

# THE NORTH-EAST

# **CREATING A CENTER IN EDGE DEVELOPMENT**

**CREATING A NEW TOWN CENTER TO COMBAT URBAN SPRAWL**

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**DEPARTMENT OF ARCHITECTURE AND PLANNING  
BALL STATE UNIVERSITY  
BACHELOR OF ARCHITECTURE DEGREE PROGRAM  
2003**

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## A C K N O W L E D G E M E N T S

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# I N T R O D U C T I O N

Originally, the traditional American city was laid out on a Cartesian grid as an easy way of organizing the town. At the center was the town center, the heart of the town that was used as a social meeting place and as the symbol of power within the town. As time has evolved, though, urban sprawl has taken its toll on these towns and cities, turning them into many different communities that have bled together. Although cities used to have centers within their peripheries, now there are only centers and peripheries. The edge of cities expands out without any relation to the original nucleus of the city, making the core a reference point that contains no content, movement, or energy. The edge, on the other hand, is a flexible area that constantly changes its identity, and grows and expands without relation to the center of the town.

Without a center to grow from, the edge of the city has become an inconsistent area of sprawling regions that lend little support or identity to the inner city. The edge of every city now looks the same, with sprawling buildings that have no relation to the context or to each other. The idea of community has been completely ignored with every building becoming a billboard to itself, and as a giant advertisement to its parent company.

Even the new residential settlements, called "subdivisions" invoke the word division in them. Not only are these residential areas divided from the rest of the city by setting themselves outside of the city limits, but each sub-

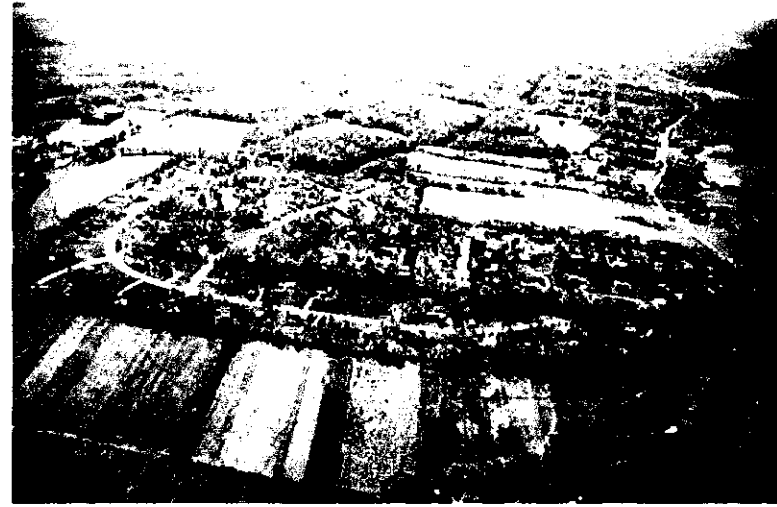
division is independent from all other subdivisions, with no connections made to adjacent subdivisions. The subdivision becomes a winding maze, ending in cul-de-sacs and forcing travelers to return the way they came. Even the houses within the sub-division have little connection to each other or to their surroundings, but are mostly brick boxes placed along winding roads without sidewalks or any other pedestrian concerns.

Also, another new trend in the growth of the city has been the idea of New Urbanism. New Urbanism has been a new planning and architectural movement that started in the late 1980s and has been gaining much attention from such developments as Seaside, Florida, and the new Disney development known as Celebration, Florida. The major ideas behind New Urbanism has been making new developments more pedestrian friendly and less car oriented, and by creating more unified looking areas with ordinances controlling the image of the businesses and the residential areas that make up these areas. While New Urbanism has helped with the creation of new communities, it really hasn't helped in fixing already existing cities. These New Urbanism developments seem to be more elitist communities for people that have the money, and they are separatist communities as well, usually being developed outside of the cities and thus becoming satellite areas that are in essence sprawl themselves. These new communities have been almost more detrimental to the urban fabric as well, and have done nothing to help with the current problems in cities; they ig-

nore it by becoming their own "perfectly" planned community away from the problems of the city. What is to be with the rest of the periphery, is it to just continue its random expansion outward and the rest of the cities problem?

Although I agree that the sprawling of cities cause many problems: congestion, traffic problems, the infrastructure, etc., I do believe that the outward spread of residential, commercial, and industrial developments is a permanent trend as long as there is space to develop. The sprawling of urban cities has become the latest trend and evolutionary step in the evolution of the habitat of man here in the United States. While there has been much focus on redeveloping and revitalizing downtown areas of cities, there should also be a focus on ways of organizing and planning for the urban sprawl that develops along the periphery of the cities. This thesis project deals with the latter.

By studying the idea of creating a permanent center to an edge region, I wanted to create a new rallying point that acts as the old center of the city once did. This nucleus was to act as a reference point for new buildings, by helping combat the urban sprawl that usually defines the edge, by being an area that brings citizens of all classes together, by being respectful to the environment around it, and by acting as a "gateway" into and out of the city.



A NEW SUBDIVISION IS LOCATED IN THE MIDDLE OF AN AGRICULTURAL BELT AND IS A COMPLETE SATELLITE.  
(FROM [www.cnu.org](http://www.cnu.org))



THE REPETITIOUS HOUSES WIND THROUGHOUT THE SUB-DIVISION, WITH NO RELATION TO EACH OTHER.  
(FROM [www.cnu.org](http://www.cnu.org))

## D E S C R I P T I O N

As the city expands out it creates a new edge region. This edge region usually consists of commercial areas, industrial parks, and new subdivisions for middle/upper class people. As these people take control of the prime agriculture land that surrounds the city, the less fortunate people inherit the inner city. The people who claim the verge slowly change it, ignoring the context of the inner city and the rural landscape that lie on either side of the periphery.

The project used to explore this topic is a mixed-use building along the edge of the northeast side of Evansville, Indiana, near the Lynch Road over-pass located on Interstate 164. This mixed-use building incorporates several different zones, containing commercial space and recreational areas along with housing for families with many children, single parents, students, and retired people. The idea of the different sized units was to create a diverse community within the building and by bringing a core of urban density to the sprawled area on the verge of Evansville. As the building fell in the transitional space between the urban fabric and the natural landscape, it was decided that the building should use environmental schemes to help with daylighting and energy conservation, and by virtue of being on the edge of the city, the building should act as a monument to the future of Evansville, and as a marker of the region where the edge of the city used to be.

The idea behind this multi-use building was to attempt to create a new center within this edge region. By bringing in a centralized core that brings an urban density to the area, it makes the building a social area from the number of people living, working and visiting there. The building also condenses the different elements of sprawl into one building creating a "vertical suburbia". This "vertical suburbia" is a focal point for the surrounding houses development, corporate businesses, and industrial parks that surround the area and becomes the monument, the billboard required to bring a unifying identity to the region.

The building has the responsibility of bringing different people of all classes together, creating a sense of identity within the fragmented sprawl, and creating a community within the edge region. In a sense, the building was to act as the old town-centers did in the original community before the sprawl, as a condensed social area for a new community within the disorganized suburbia that surrounds the city.



**P R O G R A M**

**The Program**

<b>I.</b>	<b>Atrium</b>	
1.0	Atrium	42,000 sq. ft.
<b>II.</b>	<b>Commercial Area</b>	
1.0	Large Stores	25,000 sq. ft.
1.1	Large Store: 5 @ 5,000 sq. ft.	25,000 sq. ft.
2.0	Small Stores	60,000 sq. ft.
2.1	Small Store: 25 @ 2,400 sq. ft.	60,000 sq. ft.
3.0	Restaurants	15,000 sq. ft.
3.1	Restaurant: 3 @ 5,000 sq. ft.	15,000 sq. ft.
4.0	Public Restrooms	4,000 sq. ft.
4.1	Toilets: 8 @ 500 sq. ft.	4,000 sq. ft.
<b>III.</b>	<b>Movie Theatre</b>	
1.0	Triplex Theatre	23,000 sq. ft.
<b>IV.</b>	<b>Public Recreational Area</b>	
1.0	Gym	30,000 sq. ft.
2.0	Locker Rooms	2,400 sq. ft.
2.1	Locker Rooms: 2 @ 1,200 sq. ft.	2,400 sq. ft.
3.0	Public Toilets	350 sq. ft.
<b>V.</b>	<b>Residential Area</b>	
1.0	Banquet/ Reception Hall	13,200 sq. ft.
1.1	Banquet/Reception Hall: 6 @ 2,200 sq. ft.	13,200 sq. ft.

2.0	Recreational Room	7000 sq. ft.
2.1	Seven Rec. Rooms @ 1000 sq. ft.	7000 sq. ft.
3.0	Large Indoor Park Area	6,600 sq. ft.
3.1	Three Large Indoor Park Areas @ 2,200 sq. ft.	6,600 sq. ft.
4.0	Small Indoor Park Area	3,000 sq. ft.
4.1	Three Small Indoor Park Areas @ 1000 sq. ft.	3,000 sq. ft.
5.0	Rooftop Community Area	22,600 sq. ft.
6.0	Storage	530 sq. ft.
7.0	Facility Administration Suite	850 sq. ft.
8.0	Service Area	1200 sq. ft.
9.0	4 Bedroom Apartment: 13 @ 4,500 sq. ft.	58,500 sq. ft.
10.0	3 Bedroom Apartment: 15 @ 2,750 sq. ft.	41,250 sq. ft.
11.0	2 Bedroom Apartment: 38 @ 2,400 sq. ft.	91,200 sq. ft.
12.0	1 Bedroom Apartment: 58 @ 1200 sq. ft.	69,600 sq. ft.
13.0	Net Area	517,280 sq. ft.
14.0	Grossage	258,640 sq. ft.
15.0	Mechanical Room	12,900 sq. ft.
16.0	Total Area	788,820 sq. ft.

**Site**

The site has parking, tennis courts, terraces, bus stops, and other outdoor recreational facilities.

# C O N T E X T

The site is located on Lynch Road near the Lynch Road over-pass on Interstate 164, which connects Evansville to Interstate 64, the major route between St. Louis and Louisville. To the north and east of the site is rural land, mostly devoted to agriculture. To the west of the site are new subdivisions, distribution warehouses, and U.S. 41, which connects to Terre Haute to the North, and Henderson Kentucky to the south. Directly west of the site along U.S. 41 is also where the Evansville Airport is located. To the south of the site is where most of the commercial sprawl is located, with most of the new commercial parks being built north along Burkhart Road, which connects Lynch Road and the Lloyd Expressway, a major east-west route through Evansville.

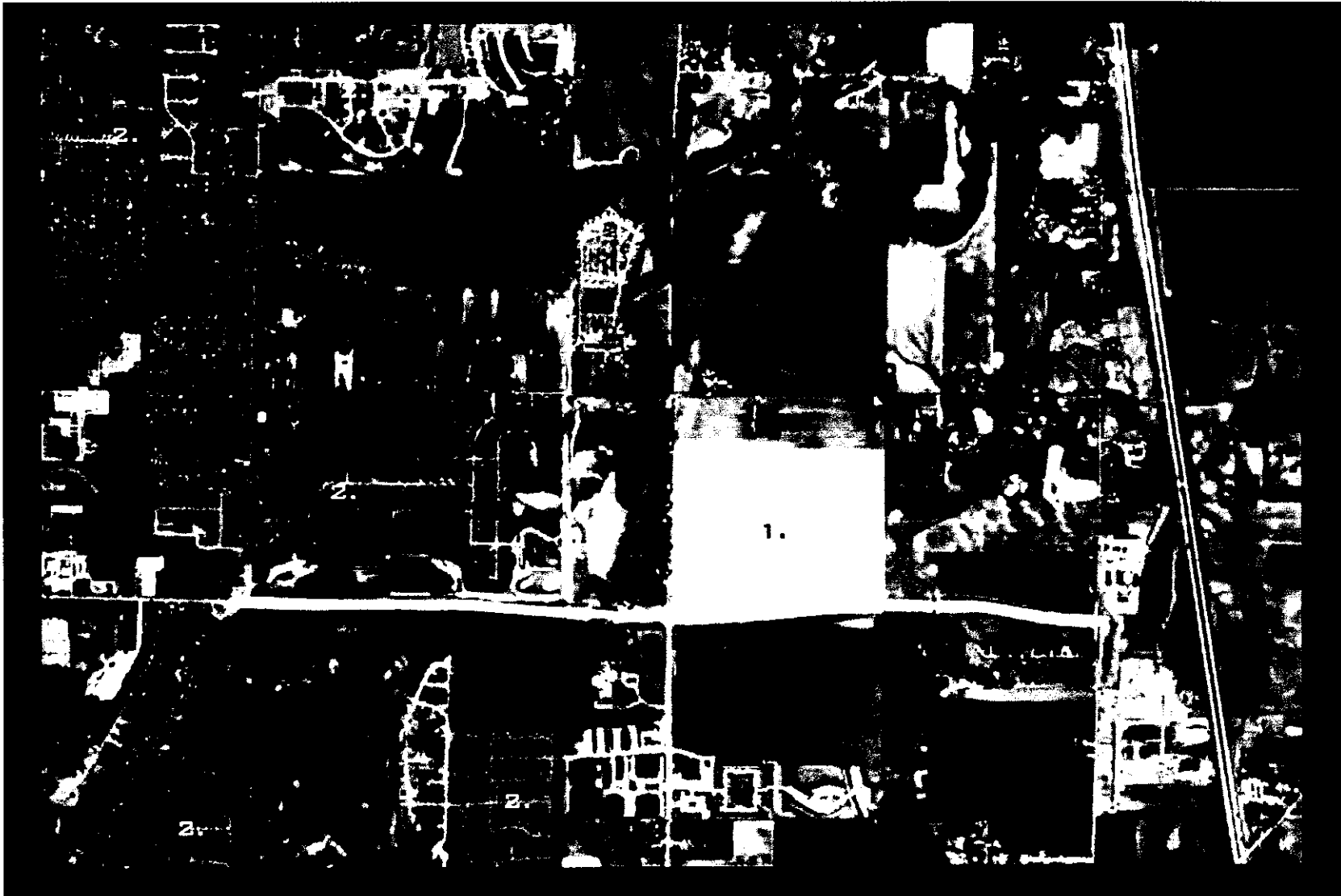
Architecturally speaking, the surrounding area is the typical Midwestern, jumbled vernacular consisting of subdivisions with brick-clad houses, the "big-box" architecture of Wal-Marts, and the giant metal-clad sheds of the distribution warehouses that surround the area. The only relation that the buildings in this area have is the use of materials, with no attention to style, position, etc.

The site is basically located at the present northeast corner of Evansville. The Lynch Road overpass is the first exit into and out of Evansville, making the site visible from Interstate 164. This has also been the area with the most development in recent years. The site was chosen because of this important location, and because of the responsibility that will come with the site. The building has the responsibility of becoming a nucleus for this area with all of the planned construction to be built around the new overpass. It also has the responsibility of creating a sense of pride to this new region of Evansville, and to provide a good example of design within the customary sprawl.



THE EVANSVILLE AIRPORT, LOCATED JUST WEST OF THE SITE, IS ANOTHER GATEWAY INTO THE CITY ALONG U.S. 41.

1. SITE
2. HOUSING DEVELOPMENTS
3. EVANSVILLE AIRPORT



THE SITE IS ABOUT A HALF MILE BY A HALF MILE. THE SITE IS SURROUNDED BY SCATTERED SUB-DIVISIONS, COMMERCIAL, AND INDUSTRIAL DEVELOPMENTS.

S I T E P H O T O S





1. VIEW TO NORTH OF THE AIRPORT
2. VIEW TO SOUTH OF THE AIRPORT
3. VIEW TO EAST OF THE AIRPORT
4. VIEW TO WEST OF THE AIRPORT (TO  
WARDS THE SITE)
5. SITE LOOKING WEST
6. SITE LOOKING NORTHEAST
7. SITE LOOKING SOUTHEAST

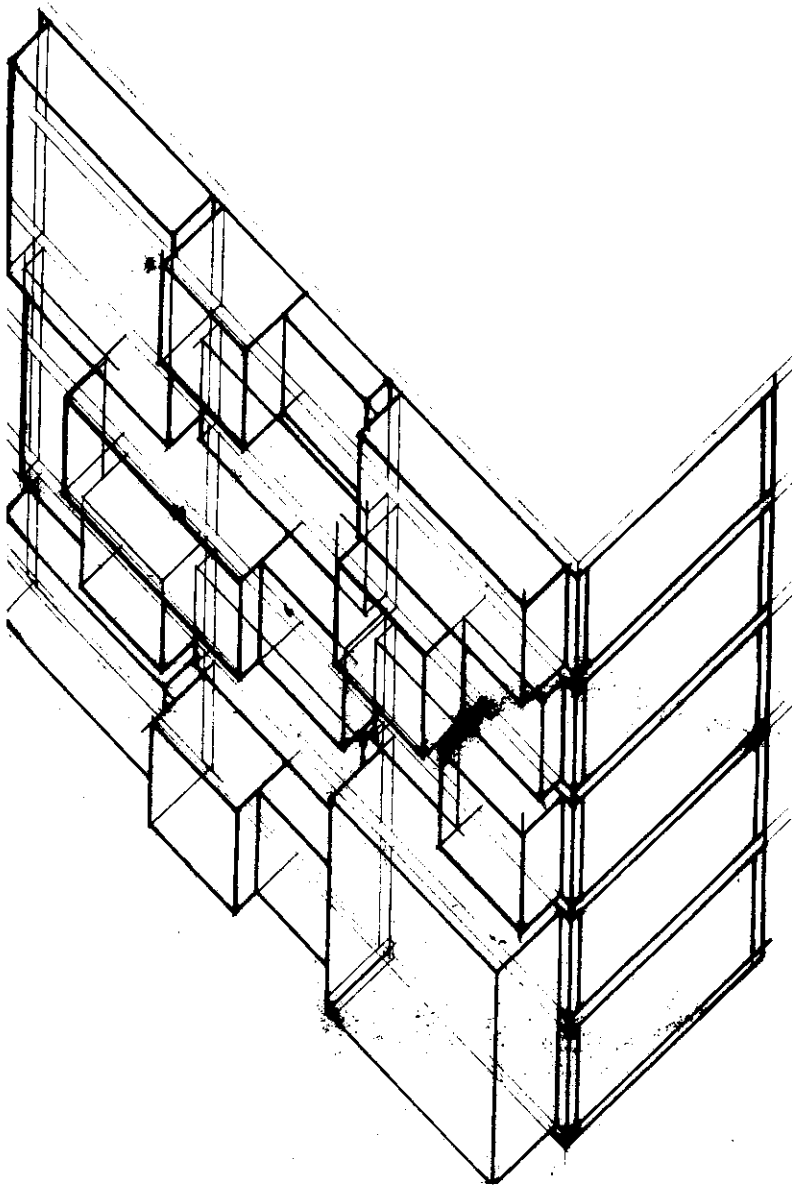
## D E S I G N   O B J E C T I V E S

The three major components of the building were the housing area that consisted of apartments for people to live in, a commercial area consisting of shops and restaurants, and recreational areas consisting of a gymnasium, tennis courts, and a movie theater. One major design objective was to integrate all of these components into one cohesive building that could become the social center of the independent subdivisions that have sprouted in this region. The major question I wished to answer with the design was how could I create a building that would engender the social interaction among the various groups of this area?

Another main focus dealt with the housing aspect of the building. The major objective with that was to create several different unit types to accommodate different numbers of inhabitants, and then clustering these units into "neighborhoods" so as to provide a sense of identity and affiliation. A third focus was to give the inhabitants their own sense of place within the building by differentiating the units from each other so that they could visually create their own sense of ownership.

A fourth design objectives dealt with the environment the building was to be placed in. The major design objective was to orient the building in an east-west orientation to maximize daylighting potential. This would also be in the correct orientation to address the edge region where the building would be located. And, finally, other design objectives dealt with linking the building to some of the surrounding sub-divisions, and addressing the agriculture belt that surround the city and this building, in particularly to its north.

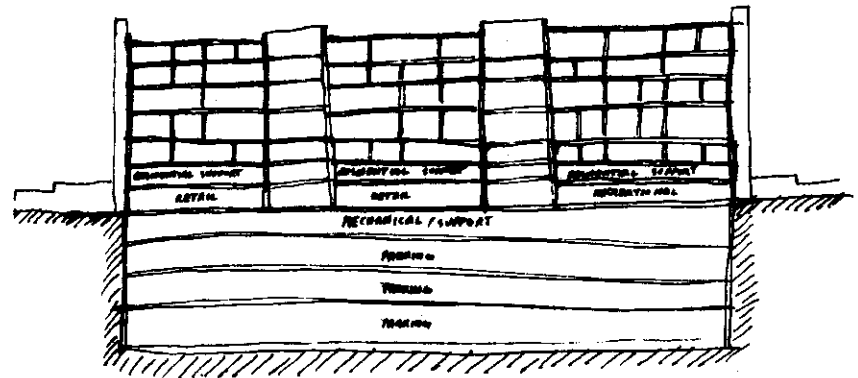
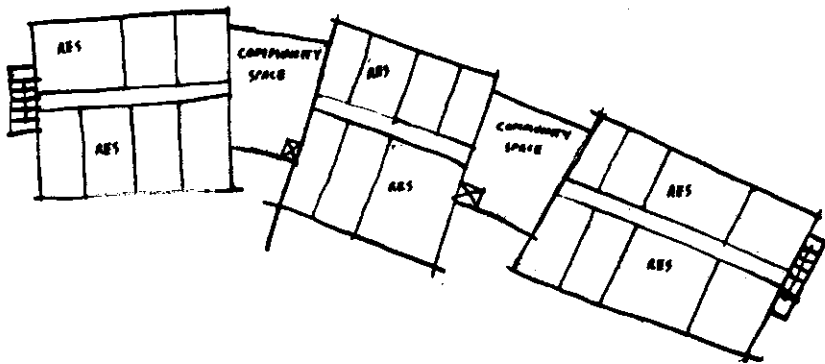
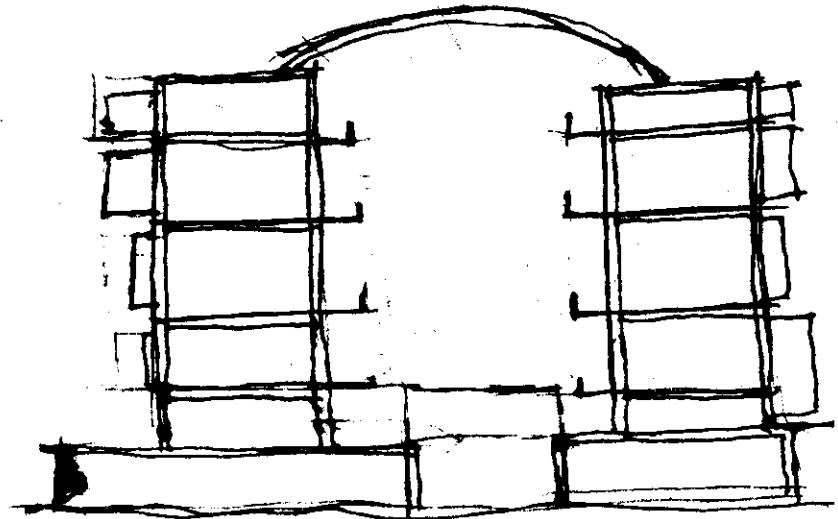
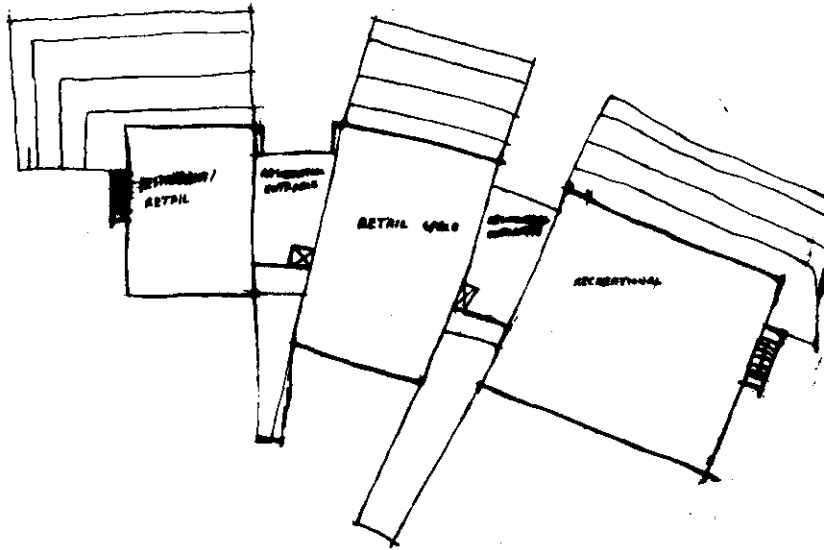
## D E S I G N P R O C E S S



The first conceptual design for the building consisted of three different blocks of housing of different heights and widths. All the housing blocks consisted of four different sized housing units: one bedroom, two bedrooms, three bedrooms, and four bedrooms. The housing units were situated along a double loaded corridor and faced north and south. The first floor consisted of shopping areas, a restaurant, and a gym. The second floor consisted of support spaces for the housing, and the offices for the administration of the building. The first floor below grade housed the mechanical room, and there were several floors below that used for underground parking. On the north side of the building, terraces cascaded from the building into the agricultural belt that surrounds the city. The first design came off too much as a fortress, that massed the building in its generalized form, but really didn't bring any of the social aspects into the building.

The second conceptual design split the building into six different blocks by splitting the building down its east-west axis and opening it up for a centralized atrium that ran the entire length of the building. The housing units also started to cantilever out of the building frame to further differentiate them from each other. In this second stage of the design process, the first two floors consisted of commercial space, and ended with two end nodes: a movie theater, and a gym. The building also steps back from the road towards the west, addressing the edge of the city that the building is located on.

# DESIGN PROCESS



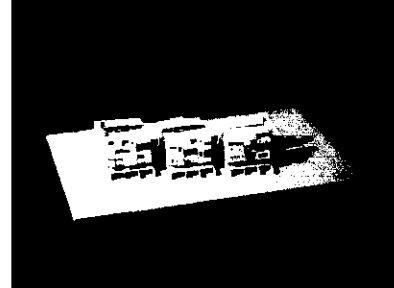
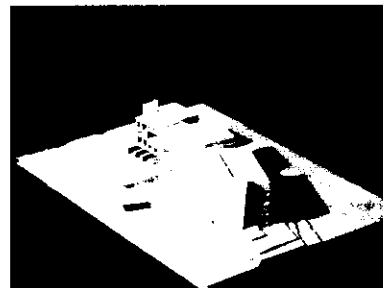
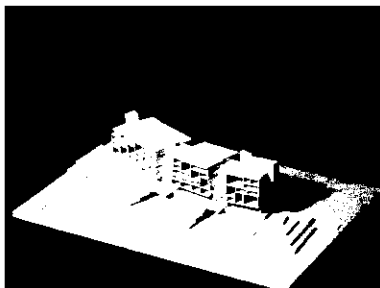
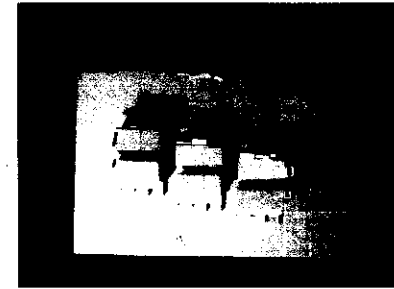
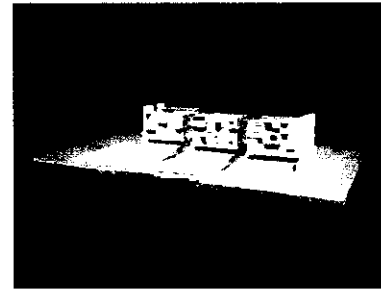
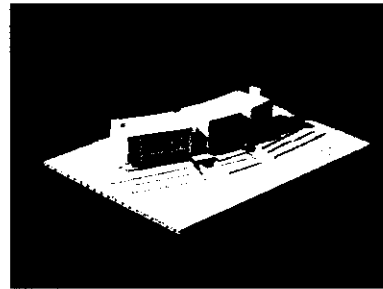
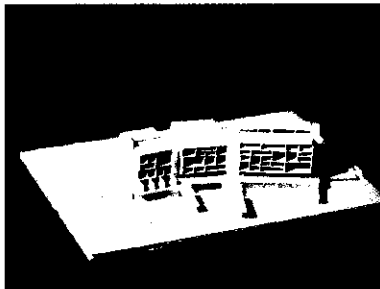
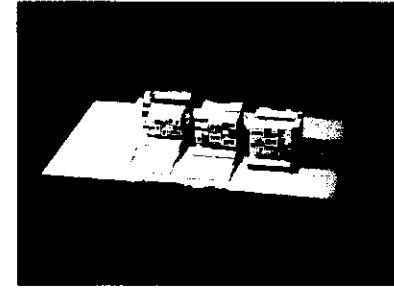
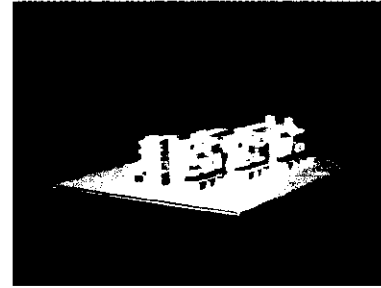
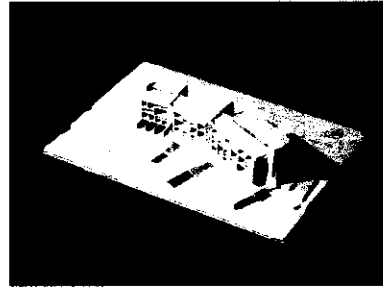
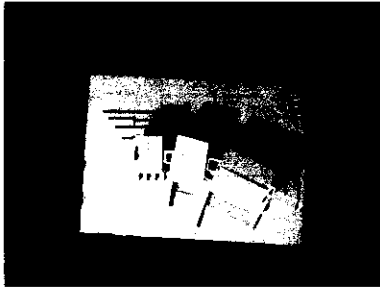


F I R S T

S T U D Y

S E C O N D

S T U D Y



## D E S I G N   S O L U T I O N

In the final design solution, the building still steps back from the road towards the west, with parking for visitors on the south side of the building. Terraces and trees surrounding the parking act to screen the cars and bring a natural look to the southern portion of the site. To the east of the building is overflow parking for residents of the building, and there is also parking on the north side concealed underneath the terraces for residents, as well.

The Town Center is still divided on its east-west axis by a centralized atrium, but the three blocks on the northern side have shifted one structural bay to the east, creating void spaces between the housing blocks that allow light to flood from the north and south. These void spaces also contain space for the entrances, service spaces, and circulation. The centralized atrium consists of different social spaces, sitting areas, planters, trees, and fountains. These different elements create a natural setting for social spaces for people to run into each other and interact with each other. These elements also subdivide the centralized atrium space causing visitors to walk around and experience the space and the people within it. The atrium is ten stories tall, and vertically slices the building as well, through the two stories of retail space, and the eight stories of residential units.

The building still ends with the two nodes consisting of a triplex movie theatre on the west end, and a gym, consisting of basketball courts, racquetball courts, and work out areas, on the east end. On the top of each of these end buildings is roof space with tennis courts, with one set of

courts exclusively for the residents, the other for the visitors. The building has different kinds of terraces for visitors to use and also for plants to be grown on that surround the east, north, and west sides of the building that help it erode into the landscape. Low intensity green roofs are also implemented in the building to help blend the building into the natural feeling of the suburbs surrounding the Town Center.

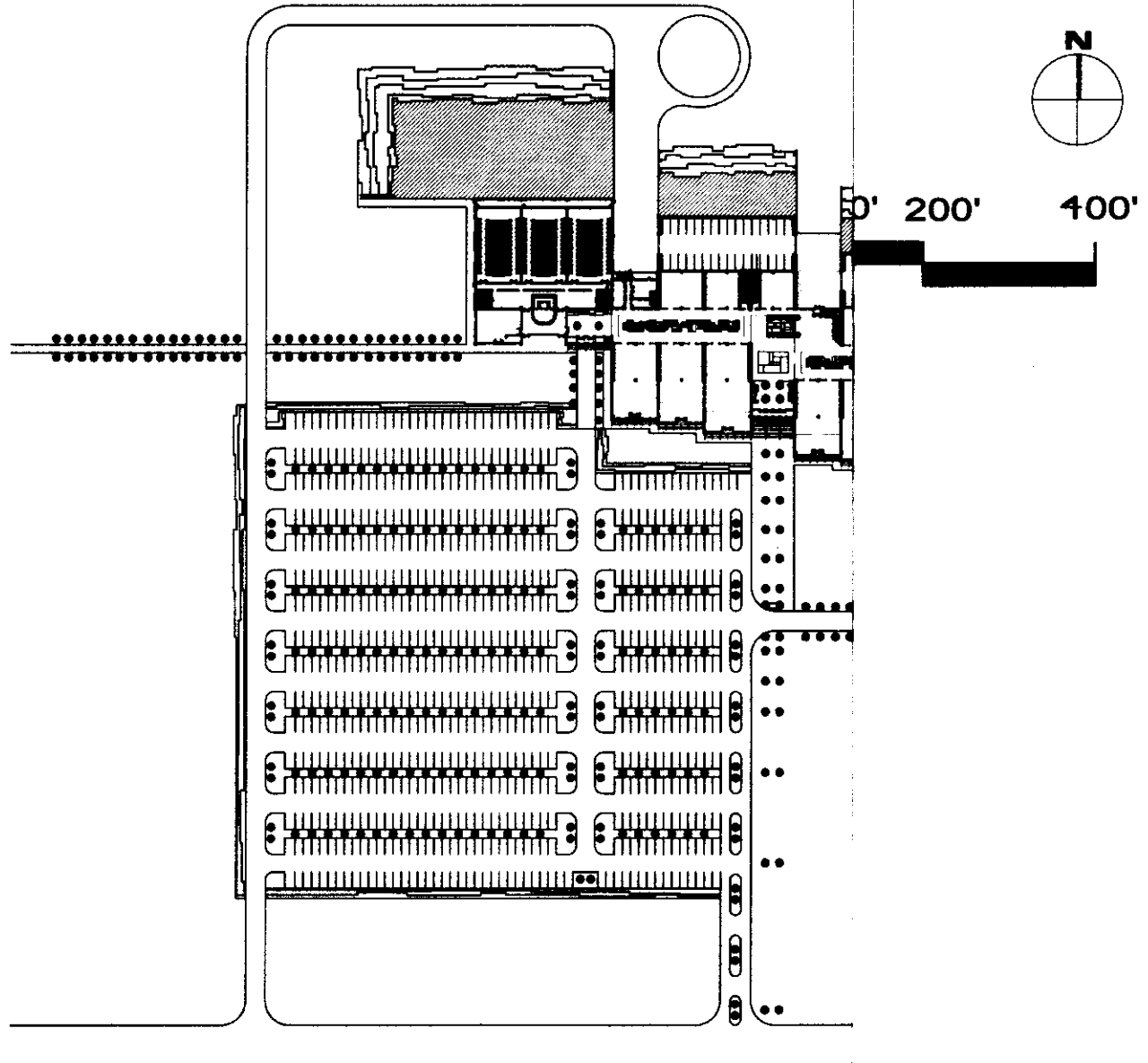
The housing part of the building consists of the eight stories on the north side of the building, and six stories on the south side of the building. There are still the four different types of units that are based off of a module for each number of bedrooms within the unit. The roof of each unit also is a low intensity green roof to create a transition between the interior and the views to the exterior. The housing modules fit within the main structure of the building and cantilever outside of the frame, further differentiating each unit from each other and giving them a sense of individuality, as if they were independent from the rest of the building. On the interior of the housing blocks, each unit has a stoop and planters that create the entrance to each unit and allow residents to create their own individual entrance to their unit, and further brings more green life into the building. The walkways on the residential floors jut in and out creating places for plants to be grown making the centralized atrium more like a green canyon. The spaces where the walkways jut out also create spaces for residents to run into each other and talk.

The residential areas of the building also have community spaces mixed in, such as banquet halls, activity rooms, and green park areas on the south side. The top two floors on the south side is also a rooftop community area. The space is two stories high, and is encased in glass. This allows light to fill the area and penetrate deeper into the atrium.

The materials of the building consist of pre-cast concrete panels, glass, steel panels, and corrugated metal paneling. The mullions for the common spaces, tennis courts, and the atrium are based on principles similar to the Fibonacci series. Similar principles were used to create the module for the housing. The Fibonacci sequence is a naturally occurring sequence found in nature in the way that things grow. The idea behind using this series to create the mullion pattern in the windows was to symbolize the growth of communities and our cities and how it has become part of our natural world. Also, louvers on the exterior of the glazing encasing the atrium help to control the intensity of daylight flooding into the atrium.

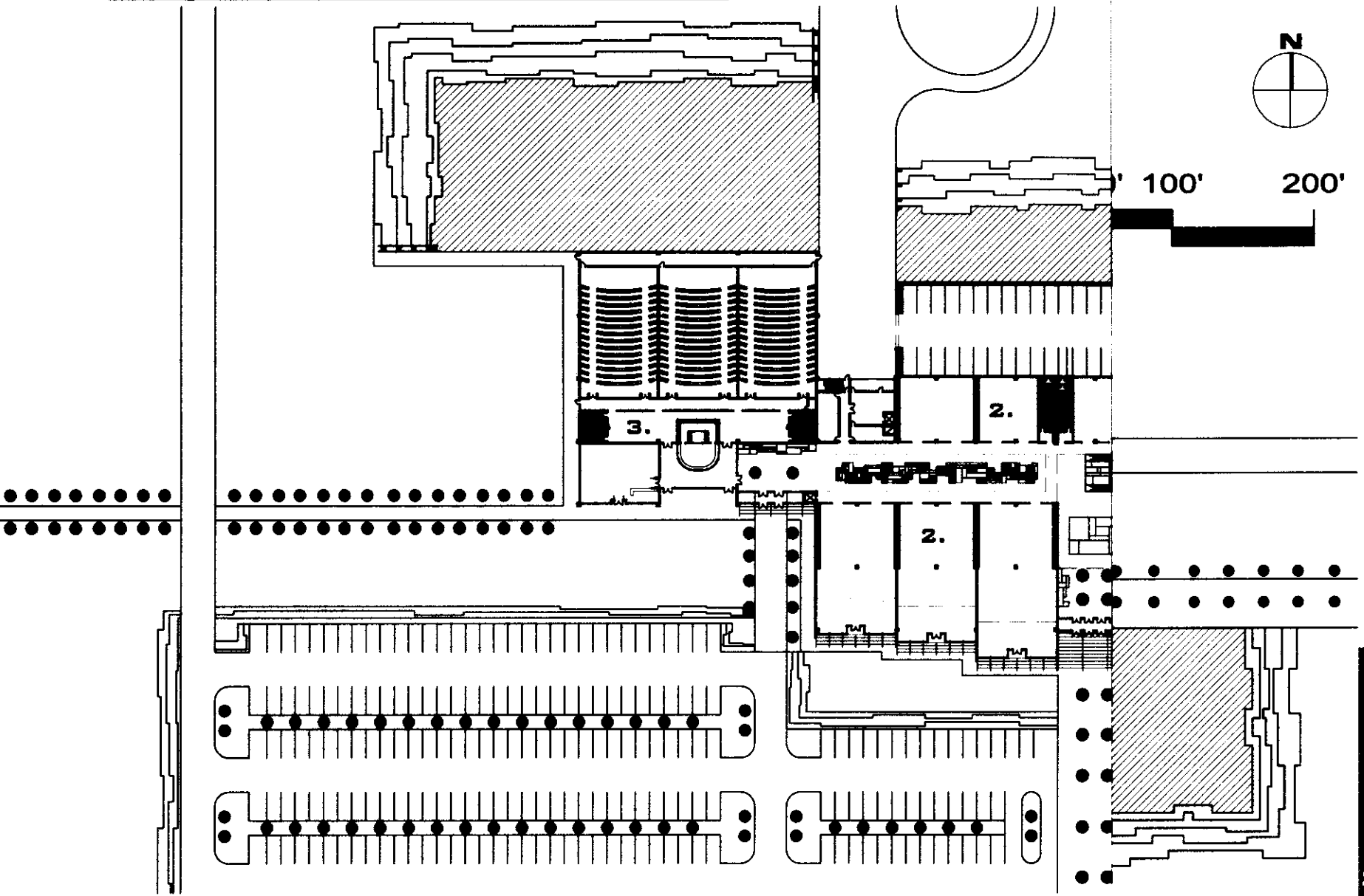


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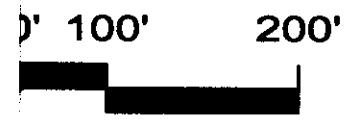
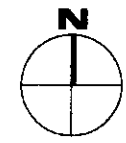
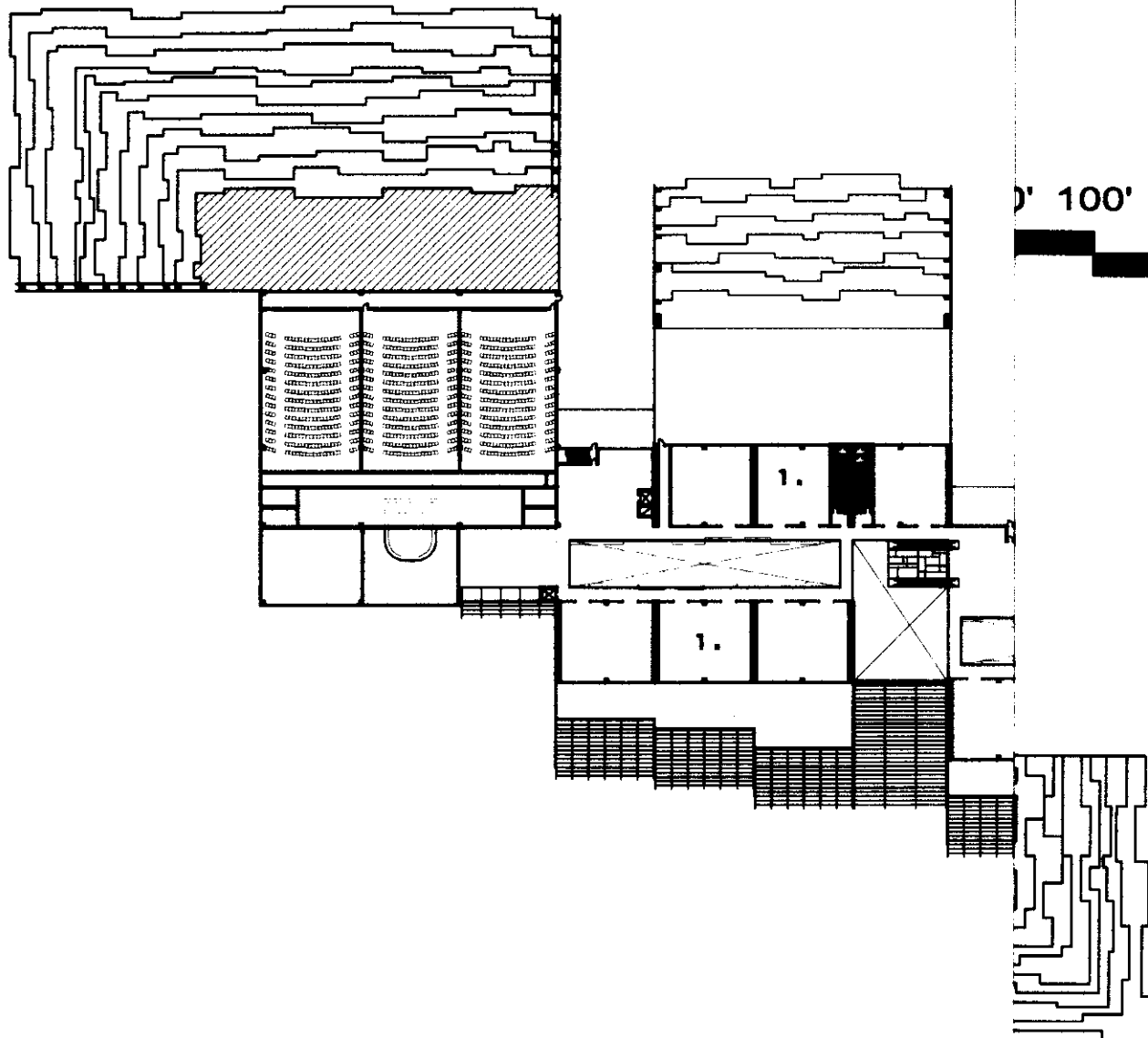




FIRST FLOOR PLAN



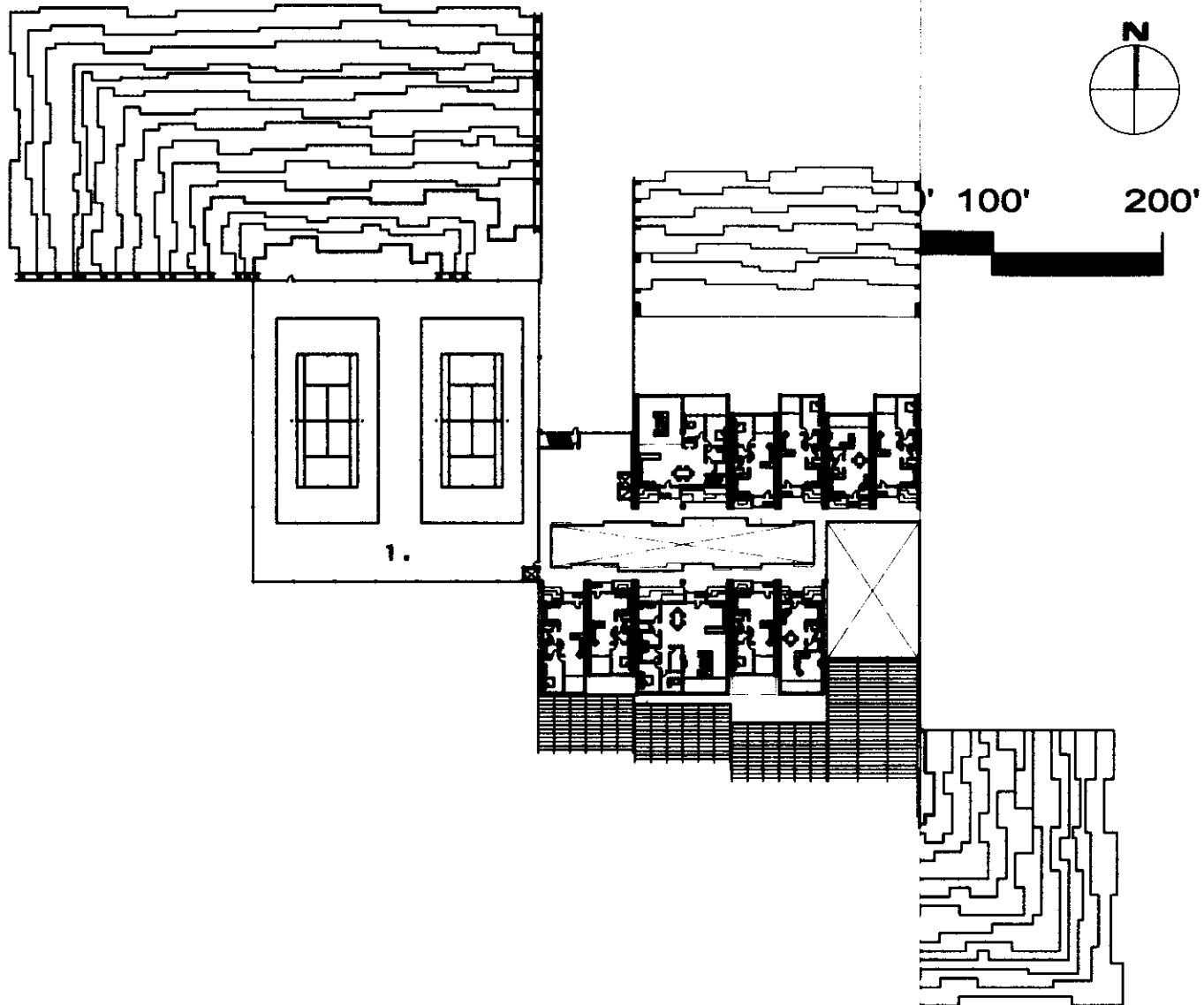
**S E C O N D   F L O O R   P L A N**



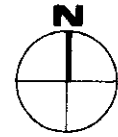
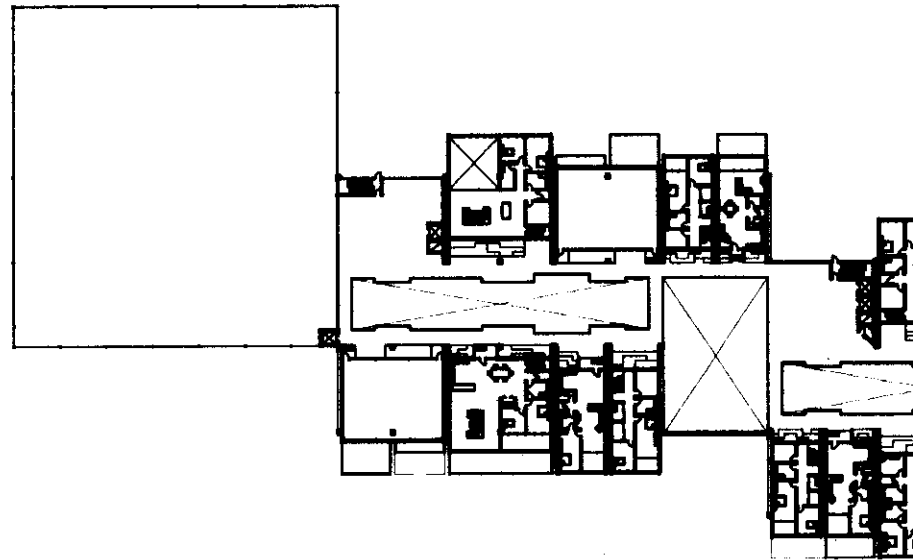




THIRD FLOOR PLAN



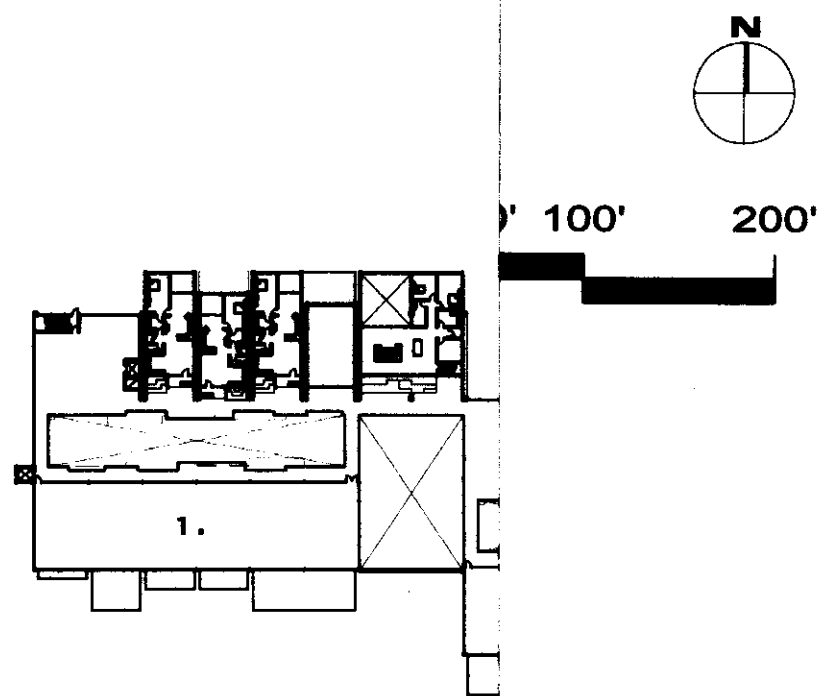
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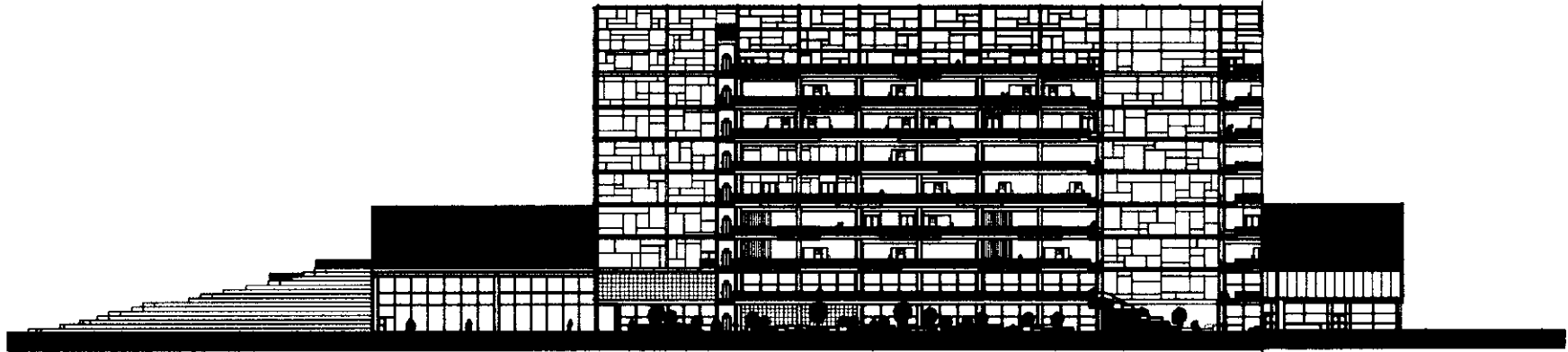
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N I N T H F L O O R P L A N



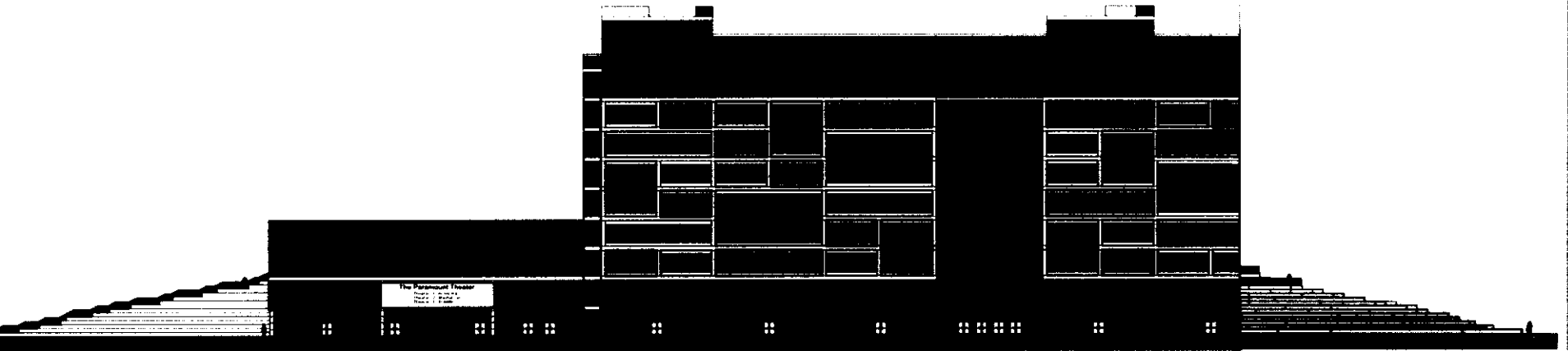
LONGITUDINAL SECTION



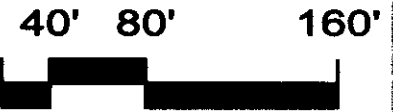
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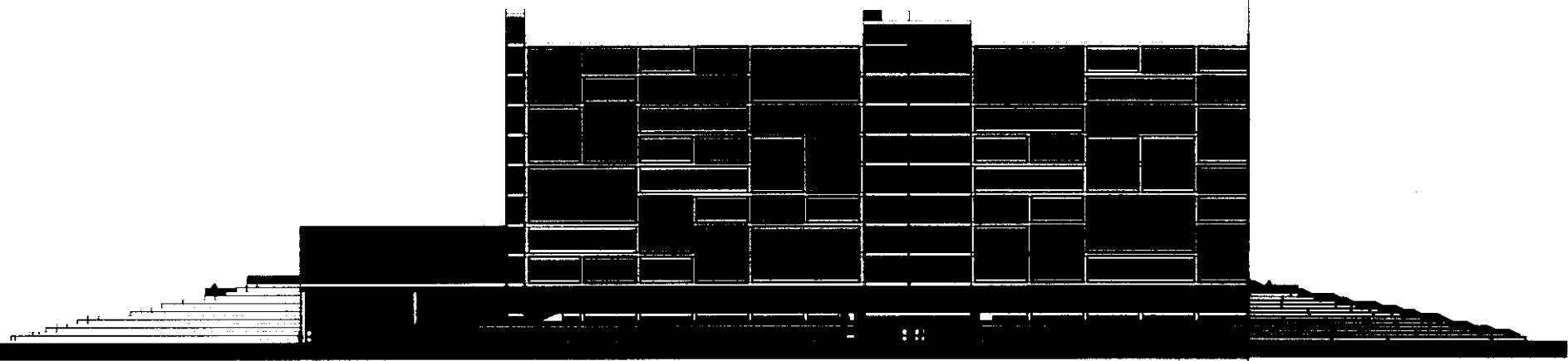
**SOUTH ELEVATION**



The Paramount Theater  
1927 - 1928  
Architect: [unreadable]



N O R T H   E L E V A T I O N



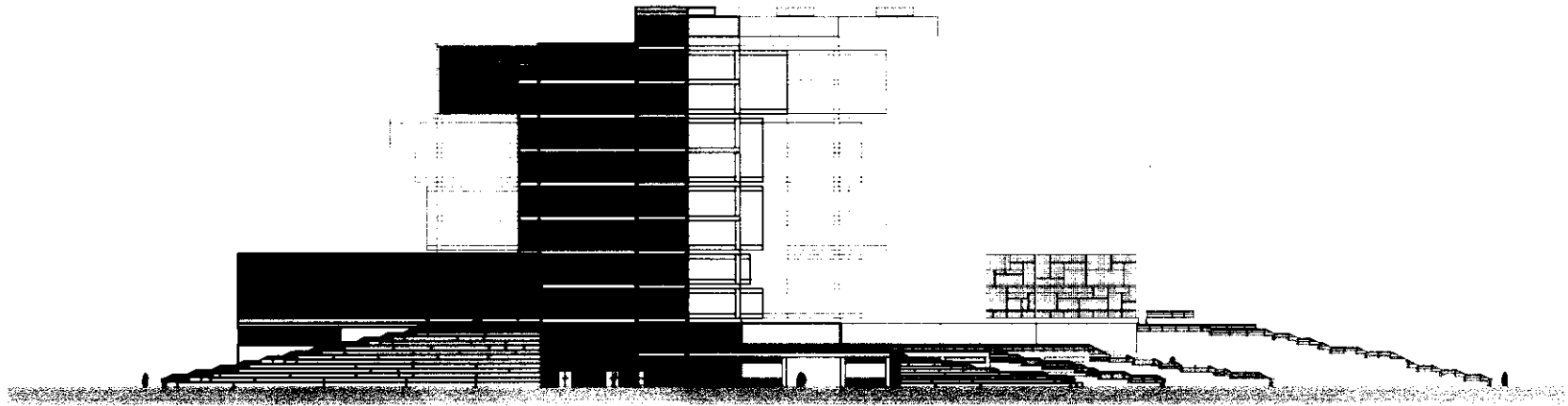




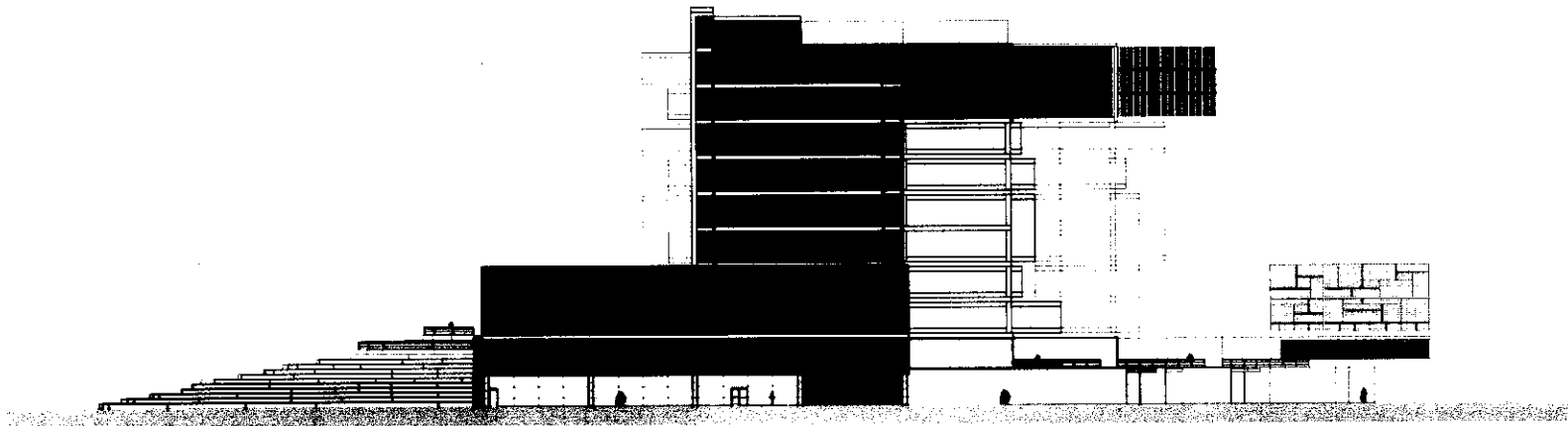
F A C A D E                      S T U D Y



**E A S T E L E V A T I O N**



W E S T E L E V A T I O N

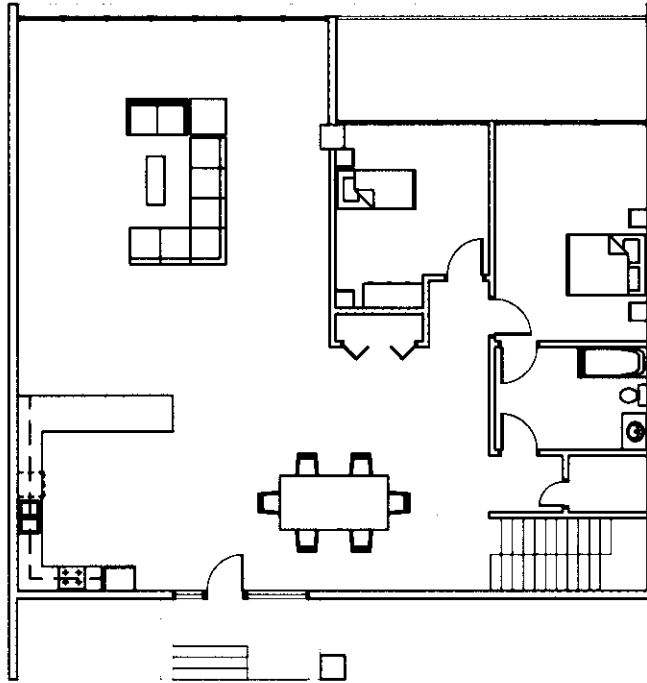
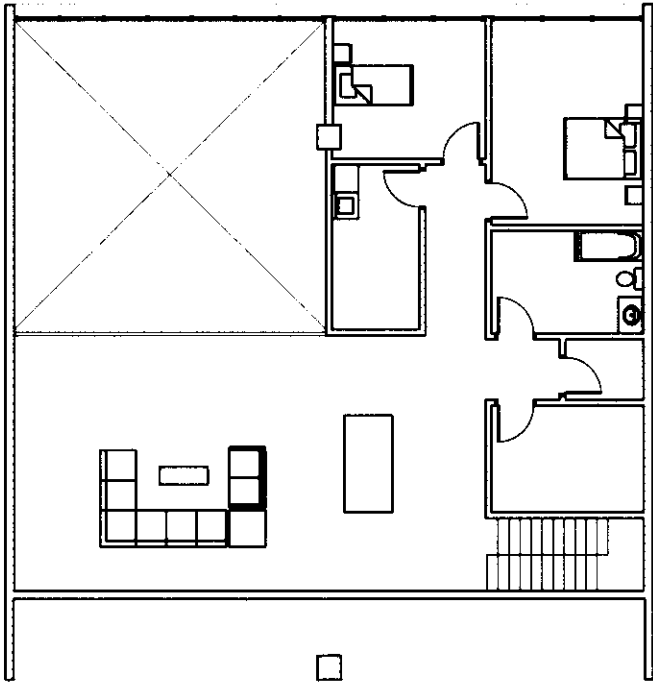


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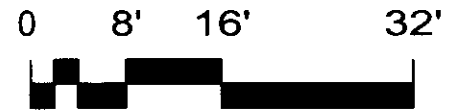
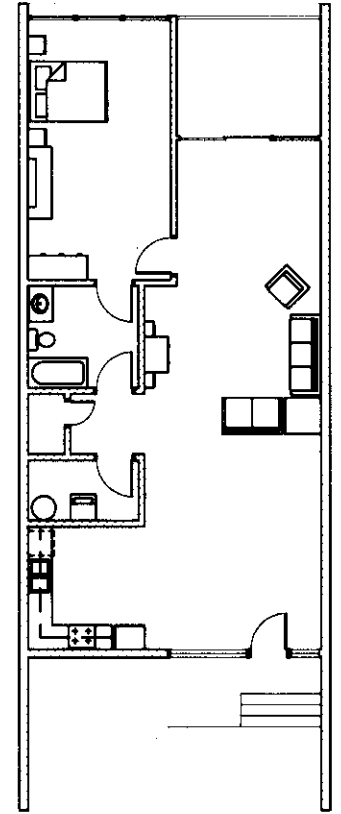


E N L A R G E D P L A N S

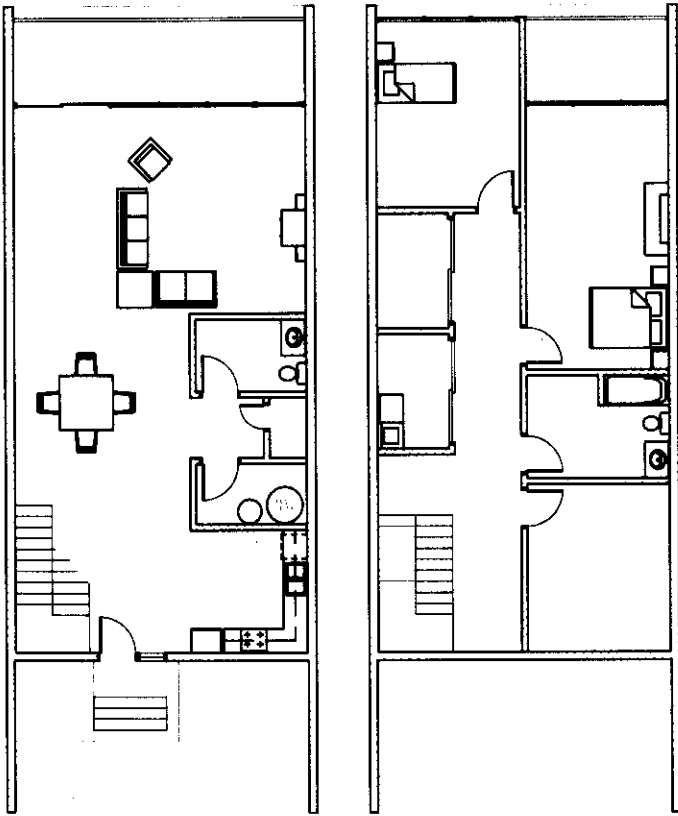
**FOUR BEDROOM APARTMENT**



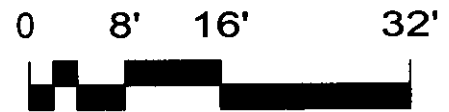
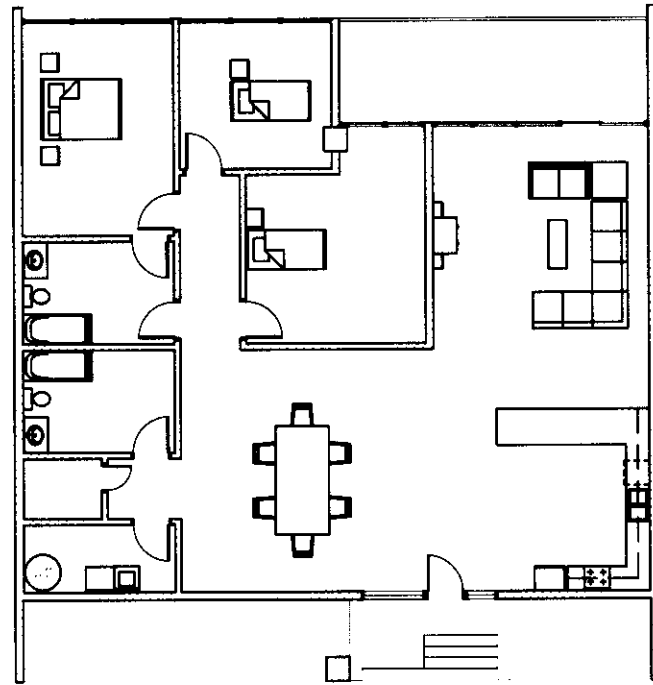
**ONE BEDROOM APARTMENT**



**TWO BEDROOM APARTMENT**

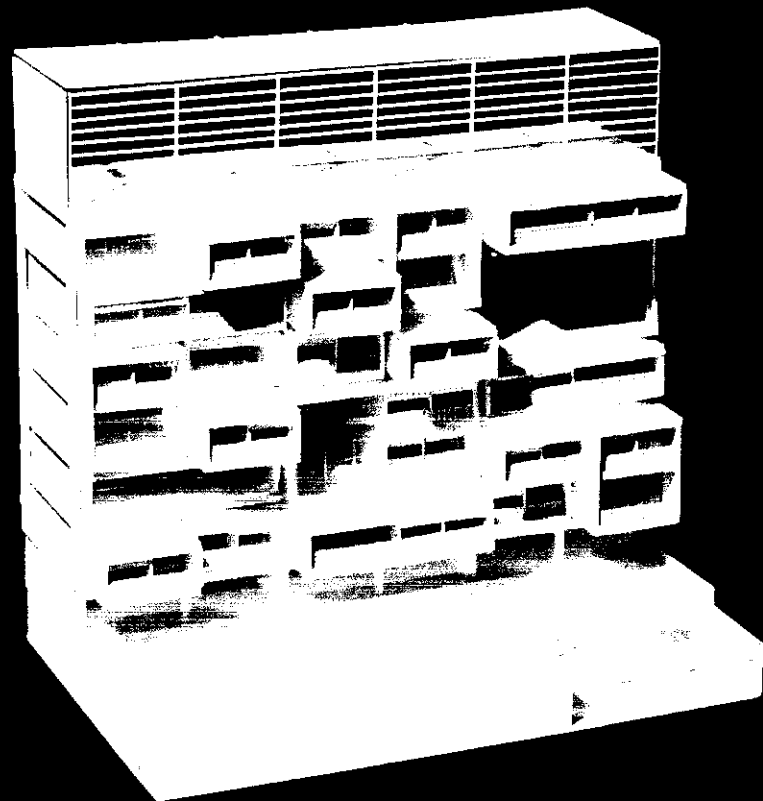


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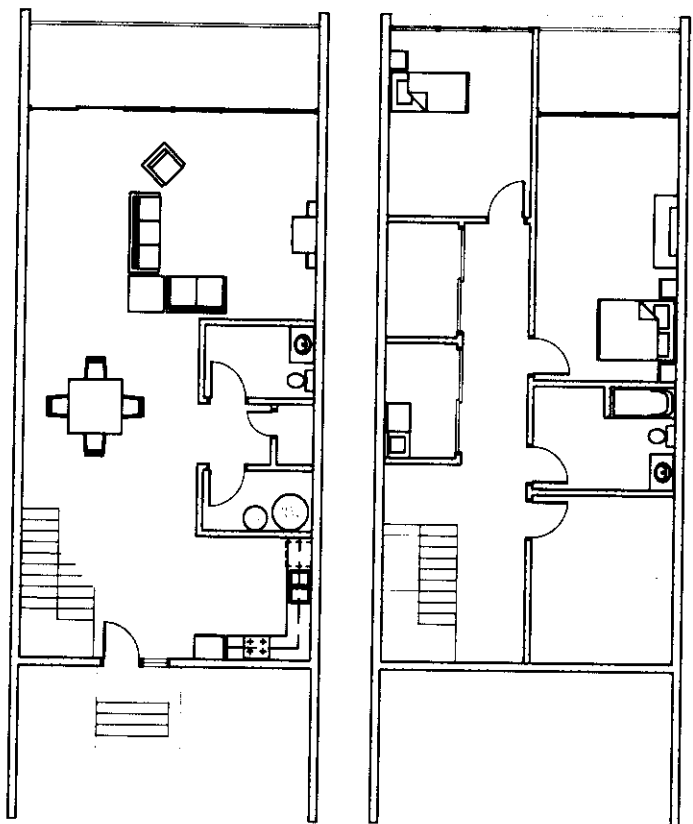


M O D E L

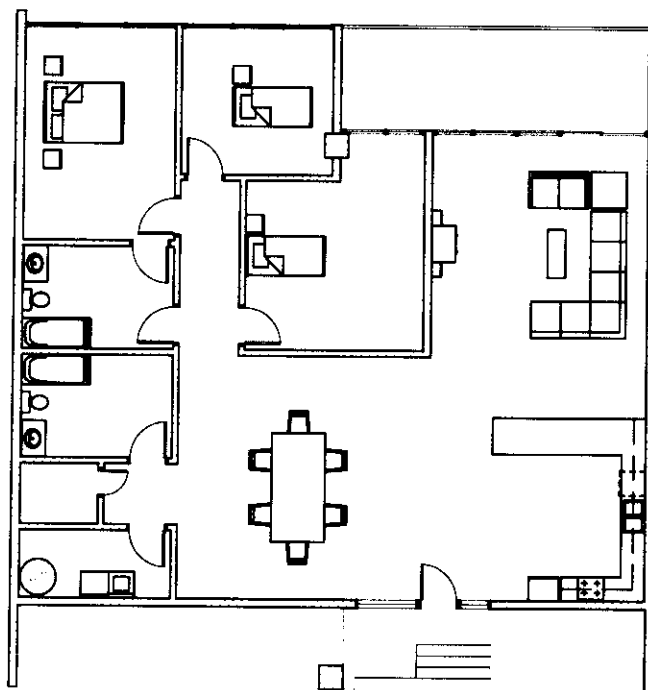
S T U D Y

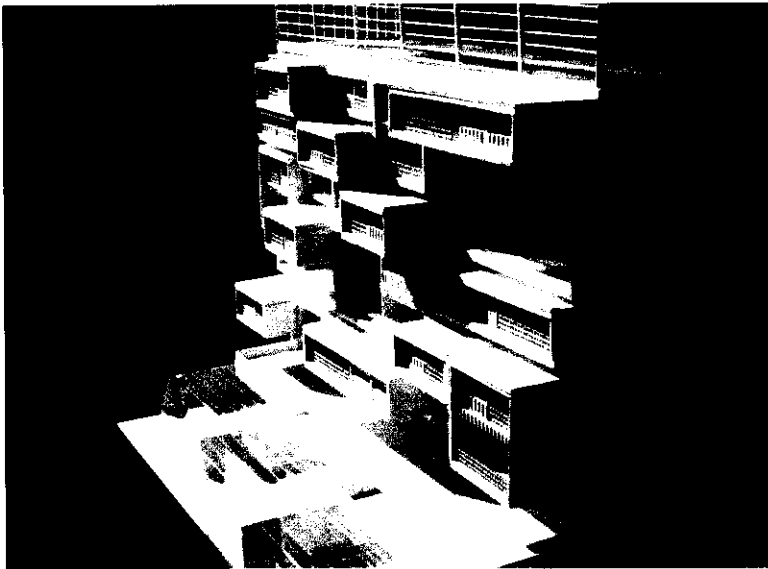
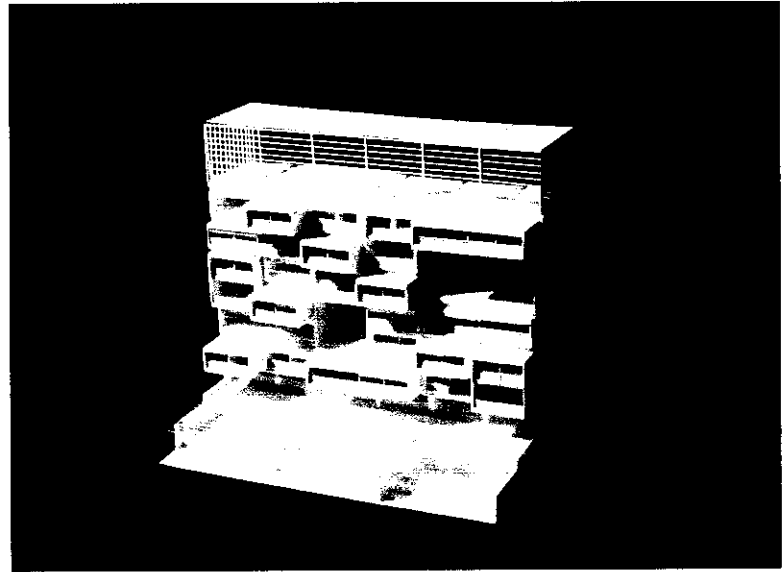
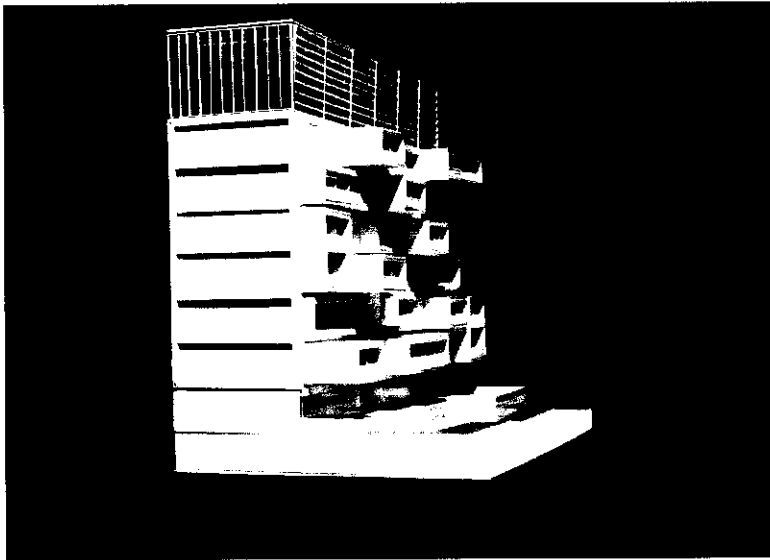


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**THREE BEDROOM APARTMENT**

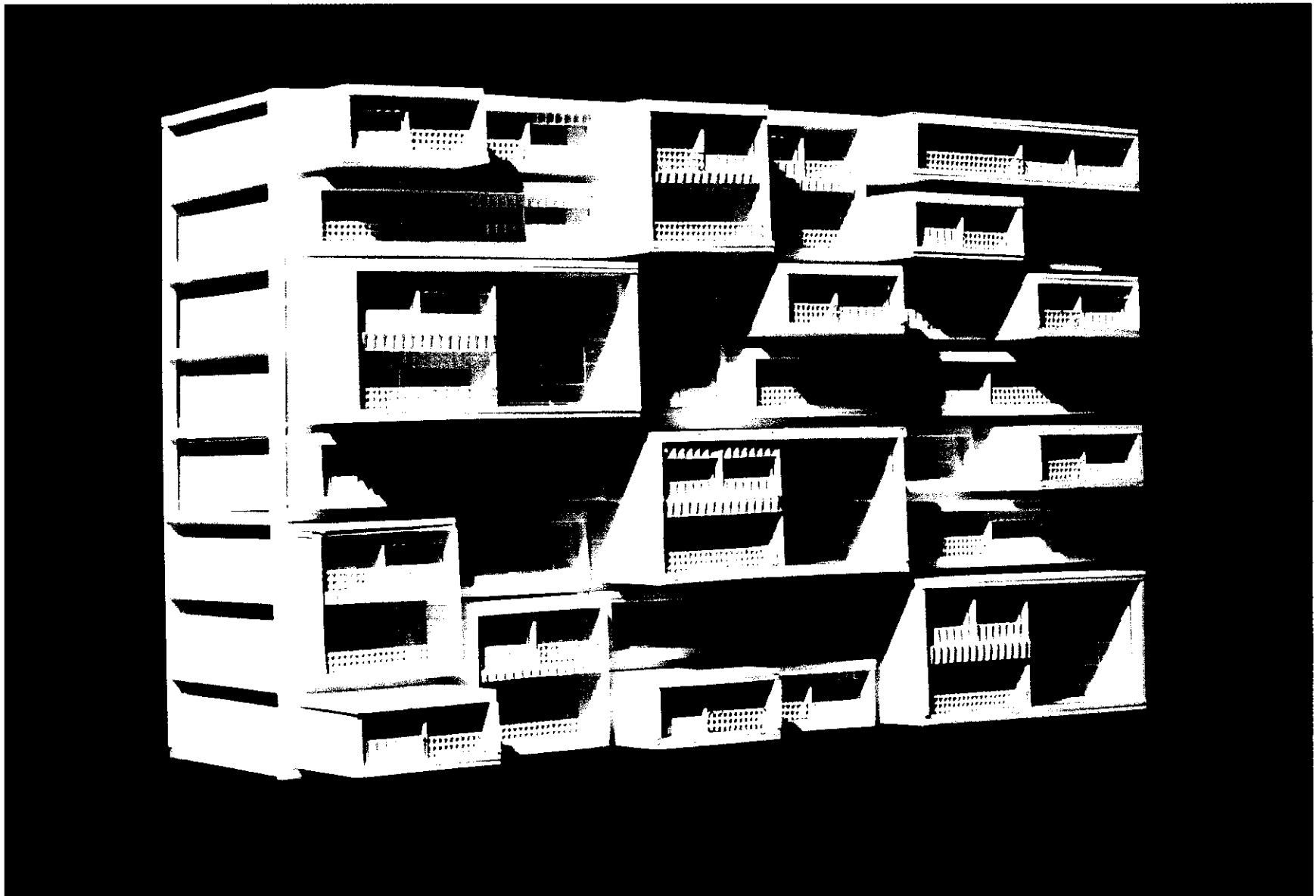


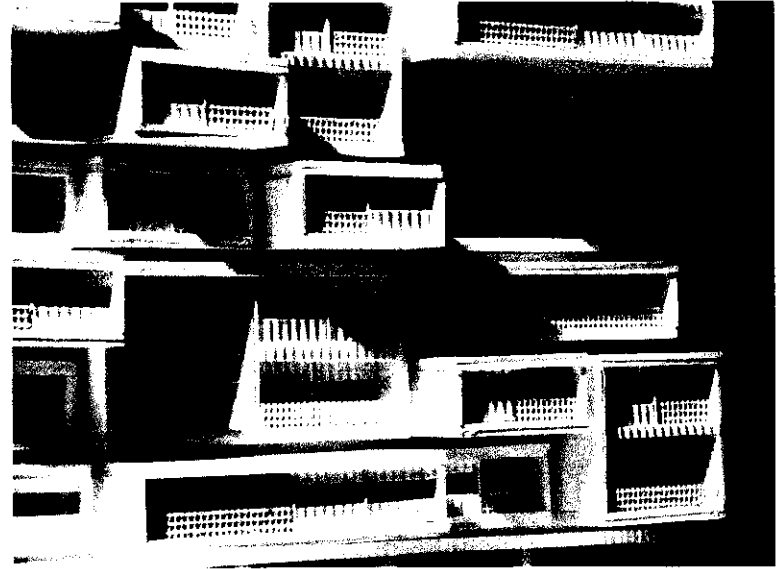
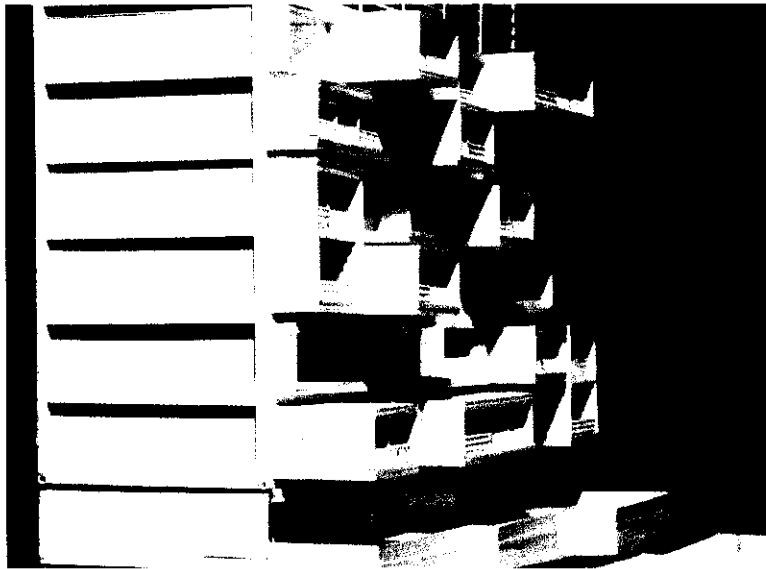
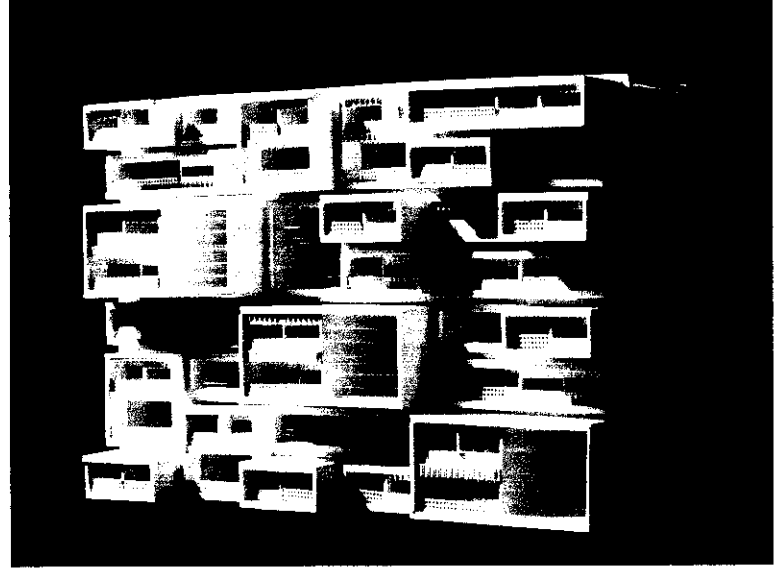
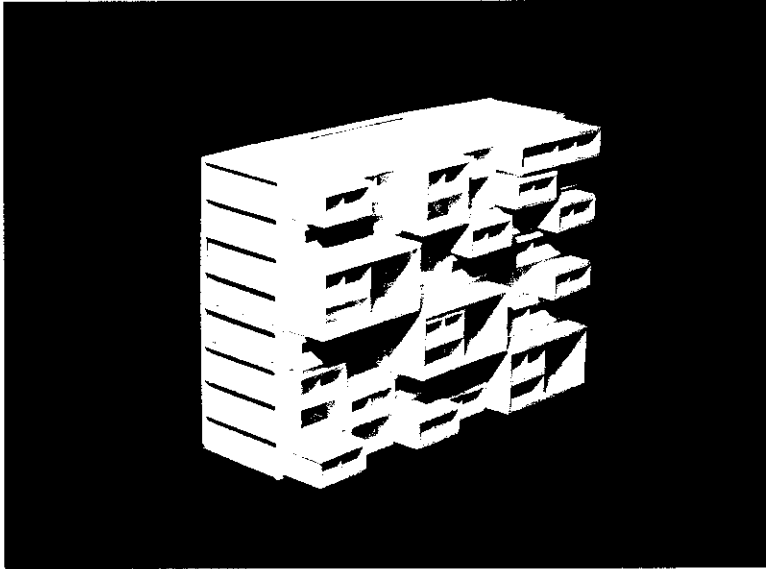




M O D E L

S T U D Y





## R E F L E C T I O N S

Overall, the project was a theoretically a successful study of how a mixed-use building could be used to bring a core of urban density into the scattered periphery of a city. By using environmental strategies to light the building, integrating plants and green roofs, and by condensing several different elements of sprawl into the building, it started to take on the characteristics of "vertical suburbia". I think the strongest component of the town center was the centralized atrium. I think by having the building revolve around this open, light filled, interior atrium that it would give the community a sense of place for the social interaction that is severely lacking in the sprawl region surrounding our cities.

I really enjoyed tackling this project, and it was a real challenge bringing all of the different parts of it together and finishing with the design I did. I was satisfied with the design and product I ended up with, but there were a few things I wish I would have had time to develop and work on to make it an even stronger project. One major thing I wish I had more time to develop was the parking. Although I was able to meet the required number of parking spaces required for a building of this size, I wish I would have had more time to develop it in its relationship to the building and to the surrounding areas. Another area I would have developed more, if time had permitted it, was the exterior of the building in its connections to the surrounding neighborhoods.

For further study of this project, I would have studied more history on the expansion of cities, especially Evansville, Indiana where this study took place. This information could be used to anticipate the new areas of growth, and plan the organization of the area with the implementation of a new town center before it grows out of control. For further study, please check out the bibliography located at the end of this report.

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