CHAPTER 2 CONTENTS OF THE PROJECT

Chapter 2 Contents of the Project

2.1 Basic Concept of the Project

2.1.1 Higher Goals and Goal of the Project

(1) Higher Plan and Goal of the Project

The Government of the Lao PDR is implementing its Social-Economic Development Plan with the long-term goal of breaking away from its LLDC status by 2020. Human resources development is one of eight priority development areas of this Plan and will continue to remain a priority area until the achievement of its goal by 2020. In the Lao PDR where economic development is almost exclusively driven by public sector investment and assistance by donors, training mainly for government officials, technocrats and intellectuals, together with school education, has also become an important need to improve the administrative efficiency.

Following the introduction of a new economic mechanism in 1986 and the country's affiliation with the ASEAN and AFTA in 1997, human resources development in the economic sector has been given priority up to today. The current Social-Economic Development Plan (2001 to 2005) adopts a policy of facilitating human resources development for government officials, technocrats and intellectuals in wide-ranging sectors in addition to the economic sector.

The Lao PDR also has affiliated with regional cooperation bodies, such as the Mekong River Commission, following its affiliation with the ASEAN and AFTA in 1997 under its policy of socio-economic development to expand external economic relations. The Lao PDR is aiming at promoting national economic development through its affiliation with APEC, ASEM and WTO and plans to host conferences on regional and international cooperation in the coming years.

The Project is regarded as providing facilities for seminars and conferences on human resources development through training mainly for government officials and facilities to host conferences featuring regional and international cooperation such as the ASEAN and AFTA.

Training and conferences on human resources development targeting government officials, technocrats and intellectuals mainly in Vientiane are being conducted by government institutions, mass organizations of the Party and donors. Conferences related to regional and international cooperation such as the ASEAN and the Mekong River Commission are also held from time to time.

Although government institutions and mass organizations have their own training facilities, their capacity is small and the conference facilities are inadequate. Therefore, they borrow external facilities, such as the halls of hotels, for large-scale training and conferences that cannot be hosted at their own facilities and donor conferences requiring an interpretation system. However, due to an increase of the number of training and conferences and the use of external facilities by the private sector, the scope of use of external facilities has become limited. As a result, the number of training or conferences on regional and international cooperation has to be restricted. The maximum seating capacity of external facilities is 300

and facilities used exclusively for training and conferences by government institutions with some 500 participants are non-existent.

Under these circumstances, in order to redress the shortage and inadequacy of training facilities for government training and conferences on human resources development mainly for government officials, the Project is designed to provide facilities capable of hosting training and conferences for human resources development and conferences to promote international cooperation through the construction of the International Cooperation and Training Center (hereinafter referred to as the Center) in Vientiane as an exclusive facility for the training of government institutions and conference facilities for regional and international cooperation. The goal of the Project is to make the Center capable of accommodating 50% of all human resources development training and conferences in Vientiane and most conferences, such as those of the ASEAN, for the promotion of regional and international cooperation.

(2) Outline of the Project

To achieve the above-mentioned goal, the Project aims at the construction of exclusive facilities for human resources development training and conferences to promote international cooperation. The completion of the Center will lead to its hosting of human resources development training and conferences and also conferences to promote regional and international cooperation and the government officials and others who participate in these training and conferences are expected to contribute to the national economic development of the country. At the same time, the status of the Lao PDR in the global community is expected to improve through international cooperation.
The concrete subject of Japan's grant aid are the construction of the Center building, procurement of the equipment required for training and conferences and the provision of assistance for the operation and management of the Center(soft components).

2.1.2 Management and Utilization Plan presented by the Lao PDR

(1) Requested Management and Utilization Plan

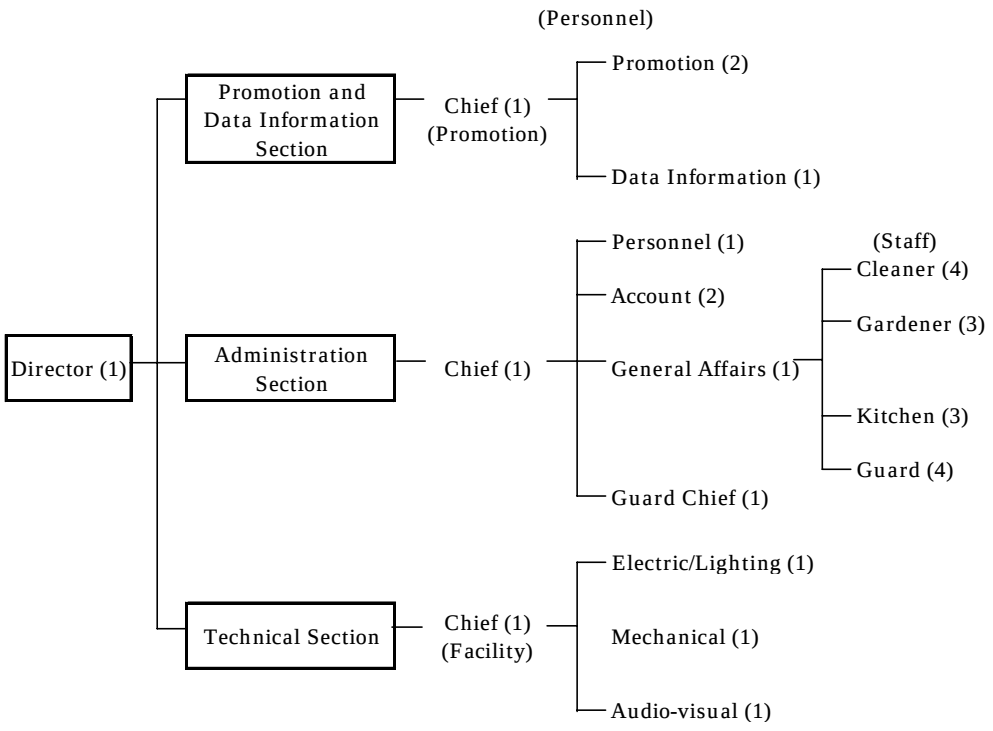
1) Main Activities at the Center
   ① Venue for international and domestic seminars, etc. relating to human resources development
   ② Venue for international and regional conferences, such as ASEAN Summits
   ③ Venue for the promotion of international relationships in various sectors
2) Services to be Provided
   ① Venue for various international and domestic training and conferences, etc.
   ② Provision of self-planned programmes featuring international relationships once the management of the Center is on the right track
3) Management and Utilization Plan
   ① A venue for various seminars and conferences, etc. will be provided.

② The main users will be government officials, intellectuals and technocrats.
③ In principle, the Center will be open from Monday through Friday.

4) Management Method
① The Center will become a government facility and will be managed with a subsidy provided by the Prime Minister's Office.
② Management of the Center as a government facility with its own source of income and budget will be considered by making it a joint venture organization or in another form in the future.

5) Management Structure
① Responsible Organization: Prime Minister's Office
② Implementation Agency: the National Committee on the Construction of the Center. Following the handing over of the Center to the Lao PDR side, the National Committee on the Management and Utilization of the Center will be responsible for the Center's management.
③ Organizational Structure of the Center
a. The organizational structure of the Center will be established around November, 2003.
b. Staff members of the Center will be recruited or appointed by around November, 2003.
c. It is planned to appoint a government official as the Director of the Center.
d. The staff members of the Center will be trained in the following manner.
- Advance training at similar facilities
- Training through provisonal operation which is planned to take place prior to the ASEAN Summit to be held in November, 2004

Figure 2-1 Organization Structure



6) Rental Fee (per day)

The rental fee at the Center are set lower than those imposed by similar facilities to accommodate the wishes of potential users and to increase the utilization rate of the Center. (The user charges have been decided by comparing them with those of similar facilities.)

	Government Institutions	Others
① Multi-Purpose Hall (500 seats)	US$150.-	US$250.-
② Multi-Purpose Hall (200 seats)	US$50.-	US$80.-
③ Seminar Room (40 – 60 seats)	US$20.-	US$50.-

7) Scale of Requested Facilities

The introduction of the following main rooms is necessary based on the Management and Utilization Plan.

① Multi-Purpose Hall x 2 : 500 seats each

② Seminar Room x 3 : 60 seats each

(2) Confirmation of Requests in Preparation for ASEAN Major Conferences

1) Necessary but minimum facility size to fully cater for a major conference
   Requested facilities/functions: reception; waiting facilities (for 60-70 VIPs); opening ceremony; main closed session; bilateral meetings (5-6 rooms with 20-30 seats); closing ceremony
2) Multi-Purpose Halls: two multi-purpose halls with some 500 seats to cater for the opening ceremony and main closed session
3) Sufficient space to accommodate 27-30 delegations at the main closed session because of an increase of the number of delegations
4) Temporary facilities to accommodate press corps and temporary electricity supply and telephone lines for temporary press facilities
5) Multi-purpose use of various rooms

2.1.3 Planned Training and Conferences presented by the Lao PDR

The training and conferences which are planned to be held at the Center can be classified into the following two categories.

① Continuation of training and conferences held in Vientiane in 2001

② Regional and international conferences of the ASEAN, the Mekong River Commission and the APEC, etc. of which the number is expected to increase in the coming years

The training and conferences which is planned to be held at the Center is estimated as follows.

(1) Training and Conferences for Human Resources Development

1) Training and Conferences by Donors

① Training by Donors

Themes: mother and child health, primary education in rural areas and the elimination of poverty, etc.

② Conferences by Donors

- Donor Conference: representatives of donors and those in charge at recipient government offices
- Review Conference (review of projects in place): representatives of donors and those in charge at recipient government offices

③ Venues: hotels in Vientiane and the National Culture Hall

The details of the training and conferences held in Vientiane in 2001 are shown in the table below.

Table 2-1 Aggregate Number of Days of International Training and Conferences, etc. Sponsored by Donors

	No. of Participants	Total No. Held	Duration (days)	Aggregate No. of Days
Seminars	20 – 60	25	1 – 3	43
	61 – 200	27	1 – 3	33
	201 – 500	6	1	6
Conferences/ Workshops	20 – 60	19	1 – 2	25
	61 – 200	7	1	7
	201 – 500	5	1	5
Total		89	-	119

The number of days for the hosting of donors' training and conferences, etc. in Vientiane in the period from 2005 to 2009 after the opening of the Center is estimated based on an annual increase of 2% after 2001.

Table 2-2 Estimated Number of Days of Training and Conferences, etc. Sponsored by Donors from 2005 to 2009

	No. of Participants	Aggregate No. of Days					
		2001	2005	2006	2007	2008	2009
Seminars, Conferences and Workshops	20 – 60	68	74	75	77	78	80
	61 – 200	40	43	44	45	46	47
	201 – 500	11	12	12	12	13	13
	Total	119	129	131	134	137	140

2) Training and Conferences, etc. Sponsored by Government Institutions

- Targets: officials of central and local governments
- Common features for all ministries
  - Training on governance and management for those in charge of governance and administrative management
  - Management training and the introduction of new knowledge for technocrats, engineers and technicians
  - Training on improved services

< By Ministry/Agency >

- Ministry of Foreign Affairs: training on international policies, including regional cooperation, and other issues

- Prime Minister's Office: training on the monitoring and evaluation of the progress of public administration reform and other issues
- Ministry of Education: training on school management for those responsible for school education and other issues
- Ministry of Finance: training on revenue and finance management and other issues
- Ministry of Information and Culture: training on data collection and evaluation of traditional culture and other issues
- Minister of Interior: training on planning, execution and evaluation for local government officials following the progress of decentralisation and other issues
- Ministry of Labour and Social Welfare: training on labour management for senior government officials and other issues
- Ministry of Commerce and Tourism: training on tariffs and trade practices in connection with the AFTA and other issues
- Ministry of Industry and Handicrafts: training on the planning, execution and evaluation of industrial zones and other issues
- Ministry of Communications, Transport, Post and Construction: training on the formulation of public sector investment plans and other issues
- Ministry of Public Health: training on planning and management for those responsible for primary care and other issues
- Ministry of Justice: training on the preparation of laws and regulations relating to public administration reform and decentralisation and other issues
- Ministry of Agriculture and Forestry: introduction of new knowledge to agricultural leaders and training on other issues
- State Planning Committee: training on the planning, monitoring and evaluation of national plans
- National Bank of The Lao PDR: training on foreign exchange control and other issues

The details of the training and conferences sponsored by government institutions in Vientiane in 2001 are shown in the table below.

Table 2-3 Aggregate Number of Days of Training and Conferences, etc. Sponsored by Government Institutions

	No. of Participants	Total No. Held	Duration (days)	Aggregate No. of Days
Seminars	20 – 60	315	1	315
	61 – 200	30	1	30
	201 – 500	30	2	60
Conferences/ Workshops	20 – 60	90	1	90
	61 – 200	15	1	15
	201 – 500	15	2	30
Total		495	-	540

Venues: hotels and government institutions training facilities in Vientiane

The number of days for the hosting of training and conferences, etc. sponsored by government institutions in Vientiane in the period from 2005 to 2009 after the opening of the Center is estimated based on an annual increase of 5% after 2001.

Table 2-4 Estimated Number of Days of Training and Conferences, etc. Sponsored by Government Institutions from 2005 to 2009

	No. of Participants	Aggregate No. of Days					
		2001	2005	2006	2007	2008	2009
Seminars, Conferences and Workshops	20 – 60	405	492	517	543	570	598
	61 – 200	45	55	57	60	63	66
	201 – 500	90	109	115	121	127	133
	Total	540	656	689	724	760	797

3) Training and Conferences, etc. Sponsored by Mass Organizations of the Party

- Targets: leaders of the Women's Union, Youth Union, Federation of Lao Trade Unions and the Lao Front for National Construction
- National conferences: national conferences with some 500 participants
- Leader training: training of the leaders of local organizations by theme (lasting for approximately two weeks each)

< Themes >

- Women's Union: vocational training, rights of mothers and children, participation in the local community and others
- Youth Union: vocational training, rehabilitation of drug addicts and socially problematic persons, moral education and others
- Federation of Lao Trade Unions: improvement of working ability (training and educational funds), provision of employment opportunities and others
- Lao Front for National Construction: moral education; ethnology (minority management), training of volunteers and others

The details of the training and conferences held by mass organizations of the Party in Vientiane in 2001 are shown in the table below.

Table 2-5 Aggregate Number of Days of Training and Conferences by Mass Organizations of the Party

	No. of Participants	Total No. Held	Duration (days)	Aggregate No. of Days
Training by Theme	40 – 60	12	10	120
Meetings of Representatives	40 – 60	20	2	40
International Seminars	61 – 200	8	1	8
National Conferences	300 – 500	8	5	40
Total		48	-	208

Venues: hotels and training facilities belonging to mass organizations of the Party in Vientiane

The number of days for the hosting of training and conferences, etc. by mass organizations of the Party in Vientiane in the period from 2005 to 2009 after the opening of the Center is estimated based on an annual increase of 5% after 2001.

Table 2-6 Estimated Number of Days of Training and Conferences, etc. by Mass Organizations of the Party from 2005 to 2009

	No. of Participants	Aggregate No. of Days					
		2001	2005	2006	2007	2008	2009
Seminars, Conferences and Workshops	20 – 60	160	194	204	214	225	236
	61 – 200	8	10	10	11	11	12
	201 – 500	40	49	51	54	56	59
	Total	208	253	265	279	292	307

(2) Increase of Regional and International Conferences (ASEAN, Mekong River Commission and APEC, etc.)

1) ASEAN Conferences

As a member of the ASEAN, The Lao PDR will sponsor the following conferences.

- Sectional conferences (economic cooperation): trade, investment, finance and others
- Functional cooperation: health, labour, science and technology, environment and others

The details of ASEAN conferences held in Vientiane in 2001 are shown in the table below.

Table 2-7 Aggregate Number of Days of ASEAN Conferences

	No. of Participants	Total No. Held	Duration (days)	Aggregate No. of Days
Coordinating Committee	55	1	2	2
Sub-Committees, etc.	80 – 150	6	2 – 3	13
SOM Sub-Committee	250	2	2	4
Total		9	-	19

Venues: hotels and the National Culture Hall in Vientiane

A total of some 450 ASEAN-related conferences are held every year but the number of conferences held in the Lao PDR in 2001 was rather small because of the lack of excusive facilities to host such conferences. Following the opening of the Center, it is planned to host some 30 conferences (about 60 days) a year as an obligation of an ASEAN member. The estimated number of days for conferences from 2005 onwards is shown in the table below.

Table 2-8 Estimated Number of Days of ASEAN Conferences from 2005 to 2009

	No. of Participants	Aggregate No. of Days					
		2001	2005	2006	2007	2008	2009
ASEAN Conferences	20 – 60	2	0	0	0	0	0
	61 – 200	13	56	56	56	56	56
	201 – 500	4	4	4	4	4	4
	Total	19	60	60	60	60	60

2) Seminars and Conferences Held by Mekong River Commission

The Lao PDR will organize the following conferences as a member country of the Mekong River Commission.

- Joint Committee conferences, meetings of technical working groups and technical seminars, etc.

The details of the seminars and conferences held by the Mekong River Commission in Vientiane in 2001 are shown in the table below.

Table 2-9 Aggregate Number of Days of Seminars and Conferences Held by Mekong River Commission

	No. of Participants	Total No. Held	Duration (days)	Aggregate No. of Days
Meetings of Technical Working Groups	30 – 40	16	1 – 3	32
Total		16	-	32

Venues: hotels in Vientiane

Following the planned relocation of the MRC Secretariat from Phnom Penh to Vientiane in 2003, it is anticipated that the number of MRC seminars and conferences will increase to some 21 a year from 2005 onwards. The estimated number of days of these seminars and conferences is shown in the table below.

Table 2-10 Estimated Number of Days of MRC Seminars and Conferences from 2005 to 2009

	No. of Participants	Aggregate No. of Days					
		2001	2005	2006	2007	2008	2009
MRS Seminars and Conferences	20 – 60	32	35	35	35	35	35
	61 – 200	0	2	2	2	2	2
	201 – 500	0	5	5	5	5	5
	Total	32	42	42	42	42	42

3) Others

The Lao PDR will also organize conferences regarding its joining regional and international cooperation organizations.

- Seminars and conferences regarding the APEC and ASEM, etc.

Although no conference of this kind was held in 2001, the organization of a number of seminars and conferences from 2005 onwards is planned as shown in the table below.

Table 2-11 Estimated Number of Days of APEC, ASEM and Other Seminars and Conferences from 2005 to 2009

	No. of Participants	Aggregate No. of Days					
		2001	2005	2006	2007	2008	2009
Seminars and Conferences	20 – 60	0	0	0	0	0	0
	61 – 200	0	10	12	14	17	21
	201 – 500	0	2	2	2	2	2
	Total	0	12	14	16	19	23

(3) Total Number of Planned Days to Host Training and Conferences

The total number of days planned to host seminars and conferences in Vientiane for the period from 2005 to 2009 is shown in the table below.

Table 2-12 Total Number of Planned Days to Host Training and Conferences, etc. in Vientiane from 2005 to 2009

	No. of Participants	Total No. of Days					
		2001	2005	2006	2007	2008	2009
Training and Conferences	20 – 60	667	795	831	869	908	949
	61 – 200	106	176	181	188	195	204
	201 – 500	145	181	189	198	207	216
	Total	918	1,152	1,201	1,255	1,310	1,369

It is planned that the Center will host some of these training and conferences, etc. in the following manner.

1) Training and Conferences, etc. Sponsored by Donors
   50% of the planned days for these training and conferences, etc. in Vientiane will be allocated to the Center.

2) Training and Conferences, etc. Sponsored by Government Institutions
   50% of the planned days for these training and conferences, etc. in Vientiane will be allocated to the Center and the remaining 50% will be allocated to training facilities owned by various government institutions.

3) Training and Conferences, etc. Held by Mass Organizations
   50% of the planned days for these training and conferences, etc. in Vientiane will be allocated to the Center and the remaining 50% will be allocated to training facilities owned by various mass organizations.

4) ASEAN Conferences
   The planned days for ASEAN conferences to be held in Vientiane will be entirely (100%) allocated to the Center.

5) MRC Seminars and Conferences
   50% of the planned days for MRC seminars and conferences in Vientiane will be allocated to the Center and the remaining 50% will be allocated to various hotels.

6) Others: Seminars and Conferences Held by APEC and ASEM, etc.
   The planned days for seminars and conferences, etc. held by the APEC and the ASEM, etc. will be entirely (100%) allocated to the Center.

The planned operation programme for the Center after its opening is described below.

1) Year 2004 : preparations for the opening and hosting of the ASEAN Summit
2) Year 2005 : 50% fulfilment of the utilization need for the Center and hosting of the ASEAN AMM, ARF, etc. in June
3) Year 2006 : 62.5% fulfilment of the utilization need for the Center
4) Year 2007 : 75% fulfilment of the utilization need for the Center
5) Year 2008 : 87.5% fulfilment of the utilization need for the Center
6) Year 2009 : 100% fulfilment of the utilization need for the Center

Based on the above programme, the planned number of days to host training and conferences, etc. at the Center is shown in the table below.

Table 2-13 Planned Number of Days to Host Training and Conferences, etc. at the Center from 2005 to 2009

	No. of Participants	Total No. of Days				
		2005	2006	2007	2008	2009
Training and Conferences	20 – 60	200	260	326	398	475
	61 – 200	62	79	98	118	141
	201 – 500	48	62	77	94	110
	Total	310	401	501	610	726

(4) Other Events

1) Goods Fairs

The Women's Union, the Youth Union and the Ministry of Industry and Handicrafts, etc. organize fairs every year.

- Fairs: display and sale of goods produced by each organization and the introduction of activities
- 2005 – 2007: 5 days/time x 6 times = 30 days
- 2008 – 2009: 5 days/time x 8 times = 40 days

2) Exhibitions

The Center will organize exhibitions on international relations.

- 2005 – 2007: 5 days/time x 2 times = 10 days
- 2008 – 2008: 5 days/time x 4 times = 20 days

2.1.4 Examination of Facility Utilization Plan

The planned training and conferences presented by the Lao PDR and annual operation and management costs were analysed to examine appropriate scale of the Center. Following the analysis result, in Case B (unchanged 2001 performance up to 2009) is believed to be realistic.

(1) Analysis of Utilization Needs

1) Utilization Plan Presented by the Lao PDR Side (Case A)

① Planned Number of Days to Host Training and Conferences, etc.

Based on the actual performance in 2001, the planned number of days to host training and conferences, etc. is calculated based on an annual increase rate of 2 – 5%.

Table 2-14 Planned Number of Days to Host Training and Conferences, etc. at the Center from 2005 to 2009

	No. of Participants	Total No. of Days				
		2005	2006	2007	2008	2009
Training and Conferences	20 – 60	200	260	326	398	475
	61 – 200	62	79	98	118	141
	201 – 500	48	62	77	94	110
	Total	310	401	501	610	726

② Facility Utilization Rate (see Table 2-21 for details)

The number of rooms required to meet the planned number of days described in 1) above is as follows.

a. Multi-Purpose Hall : two halls with 500 seats each (each hall can be partitioned to create two rooms with 200 seats each)

b. Seminar Room : three rooms with 60 seats each

The utilization rate in 2009, i.e. the fifth year after the opening of the Center, will be more than 60% for each room when calculated on the basis of the planned number of days to host training and conferences, etc.

Table 2-15 Room Utilization Rate in 2009

Type of Room	Seminar Room 60 seats x 3	Multi-Purpose Hall x 2 (500 seats each; can be partitioned to create two rooms with 200 seats each)
Annual Utilization Rate	61%	63%

< Conditions for Calculation of Utilization Rate >

- The Center will be open on five days a week, i.e. Monday through Friday, and will be closed on Saturdays, Sundays and national holidays.
- The utilization rate as 200 seater rooms, i.e. the partitioned 500 seater hall, is calculated based on the number of days which include one day each for preparation and clearance.
- The utilization rate as a 500 seater hall is also calculated based on the number of days which include one day each for preparation and clearance.

If the number of training and conferences, etc. held at the Center fails to increase at an annual rate of 2 – 5% as planned to maintain the performance level in 2001 up to 2009, the facility utilization rate will be 50%, suggesting that the planned scale of the facilities is excessive.

Table 2-16 Unchanged Performance Up to 2009 at 2001 Level

Type of Room	Seminar Room 60 seats x 3	Multi-Purpose Hall x 2 (500 seats each; can be partitioned to create two rooms with 200 seats each)
Annual Utilization Rate	43%	50%

2) Utilization Plan at Unchanged 2001 Performance Level (Case B)

① Planned Number of Days to Host Training and Conferences, etc.

The unchanged utilization of the facilities at the 2001 performance level up to 2009 due to the following reasons is assumed here to examine the required number of rooms and the utilization rate based on a smaller number of days.

a. The plan put forward by the the Lao PDR side lacks data on the years prior to 2001 and, therefore, there is no strong basis to guarantee an annual increase of the utilization rate by 2 – 5%.
b. The planned scale of the Center will be excessive if its utilization rate fails to increase by 2 – 5% a year.

Table 2-17 Planned Number of Days to Host Training and Conferences, etc. at the Center if the 2001 Performance Level Remains Unchanged up to 2009

	No. of Participants	Total No. of Days				
		2005	2006	2007	2008	2009
Training and Conferences	20 – 60	170	209	252	294	335
	61 – 200	58	74	89	107	125
	201 – 500	41	51	61	71	80
	Total	269	334	402	472	540

② Facility Utilization Rate

The required number of rooms to accommodate the number of days to host training and conferences, etc. as described in ① above will be as follows.

a. Multi-Purpose Hall : 700 seater hall x 1 (can be partitioned to create one 500 seater hall and one 200 seater hall)
b. Seminar Room : 60 seater room x 2

The utilization rate in 2009, i.e. the fifth year after the opening of the Center, will be more than 60% based on the planned number of days to host training and conferences, etc.

Table 2-18 Room Utilization Rate in 2009

Type of Room	Seminar Room 60 Seater x 2	Multi-Purpose Hall (Partitionable)	
		200 Seater Hall	500 Seater Hall
Annual Utilization Rate	65%	80%	60%

(2) Comparison of Annual Operation and Management Cost

The annual operation and management costs for Utilization Plans Case A and B with rough total floor area are estimated and compared below. These estimates are liable to some modification depending on changes of the conditions in the future (The final operation and management cost with the final total floor area is referred to 2.4.3 Operation and management Cost).

① Case A (Utilization Plan Presented by the Lao PDR Side)

Table 2-19 Annual Operation and Management Cost of Case A

(Unit: kip)

	2005	2009
1. Operation and Management Cost	325,709,010	442,880,910
(1) Running Cost	214,559,010	331,730,910
1) Operating Cost for Building and Equipment	133,866,000	251,037,900
① Electricity Cost	113,930,400	226,461,600
② Water Supply Cost	2,781,600	5,359,800
③ Telephone Cost	15,654,000	15,654,000
④ LPG Gas Cost	1,500,000	3,562,500
2) Maintenance Cost	80,693,010	80,693,010
① Building	37,381,000	37,381,000
② Utilities	33,250,000	33,250,000
③ Equipment	6,708,007	6,708,007
④ Consumables	3,354,003	3,354,003
(2) Salary for Personnel and Staff	111,150,000	111,150,000
2. Income (1) Rental Fee	147,250,000	337,915,000
1 – 2 Total	-178,459,010	-104,965,910

② Case B (Utilization Plan Based on Unchanged 2001 Performance)

Table 2-20 Annual Operation and Management Cost of Case B

(Unit: kip)

	2005	2009
1. Operation and Management Cost	279,563,248	331,192,348
(1) Running Cost	168,413,248	220,042,348
1) Operating Cost for Building and Equipment	111,434,400	163,063,500
① Electricity Cost	91,974,000	140,628,000
② Water Supply Cost	2,531,400	4,269,000
③ Telephone Cost	15,654,000	15,654,000
④ LPG Gas Cost	1,275,000	2,512,500
2) Maintenance Cost	56,978,848	56,978,848
① Building	24,686,000	24,686,000
② Utilities	23,275,000	23,275,000
③ Equipment	6,011,899	6,011,899
④ Consumables	3,005,949	3,005,949
(2) Salary for Personnel and Staff	111,150,000	111,150,000
2. Income (1) Rental Fee	129,390,000	258,115,000
1 – 2 Total	-150,173,248	-73,077,348

When these two cases are compared, it can be judged that Case B will incur less deficit with a higher feasibility of securing the operation and management budget for a long period of time.

Following the analysis results of the facility utilization rate and the operation and management cost, the planned number of days to host training and conferences, etc. in Case B (unchanged 2001 performance up to 2009) is believed to be realistic and this number of days is used as the basis to determine the scale of the Center.

(3) Funding for Operation and Management Budget

The following replies were made by the National Committee on the Construction of the Center to an enquiry regarding the prospect of securing the operation and management budget for Case B.

- The Prime Minister's Office has promised to allocate necessary budget for the operation and management budget of the Center as a subsidy.
- In principle, any subsidy in the Lao PDR can be used from the beginning of the fiscal year.

< Confirmation with the Lao PDR Side >

The estimated operation and management budget for FY 2005 (279,563,248 kip) and FY 2009 (331,192,348 kip) under Case B were presented to the the Lao PDR side to confirm whether or not the Center could pay the entire operation and management budget as such a scenario could occur due to the following reasons.

- The rental fee may be paid to the National Treasury.
- The rental fee may become almost nil because of competition

Table 2-21 Annual Facility Utilization Plan

Case A: Utilization Plan Presented by Lao PDR Side

	January						February						March						April						May					
Total	20-60		61-200		201-500		20-60		61-200		201-500		20-60		61-200		201-500		20-60		61-200		201-500		20-60		61-200		201-500	
Day	T	D	T	D	T	D	T	D	T	D	T	D	T	D	T	D	T	D	T	D	T	D	T	D	T	D	T	D	T	D
1day	26	26	0	0	0	0	26	26	0	0	0	0	26	26	0	0	0	0	25	25	0	0	0	0	26	26	0	0	0	0
2days	3	6	5	10	0	0	3	6	5	10	0	0	2	4	4	8	0	0	3	6	3	6	0	0	3	6	5	10	0	0
3days	1	3	4	12	1	3	0	0	3	9	1	3	0	0	4	12	0	0	0	0	2	6	0	0	0	0	3	9	0	0
4days	0	0	0	0	3	12	0	0	0	0	3	12	0	0	0	0	4	16	0	0	0	0	3	12	0	0	0	0	4	16
5days	0	0	0	0	0	0	0	0	1	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7days	0	0	0	0	1	7	0	0	0	0	1	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10days	1	10	0	0	0	0	1	10	0	0	0	0	1	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	31	45	9	22	5	22	30	42	9	24	5	22	29	40	8	20	4	16	28	31	5	12	3	12	29	32	8	19	4	16
U-Rate	70%		77%		65%		79%		62%		60%		48%		42%		50%		59%		50%		36%		62%		48%		62%	

	June						July						August						September						October					
Total	20-60		61-200		201-500		20-60		61-200		201-500		20-60		61-200		201-500		20-60		61-200		201-500		20-60		61-200		201-500	
Day	T	D	T	D	T	D	T	D	T	D	T	D	T	D	T	D	T	D	T	D	T	D	T	D	T	D	T	D	T	D
1day	26	26	0	0	0	0	26	26	0	0	0	0	26	26	0	0	0	0	26	26	0	0	0	0	27	27	0	0	0	0
2days	3	6	3	6	0	0	2	4	4	8	0	0	2	4	5	10	0	0	3	6	4	8	0	0	4	8	5	10	0	0
3days	0	0	3	9	0	0	0	0	3	9	0	0	0	0	3	9	1	3	0	0	4	12	1	3	0	0	4	12	1	3
4days	0	0	0	0	2	8	0	0	0	0	3	12	0	0	0	0	3	12	0	0	0	0	3	12	0	0	1	4	3	12
5days	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7days	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	7	0	0	0	0	0	0	0	0	0	0	1	7
10days	0	0	0	0	0	0	1	10	0	0	0	0	1	10	0	0	0	0	1	10	0	0	0	0	1	10	0	0	0	0
Total	29	32	6	15	2	8	29	40	7	17	3	12	29	40	8	19	5	22	30	42	8	20	4	15	32	45	10	26	5	22
U-Rate	50%		36%				62%		48%				62%		73%				65%		58%				70%		81%			

	November						December						Total					
Total	20-60		61-200		201-500		20-60		61-200		201-500		20-60		61-200		201-500	
Day	T	D	T	D	T	D	T	D	T	D	T	D	T	D	T	D	T	D
1day	26	26	0	0	0	0	26	26	0	0	0	0	312	312	0	0	0	0
2days	4	8	5	10	0	0	4	8	5	10	0	0	35	70	52	104	0	0
3days	0	0	4	12	1	3	0	0	4	12	0	0	1	3	41	123	6	18
4days	0	0	0	0	3	12	0	0	0	0	3	12	0	0	1	4	37	148
5days	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	5	0	0
7days	0	0	0	0	0	0	0	0	0	0	1	7	0	0	0	0	6	42
10days	0	0	0	0	0	0	0	0	0	0	0	0	9	90	0	0	0	0
Total	30	42	9	22	5	22	30	42	8	20	4	19	357	475	95	236	49	208
U-Rate	65%		68%		77%		65%		67%				61%		63%			

* The Center will be open on five days a week
* The utilization rate as 200 seater rooms, i.e. the partitioned 500 seater hall, is calculated based on the number of days which include one day each for preparation and clearance.
* The utilization rate as a 500 seater hall is also calculated based on the number of days which include one day each for preparation and clearance.
* The utilization rate of multi-purpose hall is calculated with 200 seater use and 500 seater use
* T: time, D: day

Case A-2:Unchanged Utilization Up to 2009 at 2001 Level with 2 Multi-Purpose Hall and 3 Seminar Rooms

	January						February						March						April						May					
Total	20-60		61-200		201-500		20-60		61-200		201-500		20-60		61-200		201-500		20-60		61-200		201-500		20-60		61-200		201-500	
Day	T	D	T	D	T	D	T	D	T	D	T	D	T	D	T	D	T	D	T	D	T	D	T	D	T	D	T	D	T	D
1day	18	18	0	0	0	0	18	18	0	0	0	0	18	18	0	0	0	0	17	17	0	0	0	0	18	18	0	0	0	0
2days	3	6	3	6	0	0	2	4	4	8	0	0	2	4	3	6	0	0	2	4	3	6	0	0	3	6	4	8	0	0
3days	1	3	4	12	1	3	0	0	3	9	0	0	0	0	4	12	1	3	0	0	2	6	1	3	0	0	3	9	0	0
4days	0	0	0	0	2	8	0	0	0	0	2	8	0	0	0	0	3	12	0	0	0	0	2	8	0	0	0	0	3	12
5days	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7days	0	0	0	0	0	0	0	0	0	0	1	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10days	0	0	0	0	0	0	1	10	0	0	0	0	1	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	22	27	7	18	3	11	21	32	7	17	3	15	21	32	7	18	4	15	19	21	5	12	3	11	21	24	7	17	3	12
U-Rate	42%		47%				50%		55%				50%		56%				33%		40%				37%		48%			

	June						July						August						September						October					
Total	20-60		61-200		201-500		20-60		61-200		201-500		20-60		61-200		201-500		20-60		61-200		201-500		20-60		61-200		201-500	
Day	T	D	T	D	T	D	T	D	T	D	T	D	T	D	T	D	T	D	T	D	T	D	T	D	T	D	T	D	T	D
1day	17	17	0	0	0	0	18	18	0	0	0	0	18	18	0	0	0	0	18	18	0	0	0	0	18	18	0	0	0	0
2days	2	4	3	6	0	0	2	4	3	6	0	0	2	4	4	8	0	0	2	4	4	8	0	0	3	6	3	6	0	0
3days	0	0	3	9	2	6	0	0	3	9	1	3	0	0	3	9	0	0	0	0	4	12	1	3	0	0	4	12	0	0
4days	0	0	0	0	1	4	0	0	0	0	2	8	0	0	0	0	2	8	0	0	0	0	2	8	0	0	1	4	2	8
5days	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7days	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	7	0	0	0	0	0	0	0	0	0	0	1	7
10days	0	0	0	0	0	0	1	10	0	0	0	0	1	10	0	0	0	0	0	0	0	0	0	0	1	10	0	0	0	0
Total	21	24	7	17	3	12	19	21	6	15	3	10	21	32	7	17	3	11	21	32	7	17	3	15	21	24	7	18	3	11
U-Rate	33%		41%				50%		45%				50%		55%				37%		47%				50%		58%			

	November						December						Total					
Total	20-60		61-200		201-500		20-60		61-200		201-500		20-60		61-200		201-500	
Day	T	D	T	D	T	D	T	D	T	D	T	D	T	D	T	D	T	D
1day	18	18	0	0	0	0	18	18	0	0	0	0	214	214	0	0	0	0
2days	3	6	4	8	0	0	3	6	3	6	0	0	29	58	40	80	0	0
3days	0	0	4	12	1	3	0	0	4	12	0	0	1	3	41	123	8	24
4days	0	0	0	0	3	12	0	0	0	0	2	8	0	0	1	4	26	104
5days	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7days	0	0	0	0	0	0	0	0	0	0	1	7	0	0	0	0	4	28
10days	0	0	0	0	0	0	0	0	0	0	0	0	6	60	0	0	0	0
Total	22	27	8	20	4	15	21	24	7	18	3	15	250	335	82	207	38	156
U-Rate	53%		58%				37%		56%				43%		50%			

Case B: Utilization Plan at Unchanged 2001 Performance Level

	January						February						March						April						May					
Total	20-60		61-200		201-500		20-60		61-200		201-500		20-60		61-200		201-500		20-60		61-200		201-500		20-60		61-200		201-500	
Day	T	D	T	D	T	D	T	D	T	D	T	D	T	D	T	D	T	D	T	D	T	D	T	D	T	D	T	D	T	D
1day	18	18	0	0	0	0	18	18	0	0	0	0	18	18	0	0	0	0	17	17	0	0	0	0	18	18	0	0	0	0
2days	3	6	3	6	0	0	2	4	4	8	0	0	2	4	3	6	0	0	2	4	3	6	0	0	3	6	4	8	0	0
3days	1	3	4	12	1	3	0	0	3	9	0	0	0	0	4	12	1	3	0	0	2	6	1	3	0	0	3	9	0	0
4days	0	0	0	0	2	8	0	0	0	0	2	8	0	0	0	0	3	12	0	0	0	0	2	8	0	0	0	0	3	12
5days	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7days	0	0	0	0	0	0	0	0	0	0	1	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10days	0	0	0	0	0	0	1	10	0	0	0	0	1	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	22	27	7	18	3	11	21	32	7	17	3	15	21	32	7	18	4	15	19	21	5	12	3	11	21	24	7	17	3	12
U-Rate	63%		84%		51%		74%		79%		70%		74%		84%		70%		49%		56%		51%		56%		79%		56%	

	June						July						August						September						October					
Total	20-60		61-200		201-500		20-60		61-200		201-500		20-60		61-200		201-500		20-60		61-200		201-500		20-60		61-200		201-500	
Day	T	D	T	D	T	D	T	D	T	D	T	D	T	D	T	D	T	D	T	D	T	D	T	D	T	D	T	D	T	D
1day	17	17	0	0	0	0	18	18	0	0	0	0	18	18	0	0	0	0	18	18	0	0	0	0	18	18	0	0	0	0
2days	2	4	3	6	0	0	2	4	4	8	0	0	2	4	4	8	0	0	2	4	4	8	0	0	3	6	3	6	0	0
3days	2	6	3	9	1	3	0	0	3	9	1	3	0	0	3	9	0	0	0	0	4	12	1	3	0	0	4	12	0	0
4days	0	0	0	0	1	4	0	0	0	0	2	8	0	0	0	0	2	8	0	0	0	0	2	8	0	0	1	4	2	8
5days	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7days	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	7	0	0	0	0	0	0	0	0	0	0	1	7
10days	0	0	0	0	0	0	1	10	0	0	0	0	1	10	0	0	0	0	0	0	0	0	0	0	1	10	0	0	0	0
Total	21	24	7	17	3	12	19	21	6	15	3	10	21	32	7	17	3	11	21	32	7	17	3	15	21	24	7	18	3	11
U-Rate	49%		70%		47%		74%		79%		51%		74%		79%		70%		56%		84%		51%		74%		93%		70%	

	November						December						Total					
Total	20-60		61-200		201-500		20-60		61-200		201-500		20-60		61-200		201-500	
Day	T	D	T	D	T	D	T	D	T	D	T	D	T	D	T	D	T	D
1day	18	18	0	0	0	0	18	18	0	0	0	0	214	214	0	0	0	0
2days	3	6	4	8	0	0	3	6	3	6	0	0	29	58	40	80	0	0
3days	0	0	4	12	1	3	0	0	4	12	0	0	1	3	41	123	8	24
4days	0	0	0	0	3	12	0	0	0	0	2	8	0	0	1	4	26	104
5days	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7days	0	0	0	0	0	0	0	0	0	0	1	7	0	0	0	0	4	28
10days	0	0	0	0	0	0	0	0	0	0	0	0	6	60	0	0	0	0
Total	22	27	8	20	4	15	21	24	7	18	3	15	250	335	82	207	38	156
U-Rate	79%		93%		70%		56%		84%		70%		65%		80%		60%	

2.2 Basic Design of the Requested Japanese Assistance

2.2.1 Design Policy

2.2.1.1 Basic Design Policy

(1) Design Principles for Facilities

1) Realistic Scale of Facilities to Suit Utilisation Needs

The required number of days to host training and conferences, etc. for human resources development is realistically analysed so that the necessary minimum facilities are planned to avoid excessive facilities with a low utilisation rate by training and conferences, etc. using the Center.

2) Scale and Contents of Facilities Capable of Securing Operation and Management Budget

To secure the operation and management budget for a long period of time, the scale of the facilities is set at meeting the minimum requirement with low operation and management costs. Each facility (room/hall) can be independently operated by means of introducing an independent air-conditioning system for each facility and other similar features to that equipment/system operation can be confined to areas of actual need.

3) Facilities Capable of Hosting Major International and Regional Conferences, Including ASEAN Summit

① Adequate Facilities to Host Major Conferences
The Center will be used for international and regional conferences such as ASEAN Summits and for AMM (ASEAN Ministerial Meeting), etc. in addition to seminars and conferences, etc. for human resources development. Accordingly, the rooms used for human resources development will be set up in a flexible manner so that they can also be used for ASEAN Summits and other major conferences.

② Temporary Press Facilities
The ASEAN Summit and other major conferences are accompanied by a large press contingent. Temporary facilities will be set up to accommodate the equipment and personnel of the press corps for temporary use and will be located outside the Center building.

- Temporary press facilities will be set up in the rear garden.
- Temporary car parks will be located along roads and in the rear garden on the premises.
- The required number of telephone lines will be temporarily extended to the site from the branching-out box located some 200 m north-east to meet the demand by the press.

- A temporary power generator will be set up on the site to meet the required power demand.

4) Appropriate Facility Layout

Given the fact that the participants of a training or conference will arrive at or leave the Center en-masse in a specific period of time, the facility layout is designed to permit the smooth arrival or departure of many people. As the development of the area around the site has only recently commenced, there is no tangible landscape which the Center can use. The facility layout is, therefore, designed to allow landscaping using the trees and flowers of the Lao PDR to provide a relaxing environment for visitors and to enhance the training effects.

(2) Design Policy for Equipment

1) Equipment Selection Criteria
   ① Priority is given to equipment which is essential to hold training and conferences, etc. for human resources development.
   ② Equipment which is only required at the time of the international and regional conferences such as ASEAN Summit, etc. is not, in principle, selected.
   ③ Communication equipment, etc. for which the necessary infrastructure is absent is not selected.

2) Design Policy for Equipment Grade
   ① High durability
   ② Maintainability by a local agent or an agent in Thailand
   ③ Easy maintenance

3) Design Policy for Equipment Quantity
   ① The quantity of Audio visual equipment to be used by the multi-purpose hall and seminar rooms is determined based on common use to avoid duplication.

2.2.1.2 Planned Components of Facilities

(1) Required Rooms and Scale

1) Multi-Purpose Hall: 1 (1,228 m^2, 1.75 m^2/person)
   ① This hall can be partitioned to create a 500 seater hall and a 200 seater hall to serve training and conferences, etc. with 201-500 participants and with 61-200 participants respectively.
   ② Annual utilisation rate: 60% for the 500 seater hall and 80% for the 200 seater hall
   ③ The tables and chairs for training and conferences will be arranged school style but will be movable to serve workshops or other purposes requiring a different arrangement.

As there is no building design standard for the floor area per person in the Lao PDR, the scale of each facility is planned based on school style furniture arrangement and comparison with similar facilities of a flat floor type.

Table 2-22 Comparison between Planned Multi-Purpose Hall and Similar Facility

Facility Name	Room Name	Floor Area (m²)	Ceiling Height (m)	Accommodation		Interpretation System
				School Style (Sheet)	Unit Floor Area(m²/P)	
Similar Facility in Japan						
Tokyo International Forum	Hall B	1,400	7.1	612	2.29	8-languages apply
	partitioned two	670	7.1	306	2.19	4-languages apply
	Hall D	340	7.4	147	2.31	4-languagse apply
Kyoto International Conference Hall	Large Hall	2,040	-	800	2.55	9-languages apply
	Hall A	950	-	370	2.57	6-languages apply
Pacific Yokohama	Hall 301-304	1,366	-	704	1.94	8-languages apply
	Hall 301+302	670	-	256	2.62	
	Hall 301	335	-	158	2.12	
Keidanren Hall	Big Hall	365	6.5	180	2.03	6-languages apply
	Room 1001	240	-	100	2.40	3-languages apply
Similar Facility in the Lao PDR						
National Culture Hall	Conference Room	480	3.3	150	3.20	x
Lao Plaza Hotel	Ball Room	448	6	200	2.24	x(delivered from Bangkok)
The Center	Multi-purpose Hall	826	8-15	500	1.65	6-languages apply
		402	8-15	200	2.01	

2) Seminar Rooms: 2 (295 m² in total, 2.31 m²/person)

① These rooms will accommodate seminars and conferences, etc. with 21-60 participants.

② Annual utilisation rate: 65% (with 60 participants)

③ The tables and chairs for training and conferences will be arranged school style but will be movable to serve workshops or other purposes requiring a different arrangement.

As there is no building design standard for the floor area per person, the scale of each facility is planned based on school style furniture arrangement and comparison with similar facilities.

Table 2-23 Comparison between Planned Seminar Room and Similar Facility

Facility Name	Room Name	Floor Area (m²)	Ceiling Height (m)	Accommodation		Interpretation System
				School Style (Sheet)	Unit Floor Area(m²/P)	
Similar Facility in Japan						
Kyoto International Conference Hall	Room B-1	470	-	100	4.70	6-languages apply
	Room B-2	350	-	70	5.00	6-languages apply
Pacific Yokohama	Room 413	124	-	56	2.21	x
Similar Facility in the Lao PDR						
Japan Center	Multi-purpose Room	202.5	3.5	100	2.03	x
	Seminar Room	67.5	3.5	30	2.25	x
Lane Xang Hotel	Small Party Room	132	3.4	60	2.20	x
	Ball Room(A)	247.7	3	85	2.91	x
	Ball Room(B)	133.3	3	50	2.67	x
The Center	Seminar Room	147.6	3.5	64	2.31	x

3) Foyer (Lobby) (448 m^2, 0.64 m^2/person)
The foyer will be used for the following purposes.

① To facilitate the smooth movement of a crowd at the beginning and end of a training and conferences, etc. held in the multi-purpose hall.
② To provide space for refreshments during the rest period of a training and conferences, etc. held in the multi-purpose hall.
③ To host goods fairs, etc. organized by the Women's Union or any other mass organization when the multi-purpose hall is not in use.
④ Annual utilisation rate: 80%

As there is no building design standard for the floor area per person, the scale of the foyer is determined based on comparison with similar facilities.

Table 2-24 Comparison between Planned Foyer and Similar Facility

Facility Name	Floor Type	Floor Area (m^2)	Accommodation	Unit Floor Area(m^2/P)
Similar Facility in Japan				
Tokyo International Forum	Flat	308	612	0.50
Kyoto International Conference Hall	Flat	635	800	0.79
Pacific Yokohama	Flat	640	704	0.91
Keidanren Kaken	Flat	255	180	1.42
The Center	Flat	448	700	0.64

4) Lecturer/Preparation Room: 1 (18.2 m^2, 6.07 m^2/person)
This is a room for lecturers and conference organizers to prepare for a training or conference.

< Basis for Calculation of Number of Users >
The lecturers for the training and conferences, etc. held in the four rooms of the Center (two rooms of the partitioned multi-purpose hall and two seminar rooms) will use this preparation room for a total of 540 days a year. When all of the four rooms are in simultaneous use, there will be at least four lecturers. However, the annual facility utilisation rate at full capacity is estimated to be 52%. This figure increases to 70% when it is assumed that three rooms are simultaneously used. Accordingly, it is reasonable to plan the scale of the preparation room to accommodate three lecturers. The actual scale is determined based on comparison with similar facilities.

Table 2-25 Comparison between Planned Preparation Room and Similar Facility

	Floor Area (m^2)	Accommodation (persons)	Unit Floor Area (m^2/person)
Japanese Language Lecturers' Room, Japan Center	20.6	2	10.3
External Lecturers' Room, Japan Center	41.25	5	8.25
The Center	18.2	3	6.07

5) Administration Rooms

In accordance with the operation and management plan, space to accommodate 15 personnel, including the director and 14 staff members, is planned in the form of a director's office, administration office and staff room.

- Promotion Section : 4 (3 promotion personnel, 1 for information service)
- Administration Section: 6 (1 senior administrator, 1 for personnel affairs, 2 for accounting, 1 for general affairs and 1 for guard)
- Technical Section : 4 (1 each for the building in general, electricity/lighting, mechanic and AV equipment)
- Staff : 14 (4 cleaners, 3 kitchen and mini-cafeteria staff, 4 guardsmen and 3 gardeners)

① Director's Office: 1 (27.5 m^2, 27.5 m^2/person)

Table 2-26 Comparison between Planned Office and Similar Facility

	Floor Area of Director's Office (m^2)	Accommodation (persons)	Unit Floor Area (m^2/peson)
Lao National Culture Center	37.3	1	37.3
Lao-Japan Center	27	1	27.0
The Center	27.5	1	27.5

② Administration/Data Information Room: 1 (99 m^2, 9.9 m^2/person)

The administration office and data information room are combined to make a single room to ensure the efficient work of both the Administration Section and the Promotion Section. Personal Computer (PCs) with Internet facility and a copy machine will be provided to create and provide data and information.

Table 2-27 Comparison between Planned Admin. Office and Similar Facility

	Floor Area of Admin. Office (m^2)	Accommodation (persons)	Unit Floor Area (m^2/peson)
Lao National Culture Center	27	3	9.0
Lao-Japan Center	49.5	6	8.3
The Center	99	10	9.9

③ Staff Room: 5 (84.9 m^2 in total, 5.66 m^2/person)

The standard unit floor area per person for the rooms for the technical section (4 personnel), cleaners (4), kitchen and mini-cafeteria staff (3), guard (4) and gardeners (3) is approximately 6.0 m^2/person and the actual floor areas are planned to include extra space for the storage of tools, etc.

Table 2-28 Comparison between Planned Staff Room and Similar Facility

	Floor Area of Cleaners' Room (m^2)	Accommodation (persons)	Unit Floor Area (m^2/peson)
FEM, Lao National University	15	2	7.5
The Center	84.9	15	5.66

6) Mini-Cafeteria/Kitchen

In principle, food and beverages will be provided by an external caterer. However, facilities to provide light meals will be provided in view of the fact that the participants of a small training or conference (40 – 60 participants), which will be the most frequent form of use, tend to only require simple food and beverages.

< Required Facilities and Scale >

- Space to heat and serve the dishes supplied by an external caterer
- Facilities to provide light meals for the participants of a small training or conference (40 – 60 participants)
- Facilities to provide tea service for users of the multi-purpose hall during a rest period

① Mini-Cafeteria (64.1 m^2, 2.14 m^2/person)

- Seating capacity: 30 (60 people to have a light meal in two sittings)
- 30 seats occupying an area of 64.1 m^2 (2.14 m^2/person)
- Annual utilisation rate: 65%

② Kitchen

- With heating and serving equipment
- Space requirement depending on the equipment layout

7) Interpretation Booth: 6 (44.6 m^2 in total)

Some of the planned training and conferences, etc. will be sponsored by donors and/or participated in by the representatives of many countries, necessitating simultaneous interpretation facilities, including booths for interpreters. Six interpretation booths will be required as the ASEAN Summit will require simultaneous interpretation involving six different languages. The required floor area for these booths will depend on the equipment layout.

8) Control Room: 1 (14.9 m^2)

The Audio visual equipment for the multi-purpose hall will be centrally controlled from this room. The required floor area will depend on the equipment layout.

9) Outdoor Car Park

The National Culture Hall (1,500 seats) has outdoor parking facilities for 125 cars and the design car ownership rate among its users is 0.083 cars/person. Based on this rate, an outdoor car park for 70 cars is planned under the Project.

0.083 cars/person x (700 + 128) persons = 68.7 cars

When an ASEAN conference is held, however, the turfed area in the rear garden will be used as a temporary car park.

2.2.1.3 Planned Components of Equipment

(1) Furniture

The furniture items to be provided under the Project are those which are required for the multi-purpose hall, seminar rooms, lecturer preparation room, data information room and mini-cafeteria, etc. and which are essential for training and conferences, etc. General furniture and sofas, etc. for the administration room and others are excluded from the scope of the furniture to be provided under the Project.

(2) Simultaneous Interpretation System

This system will be used to serve the following types of training and conferences to be held in the multi-purpose hall.

① Training or conferences sponsored by a donor: 2 languages
② International training or conferences organized by a mass organization of the Party: 2-4 languages
③ General conferences of the ASEAN: 6 languages (10 member countries + English)
④ MRC seminars or conferences: 5-6 languages (4 member countries + 2 observers + English)
⑤ Seminars or conferences of the APEC, ASEM or similar organizations: 2-4 languages
⑥ In the case of a training or conference using a seminar room, the interpreter will use a microphone to interpret at appropriate times as the number of participants will be relatively small (maximum of 60 seats).
⑦ There is no interpretation equipment rental service in Vientiane. The Lao Plaza Hotel, which is used for comparison as a similar facility, orders the said service from a provider in Bangkok.

Table 2-29 Planned Annual Use of Simultaneous Interpretation System (Unit: days)

	61-200 Participants	201-500 Participants	Total
Seminars Sponsored by Donors	20	6	26
Seminars by Mass Organizations	4	0	4
ASEAN Conferences	56	4	60
MRC Seminars/Conferences	1	3	4
Other Types of Conferences	21	2	23
Total	102	15	117

The planned simultaneous interpretation system is capable of handling six different languages and 200 earphone receivers will be made available as this number represents the most popular number of participants. Although the Lao PDR side originally proposed 7-9 booths, the maximum scale based on the standard specifications, i.e. six booths to handle six languages, is selected. This selection of the six languages system is appropriate because of the need for the same model and maker when extra equipment is leased to increase the number of languages to serve a major conference.

(3) Desk Monitor for Conference Room

As the interpretation booths will be located in a position from which the entire multi-purpose hall can be viewed, there is no need for a camera or a monitor TV for the interpreters.

(4) Conference System

This system will be used for the following types of training and conferences to be held in the multi-purpose hall.

① Training and conferences sponsored by donors: some 60 participants
② National conferences of government institutions: 18 delegates (16 provinces and 2 special cities) and headquarters' representatives
③ National conferences of mass organizations of the Party: 18 delegates (16 provinces and 2 special cities) and headquarters' representatives
④ ASEAN conferences (equal partners in principle): more than 20 delegates at a conference of sectional ministers, and 27 delegates at the conference of Summit, AMM, ARF, etc.
⑤ MRC seminars and conferences (dialogue style): 6-7 delegations
⑥ APEC, ASEM and other conferences (dialogue style): 2-4 delegations
⑦ The required number of ordinary microphones will be used in the case of a training or conference in the seminar room.

Table 2-30 Planned Annual Use of Conference System (Unit: days)

	61-200 Participants	201-500 Participants	Total
Seminars Sponsored by Donors	1	1	2
Conferences by Government Institutions	0	23	23
Conferences by Mass Organizations	0	20	20
ASEAN Conferences	56	4	60
MRC Seminars and Conferences	1	3	4
Other Conferences	21	2	23
Total	79	53	132

The conference system consists of the chairman's unit (microphone and built-in speaker), which can control the speakers, and delegate's units. One chairman's unit and 27 delegate's units are planned. Ordinary conferences of the ASEAN involve 10 delegates. However, when the external leasing of additional units is necessary, the same model and maker must be used. Therefore, the number of delegate's unit required for the ASEAN Summit and the AMM with ARF, both of which are scheduled to take place at the Center soon after its opening, is planned.

Details of 27 delegates at Summit, AMM, ARF, etc.

① ASEAN 10 members + East Timor
② Others: 16 delegates
China, Canada, Australia, USA, Russia, New Zealand, Korea (ROK), Japan, India, EU (2 delegates), Papua New Guinea, Mongolia, DPRK (North Korea), Pakistan, UNDP

(5) Audio Visual (AV) Presentation System

This system will be used for presentations at a training or conference to be held in the multi-purpose hall. The range of required equipment includes PCs, a LCD projector which is compatible with the PCs, a slide projector, a VCR (VTR) and a microphone system. One set of equipment will be provided for use by either the 500 seater hall or the 200 seater hall (when the multi-purpose hall is partitioned). The installation of a fixed screen is included in the construction work.

(6) Tele-Conference System

Under the e-ASEAN Initiative, a number of technical conferences using the tele-conference system is expected to increase in the coming years. However, the equipment for this system is not included in the Project because of the following reasons.

① Telephone network links with abroad which can accommodate the said system are insufficient.
② There is no clear date for the implementation of the e-ASEAN Initiative.

(7) Audio Visual (AV) System

This system will be used for presentations at a training or conference to be held in a seminar room. The range of required equipment includes PCs, a LCD projector which is compatible with the PCs, an OHP, a slide projector, a VCR (VTR), an audio cassette player and a microphone system. One set of equipment will be provided as a common set to serve two seminar rooms. The installation of a fixed screen is included in the construction work.

(8) Lighting Equipment

A general lighting system, including the spot lights required for training and conferences, etc., is planned. A luminous intensity of approximately 500 lux on the desk surface is required for ASEAN conferences where various documents are used as reference materials. No special lighting arrangements are included in the scope of the Project. Because of the involvement of vertically movable battens for the mounting of spot lights, etc., lighting equipment is planned as part of the construction work.

(9) Cooking and Kitchen Utensils

As an external catering service will, in principle, be used for large training and conferences, the range of kitchen equipment is planned to re-heat and serve meals prepared by a caterer and to serve light meals and beverages for a training or conference with 60 participants. Utensils are not included in the scope of the Project. As secured connections between the kitchen equipment and water supply, drainage and gas supply systems are very important to avoid any accident or breakdown following the completion of the Project, cooking equipment and its connection are planned as part of the construction work.

(10) Workshop Equipment

As the use of simple tools for maintenance work is planned rather than large tools requiring a work bench, etc., one set each of general repair tools is planned for building maintenance and equipment maintenance purposes. Regular maintenance work will be contracted out.

(11) Copy Machine and Facsimile Machine

One copy machine and one facsimile machine are planned in view of their necessity for the promotion and management of training and conferences, etc.

(12) First Aid

One wheelchair is included in the scope of the Project and all other requested equipment, etc. will be provided by the Lao PDR side.

(13) Fire Extinguishers

Fire extinguishers are planned as part of the construction work.

(14) PC Sets (PC, Printer, Scanner and Software)

The data information room requires PC sets to prepare (i) leaflets to promote the Center as a possible venue for training and conferences, etc. and (ii) leaflets to internationally publicise the Center. One PC set capable of establishing Internet connection is planned for each of these two purposes.

(15) Vehicle

Although a vehicle has been requested for the transportation of lecturers, it is omitted from the scope of the Project because of the easily accessible location of the site (findings of the traffic volume survey).

(16) Stand-By Generator

A stand-by generator is not included in the scope of the Project as the power supply situation is generally good with only some five incidents of a power cut a year. At the time of a major ASEAN conference, a stand-by generator will be leased from the Electricite Du Laos as additional insurance.

2.2.1.4 Design Policy Regarding Natural Conditions

(1) Temperature and Solar Radiation

Based on meteorological data for 1999, 2000 and 2001, the annual mean maximum temperature and the annual mean minimum temperature in Vientiane is 31.4°C and 22.3°C respectively. The monthly mean maximum temperature and the monthly mean minimum temperature in December, the coldest month, is 28.2°C and 17.4°C respectively. Because of the high temperature level throughout the year, air-conditioning is planned for such training rooms as the multi-purpose hall and the seminar rooms and administration rooms. In order to avoid strong solar radiation, wide eaves or louvre windows which are common in the local area will be employed.

(2) Rain

Based on the same meteorological data used in (1) above, the annual mean rainfall in Vientiane is 1,783 mm, of which 85% is recorded in the rainy season from May to September. The elevation of the site is the highest at the west side but is still some 30-40 cm lower than the lowest level of the adjacent road, indicating a high likelihood of rainwater infiltrating the site from this road. Even though there is no record of flooding at the site, banking to the level of the pavement, which is some 20 cm higher than the lowest level of the adjacent road, is planned to prevent the inflow of rainwater from the road and also to ensure smooth rainwater drainage from the site to a canal located on the north side and a pond located on the east side (this banking work will be conducted by the Lao PDR side).

(3) Lightning

Lightning occurs in the area around the site during the rainy season. A lightning arrester is, therefore, planned to prevent damage to the building and to electrical equipment.

(4) Earthquakes

Earthquakes have been recorded in the north-western part of the Lao PDR bordering Myanmar but no earthquake adversely affecting building structure has been recorded in Vientiane where the site is located or in the surrounding area. As the Aseismic Design Standards recently established in Thailand designate Nong Khai Province, which is adjacent to Vientiane, as an area where it is unnecessary to consider the seismic force for building design, earthquake-proof measures are not considered under the Project.

(5) Ground Containing Weak Stratum

The boring survey conducted at seven points at the site found the distribution of a relatively compacted laterite clay layer (N value: 10-15) between the surface and GL –4m, a soft sandy silt layer (N value: 0-5) between GL –4m and GL –9m, a compacted sandy gravel layer (N value: approximately 30) between GL –9m and GL –12m and a solid sandy gravel layer (N

value: more than 50) below GL –12m. The soft sandy silt layer distributed between GL –4m and GL –9m is in a state of normal compaction and the compaction subsidence of this layer is expected to occur after the construction of the Center building. Therefore, spread foundations are judged to be unsuitable and pile foundations using the firm sandy gravel layer (N value: more than 50) located below GL –12m as the bearing stratum is planned to avoid any future subsidence of the building.

2.2.1.5 Design Policy Regarding Social Conditions

(1) Building Plan Respecting Architectural Style in the Lao PDR

Although many architectural styles exist in the Lao PDR, mainly represented by Buddhist temples, no single style has been established as the Laotian style. In view of this, no decorative or historical connection is taken into consideration for the building appearance, the shape of the roof and entrance canopy and it is planned to create a Laotian atmosphere in a simple manner.

(2) Landscaping in the Lao PDR

Even there is no established type of Laotian garden, a garden with a Laotian atmosphere is planned using native trees and flowering shrubs to create a friendly and cheerful environment for Lao people and foreigners. While the construction of this garden (landscaping and planting) will be conducted by the Lao PDR side, the draft design will be proposed by the Japanese side.

(3) Reduction of Running Cost

The introduction of the following measures is planned to make it easier to secure the operation and management budget for the Center for a long period of time and conserve resources and energy.

1) Both the air-conditioning system and the electrical system will allow restriction of operation to areas of the Center which are in use.

2) The selection priority is given to locally popular and simple equipment and systems to suit the technical level of the maintenance personnel so that inspection can be carried out by the said personnel.

2.2.1.6 Design Policy Regarding Construction Work

(1) Building Regulations and Relevant Laws

Although there is no height restriction or building restriction posed by the unpaved road to the south at the site, there is one restriction which demands that any external wall of the Center building is at least 25 m away from the center line of the adjacent road. This regulation is respected in the design. In the absence of a building standards law, building standards or fire protection law, etc., the planning details for the National Culture Hall and the corresponding standards in Japan and Thailand are referred to in the building design. There are no design standards for electrical equipment and building services at present in the Lao PDR and the corresponding standards in Thailand, from where the equipment and materials will be procured, are referred to in the building design.

(2) Environmental Regulations and Environmental Impacts Assessment

There is no obligation to conduct an environmental impacts assessment for the Project as the Project does not involve any major development as in the case of the construction of a dam. However, there is a regulation governing septic tanks and planning is conducted in compliance with the standards for septic tanks and water drainage for small facilities.

(3) Use of Locally Procurable Materials

Gravel, sand, some secondary concrete products (blocks and floor materials, etc.) and bricks are produced in the Lao PDR while other construction materials are imported from Thailand and procure market in the Lao PDR. Durable materials with good maintainability are selected from among locally procurable materials.

(4) Use of Local Construction Methods and Workers

The common local construction method involves RC columns, beams and slabs, concrete block or brick walls with a mortar trowel and paint finish and a cement roof tile and this method will be used for the Project. There is currently a shortage of manpower for plastering and parts of the finishing work and skilled Thai workers fill this shortage. While the minimum number of skilled workers is required for plastering and parts of the finishing work, the selection of the local construction method with which local workers are familiar is planned so that local workers can be used as much as possible.

2.2.1.7 Design Policy for Use of Local Construction Companies

Construction companies in the Lao PDR are still very small and lack competitive strength because of the fact that the country's short history of a market economy means that work opportunities for these construction companies are limited to small buildings/facilities. Major construction works are either foreign aid projects or direct investment projects in the private sector and the construction companies of donors or Thai construction companies act as the original contractors. Under these circumstances, the technical strength of local companies has not yet been fully developed and the planning priority is given to the

selection of a construction method with which the local construction company acting as the local subcontractor for the construction work under the Project is familiar.

2.2.1.8 Design Policy Regarding Operation and Management Capability of Project Implementation Agency

(1) Easy to Operate Equipment and Systems

The recruitment of some technical personnel currently working at government institutions in the Lao PDR is planned as technical personnel for the Center. The building service equipment and systems currently used by government facilities are simple and do not have complicated control apparatus, suggesting that the technical level of the new personnel to be transferred to the Center is not particularly high. In view of this, easy to operate equipment and systems are planned with the selection of building service equipment and systems which are either the same as or similar to those currently used by government facilities.

(2) Equipment and Systems Easy to Inspect and Maintain

There are maintenance companies and agents for building service equipment and systems in Vientiane which conduct simple maintenance and repair work. However, complicated repairs are conducted by companies and agents in Thailand. The main principle here is to avoid equipment and systems requiring expert maintenance by companies and agents in Thailand as much as possible.

2.2.1.9 Design Policy for Building Grade

As the planned Center will mainly host training and conferences, etc. for human resources development, the building grade is determined at the level of a facility hosting training and conferences for human resources development rather than the level of a facility aimed at hosting ASEAN summits and other prestigious conferences. Vientiane already has the Japan Center and the Setthathirath Hospital which were constructed with Japanese grant aid and the building grade of the Center is planned to be comparable to that of these buildings, giving priority to the use of materials which can be locally procured as in the case of these existing buildings.

2.2.1.10 Design Policy Regarding Construction/Procurement Method and Construction Schedule

Based on the use of locally procurable materials and the popular local construction method, the planned facilities can be completed in approximately 12 months. It is judged that the procurement and installation of equipment, etc. can also be completed in the same period.

2.2.2 Basic Plan

The outline of the Project is shown in the table below based on the required number of rooms and size for the revised number of days to host training and conferences, etc. which was originally given in the operation and management plan put forward by the Lao PDR side. The scope of the subject facilities for grant aid consists of training facilities, including a multi-purpose hall, seminar rooms, foyer (lobby), lecturer/preparation room, administration rooms, mini-cafeteria, kitchen and simultaneous interpretation booths, etc. and an outdoor car park.

Table 2-31 Outline of Contents of the Project

Facility

Requested by the Lao Side		Contents of the Project	
Room Name	Nos.	Room Name	Nos.
Multipurpose Hall (500 Persons)	2	Multipurpose Hall (can be partitioned to make a 500 seater hall and 200 seater hall)	1
Seminar Room (60 persons)	3	Seminar Room (60 seats)	2
Lobby (Foyer)	1	Foyer	1
Small Meeting Room	1	Use of Seminar Room	
Library and Data Information	1	Data Information in Admin. Office with international relation extension function and without library function	1
Workshop	1	To supply repairing tool without workshop	
Waiting Room	1	Lecturer/Preparation Room	1
Cloak	1	Not planned	
Reception Room	1	Reception counter only	
Cafeteria	1	Mini. Cafeteria and Kitchen	1
Administration Rooms	1 lot	Administration Rooms	1 lot
Other necessary rooms (entrance, machine room, storage, toilet, corridor etc.)	1 lot	Other necessary rooms (entrance, machine room, storage, toilet, corridor etc.)	1 lot
Facility for Press	1 lot	Not planned, temporary facility will be constructed	
Car Parking (outdoor)	1 lot	Car Parking (outdoor)	1 lot

Equipment

Requested by the Lao Side		Contents of the Project	
Equipment Name	Nos.	Equipment Name	Nos.
Simultaneous interpretation system	1 lot	Simultaneous interpretation system	1 lot
Desk monitors for conference room	1 lot	Not planned as these are not required if booths are located in appropriate positions.	
Conference system for Multipurpose Hall	1 lot	Conference system for Multipurpose Hall	1 lot
Audio-visual presentation system for Multipurpose Hall	1 lot	Audio-visual presentation system for Multipurpose Hall	1 lot
Tele-conference System	1 lot	Not planned. Infrastructure for telecommunication is not prepared, and realization of e-ASEAN plan is not clear.	
Audio-visual equipment for Seminar room	1 lot	Audio-visual equipment for Seminar room	1 lot
Lighting equipment	1 lot	Necessary lighting equipment for Seminar is procured by the construction work.	1 lot
Cooking & kitchen equipment	1 lot	Small kitchen equipment is planned as part of the construction work.	1 lot

Requested by the Lao Side		Contents of the Project	
Equipment Name	Nos.	Equipment Name	Nos.
Workshop equipment	1 lot	General repairing tools only	2 sets
Copy machine	1	Copy machine	1
Facsimile machine	2	Facsimile machine	1
First aid kit(medicine, stretcher, wheel chair, resuscitator etc.)	1 lot	Wheel chair only	1
Fire extinguishers	1 lot	Planned as part of the construction work	1 lot
Personal computer set(printer, scanner and software)	3 sets	Personal computer with software: 2 sets, printer and scanner : each 1 No.	1 lot
Vehicle	1 lot	Not planned. Good access to the Center.	
Stand-by Generator	1 lot	Not planned. Rental stand-by generator shall be prepared at ASEAN major conferences.	
Furniture	1 lot	Furniture for Seminar (excluding general and reception furniture)	1 lot

2.2.2.1 Site and Facility Layout Plan

(1) Characteristics of the Site

1) Site Location

① The site is located some 4 km north by northeast of central Vientiane, faces the six lane National Route 13 and belongs to the Xaysettha District.

② The area around the site originally consisted of paddy fields. Although the area is recently becoming part of Vientiane's residential area because of the widening of National Route 13, it is still dominated by paddy fields except for areas along National Route 13.

③ One distinctive building in the area is a Toyota showroom which is under construction in front of the site. The H.E. Kaysone Phomvihahe Museum and a hotel run by the Ministry of Defence are located some 500 m from the site along National Route 13.

2) Site Access

It takes approximately 15 minutes by bus to reach the site from central Vientiane. There are many bus services, providing good access to the site.

3) Immediate Area of the Site

① The western side of the site borders National Route 13 which is the main access road to the site and which has been widened to a six lane road (three lanes in each direction) for some 116 m. There is public land of some 4 m wide between the site and this front road.

② The northern side borders a canal (approximately 6 m wide) which eventually joins Mekong River.

③ The eastern side borders another canal (approximately 4 m wide) and farmhouse spreads beyond this canal.

④ The southern side borders a some 50 cm wide drainage ditch with an unpaved public road beyond (approximately 5 m).

4) Shape and Elevation of the Site

① The site has a rectangular shape with some 273 m and 240 m for the longer sides and some 116 m and 135 m for the shorter sides, occupying a total area of 28,862 m^2.

② The western half of the site where the ground was reclaimed from paddy fields in 1990 is flat while the eastern half mainly consists of a pond and paddy fields.

③ The ground elevation is the highest in the western part of the site but is still some 30 – 40 cm lower than the lowest level of the front road. Accordingly, it is believed that rainwater flows onto the site from this road.

④ The site has a gentle incline from west to east and the central part of the site and the area around the pond are some 50 cm lower than the western end of the site, presumably causing the inflow of rainwater on the site to the pond in the eastern part.

⑤ There are only two tall trees on the site.

⑥ The highest water level and the lowest water level of the canals in the east and north are approximately the same and some 50 cm lower than the lowest ground level of the former paddy field area respectively.

⑦ The last flood in Vientiane was recorded in 1966 when the monument in the city center and the morning market site were flooded. As the elevation of the site is some 10 m higher than that of the city center, the area around the site was not affected by this flood. The highest water level around the site in the past was approximately the same as the ground elevation around the pond.

5) Evaluation of the Site

① In terms of size, while the site is sufficiently large, the eastern half is currently occupied by a pond and paddy fields. In the case of the construction of a building in the eastern half, large-scale banking will be required to reclaim the land from the pond and paddy fields. Such banking could, however, lead to ground subsidence with a strong possibility of rupturing the infrastructure piping serving the building. The eastern part of the site is, therefore, unsuitable for the construction of a building.

② The ground elevation at the site is the highest in the western part but is still some 30-40 cm lower than the lowest level of the front road, presumably resulting in the inflow of rainwater to the site from this road. Even though there is no recorded flooding of the site, banking work will be necessary to raise the ground to the level of the pavement, which is some 20 cm higher than the level of the road surface, in order to prevent rainwater from the road entering the site and also to smoothly drain rainwater from the site to the canal to the north and to the pond in the east (this banking work must be conducted by the Lao PDR side).

(2) Design Policy for Layout

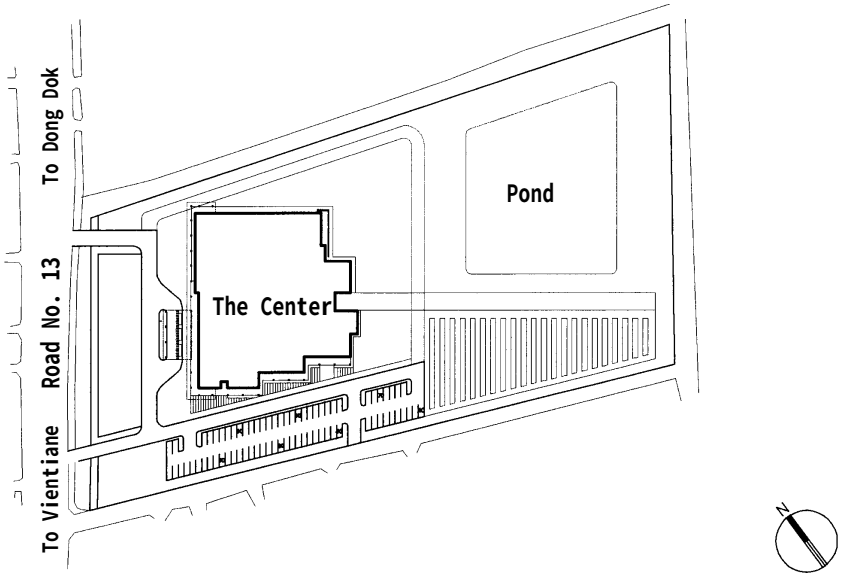
1) Building Position

The planned building can be positioned at the front (near the front road), center or back (eastern side) of the site. However, as the eastern site of the site is unsuitable for the positioning of a building, the other two options have been examined.

As shown in the table 2-32, examination of layout options, the central position has the least shortcomings and, therefore, the building will be positioned at the central part of the site.

Figure 2-2 Layout Option

Front Position



Central Position

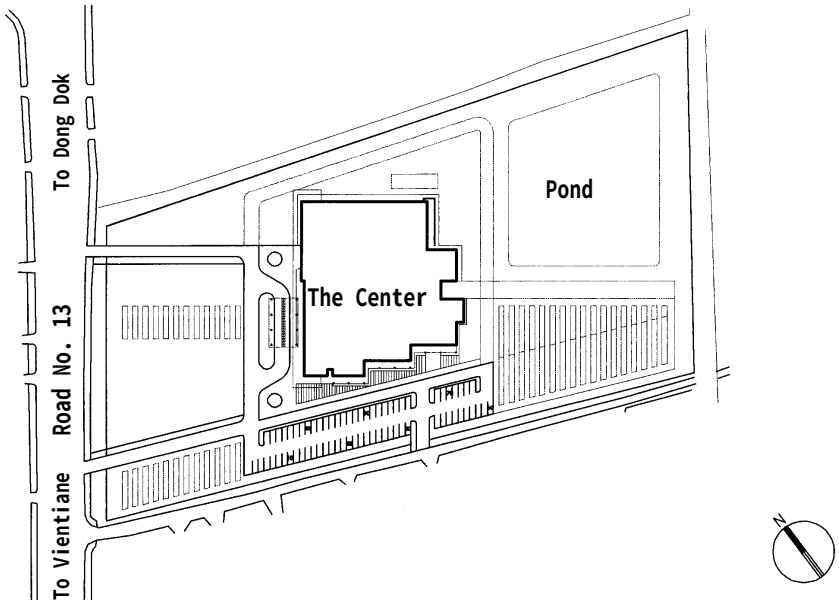


Table 2-32 Examination of Layout Options

Item for Comparison	Front Position (FP)		Central Position (CP)	
Approach from outside	Easy approach due to the short distance from the road to the building	◎	The approach distance is longer than that of FP	○
Easy on-site transport	A rush of many cars to the Center will congest the front road	▲	A rush of many cars can be dealt with on the site	○
Flow line of service road	Planning can be conducted to avoid over-lapping of the flow lines for visitors and service providers	○	Planning can be conducted to avoid over-lapping of the flow lines for visitors and service providers	○
Noise and bad odour	Affected by noise and exhaust gas from vehicles using the front road	△	Less affected than FP	○
Car park	A sufficiently large car park can only be planned at the rear	△	Sufficiently large car parks can be planned at the front and rear of the building	○
Ground conditions	Less liable to dampness and subsidence as the area was reclaimed in 1990	○	More liable to dampness and subsidence than FP as part of the building will be sited above an unreclaimed area	△
Drainage of rainwater	While raising of the ground level above the road is necessary to avoid the inflow of rainwater from the road, rainwater around the building can be drained in three directions (front road, canal to the north and pond at the back)	○	While raising of the ground level above the road is necessary to avoid the inflow of rainwater from the road, rainwater around the building can be drained in three directions (front road, canal to the north and pond at the back)	○
Land preparation cost	The scale of banking work is the smaller of the two options	◎	The scale of the banking work is larger than that of FP	○
Visibility of building from outside	Good visibility because of the proximity to the front road	◎	Although the distance is slightly longer than FP, good visibility can be ensured depending on the landscaping plan	○
Landscaping of the site	A sufficient large forecourt cannot be created between the building and the front road	△	A sufficiently large forecourt and rear garden with Laotian trees can be planned	◎
Handling of ASEAN Summit	The arrival of many vehicles in time for the conference will congest the front road	▲	A large number of vehicles can be dealt with on the site	○
	The press equipment yard can be located at the back of the building	○	The press equipment yard can be located at either the front or the back of the building	○
Prospect of Future Extension	Can be extended at the back	◎	Can be extended at the back but the space for extension is smaller than in the case of FR	○

2) Layout Planning

① Gardens

- Two gardens which will be planted with indigenous trees and shrubs to create a Laotian atmosphere will be created at the front and back of the building so that they appear familiar and pleasant for both Lao people and visiting foreigners.
- Part of the pond to the east will be preserved as a regulating pond for water discharge while the paddy fields will be banked to create a garden.
- Continuity from the foyer of the building to the rear garden will be maintained to create a feeling of unity between the building and the garden.
- A line of trees will be created along the road to develop a street landscape. The canal to the north will be lined by the extension of the roadside trees to maintain continuity.

② Separation of Approach Routes to Avoid Congestion

- The vehicles of people attending a seminar or conference will enter the site from the front road (National Route 13). A separate entrance and exit will be provided to ensure smooth vehicle movement.
- Pedestrian visitors and those using bus services will enter the premises from the front road and will approach the building using the pavement along the site road.
- People working at the Center and service providers will enter the premises via a service entrance along the road to the south.

③ Two separate car parks will be created in appropriate locations to serve visitors and people working at the Center as well as service providers respectively. Temporary car parks required at the time of the ASEAN Summit, etc. will be created along the site road and in the rear garden.

④ The fencing will be introduced along the site boundaries to prevent the burglar of equipment, etc. The forecourt will be planned as flat to be easy to guard and easy to come in sight of building through the fencing (the fencing work must be conducted by the Lao PDR side).

⑤ Temporary Facilities for Press

At the time of the ASEAN Summit or the AMM, a large press corps is expected to visit the Center for reporting purposes. An equipment yard and offices to be used by the press will be set up as temporary facilities in the rear garden.

2.2.2.2 Architectural Plan

(1) Floor Plan

1) Visitors to the Center to attend training and conferences, etc. will use the main entrance of the building while people working at the Center and service providers will enter the building through the service entrance to the south.

2) The entrance hall will be large enough to allow smooth entry to and exit from the building as more than 500 visitors to the Center will use this hall area at specific times.

3) The multipurpose hall area and the seminar room area may not be simultaneously used depending on activities at the Center. These areas will be separated from each other for independent use in order to reduce the operating cost.

4) A sufficiently large foyer is planned to allow visitors to relax before a training/conference or during a recess.

5) A courtyard will be created around the foyer to introduce natural lighting in order to create a bright and open environment. This courtyard will be flat to facilitate its use for relaxation/resting.

6) It will be possible to use the multipurpose hall as it is or partitioned. In the case of the latter, two seminars/conferences with 500 and 200 participants each can be simultaneously held.

Based on the required rooms and their floor areas, the floor plan shown in the table below has been prepared, including the entrance, storage and common use areas.

Table 2-33 Floor Area Schedule for Planned Rooms

Room Name	Accommodation (person)	Unit Floor Area (m^2)	Planned Floor Area (m^2)	Remarks
1 st Floor				
Multipurpose Hall	500	1.65	825.7	School style furniture layout
	200	2.01	402.0	School style furniture layout
Seminar Room-1	60	2.31	147.6	School style furniture layout
Seminar Room-2	60	2.31	147.6	School style furniture layout
Foyer	700	0.64	448.3	Exhibition, provision of snacks and beverages
Lecturer/Preparation Room	3	6.07	18.2	Preparation for Seminar
Administration/Data Information Room	10	9.9	99.0	With facsimile, copy machine
Staff Room(2 rooms)	7	6.17	43.2	for guard, kitchen staff
Mini. Cafeteria	30	2.14	64.1	30 persons per a time, 2 cycle
Kitchen (including Pantry)		with equipment	43.0	equipment layout
Toilet, Storage etc.			565.9	for equipment/furniture storing
Stair Case, Corridor etc.			561.1	
1 st Floor Total			3,365.7	
2 nd Floor				
Director Room	1	27.5	27.5	
Staff Meeting Room	15	2.46	36.9	for staff meeting
Staff Room(3 rooms)	11	3.79	41.7	for technical staff, gardener, cleaner
Interpretation Booth(6 rooms)	6	with equipment	44.6	equipment layout
Audio Control Room		with equipment	14.9	Control microphone, lighting
Rest Room	2	3.75	7.5	for interpreters
Toilet, Storage etc.			46.8	
Stair Case, Corridor etc.			435.1	
2 nd Floor Total			655.0	
Grand Total			4,020.7	

(2) Cross-Section

1) Although a single-story building would reduce the movement of visitors, some of the administration section will be located on the second floor to increase the freedom of building positioning and to reduce the construction cost. The locationing of some of the administration section upstairs means the least disruption of its function among the various sections of the Center.

2) The floor level of the first floor will be 90 cm higher than the level of the pavement of the front road and raised above the surrounding ground to prevent the inflow of rainwater and to smoothly drain rainwater and waste water from the building.

3) A cross-section with minimum steps is adopted to create a friendly building for the disabled so that wheelchairs can be used to enter the building.

4) The ceiling height of the multi-purpose hall is set at 7 – 8 m so that all training or conference participants can clearly see any visual presentation. The form and finishing of the ceiling will ensure little echo and a less oppressive atmosphere.

5) The interpreters' booths and control room which are required when the multi-purpose hall is in use will be located on the first floor so that the multi-purpose hall can be viewed from above.

6) The building will mainly have a sloped roof which is the most common type in Vientiane. The gable end including entrance canopy will be planned to create a Laotian atmosphere in a simple manner.

(3) Structural Plan

1) Design Policy
As there are no firmly established design standards for building structures in the Lao PDR, the planned implementation of the structural design based on the relevant standards in industrialised countries has been approved by the Ministry of Communication, Transport, Post and Construction and the Vientiane Municipality. For the structural design of the planned building, the UBC (Uniform Building Code) which is used or referred to in Asian countries will be basically used and the relevant Thai and Japanese standards will also be referred to where necessary.

2) Ground Conditions and Foundation Plan
The boring survey conducted at the site found the distribution of a solid sandy gravel layer (N value: more than 50) below GL –12m. While a bearing strength of some 100-150 KN/m^2 can be expected of the laterite clay layer found around 3 m below the ground surface, it is assumed that the softer sandy silt layer beneath it which shows the state of normal compaction will cause subsidence of several centimetres and some 11 cm

approximately one year and 10 years after the completion of the planned building respectively due to compaction. Because of the relatively smaller rigidity of local buildings compared to buildings in Japan, uneven subsidence tends to occur in Lao PDR, making it highly likely that the new building will suffer from cracks on the walls and floors and damage to the building service piping. In view of such a likelihood, spread foundations are judged to be unsuitable.

As the type of foundations to support the building, pile foundations using the firm sandy gravel layer (N value: more than 50) located below GL –12m as the bearing stratum are planned to prevent any subsidence of the building. Ready-made concrete piles which can be adjusted to the scale of the building will be used and the bored method (pre-boring and driving method) will be employed as this method promises a high bearing strength as well as economy and is used in the local area. Concrete slabs will be used for the floor of the first floor so that any compaction subsidence of the backfilled soil or soft sandy silt layer beneath will not adversely affect the building.

3) Skeleton Plan

The main skeleton of the building will consist of a rigid frame, giving priority to the common construction method in the Lao PDR, and the following types of structures will be adopted for the different sections of the building.

- Structural frame : reinforced concrete
- Flat roof : reinforced concrete
- Sloped roof : steel structure frame
- Internal and external walls : concrete blocks

4) Design Load

① Live Load

The live load suitable for the purpose of use is adopted for each room based on the UBC. The live load for each of the main rooms is listed below.

- Multipurpose hall : 5,000 N/m^2
- Administration room : 2,500 N/m^2
- Seminar room : 2,500 N/m^2
- Flat roof : 2,000 N/m^2

② Wind Load

The following wind load is considered, referring to the standards adopted in neighbouring Thailand.

- Height: less than 10 m : 800 N/m^2
  10-20 m : 1,000 N/m^2

③ Seismic Force

No earthquake accompanied by a shock affecting buildings has been recorded in either Vientiane where the site is located or its surrounding area. According to the recently introduced aseismic design standards in Thailand, Nong Khai Province near Vientiane is designated an area where consideration of the seismic force is unnecessary. Based on this information, the seismic force is not considered in the building design.

5) Materials to be Used

Apart from aggregate for concrete, Thai products, which are readily available in Vientiane, will be used. If materials which are of the same quality and cheaper than Thai products exist, these will be procured in Japan and/or a third country.

- Concrete : normal weight concrete FC21
- Cement : TIS, JIS or equivalent
- Reinforcing bars (deformed bars) : TIS, JIS or equivalent
- Structural steel (section steel) : TIS, JIS or equivalent

(4) Mechanical Work Plan

1) Design Policy

In regard to the multi-purpose hall and the seminar rooms which are required to serve many different types of use, it is planned to allow the separate operation of the equipment/systems in order to reduce the overall operation cost as these facilities may well be used independently or partitioned for separate use in the case of the multi-purpose hall. All of the systems will be easy to operate and maintain. In view of the year round high temperature and high humidity in the Lao PDR, an air-conditioning system will, in principle, be installed in each room to enhance the training effects of training and conferences and to improve the work efficiency.

2) Air-Conditioning and Ventilation Systems

The air-conditioning system will be an air-cooled package-type air-conditioning system which will be separately installed in each room as this system meets the design policy described in 1) above and minimises the area without air-conditioning at the time of an equipment breakdown. The outdoor and indoor temperature and humidity conditions are as follows.

- Outdoor conditions : temperature - 34.5°C
  humidity - 50%
- Indoor conditions : temperature - 26°C
  humidity - 50%

① Air-Conditioning System

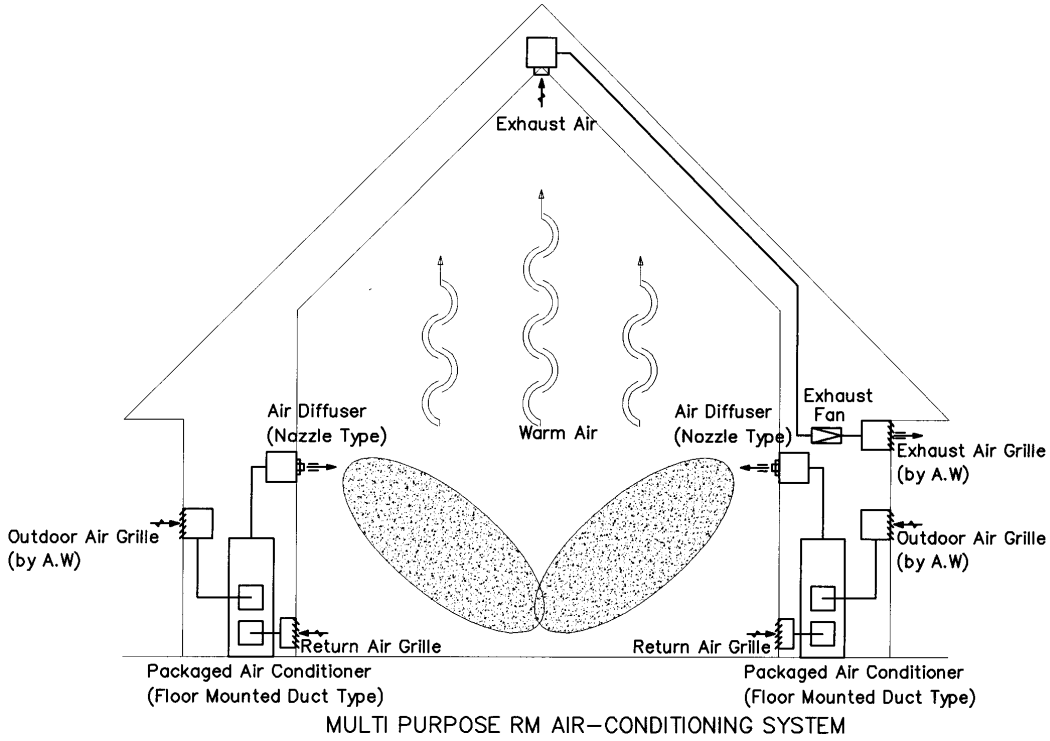
An appropriate type of air-cooled package-type indoor unit will be determined for each room depending on the room size and its anticipated pattern of use. In the case of the multi-purpose hall, a number of floor duct-type packages will be installed in view of the large space, both horizontally and vertically, to provide limited air-conditioning up to some 4 m above the floor level. In the case of other rooms, either a ceiling cassette-type or a wall mounted-type unit which is easy to maintain will be installed depending on the room size.

② Ventilation System

As it is anticipated that a heat reservoir will form in the upper space of the multi-purpose hall, ventilation of which the scale matches the volume of outside air

introduced by the air-conditioning system will be made through the uppermost part of the hall. The installation of an appropriate system is also planned for those rooms, toilet and kitchen where ventilation is required.

Figure 2-3 Multipurpose Hall Air-conditioning System



3) Plumbing System

Locally procurable sanitary-ware and materials will be selected to allow easy maintenance following the completion of the building. Measures to combat subsidence will be introduced at the pipe connection sections of various service pipes in view of anticipated subsidence.

① Water Supply System

A 50 mm pipe will branch out to the site from the 150 mm water main running below National Route 13. The water will firstly be stored in a water reservoir tank (100 m^3) located below the pump room on the first floor and will then be pumped to an elevated FRP water tank (10 m^3). Water will be supplied to various parts of the building from this elevated water tank using the gravity method. The construction of a deep well of some 30 – 40 m deep was considered to reduce the running cost and to provide an emergency back-up facility but this idea has been abandoned because of the high likelihood that the groundwater will have an unacceptable salinity level.

② Drainage System

Sewage water and miscellaneous waste water will be separately discharged indoors and will then be mixed outside the building. Following purification by a

septic tank to meet the regulations for waste water to be discharged by a building of the planned size (BOD: 40 ppm, COD: 150 ppm and SS: 50 ppm), the clean waste water will be discharged to the canal to the north of the site.

③ Sanitary Fixtures

- Water closets : all Western-type (no local type closets)
- Urinals : wall-mounted stool-type
- Washbasins : single tap without hot water supply

④ Fire-Fighting System

Fire hydrants and fire extinguishers will be installed throughout the building. A fire pump will be installed in the pump room on the first floor and will supply water to the fire hydrants through the piping network.

⑤ Kitchen Equipment

A gas range, sink, refrigerator and other kitchen equipment will be installed to heat dishes prepared by an outside caterer and to serve light meals for 60 people.

⑥ LPG Supply System

LPG will be supplied to the kitchen equipment from the LPG cylinder yard.

(5) Electrical Work Plan

1) Power Receiving and Transforming Systems

An overhead power supply line will be installed and will branch out from the overhead high voltage line (22 kV) running along National Route 13 to an outdoor floor-standing transformer. Power supply from the transformer to the building will be made to a low voltage service line (380/220 V). A watt-hour meter will be installed by the Electricite Du Laos (as the Lao PDR side work) on the secondary side of the transformer together with a distribution panel. The low voltage service line will be connected to the electrical room inside the building via an underground conduit.

2) Trunk Power Supply System

Power will be distributed to the switchboard for lighting and to the electrical control panel in the building from the distribution panel in the electrical room. The trunk line for distribution and the power line will use suitable cabling through conduits. An alarm for the power equipment will be indicated on an alarm panel in the administration office. The electrical system for the trunk line and branch circuits is as follows.

- Trunk line for lighting and power : 3 phase, 4 wire, 380/220 V
- Branch power circuits : 3 phase, 3 wire, 380 V
- Branch lighting circuits : single phase, 2 wire, 220 V

3) Wiring

A lighting zone will be established to correspond to each zoning unit of the lighting distribution panel in order to reduce the running cost and switching operation will be conducted for each zone at the site. Special receptacles will be installed to serve OA

equipment in the administration room and AV equipment in addition to ordinary receptacles. The number of these receptacles will be planned to correspond to the layout and capacity of the equipment.

4) Lighting System

Locally procurable fluorescent lamps will be the main lighting sources to reduce the running cost. Emergency lights and guide lights for evacuation purposes with a built-in battery will be installed in the multi-purpose hall as well as in strategic places in the case of a power cut.

Planned Luminous Intensity of Main Rooms

- Multi-purpose hall and seminar rooms : 500 lux
- Administration room and staff room : 300 lux
- Foyer and entrance : 200 lux
- Corridors : 150 lux

5) Telephone System

An overhead telephone line will be extended from a similar line running along National Route 13 to a service pole on the site. A service line from the service pole to the building will be installed through an underground conduit. A service terminal board and a relay terminal board will be installed inside the building and telephone lines will be installed to outlets in those rooms requiring a telephone. The cabling work to the service terminal board will be conducted by the Lao Telecommunications (as the Lao PDR side work) at its own expense. The telephone board will be installed in the administration room and a telephone(s) will be provided in those rooms requiring a telephone. Both outside connection and internal connection for internal communication will be made available.

6) Fire Alarm System

A fire alarm system will be installed for the early detection of fire and the quick implementation of initial fire-fighting activities. Push buttons to report a fire will be installed in strategic locations so that a fire alarm is displayed on the display panel in the administration room. As soon as a fire is reported, an emergency bell will be sounded to inform everyone of the occurrence of a fire to initiate prompt evacuation. Because of the absence of clear legal standards relating to fires, the system will be based on the Fire Services Law in Japan.

7) Lightning System

Because of the likelihood of lightning during the rainy season in the area, the installation of a lightning system for the building will be planned to avoid any damage to the building and equipment.

(6) Construction Materials Plan

The basic policy for the selection of the construction materials are the selection of materials and finishing methods which are appropriate for the local climate and which are firmly established in the area and the construction of facilities which are easy to maintain. Locally procurable materials will be selected as much as possible to ensure easy maintenance and on-site repair.

Table 2-34 Comparison of Construction Method

	Local Method	Applied Method	Reason for Apply
Exterior: Roof	Sloped Roof: Cement roof tile, ACB sheet, metal roofing Flat Roof: Asphalt waterproof	Cement roof tile, metal roofing Asphalt waterproof	Well weather proof, Commonly used in local
Wall	Brick or concrete block + mortar trowel + paint	concrete block + mortar trowel + spray paint	Commonly used in local
Fixture	Aluminum window Wooden door (inside)	Aluminum window Wooden door (inside)	Well durability, Commonly used in local
Interior: Floor	Stone, wooden flooring, ceramic tile, carpet tile, terrazzo tile, PVC tile	Ceramic tile, carpet tile, terrazzo tile, PVC tile	Commonly used in local Well durability
Wall	Mortar trowel + paint, wood, stone	Mortar trowel + paint, perforated plywood + glass wool mat	Commonly used in local Apply for rooms which are required sound absorption capacity
Ceiling	Rock wool acoustic board(T-bar), gypsum board + paint, acoustic board + paint	Rock wool acoustic board(T-bar), gypsum board + paint(T-bar)	Rock wool acoustic board has sound absorption capacity, Commonly used in local

The interior finishing of the main rooms is described in the table below.

Table 2-35 Main Finishing Materials

Room Name	Floor	Wall	Ceiling	Reason for Apply
Multipurpose Hall	Carpet Tile	Perforated plywood + glass wool mat	Gypsum board + rock wool acoustic board + paint	Sound absorption
Foyer Entrance Hall	Ceramic Tile	Mortar trowel + paint	Gypsum board + paint(T-bar)	Sound absorption
Seminar Room	Carpet Tile	Mortar trowel + paint	Rock wool acoustic board(T-bar)	Durability, sound absorption
Lecturer Room	Carpet Tile	Mortar trowel + paint	Gypsum board + paint(T-bar)	Economical
Director Room	Carpet Tile	Mortar trowel + paint	Gypsum board + paint(T-bar)	Economical
Admin. Room	Ceramic Tile	Mortar trowel + paint	Gypsum board + paint(T-bar)	Economical
Staff Room	PVC Tile	Mortar trowel + paint	Gypsum board + paint(T-bar)	Economical
Cafeteria	Ceramic Tile	Mortar trowel + paint	Gypsum board + paint(T-bar)	Cleanliness, easy for clean、water resist
Toilet	Ceramic Tile	Ceramic Tile	Calcium silicate board + paint	Durability, easy for clean
Storage	PVC Tile	Mortar trowel + paint	Gypsum board + paint	Economical

2.2.2.3 Equipment Plan

(1) General Plan

The range of equipment to be provided under the Project is described below.

① Equipment for Training and Conferences, etc.
Simultaneous interpretation system, conference system, AV presentation system, AV system

② Equipment for Administration/Data Information Room
PCs, printer, copy machine and facsimile machine, etc.

③ Furniture
Furniture required for training and conferences, etc.

④ Others
Repair tools and wheelchair

The above range of equipment includes that which will be installed at the new Center and of which the installation timing is difficult to determine vis-à-vis the building construction work. Accordingly, among the equipment requested by the Lao PDR, fixed screens, lighting equipment and kitchen equipment of which the installation timing is difficult to determine are included in the construction work. Complicated arrangements are required for the installation of the following systems during the construction and equipment installation periods.

- Simultaneous interpretation system, conference system, AV presentation system, AV system

(2) Major Equipment List

Table 2-36 Major Equipment List

A. Multipurpose Hall Simultaneous Interpretation System, Conference System

No.	Name of Equipment	Main Spec / Remarks	Q'ty	Purpose of use
A-2	INTERPRETER'S UNIT	Channel x6 Microphone、with Headphone	6	Translation Language
A-3	CHAIRMAN'S UNIT	Portable Type Uni-directional(Flexible-neck) Built-in Speaker Priority Switch	1	Correspond of Simultaneous Interpretation Language
A-4	DELEGATES UNIT	Portable Type Uni-directional(Flexible Neck) Built-in Speaker	27	For Utterance
A-15	INFRARED HEARING SYSTEM	Infrared Receiver	200	For Lecture

B. Multipurpose Hall AV Presentation System

No.	Name of Equipment	Main Spec / Remarks	Q'ty	Purpose of use
B-1	LCD PROJECTOR	Portable Type、Screen Size：30～300 inch Color System：Multi-system	1	Projection for PC、VTR Data
B-3	SLIDE PROJECTOR	Slide Size：23x35mm Lamp：More than 250W	1	Projection for 35mm Slide Film
B-4	VTR	Tape Format：VHS Color System：Multi-system	1	Recording & Playback for VTR
B-8	WIRELESS MICROPHONE	Hand-type	4	For Lecturer etc.
B-9	DYNAMIC MICROPHONE	Hand-type Uni-directional	6	For Lecturer etc.
B-15	SPEAKER	Ceiling Type Input：More than 150W	2	For Announcement
B-32	NOTE BOOK PC	CPU：More thanPentium3 750MHz Monitor：More than 13" TFT LCD With UPS：Rated Output 1kVA	1	For Presentation

C. Seminar Room AV System

No.	Name of Equipment	Main Spec / Remarks	Q'ty	Purpose of use
C-1	LCD PROJECTOR	Portable Type、Screen Size：30～300 inch Color System：Multi System	1	Projection for PC、VTR Data
C-2	PORTABLE SCREEN	Portable Type Screen Size：More than 1800x1800	2	Projection for OHP·Slide Projector
C-3	OHP	Lamp：More than Halogen 400W	1	For Presentation
C-5	SLIDE PROJECTOR	Slide Size：23x35mm Lamp：More than Halogen 250W	1	Projection for 35mm Slide Film
C-6	VTR	Tape Format：VHS Color System：Multi-system	1	Recording & Playback for VTR Data
C-10	WIRELESS MICROPHONE	Hand-type	4	For Lecturer
C-11	DYNAMIC MICROPHONE	Hand Held Type Uni-directional	4	For Lecturer
C-17	SPEAKER	Ceiling Type Input：More than 150W	4	For Announcement
C-28	NOTE BOOK PC	CPU：More thanPentium3 750MHz Monitor：More than 13" TFT LCD With UPS：Rated Output 1kVA	1	For Presentation

D. Personal Computer Equipment

No.	Name of Equipment	Main Spec / Remarks	Q'ty	Purpose of use
D-1	DESK-TOP PC	CPU：More than Pentium4 1GHz Monitor：More than 15" With UPS：Rated Output 1kVA	2	For Data Creation
D-2	PRINTER	Ink-jet Type(Color) Printing Size：A4,B5	1	For Data Creation
D-3	SCANNER	Scanner Type：Flatbed, Color Scan Size：More than A4	1	For Data Creation

E. Office Equipment

No.	Name of Equipment	Main Spec / Remarks	Q'ty	Purpose of use
E-1	FAX MACHINE	FAX/Telephone one apparatus	1	Transmission and reception
E-2	COPY MACHINE	Desk-top Type Copy Size：B5～A3	1	The Copy of Document

F. WORK SHOP

No.	Name of Equipment	Main Spec / Remarks	Q'ty	Purpose of use
F-1	MAINTENANCE TOOL (FOR BUILDING)	Saw, Hammer, Wooden hammer, Screwdriver etc.	1	Use for maintenance (Building)
F-2	MAINTENANCE TOOL (FOR EQUIPMENT)	Circuut tester, Screwdriver, Wrench set etc.	1	Use for maintenance (Equipment)

G. FAST AID

No.	Name of Equipment	Main Spec / Remarks	Q'ty	Purpose of use
G-1	WHEEL CHAIR	Seat:Vinyl Leather	1	for carry thr sick person

H. FURNITURE

No.	Name of Equipment	Main Spec / Remarks	Q'ty	Purpose of use
H-1	Desk	For 2 persons,folding type,width approx.1500mm	418	For training.
H-5	Cafeteria Table	Flat type desk,width approx.1800mm	5	For the mini cafeteria.
H-9	White Board (Movable)	Both side rotating type,movable with caster Board size : 1200W x 900H	2	For illustration.
H-10	Partition (Movable)	Self standing type with standing base,Size : 1200W x 1200H	16	For the partitions of a goods show.
H-14	Stage (Movable) -1	Movable,wooden made,Legs : folding type,Size : 1500W x 750D x 200H	12	For seminar room.
H-15	Stage (Movable) -2	Movable,wooden made,Legs : folding type,with step,Size : 1500W x 750D x 400-600H	44	For multipurpose room.
H-16	Stacking Chair	Vinyl Leather or fabric finish,steel pipe legs	883	For training and mini cafeteria.
H-18	Dolly for Stacking Chair	Frame material : steel pipe,painting or chrome plating , 8 or more loading	2	For stacking chair conveyance.

(3) Equipment to be Procured Locally and From Third Country

1) PCs, Printer and Scanner

These will be procured from a local agent because of the need for regular maintenance after their procurement. Regular maintenance will be provided by the local agent. If repair by the manufacturer is required, such repair will be requested by the local agent to the relevant agent in Thailand.

2) Facsimile Machine and Copy Machine

These will be procured from a local agent because of the need for regular maintenance after their procurement. Regular maintenance will be provided by the local agent. If repair by the manufacturer is required, such repair will be requested by the local agent to the relevant agent in Thailand.

3) Furniture

Furniture will be procured from Thailand. Because, locally available furniture is mainly made in Thailand and is cheaper than furniture procured in Japan.

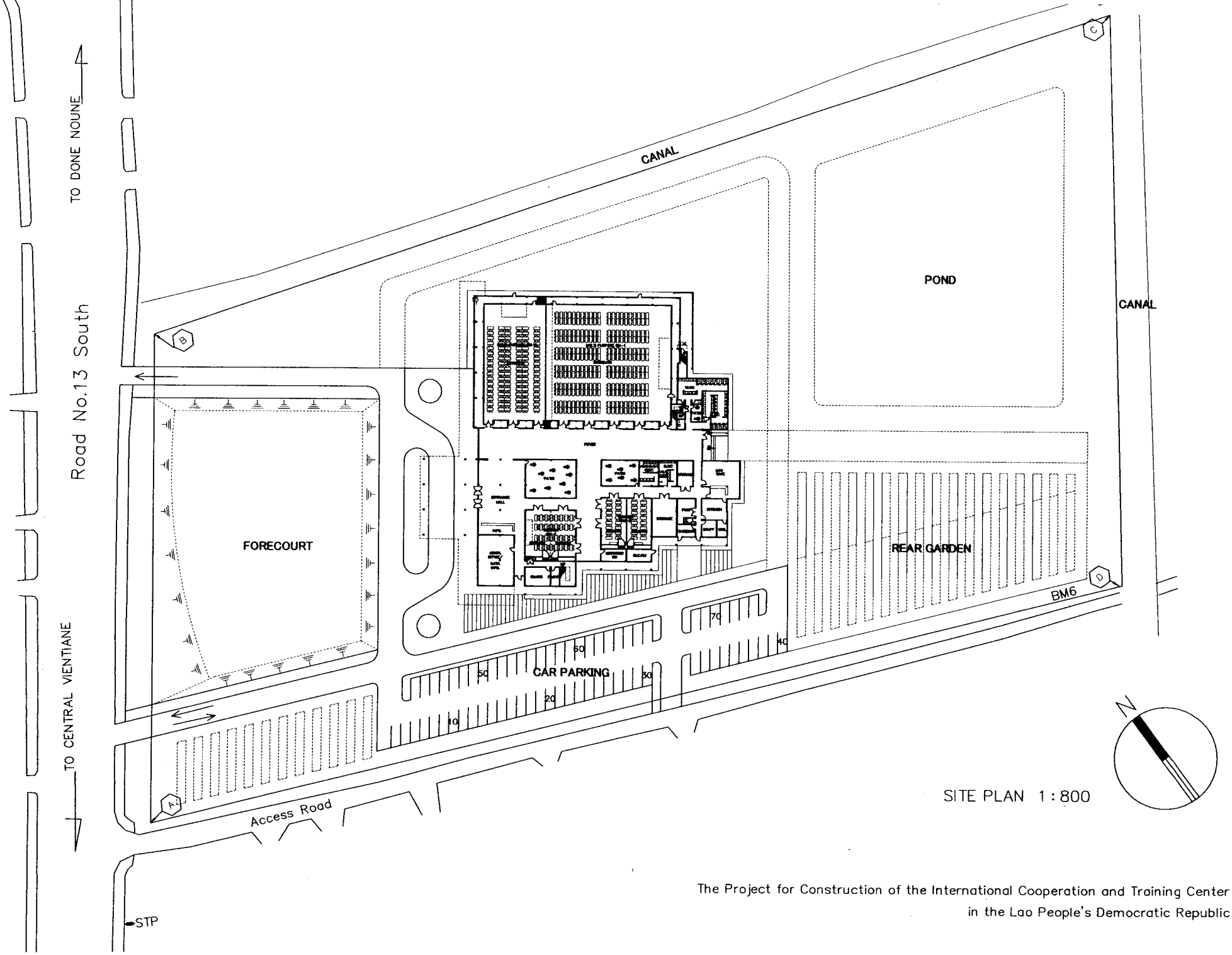
2.2.3 Basic Design Drawing

(1) Building Drawing

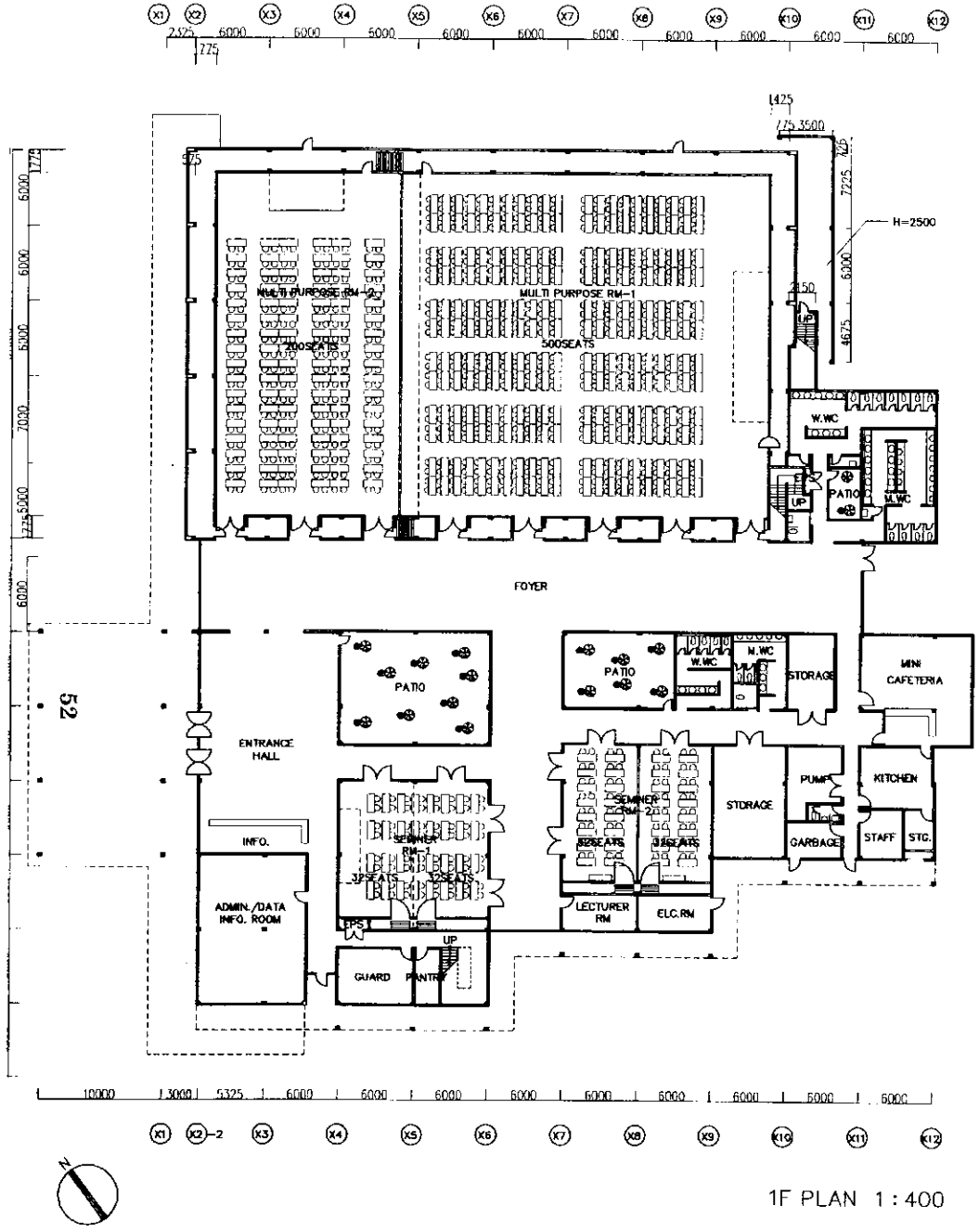
1. Site Plan
2. First and Second Floor Plan
3. Roof Plan
4. North West and South East Elevation
5. South West Elevation, Section
6. Infrastructure Connection Site Plan

(2) Equipment Layout Drawing

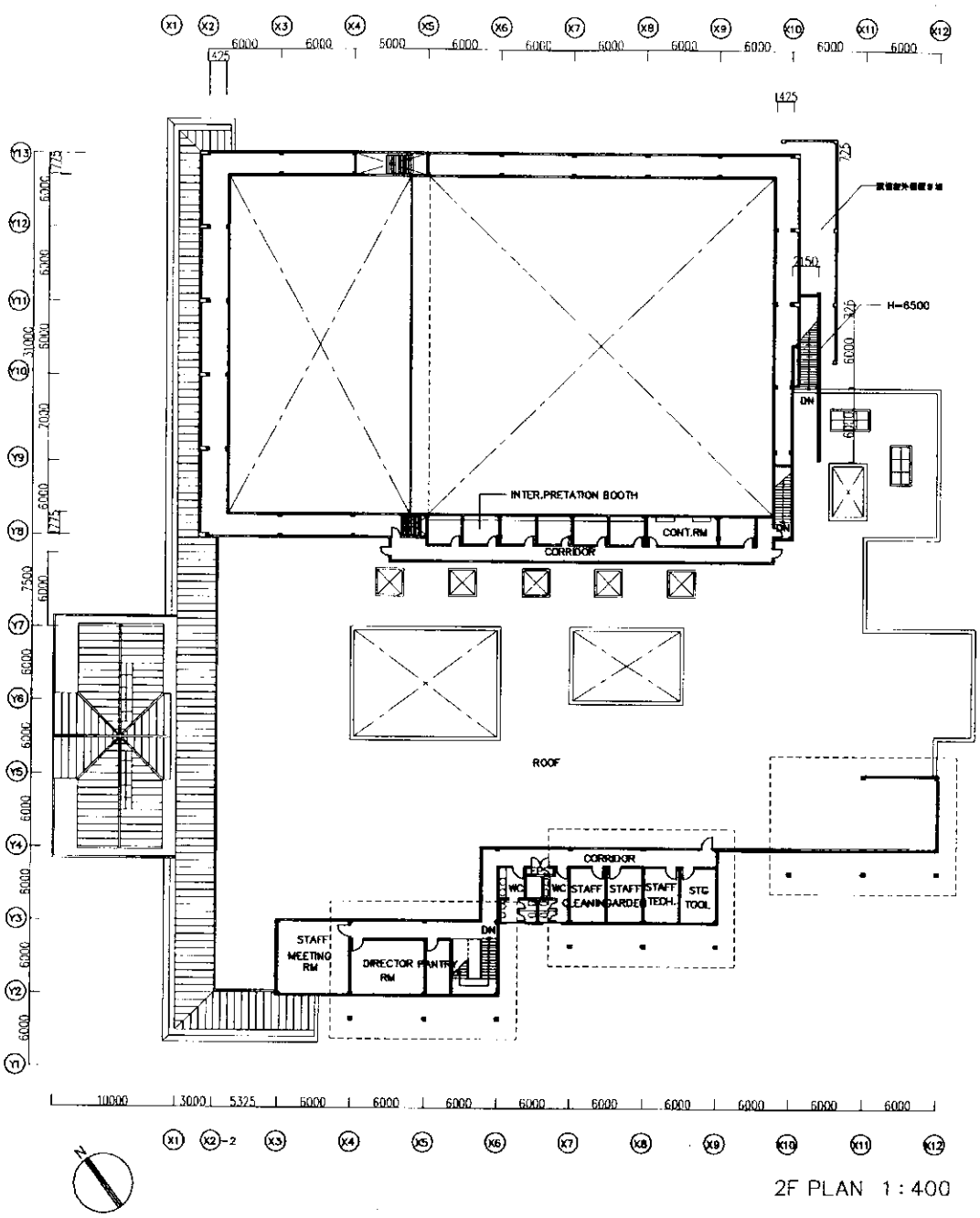
7. System Diagram – 1
8. System Diagram – 2
9. System Diagram – 3
10. Equipment Layout Plan – 1
11. Equipment Layout Plan – 2
12. Equipment Layout Plan – 3
13. Equipment Layout Plan – 4



SITE PLAN 1 : 800

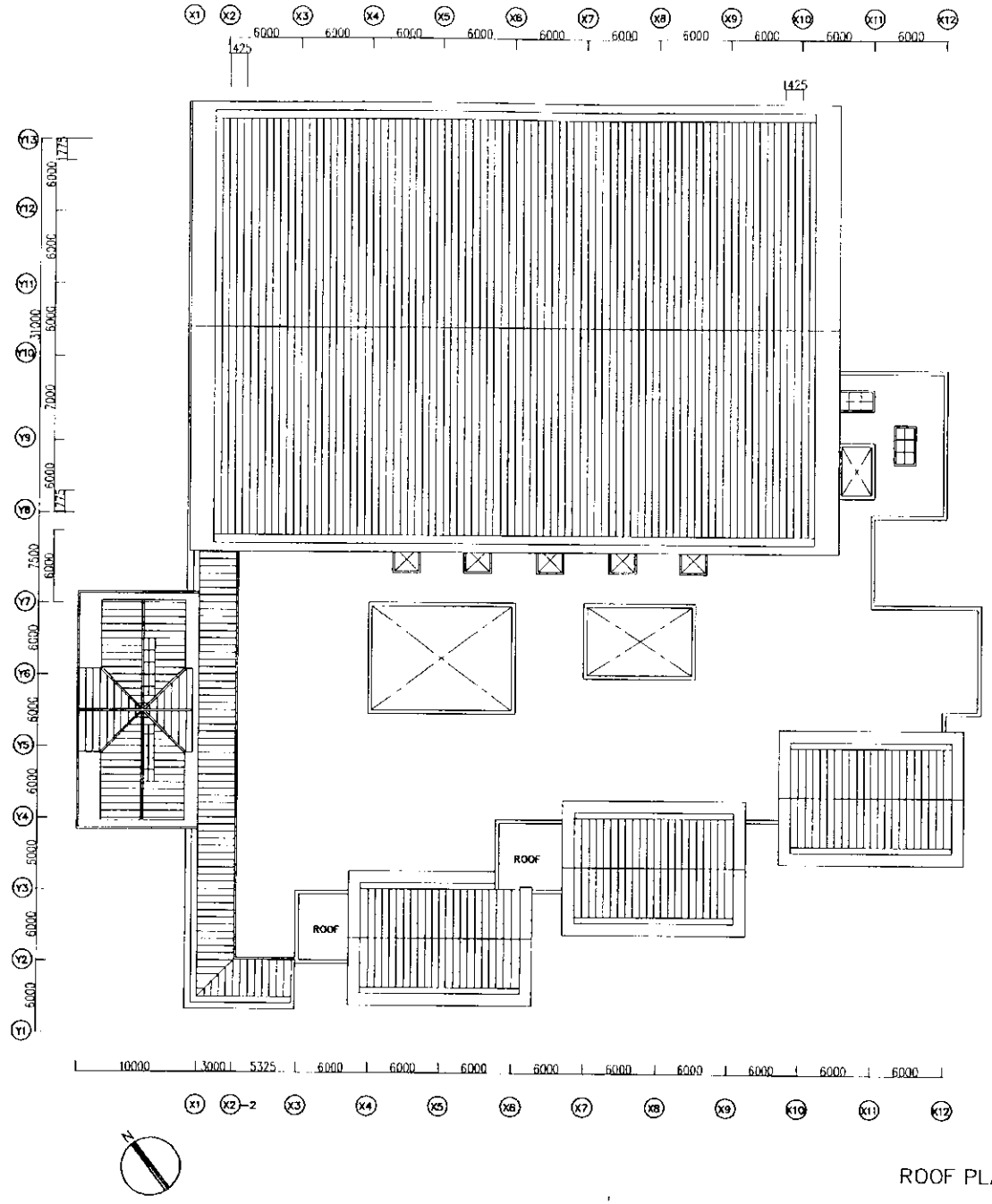


1F PLAN 1 : 400



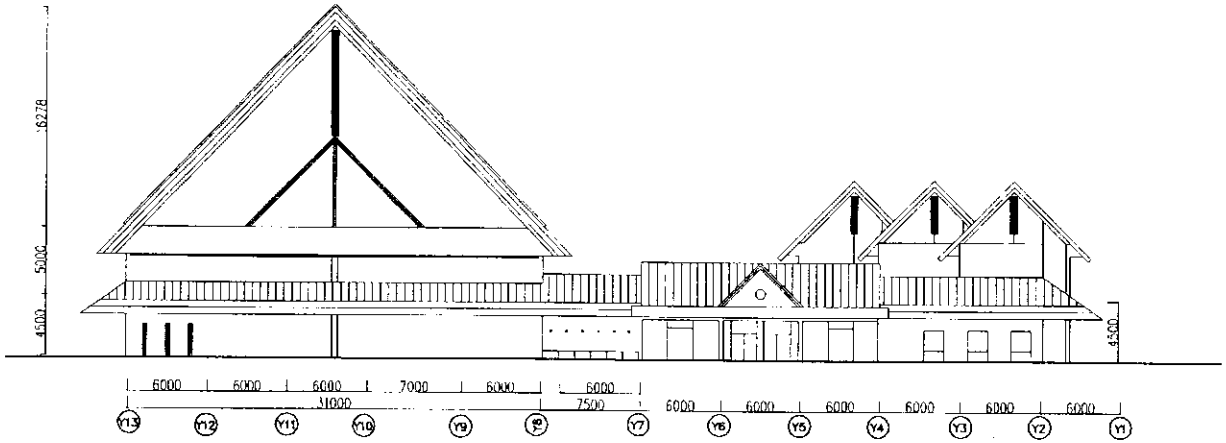
2F PLAN 1 : 400

The Project for Construction of the International Cooperation and Training Center in the Lao People's Democratic Republic

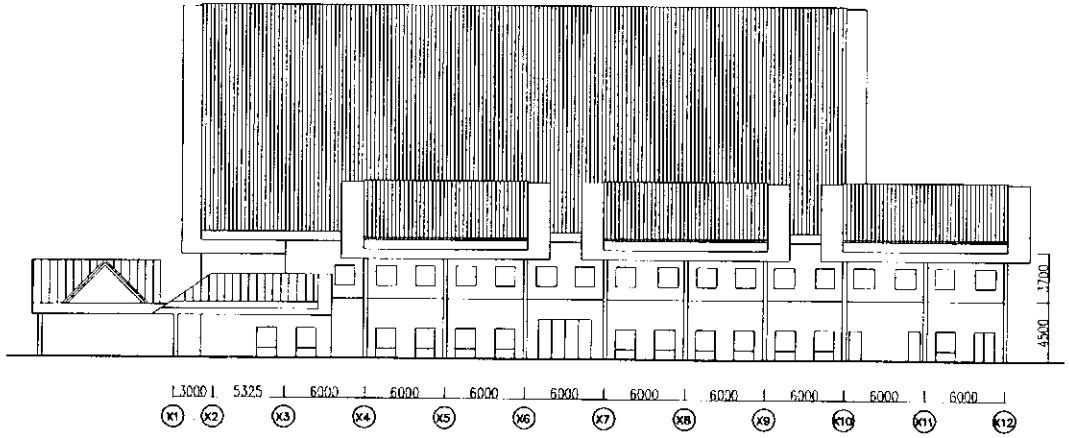


ROOF PLAN 1 : 400

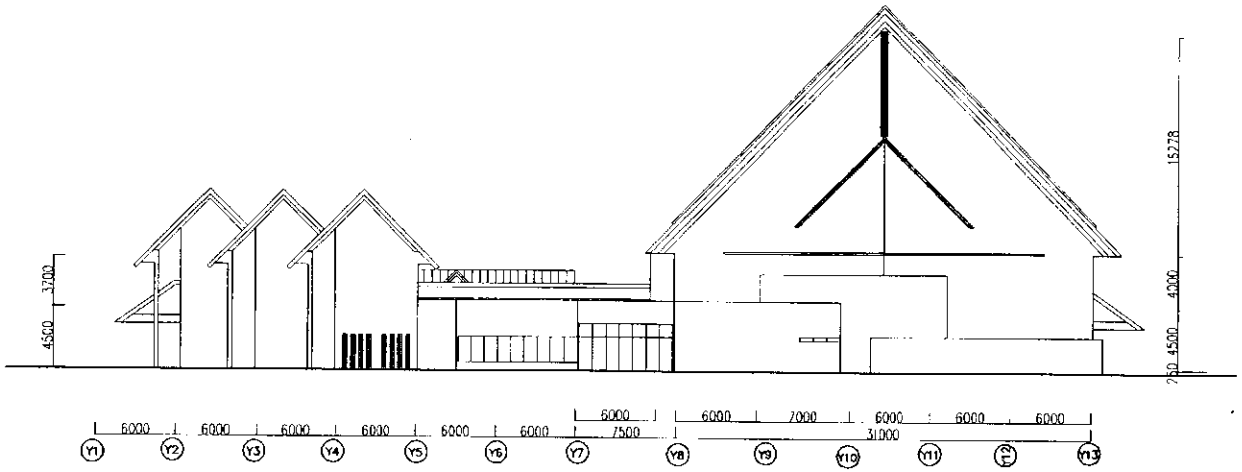
The Project for Construction of the International Cooperation and Training Center
in the Lao People's Democratic Republic



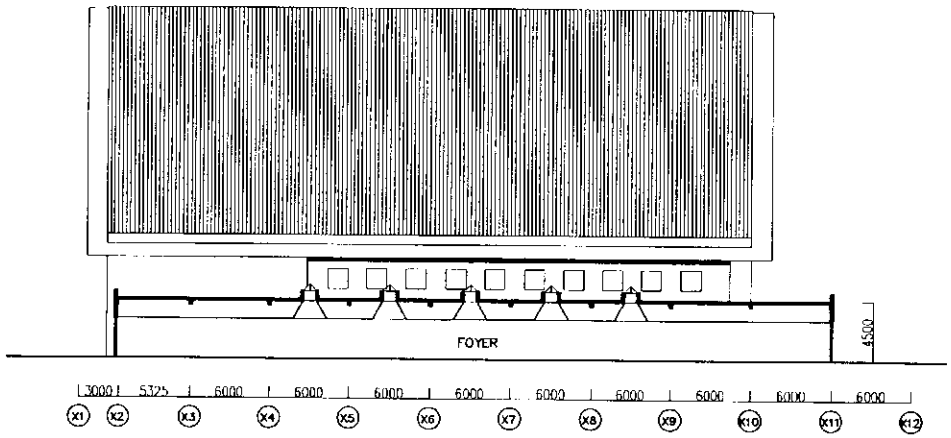
NORTH WEST ELEVATION-1 1:400



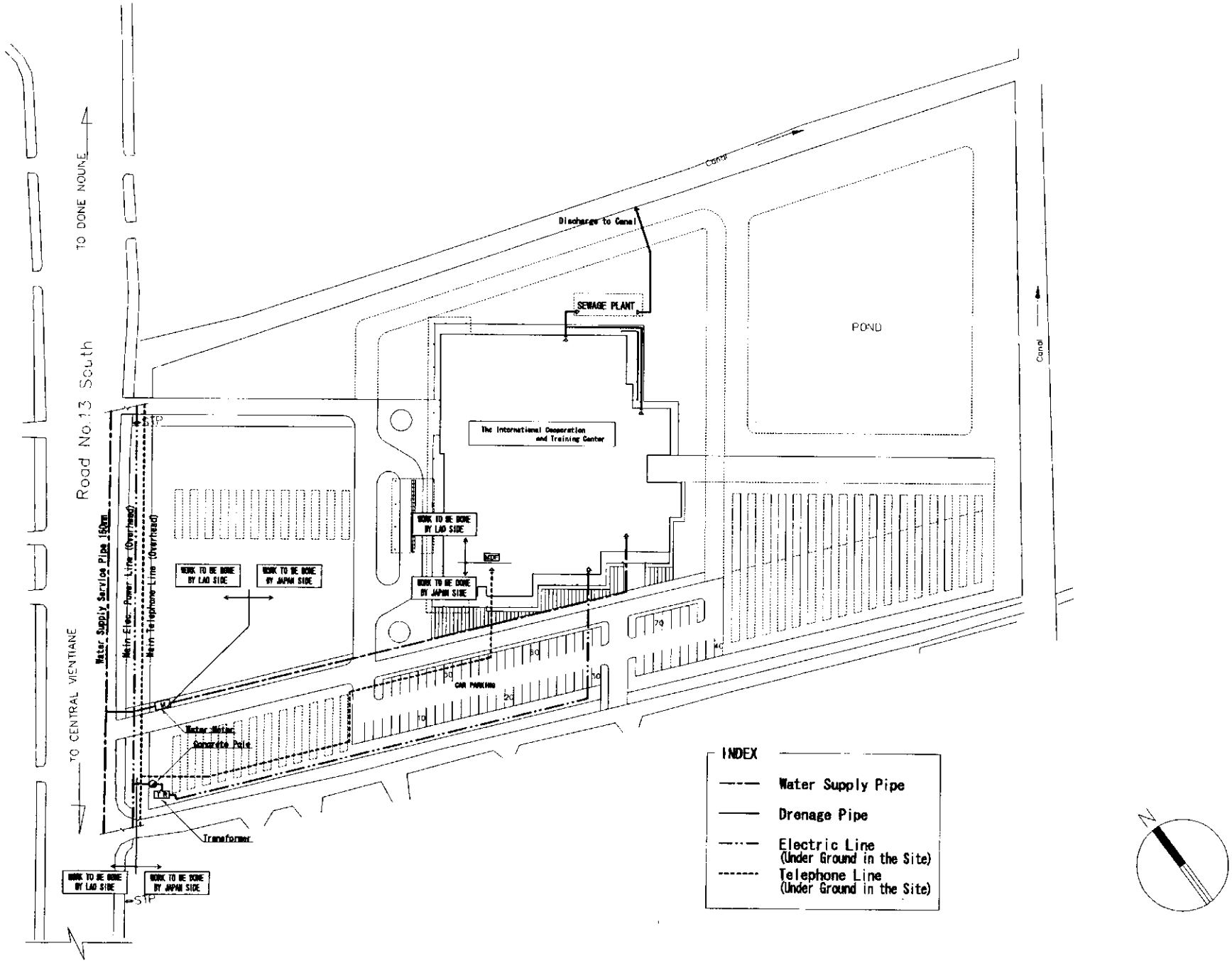
SOUTH EAST ELEVATION-1 1:400



SOUTH WEST ELEVATION-1 1:400

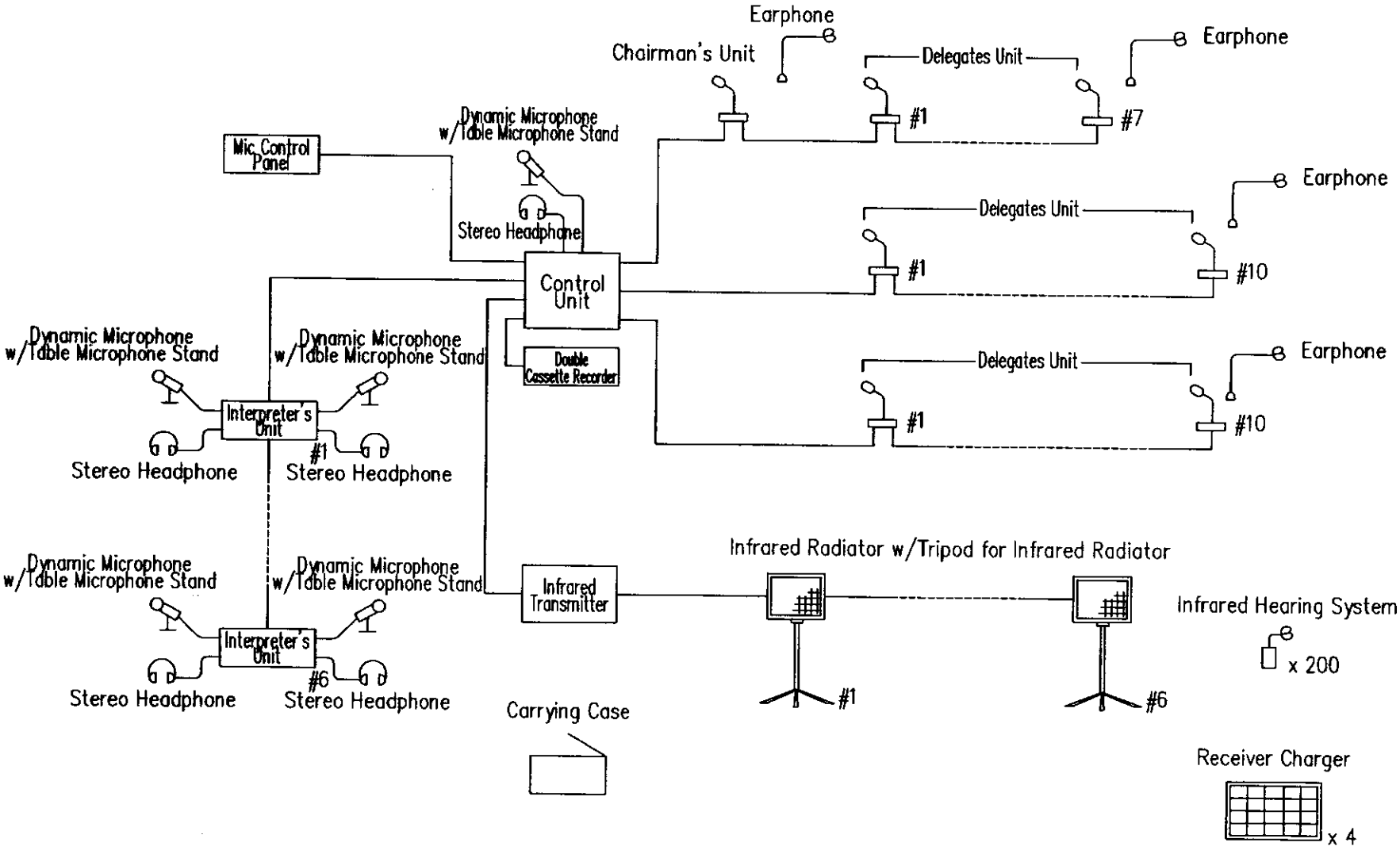


SECTION 1: 400



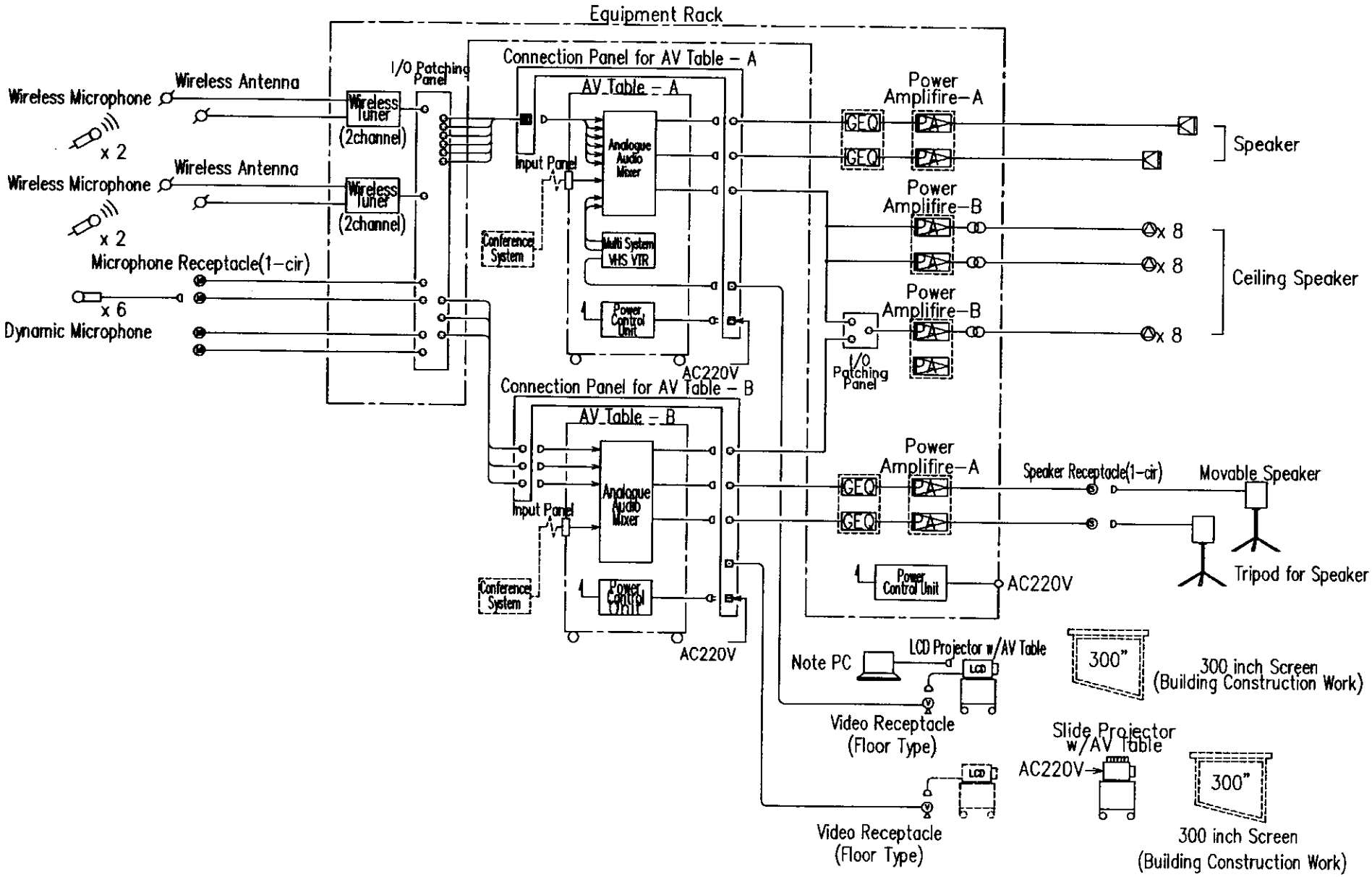
InfraStructure Connection Site Plan S=1:1000

Multipurpose Hall : Interpretation System and Conference System



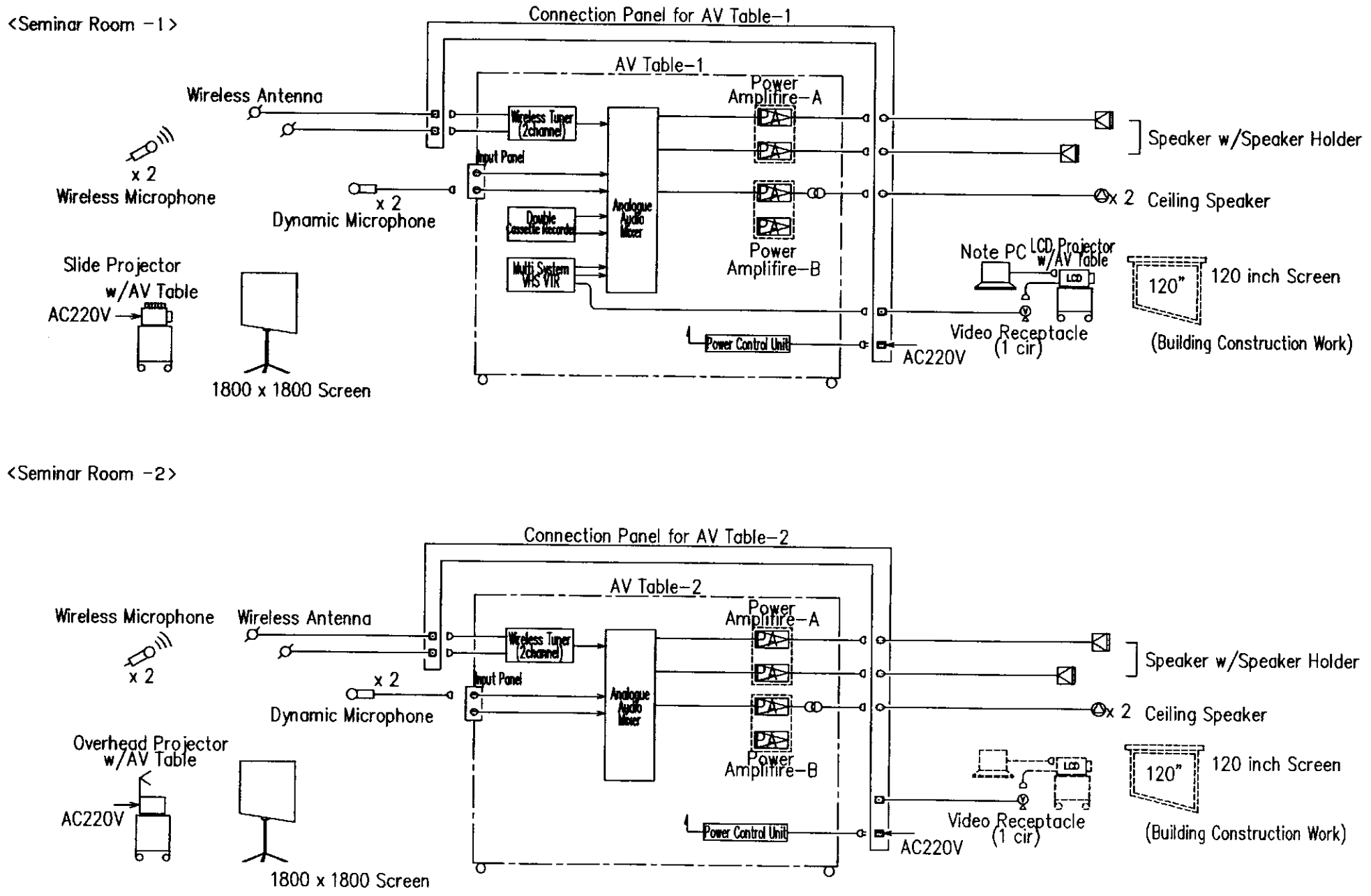
SYSTEM DIAGRAM – 1

Multipurpose Hall : AV Presentation System



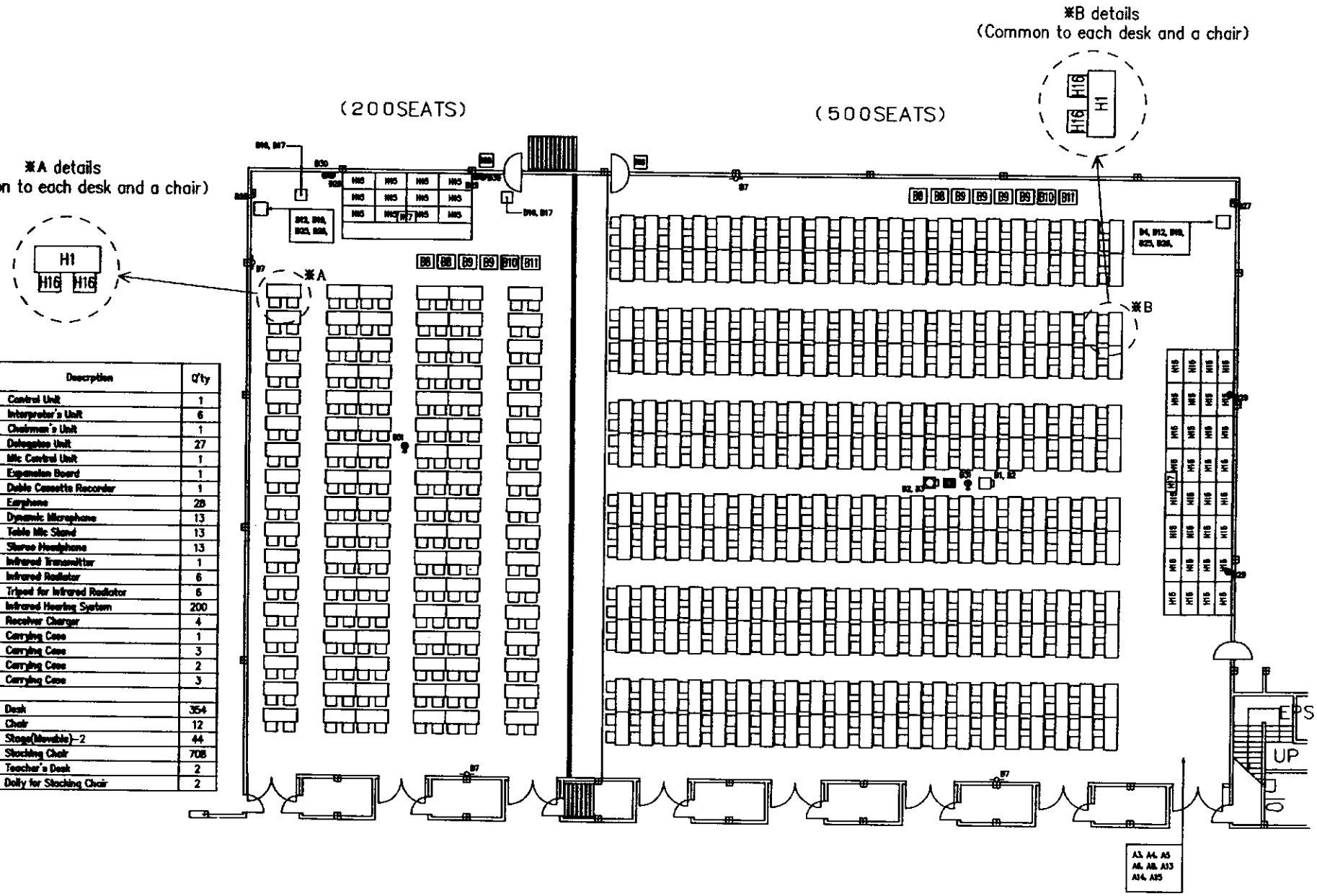
SYSTEM DIAGRAM - 2

Seminar Room : AV System



SYSTEM DIAGRAM-3

<1F MULTIPURPOSE HALL>



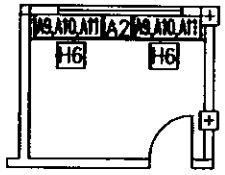
No.	Drawing No.	Description	Q'ty
A-1	A1	Control Unit	1
A-2	A2	Interpreter's Unit	6
A-3	A3	Chairman's Unit	1
A-4	A4	Delegates Unit	27
A-5	A5	Mic Control Unit	1
A-6	A6	Expansion Board	1
A-7	A7	Dable Cassette Recorder	1
A-8	A8	Earphone	28
A-9	A9	Dynamic Microphone	13
A-10	A10	Table Mic Stand	13
A-11	A11	Stereo Headphone	13
A-12	A12	Infrared Transmitter	1
A-13	A13	Infrared Radiator	6
A-14	A14	Tripod for Infrared Radiator	6
A-15	A15	Infrared Hearing System	200
A-16	A16	Receiver Charger	4
A-17	A17	Carrying Case	1
A-18	A18	Carrying Case	3
A-19	A19	Carrying Case	2
A-20	A20	Carrying Case	3
H-1	H1	Desk	354
H-6	H6	Chair	12
H-15	H15	Stage(Movable)-2	44
H-16	H16	Stacking Chair	708
H-17	H17	Teacher's Desk	2
H-18	H18	Dolly for Stacking Chair	2

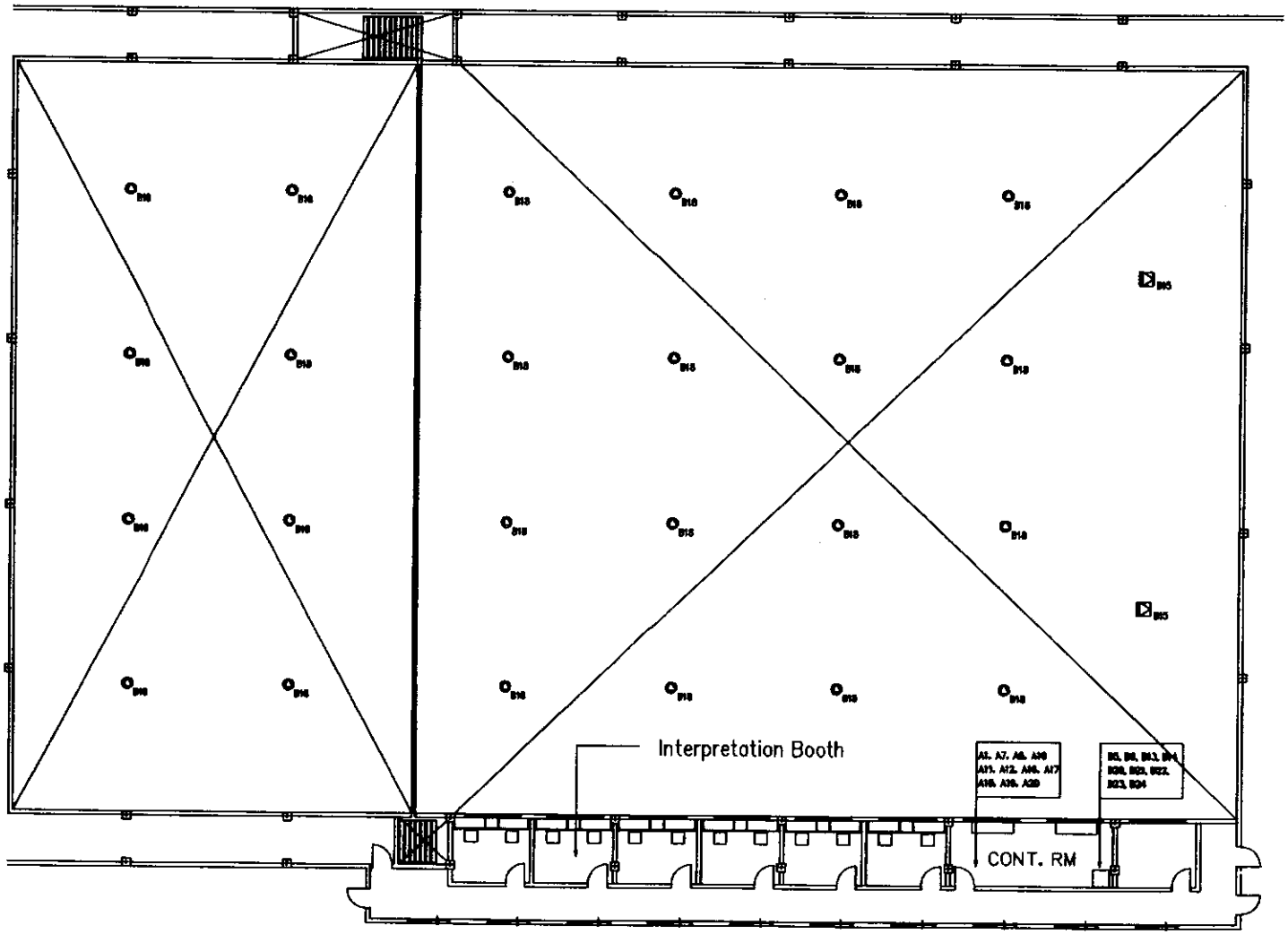
EQUIPMENT LAYOUT PLAN — 1

The Project for Construction of the International Cooperation and Training Center in the Lao People's Democratic Republic

No.	Drawing No.	Description	Q'ty
B-1	B1	LCD Projector	1
B-2	B2	AV Table	2
B-3	B3	Slide Projector	1
B-4	B4	VTR	1
B-5	B5	Tuner Unit	4
B-6	B6	Wireless Tuner	2
B-7	B7	Wireless Antenna	4
B-8	B8	Wireless Microphone	4
B-9	B9	Dynamic Microphone	6
B-10	B10	Microphone Stand(Floor Type)	2
B-11	B11	Microphone Stand(Tabletop Type)	2
B-12	B12	Analogue Audio Mixer	2
B-13	B13	Power Amplifier A	2
B-14	B14	Power Amplifier B	2
B-15	B15	Speaker	2
B-16	B16	Portable Speaker	2
B-17	B17	Tripod for Speaker	2
B-18	B18	Ceiling Speaker	24
B-19	B19	AV Table	2
B-20	B20	Cable & Installation Material	1
B-21	B21	I/O Patching Pnel	1
B-22	B22	Graphic Equalizer	2
B-23	B23	Power Control Unit	1
B-24	B24	Rack	1
B-25	B25	Input Panel	2
B-26	B26	Power Control Unit	2
B-27	B27	Connection Panel-A for AV Table A	1
B-28	B28	Connection Panel-B for AV Table B	1
B-29	B29	Microphone Receptacle	4
B-30	B30	Speaker Receptacle	2
B-31	B31	Video Receptacle (Floor)	2
B-32	B32	Note Book PC	1

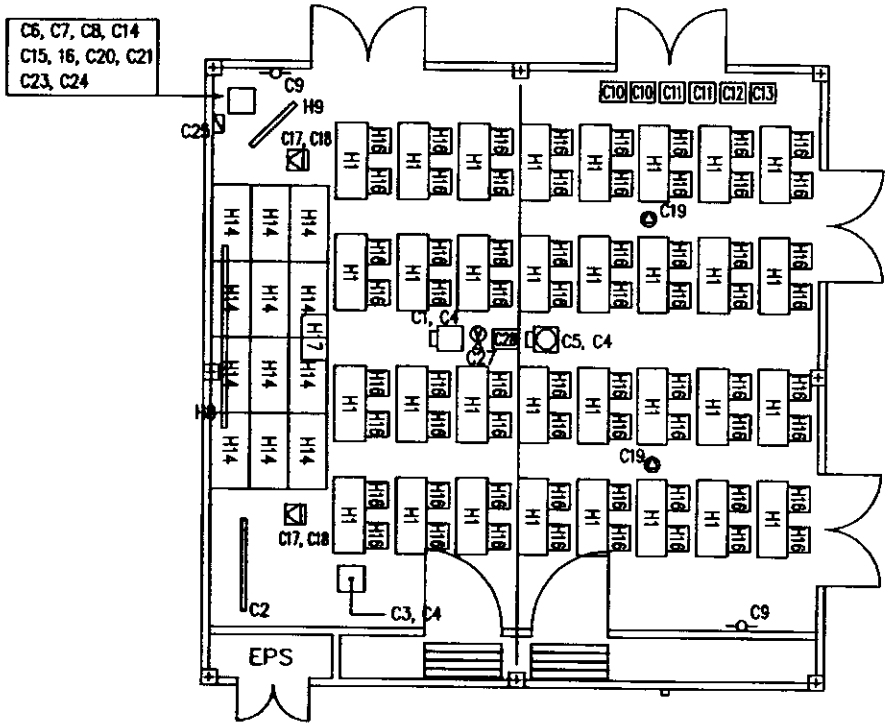
Interpretation Booth details
(Common to 6 rooms)





EQUIPMENT LAYOUT PLAN – 2

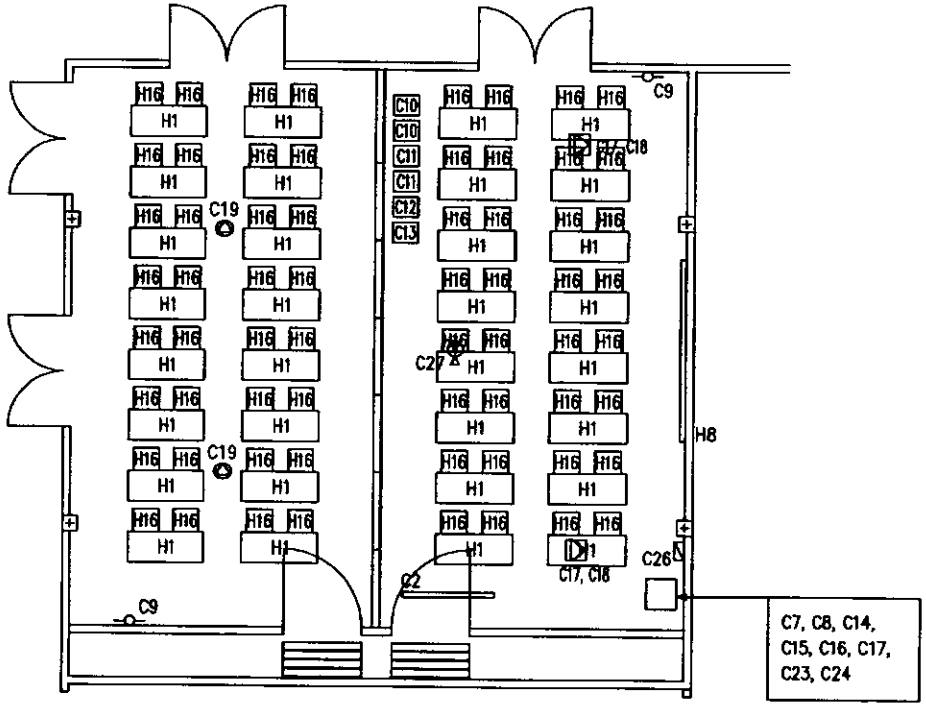
<SEMINAR RM－1>



No.	Drawing No.	Description	Q'ty
C-1	C1	LCD Projector	1
C-2	C2	Portable Screen	1
C-3	C3	OHP	1
C-4	C4	AV Table	3
C-5	C5	Slide Projector	1
C-6	C6	VTR	1
C-7	C7	Tuner Unit	2
C-8	C8	Wireless Tuner	1
C-9	C9	Wireless Antenna	2
C-10	C10	Wireless Microphone	2
C-11	C11	Dynamic Microphone	2
C-12	C12	Microphone Stand(Floor Type)	1
C-13	C13	Microphone Stand(Tabletop Type)	1
C-14	C14	Analogue Audio Mixer	1
C-15	C15	Power Amplifier A	1
C-16	C16	Power Amplifier B	1
C-17	C17	Speaker	2
C-18	C18	Speaker Holder	2
C-19	C19	Ceiling Speaker	2
C-20	C20	AV Table	1
C-21	C21	Cable & Installation Material	1
C-22	C22	Double Casset Recorder	1
C-23	C23	Input Panel	1
C-24	C24	Power Control Unit	1
C-25	C25	Connection Panel-1 for AV Table 1	1
C-27	C27	Video Receptacle (Floor)	1
C-28	C28	Note Book PC	1

No.	Drawing No.	Description	Q'ty
H-1	H1	Desk	32
H-8	H8	White Board (fix)	1
H-9	H9	White Board (Movable)	1
H-14	H14	Stage (Movable)-1	12
H-16	H16	Stacking Chair	64
H-17	H17	Teacher's Desk	1

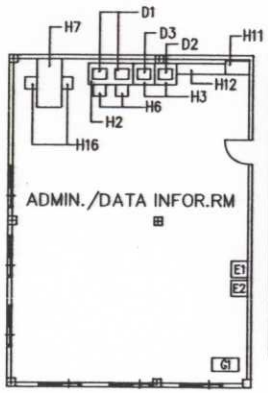
<SEMINAR RM－2>



No.	Drawing No.	Description	Q'ty
C-2	C2	Portable Screen	1
C-7	C7	Tuner Unit	2
C-8	C8	Wireless Tuner	1
C-9	C9	Wireless Antenna	2
C-10	C10	Wireless Microphone	2
C-11	C11	Dynamic Microphone	2
C-12	C12	Microphone Stand(Floor Type)	1
C-13	C13	Microphone Stand(Tabletop Type)	1
C-14	C14	Analogue Audio Mixer	1
C-15	C15	Power Amplifier A	1
C-16	C16	Power Amplifier B	1
C-17	C17	Speaker	2
C-18	C18	Speaker Holder	2
C-19	C19	Ceiling Speaker	2
C-20	C20	AV Table	1
C-23	C23	Input Panel	1
C-24	C24	Power Control Unit	1
C-26	C26	Connection Panel-2 for AV Table 2	1
C-27	C27	Video Receptacle (Floor)	1
H-1	H1	Desk	32
H-8	H8	White Board (fix)	1
H-16	H16	Stacking Chair	64

EQUIPMENT LAYOUT PLAN －3

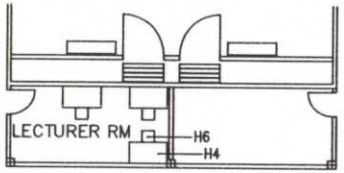
<ADMIN. /DATA INFOR.RM>



No.	Drawing No.	Descrption	Q'ty
D-1	D1	Desk-Top PC	2
D-2	D2	Printer	1
D-3	D3	Scanner	1
E-1	E1	FAX Machine	1
E-2	E2	Copy Machine	1
G-1	G1	Wheel Chair	1
H-2	H2	Desk for Computer-1	1
H-3	H3	Desk for Computer-1	2
H-6	H6	Chair	2
H-7	H7	Work Table	1
H-11	H11	Cabinet	1
H-12	H12	Book Shelf	1
H-16	H16	Stacking Chair	2

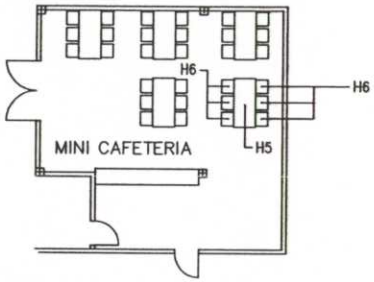
<LECTURER RM>

No.	Drawing No.	Descrption	Q'ty
H-4	H4	Meeting Table	3
H-6	H6	Chair	3



<MINI CAFETERIA>

No.	Drawing No.	Descrption	Q'ty
H-5	H5	Cafeteria Table	5
H-16	H16	Stacking Chair	30



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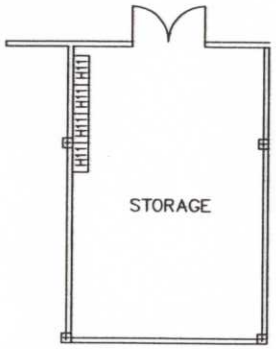
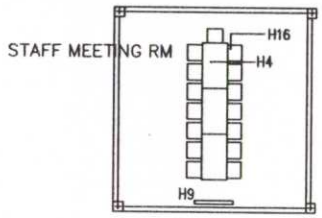


No.	Drawing No.	Descrption	Q'ty
H-11	H11	Cabinet	4

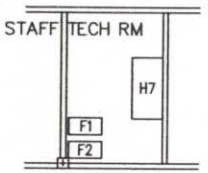
<STAFF MEETING RM>

No.	Drawing No.	Descrption	Q'ty
H-4	H4	Meeting Table	3
H-9	H9	White Board (Movable)	1
H-16	H16	Stacking Chair	15



<STAFF TECH RM>

No.	Drawing No.	Descrption	Q'ty
F-1	F1	Maintenance Tool (for Building)	1
F-2	F2	Maintenance Tool (for Equipment)	1
H-7	H7	Work Table	1



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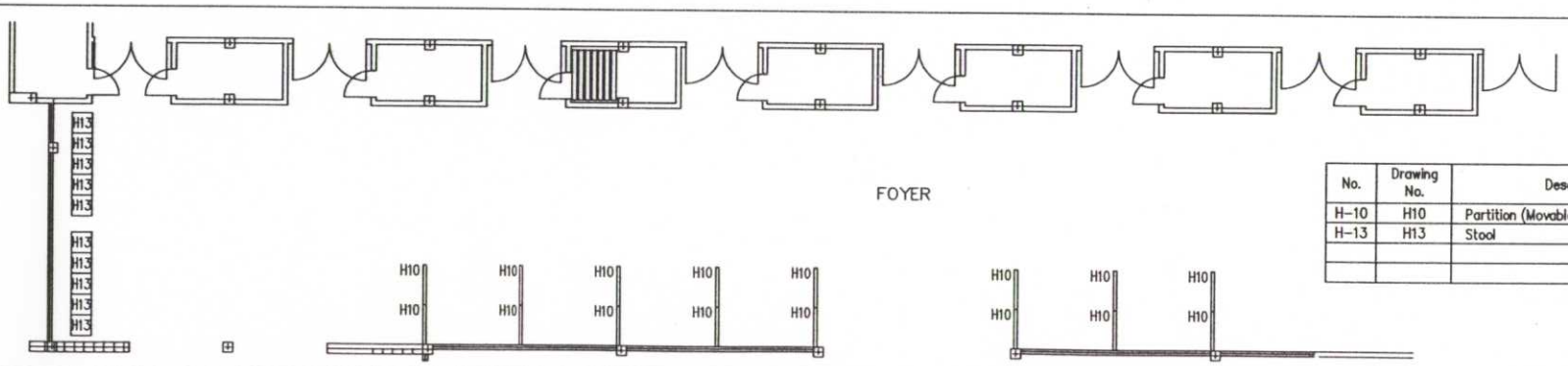


No.	Drawing No.	Descrption	Q'ty
H-10	H10	Partition (Movable)	16
H-13	H13	Stool	10

EQUIPMENT LAYOUT PLAN – 4

2.2.4 Implementation Plan

2.2.4.1 Implementation Policy (Construction and Procurement)

The Project consists of (i) the construction of the Center building and (ii) the procurement and installation of equipment, and will be implemented in accordance with the framework of the grant aid scheme of the Government of Japan after the signing of the Exchange of Notes (E/N) by the Government of the Lao PDR following a cabinet approval by the Government of Japan. After the signing of the E/N, the Government of the Lao PDR will conclude a consultant services agreement with a Japanese consultant to proceed to the detailed design stage of the facilities and equipment. After the completion of the detailed design drawings and tender documents, a Japanese contractor and a Japanese equipment supplier, both of which are selected by tender, will conduct the construction work and the equipment procurement/installation respectively. The contracts with the consultant, contractor and equipment supplier will only become valid after their verification by the Government of Japan. A construction supervision organization will be established by the project implementation agency on the Lao PDR side, the consultant, the contractor and the equipment supplier under the control of the project related government organizations in Japan and the Lao PDR.

(1) Project Implementation Agency

The responsible organization for the implementation of the Project on the Lao PDR side will be the Prime Minister's Office and the actual project implementation agency will be the National Committee on the Construction of the International Cooperation and Training Center. It is anticipated that the latter (National Committee) will be a party to the project-related contracts. The same Committee will also be responsible for the general coordination of the work as the actual project implementation agency.

(2) Consultant

After the signing of the E/N, the project implementation agency (National Committee on the Construction of the International Cooperation and Training Center) will conclude a consultant services agreement for the detailed design and supervision with the Japanese Consultant in accordance with the set procedure of Japan's grant aid scheme and this contract must be verified by the Government of Japan. After verification of the agreement, the Consultant will prepare the detailed design drawings and tender documents in accordance with the present Basic Design Study Report and in consultation with the National Committee and will have them approved by the Government of the Lao PDR. At the tender and construction stages, the Consultant will conduct the work to assist the tender and construction supervision based on these drawings and documents. The Consultant will also conduct supervisory service for the procurement and installation of the equipment from the equipment tender stage to the installation, test operation and handing over of the equipment.

1) Detailed Design

The detailed design means the decision on the details of the building plan and review of the equipment plan based on the findings of the present Basic Design Study and also the preparation of tender documents consisting of design drawings, specifications, general tender conditions and draft contracts for the construction work and equipment procurement/installation. It also includes estimates of the construction cost and equipment procurement/installation cost.

2) Assistance for Tender

This means that the Consultant witnesses the selection of the contractor and equipment supplier by the project implementation agency by means of tender and provides assistance for the administrative procedure required for the concluding of contracts, reporting to the Government of Japan and other necessary work to proceed with the Project.

3) Supervision

This means that the Consultant checks the compliance of the work by the contractor and equipment supplier with the relevant contracts in order to verify the proper execution of the contracts. It also involves the provision of advice and guidance for the project-related bodies and the coordination of such bodies in a fair manner to facilitate the implementation of the Project. The types of work expected of the Consultant in this regard are listed below.

① Checking and approval of the construction plan, work drawings, equipment specifications and other documents submitted by the contractor and the equipment supplier
② Pre-shipment inspection and approval of the quality and performance of the construction materials and equipment to be delivered to the site
③ Confirmation of the delivery, installation and proper explanation of use of the building service equipment and other equipment
④ Assessment of and reporting on the work progress
⑤ Witnessing of the handing over of the completed building and installed equipment, etc.

In addition to the above types of work, the Consultant will report on the progress of the Project, payment procedure and handing over on completion, etc. to the project-related government organizations in Japan.

(3) Contractor and Equipment Supplier

The Contractor and the Equipment Supplier for the Project will be selected from among Japanese companies with certain qualifications through an open tender. In principle, the tenderer with the lowest tender price will be declared the successful tenderer and will conclude a construction (or equipment supply and installation) contract with the project implementation agency on the Lao PDR side. The Contractor and Equipment Supplier

awarded the respective contract will conduct the construction of the facilities and the procurement, transport and installation of the equipment in accordance with the respective contract. They will also provide technical guidance on the operation and maintenance of the building service systems and equipment. After the handing over of such systems and equipment, they will provide support together with the equipment manufacturers and local agents so that the Center can receive a supply of spare parts and consumables for the major equipment and technical guidance at cost.

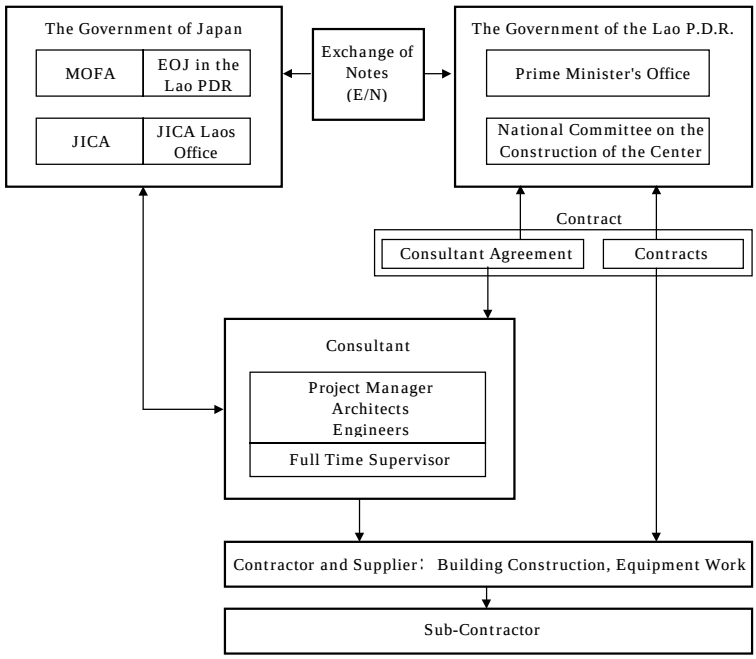
(4) Japan International Cooperation Agency (JICA)

The Grant Aid Management Department of the JICA will provide the necessary guidance for the Consultant, the Contractor and the Equipment Supplier so that the Project is properly implemented in accordance with the grant aid scheme of the Government of Japan. When necessary, it will consult with the project implementation agency to facilitate the implementation of the Project.

(5) Preparation of Construction Plan

The project implementation agency on the Lao PDR side and the Consultant will discuss the construction plan during the detailed design period. It will be necessary for the scope of work for the Japanese side and the Lao PDR side to be clearly determined and the timing and method to conduct the work assigned to each side must be confirmed so that the work in question can be smoothly conducted in accordance with the implementation schedule specified in the Basic Design Study Report. For the Project, it will be necessary for the Lao PDR side to complete the banking work at the site prior to the commencement of the construction work.

Figure 2-4 Construction Supervision Organization



2.2.4.2 Implementation Conditions

(1) Situation of Construction Industry

The situation of the construction industry in the Lao PDR is outlined below.

1) The technical capacity of local construction companies has not yet been fully developed.

2) Gravel, sand, some secondary concrete products (blocks and floor materials, etc.) and bricks are produced in the Lao PDR. Other construction materials are imported from Thailand and can be procured in the local market.

3) Based on the average work efficiency of joiners, plasterers, reinforcing bar workers and finishing workers, it is estimated that the required workforce is 2.5 – 3 times higher than that for a comparable project in Japan.

4) There are few skilled workers for joinery and finishing work, etc. and such work relies on skilled workers from Thailand.

5) As the project site is situated in Vientiane, the application for building work should usually be made to the Vientiane Municipality. As government buildings are exempt from this application process, no application is required in the case of the present Project. However, it is necessary to submit the detailed design drawings and structural computation results for inspection to the Department of Housing and Urban Planning (DHUP) of the MCTPC. If the DHUP requires any modification, such modification must be conducted. There is no obligation to prepare an environmental impacts assessment report for a facility of the planned size under the Project. The DHUP inspection is conducted when the detailed design is completed and the timing of this inspection must be arranged with the project implementation agency on the Lao PDR side. However, as this inspection by the DHUP is expected to be completed in 1 – 2 weeks, it should have little adverse impact on the implementation schedule of the Project.

(2) Important Issues Relating to Construction Work

1) Schedule Control

The rainy season in Vientiane lasts from May to September and 85% of the annual rainfall (mean rainfall for last three years: 1,783.5 mm) is concentrated in this season. For the planned facilities to be completed as planned, the construction work must be efficiently conducted during the dry season, necessitating schedule control through regular meetings involving the project-related bodies in the Lao PDR, the Consultant and the Contractor. The required overall schedule must minimise the amount of earth work, including foundation work, during the rainy season.

2) Safety Control

The project site is sufficiently large with some distance to nearby structures. However, the western side faces busy National Route 13 while the southern side faces a 4 – 5 m wide road. As the construction materials will be delivered to the site from National Route 13, safety measures, including occasional blockage of this road and the protection of pedestrians, must be taken into careful consideration. For this purpose, arrangements must be made by the project implementation agency, the Consultant and the Contractor to control vehicle access to and departure from the site in addition to the introduction of a safe path for pedestrians.

(3) Important Issues Relating to Equipment Procurement

Some of the systems to be delivered and installed at the new Center require complicated installation arrangements during the construction period. Their procurement and installation schedule must, therefore, be properly arranged through close liaisoning between the Consultant and the Contractor. The systems requiring such arrangements are listed below.

- Simultaneous interpretation system
- Conference system
- AV presentation system
- AV system

(4) Construction Management Engineers

In order to complete the construction of the facilities in line with the design documents, the Contractor must be capable of smoothly arranging the joint work with the local sub-contractor, providing appropriate technical guidance and controlling the schedule. The appointment of full-time engineers who are familiar with the local conditions will be necessary to achieve high quality facilities based on a proper understanding of the character of the planned facilities.

Given the contents and scale of the planned facilities, the following full-time on-site engineers are believed to be necessary.

• Site manager (1)	:	general construction management
• Architectural engineer (1)	:	guidance on building work, schedule control, quality control
• Mechanical and Electrical engineer (1)	:	schedule control, equipment installation and test operation, technical guidance
• Administrator (1)	:	administrative work, personnel control, import procedures

(5) Equipment Procurement

- In addition to the procurement, installation, test operation and quantity checking of the equipment, the operation and maintenance requirements of each equipment must be properly explained together with the provision of technical guidance.

- At the time of the handing over of the equipment, a list of parts, etc. which are liable to break down must be prepared and submitted to the Lao PDR side.

2.2.4.3 Scope of Works

The Project will be implemented through cooperation by Japan and the Lao PDR. In the case of the Project's implementation with grant aid scheme provided by the Government of Japan, it is appropriate to decide the following scope of work for each side.

(1) Work to be Undertaken by the Government of Japan

The Government of Japan will be responsible for the following relating to the consultant services for the Project, the construction of facilities and the procurement/installation of equipment.

1) Consultant Services
   ① Preparation of the detailed design documents and general conditions for the tender for the subject facilities and equipment of the Project
   ② Cooperation for the selection of the Contractor and the Equipment Supplier (procurement and installation) for the Project and also for the signing of the contracts with them
   ③ Supervision of the facility construction work and the delivery, installation and guidance on the operation and maintenance of the equipment

2) Construction of Facilities and Procurement/Installation of Equipment
   ① Construction of the subject facilities for grant aid
   ② Procurement of the construction materials and equipment/systems for the subject facilities for grant aid and their transportation and delivery to the said facilities
   ③ Procurement, transportation, installation, test operation and adjustment of the subject equipment/systems for grant aid
   ④ Explanation of and guidance on the operation and maintenance methods for the subject equipment/systems for grant aid

(2) Work to be Undertaken by Government of the Lao PDR

At its own expense, the Government of the Lao PDR will undertake the banking work at the site, external work, gate and fencing work, infrastructure (utility) connection work, the procurement of furniture and fixtures which are not included in the scope of the Japanese grant aid and work related to tax exemption measures and others as described below.

1) Banking Work at the Site
   Banking work including compaction, to raise the ground level at the site to the level of the pavement of the front road to the west

2) External Work
   Whole of planting work of the site

3) Gate and Fencing Work
   Construction of three gates, i.e. two gates for the entrance and exit from/to the road to the west and one service gate to the south; construction of a fence along the boundaries

4) Infrastructure (Utility) Connection Work
   ① Service connection for electricity
   ② Service connection for telephone
   ③ Service connection for city water

5) Procurement
   Procurement of the general furniture and fixtures which are not included in the scope of the Japanese grant aid

6) Tax Exemption
   Exemption of Japanese nationals (persons and companies) from domestic taxes, including VAT, and financial levies imposed in the Lao PDR for the procurement of goods and the provision of services based on the verified contracts for the Project

7) Customs Clearance, etc.
   Provision of all conveniences for (i) the speedy customs clearance of equipment and materials imported from Japan and/or the third countries for the purpose of the Project based on the verified contracts and (ii) the inland transportation of such equipment and materials

8) Visas, etc.
   Provision of all conveniences for the entry to and stay in the Lao PDR of Japanese nationals who enter and stay in the Lao PDR to conduct their assigned work for the implementation of the Project

9) Issue of Permits, etc.
   Prompt issue of the various permits and authorisations which are required for the implementation of the Project

10) Payment
    Payment of all necessary expenses which are not covered by the Japanese grant aid
11) Operation and Maintenance
    Appropriate as well as effective operation and maintenance of the facilities construction and equipment procured with the grant aid

2.2.4.4 Consultant Supervision

(1) Construction Supervision Policy

In accordance with Japan's grant aid scheme, the Consultant will establish a project team, which will be consistently involved in the detailed design and construction supervision stages to ensure the smooth progress of all of the work, taking the purport of the basic design into consideration. The policy for the construction supervision for the Project are described below.

1) To aim at completing the construction of the facilities and the procurement and installation of the equipment/systems without delay through close liaisoning with the people responsible for the Project in the two countries

2) To provide prompt and appropriate guidance and advice for the Contractor, Equipment Supplier and people related to them from an impartial standpoint

3) To provide appropriate guidance and advice on the operation and management of the facilities as well as the installed equipment/systems and to witness the handing over of the facilities and equipment/systems following confirmation of the completion of both the construction work and the equipment/system installation work meeting the contract conditions with a view to completing the consulting work by obtaining approval of the handed over facilities and equipment/systems by the Lao PDR side

(2) Supervision Plan

As the Project has many work items, one on-site work supervisor (in charge of construction work) will be appointed on a full-time basis with the dispatch of the following engineers in line with the progress of the work.

- Project manager : general coordination and guidance on schedule control
- Architect : confirmation of design intentions, work drawings and material specifications
- Structural engineer : confirmation of bearing strength for piles, foundation work, structural work and steel structure work
- Mechanical engineer : plumbing and air-conditioning system, etc.
- Electrical engineer : conduit work, wiring and power receiving transforming equipment, etc.
- Equipment supervisor : guidance on equipment installation, coordination with building service work and confirmation of appropriate explanation of equipment handling, etc.

2.2.4.5 Quality Control Plan

Given the high temperature, high humidity, strong solar radiation and concentrated rainfall during the rainy season from May to September (accounting for 85% of the mean annual rainfall), proper quality control is required in regard to the construction work. According to past local meteorological data, the daytime temperature can reach more than 35°C in March and April, necessitating measures to deal with a possible concrete temperature of more than 30°C. In view of such a likelihood, the ambient temperature at the time of concrete placing and the concrete temperature will be measured to ensure the correct concrete quality.

There are two batcher plants some 20 – 30 minutes away by car and fresh concrete will be transported from these plants. For this purpose, the quality control system of the batcher plants will be checked. If the earth work is to be conducted during the rainy season, a work plan describing the retaining work and unwatering work, etc. will be prepared as part of the quality control exercise. The quality control plan for the main work is described in the table below.

Table 2-37 Quality Control Plan

Work	Work Type	Control Item	Method	Remarks
Structural Work	Concrete work	Fresh concrete	Slump, air volume, temperature	Strength test at public test institution
		Concrete strength	Comprehensive strength test	
	Reinforcing work	Reinforcing bar	Tensile test, mill sheet check	
		Arrangement	Bar arrangement check	
	Steel structure work	structural steel	mill sheet, delivery note check	
			Fabricator inspection report check	
	Pile work	Material, bearing capacity	Factory inspection sheet check	
			Bearing capacity check	
Finishing Work	Roof work	Workmanship, leakage	Visual inspection, water spray or filling test	
	Tile work	Workmanship	Visual inspection	
	Plastering work	Workmanship	Visual inspection	
	Door & window work	Products	Factory inspection sheet check	
		Installation accuracy	Visual inspection, dimension check	
	Painting work	Workmanship	Visual inspection	
	Interior work	Products, workmanship	Visual inspection	
Electrical Work	Power Receiving & Transforming	Performance, operation installation check	Factory inspection sheet check; withstand voltage, megar, operation, Visual inspection	
	Conduit Work	Bending, support check	Visual inspection, dimension	
	Wiring and cable Work	Sheath damage, loose connection check	Performance sheet check, cleaning before laying, marking after bolt fixing	
	Lightning Work	Resistance, conductor support pitch check	Resistance measuring, visual inspection, dimension	
	Lighting Work	Performance, operation, installation check	Performance sheet check, illumination measurement, visual inspection	

Mechanical Work	Water Piping Work	Support pitch, leakage	Visual inspection, leakage, water pressure test	
	Drainage Piping	Slope, support pitch, leakage	Visual inspection, leakage, water flow test	
	Pump Installation	Performance, operation, installation check	Performance sheet check, flow rate test	
	Air-Con. Work	Performance, operation, installation check	Performance sheet check, temperature measurement	
	Water Tank	Leakage	Water filling test	
	Sanitary Fixture	Operation, installation, leakage check	Visual inspection, flow test	

2.2.4.6 Procurement Plan

(1) Construction Materials

1) Procurement Policy

As the main construction materials can be procured locally, they will, in principle, be procured in the Lao PDR. However, the products actually produced in the Lao PDR are limited to gravel, sand, fresh concrete, some secondary concrete products (blocks and floor materials, etc.), bricks and timber for temporary structures, etc. Most other construction materials are imported from Thailand and are marketed throughout the Lao PDR. As these imported materials from Thailand can be easily procured locally, they are considered part of the procurement of local products. Because of the easy maintenance of the completed facilities, materials which are locally available will be actively used. The materials and equipment of which the procurement in the Lao PDR is difficult and which are necessary to secure the intended functions of the Center will be procured from either Thailand or Japan.

2) Procurement Plan

① Structural Work

The main materials for the structural work, such as fresh concrete and plywood for forms, etc., can be procured locally, including products imported from Thailand. However, those products of which a large quantity is required and which is not completely available in the local market such as concrete piles, reinforcing bars and structural steels, etc., will be imported from Thailand.

② Building Exterior and Interior Work

Timber, tiles, roof tiles, paint and glass used for the exterior and interior of buildings are imported from Thailand and are readily available in the local market. Therefore, these will, in principle, be procured locally. However, those products of which a large quantity is required and which are not completely available in the local market will be imported from Thailand. Aluminum window frame and metal roofing materials will be imported from Thailand due to a difficulty on large quantity and different specifications in the local market.

③ Air-Conditioning and Plumbing Work

Air-conditioning equipment, exhaust fan, pumps, various apparatus and sanitary-fixture, etc. made in Thailand are popular in the Lao PDR. In principle, those products is procured in the Lao PDR in view of easy repair and maintenance. However, those products will be imported from Thailand due to a difficulty on large quantity and different specifications in local market. Custom-order products, including boxes for indoor fire hydrant, will be imported from Thailand as these products are commonly used in the Lao PDR. FRP tank and part of exhaust fan will be imported from Japan due to a difficulty on quality and specifications of products in Thailand.

④ Electrical Work

As lighting fixture, switches, lamps, electrical wires and cables, conduits and others are available in the local market, they will, in principle, be procured in the Lao PDR in view of easy repair and maintenance. If the required quantity is too large to be met locally, Thai products will be imported. Custom-order products, such as distribution panels, switchboards and control panels, etc. will be imported from Thailand as Thai products are commonly used in the Lao PDR.

Table 2-38 Major Materials Procurement Plan

Architectural Work

Work type	Materials	Local Market		Procurement Plan		
		Condition*	Import	Lao	Thai	Japan
Concrete work	Portland cement	◎	Thai	○		
	Sand, aggregate	◎		○		
	Reinforcing bar	△	Thai		○	
	Form (plywood)	◎	Thai	○		
Pile work	Concrete pile	×	Thai		○	
Steel structure work	Structural steel	△	Thai		○	
	Fabrication	×	Thai		○	
Masonry work	Concrete block	◎		○		
Waterproof work	Asphalt waterproofing	◎	Thai, Japan	○	○	
Tile work	Ceramic tile	◎	Thai	○	○	
Wooden work	Wood	◎		○	○	
Roof work	Cement roof tile	◎	Thai	○	○	
Metal window and door work	Aluminum window	△	Thai, ASEAN		○	
	Stainless window	△	Thai		○	
Wooden door work	Wooden door	△	Thai		○	
Ironmonger	Door handle, lock	△	Thai, Japan			○
Glass work	Plane glass	◎	Thai	○	○	
Paint work	Paint	◎	Thai	○	○	
Interior finishing work	Gypsum board (T-bar)	◎	Thai	○	○	
	Rockwool acoustic board (T-bar)	△	Thai		○	
	Carpet tile	◎	Thai		○	
	PVC tile	◎	Thai	○	○	

* ◎ Easy to procure in Lao the PDR market ○ Procurement country

△ Available in the Lao PDR market but model and quantity are limited

× Difficult to procure in the Lao PDR market

Mechanical and Electrical Work

Work type	Materials	Local Market		Procurement Plan		
		Condition*	Import	Lao	Thai	Japan
Air-conditioning work	Air conditioner	△	Thai, Japan		○	
	Exhaust fan	△	Thai, Japan		○	○
Plumbing work	Pump	△	Thai, Japan		○	
	Fire Hydrant	×	Thai		○	
	Sanitary fixture	△	Thai		○	
	Pipe	△	Thai		○	
	FRP tank	×				○
Electrical work	Lighting fixture	△	Thai		○	
	Panel	×	Thai, Japan		○	
	Wire, cable	△	Thai	○	○	
	Conduit (PVC)	◎	Thai	○	○	
	Telephone system	◎	Thai, Korea	○	○	
	Fire alarm system	△	Thai		○	

(2) Equipment

1) Procurement Policy

As none of the planned equipment is produced in the Lao PDR, each equipment will, in principle, be procured in Japan or a third country. As far as furniture is concerned, Thai products which are commonly used in the Lao PDR will be procured from a third country (Thailand). The PCs, facsimile machine and copy machine, etc. which require regular maintenance will be procured from local agents.

2) Procurement Plan

① AV Equipment: Simultaneous Interpretation System, Conference System, AV Presentation System and AV System, etc.

In the Lao PDR, AV equipment is commonly bought from Thailand and equipment requiring repair by the manufacturer due to breakdown tends to be sent to an agent in Thailand. As much of this equipment is made by Japanese manufacturers, it will be procured in Japan. There is no formal agent for this type of equipment in the Lao PDR and the technical ability of the local repairers is questionable. Accordingly, there will be strong emphasis on after-service by the Equipment Supplier in cooperation with the original manufacturers.

② PCs, Printer and Scanner

As these require regular maintenance after procurement, they will be procured from local agents. The most popular brands of PCs in the Lao PDR are COMPAQ, DELL, ACER and SOVA (a Thai manufacturer)

③ Facsimile Machine and Copy Machine

As these require regular maintenance after procurement, they will be procured from local agents. The most popular brands in the Lao PDR are CANON, MINOLTA, KYOCERA and SHARP.

④ Furniture

The furniture sold in the Lao PDR is mainly made in Thailand. The prices of Thai products are cheaper than Japanese products and the Thai products will be procured.

Table 2-39 Major Equipment Procurement Plan

Equipment Name	Local Market		Procurement Plan		
	Condition*	Import	Lao	Thai	Japan
Simultaneous Interpretation System	×	Thai, Japan			○
Conference System	×	Thai, Japan			○
Audio Visual Presentation System	×	Thai, Japan			○
Audio Visual System	×	Thai, Japan			○
Personal Computer, Printer, Scanner	△	Thai, ASEAN	○		
Copy Machine, Facsimile Machine	△	Thai, Japan	○		
Furniture	△	Thai		○	

* ◎ Easy to procure in the Lao PDR market ○ Procurement country

△ Available in the Lao PDR market but model and quantity are limited

× Difficult to procure in the Lao PDR market

(3) Transportation Plan

In principle, transportation of the construction materials from Japan will use wooden crates or container shipment because of the small quantity involved while the equipment will be transported in a container by sea. The main disembarkation point for maritime cargo to the Lao PDR is Port Bangkok in Thailand. There are frequent mixed consignment services from Japan to Port Bangkok. From Port Bangkok to Vientiane, the cargo will be transported by road as in the case of equipment and materials procured in Thailand. It will be transported to a bonded warehouse in Tanaleng in the Lao PDR from Nong Khai via the Mittapab Bridge over Mekong River for customs clearance. Following customs clearance, it will be delivered to the site by a Laotian transporter. The tax exemption procedure must be cleared by the Lao PDR side in advance.

Sea Land Mittapab Bridge Land

Japan → Port Bangkok → Nong Khai (Thailand) → Border → Tanaleng (The Lao PDR) → Site

2.2.4.7 Implementation Schedule

In the case of the Project's implementation with grant aid scheme provided by the Government of Japan, the following processes will be followed up to the commencement of the construction work.

① Signing of the E/N by the Government of Japan and the Government of the Lao PDR
② Recommendation of a Japanese consultant by JICA
③ Signing of the consultant services agreement by the National Committee on the Construction of the Center and the recommended consultant

④ Preparation of the detailed design documents and tender documents, tender in Japan and signing of the construction and equipment contracts with (a) Japanese companies, leading to the commencement of the construction work.

Following the signing of the E/N, the Prime Minister's Office and the National Committee on the Construction of the Center will become responsible organization and the actual project implementation agency respectively on the Lao PDR side.

(1) Detailed Design

The detailed design drawings and tender documents will be prepared based on the basic design. These will consist of the detailed design drawings, specifications, calculation sheets, budget statement and tender outline, etc. The Consultant will conduct detailed consultations with the project-related organizations of the Government of the Lao PDR at the beginning and end of the detailed design. The detailed design work of the Consultant will be completed when the final products submitted to the Government of the Lao PDR are approved.

(2) Tender and Contract

Following the completion of the detailed design, the prequalification for tender will be announced in Japan. Based on the prequalification results, the National Committee on the Construction of the International Cooperation and Training Center (project implementation agency) will invite construction companies and equipment suppliers which have expressed a willingness to participate in the tender. The tender will then be held and will be witnessed by the related parties. The tenderer with the lowest tender price will be declared the successful tenderer provided that the contents of tender are judged to be appropriate. The successful tenderer will conclude a construction contract or an equipment supply contract with the National Committee on the Construction of the International Cooperation and Training Center.

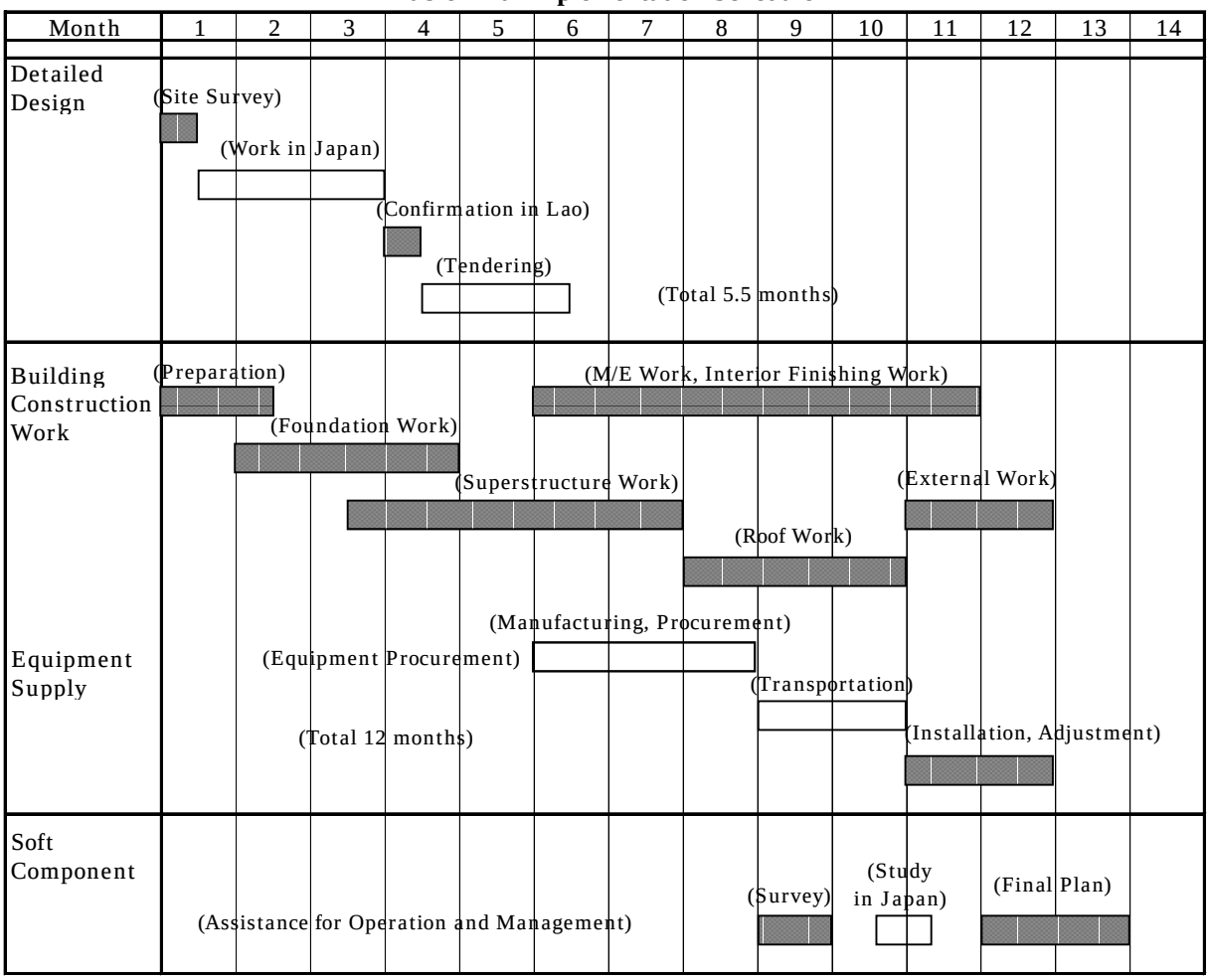
(3) Construction Work and Equipment Procurement

Following the signing of the contract, the Contractor and the Equipment Supplier will commence their respective work. The work efficiency in the Lao PDR is believed to decline during the rainy season which lasts from May to September compared to the dry season. Judging from the scale of the planned facilities and the local situation of construction workers, it is judged that the Project will take some 12 months (13 months including the soft components) to complete. The completion of the Project in this period assumes the steady procurement of the equipment and materials, the quick clearance of the various procedures and reviews, etc. by related organizations in the Lao PDR and the smooth implementation of the work to be undertaken by the Lao PDR side.

(4) Soft Components

Assistance for operation and management of the Center will be planned as soft components of the Project.

Table 2-40 Implementation Schedule



2.3 Obligations of Recipient Country

2.3.1 Obligations of Recipient Country

It will be necessary for the Government of the Lao PDR to undertake the following matters for the implementation of the Project with grant aid provided by the Government of Japan.

(1) Matters Related to Construction Work

① Banking work at the site
② Whole of planting work at the site
③ Gate and fencing work
④ Extension and services connection work for electricity and water supply to the site and extension and service connection work for the telephone line to the new building

(2) Matters Related to Maintenance

① Procurement of general office furniture, fixtures and utensils
② Arrangement of consumables and spare parts which will be required for the maintenance of the facilities and equipment
③ Appropriate as well as effective use and maintenance of the facilities construction and equipment procured with the grant aid

(3) Matters Related to Implementation Process

① Banking arrangements and payment charge of contracts amount
② Issue of authorization to pays(A/P) and amendment of A/Ps and charge for issue
③ Clearance of the procedure for the application of building permits and payment of various fees
④ Tax exemption and customs clearance of the equipment and materials imported within the scope of the grant aid and their swift inland transportation
⑤ Exemption of Japanese companies and Japanese persons working for the Project from customs duty, domestic taxes including VAT and any other financial levies imposed in Lao PDR
⑥ Provision of all conveniences for the entry to and stay in Lao PDR for Japanese persons for the execution of Project-related work
⑦ Issue of various permits and authorisation required for the implementation of the Project
⑧ Payment of all costs which are not included in the grant aid but which are necessary for the implementation of the Project

2.3.2 Cost Estimation

(1) Matters Related to Construction Work

1) Compensation of land: the cost will be estimated by the Lao PDR
2) Banking Work at the Site: 784,472,000kip
3) Whole of Planting Work at the Site: 466,450,000kip
4) Gate and Fencing Work: 61,123,000kip

The cost of fencing work will be estimated by the Lao PDR after the designing.

(2) Infrastructure Connection

1) Power Electricity Connection: 5,000,000kip
2) Telephone Line Connection: 7,622,775kip
3) City Water Supply Connection: 28,500,000kip

(3) Payment Charge (Contract Amount x 0.1%): 58,461,000kip

(4) Authorization to Pay (A/P) Charge for issue and amendment of A/P: 4,384,000kip

(5) Procurement General Furniture: 84,626,000kip

Grand Total 1,500,638,775kip

2.4 Project Operation Plan

2.4.1 Operation and Maintenance Organization

After the handing over of the facilities and equipment to the Lao PDR side, the National Committee on the Management and Utilisation of the Center will be responsible for the operation and maintenance of the facilities and equipment while an organization set up at the Center will conduct the actual operation and maintenance under the supervision of the said Committee.

The establishment of the organization to run the Center is planned around November, 2003 and the Center's personnel and staff will be deployed or recruited at the same time. The personnel and staff of the Center will undergo training at similar facilities during the period between their deployment and recruitment and the opening of the Center. They will also receive training through the test operation which is planned to be conducted during the period between the completion of the facilities and the formal opening of the Center.

(1) Maintenance Organization

The maintenance of the facilities and equipment will be conducted by the four personnel of the technical section, i.e. the chief engineer in charge of overall maintenance and one

technician each for the electrical, air-conditioning (mechanical work) and AV equipment. In the case of the maintenance of the electrical and air-conditioning equipment, daily inspection and maintenance and simple repair work will be conducted by the in-house technicians while more complicated maintenance and repair work will be contracted to an appropriate company in Vientiane. For this reason, the electrical and air-conditioning equipment to be provided under the Project are planned based on equipment and systems which are popularly used at similar facilities in Vientiane so that the maintenance organization can consist of daily inspection and maintenance by the Center's own personnel and higher level maintenance and repair by local agents and companies.

In the case of the AV equipment, simple repairs can be conducted locally. However, broken-down equipment requiring repair by the manufacturer must be referred to the procurement source in Thailand and, therefore, the equipment specifications are planned to enable agents in Thailand to comfortably deal with the repair needs. In the case of the PCs, facsimile machine and copy machine, as these require regular maintenance for their proper functioning, they will be procured from a local agent(s) to avoid any maintenance problems.

2.4.2 Maintenance Plan

(1) Facilities

There are three key issues for the maintenance of the building, i.e. (i) daily cleaning, (ii) repairs in the face of wear, damage or aging and (iii) security to ensure safety and crime prevention.
The rigorous implementation of daily cleaning gives a good impression of the facilities to visitors/users and prompts people to use the facilities and equipment gently. It is also important to maintain the proper functioning of the equipment, leading to the early detection and repair of any damage or break down and prolonging the life of the building service equipment.

The main components of the repair work will be the repair or replacement of exterior and interior materials protecting the building structure. Renewal to maintain the serviceability of the facilities is assumed to be required every 10～15 years based on examples in Japan.

The details of the regular inspection and repair which determine the life of the building will be submitted in the form of "a maintenance manual" by the Contractor when the facilities are handed over to the Lao PDR side together with an explanation of the inspection and regular cleaning methods. The required inspections are outlined below.

Table 2-41 Outline of Regular Inspection for Facility

	Type of Maintenance Work	Frequency
Exterior	• Repair and repainting of external walls	Repair: every five years, Repaint: every 15 years
	• Inspection and repair of roofing materials	Inspection: every year Repair: every five years
	• Regular cleaning of gutters and drainage system	Monthly
	• Inspection and repair of sealing of external windows and doors	Every year
	• Regular inspection and cleaning of ditches and manholes	Every year
Interior	• Renewal of interior finishing	As required
	• Repair and repainting of partition walls	As required
	• Renewal of ceiling materials	As required
	• Adjustment of window and door fitting	Every year
	• Replacement of hardware	As required

(2) Building Service Equipment

What is important for the building service equipment is regular preventive maintenance before the equipment suffers from a break down which requires repair or the replacement of a part(s). The life of the building service equipment can certainly be extended by proper operation and regular inspection, lubrication, adjustment, cleaning and repair. Such regular inspection can prevent break downs and accidents and prevent the spread of accidents. With regular inspection, the replacement of worn parts and the cleaning/replacement of filters are conducted in accordance with the maintenance manual. It is essential to establish a proper maintenance organization involving the rigorous implementation of regular inspection and maintenance by maintenance personnel and the subcontracting of regular inspection to manufacturers' agents if necessary. The general life expectancy of the main equipment is shown below.

Table 2-42 Life Expectancy of Building Services Equipment

	Type of Building Service Equipment	Life Expectancy
Electrical System	• Distribution panels	20 – 30 years
	• Fluorescent lamps	5,000 – 10,000 hours
	• Incandescent lamps	1,000 – 1,500 hours
Water Supply and Drainage Systems	• Pumps, pipes and valves	15 years
	• Tanks	20 years
	• Sanitary fixture	25 – 30years
Air-Conditioning System	• Pipes	15 years
	• Exhaust fans	20 years
	• Air-conditioning units	15 year

(3) Equipment

The maintenance of the planned equipment will required "daily inspection" which checks the proper working of the equipment before and after use and "periodic inspection" which principally consists of annual maintenance and repair. Periodic inspection must be conducted in accordance with the operation and maintenance manual. It is, therefore, very important to read the manual through to become familiar with the operation and maintenance requirements. The periodic inspection of the facsimile machine and copy machine should be subcontracted to a local agent.

2.4.3 Operation and Management Cost

The operation and management cost for 2005 when the full-scale operation of the Center will commence following the completion of the Project and for 2009 when the Center is expected to be on track and fully fulfilling its planned use are estimated. The operation cost of the Center includes the running cost and the personnel cost while rental fees are accounted as income. The running cost is further divided into the operating cost for the building and equipment (electricity cost, water supply cost, telephone cost and LPG cost) and the maintenance cost (building, utilities, equipment, pamphlet printing and consumables).

Table 2-43 Estimated Operation and Management Cost (Unit: kip)

	2005	2009
1. Operation and Management Cost	277,028,784	331,122,684
(1) Running Cost	165,878,784	219,972,684
1) Operating Cost for Building and Equipment	116,290,600	170,384,500
① Electricity Cost	94,955,200	146,074,000
② Water Supply Cost	4,406,400	6,144,000
③ Telephone Cost	15,654,000	15,654,000
④ LPG Cost	1,275,000	2,512,500
2) Maintenance Cost	49,588,184	49,588,184
① Building	17,903,846	17,903,846
② Utilities	20,461,538	20,461,538
③ Equipment	8,717,000	8,717,000
④ Pamphlet Printing	405,800	405,800
⑤ Consumables	2,100,000	2,100,000
(2) Salaries for Personnel and Staff	111,150,000	111,150,000
2. Income		
(1) Rental Fees	129,390,000	258,115,000
Total of 1 and 2	-147,638,784	-73,007,684

- The inflation of prices, personnel cost and rental fees is not considered.

Breakdown of Estimation

(1) Running Cost

1) Operating Cost for Building and Equipment

(Exchange rate: 1US$=9,500kip=130J-Yen)

Total in 2005

Electricity Cost *1	237,388	kWh/Y			x	400	kip/kWh					=	94,955,200	kip/Y
Water Supply Cost*2												=	4,406,400	kip/Y
	(28,690	P/Y	+	29	P	x 250	D/Y	x	0.1	m^3/D·Y	x 600	kip/m^3		
												=	2,156,400	kip/Y
Sprinkle Water for Garden	10,000	m^2	x	0.003	m^3/m^2·D	x 250	D/Y	x	0.5		x 600	kip/m^3		
												=	2,250,000	kip/Y
Telephone Cost												=	15,654,000	kip/Y
Basic Charge	5	lines	x	10,900	kip/line	x 12	Mo					=	654,000	kip/Y
Call Charge	5	Mi/T	x	400	kip/Mi	x 30	T/D	x	250	D/Y		=	15,000,000	kip/Y
LPG Gas Charge*3	40	P/T	x	170	T/Y	x 500	K/meal	÷	12,000	K/kg	x 4,500	kip/kg		
												=	1,275,000	kip/Y
Total													116,290,600	kip/Y

*1: referred to the attached Electricity Consumption Calculation

*2: 100 liter per person

*3: for participant to seminar at the Seminar room

P: person, D: day, Y: year, Mo: Month, Mi: minute, T: time, K: kcal

Total in 2009

Electricity Cost *1	365,185	kWh/Y			x		400	kip/kWh						=	146,074,000	kip/Y
Water Supply Cost*2														=	6,144,000	kip/Y
	(57,650	P/Y	+	29	P	x	250	D/Y	x	0.1	m^3/D·Y	x	600	kip/m^3		
														=	3,894,000	kip/Y
Sprinkle Water for Garden	10,000	m^2	x	0.003	m^3/m^2·D	x	250	D/Y	x	0.5		x	600	kip/m^3		
														=	2,250,000	kip/Y
Telephone Cost														=	15,654,000	kip/Y
Basic Charge	5	lines	x	10,900	kip/line	x	12	Mo						=	654,000	kip/Y
Call Charge	5	Mi/T	x	400	kip/Mi	x	30	T/D	x	250	D/Y			=	15,000,000	kip/Y
LPG Gas Charge*3	40	P/T	x	335	T/Y	x	500	K/meal	÷	12,000	K/kg	x	4,500	kip/kg		
														=	2,512,500	kip/Y
Total															170,384,500	kip/Y

*1: referred to the attached Electricity Consumption Calculation

*2: 100 liter per person

*3: for participant to seminar at the Seminar room

P: person, D: day, Y: year, Mo: Month, Mi: minute, T: time, K: kcal

2) Maintenance Cost for Building and Equipment

① Building Maintenance Cost

Even though the building maintenance cost considerably changes with the aging process, the necessity for major repair, etc. does not usually emerge for some 30 years after building completion. Actual examples of the maintenance cost for similar buildings suggest that the average annual repair cost is approximately 0.07% of the direct construction cost.

Direct Construction Cost 350,000,000J-Yen × 0.07% = 245,000J-Yen/year

245,000J-Yen × 73.08kip/J-Yen = 17,903,846kip

② Utilities Maintenance Cost

The amount of this type of maintenance cost will remain small for some five years after completion but will begin to increase thereafter because of the need for the replacement of parts and the replacement of equipment due to aging. The average annual repair cost over a 10 year span is estimated to be approximately 0.2% of the direct cost of utilities work.

140,000,000 J-Yen × 0.2% = 280,000 J-Yen/year

280,000 J-Yen × 73.08 = 20,461,538 kip

③ Equipment Maintenance Cost

The main equipment planned under the Project is Audio-visual and PC equipment, and the equipment maintenance cost and the spare parts cost changes with the length and frequency of use. Actual examples of the maintenance cost for similar equipment suggest that the average annual repair cost over a 10 year span is estimated to be approximately 0.2% of the equipment cost. The maintenance cost for a copy machine is also estimated.

a) Equipment Cost(Audio-visual and PC Equipment)

2,100,000,000 kip	×	0.2% =	4,200,000 kip	

b) Copy Machine Maintenance Cost

1) Annual Maintenance Contract			=	100 US$	=	950,000 Kip
2) Toner Change	650 Baht･T/Mo x	12 Mo	=	7,800 Baht	=	1,719,258 Kip
3) Paper Consumption						
A4	2000 sheet/Mo x	24,000/500 Kip	×	12 Mo	=	1,152,000 Kip
A3	500 sheet/Mo x	58,000/500 Kip	×	12 Mo		696,000 Kip
				Total		4,517,258 Kip

a) + b) Total 8,717,000 Kip

④ Pamphlet Print Cost

Pamphlet Printing Cost

A4 Color	2000 sheet/year			
A4 Master	1 page		=	6,000 Kip
Copy	1999 sheet ×	200 Kip	=	399,800 Kip
		Total		405,800 Kip

⑤ Consumables Cost

Equipment Cost(Audio-visual and PC Equipment)

2,100,000,000 kip	×	0.1% =	2,100,000 kip

(2) Salary for Personnel and Staff

Director	1 person	x	475,000 Kip/Month	=	475,000 Kip/Month
Chief	3 person	x	380,000 Kip/Month	=	1,140,000 Kip/Month
Personnel	11 person	x	332,500 Kip/Month	=	3,657,500 Kip/Month
Staff	14 person	x	285,000 Kip/Month	=	3,990,000 Kip/Month
Total					9,262,500 Kip/Month

9,262,500 Kip/Month	x	12 Month	=	111,150,000 Kip

(3) Incomes: Rental fee

The planned rental fee is as follows.

Room Name	Accomodation (person)	Rental Fee	
		Government Institutions	Others
Multi-Room	500	150US$/day	250US$/day
Multi-Room	200	50US$/day	80US$/day
Seminar Room	60	20US$/day	50US$/day

Incomes in 2005

Government Institutions					
20-60	151 day	x	20 US$/day	=	3,020 US$
61-200	48 day	x	50 US$/day	=	2,400 US$
201-500	38 day	x	150 US$/day	=	5,700 US$
Total	237 day				11,120 US$
Others					
20-60	19 day	x	50 US$/day	=	950 US$
61-200	10 day	x	80 US$/day	=	800 US$
201-500	3 day	x	250 US$/day	=	750 US$
Total	32 day				2,500 US$
(2)Total					13,620 US$
					129,390,000 kip

Incomes in 2009

Government Institutions					
20-60	301 day	x	20 US$/day	=	6,020 US$
61-200	105 day	x	50 US$/day	=	5,250 US$
201-500	74 day	x	150 US$/day	=	11,100 US$
Total	480 day				22,370 US$
Others					
20-60	34 day	x	50 US$/day	=	1,700 US$
61-200	20 day	x	80 US$/day	=	1,600 US$
201-500	6 day	x	250 US$/day	=	1,500 US$
Total	60 day				4,800 US$
(2)Total					27,170 US$
					258,115,000 kip

Estimation of Electricity Cost in 2005

Estimated Load

Lighting 20 VA/㎡

Receptacle 40 VA/㎡

Air-conditioning 80 VA/㎡

(Air-conditioning at Multipurpose Room, Foyer is 160VA/㎡)

Estimated Condition

Open 9:00 - 16:00

Max. of room using is 8 hours per day.

5 days in a week are open and Sataday. Sunday and national holiday are close, 258 day ia a year is open.

ROOM NAME	Floor (㎡)	Lighting (kVA)	Demand	Load (kVA)	Receptacle (kVA)	Demand	Load (kVA)	Air-con (kVA)	Demand	Load (kVA)	Total Load (kVA)	Using hour/day	using day/year	Using hour/year	Total Annual Load (kWh/year)
Multipurpose Room-1	825	16.5	100%	16.5	33	50%	16.5	132	80%	105.6	138.6	8	41	328	45,461
Multipurpose Room-2	402	8.04	100%	8.04	16.08	50%	8.04	32.16	80%	25.728	41.808	8	58	464	19,399
Seminar Room-1	147	2.94	100%	2.94	5.88	50%	2.94	11.76	80%	9.408	15.288	8	85	680	10,396
Seminar Room-2	147	2.94	100%	2.94	5.88	50%	2.94	11.76	80%	9.408	15.288	8	85	680	10,396
Foyer	448	8.96	80%	7.168	17.92	20%	3.584	71.68	80%	57.344	68.096	8	70	560	38,134
Entrance	172	3.44	80%	2.752	6.88	20%	1.376	13.76	80%	11.008	15.136	8	250	2,000	30,272
Lecturer/Preparation Room	18	0.36	100%	0.36	0.72	30%	0.216	1.44	80%	1.152	1.728	1.5	85	128	220
Information Counter	24	0.48	100%	0.48	0.96	30%	0.288				0.768	8	250	2,000	1,536
Administration Office	106	2.12	100%	2.12	4.24	50%	2.12	8.48	80%	6.784	11.024	8	250	2,000	22,048
Director Room	27	0.54	100%	0.54	1.08	30%	0.324	2.16	80%	1.728	2.592	8	250	2,000	5,184
Staff Meeting Room	36	0.72	100%	0.72	1.44	20%	0.288	2.88	80%	2.304	3.312	3	250	750	2,484
Mini Cafeteria	64	1.28	80%	1.024	2.56	20%	0.512	5.12	80%	4.096	5.632	2	85	170	957
Kitchen	43	0.86	100%	0.86	1.72	80%	1.376				2.236	3	85	255	570
Staff Room for Kitchen	14	0.28	100%	0.28	0.56	20%	0.112	1.12	80%	0.896	1.288	1	200	200	258
Storage for Garbage	13	0.26	80%	0.208							0.208	0.25	200	50	10
Staff Room for Cleaner	14	0.28	100%	0.28	0.56	20%	0.112	1.12	80%	0.896	1.288	3	250	750	966
Staff Room for Gardener	13	0.26	100%	0.26	0.52	20%	0.104	1.04	80%	0.832	1.196	3	250	750	897
Staff Room for Guard	28	0.56	100%	0.56	1.12	20%	0.224	2.24	80%	1.792	2.576	3	250	750	1,932
Staff Room for Technical	13	0.26	100%	0.26	0.52	20%	0.104	1.04	80%	0.832	1.196	3	250	750	897
Storage for Tool	14	0.28	100%	0.28	0.56	20%	0.112				0.392	0.5	125	63	25
Storage	65	1.3	80%	1.04	2.6	20%	0.52				1.56	0.25	125	31	49
Corridor	429	8.58	80%	6.864	17.16	20%	3.432				10.296	8	250	2,000	20,592
WC	273	5.46	80%	4.368							4.368	8	250	2,000	8,736
Staircase	50	1	100%	1	2	20%	0.4				1.4	8	250	2,000	2,800
Electrical Room	18	0.36	80%	0.288	0.72	20%	0.144				0.432	0.25	50	13	5
Pump Room	27	0.54	80%	0.432	1.08	20%	0.216				0.648	0.25	50	13	8
Interpreter Rooms	44	0.88	100%	0.88	1.76	80%	1.408	3.52	80%	2.816	5.104	8	150	1,200	6,125
Audio-visual Control Room	22	0.44	100%	0.44	0.88	80%	0.704	1.76	80%	1.408	2.552	8	150	1,200	3,062
(PS/AD, Others)	230														
Total	**3,726**			63.884			48.096			244.032					**233,419**

(1)

Pump

Lift Pump	2.2kw x 2	4.4	0.88kW
Septic Pump	2.2kw x 2	4.4	0.88kW
	Total		1.76kW
	Annual using hour		2,255h/year
(2)	Annual Consumpsion		3,969kWh/year

(1)+(2) Electricity Cost **237,388** kWh/year x **400** kip/kWh

= **94,955,217** kip/year

Estimation of Electricity Cost in 2009

Estimated Load

Lighting 20 VA/m²

Receptacle 40 VA/m²

Air-conditioning 80 VA/m²

(Air-conditioning at Multipurpose Room, Foyer is 160VA/m²)

Estimated Condition

Open 9:00 - 16:00

Max. of room using is 8 hours per day.

5 days in a week are open and Sataday. Sunday and national holiday are close, 258 day ia a year is open.

ROOM NAME	Floor (m²)	Lighting (kVA)	Demand	Load (kVA)	Receptacle (kVA)	Demand	Load (kVA)	Air-con (kVA)	Demand	Load (kVA)	Total Load (kVA)	Using hour/day	using day/year	Using hour/year	Total Annual Load (kWh/year)
Multipurpose Room-1	825	16.5	100%	16.5	33	50%	16.5	132	80%	105.6	138.6	8	80	640	88,704
Multipurpose Room-2	402	8.04	100%	8.04	16.08	50%	8.04	32.16	80%	25.728	41.808	8	125	1,000	41,808
Seminar Room-1	147	2.94	100%	2.94	5.88	50%	2.94	11.76	80%	9.408	15.288	8	170	1,360	20,792
Seminar Room-2	147	2.94	100%	2.94	5.88	50%	2.94	11.76	80%	9.408	15.288	8	165	1,320	20,180
Foyer	448	8.96	80%	7.168	17.92	20%	3.584	71.68	80%	57.344	68.096	8	143	1,144	77,902
Entrance	172	3.44	80%	2.752	6.88	20%	1.376	13.76	80%	11.008	15.136	8	250	2,000	30,272
Lecturer/Preparation Room	18	0.36	100%	0.36	0.72	30%	0.216	1.44	80%	1.152	1.728	1.5	170	255	441
Information Counter	24	0.48	100%	0.48	0.96	30%	0.288				0.768	8	250	2,000	1,536
Administration Office	106	2.12	100%	2.12	4.24	50%	2.12	8.48	80%	6.784	11.024	8	250	2,000	22,048
Director Room	27	0.54	100%	0.54	1.08	30%	0.324	2.16	80%	1.728	2.592	8	250	2,000	5,184
Staff Meeting Room	36	0.72	100%	0.72	1.44	20%	0.288	2.88	80%	2.304	3.312	3	250	750	2,484
Mini Cafeteria	64	1.28	80%	1.024	2.56	20%	0.512	5.12	80%	4.096	5.632	2	170	340	1,915
Kitchen	43	0.86	100%	0.86	1.72	80%	1.376				2.236	3	170	510	1,140
Staff Room for Kitchen	14	0.28	100%	0.28	0.56	20%	0.112	1.12	80%	0.896	1.288	1	200	200	258
Storage for Garbage	13	0.26	80%	0.208							0.208	0.25	200	50	10
Staff Room for Cleaner	14	0.28	100%	0.28	0.56	20%	0.112	1.12	80%	0.896	1.288	3	250	750	966
Staff Room for Gardener	13	0.26	100%	0.26	0.52	20%	0.104	1.04	80%	0.832	1.196	3	250	750	897
Staff Room for Guard	28	0.56	100%	0.56	1.12	20%	0.224	2.24	80%	1.792	2.576	3	250	750	1,932
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Storage for Tool	14	0.28	100%	0.28	0.56	20%	0.112				0.392	0.5	125	63	25
Storage	65	1.3	80%	1.04	2.6	20%	0.52				1.56	0.25	125	31	49
Corridor	429	8.58	80%	6.864	17.16	20%	3.432				10.296	8	250	2,000	20,592
WC	273	5.46	80%	4.368							4.368	8	250	2,000	8,736
Staircase	50	1	100%	1	2	20%	0.4				1.4	8	250	2,000	2,800
Electrical Room	18	0.36	80%	0.288	0.72	20%	0.144				0.432	0.25	50	13	5
Pump Room	27	0.54	80%	0.432	1.08	20%	0.216				0.648	0.25	50	13	8
Interpreter Rooms	44	0.88	100%	0.88	1.76	80%	1.408	3.52	80%	2.816	5.104	8	150	1,200	6,125
Audio-visual Control Room	22	0.44	100%	0.44	0.88	80%	0.704	1.76	80%	1.408	2.552	8	150	1,200	3,062
(PS/AD, Others)	230														
Total	**3,726**			63.884			48.096			244.032					**360,767**

(1)

Pump

Lift Pump	2.2kw x 2	4.4	0.88kW
Septic Pump	2.2kw x 2	4.4	0.88kW
	Total		1.76kW
	Annual using hour		2,510h/year
(2)	Annual Consumpsion		4,418kWh/year

(1)+(2) Electricity Cost **365,185** kWh/year x **400** kip/kWh

= **146,074,198** kip/year

2.4.4 Timing and Cost of Renewal

Building service equipment, paint finish and equipment, etc. can perform their functions for a long period of time if daily maintenance is conducted. However, each equipment has its own life and its function deteriorates once it reaches the end of its expected life, necessitating its renewal.

The renewal timing and cost of the main equipment, etc. planned under the Project are described below. It is necessary for the Lao PDR side to secure the necessary budget to ensure the renewal of equipment, etc. in due course.

Conditions of schedule planning and cost estimation are as follows.

- Renewal is limited to item with a life time lower than 20 years.
- Excluding break under unusual use
- Renewal cost is based on current price without price escalation
- Exchange rate: 1 US$=130 Japanese Yen

Table 2-44 Timing and Cost of renewal

Facilities: Architectural Work

Part	Work Item	Life Time	Renewal Schedule	Unit	Renewal Cost
Exterior		(Year)		(㎡)	(US$)
Roof	Asphalt Waterproofing	20～30	—	—	—
	Cement Roof Tile	20～30	—	—	—
Wall	Spray Paint	15～20	Re-spray within 15 years	5,840	43,500
Exterior	Paint on Steel	3	Re-paint within 3 years	42	90
	Paint on Board	5	Re-paint within 5 years	762	3,270
	Aluminum Window	40	—	—	—
	Steel Door	35	—	—	—
	Stainless Steel Window	40～60	—	—	—
Interior		(Year)			(US$)
Floor	Granite	60	—	—	—
	Ceramic Tile	30	—	—	—
	Carpet Tile	20	—	—	—
	Rubber Tile	30	—	—	—
	PVC Tile	30	—	—	—
Wall	Mortar Trowel＋Paint	5	Re-paint within 5 years	3,596	6,470
	Perforated Plywood + Paint	10	Re-paint within 10 years	2,325	8,000
	Ceramic Tile	30	—	—	—
Ceiling	Gypsum Board + Paint	5	Re-paint within 5 years	3,918	7,000
Others		(Year)			(US$)
	Paint on Wooden Door	5	Re-paint within 5 years	163	560
	Paint on Steel Door	5	Re-paint within 5 years	270	800
	Paint on Steel	5	Re-paint within 5 years	670	1,960
	Wooden Door	30	—	—	—
	Steel Door	40	—	—	—
	Kitchen Sink	20	—	—	—

Facilities: Mechanical and Electrical W (Year) (No.) (US$)

Part	Work Item	Life Time	Renewal Schedule		Renewal Cost
Air-Con.	Package Air-Conditioner(Air Cool)	15	Re-place within 15 years	53	227,975
	Duct for Air Conditioning	30	—	—	—
	Exhaust Fan	20	—	—	—
Plumbing	Lifting Pump	15	Re-place within 15 years	2	1,715
	Fire Hydrant Pump	27	—	—	—
	Elevated Water Tank(FRP)	20	—	—	—
	Fire Hydrant	20	—	—	—
	Vinyl Piping	25～30	—	—	—
	Sanitary Fixture	25～30	—	—	—
	Valve	20	—	—	—
	Gas Range	5～10	Re-place between 5～10 years	2	1,500
Electrical	Panel	30	—	—	—
	Lighting Fixture	30	—	—	—
	Telephone System	15～20	Re-place between 15～20 years	1	850
	Fire Alarm	20	—	—	—
	Switch, Receptacle	20	—	—	—

Equipment Work (Year) (No.) (US$)

Equipment and System Name	Life Time	Renewal Schedule		Renewal Cost
Simultaneous Interpretation System	20	—	—	—
Meeting System	20	—	—	—
LCD Projector	10	Re-place within 10 years	2	19,300
Slide Projector	10	Re-place within 10 years	2	1,600
VTR	10	Re-place within 10 years	2	930
OHP	10	Re-place within 10 years	1	890
Tape Recorder(Cassette Deck)	10	Re-place within 10 years	2	880
Microphone	20	—	—	—
Power Amplifier	25	—	—	—
Speaker	25	—	—	—
Personal Computer	5	Re-place within 5 years	4	8,600
Printer	5	Re-place within 5 years	1	300
Scanner	5	Re-place within 5 years	1	470
Facsimile Machine	5～10	Re-place between 5～10 years	1	410
Copy Machine	5～10	Re-place between 5～10 years	1	3,200

2.5 Other Relevant Issues

2.5.1 Soft Components Plan

(1) Assistance for facility operation and management

Assistance for operation and management of the Center

(2) Background and Necessity

There are no facilities in the Lao PDR which are exclusively designated to the hosting of training and conferences, etc. and, upon its completion, the Center will become the first such facilities in the country. Similar facilities also do not exist except for the banquet rooms of hotels. As the recruitment of a director and personnel with suitable experience for the Center from hotels will be difficult because of the salary level and other aspects, these will be appointed from among existing government officials. Because of this, however, the newly appointed personnel will lack a sufficient knowledge of the operation and management of such facilities as the Center and it will be necessary to provide assistance for their preparation of the operation principles, rules, marketing policies and operation plan, etc. which are appropriate for the local conditions.

(3) Outputs

Assistance will be provided for the following in view of the preparation of appropriate principles, policies and plan, etc. vis-à-vis the local conditions.

① Decisions on Operation Principles
Providing services, etc.

② Rental Fees
The planned rental fees will be compared with the corresponding fees set by competing facilities, including the banquet rooms of hotels, to see whether or not the planned number of training and conferences at the Center is feasible. If necessary, the rental fees will be revised.

③ Rules
Rules for use of facilities: available days (closed on Saturdays, Sundays and national holidays); booking method; commencement date for booking; restrictions on use (restriction on hours for continuous use and others); rental fees; auxiliary service charges (simultaneous interpretation system, lecture preparation room, catering service and light meals, etc.)

④ Marketing Method
PR activities (preparation and distribution of pamphlets or user guidebooks; explanation to potential users and open days, etc.)

⑤ Operation Plan and Method
Allotment of facilities for training and conferences; preparation and clearing methods; equipment and facility operation methods

⑥ Operation and Maintenance Budget Plan
Preparation method for budget plan and budget management techniques (reduction of operating cost and others)

⑦ Maintenance Plan and Method
Maintenance and management of facilities and equipment, storage of equipment

(4) Activities

① Dispatching two management experts

② Procedure and Period
Dispatching procedure are ① fact-finding survey in Vientiane, ② preparation of the draft plan in Japan and ③ assistant for preparation of the final plan in Vientiane, which are appropriate for the local conditions.

a. October, 2003 (two experts; one month each): dispatch to the Lao PDR for a fact-finding survey and consultation/interviews with the local management body
b. November - December, 2003 (two experts: 20 days each): preparatory work in Japan to prepare the draft plan for the operation principles, rules, marketing method and operating plan/method, etc.
c. January – February, 2004 (two experts; two months each): dispatch to the Lao PDR to assist the preparation of the final plan based on the draft plan and to conduct training on the key points of the final plan

③ Conditions for Dispatch of Experts to the Lao PDR

a. The Lao PDR side will prepare a Lao-Japanese interpreter. The rules as an output will be in Lao.
b. The appointment or provisional appointment of the director and personnel will commence in October, 2003 in time for the dispatch of experts described above.

④ Outputs
Operation principles (management policies); rules; marketing method; operation plan and method