General office equipment (copy machine, facsimile)	1 lot
General Office Furniture (desks, chairs)	1 lot

2-3 Basic Design

2-3-1 Design Concept

(1) Design Conditions

1) Basic Principles

The following basic principles will be considered in the design of the Project Facilities:

a) The design will take into consideration the local climate, natural features and lifestyles of Vietnamese people. Especially, windows will designed to be operable even when raining and the central lobby space will employ voids and high clerestory lighting and ventilating louvers for natural day lighting and ventilation.
b) The design will consider the distinction between the various users in the three separate zones and make considerations for the security aspect while maintaining easy access for the users of each zone.
c) The design will pay due attention to the local construction conditions and general level of university facilities in Viet Nam. The quality and grade of the facilities will be suitable to the advanced training activities proposed in the Project facilities.
d) The design will incorporate Japanese design elements.
e) The circulation will be designed around the central void space for clarity.
f) Finishing materials and grade of facilities will be based on the Hanoi Center.
g) The building will be 3 stories following local regulations.

2) Natural Conditions

a) Climate

Ho Chi Minh lies on the right bank of the Saigon river, a tributary of Nhia Be river. It lies in the tropical monsoon climatic zone and is hot and humid throughout the year. The average annual temperature is 25°C and is hottest from April to May. The rainy season lasts from May to October, when 90 % of annual precipitation occurs.

Typhoons land one to two times per year, but Vietnamese Building Law stipulates that Ho Chi Minh is IIA area, with typhoon effects negligible.

Design principles based upon these factors are:

- Main rooms will be air conditioned with considerations to reduce running costs.
- Due to the intensive monsoon rainfall, which generally comes as afternoon squalls, construction will have to be carefully planned for earthworks and foundation works during these periods.
- The first floor will be designed as pilotis space for air circulation.
- The sectional design will incorporate voids, high clerestory windows and venting louvers for natural air circulation.
- North and south eaves will project at least one meter to provide shade to walls and reduce heat gain.
- Windows will be designed to allow opening even when raining.
- Wind load will be calculated for wind velocity of 45m/s.

b) Soil Conditions

According to the initial geo-technical investigation carried out by a local survey company during the Basic Design Study in Viet Nam, load bearing soil was not found even after extending the boring beyond the originally planned 30 meters below ground level. Only soft clay soils with N factors in the range of 1~7 down to 23 meters and up to 11 at around 40 meters were observed. After return to Japan, further study on construction methods and costs showed that bearing piles up to 60 meters depth or friction / bearing piles for soils with N factors around 30~40 and 40 meter depth would be economically feasible and engineering sound.

It was decided to carry out further site investigations, which were conducted down to 70 meters depth. This survey also carried out laboratory tri-axial compression tests to determine the effect of settling on the piles. This boring revealed a candidate bearing sand /gravel soil strata at 38 to 42 meters with N factor above 30. The strata below weakened to N factors of 11 to 29 but firm bearing soil with N factor above 50 is found at depths below 60meters.

After review of the survey results, it was decided to employ cast in place concrete pile foundations 40.5 meters long and diameters of 800mm and 1,000 mm. (See attached Appendices 6.1 and 6.2 for the results of the Boring Surveys)

c) Earthquakes

There are no recorded major earthquakes in Ho Chi Minh. The present Vietnamese Building Laws have no detailed procedure for seismic design and it has been decided that minimal seismic structural design based on Japanese structural standards is sufficient.

3) Social Conditions

a) Infrastructure around the Project Site

Basic infrastructure, such as power supply, water supply, drainage and communication facilities are all proposed to be placed under the D5 road facing the Project site. However, the D5 Road is still under construction and only drainage mains have been put in place. 800mm mains are on the opposite side of the road and connected to manholes placed at 35 m intervals on the site side. Power supply system is presently available along the D2 road about 300 m from site at 15 kV voltage. New distribution facilities are to be provided by the Vietnamese side branching from the nearest point up to the receiving panel to be installed in the site under Grant Aid funds. A new power receiving room will be provided in the project facilities with appropriate transformers and distribution panels. Voltage fluctuation is large and power outages are frequent in Ho Chi Minh which will require appropriate countermeasures, including auxiliary diesel generator and uninterrupted power supply equipment (UPS) for the computerized equipment.

Water supply pressure is low and receiving tanks on the ground and pumps to lift up water to rooftop day tanks will be required. Water mains exist in existing road 60 meters from the site, but require passing through private land. After consideration the available options, it was decided to take a branch off from the water mains in Xo Viet Nghe Tinh Road, about 200 meters from site.

4) Building Design Regulations

Around the proposed site area, buildings having less than three stories are not granted building permits to encourage intensive use of urban land. Referring to the administrative guidance given by the Chief Architect of Ho Chi Minh to the FTU, minimum three stories are mandatory. Accordingly, the Project facilities will be three-storied in compliance with this regulation. In order to maximize the effective use of land and the building requirements, parking space for instructor’s automobiles and bicycles / motorbikes of students will be provided in the pilotis space on the ground floor of the facility.

Seismic design will be based on Japanese standards with a lateral load factor of 0.1 to reflect the local conditions. Typhoons land on Viet Nam about

once or twice annually and Vietnamese Building Law stipulates that Ho Chi Minh is a Wind Condition IIA area (effect negligible) and wind load factor of 830 dN/m^2 for load calculations. However, to rationalize structural design, Japanese structural standards will be used consistently and a wind load of 45 m/sec corresponding to the Vietnamese regulations will be adopted.

5) Local Contractors

Local contractors have gained expertise through participation in high-rise building projects under sub-contract with large foreign contractors. All large contractors are considered to have sufficient construction expertise for the project. However, adherence to a tight construction schedule and consistent quality control will require supervision under Japanese engineers.

6) Executing Agency

The Executing Agency for the entire period of the Project is FTU. It has vast experience running two separate campus in Hanoi and Ho Chi Minh. Furthermore, Project-type Technical Cooperation Scheme will send Japanese experts including an administrative expert during the initiative phase of the Project to assist in preparing administrative structure, curricula and setting student fees, etc. There is no deficiencies in administrative experience or maintenance expertise.

7) Time Schedule

Based on construction scheduling, etc, described in Chapter 3, the Project is proposed to be a single term project of 11months under Japan's Grant Aid Scheme.

8) Grade of Facilities and Equipment

Training equipment components will be designed based on the Hanoi Center and have similar capabilities.

2-3-2 Basic Design of Project Facilities

(1) Plot Plan

The Project site is situated in Binh Tanh District, which lies to the northeast of the central No. 1 District. The whole site is approximately 4,300 m^2 with dimensions of 50 m in depth north south and 110 m wide east west along D5 road. The site is flat and surrounded by scattered housing. The plot allocated for the Project

facilities is on the southwest corner of the site and has dimensions of approximately 25 m width and 40 m depth and area of around 1,000 m^2. (Ref. Figure 2-1). The Project Facility having a ground coverage of approximately 640 m^2 will be placed on the site facing east, on to the central open area of the proposed campus of the FTU Ho Chi Minh Branch. The main entrance will be approached over a lotus pond and up the main stairs to the lobby on the second floor. The main gate will be constructed along the D5 road by the Vietnamese side and the approach road up to the facility will be constructed with Grant Aid funds.

(2) Determination of Project Facility Floor Area

The floor area of each room in the Project facilities will be determined based on the planned seminars, their frequency and number of attending trainees, on the number of people occupying the rooms and on installed equipment sizes in the rooms as agreed in the Minutes of Discussion. Space calculation processes are as described below:

1) Cultural Exchange / Lobby Zone

a) Lobby: =110 m^2

This space will be designed to provide a suitable entrance space to the entire building for trainees, visitors and project personnel. It will concurrently afford a space for information services by a large flat panel display unit and will be used as a space for cultural exchange activities between the Center and the surrounding community. This space will be sized at maximum possible size within the 33% of total floor area to be allocated to all circulation spaces such as corridors and staircases, which is a standard building design practice. (=100 m^2)

Canteen will be provided behind a screening wall. (=10 m^2)

b) Library: =172 m^2

Main Room =99m^2

Reading Room: Seating for 28 persons and circulation, facing the future main open space of the campus 2.0 m^2/p.×28 p. (=56 m^2)

Control desk: Administration of Library, renting out of videos and use of internet, copying/printing 5m x 4m (=20 m^2)

Circulation space (=23m^2)

Storage =23m^2

Book racks: Rack space for 5,000 books, 5,000÷300 /m^2, (=17m^2)

video rack 6 m^2 (=6 m^2)

Internet Booths =23m^2

10 internet access booths, 1.6m×0.9m×10m (=14m^2)

circulation space (=9 m^2)
Study Carrels =11m^2
5 self-study booths, 1.6m×0.9m×5 (=7 m^2)
circulation space (=4 m^2)
Guidance Booths
2 booths, 2.0 m^2x 8persons (=16 m^2)

2) Seminar Zone

To enable versatile training activities, movable partitions will be introduced to enable efficient and flexible space creation.

a) Multi-Purpose Room: =180 m^2
Multi-function room formed by combining 3 seminar rooms with combined seating of 100, school type 3-seater, 1.5 m^2/p×100; (=150 m^2)
lectern 10m×3m (=30 m^2)
A booth for simultaneous interpreter will be required, for which an observation window and space will be provided in the storage on the west side of the room.

b) Seminar Rooms: 2 rooms for 36 persons each, school type 3-seater, 1.5 m^2/p.×36 p×2+ Lectern 6m×1m×2 =120 m^2

c) Computer Room: 20 PCs for study and 1 PC for instructor, 3.0 m^2/p.×20 p. =60 m^2

d) Cultural Exchange Room: Cultural exchange activities introducing Japan and social gathering, for 16 persons, ante-room provides storage space when required =53 m^2

e) Japan Club: Activity space for Japan Club, JOCVs etc., work tables and lockers with keys, 2.9 m^2/p.×8 p. =23 m^2

f) Storage, others =12 m^2
Translator Space 2m×3m (=6 m^2)
Hot Water Room 2m×3m (=6 m^2)

3) Administration Zone

a) Director Rooms: 1 room for Directors 8 p.×4 m^2/p. =32 m^2

b) Reception Room: Space for 15 p =20 m^2

c) Office =122 m^2
Administrative staff space (for 6); 5.0 m^2/p.×6p. (=30 m^2)
Lecturer space (for 9) : 5.0 m^2/p.×9 p. (=45 m^2)
Locker & office machine space 5.5m×2.5m (=14 m^2)
Kitchenette: 2mx3m (=6 m^2)
Circulation space (30%) (=27m^2)

d) Meeting Room: Conference space for 15 persons, 2.0 m^2/p.×15 p. =30 m^2

e) Storage: 17% of office area =13 m^2

f) Secretary Space: 7.0 m^2/p.x 1p. =70 m^2

4) Others

a) Corridors and Staircases: 33% of total floor area of above 1)~3) (excluding Lobby 100 m^2 on the 1st floor) =174 m^2

b) Toilets: 1st floor Guard man: (M) water closet 1, lavatory sink 1
2nd floor (for 50 occupants):
(M) water closet 2, urinal 2, lavatory sink 2,
(F) water closet 3, lavatory sink 3
3rd floor (for 160 occupants):
(M) water closet 2, urinal 3, lavatory sink 3,
(F) water closet 4, lavatory sink 4 =82 m^2

c) Mechanical Equipment Space & others: =84 m^2
Power Room, Pump Room , etc (=78 m^2)
Guard room (=6 m^2)

Based upon the above calculations, various rooms have been practically sized and laid out as summarized in Table 2-2.

Table 2-2 Room Areas (m^2)

Room	Remarks	Designed Area (m^2)
1 Exchange / Lobby Zone		**297**
Lobby	Display, lounge	120
Library		176
Reading Room	24 seats, 2AV tables and control desks	(100)
Internet Booth	10 internet booths	(26)
Book Rack Storage	Book racks for 5,000 books	(22)
Study Carrels	5 self study booths	(11)
Guidance	2 guidance tables	(17)
2 Seminar Zone		**443**
Multi-Purpose Room	100 sets, dividable	176
Seminar Room (1), (2)	36 sets x 2	118
Computer Room	20PC, instructor's desk	59
Cultural Exchange Room	Japanese cultural exchange	46
Japan Club	App. 7 persons	23
Storage and others		21
3 Administration Zone		**218**
Director Room	1 rooms for 2 persons	35
Reception Room	15 persons	20
Administration Office	Office worker x 6, office equipment.	50
Instructor Room	9 Lecturers, textbook editing equip.	68
Meeting Room	15 persons,	30
Storage		8
Secretary Space		7
4 Circulation/ Mechanical		**350**
Total Floor Area		**1,308**

(3) Layout and Floor Planning

As has been described in the previous sections, the facility is composed of three main zones, Cultural Exchange Zone, Seminar Zone and Administration Zone. Each zone will be independently spaced to keep each type of user separate while allowing easy access to each zone.

Most students in Viet Nam use motorbikes or bicycles to commute and the first floor will be mostly parking space for the students and instructors. Generator room, power room, pump room and guard room are also on this floor,

The second floor is the main floor with entrance, lobby, library and administration spaces. The lobby will be a centrally located space with voids in the central area opening vistas and air circulation to the third floor. The circulation is easily recognizable due to the vistas. Soft natural lighting from high clerestory windows will provide illumination during daylight hours, reducing maintenance costs.

The third floor houses all seminar activities. The rooms are placed facing the central void allowing reasonable separation of the various rooms, while maintaining eye contact and coherence. The multi-purpose room located on the south side can be divided into three separate rooms by movable partitions and will be used as the instruction rooms for Japanese language courses as well as large conferences and seminars.

The two seminar rooms are the primarily rooms for business courses and can be joined into one large room by folding the movable partitions. The cultural exchange room is designed as a Japanese 'Tatami' room with an anteroom which doubles as viewing space of demonstrations of Japanese cultural activities and as the storage space for unused furniture when the multi-purpose room is used for special functions.

(4) Facility Design

The main entrance facade of the Center will face the large central open area planned for the proposed FTU Ho Chi Minh Branch buildings. The roofs are twinned to form a gable design accentuating the frontal element of the eastern elevation, which faces the future central campus open space.

1) External Elevations and Sections

External elevations and sections will be designed in the following manner:

The external elevations will be designed as raised floor design with the first floor as pilotis space and window will be designed for functionality of the interior spaces. The roof structure over the Multi-purpose Room, etc. will be made from steel due to the large span of the rooms.

a) Main structural components (columns, beams and floor and roof slabs) will be of reinforced concrete with brick masonry walls.

b) Main rooms will be air conditioned to maintain environment suitable for studies.

c) Rooms with large occupancy such as library and seminar rooms will have a minimum ceiling height of 3 m. Other rooms will have a ceiling height of 2.5 m in principle

From preliminary structural calculations, floor heights have been determined to be:

First floor	2.7 m
Second floor	3.5 m
Third floor	4.0 m

2) Finishing Materials Plan

The first floor will be expressed as an open air raised pilotis space. On the walls, windows will be arranged to reflect internal rooms and their sizes, with simple and functional design. Especially, the eastern elevation, which will face the future campus central open space, is designed for frontality and emphasizes the scale of the structure.

The large rooms on the third floor such as multi-purpose room will require steel structure roof because of the large span. This will be expressed as sloped roofs with local glazed tile roofing. Both external and internal walls will be finished with paint on mortar screed. Interior finishing materials will be selected for durability and stain resistance for easy maintenance.

The second floor Lobby will be given a Japanese feel with selected finishing materials to express the Japanese Character of the facility.

Major finishing materials will be as given below:

a) Exterior Finishing

Wall : Paint finish on mortar screed over brick masonry
Columns : Paint finish on mortar screed over concrete structure

Roof : Local glazed tile roof, partially asphalt built-up waterproofing covered with mortar

Windows : Aluminum window frame with clear glass glazing.

b) Interior Finishes

- Ordinary rooms (multipurpose, seminar rms., adm. office, library)

  Floor : Vinyl tile
  Wall : VP paint on mortar screed (VP: vinyl paint)
  Ceiling: Acoustic ceiling tile

- Computer room

  Floor : Vinyl tile on free-access floor
  Wall : Same as the ordinary rooms

- Lobby

  Floor : Special quarry tile
  Wall : Texture paint on mortar screed
  Ceiling: Gypsum plaster on concrete

(5) Structural Design

The seismic design code has not been formalized in Viet Nam. The Building Code recommends that a recognized international design standard be applied. The Japanese Building Code Design Standards will be applied, based on the following criteria.

1) General Conditions

a) Design Load

Design Load values are shown in Table 2-3 below.

Table 2-3 Design Load List

	Type	Floor	Frame	Earthquake
General	Dead load	440	440	440
	Live load	300	180	80
	Total load	740	620	520
Metal Roof	Dead load	80	80	80
	Live load	100	100	30
	Total load	180	180	110

Note: values are in kg/m²

b) Major structural materials

The structural materials to be used in the construction of the Project facilities will be based on the following criteria.

Concrete : General structural concrete Fc=24, Leveling concrete Fc=15

Steel Reinforcement Bars : Equivalent to JISSD295A (R9~22,D10~16),JIS SD345 (D19~25)

Structural Steel : Equivalent to JIS SS 400

c) Seismic Load

The seismic design code has not been formalized in Viet Nam. The Building Code recommends that a recognized international design standard be applied. The Japanese Building Code Design Standards will be applied in this regard using a seismic factor of 0.1, based on the past seismic history of the region.

d) Wind Load

The Vietnamese Architectural laws stipulate that the Ho Chi Minh area is a IIA district, with specified wind load of 830 dN/㎡. However to maintain consistency with seismic design the Japanese structural code will be used. Wind load will be calculated at 45 m/s wind velocity, corresponding to the Vietnamese code values. The wind load is calculated from the following formula:

$q=0.6EV_0^2$

$E=E_r^2 G_f$

where q: wind pressure
E: coefficient determined from second formula
V_0: wind velocity determined from past history of region
E_r, G_f: coefficients determined by height of building and roughness of terrain

2) Design of Main Structural Frame

Main structural frame will be of reinforced concrete. External and internal walls will be of brick masonry. However, structure for main roofs will be structural steel truss design for the large spans.

3) Piling Design

Foundations will be supported by cast-in-place reinforced concrete piles, 800 and 1,000 mm in diameter. The bearing soil will be clayey sand and gravel stratum lying 40 m below the present ground level.

a) Axial Loads of Building

Table 2-4 Axial Loads For Each Column

(Unit: ton)

Axis Code	1	2	3	4	5
A	47	77	90	92	60
B	79	*107*	*109*	*113*	91
C	88	*127*	*135*	*148*	104
D	89	*130*	*135*	*148*	104
E	79	*115*	*121*	*108*	89
F	46	79	91	90	60

Note: italics are central columns

- Average Axial Load (for perimeter columns): 80.8 ton
- Average Axial Load (for central columns) : 124.7 ton

b) Bearing Capacity of Piles

Bearing Capacity of piles is calculated from the formula;

Ra= (Rp+Rf)/3-W

Where Ra: Bearing Capacity of Pile

Rp: Bearing Capacity at Tip

Rf: Friction factor

W: weight of piles excluding displaced soil

From the boring investigations data and the above formula, the following bearing capacity for piles are calculated as follows:

Table 2-5 Bearing Capacity of Piles

Diameter of Pile	600 mm	800 mm	1,000 mm
Bearing Capacity (ton)	61.3	92.6	129.4

c) Settlement Factor

Settlement factor requires bearing capacity to be reduced by the negative friction caused by settlement of the soil. However, the boring data show that the negative friction in this case is negligible, as settlement occurs over a period of around 315 years.

d) Required Number of Piles

From the above analysis, it has been determined that the perimeter piles should be 800mm diameter and the central piles be 1,000mm diameter, with 18 and 12 numbers, respectively.

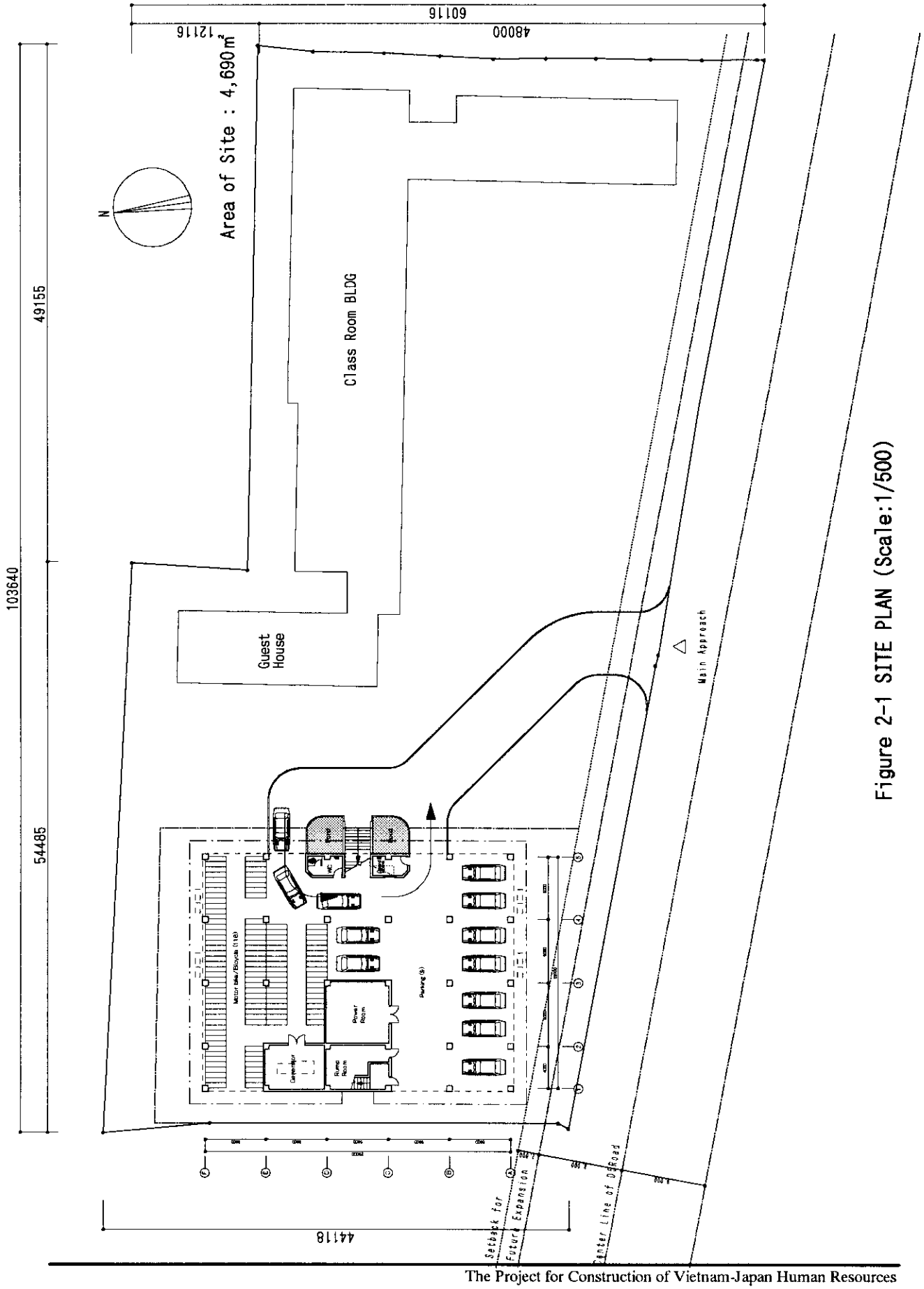


Figure 2-1 SITE PLAN (Scale:1/500)

	Room Name	Area (m²)
1	WC	6.5
2	GuardRoom	6.5
3	PowerRoom	34.8
4	PumpRoom	23.2
5	GeneratorRoom	23.2
	Total	94.2

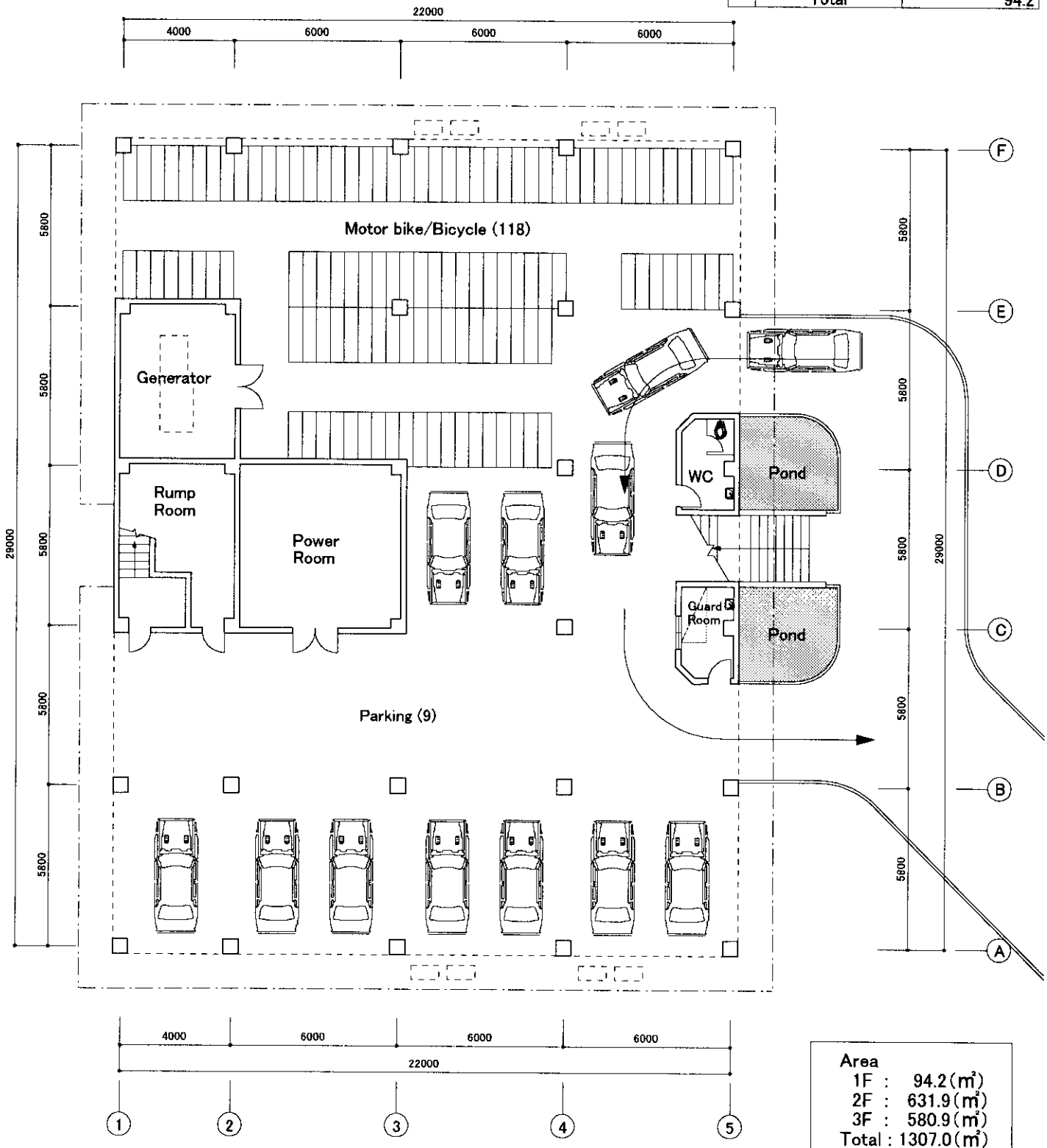


Figure 2-2 1st FLOOR PLAN (Scale:1/200)

	RoomName	Area(m²)
1	Lobby	112.8
2	Canteen	6.7
3	MainRoom	100.1
4	BookRacks	21.9
5	InternetRoom	25.9
6	StudyRoom	11.0
7	GuidanceCorner	17.4
8	JapanClub	23.2
9	DirectorRoom	34.8
10	ReceptuonRoom	20.3
11	Office	117.6
12	MeetingRoom	30.4
13	Storage	7.6
14	Secretary	6.9
15	WC	23.2
16	WC	16.0
17	Stair,Corridor	56.2
	Total	631.9

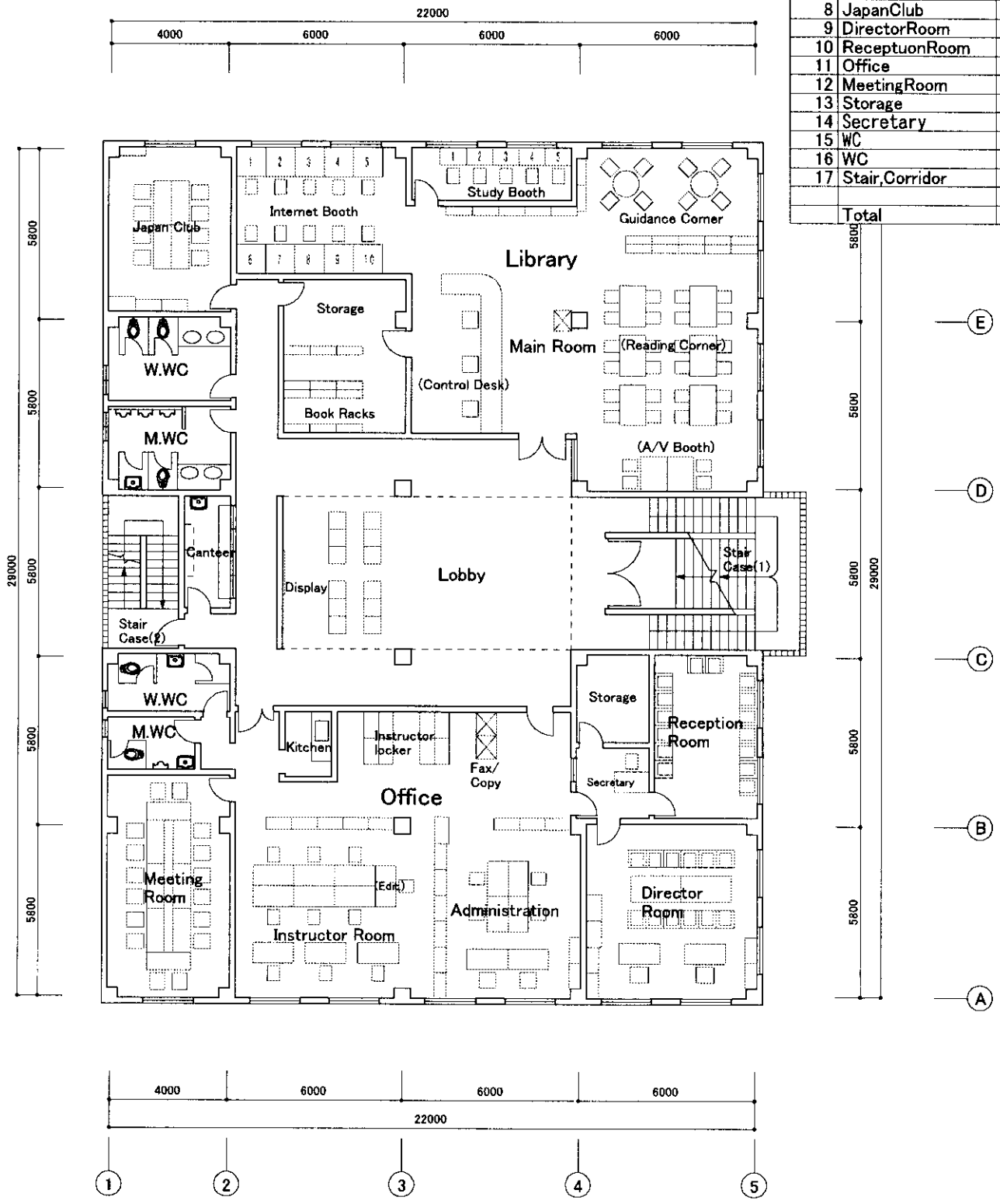


Figure 2-3 2nd FLOOR PLAN (Scale:1/200)

	Room Name	Area (m²)
1	MultiPurposeRoom	176.4
2	SeminarRoom	117.6
3	ComputerRoom	58.8
4	Ante.room,Storage	23.2
5	JapaneseCultureRoom	23.2
6	Storage	7.2
7	Trans	7.2
8	Kitchen	6.7
9	WC	36.5
10	Stair,Corridor	124.1
	Total	580.9

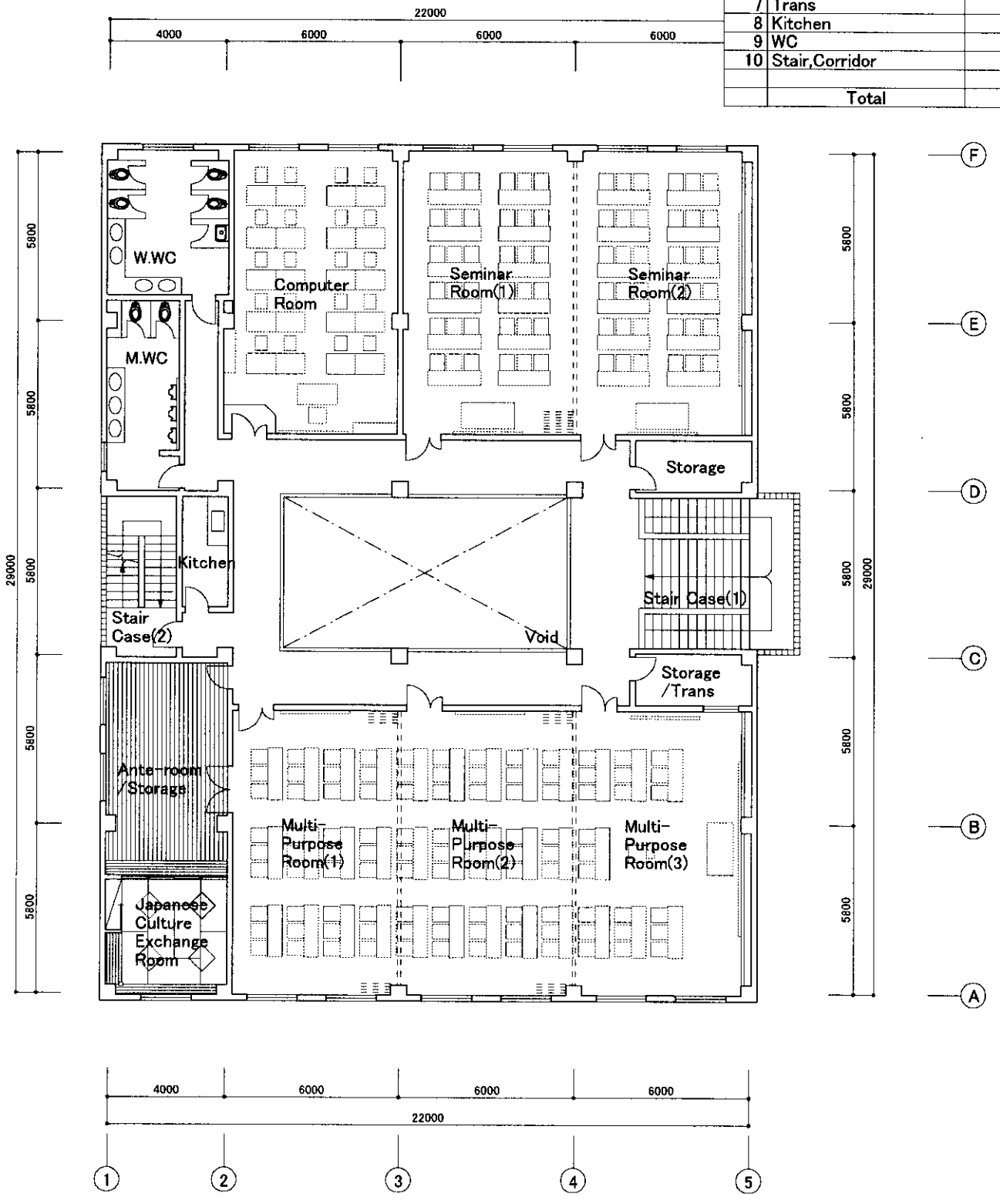


Figure 2-4 3rd FLOOR PLAN (Scale:1/200)

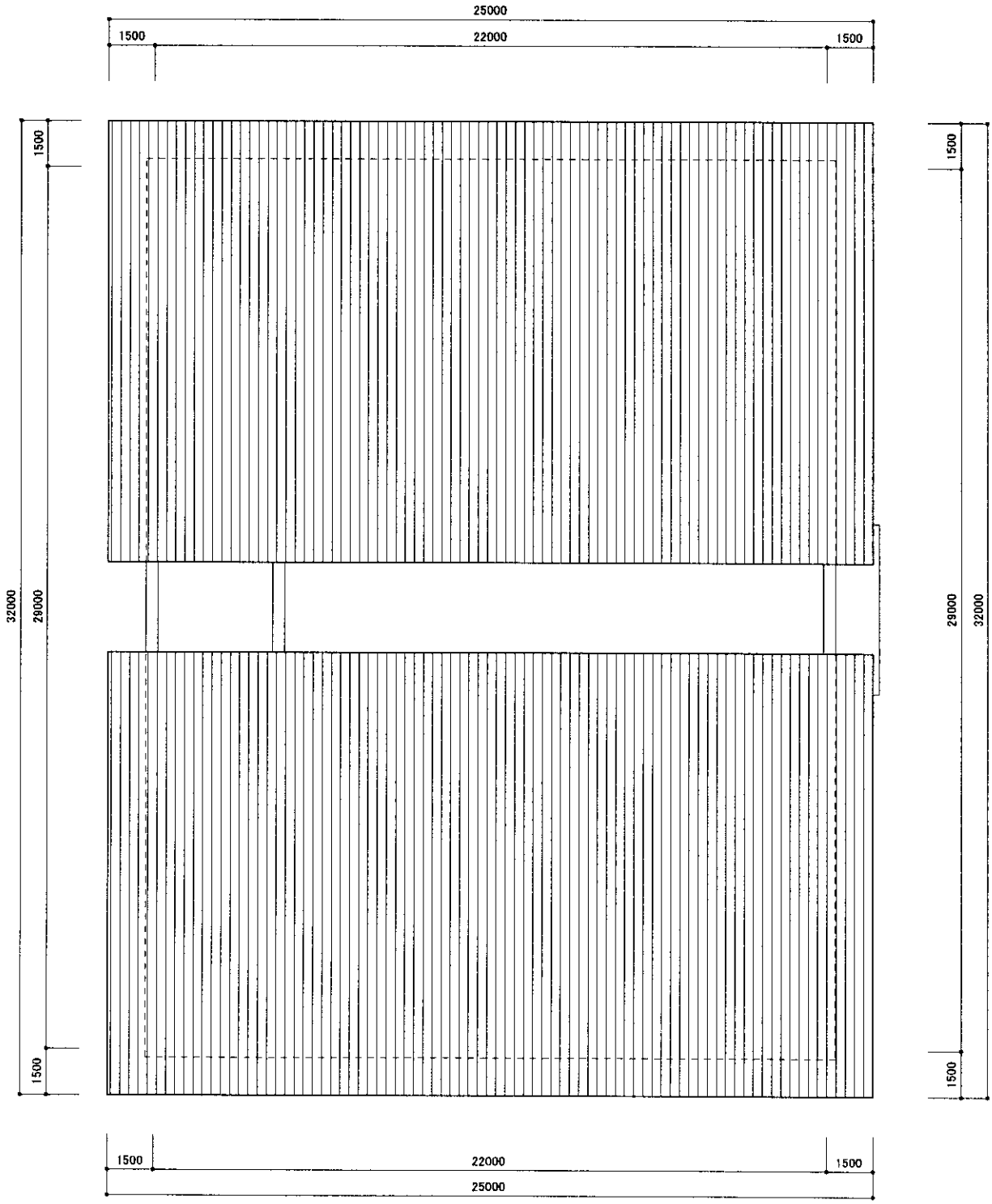


Figure 2-5 ROOF PLAN (Scale:1/200)

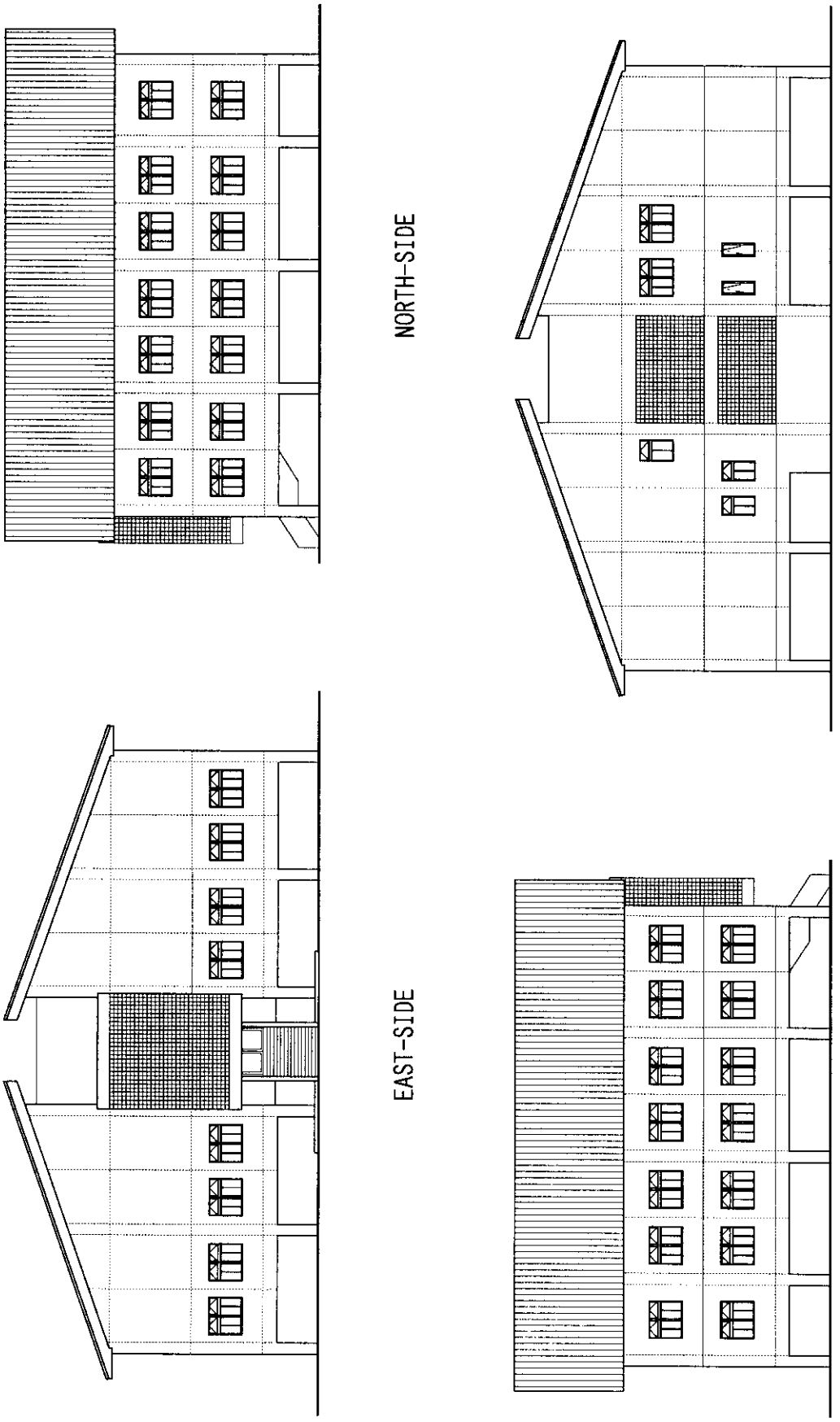


Figure 2-6 ELEVATION (Scale:1/300)

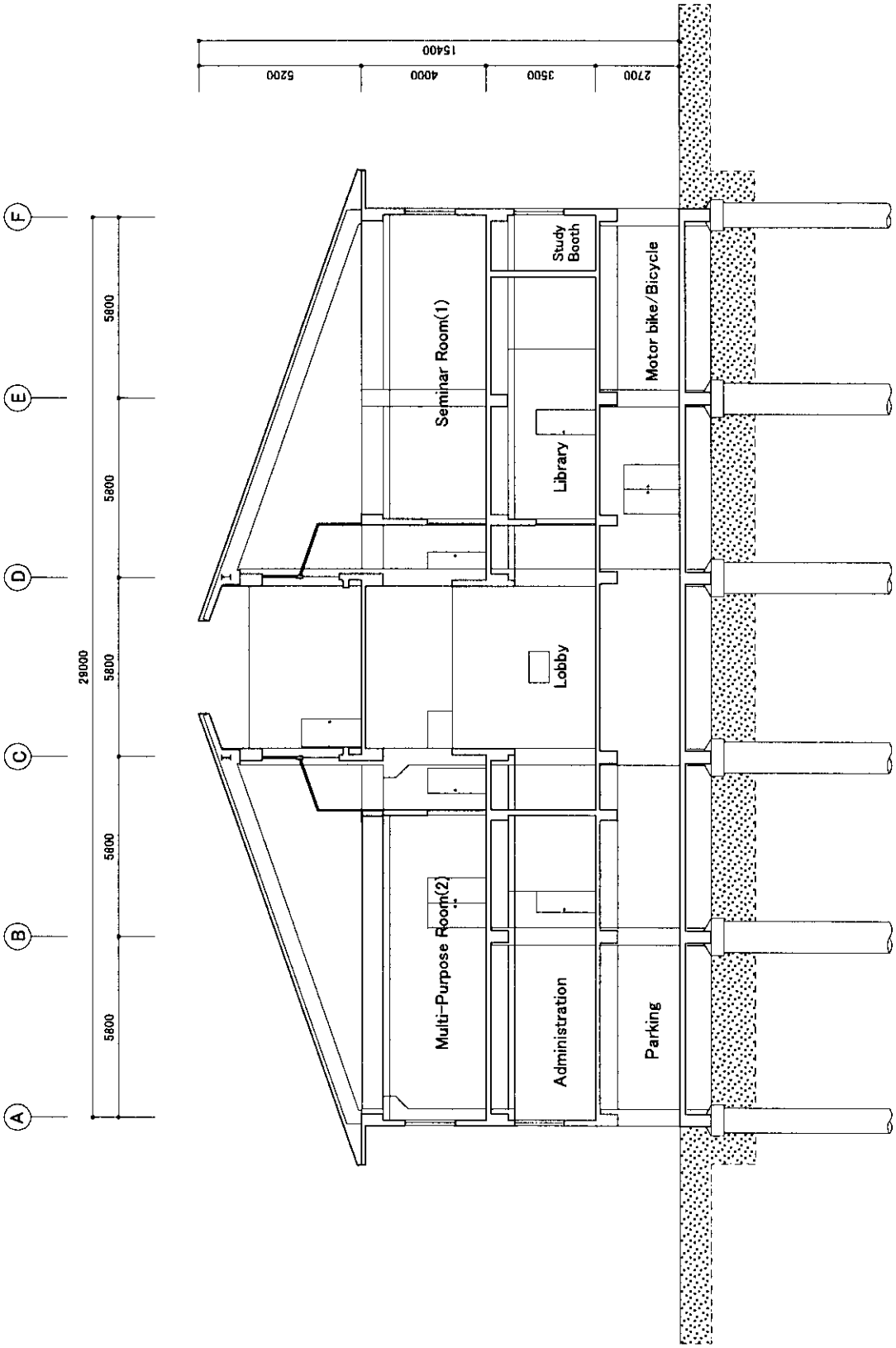


Figure 2-7 SECTION-1 (Scale:1/200)

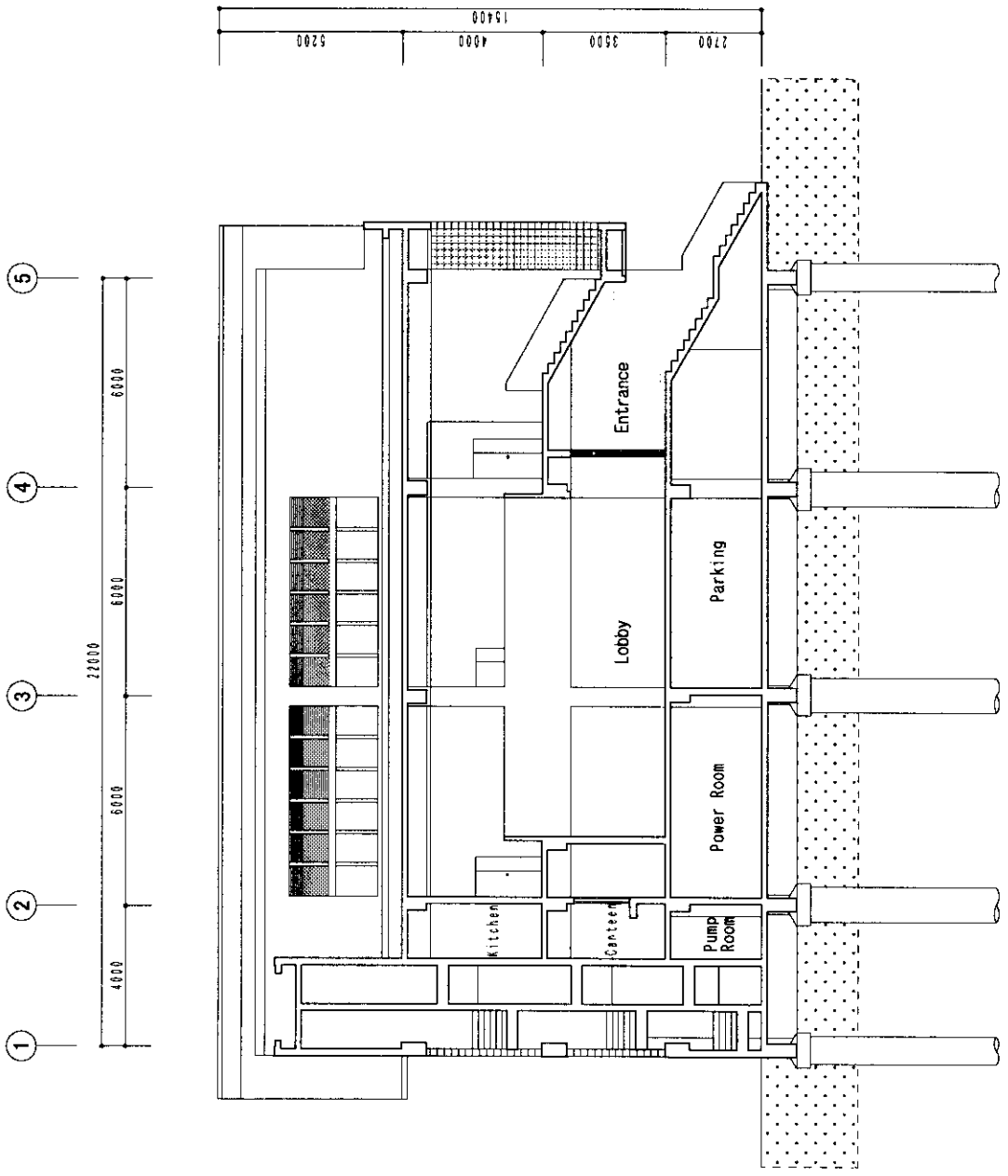


Figure 2-8 SECTION-2 (Scale:1/200)

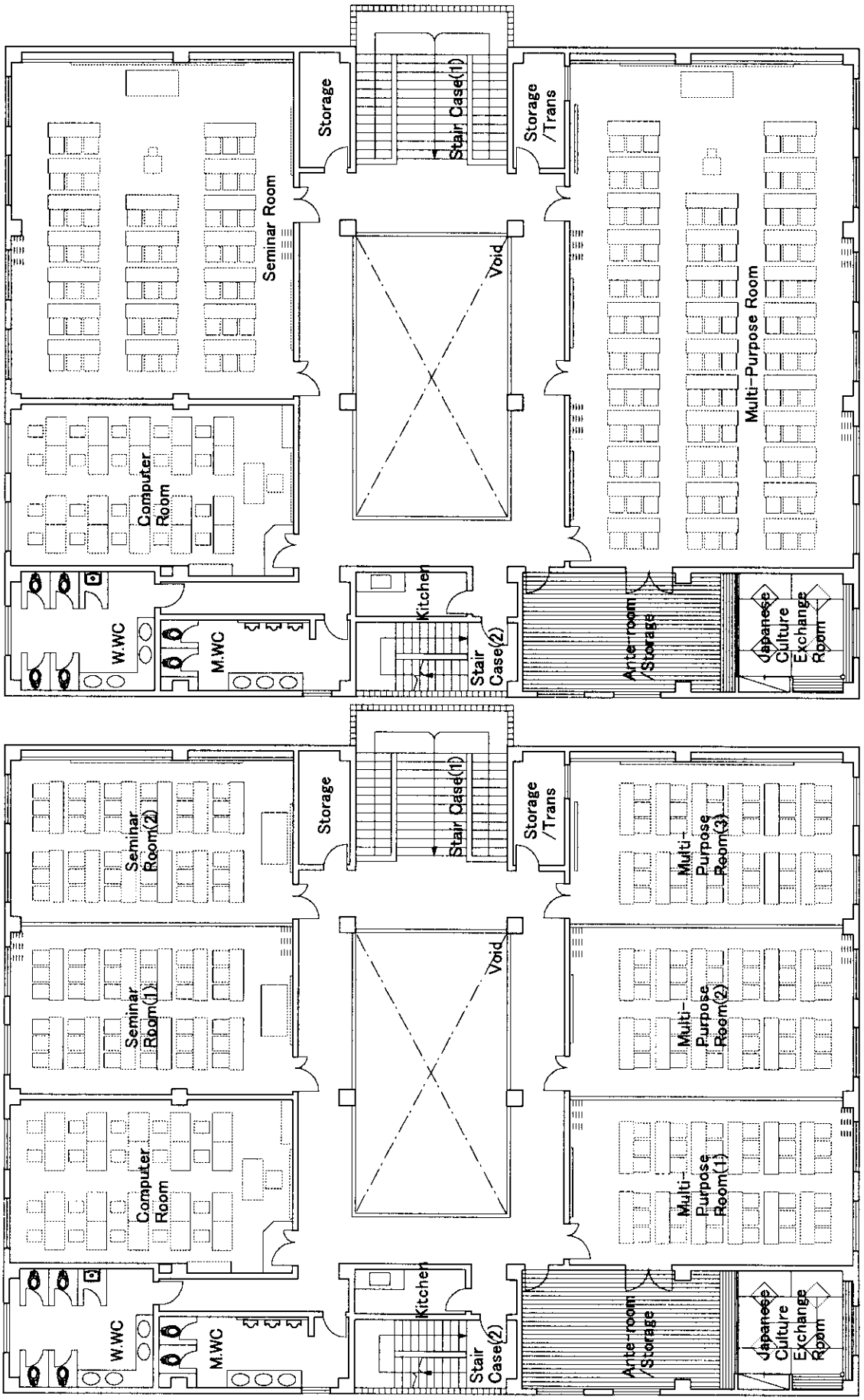


Figure 2-9 THE LAYOUT OF MULTI-PURPOSE ROOM AND SEMINAR ROOM

(6) Building Service Systems Design

1) Electrical System

Receiving voltage of power will be 15/22 kV to comply with the Electricty of Viet Nam's (EVC) future standard distribution voltage to which EVC is planning, to unify in their development plans. The present power supply is 15kV up to D2 road 300 meters from the site.. The power receiving equipment will be a convertible type of 15 kV and 22 kV with a capacity of 150 KVA.

Power supply is generally unstable in Viet Nam and a diesel generator with the following specifications will be provided:

- Rated power output : 50 KVA (for partial lighting, CPU, fire protection system etc.)
- Fuel : Light oil (JIS K2204-2 or equivalent)
- Diesel engine : Linear 4-cycle, water cooled
- Generator : 3-phase synchronized alternate current generator, horizontal axis, air cooled

a) Power Receiving System

Electric power for the Project facilities will be received at the power room on the first floor. As Ho Chi Minh has frequent power failures, the Project will be provided with uninterrupted power supply units (UPS) for computerized equipment and a back-up generator for general purposes.

The electrical system and equipment will comply with the following standards:

- Electricity of Viet Nam (EVN)
- Japanese Industrial Standards (JIS)
- Japan Electrotechnical Standards (JES)
- Japan Electrical Manufacturers Association Standards (JEM)
- International Electrotechnical Commission Standards (IEC)
- Japan Cable Standards (JCS)

Equivalent international standards will also be allowed.

a) Main Power Circuits

Power lines will be taken from the external receiving panels and into the Power Room. Lines from the low-tension distribution panels will distribute power to each requirement at 380/220 V, 50 Hz. UPS devices will be provided for training equipment as required.

b) Lighting and Power Outlets

Lighting system for each room will be planned with due consideration to low running cost and easy maintenance while securing proper luminance levels. Luminance levels in major rooms will be determined according to JIS standard taking into consideration the local conditions as shown in Table 2.5. In order not to interrupt ongoing training activities, power will be supplied to the major rooms at power failure from the diesel generator.

c) Telephones and Facsimile

Existing telephone lines will be extended to VJCC to provide 15 circuits among which 8 circuits will be used for normal telephone communications, 1 circuit for the facsimile in the administration office and 6 circuits for internet connections router.

d) Paging System

Emergency paging system will be provided in the major rooms. Amplifier and microphone will be installed in Administration Office.

e) Fire Detection System

Automatic fire detecting system will be provided throughout the building based on Japanese Fire Prevention Standards.

f) Television Antennas

Television antennas and receiving equipment for satellite transmissions will be provided. Parabolic antennas will be installed on the roof of the building for satellite transmissions. Receiver outlets will be provided in the Director room, Instructor Room, Multi-Purpose Room, Seminar Room and Library.

g) Lightning Protection System

Lightning protection system will be provided to protect computer systems and other sensitive equipment.

2) Plumbing System

a) Domestic Water Supply

Water will be received by an underground water reserve tank, then lifted up to an elevated water tank on the roof of the building. The elevated tank and the underground tank will have capacity of 2 m^3 and 10 m^3,

respectively. Plumbing fixtures will be western type, such as water closet with cistern tank.

b) Hot Water Supply

Hot water will be supplied by electric hot water heaters in Canteen on the second floor and Kitchen on the second and third floors.

c) Soil Water Drainage

Soil water from toilets and kitchens will be conducted to a sewage reception drain pit constructed in the site and the water discharged to the existing sewage manholes along D5 road.

d) Fire Protection System

Indoor fire hydrant system will be provided according to the Japanese Fire Code. Power for the fire pump unit will be supplied from the diesel generator.

3) Air Conditioning & Ventilation Systems

a) Air Conditioning Systems

Air conditioning system will be provided to such major rooms as seminar rooms, multipurpose room, administration office, library, lobby and director rooms to counter the high temperature high humidity summer in the region. Air conditioning equipment will be split multi-type units which can individually be controlled locally. Indoor units will be either ceiling mounted, wall mounted or floor mounted types according to the room conditions.

b) Ventilation System

Air-conditioned spaces will be accompanied with ventilation equipment to take in outdoor fresh air and exhaust stale air. Other spaces such as toilets where ventilation is necessary will be provided with wall mounted propeller fans.

The above building service systems are summarized in the following Table 2-5.

Table 2-5 Summary of Building Service Systems (1/2)

Floor	No.	Name of Room, Area	Air Cond. (Cooling)	Ventilation (Mech.)	Potable Water	Hot Water	Lighting Illumination Normal	Emergency	Receptacle e:earth	Fire Alarm	Speaker Emergency	TV outlet	Telephone ●Outside ○Int. F:Facsimile I:Internet	Remarks
2nd FL														
	F	Lobby	-	-	-	-	150	150	○	○	○	-	● for public line	
		Canteen	-	○	○	○	150	-	○ e	○	-	-	-	
	G	Library												
		Control Desk, Readin Area Internet Booth, Guidance Corner	○	○	-	-	300	150	○ e	○	○	○	●+ I	
		Study Booth	○	○	-	-	300	150	○ e	○	○	-	-	
		Book Storage	-	○	-	-	300	150	○ e	○	○	-	-	
	H	Director Room	○	○	-	-	200	100	○	○	○	○	●+ I	
	I	Secretary Room	○	○	-	-	300	150	○	○	-	-	○	
	J	Reception Room	○	○	-	-	200	10	○	○	○	○	○	
	L	Administration	○	○	-	-	300	150	○	○	○	-	●+ F, I	
	M	Instructor Room	○	○	-	-	300	150	○ e	○	○	-	●+ I	
	K	Meeting Room	○	○	-	-	300	10	○	○	○	-	○	
	E	Japan Club	○	○	-	-	300	10	○	○	○	-	○	
		Pantry	○	○	-	-	100	-	-		-	-	-	
			○	○	○	○	150	150	○ e	○	-	-	-	
		Staircase 1	-	-	-	-	150	150	-	-	-	-	-	
		Staircase 2	-	-	-	-	150	150	-	-	-	-	-	
		Toilet for Administration Area (M)	-	○	○	-	150	-	-	-	-	-	-	
		Toilet for Administration Area (F)	-	○	○	-	150	-	-	-	-	-	-	
		Toilet for Lobby Area (M)	-	○	○	-	150	-	-	-	-	-	-	
		Toilet for Lobby Area (F)	-	○	○	-	150	-	-	-	-	-	-	
3rd FL														
	A	Multi-Purpose Room (1)	○	○	-	-	300	300	○ e	○	○	-	-	
		Multi-Purpose Room (2)	○	○	-	-	300	300	○ e	○	○	-	-	
		Multi-Purpose Room (3)	○	○	-	-	300	300	○ e	○	○	○	-	
		Storae for Multi-Purpose Room (Translator room)	-	○	-	-	100	-	○	○	-	-	-	
	D	Japanese Culture Exchane Room	○	○	-	-	300	10	○	○	○	-	○	
		Ante-room for Japanese Culture Exchane Room (Furniture Sotrage for Multi-Purpose Room)	○	○	-	-	300	10	○	○	○	-	-	
	B	Seminar Room (1)	○	○	-	-	300	300	○ e	○	○	-	-	
		Seminar Room (2)	○	○	-	-	300	300	○ e	○	○	-	-	
	C	Computer Room	○	○	-	-	300	300	○ e	○	○	-	●+ I	Elevated Floor
		Pantry	-	○	○	○	150	-	○ e	○	-	-	-	
		Staircase 1	-	-	-	-	150	150	-	-	-	-	-	
		Staircase 2	-	-	-	-	150	150	-	-	-	-	-	
		Corridor	-	-	-	-	150	10	-	○	-	-	-	
		Toilet (M)	-	○	○	-	150	-	-	-	-	-	-	

Table 2-5 Summary of Building Service Systems (2/2)

Floor	No.	Name of Room, Area	Air Cond. (Cooling)	Ventilation (Mech.)	Potable Water	Hot Water	Lighting Illumination Normal	Lighting Illumination Emergency	Receptacle e:earth	Fire Alarm	Speaker Emergency	TV outlet	Telephone ●Outside ○Int	Remarks
													F: Facsimile	
													I: Internet	
1st FL		Toilet (F)	-	○	○	-	150	-	-	-	-	-	-	
		Staircase 1	-	-	-	-	150	150	-	-	-	-	-	
		Staircase 2	-	-	-	-	150	150	-	-	-	-	-	
		Parking for vehicle	-	-	-	-	100	-	-	○	○	-	-	
		Parking for bicycle and motorbike	-	-	-	-	100	-	-	○	○	-	-	
		Piloty corridor	-	-	-	-	150	10	-	○	-	-	-	
		Toilet for Guard	-	○	○	-	150	-	-		-	-	-	
		Electrical Room	-	○	-	-	150	10	○	○	-	-	-	
		Pump Room	-	○	-	-	100	10	○	○	-	-	-	Water supply pump Int. Fire Water pump
		Emergency Generator Room	-	-	-	-	100	10	-	○	-	-	-	
		Guard Room	-	○	○	-	150	10	○	○	-	-	○	
Roof FL		Cooler outside unit area	-	-	-	-	-	-	-	-	-	-	-	
		Parabora antena	-	-	-	-	-	-	-	-	-	-	-	
		Water Tank	-	-	-	-	-	-	-	-	-	-	-	
		Staicase 2	-	-	-	-	-	-	-	-	-	-	-	

(8) Basic Design of Training Equipment

The Training Equipment component of the Project will be comprised mainly of audio-visual equipment and computers for training and facilities for information services and administrative office equipment and furniture.

The Training Equipment will be provided for all three zones of the Project facility: Cultural Exchange/Lobby Zone, Seminar Zone, and Administration Zone as outlined below:

1) Cultural Exchange/Lobby Zone

The Cultural Exchange/Lobby Zone will be a place to receive visitors and trainees and is composed of the lobby and library on the second floor. Here information services and cultural exchange activities will be conducted.

a) Lobby: The lobby will have a 42 inch flat panel plasma display unit continuously showing video programs introducing Japan's culture, technology and nature. Control unit for display will be installed in the control desk in Library.
b) Library: The library will have 10 booths for viewing the internet, which can be connected to a printer. In addition, 2 units of audio-visual booths for viewing video programs on Japan's culture, technology etc. will be provided for the trainees and visitors. There will be 5 self-study booths for the trainees that will be acoustically insulated from the main room and 2 guidance booths where guidance services will be rendered to prospective overseas study students. Bookracks will be provided in a stacking space with a capacity for 5,000 books.

2) Seminar Zone

The Seminar Zone will be located on the third floor and constituted of the multipurpose room, seminar rooms, computer room, cultural exchange room and Japan Club room to conduct various seminars and lecturers.

a) Multi-purpose Room: Multi-purpose room will be formed by combining three small seminar rooms on the south side of the third floor, where the movable partitions can be folded away, creating a large space capable of accommodating over 100 people. The Multi-purpose room will have audio-visual equipment for various presentation purposes, including sound system, video projector, computer presentation unit, screens etc. to support various seminars and lectures. The booth for simultaneous translation will be placed in the storage adjacent to the Multi-Purpose Room.

b) Seminar Room: The room on the north side of the third floor is designed as a seminar room for holding general seminars and will accommodate about 72 people. It will have one set of portable audio-visual and computer presentation equipment.

c) Computer Room: The computer room will have 20 computer sets for the trainees and one server computer for the instructor together with a printer and scanner. The computers will be joined in a Local Area Network (LAN) system through a free-access floor raised 150 mm above the floor slab. Uninterrupted power supply unit (UPS) will be provided for the computers

d) The Cultural Exchange Room; The Cultural Exchange Room will be designed as a Japanese 'tatami' room and have an ante-room, which also be the storage space for excess furniture when the Multi-purpose room is used for special functions.

3) Administration Zone

The Administration Zone is located on the second floor constituted of Director Room, Administration Office, Reception Room, Meeting Room, Instructor Room etc. where administrative services are rendered.

a) Director Room: A director room will be provided with sufficient space for two desks as there will be a co-representative from Japan normally residing in Hanoi during the Project-type Technical Cooperation period, who will periodically visit Ho Chi Minh. The room will be furnished with appropriate desks, chairs and bookshelves.
b) Reception Room: Reception furniture for 15 persons is included in the Training Equipment list.
c) Administration Office: Lockable cabinets will be provided for 6 staff along with desks, chairs, a copy machine and facsimile machine.
d) Instructor Room: The room will be used by the teaching staff including the Japanese experts dispatched under the Project-type Technical Cooperation Scheme.
e) Secretary space: A Secretary space will be provided adjacent to the Director room.

The equipment and furniture provided in the above rooms are summarized in the Table 2-6 below.

Table 2-6 Training Equipment Furniture List

Equipment & Furniture List			Multi-Purpose Room	Seminar Room	Computer Room	Japanese Culture Exchange Room	Japan Club	Lobby	Library	Director Room	Secretary Room	Reception Room	Meeting Rom	Administration	Description/Remarks
No.	Name of Equipment or Furniture	Q'ty	A	B	C	D	E	F	G	H	I	J	K	L	
	1. Computer														
1-1	Personal Computer	33			21				12						For Control of Plasma Display in Lobby, Administration of Library, Internet Booth, Computer Room Desk Top PC w/CRT 15", PenIII, RAM64MB, HD12G Windows98(English, Japanese)、Vietnamese font、Office2000
1-2	Uninterrupted Power Supply (UPS) Small	3			1				2						650VA400W, Autonomy5min., PC for Instructor of computer room, Lobby Display and Administration of Library
1-3	Uninterrupted Power Supply(UPS) Medium	6			4				2						2000VA1600W, Autonomy 5min., For 5 sets of PC／UPS
1-4	Printer	3			1				2						Lazer Printer, for Network, monochrome, A4 size
1-5	Scanner	1			1										Flat bed type, A4 size
1-6	Devices for Network	2			1				1						24 port hub for Computer Room, 12port hub for Internet booth in Library, Cables
1-7	Devices for Internet	2			1				1						Router for Internet, Cables
	2. Audio Visual Equipment														
2-1	Screen (Ceiling type)	1	1												120 inches size, fixed under ceiling, manual operation, 2440x1830mm (height including case=2200mm)
2-2	Screen (Portable type)	1		1											100inches size w/ tri-pod stand, 2000x1500mm
2-3	Screen (Portable type)	1		1											For OHP, w/tri-pod stand, 1800x1800mm
2-4	Audio Visual System (Lobby)	1						1							For Audio Visual Service for visitors in Lobby with 42"Plasma Display and speakers
	Configuration														
2-4-1	42" Wide Plasma Display	(1)						(1)							Audio Visual System for Lobby, 42" size , multi-media (multi-video source & computer input), Wall-hanging type, w/stereo speakers
2-4-2	Video tape recorder	(1)							(1)						Audio Visual System for Lobby, multi-video source
2-4-3	Degital CS Tuner	(1)							(1)						Audio Visual System for Lobby, Digital Source(MPE2)
2-4-4	Analogue CS Tuner	(1)							(1)						Audio Visual System for Lobby, Analogue CS Source
2-4-5	VHF, UHF TV Tuner	(1)							(1)						Audio Visual System for Lobby, VHF,UHF multi-source
2-4-6	Color Monitor	(2)							(2)						Audio Visual System for Lobby, 14"CRT, multi-source
2-4-7	Remote Controller	(1)							(1)						Audio Visual System for Lobby, Video, Computer, Tuner Sellector
2-4-8	Modulater, connection devices for CS Proram	(1)							(1)						Audio Visual System for Lobby, Modulator, RF Mixer
2-4-9	Power Supply Unit	(2)							(2)						Audio Visual System for Lobby, For plasma display and CS Tuners
2-4-10	Equipment Rack	(2)							(2)						Audio Visual System for Video and CS Tuners

Table 2-6 Training Equipment Furniture List

2/4

Equipment & Furniture List			Multi-Purpose Room	Seminar Room	Computer Room	Japanese Culture Exchange Room	Japan Club	Lobby	Library	Director Room	Secretary Room	Reception Room	Meeting Rom	Administration	Description/Remarks
No.	Name of Equipment or Furniture	Q'ty	A	B	C	D	E	F	G	H	I	J	K	L	
2-4-11	Connection Cables	(2)							(2)						Audio Visual System for Video and CS Tuners
2-5	Public Address Equipment w/microphone	2	1	1											Audio Visula System for Multi-purpose Room and Seminar Room
	Confiuration														
2-5-1	Multi-media Projector	(2)	(1)	(1)											For Video source and PC source, LCD x3, 600ANSI Lumens, Projection size: 30-300 inches
2-5-2	Video tape recorder	(2)	(1)	(1)											Video source to Projector, multi-video source
2-5-3	Audio Mixer	(2)	(1)	(1)											For Audio Mixing and output sellector, panel type, 6 input lines
2-5-4	Graphic equolizer	(2)	(1)	(1)											For equolization of audio source, rack mounted type
2-5-5	Amplifier	(2)	(1)	(1)											For audio source, 200Wx2, Stereo
2-5-6	Cassete tape recorder	(2)	(1)	(1)											For audio cassette source, double deck
2-5-7	Compact Disc Player	(2)	(1)	(1)											For CD source
2-5-8	Dinamic microphone	(4)	(2)	(2)											For lecture or speech
2-5-9	Speakers	(2)	(1)	(1)											For loudness, Box type, 150W max input
2-5-10	Microphone Stand, Table top type	(2)	(1)	(1)											Stand height: 220-375mm
2-5-11	Mcrophone Stand, Floor type	(2)	(1)	(1)											Stand height: 900-1500mm
2-5-12	Tri-pod stand for speakers	(2)	(1)	(1)											Stand heighr: 1260-2000mm
2-5-13	Movable Equipment Rack	(2)	(1)	(1)											For audio visual equipment, 700x1200mm, w/connection panel
2-5-14	Connection Cables	(2)	(1)	(1)											Cables for connectin equipment, bulk material, tools
2-5-15	Power Supply Unit	(2)	(1)	(1)											Power Unit for audio visual equipment, 12 outlet
2-6	Over Head Projector	1		1											OHP for Seminar Room
	Confiuration														
2-6-1	Over Head Projector	(1)		(1)											36V 400W, Haloen lamp (w/1 spare lamp), 3500lumens
2-6-2	Transparancies	(1)		(1)											Films for OHP
2-6-3	Lazer Pointer	(1)		(1)											Lazer pointing tool, pen type
2-7	Language Study Equipment	5							5						
	Configuration														
2-7-1	Audio Cassete Tape recorder	(5)							(5)						For Study Booth in Libray, Dual Cassete tape recorder
2-7-2	Headphone Amplifier	(5)							(5)						For Study Booth in Libray, Amplifier for headphone
2-7-3	Headphone	(5)							(5)						For Study Booth in Libray, For audio monitor
2-7-4	Control Panel	(5)							(5)						For Study Booth in Libray, For control of power, audio volume, taperecorder

Table 2-6 Training Equipment Furniture List

Equipment & Furniture List			Multi-Purpose Room	Seminar Room	Computer Room	Japanese Culture Exchange Room	Japan Club	Lobby	Library	Director Room	Secretary Room	Reception Room	Meeting Rom	Administration	Description/Remarks
No.	Name of Equipment or Furniture	Q'ty	A	B	C	D	E	F	G	H	I	J	K	L	
	3. Business machines														
3-1	Copy machine	2							1					1	Desk top type, Copy size A3-B5
3-2	Facsimile	1												1	G3 type, normal paper, A4 size
	4. Furniture														
4-1	Desk (Director Room)	2								2					For Director Room: Wooden, 1600x800x700mm
4-2	Chair (Director Room)	2								2					For Director Room: Steel chair w/arm rest, Seat and back: fabric
4-3	Meeting table (Director Room)	2								2					For Director Room: Wooden, 1800x800x600mm
4-4	Meeting chair (Director Room)	12								12					For Director Room: Steel chair w/arm rest, Seat and back: fabric
4-5	Desk (Administration Room)	5									1			4	For Administration Room: Steel , 1400x700x700mm, one cabinet
4-6	Desk (Administration & Instructor Room)	12												2	For Administration & Instructor Room: Steel, 1400x700x700mm, double cabinets
4-7	Japanese table	4				4									For Japanese Culture Exchange Room: Wooden, 800x800x350mm
4-8	Table (3persons, folding type: L=1800)	60	36	24											For Multi-purpose Room: Steel, 1800x600x700mm
4-9	Chair	276	108	72	21		8		51				16		For Multi-purpose Room: Steel, Sear and back: fabric, Stackable,
4-10	Desk for PC	1			1										For Computer Room, Instructor: Steel, 1400x700x700mm
4-11	Desk for PC	35			20				15						For Internet booth, Study booth in Library and Computer Room (Students): Steel, 1000x700x700mm
4-12	Meeting table	12					4						8		For Meeting Room, Japan Club: Steel, 1500x600x700mm
4-13	Table for reading area	6							6						For reading corner in Library: Steel, 1400x900x700mm
4-14	Table for audio visual corner	2							2						For audio visual corner in Library: Steel, 1200x700x700mm
4-15	Table for guidance corner	2							2						For guidance corner in Library: Steel, D=900mm Round table
4-16	Control Desk for Library	1							1						For Control Desk in Library: Steel, 4800x700x700+R700-1/4round+1600x700x700mm
4-17	Chair (Administration Room)	8							3		1			4	For Administration Room: Steel, wo/arm, Seat and back: fabric
4-18	Chair (Administration & Instructor Room)	12												2	For Administration & Instructor Room: Steel, w/arm, Seat and back: fabric
4-19	Meeting chair (Reception Room)	2										2			For Reception Room: Wooden, w/arm rest, Seat and back: wooden, 800x800mm
4-20	Meeting chair (Reception Room)	13										13			For Reception Room: Wooden, wo/arm, Seat and back: wooden, 500x500mm
4-21	Bookshelf (Director Room)	2								2					For Director Room: Wooden , w/glass door, 915x458x1820mm

Table 2-6 Training Equipment Furniture List

Equipment & Furniture List			Multi-Purpose Room	Seminar Room	Computer Room	Japanese Culture Exchange Room	Japan Club	Lobby	Library	Director Room	Secretary Room	Reception Room	Meeting Rom	Administration	Description/Remarks
No.	Name of Equipment or Furniture	Q'ty	A	B	C	D	E	F	G	H	I	J	K	L	
4-22	Document Rack (Administration & Instructor Room, Computer Room)	17			2									11	For Administration and Instructor Room: Steel, 880x400x1850mm
4-23	Locker	9					2			2				1	For Director Room, Administration and Instrcutor Room, Japan Club Steel, 900x500x1800mm
4-24	Bookrack (Books)	12							12						For Bookrack in Library: Steel, 1840x300x2270mm
4-25	Magazine rack (Magazines)	17					1		16						For Magazine rack in Library and Japan Club: Steel, 1840x300x2270mm
4-26	Video rack	2							2						For Video rack in Library: Steel, 1000x500x1800mm
4-27	White board (Wall hanging type)	2	1	1											For Multi-purpose Room, Seminar Room: Steel, 6000x1200mm
4-28	White board (Wall hanging type)	1			1										For Computer Room: Steel, 2400x1200mm
4-29	White board (movable type)	5	3	2											For Multi-purpose Room, Seminar Room: Steel, w/stand, 1800x900mm
4-31	Dais	3	1	2											For Multi-purpose Room, Seminar Room: Wooden, 1800x1000mm
4-32	Lectern	2	1	1											For Multi-purpose Room, Seminar Room: Wooden, 800x800x1100mm
4-33	Wagon for projector	2	1	1											For Multi-purpose Room, Seminar Room: Steel type, 700x700x700mm w/caster
4-34	Lobby Chair	12						12							For Lobby, Steel base, Stool type, Seat: fabric, 600x600x300mm
4-35	Bookcard Cabinet	1							1						For Library, Wooden cabinet, 700x500x900mm

2-4 Execution of the Project

2-4-1 Organization

The Project will be conducted in concert with the Project-type Technical Cooperation at its inception.

The actual Implementation Plan will be formulated during the period of the said Technical Cooperation by the Japanese experts and Vietnamese staff. The administrative organization, training curriculum, tuitions, and number of trainees to be accommodated will all be optimized reflecting the actual operational experience gained during this period.

An organization structure of the Project as proposed by the Vietnamese side is shown in Figure 2-10, which has been worked out based upon their experience in business seminars in the past and therefore should be taken as a tentative idea. It was presented here with the purpose to calculate financial viability of the Project at this stage. The organization chart indicates number of personnel in each section, but does not include lecturers.

The execution agency of the Project on the Vietnamese side is the Foreign Trade University (FTU), and therefore, the Project will be supervised and administrated by an advisory board staffed with personnel of the University.

2-4-2 Budgetary Measures

(1) The annual budget for FTU for 1999 is presented below:

Table 2-7 Annual Budget of FTU

Items	Amount (VND)
Income	
From Governmental Budget	10,027,000,000
Tuition, etc	10,328,000,000
Total Income	**20,355,000,000**
Expenses	
Salaries, etc	988,000,000
Training Activities	8,850,000,000
Maintenance (including procurement of equipment)	6,937,000,000
Research Activities	497,000,000
Scholarships, etc	805,000,000
Others	2,000,000,000
Total Expenses	**20,077,000,000**

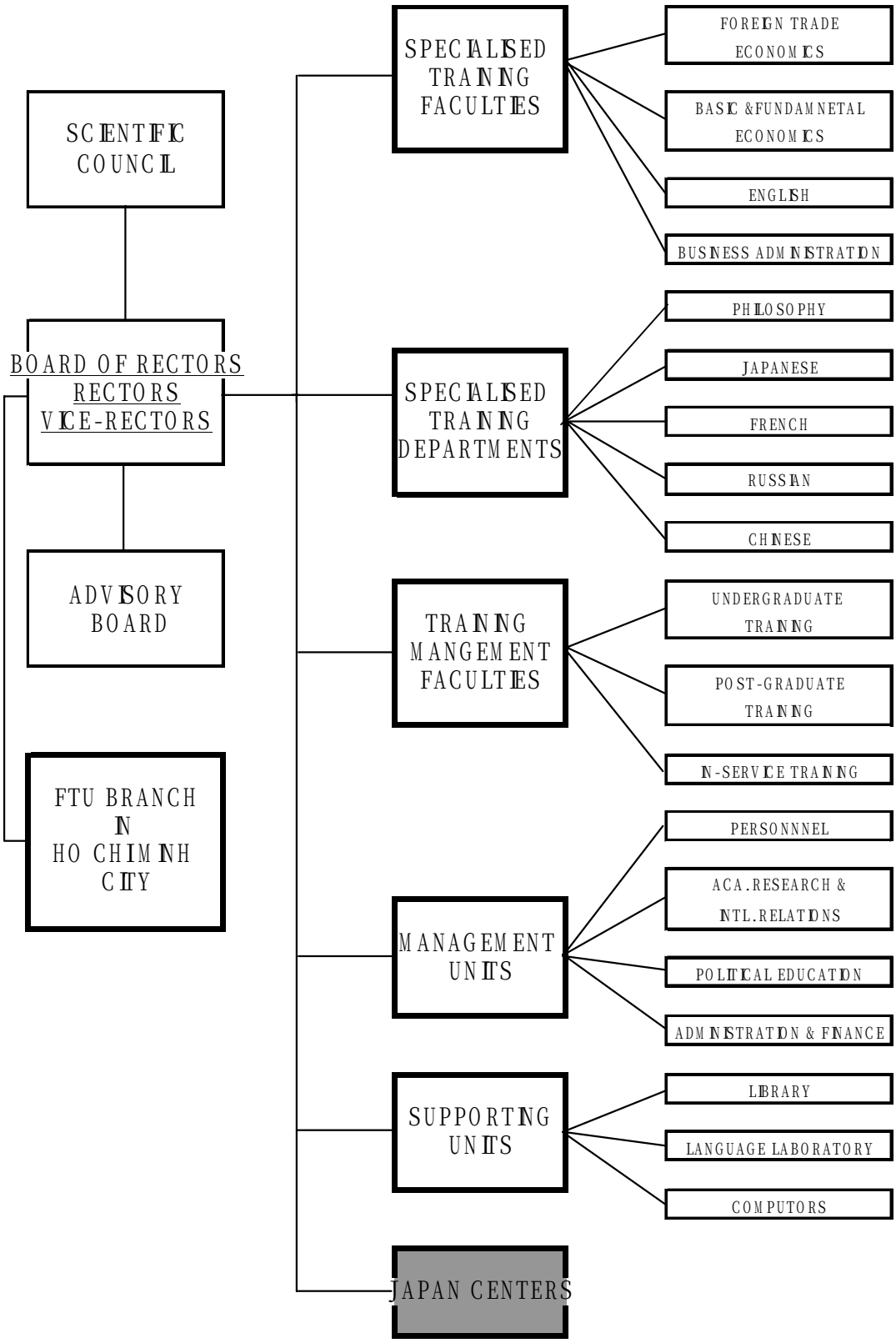


Figure 2-10 Organization Chart of FTU

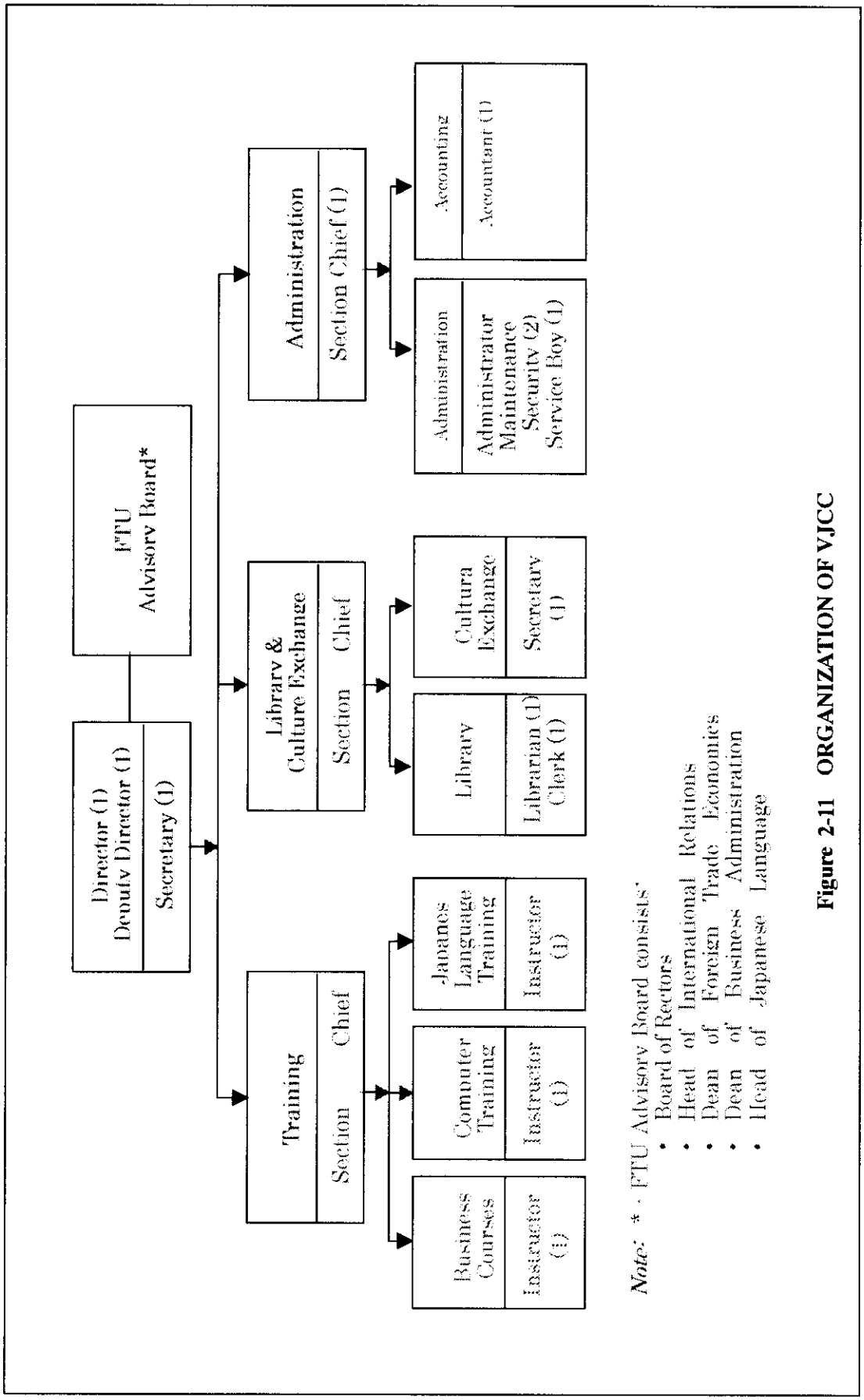


Figure 2-11 ORGANIZATION OF VJCC

(2) Budgetary Measures for VJCC-HCMC

1) Income from Courses

The Center is to be economically and technically independent in the future. This has been confirmed many times between the participating parties of both countries. All courses will charge tuition. A tentative course schedule is shown below.

Table 2-8 Course Structure

Course		Number of courses	Annual Cycles	Annual No. Courses	Students per course	Annual No. Students (max)
Business Course	Business	10	3	30	30~40	1,200
	Computer	15	2	30	15~20	450
Japanese Language Course		4	2	8	30~40	240

This table shows that there will be ten different business courses, each held 3 times annually, for total of 30 courses per year.

The total annual income can be calculated from this table and the projected tuition for each course (Business Courses US$30/course, Japanese Language Courses US$120/course and Computer Courses US$50/course) as shown below:

Table 2-9 Income from Training Courses

Item		Annual Students	Fee per Course (US$)	Amount (US$/year)
Business Courses	Business Courses	1,200	30	36,000
	Computer Courses	450	50	22,500
Total		1,650		58,500
Japanese Language Courses		240	120	28,800
Grand Total		1,890		87,300

2) Maintenance and Repair Costs

The day to day maintenance of building services, including daily operations, periodical checks and repairs will be carried out by the administration section in the tentative organization chart of VJCC shown in Figure 2-11. Heavy maintenance including replacement of defective equipment will require separate budgetary measures. Operation of Training Equipment

will be the responsibility of the instructors. Technical competence is expected to be transferred during the transition period under Project-type Technical Cooperation Scheme. Estimate of maintenance and repair costs are shown below:

- Maintenance of building facilities: broken glass, repainting, etc
  US$250/month X 12 = US$3,000/year
- Maintenance of building services:
- Operation and maintenance of diesel generator = US$3,000/year
- Check and repair of air conditioning equipment = US$2,000/year
- Check and repairs of pumps, piping, etc = US$1,000/year
- Training Equipment: operation and maintenance of
  audio-visual equipment and computers, etc = US$1,500/year
  Total Annual Maintenance Costs = US$10,500/year

3) Operation Costs

The operation costs of the VJCC-HCMC consist of salaries for staff, instructors fees and heating and lighting costs. The sums can be estimated as shown below;

- Staff Salaries are determined by multiplying by 12, the monthly salaries shown below.

Director	2,000,000 VND/month (US$143/m)
Co-Director	1,600,000 VND/month (US$114/m)
Section Chiefs	1,300,000 VND/month (US$ 93/m)
Librarian, Senior Staff	1,000,000 VND/month (US$ 71/m)
Secretary	700,000 VND/month (US$ 50/m)
General Staff	500,000 VND/month (US$ 36/m)
Total Annual Salaries	212,400,000 VND/month (US$ 15,171/year)

- Instructor's fees are charged according to reputation, academic ranking, etc.

Average Instructor's Fee	50,000~70,000VND/hour (US$ 3.5~5/h)
Special Instructor's Fee	140,000VND/hour (US$10/h)

The total working hours of instructors is estimated by averaging the courses over the course of a year, 42 weeks, 5 days per week, 5 hours per day. The fees for average instructor is taken as the mean of 60,000VND/h and the balance between average and special instructors is estimated to be 7:3. From this it can be calculated that total annual instructor fees are 88,200,000VND annually (US$ 6,300).

- Research Activities

Research Activities are estimated from present percentage of present annual FTU budget (6.5%). US$87,300 ×0.065 = US$5,675

- Heating and Lighting Costs

[Electricity Charges]
Electricity charges are calculated by taking the total receiving capacity 150kVA, estimating the percentage of equipment running at the same time to be 60% and estimating the actual operating time as, 6 hours per day, 5 days per week and 42 weeks annually. The cost per watt/hour as provided by EVN is 810 VND/W·H.
150×0.6×810×6×5×42 = 91,854,000 VND/Year (US$6,651/y)

[Water Charges]
The water charges are calculated by multiplying the daily usage per person (55 m^3/person·day) and estimating the annual usage personnel numbers as follows;

Staff 17×42×5+ students 1200×7+240×45+450×45) = 43,020 person·day/y
Annual Usage: 43,020 person·day/y×55 m^3/person·day = 2,365 m^3/year
Water charges per cubic meter is 2,571VND.
Annual Water Charges are
2,571 VND m3×2,365m3/year =6,080,415 VND/year (US$434/year)

Summarizing the above calculations;

Salaries	US$15,171/year
Instructors Fees	US$ 6,300/year
Research activities	US$ 4,300/year
Heating and Lighting Charges	US$ 6,995/year
Total	US$32,766/year

These operation costs (US$32,766) added to the above maintenance costs (US$10,500) are US$43,266 annually and are considerably lower than the estimated income of US$87,300. Although the estimates are for normal years and income revenues may fall below estimates during the initial phase until VJCC-HCMC establishes a reputation and a full curriculum is offered, the difference between projected income and expenses is considered to be sufficiently large to ensure viability of the Project.

2-4-3 Project Personnel and Competency

The competency of the instructors will certainly hold the key to the success of the Project. All instructors according to the FTU plan will be engaged on a part time basis who will be recruited from all possible fields, including university professors

and lecturers, outstanding people in specialized fields and successful business executives. The extensive network of FTU alumnae will be fully utilized in this regard. Furthermore, the Project-type Technical Cooperation Scheme is expected to train computer or Japanese language instructors from the most capable students. Salaries of public school instructors is extremely low and the taking of part-time jobs is not prohibited in Viet Nam. This will facilitate the procurement of capable personnel.

The capability of FTU maintenance personnel in the field of operation and maintenance of the Training Equipment and building service systems will not be a hindrance, for FTU already has and are familiar with equivalent computers and LL equipment as well as air conditioning equipment. The Training Equipment introduced in the Project and requiring familiarization will mainly be the audio-visual equipment in the multi-purpose room and library. The period of the Project-type Technical Cooperation should be sufficient for Vietnamese staff to get working knowledge and experience in maintenance and light repair of these equipment.

CHAPTER 3

IMPLEMENTATION PLAN

CHAPTER 3 IMPLEMENTATION PLAN

3-1 Implementation Plan

3-1-1 Implementation Concept

(1) Basic Principles

Almost all construction companies in Viet Nam are former construction and maintenance divisions of State owned enterprises, which have been privatized following the Doi Moi Policy. They have gained considerable experience in foreign construction techniques through sub-contraction work on hotels and hi-rise buildings built in Ho Chi Minh by foreign investment under major foreign construction companies as the main contractor. The local construction companies can be recognized as having sufficient experience for this Project to work under a Japanese contractor.

Most construction materials and construction equipment can also be procured locally.

As a basic principle, locally available materials and construction methods will be used. However, there are some inferior quality goods on the local market, and they will be eliminated by strict adherence to technical specifications and on-site supervision by the Consultant.

(2) Execution Agency

The execution agency of the Project on the Vietnamese side is the FTU, and therefore, the Project will be supervised and administrated by an advisory board staffed with important persons of the university.

FTU has considerable construction supervision experience through their on-going improvements at their Hanoi Campus. FTU is deemed to have sufficient administrative expertise to organize supervision staff for the Project.

(3) Consultant's Responsibility

Under the conditions of Japan's Grant Aid Scheme, all consulting activities are the responsibility of the Consultant. However, obtaining building permits in Viet Nam is a complicated and long process conducted entirely in Vietnamese. FTU is supremely qualified to undertake responsibility for this portion as it has recently constructed several new buildings for its Hanoi Campus. It was therefore agreed

between the Study Team and FTU that FTU will assume responsibility for obtaining building permits for the Project Facilities.

(4) Utilization of Local Contractors

As has been mentioned previously, major local contractors have experience with high-rise buildings and they are considered to be competent to construct the Project facilities.

However, the movable partitions are not well known in Viet Nam and local contractors do not have sufficient experience for installation of the partitions. Therefore, procurement and installation supervisory staff for movable partitions will be from Japan.

Equipment procurement will not require heavy installation work. However, there is the need for skilled staff to supervise connections and initial running of sensitive equipment, requiring staff from Japan for installation supervision.

(5) Responsibility of JICA

JICA will be responsible for overall supervision and guidance of the construction of the Project to ensure that it meets the purpose of Japanese national policy and follows the basic principles of Japanese Grant Aid. They will verify and monitor that the Project is properly conducted through on site inspections and monitoring of the monthly progress reports. Finally, they will approve the completion of the Project after conducting inspections at completion of construction works.

(6) Construction Planning

1) Construction Period:

Ho Chi Minh City where the Project is sited is located, lies inland at about 20 km west of East China Sea and is the primary international trade port in Viet Nam. The site for the project is located about 5 km north of the center of the city. The Saigon port facilities are located about 7 km from the site along the Saigon river.

The construction of the Project facilities is estimated to take 11 months from its commencement in consideration of the location, the soft ground situation and other natural and social conditions around the site and local construction conditions. (A tentative construction schedule is shown in Figure 3-1.)

2) Construction Method:

Construction materials and construction machinery which are available locally will be used as much as possible and local construction methods and practices which are acceptable will be accommodated to the extent possible. Cast in place pile foundation will be used and superstructure will be reinforced concrete frame with brick walls and mortar finishing.. Steel trusses will be designed for large span roofs. Work and stock yards will be carefully planned within the space allowed in the site area to carry out efficient and safe construction procedures.

3-1-2 Particular Consideration on Construction

Basic principle in execution of construction works will be as given below:

1） Strict observance of construction period

The Japanese consultant will supervise the progress of works and render guidance to the contractor so that the construction is on time and meets all milestone dates.

2） Securing quality and quantities of works

The Japanese consultant's resident engineer will pay careful attention to the quality of works in the field so that they will fully comply with the drawings and specifications without any omission to completion of the Project Facilities.

3) Cast in place pile foundations

The cast in place pile foundations are a recent innovation to Viet Nam and special care will be taken during the Construction Supervision Phase to ensure sound and strong foundations. Safety during construction will also be strictly monitored

4） Safety in construction

Utmost care will be exercised by all the construction parties to maintain safe conditions, especially giving priority to the surrounding housing as well as to other third parties.

Based on the above principles, the following items will be given special attention during construction

1） Noise suppression

Although the construction activities will be conducted in a sparse residential area, noise and dust generated at the construction site will be kept to a minimum. Construction activities creating noise and dust will avoided from night to early morning.

2） Building permit

For the Project Facilities, a building permit will have to be granted from the Chief Architect of Ho Chi Minh. FTU is familiar with the procedure through its experience in previous school building constructions. The Japanese consultant will entrust the procedures to FTU to obtain building permits, etc., by the concerned authorities, so that there will be no delay in the progress of construction owing to these administrative formalities.

3-1-3 Scope of Works

The demarcation of responsibility to implement the Project between Japanese and Viet Nam sides are summarized in Table 3.1.

Table 3.1 Demarcation of Works

	Japanese Side	Vietnamese Side
Temporary Works	• Temporary site office • Stocking yard of construction materials • Temporary power supply, water supply and sewage	• Land acquisition • Site clearance of existing obstacles and leveling • Obtaining of building permits
Construction Works	• Construction of building	• Power distribution line connection to power receiving panel • Water supply connection and meter • Telephone handsets and connection
Furniture	• Seminar room furniture • Office equipment and furniture	• Consumables, etc.
Training Equipment	• Information service equipment • Computers for training • Audio-visual system for seminar	
Exterior Works	• Paving for car parking • Paving for passageways	• Landscaping • Gate and fence
others	• Obtaining necessary permits	• Construction of D5 road • Provision of infrastructure facilities along D5 Road

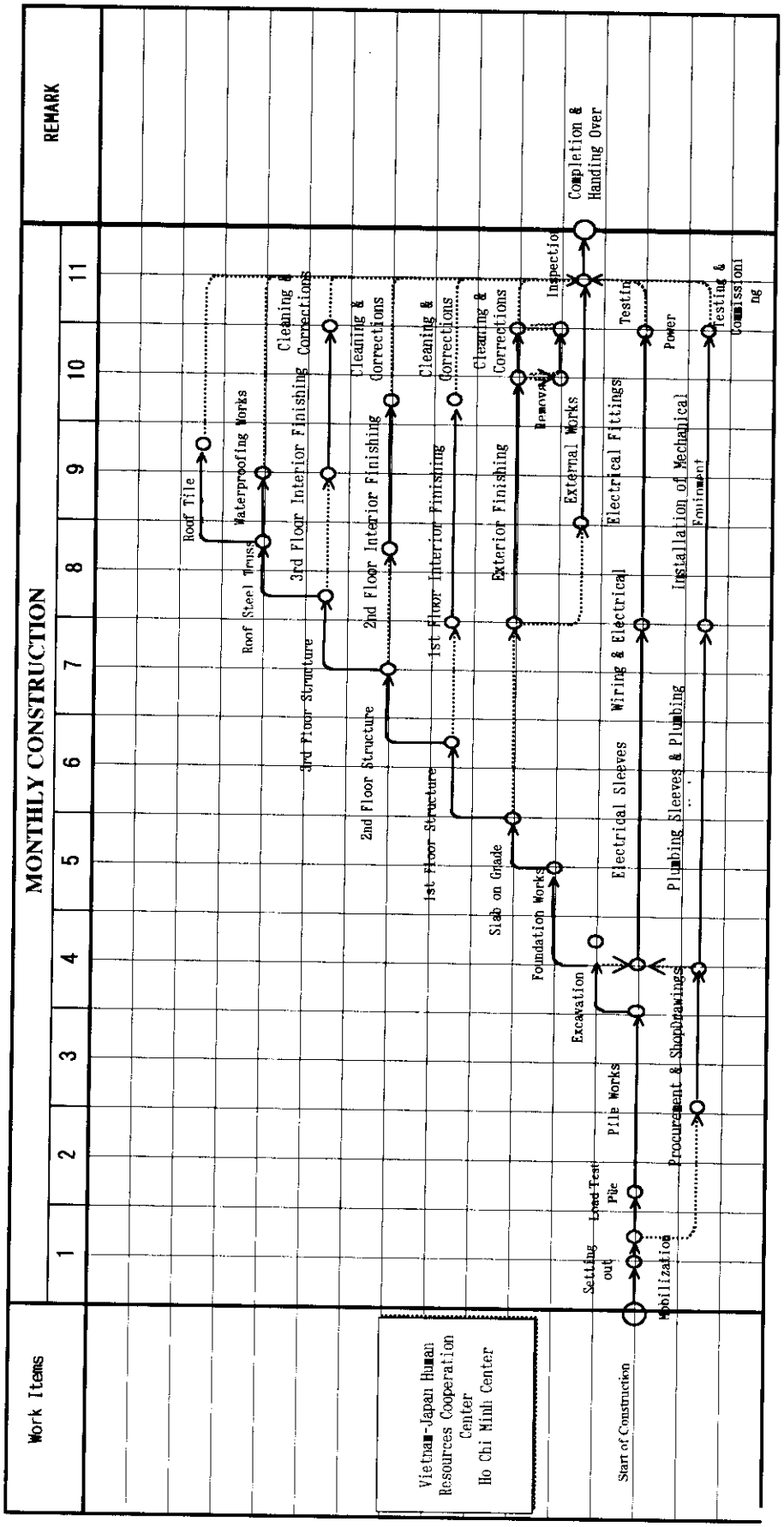


Figure 3-1 Tentative Construction Schedule

3-1-4 Consultant Supervision

(1) Construction Supervision and Detailed Design Personnel

The Japanese consultant will send Japanese engineers to Viet Nam to supervise construction during the construction period. The staff and their job assignment will be as described below;

1) Project Manager:

He will manage all aspects of detail design, tendering and construction supervision.

2) Building Engineer:

He will be responsible during design period for design of architecture and structure of the building facility. In the construction supervision phase he will be the resident engineer and as chief in the field responsible for overall supervision and guidance, including quality control, approval of shop drawings, construction schedule etc.

3) Building Systems Engineer:

He will be responsible during design period for design of electrical, air-conditioning and plumbing systems system in the building. In the construction supervision phase, he will be responsible for approval of shop drawings and correct manufacturing and erection of electrical system.

4) Equipment Expert:

He will be responsible during design period for Training Equipment design and specifications. In the construction supervision phase he will be responsible for approval of shop drawings, shop inspection and commissioning of the Equipment on site.

5) Construction Planner:

He will be responsible for construction planning and reviewing cost estimates prepared during basic design in detail and modifying project cost estimations as necessary..

(2) Construction Supervision

The engineers will include both resident and spot-dispatched engineers. The resident engineer's position will be filled by the Building Engineer among those listed above, who will be supported by the other engineers in a timely manner.

3-1-5 Procurement Plan

(1) Labor Conditions

All construction related labors such as common labors, foremen, mechanics, machine operators are available in Ho Chi Minh. However, individual competency vary considerably and therefore skilled workmen on important jobs should be tested before employment by the Japanese contractor who undertakes the construction. Assistant engineers, field supervisors and the like who will support Japanese engineers can also be employed locally.

As regards the wages for labors, minimum wages are prescribed by law. However, they are mainly applicable to state projects and are not necessarily the same as the actual market rates. Wages for reliable skilled labors tend to be rather higher than the official rates. In order to secure quality workmanship as discussed previously, practical market rates will have to be used to employ quality workers.

(2) Construction Materials

The material procurement plan for all works will be as shown in Table 3.2. All common structural materials are available in Viet Nam. Especially, ready mixed concrete is of good quality and well supplied in Ho Chi Minh. Steel structural materials and fabricating shop are available locally.

Window frames and local tile roofing material can also be procured locally as their qualities are acceptable. However, some inferior quality products are sold on the local market and care will be taken to eliminate them from being brought on to site.

On the other hand, the movable partition will be procured from Japan because of the sound proofing requirement.

Building service equipment will generally be procured locally. Regarding the air-conditioning equipment, Japanese and third countries' manufactured, products are readily available on the local market. However, third country products generally are not of high quality. Therefore, locally procured models of Japanese manufacturers will be specified.

(3) Training Equipment

The Training Equipment to be procured under this Project is almost all generic audio-visual and computer products available on the market. However, some audio-visual equipment for the multi-purpose room and seminar rooms will be

required to be organized into a comprehensive and working system. Although, Korean and Chinese audio-visual products are readily available on the local market, they are known to have problems with quality control and may have compatibility problems when incorporated into a system.

Equipment procured under Japan's Grant Aid Scheme should be of high quality and have as few maintenance and compatibility problems as possible. Therefore, all equipment will be procured from reputable makers. Audio-visual equipment will be procured from Japanese producers while computers will be from major producers with factories in ASEAN countries such as Thailand, Singapore, and Taiwan.

These systems can all be procured from representative traders based in Ho Chi Minh, and support and maintenance will not be a problem. All furniture will be procured locally.

Installation and set-up of all equipment procured through local agents will be the responsibility of the local agent.

Equipment procured from Japan and third countries will be packed in containers for overseas and overland transportation and handed over on site in the containers. Sufficient space must be allocated on site during the these containers are stocked on site.

Table 3-2 summarizes the procurement sources of various materials and equipment incorporated in the Project Facilities.

(4) Construction Equipment

Major construction equipment are all available in Ho Chi Minh City. For the major construction item in building, concrete casting, use of a concrete pump is not popular in Viet Nam. Casting of concrete is normally done by bucket and chute method.

This method can be employed for construction of the Project Facilities as well because the scale of the building is not so large.

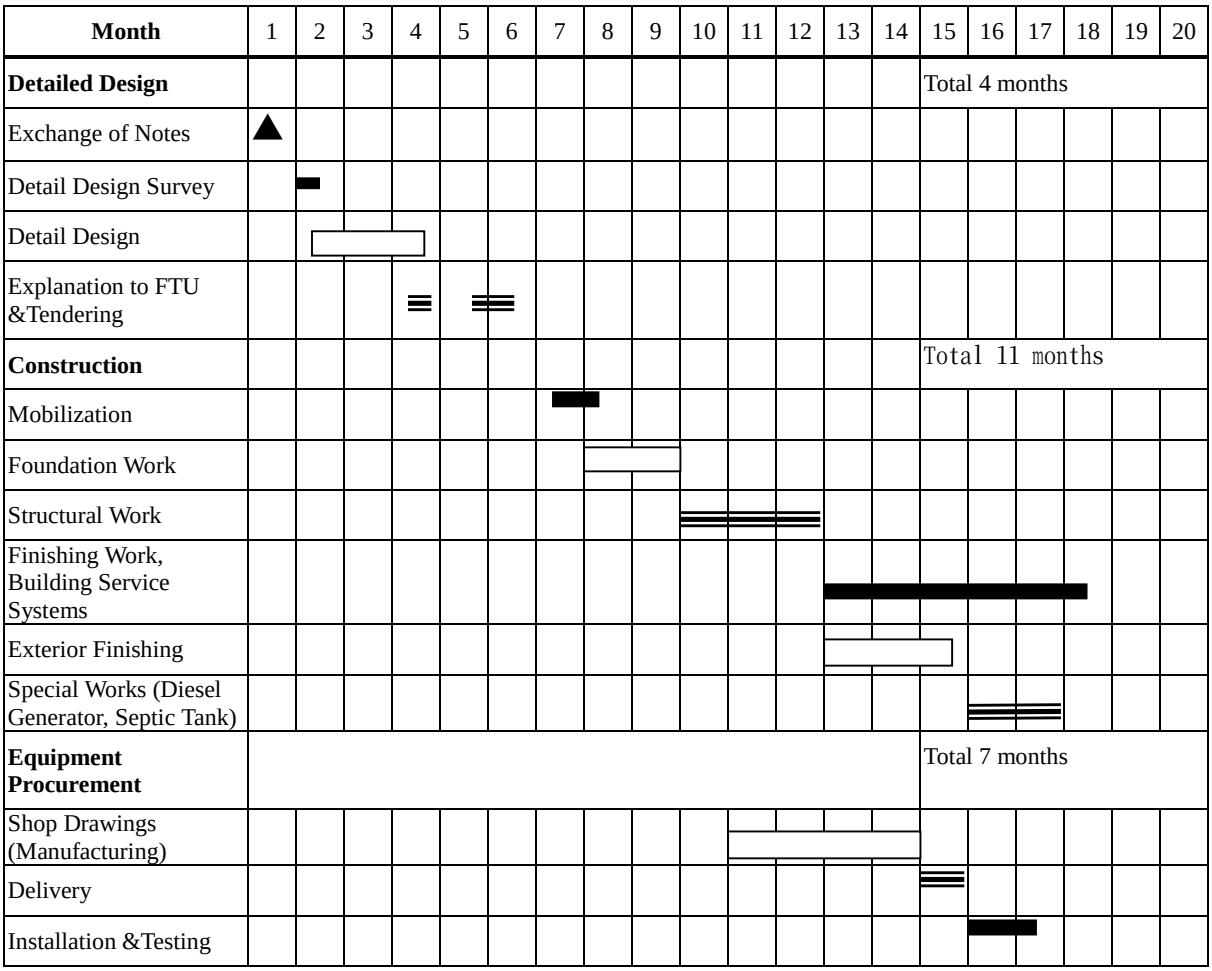
Table 3-2 Procurement Plan

Item	Availability		Procurement			Notes
	good	poor	Viet Nam	Japan	Third C	
Sand	○		○			
Gravel, Crushed Stone	○		○			
Portland Cement	○		○			
Ready-mixed Concrete	○		○			
Steel Reinforcement Bars	○		○			
Concrete Formwork Panel	○		○			
Structural Steel			○			
Brick	○		○			
Metal Roof			○			
Local Tile Roof	○		○			
Movable Partitions				○		Requires sound insulation
Aluminum Windows	○		○			
Wood Doors	○		○			
Glass	○		○			
Tile	○		○			
Vinyl Floor Tile	○		○			
Paint	○		○			
Lighting Fixtures	○		○			
Electrical Distribution Panels	○		○			
Electrical Cables	○		○			
Electronic Equipment	○		○			
PVC Pipe	○		○			
Zinc Coated Pipe	○		○			
Plumbing Fixtures	○		○			
Pumps	○		○			
Water Tanks	○		○			
Air Conditioner	○		○			
Fire Hydrant	○		○			
Transformers	○		○			
Diesel Generator	○		○			
Personal Computer	○		○			
Audio-visual Equipment	△			○		
Seminar Furniture	○		○			Quality control is vital.
Office Furniture	○		○			

3-1-6 Implementation Schedule

According to the Procedure of the Grant Aid Scheme, implementation schedule of the Project will be as illustrated below:

Figure 3-2 Implementation Time Schedule



3-1-7 Obligations of Recipient Country

In case the Project is implemented under Japan's Grant Aid Scheme, the recipient country, Viet Nam, and the Implementation Agency, Foreign Trade University, will be obligated to undertake the following measures. This matter was explained to the Vietnamese side at the time of Basic Design Study Survey and confirmed in the Minutes of Discussion.

1) Removal of all existing houses and obstacle to construction before commencement of construction.
2) Provision of power supply connection to receiving panel in site.
3) Provision of water supply and connections including water meter to site.
4) Connection of site sewage drain pit to main sewage manhole.
5) Telephone line connection to MDF in building.

6) Landscaping and planting of site.

7) Fencing and walling around site perimeter.

8) Obtain building permits.

9) Secure exemption of all tax and duty from any good or services provided for the Project under the Japan's Grand Aid Scheme.

10) Assure that all goods and materials imported for the Project under Japan's Grant Aid Scheme will be promptly unloaded, cleared through customs and delivered to the site.

11) Payment of banking charges incurred under the Banking Agreement.

12) Provide all necessary assistance to allow Japanese nationals to enter and reside in Viet Nam for the purposes of carrying out services under the certified contract.

13) Exempt Japanese nationals form all taxes and levies incurred in Viet Nam for the services procured under the certified contract.

14) Maintain and use the facility and equipment provided by the Project in an appropriate and effective manner.

15) Provide any necessary assistance in obtaining permits or governmental approval for the timely implementation of the Project.

16) Refrain from using the facilities and equipment procured under Japanese Grant Aid for commercial or military purposes.

3-2 Project Cost Estimation

The costs to be borne by the Viet Nam side in association with the execution of the Japan's Grant Aid Scheme for the Project are estimated to be US$667,449 in total as broken down in Table 3-3 below. Of the total, US$576,428 has already been disbursed during fiscal year 1999.

The remaining US$91,021 will be expended from separate budget to FTU normal annual budget.

The conditions for cost estimation are as follows:

1) Date of estimate: August 2000

2) Exchange rate: 1US$ = 107.10 J Yen

3) Period of Construction: As shown in Figure 3-3

Table 3-3 Cost Estimations of Vietnamese Obligations

Item	Facility	Cost (US$)	
		F/Y 1999	F/Y 2000
Preparatory Works	Land Acquisition	571,428	
	Removal Existing Housing	5,000	
	Leveling of Site		7,858
	Fencing Gate		22,357
Temporary Works	Obtaining Building Permits		6,000
	Power Line to Incoming Panel		29,858
	Water Supply to Site		11,000
	Connection to Sewage		715
	Connection to Telephone System		5,358
	Planting		7,875
Total		576,428	91,021

3-3 Operation and Maintenance Costs

The operational organization and operation and maintenance cost have been described in Section 2-4 hereinbefore. Administrative and maintenance planning are below.

(1) Operational and Administrative System

Regarding the maintenance of the Project facilities, day to day operation, inspection and repair will be the sole responsibility of the Center and separate from FTU. However, major repair or overhaul is planned to be assisted by the maintenance section of FTU. The Training Equipment on the other hand will be maintained by the Training Section, to which the experts of the Project-Type Technical Cooperation will render enough training during their tenure to enable Vietnamese staff to operate, inspect and repair these equipment on their own in the future. The major activities concerning operation and maintenance are described below:

1) Building Facilities: Inspection and repair of roof leakage, glass breakage, painting deterioration, breakage of locks, loose floor tiles, etc.

2) Building Services: Inspection and repair of power receiving equipment, diesel generator, air conditioning and ventilation equipment, sanitary fixtures and water pumps. Repair and resupply of light bulbs, etc.

3) Security and Cleaning: Security Guards, disposal of waste and garbage, etc.

4) Equipment: operation and maintenance of audio-visual and computer equipment, etc.

(2) Procurement of Spare Parts and Repair Material

1) Building Facilities: parts and materials procured from Japan and difficult to procure locally will be provided with repair material at time of installation and kept in stock.

2) Building Services: Parts liable to breakage or wearing down and difficult to procure locally will be kept in stock.

(3) Operation and Maintenance Cost

Building services equipment such as air conditioning equipment have a service life after which they must be replaced. Service life of major equipment are;

Air conditioners: 10years	Ventilation Fans: 15 years
Pumps: 15 years	Motors: 15 years

CHAPTER 4

PROJECT EVALUATION AND RECOMMENDATION

CHAPTER 4 PROJECT EVALUATION AND RECOMMENDATION

4-1 Project Effect

In the Vietnamese government's primary policy plan "New Five-Year Development Plan (1996 – 2000)", the net annual GDP growth rate target has been set at 9 – 10%, including industrial growth which has been targeted at 14 – 15% as the main driving force of the economic growth. In the "Educational Development Five-Year Plan (1996 – 2000)" to work in concert with the Five-Year Plan, human resources development in higher education to meet the challenge of reorientation to a market economy, along with nationwide full primary education by the year 2000, has been set to as the most urgent issues.

The Project which will be implemented by Japan's Grant Aid Scheme with the primary objective of providing business courses to train people to adapt to the market-based economy is therefore truly compatible with the highest national policies and can be appraised to be very timely in meeting the urgent needs of the country.

The Japanese language training courses carried out in the Center will serve a similar purpose, affording a common language to help associate people more closely. This course aims at a higher level of study above day-to-day conversation needed for potential students planning studies in Japan or business trainees dispatched by local businesses or industries to Japan. The computer training courses on the other hand will attempt to train people who will be able to use the computer in the course of the business activities learned above. These courses, which will be also above basic-level training, will contribute to the growth of Vietnamese businesses and industries by guiding the use of computers toward system engineering, auto-design or production control, production management or quality control, marketing or business management, integration into global information networks etc.

The cultural exchange activities planned to be carried out as secondary activities in the Center is deemed to be significant from a long term view of the relations between the two countries. It will not only foster pro-Japanese sentiment among the people but "establish" a Japanese presence in Viet Nam, providing a venue where ordinary Vietnamese people can come into direct contact with up to the minute information on Japan. It will thus contribute to nurture friendly relationship between the two countries.

The beneficiaries of the Project will thus be the Vietnamese businesses and industries in general and in a broad sense the Vietnamese economy, specifically those engaged in foreign trade, joint-venture companies, foreign companies, medium to large scale local enterprises etc. The effect, though not quantifiable, will be direct and immediate to these parties.

4-2 Recommendation

As far as the demand for the type of business courses intended at the Center is concerned, its existence in the market has been proved to be rather great particularly for modern and good quality lectures, through an extensive questionnaires and interviews with various business communities in the country conducted by the Preliminary Survey Mission for the Project dispatched by JICA as previously mentioned. And confirmed by the Study Team through interviews with similar facilities in Ho Chi Minh City. The Project can readily be justifiable in this regard. As for the computer and Japanese language training courses, the potential and latent demand for these courses aimed at practical and higher levels above basic or day-to-day conversation has not been addressed until now and therefore will not conflict with the private language schools which are mainly engaged in basic levels skills.

The important point in order for the Project to be successful will be how to secure good lecturers and instructors to continue to hold interesting and good quality lectures and training to attract many students or trainees. This will particularly hold true after the operation of the Project has been transferred to the hands of the Vietnamese party upon termination of the Project-Type Technical Cooperation Scheme by the Japanese government. To this end, it must be the main agenda for the Project to recruit and secure good lecturers and instructors from as a wide source as possible. In view of the far reaching personal connections and human network so far cultivated by the alumni of FTU in various business communities and institutions all over the country, coupled with the prestige of the Center, it is not considered to be practically difficult to overcome this problem.

APPENDICES

1. Member List of the Study Team
2. Survey Schedule
3. List of Party Concerned in Viet Nam
4. Minutes of Discussions
5. Cost Estimation Borne by Viet Nam
6. Other Relevant Data
7. References

Appendix 1. Member List of the Study Team

[At Basic Design Study Survey]

1. Mr. Akihiko HASHIMOTO, Leader
   Managing Director, Tokyo International Center
   Japan International Cooperation Agency (JICA)
2. Ms. Makiko WATANABE, Coordinator
   First Project Management Division, Grant Aid Management Department
   Japan International Cooperation Agency (JICA)
3. Mr. Shin HINOMIZU, Project Manager/Architectural Planner
   Nippon Koei Co., Ltd.
4. Mr. Toshiaki HAKODA, Facility Planner/Equipment Planner
   Nippon Koei Co., Ltd.
5. Mr. Toshiya WATANABE, Construction and Procurement Planner/Cost Estimator
   Nippon Koei Co., Ltd.

[At Basic Design Draft Report Explanation Mission]

1. Mr. Takashi HATAKEYAMA, Leader
   Deputy Representative, Vietnam Office
   Japan International Cooperation Agency (JICA)
2. Ms. Makiko WATANABE, Coordinator
   First Project Management Division, Grant Aid Management Department
   Japan International Cooperation Agency (JICA)
3. Mr. Shin HINOMIZU, Project Manager/Architectural Planner
   Nippon Koei Co., Ltd.
4. Mr. Toshiaki HAKODA, Facility Planner/Equipment Planner
   Nippon Koei Co., Ltd.

Appendix 2. Survey Schedule

[At Basic Design Study Survey]

No.	Date	Day of the week	Activities				
			Officials		Consultant		
			Mr. Hashimoto	Ms. Watanabe	Mr. Hinomizu	Mr. Hakoda	Mr. Watanabe
1	2/27	Sun	Tokyo - Hong Kong - Ho Chi Minh				
2	2/28	Mon	Visit to Site Courtesy Call to FTU Branch and Binh Tanh District Office				
3	2/29	Tue	Survey of Similar Facility Ho Chi Minh - Hanoi				
4	3/1	Wed	Courtesy call to EOJ, JICA Vietnam Discussion with MPI, MOET and FTU		Same as Official		
5	3/2	Thu	Discussion with FTU		Same as Official Survey on related project		
6	3/3	Fri	Discussion with FTU		Same as Official Data collection		
7	3/4	Sat	Discussion with FTU (Discussion on Minutes of Meeting)		Same as Official		
8	3/5	Sun	Internal Meeting, Data Analysis		Same as Official		
9	3/6	Mon	Discussion with FTU		Discussion with FTU Subcontracting topo. survey and geo. investigation Survey on construction matters		
10	3/7	Tue	Signing of Minutes of Discussion Reporting to EOJ and JICA Vietnam		Same as Official		
11	3/8	Wed	Hanoi - Tokyo		Discussion with FTU, Hanoi - Ho Chi Minh Topo. survey		
12	3/9	Thu			Preliminary planning of building	Topographical survey Investigation of construction conditions	
13	3/10	Fri			Discussion with FTU	Survey of construction conditions	
14	3/11	Sat			Survey on consulting and construction businesses	Ho Chi Minh - Hanoi	
15	3/12	Sun			Team meeting, Data Analysis		
16	3/13	Mon			Survey on electric power, Discussion with FTU		
17	3/14	Tue			Survey on construction matter, Preparation of interim report		
18	3/15	Wed			Discussion with subcontractor for survey Reporting to EOJ and JICA Vietnam		
19	3/16	Thu			Discussion with FTU		
20	3/17	Fri			Confirmation with FTU on agreed matters		
21	3/18	Sat			Hanoi – Tokyo		

EOJ： Embassy of Japan

[At Basic Design Draft Report Explanation Mission]

No.	Date	Day of the week	Activities			
			Officials		Consultant	
			Mr. Hatakeyama	Ms. Watanabe	Mr. Hinomizu	Mr. Hakoda
1	8/6	Sun		Tokyo - Hong Kong - Ho Chi Minh		
2	8/7	Mon			Site Survey Discussion with FTU Branch, Ho Chi Minh - Hanoi	
3	8/8	Tue			Explanation of Draft Basic Design Report	
4	8/9	Wed			Discussion with FTU	
5	8/10	Thu	Courtesy call to MOET and MPI Discussion with FTU on Minutes of Discussion Preparation of Documents			
6	8/11	Fri	Signing of Minutes of Discussion			
7	8/12	Sat		Hanoi - Tokyo	Discussion with FTU on detail construction matters Team Meeting	
8	8/13	Sun			Discussion with FTU	
9	8/14	Mon			Reporting to EOJ and JICA Vietnam	
10	8/15	Tue			Hanoi - Tokyo	

Appendix 3. List of Party Concerned in Vietnam

Ministry of Planning and Investment

1.	Dr. DUONG DUC UNG:	General Director, Dept. of Foreign Economic Relations
2.	Mr. PHAM KIM CUNG:	Deputy Director, Dept. of Science, Education and Environment
3.	Mr. PAHN THANH TAIN:	Senior Expert, Dept. of Science, Education and Environment

Ministry of Education and Training

1.	Prof. Dr. TRAN VAN NHUNG:	General Director, Dept. of International Relations
2.	Dr. DUONG DUC LAN:	Deputy Director, Dept. of Planning and Finance
3.	Ms. NGUYEN THUY LOAN	Expert, Dept. of International Relations

Foreign Trade University (Ha Noi)

1.	Ms. NGUYEN THI MO:	Rector
2.	Mr. HOANG NGOC THIET:	Vice-Rector
3.	Mr. TRAN VIET DZUNG:	Head, Academic Research & International Relations Dept.
4.	Mr. NGUYEN VAN CHAU:	Vice-Head, Academic Research & International Relations Dept.
5.	Mr. TRAN VIET DZUNG	Head, Dept. of Academic Research and International. Relations
6.	Mr. NGUYEN VAN HAO:	Vice-Head of Japanese Dept.
7.	Ms. LE THI LAN:	Staff-Secretary, Dept. of Academic Research & International Relations
8.	Ms. NGUYEN NGOC ANH	Staff-Secretary, Dept. of Academic Research & International Relations

Foreign Trade University (Ho Chi Minh)

1.	Dr. HOANG VAN CHAU:	Director, Vice Rector

4. Minutes of Discussion

Minutes of Discussions
of
the Basic Design Study on the Project for
Construction of Vietnam-Japan Human Resources Cooperation Center
in Ho Chi Minh City
in
The Socialist Repubic of Vietnam

In response to a request from the Government of the Socialist Republic of Vietnam (hereinafter referred to as 'Vietnam'), the Government of Japan decided to conduct a Basic Design Study on the Project for Construction of Vietnam-Japan Human Resources Cooperation Center in Ho Chi Minh City (hereinafter referred to as 'the Project'), and entrusted the study to Japan International Cooperation Agency (hereinafter referred to as 'JICA').

JICA sent to Vietnam the Basic Design Study Team (hereinafter referred to as 'the Team'), which is headed by Mr. Akihiko HASHIMOTO, Managing Director, Tokyo International Centre, JICA, and is scheduled to stay in the country from the 27th February to the 18th March, 2000.

The Team held a series of discussions with the concerned officials of the Government of Vietnam and conducted a field survey at the study area.

In the course of discussions and field survey, both parties confirmed the main items described on the attached sheets. The Team will proceed to further work and prepare the Basic Design Study Report.

Hanoi, 7th March, 2000

Mr. Akihiko HASHIMOTO
Leader
Basic Design Study Team
Japan International Cooperation Agency

Professor, Dr. Tran Van Nhung
General Director,
Dept. of International Relations,
Ministry of Education and Training

Professor, Dr. Nguyen Thi Mo
Rector,
Foreign Trade University

Witnessed by

Dr. Duong Duc Ung
General Director,
Dept. of Foreign Economic Relations,
Ministry of Planning and Investment

ATTACHMENT

1. Objective of the Project

The Government of Vietnam and the Japanese Preliminary Study Team have confirmed by the Minutes of Discussions dated 8th February, 1999, that the Government of Japan will examine the Project-type Technical Cooperation to support the establishment of Vietnam-Japan Human Resources Cooperation Center (hereinafter referred to as 'VJCC').

Both sides also agreed that the outputs of the project were to establish a)Business Courses, b)Japanese Courses and c)Cultural Exchange programs and public information services.

It was agreed by the Minutes of Discussions dated 12th August, 1999, that the building of VJCC in Ha Noi and the appropriate equipment for the Center will be provided under Japanese Grant Aid. Moreover, it was noted that if found viable, Japanese side will dispatch a Basic Design Study Team aiming specifically at Ho Chi Minh Center (hereinafter referred to as 'VJCC- HCMC').

The objective of this Grant Aid Project is to contribute to the achievement of the above mentioned objectives by constructing the building and providing appropriate equipment for VJCC-HCMC.

2. Responsible and Implementing Organization

2-1 The Responsible organization is the Ministry of Education and Training (MOET).

2-2 The Implementing organization is Foreign Trade University (FTU).

2-3 The organization charts of the above agencies are shown in Annex-1.

3. Site of the Project

The project site is as shown in Annex-2.

4. Items requested by the Government of Vietnam

After a series of discussions, the Vietnamese side requested the items attached as Annex-3 and 4. JICA will assess the appropriateness of the request and will recommend to the Government of Japan for approval.

5. Japan's Grant Aid Scheme

5-1 The Vietnamese side has understood the system and characteristics of Japan's Grant Aid Scheme as described in Annex-5 by the Team.

5-2 The Vietnamese side will take necessary measures, as described in Annex-6, for smooth implementation of the Project, as a condition for the Japanese Grant Aid to be implemented.

6. Further Schedule of the Study

6-1 The consultants will proceed to further study in Vietnam until 18th March, 2000.

6-2 JICA will prepare the Draft Basic Design Report in English and dispatch a mission in

order to explain its contents in (or around) May 2000.

6-3 In case the contents of the report is accepted in principle by the Government of Vietnam, JICA will complete the final report and send it to the Vietnamese side.

7. Other Relevant Issues

7-1 Both sides agreed that VJCC-HCMC will be three-story high provided that concerned documents are submitted, and that the total floor area will be approximately 1,000 ~ 1,200 ㎡. The land area for VJCC-HCMC will be approximately 1,000 ㎡.

7-2 Both sides agreed that after obtaining the Land Use Permit from the People's Committee in Ho Chi Minh City in May 2000, FTU will remove the houses currently located in the site and construct a fence around the site by the end of June 2000.

7-3 Both sides agreed that FTU will work to expedite the construction of D5 Road that runs by the site to be completed by September 2000, in cooperation with the People's Committee in Binh Thanh District.

7-4 Both sides agreed that FTU will obtain the Government Approval of the Project approximately by the end of July.

7-5 Both sides agreed that FTU will allocate enough budget and staff for the proper and effective operation and maintenance of VJCC-HCMC and equipment provided under the Project under the responsibility of FTU.

In case of financial shortfall, FTU will take necessary measures to secure the budget including the allocation of the Counterpart Fund of the Non-Project Grant Aid extended by the Government of Japan.

7-6 The Vietnamese side promised to exempt Japanese juridical and physical nationals engaged in the Project from customs duties, internal taxes including VAT, and other fiscal levies which may be imposed in Vietnam regarding the supply of products and services under the verified contracts.

Annex-1 Organization Charts

Annex-2 Location of the Project Site

Annex-3 List of Requested Facilities

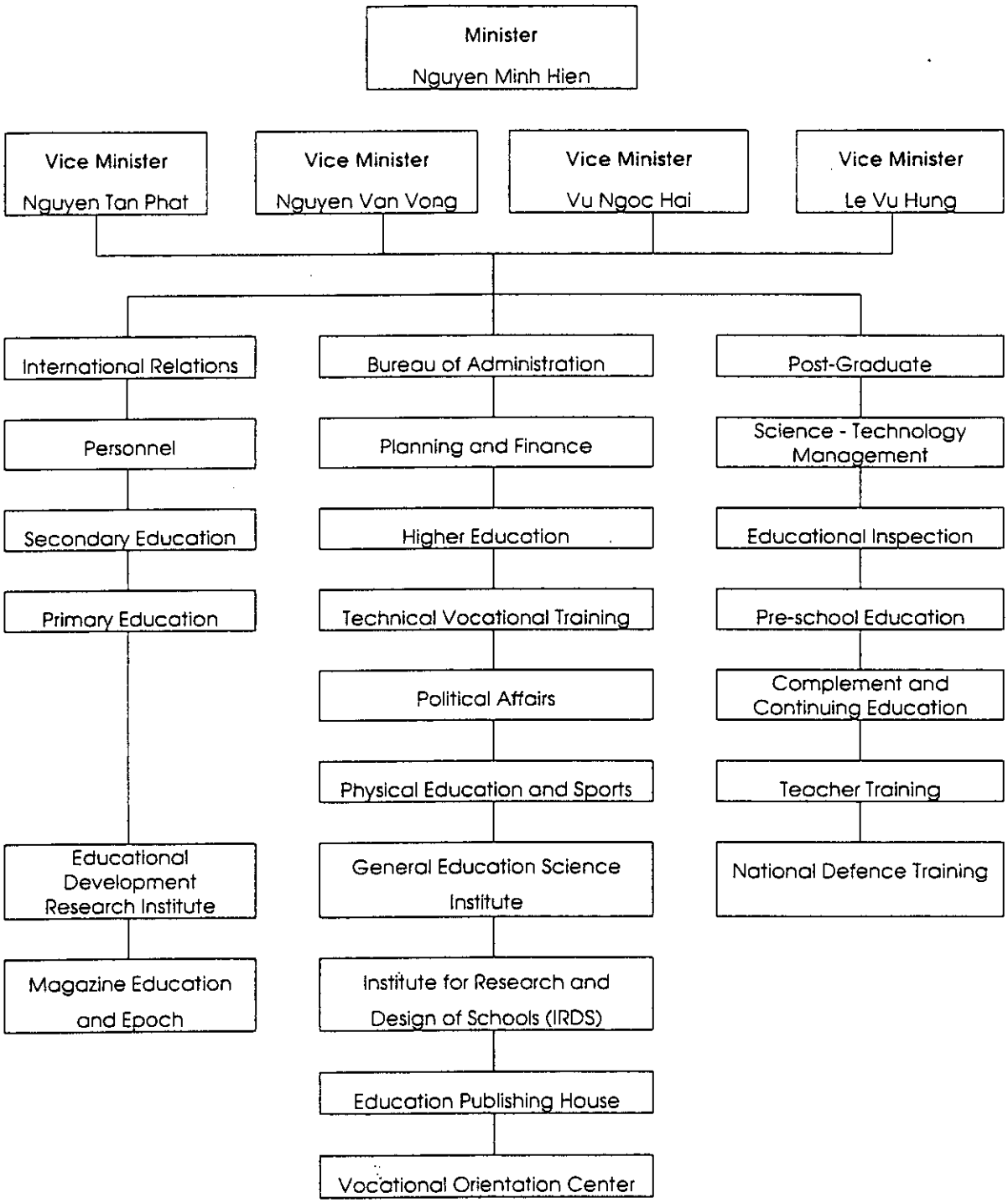
Annex-4 List of Requested Equipment

Annex-5 Japan's Grant Aid Scheme

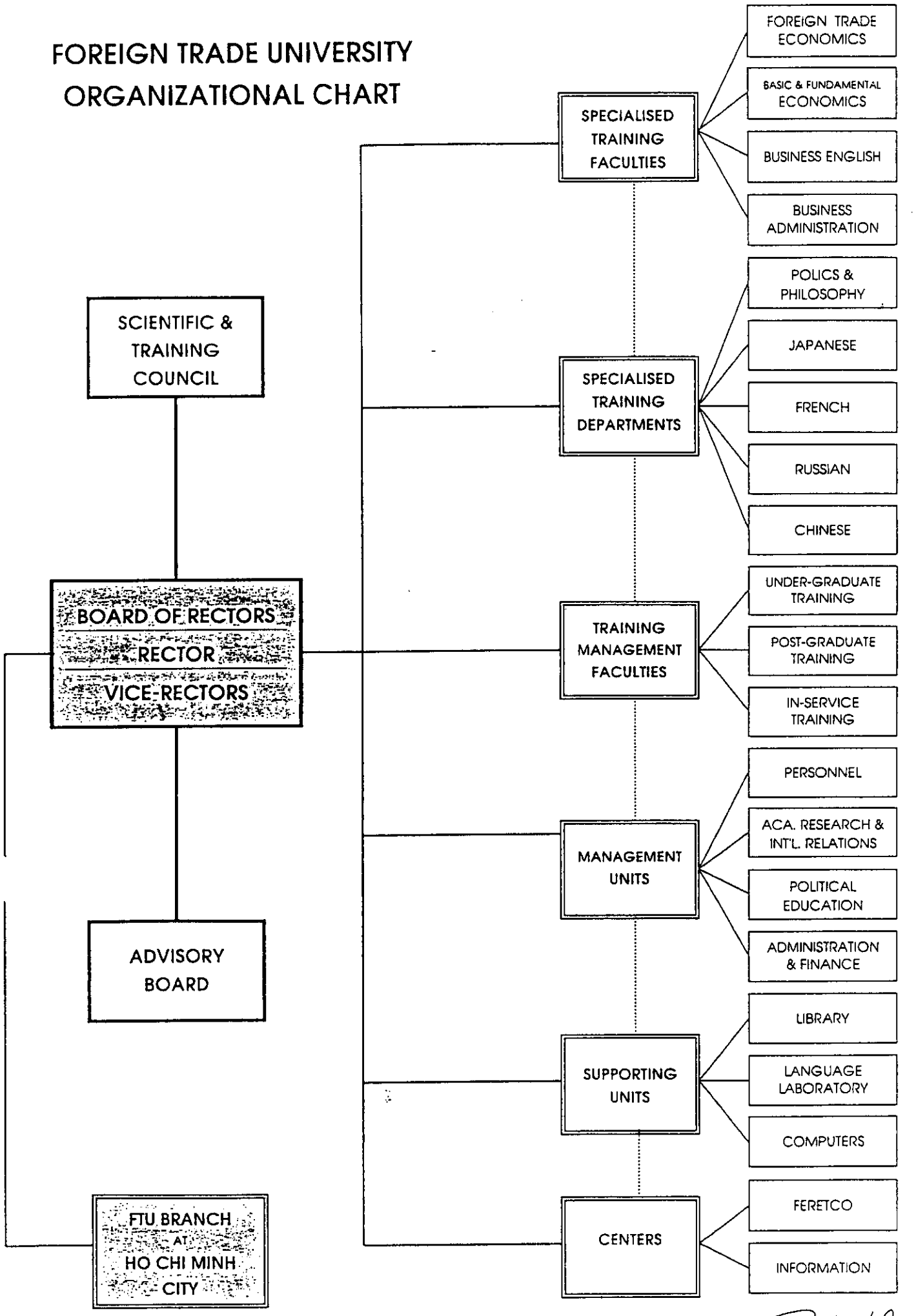
Annex-6 Major Undertakings to be taken by Both Governments

MINISTRY OF EDUCATION AND TRAINING

ORGANISATIONAL CHART

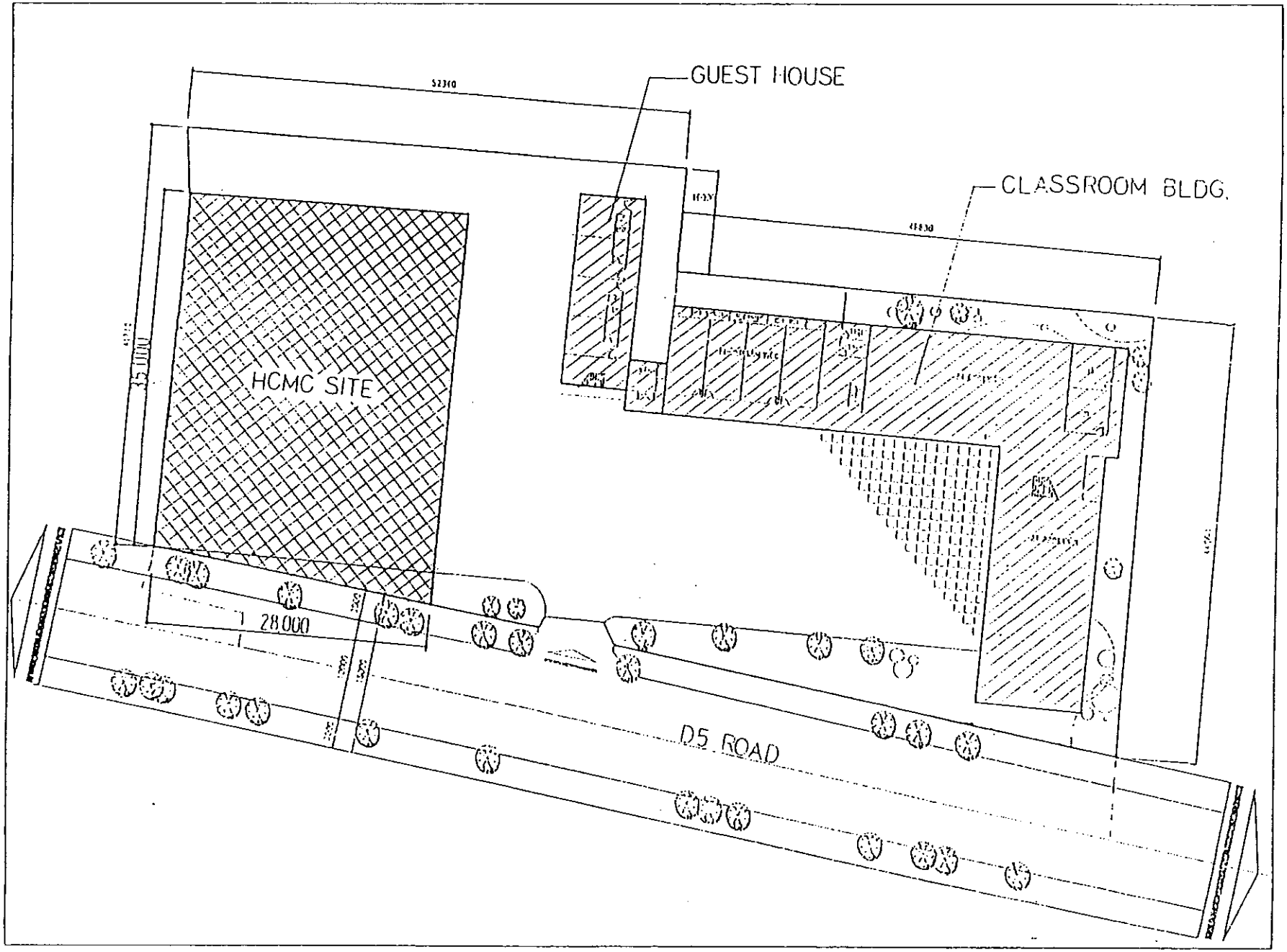


FOREIGN TRADE UNIVERSITY
ORGANIZATIONAL CHART



Location of Project Site

ANNEX-2



A11

List of Requested Facilities and Requirements

Room	Requirements	Notes
1 Lobby•Exchange		
A Lobby	Entrance Lobby, video display	
B Library		
Reading	Seating for 12~15	High priority
Internet Booth	Five to ten PC booths for internet access	
A/V Booth	Two video viewing booths	
Study Carrel	Five Study booths with Tape recorders	
Control Desk	Control Desk, equipment rack	
Racks	Rack space for 5000 books	
C Guidance Booths	Two booths w/ table & chairs	
2 Seminar		
A Multi-Purpose Room	80~100 seat room, partition into 3, translators booth	
B Seminar Rooms	Two 30~40 seat Rooms	
C Computer Room	15~20 computer units w/ server & printer	
D Cultural Exchange Room	8 Tatami room	
E Japan Club	Office space for 8	Low priority
F. Pantry	Beverage (coffee tea, etc for functions)	
3 Administration		
Director Room w/ secretary space	One Director Room to be shared by two, secretary desk & chair	
Reception Room	Small reception room for Directors	
Administration Office	6 personnel	
Instructor Room	Desks &chairs for 3 Japanese Experts & editing equipment, 6 sets of desks & chairs for other instructors	
Meeting Room	One 15 seat meeting room	
4 Other		
Circulation	Corridors, staircases	
Toilets	As required	
Machinery Space	Power room, Pump room, Generator room Air conditioning for required rooms	
Storage space	Storage space for Seminar equipment Storage space for office supplies	
Total		1000~

ANNEX-4

List of Requested Equipment

Equipment	Description
1. Cultural Exchange Lobby	
A. Lobby Display	Large screen display of cultural/ educational information
B. Audio-Visual Display	Video monitors, booths
C. Computer Terminals	Internet PC, booths
D. Library PC	For book administration, printers
E. Library Book Racks	5000 book capacity
F. Library Control Desk	Furniture, Copy Machine, equipment rack
G. Guidance booths	Furniture
2. Seminar zone	
A. A/V equipment	Video projector, Screens, CD player, Audio Amplifiers,
B. Classroom Furniture	Speakers, OHP projector, equipment wagon Desk, Chairs, Lecturers dais, Whiteboard
C. Computer System	Personal computers for instruction, server, printer, internet connection
D. Japanese Tatami Mats	8 tatami space for Cultural exchange activities
3. Administration Zone	
A. Office equipment	Copy machine, facsimile machine,
B. Office furniture	Desks, Chairs, Bookcases, Lockers
C. Lesson Editing Equipment	AV editing equipment, etc
4. Others	
A. Satellite Transmission Receiving System	Parabola antenna, amplifier, distributor, connection to required equipment
B. Storage racks	Storage of Seminar equipment & furniture , Storage of Administrative supplies and school records

Annex-5 Japan's Grant Aid Scheme

1. Grant Aid Procedures

a. Japan's Grant Aid Program is executed through the following procedures.

- Application (A request made by the recipient country)
- Study (Basic Design Study conducted by JICA)
- Appraisal &Approval (Appraisal by the Government of Japan and Approval by the Cabinet of Japan)
- Determination of Implementation (Exchange of Notes between the Governments of Japan and the recipient country)

b. Firstly, the application or request for a Grant Aid project submitted by a recipient country is examined by the Government of Japan (the Ministry of Foreign Affairs) to determine whether or not it is eligible for Grant Aid. If the request is deemed appropriate, the Government of Japan assigns JICA (Japan International Cooperation Agency) to conduct a study on the request.

Secondly, JICA conducts the study (Basic Design Study) using (a) Japanese consulting firm(s).

Thirdly, the Government of Japan appraises the project to see whether or not it is suitable for Japan's Grant Aid Programme, based on the Basic Design Study Report prepared by JICA, and the results are then submitted to the Cabinet for an approval.

Fourthly, the project, once approved by the Cabinet, becomes official with the Exchange of Notes signed by the Governments of Japan and recipient country.

Finally, for the implementation of the project, JICA will assists the recipient country in such matters as preparing tenders, contract and so on.

2. Basic Design Study

a. Contents of the study

The aim of the Basic Design Study (hereafter referred to as "the Study") conducted by JICA on a requested project (hereafter referred to as "the Project") is to provide a basic document necessary for the appraisal of the Project by the Government of Japan. The contents of the Study are as follows :

a) Confirmation of the background, objectives, and benefits of the Project and also institutional capacity of agencies concerned of the recipient country necessary for the

Project's implementation.

b) Evaluation of the appropriateness of the Project to be implemented under the Grant Aid Scheme from a technical, social and economic point of view.

c) Confirmation of items agreed on by both parties concerning the basic concept of the Project.

d) Preparation of a basic design of the Project

e) Estimation of costs of the Project.

The contents of the original request are not necessarily approved in their initial form as the contents of the Grant Aid project. The Basic Design of the Project is confirmed considering the guidelines of the Japan's Grant Aid Scheme.

The Government of Japan requests the Government of the recipient country to take whether measures are necessary to ensure its self-reliance in the implementation of the Project. Such measures must be guaranteed even though they may fall outside of the jurisdiction of the organization in the recipient country actually implementing the Project. Therefore, the implementation of the Project is confirmed by all relevant organizations of the recipient country through the Minutes of Discussions.

b. Selection of Consultants

For smooth implementation of the Study, JICA uses (a) registered consultant firm(s). JICA select (a) firm(s) based on proposals submitted by interested firms. The firm(s) selected carry(ies) out a Basic Design Study and write(s) a report, based upon terms of reference set by JICA.

The consultant firm(s) used for the Study is(are) recommended by JICA to the recipient country to also work on the Project's implementation after the Exchange of Notes, in order to maintain technical consistency.

3. Japan's Grant Aid Scheme

a. Grant Aid

The Grant Aid Programme provides a recipient country with non-reimbursable funds to procure the facilities, equipment and services (engineering services and transportation of the products, etc.) for economic and social development of the country under principles in accordance with the relevant laws and regulations of Japan. Grant Aid is not supplied through the donation of materials as such.

b. Exchange of Notes (E/N)

Japan's Grant Aid is extended in accordance with the Notes exchanged by the two Governments concerned, in which the objectives of the Project, period of execution, conditions and amount of the Grant Aid, etc., are confirmed.

c. Period

"The period of the Grant Aid" means the one fiscal year which the Cabinet approves the Project for. Within the fiscal year, all procedures such as exchanging of the Notes, concluding contracts with (a) consultant firm(s) and (a) contractor(s) and final payment to them must be completed.

However, in case of delays in delivery, installation or construction due to unforeseen factors such as weather, the period of the Grant Aid can be further extended for a maximum of one fiscal year at most by mutual agreement between the two Governments.

d. Purchase of the Products and or Services

Under the Grant Aid, in principle, Japanese products and services including transport or those of the recipient country are to be purchased.

When the two Governments deem it necessary, the Grant Aid may be used for the purchase of the products or services of a third country.

However, the prime contractors, namely, consulting, constructing and procurement firms, are limited to "Japanese nationals". (The term "Japanese nationals" means persons of Japanese nationality or Japanese corporations controlled by persons of Japanese nationality.)

e. Necessity of "Verification"

The Government of recipient country or its designated authority will conclude contracts denominated in Japanese yen with Japanese nationals. Those contracts shall be verified by the Government of Japan. This "Verification" is deemed necessary to secure accountability to Japanese taxpayers.

f. Undertakings required of the Government of the Recipient Country

(As described in ANNEX 6)

g. Proper Use

The recipient country is required to maintain and use the facilities constructed and the equipment purchased under the Grant Aid properly and effectively and to assign staff necessary for this operation and maintenance as well as to bear all the expenses other than those covered by the Grant Aid.

h. Re-export

The products purchased under the Grant Aid should not be re-exported from the recipient country.

i. Banking Arrangements (B/A)

a) The Government of the recipient country or its designated authority should open an account in the name of the Government of the recipient country in an authorized foreign exchange bank in Japan (hereinafter referred to as "the Bank"). The Government of Japan will execute the Grant Aid by making payments in Japanese yen to cover the obligations incurred by the Government of the recipient country or its designated authority under the Verified Contracts.

b) The payments will be made when payment requests are presented by the Bank to the Government of Japan under an authorization to pay issued by the Government of the recipient country or its designated authority.

ANNEX-6

Major Undertakings to be Borne by Each Government

No	Items	To be borne by Japanese Grant Aid	To be borne by Recipient Side
1	a)To secure land		●
	b) Relocation of existing houses		●
2	To clear and level land		●
	To fill in and reclaim any existing drainage ditches or waterways within site area		●
3	Landscaping to required height (filling & grubbing)		●
4	To timely obtain all permits and certification necessary for construction and procurement of HCMC facilities & equipment		●
5	To construct parking facilities	●	
6	To construct road outside site (D5)		●
7	To construct fence and gate		●
8	To construct in site access roads to HCMC	●	
9	To construct building facilities of HCMC	●	
10	To construct other campus buildings		●
11	Electricity Distribution		
	a) local distribution line to site		●
	b) main circuit breaker & transfomer	●	
	c) distribution within site to HCMC	●	
12	Water Supply		
	a) City water main to site		●
	b) Supply system within site (receiving &/or elevated tanks)	●	
13	Drainage System		
	a) Drainage mains to site		●
	b) Drainage system within site	●	
	c) Septic tank	●	
14	Telephone system		
	a)Telephone trunk line to main distribution frame (MDF) of VJCC		●
	b) MDF & internal wiring	●	
	c) connection to telephone system		●
15	Furniture &Equipment		
	a) AV equipment	●	
	b) PC equipment	●	
	c) Furniture	●	
16	To bear the following commissions to a Japanese bank for the banking services based on the Banking Agreement (B/A)		
	a) advising commission of A/P		●
	b) Payment commission		●
17	To ensure prompt unloading & customs clearance at the port of disembarkation in recipient country		●
18	Tax exemption and customs clearance, including VAT		●
19	Marine transportation to Site	●	
20	Internal land transportation to Site	●	

21	To accord Japanese nationals whose services are required in connection with the supply of the products and services under the verified contract such facilities as may be necessary to for their entry into the recipient country & stay therein for the performance of their work		●
22	To exempt Japanese nationals from customs duties, internal taxes and other fiscal levies which may be imposed in the recipient country with respect to the supply of services & products under the verified contract		●
23	To maintain and use properly and effectively the facilities constructed equipment provided under the Grant Aid		●
24	To bear all other expenses, other than those to be borne by the Grant Aid, necessary for the construction of the facilities as well as for the transportation an installation of the equipment		●

Minutes of Discussions
of
Basic Design Study on the Project for Construction of The Vietnam-Japan Human Resources Cooperation Center in Ho Chi Minh City
in
The Socialist Republic of Vietnam
(Explanation on Draft Report)

In March 2000, the Japan International Cooperation Agency (hereinafter referred to as 'JICA') dispatched a Basic Design Study Team on the Project for Construction of The Vietnam-Japan Human Resources Cooperation Center in Ho Chi Minh City (hereinafter referred to as 'the Project'), and through discussion, field survey, and technical examination of the results in Japan, JICA prepared a draft report of the Study.

In order to explain and consult with the concerned officials of the Government of Vietnam on the components of the draft report, JICA sent to Vietnam the Draft Report Explanation Team (hereinafter referred to as 'the Team'), headed by Mr. Takashi Hatakeyama, Deputy Resident Representative, JICA Vietnam Office, from 6th August to 15th August, 2000.

As a result of discussions, both parties confirmed the main items described on the attached sheets.

Hanoi, 11th August, 2000

Mr. Takashi HATAKEYAMA
Leader
Draft Report Explanation Team
Japan International Cooperation Agency

Professor, Dr. Tran Van Nhung
General Director
Dept. of International Relations
Ministry of Education and Training

Professor, Dr. Nguyen Thi Mo
Rector
Foreign Trade University

Witnessed by:

Dr. Duong Duc Ung
General Director
Dept. of Foreign Economic Relations
Ministry of Planning and Investment

ATTACHMENT

1. Components of the Draft Basic Design Report

The Vietnamese side agreed and accepted in principle the components of the draft report explained by the Team.

2. Japan's Grant Aid System

The Vietnamese side understood the Japan's Grant Aid System as explained by the Team and described in Annex-5 of the Minutes of Discussions signed by both parties on 7th March, 2000.

3. Schedule of the Study

JICA will complete the final report in accordance with the confirmed item and send it to the Vietnamese side in or around November 2000.

4. Other Relevant Issues

4-1 Both sides agreed that FTU will obtain the Government Approval for the Project by the end of September 2000, and that MPI and MOET will hasten the procedure for its acquisition.

4-2 Both sides agreed that FTU will notify the Japanese side of the acquisition of the Land Use Permit from the People's Committee in Ho Chi Minh City and construction of the fence around the project site by the end of September 2000.

4-3 People's Committee in Binh Thanh District explained that the construction of D5 Road and the removal of the 4 shops along the main street will be completed by December 2000. Both sides agreed that FTU will continuously enhance the progress.

4-4 Both sides agreed that FTU will secure enough budget for the necessary undertakings to be borne prior to the construction of VJCC-HCMC as described in Annex-6 of the Minutes of Discussions signed in March 2000.

4-5 Both sides reconfirmed that FTU will allocate enough budget and appropriate staff for the proper and effective operation and maintenance of VJCC-HCMC and equipment provided under the Project.

4-6 The Team handed one copy of the draft detailed specification of the equipment to Professor, Dr. Nguyen Thi Mo, Rector, FTU. Both sides agreed that this draft specification is confidential and should not be duplicated or released to any outside parties.

Appendix 5. Estimation of Costs borne by Vietnam

Cost estimate data was discussed between the Consultant and FTU. FTU submitted the following table to show the Vietnamese estimation of their obligation costs. The construction costs for fencing was a firm estimate prepared according to Building Permit Drawings as is shown in Appendix 6-4. Connection for electricity power was considerably higher than the Consultants estimates and subsequent investigations by the Consultant indicated the costs were for power supply facilities including the proposed main classroom buildings for Ho Chi Minh Branch of FTU.

Estimation of Costs borne by Vietnam
as provided by Foreign Trade University

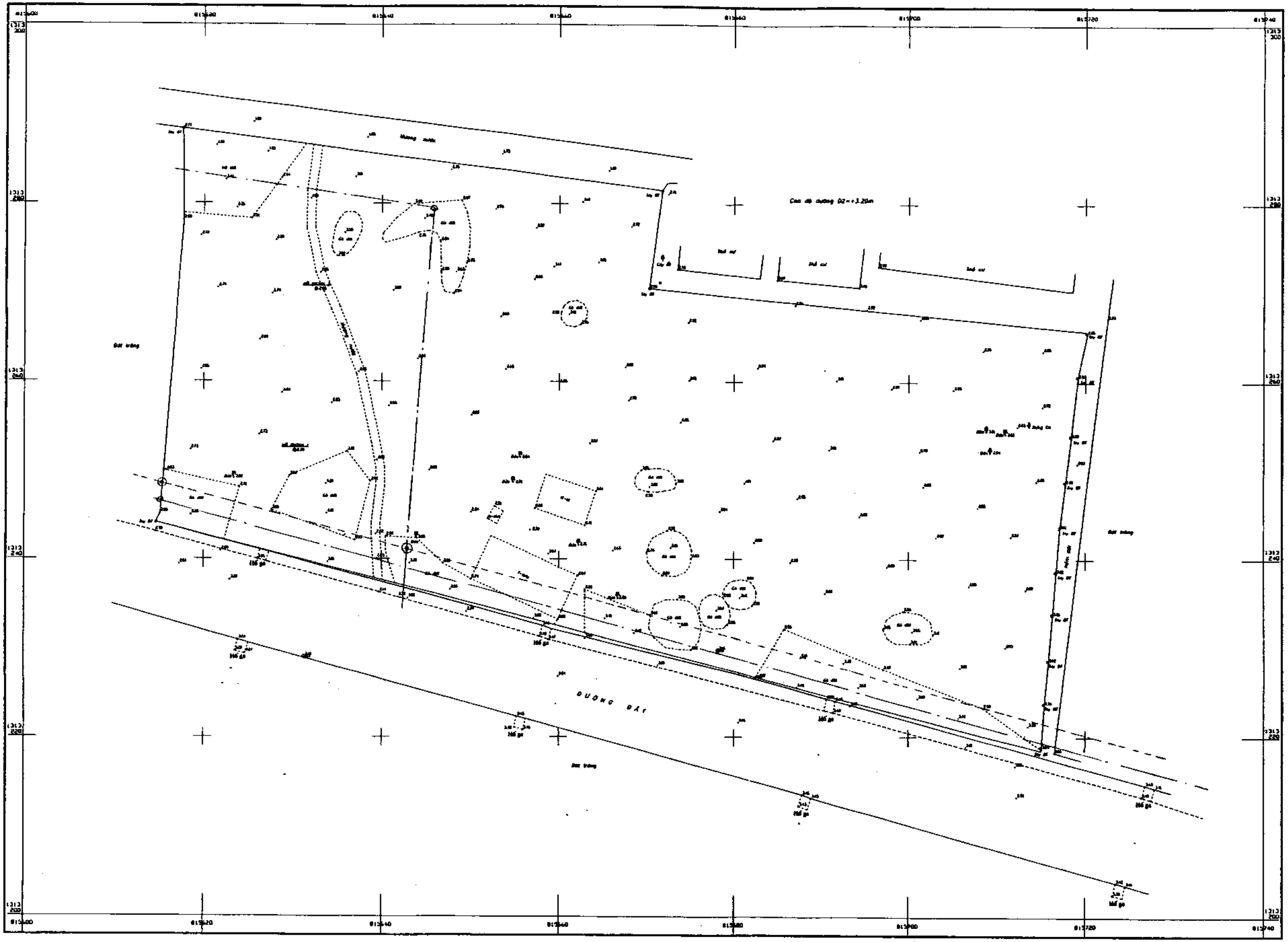
No.	Item	Cost (VND)	Cost (USD)
1.	Land acquisition costs	8,000,000,000	571,428.57
2.	Removal of houses	70,000,000	5,000.00
3.	Leveling of land	110,000,000	7,857.14
4.	Gate door and fan construction	313,000,000	22,357.14
5.	Application for building permit	42,000,000	3,000.00
6.	Power supply	418,000,000	29,857.14
7.	Telephone and fax connection	75,000,000	5,357.14
8.	Landscaping	110,000,000	7,875.14
9.	Water supply	154,000,000	11,000.00
10.	Sewerage connection	10,000,000	714.29
11.	Customs clearance for equipment imported	42,000,000	3,000.00
12.	Visa entry for experts	14,000,000	1,000.00
13.	Banking fee	420,000,000	30,000.00
14.	Construction insurance	189,567,938	13,540.57
15.	**Total**	**9,967,567,938**	**711,969.14**

6. Other Relevant Data

6.1 Geo-technical Investigation and Survey Data
6.2 Result of Geo-technical Tests and Borehole Log
6.3 Connection Diagram to Utilities
6.4 Construction Permit for Ho Chi Minh Site Fencing

6.1 Geo-technical Investigation and Survey Data

SOUTHERN GENERAL INVESTIGATION ENTERPRISE



LEGEND

Observation Station (theodolite traverse)	K-9 / 544.383
Spot Height	.597.21
Bore Hole	
House or Building	
Footpath	
Coconut	
Bush	
Grass	

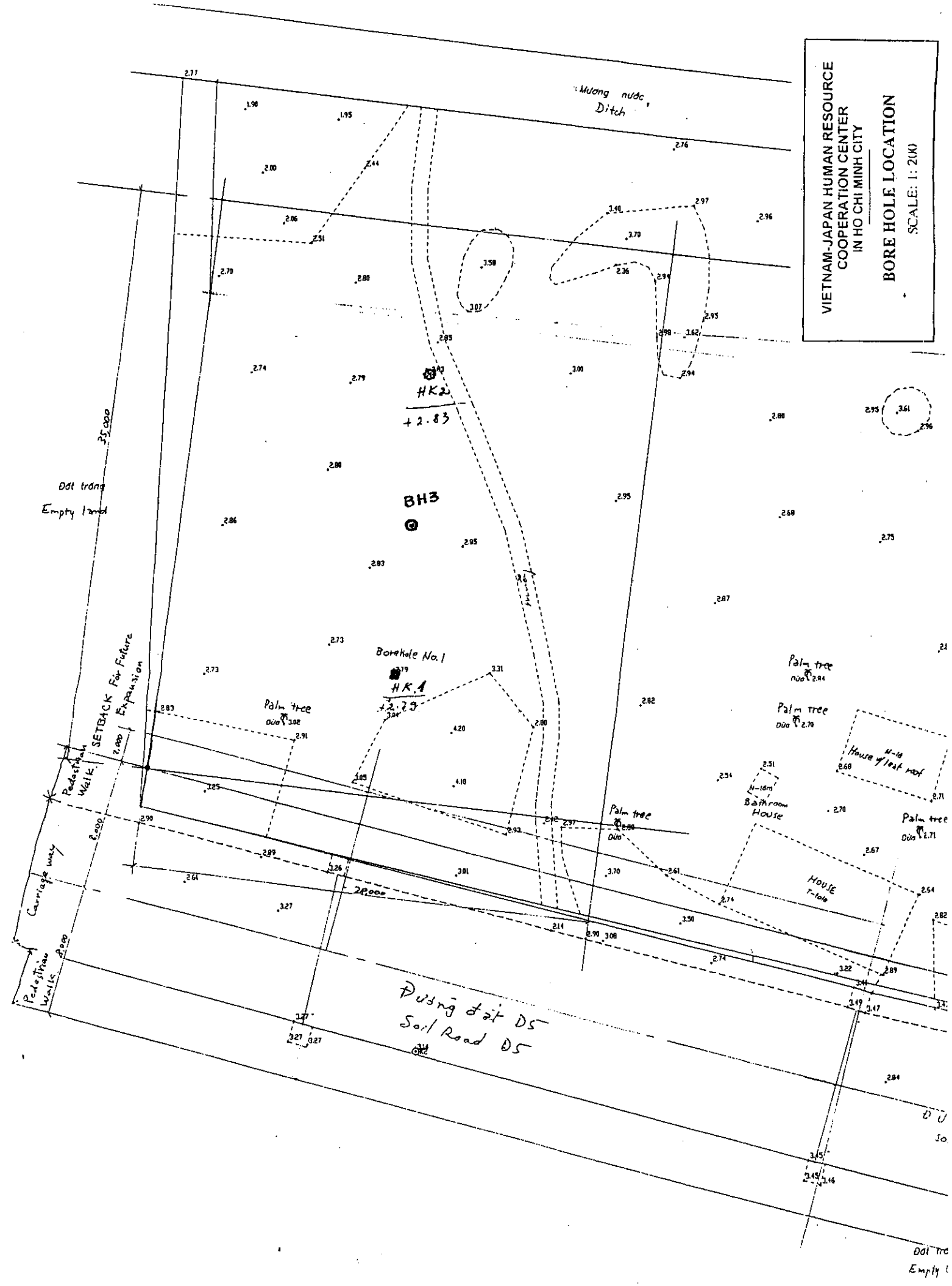
This map is made by ground survey
Coordinate system: Distance at ground elevation
Vertical Datum: Virtual Level

SOCIALIST REPUBLIC OF VIET NAM ELECTRICITY OF VIET NAM	
Southern general investigation enterprise	
TOPOGRAPHIC MAP	
Date: March 11,2000?	Scale 1:200

- Made by : Nguyễn Đình Thịnh

Scale 1:200

1cm on map corresponds with 2m in the field


VIETNAM-JAPAN HUMAN RESOURCE
COOPERATION CENTER
IN HO CHI MINH CITY
BORE HOLE LOCATION
SCALE: 1: 200
Mương nước
Ditch
HK2
+2.83
BH3
Borehole No.1
HK.1
+2.29
Đất trống
Empty land
SETBACK For Future Expansion
Pedestrian Walk
Carriage way
Palm tree
House
Bathroom
Đường đất D5
Soil Road D5

6.2 Result of Geo-technical Tests and Borehole Log

SUMMARY OF TEST RESULTS

Table 3

Sample No.		01	02	03	04	05	06	07
Depth (m)		4.2	10.5	12.0	16.5	23.5	28.0	32.0
Sample type		UD	UD	UD	UD	UD	UD	UD
Particle distribuition								
Clay to silt (<0.002 - 0.075)		88	93	95	98	77	47	73
Fine Sand (0.075-0.425)		12	7	5	2	23	52	27
Medium Sand (0.425- 2.0)							1	
Coarse Sand (2.0- 4.75)								
Wet density	γ_w, t/m^3	1.45	1.45	1.45	1.44	1.66	1.98	1.76
Dry density	γ_d, t/m^3	0.74	0.73	0.76	0.72	1.06	1.62	1.27
Porosity	n, %	71.3	71.9	71.0	72.2	59.8	40.5	52.8
Void ratio	ε	2.486	2.560	2.452	2.593	1.490	0.681	1.118
Specific gravity	Δ	2.57	2.61	2.61	2.60	2.65	2.72	2.69
Water content	w, %	96.7	97.8	91.8	99.0	56.0	22.4	38.6
Liquid limit	LL, %	76.5	77.6	82.6	88.0	76.0	29.8	49.8
Plastic limit	PL, %	34.4	34.0	36.6	37.8	32.3	15.1	25.5
Plastic index	PI, %	42.1	43.6	46.0	50.2	43.7	14.7	24.3
Degree of saturation	G, %	100	99.7	97.7	99.3	99.6	89.4	92.8
UCS	q_u, kg/cm^2	0.111	0.084	0.149	0.026	0.297	0.260	0.249
Triaxial UU	φ^0	$0^0$59'	$0^0$46'	$0^0$25'	-	$0^0$20'	$4^0$36'	$1^0$04'
	C, kg/cm^2	0.016	0.038	0.093	-	0.033	0.925	0.072
Consolidation	ε_0	2.486	2.560				0.681	
	ε_1	2.210	2.235				0.648	
	ε_2	2.078	2.048				0.631	
	ε_3	1.818	1.811				0.605	
	ε_4	1.547	1.533				0.577	
	ε_5	1.278	1.268				0.546	

BOREHOLE HK1

PROJECT: VIET NAM - JAPAN HUMAN RESOURCES COOPERATION CENTER

Tỉ lệ - Scale: 1/200

· Elevation : 2,79m
Depth : 38,0m

Start : 10 / 03 / 2000
Finish : 11 / 03 / 2000
Ground Water level : 0,5m

N°	Depth (m)	Thickness (m)	Elevation (m)	Section	No sample Depth	Description	N value SPT 5 10
1	1,7	1,7	1,09		S 1 4.8-5.2	***Layer 1*** 0,0 -1,7m Back fill: Clay: reddish brown, yellowish brown, grey, stiff, medium consolidated.	0 0 1 1
					S 2 9.6-10.0	***Layer 2*** 1,7-36,0m: Organic clay : grey, dark grey, with few pieces of vegetation decomposed, very soft to soft, non consolidated.	1 1 1 1 2 2 2 2 2 2 3 3 4 4
2	36,0	34,3	-32,21			Organic clay : grey, dark grey, with few pieces of vegetation decomposed, soft, non consolidated.	
3	38,0	2,0	-35,21			***Layer 3*** 36,0-38,0m Clay: grey, reddish brown, yellowish brown, medium, consolidated.	7 6

BOREHOLE HK2

PROJECT : VIET NAM - JAPAN HUMAN RESOURCES COOPERATION CENTER

Scale: 1/200

Elevation : 2,83m
Depth : 40,0m

Start : 12 / 03 / 2000
Finish : 13 / 03 / 2000
Ground Water level : 0,5m

N°	Depth (m)	Thickness (m)	Elevation (m)	Section	No sample depth	Description	SPT Value(N) 5 10
1	1,2	1,2	1,6			***Layer1***- 0,0 -1,2m Back fill: Clay: reddish brown, yellowish brown, grey, stiff, medium consolidated.	0
					S 3 4.6 -5.0		0
						Layer2 - 1,2 - 30,0 m: Organic clay : grey, dark grey, with few pieces of vegetation decomposed, very soft to soft, non consolidated.	1
							1
							1
							1
							1
							2
							2
							2
							2
							3
						Organic clay : grey, dark grey, with few pieces of vegetation decomposed, soft, non consolidated.	4
							4
							4
2	30,0	28,8	-27,17				7
						Layer 3 - 30,0-40,0m Sandy Clay: grey, reddish brown, yellowish brown, medium stiff, medium consolidated.	8
					S4 33,0-33,4		11
							11
3	40,0	8,0	-37,17				11

BOREHOLE LOG

GEOTEC

PROJECT: Vietnam-Japan Human Re. Co. Center
LOCATION:
BOREHOLE: BH3
DEPTH (m): 70.0
ELEVATION: +2.83

GWL /date:
Appeared 0.5m
Stabilized 0.5m

COMMENCED: 29-May-00
COMPLETED: 01-Jun-00
LOGGED: Giap Duc Tinh
CHECKED: Le Van Chien

Sheet 1 of 3

SOIL DESCRIPTION (consistency, relative density, water content, grading, group symbol etc.)	LEGEND	DEPTH (m)	STANDARD PENETRATION Nos of blows/15cm	N_{30cm} - Value 0 10 20 30 40 50 60	SAMPLE TYPE UD	SAMPLE TYPE DS	DRILLING METHOD
FILL: Sandy SILT to Silty Sand; reddish brown mottled yellow; moist; loose.		1	.5 1				
		2					
CLAY: dark to blackish grey, with some organic matters; saturated, highly plastic; very soft		3					
		4			4.2		
		5	.8 1				
		6	.5 2				
		7					
		8	.5 2				
		9					
		10			10.5	All samples from SPT	Wash drilling in diameter 91mm with bentonite
		11	2				
		12	.5 2		12		
		13					
		14	.5 2				
		15					
		16					
		17	1 1 1		16.5		
Becoming soft dark to bluish CLAY.		18					
		19	.5 .3 1 1 3				
		20					
		21					
		22	.5 1 1 2				
		23	.4		23.5		
Sandy **CLAY**: dark grey; highly plastic; saturated; firm with some silty sand lens		24	1 3 3				
		25					

BOREHOLE LOG

GEOTEC

PROJECT:	Vietnam-Japan Human Re. Co. Center	GWL /date:		COMMENCED:	29-May-00
LOCATION:		Appeared	0.5m	COMPLETED:	01-Jun-00
BOREHOLE:	BH3	Stabilized	0.5m	LOGGED:	Giap Duc Tinh
DEPTH (m):	70.0			CHECKED:	Le Van Chien
ELEVATION:	+2.83				Sheet 2 of 3

SOIL DESCRIPTION (consistency, relative density, water content, grading, group symbol etc.)	LEGEND	DEPTH (m)	STANDARD PENETRATION Nos of blows/15cm			N_{30cm}-Value 0 10 20 30 40 50 60	SAMPLE TYPE UD	SAMPLE TYPE DS	DRILLING METHOD
Sandy **CLAY**: dark grey; highly plastic; saturated; firm with some silty sand lens		26	3	3	3			All samples from SPT	Wash drilling in diameter 91mm with bentonite
		27							
		28					28		
		.5	2	3	13				
Sandy **CLAY**: Grey to bluish grey; highly plastic; saturated; stiff to very stiff. In place silty sand lens.		29							
		30	3	6	10				
		31							
		32					32		
		.5	4	4	12				
		33							
SAND: Medium-grained; grey in color; dense.		34	3	8	18				
		35							
		36	10	13	9				
		37							
		38	12	14	15				
		39							
Grading to medium to coarse; with some small quartz gravels, dense..		40	12	22	23				
		41							
Grading to fine-grained; Whitish grey in color; dense.		42	10	17	22				
		43							
Grading to very fine-grained; reddish brown in color; medium dense.		44	7	7	9				
		45							
		46	7	9	11				
		47							
		48	6	8	9				
		49							
		50	5	6	5				

BOREHOLE LOG

GEOTEC

PROJECT: Vietnam-Japan Human Re. Co. Center
LOCATION:
BOREHOLE: BH3
DEPTH (m): 70.0
ELEVATION: +2.83

GWL /date:
Appeared 0.5m
Stabilized 0.5m

COMMENCED: 29-May-00
COMPLETED: 01-Jun-00
LOGGED: Giap Duc Tinh
CHECKED: Le Van Chien

Sheet 3 of 3

SOIL DESCRIPTION (consistency, relative density, water content, grading, group symbol etc.)	DEPTH (m)	STANDARD PENETRATION Nos of blows/15cm	N_{30cm}-Value	SAMPLE TYPE UD	SAMPLE TYPE DS	DRILLING METHOD
Medium dense	51–52	7 15 14			All samples from SPT	Wash drilling in diameter 91mm with bentonite
Medium dense	53–54	6 10 11				
Grading to fine- to medium-grained; mottled greyish, yellowish and reddish brown; Dense	55–56	3 4 10				
	57–58	12 13 16				
	59–60	12 18 24				
CLAY: Greyish brown in color; wet; Hard to very hard; plastic.	61–62	8 15 17				
Clayey to sandy **SILT:** Grey to pale grey in color; saturated; Stiff to hard.	63–64	4 5 5				
	65–66	6 30 30/5				
SAND: Fine- to medium grained; mottled yellowish, greyish to reddish brown in color; with some small quartz gravels at the bottom. Very dense.	67–68	20 30 40				
	69–70	16 41 65				
The borehole bottom at 70.0m						

Note: 30/5: 30 blows for 5 cm penetration and refusal.

6.3 Connection Diagram to Utilities

Appendix 6-3 Connection Diagram to Utilities

Based on Field Surveys and discussions with concerned authorities and local companies, the Consultants have prepared preliminary diagrams for connection of infrastructure facilities to the local network. Outline of each connection is described below.

A. Electric Power Supply

Local Power Company will provide power mains along D5 Road at 15 kV. VJCC-HCMC can connect at any point along site boundary. Receiving equipment to local specifications will be provided under Grant Aid and local power company will connect to incoming panel and provide metering unit.

B. Water Supply

The local authorities will provide water mains under D5 Road, branching from existing water mains in either Xo Viet Nghe Tinh Road or .small road 60m south of site. VJCC-HCMC can connect at any point along site boundary. Design and construction of connections up to in-site metering unit will be done under Vietnamese obligations.

C. Drainage

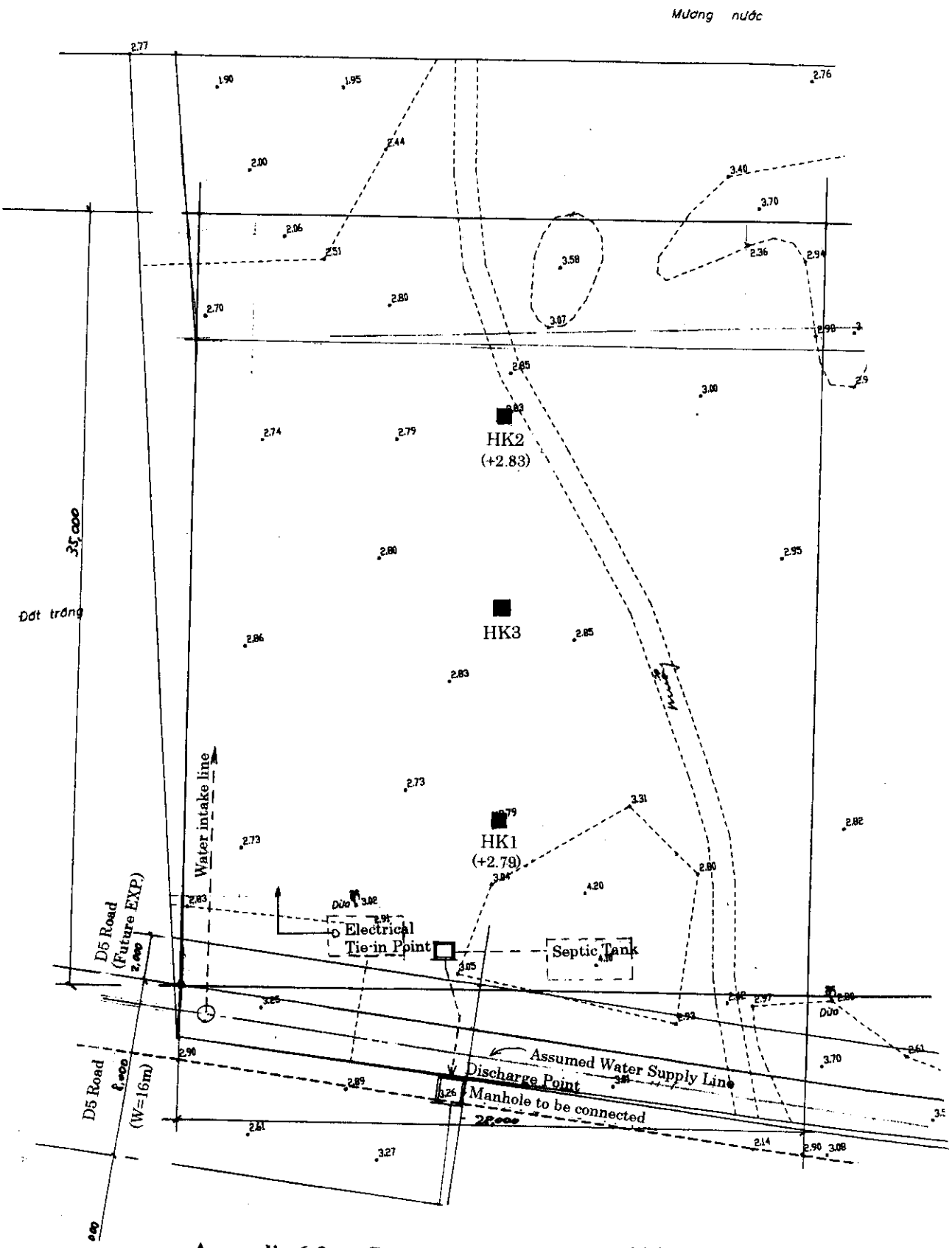
The main drainage facilities are already under D5 Road (ϕ800 main & ϕ400 crossing). VJCC-HCMC can connect to drainage manhole nearest site. Septic tank will be provided for VJCC-HCMC to collect soil water and the runoff will be released to drainage system. Connections to drainage system will be done under Grant Aid.

D. Telephone System

Local telephone company will connect to MDF (Main Distribution Frame) in VJCC-HCMC building. Sufficient grid capacity is available.

It was further confirmed between FTU and the Consultants that all connections under Japan's Grant Aid Scheme will be designed for capacity requirements of VJCC only. Any further increase in size or replacement of facilities to meet requirements of classroom buildings, et cetera will be the responsibility of FTU.

Refer to connection drawings on next page.



Appendix 6-3 Connection Diagram to Utilities

6.4 Construction Permit for Ho Chi Minh Site Fencing

Ho Chi Minh City
Binh Thanh People's Committee
No. 513/GPXD-UB

Socialist Republic of Viet Nam
Independence – Freedom – Happiness
Binh Thanh, 31 January 2000

BUILDING PERMIT

In accordance with Decision No.3217/QD-UB-QLDT
dated 26 June 97 by People's Committee of the City
on construction permit issuance in Ho Chi Minh City

****

1. Issued to **FOREIGN TRADE UNIVERSITY**

- Address: **2 Bis Phan Xich Long, Phu Nhuan Dist.**
- Be permitted to: **Constructing fence**
  In compliance with the design coded **TKSB**
  Made by Binh Thanh Housing Management Company
- Consisting of the following components:

- **The construction of the fence, concrete poles, brick walls + iron works**
- **The location of the construction is described in the Map of Present Land Use made by Mapping Team on 16 October 99:**

- The back and the two sides are walls of 2.5m in height
- The front is wall of 0.6m in height and iron work of 1.9m in height on the top (Refer to the approved detailed map)

Note: - The front is 8m distant from ~~03~~ wall
- Document No. 433/QTTV dated 15 December 99 by FTU
The issuance of fence construction permit is to prevent the land lot from squatters.
Prospective investor shall have to observe the approved planning.

- Positioning: **partially on the plots 127, 128, 130, 131, 132, 135 and a part of the Van Thanh Bac Canal.**
- Located at No. D5 Road, Ward 25, Binh Thanh Dist.

2. Prospective investor shall have to observe legitimate interests of parties

associated with the project, shall take full responsibility in case of dispute.

3. Prospective investor shall have to:

- contact with competent authorities and work out implementation design based on approved architectual design.
- the implementation of the project must be carried out by a competent organization with judicial body/
- notify Urban Management Authority to come to inspect the underground works (*chambers for flush toilets, sewage water treatment, foundation*) before covering and further the construction.
- present related permits to local government before starting the construction and have board announcing designer, construction company at the entrance of the project.
- In case of design changing, report to and wait for decision of building permit issuing authority.

4. Designer and construction company are fully responsible for safety and quality of the Project.

5. When completing the construction, investor shall have to notify Urban Management Authority to come to inspect and make report. The report, then, shall have to attached with building permit in order to certify use ownership.

6. The permit shall be effective to starting the construction within 1 year at signing. After the effective period, if the construction is intended to start, it is required to apply for extension of the permit.

FOR BINH THANH PEOPLE'S COMMITTEE
ON BEHALF OF CHAIRMAN
VICE CHAIRMAN

THÀNH PHỐ HỒ CHÍ MINH
UBND QUẬN BÌNH THẠNH
---oOo---
Số: 243 /GPXD-UB

CỘNG HÒA XÃ HỘI CHỦ NGHĨA VIỆT NAM
Độc lập - Tự do - Hạnh phúc

Bình Thạnh, ngày 21 tháng 04 năm 2000

GIẤY PHÉP XÂY DỰNG

Căn cứ Quyết định số 3217/QĐ-UB-QLĐT ngày 26-06-97 của UBND Thành phố quy định v/v cấp giấy phép xây dựng tại TP.Hồ Chí Minh.

****

1. **Cấp cho:** **TRƯỜNG ĐẠI HỌC NGOẠI THƯƠNG**
   - Địa chỉ: **2 Bis Phan Xích Long Quận Phú Nhuận**
   - Được phép: **Xây dựng tường rào**
   theo thiết kế, có ký hiệu: **TKSB** thiết lập
   do: Công ty Quản lý Nhà Bình Thạnh
   - Gồm các hạng mục dưới đây:

☆ **Xây dựng tường rào, móng cột BTCT, tường gạch + song sắt.**

☆ **Vị trí xây dựng trên ranh đất được xác định tại bản đồ hiện trạng vị trí do Đoàn đo đạc bản đồ đo ngày 16-10-99:**

- Mặt sau và 2 mặt bên xây dựng tường gạch cao 2,5m.
- Mặt trước xây dựng tường rào cao 0,6m phía trên lắp đặt song sắt cao 1,9m.
(Xem chi tiết trên bản vẽ được duyệt)

<u>Ghi chú</u>: - Mặt trước xây dựng cách tim đường D_3 : 8m.
- Công văn số 433/QTTV ngày 15-12-99 của Trường Đại học Ngoại Thương.
Việc cấp phép xây dựng tường rào nhằm mục đích bảo vệ khu đất, tránh lấn chiếm.
Chủ đầu tư phải chấp hành theo quy hoạch được duyệt sau này.

- Trên thửa đất: **1 phần các thửa 127, 128, 130, 131, 132, 135 và 1 phần rạch**
- Tọa lạc tại: Số: đường: D_3 **Văn Thánh Bắc**
Phường: 25 Quận Bình Thạnh.

2. **Chủ đầu tư phải tôn trọng các quyền lợi hợp pháp của người có liên quan đến công trình sửa chữa hoàn toàn chịu trách nhiệm trước pháp luật nếu có tranh chấp.**
3. **Chủ đầu tư phải thực hiện các điều sau đây:**
   - Liên hệ với đơn vị có chức năng và tư cách pháp nhân lập thiết kế thi công đúng theo họa đồ kiến trúc đã được duyệt.
   - Việc thi công công trình phải do đơn vị có chức năng và tư cách pháp nhân thực hiện.
   - Báo Phòng QLĐT kiểm tra phần xây dựng ngầm (*như hầm vệ sinh tự hoại, xử lý nước thải, đà móng công trình*) trước khi đậy nắp và xây dựng tiếp bên trên.
   - Xuất trình giấy phép cho chính quyền sở tại trước khi khởi công xây dựng và yết báo số giấy phép, đơn vị thiết kế, tên đơn vị thi công tại cổng của công trình.
   - Nếu thay đổi thiết kế, phải báo cáo và chờ quyết định của cơ quan cấp giấy phép xây dựng.
4. **Đơn vị thiết kế và thi công hoàn toàn chịu trách nhiệm về an toàn và chất lượng công trình.**
5. **Khi xây dựng xong, chủ đầu tư báo cho Phòng QLĐT lập biên bản kiểm tra công trình hoàn thành. Giấy phép xây dựng có kèm theo biên bản kiểm tra công trình hoàn thành mới có giá trị để đăng ký quyền sở hữu.**
6. **Giấy phép này chỉ có hiệu lực khởi công xây dựng trong thời hạn 1 năm kể từ ngày ký. Quá thời hạn quy định, nếu cần xây dựng phải xin giấy phép gia hạn./.**

TM. UBND QUẬN BÌNH THẠNH
KT. CHỦ TỊCH
PHÓ CHỦ TỊCH

[signature, stamp]

BẢN ĐỒ HIỆN TRẠNG

ĐỂ LẬP THỦ TỤC GIAO - THUÊ ĐẤT

Khu đất diện tích : 0 Ha 42.83

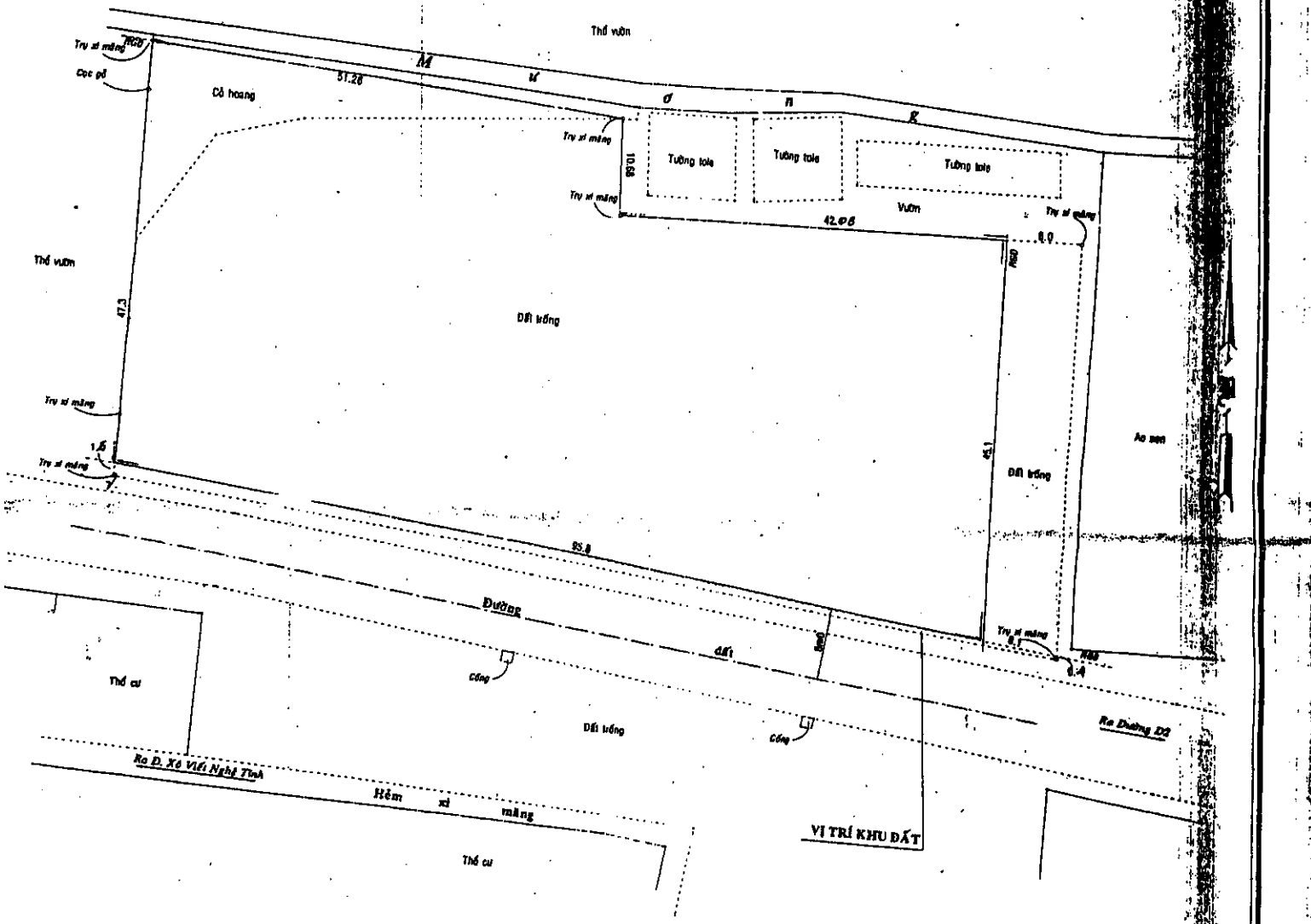
Hiện trạng bên trên : Đất trống, Cỏ hoang;
(Phường 25, Quận Bình Thạnh)

Giao cho : **TRƯỜNG ĐẠI HỌC NGOẠI THƯƠNG**

Địa chỉ : 2 Bis Phan Xích Long, Phường 3, Quận Phú Nhuận

Mục đích : Xây dựng trung tâm nghiên cứu phát triển nguồn lực ngoại thương.

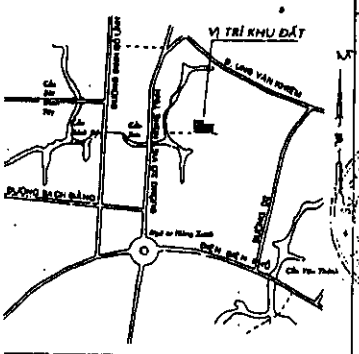
TỈ LỆ 1 / 500



Ranh giới dự kiến giao đất

SƠ ĐỒ CHỈ DẪN

Tỷ lệ : 1 / 25000



SỞ ĐỊA CHÍNH - NHÀ ĐẤT TP-HCM

ĐOÀN ĐO ĐẠC BẢN ĐỒ

Số hợp đồng : 64094/DDBD

Ngày 12 tháng 6 năm 2000

TRƯỞNG ĐOÀN ĐO ĐẠC BẢN ĐỒ

PHÓ TRƯỞNG ĐOÀN

Nguyễn Kỳ Tâm

SỞ ĐỊA CHÍNH - NHÀ ĐẤT THÀNH PHỐ HỒ CHÍ MINH

Số : 11528 /GĐ-ĐCNĐ

TRUNG TÂM KIỂM ĐỊNH BẢN ĐỒ & TƯ VẤN ĐỊA ỐC

Ngày 17 tháng 6 năm 2000

KIỂM TRA KỸ THUẬT

Tống Tâm Quý

Ngày 19 tháng 6 năm 2000

GIÁM ĐỐC

PHÓ GIÁM ĐỐC

Ngày 24 tháng 6 năm 2000

DUYỆT

KT. GIÁM ĐỐC

PHÓ GIÁM ĐỐC

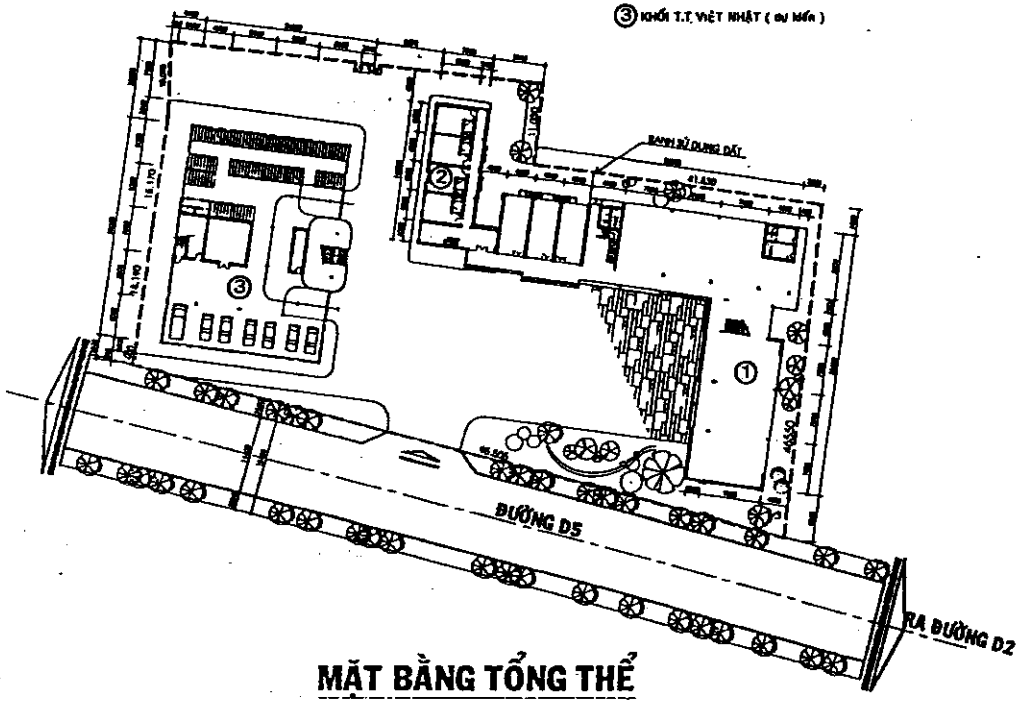
Đào Anh Kiệt

CI HỮU HUẤN

TRUNG TÂM NGHIÊN CỨU PHÁT TRIỂN NGUỒN LỰC NGOẠI THƯƠNG

(PHƯỜNG 25-QUẬN BÌNH THẠNH-TP HCM)

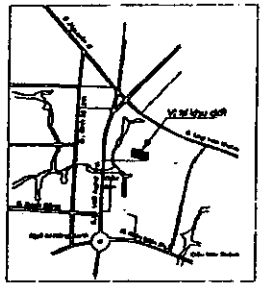
① KHỐI PHÒNG HỌC + VĂN PHÒNG
② KHỐI NHÀ KHÁCH
③ KHỐI T.T VIỆT NHẬT (dự kiến)



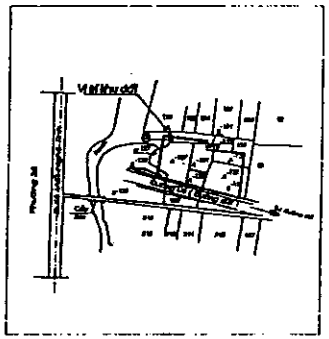
MẶT BẰNG TỔNG THỂ

TL 1/500

KHU ĐẤT THUỘC GIẢI THỬA A 127-128-131-132-135 B 127-128-130-131-132-135
TỜ BẢN ĐỒ DUY NHẤT - BỘ ĐỊA CHÍNH P.25 Q. BÌNH THẠNH
(TRÍCH TÀI LIỆU ĐIỀU TRA 299 / TTg CỦA TTCP)



SƠ ĐỒ CHỈ DẪN
TL : 1/ 25.000



BẢN ĐỒ
TL : 1/ 4.000

BẢNG CÂN BẰNG ĐẤT ĐAI

STT	LOẠI ĐẤT	DIỆN TÍCH (m2)	MẬT ĐỘ (%)
1	ĐẤT XÂY DỰNG	1.470,73	33,38
	KHỐI PHÒNG HỌC + VĂN PHÒNG	785,11	
	KHỐI NHÀ KHÁCH	157,62	
	T.TÂM VIỆT NHẬT(dự kiến)	528	
2	ĐẤT CÂY XANH	700	16,07
3	ĐẤT GIAO THÔNG NỘI BỘ & SÂN BÃI	2184,89	50,55
	TỔNG CỘNG	4.355	100

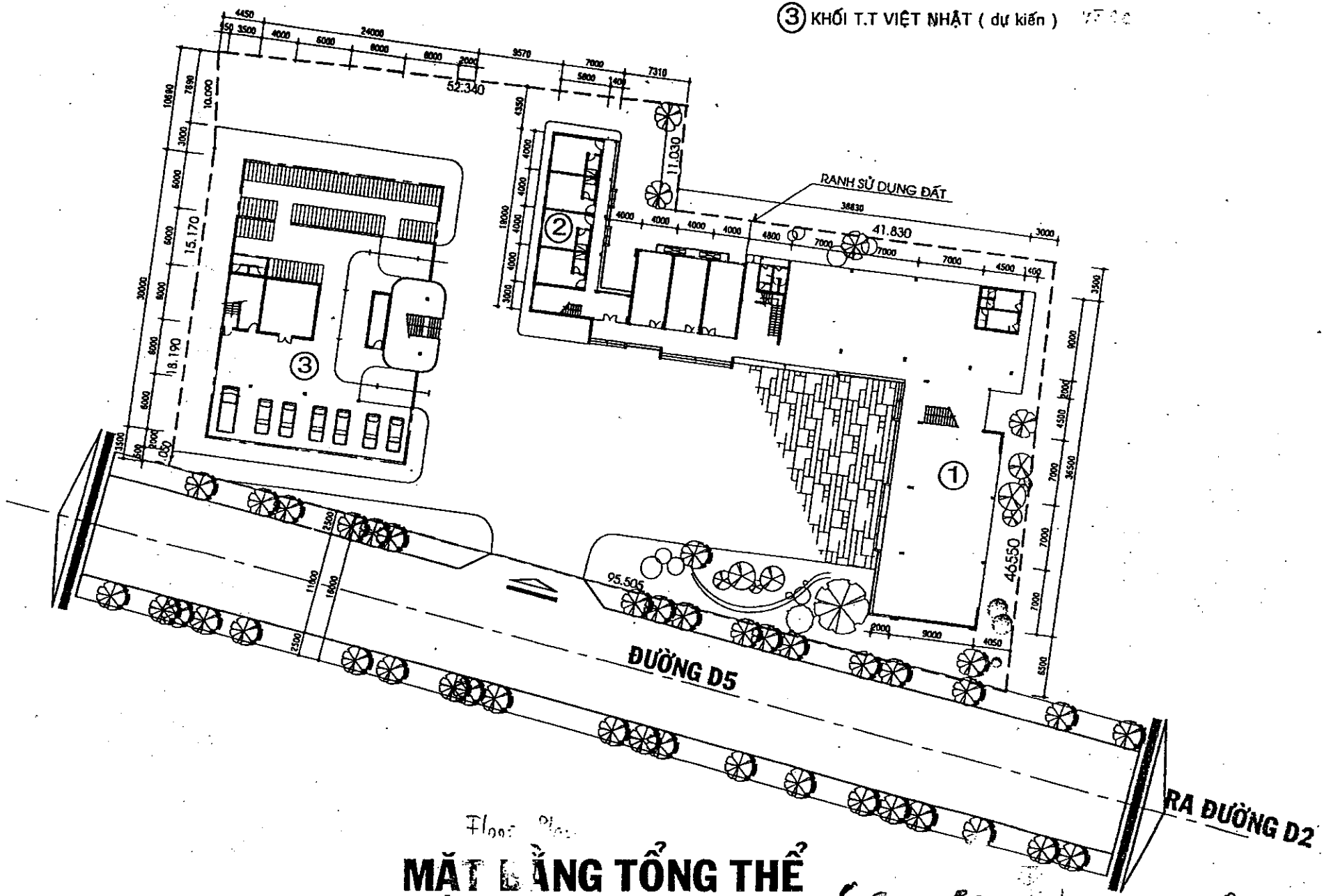
SCIC CO.,LTD
CÔNG TY TƯ VẤN ĐẦU TƯ & XÂY DỰNG
SÀI THÀNH
64 TRƯƠNG ĐỊNH-Q3 TP.HCM
ĐT: 8201396 - 8203818

Giám đốc	PST.NGUYỄN HỒNG VIỆT
Công trình : TRUNG TÂM NGHIÊN CỨU PHÁT TRIỂN NGUỒN LỰC NGOẠI THƯƠNG Địa điểm: PHƯỜNG 25 - QUẬN BÌNH THẠNH-TP.HCM	
MẶT BẰNG QUI HOẠCH TỔNG THỂ TL : 1/ 500 BẢN ĐỒ VỊ TRÍ TL: 1/ 4000 SƠ ĐỒ CHỈ DẪN TL: 1/ 25000	
Chủ trì	KTS.LÊ HƯNG QUỐC
Thiết kế	KTS.PHÒNG TRÚC LINH
QLKT	KTS.NGUYỄN DUY HIẾU
Chủ đầu tư	
KT: 01/10	Ngày hoàn thành: 07-04-2000

① KHỐI PHÒNG HỌC + VĂN PHÒNG Lecture Hall + Dorm

(KHỐI NHÀ KHÁCH Guest House

③ KHỐI T.T VIỆT NHẬT (dự kiến)



Floor Plan

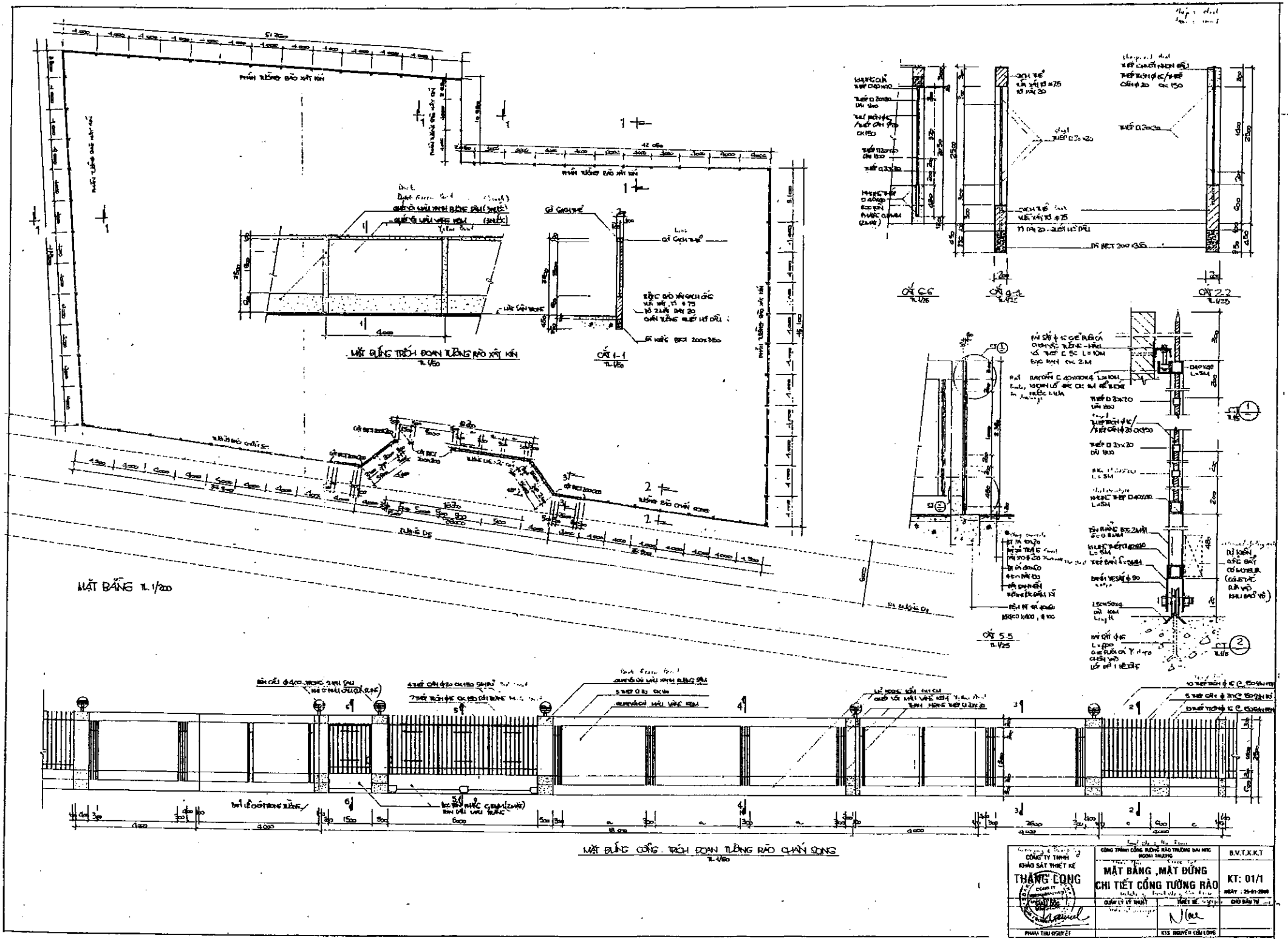
MẶT BẰNG TỔNG THỂ

(Sau khi đã trừ đi 8,0m chiều rộng)

TL 1/500

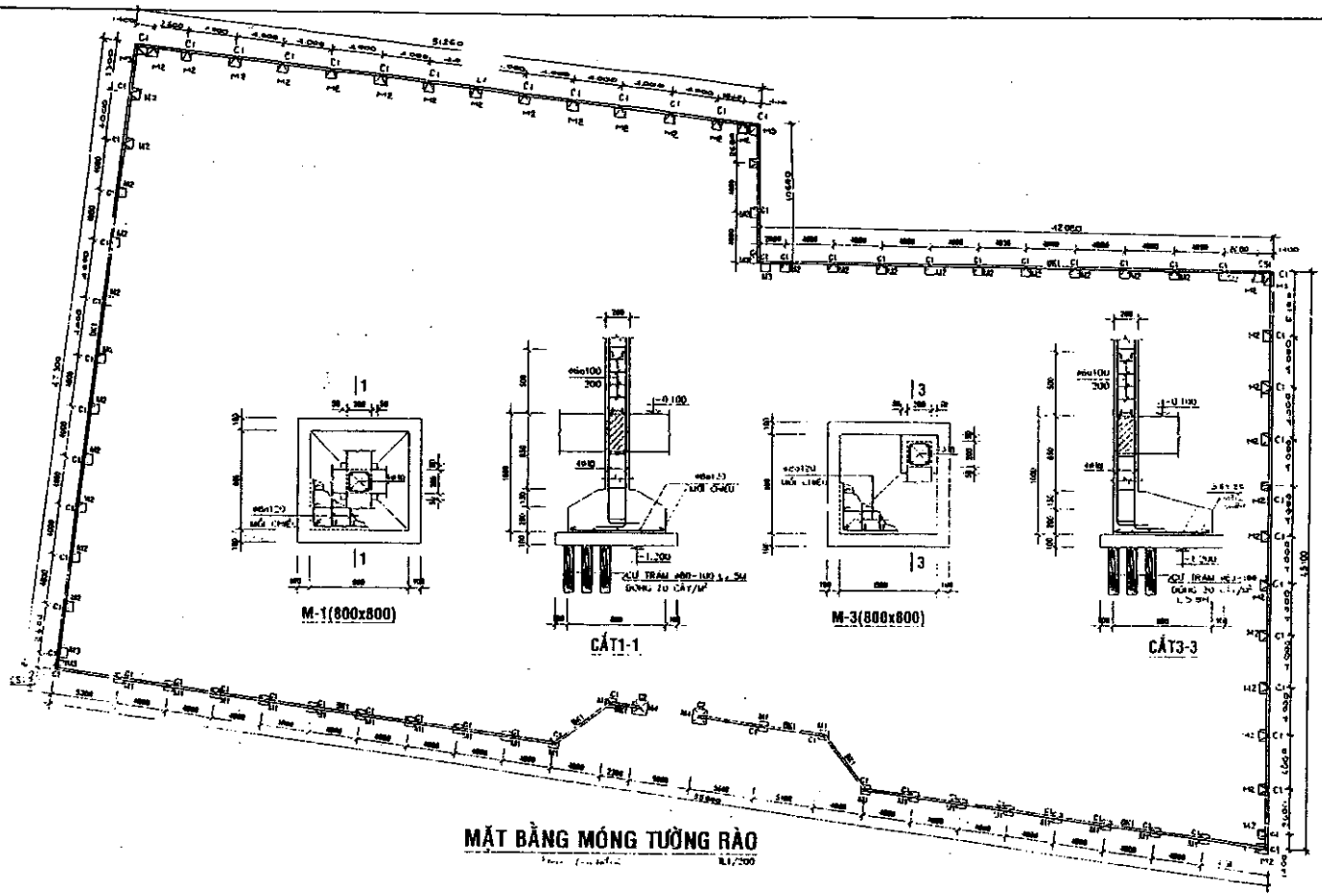
Apès 8.0m

A38


MẶT BẰNG TỈ LỆ 1/200
MẶT BẰNG TRÍCH ĐOẠN TƯỜNG RÀO XÂY KÍN
TỈ LỆ 1/50
CẮT 1-1
TỈ LỆ 1/50
CẮT C-C
CẮT 2-2
CẮT 5-5
MẶT BẰNG CỔNG - TRÍCH ĐOẠN TƯỜNG RÀO CHẮN SÓNG
TỈ LỆ 1/50
CÔNG TY TNHH KHẢO SÁT THIẾT KẾ THĂNG LONG
CÔNG TRÌNH: CỔNG TƯỜNG RÀO TRƯỜNG ĐẠI HỌC THƯƠNG MẠI
MẶT BẰNG, MẶT ĐỨNG CHI TIẾT CỔNG TƯỜNG RÀO
B.V.T.K.K.T
KT: 01/1
NGÀY: 25-01-2008
CHỦ ĐẦU TƯ
QUẢN LÝ KỸ THUẬT
THIẾT KẾ
KTS. NGUYỄN CÔNG LONG
PHẠM THU NGÂN ĐT

A39

A40



MẶT BẰNG MÓNG TƯỜNG RÀO

M-1(800x800)

CẮT1-1

M-3(800x800)

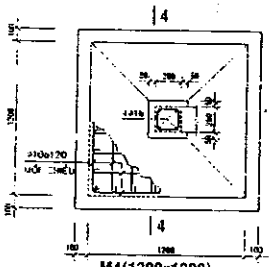
CẮT3-3

BẢNG THỐNG KÊ THÉP

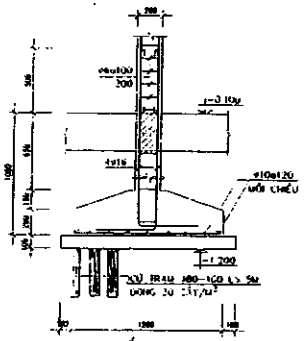
TÊN CẤU KIỆN	#	TỔNG CHIỀU DÀI (m)
M1 (21 CK)	6	117,10
	8	273,70
	10	165,80
M2 (50 CK)	6	195,00
	8	585,00
	10	390,00
M3 (7 CK)	6	53,90
	8	61,30
	10	50,40
M4 (2 CK)	6	15,00
	10	27,50
	8	14,40
C1 (60 CK)	6	975,00
	10	636,60
C2 (2 CK)	6	23,00
	10	20,40
DK1 (1 CK)	6	1439,20
	15	797,82
	12	721,9

BẢNG TỔNG HỢP

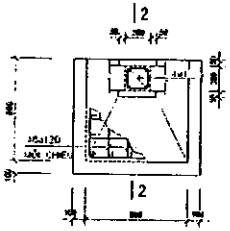
15	16			
797,82	3438			



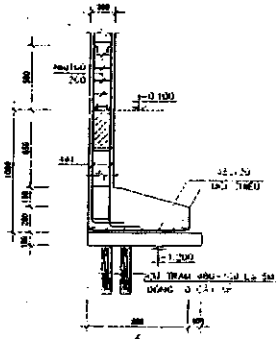
M4(1200x1200)



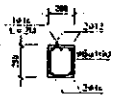
CẮT 4-4



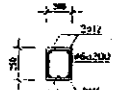
M-2(800x800)



CẮT2-2

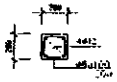


TẠI CỘT

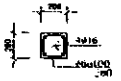


TẠI NHỊP

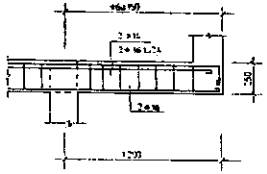
DK1(200x250)



C1(200x200)



C2(200x200)



CS1 (200 x 250)

THUYẾT MINH

CÔNG TY TNHH KHẢO SÁT THIẾT KẾ THĂNG LONG	CÔNG TRÌNH: CỔNG TƯỜNG RÀO TRƯỜNG ĐẠI HỌC NGHỆ THUẬT	B.V.T.K.K.T	
	MẶT BẰNG MÓNG TƯỜNG RÀO	KC: 01/1	
	QUẢN LÝ KỸ THUẬT	THIẾT KẾ	CHỦ ĐẦU TƯ
		KS. NGUYỄN CHÍ HÙNG	

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