

CLARENDON: The Urbanization of a Suburban Area

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Design Thesis submitted to the Virginia Polytechnic Institute and State University
Blacksburg, Virginia
Prepared at the Washington-Alexandria Center in partial fulfillment of the requirements for the degree of

MASTER OF ARCHITECTURE

August 1998

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Abstract

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THE URBANIZATION OF A SUBURBAN AREA

New technologies have created a renewed interest in the places where we live and work by lessening the differences between the two. To address this issue, this thesis will consider the possibilities of returning to a suburban neighborhood that has been abandoned in recent history. Housing is introduced to a neighborhood which was predominantly commercial and retail throughout its history. As more people are brought into these miniature downtowns, the life of a neighborhood can be strengthened.

Acknowledgments

Special thanks to my thesis committee.

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Introduction

Recent advances in technology have created a shift in our workplace. Smaller and faster computers, fax machines, copiers, and the use of the internet for information transfer have allowed more people to choose their home as their workplace. Residential neighborhoods are rapidly becoming areas populated by people during all times of the day.

Telecommuting, a term used for the people who work from their homes part of the week, has increasingly become a part of many businesses and the government. In 1995 the number of people telecommuting increased to 8.1 million, almost double what was seen in 1990 (1). The United States government has been involved in reviewing this new way of working since the 1980's. The General Services Administration (GSA) has started telework centers in small towns around the Washington D.C. area, such as Winchester, Virginia and Hagerstown, Maryland(2). These telework centers are offices located on a major circulation street in these small towns and serve as places for employees to attend to business that can not be handled from their homes such as meetings. Teleconferencing and rooms large enough for group work are available to employees who might require these services. Most of the week people would work out of their homes occasionally going downtown to Washington D.C. for certain

meetings. The potential to reduce the number of commuters on the roads thereby reduces pollution in and around our cities. This, coupled with a reduction in the amount of leased space required in major cities such as Washington D.C., has provided quite an incentive for the GSA. Businesses such as AT&T have also been involved in the shift to telecommuting (3). People in management and sales positions can now work from their homes using computers and telephones.

The more people working from their homes has increased the number of people spending their whole day in residential neighborhoods. The suburban complexes that appeared after World War II and greatly increased in number and size are having a difficult time reacting to this new wave of people working from their homes. These old suburban neighborhoods lack the conveniences and proximity to shops that one can find working in urban areas. People are now looking for suburban neighborhoods that have a better sense of community and scale that has been found in small towns and urban areas. The "new urbanism" is one example of the response to consumer requests, giving people more public places in their neighborhoods, and public facilities such as the post office and the grocery store within reasonable walking distance from their homes. The



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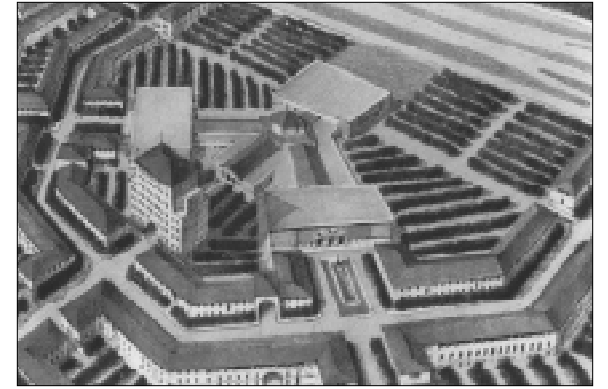
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2

Kentlands, a new development in Gaithersburg, Maryland, is a good example of this new trend. neighborhoods consisting of a variety of housing types surround areas consisting of retail, commercial and public facilities within reasonable walking distance of people's homes. A town square incorporated in the design near the major retail area achieved a sense of community for the residents. This is clearly a more attractive design attitude compared to the typical residential complexes served by strip malls built in the American landscape for the past 50 years.

It can be said that the new technology we all have access to allows us to live anywhere we wish. Where we live is no longer dependent upon proximity to the support facilities of a city, such as major retail. Another element usually found in cities, office space, can now be found in office parks throughout the suburbs. Shopping on the internet and from catalogues has increased in recent years, and telecommuters are gaining popularity in the workforce. Advances in technology are just a few examples of the factors changing the places where we live. Though the recent emphasis on urbanism in our suburban areas must be commended for the attention to public spaces and less reliance upon the car, one must ask if starting these places from scratch throughout our countryside is as destructive as the previous mode of suburban residential building. What

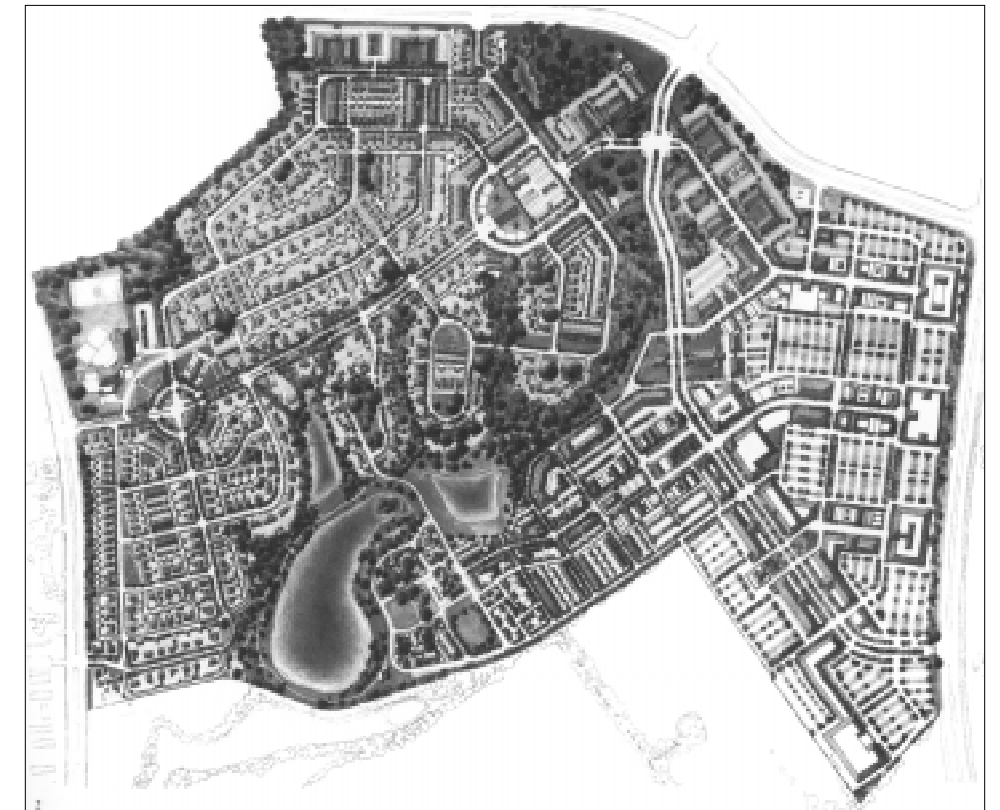
are we gaining as a civilization when we abandon our historic communities in and around our cities to create similar places in our countryside? Our cities have many of the infrastructure and support facilities required in any place inhabited by people. But major modes of transportation, utilities, businesses, and public facilities are being abandoned and recreated as America moves further and further away from our cities.



3 - "Town Center"



4 - "Aerial View of Wellington, Florida"



5 - "The Kentlands, Gaithersburg, Maryland"

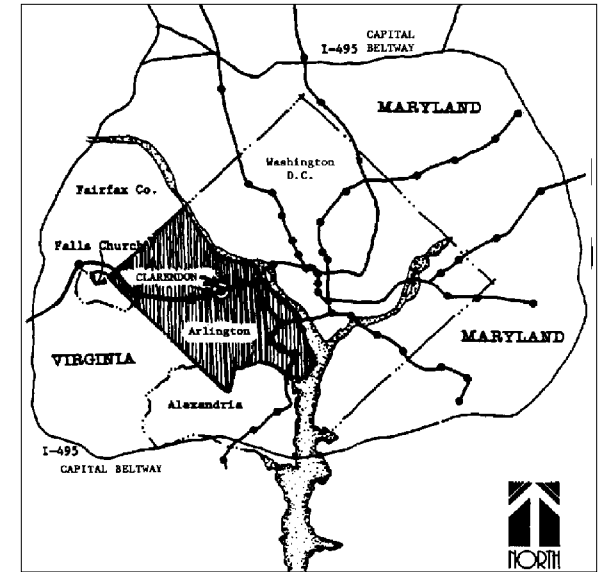
Site

Trolley lines built in the 1890's around Washington D.C. helped to develop many new commuter villages. Clarendon became one of the rapidly growing areas, building schools, churches and shops at the turn of the century. Residential and commercial development continued at a rapid pace until the onset of the Great Depression, but regained its momentum at the end of the 1930's. The Arlington Post Office (currently known as the Clarendon Post Office) was built in 1937 and was the first federal building built in Northern Virginia. In the 1940's, major department stores began to open in Clarendon. They were built using a popular style of the time, Streamline design, and helped to develop an image of this area. Through the 1950's and 1960's Clarendon was known as a major retail center of the area. The streets would come to a halt at Christmas time, and stores began to open on more of the secondary streets of Clarendon.

The late 1960's brought the decline of this bustling community. Increased traffic congestion and aging stores, coupled with the increasing relocation of families into the outer suburbs of the metropolitan area began the abandonment of Clarendon. Through the 1970's the number of stores declined by 25% and many of the larger department stores closed, moving their stores to the suburban malls.

In the late 1970's a number of changes occurred to revive Clarendon. A subway station opened in 1979 and renewed a convenient link to downtown Washington D.C. This period of time also saw an increase in the number of Southeast Asians populating the Clarendon area. The number of stores increased to 120% of what was seen in the 1950's. Many of these new stores are small retail establishments which cater to the Asian community as opposed to the large retail stores prominent in the 1950's (4).

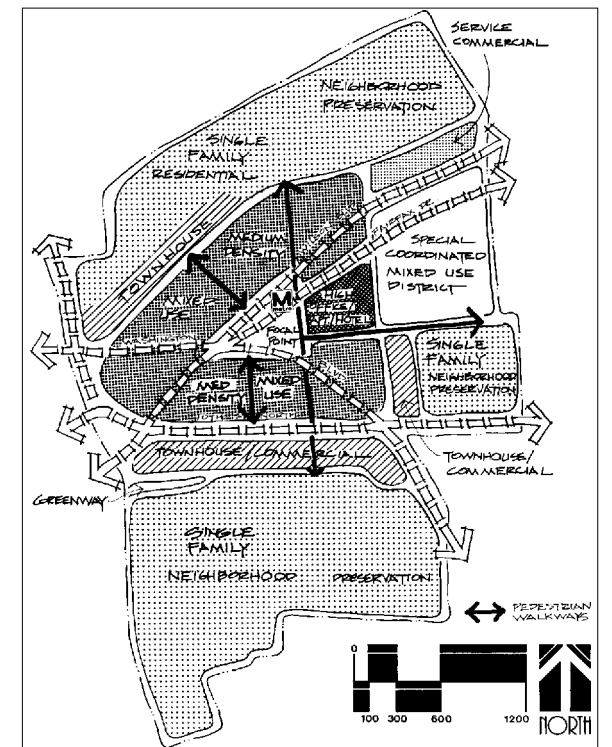
In the mid 1980's the Olmsted Foundation Building was built next to the subway station to increase commercial and retail space available in the area. This building was the first step in a planned attempt to jump start the revival of Clarendon. Planners in Arlington County developed strategies in conjunction with architectural firms to help revive these neighborhoods along the new subway stations. Zoning ordinances and strategic building, such as the Olmsted Building, began to create small downtowns around the Metro stations. Many of the elements which make up a city in Kevin Lynch's *The Image of the City* (5) were emphasized in the plan for Clarendon: landmark, path, edge, node, and district. The Olmsted Building clearly serves as a landmark for this neighborhood and can be seen from the Capitol steps on a clear day. Limitations on the



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Clarendon Post Office



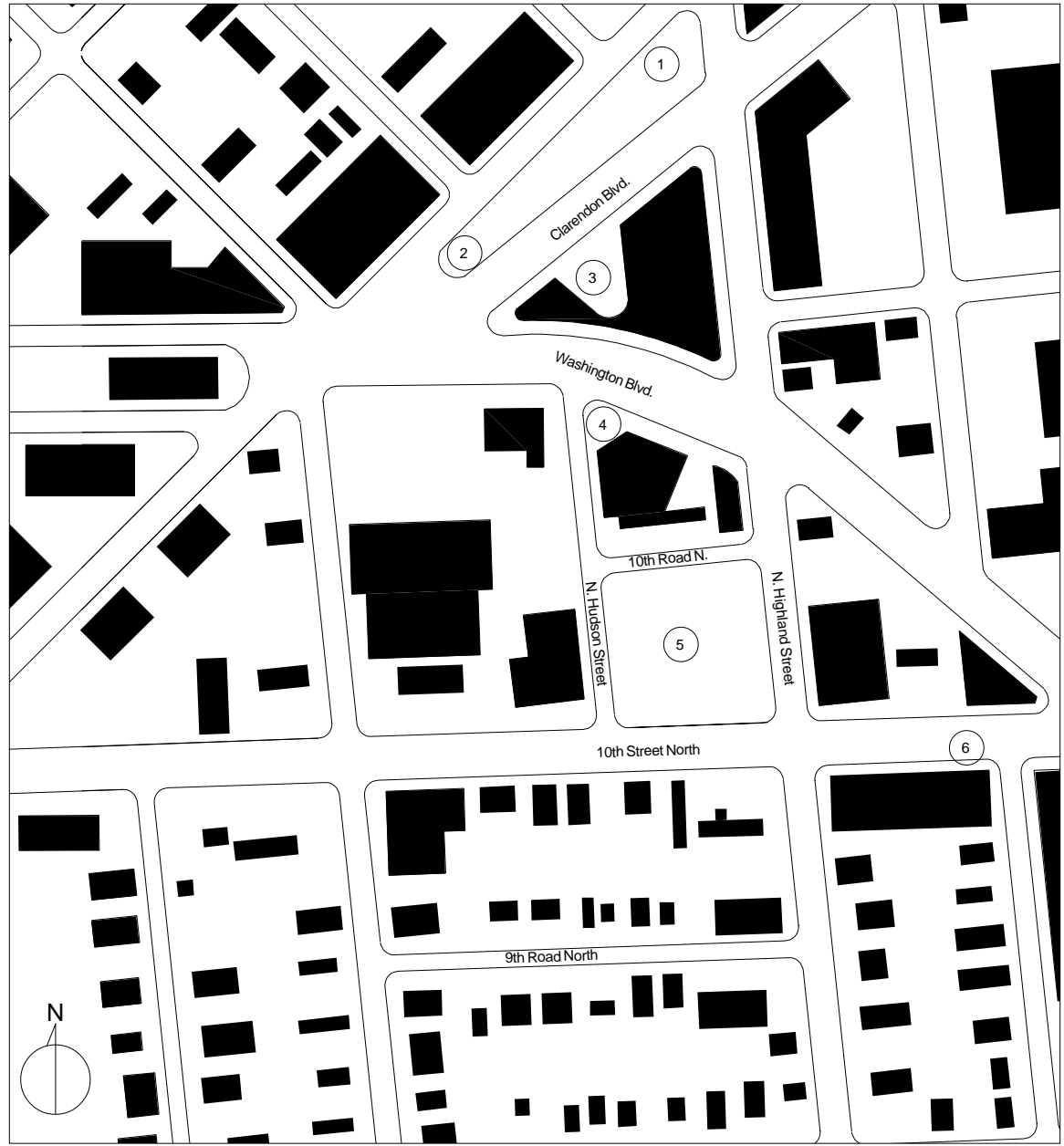
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height of nearby buildings also makes this landmark easily noticed when one is near Clarendon. Washington Boulevard, an existing four lane road is the primary path for vehicular traffic. Wilson Boulevard, Clarendon Boulevard and 10th Street North make up secondary paths which are regularly used by both vehicle and pedestrian. An edge between the mixed use downtown area and the single family detached housing is clearly defined with three to four storey townhouses and shops. 10th Street North is a good example of the definition of this edge in Clarendon. The Metro station and the Olmsted Building make up the major node in Clarendon. Though this node is not as strongly defined as a town square, it does mark an area which is used by many people in this area. Districts are shown clearly defined as types of neighborhoods, single family detached and mixed use. The height limitations given by the planning committee also help to better define these districts.

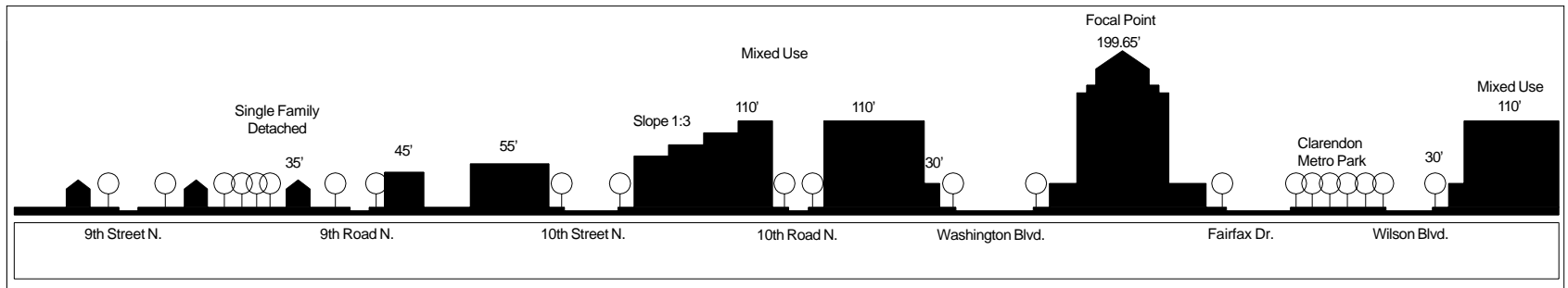
Clarendon was chosen for this thesis for its history as a miniature downtown. The site chosen for this project is located two blocks South of the Olmsted Building and Metro station. Though this district is zoned as mixed use, only retail and commercial spaces can be found. Townhouses are beginning to be built along the edges of this downtown, but not within this area. Restaurants around the Metro station do provide some

Key

- 1 Metro Station
- 2 War Memorial
- 3 Olmsted Foundation Building
- 4 Clarendon Post Office
- 5 Project Site
- 6 Recent Townhouse/Retail Construction

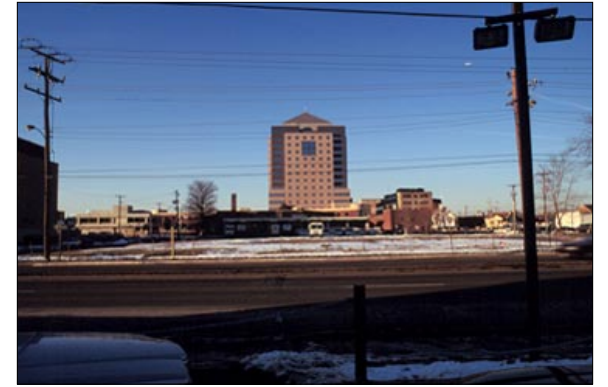


Existing site



North-South Site Section showing height limitations

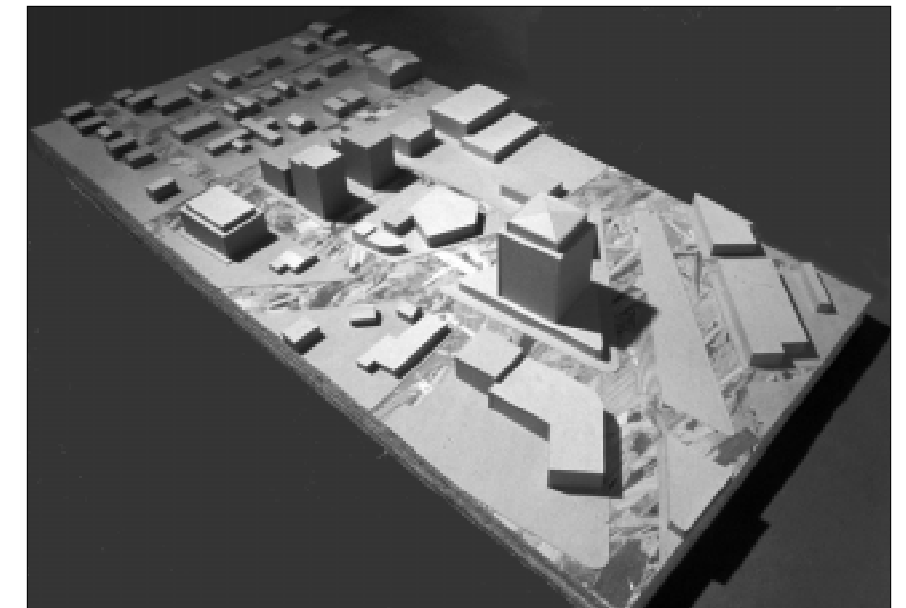
human activity in the evenings, but the mixed use district is not very active in general. A mixed use project which contains residential, commercial, and retail space was chosen to provide a microcosm of what should make up a mixed use district. Height limitations were considered as part of the design to provide for consistency with the objectives of the planners. This thesis proposes to bring a variety of residential units into this primarily commercial and retail area, helping to bring more human activity to this small downtown. Additional office space was also a part of the program, to provide for a place where a telework center can be established. Public space was considered as a necessary part of this thesis. Retail located on the ground level is consistent with current retail located in the area, and a public plaza within the site was considered to allow people a connection with nature and each other.



View of the Site and the Olmsted Foundation Building from 10th Street North



View of the War Memorial and Stores Along Wilson Blvd.



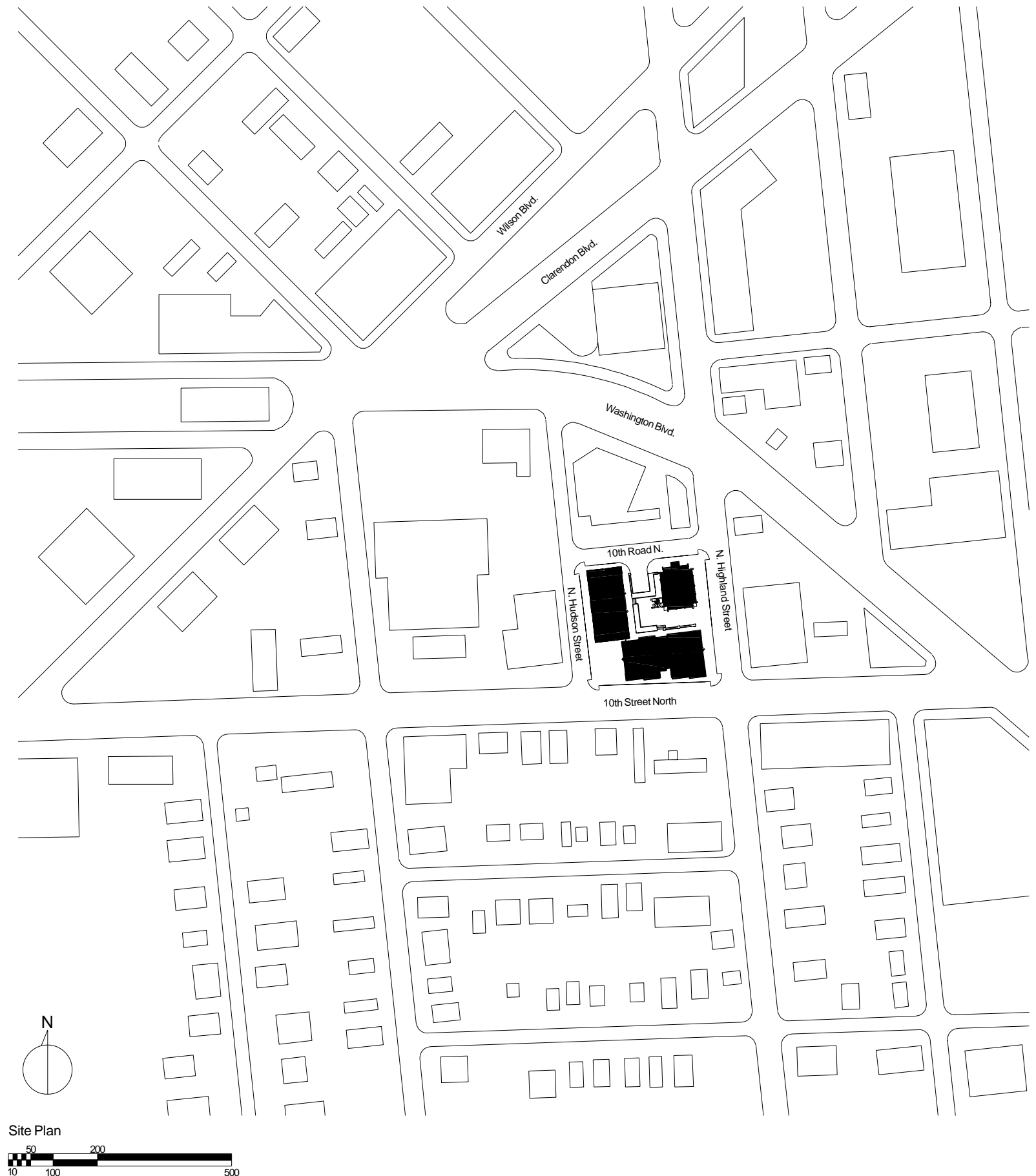
Model View of the Site from the Northeast

Design

The driving force behind the design of this project is its relationship to the site and the neighborhood. To design an appropriate addition to the neighborhood, height limitations set by the Arlington County planners were followed. Elements have been broken down into separate pieces that include an apartment block, an apartment tower, an office tower, a courtyard, and an underground parking garage. By keeping these elements separate, the residents would have more opportunities to be exposed to the world around them. This would allow a connection to nature and the neighborhood that might be neglected by a single building containing all these elements on the site.

An integral part of the program is the courtyard allowing residents and neighbors an opportunity for chance encounters in a public realm, and providing some green space in the site. Deciduous trees would be planted reminding residents of the change in seasons.

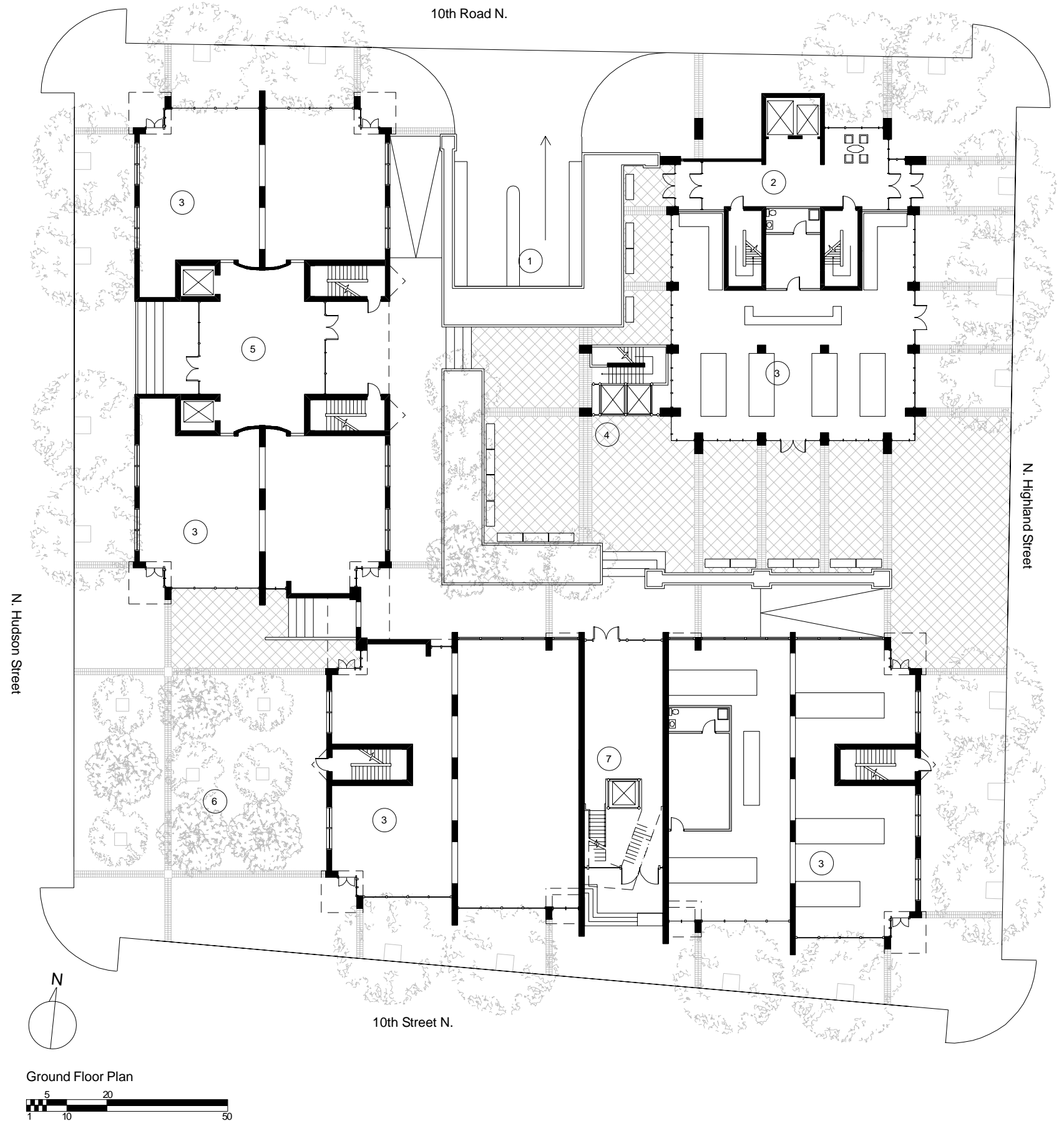
The main courtyard located in the center of the site is fairly open to allow an airy, sun-filled space on good weather days. The private residential buildings to the West and South have been given some separation from the public courtyard by planters ten feet from each building. These planters would be filled with bushes



and trees providing some visual separation from the public space without building a fence. The space between the residential buildings and the planters is ramped up two feet above street level. This gives the residential buildings a vertical separation from the street level, continuing the subtle separation from the public realm.

A smaller courtyard placed on the Southwest corner of the site is linked to the central courtyard. Current building trends along 10th Street North would create a wall of buildings. This courtyard would provide a break in the amount of building along the street. An outdoor cafe would be an excellent use of this smaller courtyard during the more temperate months. An ice cream parlor has recently been built at the intersection of 10th Street North and Washington Boulevard. The ground floor spaces adjacent to the courtyard could possibly house a small restaurant. Low trees would be planted to provide some shade from the sun and to provide a transition between the street level and the apartment tower to the North.

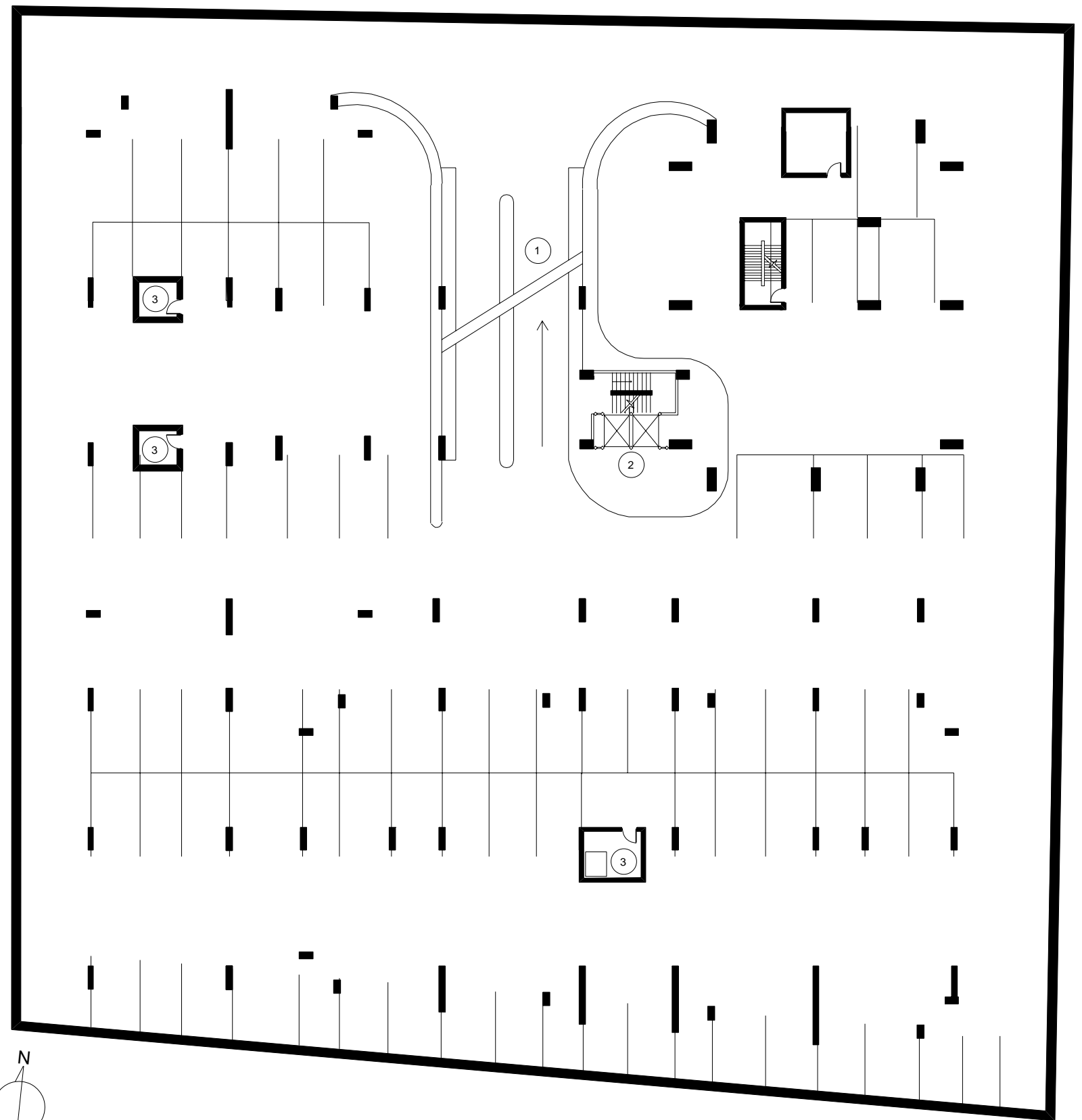
| Key | |
|-----|--|
| 1 | Ramp to the Parking Levels |
| 2 | Entry Lobby to Offices |
| 3 | Ground Floor Retail |
| 4 | Elevators and Stairs from Parking Levels |
| 5 | Lobby to Apartment Tower |
| 6 | Plaza along 10th Street N. |
| 7 | Lobby to Apartment Block |



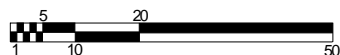
The underground parking levels would provide enough off street parking for each residential unit and one level for public use. The Metro station two blocks to the North would bring commuters to this parking area. The vehicular entry to the parking levels is from the North of the site. This entry faces the back of the Clarendon Post Office since 10th Road North is primarily a service road.

An important decision was made regarding the relationship between the residents and access to this parking garage. There is no direct route from the parking levels to the residences or the office tower. All who wish to live and work here will have to cross the courtyard to get to the garage. Access to the lower levels of the parking garage are near the center of the courtyard with an open air stairway and two elevators. This vertical circulation remains open, allowing sunlight to penetrate down into the parking levels. This penetration would also act as a focal point whenever one is within the parking garage, helping to avoid the common experience of disorientation in underground garages.

| Key | |
|-----|--|
| 1 | Ramp to Other Levels |
| 2 | Elevators and Stairs from Parking Levels |
| 3 | Mechanical Room |



Typical Parking Level Plan

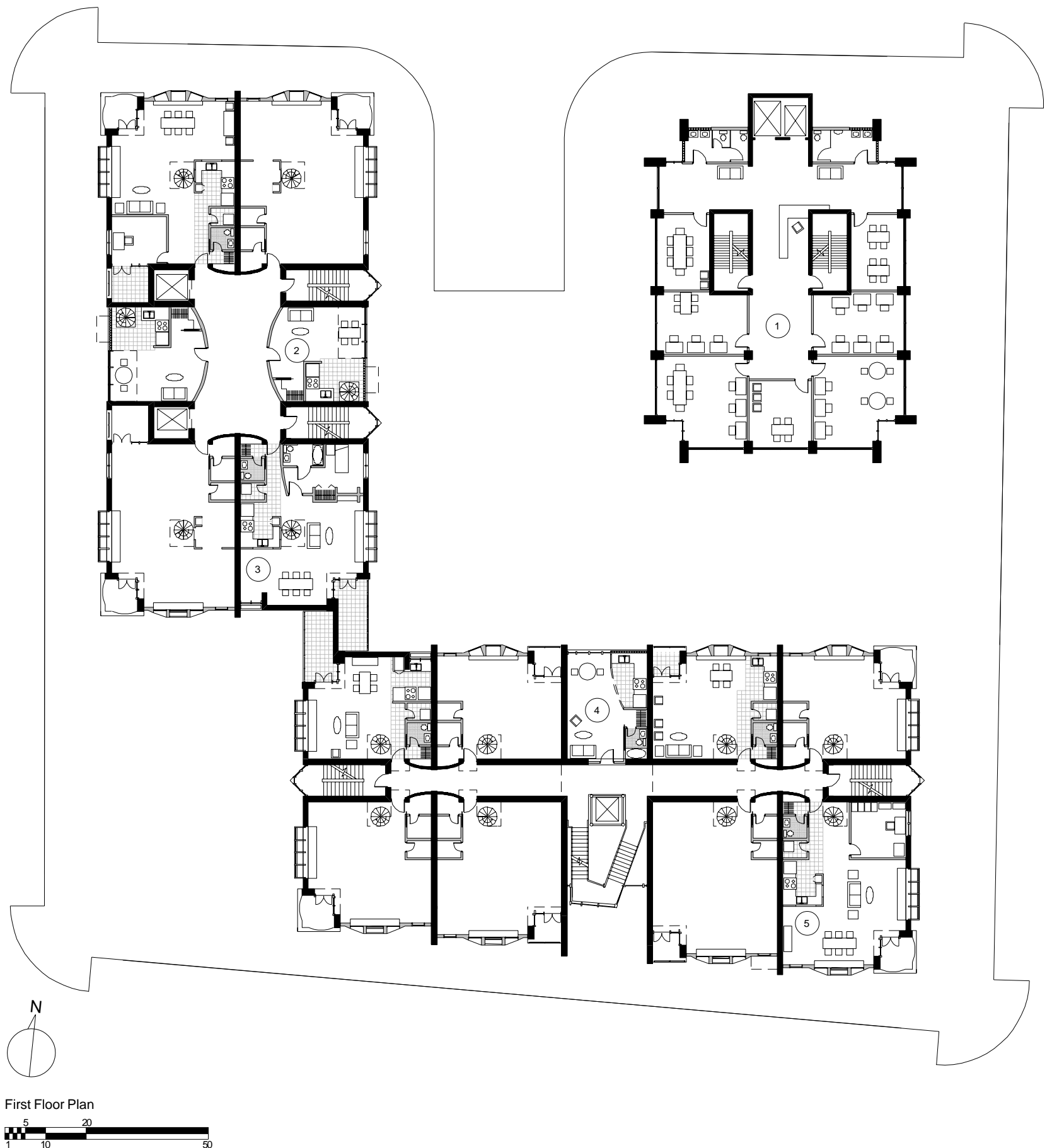


The apartment block is located along 10th Street North. The building is primarily composed of brick, metal, glass, and concrete. To remain consistent with the surrounding neighborhood brick is the predominant material used. The building provides a different type of housing unit as the area already has single family detached homes, apartments, and townhouses.

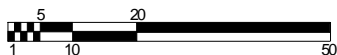
Since more people will be working from their homes as technology advances, a residence that provides some separation between work and home would be desirable. The advantages of working from home might create an intrusion into the privacy most people cherish. The individual apartments are therefore divided vertically into public and private realms. The public spaces include the kitchen, living room, dining room, and office. Private areas include the bedrooms and personal bathrooms. A vertical separation between the two helped to develop the two story apartments. Both public and private levels were further divided between the service zones including kitchen and bathrooms, and the served zones including the living and working spaces.

Key

- 1 Office Floor
- 2 Loft Apartment
- 3 4-Bedroom Apartment
- 4 Efficiency
- 5 3-Bedroom Apartment



First Floor Plan



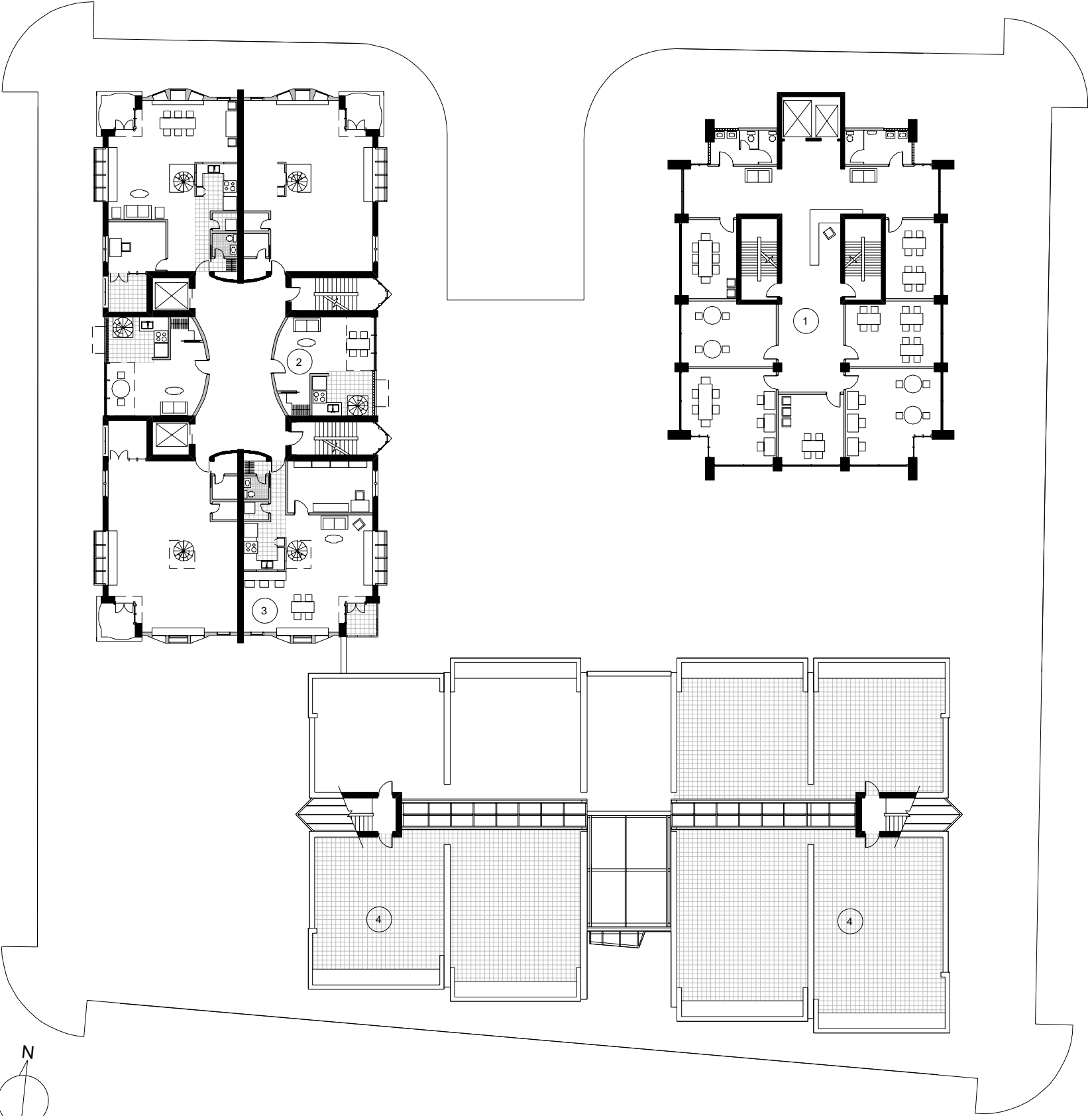
The service zones are mirrored between apartments to take advantage of the common wall separating the apartments to be used for plumbing and HVAC.

The types of units within the apartment block vary from efficiency apartments located in the entry zone, to two and three bedroom apartments located to the East and West. Residents and guests can enter the building from either the courtyard or the street. Retail is located on the ground floor. The entrance floor is raised two feet above the street level to imply a separation of the private apartment building from the public street. The South side of the entry zone houses the elevator and the stair. The South wall is glazed to provide natural light within the vertical circulation area.

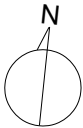
| Key | |
|-----|---------------------|
| 1 | Office Floor |
| 2 | Loft Apartment |
| 3 | 4-Bedroom Apartment |
| 4 | Efficiency |
| 5 | 3-Bedroom Apartment |



The apartment tower along North Hudson Street has many similarities to the apartment block. The articulation of the exterior is very similar, but the vertical circulation does not play such an important role on the elevation of the building. Entry from both the courtyard and the street is maintained with retail on the ground floor. The entrance is also brought up two feet from the street level. The vertical circulation is now in the center of the building with apartments along the entire perimeter. One bedroom loft apartments, and three and four bedroom apartments make up the residential units in the tower.



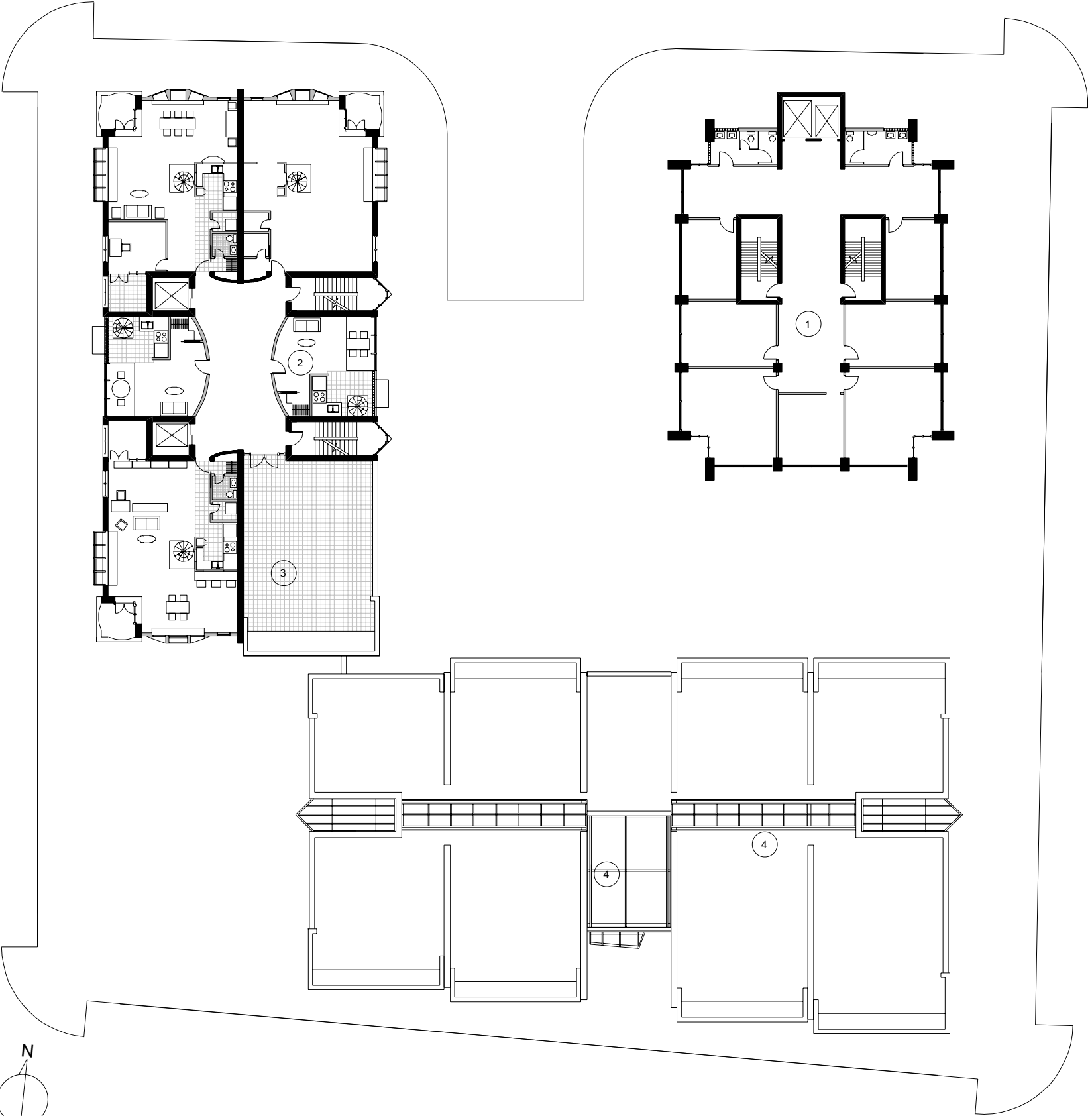
| Key | |
|-----|---------------------|
| 1 | Office Floor |
| 2 | Loft Apartment |
| 3 | 4-Bedroom Apartment |
| 4 | Roof-Top Terrace |



Fifth Floor Plan

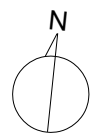
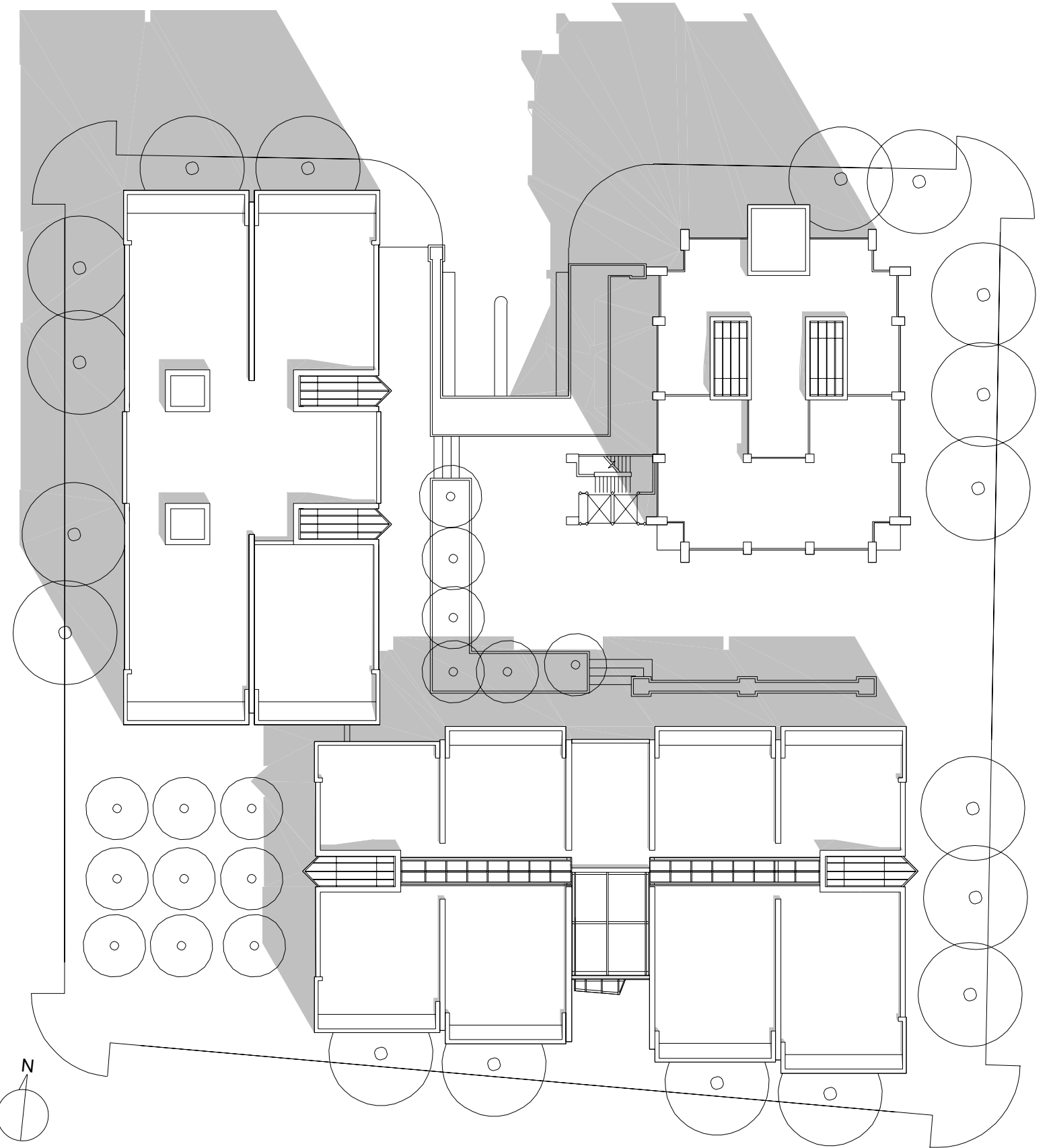


The final element, the office tower, will provide a place for people to work when their homes do not suffice. This building is modeled upon the latest trend for office hotelling. These places are also known as telework centers, particularly the places related to the General Services Administration. These offices can be used for group work, meetings with clients in a formal environment, and access to the latest technology. An open plan was designed to allow for flexible use throughout the life of the building. Each floor would be managed by a person who would schedule use of the different spaces within the building.



| Key | |
|-----|------------------|
| 1 | Office Floor |
| 2 | Loft Apartment |
| 3 | Roof-Top Terrace |
| 4 | Skylight |

Seventh Floor Plan
 1 5 10 20 50



Roof Plan



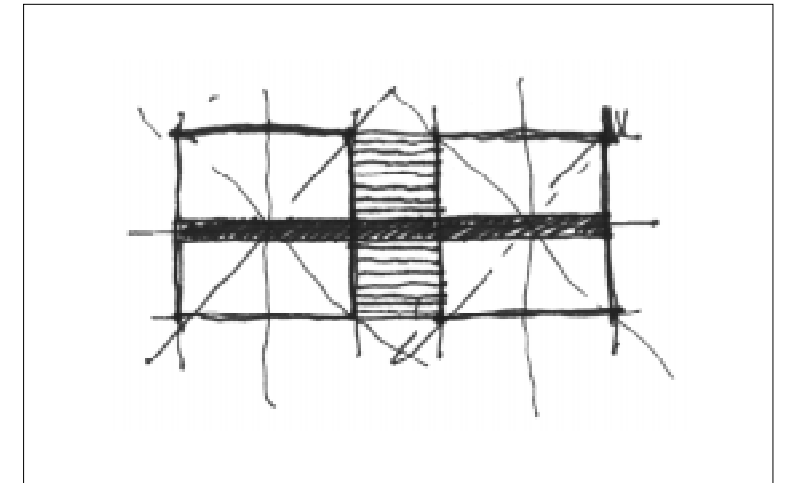
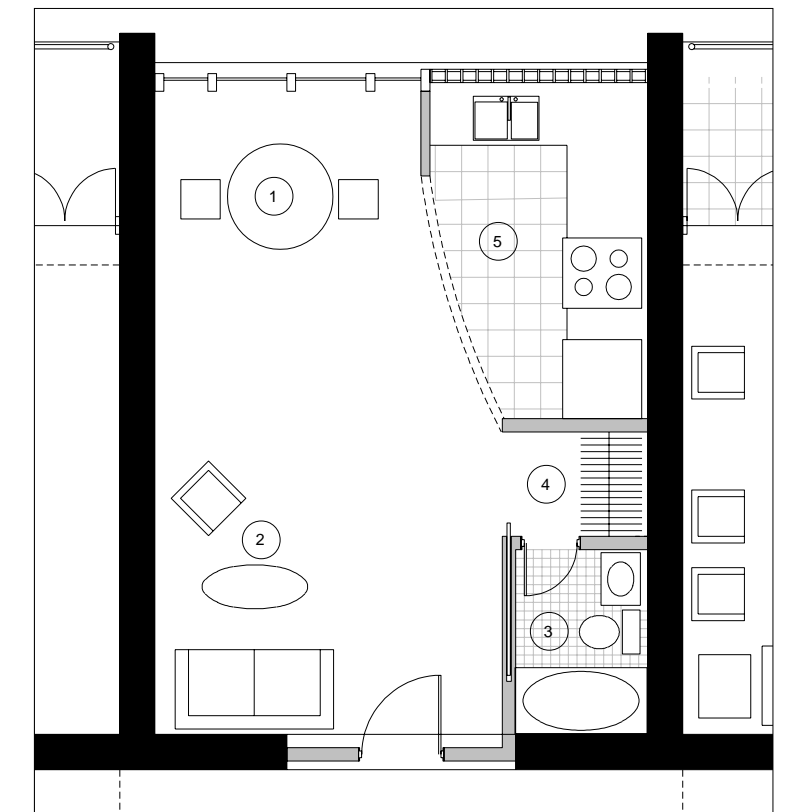
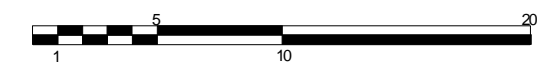


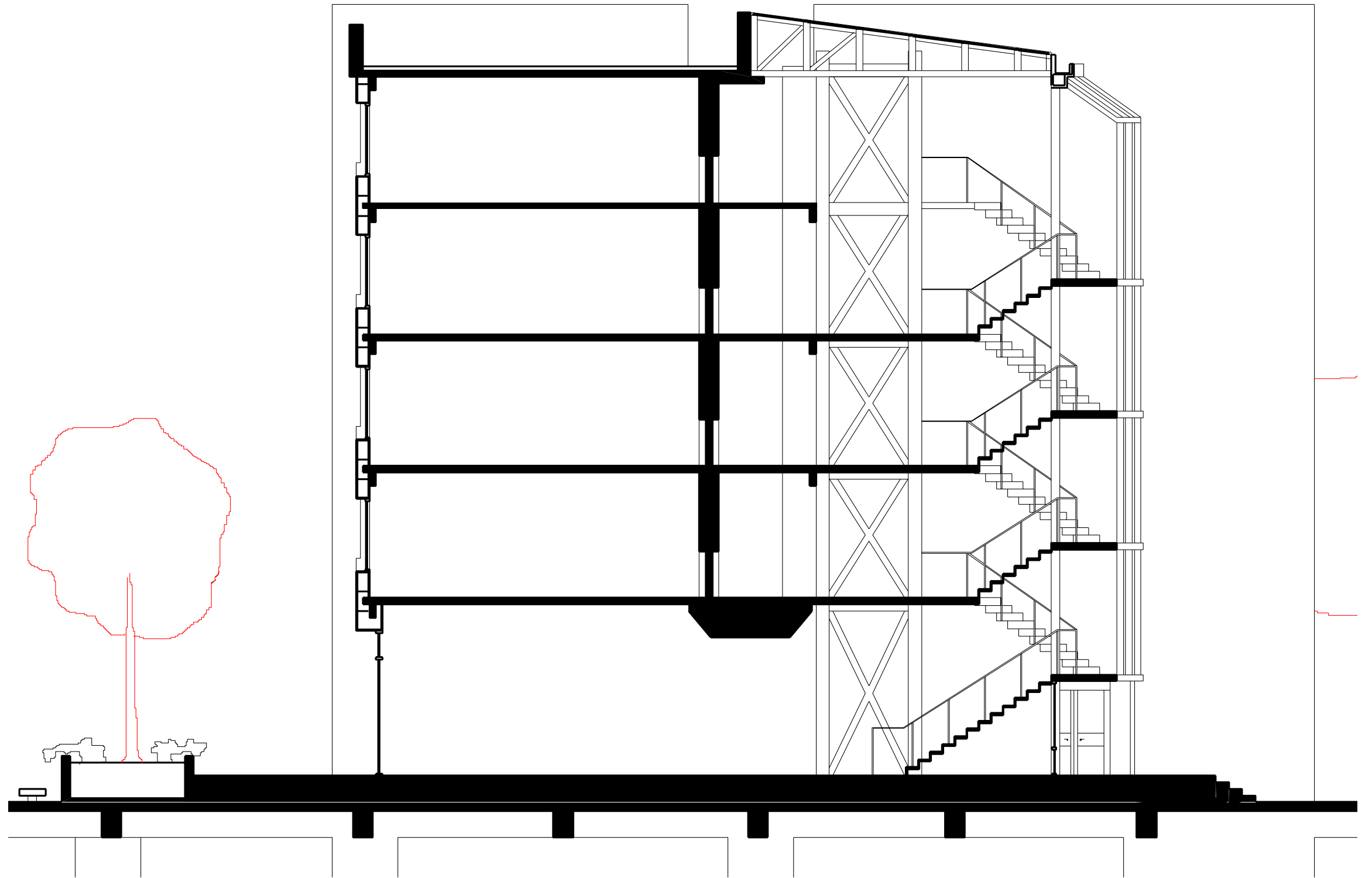
Diagram of the Apartment Block



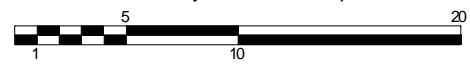
Efficiency Apartment

| Key | |
|-----|-----------------------|
| 1 | Dining Area |
| 2 | Living Room / Bedroom |
| 3 | Bathroom |
| 4 | Closet |
| 5 | Kitchen |





Section at the Entry Zone of the Apartment Block



Key

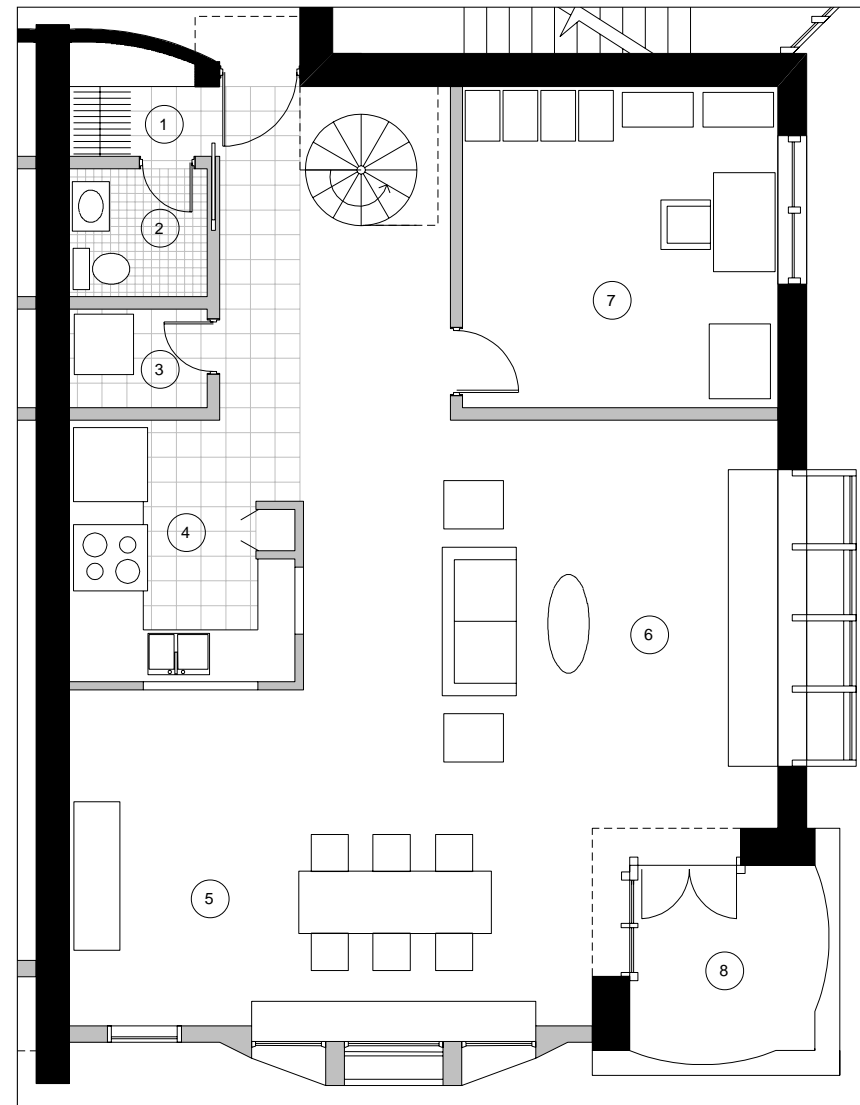
- 1 Coat Closet
- 2 Powder Room
- 3 Utility Room
- 4 Kitchen
- 5 Dining Room
- 6 Living Room
- 7 Office
- 8 Balcony

Key

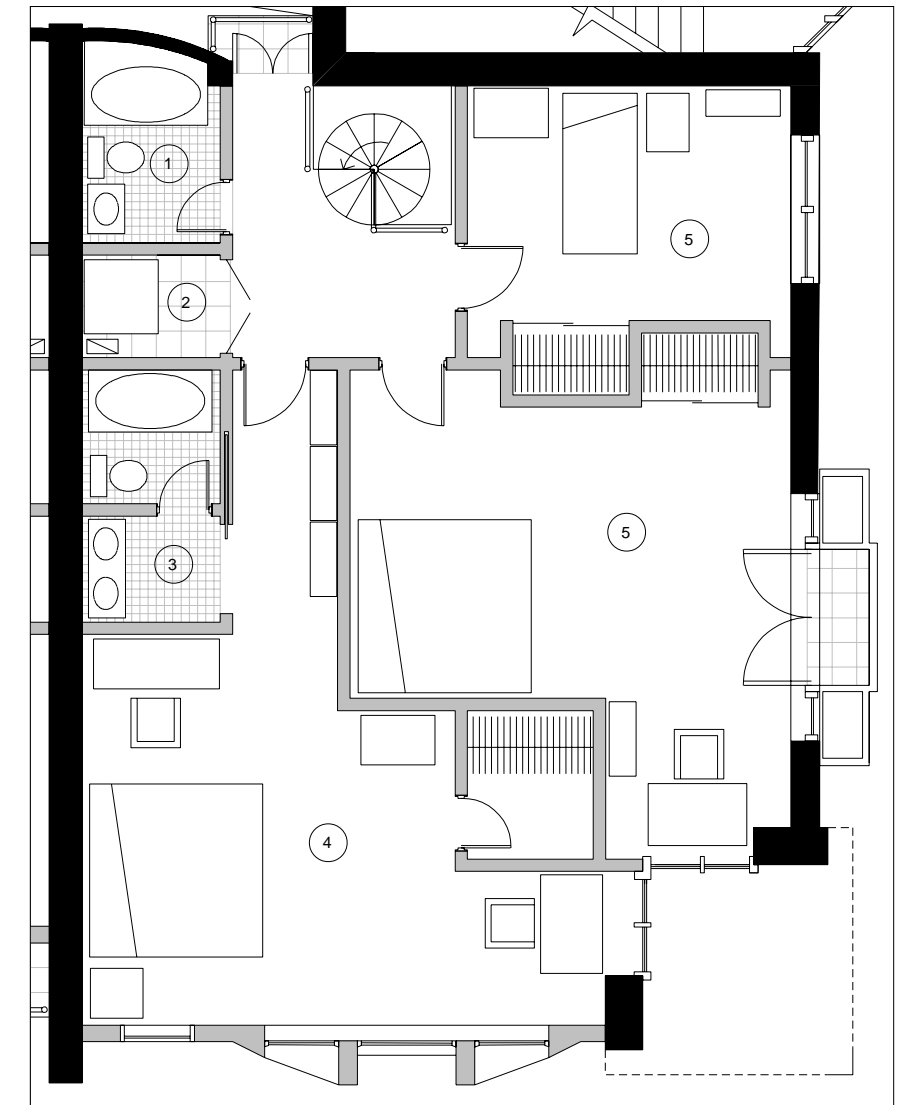
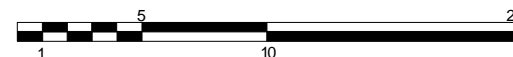
- 1 Bathroom
- 2 Laundry Room
- 3 Master Bathroom
- 4 Master Bedroom
- 5 Bedroom

To the East and West of the entry zone of the apartment block are the two storey apartments. As one arrives to the entrance to the apartment the wall curves out to signify an event. Above each entrance is a small balcony which is accessed from the private second floor of each apartment. These balconies are too small for use other than coming out to see who has come to visit.

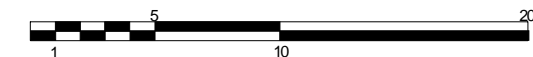
The corridors are two stories each, with a skylite above the upper corridor. The lower corridor will receive natural light through a glass block floor. These corridors would become special places within the building, an exciting change from the typical dimly lit corridors found in apartment buildings.

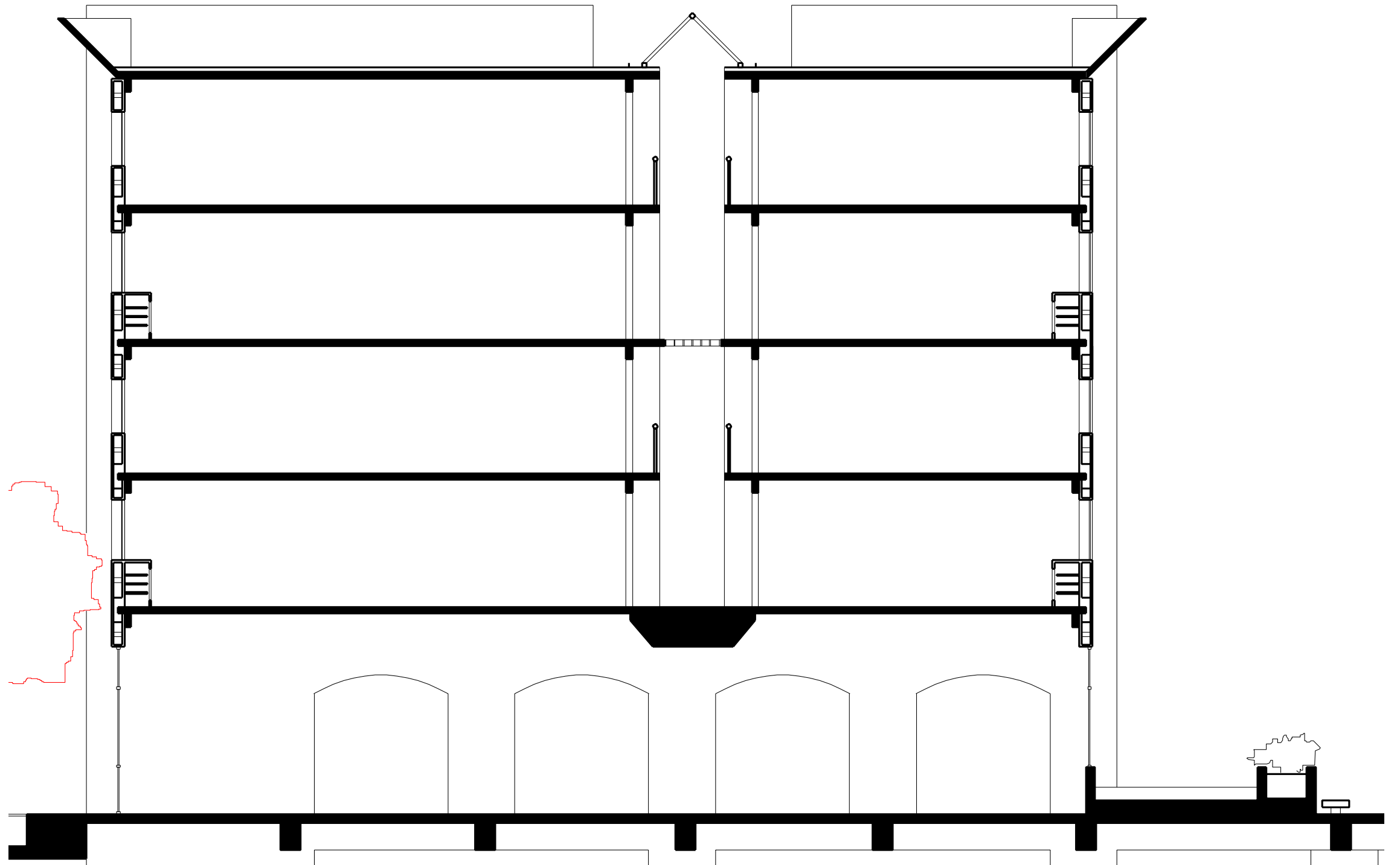


Three-Bedroom Apartment: Lower Level

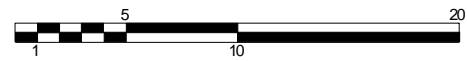


Three-Bedroom Apartment: Upper Level



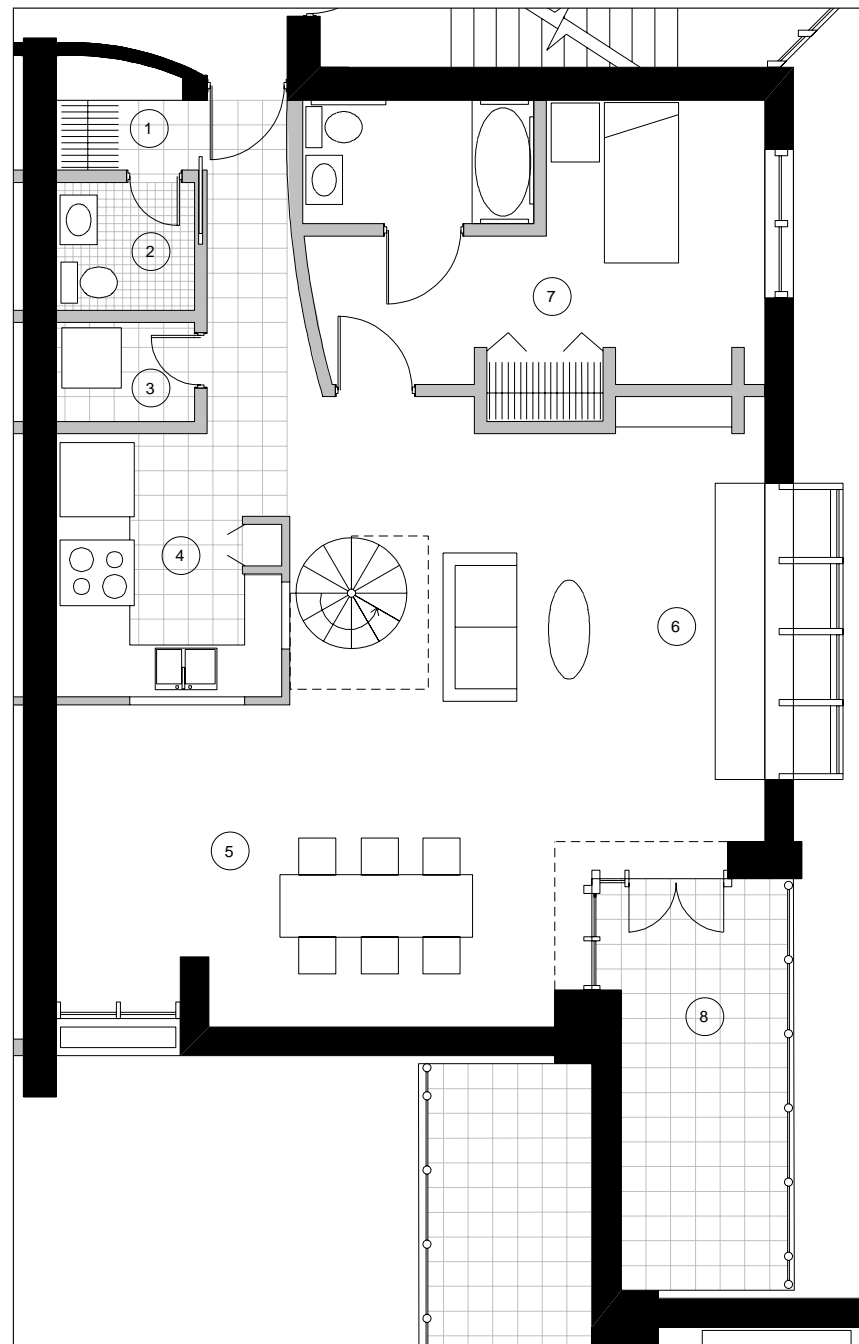


Section at the Apartment Block Showing the Relationship Between Apartments and Corridor

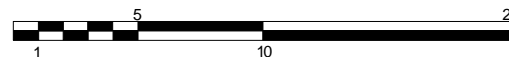


The three and four-bedroom apartments in the apartment tower are very similar in layout and zoning as the apartment block. An example of a “granny apartment” is shown in the example of the four bedroom apartment. Whether an office or an accessible bedroom and bathroom are placed on the lower level of an apartment is a decision of the occupants. The balcony above the entrance to each apartment is missing from the tower. Since the master bedroom is located in this area of the private upper floor, the balcony was left out to allow for more privacy.

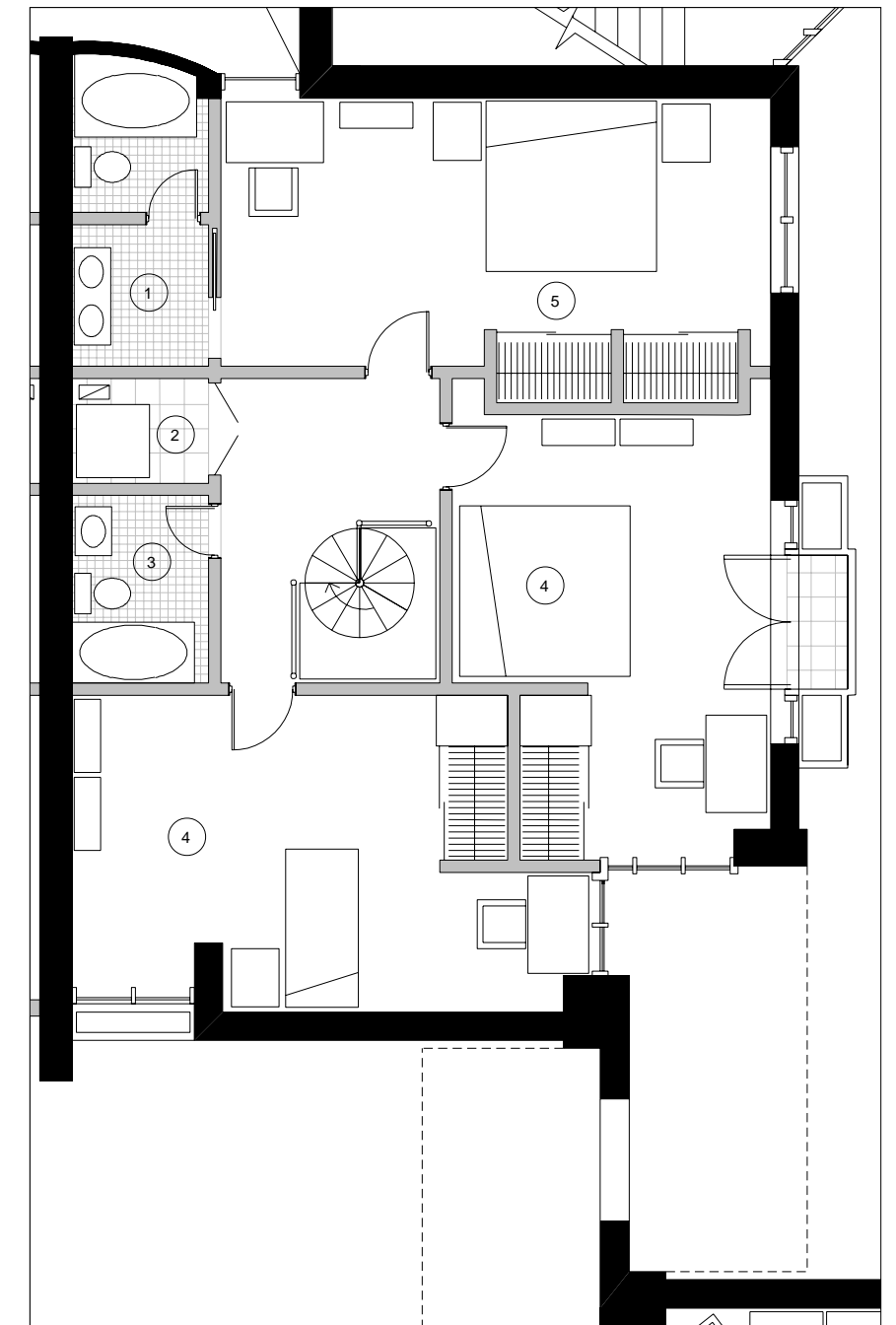
| Key | |
|-----|------------------|
| 1 | Coat Closet |
| 2 | Powder Room |
| 3 | Utility Room |
| 4 | Kitchen |
| 5 | Dining Room |
| 6 | Living Room |
| 7 | Granny Apartment |
| 8 | Balcony |



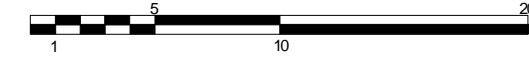
Four-Bedroom Apartment: Lower Level



| Key | |
|-----|-----------------|
| 1 | Master Bathroom |
| 2 | Laundry Room |
| 3 | Bathroom |
| 4 | Bedroom |
| 5 | Master Bedroom |

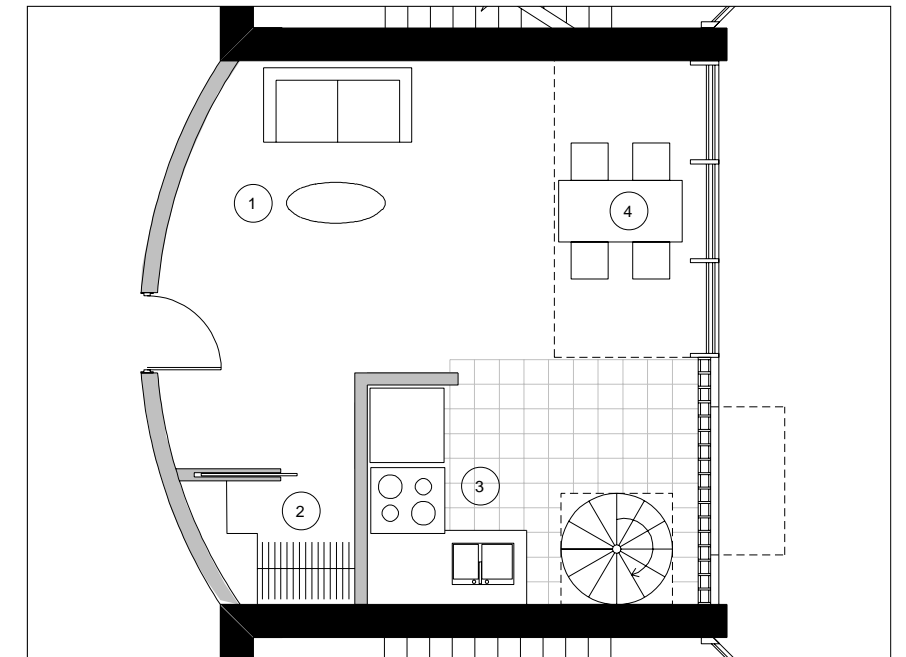


Four-Bedroom Apartment: Upper Level

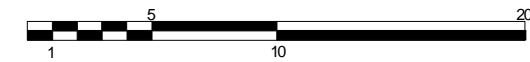


A loft apartment on either side of the entry zone replaces the efficiency apartment found in the apartment block. Though most of the zone containing the loft apartments is glazed on the exterior, metal panels and glass block help to break up the elevation. Each loft still uses the idea of public space on the lower level and private space on the upper level. The lower floor holds the living room, kitchen, closet and dining room. The loft contains the private functions of sleeping, bathing and dressing. Though at a much smaller scale than the two story apartments, a consistency of planning was used.

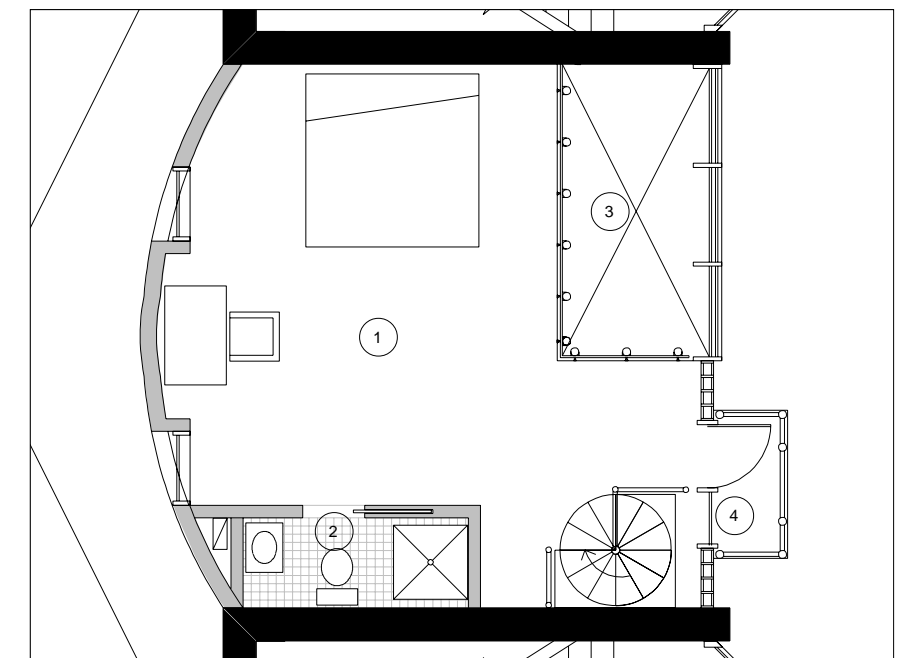
| Key | |
|-----|-------------|
| 1 | Living Room |
| 2 | Closet |
| 3 | Kitchen |
| 4 | Dining Room |



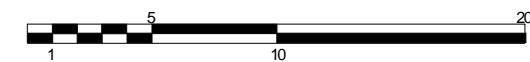
Loft Apartment: Lower Level



| Key | |
|-----|---------------|
| 1 | Bedroom Loft |
| 2 | Bathroom |
| 3 | Open to Below |
| 4 | Balcony |

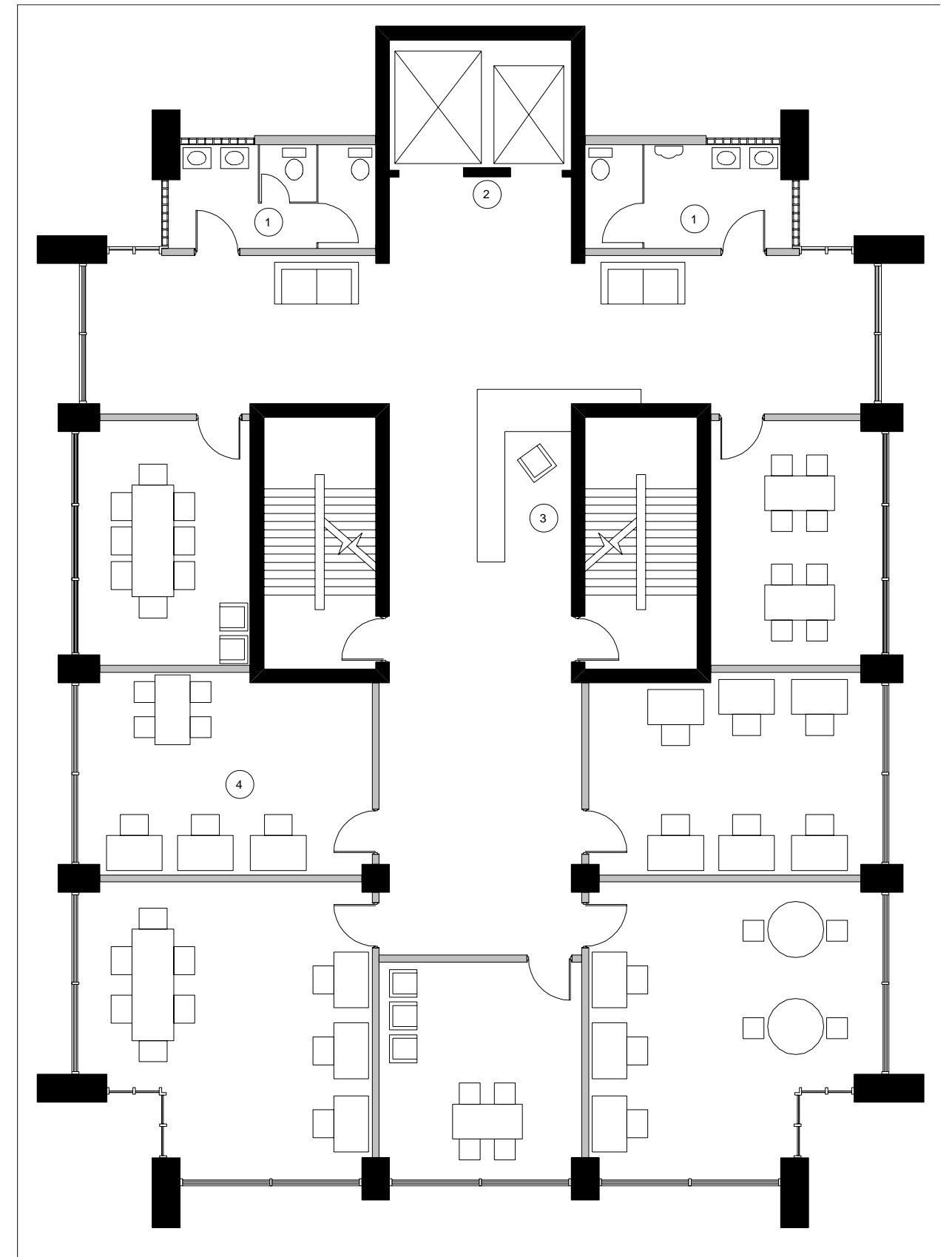


Loft Apartment: Upper Level

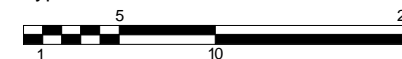


The office building was articulated differently from the residential buildings. The primary elements are metal, glass and concrete. This building should be read as a different function from the residential buildings, but similar concrete piers were used to provide some link between the office building and the residences. Retail was maintained on the ground floor to remain consistent with the rest of the buildings on the site. Each floor was also divided for HVAC usage, allowing for the floors to be heated and cooled according to usage of the individual floors. This model was used to emulate the HVAC systems often used in hotels. Ventilators in each room of some hotels allows for usage only when a room is occupied. Since this office building is not planned to be used as frequently as a typical office building, this would be an efficient form of ventilating the building.

| Key | |
|-----|----------------|
| 1 | Restroom |
| 2 | Elevators |
| 3 | Office Manager |
| 4 | Typical Office |

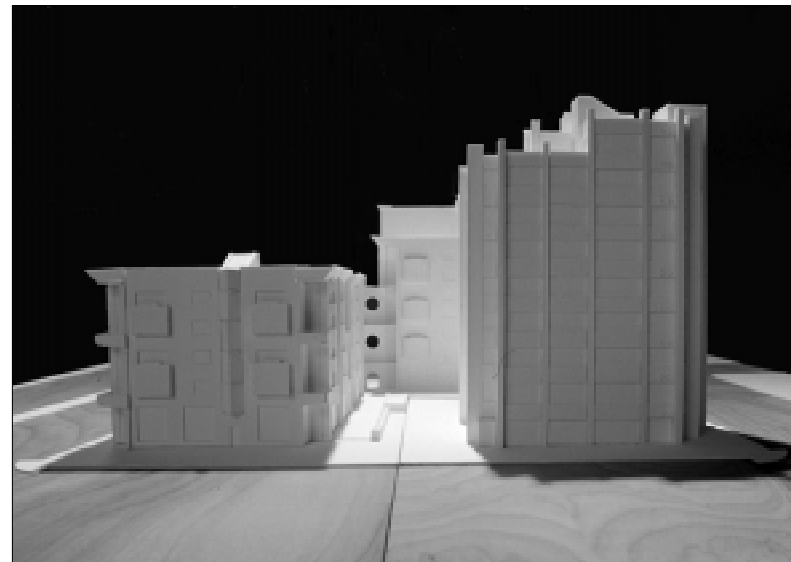


Typical Office Floor Plan

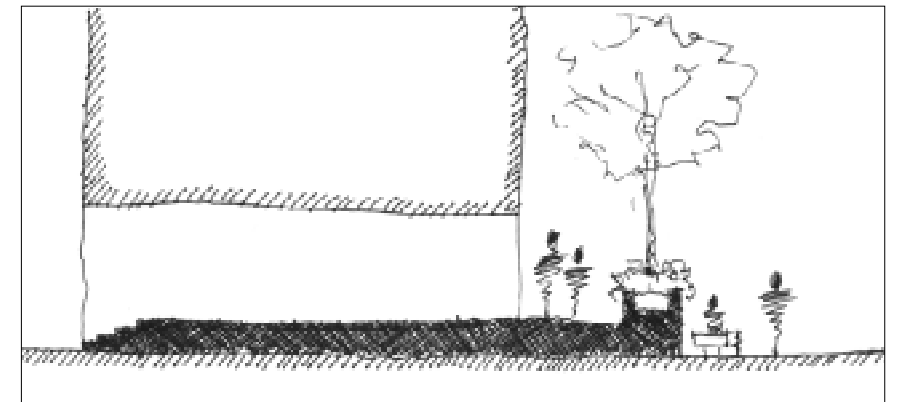




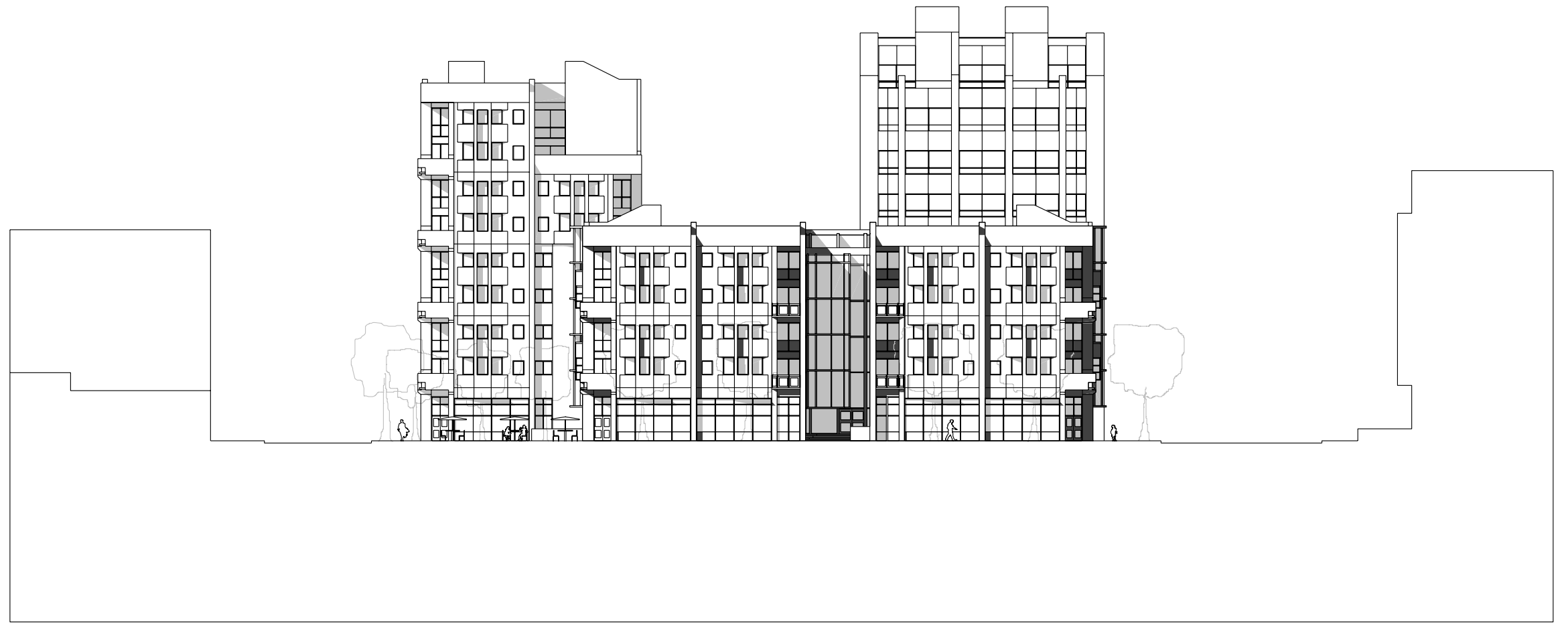
East Elevation



Model View of the East Elevation



Sketch of the Separation Between Public and Private



South Elevation



Model View from the Southwest

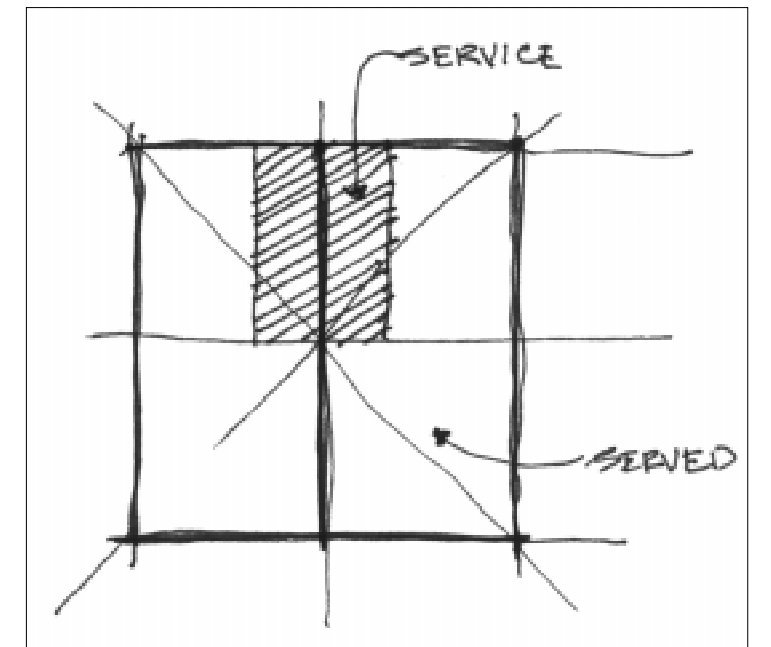
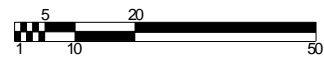


Diagram of Service Zone and Served Zone for Apartments



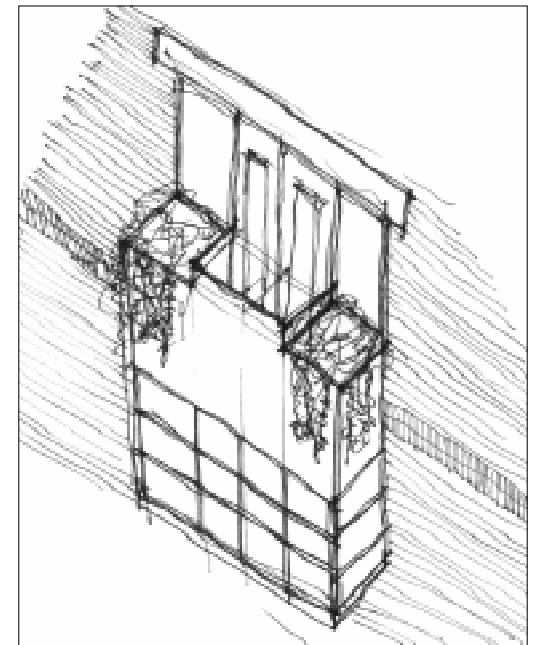
West Elevation

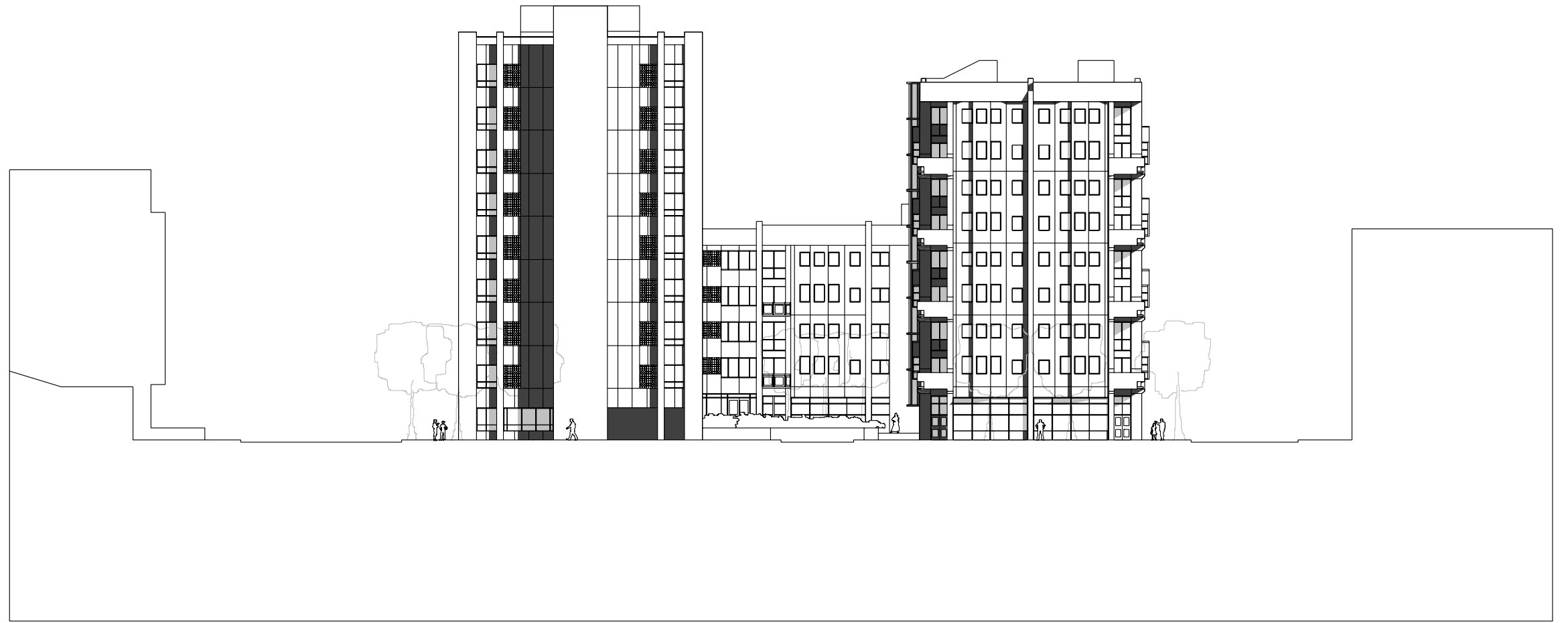


The exterior of the apartment block was articulated to show that the apartments within are two stories. Two storey metal elements are attached to the building providing windows and planters. A balcony with a two storey space above is also used to help emphasize the two story apartments within. The corner balcony is meant to be a special piece of precast concrete to be brought to the site during construction. The balcony is cantilevered from poured in place concrete piers which are used in the corners of the building.



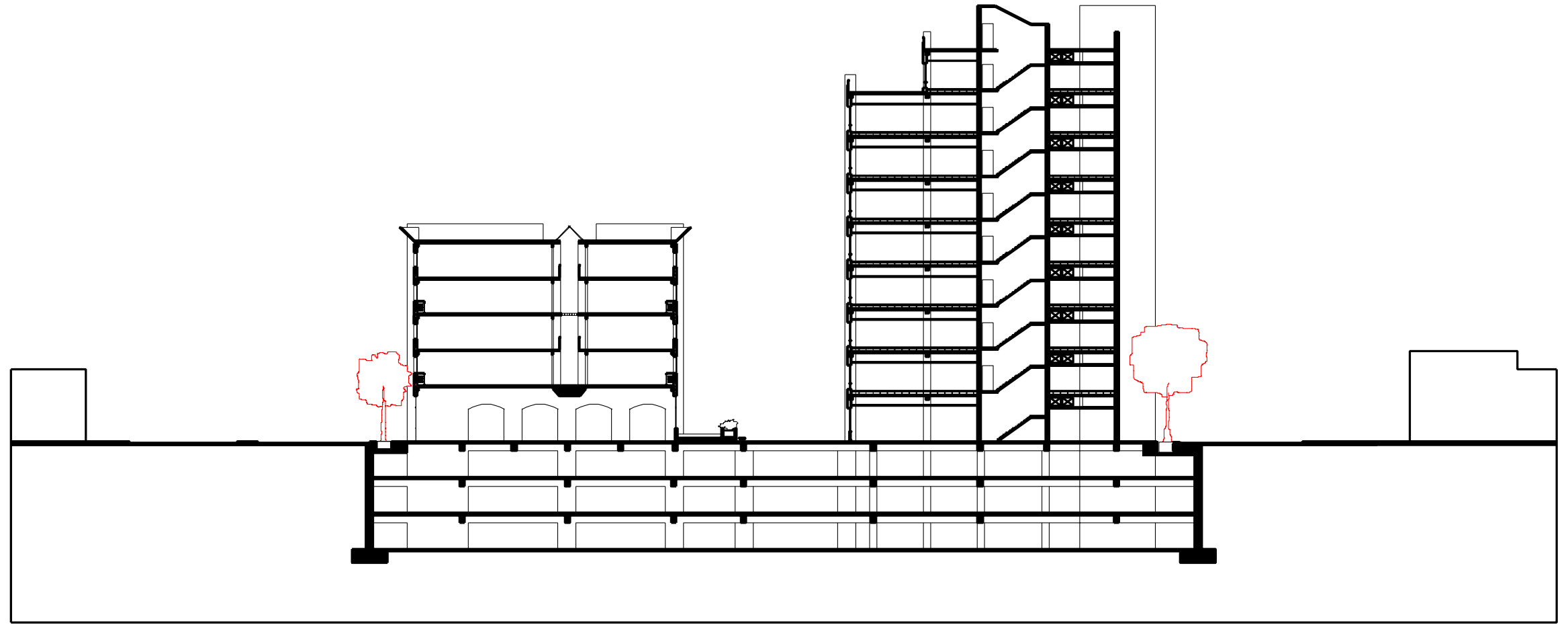
Model View from the West



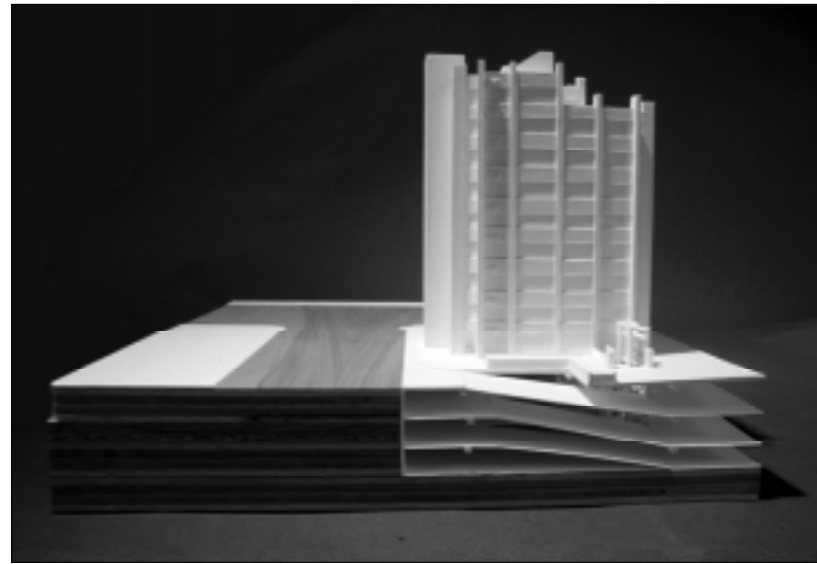


North Elevation

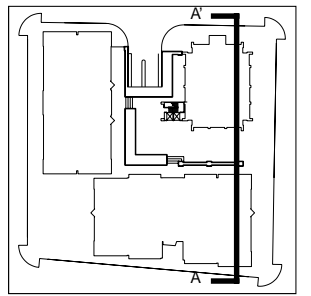


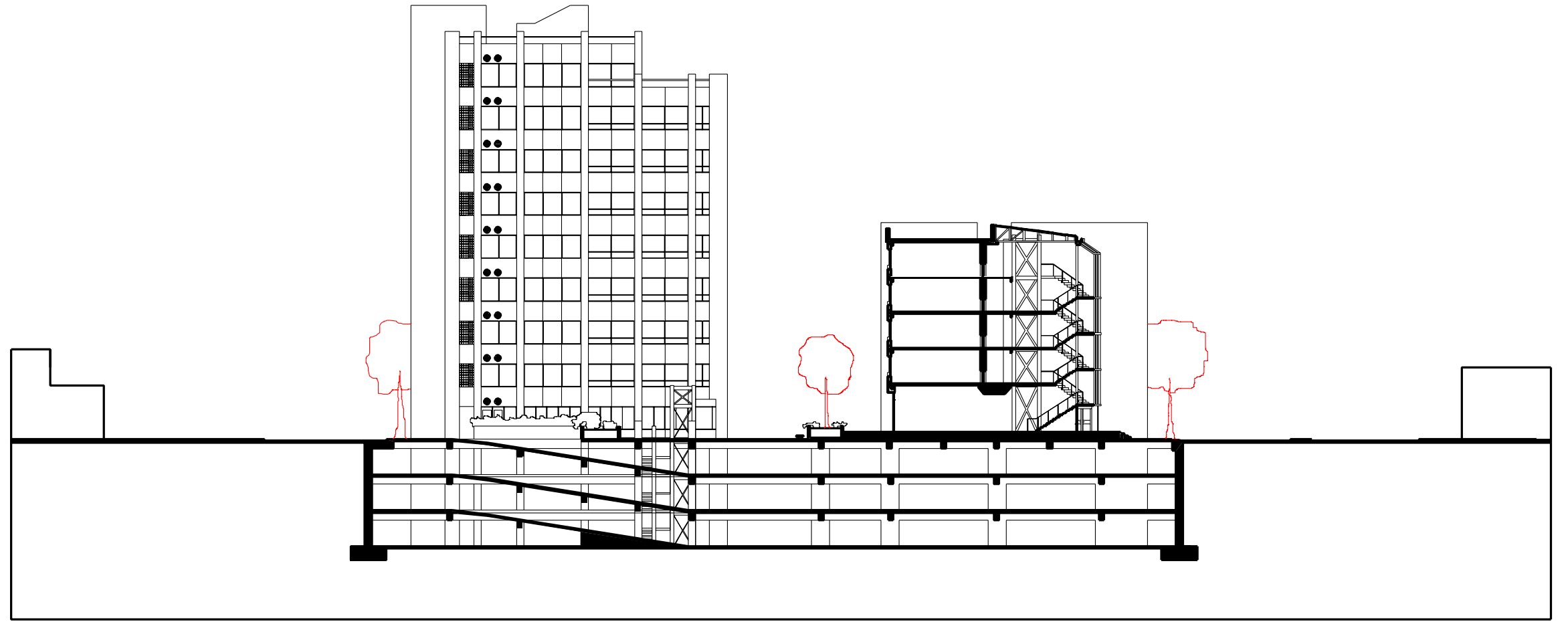


Section A-A'
1 5 10 20 50

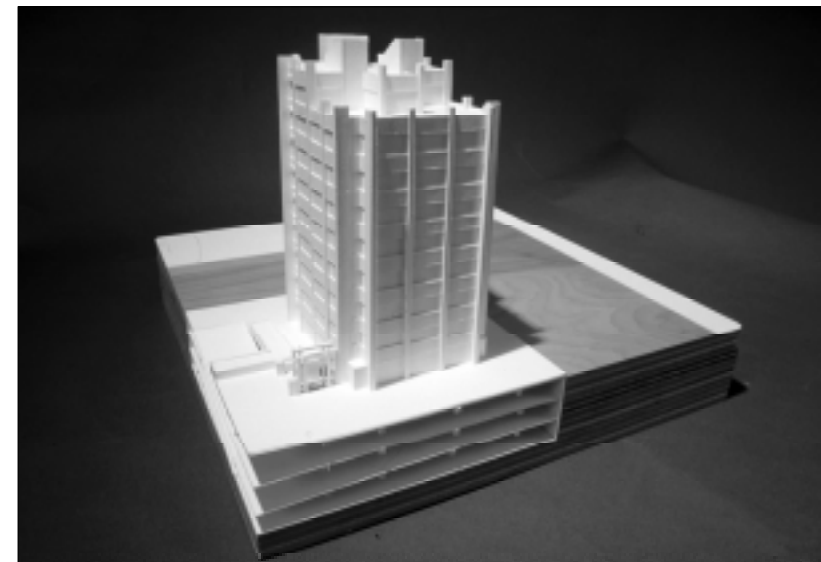


Model View of a Section by the Office Tower

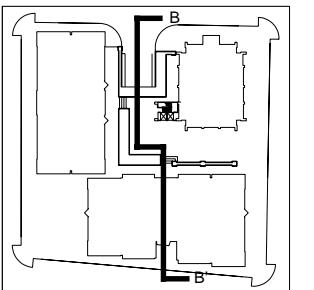


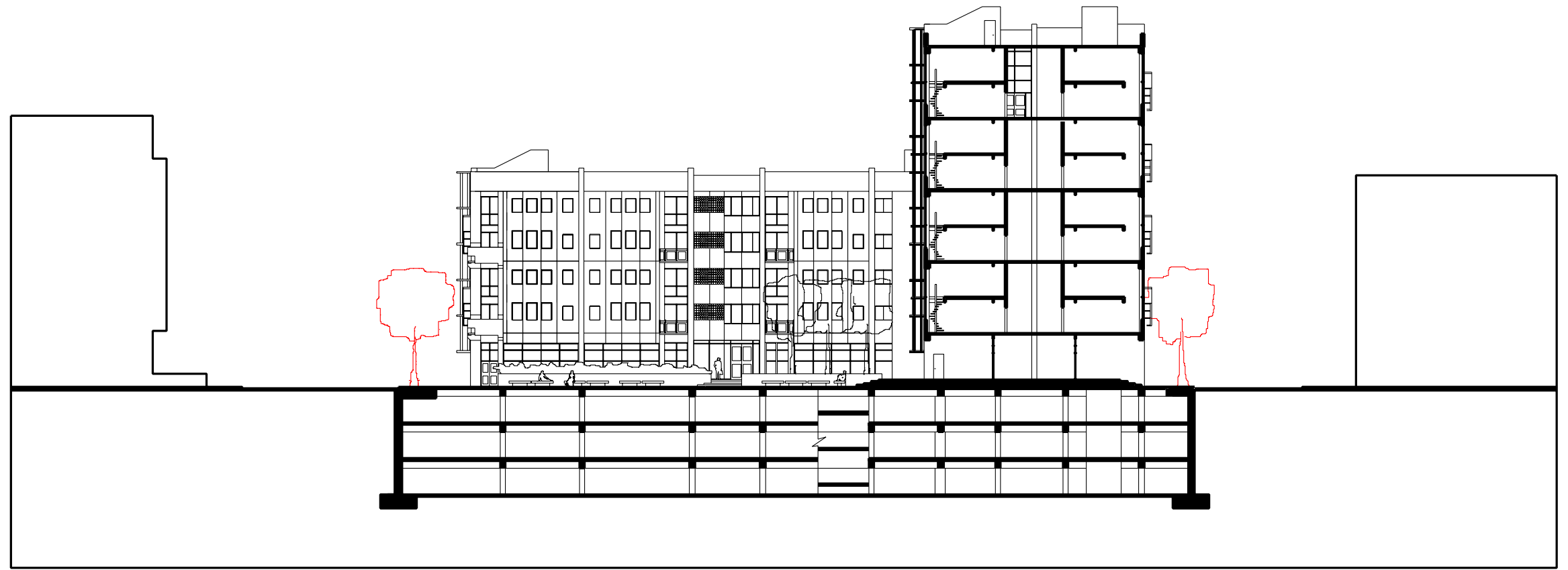


Section B-B'



Model View Section of the Office Tower

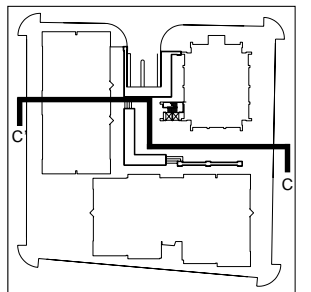


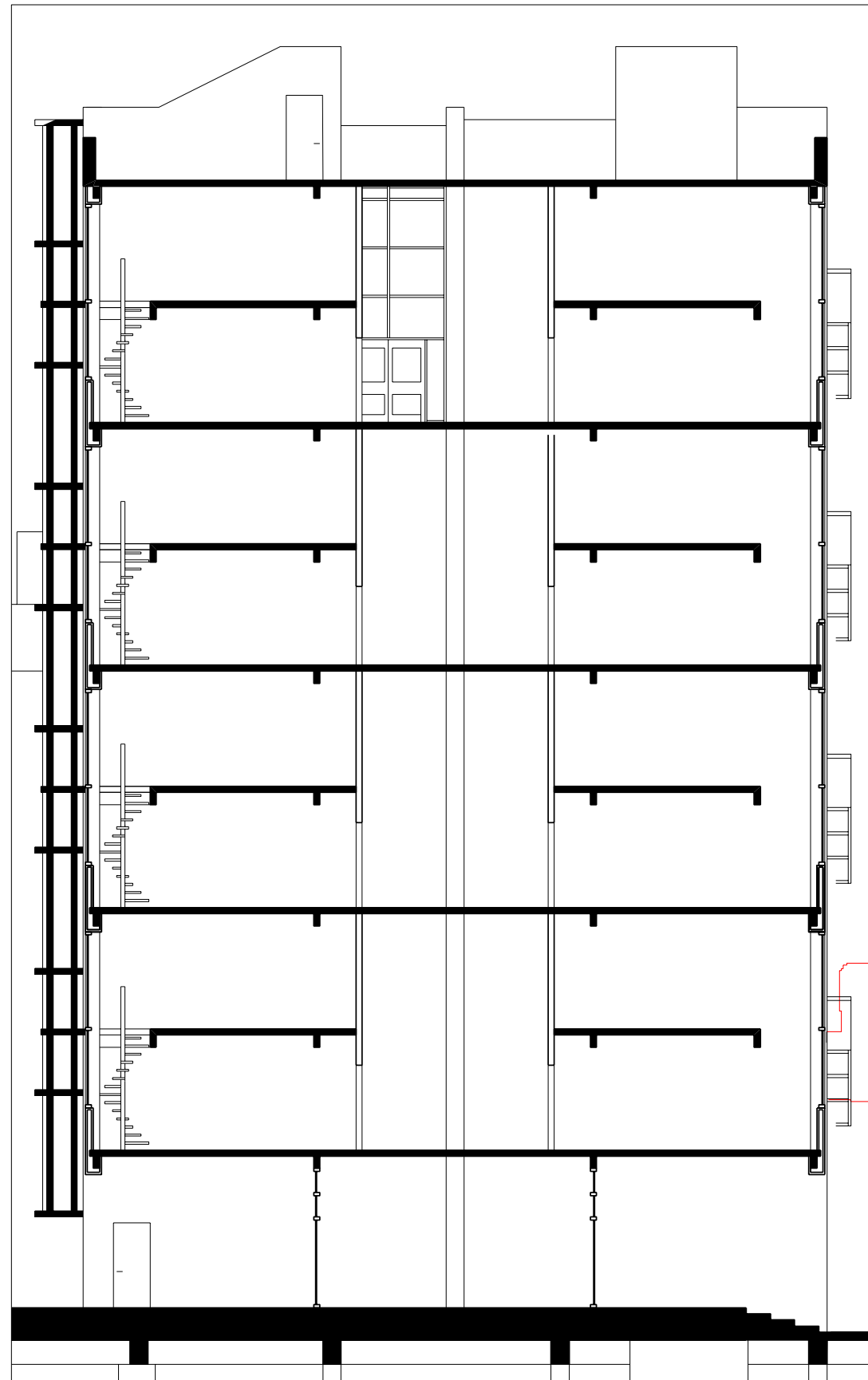


Section C-C'

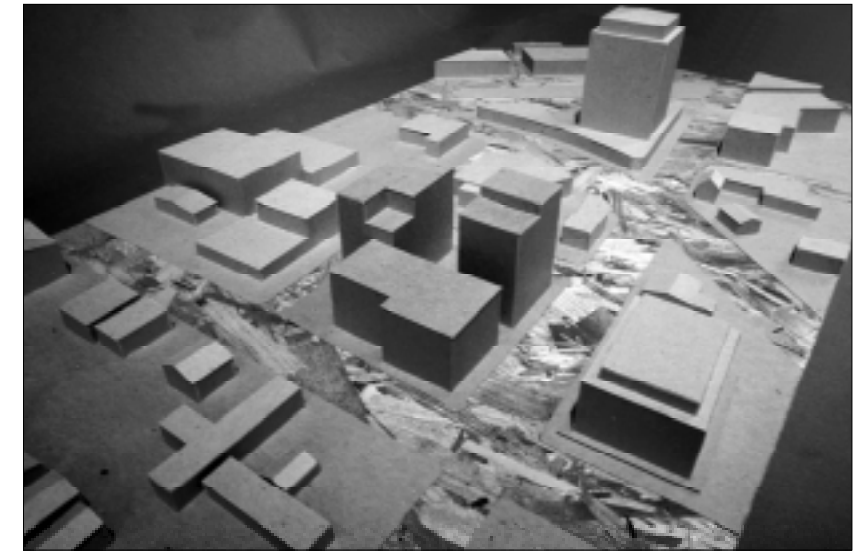


Model View from the West

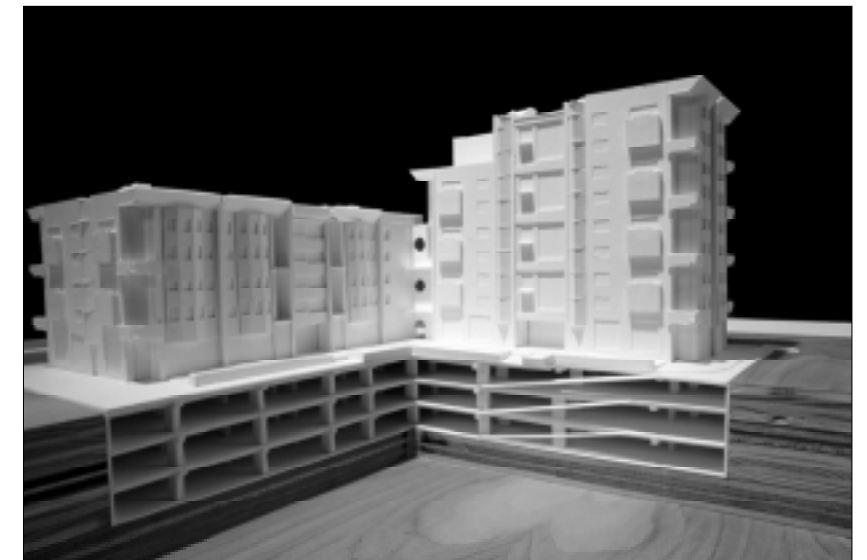




Section at the Apartment Tower Entry Zone



Model View of the Site from the Southeast



Model View from the West

Summary

How we live in the future may not change drastically from today. This thesis does not propose this idea, but I do acknowledge the fact that more people are beginning to use their homes as places of work and shopping. If we no longer need to leave our homes, and our homes can be located anywhere we wish, what environment should architects design for people?

As the world becomes a global village digitally connected to every point on the earth, people have become further detached from the world and each other. Technology has allowed many people to avoid the cities where business was traditionally handled. As these people move farther and farther away from our cities, many places rich in history have been left behind. This destructive path must be considered and alternatives should be provided.

This thesis has taken an approach which addresses these issues. Where we live does have an impact on our history and our culture. The act of recreating our towns throughout our countryside should be reconsidered. There are so many places in our metropolitan areas which require careful planning to bring back life to an historic neighborhood. This attitude found in the Arlington County planners helped guide my choice for a site. Their ideas of redeveloping our old neighborhoods has proven to be successful in bringing people to these new miniature downtowns. A successful blend of retail, commercial, and residential units should help to ensure the continued life of a neighborhood as described by Jane Jacobs in *The Death and Life of Great American Cities* (6). Clarendon was chosen as the site for this thesis because this blend was lacking around its mixed use area.



Illustration Credit

- 1 Xerox Workcenter 250. Advertisement. Newsweek Feb. 1996
- 2 Toshiba. Advertisement. Newsweek Feb. 1996
- 3 Duany, Andres and Elizabeth Plater-Zyberk, Towns and Town-Making Principles New York, Rizzoli International Publications, 1991
- 4 ---, Towns and Town-Making Principles New York, Rizzoli International Publications, 1991
- 5 ---, Towns and Town-Making Principles New York, Rizzoli International Publications, 1991
- 6 Arlington County, Virginia, Department of Community Affairs, "Clarendon Sector Plan", May, 1984
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- 1 Gordon, Gil, "Doing the Office Work Without the Office", Employment Relations Today, (Summer 1997)
- 2 United States. General Services Administration. Federal Interagency Telecommuting Centers. Washington D.C.: GPO, 1993
- 3 Kim, Nancy, "Cleaning Up Their Act: Telecommuters Lead Drive for Better Air", Bergen Record, (July, 1994)
- 4 Arlington County, Virginia, Department of Community Affairs, "Clarendon Sector Plan", May, 1984
- 5 Lynch, Kevin, The Image of the City, Cambridge, The MIT Press, 1960
- 6 Jacobs, Jane, The Death and Life of Great American Cities, New York, Random House, Inc., 1961

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Arlington County, Virginia, Department of Community Affairs, "Clarendon Sector Plan - Addendum A", May,
1990

United States. General Services Administration. Federal Interagency Telecommuting Centers. Washington D.C.: GPO,
1993

Appendix

The questions raised during the defense asked about the relationship of the office building to the apartments. The place where we live in this new digital era was the major focus of this thesis, but what about where we work away from our homes? Hotelling principles were used in the design of this office building, but is that enough? Would virtual reality completely negate the need for a formal place to conduct meetings and have groups work together? With the level of technology we have today hotelling principles seem sufficient for the design of these new telework centers, but as technology advances we may no longer need office buildings. The U.S. government and businesses have already started to reduce the amount of leased office space they require (2) (3), so the question may be what we do with the typical office building that has been abandoned.

Vita

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- 1998 Received Master of Architecture - Washington Alexandria Architecture Consortium, Virginia Polytechnic Institute and State University
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- 1994 - 1996 Employed at Bruce A. Rich Associates - design, drafting, and computer graphics

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- 1995 Awarded research grant to document an historic sawmill in Nassawadox, Virginia - Virginia Polytechnic Institute and State University
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- 1990 Awarded full scholarship as PhD candidate - University of Pittsburgh, Department of Molecular Biology