

**MINISTRY OF PLANNING AND INVESTMENT
SOCIALIST REPUBLIC OF VIETNAM**

**THE STUDY FOR
IMPROVEMENT OF LIVING CONDITIONS
FOR WORKERS AROUND
INDUSTRIAL AREAS
IN
SOCIALIST REPUBLIC OF VIETNAM**

**FINAL REPORT
EXECUTIVE SUMMARY**

JULY 2016

JAPAN INTERNATIONAL COOPERATION AGENCY

**NINE STEPS CORPORATION
ORIENTAL CONSULTANTS GLOBAL CO., LTD.
INTERNATIONAL DEVELOPMENT CENTER
OF JAPAN INCORPORATED
AZUSA SEKKEI CO., LTD.**

E I
J R
16-127

**MINISTRY OF PLANNING AND INVESTMENT
SOCIALIST REPUBLIC OF VIETNAM**

**THE STUDY FOR
IMPROVEMENT OF LIVING CONDITIONS
FOR WORKERS AROUND
INDUSTRIAL AREAS
IN
SOCIALIST REPUBLIC OF VIETNAM**

**FINAL REPORT
EXECUTIVE SUMMARY**

JULY 2016

JAPAN INTERNATIONAL COOPERATION AGENCY

**NINE STEPS CORPORATION
ORIENTAL CONSULTANTS GLOBAL CO., LTD.
INTERNATIONAL DEVELOPMENT CENTER
OF JAPAN INCORPORATED
AZUSA SEKKEI CO., LTD.**

Table of Contents

List of Figures and Tables

List of Annexes

Location Map

Abbreviations

1. INTRODUCTION.....	1
(1) Background of the Study.....	1
(2) Objective and Outcomes of the Study.....	1
2. CURRENT LEGAL FRAMEWORK FOR THE IMPROVEMENT OF LIVING CONDITIONS OF WORKERS IN INDUSTRIAL PARKS.....	2
(1) Legal Frameworks for Social Housing.....	2
(2) Incentives for Social Housing Projects.....	2
(3) Price Conditions of SH.....	3
(4) Legal System on Construction.....	3
3. CURRENT LIVING CONDITION OF WORKERS IN INDUSTRIAL PARKS.....	4
(1) Outline Survey Under the Present Condition.....	4
(2) Interview Result to Understand the Living Situation and Issues.....	4
(3) Issues of Industrial Park Typologies and Living Environments.....	4
(4) Development of Residential Area.....	5
(5) Building Conditions.....	6
(6) Situation of Housing Management.....	7
(7) Business Scheme for Housing Development.....	7
(8) Affordable Housing Costs for Industrial Park Workers.....	9
(9) Examples of the Improvement of Housing Development in Vietnam.....	10
(10) Summary of Concerns.....	12
4. HOUSING DEVELOPMENT MEASURES IN SURROUNDING COUNTRIES.....	14
(1) Financial System.....	14
(2) Spatial Control System.....	14
(3) Administrative System.....	14
5. RECOMMENDATIONS FOR THE IMPROVEMENT OF LIVING CONDITION OF IP WORKERS.....	15
(1) Recommendations for Spatial Planning and Building Design.....	15
(2) Recommendations for Institutional and the Legal System.....	19
(3) Recommendations Related to Business and Financial Planning.....	22
(4) Implementation Priority of the Policy.....	24
6. PLAN OF THE MODEL SITE.....	26
(1) Measures for Construction Plan.....	26
(2) Conclusion of Discussions with Related Entities.....	27
(3) Result of Land Use Distribution and Planning Population.....	27
(4) Housing Outline in the Model Site.....	29
(5) Building Planning.....	30
(6) Road Planning.....	32
(7) Water Supply Planning.....	33
(8) Waste Water Treatment Planning.....	34
(9) Drainage Planning.....	35

(10) Electricity Planning.....	35
(11) Landing Plan.....	36
(12) Construction Plan.....	37
(13) Cost Estimation.....	38
6.2. BUSINESS PLANNING.....	40
(1) Business Implementation System	40
(2) Requirements of Business Planning.....	42
(3) Financing Plan	44
(4) Financing (Sensibility Analysis).....	46
(5) Examination on Funding Sources	49
(6) Feasibility of Social Housing Business in the Model Site	50
6.3. RECOMMENDATIONS TO THE IMPLEMENTATION OF DEVELOPMENT	50
(1) Recommendations for Implementation of Development of the Model Site.....	50
7. CONCLUSION.....	54
7.1. THE RESULT OF THIS STUDY	54
7.2. RECOMMENDATION FOR LIVING ENVIRONMENT IMPROVEMENT OF IP WORKERS	54
(1) Measures of Living Environment Improvement of IP Workers Throughout Vietnam	54
(2) Measures of Living Environment Improvement of IP Workers for Model Site in Hung Yen	54
7.3. URBAN PLANNING OF ZONING PLAN, DETAIL PLAN, AND DRAFTED BUSINESS PLAN.....	55

List of Figures and Tables

Figure 3-1	Spatial Model between the Industrial Zones and the Residential Area	6
Figure 3-2	VISP Bac Ninh- Example on Integrated Industrial Parks.....	6
Figure 3-3	Example of a Building with Single Rooms for Rent	6
Figure 3-4	Example of Workers’ Dormitory	6
Figure 3-5	Example on Current Rent Room for Workers (Outside)	7
Figure 3-6	Example on Current Rent Room for Workers (Inside).....	7
Figure 3-7	Example of the Residential Units Converted from Ex-Single Type Dormitory to Family Type (Dai An IP)	7
Figure 3-8	Business Model of Social Housing for Industrial Workers	8
Figure 3-9	Percentage of Distribution of Monthly Income	9
Figure 3-10	Percentage of Distribution of Monthly Housing Cost	9
Figure 3-11	Spatial Planning for Low Rise Rental Housing and Design Guideline	11
Figure 3-12	Rent Room Housing by Individual Investors with Service Facilities and Open Space	11
Figure 3-13	Case of Relaxing the Operational Rules by Automatic Security System (Ascendas IP)	11
Figure 5-1	Considerations for Location Selection in View of Spatial Planning (Case of Model Site).....	17
Figure 5-2	Image of Common Space	18
Figure 5-3	Example for Considering Architectural Building for Renovation	18
Figure 5-4	Program for Rental Residential Buildings with Satisfied Conditions.....	21
Figure 6-1	Map of Model Site and Surrounding Area	27
Figure 6-2	Image of Land Use Distribution Map.....	28
Figure 6-3	Detail Plan of Plat Plan	29
Figure 6-4	Room Plan for Single (Low -Rise Housing).....	31
Figure 6-5	Room Plan for Single (Medium-Rise Housing)	32
Figure 6-6	Water Supply Planning.....	33
Figure 6-7	Plan of Sewer Pipes.....	34
Figure 6-8	Plan of Drainage Pipes	35
Figure 6-9	Power Layout	36
Figure 6-10	Image of Ring Levee	36
Figure 6-11	Construction Division Plan	37
Figure 6-12	Image of Bird’s-Eye View	39
Figure 6-13	Supposed Business Schemes in Model Site	42
Table 3-1	Summary of Survey of Current Living Situation	4
Table 3-2	Affordable Housing Price and Payment (Based on Minimum Wage, Average Income).....	10
Table 3-3	Issues with the Living Environment for Workers.....	13
Table 5-1	Relationship between National wide Recommendations and the Current Legal System.....	15
Table 5-2	Implementation Priority of Nationwide Policy for Social Housing Improvement	25
Table 6-1	Planning Requirement of Model Site on Current Zoning Plan	26
Table 6-2	Land Use Distribution and Planning Specification.....	28
Table 6-3	Housing Type and Planning Index	29
Table 6-4	Residents Summary Sheet in each Building Type.....	30
Table 6-5	Specification of Deep Well	33
Table 6-6	Outline of Water Supply Plan	34
Table 6-7	Outline of Wastewater Treatment Plan	34
Table 6-8	Outline of Rainwater Drainage Plan.....	35
Table 6-9	Construction Division Plan & Construction Outline	38
Table 6-10	Summary of Cost Estimation	38
Table 6-11	Business Stakeholders and Role Sharing.....	40
Table 6-12	Share of Expenses and Expected Roles in Workers’ Housing Business.....	41
Table 6-13	Affordability of Residents	43
Table 6-14	Affordable Price for Beneficiaries • Business Cost and Subsidies etc.	44
Table 6-15	Result of Investment Fund Allowance	46
Table 6-16	Expected Allocation Example of Investment Fund	48
Table 6-17	Funding Sources for Initial Business Cost	49
Table 6-18	Feasibility of Social Housing Business in the Model Site	50
Table 6-19	Recommended Policies for Housing Development in Model Site	51

Abbreviations

Abbreviations	English
ACB	Air Circuit Breaker
AFTA	ASEAN Free Trade Area
AH	Affected Household
ASEAN	Association of South - East Asian Nations
ATM	Automated Teller Machine
BCR	Building Coverage Ratio
BOD	Biochemical Oxygen Demand
BTN	State Saving Bank
BT	Build-Transfer
CCTV	Closed- Circuit Television
COD	Chemical Oxygen Demand
CODI	Community Organizations Development Institute
DO	Dissolved Oxygen
DRC	District Resettlement Committees
EIA	Environmental Impact Assessment
EPZ	Export Processing Zone
EV	Elevator
EWS	Economically Weaker Section
EZ	Economic Zone
FAR	Floor Area Ratio
FDI	Foreign Direct Investment
FL	Floor Level
FRP	Fiber Reinforced Plastics
GDP	Gross Domestic Product
GHB	Government Housing Bank
GL	Ground Level
HCMC	Ho Chi Minh City
HEPZA	HCMC Export Processing & Industrial Zones Authority
IBBL	Islamic Bank Bangladesh Limited.
IEC	International Electrotechnical Commission
IEE	Initial Environmental Examination
IP	Industrial Park
IRR	Internal Rate of Return
IT	Information Technology
IZ	Industrial Zone
JETRO	Japan External Trade Organization

Abbreviations	English
JICA	Japan International Cooperation Agency
JST	JICA Study Team
KASIBA	Kawasan Siap Bangun : Ready to Build Area
LDK	Living-Dining-Kitchen
LFDC	Land Fund Development Center
LISIBA	Lingkungan Siap Bangun: Ready to Build Environment
MCCB	Molded Case Circuit Breaker
MOC	Ministry of Construction
MPI	Ministry of Planning and Investment
NGO	Non-Governmental Organizations
NHA	National Housing Authority
NPC	Northern Power Corporation
ODA	Official Development Assistance
PPC	Provincial People's Committee
RC	Reinforced Concrete
SEA	Strategic Environmental Assessment
SH	Social Housing
TOR	Terms of References
TSS	Total Suspended Solids
TWG	Technical Working Group
UCDO	Urban Community Development Organization
USD	U.S. dollar
VCB	Vacuum Circuit Breaker
VIAr	Vietnam Institute of Architecture
VIUP	Vietnam Institute for Urban and Rural Planning
VND	Vietnam Dong
VOV	Voice of Vietnam
WB	World Bank
WTO	World Trade Organization
xLDK	x Room Living Dining Kitchen

1. Introduction

(1) Background of the Study

In recent years, foreign direct investment in Vietnam has increased and this is due to the efforts in creation of industrial parks and attracting foreign companies. These efforts have also led to the creation of jobs for the youth.

However, the workers in these industrial parks are compelled to live under poor housing conditions, and this has in turn become a hindrance to acquiring a skilled labor force for the companies operating in the parks. There is need to provide permanent settlement and employment contracts for the group above.

Stagnating the improvement of worker living conditions causes the constant outflow of employed workers and negatively impacts on employing and training environments for workers. It results to lower the value of Vietnam as the investment destination compared to the surrounding countries. The negative economic influence can increase the income gap within Vietnam and increase the social issue.

Although the Ministry of Construction in the Vietnam has promoted the development of social housing including that of workers in industries through the provision of incentives to the local government and the private sector, the local governments are unable to implement these schemes. This is due to the limited financial resources in government, whereas the private sector has constructed housing developments for medium to high income earning segments of society, which are economically viable.

The improvement of housing conditions for workers in industrial parks and establishment of related policies has become a pressing issue nationwide.

(2) Objective and Outcomes of the Study

1) Objectives of the Study

The objective of this study is to contribute to the improvement of living conditions of the workers in IPs in Vietnam through the following two activities:

- Providing recommendations on institutional and organizational development for activities that will improve living conditions of the workers in IPs in Vietnam
- Conducting a study on the construction of housings and the applicable business scheme model in Hung Yen Province.
-

2) Outcomes of the Study

The expected outcome of this study are the following two outputs:

- Provide recommendations on institutional and organizational development to address the aforementioned challenges.
- Propose a housing plan for workers in IP model site within zones along with detailed and draft business plans.

2. Current Legal Framework for the Improvement of Living Conditions of Workers in Industrial Parks

This chapter describes the current laws and legal systems in Vietnam for the improvement of living conditions and housings for IP workers.

(1) Legal Frameworks for Social Housing

As a measure of improving the balance between supply and demand of housing units, Decree 66/2009/QĐ-TT required IP operators (investors) in the industrial parks to satisfy 50 % of workers' housing needs by constructing housing facilities. Later, this legal requirement was relaxed and replaced with the Decree 188/2013/NĐ-CP (2013). Furthermore, to improve its content, the Decree was superseded by the Decree No.100/2015/NĐ-CP (2015) (hereinafter the Decree No.100). This decree demands that it is the duty of IP operators (investors) in the industrial parks and operators to prepare a development plan for an adequate number of housing units for workers according to local contexts and the duty of factory (tenant) to prepare funding. It is also the duty of real estate developers to construct social housings by using 20 % of land for development in the new urban and commercial housing developments. Also, the Housing Law (No.65/2014/QH13) governs the Decree No.100 and its related requirements on social housing.

(2) Incentives for Social Housing Projects

The following laws and related ordinances are for the promotion of social housing development.

1) Incentives Set in Housing Law

In order to accelerate the provision of social housing, Article 58 of the Housing Law stipulates the incentives to the owners of SH projects.

The incentives described in Clause 1 are listed below;

- i) Exemption or reduction of land-use levy or ground rates for land areas,
- ii) Exemption from or reduction of value-added tax and enterprise income tax ordinarily required under the tax laws,
- iii) Preferential loans from the Social Policy Bank or credit institutions operating in Vietnam,
- iv) Financial support from the PPC for a part or the whole of the investment in the construction of technical infrastructure systems within the social housing (here in after: SH) projects, and
- v) Other incentives prescribed by law.

2) Incentives Described in the Decree No. 100

In order to improve the profitability of the housing business, this decree stipulates the incentives which permit the construction of commercial facilities as a part of a SH project. Furthermore, commercial housing may utilize up to 20 % of the total construction land of SH projects, or for commercial housing projects to use 20 % of total floor area of the housing units.

3) 30 Trillion VND Preferential Loan Program

Through the Vietnam National Bank, regulations No. 11/2013/TT-NHNN that was passed in 2013 is being enforced. The Vietnamese government under the preferential loan program will offer to finance 30 trillion VND through five banks in order to lend to developers, owners, and developers of SH by providing preferential interest rates that are fixed and capped at 6 % per year.

(3) **Price Conditions of SH**

In order to provide SH units at an affordable price to the workers, Article 61 of the Housing Law stipulates the methods of determining the rental rates, lease-purchase prices or sale prices of SH units constructed by the non-state entities.

The basic concept of the rate/price determination is that they have to consist of the expenditures directly born by the owners plus profits stipulated by the government except for the SHs invested by households and individuals.

In addition, Article 20 of the Decree No. 100 sets price conditions as follows:

- A sale price of a SH unit within a profit range of 10 % of investment
- A rent price of a SH unit within a profit range of 15 % of investment

(4) **Legal System on Construction**

Construction standards in Vietnam are encapsulated in what is called “Collection of Vietnam Construction Standard”.

The standards pertaining to construction of SH are:

- Residential unit floor area: 25~70 m² per residential unit
- Residential unit area limitation: less than 70 m² per residential unit
- Floor Area Ratio: 2.0 or less
- Numbers of floor: below 7 floors
- Required area per person: 8 m² (construction standard for high-rise housing)
- Parking area for motorcycle and bicycle: two motorcycles, one bicycle per residential unit

Other than the general design standard mentioned above, the current standard of construction in Vietnam is not defined in detail. Therefore, building regulations are not strictly adhered to compared to the ones in advanced nations. The standards regarding lighting and ventilation in living rooms of SH units that are pertinent in the design are not defined in these regulations.

Large sized projects tend to follow the above construction standards, but this is not the case on small sized projects in local areas. Individual housing units and small sized apartments are culpable of breaching the standards. Due to the lack of human resources and budgets, the evaluation of housing application plans are not always carried out and as a result, many buildings are constructed without satisfying the standards.

3. Current Living Condition of Workers in Industrial Parks

(1) Outline Survey Under the Present Condition

In this study, the following surveys are conducted in order to comprehend the living environment situation for IP workers.

- Site visit survey: IPs (approx. 120 locations) visited in the northern, central and southern regions of Vietnam in order to grasp the workers' housing situation.
- Interview survey: Interviews with related industrial entities and questionnaire surveys for workers in the model site.
- Document study: Supplementary study about the living conditions of workers.

The study result is summarized as the table below.

Table 3-1 Summary of Survey of Current Living Situation

Viewpoint of Survey	Contents of Survey	Sections in This Chapter
General Situation of Workers' Housing and Living Condition	• Overall situation of workers' living condition and housing situation	(2)
Situation of Housing Workers Development	• Housing development situation (by each industrial park location and housing site location) • Situation of residential facilities • Situation of facilities' management	(3), (4), (7) (5) (6)
Business Scheme of Housing Development	• Business framework • Role sharing between related entities	(8)
Finance of Development Business	• Affordable housing cost of workers • Construction cost of the housing developments (this is examined in the model site case in Chapter 6).	(9)

(2) Interview Result to Understand the Living Situation and Issues

The state and issues in the living conditions of workers around industrial areas are closely related to factors, which are grouped into the following three categories:

- “Quality” of living conditions
- “Cost” of housing business
- Low profitability affected on “housing affordability” of residents

The insufficiency and the mismatch of the three factors above interfere the improvement of living conditions of workers and the progress of housing supply for low-income groups. Also, the construction demand and the necessity of residential facilities for workers have declined due to the decrease of industrial investment of large-scale factories.

The following section details each aspect.

(3) Issues of Industrial Park Typologies and Living Environments

The quality of living environment around the industrial area has a close relationship with the time of the development and the location of the area.

IPs' characteristics are classified into four categories that are based on the location of the area.

The industrial location type 1: IPs in suburban areas around large cities/ metropolitan areas

The industrial location type 2: IPs in the vicinity of rural areas around large cities/ metropolitan areas

The industrial location type 3: Isolated IPs located in rural areas

3-1: Isolated IPs without housing facilities

3-2: Isolated IPs with a workers' dormitory for housing workers of large scale factories

3-3: Isolated IPs with a workers' dormitory for small/medium scale factories

The industrial location type 4: IZ development integrated with IPs and surrounding cities and villages.

The IPs in Type 2 and Type 3-1 were mainly established and approved before 2009 when the responsibility of providing housing for workers in IPs was not mandatory, and these types of IPs faced challenges of living and housing workers.

The state of the social environment is a crucial point for workers to choose their preferred place of work and housing. Villages and market places are important social infrastructure that support workers' wellbeing. The location of the housing area and the state of its social environment influence the occupancy ratio of housing facilities. In general, the housing supplied to the industrial areas including dormitories have not been well utilized. Land with basic infrastructure for the potential development of housing facilities still remains vacant in these areas.

(4) **Development of Residential Area**

As a result of the site visit survey on the state of residential developments around industrial areas, successful housing developments must satisfy the following spatial location criteria. The following criteria should be applied and followed in the selection of sites to construct housing facilities for workers.

- Within 300 m from the existing village and town (social facilities in walking distance)
- Within 500 m from IP for commuters on foot
- Within 2 km from IP for commuters using motorcycles and bicycles.

The promotion of permanent settlement for migrant workers through the provision of housing facilities are major issues in the housing policy of the central and local governments of Vietnam. Some of the recent industrial developments reflect these policies in the form of integrated planning with intentional selection of housing sites next to IPs, surrounding cities and planned housing sites in their spatial planning in view of regional development. However, this is not a common observation.

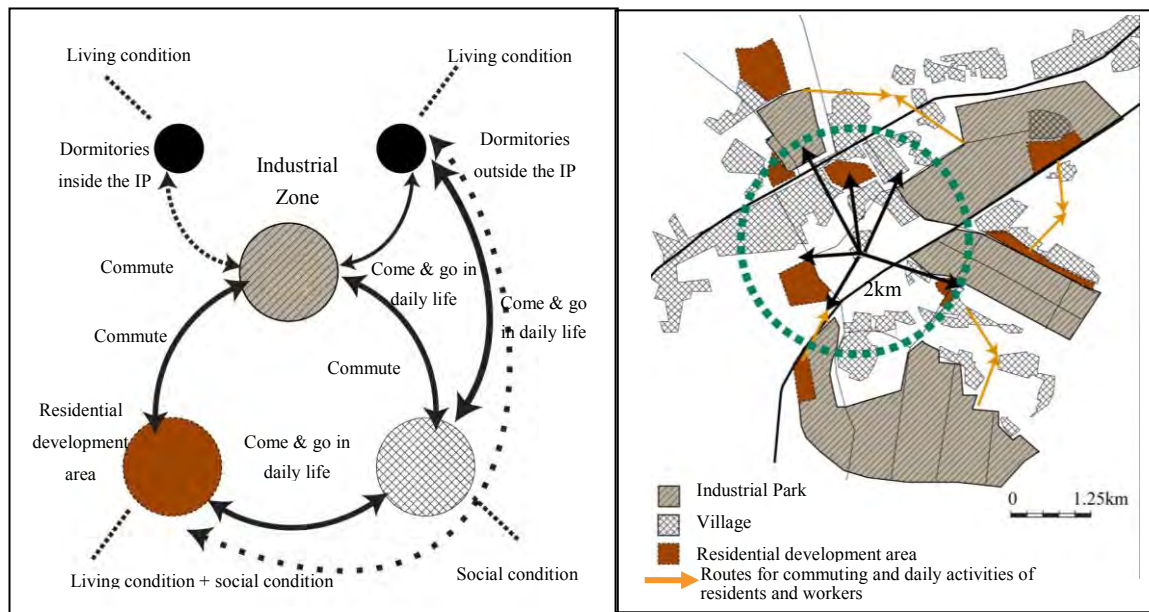


Figure 3-1 Spatial Model between the Industrial Zones and the Residential Area

It was established within 2 km from the village and made accessible to commute.

Figure 3-2 VISP Bac Ninh- Example on Integrated Industrial Parks

Several housing developments, which were undertaken after the legal obligation to provide workers' housing in 2009, considered the spatial connection to the related environment, and how the newly developed living space for workers integrate into the surrounding villages and IPs. These planning considerations enhanced convenience for workers. Newly developed areas, surrounding cities and villages, share the local social infrastructure, which results in further improvement of public and commercial facilities. Furthermore, they contribute to the improvement in the quality of the living environment for workers.

(5) Building Conditions

Through interviews with the operators of IPs, it became clear that in recent times, housing facilities for the workers such as are mentioned and seen below developed.

- Houses for family and relatives (local and migrant workers)
- Buildings with single rooms for rent (migrant workers)
- Dormitories that are occupied by a tenant or an IP operator (migrant workers)



Figure 3-3 Example of a Building with



Figure 3-4 Example of Workers'

Single Rooms for Rent

Dormitory

Among these housing types, buildings with single rooms for rent are the most common and the primary source of housing supply for the workers in industrial parks, especially in semi-rural areas.

Single room buildings are a popular housing facility for migrant workers around industrial parks that were developed in semi-rural areas around large cities (Hanoi, HCMC) before the enforcement of the housing Decree No.66/2009/QD-TT. Quality of life in these buildings is low in general due to overcrowding of residents in small spaces and inadequate sanitary facilities. It raises issues of hygiene, safety and is a negative influence to the surrounding environment



Figure 3-5 Example on Current Rent Room for Workers (Outside)



Figure 3-6 Example on Current Rent Room for Workers (Inside)

(6) Situation of Housing Management

Some IP operators and developers of isolated industrial parks in rural areas with numbers of tenants including workers, construct dormitories around the work place and offer housing facilities for workers’ convenience. These dormitory buildings are equipped with public facilities (laundry, recreation room, mini mart, medical facilities, etc.). However, despite these attempts to attract workers, many of them avoid living in these dormitories due to their strict rules, such as restrictions on entry and exit times and prohibition of cooking.



Figure 3-7 Example of the Residential Units Converted from Ex-Single Type Dormitory to Family Type (Dai An IP)

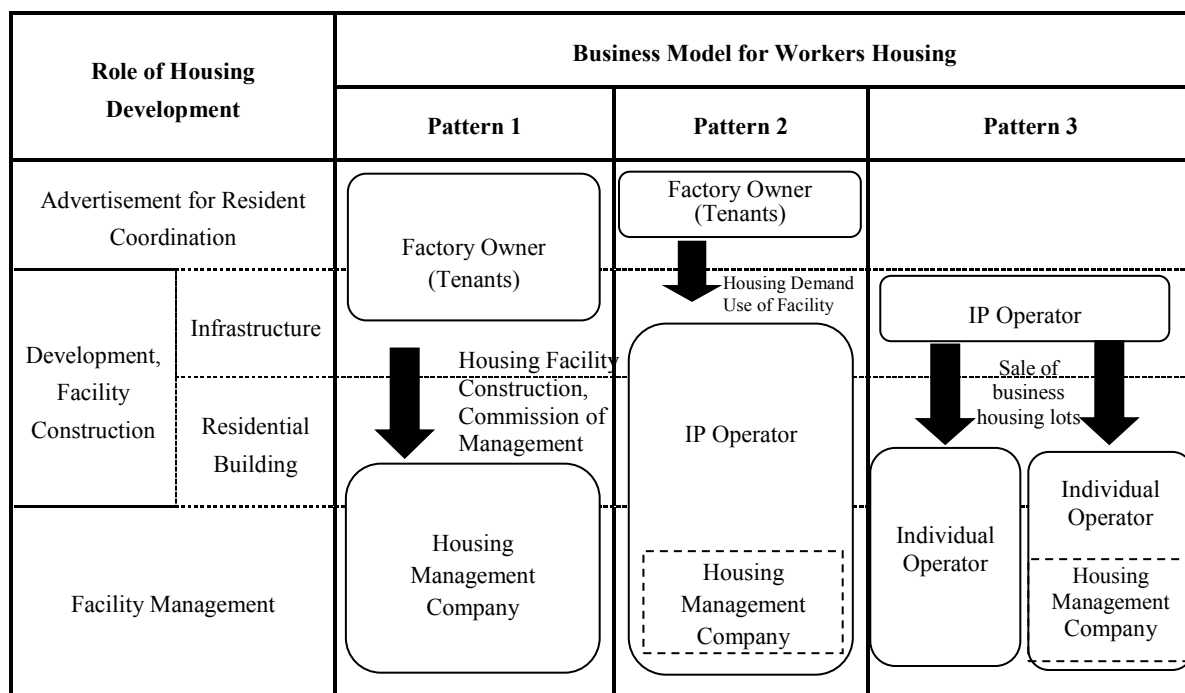
(7) Business Scheme for Housing Development

In Vietnam, the reality is that provision of housing for workers in IPs is mainly necessary for investments in large-scale factories. The current business in providing housing for workers can be

categorized in three groups including the IPs that were constructed before provision of housing for workers became part of their responsibilities.

1. Where the factories (companies in the business of production) in IPs provide housing for their workers
E.g. Que Vo IP (Bac Ninh Province), Yen Phong IP (Binh Duong Province)
2. Where the IP operators provide workers' housing as a part of the overall IP planning.
E.g. Long Hau IP (Long An Province), Ascendas IP (Binh Duong Province)
3. Where a third party or non-IP operators or production companies, provide housing for workers close to IP sites.
E.g. My Phuoc 1IP (Binh Duong Province), Dong Van II (Ha Nam Province)

Each business model above is shown in the table below. Several provisions for housing are applied simultaneously in the development of an IP.



Source : JST

Figure 3-8 Business Model of Social Housing for Industrial Workers

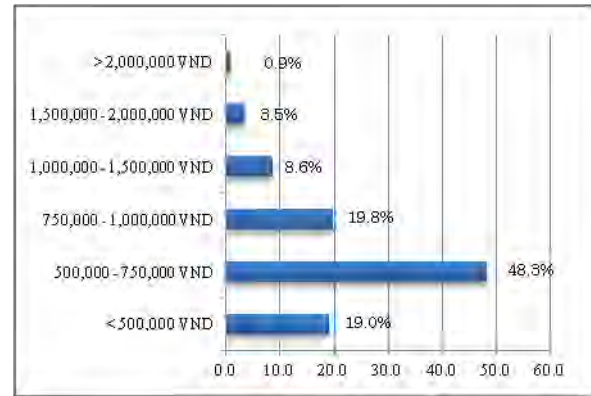
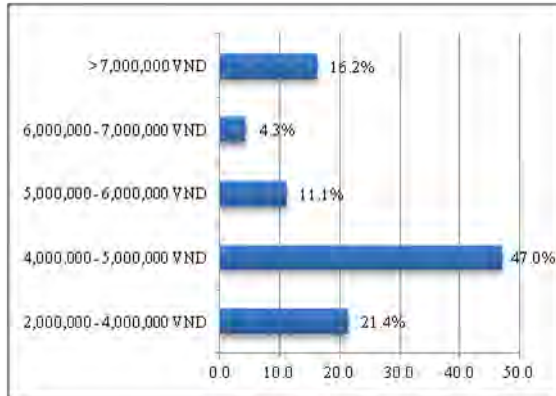
Although there might have been plenty cases of coordinated implementation by government-IP owner/tenant for industrial workers' housing supply projects with new IP development, there seems to be significant differences in degree of coordination and project materialization. Followings

- An example of urban planning and Integration is the Bac Ninh Province and Vietnam – Singapore IP: Coordinated surrounding IP developments close to the highways and residential area around national roads proceeding with the developments parallel to new highways and national roads already built.
- Thai Nguyen Industrial Park (coordinating with local community housing land and new town area): Within the IP in Thai Ngyuten province, a large scale company is to provide large-scale worker housing for singles and the new town layout preparation is ongoing by local community. Moreover, the commercial and housing developments are being processed (some of them are already dwelled).
- Another example is the new provincial capital development and surrounding industrial parks in Binh Duong Province where a large-scale city development is currently ongoing of which land for workers' housing has been set aside within industrial park and the development is in the surrounding green area of the new provincial capital.

are the examples of coordinated development for industrial workers’ housing supply projects by IP owner/tenant with new IP development, and district spatial planning by local government.

(8) **Affordable Housing Costs for Industrial Park Workers**

i) Affordable costs from the questionnaire survey results



The average salary range for workers in industrial parks in Hung Yen Province is 2.7 – 5.0 million VND/month, and their highest cost of housing ranges from 0.5 – 0.75 million VND/month per person.

Source: Survey on housing condition of workers around TLII industrial park

Figure 3-9 Percentage of Distribution of Monthly Income

Figure 3-10 Percentage of Distribution of Monthly Housing Cost

ii) Estimated results from statistical data

Household income and affordable housing costs in 2015 was estimated based on the statistical results of the “Vietnam Household Living Standard Survey” in 2010 or 2012, and applying a growth rate of the minimum wage in Vietnam to the result.¹ According to the results of the questionnaire survey, 15 - 20 percent of household income is spent in housing costs. Based on this fact, affordable housing costs were calculated from the estimated household income but with following assumptions.

Assumption
Income of a Single Worker: Estimation based on the minimum wage in region II (applied to Hung Yen) in 2015.
Income of a House Hold: Vietnam Household Living Standard Survey in 2012 and growth rate of minimum wage.
Monthly Maximum Payment for Rent: estimated 15 – 20 % of household income.
Criteria for Purchase of Housing: 15 – 20 % of income for repayment, 20 years loan at 5 % of interest rate

As a result, 413 -550 thousand VND (19-25 USD) is the maximum rent fee for a month for single workers. 61-82 million VND (2,853-3,804 USD) is the sales price for a unit. For a first quintile family (lower 0-20% income group), minimum rent fee is 893-1191thousand VND (41-55USD), while the sales price is 133-178 million VND (6,179-8,238USD).

¹ (Income of Household, estimated) = (Statistical data in 2012) * (Increase rate of minimum wage 2012/2015)

Table 3-2 Affordable Housing Price and Payment (Based on Minimum Wage, Average Income)

Housing Cost Ratio to Income		15 %			20 %		
Item	Unit	Minimum Wage	Average Income for Household		Minimum Wage	Average Income for Household	
		Region II	Quintile 1 ²	Quintile 2	Region II	Quintile 1	Quintile 2
Expected Monthly Income	million VND	2.750	5.956	10.667	2.750	5.956	10.667
Monthly Maximum payment	million VND	0.413	0.893	1.600	0.550	1.191	2.133
Total Payment (20 years)	million VND	99.163	214.415	384.017	132.022	285.887	512.022
Maximum Housing Loan	million VND	62.608	135.372	242.451	83.352	180.496	323.268
Down Payment	million VND	0.000	0.000	0.000	0.000	0.000	0.000
Affordable Price for Housing	million VND	61.608	135.372	242.451	83.352	180.496	323.268

Source: JST

(9) Examples of the Improvement of Housing Development in Vietnam**1) Introduction of Low Rise Housing Development**

In the previous housing development around the IPs, many housing operators tend to plan medium-rise housing for workers. Instead, some cases of the recent housing development include layout spaces for low-rise housings. These plans focus the functions and roles of low-rise rental housing from the beginning of the plan and establish the spatial planning by considering the worker commuting and daily activity. They consider the guideline for small sized rental housing blocks, individual architectural designs, housing block layouts and building locations with public space planning. In there, the worker/individual housings and individual shop/complex construction are managed or constructed in many cases. They are positively impacted by the advantages of individual or small sized operators for cost-cut and complex housing business management. As a result, the development with small-sized buildings enables to restrain what would otherwise be a high initial investment cost and to afford productive public space.

Referring these cases, the design guidelines and the construction requirements are proposed to promote those medium and small developers to participate more in the business. Then, they can secure the quality of living environment.

² In Vietnam Household Living Standard Survey, the income level is divided into five categories and estimated by each level. Quintile 1: lower income level of 0 to 20 %, Quintile 2 : lower income level of 20 to 40 %, Quintile 3: lower income level of 40 to 60 %, Quintile 4: lower income level of 60 to 80 % and Quintile 5 lower income level of 80 to 100 %.

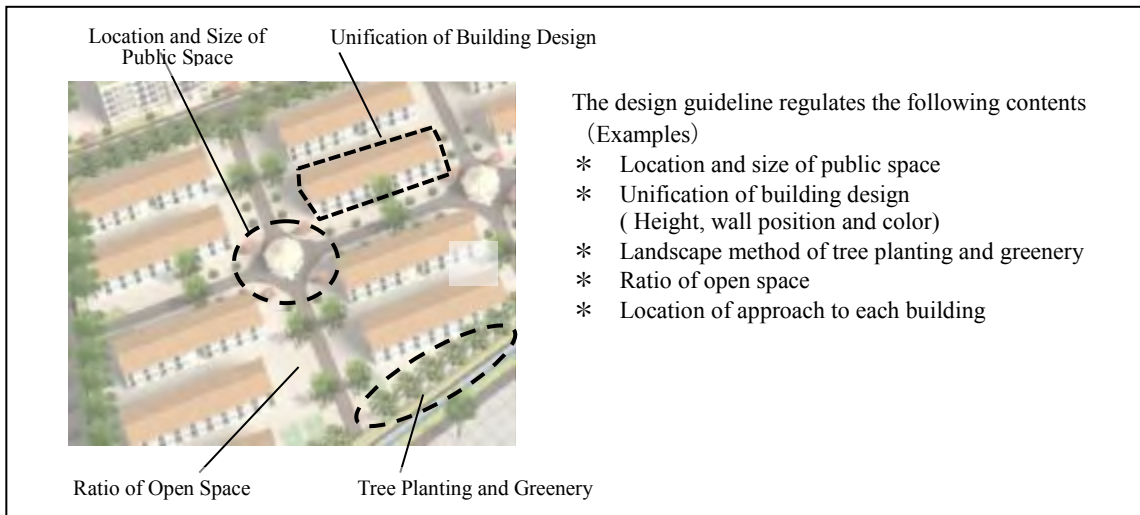


Figure 3-11 Spatial Planning for Low Rise Rental Housing and Design Guideline



Figure 3-12 Rent Room Housing by Individual Investors with Service Facilities and Open Space

2) **Improvement of Housing Administration**

In some cases of workers' housing in Vietnam, installation of automatic security systems to control entrance and exit of residents and visitors into the dormitories can be considered.

It is expected that the introduction of these systems will enable the relaxing of operational rules, whose management is dependent on a human resource approach, such as curfews and other limitations life of residents.



Figure 3-13 Case of Relaxing the Operational Rules by Automatic Security System (Ascendas IP)

(10) **Summary of Concerns**

The concerns for the improvement of living conditions for industrial workers are shown below by the results from contents in Chapter 2 “Current Legal Framework for the Improvement of Living Conditions of Workers in Industrial Parks”, in Chapter 3 “Current Living Condition of Workers in Industrial Park” and Chapter 6 “Plan of the Model Site”.

These concerns are classified in the following three ways;

- i.) The issues of spatial planning and building (issues of the quality of the living environment).
- ii.) The issues of organization pertaining to the construction of houses, improvement and enhancement of the social housing business (the need of a business operator and issues of promotion).
- iii.) Issues of business profitability (issues of good management practices).

These issues are found prominently in the IPs constructed in the regional area before 2009 that the law required the housing constructions for IP workers.

Table 3-3 Issues with the Living Environment for Workers

	Issues	Detailed Contents	Referred Sections
1) Issues of Spatial Planning and Building Design (Issues of Quality of the Living Environment)	Selection of inappropriate housing location	Low occupancy rate due to the housing location being far from IPs, villages and cities. This issue is found especially in the IPs (Type 2 & 3-1).	3(3), 3(4)
	Competition for low-quality housing among workers	Price competition for poor quality rental rooms in the surrounding villages hinders the growth of decent quality housing. This issue is found in IPs over Vietnam	3(5)
	Lack of developers	After 2009 when provision of housing for workers became mandatory, there was an increase in housing developments by IP operators and factory owners where IPs were being developed and this improved the living conditions of workers. The number of developers who only work on housing construction is limited for the IPs that were established in the local areas before 2009. This issue is found especially in the IPs (Type 2 & 3-1).	3(3)
	Lack of affordable housing for worker.	The dwelling unit for social housing is determined as 25~70 m ² . The price is above the affordable cost of housing for workers...	2(4), 3(5)
	Strict house rules and regulations.	Strict house rules for workers leads to a low occupancy rate.	3(6)
2) Issues of Organization Regarding Housing Construction, Improvement and Enhancement of Social Housing Business (Issues of Developers and Operators' Participations and Business Promotion)	Lack of developers	Shown as above.	3(3)
	Disparity in business support from the public.	Differences in provincial support for housing business and public-private partnership. This issue leads a living environment gap between wealth provinces and provinces with financial difficulty.	3(7)
	Management of residents	IP operators or large factory operators manage many housing facilities for WIPs in Vietnam. From the start of business, they manage their workers as residents. Many development cases have been implemented by large-sized operators, and a low implementation is caused without them. This issue is found especially in the IPs (Type 2 & 3-1).	3(7)
3) Issues of Business Profitability (Issues on Business Implementation and Operations)	Business profitability	Imbalance between affordable housing cost for workers and construction cost. Especially, in the IPs located in local areas face the difficulty for making profits by real-estate business, and it causes the slow housing construction.	3(8), 6.2
	Profit regulation	The same profit regulation is applied evenly to social housing business without consideration for differences in business schemes and profitability. Differentiating a regulation is important for various situations like high profitable social housing cases in urban area and low profitable cases in outer area.	2(3)
	Business support	The application of business support measures are different in provinces. This issue leads a living environment gap between wealth provinces and provinces with financial difficulty.	2(2), 3(7)
	Contribution to the housing cost by factory operators	It is declared in Decree No. 100, and considered to be applied in the implementation of the housing projects	2(1)

Source: JST

4. Housing Development Measures in Surrounding Countries

The housing development measures for improving living environment are implemented in the surrounding countries, and the contents need to be examined. The measures are classified by sector and introduce the phases. The following systems are implemented as housing development in surrounding countries, and are useful reference for housing implementation in Vietnam.

(1) Financial System

The system that the private developers burden for the development costs about SH development by Decree No. 100 was introduced in Vietnam. The following case is considered as a measure when government budget and pension fund for housing development are not enough.

- Rule No. 10 (Ashray Nidhi (Shelter Fund)) (India): the developers must deposit a fee in the shelter fund for providing urban basic services and financial support to persons belonging to the economically weaker sections (EWS). The developers who prefer not to share the cost should observe one or two of the following auxiliary rules in order to ensure housing in small sections: 1) 15 % of the total area to be developed shall be reserved for persons belonging to EWS and be equal to the size of 32 to 40 m² of the colony. 2) The developers shall construct houses of 20-24 m², whose size is 25 % of the developed area, for persons belonging to EWS, instead of developed plots 1).

(2) Spatial Control System

In Vietnam, approving the projects of large-scale urban development and IP development requires SH construction, and the impact can be enhanced by upgrading the system to the next level. The following systems describe their detail regulations about spatial development and promoting method of spatial control by public private collaboration, and they are the excellent examples for the further policy development.

- 1-3-6 and its Amendment 1-2-3 Rule (Indonesia): This regulation requires private developers to provide housings for mix settlement in a ratio of six small houses and three medium houses for every large house built in large housing development site of 200 ha or more.
- KASIBA–LISIBA Scheme (Indonesia): Mixed planning management between local governments in high level planning and private development in lower level planning. KASIBA is a system to determine the area for housing development within a well-organized environment. The construction of basic infrastructure and their management is done by the public sector. LISIBA is a small sized development area within KASIBA, and private operators provide and manage housing under the leadership of the KASIBA management committee.

(3) Administrative System

It is necessary to define the detail about role sharing of each organization or promotion system of organization for the future, while organizations regarding SH development in current decree in Vietnam. The case shows the example of organizing entities for low-income groups.

- CODI is a development support organization for community participation. It was previously called UCDO and was established in the nineties. It assists communities in implementing their developments, and broadens their capacity to access finance for improvement. The CODI organizes the National Housing Agency (NHA), Government Housing Bank (GHB), the representatives in community, residents and NGOs, and establishes a working system between public agencies and communities. In addition, it coordinates the development of financial institutions.

5. Recommendations for the Improvement of Living Condition of IP Workers

The recommendations for improving the living environment of IP workers in Vietnam in this chapter are summarized in relation to the current legal systems in the following table.

Table 5-1 Relationship between National wide Recommendations and the Current Legal System

	Recommendations and Related Current Legal System		
	1) Enforcing the Implementation of the Current Legal System	2) Introduction of New Measures	3) Recommendations for Improvement of the Current Legal System
(1) Recommendations for Spatial Planning and Building Design	(1)1)i) Enhancing the Implementation of Architectural Regulation (Application of Construction basics)	(1)2)i) Formation of a Compact Living Environment Formation, Sharing of Public Facilities and Infrastructure (Advise on Planning) (1)2)ii) Facilitation of Spatial Designs for Medium / Small Scale Investors during Housing Development (Advise on Planning) (1)2)iii) Long-term Corresponding Design of Construction	(1)3)i) Recommendations for Housing Facility Design (Construction Standards) (1)3)ii) Reconsideration of Housing Provision (Housing Law No.54)
(2) Recommendations for Institutional and Legal Systems	(2)1)i) Articulated Coordination with Public-Private Partnership (Decree No.100 Article 28-31, Housing Law Article 57) (2)2)ii) Enhancing the Role of Public Housing Entities (Housing Law Article 57)	(2)2)ii) Enhancing Provision of Housing by Medium/Small Size Investors (2)2)ii) Support for Housing Business Management & Operation (2)2)iii) Support for establishment of an information Centre dealing in Rental Housing Dealing/ Information Centre	
(3) Recommendations for Business and Financial Planning	(3)1)i) Government Born Land Preparation and Social Infrastructure (Housing Law Article 58) (3)1)ii) Introduction of Contribution of Business Cost by Factory Operators (Decree No.100 Article 31)	(3)2)i) Rent Coupon Implementation (3)2)ii) A Whole Building being Rented by Government and Public Housing Entities (3)2)iii) Comprehensive Subsidy System Implementation including Construction Cost	(3)3)i) Relaxation of the Business Profit Regulation (Decree No.100 Article 21) (3)3)ii) Introduction of Low-Interest Loans (Housing Laws Article 58, 30 Trillions VND Incentive Investment Program, Circular No. 11/2013/TT-NHNN) (3)3)iii) Improvement of Incentive Systems for Commercial Use of Social Housing Sites (Decree No.100 Article 9)

Source: JST

(1) Recommendations for Spatial Planning and Building Design

1) Facilitate and Tighten Enforcement of the Current Legal System

i) Increasing the Implementation of Architectural Regulation

Actual housings supply for IP workers in the form of private low-rise rental rooms and residential units whose standards are below the minimum requirement. .

Low-rise residential units were not considered as the major housing supply source until the recent even if the law of social housing provision expected. However, since it is expected to reduce the high construction cost of SH development, it should be considered and incorporated as an option for housing supply³.

Currently, an implementation of decent low-rise housings is expected to be promoted by applying the legal system sufficiently. However, the business of rental rooms in areas of the surrounding IPs is frequently facing serious low price competition. This situation causes hesitation and difficulty for decent investors intending to rent out decent rental rooms in these areas. In order to attract the decent investors, the quality control of building construction is essential, and to require not only it is required within the industrial parks, but also inside and outside of the planning areas.

The following guidelines need to be applied in the implementation of the current construction standard:

- Preparation of standard construction guidelines
- Complementation and formulation of current construction regulations
- Establishment of regulatory organizations
- Tight application and control of regulations

2) Introduction of New Measures

i) Formation of Compact Living Environment, Sharing of Public Facilities and Infrastructure

In some of the recently built industrial zones in Vietnam, the spatial planning is formulated based on the consideration of the spatial relationship and integration of the existing villages and new housing space for workers in some industrial parks. Based on those considerations, the social (educational facilities, parks and commercial facilities) and urban infrastructures (water supplies and electricity facilities etc.) are shared efficiently with villages and newly developed areas. Creating an integrated compact living environment enhances and ensures the quality of the living environment for workers.

In order to realize better living conditions around IPs, it is desirable to put major emphasis on a selection criteria of housing locations (refer to three. (4)) for the creation of an IP Master Plan or authorization guidelines for the proposal.

³The cost for residential facilities for 1,000 workers are calculated as follows in the case of the model case. (including land acquisition cost, land preparation cost, construction of infrastructure and building)
Low rise building: 114,817 mil VND, Medium rise building: 147,102 mil VND (refer to Chapter 9.1 (3) in the main report).

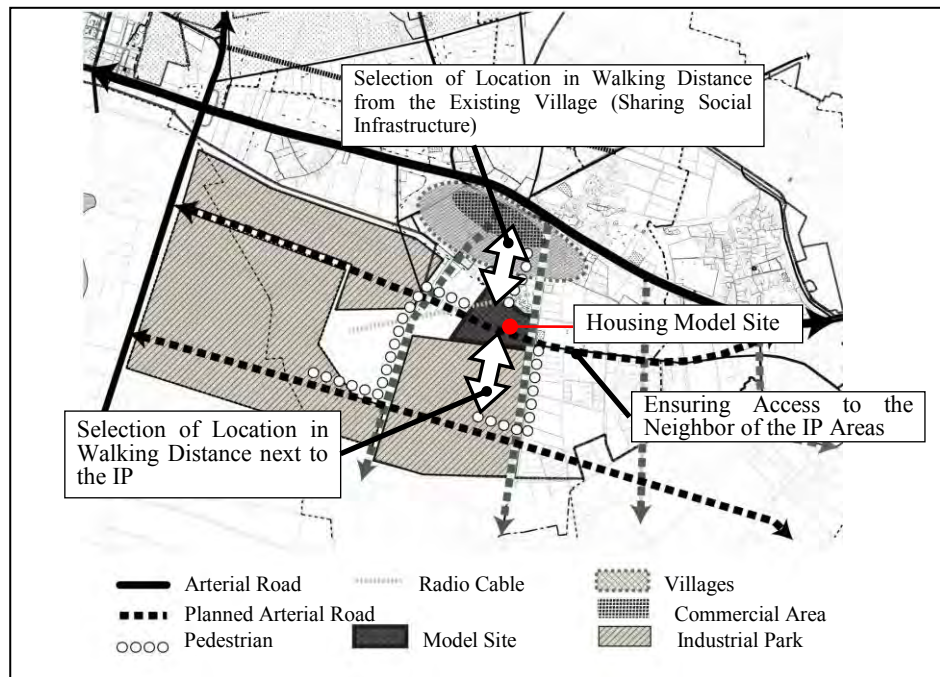


Figure 5-1 Considerations for Location Selection in View of Spatial Planning (Case of Model Site)

ii) Provision of Spatial Designs to Medium /Small Scale Developers for Housing Development

The housing supply by medium and and small-scale developers has advantages such as decent price settings and local operator participations, and large-scale operators do not have such merits. It also increases the business stability for large scale operators by sharing the roles on development. For promoting housing supply policy for medium and small-scale operators, the following considerations are recommended for the design guidelines by master developers and other developers who mainly work on housing block layouts.

The following considerations are recommended in the design of housing supplies by medium and small-scale investors

- The various land lot dimensions should be designed to match flexible land selling equivalent to the local investors' investment capability.
- Considering subdivision of the lots, the design guidelines need to be formulated and applied in order to plan and ensure community space at the center of each plot. These spaces are designed for public facilities such as kiosks and food carts.
- The sport courts could be planned for the common use among low and mid-rise housing lots.

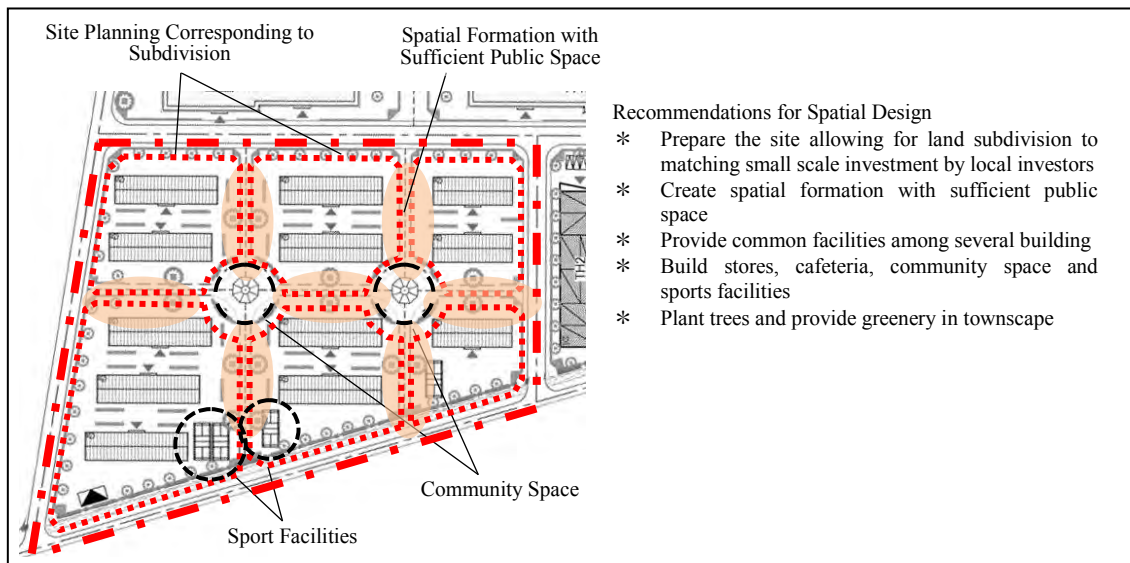


Figure 5-2 Image of Common Space

iii) Long-term corresponding design of construction

Housing market for rental rooms is very unstable because many of them are depended on the operating policy and the business situation of IP. In investment for housing construction, it is necessary to consider the unexpected market change in the future and to correspond the option of future business scheme during the process of planning and design of the dwelling unit. For example, preparing the building design as renovatable for the sale type of rent housing unit could be one of the measures to correspond with the future changing.

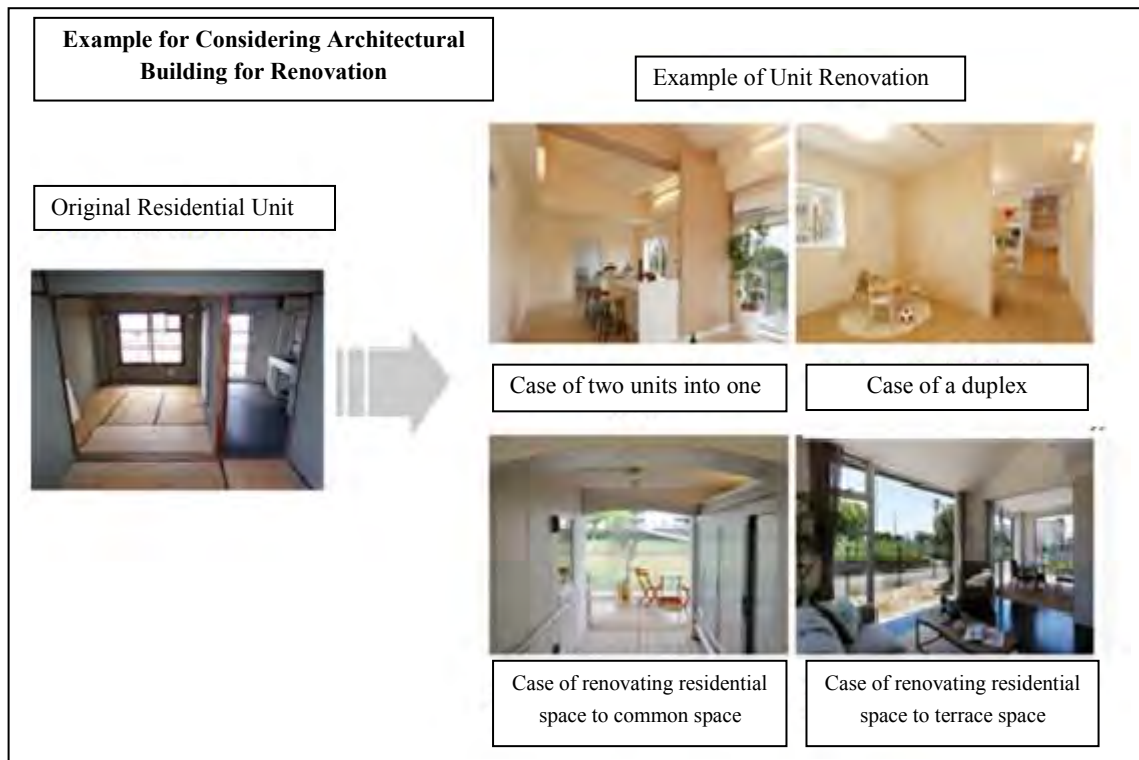


Figure 5-3 Example for Considering Architectural Building for Renovation

3) **Recommendations for Improvement of the Current Legal System**

i) Recommendations for Improvement of Housing Facility Design

The current construction standards in Vietnam lack detailed rules for keeping a good environment within the rooms. The study result therefore proposes that define about the following contents as the building regulations and design guidelines for social housing meet the following criteria in order to ensure healthy conditions for the workers and continuous use of residential facilities in the long term.

- Ensuring natural lighting in the room (i.e. setting up windows that cover over 10 % of the total floor dimensions).
- Ensuring natural ventilation in the room (i.e. setting up windows that cover over 15 % of the total floor dimensions).
- The minimum dimensions of housing units should be to 8~10 m² / person, as applied in the high-rise residential units in Hung Yen Province.
- Installing washrooms and showers in individual housing units. (ensuring continuous and long term use of these facilities)

ii) Improvement of Social Housing Provision

The current legal system in Vietnam determines residential dimension for 1 room of social housing as 25~70 m². This dimension for IP workers housings is larger than that of foreign countries in the rule (Indonesia 21~36 m²⁴, India 20~24 m²⁵). Also, the requirements of social housing supply is less restricted by comparing with other countries (In Vietnam, social housing supply requires 20 % of general housing development projects, but 60 % needs to be small size housings in all Indonesian housings). For the purpose of enhancement of social housing supply in the long-term perspective, it is desired to readjust housing dimension rules and social housing supply requisite in the housing development business to worker's housing affordability.

(2) **Recommendations for Institutional and the Legal System**

1) **Facilitation and Tightening Enforcement of the Current Legal System**

i) Articulated Coordination with Public-Private Collaboration

It is indispensable the support from IP business operators, investors, tenant companies and local governments for social house development with urban infrastructure facilities and related social infrastructure development for industrial workers.

It is therefore necessary to clarify the contexts of joint ventures based on the roles of government and private operators in SH development. It is equally important to encourage the implementation of the laws in Decree No. 100 and Housing Law Article 57.

For this purpose, the central government ought to formulate guidelines for local government and IP ventures for the supply of housing for industrial workers at every new IP establishment. Below are the procedures proposed for incorporation in the guidelines:

- Procedures in selection of an IP location including preliminary consultation and co-operation with the local authorities. This in relation to spatial and socio-economic development of

⁴ The standards for small sized housings applied the low interest rate investment based on 1-3-6 rule (refer to the section of (4)(2))

⁵ The standards for small sized housings based on Rule No 10 (refer to the section (4)(1))

infrastructure and facilities covering the social housing site(s) and other related/ neighboring areas.

- Consensual building not only for housing industrial workers to secure the labor force but also for the development of the area around the IP.
- Consensual building management and spatial arrangement for SH land for factory workers which is open to the neighboring communities,
- Following business procedures for technical infrastructure development beyond the IP boundary covering at least the social housing sites with support from IP operators/ investors,
- Integrating procedures for involving outside entities into the supply of social housing including appropriate packaging of the housing sub-schemes. All this with government commitment to complete project implementation enabling mid and small sized investors' participation easier.

ii) Enhancing the Role of Public Housing Entities

Currently, many IPs are faced with issues of improving the living environments within Vietnam. The operators of these IPs will not have difficulties in recruiting workers even if they do not improve workers' housing. Under these circumstances, it is therefore essential to establish organization of public housing with government support and conduct the business of social housing. This will enhance the improvement of the local living environment.

The following contents are the ideal functions of a public housing organization.

- Planning Formulation: designing the spatial layout including infrastructure planning, balancing with the district scale infrastructure and supporting business establishment.
- Business Coordination: business management planning, subsidies for mid/small size investors, and provision of service infrastructure.
- Implementation of Development: development implementation based on government funds, business execution by consigning to private operators.
- Housing Finance: Coordination of long-term financial support (low interest rate loans, incentive loans, and loan guarantees for operators and residents).

The Community Organizations Development Institute (CODI, Thailand), and the Delhi State Industrial and Infrastructure (DSIIDC, India) are examples of public housing entities (ref. Chapter 4.4.1).

iii) Long-term development response by participation of several developers

For implementing continuous SH business in Vietnam, it is necessary to establish the business development mechanism in order to respond easily to the long-term changes of investment situations by factory expansion and housing needs. Under the master developer that manages whole business, it becomes possible to develop worker housings with appropriate scales and business contents including housing constructions and managements. It enables to assume the suitable development capacity and business content for worker housings.

The following factors below need to be considered as corresponding the measures.

- To make a reconsideration and a change as acceptable for SH planning as needed in the future (urban planning, the introduction of the review system of business authorization)
- To introduce promotion measures to the operators who will participate only a part of housing development, such as housing construction or housing management: It applies widely that the aid to the associations referred to the current SH construction businesses and frameworks incentives. Various incentive and support systems should be considered to discuss for developers who participate the business from the middle of the term or housing operators who join it as a part, the expansion of incentive frameworks and the increase of support for the organizations related to social housing establishment under current system.

2) **Introduction of New Measures**

i) **Enhancement of Housing Provision by Medium / Small Size Investors**

Compelled to encourage sizeable business participation and increase the number of investors, provision of decent business environment and thereafter encouragement of the medium/small scale investors to participate in the housing projects is necessary.

This therefore, requires a foundation that formulates the overall business plan and coordinates investments by individuals and construction. For comprehensive dealings, it is appropriate that public housing organizations are in charge of such functions.

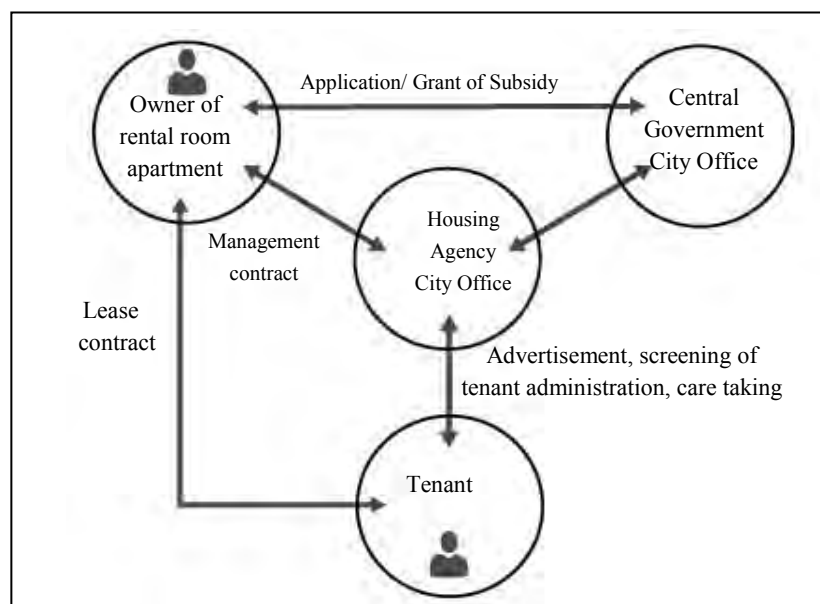
ii) **Support in Housing Business Management and Operation**

The implementation of support for housing business management and the provision of subsidies to facilitate the construction of rental housing by mid and small size investors could be considered. A corresponding system, “the subsidized rental apartment with high quality” was introduced in Japan. The following contents show the major points of the system.

Business Model System :

In this business scheme, the owners of rental housing achieve the construction requirements supported by the central and local/district level governments. Below are the characteristics and contents of the program:

- The local district offices and the local governments through public organizations like the public housing organization should support the building owners. Such support may be provided in the operations of building management, management for rent and contracts, selection of residents, and advertising.
- The rent is set according to the worker’s income. The central government and the local offices provide subsidies to fill the gap between the set rent and original rent charged by the owners of the building.
- Implementation of the system to introduce residence of subsidized rental apartments of high quality from the public housing agency (shall be discussed later). This system introduces the housing owners searching for tenants, IP operators who need housing and factory owners to each other and does the matching.



Source: Web of Kawasaki city, Japan (<http://www.kawasaki-jk.or.jp/chintai/list2.php>) (edited by JST)

Figure 5-4 Program for Rental Residential Buildings with Satisfied Conditions

iii) Support for Establishment of Rental Housing Dealing/ Information Center

A rental housing dealing/information center to implement, introduction and intermediate housing may be considered by the government support for real-estate developers. This center would show case listings, which fulfill the conditions of a housing environment in order to increase the workers' accessibility. Improvement of workers' accessibility to the rental housing could result in earlier realization of a community in the model site as well as increase the revenue to the rental housing owners.

The activities are conducted by private operators. At the beginning, the public entity will support on its organization as a part of social housing business participation support for medium and small real-estate operators, IP operators and factory owners.

(3) **Recommendations Related to Business and Financial Planning**

According to the estimation result (Chapter 6) from business planning in model site, it became clear that "the profitable business cannot be planned in social housing business for workers when the business needs to consider the housing affordability of workers". Therefore, the improvement of financial system is essential for this business.

1) **Facilitation and Tightening Enforcement of the Current Legal System**

i) Land Preparation and Construction of Social Infrastructure by Government

As the Housing Law and other related legal documents assume, social infrastructure and provision of services such as medical and educational facilities, technical infrastructure and its service provision including road and utility facilities are a government/public role. In addition, land allocations/provisions for the social housing schemes are also a government role as stipulated in the Housing Law.

The cost burden of urban infrastructure construction and land preparation by local governments closely depend on the financial condition of each province. On the other hand, some provinces with financial difficulty are not able to provide business support for private operators, and it negatively leads non-progress on improving living environment. It is desirable to introduce central government support on social infrastructure development in view of balanced national land development.

ii) Introduction of Contribution to Business Cost by Factory Operators

Decree No. 100 defines the proper housing occupancy and cost preparations necessary for launching factories. As a part of these measures, factory owners who need housing for workers may decide to rent entire building(s). This ensures expected revenue, which decreases the investment risk for private real-estate operators. It is expected that private real-estate operators will be able to reduce the risk as well as Real Estate Investment Trust (REIT) when applying whole building rent. The implementation of this measure should be considered especially when there are new construction and expansion of plants that hire many employees.

2) **Introduction of New Measures**

i) Introduction of Rental Coupon System

"Rental Coupons" can be used as a part of rent payment for housing, which meet the construction requirements. The owners, who received coupons, attain reimbursement in exchange for the coupon from the public entity. The direct approach for improving worker's living environment is expected by limiting the support usage instead of providing housing support by cash.

In cases of rent housing for workers, it is an advantageous prospective that the factory owners introduce the "Rental Coupon" system to incentivize workers to shift into favorable rental housing in support of their housing cost. This system can be implemented when housing operators in each

province or area coordinate with factory owners and IP operators. The local governments can support the system and improve the living environment.

For the rental model in which housing units are medium-rise buildings for four single persons, the affordability of target group is only approx. 25 % (25USD per month and house = 6USD per month and person) in shortage against the non-profitting case's project expenditures.

ii) Whole Building Rent by Government, Public Housing Entities

Except the case that IP operators and large-scale factory owners establish worker housings, the stability of resident number is one of issues for the business. The government needs to control the housing demand when none of private operator participates in housing construction even if it is essential to build housings around IPs. The government should consider renting rooms at an affordable price by renting the complete building for lease income assurance. Management and maintenance would then be entrusted to private firms.

For the provision of such services, the establishment of the public housing organization should be contemplated.

iii) Comprehensive Subsidy System Implementation and Business Establishment by the Government

A subsidy system is necessary to increase the private or non-governmental organizations involvement due to the low possibility for profitability in the social housing business of workers. The subsidy system would include subsidized interest, rent, funding finance support for whole building rent and subsidized construction costs.

A system that allows the private operators to receive the profits based on their investment and management spending is expected to compel this to happen. In this case, the private operators work on construction and management under the business program through public institutions. A public housing organization should be established to conduct housing business by providing financial support to relating entities.

3) **Recommendations for Improvement of the Current Legal System**

i) Relaxation of Business Profit Regulation

Decree No.100 determines the maximum profit from social housing business at 10 % (sales model) or 15 % (rent model) of the total investment. This regulation is applied across institutionally and uniformly to include SH developed as a part of profitable urban and new IP development projects. Therefore, involvement of housing developers into the social housing business are prevented due to the profit cap such as is the case in the model site.

For ensuring profitability in the housing business, it is necessary to consider exemption of the profit limitation on 10 % (sales), 15 % (housing rent) of total project cost based on decree No. 100 as a long-term improvement..

ii) Introduction of Low-interest Loans

In relation to social housing projects, introduction of appealing interest rates that are lower than the current 5 % a year are an effective incentive. This is for developers whose projects satisfy the construction requirements according to the laws and on account of setting a proper selection process of tenants. However, considering the challenges in implementation, such as risk and credit management of developers, there is need for scrutiny because there are some cases where project implementation and whole building rent measures by the government and public housing organizations are more appropriate.

iii) Improvement of the Incentive System in Commercial Use of Social Housing Sites

20 % of the land area or the equivalent floor areas against the total project area ought to be reserved for social housing projects in order to obtain better profits from commercial activities. However, lucrative profitability from commercial activities is expected only in very urbanized areas and it is difficult to expect in (semi-) rural areas.

In order to attain commercial viability in social housing development, the following considerations are recommended;

- i) Relaxation of commercial area ratios in the social housing development.
- ii) Expansion of commercial activities (for example including related public facilities such as vocational training schools).

(4) Implementation Priority of the Policy

The contents recommended in this section are classified in suitable implementation periods such as short (within 2 years), mid (3 to 4 years) and long (more than 5 years) terms according to the urgency of implementation and the period of preparation. Below is the proposed result.

Short-term measures: regardless economic and social situations, they are indispensable measures for the improvement of living environment of IP workers. These measures should be implemented by thorough practice of the current legal system. Implementation goal should be within two years.

Medium-term measures: they should be examined and to be implemented by improvement of the current legal systems and newly introduced policies and systems. It is assumed to need for a certain period for preparation of change of current official systems. Implementation goal should be within 3-4 years.

Long-term measures: they are measures to be provided in order to response the growth of labor demands in the future or the changing of economic and social situations in long term. These measures are not necessary to be executed immediately. However, they are expected to be prepared for organizational systems, development systems and financial systems in future.

Table 5-2 Implementation Priority of Nationwide Policy for Social Housing Improvement

	Priority Orders and the Terms for Conducting Measures and Policies		
	Short-term (within 2 years)	Mid-term (within 3~4 years)	Long-term (over 5 years)
(1) Recommendations for Spatial Planning and Building Design	(12)I). Formation of a Compact Living Environment Formation, Sharing of Public Facilities and Infrastructure (Advise during planning examination) (12)ii). Provision of Spatial Designs to Medium / Small Scale Investors for Housing Development (Advise during planning examination) (13)i). Recommendations for Improvement of Housing Facility Design (Construction basics) (11)i). Enhancing the Implementation of Architectural Regulation (Application of construction basics)	(13)ii). Improvement of Social Housing Provision (Housing Law No.54)	(12)iii). Long term corresponding design of construction (provide planning design information)
(2) Recommendations for Institutional and Legal Systems		(21)i). Articulated Coordination of Public-Private Partnerships (Decree No.100 Article 28-31, Housing Law Article 57) (21)ii). Enhancing the Role of Public Housing Entities (Housing Law Article 57) (22)i). Housing Provision Enhancement by Medium / Small Size Investors (22)ii). Support on Housing Business Management & Operation (22)iii). Support for Establishment of Rental Housing Dealing/ Information Center	(21)iii). Long-term development correspondence by participation of multiple operators (Housing Law 57 items, Decree 37/2010/ND-CP)
(3) Recommendations for Business and Financial Planning	(32)ii). Introduction of Contribution of Business Cost by Factory Operators (Article 31, Decree No. 100) (33)ii). Introduction of Low-Interest Loans (Housing Laws Article 58, 30 Trillions VND Incentive Investment Program, Circular No. 11/2013/TT-NHNN) (32)i). Introduction of Rental Coupon System	(31)i). Land Preparation and Construction of Social Infrastructure by Government (Housing Law No.58) (33)ii). Relaxation of Business Profit Regulation (Decree No.100 Article 21) (33)iii). Improvement of Incentive Systems for Commercial Use of Social Housing Sites (Decree No.100 Article 9)	(32)ii). Whole Building Rent by Government and Public Housing Entities (32)iii). Comprehensive Subsidy System Implementation and Business Establishment by the Government

Source: JST

6. Plan of the Model Site

(1) Measures for Construction Plan

The model site previously determined in the preparatory study could not be used because the development approval had already been handed over to another project.

The general information of the model site is as follows:

- Location : South of Phung Chi Kiem Commune, My Hao District, Hung Yen Province
- Area : 18.23 ha
- Current land use : Paddy Field
- Current urban planning : the land use of the model site is regulated by the “General Construction Plan of My Hao District” and the “Zoning Plan for My Hao Urban Center of My Hao District”. The current situation of land use is shown below.

Table 6-1 Planning Requirement of Model Site on Current Zoning Plan

Planning Content	Model Site	Surroundings
Land Use	Green/open space, residential area	Commercial & services
BCR	40 – 50 % (residential area)	40 – 50 %
Number of Floors	2 – 3 floors	5 – 7 floors

Source: Zoning Plan for My Hao Urban Center of My Hao District, Hung Yen Province

The model site is adjacent to Thang Long II IP and Pho Noi Textile IP, and located within 1 km from the center of the adjacent village. This village offers increased accessibility to shopping facilities and commercial facilities through old arterial roads.

From the model site to National Road No. 5, there exists various educational facilities such as a kindergarten, elementary school and junior high school. Other educational facilities and clinics are located across the road. Essential social public facilities are under construction in the area. In addition, a radio station is located close by.

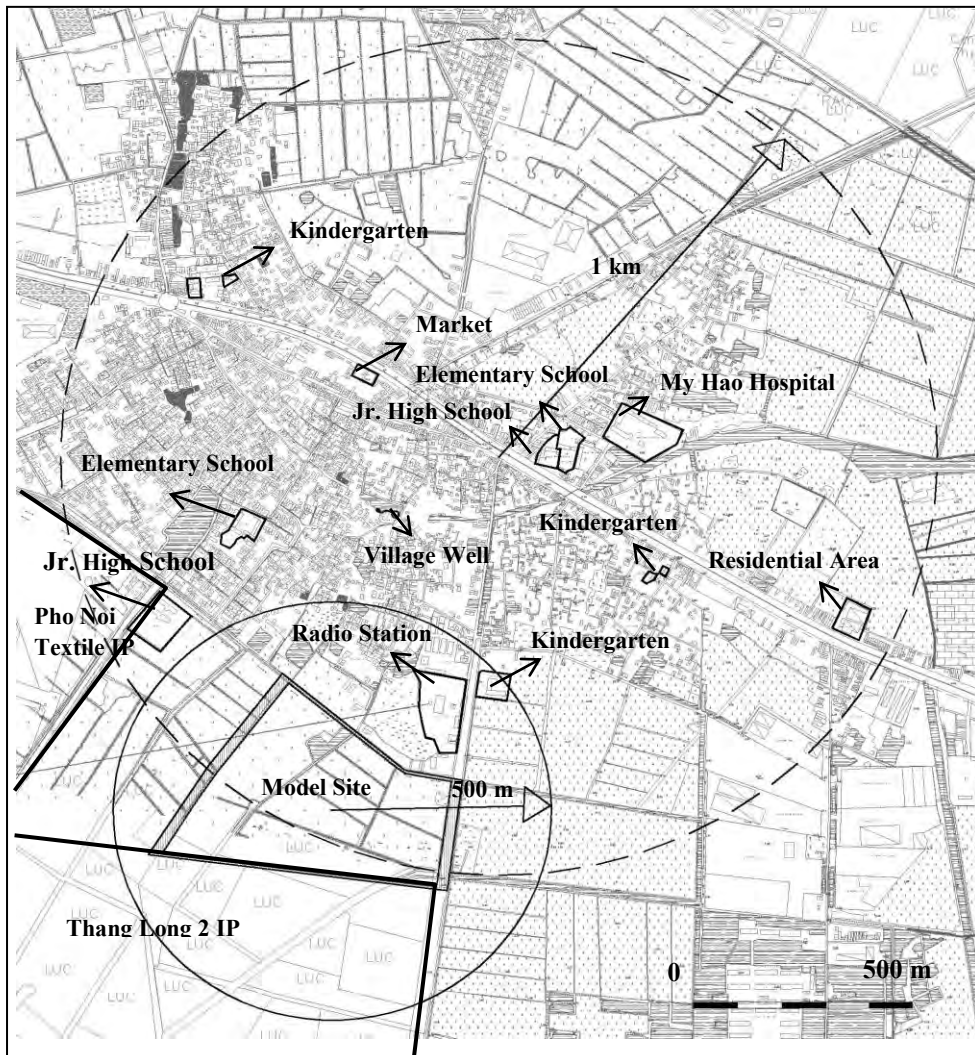


Figure 6-1 Map of Model Site and Surrounding Area

(2) Conclusion of Discussions with Related Entities

Through discussions with related entities, the following are the concluded results for model site planning.

- Current planning requirements (such as BCR, FAR, numbers of floors) must be adhered to during planning and follow legal regulations and targets.
- The target population is from 8,000 to 10,000. This population is:
 - Determined adequate in accordance with current planning population requirements of the model site by related entities.
 - Considered as the adequate population capacity to satisfy the role of demand for migrant workers who need housing.
 - Outstanding demand will be met by future developments in neighboring areas.
- Considering the characteristics of semi-agricultural areas and the high population of single workers, the educational facilities within the model site are planned for 5,500 people.

(3) Result of Land Use Distribution and Planning Population

Based on the preliminary study results, a basic spatial plan is hereby examined and formulated. The following are the land use distribution and planning specifications

Table 6-2 Land Use Distribution and Planning Specification

Land Use Category	Area (ha)	Planning Specification			Planning Population
		Building Use	FAR	Floors	
Low Rise Housing	4.14	Housings for a single worker	1.00	1-2	Single: 1,832
Middle Rise Housing	5.15	Housings for a single worker and family	1.50	3-5	Single: 924 Family: 5,160
Mixed Use Commercial Housing	1.41	Housings for a single worker and family and commercial facility	2.00	3-5	
Public Facilities	0.24	Inclusion of Medical facilities is in the plan	1.50	3	
Education (School)	1.23	Schools for 5,500 residents and kindergarten	1.50	3	
Green and Park	1.33	Water treatment facility and kindergarten excluded in the site	-	2	
Infrastructure	0.23	Waste water treatment plant	-	1	
Internal Road	2.37		-	-	
(Sub Total of Residential Area)	16.12				
Future Inter Regional Road	1.88		-	-	
VOV Radio Cable Site	0.24		-	-	
Total	18.23				Single: 2,756 Family: 5,160 Total: 7,916



Figure 6-2 Image of Land Use Distribution Map

(4) **Housing Outline in the Model Site**

The land use plan was formulated with consideration of the land lots area, road ratio, building coverage ratio, floor area ratio, minimum required area per capita and design guideline (construction boundary lines) to be applied, as shown in the following table.

Table 6-3 Housing Type and Planning Index

Housing Type	Building Coverage Ratio	Floor Area Ratio
Low-Rise Row Housing	Under 40%	Under 100%
Medium-Rise Apartments	Under 50%	Under 200%
Medium-Rise Apartments (Mixed-Use Commercial 1F/Residential)	Under 50%	Under 200%

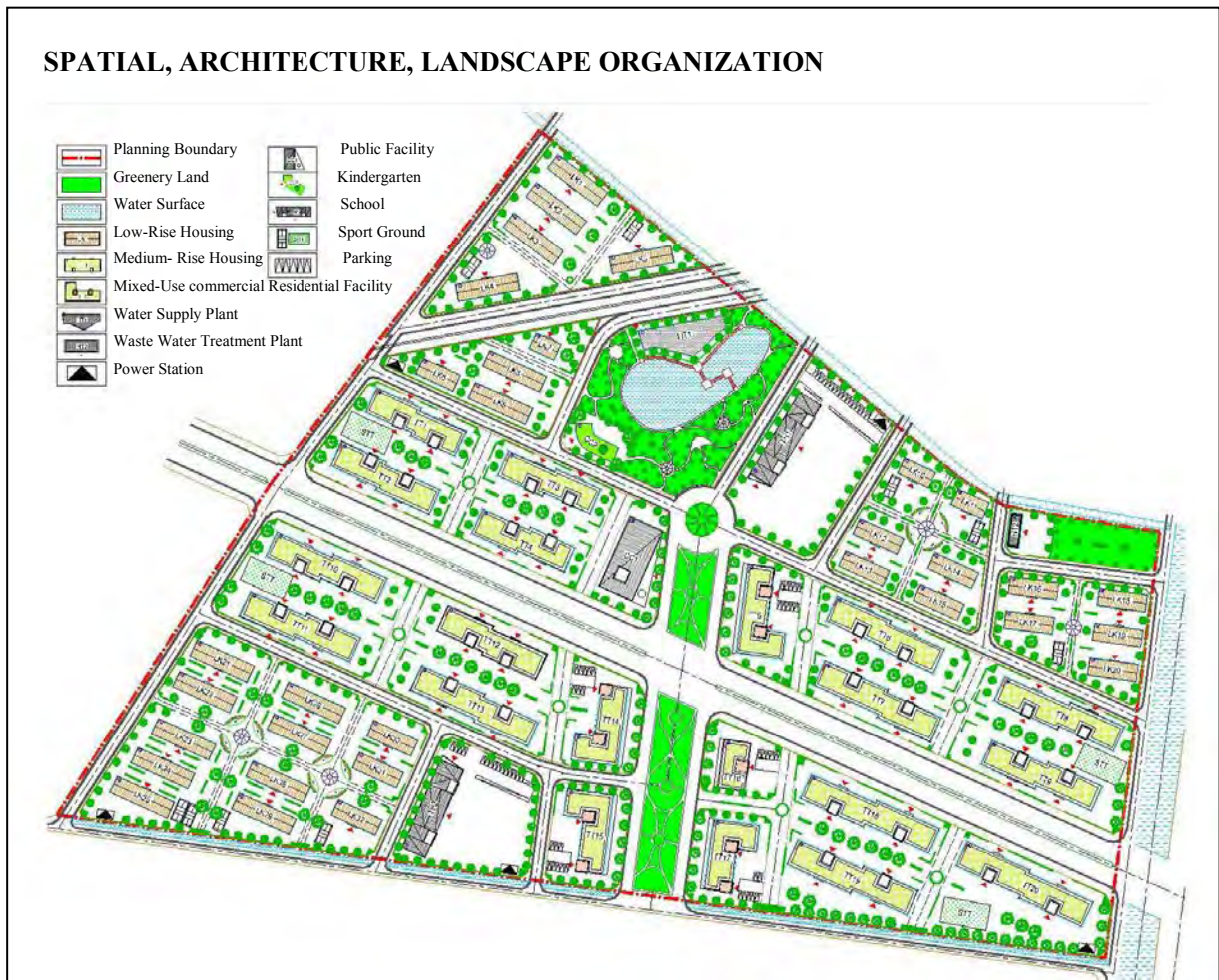


Figure 6-3 Detail Plan of Land Plan

Table 6-4 Residents Summary Sheet in each Building Type

Building Types	Residents Number	Unit Number		Residents Status	Residents (Breakdown)	
Medium-Rise Housing	6,084	Household units	1,290units	Adults	2,580	5,160
		1 family/4people		Children	2,580	
		Rooms for single 4 people shared	231 units	Industrial workers	924	924
Low-Rise Housing	1,832	Rooms for single 2 people shared	916 rooms	Industrial workers	1,832	1,832
Estimated Gross Residents Number					7,916	Family residents 5,160 People for single 2,756

(5) **Building Planning**

The design of Low-Rise Housing (housing units for two single workers) and Medium-Rise Housing (housing units for a single worker or family type for four) have been prepared for the model site plan.

1) **Low-Rise Housing**

This study proposes the improvement of low-rise rental building as a major means of adding to the housing supply. This housing type has the advantage of reasonable cost, which corresponds to affordability of workers housing. The following points are set as design criteria and they are reflected in the housing plans for the model site.

- Minimum surface of residential unit per person: 8 m².
- Kitchen and bathroom for each individual residential unit.
- Allowance of natural light and ventilation for each living space.
- Installation of security system equipment.

Consideration for a waste water treatment system (to connect sewage systems or preparation of septic tank).

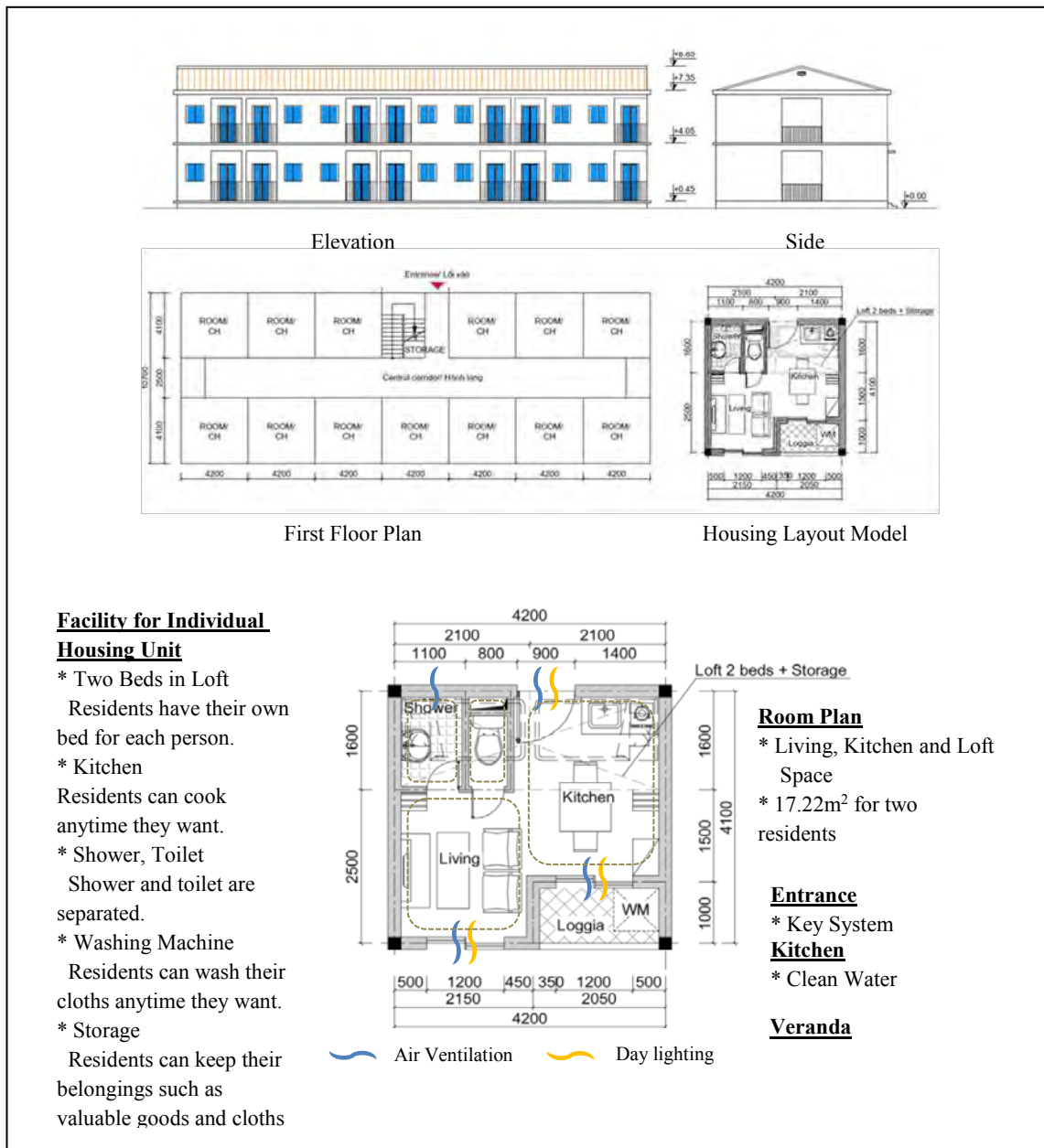
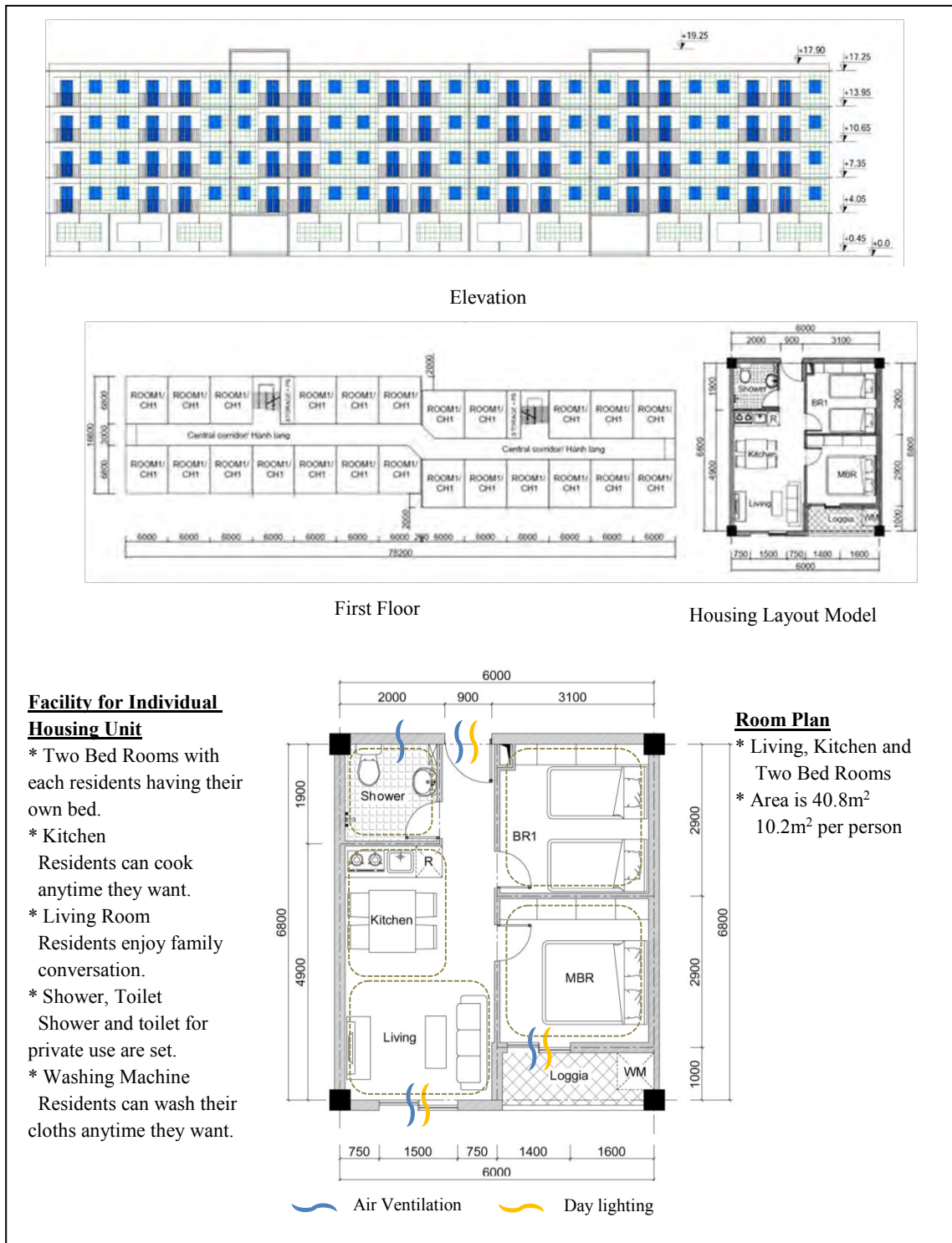


Figure 6-4 Room Plan for Single (Low -Rise Housing)

2) Design for Medium-Rise Housing

In addition to the design requirements for social housing, the study proposes the following design criteria. These criteria are intended to reduce the housing cost and to normalize business conditions of workers’ housing. They are applied to the plans for the model site.

- Middle corridor layout of housing units (improve efficiency of common space by setting rooms on both side of corridor).
- Consideration for conversion of residential unit in the future.
- Kitchen and bathroom for individual residential unit.



(6) **Road Planning**

The planning policies for road construction in the model sites are encapsulated below.

- Road Area: The road area within the city blocks needs to be more than 18 % of the whole city area based on the Vietnamese standard.
- Design Speed: the design speed for the roads within the residential area is V=20km/h based on the Vietnamese standard.

- Road Width: the road width is determined by the combination of the required widths (lanes and shoulders) in Vietnam. The widths within the city blocks have two patterns which are W=10m and W=8m (the radio cable crossed roads are considered an exception and the widths are W=4m).
- Pavement: the pavement thickness shall follow the national standard. The traffic road pavement thickness is t=29 cm. The interlocking block pavement shall be used for the pedestrian footpaths.
- Trees: Trees shall be planted on sidewalks in accordance with the requirement of the Vietnamese authority.
- Lights: Road lights shall be installed for all internal roads in accordance with the government requirements.
- Traffic Safety: Speed humps need to be placed to restrain vehicle speed.
 - Safety measures for crossing the road are necessary. This is especially so for school routes that children and students commonly use. Pedestrian bridges are proposed for such instances.
 - It is also necessary to install three-dimensional crossing facilities for safe crossing of the main road; the same should be extended to a regional level.

(7) **Water Supply Planning**

For water supply, deep wells and a treatment plant should be established in the model site.

Table 6-5 Specification of Deep Well

No.	Contents	Specification	Remarks
1	Number	2 nos	
2	Depth	80 m	
3	Pump Capacity	60m ³ /hr	=2,600m ³ /day / 24hr / 2nos



Figure 6-6 Water Supply Planning

Table 6-6 Outline of Water Supply Plan

No.	Contents	Summary	Quantity	Remarks
1	Deep Well	80m with Pump	2 well	Pump Capacity 60m ³ /hr
2	Treatment Plant	Aeration, Filtration, Disinfection	1 plant	Capacity 2,860m ³ /day
3	Pump Station	3 Pumps	1 station	1.35m ³ /min-25m-15kW
4	Distribution pipe	D 100mm D 150mm D 200mm D 250mm	1,218 m 648 m 271 m 188 m	HDPE pipe or equivalent
5	Fire Hydrant		12 sets	

(8) Waste Water Treatment Planning

There is no wastewater system and treatment plant at the model site presently. A wastewater drainage system will be developed according to the My Hao urban plan. However, the implementation schedule does not match the model site’s development plan. Therefore, a treatment system shall be planned for.

Until the local wastewater treatment system is; functional, the original treatment plant is needed to satisfy the effluent standards set forth by QCVN14.

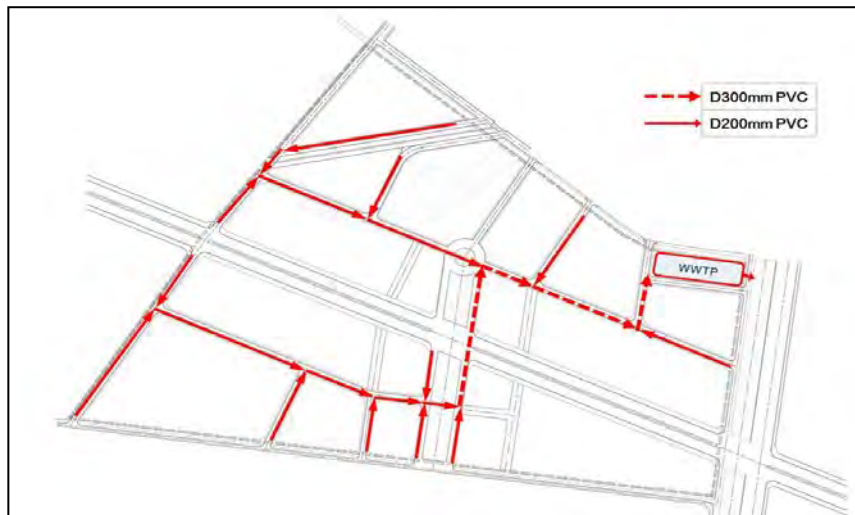


Figure 6-7 Plan of Sewer Pipes

Table 6-7 Outline of Wastewater Treatment Plan

No.	Contents	Summary	Quantity	Remarks
1	Sewer Pipe	D 200mm D 300mm	1,741 m 386 m	3‰ Maximum length of manhole is 30m
2	Treatment Plant		1 set	Pre-Fabricated FRP

(9) **Drainage Planning**

A summary of the drainage plan is presented in the table below.

Table 6-8 Outline of Rainwater Drainage Plan

No.	Contents	Summary	Quantity	Remarks
1	Drainage Pipe	D 400mm	2,289 m	3.0‰
		D 600mm	1,193 m	3.0‰
		D 800mm	741 m	2.5‰
		D1000mm	199 m	2.0‰
		BOX1200*1200mm	277 m	1.5‰



Figure 6-8 Plan of Drainage Pipes

(10) **Electricity Planning**

The number of transformers and substations should be determined taking into consideration the total electrical loads. Allocation of loads (total number of residential buildings), output voltage (22kV), power receptor points from the power company, area coverage (18 ha), the existing power supply aspect around the site (1 substation per 2000 residents), as based on more efficient distribution (the fewer, the better) and more economical systems (the more, the better) must be factored.

For the study site, 5 substations with 2000 KVA transformer capacity are suitable for the above conditions.

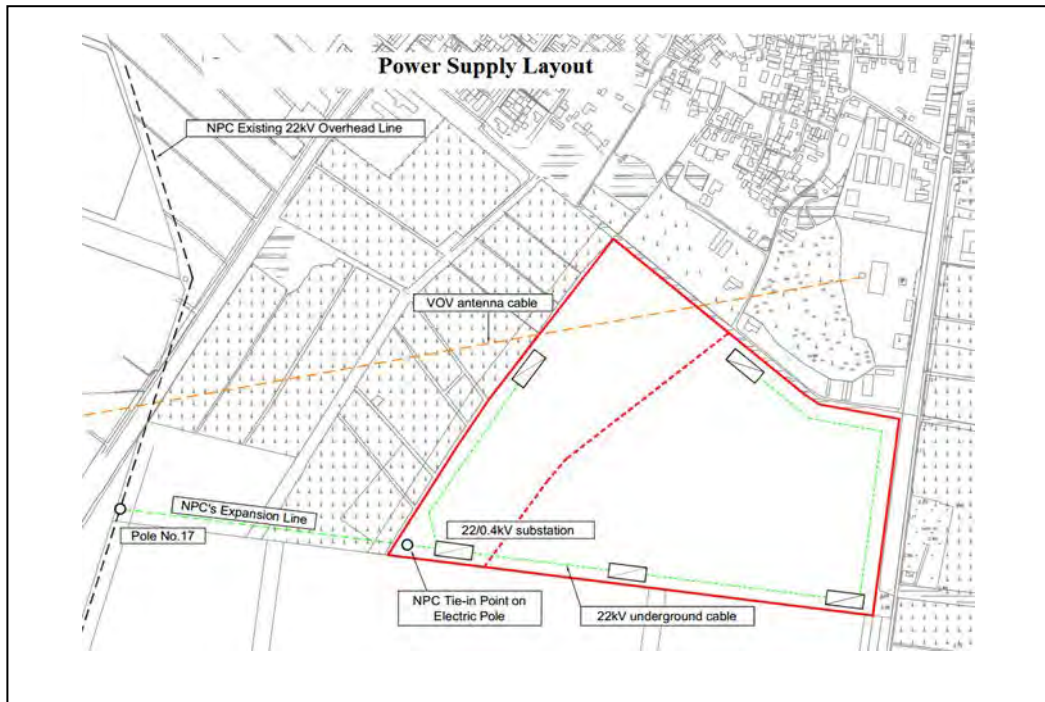


Figure 6-9 Power Layout

(11) Landing Plan

In landing plan, the proper height is essential and is based on an analysis of the estimated 100-year rainfall amount alongside secondary elements. This project will use the ring levee method. By adopting this method, it is possible to reduce excavational quantities and back-fill for building construction work.

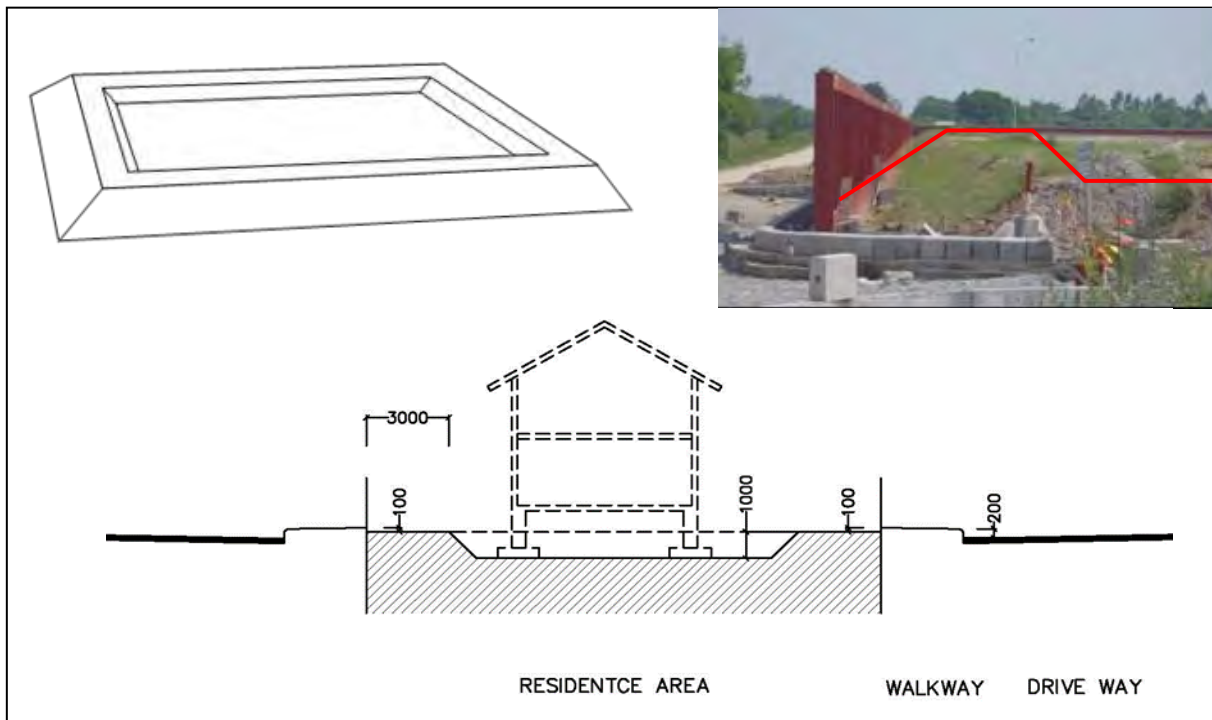


Figure 6-10 Image of Ring Levee

(12) **Construction Plan**

The construction terms regarding this matter is as follows. As a basic order, the construction needs to start infrastructure constructions such as land preparation, electricity, water and sewerage and roads, and the construction of buildings come after.

The construction schedule fluctuates depending on the order form, the capacity of contractor and the budget, the numbers of labors and securing the status of construction equipment. The construction condition in Vietnam will require minimum three years construction term for the model site case. The completed area can be operated in accordance with the construction area and the phasing construction term plan.

The residential construction area is divided into three areas for phasing development. In Area-1, in addition to infrastructure construction such as water, power supply facilities and drainage, construction of 20 buildings of low-rise housing and five buildings of mid-rise housing are planned. In Area-2, seven buildings of mid-rise housing are planned, whereas in Area-3, 12 buildings of low-rise housing and 8 buildings of mid-rise housing.

The access road of the Area-1 is planned by using constructed access road in the site with surrounding roads already constructed on north, south and east sides of the villages.

Additionally, the water will be supplied from new 2 wells and the electricity supplies from existing NPC 22 kV in the North.



Figure 6-11 Construction Division Plan

Table 6-9 Construction Division Plan & Construction Outline

	Facilities	Floor Area
Area-1	Infrastructure: water & electric supply, sewerage etc. Low-rise housing facility (20 buildings) Mid-rise housing facility (5 buildings)	± 86,300 m ²
Area-2	Mid-rise housing facility (7 buildings)	± 35,100 m ²
Area-3	Low-rise housing facility (12 buildings) Mid-rise housing facility (8 buildings)	± 60,300 m ²

(13) **Cost Estimation**

The items and unit price for cost estimation are selected for each work type, and each construction area. The adopted unit price is based on the 2014 construction unit price issued by MOC of Vietnam. However, the unit price is adjusted to conform to the current situation.

Concerning construction cost, project areas are divided into three zones, namely: a) housing areas. b) district road area and c) other areas. The cost of a) and c) are included in the calculation of the housing development project.

Table 6-10 Summary of Cost Estimation

Cost			Housing Business Cost		Note
Item	Detail	Unit	Cost	Breakdown	
Area		ha		a. Housing Area 16.11ha b. Inter District Road 1.88ha c. Others 0.24ha	
Land Acquisition , Compensation	Land cost	mill. VND	25,929	a	
	Compensation	mill. VND	30,175	a	
	Subtotal (1)		56,104		Not including the monitoring fees etc.
Land Preparation	Landing	mill. VND	112,290	a	
	Subtotal (2)		112,290		
Infrastructure Construction	Road Construction	mill. VND	27,319	a	
	Power Supply & Electrical	mill. VND	42,726	a	
	Water Supply & Drainage	mill. VND	41,119	a	
	Landscape	mill. VND	35,191	a	
	Subtotal (3)		146,355		
Building Construction Work	Low-rise Bldg.	mill. VND	133,500	a	Construction cost 6 mil/sqm Construction cost 7 mil/sqm Construction cost 7 mil/sqm, residential area
	Medium-Rise Bldg.-1	mill. VND	627,200	a	
	Medium-Rise Bldg.-2	mill. VND	125,356		
	Subtotal (4)		886,056		



Figure 6-12 Image of Bird's-Eye View

6.2. Business Planning

(1) Business Implementation System

1) Business Stakeholders and Role Sharing

The table below shows the business stakeholders, who are likely to participate in developing business for workers' housing, and their assumed roles in the initial development stage (land acquisition, infrastructure development, design), the management development stage (director of management and development, building construction, operation and maintenance), and offer business support.

Table 6-11 Business Stakeholders and Role Sharing

		Assumed Role and Feature	Initial Construction			Building and Management			
			1. Land acquisition	2. Land preparation and infrastructure	3. Designing	General management	4. Housing construction	5. Operation and maintenance	Business support
Public organization	Central Government	- No direct involvement in the development. - Supporting by execution of the relating measure such as introduction of preferential interest rate etc. - Execution of business promotion measure such as the subsidies etc.						✓	✓
	Local Government	- Possible business owner for the whole development business. - For the facilities management, executions by outsourcing (external order) to related business organization (public corporation etc.) are suitable. - Provision of business promotion measures like the subsidy etc.	✓	✓	✓	(✓)	(✓)	(✓)	✓
	Public Housing Entity	- Possible business provider to the whole development business and its management (future measures).	✓	✓	✓	✓	✓	✓	
Private entities	Industrial Park Operator	- Possible business owner for the whole development business. - After 2009, it is one of the responsible project owners for construction of workers' housings. - Bear the main load of the project expense difference between the cost of construction and the house rent income depending on the situation.	✓	✓	✓	✓	✓	✓	✓
	Owner of Tenant (Large Scale)	- Possible business owner for the whole development business. - After 2009, it is one of the responsible project owners for construction of workers' housings. - Obligation to prepare for the cost for the workers' housings (determined in Decree No. 100). - Bear the main load of the project expense difference between the cost of construction and the house rent income depending on the situation.	✓	✓	✓	✓	✓	✓	✓
	Owner of Tenant (Small Scale)	- Difficult to become a business owner for the whole development business. - Required to prepare for the cost for the workers' housings (determined in Decree No.100). - Potentially bear the main load of the project expense difference between the cost of construction and the house rent income according depending on the situation.					✓	✓	✓
	Real Estate Company (Developer)	- Seldom participate in business without profitability (unprofitable business). - Possible executor of construction and management business by the outsourcing order of the industrial parks and its tenants,	(✓)	(✓)	✓	✓	✓	✓	
	Individual Owner	- No participation in the business without the profitability.					✓	✓	
	Facility Management Company	- Execution of construction and management business by outsourcing the industrial parks and its tenants. (consignment of business activities by "Cost and Fee Scheme")						✓	

Note : ✓ is decided their roll of stakeholders by the Decree No.100.

Source: JST

The business scheme of model site needs to consider the stakeholders and the roles above.

2) **Condition of the Cost Burden in the Model Site Business**

The rent price of the workers’ houses for lease is calculated from the construction cost and the management expenditure, in comparison to workers’ affordable housing cost capacity. The study examined a non-profitable case (B/C ≐ 1) and profitable case (IRR ≐ 10 %) ⁶ which assumes earnings of 10 % of investment in the lease business.

Table 6-12 Share of Expenses and Expected Roles in Workers’ Housing Business

Related Entity	General Case in Vietnam	Expected Requirements in this Model Site
Master Developer (Project Owner)	• To invest and to recover the cost by selling and leasing their properties	(Same as the left)
IP Operator	• To bear the cost as business operator and master developer after 2009	• IP operator is not assumed to share the cost
Factory Owner (Tenants)	• To prepare workers housings by themselves in some cases • To provide housings for free and or low-price rent for workers • To provide housing allowances up to about 200,000 to 500,000VND/ month	• To contribute the part of development cost within the construction cost of their own residential facilities • Provide housing allowances up to 300,000 to 500,000VND
Resident	• To bear the cost by their payment of rents	• To bear the cost by their rents according to their affordable housing costs. • Single Worker : Expected the lower 0 to 20 % of income group, 447,000VND/per month for rent payment Family Housing Purchase : Expected the lower 20 to 40 % of income group and the purchasing power 322,268,000VND
Local Government	• To bear the cost of land acquisition, land preparation and infrastructure construction.	• To bear the land acquisition cost.

*: Refer to the Chapter 3 (8) from Summary and the Chapter 9 from Main Report

Source : JST

3) **Establishment of Business Scheme**

Since the current Decree No.100 regards the development of SH for workers as a form of private-public collaboration project development, it will be presumed that the project scheme within the model site will follow the private-public collaboration approach.

Considering the state of business stakeholders assumed in this project, the business scheme in the figure below is a basic one. In this project, the scheme assumes:

- i) the government will expropriate the land,
- ii) the lead developer (master developer) will organize and comprehensively coordinate the whole project. Besides this, the public entities are to develop infrastructure, and
- iii) To have a number of private operators participate in the project.

⁶ IRR (Internal Rate of Return) measures how much profit an investment makes, without the effect of variables such as interest rates or inflation.

At present, the master developer, to undertake project implementation or large-scale factory, that could employ the residents of SH, is uncertain. Therefore, PPC's involvement and support towards the project is indispensable for coordination of each business stage and business promotion.

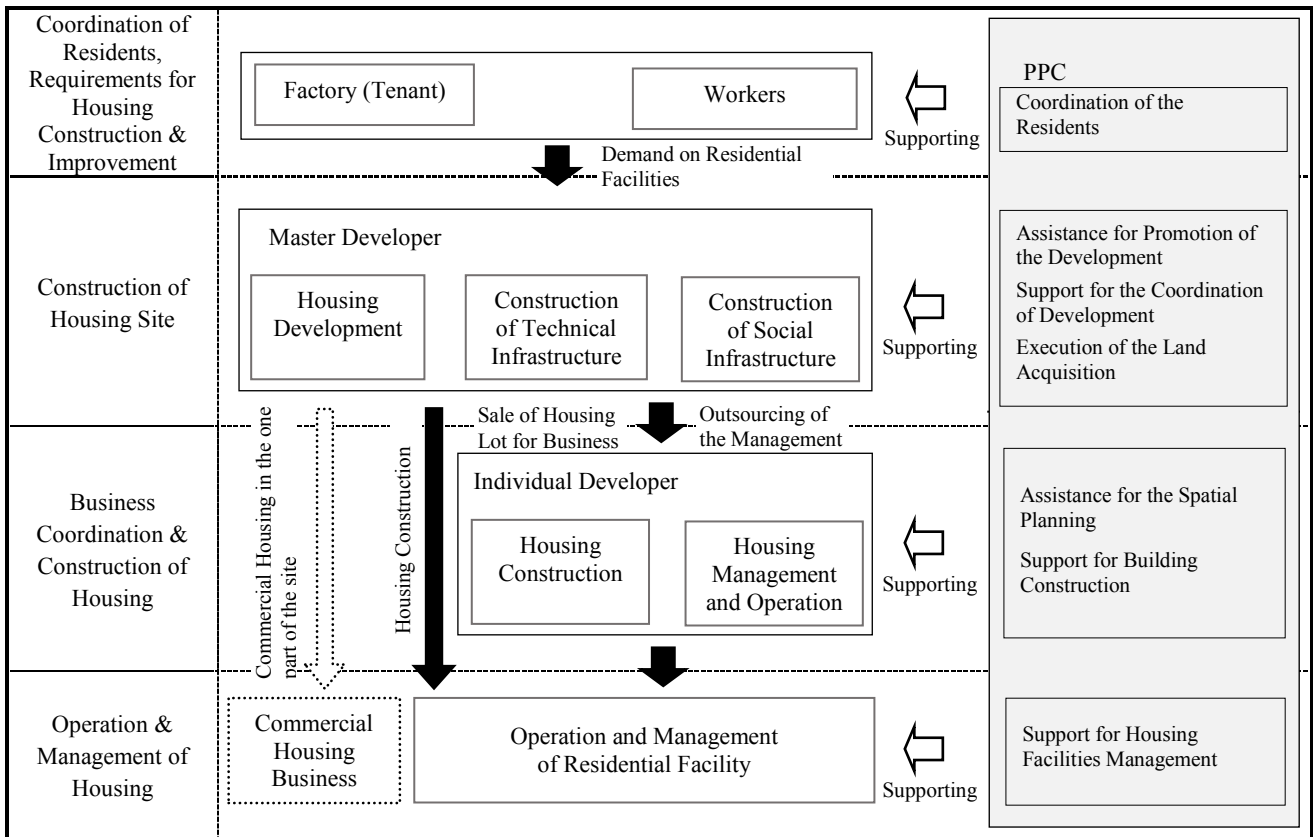


Figure 6-13 Supposed Project Schemes in Model Site

4) Others Business Schemes

Proceeding from the business form mentioned above, a business scheme incorporating the following two options are proposed for the model site.

- The initial project cost borne by factory operators: Contribution of housing development assistance cost as the Decree No.100 Article 31 stipulates.
- Commercial activities through sale of land and buildings: Land or housing sales corresponding to 20 % of land or floor area as the Decree No.100 Article 9 are permitted.

(2) Requirements of Business Planning

1) Examination of the Affordable Housing Cost of Workers

The affordable payment amount of the industrial workers around IP are represented by capabilities of income quintile of 1st and 2nd for residential facility, which is lower 0-40 % income group as mentioned in Main Report Chapter 3.9.2, for dwelling expenditures and the corresponding amounts of potential housing loan with preferential terms and conditions. Specific conditions are as followings:

- Single income earners are assumed to be 2 persons (low-rise housing), 4 persons' (mid-rise housing) cost burden. The cost burden is 446,699VND/month per person. Households' income earners are assumed to be 2 persons' cost burden. The cost burden is 1,066,713VND/month per person
- Affordable rent ranges from 15 % in the income quintile 1, and 20 % in the quintile 2 respectively as affordable housing expenditure. According to the survey, the higher income

quintile allocates more for housing cost than the lower quintile based on the result that people allocate about 15 to 20 % of their income to housing cost.

- iii) In the business cost calculation from 6.2 (2) 1, the occupancy rate in rental housing is set as 100 %, and the basic payment is calculated. In the financial analysis and fund planning from 6.2 (3), the occupancy rate is 95 %, and the resident absentee for long-term is considered.
- iv) The quintile 1 affordability is applied to industrial workers who are single and live alone.
- v) The quintile 2 affordability is applied to industrial workers who live in the houses as family

Based on above mentioned assumptions, the affordability of housing cost was calculated as follows.

Table 6-13 Affordability of Residents

(Unit: 1,000VND)

Building Types	Affordability	Unit Number	Rent Housing	
			Monthly Rent	20 Years Rent
20 Years Rent for Low-Rise Single	196,404,452	916	893.40	214,415.34
20 Years Rent for Medium-Rise Single	99,059,887	231	1,787.79	428,831.68
20 Years Rent for Medium-Family	660,508,869	1,290	2,133.43	512,022.38
Total Cost for Burden	955,973,208			

2) Commercial Facilities in Business Planning

In the model site case, the commercial facilities are planned in the medium rise building at the ground floor level, and the total floor area is approximately 3,680 m². The resutaurants and shops are expected to be in. In the SH for workers in Kim Chun Commune where is located at periphery of Hanoi, the commercial facility is rent at 35,000 VND per month/m² as setting it with low price. This price setting does not cover the construction cost in 20 years of rental. Based on this case, the rent for commercial facility in the model site is set as same as the construction cost.

These comemrcial facilities are consiedred seperately from the profitable business for social housing construction and land explained in 6.2 (1) 4.

3) Affordability and Cost Comparison in the Model Site

The correspondence of affordable cost of residents and business cost in business balance in the model site is shown as below (Any costs related to investment funding allowance are not included in the business cost).

Expected amount of the affordability by the beneficiaries in terms of rents and purchasing, which is 955,973 million VND is only a little more than the scheme’s cost for building construction, design and operation and maintenance with others amounting to 970,908 million VND. It must be less than the business cost and due profit for the housing, while the scheme’s total cost is 1,311,418 million VND considering the basic costs for land acquisition, land preparation and infrastructure development which are necessary before construction of building. Also, the interest rate burden of the load is necessary to be prepared.

Table 6-14 Affordable Price for Beneficiaries • Business Cost and Subsidies etc.

<u>Cost</u>			<u>Income (20 Years)</u>	
	Cost (mill. VND)	Note		Income (mill. VND)
O&M and Others	58,271	Annual Operation Maintenance 1 %/per year, Renovation Cost 5 %	Rent for L-R Single	196,404
Design	26,582	3 % of Housing Construction Cost	Rent for M-R Single	99,060
Housing Construction	886,056		Sales of M-R Family	417,016
(Subtotal(1))	970,908		Housing Income Subtotal	955,973
Commercial Building	25,761		Commercial Facility Income	25,761
(Subtotal(2))	25,761		Total Income	981,734
Infrastructure	146,355		<u>Income & Cost Balance</u>	
Compensation	30,175			Shortage (mill VND)
(Subtotal (3))	176,530		Total Cost-Total Income	329,685
Land Preparation	112,290		(Except Land Acquisition)	(303,756)
Land Acquisition	25,929	Burdened by HY Province	Construction Cost Balance	
(Subtotal(4))	138,219	Annual Operation Maintenance 1 %/per year, Renovation Cost 5 %	(Subtotal (1)+Subtotal (2)-Income Total)	14,936
Total Cost	1,311,418			

Note: each amount is a rounded number; therefore, the total amount may not be matched.

Source : JST

(3) **Financing Plan**

1) **Consideration for Financing Study**

For implementing the study scheme, total cost for implementation of the scheme amounting to VND 1,311.4 billion has to be financed. Unfortunately, this amount is too large for the government budget. Issuance of construction bonds and/or borrowing money is indispensable. Accountable incomes are imperative for the issuing of bonds and for borrowing money.

As subtracting the loan interest from the cost be afforded by workers and each business operators (rent and housing allowance money), the left amount will be the allocated business cost (the details are shown in Annex 11).

(Business Cost) = (Amount Afforded by Workers & Each Business Operators) – (Loan Interest Amount)

Below are the hypothetical requirements;

- Business and Financial Schemes
 - Conditions for using insurance of bonds and/or borrowing from credit institution: annual interest rate of 5 %, repaid over 20 years and guaranteed by the government.
 - Occupancy rate: 95 %
- Assumed Bearer and Expenses
 - Residents: the amount of rent is based on current affordable price

- Corporation (tenant) : assumed as factory owners and the others, who would bear the following expenses:
 - ✧ Housing cost allowance for the workers: such as offering the workers' dormitory in Vietnam, up to about 500,000 VND/ per man month
 - ✧ Allotted charges for investment at the beginning of the business: in foreign cases, the business cost contribution necessary is 10 % or more of their development land needs to be allocated.
- Government: assumed as the central or local governments and bear the following expenses;
 - ✧ The cost burden of land preparation and infrastructure development defined by decree: it determines the burden local government shoulders.
- Other businesses
 - ✧ Commercial facilities: Supposing income as same as construction cost (refer to 6.2 (2)).
 - ✧ General profit business: 6.2 (4) shows the terms.

On the assumption that the cost borne by a private company in housing construction is the housing allowance of 500,000 VND/per man month, there is deficit of 302.2 billion VND for the project.

On the assumption that the cost borne by the private company for housing construction is the housing of allowance 300,000 VND/per man month, the result of basic fund allocation would be 455.9 billion VND left.

Table 6-15 Result of Investment Fund Allowance

Business Cost Allocation by Roles

(Unit: 1,000,000 VND)

Item	Total Cost	Cost by the Roles				Shortage
	Cost	Resident	Company	Government	Other Developers (Commercial Operator Facility Operator and General Profit Business)	
Total Business Cost	1,568,168	908,174	608,304	25,929	25,761	—
Non-Loaned Business Cost	51,690	0	0	25,929	25,761	—
Loaned Business Cost	1,516,478	908,174	608,304	0	0	—
Cost Allotted for Business Cost	957,437	573,381	384,056	0	0	—
Cost Allotted for Interesting Payment	559,041	334,793	224,248	0	0	—
Shortage	—	—	—	—	—	302,291

(Unit: 1,000,000 VND)

Item		Total Cost	Cost by the Roles				Shortage	Initial Loan Amount
		Cost	Resident	Company	Government	Other Operators (Commercial Facility Operator and General Profit Business)		
Total Business Cost	a	1,311,418	573,381	384,056	25,929	25,761	302,291	
(Ratio)			43.7%	29.3%	2.0%	2.0%	23.1%	
Commercial Facility Business Income	b	25,761				25,761		
General Profit Business	c							
Total Business Cost for Worker Housings	d=a-b-c	1,385,657	573,381	384,056	25,929		302,291	
(Ratio)			44.6%	29.9%	2.0%		23.5%	
Rent & Housing Allowance (Sum Repayable of Initial Loan)	e	957,437	573,381	384,056				957,437
Land Acquisition Cost	f	25,929			25,929			
Land Preparation Cost	g				0			
Contribution of Development Cost	h	0		0				
Shortage	d-(e-h)	302,291						

(Notice: the calculation total may not be matched exactly since the numbers are rounded)

Source: JST

(4) Financing (Sensibility Analysis)

As solutions for financial shortage and business expenditure balance, finance balances have been studied for the following different business conditions and business schemes.

- Housing allowance by factory owners: 300,000 or 500,000 VND/per month
- a) Use of project site to general profit business: profit housing business use is 20 % of site or unit.
- b) Initial business contribution by factory owner: 0 ~ 70 million VND/person
- c) Interest rate of loan for the project: Annual interest 5 % or 1 %

The finance calculation results are shown below (see Table 6-16). The calculation process is shown in the Annex 11.

- a) Cases where 20 % of housing land or residential unit is allocated for general commercial housing

Calculation result of the case that 20 % of housing site or residential unit for general profit business allocated to commercial housing use according to the stipulations of decree is as followings. It is assumed to turn out profit that is equal to 10 % of construction cost in each case.

- In the case where 20 % of housing land for general profit business is allocated as commercial housing use for sale, it is expected to improve 3.1 % of business cost, but it is a cost of 261.9 billion VND short.
- In the case that 20 % of family units (400 units) are allocated to general profit commercial housing, it is expected to save 2.6 % of business costs, but result in a cost shortfall of 268.7 billion VND.

These results prove that while introduction of commercial housing leads to financial improvement, its impact is extremely limited.

From these results, the improvement of fund planning as a combination with rent subsidy or commercial business, which are assumed as business support mechanism in the current SH business frameworks, are not enough. Based on these circumstances, in this study, it was examined about business scheme shown as below.

b) The contribution to initial project cost by factory operators

In cases where factory operators pay 55 million VND per resident as development contributions, business cost shortfalls would be eliminated. Therefore, the amount of contribution is approximately equal to the construction cost of workers' housing by factory owners. It corresponds to the high labor demand where companies construct workers' housing and even bear the shortages of the project cost.

If local governments bear the land preparation cost, the initial cost allocation to factory owners would be 35 million VND per person.

c) Cases of Decreasing Interest Rate (applying preferential interest rate)

In applying preferential interest rate (from 5 % to 1 %), borrowing accessibility increases and the finance balance results in the following;

- At a company housing allowance 400,000 VND per month, business finance would be balanced.
- Taking housing allowance at 300,000 VND per month, initial cost contribution of factory owners would be 20 million VND per person.

This result shows that the introduction of preferential interest rate is quite effective.

Table 6-16

Expected Allocation Example of Investment Fund

Expected Business Case	Contribution of Initial Business, Expenses of Stakeholders and Ratio to Total Cost																
	Interest Rate	Resident		Company				Local Government				Other Operators (Commercial Facility Operator and General Profit Business)		Total Sum		Shortage Cost Amount	
		Allocated Amount	Housing Allowance	Contribution Cost	Allocated Amount	Land Acquisition Cost	Land Preparation Cost	Allocated Amount	Allocated Amount	Allocated Amount							
	a			b	c	d	e = c + d	f	a+b+e+f								
	%	(Thou VND, %)	(Thou VND/Man Month)	(mill VND/Man)	(mill VND, %)	(mill VND, %)	(mill VND)	(mill VND, %)	(mill VND, %)	(mill VND, %)	(mill VND, %)						
1a Housing Allowance 500,000 VND/per month	5%	573,381	43.7%	500	0	384,056	29.3%	25,929	0	25,929	2.0%	25,761	2.0%	1,009,127	76.9%	302,291	23.1%
1a Housing Allowance 300,000 VND/per month	5%	573,381	43.7%	300	0	230,434	17.6%	25,929	0	25,929	2.0%	25,761	2.0%	855,504	65.2%	455,914	34.8%
2a-1 20% of Site for Sale	5%	481,815	36.7%	500	0	281,564	21.5%	25,929	0	25,929	2.0%	260,181	19.8%	1,049,489	80.0%	261,929	20.0%
2a-2 20% of Family Housing for sale	5%	450,539	34.4%	500	0	326,476	24.9%	25,929	0	25,929	2.0%	239,737	18.3%	1,042,681	79.5%	268,737	20.5%
2b-1 Contribution Cost for Company 55mil VND/per person	5%	573,381	43.7%	500	55	677,536	52.7%	25,929	0	25,929	2.0%	25,761	2.0%	1,302,607	99.3%	8,811	0.7%
2b-2 Land Preparation Cost born by Local Government	5%	573,381	43.7%	500	35	570,816	43.5%	25,929	112,290	138,219	10.5%	25,761	2.0%	1,308,177	99.8%	3,241	0.2%
2c-1 Interest Rate 1%, Housing Allowance 400,000VND/month	1%	822,811	62.7%	400	0	440,901	33.6%	25,929	0	25,929	2.0%	25,761	2.0%	1,315,402	100.3%	—	—
2c-2 Interest Rate 1%, Housing Allowance 300,000VND/month	1%	822,811	62.7%	300	20	437,396	33.4%	25,929	0	25,929	2.0%	25,761	2.0%	1,311,896	100.0%	—	—

48

(5) **Examination on Funding Sources**

In the financial scheme model, the operators borrow funds to finance the operational costs and pay back through the rent payments from the IP workers. This is because it is difficult for the workers to prepare enough to meet the housing costs. As a result of the financial analysis below, this business promotion needs funding sources with favorable interest rates.

To cover the initial business costs, a 30 trillion VND incentive investment program by the current government is required. In addition, the following options are considered possible funding sources.

On the other hand, the social housing business is basically unprofitable business, and establishing bank loan or investment trust at current moment is complicated and faces a difficulty under assumed business condition. For implementing a bank loan, a public entity such as a government need to provide an assurance for the loan. Also, funding by investment trust is recommended to be discussed when the sufficient business profitability is expected with the increase of housing demand and the economic growth.

Table 6-17 Funding Sources for Initial Business Cost

		Land acquisition	Land preparation & infrastructure	Housing construction	Operation and maintenance
Bond	- It is possible to allot the industrial bond and the construction bond that a central government and the local government issue to the cost of procurement. - In an overseas case, the funding source comes from pensions and managed by the development bond for a strategic housing supply (Singapore).	(√)	√	√	
Bank Financing	- Financing for construction of buildings and management by private operators. - The business profit of the development is valued for financing. It should be a business with profitability, and related entities' defrayal is indispensable. Moreover, the state's guarantee of the financing is necessary for this case.			√	√
Investment Trust	- Accumulates a fund from many investors by Real Estate Investment Trusts and contributing it to business for development projects. - The business profit of the development is valued for the investment scheme. It should be a business with profitability potential and related entities' defrayal is indispensable. - Overseas, there are cases where sale by investment trusts covers construction of infrastructure facilities in urban development project. - This method will be taken when the housing business become profitable by price rise of housing rent and housing price renting and fulfilling the price requirements with the housing d with increase of housing demand and the Vietnamese economic growth.		√	√	√

(6) Feasibility of Social Housing Business in the Model Site

The result of social housing business planning in the model site and main issues for the feasibility of business are shown and summarized below.

Table 6-18 Feasibility of Social Housing Business in the Model Site

Business Planning Framework	Situation and Issues Related to Business Feasibility
Construction Cost & Worker's Affordability	<ul style="list-style-type: none"> • The amount of worker's affordability for housing cost does not match the construction cost of living facilities. It is difficult to keep the profitability • Additional subsidies are needed in addition to the worker's housing affordability
Business Scheme and Business Entities	<ul style="list-style-type: none"> • The master developer needs to arrange development expenses and coordinate contribution of factory operators and housing allowance in the development costs. • Large sized developers and factory operators with high residential demand are uncertain. A small development framework for medium and small sized investors should be considered since they are able to execute moderate capacity development.
Financial Planning	<ul style="list-style-type: none"> • The financial plan can be balanced by implementing low interest rate investment and introducing subsidies and contributions to development costs by factory operators. • The introduction of commercial housing business for social housing development does not improve greatly on the profitability of social housing business.

6.3. Recommendations to the Implementation of Development

(1) Recommendations for Implementation of Development of the Model Site

To improve the living condition of IP workers in the model site, Hung Yen province has to grapple with supporting and coordinating the implementation of development according to the progress of the project. Based on the basic contents of the business scheme in section 6.2 (1) 3), the following measures are recommended and proposed for execution by Hung Yen PPC. These measures follow the current legal system.

Table 6-19 Recommended Policies for Housing Development in Model Site

Framework of Measures	Content of Measures	Related Department, Organization
1) Support for Coordination of Candidate Residents	<ul style="list-style-type: none"> Promotions at support desks for IP operators Arrangement support of residents for worker housings including surrounding IPs 	DPI, EPZA, DOC
2) Support for Development Promotion	<ul style="list-style-type: none"> Execution of land acquisition 	DPI, DOC, District Office
	<ul style="list-style-type: none"> Giving publicity to the plans of candidate operators, and inviting developers (information share and one-stop services) 	DPI, EPZA
	<ul style="list-style-type: none"> Securing of financial capital <ul style="list-style-type: none"> Request to the planned factories to defray a part of business cost Coordinate the allocation of the social housing cost 	DPI, EPZA
	<ul style="list-style-type: none"> Application of the business operation incentives <ul style="list-style-type: none"> Tax reduction Exclusion from land use fee 	DPI, EPZA
3) Support for Development Coordination	<ul style="list-style-type: none"> Housing supply promotion for medium and small sized investors <ul style="list-style-type: none"> Organization support for housing related operators Information sharing support between master developer and individual operator 	DPI, DOC, EPZA, District Office , (Establishment of department in charge)
4) Support for Spatial Development Coordination	<ul style="list-style-type: none"> Coordination support between medium and small sized investors (community development support) 	DOC, (Assistance by MOC)
5) Support for the Construction of Buildings	<ul style="list-style-type: none"> Advising of construction regulations of current villages 	DOC, (Assistance by MOC)
	<ul style="list-style-type: none"> Tight enforcement of construction approval and regulation 	DOC, District Office (Assistance by MOC)
	<ul style="list-style-type: none"> Support on cut down of construction cost by group purchasing and by promoting the use of subsidized construction materials 	(Assistance by MOC)
6) Support for Residential Facility Management	<ul style="list-style-type: none"> Residential facility management support <ul style="list-style-type: none"> Rental housing management and operation support for medium and small housing operators (including loan facilitation) Promotion support for decent quality housing 	(Assistance by MPI, MOC)

1) Support for Coordination with Candidate Residents

i) Promotions at support desk for IP operators

For the purpose of stabilizing and promoting the worker housing provision model as a business, it is important to promote the supply of decent housing corresponding to the demand by workers who will rent the houses. The participation in the housing business by new factory investors needs to be encouraged. Therefore, coordination and cooperation between IP operators is recommended and the support desks for IP investors could enhance these endeavors.

ii) Arrangement support of residents for worker housing including surrounding IPs

The arrangement support to search for residents for worker housing is recommended to be provided not only for the IPs in the vicinity of the model site, but also for those in the surrounding areas and IP workers. It is recommended that management of the candidate residents is planned for the surrounding IPs and factories. This business information is provided under the oversight of the PPC.

2) Support for Development Promotion

i) Execution of land acquisition

Land acquisition in the model site by the province and its free provision are recommended in order to decrease the developmental burden of developers and to enhance business progress.

- ii) Providing publicity to plans of candidate operators, and sending invitations to the development operators.

Suitable provision of business information related to development operation will be key to encourage business participation by private developers. Only one service point should provide the various business related information such as the requirements for a development plan, support contents for business and the tendency of residential demands (one-stop services). Not to mention, this information should be provided to the medium and small sized investors.

- iii) Securing of financial capital

Business participation by private operators needs to be encouraged more to enhance this business by lowering the land acquisition costs and meeting some of construction setup costs like land preparation or urban infrastructure. In order to secure financial capital for these costs, business cost allocation requires newly expanded factories (Decree No.100 Article 31) and the coordination for social housing fund allocation (Decree No. 100 Article 5) be discussed under the current law.

- iv) Application of incentives for business operation

The tax reduction and exemption from payment of the land use fee as determined in the Housing Law 58 needs to be applied selectively to encourage business coordination between factory owners and business promotion by private developers.

3) **Support for Development Coordination**

Housing construction by medium and small sized investors is recommended as a moderate investment for housing provision. By encouraging individual investment business, the following modes of supports are proposed.

- i) Organization support for housing related operators

Creation of the development rule and coordination between business operators are necessary for making comprehensive spatial development and the coordination for individual housing development by several small sized investors. Therefore, the examples of the community development by CODI in Thailand and the KASIBA-LISIBA system in Indonesia would be suitable references for the organizations to emulate. (Refer to Chapter 4.)

- ii) Information sharing support between master developers and individual operators

While enhancing the business participation by various developers and the coordination between operators and business establishment promotions, information exchange between development operators is mandatory. From the social business perspective, a systematic approach needs to be launched for business preparation of developers.

4) **Support for Spatial Development Coordination**

- Coordination support between medium and small sized investors (community development support)

The province needs to be the main participant in coordination and support the medium/ small sized investors in spatial development. They are able to support them in the spatial planning process, indicating design guidelines and business planning formulation.

5) **Support in the Construction of Buildings**

- i) Providing advice on construction regulations in current villages

By avoiding price competition with low-quality buildings for workers in surrounding villages, it is important to manage and advise on decent quality housing within/out of the model site and not discourage expansion of decent living environments. Checking for conformance with the

construction basic standards and giving appropriate permission and lectures are essential in achieving this goal.

ii) Support for the construction cost reduction by group purchasing and promoting the use of subsidized construction materials.

This will enhance the participation in these projects by operators and investors. Ordering construction materials by means of group purchasing and promoting specific subsidized construction materials will influence the lowering of business and construction costs. This implementation is neither for one project nor one province, but for across the nation widely. The manufacture of each construction material will be done by a private developer, but the planning and the research on product usage need to be taken by the public entity. As standardizing the design guideline for social housing, the supports by MOC or related entities are expected for this approach.

6) **Support for Residential Facility Management**

From the perspective of inviting more development participation by various sized operators, overall support systems suggested include business investment and management. The recommendations for organization and systems are set forth in Chapter 5.

- Rental housing management and operation support for medium and small housing operators. (including loan facilitation)
- Promotion of support for decent quality housing.

(2) **Introduction Orders**

The above support measures shown in (1) are to be implemented in the following order:

1) **Short-Term Support**

It is necessary to support the establishment of the business system including the identification of the developers in the short term. It requires the following, 2) Support for development promotion, 3) Support for development coordination, 4) Support for spatial development coordination among supposed measures in (1). The above need to be conducted in the manner below promptly.

- Organizing the department of development support in the province: This is done by formulation of business and setting plans for business execution services.
- Execution of government support plan: Coordination of financial support for business execution (allocation of business contribution of advancement factories), and coordination for each business stakeholder.
- Appeal to the candidate development business operators (master developers) for involvement in the project (the appeal to business stakeholders)

2) **Mid-Long Term Support**

At the development stage, when the framework of the development work is prepared, it is necessary to work on the support execution of the business operation and the management. The following are the measures that can be put in place: 1) Support for coordination of candidate residents, 5) Support for construction of buildings, 6) Support for residential facility management among the measures that present in (1).

Focus on following contents from the view of participation promotion of various entrepreneurs is required.

- Supplementary promotion of construction
- Offering housing mediation services to improve living accommodation for tenant candidates.
- Support for the housing control and rental housing management to middle and small housing operators.

7. Conclusion

7.1. The Result of this Study

Summary of the results from this study is as follows.

In Chapter 2, the current legal and organizational system in Vietnam, which is related with living environment improvement of IP workers, is explained in terms of each side of housing construction, SH business promotion, and construction standards.

In Chapter 3, the current situations of living environment of IP workers are clarified from the perspective of each issues of spatial planning and housing building, organization regarding housing construction, improvement and enhancement of SH business, and issues related to business profitability.

In Chapter 4, the measures of living environment of IP workers in the neighboring countries are described. The contents and summarize measures of living environment of workers are evaluated to be able to refer in Vietnam.

In Chapter 5, based on the results from Chapter 2-4, the measures and recommendations for improvement of living environment improvement of IP workers in Vietnam are offered.

In Chapter 6, the spatial development plan and construction plan regarding the development plan of housing for workers in the model site in Hung Yen Province are formulated with the calculation of the business costs. Then, the business scheme and financial plan of business plan are examined and its business feasibility is confirmed. Finally, based on the knowledge from the examination of the development plan, recommendations about measures for living environment improvement of IP workers in Hung Yen Province are offered.

7.2. Recommendation for Living Environment Improvement of IP Workers

The measures for improving IP worker's living environment in Vietnam are recommended based on the two following frameworks.

(1) Measures of Living Environment Improvement of IP Workers Throughout Vietnam

The following frameworks are planned as the improvement measures.

- Recommendations for spatial planning and construction design.
- Recommendations for organizational system.
- Recommendations for business and financial planning.

Also, as integrating the recommendations, the alterations on legal systems and other necessary measures for the realization of the improvement of living conditions are shown.

(2) Measures of Living Environment Improvement of IP Workers for Model Site in Hung Yen

The plan of workers housing in the model site is designed and formulated, and its business plan is studied. The improvement measures for business profitability is examined and the results are proposed as recommendations for business implementation.

The roles by the province and issues need to work on are stated as policies for improving the worker living environment based on the situation of expected business operators and the issues of housing construction in model site.

7.3. Urban Planning of Zoning Plan, Detail Plan, and Drafted Business Plan

Based on the planning content in Chapter 6, the urban planning documents about IP housing development in model site were made on the basis of the Decree No.37/2010/ND-CP. The appendix of the drawing and planning documents are attached in accordance with the form of Decrees.