

New Urban Housing in Seoul, Korea

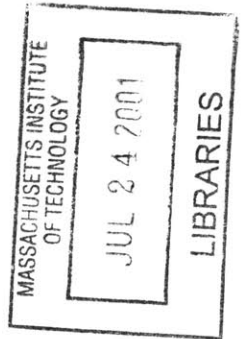
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Degree of

Master of Architecture
at the
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Fig 3 Seoul in 1920

Abstract

For the last three decades, the capital city of Korea, Seoul, has experienced an explosive increase in population and rapid urbanization. This increase has led to a severe housing shortage in Seoul. The government responded to this urgent demand for housing by building western style high-rise and high-density apartments. In this process, the government disregarded Korean architectural heritage and destroyed the old urban fabric. Today, after thirty years, Seoul is filled with 200 foot high white concrete boxes. Seoul lost many charming characteristics. Many old narrow streets are gone and are replaced by the straight traffic roads. A larger supermarket has replaced a small neighborhood grocery shop. To preserve the old neighborhoods of Seoul, a different planning practice should be implemented. This thesis examines the current housing trend in Seoul and proposes a plan for “Kyunam-dong.” Also, it proposes a representative building that not only respects the existing urban fabric but also provides the modern conveniences to its neighbor. The thesis aims to demonstrate how the alternative planning could preserve the old neighborhood as much as possible and keep people from leaving this neighborhood.

Thesis Supervisor: Roy Strickland
Title: Principal Research Scientist in Architecture

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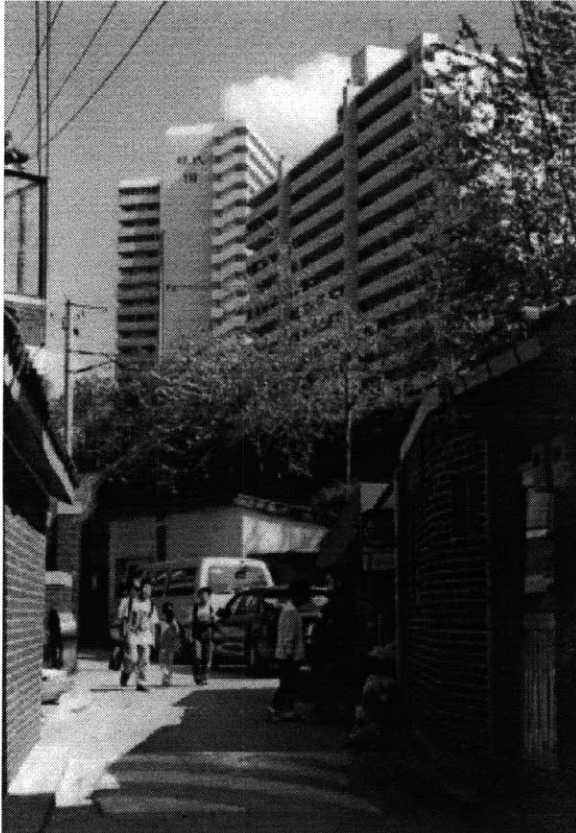
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Fig 5 Seoul in 2001

I. Introduction



Urban Renewal in Seoul

For last couple of decades, Koreans worked hard to develop their country. They wanted to build a modern nation like the United States and European countries as soon as possible. To achieve this goal quickly, they borrowed their political system, democracy, and they imported their economic system, capitalism. Furthermore, they abandoned their traditional clothes and bought ties and suits. They even began to eat hamburgers and pizzas in McDonald's and Pizza Hut. Above of all, they wanted live like the western people, so they built hundreds of high rise apartments that were the symbol of modern living for them.

While this transformation went on, Koreans lost their cultural identity. However, they did not consider it as a serious problem because they were so eager to build a city like New York or Paris. During the 20th century, the history of Architecture in Korea has been the history of adoption. Surprisingly, it did not take a long time to give up their thousands years old architectural tradition and to replace it with the international style architecture.

One may ask why they gave up their architectural tradition so easily? In fact, there are several reasons. At first, Koreans wanted to build western style buildings because they believed that they represents cultural superiority and technological advance. In other words, they liked them

because of what they represent. They wanted to show the world that they are advanced as other western nations. They wanted to get away from the image of the poor nation, and one of the fastest ways was to change their physical environment like the western cities. This kind of attitude comes from Koreans' prejudice against their own culture. Many Koreans often talk about how far Korea is behind the developed countries in terms of its technical and cultural advancement, and look down on their own culture. In addition, they prefer the high-rise apartment because the modern architecture's notion of functionalism has worked well in developing Korea. The international style architecture does not value the decorative cultural elements of a building. Its doctrine of "Less is more" was welcomed by many Korean developers and government. Since the simple high-rise box can be built most economically, many housing projects have been modeled after the international style apartment. Also, they have built it because it provides many modern conveniences. Compare to the crooked street of the old neighborhood, modern complex provides a large open space which is used as a parking lot, a playground and a garden.

Although certain aspects of the physical environment of Korea were improved through this westernization process,

this kind of development has also caused many problems. First, the most serious problem is the lost of cultural identity of the city. As the consequence of several decades of building the western style architecture in Seoul, it becomes hard to distinguish Seoul from any other metropolitan cities in any parts of the world. This ambiguity of place generated the uncertainty of self identity among Koreans. Consequently, people lost their ability to create an original and unique culture. Today, Korean people always look up to the other cultures for inspiration. The architects are no exception. Since they can not see or feel their cultural roots in their physical environment, there is nothing to inspire them to create their own unique architecture. Consequently, they just imitate the western style building without hesitation.

The thesis examines physical environments of Seoul such as its public spaces, streets, housing trends, and history. Also, typical urban development in Seoul is studied as well as the regionalism in architecture. Based on these studies, the selected site, "Kyunam-dong" is redesigned for new development, and it proposes new housing and public space.



Fig 8 View of Seoul

II. History and Background

Seoul

History

Streets

Public spaces

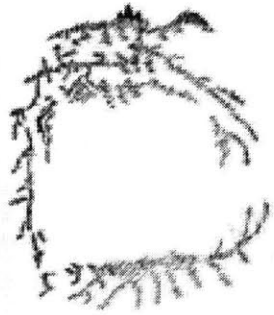


Fig 10.1 Mountains in four directions
North, South, West and East

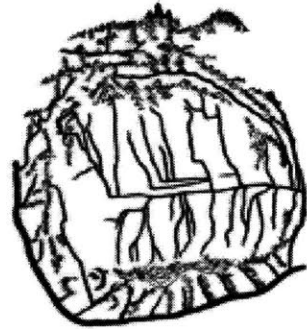


Fig 10.2 A river and streams

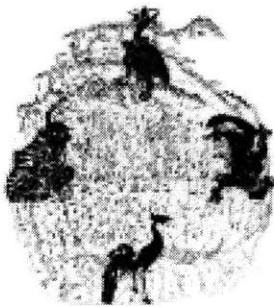


Fig 10.3 Four guardian deities
of Seoul

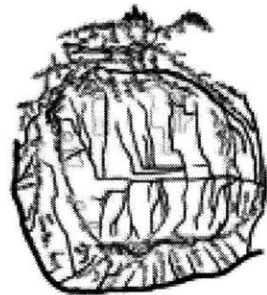


Figure 10.4 Palaces in Seoul

Seoul

History

Five hundred years ago, Seoul was chosen as the capital city of Chosun dynasty because of its strategic location in Korean peninsular and its favorable landscape. The planning of Seoul was influenced by the Chinese city planning practice of the time. (Fig 10.1-4) Also, major roads were organized around the “Kyongbok” palace. Also, the residential areas for the different classes were separated. Most of the higher classes lived around palace, and the lower class lived outside the city wall.

Until 30 years ago, expansion of Seoul has been limited within the north side of the Han River. (Fig 11.1) This area had been surrounded by walls for its protection for five hundred years. The south side of the Han River was not developed because of the difficulty of crossing the river. However, construction of bridges and the shortage of land in 1960s has led to a big housing development in the south part of the river. This new area is called “Gangnam”, which means south side of the river.(Fig 11.2) The Korean government has developed Gangnam as a high density and high rise apartment town. It was a instant success. People loved the conveniences of the new apartments such as 24 hour hot water, large parking lots, security and so on. Many people moved to Gangnam and most of them were high or

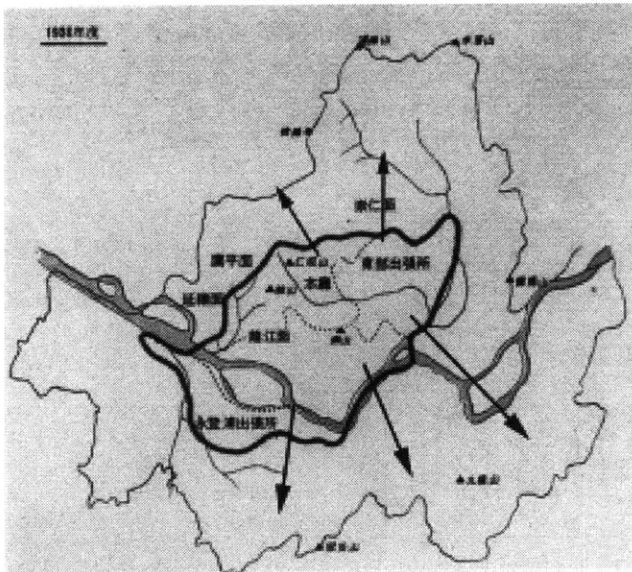


Fig 11.1 Map of Seoul 1936

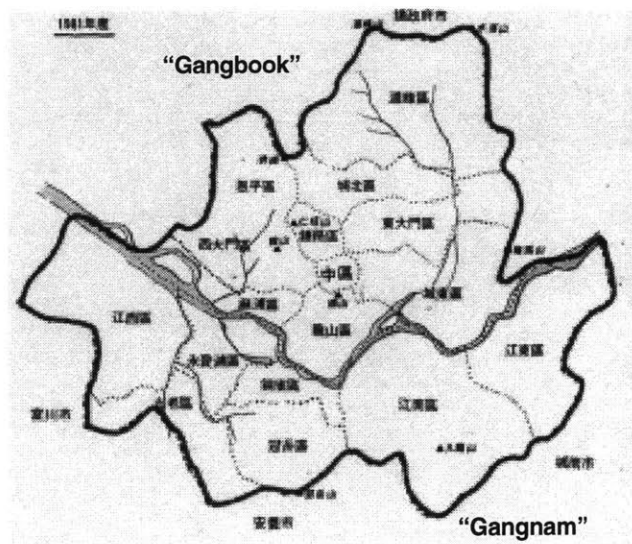


Fig 11.2 Map of Seoul 1981

middle class families. Consequently, many areas in the north part of Seoul became slums, and old downtown in the north side lost many businesses to Gangnam. Today, segregation of Seoul is almost complete and two different income groups occupy each side of the river.

The development of Gangnam was completed around the mid 1990s, and the government shifted its focus back to the north side of Seoul. Currently, the main target area for the development is still the northern part of Seoul, which it did not get much benefit from the rapid development of Gangnam. However, unlike the Gangnam, where were mainly open farmland before the development, many parts of the northern side of Han river, which is called “Gangbook”, are very densely populated urban areas. Also, they still keep many aspects of traditional dwelling. The Narrow streets, deteriorated houses, and crooked alleys are all major characteristics of these neighborhoods.

However, the government has implemented the same planning method in Gangbook as it used in Kangnam. It allowed big corporate developers to buy out the large portion of the old neighborhood and to build an apartment complex. In this process, they destroyed traditional urban fabric and built totally new neighborhood. Today, Seoul is on the verge of transforming itself into a city of the millions of apartments.

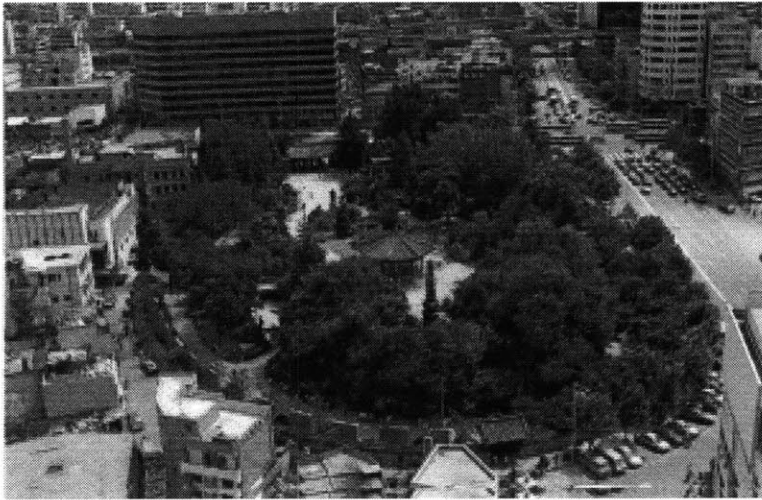
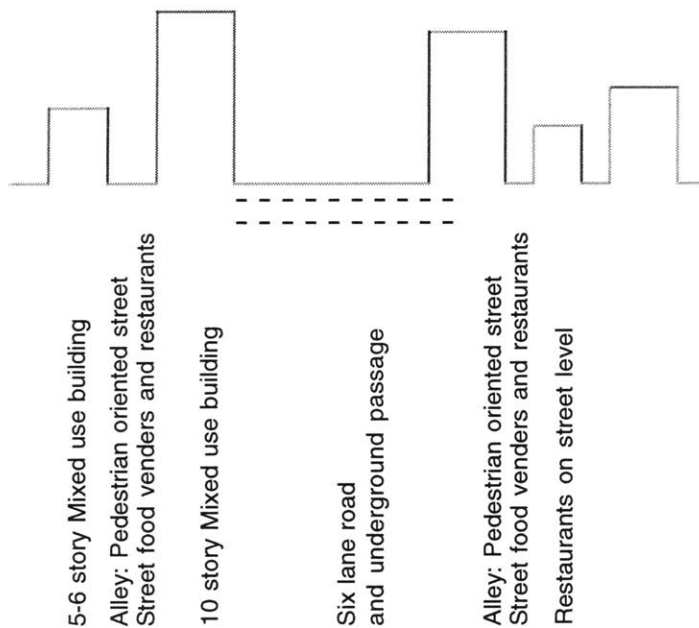


Fig 12 View showing Tapkol park and Chongno



Street

1) Chongno

“Chongno” is a historic street market place. Since Chosun dynasty, it has been famous for special products, and it is still the commercial center of Seoul.

Location: It is located at the central business district, and it attracts people from all around the city.

People: Streets are always crowded with office workers, and shoppers. Especially, many students come to Chongno to attend private educational institutions or to shop in the book stores.

Street: There is a very wide traffic road connecting Chongno to other parts of city. However, the streets around Chongno are mostly narrow and traffic access is limited. These two different street systems seem to work well in Chongno.

Buildings: Modern high-rise office buildings and old historic buildings coexist together.

Program: Government center, offices, hotels, restaurants, private educational institutes, movie theaters, and shops.

Problems: There are only limited numbers of parking spaces. No clear sense of public open space exists. The buildings and streets behind the traffic road are old, and they are not well developed.

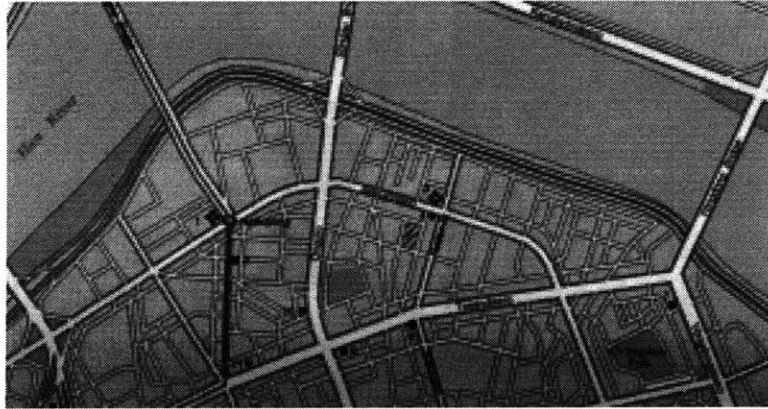
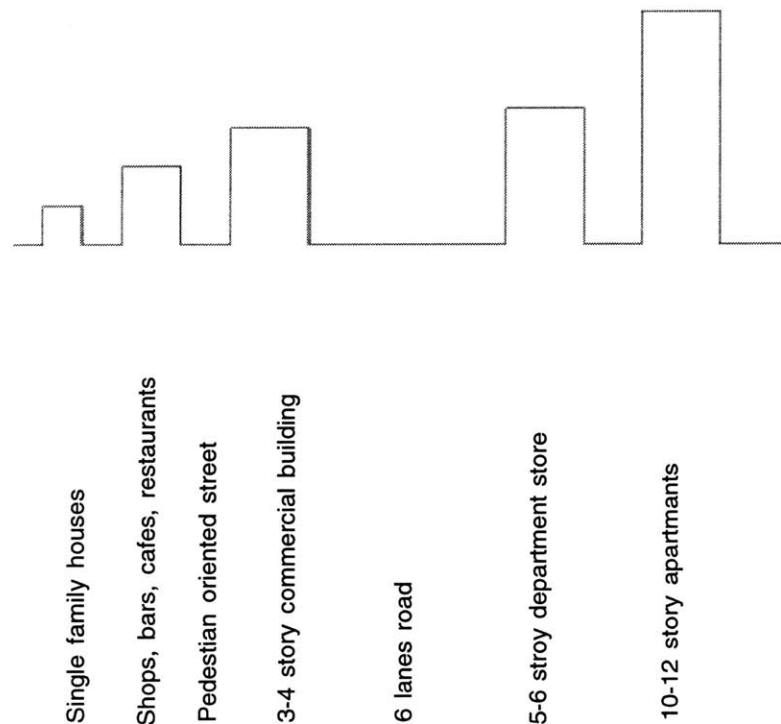


Fig 13 Map of Apkujongdong



2) Apkujong-dong

It is located in “Gangnam” which has been developed rapidly for last two decades. Many middle and upper class families live in and around Apkujon-dong. Today, it competes with the old downtown for its customers. It has many upscale shops and provides various modern conveniences which the old downtown lacks.

Location: It is surrounded by the high-rise apartment complexes. Recently, this area has been designated as the special shopping district because of the concentration of many designer shops. and its popularity among foreign travellers.

People: Many cafes and clothing shops are concentrated in Apkujong-dong and they attract many young people to come here for shopping and entertainment.

Street: The street is always crowded with young people. It is narrow and very busy. Also, the traffic access is limited in a certain area.

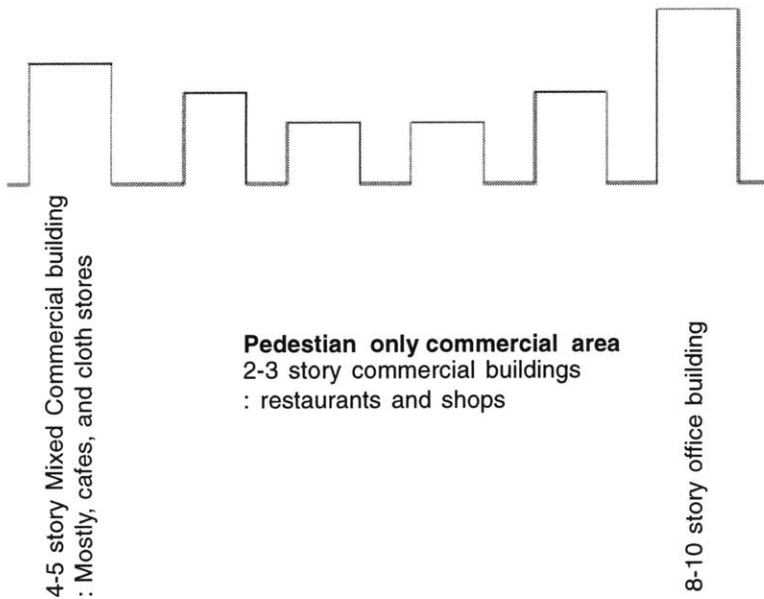
Buildings: There are many mid-rise mixed use buildings. The quality of architecture is higher than any other areas.

Program: Movie theaters, department stores, cafes, clothing shops, and restaurants.

Problems: Mix of residential and commercial zone is not always pleasant. Most places are privarized and people have to pay to get in. It needs more public space for young people.



Fig14 Street view of Shinchon



3) Shinchon

Many universities are located around this area. A large portion of the commercial area is designated for the pedestrians only zone. It is one of the most popular places for college students. It keeps the traditional characteristics of a Korean market place.

Location: It is located between two major universities.

People: Mostly, college students and shoppers. It also attracts many foreign tourists looking for cheap goods and a traditional market place.

Street: The street is very narrow, and there are few public parking spaces. The street is very lively and noisy. Automobile access is limited.

Buildings: Typical building type in this area is a low-rise commercial building. Although several new buildings have been added to this area, most buildings are old and have not been changed for many years.

Program: Clothing stores, restaurants, street vendors, cafes, fast food chains, shops, and theaters.

Problems: A truck's access to shop is very difficult if not impossible. Also, parking is a problem. However, its pedestrian-oriented shopping street attracts many young people and tourists. It is mainly due to the concentration of shops and convenient shopping environment.

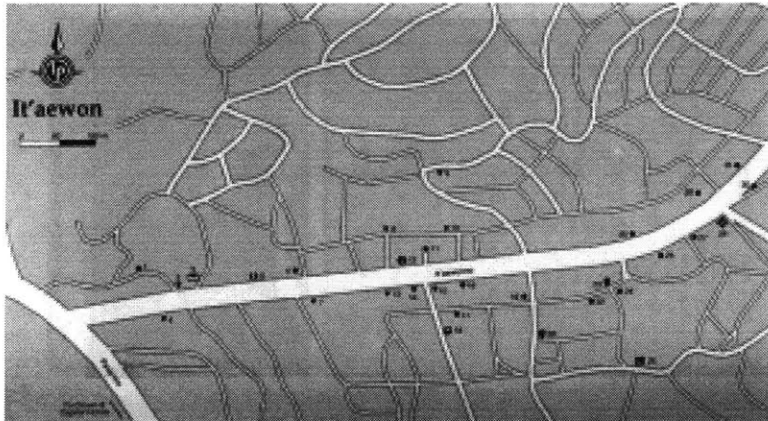
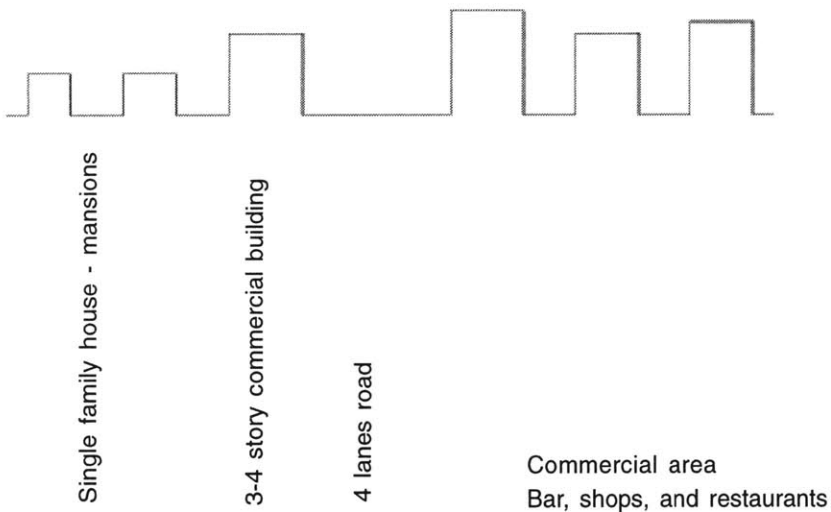


Fig 15 Map of Itawon



4) Itawon

Itawon is a famous shopping street for foreign travellers. Since it is located very close to the U.S military camp, many Americans shop in this area. Most shops are located along the 1Km long designated shopping street.

Location : It is located near the American military camp.

People: Many travellers and U.S soldiers shop here because Itawon provides a wide range of imported goods and traditional souvenirs. Many merchants speak English and Japanese. This area is developed mainly for foreigners.

Street: The street is relatively narrow, so shoppers can cross the street easily. The traffic is heavy, and it is always crowded with travellers and U.S soldiers. The secondary street system is not as well developed as other popular streets.

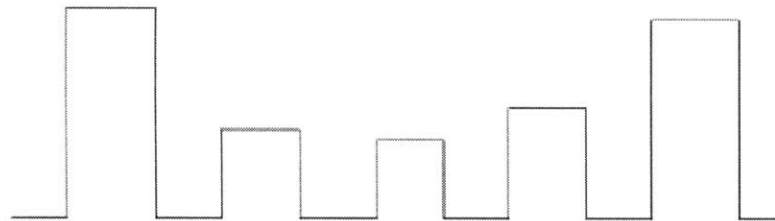
Buildings: One to two story high shops are located along the street. Most of buildings are old and condition is bad.

Program: Souvenir shops, hotels, department stores, American style restaurants, and bars.

Problems: There are not enough parking spaces. The street is not well maintained.



Fig 16.1 View of Myong-dong



10 story office building

Pedestrian oriented Commercial area
Car is accesible but limited

5) Myong-dong

Myongdong is a historic shopping street. Until recently, it had been the most popular shopping district. However, it has lost many luxury shops and customers to Apkujong-dong.

Location: The area is surrounded by many department stores and office buildings.

People: Many shops and restaurants are concentrated in this area, and office workers come here to shop and eat. Also, many shoppers from “Gangbook” area shop here. The area has been the center of high fashion and luxury goods for one hundred years.

Street: The street is narrow and traffic access is limited. It is most pleasant shopping street in Seoul. The distance between shops is adequate, and the street is maintained very well.

Buildings: Most buildings are low-rise mixed use buildings, but recently several new skyscrapers were added in this area.

Program: Hotels, offices, department stores, movie theaters, retail shops, churches, and embassies.

Problems: It has lost many attractive shops. The popularity of Myong-dong has declined since the development of Gangnam area. However, it is still the major attraction for tourists and young people.

Conclusion

The study of several streets in Seoul reveals some common characteristics.

Street: Two street systems work together. They are a traffic road and a pedestrian-oriented street. On both side of the traffic road, expensive and high-end shops and restaurants are located. They advertise themselves with huge billboards, and they are major attractions for the area. However, the more lively part of the area seems the narrow street behind the traffic road. On the pedestrian oriented street, small and less expensive shops and restaurants are located, and it is always crowded with people.

Traffic access limitation: Traffic access to the street behind the major traffic road is often restricted. There has been an effort to reserve that street only for pedestrians. This feature makes the kind of street even more popular.

Parking: Because of most these streets were formed a long time ago, they were not designed to accommodate parking. To compete with a modern shopping center, these streets should provide parking space for visitors to survive.

Open space: The streets do not provide any public open spaces. Due to the lack of public facilities, people end up paying at least some expense to enjoy the street.

Street vendors: Street vendors are everywhere on the streets. Most often, they occupy one side of the street , so the narrow streets become even more difficult to walk around. Although they are an important part of the street, a regulation seems to be required to improve the streets quality.

Some characteristics are positive and some are not. However, all of them are important parts of streets in Seoul. The thesis attempts to reflect these characteristics in the design proposal.



Fig 18.1 Market Street, “Chongno” in 19th century



Fig 18.2 Seoul during Chosun Dynasty

Public Spaces

Seoul does not have the tradition of public open spaces. Throughout history, a loyal ceremonial ground in the palaces has been the only designed open space. However, after the colonization of Korea by Japan in 1910, those palaces were converted into the public parks, and until today, they have been used as the major public open spaces in the Seoul. Conversion of the palaces into parks was implemented by Japanese imperialists to undermine the importance of the palaces since they had been the symbol of Korean independence. Not only the palaces, but also royal burial sites have been designated as the public parks. Today, these parks are filled with foreign tourists and Korean visitors. However, because the palaces are separated by walls from the other parts of city, they are not engaged well with the rest of city.

Throughout Seoul’s history, due to the lack of large open space, the streets have been an important part of daily life for people. “Chongno” (Fig 22.1) is a good example of the street market. It was planned as a major market and is still the center of commerce in Seoul. Also, a street has been used as a market for merchants and a playground for kids in Seoul for hundredsof years. Today, this tradition continues. Many merchants drive around Seoul and sell their

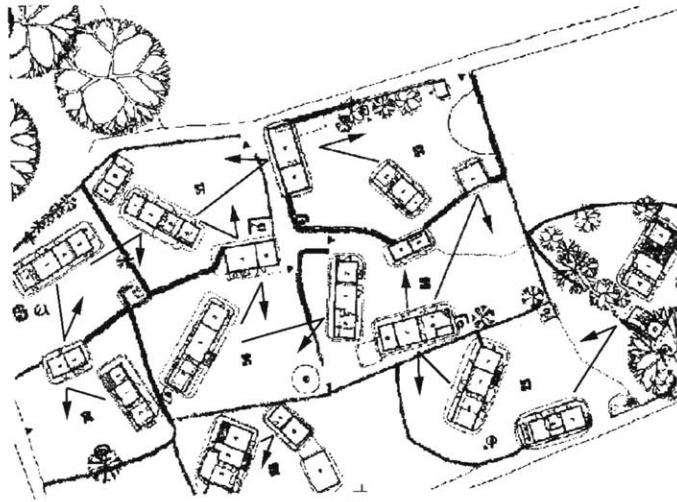


Fig. 19.1 Orientation of the houses

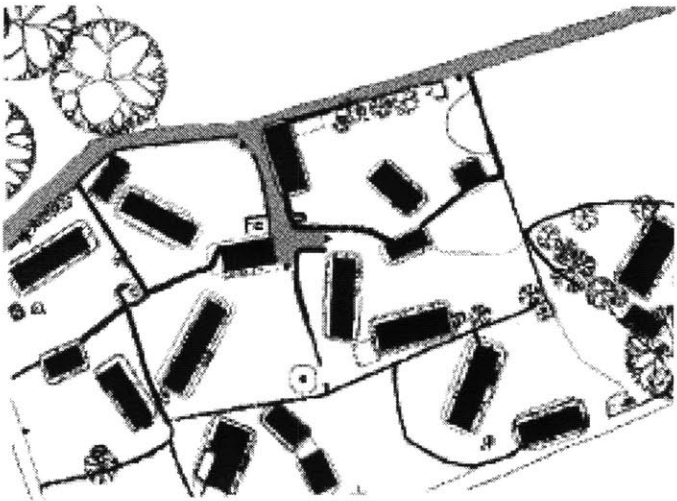


Fig 19.2 Public, Semi-Public and Private spaces

goods from their trucks ranging from food to toys. Since all kinds of activities happen around a street, it also creates safety, health, and traffic problems.

Next, a traditional neighborhood is studied to investigate the relation between public and private space.

Public and private space in a traditional rural town

The typical village in the countryside is presented in figure 19-1. The study reveals that in spite of the apparent haphazard arrangement of the units, there is a logic behind the arrangement of houses. The location of each building is carefully decided to block the direct views from the neighboring houses. The separation of buildings into two independent blocks help to create the somewhat intimate yard space within the property walls. In this way, they could keep some privacy despite the closeness to the neighboring houses. They seem to value privacy within a community. Also, these two buildings have different functions. One is used as a living quarter, and the other as a storage and a toilet. The yard was used as a garden and a playground, and a resident conducts their agricultural chore in there. Furthermore, the plan shows a clear sense of land ownership. It is reinforced by the 4 feet high walls around a house. Generally, a house is consisted of several

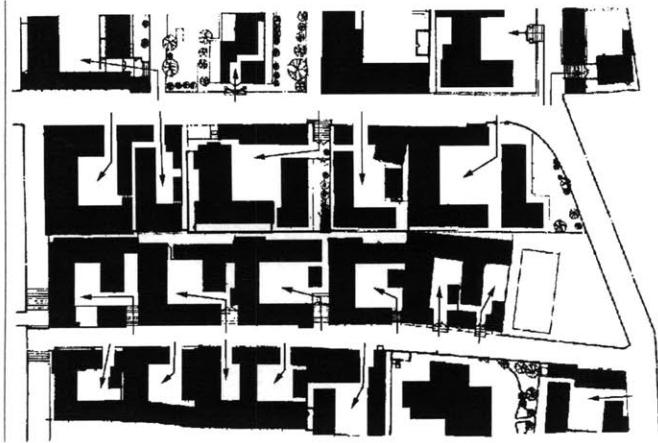


Fig 22.1 Access from the street



Fig 22.2 Public space & Courtyard

components such as a property wall, a yard, and a house structure. This wall separates the public space (a street) from the private space (a yard and a house). However, the height of the wall is adjusted to allow visual contact between two spaces so that they could keep a sense of community.

Public and private spaces in the urban neighborhood

Many courtyard type houses were built during the early 20th century architecture in Seoul, it becomes hard to distinguish Seoul from any century in response to the growing population in Seoul. Sometimes, a developer bought a large lot and built several identical houses. This kind of house is believed to borrow many characteristics from the middle class house of Chosun dynasty.

Since they were located in the urban area, the houses were oriented inward for privacy. Especially, a small courtyard in the middle of the housing block plays many important functions. It is used as a garden, a corridor, a playground, and a working space for a housewife.

Compare to the rural houses, the living quarter is definitely separated from the street. There are only small windows toward the street for ventilation, and all rooms are arranged toward the courtyard. The individuality of each building is not clear from the street since the facade of each house is very

similar and continuous. It is only recognized by a wooden door leading into each house. Also, there seem to be less sense of the community since all the houses do not show any domesticity toward the street and the public space is absent in this neighborhood.

Conclusion

Seoul does not have a tradition of public open space like a western piazza or square. However, they had a private yard. In a rural town, Koreans used it as a semi-private space which is visible from a street but is protected by the low property wall. In a big city, the courtyard was used as private open space which was used as a garden or working area. However, as living in a high-rise apartment becomes popular, they lost this private yard space. Although the apartment complex provides open space between the buildings, it is hardly the same since it is mostly filled with parking lots and a small public garden. Even worse, a multi-family condominium, which is the most popular housing type in Gangbuk, does not provide an open space as the apartment complex does. Once a yard was an important part of the house, but now Koreans have lost this tradition.

Housing Trends

High-rise Apartment

Imported house

Experimental house



High rise apartment complex in a suburban city, "Bundang"



Fig 23.2 View of a typical apartment complex

Housing Trend

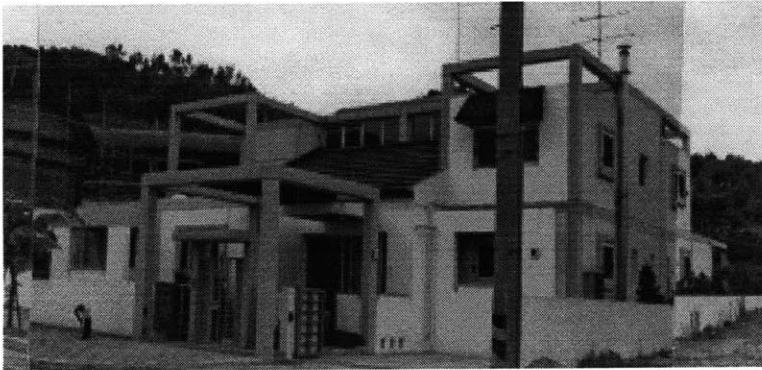
Some of most popular housing types in Korea are presented. Among them, the high-rise apartment is a most popular type of housing. However, recently some alternative housing types are introduced and tested in Seoul.

Type 1. High-rise Apartment

For the last twenty years, the high-rise apartment type has been the most popular housing type in Korea. Since the apartment was the most efficient in term of land and energy uses, the government has encouraged to build this type of housing. Thousands of new apartments have been built in the new suburban cities and Seoul. People like this new type of housing because it has many convenient features such as

- Easy traffic access
- Large parking lot
- Public facilities such as a playground and a park
- Security guard (gated community)
- Professional management
- Western style unit

Also, people buy this apartment unit as an investment because its price increases faster than any other housing type.



Future Village, Korea



Fig 24 Nexus World Japan, Housing by Steven Holl

Type 2. Experimental Housing

Recently, as a part of search for new housing type for Koreans, some developers invited several Korean architects to design a multifamily housing in the complex. They called it "Future Village". Like the Nexus project in Japan and IBS in Berlin, it attempts to develop an alternative housing type and to raise people's awareness about housing.

In spite of its good intentions, the project was not very successful. The reason for failure are the following. At first, the houses were designed only for the rich families. Many units were priced around one million dollars, and the developer had a hard time selling the houses. Also, there was no consideration for the public space and town planning. The site was divided into a number of small rectangular lots, and each individual house is simply put on a lot. Lastly, it became a mere exhibition since it did not address actual housing problems of Korea and only dealt with the issue of architectural design and esthetic.



“Garden Houses”, Korea

(All parts of the house are imported from the U.S)



Fig 25 Typical house in Massachusetts, U.S.A

Type 3. Imported Houses

Around 1995, a couple of developers began to build a light wood frame house which is called in Korea, “a garden house.” In fact, the house is a hundred percent imported from the United States. They simply import a ready-made house from the United States and assemble them for their buyers. Every single piece inside of the house are imported, and the house is sold in very high price. This kind of housing complexes built in new suburban cities.

This type appeal to the Koreans who are tired of living in an apartment unit and are looking for alternative living. Some of characteristics that appeal to a buyer of this kind of house are

- Low density development
- Individual garden space
- Exclusiveness
- Land ownership

Although this kind of house provides an alternative, this is not much different from the high-rise apartment since it is another imported housing type from the western culture. Building of this kind of house totally denies the Korean housing tradition. This house ignores local climate and housing practice. Also, it exclusiveness for the rich promotes social segregation.

Conclusion

Although the high-rise apartment has been the most popular housing type for several decades, that has been challenged by a few new alternative developments. There has been continuing effort of Korean Architects to stop the profit driven high-rise apartment development and to promote the housing type that could be more sensitive to Korean cultural heritage. To keep Seoul as a unique city, there should be awareness about the value of this architectural heritage. Otherwise, Seoul will lose its distinctive characteristics and become a mundane city. Design of new housing type should reflect the Korean way of life and culture.



Kids on a street

III. Precedents

Typical Urban Development

New Development

Redevelopment

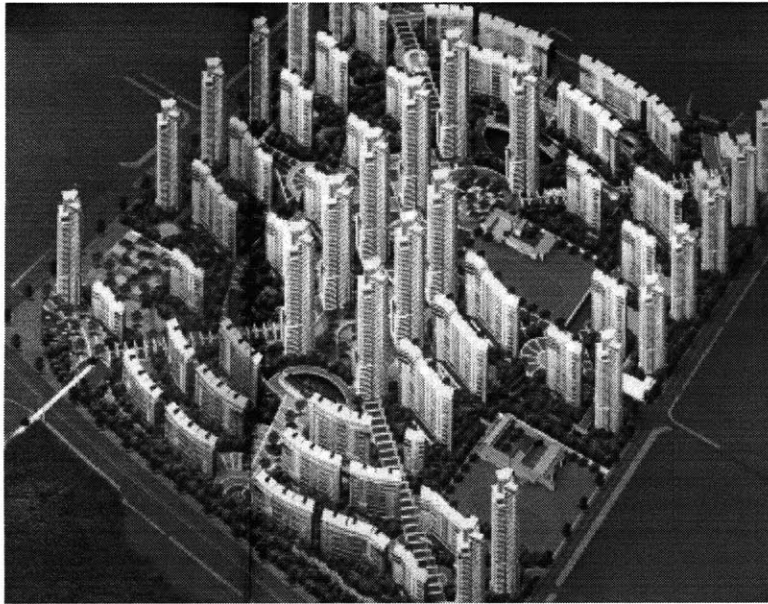


Fig 29. 1 Planned development of Gepohoung housing complex

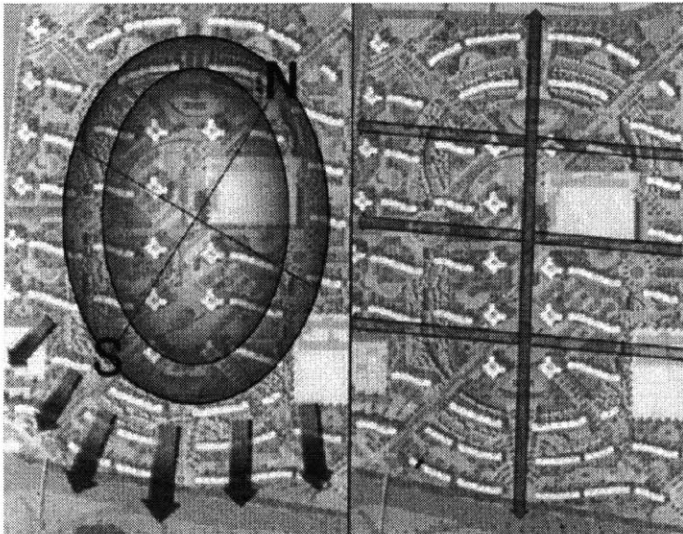


Fig 29.2 Orientation and axes

New Development

To ease the housing shortage, the government and private developer have implemented hundreds of housing projects in Seoul and the surrounding areas. The most popular development type is the high-rise and high-density apartment complex and the straight and regular street system. Popularity of this type stems from its economical land use and conveniences.

The followings are the common characteristics of this kind of development.

Planning: Mostly, the arrangement of the block is based on the grid system to maximize land use. Contrast to crooked narrow streets and space in the traditional residential area, it provides a large open spaces and traffic roads.

Access: The complex is usually designed as the gated community. Traffic and pedestrian access is limited only to the residents. A guardhouse is built at the gate to control the access. This feature provides security to the neighborhood, but it isolates the complex from the surrounding towns.

Program: In the complex, the developer generally provides a playground, underground parking, and resting area for residents. Also, along with the free-standing apartment buildings, the commercial building is constructed at the

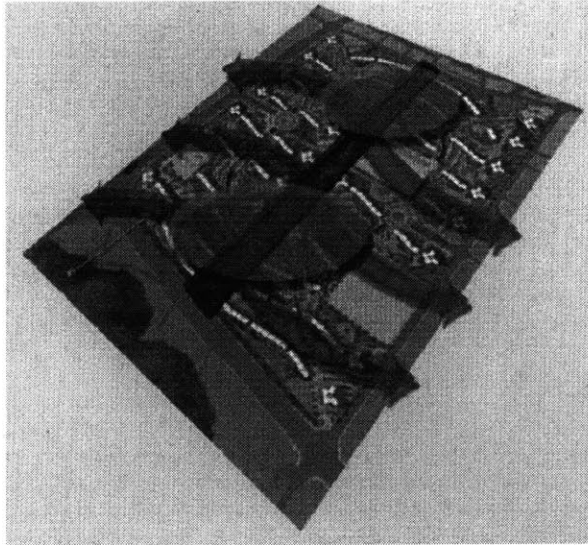


Fig 30.1 Open spaces and streets

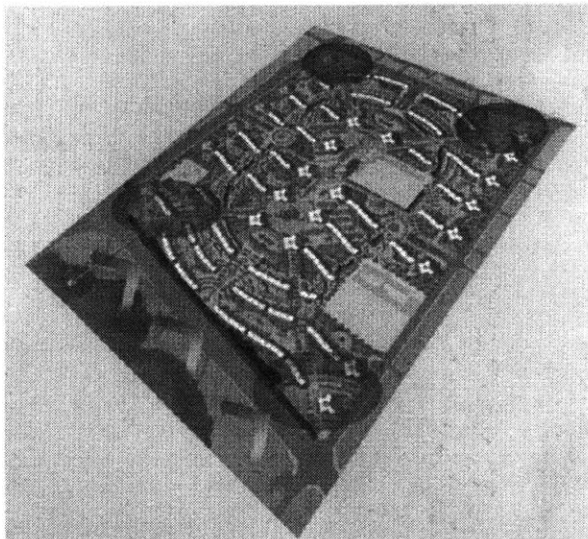
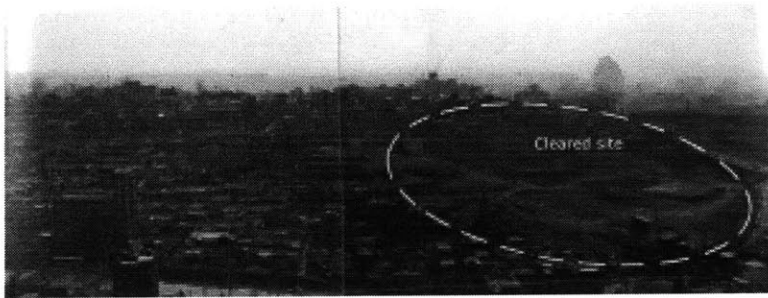


Fig 30.2 Entry plaza to the complex

edge of complex to be used by the residents and outsiders. Recently, the more luxurious development provides even a community center, an exercise room, and a swimming pool.

Units: Most typical unit size is about 1000 square feet. The rooms are relatively small because Koreans rather have many small rooms than a few large rooms. They also have a living room, a kitchen, and a dining room.



Clearance for redevelopment



Proposed development

Redevelopment

Recently, there have been many urban redevelopment projects in Seoul. Most projects are modeled after the same high-rise apartment type. Even for the urban renewal project, the government uses the same development method and did not pay much attention to the existing urban fabric. The picture shows the total clearance of the area for the redevelopment.

Many urban renewal projects are on slopes of hills around Seoul since many poor neighborhoods are located there. In the process of the redevelopment, the government destroys most of the existing urban neighborhood. Also, to maximize the profit, the developer uses the repetitive design and increases the height of a building. As a consequence, new development does not have its old charm and diverse neighborhoods. Furthermore, this type of housing has failed to create the sense of community. The old street is gone and a large parking lot replaces them. Unlike the old neighborhood, people do not know who lives next door and they do not care. It is because the design of the complex has focused only on individual units and has ignored communal space. Finally, this kind of development promotes social segregation. In many cases, similar-size units tend to be located in the same building, so people in the same economical level tend to live together.

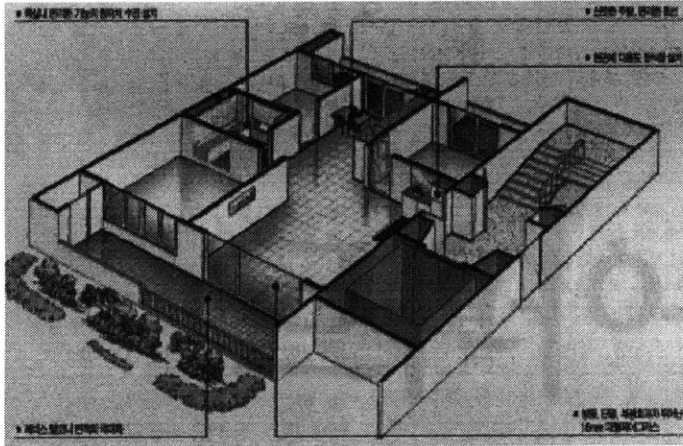


Fig 32 Interior view of a typical apartment unit

Conclusion

In spite of the emergence of different housing types in recent years, the high-rise apartment type is expected to be the most popular housing type in Korea for many years to come. The criticism of this kind of development does not come from its inferiority but from the fact that it denies any architectural traditions of Korea. The more this type of apartment is built in Seoul, the faster it lose its uniqueness as the five hundred year old city. Once the developer clears the old neighborhood for redevelopment, the urban landscape changes permanently in totally different ways.

Regionalism

Regional types

Nostalgia

Traditional elements

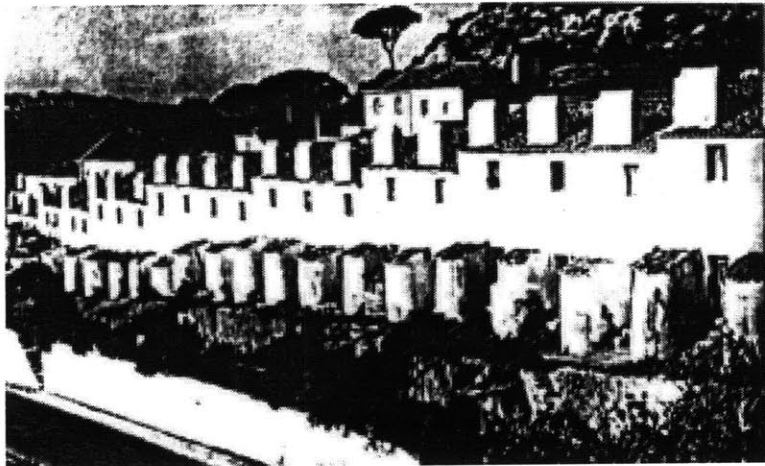


Fig 34-1 Traditional Portuguese architecture

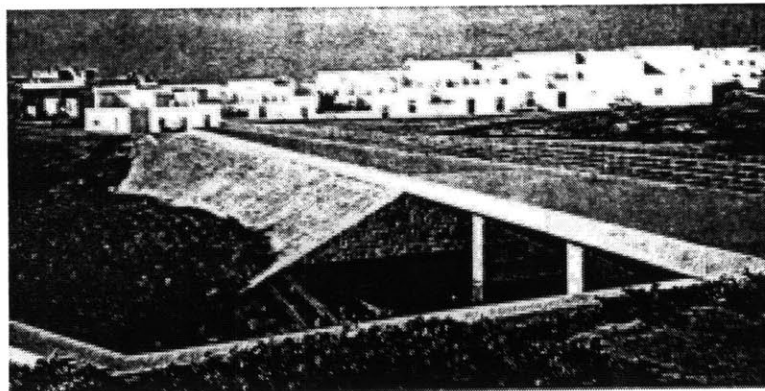


Fig 34-2 Quinta da Malagueira, Portugal

Regionalism in architecture

How can a building represent its own cultural identity? What is a method that an architect can employ to create an unique building which is recognizable as a regional architecture?

Three different design methods are presented to illustrate how regional architects reflect their culture in buildings.

Method 1 : Regional Type

Alvaro Siza: In some of Alvaro Siza's housing projects, he masterfully designed the buildings based on the architectural tradition of the particular region. He analyzed traditional building types of the region and applied his findings to his own design. The ideas which were generated from studying plans, organizations, and elevations of a traditional building became an important part of his design. Since he designed the buildings based on the regional housing type, they blended well with the existing neighborhood, and the urban fabric of the area was maintained even after the intervention. Two of Siza's housing projects are presented to illustrate how his designs respect the existing urban fabric and architectural heritage of the region.

Quinta da Malagueira, Portugal : The design of the housing units was based on the traditional Portuguese housing type. Use of white color, arrangements of the units, and strong emphasis on a chimney are all from the traditional Portuguese



Fig 35.1 Municipal housing Spangen, Rotterdam 1918, J.J.P. Oud

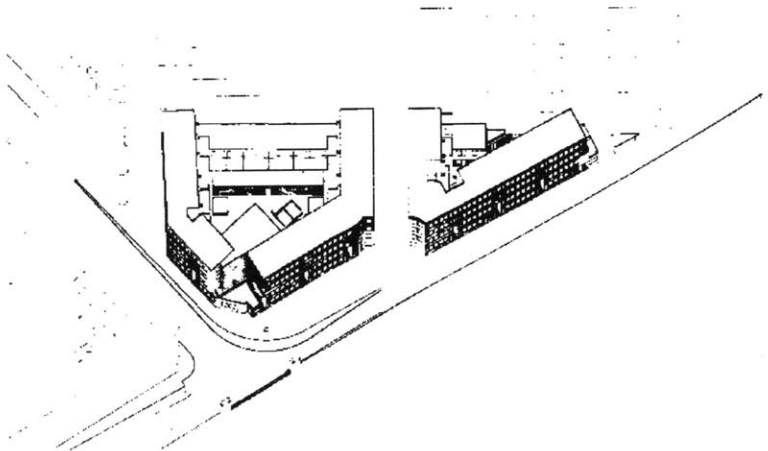


Fig 35.2 Schiderswijk, the Hague 1986 Alvaro Siza

architecture. Starting from this architectural tradition, he modified and transformed his buildings so that they could be harmonious with the surrounding buildings.

Schiderswijk, Netherlands : In the Hague, his design was based on the transformation of the popular housing type of the region. Specifically, his design of the housing blocks originated from the tradition of “Hofie”.² The hofie refers to the housing type in Netherlands that has a communal garden surrounded by Housing blocks. His design not only respects the architectural heritage of the Hague, but also continues the tradition.

“ Universality is not equivalent to neutrality, it is not the esperanto of architectural expression, it is the capacity to create from the root...

My sense of universality has more to do with the vocation of the cities, arising from centuries of intervention, of crossbreeding, of superposition and mixing of the most opposed influences, creating however an unmistakable identity.”

Alvaro Siza during the interview with “A+ U”

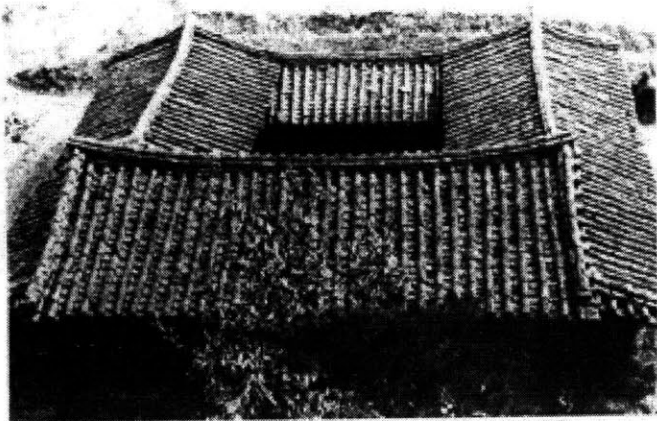


Fig 36.1 Traditional Courtyard type house

Inho Jun: Korean Architect, Inho Jun, applied a similar design method for his design of a house, so called Maison de Carre. This house clearly shows its relationship to a traditional Korean courtyard type house. By using the traditional type for his design motive, he was able to design the recognizable Korean architecture. The basic plan for the house came from a square shape, "Mium" which was commonly used in the traditional Korean architecture. Also, the simplified roof structure of Maison de Carre reminds one of the traditional roof structure of Korean houses.



Fig 36.2 Maison De Carre, Inho Jun 1999

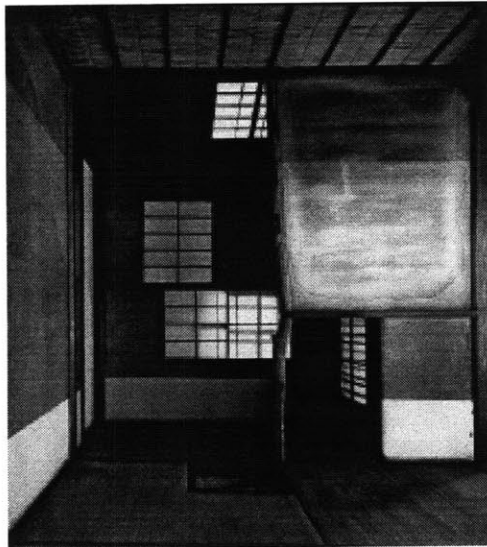


Fig 37.1 Traditional Japanese tea room



Fig 37.2 Ishihara House, 1977 Tadao Ando

Method 2 : Nostalgia

Tadao Ando: In his design, Ando tries to capture the essence of the traditional Japanese architecture. Although the physical appearance of his buildings is dissimilar to the traditional Japanese architecture, they share the spirit of the space.

Since the thirteenth century, Japanese has built a room or pavilion for the tea ceremony. This room is designed so that people can experience peace and calm after rough daily life. ³ Ando's architecture is deeply influenced by this tradition. He creates calm and peaceful simple space based on his interpretation of traditional Japanese space. Although he recreates it in a very abstract way, people can almost feel the essence of traditional Japanese architecture in his buildings.

Also, Ando extensively uses natural light in the space, and this idea also comes from the tradition of the tea room. Light within darkness is a typical characteristic of the tea room. The dynamic natural light coming into the room is deliberately used to break the calmness of the space. Ando continues this tradition in his building. He recreates the emotion that people experience in a traditional Japanese house with light and space.

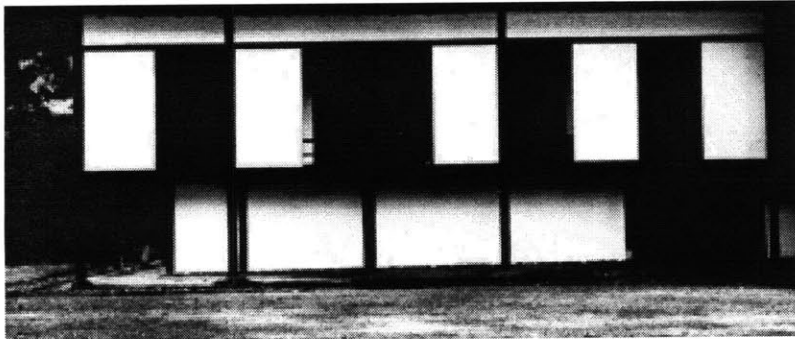


Fig 38.1 Traditional Japanese palace

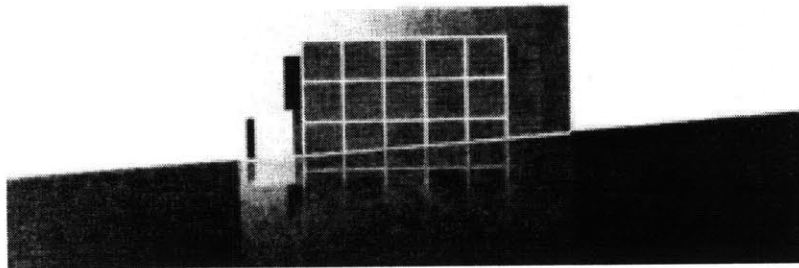


Fig 38.2 Horiuchi House, 1977~78 Tadao Ando

Finally, many buildings of Tadao Ando are based on a geometrical grid system which has been an important part of traditional Japanese architecture. All planning of traditional residential complexes and interior organization have been based on this principal, and even on the walls, the grid is emphasized by columns and beams. In Ando's buildings, this grid system is clearly expressed. (Fig 38-2)

“ My Architecture does not use any traditional architectural elements, yet I want to evoke the feeling of traditional space. About twenty years ago there was a controversy over the use of tradition, at which time it was asked whether traditional Japanese architecture could be carried over in modern architecture. However, the architects focused merely on such formal elements as roofs and coffered ceiling. Disregarding these elements, the buildings remained standardized and typically modern. In contrast, I would like to continue tradition using what I feel is a typically Japanese emotional sensitivity to daily life”

Tadao Ando

Interview with Toshio Okumura

Kenneth Frampton, Tadao Ando Buildings, Projects, writings, Rizzoli, P130



Fig 39.1 Traditional Korea house

Seok-chul Kim: In the Haein temple Museum in Korea, Seok-chul Kim successfully designed the museum that has traditional characteristics without directly using traditional elements. Like Tadao Ando, he abstracted the traditional architectural elements for his building. The wooden frames of the museum remind one of the structural expression of traditional Korean house (Fig 39.1). Beside these frames, by using white color for the exterior wall and dominant roof structure, he expresses Korean architectural heritage in the building.

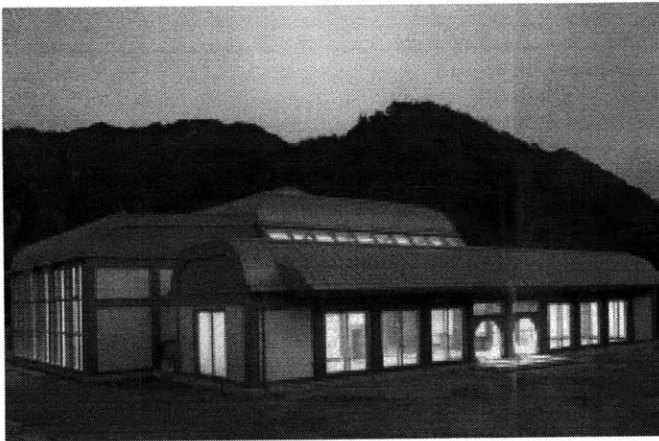


Fig 39.2 The Haein Temple Museum, Seokchul Kim, 2001



Fig 40.1 Traditional Korean House

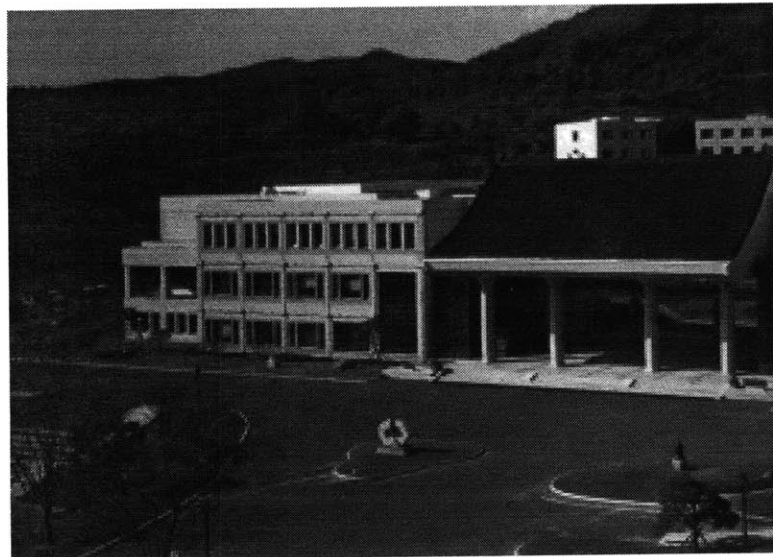


Fig 40.2 Samsung building, Korea, Samwoo Architects

Method 3 : Physical insertion

As another way to reflect cultural heritage in buildings, some Korean architects use a method of inserting traditional architectural elements. This “physical insertion” directly expresses their connection with traditional culture. Popular elements for insertion are roofs, walls, and window frames. In most cases, these elements are used for decorative purpose. Since the public recognizes the traditional elements easily, it is the most effective way to express cultural identity in architecture. However, it is very difficult to formulate a design that integrate these elements into modern buildings successfully. Not to be seen as mere decoration, architects must use these elements as integral parts of a building.

Samsoo architect: In the Samsung building, Samwoo Architects used the traditional roof structure for its gate. The gate and wall are also very important part of Korean Architecture. A Korean house was always surrounded by a property wall, and a large gate marked an entrance. Although the element was simplified, it still can be easily recognized as the traditional roof structure. By this insertion, it became undeniably a Korean building. This method of insertion seems to be the straightforward way of reflecting cultural aspects of traditional architecture.



Fig 41.1 traditional Korean house

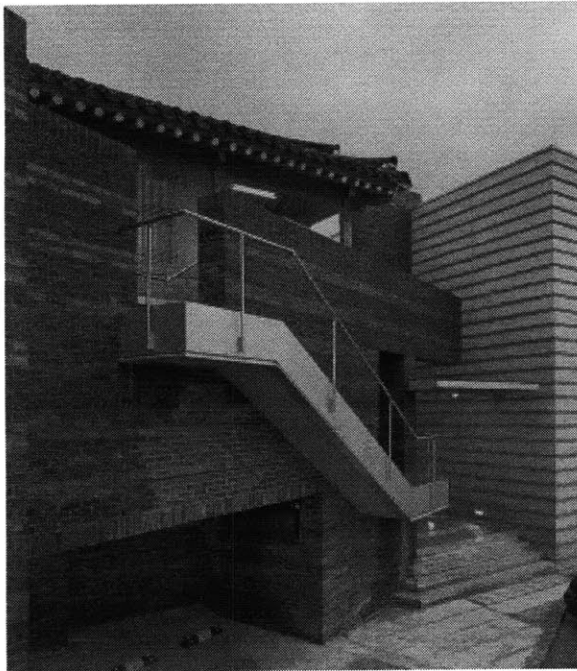


Fig 41.2 Gallery Semi, Taeyoung Yoo, 2000

Although Tadao Ando negatively commented about the use of this kind of practice in his interview, this physical insertion of traditional architectural elements is one of most popular design methods in the regional architecture and can be very effective if an architect uses it sensitively.

Taeyoung Yoo: In the design of Gallery Seomi, Korean architect, Taeyoung Yoo put traditional structure of a house on the top of the second floor. This is the literal use of traditional architecture in a modern building. The architect juxtaposed different old and modern elements in one building. The traditional roof structure and modern metal panels were composed skillfully so that neither of elements dominated the whole building. However, in his design process, there is no abstraction or transformation of traditional elements, but they are directly used in the new building.

Conclusion

Culture has to progress to survive. Architecture, which is one of major components of culture, also must progress. However, until recently, Korean architects have been unable to generate modern architecture which can reflect their cultural heritage. The blind acceptance of western architecture has destroyed their creativity as cultural creators. They have to realize that westernization is not necessarily synonymous with modernization. Also, Korean architects should be able to see the difference between cultural exchange and cultural slavery.

The examples of Alvaro Siza and Tadao Adno was illustrated along with Inho Jun, Seik-chul Kim, and Taeyoung yoo's projects. These are some of good examples of regional architecture. In recent years, a few Korean architects have tried consciously to design the buildings that reflect Korean culture and tradition. This new architecture does not necessarily need to be look like a traditional building, but it should reflect the essence of Korean architecture.



IV. Design Proposal

Site Planning

Site condition

What if

Site Analysis

Strategy

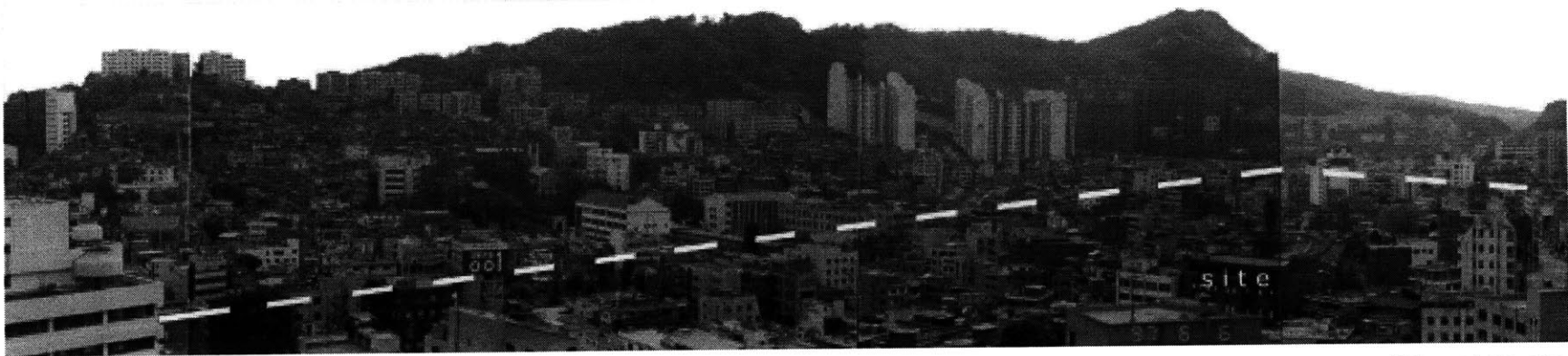
Site Plan

Site Planning

Site condition

The site is located at the northern part of Seoul. At the south edge of the site, there is a hospital complex, and along the major road, most buildings are occupied by offices, shops, and restaurants. Beside this commercial area, most of the site is filled with small old houses and low-rise condominiums. For the last decade, many old houses have been converted into 3 to 4 story high condominiums. The condition of many old houses are so bad that the government designated this area as “the redevelopment area.”

The area is mostly populated by middle and lower class residents, and it is very close to downtown Seoul. Until recently, the government was not interested in developing this kind of old downtown neighborhood. The development has been concentrated only at the edge of the Seoul. As a consequence, Seoul has grown in size considerably. However, as the developable land ran out, the focus went back to the old part of Seoul, and the site represents the typical neighborhood requiring the urban renewal.



View of the site

Site Plan



(1) Major road



(2) connectr





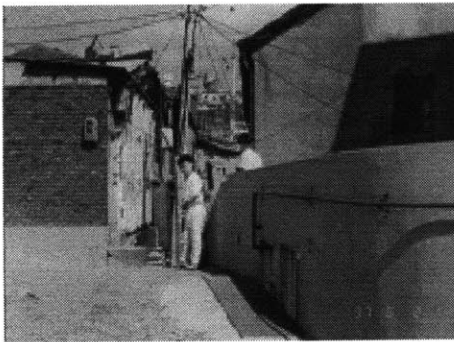
(3) Grocery Shop



(4) Local market



(5) Inner street



(6) children on a street

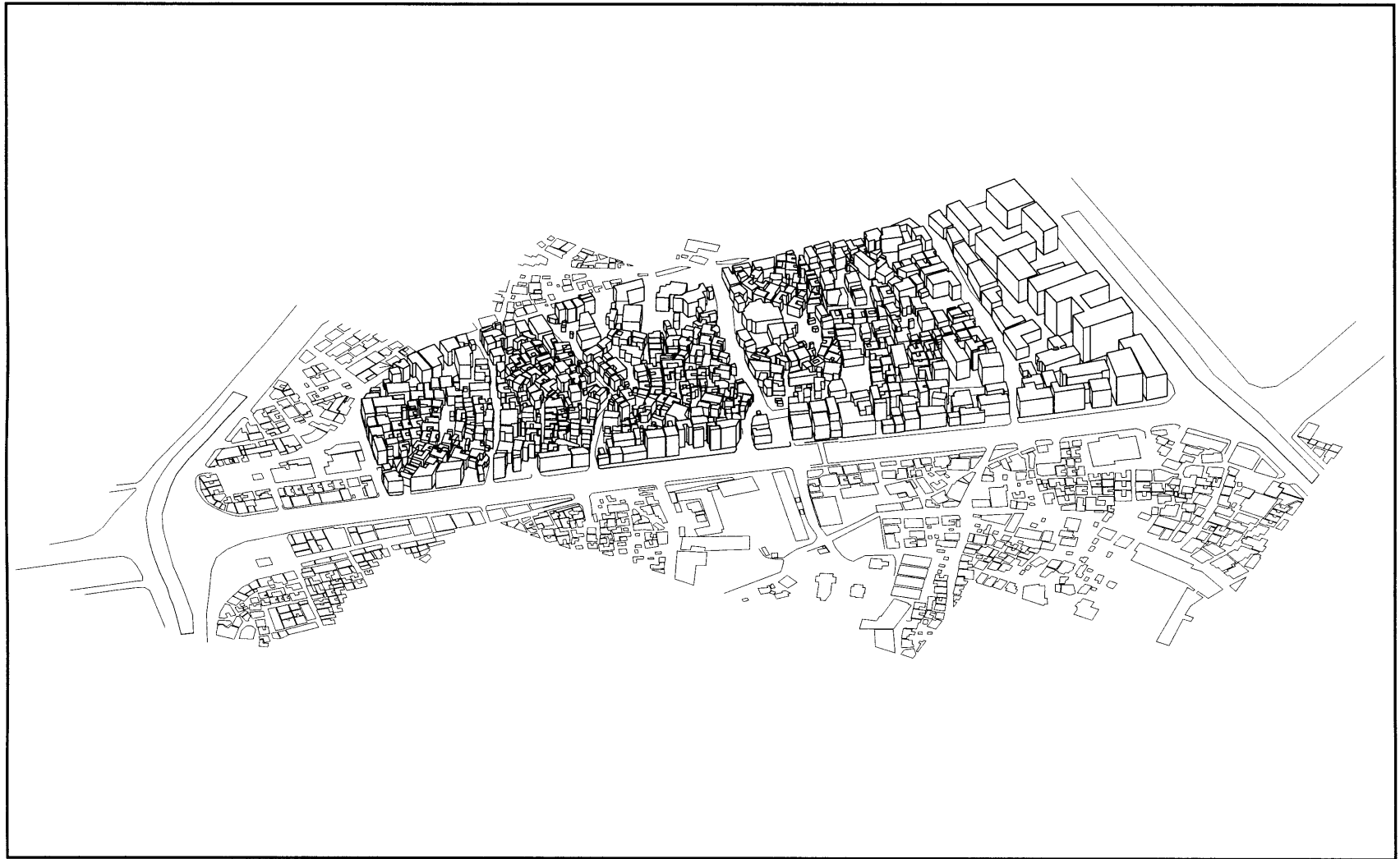


(7) Edge of the site



(8) Street Parking

3D model of the site



What if ...

If the government does not interfere with the housing market but lets a private developer develop the site, then the site will be developed in the same way as the adjacent redeveloped areas. The 15 to 20 story high apartment blocks will be built and the existing urban fabric will be totally destroyed. The developer will increase the number of households up to the allowable limit to maximize profit. Generally, the population density increases about three times after an urban renewal project. As a consequence,

the site will lose its identity as a unique traditional place. Another problem of this kind of redevelopment is that infrastructure is not improved much even after the redevelopment of the area. Although the population will at least triple, the surrounding streets will still be narrow and water and electricity supply capacity will not have increased that much since the renewal project tends to only focus on constructing apartment units.

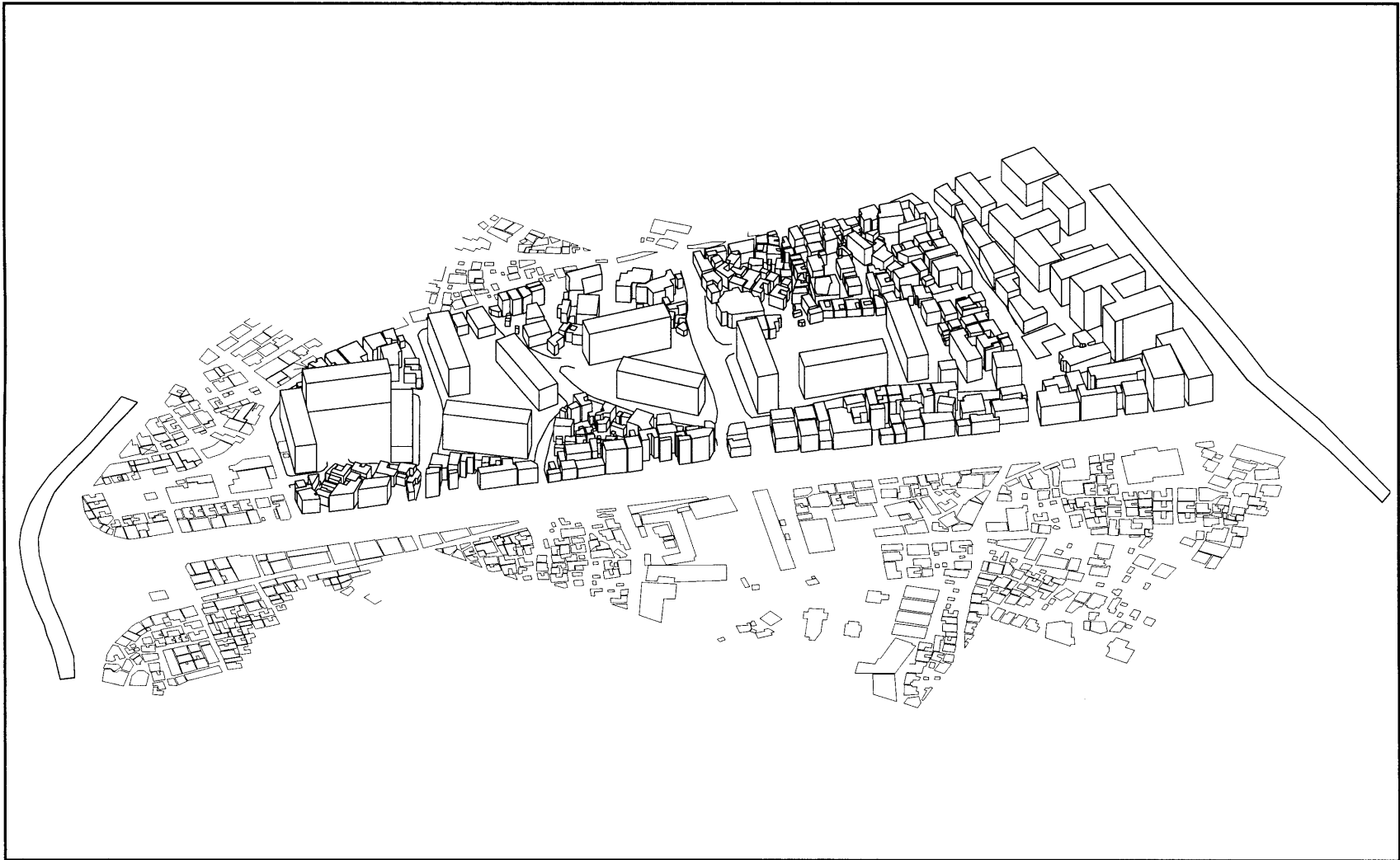


View of the site with a typical development

Site plan without the government intervention



3D model of the expected development without the government intervention



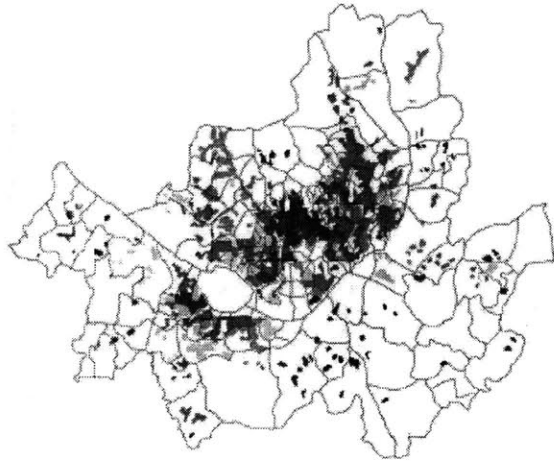


Fig 52.1 Concentration of population (1966)

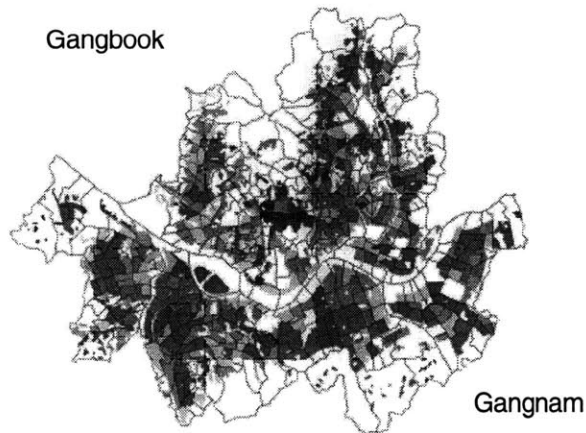


Fig 52.2 Population increase (1990)

Site Analysis

The following graphs show some of the changes and characteristics of the site.

1) Population Movement

Since the development of the southern part of the Han River, many people in the northern part of Seoul have moved to this newly built area. Especially, many middle and upper class families have left their neighborhoods. Figure 52.1 and 52.2 clearly show the increased population of the southern part of Seoul, Gangnam, and movement of population from Gangbook. The site which is located at Gangbook has also lost many people since the development of Gangnam. In contrast to the rapid development of Gangnam since the 1970s, many old Gangbook neighborhoods have not been changed for many years. However, since the mid 1990s, the government began to develop many old neighborhooda of Gangbook under name of the urban renewal program, and some people have returned to the old neighborhood.

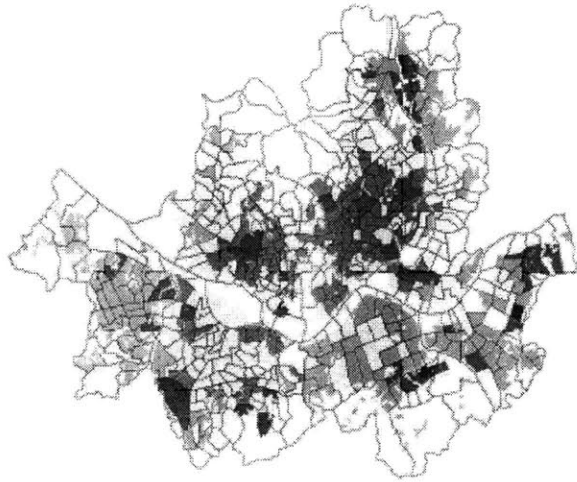


Fig 53.1 Concentration of young people

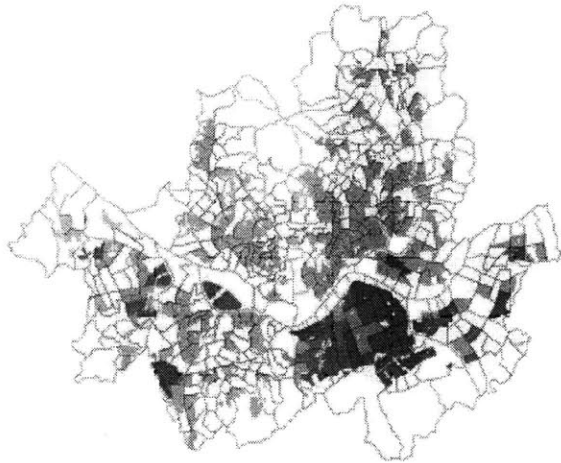


Fig 53.2 Concentration of middle-age people

2) Age group

Average age of people in Gangbook is greater than that of Gangnam. The graphs show that a large portion of residents in Gangnam are middle aged parents with young children. In contrast, most major residents of the site are either in their 20s or 60s.

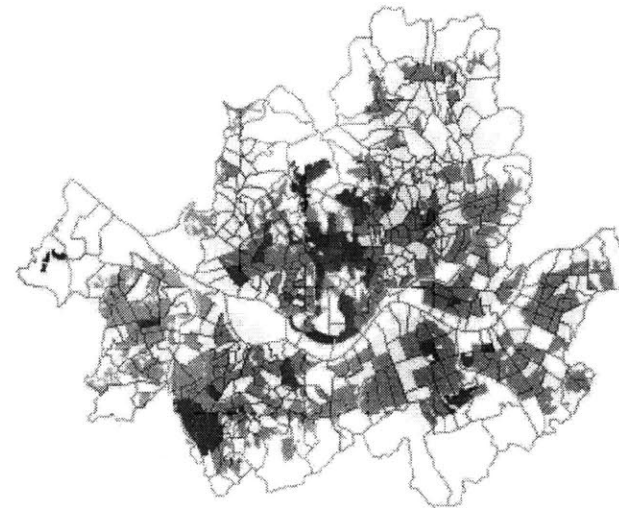


Fig 53.3 Concentration of elderly people

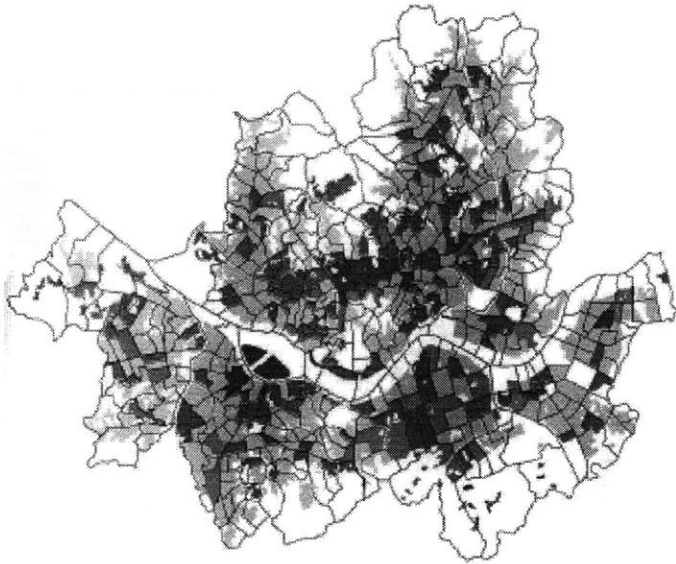


Fig 54 Concentration of population during day time

3) Daytime activity

Figure 54 shows that there are two major business districts in Seoul. They are the old downtown and Gangnam.

Everyday, many people commute to the old downtown or Gangnam where most of offices are located. This creates heavy traffic during rush hours. The site is located at the old downtown area and has a great potential to be developed as an urban residential area. Increasing commuting time makes people rethink about living in suburban towns. Living in the downtown area will be an attractive option for many people in the near future.

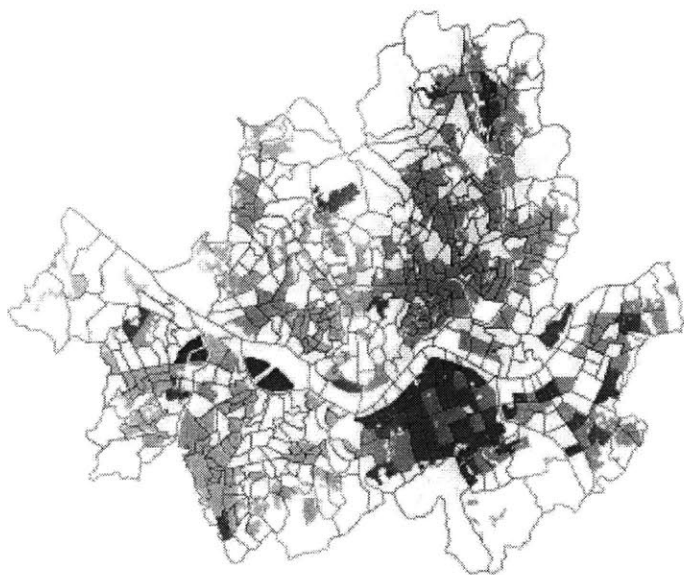
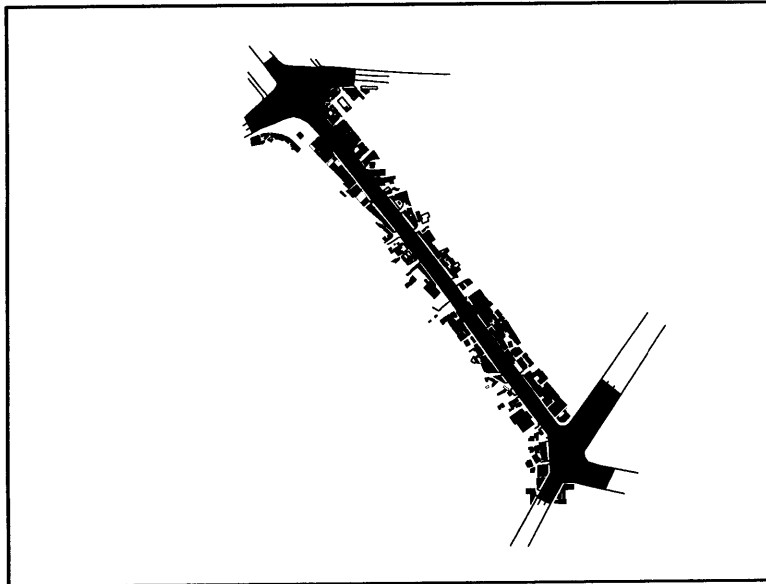


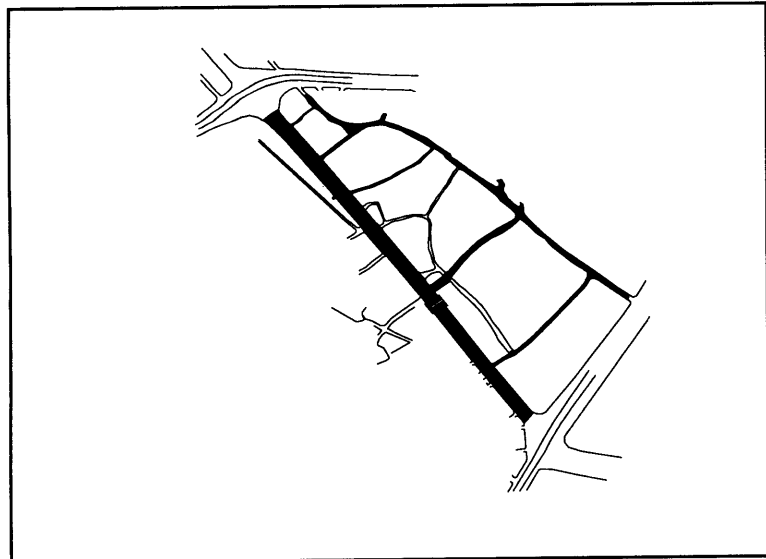
Fig 55 Concentration of college educated people

4) Class segregation

Since many wealthy professionals have moved to Gangnam, the old part of Seoul, Gangbuk is mainly occupied by less educated and poor people. Generally, the houses are old, and street conditions are bad. It only has a few open spaces and hardly have any amenities. Also, because of the narrow streets, it has a serious parking and traffic problem. In contrast, Gangnam became the wealthy residential area for well educated upper class people. It is filled with ten to twenty story high apartments, and each apartment complex has its own open space and parking structure. Like many areas in Gangbuk, the population of the site is mostly low and middle class. The major housing type is a single family house or a low-rise condominium. The street is narrow, and there is an insufficient number of parking spaces.



Major Road



"Connector"

5) Street Hierarchy

The study of the site shows that there are four different kinds of streets in the site. They are named as "Major road," "Eating Street," "Connector," and "Inner Street."

A) Major Road

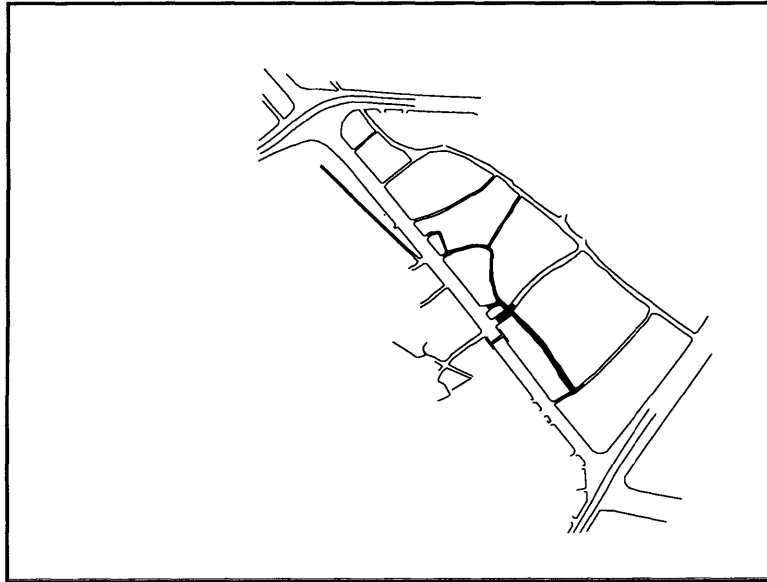
- Uses: Major traffic road (eight lanes) and pedestrian
- Program: commercial buildings on the both sides of the roads (expensive restaurants, shops and offices)
- Characteristics: formal and busy
- Others: Subway station, street venders, and neon sign

B) Eating Street

- Uses: Slow traffic (two lanes) and pedestrian
- Program: Mostly, commercial buildings on the both sides of the roads (inexpensive restaurants and shops)
- Characteristics: informal, and busy
- Others: street vendors

C) Connector

- Uses: faster traffic (two lanes) and pedestrian
- Program: houses and shops
- Characteristics: formal
- Others: traffic bumpers, and street parking



“Eating Street”



“Inner Street”

D) Inner Street

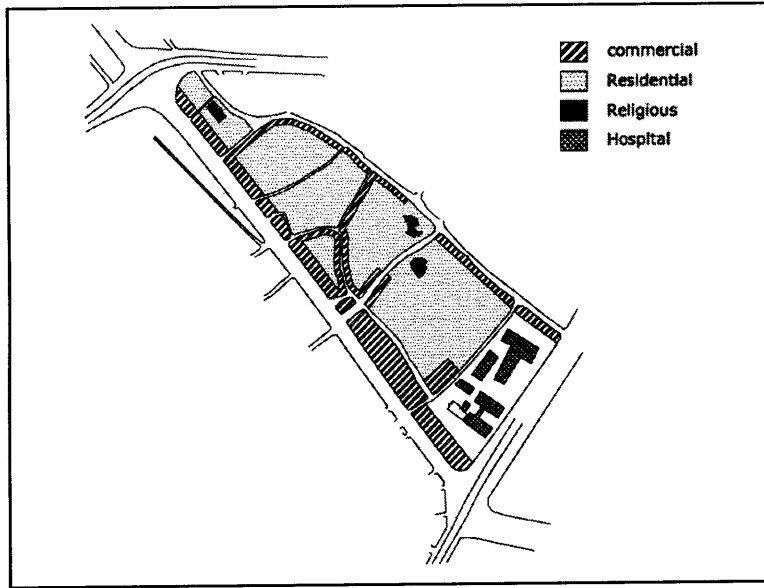
- Uses: narrow pedestrian only street
- Program: mostly houses
- Characteristics: informal
- Others: kids playing on a street

6) Zoning

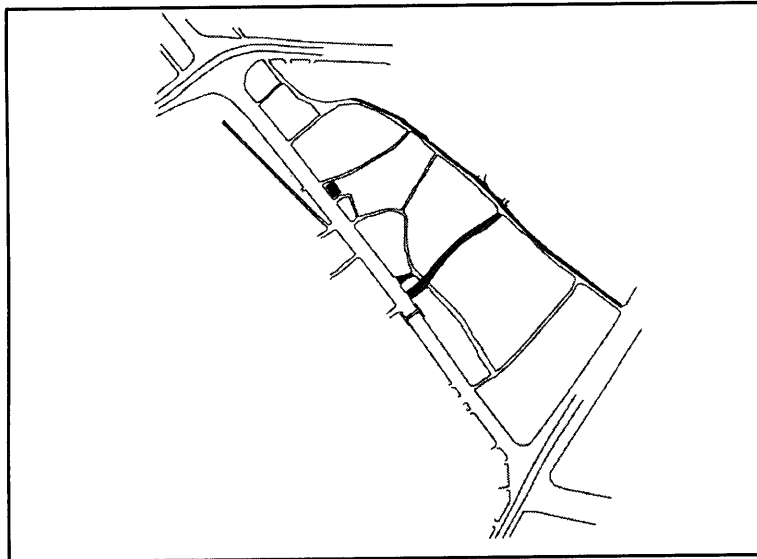
There is no clear separation between the different land uses. The zoning law is very loose, and it is not imposed on the site in a geometrical way. In many cases, commercial and residential areas are mixed. Many grocery stores are located near the residential area, and many condominiums were built in the middle of the commercial area. This mix of land use creates very lively streets. People do not need to drive to get groceries.

7) Density

Although the site contains many small houses that are occupied by several households, the density is lower than at a nearby new high-rise development. According to the government report, the population density increases up to three to four times after completion of a typical urban renewal project in Seoul. This increased population tends to create many problems such as the electric power and water shortage.



Land uses



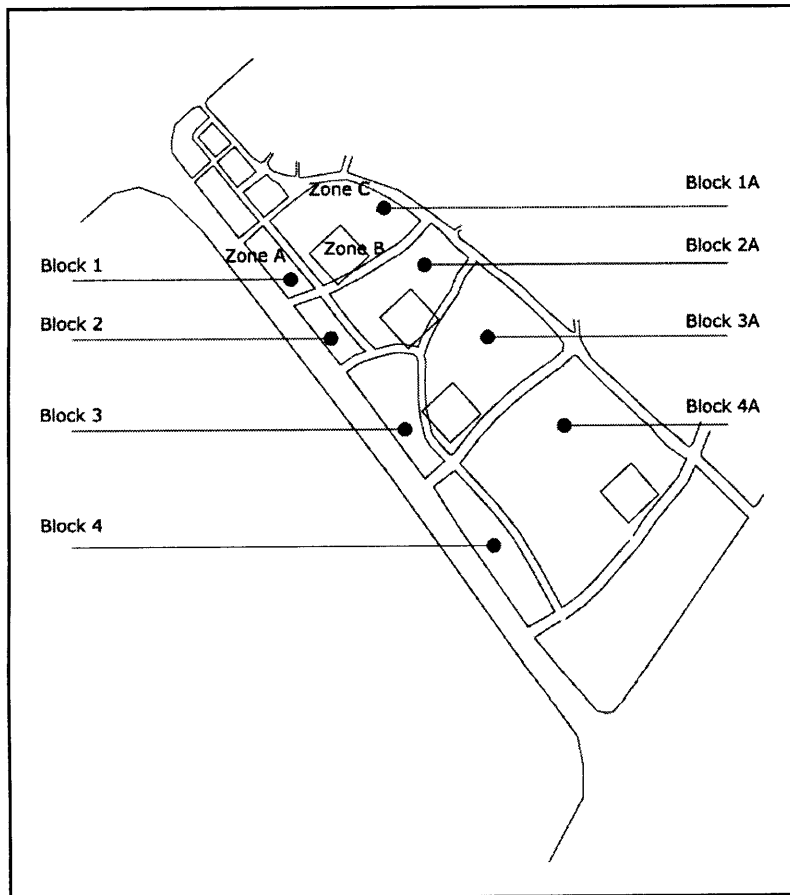
Parking

8) Parking

There are a few public parking garages near the major road, and street parking is allowed in some streets. However, they are not enough for the residents and visitors of the area. The parking capacity does not keep up with the ever-increasing car ownership. The lack of parking space leads to the decrease of property value. The recent strict imposition of parking law makes it even more difficult to live in the site with a car.

9) Public space

The site is very close to the old downtown area, and several old palaces that are used as public parks are located nearby. However, there are no community places that can provide amenities for the residents. Due to the lack of open space in the neighborhood, children unsafely play in the streets. Places for interaction between neighbors are also very limited.



Blocks and Zones

Site Planning Strategy

1) Goal

Based on the previous analysis, several design goals are stated.

- The new plan should be sensitive to **the existing urban fabric**.
- **Open space** should be provided for residents.
- **“Eating Street”** should be redefined and strengthened.
- **“Connector”** should be widened for the traffic
- **“Inner street”** should be restructured for easy pedestrian access
- **Parking Capacity** should be increased.
- **Density** increase should be modest.

2) Method

a) Concept

The key idea of site plan design is to let a single developer develop the two parcels of land in a pair.

The developer will have the right to develop two parcels of land in the site, but he is required to develop them in two very different ways guided by a guideline.

Each block is divided into zone A and zone B. High density and high-rise mixed use building will be built in the

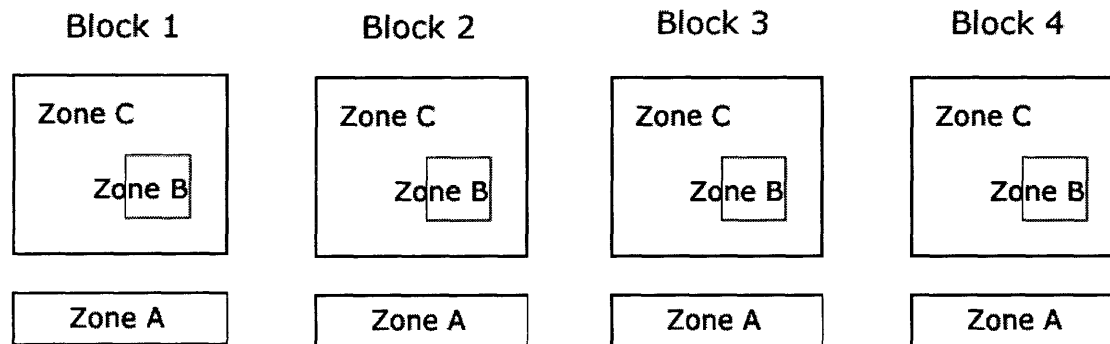
zone A. The developer expects to gain most of profit by developing zone A. In the B, a low-rise apartment, a public open space, and an underground parking structure will be constructed. Developing zone B is not as profitable as zone A. However, by developing two zones, the developer will make enough profit eventually. The government's role is to develop the guidelines for the developers.

b) Site Selection for the zone B

Next, the Zone B is selected based on the following criteria.

- Area which has many small lots or houses.
- Area which has bad housing condition.
- Area which streets are ill-organized.
- Area which is located close to "connector."
- The site should be close to the connector.

- Concept



(c) Residents

- Definition

Resident A: who has a house in zone A and loses a house due to the development.

Resident B: who has a house in zone B and loses a house due to the development.

Resident C-1: who has a house in zone C and loses a part of property due to development

Resident C-2: who has a house in zone C and loses the air right

* The height limitation will be imposed on the resident C-2' property.

(d) Loses and Gains

	Loses	Gains
Resident A	House	A unit and a parking space
Resident B	House	A unit, a parking space and open space
Resident C	A part of property	Option to move to new development
Resident D	Air right	A parking space, open space

(e) Zone A and B

Block	Zone A	Zone B
Program	1 generation Apartment unit office, shops, restaurant, parking	2 generation Apartment units shops, daycare center, parking
Density	2 x Demolished units	5 story apartment
Size of unit	1000 SF	1500 SF
Characteristics	High-rise, mixed use, small units	Low-rise, smaller units

Site planning

Block 1 and 1A

1. Numbers

	Number of Households
Resident A	17
Resident B	25
Resident C	9
Total	42



Existing Urban Fabric

2) Proposed units for Zone A and B

Density increase	Zone A	Zone B	Total
Existing Density (x2)	72	12	84
Existing Density (x2.5)	93	12	105
Existing Density (x3)	114	12	126

Unit : households

3) Building Height (Zone A)

Density increase	Housing	Commercial	Total
Existing Density (x2)	7	3	10
Existing Density (x2.5)	9	3	12
Existing Density (x3)	11	3	14

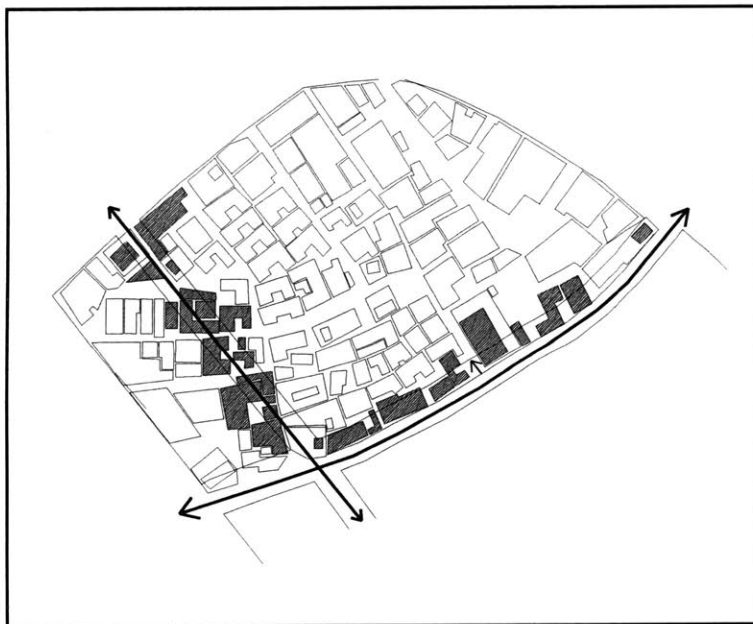
* Housing in Zone B is five stories high

unit : floors

2. Application

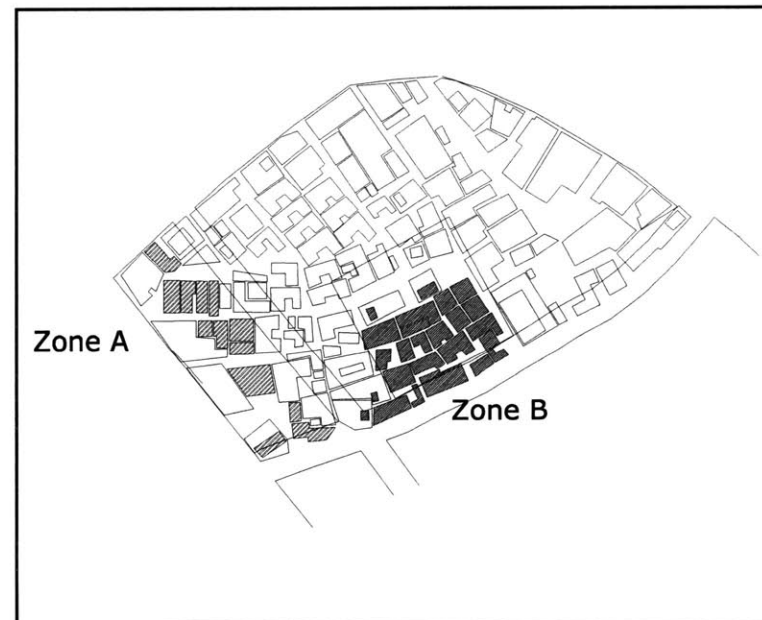
1) Restructuring

- Extends “eating street” to the block 1 and 1A
- widen the “connector” for easy access



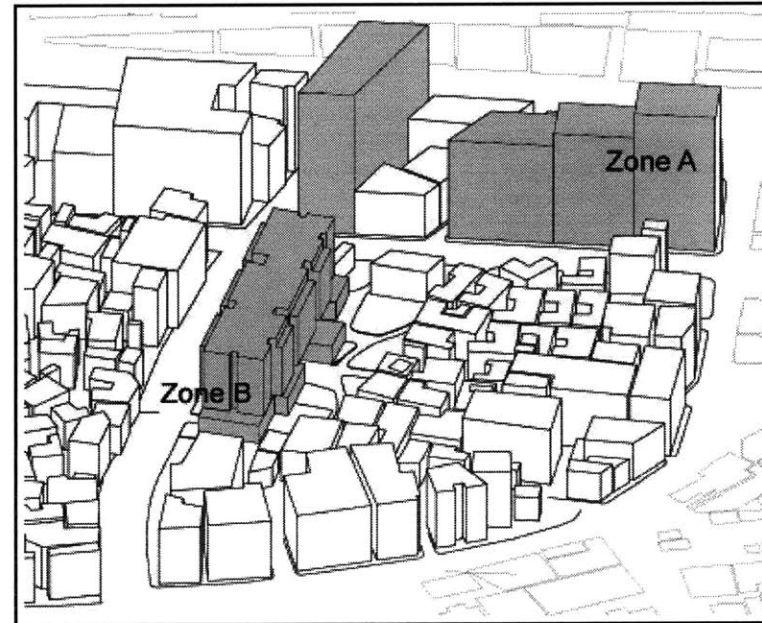
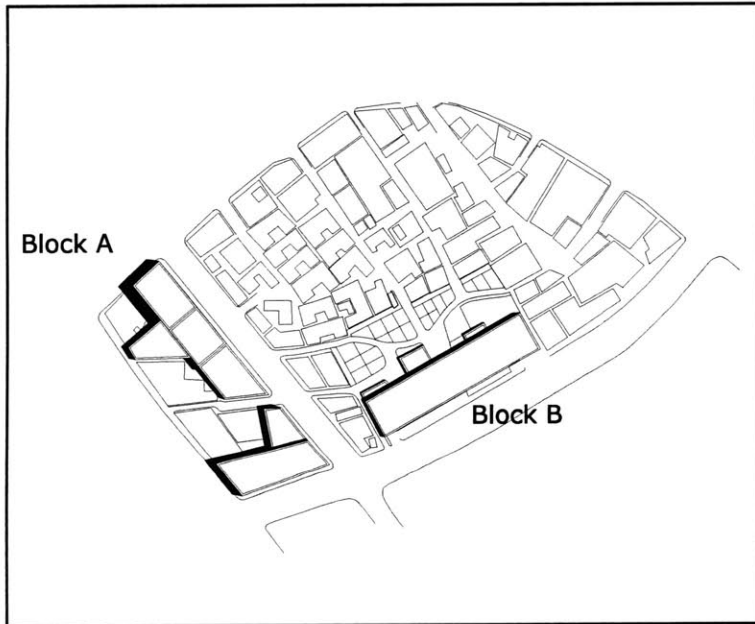
2) Housing Development

- Zone A: high-rise development (mixed use)
- Zone B: low-rise development, open space



3) Gradual restructuring

- slowly widen the existing "inner street"





Existing Urban Fabric

Block 2 and 2A

1. Numbers

	Number of Households
Resident A	14
Resident B	16
Resident C	-
Total	30

2) Proposed units for Zone A and B

Density increase	Zone A	Zone B	Total
Existing Density (x2)	48	12	60
Existing Density (x2.5)	63	12	75
Existing Density (x3)	78	12	90

Unit : households

3) Building Height (Zone A)

Density increase	Housing	Commercial	Total
Existing Density (x2)	10	3	13
Existing Density (x2.5)	15	3	15
Existing Density (x3)	18.5	3	21.5

* Housing in Zone B is five stories high

unit : floors

2. Application

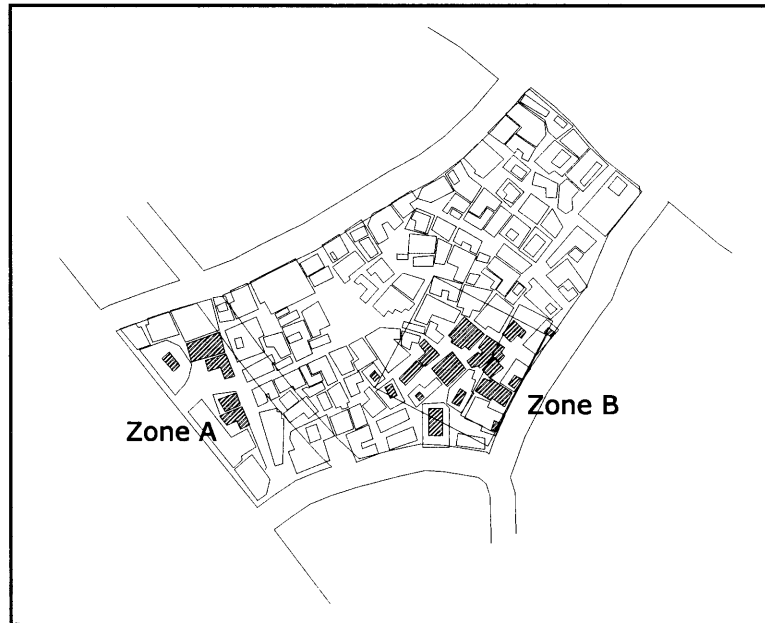
1) Restructuring

- Extends "eating street" to the block 2 and 2A

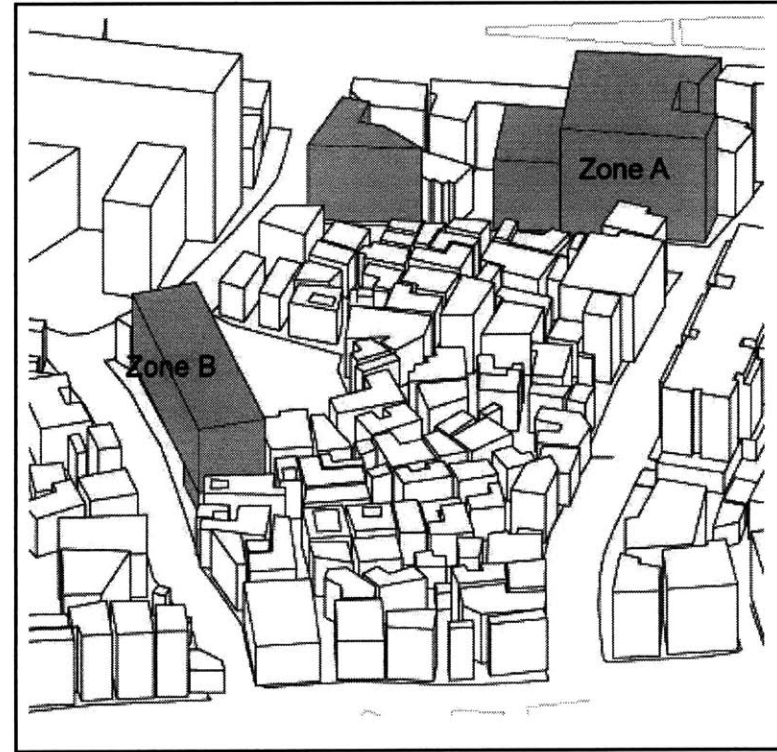
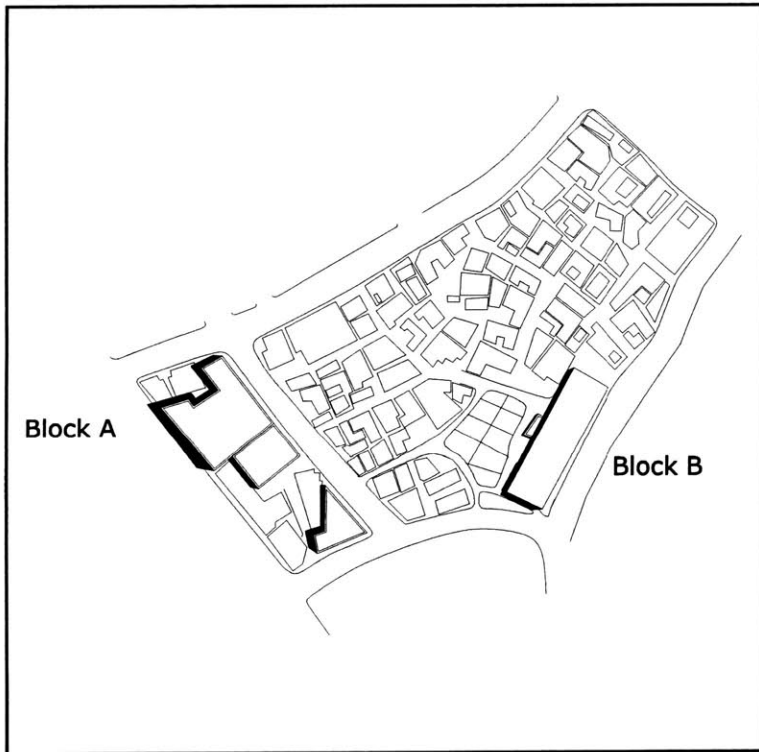


2) Housing Development

- Zone A: high-rise development (mixed use)
- Zone B: low-rise development, open space



3) Gradual restructuring
slowly widen the existing "inner street"





Existing Urban Fabric

Block 3 and 3A

1. Numbers

	Number of Households
Resident A	25
Resident B	16
Resident C	7
Total	48

2) Proposed units for Zone A and B

Density increase	Zone A	Zone B	Total
Existing Density (x2)	84	12	96
Existing Density (x2.5)	108	12	120
Existing Density (x3)	132	12	144

Unit : households

3) Building Height (Zone A)

Density increase	Housing	Commercial	Total
Existing Density (x2)	10	3	13
Existing Density (x2.5)	13	3	16
Existing Density (x3)	16	3	19

* Housing in Zone B is five stories high unit : floors

2. Application

1) Restructuring

- widen "connector" for easy access



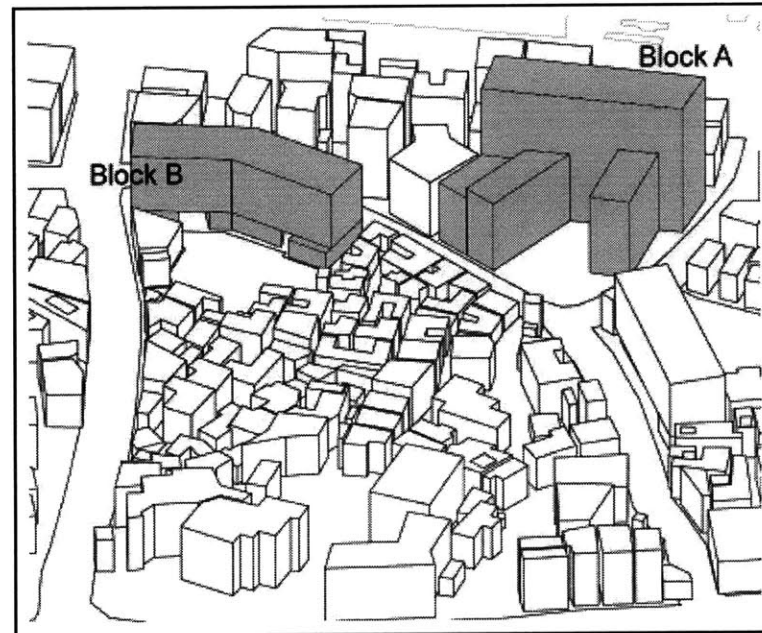
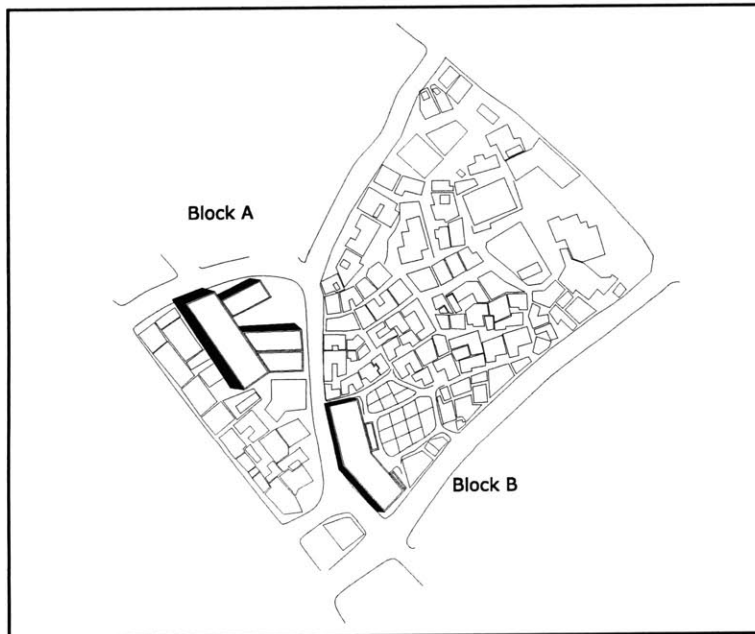
2) Housing Development

- Zone A: high-rise development (mixed use)
- Zone B: low-rise development, open space



3) Gradual restructuring

- slowly widen the existing "inner street"



Block 4 and 4A

1. Numbers

	Number of Households
Resident A	-
Resident B	11
Resident C	1
Total	12



Existing Urban Fabric

2) Proposed units for Zone A and B

Density increase	Zone A	Zone B	Total
Existing Density (x2)	-	24	24
Existing Density (x2.5)	-	30	30
Existing Density (x3)	-	36	36

Unit : households

3) Building Height (Zone B)

Density increase	Housing	Commercial	Total
Existing Density (x2)	4	1	5
Existing Density (x2.5)	5	1	6
Existing Density (x3)	6	1	7

*No Building in the zone A

unit : floors

2. Application

1) Restructuring

- widen "connector" for easy access



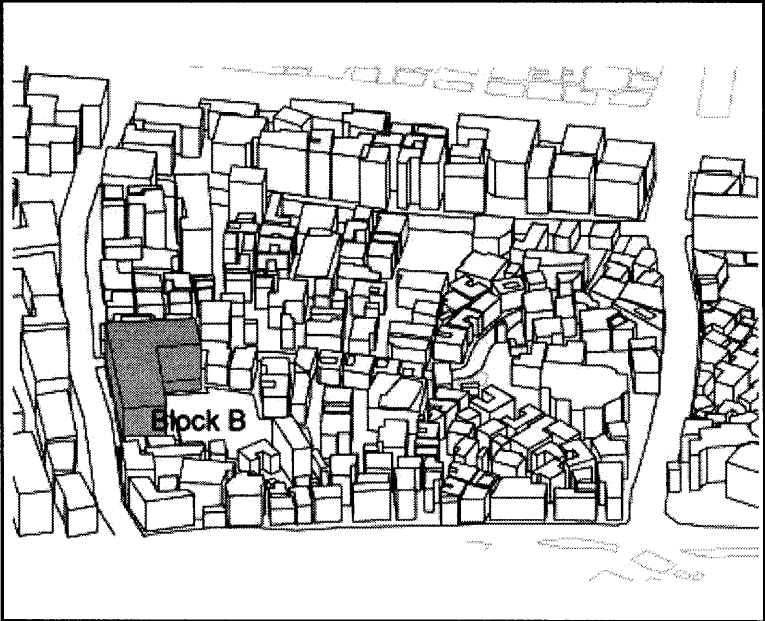
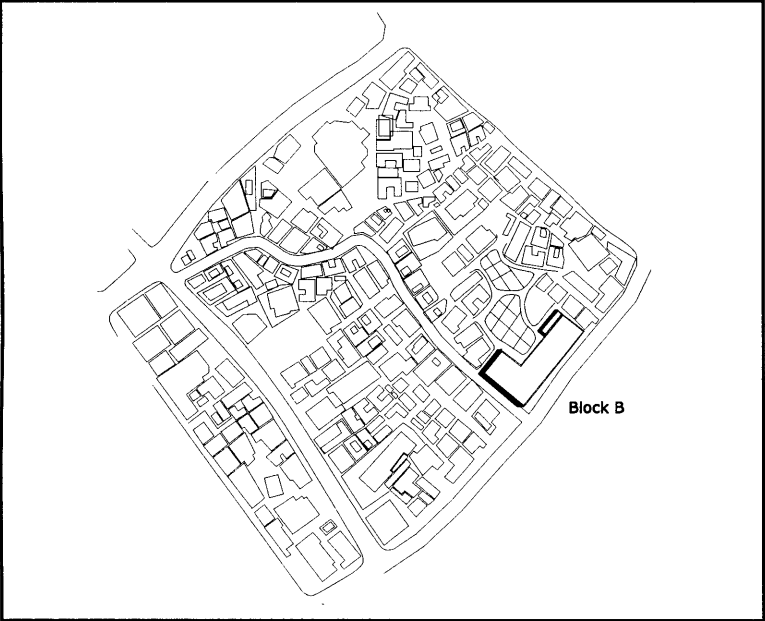
2) Housing Development

- Zone B: high-rise development, open space

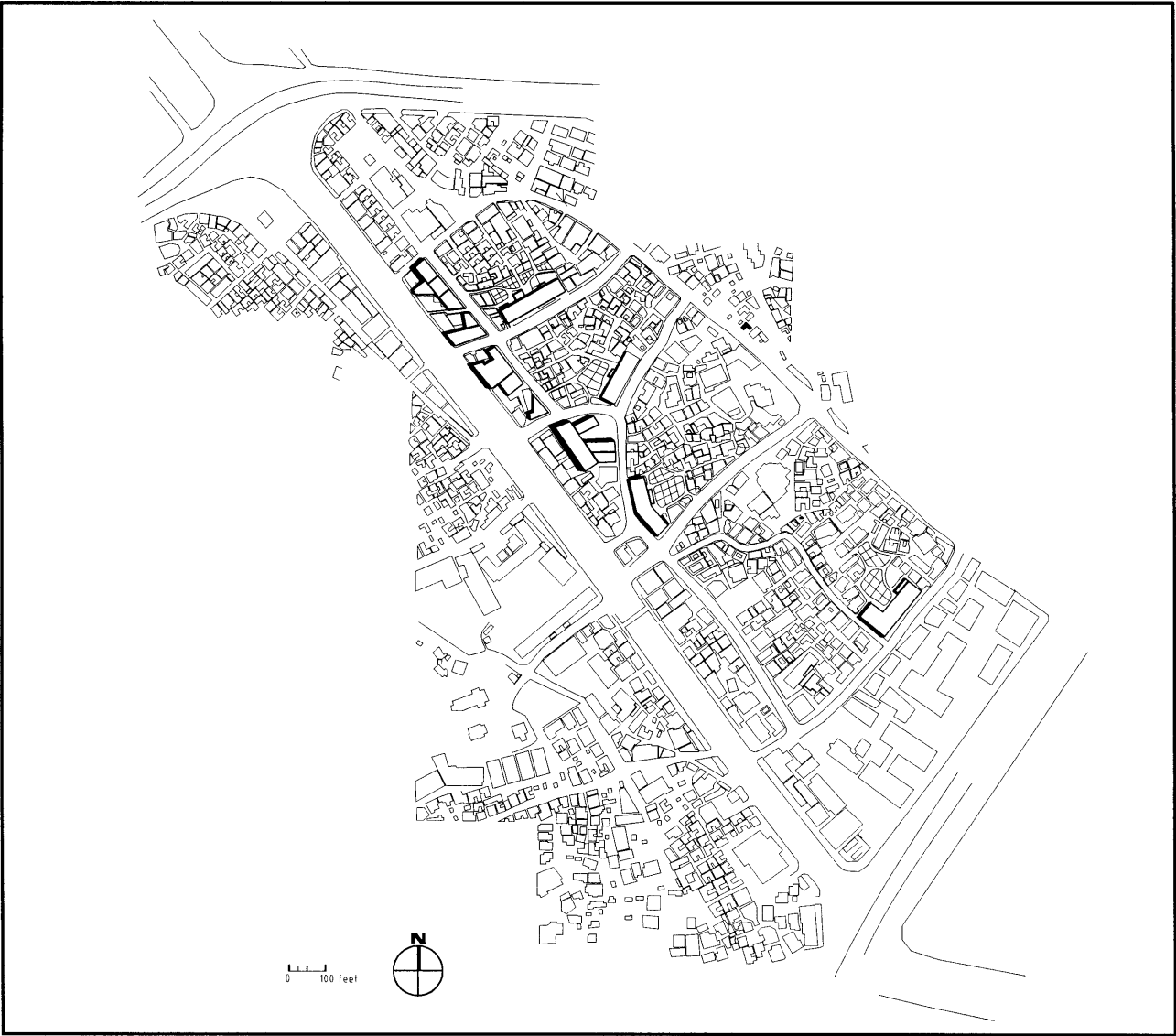


3) Gradual restructuring

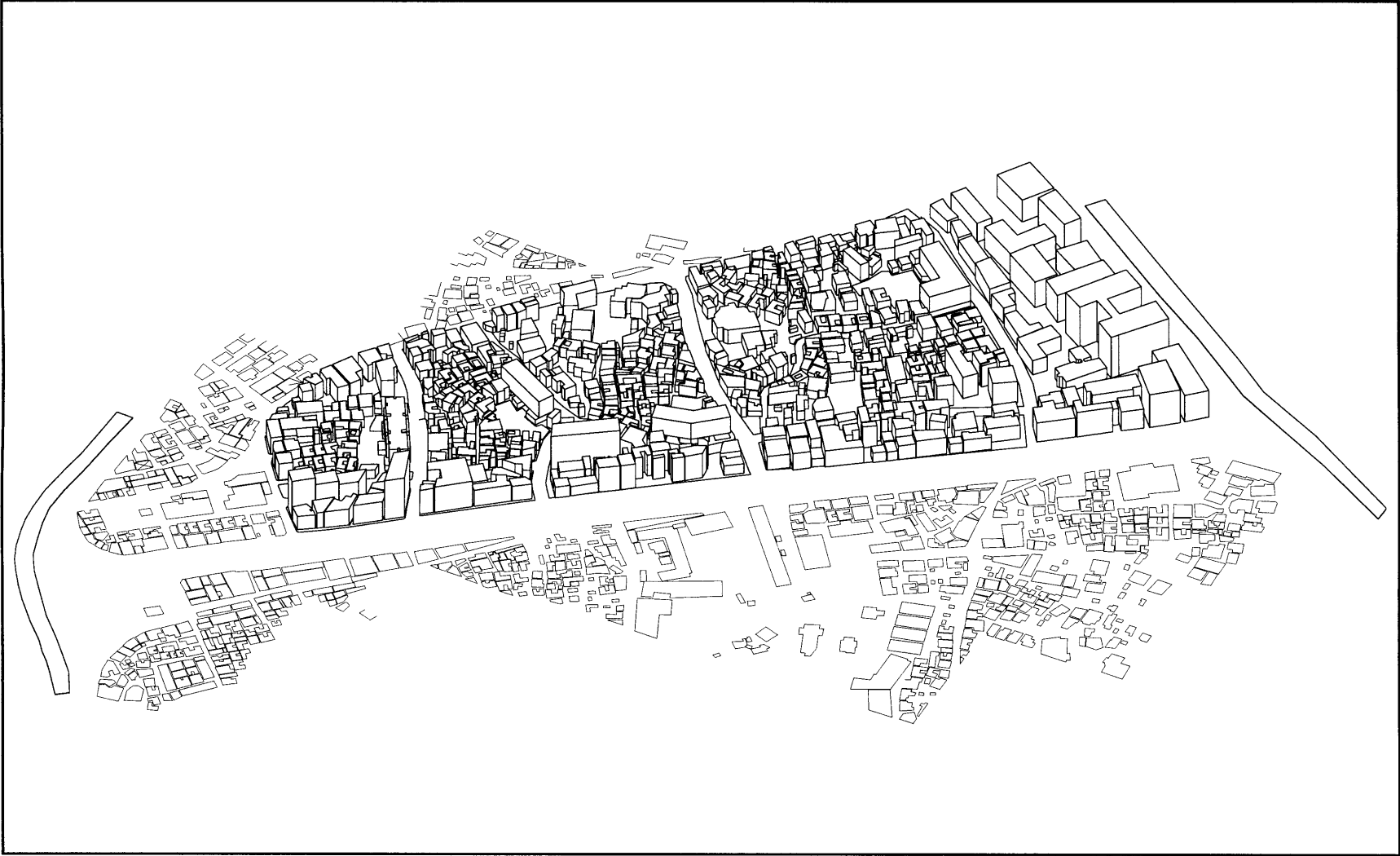
- slowly widen the existing "inner street"



New site plan after the restructuring



3d model of the proposed plan

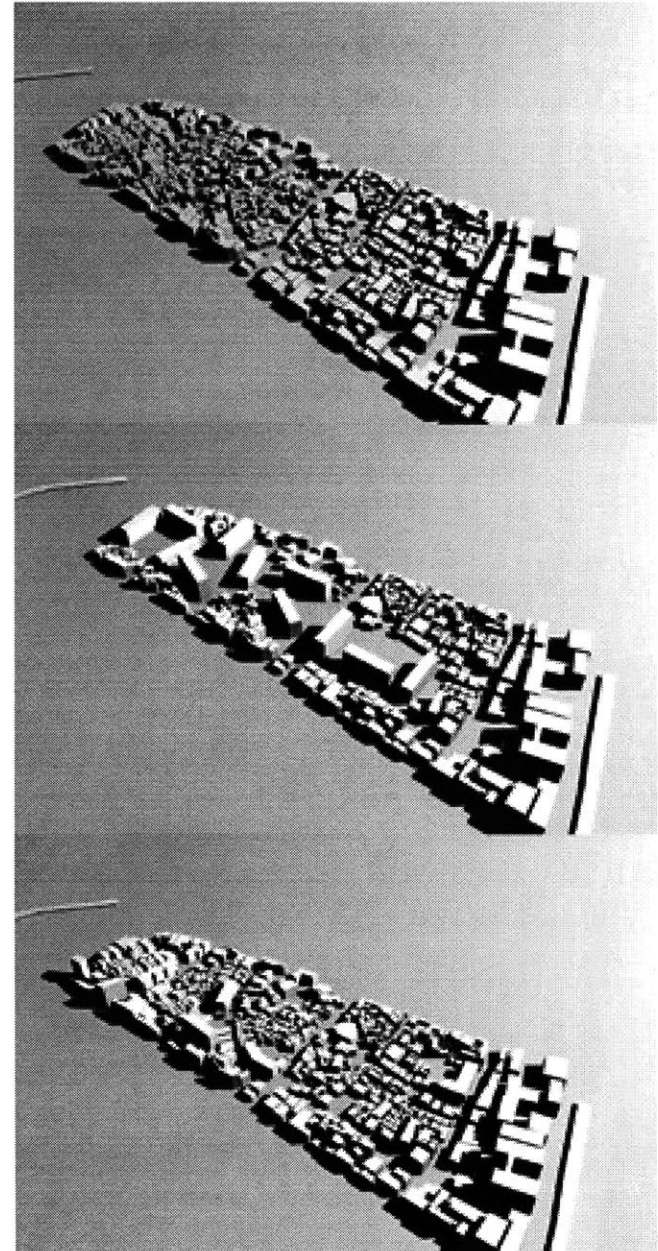


**Comparison
of three different plans**

Existing site

What if ..

Proposal



Open Space

Guideline

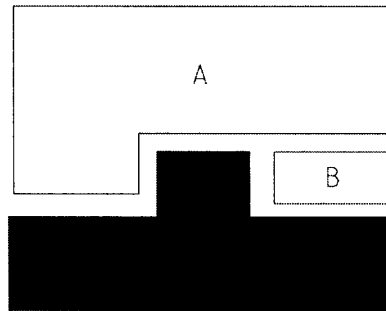
Design

Guideline

1. Program

A: Community garden / Gathering space

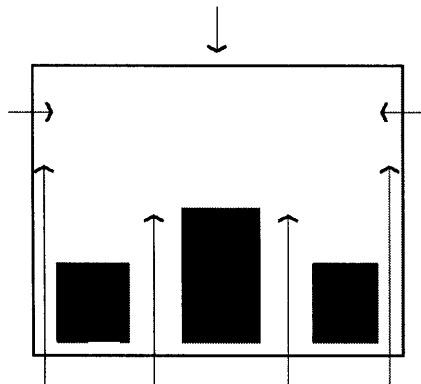
B: Playground



2. Access

Vehicles: limited only to the underground garage

Pedestrians: accessible from any directions



Open Space

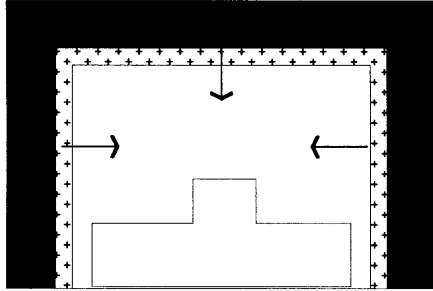
Concept

On the site, four open spaces are proposed. The open space is programmed as a community garden to encourage community interaction. Each open space is divided into about twenty lots, each of which ranges from 150 to 200 square feet. Then, the lots are assigned to the residents and surrounding neighbors for them to cultivate crops. The open area is designed to be used heavily by the community and they will bear the responsibility for managing the space.

3. Surrounding houses

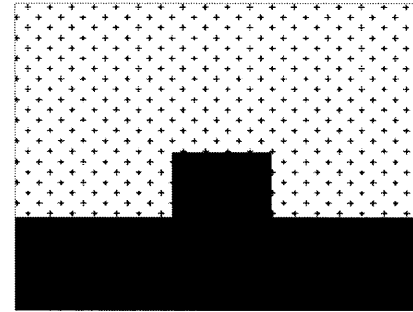
Setback: 5 feet from the open space

Orientation: facing the open space



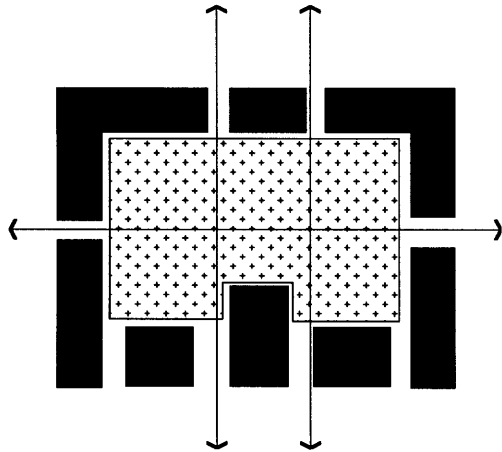
4. Surface materials

Community garden: 2 feet deep soil on the top of the parking garage.



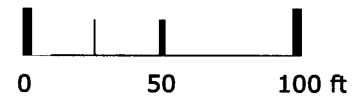
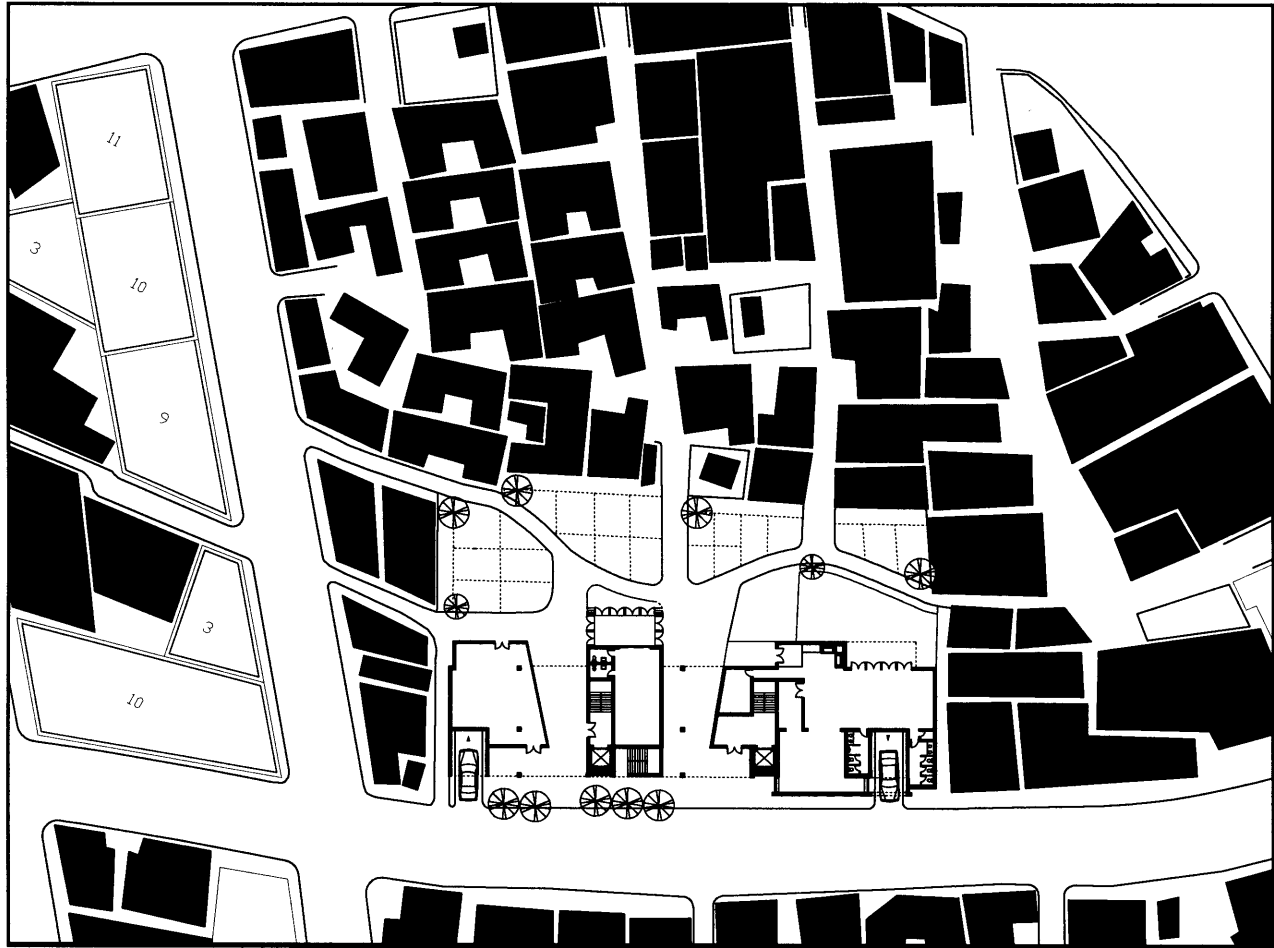
4. Axes

Align with the existing streets

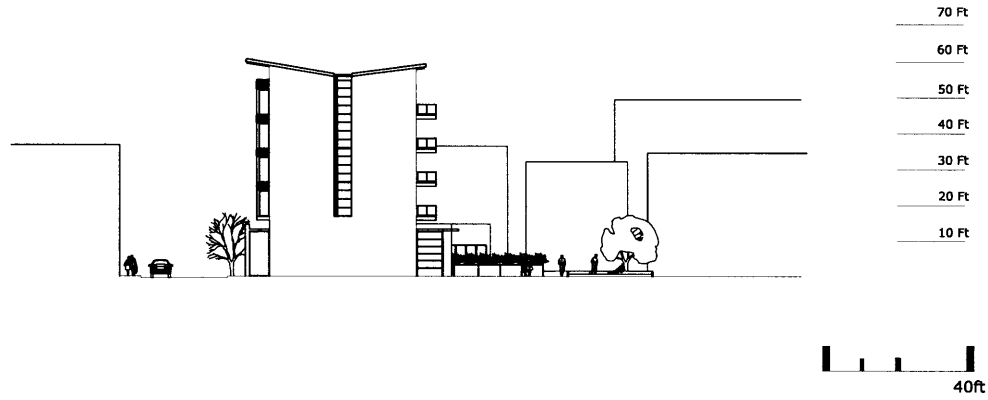


Open space design

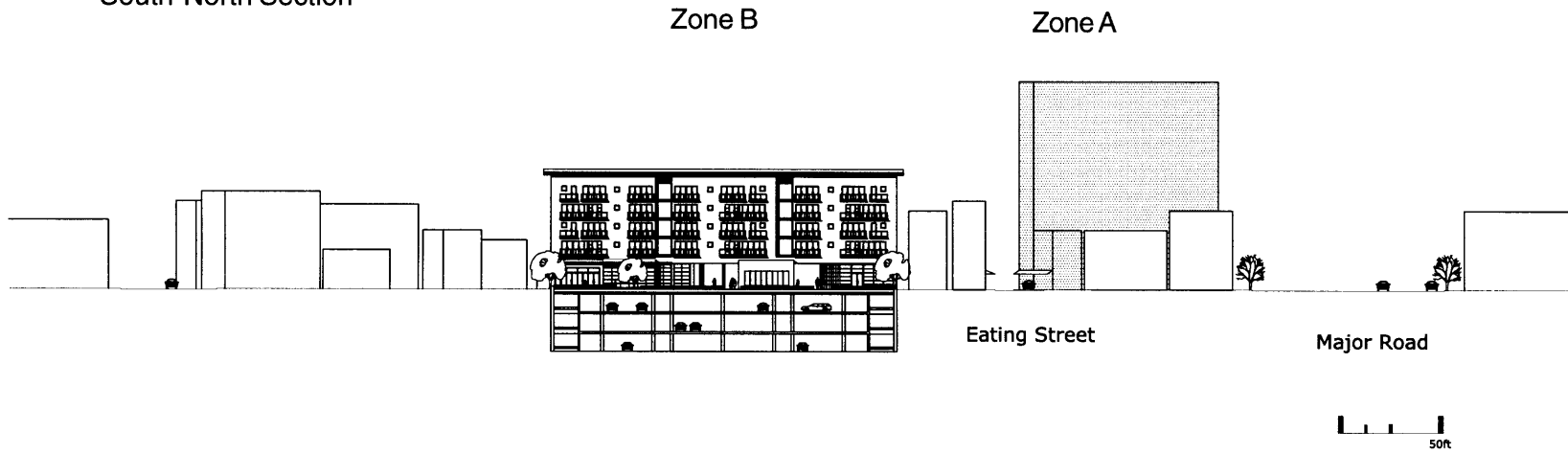
Site plan



East-West Section



South-North Section



View of the proposed
open sapce



Housing

Guideline

Unit

Housing

Housing

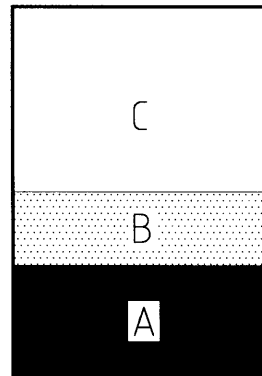
Guideline

1. Program

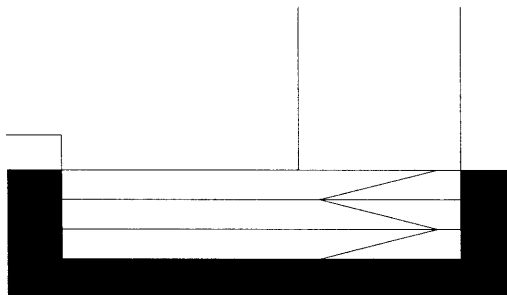
B1-B3: Parking (B1-B3)

1st FL: A community center, a daycare center,
and a grocery shop

2-3rd FL: Housing units



2. Underground parking Structure



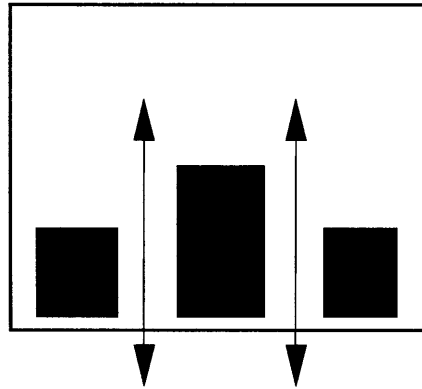
Concept

A Housing in zone B is designed for “two generation family”.

In Korea, it has been a long tradition that the eldest son of family lives with his parents, and many families still keep this life style. To accommodate their special needs, several features are introduced such as separate entrances and bathrooms. In addition, a day care center, a community center, and a grocery shop are located on the first floor of the building.

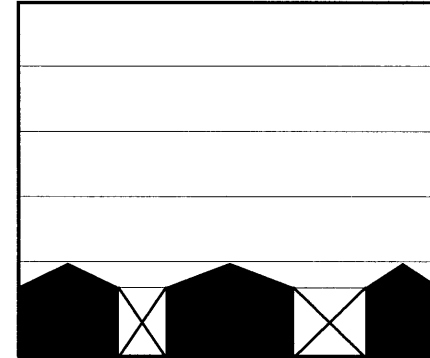
3. Access

use of piloti: create continuous space and visual connection



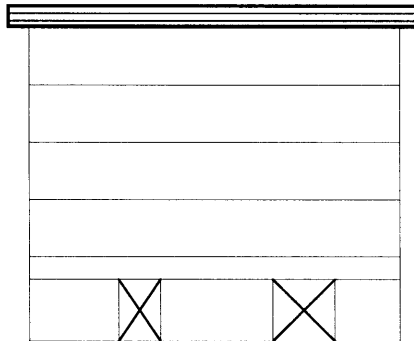
5. Building Massing

Create a passage way to the open space through the building. (Solid and void)



4. Roof Structure

Encourage to reflect a traditional roof structure



Unit design

Traditional architectural ideas in the proposed unit.

At the entrance:

Traditional house - As passing through a property wall space open up to a private yard

Proposed house - Visual connection to the outdoor space from an entrance

In the building:

Traditional house - deck space between rooms

Proposed house - penetration of balcony space

About the building:

Traditional house - Social separation between man and woman(houses within a house)

Proposed house - functional separation between two generation

Private Yard:

Traditional house - a private yard within a property wall

Proposed house - a community garden

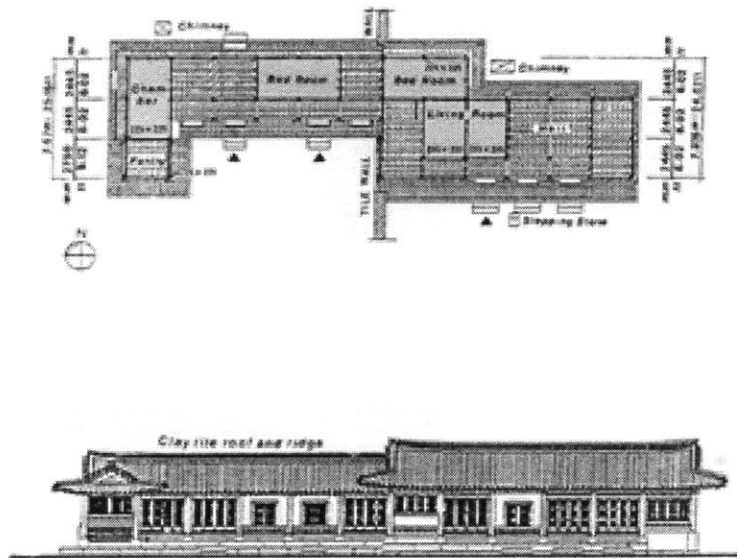
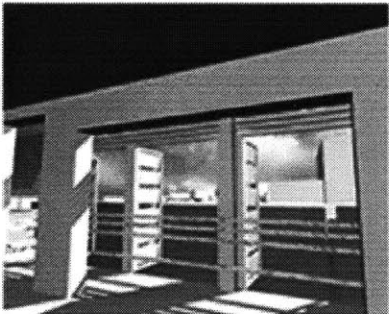
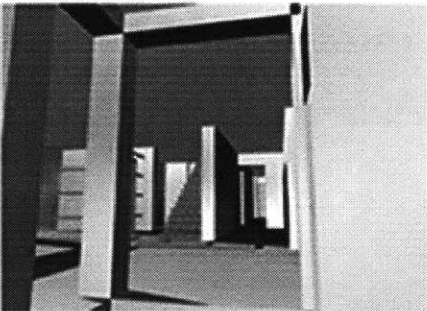


Fig 86 A typical traditional house

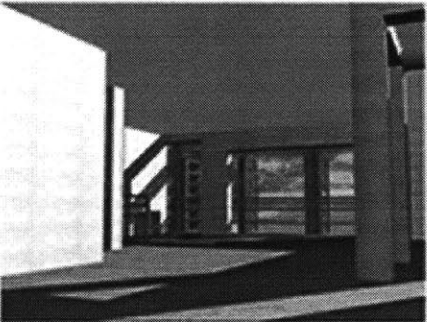
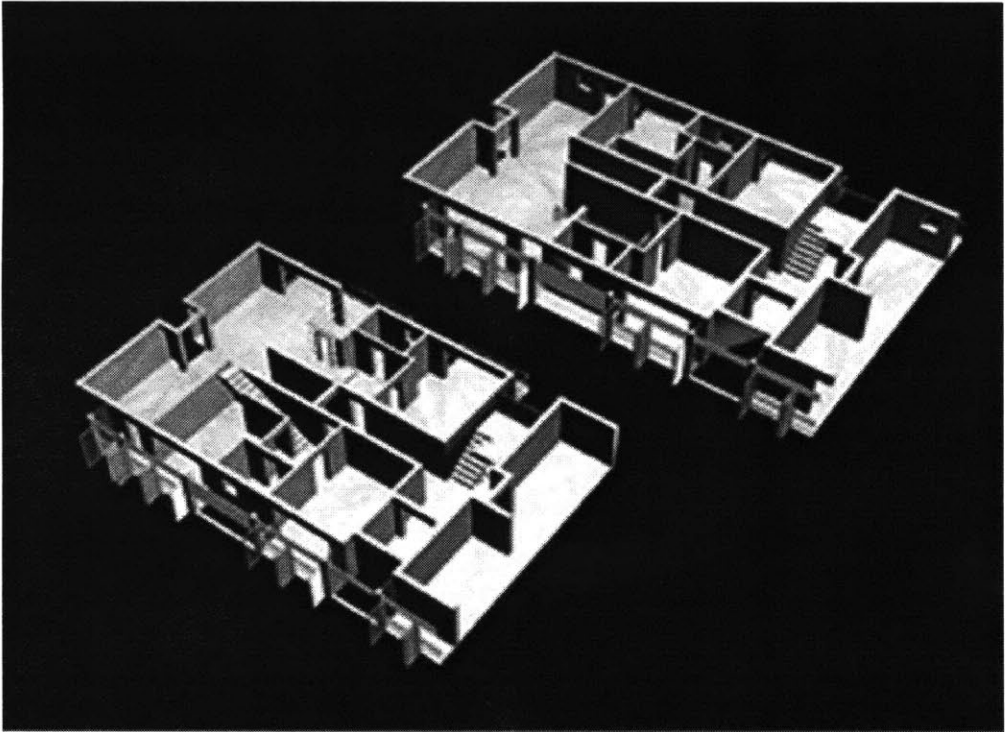
A typical two generation Unit
The housing in zone B will have 12
two generation units.



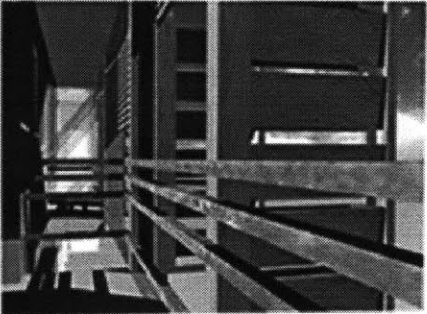
Window



Stair

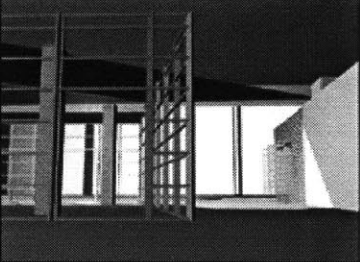
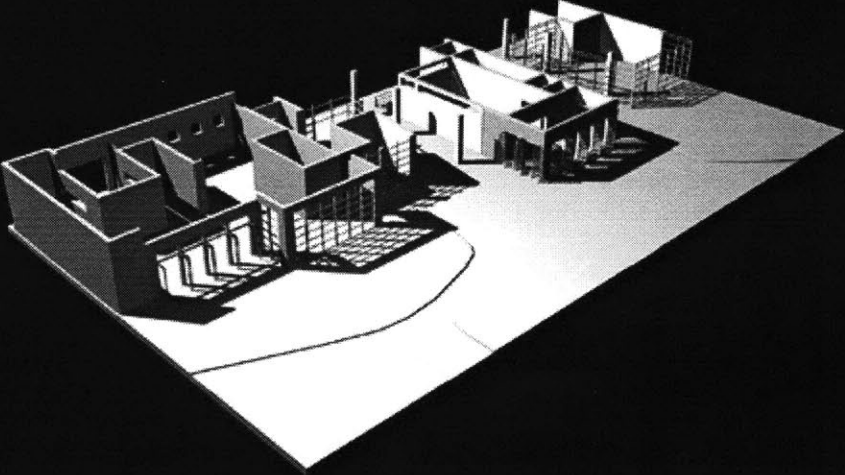


Living room



Balcony

Housing Design

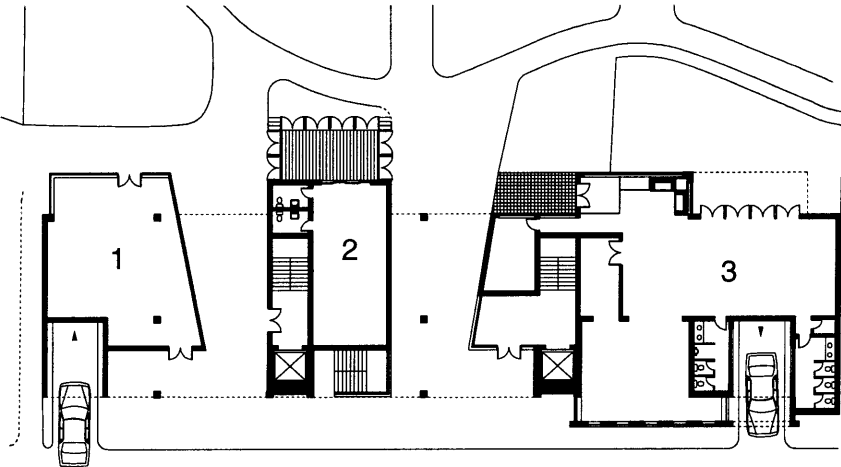


Community Center
Daycare Center
Grocery Shop
Community Garden
Playground

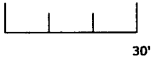
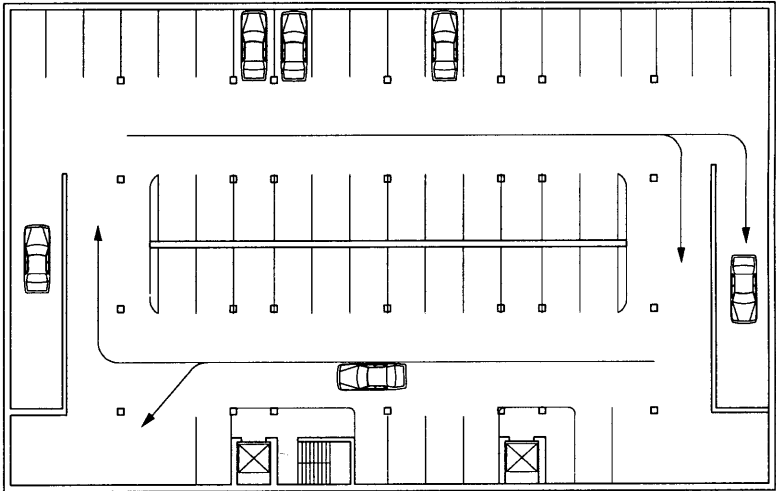


Ground floor plan

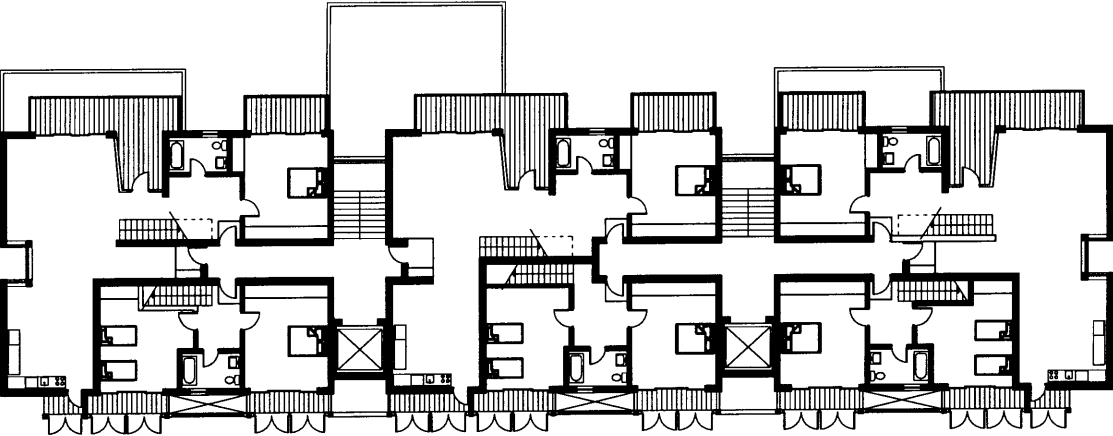
- 1. a grocery store
- 2. a community center
- 3. a day-care center



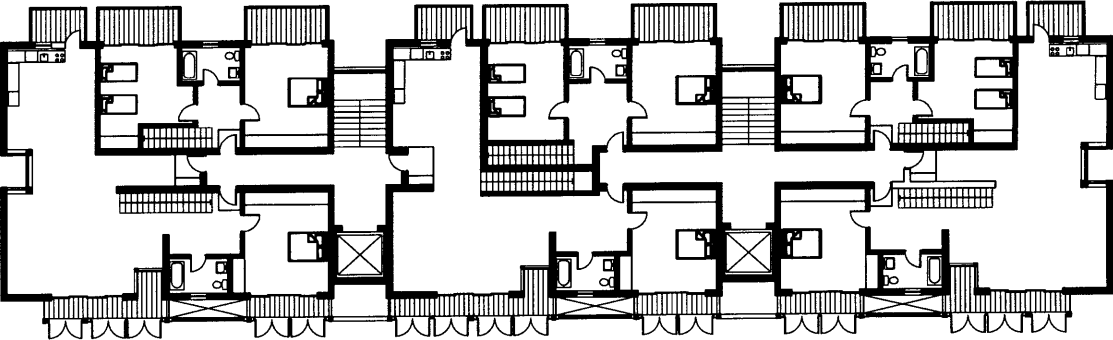
Underground parking
(capacity : 50 cars per floor)



2nd/4th floor plan



3rd/5th floor plan



30'

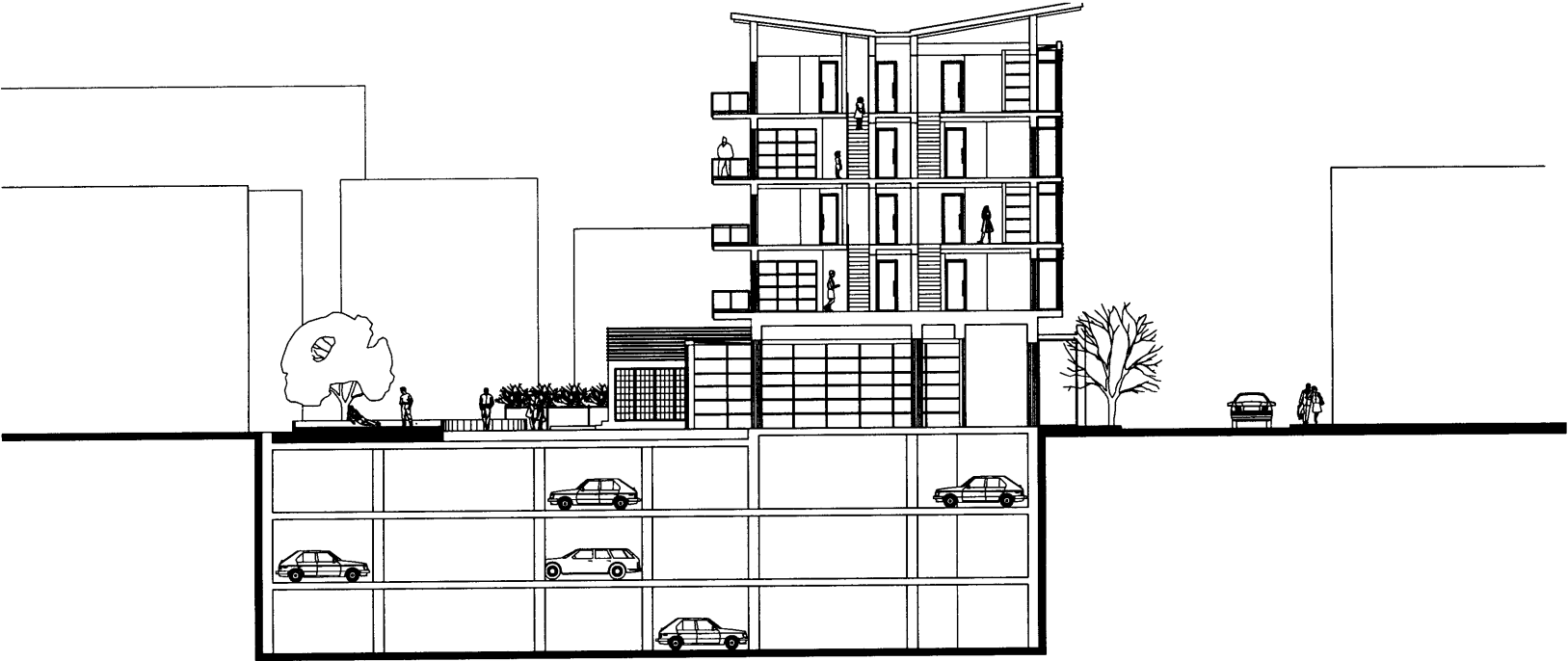
South elevation



North elevation

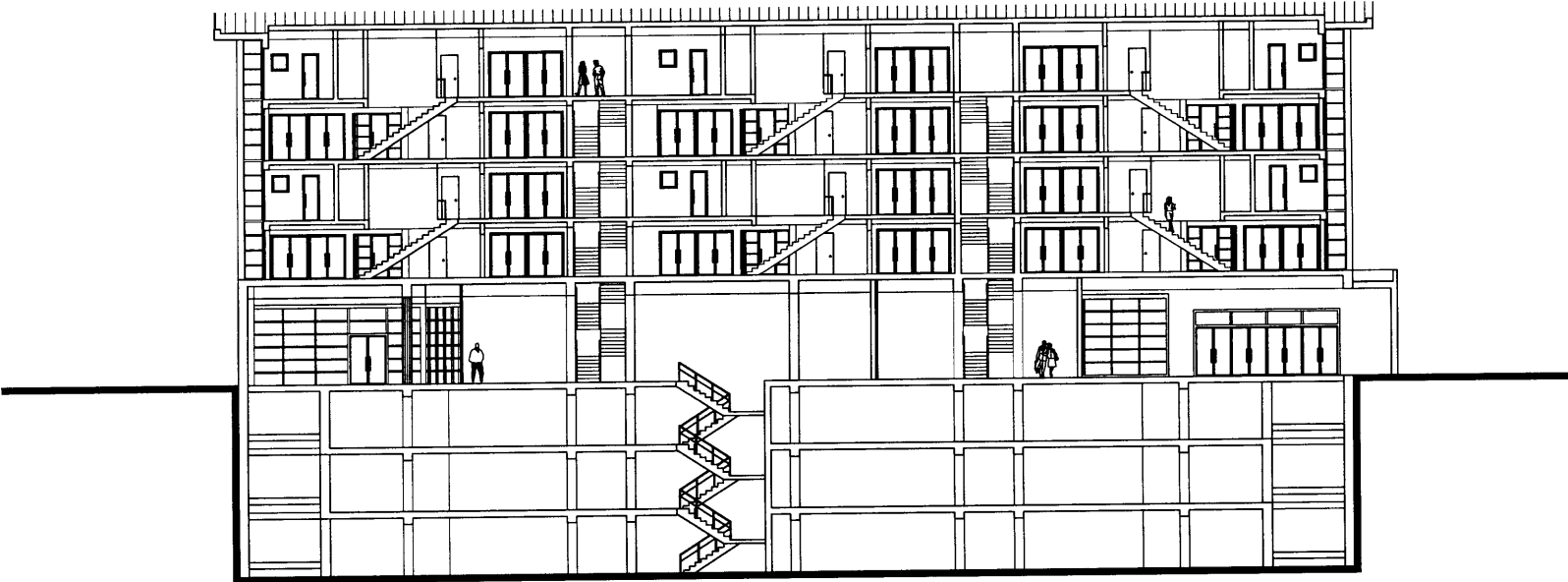


North-south Section



30'

East-west section



30'

South facade
view from southeast



South facade
view from southwest



North facade
view from northeast



North facade
view from northwest



V. Conclusion

There is a disjunction in the architectural history of Korea. Until the early 20th century, Korean architecture was based on the distinctive design and construction method that Koreans had developed throughout their thousand year history. Although the ancient architecture of Korea was also influenced by foreign cultural forces, Korea had adopted and recreated foreign architecture in a creative way, so Koreans can proudly say that they have a traditional architectural heritage in Korea. However, for the last one hundred years, there have not been any efforts to continue this tradition. Instead of Korean traditional architecture, Korean architects fell in love with the western architecture and its tradition. In consequence, the physical environment of Korea has changed dramatically. Traditional houses were abandoned, and old neighborhoods were cleared for brand new western-style building and streets.

By the end of the 20th century, Koreans had succeeded in changing the old city into the western-style city they wanted. In the process, Korea gained literally thousands of high-rise apartments, and, in turn, it lost its architectural tradition. This phenomenon was called, "cultural imperialism" in the early 20th century. Today, people call it, "Glo-

balization." Whatever they call it, this globalization is dangerous to a nation like Korea that is not the creating force of the new global culture. There is a greater chance of losing its cultural identity and being a cultural slave than of being a creator. Therefore, to stay as a recognizable cultural entity in the era of globalization, the continuation of traditional architecture is crucial for Korea.

This thesis has proposed a strategy and housing design that could preserve the old urban fabric of Seoul and reflect Korean cultural identity. In the design process, I have learned the difficulties of expressing cultural identity in a high-rise modern apartment building which has no precedent in traditional Korean architecture and demands many functional requirements. Also, from reviews and discussions, I realized the importance of economic forces in shaping the physical environment of our neighborhood.

No design project is ever completely conclusive. The further exploration of regionalism in architecture and search for the appropriate design for Korea should follow.

VI. Bibliography

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Aknowledgements

Thank you

to my wife who has supported me through my architectural eduaction with patience and love.

to my parents and family in Seoul and Jeanju who gave me an opportunity to study in M.I.T.

to my thesis committee, Roy Strickland, Joh P. De MOnchaux, and Reinhard K. Goethert for their continued support and guidance.