ANNEX

MINUTES OF DISCUSSIONS
ON
THE CONSTRUCTION PROJECT
FOR
THE PHILIPPINE TRADE TRAINING CENTER
IN
THE REPUBLIC OF THE PHILIPPINES

At the request of the Government of the Republic of the Philippines for grant aid for the Construction Project for the Philippine Trade Training Center (hereinafter referred to as "the Project"), the Government of Japan decided to conduct a Basic Design Study on the Project and entrusted the study to the Japan International Cooperation Agency (hereinafter referred to as "JICA"). JICA sent the Basic Design Study Team headed by Mr. Hiroyoshi IHARA, Special Assistant for Grant Aid, Grant Aid Division, Economic Cooperation Bureau, Ministry of Foreign Affairs from July 31 to August 20, 1986.

The team carried out field survey, had a series of discussions and exchanged views with authorities concerned of the Government of the Republic of the Philippines.

As the result of the study and discussions, both parties have agreed to recommend to their respective Governments to examine the results of the survey attached herewith towards the realization of the Project.

Manila, August 14, 1986

Mr. HIROYOSHI IHARA
Team Leader
Japanese Study Team
JICA

Mr. RAUL BONCAN
Deputy Minister for
International Trade
Ministry of Trade and Industry

ATTACHMENTS

1. The objective of the Project is to develop manpower through training in the fields of international trade, export inspection and exhibition of exportable Philippine products in order to contribute to the trade promotion of the Republic of the Philippines.

2. The outline of the training courses of the Philippine Trade Training Center is shown in Annex 1.

3. The proposed site of the project is prepared by the Goverrment of the Philippines as attached in Annex-2.

4. The International Trade Group of the Ministry of Trade and Industry of the Government of the Philippines is the implementing body of the Project.

5. The Japanese Basic Design Study Team will convey to the Government of Japan the desire of the Government of the Philippines that the former takes necessary measures to cooperate in implementing the Project and provides necessary facilities and equipment as listed in Annex-3 within the scope of Japanese economic cooperation in grant form.

6. The Government of the Philippines understood Japan's Grant Aid system as explained by the Team which includes in principle the use of a Japanese consultant firm and a Japanese general constructor for implementation of the Project.

7. The Government of the Philippines will take necessary measures as listed in Annex-4 on the condition that Grant Assistance by the Government of Japan is extended to the Project.

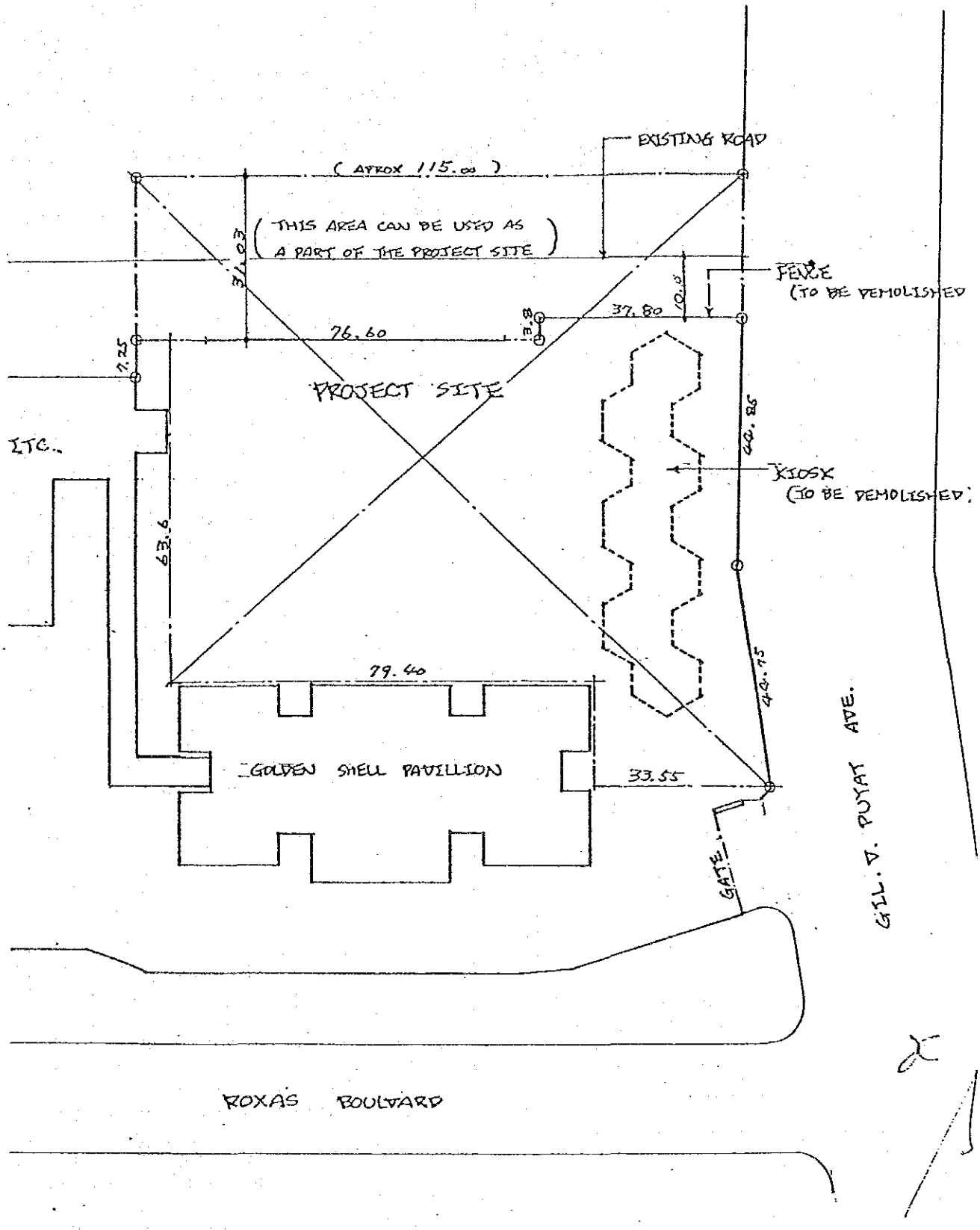
Annex-1

OUTLINE OF THE TRAINING COURSES OF THE TRADE TRAINING CENTER

A. Trade Training	B. Inspection Training
1-1 Trade Business Course Basic Training for new and Potential Exporters I	1-1 Wooden Products course Furniture Inspection and Testing
1-2 Trade Business Course Basic Training for New and Potential Exporters II	
1-3 Trade Business Courses Advanced Training for Exporters	2-1 Garments and Textile Course Basic Inspection
1-4 Trade Business Course Specialized Market Product Specific Export Promotion	2-2 Garments and Textile Course Advanced Inspection
2-1 Trade Management Course Training for Officials and Staff	
2-2 Trade Management Course Trainers Training	3-1 Food Course Food Product Inspection
3-1 Business Language Training Course Level-1	3-2 Food Course Food Process Inspection
3-2 Business Language Training Course Level-2	
3-3 Business Language Training Course Level-3	C. Exhibition Training
	1-1 Exhibition Management Course How to Organize an International Exhibition
	1-2 Exhibition Management Course Exhibition and Display Design
	1-3 Exhibition Training Course How to Participate in International Fairs Abroad

PROJECT SITE

ANNEX 2



NOTE: SITE AREA IS APROX. 9,800 sq.m.

ANNEX 3

Items required by the Goverment of the Philippines whose cost will be borne by the Goverment of Japan.

A. Building Facilities

- Seminar Rooms
- Language Laboratory
- Inspection and Testing Laboratories
- Multi-Purpose Room
- Training Materials Development Room
- Library
- Cafeteria
- Office Rooms

B. Equipment

- Trade Training Equipment
- Inspection and Testing Training Equipment
  (for Food, Garments and Textile, and Wood Furnitures)
- Exhibition Training Equipment
- Printing and Reproduction Equipment
- AV Production Equipment
- Micro-Computer System
- Vehicles

Following arrangements will be required to be taken by the Government of the Philippines.

1. To carry out site preparation such as clearing, filling, levelling and demolishing the existing facilities before commencement of construction works.

2. To provide facilities for distribution of electricity, water supply, drainage, telephone lines and other incidental facilities to the proposed site.

3. To ensure prompt unloading, tax exemption, customs clearance at ports of disembarkation in the Philippines and prompt internal transportation therein of the products purchased under the grant.

4. To exempt Japanese nationals from customs duties, internal taxes and other fiscal levies which may be imposed in the Philippines with respect to the supply of the products and services under the verified contracts.

5. To accord Japanese nationals whose services may be required in connection with the supply of the products and the services under the verified contract such facilities as may be necessary for their entry into the Philippines and stay therein for the performance of their work.

6. To maintain and use properly and effectively the facilities constructed and equipment purchased under the grant.

7. To undertake incidental civil works such as gardening, fencing gates, constructing guard house, and exterior lighting, if needed.

8. To provide general furniture required for the administrative purposes except those for the training purposes.

II Minutes of Discussion (Explanation of Draft Final Report)

MINUTES OF DISCUSSIONS
ON THE
DRAFT REPORT OF THE BASIC DESIGN STUDY
ON THE
CONSTRUCTION PROJECT
FOR THE
PHILIPPINE TRADE TRAINING CENTER
IN THE REPUBLIC OF THE PHILIPPINES

At the request of the Government of the Republic of the Philippines for grant aid for the Construction Project for the Philippine Trade Training Center (hereinafter referred to as "the Project"), the Government of Japan decided to conduct a Basic Design Study on the Project and entrusted the study to the Japan International Cooperation Agency (hereinafter referred to as "JICA"). JICA has sent the Basic Design Study Team headed by Mr. Hiroyoshi IHARA from July 31th to August 20th,1986. The Mission carried out a field survey and had a series of discussions with the authorities concerned of the Government of the republic of the Philippines.

As the result of the survey and discussions, JICA prepared a Draft Final Report on the Study and dispatched a Mission to explain and discuss the Report starting from October 30th to November 8th, 1986.

Both parties had a series of discussions on the Report and have agreed to recommend to their respective Governments that the major points of understanding reached between them, attached herewith, should be examined towards the realization of the Project.

Manila, November 7th, 1986

江國 実
MR. MINORU EKUNI
Team Leader
Japanese Study Team
JICA

MORIYA MIYAMOTO
Witness

MR. ANTONIO R. REYES
Assistant to the Minister
Ministry of Trade and Industry

MINA T. GABOR
Witness

ATTACHMENTS

1. The Philippines side principally has agreed to the basic design proposed in the Draft Final Report (with minor but appropriate alterations in design, facilities and equipment, mutually agreed upon to be incorporated in the Final Report).

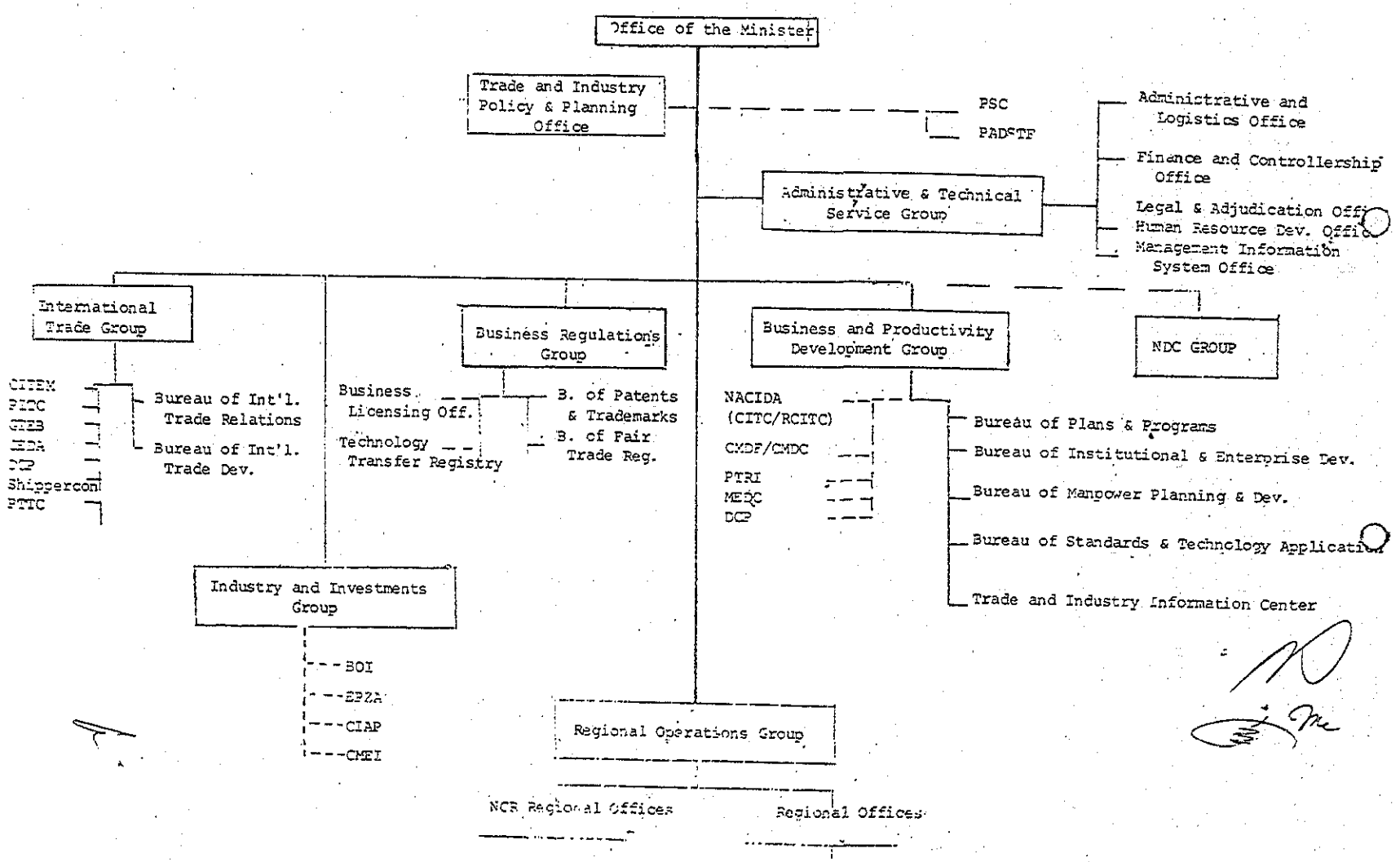
2. The Final Reports (10 copies in English) on the Project will be submitted to the Philippines side by the end of January 1987.

3. The International Trade Group of the Ministry of Trade and Industry of the Government of the Philippines is the implementing body of the Project. The position of PTTC within the International Trade Group has been decided by the Ministry of Trade and Industry as attached in Annex 1.

4. The Philippines side understood the system of Japan's Grant Aid Programme and confirmed the arrangements to be taken by the Government of the Philippines for the realization of the Project as agreed upon in the "Minutes of Discussions" dated August 14, 1986.

5. The Government of the Philippines will release the necessary budget at the proper time in conjunction with the Japanese side construction upon the signing and exchanging of Note for the project by both governments.

Ministry of Trade and Industry
Proposed Overall Structure
After September 28 meeting with PCGR



III Member of the Basic Design Study Team

III-1 Basic Design Study (July 31 - August 20, 1986)

Mr. Hiroyoshi IHARA	Team Leader	Ministry of Foreign Affairs, Special Assistant for Grant Aid, Grant Aid Division, Economic Cooperation Bureau
Mr. Tamaichi MATSUMOTO	Trade Training and Exhibition Training	Japan International Trade Organization, Senior Economist
Mr. Hitoshi MATSUMOTO	Inspection Training (Food)	Ministry of Agriculture Forestry and Fisheries, Senior Inspector, Division of Marine Products, Tokyo Agriculture and Forestry Products Inspection Institute
Mr. Satoshi TOBITA	Inspection Training (Industrial Material)	Ministry of International Trade and Industry, Economic Cooperation Division, International Trade Policy Bureau
Miss Nobuko KAYASHIMA	Project Coordinator	JICA Grant Aid Planning and Survey Department
Mr. Shotaro HAYASHIYA	Project Manager Architect	Yamashita Architects and Engineers, Inc.
Mr. Takanori TANAKA	Architect	"
Mr. Tsukasa TAMAKI	Facilities Engineer	"
Mr. Seishi ASAKURA	Equipment Engineer (Trade Training)	"
Mr. Koji SATO	Equipment Engineer (Inspection Training)	"

III-2 Explanation of Draft Final Report (October 30 - November 8, 1986)

Mr. Minoru EKUNI	Team Leader	Ministry of Foreign Affairs, Grant Aid Division, Economic Cooperation Bureau
Mr. Shotaro HAYASHIYA	Project Manager Architect	Yamashita Architects and Engineers, Inc.
Mr. Seishi ASAKURA	Equipment Engineer (Trade Training)	"

IV Survey Schedule

IV-1 Basic Design Study (July 31 - August 20, 1986)

1.	Jul.	31 (Thu)	Lv. Tokyo (Mr. Ihara, Ms. Kayashima, Mr. Hayashiya, Mr. Asakura) Ar. Bangkok
2.	Aug.	1 (Fri)	Survey of the Trade Training Center in the Kingdom of Thailand
3.	"	2 (Sat)	Data arrangement. Team meeting
4.	"	3 (sun)	Lv. Bangkok (Mr. Ihara, Ms. Kayashima, Mr. Hayashiya, Mr. Asakura) Ar. Manila Lv. Tokyo (Messrs. T. Matsumoto, H. Matsumoto, Tobita, Tanaka, Sato) Ar. Manila Team meeting
4.	"	4 (Mon)	Courtesy meeting at the Embassy of Japan and JICA office Courtesy call on NEDA Courtesy call on CITEM and schedule meeting Submission of questionnaires and Incepstion report Survey of the proposed construction site Team meeting
6.	"	5 (Tue)	Meeting with PTTC committee Meeting with PNCC Team meeting
7.	"	6 (Wed)	Meeting with PTTC committee Local construction situation survey Lv. Tokyo (Mr. Tamaki) Ar. Manila Team meeting
8.	"	7 (Thu)	Meeting with PTTC committee Survey of local construction situation and infrastructure Team meeting
9.	"	8 (Fri)	Survey of similar facilities and FDC Survey of local construction situation and infrastructure Team meeting
10.	"	9 (Sat)	Survey factories of related industry Team meeting
11.	"	10 (Sun)	Data arrangement Survey of the proposed construction site
12.	"	11 (Mon)	Meeting with PTTC committee Meeting with MGC

13.	"	12 (Tue)	Meeting with PTTC committee Meeting with PLDT Meeting with MERALCO Survey of similar facilities
14.	"	13 (Wed)	Meeting with PTTC committee on the contents of meetings Survey of local construction situation Survey of similar facilities
15.	"	14 (Thu)	Meeting with PTTC committee on the contents of meetings Meeting on contents of the facility Report to the Embassy of Japan and JICA office Signing of the Minutes of Discussions
16.	"	15 (Fri)	Lv. Manila (Mr. Ihara, Mr. T. Matsumoto, Mr. H.Matsumoto, Mr. Tobita, Ms. Kayashima, Mr. Asakura, Mr. Sato) Ar. Tokyo Survey of local construction situations (local architectural firm, grant aid facility, local material supplyer)
17.	"	16 (Sat)	Survey of local construction situations (material exhibition, local construction company local material supplyer, grant aid facility)
18.	"	17 (Sun)	Data arrangement Survey of local buildings' grade
19.	"	18 (Mon)	Confirmation of soil survey points Survey of local construction situations (building permit, local QS, local material supplyer, grant aid facility) Meeting with PTTC committee (additional questions)
20.	"	19 (Tue)	Meeting with PTTC committee (answer to questionnaires) Survey of local construction situations (local construction company, local architectural firm, local QS)
21.	"	20 (Wed)	Courtesy call on the Embassy of Japan and JICA office Lv. Manila (Messrs. Hayashiya, Tanaka, Tamaki) Ar. Tokyo

IV-2 Explanation of Draft Final Report (October 30 - November 8, 1986)

1.	Oct. 30	(Thu)	Lv. Tokyo (Mr. Hayashiya, Mr. Asakura) Ar. Manila Explanation of Draft Final Report to PTTC Committee
2.	" 31	(Fri)	Additional survey of the proposed construction site
3.	Nov. 1	(Sat)	Data collection regarding local construction situation
4.	" 2	(Sun)	Ar. Manila (Mr. Ekuni) Data Arrangement. Team meeting

5.	"	3 (Mon)	Report the progress to JICA Office Courtesy call on the Embassy of Japan Meeting with PTTC committee
6.	"	4 (Tue)	Meetings with PTTC committee
7.	"	5 (Wed)	same as above
8.	"	6 (Thu)	same as above
9.	"	7 (Fri)	Signing of Minutes of Discussions Courtesy call on the Embassy of Japan and JICA Office, and report survey result.
10.	"	8 (Sat)	Lv. Manila (Mr. Ekuni, Mr. Hayashiya, Mr. Asakura) Ar. Tokyo

V Member of the Philippine Counterparts

NAME	STATUS	BELONGING ORGANIZATION
(1) Ministry of Trade and Industry and PTTC committee		
Mr. Raul Boncan	Deputy Minister	MTI
Mr. Antonio R. Reyes	Assistant to the Minister	MTI
(PTTC Committee)		
Mrs. Mina T. Gabor	President	CITEM
Mrs. Rosario Franco	Director	BFT
Atty. Helen A Cortes	Vice President	CITEM
Ms. Lourdes Martinez	Deputy Administrator	PTEC
Ms. Adelaida Inton	Chief, Export Training	BFT
Ms. Roseni M. Alvero	Special Projects Director	CITEM
Mrs. Ludy So	Chief, financial and Management Services	MTI
Ms. Zeny Lampa	Acting Chief, Quality Assistance Division	PSA
Mr. Arturo Luz	Excutive Director	DCP
Mr. Eduardo Villanueva	Director	PTRI
Mr. Alfredo Alcantara	Chief, Technical Assistance Division	PTRI
Ms. Baby de Guzman	Head, Market Development Division	GTEB
Mr. Philip Panlilio	Marketing Staff	GTEB
Mr. Marciano Pascual	Chief, Technical Services and Industrial Technology Division	NACIDA
Ms. Delilah Delos Reyes	Chief, Promotions and Special Projects	NACIDA
Ms. Liza Mae Barrido	Senior Industry Development Specialist	BSMI
Ms. Eunice P. Villanueva	Officer-In-Charge, Technical Services Division	BSMI
Ms. Yay San Pedro	Executive Assistant	PTEC

NAME	STATUS	BELONGING ORGANIZATION
Mr. Jojo Arago	Administrative Officer	PTEC
Ms. Tess Villena	Coordinator, Staff Development Unit Planning Service	MTI
Mrs. Fe Macasaet	Chief, Standards Development Section	FDC
Ms. Myrna Capistrano	Sup. Food Technologist	FDC
Dr. Alicia Lustre	Director	FDC
Mr. Cesar D. Cueto	Vice Pres. Operations	CITEM
Mrs. Ely M. Pinto	Vice Pres. Communications and Promotions	CITEM
Ms. Angelita Madulid	Product Group Exec.	CITEM
Ms. Linda Vasquez	Technical Assistant	CITEM
Ms. Tess Beltran	Librarian	CITEM
Ms. Josie Briones	Technical Assistant	CITEM
Ms. Mimi de Leon	Technical Assistant Plans and Programs	CITEM
Mr. Mike Guioguio	Technical Assistant Plans and Programs	CITEM
(2) National Economic Development Authority (NEDA)		
Mr. Vicente D. Salazar, Jr.	Director External Assistance Staff	NEDA
Mr. Senen Ricasio	Assistant Director Industry and Utilities Staff	NEDA
(3) Embassy of Japan (in Manila)		
Mr. Nobuaki Terasaka	First Secretary	
Mr. Yasuaki Tanizaki	First Secretary	
(4) JICA Office (in Manila)		
Mr. Moriya Miyamoto	Resident Representative	
Mr. Toichi Iwata	Staff	
Mr. Yuji Okazaki	Staff	

VI List of Collected Data

	Title of Data	Source
1.	PHILIPPINE STATISTICAL YEARBOOK 1985	NATIONAL ECONOMIC AND DEVELOPMENT AUTHORITY
2.	1984 FOREIGN TRADE STATISTICS OF THE PHILIPPINES	NATIONAL ECONOMIC AND DEVELOPMENT AUTHORITY NATIONAL CENSUS STATISTICS OFFICE
3.	MINISTRY OF TRADE AND INDUSTRY 1984 ANNUAL REPORT	TRADE AND INDUSTRY INFORMATION CENTER MINISTRY OF TRADE AND INDUSTRY
4.	THE NATIONAL BUILDING CODE OF THE PHILIPPINES	PHILIPPINE LAW GAZETTE
5.	THE FIRE CODE OF THE PHILIPPINES AND REGULATIONS	SAFETY ORGANIZATION OF THE PHILIPPINES, INC.
6.	LABOR CODE OF THE PHILIPPINES (1986 Revised Edition)	AFA EDITIONAL BOARD
7.	OFFICIAL GAZETTE (Vol.74, No.23) Rules and Regulations of the National Pollution Control Commission (1978) 4453	REPUBLIC OF THE PHILIPPINES
8.	PRODUCT GUIDE PHILIPPINES (Third Edition)	GRAFIK CONCEPTS & DESIGN, INC.
9.	ARCHITECT'S NATIONAL CODE	UNITED ARCHITECTS OF THE PHILIPPINES
10.	PROFESSIONAL REGULATORY LAWS	UNITED ARCHITECTS OF THE PHILIPPINES
11.	DOCUMENTS OF THE UAP ORGANIZATION	UNITED ARCHITECTS OF THE PHILIPPINES

EVALUATION REPORT
SUBSURFACE SOIL INVESTIGATION
FOR PROPOSED PHILTRADE TRAINING CENTER
Roxas Boulevard Corner Gil Puyat Avenue
Metro Manila

1.0 Introduction

Subsurface soil investigation for the proposed Three-Storey Philtrade Training Center was made upon the request of *Filipinas - Dravo Corp.* for the purpose of determining subsurface soil characteristics underlying the proposed building needed in the determination of an efficient and economical foundation solution for the proposed project.

Two (2) boreholes were drilled at the proposed site at locations shown in the accompanying boring plan. The boreholes were drilled down to 30.5m (100 feet) depth each. Hard siltstone formation suitable for bearing of point bearing piles was encountered at about twenty-six (26) meters (85 feet) in the two boreholes.

Undisturbed samples were obtained in the very soft dredged fill material and in the original seabed material. However, due to the soft to very soft soils encountered, some of the samples were lost in the hole during the extraction.

2.0 Field and Laboratory Test Procedures

2.1 Drilling Procedure

The boreholes were advanced by wash boring procedure to the maximum boring depths. Standard Penetration Test was conducted at every 1.5 meter interval or oftener with change in formation.

PHILIPPINE GEOANALYTICS

The Standard Penetration Test consisted of driving a Standard Split Spoon Sampler of 5.08 cm (2" O.D.) diameter in three successive 15 cm. (6") intervals using a drop hammer of 64 kg. weight from a height of 76 cm. The number of blows to penetrate 15 cm. are recorded successively until the third interval is penetrated. The first interval blow count is considered as the seating drive and is discarded. The last two blow counts from the second and third intervals are added to give what is known as the N value which is a measure of the density or consistensy of the underlying soils.

Undisturbed samples were taken with great difficulty in very soft soil deposits for strength testing and determination of consolidation characteristics. Most undisturbed samples have limited recoveries due to the very soft soils encountered thus limiting the number of Triaxial Testing that could be done and also the number of trials to two for all the Triaxial Tests that could be performed. Coring using Double Tube Core Barrels was resorted to in order penetrate the siltstone layer

2.2 Laboratory Test Procedure

The following laboratory tests and their brief description were carried out on soil samples obtained from the site:

2.2.1 Classification of Soils for Engineering Purposes
BS1377:1975

2.2.2 One-Dimensional Consolidation Properties of Soil
BS1377:1975 Test 17
This method covers the determination of the rate and magnitude of consolidation of soil when it is restrained laterally and loaded and drained axially.

2.2.3 Consolidated Undrained Triaxial Test

The soil sample is consolidated under an all around stress allowing drainage. After consolidation the soil specimen is failed with increasing axial load with drainage closed. Pore pressure is measured during the test.

2.2.4 Particle Size Analysis of Soils

BS 1377:1975

Soil was passed through a series of sieves, the weight of soil retained on each sieve determined and recorded. For each sample analyzed, a graduation curve was drawn based on the percent finer by weight.

2.2.5 Liquid Limit of Soils

Cassagrande Method BS1377:1975 Test 2 (B)

Is the water content expressed as a percentage of the weight of the oven-dried soil, at the boundary between the liquid and plastic states.

2.2.6 Plastic Limit and Plasticity of Soils

BS 1377:1975 Test 3

The plastic limit of a soil the water content, expressed as a percentage of the mass of the oven-dried soil, at the boundary between the plastic and semi-solid states.

2.2.7 Laboratory Determination of Moisture Content of Soils

BS1377:1975 Test 1(A) Oven-Drying Method

The ratio expressed as a percentage of the weight of water in a given mass of soil to the weight of the solid particles.

3.0 General Site Geology and Topography

The proposed building site is on a reclaimed portion of what is known as the Financial Center of the Manila - Cavite Coastal Road and Reclamation Project (MCCRRP) which started at the original seawall along Roxas Boulevard and extends an average of about 1.5 KM into the sea. Depth of original seabed on the new bulkhead or sea wall is about seven (7) meters from MLLW. The Reclaimed land is approximately three (3) meters above MLLW.

The area was reclaimed by Hydraulic Dredged Fill. As such, fill materials have high moisture content and are poor to very poor in consistency. Average thickness of dredge fill at the immediate site is about six (6) to seven (7) meters after which the oiginal seabed is encountered.

A table showing the geologic age and features of the natural soil deposits in the area is included in Appendix A taken from Reference 1.

The seabed material down to about ten (10) meters is composed chiefly of soft mud layer which is essentially alluvial in character where N-Values from 0 to 5 were encountered.

This is replaced by a layer of sand and silt of about fifteen (15) meters thickness with average N-Values of about ten (10) to thirty (30) blows.

These layers are underlain by very competent siltstone and sandstone which are essentially vestigial traces of the Tertiary Guadulupe Tuff formation. This competent formation is suitable as a bearing layer for point bearing piles.

The site is artificially flat and considerably developed area on the existing site of the Philippine International Trading Center. The upper layer about two (2) meters thick is a thin dessicated crust which is susceptible to softening due to reworking by heavy traffic and immersion in water as in the formation of mud puddles.

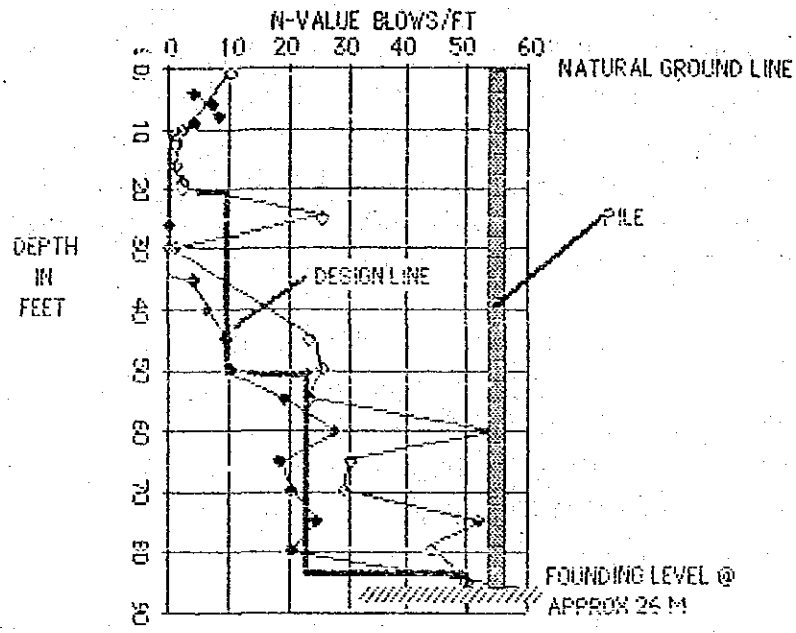
4.0 Engineering Analyses and Considerations

The very poor soils extend to a considerable depth and are incapable of supporting heavy loads due to the very low shear strength and very high compressibilities of the dredged fill and original seabed material. Specifically for a three-storey building, the magnitude of differential settlements would be considerable, although unquantifiable due to the limited number of borings and the very variable character of the dredged fill material. It is anticipated that these settlements would occur due to the nature of the soil deposits.

Thus, only a deep foundation solution is recommended. This deep foundation (Pile foundation) should be extended down to the competent bearing layer of siltstone encountered starting at a depth of twenty-four (24) to twenty-six (26) meters from existing Natural Ground Line.

The pile is expected to develope a major part of its load capacity in point bearing. Therefore it is necessary to assure that the pile is firmly and properly seated into the hard bearing stratum.

Static Pile Load Capacity Analysis was determined by computer based on semi-empirical procedures proposed by Meyerhof and modifications as recommeded by the Japanese Association for Steel Pipe Piles (JASPP). These formulas are essentially based on N-Values obtained from the Standard Penetration Test.



Allowance for Negative Skin Friction was made for the upper ten (10) meter of pile embedded into the dredged fill and original seabed material. The Negative Skin Friction Value is taken as equivalent to the cohesion of the upper layer (C=2.5T/Sq.M.) based on data gathered from tests. This value of C was obtained from the two borings in the site and represents the most probable value of shear strength. This value also was compared with values from data contained in Reference 1 and showed that time dependent strength gain has occurred over the years. The original average cohesion value for soils in the area at that time was about 1.0 T/Sq.M.

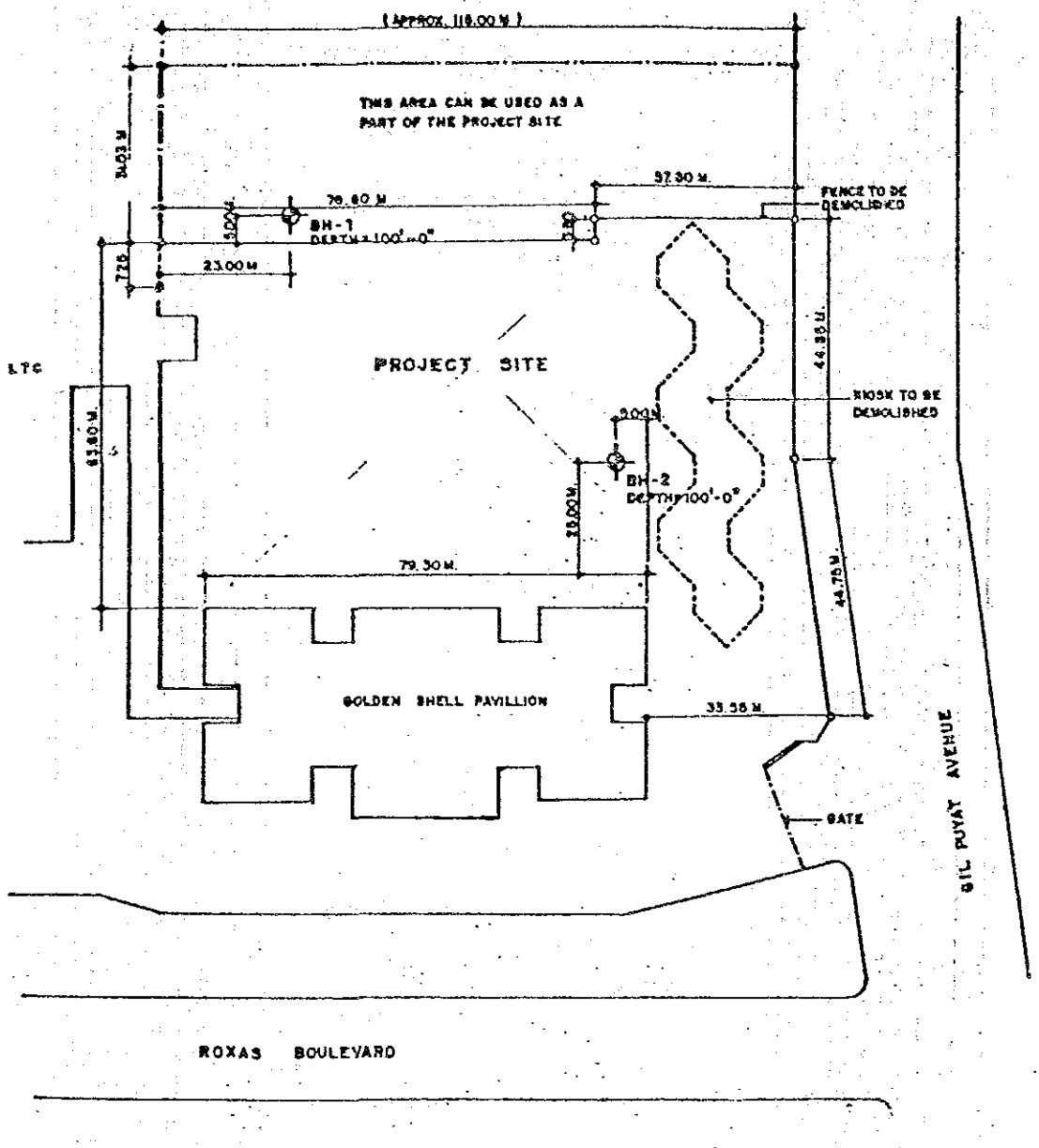
Due to the very soft ground, amplification of horizontal ground motion during earthquakes is a distinct possibility. Thus, the lateral load resistance of the pile foundation should be mobilized and checked.

Consolidation Tests

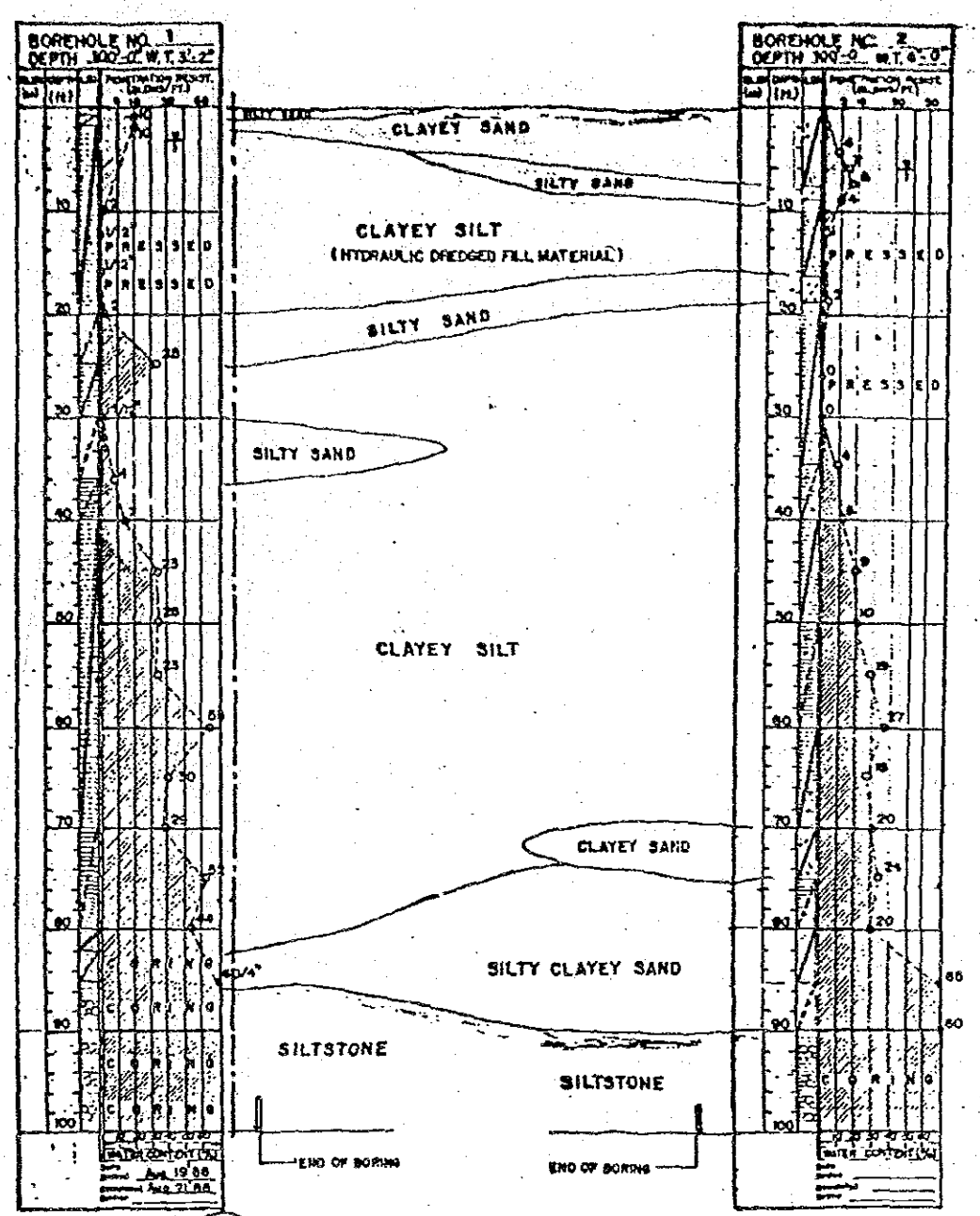
Two (2) samples obtained from the limited Shelby Tube samples were subjected to One-Dimensional Consolidation Tests. The results reveal high compressibilities in the upper layers as evidenced by the compression indices (Cc) obtained (0.4 to 1.00). Due to observed disturbances in the very soft samples obtained and limited tests possible, these values may not be representative.

A plot of Cc Vs. Liquid Limit and Natural Water Content is taken from Reference 1 and is shown in Appendix E. A suggested range of soil properties is also included for reference purposes and maybe more statistically indicative of the Soil Physical Characteristics with of course due allowances to be given to time dependent strength gain and consolidation.

The values neverthelesss indicate the high compressibility and possible Negative Friction effects that could be induced on the piles.



A 1 1 BORING PLAN



B/1 SOIL PROFILE ALONG BH-1 & BH-2