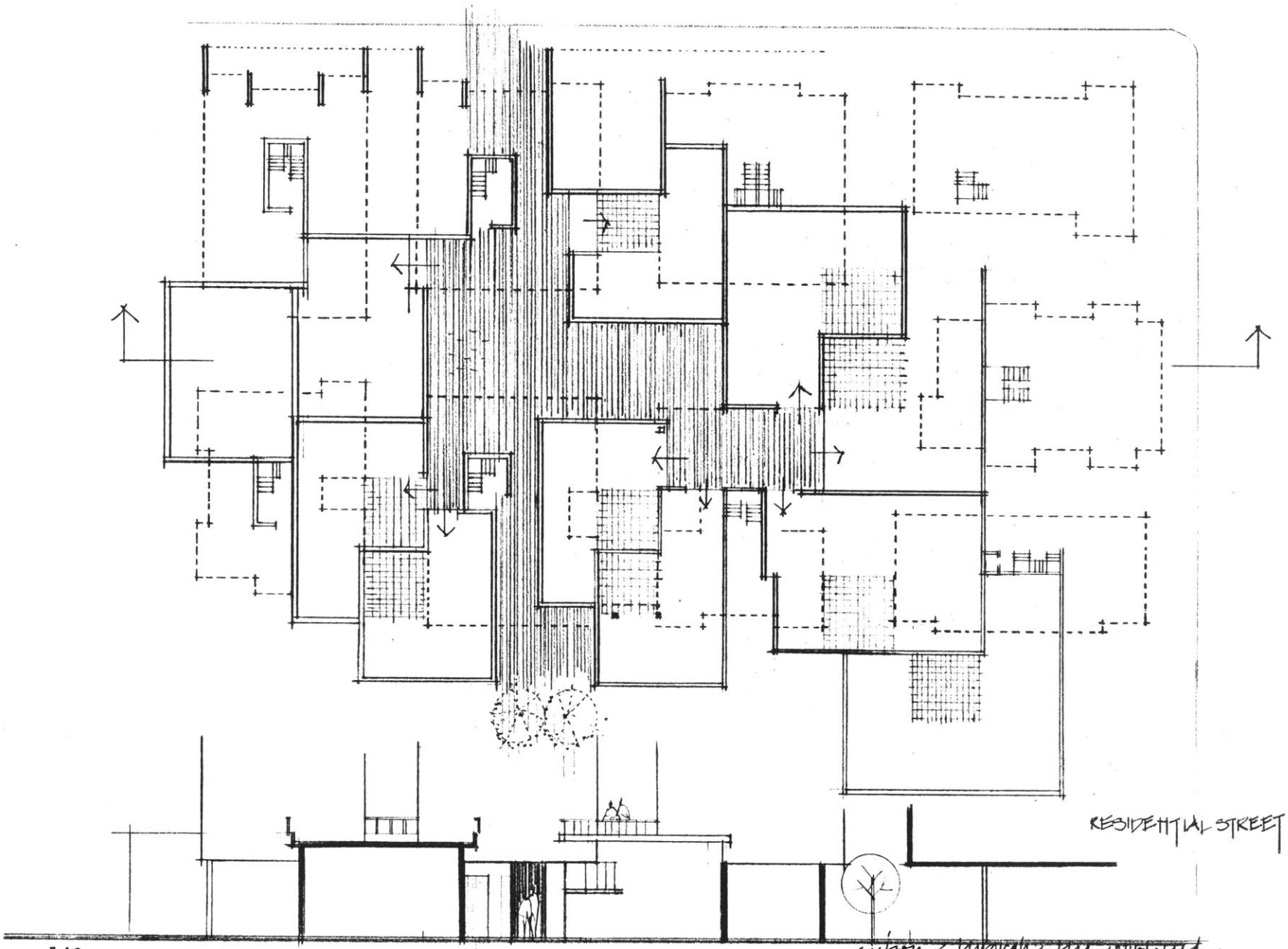
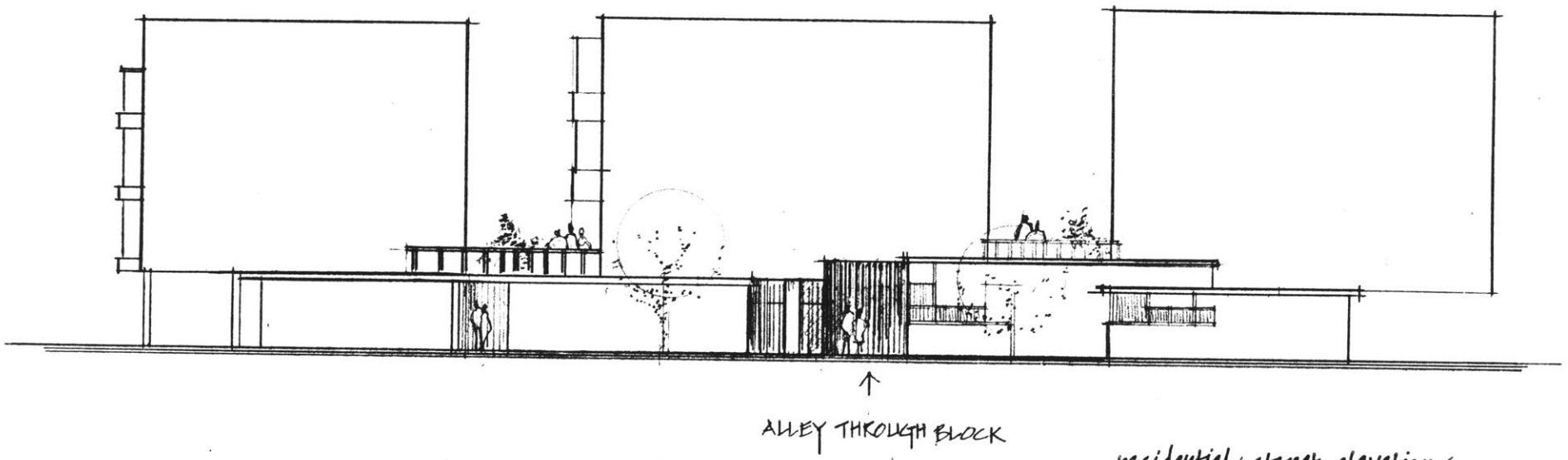
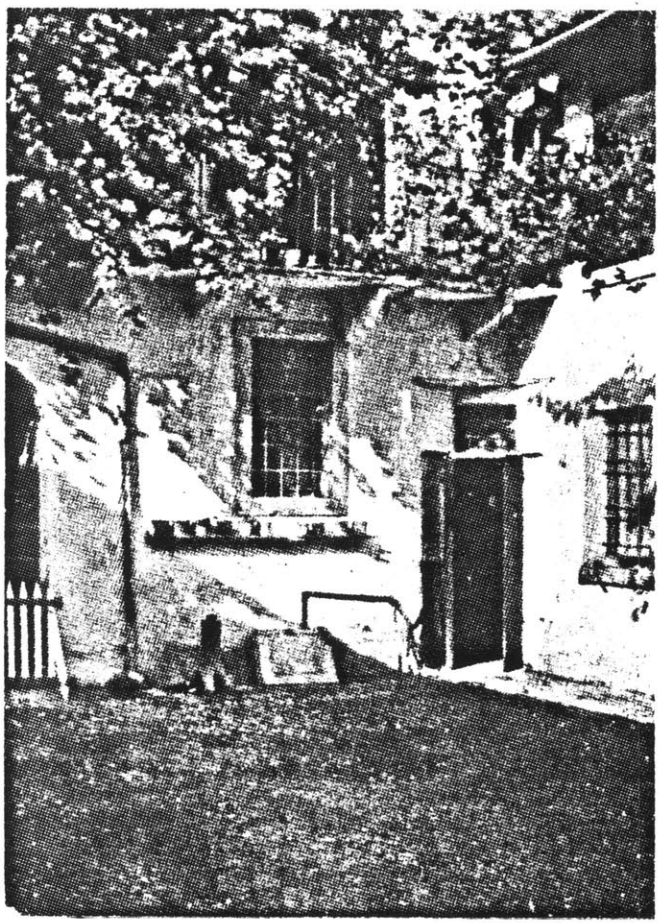
10
20



section through the courtyard

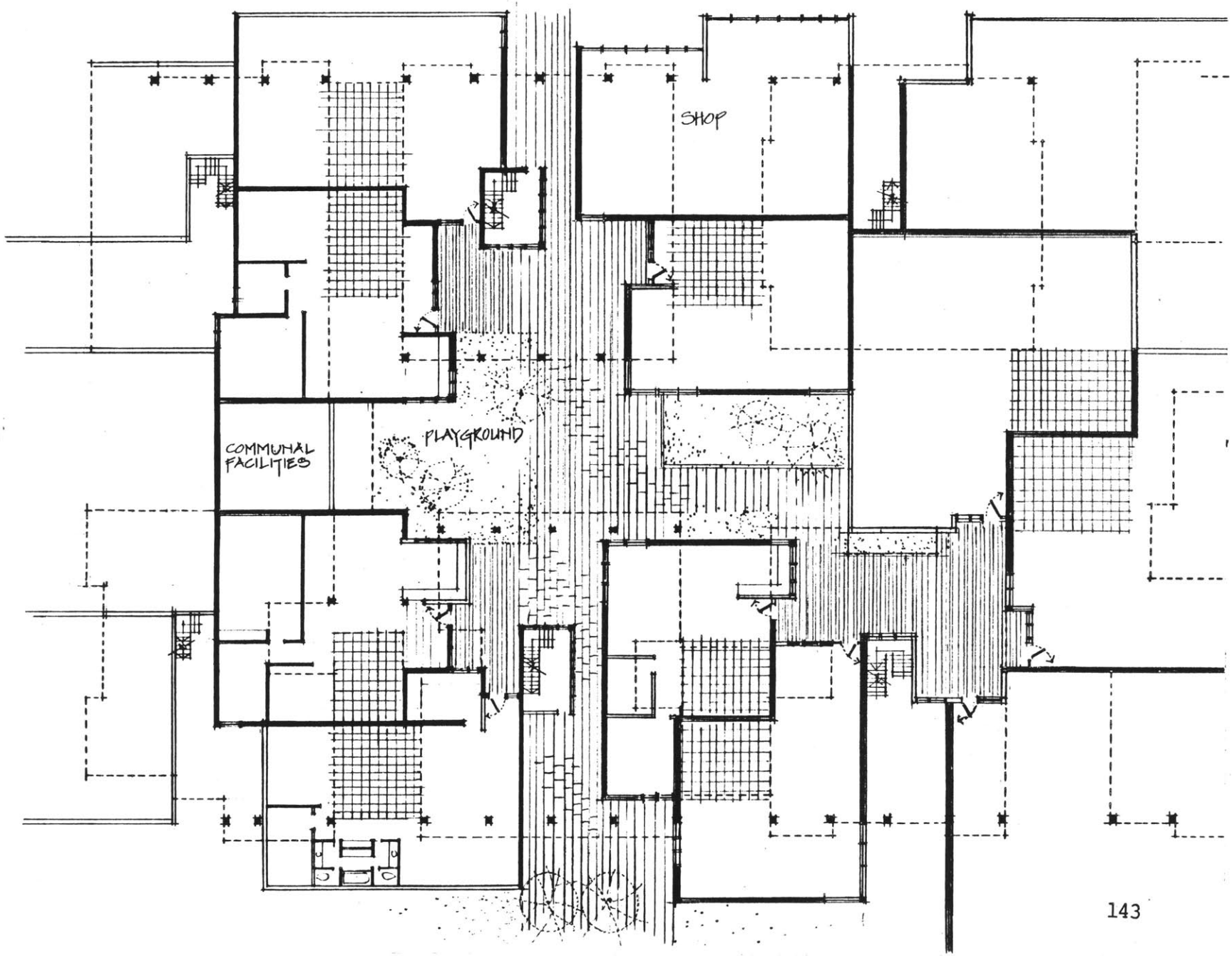


residential street elevation



from Christopher Alexander, A pattern Language, p. 513

from Christopher Alexander, A pattern Language, p. 192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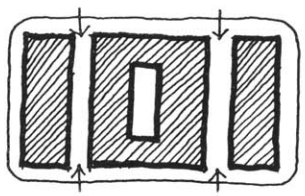
COMMUNAL FACILITIES
PLAYGROUND



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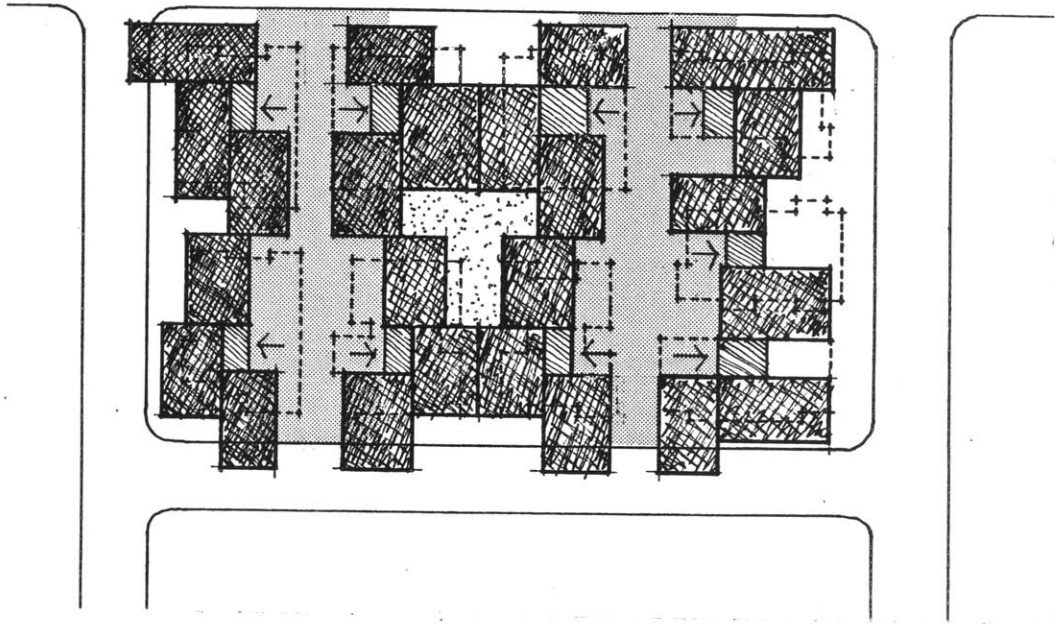

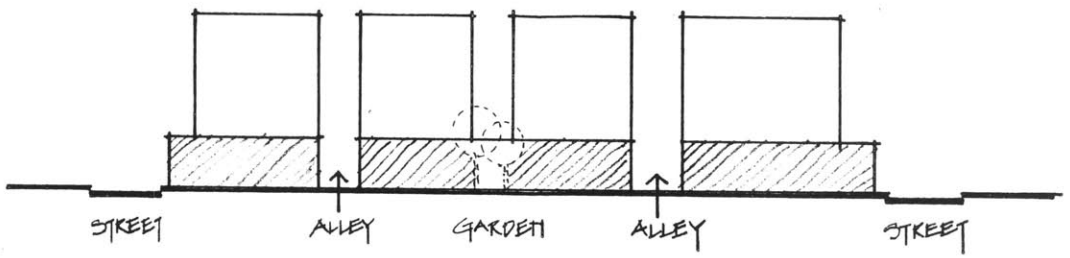

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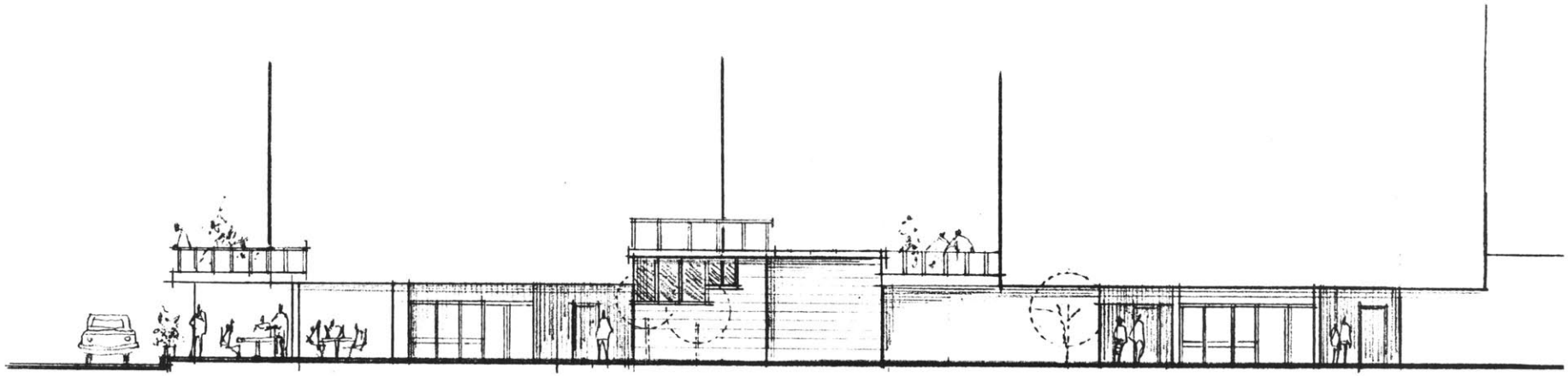
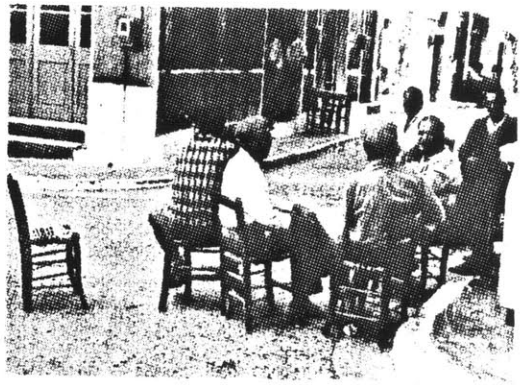
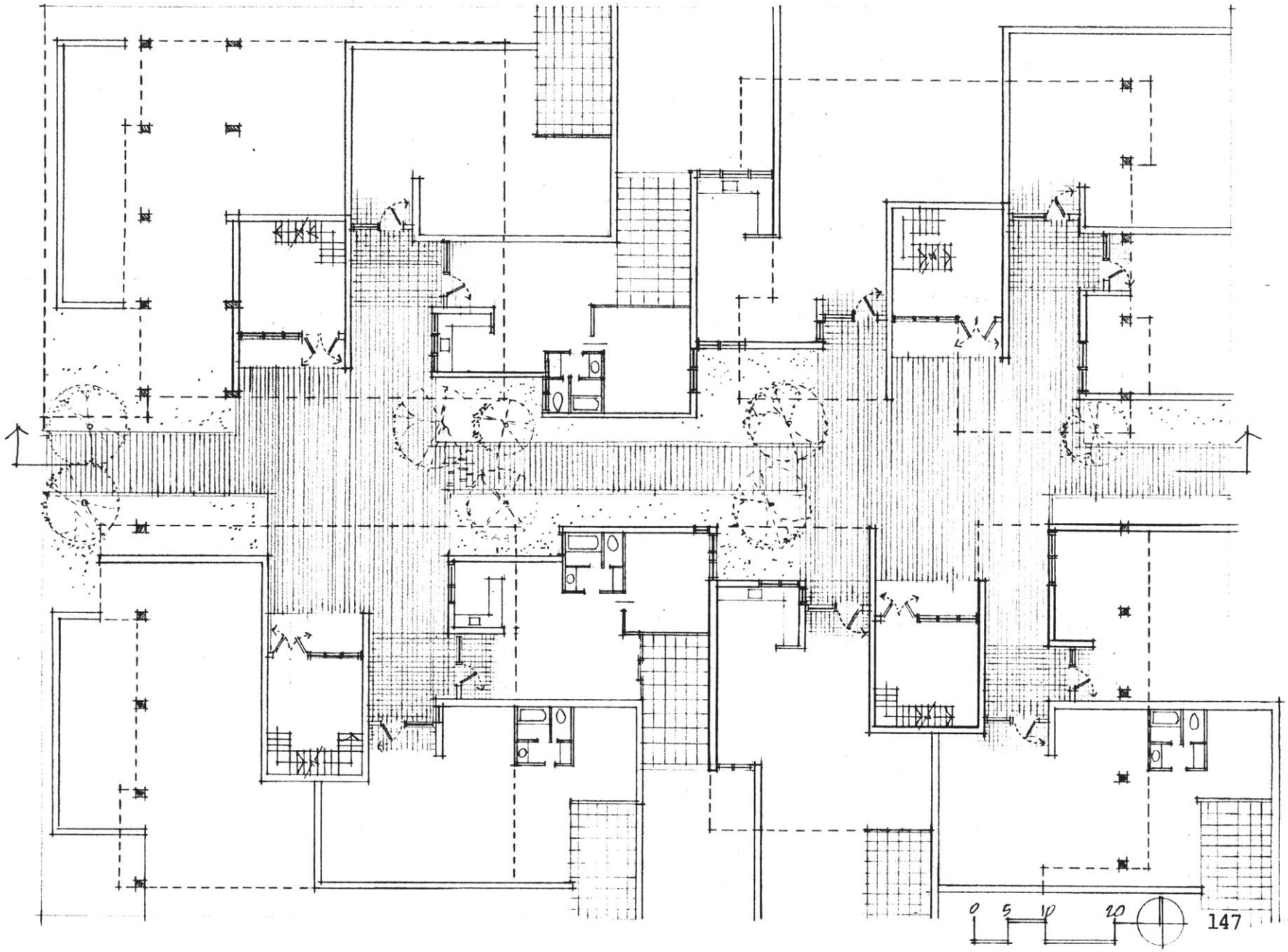


section through alley

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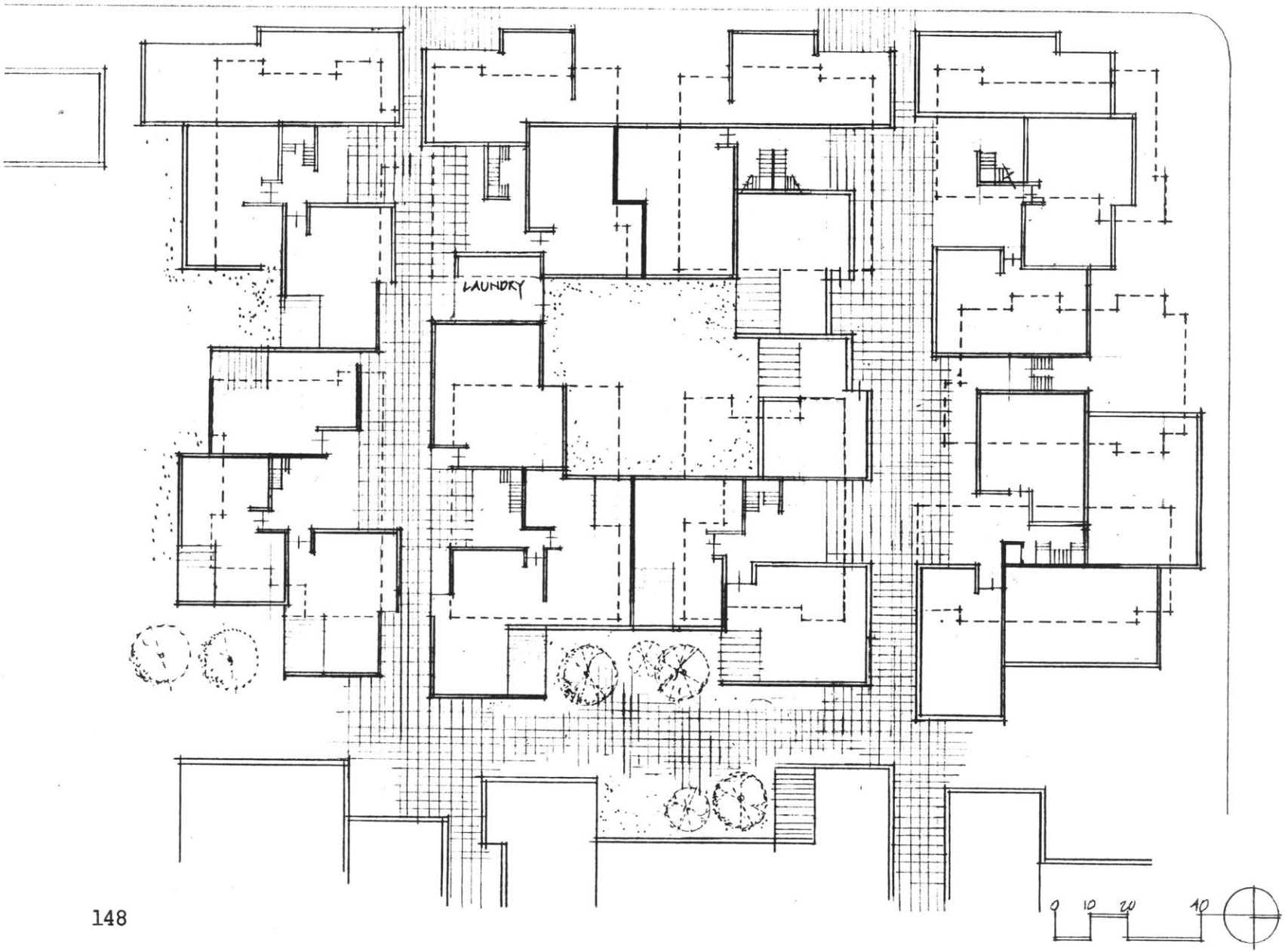
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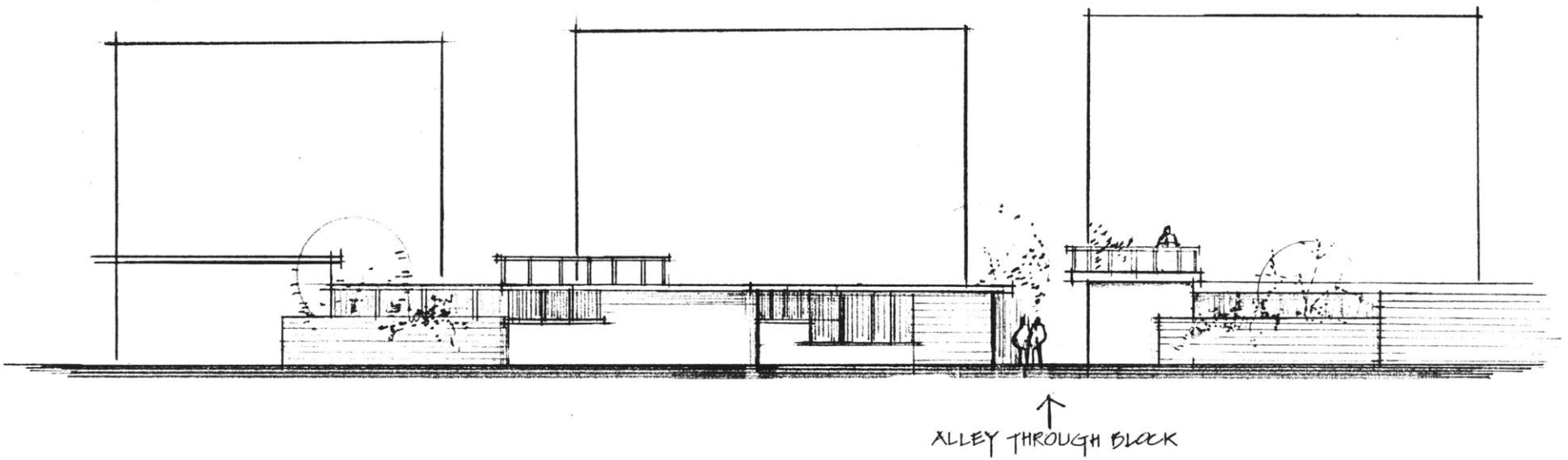
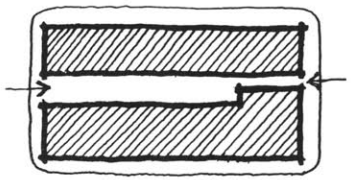


residential street elevation



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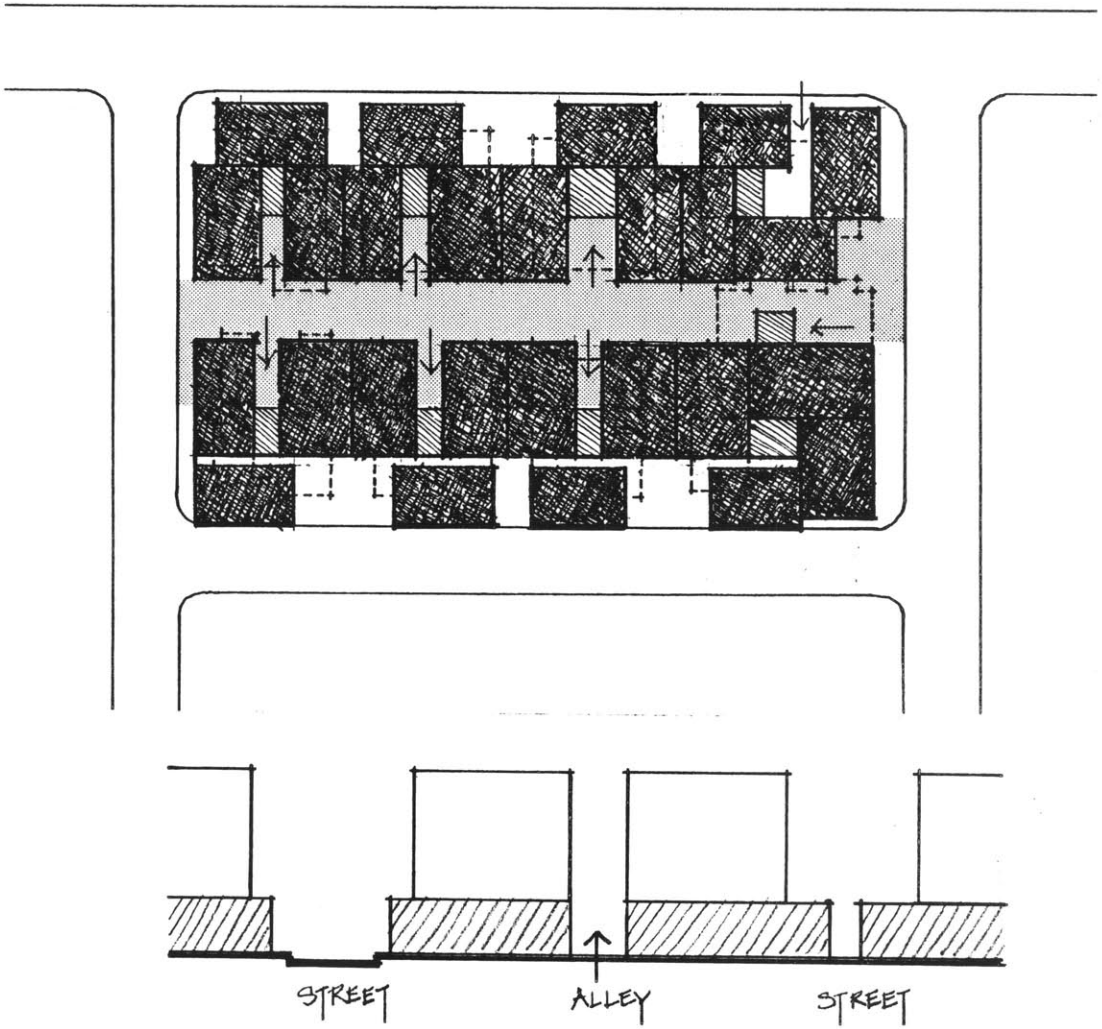

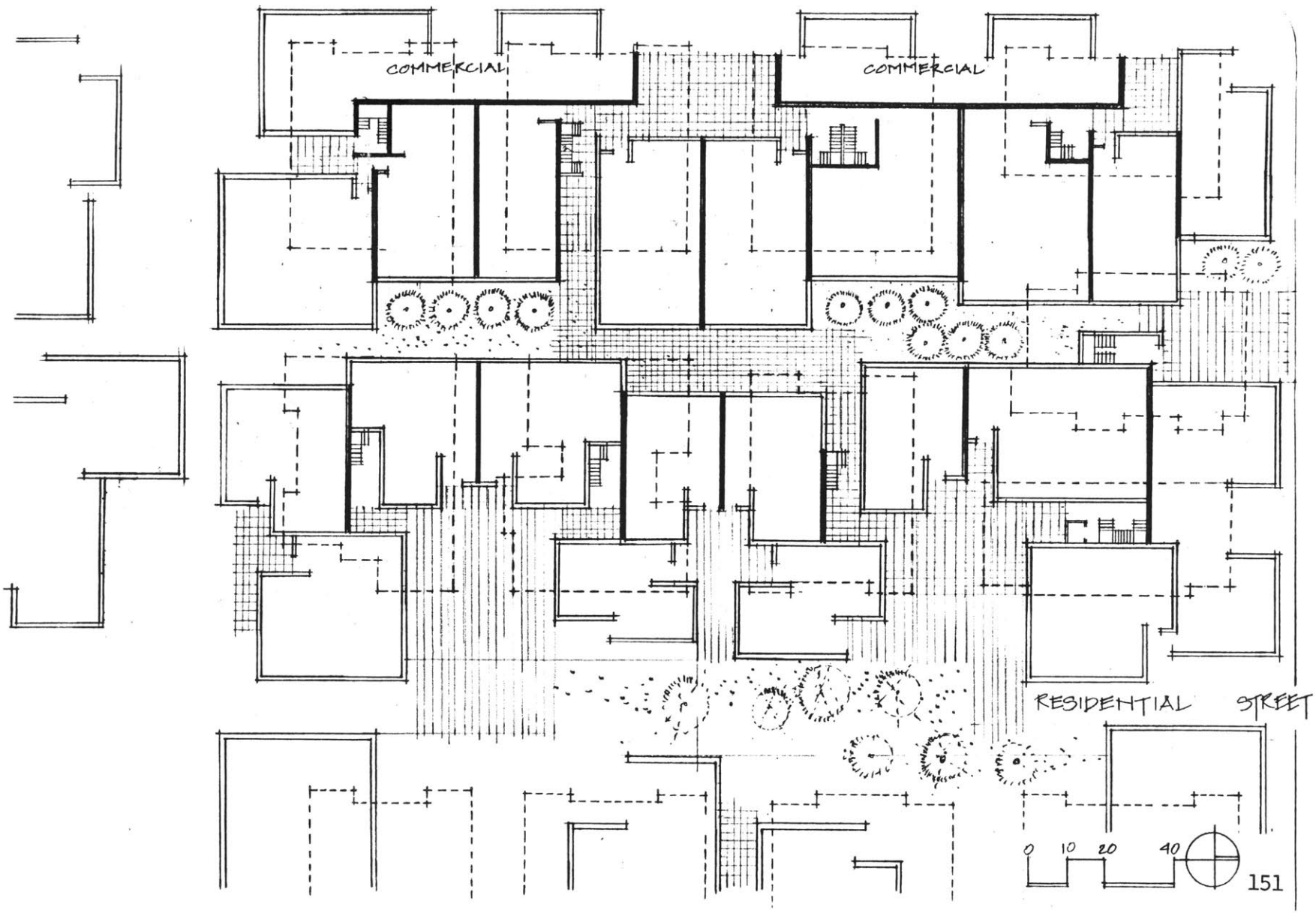
COMMERCIAL STREET
COMMERCIAL
COMMERCIAL
RESIDENTIAL STREET
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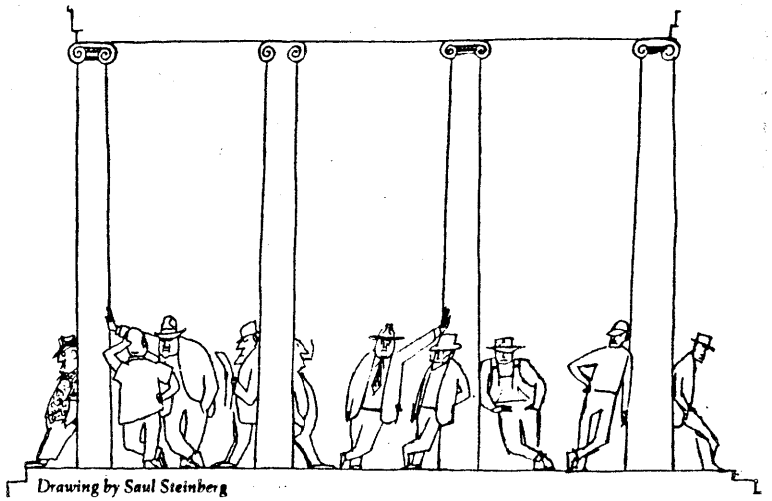


Drawing by Saul Steinberg

Conclusion

The character of a city can be perceived through the way in which its buildings comprise the urban spaces. These urban spaces, streets, alleys and yards, which are formed between the buildings, are as important to urban man as the buildings themselves; these are the spaces in which life occurs. In investigating the character of North Tel-Aviv I have emphasized the study of a specific building type and the urban spaces resulting from its assemblage. The character of residential North Tel-Aviv is greatly influenced by this building type and by the way in which it makes-up the city. A result of a speculative development of singular interventions, this building makes only a minimal effort to define and enclose the open space around it, and appears as a discrete object divorced from the life of the street.

Thus in the real needs of growth and expansion it is recommended that these buildings should be further

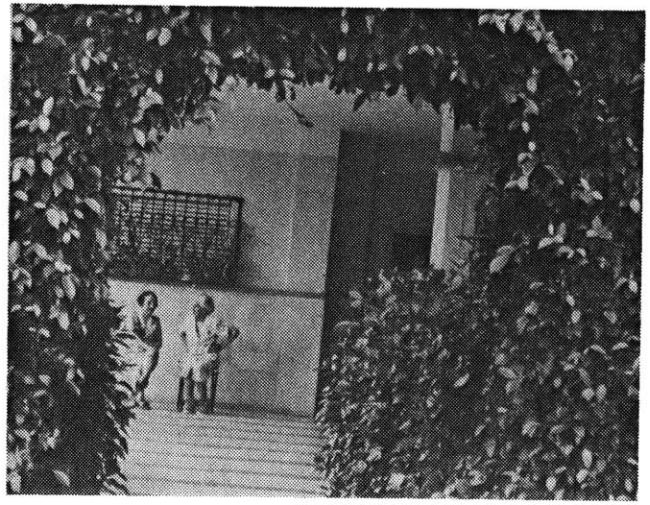
developed to make a better definition of the open space around them. As the construction of the buildings lends itself to changes at ground level, the first floor can be rebuilt to enclose the setbacks inbetween the buildings and between the buildings and the street. This process results in a variety of new open spaces, private, semi-private and communal, that are specific in form and in function in order to promote a better use of the land around the building.

In the development of the buildings, a new look was given to the organization of the residential streets and the definition of neighborhoods. The basic hierarchical order of the streets in North Tel-Aviv has potential for further development, and it presents a foundation for the establishment of meaningful communities.

Thus the residential environment of North Tel-Aviv lacking a range of spatial and social experiences, was further developed in this

thesis to include some of the original qualities intended by its founder, Sir Pattrick Geddes. His idea of hierarchy of the urban levels was expanded to include more definition between the individual building and the city as a whole and his concept of the neighborhood was given physical and spatial definition. His ideas were extended to the levels of the house and the street through the definition of the street edge and through the study of the spaces around the house. This land can be shaped and enclosed by the houses and built definition to differentiate a range of open spaces.

Tel-Aviv has experienced enough urban demolition, the resolution of each made equally through the design of more singular buildings. Instead the existing fabric can be seen as an underutilized and underdeveloped urban context in which physical modifications and additions will promote a spatial and physical urban system compatible with a rich social system.



Drawing by Saul Steinberg

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