

VERTICAL NEIGHBORHOODS

by

Terence Shealy Meehan

B.A. Georgetown University 1970

Submitted in Partial Fulfillment of the  
Requirements for the Degree of

Master of Architecture

at the

Massachusetts Institute of Technology

September, 1983

c Terence Shealy Meehan 1983

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... MAXFIELD PARRISH · 1900 ...

**ABSTRACT . . . . .**



EMPIRE STATE HOTEL Studio '82

abstract .....

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Submitted to the Department of Architecture on  
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In most high-rise buildings the subtle distinctions between public and private, inside and outside, are missing. A person is in an apartment, in the corridor, in the elevator or on the street. There is no visual or spatial richness in the transition. This thesis is an attempt to examine the transition zone in a high-rise apartment building. I have limited my examination to only the transition zone in the middle section of a high rise. The issue of how a high-rise touches the sky or connects to the ground are separate issues. Although all high rise buildings have a site, and the building design has a site, I am knowingly glossing over this issue. The climate zone is New England. Also there is clearly a North-South-East-West treatment. I have glossed over the design of the units, except how they affect the transition. This leaves to be studied and designed, an enlarged zone of access, horizontal; corridors; vertical; stairs and elevators. This enlarged zone will be referred to as a vertical neighborhood.

The examination of the vertical neighborhood began in Bob Slattery's studio in the fall of 1982. The studio concentrated on site, neighborhood and building mass. The thesis design of the neighborhood was generated in drawings and model. The model, 1/4"=1'-0" scale, was photographed and accompanies the text. Four elements are key:

- (1) the wish, on my part, to design a high-rise building to function as a vertical building not as a stacked horizontal layercake,
- (2) the requirement that the area for horizontal and vertical movement be neither bland nor isolating but magical and supportive,
- (3) the need to include semi-private and semi-public zones in the building,
- (4) the desire of people to identify where they live and to be able to express where they live.

The last three elements are chapters and are influenced strongly by John Graham's thesis. The fourth element is woven in between. The conclusion is a journey through my drawings starting with sketches building to hard-line drawings, and concluding with sketches for a redesign.

Thesis Supervisor: -

John R. Myer  
Professor of Architecture  
Head of the Department

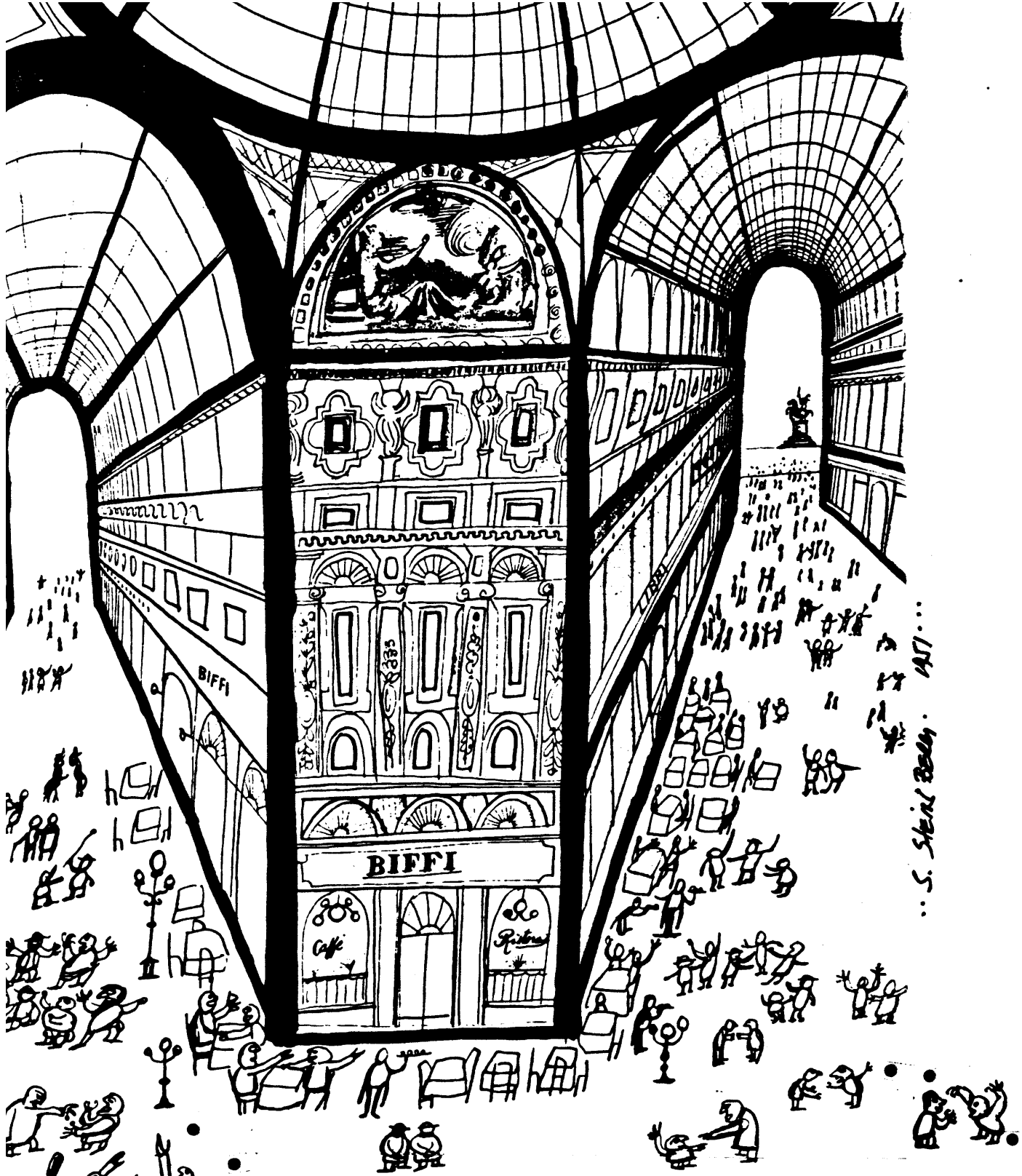
Thesis Supervisor: -

Robert Slattery  
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... S. Steindl Bely. 1917...

... . ACKNOWLEDGMENTS. .



To my advisors:

- ... To Bob Slattery for teaching a high-rise studio and working with me during this thesis.
- ... To Jack Myer for his attitude toward design and his recommendation to build a model.

To my readers:

- ... To Waclaw Zawleski for his assistance in developing the structural system and his warm, supportive personality.
- ... To John Habraken for his committment to clarity of thought, for his recommendation to control the overlapping between private and public for his encouragement and enthusiasm.
- ... To Maurice Smith for a specific, special design critique that reaffirmed my desire to understand his wonderful design attitude.

To my parents:

- ... To my father for giving me the drive and my mother the spirit that are key to me.

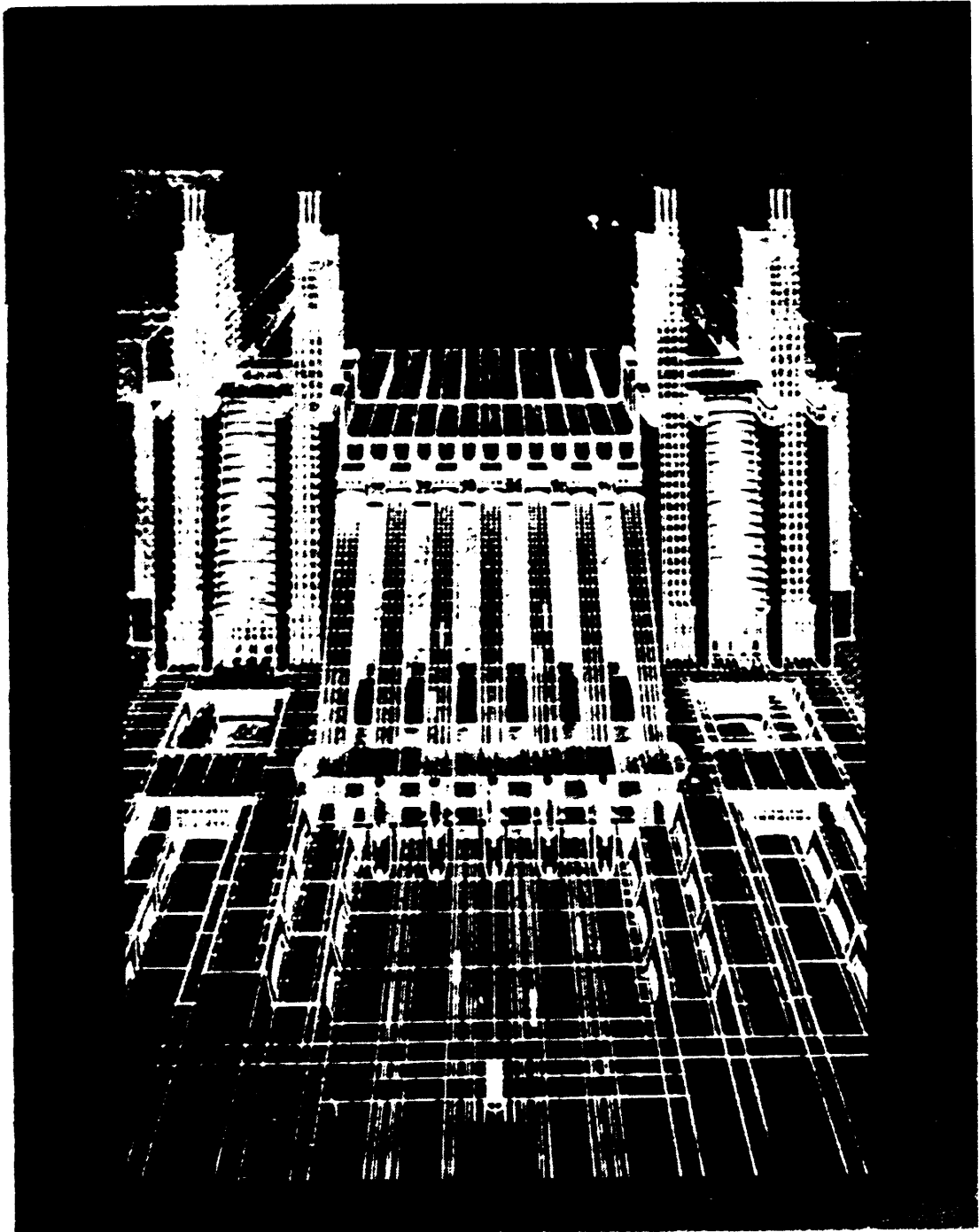
To friends and people who helped:

- ... To Steve for his friendship and his push at the end without which this thesis would never have been executed as timely or as well.
- ... To Michael for his generous support before and during this thesis, for his contagious sanity and in particular for his assistance writing this thesis.
- ... To Nick for his assistance photographing and building the model, for his boudy humor which kept me laughing.
- ... To Jookun for his friendship, his advice, and his inability to run longer distances faster than I.
- ... To Leon Grossier for his consistant flexibility and his helpfulness during my stay at M.I.T. and especially during my thesis.
- ... To Brad, Steve, David, and Jose for their willingness to educate me and to the non-residents of 5-418 for their comic relief.
- ... To all the others for their criticism, support, and time during this thesis and during my stay at M.I.T.

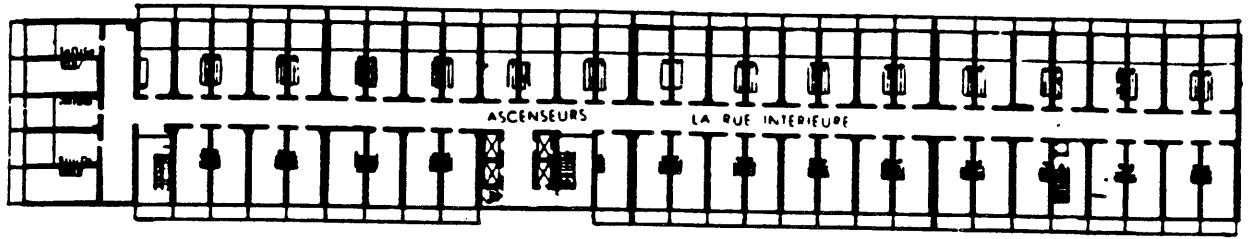


And mostly to Elizabeth for all of the above and lots more.....

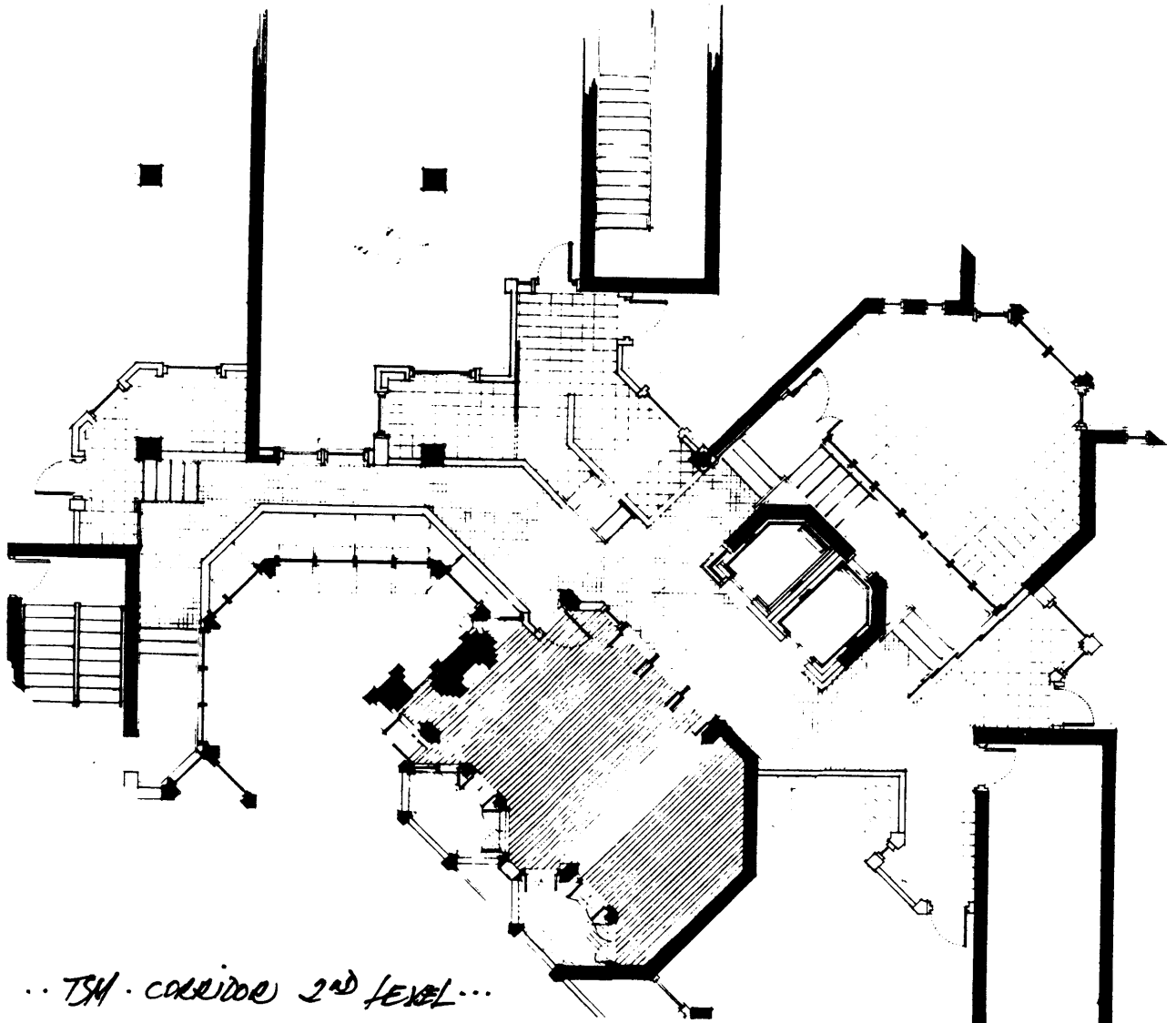
**PREFACE . . . . .**



..Sant' Elia. 1914 ...



.. CORBUSIER · CORRIDOR · MARSEILLE ...



.. TSM · CORRIDOR 2ND LEVEL ...

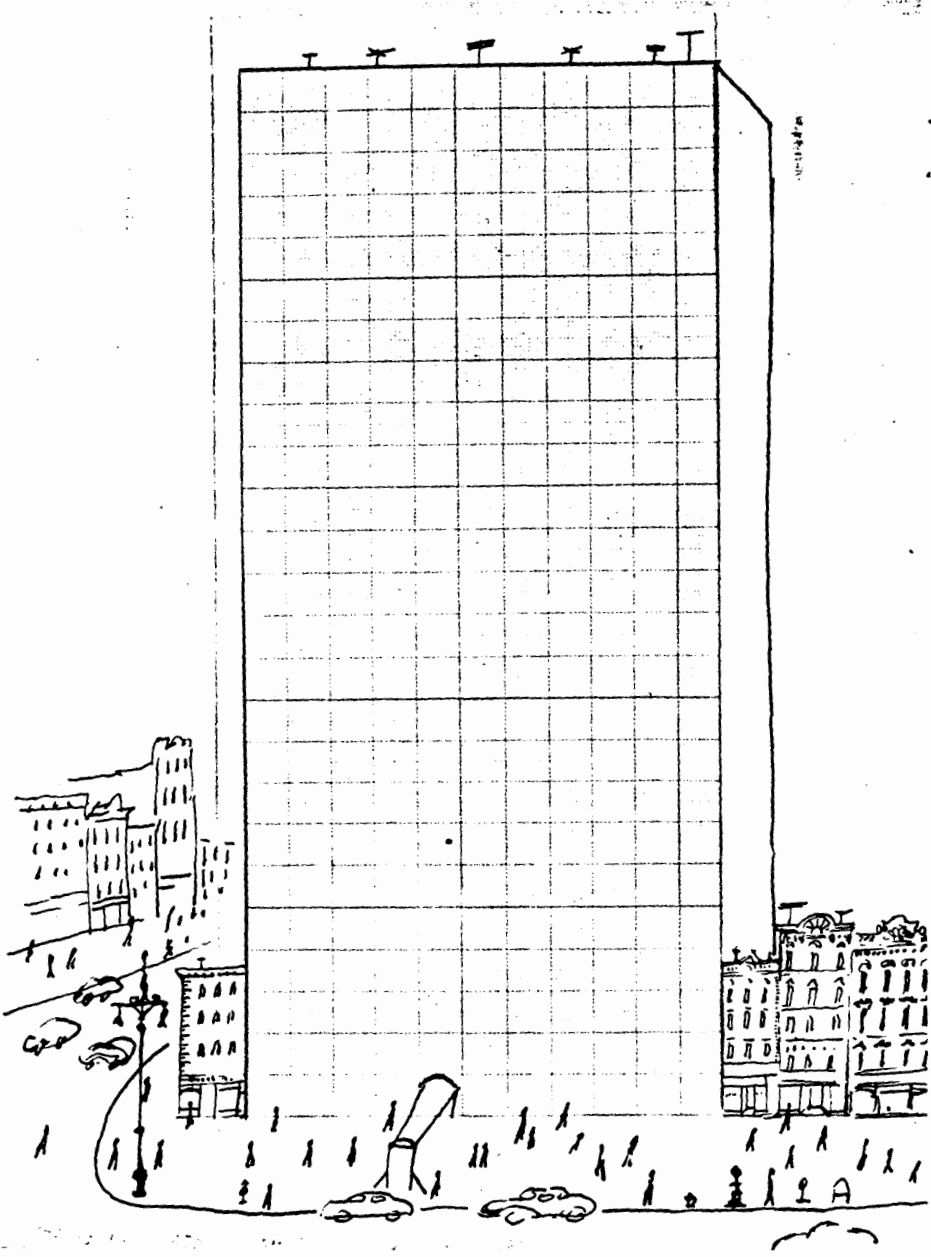
## preface.....

I have chosen to write my thesis on a vertical neighborhood. The challenge of designing a corridor system that fosters a supportive environment versus a sterile, isolating environment fascinates me. The corridor in a high rise is a narrow often overlooked topic, but not unimportant.

Some people work through a subtractive process, some additive. Some sculptors, given a lump of clay, will carve into it to form the features of the subject, while others will add more clay to the lump to form an ear, a nose, or a chin. By temperament, I am additive. I, therefore, chose one of the smallest and usually blandest zones in a residential high-rise building hoping to add quality and habitability to it. My examination of the corridor area led, in part, to the fuller development of a concept referred to as a "vertical neighborhood."

Very little has been written about this area of a building. Volumes have been written on paths in Italian hill towns, but there has been very little written about how modern city dwellers enter their building and or their living units. John Graham in his thesis points out that there are few illustrations or photographs of the corridors in Corbusier's innovative apartment at Marseille. Even in this renowned building, the issues concerning where residents live and how they get to where they live is





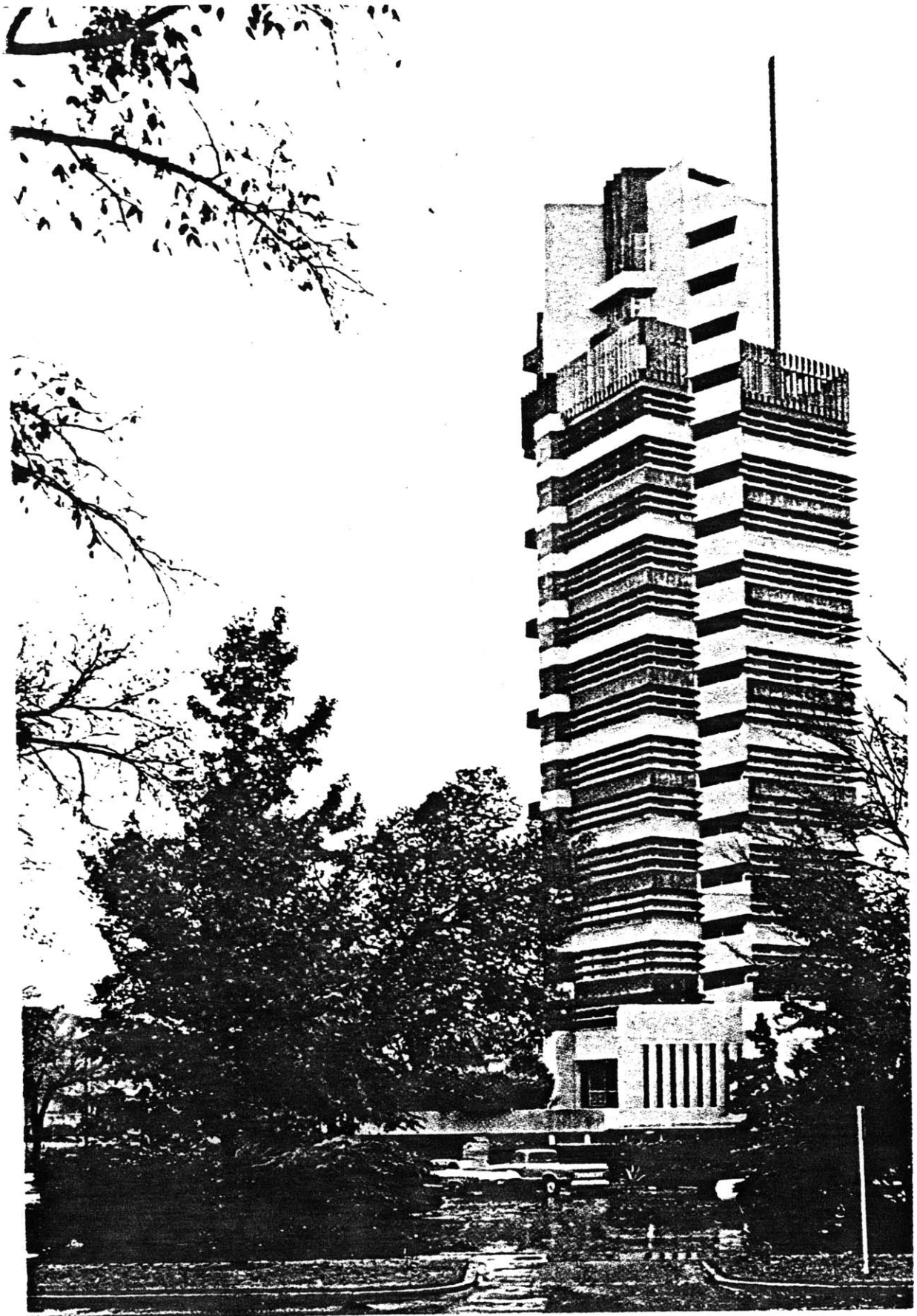
...Gul Steinbeek: 1950. GREAT NEW BUILDING...

given almost no notice. This is most unusual for a building that was designed as a community for people.

I have lived for many years in high-rises. As a child I remember leaving my apartment to enter a barren tunnel dimly illuminated night and day by the same artificial light. On the way to the elevator I would pass the metal doors of other units with multiple large locks and little peep holes. When I reached the elevator I waited for a box the size of my bathroom, but with no windows and a door with no handle that I could neither open nor close. If there were other people in the box, I would shuffle in and turn my back to them. Seldom was there any conversation. I was sure I was on the ground only when feet shuffled out of the box through the dark foyer toward the outside. On the street I often looked up and wondered where I had just come from and how I got to where I was. All the windows were the same. This to me, was not an enjoyable experience.

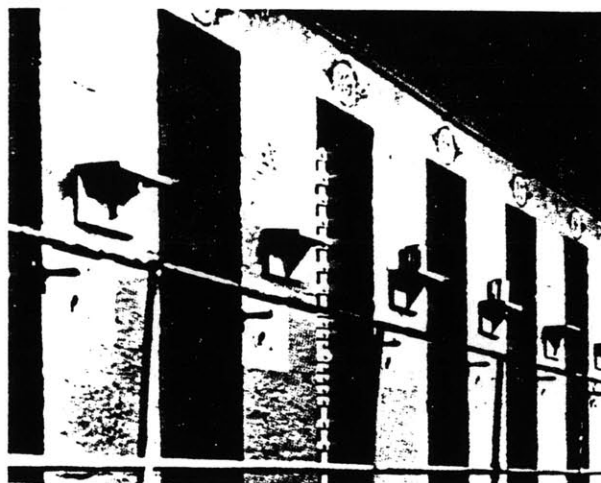
Initially, I picked a narrow topic which suited my additive tendencies and which fascinated me--the movement in a high rise from the unit to the ground. Images of old fashioned, screened elevators in Paris apartments, images of Sant' Elia, images of Hugh Ferriss, images of Grand Central Station with its multiple levels flashed by. Quickly, I warned myself not to let this design get out of control. Sequentially I felt that influenced by these images, not dominated by them, the corridor of a high rise could be a magical place.

**INTRODUCTION . . . . .**



FRANK LLOYD WRIGHT · 1953 · PRICE TOWER...

*Inside cells  
of South Wing,  
Auburn Prison.  
The small  
dimensions  
of these  
early cells  
are evident.*



## introduction.....

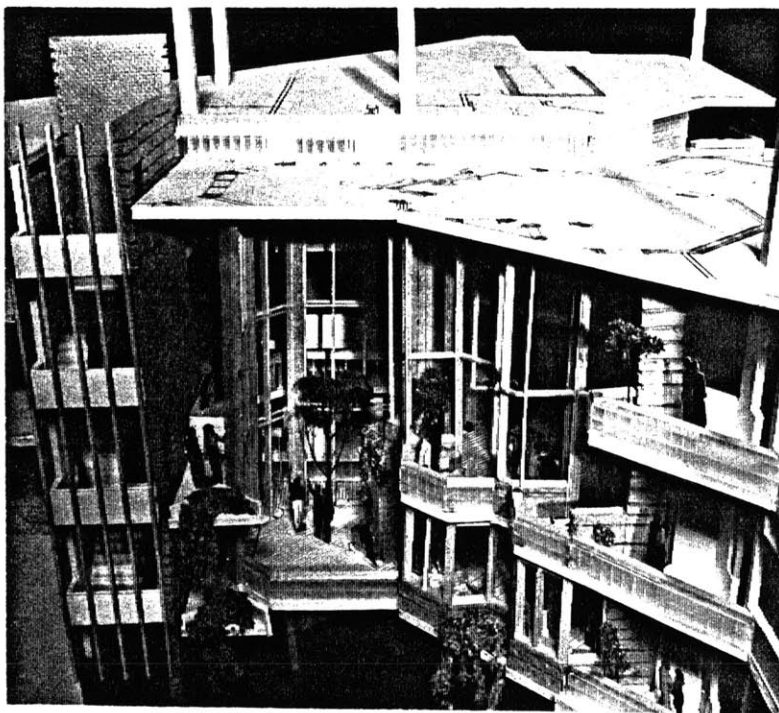
In most large high-rise buildings the first and only transition zone is the lobby of the building. Stepping off the elevator on an upper floor, one faces only a blank, bland corridor. A visitor from an earlier time might find a strong similarity between luxury high-rise corridors and nineteenth century, prison corridors, except for the addition of large amounts of artificial light. Most corridors are one story, totally enclosed spaces with no more definition than a line of uniform doors with multiple locks to units. The only connection between the corridor and the unit is a peep hole. There is no connection from corridors to the outside and no visible connection to other floors. The corridor is just an extruded buried tube that exists in a layercake building--each floor layered one top of another--each corridor identical.

Corridors which demonstrate awareness of:

- (1) horizontal and vertical movement,
- (2) articulated semi-private zones and semi-public areas,
- (3) a desire for people to identify where they live and to be able to express where they live,

will allow not only for a friendlier, richer environment but will also likely cause the structure

*massing  
model  
of whole  
building  
south side  
scale 1/16"  
fall '82*



*model  
vertical  
neighborhood  
south side  
scale 1/4"  
spring '83*

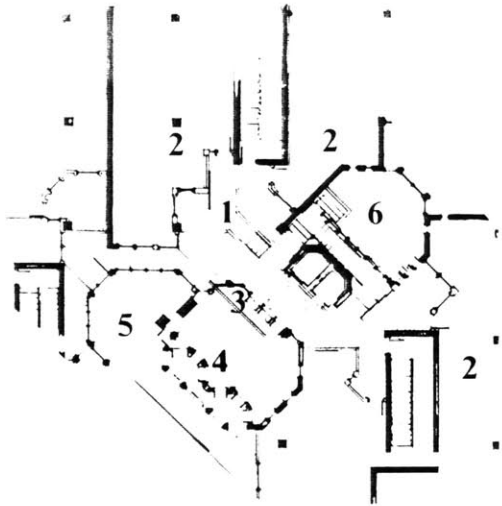
to function more as a vertical building. Further, the usual tubular corridor and the layercake building is broken down.

A new corridor would consist of units, circulation and common spaces. This new space or group of spaces serves not only one floor but three floors, referred to in this thesis as a neighborhood. The middle section of the building is comprised of five, three-story neighborhoods of twelve units each. The base of the building is five stories high with living units and large function rooms, such as health club and banquet rooms. The top of the building is a three-story penthouse and a large, outdoor, common roof deck. This design poses an alternative to ordinary high-rise living. I am not recommending this type of building become a norm, it does present an alternative. Nor am I recommending that all of the design suggestions in this paper be built in a single building. Nor am I proposing that the ideas for such a building be built exactly as I have designed them. Rather, I have designed components of a building to be examined.

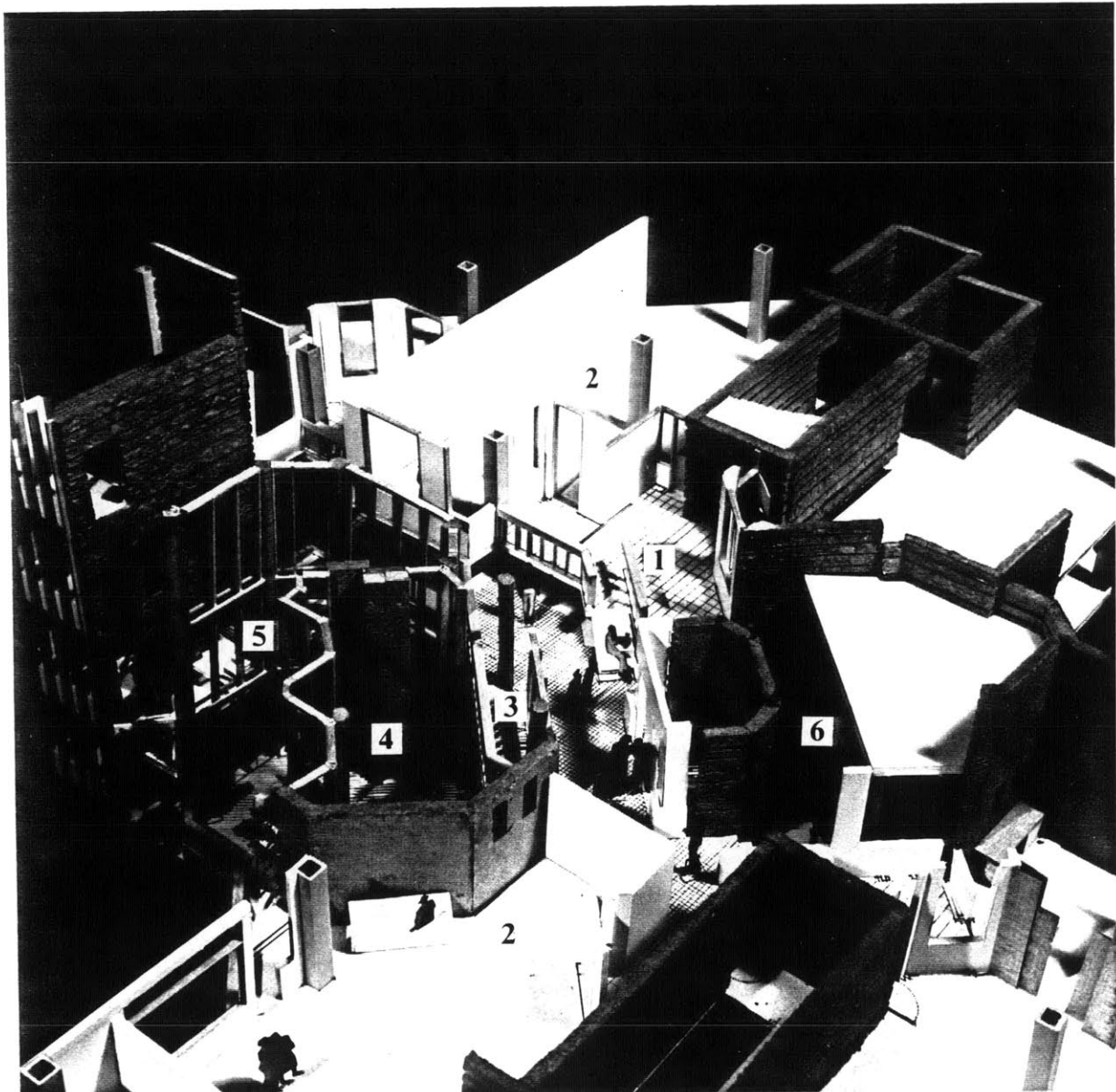
..... movement

The horizontal movement is not on a double-loaded corridor. Views to the outside are many and varied. That the corridors in high-rises are far from real ground demands that a "new ground" be erected. Without some intermediate ground the view downward is frightening. The dimension of this new corridor cannot be the same dimension as an



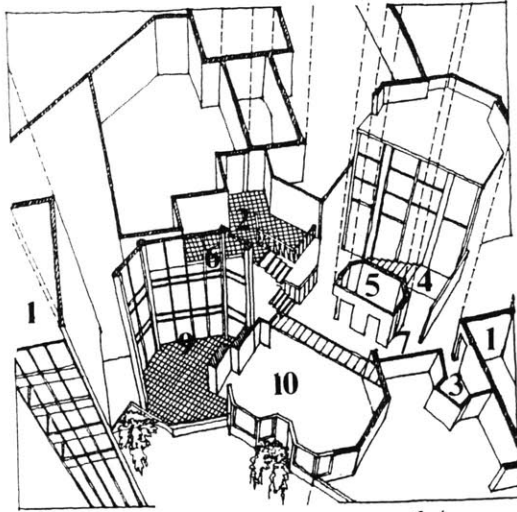


- key • *third level plan*
- 1. front porch
  - 2. unit
  - 3. balcony
  - 4. double-height screened porch
  - 5. triple-height screened porch
  - 6. triple-height room on north
- model • *looking west*



extruded bathroom in height or width. In width, my corridor is varied enough to allow for people to stop, talk, and even sit. In height, my corridor is reinforced by the three-floor neighborhood. Within each three-story neighborhood, the corridor is terraced intermittently. Finally, the new corridor bends on itself so one can see the beginning and the end. These strong visual connections along the new corridor within the neighborhood begin to break up the nineteenth century, prison-like tubular, cellular, layercake high-rise design.

The open stair and elevators allow for connections and strengthen the sense of vertical movement. Stairs that are totally closed from areas they serve preclude the possibility of social connections. In addition to fire stairs, an open stair is included to encourage pleasant movement within the neighborhoods and intensify the interior verticalness of the building. The stair, generous enough for people to stop, talk, and sit, encourages social interaction. People using the stair should have a view of the neighborhood within the building and are part of larger common areas. The location and experiences along the stair encourages increased use. Longer distances are travelled via two elevators, one an express stopping at every neighborhood and one a local stopping at every floor. The elevators are not closed off from the



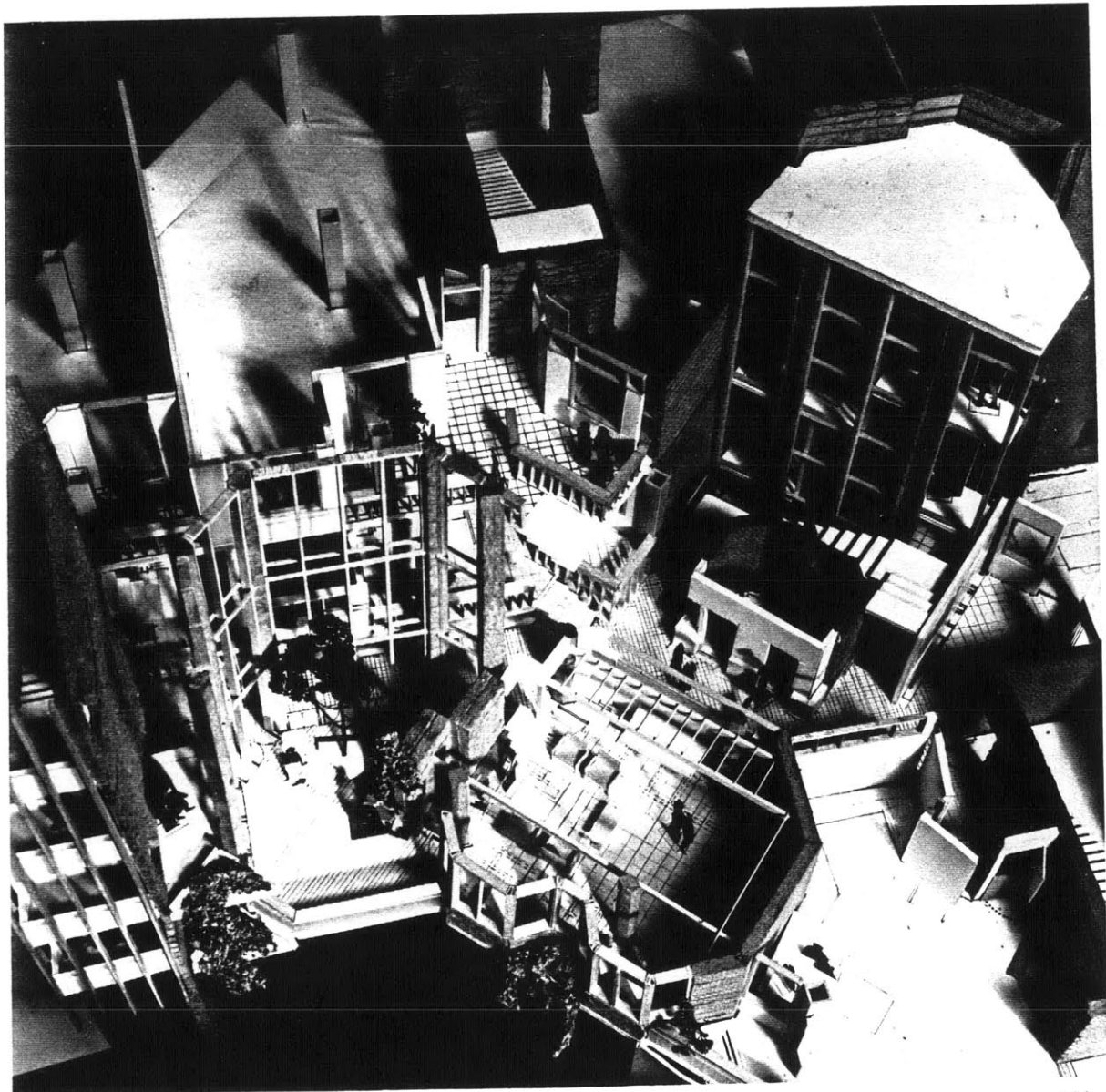
key

● *model abstraction*

- 1. fire stairs
- 2. front porch
- 3. entrance alcove
- 4. main stair
- 5. elevator
- 6. screened balconies
- 7. corridor
- 8. glazed screen
- 9. outdoor deck
- 10. common reading room

model

● *south face of neighborhood*

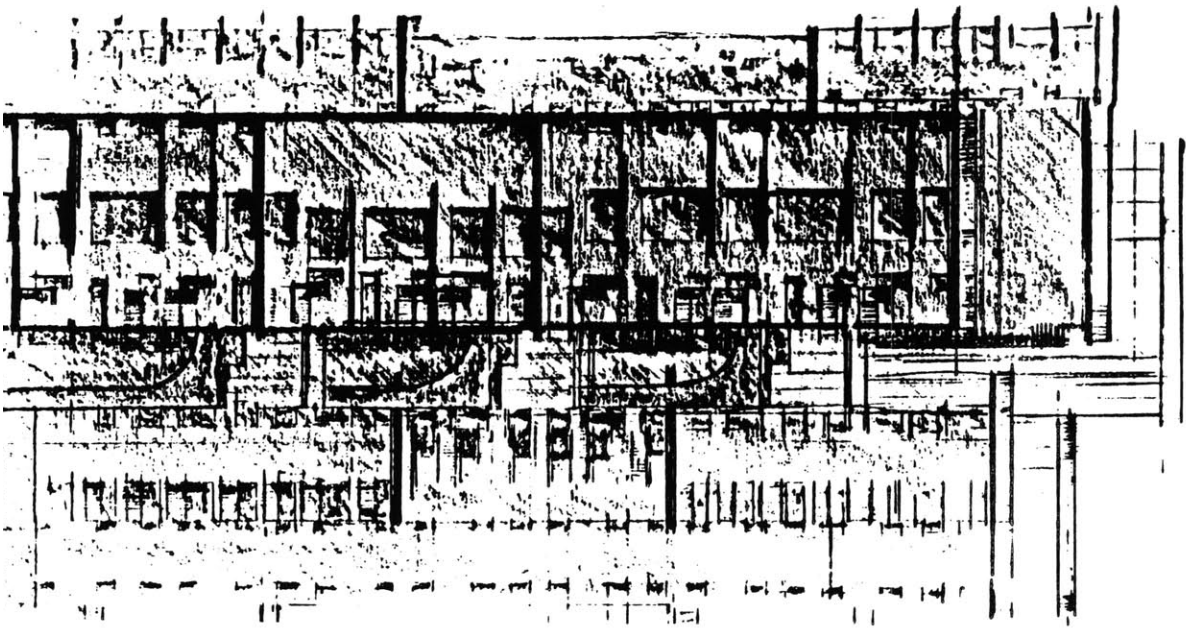
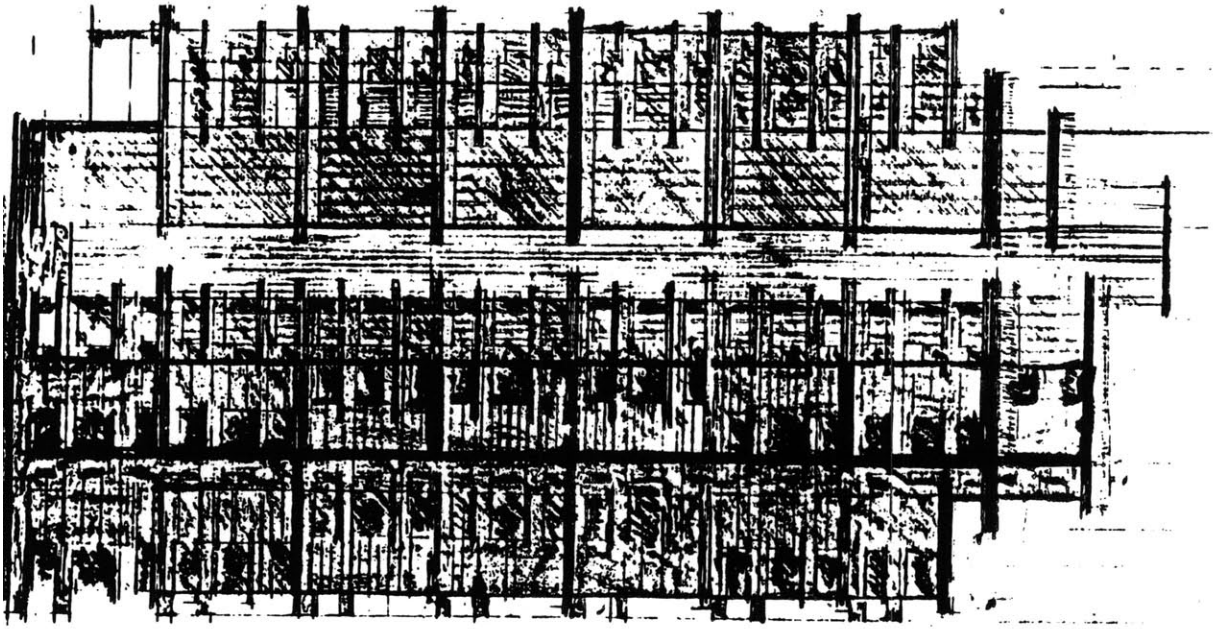


neighborhoods but have windows which permit occupants to view neighborhoods as well as the movement of the elevator. Each elevator has a window, one elevator has a southern view, the other a northern view. The windows reinforce connections to the neighborhoods and the sense of vertical movement. Most modern elevators conceal the fact that they are moving vertically.

..... space

Semi-private areas--front porches, entrance alcoves--within the neighborhood expand the horizontal space of the corridor. A porch or entrance alcove displaces the edge of the corridor. While the porch clearly belongs to the unit it faces, it expands the corridor. Because the western units are terraced and have front porches, the corridor's sense of space is expanded horizontally and vertically. Semi-private areas versus just a peep hole for security softens the relationship between the inside and outside, and makes a potentially, friendlier corridor.

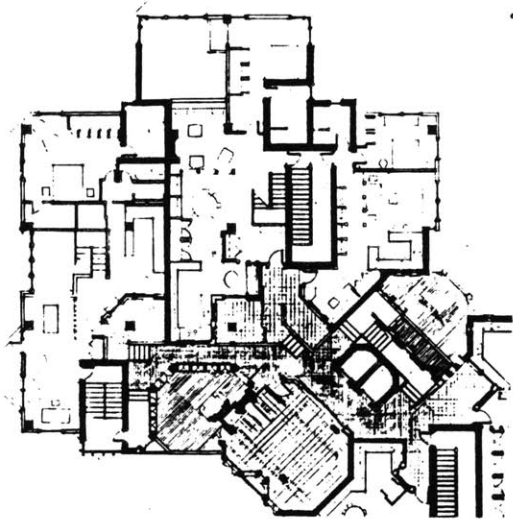
Semi-public spaces are arranged vertically as a "shishkebab", rather than horizontally, to encourage more successful use of the spaces and to encourage vertical movement within the neighborhoods. These semi-public spaces function as: (1) common rooms (2) outside decks or (3) individual rooms. The common rooms could house a wood working shop, a game room, a children's playroom, a greenhouse, a laundry room, or



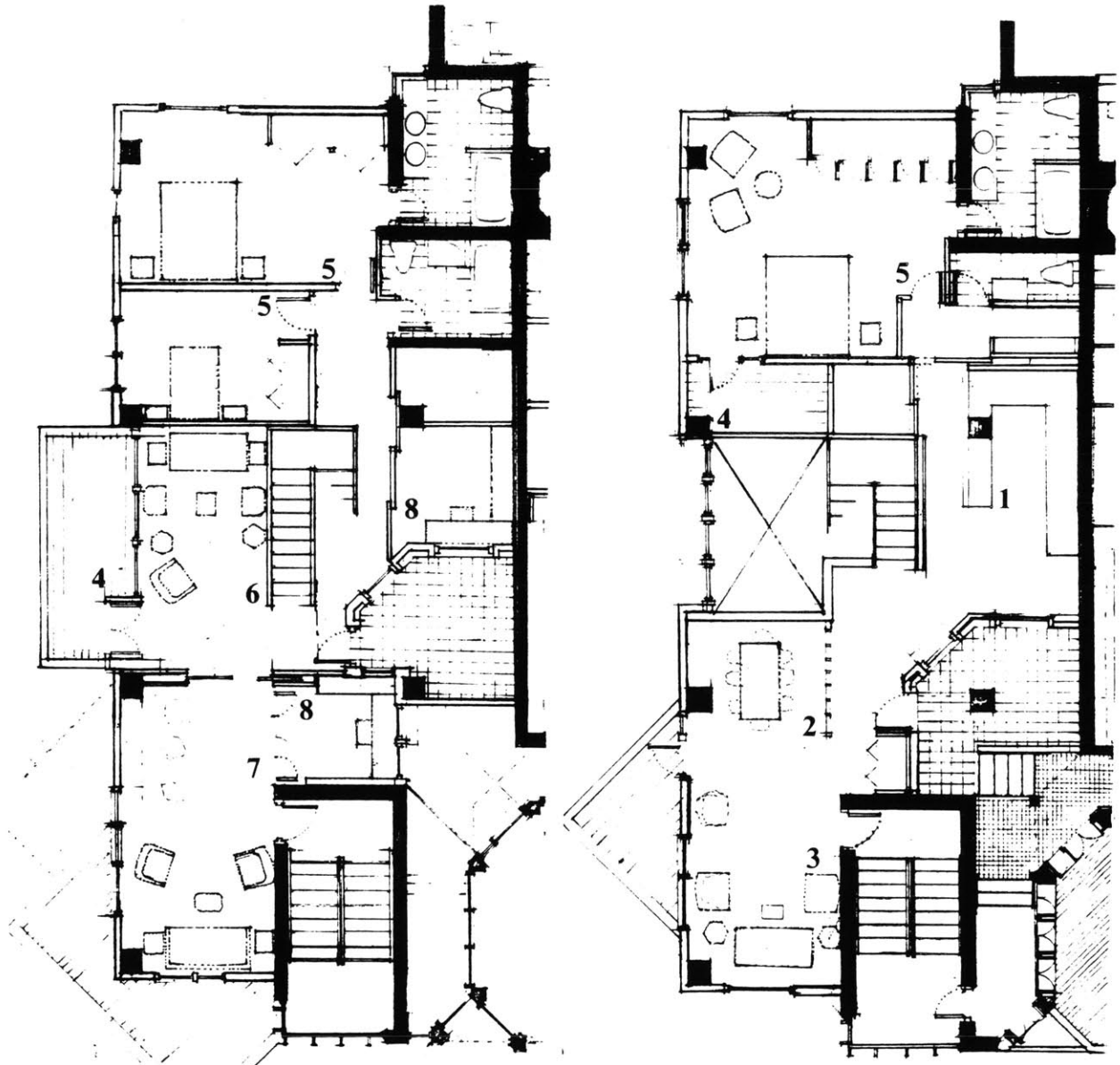
a work room. In the five neighborhoods, each three stories high, there is a single common room, and a double-height, common room on the southern face, both of 400 sq. ft. On the northern side there is a triple-height, common room of 250 sq. ft., every fifth floor. On the south face there are two types of outdoor spaces in each of the five neighborhoods, a 300 sq. ft. triple-height space with an outdoor fire place and a pair of small sun decks off the screened porch. In other words, the northern face has three, triple-height, enclosed spaces every five floors and the southern face has five, triple-height, outdoor spaces every three floors. Finally there are eight individual rooms, vertically arranged, each 250 sq. ft., available for rent to anyone on the building as an office, a work space, or a guest bedroom. These combined outside and inside common spaces are 13% of the building. The inside space is 10% of the building.

..... identity

People like to identify and be able to express where they live. Units at the top, bottom, or edge are relatively easy to identify, while distinctions tend to blur in the middle. Designing the middle presents one of the special challenges dealt with in this thesis. Using the circulation and common zones as an organizing element, I have freed the middle from its banality and made it special. The five, three-story neighborhoods and the three, five-story sections help people identify where they live. The semi-private places and windows on the corridors



- key
- plan—third level
  - three duplexes—lower portion
  - 2 flats
- plan
- unit #5
  - a duplex
  - 1. kitchen
  - 2. dining
  - 3. parlor
  - 4. inside or outside terrace
  - 5. bedroom
  - 6. living room
  - 7. library-den
  - 8. study-office



..... verticality

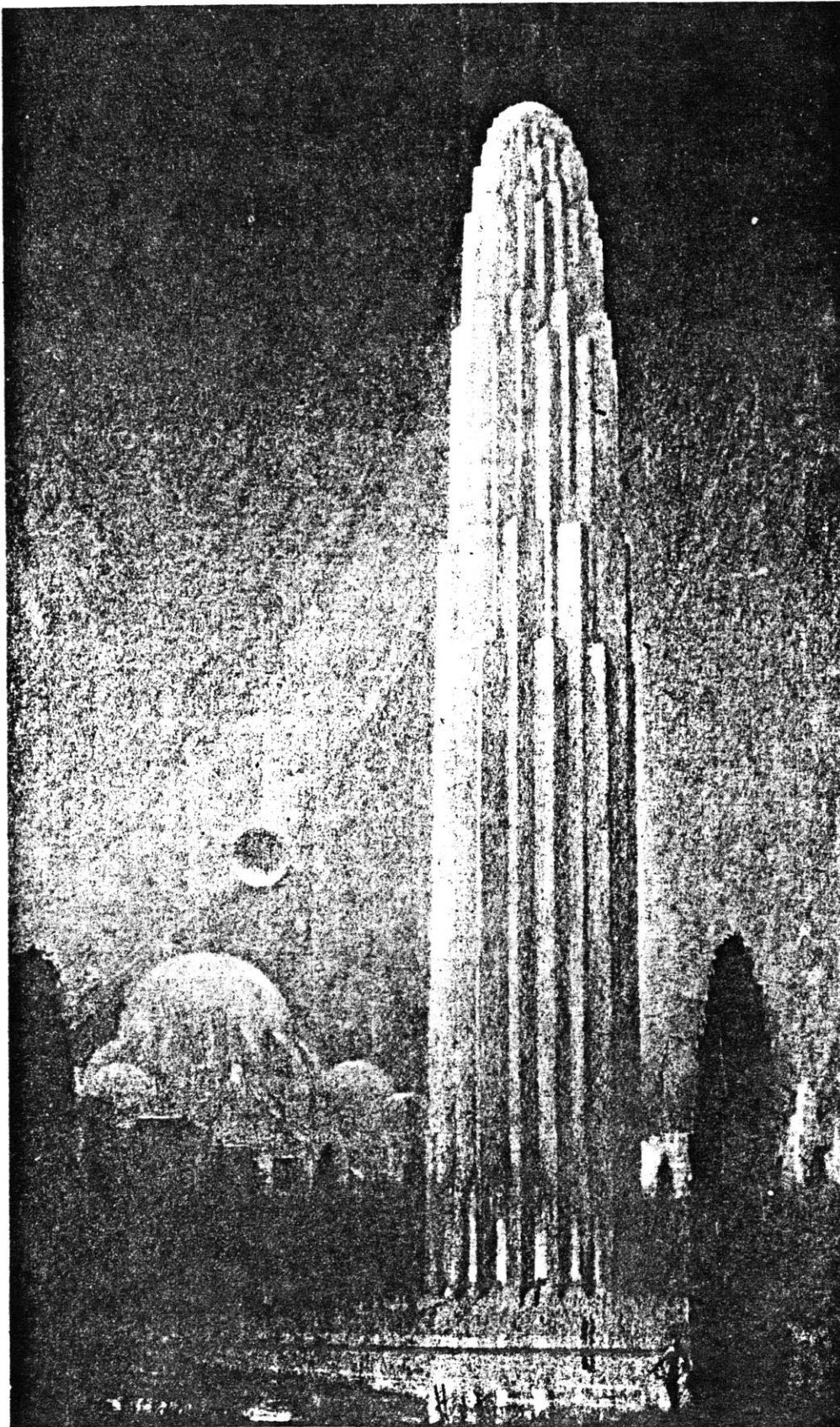
allow and encourage people to express where they live.

Since this is a vertical building, I encouraged the building to function vertically. The corridor has more than a strong horizontal element. The terracing of the corridor builds a vertical element. Open stairs and elevators heightens vertical movement in the building. Vertical organization of semi-public spaces connects the vertical neighborhoods. Finally, the units themselves have a strong vertical sense to break down further the horizontal layering.

Because duplexes have a strong vertical element, three of the five units on the reference level of the neighborhood are duplexes. The second level has five flats; the third level has the lower portion of the three duplexes of the neighborhood above and two flats. Near the entrance of a duplex, which is on the reference level, there are stairs down to the lower level which is in the neighborhood below. From the door of a unit one has a terraced view down to the lower level and out a double-height window to a terrace then to the ground. The view from the entrance is spectacular and not as frightening as a plumb view. A view closer to the edge is available on the balcony of the master bedroom.

The duplex units span two neighborhoods. The lower part of the duplex is on the third level of the next neighborhood. This overlapping emulsifies the layercake and allows for a varied type of





.. Hugh Ferriss ..

relationship within the neighborhoods--one direct one more removed. Further the third level occupants may use an express elevator and walk down to their level. The overlapping fosters a more active use of common spaces. Without these connections, the three-story neighborhood might become too insular. The layercake would remain, only the chocolate filling would be more generous. In short, these overlappings enhance the building's vertical flow.

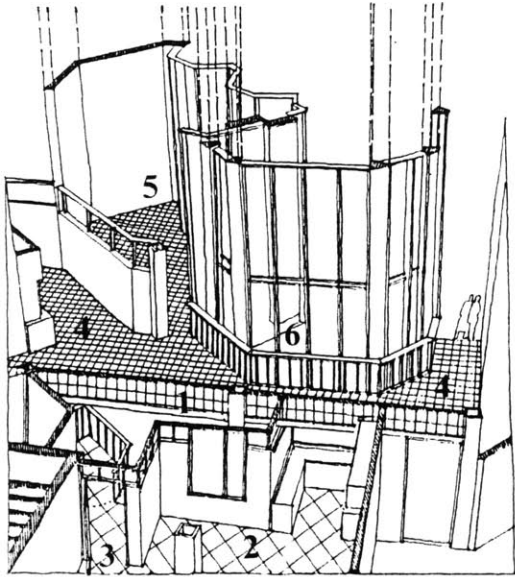
People are fascinated, inspired, awed, and frightened by places in the sky. It has been a peculiar and ironic occurrence of modern architecture that the higher we build, the less built the building is. It is almost as if the inner part of an egg has been sucked out and all that remains is the shell. Some modern high-rises, from the outside, are powerful but the insides are bland and blank. Concentrating on just one small, often overlooked, element of the inside of a high-rise, the corridor zone in the middle section of a high-rise fascinated and inspired me. I came to see the zone as very fertile and capable of enhancing a vertical building. No doubt people have lived with less for a long time but that does not mean this will or should continue. At present, there are structural changes occurring in the economic and social conditions in cities. Maybe some of the proposed design will be built. This is the stuff dreams are made of or at least enough to keep me working till the wee hours of the morning.

**PART I**

**HORIZONTAL-VERTICAL  
MOVEMENT . . . . .**



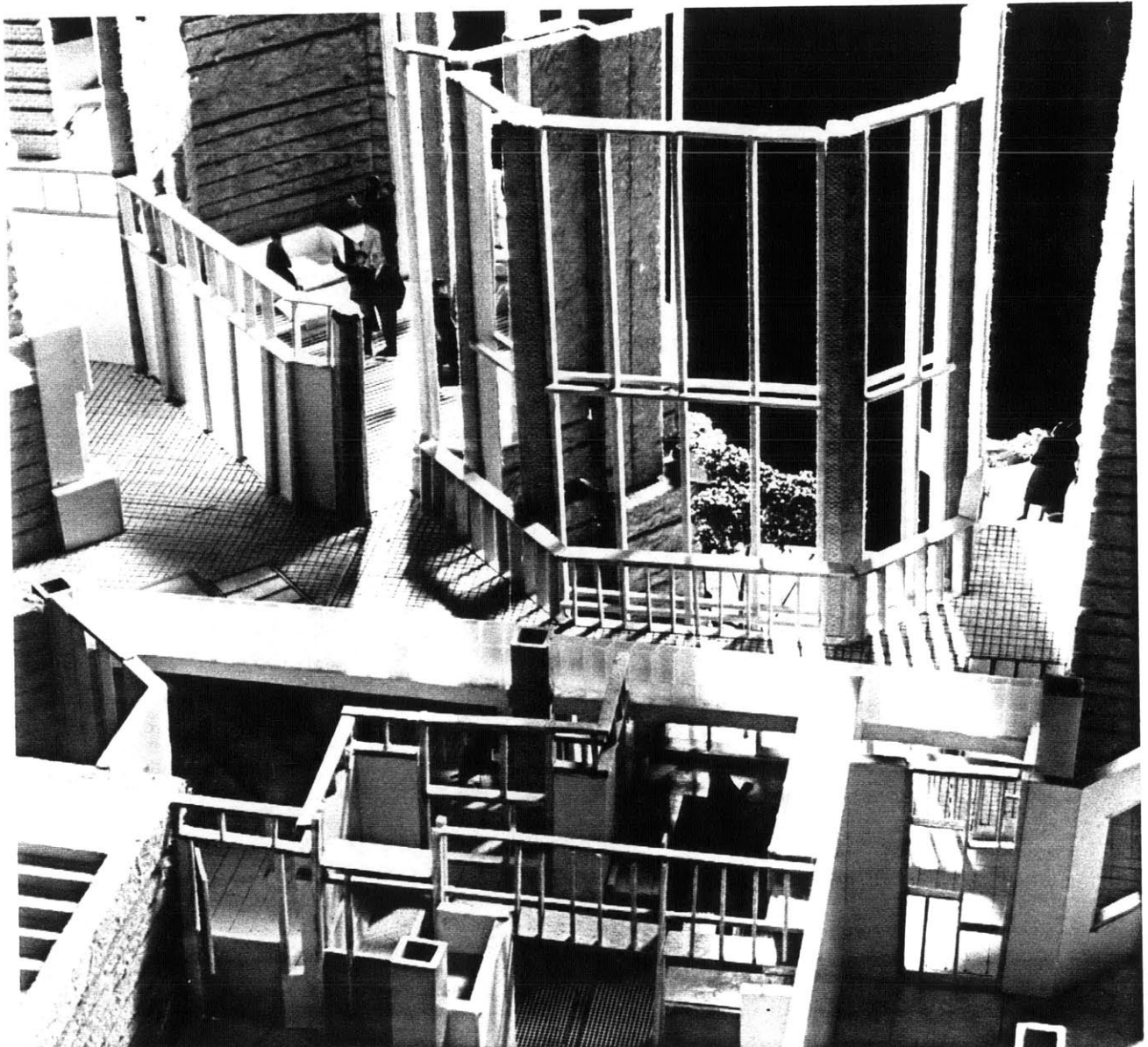
.. PIRANESI ...

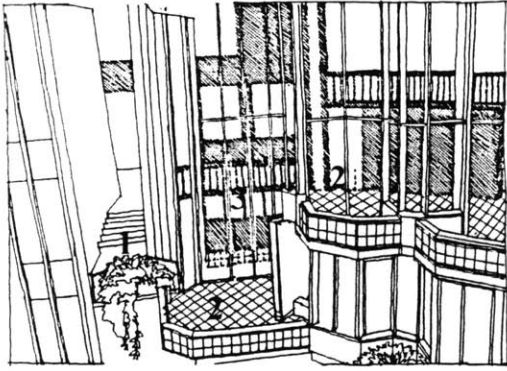


looking out.....

- key
- model abstraction
  - 1. glass block-top plate removed
  - 2. kitchen-eating area
  - 3. entrance
  - 4. corridor
  - 5. screened porch
  - 6. outside deck below

model • cutaway looking south





S.L.

## new ground.....

key

• *model abstraction*

• 1. terraced spaces

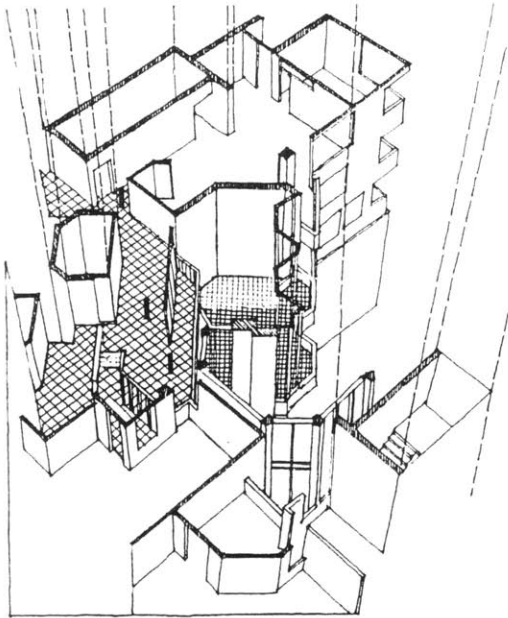
• 2. habitable visible semi-private and semi-public areas—2a. outside deck, secure and contained—2b. screened porch

• 3. screening the relationship to the outside

model • *south face of neighborhood*

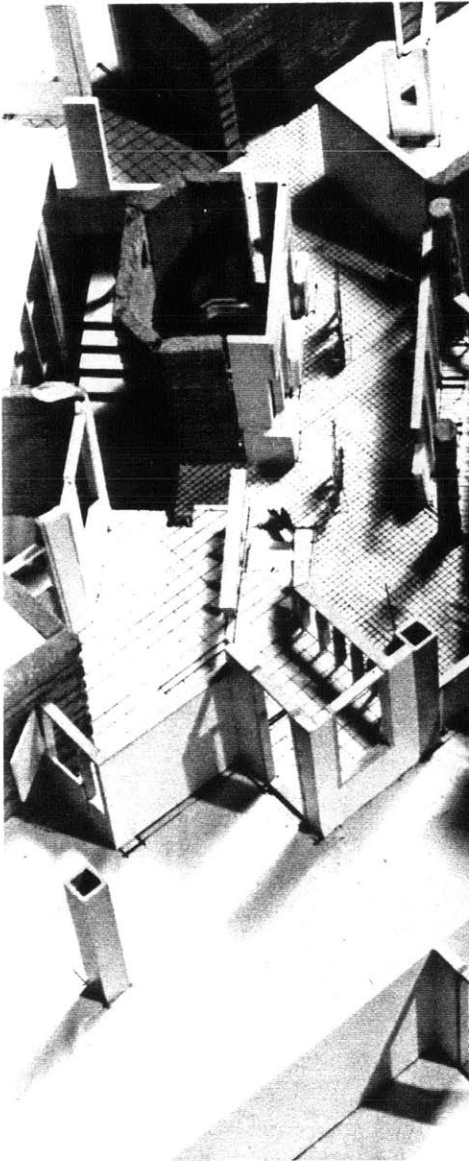
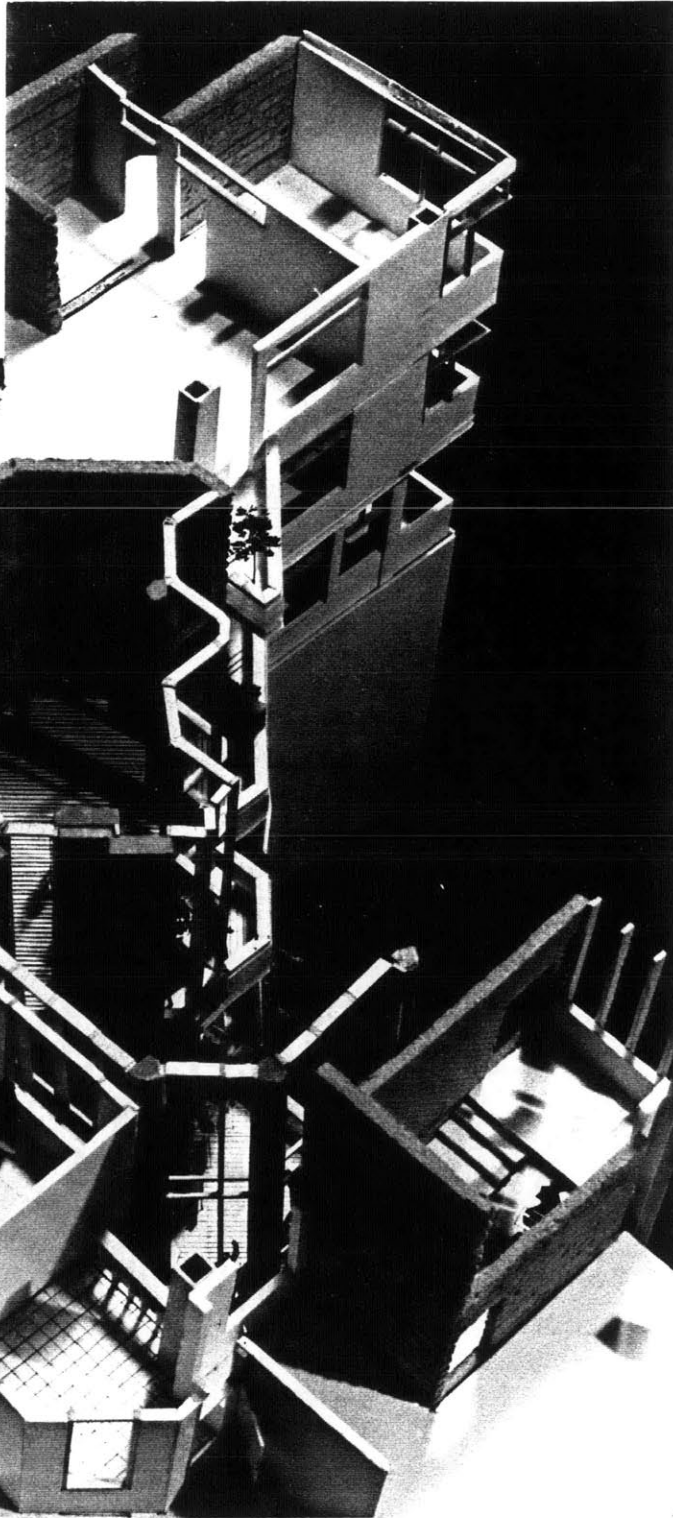


space .....



key

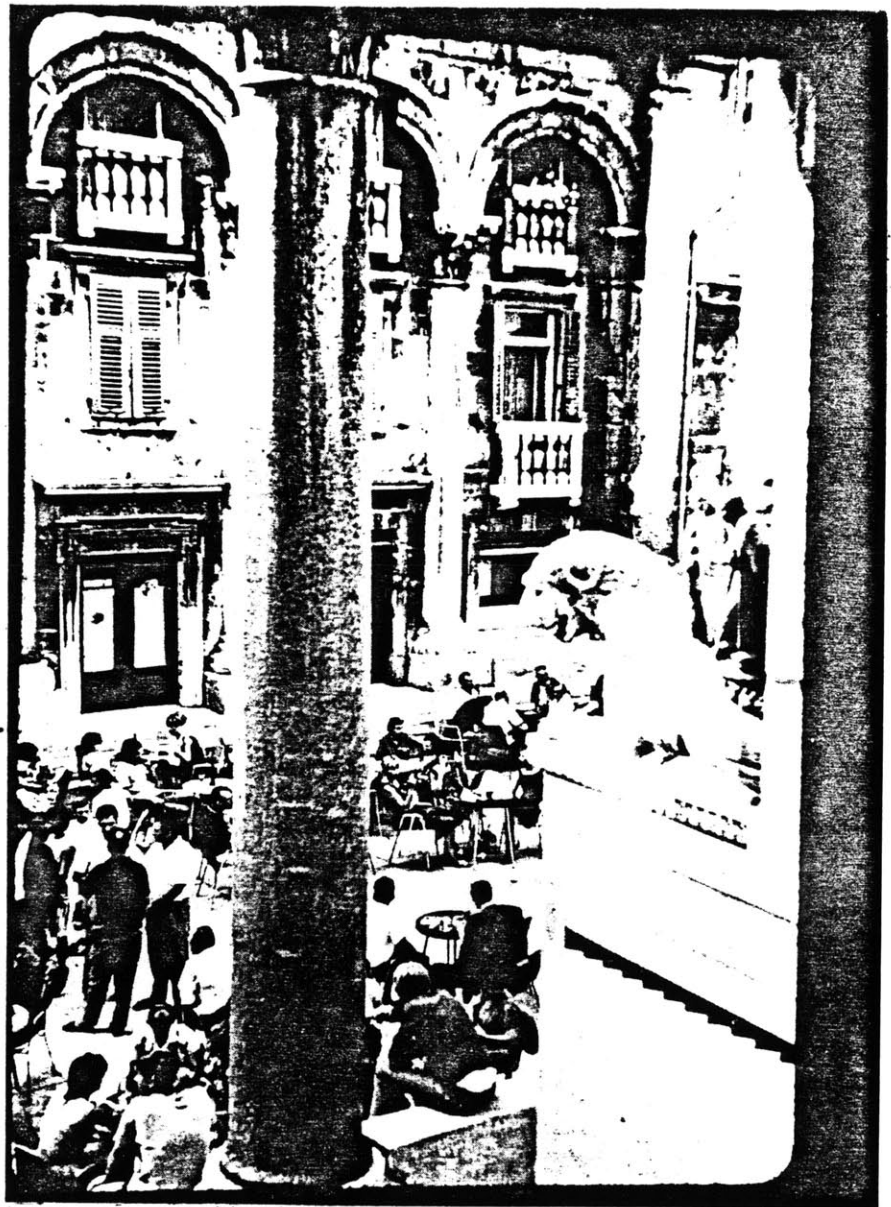
- could not crop photograph
- corridor varies
- views from corridor vary
- areas in a pleasant environment large enough for social interaction



## horizontal movement.

---

1. looking out
2. new ground
3. sp<sup>l</sup>aces



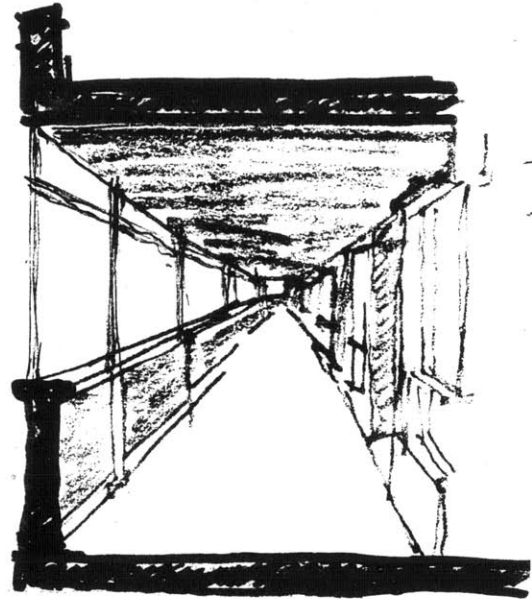
- A PUBLIC SPACE ADJACENT TO THE CIRCULATION VISIBLE FROM PRIVACIES.
- THE SPACE COULD BE NESTLED IN THE JOINT.

... DIOCLETIAN'S PALACE ...





... DOUBLE LOADED CORRIDOR ...



... SINGLE LOADED CORRIDOR ...



- RICHER PATH
- SINGLE LOADED
- VIEWS VARY
- HEIGHT VARIES
- UNSTABLE

A vaulted walkway accompanies the main street of Vipiteno,

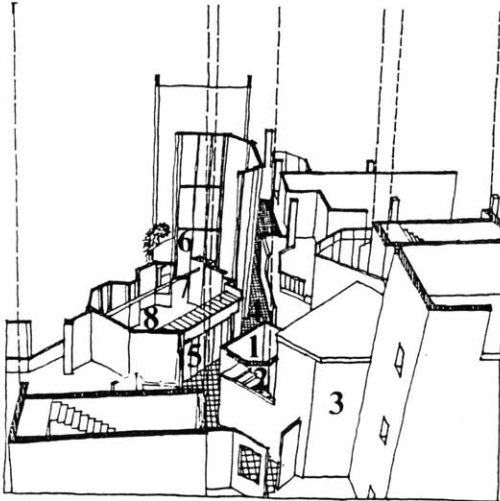
## looking out.....

"Residents of upper floor apartments are often cut off from each other socially by the very access system that is supposed to connect them."

John Graham

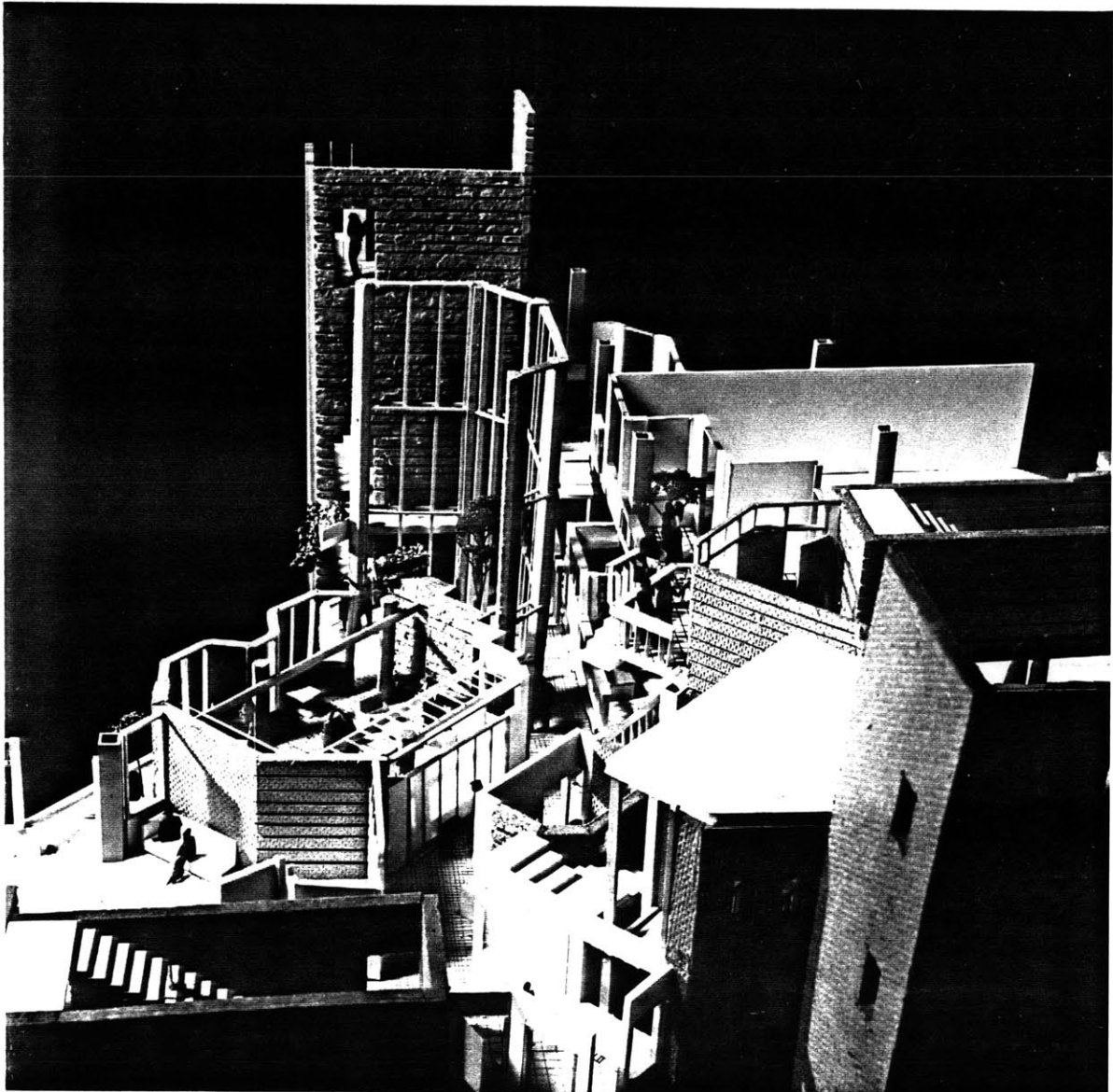
Double-loaded corridors to apartments isolate and disconnect occupants from the outside world (fig. 1). Adding a window is an improvement. However, something is not always better than nothing. The sketches on the left illustrate a single-loaded corridor (fig. 2) with a glass wall, not a vast improvement over windowless blank walled corridors. More varied and subtle connections to the outside are possible, indeed preferable. This section deals with looking out of residential high rise corridors. Looking down will be dealt with later.

Getting off the elevator, a light, shines in front from the right and light emits from behind the



S.L.

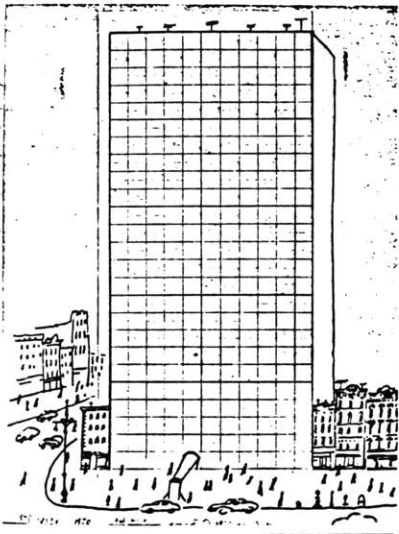
- key*
- *model abstraction*
  - 1. *elevator*
  - 2. *main stair*
  - 3. *northern common room*
  - 4. *corridor*
  - 5. *translucent screen*
  - 6. *glazed screen*
  - 7. *outside deck*
  - 8. *southern common room*
- model*
- *cutaway—view is west*
  - *reference floor*
  - *view—southwest*



elevator both from the left and right. Turning to the left, the neighborhood open stair descends. The only light comes through a door. The view is dark and cave-like. Off the elevators to the right the stair rises. Through the large screened wall is a triple-height room with core walls that splay inwards. The form of the room is of containment, a big bay window with glazing only at the furthest wall.

Off the elevator, sun light is seen to the right--not abruptly in front of the elevator but to the side. To the right the screened glazing to the outside rises three-stories. Beyond the glazing is a sun deck open for three floors. Looking to the upper left a two-story, screened porch forms a more subtle transition to the outside than the single glazed screen because it screens light through its outside wall, the room itself, and its inside screen.

Finally the corridor looks back onto itself. Besides seeing the fire escape at both ends, the neighborhood is visible from both ends. I remember noticing the curiosity of seeing end to end as a child on a long train. Passengers peered out the window as the train rounded a big bend hoping to view both the locomotive and the caboose and to see their placement on the train.



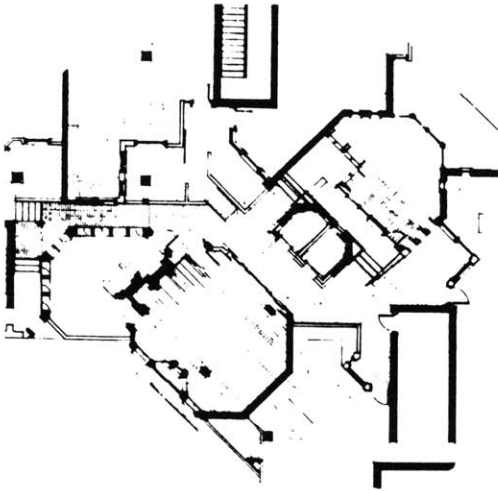
A. P. ...

## new ground.....

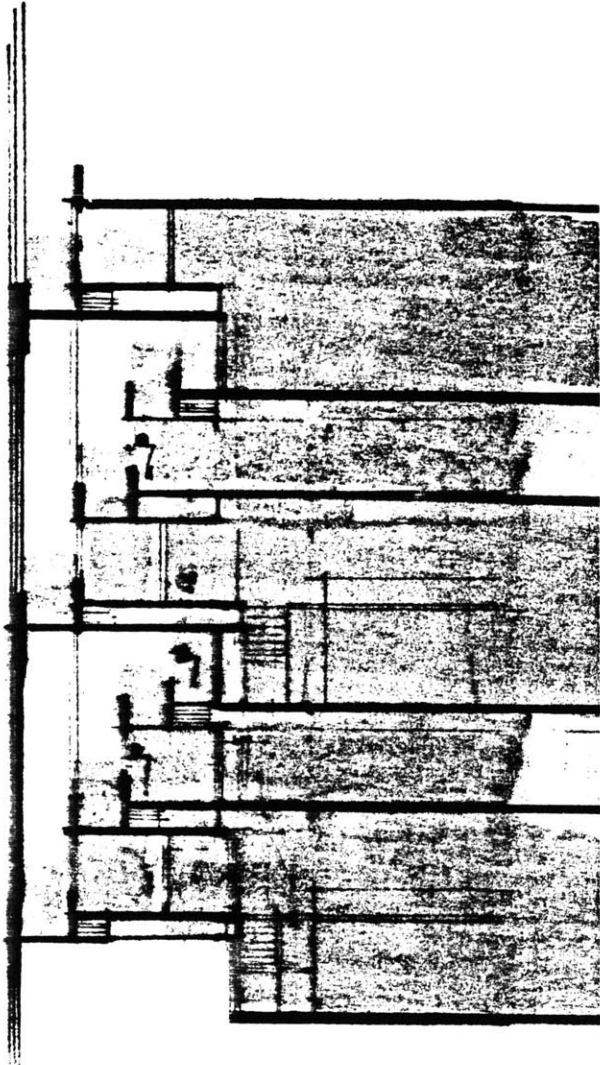
"When people live far from the ground, they lose many opportunities for social contact." "New ground", similar but not the same, will help social contact.

\*John Graham

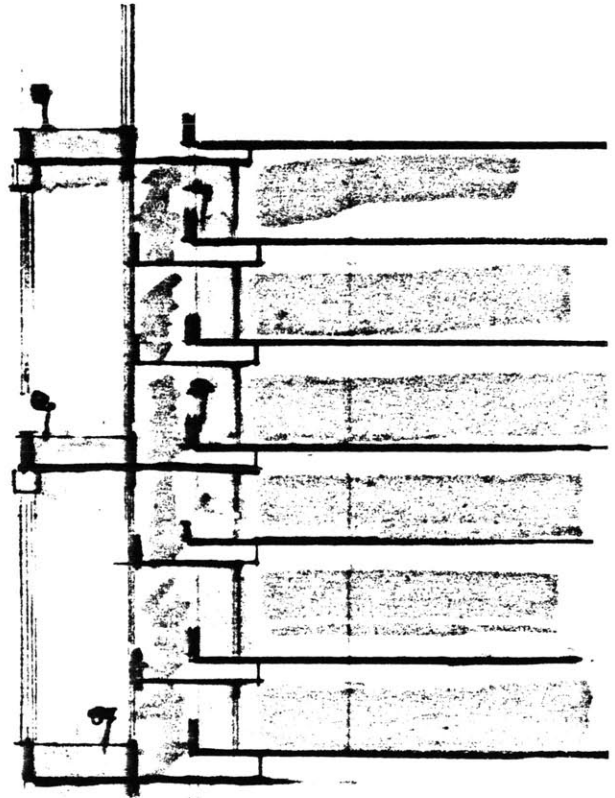
Successful vertical neighborhoods are predicated on creating a "new ground" up in the air. This "new ground" may embody some of the qualities of the ground but will never be wholly the same. Ground is full of complexities. Most of the time the ground is secure and comforting, but it can also be next to a scary cliff. Above the fourth floor there is normally a sense of dislocation from the normal references--i.e., trees, cars, and people become distant. With each higher floor this dislocation intensifies. Coupled with this growing dislocation is a sense of exposure to the elements that is magnified with each higher floor. With increased height goes a greater need to create a sense of



key • *third level plan*  
drawings • *diagrammatic sections*



*terraced corridors*



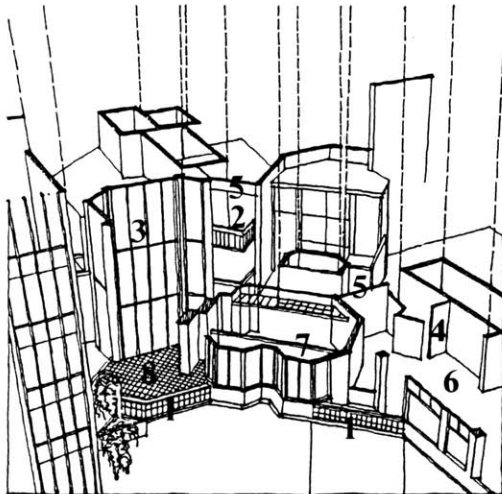
*cliff corridors*

security. Looking down is exciting but also frightening unless one is in a habitable, secure place. More than a cliff walk is necessary.

Maxfield Parrish's fantasy drawing creates a plausible new ground. As the young boy looks at the castle the viewer believes that even the highest echelons of the castle have varieties of "new ground" that are livable and friendly. Too few modern high-rise towers offer livable "new ground" in the sky. Some could even postulate that most modern high-rises do little more than violate the true ground. Closet-sized, small balconies fall short of achieving "new ground". In the nineteen twenties and thirties, balconies were sometimes more generous and more believable. Can that size be expanded even further? Can the fantastic world of the little boy be built? Can a "new ground" be created in a high-rise building? Can being up in the sky feel friendly and secure?

I have used three techniques in my high-rise to create such a world, (1) terracing part of the spaces, (2) creating habitable, visible semi-private and semi-public spaces, and (3) screening the relationship to the outside to make a subtle and gradual transition outward and downward. Just as terraced landscape is less frightening than a cliff landscape, especially in higher grounds terraced circulation areas provide a sense of security where



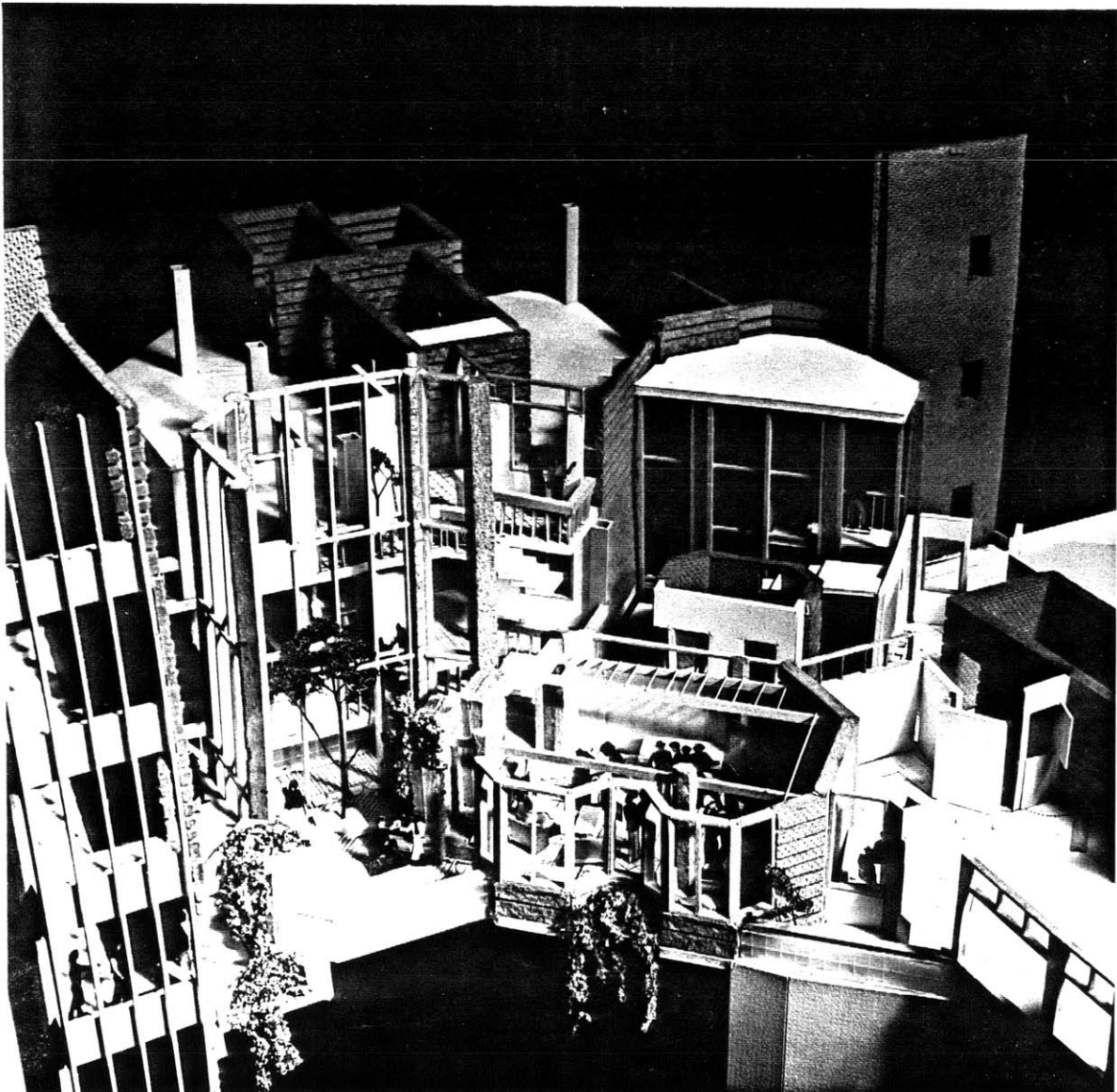


5L.

key • *model abstraction*

- 1. glass block
- 2. porch
- 3. window on corridor
- 4. Dutch door
- 5. transom—clear story
- 6. unit
- 7. common room
- 8. outdoor deck

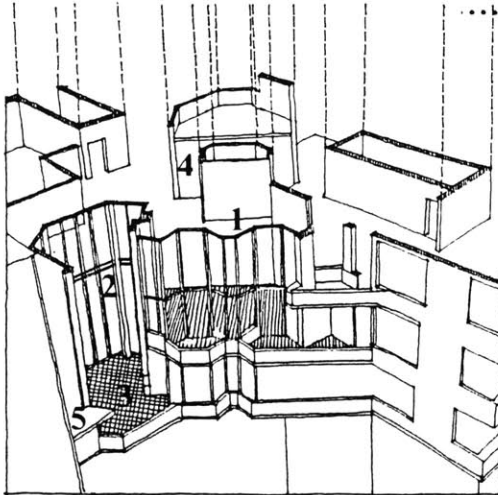
model • *cutaway facing south*



it is most open to the outside. Where the space is most secure, the eastern portion is a cliff-like, triple-stacked space.

Besides terracing, semi-public and semi-private areas soften the relationship to the outside in a high rise. The interior wall of the circulation area is neither opaque nor solid. At one's feet is a three-foot, glass block knee wall that during the day allows sunlight to filter into the apartment below, and during the night allows artificial light from the lower unit to indicate life below. Above the glass block wall are open porches and windows with habitable spaces beyond. A three-foot level change makes the porches habitable spaces but also provides some privacy. The doors and windows of the units onto the corridor serve as screens. The use of Dutch doors permits a fenced, partial view inside and defines a privacy. Above the doors and windows are transoms, so even when the doors are closed and the lower curtains pulled, light can still pass in and out of the units.

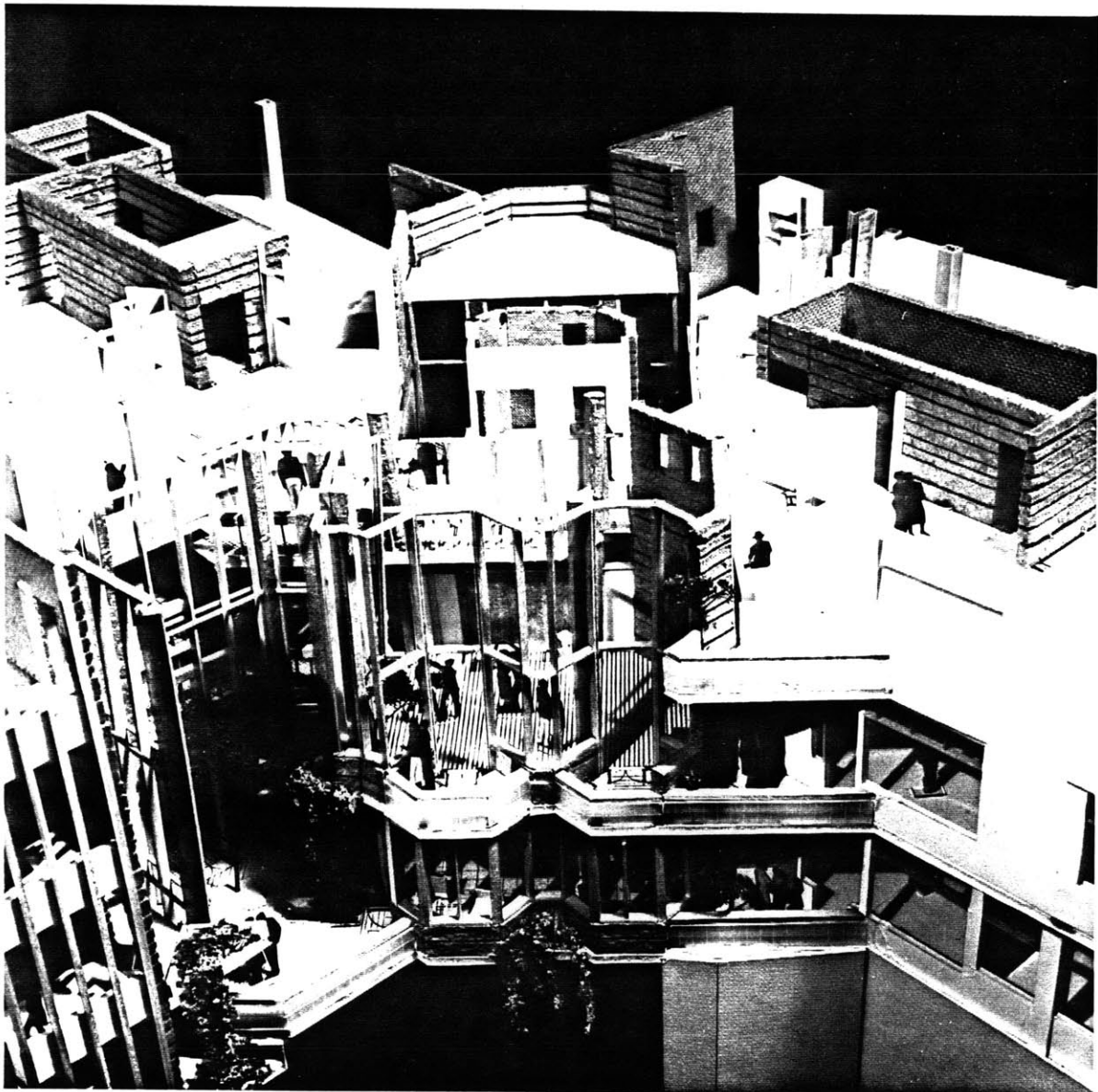
This walk is far more varied, exciting, and friendly than walking beside an opaque wall that has bolted steel doors with peep holes, with no link to the inside or outside. Imagine walking in the mountains. You would not feel secure in a cave or standing between a rock wall on one side and a cliff on the other. If the rock wall is habitable, the



*key* • *model abstraction*

- 1. translucent screen
- 2. glazed screen
- 3. deck
- 4. three-story enclosed space
- 5. only space on circulation with a direct view down

*model* • *south face of neighborhood*

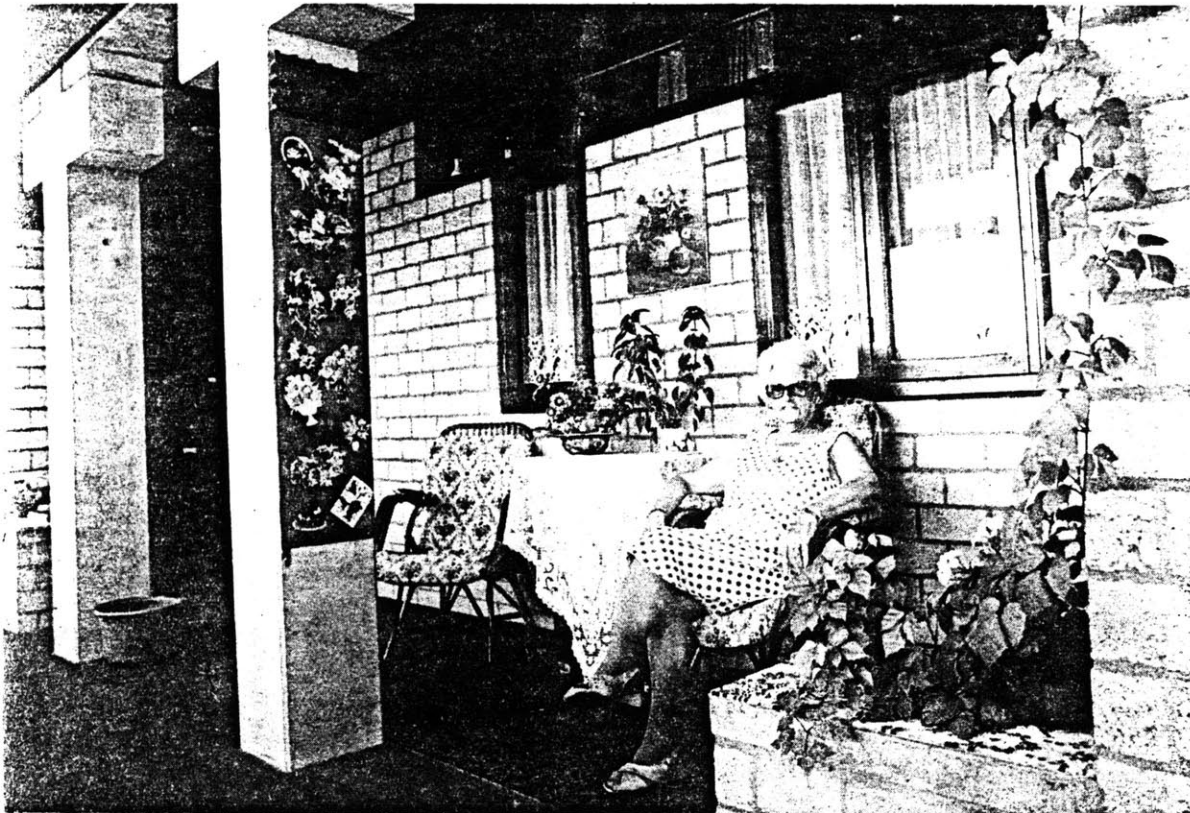


experience is less frightening. A cliff wall, partially terraced, is more reassuring.

On the outer side of the circulation area the sense of height is mitigated by means of screens, open deck spaces, and level changes. The outer wall is not continuously open to the outside. Instead, opaque and translucent screens over one third of the circulation zone soothes the impact of the distance to the street. When the outside is directly visible, the view is screened and is usually terraced to the "new ground". The exterior three-story deck on the south face is a key element of this "new ground." The deck is in a very containing, secure form. It allows someone to be outside, yet not on the real ground. It acts as displaced, terraced ground. Inside one sees this space before seeing the real ground that lies below. On the northern side, the view outside is across the open stairs and through a three-story, enclosed space. Only at a small space inside the building on the circulation zone is a direct view down to the real ground possible. This is to lessen the fear of height.

In this section I have dealt with ways to ameliorate the sense of dislocation felt by being high in the sky. To be able to ascend to this "new ground" by stairs and/or elevator is important. Vertical movement is dealt with in another section.

..... THIS CORRIDOR FULFILLS THE FOUR CRITERIA ON PAGE 53

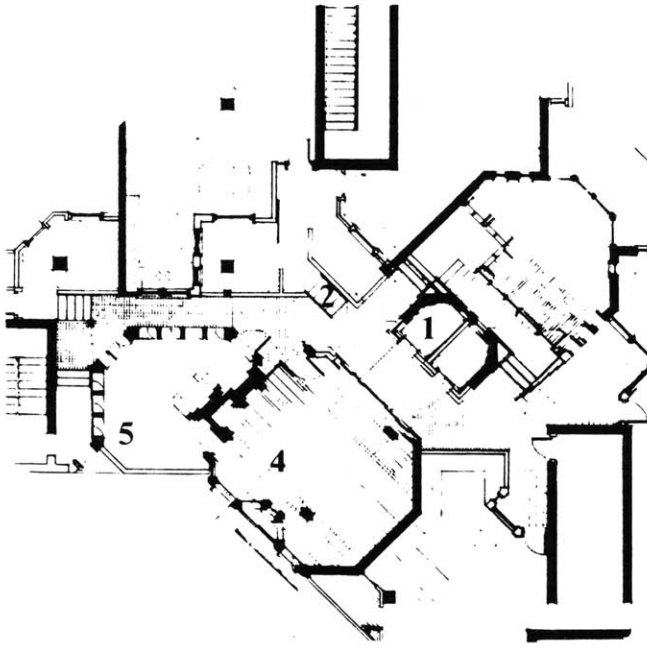


HERMAN HERTZBERGER .....

space.....

"corridors and stairwells are among  
the narrowest and least hospitable  
places in the apartment environment..."  
John Graham

A circulation zone that (1) has strong visible connections to the inside and outside environment, and (2) is sensitive to the disorientation caused by height is on its way to being a successful space. However, the dimension and location of the corridor itself, as well as the circulation zone, is also important. It is not enough to build a wider and/or

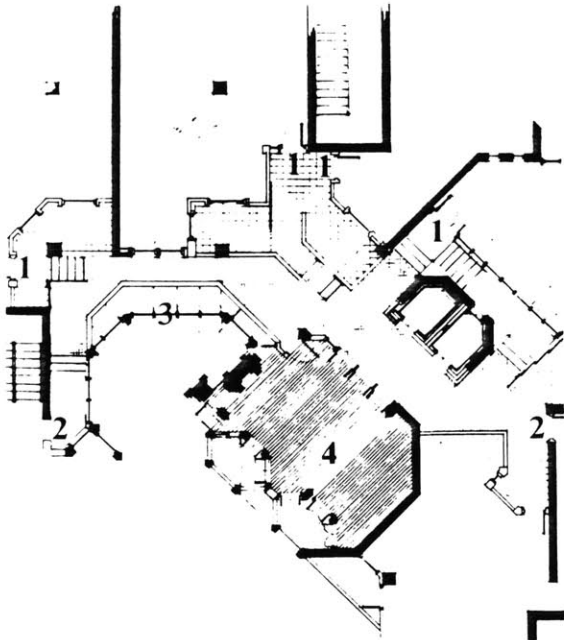


*neighborhood • reference plan*

- 1. elevator
- 2. three foot wide stair
- 3. bench area
- 4. common room
- 5. outside deck

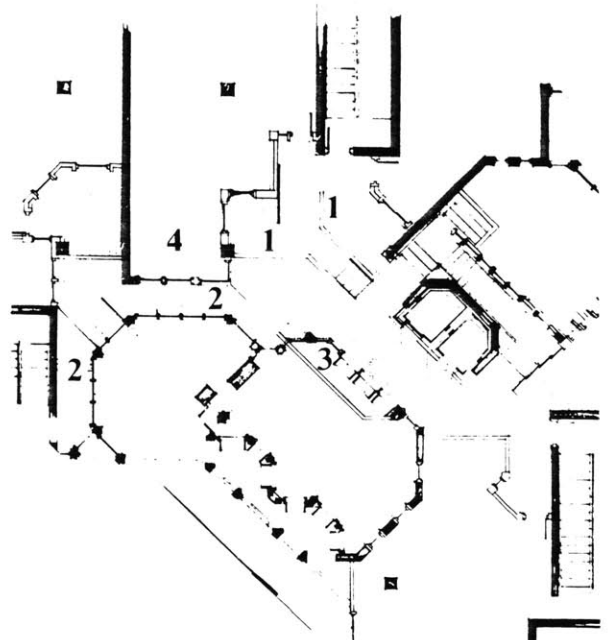
*neighborhood • 2nd level plan*

- 1. unit entrance
- 2. fire entrance
- 3. glazed screen
- 4. two-story space



*neighborhood • 3rd level plan*

- 1. front porch
- 2. corridor open to below
- 3. balcony
- 4. room overhangs 1st level corridor by 8'



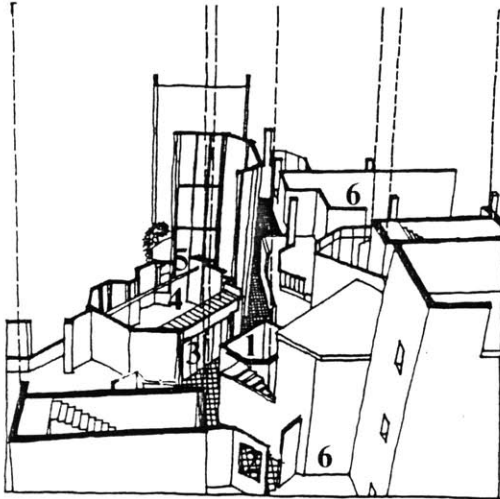
higher corridor to make a space livable. Corridors must be:

- (1) special spaces that allow people to talk, stop, and sit,
- (2) attractive and comfortable enough for people to want to be in the space,
- (3) varied enough in plan and section to be exciting but not overwhelming,
- (4) arranged so as to borrow space from adjacent areas.

. In the proposed design the sectional dimension of the corridor varies. The western circulation is terraced. The eastern circulation is cliff-like. In plan the dimensions vary with larger areas in front of the elevator/common rooms and also vary floor to floor (fig. 1, 2, 3). A sample of dimensions are (1) stairs to units are three-feet wide and (2) areas in front of elevators and common rooms are seven feet wide. The variance allows for a bench to be placed as indicated. The size of the circulation on the third floor of the neighborhood is substantially different from the other floors.

The corridor is seventy feet long, twenty feet in distance to the left of the elevator, and fifty

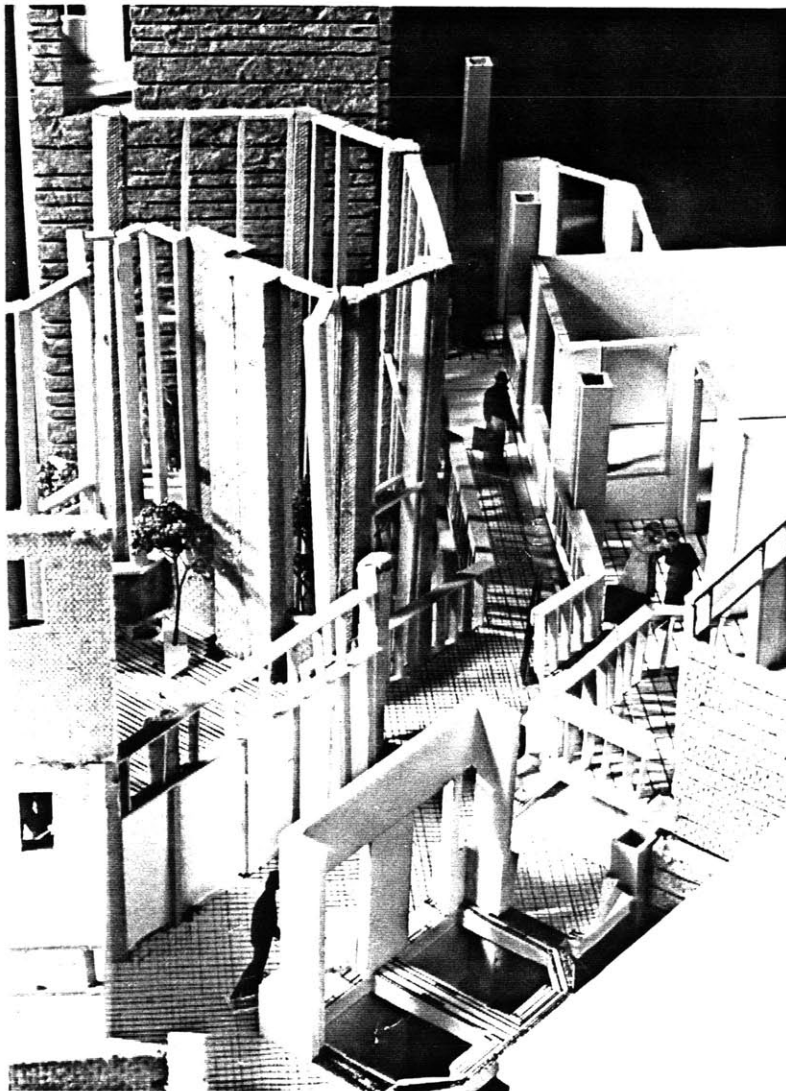




key

- *abstraction of model*
- 1. elevator
- 2. corridor
- 3. translucent screen
- 4. double-height screened porch
- 5. outside deck below
- 6. unit

S.L.



feet to the right. The location of the corridor is defined by something more than simply a distance to and from the elevator. On the short leg, there are entrances to two units, a fire stair and a descending common stair. On the longer leg, there are entrances to three units and a fire exit. On the glazed-side there is a closed room, a three-story glazed screen, a two-story screened common room, an open deck, and an entrance to a fire stair three feet lower. On the unit-side there is a raised level change of three feet with a glass-block knee-wall, front porches, kitchen windows, terraced-overhead corridors, and an eight-foot, over-hanging room. Corridors on the upper floors in the neighborhood are variations on the same theme. These corridors have special places for people to stop, talk, and look outside, and are pleasant, attractive environments.

Walking along this corridor is a truly rich experience. However, the total square footage of this corridor is similar to conventional buildings. The key element of this corridor is the variation from one side to the other and along each side. Like the train at the bend, the child in us can see the beginning and the end.

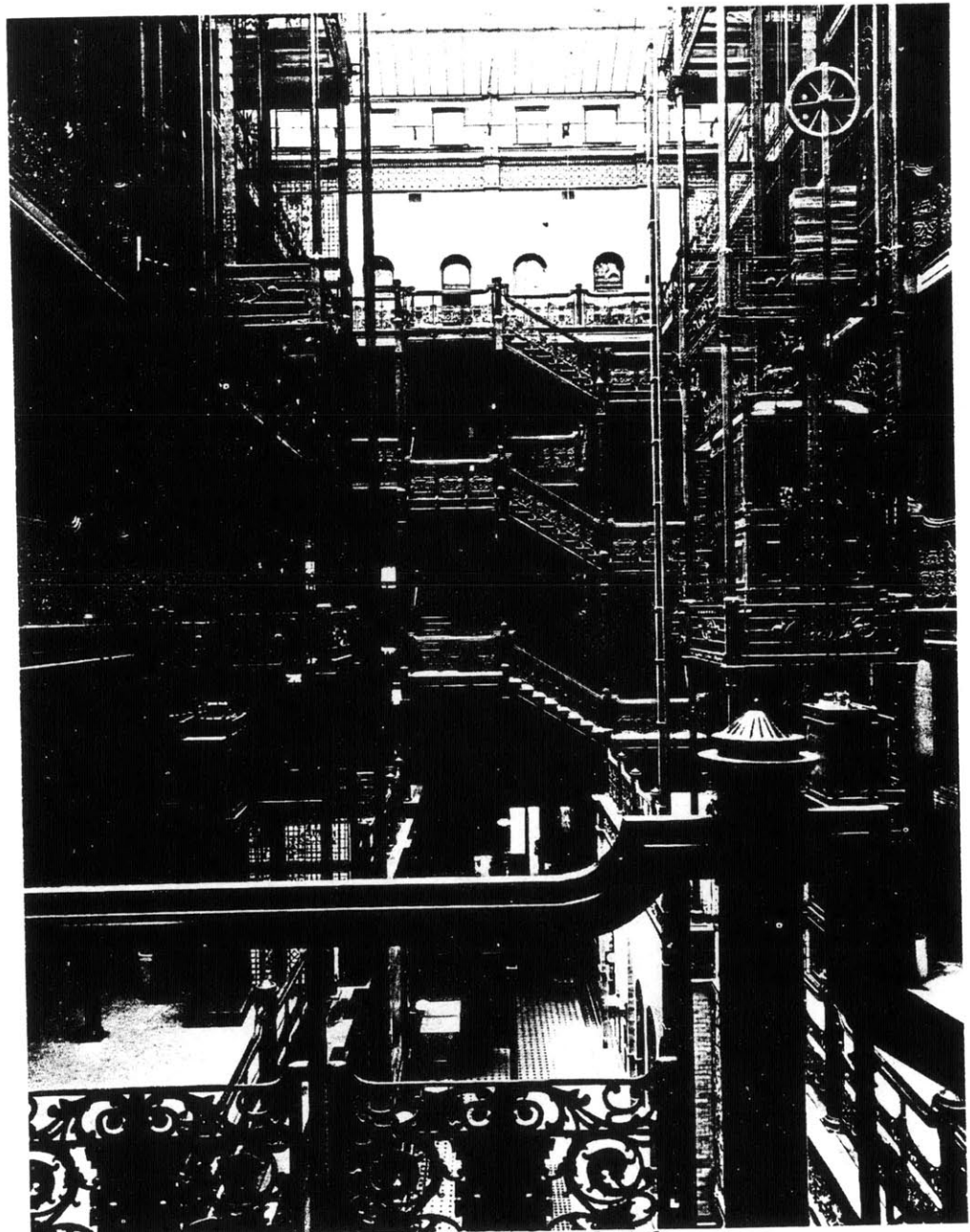


Pl. 11. Cat. No. 10. Carceri, Plate 8, First State.

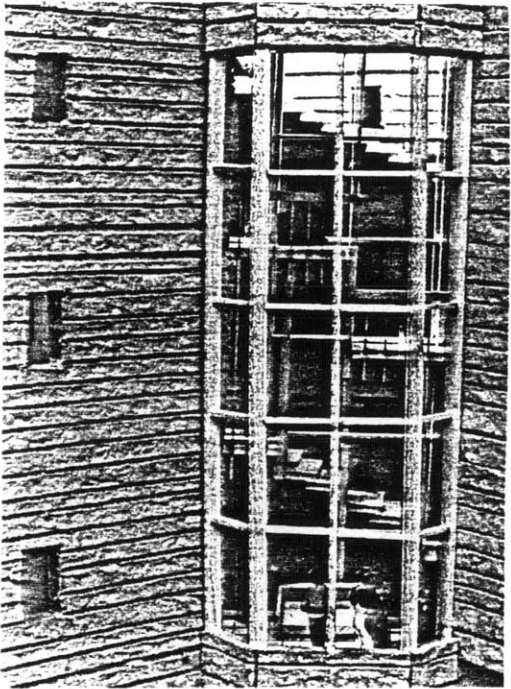
FRANCESI

vertical movement

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.. GEORGE WYMAN. 1893. BRADBURY BUILDING ..

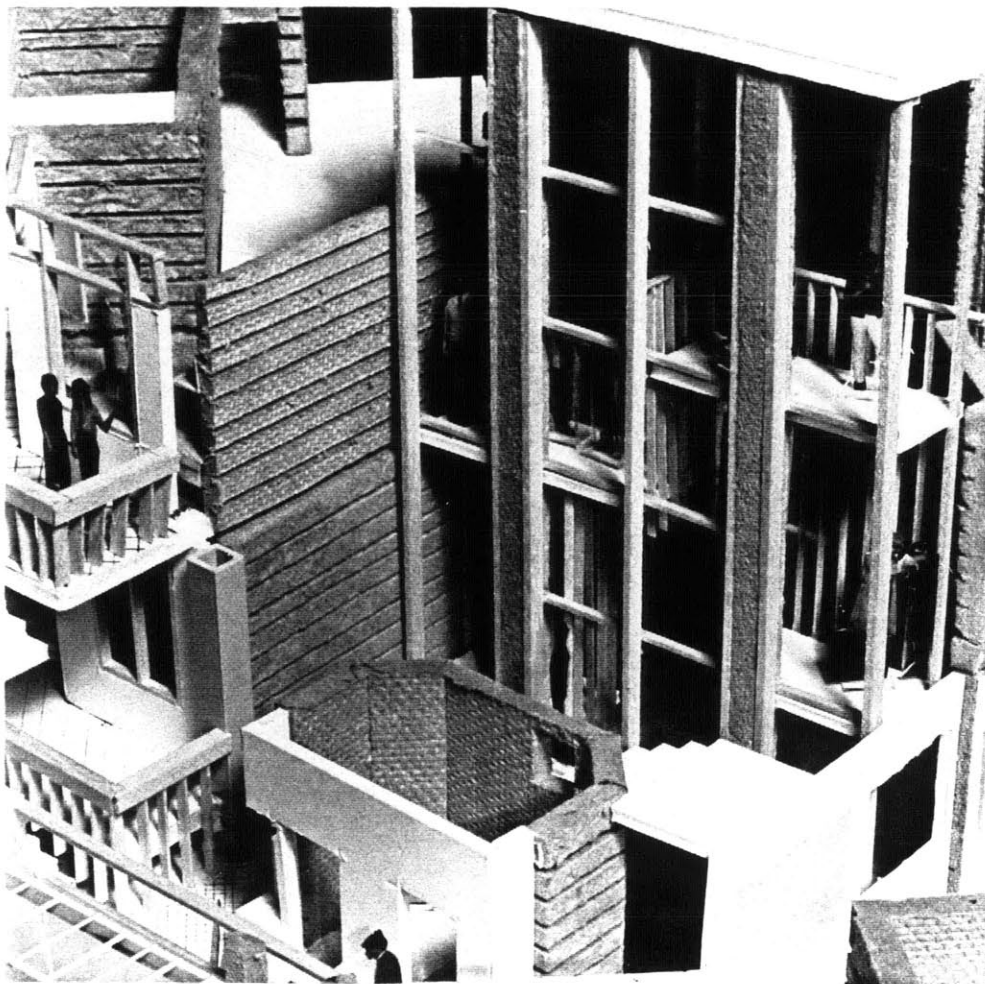


*model* • north side

- main stairs open to north common room
- resting against elevator core with punched windows
- landings generous enough for social interaction

*model* • cutaway  
• looking northwest

- elevator shaft with punched core windows and glazed left corner
- open stairs
- landings of stairs open to stairs and common room

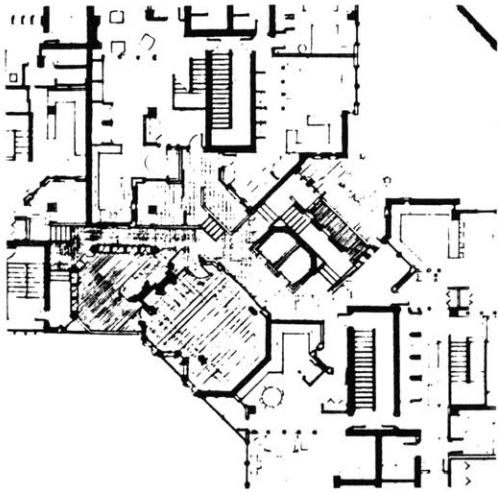


## vertical movement.....

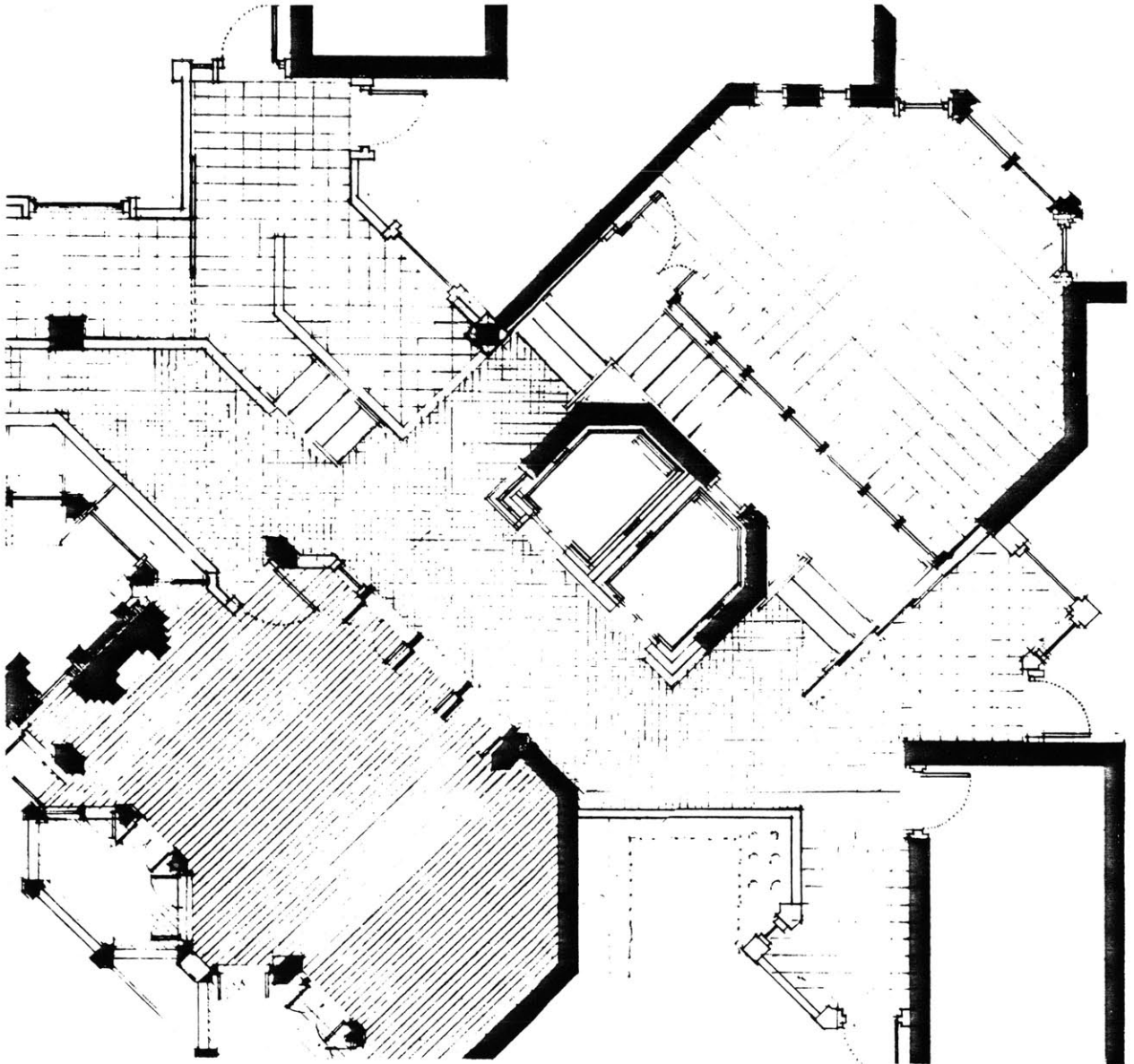
"...when stairs and elevators are enclosed in shafts and removed from view of the social space they serve, all sense of social life between apartments is lost..."\* Elevators without windows allow no visual continuity.

\*John Graham

The neighborhood has a main open staircase that offers a range of visual experiences. This staircase is in addition to the required fire stairs and has fire doors on the third level of each neighborhood. Connecting the spaces with an open stair is an attempt to build Maxfield Parrish's "fantastic new ground" and to build a vertical neighborhood. The stair coils around the elevator core. One side of the long run of the stair rests against the core--the other is visually open to a triple-height, cave-like room with multiple balconies off the stair landings. People coming and going on the stairs can observe the common room activities and vice-versa. At the end of the cave is a light shaft three stories high. The triple-height spaces are separated by two single-story private rooms. Therefore, the experience of walking on the main part of the stair is varied between light and dark, small and big spaces.



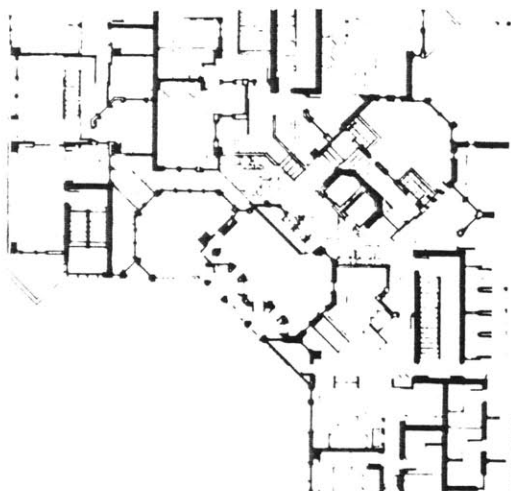
- key*
- *second level plan*
  - *vertical circulation*
  - *vertical circulation*
  - *1. open stair*
  - *2. elevators with windows*
  - *3. circulation*
  - *4. common room*
  - *5. front porch*
  - *6. unit*



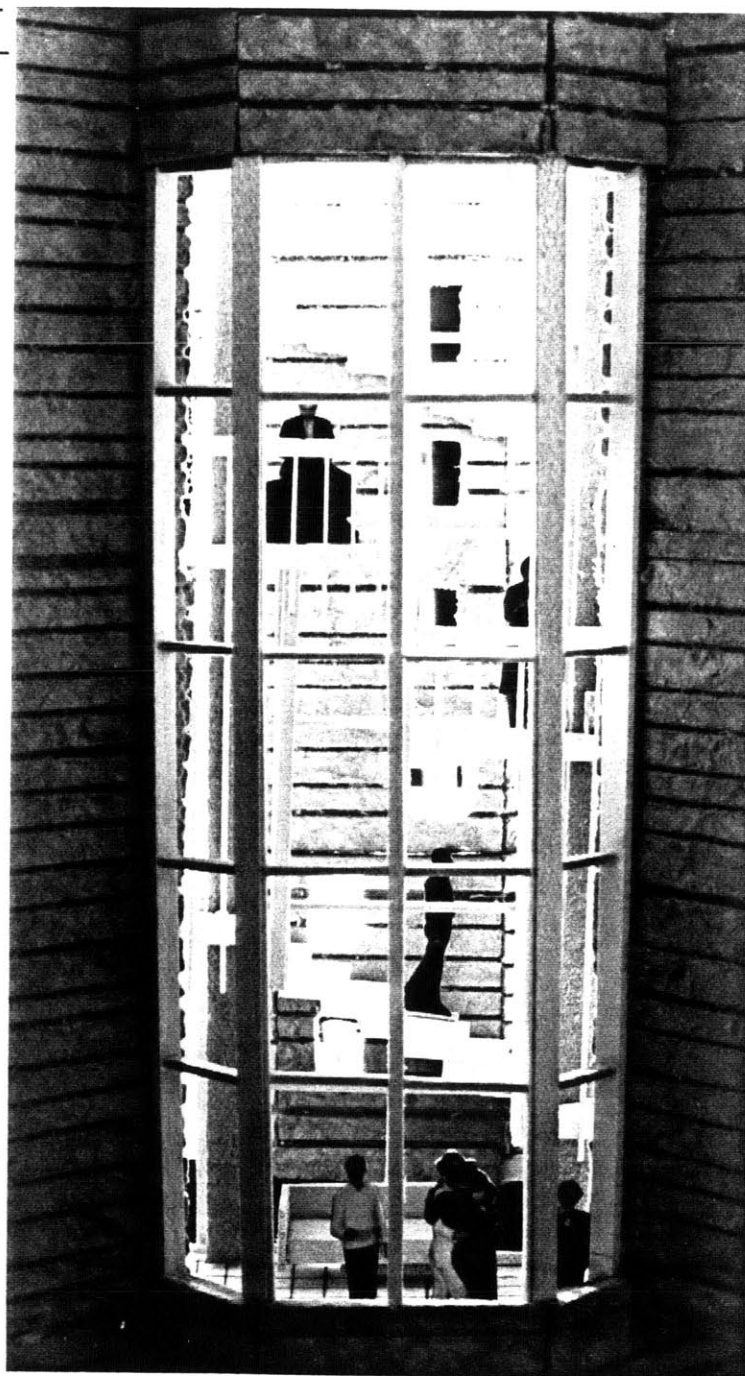
The purpose of a neighborhood stair is to reinforce the connections between the different floors in the buildings and to provide a pleasant experience walking up and down. The stair begins and ends at the different group of units. As one descends the stair, the vista is of the neighborhood, and to the outside. At the other end, the view is darker and internal. In addition to offering varied views the stair should help connect the neighborhood. The stair is open for three levels and fire restrained on the third level, not on the first level. This overlapping breaks down the layercake and fosters social interaction. The express elevator reinforces the use of the stairs. A person could get off at an express stop, the reference floors, and use the pleasant stairs to go up or down on, quicker at times than using the local elevator. The vertical "shishkebab" arrangement of common rooms further reinforces the use of the stairs. Someone in one neighborhood may want to use a common room below or above, and the stair offers easy and pleasant access to the common spaces.

The elevators provide a visual sense of continuity. Because the western elevator has a window on the outside corner, a passenger views the common spaces as well as the outside. The eastern





*key* • *plan—3rd level*  
*model* • *north side*  
• *main stair at night*  
• *light from elevator*  
*seen through punched*  
*core windows*



elevator's punched window allows a view of the stair and the triple-height common space as well as northern view to the outside. People outside the elevator can see movement of the elevator. Instead of watching a dial indicate where the elevator is, the actual cab can be seen from the corridor, the stair, and the common spaces. Unlike Portman's Hyatt design where the view from the exposed elevator cab provides little variety except for the changing vantage point, these elevators look in different directions, have varied views, and don't have a continuous view. At night the light from the cab flashes as it passes the intermittent windows. The sense of vertical movement is intensified.

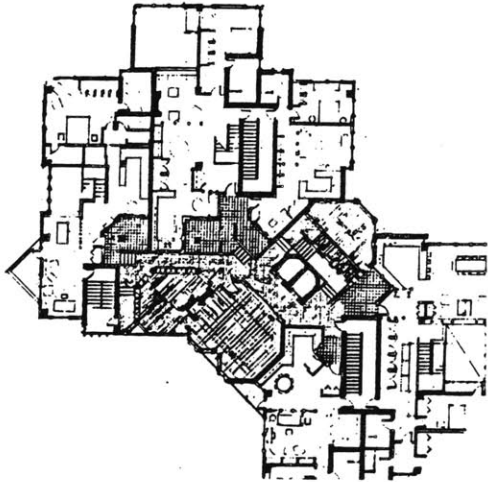
The open stair adds 140 sq. ft. to a floor plan of close to 6,000 sq. ft., a reasonable supplement to enhance the quality of life in the high-rise. Instead of closed stairs that separate and isolate floors and people, these open stair and elevators link floors and neighborhoods, provide varied views and add convenience. The stair and elevators are designed to function together and make vertical movement a richer and more intergrated experience within a high-rise. If the linkage is successful, then the high-rise will function as a vertical building.

**PART II**

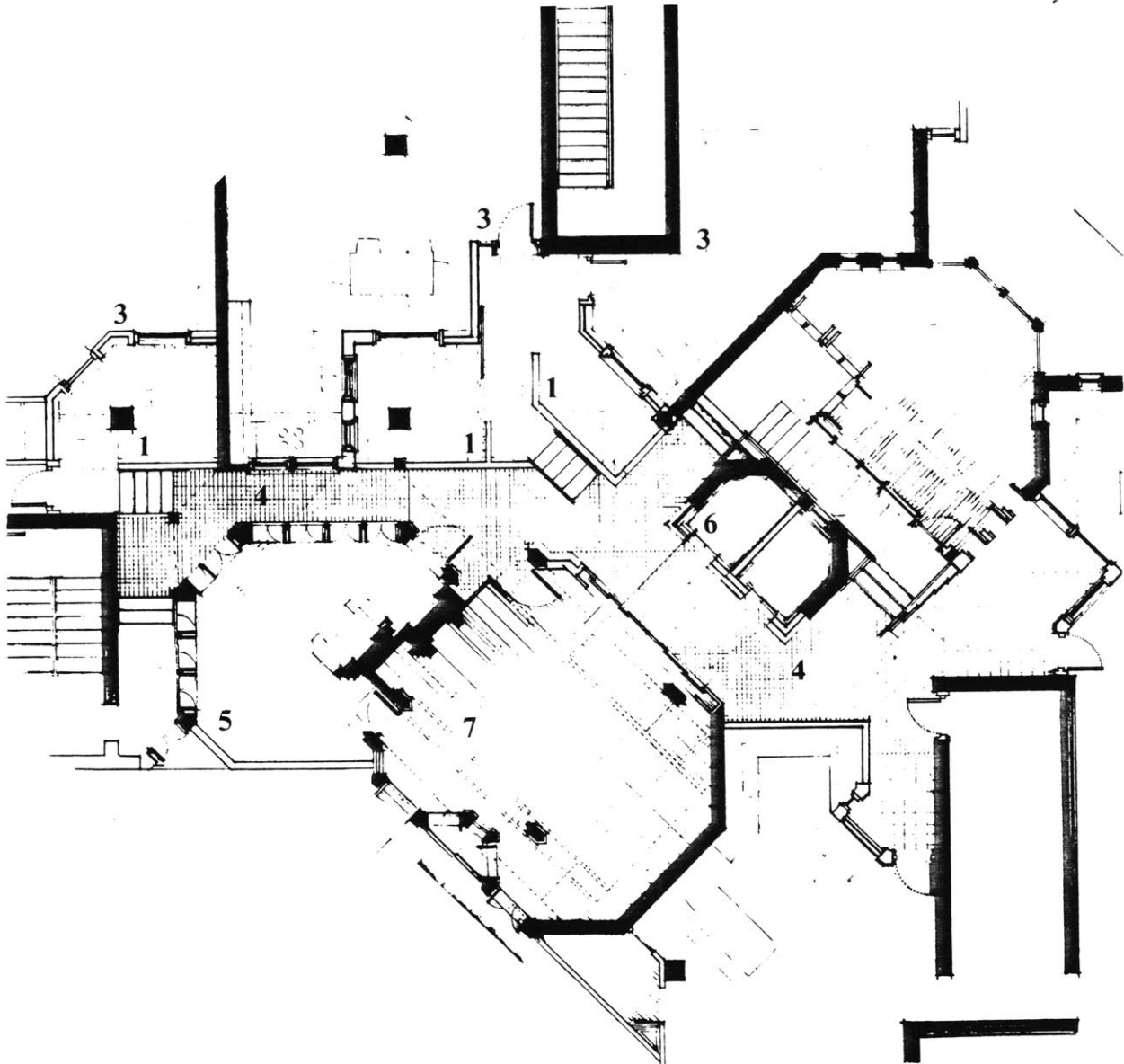
**SPACE**  
**SEMI-PRIVATE • SEMI-PUBLIC . . . . .**



...ELIZABETH O'NEIL YEAGER. CHARLESTON S.C....



- key
- reference level plan
  - semi-private zone
- plan
- 1. front porches
  - 2. entrance alcoves
  - 3. unit
  - 4. corridor
  - 5. outside deck
  - 6. elevator
  - 7. common room

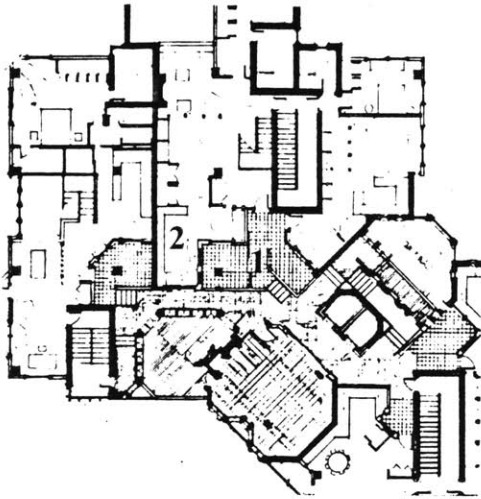


## space — semi-private.....

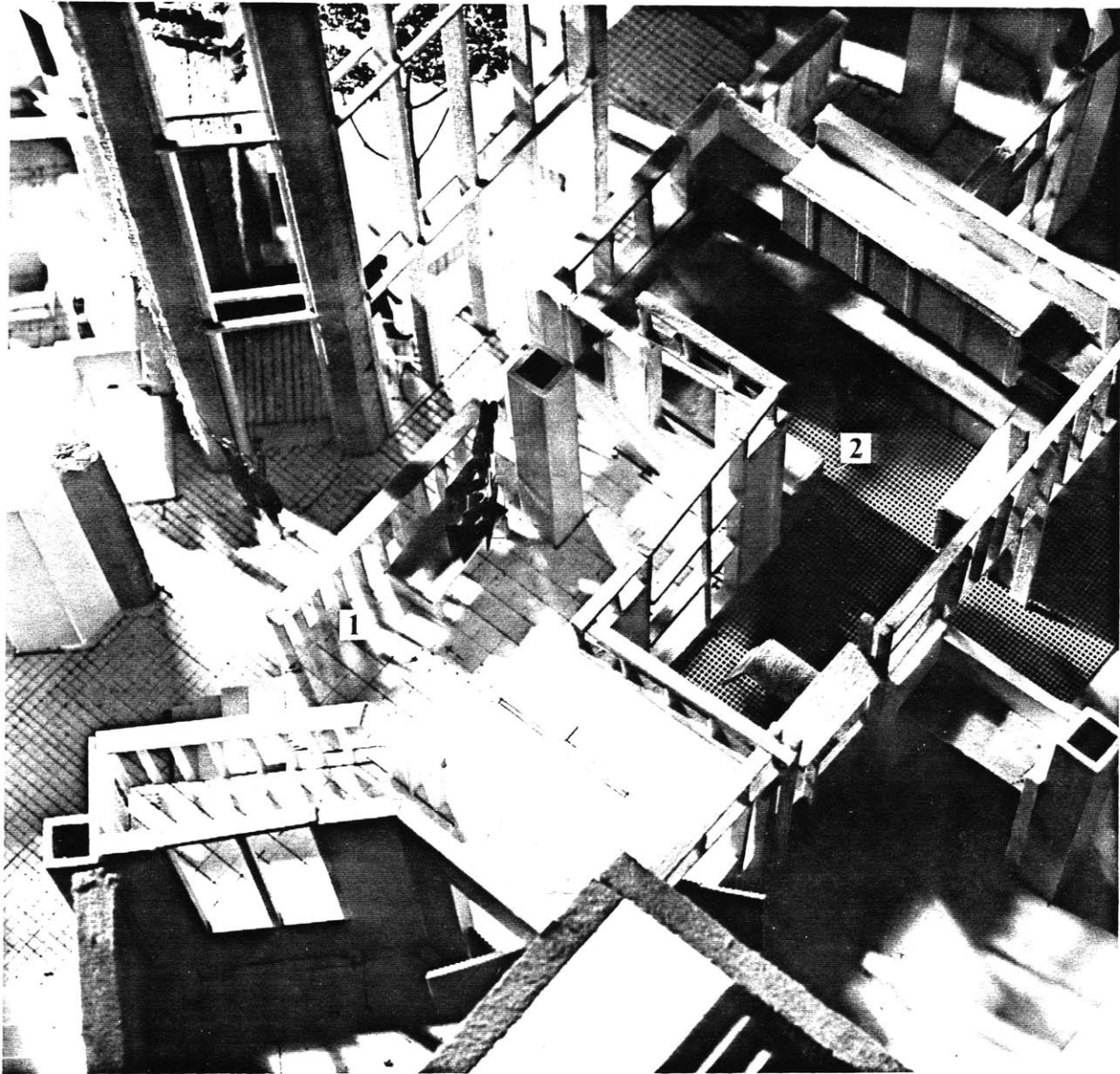
If high-rise apartment units are ever to support the casual social activities that have always taken place on stoops or porches, some personal space must be provided for each apartment at its front door.

Semi-private spaces are areas that belong to the adjacent individual unit but are not closed off from the corridor. Stoops, porches, and entrance alcoves are all semi-private areas. The normal transition in high-rises is from a closed, extruded, tubular corridor to a steel-framed door of an often cellular unit. This design examines three conditions to make the transition from the corridor to the unit more varied, subtle, and enjoyable:

- (1) the space outside the front door of the unit
- (2) the wall that separates the unit from the corridor, and
- (3) the activities that occur directly inside the unit.



- key*
- reference level plan
  - entrance area unit #3 & #4
- model*
- cutaway looking south-west
  - 1. the space front porch to unit #3&#4  
—raised three feet above corridor  
—outside deck due south
  - 2. the activities—breakfast nook with  
dropleaf table off kitchen



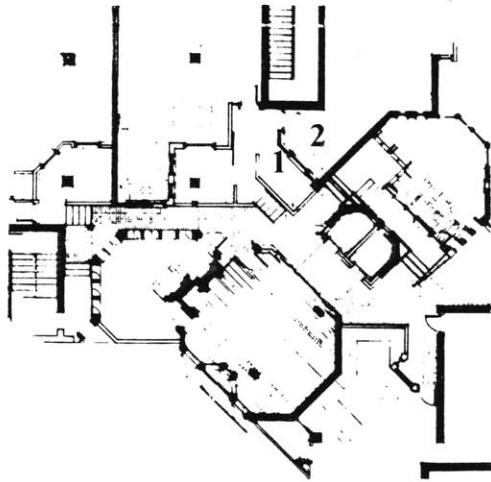
.....the space

Although Unit #1 has the least amount of space inside its unit, but not in the corridor, a transition area is provided to greet guests and neighborhoods outside the unit. Although there is no level change in the approach to unit #2, (p. 64) the descending open stairs create a sense of a level change. Unit #2's space of 80 sq. ft. is almost three times the size of the space in front of unit #1 (p. 64). Unit #2's space is screened to the stairs and has windows that open on to the three-story common room. The space is private enough so that social activities inside the apartment can spill out into this screened space. The porches, in front of units #3, #4, #5, are raised three feet and are large enough (30 sq. ft. to 80 sq. ft.) for social functions to spill out onto. They have a view not only of the corridor but also through the glazed screen and across the outside deck to the outside. The level change helps define the space as an extension of the units. However, the wooden fences allow the spaces to be an extension of the corridor. A movable screen between unit #3 and #4 further helps to define the space.

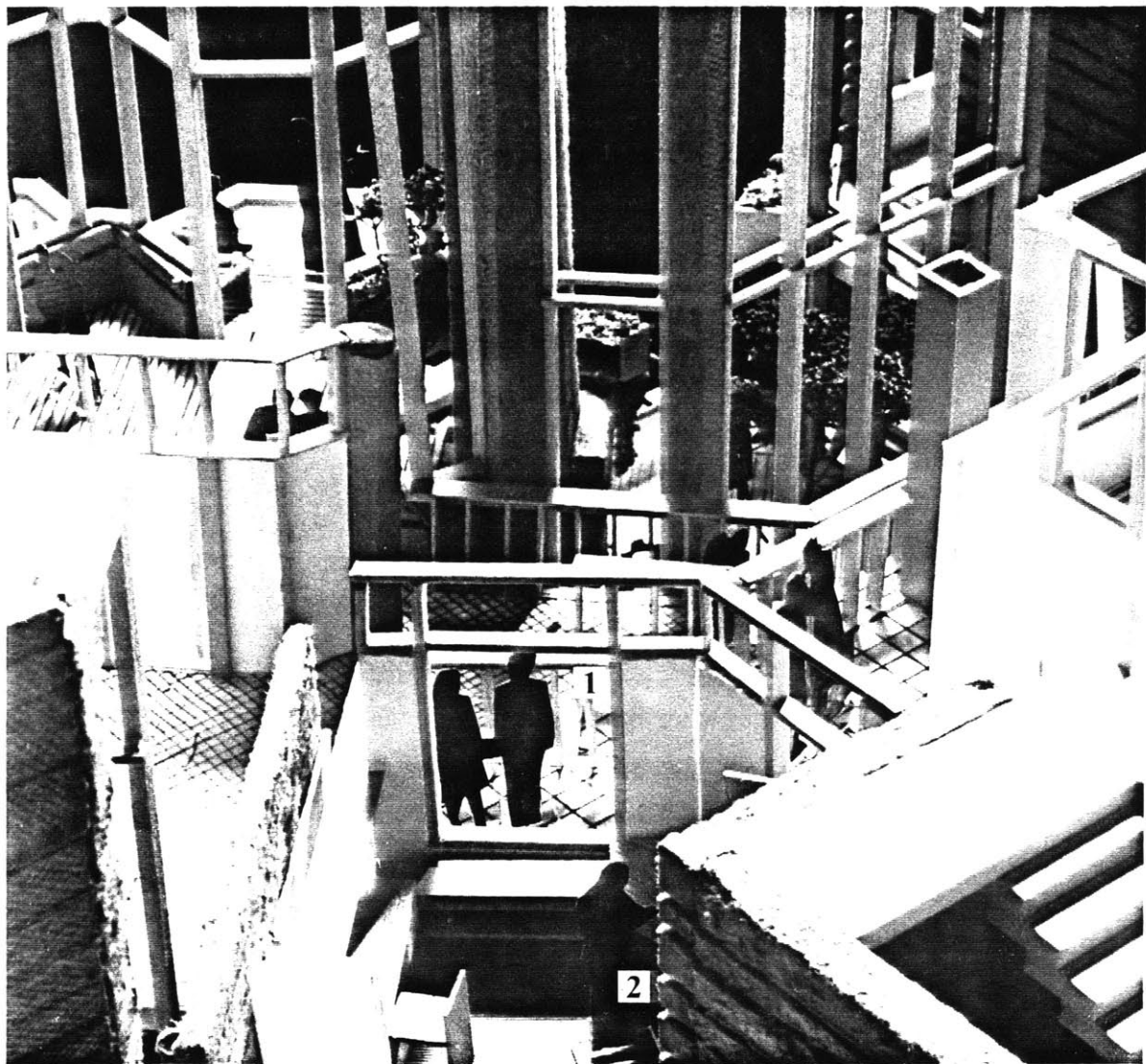
..... the wall

To establish a connection between inside and outside the unit requires more than just a peep hole. Instead there should be lots of windows and indeed a range of windows. Some of the windows should be





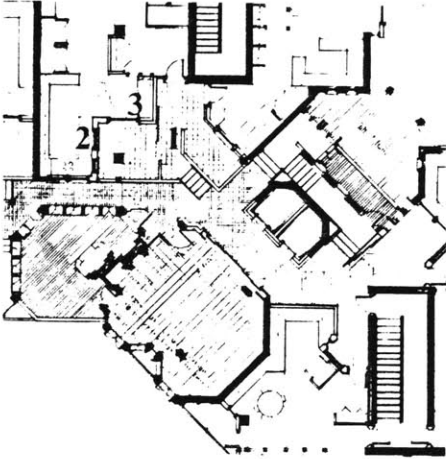
- key*
- *second level plan*
  - *unit #3*
- model*
- *cutaway looking south*
  - *1. the wall—lots of windows onto front porch*  
*—view over corridor to deck and outside*  
*—clear story-transom*
  - *2. the activities—entrance*  
*—study alcove*



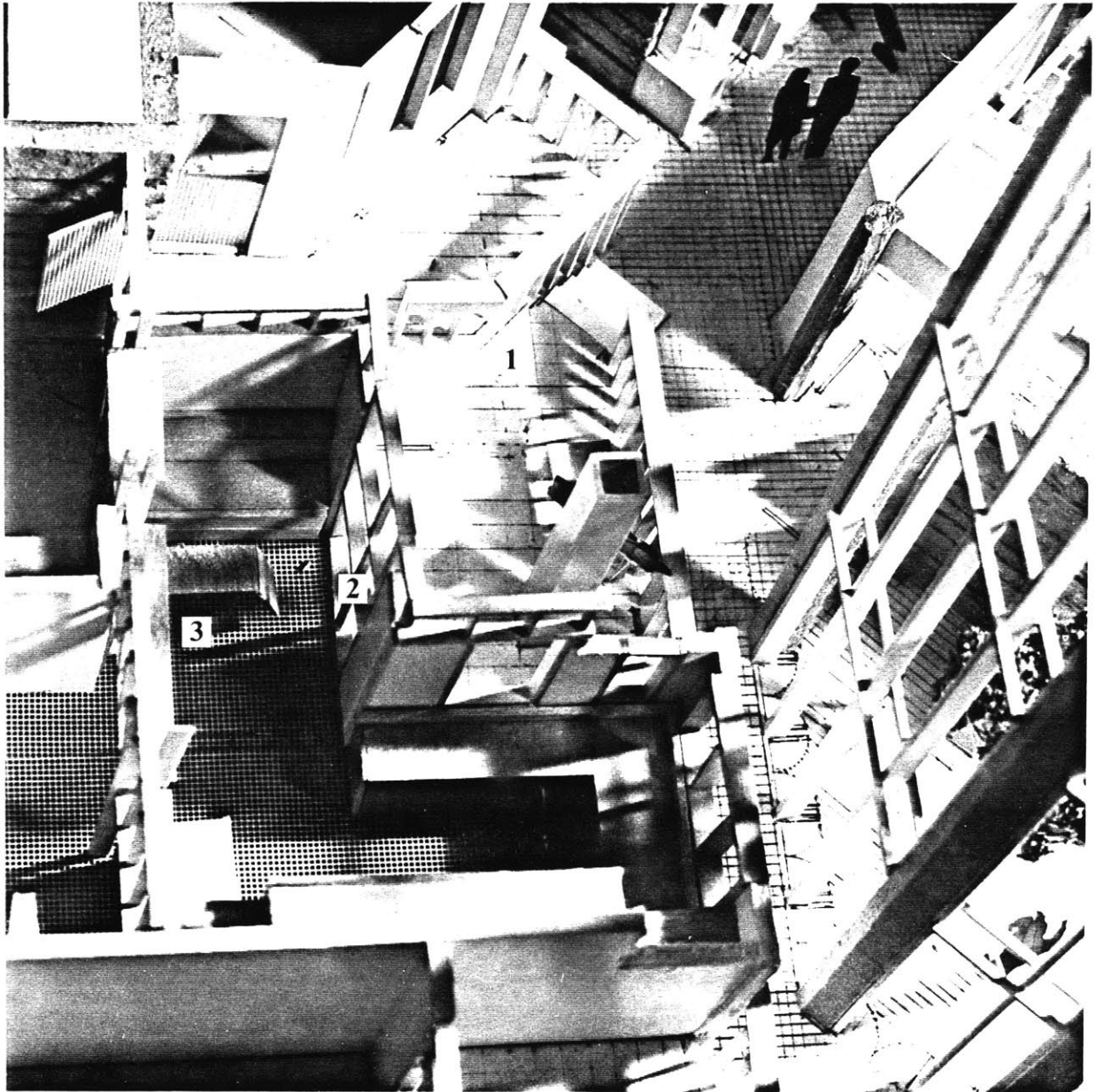
French doors, and triple-hung windows, opening onto the front porches. Some of the windows should be near front doors so one does not need a peep hole. Transoms above the windows and doors enhance the continuity between the inside and outside of the unit. Dutch doors for the front doors create a sense of openness and closure. In such a corridor different types of doors and different colors would be lively and supported.

..... the activities

The relationship between the corridor and the units can be reinforced depending upon what occurs just inside the units. Three examples of uses will be examined. In unit #3, a flat, a small study area or a breakfast niche would work best. The large double casement windows allows the space to spill outside. In unit #2, #4, and #5 the kitchen is near the front porch with a view of the corridor and the common spaces. The dining or living area can extend onto the porch. The large windows allow the activities to be partially in the unit, partially outside. Since units #2, #4, #5 are duplexes, the relationship of kitchen next to front porch is not necessary on the lower part of the duplexes. Instead of a kitchen there could be a den, study, or playroom. These areas are not as bright as the kitchen areas because the overhang of the outside deck is immediately above. From unit #4 or #5 a



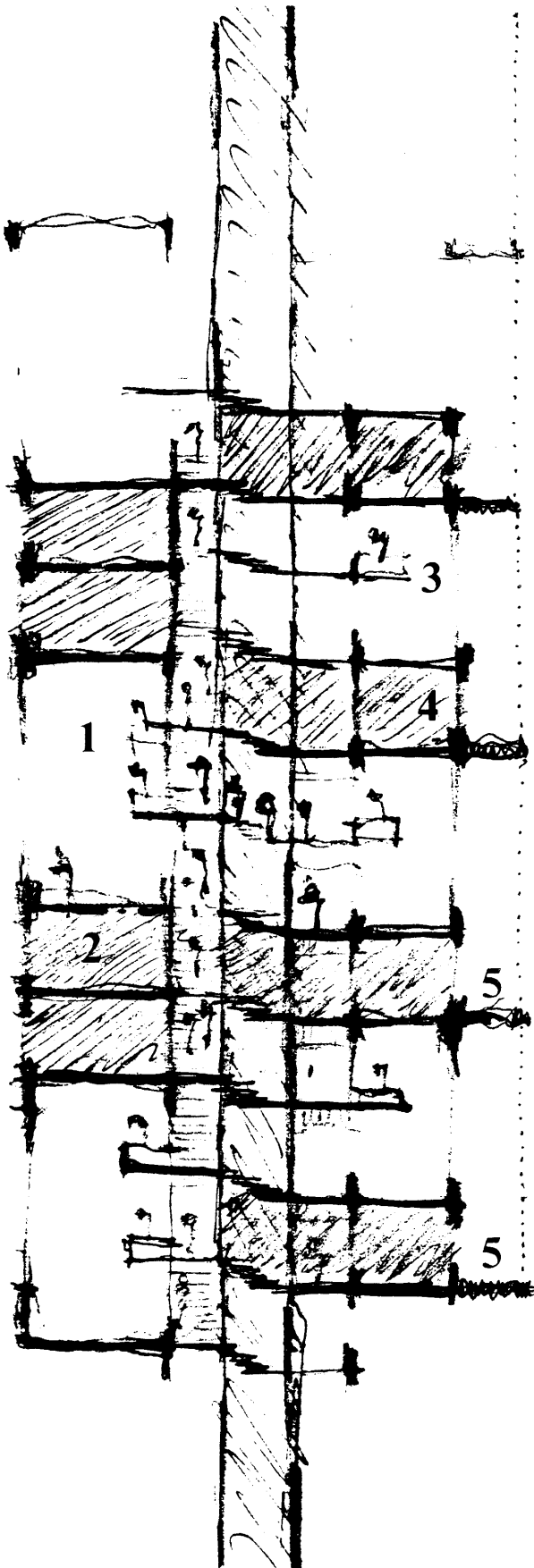
- key*
- *reference level plan*
  - *unit #3 & #4*
- model*
- *cutaway looking south*
  - *1. space—front porch unit #3&#4*
  - *2. wall—lots of windows onto corridor*
  - *3. activities—eating alcove of kitchen adjacent to porch corridor and deck*



person sitting in the den or front porch area could open with a greenhouse crank system the windows on the glazed wall to have outside fresh air (p. 26).

The semi-private spaces allow for a more magical and gentle transition between the inside and outside. Since some of the unit's space is "outside" the unit, the corridor is a more lively place. It will also mitigate the sense of confinement and exposure so commonly felt in most high-rises. The semi-private front porches enable someone to be partially outside a unit but inside the building. Most of the porches have screened, terraced views to the outside. In most high-rises the only exposure to the outside is directly to the outside. Above the fifth floor if there are no screens, nor intermediate spaces such as front porch or public spaces the views are frightening. A porch off the corridor with a view and activities adjacent to it will make for a friendlier, lively place that is well used.

The semi-private front porches comprise 250 sq. ft., or approximately 50 sq. ft. per unit. The design allows for easy incorporation of the spaces into the units. Duplex dwellers may opt for only one front porch. Still three percent of a unit is outside its door--not an excessive amount considering the benefits.



vertical organization

- 1 triple-height northern common room 225 sq ft.
- 2 individual rooms 225 sq ft.
- 3 double-height screened porch 400 sq ft.
- 4 single-height southern common room 400 sq ft.
- 5 triple-height outdoor deck 325 sq ft.

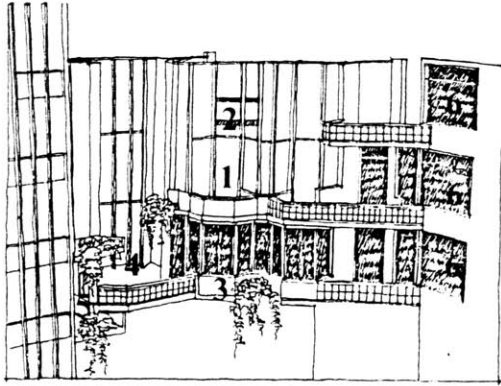
space — semi-public .....

Public spaces in vertical buildings are regulated to horizontal layer-caking. A floor may contain public spaces but this is not working with the overall organization of the vertical building.

In most high rise buildings, the subtle distinctions between public and private, inside and outside, are missing. A person is in an elevator, in a corridor, or in a unit. There are no subtle over-lapping areas. The only semi-public zone is the lobby on the ground, a laundry in the basement, and possibly a roof deck on the top. This design proposed the addition of three types of public areas in the middle of the building: (1) outside decks (2) screened porches and (3) cellular rooms.

..... public deck

Public roof decks on top of a high-rise are awkward because most people are apt to feel uncomfortable getting into an elevator in a bathing suit with others in street clothes. Moreover because the roof is isolated, it is not often casually or



key

• *abstraction of model*

1. *screened porch double-height*

2. *balcony*

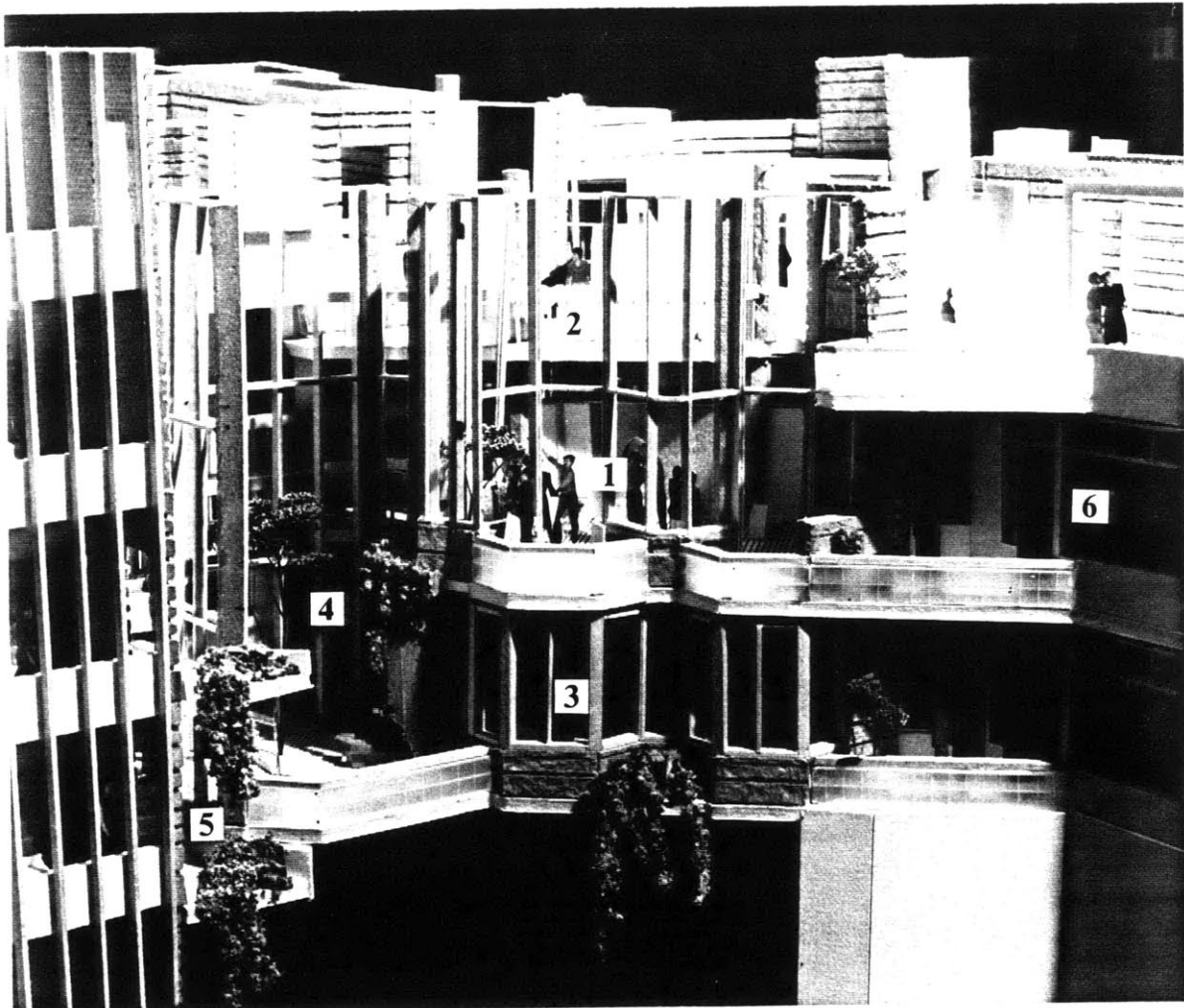
3. *cellular common room*

4. *outside deck— triple-height*

5. *one place on corridor at edge*

6. *unit*

model • *south face of neighborhood*



functionally used. In this design a small outside deck, 300 sq. ft., is included in each of the five neighborhoods. The space is very sheltered which is necessary if one is going to be outside in a high-rise. It has a exterior fireplace. There are two smaller more private intermediate decks in each neighborhood off the screened porch for sun bathing. The range, visibility, and placement of decks encourages individual and/or group use.

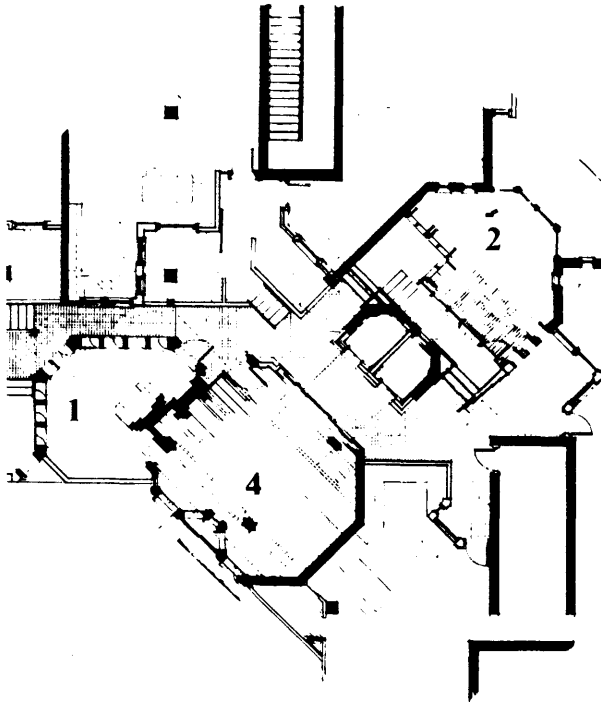
..... screened porch

A double-height screened porch is adjacent to the triple-height deck. There are five screened porches--one for each neighborhood. The screened porch, facing south, allows the warm sun to be enjoyed even when the weather is not perfect. It also serves as a double-height common room and generates a subtle transition between inside and outside. Finally, it offers a terraced view to the ground, since it looks down to the outside deck and beyond to the ground. These two spaces help to build a strong sense of a "new ground" up in the sky.

..... cellular rooms

Cellular rooms of different sizes would be included. These semi-public rooms would be arranged vertically not horizontally by interspersing them up the building not concentrating them all on one floor.

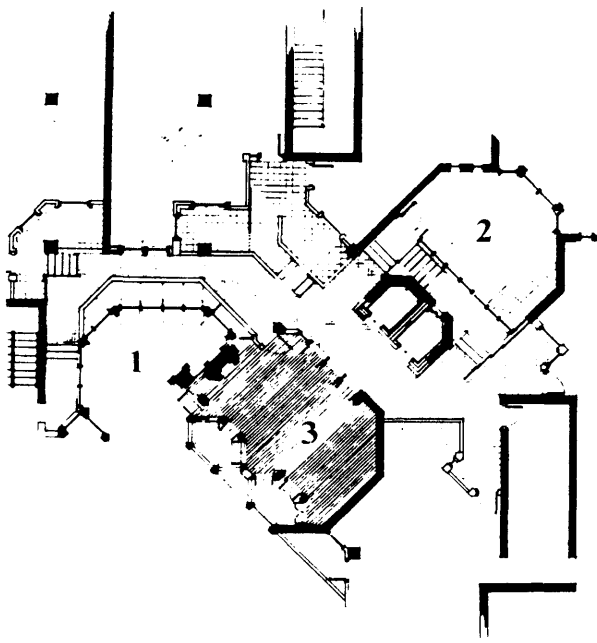




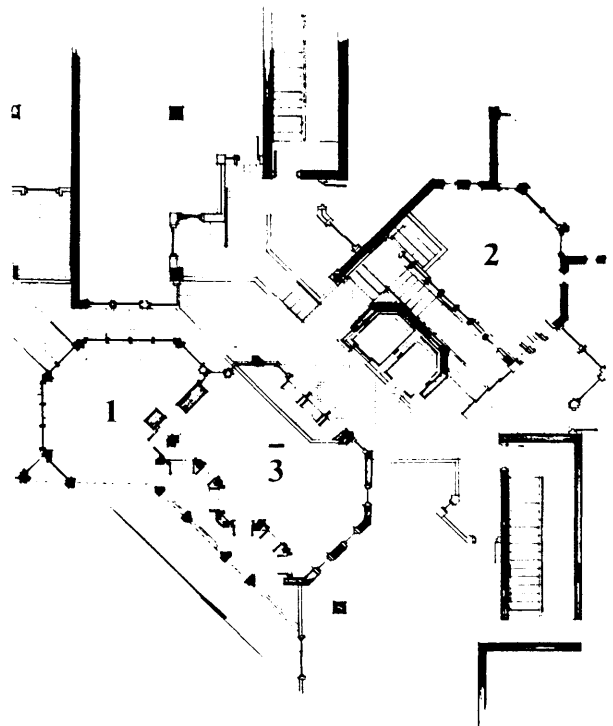
1. triple-height out door deck — 300 sq ft.
2. triple-height cave-like room — 225 sq ft.
3. double-height screened porch — 400 sq ft.
4. southern cellular room — 400 sq ft.
5. northern cellular rooms not shown — two stacked above and below cave-like room — 225 sq ft., each

plan • reference level of neighborhood

plan • second level

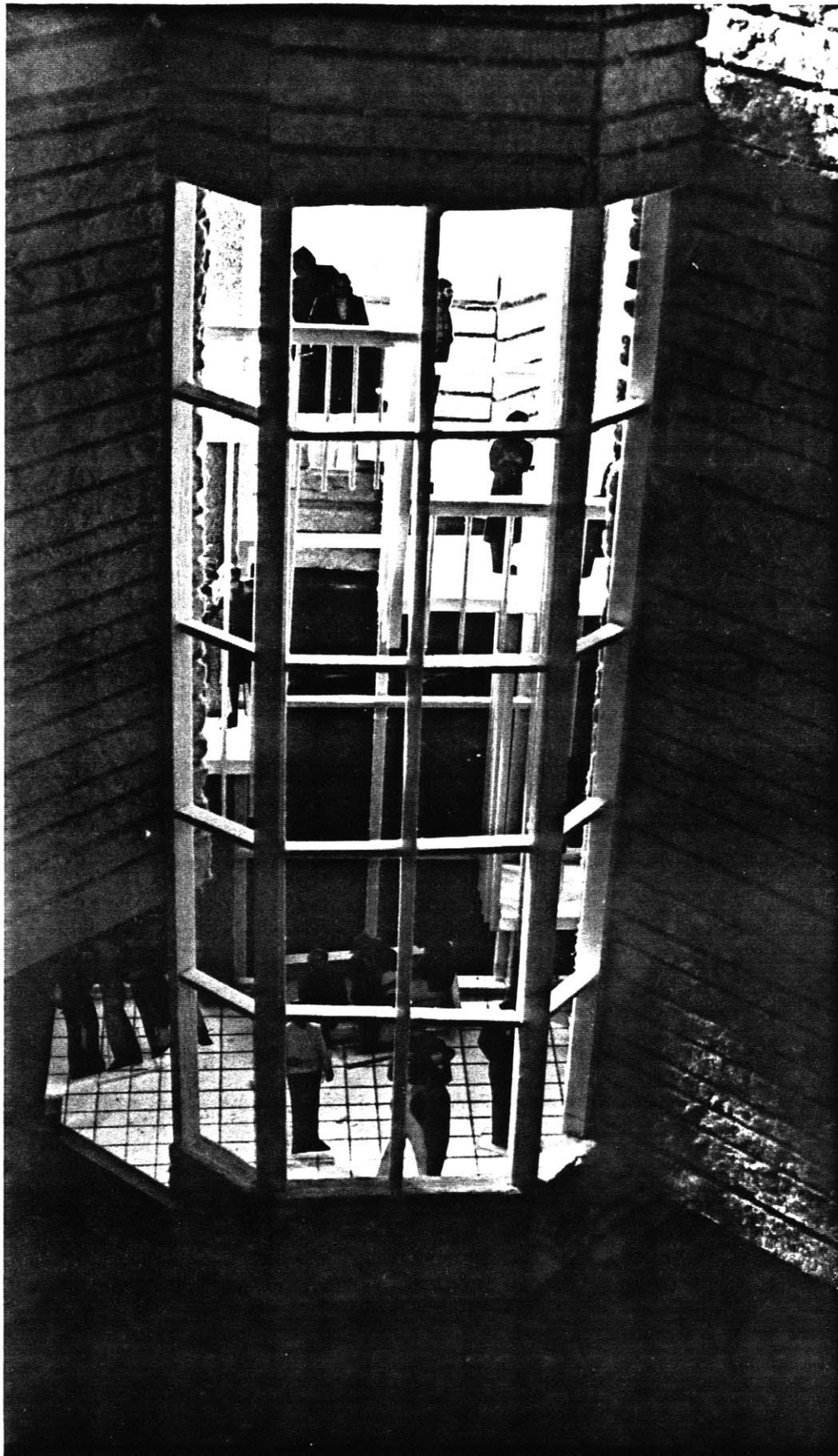


plan • third level



There would be five, single height space 400 sq. ft. on the southern side every third floor. On the northern side there would be three, triple-height 250 sq. ft. rooms every fifth floor and eight, single-height spaces of the same size. Because the entrances to the rooms are visible from the units they are part of the neighborhood. But they would be close enough to the elevator and stair so people from other floors could use these rooms.

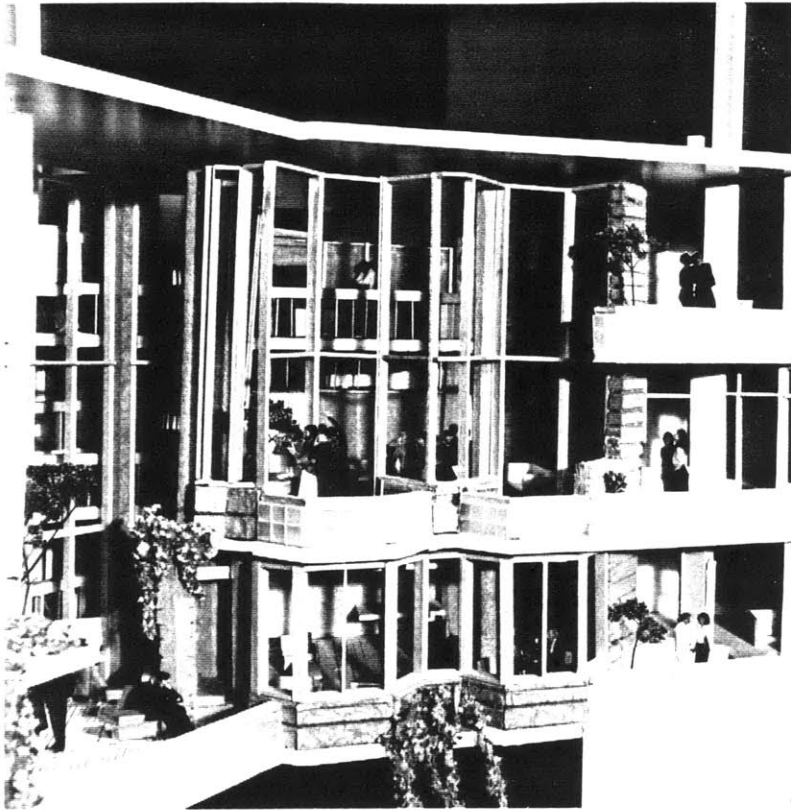
To determine the type of functions that would occur in these rooms I have divided the possible residents of this 72 unit, prototypical building into three groups--children, adolescents, and adults. The triple-height spaces on the north might become magical places for a child. No doubt the child in the Maxfield Parrish painting would be happy since children like cave-like places with multiple balconies to hide and play in. Added is the exposed screened stairs to run up and down. Since the kitchen windows of five adjacent units look into this room parents can watch their children play. At night these rooms can convert into a fantastic room with regal stairs for parents to use to entertain and host



- *northern triple-height common room*
- *cave-like*
- *open stairs against elevator core*
- *terraced landings*

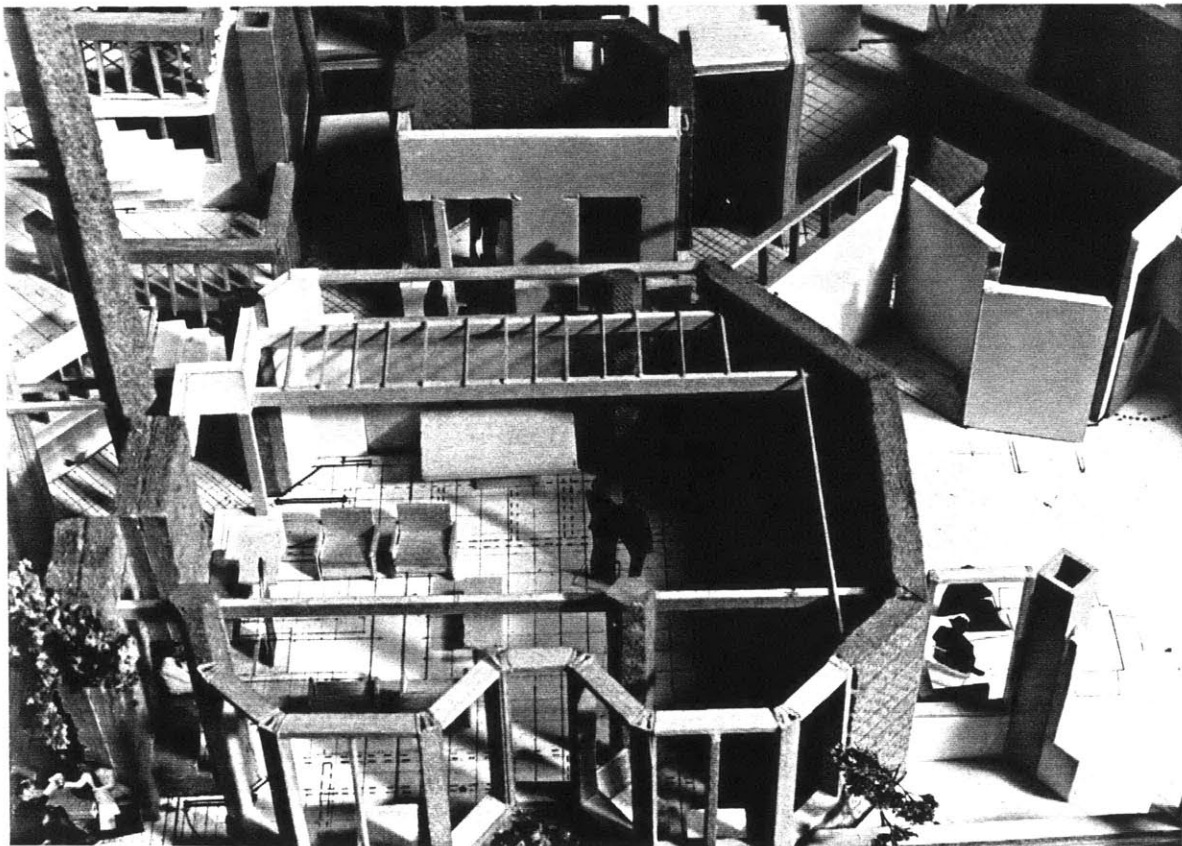
parties in. Adolescents need their own room assigned to them so they can "get out of the house" without having to leave the building. They would also use some of the spaces geared to the adults.

Adult needs can be divided between (1) a game room or rooms to play ping pong, billiards, or cards, (2) a music room to listen to music or produce music in; a room with a grand piano for practice without causing tempers to flair, (3) a reading room, quiet with large chairs and desks, a refuge from the activities of confined apartment living at his own door step, (p. 72), (4) a work shop with power tools to work on projects over a long time, (5) a shared work space of 400 sq. ft., (6) individual work rooms of 245 sq. ft. (A doctor's office or other offices that receive many clients from outside the building should be located on the ground floor. A great deal of traffic would violate the delicate sense of private/public within the neighborhoods of the building.) (7) a darkroom a communal or private, (8) a greenhouse or, (9) a guest bedroom with a bath for rent to anyone in the building.



3 2-story  
story screened  
out-porch  
side with  
deck balcony  
cellular units  
room

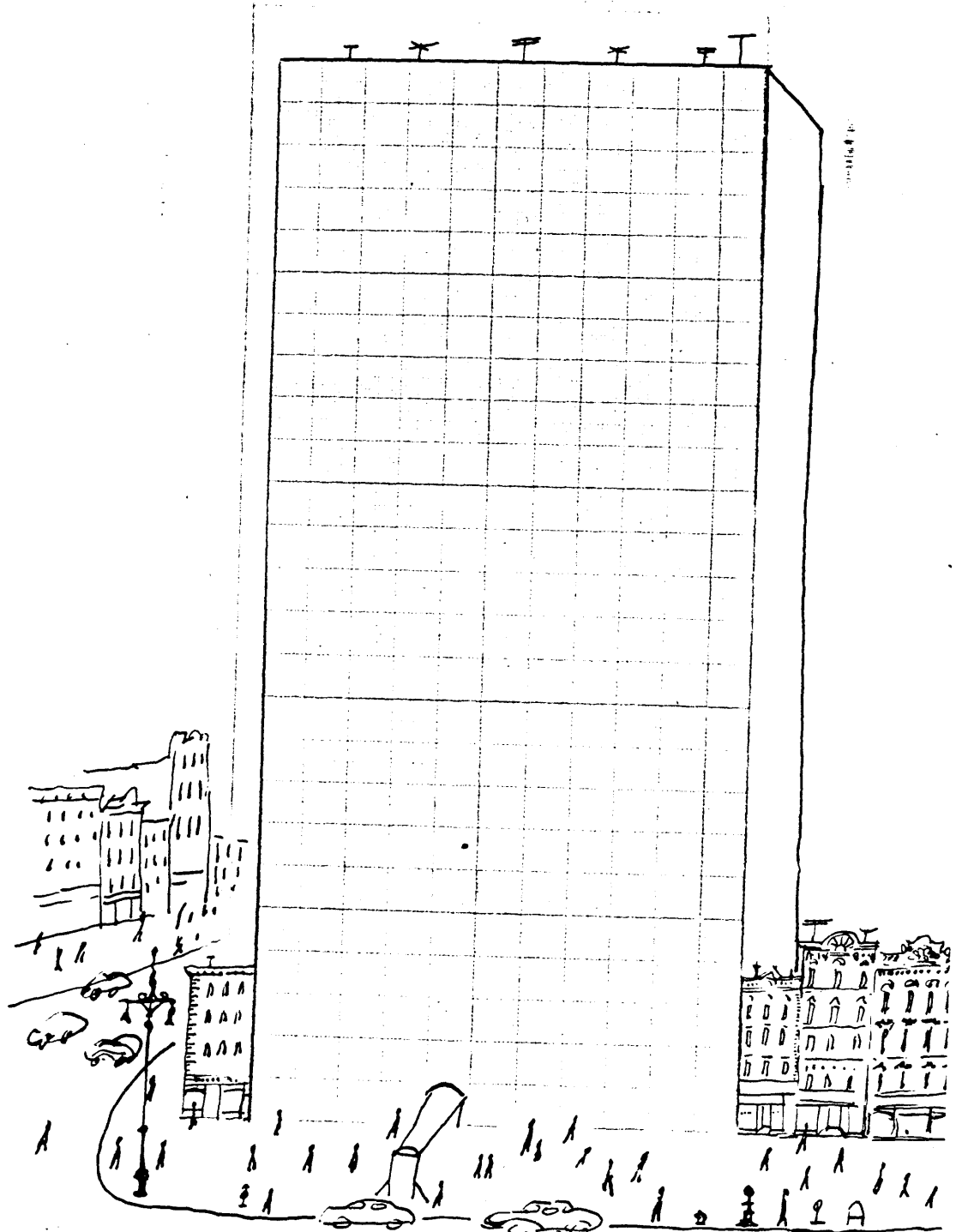
*cellular common room*



The uses of the decks, porches, and rooms should be fairly well defined. If too many functions are proposed for one room, then no activity controls the room, and its use would diminish. However, reading rooms or children's rooms, which house a small kitchen can also facilitate cocktail parties or larger dinner parties. Very large functions would have to take place on the ground levels more devoted to larger common activities such as a swimming pool, a health club, and banquet rooms. The amount of square footage allotted to these semi-public spaces is less than 900 sq. ft. per 6,000 sq. ft. floor--the two rooms amount to 625 sq. ft. and the outdoor space 300 sq. ft. The inside semi-public space is 11 percent of the space allocated to the units, a reasonable amount to house so many amenities. This 11 percent takes into account the double and triple-height spaces.

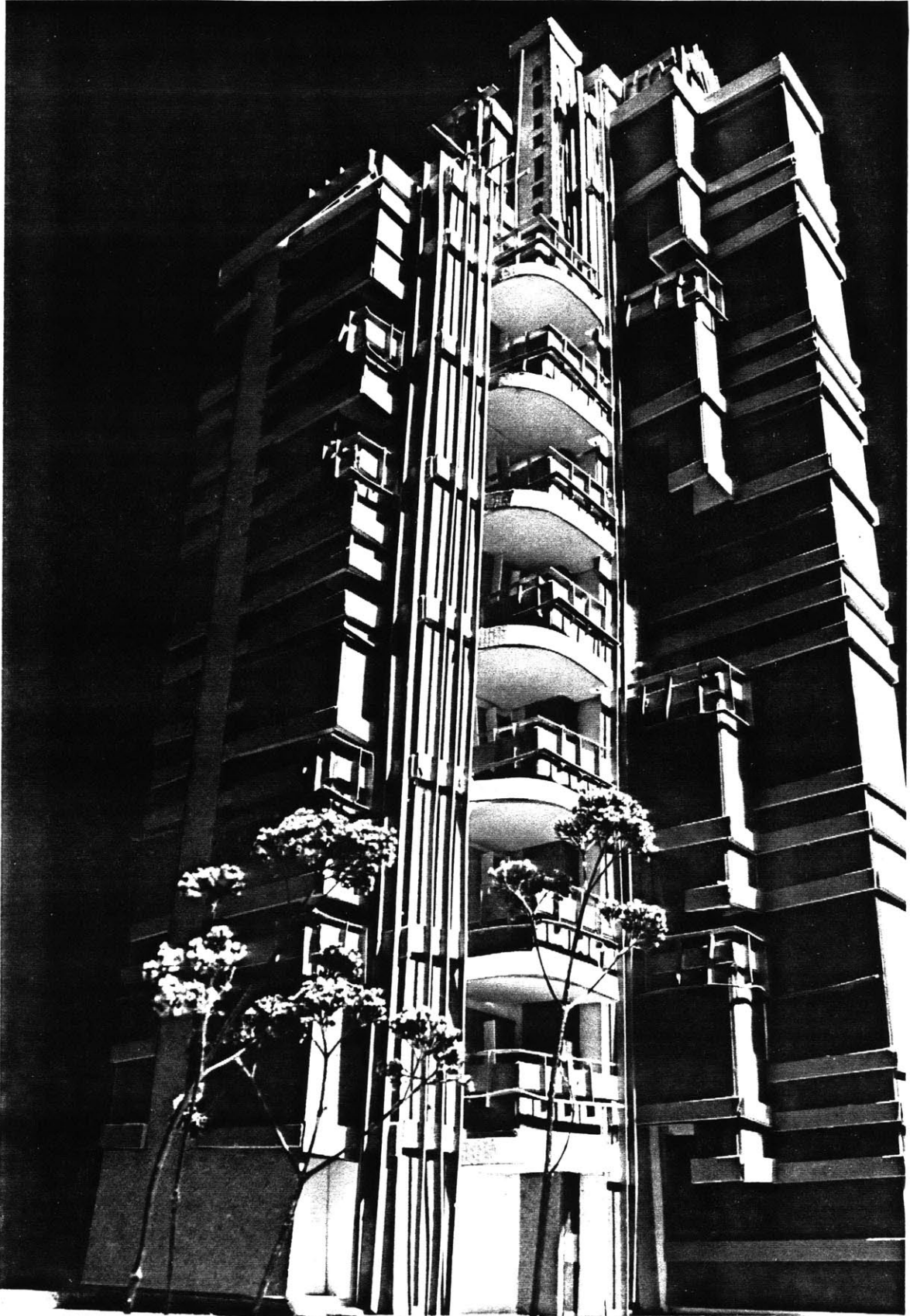
**PART III**

**IDENTITY. . . . .**



PAUL STENBERG, 1950. GENOA TOWER BUILDING...





.. Hassan Hotel - Fall '02 ... TM

# identity.....

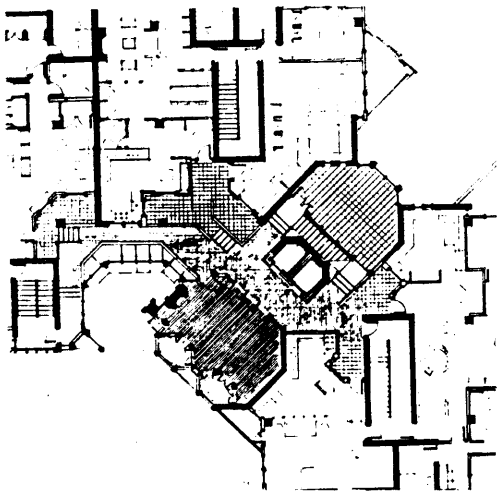
Most modern high-rise buildings look more like pigeon hole designs than homes for human being.

The need to express ones own individuality and to identify where one lives is well documented in Franklin Becker's book, Design for Living: The Residents' View, Multi-Family Housing. In one of his surveys he asked "lay" people to draw a facade on a grid representing a typical apartment building and pick a unit. Every individual picked the "most unique" part of the building--i.e., the edge, top, bottom. This thesis concentrates on the middle section. I have tried to design this section so that it is a compelling area in which people will be able to express their individuality.

The problem of identification can be viewed relative to (1) the cityscape, (2) the building, (3) the neighborhood in the building, and (4) a particular unit. Very little need be said on the cityscape. The building is itself unusual enough to stand out and be identified.

A person can easily identify with the different clearly defined sections of the building, bottom, middle, and top. However, this thesis is confined

..... the building



*plan*

• *level 3*

• *common spaces—90°*

• *private spaces—45°*

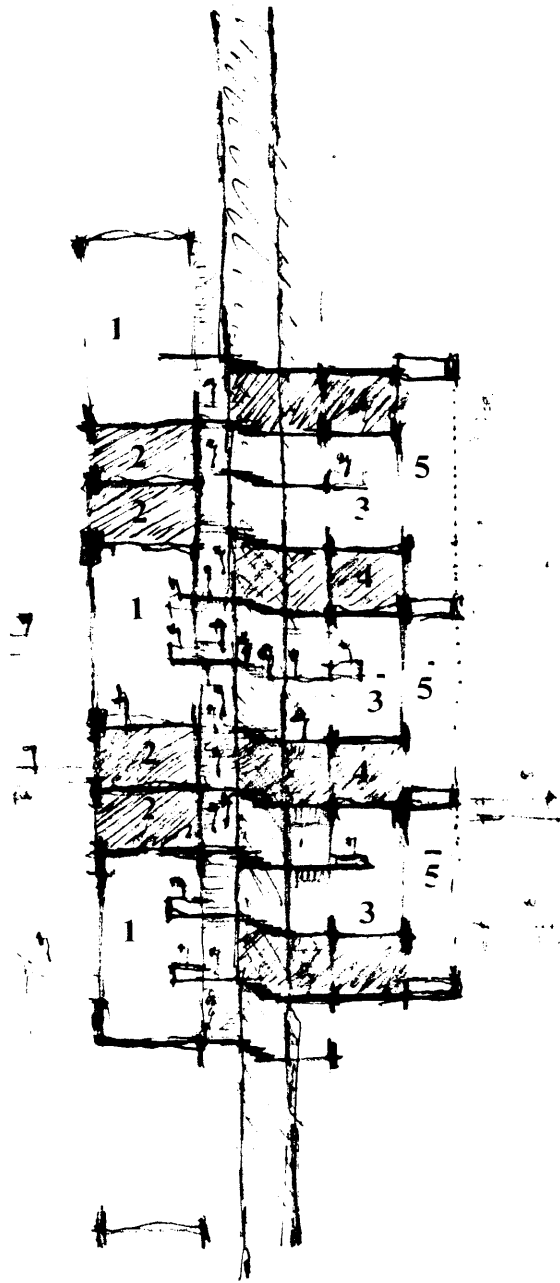
**1** *triple-height northern common room*  
225 sq ft.

**2** *individual rooms*  
225 sq ft.

**3** *double-height screened porch*  
400 sq ft.

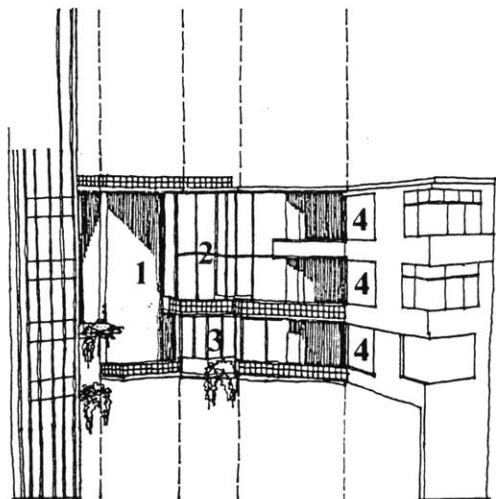
**4** *single-height southern common room*  
100 sq ft.

**5** *triple-height outdoor deck*  
325 sq ft.



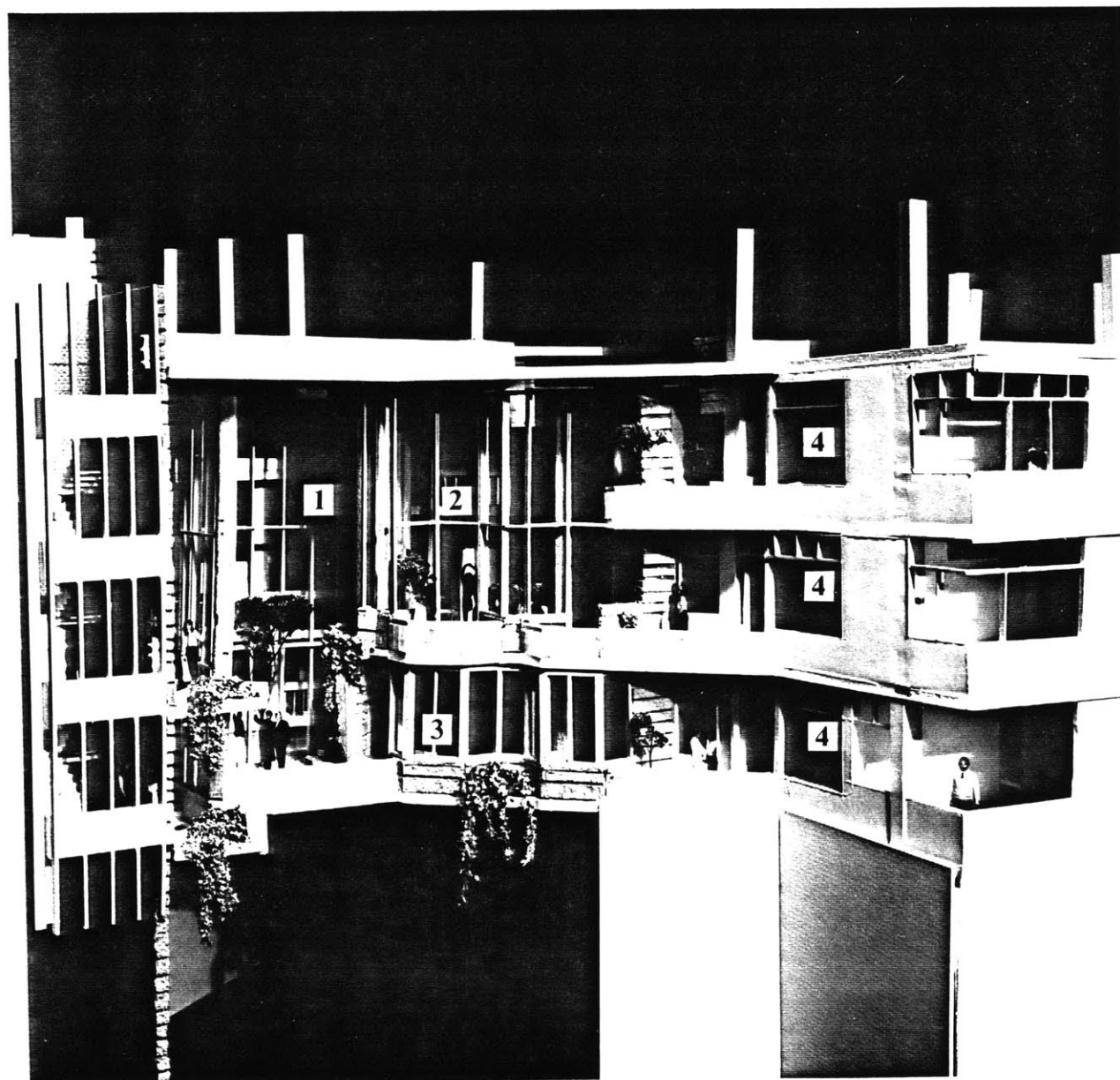
to "the middle" and the majority of references are drawn largely from areas in the middle. Each facade is distinct. No one could say his building is an egg carton with cookie cutter, repetitive windows on all four sides. A person could easily identify the facade he lives in. The south face has large, triple-high glazing and several common areas. The north face has large areas of exposed core with the large triple-high spaces. The east and west facades have a rhythmic pattern of the duplex living unit's double-height windows that are offset by the smaller windows on either side and the smaller windows of the flats that are between the duplexes. The living units are designed at a 90 degree angle and the common spaces a 45 degree angle. Therefore, as one looks at the building, one sees part of the unit and common spaces at the same time. The angle shift defines the different uses.

Besides distinct facades and the 45 degree shift in plan, the middle section of the building is subdivided to assist easy identification. On the south facade, there are five, three-story sections; on the north three, five-story sections. When viewing the building from the street both these large reference spaces help identify where one lives. At the same time there are strong vertical elements that unify the whole building--the continuous exposed



- key*
- *abstraction of model*
  - 1. *triple-height outdoor*
  - 2. *double-height screened porch*
  - 3. *common room*
  - 4. *unit*

*model* • *south face of neighborhood*  
*southern neighborhood facade—three floors—*  
*repeats five times in middle section*

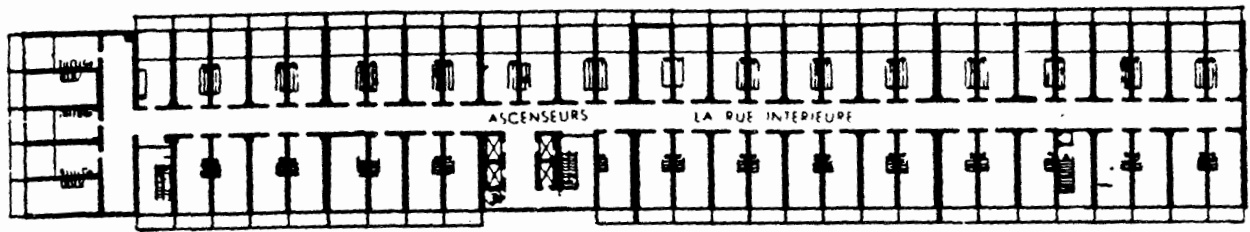


core on the north and the continuous fenestration of the fire-stairs on the south.

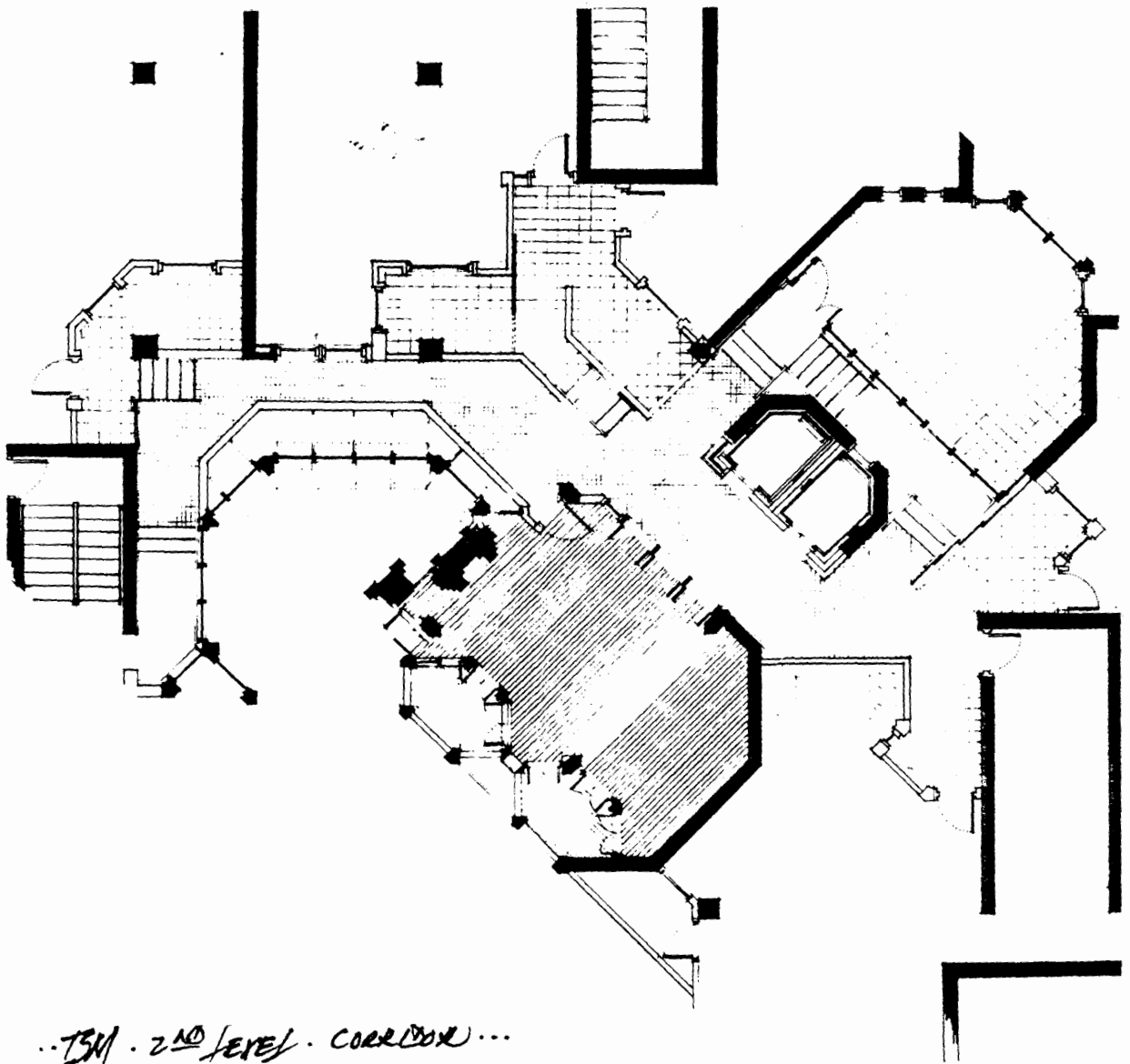
..... the neighborhood

The building functions to encourage easy identification of different neighborhoods within the building. Common rooms grouped as a vertical "shishkebab", encourage identification of a neighborhood as the one with a greenhouse, the children's playroom, the wood shop, etc. Because the common rooms are large and are only on the north and south sides, the dweller is able to identify easier where one lives.

A range of sizes further facilitates placement. In most modern high-rises there is such uniformity of size that it is hard to pinpoint where one lives in a building or where the building lives in the city. The neighborhoods of the buildings are divided into different sized elements--called here A, B, C. Within the semi-public areas, the large three-story spaces are A, the single story spaces B, and the intimate decks C. Further, the swimming pool on the ground is A, the neighborhood large outdoor decks B, and the intimate decks C. Within the circulation spaces there are different size spaces. The triple-high terraced spaces are A, the area along side the elevator is B, and the minimal corridor



..COUBOSIER. MARSEILLE. CORRIDOR..



..TSM. 2<sup>ND</sup> LEVEL. CORRIDOR...

..... the unit

dimension is C. Circulation in most high-rises is only an extruded tube size, C.

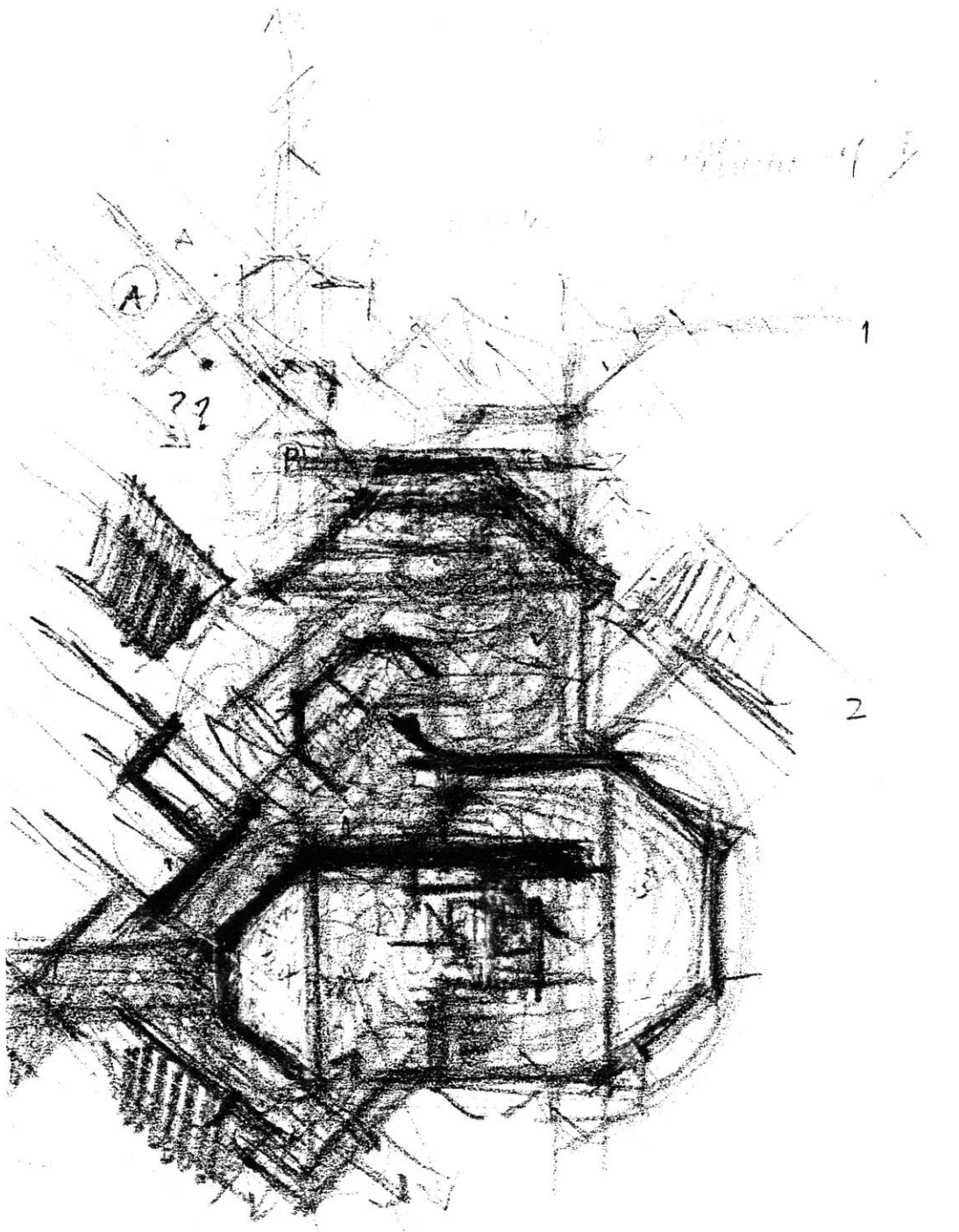
The actual neighborhood and apartment in which one lives need to be expressed. Front porches encourage expression of individuality. The use of optional Dutch doors allows the inside of a unit to be seen. Windows that open onto the corridor partially expose the different decors of the units. Because the neighborhoods are three-storied and curves back on itself, a range of spaces are seen. Instead of a bare, monotone corridor with only door mats, little peep holes, and large multiple locks to mark off the corridor, this corridor would be a fascinating place to be.

Too much variety is as disorienting as no variety. I use five and its derivatives, three plus two, and two plus one plus two, as an aid in design and ordering. There are three story spaces every three floors on the south side and three story spaces every five floors on the north face. There are five units per floor, three on one side, two on the other. The three story windows on the north are divided into five vertical sections. There are many more instances. Other numbering systems could have been used. It is important to use a system that assists identification.

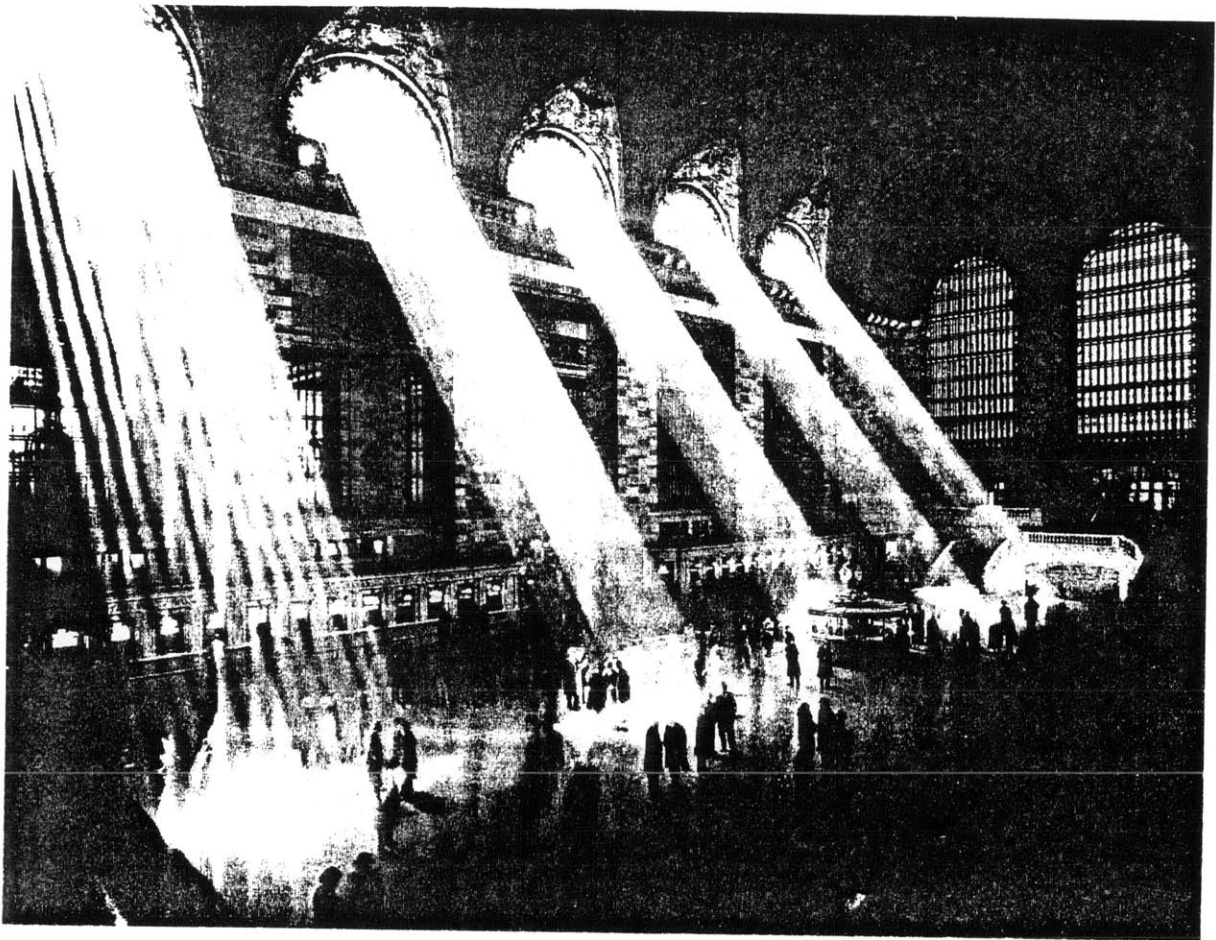


**PART IV**

**CONCLUSION** . . . . .



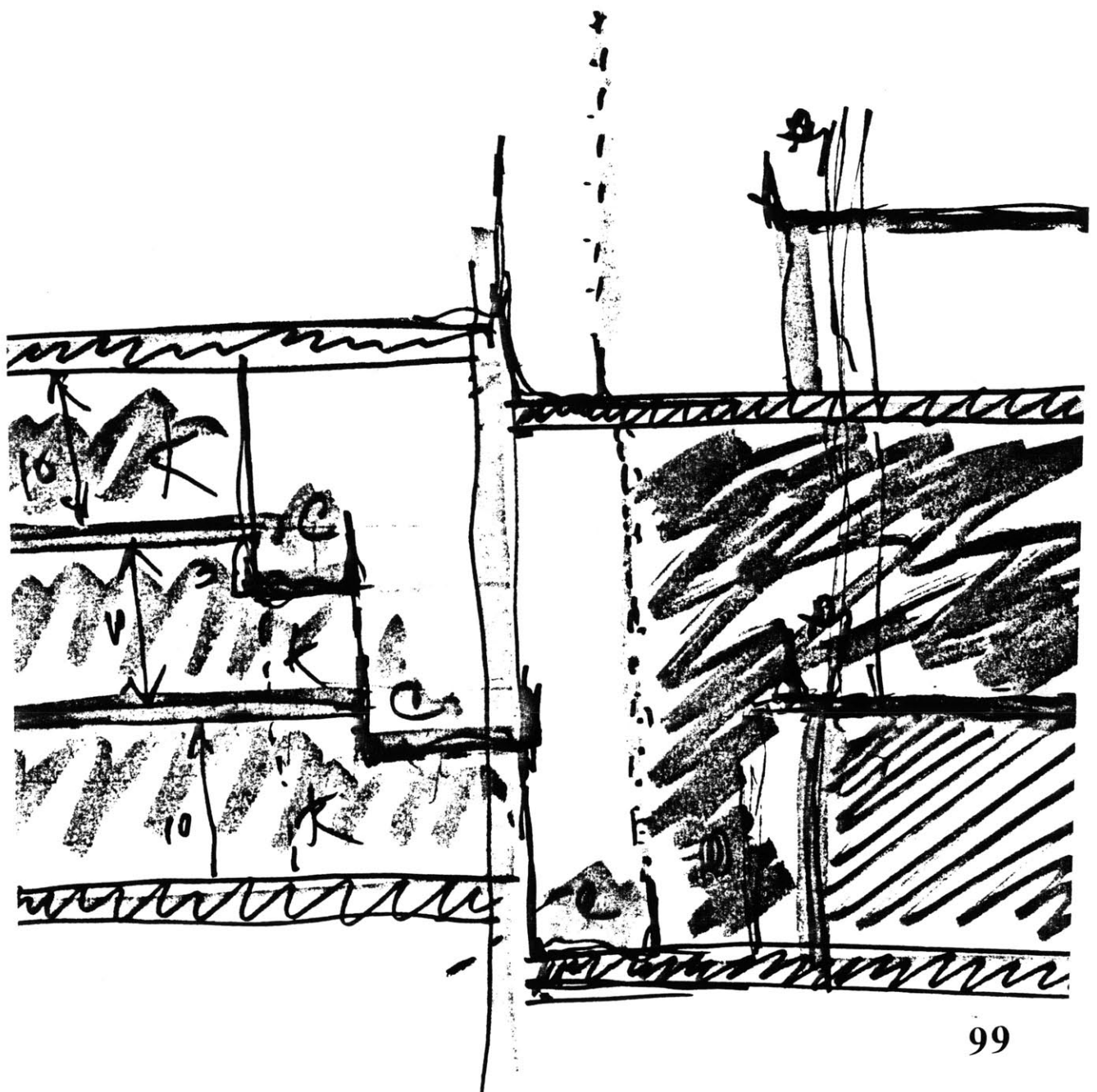
..Aurice Smith · DESIGN CURT · SPRING '83...

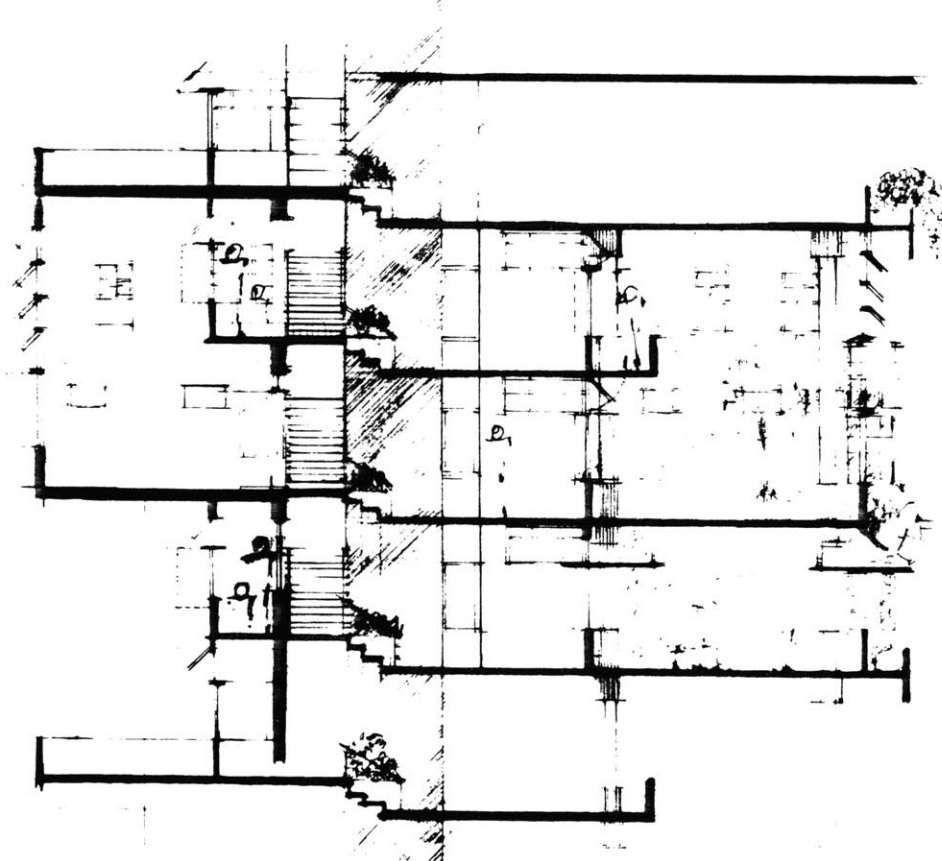
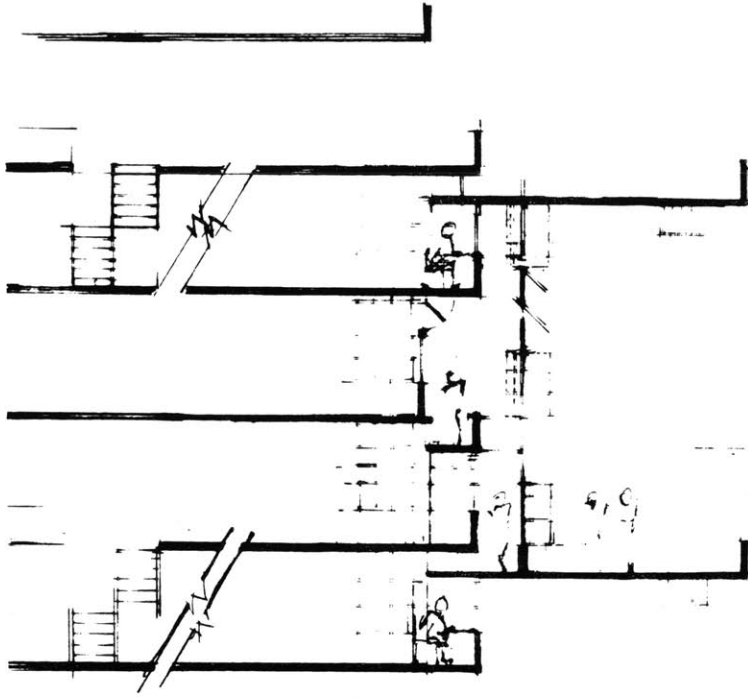


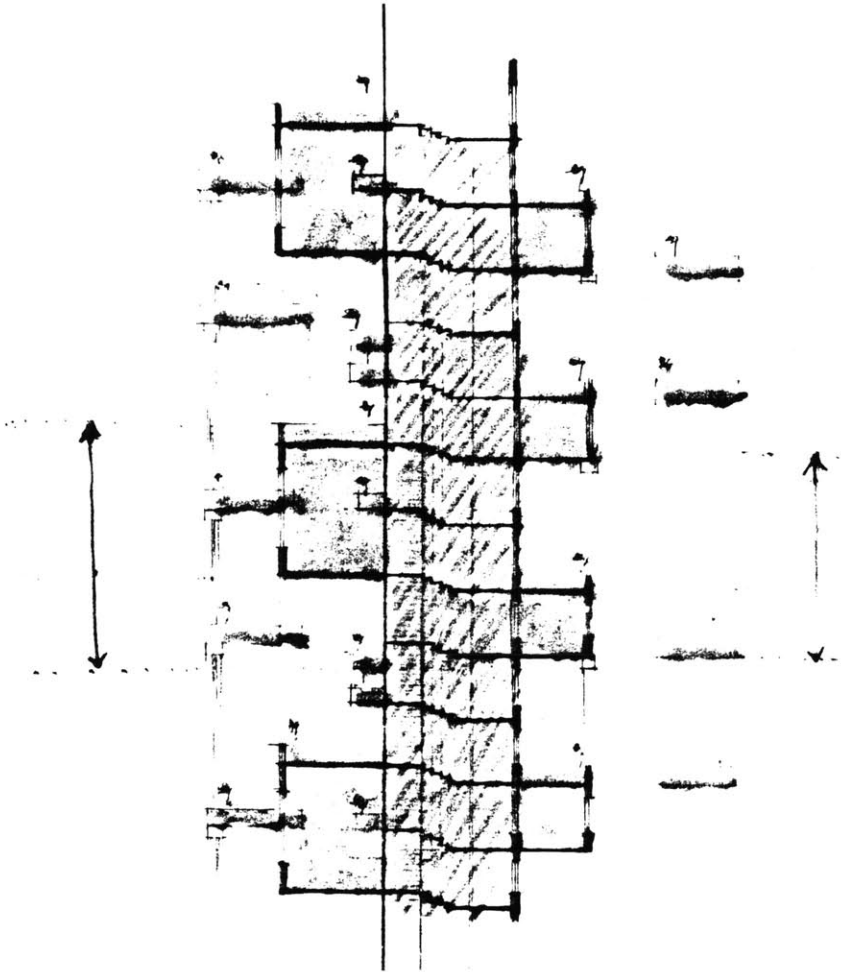
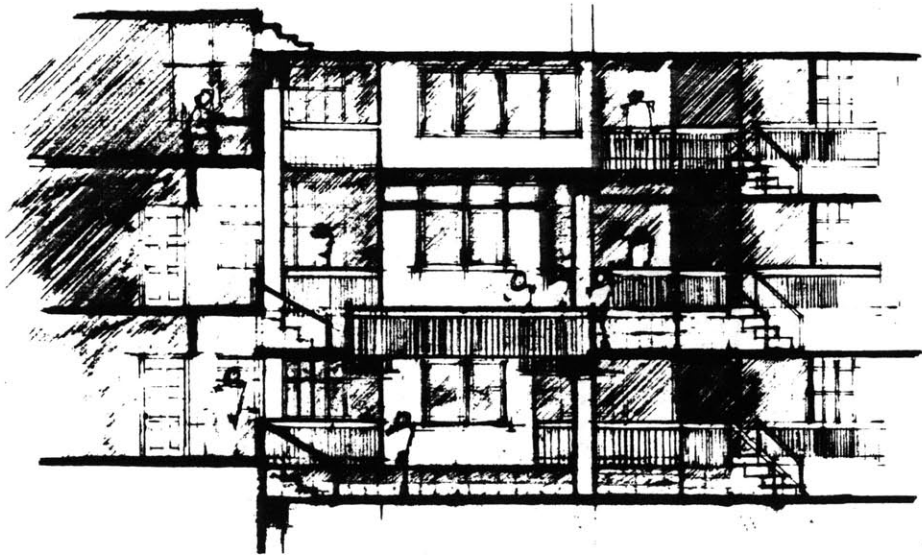
The conclusion of this thesis is a journey through the design process that starts with sketches moves on to hard line drawings and ends with sketches. I learned a great deal along the way and enjoyed the journey, but it is not over.....

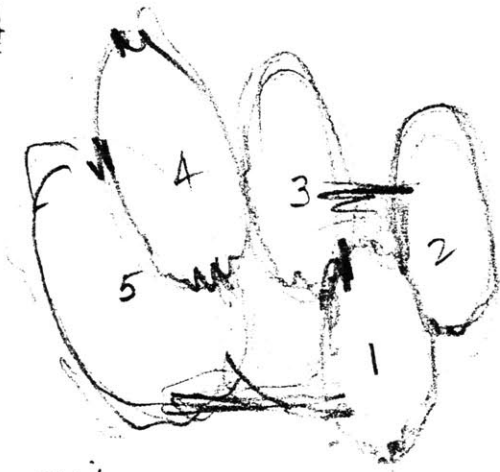
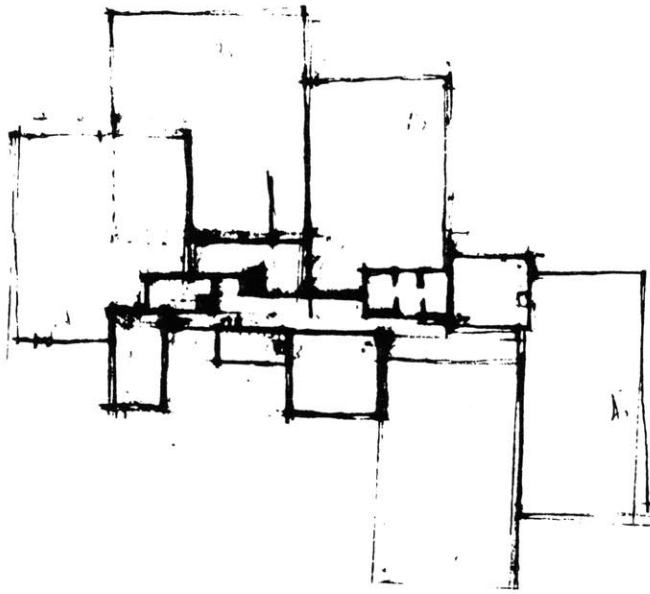
initial sketch shows relationship of kitchen "k" to corridor "c"

2. terracing
3. 3' of level change and plate shelf between east and west ends.
4. triple height space -
5. double height space.
6. cellular form.

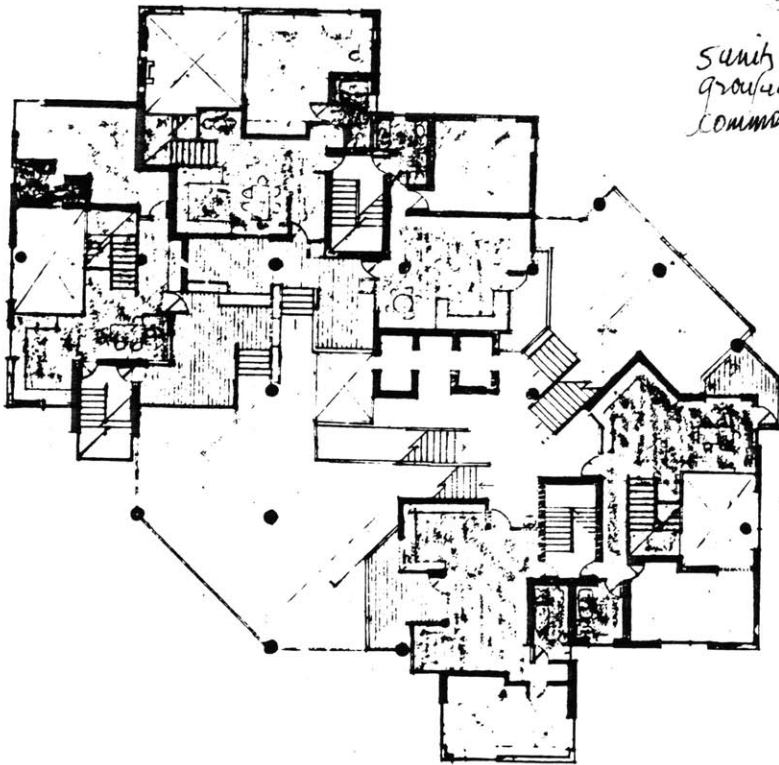


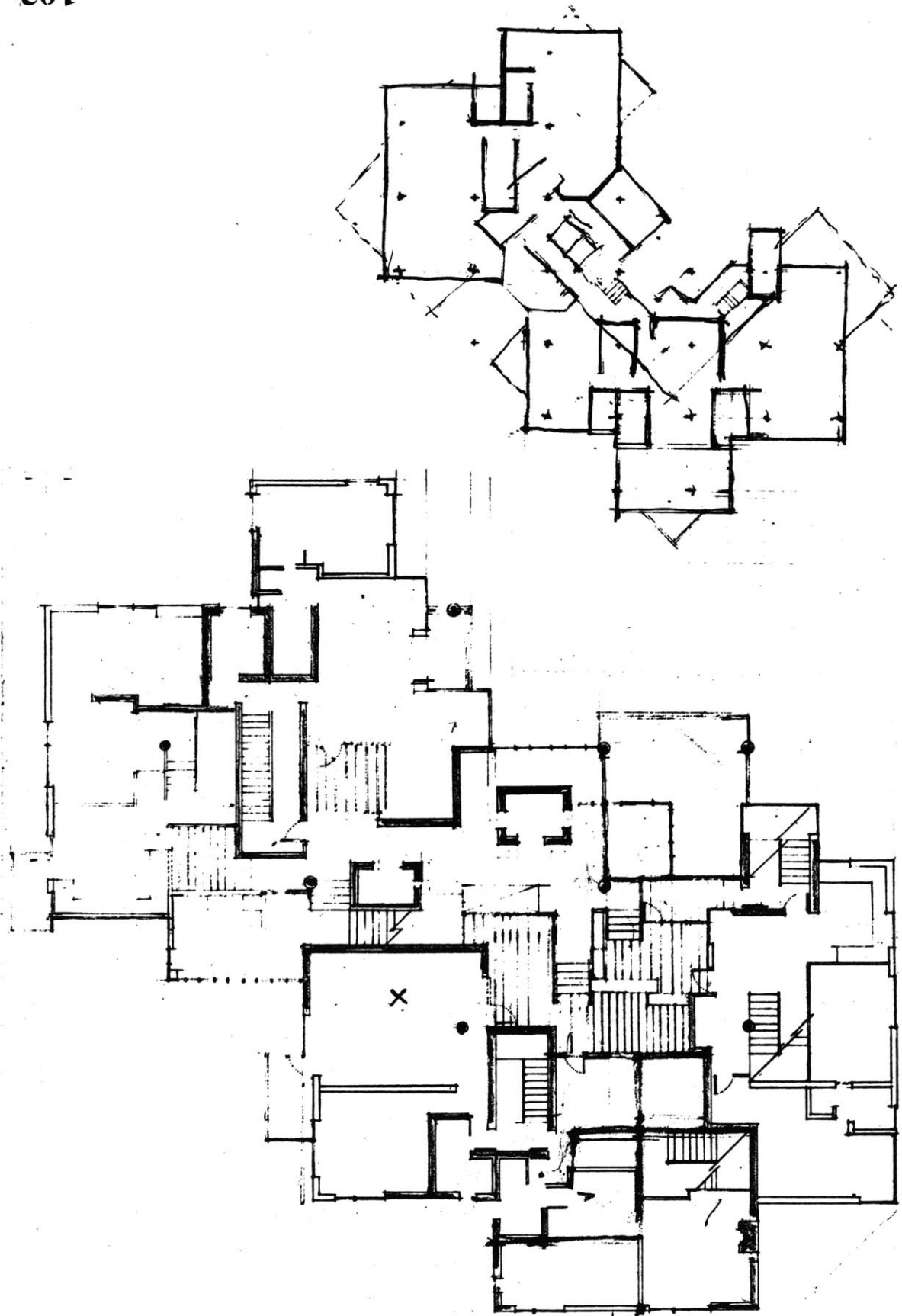




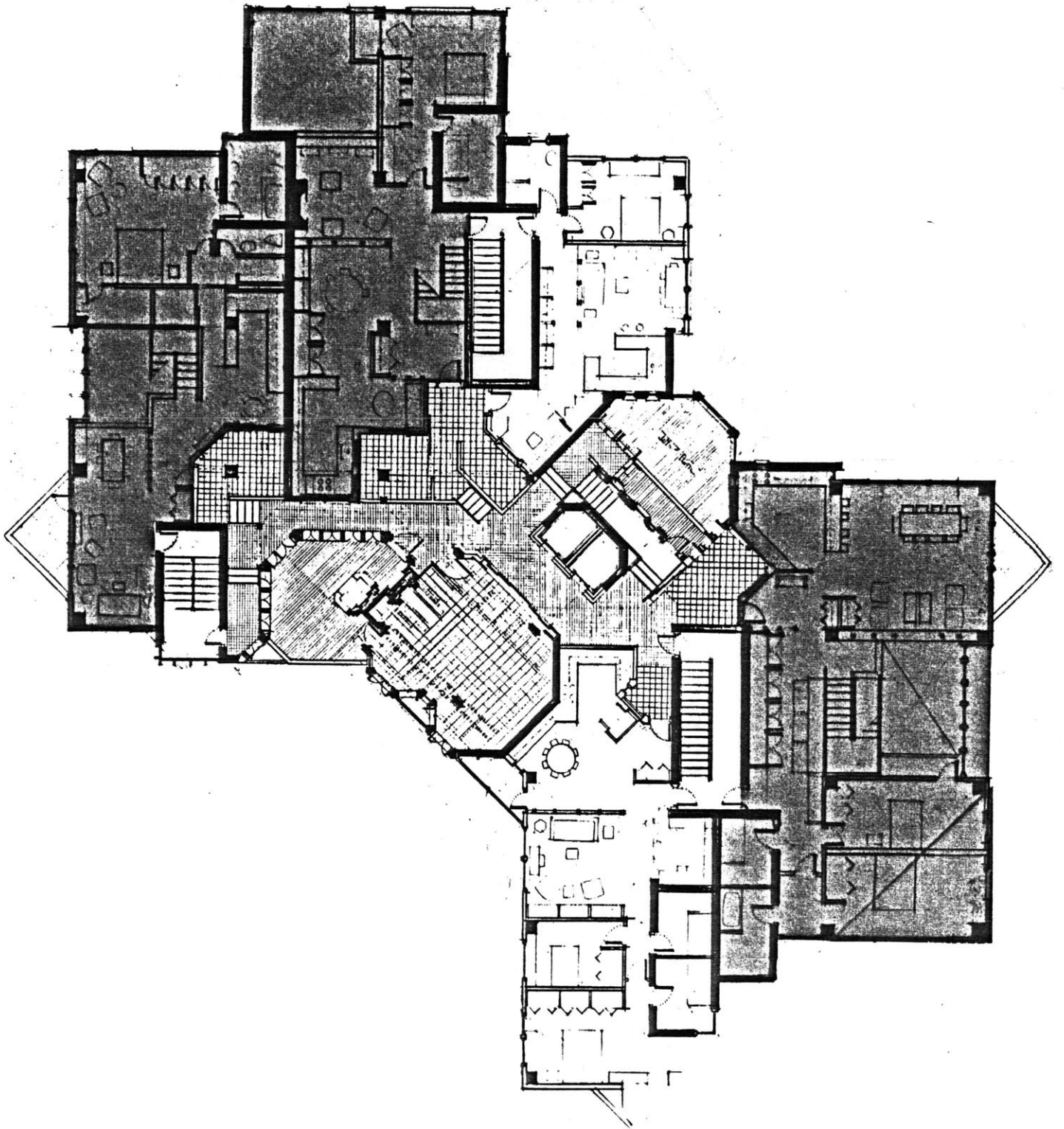


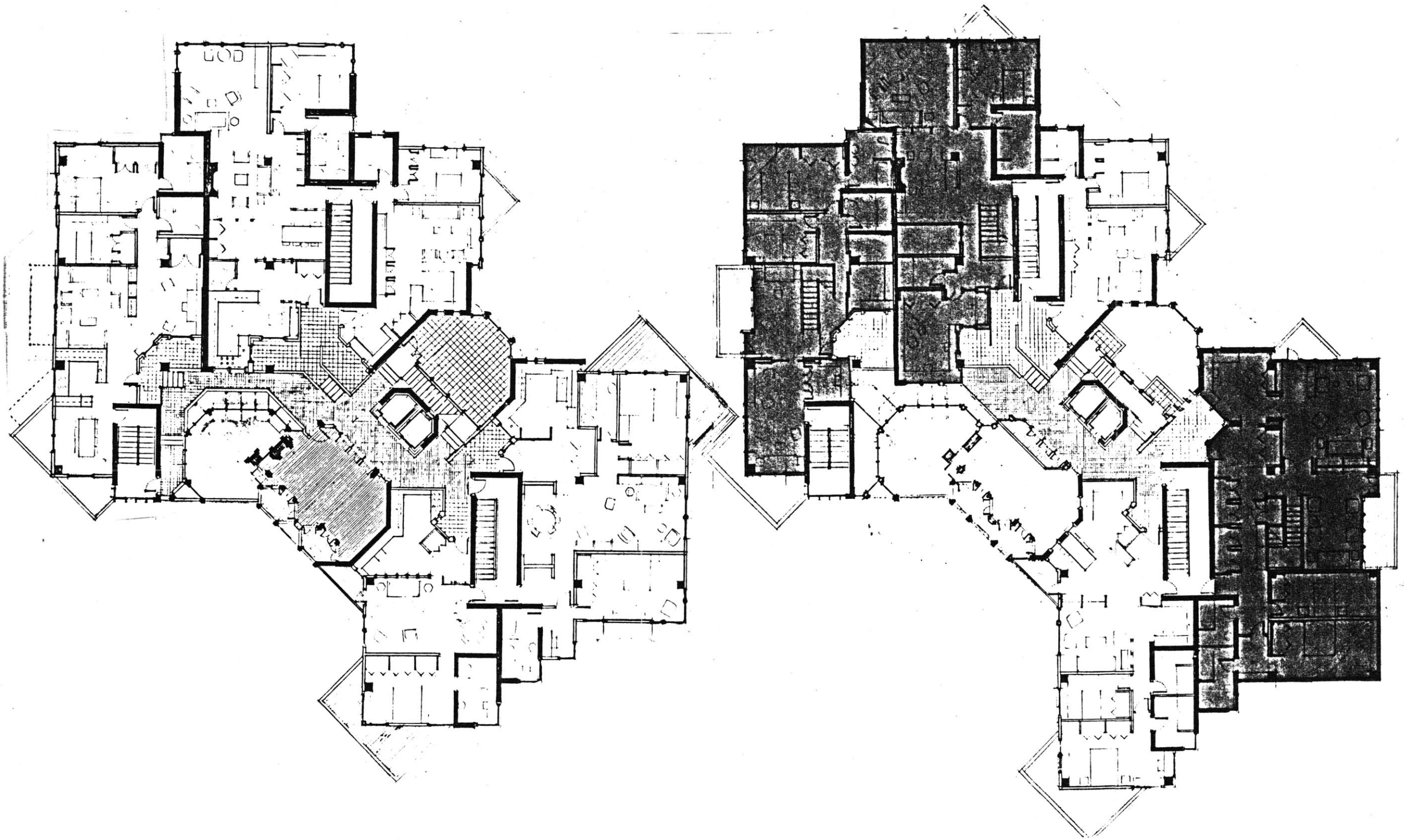
5 units -  
grouped 3+2  
common space below.





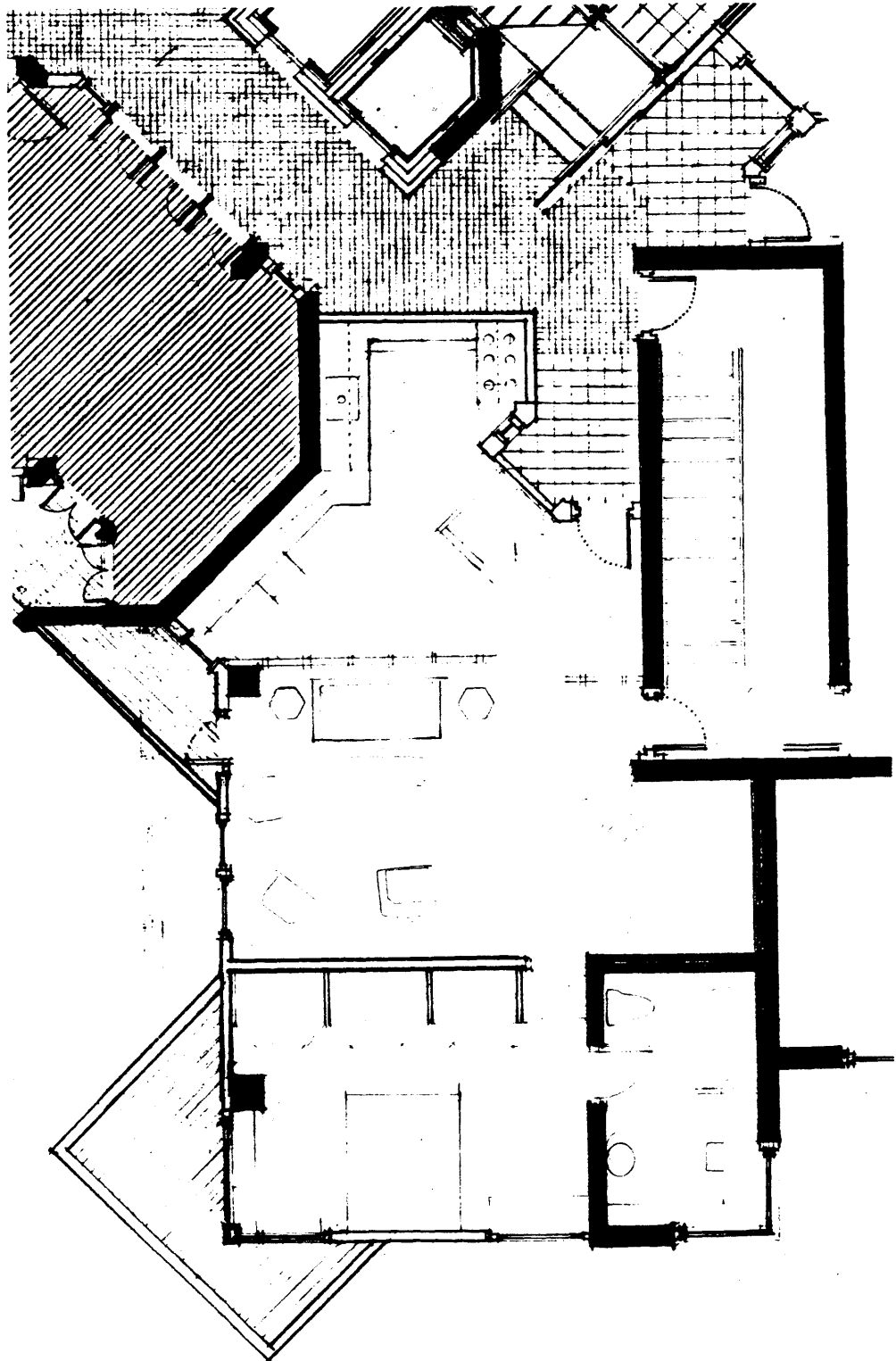




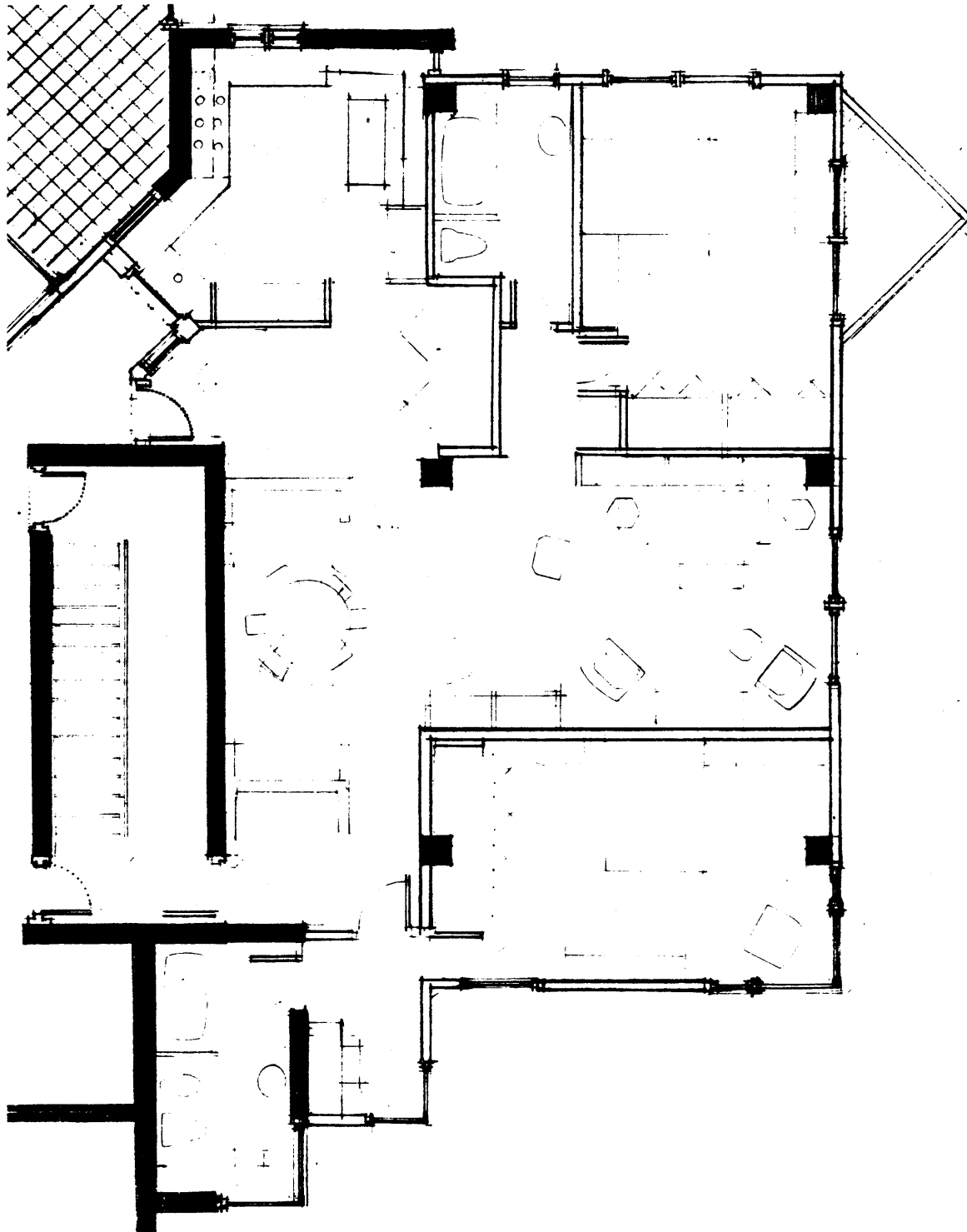




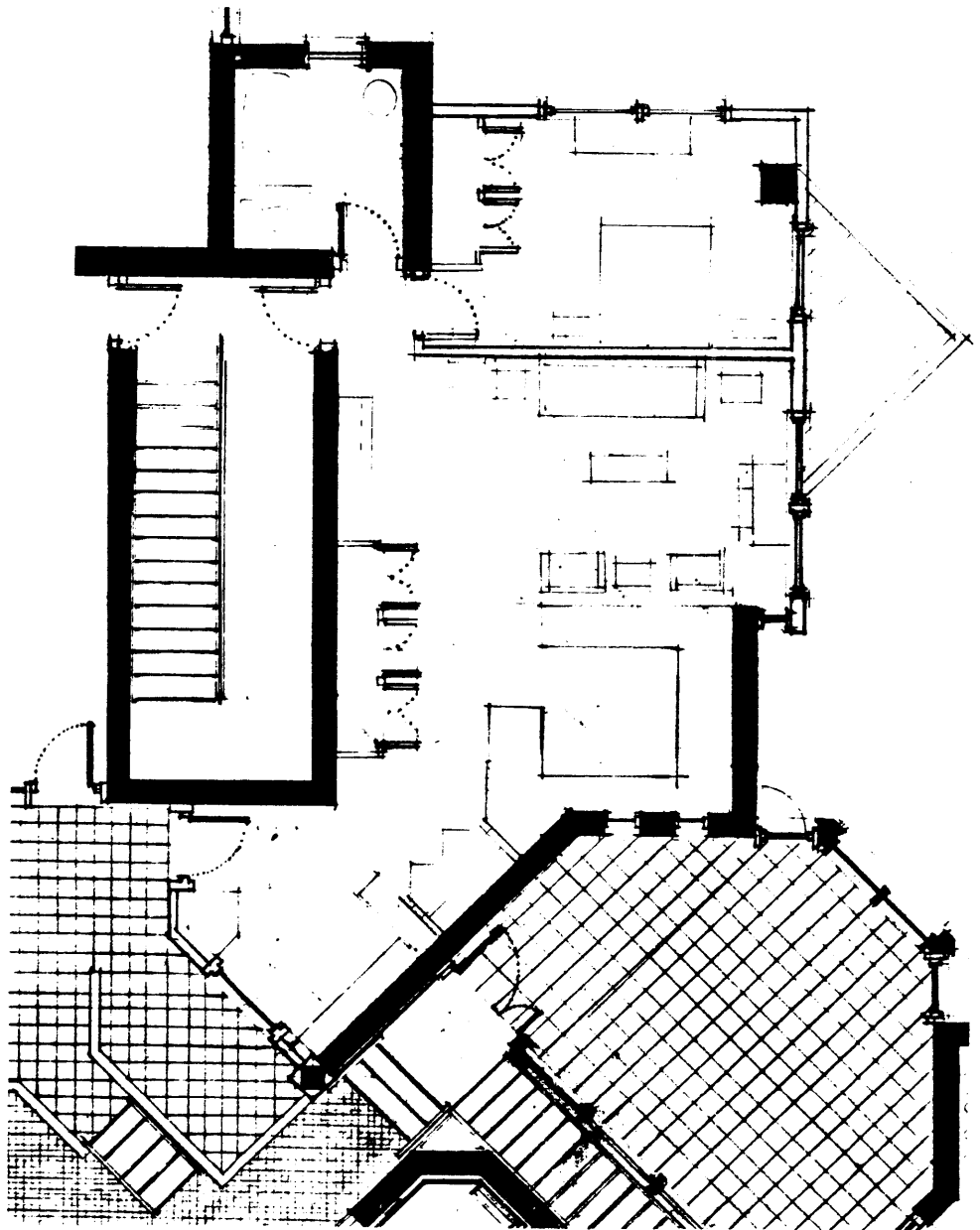
..2<sup>ND</sup> LEVEL. UNIT #1. FLAT...



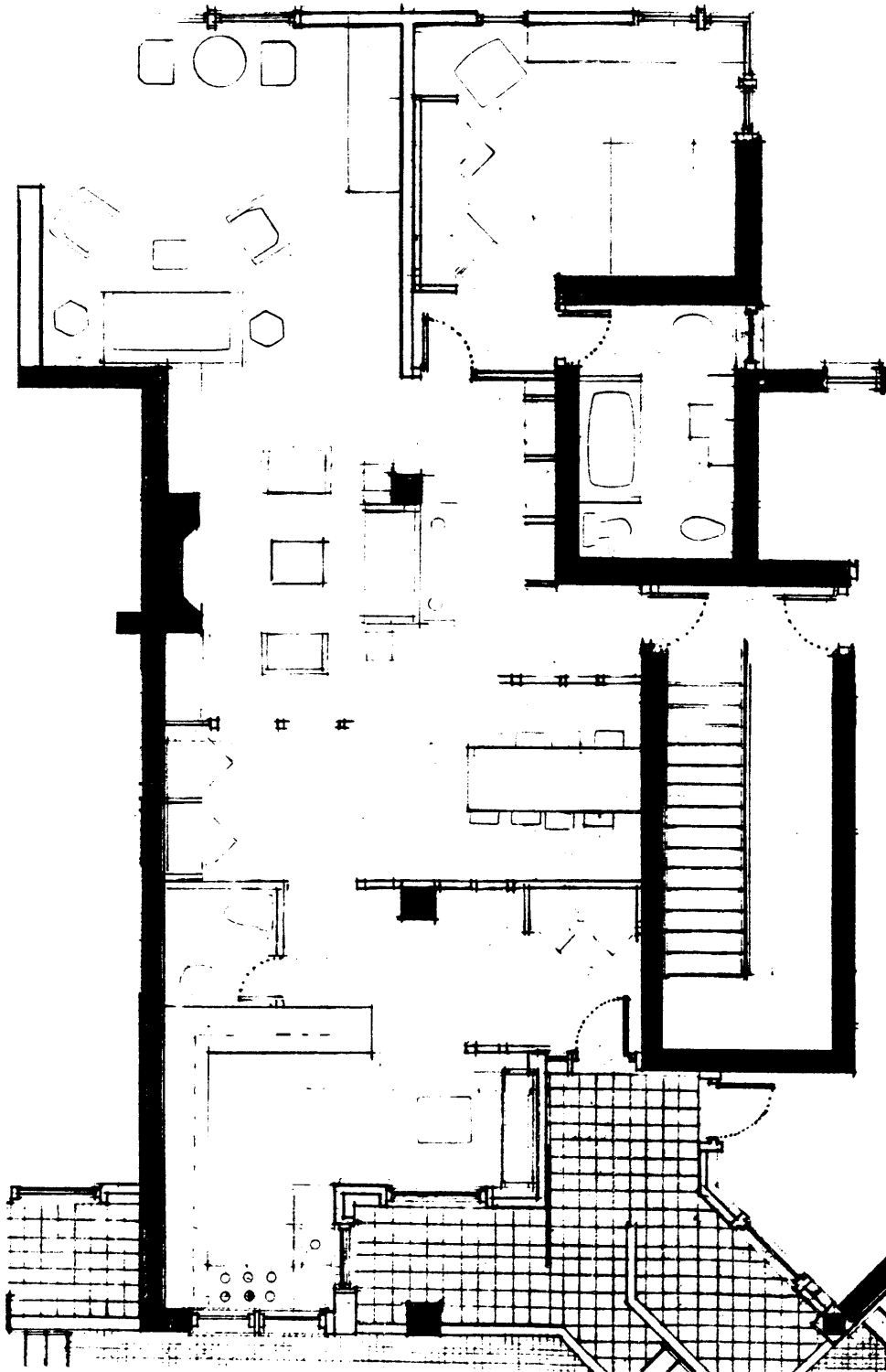
..2ND LEVEL. UNIT #2. FLAT..



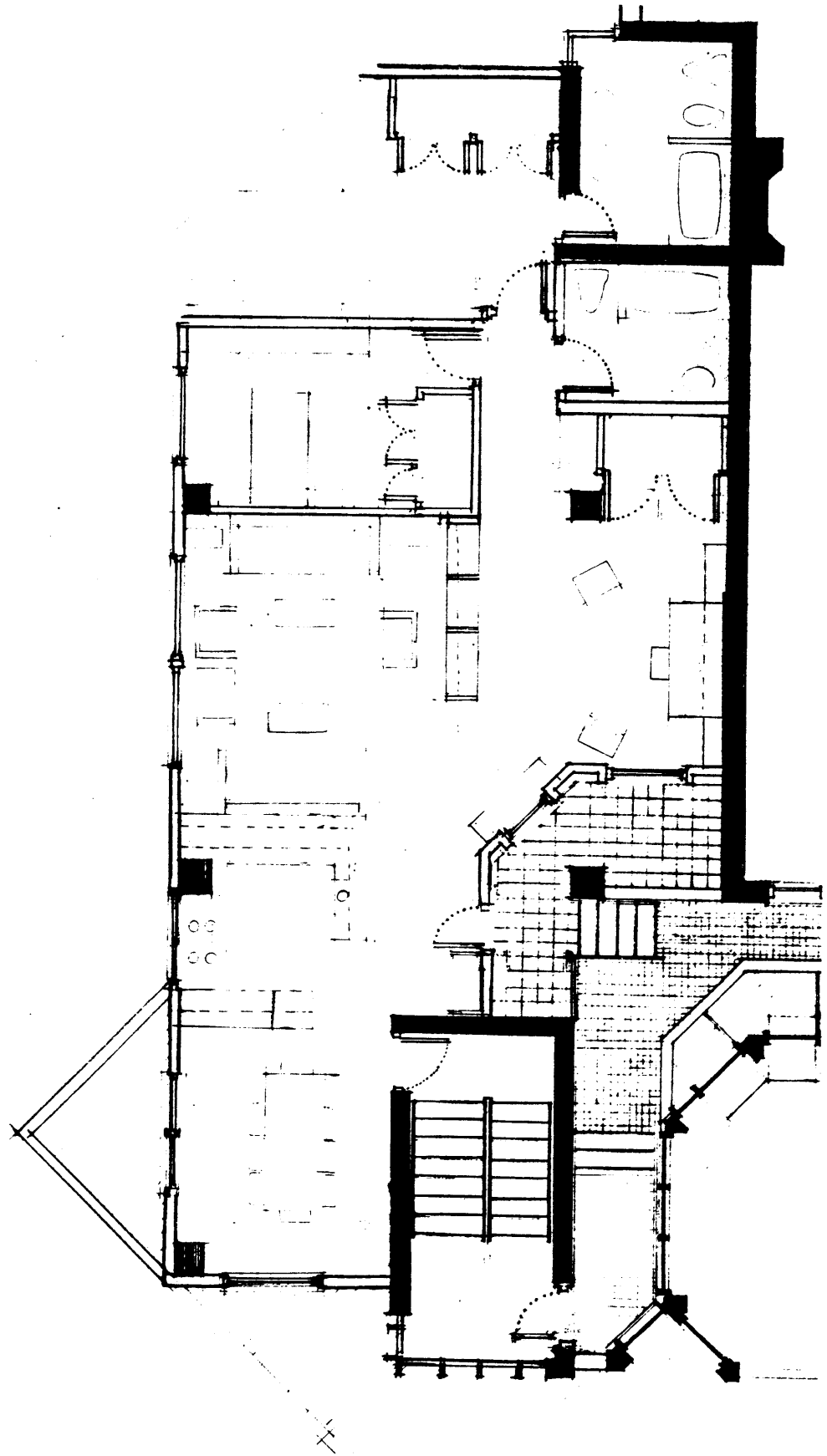
.. 2<sup>ND</sup> LEVEL · UNIT # 3 · FLOOR ..



.. 2<sup>ND</sup> LEVEL . UNIT #4 . FLAT ..

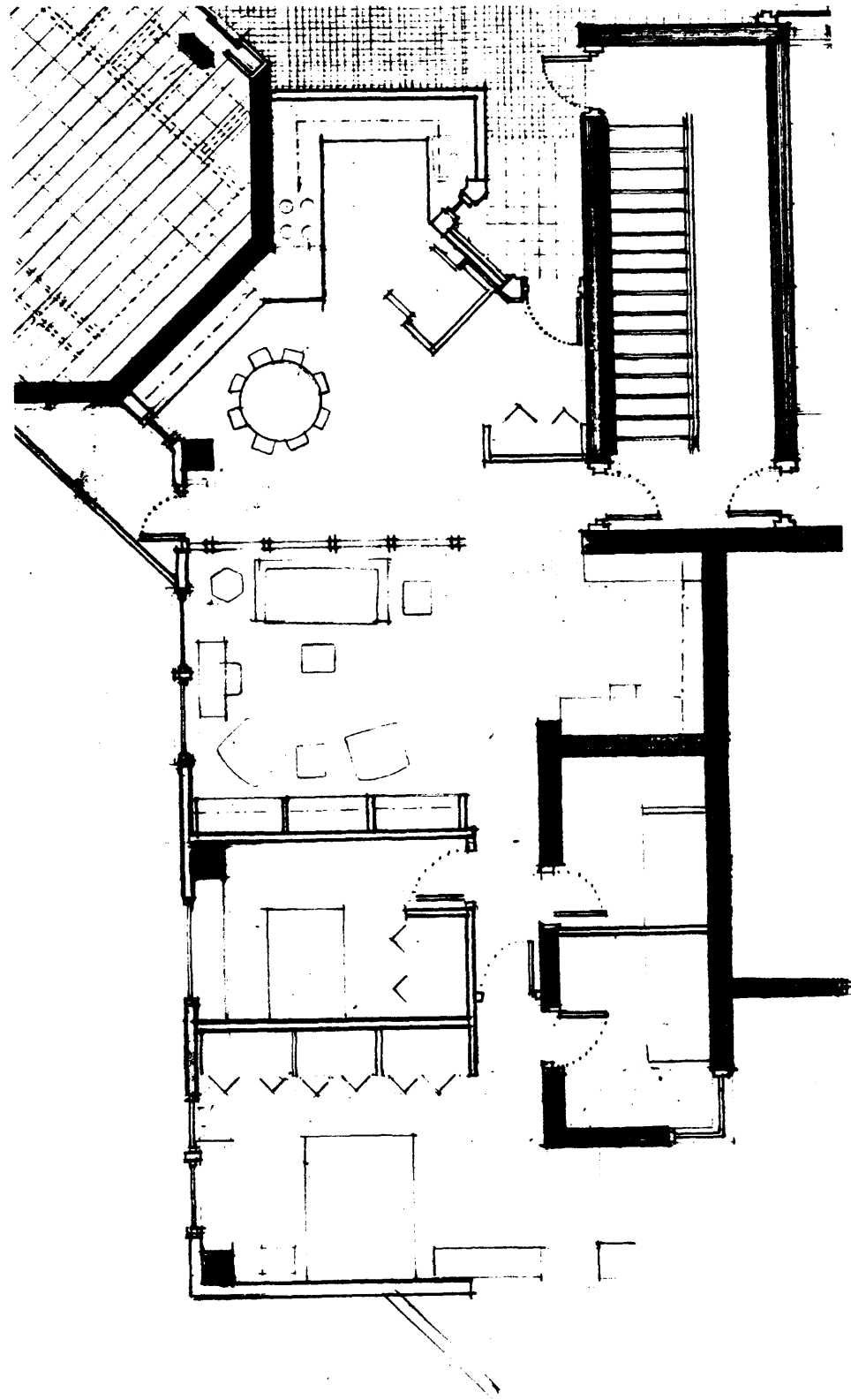


..2ND LEVEL . UNIT #5 . FLAT...

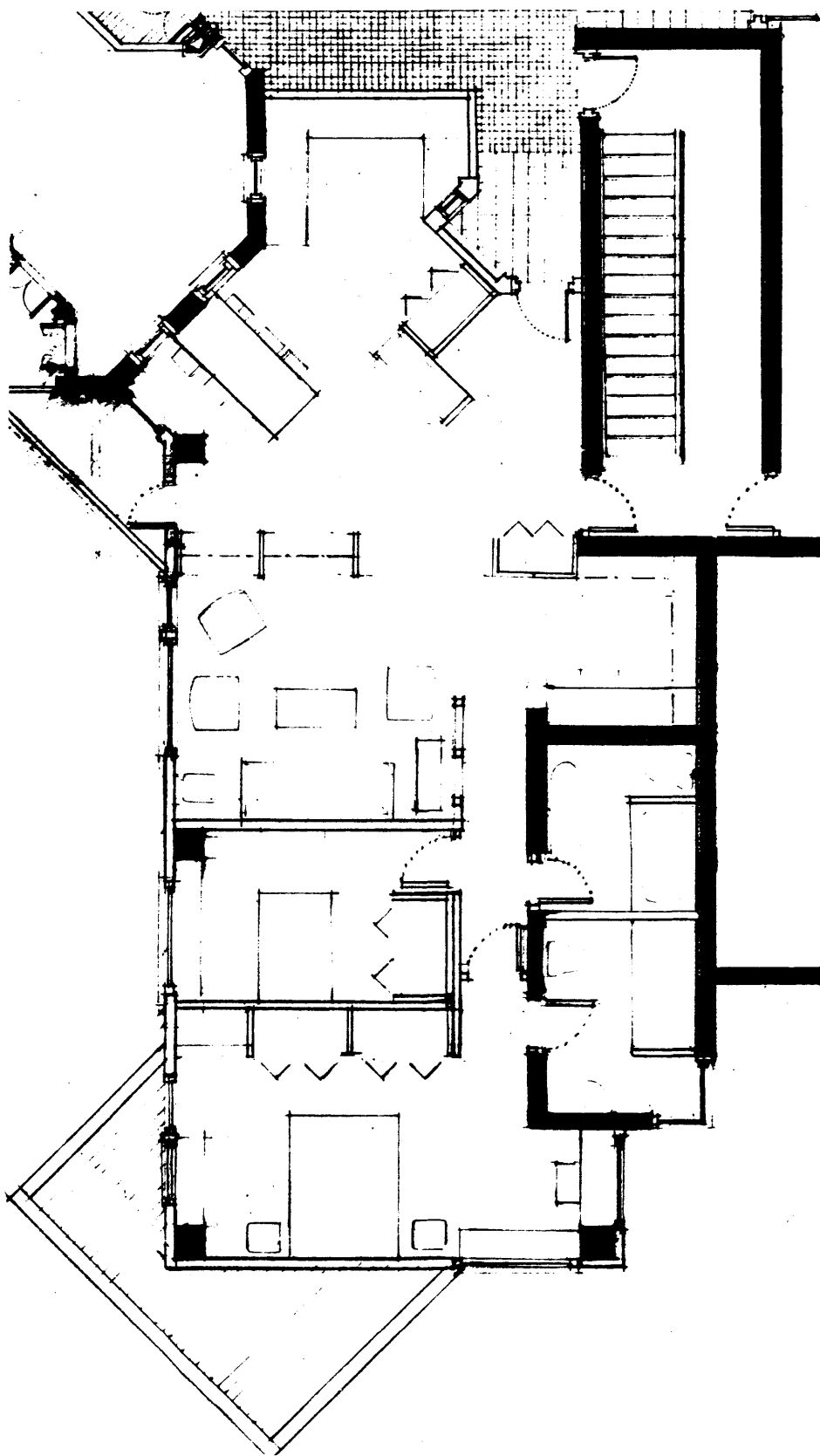




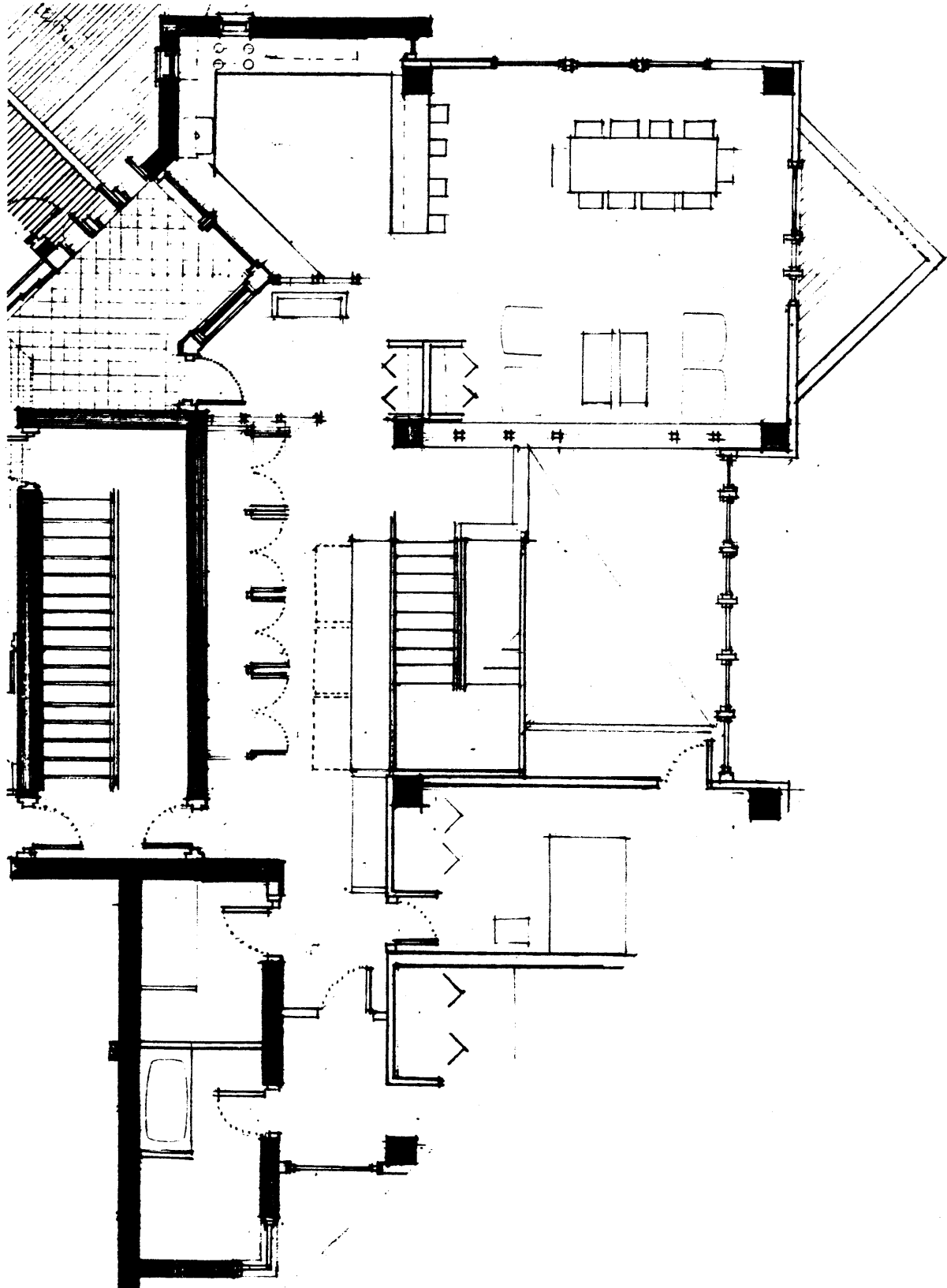
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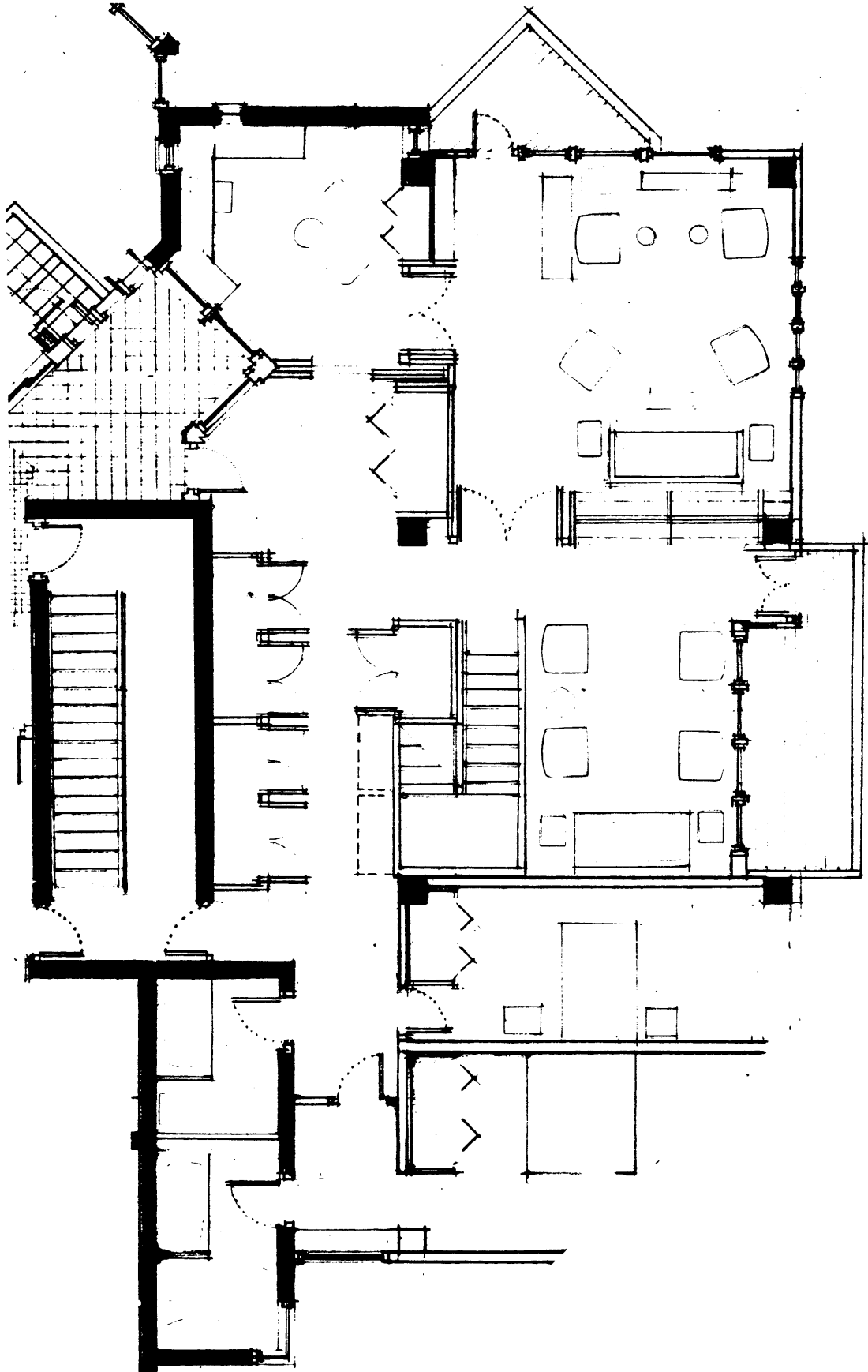
..3<sup>rd</sup> LEVEL · UNIT #1 · FLAT...



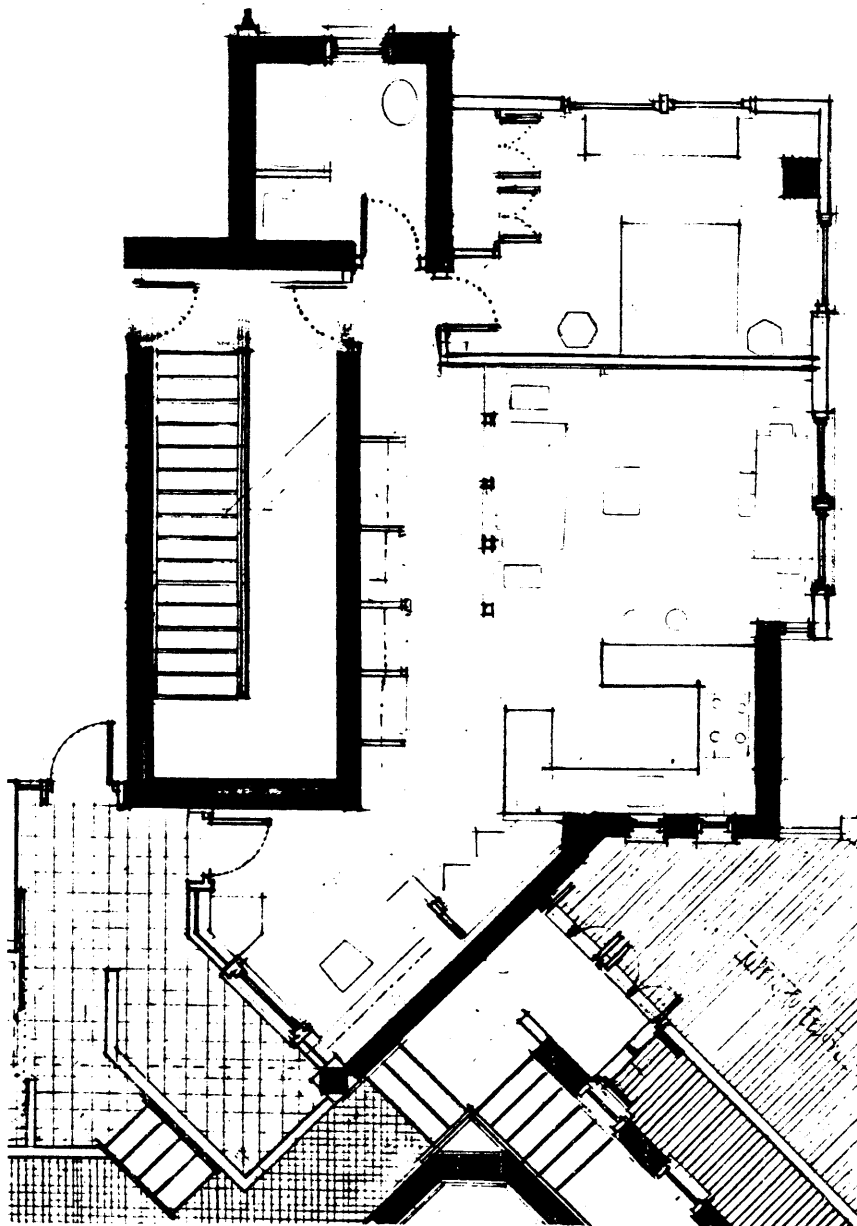
.. REFERENCE LEVEL. ONIT #2. DUXEY. UPPER 2 ...



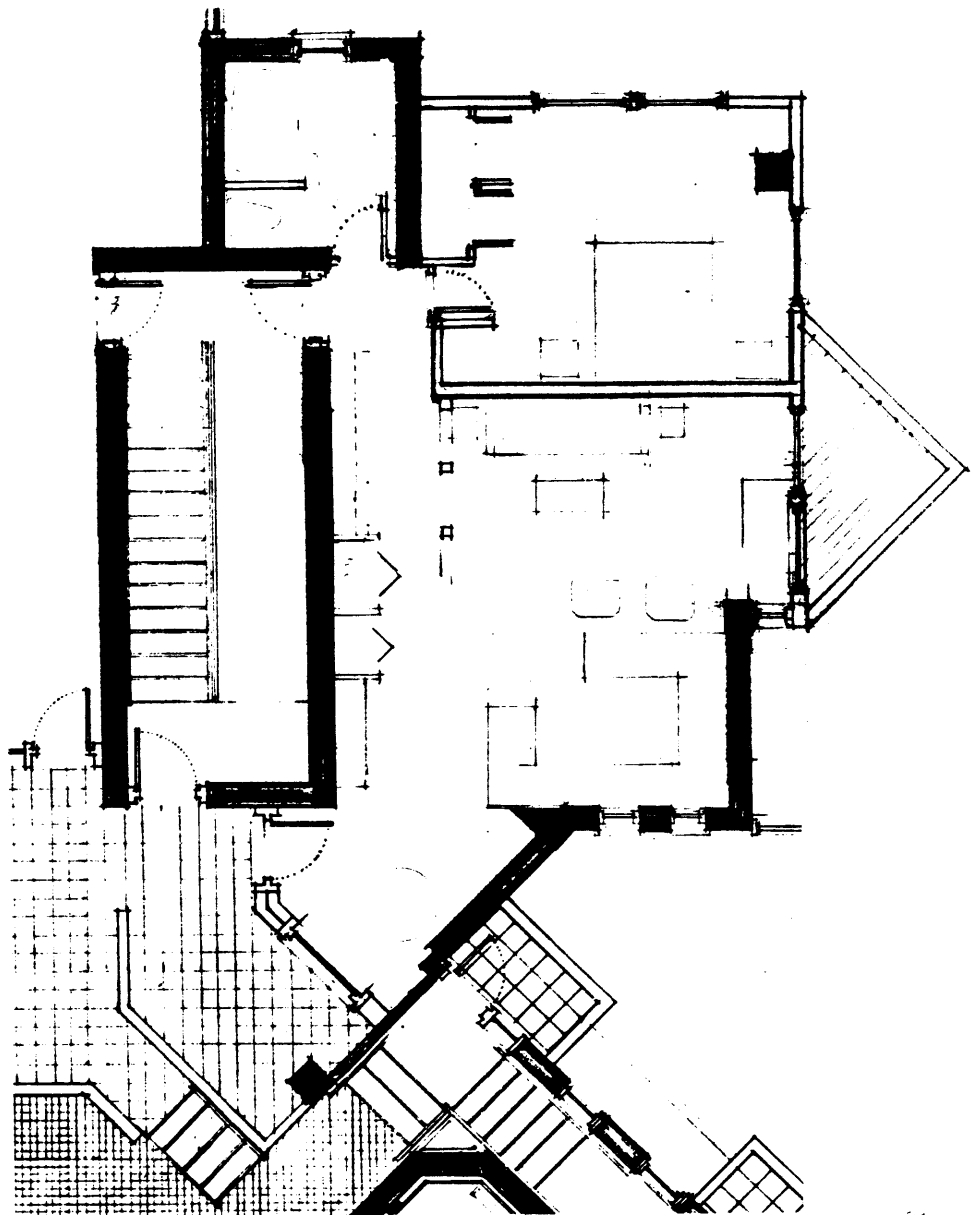
.. 3<sup>rd</sup> LEVEL · UNIT #2 · DUPLEX · LOWER 1/2 ..



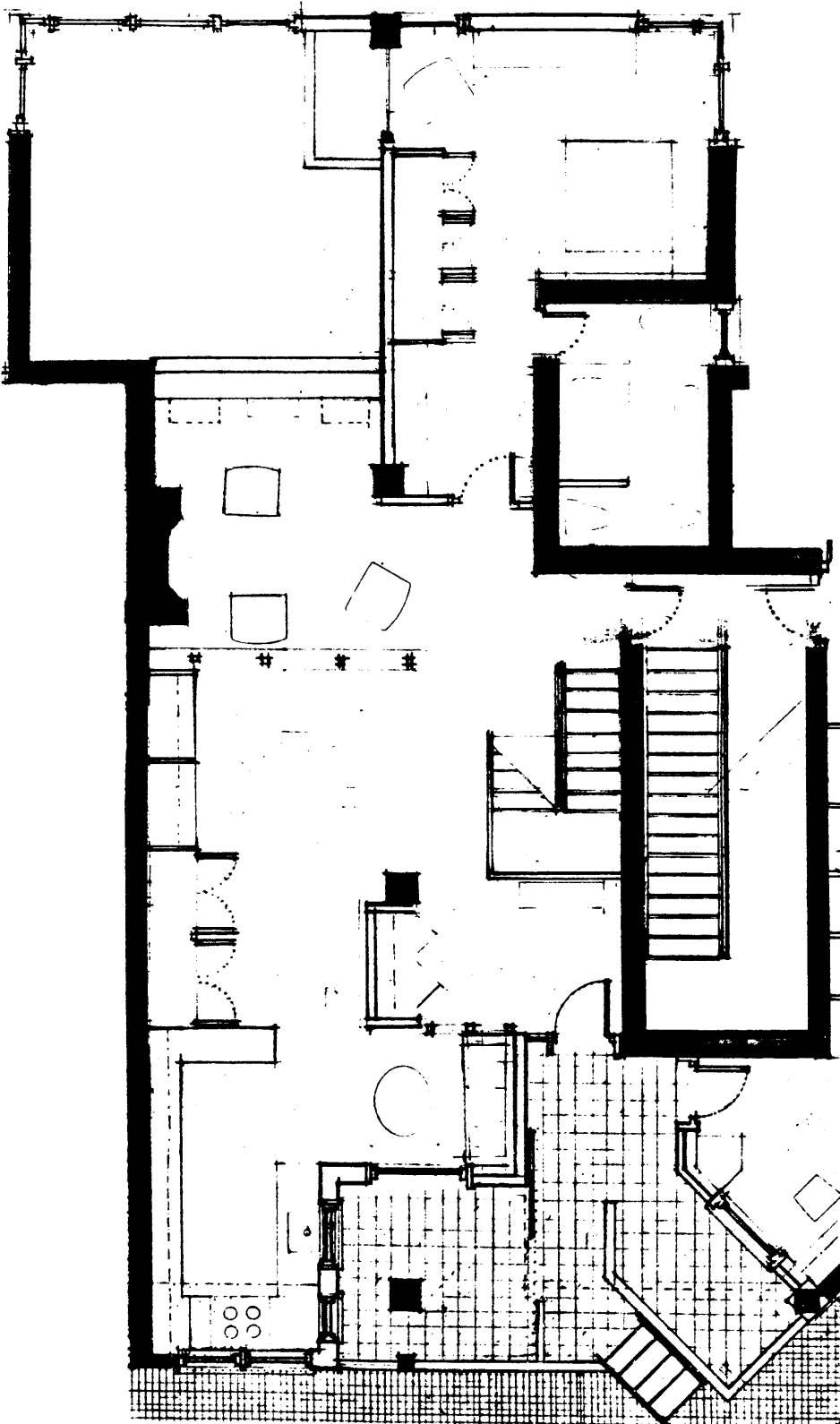
..REFERENCE LEVEL. UNIT #3. FLAT...



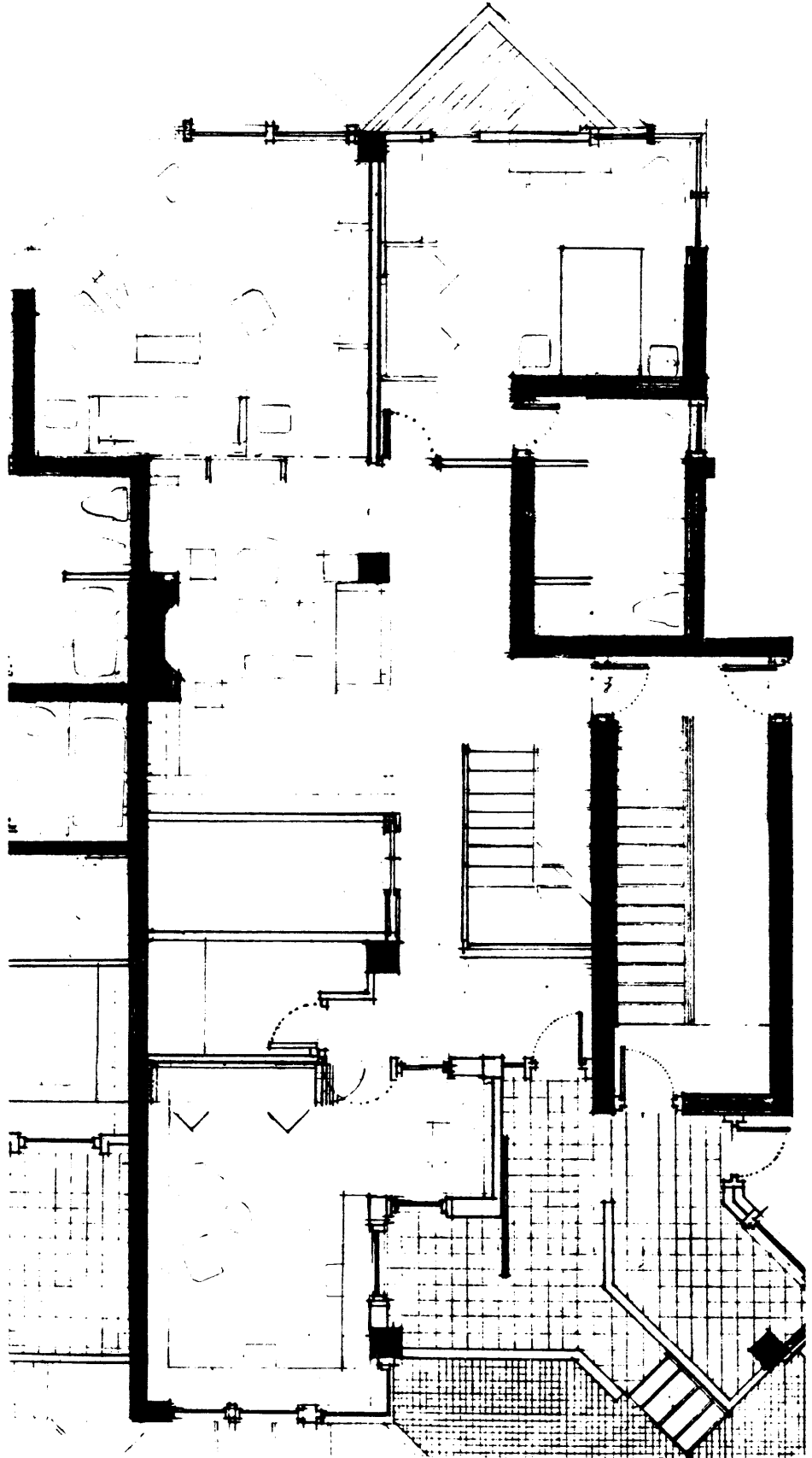
.. 32<sup>nd</sup> LEVEL . UNIT #3 . FLAT ..



..REFERENCE LEVEL - UNIT #4. DUPLEX. UPPER 1/2..

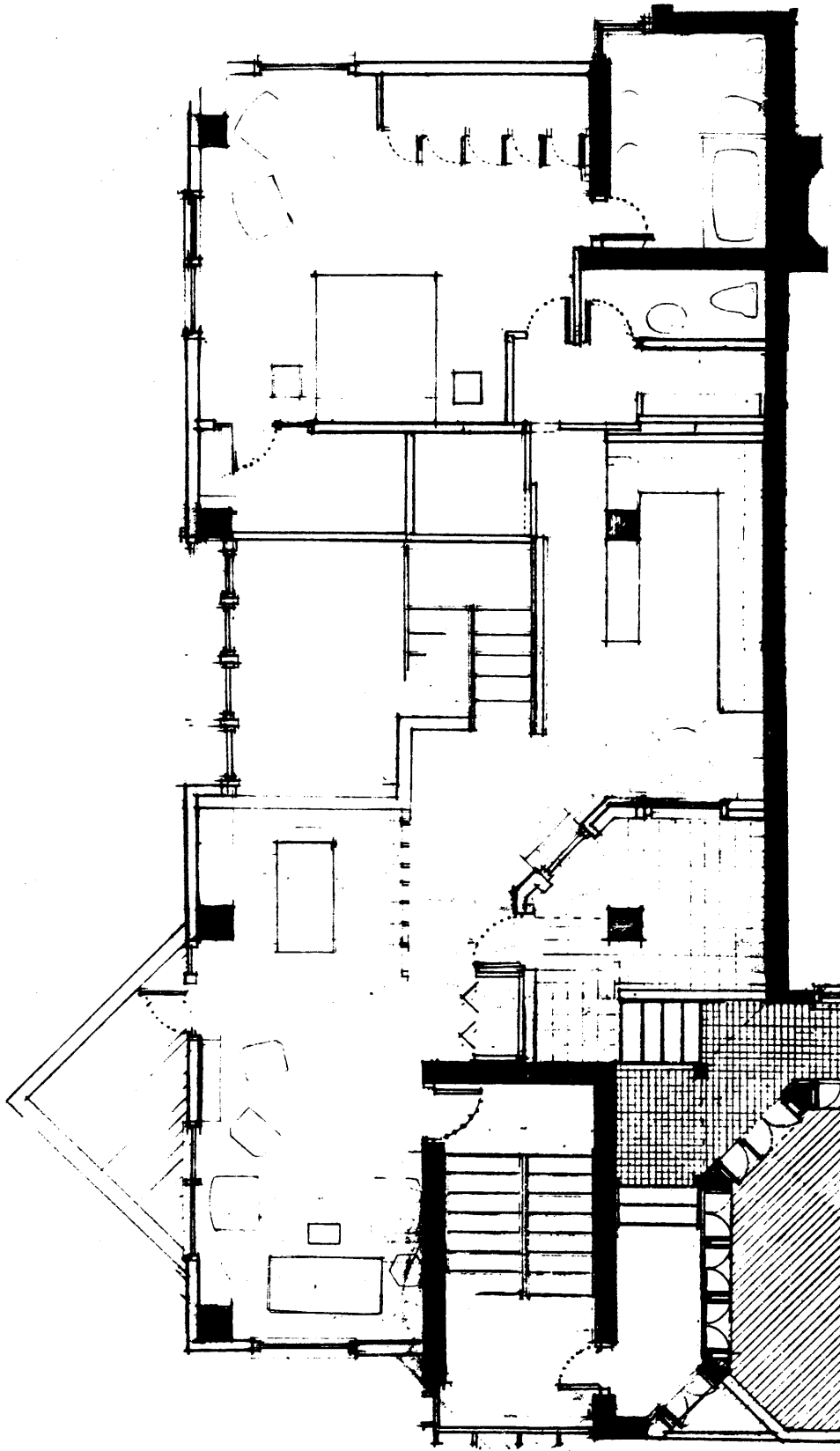


.. 3<sup>rd</sup> LEVEL. UNIT # 4. DUPLEX. LOWER L...

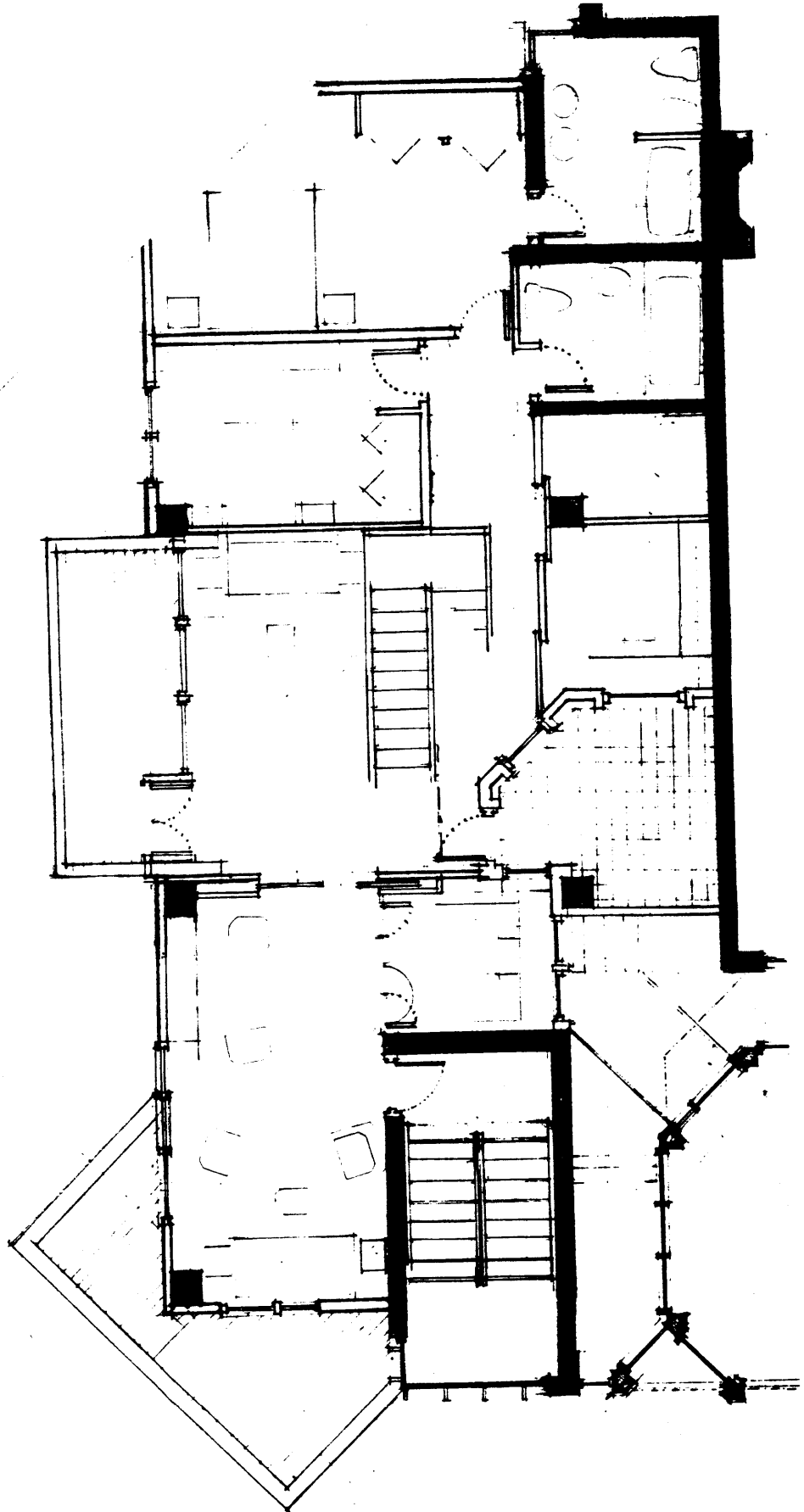


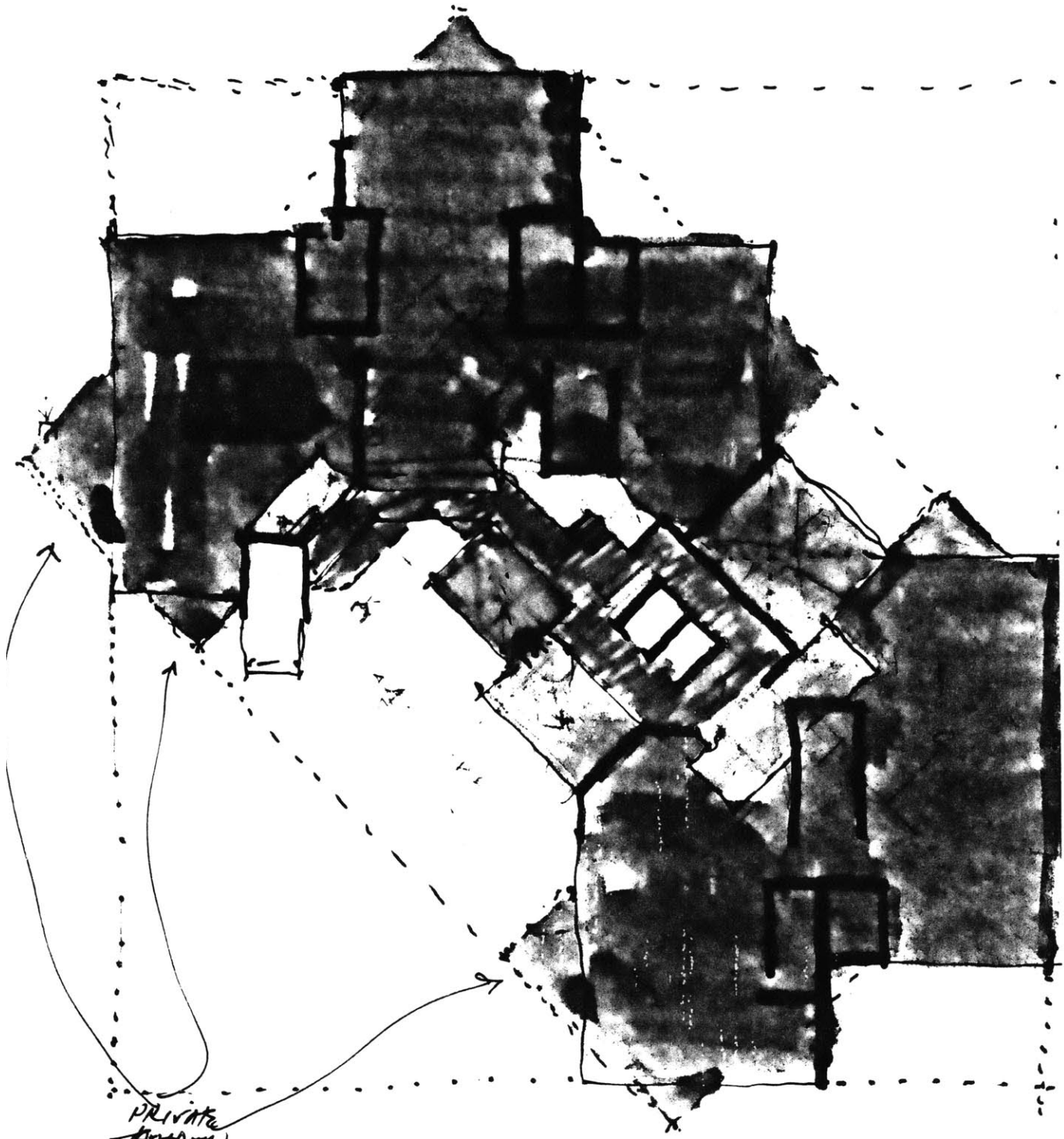


.. REFERENCE LEVEL. UNIT #5. DUPLEX. UPPER 1/2...



.. 3<sup>rd</sup> LEVEL . UNIT #5 . DUPLEX . LOWER 1/2 ...





PRIVATE  
OUTDOOR  
PORCHES

### 1. TURN ELEVATOR CORE -

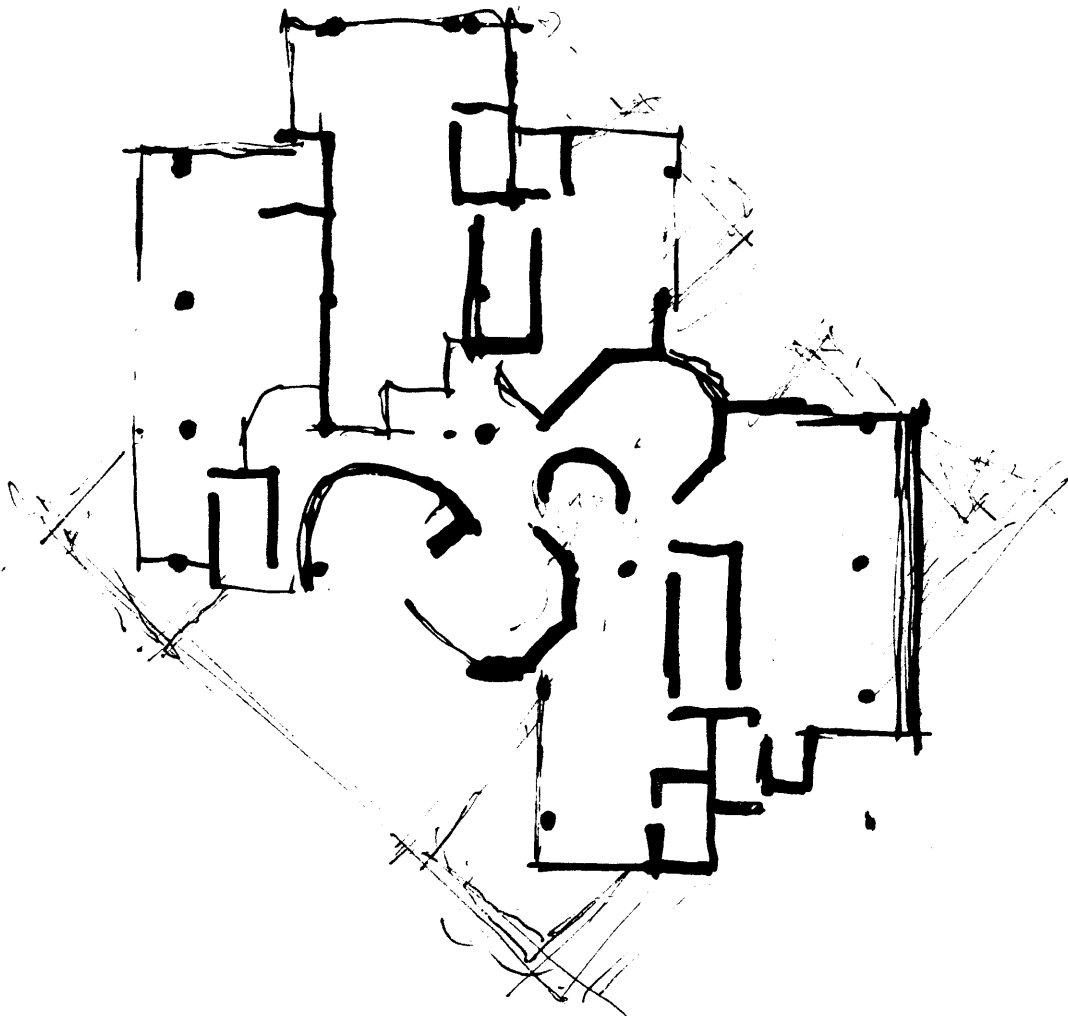
1. LESS CONTIGUOUS ENTRANCE TO ELEVATOR AND COMMON SPACES
2. CREATE A MORE HABITABLE SPACE IN FRONT OF ELEVATOR AND COMMON SPACES
3. BREAK AXIS 45°-90° (TOP RIGHT) AT PRESENT) ONE ELEMENT SHOULD BE EFFECTED BY OTHER.

### 2. KEEP STRUCTURE

1. CHANGE PLACEMENT - MORE USE OF CORE ELEMENTS TO CARRY LOADS AND TO SERVE AS FIRE WALL BETWEEN UNITS.
2. MORE USE OF CANTILEVERS.
3. LESS WASTE - ESP. NEAR CORE.

### 3. STAMPER GEOMETRY - RETAIN QUALITY - UNITS

1. BUILDING SQUARE AT GROUND - ROTATE AS IT RISES.
  2. USE PRIVATE PORCHES (-OUTSIDE)
- #. LOOK AT 5 FLOOR NEIGHBORHOOD



*"You haven't been to Rome,  
have you?" Illustration for The Golden Age  
by Kenneth Grabame. May, 1899.*



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