

5.15 Ngoc Hoi (V16) Station Area

5.15.1 Development Character

1) Existing Condition and Issues

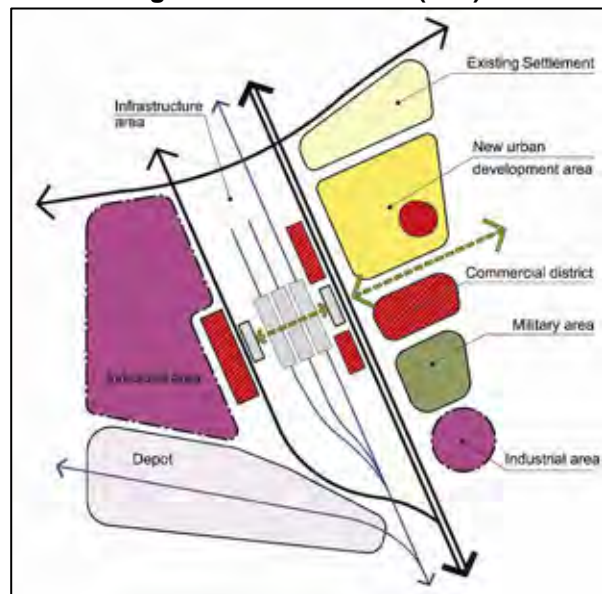
5180 Ngoc Hoi Station will be located app. 750m-west from NH-1, nearby Ngoc Hoi Industrial Park. Surrounding area is an agricultural land at present, and small rural villages are scattered. Along NH-1, there are few urban facilities. On south-east side of the station location, army's barrack is located.

5181 This station is a southernmost arrival station of UMRT Line1. It will be an interchange station with National Railway. In future, high-speed railway station and its marshaling yard and deport will be developed in west side of UMRT station.

2) Development Objectives

5182 As a new center of south of Hanoi City, Ngoc Hoi Station area will be urbanized in combination with industrial, commercial and residential functions. Residents and workers from suburban areas will enjoy working and living in a same district.

Figure 5.15.1 Conceptual Diagram for Ngoc Hoi Station Area (V16)



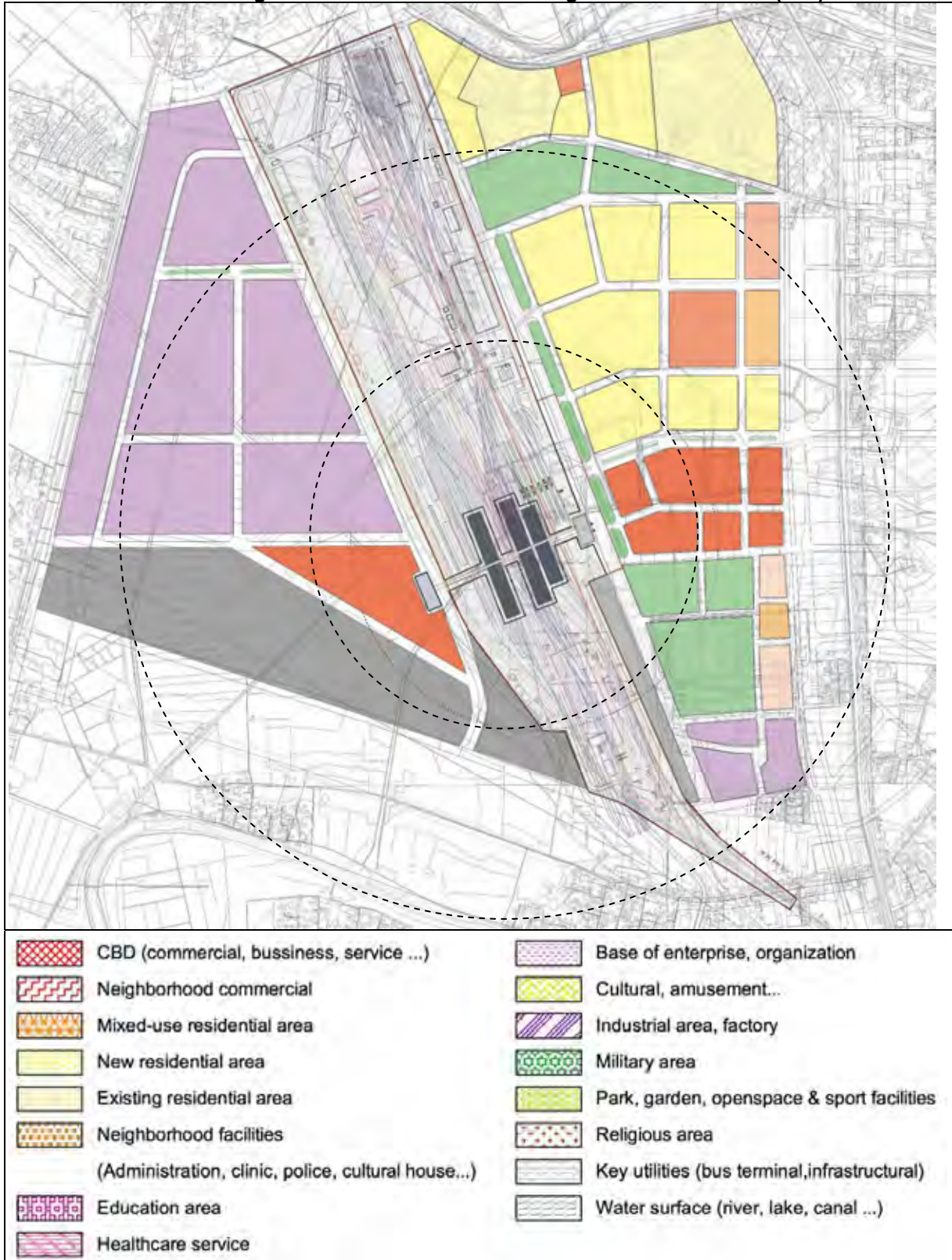
Source: JICA Project Team

Table 5.15.1 Demand Outlook for Ngoc Hoi Station Area (V16)

		Present	UMRT with integrated Urban Development	
			Without	With
Population of Station Area of radius 500m (persons)	Population	176	2,200	4,500
	Employment	538	2,700	5,900
	Student	308	588	1,200
Ridership (persons/day)		-	29,600	34,200

Source: JICA Project Team

Figure 5.15.2 Landuse Plan of Ngoc Hoi Station Area (V16)



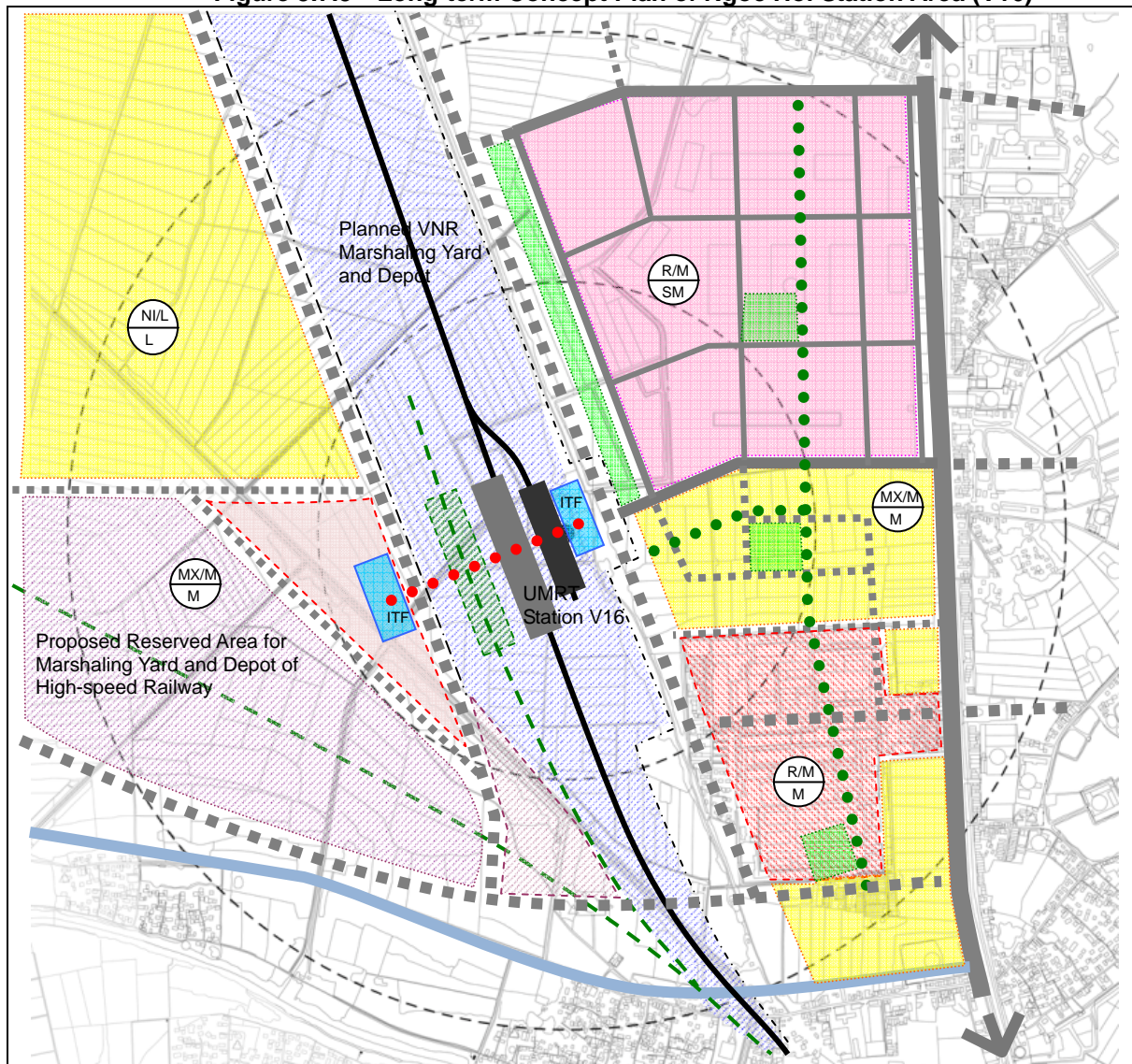
Source: JICA Project Team

5.15.2 Long-Term Plan

5183 As an eastern gate town of Ngoc Hoi Station, Ngoc Hoi Industrial Zone will be developed with environmental friendly industrial area and residential area. Industrial landuse of this area at present is proposed to convert to mixed residential area for employees of this station area.

5184 VNR marshaling yard and depot is planned along railway. Since high-speed railway station will be developed in future, it is proposed to reserve area for marshaling yard and depot of high-speed highway in western side of station. The land between these marshaling yards and depots, industrial area for logistic service will be developed to support railway-related activities around there. In front of the station, commercial and business facilities will be developed for employees of this area.

Figure 5.7.3 Long-term Concept Plan of Ngoc Hoi Station Area (V16)



Source: JICA Project Team

5.15.3 Short-Term Projects and Actions

5185 In short-term, only eastern side of station between railway and NH-1 will be developed. The main access road from NH-1 to the station is existed as a part of industrial zone, so eastern intermodal facility will be developed for station users. Since many railway users including UMRT and National Railway is expected as a arrival station of south of the city, it is necessary to develop an integrated intermodal facility such as bus stops, taxi pools, P&R spaces, two-wheel vehicle parking spaces.

Table 5.15.2 Project List of Ngoc Hoi Station Area (V16)

Project			Scale		Construction Cost (000US\$)		Implementation Body	Financial Resource
A Minimum development till opening	SF-IM-1*	East Intermodal Facility	14,000	m2	756	1,421	VNR/HPC ¹⁾	VNR/HPC ¹⁾
	SF-BS-1	Bus Stop	1	No	5		TRAMOC	HPC
	RD-NR-1*	Development of New Road	300	m	660		HDOT	HPC
	UR-1*	Development of VNR railway yard (planned) ²⁾	-	-	-		VNR	VNR
B Short-term (opening~3years)	RD-SW-1	Improvement of Sidewalks	1,000	m	270	270	HDOT	HPC
C Medium-term (3~5years)	UR-2	Development of residential and light-industry mixed use area on east of station ³⁾					Private	Private
	UR-3	Development of industrial zone on west of station ²⁾					Private	Private

Source: JICA Project Team

Minimum projects with * are prioritized to develop together with station facilities, since land acquisition is not so difficult.

1) It has not been discussed and agreed between VNR and HPC which will be an implementation body and a financial resource for ITF development. JICA Project Team recommends VNR will develop ITF as a station related facility development.

2) It is planned by VNR. It is necessary to adjust District Plan to develop VNR railway yard for operation and related industrial zone to support railway related activities.

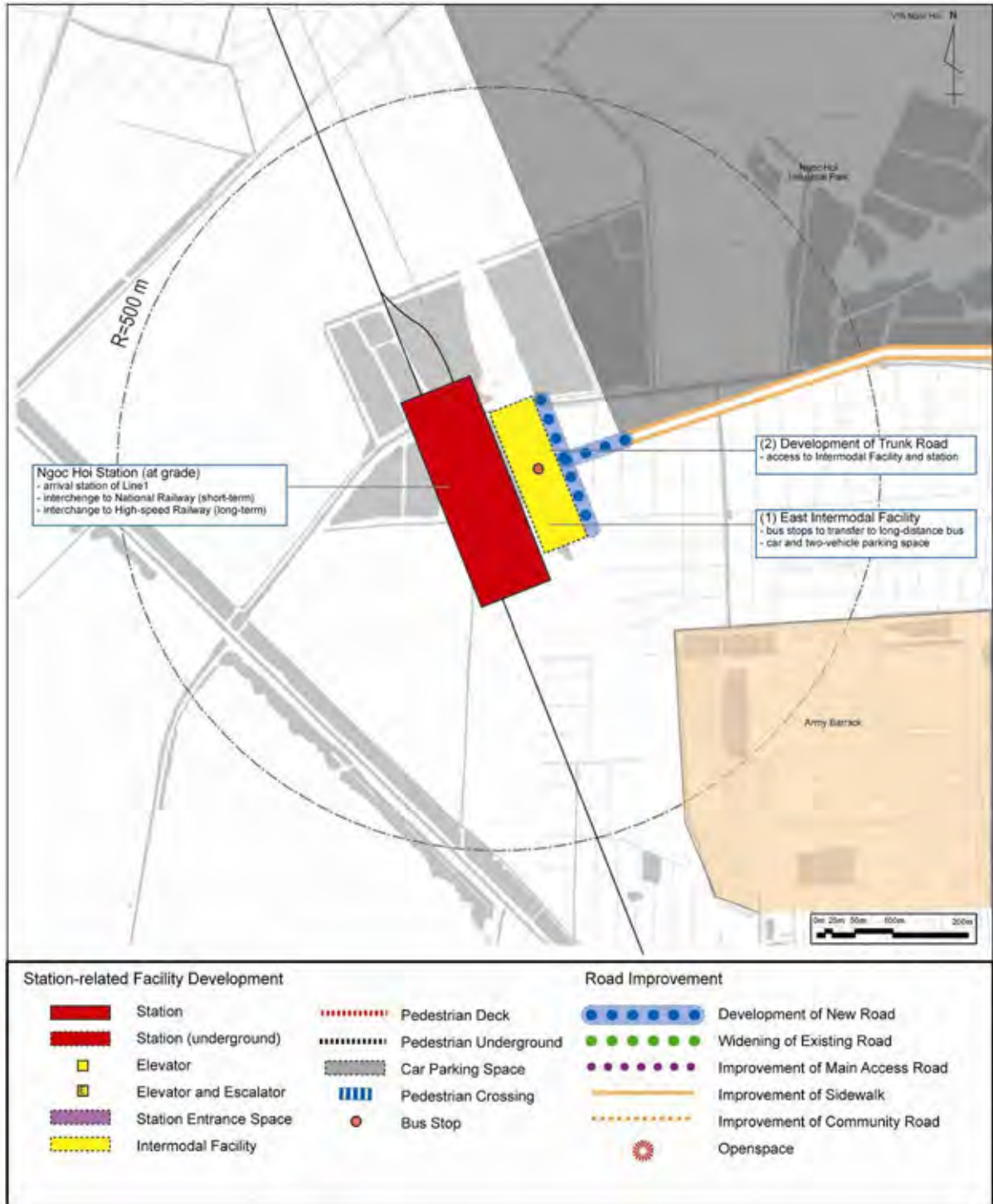
3) It is necessary to coordinate with HAUPA to adjust District Plan to convert landuse of Ngoc Hoi Industrial Zone from industry to mixed use.

5.15.4 Issues to be Clarified

5186 Reservation land for VNR-related facilities (minimum& short-term): In east side of the station, it is necessary to define necessary land for VNR for operation and maintenance of railways. In addition, landuse of remained area need to be clarified if it is utilized for logistic purpose.

5187 Conversion of landuse of industrial zone (short& mid-term): To develop the land of industrial zone as a mixed residential area with small industries, it is necessary to convert landuse.

Figure 5.15.4 Short-term Concept Plan of Ngoc Hoi Station Area (V16)



Source: JICA Project Team

5.16 Nam Thang Long (C1) Station Area

5.16.1 Development Character

1) Existing Condition and Issues

5188 Nam Thang Long Station is the end-point of Phase 1 of Line 2, and the northernmost station crossing over the Red River from Dong Anh District. There are several new town development projects such as CIPUTRA, Xuan La, Ngoai Giao Doan, etc. There are several urban facilities such as schools, hospitals, People’s Committee of Xuan Dinh, and more facilities including commercial and business will be developed for new residents of new towns.

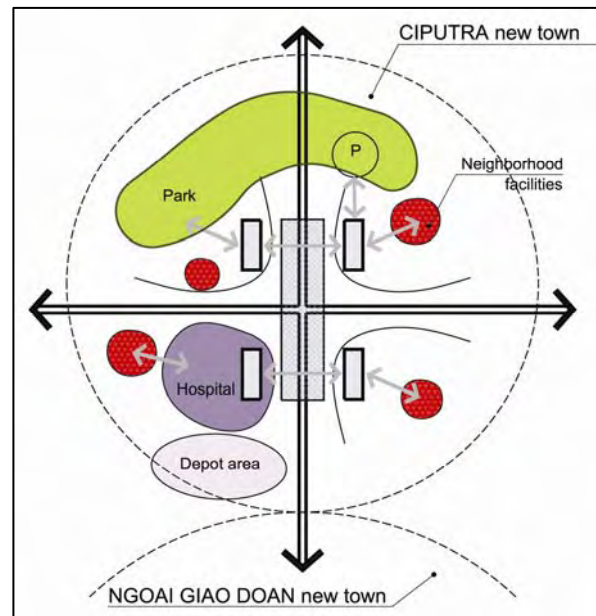
5189 Though there are suburban settlements clustered on the south side of the station area at present, after new town development of CIPUTRA, future population will be increased, commercial and business facilities and road network will be developed.

2) Development Objectives

5190 Nam Thang Long station area development will be integrated with CIPUTRA new town development, and will provide modern urban services for new town residents.

5191 There are existing residential areas which will not be integrated with new town projects of CIPUTRA and Ngoai Giao Doan, so it is necessary to improve accessibility to station and living condition in future.

Figure 5.16.1 Conceptual Diagram of Nam Thang Long Station Area (C1)



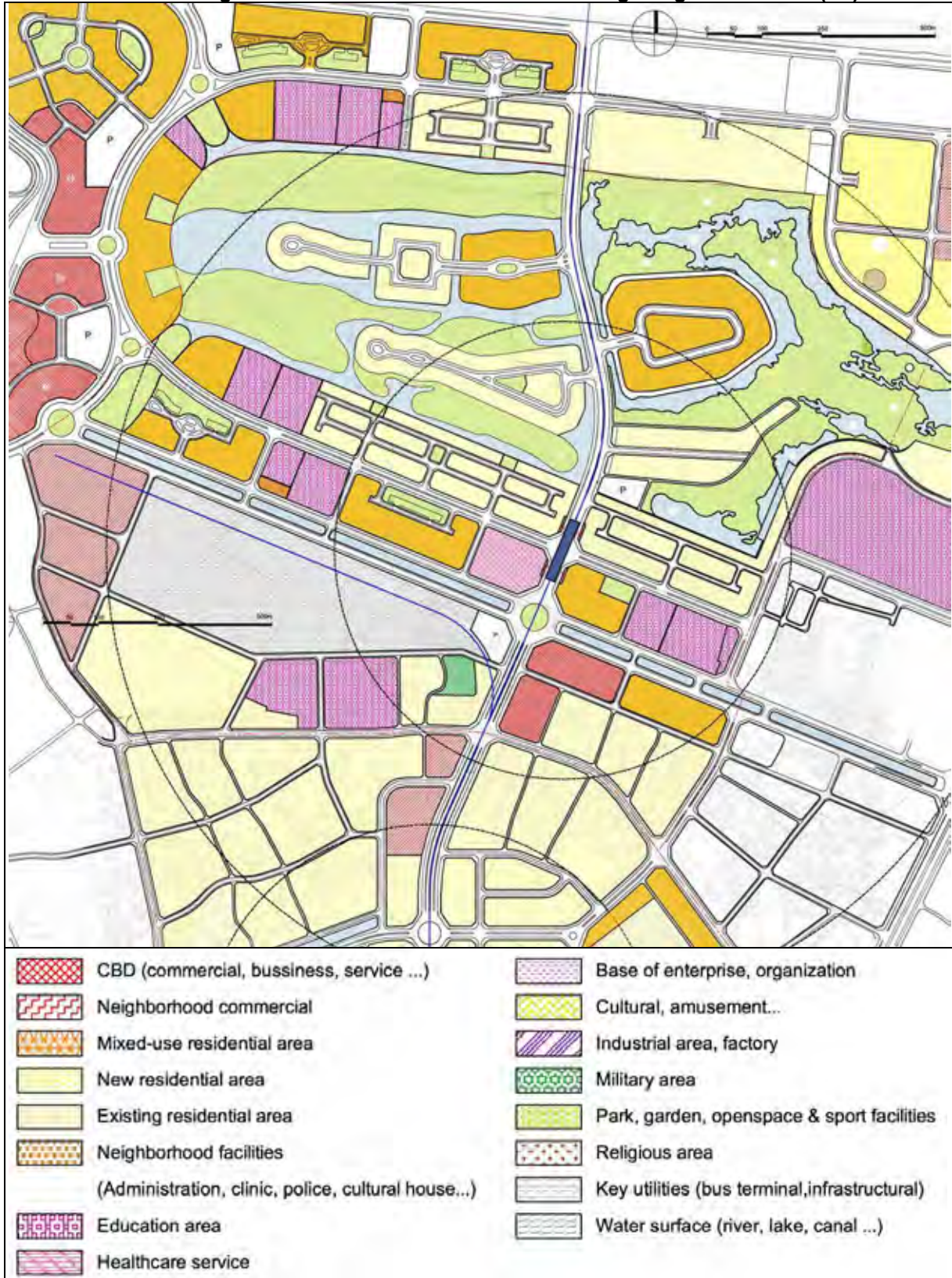
Source: JICA Project Team

Table 5.16.2 Demand Outlook for Nam Thang Long Station Area (C1)

		Present	UMRT with integrated Urban Development	
			Without	With
Population of Station Area of radius 500m (persons)	Population	1,998	5,100	5,100
	Employment	1,263	1,300	1,300
	Student	830	1,000	1,000
Ridership (persons/day)		-	39,480	83,790

Source: JICA Project Team

Figure 5.16.2 Landuse Plan of Nam Thang Long Station Area (C1)

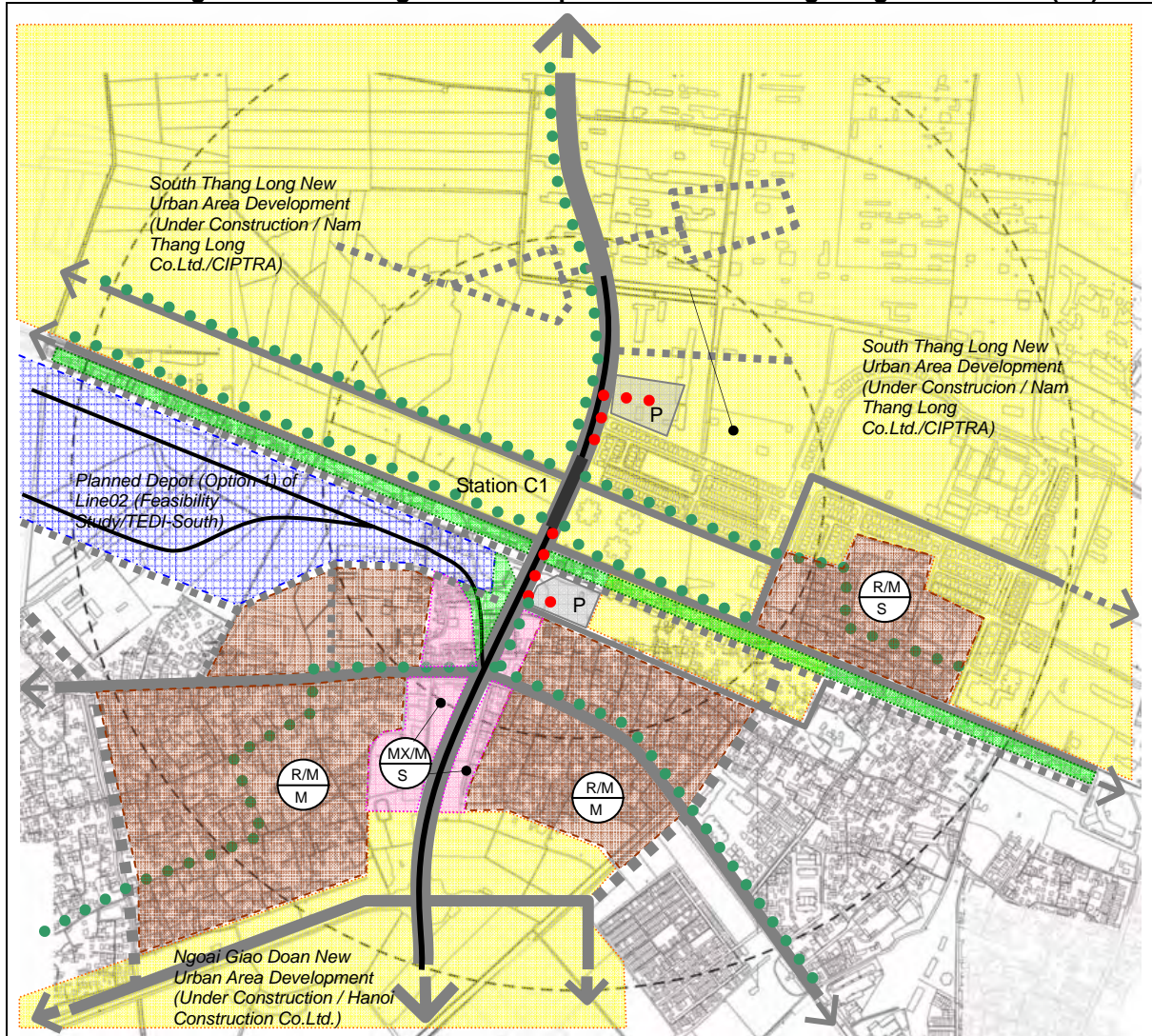


Source: JICA Project Team

5.16.2 Long-Term Plan

5192 After completion of new urban area development of CIPTRA and Ngoai Giao Doan, many residents will use UMRT. This station will be not only a transport center but also a commercial and business center for these users as well as residents. UMRT station and railway will be a landmark harmonized with a modern townscape of new towns.

Figure 5.16.3 Long-term Concept Plan of Nam Thang Long Station Area (C1)



Source: JICA Project Team

5.16.3 Short-Term Projects and Actions

5193 There are limited spaces around the station, so it is difficult to develop a parking space nearby the station. Parking spaces near the station for residents of new town should be developed. To cross over a trunk road (Nguyen Hoang Ton Street), it is proposed develop a skywalk under a viaduct, which will connect to proposed south intermodal facility.

5194 In south of station, villages are existed at present. To improve accessibility, Xuan Dinh Street will be widened and improved.

Table 5.16.2 Project List of Nam Thang Long Station Area (C1)

Project			Scale		Construction Cost (000US\$)	Implementation Body	Financial Resource	
A Minimum development till opening	SF-IM-1	North Intermodal Facility	3,450	m2	186	5,052	HPC	HPC
	SF-IM-2	South Intermodal Facility	1,400	m2	76		HPC	HPC
	SF-PD-1*	Pedestrian deck to connect to south intermodal facility	1,500	m2	3,900		HRB/HPC ¹⁾	HPC ¹⁾
	SF-EV-1*	Elevator	4	No.	400		HRB	HPC
	SF-ES-1*	Escalator	1	No.	300		HRB	HPC
	SF-BS-1	Bus Stop	5	No.	25		TRAMOC	HPC
	RD-MA-1	Improvement of Main Access Road	150	m	165		HDOT	HPC
B Short-term (opening ~3years)	RD-NR-1	Development of New Road	340	m	748	2,134	HDOT	HPC
	RD-WR-1	Widening of Existing Road	900	m	630		HDOT	HPC
	RD-SW-1	Improvement of Sidewalk	2,800	m	756		HDOT	HPC
	UR-1	CIPUTRA New Town development (ongoing) ²⁾	-	-	-		Private	Private
C Medium-term (3~5years)	UR-2	Ngoai Giao Doan new urban area development (planned) ³⁾	-	-	-	-	Private	Private

Source: JICA Project Team

Minimum projects with * are prioritized to develop together with station facilities, since land acquisition is not so difficult.

1) JICA Project Team recommends HRB or HPC will develop station related facilities together with UMRT station development.

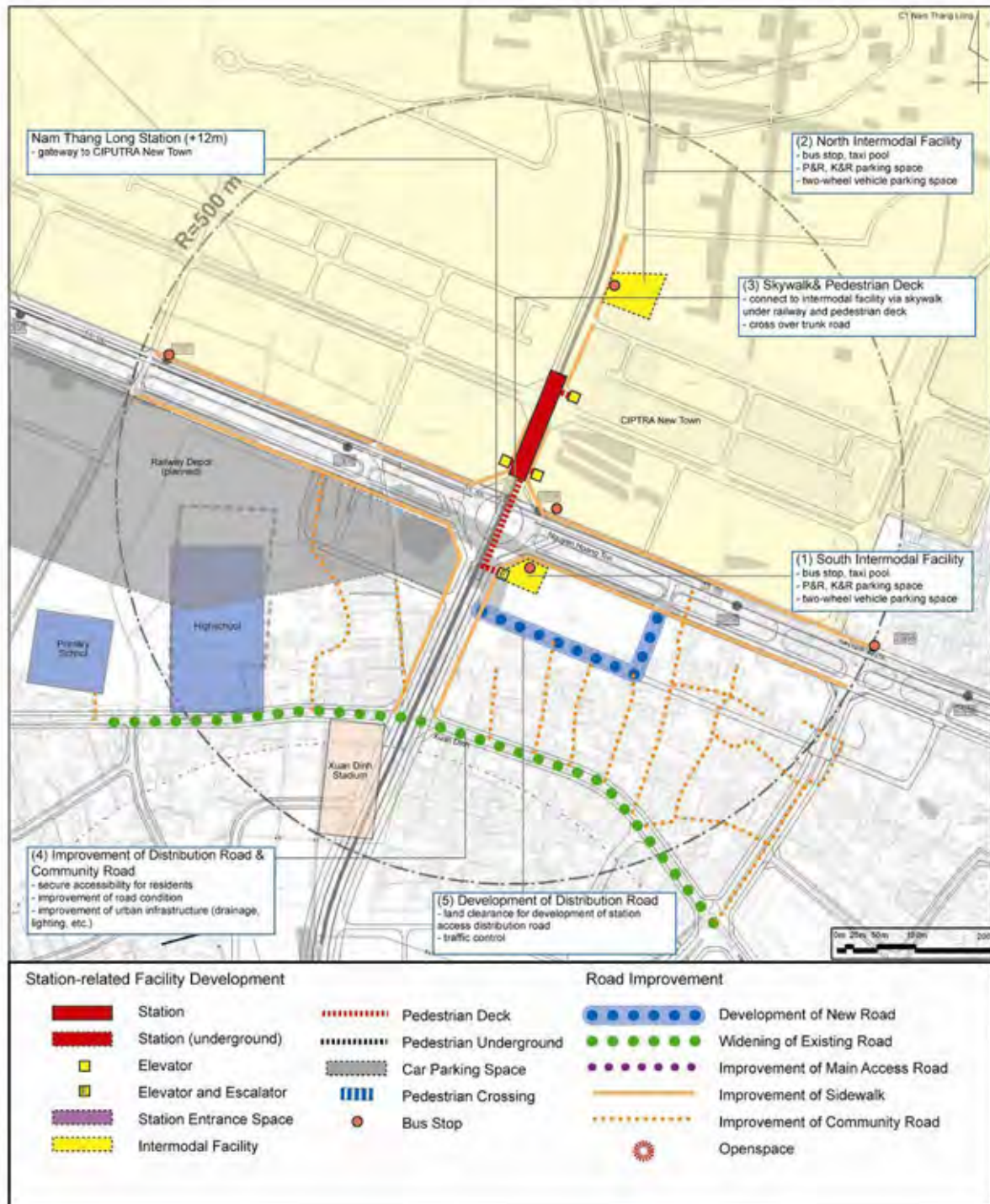
2) CIPUTRA New Town is under construction (300ha, 50,000population).

3) Ngoai Giao Doan new urban area is planned to be a diplomatic town with residential area.

5.16.4 Issues to be Clarified

5195 Coordination with CIPTRA New Town Project (short-term): Though basic road network and landuse have already designated, it is recommended to coordinate with CIPTRA project to maximize utilization of UMRT station and railway as well as socio-economic development around the station.

Figure 5.16.4 Short-term Concept Plan of Nam Thang Long Station Area (C1)



Source: JICA Project Team

5.17 Ngoai Giao Doan (C2) Station Area

5.17.1 Development Character

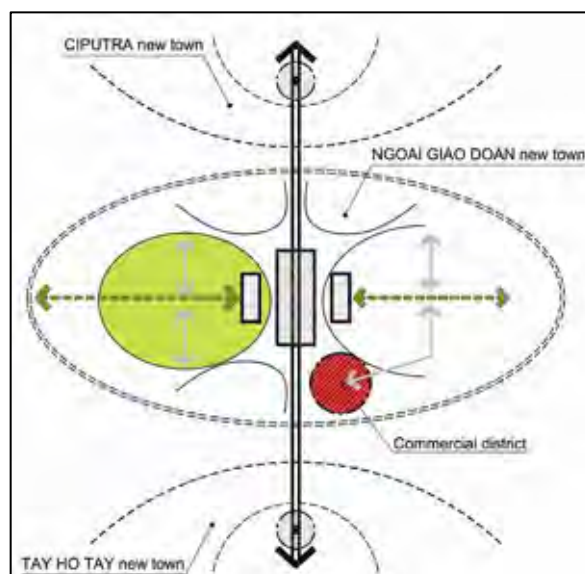
1) Existing Condition and Issues

5196 Ngoai Giao Doan Station will be located in the center of Ngoai Giao Toan New Town and near to Diplomat Town. Central governments, embassies and related political facilities will be moved into this town. Though station will be located in the new town, rural settlements on the north will be also potential users of UMRT in future. Hospitals and schools are located in residential areas, so improvement of access roads from the station to public facilities is necessary.

2) Development Objectives

5197 Ngoai Giao Doan station area development will be integrated with new diplomatic town development. Though this station will be located between Nam Thang Long Station and Tay Ho Tay Station, which are expected high demand passengers of new towns, it is necessary to provide necessary urban functions for commercial and business purposes. As a symbol of diplomatic town, integration with park will be significant.

Figure 5.17.1 Conceptual Diagram of Ngoai Giao Doan Station Area (C2)



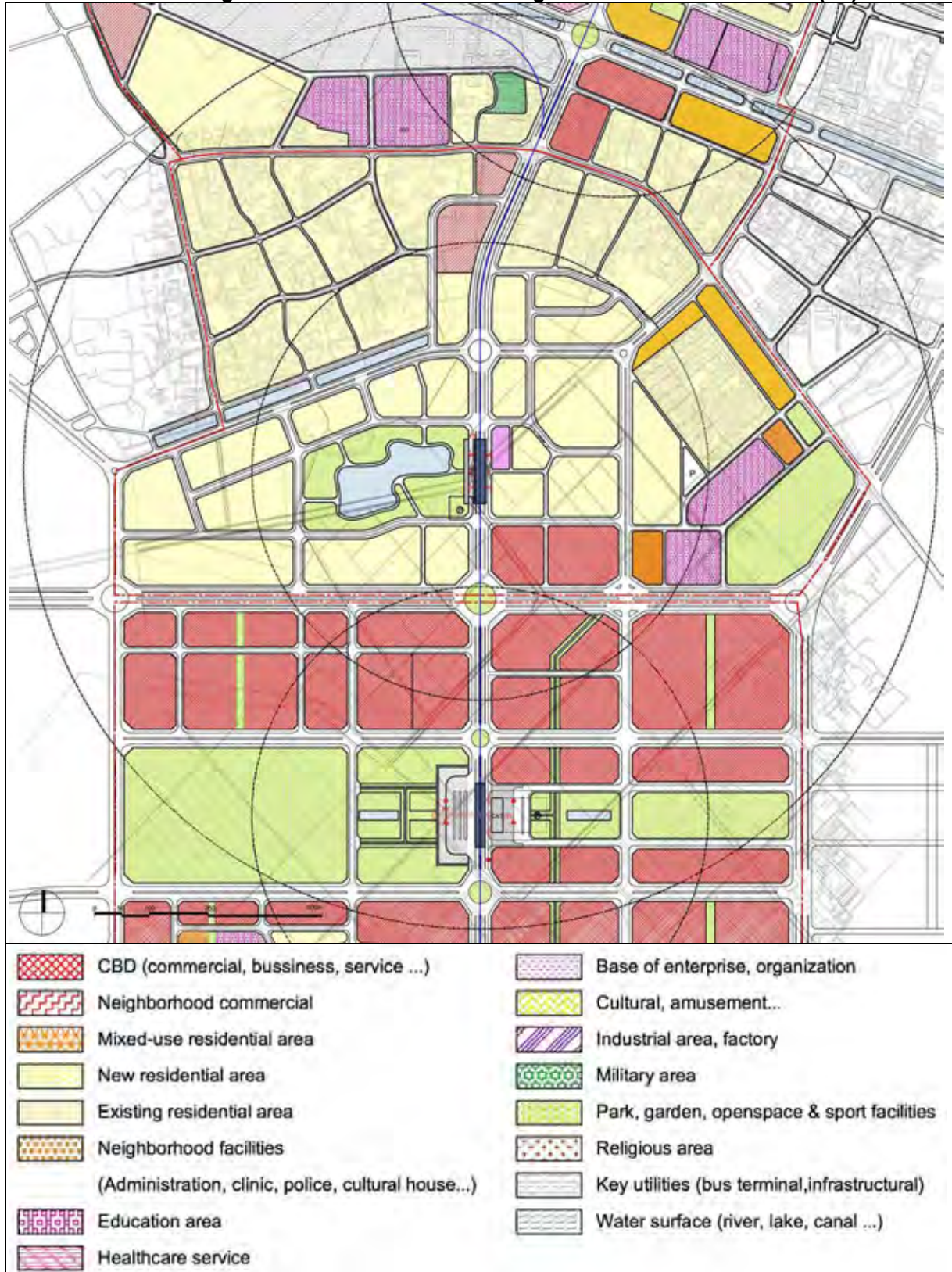
Source: JICA Project Team

Table 5.17.1 Demand Outlook for Ngoai Giao Doan Station Area (C2)

		Present	UMRT with integrated Urban Development	
			Without	With
Population of Station Area of radius 500m (persons)	Population	410	6,600	6,600
	Employment	306	41,600	45,700
	Student	191	1,300	1,300
Ridership (persons/day)		-	3,890	8,440

Source: JICA Project Team

Figure 5.17.2 Landuse Plan of Ngoai Giao Doan Station Area (C2)

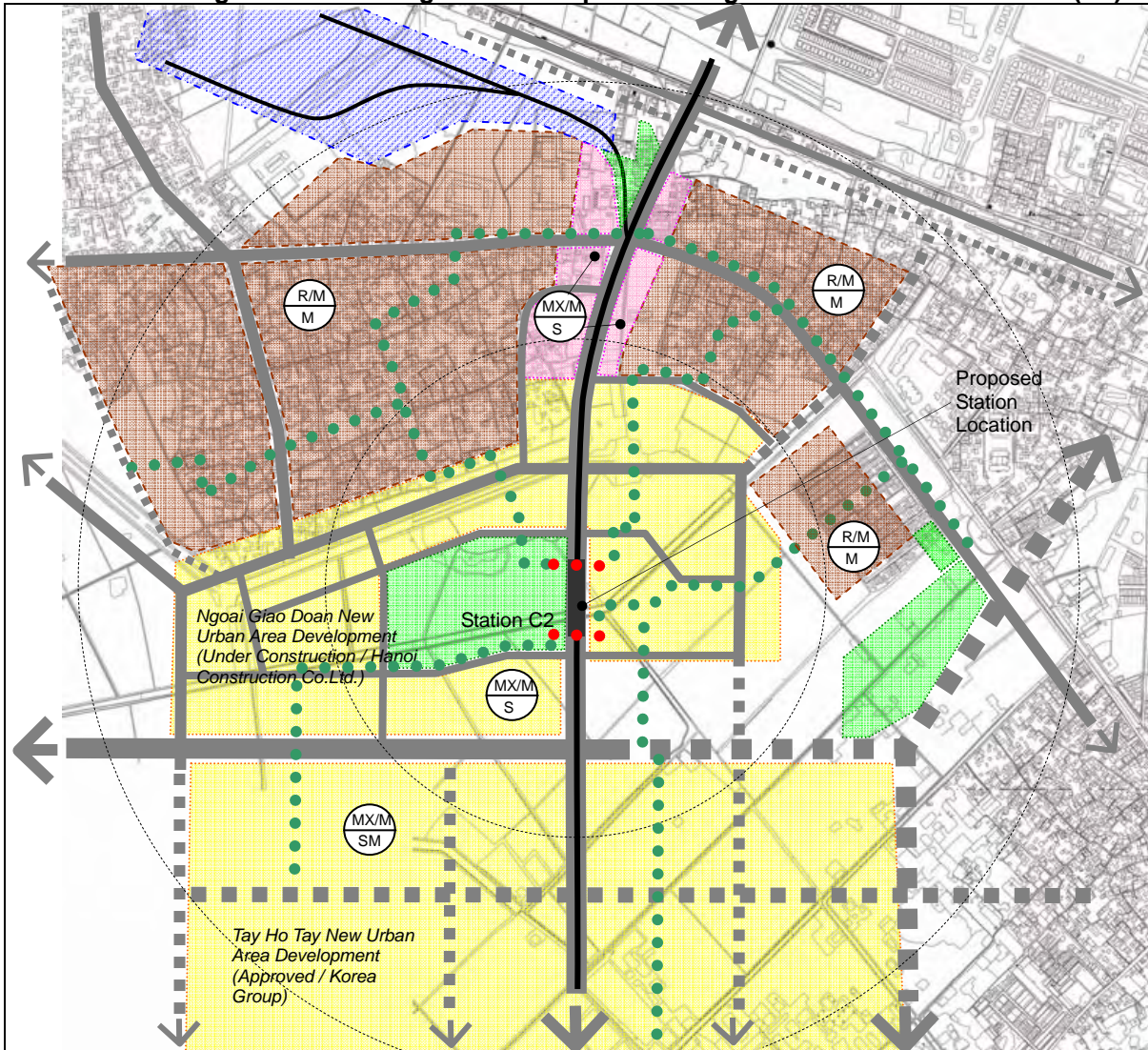


Source: JICA Project Team

5.17.2 Long-term Plan

5198 After completion of new urban area development of Ngoai Giao Doan diplomatic town development, many employees will use UMRT. Though Ngoai Giao Doan Station is only 700m north from Tay Ho Tay Station which will be a new urban center of north of Hanoi City, station area should be developed to serve employees for commercial and business purpose.

Figure 5.17.3 Long-term Concept Plan of Ngoai Giao Doan Station Area (C2)



Source: JICA Project Team

5.17.3 Short-Term Projects and Actions

5199 There are limited spaces around the station, so it is difficult to develop a parking space nearby the station. Station entrance spaces should be developed with two-vehicle parking spaces.

5200 In north of station, villages are existed at present. To improve accessibility, some trunk roads around the station need to be prioritized for development in short-term.

Table 5.17.2 Project List of Ngoai Giao Doan Station Area (C2)

Project			Scale		Construction Cost (000US\$)		Implementation Body	Financial Resource
A Minimum development till opening	SF-SE-1*	Station Entrance Space	4,900	m2	392	5,852	HRB/HPC ¹⁾	HPC ¹⁾
	SF-RD-1*	Pedestrian Deck	400	m2	1,040		HRB/HPC ¹⁾	HPC ¹⁾
	SF-RD-2*	Pedestrian Deck	400	m2	1,040		HRB/HPC ¹⁾	HPC ¹⁾
	SF-EV-1*	Elevator	4	No.	400		HRB	HPC
	SF-BS-1	Bus Stop	2	No.	10		TRAMOC	HPC
	RD-MA-1	Improvement of Main Access Road	2,700	m	2,970		HDOT	HPC
B Short-term (opening~3years)	RD-WR-1	Widening of Xuan Dinh Street	590	m	413	1,091	HDOT	HPC
	RD-SW-1	Improvement of Sidewalk	2,510	m	678		HDOT	HPC
C Medium-term (3~5years)	UR-1	Ngoai Giao Doan new urban area development (planned) ²⁾	-	-	-	-	Private	Private

Source: JICA Project Team

Minimum projects with * are prioritized to develop together with station facilities, since land acquisition is not so difficult.

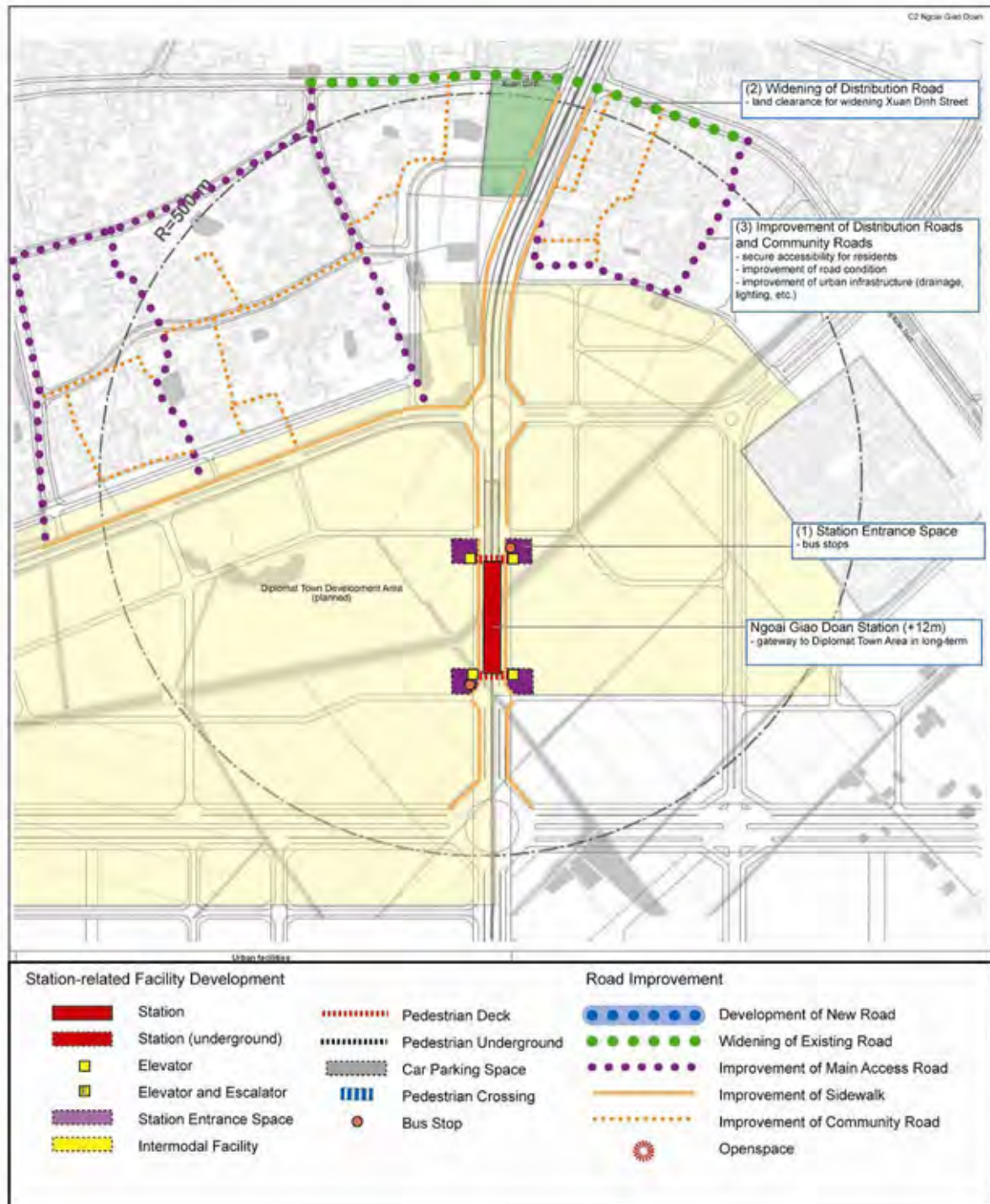
1) JICA Project Team recommends HRB or HPC will develop station related facilities together with UMRT station development.

2) Ngoai Giao Doan new urban area is planned to be a diplomatic town with residential area.

5.17.4 Issues to be clarified

5201 Coordination with Ngoai Giao Doan Diplomatic Town Development Project (short-term): Though basic road network and landuse have already designated, it is recommended to coordinate with Ngoai Giao Doan project to maximize utilization of UMRT station and railway as well as socio-economic development around the station.

Figure 5.17.4 Short-term Concept Plan of Ngoai Giao Doan Station Area (C2)



Source: JICA Project Team

5.18 Bui (C4) Station Area

5.18.1 Development Character

a) Existing Condition and Issues

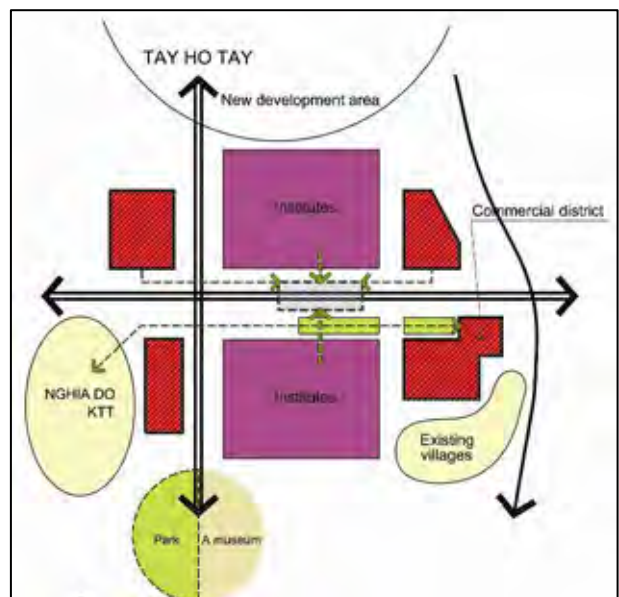
5202 Bui Station subway station will be located under Huong Quoc Viet Street, in front of Vietnam Science & Technique Institute of north and Institute of Defense of south. Many institutes and military-related facilities are located around this area. Nghia Do Park and Museum of Ethnology, one of the largest and popular cultural and tourism facilities are located along Nguyen Van Huyen Street, app. 1km from the station. Along this street, many urban facilities are newly located. Tu Lich River flows on the east of station, and sidewalk is developed along the river.

5203 This area is a clustered area of educational and cultural facilities to the north-west of the city. Many urban facilities have been constructed recently. Though existing residential areas are still not well organized, new road development and facility construction provide impacts to improve convenient lifestyle of this area. Bui station will provide convenient accessibility for people who want to go to the city center as well as who use urban facilities of this area.

b) Development Objectives

5204 As a center of clustered institutes, educational facilities, the station area will be promoted with advanced urban services. This station will be also a gateway to Nghia Du Park and Museum of Ethnology. Cultural and environmental townscape harmonized with educational and science facilities will be promoted for station area development.

Figure 5.18.1 Conceptual Diagram of Bui Station Area Development (C4)



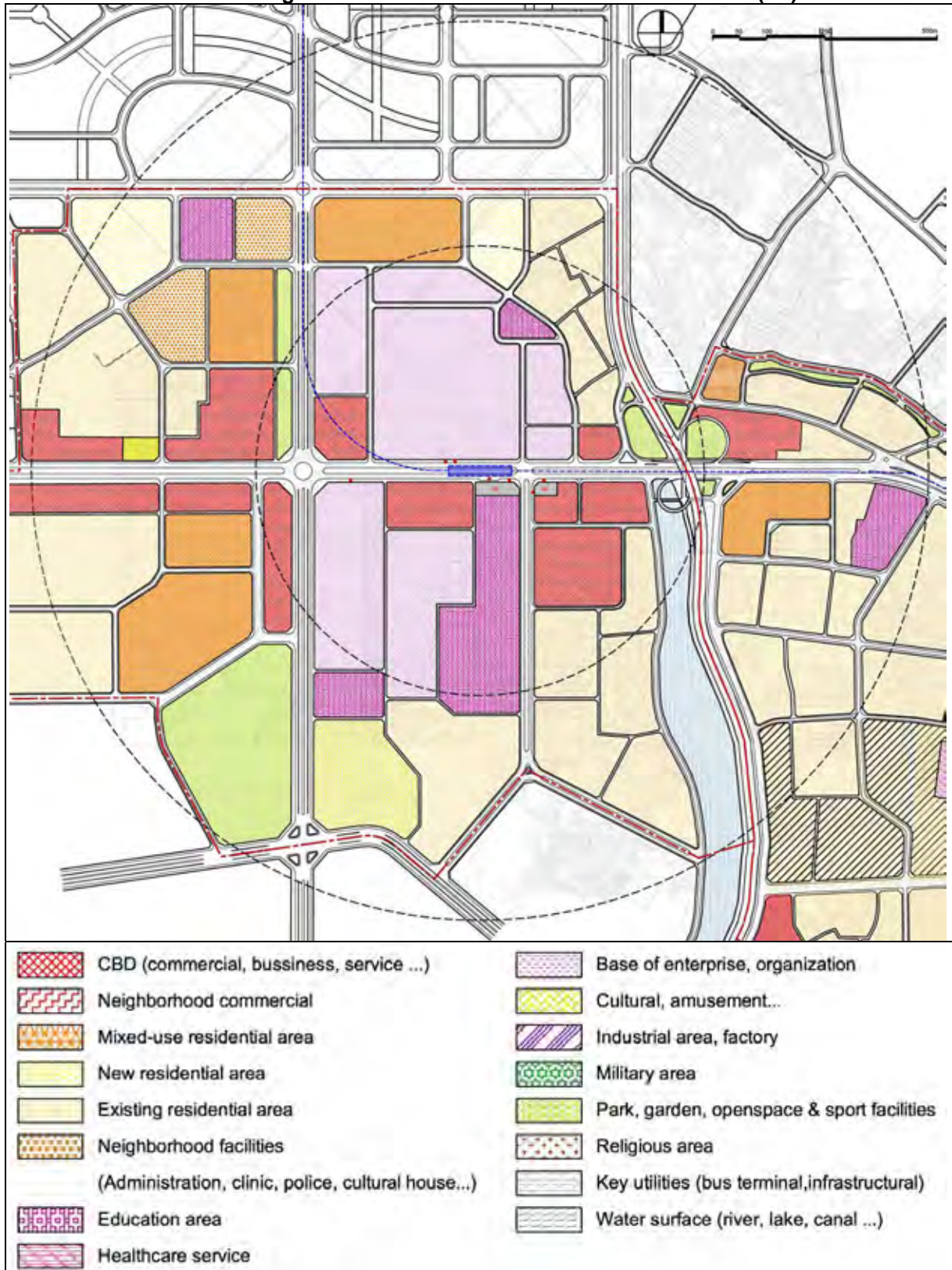
Source: JICA Project Team

Table 5.18.1 Demand Outlook for Bui Station Area (C4)

		Present	UMRT with integrated Urban Development	
			Without	With
Population of Station Area of radius 500m (persons)	Population	11,542	13,300	13,300
	Employment	4,554	7,400	7,700
	Student	2,765	4,400	4,400
Ridership (persons/day)		-	11,890	21,660

Source: JICA Project Team

Figure 5.18.2 Landuse Plan of Buoi Station Area (C4)



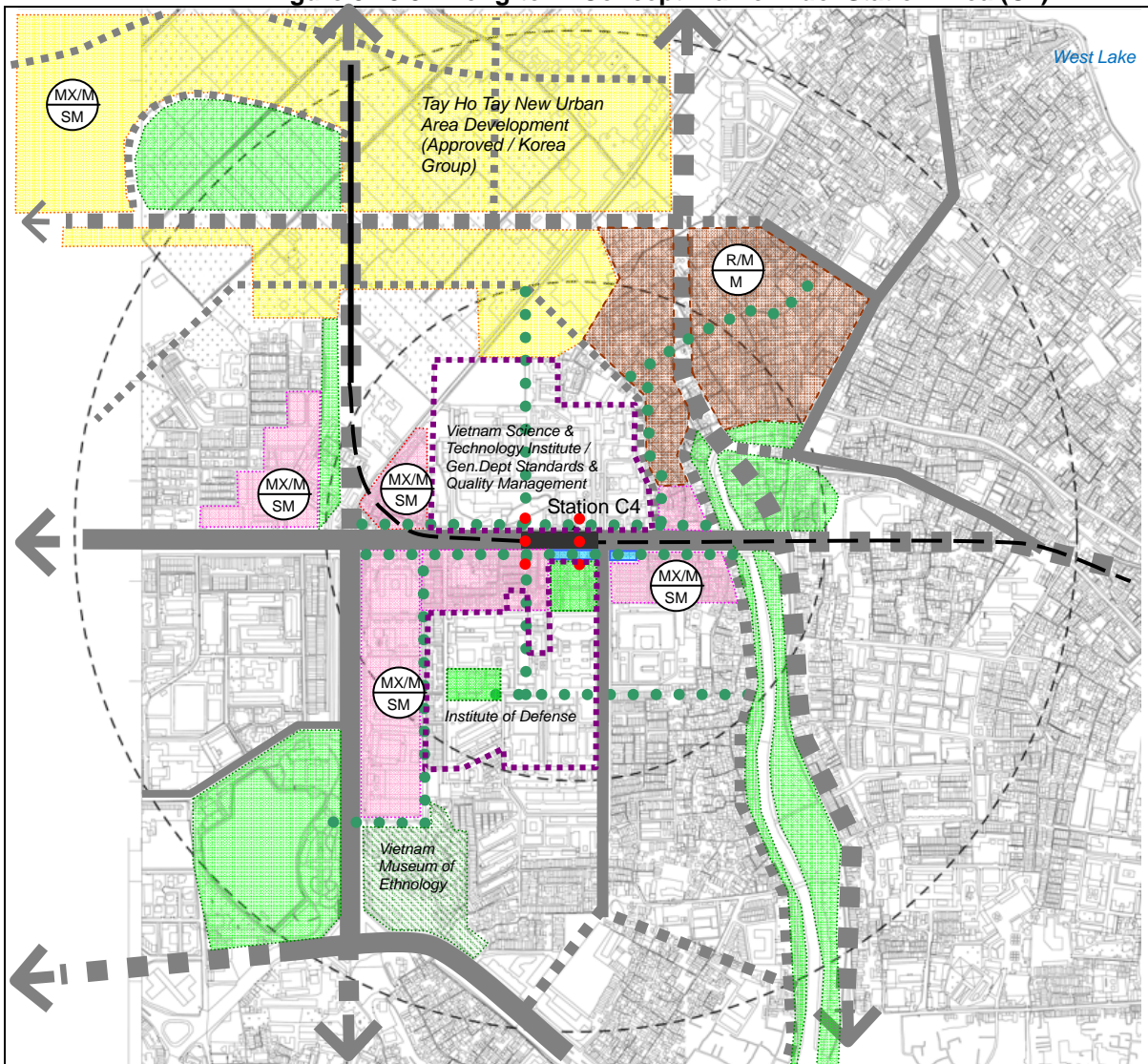
Source: JICA Project Team

5.18.2 Long-Term Plan

5205 Since many institutes are located along Huong Quoc Viet Street, big-scale urban development activities will not be promoted. Along this street, commercial and service facilities will be developed, including urban redevelopment of a factory.

5206 To attract many visitors to Nghia Do Park and Museum of Ethnology, green network connecting Nghia Do Park, Museum of Ethnology, Nguyen Van Huyen Street, Huong Quoc Viet Street, Tu Lick River will be developed with cultural atmosphere.

Figure 5.18.3 Long-term Concept Plan of Buoi Station Area (C4)



Source: JICA Project Team

5.18.3 Short-Term Projects and Actions

5207 Station-related facilities such as intermodal facility and station entrance spaces will not be necessary, since sidewalk of Huong Quoc Viet Road is wide enough.

5208 In existing residential areas, there are a few access roads, so it is necessary to designate a main access road and improve them.

Table 5.18.2 Project List of Bui Station Area (C4)

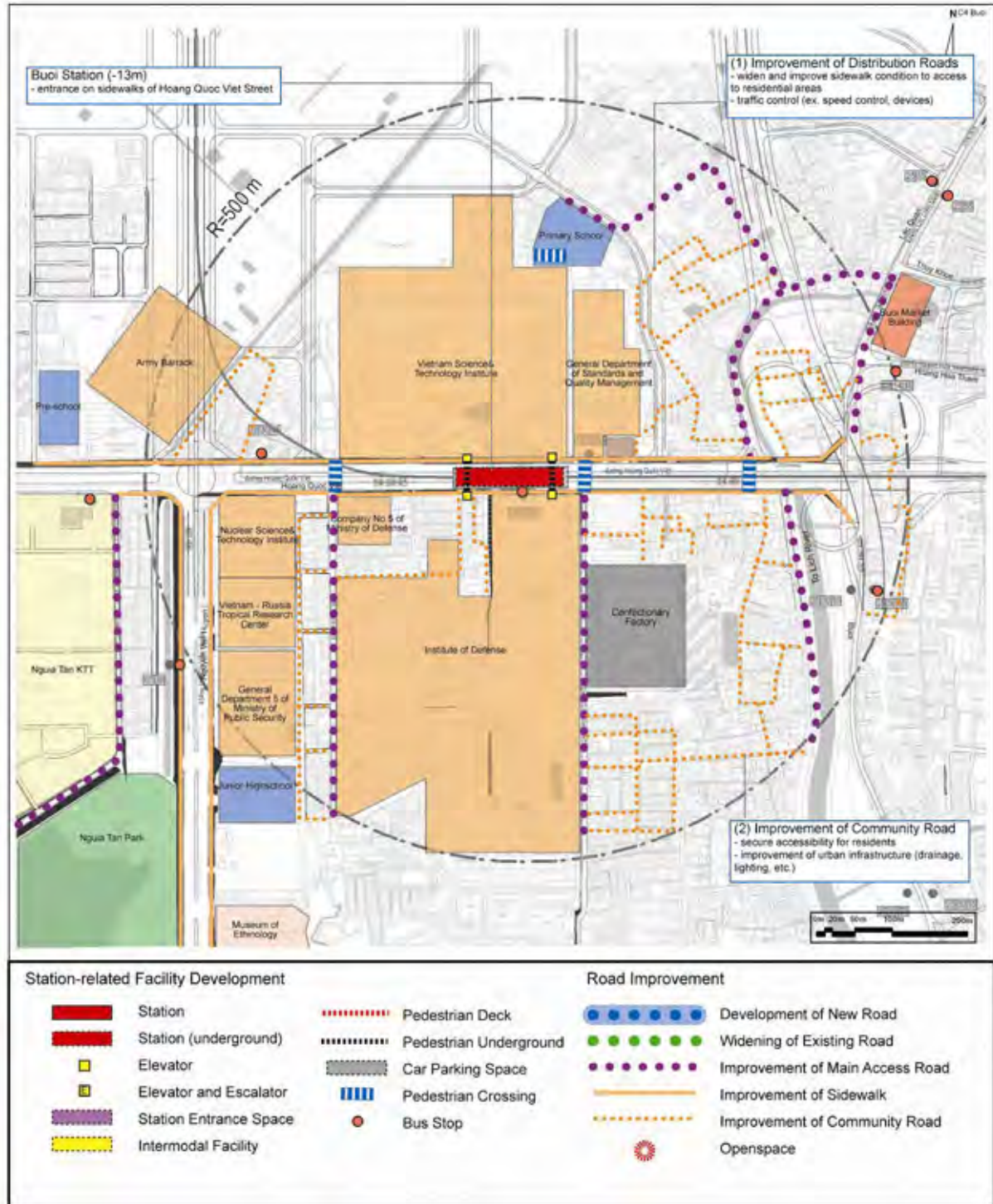
Project			Scale		Construction Cost (000US\$)		Implementation Body	Financial Resource
A Minimum development till opening	SF-PU-1*	Pedestrian Underground	800	m2	4,800	7,120	HRB	HPC
	SF-EV-1*	Elevator	4	No.	400		HRB	HPC
	SF-BS-1	Bus Stop	2	No.	10		TRAMOC	HPC
	SF-PC-1	Pedestrian Crossing	1	No.	10		HDOT	HPC
	SF-PC-2	Pedestrian Crossing	1	No.	10		HDOT	HPC
	SF-PC-3	Pedestrian Crossing	1	No.	10		HDOT	HPC
	SF-PC-4	Pedestrian Crossing	1	No.	10		HDOT	HPC
	RD-MA-1	Improvement of Main Access Road	1,700	m	1,870		HDOT	HPC
B Short-term (opening~3years)	RD-SW-1	Improvement of Sidewalk	3,070	m	829	829	HDOT	HPC

Source: JICA Project Team

5.18.4 Issues to be Clarified

5209 Not specified.

Figure 5.18.4 Short-term Concept Plan of Buoi Station Area (C4)



Source: JICA Project Team

5.19 Bach Thao (C6) Station Area

5.19.1 Development Character

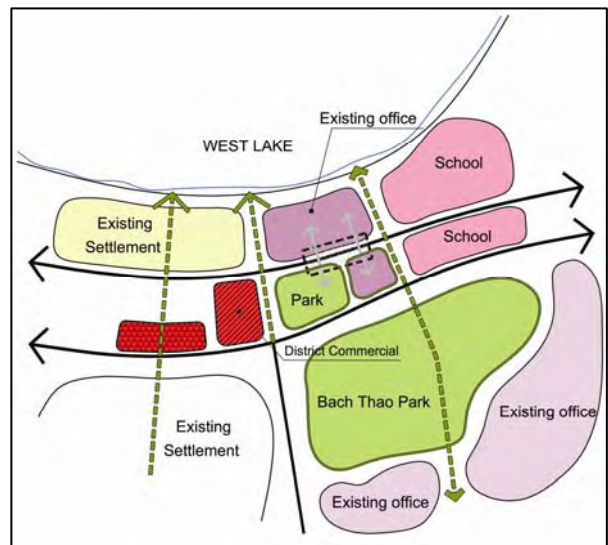
a) Existing Condition and Issues

5210 Bach Thao Station will be located along Thuy Khue Street, in front of Vietnam Women's Union building. On the south-east of the station, Botanical Garden, Ministry of Agriculture and Rural Development and Ho Chi Minh Museum are located. East side of this station area around Ba Dinh Square is political and military area of Hanoi City. Along Thuy Khue Street, schools and apartments are located, but not many commercial facilities. Hoang Hoa Tham Street will be widened and flow together with Thuy Khue Street.

b) Development Objectives

5211 There will be a gateway for sightseeing and recreation to West Lake and Bach Thao Botanical Park to enjoy urban nature of Hanoi City. Environmental-friendly atmosphere around the station will promote UMRT utilization of this station area.

Figure 5.19.1 Conceptual Diagram of Bach Thao Station Area Development (C6)



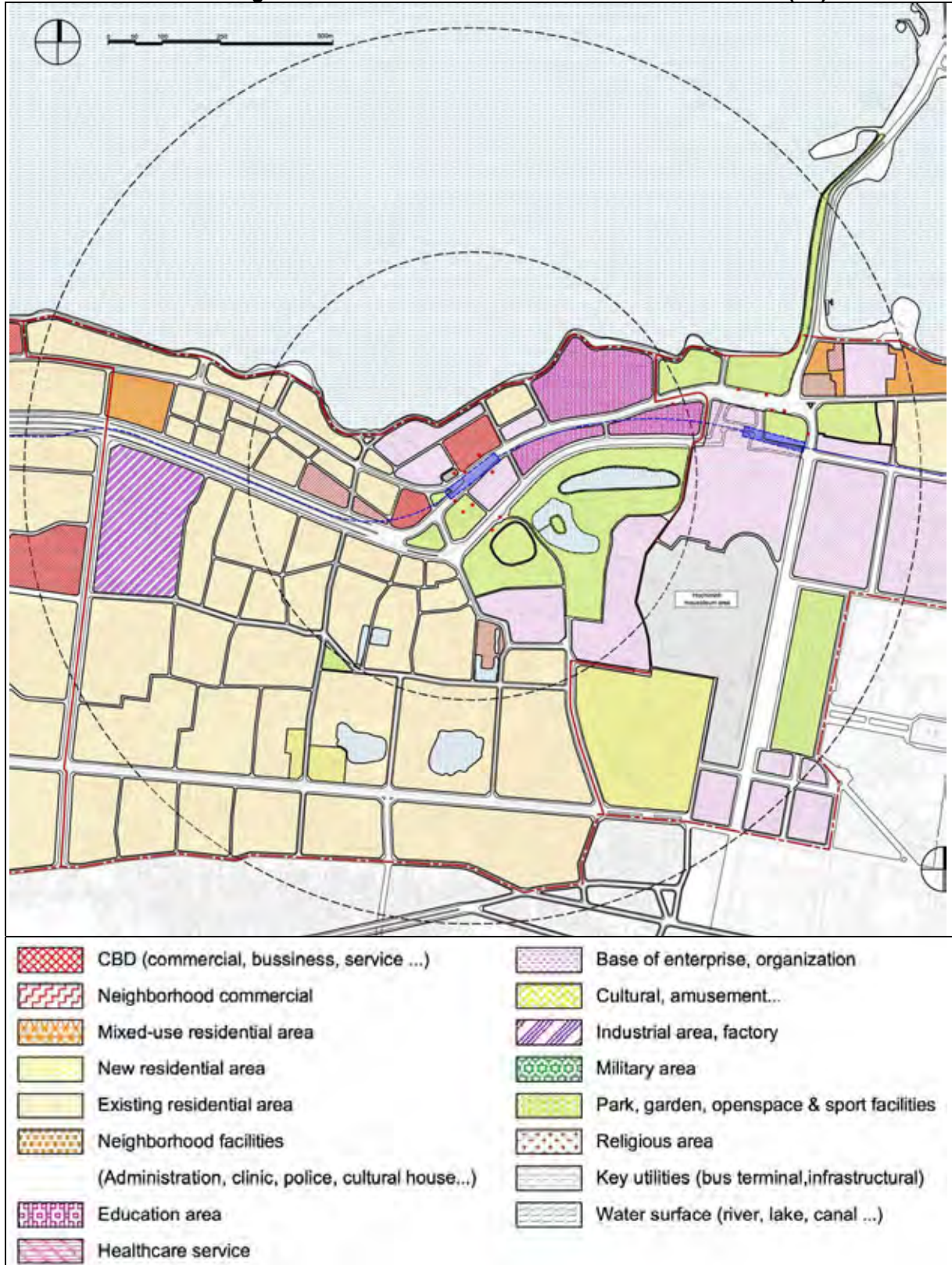
Source: JICA Project Team

Table 5.19.1 Demand Outlook for Bach Thao Station Area (C6)

		Present	UMRT with integrated Urban Development	
			Without	With
Population of Station Area of radius 500m (persons)	Population	12,925	17,900	17,900
	Employment	7,329	6,900	7,000
	Student	5,362	4,500	4,500
Ridership (persons/day)		-	5,970	11,680

Source: JICA Project Team

Figure 5.19.2 Landuse Plan of Bach Thao Station Area (C6)



Source: JICA Project Team

5.19.2 Long-Term Plan

5212 To provide convenient services for visitors and residents, commercial and public service facilities will be developed along Hoang Hoa Tham Street and Thuy Khue Street.

5213 It is proposed Hoang Hoa Tham Street along Bach Thao Park and Governmental Office will not be a main trunk road but a distribution road mainly for pedestrian and two-wheel vehicles, since Thuy Khue Street will be also widened and directly connect to Quan Thanh Street in the east.

Figure 5.19.3 Long-term Concept Plan of Bach Thao Station Area (C6)



Source: JICA Project Team

5.19.3 Short-Term Projects and Actions

5214 Station entrance spaces will be developed to connect pedestrian underground toward Bach Thao Park. Pedestrian street inside of the park will provide commuters a confort. Landscape of this area will be carefully designed in harmony with a lake and a park.

5215 Ngoc Ha Street is narrow though this is very congested. As a main access road for residents, road condition especially sidewalk need to be improved.

Table 5.19.2 Project List of Bach Thao Station Area (C6)

Project			Scale		Construction Cost (000US\$)		Implementat ion Body	Financial Resource
A Minimum development till opening	SF-SE-1*	Station Entrance Space	1,100	m2	88	3,996	HRB/HPC ¹⁾	HPC ¹⁾
	SF-EV-1*	Elevator	3	No	300		HRB	HPC
	SF-BS-1	Bus Stop	4	No	20		TRAMOC	HPC
	SF-PC-1	Pedestrian Crossing	1	No	10		HDOT	HPC
	SF-PC-2	Pedestrian Crossing	1	No	10		HDOT	HPC
	RD-WR-1	Widening of Existing Road	100	m	70		HDOT	HPC
	RD-MA-1	Improvement of Main Access Road inside Bach Thao Garden ²⁾	480	m	528		HDOT	HPC
RD-MA-2	Improvement of Main Access Road	2,700	m	2,970	HDOT	HPC		
B Short-term (opening~3years)	RD-SW-1	Improvement of sidewalk	1,660	m	448	448	HDOT	HPC
C Medium-term (3~5years)	UR-1	Redevelopment for commercial and business district on east of the station	To be estimated				Private	Private
D Long-term (5~10 years)	RD-WR-2	Widening of Ngoc Ha Street ³⁾					HDOT	HPC

Source: JICA Project Team

Minimum projects with * are prioritized to develop together with station facilities, since land acquisition is not so difficult.

1) JICA Project Team recommends HRB or HPC will develop station related facilities together with UMRT station development.

2) It is necessary to coordinate with management body of Bach Thao Garden to develop access road to station for public.

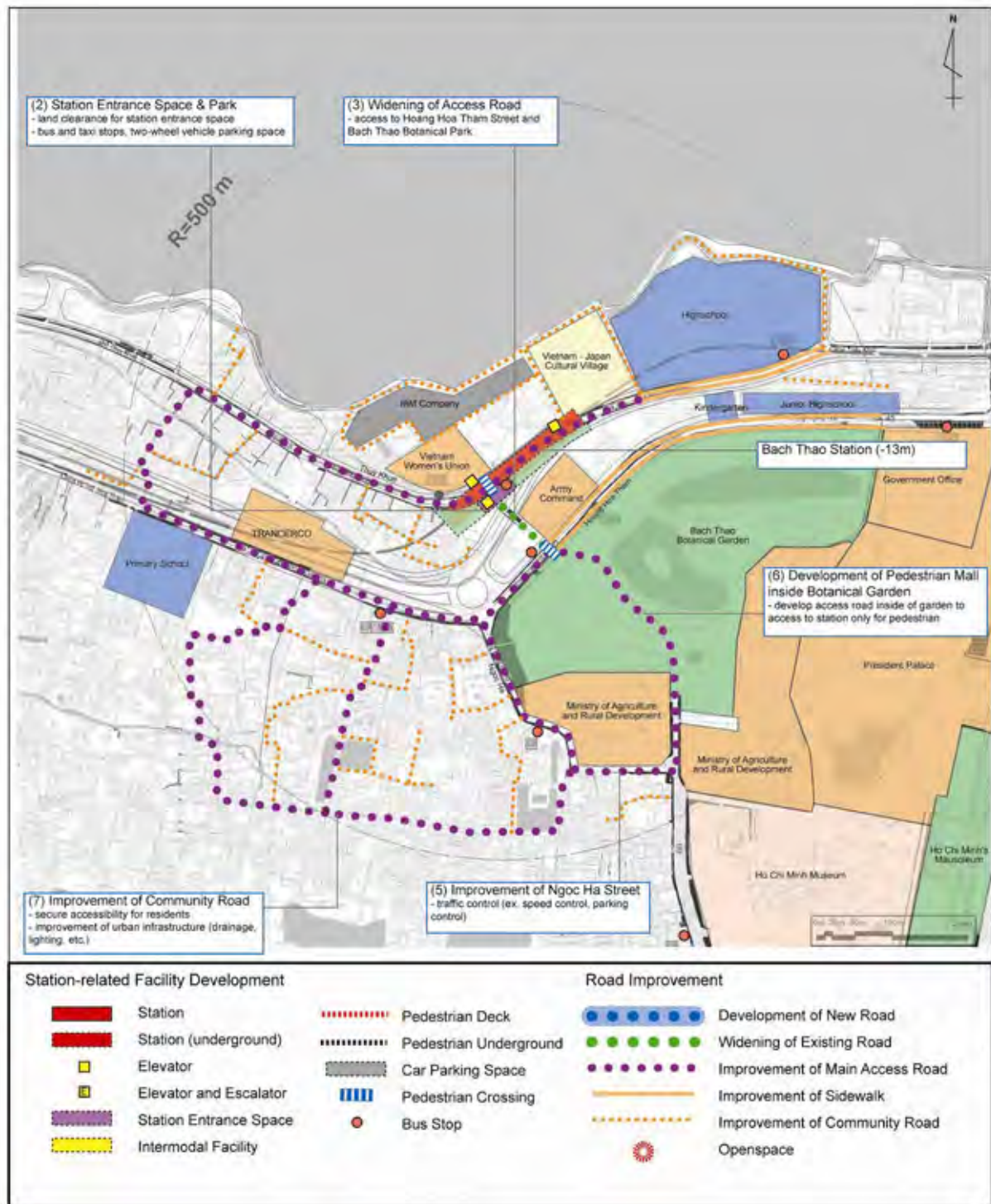
3) It is necessary to coordinate with HAUPA/ HDOT to adjust road alignment.

5.19.4 Issues to be clarified

5216 Alignment of widening trunk roads of Hoang Hoa Tham Street and Thuy Khue Street (short-term): Since this station will be developed under Thuy Khue Street, it is necessary to clarify road alignment for detailed planning of station-related facility especially entrance. As proposed, if eastern part of Hoang Hoa Tham Street in front of the park will be designated as a distribution road, intersection plan between two roads should be designed.

5217 Accessibility inside of Bach Thao Park (short-term): Since Ngoc Ha Street is narrow and not safe for pedestrian, it is proposed to develop an access road inside of the park for public.

Figure 5.19.4 Short-term Concept Plan of Bach Thao Station Area (C6)



Source: JICA Project Team

5.20 Ho Tay (C7) Station Area

5.20.1 Development Character

a) Existing Condition and Issues

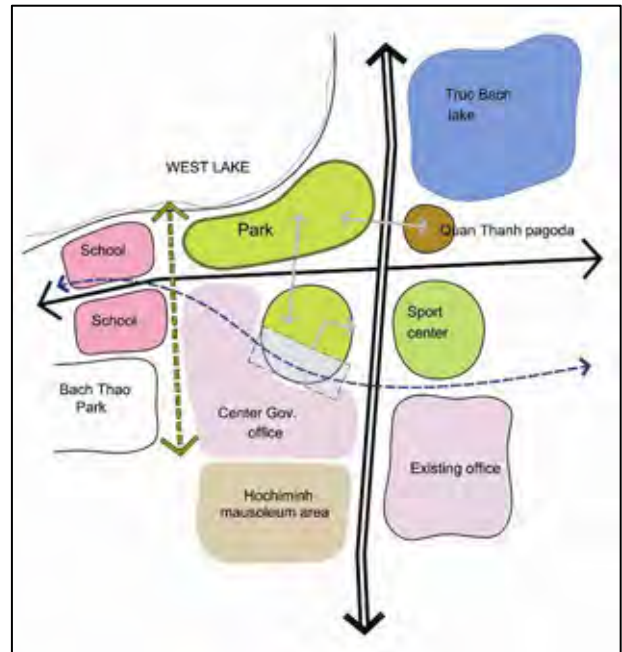
5218 Ho Tay Station will be located in front of Government Offices and near to the President House. This area is political and military area of Hanoi City, including Central Communist Party Committee, many embassies, Ministry of Defense and other ministries. In addition, there are many historical tourism areas such as Thang Long Citadel, Ho Chi Minh Mausoleum, Ba Dinh Square, Ho Chi Minh Museum, etc.

5219 Road network is well developed with trees and sidewalks around these facilities. Thanh Nien Street, which runs between West Lake and Truc Bac Lake is popular for driving and walking to enjoy beautiful scenery of lakes. Ly Tu Trong garden, Mai Xuan Thuong garden, and waterfront of Thanh Nien Street are recreation spots for Hanoi citizens.

b) Development Objectives

5220 This station will be a gateway to political center in south as well as recreational center of West Lake in north. In addition, sports and educational facilities and famous temples are located, so station users will be diversified for various purposes.

Figure 5.20.1 Conceptual Diagram of Ho Tay Station Area Development (C7)



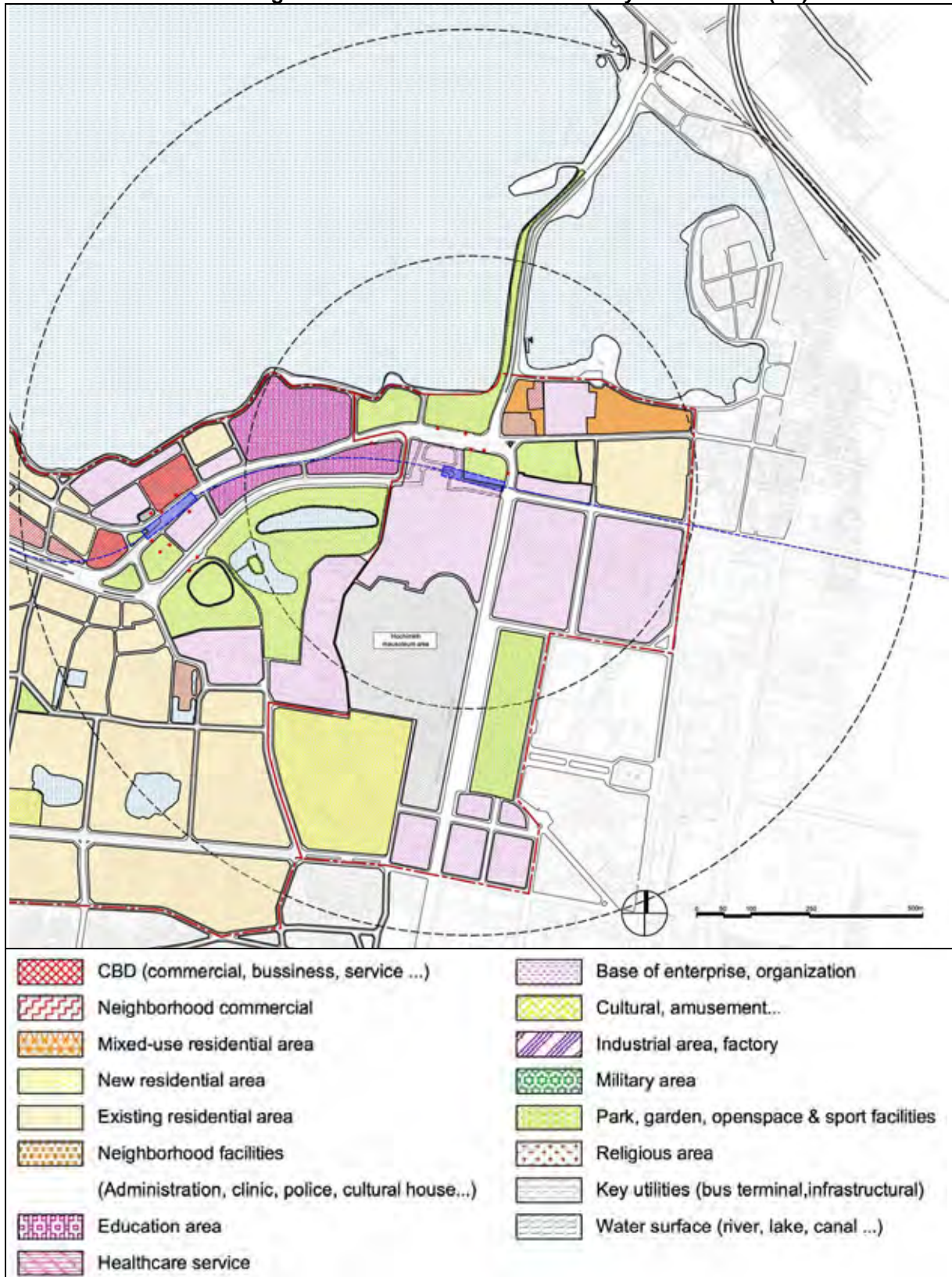
Source: JICA Project Team

Table 5.20.1 Demand Outlook for Ho Tay Station Area (C7)

		Present	UMRT with integrated Urban Development	
			Without	With
Population of Station Area of radius 500m (persons)	Population	10,286	13,500	13,500
	Employment	8,445	9,000	9,500
	Student	4,199	4,000	4,000
Ridership (persons/day)		-	11,000	12,000

Source: JICA Project Team

Figure 5.20.2 Landuse Plan of Ho Tay Station Area (C7)

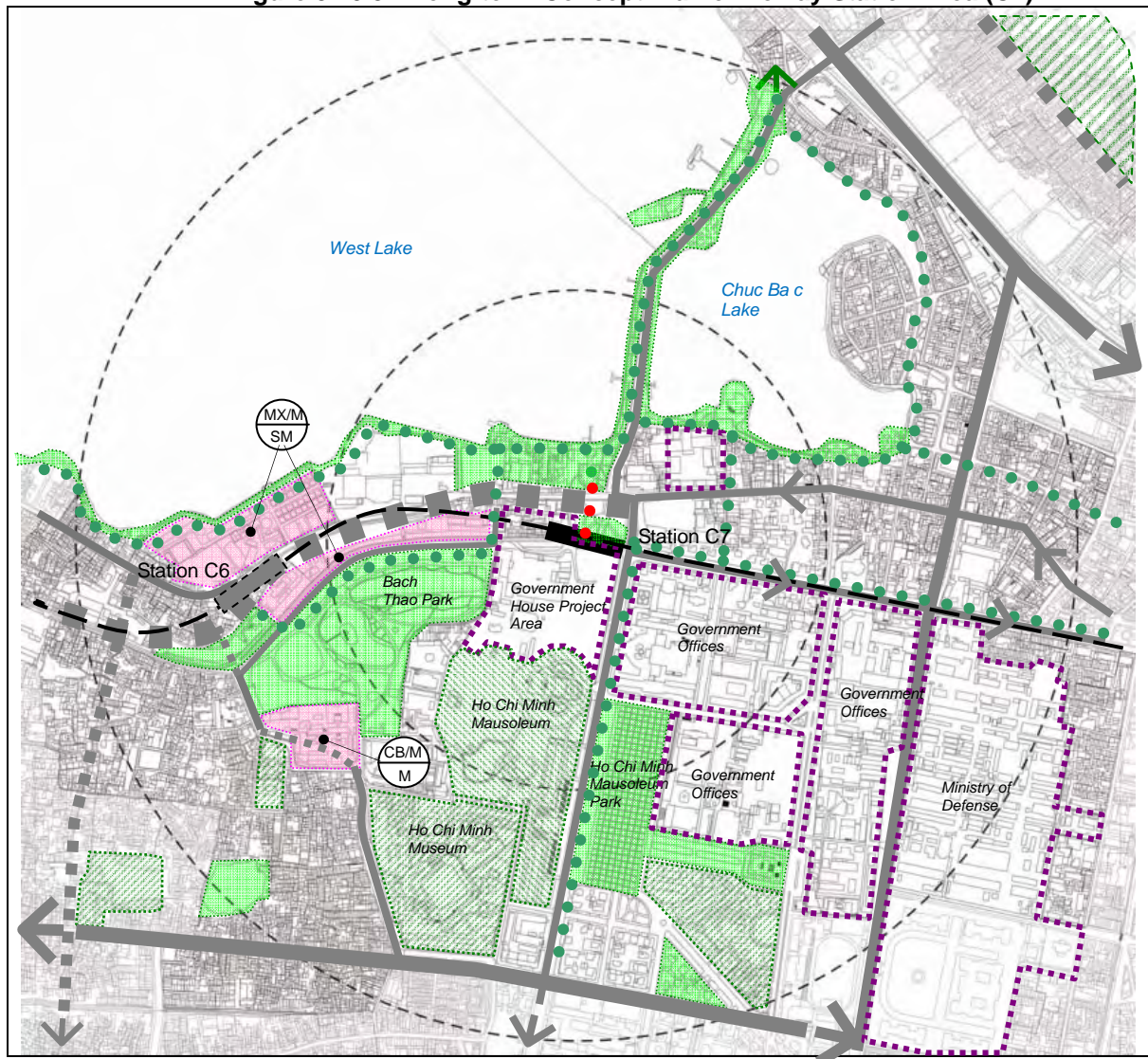


Source: JICA Project Team

5.20.2 Long-Term Plan

5221 Since this area is a politically important, urban development activities need to be strictly controlled. Though commercial and business development in big-scale will not meet local condition of this station area, provision of small-scale and various convenient services for tourists and people who enjoy leisure will be efficient. These facilities will be clustered along lakeside. Landscape of this area will be carefully designed not to destroy natural and traditional condition of this area.

Figure 5.20.3 Long-term Concept Plan of Ho Tay Station Area (C7)



Source: JICA Project Team

5.20.3 Short-Term Projects and Actions

5222 Station entrances will be developed the park in north-eastern side of new governmental office. Since south side of the station is a political area, security management planning is necessary. Along Quan Thanh Street, station entrance space will be developed with bus bay and information board, etc. Across the street, station entrance will be developed inside of Ly Tu Trong Park who will access to pagodas and lakes.

5223 Since Thuy Khue Street will be widened, road network is well developed in this station area. As one of the recreational and environmental areas of Hanoi, walking environment improvement integrated with parks, waterfront areas and cultural spots are encouraged.

Table 5.20.2 Project List of Ho Tay Station Area (C7)

Project			Scale		Construction Cost (000US\$)	Implementation Body	Financial Resource	
A Minimum development till opening	SF-SE-1*	Station Entrance Space ²⁾	1,000	m2	80	9,238	HRB/HPC ¹⁾	HPC ¹⁾
	SF-PU-1*	Pedestrian Underground	900	m2	5,400		HRB	HPC
	SF-EV-1*	Elevator	3	No.	300		HRB	HPC
	SF-BS-1	Bus Stop	8	No.	40		TRAMOC	HPC
	SF-PC-1	Pedestrian Crossing	1	No.	10		HDOT	HPC
	SF-PC-2	Pedestrian Crossing	1	No.	10		HDOT	HPC
	SF-PC-3	Pedestrian Crossing	1	No.	10		HDOT	HPC
	RD-NR-1	Development of New Road ³⁾	100	m	220		HDOT	HPC
	RD-MA-1	Improvement of Main Access Road	2,880	m	3,168		HDOT	HPC
B Short-term (opening-3years)	RD-SW-1	Improvement of sidewalk	2,100	m	567	567	HDOT	HPC
C Medium-term (3-5years)	UR-1	Government Office and park renovation project (planned) ²⁾	To be estimated				HPC	HPC

Source: JICA Project Team

Minimum projects with * are prioritized to develop together with station facilities, since land acquisition is not so difficult.

1) JICA Project Team recommends HRB or HPC will develop station related facilities together with UMRT station development.

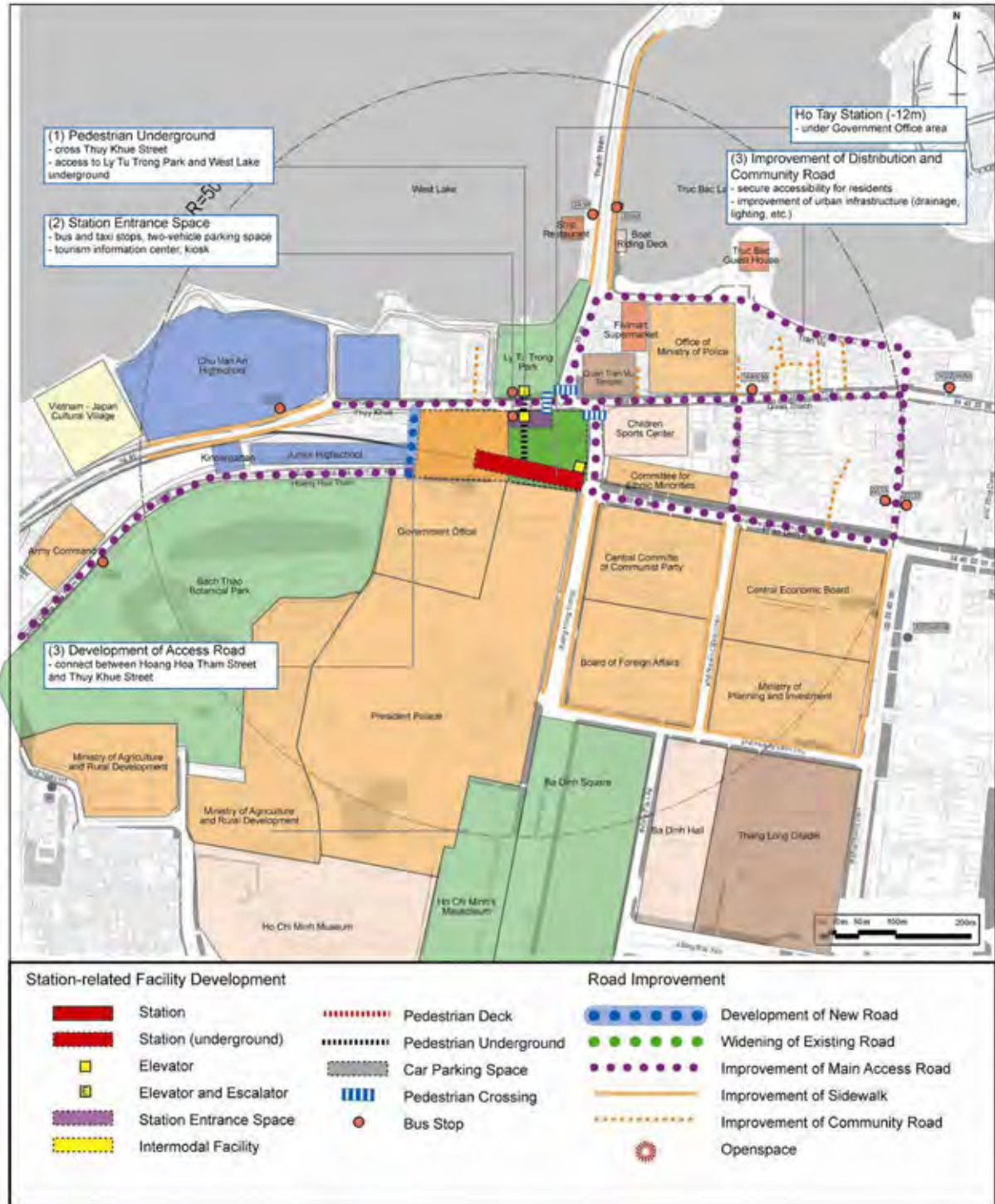
2) It is necessary to coordinate with HPC to adjust location of station entrances, which will be located inside a park of Government Office.

3) It is necessary to coordinate with HAUPA/ HDOT to adjust road alignment.

5.20.4 Issues to be clarified

5224 Coordination with new Government Office development plan for security and accessibility (short-term): The park above the station is a part of Government Office development plan. It is necessary to coordinate how to defend security and safety of political area.

Figure 5.20.4 Short-term Concept Plan of Ho Tay Station Area (C7)



Source: JICA Project Team

5.21 Hoan Kiem Lake (C9) Station Area

5.21.1 Development Character

a) Existing Condition and Issues

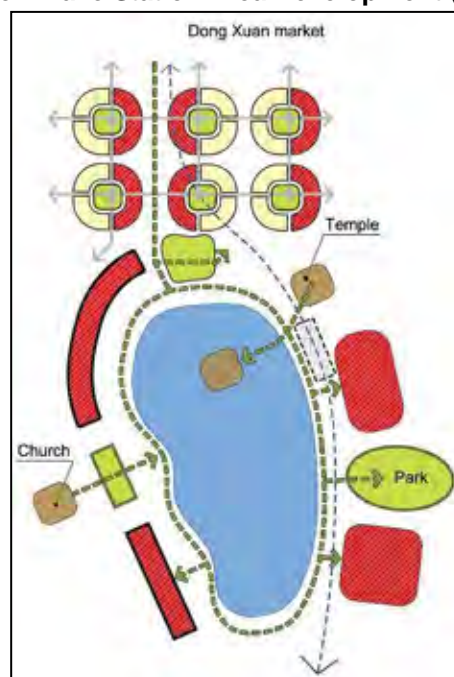
5225 Ngoc Son Temple is the heart of Hanoi City as well as the Ancient Quarter. Hoan Kiem Lake and Ngoc Son Temple are one of the most popular place for Hanoi citizens and tourists. This area is a south gate to the AQ, and Bo Ho Bus Terminal is located on the north of Hoan Kiem Lake. Next to the terminal, public parking area is designated. Dien Tien Hoang Street and Le Thai To Street are one-way of anticlockwise rotation. Cau Go Street and Hang Gai Street, which are southernmost of the AQ, are always crowded with cars, motorbikes, cyclos and pedestrians. At the south-east of station area

5226 There are many tourism and recreation places such as Water puppet theater, Ly Thai To Park, Trang Tien Plaza, Joseph's Cathedral Church, etc. Many people walk around Hoan Kiem Lake and surrounding areas. In addition, on the east and south of the lake, there are many governmental offices, hotels and offices are gathered. Hanoi City People's Committee is located in front of the lake next to Ly Thai To Park. In this area, there are 3 bus terminal located, named Long Bien, Bo Ho and Luong Yen. Though the bus network is not well developed in the Ancient Quarter, most of streets in French Quarter on south of Hoan Kiem Lake are bus routes.

b) Development Objectives

5227 The concept of this station is "a southern gateway of Ancient Quarter with natural and traditional values", where is located in front of Hoan Kiem Lake, Ngoc Son Temple and Ba Kieu Temple. This station will attract not only Hanoi citizens, but also domestic and international tourists. In addition, this station area will be a pedestrian oriented district of Ancient Quarter and Hoan Kiem Lake area.

Figure 5.21.1 Conceptual Diagram of Hoan Kiem Lake Station Area Development (C9)



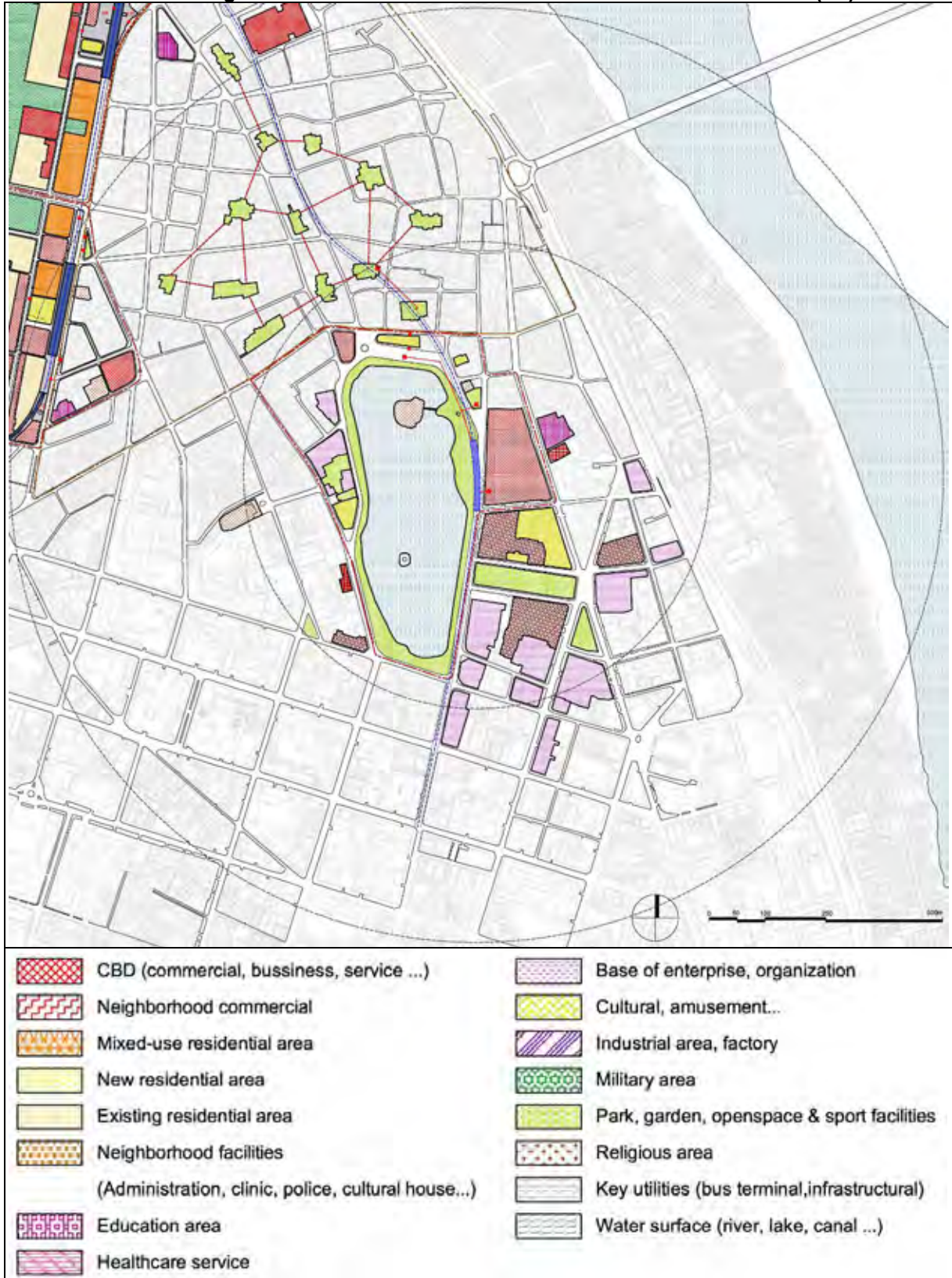
Source: JICA Project Team

Table 5.21.1 Demand Outlook for Hoan Kiem Lake Station Area (C9)

		Present	UMRT with integrated Urban Development	
			Without	With
Population of Station Area of radius 500m (persons)	Population	23,516	16,200	16,200
	Employment	29,039	38,700	40,600
	Student	7,474	5,500	5,500
Ridership (persons/day)		-	3,310	6,170

Source: JICA Project Team

Figure 5.21.2 Landuse Plan of Hoan Kiem Lake Station Area (C9)



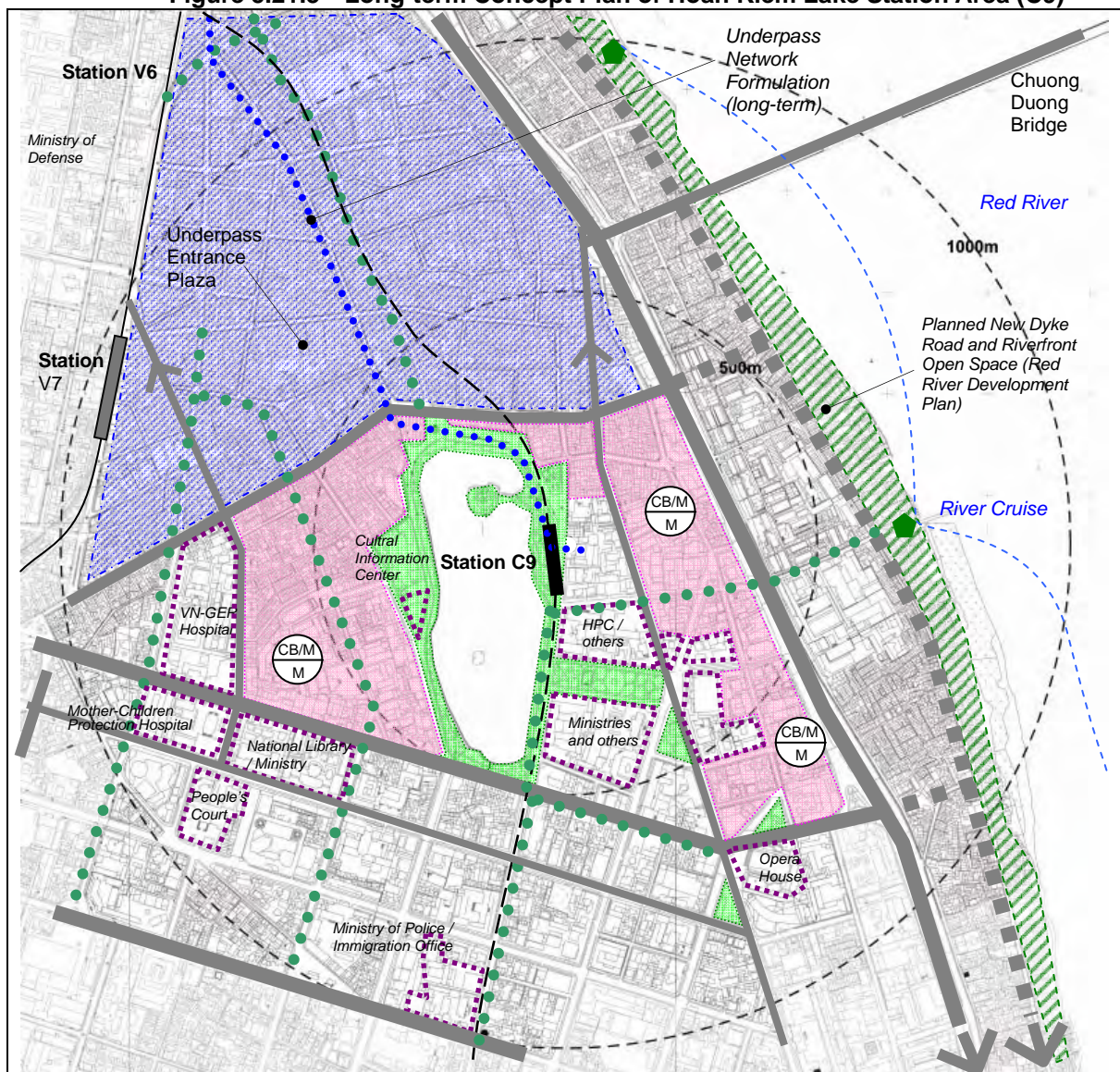
Source: JICA Project Team

5.21.2 Long-Term Plan

5228 In long-term, urban redevelopment and renovation projects can be promoted while preserving cultural and traditional values and atmosphere. Urban redevelopment of Hanoi Power Company area is a potential project to develop a complex facilities with commercial and business, cultural, tourism functions. In future, underground pedestrian mall of Ancient Quarter can be possible to enhance socio-economic potential of this area.

5229 Pedestrian-oriented district is promoted both in Ancient Quarter and Hoan Kiem Lake area as a heart of Hanoi City, so people will be able to enjoy traditional and cultural values with safe and environmental friendly atmosphere. In harmony with pedestrian network with natural environment as well as traditional and modern commercial facilities development, comprehensive urban improvement of Ancient Quarter and Hoan Kiem Lake area will be promoted.

Figure 5.21.3 Long-term Concept Plan of Hoan Kiem Lake Station Area (C9)



Source: JICA Project Team

5.21.3 Short-Term Projects and Actions

5230 In short-term, only station and entrances will be constructed to mitigate drastic impact for surrounding area. Entrances will be constructed the lakeside park. Since there are many openspaces and parks in this station area, signboard of station location, benches, kiosks will be developed with unified design and furniture.

5231 Facilities and functions of Bo Ho Bus Terminal will be improved to provide a feeder service for UMRT users. This terminal can be a station of para-transit service, for example, cyclo will serve for tourists who stay in Ancient Quarter instead of mini-bus at present. Traffic management is indispensable both in short and long term to create pedestrian oriented area.

Table 5.21.2 Project List of Hoan Kiem Lake Station Area (C9)

Project			Scale		Construction Cost (000US\$)	Implementation Body	Financial Resource	
A Minimum development till opening	SF-EV-1*	Elevator	2	No.	200	860	HRB	HPC
	SF-ES-1*	Escalator	2	No.	600		HRB	HPC
	SF-BS-1	Bus stop	12	No.	60		TRAMOC	HPC
B Short-term (opening-3years)	SF-SE-1	Improvement of Bo Ho Bus Terminal	1,400	m2	112	3,456	TRAMOC	HPC
	SF-PD-1	Footbridge to cross Tran Quang Khai Street	150	m2	390		HDOT	HPC
	SF-PD-2	Footbridge to cross Tran Quang Khai Street	180	m2	468		HDOT	HPC
	SF-OS-1	Openspace	7,500	m2	405		HDOT	HPC
	SF-OS-2	Openspace	600	m2	32		HDOT	HPC
	RD-SW-1	Improvement of sidewalk	7,200	m	1,944		HDOT	HPC
	RD-CR-1	Improvement of community road	250	m	105		HDOT	HPC
C Medium-term (3-5years)	RD-CR-2	Improvement of community road inside Ancient Quarter	15,900	m	To be estimated	HDOT	HPC	
	UR-1	Redevelopment of Electric Company area	2.2	ha		HPC/ Private	Private	

Source: JICA Project Team

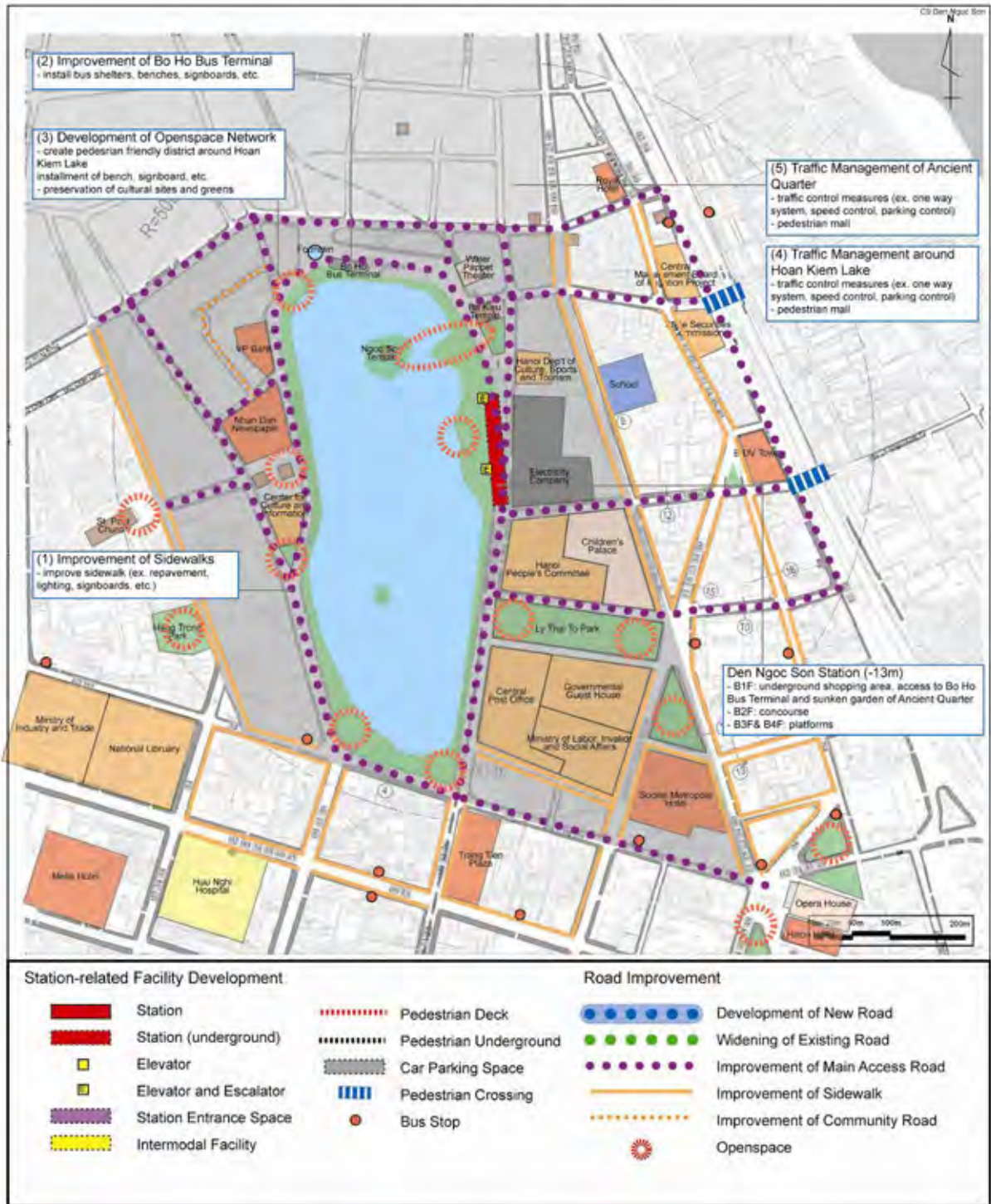
5.21.4 Issues to be clarified

5232 Mitigation of negative impacts on cultural and natural properties (short to long term): There are many properties of Hanoi City such as Ngoc Son Temple, Hoan Kiem Lake and the Ancient Quarter. It is proposed not to develop many facilities around them, but to concentrate on urban development of Hanoi Electricity Company. It is necessary to consult with stakeholders how and where to develop a subway station and entrances.

5233 Urban redevelopment of Hanoi Power Company (medium-term): It is proposed to clarify if there is a potential for relocation of Hanoi Power Company and utilization the vacant land for commercial and public purposes.

5234 Urban redevelopment of Ancient Quarter/ underground network development (long-term): Though there is a regulation to control urban development of AQ, it is proposed to review and find out measures to harmonize urban development and preservation. Underground development is one of the solutions to preserve physical condition and to utilize a limited land effectively.

Figure 5.21.4 Short-term Concept Plan of Hoan Kiem Lake Station Area (C9)



Source: JICA Project Team