

### 3.5 PARTICULAR CONSIDERATION

#### 3.5.1 Commercial Floor in Perumnas Housing Development

In the development area of Perumnas, due to the need to obtain the source fund for the cross subsidy and seed capital of Perumnas's other activities, it is generally considered that one of the solutions will be the introduction of commercial facilities.

##### 1) The price of Commercial Floor

The following items were considered in the examination.

- Price due to construction cost
- Price from the present market

##### (a) Construction cost price

- Estimated price is as follows :  
Rp 5,940,000/unit (297,000 Rp/m<sup>2</sup>)  
Note: Average floor area is 20 m<sup>2</sup>/unit
- Assumption
  - Basic Construction Cost : Rp. 220,000/m<sup>2</sup>
  - Land Development Cost : 15%
  - Ratio of Profit : 15%
  - Notarization & others : 5%
  - Ratio of profit is referred to Statistics of Indonesia. Manufacturing is about 30%, and whole sale and retail trade is 15%. Construction or Real Estate is unknown, therefore, it is assumed about 15%.

##### (b) Price from the Present Market

- Estimated price is Rp. 400,000, which is induced from the examples that have at present or already been developed/sold in the market.
- Generally, in Indonesia commercial facilities are managed as rental system.

- Major factor in pricing is the competitiveness of surrounding similar facilities or the balance of price in DKI JAKARTA.

- Example (1) Pulogadung Industrial Estate Kel. Gading Permai

This is commercial floor with residential space of 2 stories flat. Area has been well developed in the industrial estate. Floor area is 132 - 183 m<sup>2</sup> and Land is 71.5 - 74.7 m<sup>2</sup> in each type. Average selling price is Rp. 504,900/m<sup>2</sup>.

- Example (2) Sunter Area

This is an individual housing type so called "Roko". The location is very near to Kemayoran. Floor area is 120 m<sup>2</sup> and Land is 180 m<sup>2</sup>. Average selling price is Rp. 416,700 m<sup>2</sup>.

- It can be supposed the floor price in Kemayoran area will be 400 - 500,000 Rp./m<sup>2</sup>. Thus, the commercial floor area in Perumnas is expected to be Rp. 400,000/m<sup>2</sup>.

##### 2) Affordability

- Average sales amount per shop is Rp. 1,615,350 from Sensus Ekonomi. Profit is 20% of total sales amount of shop.
- Floor area is 20 m<sup>2</sup> and price is Rp. 200,000/m<sup>2</sup>.
- Case-1 Short term loan by City Bank (Bank Duta-credit Investment Kecil)  
Interest = 12% Period = 5 years  
Own capital = 20% of sales price  
Installment = Rp. 147,950/month  
Payment Ratio for Profit = 46%

- Case-2 Commercial Bank rate as 20%

Own capital = 20% of Price

Monthly payment = Rp. 178,300

Payment Ratio for Profit = 55%

- Both cases show the monthly payment ratio of profit is 46% and 55% respectively. This means about half of profit should be shared for the installment. That depends upon the total sales amount, which is referred to the average sales amount of retail shops in DJK. This value is a slightly too high to start a commercial shop in Perumnas development.

##### 3) Demand of Commercial Facilities

- The distribution of expenditures per household by Income group is obtained from the result of the socio-economic survey in Zone 3, that is shown in Table 3.18.
- Owing to the price of Perumnas housing, Income group under Rp. 200,000/month cannot afford Perumnas flat in Kemayoran. Using the income group of more than Rp. 200,000 in the already mentioned table, the distribution of expenditure by income group in Zone 3 is estimated as following Table 3.20.
- The demand is assumed based on the inhabitants of Zone 3 only, because the neighbouring commercial zone has not yet been planned in detail and the competitiveness is not clear. But, it is clear that commercial zone is planned to serve commercial and office functions on a regional basis. Therefore, commercial facilities in Perumnas will supply the main needs for daily life. This demand is forecast to cover the majority of the people in Zone 3.

- The total amount of expenditure in Zone 3 is estimated at Rp. 1,070,175,000, based on Table 3.21.
- Therefore, the number of shops is 650 shops, and the total commercial floor area is 13,000 m<sup>2</sup>.
- On the other hand an area of approximately 10,000 m<sup>2</sup> for neighbourhood facility has also been planned to serve for the needs of community-life mainly the neighbouring commercial facilities.
- Thus, it is necessary to reduce 10,000 m<sup>2</sup> from the estimated commercial floor area. Commercial facility area in Perumnas is estimated as 3,000 m<sup>2</sup>. This means the number of shops is 150 shops on average.

5. Ratio of profit for : 0.47%  
 Total Construction (Rp. 300,000,000/  
 Cost Rp. 63,295,250,000)

- 6. Ratio of profit from commercial floor for Total Profit : 0.71% (Land = Rp. 250,000)  
 Max. profit of project: Rp. 42,484,600,000
- 7. This profit can be used to construct 53 units of F-18 to relocate people by subsidized price equal to the construction cost.

Table 3.18 Number of Household by Expenditure (Main Needs) and Income Group

Income (Unit:800Rp)	Amount of Expenditure (Unit:800Rp)					Total
	<50	50-100	100-150	150-200	200<	
<100	238 38.4 85.0	254 41.0 58.8	86 13.9 47.0	28 4.5 37.8	14 2.3 25.9	620 100.0 68.6
100-200	38 14.4 13.0	135 51.3 31.3	55 28.9 30.1	21 8.0 28.4	14 5.3 25.9	263 100.0 25.7
200-300	2 0.7 0.7	36 58.7 8.3	21 29.6 11.5	7 9.9 9.5	5 7.0 9.3	71 100.0 6.9
300-500	2 3.7 0.8	6 11.1 1.4	18 33.3 9.0	17 31.5 23.0	11 20.4 20.4	54 100.0 5.3
500<	0 0.0 0.0	1 6.7 0.2	3 20.0 1.6	1 6.7 1.4	10 66.7 19.5	15 100.0 1.5
Total	280 27.4 100.0	432 42.2 100.0	183 17.9 100.0	74 7.2 100.0	54 5.3 100.0	1,023 100.0 100.0

Note:1. Each second line means the percentage of Expenditure.  
 2. Each third line means the percentage of Income class.

Table 3.19 Average of Operated Activity of Unicorporated Who Resale/Rental (Fixed Premise) per Establishment During the Month by Province

Item	Province (Unit:800Rp)	
	DKI Jakarta	Jawa Barat
Value of Sales, Commission and Other Income	1335.01	937.10
Value of Purchases	1088.24	798.91
Trade and Transport Margin and Others Income(output)	267.48	145.98
Intermediate Cost	54.00	4.37
Value Added	213.48	141.61
Trade and Transport Margin	To Value of Sales, Commission & Others Income (%)	18.63
	To Value of Purchases (%)	22.98

Source: Sensus Ekonomi 1986 Statistik Perdagangan, Rumah Makan, Hotel dan Akomodasi Lain Tidak Berbadan Hukum (Dengan Tempat Tetap), 1986 Biro Pusat Statistik Jakarta-Indonesia

4) Effect to the Project

- The introduction of commercial facilities in Perumnas is necessary in order to secure the source fund of cross subsidy and the seed capital for other activities, and its contribution is as follows:

1. Total commercial area : 3,000 m<sup>2</sup>
2. Profit per m<sup>2</sup> : Rp. 100,000/m<sup>2</sup>  
 (Sales Price-Construction Cost)
3. The total amount of Profit : Rp. 300,000,000  
 (3,000 m<sup>2</sup> x Rp. 100,000)
4. Ratio of profit for Total Sales Amount : 0.28%  
 (Rp. 3,000,000,000/  
 Rp. 105,779,350,000)

Table 3.20 Average Monthly Expenditure Per-Capita

Expenditure Items	Monthly Expenditure Per Capita (Unit:Rp)												Average per Capita	DKI Jakarta
	Less than 5,000	5,000-7,999	8,000-9,999	10,000-14,999	15,000-19,999	20,000-29,999	30,000-39,999	40,000-49,999	50,000-59,999	60,000-79,999	80,000 and over			
Food (%)	2.763	4.852	4.992	6.231	8.181	10.694	14.211	18.533	23.330	28.239	31.770	13.632	21.459	
Non-Food % I (%)	95.8	95.5	93.0	92.7	89.8	86.2	82.7	78.9	74.3	68.2	61.8	88.8	78.1	
Total (%)	2.884	4.245	5.317	6.719	8.118	12.482	17.193	23.489	31.386	41.488	61.338	17.835	38.680	
Percentage of Main Needs for Total Amounts of Consumption (%)	78.7	78.2	75.3	74.3	72.5	71.0	70.4	68.1	65.7	60.8	53.4	87.6	66.5	
Total Amount of Consumption (%)	4.088	5.573	7.857	9.937	12.669	17.468	24.426	34.467	47.797	68.185	114.765	25.197	46.838	
Percentage Distribution of Population in Urban area in Jakarta by Expenditure classes (%)			0.15	0.20	7.91	17.29	32.19	17.88	14.04	5.05	3.93	100.00		

Source: Statistik Indonesia (Statistical Year Book of Indonesia) 1987 BIRO PUSAT STATISTIK JAKARTA - INDONESIA  
 Pengeluaran Untuk Konsumsi Penduduk Indonesia per Provinsi 1987 (Angka Sementara) BIRO STATISTIK JAKARTA - INDONESIA  
 Note: % I: Detail contents are miscellaneous and Services

Table 3.21 Total Amount of Expenditure in Zone 3

Distribution of Population (Zone-3)	Monthly Expenditure Per Capita (Unit:Rp)												Household	Total Population
	Less than 5,000	5,000-7,999	8,000-9,999	10,000-14,999	15,000-19,999	20,000-29,999	30,000-39,999	40,000-49,999	50,000-59,999	60,000-79,999	80,000 and over			
Amount of Expenditure (Unit:800Rp)	-	-	288	624	24,852	71,188	178,119	127,577	133,294	81,427	55,684	651,082		

### 3.5.2 Rental System

#### 1) Rental Flat of Sarana Jaya

According to the rental houses of Sarana Jaya, average rental fee is as follows.

- Rental fee of 2 stories flat is Rp. 62.5/m<sup>2</sup>/day on average, that is Rp. 26,250/F-14/month. 2 stories flats are mainly F-14 and F-16 types.
- 4 stories flat are F-18, F-27, F-36 and F-56 types. Average rental fee is Rp. 66 - 83/m<sup>2</sup> for F-18/F-27, Rp. 128/m<sup>2</sup> for F-36 and Rp. 130/m<sup>2</sup> for F-54. Average rental fee slightly differs by type of housing, due to the difference in finishing of each type.
- Sarana Jaya, supported by DKI Jakarta, mainly supplies rental houses for the low income group who desire housing but do not have enough money. But occupancy ratio is not so high as shown in Table 3.22.
- Sarana Jaya's F18 type of rental fee, Rp. 34,500/month is affordable by income group of Rp. 115,000/month. In the case of 2 stories flat, F-14 type is affordable by income group of Rp. 87,500/month, and F-16 type by Rp. 100,000/month.

Table 3.22 Occupancy Ratio

2 Stories Rental in 1988		Rental Fee	Occupancy Ratio	
Cengkareng	14 m <sup>2</sup>	Rp. 900/day	120 units	54%
Pondok Kelapa	14 m <sup>2</sup>	Rp. 900/day	150 units	45%
Pondok Bambu	14 m <sup>2</sup>	Rp. 900/day	125 units	42%
Cipinang	14 m <sup>2</sup>	Rp. 900/day	152 units	72%
4 Stories Rental in 1988				
Tambora	F-18	Rp. 1,150/day	248	85.5%
Penjaringan	F-18	Rp. 1,000 - 1,500	524	60%
Penjaringan	F-36	Rp. 2,500	146	7%
Penjaringan	F-54	Rp. 5,000	16	0%

Note: February 1989

This shows that the target group of rental housing of 2 stories flat is Rp. 87,500 (F-14) - Rp. 100,000 (F-18) and that of 4 stories flat is Rp. 115,000 (F-18) - Rp. 700,000 (F-54)/month.

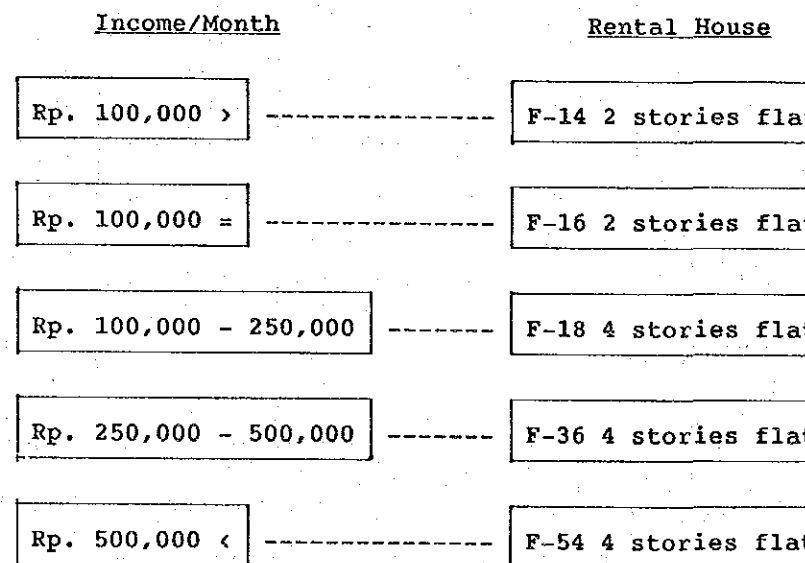
Otherwise, the case of Penjaringan, the people suffered by fire is adopted as a special price. That is shown in Table 3.23.

Table 3.23 Average Rental Fee in Penjaringan

Type	Suffered People	General
F-18	Rp. 1,500/day (Rp. 150,000/month)	Rp. 2,250/day (Rp. 225,000/month)
F-36	Rp. 2,500/day (Rp. 250,000/month)	Rp. 4,600/day (Rp. 460,000/month)
F-54	Rp. 4,600/day (Rp. 460,000/month)	Rp. 7,000/day (Rp. 700,000/day)

Note: Affordable income is shown in ( ).

Fig. 3.7 Sarana Jaya System



- Sarana Jaya's classification of income groups is as follows :

Income Group	Maximum Fee	Monthly Income
Very low	Less than Rp. 1,000/day	Rp. <100,000
Low	Less than Rp. 2,000/day	Rp. 100,000 - 200,000
Middle	Less than Rp. 15,000/day	Rp. 200,000 - 500,000
High	More than Rp. 15,000/day	Rp. 500,000

- By means of Sarana Jaya calculation procedure of Sewa-Beli, the rental fee is calculated from the sales price of Perumnas, as follows :

4 stories flat :

(F-15)	Rp. 86,000/month	2,850/day
F-18	Rp. 95,500	3,100/day
(F-21)	Rp. 105,500	3,500/day
F-27	Rp. 124,500	4,100/day

Note: Type inside ( ) is not planned in Kemayoran.

Affordable income group of F-15 Type is Rp. 287,000, that of F-18 is Rp. 318,000, F-21 is 352,000 and F-27 is 413,000/month.

Table 3.24 Comparison of Affordable Income Group

Type	Rental Case of Tambora	Rental Case of Penjaringan	PERUMNAS Sales price Const. Cost	
F-18	Rp. 115,000	Rp. 225,000	Rp. 262,000	Rp. 152,000
F-36	Rp. -	Rp. 460,000	Rp. 556,600	Rp. 317,500
F-54	Rp. -	Rp. 700,000	Rp. 911,600	Rp. 510,400

2) Rental Flat in Perumnas

The merit of rental system lies in that the house owner (that is Perumnas) continuously maintains the ownership right and manages the land. This is the major difference between selling and rental of houses.

Furthermore in the case of the rental system, once the construction cost has been recovered, after such pay off periods, the revenue equals to the profit. Moreover, the value of the land will become higher and the owner may still use it for any other purpose in the future.

Usually the pay-off period is up to 10 years. Perumnas could offer a longer pay-off period. In this period, Perumnas should be able to recover its construction cost, at first.

Supposing the introduction of the rental system in Perumnas, the rental fee need not be the same as Sarana Jaya. It can be set a bit higher than Sarana Jaya.

Taking the above mentioned into consideration, the following assumption and examination for the rental system of Perumnas are set up.

(1) Construction Cost	;	F18	Rp. 5,576,000
		F27	Rp. 8,118,000
(2) Maintenance and	;	F18	Rp. 60,000
Operation Cost/Year		F27	Rp. 60,000
(3) Revenue (Rent per	;	F18	Rp. 549,748
year)		F27	Rp. 869,462
(4) FIRR for 20 years	;	F18	4.7%
		F27	6.3%

(5) Payoff period	;		
(a) 100% Own capital		F18	12.8 years
		F27	11.2 years
(b) 50% Own capital		F18	20.8 years
50% Loan		F27	16.7 years
(interest 9%)			
(c) 50% Own capital		F18	31.0 years
50% Loan		F27	21.5 years
(interest 12%)			
(d) 10% Own capital		F18	n.a.
90% Loan		F27	33.1 years
(interest 9%)			
(e) 10% Own capital		F18	n.a.
90% Loan		F27	n.a.
(interest 12%)			

- Note:
- 1 Revenue is calculated by Sales Price which is set as equal to the level of installment with the interest rate of 9% and 20 years.
  - 2 Occupancy ratio is assumed to be 90% in the whole period.
  - 3 n.a. means "not applicable".
  - 4 Maintenance and operation cost is derived from the information of Sarana Jaya.

3) Recommendation

- (1) Rental system makes effective use of land/space possible. Rental system will maintain the opportunity that the land/space be used more efficiently for own purpose in future. If the land/space is sold, the option on use the land/space is evidently transferred to the next owner.

Maintaining such opportunity will provide a more effective way for the urban development.

- (2) FIRR is naturally low at 4.7% for F18 and 6.3% for F27. It is clearly not feasible. This is the characteristic of rental system. Thus the above mentioned matter will be important for Perumnas.
- (3) Pay-off periods of F18 and F27 are 12.8 years and 11.2 years by 100% own capital. This is the usual pay-off period for the rental system. If some portion of the finance is obtained from the bank loan, the pay-off period should become longer. A longer pay-off period would be no problem to the objectives of Perumnas, but it should be balanced with the financial situation.
- (4) It is not recommendable to rent the F54 type. Units of this type are few and the occupancy ratio is very low in the rental flat housing by Sarana Jaya.
- (5) Rental flat housing is a heavy financial load. Therefore, it does not offer so much merits for Perumnas at the present situation. If subsidy or fund for the rental flat housing from government can be obtained, it should be executed for the low income group with lower rental fee.
- (6) Concerning the implementation, Perumnas should be responsible for the section dealing with maintenance/management of the rental flat housing. Perumnas should have to maintain the units in order to ensure they are kept in good condition so that people would continue to desire living in them.

#### 4. SUB ZONE (3) RENEWAL OF ZONE 4 BUILT UP AREA

For the study of Sub Zone (3), analysis of Zone 4 as a whole is to be firstly made, because considerably large numbers of house will be evacuated by the development in Zone 3 by KCIU and Perumnas.

##### 4.1 EXISTING CONDITIONS of ZONE 4

Zone 4 has approximately 33.4 ha. (gross) measured off a 1:2,000 scale map by the Study Team, consisting of six (6) RT units. The population in Zone 4 is 16,687 persons in 3,192 houses of 3,992 families according to results of the survey by Perumnas in 1987.

##### 4.1.1 Results of the Latest Survey by Perumnas

In November and December, 1988 Perumnas conducted a questionnaire survey for 3,190 houses in Zone 4 as a part of surveys covering surrounding areas of Zone 1 with 6,000 questionnaires in total.

The followings are related items to renewal and improvement in Zone 4, resulting from the survey.

- a. For the building conditions, nearly half of the respondents' houses is semi-permanent structure which is made of concrete and/or brick for wall and wooden materials are employed to other parts and approximately 35% is permanent structure of concrete and/or brick for almost all the members.
- b. Nearly half of the respondents occupy less than 30 m<sup>2</sup> of floor area including 25% with less than 15 m<sup>2</sup>. 67% of respondents occupy less than 60 m<sup>2</sup> of house lot including 39%

Fig. 3.8 Existing Conditions

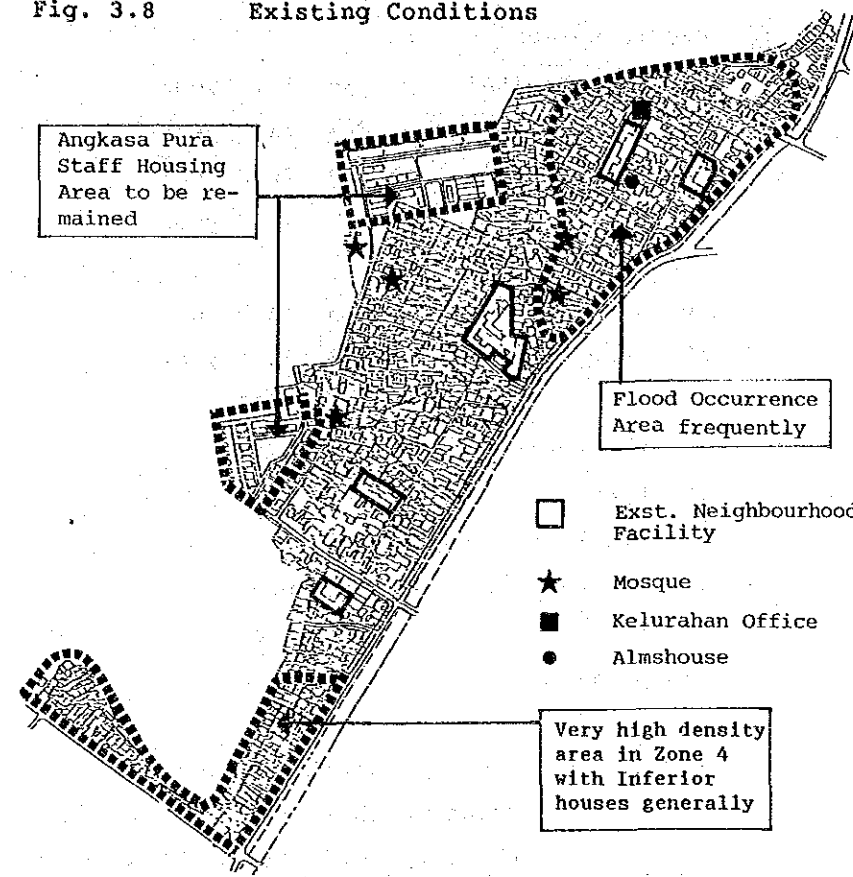
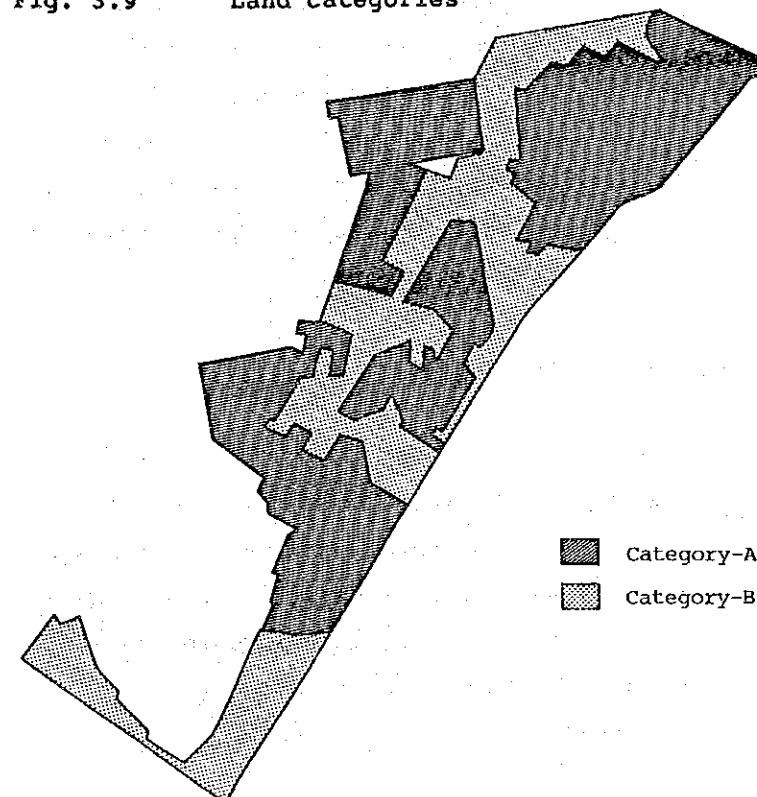


Fig. 3.9 Land Categories



with in less than 30 m<sup>2</sup>.

- c. For monthly income of householder, approximately 90% of the respondents have monthly income of less than Rp. 200,000 and nearly half of them have less than Rp. 100,000.
- d. For right of land, approximately 28% of the respondents are living in their own land and 55% are in state-owned land or unclear title of land. And for buildings, nearly 70% do not have the building permit or the situation is unclear. Fig. 3.9 shows according to the Aglaria, the two categories of land in Zone 4, although this map may be differed from the result of survey.
- e. For utility services, water supply and electrical power supply are provided as public works but 87% of respondents are buying water for cooking and 91% are drawing water from wells for washing. Approximately 33% of respondents use common sanitary units and 44% have their own toilets with septic tank.
- f. Nearly 60% of respondents are living in their own houses and nearly 25% are in rental houses. The rest are staying in other people's houses.

##### 4.1.2 Land Use of Zone 4

The land use of Zone 4 according to the proposed plan of Zone 3 by the Study Team is shown in Fig. 3.10. Table 3.25 shows the area list on the land use map but divided into two categories of the private land and state-owned land.

Fig. 3.10 Landuse of Zone 4

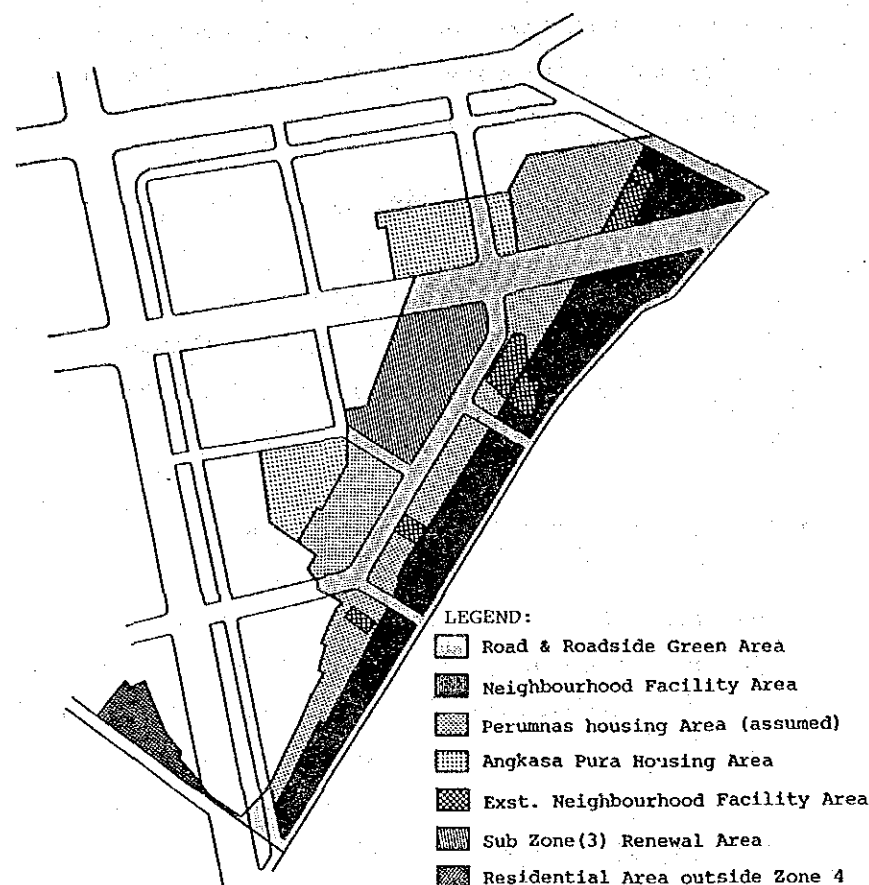


Table 3.25 Area List of Zone 4

ITEMS	CATEGORY		TOTAL	
	A	B		
AREA TO BE DEMOLISHED by:	1. ROAD & ROADSIDE GREEN	2.85	1.38	4.23
	2. NEIGHBOURHOOD FACILITY OF ZONE 3	1.04	1.23	2.27
	3. PERUMNAS HOUSING DEVELOPMENT	6.70	4.73	11.43
	SUB TOTAL	10.59	7.34	17.93
SUB ZONE(3)	4. ANGKASA PURA HOUSING	3.90	0.00	3.90
	5. EXST. NEIGHBOURHOOD FACILITY AREA	1.12	0.53	1.65
	6. RENEWAL AREA	6.41	3.54	9.95
	SUB TOTAL	11.43	4.07	15.50
7. TOTAL AREA OF ZONE 4	22.02	11.41	33.43	
8. AREA OUTSIDE ZONE 4	0.00	1.35	1.35	
9. TOTAL AREA FOR RENEWAL (7+8)	22.02	12.76	34.78	
10. NET RESIDENTIAL AREA IN ZONE 4 (7-4-5)	17.00	10.88	27.88	
11. NET RESIDENTIAL AREA FOR RENEWAL (10+8)	17.00	12.23	29.23	

## 4.2. RENEWAL STRATEGY

### 4.2.1 General

KC Master Plan of 1987 recommends that the whole built-up area namely Zone 4 should be totally demolished and cleared. The executing body namely KCMB and/or KCIU shall pay compensation to inhabitants and the total amount is estimated as approximately Rp. 30 billion which is based on the calculation of Rp. 125,000/m<sup>2</sup> x 24 hectare. This clearance of the land is inevitable since new roads will be constructed in the basic framework of Zone 1 development, of which an area of 30 ha. in Zone 3 shall be handed over to Perumnas for their housing development and sites for neighbourhood facilities required by the new population. However, it is not necessary that the total area of Zone 4 be provided for such development.

There are two fundamental problems to this recommendation. One is that the amount of compensation is too big. Although the compensation might be lower than Rp. 100,000/m<sup>2</sup>, still a total of more than Rp. 20 billion will be needed which affects the finance of the total development. As a matter of fact, it is observed that there are many houses, neighbourhood facilities, roads, etc. of fairly good condition. They shall be maintained as they are.

The other one, which is more important to consider, is if all the inhabitants, mostly belonging to the so called low income group, should be dislocated, this might create a social problem and the whole Zone 1 development might be argued, under the pretext that this urban development ignores the people who have been living in the site. It is said

that those people, although many of them are so called illegal occupants are living together in the site, relying on each other and forming a certain community. It is strongly recommended to consider certain countermeasures in order to let these people, if they wish, remain in the site as much as possible without increasing the burden of the whole Zone 1 development.

### 4.2.2 Classification

It is assumed on the available maps, recently produced from aerial photography, statistics and the Study Team's visual survey that there are approximately 3,500 houses including those located in the designated commercial center development. Those houses are classified into two categories. One is those houses on privately owned land and referred to as "Category A". The other is those houses on the land owned by the government and referred to as "Category B". Although those people of Category B as many as possible will remain in Sub Zone (3), the land should be cleared and returned to the government.

On the other hand, many houses of both Category A and B shall be demolished due to the whole Zone 3 development as described in 4.3.

### 4.2.3 Category A Renewal

Approximately 759 houses on 10.59 ha. will be demolished due to Zone 3 development and 460 houses on 6.41 ha. will be maintained. Of the houses to remain some are inferior and these shall be demolished in order to improve the environment and raise up the standard as same or similar to all of Zone 3 development. Then new

houses on the same site will be built and small open spaces will be provided. Number of new houses shall be more than that of demolished houses in order to accommodate those people of demolished houses as well as some people of houses demolished among abovementioned 759 houses.

This financing and implementation of the renewal shall be carried out by KCIU instead of paying compensation and dislocating all people of the 1,219 houses. The plan and programme are referred to in Site A Case Study shown in Section 3 of CHAPTER V. The construction of new houses might possibly be handled by Perumnas or Sarana Jaya.

People of 203 houses out of the rest of 759 houses will be located to Perumnas housing as referred to in Section 4.3.2 2) hereafter.

#### 4.2.4 Category B Renewal

All of approximately 2,219 houses will be demolished. It will be necessary for the executing body, KCIU to coordinate with DKI Jakarta and NGO should conduct careful surveys and interviews with the community and inhabitants in order to determine and classify the wishes of the inhabitants;

- 1) To receive compensation and dislocate from Zone 1.
- 2) To receive compensation and relocate to Perumnas house, on conditions of
  - a. compensation becomes payment to buy Perumnas house
  - b. Perumnas gives subsidy since the people should have priority to obtain Perumnas house (see Section 3 of Chapter III).

c. People have enough capital or income including the conditions of above (1) and (2).

- 3) Do not wish to dislocate from Zone 1 but not able to buy Perumnas house although receiving compensation from KCIU and subsidy from Perumnas mainly because of very limited income or being unemployed.

Classification 3) of the above is the most serious. However, KCIU, DKI and NGO should make further careful investigations to clarify the desires and capabilities of the people in the following manner;

- 1) Duration of living in the area. If one has moved in the area only the previous day, such a person has very weak right to remain in the area.
- 2) Willingness to work. If one does not have willingness to work, such a person will not have a job and no income to afford to obtain a house particularly in the area.
- 3) Capability to work. If one is handicapped or too old or young to work, care should be extended through social welfare measures.

The renewal strategy from these specific view points, is to keep those eligible people except the abovementioned groups temporarily in the area by providing "Transition House" and promote their job skill in order to increase income to obtain houses of Perumnas or outside Zone 3 in the future.

Under the framework of Zone 3 development, and consideration of population density, the following classification is set;

1,016 houses are dislocated from Zone 3. 547 houses are relocated to Perumnas houses. 646 housing units are provided as "Transition House". (refer to Site B Case Study of CHAPTER V)

#### 4.3 FRAMEWORKS FOR RENEWAL OF SUB ZONE (3)

The detail procedures of setting framework of the Sub Zone (3) renewal are shown here, although summary has been provided in 4.2 GENERAL STRATEGY above.

##### 4.3.1 Basic Conditions for Framework

Zone 4 has a total area of 27.88 ha. in net residential area but for renewal study built up area of 1.35 ha. outside Zone 4 to be demolished by the commercial area development is included, bringing the total for renewal study to 29.33 ha. as shown in Table 4.1. Of this total 19.28 ha. is to be demolished for the development of Zone 3 by KCIU. The remaining area of 9.95 ha. shall be subject to renewal/improvement area, namely Sub Zone (3). Basic conditions for establishing the framework in Sub Zone (3) are as follows:

Average population density in gross is around 500 person/ha. in Zone 4 (16,687 persons ÷ 33.43 ha.). Based on this, population density, average number of persons in house, house density and others are set by each category as shown in Table 4.2 to obtain basic criteria for the Sub Zone 3 framework study.

The figures in Table 3.26 are set on an assumption basis, therefore, at the actual implementation of renewal, more detailed surveys to clarify the criteria are necessary by the execution body(s).

According to the criteria above, details of the existing houses and areas in Zone 4 are shown in Table 3.27.

Table 3.26 Basic Criteria for Framework of Zone 4 Renewal

Category	Popul'n Density (P/ha.)	Aver. Pop. per House (P/Hs)	House Density (H/ha.)	Average Land (m <sup>2</sup> )	Aver. House Floor Area (m <sup>2</sup> )
A	355	4.95	71.71	75	48
B	980	5.40	181.43	30	30

Table 3.27 Existing House & Area in Zone 4

	Items	Demolished by Zone 3 Dev't	Sub Zone (3)	Total
Category A	Area (ha.)	10.59	6.41	17.00
	No. of Houses	759	460	1,219
Category B	Area (ha.)	8.69	3.54	12.23
	No. of Houses	1,557	*1) 642	2,219
Total	Area (ha.)	19.28	9.95	29.33
	No. of Houses	2,336	1,102	3,438

Note: \*1) These houses should be also demolished since the land should be returned to the government. And also almost all are houses of extremely high density and very inferior and it is never desirable that they remain as they are.

#### 4.3.2 Framework for Sub Zone (3)

##### 1) Estimation of Houses to be Demolished in Zone 4

According to the conditions of houses in Zone 4 as shown in Table 3.27 as well as the renewal strategy mentioned above, houses to be demolished in Zone 4 and Sub Zone (3) are estimated as follows :

##### a. Category A

- 20% of the area of 6.41 ha. in Sub Zone (3) is assumed to be of inferior quality houses which are to be demolished and rebuilt in the same or similar standards to Perumnas housing in Sub Zone (2) due to improving environment. The area for rebuilding becomes approximately 1.28 ha. and a population density of 1,000 persons/ha. is applied which is the same as that for Perumnas housing area in Sub Zone (2).

The number of the houses to be rebuilt is estimated as 258. (1.28 ha. x 1,000 persons/ha. ÷ 4.95 P/houses = 258 houses)

- For the 5.13 ha. area subtracted from 6.41 ha., the existing houses are to remain, and therefore the number of houses is estimated as 368 houses (5.13 ha. x 71.71 houses/ha. = 368 houses)

- Therefore, of 851 houses demolished 593 houses are to be relocated to Perumnas houses in Sub Zone (2) or dislocated to other areas outside Zone 1.

##### b. Category B

- For the 3.54 ha. area in Sub Zone (3) where the existing houses are also to be demolished due to inferior house conditions and houses in state own land. The demolished houses are estimated as 642 number.

In the area, new transition houses should be provided according to the renewal strategy with 1,000 persons/ha. of population density which is the same density as Perumnas site in Sub Zone (3).

The number of the transition houses is estimated as 656.

(3.54 ha. x 1,000 persons/ha. ÷ 5.40 P/house = 656 houses)

- Therefore, of 2,219 houses demolished 1,563 houses are to be relocated to the Perumnas houses in Sub Zone (2) or dislocated to other areas outside Zone 1.

Table 3.28 House & Area to be Demolished in Zone 4

	Items	Demolished by Zone 3 Dev't	Demolished in Sub Zone (3)	Total
Category A	Area (ha.)	10.59	*1) 1.28	11.87
	No. of Houses	759	92	851
Category B	Area (ha.)	8.69	3.54	12.23
	No. of Houses	1,577	642	2,219
Total	Area (ha.)	19.28	4.82	24.10
	No. of Houses	2,336	734	3,070



2) Moving Houses Demolished

Table 3.29 shows the status of houses in Zone 4 (demolish, maintain, move). These are set according to the following conditions which are just assumed ones, therefore further detail survey and interview should be made by KCIU at the execution of the demolition in Zone 4.

- a. Around 45% of the existing houses to be demolished in both Category A and B shall relocate to outside Zone 1 with compensation paid by KCIU due to their wish or being judged as impossible to stay in Sub Zone (3) such as :
- very short stay in Zone 4 and Sub Zone (3) i.e. no or less right to stay,
  - having sufficient income or capital to purchase a house anywhere,
  - single family status who can live elsewhere, etc.

- b. The remaining houses are relocate to the Perumnas houses in Sub Zone (2) utilizing compensation given by KCIU as a part of payment for the Perumnas houses. Some of Perumnas houses are to be provided to the persons who are living in Zone 4 with specific subsidy to make similar conditions in payment to the new houses or transitional houses in Sub Zone (3).

3) Framework for Sub Zone (3)

The framework for Sub Zone (3) renewal is settled as:

- Total number of houses is 1,282 of 626 for Category A and 656 of transition houses for

Category B.

- Of 626 number of houses in Category A, 368 houses are the existing ones and 258 are new houses.
- Total population is 6,616 persons divided into 3,074 and 3,542 persons for Categories A and B respectively with population density of 480 and 1,000 persons/ha. accordingly. Table 3.30 shows more details of the framework by Category with the area of each.

Table 3.29 Moving of Zone 4 Houses

ITEM	CATEGORY		TOTAL	
	A	B		
1) HOUSES REMAINED AS THEY ARE	368	0	368	
2) RELOCATED TO REBUILT HOUSES IN SUB ZONE (3)	258	* 656	914	
3) TOTAL	626	656	1,282	
4) RELOCATED TO PERUMNAS HOUSES IN SUB ZONE(2)	F-18	53	547	600
	F-27	150	0	150
	SUB T	203	547	750
5) DISLOCATED TO OUTSIDE ZONE 4	390	1,016	1,406	
6) TOTAL	593	1,563	2,156	
7) TOTAL HOUSES TO BE RELOCATED IN ZONE 4 (2+6)	851	2,219	3,070	

Note: Figure with \* mark is Transition Houses.

Table 3.30 Framework for Sub Zone (3)

ITEM	CATEGORY				TOTAL	
	A		B			
	AREA (Ha)	NO. OF HOUSES	AREA (Ha)	NO. OF HOUSES	AREA (Ha)	NO. OF HOUSES
1) HOUSES TO BE REMAINED AS THEY ARE	5.13	368	0	0	5.13	368
2) REBUILT HOUSES IN SUB ZONE(3)	1.28	258	3.54	656	4.82	914
3) ANGKASA PURA HOUSING	3.90	156	0	0	3.90	156
4) TOTAL	6.41	626	3.54	* 656	9.95	1,282
	10.31	782	3.54	656	13.85	1,438
5) POPULATION		3,074		3,542		6,616
		3,854		3,542		7,396
6) POPULATION DENSITY (P/Ha)		480		1,000		665
		374		1,000		534
7) HOUSE DENSITY (H/Ha)		96.9		185.3		128.3
		75.8		185.3		103.8

Note: For items of 4), 5), 6) and 7), upper and lower lines shows figures without and with 3) Angkasa Pura Housing. Figure with \* mark is for Transition Houses.



## 5. NEIGHBOURHOOD FACILITY PLANNING

### 5.1. PLANNING STANDARDS AND ALLOCATION POLICY

#### 5.1.1 General

Requirement in types and numbers of the neighbourhood facilities to be provided in Zone 2 area in Zone 1 shall first be considered on the basis of planned total population to be accommodated in Zone 2.

Population planned in Zone 2 ranges approximately between 52,500 - 75,000 in the year 2005.

However, on the other hand, provision of certain neighbourhood facilities in Zone 2 shall be considered, integrally with the existing conditions of Zone 1 or at least the immediate adjacent areas to each new settlement in Zone 2.

Zone 1 as well as Zone 2 will not be independently developed. The new settlements in Zone 2 will be organically combined and integrated with the existing settlements particularly from view points of provision of neighbourhood facilities.

Fundamental criteria for provision of neighbourhood facilities is based on "population", "catchment area", "location and distance" and "administrative boundary".

Administrative boundaries are set for the following administrative units, stated in ascending order according to size; RT, RW (RT, RW is self-government by the inhabitant), Kelurahan, Kecamatan, Wilayah and DKI Jakarta. Each administrative level has its

own facility requirements according to the facility standards and regulations set by the Jakarta Municipality (Luas Kebutuhan sarana kota untuk RTK DKI Jakarta tahun 2005/Tata Kota DKI Jakarta), BTN regulation (Ketentuan Minimum Proyek Perumahan dan Rumah Sederhana yang dapat dikaitkan dengan Kredit Pemilikan Rumah/Bank Tabungan Negara) and standards by Perumahan, Cipta Karya, and the Ministry of Public Works.

It is recommended to consider the provision of neighbourhood facilities, in the vicinity as integral parts of Zone 1 development.

The KCMB shall coordinate with DKI Jakarta and relevant institutions concerned.

All available standards concern facility site areas, but there are no standards for building floor areas.

#### 5.1.2 Standards by Perumahan, Cipta Karya

Facility standards issued by Perumahan, particularly for the flat type housing estate are as follows,

- 1) Neighbourhood facilities in flat type housing estate
  - a. The purpose of neighbourhood facility provision is to serve the public in accordance with living quality requirements and adequate living conditions.
  - b. Basically, neighbourhood facility consist of buildings and/or open space (court) which people need.
  - c. All neighbourhood facility requirements which are not determined herein should follow National Building Regulation/Local Building

Regulation or Religious Principle and other spiritual beliefs.

- d. In determining type and dimension of neighbourhood facility selections should be consistent with national average standards that are coordinated with existing local population data.
- e. Neighbourhood facility can either be used by only one neighbourhood or can be used by more than one neighbourhood of flats.

For details of standards refer to following pages and Appendix.

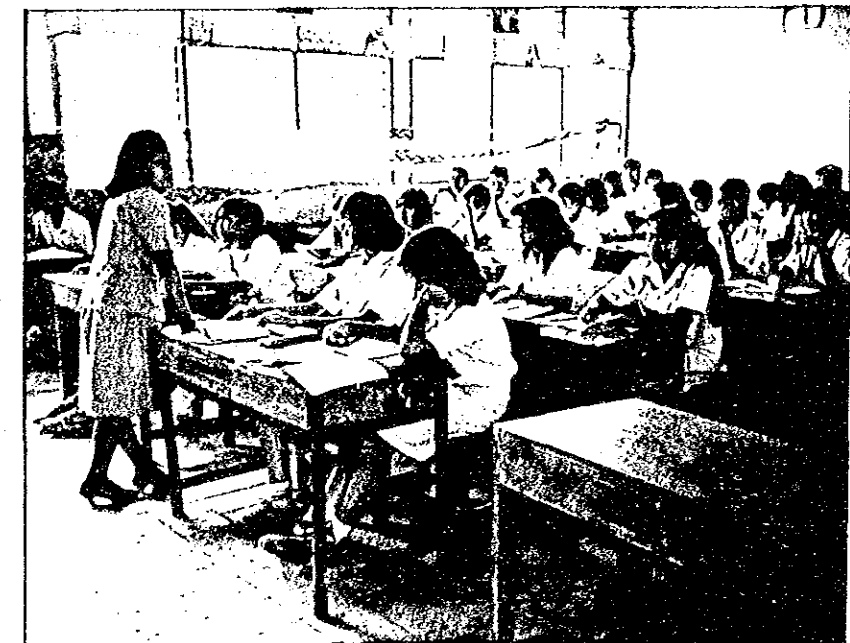


Fig. 3.11 Public Facility Standard-Dinas Tata Kota DKI Jakarta

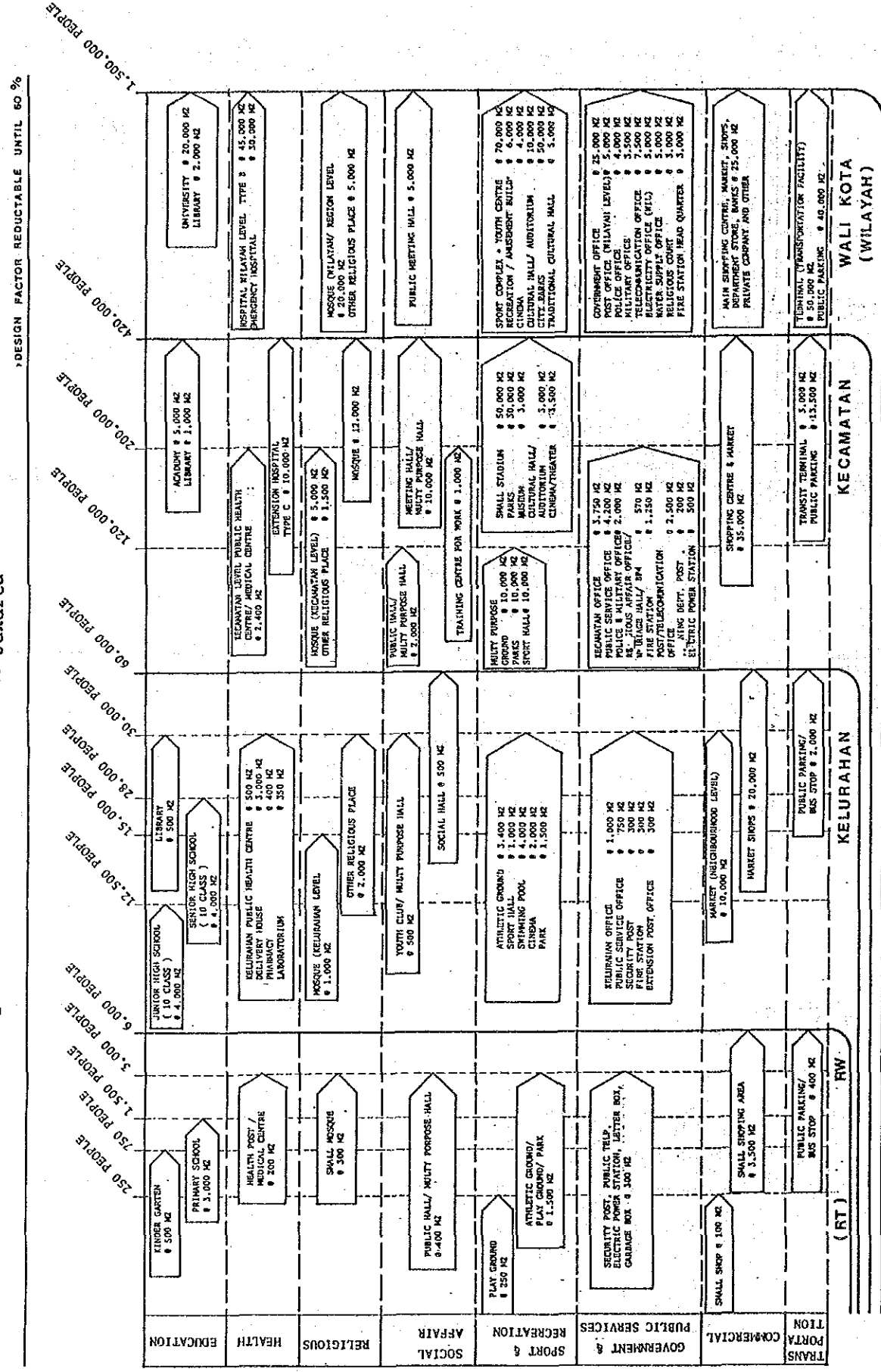


Fig. 3.12 Total Area of Minimum Necessity for Public Facility by BTN

(Based on Minimum Population)

FACILITY ITEM	POPULATION							WALI KOTA (WILAYAH)
	(I)	(II)	(III)	(IV)	(V)	(VI)	(VII)	
Play Ground	250(*)/50R 250 m² (1.00) 100 m² (0.40)	1.000(**)/200R 300 m² (0.80) (1,200)	1.600/320R 2.400 m² (1.50) (1,700)	2.500/500R	6.000/1.200R	10.000/2000R	30.000/6000R	120.000/24.000R
Kinder Garden Accumulation (I+II)								
Primary School Accumulation (II+III)								
Play Ground				1.250 m² (0.50)				
Small Mosque				300 m² (0.12)				
Shopping Centre				1.200 m² (0.48)				
Public Park				1.100 m² (0.04)				
Meeting Hall & Security Post				300 m² (0.12)				
Accumulation (II+IV)				(1,250)				
Junior High School					1.800 m² (0.300)			
Senior High School					1.800 m² (0.300)			
Public Health Centre					150 m² (0.035)			
Accumulation (IV+V)					500 m² (0.083)			
Maternity Hospital						1.600 m² (0.160)		
Pharmacy						350 m² (0.035)		
Accumulation (V+VI)						(5,868)		
Maternity House							9.000 m² (0.300)	
Mosque							1.750 m² (0.050)	
Shopping Centre							13.500 m² (0.450)	
Kejurahen Office							500 m² (0.015)	
Police Station							100 m² (0.003)	
Post Office							100 m² (0.003)	
Fire Station							200 m² (0.006)	
Multi purpose building							1.000 m² (0.030)	
Public Park							650 m² (0.021)	
Public Health Centre							(6,333)	
Sport Court								24.000 m² (0.200)
Mosque								3.600 m² (0.030)
Other Religious								1.000 m² (0.008)
Shopping Centre								36.000 m² (0.300)
Kejurahen Office								1.000 m² (0.008)
Police Office								500 m² (0.002)
Post Office								500 m² (0.004)
Fire Station								300 m² (0.002)
Youth Centre								3.000 m² (0.025)
Public Park								4.000 m² (0.032)
Telephone Office								150 m² (0.001)
Electric Power Station								(7,998)
Accumulation (VII+VIII)								205.000 m²
NOTICE : (0.80) = 0.80 m²/person								899.800 m²

EXAMPLE :  
 NOTICE : (0.80) = 0.80 m²/person  
 (\*) 1. For the Each 250 Persons :  
 - Play Ground (1.00) X 1.000 = 1.000 m²  
 - Marung (0.40) X 1.000 = 400 m²  
 - Kinder Garten (0.80) X 1.000 = 800 m²  
 Total (1.40) X 250 = 350 m²  
 (\*\*) (1.7) For the Each 1.000 Persons :  
 - Play Ground (1.00) X 1.000 = 1.000 m²  
 - Marung (0.40) X 1.000 = 400 m²  
 - Kinder Garten (0.80) X 1.000 = 800 m²  
 Total (2.20) X 1.000 = 2.200 m²  
 SOURCE: KETENTUAN MINIMUM PROYEK PERUBAHAN DAN RUMAH SEDEHAKA YANG DAPAT DIKAITKAN DENGAN KRITIK PEMILIKAN RUMAH BANK TABUNGAN NEGARA

Fig. 3.13 Planning Standard

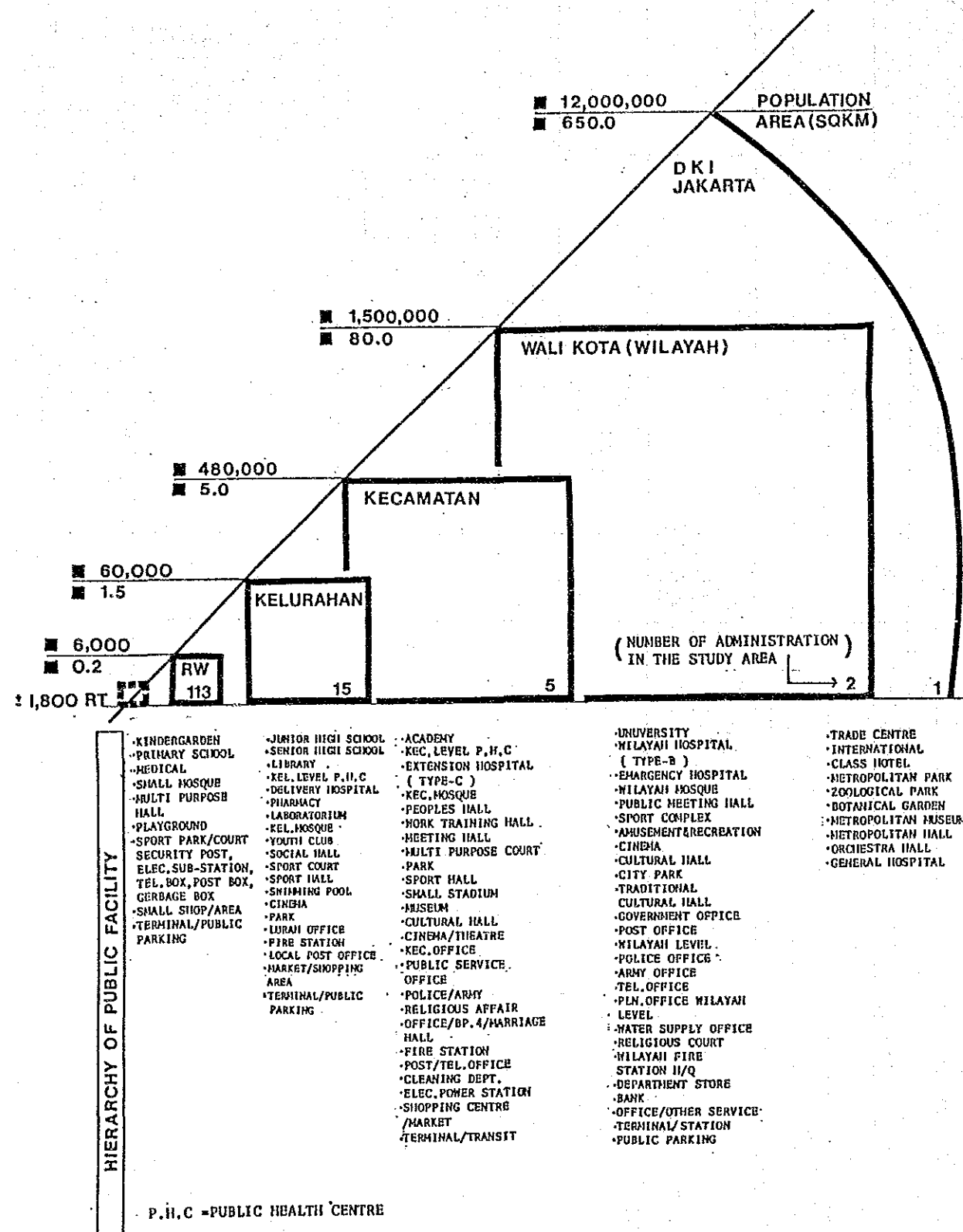
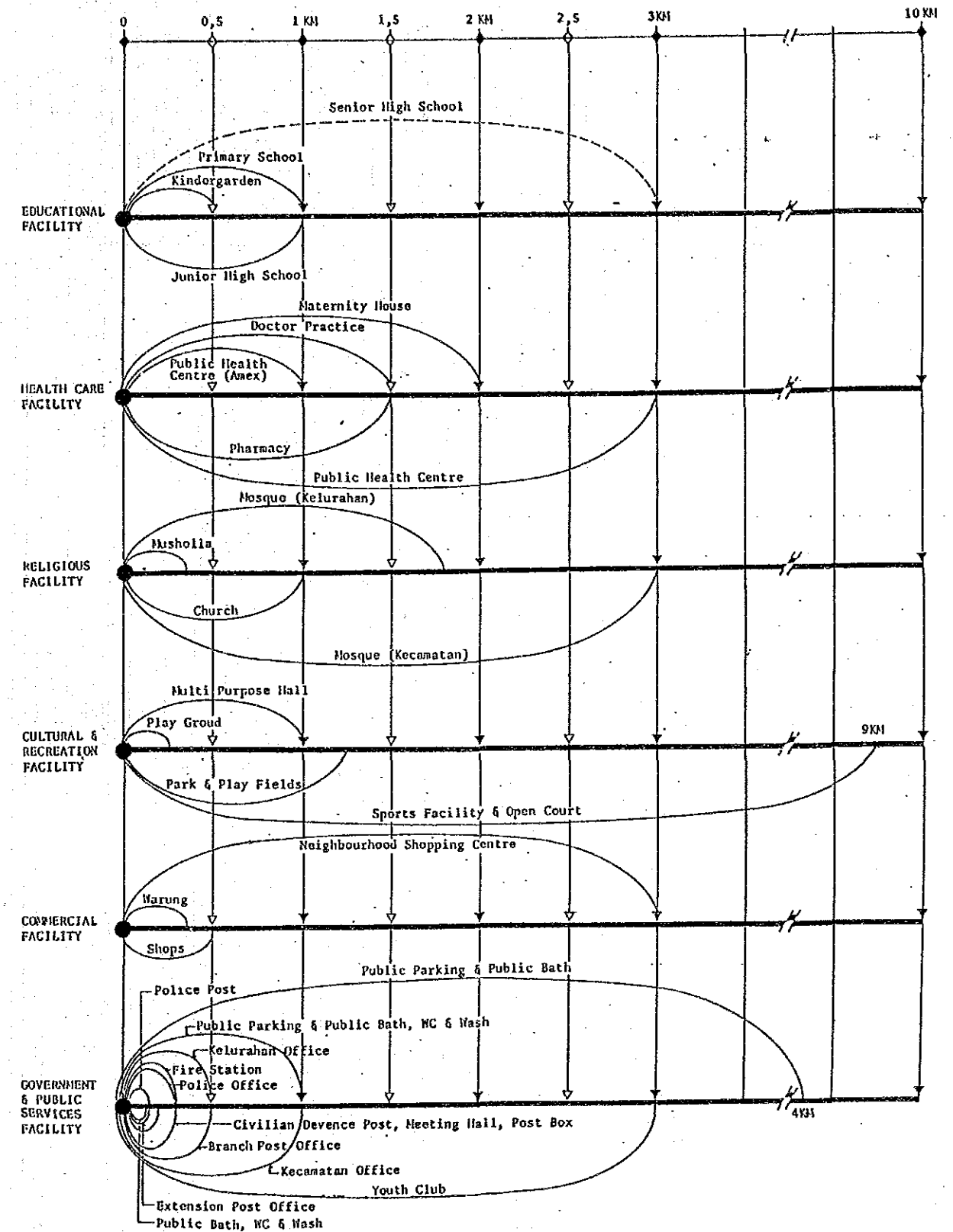


Fig. 3.14 Maximum Distance to Each Community Facilities



Source: Standard by Direktorat Perumahan, Cipta Karya

## 5.2. APPLICATION OF PLANNING STANDARDS

### 5.2.1 Modification of the Standards

The standards for neighbourhood facility by relevant agencies are summarized in Table 3.31. However these original standards sometimes reflect an ideal situation rather than an actual applicable programme.

Therefore, the Study Team modified the standards to applicable levels. These modified standards are to be closely checked by the projected facility demand formulated by the following procedure.

Since improvement in the educational sector is strongly encouraged in the national programmes, particular attention shall be drawn to the improvement of educational circumstances when planning future urban renewal, and from this aspect provisions of children's playgrounds shall be given high priority in future urban renewal.

Therefore, educational facility shall be utilised as a checking sector.

First, the number of school age population shall be obtained from the National Statistics. Second, school attendances shall be grasped based on the Repelita IV programme.

Finally, above total number of school attendances is divided by average school capacity to get the necessary number of schools for future planning.

These results meet the demand of the modified standard and such standard can be applied for future facility planning.

Table 3.31 Zone 2 Neighbourhood Facility Area Calculated by Modified Standard

R W LEVEL	DKI STANDARD (in case of 100%)				MODIFIED STANDARD			
	(1) person/ facility	(2) sqm/ facility	(3) total no. of facility	(4) total facility area	(5) (1)x1.2	(6) (2)x0.6	(7) total no. of facility	(8) total facility area
1. Kindergarten	750	500	124	62,000	900	300	103	30,900
2. Primary school	1,500	3,000	62	186,000	1,800	1,800	51	93,800
3. Play Ground *	1,000	250	93	23,250	1,200	150	77	11,500
4. Musholla, Church, Temple	3,000	300	31	9,300	3,600	180	26	4,680
5. Pharmacy, shops	30,000	400	3	1,200	36,000	240	3	720
6. Security post, Public Tel. etc	3,000	300	31	9,300	3,600	180	25	4,500
<b>T o t a l</b>				291,050				143,970
<b>KELURAHAN LEVEL</b>								
1. Junior High School	12,500	4,000	7	28,000	15,000	2,400	6	14,400
2. Senior High School	28,000	4,000	3	12,000	33,600	2,400	2	4,800
3. Clinic, Public Health centre	30,000	500	3	1,500	36,000	300	3	900
4. Maternity hospital	30,000	3,000	3	9,000	36,000	1,800	3	5,400
5. Laboratory (small hospital)	30,000	350	3	1,050	36,000	210	3	630
6. Kelurahan Office	30,000	1,000	3	3,000	36,000	600	3	1,800
7. Police post	30,000	300	3	900	36,000	180	3	540
8. Sub post office	30,000	300	3	900	36,000	180	3	540
9. Fire brigade post	30,000	300	3	900	36,000	180	3	540
10. Shopping centre (pasar)	60,000	20,000	2	40,000	72,000	12,000	1	12,000
11. Commercial (small shops)	6,000	3,500	15	52,500	7,200	2,100	12	25,200
12. Cinema	30,000	2,000	3	6,000	36,000	1,200	3	3,600
13. Cultural hall (Library, Arts hall)	30,000	500	3	1,500	36,000	300	3	900
14. Multi purpose hall/Youth club	30,000	500	3	1,500	36,000	300	3	900
15. Sports field	30,000	3,400	3	10,200	36,000	2,040	3	6,120
16. Kelurahan mosque	15,000	1,000	6	6,000	18,000	600	5	3,000
<b>T o t a l</b>				174,950				81,270

Remarks : Total number of population in ZONE 2 is 72,000

\* Only for the play ground, standard by Cipta Karya

. This area is facility site (land) area.

### 5.3. ALLOCATION PROGRAMME

#### 5.3.1 Sub-zone (1)

The development scheme in this area will be established according to the new town development method, except for sub area H3.

The existing sub area H3 has an approximate population of 3,600 and adequate facility improvement by the relevant agencies is also required.

Candidate sites for additional facilities will be prepared by KCIU.

##### 1) Neighbourhood classification

The housing development in this area is aimed at middle and high class groups with a total projected population of 35,500.

The planning of neighbourhood facility will follow the basic conditions of macro frame.

##### 2) Provide support to surrounding areas

Judging by the standards, the neighbourhood facilities in Kel. Pademangan Timur, surrounding sub area H2, are insufficient.

Therefore in planning the neighbourhood centre the shortage of surrounding facilities shall be considered as much as possible.

The capacity of the facility should be determined under the above condition.

##### 3) Executing body

The execution of neighbourhood facilities shall be undertaken by the relevant government agencies or unions composed of local inhabitants.

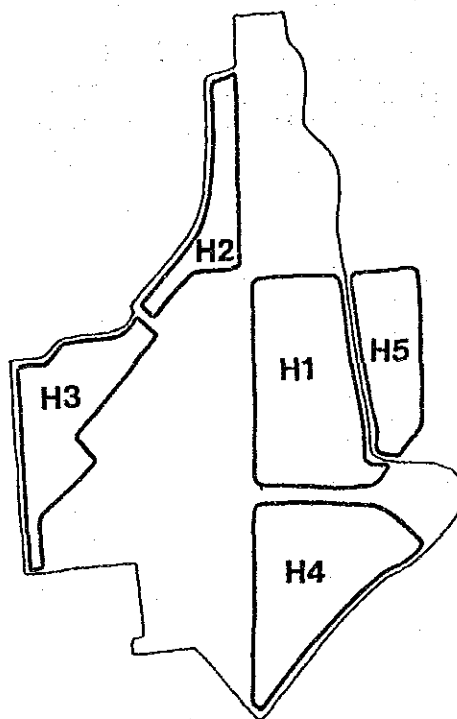
Therefore DKI shall have no major role in the establishment and operation of facilities.

The KCIU may consider providing assistance in terms of construction budget or possibly building facility and then transferring it to operating body.

Planned number of facilities, capacity and preliminary construction costs are discussed in the following pages.

Development scheme for neighbourhood facility shall be considered in context with the characteristics of each development area, unity of surroundings and overall development strategy through Zone 2 area.

Fig. 3.15 Location of Each Sub Area



Development scheme in each sub area is as follows:

##### a. Sub Area H1

This area is a new development area. Housing development shall be executed by private developers on vacant sites. Therefore, development guidelines for the neighbourhood facility will be given by DKI Jakarta coordinated with KCMB/KCIU to the developer.

##### b. Sub Area H2

Sub area H2 shall also be developed by private developers. Neighbourhood facility shall be considered under the development guidelines. However, this area must also be considered in relation with Kel. Pademangan Timur community.

The neighbourhood facility will be integrated within the surrounding community.

##### c. Sub Area H3

The existing sub area H3 has an approximate population of 3,600. This residential area will be preserved for the time being with some improvement of neighbourhood facility executed.

Sites for these facilities shall be provided by KCIU.

##### d. Sub Area H4

The development scheme for sub area H4 within Zone 3 is discussed in Chapter III-3.

##### e. Sub Area H5

Sub area H5 as an optional development area shall be developed in the same manner as sub area H1.

Table 3.32 Development Cost for Neighbourhood Facility

(Sub Area: H1)

Sub Area: H1/L1, 2, 3 (Year: 1993 - 1995)		Building Development					External Area Development					
Item	No. of Facility	No. of Storey	G. Floor	Floor Area / Facility	Total Pl. Area	Unit Price	Construct- tion Cost of (3)	FFY (20% of (3))	Site area to be Developed	Unit Price	Construct- tion Cost	Total (3)+(4)+(5)
Play Ground	16	-	-	-	-	-	-	-	300	15	72,000	72,000
Kindergarten	22	1	240	240	240	178	939,840	187,968	60	20	26,400	1,154,208
Primary School	10	2	700	500	1,200	224	2,688,000	537,600	1,100	20	220,000	3,445,600
Junior High School	1	2	1,000	700	1,700	224	761,600	152,320	1,400	20	56,000	969,920
Senior High School	1	2	1,000	900	1,900	224	425,600	85,120	1,400	20	28,000	538,720
Public Health Centre	1	2	100	100	200	224	44,800	8,960	200	20	4,000	57,760
Maternity Hospital	1	2	600	400	1,000	224	224,000	44,800	1,200	20	24,000	292,800
Hospital (Type C)	1	2	100	100	200	224	44,800	8,960	110	20	2,200	55,960
Kelurahan & Lurah Office	1	2	100	100	200	224	112,000	22,400	300	20	6,000	140,400
Police Post	1	1	100	-	100	178	17,800	3,560	80	15	1,200	22,560
Sub Post Office	1	1	100	-	100	178	17,800	3,560	80	15	1,200	22,560
Fire Brigade Post	1	1	100	-	100	178	17,800	3,560	80	15	1,200	22,560
Cultural Hall	1	2	150	100	250	250	62,500	12,500	150	20	3,000	78,000
Multipurpose Hall/Youth C	1	2	150	100	250	250	62,500	12,500	150	20	3,000	78,000
Kelurahan Mosque	1	1	150	-	150	178	26,700	5,340	450	20	9,000	41,040
Sports Fields	1	1	50	-	50	178	8,900	1,780	1,990	15	29,850	40,530
<b>Total</b>							5,456,640	1,090,928			487,050	7,032,618

Table 3.33 Development Cost for Neighbourhood Facility

(Sub Area: H2)

Sub Area: H2 / L1, 2, 3 (Year: 1996 - 1997)		Building Development					External Area Development					
Item	No. of Facility	No. of Storey	G. Floor	Floor Area / Facility	Total Pl. Area	Unit Price	Construct- tion Cost of (3)	FFY (20% of (3))	Site area to be Developed	Unit Price	Construct- tion Cost	Total (3)+(4)+(5)
Play Ground	8	-	-	-	-	-	-	-	300	15	36,000	36,000
Kindergarten	12	1	240	240	240	178	512,640	102,528	60	20	14,400	629,568
Primary School	5	2	700	500	1,200	224	1,344,000	268,800	1,100	20	110,000	1,722,800
Junior High School	1	2	1,000	700	1,700	224	380,800	76,160	1,400	20	28,000	484,960
Senior High School	1	2	1,000	900	1,900	224	425,600	85,120	1,400	20	28,000	538,720
Public Health Centre	1	2	100	100	200	224	44,800	8,960	200	20	4,000	57,760
Maternity Hospital	1	2	600	400	1,000	224	224,000	44,800	1,200	20	24,000	292,800
Hospital (Type C)	1	2	100	100	200	224	44,800	8,960	110	20	2,200	55,960
Kelurahan & Lurah Office	1	2	100	100	200	224	112,000	22,400	300	20	6,000	140,400
Police Post	1	1	100	-	100	178	17,800	3,560	80	15	1,200	22,560
Sub Post Office	1	1	100	-	100	178	17,800	3,560	80	15	1,200	22,560
Fire Brigade Post	1	1	100	-	100	178	17,800	3,560	80	15	1,200	22,560
Cultural Hall	1	2	150	100	250	250	62,500	12,500	150	20	3,000	78,000
Multipurpose Hall/Youth C	1	2	150	100	250	250	62,500	12,500	150	20	3,000	78,000
Kelurahan Mosque	1	1	150	-	150	178	26,700	5,340	450	20	9,000	41,040
Sports Fields	1	1	50	-	50	178	8,900	1,780	1,990	15	29,850	40,530
<b>Total</b>							3,302,640	660,528			301,050	4,264,218

Table 3.34 Development Cost for Neighbourhood Facility

(Sub Area: H3)

Sub Area: H3 / L1, 2 (Year: - -)		Building Development					External Area Development					
Item	No. of Facility	No. of Storey	G. Floor	Floor Area / Facility	Total Pl. Area	Unit Price	Construct- tion Cost of (3)	FFY (20% of (3))	Site area to be Developed	Unit Price	Construct- tion Cost	Total (3)+(4)+(5)
Play Ground	7	-	-	-	-	-	-	-	300	15	31,500	31,500
Kindergarten	10	1	240	240	240	178	427,200	85,440	60	20	12,000	524,640
Primary School	5	2	700	500	1,200	224	1,344,000	268,800	1,100	20	110,000	1,722,800
Junior High School	1	2	1,000	700	1,700	224	761,600	152,320	1,400	20	56,000	969,920
Senior High School	-	2	1,000	900	1,900	224	-	-	-	-	-	-
Public Health Centre	-	2	100	100	200	224	-	-	-	-	-	-
Maternity Hospital	-	2	600	400	1,000	224	-	-	-	-	-	-
Hospital (Type C)	-	2	100	100	200	224	-	-	-	-	-	-
Kelurahan & Lurah Office	-	2	100	100	200	224	-	-	-	-	-	-
Police Post	-	1	100	-	100	178	-	-	-	-	-	-
Sub Post Office	-	1	100	-	100	178	-	-	-	-	-	-
Fire Brigade Post	-	1	100	-	100	178	-	-	-	-	-	-
Cultural Hall	-	2	150	100	250	250	-	-	-	-	-	-
Multipurpose Hall/Youth C	-	2	150	100	250	250	-	-	-	-	-	-
Kelurahan Mosque	1	1	150	-	150	178	26,700	5,340	450	20	9,000	41,040
Sports Fields	-	1	50	-	50	178	-	-	-	-	-	-
<b>Total</b>							2,559,500	511,900			218,500	3,289,900



Table 3.35 Development Cost for Neighbourhood Facility  
(Sub Area: H4)

Sub Area : H4/1,2,3,4,5 (Year : 1990 - 1995)		Building Development				External Area Development						
I t e m	No. of Faci- lity	No. of Storey	Floor Area / G. Floor (1)	Facility (2)	Total Floor Area (1)+(2)	Unit Price (RM)	Construc- tion Cost of (3)	FFY (20% of (3))	Site area to be Developed	Unit Price	Construc- tion Cost (3)+(4)+(5)	T o t a l
Play Ground	33	-	-	-	-	-	-	-	300	15	148,500	148,500
Kindergarten	45	1	240	-	240	178	1,922,400	384,480	60	20	54,000	2,360,880
Primary School	22	2	700	500	1,200	224	5,913,600	1,182,720	1,100	20	484,000	7,580,320
Junior High School	2	2	1,000	700	1,700	224	761,600	152,320	1,400	20	56,000	969,920
Senior High School	1	2	1,000	900	1,900	224	425,600	85,120	1,400	20	28,000	538,720
Public Health Centre	1	2	100	100	200	224	44,800	8,960	200	20	4,000	57,760
Maternity Hospital	1	2	600	400	1,000	224	224,000	44,800	1,200	20	24,000	292,800
Hospital (Type C)	1	2	100	100	200	224	44,800	8,960	110	20	2,200	55,960
Kelurahan & Lurah Office	1	2	300	200	500	224	112,000	22,400	300	20	6,000	140,400
Police Post	1	1	100	-	100	178	17,800	3,560	80	15	1,200	22,560
Sub Post Office	1	1	100	-	100	178	17,800	3,560	80	15	1,200	22,560
Fire Brigade Post	1	1	100	-	100	178	17,800	3,560	80	15	1,200	22,560
Cultural Hall	1	2	150	100	250	250	62,500	12,500	150	20	3,000	78,000
Multipurpose Hall/Youth C	1	2	150	100	250	250	62,500	12,500	150	20	3,000	78,000
Kelurahan Mosque	1	1	150	-	150	178	26,700	5,340	450	20	9,000	41,040
Sports Fields	1	1	50	-	50	178	8,900	1,780	1,990	15	29,850	40,530
<b>T o t a l</b>							<b>9,662,800</b>	<b>1,932,560</b>			<b>2,787,710</b>	<b>12,450,510</b>

Remarks : For the building cost data issued by Cipta Karya on 1987/88 is appli  
(Tentang Pedoman Operasional Pelaksanaan DIP Pembangunan Bangunan Gedung Pemerintah dan Perumahan Dinas Tahun Anggaran 1987 - 1988).  
F.F.Y. is Fixing, Furnishing and Yarns.

Table 3.36 Development Cost for Neighbourhood Facility-Whole Zone 2

Sub Area	Building Development Cost				Site Dev't		T o t a l
	Construction Cost (1)	F . F . Y 20% of (1) (2)	Sub Total (1)+(2), (3)	Cost (4)	(3) + (4)		
H1-1,2,3	5,454,640	1,090,928	6,545,568	487,050	7,032,618		
H2-1,2	3,302,640	660,528	3,963,168	301,050	4,264,218		
H3-1,2	2,559,500	511,900	3,071,400	218,500	3,289,900		
H4-1	2,036,600	407,320	2,443,920	155,100	2,599,020		
H4-2	1,443,660	288,732	1,732,392	133,600	1,865,992		
H4-3	1,150,240	230,048	1,380,288	99,100	1,479,388		
H4-4	2,801,640	560,328	3,361,968	271,750	3,633,718		
H4-5	2,230,660	446,132	2,676,792	195,600	2,872,392		
Total	9,662,800	1,932,560	11,595,360	855,150	12,450,510		
<b>T o t a l</b>	<b>20,979,580</b>	<b>4,195,916</b>	<b>25,175,496</b>	<b>1,861,750</b>	<b>27,037,246</b>		

Remarks : For the building cost data issued by Cipta Karya on 1987/88 is applied  
(Tentang Pedoman Operasional Pelaksanaan DIP Pembangunan Bangunan Gedung Pemerintah dan Perumahan Dinas Tahun Anggaran 1987 - 1988).  
F.F.Y. is Fixing, Furnishing and Yarns.

Table 3.37 Building Size for Neighbourhood Facility

Facility By Gov't Sector	Floor Area, R E M A R K S	
	Unit (m <sup>2</sup> )	Site area (m <sup>2</sup> )
Kindergarten	3/child	240/ 300
Primary school	5/child	1,200/1,800
		Minimum 2 classes, @ 35 - 45p by Perumahan
		Minimum 6 classes, @ 40p by Perumahan
		Minimum 2 stories by DKI
		Target participation rate (Net) 100.0% by REPELITA IV
Junior high school	7/student	1,700/2,400
		Minimum 6 classes, @ 40p by Perumahan
		Minimum 2 stories by DKI
		Target participation rate (Gross) 65.0% by REPELITA IV
Senior high school	8/student	1,900/2,400
		Minimum 6 classes, @ 40p, Morning and Evening by Perumahan
		Minimum 2 stories by DKI
		Target participation rate (Gross) 39.5% by REPELITA IV
Public health centre	200/ 300	2 stories, Max. 100 people
Maternity hospital	1,000/1,800	2 stories, @ 0.04 m <sup>2</sup> per total population
Hospital	200/ 210	2 stories, @ 0.02 m <sup>2</sup> per total population
Kelurahan & Lurah Office	200/600	2 stories
Police post -	100/ 180	single storey
Sub post office	100/ 180	single storey
Fire brigade post	100/ 180	single storey
Cultural hall	250/ 300	2 stories, @ 0.001 per total population
Multipurpose hall,		
Youth club	250/ 300	2 stories @ 0.001 per total population
Play ground	- / 180	Play tool, water tap, plantation, etc
Sports field	50/2,040	Toilet, Locker room, storage, lighting, etc
Kelurahan Mosque	150/600	Single storey

Table 3.38 Sub zone (1) Neighbourhood Facility Area Calculated by Modified Standard

	DKI STANDARD (incase of 100%)				MODIFIED STANDARD			
	(1) person/ facility	(2) sqm/ facility	(3) total no. of facility	(4) total facility site area	(5) (1)x1.2	(6) (2)x0.6	(7) total no. of facility	(8) total facility site area
<b>R W LEVEL</b>								
1. Kindergarten	750	500	114	57,000	900	300	89	26,700
2. Primary school	1,500	3,000	57	171,000	1,800	1,800	41	73,800
3. Play Ground	1,000	250	85	21,250	1,200	150	64	9,600
4. Musholla, Church, Temple	3,000	300	28	8,400	3,600	180	20	3,600
5. Pharmacy, shops	30,000	400	3	1,200	36,000	240	4	960
6. Security post, Public Tel. etc	3,000	300	28	8,400	3,600	180	20	3,600
<b>T o t a l</b>				<b>267,250</b>				<b>118,260</b>
<b>KELURAHAN LEVEL</b>								
1. Junior High School	12,500	4,000	7	28,000	15,000	2,400	5	12,000
2. Senior High School	28,000	4,000	3	12,000	33,600	2,400	2	4,800
3. Clinic, Public Health centre	30,000	500	3	1,500	36,000	300	3	900
4. Maternity hospital	30,000	3,000	3	9,000	36,000	1,800	3	5,400
5. Laboratorium (small hospital)	30,000	350	3	1,050	36,000	210	3	630
6. Kelurahan Office	30,000	1,000	3	3,000	36,000	600	3	1,800
7. Police post	30,000	300	3	900	36,000	180	3	540
8. Sub post office	30,000	300	3	900	36,000	180	3	540
9. Fire brigade post	30,000	300	3	900	36,000	180	3	540
10. Shopping centre (pasar)	60,000	20,000	2	40,000	72,000	12,000	1	12,000
11. Commercial (small shops)	6,000	3,500	14	49,000	7,200	2,100	10	21,000
12. Cinema	30,000	2,000	3	6,000	36,000	1,200	3	3,600
13. Cultural hall (Library, Arts hall)	30,000	500	3	1,500	36,000	300	3	900
14. Multi purpose hall/Youth club	30,000	500	3	1,500	36,000	300	3	900
15. Sports field	30,000	3,400	3	10,200	36,000	2,040	3	6,120
16. Kelurahan mosque	15,000	1,000	6	6,000	18,000	600	4	2,400
<b>T o t a l</b>				<b>171,450</b>				<b>74,070</b>

Remarks : Total number of population in sub-zone (1) is 35,000 to 40,000.  
\* Only for the play ground, calculation is based on the standard of Cipta Karya,

2) Neighbourhood facilities in optional development area. The programme/neighbourhood facilities for the optional development area is prepared in the same manner as that for Zone 2. Planned programme of facilities are as follows:

Table 3.39 Neighbourhood Facility and Area by Modified Standard in Optional Development Area

Sub Area : H5 ( )				
I t e m s	No. of Unit	SQM/ Facility	Total Area (SQM)	Remarks
<b>R W LEVEL</b>				
1. Kindergarten	15	300	4,500	} Combined in one space
2. Primary school	7	1,800	12,600	
3. Play ground	11	150	1,650	
4. Musholla, Church, Temple	4	180	720	
5. Pharmacy, shops	1	240	240	
6. Security post, Public tel. Elec. sub stan, Letter box Garbage box	4	180	720	
<b>T o t a l</b>			<b>20,430</b>	
<b>KELURAHAN LEVEL</b>				
1. Junior High School	1	2,400	2,400	} Education
2. Senior High School	1	2,400	2,400	
3. Clinic, Public Health centre	1	300	300	
4. Maternity hospital	1	1,800	1,800	} Medical centre
5. Hospital	1	210	210	
6. Kelurahan office, Lurah office	-	600	-	} Government quater
7. Police post	1	180	180	
8. Sub post office	1	180	180	
9. Fire brigade post	1	180	180	
10. Shopping centre (Pasar)	-	12,000	-	} Commercial centre
11. Commercial (Small shops)	1	2,100	2,100	
12. Cinema	1	1,200	1,200	} Cultural, Recreational Youth centre
13. Cultural hall (Library, Arts hall, etc)	1	300	300	
14. Multi purpose hall, Youth club	1	300	300	
15. Sports field	1	2,040	2,040	
16. Kelurahan mosque	1	600	600	
<b>T o t a l</b>			<b>14,190</b>	

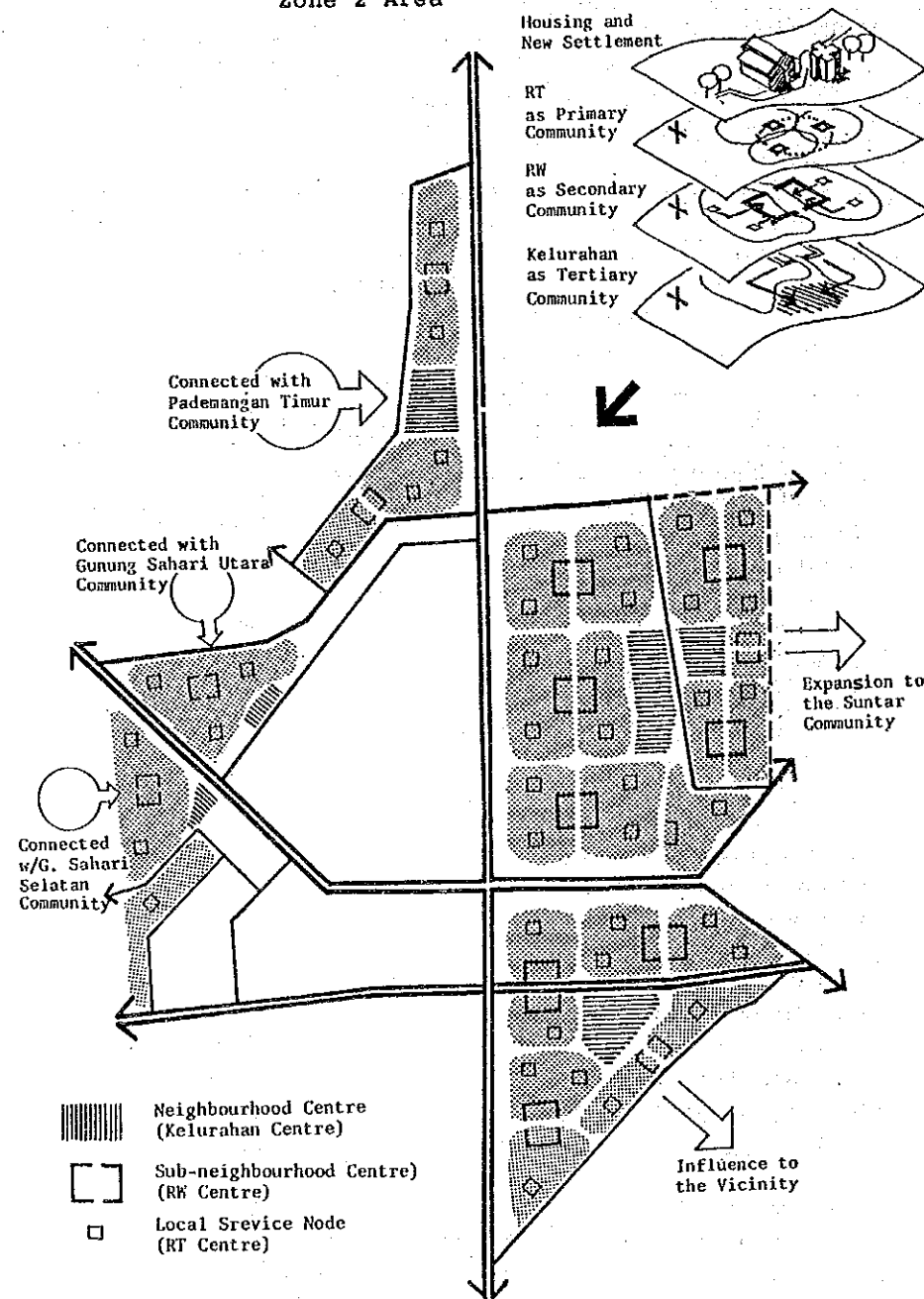
Note : Projected Population : 14,070 p (2,820 House Hold)  
Average Facility Area : RW level 1.46 sqm/person 7.25 sqm/HH  
Kelurahan level 1.01 sqm/person 5.03 sqm/HH  
Whole level 2.46 sqm/person 12.30 sqm/HH

Sub zone (1) development includes two types of site conditions. One is the ex-airport area with no inhabitants, and the second is the urbanized area in Kelurahan Kebon Kosong with a population of approximately 16,000 and airline staff housing estate in Kelurahan Gunung Sahari Utara with approximately 3,700.

Due to these site conditions planning of neighbourhood facility also basically has two obvious planning concepts. If there are no inhabitants, neighbourhood facility planning can be carried out from the beginning freely. However when various housing and basic neighbourhood facilities exist on site, the plan should be done carefully taking into consideration existing facilities and present inhabitants and the needs of future inhabitants and integration of any new facilities with those already present.

The Sub-neighbourhood centre on the RW level comprises a kindergarten, primary school, play ground, religious building, local shops, and other public installations such as security post, public telephone, electric sub-station, post box, garbage box, water tap, becak and warung pool which provide daily goods, services and safety.

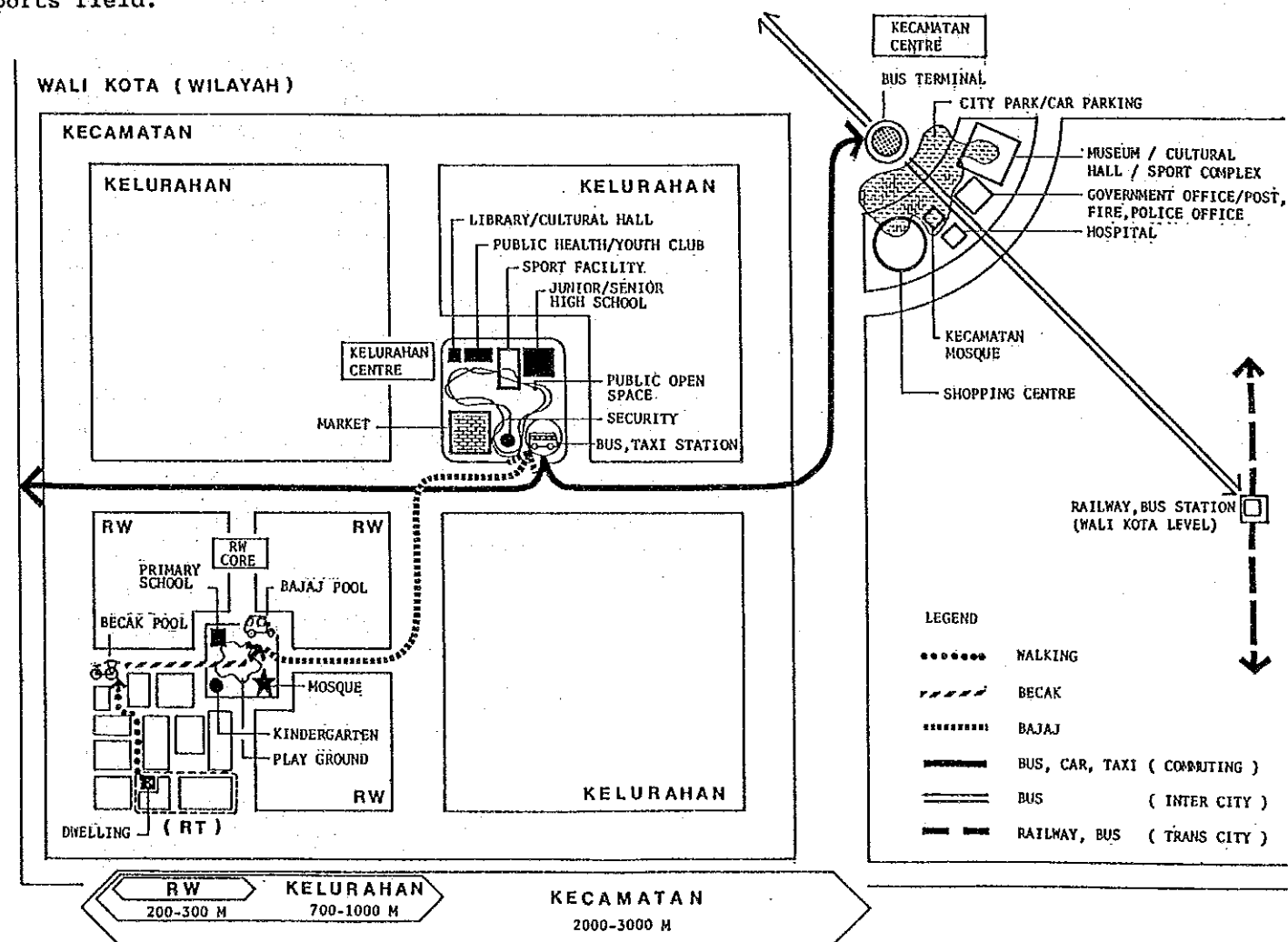
Fig. 3.16 Conceptual Neighbourhood Structure in Zone 2 Area



There are four neighbourhood centres on the Kelurahan level in Zone 2, each with its own educational quarter, government offices, commercial facilities, religious facilities, medical facilities, cultural and recreational facilities as well as park and sports field.

The building of neighbourhood facility is basically two stories to economize land occupation, except for kindergarten and some minor buildings. In particular, educational facilities are a minimum 2 stories as guided by the Tata Kota DKI. These buildings are allocated and designated in harmony with the residential buildings due to the town scape and environmental considerations.

Fig. 3.17 Development Concept



5.3.2 Zone-3

The renewal project of Zone 3 consists of various components such as development of new residential estate, redevelopment and improvement of existing Kampung area in Zone 4.

1) Development scheme

First stage of Zone 3 development will start in 1990 by Perumnas with 1,000 units for middle and low class housing.

Perumnas will construct 6,000 housing units totally on 30 ha. within 5 years.

The programming of neighbourhood facility will follow the new population increase year by year.

2) Consideration for Zone 4

Some neighbourhood facilities exist in Zone 4 (Kel. Kebon Kosong) which has a population of approximately 16,000.

Existing facilities are as follows:

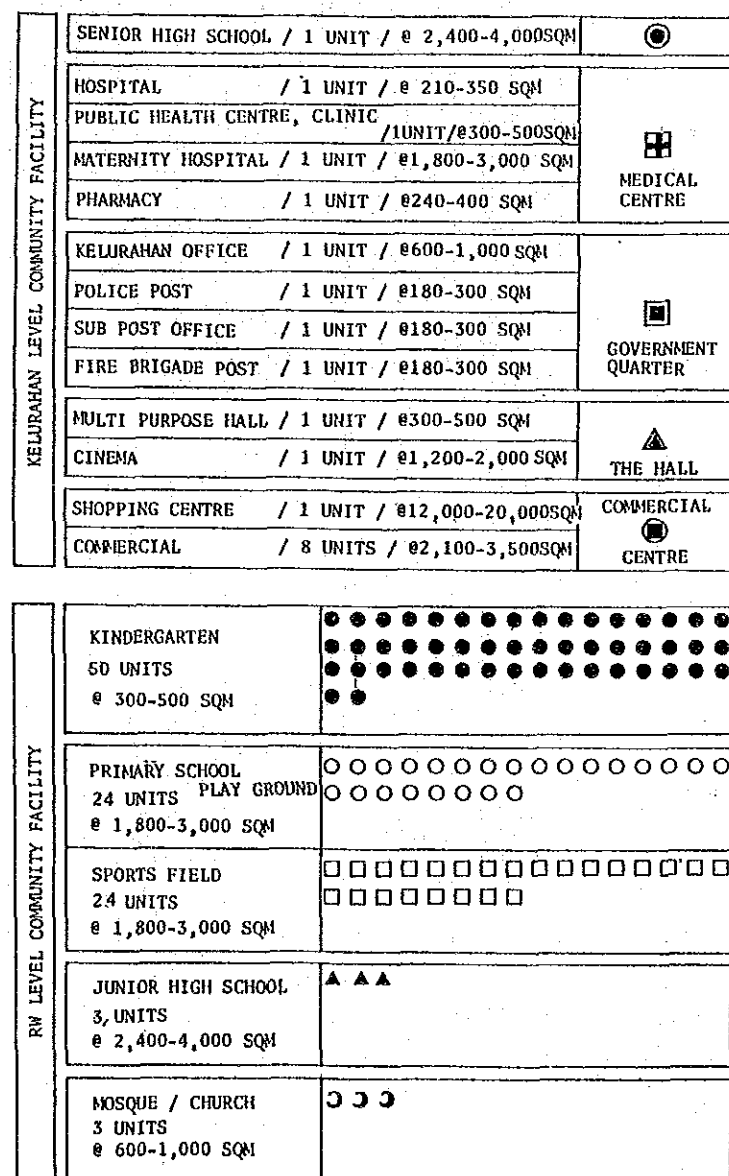
Kelurahan office, Police station . . . . .	1
Kindergarten . . . . .	6
Primary school . . . . .	18
Junior high school . . . . .	2
Senior high school . . . . .	1
School for handicaped children . . . . .	4
Mosque . . . . .	1
Public health centre . . . . .	1
Sports court . . . . .	12
Market . . . . .	2

(Based on the statistics by DKI)

During the construction period existing facilities will be maintained as long as possible so that present inhabitants can use them. The existing facilities will then be removed after the construction of new facilities.

The demolition of existing neighbourhood facilities shall be considered in combination with housing development mechanism and strategy.

Fig. 3.18 Preliminary Distribution Model for Neighbourhood Facilities in Zone 3 (Based on the Modified DKI Standard)

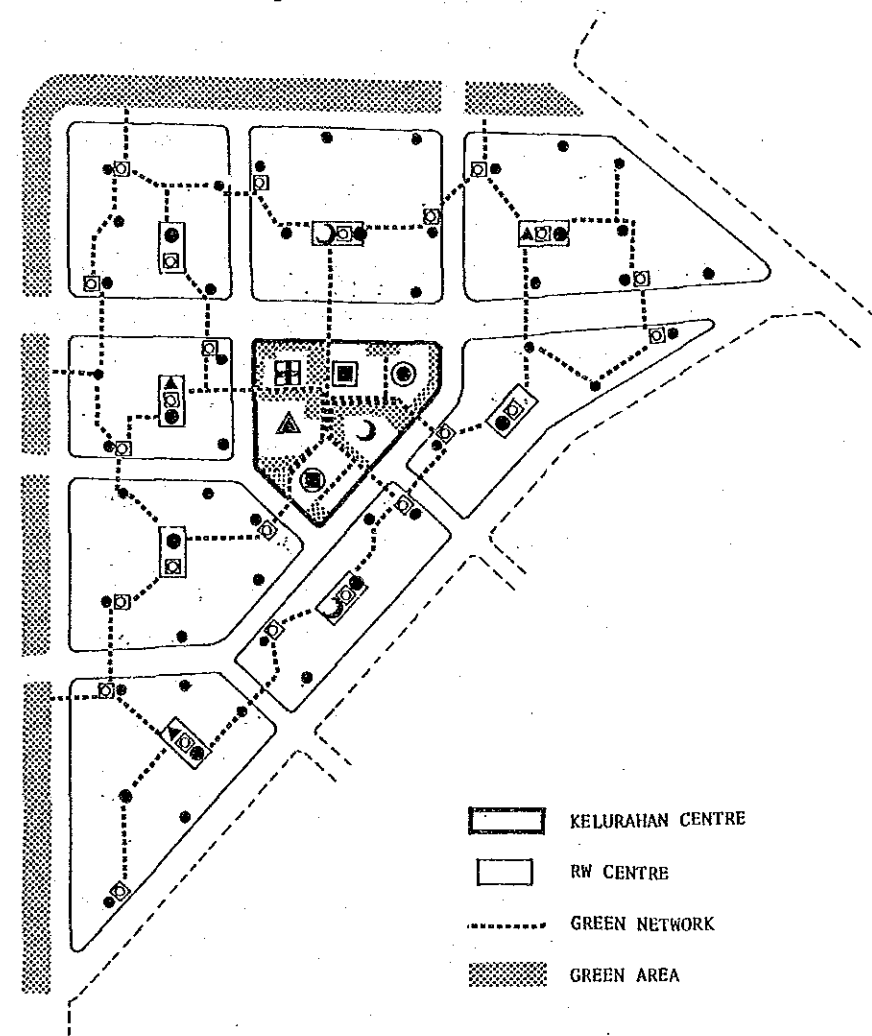


3) Execution body

The Perumnas and/or KCIU will consider providing assistance for facility execution to the relevant agencies.

Planned number of facilities, capacity and preliminary construction cost shall be discussed in the following pages.

Fig. 3.19 Conceptual Distribution Model for Neighbourhood Facilities in Zone 3



	POPULATION	SITE AREA	NET DENSITY
TOTAL	36,000-43,000 p	41.62 HA	AVERAGE 990-1,100 P/HA

5.3.3 Zone-5

As outlined in the following, shortage of neighbourhood facilities is one of the most serious problems for the comprehensive improvement of housing environment.

There are three steps or three aspects of improvement to be carried out in accordance with economic growth in the coming years. Firstly, shortage in quantity shall be overcome and secondly, simultaneously the quality of every facility shall be upgraded.

The other important aspect is to reorganize the existing provision of these facilities in such a manner so as to achieve spatial harmony with the people's life in the housing area.

In particular a major concern are the residential areas for lower income groups where the improvement of housing environment is an urgent need.

At present, the vicinity of Zone 1 area has environmental problems stemming from low rise high density housing units. In accordance with the basic programme of urban renewal, this area shall be improved to medium or high rise housing as much as possible in terms of land effectiveness. After changing the housing environment, some appropriate land can be utilised for the neighbourhood facility site to follow the distribution programme.

The concept of distribution system for neighbourhood facilities is as follows:

- 1) Peoples' daily life patterns are simulated to the community units starting from RW unit.
- 2) Above activities are supported by the convenient transportation mode in accordance with factor of time and distance.
- 3) Each facility has own catchment areas with population density in the residential area.

Table 3.40 Shortage of Neighbourhood Facilities in Study Area

TYPE OF FACILITY	NO. OF FACILITY	FACILITY DEMAND (POPULATION/FACILITY)		ESTIMATED NO. OF FACILITY	
		EXISTING	STANDARD	TOTAL	SHORTAGE
<b>EDUCATIONAL</b>					
1. KINDERGARTEN	74 (12.3%)	5,570	750	600 (100%)	526
2. PRIMARY SCHOOL	145 (48.5%)	2,840	1500	300 (100%)	155
3. JUNIOR HIGH SCHOOL *	51 (14.2%)	8,080	12,500	36 (100%)	(+15)
4. SENIOR HIGH SCHOOL *	36 (225%)	11,440	28,000	16 (100%)	(+20)
<b>RELIGIOUS</b>					
1. MOSQUE (SMALL)	101 (73.7%)	4,078	3,000	137 (100%)	36
2. CHURCH, TEMPLE	14 (100%)	29,430	30,000	14 (100%)	0
<b>HEALTH</b>					
1. PUBLIC HEALTH CENTRE	9 (64.3%)	45,770	30,000	14 (100%)	5
2. HOSPITAL	8 (57.1%)	51,500	30,000	14 (100%)	6
3. PHARMACY	7 (50%)	58,800	30,000	14 (100%)	7
<b>CULTURE/SPORTS</b>					
1. SPORTS COURT	147 (98%)	3,061	3,000	150 (100%)	3
2. FOOTBALL GROUND	7 (46.7%)	64,290	30,000	15 (100%)	8
3. CINEMA	9 (64.3%)	45,770	30,000	14 (100%)	5
4. CULTURAL HALL	2 (66.7%)	208,000	120,000	3 (100%)	1
5. YOUTH CLUB	1 (7.1%)	412,000	30,000	14 (100%)	13
<b>COMMERCIAL</b>					
1. MARKET (PASAR)	13 (92.8%)	3,170	30,000	14 (100%)	1

Standard by the Tata Kota DKI Jaya

\* Junior and Senior High School is more than standard, but facility environment is very poor such as spaces, building conditions and other auxiliary facilities

On the basis of the described concept, studies of model cases for environmental improvement and renewal in Zone 5 are shown in Figs. 3.21 and 3.22. Methods and features of the obvious block patterns are shown in the figures.

This diagram shows the concept of the relation between Zone 2 and its vicinity.

New facilities development in Zone 2 should be not only for the new settlements but also for the settlements in the vicinity where such facilities are insufficient. Thus, provision of the facilities will be well balanced for the new community and existing inhabitants.

Fig. 3.20 Neighbourhood Facilities Organically Connecting Zone 2 and its Vicinity

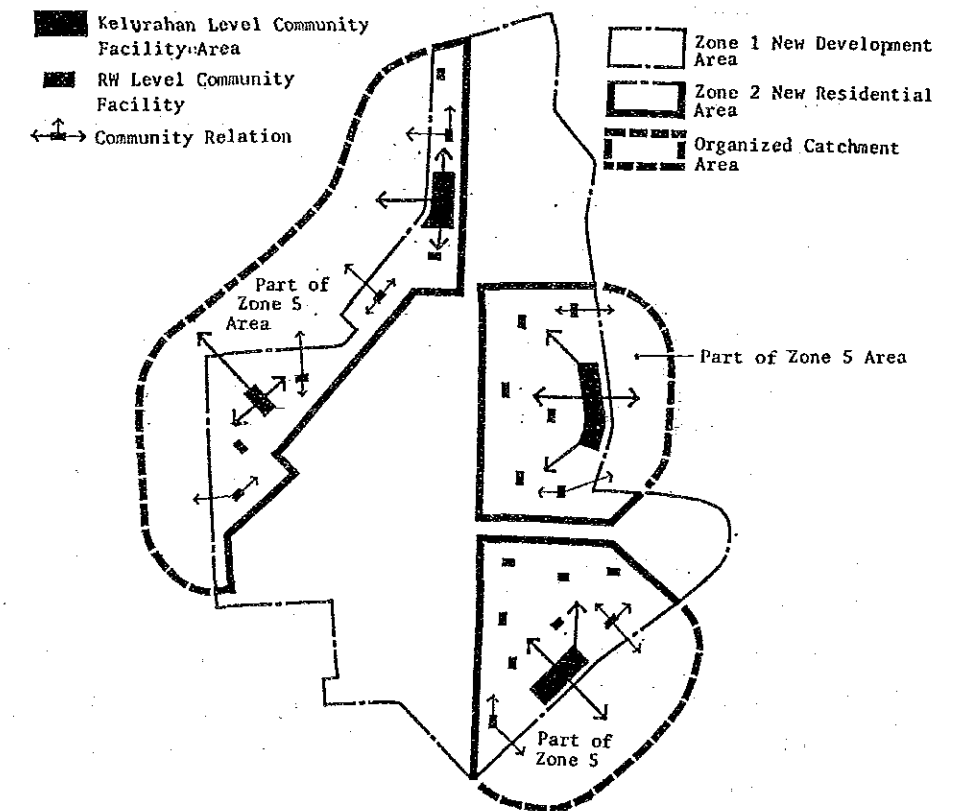
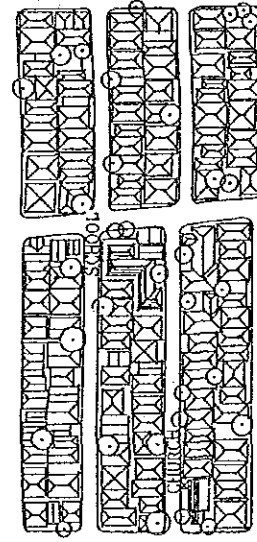


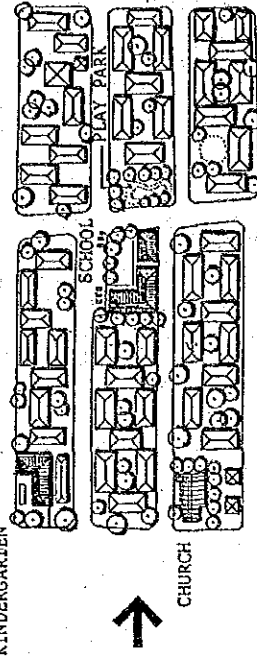
Fig. 3.21 Model Case A

Urban block is orderly block, but environmental condition is poor such as high density of single storey detached dwelling units, shortage of community facility and lack of space.

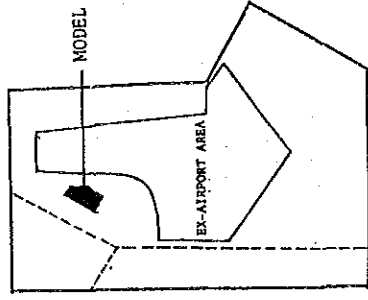
■ EXISTING URBAN BLOCK : SHORTAGE OF COMMUNITY FACILITY, LACK OF OPEN SPACE



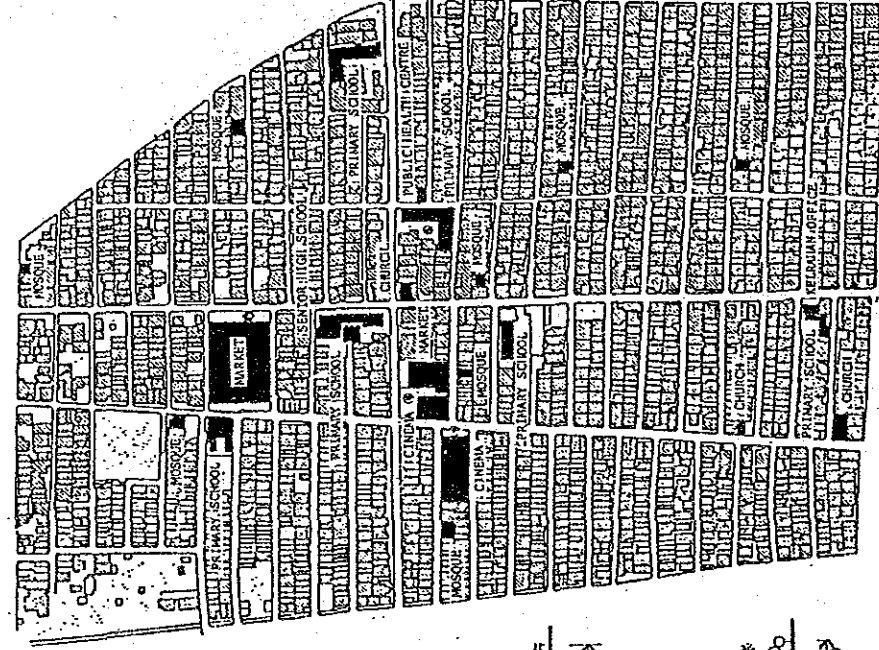
■ IMPROVEMENT : APPROPRIATE DISTRIBUTION OF COMMUNITY FACILITIES BY MEDIUM RISE HOUSING



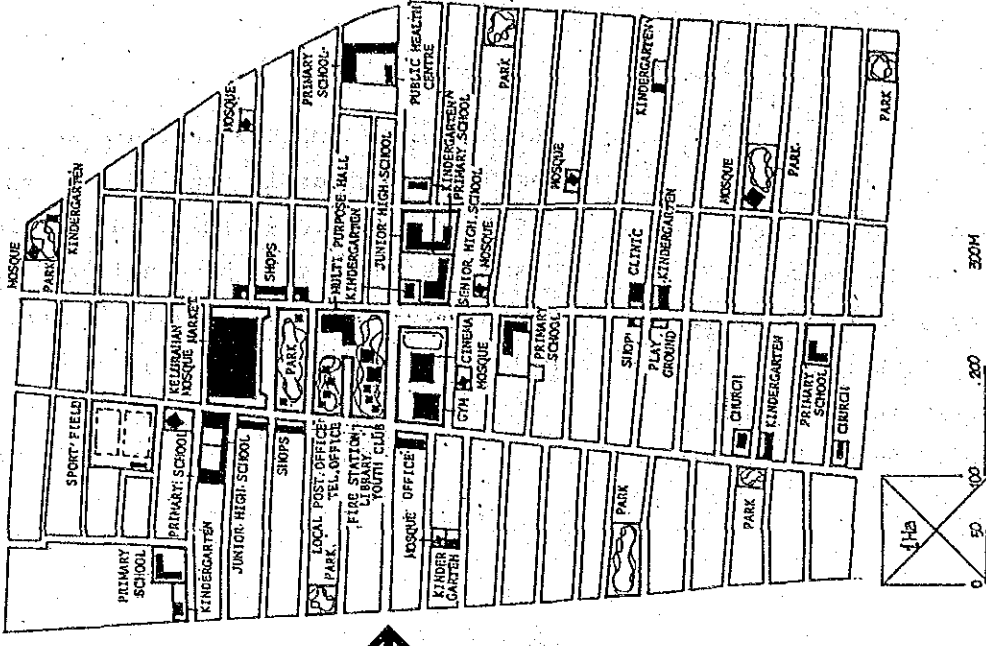
KEY MAP



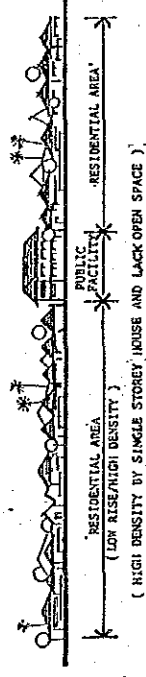
■ EXISTING RESIDENTIAL AREA



■ AFTER-URBAN RENEWAL (LONG TERM DEVELOPMENT)



■ SECTION : EXISTING CONDITION



■ SECTION : AFTER URBAN RENEWAL ( LONG TERM DEVELOPMENT )

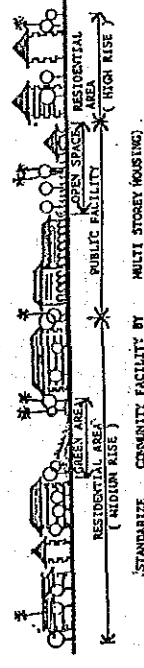
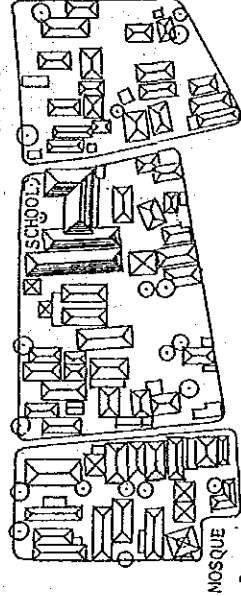


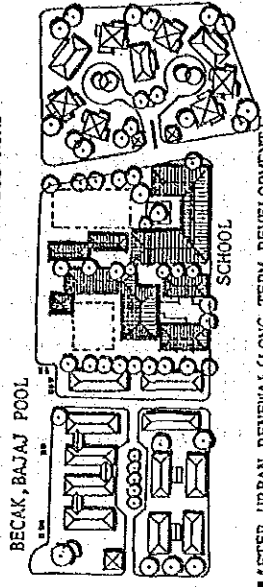
Fig. 3.22 Model Case B

Irregular urban block, narrow roads and complicated road axes.

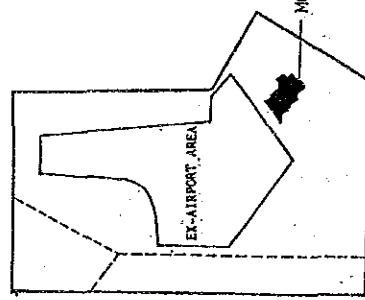
■ EXISTING URBAN BLOCK : IRREGULAR URBAN BLOCK, LACK OF RESIDENTIAL SERVICE ROAD, NARROW SITE FOR COMMUNITY FACILITY



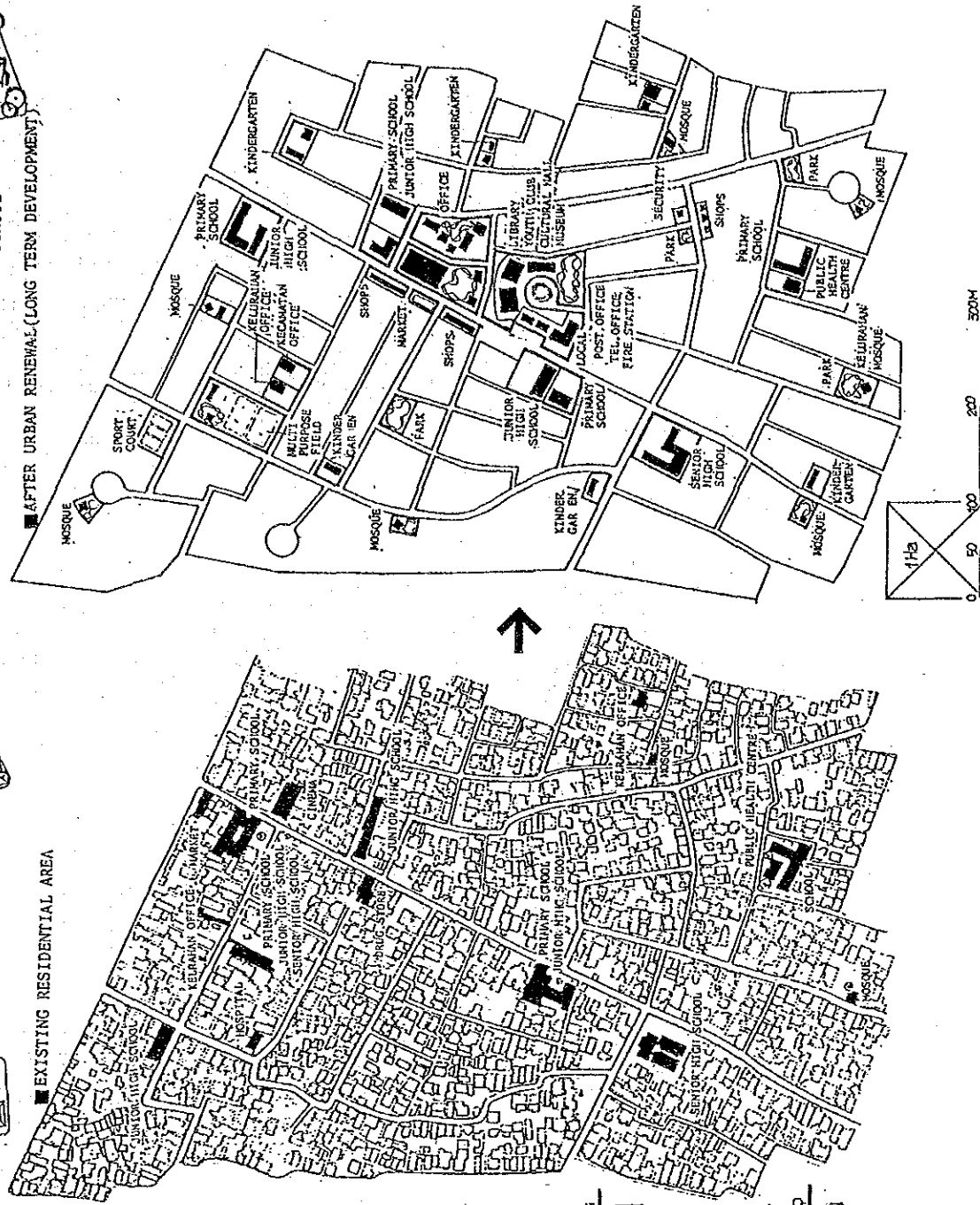
■ IMPROVEMENT : MEDIUM RISE HOUSING, RENEWAL OF BLOCK AND RESIDENTIAL SERVICE ROAD



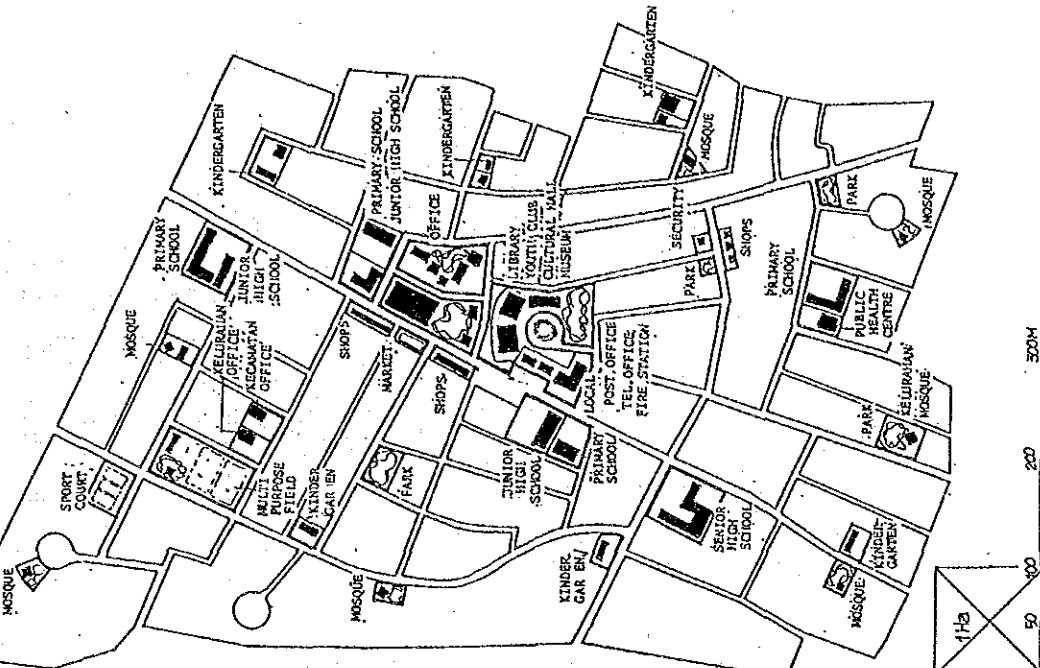
KEY MAP



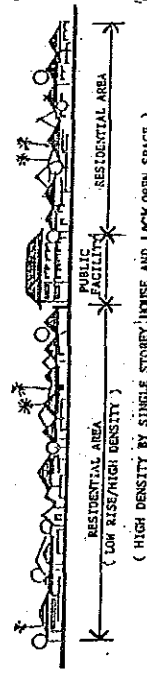
■ EXISTING RESIDENTIAL AREA



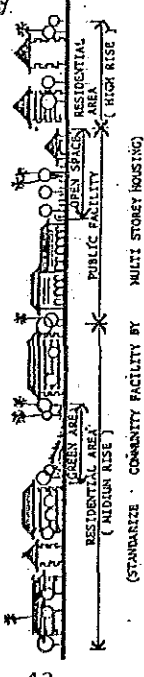
■ AFTER URBAN RENEWAL (LONG TERM DEVELOPMENT)



■ SECTION : EXISTING CONDITION



■ SECTION : AFTER URBAN RENEWAL ( LONG TERM DEVELOPMENT )



6. SEWERAGE SYSTEM PLANNING

Road network, drainage system and urban utilities needed for development of Kemayoran Complex (Zone 1) and its vicinity area (Zone 5) are identified and planned in harmony with macro-scale plan of Jakarta and surrounding situation in CHAPTER II, 3.3. "URBAN INFRASTRUCTURE DEVELOPMENT" in this report.

Furthermore, complete sanitary sewerage system for Kemayoran Complex is studied from the aspects of environmental preservation and saving water resources which must be considered and enforced in urban development especially in case of high population density and large area.

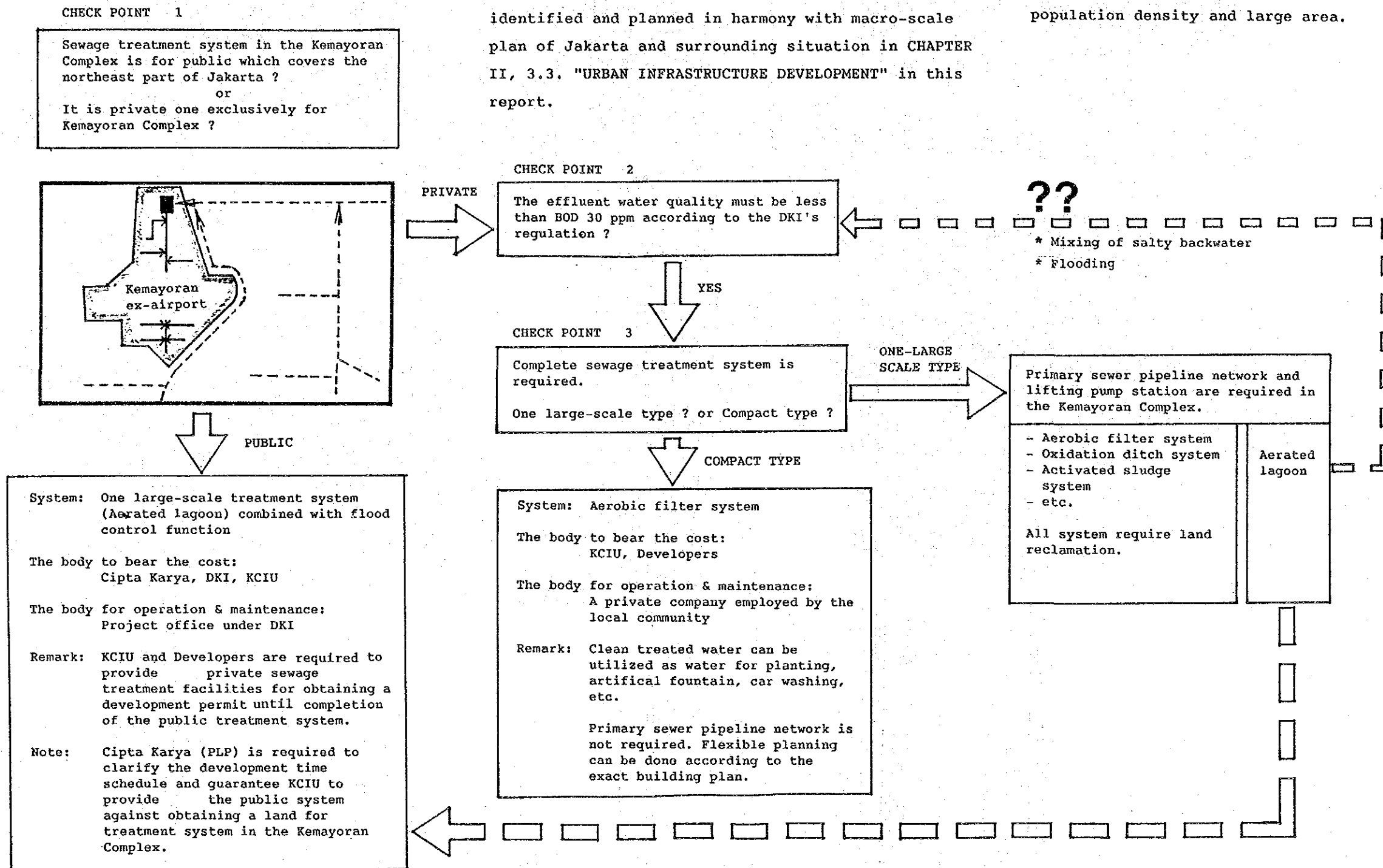
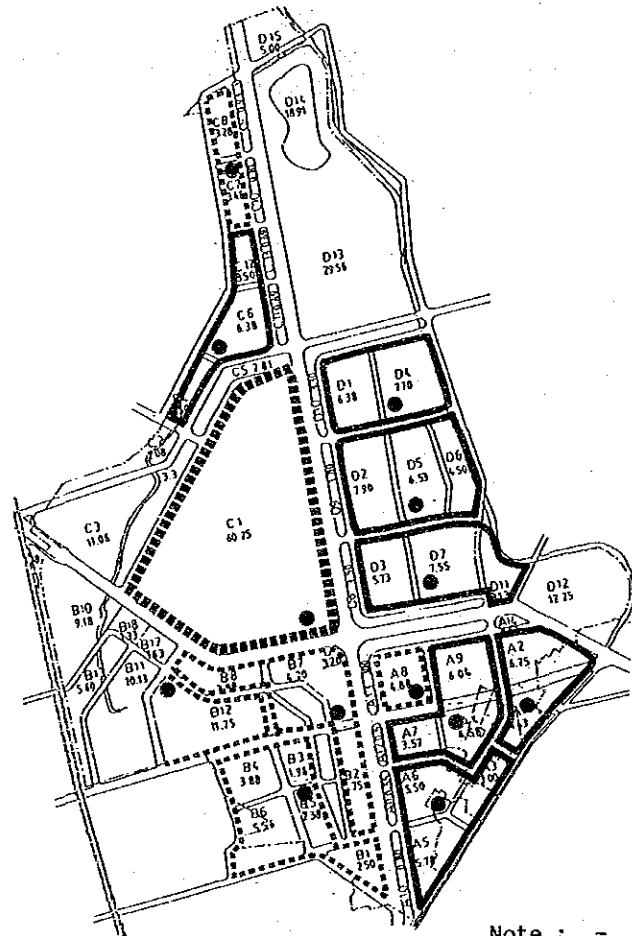


Fig. 3.23 Checking Flow of Characteristics of Sewerage System of Kemayoran Complex

### 6.1. SEWERAGE SYSTEM OF KEMAYORAN COMPLEX

Fig. 3.23 show the checking flow of characteristics of sewerage system of Kemayoran Complex and selection flow of type of sewage treatment.

The Master Plan for Jakarta Sewage and Sanitation Project made in 1977 recommended that public trunk sewer installed along Jl. R.E. Martadinata, which is the north boundary road of Kemayoran Complex, for collecting sewage from Sunter and Kemayoran.



Note : - This treatment capacity includes all the wastewaters from kitchen, bath and toilet.  
 - The site area of treatment plant unit is for an aerobic filter system.

Fig. 3.24 Allocation of Sewage Treatment Plant (Example)

However, at present an authorized implementation schedule of such plan does not exist, and its implementation may come after the completion of Kemayoran Complex development.

Therefore, sewerage system of Kemayoran Complex has to be developed as a private system for the time being and this study is made on this basis. If the development programme of public sewerage system is drastically advanced by the Government in the very near future, a part of sewerage system of Kemayoran

Treatment Plants within Blocks	Unit's Capacity	Number	Area per Unit
	3,000 m <sup>3</sup> /day	1	1,500 m <sup>2</sup> (30x50m)
	2,000 m <sup>3</sup> /day	7	1,000 m <sup>2</sup> (25x40m)
	1,000 m <sup>3</sup> /day	5	750 m <sup>2</sup> (25x30m)

Phase Zone	I - 1992	II 1993 - 1995	III 1996 - 1998
Zone A (Perumnas)	1,000 m <sup>3</sup> x 1 2,000 m <sup>3</sup> x 1	2,000 m <sup>3</sup> x 2	
Zone D (Housing)		2,000 m <sup>3</sup> x 3	
Zone C (Housing)			1,000 m <sup>3</sup> x 1 2,000 m <sup>3</sup> x 1
Zone C (Jak. Fair)	3,000 m <sup>3</sup> x 1		
Zone B (Commerc.)	1,000 m <sup>3</sup> x 1	1,000 m <sup>3</sup> x 1	

Complex to be developed in the later phase may be involved in the public sewerage system.

As for sewage treatment type for Kemayoran Complex, a dozen compact type sewage treatment plants (one plant per block) are recommendable and more realistic rather than one large-scale type because it can be constructed in accordance with the building development schedule and there is more flexibility toward the variation of urban planning during the course of the 10-years Kemayoran Complex development.

The plants with three ranks of capacity are arranged in Fig. 3.24 such as 1000 m<sup>3</sup>/day, 2000 m<sup>3</sup>/day and 3000 m<sup>3</sup>/day. However, the capacity and arrangement of individual plant shall be designed by the developers in accordance with their final development plan and sewage flow.

Fig. 3.25 and Fig. 3.26 show the examples of recycling treated effluent in housing and building complexes for commercial use and offices respectively. The treated effluent will be utilized as water for planting, fire extinguishing, car washing, artificial fountains and so on. In addition it will be utilized as flushing water for toilets in building complexes for commercial use and offices.

The system will greatly contribute to reducing the water consumption as well as saving expenses especially for commercial use because water charge for large scale commercial use is as expensive as 1,500 Rp/m<sup>3</sup> in the case of water consumption exceeding 50 m<sup>3</sup> per month.



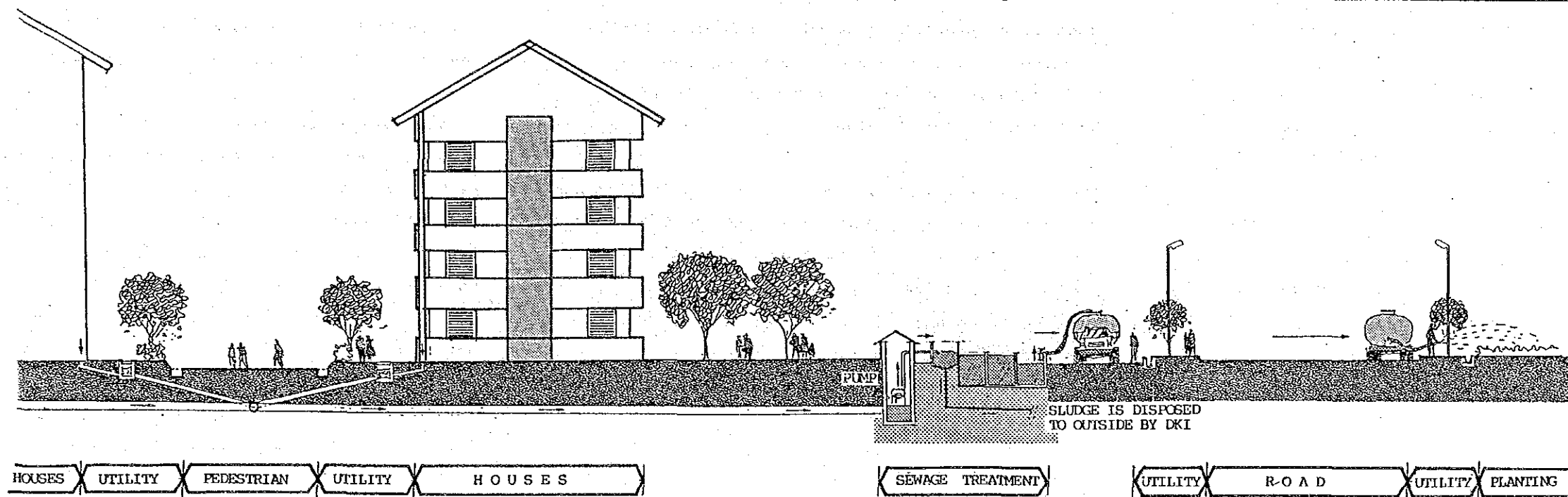


Fig. 3.25 Recycle of Treated Effluent in Housing Area

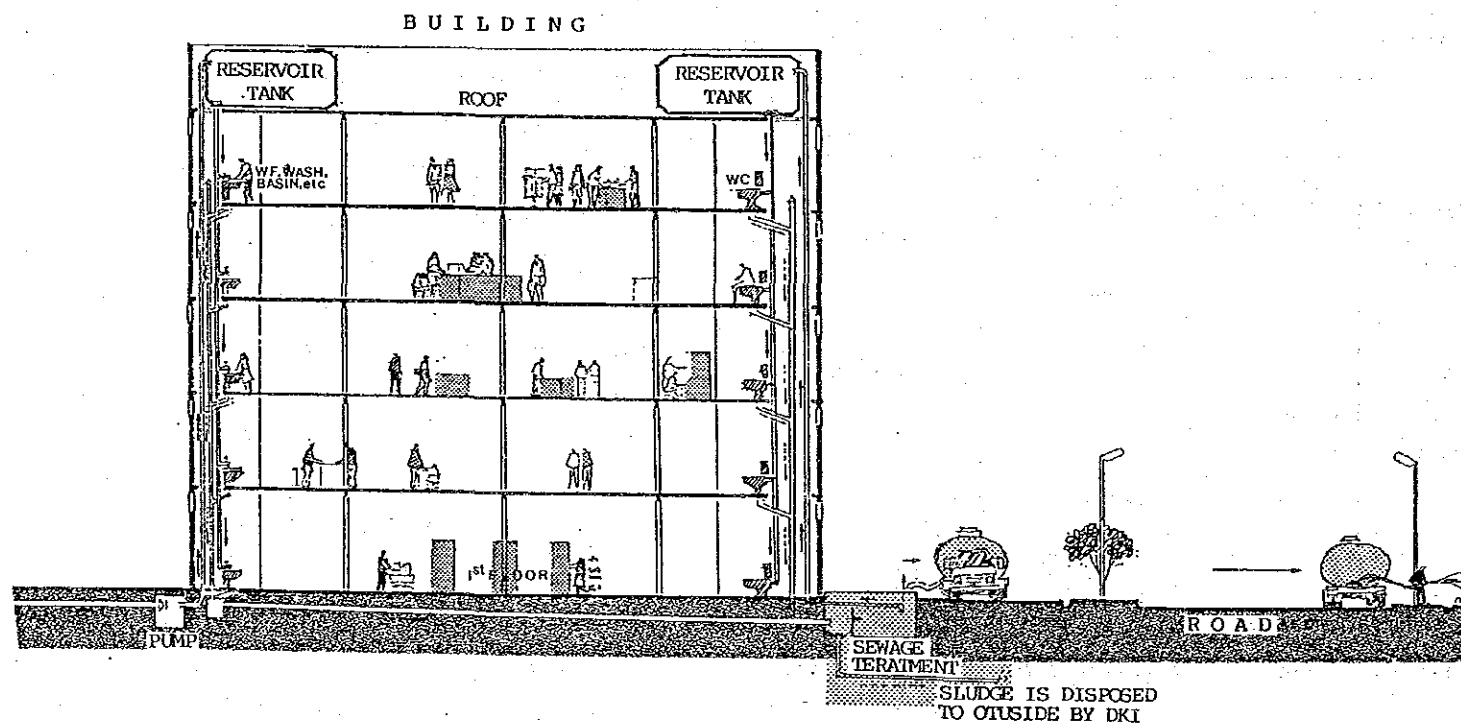


Fig. 3.26 Recycle of Treated Effluent in Commercial Buildings and Offices

MASTER PLAN and FEASIBILITY STUDY  
 on KEMAYORAN URBAN HOUSING  
 DEVELOPMENT and RENEWAL PROJECT

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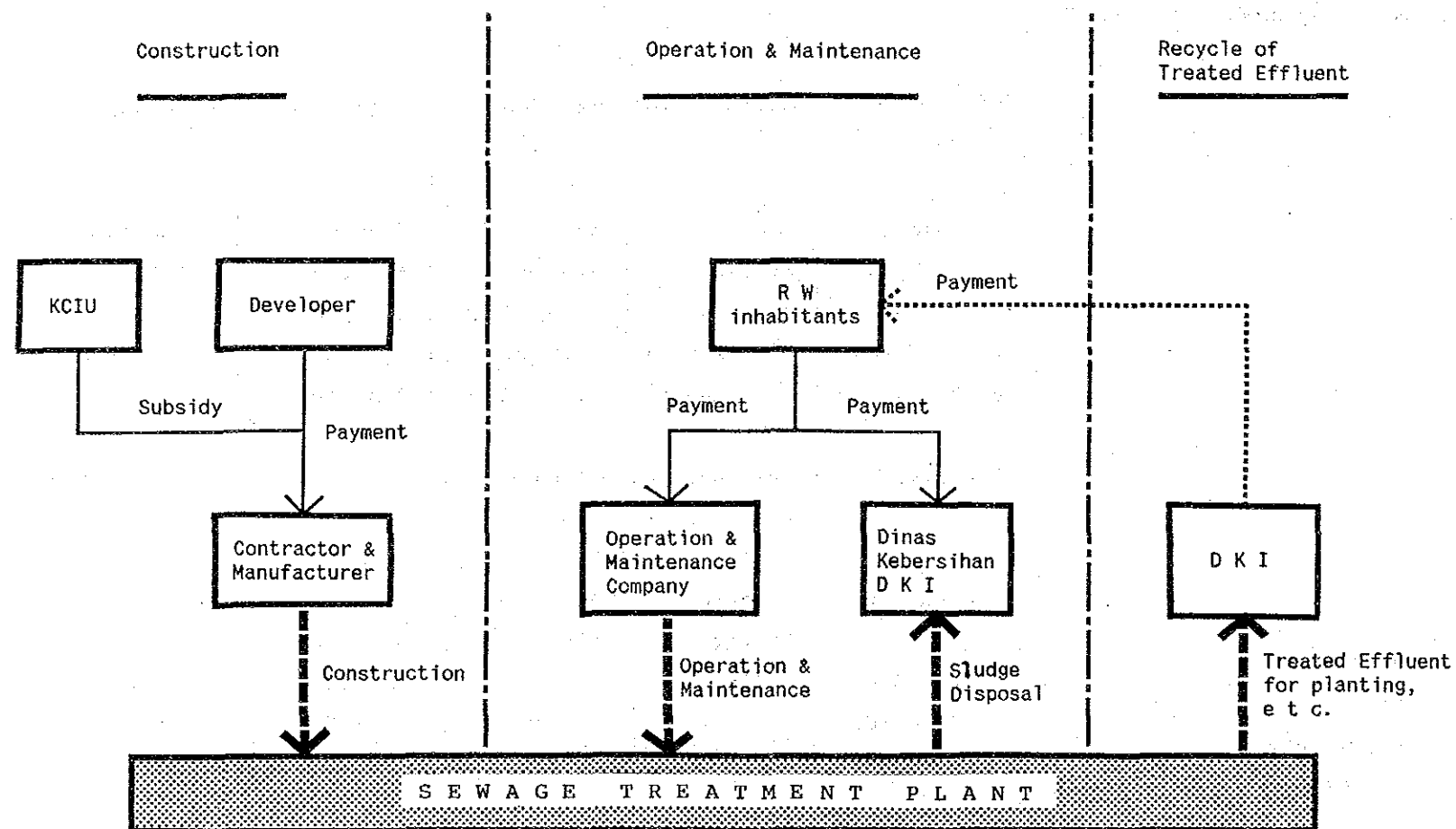


Fig. 3.27 Organizational Chart of Sewage Treatment Plant

## 6.2. ORGANIZATION FOR THE SEWAGE TREATMENT PLANT

Fig. 3.27 shows the organizational chart recommended for the sewage treatment plant.

### 6.2.1 Construction

The developers shall prepare the final design of the plant in accordance with their development plan and shall be responsible for the plant construction.

KCIU shall subsidy a part of such cost because it is responsible for environmental preservation regarding the development of Kemayoran Complex.

### 6.2.2 Operation and Maintenance

For operation and maintenance of the plant inhabitants shall organize a self-governing body (RW) like Yayasan. Such body collects a certain amount of charge from inhabitants and enters into a contract with a company for operation and maintenance.

The sludge produced through the treatment is collected by Dinas Kebersihan DKI at the rate of 800 Rp/m<sup>3</sup>.

### 6.2.3 Recycle of Treated Effluent

The treated effluent will be utilized for several purposes as mentioned before. In case that DKI uses such treated effluent for public uses instead of PAM's water, some charge may be paid to the said self-governing body.

### 6.3. APPLICABLE TREATMENT PROCESSES

The Kemayoran Complex is located in central urban and high-density populated area. According to the regulation regarding water quality discharged to the river issued by DKI in 1977, the effluent BOD to be discharged to Kali Sunter should be less than 30 mg/l. From these points of view, the required treatment process should be of high efficiency with minimum site area.

Tables 3.41 and 3.42 show comparison of power consumption and site area for four kinds of treatment processes. From such comparison an aerobic filter process seems to be the most applicable for the time being.

The waste water treatment technologies are still being developed with considerable rapidity. Consequently more efficient and economic sewage treatment system may be developed in the next decade until completion of Kemayoran Complex development.

Table 3.44 Construction Cost in Each Categorized Housing  
(in case of 2,000 m<sup>3</sup>/day)

Housing Category	Population Density (prs/ha)	Sewage flow		Construction cost per land area (Rp/M <sup>2</sup> )
		(m <sup>3</sup> /prs/day)	(m <sup>3</sup> /ha/day)	
	(A)	(B)	(C=AxBx1.3)	(C x 132)
High income	350	0.20	91	12,000
Mid. income	700	0.16	146	19,000
Low income	1,000	0.12	156	21,000

Note : \* An additional 30% is the sewage from communal facilities in the housing area.

### 6.4. SUBSIDY SYSTEM OF THE COST

The preliminary cost estimation of aerobic filter process is shown in Table 3.43, but it is subject to modification according to the detailed study by KCIU and developers concerned.

The sewage flow from each categorized housing and the construction cost converted into per land area of 1.0 m<sup>2</sup> is as shown in Table 3.44.

The construction cost of sewage treatment plant is 12,000 Rp/m<sup>2</sup> for high income group, 19,000 Rp/m<sup>2</sup> for middle income group and 21,000 Rp/m<sup>2</sup> for low income group. The cost for high income group is lower than that for low income group because of great difference in population density.

Table 3.41 Comparison of Power Consumption per 1.0 m<sup>3</sup> of Sewage

Capacity	Aerobic Filter	Activated Sludge	Extended Aeration	Oxidation Ditch
300 m <sup>3</sup> /day	0.33 KWH/m <sup>3</sup>	0.49 KWH/m <sup>3</sup>	0.54 KWH/m <sup>3</sup>	0.47 KWH/m <sup>3</sup>
2,000 m <sup>3</sup> /day	0.17 KWH/m <sup>3</sup>	0.35 KWH/m <sup>3</sup>	0.40 KWH/m <sup>3</sup>	0.38 KWH/m <sup>3</sup>
6,000 m <sup>3</sup> /day	0.16 KWH/m <sup>3</sup>	0.35 KWH/m <sup>3</sup>	0.40 KWH/m <sup>3</sup>	0.38 KWH/m <sup>3</sup>

Table 3.42 Comparison of Site Area (Supposing the site area of aerobic filter process as 100)

Capacity	Aerobic Filter	Activated Sludge	Extended Aeration	Oxidation Ditch
300 m <sup>3</sup> /day	100	190	200	250
2,000 m <sup>3</sup> /day	100	250	250	360
6,000 m <sup>3</sup> /day	100	230	290	390

Table 3.43 Cost of Aerobic Filter Process

Capacity	unit : million Rp	
	Construction Cost	Construction cost per sewage 1.0 m <sup>3</sup>
1,000 m <sup>3</sup> /day	1,450	1.45
2,000 m <sup>3</sup> /day	2,640	1.32
3,000 m <sup>3</sup> /day	3,660	1.22

Fig. 3.28 shows an example of cost sharing between KCIU and developers. This system is made on the assumption that KCIU subsidizes a half of construction cost as a whole.

In this example, there is no subsidy for high income group. For low income group two-thirds of the cost is subsidized by KCIU (14,000 Rp/m<sup>2</sup>) and one-third of the cost is borne by the developers (7,000 Rp/m<sup>2</sup>).

The above subsidy system is just recommended and is not yet authorized by KCIU nor other bodies concerned. The final amount and proportion of subsidy to sewage treatment plant shall be decided by KCIU based on the financial capability of KCIU, and through discussion and negotiation with developers.

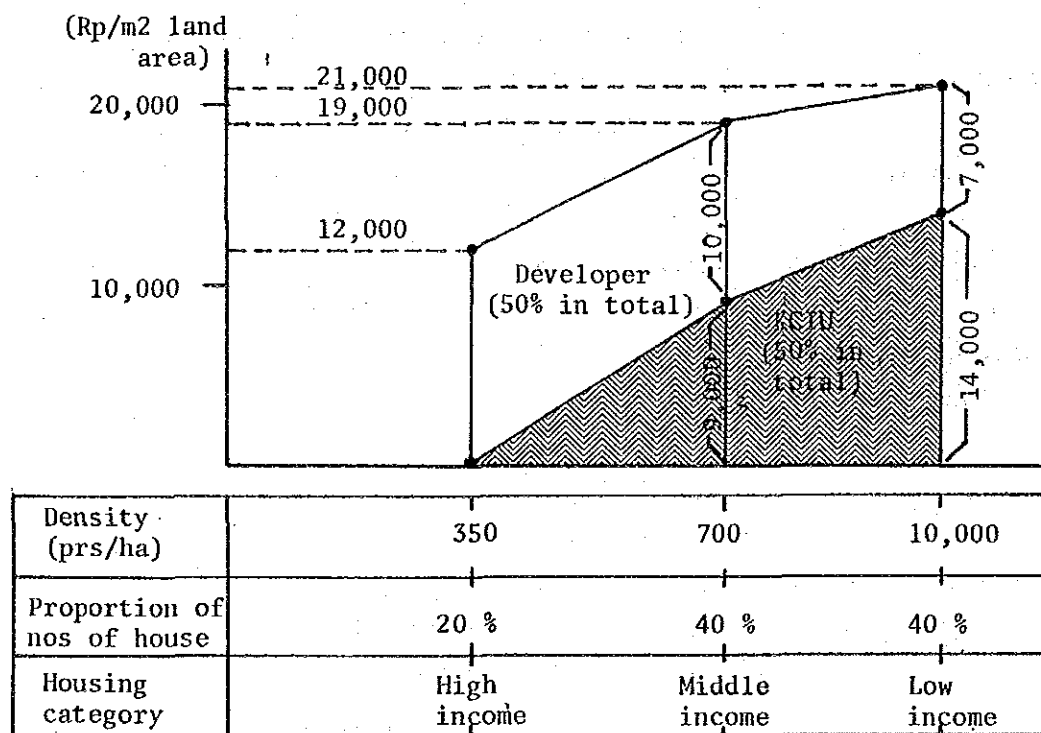


Fig. 3.28 An Example of Share of The Cost

The operation and maintenance cost is roughly estimated as shown in Table 3.45. The monthly charge for operation and maintenance to be collected from one household is :

$$5 \text{ (prs/hours)} \times 0.16 \text{ (m}^3\text{/prs/day)} \times 118.5 \text{ (Rp/m}^3\text{)} \times 30 \text{ day} = 2,800 \text{ Rp/month/household}$$

The monthly charge is also classified by income in order to reduce the economic burden of low income group as shown in Table 3.46.

Table 3.45 Operation and Maintenance Cost

(In case of Aerobic Filter system with 2000 m<sup>3</sup>/day capacity)

	Unit consumption per 1.0m <sup>3</sup> sewage	Unit Price	Cost (Rp/1.0m <sup>3</sup> sewage)	Paid to
Electricity	0.17 kwh	about 125 Rp/kwh	13.6	PLN
Sludge disposal	0.009 m <sup>3</sup> sludge	800 Rp/m <sup>3</sup> sludge	7.2	Dinas Kebersihan D K I
Spare parts, repairing and others	2.5% of the construction cost in a year		90.4	Maintenance company contracted with R W
<b>T O T A L</b>			<b>118.5</b>	

Table 3.46 Monthly Charge for Operation and Maintenance

Housing Category	Proportion in nos of houses	Operation and Maintenance Cost (Rp/month/house)
High income	20 %	5,600
Mid. income	40 %	2,800
Low income	40 %	1,400
<b>A v e r a g e</b>		<b>2,800</b>

7. INTEGRATED DEVELOPMENT AND RENEWAL

7.1 ZONE 2 DEVELOPMENT EXCLUDING PERUMNAS HOUSING

7.1.1 Seed Capital

As explained in Chapter IV regarding KCIU, approximately Rp. 70 billion will be used for subsidy to low income group housing renewal in Zone 5. Rp. 70 billion is divided into Grant and Loan portions which are Rp. 20 billion and Rp. 50 billion respectively.

Rp. 20 billion is equivalent to 20% of selling price of F-27 (Rp. 8,100,000/unit) for a total of 12,345 units.

$$\text{Rp. 20 billion} \div (\text{Rp. 8,100,000/unit} \times 20\%) = 12,345 \text{ housing units}$$

Or Rp. 20 billion is equivalent to 30% of selling price of F-18 (Rp. 6,400,000/unit) for a total of 10,416 units.

$$\text{Rp. 20 billion} \div (\text{Rp. 6,400,000} \times 30\%) = 10,416 \text{ housing units}$$

Note: Selling price disregards costs of land acquisition, demolition of existing structure, etc. Selling price is that of BTN standard for flat type housing.

Rp. 50 billion of Loan portion is referred to Perumnas/BTN loan disbursement in 1987 at Jakarta I branch which amounts to Rp. 51.1 billion for 11,836 housing units.

7.1.2 Transition House as Temporary Accommodation

Transition House in Zone 4 described in the previous sections and referred to in Priority Site B in Chapter V, is for those inhabitants who are living in Zone 4 at present.

It is hoped that those inhabitants who will live in Transition Houses will improve their job skill and increase their income to dislocate to better houses outside Zone 3 within a few years or more. Then Transition Houses will be empty and used for other people who will be involved in urban renewal in Zone 5 as their temporary accommodation. Those people should be jobless or of very low income group who will be offered vocational training at Transition Houses. It will be repeated until the total completion of Zone 1 development and integrated Zone 5 renewal.

7.2 ZONE 3 PERUMNAS HOUSING DEVELOPMENT

7.2.1 Seed Capital for Zone 5 Housing Renewal

As explained in Financial Framework of Perumnas Housing Development in Chapter III, some Rp. 9,677 million is estimated as the total profit gained in the development on the following conditions:

- 1) The estimate is based on the development framework studied upto March, 1989 but incorporated with BTN Loan standard issued in April, 1989.
- 2) Land price is Rp. 2,000 per M<sup>2</sup>.

- 3) The development is carried out only by the capital of Perumnas without any loan from financial source.
- 4) Cost estimates particularly of construction are according to unit cost prevailing in Jakarta by December, 1988.
- 5) All housing units are to be sold immediately after the completion of the construction.

If conditions differ on any of the above, the total profit/seed capital will be decreased.

7.2.2 Housing Renewal in Zone 5 using the Seed Capital

This exercise is to figure out the size of acquirable land in Zone 5 by Perumnas if all the profit gained by Zone 3 development is used. There is no detail data for all of Zone 5, therefore the exercise is based on the data obtained and studied for Case Study Sites C and F. The data of Sites C and F are used for assumption of other similar areas in Zone 5. Sites A, B, D and E are not applicable due to these characteristics. All figures shown below are of approximate average.

	CASE 1 SITE C	CASE 2 SITE F
1) Building Floor Area/house	80 M <sup>2</sup>	39 M <sup>2</sup>
2) Site size/house	110 M <sup>2</sup>	58 M <sup>2</sup>
3) Compensation including land and building/house	Rp. 8,428,000	Rp. 5,400,000
4) Demolition cost/house	Rp. 400,000	Rp. 195,000
5) Land clearance cost/house 3) + 4)	Rp. 8,828,000	Rp. 5,595,000

Note: Evaluation measure of compensation for land clearing is in accordance with the standard issued by the government.

That for building is set as below:

Structure	Durability	Base Value	Depreciation per year	Life years
Permanent	50 years	Rp.150,000	2 %	varied
Semi-Permanent	25	120,000	4	
Ordinary	10	100,000	10	
Temporary	10	50,000	10	

Building compensation =  
Base Value x Floor Area x Depreciation x Life Years

CASE 1

Rp. 9,667 million + Rp. 8,828,000 = 1,096 houses  
1,069 houses x 110 M<sup>2</sup>/house = Approx. 12.0 ha.

CASE 2

Rp. 9,667 million + Rp. 5,595,000 = 1,730 houses  
1,730 houses x 58 M<sup>2</sup>/house = Approx. 10.0 ha.

It can be said that Perumnas can clear the land of more or less 10 hectares in Zone 5 by using the capital of Rp. 9,667 million on the following conditions:

- 1) Ten hectares is total land. It does not mean the land is one parcel.
- 2) Calculated area is only for house sites. It does not include public area such as roads and open spaces.
- 3) Clearance or provision of main access roads and infrastructure is not calculated, while those are cleared and provided by KCIU in Zone 3.
- 4) Calculation is based on average figures but

any area has its own variety of large or small houses, site sizes and different income groups. Therefore, clearance of large parcel of land is not so easy in reality.

Therefore it is considered that Perumnas can acquire and clear land of maximum 10 hectares in total where condition is similar to the area in Zone 3 handed over by KCIU on the basis of Rp. 2,000/m<sup>2</sup>, and Perumnas can develop housing on that land. After the total 10 hectare development, the next acquirable land will be reduced and it can not be repeated more than a few times.

7.2.3 Combined Development and Renewal

Another exercise is to find out feasibility of Perumnas and inhabitants' affordability in case Perumnas implements Zone 3 development combined with Zone 5 housing renewal.

Data of Sites C and F are also applied to the exercise.

	CASE 1 SITE C	CASE 2 SITE F
1) Building Floor Area/house	80 M <sup>2</sup>	39 M <sup>2</sup>
2) Compensation received by inhabitants/house	Rp. 8,256,000	Rp. 5,380,000
3) Monthly income/house	Rp. 160,000	Rp. 124,000

Note: Different amount of compensation between the tables of 7.2.2 and 7.2.3 is derived from the fact that Table 7.2.2 shows paying compensation to right holders and Table 7.2.3

shows compensation received by inhabitants. Perumnas should pay 100% of compensation to Hak Milik right holders but the inhabitants (borrowing the land from the right holder, specified as Tanah Garapan) receive 25% of evaluated value of Hak Milik. Compensation for building is fully paid to the inhabitants.

This means that if the compensation is used as down payment to buy Perumnas Housing unit in Zone 3, an inhabitant of Site C can afford to buy F-36 and an inhabitant of Site F can afford to buy F-27.

CASE 1

Selling price of F-36 : Rp. 10,600,000  
Down payment (Compensation) : Rp. 8,256,000  
Installment : Rp. 2,344,000  
Monthly amount of repayment : Rp. 32,946  
(20 years, 18% of interest) (20.6% of monthly income)

CASE 2

Selling price of F-27 : Rp. 8,100,000  
Down payment (Compensation): Rp. 5,380,000  
Installment : Rp. 2,720,000  
Monthly amount of repayment: Rp. 38,231  
(20 years, 16% of interest) (30.8% of monthly income)

It is a question whether an inhabitant who has 80 M<sup>2</sup> of house or 39 M<sup>2</sup> wishes to relocate to F-36 or F-27, although it is affordable.

On the other hand, if Perumnas relocates Site C inhabitant to F-36 or Site F inhabitant to F-27 in Zone 3, the project is calculated as follow:

CASE 1

Expenditure

- 1) Development cost of F-36 in: Rp. 10,597,000  
Zone 3
- 2) Compensation to a right : Rp. 8,428,000  
holder
- 3) Demolition of a house in : Rp. 400,000  
Site C
- 4) Total (A) : Rp. 19,425,000

Gain

- 1) Down payment (Compensation): Rp. 8,256,000
- 2) Installment (from BTN) : Rp. 2,344,000
- 3) Total (selling price of : Rp. 10,600,000  
F-36) (B)
- 4) Land namely 110 M<sup>2</sup> of a house site in Site C

Therefore, the gained land of 110 M<sup>2</sup> should have at least a value of Rp. 8,825,000 (Total (A) - Total (B)) which is Rp. 80,227/M<sup>2</sup>.

CASE 2

Expenditure

- 1) Development cost of F-27 in: Rp. 8,118,000  
Zone 3
- 2) Compensation to a right : Rp. 5,400,000  
holder
- 3) Demolition of a house in : Rp. 195,000  
Site F
- 4) Total (A) : Rp. 13,713,000

Gain

- 1) Down payment (Compensation): Rp. 5,380,000
- 2) Installment (from BTN) : Rp. 2,720,000
- 3) Total (B) (selling price : Rp. 8,100,000

of F-36)

- 4) Land namely 39 M<sup>2</sup> of a house site in Site F

Therefore, the gained land of 39 M<sup>2</sup> should have at least a value of Rp. 143,923/M<sup>2</sup>.

As a conclusion, it is said that the next development in Site C or Site F should be based on the land price of Rp. 80,227/M<sup>2</sup> (Rp. 30,000/M<sup>2</sup> at present or Rp. 143,923/M<sup>2</sup> (Rp. 25,000/M<sup>2</sup> at present) instead of Rp. 2,000/M<sup>2</sup> in Zone 3.

Consequently, the next development is not feasible if it is housing of F-36, F-27 and F-18. The development should be housing above F-54 or commercial facilities if marketability is high.

7.2.4 Combined Housing Development and Commercial Building Renewal

If Perumnas acquires land and renews a commercial building in Zone 5 combined with Zone 3 housing development, this combined project is formulated as follow:

Note: Commercial building renewal project is referred to Case Study Site D. Some figures are the same as Case Study D.

1) Conditions

Site D size is 8,750 M<sup>2</sup> (Gross) and 43 houses are existing. All the site of 8,000 M<sup>2</sup> (Net) is used only for commercial building and 43 houses are relocated to Perumnas housing development area in Zone 3.

Site size (Net) : 8,000 M<sup>2</sup>

Building Regulation

- (1) Max. Nos. of storey : 6 (4 at present)
- (2) Building Coverage Ratio: 60%
- (3) Floor Area Ratio : 360%
- (4) Max. Total Floor Area : 28,800 M<sup>2</sup>

- 2) Breakdown of Max. Floor Area of 28,800 M<sup>2</sup> (100%)

- (1) Common use area : 5,760 M<sup>2</sup> (20%)  
(Non-salable, Non-right holder's floor)

- (2) Right Holder's Floor : 3,500 M<sup>2</sup> (12%)
- (3) Salable Floor Area : 19,540 M<sup>2</sup> (68%)

3) Project Cost

- (1) Demolition Rp. 32,350,000
- (2) Compensation Rp. 53,244,000  
- Perumnas paying amount minus Inhabitant's receiving amount
- (3) New Building of 28,800 M<sup>2</sup> Rp. 20,160,000,000  
- Rp. 700,000/M<sup>2</sup> (gross) x 28,800 M<sup>2</sup>
- (4) Housing in Zone 3 Rp. 546,240,000  
F-21 11 units  
F-36 16 units  
F-54 8 units  
F-100 8 units
- (5) Infrastructure, etc. Rp. 90,580,000
- (6) Temporary Accommodation Rp. 15,480,000

Sub-total Rp. 20,897,894,000

- (7) Study, Design, Supervision 1,044,894,000  
20,897,894,000 x 0.05
- (8) Administration 877,711,548  
21,942,788,700 x 0.04

(9) Contingency 912,820,009  
 22,820,500,248 x 0.04

Total Rp. 23,733,319,557

4) Conclusion

Total project cost is Rp. 23,733,319,557.  
 Salable Floor Area is 19,540 M<sup>2</sup>.  
 Therefore the selling price of the floor is average  
 Rp. 1,214,600/M<sup>2</sup>, and if it is salable, this  
 project is feasible but Perumnas has no profit.

5) Remarks

- (1) The basis of the calculation is that Perumnas has own capital and there is no loan involved.
- (2) The salable floor should be sold immediately after the construction.
- (3) There is approx. Rp. 175,257,000 of cross subsidy for 43 houses. (average Rp. 4,075,744/house or Rp. 86,000/M<sup>2</sup>)

Type	Price	No. of Units	Amount
F-21	Rp. 7,000,000	11	Rp. 77,000,000
F-36	10,600,000	16	169,600,000
F-54	19,075,000	8	152,600,000
F-100	35,000,000		
Total		43	Rp. 679,200,000

Total compensation received by the inhabitants is  
 Rp. 503,942,715.

- (4) If there is 10% of subsidy for total project cost, average selling price of floor is Rp. 1,093,141/M<sup>2</sup>, then the project may be feasible.

7.2.5 Rental House

Rental House System introduced in Section 3 of Chapter III is to be considered for the use of renewal projects in Zone 5 as temporary accommodation. It contributes to promote and expedite the renewal projects in Zone 5. Some certain number of different housing units should be reserved for that purpose.

7.3 INTEGRATED RENEWAL IN ZONE 5

7.3.1 Seed Capital of KCIU

In case Rp. 70 billion of the seed capital is used as subsidy for low income group housing some 20,000 housing units can be developed and integrated in urban renewal in Zone 5. This subsidy is to be given to any public and private housing developers provided development is not for commercial purpose. Priority should be given to Perumnas housing renewal projects in Zone 5.

7.3.2 Housing Renewal by Perumnas

Although the results of the study shown in Section 7.2 in Chapter III are rather negative, Perumnas is able to acquire a total max. 10 hectares of land which is commonly spreading out in Zone 5, if the said conditions are satisfied.

Total 10 hectare is, in reality, divided into several areas and those areas should be strategically selected according to the Master Plan of DKI Jakarta coordinated with the KC Master Plan.

If Perumnas extends its development activities to

commercial facility/building development, there might be a possibility to combine Zone 3 development and commercial building renewal in Zone 5 where conditions are more advantageous than Case Study Site D.

7.3.3 Temporary Accommodation for Renewal Projects

Some certain numbers of Perumnas housing units in Zone 3 and Transition House of KCIU in Zone 4 could be used as temporary accommodation for urban renewal projects in Zone 5, at the earliest a few years after the commencement of Zone 3 actual implementation.

7.3.4 Strategic Renewal

Under the guidance of the authority or coordination body including the central government, DKI Jakarta local government and its municipalities, KCMB/KCIU, mentioned in Chapter II, the above listed "Seed Capital of KCIU", "Housing Renewal by Perumnas" and "Temporary Accommodation" are to be integrated with urban renewal projects in Zone 5.

The Authority or the coordination body should identify priority areas for housing renewal. Each area will be most likely a small area and the whole implementation will be conducted gradually within 10 years.

These small renewal projects sites strategically plotted in the priority areas will stimulate the surroundings and, as a whole, townscape will gradually become better and in harmony with zone 1 development.





**CHAPTER IV**

**URBAN HOUSING RENEWAL AT CASE STUDY  
AND PRIORITY SITES**

CHAPTER IV URBAN HOUSING RENEWAL AT CASE STUDY AND PROJECT SITES

1. OBJECTIVES OF PLANNING STUDY

1.1 GENERAL DESCRIPTION

As explained in CHAPTER 1, Section 1, there are two main objectives for executing planning studies for six Case Study Sites and Feasibility Studies for two priority sites.

The first objective is the formulation of conceptual model plans for urban housing renewal at Kemayoran area considered integrally with the ex-airport development (OBJECTIVE 1). The second objective is the formulation of renewal methods for urban housing renewal which may be applicable to built-up areas in other big cities in Indonesia (OBJECTIVE 2).

1.2 FORMULATION OF CONCEPTUAL RENEWAL MODEL PLANS AT KEMAYORAN AREA (OBJECTIVE 1)

Through the planning study for Case Study and Priority Sites, urban housing renewal of the Study Area, namely Zone 5 (approx. 1,000 ha) and Zone 4 (approx. 33 ha) shall be elaborated. Therefore, each site (consisting of a few R.T. community units) shall be a typical site in the Study Area. The renewal plan and the study method for each study site shall be a model, which may be applied to other similar sites in the Study Area.

Fig. 2.1 of CHAPTER II shows the strategy of urban housing renewal for the Study Area and its relation with the conceptual model of the study sites.

1.3 METHODOLOGY DEVELOPMENT OF URBAN RENEWAL (OBJECTIVE 2)

This KTA-53 study also aims to develop methodology of urban housing renewal through the planning studies of Case Study and Priority Sites. Therefore, the methods being developed for the renewal of the study sites are to be emphasized on generality for application to other built-up areas not only in the Study Area but also in Jakarta or big cities in Indonesia.

Fig. 4.1. and 4.2 show the study planning flow of Urban Housing Renewal at Case Study and Priority Sites in phase 1 and phase 2 of the Study respectively.

The basic strategy for synthesis and integration of all the study is firstly setting up concept of the Study Area (CHAPTER II), then independent study of Zone 2 (CHAPTER III) and Case Study/Priority Site (CHAPTER IV), and finally all the study is integrated as mostly shown in Section 5 of CHAPTER II and Section 7 in CHAPTER III.

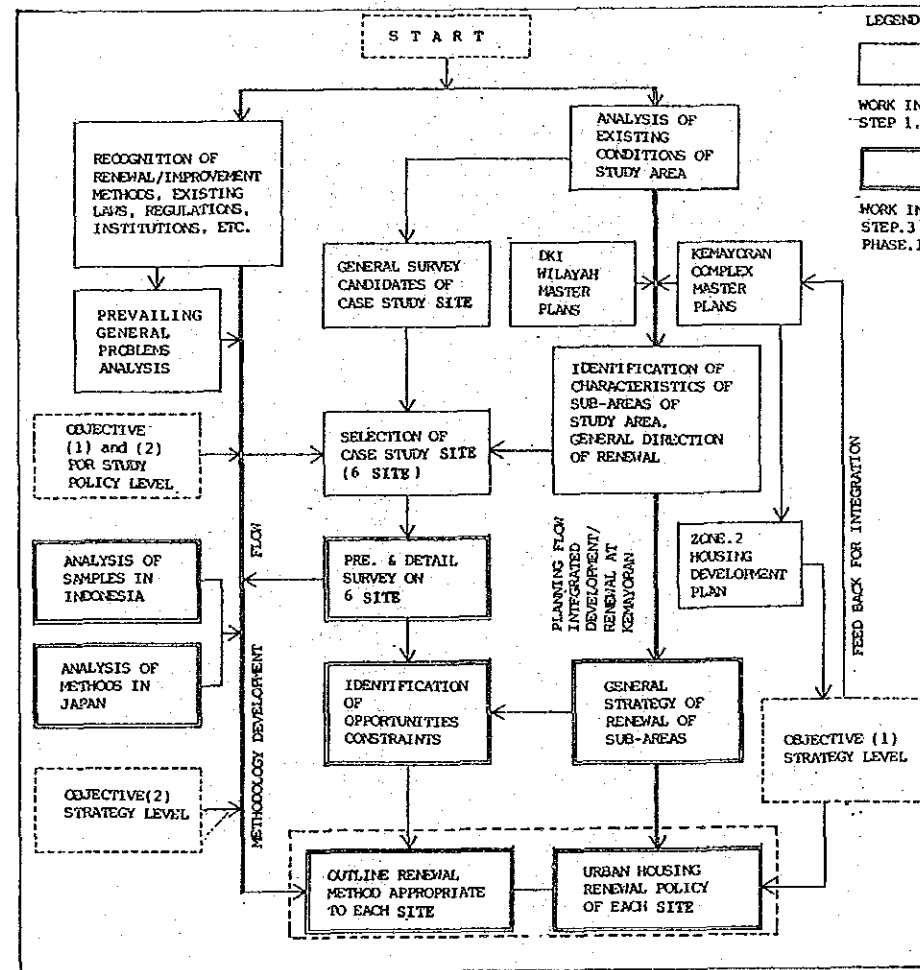


Fig. 4.1 Study Flow (Phase 1)

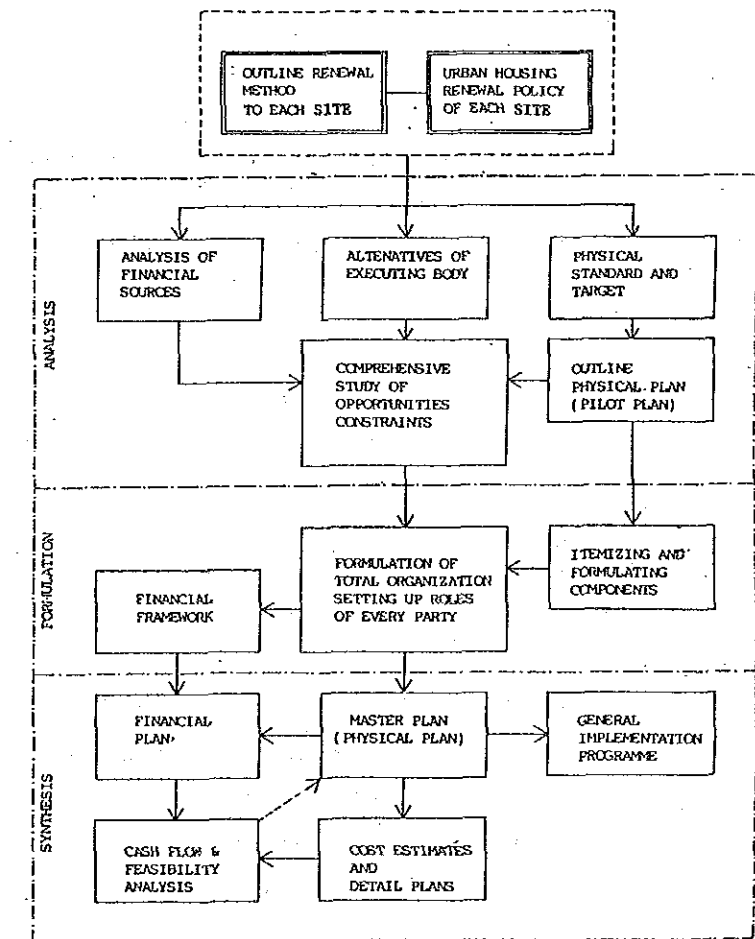


Fig. 4.2 Study Flow (Phase 2)

## 2. SELECTION OF STUDY SITES

### 2.1 GENERAL CONSIDERATION FOR SELECTION

The basic criteria for selection of six Case Study Sites are as follow:

- 1) From view points of the aforementioned OBJECTIVE 1, the site shall be a typical one in the urban renewal of the Study Area and represent sub-areas in Zone 5 and Zone 4.
- 2) From view points of OBJECTIVE 2, the site shall be as much as possible common to other places in Jakarta or other big cities in Indonesia.
- 3) In accordance with the indications for tentative classification shown in the Scope of Work agreed on April 14, 1988 the selected site should have the following conditions:
  - the area where housing condition is very bad such as low quality, high density, etc.,
  - the area where economic/commercial potential is high but land use is not intensive,
  - the area where basic infrastructure and public facilities are insufficient,
  - the area where un-planned urbanization (sprawling) is going on,
  - the area where renewal is necessary in relation to the improvement of public facilities such as construction/widening of the access road, etc.,
  - the area where renewal is necessary to create secondary or tertiary city center in urban structure..

Size of a site shall consist of a few R.T. community units (more or less one hectare).

### 2.2 SELECTION PROCESS OF CASE STUDY SITES

#### 2.2.1 Step 1 (refer to Fig. 4.3)

In consideration of the above mentioned criteria, one typical site is to be selected from one area. An area is designated as a priority area of urban renewal and characteristics of the zones differ from one to another (refer to 5.2 "DEVELOPMENT OBJECTIVES OF STUDY AREA" of CHAPTER II).

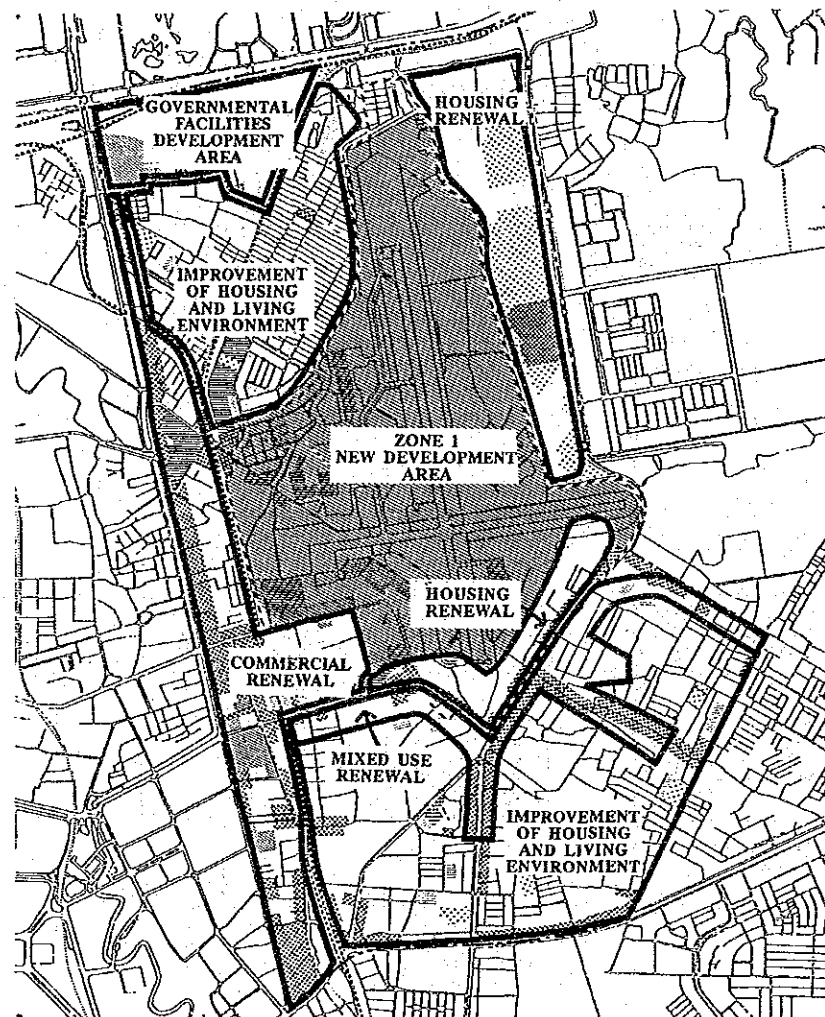


Fig. 4.3 Selection of Case Study Sites, Step 1

#### 2.2.2 Step 2 (refer to Fig. 4.4)

Through a general survey conducted in each area, 14 alternative sites were selected. Sites in the same area were then compared.

#### 2.2.3 Step 3 (refer to Fig. 4.5)

Six sites were selected after giving particular consideration to their relation with the ex-airport development.

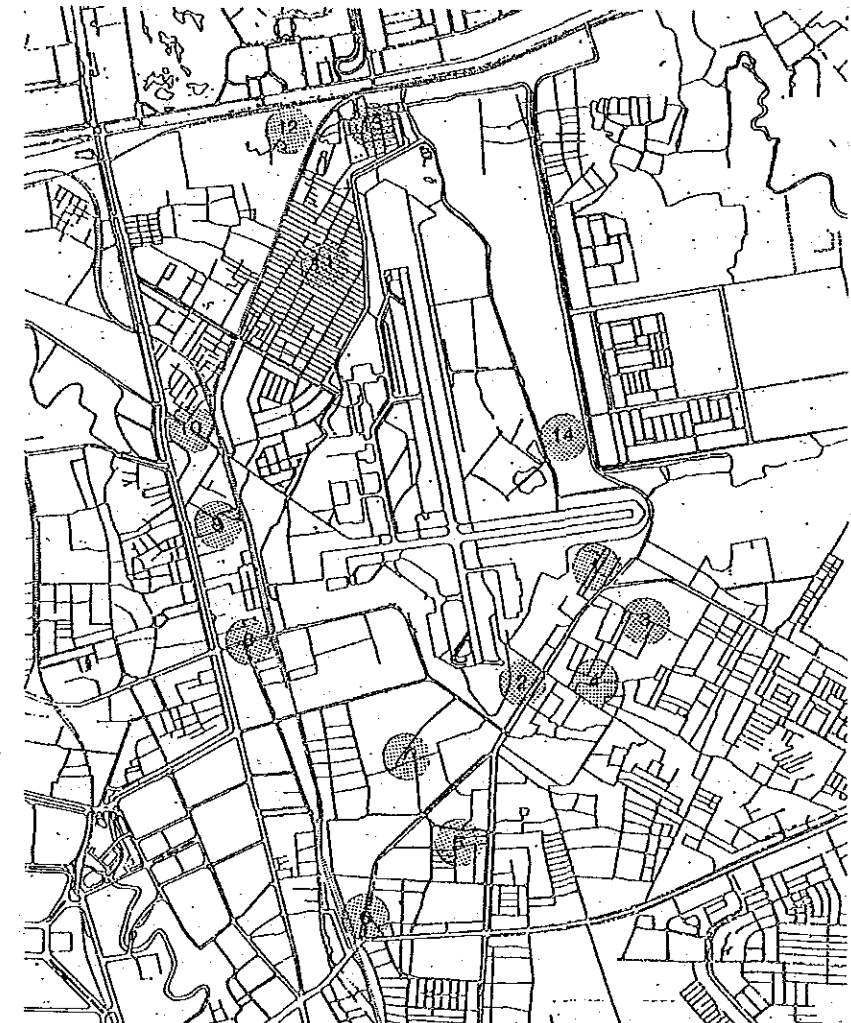


Fig. 4.4 Selection of Case Study Sites, Step 2

Sites A & B: Within Zone 4 of the ex-airport development project site. Site A is mostly occupied by land right holders. Site B is state owned land.

Sites D & F: Directly influenced by the ex-airport development or it is said that the renewal of Site D and F is as a consequence of the ex-airport development.

Sites C & E: Indirect relation to the ex-airport development. The renewal is of a long term nature.

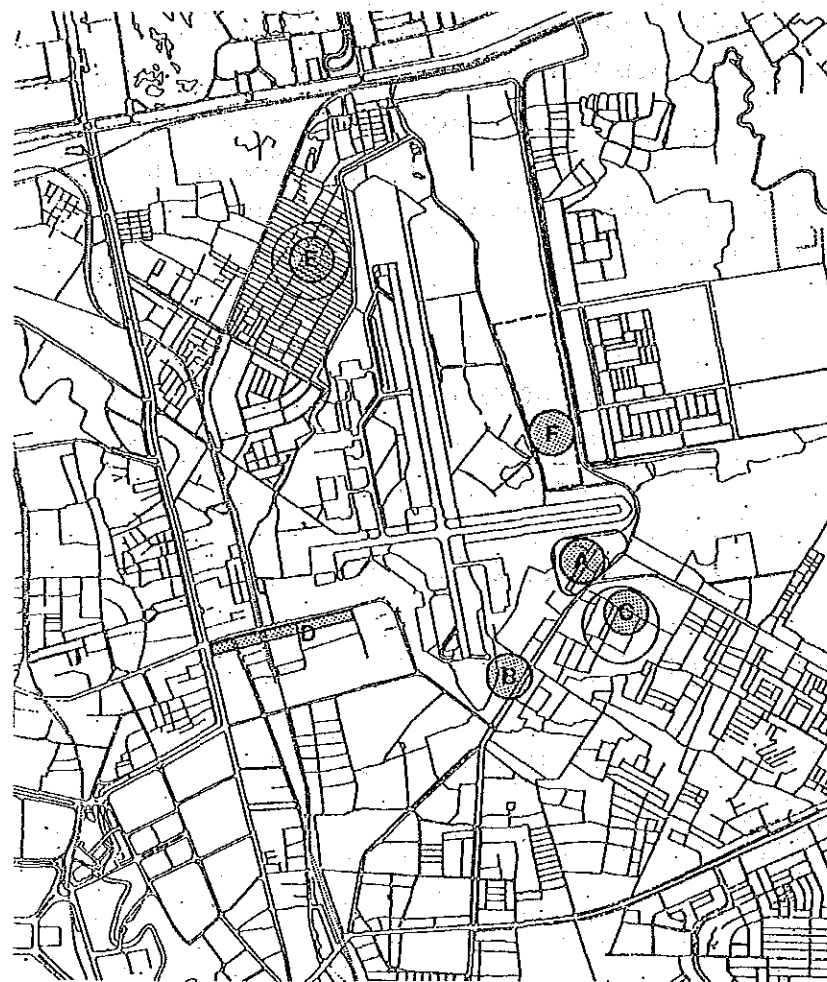


Fig. 4.5 Selection of Case Study Sites, Step 3

### 2.3 SELECTION PROCESS OF PRIORITY SITE

Priority Sites shall be selected from Zone 5 and Zone 4 in accordance with the Scope of Work agreed on April 14, 1988.

Selection criteria is not that of technical comparison among six Case Study Sites since six Case Study Sites were selected by aforementioned criteria and therefore characteristics of renewal are different from one Case Study Site to another.

The selection is made through comparison of study themes among the six Case Study Sites.

Selection was discussed at Technical Committee meeting of August 10, 1989 and confirmed during the Steering Committee Meeting of October 10, 1989. Site B in Zone 4 was selected since the site shall be by all means renewal as a part of the ex-airport development. Site D in Zone 5 was selected for the purpose to examine transferability of the method established in Japan which stimulates methodology development particularly for future use.

Selection of Priority Site, Comparison of Study Theme

THEME OF THE STUDY	ZONE 4		ZONE 5			
	SITE A	SITE B	SITE C	SITE D	SITE E	SITE F
The renewal of this site including surroundings shall be urgently implemented in relation with the ex-airport development. There is high possibility to apply the study results to the actual implementation immediately after the Study.	◎	◎	○	◎	○	◎
	KCIU	KCIU,NGO INHABITANTS COMMUNITY	INHABITANTS COMMUNITY	PRIVATE & PUBLIC SECTOR	PUBLIC SECTOR & INHABITANTS	PRIVATE & PUBLIC SECTOR
In order to stimulate the methodology development, established methods particularly in Japan are applied to the study although various conditions are different between Indonesia and Japan.	○	○	◎	◎	◎	◎
	—	—	HOUSING BETTERMENT PROJECT	URBAN RENEWAL PROJECT	HOUSING BETTERMENT PROJECT	LAND RE-ADJUSTMENT PROJECT
It aims at finding out a solution for the social problem seen in big cities. The problem concerns those low income people who have weak land tenure and unstable jobs and are residing in areas involved in urban development/renewal.	○	◎	○	◎	○	◎
	PROJECT COST	PROJECT COST	COMPENSA-TION	CROSS SUBSIDY	SUBSIDY & COMPENSA-TION	CROSS SUBSIDY
Community participation is one of the most important aspects in urban housing renewal. The trial of the study is to enhance motivation and/or active participation of community/inhabitants for urban housing renewal.	○	◎	◎	◎	◎	○
	INITIATIVE OF KCIU	GUIDANCE BY NGO	MOTIVATION OF INHABITANTS	INITIATIVE OF PRIVATE SECTOR	MOTIVATION OF DKI & INHABITANTS	INITIATIVE OF PRIVATE & PUBLIC SECTOR
Discussion was made with Technical Committee on the Priority Sites selection on August 10,1989, and the decision was confirmed with Steering Committee on October 10, 1989.	○	◎	◎	◎	○	◎
		PRIORITY SITE		PRIORITY SITE		

### 3. FRAMEWORK OF STUDY

#### 3.1 LEGISLATIVE FRAMEWORK

The case study complies with the prevailing ordinance and other legal systems on urban management presently enforced in Indonesia.

The legal system applied to the renewal of sites D and F excerpts from the Japanese system framework. It is apparent that the proposed system is subject to Indonesian fundamental laws on land tenure, building right and enforcement procedure.

The specific legislative framework in the case study follows.

##### 3.1.1 Land Tenure

Definition and classification are subject to the AGRARIAN LAW NO. 5 OF THE YEAR 1960.

##### Consideration

Land tenure in the Study Area mostly corresponds to "Tanah Garapan". Although inhabitants mostly occupy the land designated as Tanah Garapan, a compensation of 25% of basic land price is paid to the inhabitants, in case the land is state owned. This means a compensation is paid for living right. The case study considers that the Tanah Garapan is affiliated to the state, PEMDA, DESA and INSTANSI, but the state cannot consider value of the land as an asset. The state has authority to control the land.

##### 3.1.2 Compensation

The rate of compensation and calculation method comply with the "Decree of the Governor of DKI Jakarta No. DA 11/3/14/1972." Details are discussed in 3.3, Financial Framework.

##### 3.1.3 Multi-storey House Law (Condominium Law)

The law concerning the Multi-storey house complies with the "Law of the Republic of Indonesia No. 16 year of 1985".

The government set forth this law with the following background:

Intensive and effective land use is necessary in areas where it is required to upgrade poor living environment and bad conditions. Thus, it is the government's belief that multi-storey houses must be constructed.

##### Definition

Multi-storey house means that jointly owned building consisting of parts, things and land, but individually possessed.

##### Consideration

The multi-storey House Law (CONDOMINIUM LAW) is a fundamental condition for planning of all the Case Study Sites. The urban typical housing in the future must comply with this law. In connection with the intensive use of land and increase of housing stock, the concerned executing bodies must enlighten the public on this law. The ownership, as a new right among the land tenure and building right, must be recognized by the public.

##### 3.1.4 Building Planning

The statute concerning building planning in Jakarta is executed by DINAS TATA KOTA. The Study conforms with this framework.

##### 3.1.5 Urban Planning (District Plan)

DISTRICT PLAN REGULATION: DKI Jakarta, No. 4 of the year 1975

The regulation securing a sound and orderly city stipulates 1) free distance from boundary, 2) building coverage ratio, and 3) floor area ratio.

The other regulations and guidelines for land use and district management (building height and building density) are provided by DKI Jakarta. On the other hand, in light of formulating renewal regulations the following stipulations shall be especially provided in the urban planning regulations:

- Designation of district for intensive use of land which covers maximum and minimum floor area ratio and maximum and minimum building coverage ratio,
- designation of district for fire prevention, and
- distribution of public urban facilities.

##### 3.1.6 Urban Area Redevelopment Law (Recommendation)

In Indonesia, there is no statute concerning urban renewal law or regulation for right conversion method as applied in Japan. It is effective to introduce the renewal method authorized by this law into Indonesia.

### Consideration

In formulating the urban renewal law, the following items should be adjusted: The idea of Right Conversion where the former right itself can be replaced with new converted right after execution of the project, shall need to be recognized. The right conversion is to exchange the ex-value of building and land with the new value of floor area.

The site criteria for project using the method of right conversion will cover the following:

- The site must be located in a district where there is intensive land use.
- The total coverage area of fireproof buildings of more than three stories, is to be less than one third of the total coverage area of all buildings in the site.
- The site seriously lacks public facilities and land use is inadequate due to piecemeal ownership of the land.
- There are prospects for effective future use in the site to improve urban functions.

In case of enacting the law, the following considerations are further required:

- 1) Institutionalization of right conversion system
- 2) Authorization of executing body as an entity
- 3) Exemption of corporate tax and other duties, and easing of participants burdens
- 4) Introduction of subsidy for public facilities and common use of building
- 5) Execution of systematic urban management

### 3.1.7 Land Readjustment (L/R) (Adjustment)

The Land Readjustment Renewal method is not available in Indonesia. Therefore, the case study adopting this system adjusts the Japanese method. But considering conditions particular to Indonesia, housing construction for small right holders shall be supplemented to the Japanese method.

The basic features of L/R law in Japan are enumerated below.

- 1) The law defines that L/R projects are of public character by stating that the purpose is to promote public welfare through improving the living environment in the urban area.
- 2) The Japanese constitution prescribes that the public interest takes precedence over private rights. Accordingly L/R projects of public interest as defined above are endowed with legal enforcement over all landowners and others concerned as far as the disadvantages, if any, on the landowners caused by the implementation of project remain within socially acceptable standards. It also justifies government financial assistance to the project.
- 3) In line with the public definition or recognition of L/R, the law provides a legal basis for both organization of implementation, and implementation of the project. (It is not necessary to rely on other laws.)

- 4) The strict regulations on both the organization (establishment and management) and implementation (financial, technical rules and others) are set forth dictating due administrative procedures through which the approval of government and individual participants are sought, in order to secure the public interest, which is the main purpose of the project and also to defend individual rights and interests or maintain equality among the individual participants.

The basic features of L/R law in Japan are enumerated below.

The main characteristics of Japanese L/R administrative procedure can be divided into two steps as follows:

1. Project and executing bodies (in the case of a cooperative) are to be authorized, if and when "action plan and implementation ordinance" are approved by the authority. These only state basic features of the project and exclude replotting in detail.
2. Replotting, which is the chief concern of individual landowners, is to be approved or agreed by authority or cooperative in the course of implementation of the project.

In response to the administrative procedure for implementation of the project, a development plan, replotting design and a replotting plan must be prepared.

## 3.2 INSTITUTIONAL FRAMEWORK

### 3.2.1 DKI Jakarta and Affiliated Agencies

DKI Jakarta administration is responsible for the city planning and has properly executed many urban redevelopment projects. They have much experience in activities involving the community. They know how to mobilize the community and how to efficiently budget projects on improvement of living environment. In this context, the administration of DKI Jakarta is positively involved in the project upgrading living environment from the project's early stage to its completion. Furthermore the citizens of Jakarta naturally require the amenity and upgrading of their environment and opportunities to increase their income, thereby increasing the responsibility of DKI Jakarta to install and provide more essential facilities for affluent life.

The executing body for living environment such as KIP is affiliated to DKI Jakarta. This agency, BAPPEM MHT, is substantially independent from DKI Jakarta.

This agency has exceptionally carried out the supply of rental housing and is familiar with the improvement of living environment and the subjects of depressed people and dilapidated areas. Further, the people trust this agency because of its activities.

It is reasonable that this agency becomes an executing body to simultaneously supply housing with the execution of KIP.

Sarana Jaya also is an agency supplying rental housing. Besides that, this agency is promoting the renewal project in Senen Triangle to recover the expenses for rental housing. This agency conducts and transacts to some extent from the consolidation of land title to sales of building and floor.

This agency is reliable as an executing body for not only the supply of rental housing for low income group, but also for commercial renewal projects. The Lurah office is placed with a function of considering between conventional institutional hierarchy and community level organizations, i.e. RT and RW unit. Especially in case of new KIP schemes, the Lurah office is extremely important. The Lurah office with the KIP officer assesses the offer of credit proposed from the credit union established through RT and RW. By nature, the Lurah office authorizes the establishing of credit union.

The present institutional hierarchy and community organization is effective to execute public projects. Thus, even if a new project system will be presented, it is essential to maintain the conventional institutional hierarchy.

### 3.2.2 KCIU

The KCIU, Kemayoran Complex Implementation Unit, is responsible for the management and control of the site. Although the inhabitants illegally occupied the land managed by the KCIU, this organization is responsible for taking care of these illegal inhabitants who are strictly-speaking considered squatters.

The KCIU is a temporary organization. The government will dissolve this organization when the Kemayoran Complex project is completed. It is assumed that the site management will gradually be transferred to the local government. Therefore, coordination with the local government about the infrastructure system, city planning and other institutional and administrative aspects is necessary.

Besides that, programme and system conducted by this agency also are not lasting, so that it must coordinate with the proper authorities.

### 3.2.3 Community Participation

#### 1) General

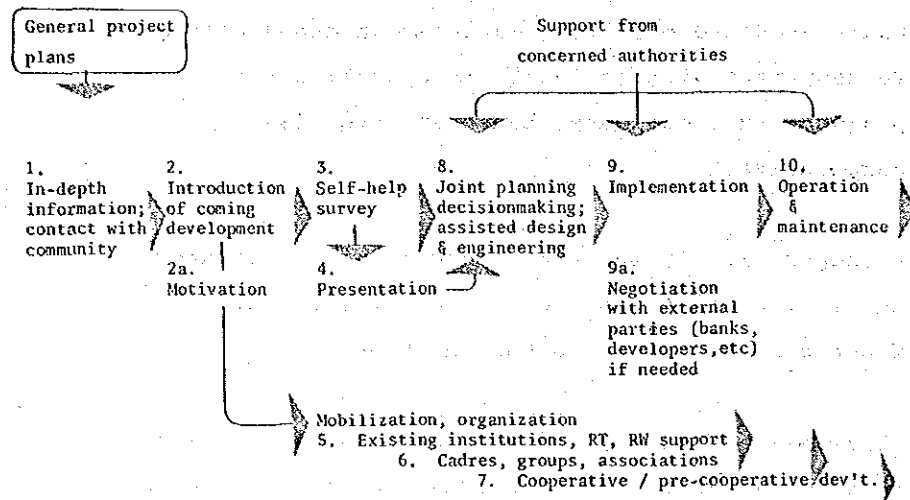
The community participation shall be realized from the stage of information collection. The community's participation in basic planning and decision-making should also be considered. To achieve this, the community is prepared beforehand by being involved in the following activities:

- Information gathering:  
for more valid data during this stage close contacts are established with community groups and leaders.
- Organizational activity:  
identification of potential local organizations, or formation of new ones, which will be committed to future activities.



The process of community participation is outlined in Fig. 4.6.

Fig. 4.6 Outline of Local Participation in Kemayoran Renewal



It must be noted that to arrive at such a community preparedness, considerable time may be necessary. Sometimes contingencies in the process result in regularities in the project time-frame. The process should also not involve a large team, nor high costs, because it is basically a self-help activity.

Important benefits of community participation to the project implementation are:

- (a) In depth and verified field data successfully collected become valuable records for planners as well as for community members. The collected data are the basis for subsequent negotiation and commitments among residents themselves and with external parties.
- (b) The process itself is an effort to secure community commitment and support for the project. Rather than becoming an obstacle to implementation, community action may then press for quicker implementation and later lead to responsible operation and maintenance of facilities.

## 2) Components of the Process

### (1) Data Collection (Steps 1, 2, & 3)

Since sites A through F are only samples of typical areas, data must be completed and verified. The survey has provided sufficient baseline information to proceed with in-depth surveys for the whole area. Assuming that the sites are representative for each type, a team of experienced community-development staff per RW can discover in-depth knowledge of local dynamics (step 1, see Fig. 4.6) such as:

- social structure, leadership patterns;
- aspirations and problems in general;
- economic activity, constraints and potential; and
- urgent environmental problems.

Hereafter the executing body can introduce the projects' main intentions (step 2), in forums which are mobilized with the help of the community-development (C/D) staff. This activity may be supported by a motivational information session or campaign. A self-help survey by the community (step 3) is most important for the following reasons:

- a. It provides and verifies valuable data on
  - individual & collective assets and rights,
  - local resources, including manpower, and
  - aspirations, expectations, as well as conflicts of interest and ignorance or uncommitment.
- b. It is a product of efforts of community members themselves, and therefore the initial step of participation within the project. It brings a sense of belonging and hopefully (if the survey was well-organized) a high degree of commitment.

It is suggested to involve retired people, school drop-outs, and activists chosen by the community to execute the survey, with small fees and expert assistance from the C/D team. For "sites" of higher incomes, RT/RW staff will be sufficient, as long as they have good relations with the households.

The importance of this activity must be stressed. It will become a strong basis for further planning and mobilization of the community.

At an early stage data on rights must be verified. If not, some miscalculations on housing and family dislocation may result, creating frictions with and among the community groups. Superficial data may overlook RT/RW data inaccuracies, individual data manipulation or changes in the period before implementation. Particular consideration should be given to home-renting and multiple-family houses. A self-survey can throw new light on the question of affordability as new opportunities for solving financial problems may turn up.

### (2) Participation in Planning and Decision-Making (Steps 4, 8, & 9)

After the data has been tabulated and presented in popular form, it is submitted to the community in a presentation (as their own achievement). As reinforcement to this step No. 4, it is very helpful if the municipality confirms its' good intentions by "opening" the presentation and explaining the peoples' role in the area development.

An official such as the mayor or project officer can "force" the community to participate actively by stating that participation is a precondition for receiving KCIU support to housing alternatives and public facilities.

(3) Organization & Mobilization (Steps 5, 6, & 7)

If full sustainable participation is expected for a long term, a high degree of organization is necessary.

Community participation in the project, especially their capacity to negotiate (at a sufficient bargaining position) is possible if they are well organized so as to:

- distribute information impartially/objectively
- express real needs and aspirations, and make collective decisions on them;
- mobilize local resources/assets, however small (land, material, energy, etc.);
- manage implementation activities (a.o. construction part of which may be more efficient by self-help); and
- manage their area after implementation, including recovery of costs, and loans.

In the first instance, RT/RW organizations will be very crucial. Within the community also potential, informal or formal organizations may exist, like small cooperatives, "artisan" or occupational associations which can evolve into credit unions, or women's and youth as well as religious associations, and the like. The C/D team should assist in selecting and assisting the most effective organization for each project component.

The general organization might take the following form (Fig. 4.7). Here a formation of a local cooperative, if possible with legal status, will be of benefit to project implementation and operation.

Linking community to the authorities, to developers or investors (for negotiation or joint-ventures), and to technical assistance from banks and sectoral agencies, are the project team members of NGOs acting as intermediaries.

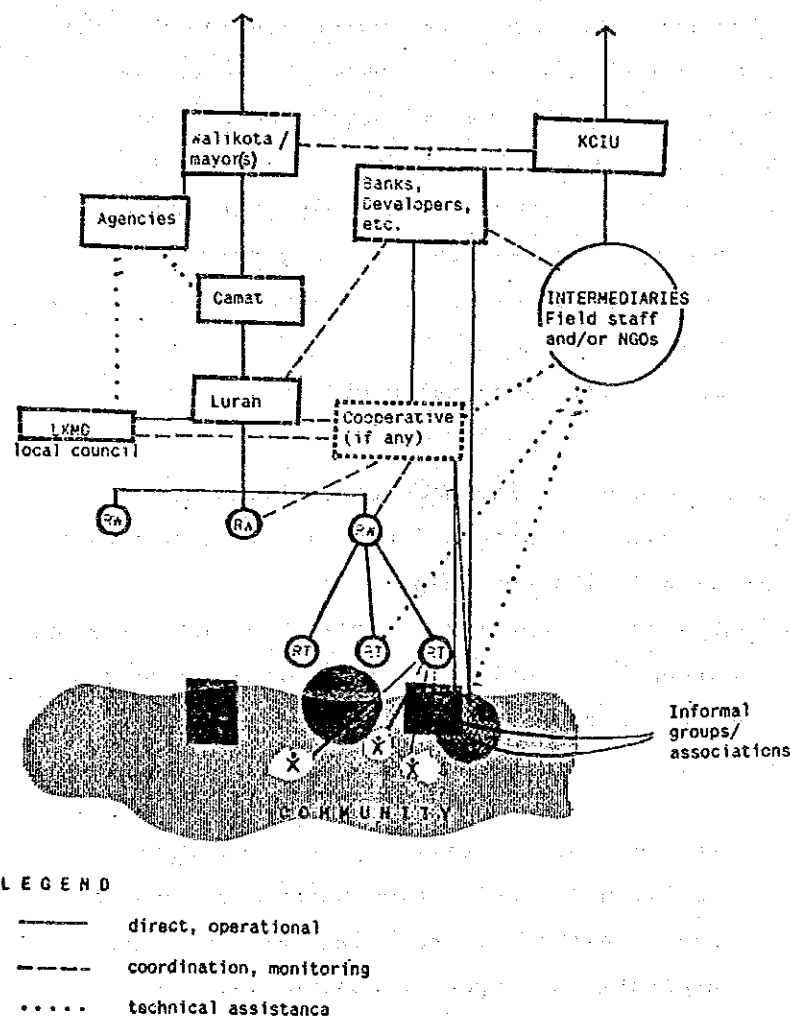


Fig. 4.7 Organization Context of Community Participation

3.2.4 Community Cooperation

This is an agency, as an executing body, organized by the community in the project site to accomplish their longstanding aspirations which are to upgrade their standard of living environment and dwelling. To cooperate with residents in executing the project, the residents themselves organize a cooperative.

A cooperative intensifies functions of negotiator and initiator of the project rather than having such functions dealt with on the individual level.

There are many non-profit cooperatives for various purposes in Indonesia. The existing cooperatives aim to contribute to the social welfare.

In addition, the new KIP strategy proposes a credit union for the community development funds based upon the community of RW/RT in order to improve their living environment. This credit union shall be a residential group whose members are from the same occupation within RW/RT, as if it were craft union. This credit union, as a type of community cooperative, shall not only be an executing body formalized by the Kelurahan Office for the project, but also a borrower of fund from BPD.

A debt that the credit union can borrow is limited to its income. This group provides the physical environment for their small business with the credit.

The community group, however, has no capability to organize without cooperation and orientation by professional bodies like the NGO.

The project that the community cooperative executes is not so small as that of the credit union. The financial and administrative cooperation is more crucial. The subjects to be dealt with in the case study include the consolidation of land tenure and real estate business. The community cooperative, as an executing body, shall need aid from the authorities as well as the NGO.

### 3.2.5 Resettlement Plan

#### 1) General

The nature of inhabitants who live in respective sites is heterogeneous. The social structure, educational level and economical structure are not similar to each other. The method of resettlement and relocation will be applied in accordance with this fact in principle.

The case studies focus on the qualitative elements of each case, because the proposed method of renewal does not yet provide ample scope for the incorporation of local residents' intentions. The number of families to be resettled will be automatically counted by assessing family incomes and assets on the basis of the survey results.

#### 2) Means of Resettlement

The means of resettlement and relocation are as follows:

- a. Relocation (including dislocation) to an outside place
- b. Joint ownership house, self-help house

- c. Perumnas housing
- d. Public rental housing and/or transitional housing
- e. Transitional housing supported by income increase and job training programme

#### 3) Allocation Method of Resettlement

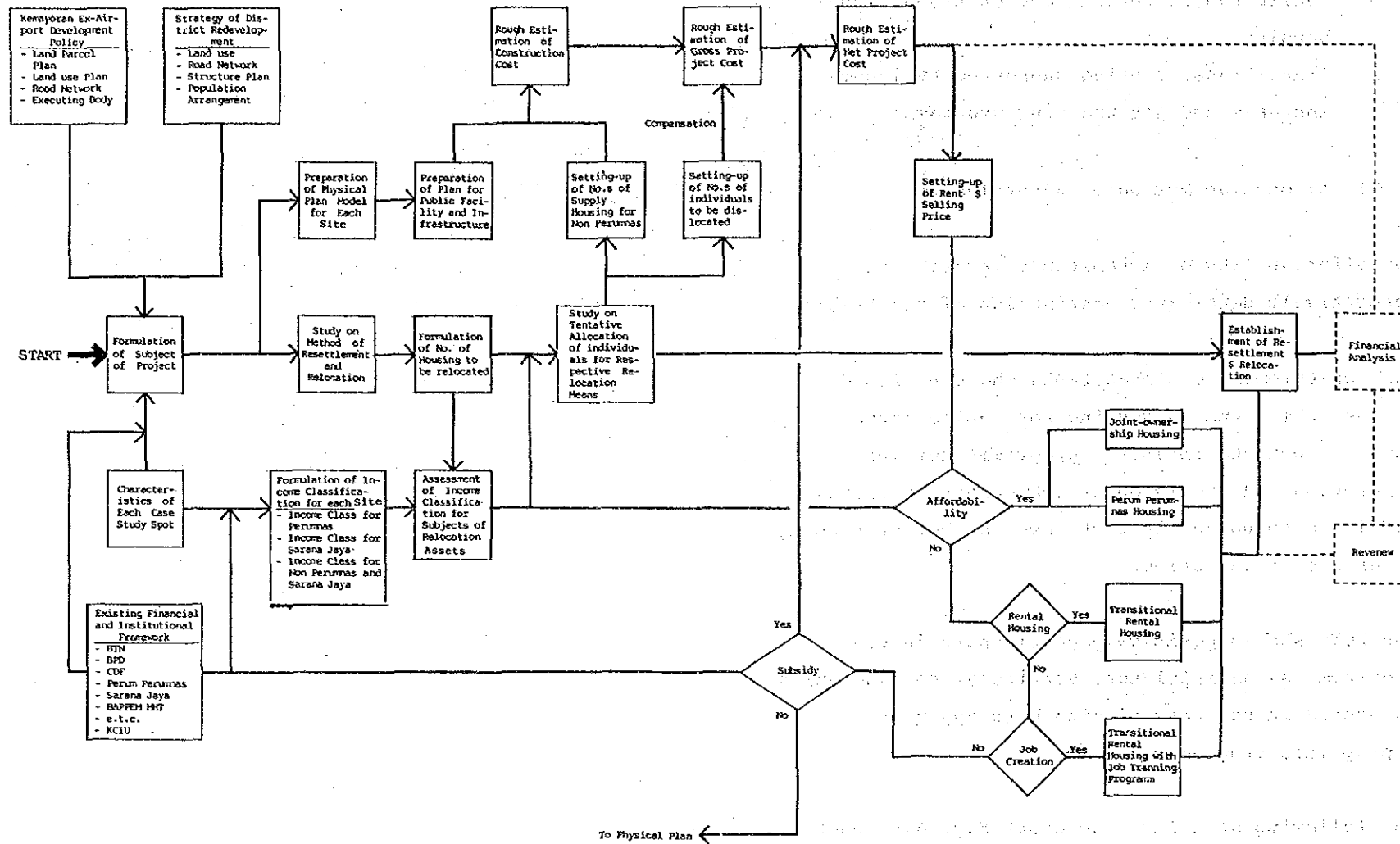
The affordability of inhabitants in each site respectively determines destination of resettlement.

The resettlement of inhabitants who can afford neither the Perumnas housing nor public rental housing ought to include a programme for income generation and provision of job opportunities as a lifting step up to the next level of better housing after a certain period.

The KCIU should positively participate in the programme as an initiator. Particular consideration is needed in the case of site B to apply an appropriate programme.

The following planning flow chart Fig. 4.8 shows the assessment of affordability for respective resettlement.

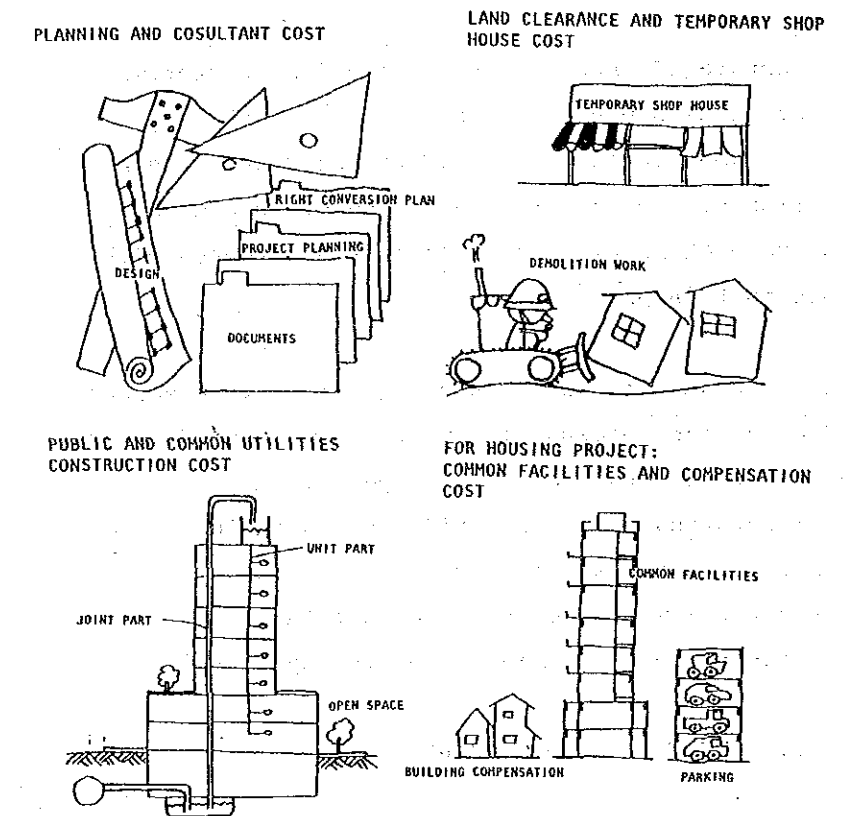
RELOCATION AND RESETTLEMENT PLANNING FLOW CHART



3.2.6 Subsidy

The subsidy systems for renewal project promote the execution of the project and encourage the residents to play an initiating role. There are three types of subsidy systems in Japan:

- 1) Grant in aids from the central aid local government for planning expenses and a certain component of construction cost.



2) Low interest short term loan for housing, land acquisition and others.

3) Tax preferential treatment

The subsidy system is linked with the renewal system in Japan. In this connection subsidy for the right conversion system in Japan comes to about 10% of total project budget.

The subsidies discussed here are as follows:

1) Housing for very low income brackets by KCIU for site D; (refer to the financial Framework) Construction cost for public facilities and common utilities by the DKI for Site D

2) Construction cost of fireproof joint ownership housing for site E;

The subsidy for the renewal aims to gain maximum effect with minimum investment.

### 3.2.7 Executing Body

The executing bodies and relevant organizations are enumerated below. The executing bodies and relevant organizations are assumed from those within the present institutional framework. And the community cooperative here, similar to a craft union or a guild organization, will be established as the new KIP scheme progresses. The function of executing body and it's capability will be evaluated herein.

As a result of evaluation of organization (refer to Table 4.1), the following authorities are fit for their respective roles:

- executing body	Site A	KCIU
(initiator)	Site B	KCIU
	Site C	DKI/RIGHT HOLDER'S COOPERATIVE
	Site D	DKI/RIGHT HOLDER'S COOPERATIVE/DKI JAKARTA/SARANA JAYA/RIGHT HOLDER'S COOPERATIVE
	Site E	DKI
	Site F	KCIU/PRIVATE SECTOR/PERUMNAS

- Guideline of urban renewal

CIPTA KARYA,  
DIRECTORATE OF  
HOUSING

- Regulation of urban renewal

DKI JAKARTA/CIPTA  
KARYA

- City planning	DKI JAKARTA
- Funding	KCIU
- Housing loan	B T N P.T. PAPAN SEJAHTERA
- Environment loan	B P D CREDIT UNION
- Organization of cooperative	MINISTRY OF COOPERATIVE BUKOPIN
- Compensation	TEAM 9/B P N
- Vocational training	MINISTRY OF LABOUR B L K I
- Small business loan	BUKOPIN/ B P D
- Intermediary between community and authority	N G O

The Function of executing body to be assumed and capability

Executing Body to be assumed	Formulation of project and initiative	Public Relation		Project management and control			Project Implementation				Function to be added
		Formulation on Consensus	Compensation Re-settlement	Funding and Financing	Coordination with Relevant Organization	Administrative Management	Planning	Bidding construction	Supervision	Operation and maintenance	
Kemayoran Complex Implementation Unit (KCIU)	Available Only zone 4 A and B Site  Funding of Housing for low income brackets in Site C.D.E.F	No experience - request to NGO, or DKI  Lurah office is necessary a menu of release for low income brackets in Site B  e.g. - income generation - Job creation	No experience - request to Team 9 in zone 4, Site A and B  Lurah office is a window of residents and a member of Team 9  Transitional Housing may requested to P.D Sarana Jaya	On-going - there are legal and administrative department	available - member consists various Ministry	available	available - commission to consultant	available only Bid	request to consultant	commission or sale	1. preparation of guideline and programme for funding to low income bracket house 2. assignment of roles between other funding 3. proposal, planning operation and maintenance of transitional Housing 4. public relation
BAPPEM MHT	available  Initiative will be intended to mobilize community  within the existing institutional framework	experienced - Request to NGO - Hunt a rotivator by NGO	experienced	available - from Central Government, Local Gov. and World Bank	limited	no problem	commission to consultant	Available but limited mobile the residents	by resident and KIP officer.	residents not succeeded, must need enlightenment	1. Synthesis of the new KIP scheme's standard and comprehensive urban planning standard 2. recognition of land tenure but the subject to be studied

Table 4.1 Evaluation of Function and Capacity of Present Organization

The Function of executing body to be assumed and capability

Executing body to be assumed	Formulation of project and initiative	Public Relation		Project management and control			Project Implementation				Function to be added
		Formulation on Consensus	Compensation Re-settlement	Funding and Financing	Coordination with relevant Organization	Administrative Management	Planning	Bidding construction	Super-vision	Operation and main-tenance	
Community COOPERATIVE (RT, a craft union or guild )	<u>proposed</u> must need enlighten-ment and dessemina-tion by NGO	<u>proposed</u> - organizing community by motivator - recornition of land tenure may stimulate residents	<u>available</u> must need notary by Lurah office or KIP officer	<u>available</u> Funding by Community Dev. fund through BPD  Audit must be needed by Lurah office and KIP officer	<u>not possible</u> - to carry out by Lurah office  - registra-tion of land tenure is availa-ble by group as a more shorter way	<u>not possible</u> by Lurah office	<u>not possible</u>	<u>up to size of project</u>	<u>resident</u>	<u>resident</u>	1. request to register land tenure

The Function of executing body to be assumed and capability

Executing body to be assumed	Formulation of project and initiative	Public Relation		Project management and control			Project Implementation				Function to be added
		Formulation on Consensus	Compensation Re-settlement	Funding and Financing	Coordination with relevant Organization	Administrative Management	Planning	Bidding construction	Super-vision	Operation and main-tenance	
DKI Department concerned	<u>available</u> only network and area development	<u>request to</u>	<u>by Team 9.</u>	General Sources of Revenue and World Bank loan	<u>by Bappeda</u>	<u>sectional administration</u>	<u>possible</u>	<u>possible</u>	<u>possible</u>	<u>possible</u>	
P.D Sarana Jaya	<u>available</u> - rental housing and commercial building - many experience	<u>available</u> - representa-tive project is Senen Triangle - may need NGO	<u>by Team 9</u>	<u>from DKI's general sources of revenue and profit commercial development</u>	<u>possible</u> - operation and main-tenance of Penjaring-an project through Directo-ate of Housing DPU - possible to associate or to make J/V	<u>equal to private company</u>	<u>possible</u>	<u>possible</u>	<u>possible</u>	<u>possible</u>	
Perum Perumnas	<u>available</u>	<u>may possible</u> - but need NGO	<u>available</u>	<u>available</u>	- <u>affiliate to Cipta Karya</u> - inter - change of personnel	<u>available</u>	<u>possible</u>	<u>possible</u>	<u>possible</u>	<u>possible</u>	
Directorate of Housing	<u>available</u>	<u>experienced</u>	<u>by Team 9</u>	<u>available</u> - in case of KIP, World Bank funds - Rental Housing improve-ment loan	<u>available</u>	<u>available</u>	<u>possible</u>	<u>possible</u>	<u>possible</u>	<u>possible</u>	