

Urban Development of District 11 Ho Chi Minh City, VietNam

Reconstruction Ly Thuong Kiet Residential Area

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Introduction

Ho Chi Minh City is the most important centre of economics, culture, sciences and technology in VietNam, with the population of more than 5 million inhabitants, an area of 2,100 km², and favourable geographical conditions. The city consists of 17 districts inner city and 5 districts in the suburb.

District 11, one of 17 inner-city districts, is about 8 km Southwest of the centre. It is the southern gateway of the city, which is convenient to get access within the Delta Zone (South of Vietnam), especially in trading agriculture production. It also is one of the Sport, entertainment centres of the city. Therefore, urban development of District 11 does not impact to its own development but also to the whole city.

To plan and manage the urban development of District 11 in a subjective and global way, after many years of study, the local government formulated the Urban Development Plan of District 11, which was approved by the Ho Chi Minh City's People Committee and based on the City Master Plan of urban development.

One of first projects, which must carry out initially in urban development of District, is the Project:

Reconstruction Ly Thuong Kiet Residential area.

That is the theme I would like to present in this Report.

Problems

Reconstruction Ly Thuong Kiet Residential area

Project aims at solving these problem:

1. Improving the living condition in the area.
2. Supplying more facilities for residents in the area
3. Suggesting a suitable solution in designing and planning for the whole area.

In this report, I would like to present the project under these aspects I mentioned above.

Organisation of the Report

- Introduction: describes the introduction and the objectives of the project.
- Background: deals with: background conditions of the project's area, description the existing area
- The project: Presents the project: objectives, strategies, actors,
- Project Implementation: analyse, project design (architectural, structural, infrastructure design), cost estimation, relocated policy, construction process, maintenance)
- Conclusion

Background

Description Existing Living Conditions of Ly Thuong Kiet Residential Area

Data

To have a general idea about the Urban Development Plan of District 11, we should look at some data below. According to these data, it is easy to recognise that most residential of District 11 still living in very poor living conditions: lack of dwellings, public services, transportation, and green area.

Ly Thuong Kiet Residential Area is located in Ward 7 (among 16 wards of District 11). It has the highest population density and poorest living conditions.

Title	Unit	Existing	Planning to 2020
Total population	Person	256,445	210,000
Total area	Ha	512	512
Population Density	Inhab/ha	497	407
Construction Density (Building area / Total area)	%	60.9	40
Average per capita housing floorage	m ² /person	8.17	12
Dwelling area / person	m ² /person	12.73	17.74
Green area/ person	m ² /person	2.02	3.86
Transportation / area	m ² /person	1.23	2.72
Public area	m ² /person	2.65	4.02
Average storeys of building	Storey	1.23	3

Table 1: Parameters in urban development of District 11

Construction Situation

Ly Thuong Kiet Residential Area consists of 9 housing block and more than 100 private houses.

- **9 housing blocks** (each including 4 storeys) built in 1969 as temporary settlements for victims during the war. First, they were intended for use for about 5–10 years. They were constructed with steel frame and bricks in fill. Because of the economic situation, people still living there up to now.
 - Total area: 37,585 m²
 - Total units: 1,032 units
 - Averages m² per unit: 35
 - Total residents: 6,032 persons
 - Age of buildings: over 30 year s



Figure 1: 9 existing buildings: they are a dirty and ugly face to the whole area.

All of 9 buildings now are old with terrible constructive conditions:

- Steel frame: rusty
- Floors, roofs: leakage
- Power, water supply: lacked
- Drainage system: destroy.
- Infrastructure: over load.

- **-Other private houses:** not traditional houses. All of them are row houses with small plots, lacking daylight

Transportation between the area is unplanned, narrow, and difficult in case of fire.



Figure 2: Private houses in Ly Thuong Kiet Residential Area: unplanned, unserviced.

To improve the living conditions in that area, District 11 Government has been very keen interest in carrying out the Project Reconstruction Ly Thuong Kiet Residential Area.

Method

A survey was done in all residents in the area to acknowledge about their needs in daily life, their wishes when they have to leave their old houses and move to another ones in new building in order to have a best solution to resettle them successfully. Besides that, many meetings were carried out among the Local Government, The construction Company of District 11, as well as with many specialist in architectural design field to conclude a best solution planning for the whole area.

The Project

Urban Development Plan of District 11

To have a general idea about development process in District 11, we should look at some main objectives addressing in the Urban Development Plan of District 11.

The Urban Development Plan of District 11 has been carried out from 1995 and was approved by the City Government in 1999. It should be finished in 2020.

The investment project for rehabilitation and development of the District 11 shall be based on the District 11 Urban Development Project with the following orientations:

1. Mobilising all capital sources with the policy and measure to attract the investor so a to rapidly expand the infrastructure and technical network of the district. The fields to be financed in our district are:

- Communication

- Transportation
- Water supply
- Sewerage
- Energy
- Amelioration of accommodation conditions and living environment for the population.

2. Rapid formation of the populated area with adequate basic public services such as: kindergarten, elementary school, market, and medical centre in order to minimize the transportation within the city. Therefore, residential can save time to pick up their children from school, to go shopping, to have a health care ... This also contribute in preventing the air polluted from the vehicles ' smoke as well as reduce the traffic jam – a big problem in HCM City.

3. Rehabilitation of the old urban area, starting with the houses, because of poor living and environmental conditions. The common ways are:

- Building high storey housing block for replacing the overdate building and slum occupying great superficies of land, reducing the building density, increasing green urban area and public services.
- Supplementing the technical and infrastructure network, especially communication, water drainage and supply to densely populated areas.

4. Housing in the district. The accommodation development rate in our district is still low as to compare with the needs in recent years. The investment rate has been highly accelerated thanks to the encouragement of rehabilitation of old buildings and the construction of new housing as per the Urban Developing Plan. The City Government grants priority of land use to build housing to be rented or sold on instalments to the poor people. Gradually, the accommodation in our District shall be better, so as to ensure the environmental sanitation conditions.

Reconstruction Ly Thuong Kiet Residential Area

Based on the objectives in The Urban Development Plan of District 11, The Reconstruction Ly Thuong Kiet Residential Area Project aims at the following:

1. The dangerous structure damage in 9 existing buildings is the first important thing to be solved initially, because more than 6000 lives under these buildings are facing an unpredictable danger every day. In this project, providing a safe settlement for all people in the area is one of the most necessary targets.
2. Like the goals and principles, which were mentioned in the Habitat Agenda, the Reconstruction of Ly Thuong Kiet Residential Area also aimed at: *Adequate Housing for All*, in this case all the residents in the area. Besides that, we also want to reach these aims:
 - Improving the living conditions, the environmental situation, and the sanitation of the area.
 - Provide a better life: better living conditions, which will help the residents be healthier and happier.

3. One of the priority targets set forth by the city Government is the program of housing urban poor. Most of residents in Ly Thuong Kiet Residential area are the poor. This project also aimed at providing housing for the poor.
4. The newly built housing is associated with public facilities, so that the residents could reduce travelling distance when the public transport of the city is still in poor conditions.
5. Modernise the construction face of the area as well as intensify the living standard in order to create a model residential area, which will be concerned to be a first step to accelerate all over the district.

Strategies

The strategies of the Ly Thuong Kiet Residential Area Project follow the overall Urban Development Plan of District 11. The project will:

- Intensify implementation of housing projects, especially housing for the poor.
- Use land more intensively in order to have more spaces for green area, public houses, and other services.
- Increase urban environmental protection. The control of urban environment biased towards community participant and education campaign.
- Maximise using capacity of new infrastructure systems like drainage, water supply, pavement, public lighting in order to lowering the overall cost of the system per household.
- Raising the urban construction and management efficiency.
- Approaching a sustainability of urban development.

Actors

The Municipality

The City Government

Area involved: The City Government leads the whole project. They are responsible in:

- Making the policy (investment, compensation policy to the old resident removed)
- Giving orientation (removing old residents demolishing old buildings and building new temporary settlements)
- Giving approach to invest the project.

Problems: Although the City Government always give priority to Housing Project, especially housing for the poor but, their support are constrained because of the restricted financial ability, the limited experience in management and the lacking of professional knowledge in this field. It should be better if the City Government increase a professional staff to concern this field.

The Municipal Authorities

There are 6 different departments of municipal authority to administer the same project. Including:

- The Architect in Chief Office: manage the site plan at the beginning, and the architectural design after the

plan got approval by the City Government. They also give the project's construction permission.

- The Investing and Planning Department: After the site plan got approval by the Architect in Chief Office, The Investing and Planning Department will review the total investment capital. They usually fix an unchangeable budget, that cause many complication during the implementation process.
- The Land and Housing Department: Manage the land use, establish land used permission of the project and the ownership of new buyers when they finished their payment.
- The Construction Department: Review the project design in details: architectural design and budget investment for each construction of the project.
- The Sanitation and Environment Department: Considers aspects that influence the urban environment such as: safe water supply, garbage collection and especially the air, noise and visual pollution.
- The Fire Preventing Department: Considers aspect to prevent fire disaster: fire preventing system, electricity short circuit.

The project would be submitted to the City Government after these 6 authorities accepted. The six authorities above do not always work together well, causing a waste of time and low efficiency. A suggestion in this case is a simple and rational management system (including six members of the departments) to manage the project from the beginning to the end. The review process can be done in a short time, consuming less effort, time and money.

Local Authorities

The Local Authorities insist of The District Government and their departments (Urban Management, Finance, Planning and Investing Department and The Ward Government). At the beginning, they have a weak and passive role. They must wait for The City Government decision. But they have a principle and active role in project's implementation. Their involved sectors are:

- establish compensation policy to the removed people
- funding
- organising the whole planning process
- managing the implementation process
- co-ordinating with all participants involved.
- establishing the Settlement Policy (including relocated policy, repayment policy)
- managing the maintenance of the whole area.

Usually, a well-managed local authority is helpful to the project's planning and construction. So the local authority's officers must be professional, transparent and conscientious.

Planners and Designers

Participate in almost phases of the project. They have an important role in the whole project: from the beginning of pre-project to the end of construction process.

They are responsible for:

- Carefully and completely investigating the background conditions including, population, living

conditions, target group and the physical situation, including structural damage and existing infrastructure.

- Providing a good solution in plan and design according to the problems and objectives of the project.
- Following up implementation. The project could be successful or not depending on the professional level of planners and designers. A part of their participation is to give professional services; another part is co-ordinate with the others. They should be more active in their participation, pay attention to the feedback information from the project implementation and concern to resident's interests.

Construction Company of District 11

This State Company is the main developer and contractor of the district. They have an active role in implementation process of the project.

+ As a developer: They mobilize efforts, professional staff and money to implement the whole project. They participate in almost all phases from the beginning to the end. They are responsible for the survey, design, execution and financial funding of the project.

+ As a constructor: They assume the construction process. They must ensure a reliable standard of construction and responsible in many fields:

- Construct all buildings in the project, including the infrastructure system
- Manage the construction site: workers, working regulations, security for the surrounding buildings.
- Provide and choose adequate building material.
- Co-operate with Local Government to solve any problem happening during the construction process.

It can be said that The Construction Company of District 11 is one of the most important actors of project. Their efforts, professional skill as well as money contribute a lot to the success of the project.

Residents in the Area

They are concerned as private sector role.

- Their first participation begins with the Co-operation with the Local Government in removing phase.
- The second is that they present their needs, opinions both to the local authority and planners. Their ideas form the details that the planners and designers will pay attention to.
- The last one is if they acknowledge the community interest they will be the most important actors to maintain the sustainable development of the area.

To achieve this target, they should well informed through intense, simple, accessible promotion and information.

Project Implementation

The project implementation would last for 8 years, from 1997 to 2005 including time of investment investigation, design process and constructive process.

Analyse

Considering to the existing living and constructive conditions of Ly Thuong Kiet Inhabitat area, as well as its objectives, we easily realize problems in project implementation.

The first problem is How to relocate all residents in new accommodation with adequate services and better living conditions. To solve this problem, we face two contradictions:

✎ The first contradiction is: the population is increasing unlimitedly while the land use is limited. This contradiction causes the high building density which is worsening the urban living condition every day: average per capita housing floorage is reduced, average per household is increased, the public services is not considered at all and the infrastructure system is overload.

✎ The second contradiction is: Land and housing are getting more and more expensive but the resident's income is unchanged. The residents cannot afford to renew their houses, so repairing structural damage of these buildings must wait for subsidies from the government. The Government's target becomes more and more difficult.

The second problem is how to carry out the project implementation in an efficient and successful way. To solve this we need to carry on these phases:

- Phase 1: Remove old residents. There are two ways to do this:
 - Give appropriate compensation through negotiations between Local Government and the residents. This requires a suitable and just policy from the Government, a transparent and conscientious spirit of the officers and a big budget at the beginning.
 - Provide temporary settlements. A building should be constructed before starting project implementation to house the residents temporarily. But we are facing the lacking of temporary settlement. Although the Government constructed a temporary building, the demand was bigger than the supply. This problem could be solved if we have help from the municipality and other Local Governments in the City.
- Phase 2: Demolish the old building in a safe way, not to affect the surround area. This phase is done by the contractor under the supervision of Local Government. In this phase, the residents in surrounding area sometimes protest the demolished implementation. They complain about the noise, dirt, dangers come from the building site. The best way to solve this problem is isolating the construction site from the surrounding area as far as possible and limiting the period of demolition. Anyway, this is not a simple work, it require a new modern technique and a big financial funding, while our capital is still limited.
- Phase 3: Design and construction process

The first thing to do in this phase is finding out a best solution in designing. The problem is how to have a high density housing without crowding. This means the planners and designers must find a solution which makes land use more economical in constructing

houses, but does not affect to the normal living of the residents. On the other side, this solution must catch the main objective of the project: providing a better living condition for the residents (more green area, more public area, and better infrastructure and transportation system).

The second thing to do in phase 3 is ensure a high standard of construction that is also economical. It is necessary to have adequate choices in building material, a well-manage staff in construction site and new construction technique.

The technical skill of builders in VietNam needs to be raised. The Government should encourage and give priority to contractors to learn new techniques in developed countries. That requires a sustainable training campaign in this field.

- Phase 4: Relocation and cost recovery

This is the most difficult phase. The Local Government must establish a just distribution policy: Every resident has the right to understand and participate in this phase in order to ensure a proper and equal distribution.

Besides that, the Government should define an appropriate time for repayment loans to help the poor getting a house.

Project Design

This is the design of the first phase that began in 1997 and is almost complete.

Design Concept

Key concepts in this project:

- Efficiency in utilisation of land, infrastructure system and the access of low-income households to adequate shelter
- Combining modern with tradition, technology with culture, development with environment required

Design for efficiency

- *Economic efficiency:*

Reconstruction Ly Thuong Kiet Residential Area is an upgrading project. The planners and designers try to reuse the current infrastructure system such as: sewage, drainage, electricity system and roads as much as possible. These systems should be upgraded to meet the new demands. Upgrading the current infrastructure system is not as costly as constructing new.

That helps us to minimize the impact of infrastructure system and roads in the total project cost.

In other hand, choosing adequate and local building material and having a good planning contribute an important role in economic efficiency of the project.

- *Land use efficiency*

In this concept, the planners and designers manage to minimize the building plot covered to save space for other purposes: green area, public services and urban environmental protection. In order to satisfy these aims, it is necessary to approach two points:

- Balance between open and occupied spaces

- Access optimal use of available land and infrastructure while producing pleasant and sustainable urban development.

Vertical development of construction is chosen as an adoptable solution.

- *Time use efficiency:*

Time use efficiency is one of the ways to avoid wasting in construction and design project. Designers manage to save time through these solutions:

- Making simple (but not boring), vital, attractive architectural design, suitable to the climate, culture and other factors. Besides that, it is needed to avoid useless, complicated decoration details of the design to shorten the period time of construction, and save labour time.
- Making a model of design to reuse it in next phases is one of the ways to save time and money.

Design for better life and create spaces for modern life.

Units of house must give enough comfort, not too big or too small. Air ventilation, daylight, using capacity of rooms must be concerned. The designers should pay attention not only to the current users but also to next generation users, ensure a long- life living standard.

Site layout

The site spread over 37,585 m², with an advantage infrastructure and roads system. 5 current streets cover the site:

- Ly Thuong Kiet Street in the east. This is one of the main roads of the City, and the primary road from the area to other districts.
- Vinh Vien Street is at right angle of Ly Thuong Kiet Street, the second important road of the area, which is concentrate with industrial production trading.
- Nhat Tao Street in the north
- Hoa Hao street in the south, one of main business street of the City.
- Ly Nam De street in the west, an intervention road of district 11.

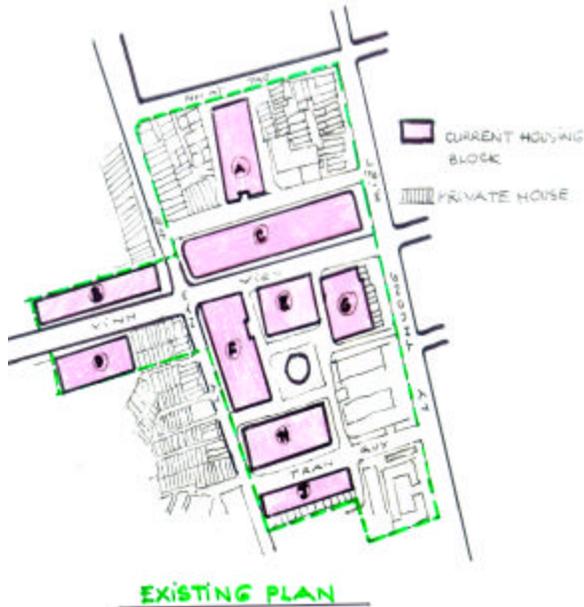
All of those streets above are existing roads, using as the transportation frame of the new residential area.

To ensure objectives of the project, especially supplying enough settlements to rehabilitate, the plan should include

- 8 new apartments mainly based on the current roads system to take advantage of existing infrastructure. (Table 2)
- Elementary school: covering 900 m² and serving 500 students in the area.
- Kindergarten: covering 470 m² and serving 100 children in the area.
- Other public services: clinic, post office, markets.



LY THUONG KIET RESIDENTIAL AREA



Name of Apartment	Area m ²	Storeys	Total floor area	Number of units
A	730	9	7,973	110
B	576	17	11,443	116
C	1,056	9	18,548	256
D	1,080	5	5,241	96
E	985	9	10,574	156
F	984	9	10,574	156
G	1,152	17	22,886	232
H	708	5	4,013	64
Total	7,715		91,255	1,186

Table 2: Parameters of 8 new apartments.

According to table 2: 1186 house units will be finished. Average persons per household is five, total relocated people will be approximately 6000, equivalent to the current population.

Construction	Total m2	Percentage / total area (%)
8 apartments	7,715	} 24 %
Elementary school	900	
Kindergarten	470	
Green area, pavement Public services	20,429	55%
Transportation	7,871	21%
Total area	37,585	100%
Total Construction floors area	96,265	Note

Table 3: Land use balance

Note: Total construction floor area = 256%

Total area

According to Table 3: the plot covered is only 24% in compare to the total area, that is an ideal percentage while the permissible percentage in this case is 40%.

Housing Design

New buildings are named A, B, C, D, E, F, G, H. They are designed as apartments for low-income people, with different facades and at different level to make a variable view of the area and ensure a balance building density. (See Table 2)

Architectural Design

Apartment C is the first building constructed in this project. It also is the first high-rise building in District 11. This is a standard design used for other buildings. There are two blocks: CI and CII. Each block consists of 9 floors.

- Ground floor and mezzanine:
 - Ground floor: is planned with a garage (for cars, motorbikes) some shops in front of the building and a services room (store water pump, electric control system and power machines) Each block has two entrances, two staircases and four elevators.
 - Mezzanine: between ground floor and first floor. It covers a part of ground floor space, used as bicycle garage and management office of the apartment.
- First to eighth floors: The upper 8 floors are designed as housing units. Total of 256 units in two blocks. Some figures of design:
 - Average m² per unit: 50 to 77 m²
 - Houses are on both sides of corridor
 - Houses access directly sunlight, ensuring enough daylight supplying.
 - Ventilation also concerned through the fact that windows open in different directions, and there is a gap between the inner wall and the ceiling.
 - Two-third of total house units consists of 3 rooms: one kitchen with bathroom inside, one living room (also use as children room) one bedroom. One-third of total houses consists of 4

rooms: one kitchen with bathroom inside, one living room and two bedrooms.

- A small patio in middle of the corridor is planned to supply enough daylight and ventilation for it.

The façade is designed as an important figure of the building. It contributes in making a new, bright face of the whole area with a modern architecture and a simple, harmonious design.

In this project, the designers specially pay attention to solve the problem of daylight and ventilation. That is the way reducing the cost recovery of power consumed for residents.

Another element is also particularly respected in the design process, that is escape in an emergency such as fire, or gas explosion, etc. This fact is shown by the distance from the farthest house to the staircases or elevators always is below 20m.

Structural Design

A geographical investigation was carried out before starting structural design process. Strap foundation is chosen as a foundation solution. The building is constructed with reinforce concrete frame (foundations, pillars, beams, floors), bricks in filled, and slop roofs with concrete roofing tiles.

The structure engineers have carefully thought over the suitable structural solution in order to have a most economical structural cost.

Services and Infrastructure System

- Services: Green area, park, public services such as: kindergarten, elementary school, post office, market are planned in this project. The local Government gives fund to these public buildings.
- Infrastructure system: The infrastructure system in side housing blocks is constructed new. New technique and new standard are required to have a sustainable system. But the general system of the whole area (sewage, drainage, and electricity system, main roads) is upgraded to be suitable to new standard. This solution reduces the infrastructure cost in the total investment. The garbage collection is done daily by the District Sanitation Services.

Cost Estimation

The estimated cost of the whole project is about VND300 billion, equal to USD 22 million. The estimated cost includes:

- Cost of compensation for land tenure (if any)
- Cost of construction
- Cost of infrastructure system.
- Cost of professional consultation.
- Cost of land use (In this project, the City allowed land use free of charge)

Thus the estimated cost per m² household is approximately USD 230. The cost per house unit is vary from USD 11,500 (50m²/household) to USD 16,100 (70m²/household). That is suitable to financial capacity of most residents in the area.



Figure 3: Apartment C 's Perspective

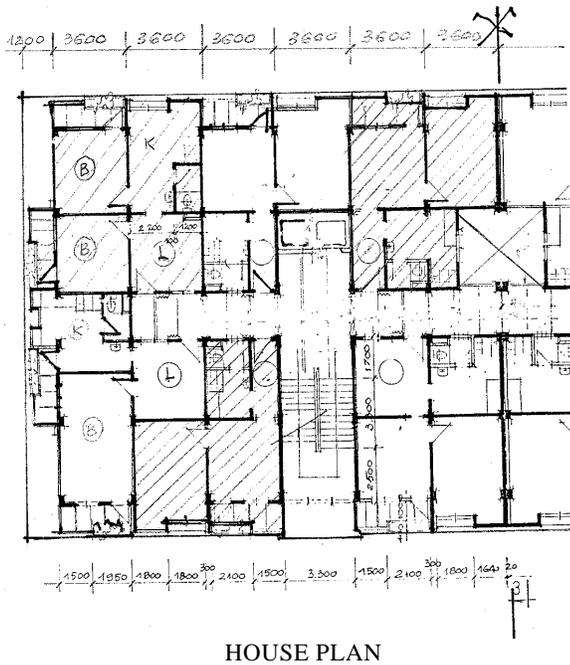
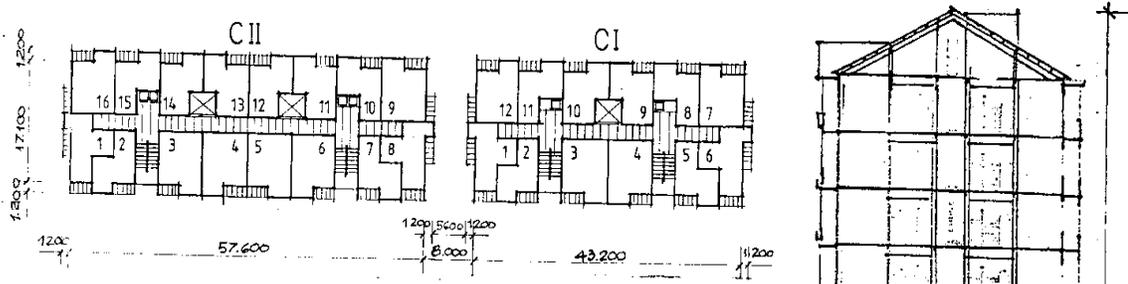
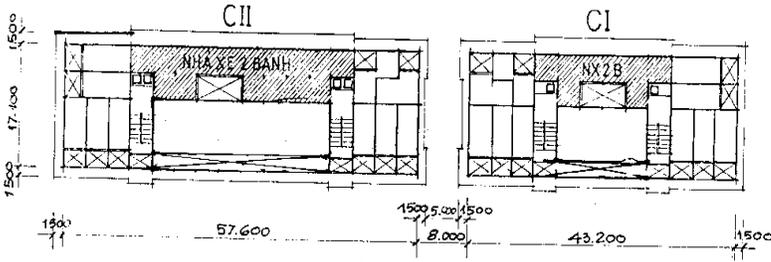


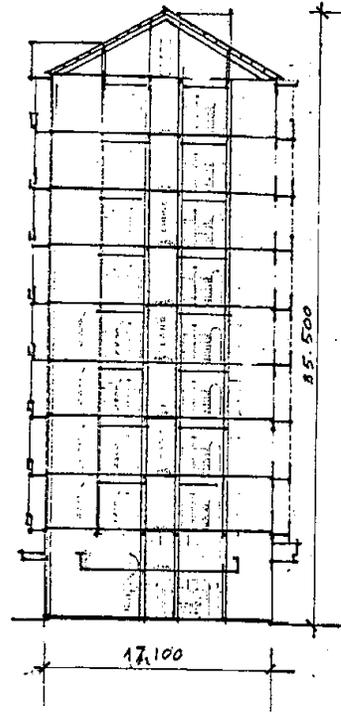
Figure 3: Apartment C is under finishing stage



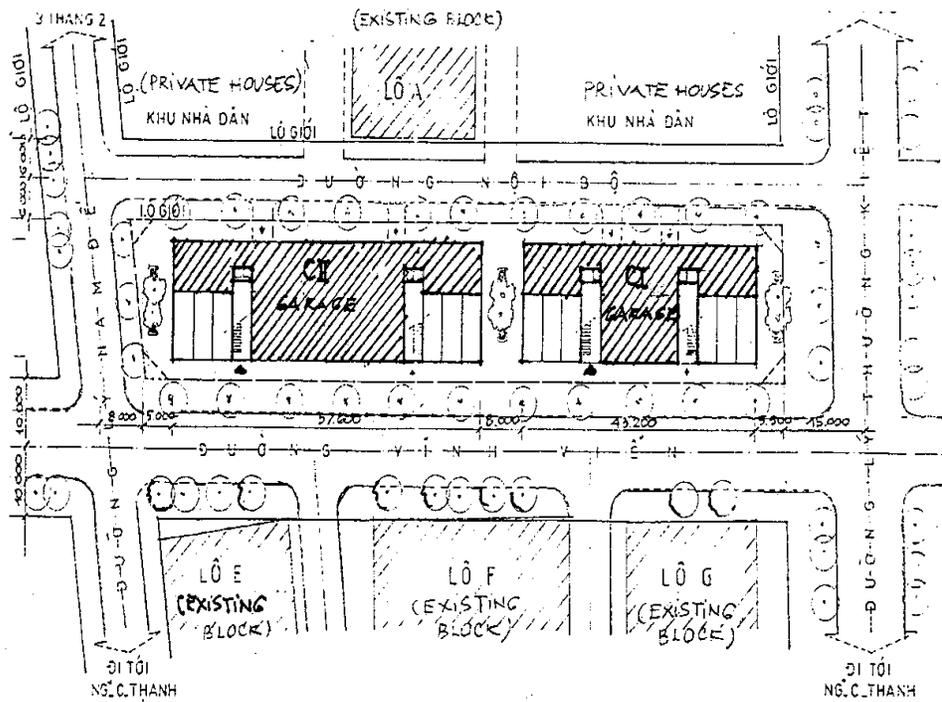
FIRST TO EIGHTH FLOORS PLAN



MEZZANIME



SECTION 1-1



GROUND FLOOR

Relocation and Cost Recovery Policy

The old residents are given priority to rehabilitate in new buildings. There are two ways of relocating:

Residents who have financial capacity

- + One time repayment: They could have the ownership of new house after finished their repayment.
- + Pay by instalment: Otherwise, they can pay the repayment in 10 years period, with 10% annual interest. (That is a special low interest offered by the national bank just now.)

Residents who cannot repay

They are given priority to relocate in new house in a long- term rent period. The monthly rent is about USD 0.2 per m² that means USD 10 to USD 14 per house, nearly one-sixth of a poor family's income.

Due to the flexible relocated policy, the project objective: adequate for all has succeeded at first step.

Construction Process

The construction process includes 8 phases:

- Phase 1: Construct a building in another place to use as a temporary settlement to remove residents of the old C housing block.
- Phase 2: Demolish the old and construct the new building C. Residents return to C and leave the temporary settlement empty.
- Phase 3: Remove residents of A and G blocks. Demolish the old building and construct the new buildings A and G.
- Phase 4: Remove residents of E and H blocks, demolish the old building and construct the new building E and H.
- Phase 5, 6, 7: The same way carry out for the rest building: Blocks D, B, G.
- Phase 8: Demolish the water tower (because it is useless now) and Block F to construct a park. This park increases the green area of the residential area. In this phase, upgrading the current infrastructure system, roads will be the last construction.

In this process, reducing construction time is very important to keep cost down as well as a good planning also contribute to this problem. The constructor should make a plan based on realistic factors such as:

- avoiding seasonal problems like the rainy season (rain in Vietnam lasts 5 months). If the contractor starts building foundations or outside finishing in this period, much time and labour would be wasted)
- Supplying in time building materials, financial investment.

Maintenance

The Local Government should establish a management staff of Ly Thuong Kiet Residential Area after the construction process finished. The management staff salary would be paid by money collection from residents in the area and by the support of Local Government.

This staff is responsible for:

- Maintaining the environment of the whole area as well as the sustainable constructive condition of new buildings. Activities like gardening, cleaning, minor repair and painting should be carried out regularly.
- Managing the electricity, water supply, drainage system and the elevators.

These staff activities have an important role in maintaining the sustainability of construction.

Conclusion

As I write this report, the Project has nearly finished the first steps. Apartment C is at the finishing stage. The residents understand how their new settlements will be. At the beginning of the project, most of them are reluctant to participate. This attitude is reasonable, because normally old residents in this kind of project lose more than they gain from it. But now they are willing to move to new houses. It is probable that, the project is going to be successfully. Why are the reasons?

- First, because of the reasonable cost. This cost is fairly low thanks to the land use granted by the City Government (free plots) and the flexible removal and relocating policy. Now residents in this area can believe in the objectives of the project: the project is of, for and by themselves.
- Second, there is good co-ordination and efficient interrelationship between actors involved. The project implementation has not suffered from the usual problems: conflicts, corruption, delays or so on. That speeds the implementation process and sustains the total cost of project.
- Last, commercial benefit is not the main purpose in this project. This project obviously aims at a sustainable urban development of District 11.

However, housing demand in District 11 requires more houses to be built with the higher and higher quality in the coming years. The first successful stage is concerned as an experiment for us. Our responsibility now is to continue the rest stages more efficiently.

In short, for Vietnamese people, housing is an essential demand of their lives. It is not only the roof on one's head; it also means a cosy nest of a family where feelings and affections of many generations converge. Beside that, it is a small cultural environment to educate the youth.

Last of all, housing is in direct association with environment, health and society. So, if the housing problem is well solved, its associated problems will be solved accordingly.

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