

city/edge



city/edge a development alternative to the edge city

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Thesis submitted to the faculty of Virginia Polytechnic Institute and State University in partial fulfilment of the requirements for the degree of Master of Architecture.

William Galloway, Chair

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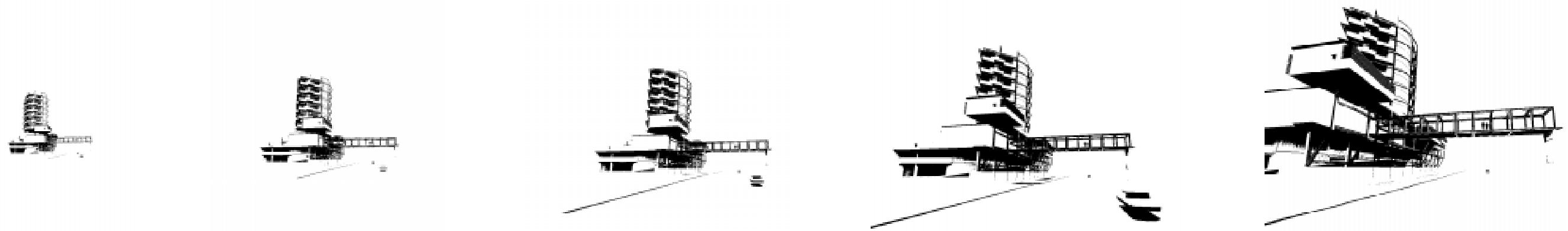
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William Green

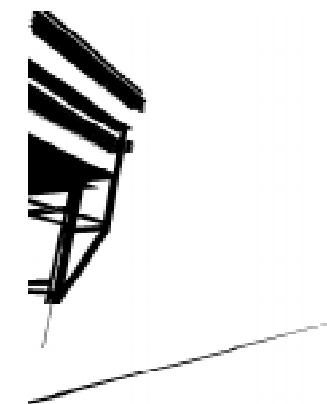
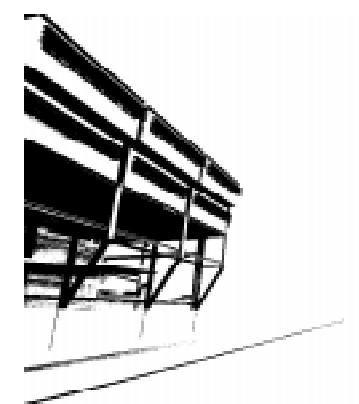
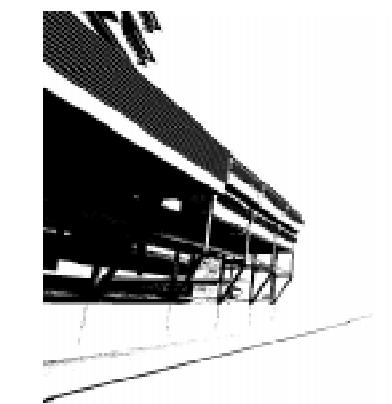
8 December 1999
Blacksburg, VA

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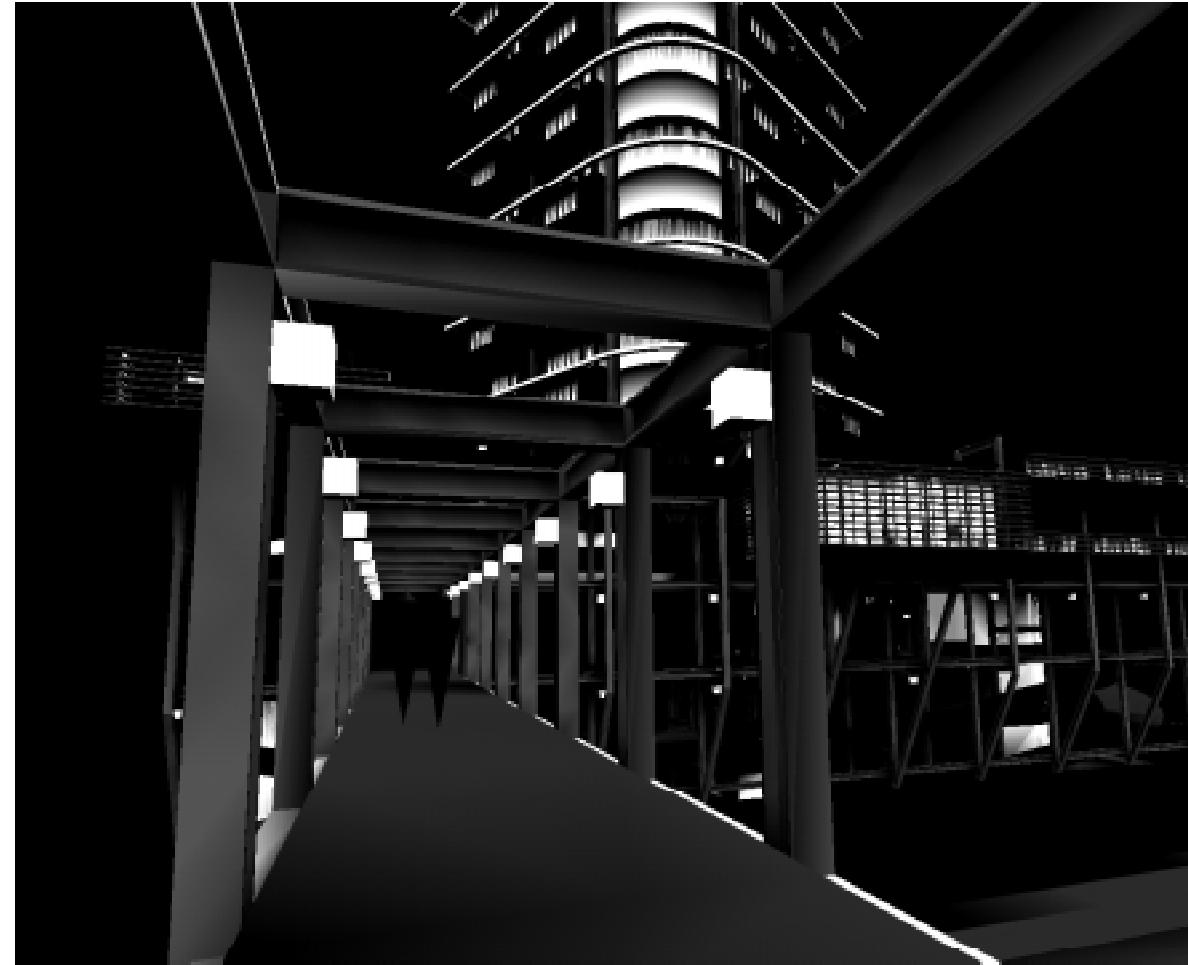
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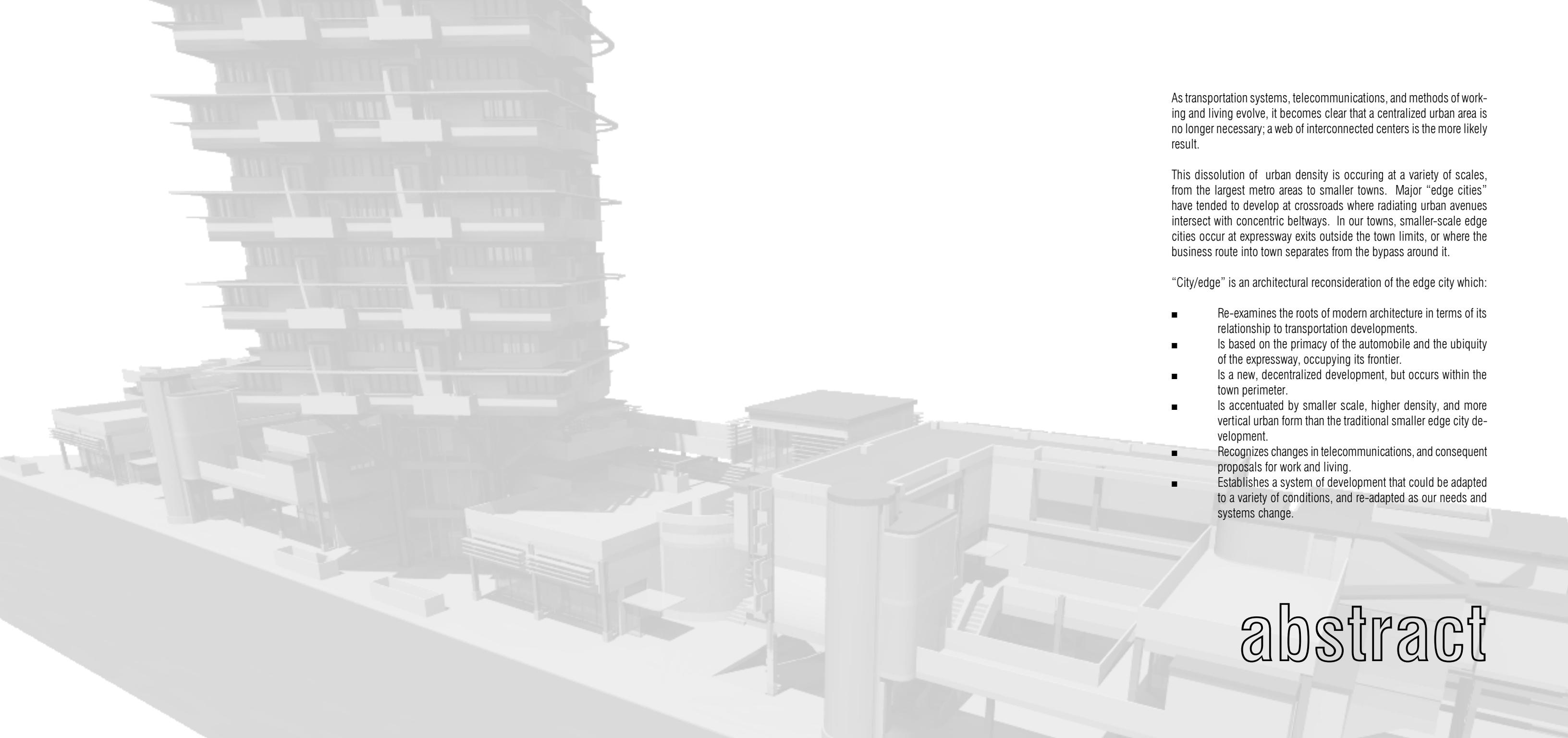
"What is the meaning of this voyage? What kind of sordid business are you on now? I mean, man, whither goest thou? **Whither goest thou, America, in thy shiny car in the night?**"



"Whither goest thou?" echoed Dean with his mouth open. We sat and didn't know what to say; there was nothing to talk about any more. The only thing to do was **go**. ■ Jack Kerouac, *On the Road*



This book is dedicated to my parents, Ronald J. and Carol A. Bergrage.



As transportation systems, telecommunications, and methods of working and living evolve, it becomes clear that a centralized urban area is no longer necessary; a web of interconnected centers is the more likely result.

This dissolution of urban density is occurring at a variety of scales, from the largest metro areas to smaller towns. Major “edge cities” have tended to develop at crossroads where radiating urban avenues intersect with concentric beltways. In our towns, smaller-scale edge cities occur at expressway exits outside the town limits, or where the business route into town separates from the bypass around it.

“City/edge” is an architectural reconsideration of the edge city which:

- Re-examines the roots of modern architecture in terms of its relationship to transportation developments.
- Is based on the primacy of the automobile and the ubiquity of the expressway, occupying its frontier.
- Is a new, decentralized development, but occurs within the town perimeter.
- Is accentuated by smaller scale, higher density, and more vertical urban form than the traditional smaller edge city development.
- Recognizes changes in telecommunications, and consequent proposals for work and living.
- Establishes a system of development that could be adapted to a variety of conditions, and re-adapted as our needs and systems change.

abstract



The Blacksburg, VA area, home to Virginia Tech, is undergoing development similar to other places around the United States: the area grows, more routes are needed to, from and within the region; more access encourages more growth. ■ More building is coincident with more expressway construction. Where these two areas intersect, a common solution is the precast panel **(a)**. The panel attempts to hide this connection, with some success despite its banality - ask the nearby residents if they'd rather the panel not be there. ■ The panel is a symbol of our relationship to the expressway. As a medium for movement the expressway is tolerated as a necessary evil - as a static element in the landscape it is derided and feared. ■ In the U.S. the concept of travel has special meaning, given the application of an (increasingly) instantaneous monoculture across an entire continent. However, the experience of the journey over that of the destination, at least as a daily event, has ceased to be an adventure.

If the precast highway divider panel is a descriptive element of our ambivalence towards our highways, how do we consider the Edge City, which owes its existence to the highway system - more often than not it is American's place of work, if not where we live, shop, eat, play? ■ "I have come to call these new urban centers Edge Cities. Cities, because they contain all the functions a city ever has, albeit in a spread-out form that few have come to recognize for what it is. Edge, because they are a vigorous world of pioneers and immigrants, rising far from the old downtowns, where little save villages or farmland lay only thirty years before." Joel Garreau, *Edge City* ■ Edge cities occur at intersections with the expressway; in larger urban areas radial roads frequently intersect with loop roads around the outskirts. At a smaller scale edge cities occur and grow where expressways bypass business routes through the downtowns of smaller cities and towns, such as Christiansburg, VA, near Blacksburg **(b)**.

While their efficiency and effectiveness have made them ubiquitous, both the expressway and the edge city experience are seen by many to be unsatisfactory. City/edge is an attempt to use this most common American experience of car travel - and the common landscape of roadways and development it generates - to construct a further iteration, a model for future development.

precedent

Christiansburg, VA is Blacksburg's "edge city." It is not at the scale of the large edge cities of major metro areas; consequently it lacks some of the urban indicators of those larger developments. However, it functions in a similar fashion and is typical of developments that have grown up where roads radiating from towns intersect the expressway. Despite its horizontal, spread-out nature, the area along 460 between the bypass and I-81 does indeed function like a city. It has the same elements of offices, industry, retail, and housing that we associate with a city. What is missing are some of the elements of "mythical" urban form, found to a greater extent in larger edge city conditions.

city



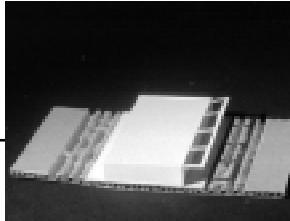
The area around Route 460 in Christiansburg lacks the density of earlier cities **(a)** which made them vibrant. Density in earlier cities, however, was a result of necessity and not any planning forethought. There are reasons for our spread-out developments: for the last 50 years, they have served us well. Now car congestion approaches that of the pedestrian congestion in early urban photos. A new development would perhaps have a higher density but only where it is desirable. ■ Verticality is the key to density, and the form of vertical elements is a component of what is essentially urban about a place. Simple vertical extrusions of plans quickly dull the eye and fail to create upper levels as separate from the base in any real sense. Setbacks and cuts **(b)** allow for different experiences in viewing the structure and inhabiting it. A combination of elements of various shapes and heights creates variety; too rigorous an application of form - common in larger edge city buildings - can be boring and does not provide an indication of scale. ■ If, at a closer view, the elements can fracture into a series of individual parts that can be understood, the building can be seen as a sum of parts - seen from far away, or from the expressway, it becomes an entity, but up close it dissolves into easily understandable components. ■ A quality frequently missing from a typical edge city building is its ability to be understood as a mythic urban entity, as a signifier of civiliza-

tion, beyond its experience as a form. The tall building is an expression of modernism, but that alone doesn't give it its meaning. The "edge" building, as a response to a new condition, should be differentiated from the building in a long-established downtown. This occurs already even at the most basic level - a pre-fabricated metal warehouse building would be out of place next to a downtown department store, but coexists next to the mall near the expressway. Implicit in the meaning of such a building is its connection to the industry and the technology that made the structure possible **(c)**. What is missing are signifiers that indicate something beyond functionality and technology, while recognizing their importance. ■ The best architecture in the future will be that which indicates its structure while still retaining the primacy of the person, whether human involvement is indicated through formal arrangement **(d)** or activity. The frontiers of building, whether they be new social trends, new technology or new, often hostile locations, create a potential for excitement and enhanced living that we as architects need to recognize. ■ Images: a. Seattle WA, ca. 1916, from glass lantern slide ■ b. building, lower Manhattan ■ c. studio project: tower addition, Virginia Tech campus near downtown Blacksburg ■ d. Museum of Science and Industry, Parc de la Villette, Paris, Adrien Fainsilber architect, 1984-6.



edge 1

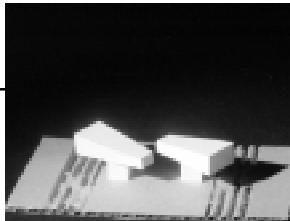
Historic considerations of new road/city relationships can be loosely grouped. The **extrusion**, **median**, **platform** and **bridge** are distilled examples of a physical road/city condition. The **agglomeration** and **system** describe the road/city in terms of function and organization, and can result in a variety of arrangements.



extrusion

While some urban/street integrations were proposed during the Renaissance, it was not until the Industrial Revolution that such ideas became common. The invention of railroads and then automobiles brought the first advances in ground transportation in thousands of years. That rapid travel was an accurate metaphor for (and direct contributor to), progress was never in doubt. Development was linked to transportation like never before; constructing an urban context based on the road became a sign of forward thinking. ■ Like the steel rails of train travel, the first proposed developments were extrusions.

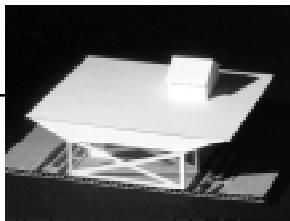
A consequence of the extrusion is banality as a form; much as vertical towers that do not change in elevation can be banal. However, these projects were not proposed unthinkingly; the extruded form was more directly related to movement and the needs of the road. The structures of both “Road Town” and Le Corbusier’s proposal for Algiers were based on that of the roadbed itself, with the rest of the building relying on the existence of the road. The buildings were not on, or next-to, or over the road; they *were* the road, and thus are the purest expression of the relationship between building and travel.



median

Inhabiting the median is an obvious consideration to anyone who has traveled on an interstate: the land seems like so much wasted space. Accessing the median development becomes a problem, however. By definition something must occur on either side of the road, or the road must be interrupted itself to provide access to the median.

Because of the median’s isolation, creating a “place” there which is friendly to human habitation is difficult. It is a hostile condition and cannot even be considered a frontier; there is no edge from which to advance. If a place can be made there it must be at the cost of ignoring the outside.



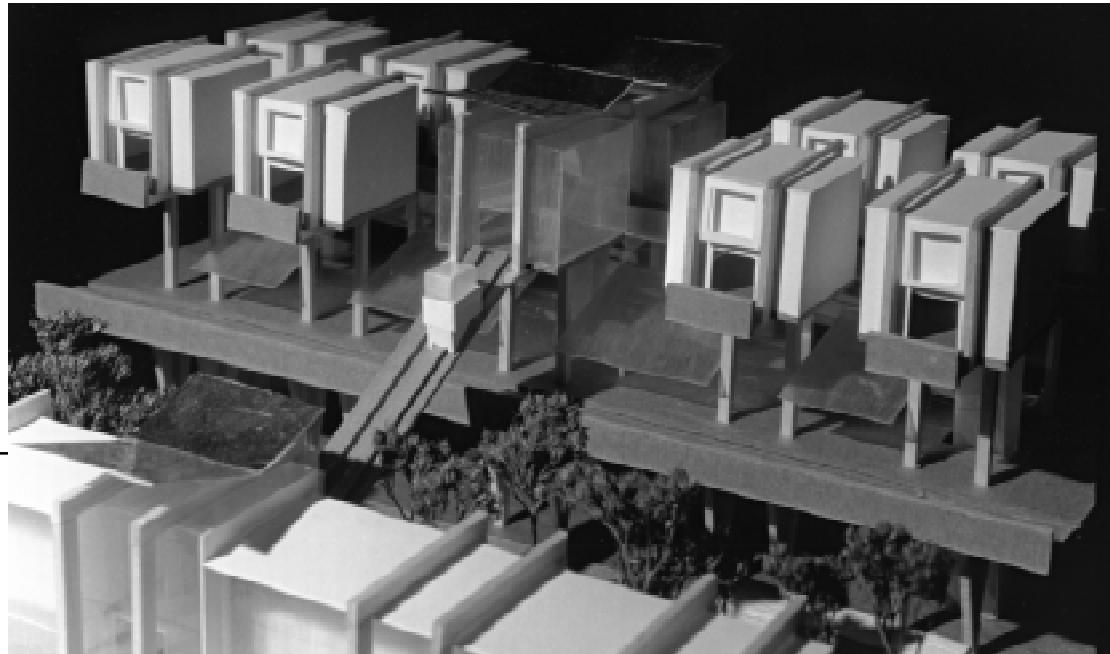
platform

A logical step to considering the median is a platform over it with access to either side. Most examples of this type of proposal are quite large-scale, where the building is actually larger than the road; these are more successful than smaller-scale attempts which divide the human scale between “above the road” platform and “side of the road” access - both are places where interaction is expected to occur, but how one guarantees 2 “places” can be made against the presence of the expressway is difficult to ascertain.

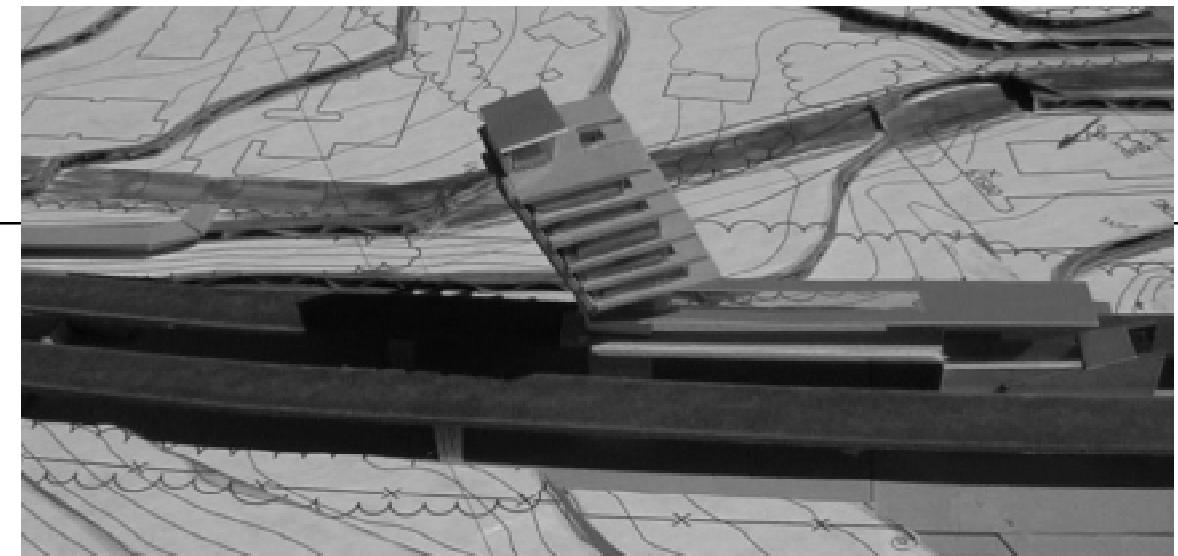
In either case, small or large, the platform approach is fundamentally at odds with the original extrusion concepts in that they see the road as something to be overcome, not something to be *of*. Travel on the road becomes travel through a tunnel.



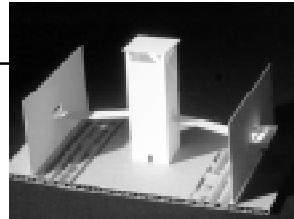
Median development with mag-lev station and apartment tower.



Mixed-use median/platform development with mag-lev station, with shops on side; funicular provides access to station and apartments.



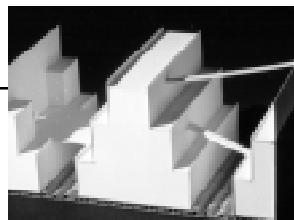
edge 2



bridge

More in the spirit of the original proposals are those where the road, or building, is elevated as a part of the other. The building may span the road, but there is no attempt to cover it. Or, the road spans the building, creating a completely different driving experience. As modern skyscrapers are compared to mountains and pyramids, so driving through them relates to driving through the American frontier/West. Implicit in these designs is the celebration of structure and human accomplishment necessary for vibrant urban form.

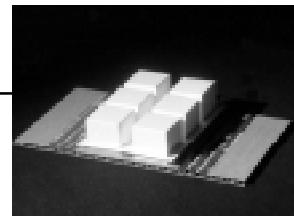
Investigations included a multi-use development bridging a cut made through a mountain for a new "smart road" test bed near Blacksburg, VA. The project is made dynamic by the way it intersects the roadway at almost 90 degrees; it was conceived not as an extrusion but as a very long section through the road, mountain, and structure which replaced the removed rock.



agglomeration

A more likely result is the development along a route which occurs with the lack of an overall plan. Individual structures are built with consideration for the road; the overall development responds to the road as a necessary artery but as an infringement on expansion, as well. This is probably the most common relationship of architecture to the road. It can be quite pleasant and efficient, or equally unpleasant and inefficient, depending on how well individual acts coalesce into a whole.

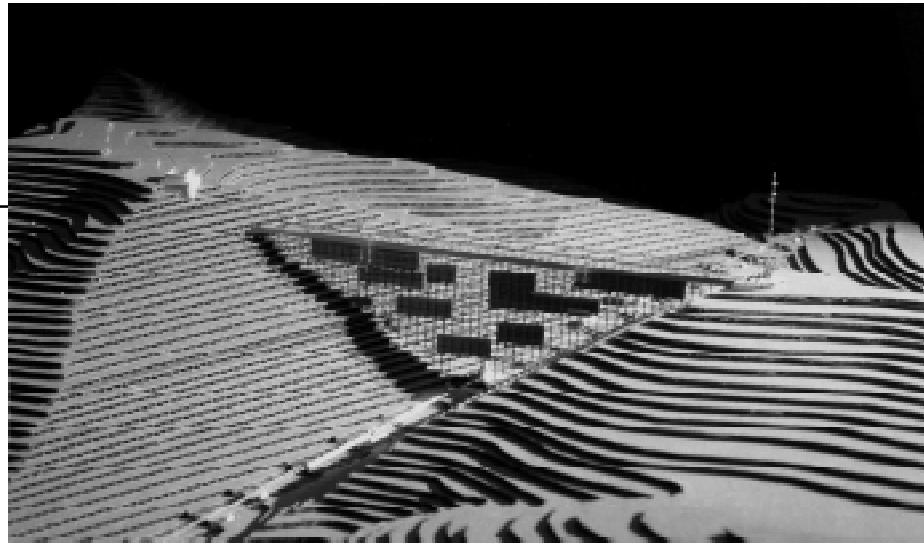
When individual constructions have a unity of purpose, a purely functional or economic arrangement of pieces along a route can be striking, even if an overall relationship to the route itself was not a consideration. This is especially true if the elements have some sort of related structure. From the perspective of the road, variety that is somehow related (such as factory stacks and tanks, lights of different towers at night) can be powerful signifiers of habitation, even more so if they occur in what seems to be a hostile, frontier geography.



system

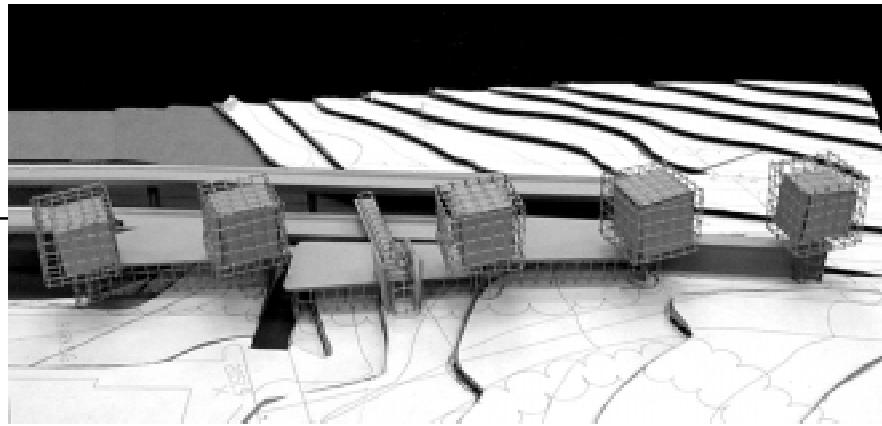
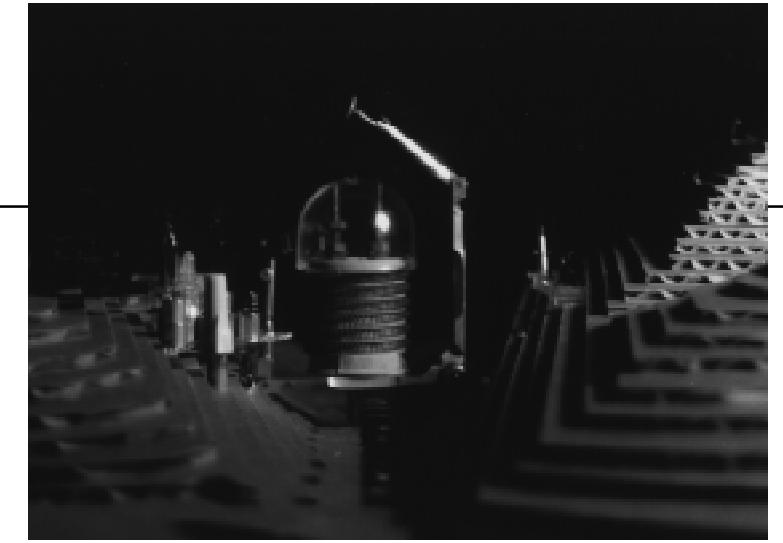
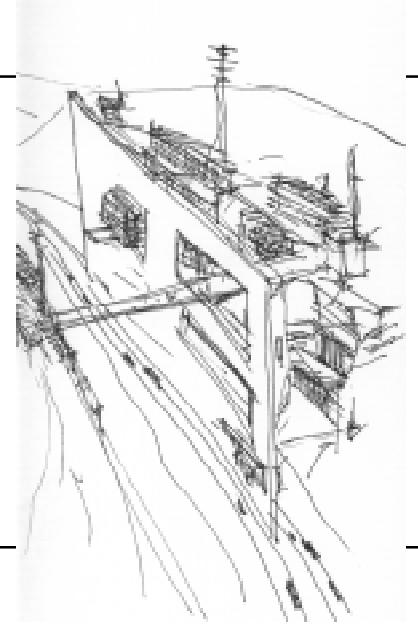
Establishing a system for development along a road allows for a wide variety of constructions, experiences, and relationships while retaining a structural continuity. In the example to the left, a mixed-use development with apartments and shops (the first iteration of City/edge) is reconfigured to link to a mag-lev commuter station in the median.

More recent considerations have used some sort of system to regulate the relationship between buildings and roads: the building and road have more of an equal relationship, but at times one completely dominates the other; there are repeating elements rather than one extruded whole.

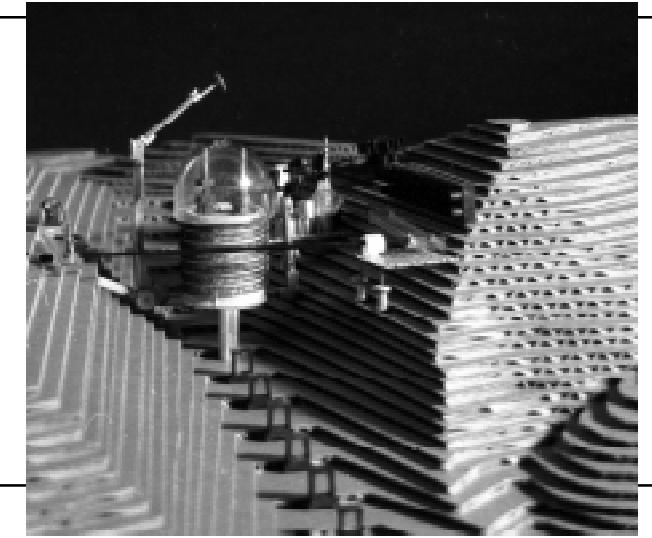
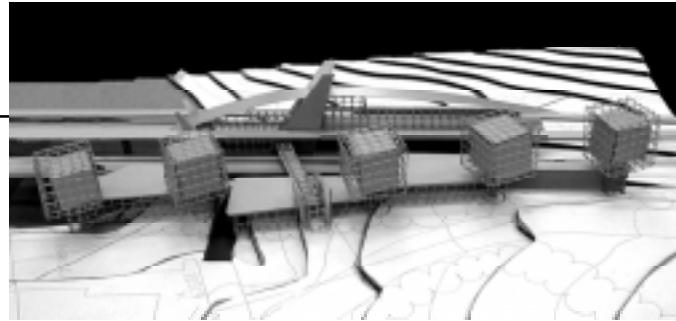


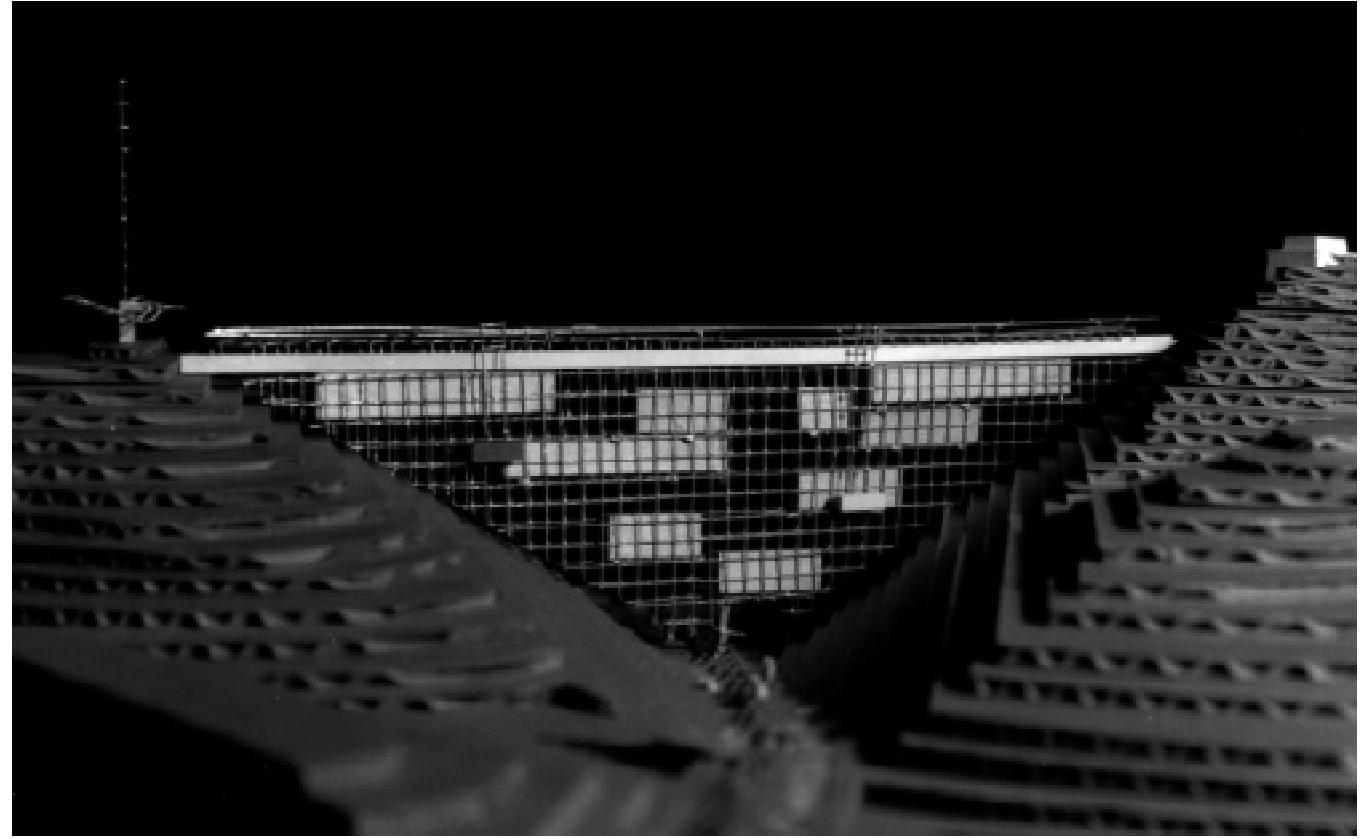
Bridge over "smart road" expressway containing housing, shops, mag-lev commuter station

Sketch and models - early investigations of edge/frontier aesthetic



Apartment pods over shops (left), added commuter station (below)





Facetious minds have suggested that the placing of apartments in such a fashion would introduce a bizarre - not to say dangerous - element into domestic life! On the other hand, serious minds have claimed that the project is not only structurally sound but possesses unusual advantages...

■ Hugh Ferriss, text accompanying illustration "Apartments on Bridges," *Metropolis of Tomorrow*, 1926.

city/edge

City/edge contains:

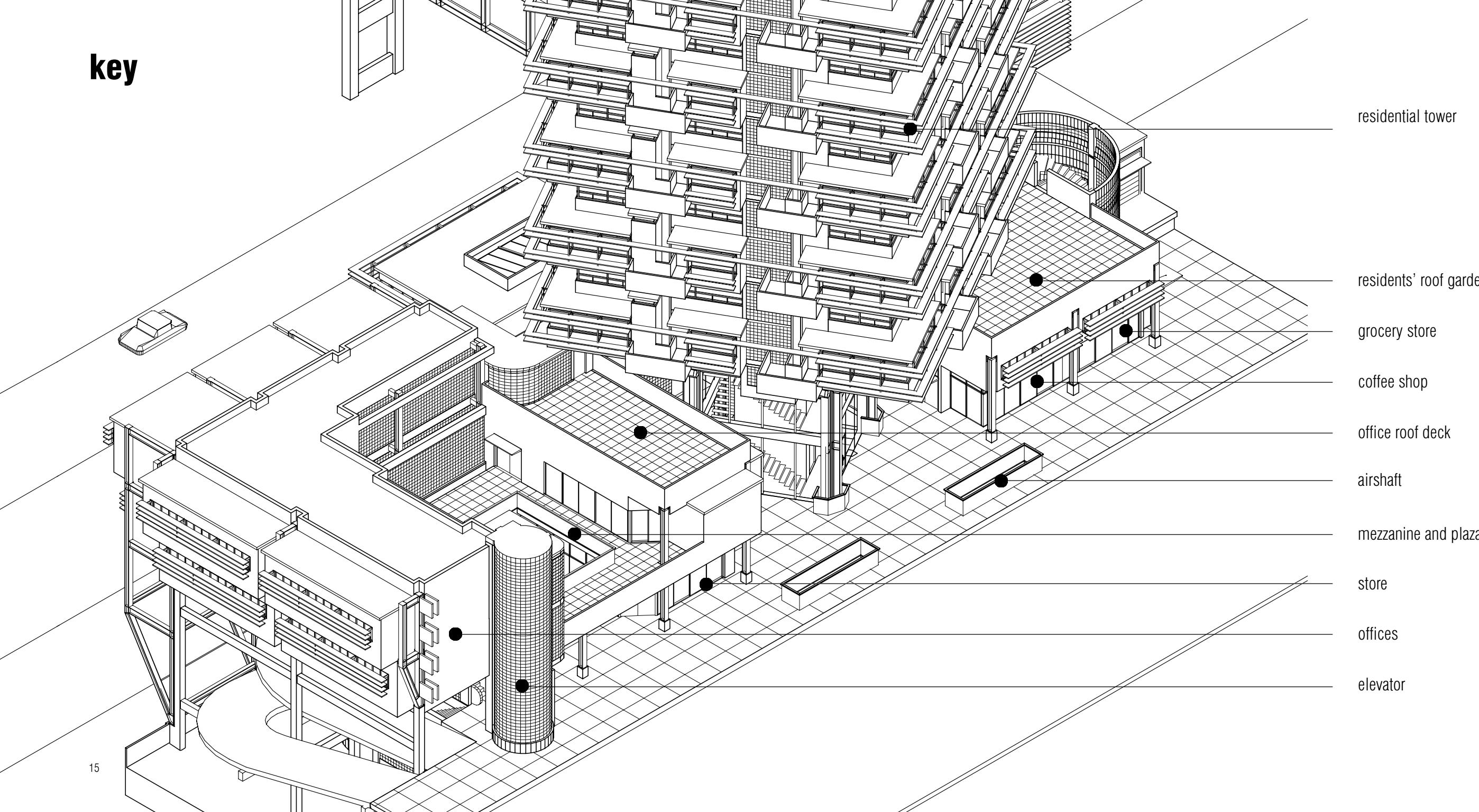
- 30 loft-style apartments, 6 100% accessible 1BR apartments
- 7500 sf. of retail space
- 5000 sf. of office space for short or long-term lease
- public plaza and mezzanine, private roof garden and 2 roof decks
- bridge and bikepath to north side of expressway
- on-site parking ramp
- community center for apartment residents
- recycling center, laundry facilities, bike storage

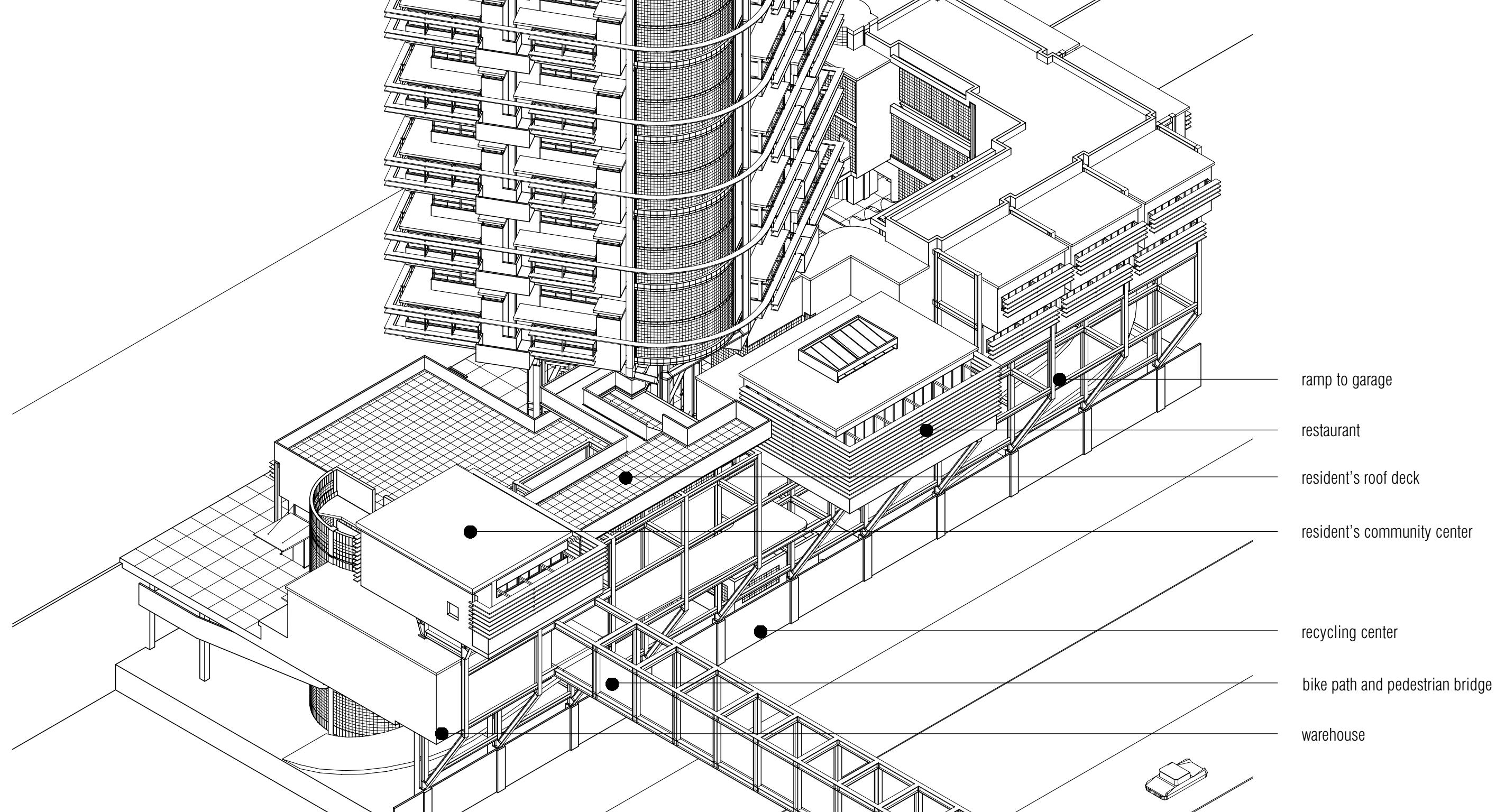
City/edge is a prototype mixed-use development in an “expressway zone” along the Route 460 bypass in Blacksburg, VA.

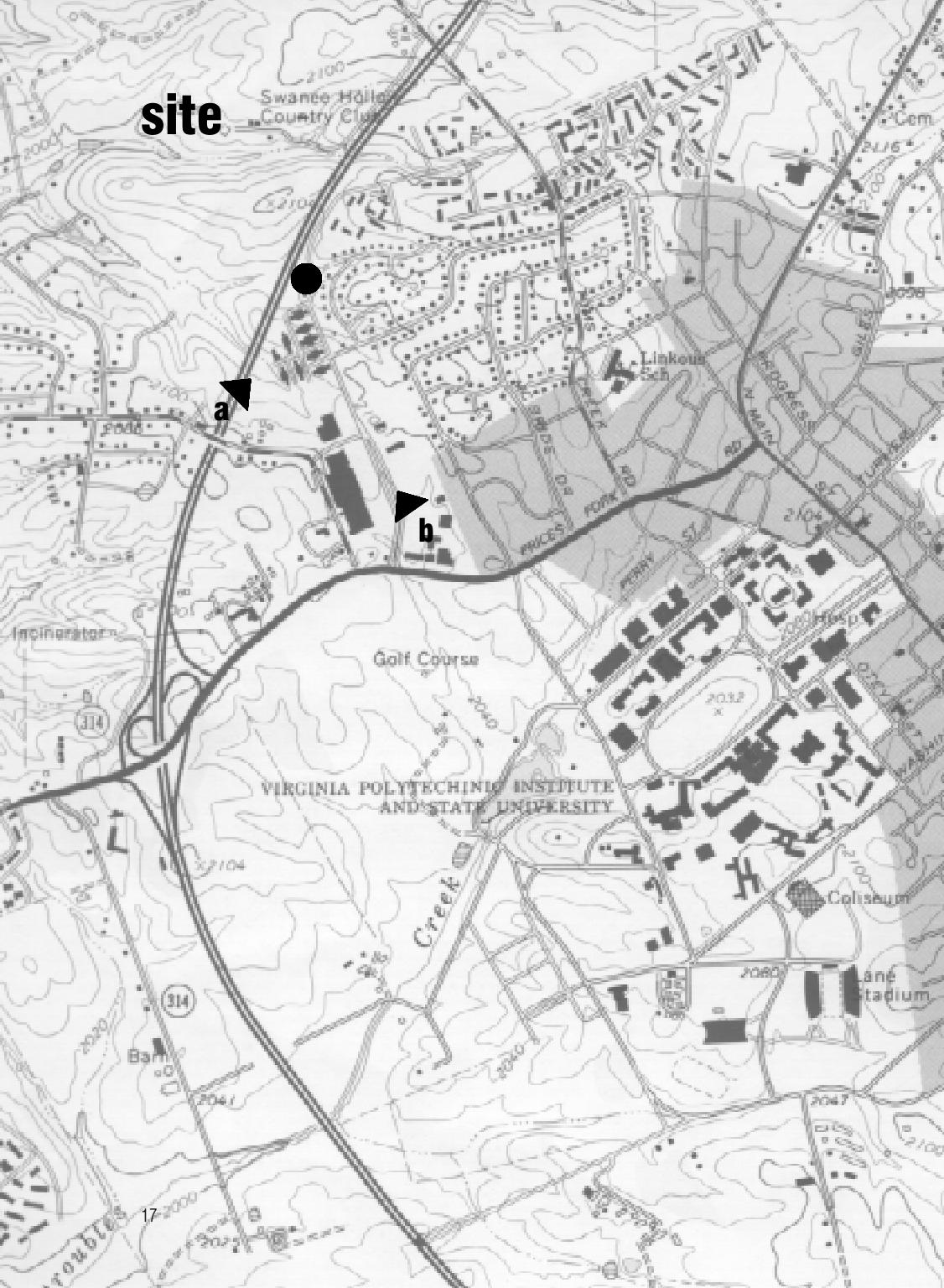
City/edge is a new direction in suburban living - the convenience of the suburbs with the experience of the town. This is done by combining the elements of a typical suburban developed area into a much smaller footprint, at a reduced scale - both to fit the narrow site and to accommodate a variety of functions within walking distance. ■ City/edge is a retail and office complex next to and partially over the expressway, which accommodates a separate residential tower in its center.

The residential tower consists of small loft apartments well-suited to transitory residents, such as college students, businesspeople, and travelers. ■ The office complex similarly provides space for transient business and telecommunications use. ■ Together they provide customers for the shops and restaurants, and people to energize the sidewalks, plazas, decks and gardens. In turn these areas give the residents a variety of places, both public and private, to experience life in Blacksburg on the edge of the expressway.

key

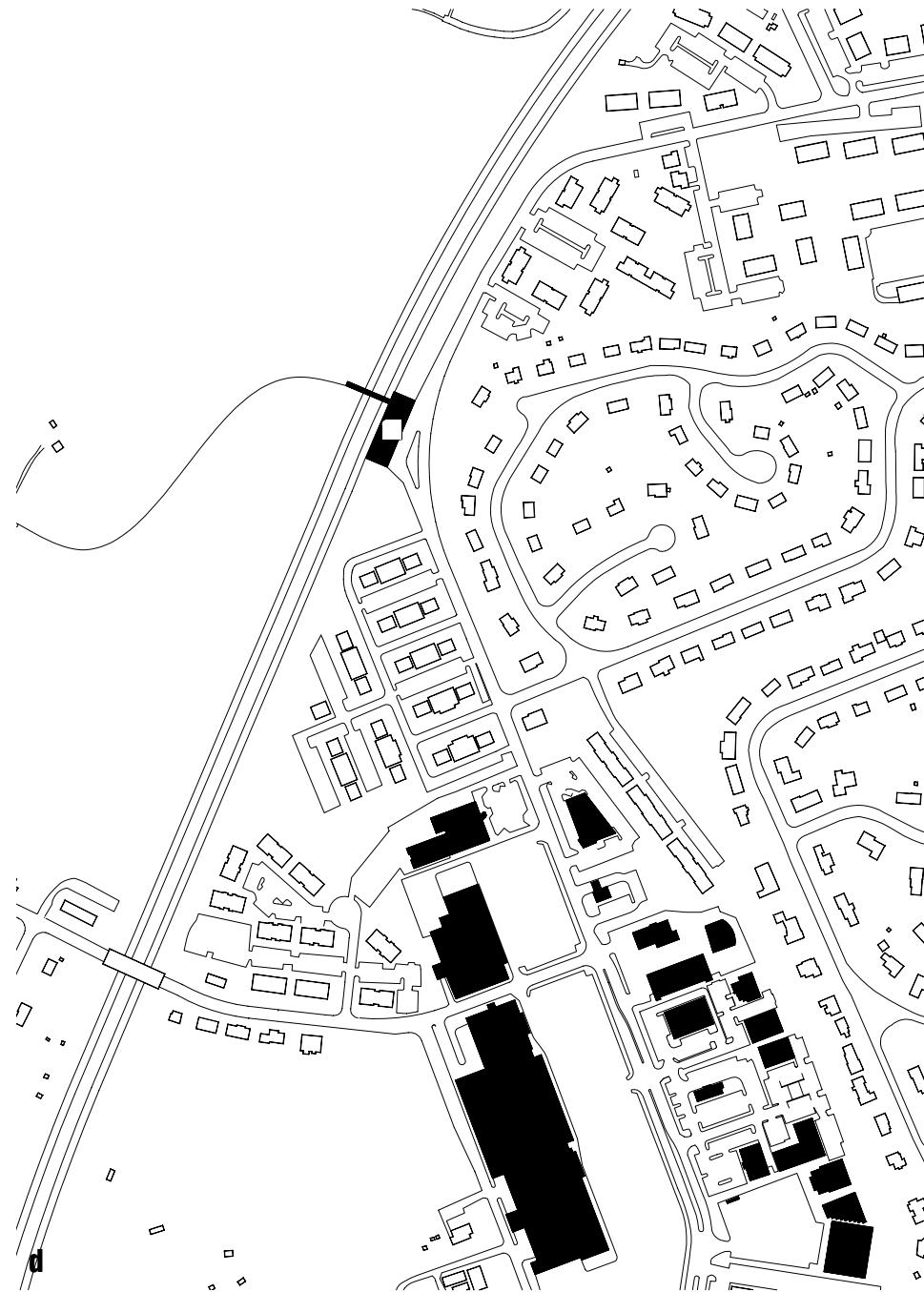






As home of Virginia Tech and its 25,000 student body, Blacksburg has a high need for transitory apartment housing, reasonably-priced restaurants and foodstores, and places to gather. As many retailing and other commercial functions move towards Christiansburg (and more housing is built out there), the student population spreads. Still, Blacksburg enjoys a vibrant downtown. ■ City/edge provides transitory housing with easy access to these businesses. It occurs along Route 460 in Blacksburg, VA (**a**) and is accessed by University Boulevard, which features Blacksburg's first enclosed mall (**b**). About a mile from downtown, the smaller mall has long since been eclipsed by the big mall and other stores in Christiansburg, but it still remains full and busy. ■ City/edge is visually at the terminus of the boulevard. It is separated from the mall, Kroger and the main Blacksburg post office by some 3- and 4-story apartment buildings typical to the area, and across from the edge of a single-family subdivision.





While City/edge is next to the expressway, it is not at an intersection with it. It uses the expressway to define an edge - in this case, the edge of the town of Blacksburg. As it becomes a marker to travelers on 460, it also acts as a buffer against the expressway for residents within the town itself, and a locator of the edge of town **(c)**. ■ Because of its scale, City/edge is not a regional shopping or business destination. It has been placed at a specific site **(d)**. Further city/edge developments can be built in similar sites as considerations allow. For example, the current site may allow for more towers to be built, or other, similar sites in Blacksburg may become available **(e)**. ■ Virginia Tech is a sponsor of a new "smart road" test facility which will encourage transportation research; construction of the smart road has begun off Route 460 in Blacksburg. It will eventually terminate at I-81. New access to I-81 is being constructed in nearby Christiansburg from 460 between the two towns (and the smart road and 81). Originally a mag-lev train bed was a consideration for the smart road, and it may be eventually built. The original city/edge site or another nearby could be configured to accommodate a mag-lev commuter station.

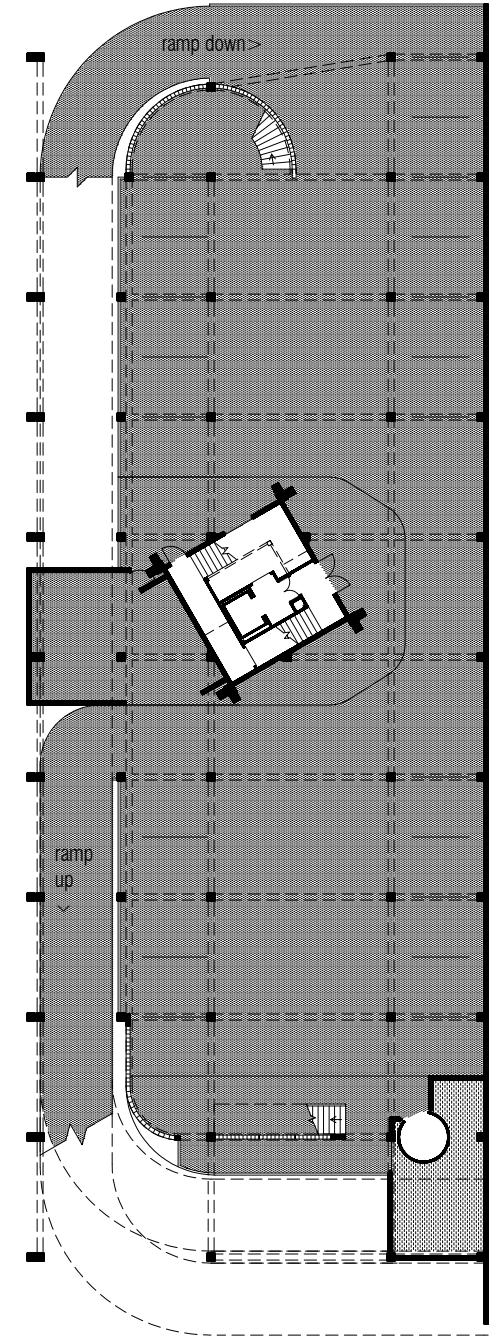


plans

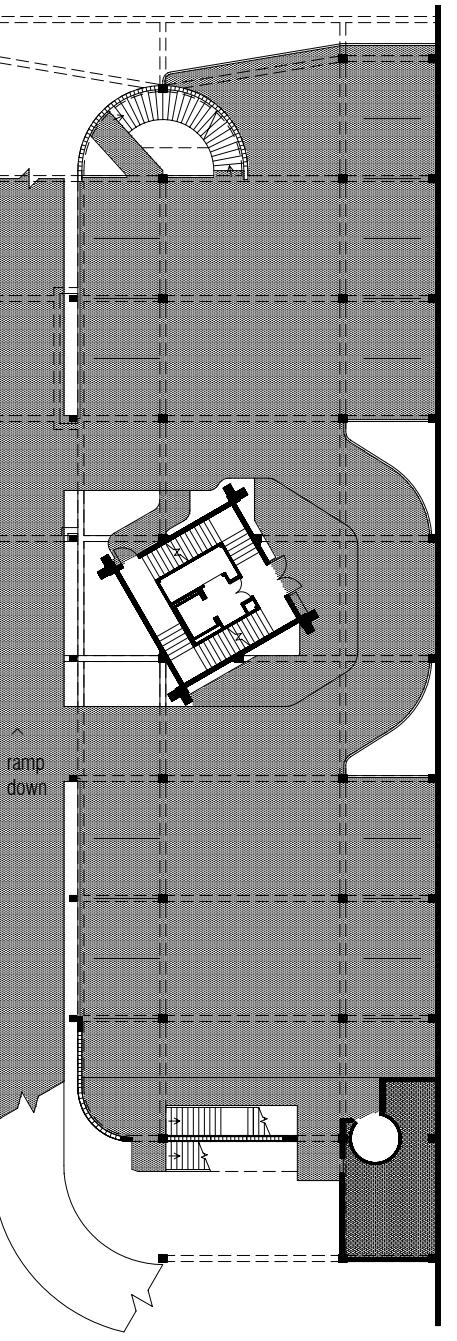
1" = 32'



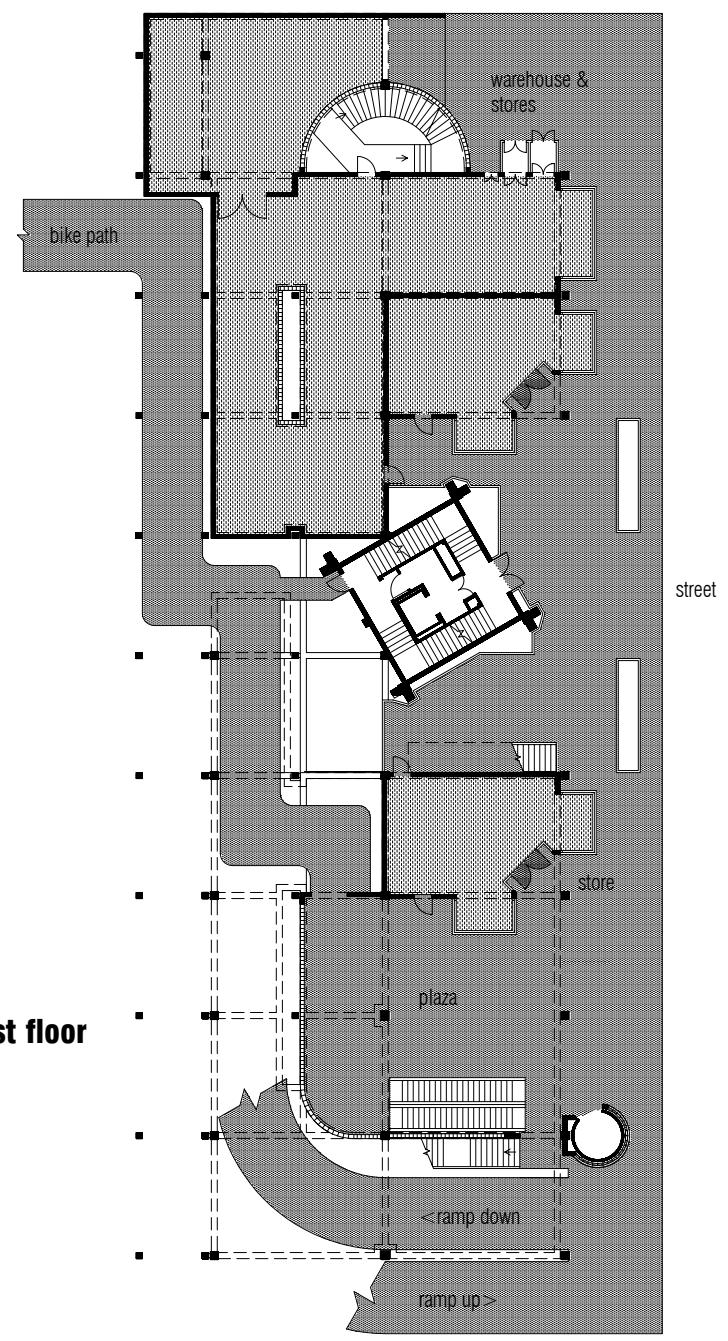
first parking level

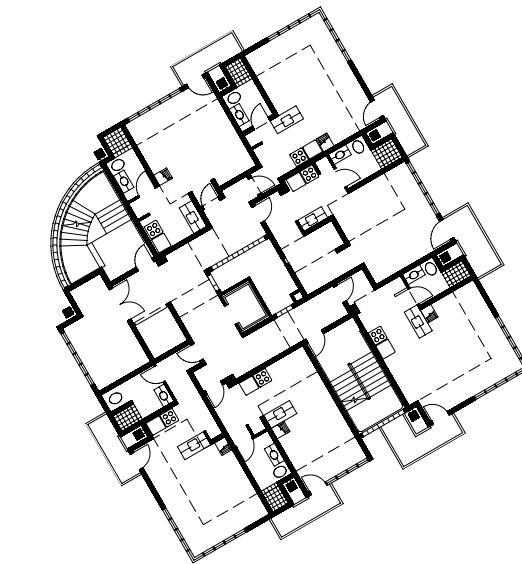
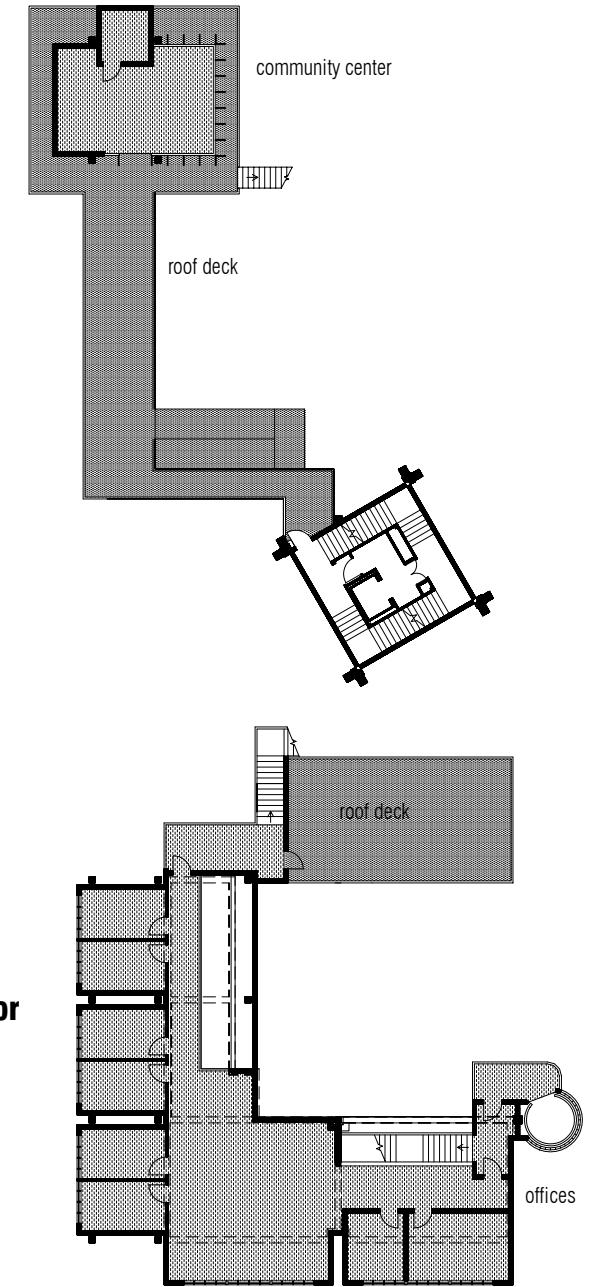
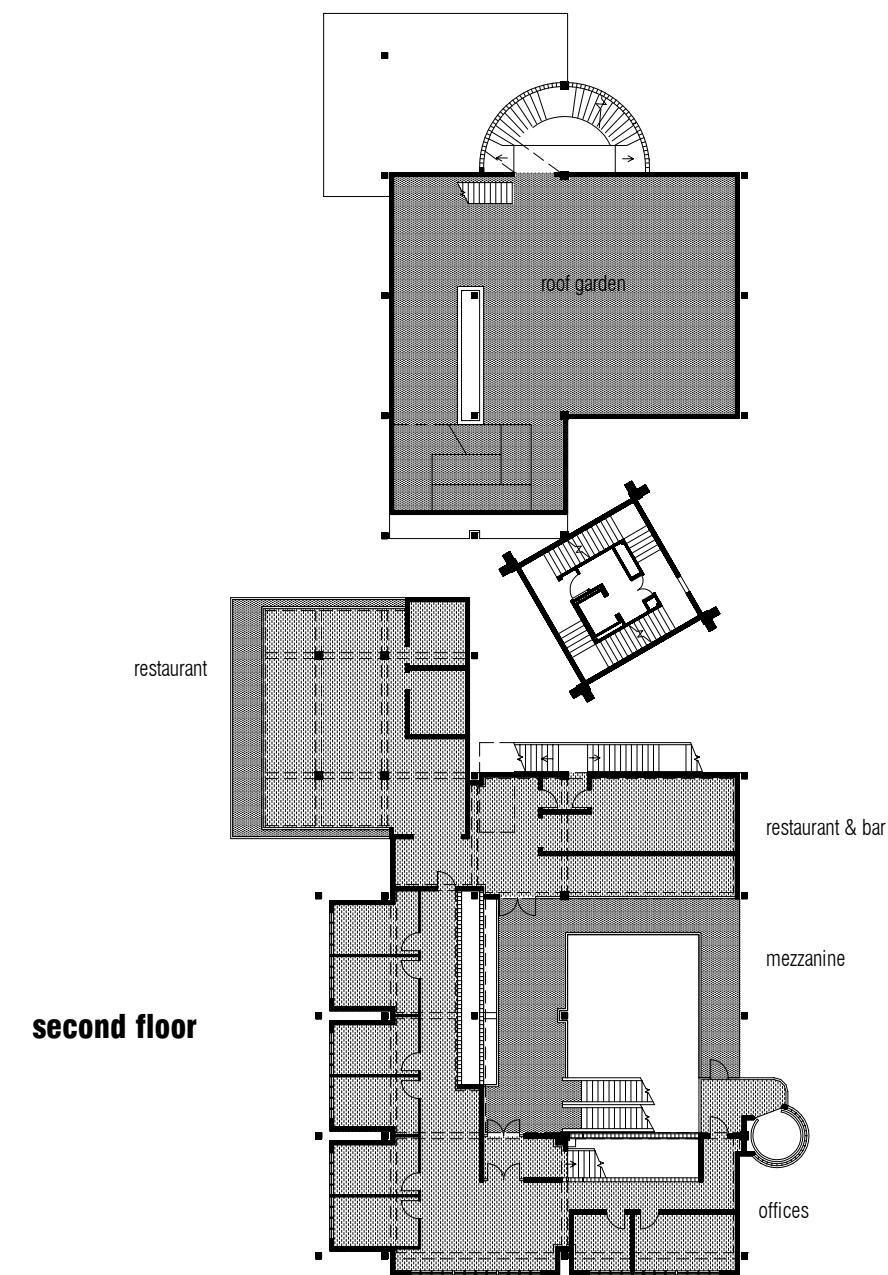


second parking level

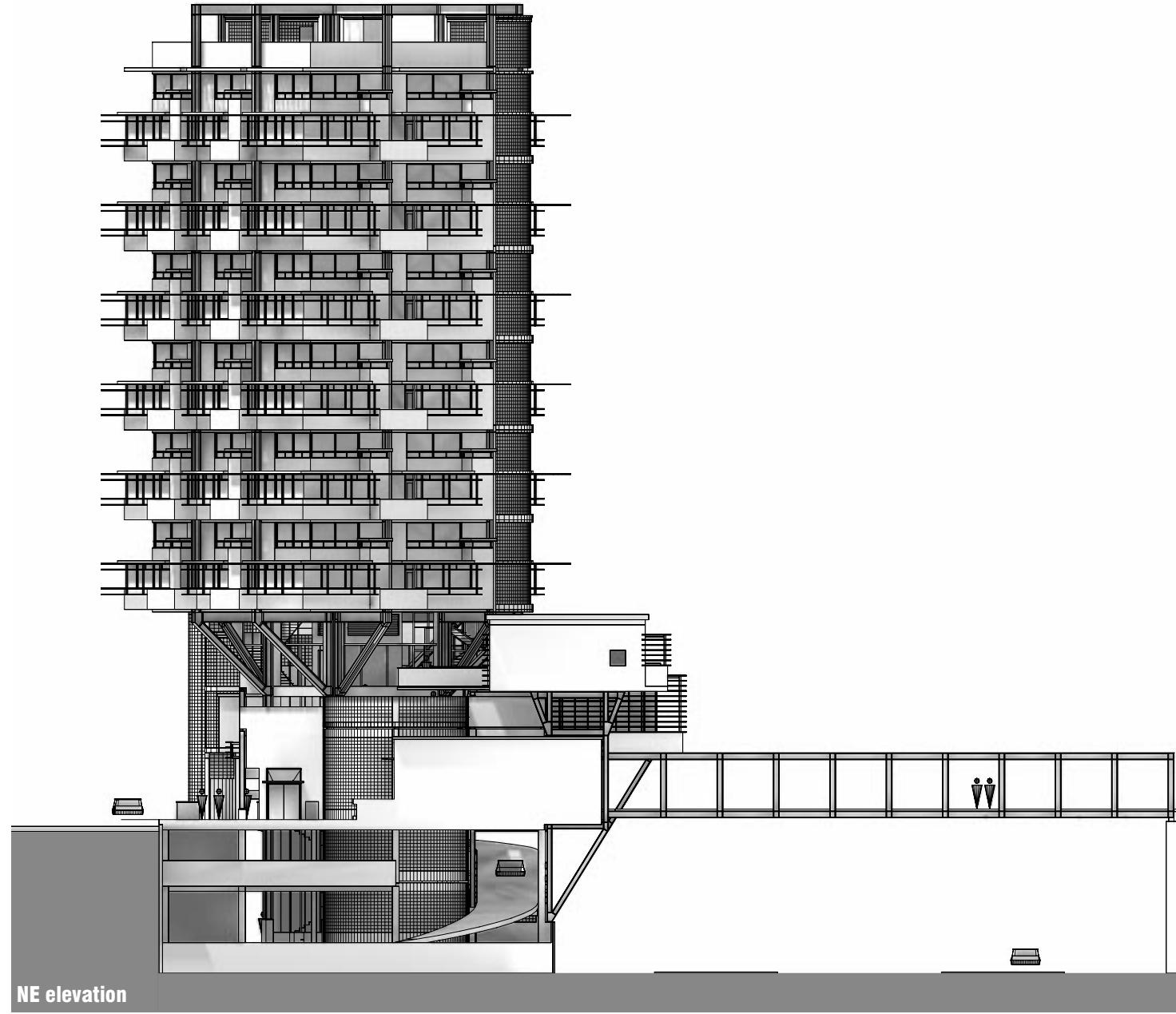
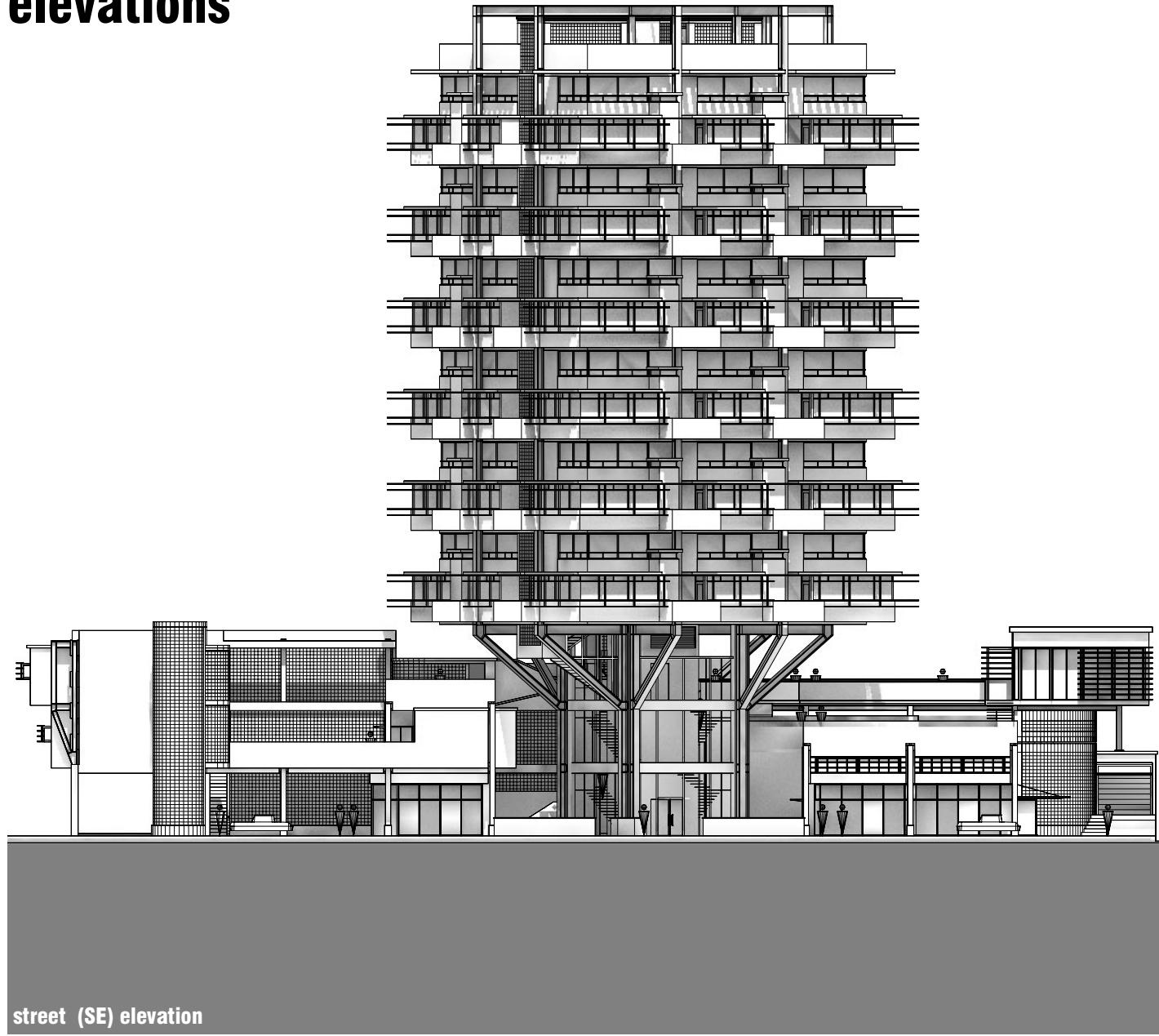


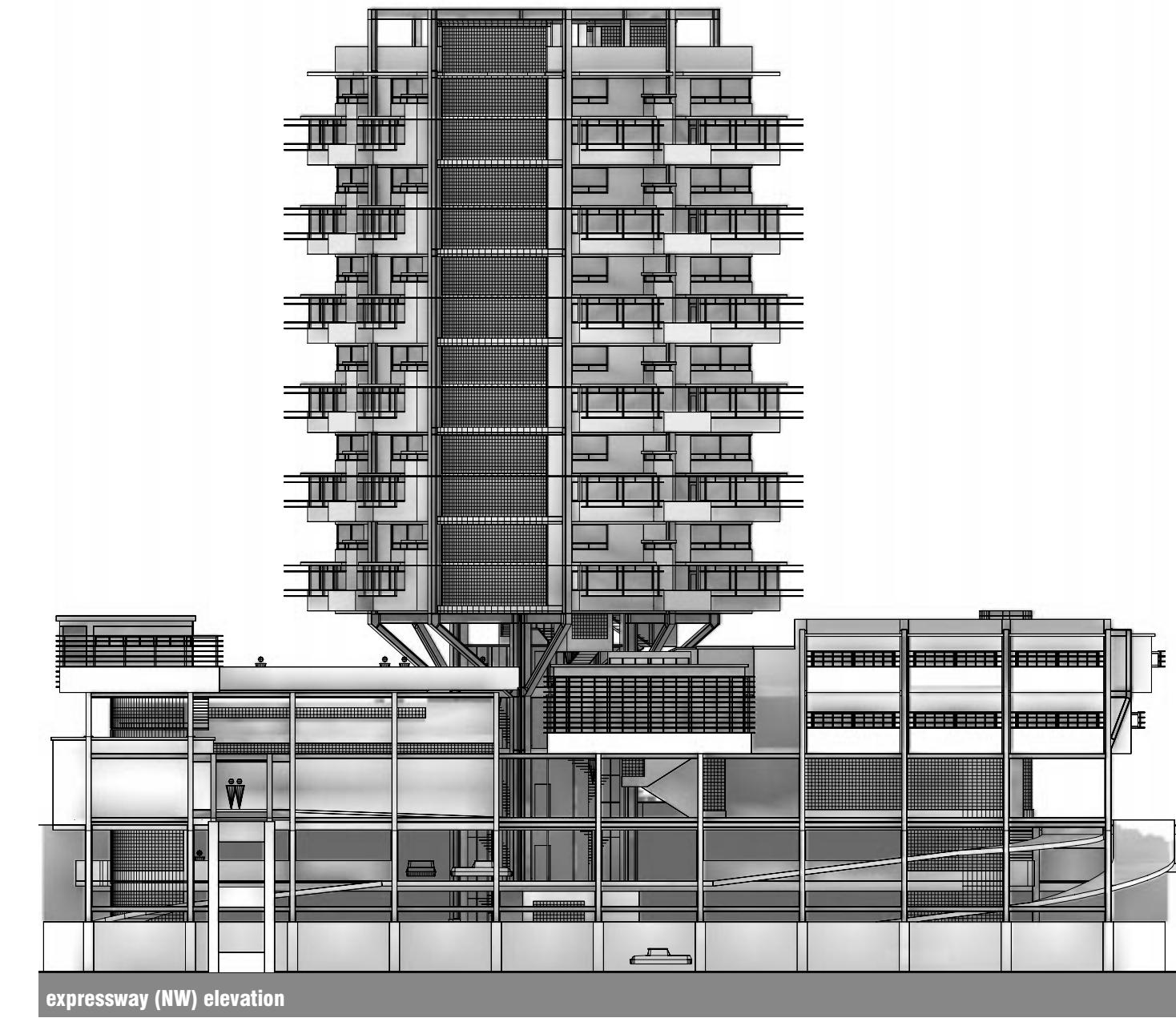
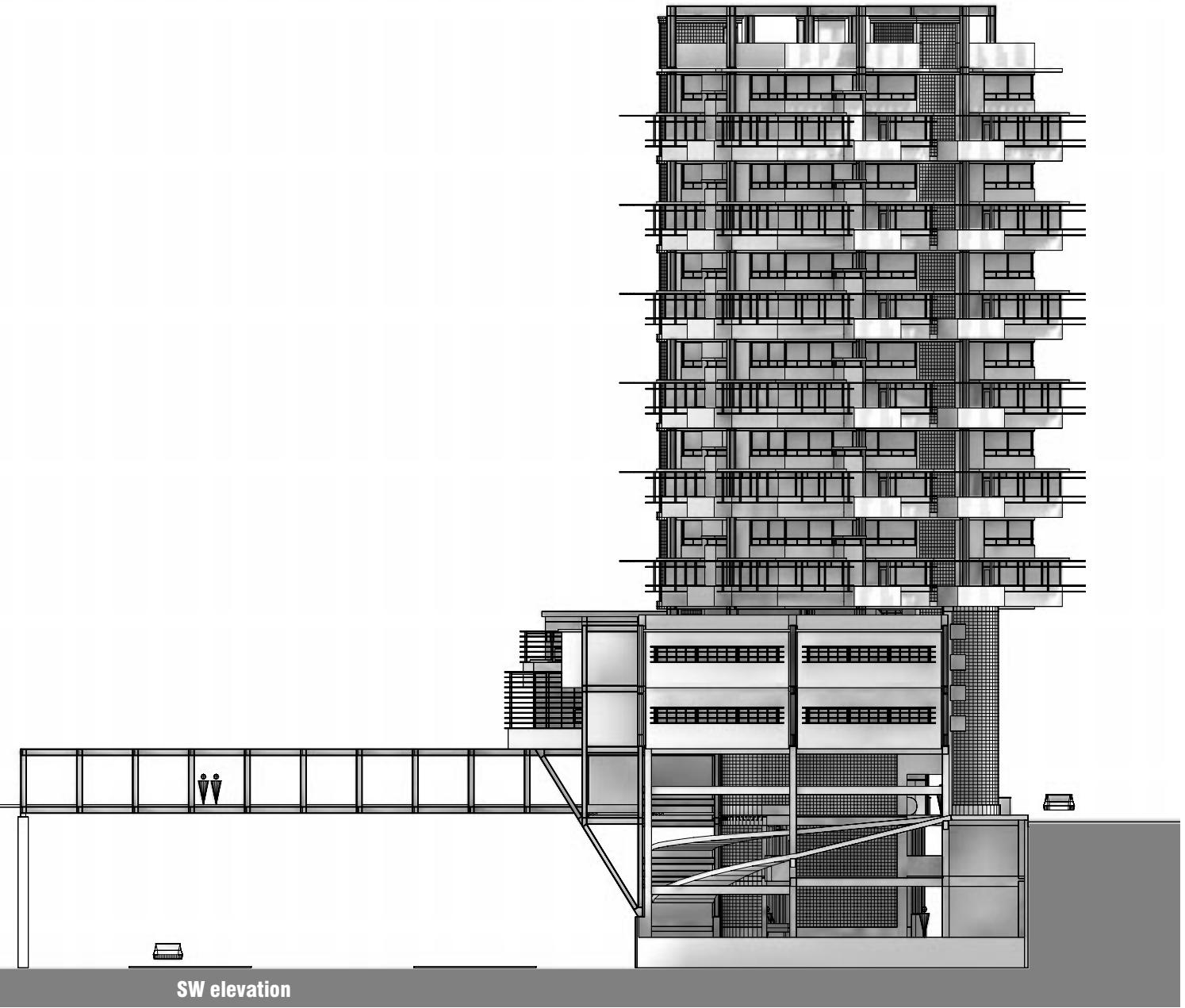
first floor





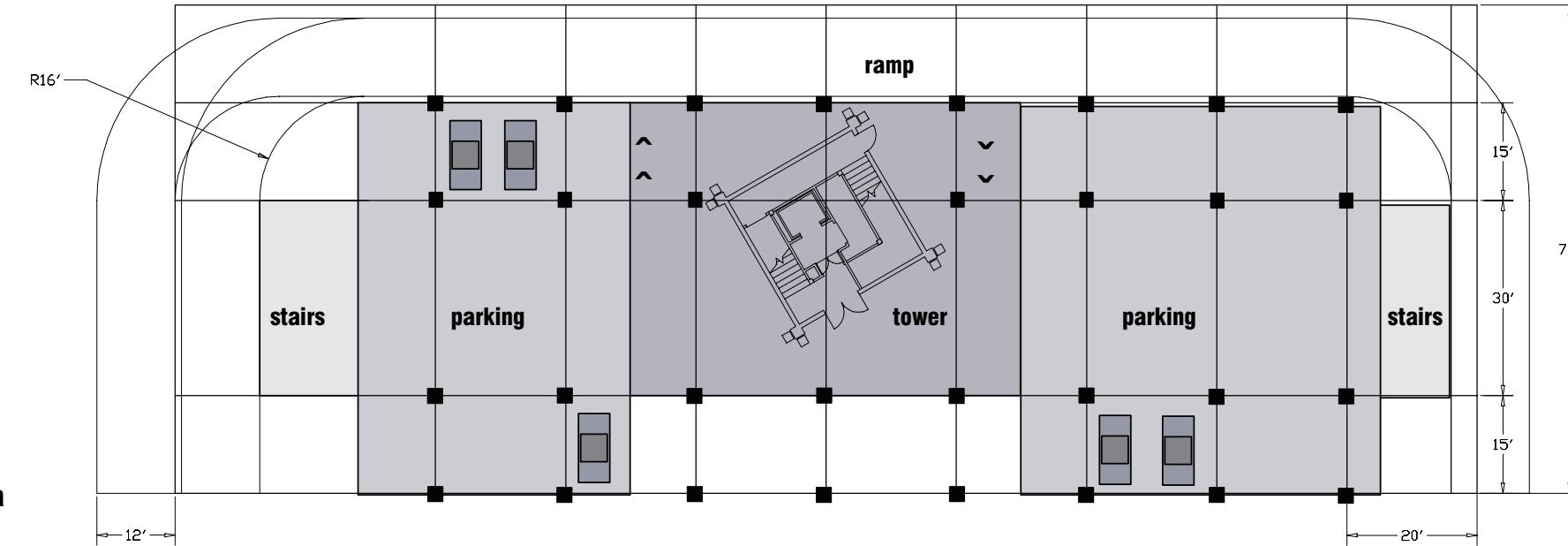
elevations





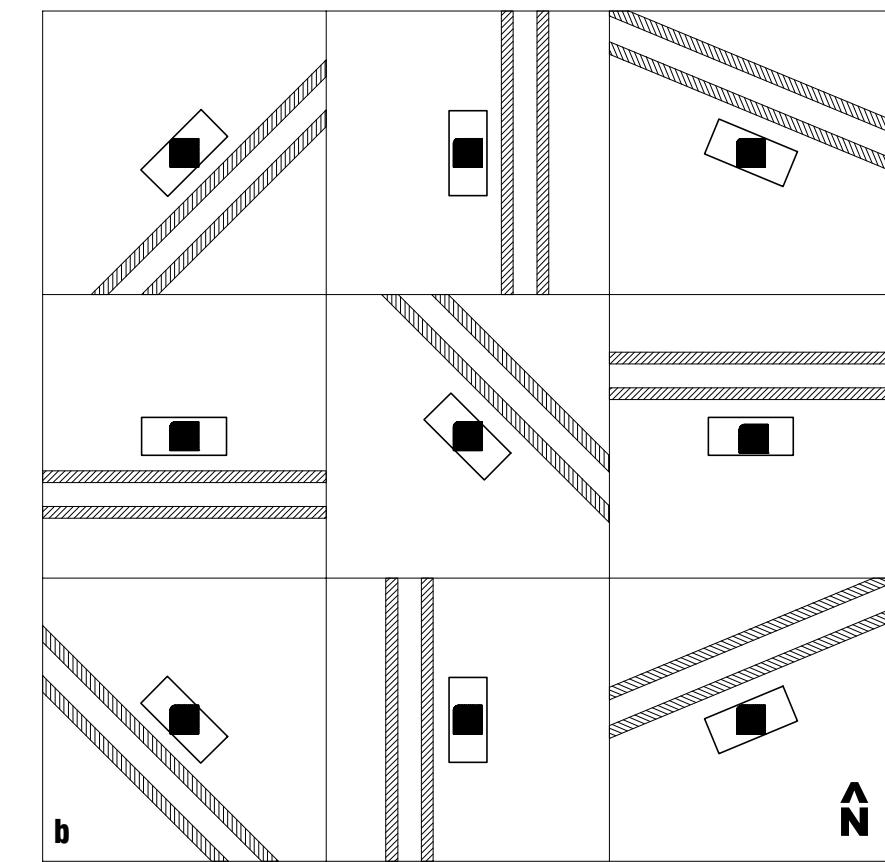
system/materials

expressway

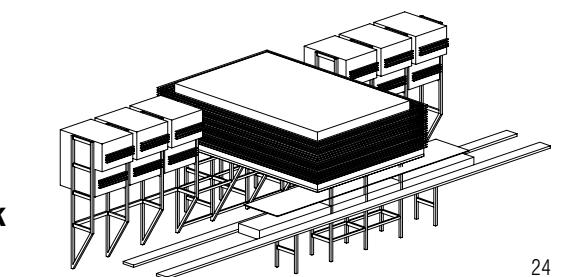
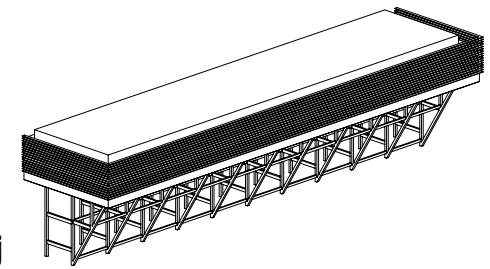
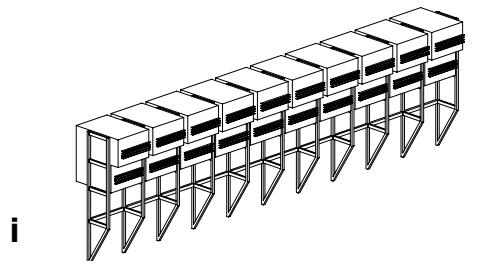
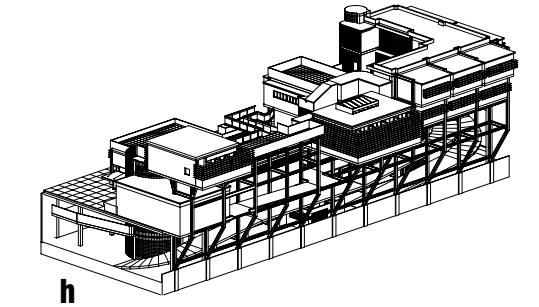
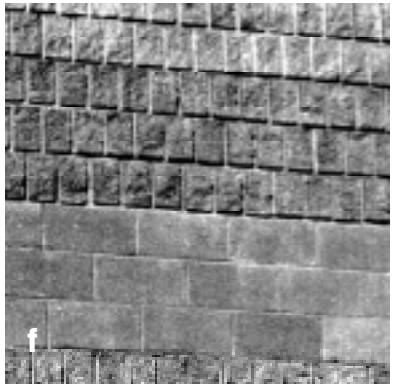
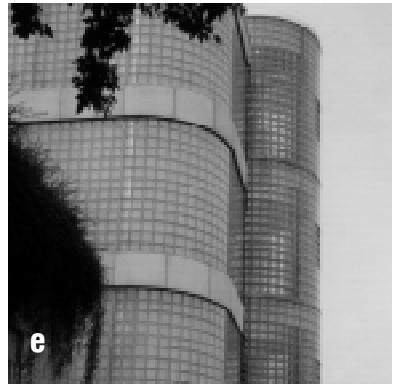
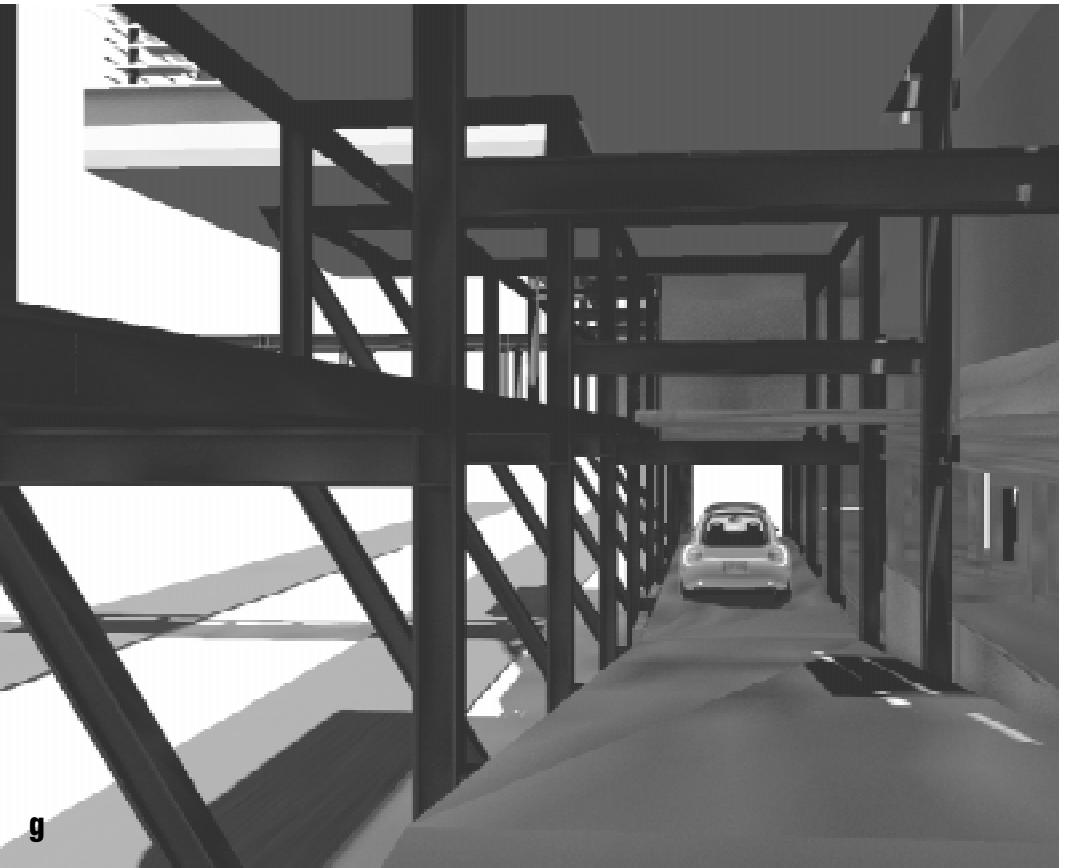
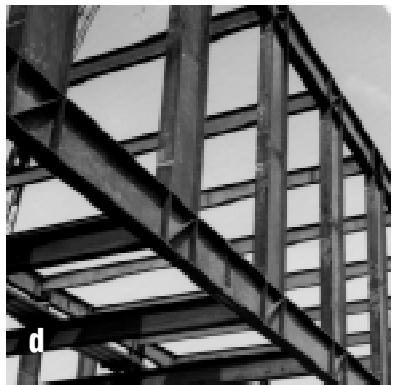
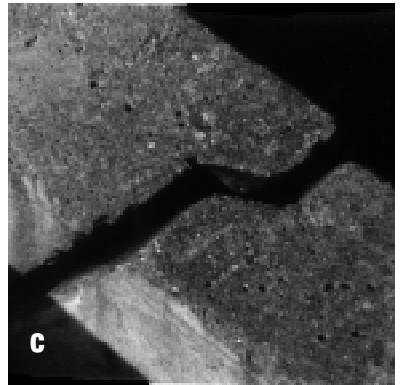


City/edge uses a grid in plan to organize structure, element, and thus function **(a)**. The grid is derived from the car. It takes its depth from the minimum allowed to have two rows of parked cars, easy access in and out to parking spaces and ramps, and an adequate distance from the expressway traffic. ■ The length of the prototype is determined by the minimum necessary to allow parking for all residents, two access stairs and an elevator, ramps, and an internal “tower zone” where the apartment tower is placed. The length readily accommodates turning radii of

current expressway construction; this will not change as faster modes of transportation are introduced. ■ The base of city/edge is oriented toward the expressway; the tower is oriented toward the points of the compass. In this prototype in Blacksburg, the tower is at a 30 degree angle from the base. The tower is separate but integrated structurally into the base with reinforced concrete. The concrete walls of the tower’s base, around its access stairs and elevator shaft, accommodate the beams of the parking structure. Other arrangements of the tower



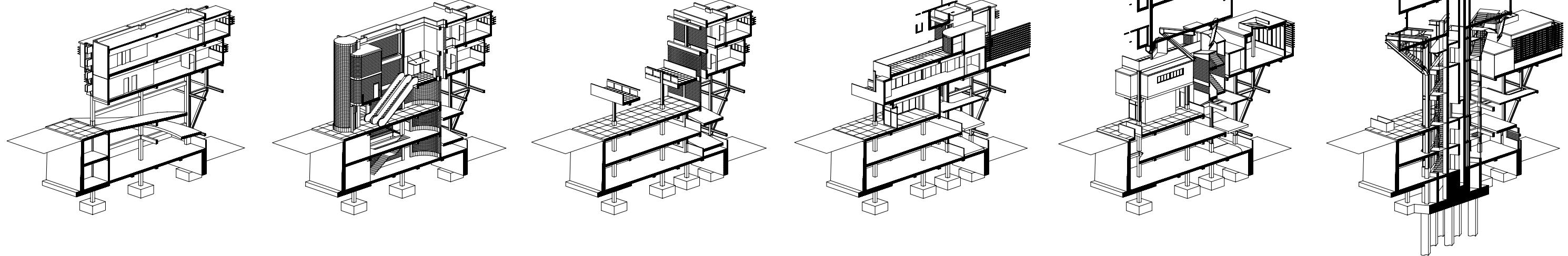
are possible in further city/edge developments **(b)**, depending on the orientation of the expressway. ■ City/edge uses **materials** already associated with suburban development today, and other materials more associated with urban projects. ■ Reinforced concrete columns and beams hold up composite slabs in most of the project **(c)**. Wide-flange and plate steel are used (with moment connections) as structure in key areas **(d)**. ■ Steel structure forms a lattice along the back of city/edge and at certain points further inward to allow



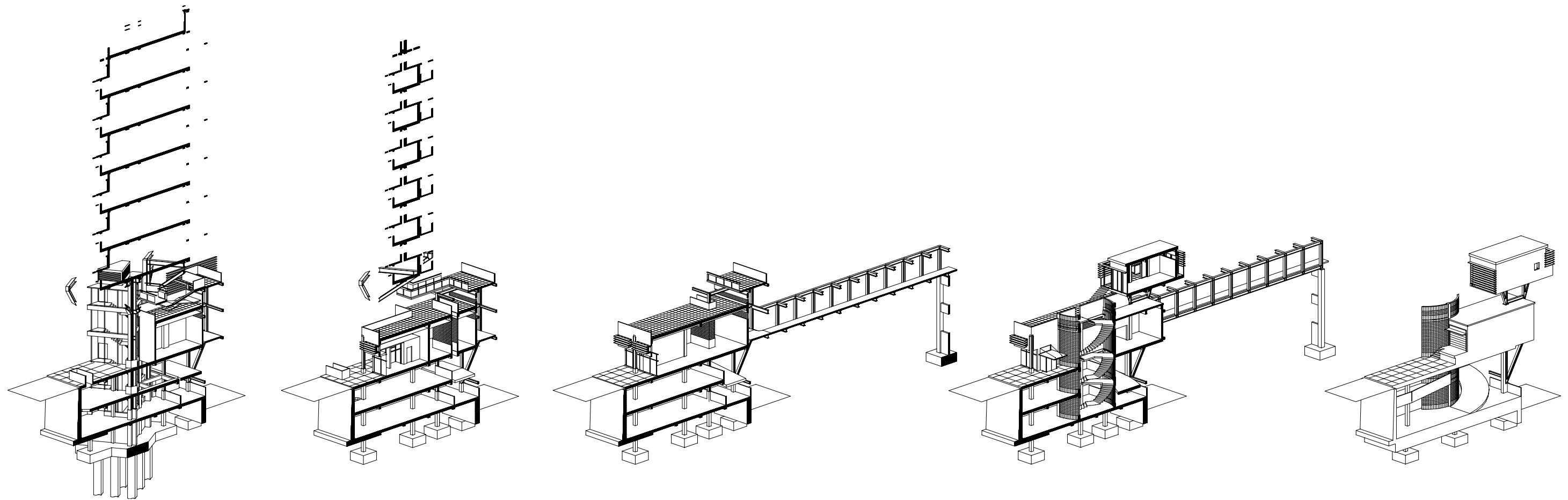
light and air to penetrate into the parking garage. The steel also repeats along the expressway-side for the same reasons of light and air, but also functions as a visual statement for travelers. The steel structure along the expressway contains the ramps for the parking garage (**g**) as well as the path to the bike/pedestrian bridge. ■ Glass block as infill is used to announce vertical passage: stairwells, escalators and elevators (**e**). It is also used as a sound and wind-barrier in the parking levels and at the plaza level. ■ Concrete block is used

as an infill - as finished exterior block at the shopping levels and as interior infill in the tower (**f**). ■ The concrete and steel can be configured in a variety of ways, to vary later city/edge constructions: as currently configured (**h**), as a larger office complex (**i**), as a small convention center (**j**), as a mag-lev train commuter station (**k**). The tower exterior consists of aluminum panels; sound- and sun-shades are also clad in aluminum and are attached to steel-tube frames.

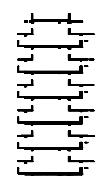
sections

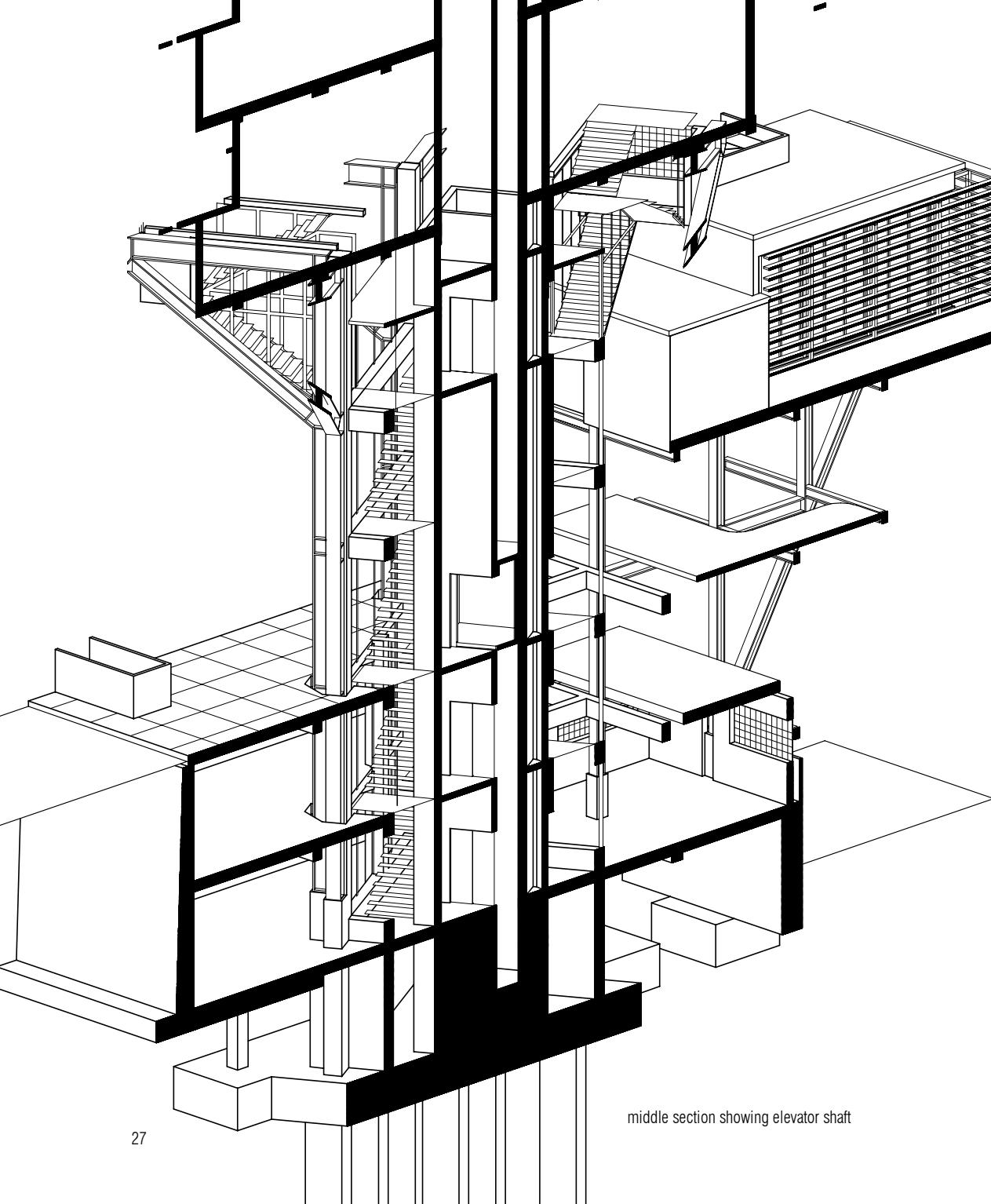


Although it follows the extruded expressway, city/edge is not a direct extrusion. The structural grid repeats and is based on the direction of the roadway, but the structure itself is dependent on the program of the specific section. The tower is accommodated, at an angle, in the middle portion of the base.

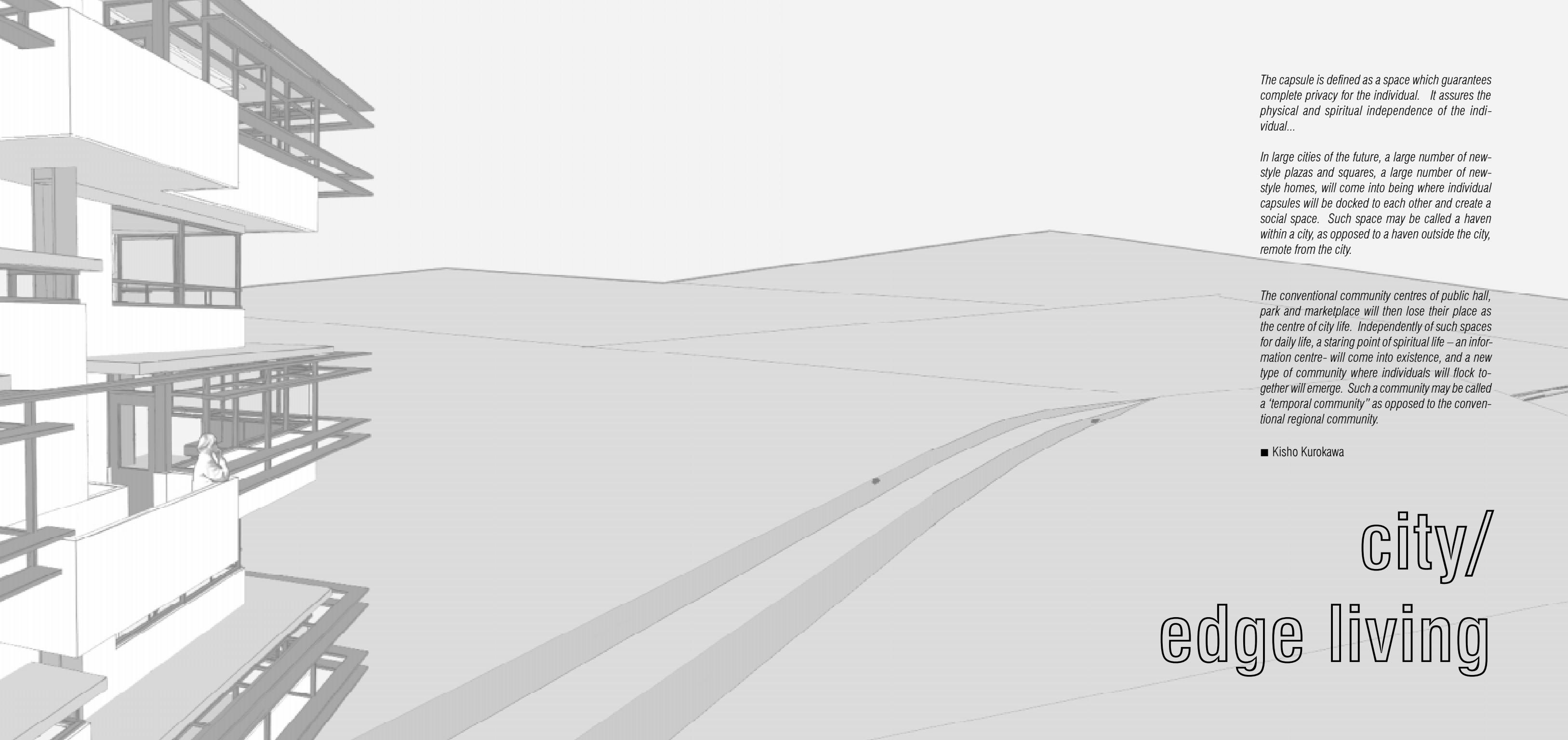


The prototype is built along a road substantially higher than the expressway. Future city/edge constructions may be built along roads at grade with the expressway, by placing shops at street level in front of the parking garage, and moving the tower forward and down.>





middle section showing elevator shaft



The capsule is defined as a space which guarantees complete privacy for the individual. It assures the physical and spiritual independence of the individual...

In large cities of the future, a large number of new-style plazas and squares, a large number of new-style homes, will come into being where individual capsules will be docked to each other and create a social space. Such space may be called a haven within a city, as opposed to a haven outside the city, remote from the city.

The conventional community centres of public hall, park and marketplace will then lose their place as the centre of city life. Independently of such spaces for daily life, a starting point of spiritual life – an information centre – will come into existence, and a new type of community where individuals will flock together will emerge. Such a community may be called a ‘temporal community’ as opposed to the conventional regional community.

■ Kisho Kurokawa

city/
edge living

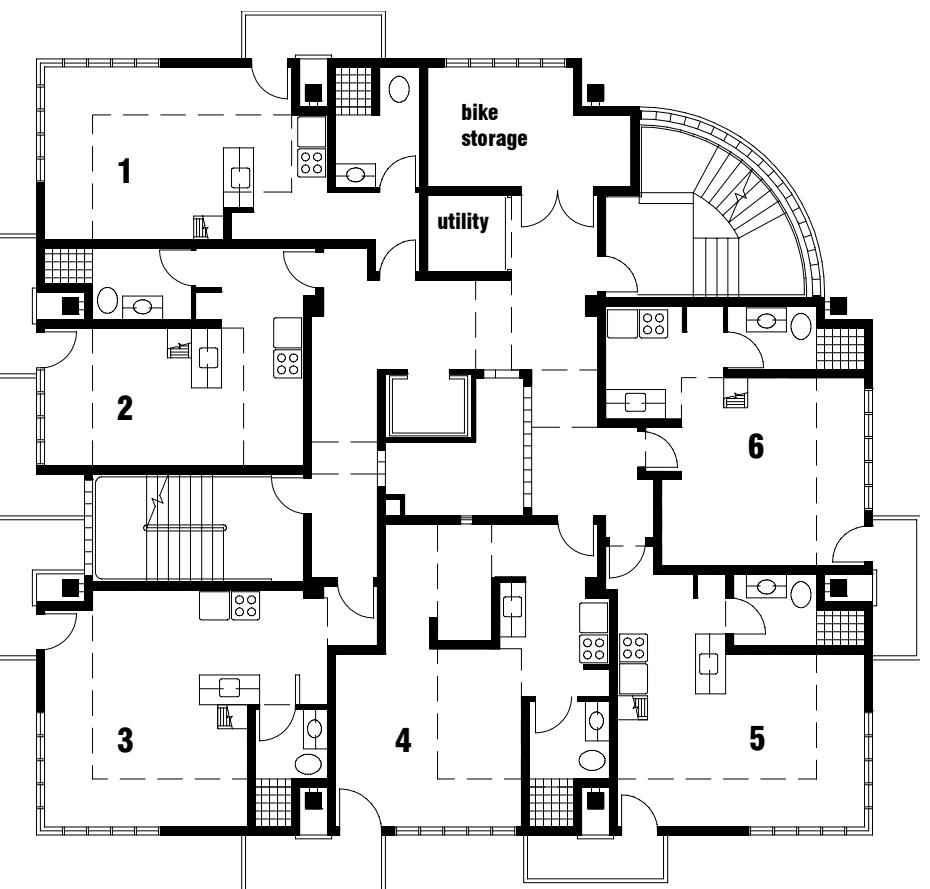
apartments

The apartments consist of a large studio space with a kitchen and laundry console, a full bathroom, a sleeping loft, and built-in storage. Each floor has a utility room and bicycle storage room.

The apartments are not large but are efficient and convenient. They provide a base for residents who are mobile, either using the expressway itself or working within town, such as college students. ■

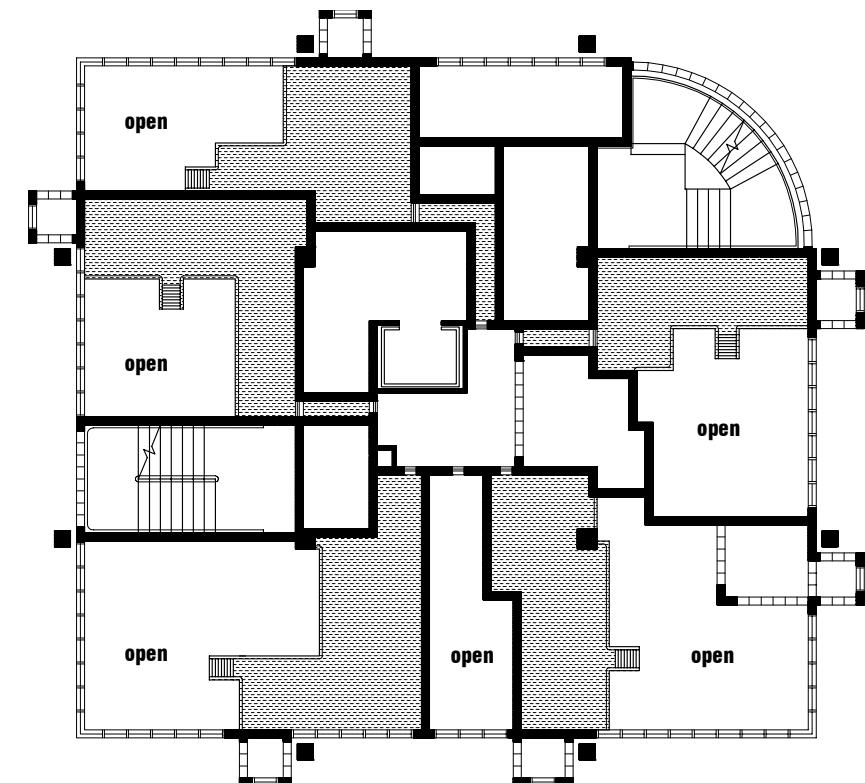
They are a further step towards a living arrangement which accommodates current trends in technology, work and communication, and the ability of a person to travel from place to place without dislocation. They emphasize access to experience and information rather than acquisition of goods: they are configured as a home base from which one can work, communicate and travel, but because of their size they provide little storage.

While they are efficient, the apartments are not sterile or anonymous. Because they do not attempt to ignore the site or expressway, they are constantly presented to the resident as a refuge, a view, a real place in contact and in contrast to its environment.



main level

1" = 16' N>

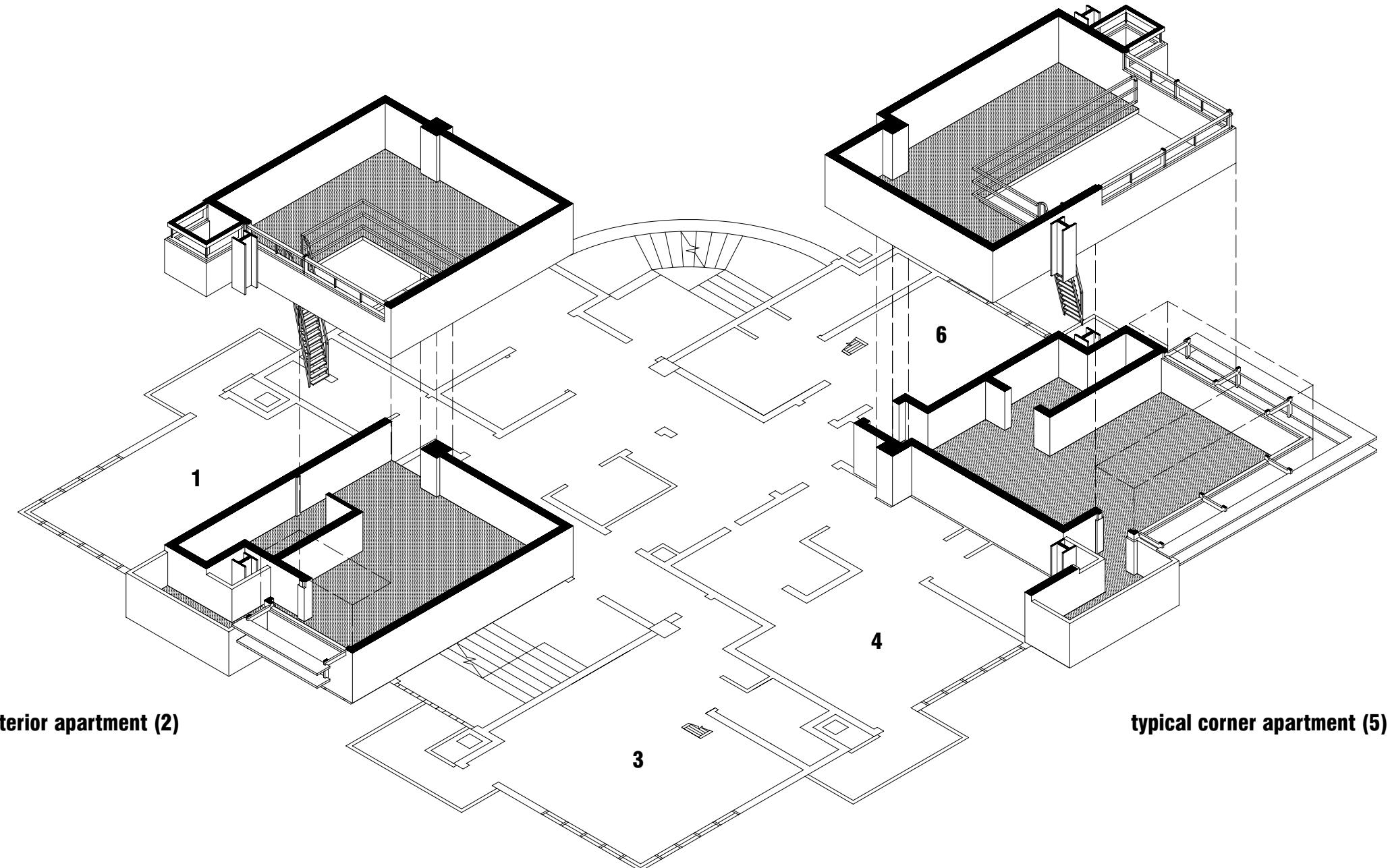


loft level

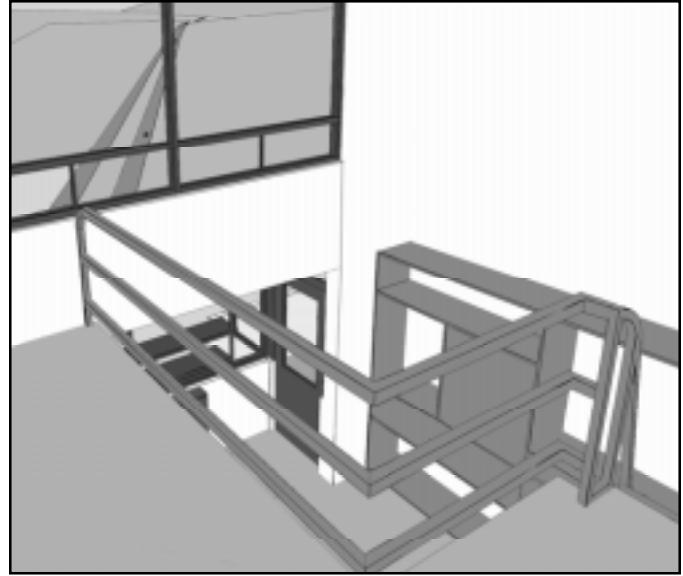
Since each apartment has at least two interior walls, the exterior walls are filled with windows. The living room ceiling is generally two stories except at the edges facing out; here the height is reduced to 7.5 feet, preserving a comfortable scale to counter the outside view. ■ This change in ceiling height helps the resident control the focus within the apartment – one does not always have to be constantly looking out. The eye has a variety of places to travel within the small space.

The verticality of the apartments also allows a wide arrangement of plans. While the structure does not vary, none of the apartments on a floor are configured in the same way. Lofts generally occur over kitchens and bathrooms. ■ One completely accessible apartment per floor (4) has a main floor bedroom instead of a loft, but the ceiling still varies, letting in clerestory light without creating a huge barn of empty space: lofts from apartments 3 and 5 overlap into its upper area. ■ The stacked arrangement also allows 1.5 story-high showers in all the bathrooms, with clerestory windows at the top, providing outside ventilation while still remaining private.

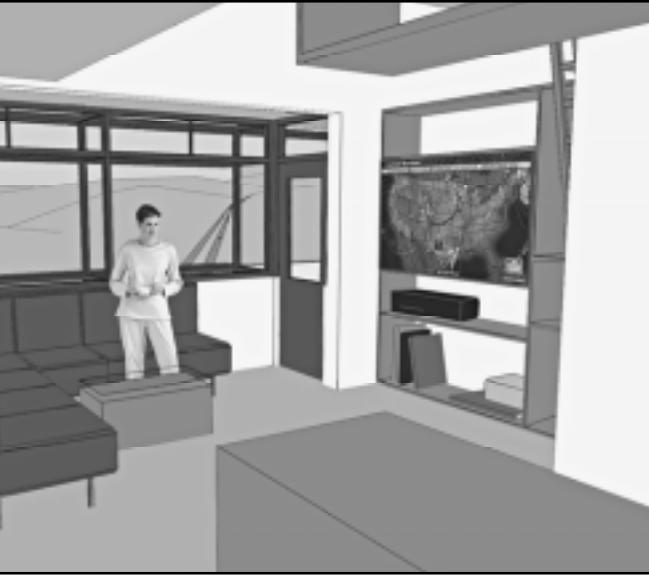
The lowest level of apartments is over 60 feet higher than the road. ■ Perspective views shown in this section (pp. 29-36) are taken of the apartments on the 5th floor, which is over 130 feet above the expressway.



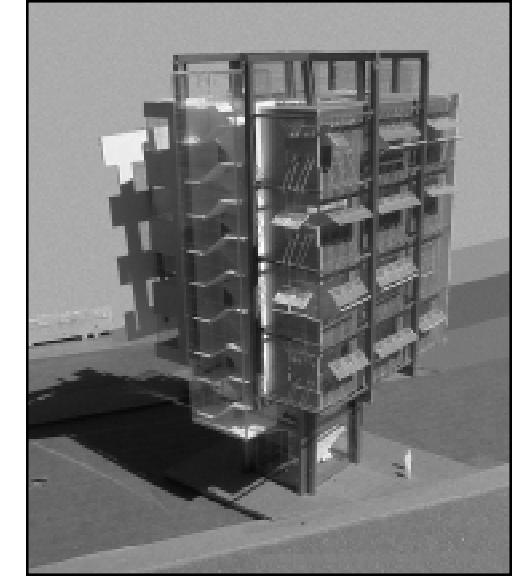
edge living



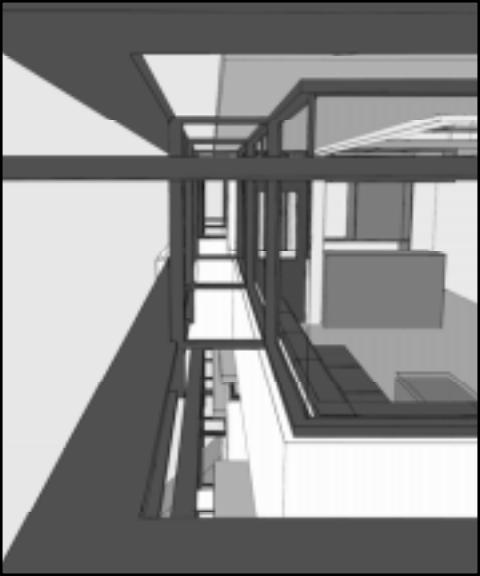
typical interior apartment, loft view (apartment 506)



typical interior apartment, living room (apartment 506)



alternative shading study model



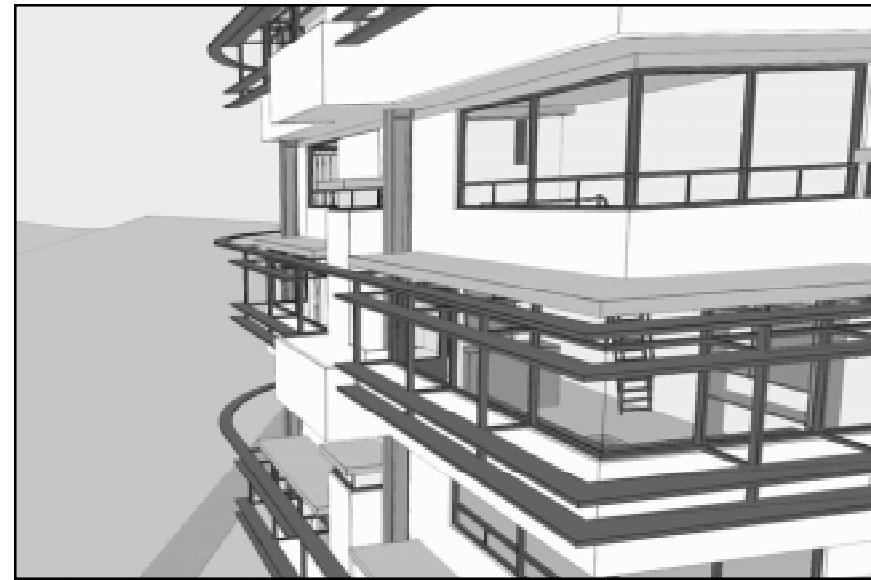
brise-voiture, apartment 501

While each apartment is different, there are generally two types: the corner apartments (1, 3, 5) and the interior apartments (2, 4, 6). They provide a variety of scales and consequent relationships to the outside. The interior apartments are smaller and have less exposure to the expressway. The corner apartments are larger and have a more dynamic

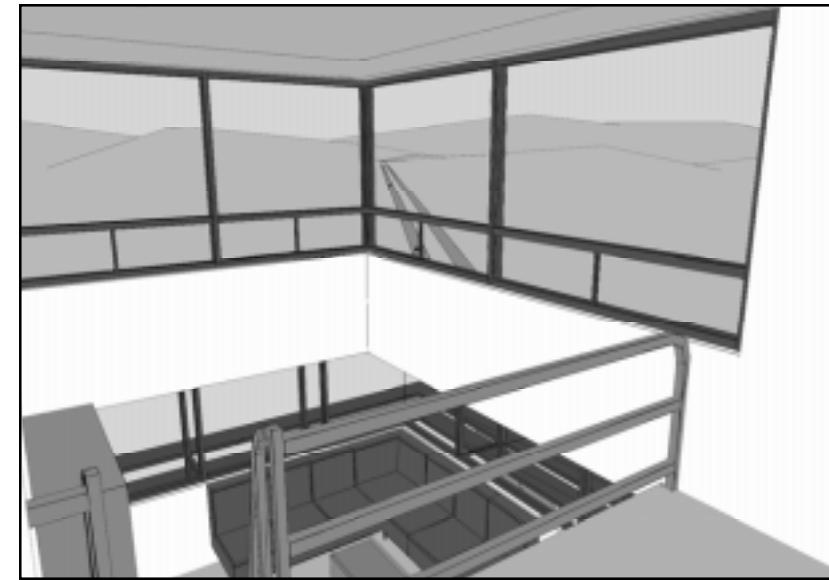
relationship to the outside, which is countered by having deeper lofts. The expressway can be seen from each apartment – from 4, however, one has to go out on the balcony. The ubiquity of the road would be the case regardless of the orientation of the development. ■ Each apartment has cross-ventilation. Operable windows are found at the tops of the lower

windows (to cut down on noise), and at the bottoms of the loft-level clerestories (for ease of use). Each apartment has access to the central open shaft. The shaft is enclosed below the habitable floors; vents above the enclosure provide airflow. ■ All the lower

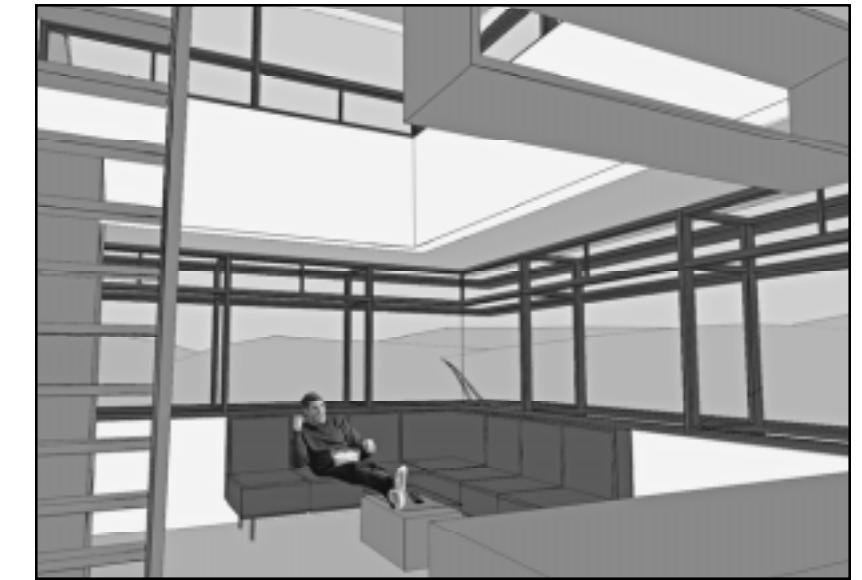
windows have *brise-voiture* or shades from the cars below. While the shades provide a variation of light and shadow into the apartments, their primary purpose is to provide some frame for the view, including the expressway – the lowest shade is actually



facade, apartment 501



typical corner apartment, loft view (apartment 501)



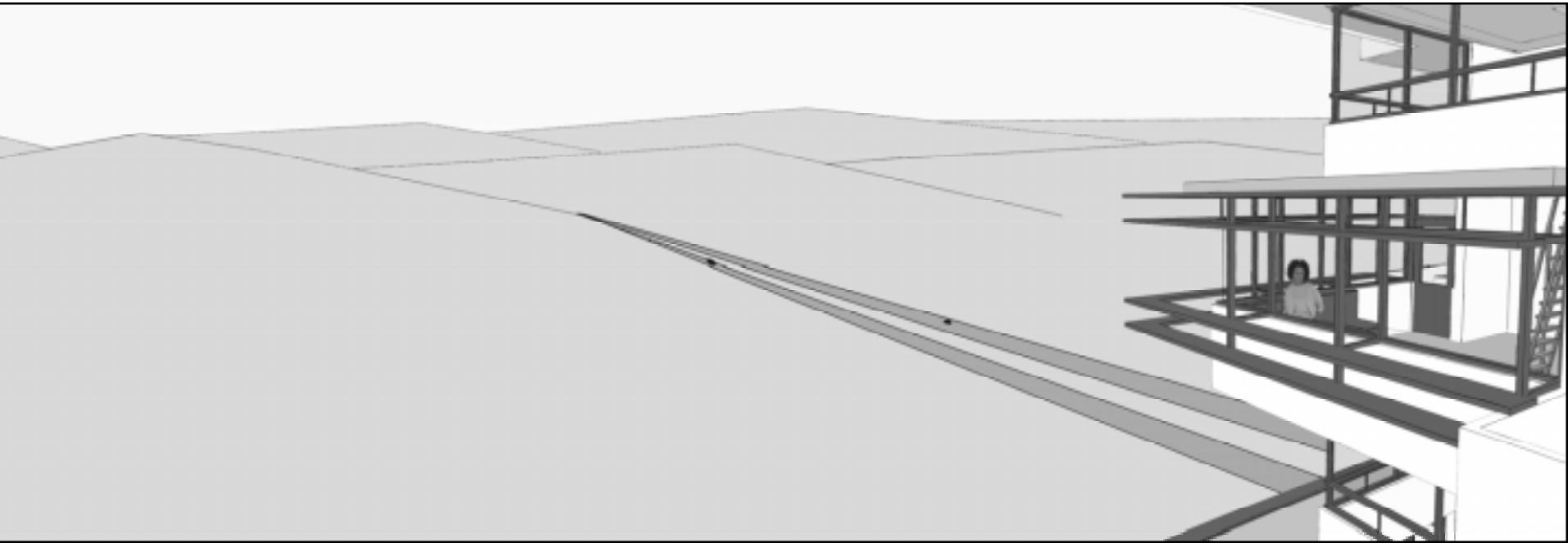
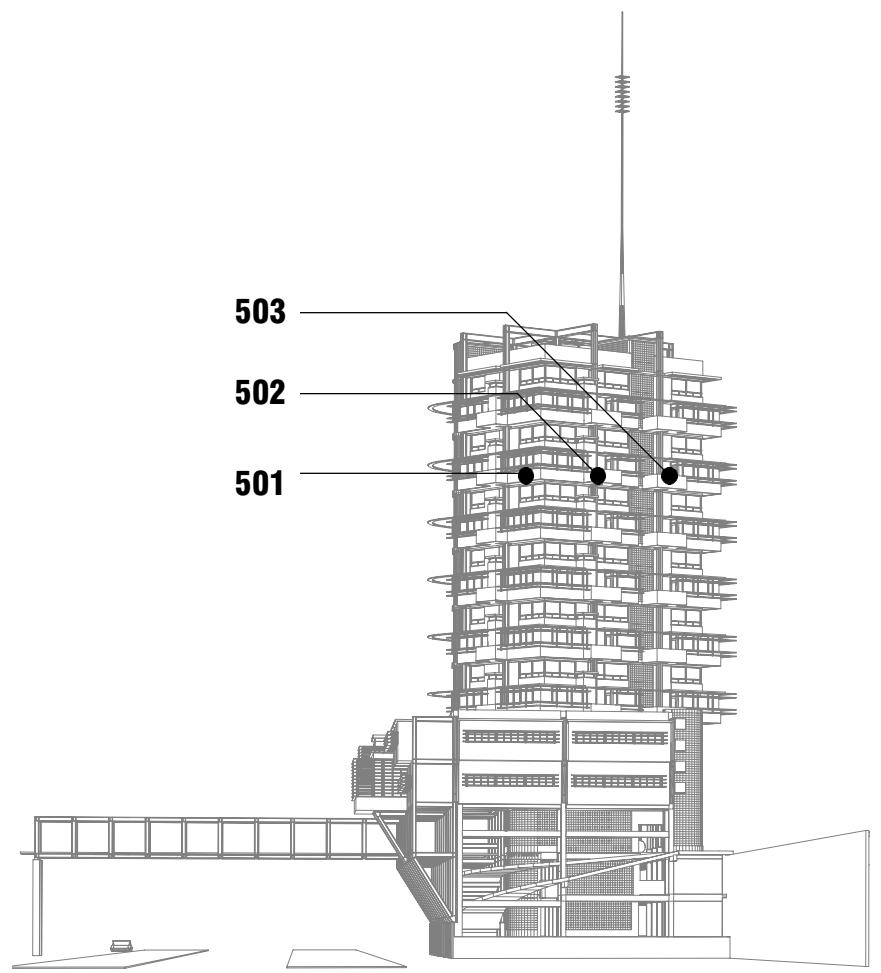
typical interior apartment, living room (apartment 501)

below the windows. The shades are also set away from the building itself to create an intermediate zone: the eye can determine the distance and scale of this zone, which provides another type of buffer to the view. ■ For the same reason the balconies are nominally covered; this creates a ledge or niche that keeps the resident from being completely exposed to the expressway, height, and view. Each balcony wraps around the exposed steel columns

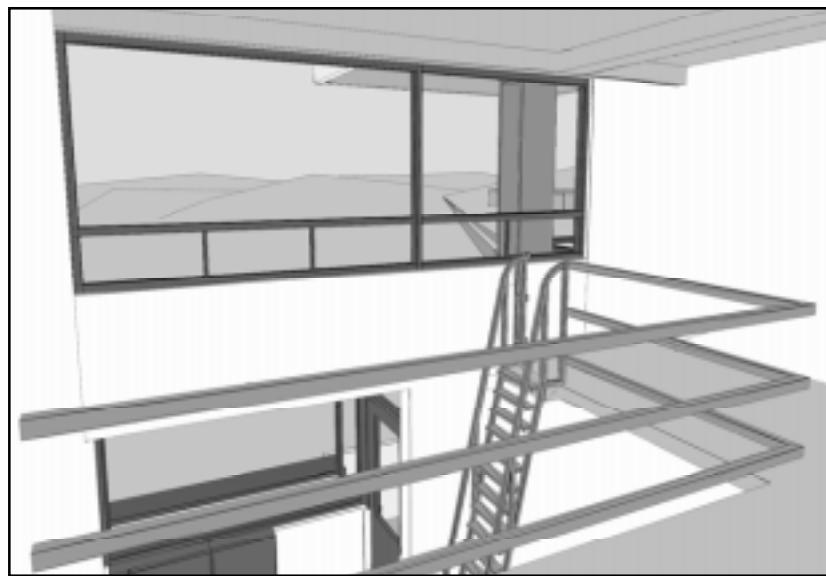
that extend to the roof of the tower; one can look down not only towards outside views, but "inside" the structure as the steel comes up through each level. ■ The loft-level clerestory windows are not adjacent to the lofts themselves, but can only be experienced over the distance of the open living room. Consequently shades are not needed to control the view out (or in). Further, the lofts and the clerestory window levels are also

set back into the building, making sunshading irrelevant. ■ The overall effect is of several zones within the apartment which vary in terms of privacy and dynamic relationship to the outside. Where the living room narrows down to become more intimate, the outside is the most evident; from the far back sanctuary of the loft one gets the most uninterrupted views.

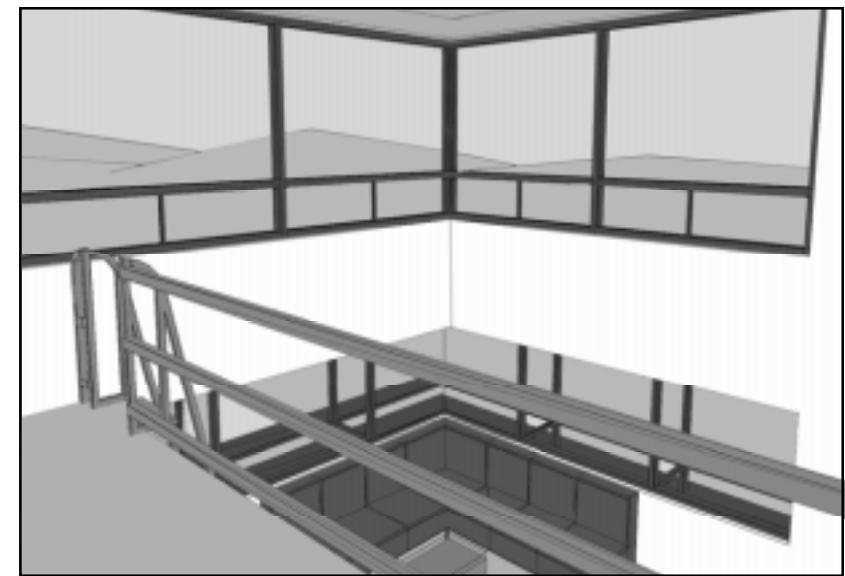
apartment views - southbound



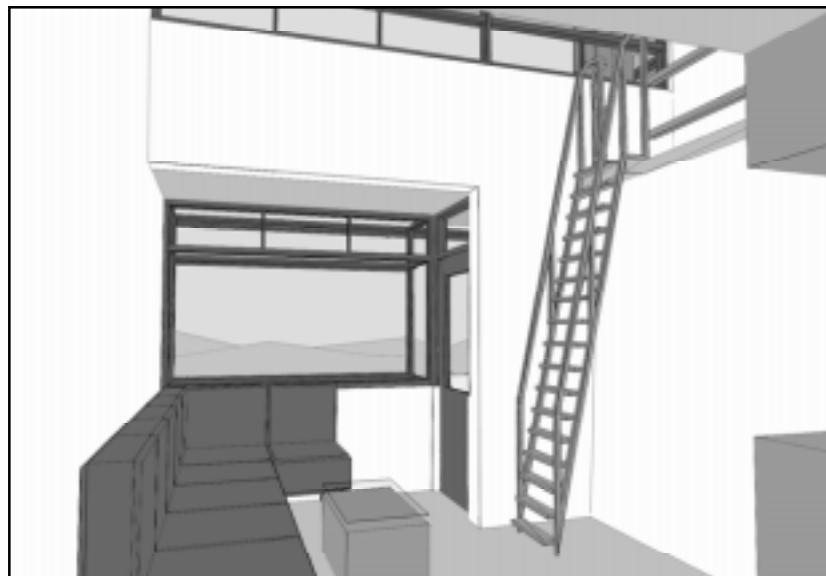
apartment 503



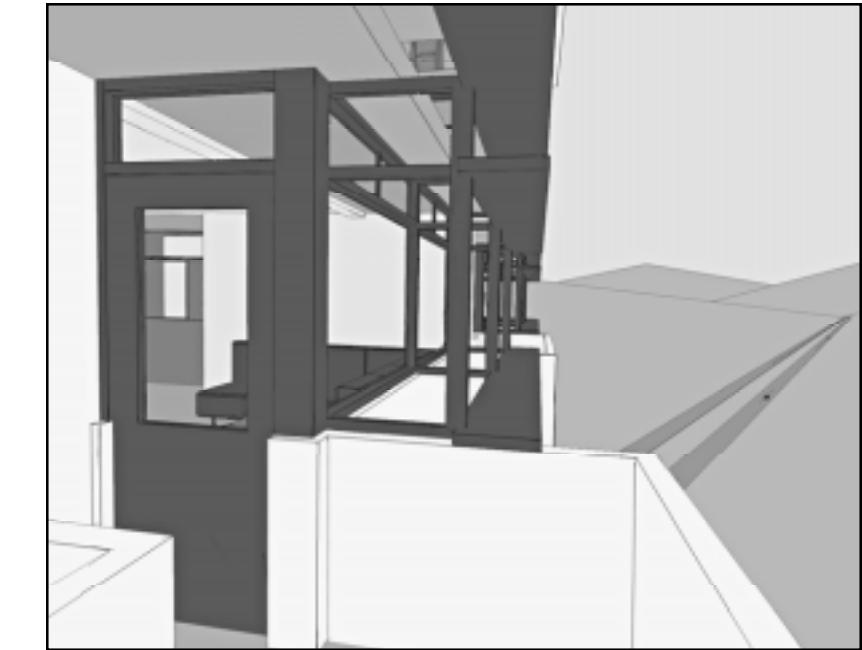
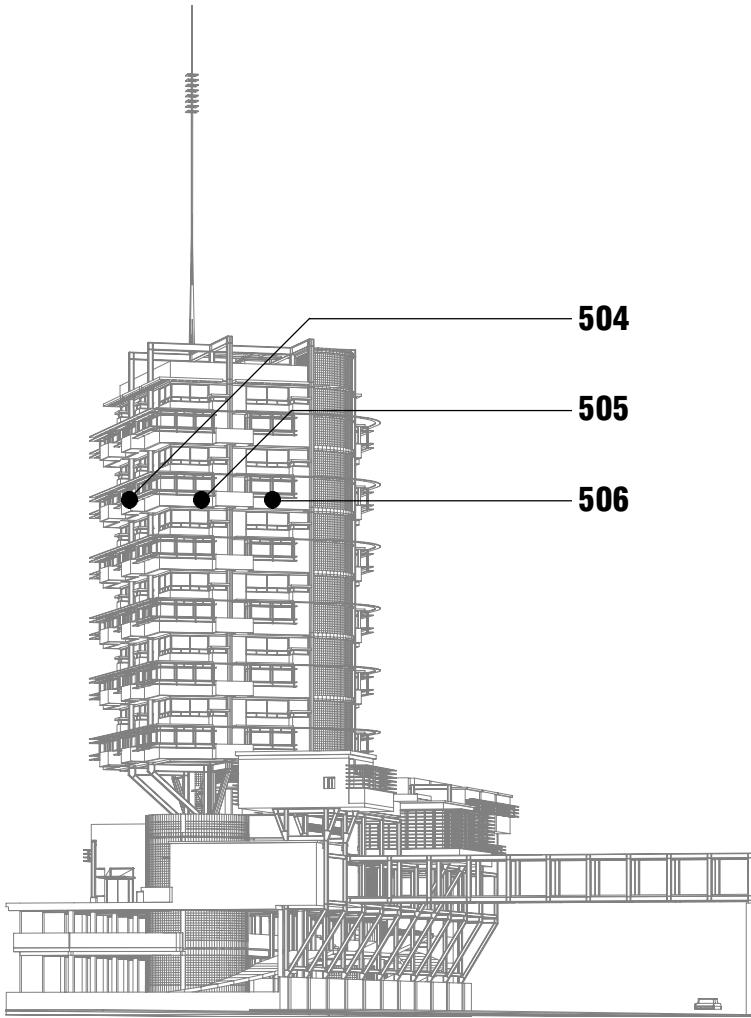
apartment 502, loft and living room views



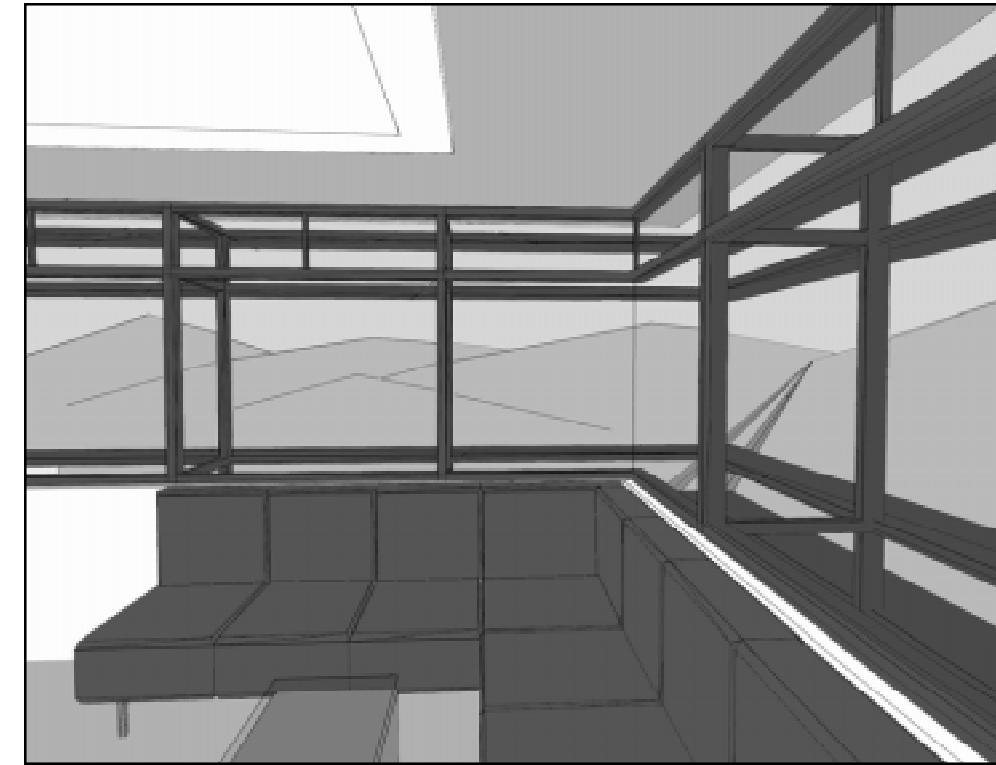
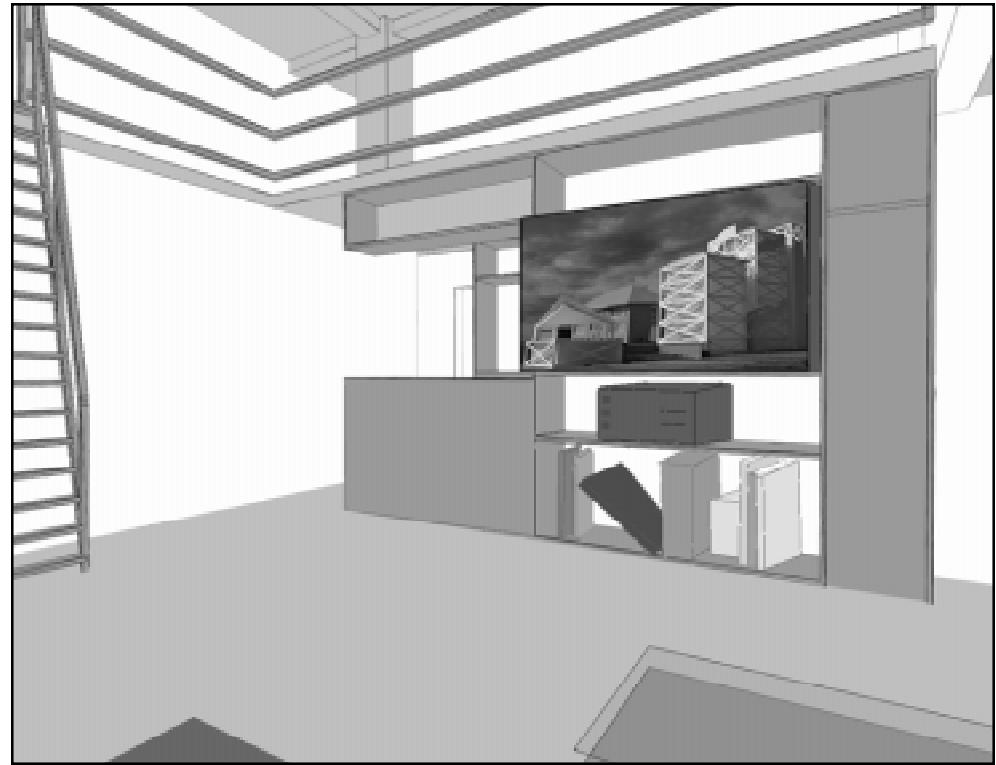
apartment 503, loft and living room views



apartment views - northbound

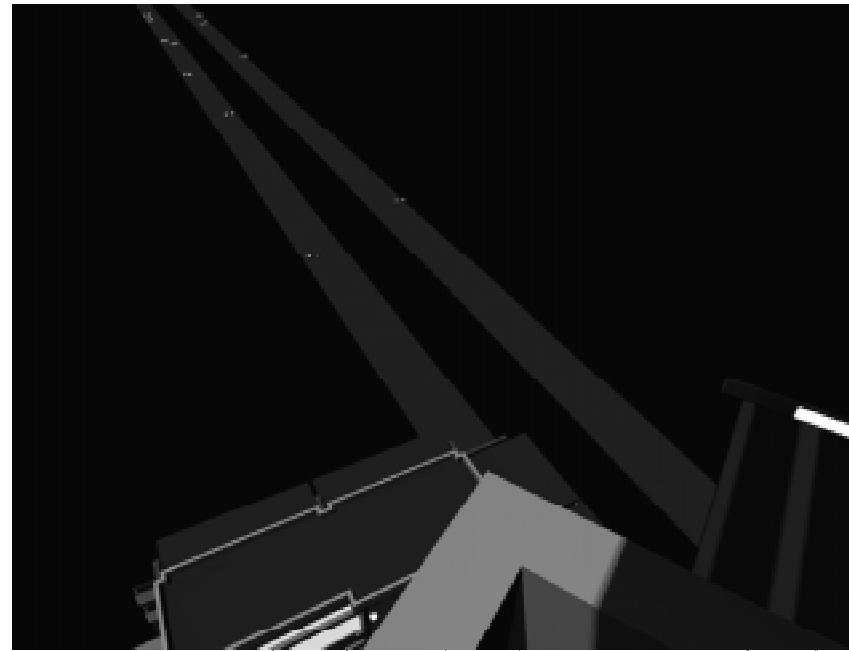


Apartment 504: apartment 4 on each level is completely accessible. View on left of living room from kitchen (bedroom is behind right wall). View on right of expressway from balcony.

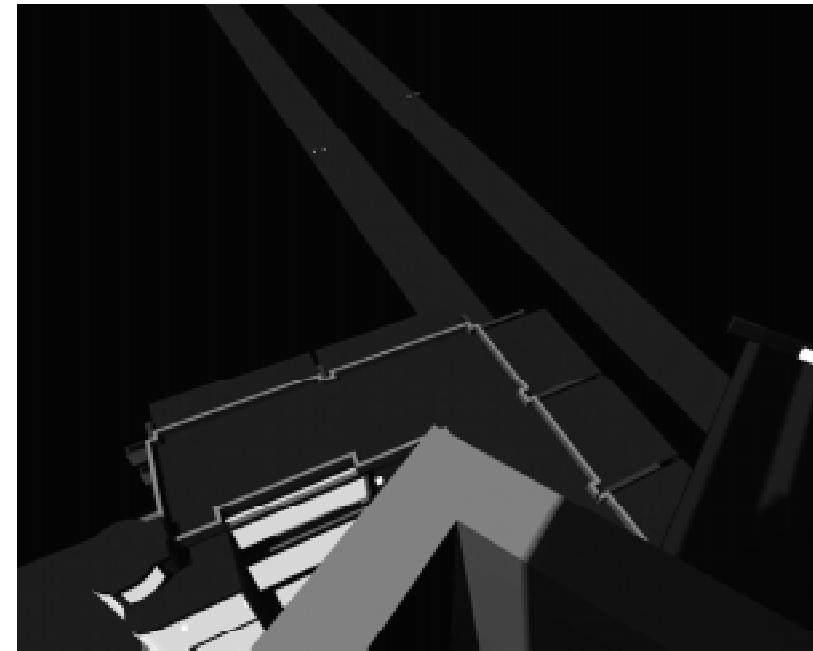


Apartment 505: two views from the same spot: watching HDTV (view towards kitchen and loft), or looking out the window to the expressway and mountains below. The loft is set back, over part of 504.

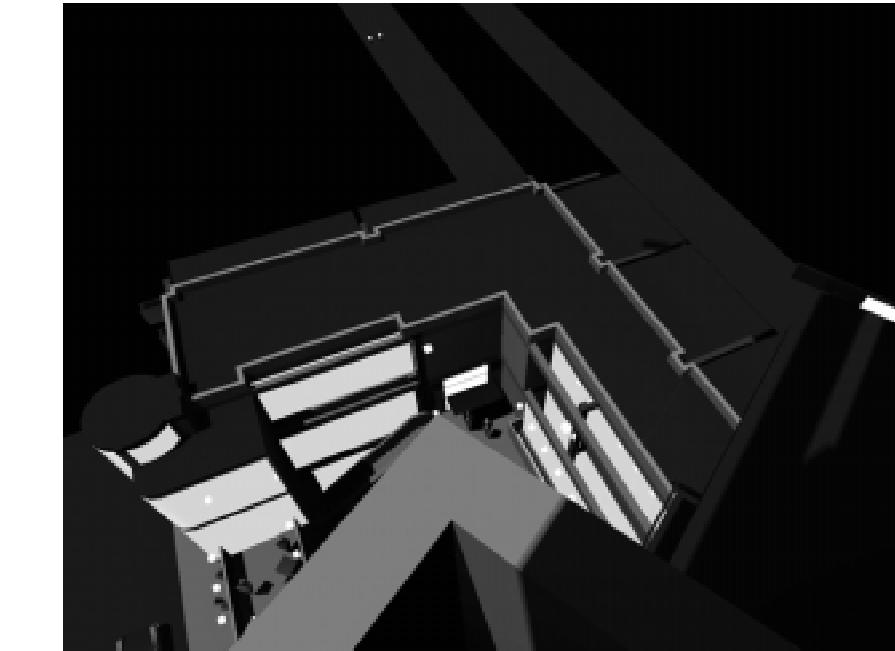
balcony views - southbound



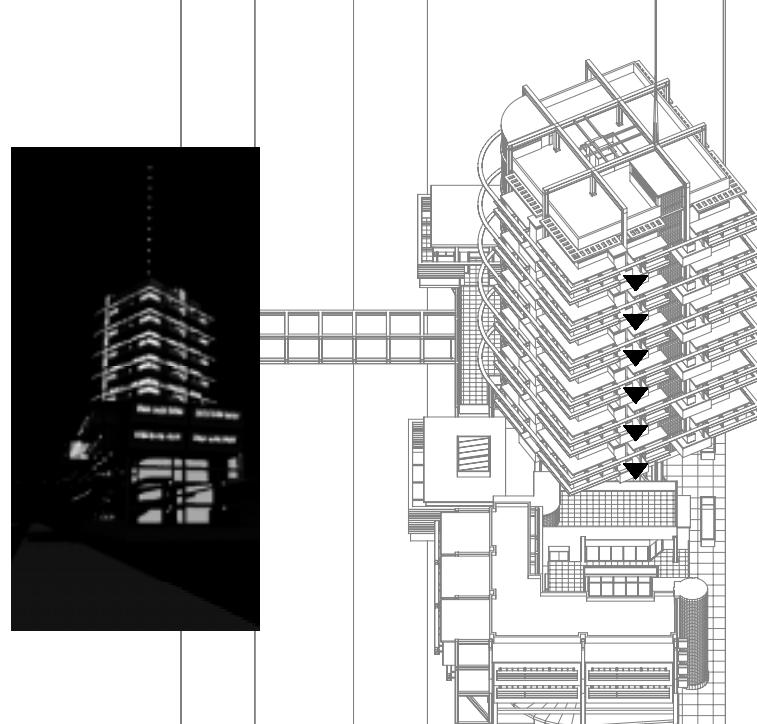
apt 602



apt 502

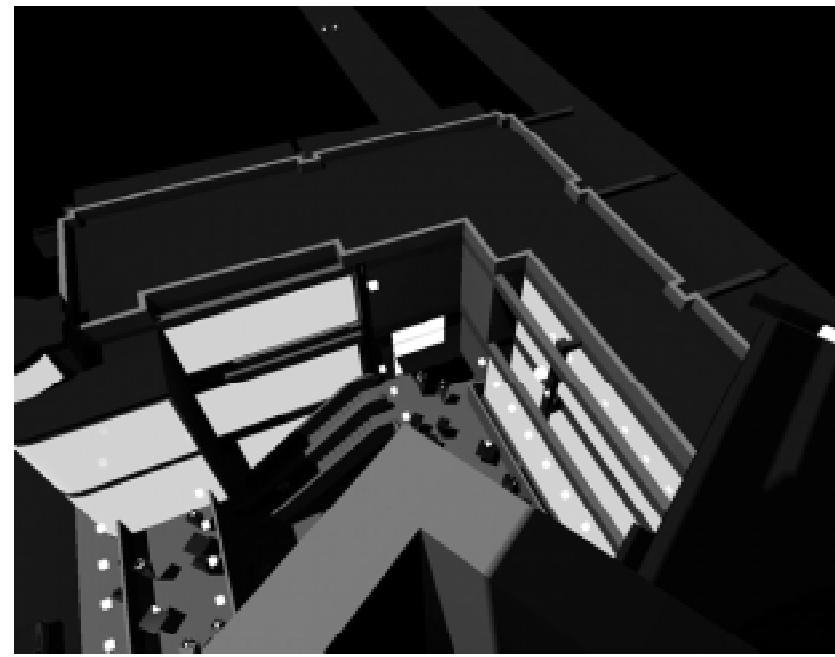


apt 402

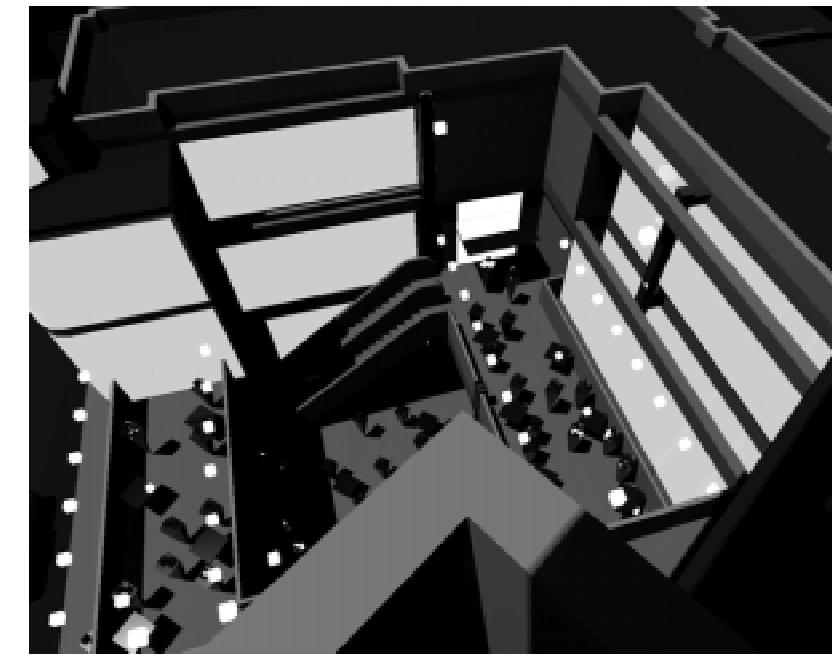


37

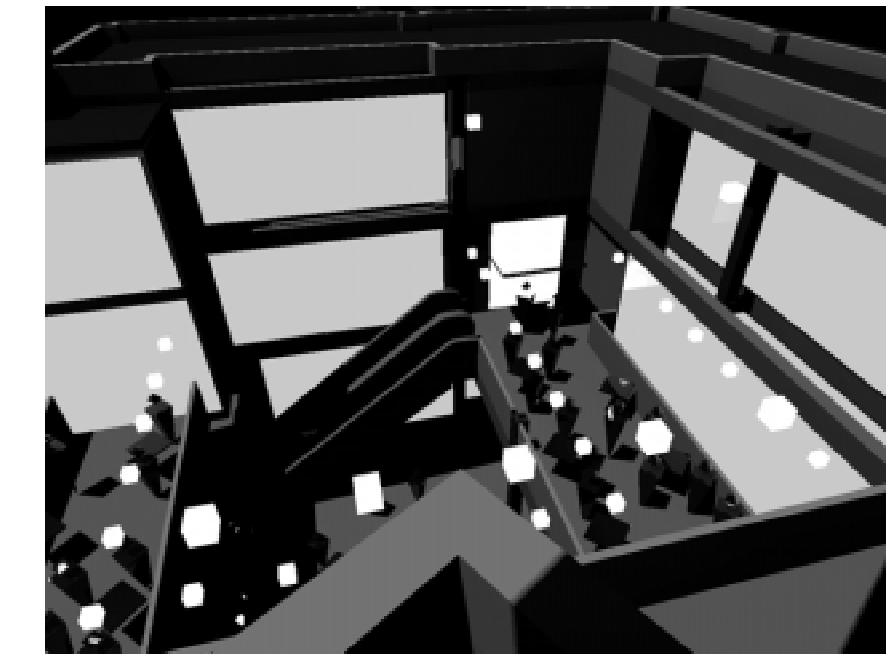
Viewed from the balconies of apartment 2 on each floor: the traffic from the southwest comes out of the dark; gradually the focus becomes the activity in the plaza restaurants at night.



apt 302

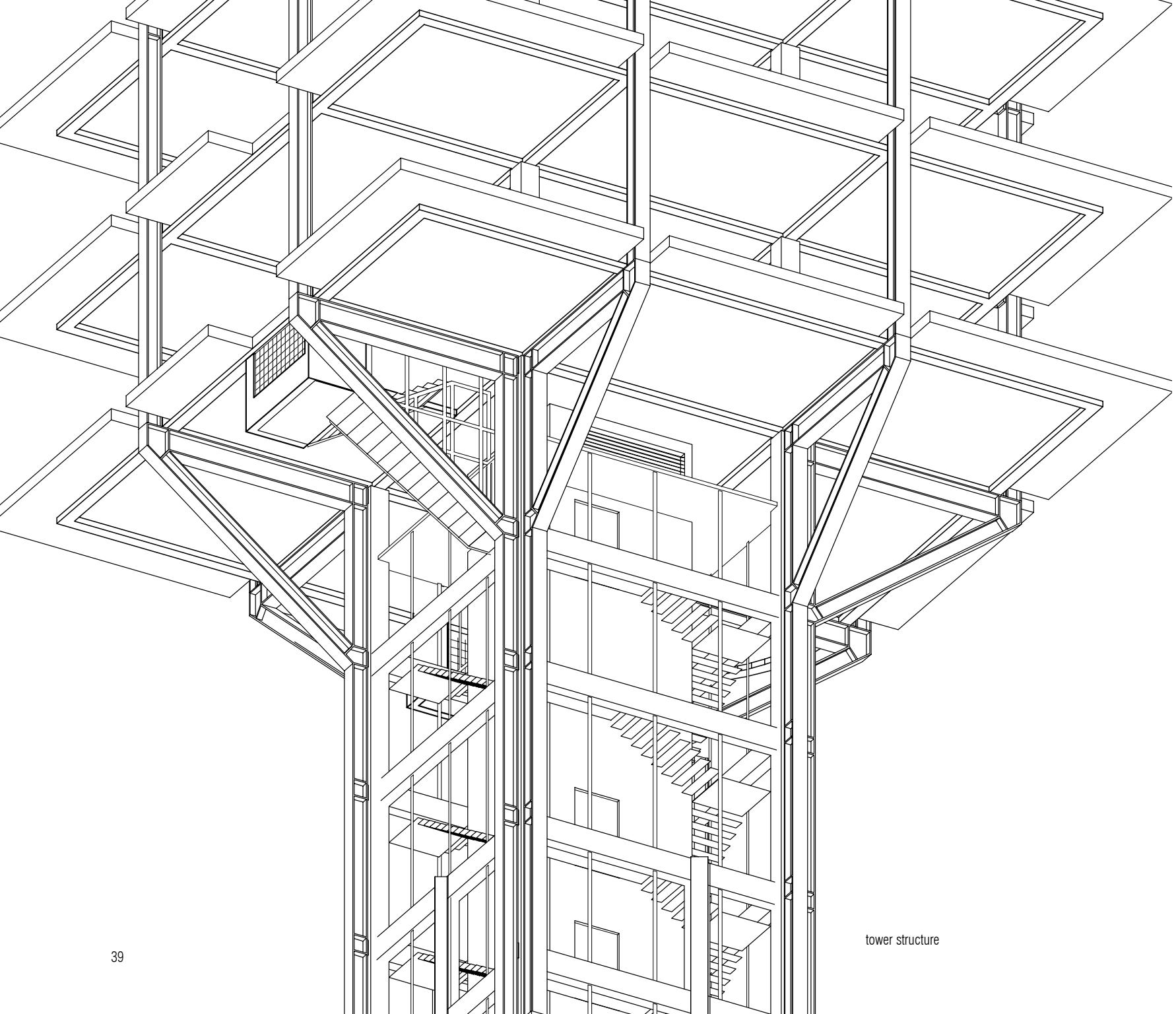


apt 202

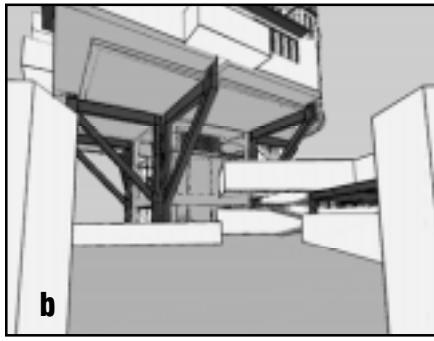
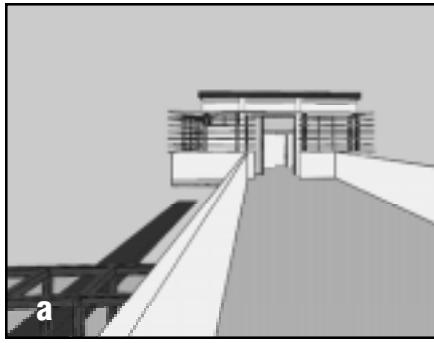


apt 102

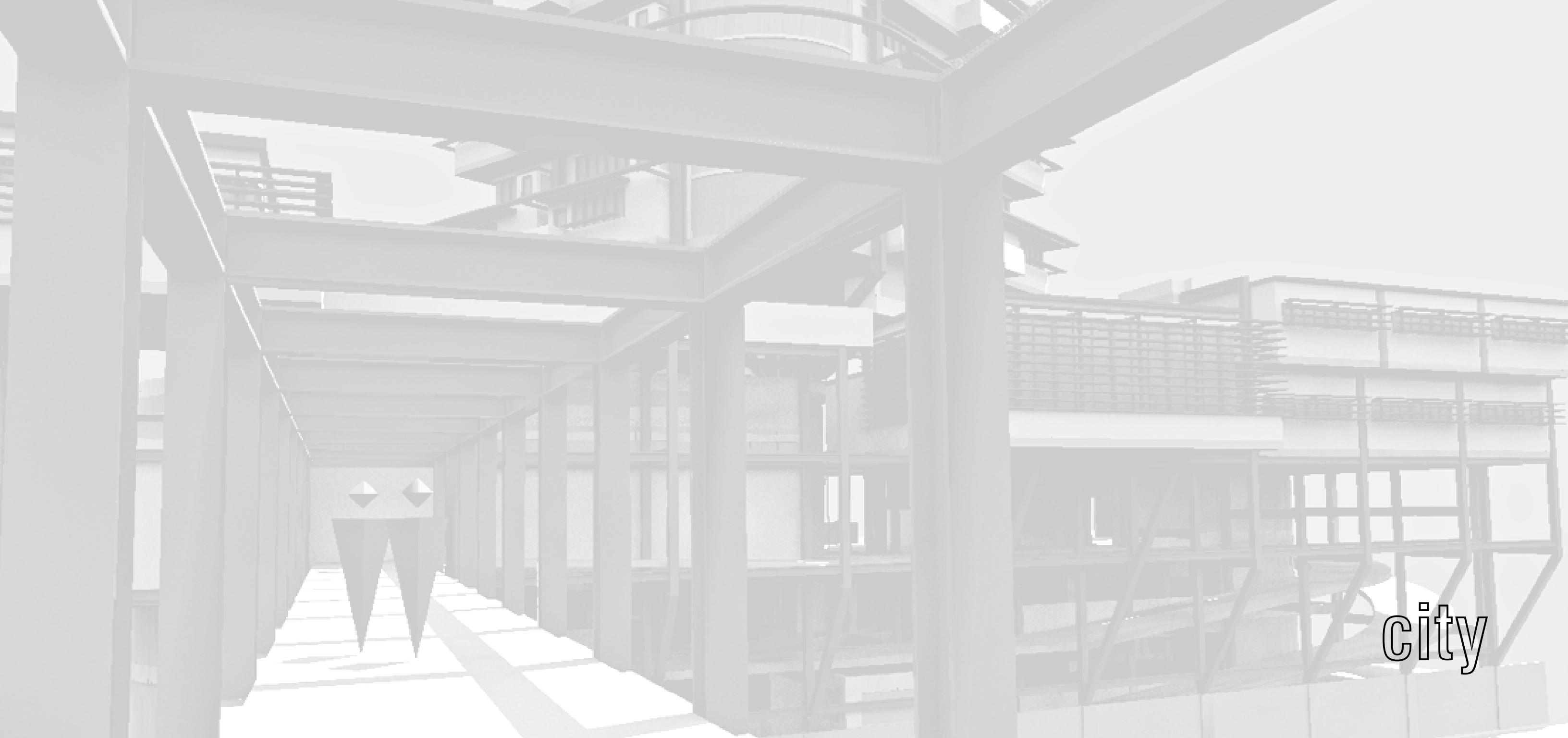
The resident has the option to remain in solitude, contemplating the night view, or participate in the activity below. ■ When night intervenes the passage of cars along the autostrada traces luminous tracks that are like the tails of meteors flashing across the summer heavens. ■ Le Corbusier



39

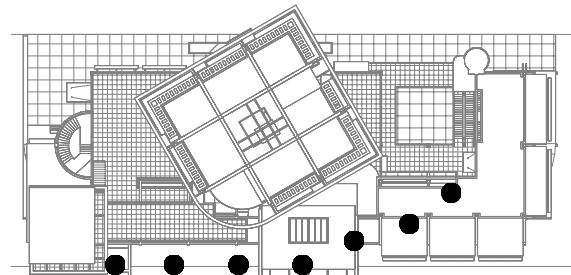
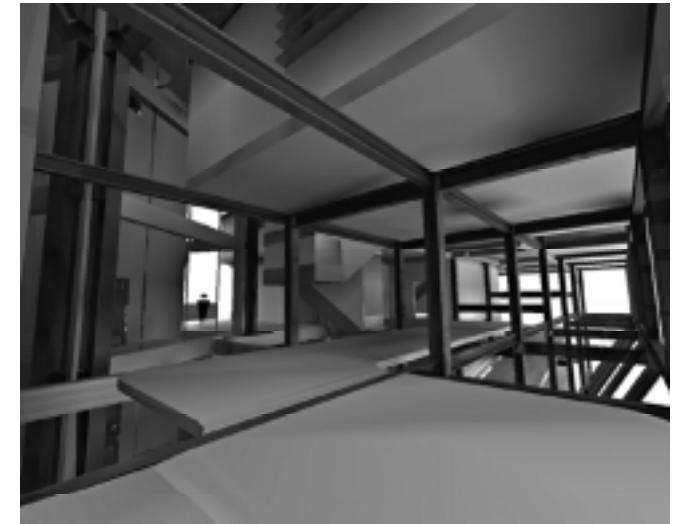
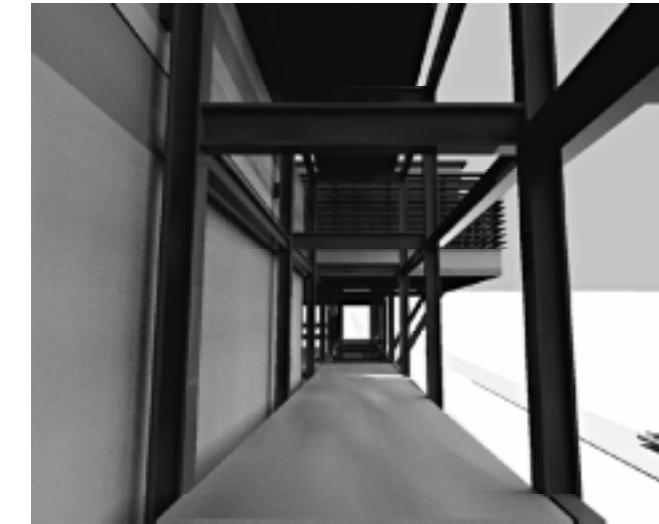
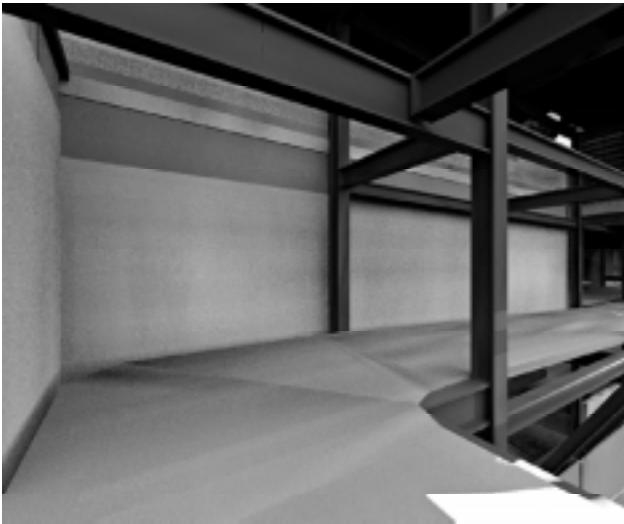
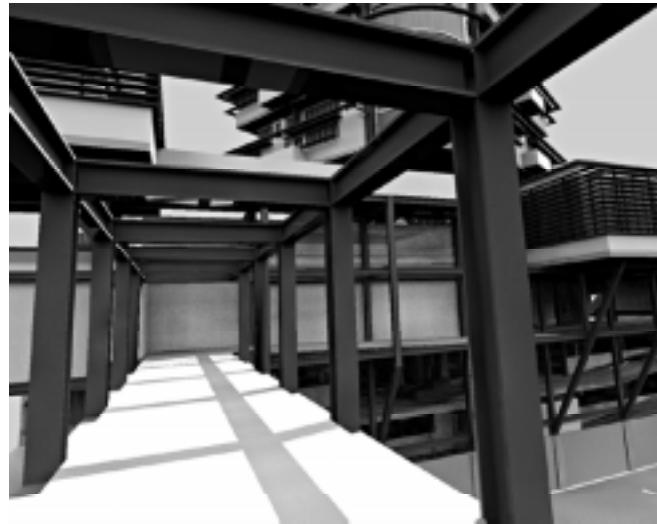


Residents of the tower can enjoy the the community center on the upper deck which cantilevers over the expressway **(a)** and the private roof garden on top of the shopping area **(b)**.

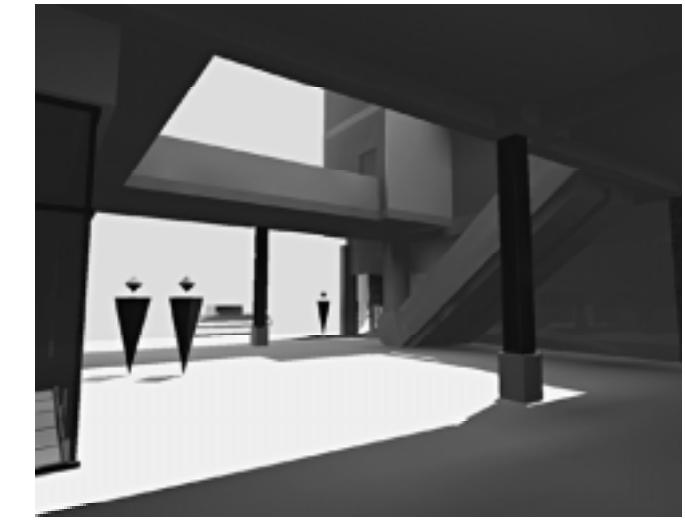
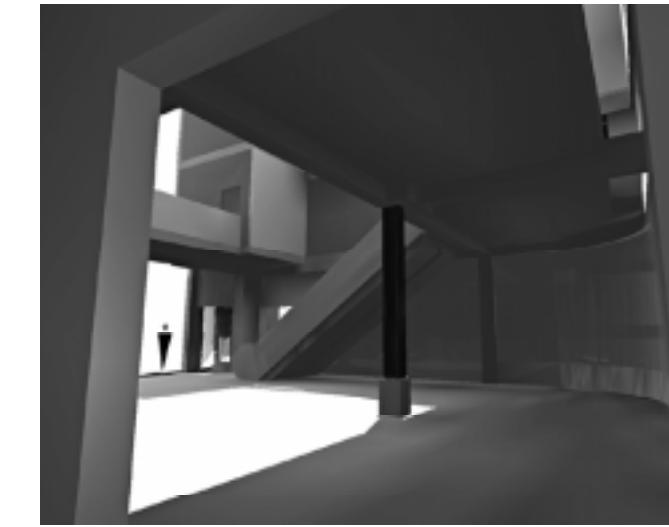
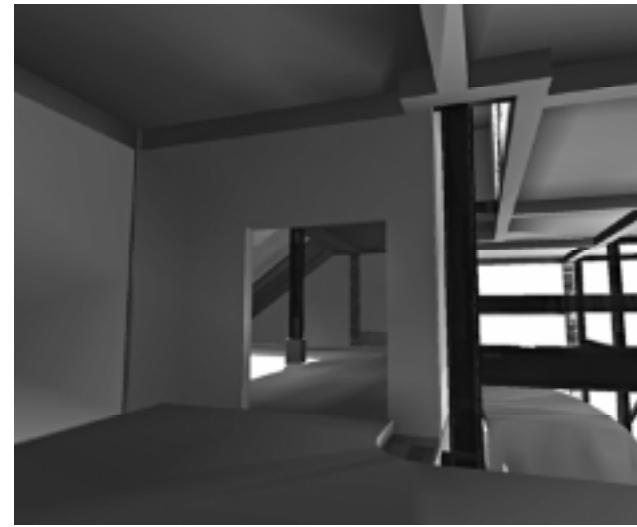
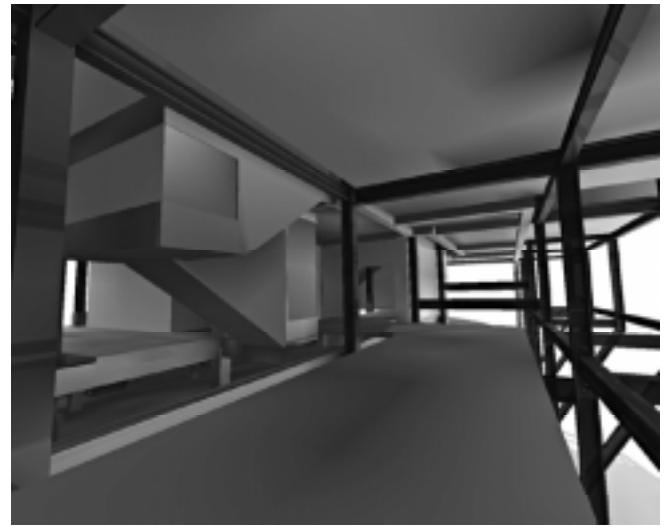


city

bike path

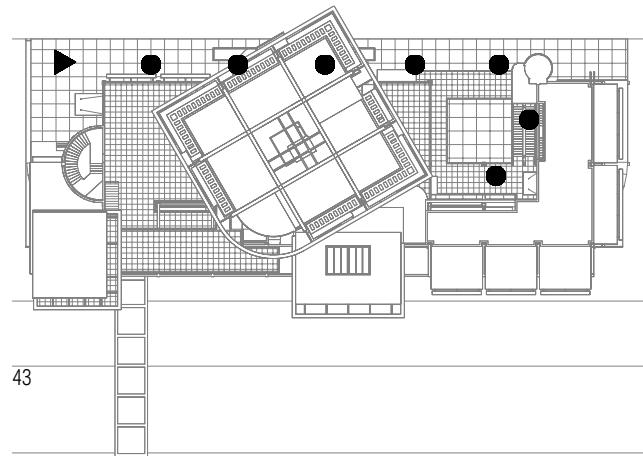
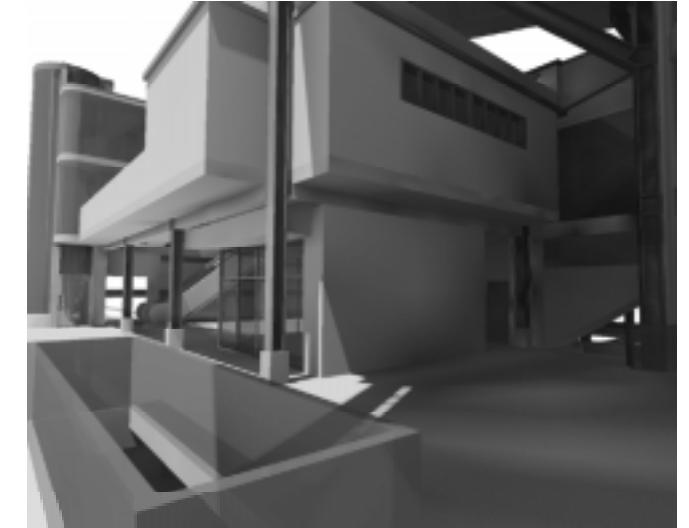
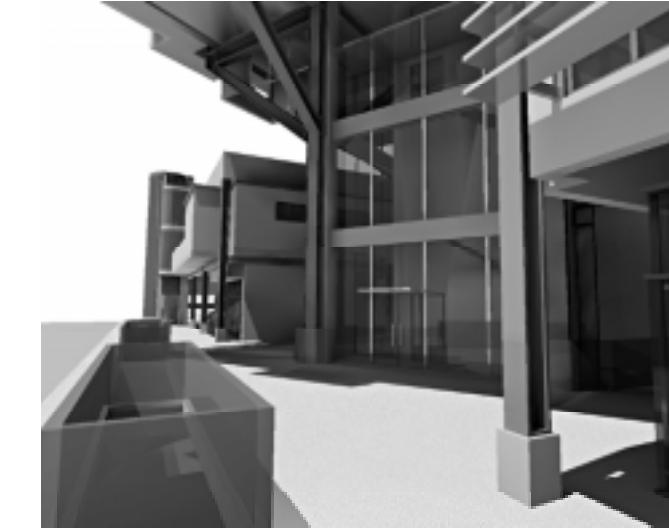
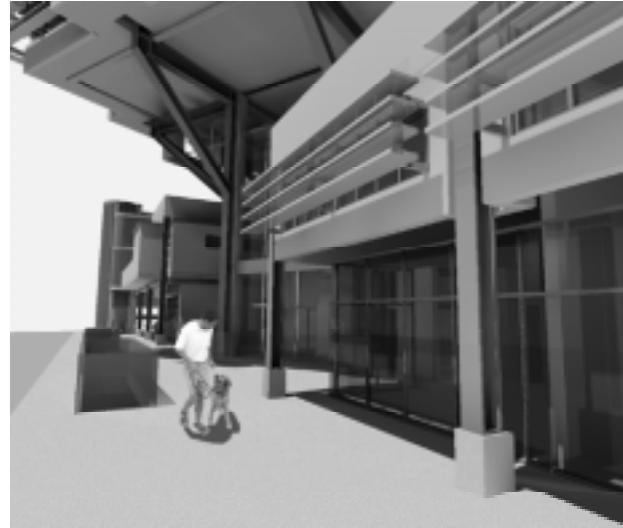


The structure is experienced 5 ways: standing still, passing through on foot, bike, or car; or speeding by it on the expressway. Along the bike path, one passes through the bridge and over the expressway, through the steelwork, finally passing through a doorway into the plaza.

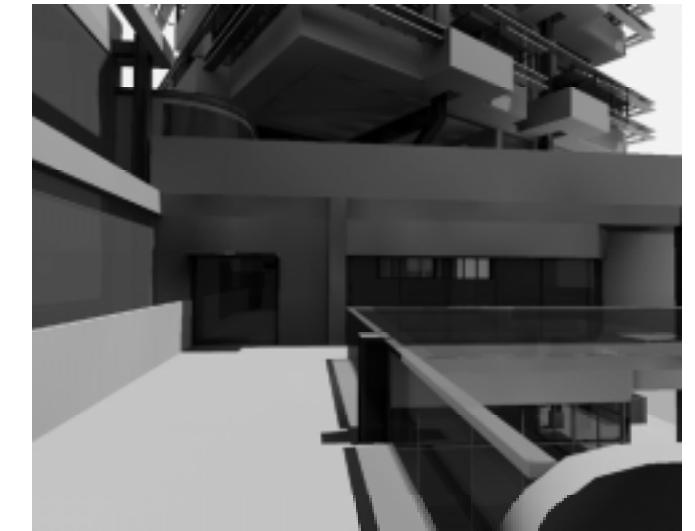
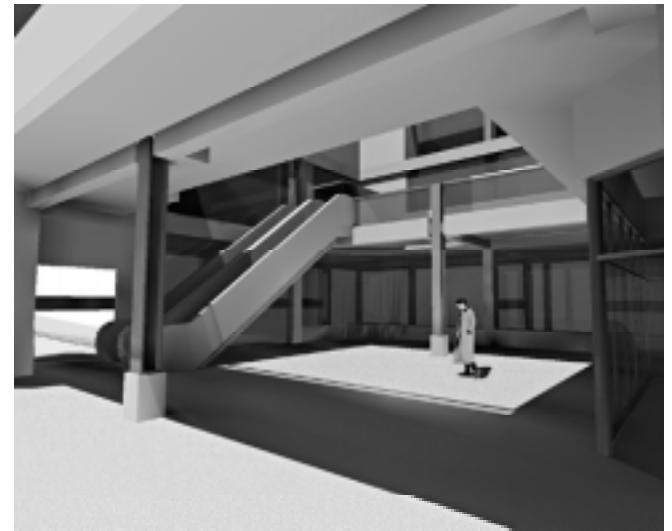


Architecture has to be walked, travelled and is not...a graphic illusion organized around a central figure...Armed with his two eyes, and facing forwards, our man walks about, going about his business, taking notice of the succession of architectural events as they unfurl one by one. ■ Le Corbusier

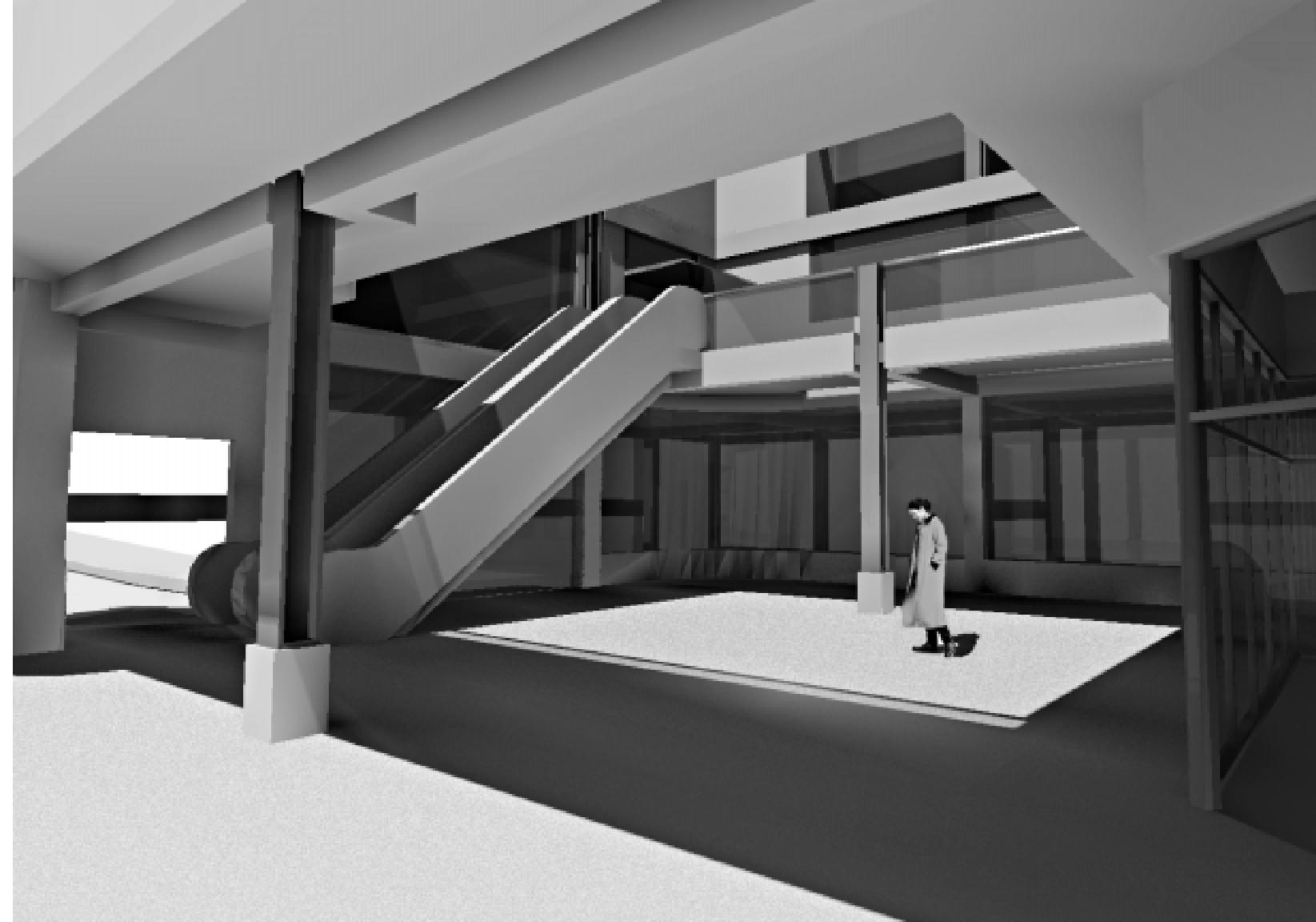
sidewalk



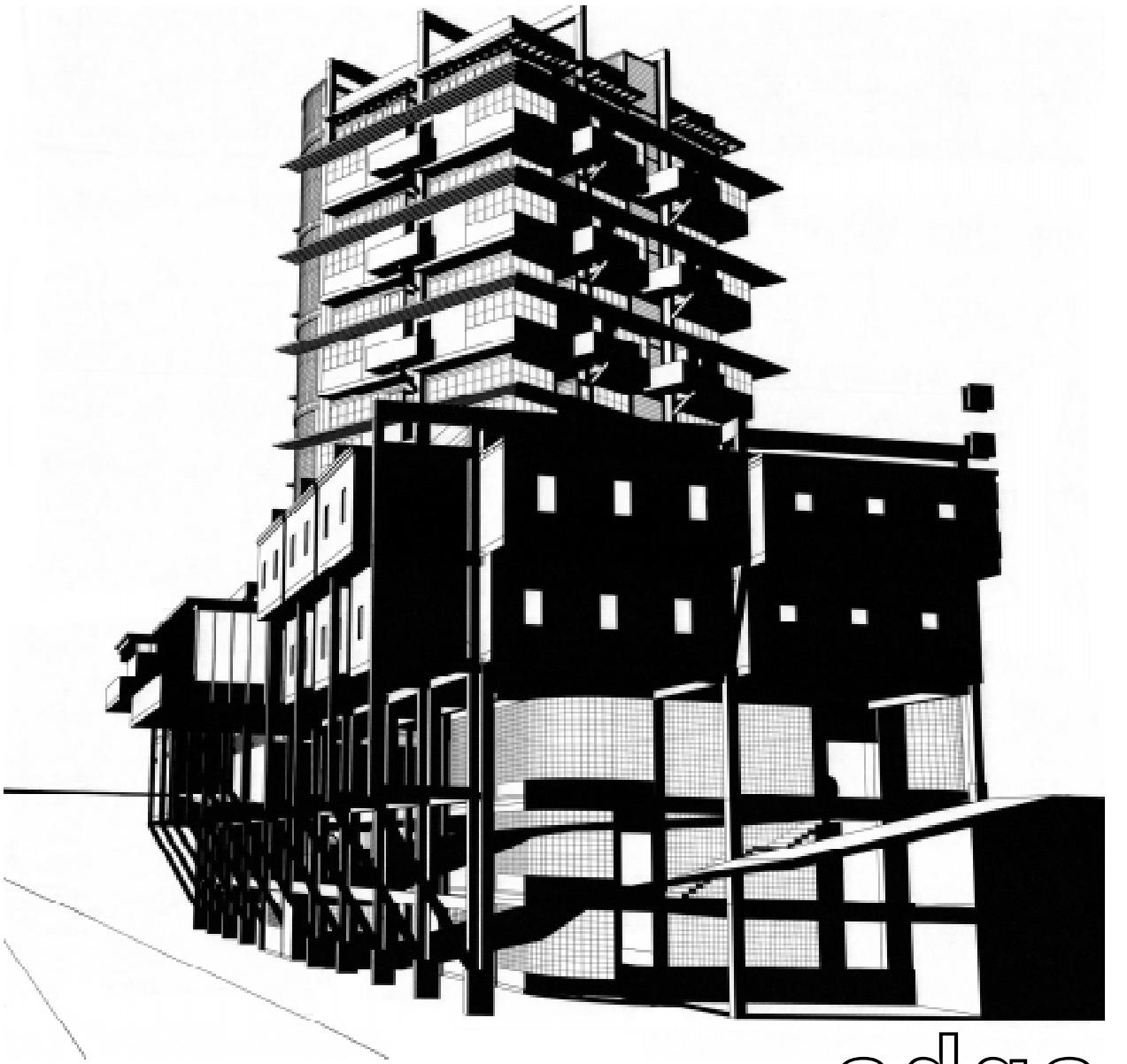
The stores and offices share the same materials and structure and fall within the grid established by the parking garage below. This grid, more evident along the expressway side, is implicit along the sidewalk, as elements



arranged in a variety of ways pass by the pedestrian. The tower entrance and the canopy of its larger mass provide an “exception to the rule” which governs placement of structure, and further adds to the sense of shelter.

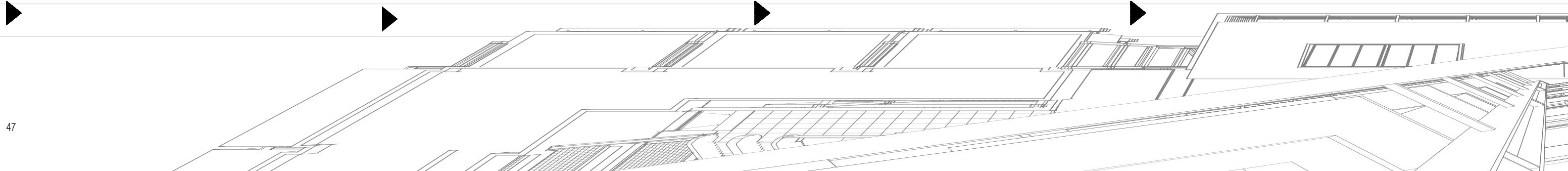
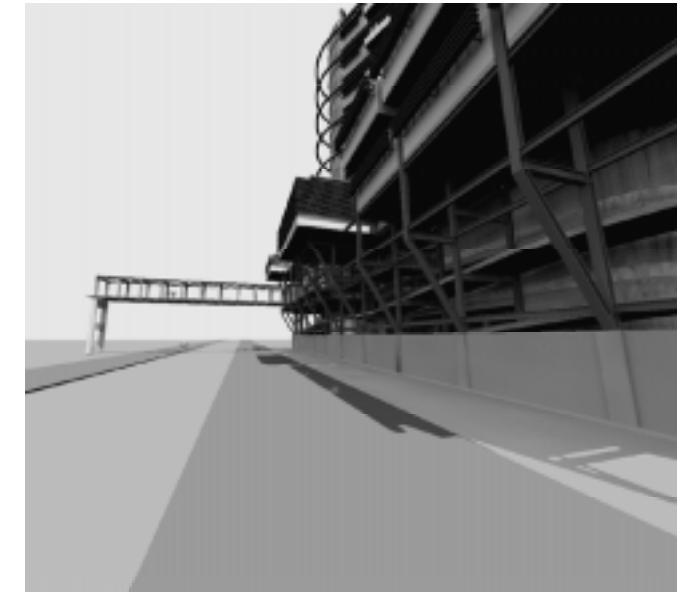
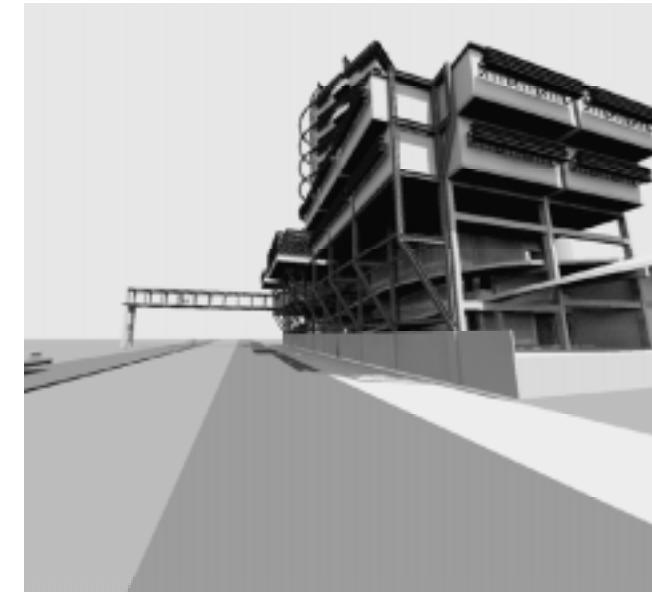
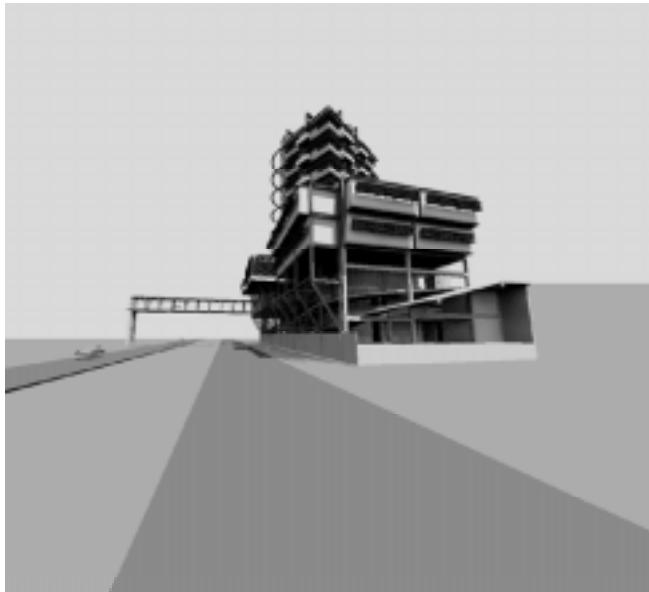
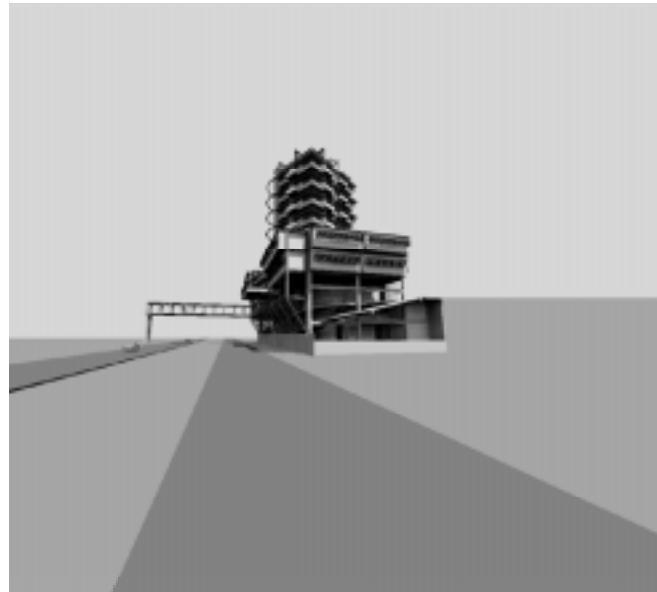


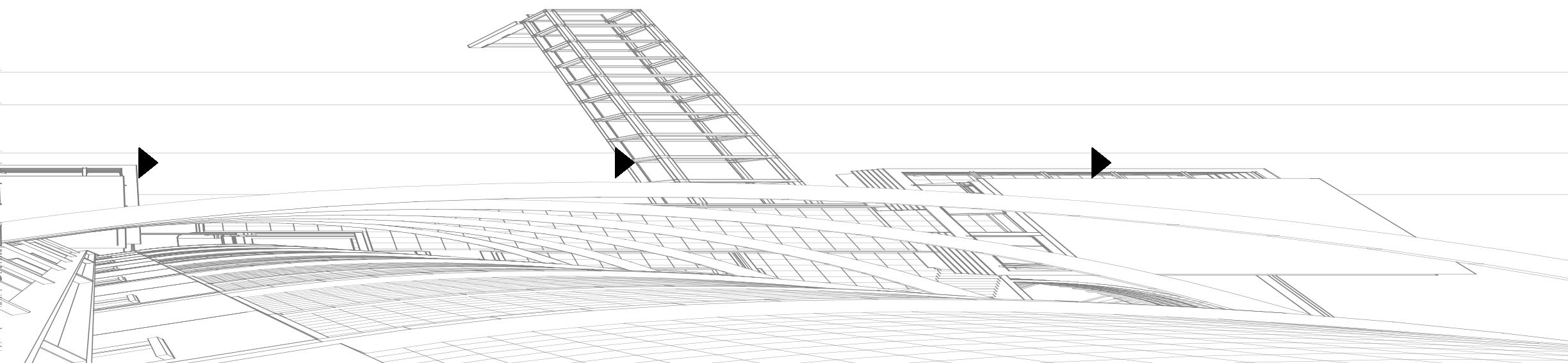
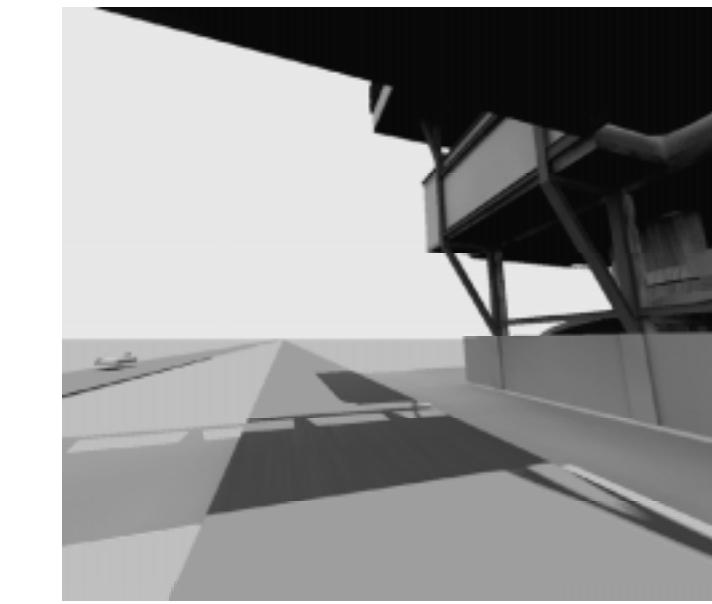
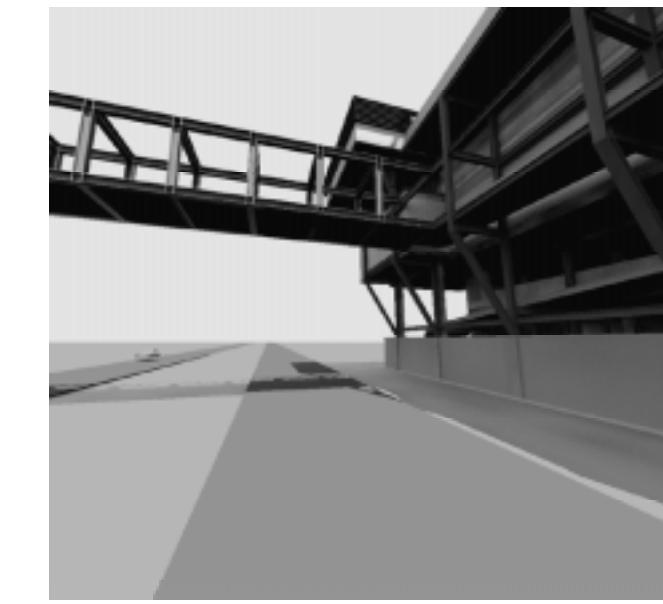
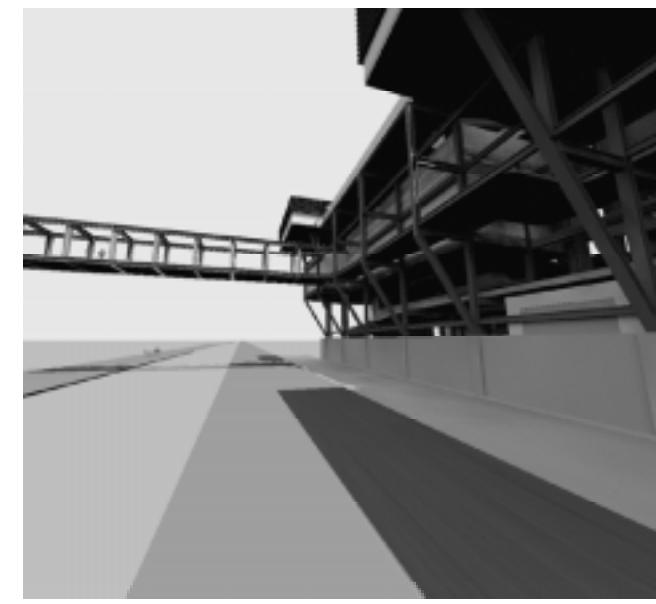
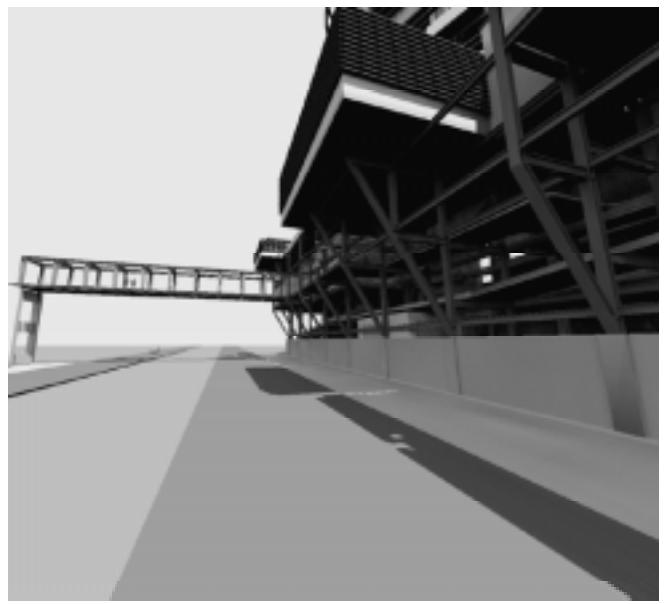
view of plaza from sidewalk



edge

expressway

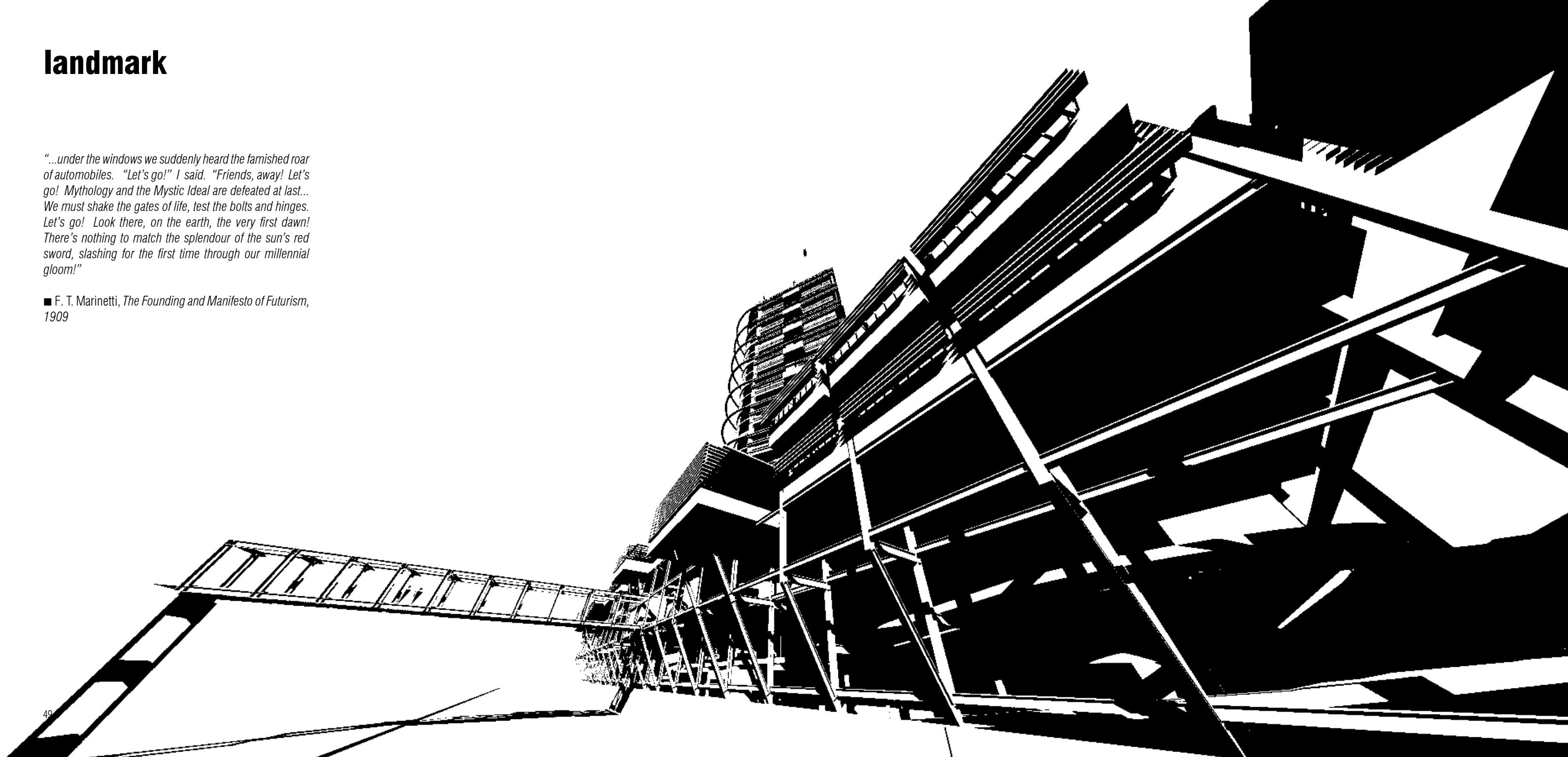


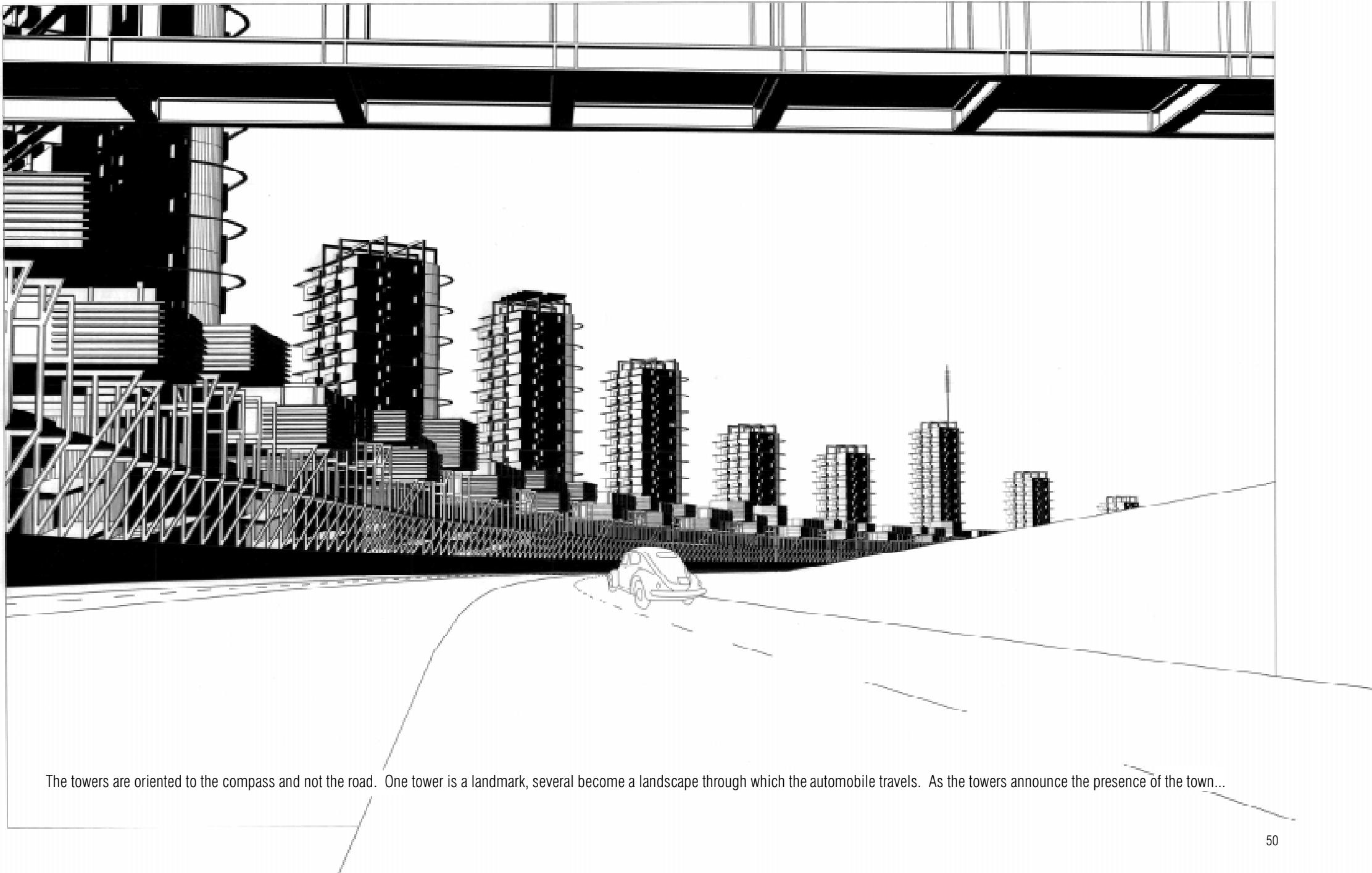


landmark

"...under the windows we suddenly heard the famished roar of automobiles. "Let's go!" I said. "Friends, away! Let's go! Mythology and the Mystic Ideal are defeated at last... We must shake the gates of life, test the bolts and hinges. Let's go! Look there, on the earth, the very first dawn! There's nothing to match the splendour of the sun's red sword, slashing for the first time through our millennial gloom!"

■ F. T. Marinetti, *The Founding and Manifesto of Futurism*,
1909





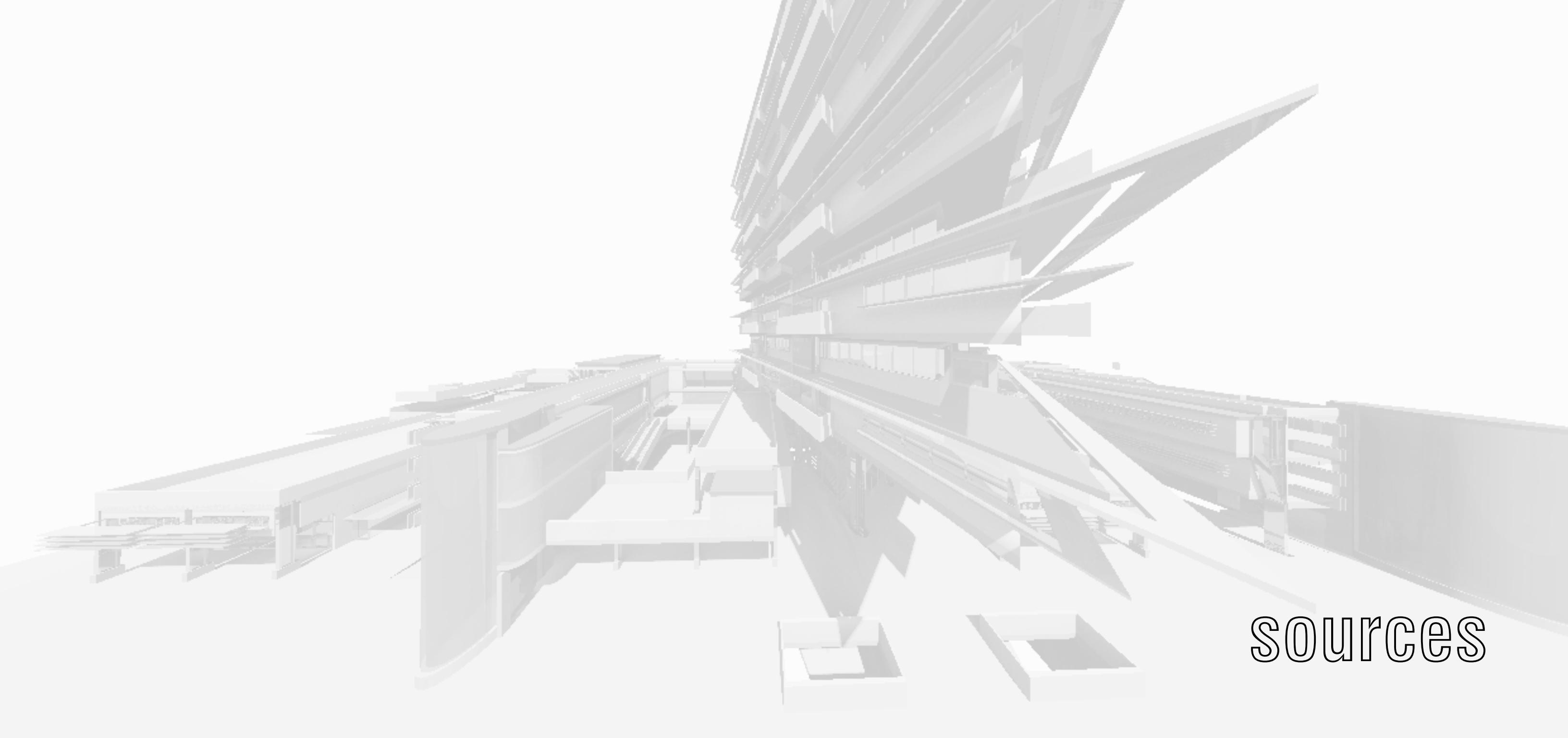
The towers are oriented to the compass and not the road. One tower is a landmark, several become a landscape through which the automobile travels. As the towers announce the presence of the town...



...so do they announce the presence of the road to those in the town.

The impact of several similar towers beyond the prototype development bears some consideration. The expressway experience may be enhanced by the repeating of several towers: their profiles responding to the sun, not the road, making them more an element of landscape than one of experience. However, this condition can only be as a result of other factors which make the additions desirable.

Too often modern buildings are best viewed at a distance, without knowledge of the context they create for their inhabitants. The success of this development depends on the extent to which it becomes a place – how well it combines the unique site of the “city” condition with the dynamic force of the expressway “edge.”



sources



abandoned rocket ride along Highway 8, Michigan

If you know what a thing will look like fifty years from now, you can do it now. But you don't know, because the way that a thing will be fifty years from now is what it will be.

There are certain natures which will always be true. What a thing will look like will not be the same, but that which it is answering will be the same. It is a world within a world: that is what it will always be.

■ Louis Kahn

Quotes

Pages 1-2

On the Road, Jack Kerouac. New York: Penguin Books, 1957, p. 119.

Page 5

Edge City - Life on the New Frontier, Joel Garreau. New York: Doubleday, 1991, p. 4.

Page 28

Metabolism in Architecture, Kisho Kurakawa. London: Studio Vista, 1977, p. 82.

Page 38

Le Corbusier et Pierre Jeanneret - Oeuvre Complete 1910-1929, 8th ed., Le Corbusier. Zurich: W. Boesiger and O. Stonorov, 1965, p. 119.

Page 42

Le Corbusier, 1943, from **Le Corbusier**, Jean Jenger. New York: Henry N. Abrams, Inc., Publishers, 1993, p. 129.

Page 49

"The Founding and Manifesto of Futurism 1909," by F. T. Marinetti from **Futurist Manifestos**, Umbro Apollonio. New York: Viking Press, 1970, p. 20.

Page 53

Conversations with Students, Louis Kahn, 2nd. ed. Houston: Rice University Press, 1998, p. 38.

Other Sources

Le Corbusier, **Creation is a Patient Search**, James Palmes, trans. New York: Frederick A. Praeger, 1960.

Le Corbusier, **Towards a New Architecture**. New York: Dover Publishers, 1986.

Esther da Costa Meyer, **The Work of Antonio Sant'Elia - Retreat to the Future**. New Haven: Yale University Press, 1995.

David Gebhard, **Schindler**. San Francisco: William Stout Publishers, 1997.

Herman Hertzberger, **Lessons for Students in Architecture**. Rotterdam: Uitgeverij 010 Publishers.

Sarah Hopkins, ed., **Iakov Chernikhov Architecture of Fantasy**. London: The Architecture Foundation, 1993.

Erich Mendelsohn, **Complete Works of the Architect**, Antje Fritsch, trans. New York: Princeton Architectural Press, 1992.

Irena Zantovska Murray, ed., **Moshe Safdie Buildings and Projects 1967-1992**. Montreal: McGill-Queen's University Press, 1996.

Frank Lloyd Wright, **The Living City**. New York: Horizon Press, 1958.

Nelson Wright, **Tomorrow's House - How to Plan Your Post-War Home Now**. New York: Simon and Schuster, 1945.

Franco Borsi, **Architecture and Utopia**. Paris: Editions Hazan, 1997.

Robert McCarter, ed., **Pamphlet Architecture #12: Building Machines**. New York: Princeton University Press, 1987.

Andreas Papdakis, ed., **New Architecture 1: Reaching for the Future**. United Kingdom: Andreas Papdakis Publishers, 1997.

Martin Pawley, **Terminal Architecture**. London: Reaktion Books Ltd., 1998.

Bernard Tschumi, **Architecture and Disjunction**. Cambridge: The MIT Press, 1996.

Sheila De Vallée, **Architecture for the Future**. Paris: Editions Peirre Terrail, 1996.

Jean Baudrillard, **America**. London: Verso, 1989.

Christophe Canto and Odile Falgu, **The History of the Future - Images of the 21st Century**, Francis Cowper, trans. Paris: Flammarion, 1993.

Joseph Corn and Brian Horrigan; Katherine Chambers, ed., **Yesterday's Tommors - Past Visions of the American Future**. Baltimore: Johns Hopkins University Press, 1984.

David Gelernter, 1939 - **The Lost World of the Fair**. New York: The Free Press, 1995.

Lawrence Halprin, **Freeways**. New York: Reinhold Publishing Corporation, 1966.

Erich Mendelsohn, **Amerika**. New York: Da Capo Press, 1976.

Neil Postman, **Technopoly, The Surrender of Culture to Technology**, New York: Alfred A. Knopf, 1992.

William Irwin Thompson, **The American Replacement of Nature**. New York: Doubleday, 1991.

Mildred Friedman, ed., **De Stijl: 1917-1931 – Visions of Utopia**. New York: Abbeville Press, 1982.

Max Gallo, **The Poster in History**. New York: McGraw-Hill, 1974.

Wieland Schmied, **Edward Hopper - Portraits of America**. New York: Prestel-Verlag, 1995.

Charles Sheeler. Washington, DC: Smithsonian Institution Press, 1968.

Ben Bova, **Welcome to Moonbase**. New York: Ballantine Books, 1987.

Ernest Callenbach, **Ecotopia**. New York: Bantam Books, 1975.

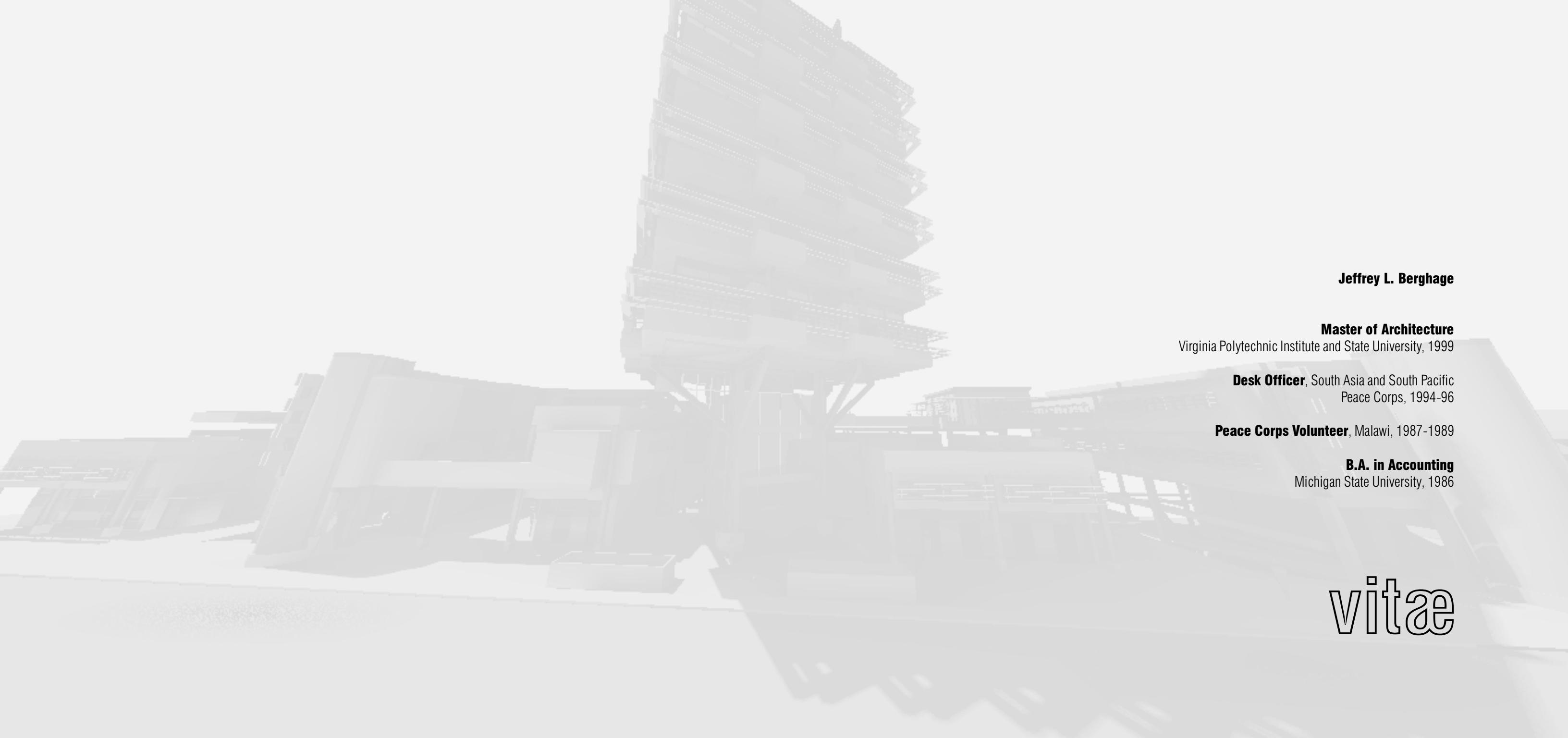
Ben Elton, **This Other Eden**. New York: Pocket Books: 1993.

Steven Millhauser, **The Barnum Museum**. New York: The Poseidon Press, 1990.

Steven Millhauser, **Martin Dressler - The Tale of an American Dreamer**. New York: Random House, 1996.

Jules Verne, **Paris in the Twentieth Century**. New York: Ballantine Books, 1996.

H. G. Wells, **The Time Machine**. New York: Random House, 1931.



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