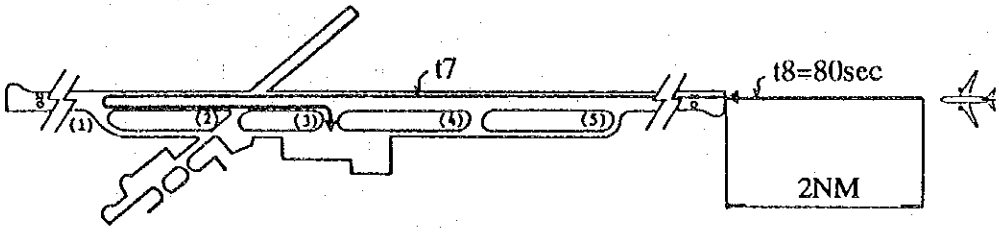
c. Landing followed by Take-off

Arrival aircraft is required to get approval of landing before the aircraft reaches 2 nm from runway threshold.

Large and Medium Jet



*2

t8 = 2 nm / 150 kt + 30 sec = 78 sec ≒ 80 sec
Note, *2 : Time for communication

*1

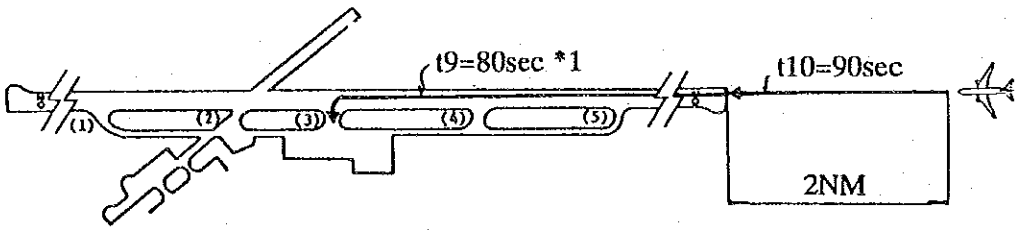
Large Jet {230 - (0.8 km ÷ 30 km/hr)} x 0.23 = 53 sec

t7 { *1 + }÷ 2 = 63.5≒64
Medium Jet 125 sec x 0.77 = 96 sec

Ave. 149 sec
Note, *1 : Based on survey

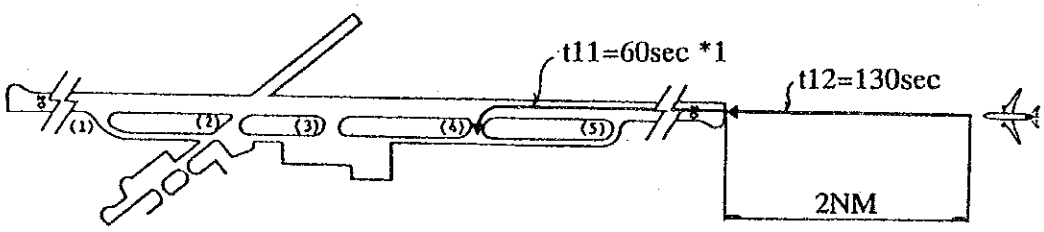
T1 = t7 + t8 = 144 sec

HS 748



t10 = 2 nm / 120 kt + 30 sec = 90 sec
T8 = t9 + t10 = 170 sec

DHC-6



t12 = 2 nm / 70 kt + 30 sec = 133 sec ≒ 130 sec
T9 = t11 + t12 = 190 sec

d. Landing followed by Landing

Same as c.

2) Average Runway Occupancy Time

Unit : Second

Type of Aircraft	Large and Medium Jet	HS-748	DHC-6	Average
Runway Usage Proportion	43%	27%	32%	
a. Take-off followed by Take-off	120	115	60	102
b. Take-off followed by Landing	250	273	342	289
c. Landing followed by Take-off	144	170	190	169
d. Landing followed by Landing	144	170	190	169
			Average	183

3) Runway Capacity

C = 3600 sec / 183 sec = 19.7 $\fallingdotseq$ 19 operations

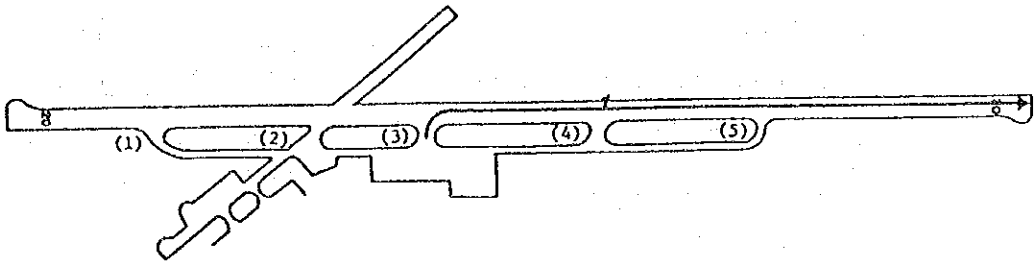
Case-2 Full length of the existing parallel taxiway is available to all types of aircraft, with radar control

1) Runway Occupancy Time

Minimum 3 nm is required for the reparation.

a. Take-off followed by Take-off

Jet

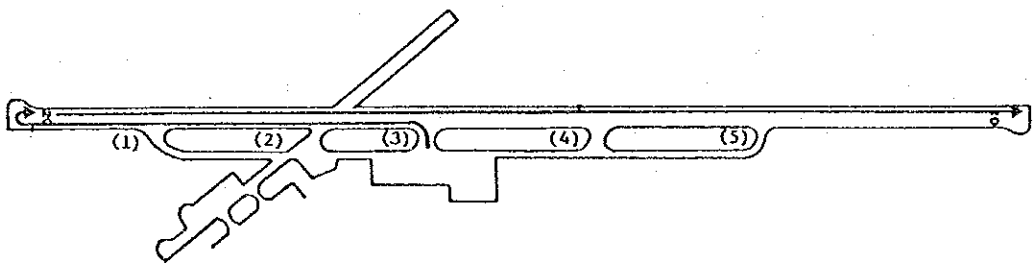


t1 = 3 nm / 170 kt = 66 sec

T1 = t1 = 66 sec →120 sec *

* : Although an actual runway capacity time is 66 seconds, the minimum flight separation of 2 minutes is required for wake turbulences.

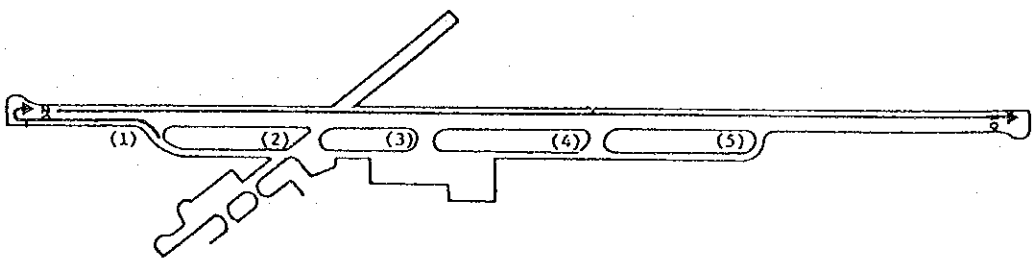
HS 748



t2 = 3 nm / 150 kt = 72 sec

T2 = t2 = 72 sec

DHC-6

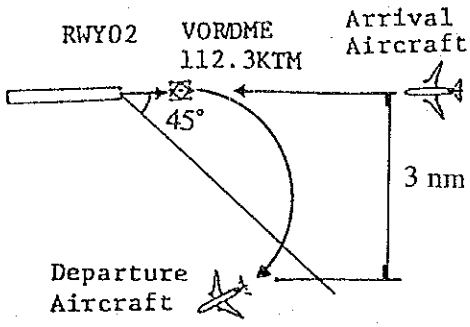


t3 = 3 nm / 85 kt = 127 sec

T3 = t3 = 127 sec

b. Take-off followed Landing

In this case, separation minima is defined as the following figure.
Distance from RWY 02 to the point of departure aircraft is 6.23 nm.



Jet

t1 = 6.23 nm / 210 kt = 125 sec

T4 = t1 = 125 sec

HS 748

t2 = 6.23 nm / 175 kt = 128 sec

T5 = t2 = 128 sec

DHC-6

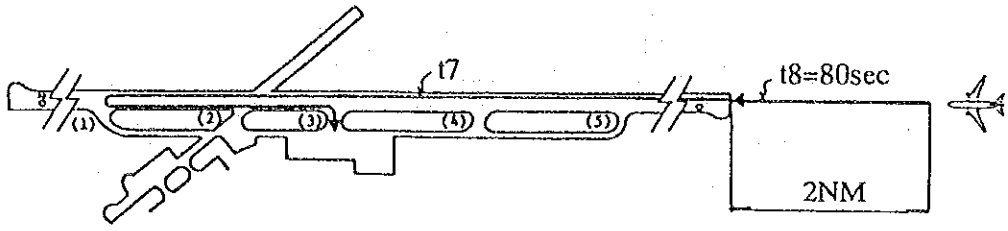
t3 = 6.23 nm / 93 kt = 242 sec

T6 = t3 = 242 sec

c. Landing followed by Take-off

Arrival aircraft is required to get approval of landing before the aircraft reaches 2 nm from runway threshold.

Large and Medium Jet



*2

t8 = 2 nm / 150 kt + 30 sec = 78 sec ≒ 80 sec
Note, *2 : Time for communication

*1

Large Jet {230 - (0.8 km ÷ 30 km/hr)} x 0.23 = 53 sec

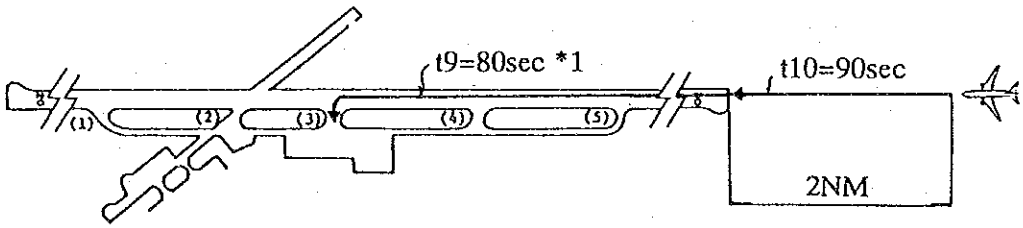
t7 { *1 + } ÷ 2 = 63.5 ≒ 64

Medium Jet 125 sec x 0.77 = 96 sec

Ave. 149 sec
Note, *1 : Based on survey

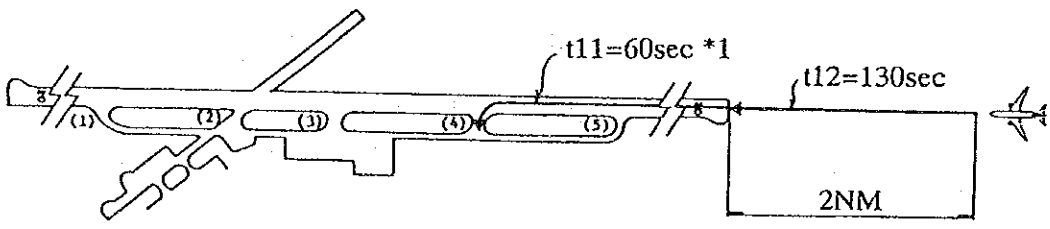
T1 = t7 + t8 = 144 sec

HS 748



t10 = 2 nm / 120 kt + 30 sec = 90 sec
T8 = t9 + t10 = 170 sec

DHC-6



t12 = 2 nm / 70 kt + 30 sec = 133 sec ≒ 130 sec
T9 = t11 + t12 = 190 sec

d. Landing followed by Landing

Jet

T7 = Wake Turbulence Minimum = 120 sec

ATC Minimum = 120 sec

HS 748

t2 = 3 nm / 120 kt = 90 sec

T8 = t2 = 90 sec

DHC-6

t3 = 3 nm / 93 kt = 154 sec

T9 = t3 = 154 sec

2) Average Runway Occupancy Time

Unit : Second

Type of Aircraft	Large and Medium Jet	HS-748	DHC-6	Average
Runway Usage Proportion	43%	27%	32%	
a. Take-off followed by Take-off	120	72	127	106
b. Take-off followed by Landing	125	128	242	165
c. Landing followed by Take-off	144	170	190	169
d. Landing followed by Landing	120	90	154	121
			Average	141

3) Runway Capacity

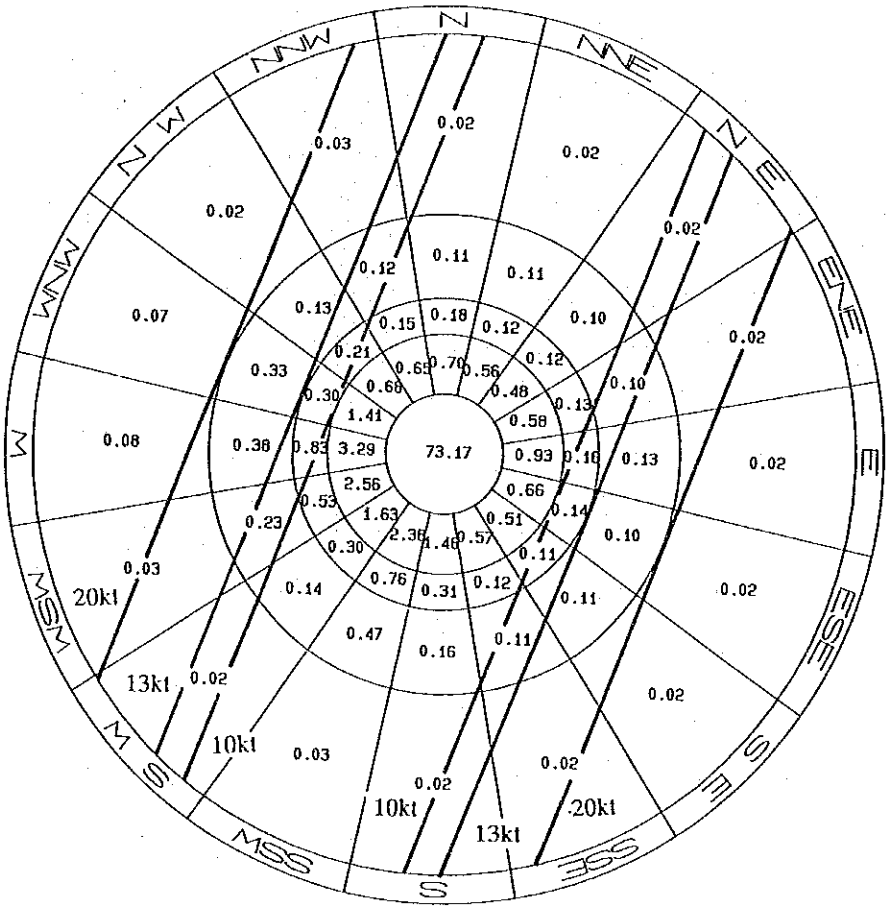
C = 3600 sec / 141 sec = 25.5 ≒ 25 operations

Appendix - 6.2 Wind Coverage

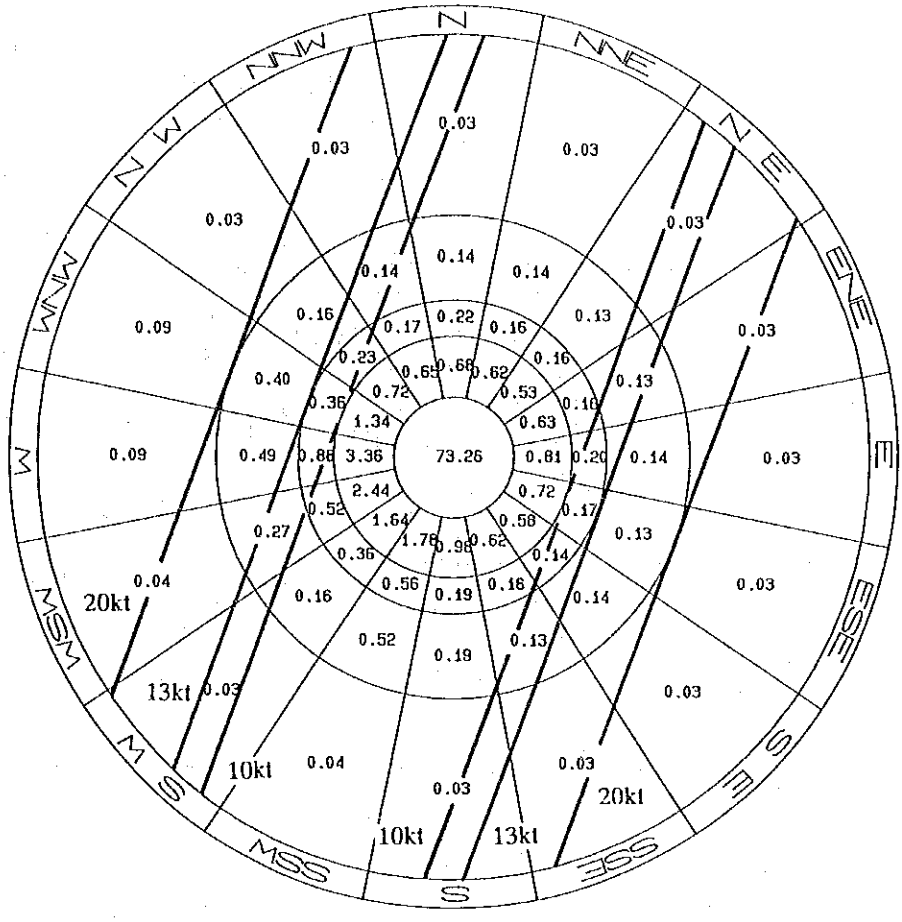
Wind Coverage for R/W 02-20

Season / Cross Wind	All	Dry	Monsoon
10 kt	96.48	95.81	98.62
13 kt	98.40	98.02	99.61
20 kt	99.73	99.67	99.94

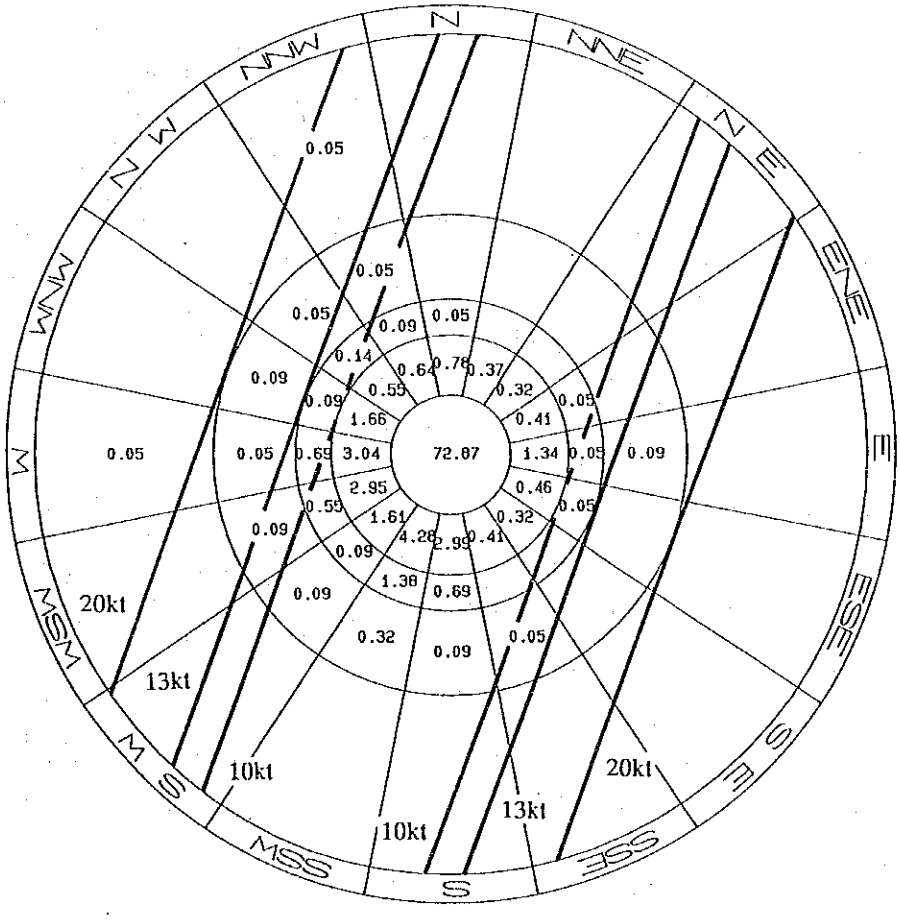
note : Data from 1990 to 1993, No tail wind
source : Department of Hydrogy and Meteorology



Wind Rose of R/W 02-20 (All Season)



Wind Rose of R/W 02-20 (Dry Season)



Wind Rose of R/W 02-20 (Monsoon Season)

Appendix - 6.6 Passenger Processing Time Survey

Passenger Processing Time Survey

(1) International Passenger

The result of the survey, carried out on 28 to 30 august, 1992 is presented as follows:

1. Check-in

Date	No. of PAX Serveyed Surveyed	Average Processing
29 Jul	38	47'
30 Jul	43	62'
31 Jul		

2. Security Check

Date	No. of PAX Serveyed Surveyed	Average Processing
29 Jul	35	10'
30 Jul	68	13'
31 Jul		

3. Passport Control - Departure

Date	No. of PAX Serveyed Surveyed	Average Processing
29 Jul	12 14'30"	73"
30 Jul	33 34'22"	63"
31 Jul		

4. Passport Control - Arrival

Date	No. of PAX Serveyed Surveyed	Average Proccssing
29 Jul	56	41"
30 Jul	29	48"
31 Jul		47"

5. Custom Cunter Arrival

Date	No. of PAX Serveyed Surveyed	Average Processing
29 Jul	46	78"
30 Jul	75	35"
31 Jul		

(2) Domestic Passenger

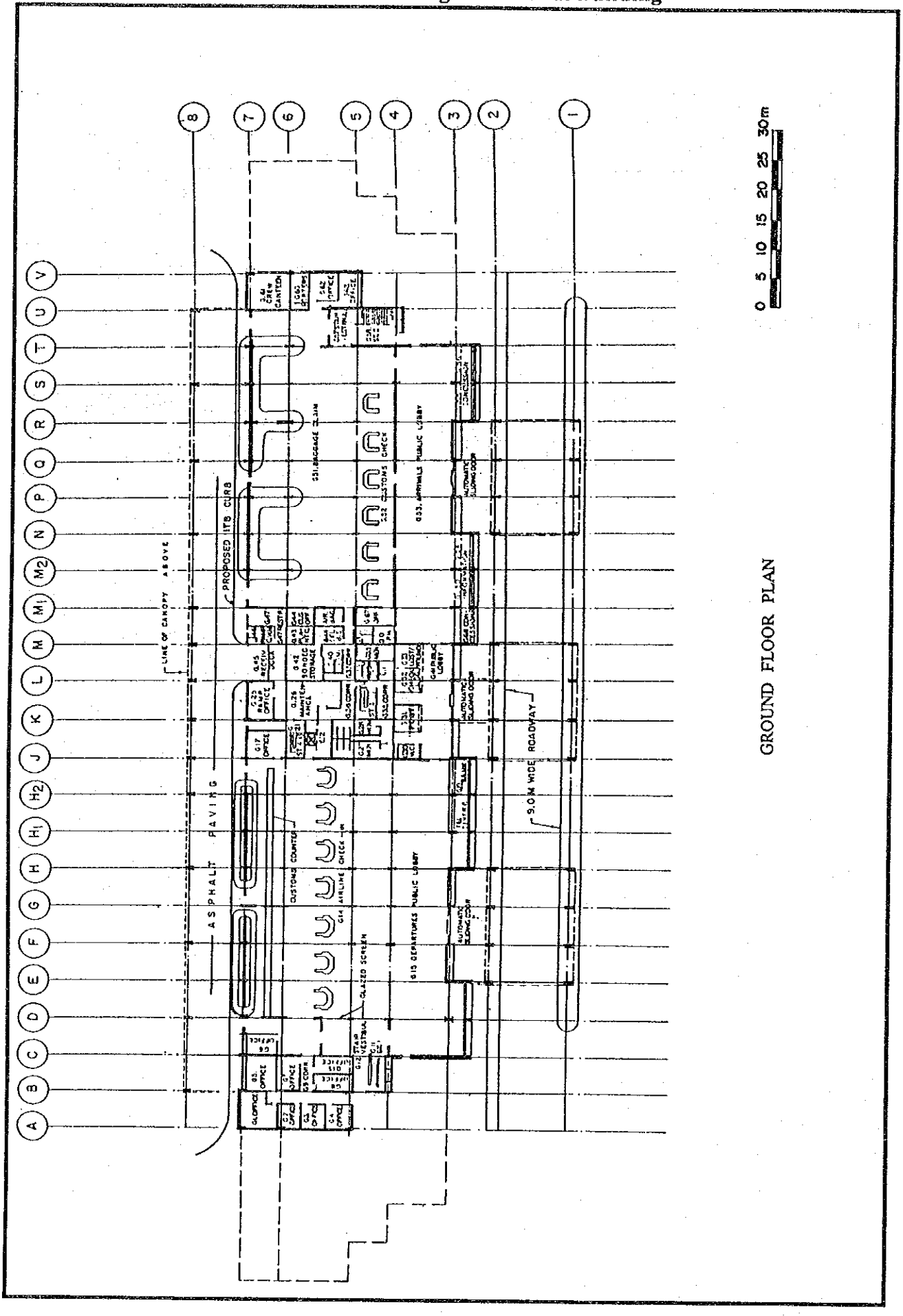
1. Check in

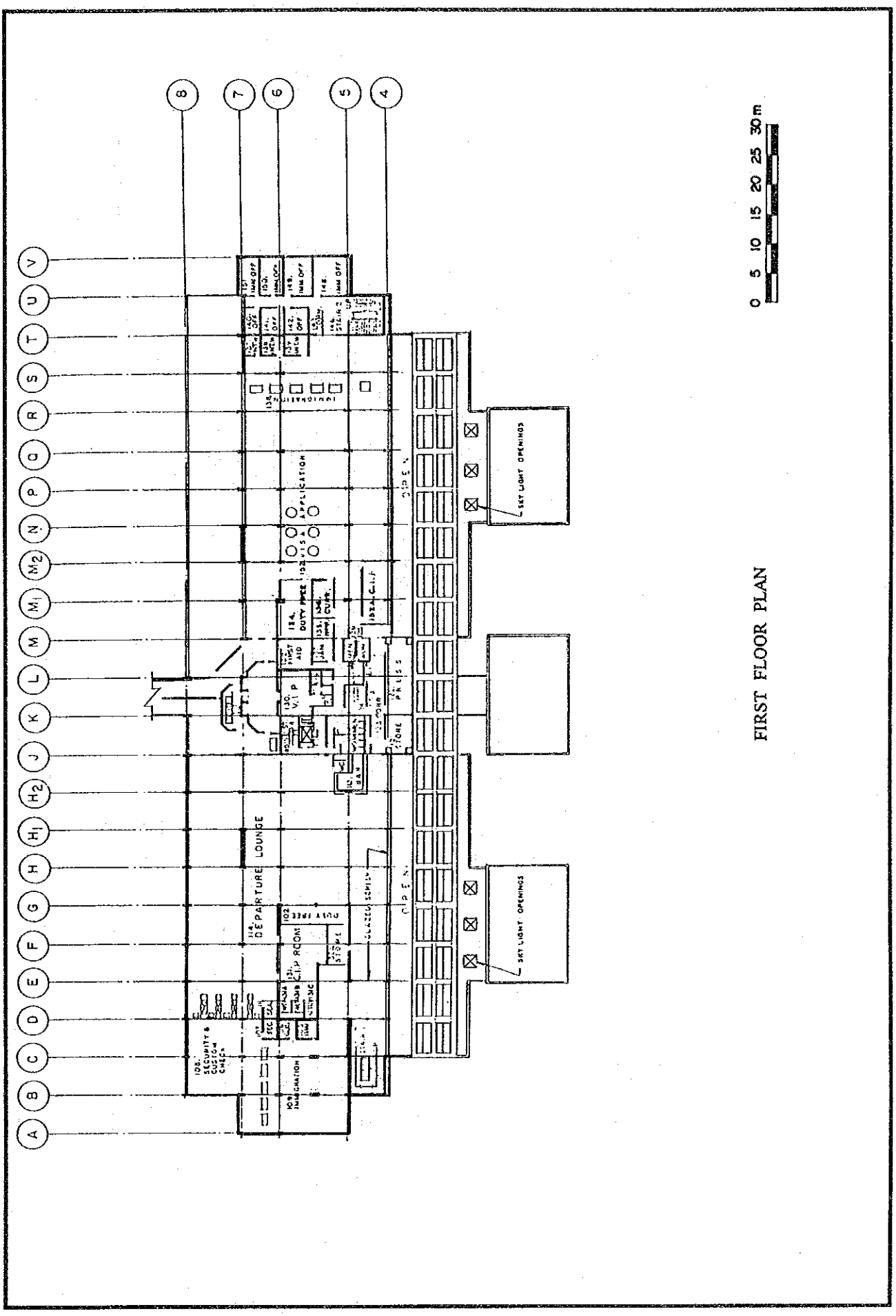
Date	No. of PAX Serveyed Surveyed	Average Processing
29 Jul	5 (3 minutes)	1.7 minutes
30 Jul		
31 Jul	31 (17 minutes)	1.8 minutes

2. Security Check

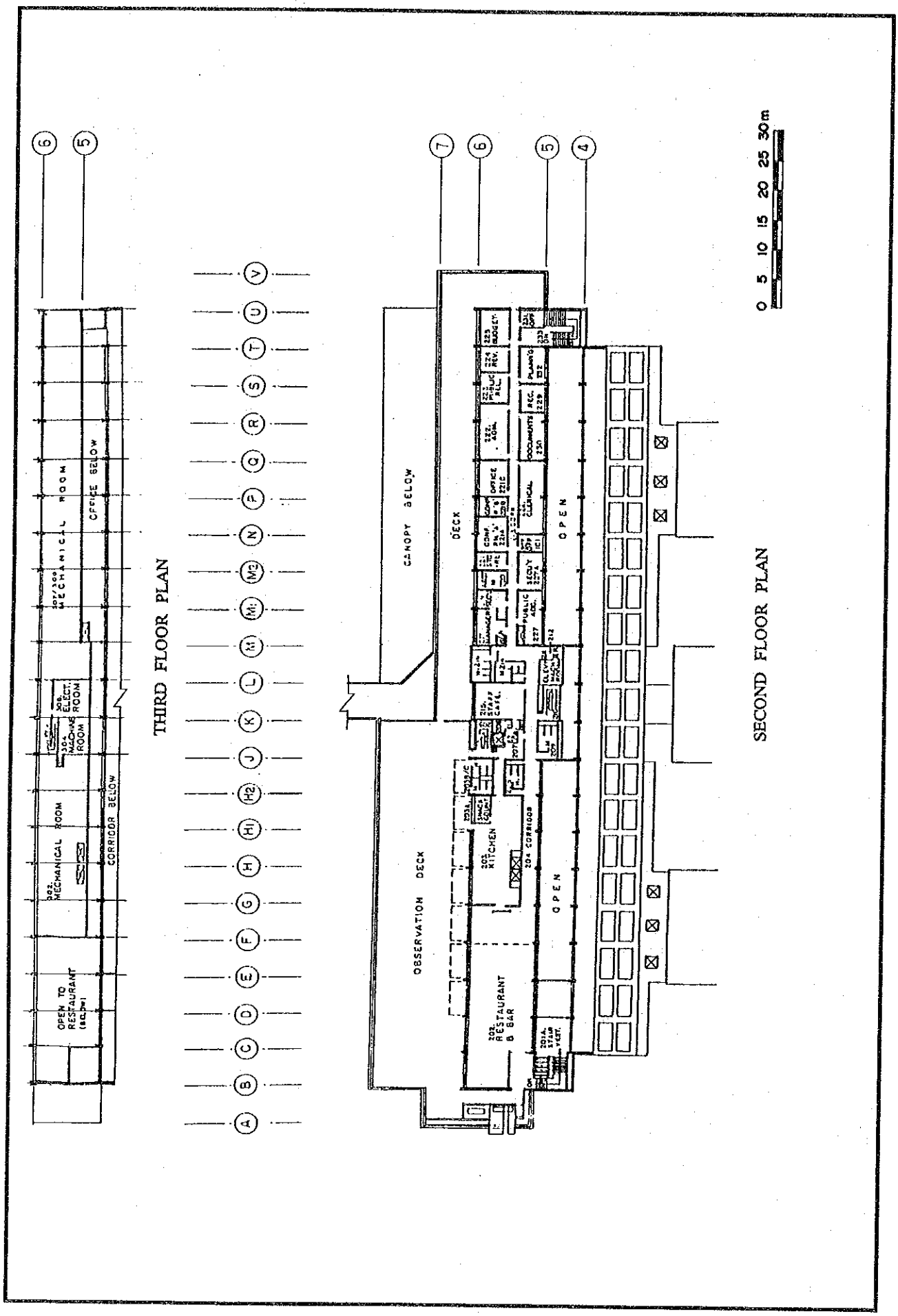
Date	No. of PAX Serveyed Surveyed	Average Processing
29 Jul	25 (10 minutes)	2.5 minutes
30 Jul	16 (5 minutes)	3.2 minutes
31 Jul	40 (11 minutes)	3.6 minutes

Appendix - 6.6 **Layout Plan of Existing International Passenger Terminal Building**

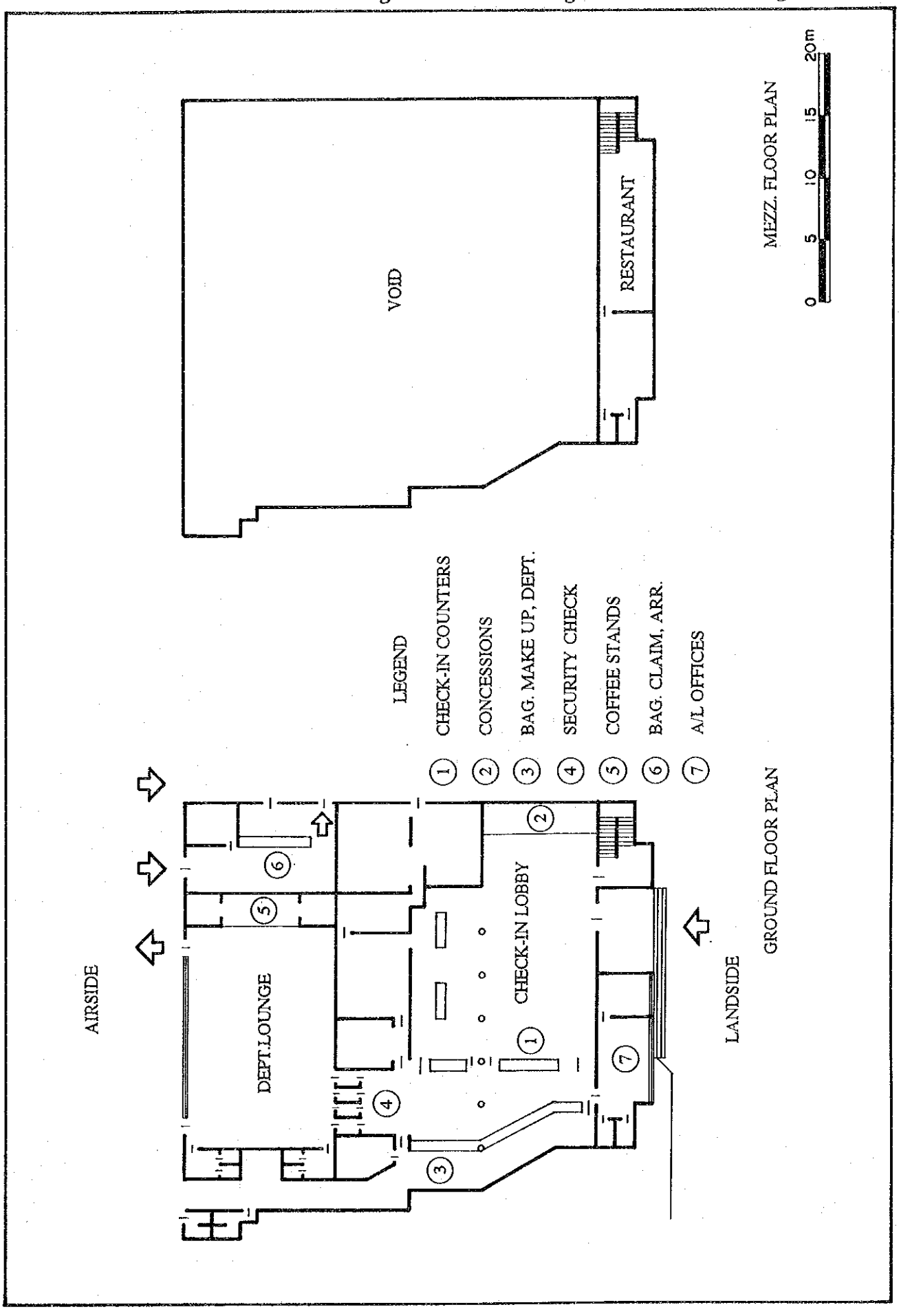




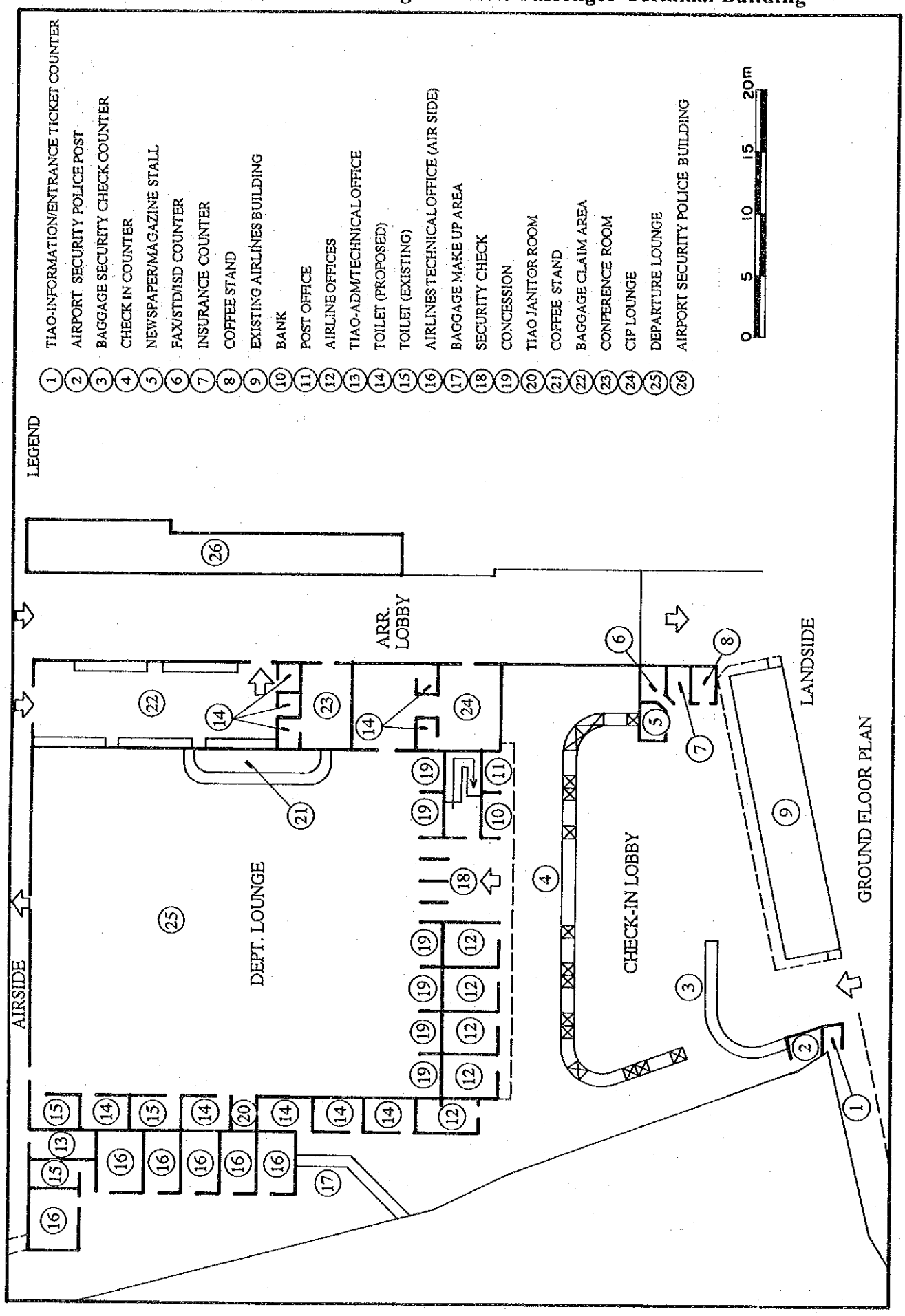
FIRST FLOOR PLAN


THIRD FLOOR PLAN
SECOND FLOOR PLAN
0 5 10 15 20 25 30m
OPEN TO RESTAURANT (BELOW)
MECHANICAL ROOM
OFFICE BELOW
CORRIDOR BELOW
CANOPY BELOW
DECK
OBSERVATION DECK
OPEN
KITCHEN
RESTAURANT & BAR

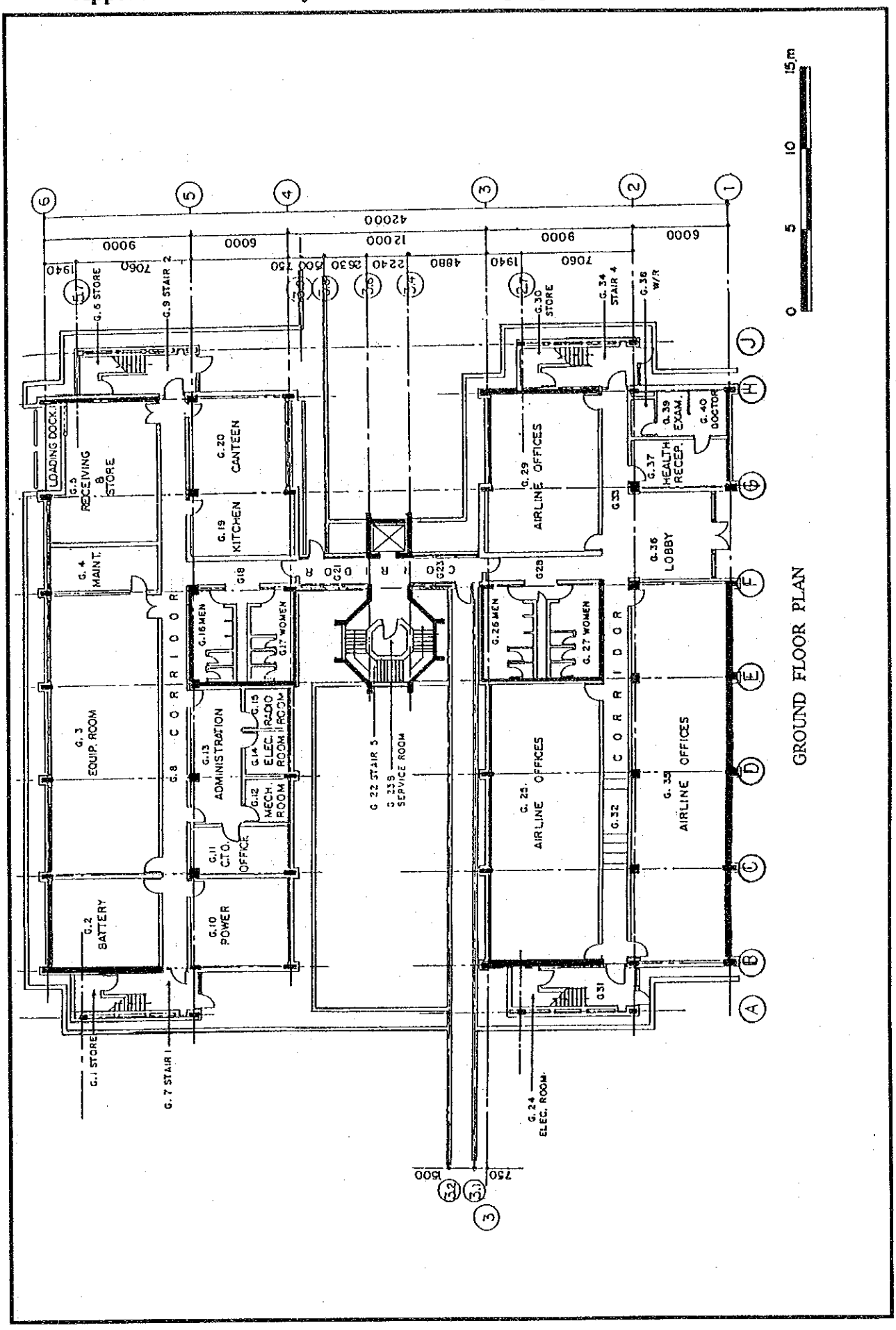
Appendix - 6.6 **Layout Plan of Existing Domestic Passenger Terminal Building**

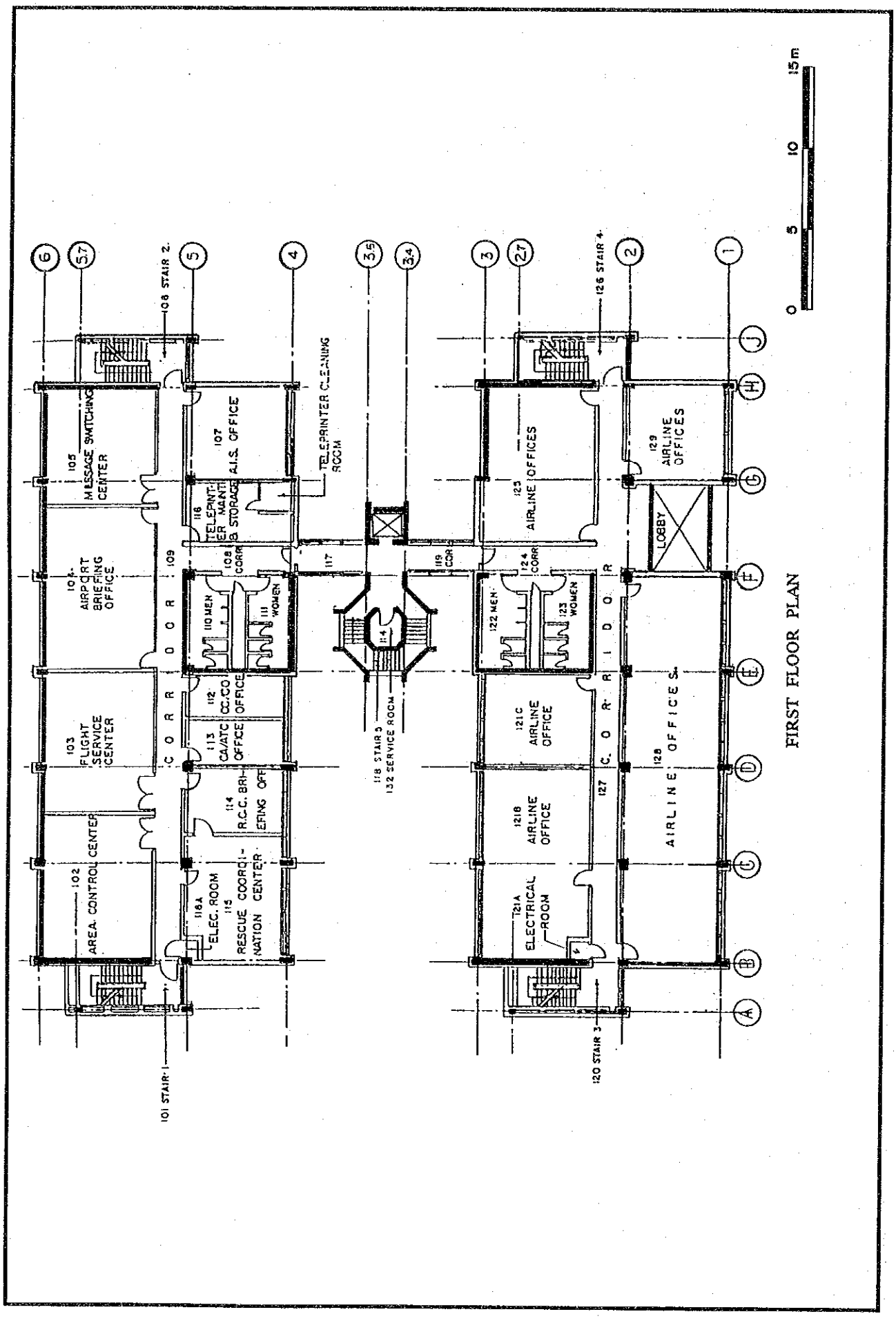


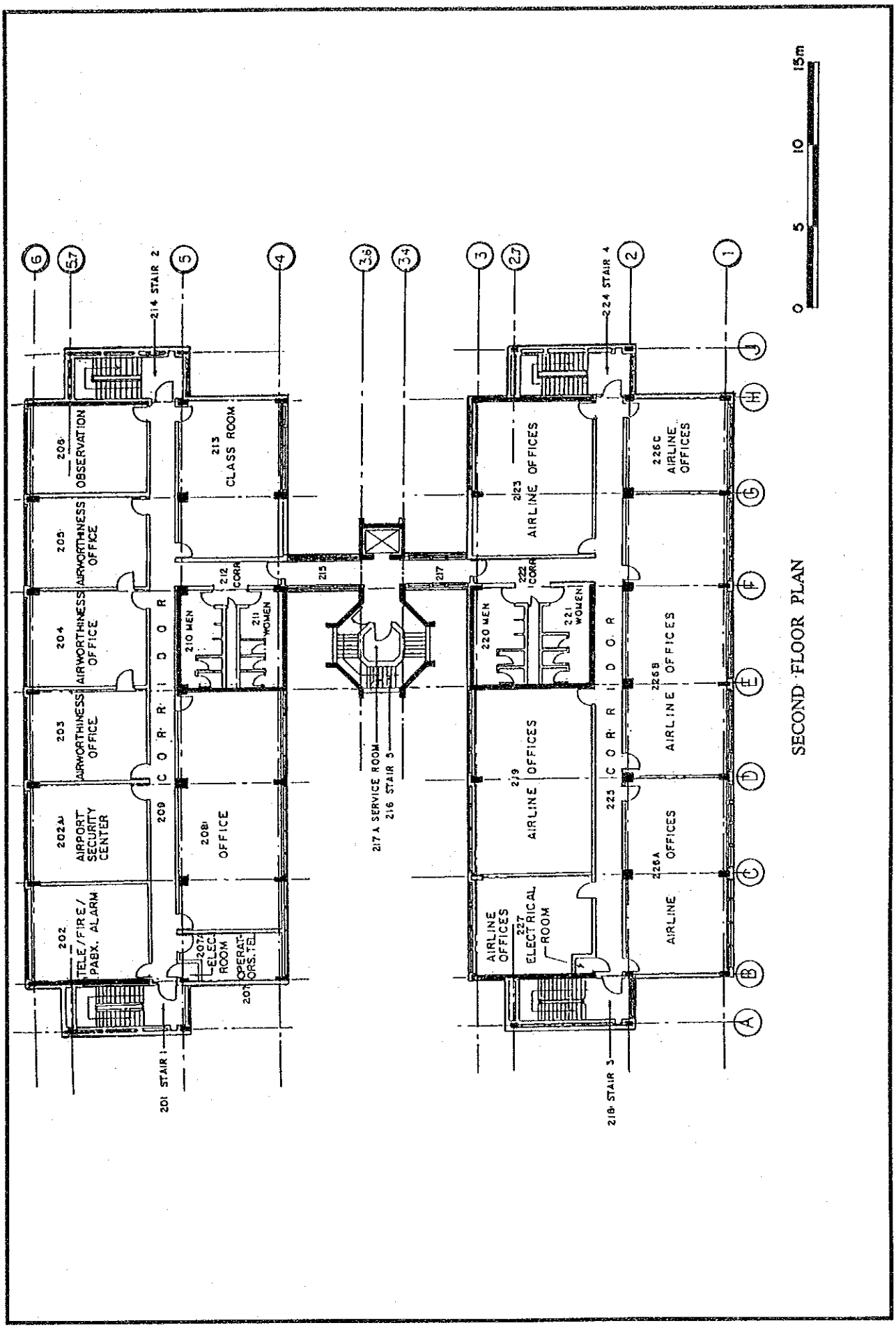
Appendix - 6.6 **Temporary Expansion Plan of Existing Domestic Passenger Terminal Building**

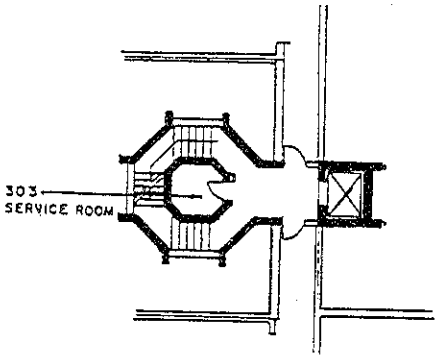


Appendix - 6.6 Layout Plan of Existing Operation/Airlines Complex

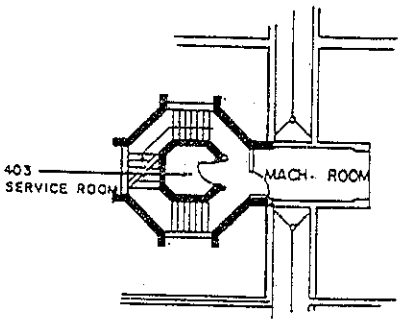



0
5
10
15m
101 STAIR 1
102 AREA CONTROL CENTER
103 FLIGHT SERVICE CENTER
104 AIRPORT BRIEFING OFFICE
105 MESSAGE SWITCHING CENTER
106 STAIR 2
107 A.I.S. OFFICE
108 CORR
109 CORRIDOR
110 MEN
111 WOMEN
112 CC/CO OFFICE
113 CA/ATC OFFICE
114 R.C.C. BRIEFING OFF
115 RESCUE COORDINATION CENTER
116 TELEPRINTER MAINT & STORAGE
117
118 STAIR 5
132 SERVICE ROOM
119 COR
120 STAIR 3
121A ELECTRICAL ROOM
121B AIRLINE OFFICE
121C AIRLINE OFFICE
122 MEN
123 WOMEN
123 AIRLINE OFFICES
124 CORR
125 AIRLINE OFFICES
126 STAIR 4
127 CORRIDOR
128 AIRLINE OFFICES
129 AIRLINE OFFICES
LOBBY
TELEPRINTER CLEANING ROOM
FIRST FLOOR PLAN

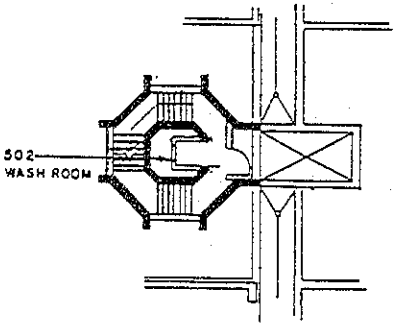

SECOND FLOOR PLAN
0
5
10
15m
206 OBSERVATION
205 AIRWORTHINESS OFFICE
204 AIRWORTHINESS OFFICE
203 AIRWORTHINESS OFFICE
202A AIRPORT SECURITY CENTER
202 TELE/FIRE/ PABX. ALARM
209 CORRIDOR
208 OFFICE
207 ELEC. ROOM
207A OPERAT. ORS. TEL
213 CLASS ROOM
212 CORR
210 MEN
211 WOMEN
214 STAIR 2
201 STAIR 1
215
217
217A SERVICE ROOM
216 STAIR 3
223 AIRLINE OFFICES
222 CORR
220 MEN
221 WOMEN
224 STAIR 4
219 AIRLINE OFFICES
225 CORRIDOR
227 ELECTRICAL ROOM
AIRLINE OFFICES
226C AIRLINE OFFICES
226B AIRLINE OFFICES
226A AIRLINE OFFICES
218 STAIR 5



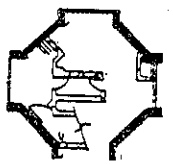
THIRD FLOOR PLAN



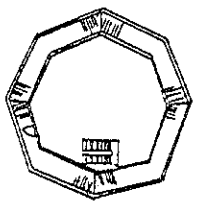
FOURTH FLOOR PLAN



FIFTH FLOOR PLAN



601 MECH ROOM



701 CONTROL ROOM

THIRD ~ CONTROL TOWER ROOM

APPENDIX TO CHAPTER 7

Appendix - 7.2 Airport Development Alternatives

Airport Development Alternatives

(1) Terminal Area Development Planning

a) The development to the north (case 1) is selected as the most satisfactory plan in chapter 7.

b) However, if the necessary condition of relocating the existing aircraft maintenance area and hangars will not come true immediately. the following constraints will face the short-term airport development, which is expected to be implemented immediately to improve the conditions to meet the demands.

- Urgency of improving the domestic terminal
- This will require some time to remove existing facilities, such as aircraft maintenance area and hangars

Under the constraints, Case 1 and Case 2 are not adequate to apply immediately.

In the long run, the northern development will be the basis of planning. For the immediate development, a new domestic terminal should be free from the existing buildings.

c) Hence, an another terminal alternative can be considered as follows;

- The international terminal, which requires much deeper apron depth to accommodate larger types of aircraft, will expand to the present site to the north.
- A "remote" new domestic terminal will be developed, apart from the international terminal.

d) There are three alternatives, based on the following premises.

- 182.5 m, the distance between the center lines of parallel taxiway and the runway center line of ICAO's ANNEX 14, is considered in the planning.
- However, in order to keep the project cost low, shifting of the parallel taxiway is planned beyond the year 2010. The new apron will be planned to connect to the existing parallel taxiway at the southern site. As the northern site is easy to link with the end of RWY 20, this is planned as well.

CASE A was selected to minimize the earth work volumes to reduce the construction costs.

In this case, there are some problems as follows,

- Head-on encounter on the parallel taxiway could occur between arriving and departing aircraft. This will cause the delay and or decreasing the runway capacity.
- It will require the removal of the existing fuel farm and the international warehouse.

- It will require the re-alignment of the RING ROAD in order to solve the height difference between the airport side and the road.

The site of **CASE B** was moved to the south to be cleared of the existing facilities.

In this Case, there are still following problems:

- Head-on encounter of aircraft on the parallel taxiway
- Difficulty of the future expansion due to the location of the building
- Large volume of land fill required

CASE C was selected to avoid the aircraft head-on encounter on the parallel taxiway. This case gives better features of the airport operations and future expansion as follows:

- Particularly, this case will contribute to increasing the runway capacity, because of the connection of the taxiway to the end of RWY 20.
- In the future, this area will be connected with the expanded international terminal. This connection of domestic and international terminals will enhance better and more flexible operation. (See Fig.7.1)

e) Through the comparison of alternatives, the northern site of CASE C was selected.

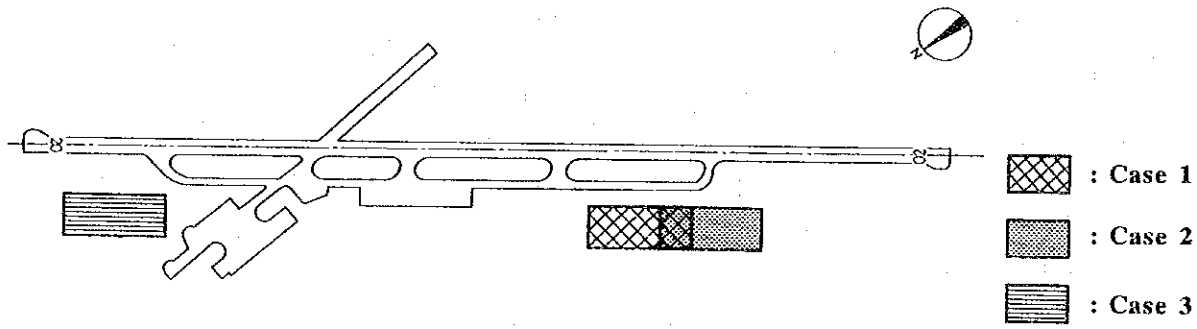


Figure 7.1 Alternatives of Remote Domestic Terminal

Table 7.1 Comparison of Alternatives for Remote Domestic Terminal

	CASE 1	CASE 2	CASE 3
1. Airport operation	(C) Head-on between arriving & departing aircraft on parallel TWY (Dual parallel TWY required)	(C) Same with CASE 1	(A) No head-on Increasing RWY capacity due to connection to RWY 20 end
2. Road accessibility	(B) Possible with slope	(B) Possible with slope	(B) Easy
Traffic flow	(C) Re-alignment of RING ROAD required	(C) Traffic crossing on slope of RING ROAD	(B) Simple
3. Airport development (It needs additional embankment.)			
(1) Expandability of apron	(B) Possible	(B) Possible	(B) Possible
(2) Expandability of PTB	(B) Possible	(C) Difficult	(A) Easy
(3) Future development	(C) Completely being separated	(C) Completely being separated	(B) Being combined with INT terminal
4. Construction			
(1) Easiness of implementation	(C) Dofficult	(A) Easy	(A) Easy
(2) Easiness of work	(A) Easy	(C) Not easy (high embankment)	(B) Not easy (High embankment, but better topography)
(3) Volume of earth work	(B) Less	(C) Large	(C) Large
TOTAL EVALUATION	2	3	1
(A)	1	1	3
(B)	3	2	5
(C)	5	6	1
REQUIREMENT	REMOVAL OF EXISTING FACILITIES		ROAD PASSING THROUGH ARMY AREA

(2) Terminal Area Layout

1) International Terminal

a. The international apron is planned to handle large type aircraft. Taking into account this requirement and the following conditions of the planning, the 300 meter-width runway strip and the separation distance of 182.5 meters between the runway center line and the parallel taxiway center line, this requires deeper depth of the apron than at present. And there is a land limitation of the present airport property. Then "NOSE-IN and PUSH-OUT" aircraft configuration will be adopted for aircraft handling system on the apron.

b. The existing international passenger terminal building is limited on its expansion due to the surrounding facilities. And larger design unit floor areas is planned to improve the level of service.

Therefore the following idea is set up for planning the international terminal.

- The existing PTB will be expanded within an allowance of the land area and also it will be rehabilitated to cope with the higher service expected.

- A new PTB will be constructed to complement the shortage of the existing PTB capacity for the need in the future.

c. It should be noted that the parking spots for large aircraft (types of B-747, DC-10, etc.) will be short by two (2) in the year 2003 and 2010 respectively in comparison with the demand, if the existing facilities of aircraft maintenance area and hangars are not removed.

So it is quite requested to relocate them to the reserved sites as soon as possible to satisfy the requirements of the planning.

2) Domestic Terminal

a. As it is mentioned previously, a new domestic passenger terminal is planned at the north-eastern site of RWY 20.

b. As aircraft fleet for the domestic flight consists of small aircraft such as HS-748 and or DHC-6, "ANGLED SELF-MANEUVERING" parking configuration will be planned.

The apron is planned to accommodate 3 HS-748 and 3 DHC-6 for loading, 3 HS-748 for night stay, and 2 helicopters.

3) Cargo Terminal

a. A cargo terminal is expected to be located beside aprons as for easy cargo-handling, smooth vehicle flows concerned and better airport operation.

So a domestic cargo terminal will be planned in the domestic terminal.

However an international cargo terminal will not be able to be planned besides the international apron because of the land limitation

(the expansion of the international apron has also suffered from this land limitation.) and the existing facilities (which will take time for relocation) of the conditions in the planning. As the cargo terminal is one of the urgent works for improvement, it is required to leave the existing facilities as they are.

b. The following alternatives were selected for the international cargo terminal.

- in the new domestic terminal : It will be a long and complicated path to and from parked aircraft. And it will require further large volume of earth work to be filled.

- alongside of the parallel taxiway : It will not solve the long conveying path at the present, because of lack of internal service roads. And its construction will cost high due to high embankment and the separation from the parallel taxiway planned to be shifted in future.

- beside the international car park : There will be some cross of the traffic flows of cargo trucks and general cars between the cargo terminal and the apron. But the traffic volume of general cars, the traffic of which are originated around the aircraft maintenance area and hangars, will not be big as for the activity. It will give the shortest conveying length. And also this will be the easiest construction.

Through the comparison of the alternatives above, the last one was selected.

But, as mentioned before, the best site is the northern portion of the international terminal building (the aircraft maintenance area and hangars at present). So the selected alternative is preferable to be planned temporarily and tentatively.

(3) Passenger Terminal Building Development Plans

a) Existing International Passenger Terminal Development Plan

- Basic Passenger and Baggage Flow

Basic passenger and baggage flow for international operations is shown in Figure 7.2, and departing and arriving passenger flows should be segregated for terminal security. The departing customs inspection that is performed after check-in is a serious bottleneck during the peak seasons. For this purpose an alternative solution is described later.

- Passenger Flow Concept

The following three alternatives were studied to evaluate a suitable concept in terms of the passenger flows as shown in Figure 7.3, and its characteristics are described as follows.

ALT-1 : As passengers pass through apron on foot, it is not only dangerous for passengers but also disadvantageous for apron operations. It has been adopted only at small airports.

ALT-2 : Passengers move partially on the apron and pass through on underground passage beneath the service road. It is a costly construction for the underpass and an inconvenient level change for passengers.

ALT-3 : Passengers pass through PBB (Passenger Boarding Bridge), fixed bridges above service road and airside corridor so as to separate the flow from apron operations. It is safe for passengers and convenient for apron operations. It has been adopted at many airports throughout the world.

Thus it is recommended that ALT-3 be adopted as it is safe for passengers and convenient for apron operations.

- Departing and Arriving passenger Flows

  Based on ALT-3 selected above, departing and arriving passenger flows were studied to segregate them in terms of terminal security, and these flows are shown in Figure 7.4 and 7.5, in section and plans.

  In the airside corridors the departing passengers can utilize the first floor and the arriving passengers can use the ground floor. At the fixed bridges segregation will be managed with door control systems.

- Possibility of Expansion

  The existing passenger terminal building can be expanded both ways - to the south with 3 bays (18m) and to the north with 4 bays (24m), without any bad influence of the existing facilities - access roads, other buildings parking area etc.. The terminal building will have about 3,270 sq.m in the total enlargement floor area.

- Study of Development Customs Flows

  It is understood that the customs inspection - departure is a government requirement. However, departing passenger and baggage flows point of view, it is inevitable to arrange a location of the customs (before Check-in Counter "ALT-B) in order to provide smooth and effective departing passenger flows.

It is a fact that extreme congestion at the customs counter (ALT-A) and long queues at check-in counters are observed during peak hours due to the customs locations and a shortage of the check-in counters. Therefore it is a serious bottleneck.

It is proposed to adopt ALT-B "before check-in" for the customs inspection in order to solve the bottleneck for facilitation. Comparison table of ALT-A and B, its departing customs inspection systems and its layout plans are shown in Table 7.2 and Figures 7.6 and 7.7.

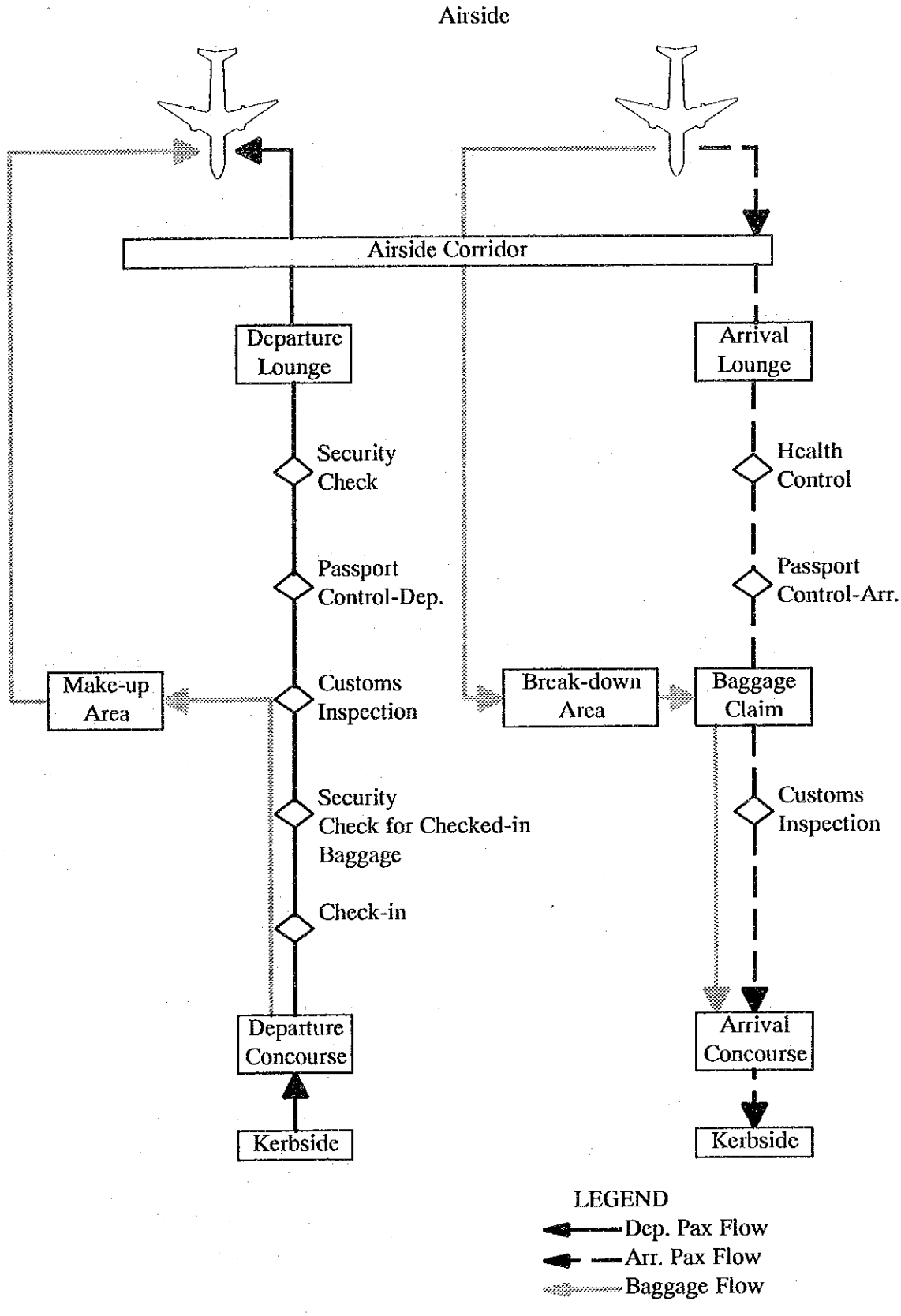
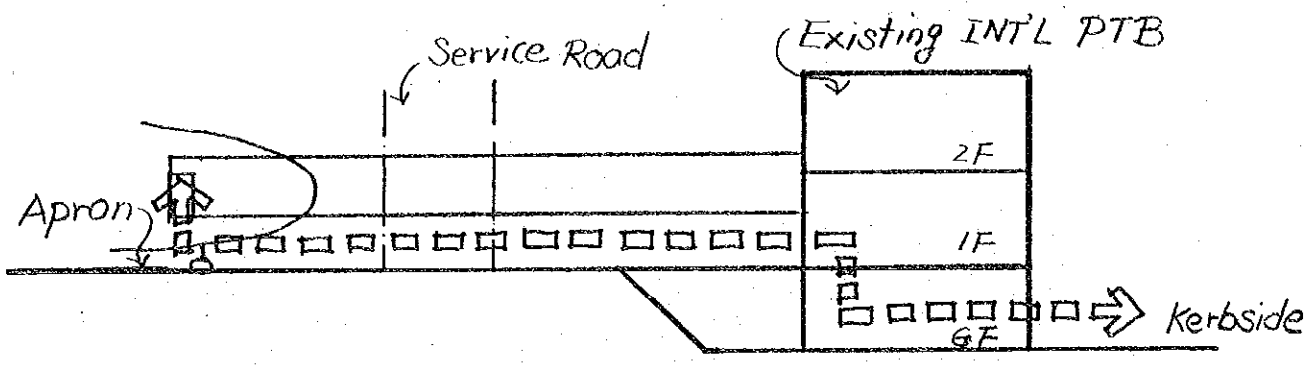
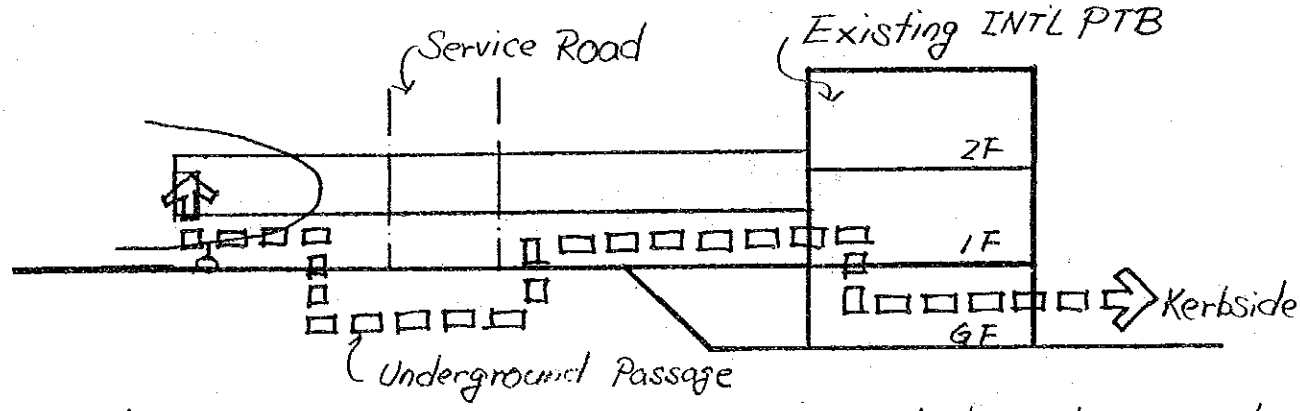


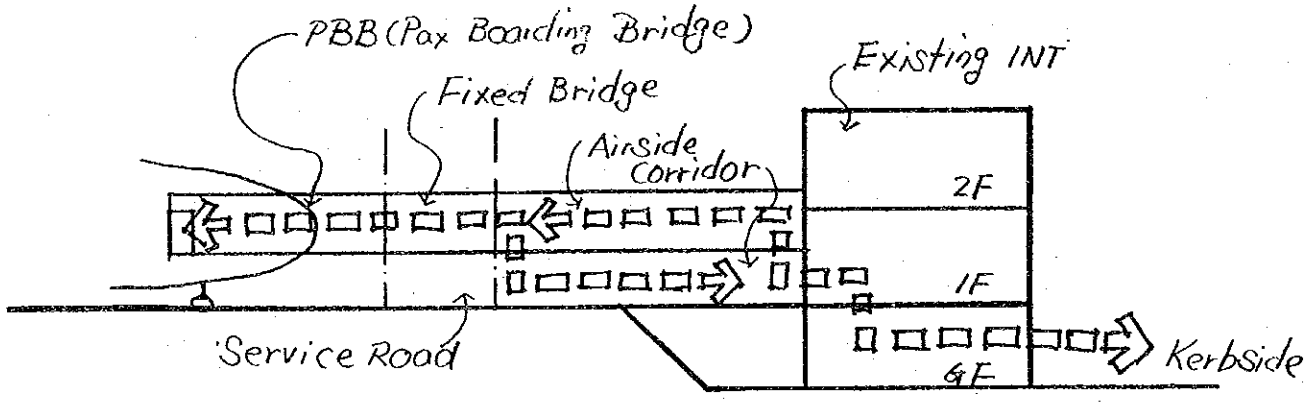
Figure 7.2 Basic Passenger and Baggage Flow for International



Alternative - 1 : Apron Level Concept



Alternative - 2 : Apron Level and Underpath Concept

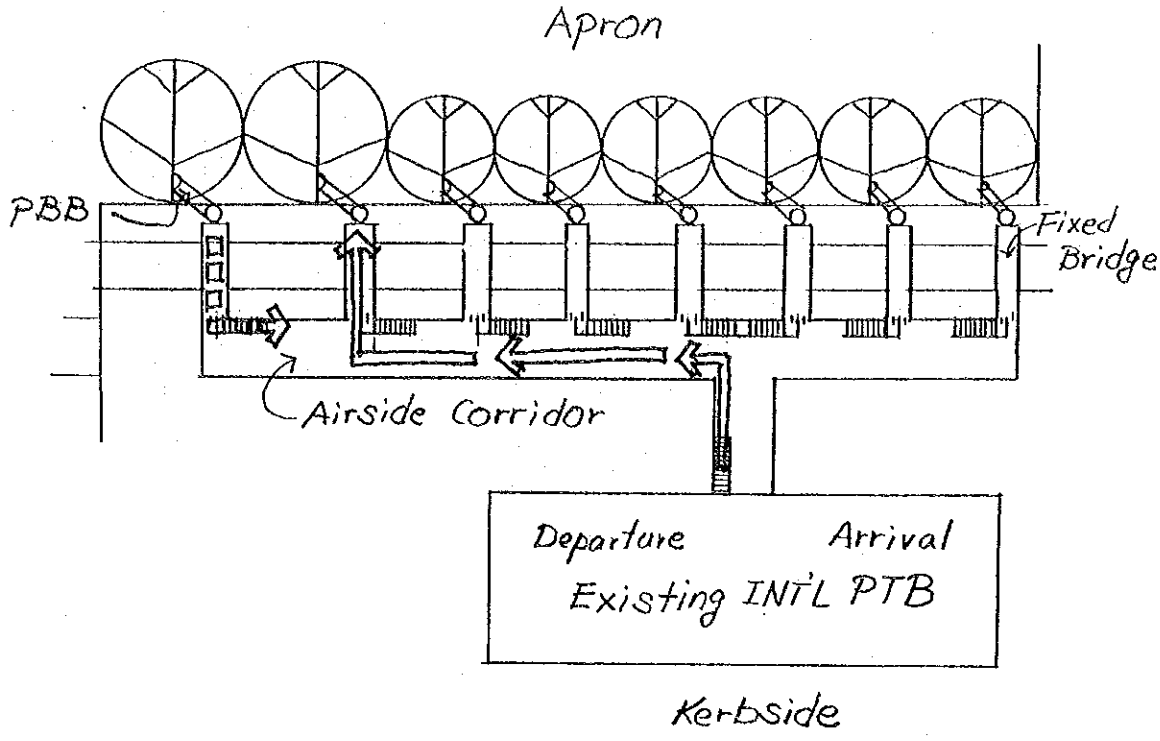


Alternative - 3 : Fixed Bridge with PBB Concept

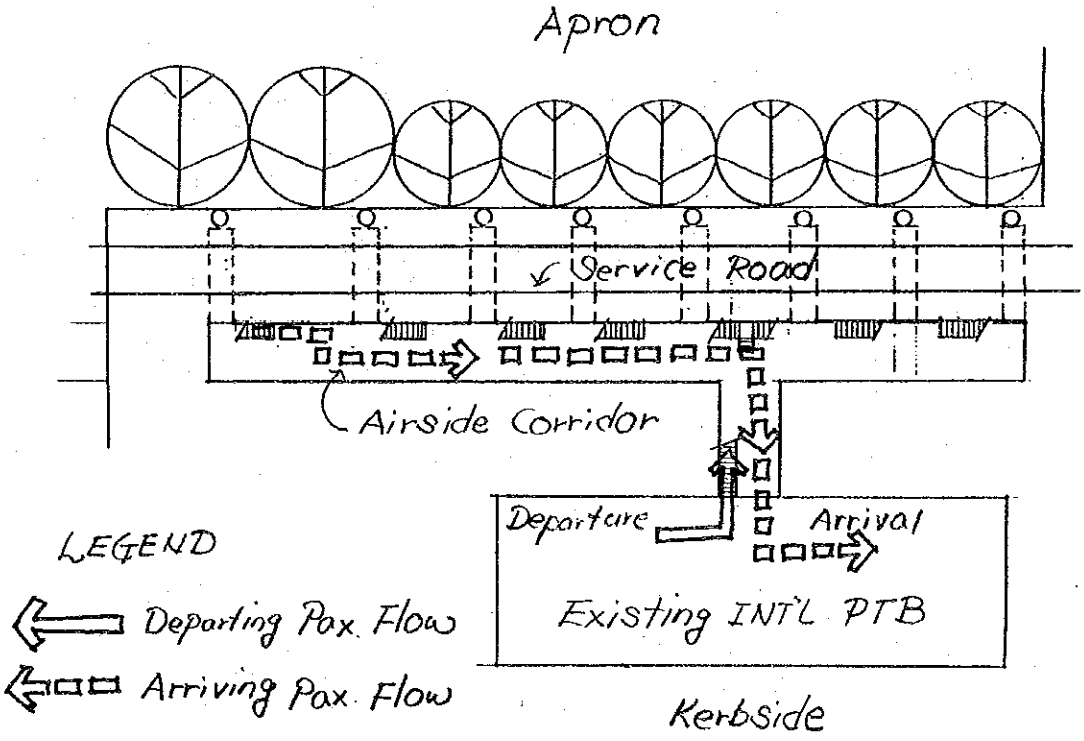
LEGEND

Pax Flow

Figure 7.3 Passenger Flow Concepts



Airside Corridor , First Floor Level



Airside Corridor, Ground Floor Level

Figure 7.4 Departing and Arriving Passenger Flows, Floor Plan

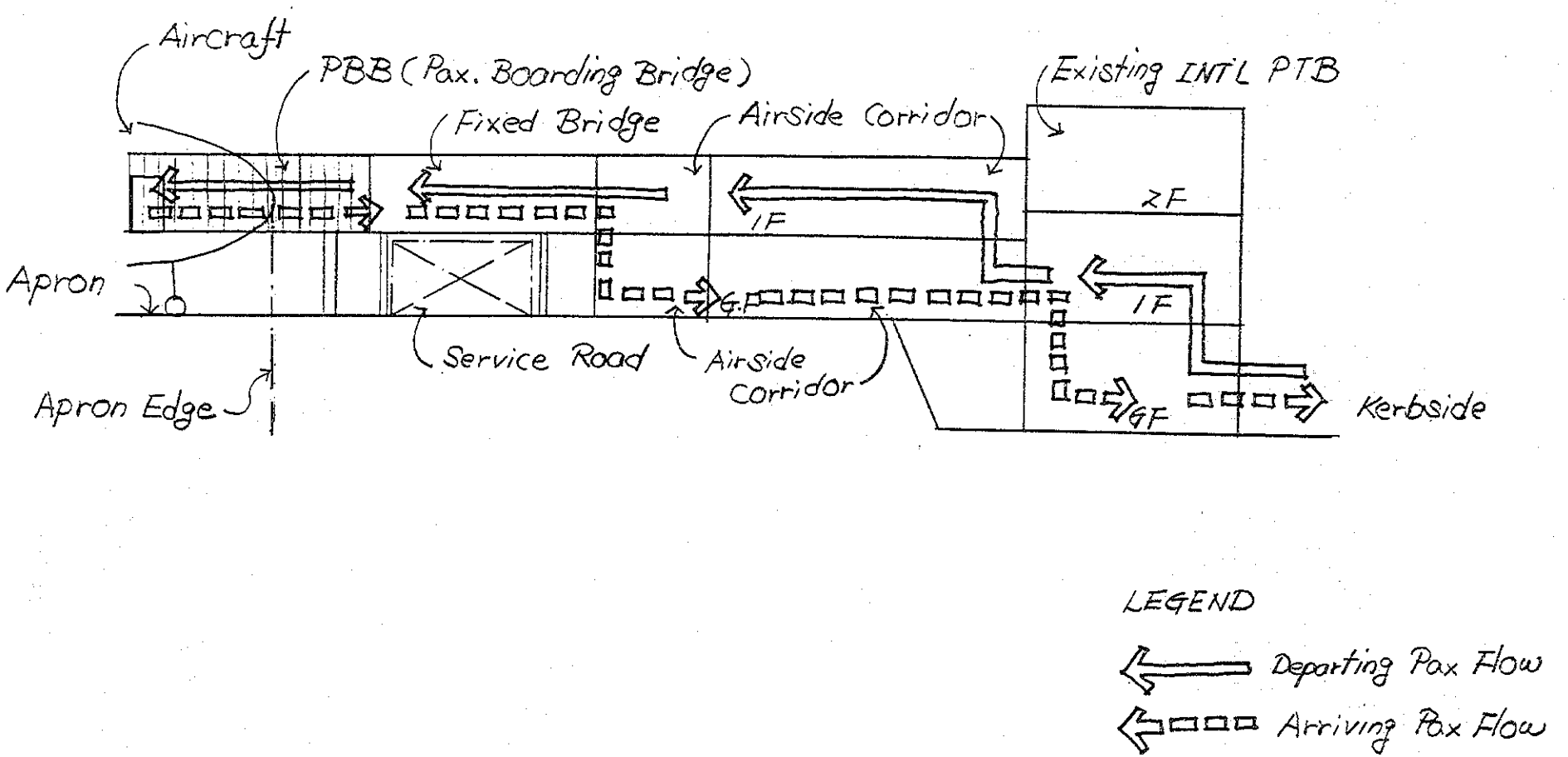


Figure 7.5 Departing and Arriving Passenger Flows, Section

Table 7.2 Comparison of ALT-A and ALT-B

ITEM \ ALT	ALT - A "After check-in" Current system	ALT - B "Before check-in" Proposed system
1. Customs Inspection	1. Boarding pass 2. Baggages	1. Flight ticket 2. Bagagges
2. Pax. and Baggage Flow	Not smooth Complicated flows and congestion at customs counters	Smooth Simple and Smooth flows
3. Pax. Convenience	Inconvenience Completed flows and congestion at customs counters	Convenient Simple and smooth flows, Not long queue at check-in counters
4. Airline Convenience	Inconvenience Completed passenger and baggage flow	Convenient Simple and smooth passenger and baggage flow
		Recommendable

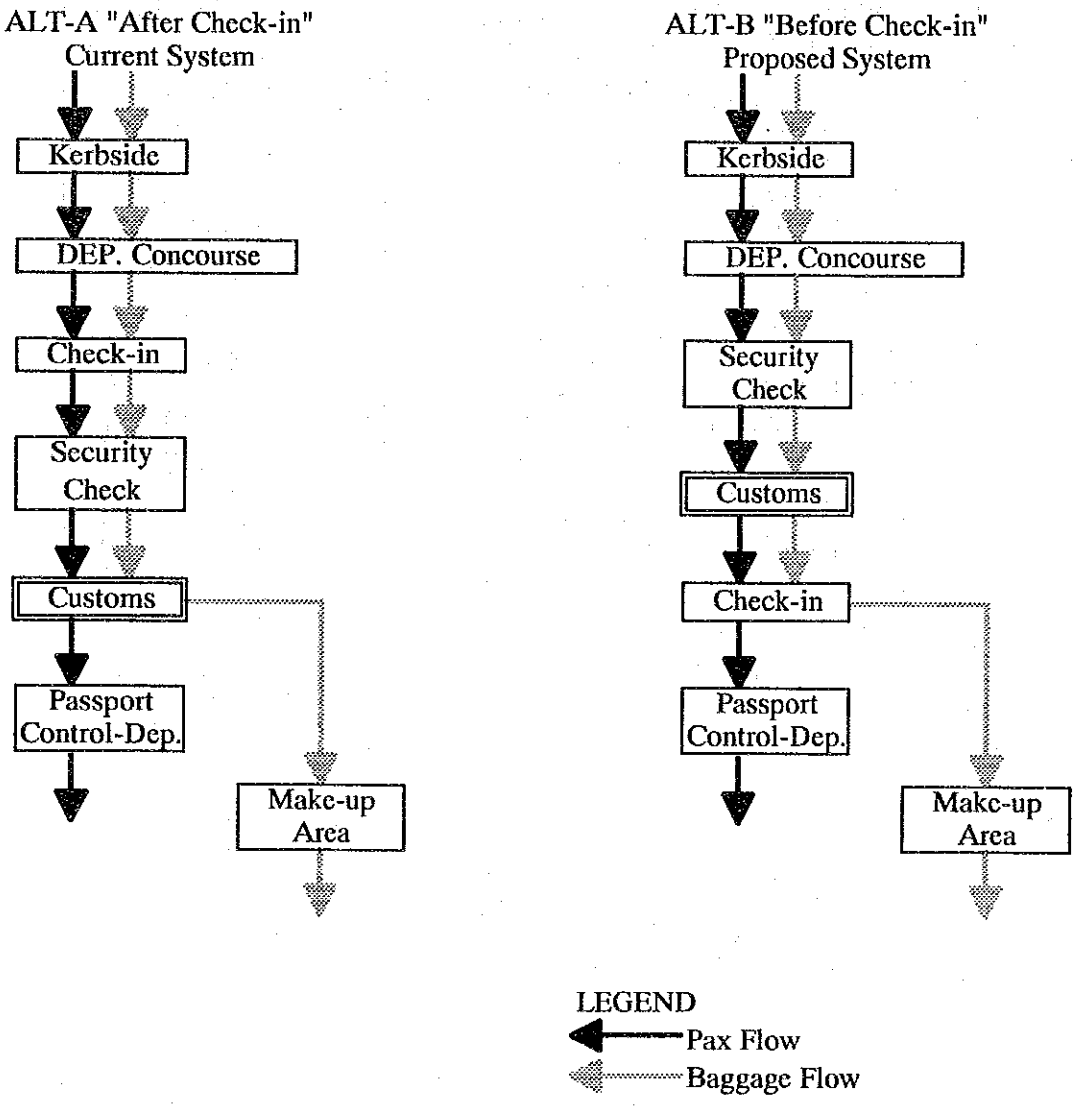


Figure 7.6 ALT-A and ALT-B on Departure Custom Inspection System

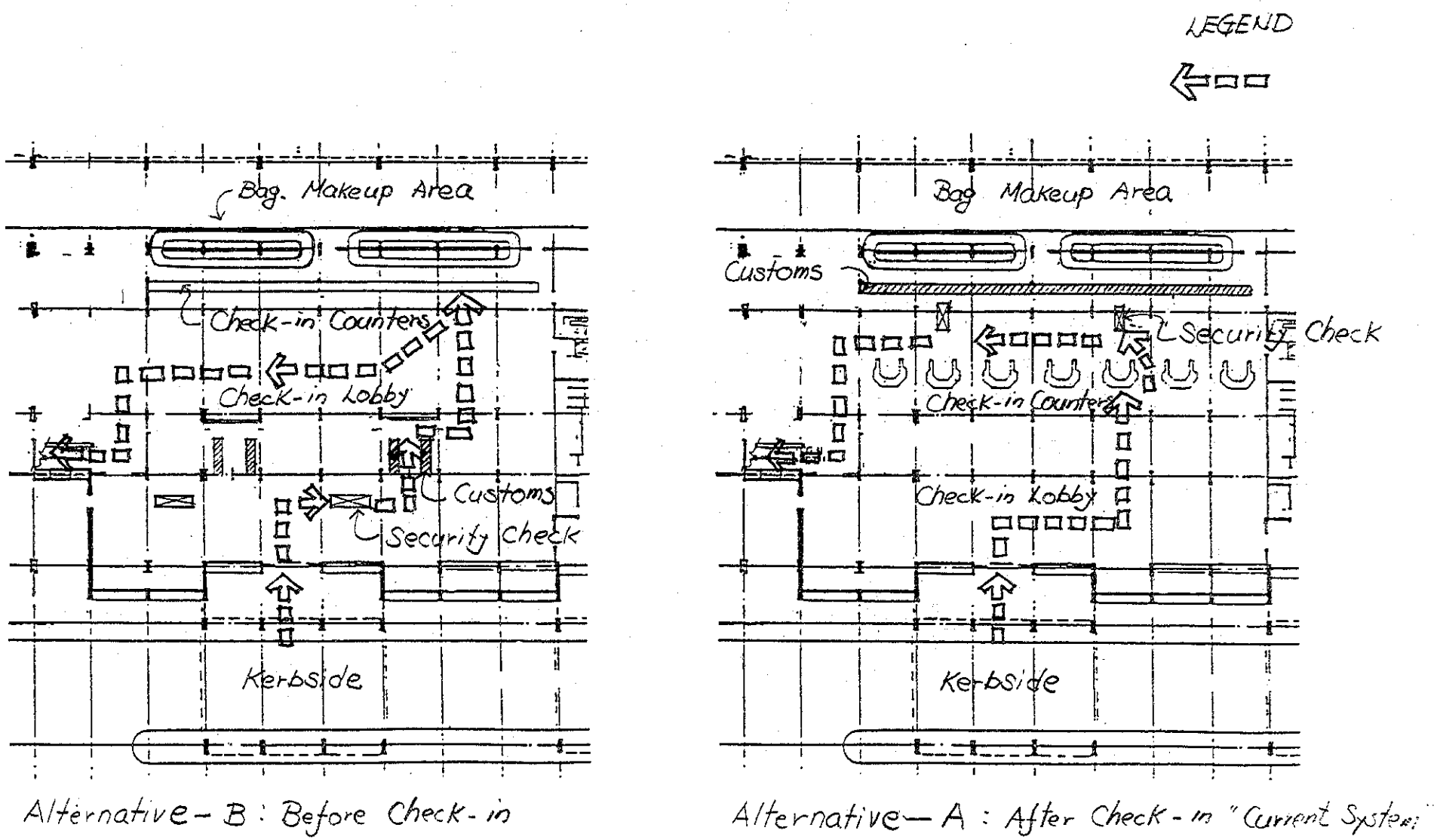


Figure 7.7 Alternative A and B Layout Plan

c) New International Passenger Terminal Development Plan

General

Basic passenger and baggage flow, passenger flow concept, departing and arriving passenger flow to segregate are the same as per a) existing international passenger building development plan as explained in the previous section.

Terminal Concept

Linear concept with one and a half level which is the same as the existing international passenger terminal building, will be planned. More development plan such as floor plans, elevations, sections will be discussed in the draft final report.

d) Floor Area for International Passenger Terminal Building

International passenger terminal buildings consist of existing and new terminal and based on the required floor area mentioned in Section 5.4.1. The terminal floor area are planned as follows.

	Existing Terminal	New Terminal	Total
2003	14,000 sq.m (including expansion of 3,270 sq.m)	11,000 sq.m	25,000 sq.m
2010	14,000 sq.m	19,000 sq.m (including expansion of 8,000 sq.m)	33,000 sq.m

e) New Domestic Passenger Terminal Development Plan

- Basic Passenger and Baggage Flow

Basic passenger and baggage flow is shown in Figure 7.8. Based on the basic flow, new terminal development plan such as floor plans, sections and elevations will be studied in the draft final report. As to the terminal concept, linear concept with one level will be planned for the new terminal taking the passenger demand into account.

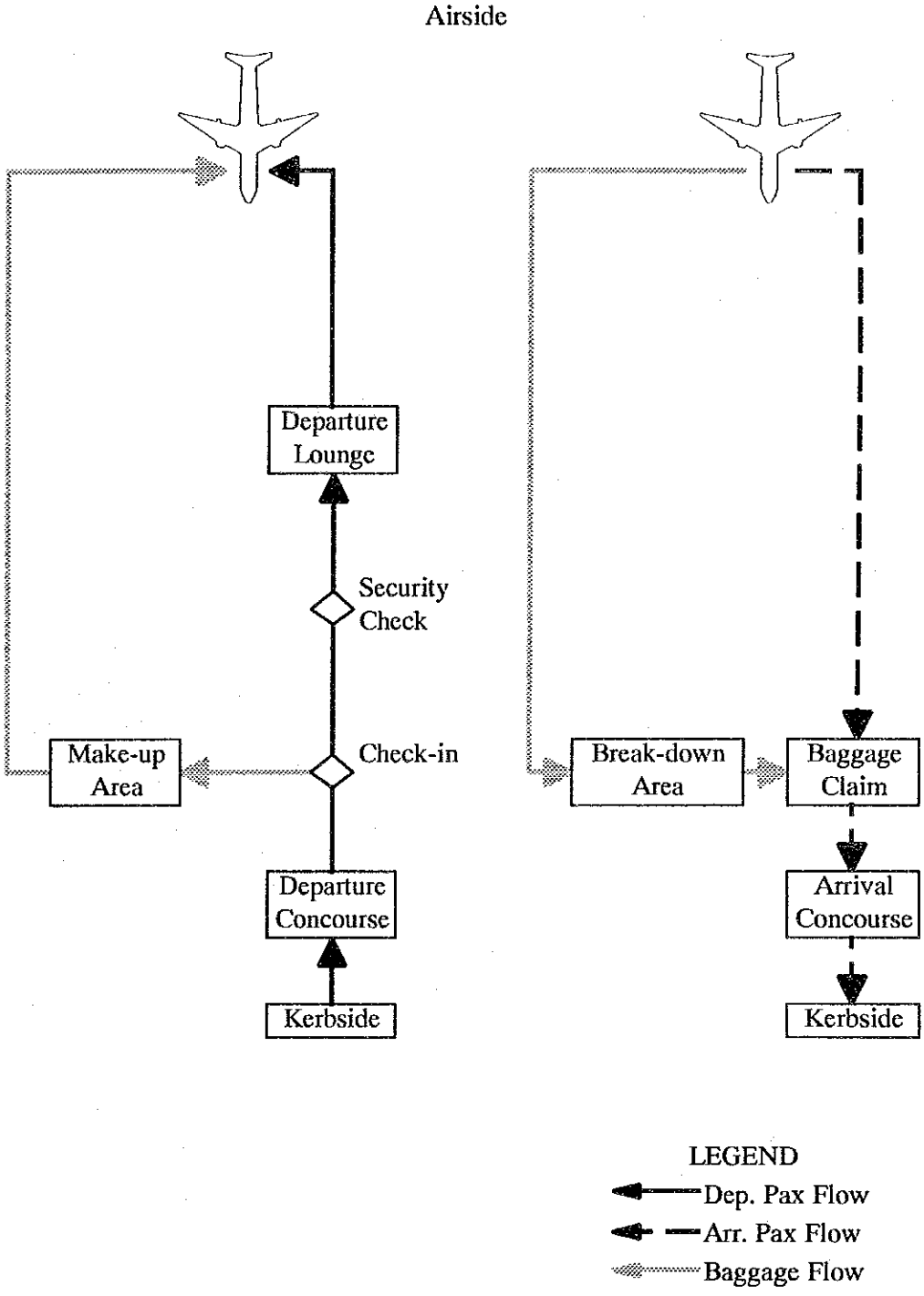
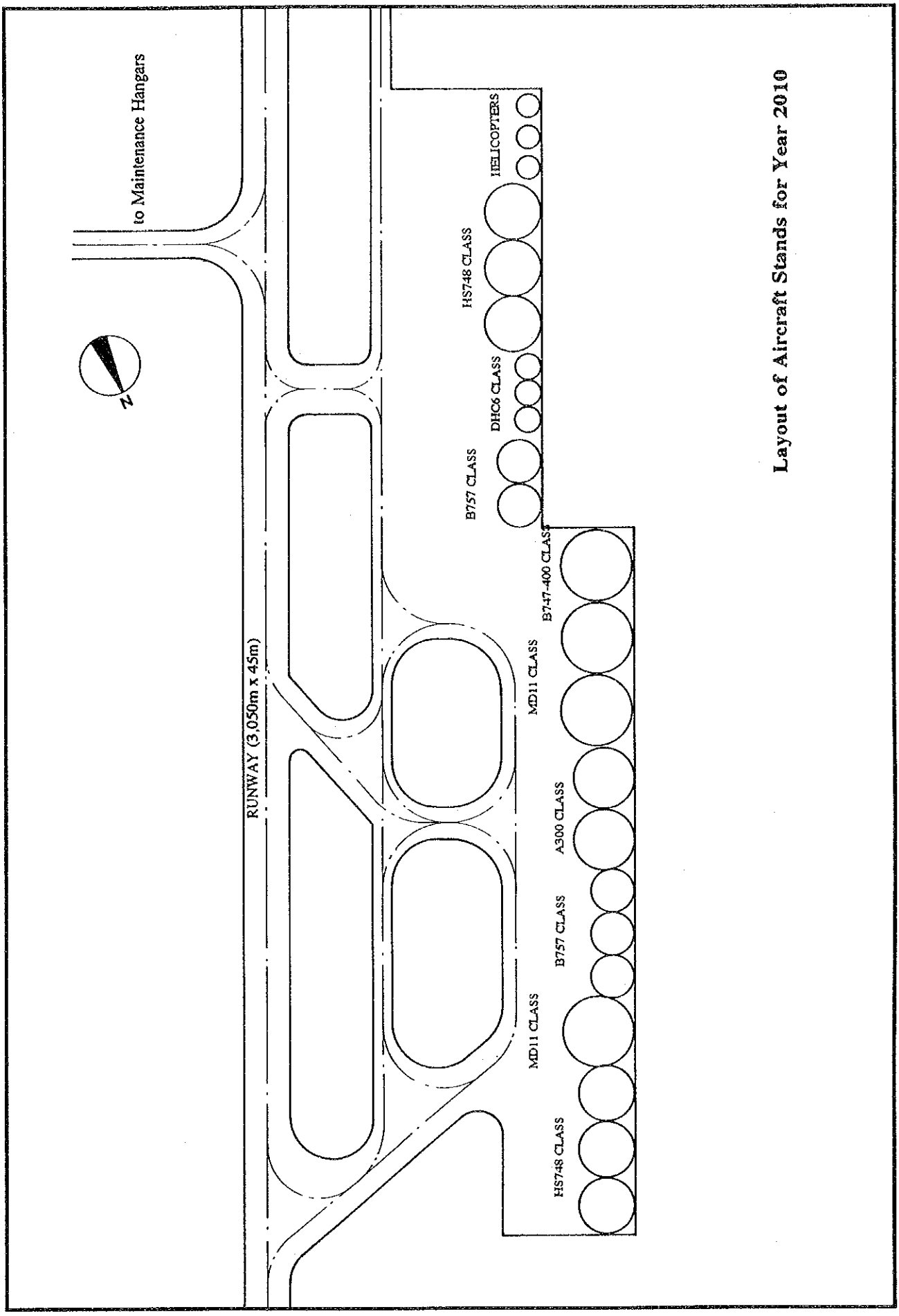


Figure 7.8 Basic Passenger and Baggage Flow for Domestic

APPENDIX TO CHAPTER 11

Appendix - 11.3 Layout of Aircraft Stands for Year 2010



APPENDIX TO CHAPTER 14

Appendix - 14.2.9 Design of Pavement Structure

Design of Pavement Structure

1. Taxiway

   a) Design Criteria

Design Aircraft:	B747
Aircraft Mass:	273,300 kg
Annual Departures:	6,000
Design CBR:	6.0 %

   b) Structure of Pavement

Total Thickness:	47 in (120 cm)
Bitumonous Surface:	5 in (13 cm)
Base Course:	16.5 in (42 cm)
Subbase:	120-(13+42)= 65 cm

2. Apron

   a) Design Criteria

Design Aircraft:	B747
Aircraft Mass:	273,300 kg
Annual Departures:	6,000
K Value of Subgrade:	K75 = 4.1 kg/cm3

   b) Structure of Pavement

Slab Thickness:	16.1 in (41 cm)
Base Course:	15 cm

3. Maintenance Apron

   a) Design Criteria

   Same as "2. Apron"

   b) Structure of Pavement

Slab Thickness:	33 cm (80% of apron pavement)
Base Course:	15 cm

4. Shoulder

   a) Design Criteria

   Same as "1. Taxiway"

   b) Structure of Pavement

Total Thickness:	60 cm (50% of taxiway pavement)
Bitumonous Surface:	5 cm
Base Course:	25 cm
Subbase:	30 cm

5. Service Road

a) Design Criteria

Same as "2. Apron"

b) Structure of Pavement

Slab Thickness:	23 cm
Base Course:	43 cm

APPENDIX TO CHAPTER 18

Appendix - 18 Estimation of Share Ratio etc.

Table 18.1 Estimation of "Share Ratio of Nepalese Domestic Passengers to Total Domestic Passengers"

(A) Result of 1993 Passengers Interview Survey at Tribhuvan International Airport

"Nationality" at Domestic Lobby

	Number	Share
Nepalese	311	74.4%
Foreigners	107	25.6%
(India)	(39)	(9.3%)
(Other than India)	(68)	(16.3%)
(Nepalese + India)	(350)	(83.7%)
Total	418	100.0%

Table 18.2 **Estimation of "Share Ratio of Business Purpose Passengers to Total Nepalese Domestic Passengers"**

(A) Estimation of "Share ratio of business purpose passengers to total domestic passengers

Results of 1993 Passenger Interview Survey

"Purpose of Travel" at Domestic Lobby

	Number	Share
Holiday	99	23.7%
Business	58	13.9%
Convention	1	0.2%
Official	82	19.6%
Visiting Friend & Relatives	86	20.6%
Others	82	19.6%
Unknown	10	2.4%
Total	418	100.0%
Business Purpose (Business + Convention + Official)	(141)	(33.7%)

(B) Estimation of "Share ratio of business purpose passengers to total Nepalese domestic passengers"

Total Number of Foreign and Nepalese Domestic Passengers in 1991 (1,000)	Share Ratio of Business Purpose Passengers (1993 Interview Survey)	Estimated Total Number of Business Purpose Passengers in 1991 (1,000)
216 (a)	34% (b)	73 (c)=(a)x(b)
Foreign Domestic Passengers in 1991 (1,000) (Assumed as 26%, = Share Ratio of Foreign Domestic Passengers to Total Domestic Passengers)	Share Ratio of Foreign Business Purpose Passengers (Assumed as 20%, = Share Ratio of Foreign Business Purpose International Passengers) (1991 Data in Tourism Statistics)	Estimated Number of Foreign Business Purpose Passengers in 1991 (1,000)
56 (d)=(a)x26%	20% (e)	11 (f)=(d)x(e)
Nepalese Domestic Passengers in 1991 (1,000)	Estimated Share Ratio of Nepalese Business Purpose Passengers	Estimated Number of Nepalese Business Purpose Passengers in 1991 (1,000)
160 (g)=(a)-(d)	38.8% (h)=(i)/(g)	62 (i)=(c)-(f)

(C) Estimation of "Share ratio of business purpose passengers to total Nepalese domestic passengers"

40%

Table 18.3 **Estimation of Weighted Average Domestic Airfare for Nepalese from/to Kathmandu (one way)**

Route (From/to Kathmandu, KTM)		Number of Passengers in 1992	(Share)	(Share Ex. Others)	Unit Airfare Per passenger for Nepalese (Rs.)	Weighted Amount (Rs.)
BWA	Bhairahawa	3,227	1.2%	1.4%	1,100	15
BHR	Bharatpur	16,391	6.2%	7.2%	620	45
BIR	Biratnagar	49,651	18.8%	21.9%	1,400	307
JUM	Jumla	1,508	0.6%	0.7%	2,500	18
LUA	Lukla	27,209	10.3%	12.0%	1,130	136
PKR	Pokhara	67,298	25.5%	29.7%	990	294
RUM	Rumjatar	5,893	2.2%	2.6%	870	23
SIF	Simra	12,044	4.6%	5.3%	470	25
TMI	Tumlingtar	6,834	2.6%	3.0%	1,200	36
JKR	Janakpur	4,182	1.6%	1.8%	820	15
BHP	Bhojpur	3,688	1.4%	1.6%	1,120	18
PPL	Phapul	4,551	1.7%	2.0%	1,070	21
MEY	Meghauli	3,565	1.4%	1.6%	620	10
RCH	Ramechhap	5,414	2.1%	2.4%	620	15
LDN	Lamidanda	3,870	1.5%	1.7%	990	17
KEP	Nepalgunj	9,180	3.5%	4.1%	2,000	82
DHI	Dhangadhi	1,596	0.6%	0.7%	2,810	20
HRJ	Rukumkot (Chaurajhari)	462	0.2%	0.3%	1,870	6
	Others	36,966	14.0%			
	Total	263,529	100.0%			
	Total Excluding Others	226,563		100.0%		1,103

Note: 1) Numbers of passengers by route are referred to Table 3.5.11.

2) Out of routes in Table 3.5.11, those without airfare data are excluded for calculation of weighted average domestic airfare for Nepalese.

3) "Mountain Flight" is excluded for calculation of weighted average domestic airfare for Nepalese.

4) Share ratio of Nepalese to total domestic passengers is assumed to be fixed for each route above.

5) Airfare as of Winter Schedule Oct. '93 - Feb. '94.

6) As for the routes in which multiple airlines operate, airfares are based on those of Royal Nepal Airlines.

7) In the domestic passenger airfare, tariff system is classified into two categories; "Nepalese and Indian" and "Foreignses excluding Indian".

Table 18.4 **Estimation of Share Ratio of Nepalese and Foreign Passengers to Total International Passengers**

Results of "International Passengers Traffic Forecast"

(Unit: 1,000 persons, %)

Year	1995	2000	2003	2005	2010
International Passengers					
Nepalese	280	380	430	480	590
(Share)	(29.8%)	(30.4%)	(30.1%)	(30.6%)	(30.4%)
Foreigners	660	870	1,000	1,090	1,350
(Share)	(70.2%)	(69.6%)	(69.9%)	(69.4%)	(69.6%)
Total	940	1,250	1,430	1,570	1,940
	(100.0%)	(100.0%)	(100.0%)	(100.0%)	(100.0%)

Note: Refer to Table 4.2.1.

Table 18.5 Estimation of "Share Ratio of Business Purpose Passengers to Total Nepalese International Passengers"

(A) Estimation of "Share ratio of business purpose passengers to total international passengers

Results of 1993 Passenger Interview Survey

"Purpose of Travel" at International Lobby

	Number	Share
Holiday	182	54.8%
Business	55	16.6%
Convention	16	4.8%
Official	28	8.4%
Visiting Friend & Relatives	16	4.8%
Others	35	10.5%
Unknown	0	0.1%
Total	332	100.0%
Business Purpose (Business + Convention + Official)	(99)	(29.8%)

(B) Estimation of "Share ratio of business purpose passengers to total Nepalese international passengers"

Total Number of Foreign and Nepales International Passengers in 1991 (1,000)	Share Ratio of Business Purpose Passengers (1993 Interview Survey)	Estimated Total Number of Business Purpose Passengers in 1991 (1,000)
781 (a)	30% (b)	234 (c)=(a)x(b)
Foreign International Passengers in 1991 (1,000)	Share Ratio of Foreign Business Purpose Passengers (20%, = Share Ratio of Foreign Business Purpose International Passengers) (1991 Data in Tourism Statistics)	Estimated Number of Foreign Business Purpose Passengers in 1991 (1,000)
536 (d)	20% (e)	107 (f)=(d)x(c)
Nepalese International passengers in 1991 (1,000)	Estimated Share Ratio of Nepalese Business Purpose Passengers	Estimated Number of Nepalese Business Purpose Passengers in 1991 (1,000)
245 (g)=(a)-(d)	**51.8%** (h)=(i)/(g)	127 (i)=(c)-(f)

(C) Estimation of "Share ratio of business purpose passengers to total Nepalese international passengers"

52%

Table 18.6 **Estimation of Weighted Average International Airfare from/to Kathmandu (one way)**

Route	Number of Passengerg in 1992	(Share)	(Share for Total ex. "Others")	Airfare per passenger (US$) (Economy)	(Rs.) (Assumed Rate) (Rs.49.0/US$)	Weighted Amount (US$)	(Rs.)
Bangkok	123,844	18.5%	20.1%	265	12,985	53.3	2,610
Bombay	16,454	2.5%	2.7%	257	12,593	6.9	340
Calcutta	66,320	9.9%	10.8%	96	4,704	10.4	508
Delhi	168,672	25.2%	27.4%	142	6,958	38.9	1,906
Dhaka	41,826	6.3%	6.8%	86	4,214	5.8	287
Dubai	28,684	4.3%	4.7%	414	20,286	19.5	953
Hong Kong	42,414	6.3%	6.9%	429	21,021	29.6	1,450
Karachi	34,772	5.2%	5.6%	189	9,261	10.6	519
Lhasa	13,006	1.9%	2.1%	190	9,310	4.0	196
Paro	934	0.1%	0.2%	165	8,085	0.3	16
Singapore	853	0.1%	0.1%	405	19,845	0.4	20
Varanasi	67,187	10.0%	10.9%	71	3,479	7.7	379
Sarjah	11,028	1.6%	1.7%	454	22,246	7.7	378
Others	52,983	8.1%	-				
Total	668,977	100.0%	-				
Total Excld. "Others'	615,994	-	100.0%			195.1	9,562

Note: 1) Numbers of passengers in 1992 are referred to Table 3.5.11.

2) Airfares per passenger (economy class) are based on the information of the travel agent in Kathmandu.

Table 18.7 Estimation of Weighted Average International Departure Tax

Route			Number of Passengers	(Share)	Tax per Psg. (Rs.)	Weighted Average International Departure Tax (Rs.)	
(A) Related to SAARC Countries							
Bombay	(India)		16,454				
Calcutta	(India)		66,320				
Delhi	(India)		168,672				
Dhaka	(Bangladesh)		41,826				
Karachi	(Pakistan)		34,772				
Paro	(Bhutan)		934				
Varanasi	(India)		67,187				
(Subtotal)			396,165	64.3%			
(Foreigners)					600	386	(a)
(Nepalese)					500	322	(b)
(B) Related to Other Than SAARC							
Bangkok	(Thailand)		123,844				
Dubai	(U.A.E.)		28,684				
Hong Kong	(Hong Kong)		42,414				
Lhasa	(China)		13,006				
Singapore	(Singapore)		853				
Sarjah	(U.A.E.)		11,028				
(Subtotal)			219,829	35.7%			
(Foreigners)					700	250	(c)
(Nepalese)					600	214	(d)
Foreigners					(a)+(c)	**636**	(e)
Nepalese					(b)+(d)	**536**	(f)
(Total)							
(Foreigners)	(70.0%)	(g)			(e)*(g)	(445)	(i)
(Nepalese)	(30.0%)	(h)			(f)*(h)	(161)	(j)
Total			615,994	100.0%	(i)+(j)	**606**	

Note: 1) SAARC: South Asian Association for Regional Cooperation
(Bagladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sli Lanka)

2) Number of international passengers by route in 1992 is referred to Table 3.5.11.
(Excluding "Other Routes")

3) Share ratio of Foreigners and Nepalese to total international passengers
is assumed to be 70% : 30% based on the results of "International Passenger
Traffic Forecast (Table 4.2.1)".

Table 18.8 **Estimation of Share Ratio of Royal Nepal Airlines to Total International Passengers Transportation**

(Unit: Number of passengers, %)

Airlines		1990		1991		1990+1991	
			(Share)		(Share)		(Share)
RA	Royal Nepal Airlines	95,921	42.4%	110,387	41.2%	206,308	41.7%
IC	Indian Airlines	67,552	29.8%	75,756	28.3%	143,308	29.0%
UB	Myanmar Airways	1,440	0.6%	2,197	0.8%	3,637	0.7%
BG	Biman Bangladesh Airlines	8,235	3.6%	11,436	4.3%	19,671	4.0%
TG	Thai Airways International	24,719	10.9%	25,487	9.5%	50,206	10.2%
PK	Pakistan International Airlines	5,872	2.6%	5,288	2.0%	11,160	2.3%
SQ	Singapore Airlines	4,896	2.2%	5,135	1.9%	10,031	2.0%
LH	Lufthansa German Airline	7,374	3.3%	9,132	3.4%	16,506	3.3%
KB	Druk Air of Bhutan	466	0.2%	1,789	0.7%	2,255	0.5%
SZ	China Southwest Airlines	1,436	0.6%	2,891	1.1%	4,327	0.9%
KA	Dragonair of Hong Kong	4,338	1.9%	6,007	2.2%	10,345	2.1%
SU	Aeroflot	124	0.1%	2,168	0.8%	2,292	0.5%
	Others	4,048	1.8%	10,259	3.8%	14,307	2.9%
(Subtotal Other Than "RA")		130,500	57.6%	157,545	58.8%	288,045	58.3%
(Grand Total)		226,421	100.0%	267,932	100.0%	494,353	100.0%

Note: Tourist Arrivals by Airline in 1990 and 1991, Nepal Tourism Statistics 1991

Table 18.9 Estimation of Expense Consumed (Excluding Domestic Airfare) in Nepal per Foreign Visitors

(1) Estimation of Total Expense Consumed by Foreign Visitors by Air including Indian in 1992

(1-1) Estimation of Expense Consumed in Nepal per Foreign Visitor

Year	Average Income per Visitors	
	(US$)	(Rs.)
1987	318.5	
1988	327.5	
1989	347.5	
1990	326.5	
1991	292.2	
Average of 5 Years	322.4	15,800

Note: 1) Refer to Table 2.5.7. (Nepal Tourism Statistics 1991)
2) The above values of the average income per visitor in the Tourism Statistics are those which exclude the income from Indian tourists.
In this economic analysis, however, the estimated average value above is assumed to be applied also for Indian tourists, due to limitation of data availability.
3) The exchange rate is assumed to be Rs. 49.0/US$.

Assumption of Expense Consumed in Nepal per Foreign Visitors by Air	(a)	US$	320
		Rs.	15,680

(1-2) Number of Foreign Visitor by Air in 1992 (Refer to Table 2.5.1.)

(b)	300,000

(1-3) Estimation of Total Expense Consumed in Nepal by Foreign Visitors Including Indian

	(US$ 1,000)
(c) = (a) x (b)	96,000

(2) Estimation of Total Amount of Domestic Airfare Paid by Foreign Visitors Including Indian

(2-1) Weighted Average Domestic Airfare for Foreigners

Refer to "Table 19.10 in Appendix".

	Rs.	2863
(d)	US$	58

(Assumed exchange rate = Rs. 49/US$)

Table 18.9 **Estimation of Expense Consumed (Excluding Domestic Airfare) in Nepal per Foreign Visitors (Continued)**

(2-2) Number of Foreign Domestic Passengers

1) Number of Total Domestic Passengers in 1992 (Refer to Table 3.5.1.)		292,000
2) Estimated Share Ratio of Foreigners (Including Indian) to Total Domestic Passengers (Refer to "Table 19.1 in Appendix".)		25%
3) Estimated Number of Foreign Domestic Passengers Including Indian	(e)	73,000

(2-3) Estimation of Total Amount of Domestic Airfare Paid by Foreign Visitors Including Indian

	(US$ 1,000)
(f) = (d) x (e)	4,230

(3) Estimation of Expense Consumed (Excluding Amount of Domestic Airfare) in Nepal by Foreign Visitors

	(US$ 1,000)
(g) = (c) - (f)	91,770

(4) Estimation of Expense Consumed Excluding Amount of Domestic Airfare in Nepal per Foreign Visitors

(4-1) Number of Foreign Visitor by Air in 1992	(b)	300,000

(4-2) Estimation of Expense Consumed Excluding Domestic Airfare in Nepal per Foreign Visitor

		(US$)
(g) x 1000 / (b)		306
	Rs.	14,994

Table 18.10 Estimation of Weighted Average Domestic Airfare for Foreigners (Including Indian) from/to Kathmandu (one way)

Assumption on Share Ratio of (Indian) and (Foreigners) for Domestic Passengers in Terms of Airfare			
	Indian	Foreigners	I. + F.
For Routes Other Than "Mountain	35.0%	65.0%	100.0%
For "Mountain"	0.0%	100.0%	100.0%

Share Ratio of Indian & Foreigner (ex. Indian) in Domestic Psg.		
I.	9%	(35%)
F. ex I. :	17%	(65%)
I. + F. :	26%	(100%)

Route (From/to Kathmandu, KTM)		Number of Passengers in 1992	(Share)	(Share Ex. Others)	Unit Airfare per Passenger (One Way) For Indian (Rs.)	For Foreigners (US$)	(Assumed Rate) (Rs. 49.0 /US$) (Rs.)	Weighted Amount (Rs.) For Indian (Rs.)	For Foreigners (Rs.)	I. + F. (Rs.)
BWA	Bhairahawa	3,227	1.2%	1.2%	1,100	72	3,528	5	28	33
BHR	Bharatpur	16,391	6.2%	6.2%	620	50	2,450	13	99	112
BIR	Biratnagar	49,651	18.8%	18.9%	1,400	77	3,773	93	464	557
JUM	Jumla	1,508	0.6%	0.6%	2,500	127	6,223	5	24	29
LUA	Lukla	27,209	10.3%	10.4%	1,130	83	4,067	41	275	316
-	Mountain	35,982	13.7%	13.7%		99	4,851	0	665	665
PKR	Pokhara	67,298	25.5%	25.6%	990	61	2,989	89	497	586
RUM	Rumjatar	5,893	2.2%	2.2%	870	55	2,695	7	39	46
SIF	Simra	12,044	4.6%	4.6%	470	44	2,156	8	64	72
TMI	Tumlingtar	6,834	2.6%	2.6%	1,200	44	2,156	11	36	47
JKR	Janakpur	4,182	1.6%	1.6%	820	55	2,695	5	28	33
BHP	Bhojpur	3,688	1.4%	1.4%	1,120	77	3,773	5	34	39
PPL	Phapul	4,551	1.7%	1.7%	1,070	77	3,773	6	42	48
MEY	Meghauli	3,565	1.4%	1.4%	620	72	3,528	3	32	35
RCH	Ramechhap	5,414	2.1%	2.1%	620	39	1,911	5	26	31
LDN	Lamidanda	3,870	1.5%	1.5%	990	66	3,234	5	32	37
KEP	Nepalgunj	9,180	3.5%	3.5%	2,000	99	4,851	25	110	135
DHI	Dhangadhi	1,596	0.6%	0.6%	2,810	149	7,301	6	28	34
HRJ	Rukumkot (Chaurajhari)	462	0.2%	0.2%	1,870	116	5,684	1	7	8
	Others	984	0.3%							
	Total	263,529	100.0%							
	Total Excluding Others	262,545		100.0%				333	2,530	2,863

Note: 1) Numbers of passengers by route are referred to Table 3.5.11.

2) Out of routes in table 3.5.11, those without airfare data are excluded for calculation of weighted average domestic airfare for foreigners.

3) Share ratio of Indian and Foreigners to total domestic passengers is assumed to be fixed for each route except "Mountain".

4) Airfare as of Winter Schedule Oct. '93 - Feb. '94.

5) As for the routes in which multiple airlines operate, airfares are based on those of Royal Nepal Airlines.

6) In the domestic passenger airfare, tariff system is classified into two categories; "Nepalese and Indian" and "Foreigners excluding Indian".

Table 18.11 **Estimation of Unit Landing Charge and Unit Air Navigation Facility Charge for Representative Aircraft**

(a) International

Category	Representative Aircraft	Aircraft Weight (Kg)	Estimated Unit Charge per Aircraft (US$)			Total in Rs. (Assumed Rate: Rs. 49.0/US$)
			Landing	Navigation	Total	
J	B747-400	394,600	1,997.22	203.65	2,200.87	107,843
L	MD11	273,300	1,305.81	203.65	1,509.46	73,964
M	B767-300	142,900	562.53	203.65	766.18	37,543
N	B757-200	99,790	316.97	203.65	520.62	25,510
S	B737-200	49,400	92.36	50.90	143.26	7,020

(b) Domestic

Category (Class)	Representative Aircraft	Aircraft Weight (Kg)	Estimated Unit Charge per Aircraft (Rs.)			Total in Rs.
			Landing	Navigation	Total	
B757	B757-200	99,790	5,487.08	0	5,487	5,487
HS748	HS748	21,660	599.76	0	600	600
DHC6	DHC6-300	5,660	101.88	0	102	102

Note: Study Team's Estimates

Table 18.12 **Estimation of Benefit Due to Accommodation of Overflowing Foreign Airline Aircraft**

Aircraft Category	Number of Overflowing International Aircraft Movements		Share Portion of Foreign Airline Aircraft	Unit Charge of Aircraft Landing & Navigation	Estimated Benefit (Rs. thousand)	
	2000 (a)	2005 (b)	60% (c)	(Rs.) (d)	2000 (a)x(c)x(d)/2	2005 (b)x(c)x(d)/2
J	0	520		107,843	0	16,824
L	110	140		73,964	2,441	3,106
M	92	372		37,543	1,036	4,190
N	147	457		25,510	1,125	3,497
S	51	-889		7,020	107	-1,872
Total	400	600			4,709	25,745

Note: 1) The number of overflowing international aircraft movements by aircraft category is referred to Table 19.2.1.

2) The share portion of foreign airline aircraft movements for total aircraft movements (60%) is referred to Table 3.5.9, and is assumed to be applied for each of aircraft category.

3) The unit air landing/navigation charge by aircraft category is referred to Table 19.11 in Appendix.

Table 18.13 Estimation of Operation and Maintenance Costs for "With Project" Case
(Financial and Economic Prices)

(Rs. thousand)

Year		(1) Financial Price							(2) Eco. Price
		(A) O/M Costs for "Without P." Excluding Personnel Costs	(B) Personnel Costs				(C) Additional O/M Costs	Total Costs (1993 Price)	Total Costs (1993 Price)
			Number of Passengers			Personnel Costs (Rs. 10.0 per Passenger)			
			Int.	Dom.	Total				
			(1,000 persons)						
		(a)				(b)	(c)	(d) (a)+(b)+(c)	(g) (d)x0.88
	1993	44,900							
	1994	44,900							
	1995	44,900							
	1996	44,900							
	1997	44,900							
	1998	44,900							
	1999	44,900							
1	2000	44,900	1,250	370	1,620	16,200	82,470	143,570	126,342
2	2001	44,900				16,930	82,470	144,300	126,984
3	2002	44,900				17,700	82,470	145,070	127,662
4	2003	44,900	1,430	420	1,850	18,500	82,470	145,870	128,366
5	2004	44,900				19,330	82,470	146,700	129,096
6	2005	44,900	1,570	450	2,020	20,200	82,470	147,570	129,862
7	2006	44,900			2,020	20,200	82,470	147,570	129,862
8	2007	44,900			2,020	20,200	82,470	147,570	129,862
9	2008	44,900			2,020	20,200	82,470	147,570	129,862
10	2009	44,900			2,020	20,200	82,470	147,570	129,862
11	2010	44,900			2,020	20,200	82,470	147,570	129,862
12	2011	44,900			2,020	20,200	82,470	147,570	129,862
13	2012	44,900			2,020	20,200	82,470	147,570	129,862
14	2013	44,900			2,020	20,200	82,470	147,570	129,862
15	2014	44,900			2,020	20,200	82,470	147,570	129,862
16	2015	44,900			2,020	20,200	82,470	147,570	129,862
17	2016	44,900			2,020	20,200	82,470	147,570	129,862
18	2017	44,900			2,020	20,200	82,470	147,570	129,862
19	2018	44,900			2,020	20,200	82,470	147,570	129,862
20	2019	44,900			2,020	20,200	82,470	147,570	129,862
21	2020	44,900			2,020	20,200	82,470	147,570	129,862
22	2021	44,900			2,020	20,200	82,470	147,570	129,862
23	2022	44,900			2,020	20,200	82,470	147,570	129,862
24	2023	44,900			2,020	20,200	82,470	147,570	129,862
25	2024	44,900			2,020	20,200	82,470	147,570	129,862

APPENDIX TO CHAPTER 19

Appendix - 19 Estimation of Revenue etc.

Table 19.1 Estimation of Revenue of Aircraft Landing and Air Navigation Facility Charges

(a) International							
	Category	J	L	M	N	S	Total
(1)	Unit Charge (Rs.) (Landing + Navigation)	107,843	73,964	37,543	25,510	7,020	
(2)	Aircraft Movement						
	(Without Project)						
	1999	0	1,420	928	2,403	5,049	9,800
	(With Project)						
	2000	0	1,530	1,020	2,550	5,100	10,200
	2003	0	1,710	1,426	3,136	5,130	11,402
	2005	520	1,560	1,300	2,860	4,160	10,400
	(2010)	(1,180)	(1,770)	(1,770)	(3,540)	(3,540)	(11,800)
(3)	Estimated Revenue of Aircraft Landing and Navigation Charges (Rs. 1,000)						
	(Without Project)						
	1999	0	52,514	17,420	30,650	17,722	118,306
	(With Project)						
	2000	0	56,582	19,147	32,525	17,901	126,155
	2003	0	63,239	26,768	40,000	18,006	148,013
	2005	28,039	57,692	24,403	36,479	14,602	161,215
	(2010)	(63,627)	(65,458)	(33,226)	(45,153)	(12,425)	(219,889)

(b) Domestic					
	Class	B757	HS748	DHC6	Total
(1)	Unit Charge (Rs.) (Landing + Navigation)	5,487	600	102	
(2)	Aircraft Movement				
	(Without Project)				
	1992	146	2,694	11,360	14,200
	(With Project)				
	2000	170	4,100	12,830	17,100
	2003	340	5,540	10,920	16,800
	2005	510	5,920	10,480	16,910
	(2010)	(880)	(7,880)	(8,750)	(17,510)
(3)	Estimated Revenue of Aircraft Landing and Navigation Charges (Rs. 1,000)				
	(Without Project)				
	1992	401	808	579	1,788
	(With Project)				
	2000	466	1,230	654	2,350
	2003	933	1,662	557	3,152
	2005	1,399	1,776	534	3,709
	(2010)	(2,414)	(2,364)	(446)	(5,224)

Note: 1) Revenue = (Unit Charge) x (Aircraft Movement) x 0.5

2) Revenues for the short-term modernization plan are those in 2000, 2003 and 2005. Revenues in 2010 are those for the long-term modernization plan.

3) Numbers of international aircraft movements by aircraft category in 1999 is estimated by interpolation between those in 1995 and those in 2000.

4) Total number of domestic aircraft movements in 1992 is referred to Table 19.2.1, and numbers of aircraft movements by category in 1992 are estimated based on the composition rate in those in 1995.

Table 19.2 **Estimation of Revenue of Passenger Service Charge (Passengers Airport Departure Tax)**

(a) International			
Year	Assumed Weighted Average Departure Tax Per Passenger (Rs. 600)	Estimated Number of Passengers (1,000)	Estimated Revenue (Rs. 1,000)
(Without Project)			
1999		1,180	354,000
(With Project)			
2000		1,250	375,000
2003		1,430	429,000
2005		1,570	471,000
(2010)		(1,940)	(582,000)

(b) Domestic			
Year	Assumed Departure Tax Per Passenger (Rs. 50)	Estimated Number of Passengers (1,000)	Estimated Revenue (Rs. 1,000)
(Without Project)			
1992		292	7,300
(With Project)			
2000		370	9,250
2003		420	10,500
2005		450	11,250
(2010)		(550)	(13,750)

Note: 1) Revenue = (Departure Tax) x (Number of Passengers) x 0.5

2) Revenues for the short-term modernization plan are those in 2000, 2003 and 2005. Revenues in 2010 are those for the long-term modernization plan.

3) Assumed Unit Departure Tax per Passenger:
For International : Refer to Table 19.7 in Appendix.
For Domestic : Refer to Section 19.3.4.

Table 19.3 Examination of "Airport Tax" Tariff Raising
(For Revenue Increased in Case Burdened Only to "Airport Tax" in 2000)

(1) Case-1 "Airport Tax" Related to International and Domestic Passengers

	Number of Passenger in 2000 (thousand persons)	Base Level		Revenue Level +50%		Revenue Level +130%	
		Tariff (Rs.)	Revenue (Rs. million)	Tariff Required (Rs.)	Revenue (Rs. million)	Tariff Required (Rs.)	Revenue (Rs. million)
	(a)	(b)	(c) (a)x(b)x0.5	(d) (b)x1.714	(e) (a)x(d)x0.5	(f) (b)x2.857	(g) (a)x(f)x0.5
Int.	1,250	600	375	1,029	643	1,715	1,072
Dom.	370	50	9	86	16	143	26
Total	1,620		384		659		1,098
			(h)		(i)		(j)
(Incremental Revenue)					(i) - (h) 275		(j) - (h) 714

(2) Case-2 "Airport Tax" Related Only to International Passengers

	Number of Passenger in 2000 (thousand persons)	Base Level		Revenue Level +50%		Revenue Level +130%	
		Tariff (Rs.)	Revenue (Rs. million)	Tariff Required (Rs.)	Revenue (Rs. million)	Tariff Required (Rs.)	Revenue (Rs. million)
	(a)	(b)	(c) (a)x(b)x0.5	(d) (b)x1.732	(e) (a)x(d)x0.5	(f) (b)x2.904	(g) (a)x(f)x0.5
Int.	1,250	600	375	1,040	650	1,742	1,089
(Incremental Revenue)					(e) - (c) 275		(g) - (c) 714

Table 19.4 Financial Cash Flow of the Project (Base Case)

Unit: Rs. million

Year	1995	1996	1997	1998	1999	1 2000	2 2001	3 2002	4 2003	5 2004	6 2005	7 2006	8 2007	9 2008	10 2009	11 2010	12 2011	13 2012	14 2013	15 2014	16 2015	17 2016
(1) Profit & Loss																						
Revenue (Incremental)						46	73	102	132	163	196	196	196	196	196	196	196	196	196	196	196	196
O/M Costs (Incremental)						87	87	88	89	90	91	91	91	91	91	91	91	91	91	91	91	91
(Gross Profit)						-(41)	-(14)	(14)	(43)	(73)	(105)	(105)	(105)	(105)	(105)	(105)	(105)	(105)	(105)	(105)	(105)	(105)
Interest						75	76	76	76	76	76	76	76	74	72	70	67	65	62	59	56	54
(Profit Post-Interest)						-(116)	-(90)	-(62)	-(33)	-(3)	(29)	(29)	(29)	(32)	(34)	(36)	(39)	(41)	(44)	(46)	(49)	(51)
Depreciation						291	291	291	291	291	291	291	291	291	291	291	291	291	291	291	291	291
(Profit Post-Depreciation)						-(407)	-(381)	-(353)	-(324)	-(293)	-(261)	-(261)	-(261)	-(259)	-(257)	-(255)	-(252)	-(250)	-(247)	-(245)	-(242)	-(240)
(2) Cash Flow																						
(2-1) Inflow	(0)	(339)	(3)	(4,001)	(1,924)	(1,359)	(73)	(102)	(132)	(163)	(196)	(196)	(196)	(196)	(196)	(196)	(196)	(196)	(196)	(196)	(196)	(196)
Revenue (Incremental)						46	73	102	132	163	196	196	196	196	196	196	196	196	196	196	196	196
Loan	0	336	0	3,958	1,861	1,238	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Loan (I.D.C.P.)	0	3	3	43	62	75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(2-2) Outflow	(0)	(339)	(3)	(4,001)	(1,924)	(1,399)	(163)	(164)	(165)	(166)	(166)	(178)	(178)	(309)	(371)	(947)	(409)	(407)	(404)	(402)	(399)	(397)
Investment	0	336	0	3,958	1,861	1,238	0	0	0	0	0	0	0	0	0	534	0	0	0	0	0	0
O/M Costs (Incremental)						87	87	88	89	90	91	91	91	91	91	91	91	91	91	91	91	91
Loan Repayment	0	0	0	0	0	0	0	0	0	0	0	11	11	143	205	246	246	246	246	246	246	246
Loan Repayment (I.D.C.P.)	0	0	0	0	0	0	0	0	0	0	0	0	0	2	4	6	6	6	6	6	6	6
Interest Payment	0	3	3	43	62	74	74	74	74	74	74	74	74	72	70	68	65	63	60	58	55	53
Interest Pay. (I.D.C.P.)	0	0	0	0	0	1	2	2	2	2	2	2	2	2	2	2	2	2	2	1	1	1
(2-3) Inflow - Outflow	0	0	0	0	0	-41	-90	-62	-33	-3	29	18	18	-113	-175	-751	-214	-211	-208	-206	-203	-201
(2-4) Surplus/Deficit	0	0	0	0	0	-41	-90	-62	-33	-3	29	18	18	-113	-175	-751	-214	-211	-208	-206	-203	-201
(2-5) Accumulated	0	0	0	0	0	-41	-131	-193	-226	-228	-199	-181	-162	-275	-451	-1,202	-1,415	-1,627	-1,835	-2,041	-2,245	-2,446

(3) Loan Balance	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Carried Over	0	0	336	336	4,294	6,155	7,393	7,393	7,393	7,393	7,393	7,393	7,382	7,371	7,228	7,023	6,777	6,531	6,285	6,039	5,793	5,547
Drawing	0	336	0	3,958	1,861	1,238	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Repayment	0	0	0	0	0	0	0	0	0	0	0	11	11	143	205	246	246	246	246	246	246	246
Ending Balance	0	336	336	4,294	6,155	7,393	7,393	7,393	7,393	7,393	7,393	7,382	7,371	7,228	7,023	6,777	6,531	6,285	6,039	5,793	5,547	5,301
Interest 1.0%	0	3	3	43	62	74	74	74	74	74	74	74	74	72	70	68	65	63	60	58	55	53
(4) Loan Balance (Loan for Interest During Construction Period (I.D.C.P.))																						
Carried Over	0	0	3	6	49	112	187	187	187	187	187	187	187	186	185	181	175	169	162	156	150	144
Drawing	0	3	3	43	62	75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Repayment	0	0	0	0	0	0	0	0	0	0	0	0	0	2	4	6	6	6	6	6	6	6
Ending Balance	0	3	6	49	112	187	187	187	187	187	187	187	186	185	181	175	169	162	156	150	144	137
Interest 1.0%	0	0	0	0	0	1	2	2	2	2	2	2	2	2	2	2	2	2	2	1	1	1

Table 19.4 Financial Cash Flow of the Project (Base Case) (Continued)

Unit: Rs. million

18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40		
2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	Total	Year
																								(1) Profit & Loss
196	196	196	196	196	196	196	196	196	196	196	196	196	196	196	196	196	196	196	196	196	196	196		Revenue (Incremental)
91	91	91	91	91	91	91	91	91	91	91	91	91	91	91	91	91	91	91	91	91	91	91		O/M Costs (Incremental)
(105)	(105)	(105)	(105)	(105)	(105)	(105)	(105)	(105)	(105)	(105)	(105)	(105)	(105)	(105)	(105)	(105)	(105)	(105)	(105)	(105)	(105)	(105)		(Gross Profit)
52	49	47	44	42	39	37	34	32	29	27	24	22	20	16	14	11	9	6	4	2	0	0		Interest
(53)	(56)	(58)	(61)	(63)	(66)	(68)	(71)	(74)	(77)	(79)	(82)	(84)	(86)	(89)	(91)	(94)	(96)	(99)	(101)	(103)	(105)	(105)		(Profit Post-Interest)
291	291	291	291	291	291	291	291	291	291	291	291	291	291	291	291	291	291	291	291	291	291	291		Depreciation
-(238)	-(235)	-(233)	-(230)	-(228)	-(225)	-(223)	-(219)	-(217)	-(214)	-(212)	-(209)	-(207)	-(205)	-(202)	-(200)	-(197)	-(195)	-(192)	-(190)	-(188)	-(186)	-(186)		(Profit Post-Depreciation)
																								(2) Cash Flow
(196)	(196)	(196)	(196)	(196)	(196)	(196)	(196)	(196)	(196)	(196)	(196)	(196)	(196)	(196)	(196)	(196)	(196)	(196)	(196)	(196)	(196)	(196)		(2-1) Inflow
196	196	196	196	196	196	196	196	196	196	196	196	196	196	196	196	196	196	196	196	196	196	196		Revenue (Incremental)
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7,393	Loan
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	187	Loan (I.D.C.P.)
(395)	(392)	(390)	(5,120)	(385)	(382)	(380)	(377)	(375)	(372)	(369)	(366)	(364)	(897)	(359)	(357)	(354)	(352)	(355)	(336)	(332)	(199)	-(133)		(2-2) Outflow
0	0	0	4,733	0	0	0	0	0	0	0	0	0	534	0	0	0	0	0	0	0	0	-275	12,920	Investment
91	91	91	91	91	91	91	91	91	91	91	91	91	91	91	91	91	91	91	91	91	91	91		O/M Costs (Incremental)
246	246	246	246	246	246	246	246	246	246	246	246	246	246	246	246	246	246	252	235	233	104	49	7,393	Loan Repayment
6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	5	3	187	Loan Repay (I.D.C.P.)
51	48	46	43	41	38	36	33	31	28	26	23	21	19	16	14	11	9	6	4	2	0	0		Interest Payment
1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0		Interest Pay. (I.D.C.P.)
-199	-196	-194	-4,924	-189	-186	-184	-181	-179	-176	-174	-170	-168	-701	-163	-161	-158	-156	-159	-140	-136	-3	329		(2-3) Inflow - Outflow
-199	-196	-194	-4,924	-189	-186	-184	-181	-179	-176	-174	-170	-168	-701	-163	-161	-158	-156	-159	-140	-136	-3	329		(2-4) Surplus
																								(2-5) Accumulated Surplus
-2,645	-2,841	-3,035	-7,960	-8,149	-8,335	-8,518	-8,699	-8,878	-9,053	-9,227	-9,397	-9,566	-10,267	-10,430	-10,591	-10,749	-10,905	-11,064	-11,204	-11,340	-11,343	-11,014		

2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039			
																								(3) Loan Balance	
5,301	5,055	4,809	4,563	4,317	4,071	3,825	3,579	3,333	3,087	2,841	2,595	2,349	2,103	1,857	1,611	1,365	1,119	873	621	386	153	49		Carried Over	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7,393	Drawing	
246	246	246	246	246	246	246	246	246	246	246	246	246	246	246	246	246	246	252	235	233	104	49	7,393	Repayment	
5,055	4,809	4,563	4,317	4,071	3,825	3,579	3,333	3,087	2,841	2,595	2,349	2,103	1,857	1,611	1,365	1,119	873	621	386	153	49	0		Ending Balance	
51	48	46	43	41	38	36	33	31	28	26	23	21	19	16	14	11	9	6	4	2	0	0		Interest	1.0%
																								(4) Loan Balance (I.D.C.P.)	
137	131	125	119	113	106	100	94	88	82	75	69	63	57	50	44	38	32	26	19	13	7	3		Carried Over	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	187	Drawing	
6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	5	3	187	Repayment	
131	125	119	113	106	100	94	88	82	75	69	63	57	50	44	38	32	26	19	13	7	3	0		Ending Balance	
1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0		Interest	1.0%

Table 19.5 **Financial Cash Flow of the Project** **(Expecting Revenue Increase +50%)** **(Continued)**

Unit: Rs. million

18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40		
2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	Total	Year
																								(1) Profit & Loss
546	546	546	546	546	546	546	546	546	546	546	546	546	546	546	546	546	546	546	546	546	546	546		Revenue (Incremental)
91	91	91	91	91	91	91	91	91	91	91	91	91	91	91	91	91	91	91	91	91	91	91		O/M Costs (Incremental)
(455)	(455)	(455)	(455)	(455)	(455)	(455)	(455)	(455)	(455)	(455)	(455)	(455)	(455)	(455)	(455)	(455)	(455)	(455)	(455)	(455)	(455)	(455)		(Gross Profit)
52	49	47	44	42	39	37	34	32	29	27	24	22	20	16	14	11	9	6	4	2	0	0		Interest
(403)	(406)	(408)	(411)	(413)	(416)	(418)	(421)	(423)	(426)	(428)	(431)	(434)	(436)	(439)	(441)	(444)	(446)	(449)	(451)	(453)	(455)	(455)		(Profit Post-Interest)
291	291	291	291	291	291	291	291	291	291	291	291	291	291	291	291	291	291	291	291	291	291	291		Depreciation
(112)	(115)	(117)	(120)	(122)	(125)	(127)	(130)	(132)	(135)	(137)	(141)	(143)	(145)	(148)	(150)	(153)	(155)	(158)	(160)	(162)	(164)	(164)		(Profit Post-Depreciation)
																								(2) Cash Flow
(546)	(546)	(546)	(546)	(546)	(546)	(546)	(546)	(546)	(546)	(546)	(546)	(546)	(546)	(546)	(546)	(546)	(546)	(546)	(546)	(546)	(546)	(546)		(2-1) Inflow
546	546	546	546	546	546	546	546	546	546	546	546	546	546	546	546	546	546	546	546	546	546	546		Revenue (Incremental)
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7,393	Loan
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	187	Loan (I.D.C.P.)
(395)	(392)	(390)	(5,120)	(385)	(382)	(380)	(377)	(375)	(372)	(369)	(366)	(364)	(897)	(359)	(357)	(354)	(352)	(355)	(336)	(332)	(199)	-(133)		(2-2) Outflow
0	0	0	4,733	0	0	0	0	0	0	0	0	0	534	0	0	0	0	0	0	0	0	-275	12,920	Investment
91	91	91	91	91	91	91	91	91	91	91	91	91	91	91	91	91	91	91	91	91	91	91		O/M Costs (Incremental)
246	246	246	246	246	246	246	246	246	246	246	246	246	246	246	246	246	246	252	235	233	104	49	7,393	Loan Repayment
6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	5	3	187	Loan Repay (I.D.C.P.)
51	48	46	43	41	38	36	33	31	28	26	23	21	19	16	14	11	9	6	4	2	0	0		Interest Payment
1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0		Interest Pay. (I.D.C.P.)
151	154	156	-4,575	161	164	166	169	171	174	176	179	181	-351	186	188	192	194	191	210	214	346	679		(2-3) Inflow - Outflow
151	154	156	-4,575	161	164	166	169	171	174	176	179	181	-351	186	188	192	194	191	210	214	346	679		(2-4) Surplus
3,418	3,572	3,728	-847	-686	-522	-356	-187	-16	158	334	513	694	344	530	718	910	1,104	1,294	1,504	1,718	2,065	2,743		(2-5) Accumulated Surplus

2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039		
																								(3) Loan Balance
5,301	5,055	4,809	4,563	4,317	4,071	3,825	3,579	3,333	3,087	2,841	2,595	2,349	2,103	1,857	1,611	1,365	1,119	873	621	386	153	49		Carried Over
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7,393	Drawing
246	246	246	246	246	246	246	246	246	246	246	246	246	246	246	246	246	246	252	235	233	104	49	7,393	Repayment
5,055	4,809	4,563	4,317	4,071	3,825	3,579	3,333	3,087	2,841	2,595	2,349	2,103	1,857	1,611	1,365	1,119	873	621	386	153	49	0		Ending Balance
51	48	46	43	41	38	36	33	31	28	26	23	21	19	16	14	11	9	6	4	2	0	0		Interest 1.0%
																								(4) Loan Balance (I.D.C.P.)
137	131	125	119	113	106	100	94	88	82	75	69	63	57	50	44	38	32	26	19	13	7	3		Carried Over
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	187	Drawing
6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	5	3	187	Repayment
131	125	119	113	106	100	94	88	82	75	69	63	57	50	44	38	32	26	19	13	7	3	0		Ending Balance
1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0		Interest 1.0%

Table 19.5 Financial Cash Flow of the Project (Expecting Revenue Increase +50%)

Unit: Rs. million

Year	1995	1996	1997	1998	1999	1 2000	2 2001	3 2002	4 2003	5 2004	6 2005	7 2006	8 2007	9 2008	10 2009	11 2010	12 2011	13 2012	14 2013	15 2014	16 2015	17 2016
(1) Profit & Loss																						
Revenue (Incremental)						321	361	404	449	496	546	546	546	546	546	546	546	546	546	546	546	546
O/M Costs (Incremental)						87	87	88	89	90	91	91	91	91	91	91	91	91	91	91	91	91
(Gross Profit)						(234)	(274)	(316)	(360)	(407)	(455)	(455)	(455)	(455)	(455)	(455)	(455)	(455)	(455)	(455)	(455)	(455)
Interest						75	76	76	76	76	76	76	76	74	72	70	67	65	62	59	56	54
(Profit Post-Interest)						(159)	(198)	(240)	(285)	(331)	(379)	(379)	(379)	(381)	(383)	(385)	(388)	(390)	(394)	(396)	(399)	(401)
Depreciation						291	291	291	291	291	291	291	291	291	291	291	291	291	291	291	291	291
(Profit Post-Depreciation)						-(132)	-(93)	-(50)	-(6)	(40)	(88)	(88)	(88)	(90)	(92)	(94)	(97)	(100)	(103)	(105)	(108)	(110)
(2) Cash Flow																						
(2-1) Inflow	(0)	(339)	(3)	(4,001)	(1,924)	(1,633)	(361)	(404)	(449)	(496)	(546)	(546)	(546)	(546)	(546)	(546)	(546)	(546)	(546)	(546)	(546)	(546)
Revenue (Incremental)						321	361	404	449	496	546	546	546	546	546	546	546	546	546	546	546	546
Loan	0	336	0	3,958	1,861	1,238	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Loan (I.D.C.P.)	0	3	3	43	62	75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(2-2) Outflow	(0)	(339)	(3)	(4,001)	(1,924)	(1,399)	(163)	(164)	(165)	(166)	(166)	(178)	(178)	(309)	(371)	(947)	(409)	(407)	(404)	(402)	(399)	(397)
Investment	0	336	0	3,958	1,861	1,238	0	0	0	0	0	0	0	0	0	534	0	0	0	0	0	0
O/M Costs (Incremental)						87	87	88	89	90	91	91	91	91	91	91	91	91	91	91	91	91
Loan Repayment	0	0	0	0	0	0	0	0	0	0	0	11	11	143	205	246	246	246	246	246	246	246
Loan Repayment (I.D.C.P.)	0	0	0	0	0	0	0	0	0	0	0	0	0	2	4	6	6	6	6	6	6	6
Interest Payment	0	3	3	43	62	74	74	74	74	74	74	74	74	72	70	68	65	63	60	58	55	53
Interest Pay. (I.D.C.P.)	0	0	0	0	0	1	2	2	2	2	2	2	2	2	2	2	2	2	2	1	1	1
(2-3) Inflow - Outflow	0	0	0	0	0	234	198	240	285	331	379	368	368	237	175	-401	136	138	141	143	146	149
(2-4) Surplus/Deficit	0	0	0	0	0	234	198	240	285	331	379	368	368	237	175	-401	136	138	141	143	146	149
(2-5) Accumulated	0	0	0	0	0	234	432	673	957	1,288	1,667	2,036	2,404	2,640	2,815	2,414	2,550	2,688	2,829	2,973	3,119	3,268

(3) Loan Balance	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Carried Over	0	0	336	336	4,294	6,155	7,393	7,393	7,393	7,393	7,393	7,393	7,382	7,371	7,228	7,023	6,777	6,531	6,285	6,039	5,793	5,547
Drawing	0	336	0	3,958	1,861	1,238	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Repayment	0	0	0	0	0	0	0	0	0	0	0	11	11	143	205	246	246	246	246	246	246	246
Ending Balance	0	336	336	4,294	6,155	7,393	7,393	7,393	7,393	7,393	7,393	7,382	7,371	7,228	7,023	6,777	6,531	6,285	6,039	5,793	5,547	5,301
Interest 1.0%	0	3	3	43	62	74	74	74	74	74	74	74	74	72	70	68	65	63	60	58	55	53
(4) Loan Balance (Loan for Interest During Construction Period (I.D.C.P.))																						
Carried Over	0	0	3	6	49	112	187	187	187	187	187	187	187	186	185	181	175	169	162	156	150	144
Drawing	0	3	3	43	62	75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Repayment	0	0	0	0	0	0	0	0	0	0	0	0	0	2	4	6	6	6	6	6	6	6
Ending Balance	0	3	6	49	112	187	187	187	187	187	187	187	186	185	181	175	169	162	156	150	144	137
Interest 1.0%	0	0	0	0	0	1	2	2	2	2	2	2	2	2	2	2	2	2	2	1	1	1