Chapter 5 PROGRESS OF THE HHTP DEVELOPMENT

5.1 Environmental Conditions

5.1.1 Geographical Conditions

The site planned for HHTP (planned for Phase-1 in 2012 and Phase-2 in 2020) covers 1,610 ha of development land around Tan Xa Lake and more than 300 ha of reserved residential and relocation area, within the area of 6 communes i.e. Tan Xa, Ha Bang, Thach Hoa, Binh Yen, and Dong Truc of Thach That Districts, Ha Tay Province. The area in Don Truc Commune located in the south of Lang-Hoa Lac Highway was included in the latest plan as Reserved Area to supplement the reserved residential area in north of HHTP area. The most of people who have been concentrated in villages since a long time have depended mainly on agricultural production for their having but some people adjacent to the national road No. 21A and Lang-Hoa Lac Highway are engaged in commercial activity. In the middle of this land there is a group of small natural ponds, connected with each other to form the Tan Xa Lake. This lake constitutes a natural drain of rain water and at the same time irrigational use for agricultural production and some domestic use of the people in the area.

5.1.2 Topography

Most of the relief features in the HHTP area are low hills, with common elevation of +5 to +30 m and average elevation of 15-17 m from sea level. The slope is commonly 3 – 7%. In the middle of the area is the Tan Xa Lake with a water surface area of around 140 ha. The designed flood water level is +8.0m for the return period of 5 years. Around the Tan Xa Lake are gentle hill slopes, forming wide and flat fields. Most of the plain land and low hill slopes are used for planting cassava, dry crops and paddy. On the hill slopes there are terraced fields with small elevation difference. The top of the hills is covered with gravely soil overlaying lateritic layers. On the hill slopes and in the valleys are the low terraced fields.

5.1.3 Climate

(1) The latest data of Ha Tay Province up to 2005

The Ha Tay Province has a humid tropical climate, characterized by monsoons. Winter is cold and relatively dry, meanwhile summer is hot and humid. In the hot season (May, June, July), the mean temperature was 28-29 degree Celsius in 2005. The annual mean humidity was 83-86% from 2000 to 2005. Generally in December the mean humidity is less than 80%. The total sunny duration from 2000 to 2005 was from 1,251 hr to 1,576 hr in a year and the most sunny period is the one from May to August. The annual rainfalls from 2000 to 2005 were 1355 mm, 1201 mm, 1415 mm, 1346 mm and 1710 mm, respectively. In rainy season the monthly rainfalls reach to 300-400 mm but it is only 2-10 mm mainly in January. The main wind direction in winter is SE – NW to NE – SW, with a mean velocity of 4 m/s. In summer the main wind direction varies from SE - NW to NW-SE, with a mean velocity of 2.5 m/s. Typhoons usually occur from August

to October, but with low frequency, in average once every 3 years.

(2) Data for HHTP area in 2001

Like in Northern provinces in Vietnam, Hoa Lac park has typical climate of Northern Vietnam, which is featured by windy, tropical and wet climate with two different seasons.

- The raining season starts from May to October featured by rains, hot and moist climate, and the major rainfall is in July, August, September, occupies 70% the total annual rainfall. The main wind direction is East South.
- The dry season starts from November to next April, featured by small rainfall, cold weather, and the main wind direction is East North.

Climatic features:

- Average air temperature is 23.4^{o}C
- Annual average highest temperature is 28.7^{o}C
- Annual average lowest temperature is 16.6^{o}C
- Annual average air moisture is 84%
- Annual average rainfall is 1839 mm
- Annual sunlight hours from 1300 to 1700 hours.

5.1.4 Rivers, Lakes and Irrigation System

The Tich River and small canal system form the main water supply and drainage system of the area. The Tich River has a narrow and shallow channel, and the velocity of the flow is quite slow. In the dry season the water level is quite low. The Tan Xa Lake with a water surface area of around 140 ha is the main water source for agricultural production and domestic water supply of the population in the area. The water is filtered for drinking purpose and unfiltered for washing purpose.

5.1.5 Water and Air Quality

(1) Surface Water

1) River

The water quality of Tich River and other rivers in Ha Tay Province measured in 2005 is shown in Table 5.1-1.

Table 5.1-1 Water Quality in Tich River and Other Rivers in Ha Tay Province

River Name		Tich		Nhue		Day		Bui	
Indicator	Unit	Jun 2005	Nov 2005	Jun 2005	Nov 2005	Jun 2005	Nov 2005	Jun 2005	Nov 2005
pH	-	7.36	7.56	7.78	7.26	7.36	7.52	7.04	7.20
COD	mg/l	32	28	52	40	88	160	30	34
DO	mg/l	3.4	3.2	2.2	2.6	3.2	2.8	3.4	5.0
BOD_5	mg/l	30	24	36	24	72	88	20	24
NO_3-	mg/l	2.32	2.48	2.48	4.42	6.72	6.92	1.52	1.04
PO_4^{3-}	mg/l	1.36	1.24	1.46	1.86	3.22	2.42	0.96	1.12
SO_4^{2-}	mg/l	1.16	1.08	3.31	2.85	3.68	3.56	0.76	1.20
H_2S	mg/l	1.30	1.20	1.22	1.42	2.57	2.23	0.74	1.02
CN^-	mg/l	N/D	N/D	0.01	0.01	0.02	0.04	N/D	N/D
Fe	mg/l	2.96	2.68	3.22	2.46	2.58	2.62	1.96	1.68
Cu^{2+}	mg/l	0.84	1.08	1.56	2.24	2.44	2.82	0.56	1.20
As^{3+}	mg/l	0.01	0.02	0.01	0.03	0.06	0.10	N/D	N/D
Hg	mg/l	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D
Zn^{2+}	mg/l	2.28	2.62	1.14	1.90	3.16	3.40	1.95	0.09
TSS	mg/l	70.3	82.1	92.0	65.2	131.5	108.5	52.6	40.6
Coliform	MPN/ 100ml	3400	6200	13800	12600	20680	18520	2800	2000

Note: N/D: Not detected
Source: Report on Present Condition of Ha Tay Province' Environment in 2005

Compared with the rivers of Nhue and Day which flow the outskirt of Hanoi City and collect some wastewater generated inside Hanoi City, the rivers of Tich and Bui are clean observed from TSS and Coliform.

2) Lake

The water quality data of Tan Xa Lake is not existing. The lake water quality data below is ones of Suoi Hai and Dong Mo Lakes which are located in northwest of the Ha Tay Province and Quan Son Lake which is located in the south of the province. Out of three lakes Dong Mo Lake is closest to HHTP area and located in about 5 km northwest of the area.

Table 5.1-2 Water Quality of Lakes in Ha Tay Province

Parameter	Unit	Suoi Hai Lake		Dong Mo Lake		Quan Son Lake	
		Period 1	Period 2	Period 1	Period 2	Period 1	Period 2
pH	mg/l	7.38	7.26	7.28	7.40	7.32	7.48
COD	mg/l	24	32	42	54	34	46
DO	mg/l	7.8	6.6	6.0	6.4	6.6	6.2
BOD_5	mg/l	14	20	24	32	20	28
NO_3^-	mg/l	1.80	1.68	1.18	1.26	1.24	1.40
PO_4^{-3}	mg/l	0.14	0.18	0.14	0.18	0.30	0.26
SO_4^{-2}	mg/l	0.54	0.42	0.14	0.28	0.28	0.36
H_2S	mg/l	0.01	0.01	0.01	0.01	N/D	0.02
CN	mg/l	N/D	N/D	N/D	N/D	0.01	N/D
Fe total	mg/l	0.12	0.32	0.22	0.42	0.40	0.44
Cu^{2+}	mg/l	0.02	0.04	0.02	0.02	0.01	0.01
As^{3+}	mg/l	0.01	0.02	0.05	0.07	0.02	0.02
Hg total	mg/l	N/D	N/D	N/D	N/D	N/D	N/D
Zn^{2+}	mg/l	0.02	0.04	0.03	0.05	N/D	N/D
TSS	mg/l	58	56	48	52	52	58
Coliform	MPN/100ml	740	1100	960	1480	960	1200

Note: N/D: Not detected
Source: Report on Present Condition of Ha Tay Province' Environment in 2005

(2) Groundwater

In Geological and Hydrograph Survey Document, Evaluation of Water Supply Condition of Vietnam Geological Association, April 2000, the groundwater in the project area is quite little. In 5 boreholes, there are 3 boreholes that can be exploited from 2,700 to 3,000 m^3/day. The groundwater mainly is at 30-100m in depth, pillar of water is high and stable in water capacity, water level is full again quickly (boreholes that are 99-101m depth), exploitable capacity of well is 10 L/s (36 m^3/h). In February 2001, with allowance of Hoa Lac Hi-tech Park Management Board, Wassenco was appointed by Vinaconex to be Investor Owner and implement survey to evaluate industrial exploitable flow based on the experimental result of pumping water in long-term and the result of water analysis, the report conclude: Exploitable flow in well BW1=BW2=BW5=900 m^3/day. Exploitable flow of three wells is 2,700 m^3/day. Pre-evaluation conclude that water qualities of three wells are quite good, PH is 8.4; Fe is 0.11 mg/l; mineral sum is 261 mg/l. In case using this source for the drinking water, there is only need to disinfect the coliform.

Table 5.1-3 Groundwater Quality in HHTP Area

No.	Parameter	unit	Content			
			BW1	BW2	BW5	TCVN:5944
1	Ca^{2+}	mg/l	2.0	36.0	42.0	300-500 ($CaCO_3$)
2	Mg^{2+}	mg/l	0.6	7.2	9.6	
3	Na^{+}	mg/l	0.65	0.73	4.96/2.85	
4	K^{+}	mg/l	0.27	0.21	0.50	
5	HCO_3	mg/l	6.1	137	173.9	
6	Cl^{-}	mg/l	2.84	2.55		200-600
7	NO_2^{-}	mg/l	0.16	-	<0.01	45
8	NO_3^{-}	mg/l	4.30	-	0.01	
9	NH_4^{+}	mg/l	0.01	-	<0.01	
10	PO_4^{3-}	mg/l	0.45	-	1.38	
11	SO_4^{2-}	mg/l	7.1	5.0	N/A	200-400
12	As	mg/l	-	0.0085	0.0103	0.05
13	Pb	mg/l	-	0.0004	<0.0001	1
14	Cd	mg/l	-	0.0001	<0.0001	0.01
15	Zn	mg/l	-	0.0005	0.0128	5
16	Cu	mg/l	-	0.0003	0.0010	1
17	CN-		-	0.002	0.003	
18	Phenol	mg/l	-	0.001	0.001	0.001
19	Ag		-		<0.01	
20	Se	mg/l	-	<0.001	<0.001	0.01
21	Hg	mg/l	-	0.0001	0.0001	0.001
22	Fe	mg/l	-		0.11	1-5
	Date		11/2/2001	11/2/2001	20/3/2001	

Note: TCVN: 5944 is environmental standard for groundwater
Source: Feasible Project on Hoa Lac Water Supply System (Feb 2001), TCVN:5944 (1995)

(4) Air

The traffic flow and air quality on Lang-Hoa Lac Highway and National Road 21 which forms boundary of HHTP area in the south and west respectively are shown in the tables below.

Table 5.1-4 Traffic Flow on Lang-Hoa Lac Highway and National Road 21

Point	Car (No./hr)		Motorbike (No./hr)	
	Period 1	Period 2	Period 1	Period 2
Lang-Hoa Lac Highway				
1) An Khanh IZ	240	328	816	1,020
2) Toll gate	288	314	930	980
3) Phung Xa (T-Junction between the Highway and NH72)	312	328	1,008	988
4) Hoa Lac T-junction	354	342	1,464	1,320
National Road 21				
1) Te Tieu	30	42	198	268
2) Van Dinh	114	186	804	624
3) Binh Da	126	156	798	720

Source: Report on Present Condition of Ha Tay Province' Environment in 2005

Table 5.1-5 Air Quality on Lang-Hoa Lac Highway and National Road 21

Point	SPM (mg/m^3)			CO (mg/m^3)			SO2 (mg/m^3)			NOx (mg/m^3)		
	1	2	TCVN 5937	1	2	TCVN 5937	1	2	TCVN 5937	1	2	TCVN 5937
Lang-Hoa Lac Highway												
1) An Khanh IZ	1.9	3.0		30	**48**		0.2	0.4		0.1	0.3	
2) Toll gate	5.3	5.9		38	40		0.4	0.4		0.2	0.3	
3) Phung Xa (T-Junction between the Highway and NH72)	6.5	10.6	0.3	42	**48**	40	**0.6**	0.3	0.5	0.3	0.3	0.4
4) Hoa Lac T-junction	2.8	15.6		38	**48**		0.2	0.5		0.2	**0.6**	
National Road 21												
1) Te Tieu	0.8	6.0		35	40		0.2	0.3	0.5	0.2	0.3	
2) Van Dinh	1.6	4.4	0.3	30	40	40	0.2	0.2		0.1	0.2	0.4
3) Binh Da	0.9	5.6		32	38		0.3	0.2		0.1	0.1	

Note: TCVN 5937: 1995 Environmental standard for air
Source: Report on Present Condition of Ha Tay Province' Environment in 2005

5.2 Action Taken by the Government of Vietnam

After approval of the original Master Plan, the Government of Vietnam has taken principal actions as shown in chronological order in Table 5.2-1 to go ahead with the HHTP project.

Table 5.2-1 Principal Actions Taken by Government of Vietnam

Date	Principal Actions
October 12, 1998	The establishment of HHTP and approval of the master plan and investment project, Stage 1, Phase I (Decision No. 198/1998/QD-TTg)
January 18, 2000	The establishment of HHTP-MB under MOSTE (Decision No. 10-2000/QD-TTg)
February 8, 2002	Regarding the approval of investment project "Construction and Infrastructure Business of Hi-tech Industrial Park – HHTP" of HHTP Infrastructure Development Company under VINACONEX; the Company was given 34.5 ha of land of the Hi-tech Industrial Park within the Stage 1, Phase I area of HHTP. (HHTP-MB Decision No. 01/2002/QD-CNC)
January 13, 2003	A number of measures to speed up the tempo of construction of HHTP's infrastructure; HHTP-MB agreed with MOST's proposal on assigning VINACONEX under MOC to act as general contractor to implement infrastructure construction projects, Stage 1, Phase I, HHTP under turnkey contract as one of the measures. (Decision No. 62/QD-TTg)
October 31, 2005	Approving the adjustment to the general planning on construction of HHTP (Decision No. 274/2005/QD-TTg)
March 17, 2006	Approval for change of investment owner and transfer of Project named "Construction and Infrastructure Business of Hi-tech Industrial Park – HHTP"
August 24, 2006	On speeding up the construction of HHTP, the Prime Minister gave several comments such as submission of updated master plan, strengthening organization and personnel of HHTP-MB, directing the appointment of FPT as HHTP Development Co., and directing HHTP-MB to appoint FPT to be the investor of the Software Zone. (No. 1310/TTg-KG)
August 24, 2006	Confirming the duty of Ha Tay Provincial People's Committee to make the plan and concentrate to acquire the land, compensate, and resettle of Phase I land by the 2nd quarter (June) of 2008. (No. 1310/TTg-KG)
March 8, 2007	Regarding task assignment to FPT as HHTP Developer; Prime Minister gave comments, and agreed that VINACONEX would not implement as EPC Contractor who carries out infrastructure projects under Stage 1, Phase I in HHTP. (No. 303/TTg-KG)

5.3 Project Organization

5.3.1 Organizational Reformation

Hoa Lac High-tech Park (HHTP) is in the process of organizational reform to accelerate the progress of development.

Taking a position as Prime Minister, Mr. Nguyen Tan Dung made some guiding comments to speed up the construction of HHTP by letter No. 1310/TTg-Kg dated August 24, 2006. He made the following comments as to organizational reformation:

1) The Ministry of Science and Technology (MOST) should promptly strengthen the organization and personnel of the HHTP Management Board so that the Board will have enough capacity to match the requirements for HHTP construction and development.

2) MOST should cooperate with the Ministry of Home Affairs to propose personnel for the position of Chairman of HHTP Management Board to the Prime Minister.

3) MOST should direct the appointment of FPT to carry out the activities of HHTP development.

4) MOST should direct the HHTP Management Board to create conditions for Vietnam's strongest companies in the high-tech field to invest in HHTP, and to appoint FPT to be the investor of the Software Zone.

5) Ha Tay People's Committee should direct the activities of making the plan to compensate, resettle and clear the total HHTP site and to appraise, approve and decide the investment and implementation pursuant to prevailing laws.

In addition, the Prime Minister agreed, in principle, with the proposals of MOST and HHTP Management Board on assigning FPT as HHTP Development Company; and he agreed to terminate the task of VINACONEX as EPC (Engineering, Procurement, and Construction) contractor of HHTP infrastructure projects, Step 1of Phase 1 (PM's letter No. 303/TTg-KG, dated March 8, 2007).

5.3.2 Present Organizational Structure

(1) Overview Organizational Chart

In respect to construction of technical infrastructure, two types of enterprises are required to play key roles. Hoa Lac High-Tech Park Management Board (HHTP-MB) should organize the construction of technical infrastructure financed with State budget capital.

Another type of enterprise to play key roles is Hoa Lac High-Tech Park Development Company (HHTP-DC), which should organize the construction of technical infrastructure financed with non-State budget capital, with guidance and supervision of HHTP-MB. VINACONEX has been working for the HHTP Infrastructure Development Company of stage-1 high-tech industrial area since 2002. In addition, FPT is approved as HHTP-DC, which will organize the construction of technical infrastructure in the Software Zone of the HHTP including the Software Park, FPT University and IT Training Center. Nothing has been approved for technical infrastructure financed with non-State budget capital, except for the Software Zone.

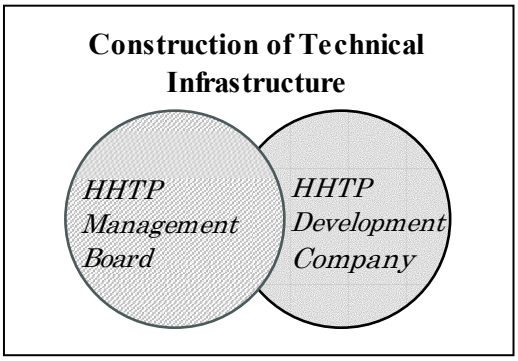
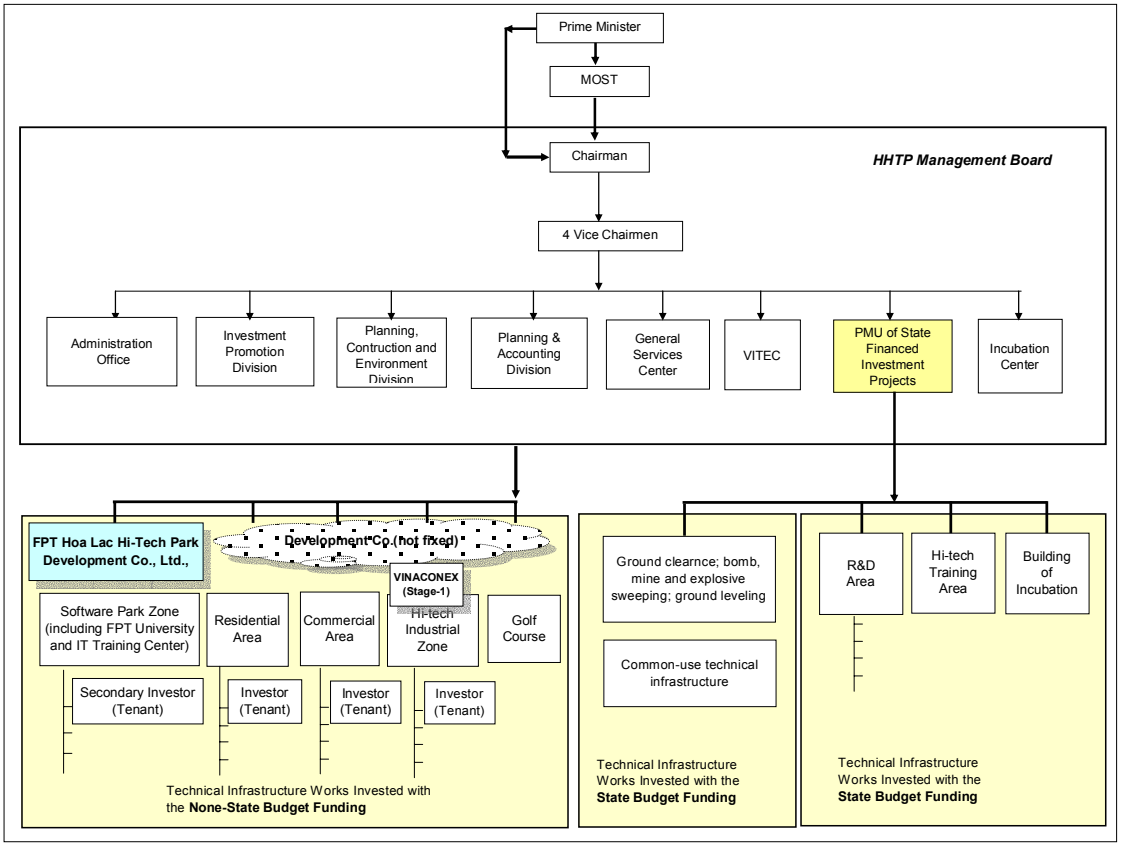


Figure 5.3-1 Two Players of HHTP Development

Figure 5.3-2 illustrates the overview organizational chart of HHTP as of the end of April, 2007.



Source: JICA Study Team

Figure 5.3-2 Organizational Structure of Hoa Lac High-Tech Park (as of the end of April, 2007)

(2) Investment Capital for Constructing Technical Infrastructure

Article 9 of "Regulation on High-tech Park" promulgated together with Decree No.99/2003/ND-CP (August 28, 2003) stipulates the investment capital for constructing technical infrastructure as illustrated in Figure 5.3-3. In addition, the State shall prioritize the calling of official development assistance (ODA) capital for constructing HHTP.

Funded by the State Budget

1. Making general and detail plans, and investment preparation work.
2. Ground clearance; bomb, mine and explosive sweeping; and ground leveling.
3. Constructing common-use technical infrastructure of the HHTP, working offices of the HHTP-MB.
4. Constructing technical infrastructure for the high-tech training and R&D areas.
5. Building incubators of high-tech enterprises.

Funded by Other Capital Sources

Constructing technical infrastructure other than specified by the above description for the State budget.

Source: Made by JICA Study Team in line with Decree No.99/2003/ND-CP (August 28, 2003)

Figure 5.3-3 Capital Source for Technical Infrastructure Construction

(3) Investment Capital for Land Acquisition and Compensation

The budget for the land acquisition and compensation is funded by the ministry of finance and transferred to Management Unit for Investment & Development of Industrial Groups & Handicrafts under Ha Tay People's Committee. From the unit the capital is further transferred to Thach That Land Acquisition and Compensation Board under Thach That (District) People's Committee.

(4) HHTP Management Board

Tasks and powers of HHTP-MB are shown in Table 5.3-1, referring to Article 35 of "Regulation on High-tech Park" promulgated together with Decree No.99/2003/ND-CP (August 28, 2003), the amendment and supplement of "Regulation on High-tech Park" by Decree 2007/ND-CP the 1st Draft (May 4, 2007)[1].

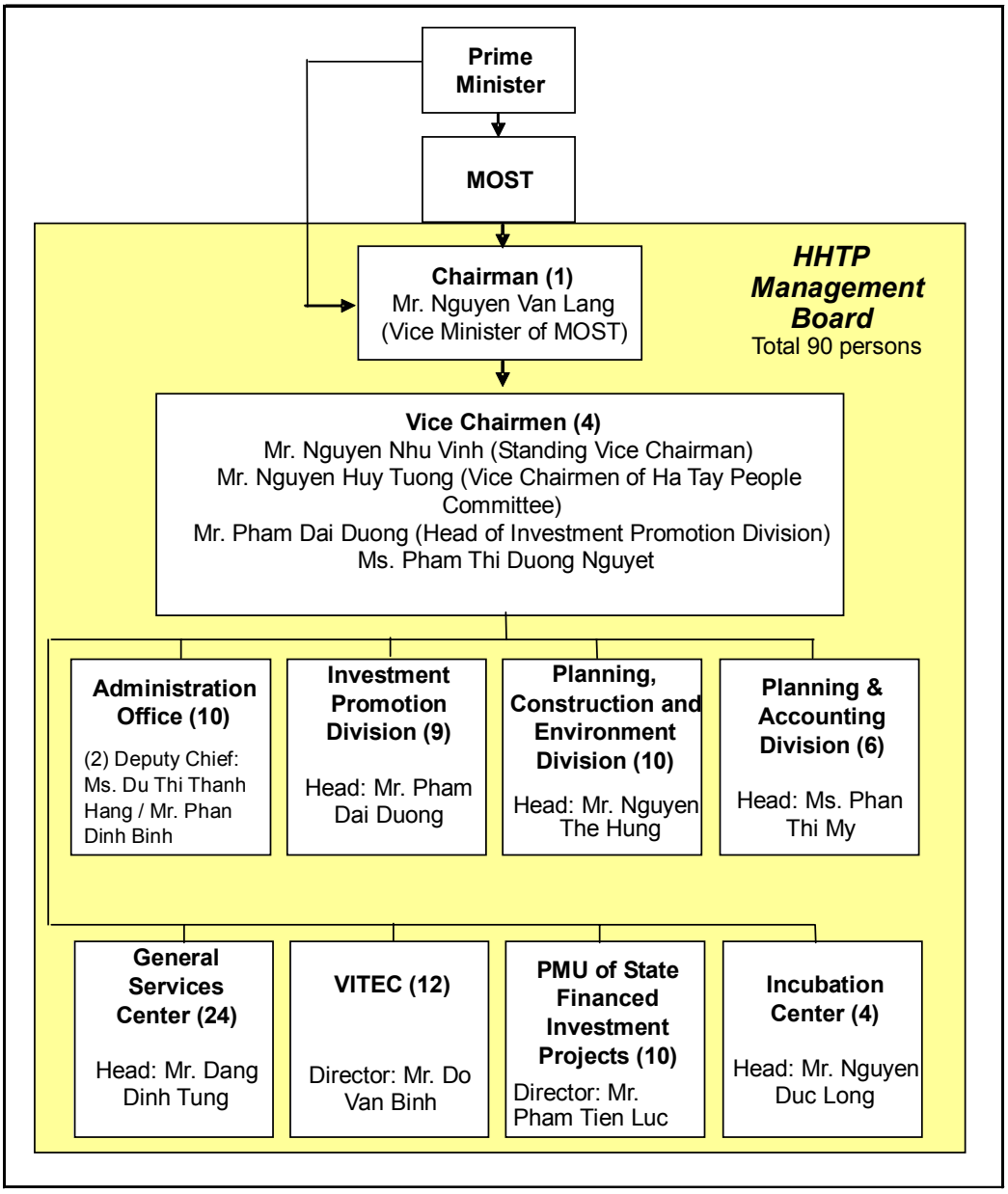
Figure 5.3-4 shows the organization chart of HHTP-MB as of the end of April, 2007. According to the chart, HHTP-MB has eight divisions/centers/units with a total of 90employees. The regulations of eight divisions/centers/units are being drafted by HHTP-MB at this moment.

[1] Amendment of the regulation is being prepared by exchanging opinions among MOST, Managing Boards of Hoa Lac and Saigon High-Tech Parks, as of June 2007.

Table 5.3-1 Tasks and Power of HHTP-MB

Task	Description
Management of Planning	1. To manage making a general plan of HHTP and detail plans of functional areas
	2. To draw up five-year and annual development plans of HHTP
	3. To organize approval of the general plan of HHTP
	4. To approve the detail plans of functional areas based on the approved Master Plan
Investment Promotion	1. To draw up the investment promotion plan
	2. To decide investment projects to be funded with the State budget capital
	3. To organize the construction of technical infrastructures in HHTP
	4. To cooperate with organizations, enterprises and individuals at home and abroad relating to the high-tech park investment, construction and development
	5. To issue, adjust, and revoke the following permits, certificates, confirmation papers:
	Business registration certificates for some organizations and individuals to develop their businesses in HHTP
	Permit to establish trading representative office of foreign organizations in HHTP
	Investment registration certificates and investment preferential certificates for domestic investment projects in HHTP
	Planning certificates, construction permits, and certificates of origin in HHTP
	Labor permits for foreigners and overseas Vietnamese who want to work or invest in HHTP
	6. To hold the revenue for 15 years to re-invest for R&D, nurture hi-tech businesses, train and manage the operation of HHTP:
Land Management	To manage the land in HHTP under the following provisions
	HHTP-MB shall be assigned land once for organizing the construction and development of HHTP in line with the land use plan already approved by competent State bodies. HHTP-MB may assign or lease the land to investors in line with the procedures prescribed by the land legislation.
	Investors using land in HHTP will have land use right certificates. The Department of Resources and Environment is responsible for issuing this certificate within 7 days after the all legal documents are received.
	The order and procedures for assigning land and granting land use right certificates shall comply with the guidance of the Ministry of Natural Resources and Environment.
Organization of HHTP-MB	To formulate the organizational plan and regulations for individual departments of HHTP-MB, and to submit them to the high-tech park-managing agencies for approval:
Services Provided by HHTP-MB	To organize and manage services within HHTP
Reports	To report regularly and additionally as needed to the Prime Minister, the high-tech park-managing agencies and competent State management bodies on the situation of construction, development, management and operation of high-tech parks

Source: Article 35 of "Regulation on High-tech Park" promulgated together with Decree No.99/2003/ND-CP (August 28, 2003), the amendment and supplement of "Regulation on High-tech Park" by Decree 2007/ND-CP the 1st Draft.



Source: HHTP-MB and JICA Study Team

Figure 5.3-4 Organizational Chart of HHTP-MB (as of August, 2007)

(5) HHTP Development Company

Tasks and powers of HHTP Development Company (HHTP-DC) are as follows, referring to Article 14 of "Regulation on High-tech Park" promulgated together with Decree No.99/2003/ND-CP (August 28, 2003), the amendment and supplement of "Regulation on High-tech Park" by Decree 2007/ND-CP the 1st Draft (May 4, 2007).

Table 5.3-2 Task and Power of HHTP Development Company

Task	Description
HHTP-DC Business	HHTP-DC is the business approved by the HHTP-MB to implement some tasks related to the construction and development of HHTP.
Activities	HHTP-DC shall operate in the following activities:
	1. Investing in construction and development of HHTP
	2. Constructing and commercially operating the HHTP technical infrastructural works.
	3. Providing services for investment and technology transfer activities within HHTP.
	4. Other activities registered in line with the law provisions.
Rights and Obligations of HHTP-DC	HHTP-MB is responsible to guide HHTP-DC to implement some tasks related to the construction and development of HHTP; and work together with HHTP-DC to develop co-operative regulations and plans for the implementation of the construction and development of HHTP. HHTP-DC shall have the following rights and obligations.
	1. To select investment forms.
	2. To be assigned, leased or sub-leased land with built infrastructures; to rent or purchase workshops.
	3. To be granted land use right certificates; to mortgage the land use right value and assets affixed to land with credit institutions according to law provisions.
	4. To transfer the land use right value and assets affixed to land within the land lease duration according to law provisions. The transferees shall have to continue performing the obligations and enjoying the interests defined in the contracts signed between the transferors, unless otherwise agreed.
	5. To enjoy investment preference policies as prescribed.
	6. To operate in accordance with the provisions of their investment licenses.
	7. To supply information to HHTP-MB and concerned State management bodies according to regulations.
	8. To be accountable for the quality of works and operation and maintenance of the work constructed by themselves.
	9. To promote investment into HHTP.
	10. Other rights and obligations as prescribed by law.
	After two years from the decisions approving the technical development projects are issued, if HHTP Development Companies fail to deploy the projects, HHTP-MB shall consider and revoke such decisions.

Source: Article 14 of "Regulation on High-tech Park" promulgated together with Decree No.99/2003/ND-CP (August 28, 2003), the amendment and supplement of "Regulation on High-tech Park" by Decree 2007/ND-CP the 1st Draft (May 4, 2007)

(6) FPT Hoa Lac High-Tech Park Development Company

FPT Hoa Lac High-Tech Park Development Company (FHHTPDC) was established in 2007. The profile of the company is shown below in line with the document prepared by

the Company.

1) Key functions upon agreement between FHHTPDC and HHTP-MB

General Functions and Duties

a. FHHTPDC has been assigned the general duties of HHTP-DC and will operate within the limits of Business Law and under the management of governmental authorities, and be responsible for the direct supervision and inspection of HHTP-MB, in accordance with Article 14 of Decree 99/2003/ND-CP,.
b. The company will cooperate with the HHTP-MB to build up and develop Hoa Lac Hi-Tech Park.

Detailed Responsibilities

a. Cooperating with the HHTP-MB to design and manage the master plan.
b. Following the assignment or proxy of the HHTP-MB in investing State budgets on construction; developing, utilizing and managing the infrastructure and facilities constructed with State budgets for HHTP.
c. Developing the technical infrastructure for specific zones.
d. Cooperating with HHTP-MB to make policies on developing HHTP.
e. Proposing and coordinating with HHTP-MB the process of approving, issuing, updating or revoking Certificates of Investment in HHTP.
f. Receiving land use rights from HHTP Management Board according to the development plan.
g. Promoting and leasing the land with infrastructures.
h. Providing services in the software park.
i. Following the assignment or proxy of the HHTP-MB in managing human resources, import-export, security and social safety.
j. Coordinating with HHTP-MB in international cooperation and investment promotion in the hi-tech park.
k. Promoting the investment in functional zones.

2) Management structure with key leaders' names

Chairman of Board of Directors: Mr. Phan Ngo Tong Hung

General Manager: Mr. Hoang Nam Tien

Management structure of the company is shown in the organizational chart (Figure 5.3-5). It seems that FHHTPDC envisages establishing a joint venture company, since linkage with the joint venture partners is shown on the organization chart.

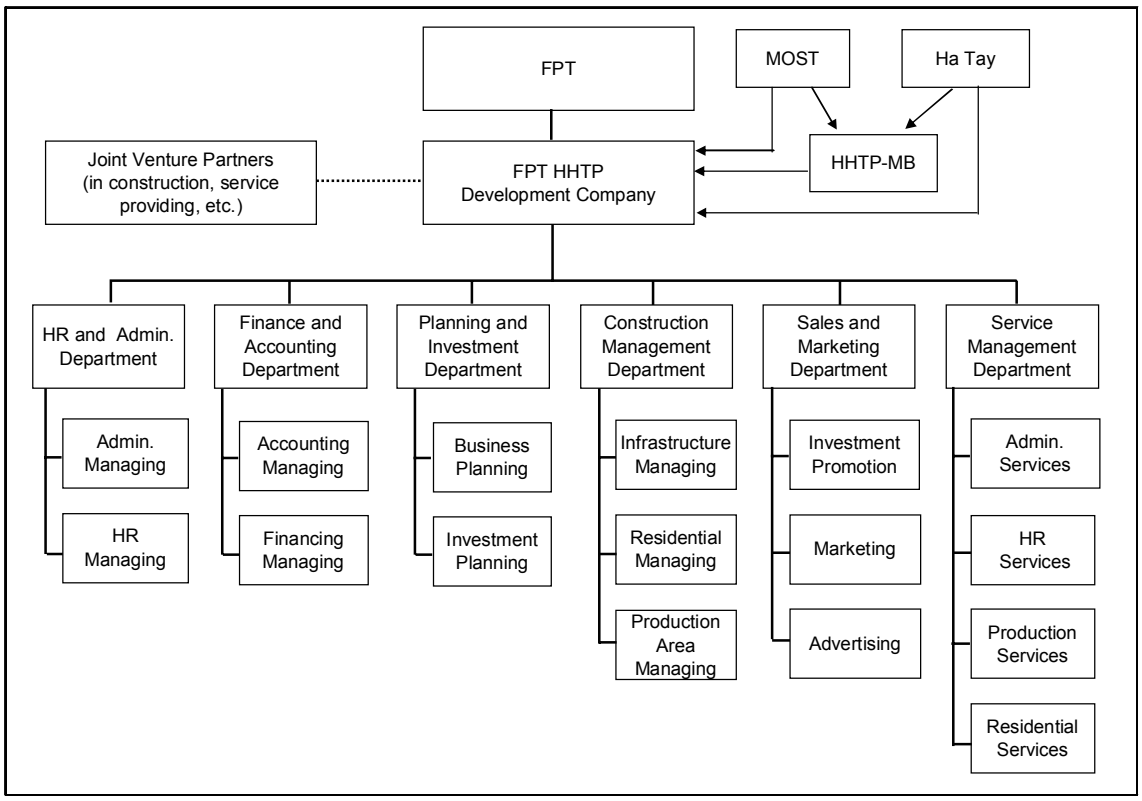


Figure 5.3-5 Organizational Chart of FHHTPDC

5.4 Tenants and Investment Status

5.4.1 High-Tech Industry Zone

Three companies have invested in the area of stage-1, phase-1. Profiles of each company are shown below.

Table 5.4-1 Existing Investors in HHTP

Company	Land Area	Employees	Main Products
Nobel Electronics Vietnam Co., Ltd. (Japan)	3.0 ha	250	Electronic equipment and components for digital cameras
OE TEK Inc Vietnam Co., Ltd. (Taiwan)	1.5 ha	60	Optical fiber patch-cords
Complex of New Material Production and Technology Transfer at Hoa Lac Hi-Tech Park (Vietnam)	2.5 ha	150	Super light concrete

Source: HHTP-MB and JICA Study Team

All invested companies are almost satisfied with their present preferential treatment, but not with the operation and management of HHTP. They are unlikely to be satisfied with infrastructures such as internal roads and supporting facilities, the present customs service and investment approval procedures.

5.4.2 Other Zones

In addition to those three manufacturers, three facilities listed in Table 5.4-2 have been built or are under construction.

Table 5.4-2 Existing Facilities other than Manufacturing Use

Facilities	Land Area	Owner	Remarks
General Service Center	1.2 ha	HHTP-MB	
Center for IT Training and Development of Incombank	2.5 ha	Incombank	Under construction,
Telecommunication Building (Not in use)	0.8 ha	HHTP-MB	HHTP-MB built this building for the HHTP internet gate, but it has not been used previously. At this moment, HHTP-MB is farming out the building to Hanoi Telecomm for installing mobile phone relay station equipment. However, Hanoi Telecomm has not yet installed any equipment in it. HHTP-MB said that they would hand the building over to Viettel who has been allowed to install an optical cable and other means of transmission for the whole of the HHTP.

Source: HHTP-MB

According to the original master plan, it was recommended that locating state research institutes in HHTP under the initiative of the Government would be a clear signal of the firm determination of the Government toward the materialization of HHTP to the concerned parties and entities, both domestically and overseas. However, no organization has invested in research institutions to date, regardless of efforts made by MOST and HHTP-MB.

5.5 Land Acquisition and Infrastructure Development

5.5.1 Land Acquisition and Present Land Use

(1) Land Acquisition

According to the Article 38 in land law revised in 2003, the lands in purpose of national defense, safety, benefit, economic development are acquired by the central government. However, the practical works such as preparation of resettlement plan and compensation was usually conducted by the provincial people's committees and after the revision of the decree on land acquisition (Decree 197/2004/ND-CP) the works can be entrusted to district level people's committees under the supervision of provincial people's committee. Therefore the land acquisition works were started by Ha Tay Province with necessary entrustment of some works to Thach That District from April 2002 and the prime minister stressed the supervision of the work by Ha Tay Province in the letter No. 1310/TTg-KG dated August 24, 2006. At present most of the practical works are conducted by "Thach That Land Acquisition and Compensation Board (Thach That LACB)" established under Thach That (District) People's Committee in July 2005 in order to accelerate the works.

The whole area of stage-1 of 200 ha was acquired by 2005. The land acquisition for the remaining area of phase-1 (610 ha) is being implemented and it is scheduled to be

completed by June 2008. By the end of May 2007, around 70 ha had been additionally acquired.

The progress of land acquisition and resettlement to date and future plan are summarized in the table below.

Table 5.5-1 Progress and Plan of Land Acquisition Works

Item	Progress	Phase-1	Phase-2
Land Acquisition (ha)	270	540	800
Resettlement (household)	165*	500 to 600	800 to 900

Note) * Number for Phase-1 Stage-1 development work (200 ha)
Source) Progress of land acquisition: Letter No. 96 BC/BQL, 23, May, 2007
Land acquisition in future: JICA Study Team
Resettlement: Interview Survey for HHTP-MB and Thach That LACB

According to the HHTP-MB in course of preparing JICA environmental check list, it is still required to resettle around 500 to 600 households in order to develop Phase-1 area with a total area of 810 ha except for Phase-I Stage-1 area (200 ha). The detailed land and household survey is under implementation by Thach That LACB at present and the exact figure will be clarified soon. In addition, according to HHTP-MB as well, around 1,400 households are to be resettled for development of overall area of 1,610 ha. The figure for Phase-2 in the table above is estimated by each figure. The colonies where the houses are concentrated are shown in Figure 5.5-1.

The JICA Study Team analyzed the major factors of delay of past land acquisition as follows.

1) No existence of Resettlement Action Plan (RAP) or Land Acquisition and Resettlement Action Plan (LARAP)

Although some relevant documents such as a progress report have been prepared for land acquisition and resettlement for HHTP, the RAP or LARAP have not been prepared. The prepared documents were lack of detailed schedule, procedure and explanation of compensation and support. It caused the lack of implementing the works with and the delay of acceptance of resettlement by land users.

2) Insufficient disclosure of resettlement plan and lack of public consultation

There are no records of announcements or public consultation meetings with land users for Phase-1 Stage-1 area and the minutes of meetings have not prepared for ones in rest of Phase-1 area. From these facts it can be obviously said that few opinions from land users and residents were reflected on the land acquisition and compensation procedures and amount of payments for them.

3) Inadequate compensation procedures with land users after sending letters of payments by LACB

According to the Thach That LACB, some land owners did not agree on the conditions of compensation and support sent from Thach That PC or the LACB by 2005. However, many letters seem to be suspended by the land users and the LACB did not take any actions to such land users.

4) Long period for resettlement after compensation agreement

According to the Thach That LACB, even after agreement by land users for the offered condition of land and compensation in 2005 some land users continued to stay in their land until the time of final deadline announced by LACB (August 2007) approached. The interval between 2005 and 2007 is obviously too long.

5) Insufficient sharing of information among concerned agencies

The HHTP-MB does not have sufficient data on land acquisition and resettlement of HHTP area that LACB has. It can be said that the data on land acquisition and compensation is not shared by the key concerned agencies properly. It avoids the proper involvement of such agencies for land acquisition works and give the necessary comments.

In addition to the major factors above, a following factor can be guessed although it was impossible to compare with the standard amount in land law or ones in other projects.

6) No Vocational Trainings and Unreasonable Compensation for changing the Jobs

There has not been any vocational training for the residents or land users who have to quit the businesses such as agriculture and fish breeding in Phase-1 area. And the monetary support for them to change the jobs is only VND 10,000 a person. Obviously the amount is quite small for the big tasks for which the residents sacrifice their lives and it seems that land users feel reluctant to sell their land, quit their business and then change the jobs.

(2) Land Use

At the present, except for the area for roads, 31.5 ha of the acquired area including 11.5 ha of existing facilities have already been prepared. The present land use and land acquisition status is shown in Figure 5.5-2.

Table 5.5-2 Summary of Present Land Use

Land Use		Stage-1 (ha)	Acquired Area (ha)
1	Software Park	28	38
2	Research & Development Zone	17	17
3	High-Tech Industrial Zone	51	80
4	Education and Training Zone	0	0
5	Center of High-tech City	34	34
6	Mixed Use Zone	27	44
7	Residential Zone	0	0
8	Housing Complex	0	0
9	Reserved Area	0	0
10	Amenity Zone	0	0
11	Amusement Zone	12	17
12	Infrastructure	31	40
13	Lake and Buffer Zone	-	-
	Total	200	270

Source: JICA Study Team

5.5.2 Road Transportation Systems

(1) HHTP Relevant Road Systems

HHTP relevant road systems are as below and shown in Figure 5.5-3:

Lang-Hoa Lac Highway

The Lang-Hoa Lac Highway, the road connecting Hanoi and Hoa Lac (HHTP) will be expanded from the current 12 meters to 140 meters in width, which will consist of a three-lane expressway road and a two-lane frontage road in each direction.

This project is now under construction and will be completed by the end of 2009.

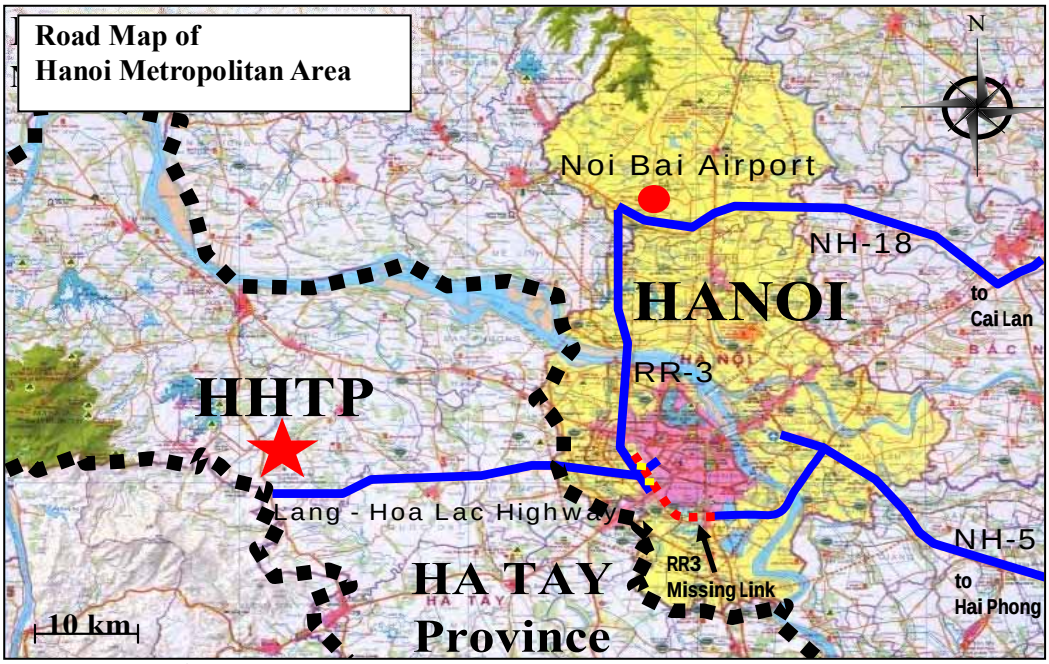
Hanoi Ring Road No. 3

Ring Road No.3 (RR-3), the road linking the Lang-Hoa Lac Highway and National Highway No.5 (NH-5), which finally connects to the main ports in northern Vietnam such as Hai Phong and Cai Lan, is under construction. However, there are still missing links not included in the current construction contract.

It is necessary to connect RR-3 to NH-5, so that HHTP could have a better access to the main ports.

(2) HHTP Internal Roads

The internal roads have been developed in parallel with land acquisition. Development status of road is shown in Figure 5.5-4.



Source: JICA Study Team

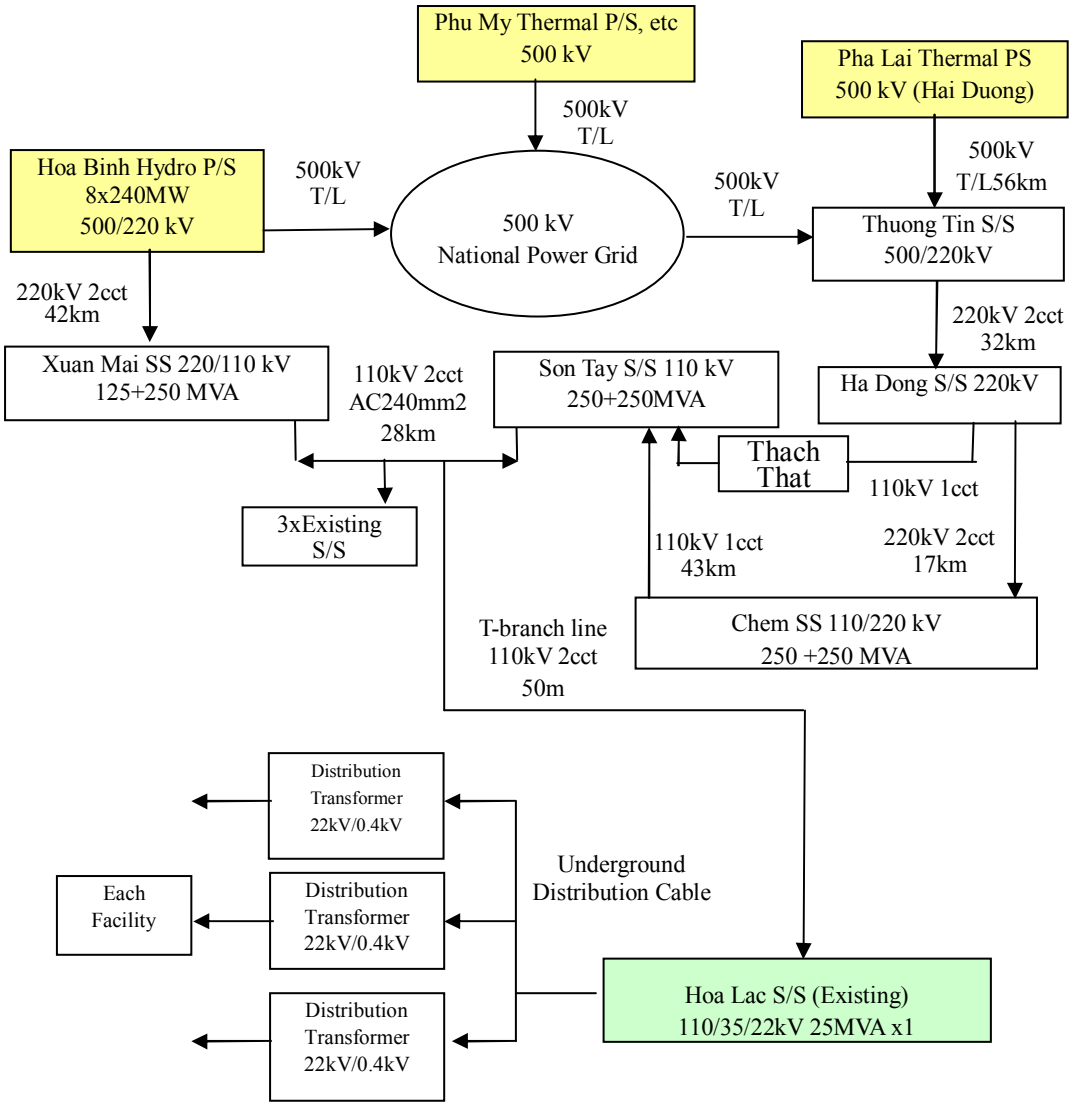
Figure 5.5-3 HHTP Relevant Road Systems

5.5.3 Power Supply System

A substation (110/35/22kV, 25MVA) has already been constructed in the HHTP compound and a power supply network to existing facilities has been developed. The current power line of 110kV only can supply 80MVA as maximum. To increase the capacity of existing substation, it is necessary to put one more line and it is necessary to power cut off during the installation works due to lack of bas bar.

The present regional power supply system including power plants is shown in Figure 5.5-5. Location of the substations, transformers and present power distribution network are shown in Figure 5.5-6.

Black out frequently occur at least once a month. Advance information some time is not properly done and put the investors/factories in to trouble.



Source: JICA Study Team

Figure 5.5-5 Regional Power Supply System

5.5.4 Water Supply System

(1) Relevant Water Supply Project

Da River Water Supply Project will supply water to the Son Tay - Hoa Lac - Xuan Mai - Mieu Mon - Hanoi - Ha Dong urban chain and areas along the Lang - Hoa Lac Highway, of which VINACONEX is the investor under the Building-Operation-Owning (BOO) scheme. From a water purification plant located in Hoa Binh, treated water will be supplied to Hanoi City by gravity flow through a pipeline installed along the Lang- Hoa Lac Highway, with a total length of about 47 km.

Most of the construction works for the 1st phase with a capacity of 300,000m^3/day have been completed, except for a 3km pipeline in front of HHTP due to land acquisition problems. However, it is scheduled to be commissioned by the end of 2007. A total of 12,000m^3/day water will be distributed to HHTP and Phu Cat Industrial Zone (PCIZ).

Subsequently, the 2nd phase works with a capacity of 600,000 m^3/day is planned to be commenced with target completion of 2010. If the water demand grows steadily, future expansion plans for up to 1,200,000 m^3/day capacity are also envisaged as a 3rd phase development.

(2) Water Supply System

Three groundwater wells (1,500m^3/day/well) have been developed inside HHTP. One of them is equipped with a purification plant and distributes water to existing facilities except for the Start-Up Center which has its own well. The pipeline has been installed along the internal road network. Since the present water demand in HHTP is small, HHTP is supplying water to PCIZ. The present water supply system is shown in Figure 5.5-7.

5.5.5 Telecommunication System

Vietnam has two international telecommunications lines, which are TVH (since 1996; station at Vung Tau; Q=1.12Gbps) and SMW-3 (since 1999; station at Danang; Q=40Gbps). This limited number of international telecommunication lines causes lower communication speed of Internet in Vietnam at present and reinforcement of international telecommunication system is essential to satisfy high-tech industries.

Overhead optical fiber cable with physical maximum communication speed of 2.5 Gbps has been installed between Hanoi and the HHTP Start-Up Center. However the maximum speed of current communication services in Hanoi and surrounding area is only up to 2 Mbps as maximum, and it is generally very slow during the day time causing data transmission errors frequently occur in transmission of files over 10MB.

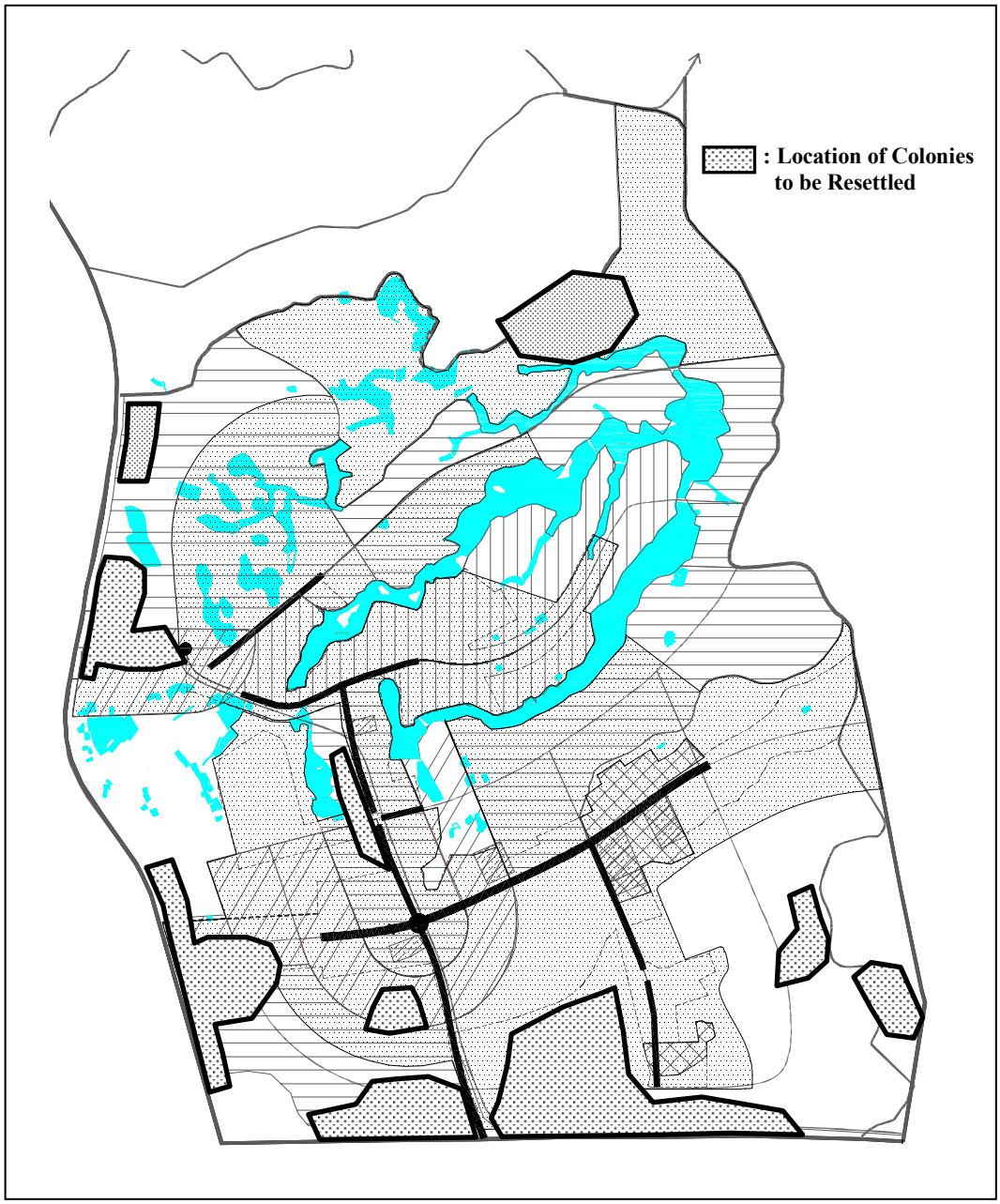
Both the overhead optical fiber cable and the copper cable are temporary facilities. Present status of the telecommunications system is shown in Figure 5.5-8.

5.5.6 Sewerage System

Sewer and drainage systems have been installed along the internal road network and a water treatment plant is under construction. Location of the sewage treatment plant (6,000 m^3/day) and present development status of the sewer pipe are shown in Figure 5.5-9. Three sewage pump stations are planned and two of them have been partly constructed. Treated effluent from the plant will be discharged into the Tich River.

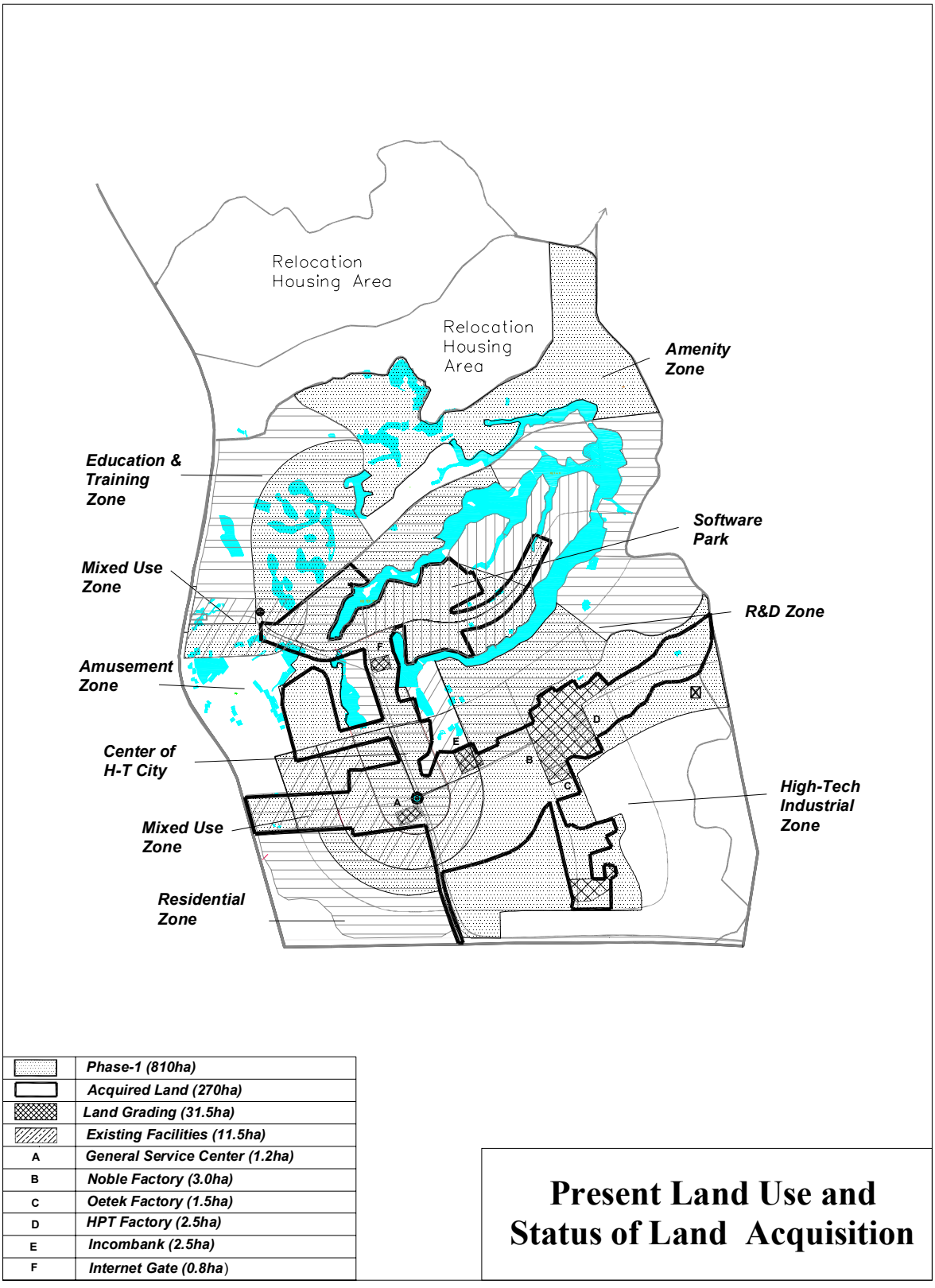
5.5.7 Drainage System

The present drainage system is shown in Figure 5.5-10. The storm water will be discharged into the lakes and ponds inside HHTP.



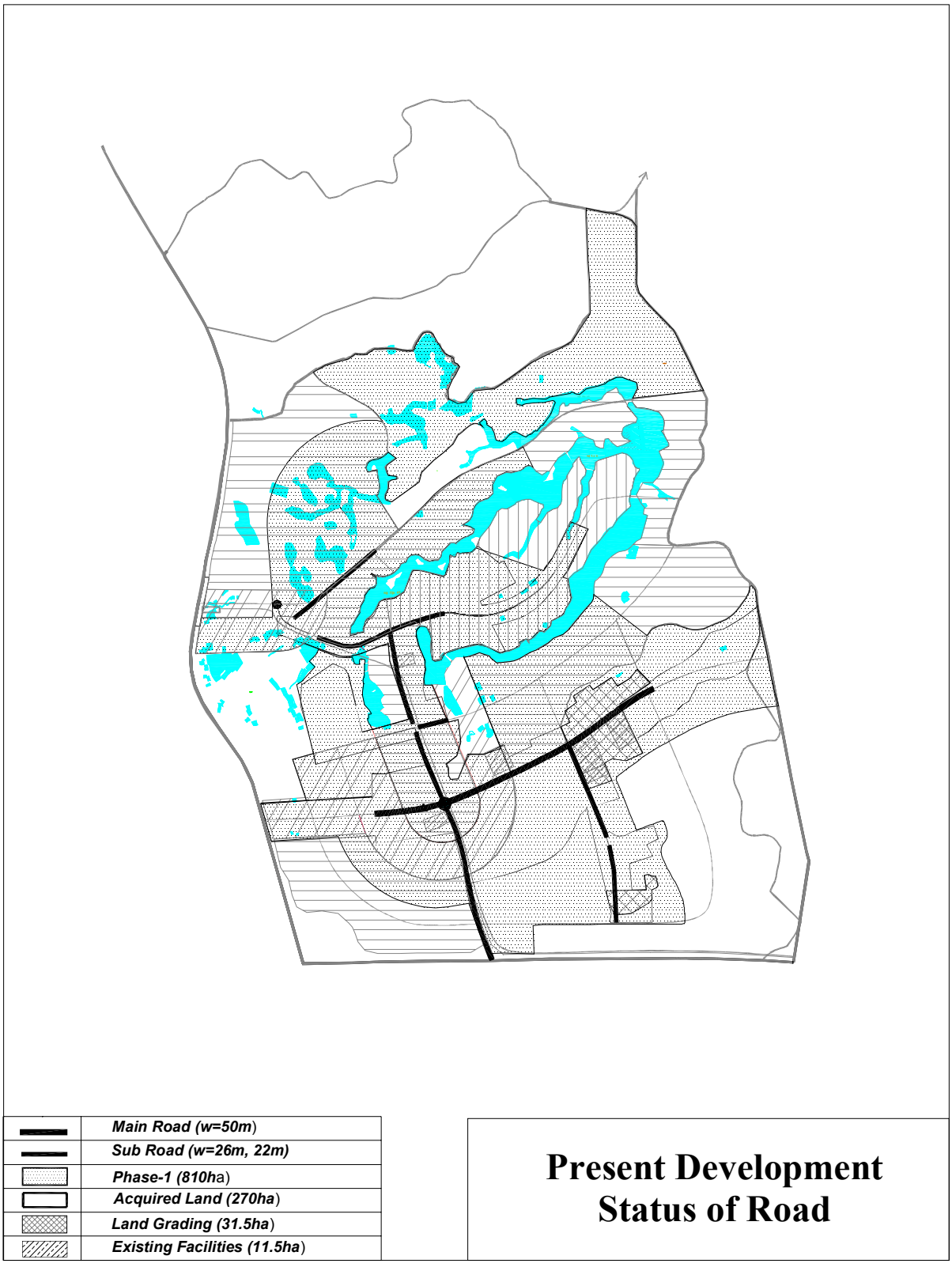
Source: JICA Study Team

Figure 5.5-1 Location of Colonies to Be Resettled



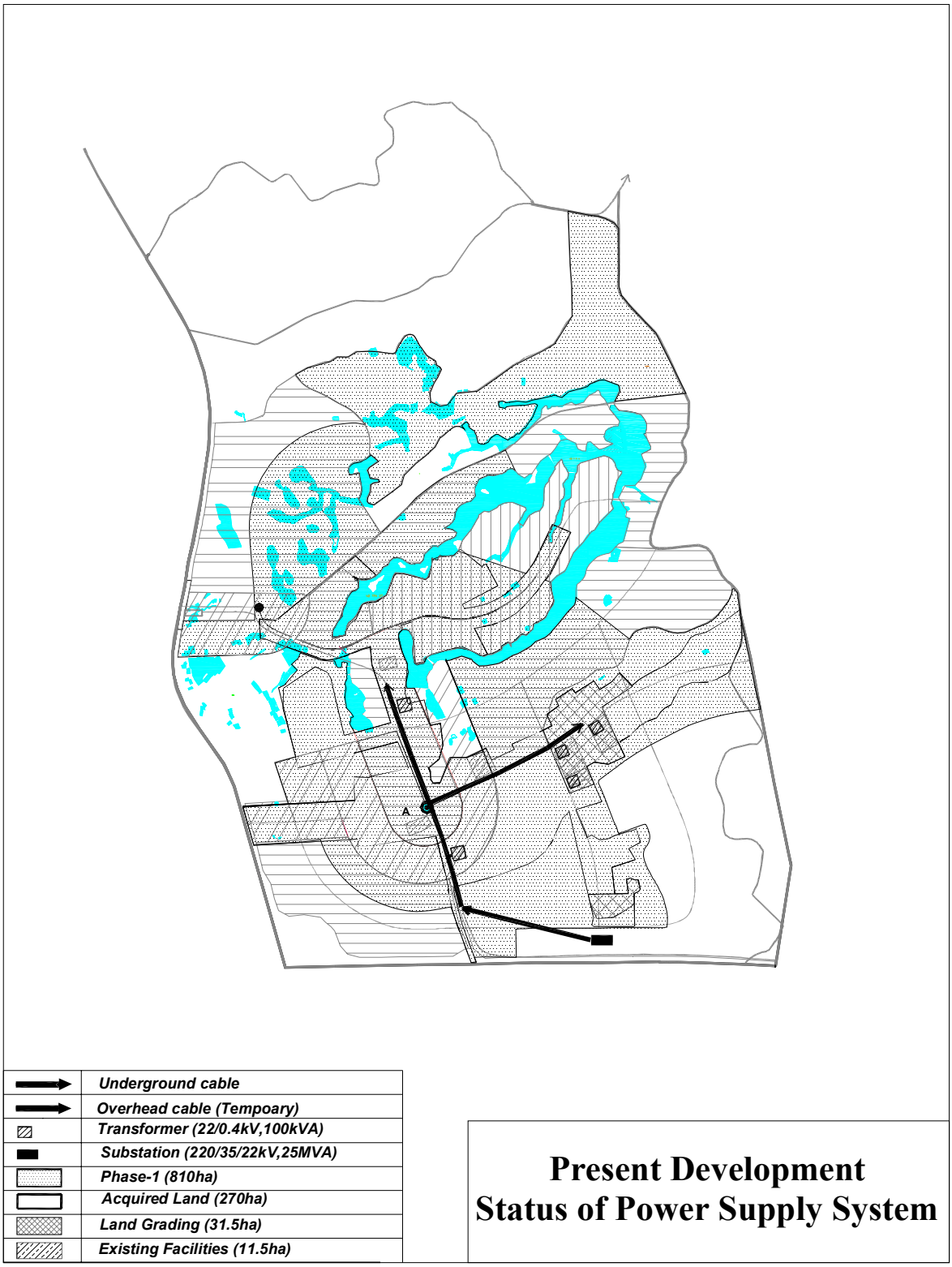
Source: JICA Study Team

Figure 5.5-2 Present Land Use and Status of Land Acquisition



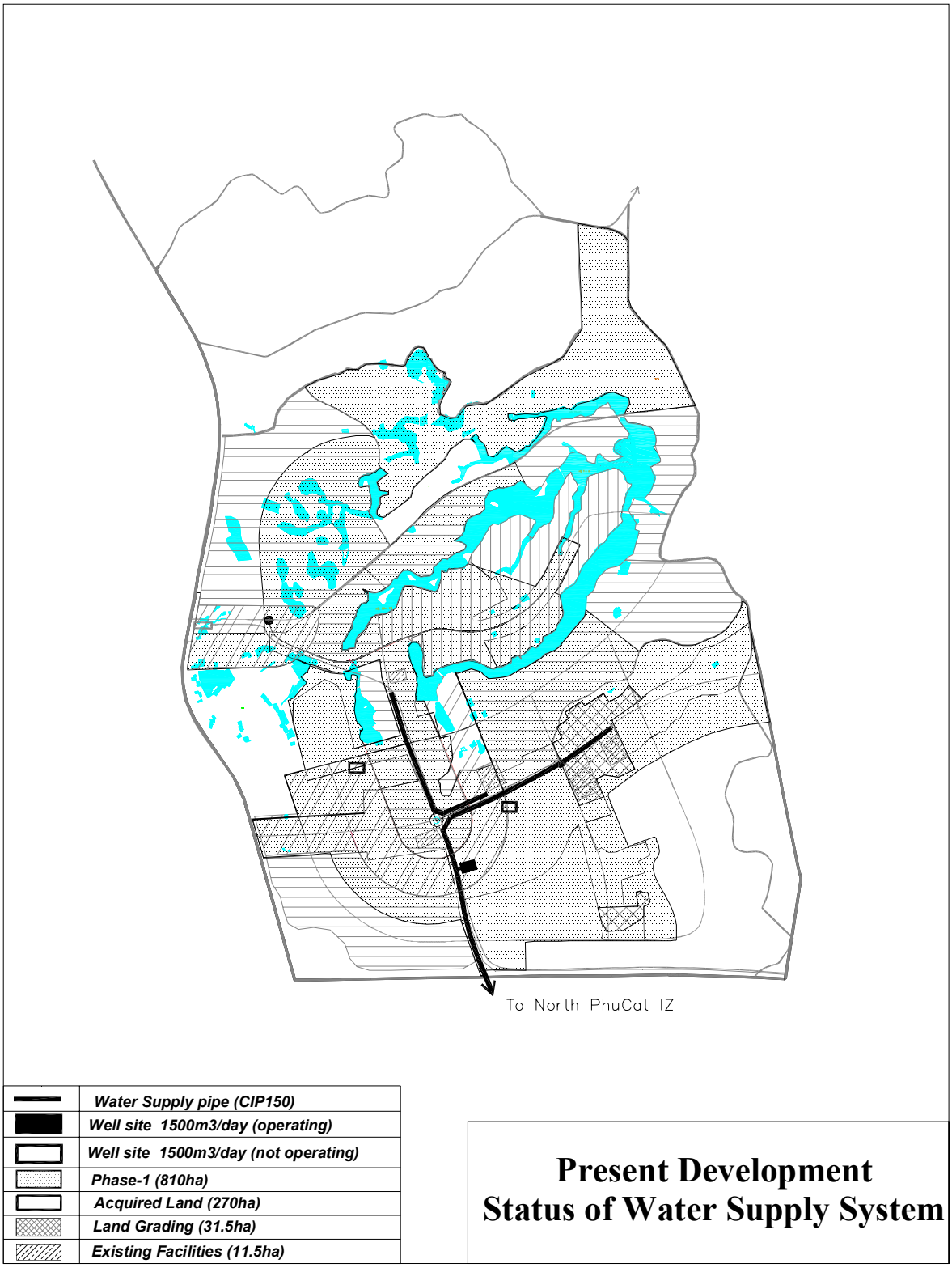
Source: JICA Study Team

Figure 5.5-4 Present Development Status of the Roads



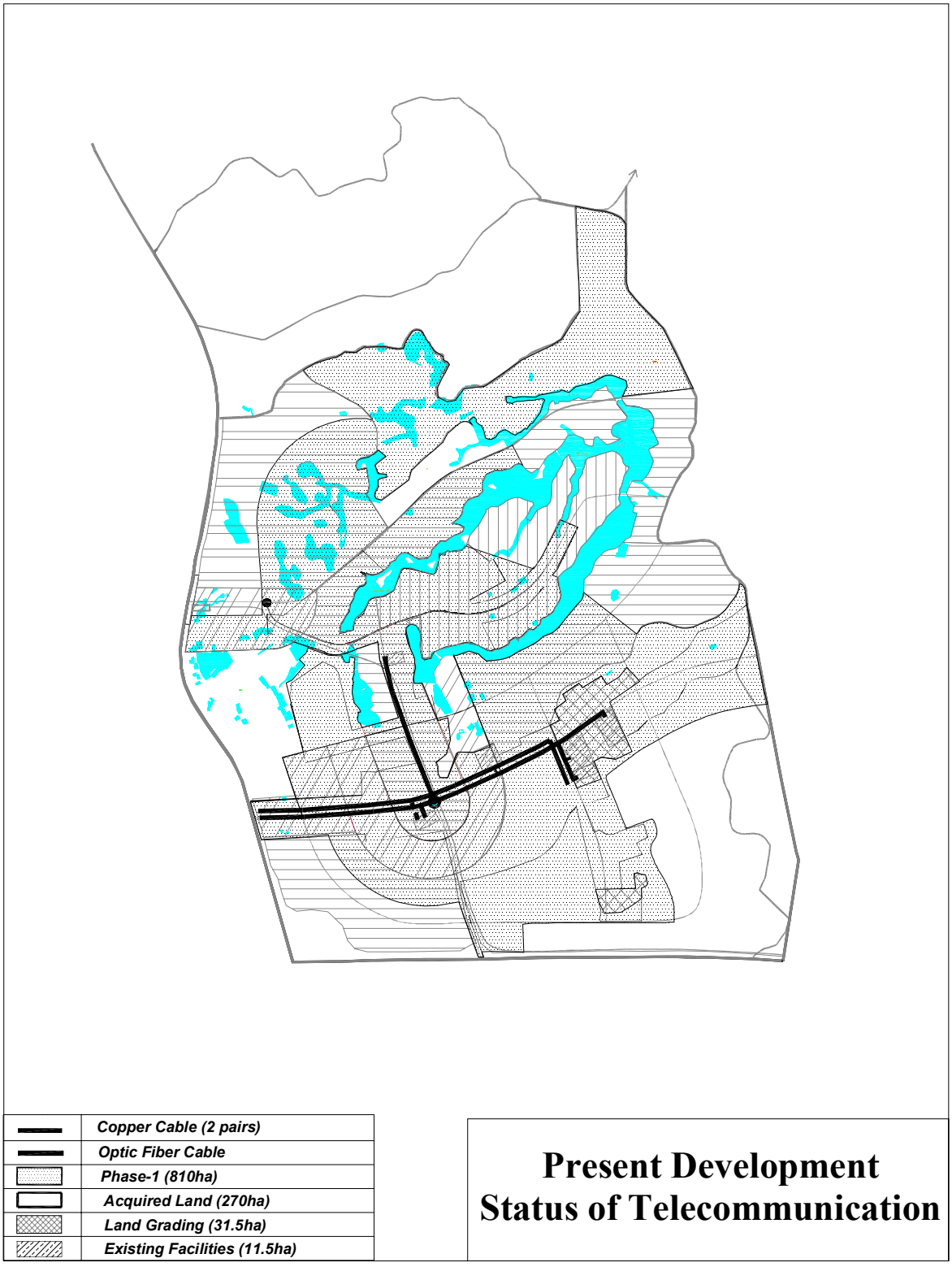
Source: JICA Study Team

Figure 5.5-6 Present Development Status of the Power Supply System



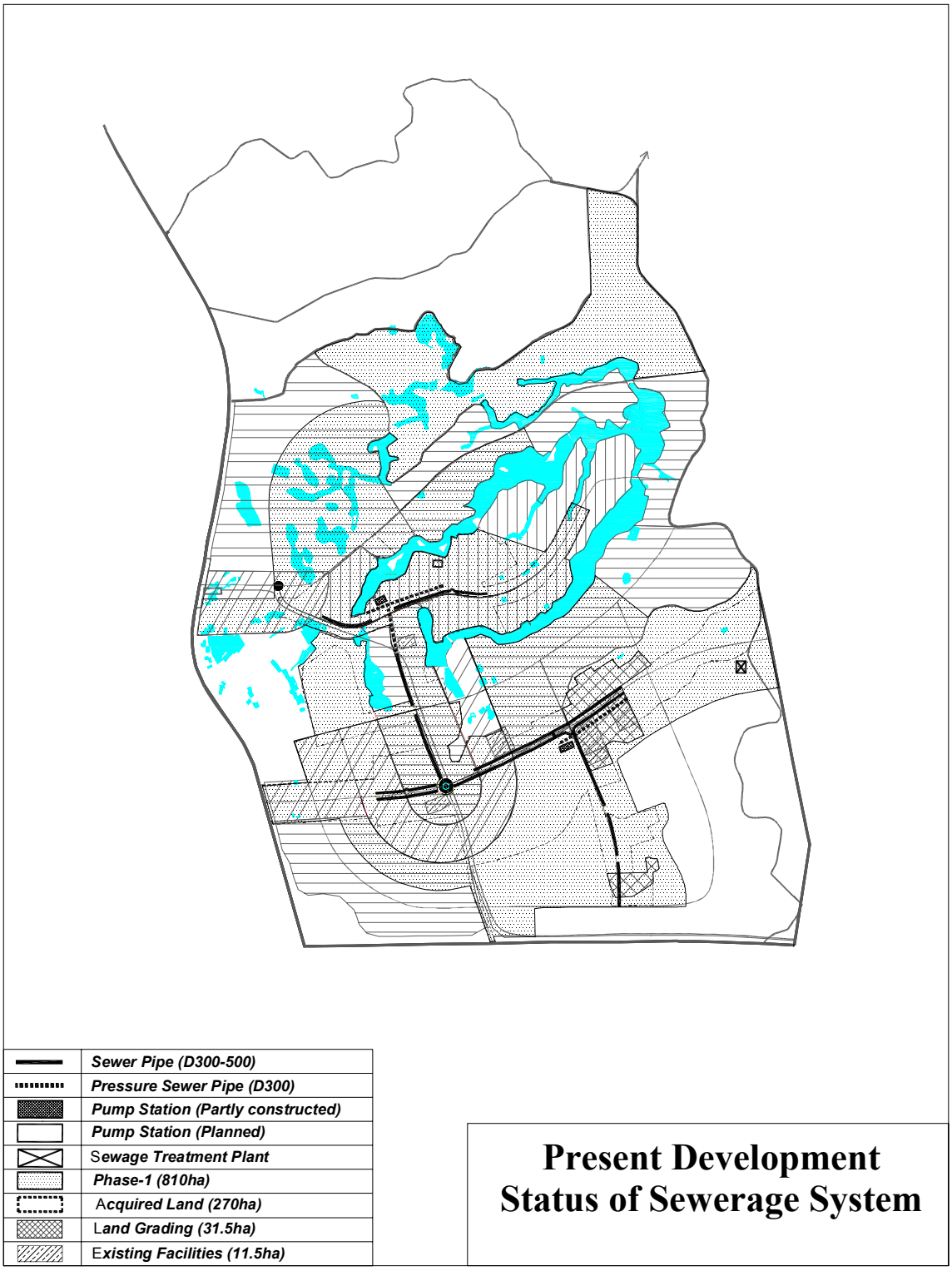
Source: JICA Study Team

Figure 5.5-7 Present Development Status of the Water Supply System



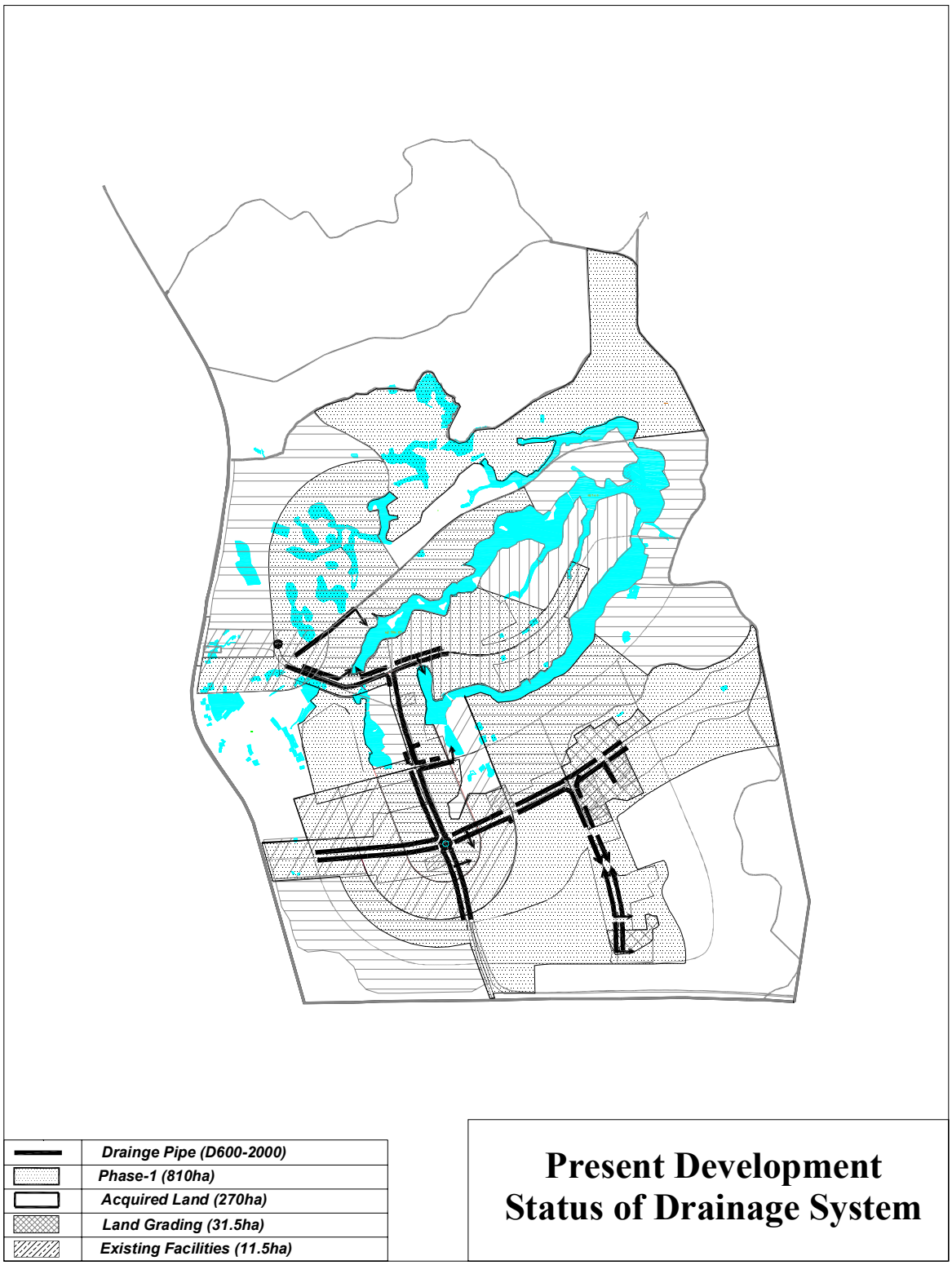
Source: JICA Study Team

Figure 5.5-8 Present Development Status of the Telecommunication System



Source: JICA Study Team

Figure 5.5-9 Present Development Status of the Sewerage System



Source: JICA Study Team

Figure 5.5-10 Present Development Status of the Drainage System

5.6 General Technical Sector Issues

In view of the investigation and collected technical documents, the following issues on infrastructure development status have been identified.

1) Absence of as-built drawings and detail design reports

Actual status of existing infrastructure cannot be identified in detail because as-built drawings of completed infrastructure are not available. Moreover, some of technical design reports are also not available in HHTP-MB. It is anticipated that the absence of these documents will bring difficulties in proceeding with design work for the remaining infrastructure for all of HHTP without conducting detailed investigations of the actual status of the infrastructure.

2) Treatment of existing facilities

Existing facilities such as water supply, sewerage and drainage were designed only for 200 ha of stage-1, which means their capacities area not sufficient as systems for whole HHTP area. Their capacity should be verified and considered whether they are available into the future. However, if necessary, water supply pipeline, sewer pipe and drainage pipe including their accessories will be removed.

3) Existence of Suspended Construction

There is a construction work which is observed to be suspended. The construction of public utility conduits has been suspended because existing drainage interferes with the construction of the conduit. It is necessary to confirm the cause of this situation and to identify countermeasures.

4) Inadequacy of Maintenance of Existing Infrastructure

Maintenance of existing infrastructure such as roads, sewerage and drainage systems is not being conducted adequately. For example, there are some sewerage/drainage maintenance hatches and curbs that are partially broken. And the road surface is not clean due to soil runoff from undeveloped land. In this condition, potential investors would not be attracted to HHTP and the currently invested enterprises would not be satisfied.

5.7 Progress of Surrounding Development

5.7.1 Relocation of Vietnam National University in Hanoi

The Vietnam National University in Hanoi (VNUH) has a plan to relocate its campuses to Hoa Lac. It is located west of HHTP across national road No 21, with a total development area of 1,000 ha.

The master plan for the development of VNUH was approved by the Government in Decision No 702/QD-TTg dated August 23rd, 2002 and its ground breaking ceremony was held in December 2003. A start-up center has already been established on the site for the construction work. The implementation of this project has been disturbed by land acquisition and delayed contractual arrangement for design work.

The present milestones for the relocation of the colleges from Hanoi are reported as follows;

1st phase (by 2010)	College of Natural Science, College of Technology, College of Economics, International School
2nd phase (2012-2015)	College of Social Science, College of Law, College of Education, College of Foreign Language

Among them, 130ha of the land will be allocated to the campus of the College of Technology. About 6,000 students will start studying in the new campus from 2010. The present campus in Hanoi will be closed and handed over to Hanoi city after relocation of the campus. The College of Technology has faculties such as information technology, electronics, nano-technology, robotronics, and mechatronics.

In view of the present progress of the site works, the achievement of above target years seems to be a big challenge; however, this project is certainly stepping forward. Since synergetic effects between HHTP and VNUH are remarkable for both projects to enhance linkage among the academy, R&D and high-Tech industries, it is highly anticipated that development of VNUH will keep pace with development of HHTP.

5.7.2 Phu Cat Industrial Zone Development

The North Phu Cat Industrial Zone, with total development area of 1,507 ha (1st phase: 307 ha, 2nd phase: 1,207 ha) is located south of HHTP across the Lang- Hoa Lac highway. It is expected that supporting industries for HHTP High-Tech industries would be located in this Industrial Zone.

The government approval of the investment for this project was promulgated with Decision 996/QD-TTg on October 31 2002. Viet Nam Construction and Import-Export Corporation (VINACONEX) is a developer of the project.

At present, about 250ha of the land for the 1st phase has been developed and 2 factories (brick manufacturer and glass fiber reinforced pipe manufacturer) are operating and about 10 enterprises are under the process of investment application according to VINACONEX.

The land use plan for the 1st phase development is as below;

Table 5.7-1 Land Use Plan for 1st Phase Development of Phu Cat Industrial Zone

Land Use	Area (ha)	%
Industrial zone & warehouse area	201.4	65.7
Administration area	13.5	4.4
Technical & service area	6.3	2.0
Green area & water surface	38.3	12.5
Green area for electricity isolation	1.7	0.5
Internal roads	45.6	14.9
Total	306.8	100.0

Source: VINACONEX

5.7.3 An Khanh Urban Development Project

This is an urban city project developed along the Lang-Hoa Lac Highway in Ha Tay province. This project has two development blocks in north and south of the highways comprising 6 functional areas, i.e. high residential buildings, villas and plot houses, office for rent, commercial centers and super markets. The east boundary of each blocks is 6.3 km point from a junction of Lang-Hoa Lac Highway and Ring Road No.3. The general features of each block are as follows;

Block	Developer	Area (ha)	Population
North	JV of VINACONEX and POSCO (Korea)	264	35,000
South	Sonda Construction Company	336	25,000
Total		600	60,000

Source : VINACONEX

The two-thirds of north block land has been already acquired and the project is scheduled to be completed in 2020.

5.7.4 Industrial Estate Projects in the vicinity of Hanoi

There are about 20 major industrial estates available in the vicinity of Hanoi with total land area of some 3,200 ha as shown below;

Table 5.7-2 Major Industrial Estate in the Vicinity of Hanoi

No.	Name of IZ	Province	Developer	Area (ha)
1	Bac Thang Long IZ	Hanoi	Japan-VN	195
2	Daewoo-Hanel (SDA) IZ	Hanoi	Korea-VN	197
3	Dai Tu IZ	Hanoi	Vietnam	40
4	Noi Bai IZ	Hanoi	Malaysia+VN	100
5	Sai Dong B IZ	Hanoi	Vietnam	78
6	Kim Hoa IZ	Vinh Phuc	Vietnam	50
7	Quang Minh IZ	Vinh Phuc	Vietnam	344
8	Binh Xuyen IZ	Vinh Phuc	Vietnam	271
9	Khai Quang IZ	Vinh Phuc	Vietnam	262
10	Que Vo IZ	Bac Ninh	Vietnam	218
11	Tien Song IZ	Bac Ninh	Vietnam	134
12	Dai Dong-Foan Son IZ	Bac Ninh	Vietnam	230
13	Quang Chau IZ	Bac Gian	Vietnam	98
14	Bac Phu Cat IZ	Ha Tay	Vietnam	327
15	Dai An IZ	Hai Duong	Vietnam	171
16	Nam Sach IZ	Hai Duong	Vietnam	64
17	Phuc Dien IZ	Hai Duong	Vietnam	87
18	Dinh Vu IZ	Hai Phong	Vietnam	130
19	Hai Phong 96 EPZ	Hai Phong	Vietnam	150
20	Nomura Hai Phong IZ	Hai Phong	Japan-VN	153
	Total			3,269

Source: Investment Climate in Vietnam published by JBIC (2006)
ASEAN-Japan Center WEB site

The development of industrial estates is very active after 1998 in line with increasing FDI into Northern Vietnam and current trend of industrialization of the country. Several new industrial estates are planned to be developed in near future other than those listed above. The average land area is 160 ha for the above 20 industrial estates.

The intensive sales promotion effort will be required to fill up the 340 ha of High-Tech industrial zone of HHTP with tenants in view of rapid growth of establishment of industrial estates in Northern Vietnam.