

## APPENDICES



## APPENDICES

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1. Basic Design Study
- 1.1 Minutes of Discussion

**MINUTES OF DISCUSSIONS  
ON  
THE BASIC DESIGN STUDY  
ON  
THE PROJECT FOR ESTABLISHMENT OF  
DRUGS STORAGE AND DISTRIBUTION CENTER  
IN THE ARAB REPUBLIC OF EGYPT**

In response to the request made by the Government of the Arab Republic of Egypt, the Government of Japan decided to conduct a Basic Design Study on the Project for Establishment of the Drugs Storage and Distribution Center (hereinafter referred to as "the Project") and the Japan International Cooperation Agency (JICA) sent the Basic Design Study Team headed by Mr. Akira Kawahara, Deputy Director of the First Evaluation and Registration Division, Pharmaceutical Affairs Bureau, Ministry of Health and Welfare, from March 26, to April 24, 1988.

The team had a series of discussions with the authorities concerned of the Government of the Arab Republic of Egypt, headed by Dr. Medhat El-Kattan, Chairman of the General Organization for Drugs and Dr. Abdel Aziz Ghazal, Chairman of the Egyptian Pharmaceutical Trading Company (EPTC), and conducted a field survey.

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

Cairo, August 2, 1988

飯村 圭一

Keiji Iimura  
Resident Representative,  
JICA Egypt Office  
on behalf of Basic Design  
Study Team

A. Ghazal

Abdel Aziz Ghazal  
Chairman,  
The Egyptian Pharmaceutical  
Trading Company

Witnessed by

S. Bayoumi

Saad Bayoumi  
Undersecretary  
Ministry of International  
Cooperation

Dr. Helmy El-Berwany  
Dr. Helmy El-Berwany  
Undersecretary of State  
Ministry of Health

## ATTACHEMENTS

### 1. Objectives of the Project

The objective of the Project is to improve the efficiency of drug storage and distribution in Egypt with establishment of the Drugs Storage and Distribution Center of the Egyptian Pharmaceutical Trading Company (EPTC).

### 2. Executing Agency

The responsible Ministry for the Project in the Government of Egypt is the Ministry of Health, and the General Organization for Drugs and the Egyptian Pharmaceutical Trading Company will be responsible for implementation of the Project and operation of the Center after its completion.

### 3. Project Site

The Project site is shown in Annex I.

### 4. Major Items Requested

The major items requested by EPTC are as listed in Annex II.

### 5. Grant Aid Program

5-1 The Egyptian side has understood the system and procedures of the Japanese Grant Aid as explained by the study team including a principle of use of a Japanese consulting firm and Japanese general contractors for the implementation of the Project.

5-2 The study team will convey to the Government of Japan the request of the EPTC that the former takes necessary measures to cooperate in implementing the Project by providing necessary facilities and equipment under Japan's Grant Aid Program.

5-3 The Government of the Arab Republic of Egypt has agreed to provide the necessary measures as listed in Annex III on condition that the grant aid by the Government of Japan would be extended to the Project.

### 6. Tentative Implementation Schedule and Procedures in Egypt

6-1 The tentative implementation schedule, to be realized on condition that the Grant Aid by the Government of Japan should be extended to the Project, is shown in Annex IV.

etc

*Agk*

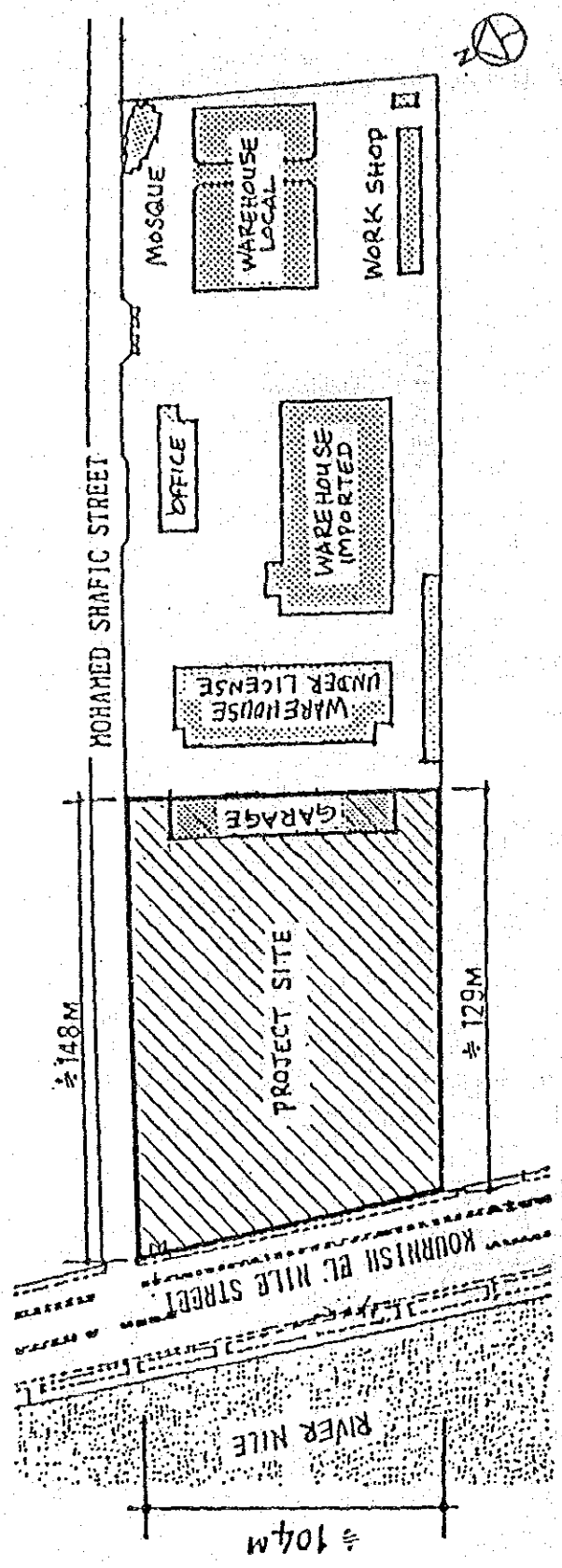
6-2 The Egyptian side will take necessary actions to expedite the approval for executions of this project by the Government of the Arab Republic of Egypt.

7. The equipment provided under the grant shall have a maintenance office in Egypt which is capable of its maintenance. Any exception for above should be agreed by both sides considering the nature of the equipment.

*vi*

*ASJ*

Annex I Proposed Project Site



NO SCALE

1353 Kournish EL Nile Street  
Shoubra Central Warehouse

AB



## Annex II

### Major Items Requested

#### . Construction of a Building with :

- 1) storage rooms for :
  - i) ordinary drugs
  - ii) restricted substances
  - iii) inflammable substances
- 2) walk-in refrigerator for vaccine and sera
- 3) truck berth
- 4) elevators
- 5) offices
- 6) fire alarm and fighting system (hydrant and extinguishers)
- 7) ventilation system
- 8) public address system
- 9) electricity, water supply and drainage system within the Project site
- 10) workshop

#### . Equipment

- 1) racks and pallets
- 2) computers
- 3) trucks (ordinary and airconditioned for such items as insulin and serum preparation)
- 4) other equipment necessary for transportation in the storage rooms

Ag/

Annex III Recommendations for Undertakings by The Governments of the Arab Republic of Egypt, in accordance with Egyptian Regulations and Relevant Laws

1. To secure the land for the Project and to clear, level and reclaim the site, and to remove the existing garage before construction starts, if it is necessary.
2. To provide facilities for the distribution of electricity, water supply, drainage, telephone, gas, and other incidental facilities.
3. To ensure the necessary budget (from fiscal year 1989/1990) and personnel for the proper and effective operation and maintenance of facilities and equipment provided under the grant.
4. To ensure prompt unloading, tax exemption, customs clearance at the port of disembarkation in Egypt and prompt internal transportation of materials and equipment provided under the grant in accordance with the law and regulations concerned in Egypt.
5. 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 Egypt and stay therein for the execution of the Project.
6. Japanese nationals involved in the Project will not be subject to any customs duties, internal taxes, and other fiscal levies which may be imposed in Egypt with respect to the supply of the products and services under the verified contract.
7. To bear all expenses, other than those to be borne by the grant, necessary for construction of the facilities as well as for the transportation and installation of the equipment.

*eh*

*Agh*

No. of Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Exchange of Notes	△																		
Approval by N.P.A.		⊙																	
Consulting Contract			△																
D/D & Tender Doc.			■																
Tender Announcement				△															
Tender Opening					△														
Construction Contract.						△													
Construction Period																			
Transportation (arrival)																			
Trial (run & operation)																			
Delivery																			△

*Handwritten signature*

## 1.2 Members of Basic Design Study Team

### (1) Basic Design Study

Assignment	Name	Position
Team Leader	Akira KAWAHARA	Deputy Director, First Evaluation and Registration Division, Pharmaceutical Affairs Bureau, Ministry of Health and Welfare
Project Coordinator	Harumi KITABAYASHI	Grant Aid Planning and Survey Department, Japan International Cooperation Agency (JICA)
Pharmaceutical Supply Specialist	Kuniyasu FUJISHITA	Ohtsuka Pharmaceutical Co., Ltd.
Architectural Planner	Shinichi INOUE	Azusa Sekkei Co., Ltd.
Architectural Designer	Hiroyasu TOYOKAWA	Azusa Sekkei Co., Ltd.
Utility Planner	Tsuneo SAFU	Azusa Sekkei Co., Ltd.
Distribution and Equipment Planner	Hideo KAWAHARA	Azusa Sekkei Co., Ltd.

### (2) Explanation of Basic Design Draft Report

Assignment	Name	Position
Team Leader	Kazushi ENDOH	Expert of Pharmaceutical Affairs, Inspection and Guidance Division, Pharmaceutical Affairs Bureau, Ministry of Health and Welfare
Project Coordinator	Harumi KITABAYASHI	Grant Aid Planning and Survey Department, Japan International Cooperation Agency (JICA)
Architectural Planner	Shinichi INOUE	Azusa Sekkei Co., Ltd.
Utility Planner	Tsuneo SAFU	Azusa Sekkei Co., Ltd.
Distribution and Equipment Planner	Hideo KAWAHARA	Azusa Sekkei Co., Ltd.

### 1.3 Itinerary of Study

#### (1) Basic Design Study Team

Date	Member	Activity	Location
26 March (Saturday)	Kawahara, Kitabayashi, Fujishita, Inoue, Kawahara, Toyokawa, Safu	Leave Narita 21:10 by BA-006	
27 March (Sunday)	Kawahara, Kitabayashi, Fujishita, Inoue, Kawahara, Toyokawa, Safu	Arrive Cairo 22:30 by BA-157	Cairo
28 March (Monday)	Kawahara, Kitabayashi, Fujishita, Inoue, Kawahara, Toyokawa, Safu	(1) Social visit to JICA Office, Japanese Embassy, General Organization for Pharmaceuticals, Chemicals and Medical Appliances, EPTC, Ministry of Planning and International Cooperation  (2) Submit Inception Report and Questionnaire	
29 March (Tuesday)	Kawahara, Kitabayashi, Fujishita, Inoue, Kawahara, Toyokawa, Safu	(1) Explain Inception Report and Grant Aid System to EPTC  (2) Inspect Shoubra main warehouse	
30 March (Wednesday)	Kawahara, Kitabayashi, Fujishita, Inoue, Kawahara, Toyokawa, Safu	(1) Inspect drug supply center  (2) Meeting at Shoubra main warehouse	
31 March (Thursday)	Kawahara, Kitabayashi, Fujishita, Inoue, Safu  Toyokawa	(1) Inspect Mahara and Babshak Intermediate warehouses  (1) Prepare conceptual drawing and sketch	Alexandria  Cairo
1 April (Holiday)	Kawahara, Kitabayashi, Fujishita, Inoue, Kawahara, Safu  Toyokawa	(1) Inspect pharmacies and warehouses in Alexandria and return to Cairo  (1) Prepare conceptual drawing and sketch	Cairo
2 April (Saturday)	Kawahara, Kitabayashi, Fujishita, Inoue, Kawahara, Toyokawa, Safu	(1) Survey construction condition in Cairo	
3 April (Sunday)	Kawahara, Kitabayashi, Fujishita, Inoue, Kawahara, Toyokawa, Safu  Kawahara, Kitabayashi, Fujishita, Inoue  Kawahara, Toyokawa, Safu	(1) Discuss organization of EPTC at EPTC  (2) Hear drug distribution at Cairo University Pediatric Hospital  (1) Inspect Shoubra main warehouse	

Date	Member	Activity	Location
4 April (Monday)	Kawahara, Kitabayashi, Fujishita, Inoue, Kawahara, Toyokawa, Safu	(1) Explain the draft of minutes to EPTC  (2) Inspect Arab Otsuka pharma- ceutical plant	
5 April (Tuesday)	Kawahara, Kitabayashi, Fujishita, Inoue  Kawahara, Toyokawa, Safu	(1) Discuss Minutes at EPTC  (1) Inspect Shoubra main warehouse, submit supplementary questionnaire  (2) Prepare site layout plan and construction schedule	
6 April (Wednesday)	Kawahara, Kitabayashi, Fujishita, Inoue  Kawahara, Toyokawa, Safu	(1) Discussed minutes, but no agreement was reached.  (1) Inspect Shoubra main warehouse	
7 April (Thursday)	Kawahara Kitabayashi, Fujishita, Inoue, Kawahara, Toyokawa, Safu	(1) Report to JICA Office  (2) Visit EPTC and Ministry of Planning & International Cooperation to report departure of Kawahara, Kitabayashi and Fujishita (leave by JL-474)	
8 April (Holiday)	Inoue, Kawahara, Toyokawa, Safu	(1) Meeting within team and arrangement of collected information	
9 April (Saturday)	Inoue, Kawahara, Toyokawa, Safu	(1) Inspect Shoubra main warehouse and verify received data	
10 April (Sunday)	Inoue, Kawahara, Toyokawa, Safu	(1) Inspect equipment used at Shoubra main warehouse  (2) Interim report to JICA Office	
11 April (National holiday)	Inoue, Kawahara, Toyokawa, Safu	(1) Meeting within team, arrange collected information  (2) Prepare basic design sketch	
12 April (Tuesday)	Inoue, Kawahara, Toyokawa, Safu	(1) Inspect Shoubra main warehouse  (2) Prepare basic design sketch	
13 April (Wednesday)	Inoue, Kawahara, Toyokawa, Safu	(1) Inspect Shoubra main warehouse  (2) Study economic condition in Egypt  (3) Survey price of equipment and material	

Date	Member	Activity	Location
14 April (Thursday)	Inoue, Kawahara, Toyokawa, Safu	(1) Inspect Shoubra main warehouse  (2) Confirmed survey and boring position	
15 April (Holiday)	Inoue, Kawahara, Toyokawa, Safu	(1) Meeting within team. Arrange collected information	
16 April (Saturday)	Inoue, Kawahara, Safu  Toyokawa	(1) Inspect Shoubra main warehouse  (1) Survey price of equipment and material	
17 April (Sunday) Beginning of Ramadan	Inoue, Kawahara, Safu    Toyokawa	(1) Investigate Nile Company pharmaceutical company  (2) Investigate Shoubra main warehouse  (1) Visit Bank of Tokyo Cairo Office Hear Egypt economic condition from Manager Sato and receive data	
18 April (Monday)	Inoue, Kawahara, Toyokawa, Safu    Toyokawa	(1) Prepare report to JICA Office and EPTC  (2) Prepare basic design drawing, plane, vertical, cross section and arrangement drawings  (1) Investigate similar project "Construction equipment training center"  (2) Receive sample of price list	
19 April (Tuesday)	Inoue, Kawahara, Toyokawa, Safu	(1) Report outline of survey to EPTC  (2) Inspect infrastructure and construction condition	
20 April (Wednesday)	Inoue, Kawahara, Toyokawa, Safu	(1) Submit survey data at final report meeting at Shoubra main warehouse	
21 April (Thursday)	Inoue, Kawahara, Toyokawa, Safu	(1) Report survey result for leaving Egypt to JICA Office  (2) Invest similar project "Educational culture center"	
22 April (Holiday)	Inoue, Kawahara, Toyokawa, Safu	Leave by TG-927	
23 April (Saturday)	Inoue, Kawahara, Toyokawa, Safu	Arrive Bangkok	Bangkok
24 April (Sunday)	Inoue, Kawahara Toyokawa, Safu	Arrive Narita TG-740	

## (2) Draft Final Report Explanation Team

Date	Member	Activity	Location
1 August (Monday)	Endo, Kitabayashi, Inoue Kawahara, Safu	Leave Narita by JL-471 (14:15)	
2 August (Tuesday)	Endo, Kitabayashi, Inoue Kawahara, Safu	Arrive Cairo by JL-471 (06:35)  (1) Social visit JICA Office, Japan Embassy, Ministry of Planning and International Cooperation  (2) Submit draft report and supplementary questionnaire	Cairo
3 August (Wednesday)	Endo, Kitabayashi  Inoue, Kawahara, Safu	(1) Social visit to Ministry of Health  (1) Meeting at Shoubra main warehouse	
4 August (Thursday)	Endo, Kitabayashi, Inoue, Kawahara, Safu	(1) Draft report explanation meeting	
5 August (Friday)	Endo, Kitabayashi  Inoue, Kawahara, Safu	(1) Summarize result of meeting  (1) Meeting within team	
6 August (Saturday)	Endo, Inoue  Kawahara, Safu  Kitabayashi	(1) Inspect Mohandesine intermediate warehouse  (1) Heliopolis intermediater warehouse  (1) Confirm and discuss EPTC minutes content	
7 August (Sunday)	Endo, Inoue  Kawahara, Safu	(1) Supplementary investigation of Shoubra main warehouse  (1) Confirm answers of supplementary questionnaire	
8 August (Monday)	Endo, Kitabayashi, Inoue, Kawahara, Safu	(1) Exchange signature on Basic design minutes	
9 August (Tuesday)	Endo, Inoue, Kawahara, Safu	Leave Cairo BA-152 (9:00) Arrive London (12:05) Leave London JL-402 (19:30)	
10 August (Wednesday)	Endo, Inoue, Kawahara, Safu	Arrive Narita JL-402 (15:15)	



#### 1.4 List of Persons Visited in the Arab Republic of Egypt

Ministry of Health	Underscretary	Dr. Helmy El-Baramouy
Ministry of Planning and International Cooperation	Undersecretary	Mr. Saad Mohamed Bayoumi
	General Manager	Mr. Hamed Moustafa
	Economic Researcher	Mr. Mohsen M. Sadek
General Organization for Pharmaceuticals, Chemicals and Medical Appliances	Chairman	Dr. Kattan
Egyptian Pharmaceutical Trading Company	Chairman	Dr. Abdel Aziz Ghazal
	Director of Planning Sector	Dr. Aly Ibrahim Hammad
	Director of Storage Facility Sector	Dr. Mohamed Shehata
	Director of Information Sector	Dr. Abdel Aal Awad
	Director of Finance Sector	Mr. Ismail Ewais
	Director of Imported Sector	Mr. Mohamed Abdelazim
	Engineering Sector	Mr. Sherif Abd El Bari Mohamed
EPTC Architectural Consultant		Mr. Mostafa Shihite
		Prof. Dr. Ibrahim Gaafar
		Mr. Ismail Waly
		Mr. Abdel Khalek H.
Cairo University Pediatric Hospital	Technical Cooperation Leader	Ms. Kyoko Tateyama R.N.

## 2. Survey of Shoubra Main Warehouse

### 2.1 Survey of Shoubra Main Warehouse

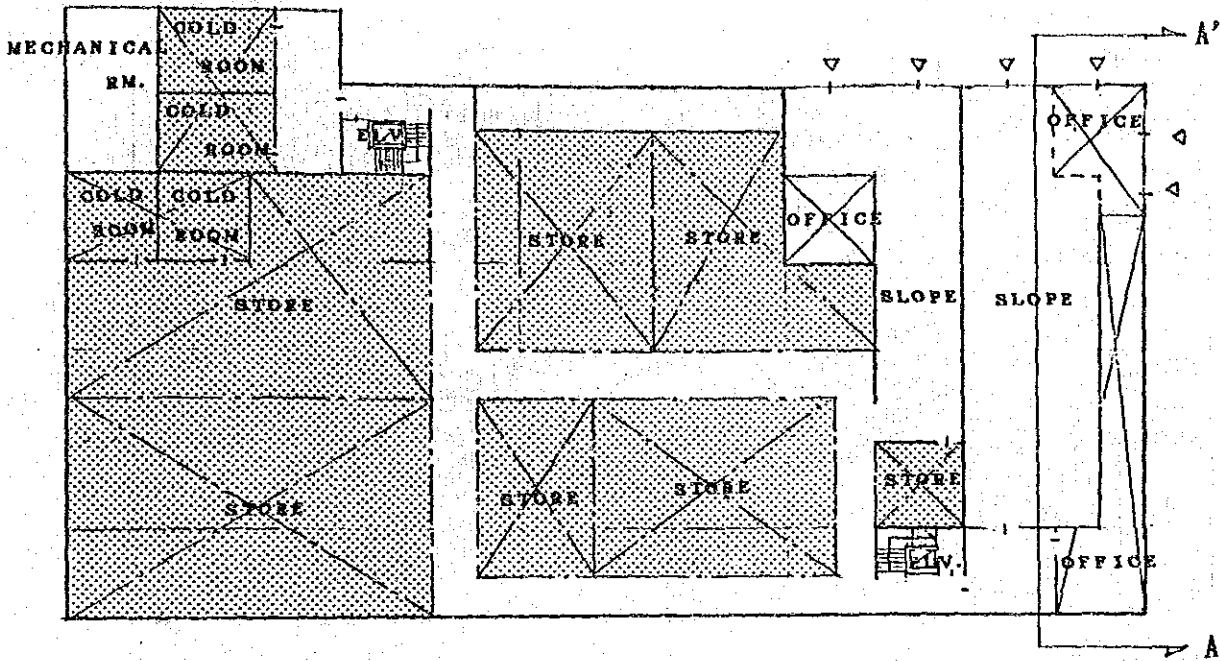
Floor Area for Existing Warehouse

April 17, 1988

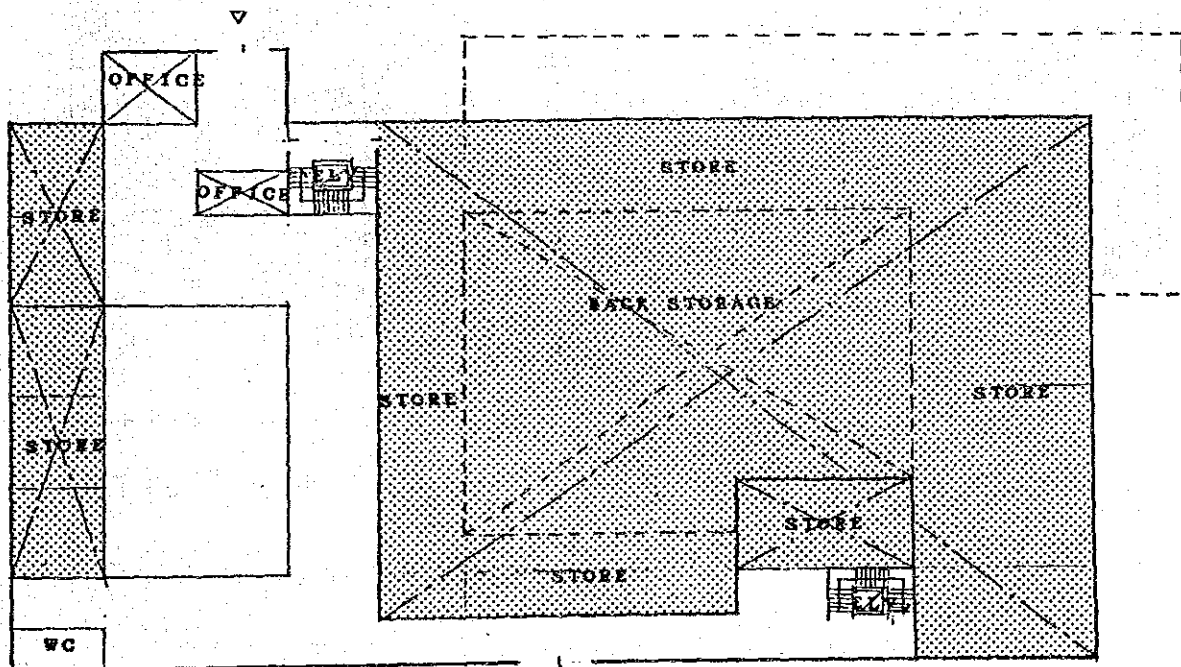
Basic Design Study Team

	Floor Height (m)	Floor Area (m <sup>2</sup> )	Storage (m <sup>2</sup> )	Office (m <sup>2</sup> )	Corridor & Others (m <sup>2</sup> )
<b>Building A (Imported)</b>					
Ground F.	7.5	2,682	1,527	180	
1st F.	7.5	2,652	1,764	264	
2nd F.	6.0	2,652	2,452	72	
<b>Building B (Local)</b>					
Ground F.	5.0	1,760	1,080	180	
1st F.	4.0	1,760	1,060	280	
2nd F.	4.0	1,760	1,340	40	
3rd F.	4.0	1,760	1,508	80	
<b>Building C (Under Lisece)</b>					
Ground F.	6.0	1,592	960	340	
Mezzanin		632	----	444	
1st F.	4.5	1,872	1,444	220	
2nd F.	4.5	1,872	1,668	----	
3rd F.	4.5	1,872	1,668	----	
4th F.	4.5	1,872	----	1,668	
<b>Total A + B + C</b>	---	<b>24,738</b>	<b>16,471</b>	<b>3,768</b>	<b>4,499</b>


Building A



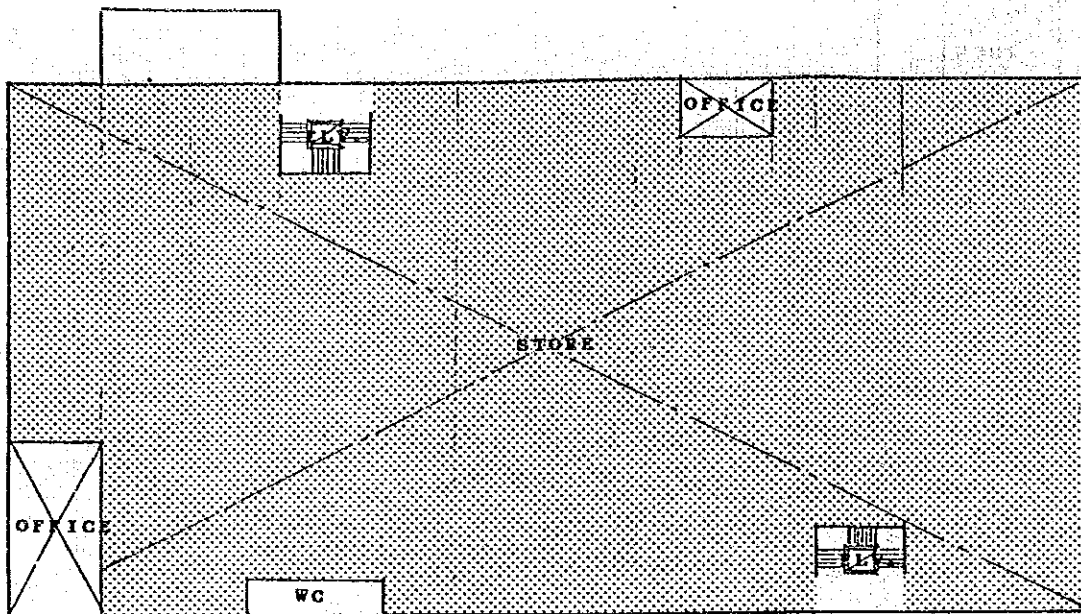
Ground Floor



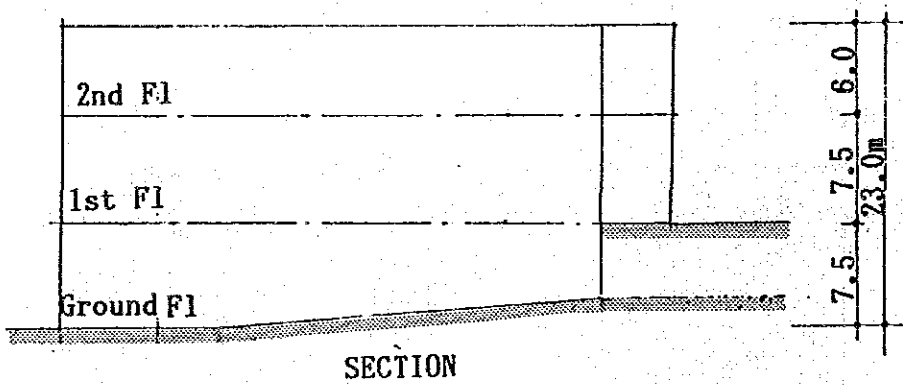
1st Floor

 Imported Drugs

SCALE 1:500

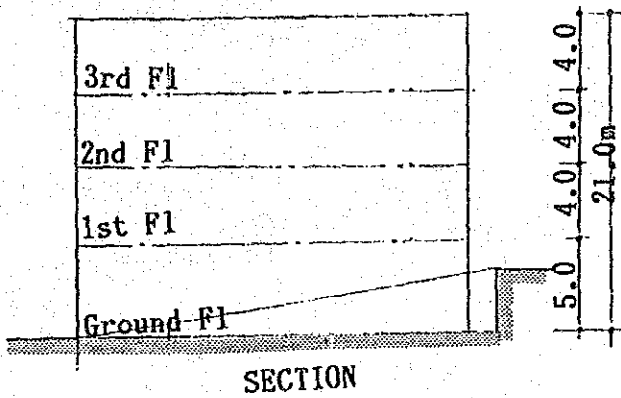
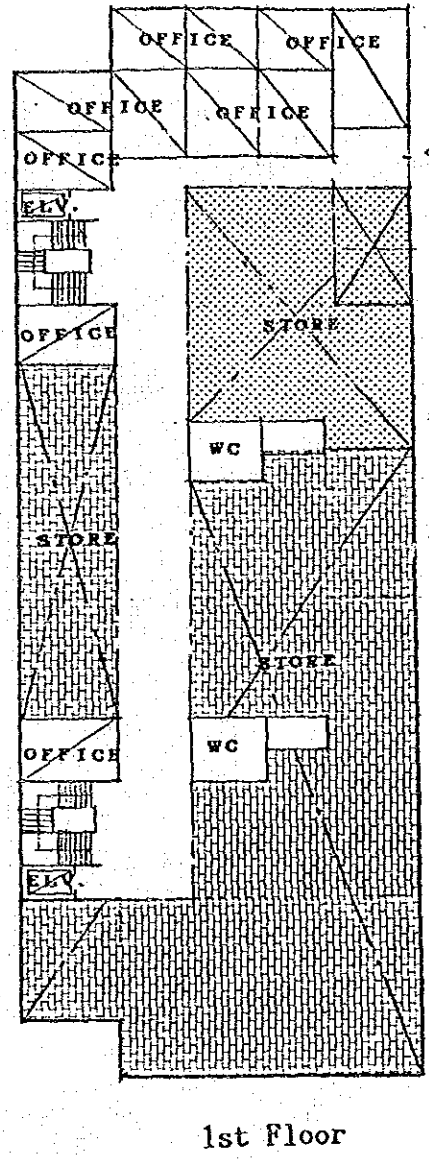
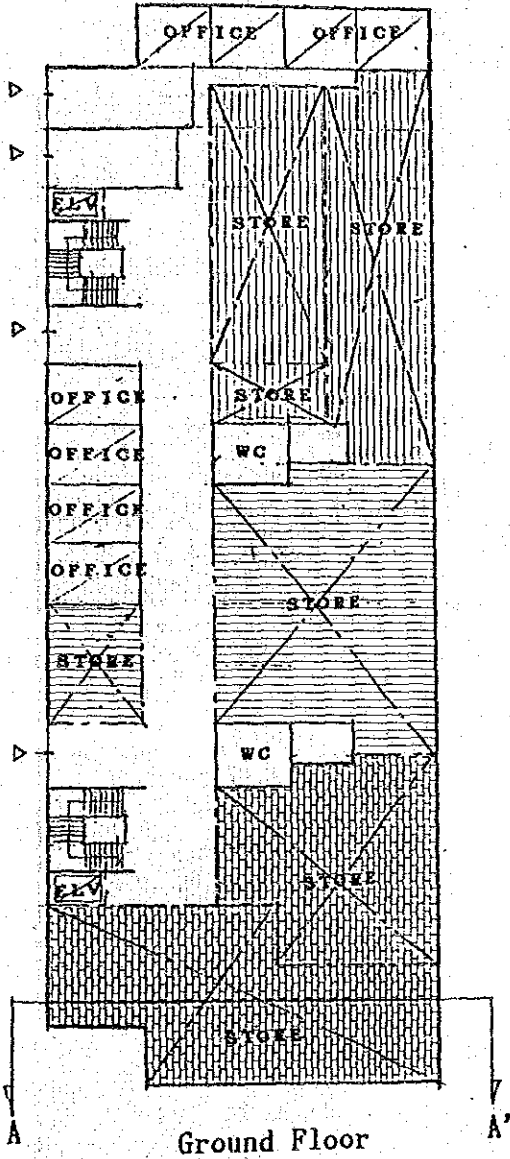






2nd Floor



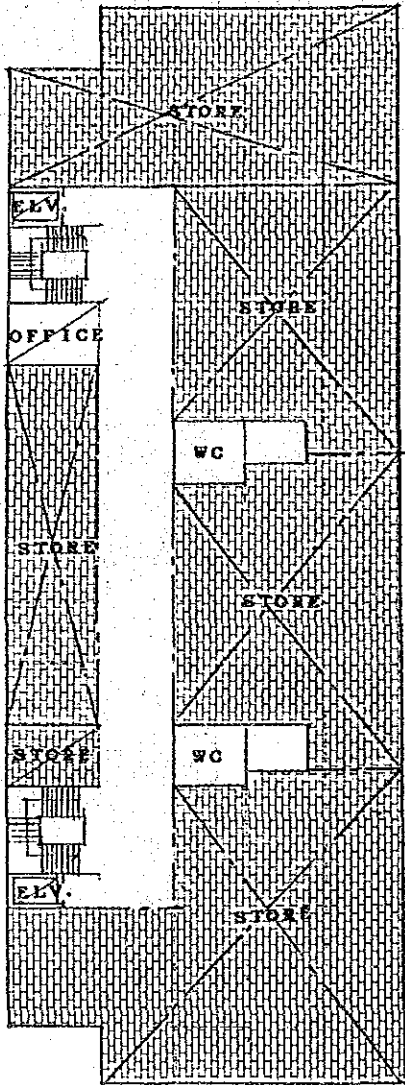
SECTION

Building B

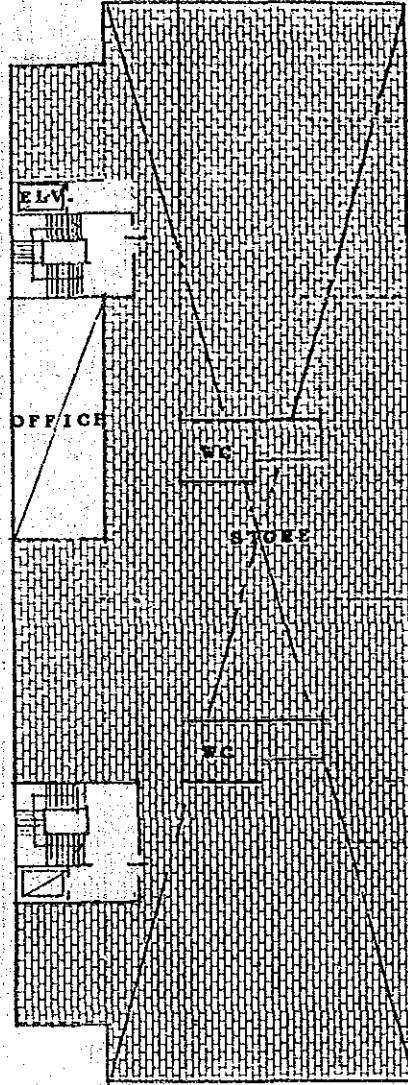


-  Local Drugs
-  Vet. & Tender Drugs
-  Family Planning
-  Restricted & Essential Drugs

SCALE 1:500

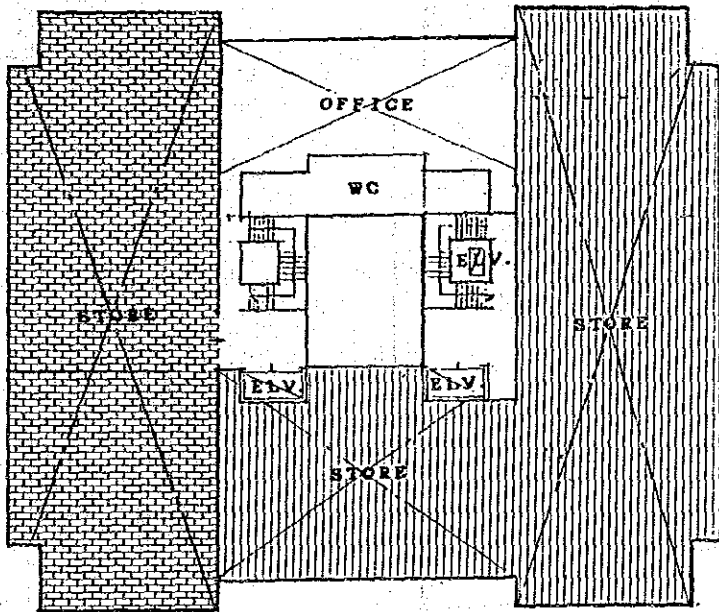
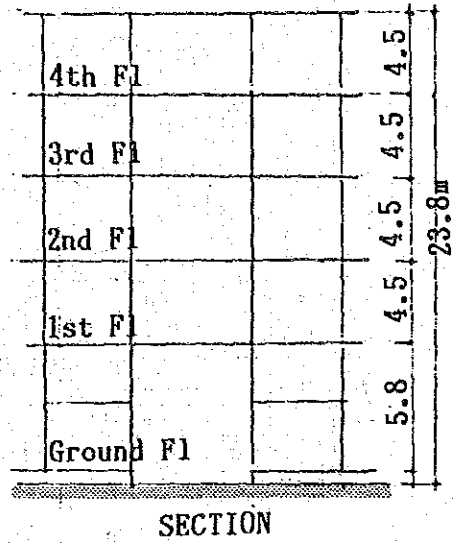
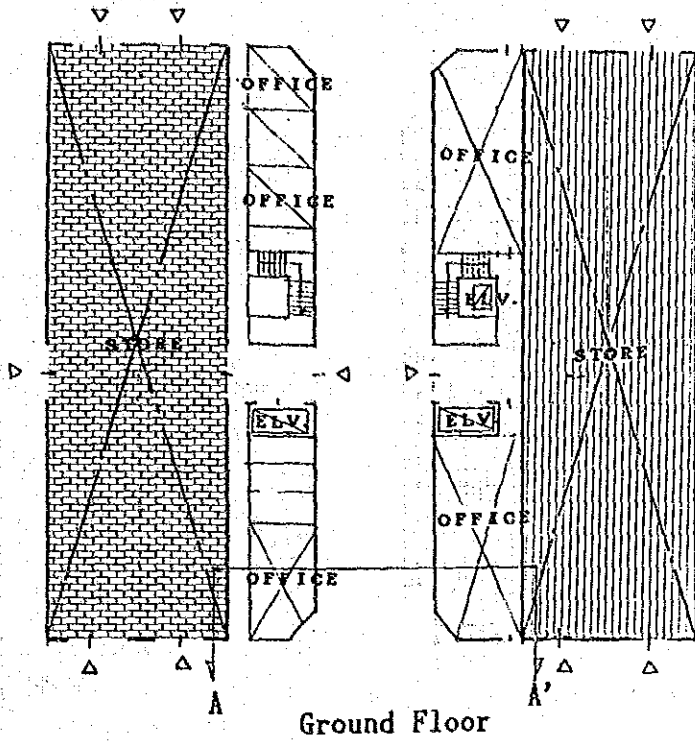




2nd Floor



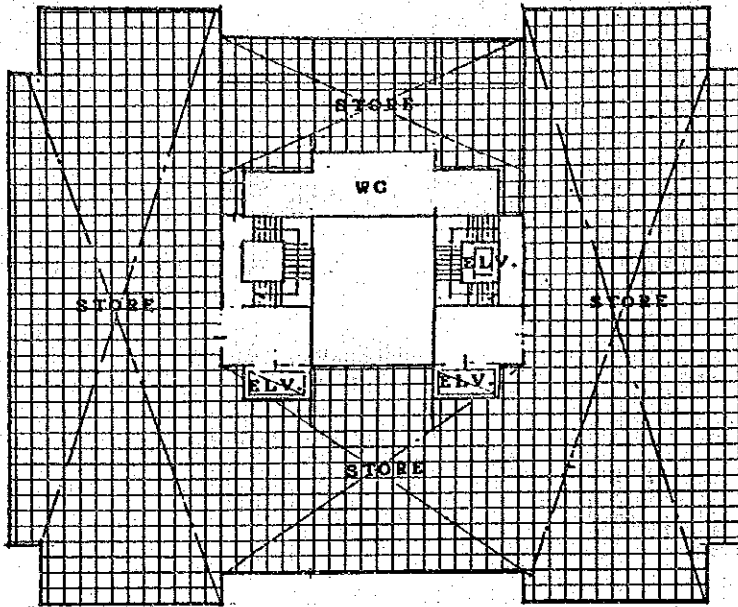
3rd Floor

Building C




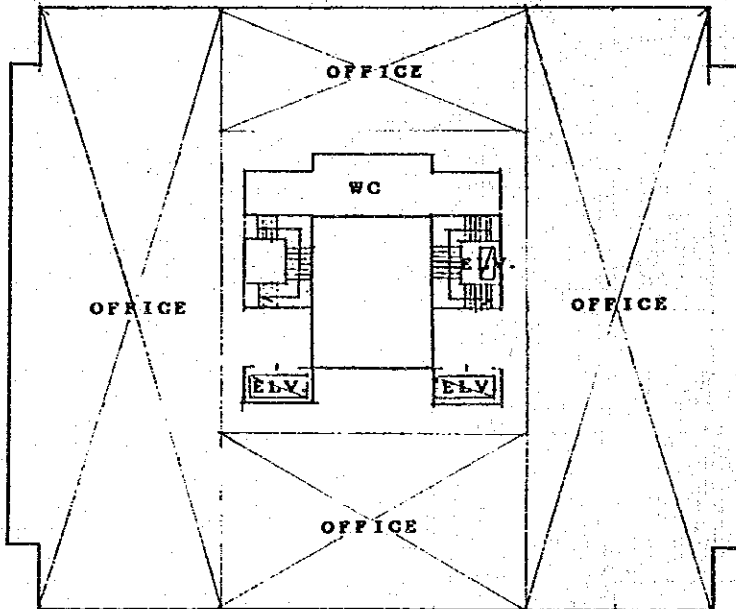
-  Infant Milk
-  Others

SCALE 1:500



2nd & 3rd Floor

 Underlicensed Drugs



4th Floor



## 2.2 Investigation of Drug Storage at Shoubra Main Warehouse

### Survey of Storage Area

	Storage area (m <sup>2</sup> )	Effective storage area excluding pathway	Average height of stacked drugs (m)	Number of items	m <sup>3</sup> /pallet	Average number of pallet for each item
Imported drugs	4,216 <sup>1)</sup>	x 0.5	x 2	÷ 600	÷ 1.4	5.0
Underlicense drugs	3,747	x 0.5	x 3	÷ 900	÷ 1.4	4.5
Restricted drugs	285	x 0.5	x 2	÷ 50	÷ 1.4	4.1
Drugs to be cooled	230 <sup>2)</sup> m <sup>3</sup> ÷ 1.4 m <sup>3</sup> /pallet ÷ 164 pallets					

1) The sorting area in first floor is excluded.

2) Number of drugs required to be cooled for one year.

$$\text{NOVO } 0.0215 \text{ m}^3/\text{carton} \times 4,047 \text{ carton/year} = 87.1 \text{ m}^3/\text{year}$$

$$\text{LEO } 0.0122 \text{ m}^3/\text{carton} \times 7,756 \text{ carton/year} = 94.62 \text{ m}^3/\text{year}$$

---


$$181.63 \text{ m}^3/\text{year}$$

$$181.63 \times 1.3 \text{ (other drugs required to be cooled)} = 230 \text{ m}^3$$

### 3. Reference Material

#### 3.1 Drugs Imported into Egypt

1. Roche (Switzerland)	37 items	(A2: Rivotril, Mestinon)
2. Schering AG (West Germany)	24 items	(A1: Urographin, Angiographin)
3. Glaxo (England)	19 items	(A1: Eitroxin, A2: Becotide, Zantac)
4. Wellcome Foundation (England)	17 items	(A2: Leukeran, Imuran)
5. Bayer (West Germany)	15 items	(A1: Yomesan, Biltricide)
6. Roussel Uclaf (France)	13 items	(A2: Sofra-tulle)
7. Bristol Myers (U.S.A.)	13 items	(A2: Platinol, Blenoxane)
8. E. Merck (West Germany)	13 items	(A1: Fortecortin)
9. Ciba-Geigy (Switzerland)	12 items	(A1: Desferal, A2: Ritalin, Anafranil)
10. Astra (Sweden)	11 items	(A1: Mercaine, A2: Xylocaine)
11. Parke Davis (U.S.A.)	10 items	(A1: Ketalar, A2: Zarontin)
12. Nordisk (Denmark)	9 items	(A1: Insulin-verosulin)
13. Sandoz (Switzerland)	7 items	(A1: Hydergine)
14. Novo (Denmark)	7 items	(A1: Insulin-lente)
15. Asta (U.S.A.)	7 items	(A2: Endoxan)
16. Beecham (England)	6 items	(A2: Pyopen, Ampiclox)

A1, A2 shown above are the priority ranking for allocating foreign exchange for imported drugs by the High Committee of Drugs of Ministry of Health.

### 3.2 Weather Data of Cairo

Table 3-1 Temperature

Month	Period 1947 - 1960												
	Pressure (mb.) Corrected to M.S.L.	Relative Humidity %	Temperature (°C)							Rainfall (mm.)			Evaporation per Day mm. (Piche)
			Mean of Day	Max.	Min.	Absolute Records				Total	Max. in One Day	Date	
						Max.	Date	Min.	Date				
January	1018.0	59	13.7	19.1	8.6	30.2	23/1948	3.0	29/1950	3.7	8.1	21/1957, 1/1960	7.0
February	1017.7	56	14.9	20.7	9.1	35.5	23/1955	0.8	6/1950	4.2	10.4	2/1952	7.9
March	1015.2	54	17.5	23.7	11.3	39.2	30/1960	4.4	1/1948	2.3	10.0	15/1948	10.2
April	1013.7	49	20.9	28.2	13.9	41.8	18/1948	8.5	11/1956	0.6	3.3	1/1954	12.4
May	1012.2	44	24.8	32.4	17.4	43.9	21/1952	11.5	5/1954	0.5	5.8	9/1957	14.6
June	1011.0	48	27.0	34.5	19.9	45.3	13/1948	15.5	6/1955, 3/1960, 4/1957, 4/1952	0.3	3.6	12/1957	14.6
July	1009.0	52	28.1	35.4	21.5	46.2	16/1948	18.5	—	0.0	0.0	—	13.4
August	1008.5	56	27.9	34.8	21.6	41.7	10/1956	17.5	22/1949	Tr.	Tr.	6/1947	12.1
September	1012.2	58	25.8	32.3	19.9	41.7	4/1955	15.7	30/1949	Tr.	Tr.	27/1952, 20/1959	10.8
October	1015.3	58	23.5	29.8	17.8	38.8	2/1955	12.0	15/1948	0.1	0.1	20/1957	9.7
November	1016.9	61	19.3	25.1	13.9	36.3	3/1959	5.2	29/1953	3.5	18.5	29/1957	7.3
December	1018.1	64	15.3	20.7	10.4	32.5	12/1960	4.5	1/1953	8.6	50.0	6/1951	6.1
Total	—	—	—	—	—	—	—	—	—	23.8	—	—	—
Annual Mean	1013.9	55	21.5	28.1	15.4	—	—	—	—	—	—	—	10.5

Table 3-2 Precipitation

Month	Period 1947 - 1960														
	Duration of Bright Sunshine			Number of Days of Occurrence of											
	Total Actual (hours)	Total Possible (hours)	Percentage %	Rain with Amount			Snow	Ice pellets	Hail	Thunder- storms	Fog vis. < 1000 (metres)	Mist or Haze vis. ≥ 1000 (metres)	Dust or Sandstorm vis. ≥ 1000 (metres)	Dust or Sandstorm vis. < 1000 (metres)	Gales Sur- face Wind Speed ≥ 24 (knots)
				≥ 0.1 mm.	≥ 1.0 mm.	≥ 10.0 mm.									
January	—	—	—	2.5	1.4	0.0	0.0	0.0	0.0	0.2	1.1	3.5	1.9	0.4	0.4
February	—	—	—	2.1	1.3	0.1	0.0	0.0	0.0	0.4	1.3	2.0	1.6	0.4	0.5
March	—	—	—	1.4	0.6	0.1	0.0	0.0	0.1	0.4	1.0	2.3	2.1	0.6	0.4
April	—	—	—	0.4	0.1	0.0	0.0	0.0	0.0	0.2	1.4	1.9	2.1	0.7	0.2
May	—	—	—	0.3	0.1	0.0	0.0	0.0	0.0	0.1	0.7	0.7	1.4	0.3	0.4
June	—	—	—	0.1	0.1	0.0	0.0	0.0	0.0	0.0	1.3	0.9	0.3	0.1	0.0
July	—	—	—	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	1.8	0.0	0.0	0.0
August	—	—	—	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	2.0	0.1	0.0	0.0
September	—	—	—	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	2.9	0.0	0.1	0.0
October	—	—	—	0.2	0.0	0.0	0.0	0.0	0.0	0.1	2.5	2.6	0.3	0.1	0.0
November	—	—	—	1.5	0.5	0.1	0.0	0.0	0.1	0.4	1.4	1.9	0.5	0.1	0.0
December	—	—	—	3.1	1.6	0.1	0.0	0.0	0.1	0.1	1.8	1.4	0.8	0.4	0.1
Total	—	—	—	11.6	3.7	0.4	0.0	0.0	0.3	1.9	19.7	25.1	11.1	3.2	2.0
Annual Mean	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Table 3-3 Percentage of Sky Cover

Month	Period 1947-1960					Period 1956-1960							
	Total Sky Cover (Okts)					Surface Wind Speed (knots)							
	0000 UT	0600 UT	1200 UT	1800 UT	Mean of Day	Percentage Frequency of Winds Blowing Within the Following Speed Ranges:							
						1-3	4-6	7-10	11-16	17-21	22-27	28-33	≥34
January	1.6	2.9	3.6	1.9	2.4	13.5	24.5	30.8	21.4	3.4	1.1	0.1	0.0
February	1.6	3.0	3.8	2.0	2.6	21.6	24.7	28.0	17.3	2.3	0.8	0.2	0.1
March	1.5	2.9	3.5	1.6	2.6	18.1	29.1	27.9	18.1	2.9	0.9	0.0	0.0
April	1.5	2.7	2.5	1.2	2.1	14.0	24.6	32.7	23.3	2.3	1.0	0.0	0.0
May	1.3	2.6	2.4	1.6	2.0	16.1	26.9	36.8	18.0	0.7	0.1	0.0	0.0
June	0.8	2.0	0.5	0.2	1.1	23.2	24.1	34.1	16.2	0.4	0.1	0.0	0.0
July	1.3	2.7	0.4	0.1	1.1	36.4	27.4	27.0	5.5	0.1	0.0	0.0	0.0
August	1.3	3.0	0.3	0.1	1.1	34.3	27.7	29.1	4.7	0.1	0.0	0.0	0.0
September	1.1	2.3	1.0	0.2	1.2	27.9	26.0	32.0	7.3	0.0	0.0	0.0	0.0
October	1.3	2.4	2.1	0.8	1.7	26.3	26.0	33.8	9.2	0.1	0.0	0.0	0.0
November	1.3	2.7	3.6	1.4	2.1	18.8	23.6	35.0	12.3	0.2	0.0	0.0	0.0
December	1.7	3.6	4.1	2.1	2.8	25.1	26.9	23.5	11.6	1.0	0.1	0.0	0.0
Annual Mean	1.4	2.7	2.3	1.1	1.9	22.9	26.4	31.3	13.7	1.2	0.3	0.0	0.0

Table 3-4 Wind Velocity

Month	Period 1956-1960														Variable	Calm	
	Mean Ekman Wind Speed (knots)	Surface Wind															
		Percentage Frequency of Winds Blowing From the Following Directions															
		014°	046°	074°	101°	134°	164°	194°	224°	234°	234°	316°	346°				
January	6.7	3.1	4.2	7.5	4.6	3.9	6.1	12.3	15.5	11.6	10.5	7.1	4.6	3.8	3.2		
February	6.9	6.6	8.8	12.0	9.2	5.5	5.0	5.7	7.3	8.2	6.0	8.8	8.1	3.8	3.0		
March	7.4	6.8	7.1	11.8	7.4	4.7	5.4	4.4	6.1	9.4	9.2	12.7	10.9	3.1	3.0		
April	7.7	7.8	13.7	15.2	10.1	7.1	4.0	3.2	3.4	4.7	5.2	8.4	13.1	2.0	2.1		
May	7.5	9.6	18.9	27.6	9.7	4.0	2.4	1.3	0.7	1.7	3.4	3.5	11.8	2.0	1.4		
June	6.8	15.4	24.9	14.1	5.9	2.2	1.9	0.5	2.0	1.2	4.5	10.1	14.1	1.3	1.9		
July	4.9	21.0	37.9	8.2	2.6	1.1	0.5	0.0	0.2	0.7	5.0	13.3	24.5	1.4	3.6		
August	5.0	22.2	37.6	7.5	2.8	0.9	0.2	0.0	0.3	0.9	4.2	12.0	24.1	3.2	4.3		
September	5.6	14.1	28.0	18.0	6.7	2.8	0.9	0.2	0.5	0.5	1.4	4.4	12.3	3.4	6.8		
October	5.7	10.0	16.8	22.5	11.7	3.3	0.8	1.0	2.1	2.2	3.0	5.0	11.3	5.7	4.6		
November	6.1	7.2	14.3	21.4	12.1	5.0	2.2	3.4	6.5	4.8	4.1	4.3	6.5	3.1	5.1		
December	5.8	3.5	7.7	12.5	9.8	6.0	5.1	7.3	12.3	8.0	5.6	4.5	4.4	6.5	6.8		
Annual Mean	6.3	10.6	15.0	14.8	7.7	3.9	2.7	3.3	4.7	4.5	5.2	8.0	12.1	3.3	4.2		

### 3.3 Present Salary Table of EPTC

(Egyptian pound)

Occupation	Monthly Salary
Director	500
General Manager	400
Store Keeper	300
Pickers	250
Finance Staff in Warehouse	250
Truck Driver	350
Forklift Operator	150
Computer Operator	180
Secretary	200
Worker	120





