

付属資料 I

I-1 調査団の構成

I-1-1 無償(事前)技術協力(コンタクト)合同調査団

(昭和62年12月16日~12月25日)

花田 吉隆	団長・総括	外務省経済協力局無償資金協力課 首席事務官
力石 寿郎	計画管理	国際協力事業団無償資金協力計画 調査部基本設計調査第二課
植沢 年次	技術協力政策	外務省経済協力局技術協力課事務官
関 成孝	技術協力計画	通商産業省工業技術院標準部 国際規格室課長補佐
柿沼 幹二	規格・検査	(財)日本規格協会理事
志賀 忠夫	業務調整	国際協力事業団鉱工業開発協力部付 参事

I - 1 - 2 基本設計調査団(昭和63年3月29日~4月19日)

伊坂 潔	総括	国際協力事業団無償資金協力計画 調査部基本設計調査第二課課長
矢島 武憲	計量標準	通商産業省機械情報産業局 計量行政室
関 成孝	工業標準化	通商産業省工業技術院標準部 国際規格室課長補佐
沼倉 昭夫	建築計画 業務主任技術者	(株)山下設計
田中 孝典	建築設計	〃
浅倉 晴司	設備設計	〃
大野 昭治	積算	〃
佐々木隆一	機材計画・積算 業務主任技術者	(財)機械電子検査検定協会
渡辺 修一	計量機材	〃
柿沼 幹二	標準化機材	〃
桜井 邦夫	試験機材	〃
富山 和	認証機材	〃

I-1-3 ドラフトレポート説明調査団(昭和63年7月10日~7月16日)

関 成幸	総 括	通商産業省工業技術院標準部 国際規格室課長補佐
力石 寿郎	計画管理	国際協力事業団無償資金協力計画 調査部基本設計調査第二課
沼倉 昭夫	建築計画 業務主任技術者	(株)山下設計
浅倉 晴司	設備設計	〃
佐々木隆一	機材計画・積算 業務主任技術者	(財)機械電子検査検定協会
柿沼 幹二	標準化機材	〃

I-2 調査日程

I-2-1 無償(事前)技術協力(コンタクト)合同調査日程 (昭和62年12月16日~12月25日)

日順	月・日(曜日)	調査日程
1	12月16日(水)	東京発 バンコク着
2	17日(木)	JICAタイ事務所にて調査打合せ 日本大使館表敬訪問 商務省表敬訪問
3	18日(金)	DTECにて合同協議(DTEC、TISI、TISTR) TISIにて第1回打合せ
4	19日(土)	サイト調査
5	20日(日)	資料整理
6	21日(月)	第2回打合せ(於てTISI) 第3回打合せ(於てTISTR)
7	22日(火)	TISIにて合同打合せ(TISI/TISTR)
8	23日(水)	ニッツ署名
9	24日(木)	日本大使館、JICA事務所へ調査結果報告 (無償チーム帰国)
10	25日(金)	バンコク発 東京着

I-2-2 基本設計調査日程(昭和63年3月29日~4月19日)

日順	月・日(曜日)	調査日程
1	3月29日(火)	東京発バンコク着 (伊坂団長、矢島、関、沼倉、田中、浅倉、大野、佐々木、渡辺、柿沼、桜井、富山)
2	30日(水)	TISI, TISTRと合同会議(インセプションレポート説明) JICA事務所表敬訪問
3	31日(木)	TISI, TISTRに質疑書提出、内容説明 建設予定地調査 BANGPOO工業団地事務所と協議(インフラ関連)
4	4月1日(金)	TISIと協議、TISTRと協議 TISI, TISTRの既存施設調査 団内打合せ、資料整理、建設事情調査
5	2日(土)	建設予定地調査(簡易測量)
6	3日(日)	団内打合せ、資料整理、建設事情調査
7	4日(月)	TISIと協議、TISTRと協議 建設事情調査
8	5日(火)	TISIと協議、TISTRと協議 TISTRと技協に関する協議 建設事情調査、団内打合せ
9	6日(水) (国民休日)	資料整理
10	7日(木)	TISIと協議、TISTRと協議 ミニッツ内容についてTISI, TISTRと協議 建設事情調査
11	8日(金)	ミニッツ作成、団内打合せ ミニッツ署名 日本大使館、JICA事務所へ報告 建設事情調査
12	9日(土)	団内打合せ バンコク発東京着(関) 建設事情調査
13	10日(日)	バンコク発東京着(伊坂団長、矢島) 資料整理 建設事情調査
14	11日(月)	TISIと協議、TISTRと協議 インフラ協議(IEATにて給排水、MEAにて電力) 建設予定地にてボーリング作業確認
15	12日(火)	TISIと協議 建設事情調査

日順	月・日(曜日)	調査日程
16	13日(水) (国民休日)	資料整理 団内打合せ
17	14日(木)	TISTRと協議 インフラ協議(TIDCにて給排水等) 建設事情調査 資料整理 団内打合せ
18	15日(金)	既存無償建物調査(チャンネル11、金属加工研究センター、国立衛生研究所) TISIと協議、TISTRと協議
19	16日(土)	TISIと協議 TISIにてインフラ資料回収・協議 建設事情調査
20	17日(日)	建設事情調査 団内打合せ 資料整理
21	18日(月)	TISI,TISTRと合同会議 JICA事務所、日本大使館へ報告
22	19日(火)	バンコク発東京着 (沼倉、田中、浅倉、大野、佐々木、渡辺、柿沼、桜井、富山)

I-2-3 ドラフトレポート説明調査日程(昭和63年7月10日~7月16日)

日順	月・日(曜日)	調査日程
1	7月10日(日)	東京発 バンコク着 (関団長、力石、沼倉、浅倉、佐々木、柿沼)
2	11日(月)	TISI, TISTRと合同会議(ドラフトレポート説明) 日本大使館、JICA事務所表敬訪問
3	12日(火)	建設予定地現況調査
4	13日(水)	TISI、TISTRと協議 団内打合せ
5	14日(木)	TISI, TISTRと合同会議(ミニッツ準備他)
6	15日(金)	TISIと協議 日本大使館、JICA事務所へ報告 ミニッツ署名
7	16日(土)	バンコク発 東京着 (関団長、力石、沼倉、浅倉、佐々木、柿沼)

I-3 面会者リスト

● TISI (Thai Industrial Standards Institute, Ministry of Industry)

Mr. Visith NOIPHAN	Secretary General
Mr. Thien MEKANONTCHAI	Deputy Secretary General
Ms. Phani Na RANGSI	Senior Expert
Ms. Kanya SINSAKUL	Director, Standardization Division
Ms. Sasithorn SUNTHRARAK	Director, Technical & Foreign Relation Division
Mr. Patibhan ARIYADEJ	Senior Standardization Officer
Mr. Thammachai CHAOPREECHA	Engineer

● TISTR (Thailand Institute of Scientific & Technological Research,
Ministry of Science, Technology and Energy)

Dr. Smith KAMPEMPOOL	Governor
Mr. Siri NANDHASRI	Director, Testing & Standards Center
Ms. Pranee NANDHASRI	Director, Biochemistry Laboratory
Mr. Surapol VATANAWONG	Director, Electrical and Electronic Standards Laboratory
Mr. Chumrong HAYAKIJKOSOL	Director, Analytical Chemistry
Mr. Preecha DISATHIEN	Chief, Photometric & Thermometric Standards Laboratory
Mr. Thanit THONGTAN	Chief, Mechanical Engineering Laboratory
Mr. Sura NOIPHAN	Chief, Photometric & Thermometric Standards Laboratory

● IEAT (Industrial Estate Authority of Thailand)

Mr. Sukhum KOSAISAEVEE	Division Director, Construction Division
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● TIDC (Thailand Industrial Real Estate Development Co., Ltd.)

Mr. Vivat JIRATIKARNSAKUL Construction Manager

Mr. Vanchai VIMUKTAYON Consultant

● MEA (Metropolitan Electricity Authority)

Mr. Bovorn JURAMONGKOL Chief, Short Range Planning Section,
Klong Toey Office

Mr. Watchara DANKUL Deputy Chief, Estimate Section, Samut
Prakan Office

● 在バンコク日本国大使館

生田 章一 一等書記官

● JICAタイ事務所

斎藤 勉 所長

櫻田 幸久 次長

師岡 俊夫 所員

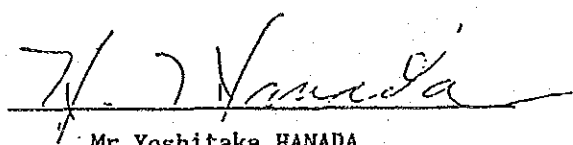
MINUTES OF MEETING OF JAPANESE GRANT AID AND TECHNICAL COOPERATION
FOR THE DEVELOPMENT OF
INDUSTRIAL STANDARDIZATION, TESTING, AND METROLOGY
IN THE KINGDOM OF THAILAND

The Japanese Joint Team organized by the Japan International Cooperation Agency, consisting of the Preliminary Study Team for Grant Aid and the Contact Team for Technical Cooperation headed by Mr. Yoshitaka Hanada, Deputy Director, Grant Aid Division, Economic Cooperation Bureau, Ministry of Foreign Affairs visited the Kingdom of Thailand from December 16th to December 24th for the purpose of discussing the Japanese grant aid and technical cooperation to Thai Industrial Standards Institute (TISI) and Thailand Institute of Scientific and Technological Research (TISTR) for the development of industrial standardization, testing, and metrology in the Kingdom of Thailand.

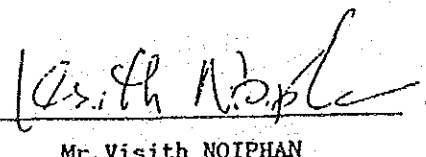
During its stay in Thailand, the Team exchanged views and had a series of discussions with TISI, TISTR, Department of Technical and Economic Cooperation, and authorities concerned.

As a result of discussions, the Thai side agreed to submit a revised project document to the Government of Japan which covers both TISI and TISTR projects, originally requested separately, as one project for Japanese grant aid and technical cooperation, and both parties mutually agreed to report to their respective Governments the understanding concerning the matters referred to in the documents attached herewith.

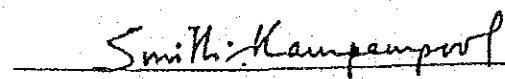
Bangkok, December 23rd, 1987.


Mr. Yoshitaka HANADA

Leader of the Preliminary Study Team
for Grant Aid and the Contact Team
for Technical Cooperation
The Japan International Cooperation
Agency


Mr. Visith NOIPHAN

Secretary General
Thai Industrial Standards Institute


Dr. Smith KAMPEMPOOL
Governor

Thailand Institute of Scientific
and Technological Research

THE ATTACHED DOCUMENT I

Grant Aid

1. Objective of the Project

The objective of the Project is to construct necessary facilities and to provide necessary equipment to implement development programmes of industrial standardization, testing, and metrology in the Kingdom of Thailand.

2. Responsible and Coordinating Ministries

2.1 Ministry of Industry

2.2 Ministry of Science, Technology and Energy

3. Executing and Implementing Agencies

3.1 Thai Industrial Standards Institute, Ministry of Industry

3.2 Thailand Institute of Scientific and Technological Research, Ministry of Science, Technology and Energy

4. Project Site

4.1 The proposed site of the Project is located at Bangpoo Industrial Estate, Km.34 Sukhumvit Road, Samutprakarn Province, and is shown in Annex 1.

4.2 To ensure an effective result of the construction of the buildings, the back filling for site improvement and other necessary measures should be undertaken by the Thai side at least 6 months prior to the start of the construction.

5. The Major Requested Items for the Project

The outline of the facilities and major equipment is as follows.

5.1 Building

5.1.1 The Industrial Standardization, Testing and Training Centre

5.1.2 The Industrial Metrology Testing Service Centre

5.2 Equipment

5.2.1 TISI

Equipment of basic and urgent need for the use of formulating national industrial standards and implementing certification (testing and quality control).

Fields

5.2.1.1 Industrial standardization

5.2.1.2 Testing

(1) Material and mechanical properties

(2) Electrical and electronics

(3) Chemical

5.2.1.3 Common equipment for the fields mentioned above

5.2.2 TISTR

Equipment of basic and urgent need for the use of national metrology (excluding commercial metrology) and testing for industrial research and development.

Fields

5.2.2.1 Metrology

(1) Mass, Length

(2) Force, Pressure

(3) Volume, Flow

(4) Photometry, Radiation

(5) Acoustic, Vibration

(6) Electrical, Electronics

(7) Temperature

5.2.2.2 Testing

(1) Material and mechanical properties

(2) Electrical and electronics

(3) Chemical and biochemistry

5.2.2.3 Common equipment for the fields mentioned above

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6. Grant Aid Programme

- 6.1 The Thai side has understood the system of the Japanese Grant Aid and the necessity of consulting services of a Japanese consultant firm for the implementation of the Project.
- 6.2 The Government of Thailand will undertake to ensure the necessary budget and personnel for the proper and effective operation and maintenance of facilities and equipment provided under the Grant Aid.
- 6.3 The Team will convey to the Government of Japan the desire of the Government of Thailand that the former would take necessary measures to cooperate in implementing the Project and to provide necessary facilities and equipment under the Japanese Grant Aid Programme.
- 6.4 The Thai side understood that the necessary measures will be taken by the Government of Thailand on condition that the Grant Aid by the Government of Japan would be extended to the Project.

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Technical Cooperation to TISI

1. Name of the Project:

Project-Type Technical Cooperation on the Industrial Standardization, Testing and Training Centre in the Kingdom of Thailand.

2. Objective and Scope of the Project:

The objective of the Project is to transfer appropriate technology to the Thai counterparts in the field of industrial standardization and testing.

3. Project Implementation Agency:

Thai Industrial Standards Institute (TISI), Ministry of Industry.

4. Duration of the Project:

The duration of the Japanese Technical Cooperation would be five (5) years from the date of signing of the Record of Discussions (R/D).

5. Project Site:

The Industrial Standardization, Testing and Training Centre is as shown in the ATTACHED DOCUMENT I (Clause 4).

6. Experts and Counterparts:

In compliance with the request from the Thai side, Japan would dispatch experts and accept counterparts according to the plan to be agreed by both sides.

For this purpose, the Team stated that following discussions carried out between both sides on this occasion, the Preliminary Survey and the Implementation Survey would be conducted in F/Y 1987 and in F/Y 1988 respectively.

7. Allocation of Manpower and Operational Costs by the Thai Side:

7.1 The Team stressed that sufficient allocation of manpower and operational costs for the effective implementation of the Project is required to be well assured by the Thai side.

7.2 Related to the above, the Thai side explained that they would make efforts to secure necessary manpower and operational budget.

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THE ATTACHED DOCUMENT II-2

Technical Cooperation to TISTR

1. Name of the Project:

Technical Cooperation on the Industrial Metrology Testing Service Centre in the Kingdom of Thailand.

2. Objective and Scope of the Project:

The objective of the Project is to transfer appropriate technology to the Thai counterparts in the field of metrology and testing so as to enable them to operate the Centre.

3. Project Implementation Agency:

Thailand Institute of Scientific and Technological Research (TISTR), Ministry of Science, Technology and Energy.

4. Duration of the Project:

The duration of the Japanese Technical Cooperation by dispatch programme of experts and acceptance programme of counterparts under JICA scheme would be three (3) years.

5. Project Site:

The Industrial Metrology Testing Service Centre is as shown in the ATTACHED DOCUMENT I (Clause 4).

6. Experts and Counterparts:

Dispatch of Japanese experts and acceptance of counterparts, in compliance with specific requests of the Thai side, would be conducted.

At sometime, considering the progress of construction of building and installation of equipment provided under the Japanese Grant Aid scheme, a mission would be sent for further discussions on this matter, if necessary.

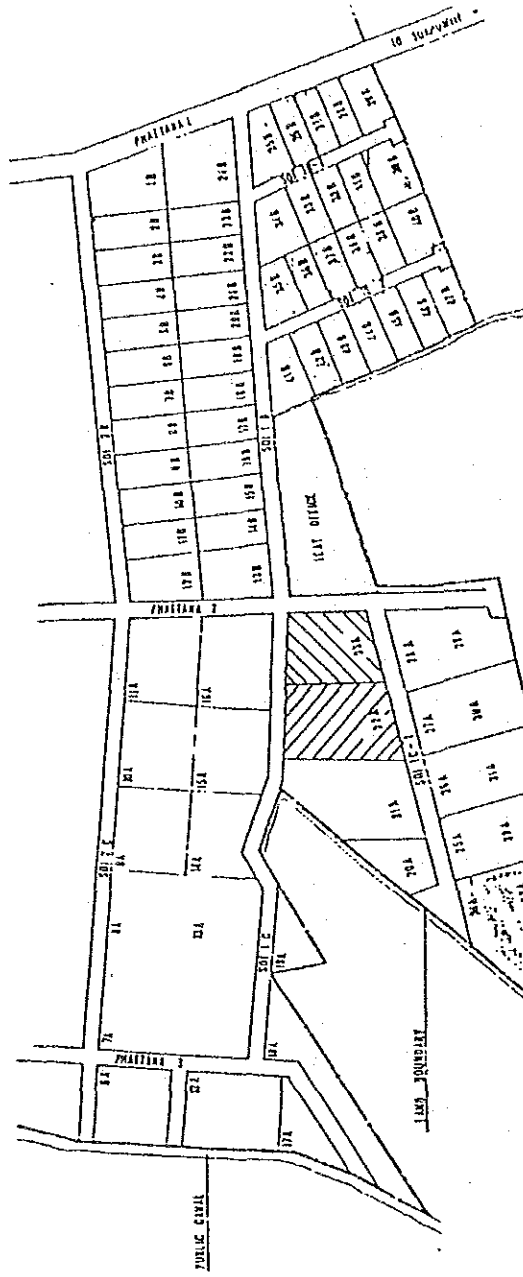
7. Allocation of Manpower and Operational Costs by the Thai Side:

7.1 The Team stressed that sufficient allocation of manpower and operational costs for the effective implementation of the Project is required to be well assured by the Thai side.

7.2 Related to the above, the Thai side explained that they would make efforts to secure necessary manpower and operational budget.

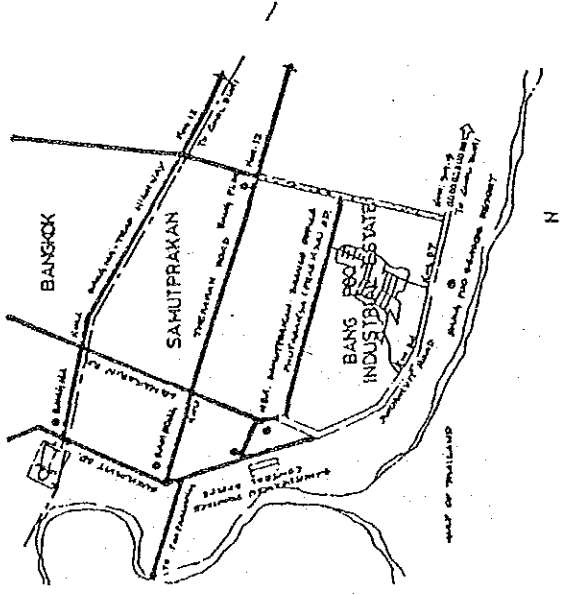
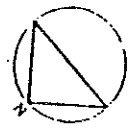
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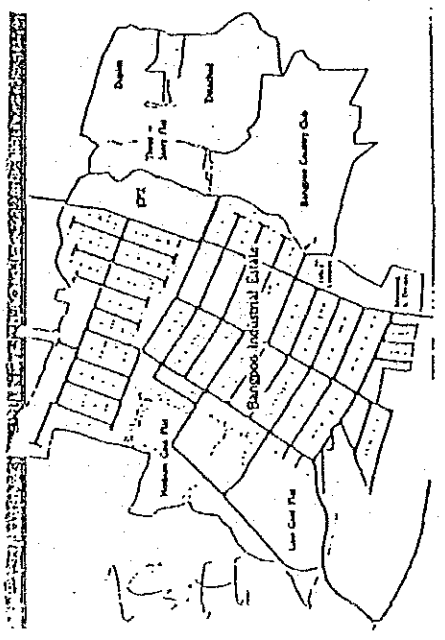
- IEAT OFFICE
- TISI SITE (17552 m²)
- TISTR SITE (24068 m²)

BANGCO INDUSTRIAL AREAS



LOCATION MAP

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MINUTES OF DISCUSSIONS
ON THE PROJECT FOR CONSTRUCTING
THE INDUSTRIAL STANDARDIZATION, TESTING AND TRAINING CENTRE
AND
THE INDUSTRIAL METROLOGY TESTING SERVICE CENTRE

In response to the request of the Government of the Kingdom of Thailand, the Government of Japan decided to conduct a basic design study on the project for constructing the Industrial Standardization, Testing and Training Centre and the Industrial Metrology Testing Service Centre (hereinafter referred to as "the Project"), and the Japan International Cooperation Agency (hereinafter referred to as JICA) sent to Thailand a study team headed by Mr. Kiyoshi Isaka, Head of the Second Basic Design Study Division, Grant Aid Planning and Survey Department, JICA from March 29 to April 19, 1988.

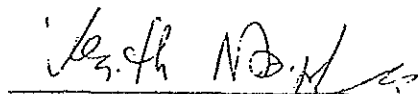
The team had a series of discussions on the Project with the officials concerned of the Government of Thailand and conducted a field survey in the Bangpoo Industrial Estate.

As a result of the study, both parties agreed to recommend to their respective Governments that the major points of understanding reached between them attached herewith, be examined towards the realization of the Project.

Bangkok, April 8, 1988



Mr. Kiyoshi Isaka
Leader
Basic Design Study Team
Japan International
Cooperation Agency



Mr. Visith Noiphan
Secretary General
Thai Industrial Standards
Institute



Dr. Smith Kampempool
Governor
Thailand Institute of Scientific
and Technological Research

ATTACHEMENT

1. The Project Title

The Project for Constructing the Industrial Standardization, Testing and Training Centre and the Industrial Metrology Testing Service Centre.

2. The Objectives of the Project

The objectives of the Project are to construct the Industrial Standardization, Testing and Training Centre and the Industrial Metrology Testing Service Centre and to provide both Centres with necessary equipment.

3. The Responsible and Coordinating Ministries

3.1 Ministry of Industry

3.2 Ministry of Science, Technology and Energy

4. The Executing and Implementing Agencies

4.1 Thai Industrial Standards Institute of Ministry of Industry

4.2 Thailand Institute of Scientific and Technological Research of Ministry of Science, Technology and Energy

5. The Project Site

The Project site is located at the Bangpoo Industrial Estate, km.34 Sukhumvit Road, Samutprakarn Province, and is shown in Annex 1.

6. The Major Items Requested for the Project

The major items requested for each Centre are listed in Annex 2.

7. Grant Aid Programme

7.1 The Thai side has understood the system of Japan's Grant Aid Programme and the principle for use of Japanese consulting firm(s) and contractor(s) for the implementation of the Project.

7.2 The Study Team will convey to the Government of Japan the desire of the Thai Government that the former takes

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necessary measures to cooperate in implementing the Project and provides necessary facilities and equipment under the Japan's Grant Aid Programme.

- 7.3 The Government of Thailand will take necessary measures as listed in Annex 3 on condition that the Grant Aid by the Government of Japan would be extended to the Project.

8. Technical Cooperation

The Thai side has requested the following technical cooperation from the Government of Japan and the Team will recommend to the Government that it be extended for smooth and effective operation of both Centres.

8.1 Industrial Standardization, Testing and Training Centre

Project-type technical cooperation

(The details shall be discussed separately with the Technical Cooperation Mission dispatched by JICA)

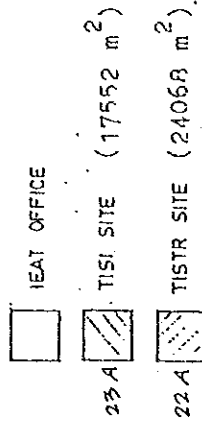
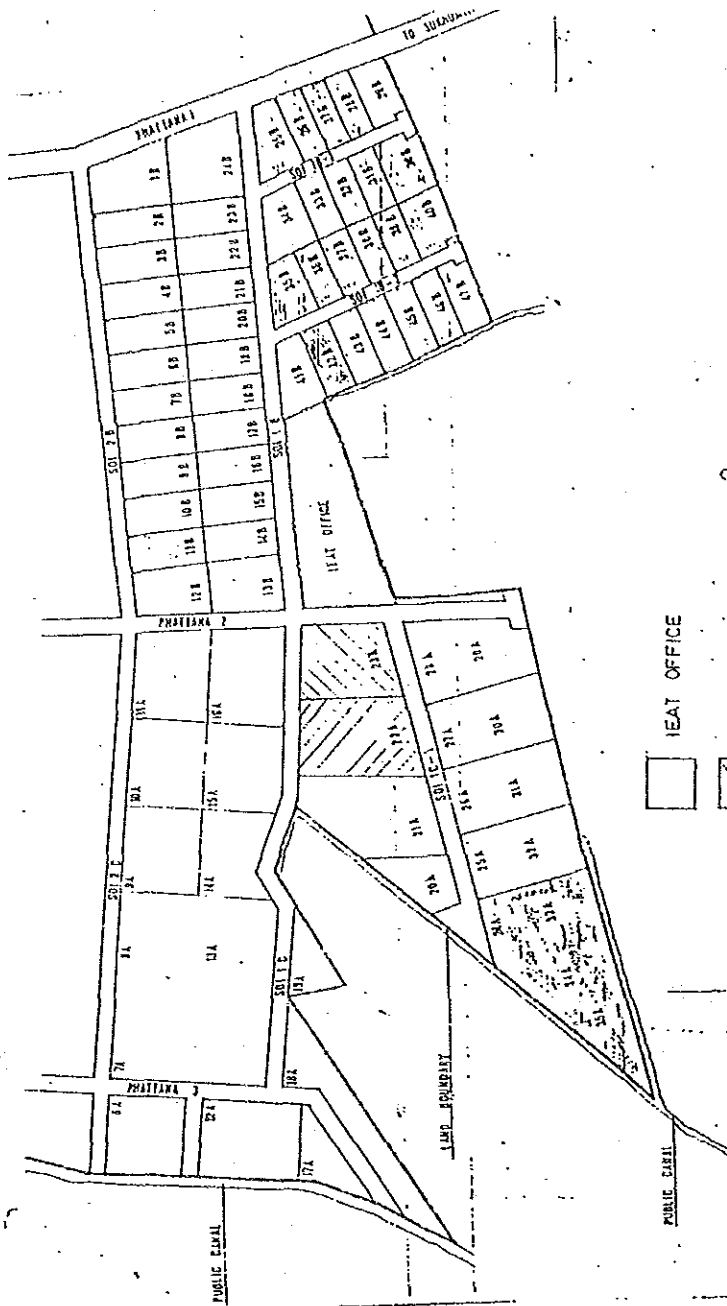
8.2 Industrial Metrology Testing Service Centre

The Team received a proposal of the request from the Thailand Institute of Scientific and Technological Research for technical cooperation from the Government of Japan.

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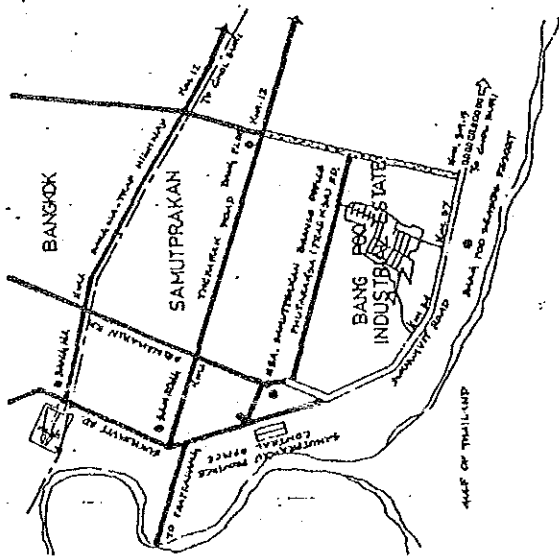
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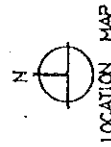
BANGPOO INDUSTRIAL AREAS



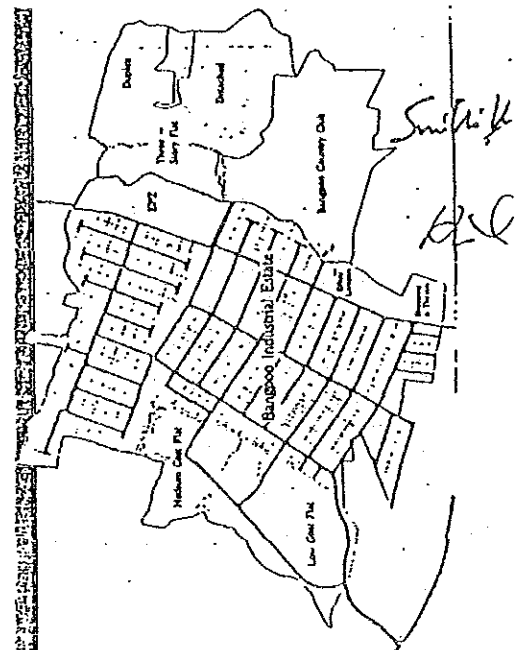
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LOCATION MAP



ANNEX 2

THE MAJOR ITEMS REQUESTED FOR THE PROJECT

1. INDUSTRIAL STANDARDIZATION, TESTING AND TRAINING CENTRE

1.1 Building and Facilities

1.1.1 Laboratories

- (1) Electrical and Electronics Testing
- (2) Chemical and Biochemical Testing
- (3) Mechanical and Material Testing
- (4) Environmental Testing

1.1.2 Rooms for seminar and conference

1.1.3 Office rooms

1.1.4 Library, etc.

1.2 Equipment

1.2.1 Laboratory equipment for product testing in the following fields :

- (1) Electrical and electronics
- (2) Chemical and biochemical
- (3) Mechanical engineering
- (4) Material testing
- (5) Others

1.2.2 Training aid equipment

1.2.3 Vehicles, etc.

2. INDUSTRIAL METROLOGY TESTING SERVICE CENTRE

2.1 Building and Facilities

2.1.1 Standard laboratories

2.1.2 Testing laboratories

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2.1.3 Rooms for seminar and conference

2.1.4 Office rooms

2.1.5 Library, etc.

2.2 Equipment

2.2.1 Standard laboratory equipment

(1) Length

(2) Mass

(3) Volume

(4) Force

(5) Pressure

(6) Temperature

(7) Electrical

(8) Acoustic

(9) Photometric

(10) Others

2.2.2 Testing laboratory equipment for industrial R&D

(1) Mechanical (including NDT)

(2) Electrical

(3) Electronics

(4) Chemical

(5) Biochemical

(6) Others

2.2.3 Training aid equipment

2.2.4 Vehicles, etc.

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ANNEX 3

UNDERTAKINGS BY THE GOVERNMENT OF THAILAND

1. To secure the site for the project.
2. To clear, level and reclaim the site prior to the commencement of the construction.
3. To undertake incidental out-door works such as gardening, fencing and making gates in and around the site.
4. To construct access roads to the site prior to the commencement of the construction.
5. To provide facilities for distribution of electricity, water supply, telephone, drainage, and other incidental facilities to the site.
6. To bear commissions to the Japanese foreign exchange bank for the banking services based on the Banking Arrangement.
7. To ensure the necessary budget and personnel for the proper and effective operation and maintenance of the facilities and the equipment provided under the Grant Aid.
8. To ensure prompt unloadings, tax exemption, customs clearance at the port of disembarkation in Thailand and prompt internal transportation of the materials and the equipment provided under the Grant Aid.
9. To exempt Japanese nationals involved in the Project from customs duties, internal taxes and other fiscal levies which may be imposed in Thailand with respect to supply of the equipment and services under the verified contracts.
10. To accord Japanese nationals whose services may be required in connection with the supply of the products and the services under the verified contracts such facilities as may be necessary for their entry into Thailand and stay therein for the execution of the Project.

Smith:k

WLP

Ve:tl.

11. To maintain and use the facilities constructed and the equipment purchased under the Grant Aid properly, efficiently and effectively.
12. To bear all the expenses other than those to be borne by the Grant, necessary for the construction of the facilities as well as for the transportation and installation of the equipment.

V. H.

Smith, K

D. V.

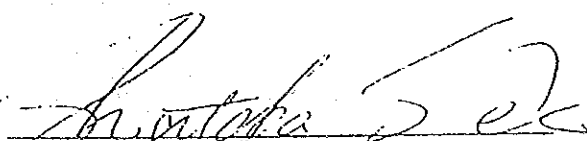
MINUTES OF DISCUSSIONS
OF
THE BASIC DESIGN STUDY ON THE PROJECT FOR CONSTRUCTING
THE INDUSTRIAL STANDARDIZATION, TESTING AND TRAINING CENTRE
AND
THE INDUSTRIAL METROLOGY TESTING SERVICE CENTRE
IN THE KINGDOM OF THAILAND

In response to the request by the Government of the Kingdom of Thailand, the Government of Japan decided to conduct a basic design study on the Project for Constructing the Industrial Standardization, Testing and Training Centre and the Industrial Metrology Testing Service Centre (hereinafter referred to as "the Project"), and the Japan International Cooperation Agency (JICA) sent the Basic Design Study Team headed by Mr. Kiyoshi ISAKA, Head of the Second Basic Design Study Division, Grant Aid Planning and Survey Department, JICA from March 29 to April 19, 1988.

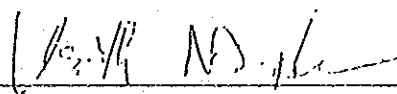
As a result of the study, JICA prepared a Draft Final Report and dispatched a team headed by Mr. Shigetaka SEKI, Deputy Director of International Standards Office, Agency of Industrial Science & Technology, Ministry of International Trade and Industry to explain and discuss it with the relevant officials of the Government of Thailand from July 10 to 16, 1988.

Both parties had a series of discussions on the Draft Final 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.

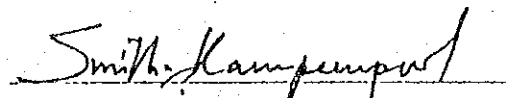
Bangkok, July 15, 1988.



Mr. Shigetaka Seki
Leader of the Draft Final Report Team
Japan International Cooperation
Agency



Mr. Visith Noiphan
Secretary General
Thai Industrial Standards Institute



Dr. Smith Kampempool
Governor
Thailand Institute of Scientific
and Technological Research

ATTACHMENT

1. The Thai side agreed in principle on the basic design proposed in the Draft Final Report with a request to alter building design slightly as shown in Annex.
2. The Thai side has understood Japan's grant aid system and reconfirmed that necessary measures be taken by the Thai side which are manifested in the Annex 3 of the Minutes of Discussions on the Project signed on April 8, 1988, on condition that the grant aid by the Government of Japan be extended to the Project.
3. The Thai side ensured that the necessary budget for the effective operation and maintenance of the Centres in line with the adequate number of the Thai personnel.
4. The Final Report (14 copies in English) will be submitted to the Thai side within the middle of August, 1988.

S.K

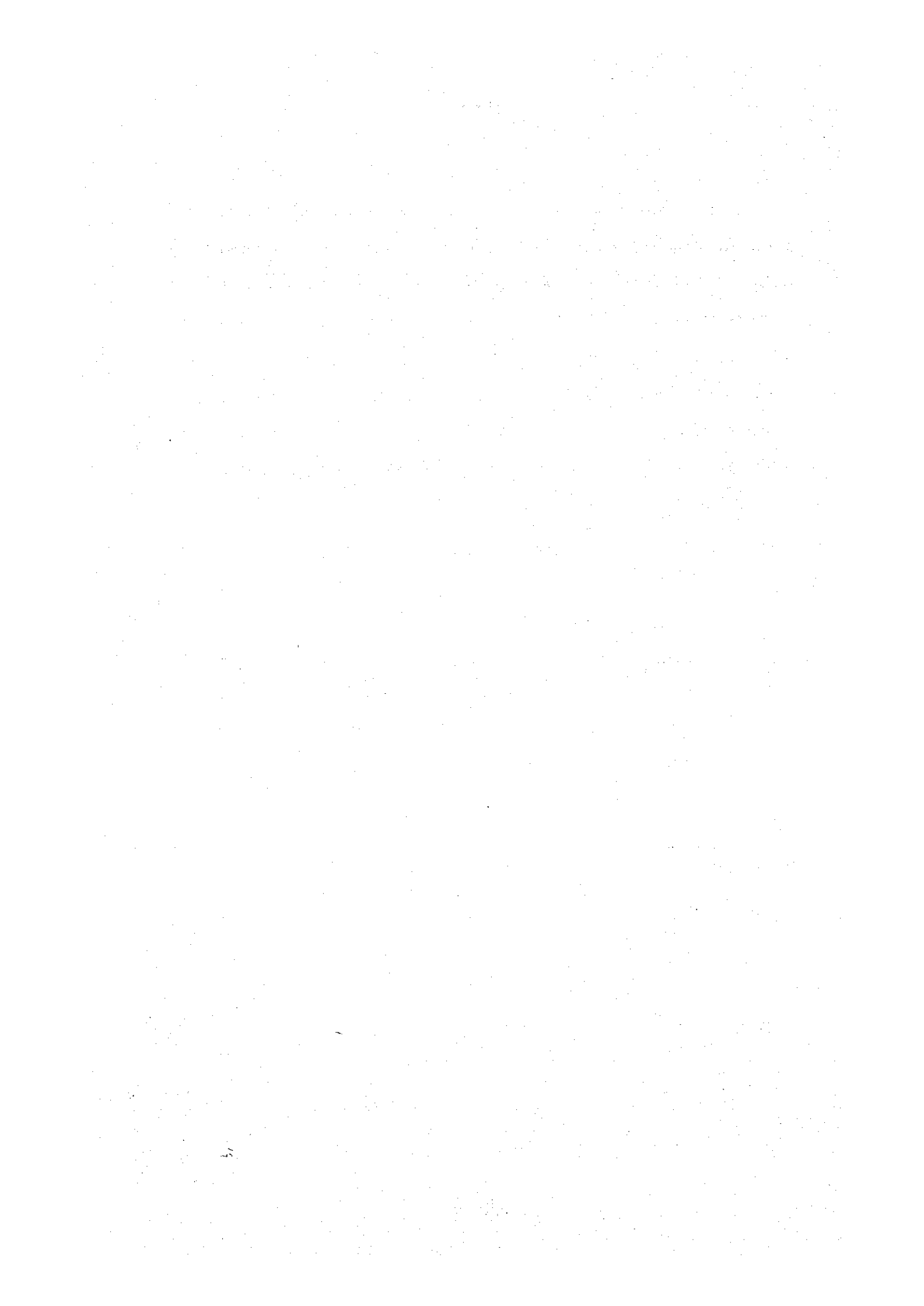
U.S.H.

S.S.

ANNEX

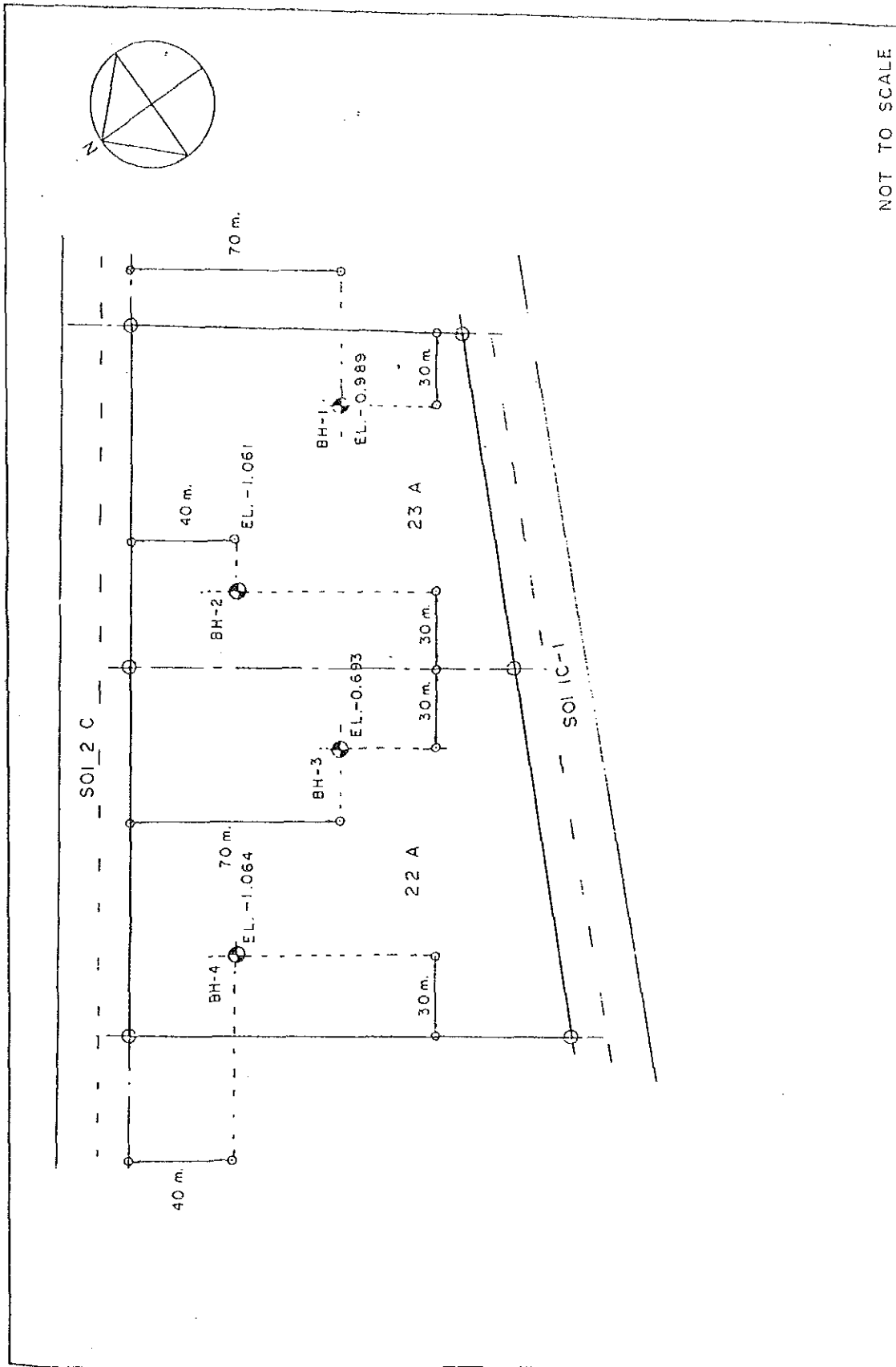
The Thai side requested that the eaves of the Industrial Standardization, Testing and Training Centre building be extended to the east end of the building (four spans) to shade direct sunlight into the entrance hall.

S.K.
10/11/68
S.S.



付属資料 II

II-1 ボーリングデータ



NOT TO SCALE

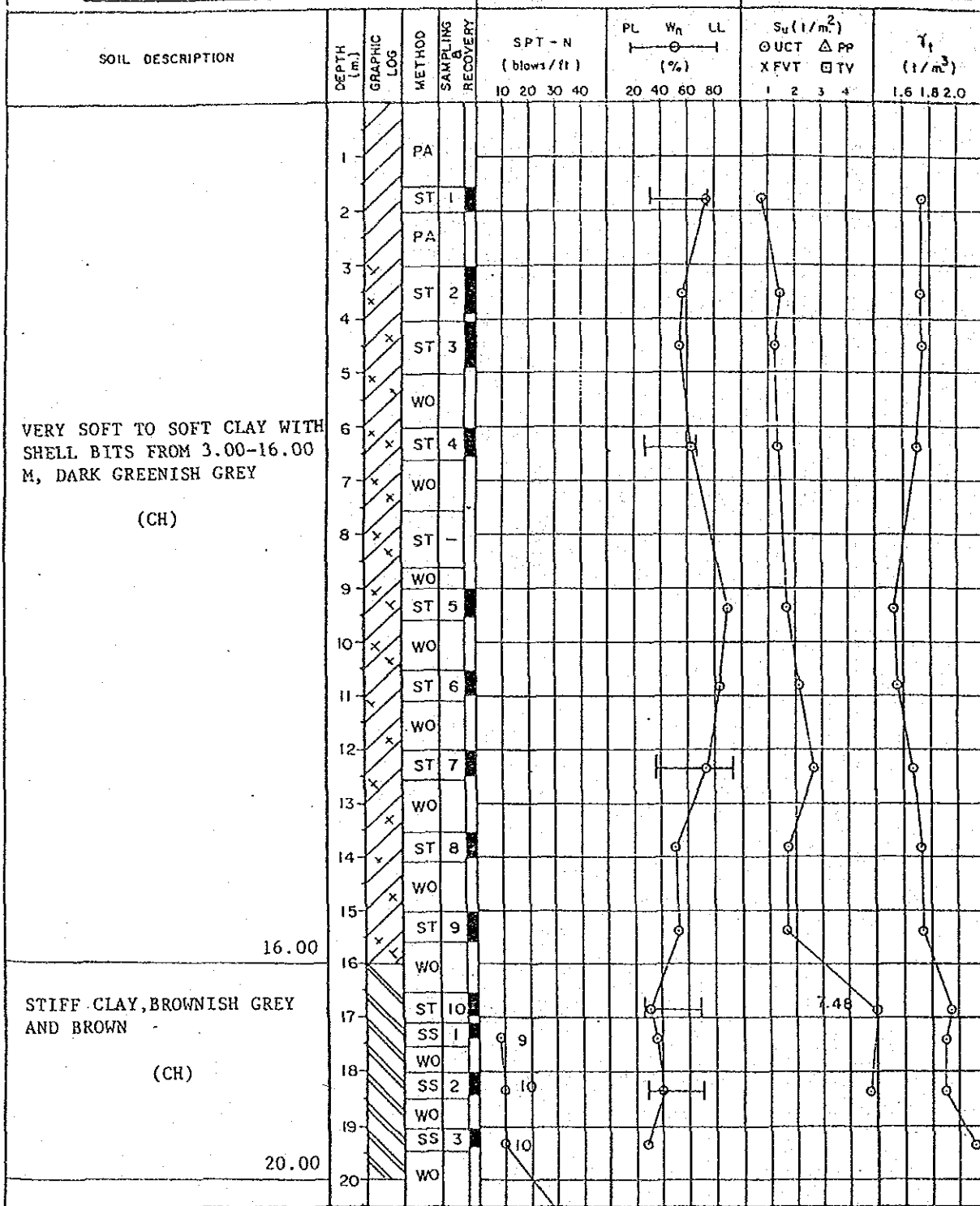
LOCATION OF BOREHOLES

K. ENGINEERING CONSULTANTS CO., LTD.

BORING LOG
 PROJECT TESTING AND MEASUREMENT CENTER
 LOCATION BANG POO, SAMUT PRAKAN

BORING NO. BH-1
 DEPTH (m.) 35.45
 COORD. _____

GROUND ELEV.(m.) -0.989
 OBSERVED WL (m.) -1.60
 DATE STARTED 11/4/88
 DATE FINISHED 13/4/88



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BORING LOG

PROJECT TESTING AND MEASUREMENT CENTER
 LOCATION BANG POO, SAMUT PRAKAN

BORING NO. BH-1 (CONT.)
 DEPTH (m.) 35.45
 COORD. _____

GROUND ELEV.(m.) -0.989
 OBSERVED WL (m.) -1.60
 DATE STARTED 11/4/88
 DATE FINISHED 13/4/88

SOIL DESCRIPTION	DEPTH (m.)	GRAPHIC LOG	METHOD	SAMPLING & RECOVERY	SPY - N (blows/ft)		PL W _n LL (%)			S _u (t/m ²)				γ _t (t/m ³)				
					10	20	30	40	20	40	60	80	UCT	PP	FVT	TV	1.5	1.8
STIFF CLAY (CH) 20.00			WO															
VERY STIFF CLAY, WITH SHELL BITS, BROWN (CL) 21.00	20		SS 4	■	28													
	21		WO															
HARD SANDY CLAY, BROWN (CL) 22.30	21		SS 5	■	33													
	22		WO															
	23		SS 6	■	43													
	23		WO															
	24		SS 7	■	38													
	24		WO															
	25		SS 8	■	44													
	25		WO															
	26		SS 9	■	33													
	26		WO															
	27		SS 10	■	48													
	27		WO															
	28		SS 11	■	34													
	28		WO															
	29		SS 12	■	52													
	29		WO															
	30		SS 13	■	50													
	30		WO															
	31		SS 14	■	27													
	31		WO															
	32		SS 15	■	31													
	32		WO															
	33		SS 16	■	31													
	33		WO															
	34		SS 17	■	29													
	34		WO															
	35		SS 18	■	29													
	35		WO															
	35		SS 19	■	29													
END OF BORING																		

K. ENGINEERING CONSULTANTS CO., LTD.

BORING LOG

PROJECT TESTING AND MEASUREMENT CENTER
 LOCATION BANG POO, SAMUT PRAKAN

BORING NO. BH-2

DEPTH (m.) 35.45

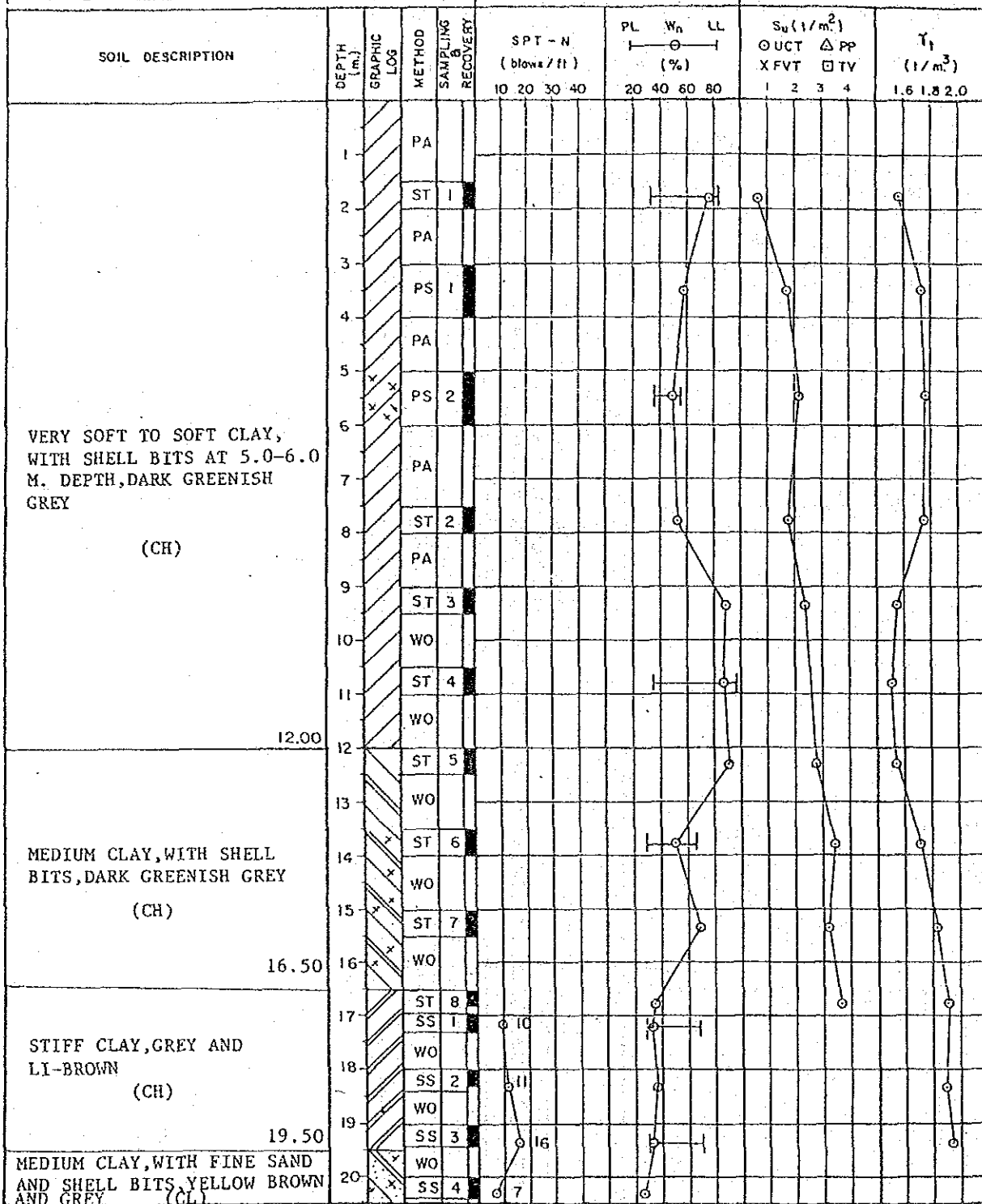
COORD.

GROUND ELEV.(m.) -1.061

OBSERVED WL (m.) -1.30

DATE STARTED 9/4/88

DATE FINISHED 10/4/88



K. ENGINEERING CONSULTANTS CO., LTD.

BORING LOG

PROJECT TESTING AND MEASUREMENT CENTER
 LOCATION BANG POO, SAMUT PRAKAN

BORING NO. BH-2 (CONT.)
 DEPTH (m.) 35.45
 COORD. _____

GROUND ELEV.(m.) -1.061
 OBSERVED WL (m.) -1.30
 DATE STARTED 9/4/88
 DATE FINISHED 10/4/88

SOIL DESCRIPTION	DEPTH (m.)	GRAPHIC LOG	METHOD SAMPLING & RECOVERY	SPT - N (blows/ft)				PL	W _n	LL	S _u (t/m ²)				T ₁ (t/m ³)			
				10	20	30	40	20	40	60	80	5	10	15	20	1.6	1.8	2.0
MEDIUM CLAY, WITH FINE SAND AND SHELL BITS, YELLOWISH BROWN AND GREY (CL) 21.00	21		WO															
	21		SS 5			26												
	22		WO															
	22		SS 6			31												
	23		WO															
	23		SS 7			22												
	24		WO															
	24		SS 8			21												
	25		WO															
	25		SS 9			28												
	26		WO															
	26		SS 10			23												
	27		WO															
	27		SS 11			27												
	28		WO															
	28		SS 12			25												
	29		WO															
	29		SS 13			27												
	30		WO															
	30		SS 14			25												
	31		WO															
	31		SS 15			38												
	32		WO															
	32		SS 16			25												
	33		WO															
	33		SS 17			26												
	34		WO															
	34		SS 18			23												
	35		WO															
	35		SS 19			27												
END OF BORING	36																	

VERY STIFF TO HARD CLAY, WITH FINE SAND AT 25.0-30.0 M. DEPTH, GREY, DARK BROWN AND YELLOW
 (CL, CH)

K. ENGINEERING CONSULTANTS CO., LTD.

BORING LOG

PROJECT TESTING AND MEASUREMENT CENTER
 LOCATION BANG POO, SAMUT PRAKAN

BORING NO. BH-3

DEPTH (m.) 35.45

COORD.

GROUND ELEV.(m.) -0.693

OBSERVED WL (m.) -0.80

DATE STARTED 9/4/88

DATE FINISHED 11/4/88

SOIL DESCRIPTION	DEPTH (m.)	GRAPHIC LOG	METHOD	SAMPLING & RECOVERY	SPT - N (blows / ft)				PL W _n LL (%)			S _u (t/m ²)				γ _t (t/m ³)			
					10	20	30	40	20	40	60	80	UCT	FVT	PP	TV	1.6	1.8	2.0
									-----○-----			○	×	△	□				
VERY SOFT TO SOFT CLAY WITH SHELL BITS AT 9.00-14.00 M DEPTH, DARK GREENISH GREY (CH)	1		PA																
	2		ST 1																
	3		PA																
	4		ST 2																
	5		PA																
	6		ST 3																
	7		WO																
	8		ST 4																
	9		WO																
	10		ST 5																
	11		WO																
	12	12.00	ST 6																
MEDIUM CLAY, DARK GREENISH GREY (CH)	13		WO																
	14		ST 7																
	15		WO																
	16		ST 8																
	17		WO																
	18	17.50	ST 9																
STIFF TO VERY STIFF CLAY, GREY, LI-GREY AND LI-BROWN (CH)	19		WO																
	18		ST 10																
	19		WO																
	18		ST 11																
	19		WO																
20		ST 12																	
		SS 1																	
		WO																	
		SS 2																	
		WO																	
		SS 3																	

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BORING LOG	BORING NO. <u>BH-3 (CONT.)</u>	GROUND ELEV.(m.) <u>-0.693</u>
	DEPTH (m.) <u>35.0</u>	OBSERVED WL (m.) <u>-0.80</u>
PROJECT <u>TESTING AND MEASUREMENT CENTER</u>	COORD. _____	DATE STARTED <u>9/4/88</u>
LOCATION <u>BANG POO, SAMUT PRAKAN</u>		DATE FINISHED <u>11/4/88</u>

SOIL DESCRIPTION	DEPTH (m.)	GRAPHIC LOG	METHOD	SAMPLING & RECOVERY	SPT - N (blows / ft)				PL W _n LL (%)		S _u (1/m ²)				γ _t (1/m ³)						
					10	20	30	40	20	40	60	80	5	10	15	20	1.6	1.8	2.0		
									○ UCT	△ PP	X FVT	□ TV									
VERY STIFF CLAY WITH SAND AND SHELL BITS, LI-GREY AND YELLOW (CL) 21.00	21	[Graphic Log]	SS 3	3	16																
			WO																		
HARD CLAY, BROWN AND GREY (CL, CH) 22.50	22	[Graphic Log]	SS 4	4	34																
			WO																		
VERY STIFF CLAY, GREY, BROWN AND YELLOW (CH)	23	[Graphic Log]	SS 5	5	34																
			WO																		
			SS 6	6	25																
			WO																		
			SS 7	7	20																
			WO																		
			SS 8	8	18																
			WO																		
			SS 9	9	23																
			WO																		
			SS 10	10	20																
			WO																		
			SS 11	11	22																
			WO																		
			SS 12	12	25																
			WO																		
			SS 13	13	23																
			WO																		
SS 14	14	24																			
WO																					
SS 15	15	19																			
WO																					
SS 16	16	23																			
WO																					
SS 17	17	20																			
WO																					
SS 18	18	22																			
WO																					
35.45	35																				
END OF BORING																					

K. ENGINEERING CONSULTANTS CO., LTD.

BORING LOG

PROJECT TESTING AND MEASUREMENT CENTER
 LOCATION BANG POO, SAMUT PRAKAN

BORING NO. BH-4
 DEPTH (m.) 35.45
 COORD. _____

GROUND ELEV.(m.) -1.064
 OBSERVED WL (m.) -1.20
 DATE STARTED 12/4/88
 DATE FINISHED 14/4/88

SOIL DESCRIPTION	DEPTH (m.)	GRAPHIC LOG	METHOD	SAMPLING & RECOVERY	SPT - N (blows / ft)				PL W _n LL (%)				S _u (t/m ²)				γ _t (t/m ³)			
					10	20	30	40	20	40	60	80	1	2	3	4	1.5	1.8	2.0	
VERY SOFT TO SOFT CLAY, DARK GREENISH GREY (CH)	1		PA																	
	2		ST 1																	
	3		PA																	
	4		ST 2																	
	5		WO																	
	6		ST 3																	
	7		WO																	
	8		ST 4																	
	9		WO																	
	10		ST 5																	
	11		WO																	
12.00																				
MEDIUM CLAY, DARK, GREENISH GREY (CH)	12		ST 6																	
	13		WO																	
	14		ST 7																	
	15		WO																	
16.00																				
STIFF CLAY, GREY AND YELLOW (CH)	16		ST 8																	
	17		WO																	
	18		ST 9																	
VERY STIFF CLAY, GREY AND YELLOW (CH)	19		WO																	
	19.00																			
	17		SS 1																	
	18		SS 2																	
19		SS 3																		
20		SS 4																		

K. ENGINEERING CONSULTANTS CO., LTD.

BORING LOG

PROJECT TESTING AND MEASUREMENT CENTER
 LOCATION BANG POO, SAMUT PRAKAN

BORING NO. BH-4 (CONT.)
 DEPTH (m.) 35.45
 COORD. _____

GROUND ELEV.(m.) -1.064
 OBSERVED WL (m.) -1.20
 DATE STARTED 12/4/88
 DATE FINISHED 14/4/88

SOIL DESCRIPTION	DEPTH (m.)	GRAPHIC LOG	METHOD	SAMPLING & RECOVERY	SPT - N (blows / ft)				PL W _n LL (%)		S _u (t/m ²)				γ _t (t/m ³)			
					10	20	30	40	20	40	60	80	5	10	15	20	1.5	1.9
VERY STIFF TO HARD CLAY, LI-GREY, LI-BROWN, BROWNISH GREY AND BROWN (CH, CL)	21		SS 4		19													
			WO															
	22		SS 5		30													
			WO															
	23		SS 6		31													
			WO															
	24		SS 7		23													
			WO															
	25		SS 8		19													
			WO															
	26		SS 9		20													
			WO															
	27		SS 10		21													
			WO															
	28		SS 11		25													
			WO															
	29		SS 12		26													
			WO															
	30		SS 13		25													
		WO																
31		SS 14		27														
		WO																
32		SS 15		23														
		WO																
33		SS 16		34														
		WO																
34		SS 17		39														
		WO																
35	35.45		SS 18		29													
			WO															
			SS 19		28													
END OF BORING																		

