

ARAB REPUBLIC OF EGYPT

FEASIBILITY STUDY

FOR

NEW ALEXANDRIA INTERNATIONAL AIRPORT

CONSTRUCTION PROJECT

INCEPTION REPORT

JULY 1984

JAPAN INTERNATIONAL COOPERATION AGENCY



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ARAB REPUBLIC OF EGYPT

FEASIBILITY STUDY

FOR

NEW ALEXANDRIA INTERNATIONAL AIRPORT

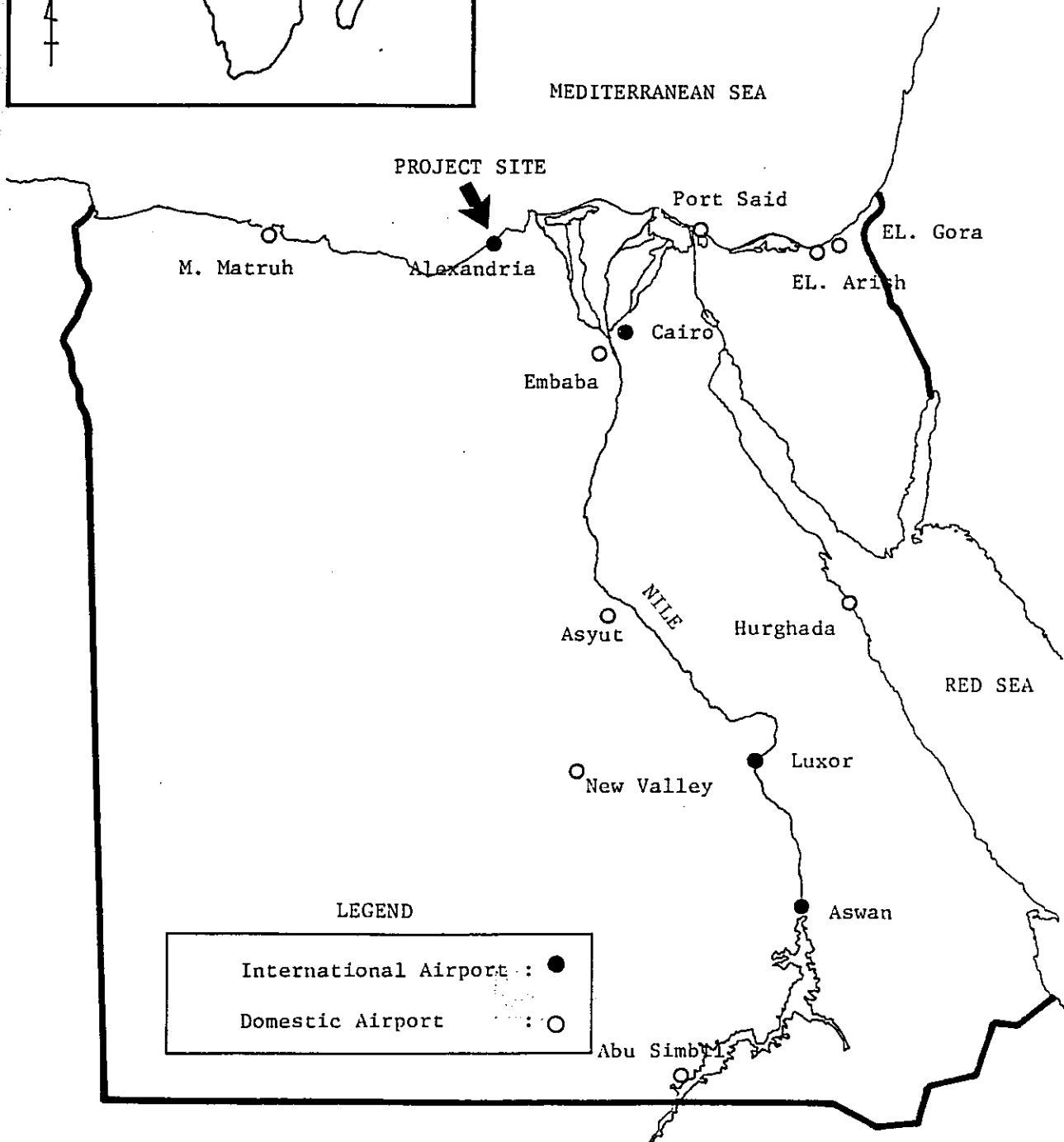
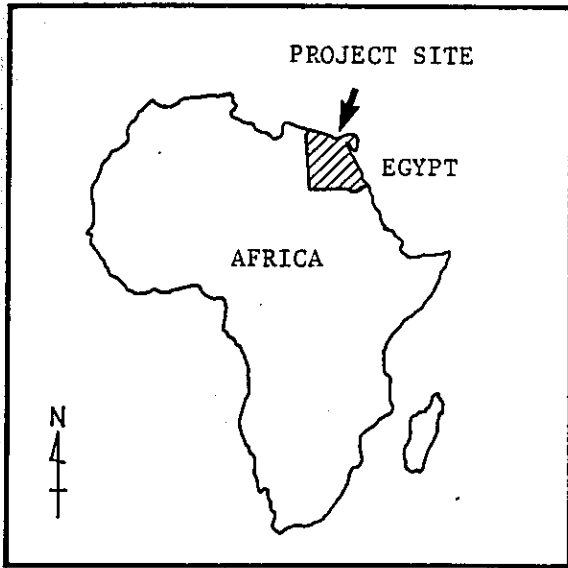
CONSTRUCTION PROJECT

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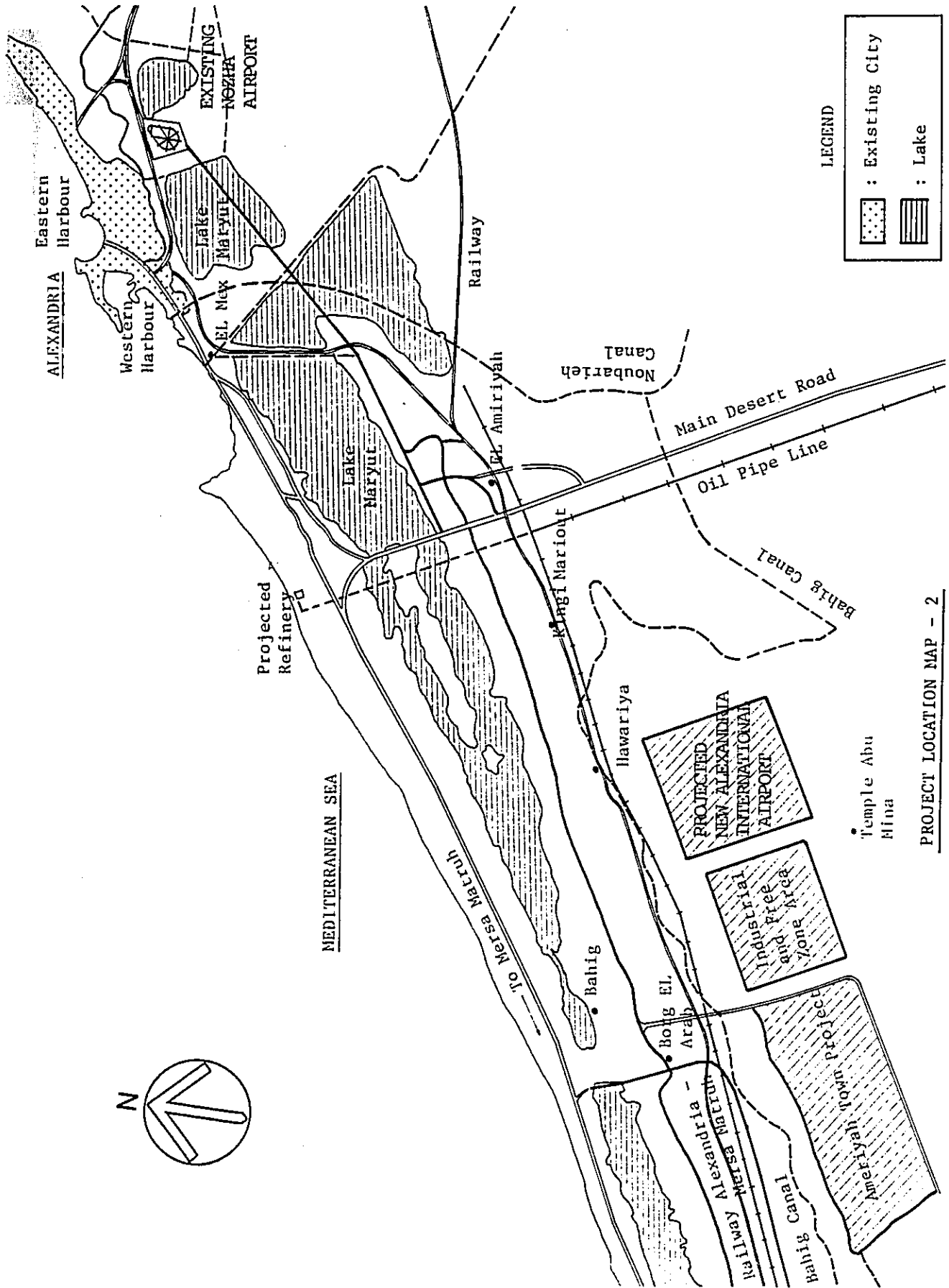
JULY 1984

JAPAN INTERNATIONAL COOPERATION AGENCY

国際協力事業団	
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PROJECT LOCATION MAP - 1



PROJECT LOCATION MAP - 2

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CHAPTER 1. INTRODUCTION

The Government of Japan, in response to the request of the Government of the Arab Republic of Egypt (hereinafter referred to as the Government), has decided to undertake the Feasibility Study (hereinafter referred to as the Study) for the New Alexandria International Airport Construction Project.

Based on this decision, the Japan International Cooperation Agency (hereinafter referred to as JICA), an official agency responsible for the implementation of the technical cooperation programs of the Japanese Government, was entrusted to carry out the Study.

The objective of this Inception Report is to outline the study items and methodology of the Study, which the JICA Study Team will carry out both in Egypt and in Japan from July 1984, based on the Scope of Work agreed upon between the Government and JICA on March 12, 1984.

The project site, Alexandria (city), is located on the Mediterranean Sea approx. 200 km north west of the Egyptian capital, Cairo (city). Alexandria is mainly a commercial and tourist city, and it is the second most populated city in Egypt.

The existing Nozha Airport, which has two runways (2,200m x 45m and 1,440m x 30m), is located in Alexandria city, and provides connecting flights to Cairo and to Jeddah by B-737 and F-27 aircraft. However, the existing airport was built on reclaimed land on Maryut lake and is below sea level. As a result, it is difficult to develop. Because Nozha Airport is an international airport, further expansion and development will be necessary in order to cope with the increasing air traffic demands and the introduction of wide-bodied jet aircraft.

This will require the following construction works: relocation of the terminal facilities, extension of the runway by reclamation of the lake, overlay of the pavement, improvement of air navigation systems, and various environmental measures to protect the environment of the surrounding area.

Accordingly, the Government has decided to construct a new international airport at approx. 40 km west of Alexandria city. An area of 36 km² (6 km x 6 km) has been preserved for this purpose, and the construction project has been listed in the Five Year Plan for Economic and Social Development (1982/83 to 1986/87).

The construction of a new international airport is considered to be indispensable for the promotion of the regional development of the area which faces the Mediterranean Sea, an area of about 500 km in length from Alexandria city to the Libyan border, and for the promotion of the development of the new city of Ameriyah (500 to 1,000 thousand population) which is to become the center of the region.

This regional development plan is one of the most important programs in the Five Year Plan for Economic and Social Development.

Although many studies have been carried out so far for Nozha Airport and a new international airport, there are as yet no studies which present an overall and comparative evaluation between the two projects or which include financial and economic analyses of the construction of a new airport. Thus, the necessity for and the priority of a new international airport has not yet been clearly established.

The objectives of the Study are to select the most suitable airport development scheme between the redevelopment of the existing airport and the development of a new airport and to prepare its master plan, and, finally, to establish the most economically viable implementation program. Various studies, such as data collection and site reconnaissance, review of the

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pertinent previous study reports, redevelopment plan of the existing Nozha Airport, development plan of a new airport, overall and comparative evaluation of both schemes, and economic and financial analyses will be undertaken for this purpose.

The following is the basic schedule of the Study:

- The Progress Report, the results of a 3-month study in Egypt, will include both a redevelopment plan for the existing Nozha Airport and a development plan for a new airport. It will summarize a selection of the most feasible airport development schemes for the Alexandria region.
- The Interim Report, which will be prepared in Japan and submitted to the Government, will include a master plan for the selected scheme.
- The Draft Final Report will incorporate the Government's comments on the Interim Report, a detailed study for the first phase development of the selected scheme and overall study results available at that time.
- The Final Report will be completed based on the Government's comments on the Draft Final Report and submitted to the Government.

CHAPTER 2. WORK ITEMS OF THE STUDY

2.1 Basic Approach

2.1.1 Study Items

The study comprises the following twelve (12) major items and includes data collection and site reconnaissance:

- 1) Meteorological observations (new airport)
- 2) Topographical survey (new airport)
- 3) Soil investigations (existing airport and new airport)
- 4) Air traffic analysis and demand forecast
- 5) Airport requirements analysis
- 6) Redevelopment plan of the existing airport
- 7) Development plan of a new airport
- 8) Comparative evaluation of the redevelopment of the existing airport and the construction of a new airport
- 9) Airport master planning
- 10) Land use planning of the area surrounding the airport
- 11) Construction schedule and cost estimates
- 12) Economic and financial analyses

The outline of the above mentioned study items are clarified in the following section 2.2 "Outline of the Study".

2.1.2 Schedule

The study will be executed as follows:

Step-1 Preparatory Work in Japan Two Weeks
(Preparation of Inception Report)

Step-2 Preparation of Progress Report in Egypt
..... Three Months

The Progress Report will suggest the most feasible choice between the development of a new airport or the re-development of the existing airport, and the basic concept of the future airport development in the Alexandria region along the lines of which the following study will be carried out:

Step-3 Preparation of Interim Report in Japan
.....Two Months

Step-4 Preparation of Draft Final Report in Japan
..... Two Months

Step-5 Preparation of Final Report in Japan
..... Two Months

2.2 Outline of the Study

The study items listed in 2.1.1 are subdivided into 5 steps of the Study and will be carried out according to the Work Time Schedule in Fig. 3-2 and the Work Flow Chart in Fig. 3-3.

2.2.1 Step-1: Preparatory Work in Japan

Prior to the arrival of the Study Team in Cairo, the following work has already been carried out and accomplished in Japan:

- (1) Review of available data
- (2) Preparation of necessary questionnaires
- (3) Preparation of Inception Report

2.2.2 Step-2: Preparation of Progress Report in Egypt

This work is to be carried out in Egypt and will cover the following items:

- (1) Explanation and discussion of inception report

The contents, implementation policy, schedule of the required work, and arrangements of the undertaking of the Egyptian Civil Aviation Authority (hereinafter referred to as ECAA) will be explained to and discussed with ECAA.

- (2) Collection of relevant data and information

Data and information related to the redevelopment of the existing Nozha airport and the construction of a new airport will be collected as follows:

- a) Geography and geology
- b) Meteorology and Climatology
- c) Demography
- d) Economic
- e) Engineering
- f) Regional and local master planning
- g) Transport (other than air transport) and communication
- h) Air transport (airlines, air traffic) and operation
- i) Existing airport facilities

The Study Team will also conduct site reconnaissance at both the existing Nozha Airport and a new airport site to consider the following major items:

- 1) The existing Nozha Airport:
 - a) Present conditions of the airport facilities
 - b) Existing airport and aircraft operations
 - c) Geographical and geological conditions including the airport vicinity
 - d) Existing land use and buildings/structures of the surrounding area
 - e) Existence of any obstructions to aircraft
 - f) Transportation network from/to the airport
 - g) Selection of points for soil investigation (boring)

2) A new airport site:

- a) Current construction of a military airport nearby
- b) Geography and geology
- c) Confirmation of a datum point and topographic survey area
- d) Selection of points for soil investigation (boring)
- e) Land use and extent of regional development in the new airport vicinity
- f) Existence of any obstructions to aircraft
- g) Site selection for installation of meteorological observation equipment

(3) Meteorological observations (new airport site)

The Study Team will conduct the following meteorological observations at the new airport site:

- Wind direction and speed,
- Air temperature, and
- Humidity.

The observation equipment are the self pen-recording type with battery power supply, and are to be supplied by JICA.

The Study Team will install the equipment as soon as possible so that the data obtained during the study Team's stay in Egypt can be effectively reflected in the Feasibility Study.

Since the study period in Egypt is limited, the meteorological conditions at the new airport site will be presumed for the Progress Report by analysing the data collected during the first month

of observation and also by comparison with the weather data collected at Nozha Airport.

However, the observation data collected during the three month study will be used in Step-3, the Interim Report.

(4) Topographic Survey (new airport site)

The location for the topographic survey will be decided after discussion with the ECAA.

The topographic survey is scheduled to be conducted on an area of approximately 4.5 km², which includes a runway, taxiways, aprons and the passenger terminal area.

The survey will be performed at intervals of 100 m along the runway centerline, and at intervals of 50 m for the cross-section.

The following geographical maps will be produced for the new airport site:

- a) Profile (Scale: V=1/100, H=1/5,000)
- b) Cross-sections (Scale: V=1/100, H=1/1,000)
- c) Geographical map with contour lines of one meter intervals (Scale = 1/2,500)

The datum point (co-ordinates) for the maps should be directed by ECAA.

(5) Soil Investigation (new airport and existing airport)

a) New airport site

Soil investigation will be performed in order to determine the stratification, physical properties, engineering properties and bearing capacity of soil.

Items and quantities of soil investigation are shown in the following table:

Item	Quantity	Note
Mechanical Boring	3 places	Runway : 2 places Terminal: 1 place
Standard Penetration Test	at one meter intervals in each borehole	
Test Pit	5 places	
Modified CBR Test	5 "	
Plate Bearing Test	5 "	
Physical Property Test	8 Samples	

b) Existing airport

The extension of the runway is planned on Lake Maryut, where a weak foundation is expected.

Therefore, soil investigation in this site will be performed taking into account the consolidation and bearing capacity of the subsoil.

Items and quantities of the soil investigation are shown in the following table:

Item	Quantity	Note
Mechanical Boring	3 places	Extension of Runway: 2 places Terminal: 1 place
Standard Penetration Test	at one meter intervals in each borehole	
Consolidation Test	2 samples	
Unconfined Compressive Test	2 "	
Physical Property Test	3 "	

(6) Review and evaluation of the previous study reports

The following studies have been conducted for the development of the existing Noza Airport and the New Alexandria International Airport.

a) Nozha Airport Feasibility Study (NACO, 1978)

b) New Alexandria Airport (NACO, 1974)

Part 1, General Master Plan

Part 2, Runway Master Plan

Part 3, Passenger Terminal Building

The runway of the existing Nozha Airport has already been extended based on the master plan, above a).

The above studies/reports were, however, prepared 6 to 10 years ago, and the data bases used for these plans, especially for the air traffic demand forecast, are no longer current. Therefore, it is not likely that these studies meet the present requirements.

Accordingly, the contents and recommendations will be reviewed based upon the air traffic analysis and demand forecast, the facility requirements of the JICA Study, and those results will be incorporated into the JICA Study report.

(7) Air traffic analysis and demand forecast

The forecast will be made at five year intervals for some 25 years taking into account the following:

- a) Five Year Plan for Economic and Social Development
- b) Regional development plan (cities, industries and tourism) for the North West area and the area facing the Mediterranean
- c) Present air transportation in Egypt
- d) Share of air transport among road and railway transport
- e) Correlation between national socio-economic factors and air transport

- f) Potential for new air route development
- g) Present air transport traffic and characteristics in neighbouring countries

The traffic forecast will cover the following:

- a) Passenger movements for year, day, and peak hour for domestic, international, arrival, departure, transit, and market categories
- b) Freight volumes, including mail, for year and day for domestic, international, import, export and trans-shipment categories
- c) Scheduled or non-scheduled aircraft movements for year, day, and peak hour for aircraft type and purpose of flight
- d) Numbers of greeters, visitors, and staff
- e) Vehicular traffic volume by transportation mode

(8) Airport requirements analysis

Based on the air traffic demand forecast projected in (7) above, facility requirements will be planned for the following airport facilities to follow ICAO standards and recommendations wherever practicable.

- a) Obstacle limitation surfaces
- b) Runway (length, width and configuration)
- c) Taxiways (type and number of taxiways, width, spacing, and locations)
- d) Apron (number and type of aircraft stands for passenger, cargo, and others)
- e) Terminal buildings (space requirements for passenger and cargo terminals)
- f) Other buildings (administration, fire stations, etc.)

- g) Landside facilities (space requirements of car parking area, requirements for roads, etc.)
- h) Air navigation systems (facility items and their requirements)
- i) Heliport (number and type of helicopter)
- j) V.I.P facilities (terminal building, apron)
- k) Others (requirements for utilities such as water supply, sewage treatment, incinerator, power supply, telecommunications, fuel supply, etc.; and general services as necessary)

(9) Redevelopment plan for the existing airport

The aim of this study item is to evaluate the existing airport facilities in terms of capacity vs. demand, aviation safety and compatibility with the surrounding community, and also to clarify the policy, problems/constraints, and redevelopment concept of the existing airport in order to cope with future air traffic demands.

An alternative study will be carried out for the redevelopment plan.

The following will be the major study items for the improvement and/or redevelopment of the existing airport:

- a) Immediate improvement works,
- b) Improvement works required for a transitional period in case of a new airport construction scheme,
- c) Utilization method of the existing airport including study on its maintenance or abolition in case of a new airport construction,

- d) Reclamation works for runway extension on the poor soil foundation in the water area,
- e) Necessity and method of relocation of the drinking water channel and the desert road (Cairo - Alexandria),
- f) Relocation and development of the passenger terminal area,
- g) Pavement overlay for future traffic,
- h) Survey of obstructions which may infringe upon the future obstacle limitation surfaces,
- i) Any existence of aircraft operational constraints to wide bodied jet aircraft, and
- j) Aircraft noise pollution to the surrounding area.

(10) Development plan for a new airport.

The development plan for a new airport will be prepared at the new airport site based on the airport requirements analysis.

Since it is necessary to begin the topographic survey and soil investigations as soon as possible, the runway location and orientation of a new airport will be discussed and decided in advance, taking into account the layout plan for an adjacent military airport and will be modified later on as necessary.

The aim of this study item is to plan and establish a development plan for the construction of a new airport so that a comparative evaluation can be made with the redevelopment of the existing airport.

The new airport development plan will be prepared using the topographical survey results obtained in study item (4).

The major factors which should be taken into consideration are: land use in the airport vicinity; compatibility with the regional development plan around the airport; obstructions to aircraft; flight procedures; and, air traffic control requirements, etc.

The following drawings will be produced:

Airport vicinity map	1/25,000 - 1/50,000
Airport site plan	1/5,000
Runway profile	V=1/100, H=1/10,000
Typical cross section	V=1/100, H=1/1,000

- (11) Comparative evaluation of the redevelopment of the existing airport and the construction of a new airport.

The aim of this study item is to compare both schemes with each other by evaluating them from various aspects, and finally, to select the most feasible and economically viable scheme. In the new airport construction scheme, a study on the necessity of the existence and the future use of the existing airport will also be included.

The comparative evaluation will be performed in terms of the following aspects:

- a) Aircraft operational requirements
- b) Airport access
- c) Future capacity for expansion
- d) Compatibility with land use

- e) Environment requirements
- f) Construction requirements
- g) Airport operation and administration

However, the economic viability, future capacity for expansion, and compatibility with the land use in the airport vicinity will be the major factors to be emphasized.

(12) Preparation and submission of Progress Report

As a result of the study in Egypt, the Study Team will prepare a Progress Report and conduct discussions with ECAA on the extent of the study progress as of that time, and will cover the following:

- a) List and analysis results of data, information, and the previous study reports
- b) Interim report of meteorological observation data
- c) Interim report of the topographical survey and soil investigations
- d) Air traffic demand forecast
- e) Airport requirements analysis
- f) Redevelopment plan of the existing airport
- g) Development plan of a new airport
- h) Comparative evaluation of the redevelopment of the existing airport and construction of a new airport

Based on the above studies, the Progress Report will outline the most suitable implementation plan for future airport development in the Alexandria region; i.e., the redevelopment of the existing airport or the construction of a new airport and a scenario of the Feasibility Study along which lines the succeeding study will be carried out in detail.

2.2.3 Step-3: Preparation of the Interim Report in Japan

The work is to be carried out in Japan, and will include the development of the airport master plan in line with the future airport development scheme selected in the Step-2.

This work will cover the following items:

(1) Airport master plan

The objective of the airport master plan is to identify the construction items with particulars necessary for each phase of airport development.

1) Airport site planning

The airport site plan will provide the most efficient and flexible integration of the airport facilities as planned by studies 2) and 3) and for compatibility with the environs of the airport. Airport site plans are composed of an airport vicinity map, airport site plan, and terminal layout plan. Drawings will define the phased development, scale of construction, name of facilities, major dimensions, etc.

Although the scales of the drawings are subject to change, they are planned as follows:

Airport vicinity map	1/25,000 - 1/50,000
Airport site plan	1/5,000
Terminal layout plan	1/1,000 - 1/2,500

2) Airport facility planning

The facility planning will be carried out to meet relevant facility requirements and practical standards such as ICAO, and from safety, functional and economical view points. As a result of the study, details of facilities will be elaborated by way of drawings and/or descriptions to the extent necessary to estimate the construction cost.

Outline of the studies on major facilities will be as follows:

a. Runway strip, runway, taxiways, and apron

Considering the gradient, dimensions, etc. specified by ICAO, economy in earth work, efficient surface drainage, efficient aircraft ground operation, etc., horizontal and vertical alignments will be planned. Type and thickness of pavement structures will also be planned.

b. Grading and storm water drainage system

This work will include grading, demolition and relocation of the existing facilities, and storm water drainage system, etc.

c. Buildings

Based on facility requirements, planning of buildings, including necessary equipment, will be conducted for the respective facilities to set forth an outline of remodeling, conversion, extension and new construction. Plans and elevations will be produced as necessary. As for the planning of the terminal building, traditional Egyptian architectural characteristics

will be given foremost consideration, in addition to function, construction economy, convenience for users, future expansibility and compatibility with the other facilities

d. Roads and car parking areas

Location, size, alignment, and structure of roads and car parking facilities will be planned together with other necessary areas and facilities.

e. Utilities

Capacity, source, system, and quality will be outlined, respectively, for power supply, telecommunications, water supply, sewage system, fuel supply, etc.

f. General services

Requirements and outlines of the facilities will be clarified for fire station, aerodrome rescue and fire fighting facilities, aircraft servicing facilities, holding areas for servicing equipment, airport maintenance, security facilities, etc.

3) Flight procedures and air navigation system planning

The aim of this study is to make clear whether or not it is possible to establish standard, safe and efficient flight procedures, and also to plan the necessary air navigation systems taking into account the present conditions and the future development policy of air navigation in Egypt, and local meteorological conditions (temperature, sand dust, etc.) which may severely affect the operation and maintenance of air navigation equipment.

The study will include the following:

- Airspace utilization concept, including the establishment of obstacle clearance surfaces, standard terminal arrival route (STAR), holding procedures, approach procedures (initial, intermediate, final and missed approaches), standard instrument departures (SID) procedures, and modification, where necessary, of air routes with respect to the airport.
- Planning of air navigation systems for the airport, including radio navigation aids, air traffic control systems, aeronautical telecommunications systems, meteorological systems, aeronautical ground lights and power supply systems.

4) Subsidiary considerations

The organization and manpower requirements for airport operation will be planned to meet the scale of facilities and characteristics of the airport.

(2) Land use planning of the area surrounding the airport

Control of land use for the area surrounding the airport is considered necessary in order to maintain the harmony of the airport community. Land use requirements will be planned on a scale of approx. 1/10,000.

Necessary works related to the airport development will be indicated on a map including the area between Alexandria and New Ameriyah cities facing the Mediterranean Sea.

Aircraft noise contours necessary for planning land use control will be drawn in this study item.

(3) Construction schedule and cost estimates

a) Construction schedule

In order to indicate how to implement the project, a construction schedule will be produced considering the necessary durations for preparation, design, financial arrangement, etc., availability of construction equipment, labor and materials, weather conditions, foreseeable difficulties of construction, and phases of construction.

b) Cost estimates

Construction cost will include the overhead and profit of contractors, engineering fee, physical contingency, price escalation, etc., for each segment or stage of construction based on the collected data and the outlined implementation program.

Unit prices for each construction item will be based on current prices. The cost of each item will be classified into foreign and local currency portions. Maintenance costs will be estimated by referring to the experience of the operation of similar airports.

(4) Economic and financial analyses

1) Economic analysis

An economic analysis will be carried out for the project (the selected scheme as a result of comparison of redevelopment scheme of the existing airport and development scheme for the construction of a new airport) in order to evaluate the economic viability of the project and to recommend how to best implement the project.

a) Calculation of economic costs

Based on the results of engineering studies, the economic costs - with division into foreign and local currencies - will be calculated by extracting such transfer costs as taxes and subsidies from market costs of the project investment, maintenance and operation.

b) Calculation of economic benefit

The effect accruing from the airport development will be analysed and assessed quantitatively and/or qualitatively for the following expected effects, among others:

i) Direct benefit

- Savings on aircraft operation costs
- Savings on time costs
- Benefit by increase of air passengers
- Reduction of traffic congestion on landside facilities
- Benefit of additional expenditures by an increased number of tourists

ii) Indirect benefit

- Effect on regional activity and industrial development
- Effect on promotion of tourist industries
- Increase of airport employment
- Increase in safety and convenience

c) Economic evaluation

The project will be evaluated by using the following methods of evaluation:

- Economic internal rate of return
- Benefit/cost ratio
- Net present value

The above methods will be employed as necessary to select the most feasible choice between re-development of the existing airport or development of a new airport in Step-2.

d) Sensitivity analysis

In order to check the economic viability of the scheme, a sensitivity analysis will be carried out by applying variables, within their probable range of accuracy, such as

- Discount rates
- Increase/decrease of construction costs
- Construction stages
- Increase/decrease of air traffic, etc.

2) Financial analysis

Analysis of the cashflow for the airport will be carried out in order to recommend the most beneficial operational formula for the airport.

Cost and income for the analysis will be calculated at market price and will include investment cost, maintenance and operation cost, depreciation allowance, landing fee, aircraft parking fee, navaid utilization

fee, airport tax, rental fee, etc. Sensitivity analysis will be made for the changes in airport revenue sources, costs, and interests.

(5) Preparation and submission of Interim Report

In order to develop a long range master plan for the airport development scheme selected in the Progress Report, and to study how to best implement the scheme, the Interim Report will be prepared in Japan based on the contents of the Progress Report.

The refinement of the contents of the Progress Report together with any necessary supplement thereto and the studies on the selected scheme covering the Study Items 9) through 12) in paragraph 2.1.1. will be carried out and incorporated in the Interim Report.

A Final Report on the meteorological observations, the topographical survey and the soil investigations will also be prepared. These reports will be submitted to ECCA for discussion and comments.

2.2.4 Step-4: Preparation of the Draft Final Report in Japan

Preparation of the Draft Final Report will be done in Japan, based upon the contents of and comments on the Interim Report.

Detailed studies of items 9) through 12), as listed in Chapter 2, paragraph 2.1.1 "Study Items", with an elaboration of the first phase development of the selected scheme will be carried out.

The Draft Final Report will be submitted to ECAA for comment and discussion prior to the composition of the Final Report.

2.5.5 Step-5: Preparation of the Final Report in Japan

After the review and study of ECAA comments on the Draft Final Report, necessary revisions/modifications will be made to finalize the report. The Final Report will be submitted within 2 months after the receipt of the comments.

CHAPTER 3: EXECUTION OF THE WORK

3.1 Organization for the Implementation of the Study

The Study will be carried out by the Study Team under the direction of the Advisory Committee, both of which have been organized by JICA. The organization chart is as shown in Fig. 3-1. The Advisory Committee comprises six members, as follows:

Members of the Advisory Committee

MR. Koichi MASE (Chairman)	Deputy Director Construction Division Aerodrome Department Civil Aviation Bureau Ministry of Transport
MR. Hidenori SASANUMA	Deputy Director Construction Division Aerodrome Department Civil Aviation Bureau Ministry of Transport
MR. Tadashi EGAWA	Special Assistant to the Director International Cooperation Division Bureau of International Transport and Tourism Ministry of Transport
MR. Koji WADA	Chief of Planning Section Flight Standard Division Technical Department Civil Aviation Bureau Ministry of Transport

MR. Takao KAIBARA 1st Development Survey Division
 Social Development Cooperation
 Department
 Japan International Cooperation
 Agency (JICA)

MR. Takaaki OHIWA Ditto

The Study Team is composed of the following eight members:

Members of the Study Team (JICA)

MR. Makoto TANAKA Project Manager/General Management

MR. Ryuji TAGUCHI Airport Planner

MR. Tadamitsu ITO Aircraft Operations and Nav aids
 Planner

MR. Yoshiteru SUNAGO Traffic Forecast and Economic/
 Financial Analyst

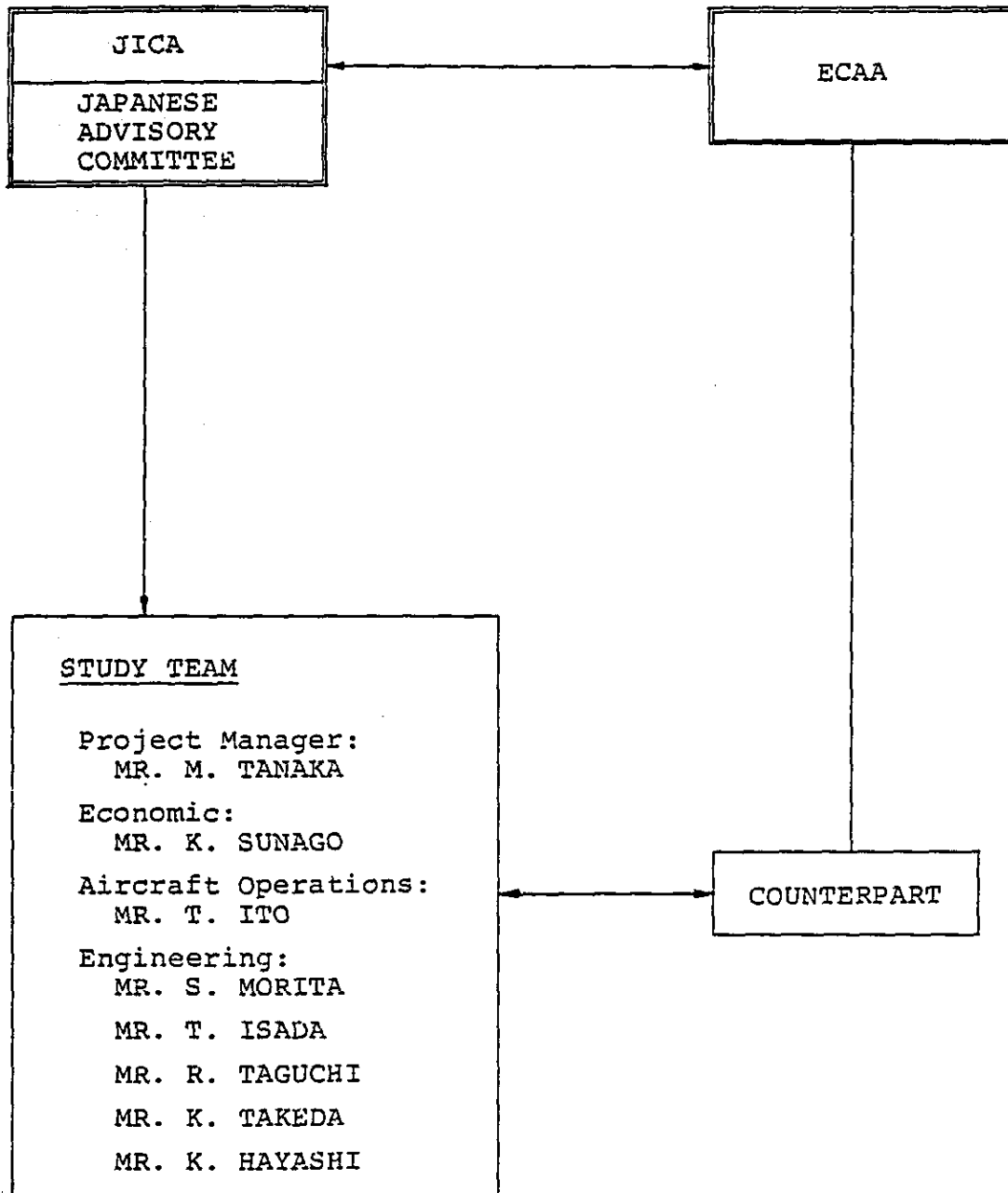
MR. Keiichi TAKEDA Airport Planner

MR. Tsuyoshi ISADA Natural Condition Surveyor

MR. Kazuo HAYASHI Airport Civil Engineer

MR. Shota MORITA Airport Construction Planner

Fig. 3-1 Organization Chart



3.2 Work Schedule

The work time schedule of the Study is shown in the following Fig. 3-2, and Work Flow Chart is shown in Fig. 3-3.

3.3 Reports

Reports to be submitted to the Government of Egypt are as follows:

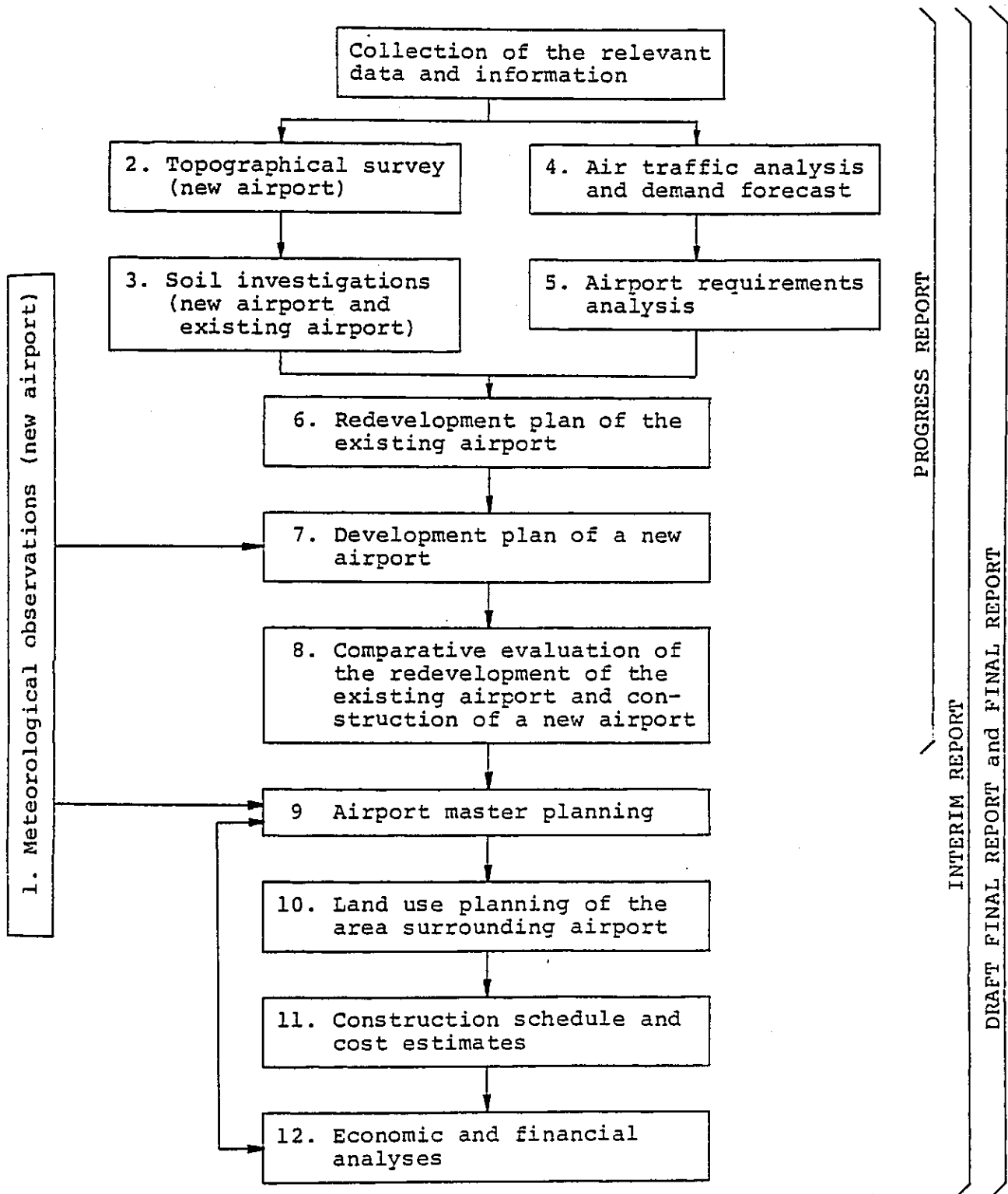
- 1) Inception Report : 30 copies
- 2) Progress Report : 30 copies
- 3) Interim Report : 30 copies
- 4) Draft Final Report : 30 copies
- 5) Final Report : 50 copies

Fig 3-2 Work Time Schedule

Work in Egypt
 Work in Japan
 Discussion W/ECAA

Work Item		Month	July 1984	August	September	October	November	December	January 1985	February	March	April ~
Step-1 Preparatory Work in Japan	1	Review of available data	—									
	2	Preparation of necessary questionnaires	—									
	3	Preparation of Inception Report	—									
Step-2 Preparation of Progress Report in Egypt	1	Explanation and discussion of Inception Report	▣									
	2	Collection of relevant data and information	▣	▣								
	3	Meteorological observations (new airport)	▣	▣								
	4	Topographical survey (new airport)	▣	▣								
	5	Soil investigations (new and existing airport)	▣	▣								
	6	Review and evaluation of previous study report	▣									
	7	Air traffic analysis and demand forecast	▣	▣								
	8	Airport requirements analysis		▣								
	9	Redevelopment plan of existing airport		▣	▣							
	10	Development plan of a new airport			▣	▣						
	11	Comparative evaluation of the redevelopment of the existing airport and construction of a new airport			▣							
	12	Preparation and submission of Progress Report			▣	▣						
Step-3 Preparation of Interim Report in Japan	1	Airport master planning				—						
	2	Land use planning of the area surrounding airport				—						
	3	Construction schedule and cost estimates				—						
	4	Economic and financial analyses					—					
	5	Preparation and submission of Interim Report					—	▣				
Step-4 Preparation of Draft Final Report in Japan		Preparation and submission of Draft Final Report						—			▣	
Step-5		Preparation and submission of Final Report									—	

Fig. 3-3 Work Flow Chart



CHAPTER 4: UNDERTAKINGS BY THE GOVERNMENT OF EGYPT

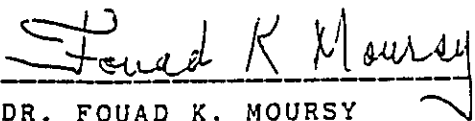
The undertakings by the Government of Egypt, being respectfully expected, are follows:

- 1) To provide the Study Team with all available data and information necessary for the study and to arrange for the study team access to such sources of information as are considered necessary for the execution of the study.
- 2) To arrange that such documents are allowed to be taken out of the Arab Republic of Egypt.
- 3) To exempt from taxes and duties on the materials, equipment and personal effects of the Study Team on entry into and departure out of Egypt.
- 4) To assign the counterpart officials for the Study Team at the full time basis.
- 5) To provide the Study Team with the following office and equipment in Cairo.
 - Office space with telephones and air conditioning
 - Desk and chairs for JICA Study Team, 6 sets
 - Long table with 10 chairs, 1 set
 - Cabinet, 1 set
 - White board, 1 set
 - Desk and Chairs for typists, 2 sets

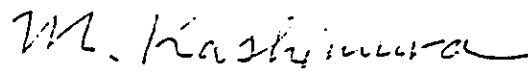
SCOPE OF WORK
FOR
THE FEASIBILITY STUDY
ON
THE NEW ALEXANDRIA INTERNATIONAL AIRPORT CONSTRUCTION PROJECT
IN
THE ARAB REPUBLIC OF EGYPT

AGREED UPON BETWEEN
EGYPTIAN CIVIL AVIATION AUTHORITY
AND
THE JAPAN INTERNATIONAL COOPERATION AGENCY

CAIRO, MARCH 12th, 1984



DR. FOUAD K. MOURSY
CHAIRMAN
EGYPTIAN CIVIL AVIATION
AUTHORITY
MINISTRY OF TOURISM AND
CIVIL AVIATION



MR. MASAKI KASHIMURA
LEADER OF THE JAPANESE
PRELIMINARY STUDY TEAM,
THE JAPAN INTERNATIONAL
COOPERATION AGENCY

I. INTRODUCTION

In response to the request of the Government of the Arab Republic of Egypt, the Government of Japan decided to conduct the Feasibility Study on the New Alexandria International Airport Construction Project in the Arab Republic of Egypt (hereinafter referred to as "the Study"), within the general framework of technical cooperation between Japan and the Arab Republic of Egypt, which is set forth in the Agreement on technical cooperation between the Government of Japan and the Government of Arab Republic of Egypt on June 15th, 1983.

The Japan International Cooperation Agency (hereinafter referred to as "JICA"), the official agency responsible for the implementation of the technical cooperation programmes of the Government of Japan, will carry out the study in close cooperation with the authorities of Arab Republic of Egypt.

The Egyptian Civil Aviation Authority (hereinafter referred to as "ECAA"), will act as counterpart agency to the Japanese study team and also as coordinating body to other relevant organization for the smooth implementation of the study.

The present document sets forth the Scope of Work for the Study.

II. OBJECTIVE OF ~~THE~~ THE STUDY

The objective of the Study is to examine the technical and economic feasibility of the New Alexandria International Airport Construction Project so as to contribute to the optimum planning of the Project.

III. SCOPE OF ~~THE~~ ~~SCOPE~~ WORK

In order to achieve the objective mentioned above, the Study will cover the following items:

1. Collection of relevant data and information
2. Review and evaluation of previous study reports
3. Air traffic analysis and demand forecast
4. Airport requirements analysis

Jm
mk

5. Site evaluation including topographical Survey and soil investigation for Nosha and New site
6. Airport layout planning
7. Airport master planning
8. Construction cost estimate
9. Economic and financial analysis
10. Project implementation schedule

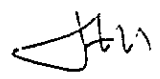
IV. STUDY SCHEDULE

The Study, in principle, will be carried out in accordance with the tentative schedule in Annex.

V. REPORTS

JICA will prepare and submit the following reports in English to the Egyptian Government.

1. Inception Report
Thirty (30) copies at the beginning of the field survey.
Explanation and Discussion in Egypt.
2. Progress Report
Thirty (30) copies at the time of the completion of the field survey.
Explanation and Discussion in Egypt.
3. Interim Report
Thirty (30) copies within seven (7) months after the commencement of the Study.
Explanation and Discussion in Japan.
4. Draft Final Report
Thirty (30) copies within ten (10) months after the commencement of the Study.
Explanation and Discussion in Japan.
The Egyptian Government will provide JICA with its comments on the Draft Final Report in English within one(1) month after the receipt of the Report.
5. Final Report
Fifty (50) copies within two (2) months after the receipt of the comments from the Egyptian Government on the Draft Final Report.


M. K.

VI. UNDERTAKING OF THE EGYPTIAN GOVERNMENT

The Egyptian Government will accord privileges, immunities and other benefits of the Japanese study team and, through the authorities concerned, take necessary measures to facilitate the smooth implementation of the Study.

1. ECAA will make necessary arrangements with the cooperation of other relevant organizations for the followings:
 - (1) To secure the safety of the Japanese study team.
 - (2) To permit the members of the Japanese study team to enter, leave and sojourn in Egypt for the duration of their assignment therein, and exempt them from alien registration requirements and consular fees.
 - (3) To exempt the members of the Japanese study team from taxes, duties and other charges on equipment, machinery and other materials brought into Egypt for the implementation of the Study.
 - (4) To exempt the members of the Japanese study team from income tax and charges of any kind imposed on or in connection with any emoluments or allowances paid to the members of the Japanese study team for their services in connection with the implementation of the Study.
 - (5) To provide the necessary facilities to the Japanese study team for the remittance as well as utilization of the funds introduced into Egypt from Japan in connection with the implementation of the Study.
 - (6) To secure permission for entry into private properties or restricted area for the conduct of the Study, as deemed necessary and mutually agreed between ECAA and JICA.
 - (7) To secure permission to take all data and documents including photographs and maps related to the Study out of Egypt to Japan by the Japanese study team in order to prepare the Reports.

2. ECAA will, at its own expense, provide the Japanese study team with the followings, in cooperation with other relevant organizations:
 - (1) Available data and information related to the Study
 - (2) Counterpart personnel
 - (3) Suitable air-conditioned office with necessary equipment and furniture

 - (4) Credentials or identification cards


3. ECAA will bear claims, if any arises, against the members of the Japanese study team resulting from, occurring in the course of, or otherwise connected with the discharge of their duties in the implementation of the Study, except when such claims arise from gross negligence or wilful misconduct on the part of the members of the Japanese study team.

VII. UNDERTAKING OF JICA

For the implementation of the Study, JICA will take the following measures:

- (1) To dispatch, at its own expense, study team to Egypt.
- (2) To perform technology transfer to the Egyptian counterpart personnel in the course of the Study.


VIII. JICA and ECAA will consult with each other in respect of any matter that may arise from or in connection with the Study.


m.k.

TENTATIVE STUDY SCHEDULE

Items	Months	1	2	3	4	5	6	7	8	9	10	11	12
Work in Egypt		■	■										
Work in Japan													
Submission of Report		○ IC		○ PR			○ IT			○ DF			○ FR
Explanation and Discussion on Report		■		■			■			■			

Remarks : IC : Inception Report PR : Progress Report IT : Interim Report
 DF : Draft Final Report FR : Final Report

M.K.


APPENDIX B

LIST OF DATA PREVIOUSLY COLLECTED FOR THE FEASIBILITY
STUDY ON THE NEW ALEXANDRIA INTERNATIONAL AIRPORT
CONSTRUCTION PROJECT

CATEGORY	REPORT/DATA PREVIOUSLY COLLECTED	SOURCE	REMARKS
A : THE EXISTING REPORT ON NEW AIRPORT DEVELOPMENT	<p>A - 1, New Alexandria Airport Master Plan Report Part 1 - General Master Plan. Set. 1974 Part 2 - Runway Preliminary Design. Jan. 1979 Part 3 - Passenger Terminal Building. Dec. 1974</p> <p>A - 2, New Alexandria Airport Study Passenger Terminal Building Drawings. Oct. 1974</p> <p>A - 3, New Alexandria Airport Preliminary Runway Design. Jan. 1979</p> <p>A - 4, Arab Republic of Egypt Preliminary Investigation Report for New Alexandria International Airport Construction Project. Jul. 1979</p> <p>A - 5, New Alexandria International Airport Pre-feasibility Study Report. Jul. 1979</p>	<p>ECAA</p> <p>ECAA</p> <p>ECAA</p> <p>Japan Transport Consultant Association (JTCA)</p> <p>ECAA</p>	<p>NACO</p> <p>NACO 6 sheets</p> <p>NACO 12 sheets</p> <p>Pacific Consultants International (PCI)</p>

CATEGORY	REPORT/DATA PREVIOUSLY COLLECTED	SOURCE	REMARKS
B : THE EXISTING STUDIES ON NOZHA AIRPORT DEVELOPMENT	<p>B - 1, Nozha Airport Alexandria Feasibility Study Report. Jan. 1978</p> <p>B - 2, Nozha Airport Alexandria Feasibility Study Drawings. Jan. 1978</p> <p>B - 3, Nozha Airport Alexandria Civil Works Contract, Volume 1 of 4, Conditions.</p> <p>B - 4, Nozha Airport Alexandria Civil Works Contract, Volume 2 of 4, General Specifications. Nov. 1978</p> <p>B - 5, Nozha Airport Alexandria Building Works Contract, Volume 1 of 3, Conditions.</p> <p>B - 6, Nozha Airport Alexandria Building Works Contract, Volume 2 of 3, Structural Specification.</p> <p>B - 7, Nozha Airport Alexandria New Lay-out. Nov. 1978</p> <p>B - 8, Nozha Airport Alexandria Extension Runway 04-22 lay-out, Longitudinal Profile, Cross Sections and Pavement Details. Nov. 1978</p>	<p>ECAA</p> <p>ECAA</p> <p>ECAA</p> <p>ECAA</p> <p>ECAA</p> <p>ECAA</p> <p>ECAA</p> <p>ECAA</p>	<p>NACO</p> <p>NACO 17 sheets</p> <p>NACO</p> <p>NACO</p> <p>NACO</p> <p>NACO</p> <p>NACO Drawing S=1 : 5,000</p> <p>NACO Drawing</p>

CATEGORY	REPORT/DATA PREVIOUSLY COLLECTED	SOURCE	REMARKS
C : GEOGRAPHY AND GEOLOGY	C - 1, Alexandria City Map S=1 : 100,000 C - 2, New Site Map S=1 : 25,000 C - 3, A map on a scale of 1 to 500,000	ECAA ECAA (PCI)	
D : METEOROLOGY AND CLIMATOLOGY	Nil		
E : DEMOGRAPHY	E - 1, Population and Development	Central Agency for Public Mobilization and Statistics	Sep. 1978

CATEGORY	REPORT/DATA PREVIOUSLY COLLECTED	SOURCE	REMARKS
F : ECONOMY AND INDUSTRY	<p>F - 1, The Five-Year Plan, 1978-1982 Vol. 10 Part-1 Vol. 10 Part-2 Vol. 12 Part-4 Vol. 13</p> <p>F - 2, Five Year Plan for Economic and Social Development 1982/83 - 1986/87</p> <p>F - 3 Summary of Programs and Potential for Investments in Egypt * Extract</p> <p>F - 4, Statistical Year Book, 1974, 1977, 1978, 1981, 1982.</p> <p>F - 5, Monthly Bulletin of Foreign Trade Part-1 Part-2</p> <p>F - 6, A.R.E. Tourist Movement, 1962-1972.</p> <p>F - 7, Statistical Bulletin, Jan., April, June, July, Aug. and Oct. 1978.</p> <p>F - 8, National Plan for Tourism Arab Republic of Egypt. Vol. 1, Vol. 2, Vol. 3, Vol. 4, Vol. 5</p>	<p>Ministry of Planning</p> <p>Ministry of Planning</p> <p>Ministry of Development</p> <p>Central Agency for Public Mobilization and Statistics</p> <p>Central Agency for Public Mobilization and Statistics</p> <p>Ministry of Tourism Statistics Department</p> <p>Ministry of Tourism</p> <p>Steigenberger Consulting Ltd. and Studiehreis Fur Tourismus</p>	<p>Aug. 1977</p> <p>Dec. 1982</p> <p>Aug. 1983</p> <p>1975</p> <p>1978</p> <p>Apr. 1978</p>

CATEGORY	REPORT/DATA PREVIOUSLY COLLECTED	SOURCE	REMARKS
G : REGIONAL AND LOCAL MASTER PLANNING	G - 1, New Ameriyah City Master Plan, Main Report. G - 2, New Ameriyah City First Stage Plan, Main Reprot.	Ministry of Development and New Communities Ditto	Oct. 1978 ILACO HASSAN ISMAIL AND PARTNERS CEAT Aug. 1978
H : ENVIRONMENT	NIL		
I : TRANSPORTATION (other than air transport) AND COMMUNICATION	I - 1, Egypt National Transport Study Phase II-1981	Ministry of Transport	NEDECO

CATEGORY	REPORT/DATA PREVIOUSLY COLLECTED	SOURCE	REMARKS
J : AIR TRANSPORT	<p>J - 1, Booklet of Egypt Air.</p> <p>J - 2, Annual Statistical Report, Civil Aviation Organization, 1969, 1970, 1972, 1975, 1976, 1977, 1980, 1981, 1982</p> <p>J - 3, Annual Report of All Airport</p> <p>J - 4, Statistical Report in Civil Aviation in the ARE 1982</p>	<p>Egypt Air</p> <p>ECAA</p> <p>ECAA</p> <p>ECAA</p>	
K : THE EXISTING AIRPORT FACILITIES	K - 1, Refer to B-2		

CATEGORY	REPORT/DATA PREVIOUSLY COLLECTED	SOURCE	REMARKS
L : AIRSPACE USE AND AIR NAVIGATION	L - 1, Aerodrome Information Publication (AIP), in Egypt. L - 2, Air Navigation Plan-Africa-Indian Ocean Region. L - 3, Notam 9/1983 (ATS Route System within Cairo FIR) L - 4, A New System of Air Traffic Control for Egypt.	ECAA ICAO ICAO ECAA	Jan. 1983 Sep. 1983 Sofreaira

CATEGORY	REPORT/DATA PREVIOUSLY COLLECTED	SOURCE	REMARKS
<p>M : AIRPORT ADMINISTRATION</p>	<p>M - 1, Organization of MOCA.</p>	<p>MOCA</p>	<p>Chart</p>
<p>N : ENGINEERING</p>	<p>N - 1, Foundation Investigation on the New Alexandria Airport. Jul. 1978</p>	<p>The Egyptian Authority for Roads and Waterways</p>	

LIST OF DATA AND INFORMATION TO BE COLLECTED FOR THE FEASIBILITY
STUDY ON THE NEW ALEXANDRIA INTERNATIONAL AIRPORT
CONSTRUCTION PROJECT

CATEGORY	DATA AND INFORMATION REQUIRED	SOURCE EXPECTED	REMARKS
<p>A : THE EXISTING STUDIES ON NEW AIRPORT DEVELOPMENT</p>	<p>A - 1, Other existing studies on New Airport Development, if any.</p>	<p>ECAA</p>	
<p>B : THE EXISTING STUDIES ON NOZHA AIRPORT DEVELOPMENT</p>	<p>B - 1, Other existing studies on the Nozha Airport Development, if any.</p>	<p>Ditto</p>	

CATEGORY	DATA AND INFORMATION REQUIRED	SOURCE EXPECTED	REMARKS
C : GEOGRAPHY AND GEOLOGY	<p>C - 1, Atlas of Arab Republic of Egypt.</p> <p>C - 2, Aerial photographs covering the Nozha Airport and New Airport Site, if any.</p> <p>C - 3, Geographic maps covering the Nozha Airport and Alexandria City.</p> <p>C - 4, Geographic maps covering the New Airport Site.</p> <p>C - 5, Geologic maps covering all the Alexandria City and New Airport Site.</p> <p>C - 6, Geological survey report on Nozha Airport and New Airport Site.</p> <p>C - 7, Current road network map.</p> <p>C - 8, Drawing of property for New Airport.</p>	<p>ECAA</p> <p>Ditto</p> <p>Ditto</p> <p>Ditto</p> <p>Ditto</p> <p>Ditto</p> <p>Ditto</p> <p>Ditto</p> <p>Ditto</p>	<p>Scale 1:2,500 - 1:10,000</p> <p>Scale 1:2,500 - 1:10,000</p> <p>Scale 1:2,500 - 1:10,000</p>

CATEGORY	DATA AND INFORMATION REQUIRED	SOURCE EXPECTED	REMARKS
D : METEOROLOGY AND CLIMATOLOGY	<p>D - 1, Meteorological data of the Nozha Airport, Jan. 1981 - Dec. 1983.</p> <ul style="list-style-type: none"> - Wind direction and velocity. - Visibility and cloud height. <p>(Measurements at least eight times daily and spaced at equal intervals of time)</p> <p>D - 2, Other meteorological data of Nozha Airport, Jan. 1981 - Dec. 1983.</p> <ul style="list-style-type: none"> - Temperature. - Humidity. - Rainfall. - Sandstorm. - Mist. <p>D - 3, Precipitation statistics over 20 years including annual maximum precipitation of 5 min., 10 min., 15 min., 20 min., 30 min., 45 min., 60 min., 120 min., and day, a period of duration, etc. or designing rainfall intensity curves.</p>	<p>Meteorology Authority, Nozha Airport Administration Office.</p> <p>Ditto</p> <p>ECAA</p>	<p>Latest data if available</p> <p>Ditto</p>

CATEGORY	DATA AND INFORMATION REQUIRED	SOURCE EXPECTED	REMARKS
E : DEMOGRAPHY	<p>E - 1, Population statistics for 10 years period, including:</p> <ul style="list-style-type: none"> - Total population. - Population trend. - Population distribution. (age, profession and occupation, income, religion) - Annual increase rate of population. - Composition of employed population. <p>E - 2, Immigration Statistics.</p> <p>E - 3, Pilgrimage Statistics (to Mecca).</p> <p>E - 4, Tourist Statistics.</p>	<p>Central Agency for Public Mobilization and Statistics</p> <p>Ministry of Immigration and Affairs of Egyptians Overseas</p> <p>Central Agency for Public Mobilization and Statistics</p> <p>Ministry of Tourism and Civil Aviation</p>	<p>Latest 10 year period</p> <p>Ditto</p> <p>Ditto</p> <p>Ditto</p>

CATEGORY	DATA AND INFORMATION REQUIRED	SOURCE EXPECTED	REMARKS
F : ECONOMY	<p>F - 1, Basic national and regional income basis. (Agriculture, manufacturing, commerce, government, etc.)</p> <p>F - 2, Gross income of Alexandria and other region.</p> <p>F - 3, Per capita income data.</p> <p>F - 4, Gross domestic product and expenditure.</p> <p>F - 5, Trading structure.</p> <p>F - 6, Regional industry and commerce, both present situation and projected development and potential.</p> <p>F - 7, Tourism as an economic factor, present and potential. (Number of foreign tourist, revenue from tourist, etc.)</p>	<p>Ministry of Economy and Foreign Trade</p> <p>Ministry of Tourism and Civil Aviation</p> <p>Ministry of Economy and Foreign Trade</p> <p>Ditto</p> <p>Ditto</p> <p>Ditto</p> <p>Ministry of Tourism and Civil Aviation</p>	<p>Latest 10 year period</p>

CATEGORY	DATA AND INFORMATION REQUIRED	SOURCE EXPECTED	REMARKS
<p>G : REGIONAL AND LOCAL MASTER PLANNING (Nozha Airport and New Airport Site)</p>	<p>G - 1, Status quo. and Local Master Planning on:</p> <ul style="list-style-type: none"> - Road Network. - Public Transportation and communication. (Railway, harbour, channel, pipeline) - Irrigation canal, drinking water supply canal and lake. - Land Use Plan and owner. - Public Utilities. - Peripheral land use plan. - Zoning and other land use controls. <p>G - 2, All data possible on planned commercial, industrial residential and public works development.</p> <p>G - 3, Data on city area growth trends and rates.</p> <p>G - 4, Agricultural projects.</p> <p>G - 5, Tourism development projects.</p> <p>G - 6, Irrigation plans.</p> <p>G - 7, Public utilities plans.</p> <p>G - 8, All data possible on New Ameriyah City Industrial Development.</p> <p>G - 9, New Ameriyah City planning drawing.</p> <p>G -10, Alexandria City planning drawing.</p> <p>G -11, North West Coast Development.</p>	<p>Ministry of Planning</p> <p>Ditto</p> <p>Ditto</p> <p>Ditto</p> <p>Ditto</p> <p>Ditto</p> <p>Ditto</p> <p>Ditto</p> <p>Ditto</p> <p>Ditto</p> <p>Ditto</p> <p>Ditto</p>	

CATEGORY	DATA AND INFORMATION REQUIRED	SOURCE EXPECTED	REMARKS
H : ENVIRONMENT	<p>H - 1, Data regarding:</p> <ul style="list-style-type: none"> - Pertinent zoning in effect or proposed. - Peripheral land use, current and proposed. - Historic site in area. - National parks, recreational area, etc. - Mosque. <p>H - 2, Social reaction to airport developments in area.</p> <p>H - 3, Environmental laws or regulations.</p> <p>H - 4, Projects planned in the vicinity of the airport.</p> <p>H - 5, Data on:</p> <ul style="list-style-type: none"> - Distribution map of plantations. - Utilization of rivers. - Distribution of animals and plants. 	<p>Ministry of Planning</p> <p>Ditto</p> <p>Ditto</p> <p>Ditto</p> <p>Ditto</p>	

CATEGORY	DATA AND INFORMATION REQUIRED	SOURCE EXPECTED	REMARKS
<p>I - TRANSPORTATION (other than air) AND COMMUNICATION</p>	<p>I - 1, Transportation (other than air) and Communication Public transportation related to the project and area served by it, including:</p> <ul style="list-style-type: none"> - Bus service and schedules, costs. - Rail service and schedules, costs. - Shipping service and schedules, costs. - Helicopter service and schedules, costs. - Other (taxi, limousine, etc.) - Rental cars. - Availability, adequacy and quality of such services. <p>I - 2, Private transportation data, including;</p> <ul style="list-style-type: none"> - Vehicles per capita, national and regional. - Statistics regarding private vehicles registration over most recent 5 years, minimum. - Use of private vehicles for access from/to Airport. - Parking statistics and costs at the Airport. <p>I - 3, Administration of communications and public transport systems:</p> <ul style="list-style-type: none"> - Ownership or state agency involved. - Vehicle purchase and/or rental costs, availability. 	<p>Ministry of Transport, Communication and Maritime Transport</p> <p style="text-align: center;">Ditto</p> <p style="text-align: center;">Ditto</p>	

CATEGORY	DATA AND INFORMATION REQUIRED	SOURCE EXPECTED	REMARKS
I : TRANSPORTATION (Other than air) AND COMMUNICATIONS (cont'd)	I - 4, Road networks to/from the Airport. - Geometric standards (speed limit, right of way, width, etc.). - Structural standards (culvert, pavement). - Restrictions (load, width, height) imposed by tunnels, bridges, etc.. I - 5, Communication facilities pertinent to and available at the Airport. - Telephone, telegraph, radio and other with data as to adequacy, efficiency, cost and reliability. I - 6, Passenger access transportation modes.	Ministry of Transport Communication and Maritime Transport Ditto Ditto	

CATEGORY	DATA AND INFORMATION REQUIRED	SOURCE EXPECTED	REMARKS
<p>J : AIR TRANSPORT (airlines and air traffic) AND OPERATION</p>	<p>J - 1, List all commercial airlines, schedules, non-scheduled and cargo serving the airport.</p> <p>J - 2, Current schedules for above including terminating and originating at the airport, and transiting through the airport.</p> <p>J - 3, Name, address, phone number of local airline contact for all lines listed above.</p> <p>J - 4, Name and address of executive in charge of properties and facilities planning for each airline listed above.</p> <p>J - 5, Passenger statistics by route in greatest detail possible, over a minimum period of 10 years, including:</p> <p>a. Total annual passenger volume, broken down into smallest time increments possible.</p> <p>b. Domestic passenger statistics:</p> <ul style="list-style-type: none"> - Arrival - Departure - Transfer - In transit 	<p>ECAA</p> <p>Ditto</p> <p>Ditto</p> <p>Ditto</p> <p>Ditto</p>	

CATEGORY	DATA AND INFORMATION REQUIRED	SOURCE EXPECTED	REMARKS
<p>J : AIR TRANSPORT (airlines and air traffic) AND OPERATION</p>	<p>c. International passenger statistics:</p> <ul style="list-style-type: none"> - Arrival - Departure - Transfer - In transit <p>J - 6, Air cargo statistics by route for 10 years period, including:</p> <ul style="list-style-type: none"> - Annual volume (by weight) broken down into smallest time increments possible, both arrival and departure. - General nature of air cargo; and - Primary local sources of cargo generation. <p>J - 7, Data on non-scheduled and/or charter passenger and freight operations.</p> <p>J - 8, Data on military aircraft activity at the airport and any special requirements or restrictions resulting from it.</p> <p>J - 9, Fixed base operation data, including;</p> <ul style="list-style-type: none"> - Existing facilities. - Annual activity. - Current annual value of above. <p>J -10, Aircraft types in use by all airlines, other users, both present and projected for future.</p>	<p>ECAA</p> <p>Ditto</p> <p>Ditto</p> <p>Ditto</p> <p>Ditto</p>	

CATEGORY	DATA AND INFORMATION REQUIRED	SOURCE EXPECTED	REMARKS
<p>J : AIR TRANSPORT (airlines and air traffic) AND OPERATION (cont'd)</p>	<p>J - 11, Aircraft mix data, particularly at peak periods.</p> <p>J - 12, Aircraft operations statistics, all categories.</p> <p>J - 13, Passenger-visitor ratio data.</p> <p>J - 14, Customs, immigration, health and security processing procedures for passengers, cargo general aviation.</p> <p>J - 15, General aviation activity, including:</p> <ul style="list-style-type: none"> - Statistics of general aviation movements. - Number of aircraft stationed at airports. - Existing facilities. - Policy for general aviation development, if any. <p>J - 16, Airlines maintenance facilities existing, projected or required.</p> <p>J - 17, Flight meal procedure, facilities existing, projected or required.</p> <p>J - 18, Cargo facilities existing, projected or required.</p> <p>J - 19, Development plans of all airlines w/respect to the airport.</p> <p>J - 20, Aviation policies of ECAA.</p>	<p>ECAA (Central Department of Air Transport)</p> <p>Ditto</p> <p>Ditto</p> <p>Ditto</p> <p>Ditto</p> <p>Egypt Air</p> <p>Ditto</p> <p>Ditto</p> <p>Airlines</p> <p>ECAA</p>	

CATEGORY	DATA AND INFORMATION REQUIRED	SOURCE EXPECTED	REMARKS
J: AIR TRANSPORT (airlines and air traffic) AND OPERATION (cont'd)	J - 21, Airline policies and future projections.	Egypt Air	
	J - 22, Data on national carriers based at the airport including capital, organization, fleet size, staff, passenger carried, etc.	Ditto	
	J - 23, Time table at Nozha and the other major airports in Egypt.	Egypt Air and Other Airlines	
	J - 24, National airports system plan study report, if any.	ECAA	
	J - 25, All the existing air traffic demand forecasts (by ECAA, Egypt Air).	ECCA, Egypt Air	
	J - 26, Location map of neighboring airport of Alexandria.	ECAA	
	J - 27, Aircraft Movement at Cairo International Airport and Mersa Matruh Airport.	Ditto	
	J - 28, No. of Employees of Egypt Air.	Egypt Air	
	J - 29, Aircraft owned by Egypt Air by type.	Ditto	
	J - 30, Airroutes served by Egypt Air.	Ditto	
	J - 31, Passenger and cargo handled by Egypt Air during latest 10 years period.	Ditto	

CATEGORY	DATA AND INFORMATION REQUIRED	SOURCE EXPECTED	REMARKS
K : THE EXISTING AIRPORT FACILITIES	<p>K - 1, Airport layout plan drawing indicating all airport facilities, natural and man-made features, existing ground contours, airport boundaries, approach and clear zone outlines, etc. with necessary dimensions.</p> <p>K - 2, The complete set of as-built drawings and other relevant design reports for all the airport facilities including runway, taxiway, apron, building, utilities, nav aids, access roads, etc..</p> <p>K - 3, Descriptions of the existing airport facilities (including navigation aids system).</p> <p>K - 4, Construction and improvement history.</p> <p>K - 5, Construction costs.</p> <p>K - 6, Problems taken place in existing structure, facilities, airport operation and maintenance, etc..</p> <p>K - 7, Plans of expansion, demolition and modifications.</p> <p>K - 8, Drawing of existing drainage and pumping facilities.</p> <p>K - 9, Status quo. and development plan of Cairo International Airport and Mersa Matruh Airport.</p>	<p>Nozha Airport Administration Office</p> <p>Ditto</p> <p>Ditto</p> <p>Ditto</p> <p>Ditto</p> <p>Ditto</p> <p>Ditto</p> <p>Ditto</p> <p>Ditto</p>	

CATEGORY	DATA AND INFORMATION REQUIRED	SOURCE EXPECTED	REMARKS
L : AIRSPACE USE AND NAVIGATION	<p>L - 1, Information on the aviation policy and other planned project.</p> <p>L - 2, Current Conditions of Terminal Control and Systems.</p> <p>L - 4, Nav aids Data List of existing Nav aids for Nozha Airport and other site.</p> <p>L - 5, Airway system in Egypt.</p> <p>L - 6, Existing STAR.SID. IAP. at Nozha Airport.</p> <p>L - 7, Data of aircraft operations at Nozha Airport.</p> <p>L - 8, ATC Radar System in Egypt.</p> <p>L - 9, Radio Navigation chart.</p> <p>L -10, The past records of air accident/incident which occurred within the airport vicinity between 1974 and 1983.</p> <p>L - 11, The aviation policy and planned projects of ECAA.</p> <p>L - 12, Current condition/status of prohibited, restricted and danger areas and Air Defence Identification Zone in Cairo FIR.</p>	<p>ECAA</p> <p>ECAA (Control Department of Air Traffic Control)</p> <p>Ditto</p> <p>Ditto</p> <p>Ditto</p> <p>Ditto</p> <p>Ditto</p> <p>Ditto</p> <p>Ditto</p> <p>Ditto</p> <p>Ditto</p>	<p>ILS, VOR/DME, NDB, ASR/SSR, etc.</p>

CATEGORY	DATA AND INFORMATION REQUIRED	SOURCE EXPECTED	REMARKS
L : AIRSPACE USE AND AIR NAVIGATION (cont'd)	<p>L - 13, Current Conditions of ACC, APP and AD control Units and Systems.</p> <p>L - 14, Air Route Traffic Volume Data.</p> <p>L - 15, Secondary Surveillance Radar Network and Coverage.</p> <p>L - 16, List of obstructions for Nozha Airport and their dimensions.</p> <p>L - 17, Radio Navigation chart in CAIRO FIR.</p> <p>L - 18, CAIRO FIR and the area of responsibility for CAIRO ACC.</p> <p>L - 19, List of Air Traffic Control Units.</p> <p>L - 20, Number of aircraft movement handled by CAIRO FIR.</p> <p>L - 21, Coverage chart for CAIRO ARSR.</p>	ECAA (Central Department of Air Traffic Control) Ditto Ditto Ditto Ditto Ditto Ditto Ditto Ditto	

CATEGORY	DATA AND INFORMATION REQUIRED	SOURCE EXPECTED	REMARKS
M : AIRPORT ADMINISTRATION	<p>M - 1, ECAA Organization chart and number of staff.</p> <p>M - 2, Organization chart of Nozha Airport and Cairo International Airport.</p> <p>M - 3, Airport population (management, airlines, government, military etc.) census by category for 5 years, at Nozha Airport and CAIRO International Airport.</p> <p>M - 4, Organization, staff number and responsibility of relative administrations to aviation.</p> <p>M - 5, Status quo. of airport administration and organization of maintenance.</p> <p>M - 6, Charging system of landing and parking fees at Nozha Airport and CAIRO International Airport.</p> <p>M - 7, Annual revenue and expenditure of Nozha Airport and CAIRO International Airport.</p>	<p>ECAA</p> <p>Ditto</p> <p>Ditto</p> <p>Ditto</p> <p>Ditto</p> <p>Ditto</p> <p>Cairo Airport Authority</p>	

CATEGORY	DATA AND INFORMATION REQUIRED	SOURCE EXPECTED	REMARKS
N : ENGINEERING	<p>N - 1, Local codes, laws, ordinances and standards on structures, Bldg. Code, Utilities, Safety; Fire protection etc. applicable to the project.</p> <p>N - 2, Utility Systems Data on: - Water System, domestic, potable, fire protection. - Electrical System. - Sanitary Sewage System. - Storm Sewage System. - Fuel Storage and Distribution System.</p> <p>N - 3, Construction Materials and Facilities; availability and costs, including Source of reclamation materials for Nozha Airport.</p> <p>N - 4, Data pertaining to damages due to natural calamity, such as flood, storm, etc..</p> <p>N - 5, Soil investigation report of Nozha Airport. (incl. subterranean water level)</p> <p>N - 6, Exemption of taxes for public works, if any.</p>	<p>Ministry of Housing</p> <p>Ministry of Supply and Home Trade</p> <p>Ministry of Administrative Development</p> <p>Ministry of Administrative Development</p> <p>ECAA</p> <p>Ministry of Administrative Development</p>	

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