

Appendix 2

Methodology for Replotting Design and Land Evaluation

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Appendix 2 Methodology for Replotting Design and Land Evaluation

1. Preparatory Work for Replotting Design

The purposes of the Land Consolidation (L/C) projects are the improvement of public utilities/facilities realized by the implementation plan, and the increase of land utility realized by the replotting design based on the implementation plan. The implementation plan will be subject to comprehensive plans such as urban planning prepared by the local government and the national development plan. On the other hand, the replotting plan is defined as reallocation of lots in the project area in accordance to the L/C implementation plan. In order to create lands for public utilities/facilities, replots of which areas are decreased multiplying by respective contribution ratios will be allocated into blocks planned by the L/C design.

Relotting design is how to determine the location, lot area and shape for every lot in an L/C project area. For the replotting design, primary surveys are needed such as site surveys, and land right surveys.

(1) Primary Survey

1) Site Survey

The site survey will be implemented in order to understand the details of existing conditions in the project area based on the topographic map, and it will be the basic replotting design data. The principal items of the site survey are outlined as follows.

- Conditions of road, park, river/canal, religious facility, etc.
- Conditions of buildings and those structures.
- Conditions of land use by type (residence, industry, commerce, agriculture, graveyard, etc.).
- Characteristics of land such conditions as soil, topography, etc.

2) Land Right Survey

The circumstance of rights related to land changes as time passes, thus the land right survey has to be implemented before the replotting design. The replotting design will be implemented for each lot in the project area based on the characteristics clarified by the survey such as right of ownership, registered area and so on.

(2) Determination of the Original Lot Area

1) Identification of Rights for Original Lots

In general, land parcels in Indonesia are classified into registered lots (Hak Milik, Hak Guna Bangunan, Hak Guna Usaha, Hak Pakai) and non-registered lots (Hak Milik Adat). A registered lot has rights because its location and area is identified on the cadastral map. On the other hand, a non-registered lot has no certificates of land rights except the taxation map. Those conditions related to land rights must be sufficiently identified for the replotting design.

2) Determination of the Datum Area

The datum area is defined as a basic area of an original lot to determine a replot in the replotting design.

For the determination of the datum area, it is not adequate to deal with registered lots and non-registered lots equally because those areas differ in accuracy. The area of registered lots can be adopted as the datum area since it was measured. On the other hand, the area of non-registered lots will be modified by some measures. Following two kinds of measures are proposed to determine the datum area of non-registered lots in Indonesia.

Method by measurement

This is the most accurate method by the measurement of the actual area of every lot. However, a long period of time and a great deal of cost are needed for the witness and the survey.

Method by proportional distribution

This is a method where a certain area is to be distributed to a non-registered lot by dividing proportionally the difference between the total area of the non-registered lots on the taxation map and the total area of the project excluding registered lots.

(3) Preparation of the Adjusted Cadastral Map of Original Lots

In order to execute replotting design and land valuation, it is needed to prepare an adjusted cadastral map, which show the information of original lots. The following information is needed on the map.

- Boundary of the project area
- Location, shape and serial number of original lots
- Land rights

The adjusted cadastral map will be overlapped by the finalized block plan, namely it is called the "overlapped map", which will be a material to examine the location of the lots before and after the project.

(4) Preparation of the Finalized Block Plan

In order to execute the replotting design and land valuation, it is needed to prepare a finalized block plan, which contains information about the side lengths and the area and serial number of each block, based on the final assurance survey map by block.

2. Replotting Design

2-1 Signification of the Replotting Design in Land Consolidation System

The replotting design is to transfer every lot in a project area from the land before project to the land after project, followed by the lots' change of character and shape. Replotting is not land acquisition, but replaces original lots and to has renewed lots at the same time according to the regulation of the L/C system.

2-2 Proposed Replotting Design Method on Land Consolidation in Indonesia

(1) Method for Locational Fixation of Replots

Location, area, conditions of land use, and environment of those lots before readjustment should be taken into consideration, in order to fix the location of replots. It is desirable that a location of replot be located at the same location of the original lot or nearby, as much as possible. Because the location of the lot influences on the land value greatly, and it is easily understood by the landowner. On the other hand, a replot of public land which, exists only on the L/C design cannot be located at the original location because it did not exist before the project.

Transferring a replot to a different location is defined as a "transfer replotting", which is called a "flying replotting" in Japan, while leaving a replot at its original location or nearby is defined as an "original location replotting". In principle, the transfer replot is located where conditions are equivalent or better than those of the original location.

In case of transfer replotting, it is needed to take the following items into consideration:

- As for neighboring lots before project, they are replotted together in the same direction and alike as far as possible.
- Neighboring relationships, before project, in residential areas are respected.
- Adjacent lots owned by one landowner are replotted alike.

(2) Determination of the Replotting Area

As for the replotting design, the important factors are a contribution of which area is reduced from each lot area before project, and the location and shape of each replot. Thus the replotting design is executed to fix the replot area taking into consideration the area, shape, condition of land use, land value and environment of each lot before project. To calculate the areas of replots, there are several calculation methods. The application of a calculation method to a certain area should take social and legal conditions into consideration.

The calculation methods are roughly classified into the area replotting design method and the valuation replotting design method, and outlined as follows:

Area Replotting Design Method

Frontage contribution and common contribution are set up in advance and the area of the replot is calculated based on the original lot area. Accordingly, the replotted area can be determined without land valuation. In principle, original location replotting is applied to fix the location of replot in this method.

Valuation Replotting Design Method

The original lot value is calculated and multiplied by a proportional rate to determine the replot value. A certain area of replot is given corresponding to the replot value. This method is considered logical in respect of fairness in land value.

1) Area Replotting Design Method

Regarding the Indonesian “area replotting design method”, the two following alternatives are proposed:

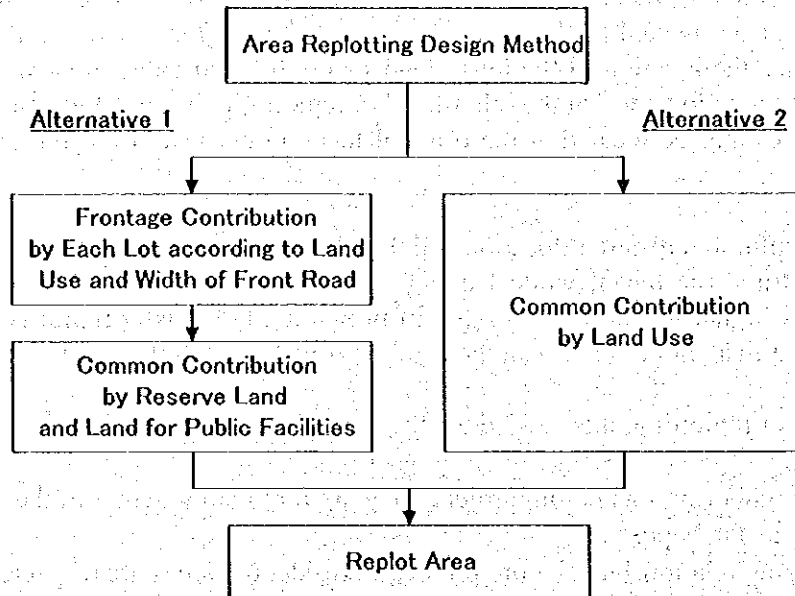


Figure A2-1 Proposed Alternatives for Calculation of Replotting Area

[Alternative 1 – Method by Frontage Contribution]

By this method, the replot area is estimated from reduction of frontage contribution and common contribution as follows:

Frontage Contribution: The utility value of a replot varies depending on the frontage length, which is touching the front road. Thus, by this method, a half of the R.O.W. as frontage contribution is burdened on each replot of both sides of the road.

As for wider roads, it is not only the benefit for each lot on both sides of the road but also for lots in the project area. Therefore a part of the R.O.W. as common contribution is burdened on all lots in the project area.

Common Contribution: In addition to the frontage contribution of the R.O.W., a common contribution of reserve lands and lands for some other public utilities/facilities is burdened on all lots in proportion to the original lots' area.

The procedure of the calculation by the frontage contribution method is outlined as follows:

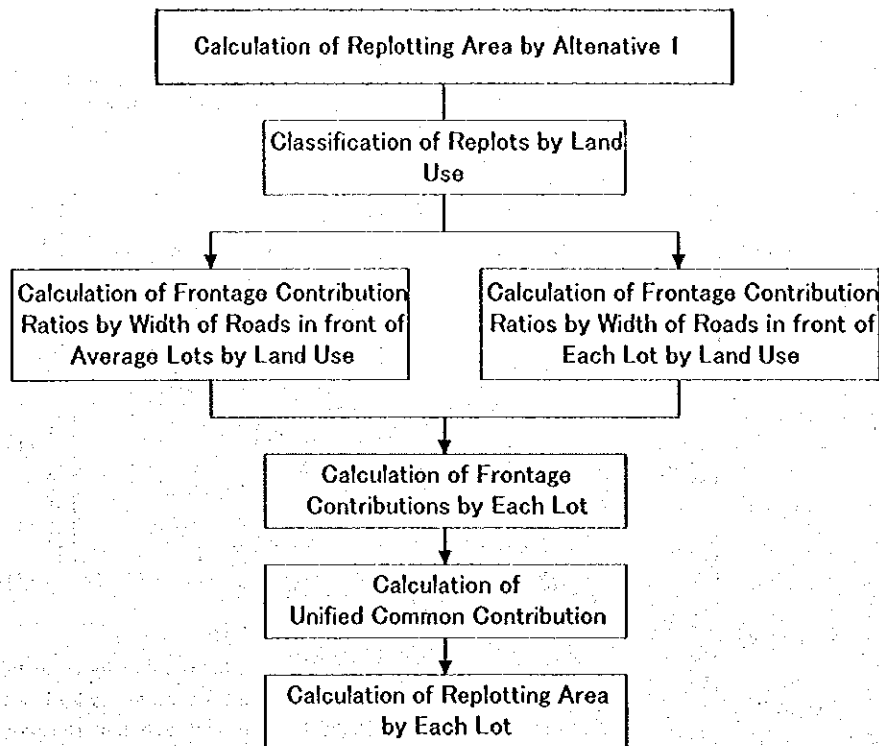


Figure A2-2 Calculation of the Replot Area by Frontage Contribution Method

The following formulas are applied to calculate the frontage contribution ratio and the amount of replotting area reduced by the frontage contribution.

$$E_1 = \sum \{ \text{Replotting Area} \times (1 - \xi) \}$$

$$\xi = \{ (W_a - W_b) / 2 \} \div \{ D_r + (W_a - W_b) / 2 \}$$

Where,

- E_1 : Amount of Replotting Area
- ξ : Frontage Contribution Ratio
- W_a : Road Width after Project
- W_b : Road Width before Project
- D_r : Depth of Replot

And then, following formulas are applied to calculate a common contribution ratio and an amount of replotting area reduced by both frontage and common contributions.

$$E = E_1 \times (1 - \mu)$$

$$\mu = \{ \{ (A_{pa} - A_{fc}) - A_{pb} \} + A_d \} \div (A_d - A_{fc})$$

Where,

- E : Amount of Replotting Area
- μ : Common Contribution Ratio
- A_{pa} : Amount of Public Land after Project
- A_{fc} : Amount of Frontage Contribution
- A_{pb} : Amount of Public Land before Project
- A_d : Amount of Reserve Land

Outline of the "area replotting design method" by alternative 1 is shown as follows:

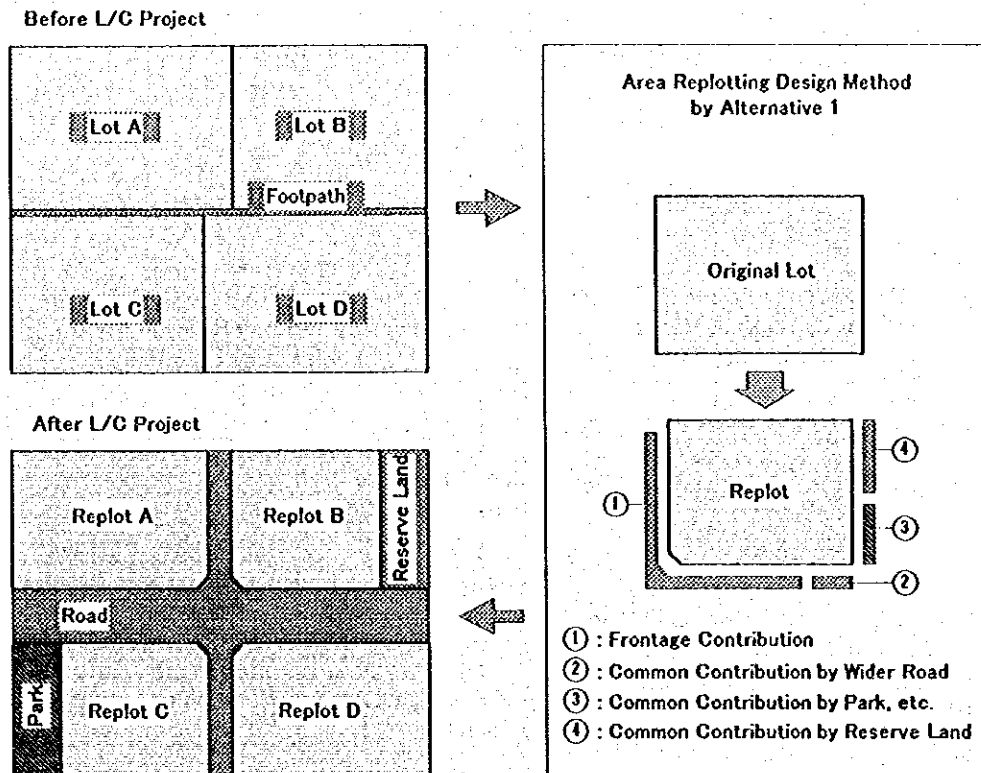
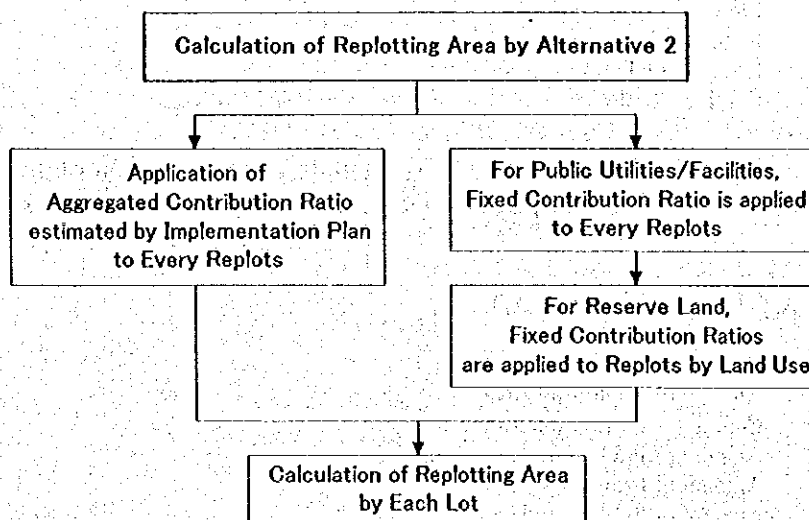


Figure A2-3 Area Replotting Design Method by Alternative 1

[Alternative 2 – Method by Fixed Contribution]

This is an alternative method where a replotting area is calculated by a fixed contribution ratio based on an aggregated contribution ratio, which is estimated by the implementation plan of the project area. There are two measures of this method as follows:



Note: In case of only one type of land use, aggregated contribution ratio is applied to every replots

Figure A2-4 Calculation of Replot Area by the Fixed Contribution Method

2) Valuation Replotting Design Method

The valuation replotting design method, based on proportional valuation, is to calculate the area of each replot estimating the corresponding lot area based on the ratio in comparison with the values of both "before" and "after" the project.

In concrete, each lot land value, both of before and after project, is calculated based on the street value method. And then, the appropriate area of each replot is calculated comparing the total values of land before and after project.

The average increase rate of housing lots can be calculated in comparison between the evaluated index per unit of land before and after project, as following formula:

$$y = c/a \quad \text{accordingly,} \quad e = a \times y$$

$$\text{and, } E = A(1 - d) \quad \text{therefore,}$$

$$E \times e = A \times a(1 - d) \times y$$

$$(1 - d) \times y = (E \times e) \div (A \times a)$$

$$\text{Assuming that, } \alpha = (1 - d) \times y \quad \text{then } (\alpha: \text{proportional rate})$$

$$E_i \times e_i = A_i \times a_i \times (E \times e) \div (A \times a)$$

$$= A_i \times a_i \times \alpha$$

$$\text{accordingly, } E_i = (A_i \times a_i \times \alpha) \div e_i$$

contribution rate is,

$$d_i = 1 - (E_i \div A_i) \quad \text{therefore,}$$

$$d_i = 1 - (a_i \times \alpha) \div e_i$$

where,

A: Gross area of the lot before project

a: Evaluated index before project per m² as an average

A_i: Area of each lot before project

a_i: Evaluated index of each lot before project per m² as an average

E: Gross area of the lot after project except financial land

e: Evaluated index after project per m² as an average

E_i: Area of each lot after project

e_i: Evaluated index of each lot after project per m² as an average

d: Average (aggregate) contribution rate in project area

d_i: Contribution rate of each lot

y: Average land value increase rate in project area (c/a)

2-3 Proposed Replotting Design Standards

(1) Zoning for Replotting Design

If the replotting design is executed for the whole project area as one zone at the same time, there will be many cases where the imbalances among replots and the surplus or shortage of the replots will largely take place. Thus the project area should be divided into several zones by its magnitude so as to prevent those problems as far as possible. As for the determination of the zoning, characteristics of the respective original lots will be sufficiently examined concerning those conditions of usage and environments, and then those conditions of public

utilities/facilities after the project.

(2) Management of Exceptional Replots

Exceptional replots, as areas for public utilities/facilities, which have to be given careful consideration, shall be fixed to certain locations in advance. And reserve lands shall be allocated to certain locations realizing the implementation plan.

As for parcels to which replots are not given, they are excluded from the replotting design and are given equity payment in return.

(3) Valuation of Replots

Replots in a comprehensive area of the project have to be valued from a synthetic/objective viewpoint at the same time, in order to avoid imbalances among them. A simplified theoretical valuation method is recommended for the estimation.

(4) Replotting Design

• Location of Replots

In Land Consolidation, the area of replots decreases compared with the area of original lots before project because of improvements of public utilities/facilities. In addition, the replot's usage condition is greatly transformed by those improvements. Thus, the location of replots will be fixed so as to preserve the situational relationships among those lots before project.

• Area of replots

Each area of replot will be calculated by the area replotting design method, excluding exceptional replots. A calculated area of the replots will be examined by its contribution ratio, concerning the equity in the project area. In case of the area is judged as imbalanced, the replots will be reexamined concerning the location, the land valuations before and after the project, etc.

• Combination of replots

In principle, one replot will be fixed for the one original lot because this combination between before and after project is convenient to the procedure of replotting design and land registration.

As exceptions, combinations of one replot for several original lots and several replots for one original lot will also be applied. The former is a case where the respective areas of replots for the original lots possessed by one landowner are too small to be used as housing parcels. The latter is the case where the one original lot cannot be established as one replot because of the excessive land area.

2-4 Preparation of Replotting Design Standards

It is needed to prepare standards for the replotting design as an indicator so as to execute the design properly. The replotting design standards consist of the following main items:

- Measures for the determination of the datum area, which is the basis to calculate the replot,

- Materialized procedures of the replotting design method,
- Measures for the fixation of replots,
- Measures for the management of exceptional replots,
- Measures for the combination of replots after project and the original lots before project, and
- Measures for the fixation of reserve lands.

3. Land Valuation

(1) Present Manner of Land Valuation in Indonesia

The land valuation method in Indonesia has not been commonly established yet. Therefore, at present, the taxation of each land is determined by land use (commercial use, residential use, agricultural use, etc.). The market value of land transaction in housing developments is determined by each developer considering the distance from the main street and public facilities, and the land use and so on. The land parcels, which are far from a main street are dealt with the same land price even if the location, scale and shape of land is different.

(2) Land Valuation for L/C Projects

1) Land Valuation for L/C

Land Consolidation projects involve exchange of land, subdivision and annexation of land parcels and lot-shape corrections to improve public utilities/facilities and increase the land utility. The primary purpose of land valuation is to distribute costs and profits of the project by dividing the contribution and shares among landowners equitably. Accordingly, while general land valuation considers social, economical and administrative factors, land valuation for L/C puts more consideration on physical and geographical factors such as locations, area, environment, etc. These features of L/C land valuation are outlined as follows:

- To evaluate the increase in land utility after the L/C project,
- Valuation of land parcels on comparable basis for “before” and “after” effects of the project,
- Valuation of a large number of land parcels with different features in the project areas on a comparable basis for “before” and “after”, and
- Calculation of liquidation considering the balance between collection and delivery.

On the other hand, the other purposes of land valuation are classified from project implementation, as follows:

- To judge the project feasibility,
- To obtain reserve land and a source of revenue, and
- To calculate liquidation.

As mentioned above, the purposes of land valuation for L/C are different from the valuation for land transaction and tax assessment. The primary purpose of land valuation for L/C is to fairly distribute the benefit of the L/C project.

To meet the above-mentioned purposes of the land valuation, the "Street Value Method" is recommended. The street value method has been applied in Land Readjustment projects extensively in Japan as well as in other countries such as Korea.

(3) Proposed Land Valuation Method for L/C Projects in Indonesia

1) Consideration for Sense of Street Value

Road functions can be distinguished by their hierarchy, connection, width, pavement and design. They affect the utility of facing lots to a great extent. Besides their use in transportation, some roads have the following secondary function in residential and commercial area:

- Refuse and buffer space in case of disasters.
- Ventilation passage and scenic greenery.
- Space for trenching drains and sinking piles.

In order to secure the above-mentioned functions, therefore, a certain width of road (street) related to the land use has to be prepared. A broader road generally has better functions within certain limits.

2) Definition of Land Valuation based on the Street Value Method

Land valuation based on street value method is to judge the equity of replots in the project area in accordance with such conditions as roads and replots, however, it is not a method for the estimation of the absolute land price. In order to determine the absolute land price, it has to be based on an expert land appraisal.

In case of replotting design in the L/C system in which a large number of parcels are replotted at the same time, the land valuation is applied to explain/interpret the equity among those replots. It is proposed that the land valuation based on the street value method for the L/C system be introduced into the existing valuation method in housing developments or for taxation in Indonesia. The procedure of land valuation based on the street value method is outlined as follows:

1. The L/C project area is divided into several groups as resemble areas by classification of the land price, and then each standard lot adjoining to a street is selected respectively as a typical land in a resemble area.
2. Each standard lot land price is appropriately determined comparing land prices on some land transactions.
3. A formula model of the land valuation, which explains the differences of land prices among standard lots in the project area is prepared as a result of some simulated calculations using factors of land price as the variables.
4. Some supplemental coefficients are prepared to calculate the appropriate land price of each parcel in the resemble area. Accordingly, the respective land prices of both replots and their original lots in the project area can be calculated from the formula model and the coefficients.

It is deemed that a land price is composed by the following factors:

- Physical factors concerning time, location, planning, surrounding, accessibility, size, shape, geographical feature, land use and amenity,
- Economic factors concerning demand and supply,
- Conversion factors concerning land use, and
- Other factors concerning unfavorable matters such as squatters, etc.

3) Selection of Streets for Land Evaluation based on the Street Value Method

In principle, street values should be given on streets consisting of roads and footpaths and making lots useable. When land evaluation is done according to street value, the land value depends on the adjacent road with the street values on it. Accordingly, the selection of roads to be given a street value must be carried out with careful consideration. All the roads in the planning area and roads outside the planning area that connect with the planning area are studied, and of those having a basic value regardless of whether they are public or private roads, selected roads are then given street values.

Roads given street values will be selected based on the following points:

Before L/C

Public roads can be used by anyone without restriction and even if they are unusable presently, they will be improved using public funds to make them usable, increasing the real value. Thus all roads on cadastral maps, regardless of the width, will be given street values.

- Roads outside the project area that are essential for land evaluation will also be given street values.
- Private roads, excepting those that are not serving for access of other lots, will be given street values.
- Canals and waterways that are essential for land evaluation will also be given street values.

After L/C

By the nature of the project, all the roads will be used for vehicles and pedestrians, and all roads within the project area will be given street values. Roads outside the project area and connected to it will remain the same as before project.

4) Street Value Calculation

The street value is defined as the utility value per sq. m of a standard lot fronting a road at the right angle in the middle portion of a block. The value is affected by factors concerning the conditions of road, accessibility and land, and calculated by the following procedures:

1. The standard street value index is fixed at 1,000 and applied to the most valuable roads before project.
2. All factors affecting land prices are analyzed, and those coefficients are estimated.
3. Other street values are calculated by the factors as follows:

$$\text{Street value} = \text{Standard Street Value Index (1,000)} \times (\sum \text{Coefficient Value by Each Factor})$$

The calculated street value index is expressed as an index, but in monetary unit. It is

convenient for “valuers” to neglect inflation and time and to pay attention only to physical changes in relation to lots by the project.

5) Adjustment Factors of Street Value

Possible factors and ranges of coefficient values in street value calculations are summarized in the following table. In preparing factors and coefficient values, it is required to sort them out taking into consideration the regional characteristics and project implementation plan. And coefficient values, which will be prepared by each project, can be changed depending on the characteristics of the project area.

Table A2-1 Factors and Coefficient Values for Street Value Calculations

Factors	Conditions	Coefficient Value
Conditions of Street (Character, Continuity, etc.)	Very Good	+ ___ % ~ + ___ %
	Good	+ ___ % ~ + ___ %
	Normal	-
	Bad	- ___ % ~ - ___ %
	Very Bad	- ___ % ~ - ___ %
Amenity (Neighborhood Status)	Very Good	+ ___ % ~ + ___ %
	Good	+ ___ % ~ + ___ %
	Normal	-
	Bad	- ___ % ~ - ___ %
	Very Bad	- ___ % ~ - ___ %
Accessibility (Shopping, Bus Line, Park and School, Others)	Very Near	+ ___ % ~ + ___ %
	Near	+ ___ % ~ + ___ %
	Normal	-
	Far	- ___ % ~ - ___ %
	Very Far	- ___ % ~ - ___ %
Width of Street	Very Wide	+ ___ % ~ + ___ %
	Wide	+ ___ % ~ + ___ %
	Normal	-
	Narrow	- ___ % ~ - ___ %
	Very Narrow	- ___ % ~ - ___ %
Type of Road	Pavement	-
	Metalled	- ___ % ~ - ___ %
	Earth	- ___ % ~ - ___ %
Sewerage / Drainage		± ___ % ~ ± ___ %
Water Supply		0% ~ ± ___ %

(4) Land Valuation for Individual Lots

The valuation of individual lots is conducted using the street value to find equivalent areas and the standard unit price and adjusting according to the individual characteristics of each lot to find the value for that particular lot.

1) Basic Calculation and Individual Factors

The evaluation of individual lots is expressed using the following formula:

$$\text{Individual Lot Value} = (\text{Street Value}) \times \Sigma(\text{adjustments according to individual factors of each lot})$$

In calculating the lot values, careful attention must be paid to the individual factors

concerning the lot according to the lot usage condition. When standard lots and general lots are compared, the factors causing the difference in value can be largely divided into:

- Adjustments according to the location in relation to the road
Adjustments according to the occurrence of differences in the degree of lot usage due to the location of the lot to be valued in relation to the road and adjoining conditions such as adjustments as corner plots, plots with road frontage back and front, lots without road access, etc.
- Adjustments according to alterations to the shape of the lot.
Adjustments according to the discrepancy between the real conditions of the lot and the standard, which affect the characteristics of the lot, such adjustments as by width, length, etc.
- Adjustments according to the state of utility of the lot.
Adjustments according to differences in lot utility of the standard lot usage due to the lot being put to special use, such adjustments as by legal factors.

2) Standards of Land Valuation

Coefficient values of affected factors on lots are summarized in the following table, and the figures of coefficient values will be prepared for each L/C project:

Table A2-2 Coefficient Values on Lots

Factors	Condition	Coefficient Value
Category of Land Use	Commercial	+ ___% ~ + ___%
	Industry	+ ___% ~ + ___%
	Residential	-
	Agriculture	- ___% ~ - ___%
	Others	- ___% ~ - ___%
Size	Very Large	- ___% ~ - ___%
	Large	- ___% ~ - ___%
	Normal	-
	Small	- ___% ~ - ___%
	Very Small	- ___% ~ - ___%
Shape	Standard	-
	Bad	- ___% ~ - ___%
	Very Bad	- ___% ~ - ___%
Terrain	Standard	-
	Bad	- ___% ~ - ___%
	Very Bad	- ___% ~ - ___%
Existence of Unfavorable Facility	Near	- ___% ~ - ___%
	Very Near	- ___% ~ - ___%
Difference between High and Low	Very High	- ___% ~ - ___%
	High	- ___% ~ - ___%
	Standard	-
	Low	- ___% ~ - ___%
	Very Low	- ___% ~ - ___%
Corner Lot		+ ___% ~ + ___%
Land adjoining to Road in Front and Back		+ ___% ~ + ___%
Land not adjoining to any road		- ___% ~ - ___%
Flooding Condition	Standard	-
	Bad	- ___% ~ - ___%
	Very Bad	- ___% ~ - ___%

Appendix 3

**L/C Project Implementation Manual for Application during
Transition Period for Administrative Reform in Indonesia**

Appendix 3 L/C Project Implementation Manual for Application during Transition Period for Administrative Reform in Indonesia

I. FOREWORD

Land Consolidation (L/C) constitutes land policy related to rearrangement of tenure, ownership and use of land in accordance with the Regional Spatial Plan provided with environmental facilities and infrastructure, through joint effort of the landowners/community themselves or with other parties, either implemented in an urban area or in a rural/agricultural area.

Basically, Land Consolidation activities are differentiated into two, namely Urban Land Consolidation and Rural/Agricultural Land Consolidation. Particularly in the case of this Implementation Manual (I/M) for the implementation of Land Consolidation, it is prepared to provide implementation manual in Urban and Rural/Agricultural Land Consolidation activities.

Basically, this Land Consolidation with Self-Fund Method Preparatory phase includes:

- a) Determination of Prospective Land Consolidation Location.
- b) Assessment/Selection of Land Consolidation Location.
- c) Land Consolidation Implementation Extension for Land Consolidation Participants.
- d) Assessment of Land Consolidation Implementation Agreement.
- e) Formulation of Land Consolidation Agreement Result.
- f) Designation of Land Consolidation Location.
- g) Confirmation of Land Consolidation Object.

Meanwhile, the Land Consolidation Completion phase generally covers:

- a) Data collection.
- b) Arrangement.
- c) Construction.

As a guide in the implementation of Land Consolidation, either at the Central Office of the National Land Agency (BPN) or at a Provincial Office of the BPN or Regency/Municipality Land Office, this Implementation Manual (I/M) is based on the provisions of the prevailing regulation.

A. Technical Provisions

1. Regulation of the Head of National Land Agency Number 4 dated 7 December 1991 regarding Land Consolidation.
2. Regulation of the State Minister for Agrarian Affairs/Head of National Land Agency Number 3 of 1999 dated 19 February 1999 regarding Delegation of Authority for Issuance and Cancellation of Decree on Conferment of Title on State Land.
3. Decree of the State Minister for Agrarian Affairs/Head of National Land Agency Number 4 of 1995 regarding Amendment to Amount of Cost Charging for the Purpose of Issuance

- of Land Title Certificate originating from Conferment of Title on State Land, Confirmation of Traditional Land Title, and Conversion of Former Traditional Land Title, which has become Agrarian Operational Project Object.
4. Letter from the Head of National Land Agency Number 410-4245 dated 7 December 1991 regarding Land Consolidation Implementation Instruction.
 5. Circular Letter from the State Minister for Agrarian Affairs/Head of National Land Agency Number 410-1078 dated 18 April 1996 regarding Land Consolidation Technical Instruction.
 6. Circular Letter from the State Minister for Agrarian Affairs/Head of National Land Agency Number 410-55 dated 8 January 1997 regarding Land Consolidation Participant Organization.
 7. Circular Letter from the State Minister for Agrarian Affairs/Head of National Land Agency Number 462-3872 dated 22 December 1997 regarding Designation of Land Consolidation Location.
 8. Circular Letter from the State Minister for Agrarian Affairs/Head of National Land Agency Number 410-2084 dated 30 June 1998 regarding Improvement of Land Consolidation Service.
 9. Letter from the Deputy for Land Tenure and Land Use Arrangement Number 410-1355-DII dated 15 May 1996 regarding Land Consolidation Implementation Cooperation Instruction.
 10. Circular Letter from the Deputy for Land Tenure and Land Use Arrangement Number 411-1852-DII dated 5 July 1995 regarding Cost of Registration Fee at Land Consolidation Location.
 11. Circular Letter from the Deputy for Land Tenure and Land Use Arrangement Number 410-1919-DII dated 3 July 1996 regarding Instruction on Report of Land Consolidation Follow-up Monitoring and Work Progress.

B. Financial Provisions

1. Law Number 20 for 1997 regarding Non-Tax State Revenue.
2. Government Regulation Number 22 of 1997 regarding Type and Remittance of Non-Tax State Revenue.
3. Decree of the Minister of Finance Number 114a/KMK.03/ 1997 dated 21 March 1997 regarding Administration of and Accountability for Non-Tax State Revenue (PNBP) at User Agencies.
4. Circular Letter from the Director General of Budget Number SE-76/A/46/0697 dated 3 June 1997 regarding Instruction on Implementation of Decree of the Minister of Finance Number 114a/KMK.03/1997 dated 21 March 1997 regarding Administration of and Accountability for Non-Tax State Revenue (PNBP) at User Agencies.
5. Circular Letter from the Director General of Budget Number Se-82/A/461/0598 dated 12 May 1998 regarding Instruction on Implementation of the Supplementary Activity Questionnaire (DIKS) of User Agencies.

C. Implementation Organization

The Land Consolidation Implementation Organization is the organization referred to in Regulation of the Head of National Land Agency Number 4 of 1991, article 5, as follows:

1. Implementation Coordination

Implementation coordination at a Province is referred to as Control Team and at Regency/Municipality it is referred to as Coordination Team.

a. Provincial Land Consolidation Control Team

The composition of membership of the Provincial Land Consolidation Activity Control Team is:

- 1) Advisor : Governor/Head of Province
- 2) Chair/Member : Head of BPN Regional Office
- 3) Vice-chair/Member : Head of Provincial BAPPEDA
- 4) Secretary/Member : Head of Land Tenure Arrangement Division, BPN
- 5) Members :
 - Head of Provincial Government Guidance Bureau
 - Head of Land Use Division, BPN
 - Head of Land Title Division, BPN
 - Head of Land Measurement and Registration Division, BPN
 - Head of Provincial Public Works
 - Human Settlements Service
 - Other related agencies

The Control Team is established with Decree of the Governor/Head of Region. The draft Decree is prepared by the Province Regional Office of the BPN through the Head of Land Tenure Arrangement Division concerned.

The duties of the Land Consolidation Control Team are:

- a) Conducting control and evaluation of Land Consolidation activity implementation development.
- b) Solving problems arising in the implementation of Land Consolidation and taking follow-up measures.
- c) Providing guidance, direction and instruction to Land Consolidation Executors at Regencies/Cities.
- d) Taking other actions deemed necessary.

b. Regency/Municipality Land Consolidation Coordination Team

The composition of the Coordination Team is as follows:

- 1) Chair : Regent/Mayor/Head of Region
- 2) Vice-chair/Member : Head of Regency/Municipality Land Office
- 3) Vice-chair/Member : Head of Regency/Municipality BAPPEDA
- 4) Secretary/Member : Head of Land Tenure Arrangement Section, Land Office
- 5) Members :
 - Head of Government Section
 - Head of Public Works Service
 - Head of Agricultural Service
 - Head of Municipality Planning Service
 - Head of Land Use Section, Land Office

Head of Land Title Section, Land Office
Head of Land Measurement/Registration Section, Land Office
Representative of Landowners (2 Persons)
Other related agencies

The duties of the Coordination Team are:

- 1) Conducting extension to the people.
- 2) Evaluating and guiding preparation of Land Consolidation Design (Land Tenure, Land-ownership and Land Use System Design).
- 3) Organizing/directing allocation and use of Reserved Land (TPBP).
- 4) Solving and handling problems arising in the implementation of Land Consolidation.
- 5) Conducting consultative discussion to reach an agreement with Land Consolidation participants.
- 6) Taking other actions deemed necessary.

The Coordination Team is established with Decree of Regent or Mayor, Head of Level II Region. The draft Decree is prepared by the Head of Land Tenure Arrangement Section of the Land Office concerned.

2. Executors

The Regency/Municipality Land Consolidation Executors are referred to as the Land Consolidation Executor Unit (Task Force) with membership composition as follows:

- 1) Chair/Member : Head of Regency/Municipality Land Office
- 2) Vice-chair/Member : Head of Land Tenure Arrangement Section
- 3) Members : Head of Land Use Section
Head of Land Title Section
Head of Land Measurement and Registration Section
Local District Head
Village Head

The Land Consolidation Executors (Task Force) have duties as follows:

- 1) Performing Land Consolidation implementation duties.
- 2) Functioning as Land Inspection Committee which with the existing data can prepare land inspection report for issuance of Decree on Conferment of Title on Land by the authorities.
- 3) Functioning as Land History Investigating Team in accordance with the prevailing laws and regulations.

The Land Consolidation Executor Task Force is formed with Decree of Regent/Mayor/Head of Level II Regency/ Municipality. The draft Decree is prepared by the Head of Land Tenure Arrangement Section of the Land Office concerned.

II. LAND CONSOLIDATION LOCATION PREPARATION

A. Implementation Preparation

1. Preparation of Operational Plan of Implementation Activities-Supplementary Activity Questionnaire.
2. Procurement of office stationery, technical materials and field equipment.
3. Formation of Land Consolidation Control Team at Provincial Level if not yet formed, Coordination Team and Implementation Task Force (Task Force) at Regency/Municipality Level.

B. Field Activities

1. Determination of Prospective Land Consolidation Location

Prospective Land Consolidation implementation location may be obtained based on the proposal or request of the landowners/land-holders or based on the result of Land Consolidation location assessment conducted by the BPN officials. Before proceeding to the next phase, evaluation should be made on the feasibility of the location for Land Consolidation implementation, among others in relation to conformity of the location to the Regional Spatial Plan concerned. It should be ascertained that the Land Consolidation location really supports the implementation of Regional Spatial Plan in accordance with the prevailing regulation, thereby always avoiding conflicts and non-conformity of the location to the Spatial Plan.

2. Land Consolidation Location Assessment/Selection

Assessment of location designation is intended to conduct assessment at the field for the purpose of selection of location meeting the requirements designated as Land Consolidation location. This location assessment/selection phase constitutes a very decisive phase determining the success of Land Consolidation implementation. If the Land Consolidation implementation fails halfway, generally this is due to a fault at the location assessment/selection phase.

The location assessment/selection activity is intended so that:

- 1) The location selected to be rearranged through the Land Consolidation is agreed upon by a percentage of the landowners/land-holders minimum in accordance with the regulation (at present 85%) of the total number of landowners/land-holders including the minimum area of the location plan area based on the prevailing regulation (at present 85%, based on Regulation of the Head of National Land Agency Number 4 of 1991).
- 2) The selected location conforms to the Regional/Municipality Spatial Plan and is expected to grow and develop in line with the regional development around it.
- 3) A general indication is obtained on the location and the Regional Spatial Plan or development plan at the location, so that a General Land Consolidation Implementation Plan for the prospective location is obtained. Thus at the phase of Extension and Formulation of Agreement Assessment Result, the Land Consolidation participant candidates whose acceptance to be requested will obtain a clear indication regarding the Land Consolidation Plan from the Land Consolidation Implementation Team, and the amount of the Land Contribution for Development can be estimated.

Several factors to be taken into consideration in selecting the prospective Land Consolidation location are:

- a) Conformity of the prospective location to the General Plan/Detailed Plan/Technical Regional Spatial Plan or direction of housing and settlements sector development activities.
- b) Level of location accessibility.
- c) Level of preparedness of participants/landowners to participate in Land Consolidation activities in accordance with the required Land Contribution for Development percentage, the more participants accepting the better.
- d) Number of land plots to be rearranged.
- e) Uniformity of land plot area, the more uniform the better.
- f) Number of Land Consolidation participants.
- g) Topographical condition.

At the location assessment/selection phase, several activities are conducted consecutively starting from preparation, assessment at the field, data processing and reporting. Thus, a proper location can be determined or selected for the implementation of Land Consolidation activities.

a. Preparation

- a) Inventorying of information on intention of the community to participate in Land Consolidation programmes, to be conducted with data collection originating from the will of the prospective Land Consolidation participants.
- b) Subsequently, based on the consideration of the Province or Regency/Municipality Regional Government together with the related agencies and the National Land Agency it shall be stipulated that land rearrangement to accommodate the development activities will be achieved through Land Consolidation.
- c) Prior to going to field survey and field-check, first of all location assessment preparation will be conducted carefully by analyzing the alternative location based on the available data, maps, and other information and facts at the field, such as:
 - (1) Existing Land Use Map with detailed scale.
 - (2) Land-ownership or Land-holding Maps and Land Plot/Perimeter Map on detailed scale if already available.
 - (3) Spatial Plan at alternative location.
 - (4) Road Networks, Public Facility and Social Facility Maps.
 - (5) Population Density Map.
 - (6) Other data and maps required.

For the sharpness of map analyses, the more detailed the data and the bigger the scale of the map will be the better, because this provides more detailed indication.

- d) From the result of analyses of the alternative location, the selected location is designated and incorporated into the working maps to be taken to the field.

b. Implementation

After the prospective location has been selected, assessment is subsequently made at the location in consideration, by taking the data and working maps already prepared earlier. The data and working map will be completed and improved at the field based on:

- a) Interview with community figures, Village/Subdistrict Head/District Head, and Regency/ Municipality Regional Government to know the general comments on the planned Land Consolidation at the selected location.
- b) Present land use at the field including residential/housing, field, mixed garden, vacant land, trade/service, industrial, waters, open space, and so on.
- c) Road networks relating to size (length and width), compaction (soil, rock, asphalt, or hot mix).
- d) Public facilities and social facilities.
- e) Various land plot shapes.
- f) Secondary data collection at the Office of Village/Subdistrict Head, Office of District Head, Regency/Municipality Land Office, and Land and Building Tax Service Office and other agencies to supplement the information.

c. Processing

Data and fact processing at the field resulting from the location assessment will be incorporated into the map and list giving an overview of the prospective Land Consolidation location. The maps and list cover:

- a) Maps of detailed land use already improved, showing road networks, public facilities, social facilities, housing land or land plots before implementation of Land Consolidation.
- b) List of landowners/land-holders from the Office of the Village/Subdistrict Head.
- c) Area of each type of land use before the land Consolidation implementation (calculated from the land use map or using secondary data from the Office of the Village/Subdistrict Head).

In accordance with the Regional Spatial Plan or Detail Spatial Plan or Technical Spatial Plan as well as existing specific plan, then there will be established such a General Block-plan which is at least show road networks plan and land allocation block. The block plan is to be drawn on a map to show existing condition of the location before the project (Location Map) in order for further review. Based on the review, it is expected that land contribution will be able to be calculated for:

- a) Additional land requirement for road networks.
- b) Additional land requirement for public facilities and social facilities.
- c) Reserved Land.

The Land Contribution for Development amount must be calculated in accordance with the additional land requirement to meet the General Spatial Plan/Detailed Spatial Plan/Technical Spatial Plan demand. The Land Contribution for Development area may be calculated as a percentage against the total area of the existing land plot, so that the land-owners may expect the general indication of the planned land percentage to be donated. The Land Contribution for Development calculation must be made carefully.

At the time of location assessment, formulation must already be made of Work Operational Plan based on the Instruction on Implementation of the Supplementary Activity Questionnaire (DIKS) or Budget Plan and the Operational Instruction (O/I) or Work-plan covering financing including estimated cost amount, financial source, and planned implementation period.

Therefore, calculation must be made so that the Land Consolidation participant candidates will not have too much burden, because a portion of their land is already planned to be donated through the Land Contribution for Development.

d. Preparation of Reports

Preparation of Report on Result of Location Assessment incorporated into a general report. The report will be prepared as a report called General Land Consolidation Implementation Plan containing:

- a) General indication of condition on location.
- b) Response of the landowners/land-holders/community and other related parties.
- c) Land Contribution for Development Plan.
- d) Cost Plan.
- e) Planned Implementation Schedule.

After the location assessment has been completed, extension can then be conducted on the Land Consolidation participant candidates at the location.

3. Land Consolidation Implementation Extension for Land Consolidation Participants

a. Extension will be provided to the people, community leaders/figures, traditional leaders, and executors at the selected location with the purpose of ensuring that the people increasingly understand the meaning, system and benefit of Land Consolidation programmes and will be willing to participate actively in its implementation. Whereas extension to the executors of Land Consolidation activities is intended to ensure that they understand the duties and responsibilities as well as role of each of them in implementing Land Consolidation programmes. Extension will be conducted by the Coordination Team and the designated officials and efforts will be made to do this directly (direct information to the Land Consolidation participants). However, indirect extension can also be conducted through informal leaders, RW/RT or neighborhood leaders, and community leaders to be subsequently passed on to the Land Consolidation participant candidates in sequence.

b. Extension materials include:

- 1) Land Consolidation activities in general.
- 2) General Land Consolidation Implementation Plan at the prospective location as a continuation of the result of assessment of the location designation.
- 3) The need for Land Contribution for Development for the purpose of provision of road networks/sanitation, public facilities and other social facilities. Calculation of estimated Land Contribution for Development amount should be informed to the landowners/land-holders/community at the time of extension. The estimated Land Contribution for Development amount should be informed to the participants/community and must be based on the result of report on assessment of the prospective Land Consolidation location.
- 4) Benefit of Land Consolidation for Land Consolidation participants.
- 5) Other items related to Land Consolidation implementation.