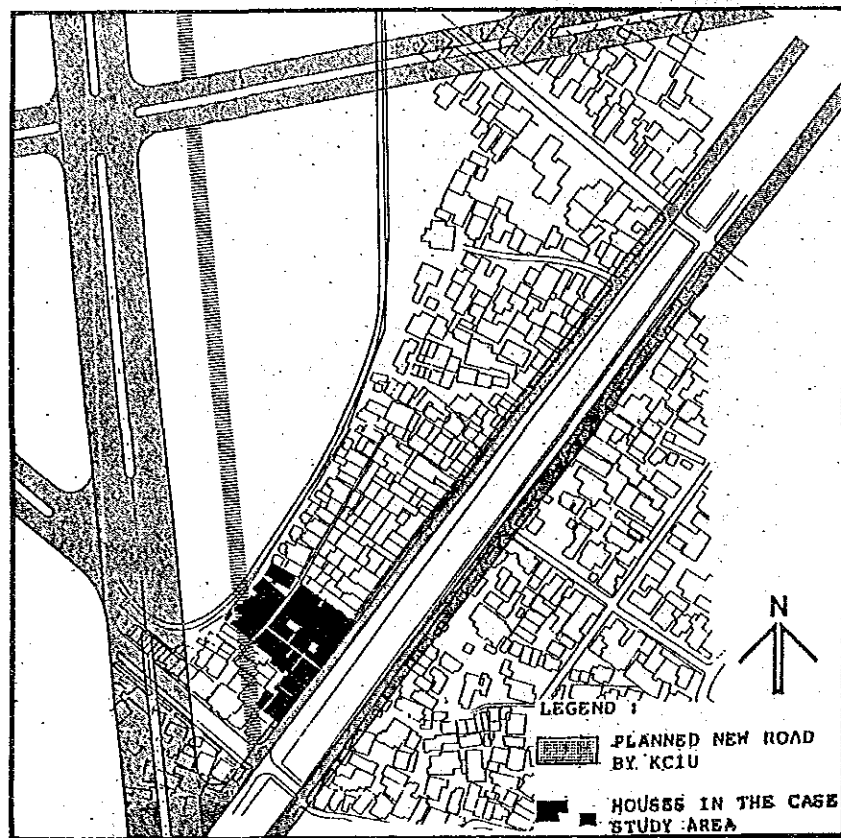


2.3 PHYSICAL CONDITIONS AND PLAN

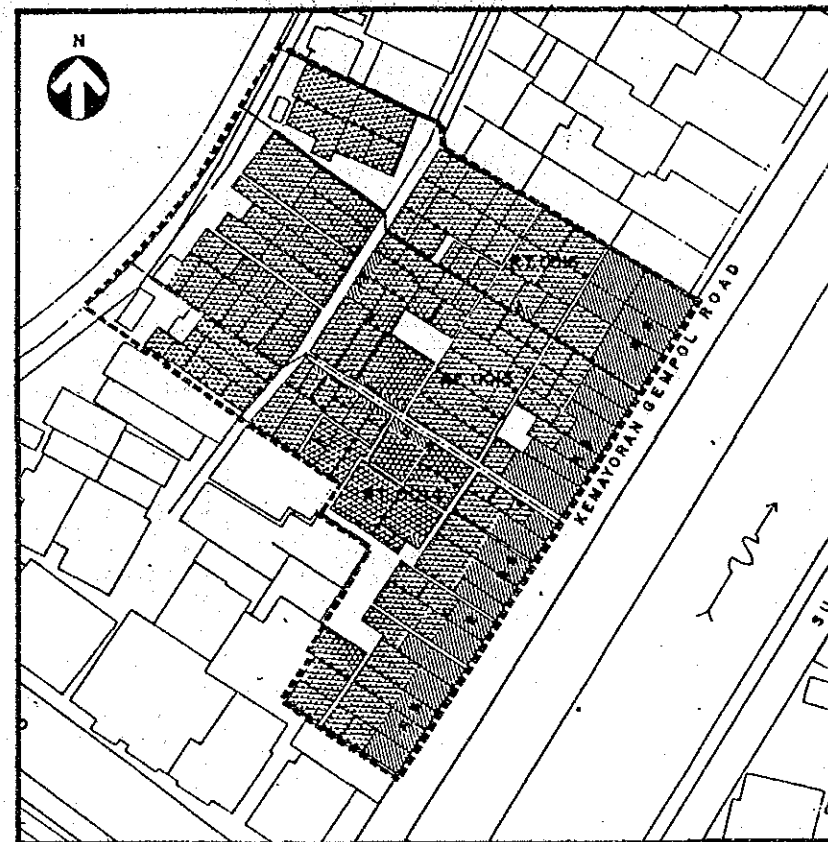
The detailed survey data of Site B, representing similar areas of Category B in Zone 4 are shown here.

2.3.1 Existing Characteristics



- It lies in Kelurahan Kebon Kosong, and KIP has been implemented during Repelita III.
- The site falls within Zone 1 and most of it will be demolished by the execution of the Kemayoran Complex Development Project, and the required renewal and integrated development with Perumnas housing development.
- The site has very poor housing located mostly in Hak Milik/Tanah Garapan and no neighbourhood facilities, with extremely crowded housing inhabited by low income households. The major land use of the site is residential with a number of commercial shops along the road side.

2.3.2 Building Use



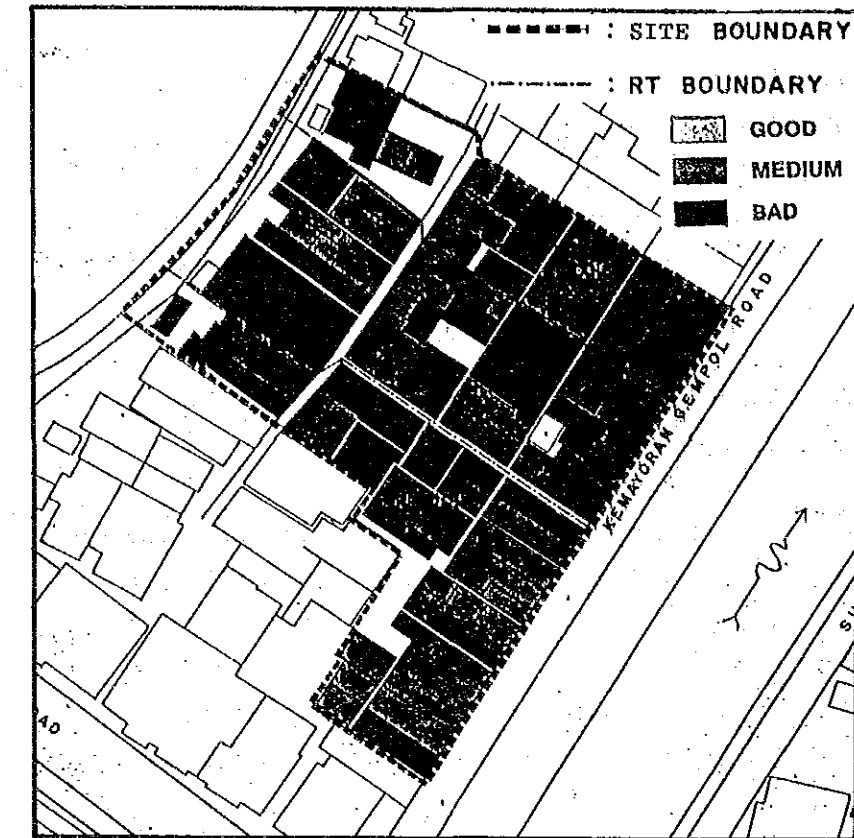
Land Use/Price

- 22% of the land is used for retail shops.
- Average land price is 66,000 - 82,000 Rp/sqm

Others

- Household income is very low (average: 104,000 Rp/month)

2.3.3 Building Conditions



- Land area : 4,231 m² (3.5 ha.)
- Net residential land area : 3,255 m²
- Average land area : 30.71 m²/house
- Average building area : 29.46 m²/house
- Average building storey : 1.7 fl./house
- Average No. of family members: 5.96 P/house, 3.1 P/h.h.
- Average No. of Households : 1.92 h.h./house

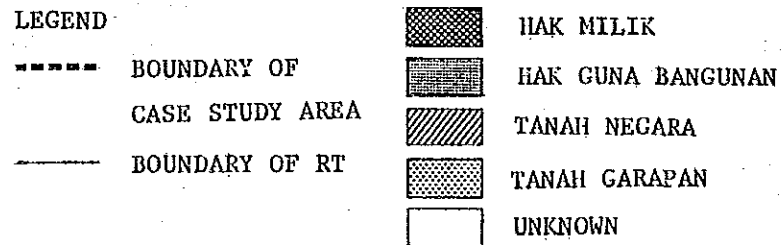
Buildings

- No temporary houses, and 76% of the houses have permanent structure due to being reconstructed after a recent fire.
- 24% of the houses are very old (more than 20 years old).
- 80% of the houses are owned by the inhabitants.

2.3.4 Present Situation of Residential Environment

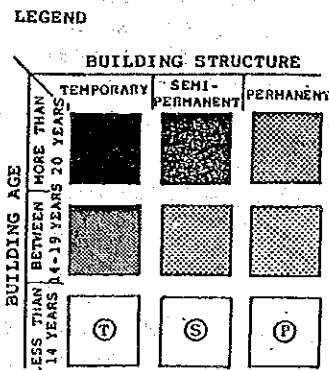
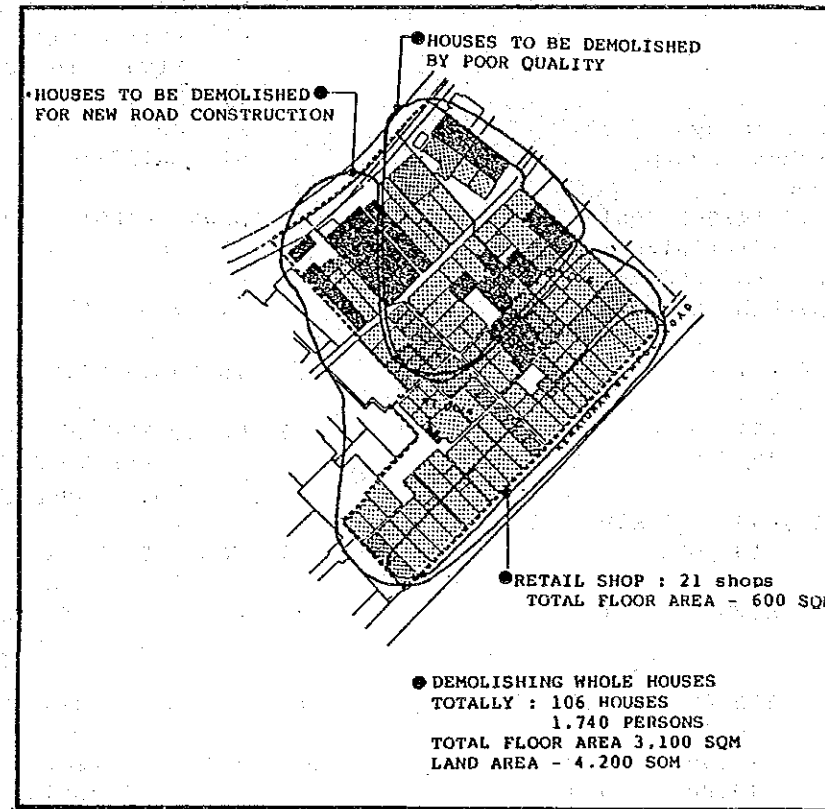
SITE NO.	SITE B	
LOCATION	KC. Kemayoran/JP	
NAME	Kebon Kosong	
PRESENT LAND USE (incl. surroundings)	RW04	
DKI MASTER PLAN	RT0014/0015/0016	
SPATIAL RELATION TO KEMAYORAN COMPLEX PROJECT	Residential/Commercial	
AREA OF THE SITE (sq.m)	Kemayoran Complex	
NO. OF POPULATION (persons)	Within the Zone 4	
NO. OF HOUSEHOLD (households)	4,231.25	
NO. OF HOUSES (houses)	736.00	
AVERAGE LAND PRICE OF HOUSING LOT (Rp.sq.m.)	204.00	
AVERAGE HOUSEHOLD INCOME (Rp./month)	106.00	
	NUMBER	(%)
1. BUILDINGS		
A) BUILDINGS STRUCTURE (no. of houses)	106.00	100.00
a) Temporary	0.00	0.00
b) Semi-permanent	30.00	28.30
c) Permanent	76.00	71.70
B) BUILDING AGE (no. of houses)	106.00	100.00
a) 20 Years & More	25.00	23.58
b) 15 - 19 years	12.00	11.32
c) 14 Years & Less	69.00	65.00
C) BUILDING OWNERSHIP (no. of houses)	106.00	100.00
a) Yearly Contract/Rent	18.00	16.98
b) Others (Stay with the Owner/Company's House, etc.)	2.00	1.89
c) Own House	86.00	81.13
2. DENSITIES		
a) Population Density (persons/spot area:ha)	1,748.00	
b) Household Density (floor area:sq.m./person)	4.24	
c) Building Density (no. of houses/ha)	250.52	
3. OPEN SPACES/PUBLIC FACILITIES		
A) PUBLIC FACILITIES		
a) Open spaces (e.g. play ground, park, etc.)	None	
b) Education (e.g. Kindergarten, primary school, junior high school etc.)	None	
c) Medical	None	
d) Religious (e.g. mosque, church etc.)	None	
e) Cultural/Welfare	None	
f) Governmental	None	
g) Shops	Some	
B) FLOOR RATIO		
a) Building Floor (total housing floor area:sq.m.)	3,123.25	
b) Lot Area (total housing lot area:sq.m.)	2,508.00	
c) Residential Used Area (sq.m.)	3,259.25	
d) Floor Area Ratio-1 (a/b:%)	1.25	
e) Floor Area Ratio-2 (a/c:%)	0.96	
f) No. of Stories	1.69	
g) Building Coverage Ratio (d/e:%)	0.74	
4. SERVICE ROAD (no. of houses)	129.00	1.00
a) Facing to 1.5 m & Less (only for beca)	122.00	0.95
b) 2.0 m - 3.0 m (only for one way vehicle)	0.00	0.00
c) 4.5 m & More	7.00	0.05
5. INFRASTRUCTURE		
A) WATER SUPPLY (for drinking water from;)	106.00	100.00
a) Water Seller/Wells	103.00	97.17
b) Water Supply Agency	3.00	2.83
B) WASTE DISPOSAL	106.00	100.00
a) River/Others	32.00	30.19
b) Septic Tanks	65.00	61.32
c) Town Drainage	9.00	8.49
C) FLOOD OCCURRENCE	Not for few years	
6. LAND USE (sq.m.)	4,231.25	100.00
a) Residential	2,508.29	59.28
b) Commercial	941.88	22.26
c) Roads	162.90	3.85
d) Public Facilities	17.35	0.41
e) others	600.84	14.20
7. LAND PRICE (Rp./sq.m.)	106.00	100.00
a) 66,000 Rp. & Less	91.00	85.85
b) 66,000 - 129,000	7.00	6.60
c) 129,000 Rp. & More	8.00	7.55
8. LAND OWNERSHIP	106.00	100.00
a) Tanah Garapan	26.00	24.53
b) Hak Pakai	0.00	0.00
c) Hak Guna Bagunan	6.00	5.66
d) Hal Milik	9.00	8.49
e) Tanah Negara	44.00	41.51
f) Tidak Jelas	21.00	19.81
9. HOUSEHOLD INCOME (Rp./household)	105.00	100.00
a) 100,000 Rp. & Less	71.00	67.62
b) 100,001 - 300,000 Rp.	3.00	2.86
c) 300,001 & More	3.00	2.86
10. AGE OF COMMUNITY	106.00	100.00
a) More than 10 Years	67.00	63.21
b) 4 - 10 Years	26.00	24.53
c) Less than 3 Years	13.00	12.26

2.3.5 Land Status



	NUMBER	(%)
● LAND OWNERSHIP	106.00	100.00
a) Tanah Garapan	26.00	24.53
b) Hak Pakai	0.00	0.00
c) Hak Guna Bagunan	6.00	5.66
d) Hal Milik	9.00	8.49
e) Tanah Negara	44.00	41.51
f) Tidak Jelas	21.00	19.81
● LAND PRICE (Rp./sq.m.)	106.00	100.00
a) 66,000 Rp. & Less	91.00	85.85
b) 66,00 - 129,000	7.00	6.60
c) 129,000 Rp. & More	8.00	7.55

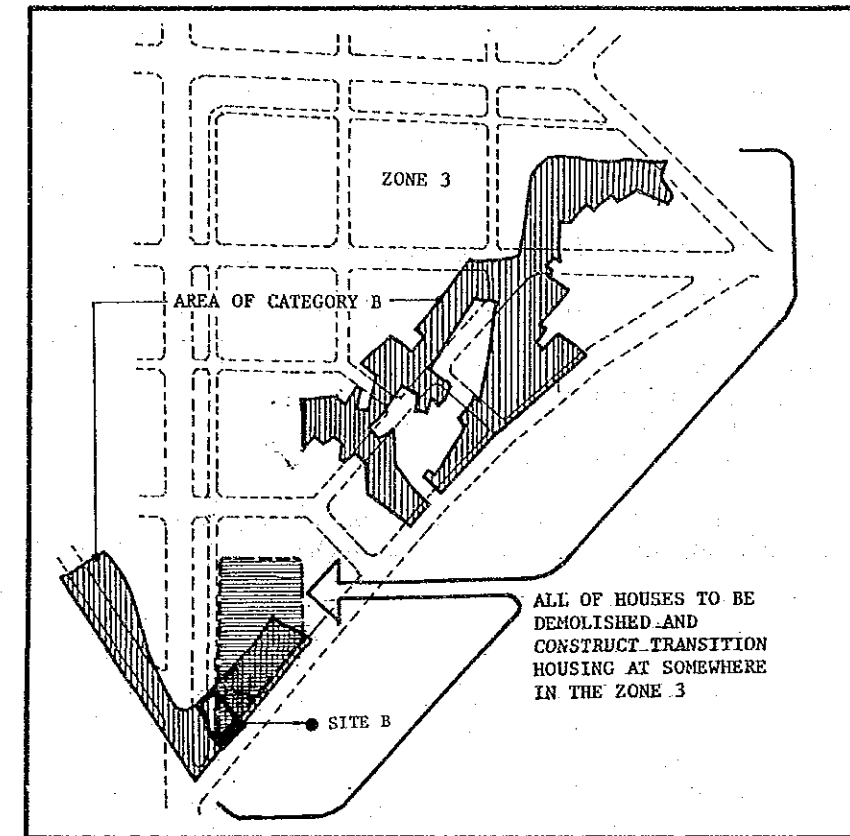
2.3.6 Analysis for Renewal



Densities/Floor Ratio

- extremely high population density; 1,748 person/ha. (net)
- very high floor density ; 4.24 sqm/person
- very high building density; 68 houses/ha.
- FAR; 125%
- BCR; 74%

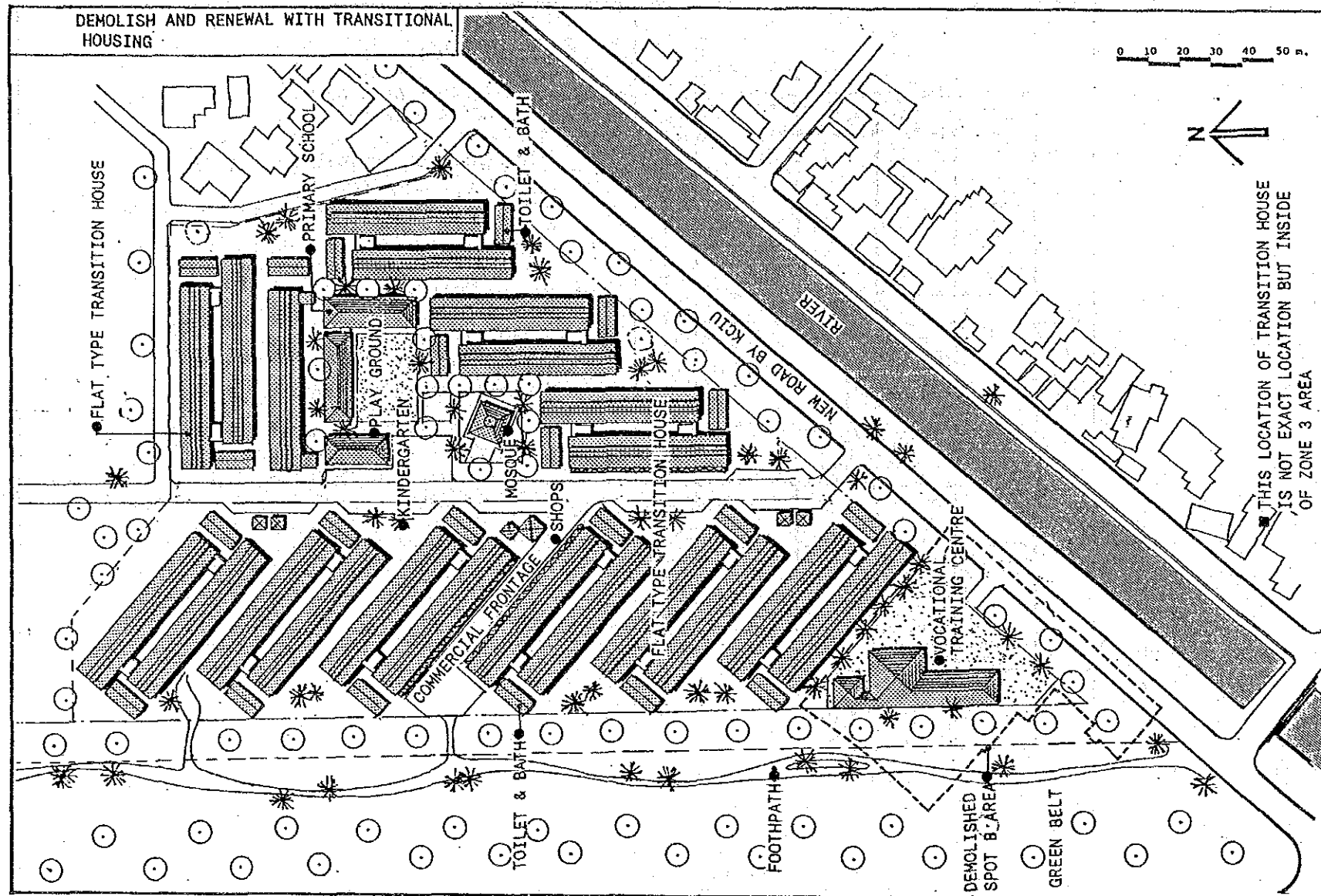
2.3.7 Renewal Concept



Recommendable Environmental Guidelines

- Land Use : Residential/Multi storied flat type housing area for mid. and low income group with commercial use
- Population Density : 650 - 750 P/ha. (average of Zone 3 area)
- Building Height : Max. 8 Storey
- Building Coverage Ratio : Max. 60%
- Floor Area Ratio : Max. 300%
- Setback/Front : 10 m (along big road)
/Perimeter : 2 m

2.3.8 Renewal Plan



RENEWAL COMPONENT

1. Development Area
 - a) Whole case study site : 4,231 m²
 - b) Catchment area for the project : 12.23 ha.
 - c) Land for transition : 3.5 ha.
2. Residential Development
 - a) Transitional housing for illegal settlers in Zone 4
 - b) Housing F-21 x 536 units
F-30 x 110 units
Total 646 units
 - c) Number of stories : 4 stories
 - d) Toilet, shower & washing bldg.
- 1 unit for each block
- Single storey
3. Commercial
10% of total units is for existing retail shops.
4. Neighbourhood Facility
 - a) Kindergarten : 200 m²
 - b) Primary school : 700 m²
 - c) Vocational training : 500 m²
centre
 - d) Mushola : 100 m²
 - Total : 1,500 m²
5. Population Density
 - a) Existing density in Site B: 1,740 P/ha.
 - b) Planned: 646 units x 5.4 P/h*
(average of Site B)
= 3,488 P
3,488 - 3.5 ha. = 996 P/ha

6. Renewal Scheme

	Whole Site	For Preserve	For Demolition	New House	Total
No. of House (Site B) --- (a)	106	-	106	-	-
No. of House (Catchment area of category B) ----- (b)	2,219	-	2,219	646	1,288
No. of Household ----- (a)	204	-	204	-	-
No. of Household ----- (b)	4,270	-	4,270	1,240	2,470
Bldg. Area (m ²) ----- (a)	3,123	-	3,123	-	-
Bldg. Area (m ²) ----- (b)	46,300	-	46,300	17,460	30,860
Population ----- (a)	736	-	736	-	-
Population ----- (b)	10,980	-	10,980	3,488	3,488

Note:

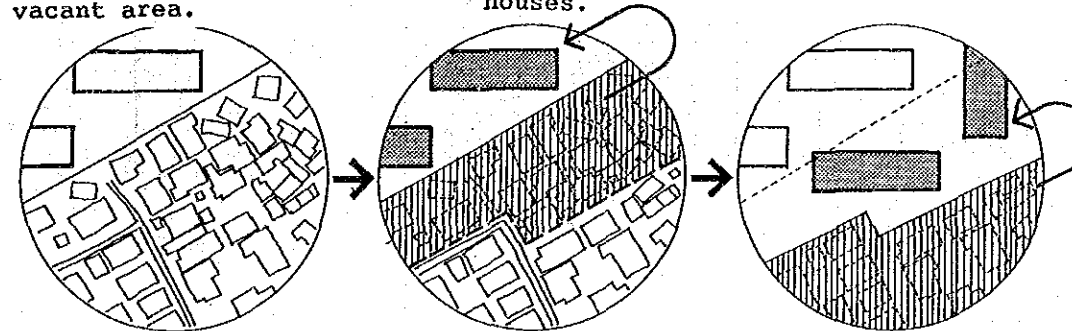
*: Number of household is calculated by the Category B group in Zone 4 (Refer to Chapter IV-4.2) which different to actual survey data of Site B).

NOTE:

1. KCIU should conduct careful survey for defining number of housing units.
(Refer to Chapter V-2.3.)
2. KCIU should select the site or sites of Transition House in coordination with Perumnas. 646 housing units might be divided into two or more.
3. The site should included vacant area for step demolition, construction and resettlement.

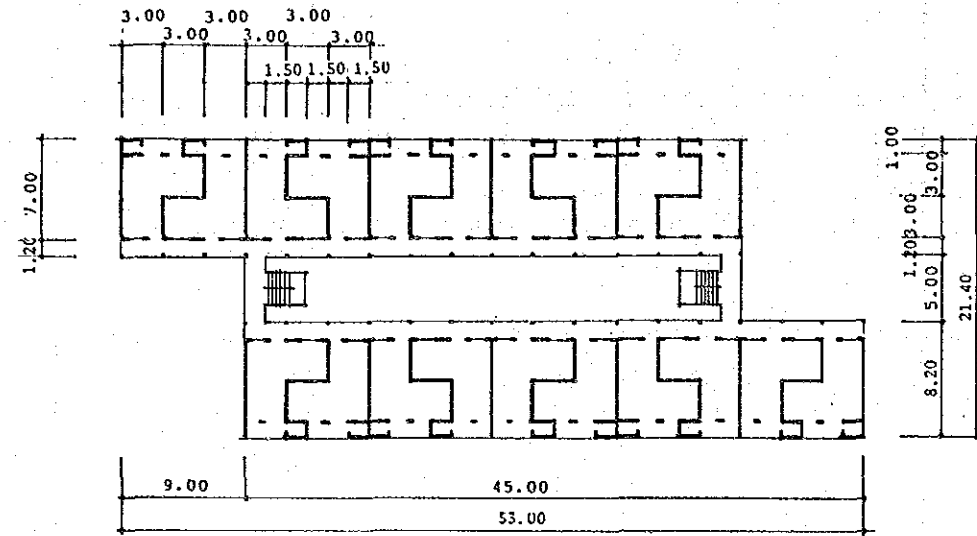
PROCEDURE FOR STEP RENEWAL

- 1ST STEP
To construct transition house in vacant area.
- 2ND STEP
Inhabitants relocate to transition house and demolition of existing houses.
- 3RD STEP
To construct next transition house in demolished area and implement same action of 2nd step.

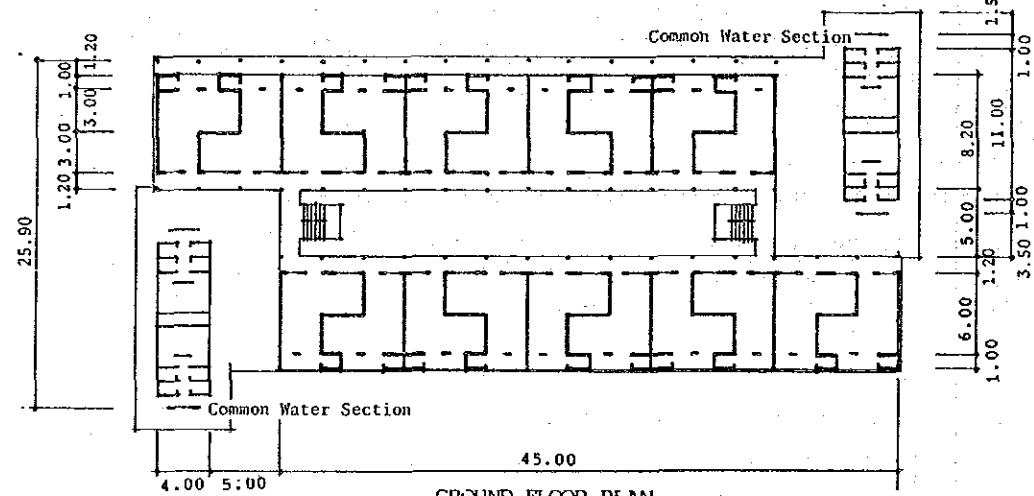


DETAIL PLANS (2)

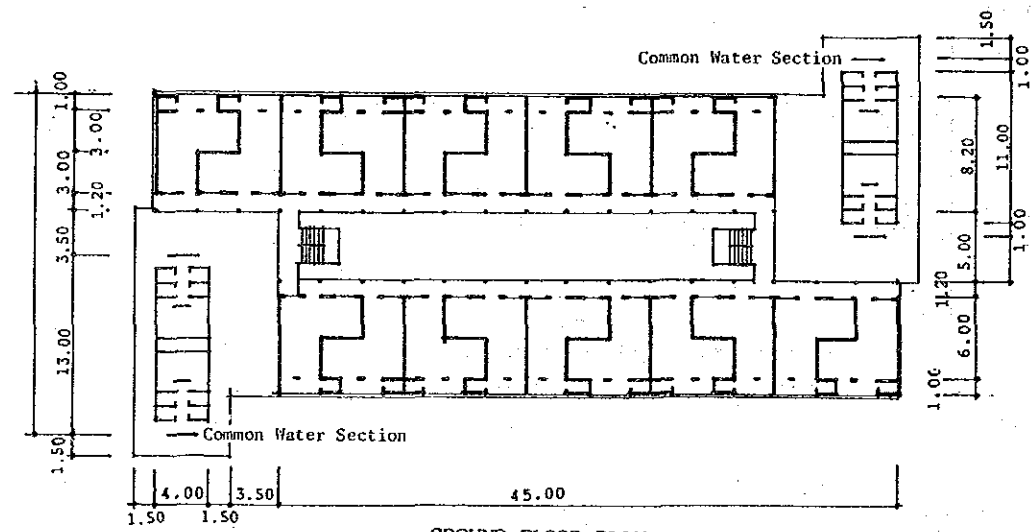
F-30 TYPE APARTMENT HOUSE



1st FLOOR PLAN

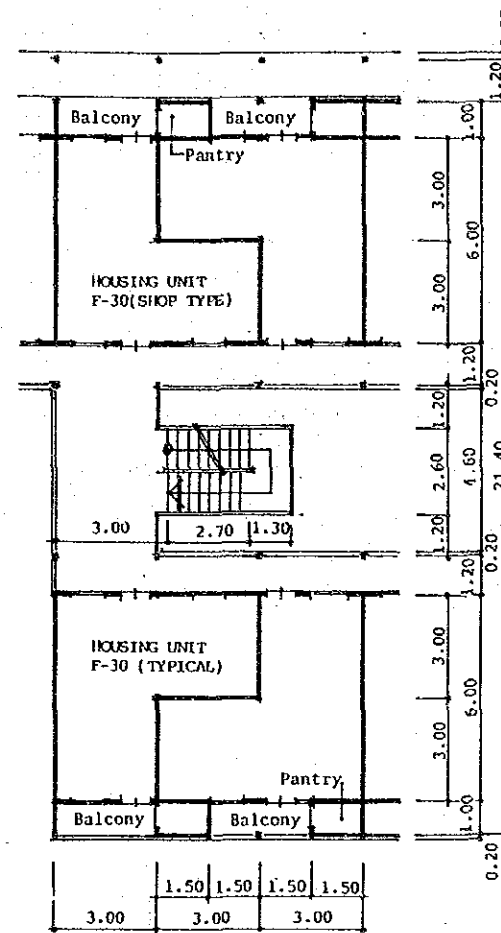


GROUND FLOOR PLAN
(SHOP HOUSE FOR ONE SIDE)



GROUND FLOOR PLAN
(TYPICAL)

Scale 1:500



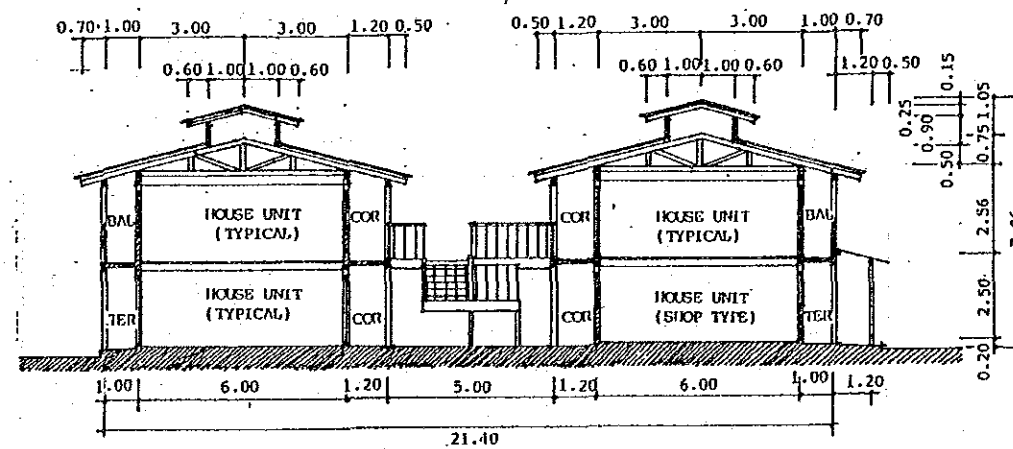
UNIT PLAN

Scale 1:200

1. No. of Floors : 2
2. Actual Floor Area of Unit : 34.5
(Including Balcony)
3. Floor Area of Typical Bldg. (m2)
Net Area : 1,260.0
Gross Area : 1,665.6
4. Efficiency Ratio (%) : 75.65
5. Structure System :

Same as F-21 Type APARTMENT HOUSE

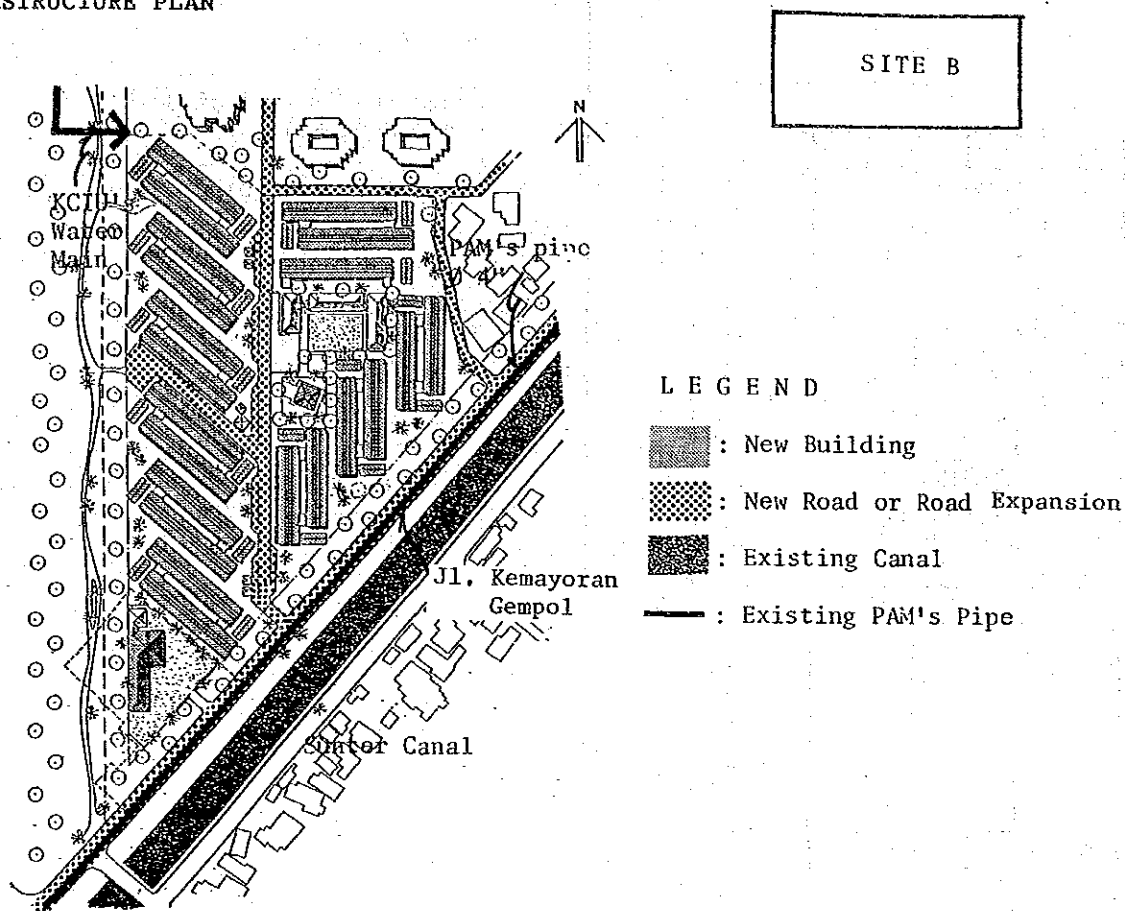
NOTE : Gross floor area includes common water section also



CROSS SECTION

Scale 1:200

2.5. INFRASTRUCTURE PLAN



PLANNING ELEMENTS	
Existing Condition of Infrastructure	<ul style="list-style-type: none"> - Site B is built-up area within Kemayoran ex-airport. This site is a highly dense populated Kampung. - Sanitary facilities are MCK provided by KIP. - There is a public well, but no piped water supply.
Main objectives of Improvement	<ul style="list-style-type: none"> - This Spot is needed to be demolished for Kemayoran Complex Development. However, for the next 10 years transition housing shall be located in this site to give the Kampung people time and opportunity for resettlement.
Planned Population and Water Demand	<ul style="list-style-type: none"> - Number of New Houses : 646 units - Population : 646 units x 2.93 prs/unit = 1892 prs - Water Demand : 1829 prs x 30 l/prs x 1.3 (non-domestic) (Public taps) = 72 m³/day

Components of Infrastructure	Improvement Plan	Remark	Agencies to be Coordinated
Street & Footpath	<ul style="list-style-type: none"> - Paved access from Jl. Kemayoran Gempol will be provided. - Paved pedestrian and open lot will be provided for inhabitants passage and informal warung. 	All roads and pedestrian will be constructed by KCIU and maintained by local community	* Tata Kota DKI * DPU
Drainage	<ul style="list-style-type: none"> - Storm water will be discharged to Sunter canal. 	Drainage channels will be constructed by KCIU.	* DPU
Water Supply	<ul style="list-style-type: none"> - Piped water will be served from the new water main in Kemayoran Complex provided by KCIU. - Public taps will be provided in every flat. 	Inhabitants shall pay consumption charge.	* PDAM Pusat
Waste Water Disposal	<ul style="list-style-type: none"> - Community toilets with septic tank/leaching bed will be provided by KCIU. 	Local community will maintain it.	* DPU
Solid Waste Management	<ul style="list-style-type: none"> - Communal container will be provided by KCIU 	Local community will maintain equipment and handle collection.	* Sub - Dinas Kebersihan Pusat.
Electricity	<ul style="list-style-type: none"> - PLN will supply electricity services. - Outdoor lighting will be provided by KCIU and maintained by local community. 	Inhabitants pay consumption charge.	* PLN * BKJS
Telephone	<ul style="list-style-type: none"> - Public telephone will be provided by PERUMTEL where safety is secured. 	Charge is paid by user.	* PERUMTEL * BKJS

2.6 Condition of Project Cost

1) Land development

This cost includes;

- Grading cost in the project site including land fill (assumed average 30 cm) to protect houses from flood.
- Installation cost for utility services from the city line to the facility. (water supply, elec. supply, solid waste disposal, storm water drainage, sewage)
- Cost for road construction and parking pavement.

2) Housing (including toilet, bath and kitchen unit)

Specifics for the transition houses are;

- Structure : Conventional reinforced concrete post and beam
- Roof : Wooden frame with asbestos corrugated sheets
- External wall : Brick wall with cement sand plaster
- Internal wall : Perimeter - Brick wall with mortar joint
Others - Plywood
- Floor : Ground floor - Cement sand rendering finish
Upper floor - Particle board with wooden frame
- Ceiling : Ground floor - Particle board
Upper floor - Nil

- Opening : Window - Aluminum frame jalousie window
Door - Plywood flash door with wooden frame
- Utility : Electricity supply for each unit

3) Neighbourhood facility

The cost for the neighbourhood facility does not include loose equipment. Building quality is in conformity with the facility standards of DKI Jakarta.

4) Landscaping

Costs for outdoor lightings, outdoor furniture, planting, sign, and information, etc. are included.

5) Study and design

The cost is assumed to be 5 percent of total amount of items 1) to 4).

6) Administration

Administration cost is assumed to be 4 percent of total amount of items 1) to 5) and covers preconstruction and construction stages including application costs for changing land title;

In case of

Hak Pengelolaan (HPL) Rp. 150/m² of land,
Hak Guna Bangunang (HGB) Rp. 400/m² of land.

7) Contingency

The cost is assumed as 4 percent of total amount of above items and includes physical contingency but

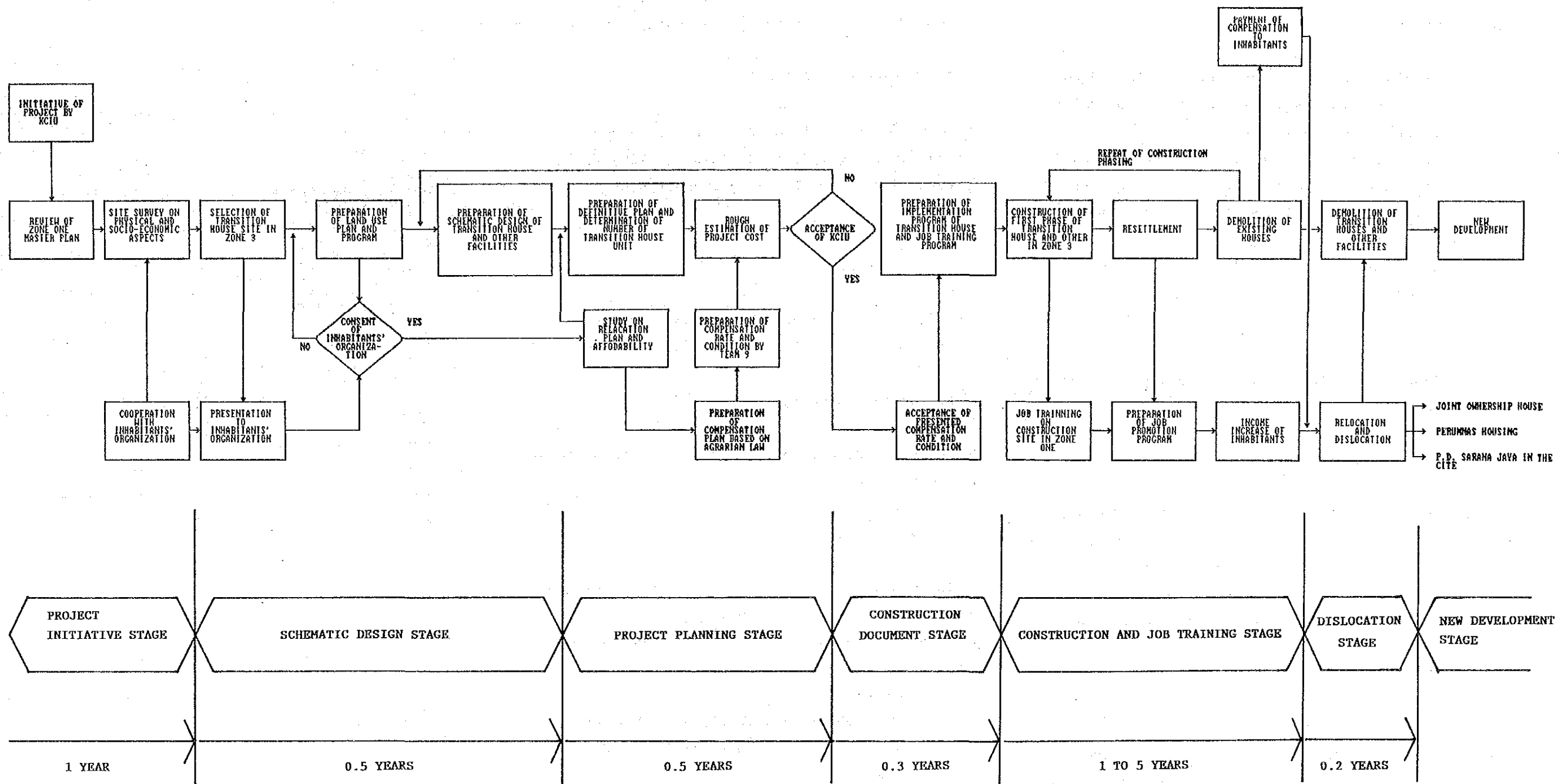
does not cover cost escalation.

8) Estimated costs are as of March, 1989.

Construction Cost / ZONE B (INCLUDED SITE B)

Item	Unit	Quantity	Unit Price (Rp)	Amount (Rp x 1,000)
1. Housing Development				
1.1 Land development				
a. Road and open-lot pavement (asphalt penetration)	m ²	2,400	16,000	38,400
b. Drainage channel (average U-400)	m	700	37,000	29,600
c. Water supply pipes				
. Pipe (PVC) 63"	m	550	11,000	6,050
. Pipe (PVC) 41 1/2 "	m	400	7,000	2,800
. Fittings (30% of pipe's cost)	L.S.	1		2,660
d. Solid waste communal container (cap: 1 m ³)	each	24	450,000	10,800
1.2 Housing				
a. F-21 536 units	m ²	11,256	100,000	1,125,600
b. F-30 110 units	m ²	3,300	100,000	330,000
c. Toilet, bath & kitchen unit @44 m ² 21 units	m ²	924	200,000	184,800
Sub Total				1,730,710
2. Neighbourhood Facilities				
2.1 Primary school	m ²	700	-	(DKI)
2.2 Kindergarten	m ²	200	200,000	40,000
2.3 Mushola	m ²	100	200,000	20,000
2.4 Vocational training centre	m ²	500	150,000	75,000
2.5 Public open space	m ²	500	20,000	10,000
Sub Total				145,000
3. Landscaping				
3.1 Outdoor lighting, planting, etc.	m ²	35,000	500	17,500
Sub Total				17,500
Total				1,893,210
(Rp x 1,000)				
4. Study and Design : 1,893,210 x 0.05				= 94,660
5. Administration : 1,987,870 x 0.04				= 79,514
6. Contingency : 2,067,384 x 0.04				= 82,695
Total				256,869
Grand Total				2,150,079

2.7. IMPLEMENTATION SCHEDULE

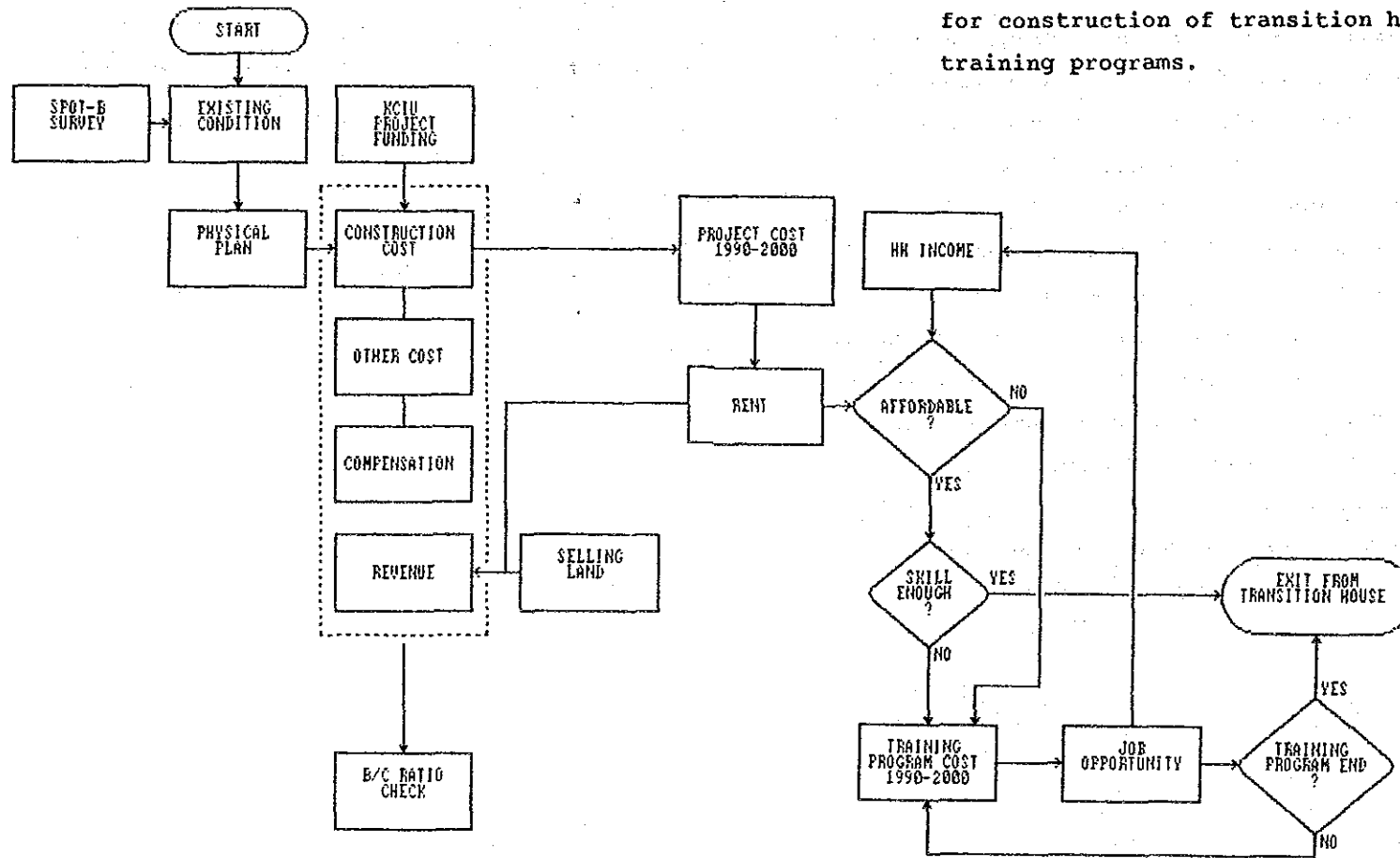


2.8 FINANCIAL FEASIBILITY STUDY

1) Work Flow

Financial study flow of Site B and its surrounding area is shown in Fig. 4.5.4. In case of Site B, KCIU is the responsible organization and the major source of project funding. KCIU will fully take care of the former residents of the site through rent subsidy and training program. After a certain specified period, for example 10 years, residents should leave KCIU-supported Transition Houses after having acquired sufficient level of skills earned through vocational training program in order to be able to work in other parts of the city.

Fig. 5.2 Site B Financial Study Work Flow



2) Planning Conditions and Assumptions

In this case study, assumptions for the financial analysis are as follows:

- (1) Land value at the year 2000 is assumed to be Rp. 2,000,000 per m².
- (2) According to regression analysis, consumer price will increase 1.62 times during the next 10 years.
- (3) Flat rent for transition house is Rp. 24,000/month for F-21 unit and Rp. 30,000/month for F-30 unit.
- (4) Administration cost includes both activities for construction of transition houses and for training programs.

- (5) Compensation is paid when the residents can neither get the right of Building construction status (HGB) nor get permanent living status in the transition house.

3) Project Cost

Project cost of Site B renewal scheme consists of the following items:

- (1) Construction of Transition Houses, Training Center, and Public Facilities,
- (2) Study and Design
- (3) Infrastructure
- (4) Compensation
 - There are 635 category B houses in Site B. Total compensation is Rp. 2,330 million at the year 1989. The compensation will be paid to residents when they leave the transition house.
 - The land compensation estimation for Hak Milik and HGB follows the calculation formula described in Chapter 2, Financial Framework.
 - The residents on Tanah Garapan, Tanah Negara and Tidak Jelas are all assumed to be illegal settlers. The compensation for those people is assessed at 25% of land value.
 - Building compensation is assessed by the calculation model described in Chapter 2, Financial Framework.

(5) Demolition

- Site B project cost does not include demolition cost, since demolition cost is included in the ex-airport development budget by KCIU.
- Site B project cost includes demolition cost for transition house at the year 2000. The cost is calculated by using 1989 prices.

(6) Training Cost

- The cost of training for vocational training center (VTC) includes:
 - Instructors' fee
 - Training material cost
 - Utilities and others costs
 Sum of these costs becomes Rp. 5,500,000/month for 1,080 trainees, and the yearly cost Rp. 82,500,000.

(7) Maintenance and Administration

- Maintenance cost includes the expenses for maintaining transition house, public facilities and vocational training center. The cost is calculated as 5% of construction cost of those facilities each year using 1989 constant price.
- Administration cost includes the administration at the time of facilities construction and that of managing rental house and vocational training center.
- Above mentioned costs are calculated at 4% of facilities' construction cost, 10% of maintenance cost for rental house and VTC and 10% of training program cost for managing VTC every year.

4) Revenue

The revenue of Site B project is summarized as follows:

Rent of Transition House
 Revenue from selling land after removal of transition house after specified period.

There are 646 units of rental houses, including F-21 and F-30 types, in Site B project area. The rents for those two types of houses are assumed at Rp. 800/day or Rp. 24,000/month for F-21 and Rp. 1,000/day or Rp. 30,000/month for F-30. The rents are set at similar prices to those of Sarana Jaya. The revenue by rent becomes Rp. 194.0 million per year, in turn Rp. 1,940 million for ten years at 1989 constant price.

The area of Site B is 3.5 ha. The average land value at the moment is assessed at around R. 45,000/m². The value of the land will be expected to increase to Rp. 200,000/m² when the squatter houses are cleared and the land is prepared for development. Further the value of the land will increase several times more when the Kemayoran ex-airport area is fully developed at the year 2000. In this case study the value of land at the year 2000 is assumed to be 10 times of that of the year 1989 in nominal value. Since consumer price index at the year 2000 is expected to be 1.62 times of that of the year 1989, Rp. 1,228,000/m² is estimated as the land value of the area at the year 2000 by 1989 constant price.

5) Result of Financial calculation

Total project cost of Site B amounts to Rp. 6,447 million at the year 1989 constant price. Balance of Site B renewal scheme greatly depends upon the land price at the target year, the year 2000. If the land price estimation does not increase much, it is difficult to recover the necessary cost of the transition house project. According to a simple calculation, present land price can cover the total cost of project.

Table 5.2A Project Cost

	Cost x Rp. 1,000	Ratio
Land Aquisition	77,440	1.2 %
Demolition	1,640,400	25.4 %
Housing Construction		
Public Facilities	145,000	2.2 %
Compensation	2,330,277	36.2 %
Infrastructure	107,810	1.7 %
Other Cost	428,641	6.7 %
Maintenance and Training	1,717,700	26.6 %
Interest		
Total	6,447,268	100.0 %

The results of the discounted cash flow analysis show that FIRR (Financial Internal Rate of Return) of this project is 23.9% according to the assumed investment and land sale schedule. It means that this project is financially feasible if the market interest rate is less than 23.9%. As the market interest rate varies between around 15-20% in Indonesia, the result can justify the project in financial terms if conditions and assumptions are satisfied.

Net present value (NPV) amounts to Rp. 5,033 million in 1989 prices (discounted at 15%). Moreover, B/C ratio is 2.00, approximately.

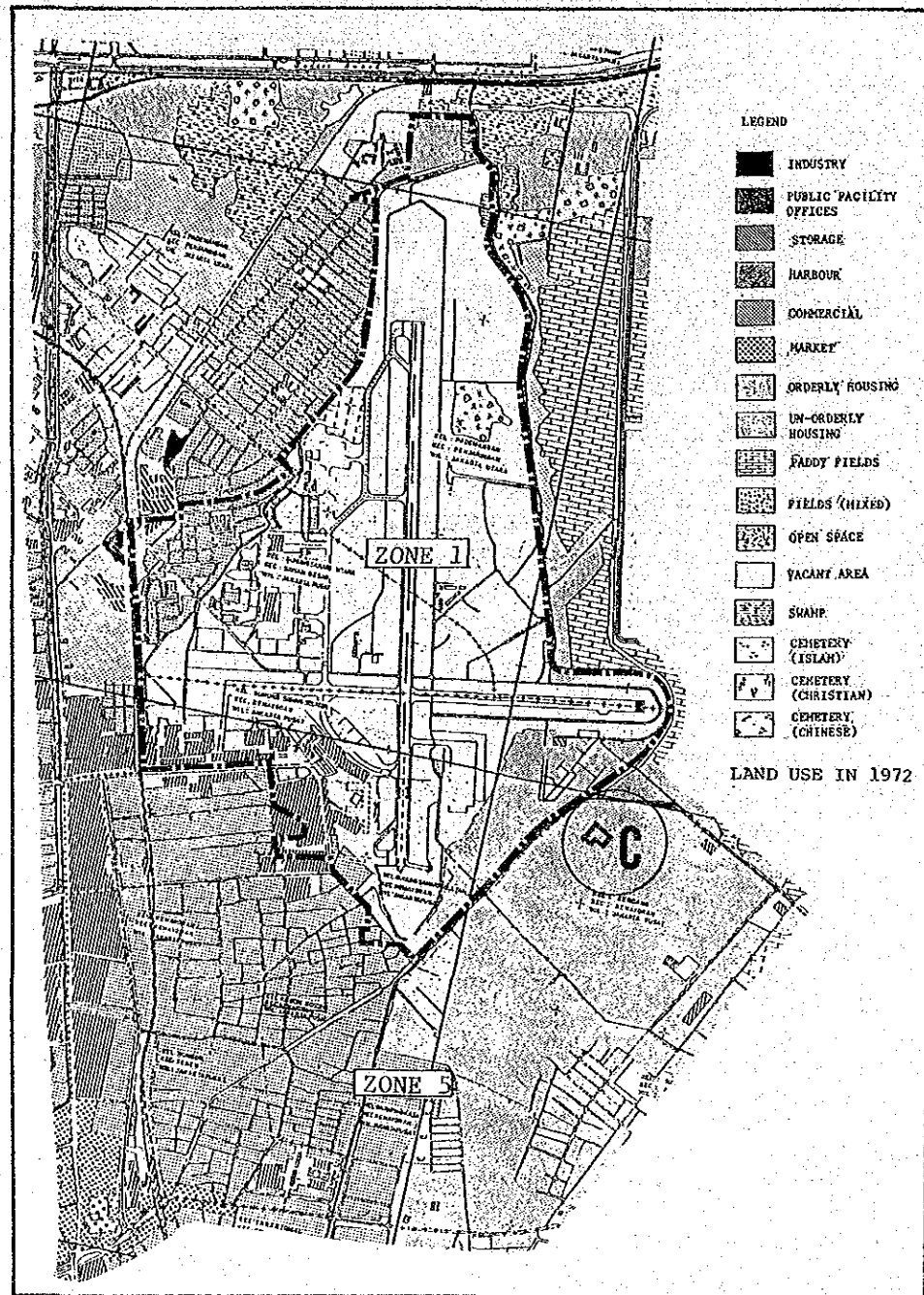
The funding of project cost will come from KCIU, which is expected to retain earnings through development of Kemayoran ex-airport area. According to cash flow table, KCIU's payment amounts to Rp. 6,447 million in 1989 prices for project period. Since project cost is paid by own capital, the burden of interest is exempted.

Table 5.2B Financial Cash Flow Table for Site B

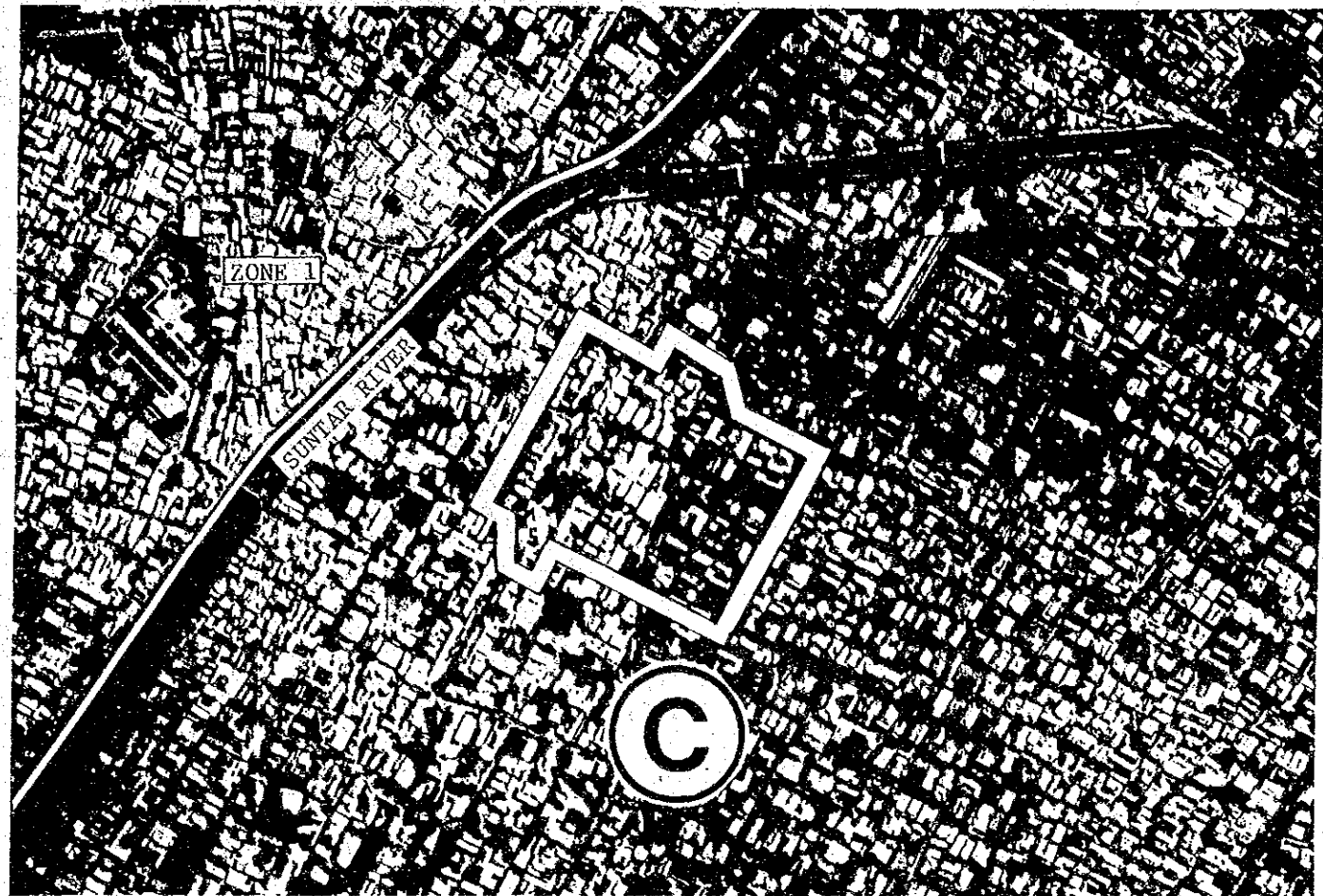
UNIT: Rp'000 in 1989 prices													TOTAL	TOTAL (DISCOUNTED)	
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1989	2000			
CASH OUTFLOW															
Compensation	2,330,277													2,330,277	2,330,277
Demolition												77,400	77,400	77,400	16,637
Administration		79,515	17,177	17,177	17,177	17,177	17,177	17,177	17,177	17,177	17,177	17,177	17,177	251,285	144,106
Maintenance			89,270	89,270	89,270	89,270	89,270	89,270	89,270	89,270	89,270	89,270	89,270	892,700	389,567
Training Progr.			82,500	82,500	82,500	82,500	82,500	82,500	82,500	82,500	82,500	82,500	82,500	825,000	360,042
Construction															
Transition House		1,640,400												1,640,400	1,426,435
Vocational School		75,000												75,000	65,217
Public Facilities		70,000												70,000	60,870
Study and Design	94,661													94,661	94,661
Contingency		82,695												82,695	71,909
Infrastructure		187,810												187,810	93,740
CASH OUTFLOW TOTAL	2,424,938	2,855,420	188,947	188,947	188,947	188,947	188,947	188,947	188,947	188,947	188,947	266,347	6,447,228	5,053,489	
CASH INFLOW															
Selling Land												42,988,082	42,988,082	42,988,082	9,239,997
Rent			193,968	193,968	193,968	193,968	193,968	193,968	193,968	193,968	193,968	193,968	1,939,680	846,505	
CASH INFLOW TOTAL	0	0	193,968	193,968	193,968	193,968	193,968	193,968	193,968	193,968	193,968	43,182,050	44,927,762	10,086,502	
NET CASH FLOW (CUMULATIVE)	-2,424,938	-2,855,420	5,021	5,021	5,021	5,021	5,021	5,021	5,021	5,021	5,021	42,915,703	38,480,534	5,033,013	
FIRR =	0.239														
NPV =	5033013 (DISCOUNTED AT 15 %)														
B/C RATIO =	1.996 (DISCOUNTED AT 15 %)														

3. SITE C (CASE STUDY SITE)

LOCATION MAP



AEROPHOTOGRAPHY



TYPICAL ATMOSPHERE IN SITE C

3. SITE C (CASE STUDY SITE)

3.1. GENERAL DESCRIPTION

3.1.1 Motivation

DKI and Wilayah urban development master plans indicate that the area which includes Site C has been programmed for (1) Betterment of houses and environment, (2) Increase in population (existing population density is approx. 400 prs/ha., planned is 500 prs/ha.), and (3) Allowing maximum 4 story buildings to realize intensive land utilization.

Potential of the area is high and gradual renewal will be spontaneously implemented, and in addition, the ex-airport development will accelerate the demand for renewal. Therefore, a proper guidance on making plan and programme for renewal shall be considered especially by DKI Jakarta and its local administration offices.

The direct motive of the Site C renewal is the widening of the road at the east end by DKI Jakarta for the purpose of smoother traffic flow, and intensive land use. Seizing this opportunity, two major improvements are planned based on the interests of the community or and its inhabitants. One is further widening a 2.5 m road at present connected to the above-mentioned road in order to enable emergency vehicles to access to all houses in the site. The second is the reconstruction of some houses which will be partially demolished due to road widening projects.

Cost recovery is planned by providing additional salable housing units, in line with DKI Jakarta's policy to increase population in the area.

This renewal is of rather long term implementation since the ability of community/inhabitants is not high enough for this type of project. One of the tasks of this Case Study is to analyze community/inhabitants' economic/financial and technical abilities and capacities.

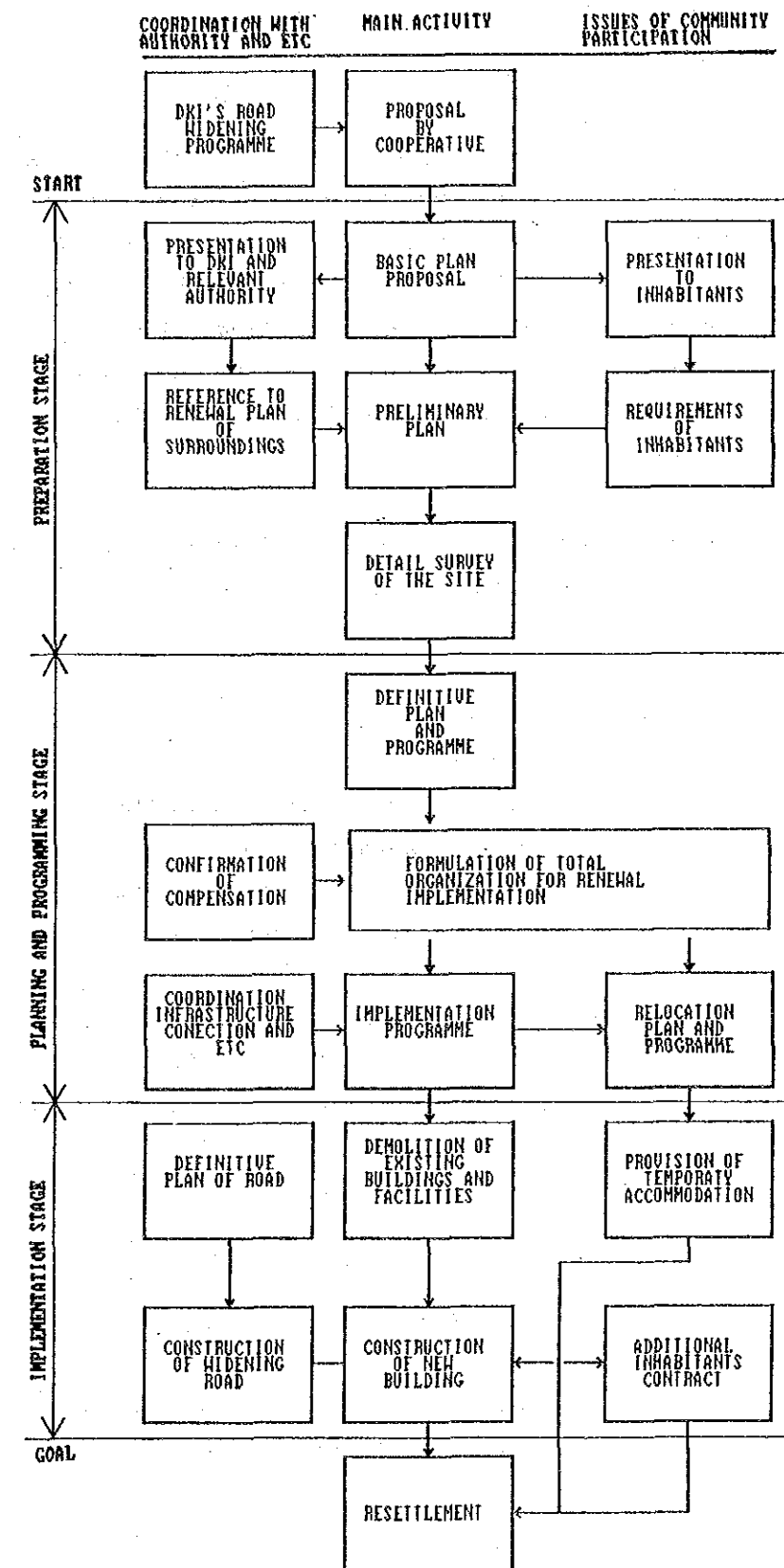
3.1.2 Particular Considerations

Any renewal or environment improvement at a pure urban residential area of low income group is extremely difficult especially from the financial viewpoint. There are two major activities of the government related to this matter. One is flat development by Perumnas but there is still a big gap between price/cost of flat and inhabitant's affordability. The other is KIP which offers very minimum environment improvement but not houses improvement.

Recently Perumnas has been trying to cope with this problem by considering the undertaking of combined commercial and housing development and rental houses where certain cross subsidy systems are applied to help low income group. KIP has also expanded its activity to include small scale business promotion to increase the inhabitants incomes and ability to obtain better houses.

Community's motivation and/or participation in any manner in housing renewal or environment improvement shall be strongly encouraged. Positive support of the government to community/inhabitants shall be considered and potential of community/inhabitants shall be properly identified and enhanced. In the course of promoting organization of the community, information on concerned laws, regulations, institutions, etc. shall be introduced to the community.

3.1.3 General Activity Flow



3.2 RENEWAL METHOD

3.2.1 Introduction

This renewal basically comes on the foot-steps of, and to utilize the opportunity born by the road widening project, a public works project by DKI Jakarta Municipality. The success of the renewal rests in the establishment of a cooperative of potential inhabitants which shall be legally and financially supported by the concerned public sectors.

The renewal method of Site C is described from various integrated aspects as listed hereafter:

- 1) Legislative Framework
- 2) Institutional Framework
 - (1) Executing Body
 - (2) Roles of bodies relevant to the renewal
 - (3) Community participation
This is also referred to in Chapter IV, Section 3.2.3, Community Participation
- 3) Financial Framework
The financial framework is referred to in Chapter IV, Section 3.3, FINANCIAL FRAMEWORK, and Chapter V, Section 3.6, FINANCIAL STUDY
- 4) Procedural Framework
This framework is referred to in Chapter V, Section 3.1.3, General Activity Flow.

3.2.2 Legislative Framework

The following are major legal factors which are necessary for the renewal implementation.

1) Permit of Renewal/Development

The road widening of Jl. Taruna (east side of Site C) is a public works project by DKI Jakarta Municipality. Widening of a small street extended to the west shall also be included in the public works project upon request of Lurah Office and acceptance of DKI Jakarta Municipality. Significance of widening the small street is to provide access for emergency vehicles and refuge in times of urban disasters.

2) Land Acquisition

DKI Jakarta Municipality shall acquire the land owned or occupied by inhabitants for the purpose of widening the road and street. The compensation shall be on the basis of laws/regulations dealing with the issues of land Tenure and compensation. (Refer to Chapter IV, Section 3.1.1, Land Tenure, Section 3.1.2, Compensation, and Section 3.3.2, Compensation Model)

3) Land Tenure

The consolidated land for 12 houses belonging to existing inhabitants is to be sub-divided after the resettlement. The land for another 12 houses (for selling) shall be owned by the new inhabitants. The land tenure for both is, in principle, HGB although the site is not exceeding from 5,000 m² and the application of Condominium Law is rather appropriate under the existing legal conditions.

Evaluation of inhabitant's existing assets and the assets after the renewal shall be made by referring to Chapter IV, Section 3.3.2, Compensation Model.

4) Establishing a Cooperative

The executing body, namely the inhabitants cooperative, shall be established in compliance with the regulation and guidelines issued by the Ministry of Cooperative.

The main reasons for establishing a cooperative is to obtain bank finance, receive subsidy (7% of the total project cost is estimated), and sell 12 housing units.

5) Housing

The building permission shall be obtained as stipulated in DKI Jakarta Municipality regulations and referred to in Chapter IV, Section 3.1.4, Building Planning, and Section 3.1.5, Urban Planning.

The acceptance of the additional 12 houses (for sale) stems from the desire to increase housing stock since the population density of Site C shall be increased in accordance with DKI Jakarta Master Plan.

3.2.3 Institutional Framework

The executing body and the most concerned sectors/bodies to the renewal such as central/local government, authorities, agencies, private sectors as well as inhabitants' community are described hereafter. The involvement of these bodies is essential to the planning and implementation of the renewal and it shall be arranged by the executing body assisted by others concerned.

1) Executing Body

The inhabitants of the existing 12 houses to be partially demolished due to road widening project shall form a cooperative. Establishment of the cooperative shall be supported by RT, RW and Lurah Office, and shall exist under the pertinent regulation.

2) Roles of bodies relevant to Site C Renewal

(1) The inhabitants cooperative: As the executing body, the cooperative is responsible for planning and implementing the renewal, however the assistance of others concerned is deemed necessary.

(2) DJCK: Provision of guidance on the renewal methodology to the cooperative through DKI Jakarta Municipality and most probably NGO.

(3) DKI Jakarta/Walikota: Implementing the road and street widening, and paying compensations to the pertinent inhabitants. Reviewing and approving the plan of Site C renewal proposed by the cooperative particularly on land use, population density, road/street network, building development, and consideration of urban disaster prevention. Also/DKI Jakarta/Walikota shall review the feasibility study prepared by the cooperative and disburse the required subsidy.

(4) Kelurahan/Lurah Office: Coordinating administrative matters between Walikota and the cooperative. LKMD shall actively support the establishment of the cooperative.

(5) Team 9: Evaluating rights, properties and value of inhabitants' assets mainly for the purpose of setting compensation to be paid by DKI Jakarta Municipality to the inhabitants.

(6) NGO: NGO shall assist the cooperative mainly by enhancing the motivation of the inhabitants. It shall also assist in supervising the physical and socio-economic surveys on the existing conditions of the 12 houses as well as the whole Site C, coordinating with the government agency, Lurah Office, LKMD for establishing the cooperative and proceeding with the legal steps required in planning and implementing the renewal.

Partial involvement of consultants will be considered particularly for the study of project feasibility, physical planning and construction supervision.

(7) Financial Body: BPD or similar government banks who can offer bank loan of low interest rates to the cooperative. The loan shall be guaranteed by LKMD. The loan proposal prepared by the cooperative shall be applied through RT, RW and Lurah Office for the review and acceptance of the bank.

(8) Private Agency: Additional 12 houses shall be sold. The cooperative may ask a private agency or preferably REI to find buyers. If this renewal is integrated with housing development of Zone 2, it might be more effective.

The government shall consider tax exemption on income of the cooperative.

(9) Infrastructure agencies or corporation: See Chapter V, Section 3.4, INFRASTRUCTURE PLAN.

3) Community Participation

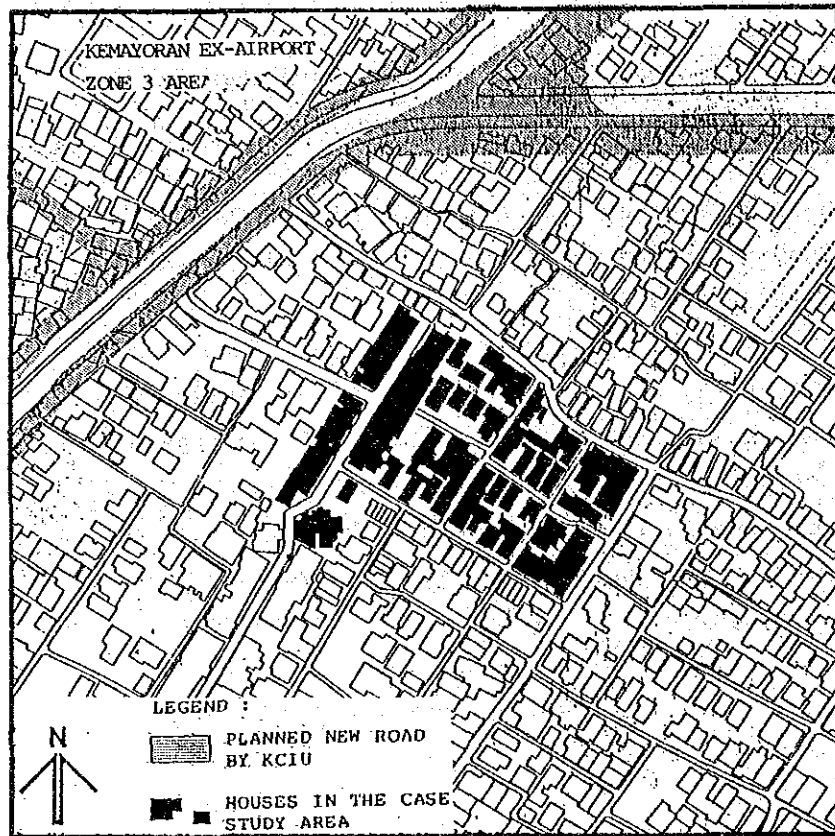
Site C renewal does not require comprehensive participation of RT unit community. It is rather limited to the inhabitants of the existing 12 houses. However, those inhabitants needs full support of the heads of RT, RW and Lurah Office as well as LKMD.

Therefore, a degree of consensus must exist among the inhabitants of the RT which will be expanded on further environmental improvement of the whole RT compound including emergency vehicles access to every house, open spaces and landscaping. The community will be stimulated by the success of this renewal and positively influenced by a better understanding of urban renewal and possibility of community participation.

3.3 PHYSICAL CONDITIONS AND PLAN

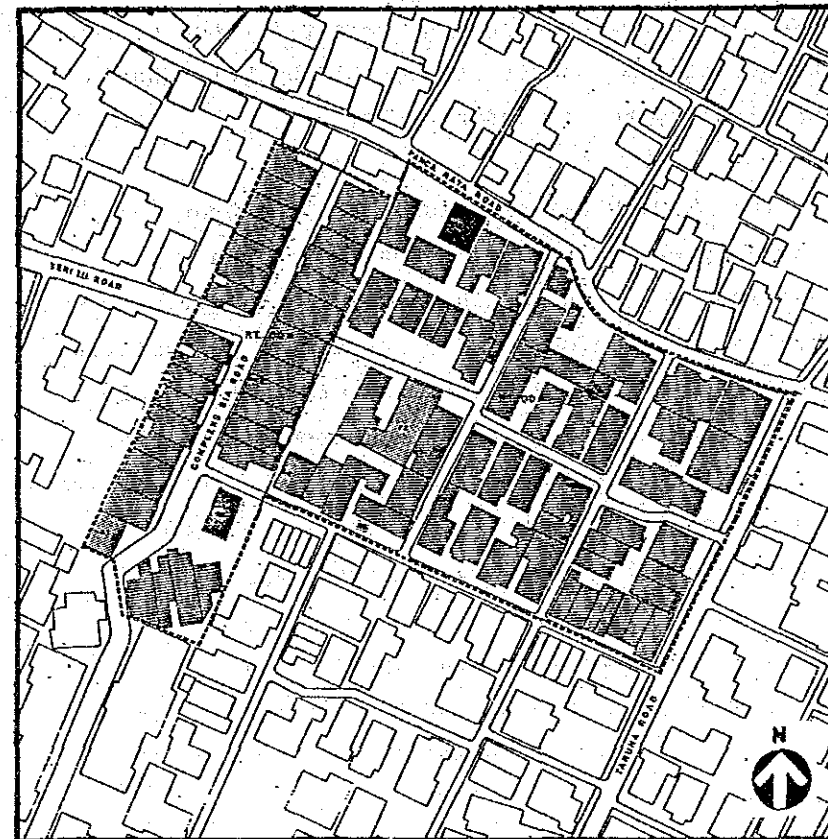
Detailed survey results of Site C are described here.

3.3.1 Existing Characteristics



- The site lies in Kelurahan Serdang and the population is 536 persons involving two RT units. The KIP has been implemented during Repelita III. The major land use of the site is residential with very few retail shops and few neighbourhood facilities.
- Another typical Kampung with old buildings of high density, narrow streets and lack of neighbourhood facilities. Improvement of environment is necessary to maintain the well balanced urban settlement area.

3.3.2 Building Use

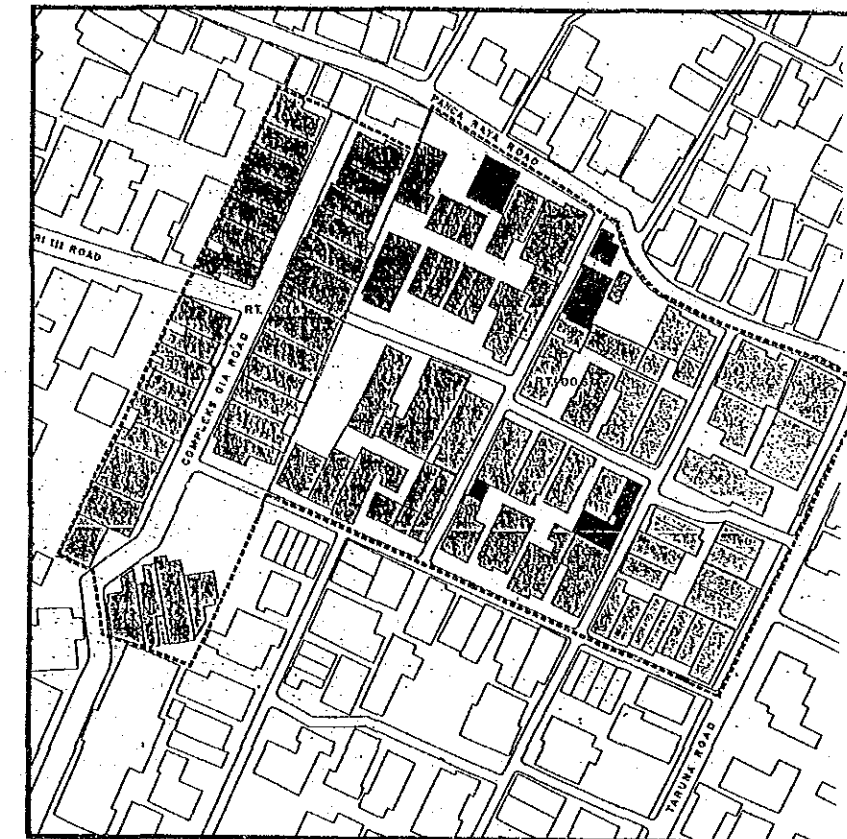


- : SITE BOUNDARY
- : RT. BOUNDARY
- HOUSING
- KUNDERGARTEN
- POSYANDU
- PRIMARY SCHOOL
- JUNIOR HIGH SCHOOL
- STALL
- HOME INDUSTRY
- HYDRANT
- HALL
- BADMINTON COURT

Land Use/Price/Ownership

- Nearly 80% of the land is occupied by houses and thus the land for public use is 8% only.
- Land price is very low (22,000 - 34,000 Rp/sqm)
- Average households income is 160,000 Rp/month

3.3.3 Building Conditions



- : SITE BOUNDARY
- : RT BOUNDARY
- GOOD
- MEDIUM
- BAD

- Land area : 14,121 m²
- Net residential land area : 9,050 m²
- Average land area : 117.53 m²/house
- Average building area : 79.04 m²/house
- Average building storey : 1.1 fl/house
- Average No. of family members: 6.9 P/house, 5.5 P/h.h.
- Average No. of Households : 1.26 h.h./house

Buildings

- All houses have permanent structure.
- 55% of the houses are very old (more than 20 years old).
- 18% of the houses are for rent.

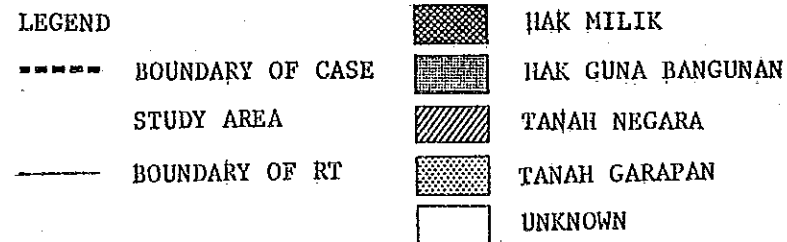
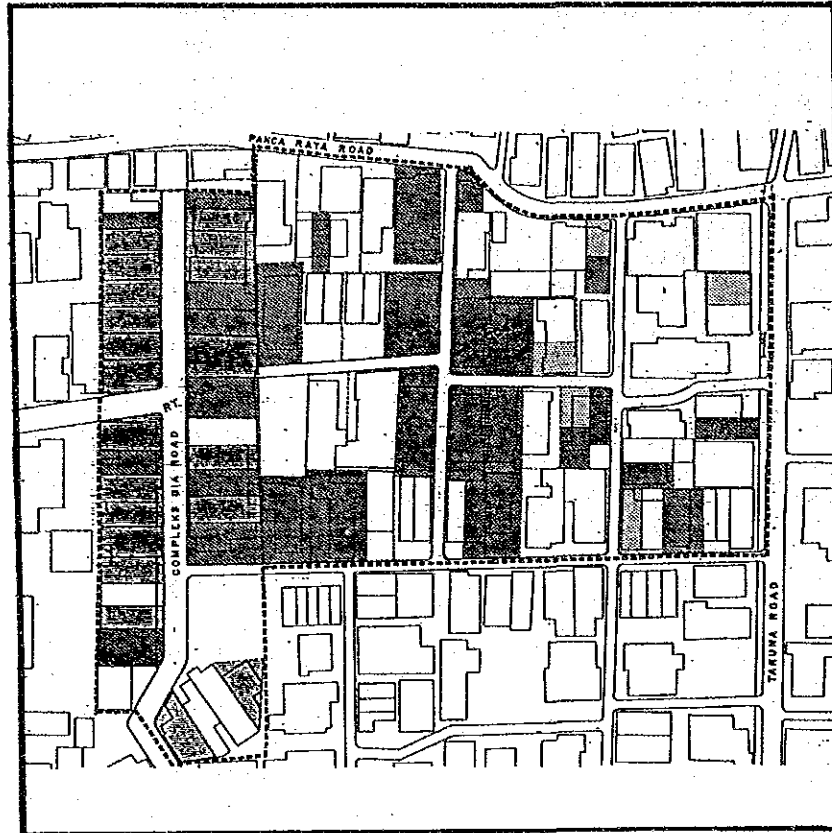
3.3.4 Present Situation of Residential Environment

SITE NO.	SITE C
LOCATION	KC. Kemayoran/JP Serdang
NAME	RW01
PRESENT LAND USE (incl. surroundings)	RT006/008 Residential
DKI MASTER PLAN	Residential
SPATIAL RELATION TO KEMAYORAN COMPLEX PROJECT	None Direct
AREA OF THE SITE (sq.m)	14,121.00
NO. OF POPULATION (persons)	536.00
NO. OF HOUSEHOLD (households)	97.00
NO. OF HOUSES (houses)	77.00
AVERAGE LAND PRICE OF HOUSING LOT (Rp.sq.m.)	22,000 - 34,000
AVERAGE HOUSEHOLD INCOME (Rp./month)	160,000

	NUMBER	(%)
1. BUILDINGS		
A) BUILDINGS STRUCTURE (no. of houses)	77.00	100.00
a) Temporary	0.00	0.00
b) Semi-permanent	3.00	0.30
c) Permanent	74.00	96.10
B) BUILDING AGE (no. of houses)	77.00	100.00
a) 20 Years & More	42.00	54.55
b) 15 - 19 years	8.00	10.39
c) 14 Years & Less	27.00	35.06
C) BUILDING OWNERSHIP (no. of houses)	77.00	100.00
a) Yearly Contract/Rent	14.00	18.18
b) Others (Stay with the Owner/Company's House, etc.)	10.00	12.09
c) Own House	53.00	68.83
2. DENSITIES		
a) Population Density (persons/spot area:ha)	380.00	
b) Household Density (floor area:sq.m./person)	11.27	
c) Building Density (no. of houses/ha)	54.53	
3. OPEN SPACES/PUBLIC FACILITIES		
A) PUBLIC FACILITIES		
a) Open spaces (e.g. play ground, park, etc.)	None	
b) Education (e.g. Kindergarten, primary school, junior high school etc.)	None	
c) Medical	None	
d) Religious (e.g. mosque, church etc.)	None	
e) Cultural/Welfare	None	
f) Governmental	None	
g) Shops	None	

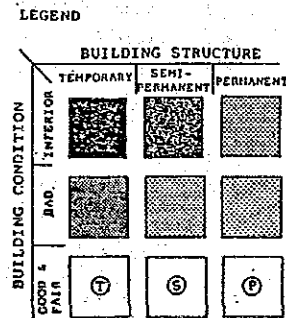
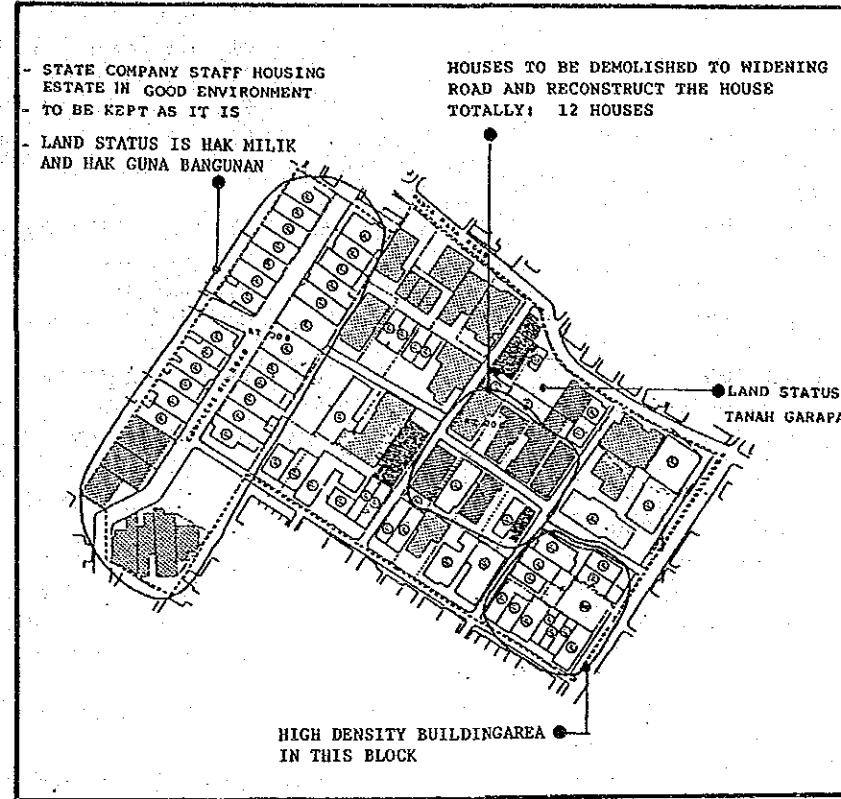
B) FLOOR RATIO		
a) Building Floor (total housing floor area:sq.m.)	6,041.43	
b) Lot Area (total housing lot area:sq.m.)	8,880.40	
c) Residential Used Area (sq.m.)	11,170.00	
d) Floor Area Ratio-1 (a/b:%)	0.68	
e) Floor Area Ratio-2 (a/c:%)	0.54	
f) No. of Stories	1.04	
g) Building Coverage Ratio (d/e:%)	0.65	
4. SERVICE ROAD (no. of houses)	89.00	1.00
a) Facing to 1.5 m & Less (only for beca)	0.00	0.00
b) 2.0 m - 3.0 m (only for one way vehicle)	42.00	0.47
c) 4.5 m & More	47.00	0.53
5. INFRASTRUCTURE		
A) WATER SUPPLY (for drinking water from;)	77.00	100.00
a) Water Seller/Wells	45.00	58.44
b) Water Supply Agency	32.00	41.56
B) WASTE DISPOSAL	77.00	100.00
a) River/Others	0.00	0.00
b) Septic Tanks	76.00	98.70
c) Town Drainage	1.00	1.30
C) FLOOD OCCURRENCE		Not for few years
6. LAND USE (sq.m.)	14,121.00	100.00
a) Residential	11,169.71	79.10
b) Commercial	24.01	0.17
c) Roads	1,546.25	10.95
d) Public Facilities	795.01	5.63
e) others	586.02	4.15
7. LAND PRICE (Rp./sq.m.)	77.00	100.00
a) 66,000 Rp. & Less	77.00	100.00
b) 66,000 - 129,000	0.00	0.00
c) 129,000 Rp. & More	0.00	0.00
8. LAND OWNERSHIP	77.00	100.00
a) Tanah Garapan	7.00	9.09
b) Hak Pakai	0.00	0.00
c) Hak Guna Bagunan	20.00	25.97
d) Hal Milik	33.00	42.86
e) Tanah Negara	0.00	0.00
f) Tidak Jelas	17.00	22.08
9. HOUSEHOLD INCOME (Rp./household)	77.00	100.00
a) 100,000 Rp. & Less	32.00	41.56
b) 100,001 - 300,000 Rp.	31.00	40.26
c) 300,001 & More	14.00	18.18
10. AGE OF COMMUNITY	77.00	100.00
a) More than 10 Years	56.00	72.73
b) 4 - 10 Years	6.00	7.79
c) Less than 3 Years	15.00	19.48

3.3.5 Land Status



	NUMBER	(%)
● LAND OWNERSHIP	77.00	100.00
a) Tanah Garapan	7.00	9.09
b) Hak Pakai	0.00	0.00
c) Hak Guna Bagunan	20.00	25.97
d) Hak Milik	33.00	42.86
e) Tanah Negara	0.00	0.00
f) Tidak Jelas	17.00	22.08
● LAND PRICE (Rp./sq.m.)	77.00	100.00
a) 66,000 Rp. & Less	77.00	100.00
b) 66,000 - 129,000	0.00	0.00
c) 129,000 Rp. & More	0.00	0.00

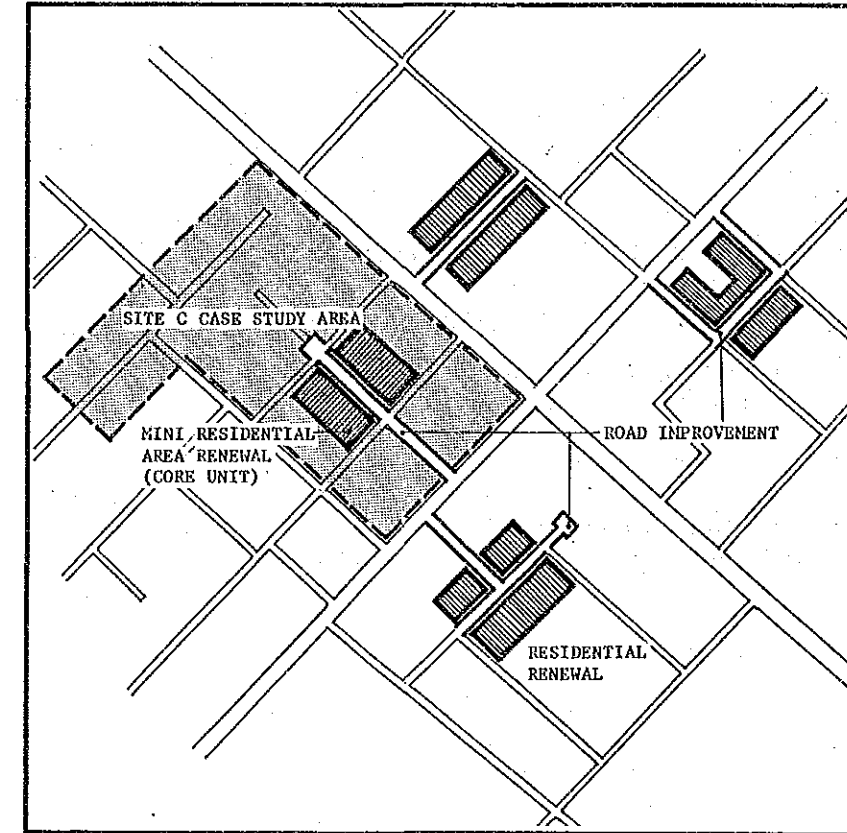
3.3.6 Analysis for Renewal



Densities/Floor Ratio

- average population density; 380 persons/ha. (net)
- average/floor density; 11.27 sqm/person
- average/building density; 67 houses/ha.
- FAR; 68%
- BCR; 65% (average stories is 1.06)

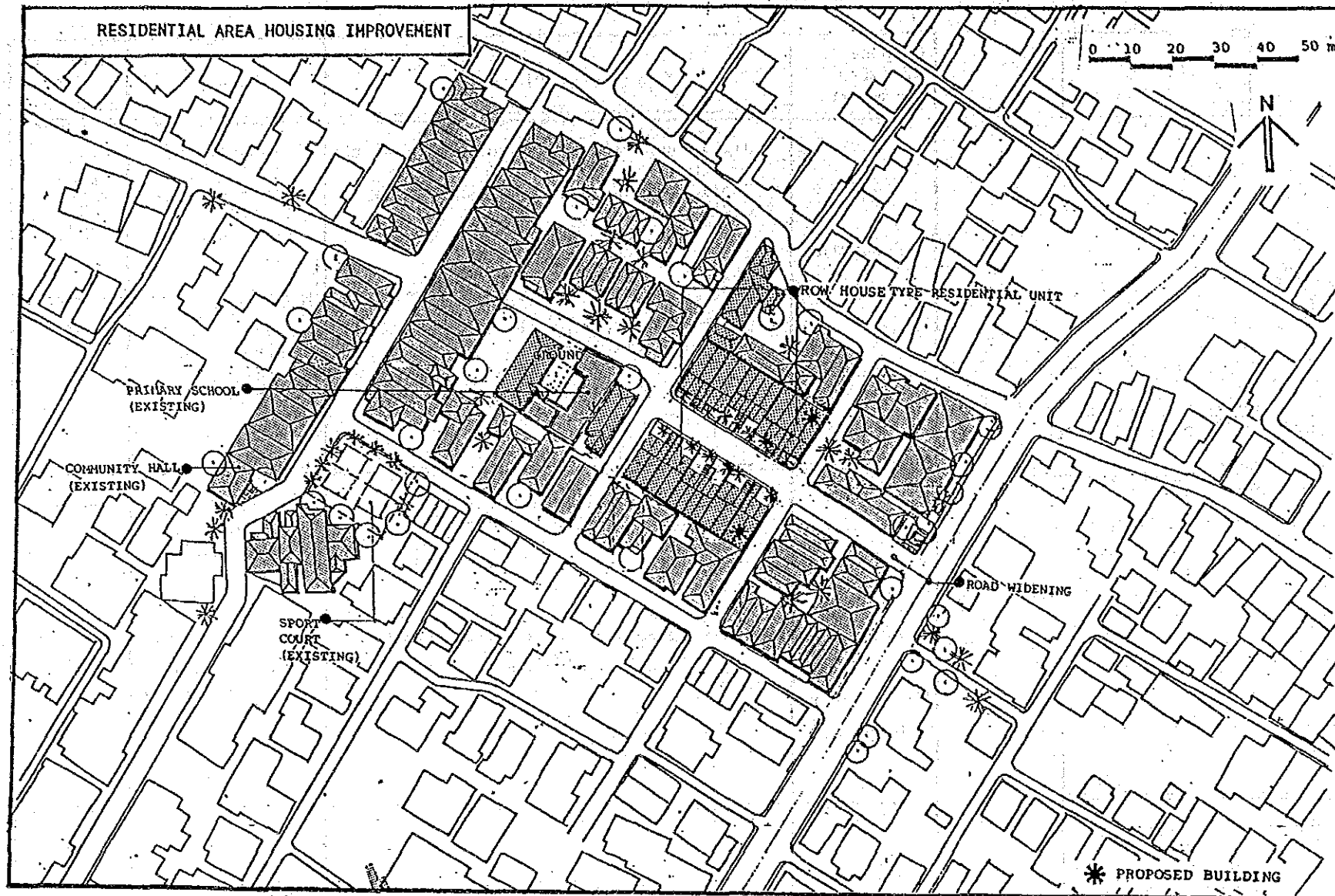
3.3.7 Renewal Concept



Recommendable Environmental Guidelines

- Land Use : Residential/Multi class
- Population Density : 500 P/ha.
- Building Height : 3 - 4 stories
- Building Coverage Ratio : Max. 80%
- Floor Area Ratio : Max. 300%
- Setback/Front : 2 m (along big road) /Perimeter : 0 m

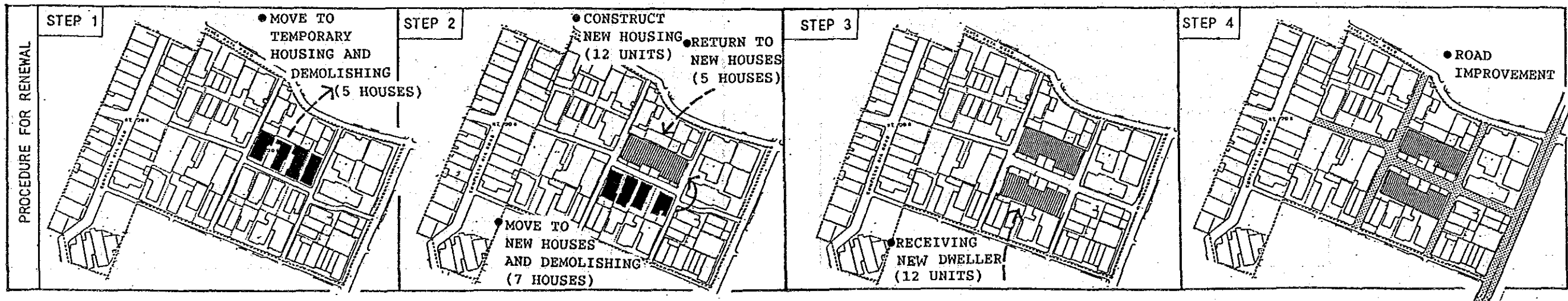
3.3.8 Renewal Plan



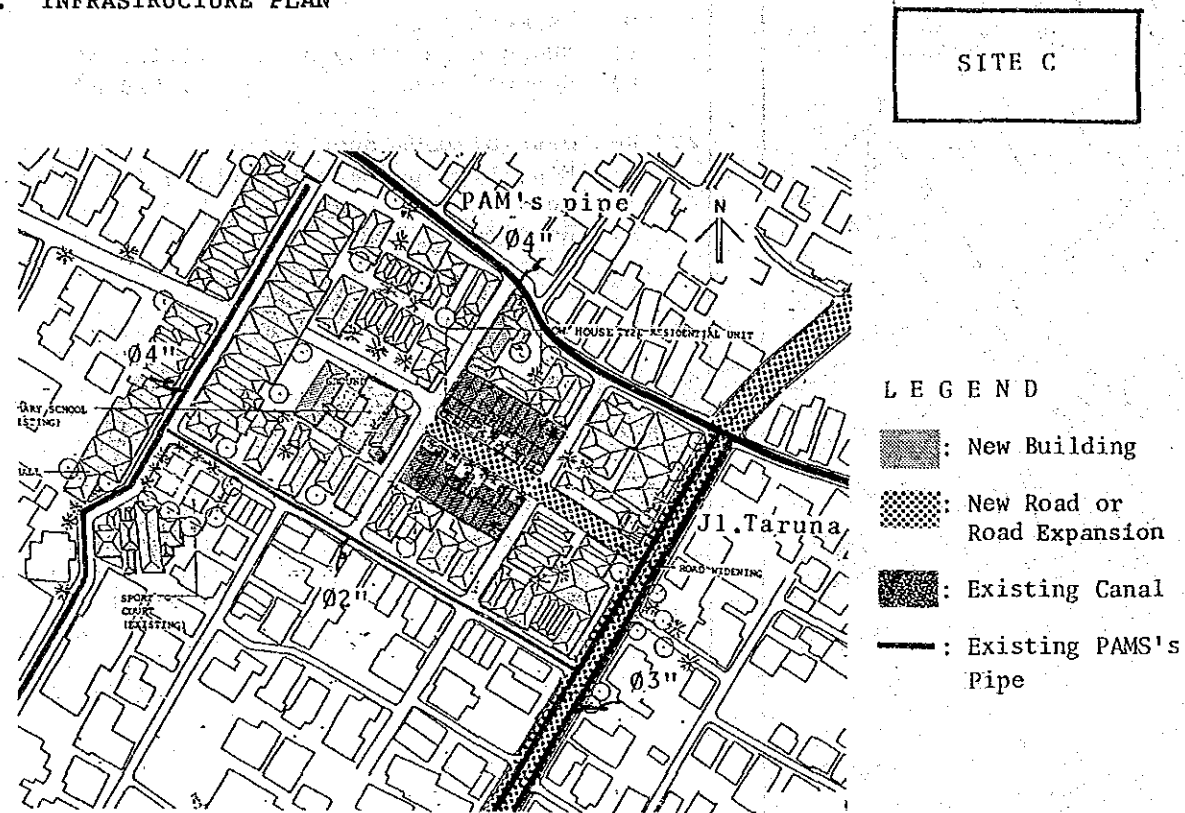
RENEWAL COMPONENT

1. Development Area
 - a) Whole case study site: 14,121 m²
 - b) Renewal area : 1,520 m²
2. Residential Development
 - a) Flat type permanent housing for resettler and selling
 - b) Housing F-45 x 8 units
F-70 x 16 units
Total 24 units
 - c) Number of storey : 2 storey
3. Neighbourhood Facility
Road widening by the public sector
4. Population Density
 - a) Existing : 380 P/ha.
 - b) Planned : 24 units x 6.9 P/h
(average of Site C)
= 165 P
Ordinal house:
65 h x 6.9 = 453 P
Total 618 P
618 P - 1.41 ha
= 438 P/ha.
5. Renewal Scheme

Residential	Whole Site	For Preserve	Demoli- tion	New House	Total
No. of House	77	65	12	24	89
No. of House- hold	97	82	15	30	112
Bldg. Area (m ²)	6,086	4,924	1,162	1,770	6,694
Population	536	453	83	165	618



3.4. INFRASTRUCTURE PLAN



PLANNING ELEMENTS	
Existing Condition of Infrastructure	<ul style="list-style-type: none"> - KIP has been carried out and drainage is relatively in good condition. - PAM's water supply pipes are located and house connections are executed to the houses which could afford to pay installation fee and consumption charge. - Streets are too narrow for fire engine passage.
Main objectives of Improvement	<ul style="list-style-type: none"> - DKI plans to expand Jl. Taruna by the year 2005 in accordance with the street improvement plan of Kel. Kemayoran. - For the sake of street expansion which requires demolition of existing houses, integrated urban renewal is needed for resettlement of the people on the route.
Planned Population and Water Demand	<ul style="list-style-type: none"> - Number of new houses : 24 units - Population : 24 units x 5.7 prs/unit = 137 prs - Water Demand : 137 prs x 160 l/prs = 22 m3/day

Components of Infrastructure	Improvement Plan	Remark	Agencies to be Coordinated
Street & Footpath	<ul style="list-style-type: none"> - Jl. Taruna will be expanded to a width of 10m. - Small streets will be expanded to a width of 4m. 	* Expansion of Jl. Taruna and small streets will be implemented by DKI	* Tata Kota DKI * DPU
Drainage	- Storm water will be discharged to the present downstream.	Drainage will be constructed by the renewal executing body.	* DPU
Water Supply	- Clean water will be supplied from the existing PAM's pipes to each house.	Inhabitants pay installation fee and consumption charge.	* PDAM Pusat
Waste Water Disposal	- Septic tank/leaching bed will be provided.	Local community will maintain it.	* DPU
Solid Waste Management	- Communal container will be provided by the renewal executing body.	Local community will maintain equipment and pay charge for collection.	* Sub-Dinas Kebersihan Pusat
Electricity	<ul style="list-style-type: none"> - PLN will supply electricity services. - Outdoor lighting will be provided by the renewal executing body and maintained by local community 	Inhabitants pay installation fee and consumption charge.	* P L N * BKJS
Telephone	<ul style="list-style-type: none"> - Individual telephone line will be provided by PERUMTEL for an installation fee of Rp 500,000/line. - Public telephone will be provided by PERUMTEL where safety is secured. 	Charge is paid by user.	* PERUMTEL * BKJS

3.5 Project Cost

1) Demolition

- This cost includes demolition of super structure and infrastructure above and below ground level.
- The demolition cost for super structure is according to structure type such as 1) permanent & semi-permanent, 2) ordinary, and 3) temporary structure.
- Cost for small structure and trees is neglected in this estimation, but in case of implementation these costs should be included in the compensation amount especially productive trees and wells etc.

2) Grading

Grading cost includes land fill (assumed average 30 cm) in the project site to protect houses from flood.

3) Housing

Specifics for the flats are;

- Structure system : Rigid frame reinforced concrete
- Roof : Wooden frame with asbestos corrugated sheets
- External wall : Concrete block with mortar joint
- Internal wall : Concrete block with mortar joint
- Ceiling : Ground floor - Concrete slab
Upper floor - Nil

- Floor : Cement sand rendering troweled finish
- Opening : Window-Aluminum frame and sash
Door-Plywood flash door with wooden frame
- Utility : Electricity supply, gas supply piping and water supply for each unit

4) Temporary house

This cost includes rental cost for inhabitants who will be evacuated, throughout the construction period for new houses.

5) Study and design

The cost is assumed to be 5 percent of the total amount of items 1) to 4).

6) Administration

The cost is assumed to be 4 percent of total amount of items 1) to 5) and covers preconstruction and construction stages including application costs for changing land title;

In case of

Hak Pengelolaan (HPL) Rp. 150/m² of land,
Hak Guna Bangunang (HGB) Rp. 400/m² of land.

7) Contingency

The cost is assumed to be 4 percent of total amount of above items and includes physical contingency but does not cover cost escalation.

8) Estimated costs are as of March, 1989.

Construction Cost

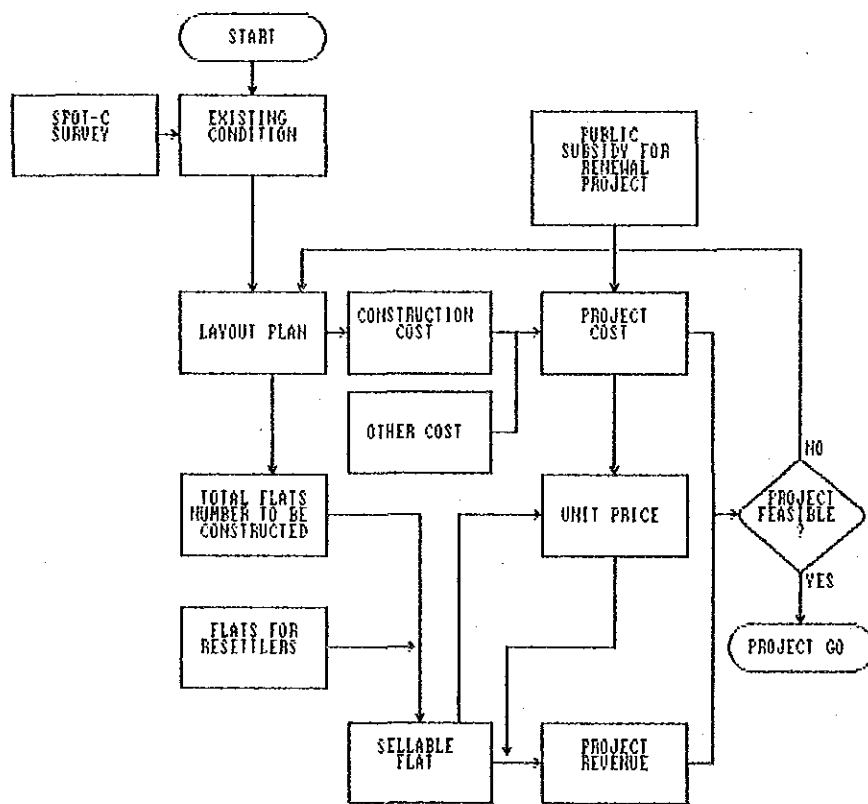
Item	Unit	Quantity	Unit Price (Rp)	Amount (Rp x 1,000)
1. Housing Development				
1.1 Demolition				
a. Permanent & semi-permanent structure	m ²	1,162	5,000	5,810
1.2 Grading	m ²	1,520	3,000	4,560
1.3 Housing				
a. F-45 8 units	m ²	360	200,000	72,000
b. F-70 16 units	m ²	1,120	200,000	224,000
Sub Total				306,370
(Rp x 1,000)				
2. Temporary House	:	5 houses x @2,000/day x 180 days =		1,800
3. Study and Design	:	308,170 x 0.05	=	15,400
4. Administration	:	323,570 x 0.04	=	12,900
5. Contingency	:	336,470 x 0.04	=	13,400
Sub Total				43,500
Total				349,870

3.6 FINANCIAL STUDY

1) Work Flow

Financial study flow of Site C is shown in Fig. 5.3. The development project will prepare the flat houses for resettlers and additional flats for sales in order to generate revenues. A subsidy by public sector through Urban kumpong renewal program shall be one of the project fund sources. This type of subsidy will encourage development activities by private sectors.

Fig. 5.3 Site C Financial Study Work Flow



2) Planning Conditions and Assumptions

The following are the conditions and assumptions of Site C financial study.

- (1) Sales price of the flat house should be compatible with market price. Market price is assumed to be around Rp. 310,000 per m² by Tanah Abang project.
- (2) Newly constructed flat houses will receive subsidies according to DKI's urban housing and environmental renewal project. To decide the amount of subsidy in the project more detail study is needed but in this case study 10% of construction cost will be assumed as subsidy to encourage urban Kumpong housing renewal by private sector.
- (3) A resettler will receive compensation for land and buildings then pay for one's own flat.
- (4) Project fund is a loan from commercial bank with 18% interest for one year.

3) Project Cost

The site C project cost includes:

- Demolition
- Housing Construction
- Land Development
- Compensation
- Temporary house preparation
- Other cost (study & design, administration, contingency)

- Average compensation for building related to road widening becomes Rp. 5.6 million per family. Therefore total compensation for 12 houses is Rp. 67.5 million. This compensation will be a part of the construction cost.

4) Sources of Fund

Following items are major sources of fund for cooperative executing Site C project:

- Selling land to public sector for road widening
- Selling half of the floor of flat housing
- Corporative members own capital
- Compensation for 12 buildings
- Subsidy for urban housing renewal project

Selling Land

Necessary land for road widening by DKI is calculated as 128 m². The land title of the site is all Tanah Garapan, therefore building owners, who are assumed to be major cooperative members, can receive 25% of the land value. Average land value of the site is Rp. 92,000/m². Rp. 2.9 million is the total amount generated by selling land.

Selling Floor Area

Cooperative can get revenue by selling 12 units of flat houses. Market price of the floor area in this case study is assumed at Rp. 310,000/m² by Perumnas standard flat price. Rp. 229.4 million is total revenue from floor selling.

Cooperative Members' Own Capital

According to the Study's survey, cooperative members' average monthly income is Rp. 160,000/hh. The maximum debt for each family shall be Rp. 3.6 million under 20 years of loan period and 12% of interest.

Subsidy by Public Sector

The subsidy amount of Rp. 25.5 million is about 7% of the project cost. If the public sector provides a larger subsidy amount, the cooperative shall have a stronger incentive to implement the project.

5) Results

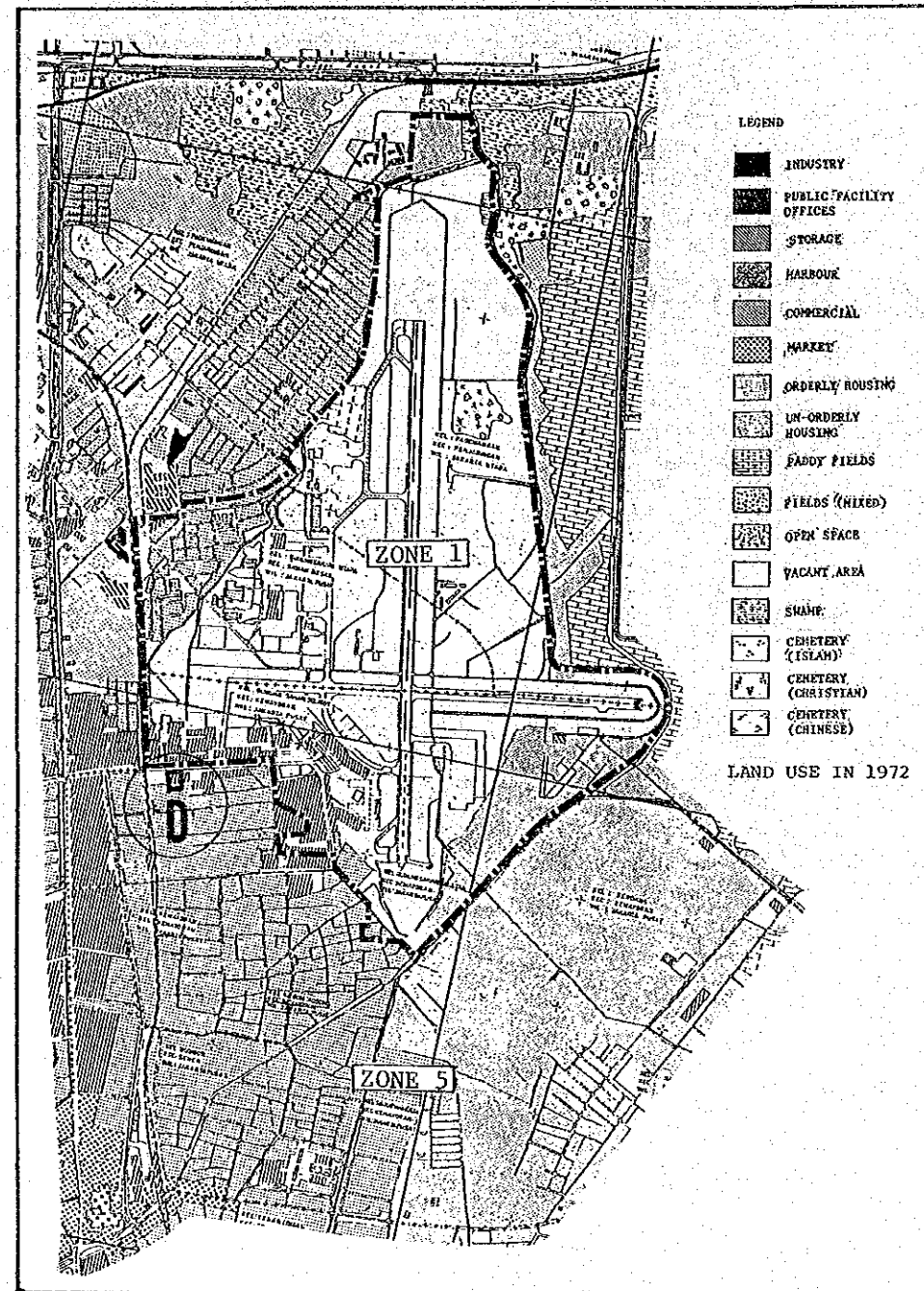
Project cost consists of Rp. 296.0 million for housing construction, Rp. 5.8 million for demolition, Rp. 41.8 m for other cost and Rp. 18.4 million for interest payments. Total project cost is Rp. 368.4 million for 24 units of F-45 and F-70 flat houses. Net unit construction cost is around Rp. 301,000/m². If the floor sale price of flat houses is Rp. 310,000/m², cooperative members can get a little cross subsidy.

Table 5.3 Project Cost and Source of Fund

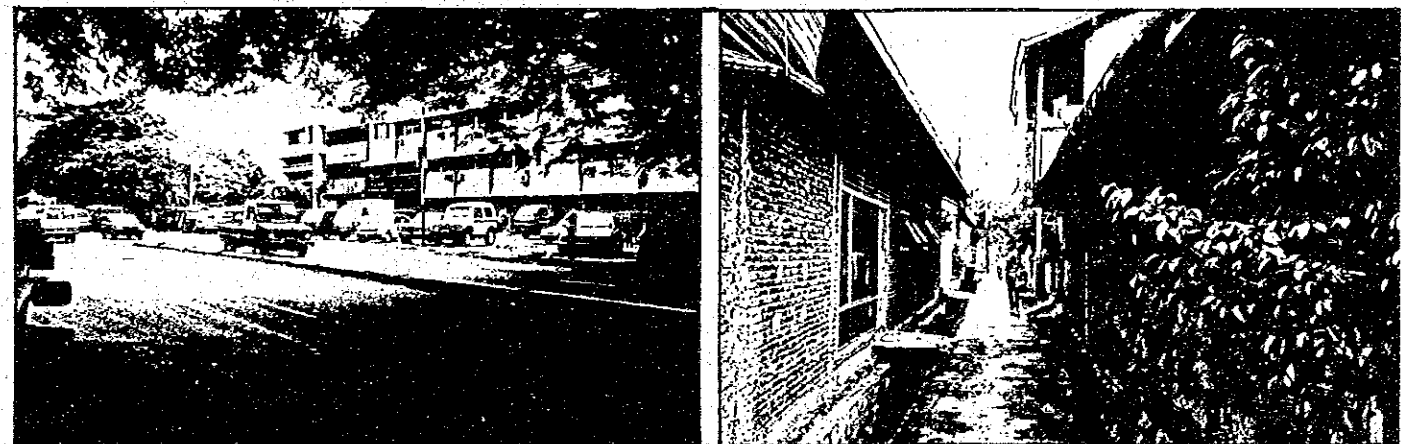
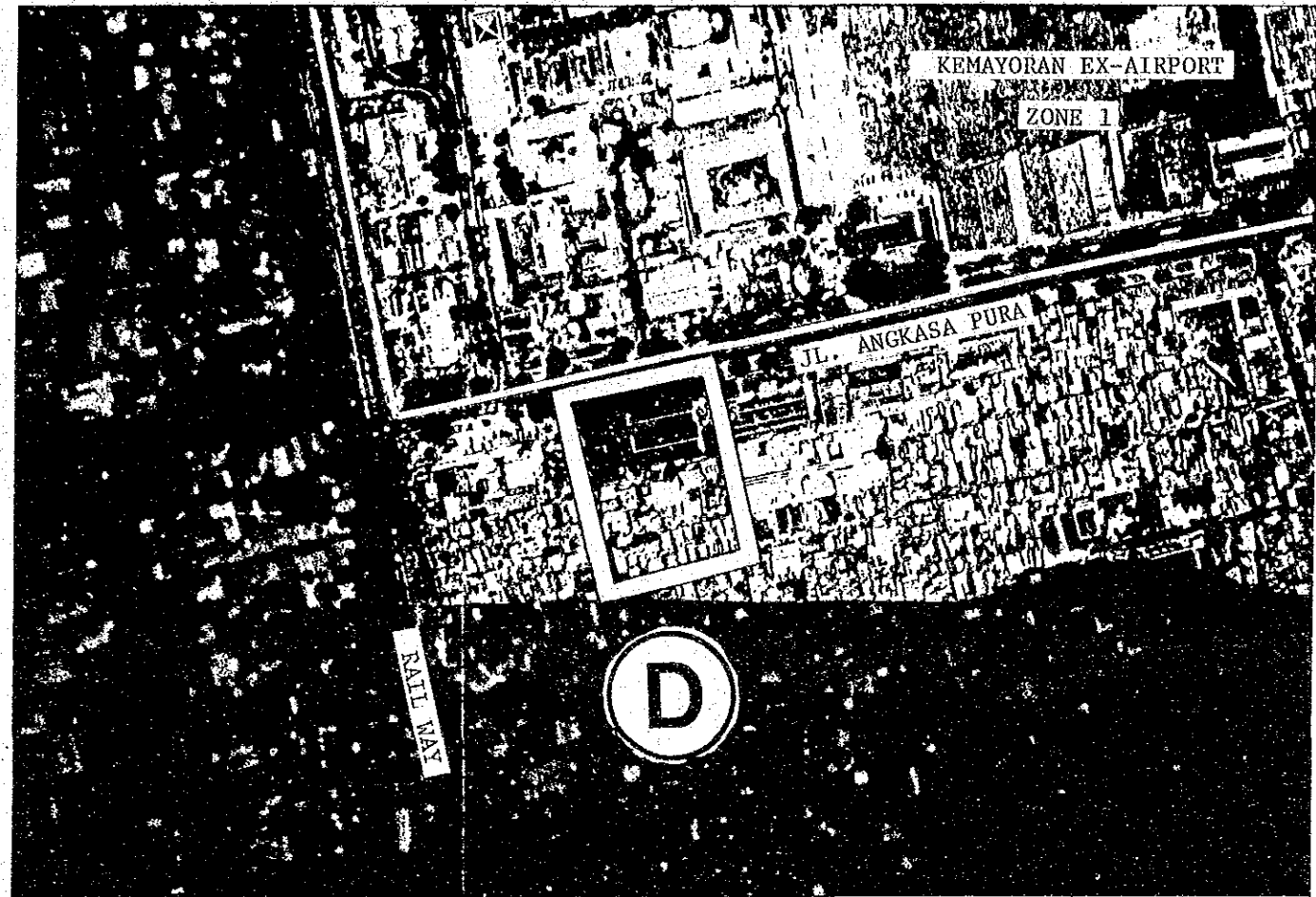
	Cost x Rp. 1,000	Source of Fund x Rp. 1,000	
Land Aquisition	5,810	67,485	Compensation
Demolition			
	296,000	2,944	Land Selling
Housing Construction		43,024	Residents' own capital
	4,560		
Land Development	1,800		
Temporary House		229,400	Selling Floor
Others	41,813		
Interest	18,417	25,547	Subsidy
Total	368,400	368,400	

4. SITE D (CASE STUDY & PRIORITY SITE)

LOCATION MAP



AEROPHOTOGRAPHY



TYPICAL ATMOSPHERE IN SITE D

4. SITE D (CASE STUDY AND PRIORITY SITE)

4.1. GENERAL DESCRIPTION

4.1.1 Motivation

Jl. Angkasa will connect the commercial/business center in Zone 1 and the major road Jl. Gunung Sahari which extends to Senen commercial center. Zone 1 will serve as an additional urban center in Jakarta and Senen a secondary center, therefore, potential of Jl. Angkasa for commercial use will be extremely high.

This renewal plan of Site D will hopefully be a model for future similar renewal projects of commercial and housing complexes along such high potential roads elsewhere in Jakarta or other big cities. The renewal method applied to this Site D is "Urban Renewal Project" and its key point is "Right Conversion" which is practiced in Japan. The aim of introducing this method is to stimulate methodology development of urban renewal in Indonesia.

The present (October '89) situation is different from that in December 1988 when the site was selected as a Case Study Site. The widening road plan existing before December, 1988 was altered and the new plan does not affect the site thereby weakening the motivation and advantage for renewal. A private developer purchased the land facing Jl. Angkasa after April, 1989. As a consequence of such conditions, the only aim is to study the applicability of the method being practiced in Japan although it is predicted that the method would be hardly applicable.

4.1.2 Particular Considerations

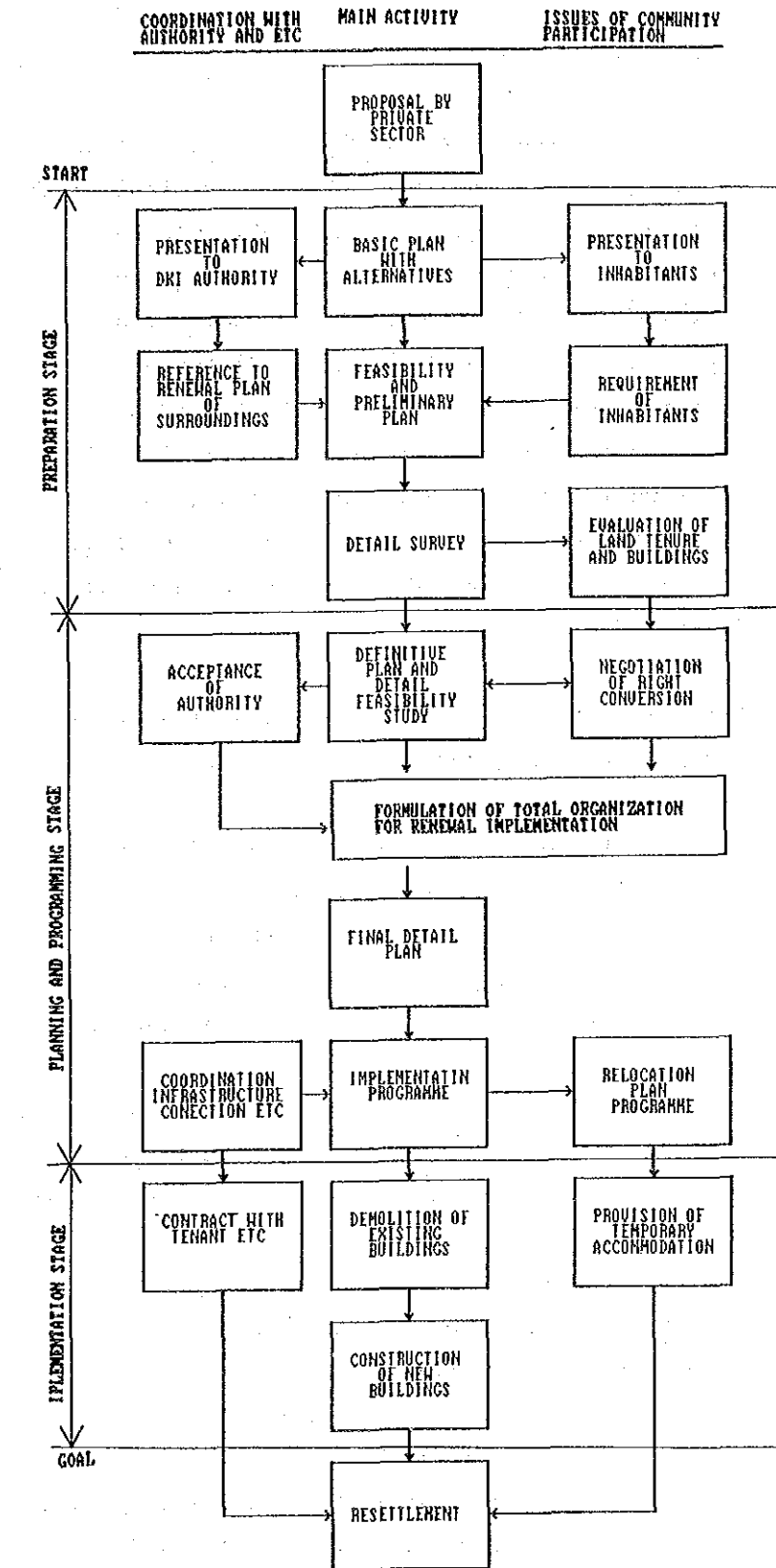
Needless to say, some fundamental conditions are different between Japan and Indonesia particularly in land price, construction cost, value of property, practice of organizing executing body and relevant regulations. Therefore the method is not directly applicable to the present conditions of site as well as any other urban renewal projects in Indonesia.

Firstly, while construction cost is not so much different between Japan and Indonesia, land price is very much low and consequently, building floor price is also very low in Indonesia compared with Japan, which means most probably that demand of high dense effective land use is premature in big cities in Indonesia.

Secondly, there is approximately a 10% subsidy from the public sector to the total renewal project cost in case of Japan. The subsidy is either low rate interest of public financing or grant for public or common use facilities.

Thirdly, organizing executing body for the renewal including right holders is the key for the execution of an "Urban Renewal Project". Value of property (land and building) of most of the inhabitants where renewal is required is low and makes "Right Conversion" result unbalanced. In practice in Japan, negotiation with every right holder takes enormous time until an agreement is concluded.

4.1.3 General Activity Flow



4.2 RENEWAL METHOD

4.2.1 Introduction

1) As it is mentioned in the previous Section 4.1. in this Chapter, the "Urban Renewal Project" method used in Japan is not directly applicable to Indonesia. However, it is worth considering the system of "Right Conversion" in a comparison between Japan and Indonesia. Fundamental difference in "Right Conversion" is that right of land and building is converted to right of building floor in Japan while value of land and building is equivalently converted to value of building floor with land of HGB in Indonesia, which is elaborated in this Case Study.

Renewal method is described in this Case Study in the following sequence:

- (1) Introducing principle idea of "Urban Renewal Project" used in Japan.
- (2) Applying the method to the renewal of Site D with clarification of different conditions in Indonesia and adopted framework to the renewal.

2) Adopted framework mentioned above is described hereafter in a sequence similar to that used to describe the renewal in the other Case Study Sites.

(1) Legislative Framework
Conditions favourable to this method are not yet established in Indonesia.

(2) Institutional Framework

(1) Executing Body

Right holders' union (or cooperative) called "KUMIAI", in Japan, is not practiced in Indonesia

(2) Roles of bodies relevant to the renewal

(3) Community Participation

(3) Financial Framework

The financial framework is referred to in Chapter IV, Section 3.3, FINANCIAL FRAMEWORK and Chapter V, Section 4.8, FINANCIAL STUDY.

(4) Procedural Framework

This framework is referred to in Chapter V, Section 4.1.3, General Activity Flow, and Section 4.7, IMPLEMENTATION SCHEDULE.

4.2.2 Introducing Urban Renewal Project in Japan

Article 1 of the Urban Renewal Act in Japan stipulates its purpose as "contribution to public welfare by taking reasonable and sound efficient utilization of land in urban communities and renewal of urban functions". These direct and/or indirect purposes are described as follows:

(1) Arrangement of favourable urban environment

In particular the act might offer a solution to deteriorated urbanization by crowded, wooden low-storeyed houses, land use disorder, etc.

(2) Urban-disaster prevention

Also a particular solution to possible conflagration caused by earthquake in crowded wooden-houses areas through promotion of fire-prevention and fire-fighting means.

(3) Supply of favourable urban-housing

Countermeasures against occurrence of so-called city-cavitation by changing downtown to be more habitable.

(4) Provision of public facilities

In existing urban areas, land acquisition is almost impossible for provision of public facilities. The land readjustment (Kukau-seiri) system is also not practical due to bigger rate of land-contribution (genbu) to meet huge compensation cost. Herein, so-called solid or cubic right-conversion system is to be adopted.

2) Feature of Right Conversion System Renewal Project

Right conversion system renewal project marks the greatest feature of integrated arrangement and/or renewal of buildings, building-sites and public facilities. The characteristic procedures are described as follows:

(1) Practical use of right-conversion method

The project applies the right-conversion method in exchange for land-acquisition. Previous right on land and/or buildings are to be converted to certain floors of renewed buildings.

Herein, rightful persons are not necessarily forced to move out and discontinue their living/business.

(2) Sale of reserved floors to meet project cost

A part of the buildings constructed in the project is granted to the rightful person. Excess floors are reserved to be sold for meeting the project expenses.

(3) Practical participation of private sector

The executors of the project are not only public bodies such as local municipalities and the housing/urban development corporation but also a union of the rightful person. Private developers are allowed to participate in the project as union members.

3) City-plan on Right Conversion System Renewal Project

Right conversion system renewal project is executed in principle as a city-plan project. The requisites for the urban area redevelopment project are as follows:

- (1) The project area shall be located in a high-utilization district.
- (2) The rate of fire-proof buildings of the project area shall not be more than 30% in terms of floor-area.
- (3) The land use in the project area shall be in extreme disorder.
- (4) The high utilization of land in the project area shall contribute to complete renewal of urban functions.

4) Executor of Right Conversion System Renewal Project

The executing bodies of right conversion system renewal project are to be either of the following: an individual, cooperative, local municipality or other state organization supplying housing.

The individual means a land-owner or a leaseholder in the high utilization area. The cooperative is defined as a legal company which land-owners and/or leaseholders organize. The local housing supply corporations are to be executing bodies in the case that the project's main aim is housing supply.

4.2.3 Applicability of Urban Renewal Project

1) Economic constraints

In general, urban economic activities in big cities in Indonesia are not as high as those in Japan, therefore, resulting in the following situation:

- (1) Low intensive land use, low density of built-up area, and low rate of mixed use to be re-organized.

Needs of intensive high density use of land area not matured yet. Data of Site D shows that: building coverage ratio is 0.62, floor area ratio is between 0.4 and 0.8, and average number of storeys of existing buildings is 1.28 (See Section 4.3.4). The situation is seen elsewhere in Jakarta and is called "high density area".

- (2) Low land price and high building construction cost

Land price in the area facing Jl. Angkasa at Site D is maximum Rp 400,000/M² at present. Land prices of approximately 70% of the site range between Rp 60,000/M² and Rp 129,000/M². (See Section 4.3.4) The reason for the low land price is derived from the above mentioned need regarding intensive high density use of land.

On the other hand, building construction cost is approximately Rp 300,000/M² in the case of Perumnas standard low income group flat and Rp 1,000,000/M² for ordinary multi-storey office/shop building.

In case of Japan, unit/price of land is several times higher than unit cost of building construction where "Urban Renewal Project" method is applied.

(3) Low value of right holder's assets

Mainly because of low land price, value of assets of right holders/inhabitants is low compared with the price/cost of the new building. Therefore it is difficult to exchange land of low value asset for new floor building of high price if the floor area before the renewal should be the same as the floor area after it.

(4) Opportunities

Land price in Jakarta is increasing and it has reached to some Rp 2,000,000/M² in the central business district.

Since Zone 1 development is being implemented, land price along Jl. Angkasa or areas near Zone 1 will rapidly increase. If trends continue in that direction, it is possible in the future that the "Urban Renewal Project" type will be applicable in Indonesia.

2) Legislative and institutional opportunities

Although there is no method similar to Urban Renewal Project in Indonesia, there are some possibilities to apply the method by enhancing and adjusting existing activities of urban renewal or improvement in Indonesia. Major legal and institutional constraints, described below, may be overcome if the existing activities are positively extended.

(1) Organizing executing body

As mentioned in the previous Section 4.2.2, an executing body is either an individual, a cooperative (KUMIAI), a local municipality or state/local government housing supply corporation.

A local municipality (such as DKI Jakarta) may be burdened by certain financial constraints. In addition a basic policy of urban development towards the year 2005 is to enhance private sector's potential and encourage local community participation. Therefore, the local municipality does not appear to be suitable as the executing body for this type of urban renewal.

It is possible for public housing supply corporations, such as Perum Perumnas and PD. Sarana Jaya, to be the executing bodies if the renewal is combined to a large extent with business/commercial development.

It is worthwhile to consider the enhancement of cooperatives, presently common throughout Indonesia, to a level of organization similar to cooperatives (KUMIAI) in Japan. However, such cooperatives should be guided by public sectors and initiated by potential private sectors in reality at present.

(2) Land tenure after renewal

The recent experience in Indonesia particularly on land consolidation systems and Condominium Law indicates that there are no critical constraints in clarifying land tenure after the renewal. One possible legal problem lies in the means to clarify the rights of inhabitants concerning ownership or lease of the land before the renewal. Social problems are likely to surface as the authority attempts to reach an understanding with the inhabitants on such rights in order to compile a systematic registration record.

(3) Subsidy

In most cases of Urban Renewal Project in Japan, a local municipality gives a subsidy to executing body since the renewal would contribute to urban improvement by providing public facilities and spaces. The subsidy (approximately 10% of total renewal cost) is either grant in aid or financing by low interest loan (about 5%) from public financial bodies.

The lowest interest rate in Indonesia is some 18%, except for BTN house loan for low income group. This high rate is one of the constraints and makes the renewal difficult.

There should be a fund for the purpose of realizing such renewal. In this particular case study of Site D renewal, such subsidy is expected for public facility development by DKI Jakarta Municipality and for low income group housing development by KCIU.

4.2.4 Legislative Framework

The following are major legal procedures for the renewal using Right Conversion System.

1) Permit of Renewal

The general renewal plan prepared by the executing body shall be reviewed and approved by DKI Jakarta Municipality particularly on land use, population density, allocation of neighbourhood facilities including open spaces, infrastructure connections, and consideration of urban disaster prevention. Limitation of building height shall be maximum 6 stories instead of 4 stories at present.

2) Establishing Cooperative

Right holder's cooperative initiated by a private developer or enterprise shall be legally approved by concerned central and local government agencies. The cooperative's activities shall not only be housing renewal but also development of business/commercial facilities including selling floor area.

3) Evaluation of inhabitants' assets

The value of inhabitants' assets (normally specified as compensation) in terms of land and building shall be evaluated on the basis of laws/regulations dealing with the issues of Land Tenure and compensation (See Chapter IV, Section 3.1.1, Land Tenure, Section 3.1.2, Compensation, and Section 3.3.2, Compensation Model).

4) Housing and building

The building permissions shall be obtained as stipulated in DKI Jakarta Municipality regulations and referred to in Chapter IV, Section 3.1.4, Building planning, and Section 3.1.5, Urban Planning.

Land tenure jointly owned by the right holders and buyers of selling floor is in principle based on the Condominium Law.

5) Subsidy

The subsidy system shall be legally organized. In this case study, DKI Jakarta Municipality shall be responsible for the subsidy paid for the construction of public facilities and common spaces while KCIU shall subsidize the low income group housing. The total subsidy is approximately 7.5% of the total cost of renewal estimated in this case study.

4.2.5 Institutional Framework

The executing body and the most concerned sectors/bodies to the renewal are described hereafter. The planning and implementation of the renewal depends on the coordination, assistance, approvals and other relevant activities of these bodies.

1) Executing Body

A cooperative comprising the inhabitants of 43 houses and initiated by a potential private enterprise (assumed to be the owner of a vacant factory building in the site) is to be legally established.

2) Roles of relevant bodies concerned to Site D Renewal

(1) The cooperative: As the executing body shall be responsible for planning, financing and implementing the renewal.

(2) DJCK: Provision of guidance on the renewal methodology, especially on the systems of right Conversion, to the cooperative through DKI Jakarta, NGO and probably consultants.

(3) DKI Jakarta/Walikota: Reviewing and approving the plan of Site D renewal proposed by the cooperative. Also DKI Jakarta/Walikota shall review the feasibility study prepared by the cooperative in order to justify the necessity and amount of subsidy.

(4) Kelurahan/Lurah Office: Coordinating administrative matters between Walikota and the cooperative. LKMD shall actively support the establishment of the cooperative.

(5) Team 9: Assisting the cooperative for evaluating rights, properties, and value of assets of inhabitants. The evaluation will be the basis for the Right Conversion plan.

(6) NGO: NGO shall assist the cooperative in coordination with Walikota mainly by enhancing the motivation of the inhabitants. It shall further assist in supervising the physical and socio-economic surveys, and simultaneously in the establishment of the cooperative. NGO's coordination shall be expanded to Walikota, Lurah Office, and LKMD for smooth planning of the renewal.

(7) Consultants: Assisting the cooperative on technical matters such as physical planning, obtaining building permissions, and supervision of construction. The consultants shall closely coordinate with NGO.

(8) Ministry of Trade and relevant division of Walikota: Approving the establishment of the cooperative and its activities of selling floor area.

(9) KCIU: Reviewing the renewal plan which involves low income group housing and disbursing required subsidy.

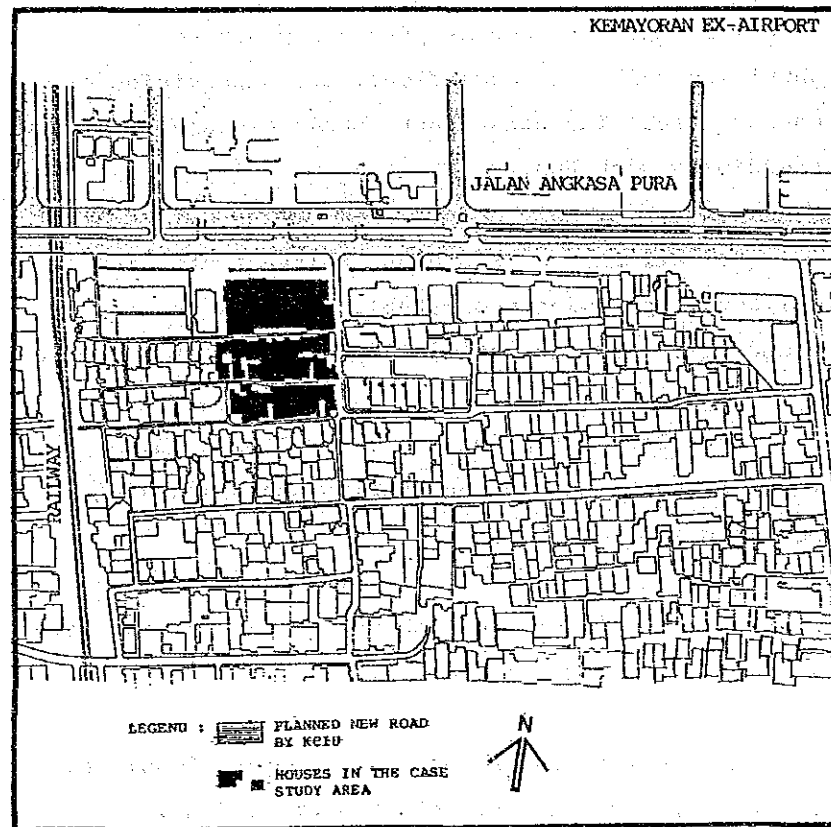
(10) Agencies for Neighbourhood Facilities: See APPENDIX D Tables D-4 and D-5.

(11) Infrastructure agencies/corporations: See Chapter V, Section 4.5, INFRASTRUCTURE PLAN.

4.3 PHYSICAL CONDITIONS AND PLAN

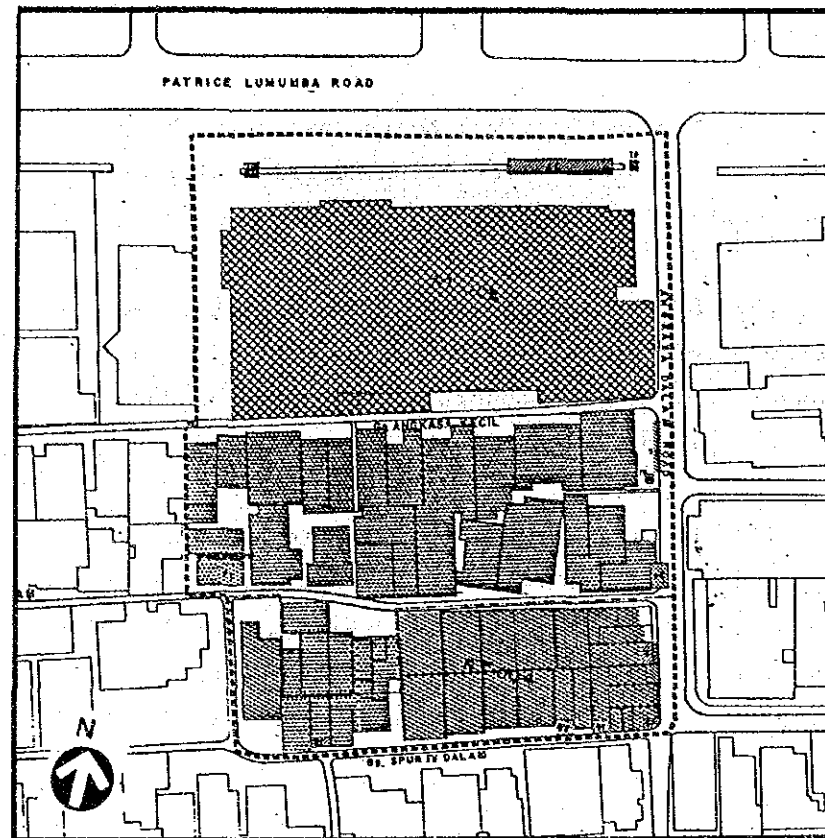
Detailed Survey results of Site D are described here.

4.3.1 Existing Characteristics



- The site lies in Kelurahan Gunung Sahari Selatan and the population of the site is 298 persons involving two RT units. The KIP has been implemented during Repelita I and with the passage of a long period of time and poor maintenance it is feared that deterioration of the living environment has begun.
- A vacant ex-factory building is located in front of the housing area, facing the Jl. Angkasa which is planned for widening in the future as the major collector road and also as one of the major access roads to Zone 1 Area.
- Along the said road there is high potential for street type commercial/business development, and thus the site area is designated a commercial use area in the DKI Land Use Plan.

4.3.2 Building Use



- | | |
|-----------------------|--------------------|
| ----- : SITE BOUNDARY | ■ MOSQUE |
| : RT BOUNDARY | ■ CHURCH |
| ■ HOUSING | ■ KELURAHAN OFFICE |
| ■ KENDAR GAMBEN | ■ TELEPHONE |
| ■ POSTYANDIS | ■ STALL |
| ■ PRIMARY SCHOOL | ■ RETAIL STORE |
| ■ JUNIOR HIGH SCHOOL | ■ INFORMAL SECTOR |
| ■ SENIOR HIGH SCHOOL | ■ NON USE BUILDING |
| ■ MUSHOLA | |

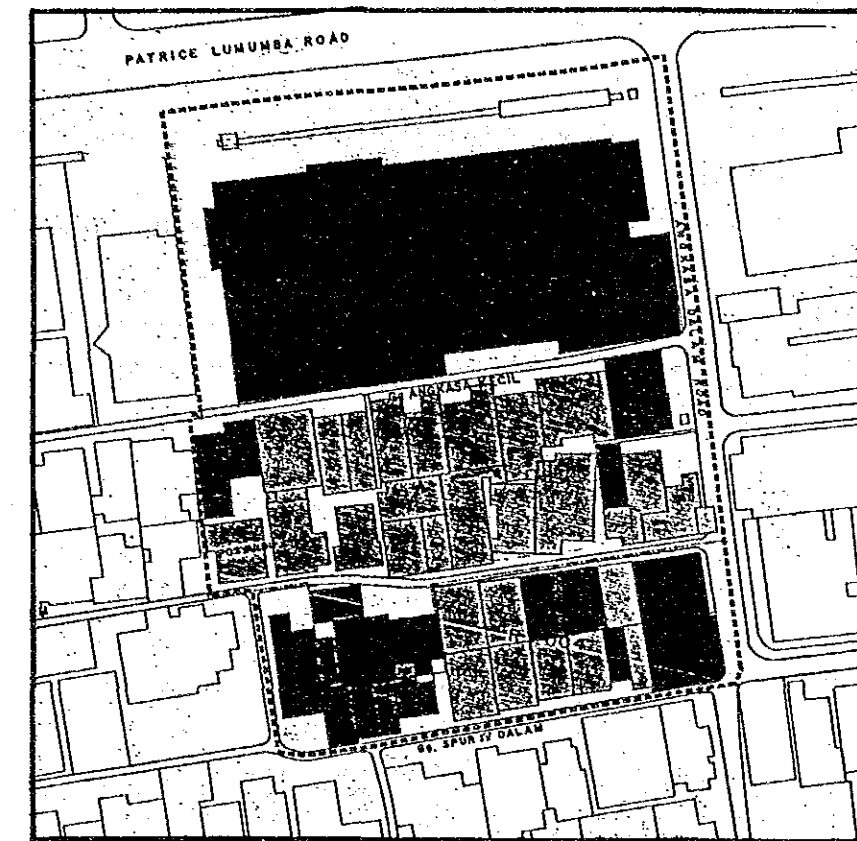
Land Use/Price

- Frontage to the site is occupied by a vacant building.
- Land price is highest among the 6 sites (135,000 - 169,000 Rp/sqm)

Others

- Average household income is 149,000 Rp/month

4.3.3 Building Conditions



- | | |
|-----------------------|----------|
| ----- : SPOT BOUNDARY | ■ GOOD |
| : RT BOUNDARY | ■ MEDIUM |
| | ■ BAD |

- Land area : 11,500 m²
- Net residential land area : 4,349 m²
- Average land area : 101.14 m²/house
- Average building area : 79.72 m²/house
- Average building storey : 1.3 fl./house
- Average No. of family members: 6.3 P/house, 3.8 P/h.h.
- Average No. of Households : 1.67 h.h./house

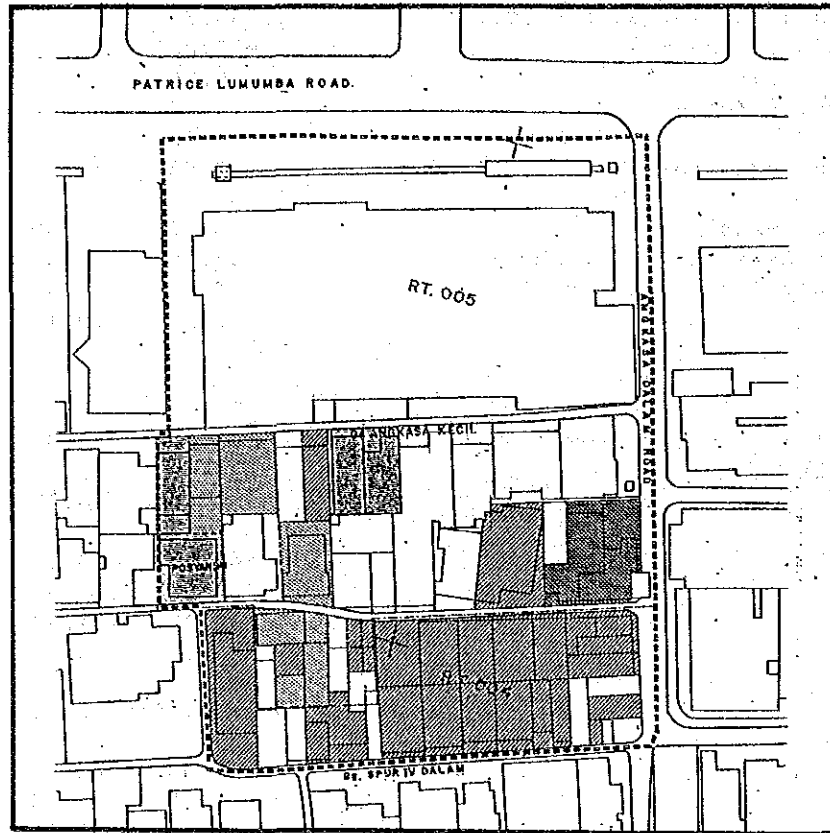
Buildings

- 65% of the houses have permanent structure.
- 70% of the houses are very old (more than 20 years old).
- 30% of the houses are for rent.

4.3.4 Present Situation of Residential Environment

SITE NO.	SITE D		
LOCATION	KC. Kemayoran/JP		
NAME	Gunung Sahari Selatan		
	RW002		
PRESENT LAND USE (incl. surroundings)	RT004/005		
DKI MASTER PLAN	Commercial/Residential		
SPATIAL RELATION TO KEMAYORAN COMPLEX PROJECT	Commercial/Office		
	Road Expansion		
AREA OF THE SITE (sq.m)	11,500.00		
NO. OF POPULATION (persons)	298.00		
NO. OF HOUSEHOLD (households)	72.00		
NO. OF HOUSES (houses)	43.00		
AVERAGE LAND PRICE OF HOUSING LOT (Rp./sq.m.)	135,000 - 169,000		
AVERAGE HOUSEHOLD INCOME (Rp./month)	149,000		
	NUMBER	(%)	
1. BUILDINGS			
A) BUILDINGS STRUCTURE (no. of houses)	43.00	100.00	
a) Temporary	0.00	0.00	
b) Semi-permanent	15.00	34.88	
c) Permanent	28.00	65.12	
B) BUILDING AGE (no. of houses)	43.00	100.00	
a) 20 Years & More	30.00	69.77	
b) 15 - 19 years	6.00	13.95	
c) 14 Years & Less	7.00	16.28	
C) BUILDING OWNERSHIP (no. of houses)	43.00	100.00	
a) Yearly Contract/Rent	13.00	30.23	
b) Others (Stay with the Owner/Company's House, etc.)	7.00	16.28	
c) Own House	23.00	53.49	
2. DENSITIES			
a) Population Density (persons/spot area:ha)	259.00		
b) Household Density (floor area:sq.m./person)	11.49		
c) Building Density (no. of houses/ha)	38.57		
3. OPEN SPACES/PUBLIC FACILITIES			
A) PUBLIC FACILITIES			
a) Open spaces (e.g. play ground, park, etc.)	None		
b) Education (e.g. Kindergarten, primary school, junior high school etc.)	None		
c) Medical	Health Center		
d) Religious (e.g. mosque, church etc.)	None		
e) Cultural/Welfare	None		
f) Governmental	None		
g) Shops	Some		
B) FLOOR RATIO			
a) Building Floor (total housing floor area:sq.m.)	3,425.36		
b) Lot Area (total housing lot area:sq.m.)	4,336.75		
c) Residential Used Area (sq.m.)	8,072.00		
d) Floor Area Ratio-1 (a/b:%)	0.79		
e) Floor Area Ratio-2 (a/c:%)	0.42		
f) No. of Stories	1.28		
g) Building Coverage Ratio (d/e:%)	0.62		
4. SERVICE ROAD (no. of houses)	56.00	1.00	
a) Facing to 1.5 m & Less (only for beca)	47.00	0.84	
b) 2.0 m - 3.0 m (only for one way vehicle)	0.00	0.00	
c) 4.5 m & More	9.00	0.16	
5. INFRASTRUCTURE			
A) WATER SUPPLY (for drinking water from;)	43.00	100.00	
a) Water Seller/Wells	34.00	79.07	
b) Water Supply Agency	9.00	20.93	
B) WASTE DISPOSAL	43.00	100.00	
a) River/Others	0.00	0.00	
b) Septic Tanks	35.00	81.40	
c) Town Drainage	8.00	18.60	
C) FLOOD OCCURRENCE			Not for few years
6. LAND USE (sq.m.)	11,500.00	100.00	
a) Residential	8,071.85	70.19	
b) Commercial	182.85	1.59	
c) Roads	678.50	5.90	
d) Public Facilities	36.80	0.32	
e) others	2,530.00	22.00	
7. LAND PRICE (Rp./sq.m.)	43.00	100.00	
a) 66,000 Rp. & Less	0.00	0.00	
b) 66,000 - 129,000	29.00	67.44	
c) 129,000 Rp. & More	14.00	32.56	
8. LAND OWNERSHIP	43.00	100.00	
a) Tanah Garapan	5.00	11.63	
b) Hak Pakai	0.00	0.00	
c) Hak Guna Bagunan	4.00	9.30	
d) Hal Milik	2.00	4.65	
e) Tanah Negara	20.00	46.51	
f) Tidak Jelas	12.00	27.91	
9. HOUSEHOLD INCOME (Rp./household)	43.00	100.00	
a) 100,000 Rp. & Less	19.00	44.19	
b) 100,001 - 300,000 Rp.	19.00	44.19	
c) 300,001 & More	5.00	11.63	
10. AGE OF COMMUNITY	43.00	100.00	
a) More than 10 Years	31.00	72.09	
b) 4 - 10 Years	6.00	13.95	
c) Less than 3 Years	6.00	13.95	

4.3.5 Land Status

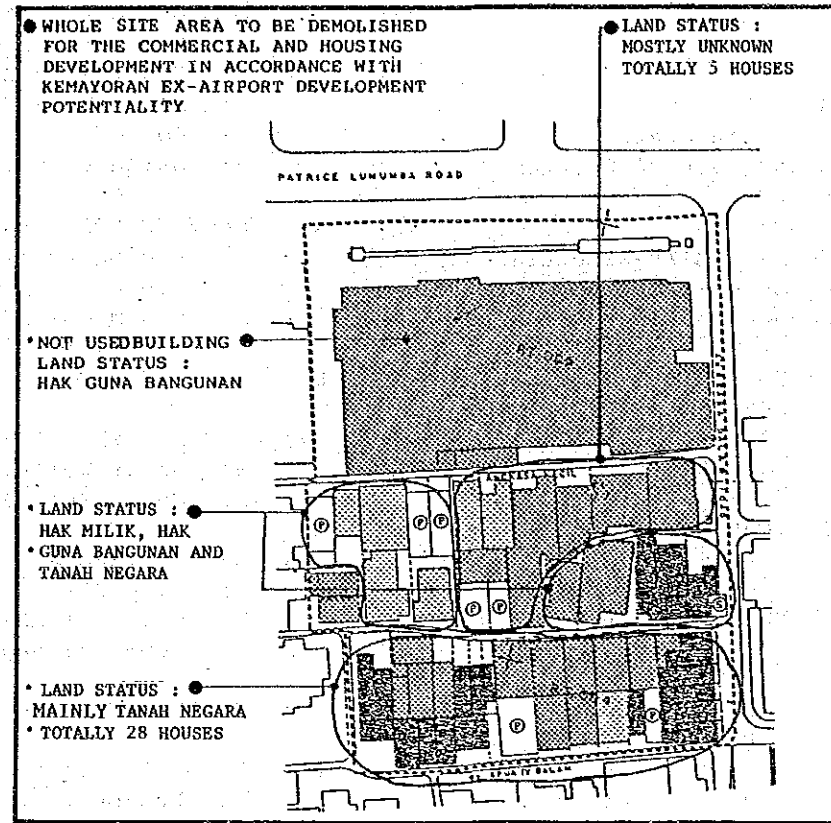


LEGEND

- BOUNDARY OF CASE STUDY AREA
- BOUNDARY OF RT
- [Stippled] HAK MILIK
- [Diagonal lines] TANAH NEGARA
- [Cross-hatch] TANAH GARAPAN
- [Horizontal lines] HAK GUNA BANGUNAN
- [White] UNKNOWN

	NUMBER	(%)
● LAND OWNERSHIP	43.00	100.00
a) Tanah Garapan	5.00	11.63
b) Hak Pakai	0.00	0.00
c) Hak Guna Bagunan	4.00	9.30
d) Hak Milik	2.00	4.65
e) Tanah Negara	20.00	46.51
f) Tidak Jelas	12.00	27.91
● LAND PRICE (Rp./sq.m.)	43.00	100.00
a) 66,000 Rp. & Less	0.00	0.00
b) 66,000 - 129,000	29.00	67.44
c) 129,000 Rp. & More	14.00	32.56

4.3.6 Analysis for Renewal



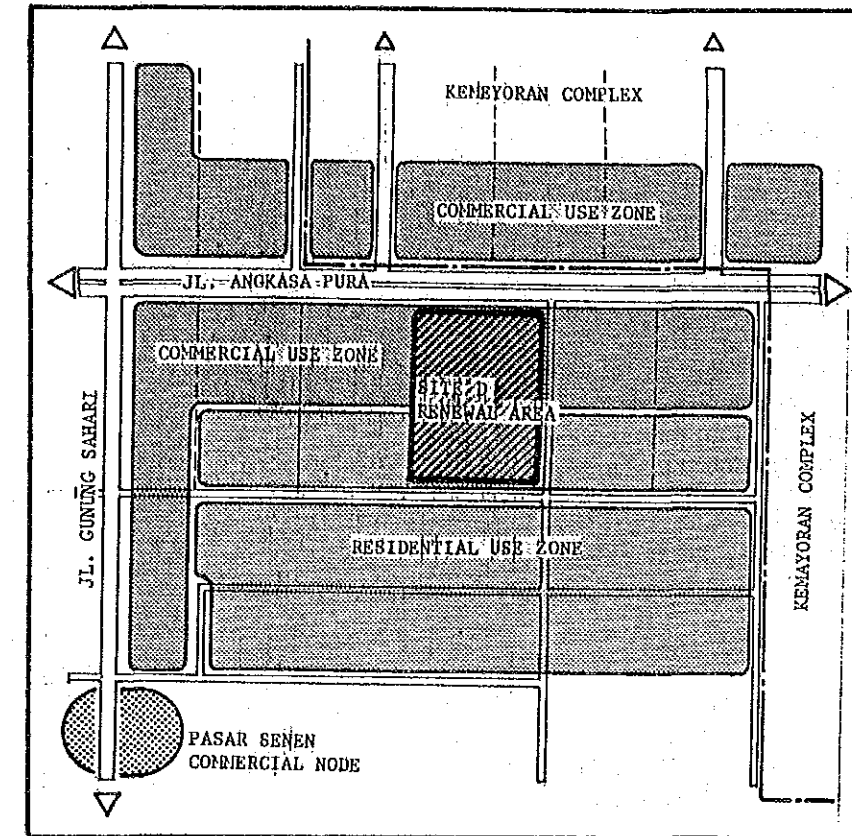
LEGEND

BUILDING CONDITION	BUILDING STRUCTURE		
	TEMPORARY	SEMI-PERMANENT	PERMANENT
GOOD & FAIR	[T]	[S]	[P]
BAD	[T]	[S]	[P]
INFERIOR	[T]	[S]	[P]

Densities/Floor Ratio

- lowest population density among the 6 sites; 380 p/ha. (net)
- lower floor density; 11.49 sqm/person
- average building density; 82 houses/ha.
- FAR; 29%
- BCR; 62%

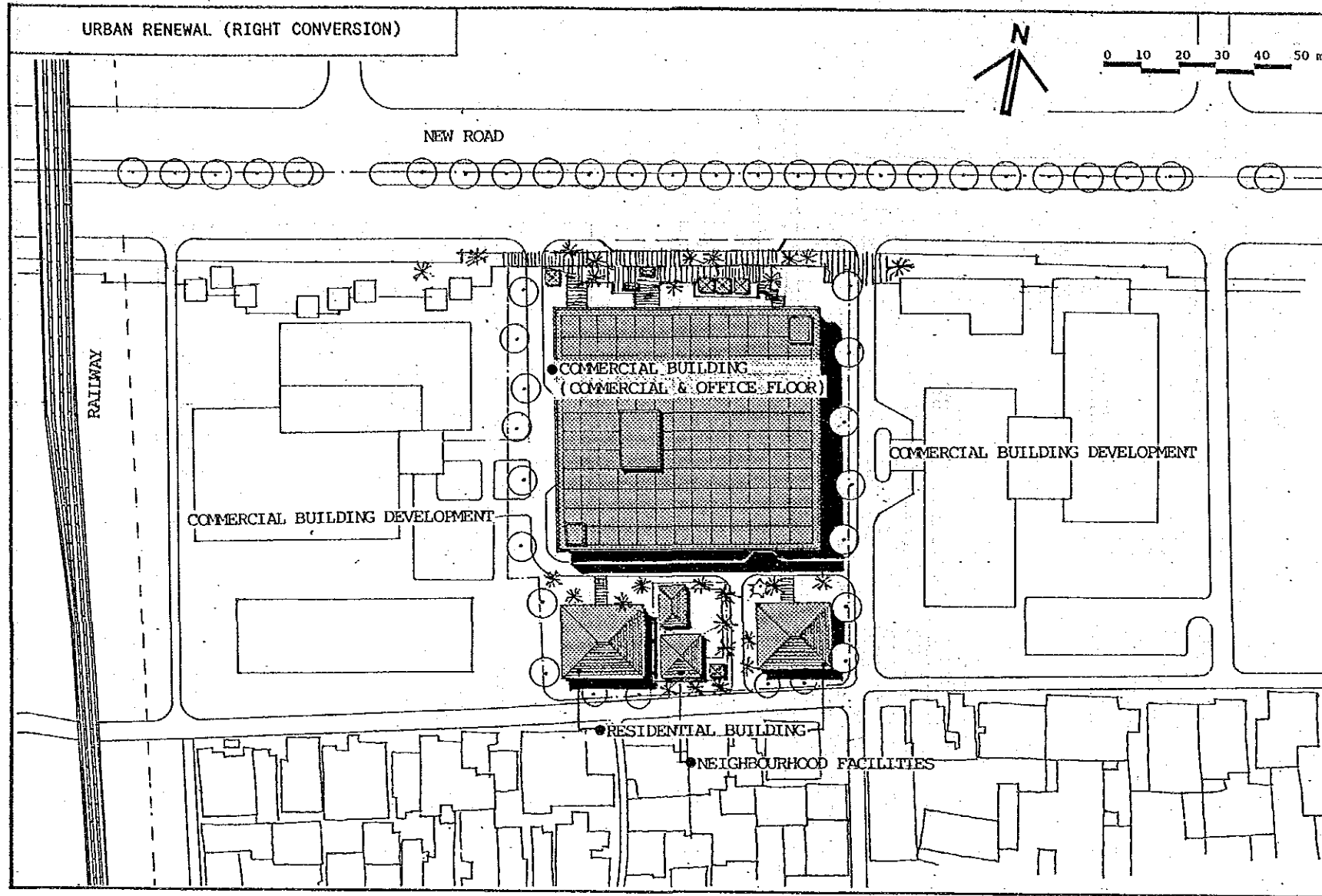
4.3.7 Renewal Concept



Recommendable Environmental Guidelines

- Land Use : Commercial/Residential mixed use
- Population Density : 300 - 400 P/ha.
- Building Height : Max. 4 Storey
- Building Coverage Ratio : Max. 60%
- Floor Area Ratio : Max. 240%
- Setback/Front : 10 m (along big road)
- /Perimeter : 5 m

4.3.8 Renewal Plan



RENEWAL COMPONENT

1. Development Area
 - a) Whole case study site: Gross 11,500 m²
(Net 8,750 m²)
 - b) Renewal area : 8,750 m²
2. Residential Development
 - a) Flat type permanent housing to resettler (Right Conversion)
 - b) Housing

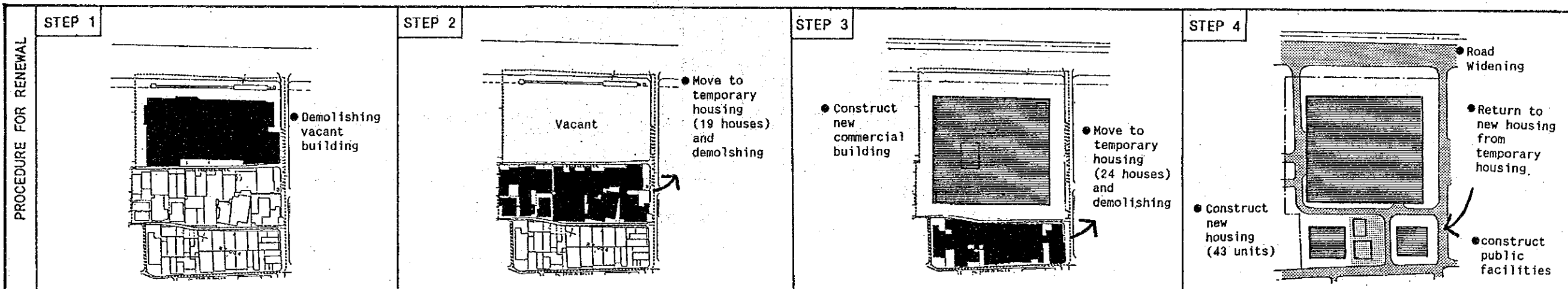
F-21 x 11 units	1,077 m ² (Gross)
F-36 x 16 units	
F-54 x 8 units	1,503 m ² (Gross)
F-100 x 8 units	
Total	43 units 2,580 m²
 - c) Number of storey : 4 storey
3. Commercial Development
 - a) Commercial floor: Ground fl. 3,737 m² (Gross)
1st fl. 3,900 m² (Gross)
Total 7,637 m²
 - b) Office floor : 2nd fl. to 5th fl.
4,284 m² x 4 = 17,136 m²
 - c) Basement car : 3,625 m²
parking
4. Neighbourhood Facility
 - a) Kindergarten : 150 m²
 - b) Multi purpose : 250 m²
5. Provision of Number of Car Parking
 - a) Residential use : 35 units (F-21, 36, 54) -
5 car/u = 7
8 units (F-100) -
1 car/u = 8
Total = 15
 - b) Commercial use : 7,637 x 0.62 (net fl. ratio) - 60 car/m² = 83
 - c) Office use : 17,136 x 0.75 (net fl. ratio) - 100 car/m² = 129

Total number of : 227 cars
car parking space

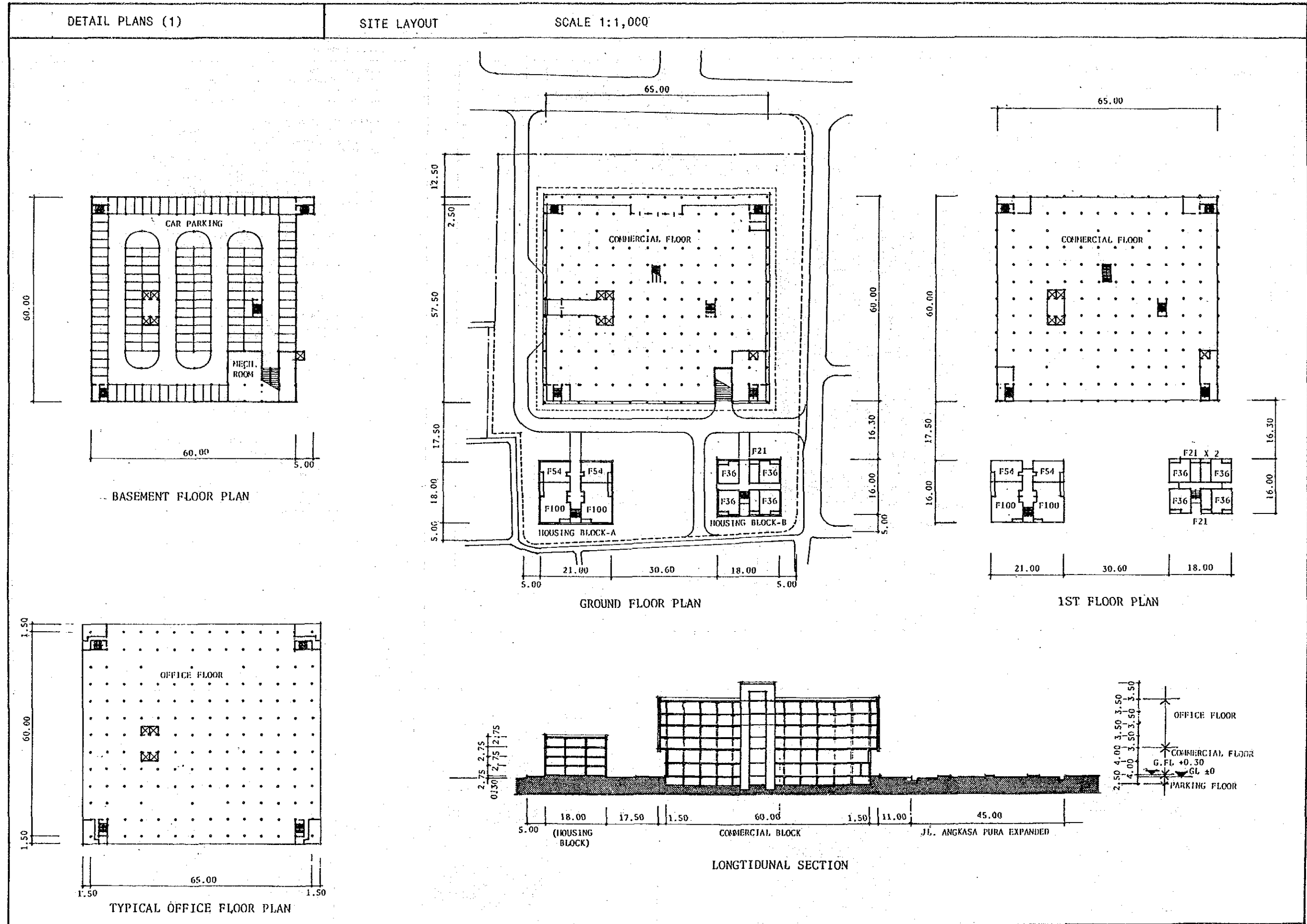
Note: Car parking lot provision is calculated based on the "PEDOMAN PERENCANAAN TATA BANGUNAN" issued by DINAS TATA KOTA, DKI JAKARTA.

6. Population Density : 43 h x 6.3 P/h = 270 P
270 P - 0.875 = 308 P/h
7. Renewal Scheme

Residential	For			Total
	Whole Site	Demolition	New House	
No. of House	43	43	43	43
No. of Household	72	72	72	72
Bldg. Area (m ²)	3,428	3,428	2,580	2,580
Population	270	270	270	270



4.4. BUILDING PLAN



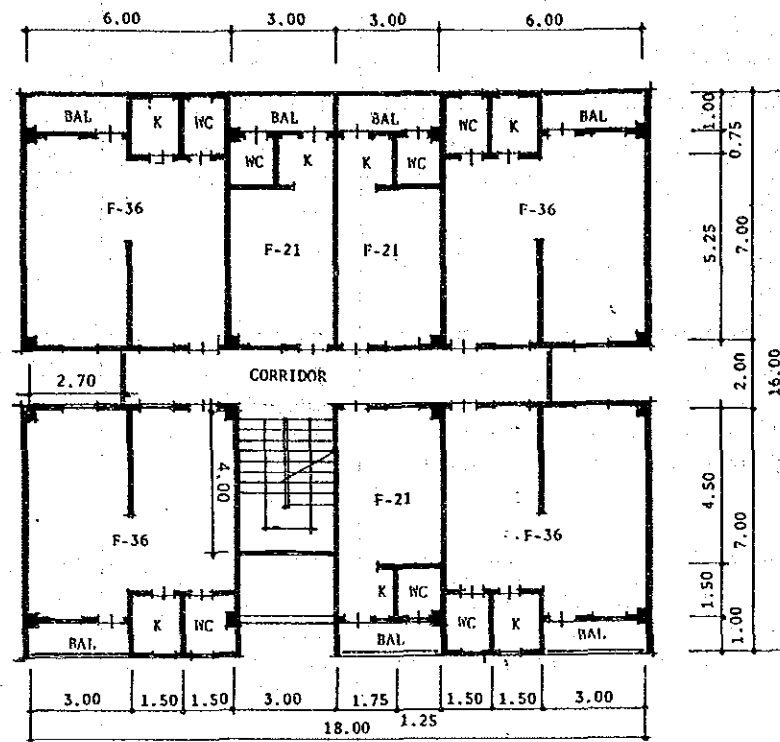
DETAIL PLANS (2)

F-21/F-36 TYPE APARTMENT HOUSE

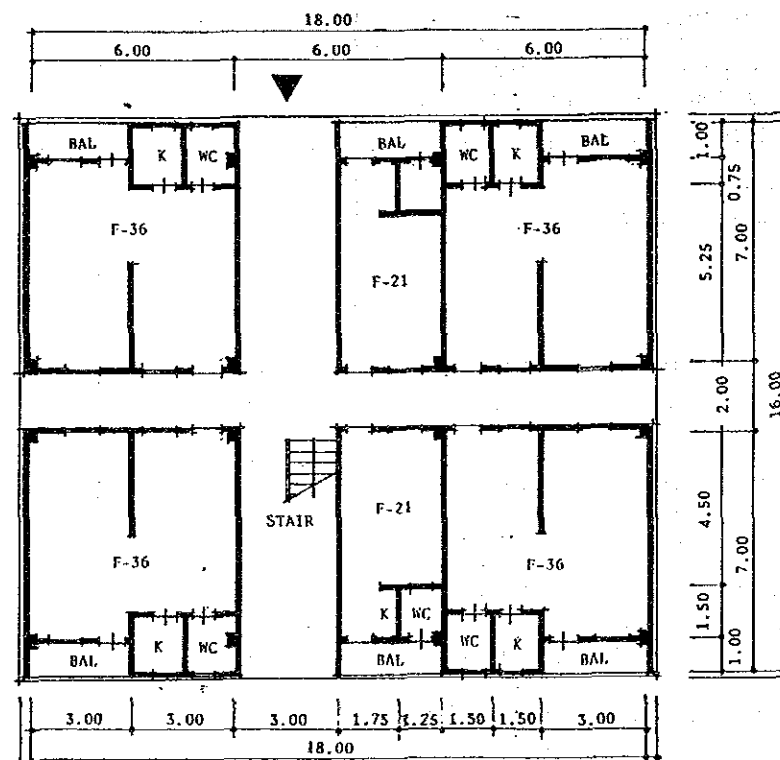
SCALE 1 : 200

F-54/F-100 TYPE APARTMENT HOUSE

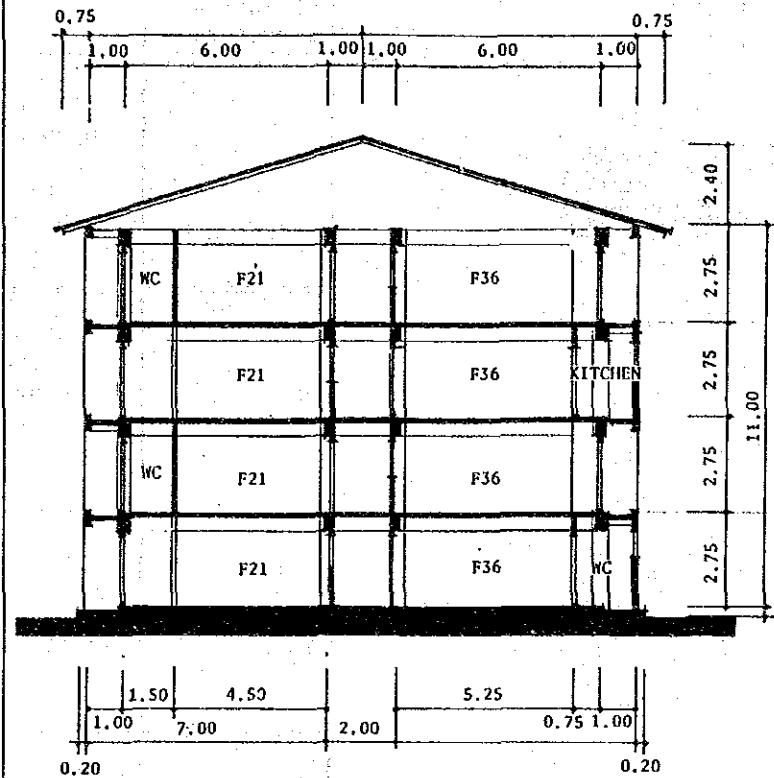
SCALE 1:200



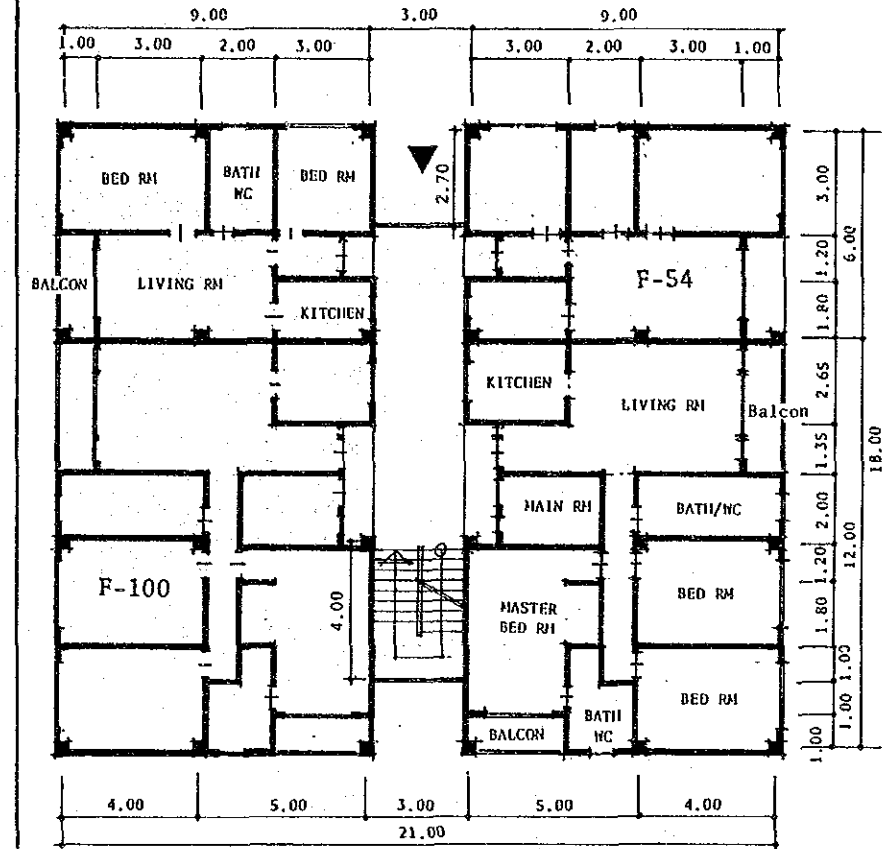
TYPICAL FLOOR PLAN
(1st~3rd FLS.)



GROUND FLOOR PLAN



CROSS SECTION

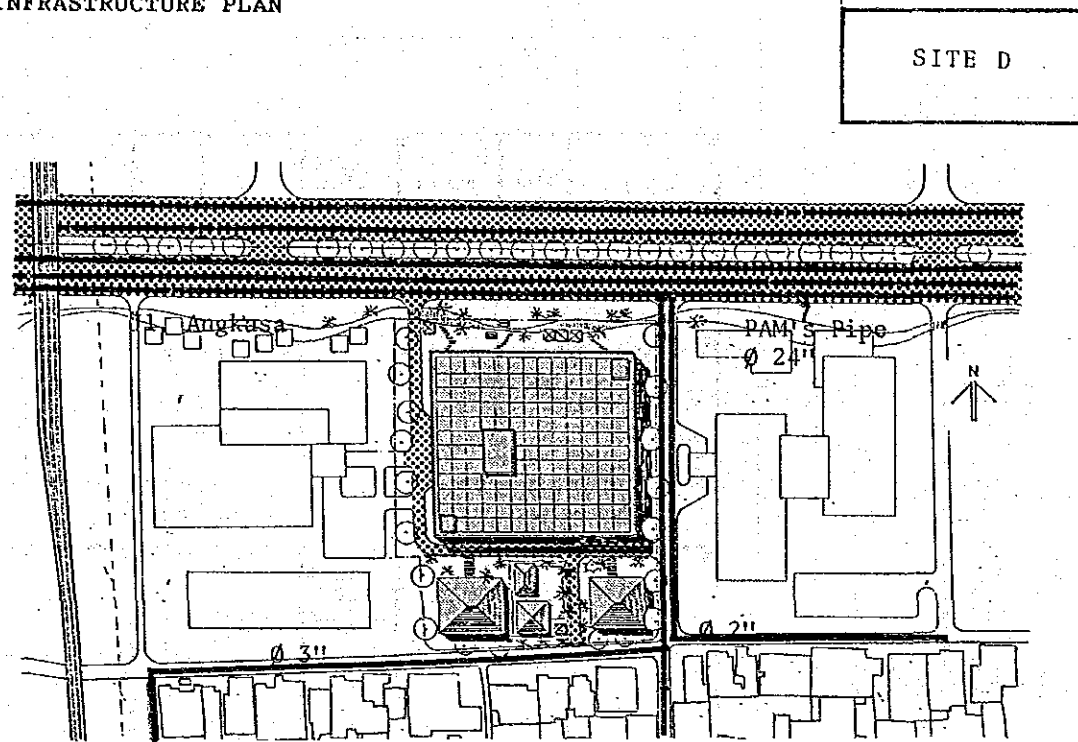


TYPICAL FLOOR PLAN
(GROUND FLOOR 3rd FLOOR)

- | | | |
|--|---|----------|
| 1. No. of Floors | : | 4 |
| 2. Actual Floor Area of Unit
(Including Balcony) F-21 | : | 22.05 |
| F-36 | : | 42.0 |
| 3. Floor Area of Typical Bldg. (m ²) | | |
| Net Area | : | 934.125 |
| Gross Area | : | 1,077.24 |
| 4. Efficiency Ratio (%) | : | 36.71 |
| 5. Structure System : | | |
| - POST & BEAM RIGID FRAME SYSTEM | | |
| - ROOF : Wooden Frame with roof tile | | |
| - WALL : Brick fill with plaster | | |
| - FLOOR : RC slab | | |

- | | | |
|--|---|----------|
| 1. No. of Floors | : | 4 |
| 2. Actual Floor Area of Unit
(Including Balcony) F-54 | : | 58.59 |
| F-100 | : | 111.60 |
| 3. Floor Area of Typical Bldg. (m ²) | | |
| Net Area | : | 1,361.52 |
| Gross Area | : | 1,503.54 |
| 4. Efficiency Ratio (%) | : | 90.55 |
| 5. Structure System : | | |
| SAME AS F-21/F-36 TYPE | | |

4.5. INFRASTRUCTURE PLAN



LEGEND

- New Road or Road Expansion
- New Building
- Existing PAM's Pipe

PLANNING ELEMENTS	
Existing Condition of Infrastructure	<ul style="list-style-type: none"> - Non-used ex-factory occupies half of the land of Site D and the other half is shared by low/middle income residence. - Flood sometimes occurs due to bad drainage condition. - Most houses have septic tank and some houses have house connection of PAM's water
Main objectives of Improvement	<ul style="list-style-type: none"> - Jl. Angkasa is planned to be widened to 47 m according to DKI's road network plan. Small streets shall also be improved at the time of renewal. - In the future when many commercial buildings along Jl. Angkasa are developed, sewage treatment plant will be provided by the cooperative of commercial owners.
Planned Population and Water Demand	<ul style="list-style-type: none"> - Number of new houses: 43 units - Office and commercial floor: 16,300 m² (office) 8,700 m² (commercial) - Demand of water: Total 123 m³ (houses) 43 units x 6.9 prs x 160 lit/prs = 47 m³ (office and commercial) 16,300 m² x 2 lit/m² + 8,700 m² x 5 lit/m² = 76 m³

Components of Infrastructure	Improvement Plan	Remark	Agencies to be Coordinated
Street & Footpath	<ul style="list-style-type: none"> - Jl. Angkasa will be widened to the opposite site of Site D because this area belongs to KCIU. - A new street will be made along the west boundary of Site D for traffic convenience. 	Jl. Angkasa will be expanded by DKI.	* Tatakota DKI * DPU
Drainage	<ul style="list-style-type: none"> - Land will be filled before reconstruction for flood prevention - Drainage along the existing street will be improved together with street. 	Drainage along streets will be improved by DKI.	* DPU
Water Supply	<ul style="list-style-type: none"> - Clean water will be supplied from the existing PAM's pipe. - PAM's pipe in Jl. Angkasa kecil will be replaced. 	Inhabitants pay connection fee and consumption charge.	* PDAM Pusat
Waste Water Disposal	<ul style="list-style-type: none"> - Septic tank/leaching bed will be provided for the time being because of less sewage effluent. - In the future, private sewage treatment plant will be provided when many offices and commercial buildings are developed along Jl. Angkasa. 	Local community will maintain it.	* DPU
Solid Waste Management	<ul style="list-style-type: none"> - Communal container will be provided by the renewal executing body. 	Local community will maintain equipment.	* Sub - Dinas Kebersihan Pusat.
Electricity	<ul style="list-style-type: none"> - PLN will supply electricity services. - Outdoor lighting will be provided by the renewal executing body and maintained by local community. 	Inhabitants pay installation fee and consumption charge.	* P L N * BKJS
Telephone	<ul style="list-style-type: none"> - Private telephone line will be provided by PERUMTEL for an installation fee of Rp 500,000/line. - Public telephone will be provided by PERUMTEL where safety is secured. 	Charge is paid by user.	* PERUMTEL * BKJS