

CHAPTER 3. CONTENTS OF THE PROJECT

CHAPTER 3. CONTENTS OF THE PROJECT

3-1. Objectives

The objectives of this proposed project are to establish the Indonesia Export Training Center (IETC) on a site owned by the Ministry of Trade in the City of Jakarta and to have the Center function as the nucleus of human resources development in the fields of international trade, quality control, etc. by offering practitioners of export-related private enterprises and government personnel training in actual trade practices, product inspection and exhibition techniques. The project aims at restructuring the production pattern of Indonesia's export products and improving technology and technical skill in order that it might contribute to accelerating internationalization of local economics and medium and small scale enterprises and promoting exports and imports.

3-2. Review of the Requested Contents

As stated thus far, there is urgent need to promote exports and develop human resources in related fields in Indonesia, and thus, the need to establish said Center under this project is high. The contents of the request for grant aid and technical cooperation outlined in the study report of the Contact Mission dispatched in June 1986 have been partially changed on the basis of the subsequent preliminary survey and the survey made by the long-term experts who have discussed with the Indonesian side mainly with respect to the functions of this project and the contents of technical cooperation and also as a result of further discussions with the Indonesian side during the basic design study with respect to the contents of facilities based on the foregoing. The project contents described below reflect the results of these studies.

3-3. Summary of the Project

3-3-1. Implementation Organization and Operating System

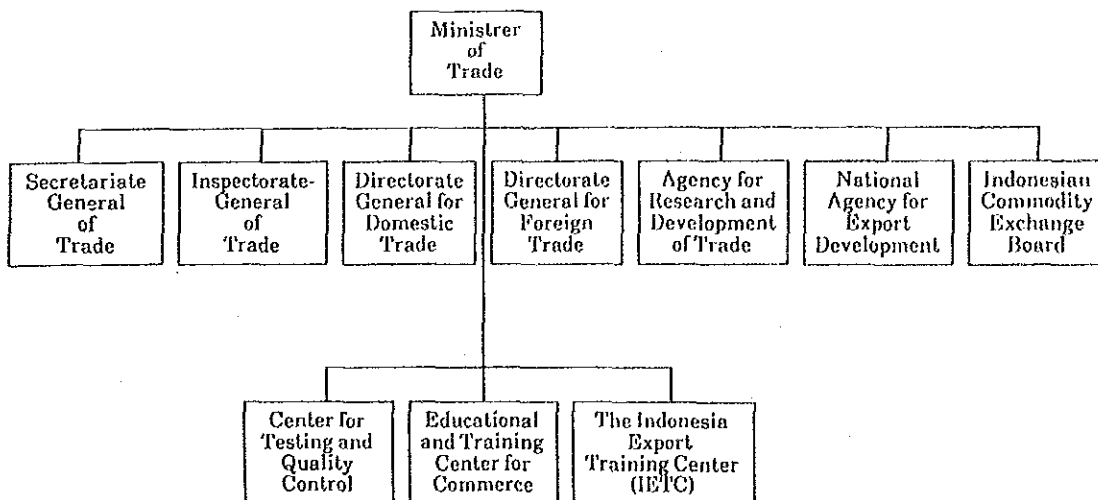
The Indonesian government agency responsible for planning and implementation of the project for construction of this Center and its operation and maintenance will be the Ministry of Trade (MOT), and the Secretary General of MOT will assume overall responsibility for the Project. The Center, upon completion of its facilities, will be positioned as one of the internal organs of MOT, but the training of this Center which aims at promoting export will have a class bearing on other organs within MOT as well, a steering committee will be organized by members appointed from these organs, under the chairmanship of the Secretary General to deliberate on the works necessary to establish the Center and operating policy of the Center. The members of the Steering Committee will be as follows.

- Chairman : Secretary General of the Ministry of Trade
- Secretary : Director of the Center (IETC)
- Members : Director General for Foreign Trade, MOT
: Chairman of the National Agency for Export Development (NAFED)

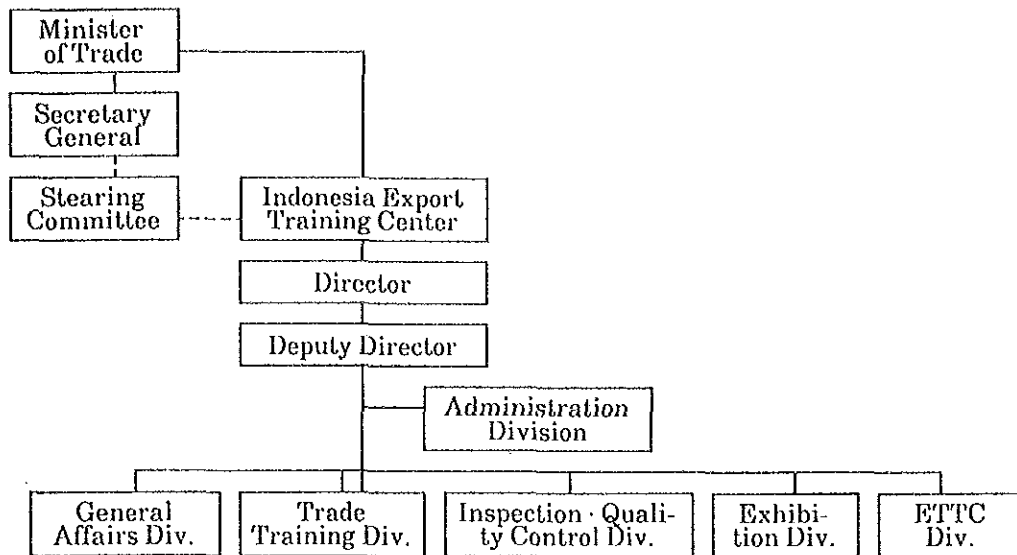
Routine operation and maintenance of the Center will be run by six divisions, namely, Administration Division, General Affairs Division, Trade Training Division, Inspection and Quality Control Division, Exhibition Division and Educational and Training Center for Commerce (ETCC) to be established under the Director and the Assistant Director. (Refer to 3-3-6. Personnel Plan)

1) Organization of the Ministry of Trade

The organizational structure of the Ministry of Trade by each organ and the position of the Indonesia Export Training Center (IETC) are as follows :



2) Organization of the Center



The functional roles of IETC as a government organ concerned with trade promotion will be

1. to formulate training policies,
2. to prepare training plans and programmes,
3. to implement and amplify training activities,
4. to evaluate and publicize training activities, and
5. to operate and maintain the facilities

in the fields of international trade, quality control and exhibition.

Each of these functions will be performed by their respective divisions, each being responsible for the following functions.

Administration Division

- Establishment and coordination of plans and policies for training activities
- Financial control and budgetary measures
- Liaison and coordination with other related organizations
- Evaluation and publicity of training activities
- Library management
- Printing and recording of the results of activities
- Personnel affairs in general

General Affairs Division

- Facilities and equipment management in general

- Repair and maintenance of equipment, mechanical systems and apparatus
- Procurement and amplification of teaching materials and training equipment
- Improvement of facilities
- Coordination and adjustment for the use of facilities
- General affairs

Trade Training Division

- Preparation of training activities programme
- Preparation for execution of training
- Execution and development of training curricula
- Evaluation and report on training curricula
- Related general affairs

Inspection and Quality Control Division

- Preparation of training activities programme
- Preparation for execution of training
- Execution and development of training curricula
- Evaluation and report on training curricula
- Related general affairs

Exhibition Division

- Preparation of training activities programme
- Preparation for execution of training
- Execution and development of training curricula
- Evaluation and report on training curricula
- Related general affairs

ETCC (Educational and Training Center for Commerce) Division

- Management training for MOT staff
- Financial training
- Data analysis training
- Planning and programming training
- Domestic trade training
- Foreign trade training

3) The Joint Committee

To iron out differences of opinions on operation of the Center between the Indonesian side and the Japanese side, a joint committee composed of members from both sides will be established.

Members Composing the Joint Committee will be as follows :

I . Indonesian Side :

- a. Chairman : Secretary General of the Ministry of Trade
- b. Members :
 1. Chairman of NAFED
 2. Head of the Center for Testing and Quality Control
 3. Director of Indonesia Export Training Center
 4. Head of the Educational and Training Center for Commerce
 5. Personnel concerned with the Activities of the Project of Indonesian Side
 - 1). Head, Bureau of Planning
 - 2). Head, Bureau of Public Relations and Foreign Cooperation

II . Japanese Side :

- 1) Team Leader
- 2) Coordinator
- 3) Japanese Experts
- 4) Representatives of JICA Office in Indonesia
- 5) Personnel concerned with the Project to be dispatched by JICA

Note : Officials of the Embassy of Japan may attend the Joint Committee as observers.

3-3-2. Outline of the Training Plan

Outline of Trade training, Export inspection and testing, and Exhibition management are as follows:

(1) Trade Training

The purpose of this course is to give the trainees the basic knowledge necessary for export business, and to train enterprisers from the small/medium scale industries, manager and staff members from the private sector and government officials to become policy maker and enterprisers for trading.

1) Basic Training Course

To give the trainees the basic knowledge necessary for export business and actual flow of every procedures for export business in this course.

2) Advanced Training Course

This course is for the managers and staff members of private sector and also for the Government officials who are in charge of actual dealing in export business procedures. They have to understand the meaning and/or purpose of the every procedures. The trainees will study the practical method in full detail. The course consists of 2 courses. The first course is "Specialized Training Course" and the other "Export of Selected products". The lectures would be given by trainers in reference to the specified products, such as rattan, wooden products, textiles, garments, processed foods, natural rubber, etc.

3) Management Training Course

This course aims to enhance the knowledge and analytical skill of export promotion officials and managers in the field of the trade business and intended for managers of enterprises and also for the Government officials who are in position to have to conduct and decide the export business, and to work out the Government strategy for export policy.

4) Business Japanese Language Training Course

To offer the Indonesian businessmen and the Government officials who wish to make a business negotiation in Japanese and to promote exports to

Japan, and also to enable them to communicate verbally in Japanese, at a level sufficient for their business/or official needs.

The course consist of 3 courses (Basic, Intermediate and Advanced).

(2) Export Inspection and Testing Training

This training course is to give necessary technique to staff of private enterprises and Government officials in testing and quality control of export products to match the international marketing needs.

- 1) Wooden Furniture, Wood Products and Rattan Products Training
 - a. Inspection and Testing of Wooden furniture and Wood Products Course
To obtain persons well versed in testing quality control and inspection for implementation of further training of the kind.
 - b. Inspection and Testing of Rattan Product Course
To obtain persons well versed in testing quality control and inspection for implementation of further training of kind.

- 2) Textile and Garment Training
 - a. Basic Training Course
 - To provide general knowledge of textile manufacturing process, need for textile quality control and control items.
 - To provide basic technique for fabric testing and inspection.
 - b. Advanced Training Course
 - To provide much more testing technique for fabric and also for garment.
 - To provide general knowledge of garment manufacturing process.
 - To provide garment inspection technique.

- 3) Rubber and Rubber Products Training
 - a. Basic Training Course
To give trainees the basic knowledge of quality control for natural rubber industry and to improve their skill level of the specified inspection test.
 - b. Advanced Training Course
To train trainees to have a good knowledge and skills of quality control, and to be able to practice them in their job sites.

- 4) Frozen Food and Canned Food Training ,
 - a. Frozen Food Inspection Training Course
 - To obtain persons well versed in export inspection of frozen food and in manufacturing process.
 - b. Canned Food Inspection Training Course
 - To obtain persons well versed in export inspection of canned food and in manufacturing process.

(3) Exhibition Management Training

1) Basic Training Course

To give the trainees the basic knowledge necessary for their participation in exhibitions and/or trade fairs as a *promotional tool*.

2) Advanced Training Course

To enable the trainees to get more detailed knowledge and technical know-how to utilize trade fairs as effective parts of the export marketing coordinated with other promotional elements. To develop technical skill of trainees in the creative designs and display for exhibitions and trade fairs.

(4) ETCC Training

ETCC facilities are used only for training the staff of the Ministry of Trade in commercial affairs and for offering training courses for commercial attaches who will be dispatched to other countries, and for staff who got the promotion (G1→2. 2→3). It is their duty to have this training course when they got the promotion each time.

The contents of training are managerial course, financial affairs, data analysis, scheme planning, domestic trading and others.

ETCC will continue to offer training courses only for staffs of the Ministry of Trade.

(5) Outline of Training Course of this Center

The total number of training courses and trainees in this Center (IETC) except ETTC in a year are as follows.

- 1) Trade Training
 - 7 courses (including business Japanese language training course)
 - 1,035~1,125 persons
 - 2) Export Inspection and Testing
 - 8 courses
 - 193~322 persons
 - 3) Exhibition Management Training
 - 2 courses
 - 120~160 persons
- Total 17 courses 1,348~1607 persons

(6) Method of Accepting Trainees

This Center (IETC) is planning to have 20~25 percent of trainees from governmental agencies mainly the Ministry of Trade and 75~80 percent from private companies for each training course. The total number of trainees for each training course in a year is 1,348~1,607 persons, and the 1,045~1,246 trainees come from private companies and remain 303~361 trainees from governmental staffs by the trainee constitution ratio. These figures mean NAFED puts a lot of emphasis on small/medium private enterprises training.

Another important objective of the IETC is to train local governmental staff who are dispatched to the local office and giving trade lessons in 27 local offices of Regional Trade Representative and 19 local inspection offices of TQC. The number of these governmental trainees will be increased from 20~25 percent to 30~50 percent when the government organize the training course for these staff.

IETC is planning to advertise for the trainees through public information services to the private companies. IETC will send the training information through the related private industry group, local public body like TQC and NAFED, and publish advertisement in the newspaper and poster. And when IETC accepts applications from governmental staff, IETC is planning to send information through the MOT agencies and related ministries.

(7) Recruitment of Counterpart

The Japanese technical and proposal plan for the staff allocation and qualification of the trainers, to operate each training course was agreed by the Indonesian side. Total number of trainers for 3 training types (Trade Training,

Inspection and Testing Training and Exhibition Management Training) are 30 persons. (See in the Table 3-1)

- Trade Training		11 persons
: Chief (Trade Training and Business Japanese-Language)	.....	1
: Trainers		
Trade Training	.....	7
Business Japanese Language	.....	3
- Export Inspection and Testing Training		14 persons
: Chief	.....	1
: Trainers		
Furniture, Wooden Products and Rattan Product	.....	4
Textile	.....	2
Rubber	.....	3
Frozen Food and Canned Food	.....	4
- Exhibition Management Training		5 persons
: Chief	.....	1
: Trainers	.....	4
Total		30 persons

These trainers will work as counterparts for Japanese specialists dispatched by the Japanese government. Trainers for trade training and exhibition management training will be assigned by NAFED and Bureau of Foreign Trade, and for Inspection and Testing Training by TQC.

- Export Inspection and Testing Training		14 persons
: Chief	.....	1
: Trainers		
Furniture, Wooden Products and Rattan Product	.....	4
Textile	.....	2
Rubber	.....	3
Frozen Food and Canned Food	.....	4
- Exhibition Management Training		5 persons
: Chief	.....	1
: Trainers	.....	4
Total		30 persons

These trainers will work as counterparts for Japanese specialists dispatched by the Japanese government. Trainers for trade training and exhibition management training will be assigned by NAFED and Bureau of Foreign Trade, and for Inspection and Testing Training by TQC.

Table 3-1. Outline of Training Courses

	No. of Trainees	Frequency per Year	Total No. of Trainees per year	Duration per Session	No. of Trainers	Objectives
I. Trade Training (4 courses)						
1. Basic Course	20~25	12	240~300	2W	2	Basic knowledge necessary for export business
2. Advanced Course						
a. Specialized Training	50	6	300	2W	2	Higher level knowledge for specialized subjects.
b. Selected Products	50	6	300	2W	2	Higher level knowledge for selected products.
3. Management Course	10~15	6	60~90	2W	*2 (1 chief)	Knowledge and analytical skill of export promotion managers
4. Business Japanese Language Training Course						
a. Basic Course	20	3	60	3M	1	Basic conversational Japanese
b. International Course	15	3	45	3M	1	Business terms, Japanese economy and business environment
c. Advanced Course	10	3	30	3M	*1	Promotion of knowledge and specialized terms.
II. Inspection & Testing Training (8 courses)						
1. Wooden Furniture & Wood Products, Rattan Product Goods Training						
a. Wooden Furniture & Wood Products Course	8~12	4	32~48	1M	2	Wooden furniture and wood products
a. Rattan Product Goods Course	8~12	4	32~48	1M	2	Rattan products good
2. Textile & Garment-Training						
a. Basic Course	5~10	3	15~30	5W	2	Textile
b. Advanced Course	5~10	3	15~30	3W		Garment
3. Rubber & Rubber Products Training						
a. Basic Course	8~12	4	32~48	4W	3	Natural rubber
b. Advanced Course	8~12	4	32~48	4W		Rubber products
4. Frozen & Canned Food Training						
a. Frozen Food Course	5~10	4	20~40	6W	2	Frozen Food
b. Canned Food Course	5~10	3	15~30	3W	2	Canned Food
III. Exhibition Management Training (2 Courses)						
1. Basic Course	20~25	4	80~100	2W	2	Basic knowledge necessary for exhibition or trade fairs.
2. Advanced Course	10~15	4	40~60	2W	*3 (1 chief)	Develop of technical skill of trade fair for export marketing
IV. ETCC Training						
	30	12	360	8~12 W	Full-time 10	Managerial course, financial affairs, data analysis, scheme planning, domestic trading, etc. for staff and attaches of commercial affairs

Table 3-2. Number of Trainees

Course	Month	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Frequency (Times per Year)	Total No. of Trainees
Trade Training															
Basic Course		25	25	25	25	25	25	25	25	25	25	25	25	12	300
Advanced Course															
Specialized Training		50		50		50		50		50		50		6	300
Selected Products			50		50		50		50		50		50	6	300
Management Course		15		15		15		15		15		15		6	90
Business Japanese Language															
Basic Course		20	(20)	(20)		20	(20)	(20)		20	(20)	(20)		3	60 (120)
Intermediate Course		15	(15)	(15)		15	(15)	(15)		15	(15)	(15)		3	45 (90)
Advanced Course			10	(10)	(10)		10	(10)	(10)		10	(10)	(10)	3	30 (60)
Exhibition Training															
Basic Course			25	25	25	25								4	100
Advanced Course			15	15	15	15								4	60
Wood & Rattan Products Training															
Wooden Furniture & Wood Products Course		12			12			12			12			4	48
Rattan Products Course			12			12			12			12		4	48
Textile & Garment Training															
Basic Course			10	(10)			10	(10)			10	(10)		3	30 (30)
Advanced Course					10				10				10	3	30
Rubber & Rubber Products Training															
Basic Course			10			10			10			10		4	40
Advanced Course				10			10			10			10	4	40
Frozen & Canned Food Training															
Frozen Food Course		10	(10)		10	(10)		10	(10)		10	(10)		4	40 (40)
Canned Food Course				10			10			10				3	30
Actual Number		147	157	150	147	187	115	112	107	145	117	112	95		1,591
Overlapped Number		(0)	(45)	(55)	(10)	(10)	(35)	(55)	(20)	(0)	(35)	(65)	(10)		(340)
Total Number		147	202	205	157	197	150	167	127	145	152	177	105		1,851 Ave.154/ month)

3-3-3. Contents of Each Training Program

The objectives, training contents and outline of courses of each training programme are described below.

(1) Trade Training Program

1) Basic course

Since external trade is entirely different in nature from domestic business, trainees must first of all be given basic knowledge of business involved in external trade. The target trainees of this course are the operators of medium and small scale enterprises, managers of private companies and staff, and government officials. Trainees will receive training in general foreign trade practices and learn about the linkage among them.

The contents of training will mainly concern basic matters involved in external trade practices. Training will be offered in the form of lectures in training rooms, sometimes with the use of audio-visual equipment, practical exercise through case studies, etc., for which textbooks, charts and figures, audio-visual aids produced at this Center will be used.

2) Advanced Course

The target participants of this course are the managers of medium and small scale enterprises who are engaged in export business and have the decision making authority as well as government officials. Trainees must be trained to understand the significance and purpose of every work involved in external trade in order to master external trade practices as much in detail as possible.

This course will consist of two courses, one of which is "Specialized training" and the other "Selected products". Training will be given mainly on rattan products, wood products and furniture, textile products, processed food, natural rubber and other selected priority products for export.

- 1. Specialized training

Training will be given mainly on subjects necessary to enhance planning ability for exporting products of each enterprise. Training will be conducted mainly through lectures and discussions in training room, case studies, and visits to business firms.

- 2. Selected products

The target trainees are those who are interested in exporting specific products to overseas markets or those who have problems in exporting. Contents of training will be concentrated on some selected priority products for example rattan products, furniture and wood products, textile goods, processed food and natural rubber and others.

To help promote exports of those selected products, instructors will pick up the trainees' problems as topics of free discussion in order that one might learn from the other. Training will be mainly conducted through project works, case studies and discussions and visits to business firms.

The selected products training is as the compromise programme of the proposed adaptation activities.

Table 3-3. Outline of Trade Training (No. 1)

	A. Basic Course	B. Advanced Course	
		Specialized Training	Selected Products
1. Contents	<p>General Information</p> <p>(1) World trade situation</p> <p>(2) International trade of Indonesia</p> <p>(3) Necessity of export promotion of Indonesian commodities except oil, oil-products and natural gas</p> <p>Trade Information</p> <p>(1) Related laws and regulations</p> <p>(2) Government policy for trade</p> <p>(3) Development of exportable products</p> <p>(4) Collection of trade information for targeted markets</p> <p>(5) Export marketing</p> <p>Business Communication</p> <p>(1) Finding customers/clients</p> <p>(2) Letter of proposing business</p> <p>(3) Inquiries with samples</p> <p>(4) Business negotiation</p> <p>(5) Company investigation</p> <p>Export Procedures</p> <p>(1) Contract agreement and contract sheet</p> <p>(2) Finance and foreign exchange</p> <p>(3) Preparation of goods</p> <p>(4) Shipping document</p> <p>(5) Settlement of payment</p> <p>Transporting and shipping</p> <p>(1) Transportation</p> <p>(2) Inspection</p> <p>(3) Insurance</p> <p>(4) Customs clearance</p> <p>(5) Shipping and Bill of Lading (3/L)</p>	<p>(1) Export marketing techniques</p> <p>(2) Business negotiation techniques</p> <p>(3) Contents of export contract</p> <p>(4) Costing and pricing</p> <p>(5) Terms and conditions</p> <p>(6) Inspection and quality control</p> <p>(7) Special packaging problems</p> <p>(8) Transportation and shipping</p> <p>(9) Marine insurance</p> <p>(10) Export claim</p> <p>(11) Others</p>	<p>(1) Export marketing planning</p> <p>(2) Sources of market information</p> <p>(3) Distribution channels</p> <p>(4) Product adaptation requirements</p> <p>(5) Shipping facilities</p> <p>(6) Payment terms</p> <p>(7) Others</p>
2. Qualification of Trainee	<p>(1) Enterprisers from the small/medium scale industries without and with some export experience</p> <p>(2) Managers and staff members from the private sector</p> <p>(3) Government officials</p>	<p>(1) Managers and staff members from small and medium scale industries</p> <p>(2) Government officials</p> <p>(3) Those who completed "Basic Course"</p>	<p>(1) Managers and staff members from the small and medium scale industries, with export experiences</p> <p>(2) Government officials</p> <p>(3) Those who completed "Basic Course"</p>
3. Number of Trainees	20~25 persons	50 persons	50 persons
4. Duration	2 weeks (10 days) per session	2 weeks (10 days) per session	2 weeks (10 days) per session
5. Training Hours	3.5 hours per day 08:30~10:00, 10:30~12:00 or 14:00~15:30, 16:00~17:30	3.5 hours per day 08:30~10:00, 10:30~12:00 or 14:00~15:30, 16:00~17:30	3.5 hours per day 08:30~10:00, 10:30~12:00 or 14:00~15:30, 16:00~17:30
6. Frequency	12 sessions per year	6 sessions per year	6 session
7. Annual Enrollment	240~300 persons	300 persons	300 persons
8. Training Method	<p>(1) Lecture in classroom</p> <p>(2) Lecture in audio/visual room</p> <p>(3) Case study</p>	<p>(1) Lecture and discussion in classroom</p> <p>(2) Case study</p> <p>(3) Field visit</p>	<p>(1) Project works</p> <p>(2) Case study and discussion</p> <p>(3) Field visit</p>
9. Training Materials	<p>(1) Textbook</p> <p>(2) Charts and diagrams</p> <p>(3) Audio/visual materials</p>	<p>(1) Textbook</p> <p>(2) Audio/visual materials</p> <p>(3) Other materials, if any</p>	<p>(1) Textbook</p> <p>(2) Audio/visual materials</p> <p>(3) Other materials developed by trainers</p>
10. Instructors	<p>(1) Qualification : Experts who have 3~5 year experiences in international export marketing Senior officials of the government (Ministry of Trade, NAFED, etc.)</p> <p>(2) Number : 2 persons (full time) plus some guest trainers</p>	<p>(1) Qualification : Experts who have 3~5 year experiences in international export marketing Senior officials of the government (Ministry of Trade, NAFED, etc.)</p> <p>(2) Number : 2 persons (full time) plus some guest trainers</p>	<p>(1) Qualification : Experts who have 3~5 year experiences in international export marketing Senior officials of the government (Ministry of Trade, NAFED, etc.)</p> <p>(2) Number : 2 persons (full time) plus some guest trainers</p>

3) Management Course

This course will be offered to managers in the foreign trade community and government officials in order to enhance their analytical skill in exporting and knowledge of export.

The target participants of this course are government officials and managers of enterprises who are in a position to render various decisions in export business, assume leadership and put the export policy of the government into practice. Accordingly, trainees must have all-round knowledge of export business in general and must be representatives of their respective enterprise or policy makers. For this reason, many case studies relevant to the trainees will be prepared by the Indonesian counterpart personnel with the cooperation of Japanese exports. Training will be given in the form of lectures in seminar rooms, discussions on practical matters, and trips to business firms.

4) Japanese Business Language Course

The course is for the benefit of government officials and businessmen who wish to negotiate export business with Japan in Japanese. It will aim to improve their conversational proficiency in Japanese to a level that will enable them to communicate their business needs in Japanese without any difficulty.

- 1. Basic course

The purpose of this course is to enable the trainees to carry out basic conversation in Japanese. By the time of completing this course, trainees should be able to carry out daily conversation in Japanese.

- 2. Intermediate course

Trainees will be adequately trained in the Japanese language, and in commercial terminologies. They will also study about economic and foreign trade conditions in Japan.

- 3. Advanced course

The NIHON KEIZAI SHINBUN, one of the leading economic daily newspapers in Japan will be used as a text to enlarge trainees' knowledge, vocabulary and special terminology and improve their reading comprehension.

Training will be offered through lectures using textbooks in training rooms and the use of the language laboratory system.

Table 3-4. Outline of Trade Training (No. 2)

	C. Management Course	D. Business Japanese Language Training Course
1. Contents	(1) Trade information (2) Finance (3) Export market research (4) Export products (5) Export price (6) Customs/clients (7) Exhibition/trade fairs (8) Managing employees (9) Others	(1) Basic Course Basic conversational Japanese (2) Intermediate Course Business terms, Japanese economy and business environment (3) Advanced Course Increase of knowledge, specialized terms, understanding through Japanese economic newspaper
2. Qualification of Trainee	(1) Owners of exporting companies/manufacturers (2) Managers of private sector who are engaged in export business. (3) Middle/high class Government officials	(1) Manager and staff members of private sector (2) Government officials (3) Language teachers
3. Number of Trainees	10~15 persons	(1) Basic Course 20 persons (2) Intermediate Course ... 15 persons (3) Advanced Course 10 persons
4. Duration	2 weeks per session	3 month each
5. Training Hours	3.5 hours per day 08:30~10:00, 10:30~12:00 or 14:00~15:30, 16:00~17:30	3.5 hours per day 08:30~10:00, 10:30~12:00 or 14:00~15:30, 16:00~17:30
6. Frequency	6 sessions per year	3 sessions per year
7. Annual Enrollment	60~90 persons	135 persons
8. Training Method	(1) Lecture in classroom (2) Practical discussion (3) Field visit	(1) Textbook (2) Complete set of L.L. equipment (3) A/V materials, if any
9. Training Materials	(1) Textbook (2) Audio/visual materials	(1) Lecture by textbook (2) Language laboratory system
10. Instructors	(1) Qualification : Exports management experts who have experienced for more than 5 years in international export marketing Senior officials of the Government (2) Number : 2 persons (full time) plus some guest trainers	(1) Qualification : The government officials (Ministry of Trade and/or NAFED) Those who graduated from university, academy and/or language school (Japanese course) (2) Number : 3 persons (full time) Some guest trainers, native speakers.

(2) Export Inspection and Testing Training Program

The purpose of training is to develop human resources well versed in product inspection, testing and quality control of products to assume leading roles in the future.

1) Furniture, Wood Products and Rattan Products Training Courses

- 1. Furniture and wood products course

The training aims to increase export quantities of furniture and wood products. Target participants are senior or intermediate class government officials and technical staff of private enterprises who have had experiences in fabricating these products or who have had experiences in similar fields and have the vocational aptitude for the quality control and inspection job.

Training will be effected through lectures and case studies in lecture rooms and through practical exercise in product inspection and testing in workshop.

- 2. Rattan products training course

The training aims to improve production of rattan products for export. Target participants are senior or intermediate class government officials and technical staff of private enterprises who have had experiences in fabricating these products or who have had experiences in similar fields and have the vocational aptitude for the quality control and inspection job.

Training will be effected through lectures and case studies in training rooms and through practical exercise in product inspection and testing in inspection training rooms.

Table 3-5. Outline of Furniture, Wood and Rattan Product Training

	A. Furniture, Wood Products	B. Rattan Product Goods																																																																																
1. Contents	<table border="0"> <tr> <td>(1) Lecture</td> <td>Hrs.</td> </tr> <tr> <td>1. General review of wooden furniture and wood products</td> <td>9</td> </tr> <tr> <td>a. Quality as required by consumers</td> <td>(3)</td> </tr> <tr> <td>b. Quality control in various countries</td> <td>(6)</td> </tr> <tr> <td>2. Standard of wooden furniture and wood product</td> <td>6</td> </tr> <tr> <td>3. Raw Materials</td> <td>12</td> </tr> <tr> <td>4. Processing and packaging</td> <td>12</td> </tr> <tr> <td>5. Sampling method</td> <td>6</td> </tr> <tr> <td>6. Others</td> <td>9</td> </tr> <tr> <td>(2) Practice</td> <td></td> </tr> <tr> <td>1. Testing and quality control</td> <td>30</td> </tr> <tr> <td>a. Density</td> <td>(12)</td> </tr> <tr> <td>b. Flexion</td> <td>(12)</td> </tr> <tr> <td>c. Visual assessment</td> <td>(6)</td> </tr> <tr> <td>2. Inspection</td> <td>42</td> </tr> <tr> <td>a. Method and technique for inspection</td> <td>(12)</td> </tr> <tr> <td>b. Operation of inspection machine</td> <td>(12)</td> </tr> <tr> <td>c. Quality assessment</td> <td>(6)</td> </tr> <tr> <td>d. Evaluation method</td> <td>(6)</td> </tr> <tr> <td>e. Others</td> <td>(6)</td> </tr> <tr> <td>3. Other requirements adjusted to the consumers' needs</td> <td>12</td> </tr> <tr> <td>Total</td> <td>138</td> </tr> </table>	(1) Lecture	Hrs.	1. General review of wooden furniture and wood products	9	a. Quality as required by consumers	(3)	b. Quality control in various countries	(6)	2. Standard of wooden furniture and wood product	6	3. Raw Materials	12	4. Processing and packaging	12	5. Sampling method	6	6. Others	9	(2) Practice		1. Testing and quality control	30	a. Density	(12)	b. Flexion	(12)	c. Visual assessment	(6)	2. Inspection	42	a. Method and technique for inspection	(12)	b. Operation of inspection machine	(12)	c. Quality assessment	(6)	d. Evaluation method	(6)	e. Others	(6)	3. Other requirements adjusted to the consumers' needs	12	Total	138	<table border="0"> <tr> <td>(1) Lecture</td> <td>Hrs.</td> </tr> <tr> <td>1. Classification of raw materials</td> <td>18</td> </tr> <tr> <td>2. Processing and packaging</td> <td>21</td> </tr> <tr> <td>3. Sampling</td> <td>6</td> </tr> <tr> <td>4. Others</td> <td>9</td> </tr> <tr> <td>(2) Practice</td> <td></td> </tr> <tr> <td>1. Testing and quality control</td> <td>30</td> </tr> <tr> <td>a. Humidity</td> <td>(12)</td> </tr> <tr> <td>b. Flexion</td> <td>(12)</td> </tr> <tr> <td>c. Visual assessment</td> <td>(6)</td> </tr> <tr> <td>2. Inspection</td> <td>42</td> </tr> <tr> <td>a. Method and technique for inspection</td> <td>(12)</td> </tr> <tr> <td>b. Operation of inspection machine</td> <td>(12)</td> </tr> <tr> <td>c. Quality assessment</td> <td>(6)</td> </tr> <tr> <td>d. Evaluation method</td> <td>(6)</td> </tr> <tr> <td>e. Others</td> <td>(6)</td> </tr> <tr> <td>3. Other requirements adjusted to the consumers' needs</td> <td>12</td> </tr> <tr> <td>Total</td> <td>138</td> </tr> </table>	(1) Lecture	Hrs.	1. Classification of raw materials	18	2. Processing and packaging	21	3. Sampling	6	4. Others	9	(2) Practice		1. Testing and quality control	30	a. Humidity	(12)	b. Flexion	(12)	c. Visual assessment	(6)	2. Inspection	42	a. Method and technique for inspection	(12)	b. Operation of inspection machine	(12)	c. Quality assessment	(6)	d. Evaluation method	(6)	e. Others	(6)	3. Other requirements adjusted to the consumers' needs	12	Total	138
(1) Lecture	Hrs.																																																																																	
1. General review of wooden furniture and wood products	9																																																																																	
a. Quality as required by consumers	(3)																																																																																	
b. Quality control in various countries	(6)																																																																																	
2. Standard of wooden furniture and wood product	6																																																																																	
3. Raw Materials	12																																																																																	
4. Processing and packaging	12																																																																																	
5. Sampling method	6																																																																																	
6. Others	9																																																																																	
(2) Practice																																																																																		
1. Testing and quality control	30																																																																																	
a. Density	(12)																																																																																	
b. Flexion	(12)																																																																																	
c. Visual assessment	(6)																																																																																	
2. Inspection	42																																																																																	
a. Method and technique for inspection	(12)																																																																																	
b. Operation of inspection machine	(12)																																																																																	
c. Quality assessment	(6)																																																																																	
d. Evaluation method	(6)																																																																																	
e. Others	(6)																																																																																	
3. Other requirements adjusted to the consumers' needs	12																																																																																	
Total	138																																																																																	
(1) Lecture	Hrs.																																																																																	
1. Classification of raw materials	18																																																																																	
2. Processing and packaging	21																																																																																	
3. Sampling	6																																																																																	
4. Others	9																																																																																	
(2) Practice																																																																																		
1. Testing and quality control	30																																																																																	
a. Humidity	(12)																																																																																	
b. Flexion	(12)																																																																																	
c. Visual assessment	(6)																																																																																	
2. Inspection	42																																																																																	
a. Method and technique for inspection	(12)																																																																																	
b. Operation of inspection machine	(12)																																																																																	
c. Quality assessment	(6)																																																																																	
d. Evaluation method	(6)																																																																																	
e. Others	(6)																																																																																	
3. Other requirements adjusted to the consumers' needs	12																																																																																	
Total	138																																																																																	
2. Qualification of Trainee	Academy graduates or above as a rule	Same as left																																																																																
3. Number of Trainees	8~12 persons	Same as left																																																																																
4. Duration	1 month (23 days, 138 hrs.)	Same as left																																																																																
5. Training Hours	Mon.~Thurs. 8:00~15:00 Fri. 8:00~11:30 Sat. 8:00~14:00	Same as left																																																																																
6. Frequency	4 times a year	Same as left																																																																																
7. Annual Enrollment	32~48 persons	Same as left																																																																																
8. Training Method	Lectures, Practice	Same as left																																																																																
9. Trainers	(1) Qualification: Academy graduate or above engineering major. A few years of actual experience after graduation. (2) Required Number: 2 persons	Same as left																																																																																

2) Textile & Garment Training Course

-1. Basic Course

Training in basic knowledge of textile manufacturing processes and in basic techniques for inspection of textiles necessary for their quality control will be given to government employees and talented staff of private enterprises.

-2. Advance Course

Training in more advanced testing techniques of textiles and garments, general knowledge of garment manufacturing processes and garment inspection techniques will be given to government employees and talented staff of private enterprises.

Table 3-6. Outline of Textile Garment Training

	A. Basic Course	B. Advanced Course
1. Contents	<p style="text-align: right;">Required days</p> 1. Fundamental knowledge of textile fiber 3 2. Textile product manufacturing process 5 (1) Yarn (2) Fabric (3) Fabric dyeing printing and finishing, etc. (4) Fabric defects 3. Basic technique for fabric testing 14 (1) Testing methods for fiber identification and quantitative analysis of fiber mixtures (2) Testing methods for fabric constructions (3) Testing method for fabric physical properties - tensile strength - tearing strength - shrinkage percentage (4) Testing methods for color fastness to : - light - washing - perspiration - rubbing - dry cleaning etc. 4. Inspection methods for fabric appearance 3 <p style="text-align: right;">Total 25</p>	<p style="text-align: right;">Required days</p> 1. General knowledge of garment manufacturing process 6 2. Testing methods for fabric and garment properties 2 - pilling - bursting strength - slippage resistance - seam strength - seam puckering due to washing - wash & wear - water permeability 3. Visual inspection methods for garment 3 4. Inspection methods for fabric and garment packing conditions 2 5. Information on textile quality control 2 <p style="text-align: right;">Total 15 (3 weeks on a 5 days/week)</p>
2. Qualification of Trainee	(1) Government employees (2) Private enterprise employees	Same as left
3. Number of Trainees	5~10 persons	Same as left
4. Duration	5 weeks	3 weeks
5. Training Hours	In accordance with office hours of Indonesian government agencies Mon.~Thurs. 8:00~15:00 Fri. 8:00~11:30 Sat. 8:00~14:00 37.5 hrs./week	Same as left
6. Frequency	3 times a year	Same as left
7. Annual Enrollment	15~30 persons	Same as left
8. Training Method	Lectures, Practice, visit to factories	Same as left
9. Trainers	(1) Qualification : Those who majored in textile, chemistry and other related field at university or academy and received specified technical guidance from Japanese experts during the technical cooperation period. (2) Required Number : 2 persons	Same as left

3) Rubber & Rubber Products Training Course

-1. Basic Course

This course aims to let trainees acquire basic knowledge of quality control in order to help develop the natural rubber industry and also to improve their technical level for specified inspection and testing. Contents of training include basic knowledge of physical and chemical properties of natural rubber, basic knowledge of quality control and quality inspection, and training to improve technical skill for specified inspection and test items.

-2. Advanced Course

Trainees will acquire technical skill for quality control and more advanced basic knowledge that they will be able to propagate these techniques after returning to this respective job site. Contents of training will include basic knowledge of rubber technology, methods for propagating quality control and quality assurance, and practice in inspection.

Table 3-7. Outline of Rubber and Rubber Products Training

	A. Basic Course	B. Advanced Course
1. Contents	(1) Basic knowledge of physical and chemical properties of natural rubber - Classification and processing - Physical and chemical properties - Compounding, processing and vulcanization (2) Basic knowledge of quality control and inspection - Concept of quality control - Inspection in quality control - Quality assurance (3) Level-up training for the specified inspection and test - Natural rubber standards in various countries - Sampling methods - Testing and inspection - Visit to factories	(1) Basic knowledge of rubber technology - Fundamental knowledge of rubber products - Experience in typical process of vulcanization (2) Method for promoting quality control and quality assurance. Rubber products standards in various countries - Philosophy of Q/C and Q/A - Method for promoting Q/C - Method for promoting Q/A (3) Field training - Verification of inspection process in the industry - Survey of process control in the industry - Training in advisory service
2. Qualification of Trainee	Government and Private enterprise employees	Same as left
3. Number of Trainees	8~12 persons	Same as left
4. Duration	4 weeks	Same as left
5. Training Hours	5 days a week 8 hours a day	Same as left
6. Frequency	4 times a year	Same as left
7. Annual Enrollment	32~48 persons	Same as left
8. Training Method	Lectures, Practice	Same as left
9. Trainers	(1) Qualification: University or academy graduate (majored in physics, chemistry or related field) who have three or more years' working experience (2) Required Number: 3 persons	Same as left

4) Frozen Food and Canned Food Training Course

-1. Frozen Food Course

The training course aims to develop government employees and technical staff of private enterprises into specialists well versed in inspection of frozen foods for export and quality inspection during their manufacturing processes.

Contents of training which will be offered through lectures will be tailored to specialists of quality control and inspection of frozen foods to let them acquire general knowledge of frozen food, applicable standards, basics and application of quality control, labeling and marking to indicate quality, and measuring methods.

Trainees will also practice sensory tests, physical tests, chemical analyses and microbiological tests.

-2. Canned Food Course

The training course aims to develop government employees and technical staff of private enterprises into specialists well versed in inspection of canned foods for export and quality inspection during their manufacturing processes.

Contents of training which will be offered through lectures will be tailored to specialists of quality control and inspection of canned foods to let them acquire general knowledge of canned food, applicable standards, basics and application of quality control, labeling and marking to indicate quality and measuring methods.

Trainees will also practice sensory tests, physical tests, chemical analyses and microbiological tests.

Table 3-8. Outline of Frozen food & Canned Food Training

	A. Frozen Food Inspection Training Course	B. Canned Food Inspection Training Course
1. Contents	Lecture (1) General knowledge on frozen food (2) Standards for frozen food (3) Basis and application of quality control (4) Quality indices and their methods of measurement Practice (5) Testing a. Sensory testing b. Physical testing c. Chemical testing d. Microbiological testing	Lecture (1) General knowledge on canned food (2) Standards for canned food (3) Basis and application of quality control (4) Quality indices and their methods of measurement Practice (5) Testing a. Sensory testing b. Physical testing c. Chemical testing d. Microbiological testing
2. Qualification of Trainee	Personnel of government and private sector	Same as left
3. Number of Trainees	5~10 persons	Same as left
4. Duration	6 weeks	Same as left
5. Training Hours	8 hours a day	Same as left
6. Frequency	4 times a year	3 times a year
7. Annual Enrollment	20~40 persons	15~30 persons
8. Training Method	Lectures, Practice	Same as left
9. Trainers	(1) Qualification : University or Academy graduate (2) Required Number : 2 persons	Same as left

(3) Exhibition Management Training Program

1) Basic Course

Basic knowledge necessary to participants in or sponsor exhibition and trade fairs will be taught to the staff of medium and small scale enterprises, managers and staff of commercial and industrial companies and government employees.

Contents of training will be mainly concerned with the methods for participating in or sponsoring exhibitions and international trade fairs.

2) Advanced Course

In order to effectively utilize trade fairs, those who completed the basic course will be trained in more detailed knowledge and technical know-how at the same time, in display methods of exhibitions and trade fairs so as to develop their technical skill for creative design.

Contents of training mainly consist of technical guidance for the administration and management of trade fairs.

Table 3-9. Outline of Exhibition Management Training (No. 1)

	A. Basic Course	B. Advanced Course
1. Contents	(1) Collection of list of overseas trade fairs (2) Collection of information domestic industries (3) Selection of domestic products categories suitable for export (4) Collection of rules and regulations made by the overseas fair organizers (5) Collection of overseas market data of a specified products (6) Establishing objectives for exhibiting (7) Budget planning (8) Analysis of rules and regulations of a trade fair to participate in (9) Preparation for a fair (10) Publicity and promotional strategy of a trade fair	(1) Application and contract with an organizer (2) General information on display materials (3) Study of display design (4) Cost estimate of display works (5) Contract with display workers (6) Orientation for exhibitors (7) Transport, forwarding, custom procedures (8) Construction of booths (9) Guidance for attendants and exhibitors (10) Promotional activities (11) Evaluation of participation (12) Processing of inquires
2. Qualification of Trainee	(1) Staff members from the small and medium scale industries without and with experience. (2) Managers and staff members of the industrial associations and chamber of commerce. (3) government officials	Those who completed "Basic Course".
3. Number of Trainees	20~25 persons	10~15 persons
4. Duration	2 weeks (10 days) per sessions	Same as left
5. Training Hours	3.5 hours per day (3 hours net) 8:30~10:00, 10:30~12:00 or 14:00~15:30, 16:00~17:30	Same as left
6. Frequency	4 sessions per year	Same as left
7. Annual Enrollment	80~100 persons per year	40~60 persons per year
8. Training Method	Lecture in classroom Audio/visual system (slide/video films, etc.) Case study	Lecture in classroom Practices of display works Field visit
9. Trainers	(1) Qualification : Experts graduated from university or academy (Architecture and/or any other related technical field) Experience in exhibition for some years. (2) Required Number : 2 persons (full time) plus some guest trainers	(1) Qualification : Same as left (2) Required Number : 3 persons (full time) plus some guest trainers

3-3-4. Proposed Construction Site

1) Project Site Location

The site proposed for construction of the Center is located at Grogol, slightly west of Jakarta, the capital of the Republic of Indonesia which has a population of over 7 million. JL Let. Jend.S. Parman which runs through the site in the north-south direction is one of the arterial streets of Jakarta designated also as Jl. Protokol by the City, having eight lanes in all on both sides of a planted median strip and going in both directions. The site is located on the east side of this street, about 3 km from the ramp of the speedway that leads to Soekarno Hatta International Airport and about 4 km from the center of the City where the headquarters of the Ministry of Trade and many other government offices are concentrated. A university campus, public corporation buildings, hotels and many other buildings line the neighboring streets, but on the whole, there is still plenty of open space and an abundance of greenery. Buildings of low and medium height are spotted among a proliferation of trees near the site. The site therefore may be said to be quite favorably located in terms of environment and ease of access and should appeal to those inside and outside of the Center.

2) Condition of the Site and its Surroundings

The site is an irregular block of land surrounded by streets on all four sides. The block covers an area of about 18,000m², but the front half and the north side are occupied by the staff houses of the Ministry of Mining, and a part of the site at the southern end is the block for residence of official of the Ministry of Trade, so that the area for construction of the Center owned by the Ministry of Trade is about 9,000 m². Behind the site are residences, and at the front on the south side is a bank's staff-residence. The site is generally flat, on which stand a two-story RC building of the Educational and Training Center for Commerce (ETCC) of the Ministry of Trade, its two dormitory buildings and a tennis court, all of which are scheduled to be dismantled to make way for the new Center (ETCC will be merged into this Center). The main gate faces the south now, but the site is accessible from three sides except from the street on the north side. The surrounding streets tend to become submerged during rainfall, but as the site is about 1.5m higher than the front street and about 1m higher than the one on the east side, there is no danger of the site becoming flood. The City of Jakarta regulates the building wall line by area, and in the case of this site, the building wall line must be pushed back to a distance of 15m from the frontal boundary line of the site (Refer to Fig. 4-1 for existing condition of site).

3) Ground Condition Around the Site

The ground in the northern part of the City of Jakarta is covered by soft and weak silt layer, and the ground bearing capacity of the surface soil is said to be below 5.0 t/m². The ground condition of the site of the boring test results conducted on this site, soft and weak silt layer mixed with sand of 0~2 in N value according to the standard penetration test is deposited down to nearly GL-16m to -36m, beneath (-38m or more) which occurs fine sand layer or silt layer mixed with sand of 30 to 50 in N value.

The form of foundation for each building under this Project is from the fact that the existing two-story RC building of ETCC was designed with spread footing, spread footing may be adopted for minor buildings of about two stories high and pile-footing for this Center building.

4) Condition of Infrastructure Facilities

Electricity

There is no problem in supplying electricity to this Center as a 20KV high tension line is buried along JL. Jend. S. Parman (the main street on the southwestern side of the site). The condition of electric supply is good as the spindle system (ring connection supply system) is adopted in this area which is capable of supplying electricity from the opposite side even if disconnection occurs at any one location, so that the possibility of a blackout is unlikely.

Telephone

As in the case of electricity, a trunk line is buried along JL. Jend. S. Parman from which a telephone line can be drawn into this Center.

Water Supply

A 500 mm distributing main and a 200mm service pipe are buried along JL. Jend. S. Parman and a 100mm service pipe along JL. Letjen S. Parman (a street on the southeastern side of the site). Water can be drawn into this Center from the 200 mm service pipe. If this service pipe is to be used, drilling of a well other than for emergency is forbidden.

Drainage

There is a side ditch of about 600W×700D along JL. Jend. S. Parman into which domestic sewage may be discharged together with storm sewage after treating to 20 ppm of BOD and 30 ppm of SS. There is also a side-ditch of about 300×300 along Jl.

Komplex (the street on the northeastern side of the site) into which some storm sewage may be discharged.

Gas

There is no city gas main so that LPG would have to be used if gas supply is necessary.

3-3-5. Outline of Facilities and Equipment

In order to attain the objectives of this Project, the following facilities and equipment are considered necessary.

(1) Facilities

① Training lecture facilities :

Seminar rooms (three types accommodating 50, 30 and 15 persons each), auditorium (accommodating 200 persons), L/L room.

② Practical exercise facilities for inspection training :

Inspection training rooms for furnitures and wood and rattan products, textile, garment, rubber · rubber products, frozen food and canned food.

③ Practical exercise facilities for exhibition training :

Exhibition training hall.

④ Information facilities :

Library

⑤ Teaching material development facilities :

Audio-visual production room, printing room

⑥ Administration facilities, etc. :

Director's room, deputy director's room, office, expert's room, trainers room, business contact room, health clinic, cafeteria.

⑦ Lodging facilities :

Bed rooms, study room, dining room

(2) Outline of Equipment

① General training equipment :

Typewriter, copying machine, printing machine, vehicles, personal computer, training fittings (lecture tables, chairs, etc.), etc.

② Audio-visual equipment :

Video projector, OHP, 35mm slide projector, 16mm film projector, audio-visual aid production/editing machineries, L/L machinery, etc.

③ Export inspection training equipment :

- Furniture, wood and rattan products inspection and testing equipment
- Textile and garment inspection and testing equipment
- Rubber and rubber products inspection and testing equipment
- Frozen and canned food inspection and testing equipment

④ Exhibition training equipment :

Knockdown stage, mannequins, dress racks, exhibition modules, etc.

3-3-6. Personnel Plan

The personnel assignment plan for operating the activities of this Center as described heretofore will be as follows :

Director's Office :

Director, Deputy Director, five staff (typists, secretaries) Total 7

Administration Division :

2 Division Chiefs, 8 Assistants, 33 Staff Total 43

General Affairs Division :

Division Chief, 4 Assistants, 33 Staff Total 38

Trade Training Division :

2 Division Chiefs, 7 Assistants, 13 Staff Total 22

Inspection and Quality Control Division :

Division Chief, 4 Assistants, 18 Staff Total 23

Exhibition Division :

Division Chief, 2 Assistants, 8 Staff Total 11

ETCC Division :

3 Division Chiefs, 10 Assistants, 20 Staff Total 33

As above, total staff size will be 177 persons.

3-4. Technical Cooperation

In order to effectively demonstrate the functions of IETC upon its opening, the Government of the Republic of Indonesia strongly requests for project-type technical cooperation of the Government of Japan. In response to this request, the Government of Japan decided to conduct an investigation on technical cooperation and dispatched served survey teams during the following periods through the Japan International Cooperation Agency. The team confirmed the contents of request, studied the propriety and feasibility of cooperation, evaluated their findings and discussed the details of Japan's cooperation with the Indonesian side.

Contact Mission (on technical cooperation) : June 23~Junly 3, 1986

Preliminary Survey Team (on technical cooperation) : January 25~February 1, 1987

Long Term Experts Survey Team (jointly on technical cooperation and grant aid) :
June 1~June 16, 1987

The contents of technical cooperation which in the opinion of the Government of Japan may possibly be extended as of now are as follows.

(1) Fields of Technical Cooperation

Three fields of trade training including business Japanese training, export inspection and quality control training of industrial products (furniture, wood products, rattan products, textile products, rubber products, etc.) and agricultural products (frozen food and canned food), and exhibition training.

(2) Duration of Technical Cooperation

Planned to be five years after signing the Minutes of Discussion (R/D) concerning technical cooperation.

(3) Contents of Technical Cooperation

1) Dispatch of Japanese experts

The Japanese side is considering to dispatch the following long terms experts:

Altogether 9 experts consisting of one leader, one coordinator, two experts of trade training, 1 expert of Japanese language training, 4 experts of export inspection and quality control will be dispatched as necessary.

2) Training of Indonesian Counterparts in Japan

During the technical cooperation period, training will be conducted in Japan as the need arises. The Japanese side is considering taking in four trainees annually, for a total of 20 over the duration.

3) Equipment Supply

All necessary equipment will be supplemented, during the technical cooperation period including the period prior to the opening of the center.

CHAPTER 4. BASIC DESIGN

CHAPTER 4. BASIC DESIGN

4-1. Design Policy

The basic design work will be executed in accordance with the following principles with major emphasis on functionality, cost and durability and with due consideration to the contents of the Project as described in the previous chapter.

• *A Facilities Design which conforms with the Basic Policy of Project-type Technical Cooperation*

This Project is positioned as one that will provide the necessary and most suitable facilities and equipment for the project type technical cooperation of the Government of Japan scheduled to be implemented, starting in FY 1988.

The scale, grade, etc. of specific facilities and equipment will be determined according to the contents of the plan for said project type technical cooperation.

The project implementation schedule will also be studied, and construction of the facilities shall be completed according to said schedule which shall be in conformity with the technical cooperation programme.

• *A Facilities Configuration which is Functional and Assures Ease of Use*

As the Center plans to implement extensive training such as in trade promotion, inspection and quality control and exhibition of trade products in order to upgrade and activate the market, its facilities shall be designed to be as functional as possible and planned with due consideration given to the diversity of the contents of activities planned for each of its divisions.

Particularly, a facilities configuration that will allow trainees coming from without to find their way easily shall be planned, and in order to enhance training effect the facilities shall be distinctively divided into "static zone" and "dynamic zone".

• *A Symbolic Facilities Design for Promotion of Trade*

The Exhibition Training Division of this Center will become the arena for external interchange and the landmark that will assume the central role in promoting trade. In this sense, it is especially important that its design be symbolic of its role. Every little detail of the building from facade to finishing materials must be planned carefully with due consideration to this point.

● Building Component Design Suitable to the Local Climate and Natural Features ↓

The facilities must be designed to be as comfortable as possible by taking into full consideration the local natural features and tropical climatic conditions. The strong rays of the sun and torrential squalls shall be controlled by architectural ingenuity (for example, eaves and louvers) and natural light and natural ventilation shall be utilized as much as possible instead of relying on mechanical systems. }

● Design based on Indonesia's Construction Situation and Designing System :

The policies borne of the construction situation in Indonesia (such as its policy on local procurement of construction equipment and materials) and the designing system and standards Indonesia shall be adopted as far as it is possible for a grant aid cooperation project of Japan, and the design shall be a reasonable one, designed with major emphasis on allowing the facilities to withstand permanent use. }

● Ease of Maintenance and Reduction of Running Cost :

An attempt shall be made to conserve energy in order to reduce the maintenance and operation cost of facilities, and to actively use locally procurable construction equipment and materials in order to reduce construction cost and ensure ease of maintenance. If some of the equipment and materials must inevitably be procured in Japan, they shall be selected carefully with due consideration to durability and ease of maintenance and operation. Particularly the inspection and quality control equipment which, for the most part, will presumably be procured in Japan must be those for which a maintenance system is firmly established, such as having local agents who are capable of repairing and maintaining them.

4-2. Design Conditions

In working out the basic design, the following elements in particular will be considered as the design conditions.

4-2-1. Natural Conditions

Facilities must match the local climate, surrounding landscape and other natural conditions of the area in which they are to be constructed. In the case of this Project, the following natural conditions in particular must be taken into consideration in designing the facilities.

(1) Heavy Rain

The proposed construction site is situated in an area with a typical tropical climate, which is divided into rainy seasons (July~August, and October~January) and dry seasons (February~June, and August~September). During the rainy seasons, especially in January, the area is visited by concentrated torrential rainfalls (squalls) uniquely characteristic to this area. In view of this, it is essential to consider waterproofing performance and to take countermeasures against leaking and blowing in of rain when designing the facilities.

(2) Thunderbolts

Squalls during the rainy seasons often accompany fierce thunderbolts. Since damages by thunderbolts are considerably serious, adequate countermeasures must be taken to avoid falling of thunderbolts when planning the building design.

(3) High Temperature and High Humidity

The climate in Jakarta and its vicinity is generally tropical, with high temperature and high humidity and with little temperature variations throughout the year. The mean maximum temperature is above 30°C and the humidity ranges around 60 to 90% all year round. Therefore, architectural considerations, such as providing natural ventilation and mechanical air conditioning are necessary to secure a comfortable environment within the facility.

(4) Earthquakes

Indonesia, being located at the intersection of the Pan-Pacific Seismic Belt and the Trans-Asia Seismic Belt, may be justifiably called a high density earthquake occurring area. Types of earthquake are volcanic and crustal. Heavy damages have been recorded more frequently in areas east of Java Island and less on Sumatra Island. Whether there is earthquake or not has a large impact on facilities and in view of this, aseismic design standards for buildings have been completely stipulated, which must be adequately examined and considered in the structural planning.

(5) Ground Condition

The ground around the site is covered with soft and weak argillaceous silt layer. In view of this, piles of around 35~40m in length are considered to become necessary for the construction, and type of pile, cost and construction period must be studied from various angles.

4-2-2. Local Construction Situation

The construction industry in Indonesia may be called underdeveloped yet in terms of organization as a business, but as far as Jakarta and its environs are concerned, the foundation of construction activities may be deemed relatively well developed. A large quantity and wide range of construction materials are produced, and skill of many of construction workers is high. There are also large-scale design offices and construction companies which receive a considerable amount of orders. The following shall be especially taken into consideration for the basic design under the construction situation as described above.

(1) Construction Equipment and Materials

Most of the basic construction materials are locally produced so that there is ample room to utilize locally produced materials. Some of the products, however, may not be favorable in terms of quality and stable supply. Adequate control is therefore necessary in using locally produced materials. In particular, the limited variety of colors and shapes of local finishing materials will pose restrictions on design.

(2) Construction Regulations

All buildings in Indonesia are regulated by a building code, a fire code, mechanical and electrical design standards and various other legal systems that have to be understood when designing. In addition, there are also regulations that govern construction permits, the application for building plans and other procedures. The time required to go through all these procedures should be accounted for in the project implementation schedule.

(3) Local Construction Skills

Construction companies in urban areas such as Jakarta and Bandung are large in scale and are well equipped with heavy construction machinery. With the cooperation of a Japanese construction company, it will be possible to execute construction work with good workmanship in a short period of time.

4-3. Basic Plan

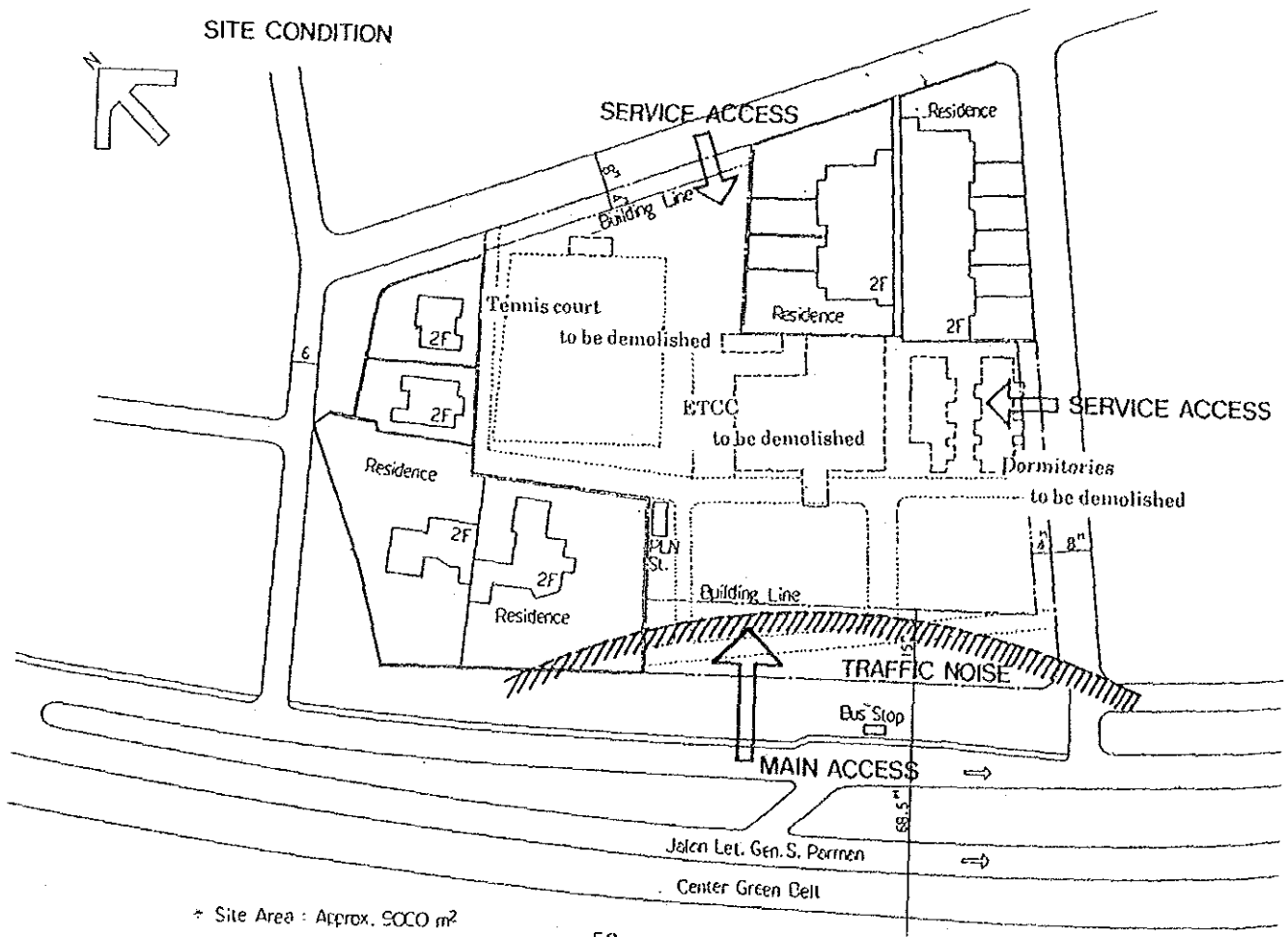
4-3-1. Site and Facilities Layout Plan

(1) Site Condition and Utilization Plan

The site narrows roughly at the center, and is thus divided into two rectangular pieces of land, one in the north and one in the south. The southern piece of land faces the arterial street Jalen Let. Gen.AS. Parman in the front, and because of its function of offering main access to the facilities and the noise of incoming and outgoing vehicles, it will be characterized as the "dynamic environment area" whereas the northern piece of land will be characterized as the "static environment area". As the northern piece of land also faces a street there is no problem in gaining access to it. The main gate is on the street on the east side of the site now, but considering the nature and scale of the facilities it would be better if the facilities can be directly approached from Jalen Let. Gen.AS. Parman in the front.

The site area of 9,000 m² is by no means adequate for this Center, so that in planning the use of this site the building must be built close together in order to secure as much open space as possible around the buildings for future expansion.

Fig. 4-1



(2) Layout Plan

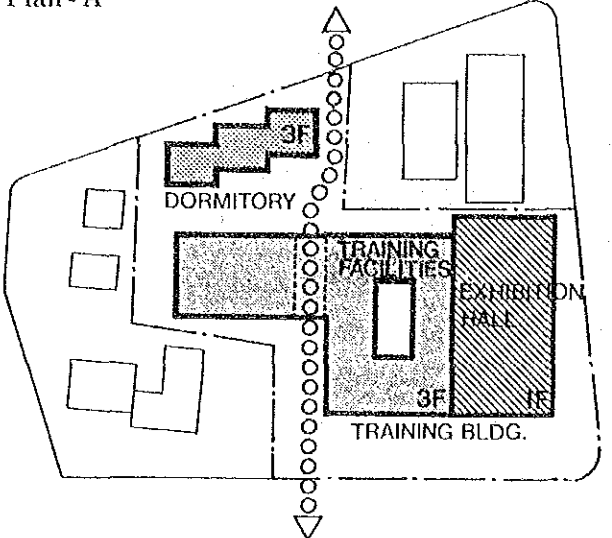
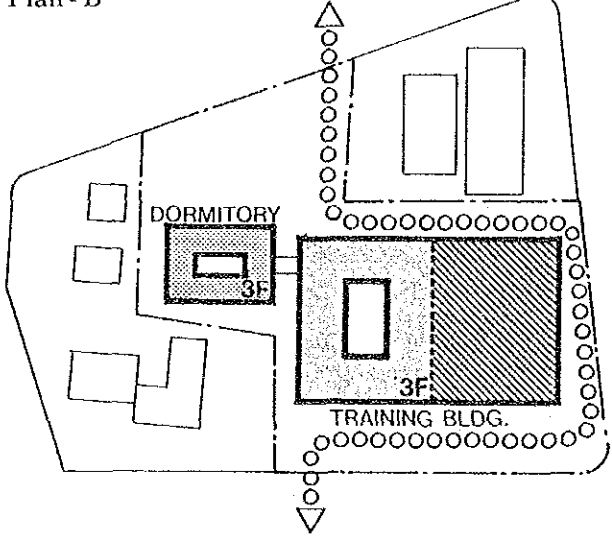
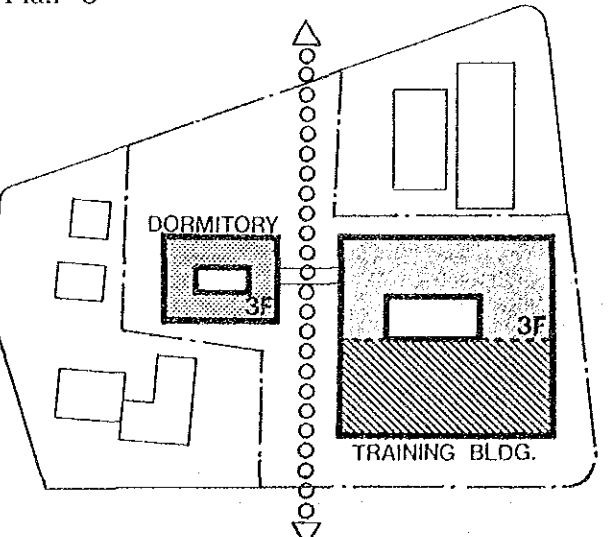
Then the facilities configuration of this Center and linkage among its various facilities are considered, the facilities may be broadly divided into the following three blocks.

- Exhibition Hall Block : A multi-purpose hall with a large space to be used mainly for exhibition practice.
- Training Facilities Block : The Center's core block composed of training rooms including seminar rooms, product inspection and testing rooms, various office rooms for administration, etc.
- Dormitory Block : The trainees' dormitory and welfare facilities. This block shall constitute an independent building as it is different in nature from other blocks.

In planning the layout of the facilities for this Center, three alternative block layout models were assumed from which to select the optimum layout. (Refer to Table of comparative study on alternative block layouts on the following pages.)

The layout of facilities for this Center will be planned in accordance with Alternative C which poses the smallest number of problems.

Table 4-3-1. Examination of Alternative Layout Plan

Site Plan	Proposal and Examination			
<p>Plan - A</p>  <p>The site plan for Plan A shows a dormitory (3F) on the left, a central passage with a row of trees, and a training building (3F) on the right. The training building is divided into 'TRAINING FACILITIES' and 'EXHIBITION HALL' (1F). There are two rectangular buildings at the top of the site.</p>	<p>The plan proposes to separate each building block clearly.</p> <table border="1" data-bbox="751 539 1442 891"> <tr> <td data-bbox="751 539 1094 891"> <p>Merit</p> <ul style="list-style-type: none"> • Building structure design is easy and economical. </td> <td data-bbox="1099 539 1442 891"> <p>Demerit</p> <ul style="list-style-type: none"> • Not enough open space. • No court yard in each building. </td> </tr> </table>		<p>Merit</p> <ul style="list-style-type: none"> • Building structure design is easy and economical. 	<p>Demerit</p> <ul style="list-style-type: none"> • Not enough open space. • No court yard in each building.
<p>Merit</p> <ul style="list-style-type: none"> • Building structure design is easy and economical. 	<p>Demerit</p> <ul style="list-style-type: none"> • Not enough open space. • No court yard in each building. 			
<p>Plan - B</p>  <p>The site plan for Plan B shows a dormitory (3F) on the left, a central passage with a row of trees, and a training building (3F) on the right. The training building is integrated with the exhibition hall. There are two rectangular buildings at the top of the site.</p>	<p>The plan proposes to build training facility block on exhibition hall.</p> <table border="1" data-bbox="751 1144 1442 1496"> <tr> <td data-bbox="751 1144 1094 1496"> <p>Merit</p> <ul style="list-style-type: none"> • Building front is clear. • Enough open space. </td> <td data-bbox="1099 1144 1442 1496"> <p>Demerit</p> <ul style="list-style-type: none"> • Passage become long. • Square type of exhibition hall is inconvenient for exhibition. </td> </tr> </table>		<p>Merit</p> <ul style="list-style-type: none"> • Building front is clear. • Enough open space. 	<p>Demerit</p> <ul style="list-style-type: none"> • Passage become long. • Square type of exhibition hall is inconvenient for exhibition.
<p>Merit</p> <ul style="list-style-type: none"> • Building front is clear. • Enough open space. 	<p>Demerit</p> <ul style="list-style-type: none"> • Passage become long. • Square type of exhibition hall is inconvenient for exhibition. 			
<p>Plan - C</p>  <p>The site plan for Plan C shows a dormitory (3F) on the left, a central passage with a row of trees, and a training building (3F) on the right. The training building is located in a recessed area of the site. There are two rectangular buildings at the top of the site.</p>	<p>Variation of Plan - B</p> <p>The plan proposes to build most of training facilities in the recesses of the site where it is very quiet.</p> <table border="1" data-bbox="751 1749 1442 2101"> <tr> <td data-bbox="751 1749 1094 2101"> <p>Merit</p> <ul style="list-style-type: none"> • Enough open space. • Passage become useful. • Good environment for training. </td> <td data-bbox="1099 1749 1442 2101"> <p>Demerit</p> <ul style="list-style-type: none"> • Building front is not clear. </td> </tr> </table>		<p>Merit</p> <ul style="list-style-type: none"> • Enough open space. • Passage become useful. • Good environment for training. 	<p>Demerit</p> <ul style="list-style-type: none"> • Building front is not clear.
<p>Merit</p> <ul style="list-style-type: none"> • Enough open space. • Passage become useful. • Good environment for training. 	<p>Demerit</p> <ul style="list-style-type: none"> • Building front is not clear. 			

4-3-2. Building Design

(1) Plan for Each Building and Size of Each Room

The size of various rooms was determined upon clarifying the functions of each room in accordance with the personnel assignment plan for each room based on the request of the Indonesian side. The functions and size of major rooms will be as follows.

a) Seminar rooms and L/L room

The seminar rooms and L/L room will be used mainly for trade training courses and also for lectures of business Japanese training courses and inspection training courses. The number of rooms and their size have been determined as follows according to the contents of training curricula and with due regard to possible changes in class size. The floor area of each seminar room was calculated roughly on the basis of 2m² per capita by arranging 1.5m×0.4m desks that seat two persons per desk. And the floor area of the L/L rooms was determined based on the layout of L/L equipment.

1. Seminar room-1 : 90m² with seating capacity of 50 trainees, used for advanced trade training courses.
2. Seminar room-2 : 60m² with seating capacity of 30 trainees, used for advanced trade training courses and intermediate business Japanese course.
3. Seminar room-3 : 60m² with seating capacity of 30 trainees, used for trade management training courses and basic exhibition training course.
4. Seminar room-4 : 30m² with seating capacity of 15 trainees, used for advanced business Japanese training course and advanced exhibition training course.
5. Seminar room-5 : 30m² with seating capacity of 15 trainees, used for export inspection and quality control training (8 courses), placed next to the inspection practice room.
6. L/L room : 60m², wherein 20 system units and 1 master unit will be installed, used for basic business Japanese course.

It was judged that the foregoing size of seminar rooms would be large enough to be used also for ETCC training based on past status of its activities. The number of days per year during which each seminar room will be used according to the training curricula is as follows.

Estimated Annual Occupancy of Seminar Room & L/L Rm.

Seminar Rm.	Seats Nos.	Course Name	Occupant Nos.	Occupancy		
				(days/session) × (Session/year) × (ratio) = days/year		
RM-1	50	Trade Training (Specialized Training)	50	10	6	= 60
		Trade Training (Selecter Product)	50	10	6	= 60
Total						120
RM-2	30	Trade Training (Basic)	25	10	12	= 120
		Japanese Business Language (Intermediate)	15	60	3	= 180
Total						300
RM-3	30	Trade Training (Management)	15	10	6	= 60
		Exhibition Training (Basic)	25	10	4	= 40
Total						100
RM-4	15	Japanese Business Language (Advanced)	10	60	3	= 180
		Exhibition Training (Advanced)	15	10	4	= 40
Total						220
RM-5	15	Lecture for Inspection's Testing Training	8~12	20	8	1/5 = 32
		- Furniture, Wood and Rattan Product	5~10	20	6	1/5 = 24
		- Textile and Garment	8~12	20	8	1/5 = 32
		- Rubber and Rubber Product	5~10	25	7	1/5 = 35
Total						123
L/L Rm.	20	Japanese Business Language (Basic)	20	60	3	= 180

b) Inspection training rooms

The inspection training rooms will be arranged in accordance with the training curricula and the contents of the practice subject. The size of each room will be determined based on the layout of equipment and furniture to be assigned to each room. Necessary inspection training rooms and their size for this Center are as follows.

1. Furniture, wood and rattan product inspection training room

A furniture and wood products training course and a rattan products training course will be conducted. Each course will be comprised of 8 to 12 trainees who will practice furniture testing, paint testing and packaging material testing. The following rooms are required :

- Product testing laboratory
- Paint testing laboratory
- Packing material testing laboratory, etc.

Total approx. 290 m²

2. Textile and garment inspection training rooms

A basic course and an advanced course will be offered.

Each course will be comprised of 5 to 10 trainees who will practice various types of inspection. The following rooms are required :

- Physical testing laboratory
- Chemical analysis laboratory, etc.

Total approx. 180 m²

3. Rubber and Rubber products inspection training rooms

A basic course and an advanced course will be offered. Each course will be comprised of 8 to 12 trainees who will practice various types of inspection on natural rubber and rubber products. The following rooms are required :

- Natural rubber testing laboratory
- Storage and compounding room
- Mixing and vulcanizing room
- Physical testing laboratory, etc.

Total approx. 370 m²

4. Frozen food and canned food inspection training rooms

A frozen food course and a canned food course will be offered. Each course will be comprised of 5 to 10 trainees who will practice various types of inspection on processed food. The following rooms are required :

- Physico-chemical laboratory
- Sensory evaluation laboratory
- Bacteriological laboratory, etc.

Total approx. 210 m²

c) Exhibition training hall

The hall will be planned as a space for practical training in exhibition to be offered in the basic and advanced exhibition training courses.

It was assumed that 25 trainees participating in the basic course will be divided into 13 pairs of trainees and that practical exercise will be conducted on the following five subjects, and the necessary space was calculated based on the size of the display panels used.

Required Unit Area for Exhibition Training

Practice Subject	Booth Size
1. Wood & Rattan Exhibition Training	3m x 4.5m = 13.5 m ²
2. Textile & Garment Exhibition Training	3m x 3m = 9.0
3. Rubber Products Exhibition Training	3m x 3m = 9.0
4. Procesed Food Exhibition Training	3m x 3m = 9.0
5. Practice in the Use of Exhibition Machinery	3m x 3m = 9.0
Area required per Unit	49.5 m ²

The area occupied by panels of 13 pairs of trainees will therefore become about 650 m² and, adding the passage area of 650 m² (operating rate to be 50%), the total area of the exhibition training hall was determined to be approximately 1,300 m².

d) Auditorium

An auditorium will be provided for grand events of this Center (such as orientation and public lecture meetings), training of a large number of participants (of more than 50 persons) and general meetings. In consideration of the monthly mean of 150 trainees and 30 faculty members, the seating capacity was determined to be 200 persons and the floor area to be 300m² based on the study of the layout of desks and chairs. Storable furnitures (desks and chairs) and movable partitions for dividing the room will be provided in order to respond to diverse modes of use.

e) Library

The library will provide trainees, instructors and the general public with information and data services through lending of books and documents, etc. as well as a place for reading and studying. According to the training curricula, between 110 to 200 trainees will be present in the Center at the same time. If the utilization rate of the library is assumed to be 10% based on statistical survey in Japan, the required number of seats in the reading room would be 11 to 20. The number of seats under this Project was determined to be 20 seats, 8 of which will be carrel style and the remaining 12 to be grouped around a large table and a space large enough for them was secured. The size of the book stock was assumed to be around 10,000 volumes based on current

conditions in similar facilities, and the floor area was determined based on the layout of open access bookshelves (housing 150 volumes per m²).

From the above, the library space was determined to be altogether 120m², consisting of 70m² as a space for bookshelves, 40m² for reading space and 10m² as a space for the reception counter.

D) Office Rooms

Offices of each division will be planned to be of the large common room type in consideration of the usual practice in Indonesia and the prevalent conditions of existing facilities. Regarding the size of each office, per capita floor space was assumed in consideration of the local customs in laying out furniture (with plenty of space between pieces of furniture) to be 8m² for Division Chief, 6m² for Assistant, and 5m² for ordinary staff, and the required floor area for the office of each Division was calculated as follows based on the personnel plan as a guide to determine the planned floor area. In order to provide flexibility to cope with future changes in the staff size, walls will not be erected between adjacent offices but partitioning with office furniture will be considered instead.

Table of Calculated Floor Areas for Offices of Each Division

		Chief	Assistant	Staff	Total
Administrative Division	No.	2	8	33	43
	Area	x 8 = 16	x 6 = 48	x 5 = 165	229m ²
General Affairs	No.	1	4	33	38
	Area	x 8 = 8	x 6 = 24	x 5 = 165	197m ²
Trade Training Division	No.	2	7	13	22
	Area	x 8 = 16	x 6 = 42	x 5 = 65	123m ²
Inspection-Quality Control Division	No.	1	4	18	23
	Area	x 8 = 8	x 6 = 24	x 5 = 90	122m ²
Exhibition Division	No.	1	2	8	11
		x 8 = 8	x 6 = 12	x 5 = 40	60m ²
ETCC Division	No.	3	10	20	33
	Area	x 8 = 24	x 6 = 60	x 5 = 100	184m ²

g) Lodging

Lodging rooms will be provided for the benefit of trainees coming from local provinces. Based on the 150 monthly mean trainees and assuming that about half of the trainees will come from local provinces according to the actual example of ETCC's training activities, the accommodating capacity was determined to be 72 persons. The composition of rooms will be 12 twin rooms (accommodating 24 persons in total) and 8 rooms accommodating 6 persons each in consideration of the efficiency and modes of use, and the floor area was determined to be 24m² and 48m² respectively based on the layout of furniture and the required area for shower room to be provided in each room.

The size of various rooms including other rooms for each building will be as shown below.

1) Training Building

Room Name	Planning Area(m ²)	Remarks
Director Room	30	Office and reception room w/Lav.
Dep. Director Room	25	- Ditto -
Secretary Room	25	5 Secretaries 5.0m ² /person
Meeting Room-1	40	Attached to Director room, Capacity : 20 p.
Expert's Room	60	Office room for Japanese technical cooperation experts, inc. Team Leader's room and coordinator's room
Instructor's Room	120	26 Instructors' offices (Trade & Exhib.-16, ETCC-10)

Room Name	Planning Area(m ²)	Remarks
Business Contact Room	60 (30×2)	Negotiation and consultation room for visitors
Meeting Room-2	60	General meeting for Center, Capacity : 30 p.
Administration Div. Rm.	220	Administration Div. 43 staffs
General Affairs Div. Rm.	210	General Affairs Div. 38 staffs
Trade Training Div. Rm.	130	Trade Training Div. 22 staffs
Inspection & Q/C Div. Rm.	120	Inspection and Q/C Div. 23 staffs
Exhibition Div. Rm.	60	Exhibition Div. 11 staffs
Elec. Div. Rm.	180	ETCC 32 staffs
Clinic	30	2 beds and first aid treatment space
Seminar Room 1~5	270	Based on training programs
L/L Room	60	Language Lab., Capacity : 20 trainees
Exhibition Training Hall	1,260	For exhibition training space and trade fairs etc.
Library	120	Open stack system, capacity : 10,000 volume of books. 150 books/m ² 70m ² Carrels, Capacity : 20p. ....40m ² Reference counter 10m ²
Printing Room	30	Working space for Teaching materials and printing space of notices, etc.
AV Mixing Room	40	Studio for editing and recording of audio-visual teaching materials
Auditorium	300	Space for lecture, assembly, seminar, Capacity : 200 p. inc. stage, projection room
Cafeteria	150	Space for serving soft drinks and snacks to staff, trainers (227 p.) and trainees (50 p.)
Kitchen	30	For cafeteria service
· Furniture, Wood-Rattan Products Inspection Training Room	290	Set up by experimental equipment layout and working space.
· Textile & Garment Inspection Training Room	180	- ditto -
· Rubber and Rubber Products Inspection Training Room	370	- ditto -
· Frozen & Canned Food Inspection Training Room	210	- ditto -
Preparation Room	40	For keeping material and trainers for Inspection training section
Hall, Corridor, Mech. Room, Toilet, etc.	2,628	
Balcony	474	
Total	7,792	

2) Dormitory Building

Room Name	Planning Area(m ²)	Remarks
Office	10	Administrative staff 2 p.
Superintendent Room	30	Two beds, Lavatory
Bed Room-A	288 (24 x 12Rms)	Twin beds room w/shower room Total capacity 2 persons × 12 rooms = 24 persons
Bed Room-B	384 (48 x 8Rms)	Six beds room, common shower room Total capacity 6 persons × 8 rooms = 48 persons
Dining Room	75	Capacity : 50 p. 70% of boarders Combained use as hall
Kitchen	30	for dining room service
Study Room	60	Set up by utilization of 60~70% of Bed room B. Capacity : 20 seats 20 m ² /seat
Laundry	30	For light washing inc. drying space
Hall, Corridor, etc.	593	
Balcony	216	
Total	1,716	

Total of 1) + 2) : 9,508 m²

Other outdoor ancillary facilities :

Garage : 150 m² (10 vehicles including micro bus, wagon and cargo truck)

Guard hosue : 16 m²

Preparation room : 32 m²

Water tower

(2) Floor Plan

The facilities of this Center will be composed of the Training Building and the Dormitory Building as stated before. In floor planning of both buildings, the quadrangle type which prompts natural airing and ventilation will be adopted, and the rooms of each building will be connected by corridor to enhance linkage among them. The composition of each building will be as follows :

● Training Building

The training facilities, library and auditorium will be laid out on the second floor. Since the second floor will be mainly used by the trainees, it would facilitate administration and effective use of each room.

The product inspection facilities which occupy a large total floor area and are different in nature from other rooms will be collectively laid out on the third floor with a small seminar room for common use attached to them for the convenience of lectures. A freight lift will be installed in consideration of the necessity of hauling in goods.

The administrative facilities will be arranged on each floor for its function and nature. The Exhibition hall which will be used for exhibition training and which will also be opened to the general public as an exhibition hall will be arranged on the first floor for the convenience of visitors and also for ease of hauling in exhibition items. The floor plan of the multi-purpose exhibition hall will be of a design that allows direct access to it from the entrance hall. A plaza will also be provided on the first floor as a place for public display of items associated with exhibition training, and information on the activities of this Center.

1st Floor : Entrance Hall, Plaza, Exhibition Training Hall, Exhibition Division Office, Administration Division Office, General Affairs Division Office, Cafeteria, etc.

2nd Floor : Seminar rooms, I/L Room, Auditorium, Library, Trade Training Division Office, etc.

3rd Floor : Export Inspection Training rooms (wood and rattan products, textiles and garments, rubber and rubber products, frozen food and canned food). Inspection and Quality Control Division Office, ETCC Division Office, Trainers' Office, Director's Office, etc.

● Dormitory Building

12 twin bed rooms and eight rooms to accommodate 6 trainees each will be planned as lodging accommodation for trainees coming from local provinces and

also to be used as temporary billet for IETC staff. It will be a separate building from the Training Building and carefully designed to create an intimate atmosphere.

- 1st Floor : Office rooms, dining room, washing room, etc.
- 2nd Floor : Bedroom (6 twin beds rooms, 4 rooms to accommodate 6 trainees)
- 3rd Floor : Bedroom (6 twin beds rooms, 4 rooms to accommodate 6 trainees)

(3) Elevation and Section Plan

The elevation and section of facilities will be planned according to the following basic policies with emphasis on functionality, economics and beauty.

• No. of Stories of Each Building

Considering that the City-designated building wall line must be observed and that a space for outdoor facilities must be reserved to effectively utilize the site of this Center which is about 9,000 m², the height of the buildings that would allow most effective use of the land available for their construction was determined to be 3 stories. It is possible to make them higher, but such a plan would make both construction cost and maintenance and operating cost too high as they would require elevators and sprinklers. Both the Training Building and Dormitory Building of this Center will therefore be three storied.

• Indoor Environment

Most of the rooms of this Center will be air-conditioned, but in order to shorten the operating hours of the air-conditioning system and thus reduce the running cost of facilities, natural ventilation and natural lighting will be emphasized as the basic policy in planning indoor environment. According to this policy, windows and transoms will be provided on the outer walls of each room and along corridors to let in fresh air. Decorative latticeworks and louvers will also be provided on the outside of the building to prevent the sun from reaching the outer walls and inside of the rooms. Corridors, which will mainly surround the courtyard and which will basically be considered as outdoor facilities, will be designed to obtain satisfactory ventilation and to keep out rain.

• Story Height Plan

The height of each story of the building will be determined from the combination of ceiling height, space required for utilities piping and wiring in the ceiling, size of the section of structural beams, thickness of finishing material, etc. the height of each story of the Training Building and Dormitory Building will be determined as follows to accommodate the most typical rooms.

	Training Building			Dormitory Building		
	1st Flr.	2nd Flr.	3rd Flr.	1st Flr.	2nd Flr.	3rd Flr.
Ceiling Height	3.0m	3.0m	3.0m	Not double ceiling as a rule. (direct ceiling)		
Story Height	4.2m	3.8m	4.0m	3.5m	3.2m	3.2m

However, the multi-purpose hall will be designed to have a large void two-stories high, or an effective ceiling height of 6.5m in consideration of the diversity of display method.

(4) Structural Design

As a basic principle, emphasis will be placed on designing a strong and yet economical architectural framework. Accordingly, the general approach locally adopted will be respected as much as possible in selecting the applicable structural design standards, assumed external forces, materials and construction methods.

1) Basic Policy for Structural Design Work

The structural design standards for this Project shall be pursuant to the various structural design standards of Indonesia although the design standards of Japan will also be referred to whenever necessary, such as when designing steel structures.

Principal standards which shall be conformed to are as follows.

1. Load and External Force Regulation N118-1983
Peraturan Dembebanan Indonesia Untuk Gedung 1983
2. Aseismic Design Regulations PMI 1983
3. Aseismic Design guide lines
Buku Dedoman Perencanaan Untuk S.B.B.B. DAN S.T.B. Untuk Gedung 1983
4. Reinforced Concrete Structure Design Standards N12-1971
Peraturan Beton Betulang Indonesia
5. Steel Structure Design Standards, Japan Building Society Standards

Design conditions on loads and external forces are as summarized below.

a) Live Load

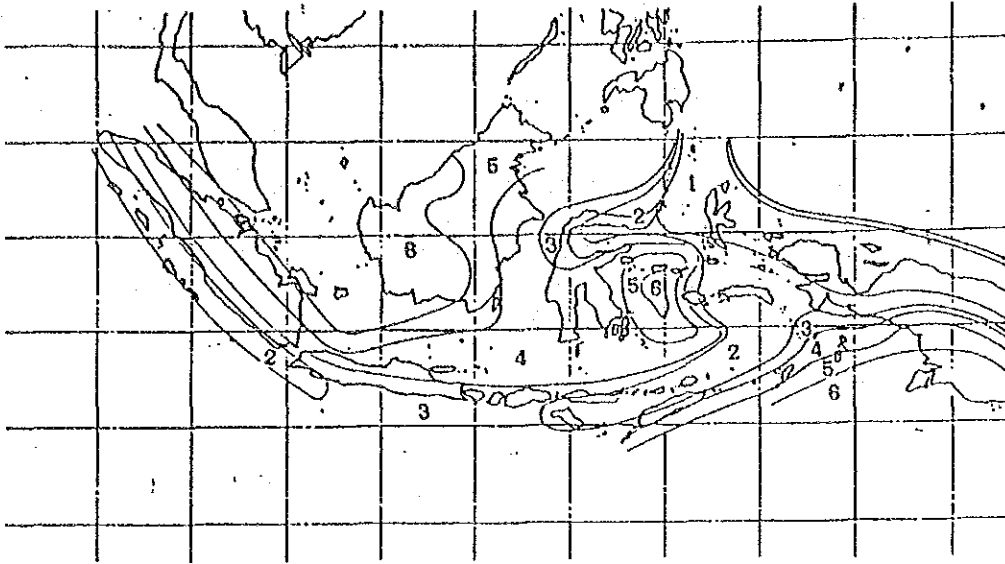
Room	Kg/m ²
Office room, seminar room	250
Dormitory room	200
Conference room	400
Exhibition hall	500
Stairway, corridor	300

b) Seismic Force

Indonesia, which is located at the interseciton of the Pan-Pacific Seismic Belt and the Trans-Asia Seismic Belt is a high density earthquake



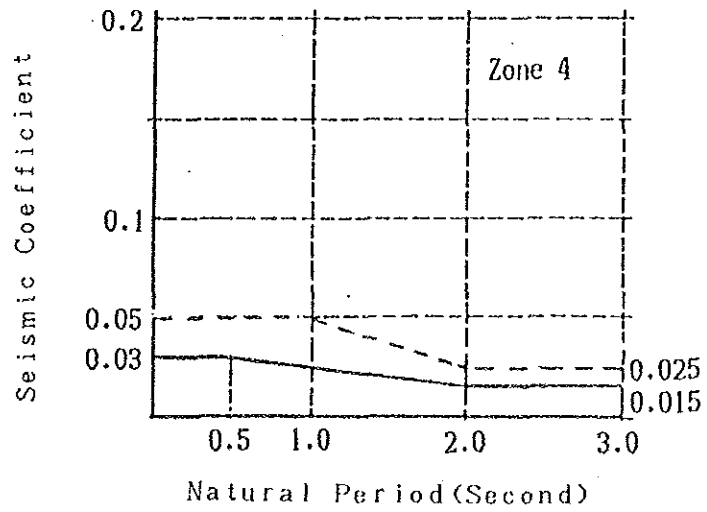
Seismic Zoning Map



Standard Seismic Coefficient (C)

— Buildings on the Solid Ground

- - - Buildings on the Soft Ground



occurring area. Because of this, its structures are required to be of aseismic design, and besides the Earthquake Zoning Map shown on Fig. 1, it has a complete set of aseismic rules. Jakarta and its environs where the proposed site is located belongs to the zone where earthquakes, relatively speaking, occur with less frequency, and the applicable reference seismic coefficient is 0.05 as shown on Fig.-2 which is only about one-fourth the value adopted in Japan. However, as Capacity Design, which corresponds to secondary design in Japan, is required in Indonesia which demands structures to have ductility and adequate bearing capacity to withstand earthquakes, the section of structures becomes relatively large, and the required quantity of reinforcing bars also tends to become large. According to standards, the seismic force acting on a three-story building of reinforced concrete rigid frame structure would be as follows.

$$V = C_2^* \times I \times Wt \text{ (RC rigid frame - structural classification D)}$$

wherein V : Base shear

C_2^* : Reference seismic coefficient (Zone 4 → $C_2^* = 0.05$)

I : Application factor

Wt : Dead weight of building

As windpressure is small at 25 kg/m², it can usually be disregarded in the case of a RC structure.

2) Structural Form

Building Name	No. of Stories	Structural Form
Training Center Bldg.	3 stories above ground	RC rigid frame, prestressed concrete construction for the frame of multi-purpose hall
Dormitory Bldg.	3 stories above ground	RC rigid frame

3) Structural Materials

All structural materials shall be locally produced ones.

- Concrete (strength : K225)

Cement : Ordinary Portland cement

Coarse aggregate : River gravel, crushed stone

Fine aggregate : River sand

- Reinforcing bar

Shaped bar steel : U30, D10, D13, U39, D16, D19, D22, D25

- Steel frame

II-shaped steel, equal angle SS41

4) Ground Conditions Around Site, and Foundation Design Principle

The ground in the northern part of Jakarta is covered with soft and weak silt layer, and the ground bearing capacity of the surface soil is said to be below 5.0 t/m². The soil properties at this site is from Fig. 4-2 which shows the results of boring tests conducted at the site, soft and weak silt layer mixed with clay having the N value of 0 to 2 according to the standard penetration test is redeposited close to GL-16 to -36m, beneath which fine sand layer or silt layer mixed with sand having N values ranging between 30 and 50 is distributed.

As for the form of foundation for each of the buildings under this Project, spread footing will be adopted for minor buildings of one or two stories as the existing RC two-story ETCC building was confirmed to have been designed upon spread footing. Pile foundation however will be adopted for all major buildings such as new Center Building and the Dormitory Building, the pile length of which will be about 35 to 40m.

Pile foundations adopted in Jakarta and its environs may be classified as follows according to bearing capacity and pile length.

1) In case the structure is relatively minor and the pile length short :

Concrete pile with square section is driven in.

2) Building with many stories :

Cast-in-place concrete pile (frankie pile) by percussion penetration, cast-in-place concrete pile by machine excavation (William's digger method, Calweld method).

3) Road Pedestal : Steel pipe pile

In view of the weight of buildings and depth of bearing stratum, cast-in-place concrete pile of 80 to 100 cm in diameter will be adopted for this Project.

(5) Air-conditioning and Plumbing Facilities Plan

1) Air-conditioning and Ventilation Facilities Plan

Air-conditioning and ventilation systems will be planned with due consideration to low running cost and ease of maintenance by utilizing natural draft as much as possible and providing eaves to shield the light and heat of the sun.

a. Design Conditions for air-conditioning System

Based on the data on temperature and humidity in May, which is the warmest month in Jakarta, and the design data of ASHRAE, the most comfortable temperature and humidity were determined on the basis of which the room conditions were determined as follows.

Outdoor conditions : Temperature 32.2°C, humidity 65%

Indoor conditions : Temperature 26°C, humidity 50~60%

b. Air-conditioning System

The air-conditioning system will be the individual type which can be operated or stopped at will in each room. Cooling will be effected by air-cooled separate type air-conditioner, and ventilation by total heat exchanger in order to save energy.

Air-conditioners will be provided in the following rooms :

IETC Director's room, office rooms, meeting rooms, auditorium, library, seminar rooms, trainers' room, inspection training rooms, exhibition hall, cafeteria, bed room A, study room, dining room

c. Ventilation System

Ventilation will be by natural airing as a rule, but mechanical ventilation system will be provided for lavatories and pantories which, for reasons of architectural design, cannot be ventilated adequately by natural ventilation and also for kitchen and rooms such as the electric room which functionally require such a system. Also, spot ventilation equipment will be provided at necessary places in inspection rooms where change of air or exhausting of heat and toxic gas become necessary.

2) Water Supply, Drainage and Sanitary Facilities

a. Water Source

As a 500mm trunk line and 200mm branch line of PAM's water main, which are sufficiently high in hydraulic pressure, are buried along JL. Let. Jem. S. Parman which runs on the west side of the site in the north-

south direction, a service pipe will be drawn from these to supply water to the Center.

b. Estimation of Water Consumption

The maximum water consumption per day was estimated here based on the number of people who will use the facilities and the mean water consumption per head per day.

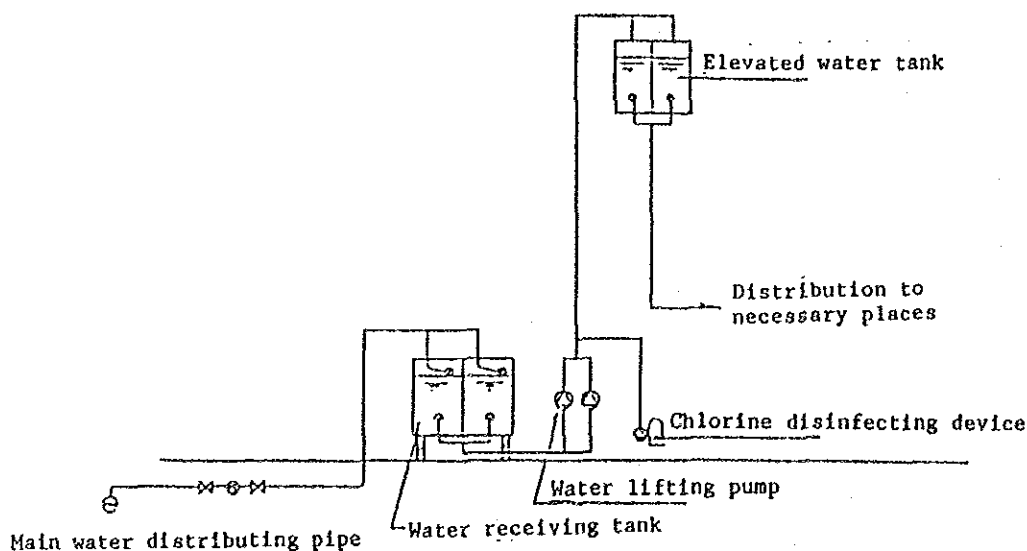
Trainees (commuting) :	20 persons × 100 l/day/capita = 2,000 l/d
Trainees (boarding) :	80 persons × 250 l/day/capita = 20,000 l/d
Staff :	187 persons × 150 l/day/capita = 28,050 l/d
	Total 50,050 l/d

Allowing for visitors, daily water consumption was assumed to be 60 m³/day.

c. Water Supply Facilities

In consideration of the ratio of simultaneous use, a receiving tank of about 50 tons in capacity, which is 80% of the maximum daily consumption, will be provided. Water will be pumped up from this tank to an elevated tank and supplied to necessary places by means of gravity feed.

Fig. 4-3. Water Supply Diagram



d. Hot Water Supply Facilities

Places that will have hot water supply and the respective method by which it will be supplied are as follows.

- Dormitory bedroom A: Storage type electric hot water heater
- Kitchen : Gas instantaneous hot water boiler
- Each pantry : Storage type electric hot water heater

e. Drainage Facilities

Waste water drained from buildings will consist of domestic sewage, effluent from product inspection and experiment and storm sewage. After treatment, each will be discharged into the open ditch along Jl. Let. Jem. S. Parman on the west side of the site.

f. Domestic Sewage

Domestic sewage from various parts of the building will be led into the sewage treatment system and treated to 20 ppm of BOD, 30 ppm of SS (the effluent standard of Jakarta) before discharging.

- Effluent from experiments

Effluent containing acids and alkalies from product inspection and experiment facilities will be led into the neutralization system and then to the sewage treatment facilities.

- Storm sewage

Storm sewage from roofs of buildings and from other parts of the site will be collected into the side ditch to be discharged.

- Gas facilities

LPG cylinders will be installed to supply gas to the kitchen and experiment rooms

(6) Electrical System Plan

1) Electricity receiving and Transforming Facilities

a) Voltage and frequency

PLN's 20 KV high tension underground distribution line is buried along the arterial street on the west side of the site. A lead-in wire branched from this line will be led into the site through underground conduit. The frequency is 50 Hz.

b) Transformer facility

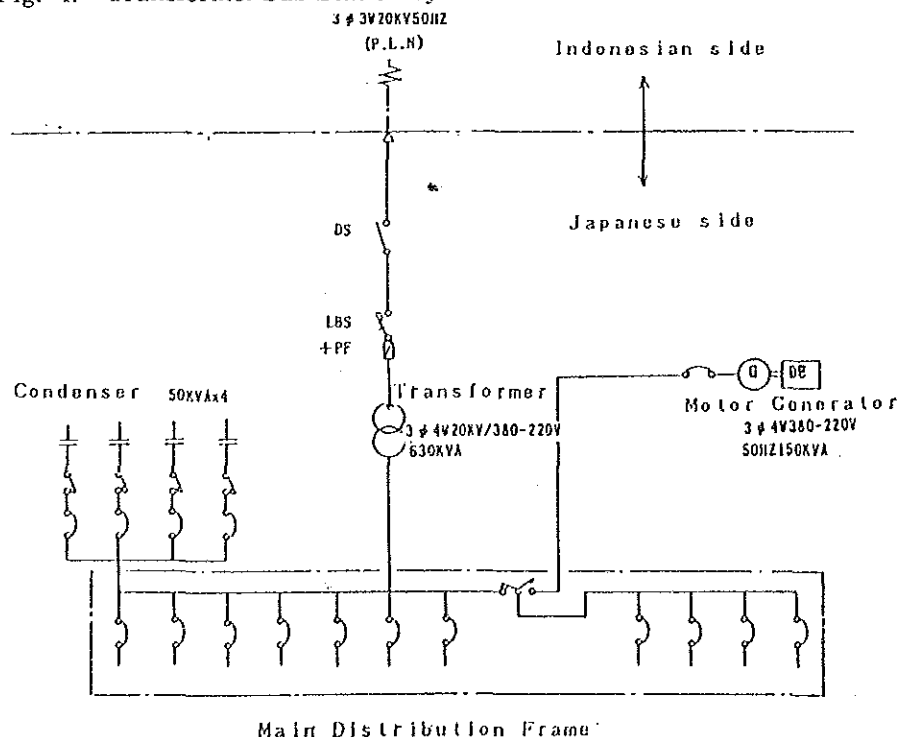
A PLN Sub-station will be constructed by PLN on the site. The PLN building will consist of a high tension switch, metering equipment and other apparatus and the building itself to house them. the 20 KV high tension power which will be led into the site will be dropped to low tension 380/220 V power by means of a transformer. The required capacity of the transformer is estimated to be approximately 630 KVA.

c) Division of work

Leading-in of high tension power and construction of the set of facilities including the PLN building will be under-taken by the Indonesian side, and the dividing point of work will be the terminal on the primary side of the transformer.

Hence, the work to be undertaken by the Japanese side will be the transformer and low tension distribution board after the switch on the primary side of the transformer. (See System Diagram Fig. 4-4)

Fig. -4. Transformer Sub-Station System



2) Emergency Power Source Facility

A 150 KVA capacity diesel engine generator will be installed as emergency power source for operation display of transformer and power load, alarm, security lighting and fire pump.

A 200 AH battery will also be installed for emergency lighting and operation display of transformer.

3) Main Line System

Power dropped by transformer will be distributed to lighting distribution boards and power control boards in each building via MCB of the low tension distribution board in the electric room. The main line will be installed by piping in the ceiling of the corridor which connects the two buildings. The electric system of the main line and the loads will be as follows :

- (1) Light and power main line : 3 phase 4 wire, 380/220V
- (2) Illumination and outlets : Single phase 2 wire, 220V
- (3) Power load for fan, pump, etc. : 3 phase 3 wire, 380V

4) Lighting Facilities

a) Lighting equipment

Fluorescent lamps will primarily be used as light source for lighting equipment in order to reduce running cost, but incandescent lamps will be used wherever architectural design demands. Two stabilizers, one for each fluorescent lamp, which can be lighted by operating only one of them will be used instead of the one for two lamps. The wiring system from the distribution board to the first box in the double ceiling portion will be by means of conduit, and after that by rolled wiring in cable between lighting fixtures.

The riser portion up to the wall-mounted switch will be protected by a metal conduit. The on and off switches will be planned in small sections to permit thinned lighting in corridors and similar places.

The intensity of illumination is planned roughly as follows :

- (1) Office rooms, training rooms, products inspection rooms 350~400lx
- (2) Library (reading room) 500lx
- (3) Multi-purpose hall 300~500lx
- (4) Cafeteria 150~200lx
- (5) Corridor, lavatory 50~100lx
- (6) Bed room 200lx

b) Outlets

Plug socket type outlets will be planned according to the layout and capacity of equipment and appliances in the general office rooms, products inspection and quality control rooms and other rooms where electrical equipment and appliances will most likely be used. Depending on the type of equipment and appliance, grounding work will be executed as necessary.

c) Ceiling fan

Ceiling fans will be installed in rooms which are not air-conditioned.

5) Power System

A power control panels will be installed in each machine room to start and stop motors of fans, pumps and the like. Each panel or machine room will accommodate an alarm system for detecting abnormal load or water level, and the alarm will be displayed on the alarm panel of the administration office.

6) Telephone System

a) Dropping of trunk lines

As office lines can be dropped into the construction site, 5 to 10 trunk lines are planned. A telephone drop panel will be provided on the site from where the telephone lines will be led through an underground conduit to MDF inside the building by the telephone company (PERUHTEL).

b) Telephone conduit system

Piping will be installed from MDF to the telephone outlets of various principal rooms via IDF of each building. The outlets shall be of the wall-mounted type as a rule.

c) Telephone exchange system

An electronic type telephone exchange system will be installed, and 50 extension telephone sets will be installed in rooms which require one.

7) Public Address System

Speakers will be installed in principal rooms to be used for transmitting messages and for paging, and an amplifier will be installed in the administration office for loudspeaker announcement. The output system will be designed to allow each building to make its own announcements. An independent public address system will also be provided in the auditorium and the multi-purpose hall.

8) Interphone System

Interphones will be installed in rooms for those who need to maintain close and frequent contact with each other in discharging their duties. Also, interphones for facilities operation and maintenance purposes shall be installed.

9) Automatic Fire Alarm System

An automatic fire alarm system which sounds an alarm by means of sensors and push button switches as soon as a fire breaks out will be installed in order to detect fires in their early stage and to allow the occupants to evacuate safely. A receiver that displays the place of fire will be installed in the administration office.

10) Community Antenna for TV

A TV outlet will be installed in each of audio-visual room, training rooms, auditorium, cafeteria and other necessary rooms. The master antenna will be installed on the roof of the building from where signals will be distributed to each outlet via coaxial cables.

Pipings will be installed for receiving the satellitic broadcasting in the new future.

11) Lightning Arrester

A lightning rod will be installed on each building to protect the facilities from thunderbolts.

12) Outdoor Lighting

Outdoor lamps will be installed to be lighted at night for security purpose. They shall be fluorescent mercury lamps which can be turned on and off automatically by a timer as well as manually.

(7) Building Materials Plan

The construction materials to be used for constructing IETC must be selected with emphasis on suitability to local climate and natural features, and they must be locally available materials suited to locally employed construction methods. The following materials which are respectively suitable for specific applications within the facilities and also considered suitable in terms of cost, durability and ease of maintenance will be planned for use.

(1) Exterior Finishing Materials

Spray finished tile which is congenial to the local climate and natural features, superior in weather resistance and produces a subdued atmosphere suitable for a training institute will be used for finishing exterior walls. The roof will be a flat top, reinforced concrete roof constructed by the highly durable asphalt-waterproofed, concrete-retained external heat insulating and waterproofing method. For windows, local aluminum sash which has been remarkably improved in functional performance lately will be used in consideration of their ease of maintenance and watertightness. Since most of rooms will be air-conditioned and seldom used during night, it was judged unnecessary to provide window screen to keep out insects.

(2) Interior Finishing Materials

As each room will differ in nature, the rooms of the buildings will be divided into the following groups, and materials suitable to the required function of each group will be selected for interior finish.

Group A : As the rooms will be occupied at all times by the working staff, the finishing materials must be of a grade used for ordinary office rooms.

Office rooms, instructors' rooms, experts' rooms of each division belong to this category.

Group B : As these rooms will be used by many persons and/or for important purposes, finishing materials which are especially superior in durability and which give the impression of cleanliness are required.

Testing rooms, seminar rooms, language laboratory, etc. belong to this category.

Group C : As the rooms will be used primarily by executive personnel or by guests, finishing materials of higher grade than those used

for ordinary office rooms will be selected. IETC Director's room, Dep. Director's room, business contact room, and conference room belong to this Category.

Group D : Because of the nature of their purpose, it is especially important that these rooms excel in sound-absorption performance.

Auditorium, library, audio-visual teaching aid preparation, etc. belong to this category.

Group E : Since these may be considered partly as semi-outdoor public space, the finishing materials must withstand heavy use and assure ease of maintenance.

Entrance hall, corridor, porch, etc. belong to this category.

Group F : As water will be used, finishing materials which do not stain easily and are easy to wash must be selected.

Kitchen, pantry, pre-treatment room for food inspection, lavatory, etc. belong to this category.

Group G : As these are the equipment rooms, the materials must be highly durable and must not become the cause for producing excessive noise.

Machine room, electric room, etc. belong to this category.

Group H : Considerations must be given to diverse use and hauling-in of materials. The exhibitions training hall belongs to this category.

The following finishing materials will be selected for each of the above groups.

■ Finishing Materials

Group Name	Floor	Wall	Ceiling	Remarks
Group A	PVC Sheet	Painting	Rockwool Board	
Group B	PVC Sheet or Terrazzo tile	Painting	Rockwool Board, Asbestos Board Paint Finish	In case water is used on the upper floor, waterproofed veneer board paint finish
Group C	Pauquet Floor	Wood or Vinyl Leather	Rockwool Board	
Group D	Pauquet Floor	Painting or Acoustic Board	Rockwool Board	
Group E	Terrazzo tile or Granite stone	Spray tile	Painting (RC slab) or Wood	
Group F	Mozaic Tile	Tile	Waterproofed veneer board paint finish	
Group G	Hardner	Glass wool mat	Glass wool mat	
Group H	Mortar trowel	Wood and Asbestos board paint finish	Rockwool board	

4-3-3. Equipment Plan

Equipment to be granted and installed at this Center must be selected with particular attention to the following points.

1) Equipment of Appropriate Types and Levels

The equipment selected must be of a level suitable to the conditions in Indonesia, and they shall be selected by referring to the equipment of other similar local institutions and by taking into full account not only the target trainees, contents of curricula but the instructors and staff of IETC for whom the equipment must be easy to handle.

2) Effective Operation of Equipment and Conformity with the Technical Cooperation Programme

The required quantity of equipment and their layout shall be carefully planned upon closely examining the training system and contents of curricula so that the scheduled technical cooperation activities are not hampered in any way. At the same time, common use of the equipment shall be considered to the extent possible in order that they may be utilized effectively.

3) Consideration to Maintenance and After-Care

Every equipment, some of which are highly advanced, will be used continuously for a long period of time. The equipment, therefore, will be selected with emphasis *on after-care*. Those for which spare parts and expendables are readily procurable and local maintenance services are available shall be selected.

The equipment for this Center may be classified into the following categories.

- General Training Equipment
- Audio Visual Equipment
- Export Inspection Training Equipment
- Exhibition Training Equipment

(1) General Training Equipment

No.	Item	Q'ty (Pcs./Nos.)
1	Electric Typewriter	25
2	Word Processor (w/4 terminals)	1
3	Reproduction Machine	1 set
	· Collating Machine	(2)
	· Copier Machine	(4)
	· Scanner	(2)
	· Mimeographing Machine	(2)
	· Small Printing with Color Separate	
	- Plate Maker	(1)
	- 2-color offset press	(1)
	· Typesetting Machine	(1)
	· Book-binding Machine	
	- Paper Folder	(1)
	- Electric Stapler	(2)
	- Punch & Comb.	(1)
	- Paper Punch	(2)
	- Manual Paper Cutter	(1)
	- Guillotine Cutter	(1)
	- Layout Table	(2)
4	Mini Computer System (w/ Hardware, Software)	1 set
5	Vehicles	
	· Micro Bus	(1)
	· Wagon	(2)
	· Van	(1)
6	Communication Equipment	
	· Walkie-Talkie	(1)
	· Telex Machine	(1)

(II) Audio Visual Equipment

No.	Item	Q'ty (Pcs./Nos.)
1	Seminar Rm.-1 Video Projector Set · Video Projector · Screen · Video Player (1/2 inch, 3/4 inch) · Monitor TV · Speaker	1 set (1) (1) (2) (2) (2)
2	Sound System Set for Lecture · Amplifier · Microphone · Tapedeck · Player	1 set (1) (2) (1) (1)
3	Seminar Rm.-2 Video Projector Set · Video Projector · Screen · Video Player (1/2 inch, 3/4 inch) · Monitor TV · Speaker	1 set (1) (1) (2) (2) (2)
4	Sound System Set for Lecture · Amplifier · Microphone · Tapedeck · Player	1 set (1) (2) (1) (1)
5	L/L Rm. Language Learning System Set · Control Console · Student Booth Set (w/Recorder) · Video Projector · Screen · Video Player (1/2 inch, 3/4 inch) · Monitor TV	1 set (1) (20) (1) (1) (2) (2)
6	Auditorium Video Projector System · Video Projector	1 set (1)

No.	Item	Q'ty (Pcs./Nos.)
	· Screen	(1)
	· Video Player	(2)
	· Monitor TV	(4)
7	Sound System Set	1 set
	· Wireless Receiver	(1)
	· Wireless Microphone	(4)
	· Antenna	(2)
	· Amplifier	(1)
	· Microphone with Stand	(2)
	· Cassette Tape Deck	(1)
	· Speaker	(4)
8	Microphone System for Conference	1 set
	· Chairman Unit	(2)
	· Attendance Unit	(50)
	· Portable Tape Recorder	(2)
	· Control Unit	(2)
9	Projector System Set	1 set
	· 16mm Sound Projector	(1)
	· 35mm Sound Projector	(2)
	· Over Head Projector	(2)
	AV Production Room	
10	Editing System Set	1 set
	· Microphone	(2)
	· Audio Mixer	(1)
	· Cassette Deck	(2)
	· Record Player	(1)
	· Amplifier	(1)
	· Monitor Speaker	(2)
11	Portable Video Taking System Set	1 set
	· Video Camera	(1)
	· Tripod with Dolly	(1)
	· Portable VTR	(1)
	· Portable Monitor TV (9 inch)	(1)
	· Portable Battery Light Kit	(1) set
	· Microphone	(1)
	· AC Power Supply Unit	(1)
12	AV Studio System	1 set

No.	Item	Q'ty (Pcs./Nos.)
	· 3-tube Video Camera	(2)
	· Tripod with Dolly	(2)
	· Camera Control Unit	(2)
	· <i>Monochrome Viewfinder</i>	(4)
	· Colour video Monitor (20 inch)	(1)
	· Microphone	(3)
	· <i>Lighting Set</i>	(1) <i>set</i>
	· AC Power Supply Unit	(1)
	· R/W Video Camera	(1)
	· <i>Special Effect Generator</i>	(1)
	· Wire Pattern Extender	(1)
	· Universal Chroma Keyer	(1)
	· <i>Portable Monitor TV</i>	(4)
	· Waveform Monitor	(1)
	· Vectorscope	(1)
	· Head Set	(4)
	· Video Recorder (3/4 inch)	(2)
	· Monitor TV (1/3 inch)	(2)
	· <i>Editing Control Unit</i>	(1)
	· Time Base Corrector	(1)
	· 8-channel audio Mixer	(1)
	· Headphone	(1)
	· Cassette Deck	(1)
	· Compact Disk Player	(1)
	· Amplifier	(1)
	· Portable Monitor Speaker	(2)
	· <i>Title Composer</i>	(1) <i>set</i>
	· Video Cassette Tape	(100)
	· Audio Casette Tape	(100)
	· Filmchain Multiplexer (inc. Slide Projector, Film Projector, etc.)	(1) <i>set</i>

(III) Export Inspection Training Equipment
 (A) Furniture, Wood-Rattan Product

1. Furniture Testing Equipment

No.	Item	Q'ty (Pcs./Nos.)
1	10 - Ton Universal Testing Machine	1
2	Furniture Testing Machine	1
3	Water Content Meter (For wood)	5
4	Electric oven dryer (Thermostatic oven)	2
5	Wooden Electric Power Tools (Saw, Planer, Sander, Doril)	5 sets

2. Testing Apparatus for Paints

No.	Item	Q'ty (Pcs./Nos.)
1	Salt Sprai Tester	1
2	Pencil Scratch Tester	1
3	Adhesion Tester	1
4	Cross - Cut Tester	1
5	Portable thickness Tester	5
6	Du-Pont's Paint - film impact Tester	1
7	Oil bubble Viscometer	2
8	Cross - Cut Guide	10
9	Rotary abrasion Tester	1
10	Hygro meter	5
11	Gloss meter	1
12	Standard lighting Glove (lighting Box)	1
13	Lux meter	2
14	Assorted glass cylinder	5
15	Air compressor for Painting with Spray and filter	1

3. Testing Apparatus for Rattan Products

No.	Item	Q'ty (Pcs./Nos.)
1	Water content Mater	5
2	Electric Oven dryer (Max. T. 150°C)	2
3	Electric Power Tools (Saw, Planer, Sander, Doril, Other)	5 sets
4	Hygro Meter	5
5	Cross-Cut Guide	10
6	Portable Thickness Tester	5
7	Push/ Pull Scall (0~30 Kg)	2
	Push/ Pull Scall (0~100 Kg)	2
8	Laboratory Tables (Center)	4
	Laboratory Tables (Slide)	6
	Sink Unit	1
9	Assorted Glass Cylinders	5
10	Stainless steel vats	10
11	Storage Cabinets for equipment and chemicals	5

4. Tester for Packaging Materials

No.	Item	Q'ty (Pcs./Nos.)
1	Mullen's bursting Tester	1
2	Bending Tester for Paperboard	1
3	Sponge Compression Tester	1
4	Abrasion fastness Tester	1
5	Film welder	1
6	Strapping tools	5
7	Static Compression Press (Capacity, 10 ton, table size 1,000mm×1,000mm)	1
8	Fork-lift (capacity, 1 ton, manual type)	1
9	Small Revoluting Drum	1
10	Pendulum for testing tearing of cartoons, Papers and Palstics	1
11	Hand burners (for LP-Gas)	3
12	Barance (Plat form type, capacity 1 ton)	1
13	Hist Crane (capacity 2 ton, roof seting type)	1
14	12 point Transmometer with recorder 0°C~200°C	1

5. Common Equipment

No.	Item	Q'ty (Pcs./Nos.)
1	Enlargement Color TV System	3
2	Optical Microscope (Stereoscopic)×120	5
3	Cameras (Camera, Strobe light and tripod)	2
4	Electronic thermometer with Recorder (Max. 300°C)	2
5	Stroboscope for revolution measurement (Max. 3,000 RPM)	2
6	Balance (Electronic type 5,000g Capacity)	2
7	Balance (Electronic type 5,000g capacity)	2
8	Balance (100 Kg capacity)	1
9	Standard Unit of weights (1g~500g), (1Kg~10Kg) (10mg, 20mg, 50mg, 100mg, 200mg, 500mg)	2 sets
10	Thermometer (portable type)	5
11	Thermometer (mercury type)	10
12	Stopwatch (Digital, 1/100 sec.)	5
13	Volt meter (AC. 0~600 volt)	2
14	Ampere meter (AC. 0~100 A)	2
15	Circuit Tester (Volt, Ampere, ohm meter)	2
16	Digital type multimeter	2
17	Convex ruler (5m and 2m)	20
18	Vernier caliper (500 mm)	10
19	Vernier caliper (300 mm)	10
20	Vernier caliper (150 mm)	10
21	Micrometer (25~50 mm)	10
22	Micrometer (0~25 mm)	10
23	Thickness guage (dial type) 5 mm	5
24	Thickness guage (dial type) 25 mm	5
25	Push/ Pull scall (0~30 Kg)	2
26	Push/ Pull scall (0~100 Kg)	2
27	Hand tools for wooden work	5 sets
28	Vacuum type Dust Collector	2
29	Laboratory tables	6
30	Low temperature stocker (0.25 m ³)	2
31	Black board with caster	5
32	Timer (Aram)	5
33	Barometer	5

B) Textile-Garment

1. Textile Testing and Inspection

No.	Item	Q'ty (Pcs./Nos.)
1	Elmendorf tearing tester	1
2	Mullen's bursting tester	1
3	ICI pilling tester	1
4	Tensile strength tester	1
5	Yarn twist tester	1
6	Refrigerator	1
7	Standard hydrometer	1 set
8	Carbon fade-ometer	1
9	Xenon fade-ometer	1
10	Launder-ometer	1
11	Crock meter	1
12	Electronic balance digital (0.1 mg~abt. 200g)	1
13	Electronic balance digital (0.1 mg~abt. 300g)	1
14	Electronic balance digital (5 mg~abt. 10 Kg)	1
15	Hot air oven	2
16	Hot plate	2
17	Water bath	1
18	Handy aspirator	2
19	Perspiration meter	1
20	pH meter	1
21	Shaker	1
22	CIE D65 light source	1
23	Washing machine with dryer	1
24	Portable sewing machine	1
25	Microscope with camera and TV monitor	1
26	Electric steam iron	1
27	Drying oven for glasswares	1
28	Soxhlet extractor	1
29	Handy timer with alarm	5
30	Draft chamber	1
31	Laboratory table with sink	3
32	Cabinet for chemicals	2
33	Table for testing equipment	7
34	Whiteboard with caster	2
35	Scorch tester (Dry heating device for hot pressing)	1
36	Rubbing tester	1

No.	Item	Q'ty (Pcs./Nos.)
37	Cutters for sample preparation	1
38	Dummy bust (Manikin for garment inspection)	6
39	Audio-visual equipment (Video projection equipment)	1 set
40	Audio-visual training material	1 set
41	Overhead projector	1
42	35mm slide projector	1
43	Auto still	1
44	Fabric and garment inspection table	1
45	Pocket lux meter	1
46	Fabric shrinkage tester with shrink marker	1
47	Digital thermometer (Surface thermometer)	1
48	Thermo-hygrograph	1
49	Air conditioning equipment	1
50	Wash cylinder	1
51	Shrinkal (ruler for shrinkage test)	1
52	Fluorescence detector	1
53	Gray scale	6
54	Blue scale	5
55	Various glasswares	1 lot
56	Magnetic stirrer	1
57	Vernier calipers	2
58	Electronic calculator	5
59	Torsion scale	1
60	Locker (for keeping fabric and garment sample)	1
61	Bookshelves	1
62	Infrared spectrophotometer	1
63	Replica for seam puckering	1 set
64	Replica for wash & wear, with apparatus for visual assessment	1 set
65	Spray tester	1
66	Sink Unit	2

2. Textile Packing Conditions

No.	Item	Q'ty (Pcs./Nos.)
1	Water penetration meter	1
2	Impact resistance tester for film	1
3	Cooling water bath	1
4	Paper bending apparatus	1
5	Water vapour permability tester	1
6	Film thickness gauge	1
7	Compression tester for corrugate board	1

C) Rubber · Rubber Product

No.	Item	Q'ty (Pcs./Nos.)
1	Load-cell type tensile testing H/C	2
2	Curing press with mould	2
3	Specimen cutter with dies	1
4	Test tube aging tester	1
5	Mixing roll 6"	1
6	Mixing roll 10"	1
7	William abrasion tester	1
8	De-Matia flex-cracking tester with cutting device for cut growth test	1
9	Conical disk theometer	2
10	Wallace rapid plastimeter with cutter	2
11	Honey viscometer	2
12	Muffle furnace	1
13	Balance 5Kg	1
14	Balance 1Kg	1
15	Balance 200g	1
16	Hardness tester (IRH)	1
17	Shieve holder with shieves	10 sets
18	Ultrasonic cleaner	1
19	Lovibond colormeter with mould	1
20	Water destilling apparatus	1
21	Electric Bunsen	10
22	Thickness gauge	2
23	Sheet gauge	2
24	Dryer for glassware	1
25	Ventilator for mixing roll	2

No.	Item	Q'ty (Pcs./Nos.)
26	Ventilator for weighing C/B	1
27	Resilience tester	1
28	Ozone weatherometer with specimen holders	1
29	Compressor for mooney & rheometer	1
30	Oil pressure pump for presses	2
31	Kinds of glassware	1 lot
32	Cutlery	1 lot
33	Ball-type softening point tester	1
34	Sheet gauge for film	1
35	Drying oven (200°C)	1
36	Slide projector 35mm	1
37	Overhead projector A4	1
38	Screen	1
39	Buffing machine, Slicing machine	1 each
40	Klaxon stirrer	1
41	Interval Timer	1
42	Analytical balance	2
43	Laboratory Table (Center)	7
44	Laboratory Table (Side)	12
45	Sink Unit	3
46	Draft Chamber	1

D) Frozen Food and Canned Food Testing

No.	Item	Q'ty (Pcs./Nos.)
1	Fume Hood	1
2	Atomic Absorption Spectrophotometer	1
3	Air Compressor	1
4	Spectrophotometer	1
5	Water Activity Test Apparatus	1
6	Muffle Furnace	1
7	Centrifuge	1
8	Mercury Analyzer	1
9	Deep Freezer	1
10	Shaker	1
11	Rotary Evaporator	1
12	Cooling Incubator	1
13	Drying Oven	1

No.	Item	Q'ty (Pcs./Nos.)
14	Magnetic Stirrer with Hot Plate	2
15	pH Meter	1
16	Water Bath	2
17	Soxhlet Extractor	20
	Receiver for Extractor	30
18	Conway Unit	100
19	Micro Burets, Horizontal Type	5
20	Kjeldahl Digesting Apparatus	2
	Kjeldahl Distillation Apparatus, Micro	2
	Kjeldahl Distillation Apparatus, Semi-Micro	2
	Kjeldahl Titration Apparatus	2
21	Autoclave	1
22	Clean Bench	1
23	Drying Sterilizer	1
24	Colony Counter	2
25	Shaking Bath, Constant Temperature	1
26	Cooling Incubator	1
27	Incubator	1
28	Biological Microscope, Brightfield	2
29	Coliform Constant Temp. Incubator Bath	1
30	Homogenizer Stomacher	1
31	Sterilizing Bag, Polyethylene	1000
32	Anaerobic Jar	2
33	Anaerobic Jar	2
34	Needle Holder	5
35	Platinum Needle	20 cm
36	Homogenizer	1
37	Culture Tube	100
38	Refractometer (0~32%)	5
39	Refractometer (28~62%)	2
40	Refractometer (45~82%)	2
41	Thermometer, 0~100°C	10
42	Thermometer, 0~200°C	5
43	Thermometer, -5~50°C	10
44	Thermometer Digital	2
45	Balance	2
46	Balance, Top-pan	1
47	Balance, Top-pan	2
48	Balance for Centrifugal Tube	1

No.	Item	Q'ty (Pcs./Nos.)
49	Platform Scale	1
50	Dessicator	5
51	Petri Dish, 150 dia.	5
52	Petri Dish, 90 dia.	300
53	Beaker, 100ml	100
54	Beaker, 300ml	100
55	Beaker, 500ml	100
56	Beaker, 1000ml	25
57	Beaker, 2000ml, Polyethylene	25
58	Measuring Cylinder, 100ml	20
59	Measuring Cylinder, 200ml	20
60	Measuring Cylinder, 500ml	20
61	Measuring cylinder, 1000ml	10
62	Measuring Cylinder, 500ml, Polyethylene	10
63	Measuring cylinder, 1000ml	10
64	Graduate, Metric Scale, 10ml	10
65	Graduate, Metric Scale, 20ml	10
66	Pipet, Volumetric, 1ml	50
67	Pipet, Volumetric, 5ml	50
68	Pipet, Volumetric, 10ml	50
69	Pipet, Volumetric, 15ml	50
70	Pipet, Volumetric, 25ml	50
71	Pipet, Volumetric, 50ml	50
72	Pipet, Measuring Type, 1ml	200
73	Pipet, Measuring Type, 2ml	50
74	Pipet, Measuring Type, 5ml	50
75	Pipet, Measuring Type, 10ml	50
76	Pipet, Komagome, 5ml	100
77	Pipet, Komagome, 10ml	100
78	Pipet Stand	2
79	Flask, Erlenmeyer, 50ml	50
80	Flask, Erlenmeyer, 100ml	50
81	Flask, Erlenmeyer, 200ml	50
82	Flask, Erlenmeyer, 300ml	50
83	Flask, Erlenmeyer, 100ml, w/stopper	20
84	Flask, Erlenmeyer, 300ml, w/stopper	20
85	Flask, Volumetric 50ml	50
86	Flask, Volumetric 100ml	50

No.	Item	Q'ty (Pcs./Nos.)
87	Flask, Volumetric 200ml	20
88	Flask, Volumetric 250ml	20
89	Flask, Volumetric 500ml	10
90	Flask, Volumetric 1000ml	5
91	Test Tube, 18 dia. × 180mm	600
92	Test Tube, 12 dia. × 120mm	200
93	Test tube Stand, 12 dia. × 50 pcs.	2
94	Test tube Stand, 18 dia. × 50 pcs.	4
95	Aluminum Cap, for 18 dia. mm	200
96	Aluminum Cap, for 12 dia. mm	100
97	Dispenser, Amber, 20cc	2
98	Funnel Separatory, 100ml	20
99	Funnel Separatory, 250ml	30
100	Stand for Funnel Separatory	2
101	Stand for Funnel Separatory	2
102	Funnel, 50mm dia.	30
103	Funnel, 90mm dia.	30
104	Funnel Stand	5
105	Automatic buret, 25ml, w/Stop Cock	3
106	Automatic buret, 50ml, w/Stop Cock	2
107	Stand for automatic Buret	2
108	Weighing Container, 40mm dia., Glass	50
109	Sample Container, 250ml	100
110	Dropping Bottle, Square, 60ml	5
111	Crucible, 30ml	20
112	Reagent Bottle, 250ml	5
113	Reagent Bottle, 500ml	10
114	Reagent Bottle, 1000ml	10
115	Reagent Bottle, 1000ml, Polyethylene	10
116	Reagent Bottle, 2000ml, Polyethylene	10
117	Mortar Set, 150mm dia.	5
118	Mortar Set, 90mm dia.	5
119	Spoon, 150mm length	30
120	Spoon, 210mm length	30
121	Micro Spatula, 180mm	5
122	Crucible tong	5
123	Stainless Pipe for Air Piping	1
124	Glass rod, 3.5 and 10mm dia.	5 each

No.	Item	Q'ty (Pcs./Nos.)
125	Alcohol Lamp	5
126	Burner, Bunsen	5
127	Forceps	10
128	File, Flat type, 125mm	3
129	Scissor	10
130	Washing Bottle, Teflon, 500ml	20
131	Spout, for Komagome 10ml	30
132	Spout, for Komagome 5ml	30
133	Pipetter, 1~10ml	10
134	Stirring glass rod, 3mm dia.	50
135	Spray, 500ml	2
136	Rubber Bulb	5
137	Rubber Stopper, No. 6, 8 and 10	25 each
138	Cork borer	2
139	Asbest, with Wire, 180mm dia.	20
140	Beaker tong, Steel Band Type	5
141	Support, Tripod Base, 200mm length	5
142	Support, Tripod Base, 130mm length	5
143	Working gloves	50
144	Extraction thimble, 28mm dia. 25 pcs/box	5 boxes
145	Filter Paper, qualitative, 110mm dia. 100 pcs/box	10 boxes
146	Filter Paper, qualitative, 150mm dia. 100 pcs/box	10 boxes
147	Filter Paper, qualitative, 185mm dia. 100 pcs/box	10 boxes
148	Paraffin Paper, 90×90mm, 100 pcs/box	1 box
149	Paraffin Paper, 120×102mm, 100 pcs/box	3 boxes
150	ASTM Standard Sieve, w/receiver	1
151	Devine Magnifier	1
152	Caliper, SUS 200mm length	5
153	Micrometer	5
154	Vacuum gauge	2
155	String Saw	5
156	String for Saw	1 gross
157	Edrand Can Opener	2
158	Can Percussion Rod	5
159	Hand Can Tester	1
160	Electric Drill	2
161	Testing Dish	30
162	Spoon, Large	20

No.	Item	Q'ty (Pcs./Nos.)
163	Fork	20
164	Glass Cup	20
165	Tray, Stainless Steel	10
166	Electric Oven	1
167	Microwave Oven	1
168	Slicer	1
169	Chopping board	3
170	Kitchen Knife, Stainless Steel	5
171	Frying Pan, 300~400mm dia.	2
172	Cooking Pan, 300~400mm dia.	2
173	Steamer, Metal	1
174	Cooler box, 10 lit.	5
175	Gas Stove	2
176	Small Type Electric Saw	1
177	Laboratory Table (Center)	6
178	Laboratory Table (Side)	15
179	Sink Unit	5
180	Balance Table	2
181	Water Distilling Apparatus	1
182	Ultrasonic Washer	1
183	Ultrasonic Pipette Washer	1
184	Pipet Washer	1
185	Pipet Storage Box	2
186	Storage Cabinet	2
187	Drying Shelf	1
188	Refrigerator	2
189	Black Board with Caster	2
190	Sealer	1
191	Labo Cart	3
192	Carrier	1
193	Washing Brush for Test Tube	10
194	Washing Brush for Bottle	10
195	Washing Brush for Bottle	10
196	Washing Brush for Beaker	10
197	Washing Brush for Buret	10
198	Washing Brush for Pipet	10
199	Scrubbing Brush, Rubber Sponge	20

No.	Item	Q'ty (Pcs./Nos.)
200	Trichloroacetic Acid	2
201	Hydrochloric Acid	5
202	Barium Hydroxide	1
203	Ethanol	10
204	Methyl Red	2
205	Methylene Blue	1
206	Calcium Carbonate	1
207	Uaseline, White	1
208	Paraffin, Liquid	1
209	Formalin	2
210	Magnesium Acetate	2
211	Soda Lime	2
212	Sea Sand	2
213	Sulfuric Acid	5
214	Sodium Hydroxide	3
215	Ethyle Ether	10
216	Silica Gel	5
217	Gaspak Catalyst	5
218	Sodium Dihydrogenphosphate	2
219	Sodium Chloride	2
220	Copper (II) Sulfate	1
221	Sulfamic Acid	2
222	Potassium Sulfate	2
223	Bromothymol Blue	1
224	Phosphate buffered Saline	2 each
225	Perchloric Acid	1
226	Potassium Carbonate	2
227	Ammonia Water	2
228	Potassium Parmanganate	2

No.	Item	Q'ty (Pcs./Nos.)
229	Sodium Thiosulfate	2
230	Ammonium Sulfate	2
231	Starch	1
232	Na ₂ C ₄ O ₇	1
233	Na ₂ B ₄ O ₇	1
234	Standard Plate Count Agar	5
235	Desoxycholate Agar	5
236	Eosin Methylene Blue Agar	2
237	Lactose Broth	5
238	Agar (for stant)	2
239	E.C. Broth	3
240	Nutrient Broth	3
241	Salt Egg York Agar Base	3
242	Brain Heart Infusion Broth	3
243	Rabbit Plasma (dried), for coagulase test	10
244	Hajna Tetrathionate Broth	3
245	SPotassium Iodide	1
246	Iodine	1
247	DHL Agar	2
248	TSI Agar	3
249	SIM Agar	3
250	LIM Agar	5
251	Phenylalanine Malonate Broth	5
252	Somatic Antiserum (Mixed Oantiserum and VI)	5
253	Salt Polymyxim Broth	5
254	Cytochrome Oxdase Test Strip	5
255	Gram Strainer No. 1	2
256	Monsur Pepton Water	5
257	Alkaline Pepton Water	3
258	TSBS Agar	3
259	Vibrio Agar	3
260	Somatic Antiserum	3
261	I.D Test (E.B 20)	
	Biochemical Test Kit	2
	Biochemical Reagent	4
262	3.5% Potassium Tellurite (for Monsur Pepton Water)	2

(IV) Exhibition Training Equipment

No.	Item	Q'ty (Pcs./Nos.)
1	Exhibition Modules (Consisting of 50 Booths with Carpets, Spotlights, etc.)	1 lot
2	Negotiation Table	80
3	Negotiation Chair	160
4	Mannequins (Full Body)	25
5	Mannequins (Half Body)	15
6	Dress Rack	15
7	Abstracta System	30 sets
8	Knockdown Stage	1 set
9	Forklift (Manual) and Hand Trolley (1 each)	1 set
10	Lighting Panel/Supporting Materials	3 sets
11	Drawing Machine Set	4 sets
12	Rolling Tower	1
13	Vacuum Cleaner	2
14	Floor Polisher	2

(V) Training Fittings

No.	Item	Q'ty (Pcs./Nos.)
1	Seminar Desk (Seminar Rm.-Auditorium)	140
2	Lecturer's Desk (Seminar Rm.)	5
3	Seminar Chair	160
4	Lecturer's Chair	6
5	Storage Cabinet (AV Teaching Material Rm., Expert's Rm., etc.)	10
6	Work Table (AV Teaching Material Rm.)	2
7	Stool (AV Studio Control Rm., Printing Rm.)	16
8	Desk (Director Rm., D-Director Rm., Expert's Rm., etc.)	14
9	Chair (Director Rm., D-Director Rm., Expert's Rm., etc.)	14
10	Book Cabinet (Director rm., Expert's Rm.)	6
11	Meeting Table (Director Rm., D-Director Rm., Team Leader's Rm., Business Contact Rm.)	9
12	Meeting Chair (Director Rm., D-Director Rm., Team Leader's Rm.)	45
13	Meeting Table & Chair (Meeting Rm.)	2 sets
14	Desk (Lecturer's Rm.)	26
15	Chair (Lecturer's Rm.)	26
16	Partition (Expert's Rm., Lecturer's Rm., Business Contact Rm.)	12
17	Book Shelves (Library)	20
18	Counter (Lecturer's Rm.)	1
19	Reading Table (Library)	6
20	Library Counter (Library)	1
21	Work Table (Library, Printing Rm.)	4
22	File Cabinet (Library)	3
23	Microfilm Cabinet (Library)	2
24	Magazine Rack (Library)	2
25	Newspaper Rack (Library)	2
26	Card Catalogue Cabinet (Library)	1
27	Reading Chair (Library)	20
28	Dining Table (Cafeteria)	25
29	Dining Chair (Cafeteria)	100
30	Storage Rack (Laboratory)	6
31	Storage Cabinet (Laboratory)	21
32	Stool (Inspection Lab.)	60
33	Computer Rack	1
34	Floppy Disk Cabinet	1

No.	Item	Q'ty (Pcs./Nos.)
35	Dining Table (Dining Rm.)	13
36	Dining Chair (Dining Rm.)	52
37	Bed (Clinic, Superint. Rm., Bed Rm.)	76
38	Study Desk (Study Rm., Bed Rm.-A)	54
39	Study Chair (Study Rm., Bed Rm.-A)	54
40	Conference Table (Bed Rm.-B)	8
41	Conference Chair (Bed Rm.-B)	48
42	Locker (Bed Rm.)	72