APPENDIX 2B

ANNUAL RECORDS OF TRANSPORT

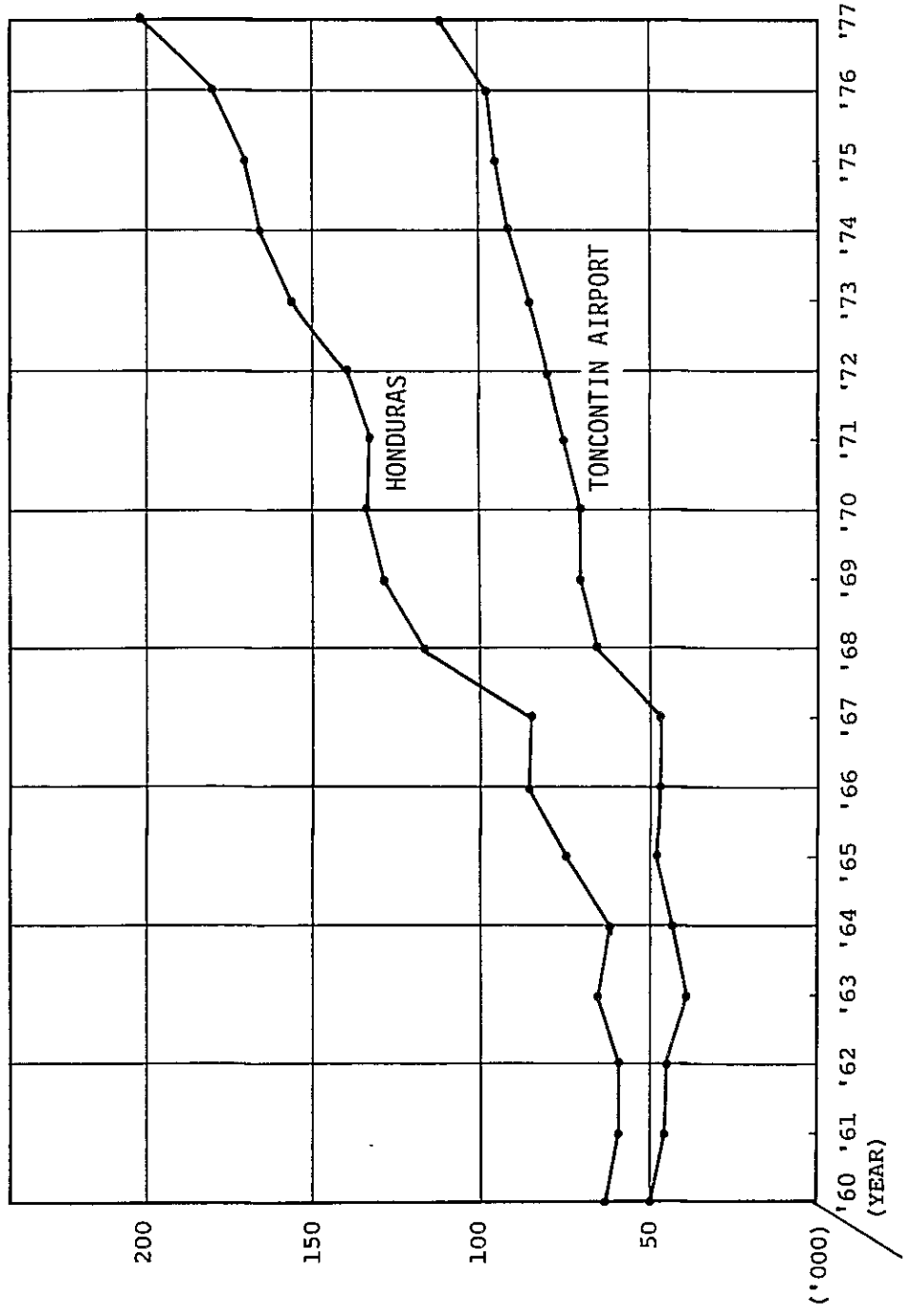


Fig. 2B-1 PAST DEVELOPMENT OF INTERNATIONAL EMBARKING & DISEMBARKING PASSENGER TRAFFIC IN THE REPUBLIC OF HONDURAS

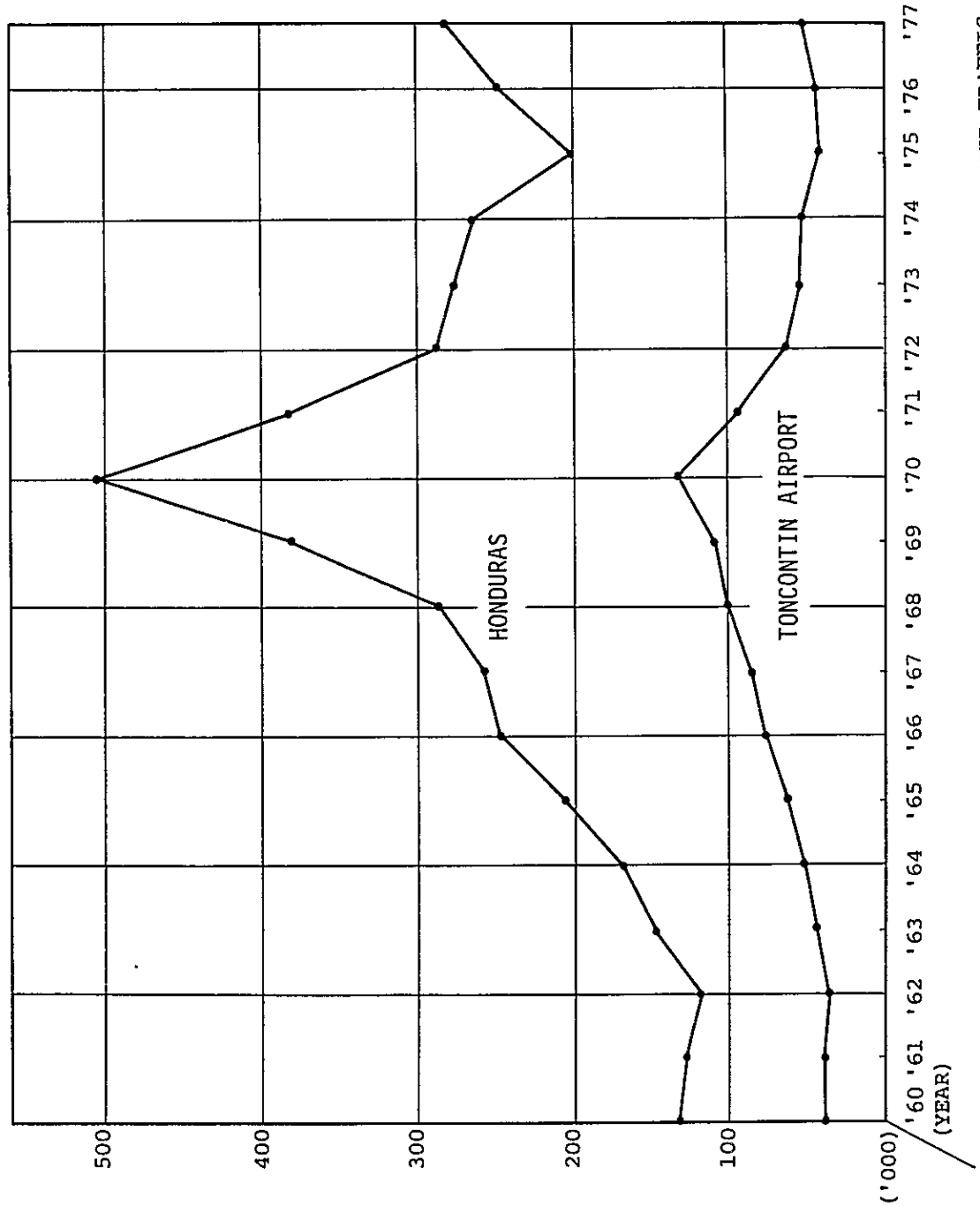


Fig. 2B-2 PAST DEVELOPMENT OF DOMESTIC EMBARKING & DISEMBARKING PASSENGER TRAFFIC IN THE REPUBLIC OF HONDURAS

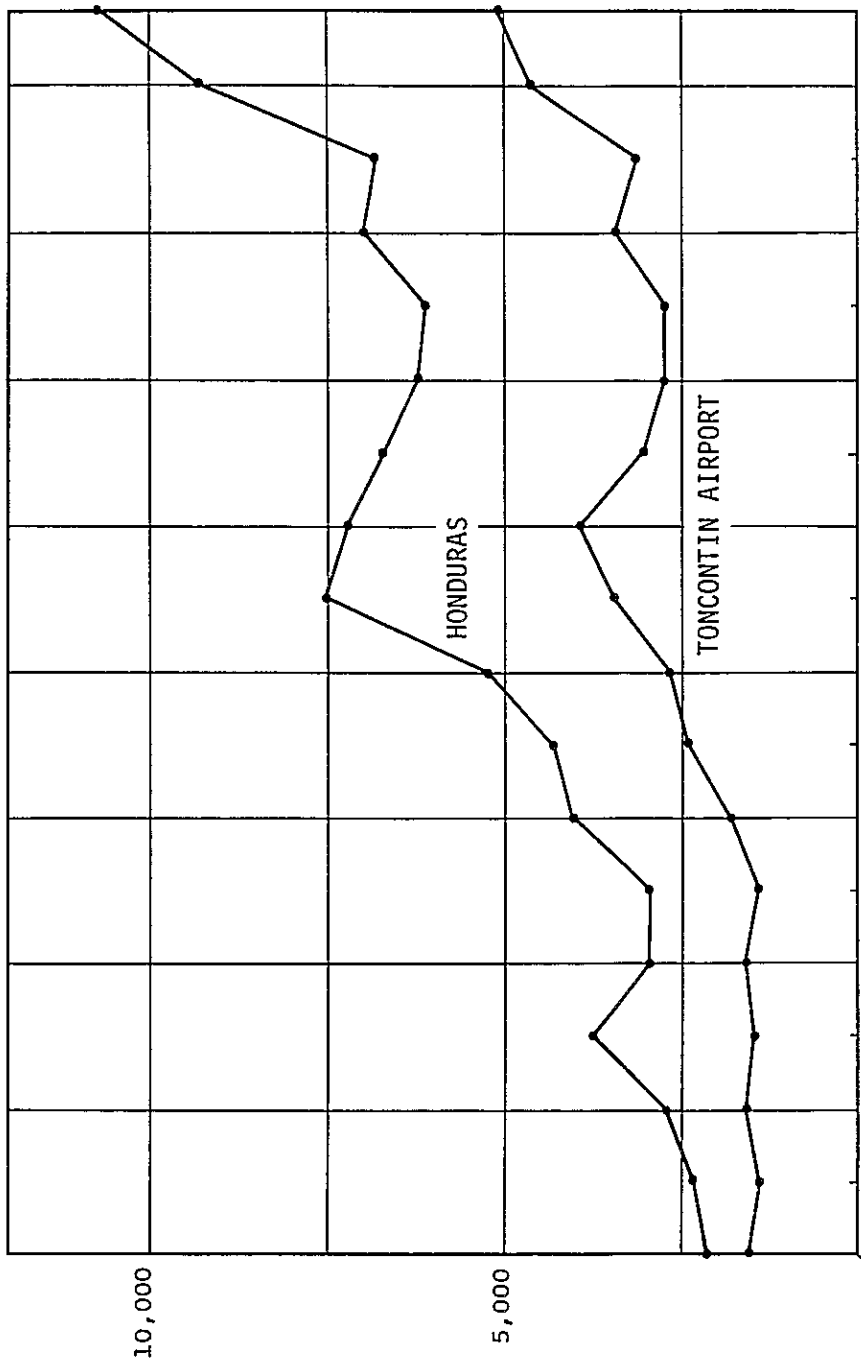


Fig. 2B-3 PAST DEVELOPMENT OF INTERNATIONAL LOADED & UNLOADED CARGO TRAFFIC IN THE REPUBLIC OF HONDURAS

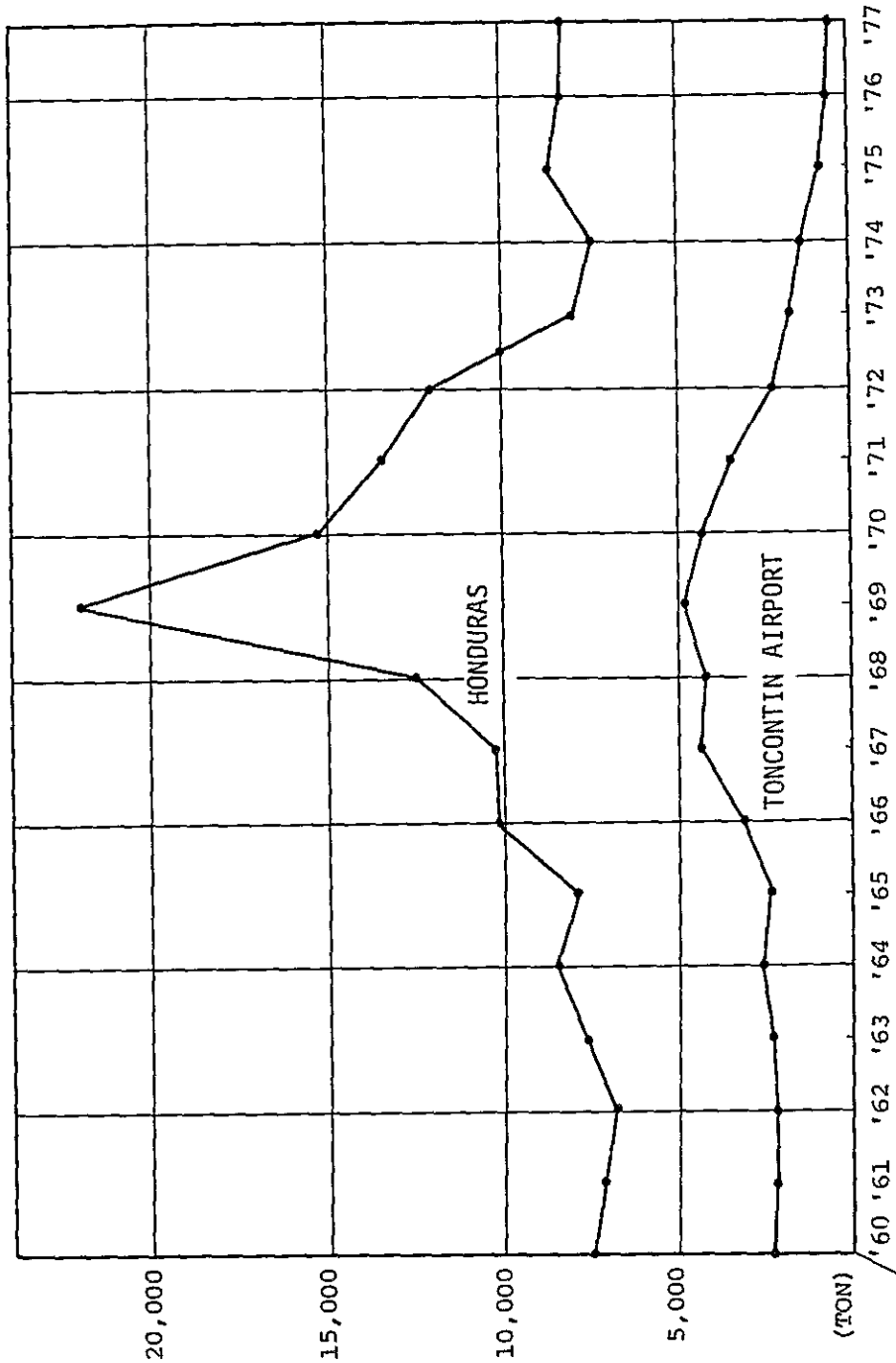


Fig. 2B-4 PAST DEVELOPMENT OF DOMESTIC LOADED & UNLOADED CARGO TRAFFIC IN THE REPUBLIC OF HONDURAS

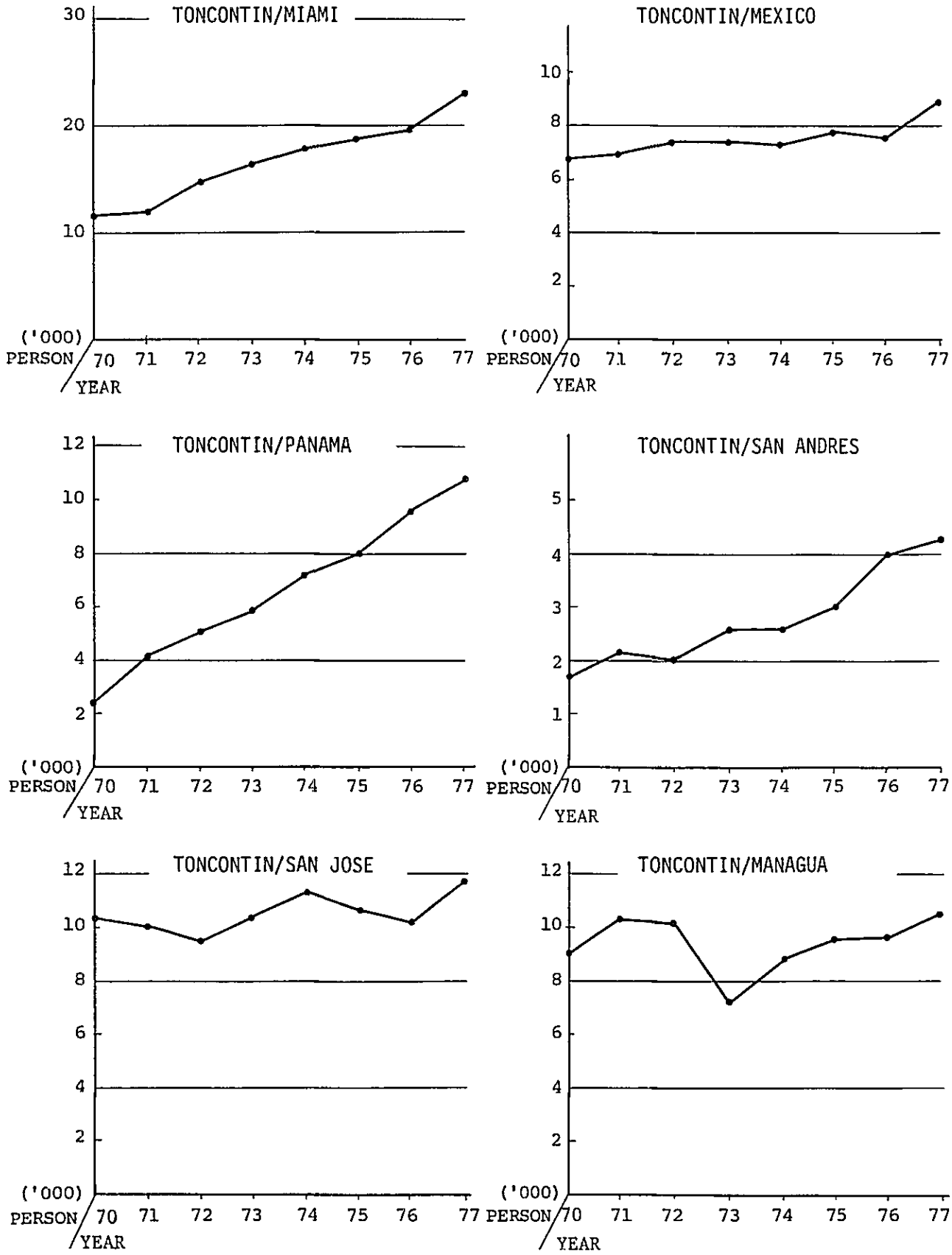


Fig 2B-5 (1) INTERNATIONAL EMBARKING & DISEMBARKING PASSENGERS BY ORIGIN/DESTINATION AT TONCONTIN AIRPORT [1970 - 1977]

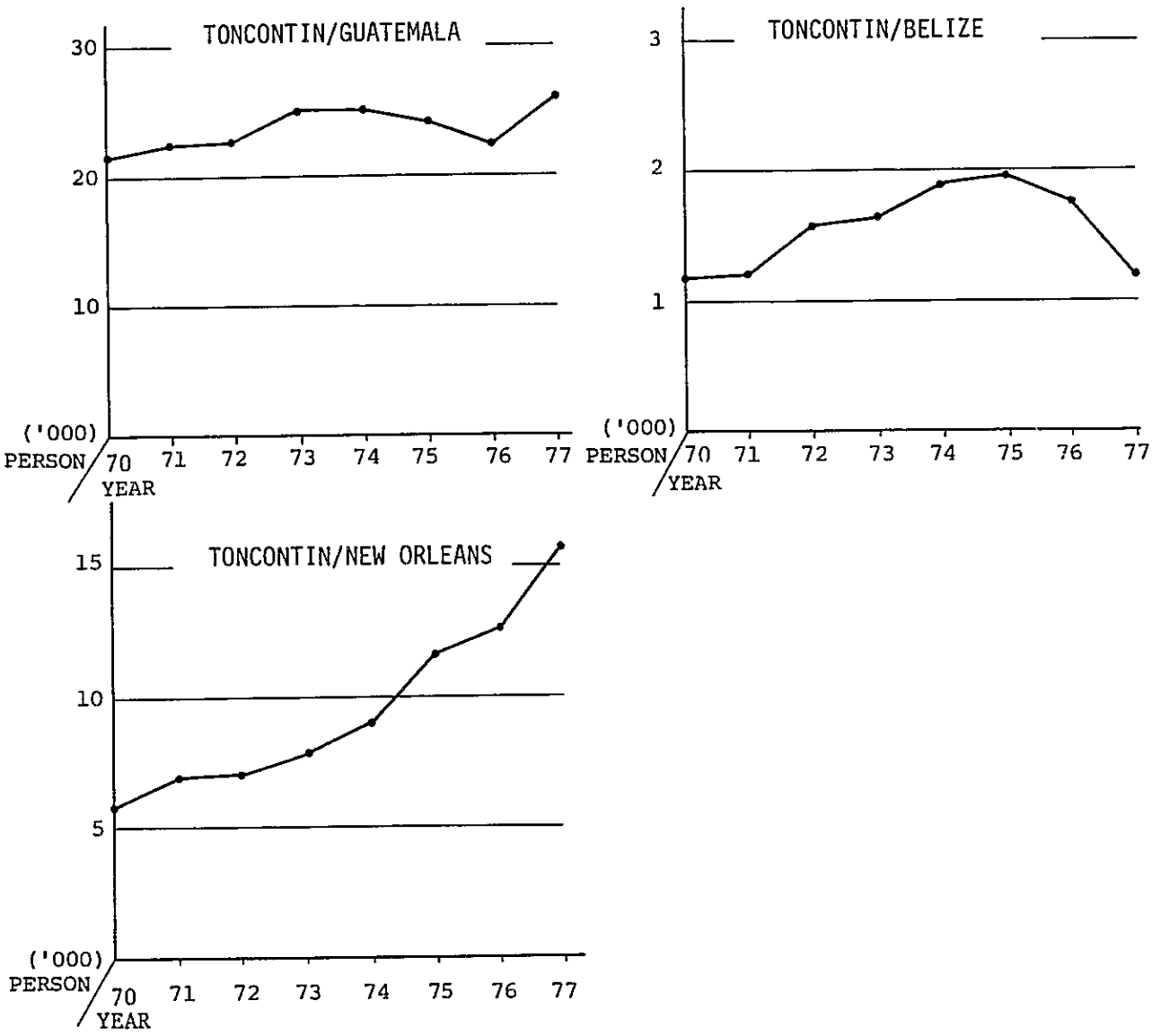


Fig. 2B-5 (2) INTERNATIONAL EMBARKING & DISEMBARKING PASSENGERS BY ORIGIN/DESTINATION AT TONCONTIN AIRPORT [1970 - 1977]

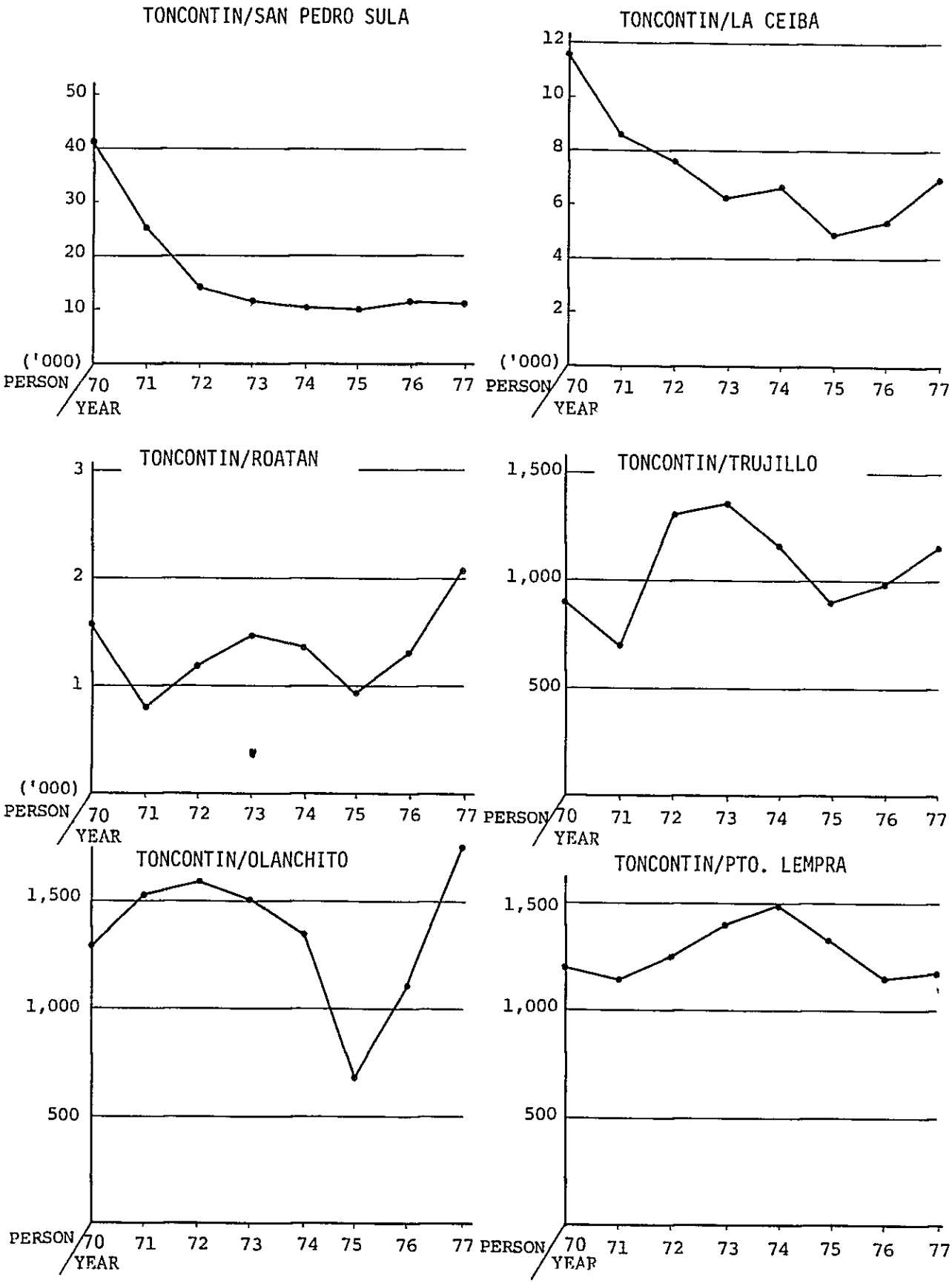


Fig. 2B-6 DOMESTIC EMBARKING & DISEMBARKING PASSENGERS BY ORIGIN/DESTINATION AT TONCONTIN AIRPORT [1970 - 1977]

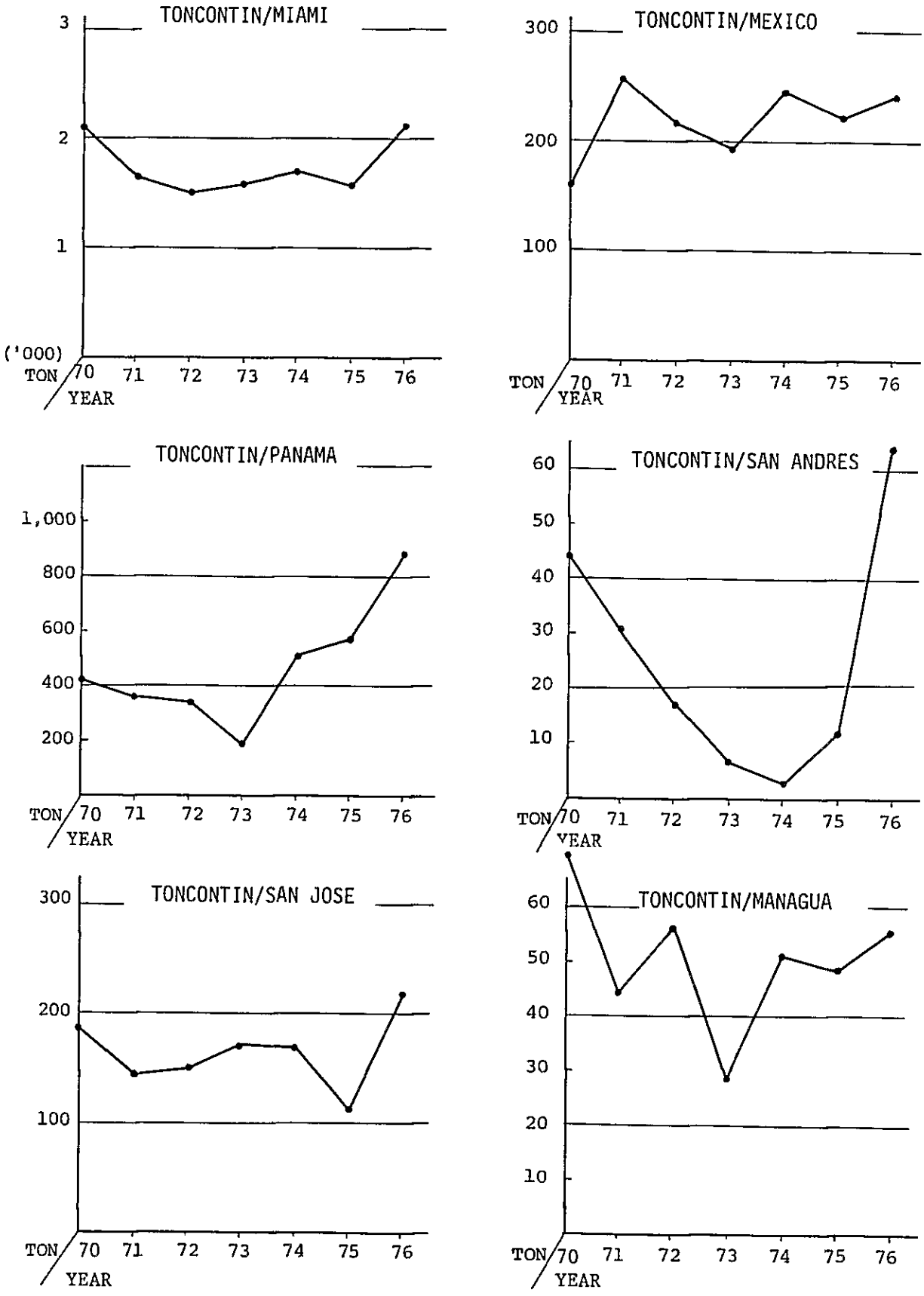
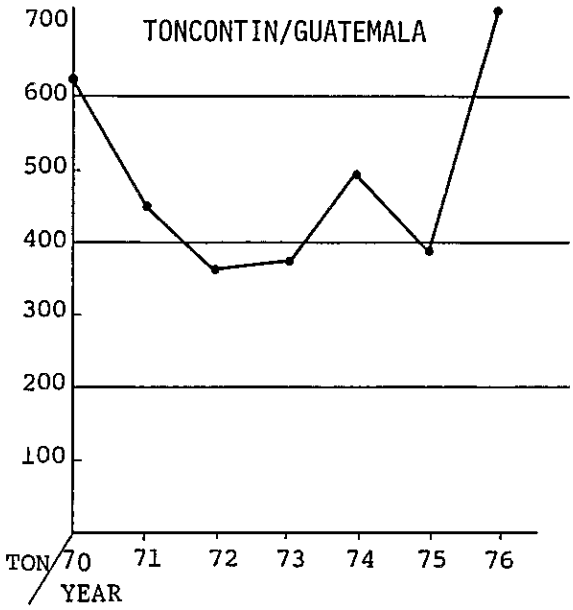
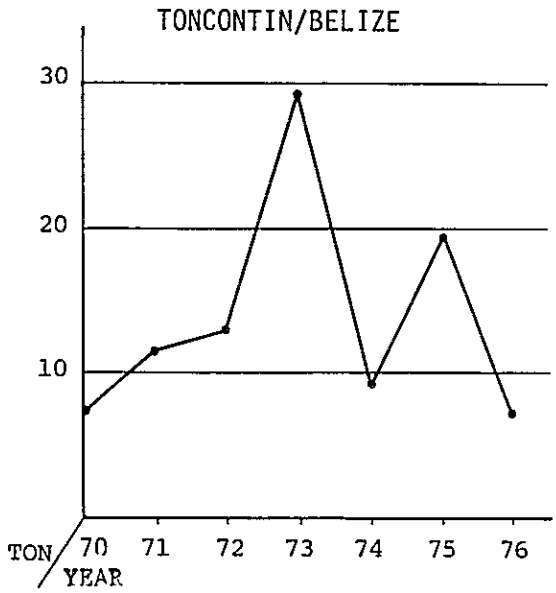


Fig. 2B-7 (1) INTERNATIONAL LOADED & UNLOADED CARGO BY ORIGIN/DESTINATION AT TONCONTIN AIRPORT [1970 - 1976]





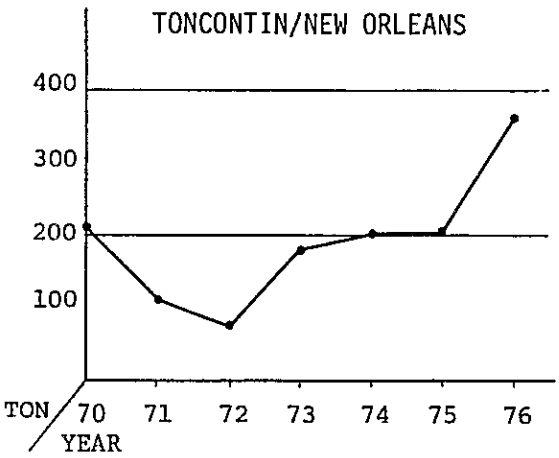


Fig. 2B-7 (2) INTERNATIONAL LOADED & UNLOADED CARGO BY ORIGIN/DESTINATION AT TONCONTIN AIRPORT [1970 - 1976]

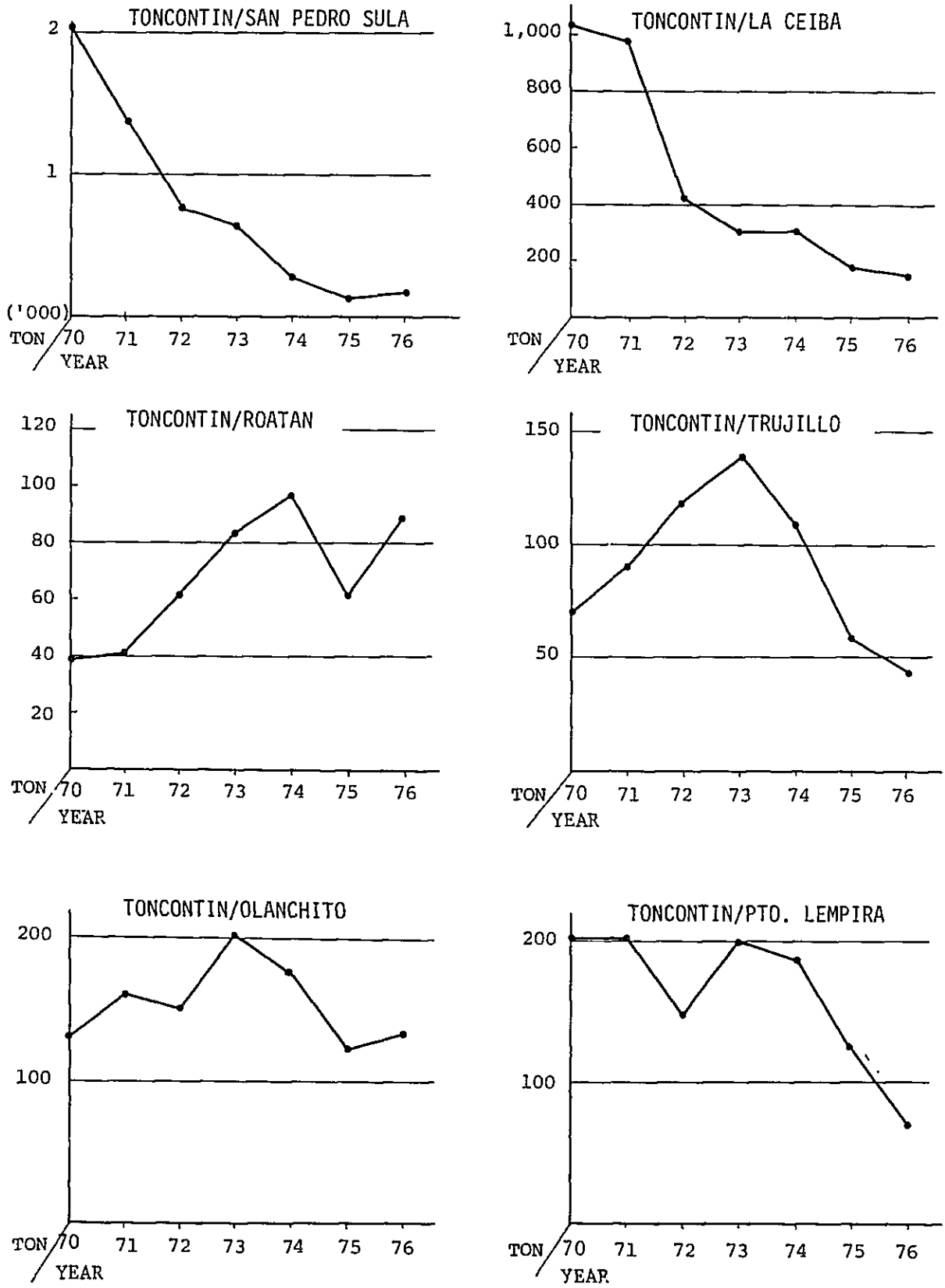


Fig. 2B-8 DOMESTIC LOADED & UNLOADED CARGO BY ORIGIN/DESTINATION AT TONCONTIN AIRPORT [1970 - 1976]

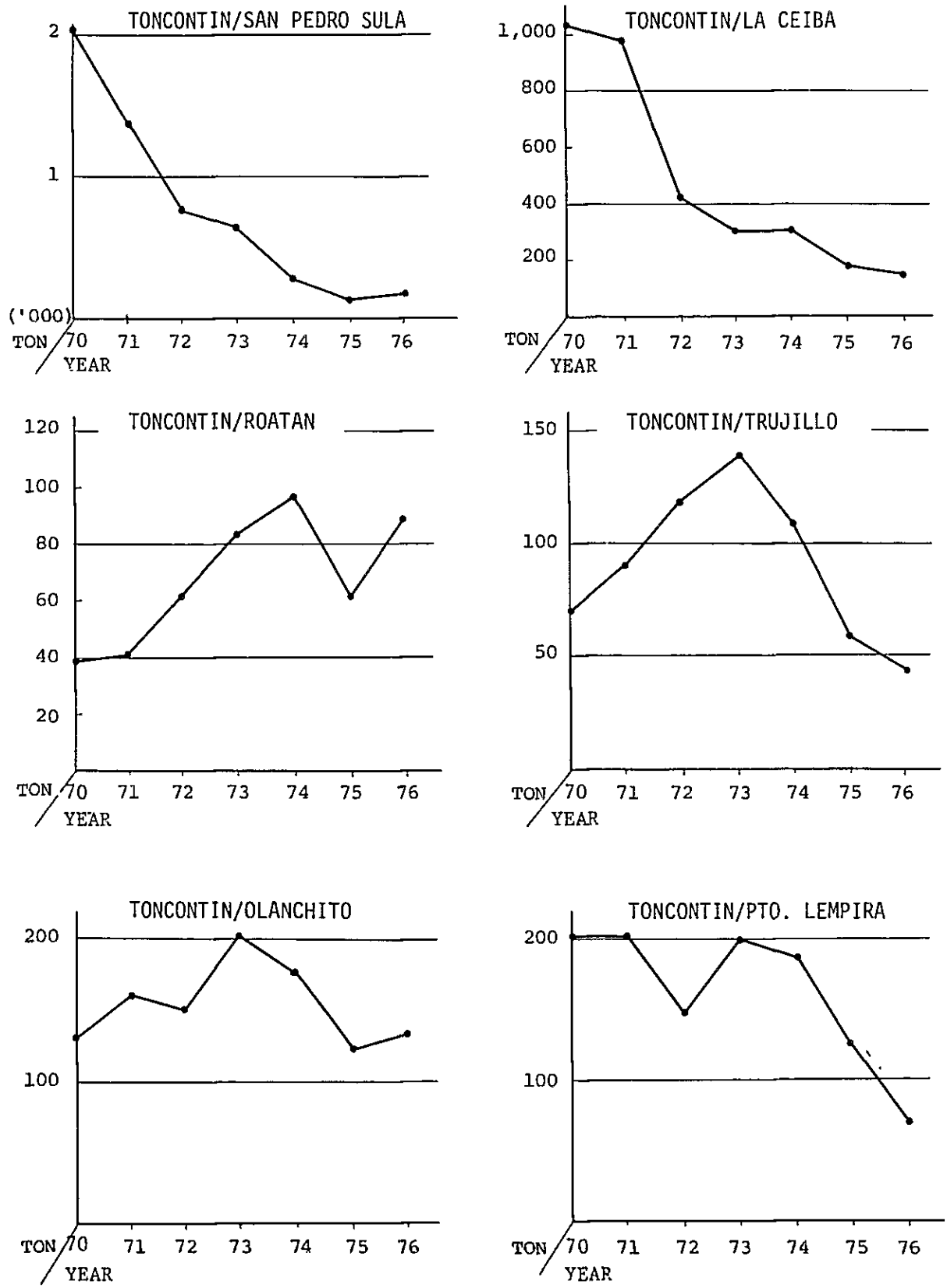


Fig. 2B-8 DOMESTIC LOADED & UNLOADED CARGO BY ORIGIN/DESTINATION AT TONCONTIN AIRPORT [1970 - 1976]

APPENDIX 3A

ILS OPERATIONAL REQUIREMENT

Appendix 3A ILS OPERATIONAL REQUIREMENTS

Operational requirements of ICAO by category of Instrument Landing System (ILS) are as follows:

Table 3A-1 ICAO ILS OPERATIONAL REQUIREMENTS BY CATEGORY

Category	Decision Height meter (ft.)	Runway Visual Range meter (ft.)
I	60 (200)	800 (2600)
II	30 (100)	400 (1200)
III	- -	Below 200 (700)

The frequency of occurrence of below Cat-I operational minima at each meteorological observation point based on data obtained 24 times a day for a 12-month period are as follows:

Table 3A-2 PERCENTAGE OF OCCURRENCE OF WEATHER CONDITIONS BELOW CAT-I OPERATIONAL MINIMA

	Toncontin	Pedregal	Hule	Talanga
Average for 12-month period	0.7%	4.4%	11.5%	
Jan	0	12.1	5.0	
Feb	0	0.5	5.0	
Mar	0	1.6	3.5	0
Apr	0	1.9	14.6	0.15
May	0.7	0.9	6.1	0
Jun	3.1	4.3	14.7	0.15
Jul	0.7	7.7	13.2	
Aug	1.3	1.8	13.3	
Sep	0	0.5	16.7	
Oct	2.2	3.2	19.5	
Nov	0	11.3	13.4	
Dec	0	13.6	8.0	

Provision of ILS at airports regularly handling international jet flights is generally required by international airlines. ILS is often an economic necessity where its absence could result in excessive delays and diversions of traffic. As Tegucigalpa area is surrounded by mountains and is elevated high, it has low cloud height and poor visibility as shown in Table 3A-2 above.

Notwithstanding the fact that according to the ICAO recommendation as stipulated in the "Requirements of ILS at New Tegucigalpa International Airport, ANP 1977", ILS Category I operation with Category II ILS equipment and appropriate airfield lighting system are recommended, in this site selection study Category I equipment is selected for economic reasons, especially of cost-effectiveness considerations based on (1) expected number of flight movements and (2) costs of equipment, operation and maintenance.

APPENDIX 3B

AERONAUTICAL METEOROLOGICAL ANALYSIS

Appendix 3B AERONAUTICAL METEOROLOGICAL ANALYSIS

1. Observation Data Obtained

1) Source

Dirección General de Aeronautica Civil, Servicio Meteorologico Nacional

2) Observation Points, Period, Time and Interruption

i) Toncontin (Existing Airport Site) - Elev. 1000m

January to December, 1976 (12 months)
Hourly observation (24 times a day)
No interruption of observation

ii) El Pedregal - Elev. 1500m

January to December, 1976 (12 months)
Hourly observation (24 times a day)
Interruption 23%

iii) Cerro de Hule - Elev. 1500m

a) January, 1962 (1 month)
Hourly observation (12 times a day)
No interruption of observation

b) February, 1962 to January, 1963 (12 months)
Hourly observation (24 times a day)
Interruption %

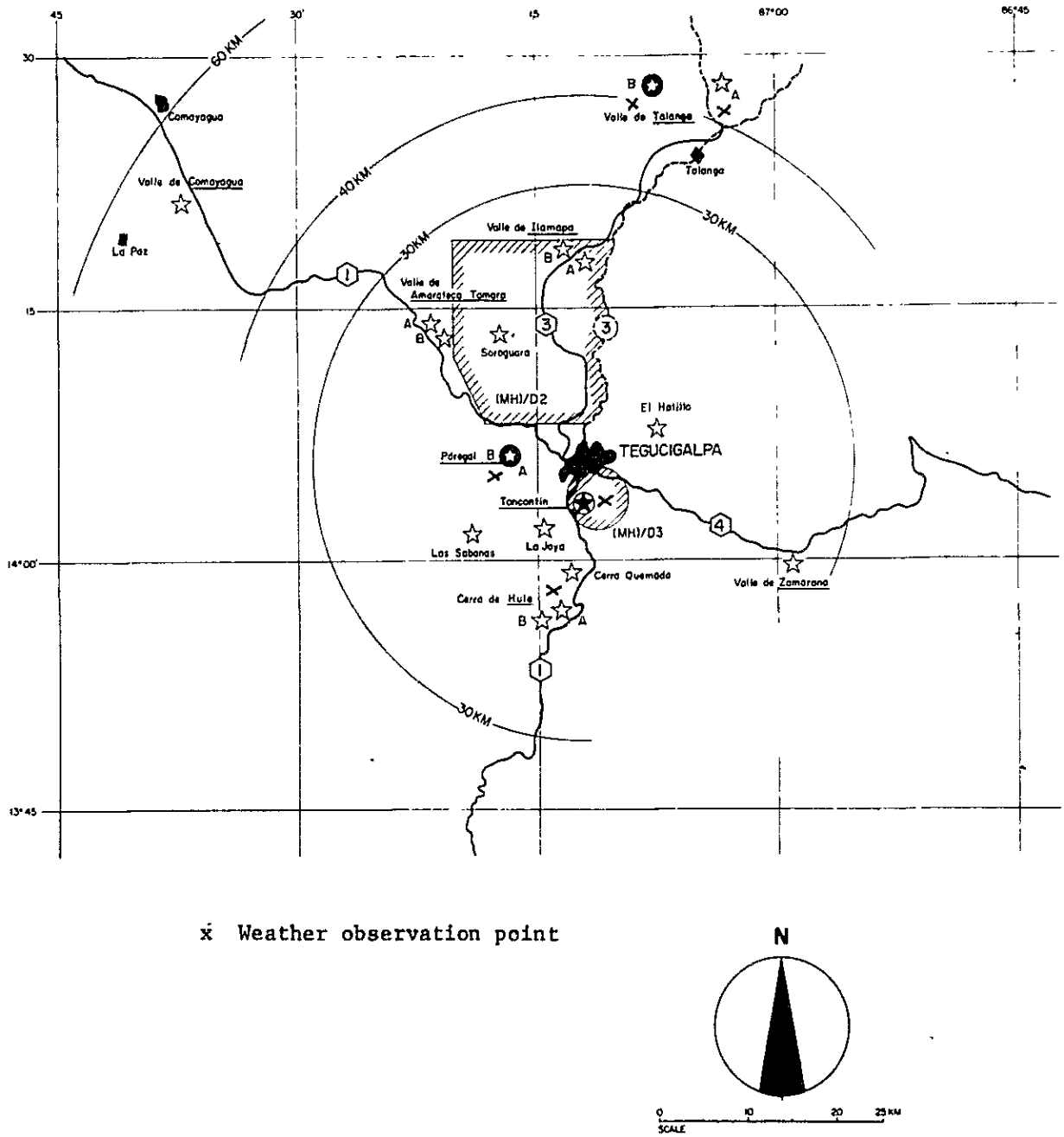
c) April to December, 1970 (9 months)
Hourly observation (12 times a day)
Interruption 24%

iv) Talanga - La Ermita - Elev. 760m

March, 1978 to present
Hourly observation (24 times a day)
No interruption of observation

v) Talanga - El Espino - Elev. 760m

April, 1978 to present
Anemocinemograph recording (24 hours a day)
No interruption of observation



x Weather observation point

Fig. 3B-1 LOCATION OF WEATHER OBSERVATION POINTS

2. Results of Analysis

1) Toncontin

i) Prevailing wind direction : N to NNE

ii) Frequency of occurence of calm wind:

39% of the total number of observations

25% of the number of daytime observations only

iii) Annual frequency of occurence of weather conditions below weather minimum (ceiling/visibility):

	Below 200ft - 800m	Below 1200ft - 2800m (Operating minima for the existing runway)
Out of the total number of observations	0.7%	17%
Out of the number of daytime observations only	0.8%	21%

iv) Wind coverage

	Maximum cross-wind component :	
	10kts	15kts
RWY 01/19	95.2%	99.8%
RWY 06/24	89.5%	99.3%
RWY 13/31	85.3%	98.7%

2) El Pedregal

i) Prevailing wind direction : N to NNE

ii) Frequency of occurence of calm wind:

52% Whole year

44% Dry season

58% Wet season

iii) Frequency of occurence of weather conditions below weather minimum (ceiling/visibility, 24 hours):

	Below 200ft - 800m	Below 200ft - 1200m
Whole year	4%	7%
Dry season	4%	6%
Wet season	4%	7%

iv) Wind coverage

Not less than 99% for any direction under the maximum cross-wind component of 15kts.

3) Cerro de Hule

i) Prevailing wind direction : N

ii) Frequency of occurence of calm wind:

32% Whole year

27% Dry season

35% Wet season

iii) Frequency of occurence of weather conditions below weather minimum (ceiling/visibility, 24 hours):

	Below 200ft - 800m	Below 200ft - 1200m
Whole year	12%	12%
Dry season	7%	7%
Wet season	15%	15%

iv) Wind coverage:

	Max. cross-wind component	
	10kts	15kts
RWY 04/22		
Whole year	74.8%	93.1%
Dry season	73.1%	92.0%
Wet season	75.9%	94.4%
RWY 18/36		
Whole year	97.3%	99.7%
Dry season	97.0%	99.7%
Wet season	97.5%	99.6%

v) Other findings:

During January, 1962, wind of over 30kts was observed, with frequency of occurence of 57%.

4) Valle de Talanga

i) Prevailing wind direction : E

ii) Frequency of occurence of calm wind:

More than 50%

iii) Frequency of occurence of weather conditions below weather minimum (Ceiling 200ft, Visibility 800m)

No more than 1%

Table 3B-1 SUMMARY (1)

Observation Point	Year	D.S	W.S.	Dry Season (D.S.)						Wet Season (W.S.)					
				Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
a) Prevailing Wind Direction															
Toncontin 12 hrs	N,NNE	N,NNE	N	NNE	NNE	NNE	NW	N,NE	NW	N,NW	NW	NW	NW	N	NNE
24 hrs	N,NNE	N	NNE	NNE	NNE	NNE	NW	N	NW	N	N	NW	NW	N	NNE
Pedregal	N	N	N,NNE	NE	N	N	N	N	N	E	NNE	NNE	NNE	N	N
Hule 1962	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Hule 1970*1	N	N	N												
Talanga															
La Ermita							E	E	E	E					
El Espino								E	E	E					
b) Frequency of Occurence of Calm Wind (%)															
Toncontin 12 hrs	25.4	24.6	26.3	18.4	15.1	14.1	29.0	32.3	38.2	51.8	15.6	21.1	26.2	26.8	16.7
24 hrs	39.0	34.4	43.7	30.9	23.3	24.0	40.1	40.6	47.0	63.1	34.7	41.7	46.3	44.8	31.5
Pedregal	51.9	44.4	58.3	32.5	22.4	28.2	43.5	51.3	68.8	83.6	38.6	51.4	64.1	60.1	48.4
Hule 1962	31.6	27.4	35.2	11.5	13.6	24.6	46.3	31.5	25.9	58.8	7.1	36.7	52.4	43.1	13.8
Hule 1970*1	17.1	11.9	20.3												
Talanga															
La Ermita							66.1	56.6	59.7	62.2					
El Espino								54.9	45.1	52.5					

*1 March to December only

*1 March to December only

Table 3B-1 SUMMARY (2)

Observation Point	Year	D.S.	W.S.	Dry Season (D.S.)						Wet Season (W.S.)					
				Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov

C) Frequency of Occurence of Wind Velocity More Than 20 kts (%)

Toncontin															
12 hrs	0.36	0.50	0.21	0.25	1.49	1.06	0.25	0	0	0	0	0.25	0.26	0	0.77
24 hrs	0.33	0.52	0.14	0.40	0.81	0.57	1.07	0.14	0.13	0.14	0	0.13	0.14	0	0.42
Pedregal	0.09	0.19	0	0	0.40	1.00	0	0	0	0	0	0	0	0	0
Hule 1962*2	6.85	8.36	5.56	*1 17.69	75.53 11.53	12.63	6.33	7.50	0.94	0.42	5.91	3.36	0.28	0.95	22.79
1970*2	13.58	20.53	9.09												
Talanga															
La Ermita															
El Espino															

*1 12 hrs. 1962 only

*2 March to December, 1970

Table 3B-1 SUMMARY (3)

Observation Point	Year	D.S.	W.S.	Dry Season (D.S.)						Wet Season (W.S.)					
				Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
d) Frequency of Occurence of Ceiling/Visibility Minimum (%)															
Toncontin (12hrs)															
200ft - 800m	0.76	0.08	1.47	0	0	0	0	0	0	3.85	0	1.24	0	3.72	0
1200ft - 2800m*1	20.55	12.99	24.30	34.99	17.87	9.28	1.99	5.90	7.69	36.15	22.58	15.14	13.85	29.53	26.92
(24hrs)															
200ft - 800m	0.74	0.11	1.25	0	0	0	0	0	0.67	3.14	0.68	1.34	0	2.15	0
1200ft - 2800m	17.06	12.48	21.65	33.91	18.01	7.89	1.47	4.43	8.74	34.67	19.35	9.66	11.20	31.95	23.19
Pedregal															
200ft - 800m	4.38	4.34	4.34	13.61	12.10	0.50	1.59	1.87	0.94	4.28	7.69	1.82	0.46	3.23	11.29
200ft - 1200m	6.70	6.32	7.10	24.17	14.48	0.75	2.07	2.43	1.75	8.22	9.74	3.33	1.98	7.22	15.21
Hule (1962)					12.20*2										
200ft - 800m	11.46	7.14	15.11	8.97	5.03	5.02	3,50	14.58	6.05	14.71	13.17	13.31	16.67	19.50	13.36
200ft - 1200m	11.71	7.28	15.46	8.97	5.36	5.02	3.50	14.72	6.32	15.13	13.31	13.31	16.81	19.86	14.35
(1970)*3															
200ft - 800m	13.63	9.67	16.01												
200ft - 1200m	14.54	10.55	16.50												
Talanga - La Ermita															
200ft - 800m							0	0.15	0	0.15					
200ft - 1200m							0	0.58	1.11	0.15					

*1 Existing Runway Operation Minimum
*2 12hrs, 1962 only
*3 March to December only

Table 3B-1 SUMMARY (4)

e) Wind Coverage

(%)

Observation Point		RWY	Cross Wind Components of					
			10kts			15kts		
			Year	Dry Season	Wet Season	Year	Dry Season	Wet Season
Toncontin	12hrs	01/19	91.6 x	91.2 x	92.2 x	99.7	99.6	99.8
		06/24	84.6 x	82.8 x	85.4 x	98.9	98.6	99.3
		13/31	79.8 x	75.5 x	83.6 x	98.0	97.3	99.2
	24hrs	01/19	95.2	94.6	95.4	99.8	99.8	99.9
		06/24	89.5 x	88.7 x	90.7 x	99.3	99.0	99.5
		13/31	85.3 x	82.0x	89.0 x	98.7	97.9	99.8
Pedregal	24hrs	01/19	99.6	100.0	99.7	99.99	99.4	99.97
Hule (1962)	24hrs	04/22	74.8 x	73.1 x	75.9 x	93.1 x	92.0 x	94.4 x
		18/36	97.3	97.0	97.5	99.7	99.7	99.6
Talanga *1	24hrs	17/35		90.1 x	87.1 x		98.2	94.5 x
La Ermita		10/28		96.7	97.9		99.5	99.5
El Espino *2		17/35		88.9 x	86.3 x		99.7	99.4
		10/28		98.2	99.5		99.9	100.0

Notes to Observation Period: *1 March to June, 1978 *2 April to June, 1978

Mark x indicates wind coverage less than 95%

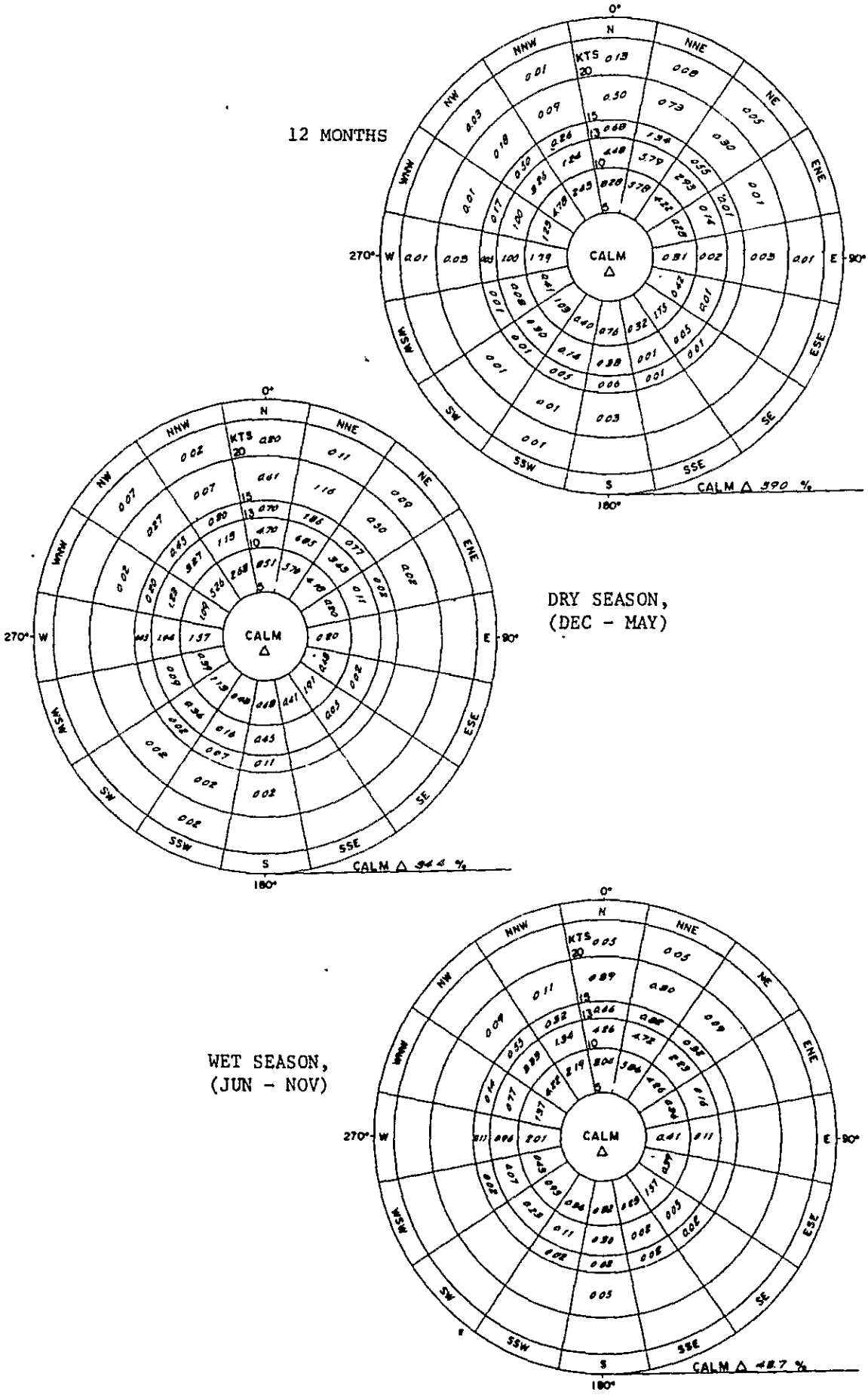


Fig. 3B-2 (a) TONCONTIN WIND ROSE, 1976

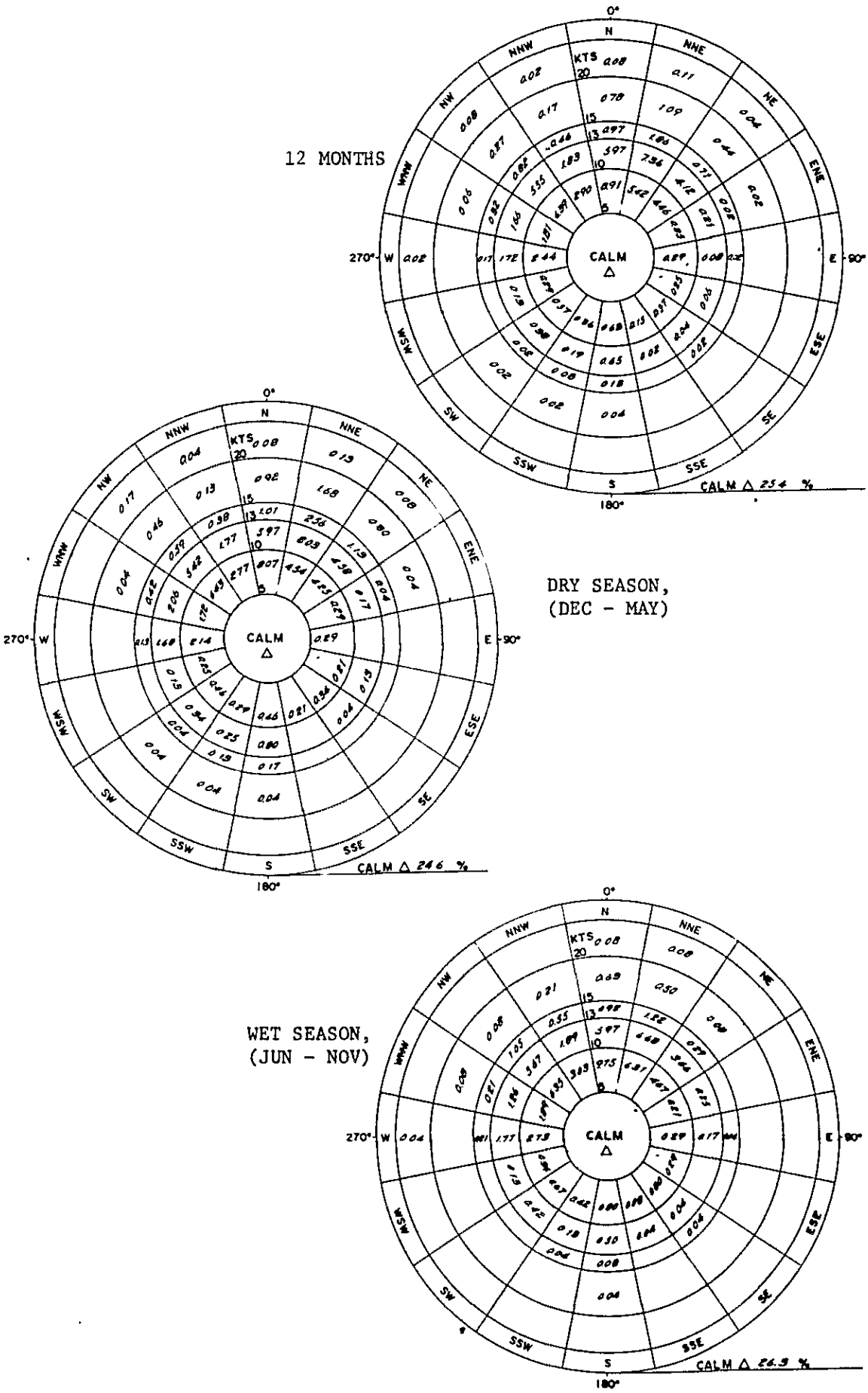


Fig. 3B-2 (b) TONCONTIN-DAYTIME WIND ROSE, 1976

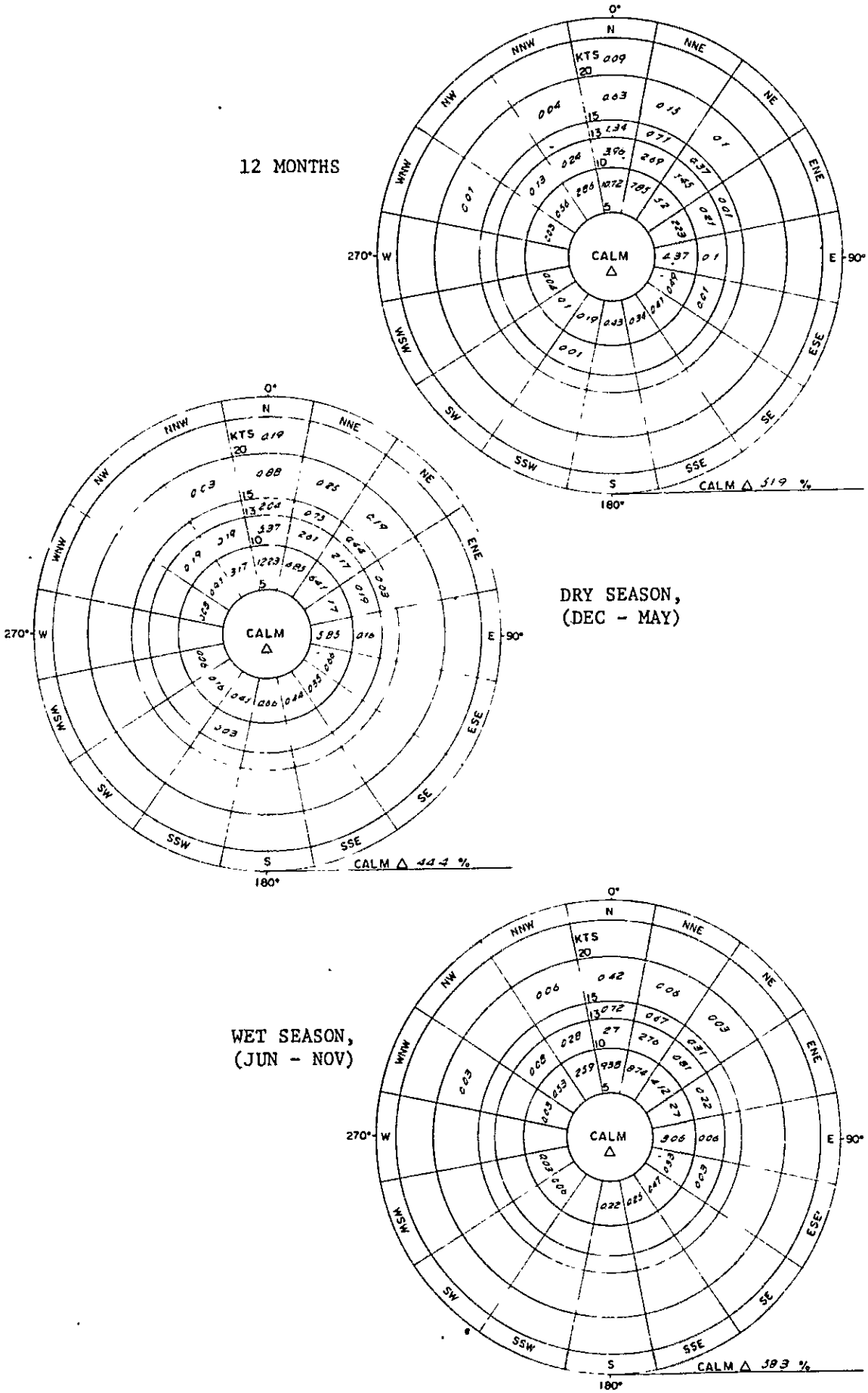


Fig. 3B-3 PEDREGAL WIND ROSE, 1976

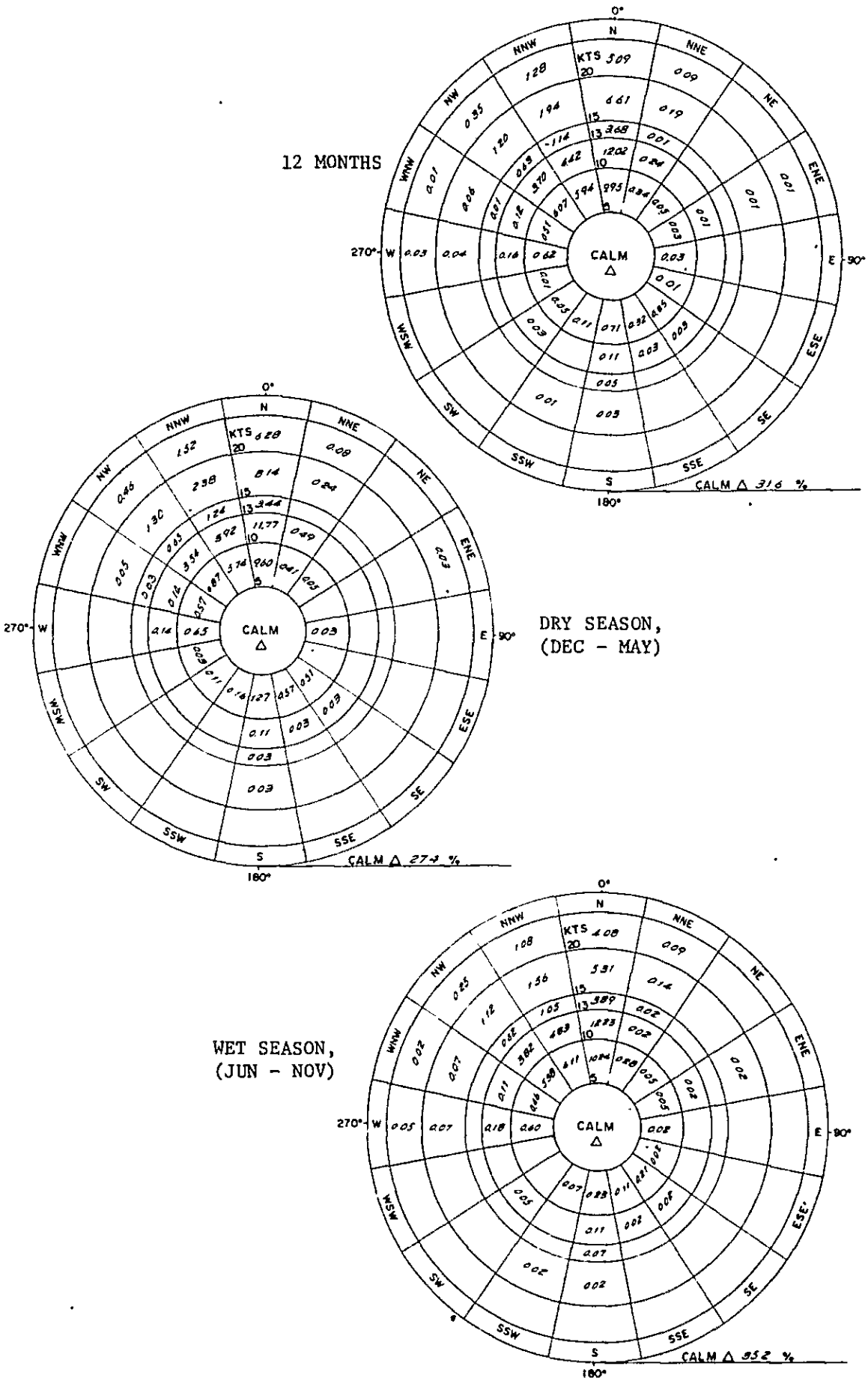


Fig. 3B-4 HULE WIND ROSE, 1962 - 1963

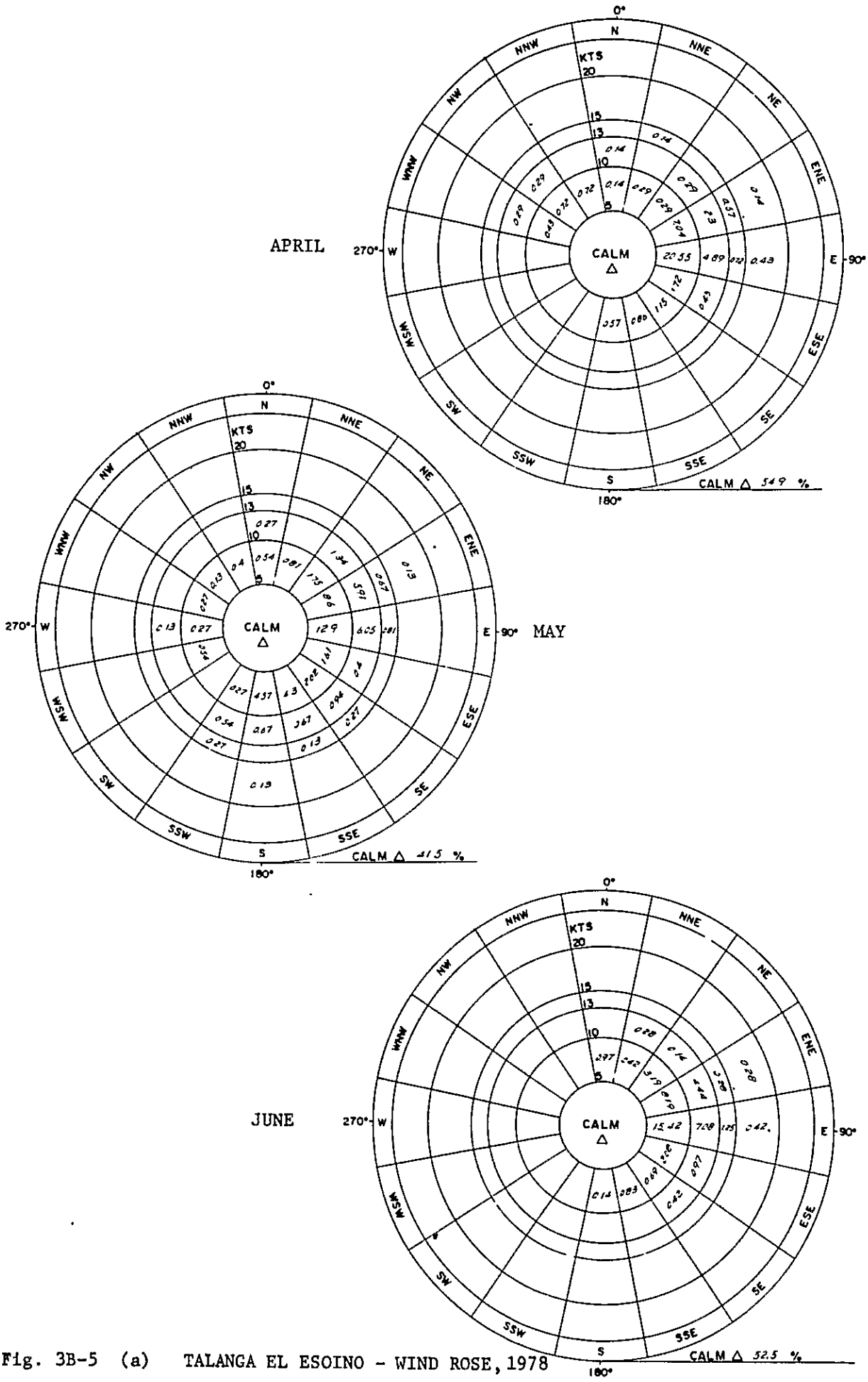
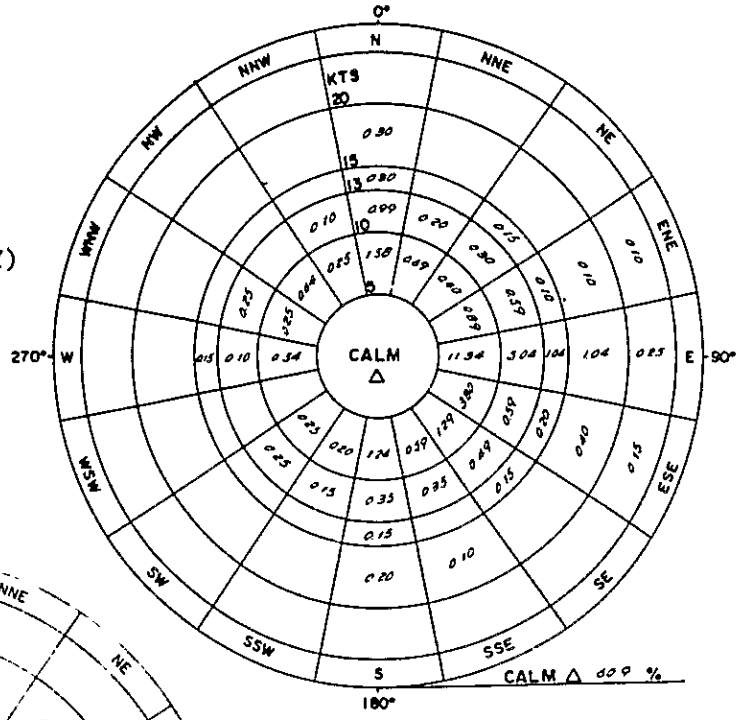
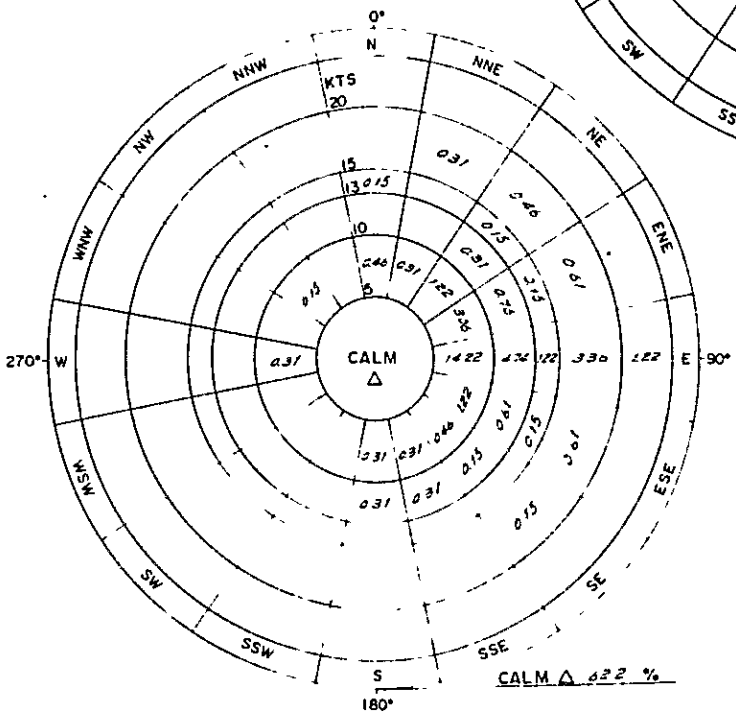


Fig. 3B-5 (a) TALANGA EL ESOINO - WIND ROSE, 1978

DRY SEASON
(MAR. APR. MAY ONLY)





WET SEASON
(JUNE ONLY)

Fig. 3B-5 (6) TALANGA LA ERMITA - WIND ROSE, 1978

STATION TONCONTIN — 12 MONTHS — YEAR 1976

CEILING (meter) \ VISIBILITY (meter)		100 or less	100	200	300	400	500	600	700	800	900	1,000	1,100	1,200	1,300	1,400	1,500	1,600 2,000	2,100 3,000	3,100 5,000	6,000 or more	TOTAL	%
Cloud layer 5/8 or more	Unknown																						
	50 or less											1								2	5	8	009
	50 ~ 100											6						3	3	7	32	51	058
	100 ~ 200									2		2						11	16	35	214	280	318
	200 ~ 300						1					5						7	19	30	835	897	1020
	300 ~ 600											3						2	3	13	403	424	483
	600 ~1,000						2	1		1		4	1				1	10	17	36	3315	3388	3852
	1,000 ~1,500																	1	3	9	781	794	903
	1,500 ~2,000																						
	2,000 ~2,500																						
	2,500 or more																	1			27	28	032
Cloud layer 4/8 or less							2											2	3	19	2905	2925	3326
TOTAL							5	1		3		21	1				1	37	64	143	8517	8795	
%							006	001		003		024	001				001	042	073	165	9864		

DRY SEASON, (DEC - MAY)

STATION TONCONTIN — YEAR 1976

CEILING (meter) \ VISIBILITY (meter)		100 or less	100	200	300	400	500	600	700	800	900	1,000	1,100	1,200	1,300	1,400	1,500	1,600 2,000	2,100 3,000	3,100 5,000	6,000 or more	TOTAL	%
Cloud layer 5/8 or more	Unknown																						
	50 or less																						
	50 ~ 100																			2	3	5	011
	100 ~ 200																	2	3	13	47	65	147
	200 ~ 300						1					4						1	5	5	338	354	803
	300 ~ 600											1						2	2	3	188	196	445
	600 ~1,000						1	1		1		2						4	9	19	1325	1362	3091
	1,000 ~1,500																		1	5	397	403	914
	1,500 ~2,000																						
	2,000 ~2,500																						
	2,500 or more																	1			6	7	016
Cloud layer 4/8 or less							2											1	3	11	1998	2015	4572
TOTAL							4	1		1		7						11	23	58	4302	4407	
%							009	002		002		016						025	052	132	9762		

WET SEASON, (JUN - NOV)

STATION TONCONTIN — YEAR 1976

CEILING (meter) \ VISIBILITY (meter)		100 or less	100	200	300	400	500	600	700	800	900	1,000	1,100	1,200	1,300	1,400	1,500	1,600 2,000	2,100 3,000	3,100 5,000	6,000 or more	TOTAL	%
Cloud layer 5/8 or more	Unknown																						
	50 or less											1								2	5	8	018
	50 ~ 100											6						3	3	5	29	46	105
	100 ~ 200									2		2						9	13	22	167	215	490
	200 ~ 300											1						6	14	25	497	543	1237
	300 ~ 600											2							1	10	215	228	520
	600 ~1,000						1					2	1				1	6	8	17	1990	2026	4617
	1,000 ~1,500																						
	1,500 ~2,000																						
	2,000 ~2,500																	1	2	4	384	391	891
	2,500 or more																				21	21	048
Cloud layer 4/8 or less																		1		2	907	910	2074
TOTAL							1			2		14	1				1	26	41	87	4215	4388	
%							002			005		032	002				002	059	093	198	9606		

Table 3B-2 (a) TONCONTIN-CEILING/VISIBILITY 1976

STATION TONCONTIN-DAYTIME 12 MONTHS YEAR 1976

CEILING (meter) \ VISIBILITY (meter)	100 or less	100	200	300	400	500	600	700	800	900	1,000	1,100	1,200	1,300	1,400	1,500	1,600 2,000	2,100 3,000	3,100 5,000	6,000 or more	TOTAL	%
Cloud layer 5/8 or more: Unknown																						
50 or less																						
50 ~ 100											6						3	1	4	21	35	074
100 ~ 200									1		2						7	8	17	110	145	305
200 ~ 300											5						4	17	23	486	535	11.24
300 ~ 600											1						1	3	6	238	249	523
600 ~1,000						1					4					1	7	14	18	1834	1879	3949
1,000 ~1,500																		3	8	599	610	1282
1,500 ~2,000																						
2,000 ~2,500																						
2,500 or more																				5	5	011
Cloud layer 4/8 or less						1											1	3	7	1288	1300	2732
TOTAL						2			1		18					1	23	49	83	4581	4758	
%						004			002		038					002	048	103	174	9628		

STATION TONCONTIN-DAYTIME DRY SEASON, (DEC - MAY) YEAR 1976

CEILING (meter) \ VISIBILITY (meter)	100 or less	100	200	300	400	500	600	700	800	900	1,000	1,100	1,200	1,300	1,400	1,500	1,600 2,000	2,100 3,000	3,100 5,000	6,000 or more	TOTAL	%
Cloud layer 5/8 or more: Unknown																						
50 or less																						
50 ~ 100																						
100 ~ 200																	1	1	3	27	32	135
200 ~ 300											4						1	6	3	178	194	815
300 ~ 600											1						1	2	1	116	120	504
600 ~1,000						1					2						3	9	13	731	759	3190
1,000 ~1,500																		1	4	284	289	1215
1,500 ~2,000																						
2,000 ~2,500																						
2,500 or more																				5	5	021
Cloud layer 4/8 or less						1											1	3	6	969	980	4119
TOTAL						2					7						7	22	32	2309	2379	
%						008					029						029	092	135	9706		

STATION TONCONTIN-DAYTIME WET SEASON, (JUN - NOV) YEAR 1976

CEILING (meter) \ VISIBILITY (meter)	100 or less	100	200	300	400	500	600	700	800	900	1,000	1,100	1,200	1,300	1,400	1,500	1,600 2,000	2,100 3,000	3,100 5,000	6,000 or more	TOTAL	%
Cloud layer 5/8 or more: Unknown																						
50 or less																						
50 ~ 100											6						3	1	4	21	35	147
100 ~ 200									1		2						6	7	14	83	113	475
200 ~ 300											1						3	11	18	308	341	1433
300 ~ 600																		1	5	123	129	542
600 ~1,000											2					1	4	5	5	1103	1120	4708
1,000 ~1,500																		2	4	315	321	1349
1,500 ~2,000																						
2,000 ~2,500																						
2,500 or more																						
Cloud layer 4/8 or less																				1	319	320 1345
TOTAL									1		11					1	16	27	51	2272	2379	
%									004		046					004	067	118	214	9550		

Table 3B-2 (a) TONCONTIN-DAYTIME CEILING/VISIBILITY 1976

STATION PEDREGAL — 12 MONTHS — YEAR 1976

CEILING (feet) \ VISIBILTY (meter x100)		1 or less	1	2	4	6	8	10	12	14	16	20	24	28	32	36	40	48	64	80	90	112	160	240 or more	TOTAL	%
Cloud layer 5/8 or more	50 or less	52	4	2	13			1				3					2								77	114
	100	9		1	1			2																	13	019
	200	5	1	1	1	1		4				5		5			2	6		1	1			10	43	063
	300		2		2			4				3		1				5			1			1	19	028
	400	3		1	9			3									1								17	025
	500	1	1		6	1		4									1							1	15	022
	600	2			4			5						1			2	1						2	17	025
	700																							1	1	001
	800	2			1			1																1	6	009
	900																									
	1,000	17		3	7		1	18				15		7			2	19	4	6	1	4		23	127	187
	1,100																									
	1,200	10	1	2	7		2	32			1	38		23			22	43	4	50	1	1	1	133	371	548
	1,300 ~ 1,500	3	1	1	3			7				17		31			9	31	12	21	3	9	12	201	361	533
	1,600 ~ 2,000	13	8	3	2		2	34				10		13			17	37	4	34	14	38	89	502	820	121
	2,100 ~ 3,000																	5		10	1	1	23	377	417	615
	3,100 ~ 5,000							1																6	7	01
	5,100 ~ 10,000	5		3	10	3	1	33				45		13			27	58	11	64	13	8	3	345	644	951
	10,000 or more				4			1				5		6			7	17	2	23	2	2	22	315	406	894
Cloud layer 4/8 or less		42	1		11			9				32		23			53	75	6	106	18	45	136	2639	3214	4744
TOTAL		167	19	17	81	5	6	159	0	1	1	173	0	125	0	0	145	297	43	315	55	108	286	4777	6775	
%		246	028	025	12	007	009	235	0	001	001	255	0	185	0	0	214	438	063	465	081	159	419	7051		100

STATION PEDREGAL — DRY SEASON, (DEC - MAY) — YEAR 1976

CEILING (feet) \ VISIBILTY (meter x100)		1 or less	1	2	4	6	8	10	12	14	16	20	24	28	32	36	40	48	64	80	90	112	160	240 or more	TOTAL	%
Cloud layer 5/8 or more	50 or less	33	4	2	10			1				3					2								55	173
	100																									
	200		1		1	1		2												1					6	019
	300		2		2			1				3		1										1	10	031
	400	3		1	8			2									1								15	047
	500	1	1		6	1		4									1							1	15	047
	600	2			4			5						1			2	1						2	17	053
	700																							1	1	003
	800				1			1		1															3	009
	900																									
	1,000	1		1	3		1	3				3		1				3						6	22	069
	1,100																									
	1,200				4		1	9			1	6		7			4	5	1	5				55	98	308
	1,300 ~ 1,500	1	1	1				1				7		10			5	12	1	9				83	131	412
	1,600 ~ 2,000	7	8	3	1		2	25				10		6			3	16	1	15	11	25	37	220	440	1383
	2,100 ~ 3,000																	2		6		1	11	249	269	845
	3,100 ~ 5,000							1																6	7	022
	5,100 ~ 10,000				2			3				5		3			1	15		8				132	169	531
	10,000 or more				2			1				2		3			1	5		6	1		3	205	229	72
Cloud layer 4/8 or less		10			3			1				9		2			6	27		26	2	11	47	1551	1695	5327
TOTAL		38	17	8	47	2	4	40	0	1	1	48	0	34	0	0	26	86	3	76	14	37	98	2541	3182	
%		182	053	025	148	006	013	189	0	003	003	151	0	107	0	0	082	27	009	239	044	116	308	8052		100

STATION PEDREGAL — WET SEASON, (JUN - NOV) — YEAR 1976

CEILING (feet) \ VISIBILTY (meter x100)		1 or less	1	2	4	6	8	10	12	14	16	20	24	28	32	36	40	48	64	80	90	112	160	240 or more	TOTAL	%
Cloud layer 5/8 or more	50 or less	19			3																				22	061
	100	9		1	1			2																	13	036
	200	5		1				2				5		5			2	6			1			10	37	103
	300							3										5			1				9	025
	400				1			1																	2	006
	500																									
	600																									
	700																									
	800	2																						1	3	008
	900																									
	1,000	16		2	4			15				12		6			2	16	4	6	1	4		17	105	292
	1,100																									
	1,200	10	1	2	3		1	23				32		16			18	38	3	45	1	1	1	78	273	76
	1,300 ~ 1,500	2			3			6				10		21			4	19	11	12	3	9	12	118	230	64
	1,600 ~ 2,000	6			1			9						7			14	21	3	19	3	13	52	232	380	1058
	2,100 ~ 3,000																	3		4	1		12	128	148	412
	3,100 ~ 5,000																									
	5,100 ~ 10,000	5		3	8	1	1	30				40		12			26	43	11	56	13	8	3	213	475	1322
	10,000 or more				2							3		3			6	12	2	17	1	2	19	310	377	1049
Cloud layer 4/8 or less		37	1		8			8				23		21			47	48	6	80	16	34	87	1108	1519	4228
TOTAL		106	2	9	34	3	2	99	0	0	0	125	0	91	0	0	119	211	40	239	41	71	186	2215	3593	
%		295	006	025	095	008	006	276	0	0	0	348	0	253	0	0	331	587	111	665	114	198	518	6145		100

Table 3B-3 PEDREGAL-CEILING/VISIBILITY 1976

STATION HULE — 12 MONTHS — YEAR 1962, 1963

CEILING (meter) \ VISIBILITY (meter)		100 or less	100	200	300	400	500	600	700	800	900	1,000	1,100	1,200	1,300	1,400	1,500	1,600 2,000	2,100 3,000	3,100 5,000	6,000 or more	TOTAL	%
Cloud layer 5/8 or more	Unknown	4				1												1			7	13	0.8
	50 or less	259		1		79				12								69	3	39	160	621	7.7
	50 ~ 100	9		2		1	1			3				1				2	1	12	19	51	0.6
	100 ~ 200	34		2		48				4						2		41	1	74	346	552	6.9
	200 ~ 300	35		1	1	23				1				3			1	18		37	229	349	4.3
	300 ~ 600	4				9												3		10	166	192	2.4
	600 ~1,000	33				20				3		1						27		54	2177	2315	28.7
	1,000 ~1,500	6				6												2		12	928	954	11.8
	1,500 ~2,000																				1	1	—
	2,000 ~2,500	1																			21	22	0.3
	2,500 or more	8				2				1								5		5	69	88	1.1
Cloud layer 4/8 or less		4				2				4	2	3	1				1	8		31	2849	2905	36.0
TOTAL		396		6	1	191	1			28	2	4	1	4		2	2	176	3	272	6972	8063	
%		4.9		0.1	—	2.4	—			0.4	—	0.1	—	0.1		—	—	2.2	0.1	3.4	86.5		

STATION HULE — DRY SEASON, (DEC - MAY) — YEAR 1962, 1963

CEILING (meter) \ VISIBILITY (meter)		100 or less	100	200	300	400	500	600	700	800	900	1,000	1,100	1,200	1,300	1,400	1,500	1,600 2,000	2,100 3,000	3,100 5,000	6,000 or more	TOTAL	%
Cloud layer 5/8 or more	Unknown					1												1			4	6	0.2
	50 or less	59		1		48				1								16		5	35	165	4.5
	50 ~ 100	5								2				1				2	1	3	12	26	0.7
	100 ~ 200	13		2		12				2								10	1	16	125	179	4.8
	200 ~ 300	2		1		8								3				1		2	60	77	2.1
	300 ~ 600					7												1		4	87	99	2.7
	600 ~1,000	1				6												6		25	632	670	18.1
	1,000 ~1,500	2				2												1		1	354	360	9.7
	1,500 ~2,000																					0	
	2,000 ~2,500																					0	
	2,500 or more	6								1								3			37	47	1.3
Cloud layer 4/8 or less		3				2				2								1		4	2055	2067	55.9
TOTAL		91		4		86				8				4				42	2	60	3999	3496	
%		2.5		0.1		2.3				0.2				0.1				1.1	0.1	1.6	92.0		

STATION HULE — WET SEASON, (JUN - NOV) — YEAR 1962

CEILING (meter) \ VISIBILITY (meter)		100 or less	100	200	300	400	500	600	700	800	900	1,000	1,100	1,200	1,300	1,400	1,500	1,600 2,000	2,100 3,000	3,100 5,000	6,000 or more	TOTAL	%
Cloud layer 5/8 or more	Unknown	4																			3	7	0.2
	50 or less	199				31				11								53	3	34	185	456	10.4
	50 ~ 100	4		2		1	1			1										9	7	25	0.6
	100 ~ 200	21				36				2						2		31		38	223	373	8.5
	200 ~ 300	33			1	15				1							1	17		35	149	272	6.2
	300 ~ 600	4				2												2		6	79	93	2.1
	600 ~1,000	32				14				3		1						21		29	1545	1645	37.7
	1,000 ~1,500	4				4												1		11	574	594	13.6
	1,500 ~2,000																				1	1	—
	2,000 ~2,500	1																			21	22	0.5
	2,500 or more	2				2												2		3	32	41	0.9
Cloud layer 4/8 or less		1								2	2	3	1				1	7		27	794	838	19.2
TOTAL		305		2	1	105	1			20	2	4	1			2	2	134	3	212	3379	4367	
%		7.0		—	—	2.4	—			0.5	—	0.1	—			—	—	3.1	0.1	4.9	81.8		

Table 3B-4 HULE-CEILING/VISIBILITY 1962 - 1963

STATION LA ERMITA — MARCH — YEAR 1978

CEILING (feet) \ VISIBILTY (meter x100)	1 or less	1	2	4	6	8	10	12	14	16	20	24	28	32	36	40	48	64	80	90	112	160	240 or more	TOTAL	%
Cloud layer 5/8 or more: 50 or less																								0	
100																								0	
200																								0	
300																								0	
400																								0	
500																								0	
600																								0	
700																								0	
800																								0	
900																								0	
1,000																								0	
1,100																								0	
1,200																								0	
1,300 ~ 1,500																								0	
1,600 ~ 2,000																	1						11	12	17
2,100 ~ 3,000																	1		1				98	100	141
3,100 ~ 5,000																							168	168	236
5,100 ~ 10,000																1	1			1			17	20	28
10,000 or more																	2		2				47	51	72
Cloud layer 4/8 or less													1				1						358	360	506
TOTAL													1			1	6		3	1			699	711	
%													01			01	08		04	01			983		

STATION LA ERMITA — APRIL — YEAR 1978

CEILING (feet) \ VISIBILTY (meter x100)	1 or less	1	2	4	6	8	10	12	14	16	20	24	28	32	36	40	48	64	80	90	112	160	240 or more	TOTAL	%
Cloud layer 5/8 or more: 50 or less																									
100																									
200																									
300																									
400																									
500																									
600																									
700																									
800																									
900																									
1,000																									
1,100																									
1,200																									
1,300 ~ 1,500																									
1,600 ~ 2,000																							4	4	06
2,100 ~ 3,000													2			3	3	1	21	4			66	100	146
3,100 ~ 5,000											4		6			9	13		13	3			93	141	206
5,100 ~ 10,000																	3		1	1			3	8	12
10,000 or more	1												1			16	16		21	6			63	124	181
Cloud layer 4/8 or less							3				3		15			14	23	3	9	11			227	308	450
TOTAL	1						3				7		24			42	58	4	65	25			436	685	
%	02						04				10		35			61	85	06	95	37			666		

STATION LA ERMITA — MAY — YEAR 1978

CEILING (feet) \ VISIBILTY (meter x100)	1 or less	1	2	4	6	8	10	12	14	16	20	24	28	32	36	40	48	64	80	90	112	160	240 or more	TOTAL	%
Cloud layer 5/8 or more: 50 or less																									
100																									
200																									
300																									
400																									
500																									
600																									
700																									
800																									
900																									
1,000																									
1,100																									
1,200																									
1,300 ~ 1,500																									
1,600 ~ 2,000											2						2		1				1	6	10
2,100 ~ 3,000							3						1			2	5		15	2			93	121	193
3,100 ~ 5,000						1					1		1			1	5		8	8			108	133	212
5,100 ~ 10,000							3									1	6		2	3			23	38	61
10,000 or more																	1		7	2			95	105	167
Cloud layer 4/8 or less											4		4			3	25	1	36	14			140	225	358
TOTAL						1	6				7		6			7	44	1	67	29			460	628	
%						02	10				11		10			11	70	02	107	46			733		

Table 3B-5 (a) TALANGA LA ERMITA-CEILING/VISIBILITY 1978

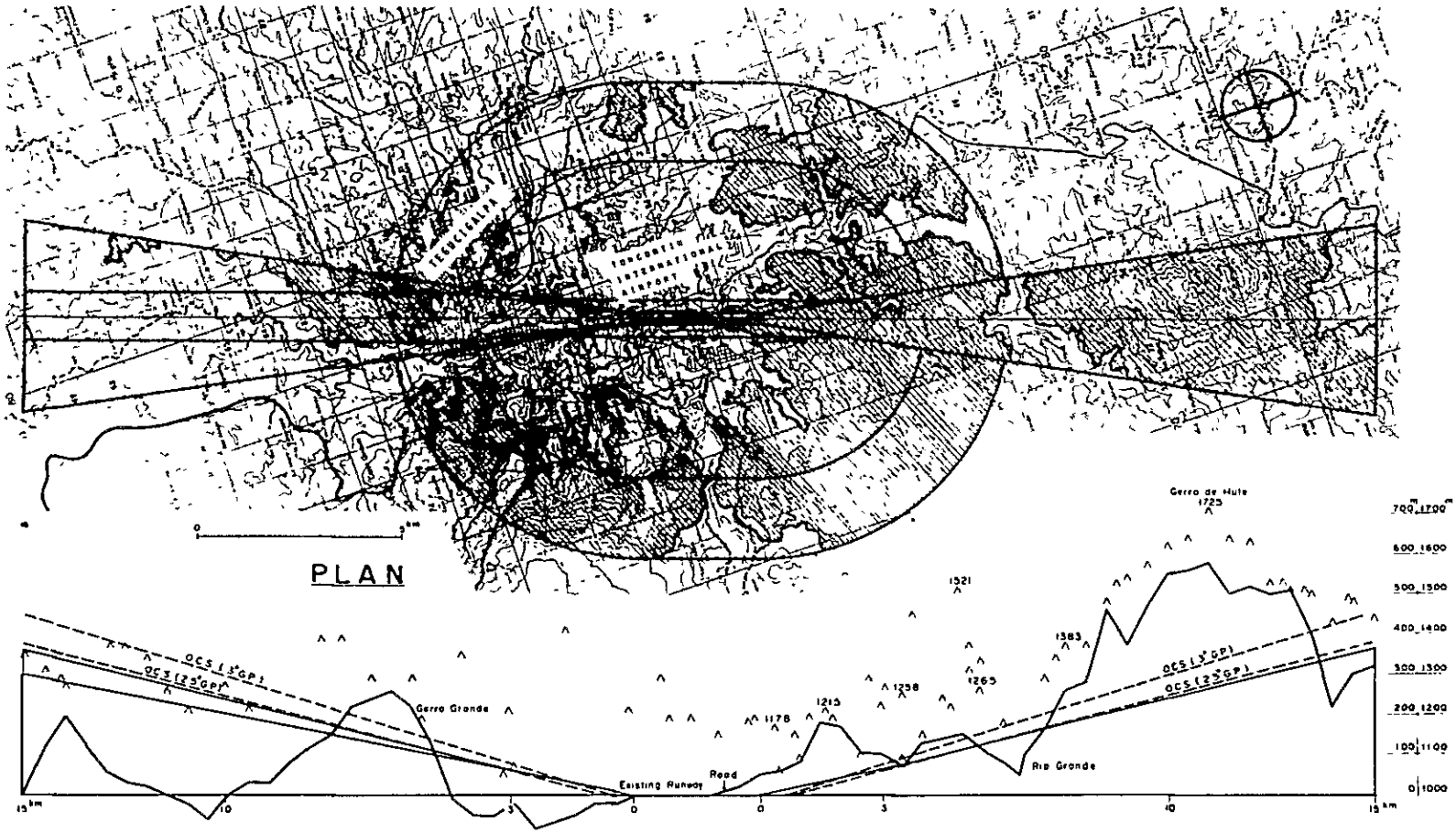
STATION LA ERMITA JUNE YEAR 1978

CEILING (feet) \ VISIBILTY (meter x100)	1 or less	1	2	4	6	8	10	12	14	16	20	24	28	32	36	40	48	64	80	90	112	160	240 or more	TOTAL	%
Cloud layer 5/8 or more: 50 or less																									
100																									
200																									
300																									
400																									
500																									
600																									
700																									
800																									
900																									
1,000																									
1,100																									
1,200																									
1,300 ~ 1,500																									
1,600 ~ 2,000			1																2				14	17	260
2,100 ~ 3,000											1					1	5	1	7	10			219	244	3731
3,100 ~ 5,000																			1				35	36	550
5,100 ~ 10,000																	2		4				46	52	795
10,000 or more																	1		1	1			115	118	1804
Cloud layer 4/8 or less																1	1		1	2			182	187	2859
TOTAL			1								1					2	9	1	16	13			611	654	
%			015								015					031	138	015	245	199			9345		

Table 3B-5(b) TALANGA LA ERMITA-CEILING/VISIBILITY 1978

APPENDIX 3C

DRAWINGS OF SITES SCREENING



PROFILE OF OBSTRUCTION LIMITATION AREA (RWY 01/19)

NOTES
RUNWAY DATA
1) INSTRUMENT RUNWAY
2) ICAO OBSTRUCTION RESTRICTION
3) LENGTH 3000m
4) ELEVATION 1000m (ASSUMED)
5) ORIENTATION N19°30 E (TENTATIVE)

TOPOGRAPHICALLY OBSTRUCTED AREA

Fig. 3C-1 (a) EXISTING TONCONTIN AIRPORT:
RWY (01/19) EXTENSION & OBSTACLES

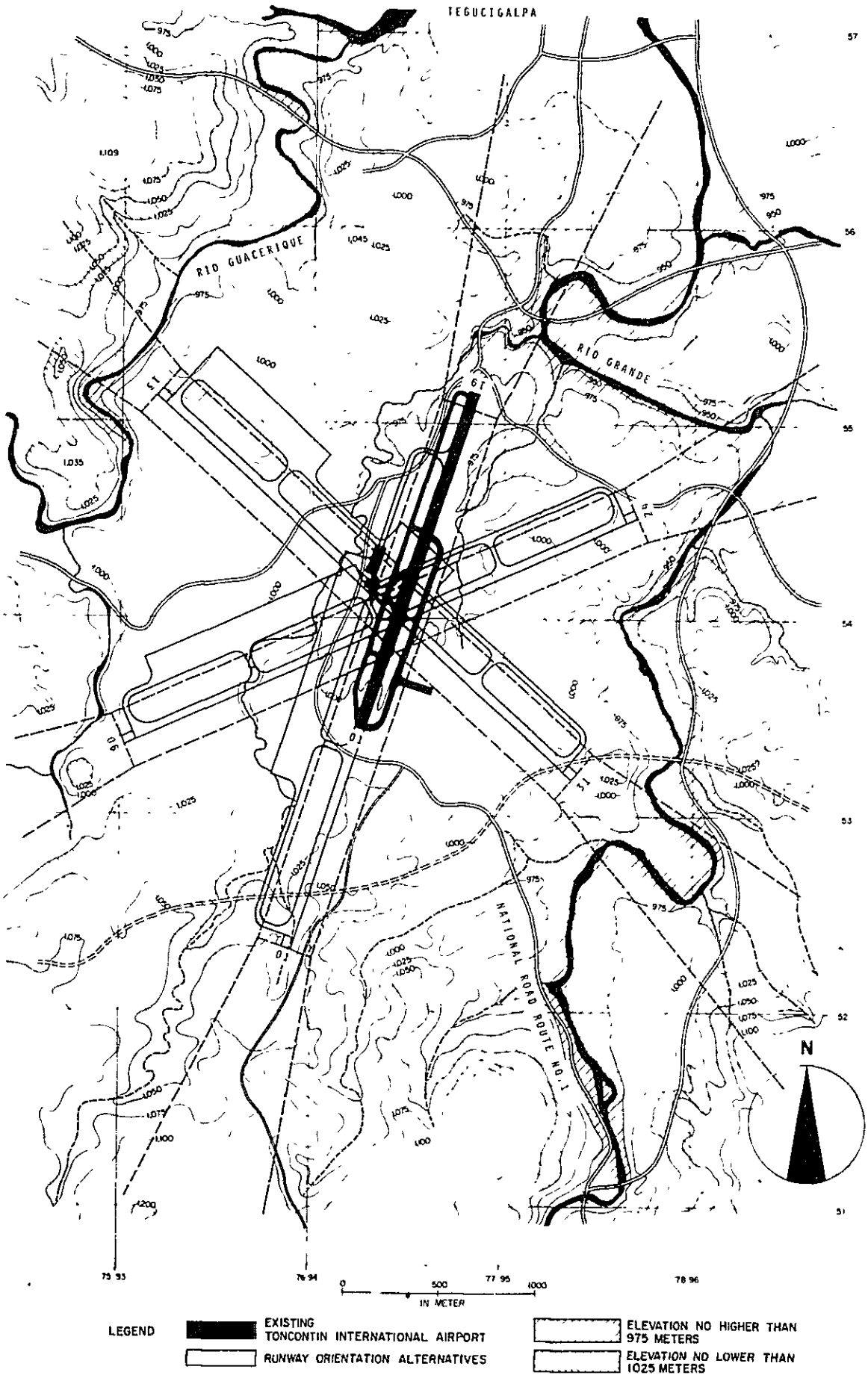


Fig. 3C-1 (b) TOPOGRAPHICALLY FEASIBLE ORIENTATION ALTERNATIVES OF RUNWAY EXTENSION NEEDED IN IMPROVEMENT OF EXISTING TONCONTIN AIRPORT

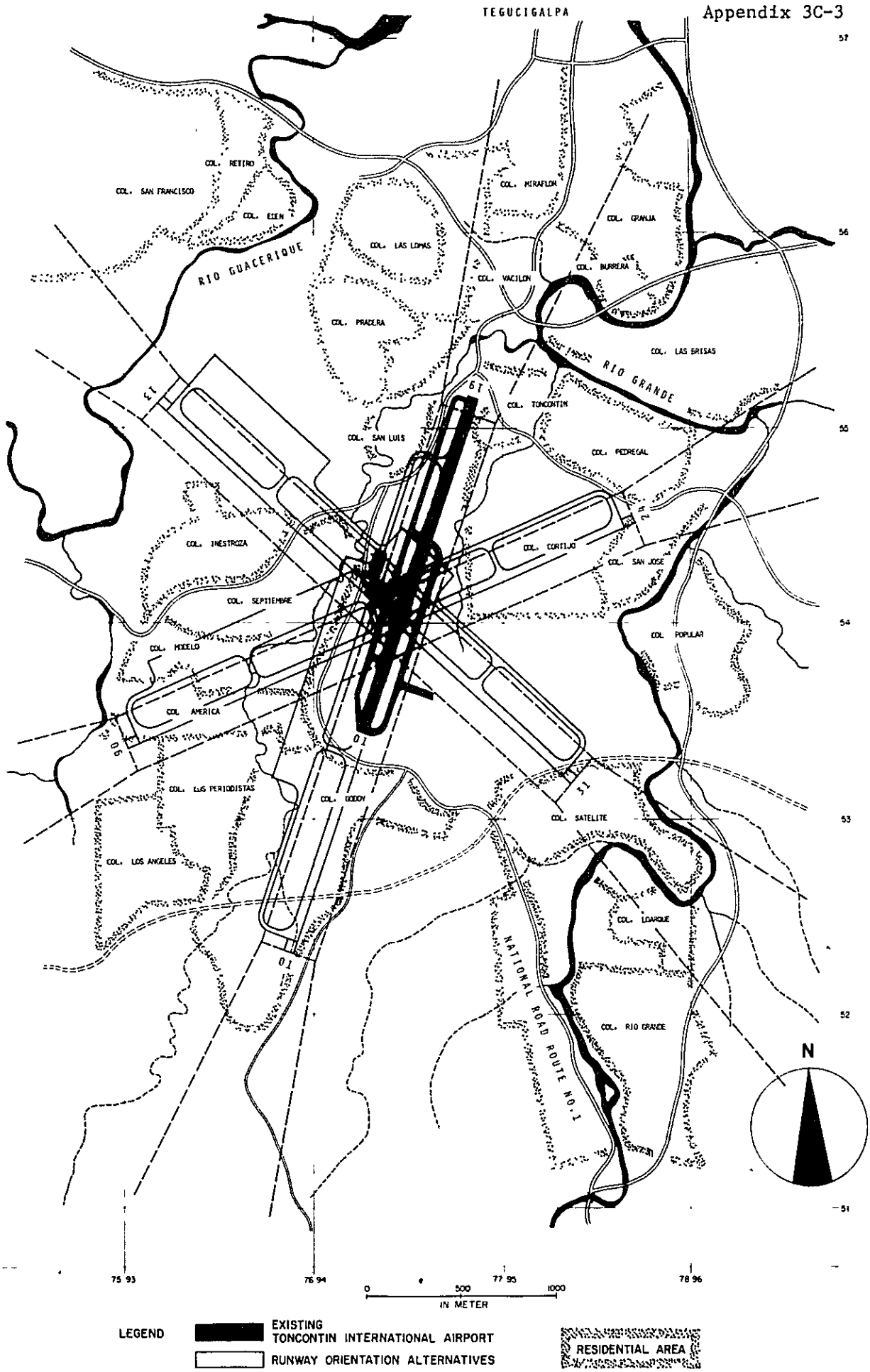
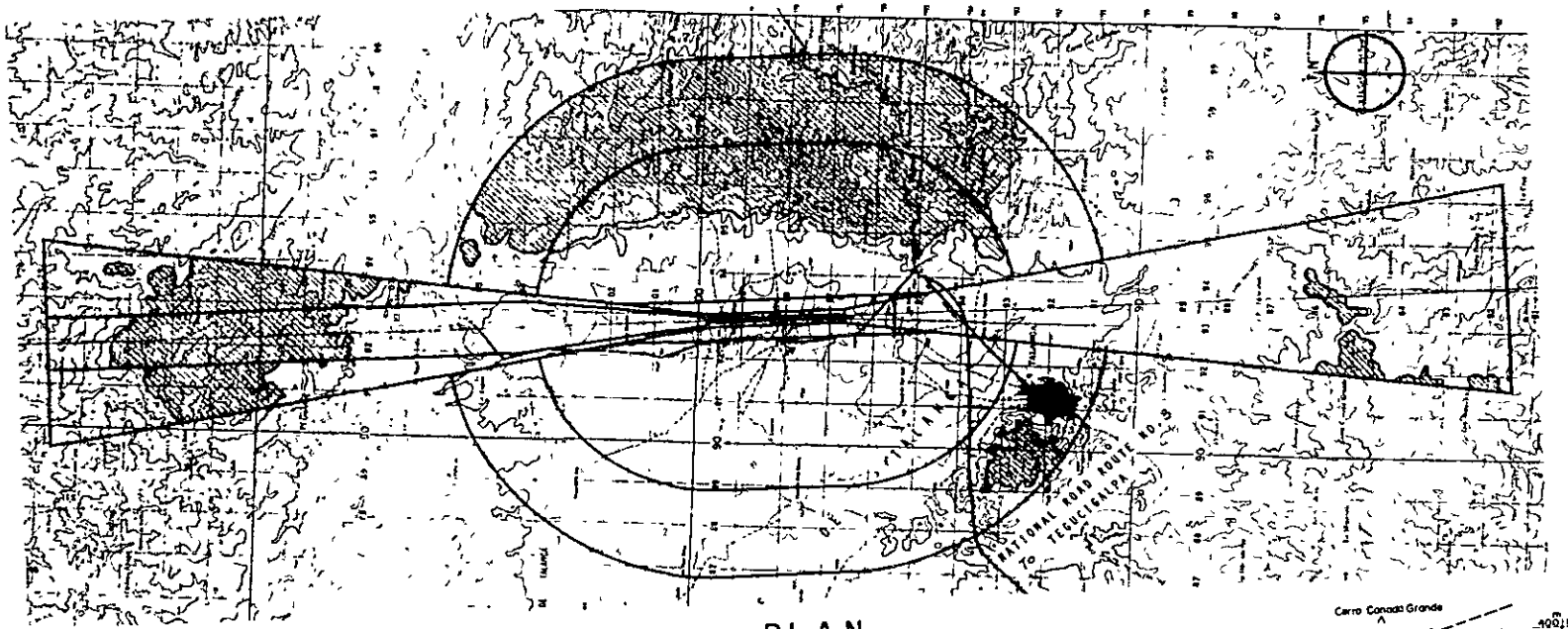


Fig. 3C-1 (c) INCOMPATIBILITY WITH SURROUNDING LAND USE OF TOPOGRAPHICALLY FEASIBLE EXPANSION POSSIBILITIES OF EXISTING TONCONTIN AIRPORT



PROFILE OF OBSTRUCTION LIMITATION AREA

NOTES
RUNWAY DATA
1) INSTRUMENT RUNWAY
2) ICAO OBSTRUCTION RESTRICTION
3) LENGTH 3000m
4) ELEVATION 760m (ASSUMED)
5) ORIENTATION N34°40'W (TENTATIVE)

- TOPOGRAPHICALLY OBSTRUCTED AREA

Fig. 3C-2 (a) VALLE DE TALANGA - A : RWY LOCATION & OBSTACLES

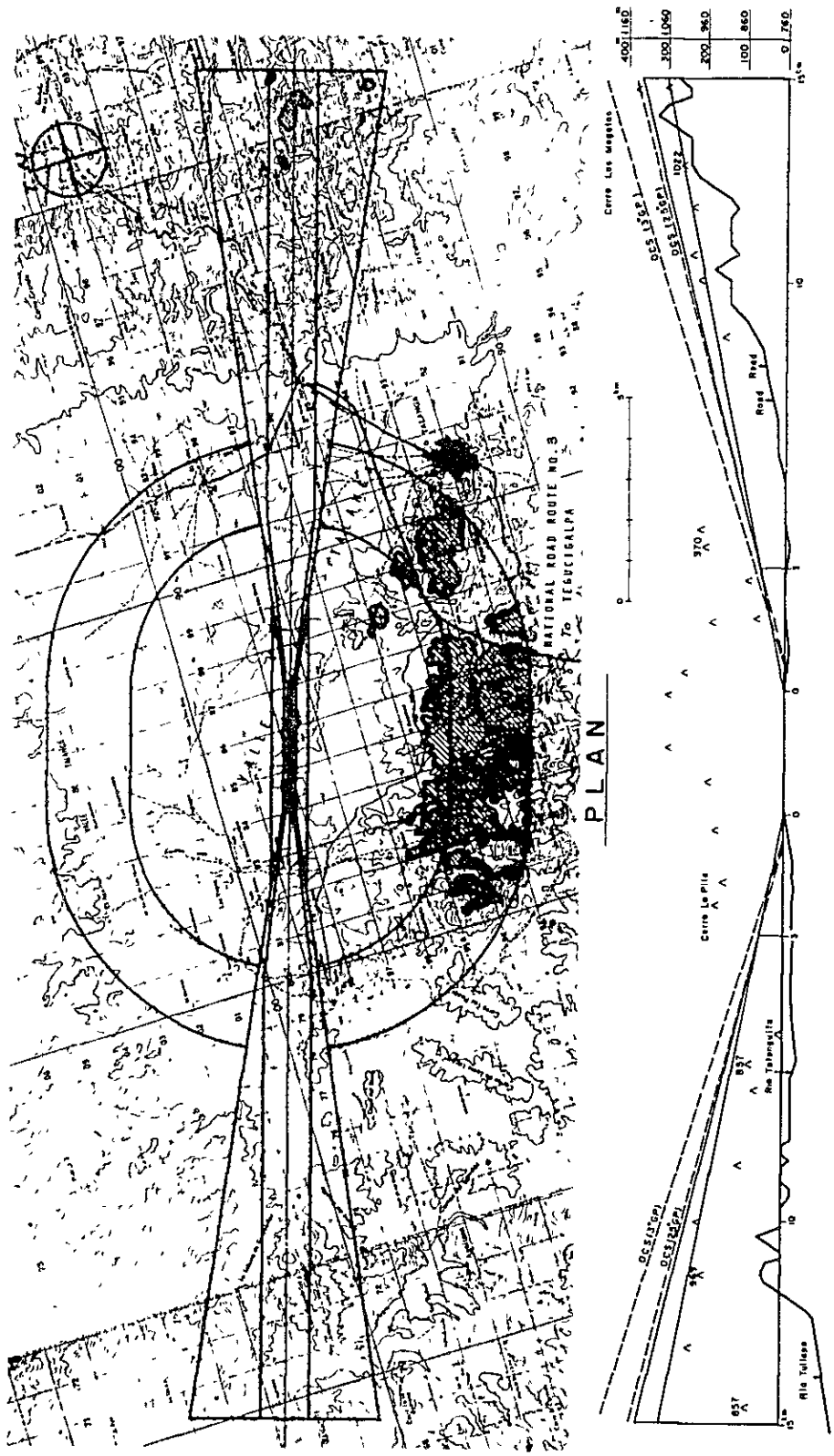
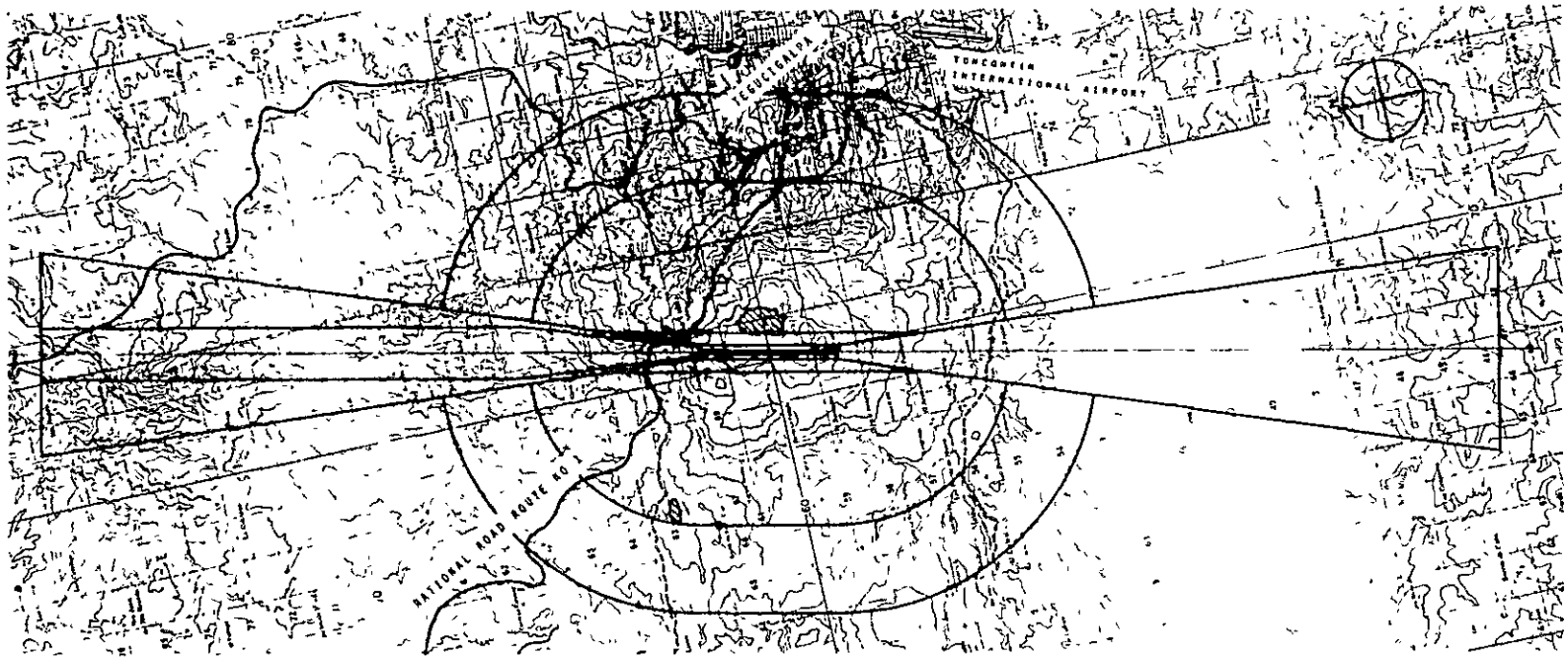


Fig. 3C-2 (b) VALLES DE TALANGA - B : RWY LOCATION & OBSTACLES

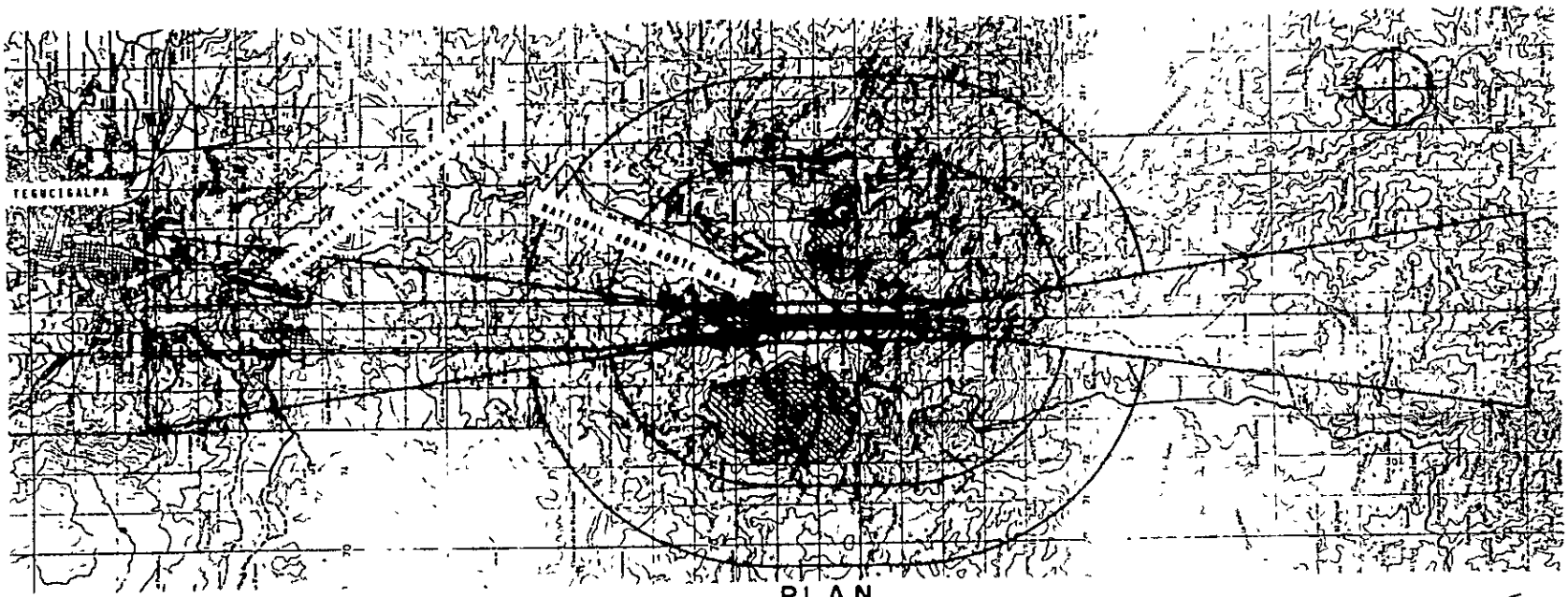


PROFILE OF OBSTRUCTION LIMITATION AREA

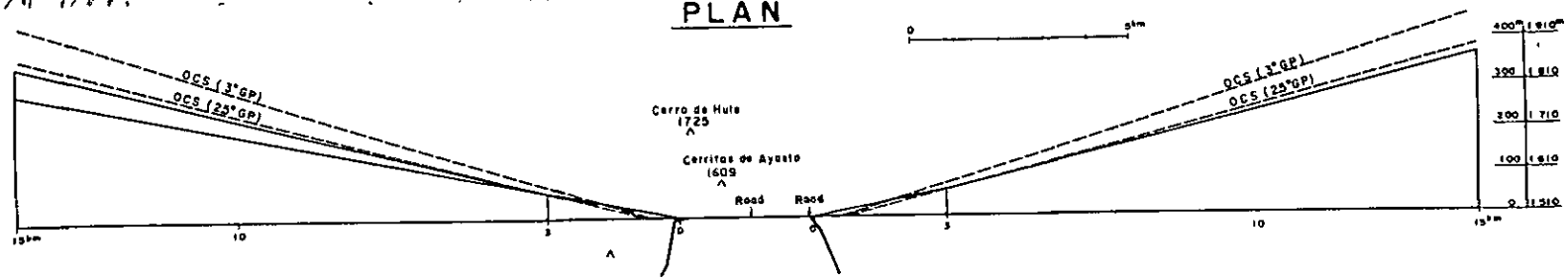
NOTES
RUNWAY DATA
1) INSTRUMENT RUNWAY
2) ICAO OBSTRUCTION RESTRICTION
3) LENGTH 3,000m
4) ELEVATION 1500m (ASSUMED)
5) ORIENTATION N12°20E (TENTATIVE)

– TOPOGRAPHICALLY OBSTRUCTED AREA

Fig. 3C-3 LAGUNA EL PEDREGAL - B : RWY LOCATION & OBSTACLES



PLAN

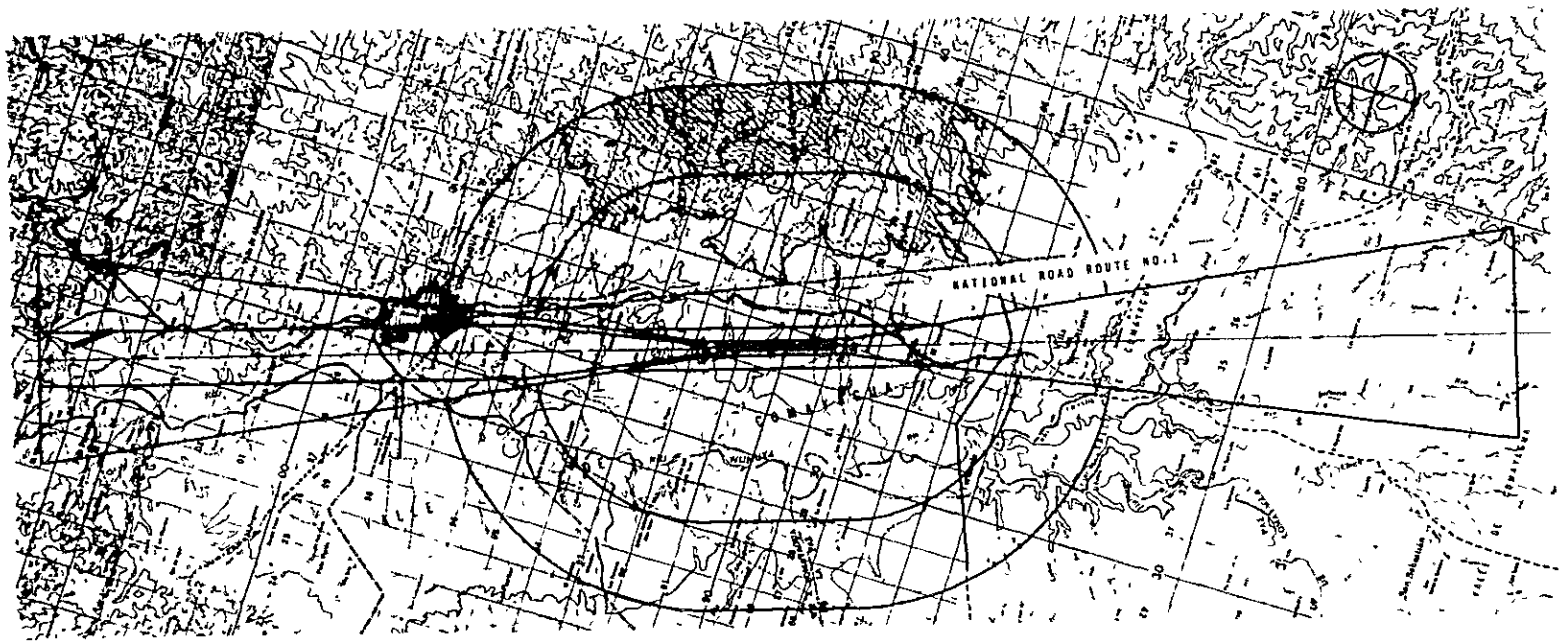


PROFILE OF OBSTRUCTION LIMITATION AREA

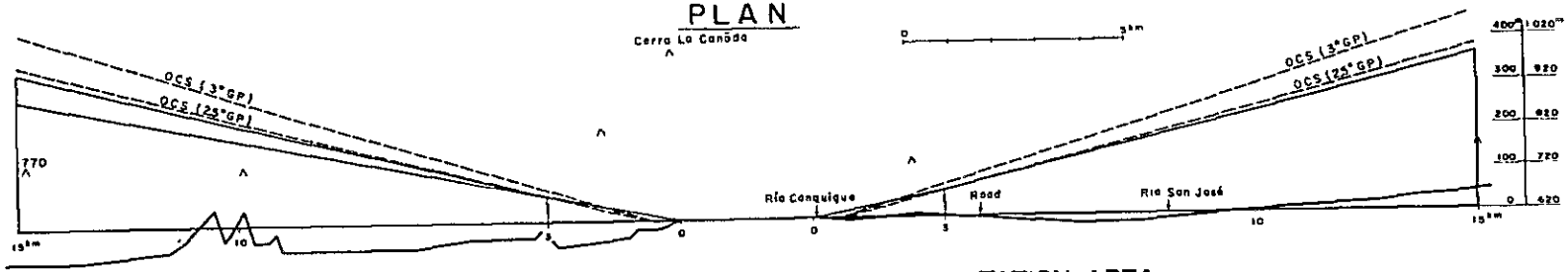
NOTES
RUNWAY DATA
1) INSTRUMENT RUNWAY
2) ICAO OBSTRUCTION RESTRICTION
3) LENGTH 3000m
4) ELEVATION 1910m (ASSUMED)
5) ORIENTATION N00°E (TENTATIVE)

– TOPOGRAPHICALLY OBSTRUCTED AREA

Fig. 3C-4 CERRO DE HULE - B : RWY LOCATION & OBSTACLES



PLAN



PROFILE OF OBSTRUCTION LIMITATION AREA

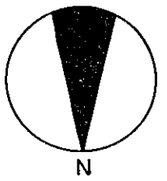
NOTES
RUNWAY DATA
1) INSTRUMENT RUNWAY
2) ICAO OBSTRUCTION RESTRICTION
3) LENGTH 3 000m
4) ELEVATION 620m (ASSUMED)
5) ORIENTATION N17°W (TENTATIVE)

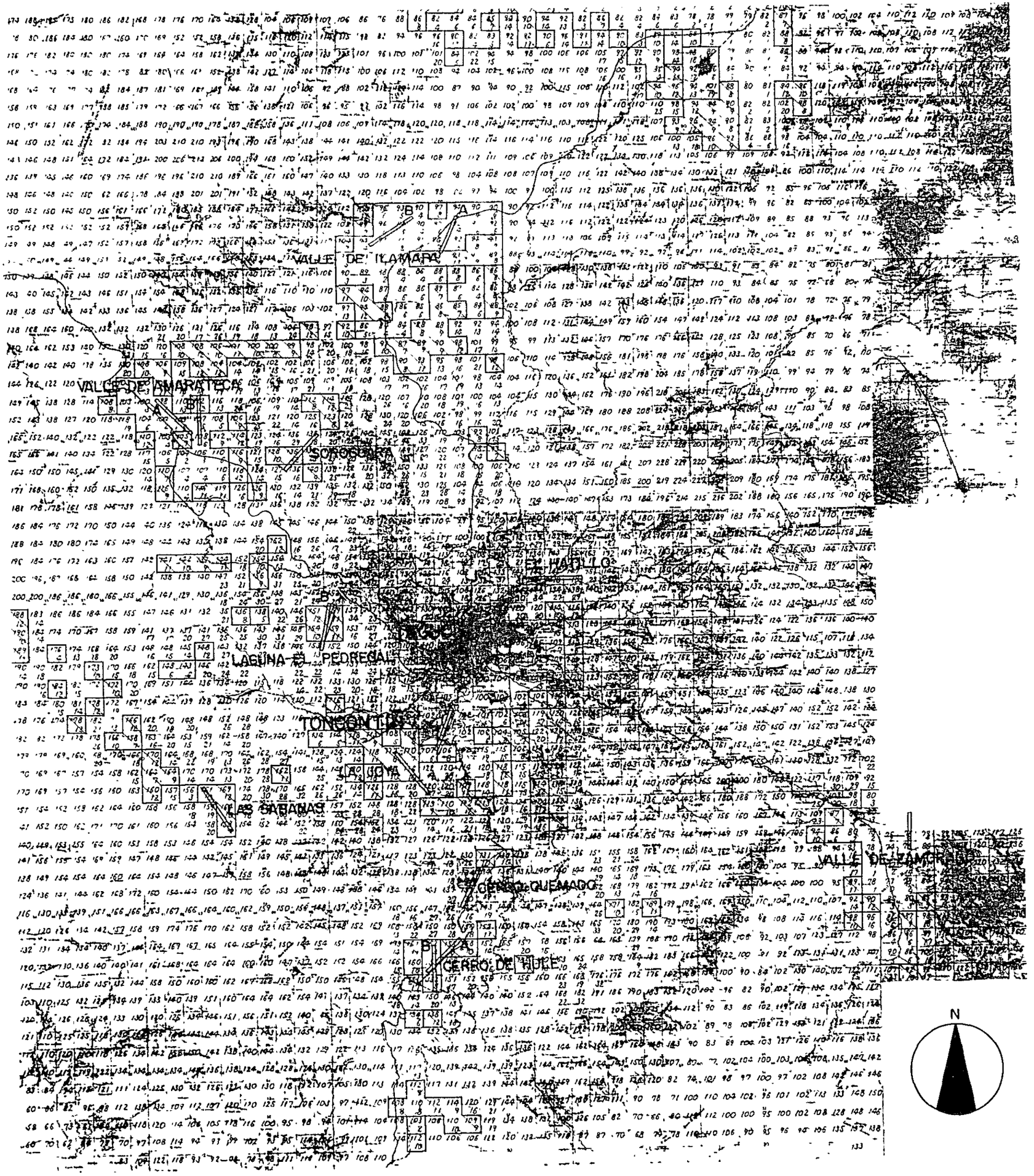
TOPOGRAPHICALLY OBSTRUCTED AREA

Fig. 3C-5 COMAYAGUA : RWY LOCATION & OBSTACLES

APPENDIX 3D

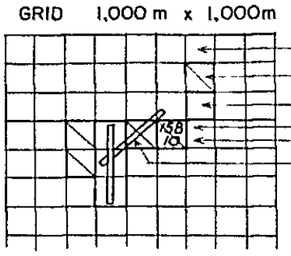
GRID MAP


N



LEGEND :

GRID 1,000 m x 1,000m



- MAX. ELEVATION RANGE IN GRID — 120m AND OVER
- MAX. ELEVATION RANGE IN GRID — 60m – 120m
- MAX. ELEVATION RANGE IN GRID — 0m – 60m
- HEIGHEST ELEVATION IN GRID — 158 (x10) = 1580m
- MAX. ELEVATION RANGE IN GRID — 10 (x10) = 100m
- POTENTIAL SITE (RUNWAY LOCATION)

NOTE : COMAYAGUA-SITE IS NOT SHOWN

SCALE : 1 : 200,000

AIRPORT POTENTIAL SITES / EARTHWORK PRACTICABILITY GRID MAP

NEW TEGUCIGALPA AIRPORT DEVELOPMENT – HONDURAS, C.A.

Appendix 3 D

APPENDIX 4A

LISTS OF PROJECTION FORMULA

1. Forecast of International Embarking & Disembarking Passengers in the Republic of Honduras

[Formula 1] $\text{Log } Y_t = -1.1656 + 1.1340 \text{ Log } X_t + 0.4094 \text{ Log } Y_{t-1}$

where: Y_t = International Embarking & Disembarking Passengers in Honduras at year t

X_t = Gross Domestic Product in Honduras at year t

(R = 0.989, DWR = 2.272, n = 18)

2. Forecast of International Embarking & Disembarking Passengers at Toncontin Airport

[Formula 2] $\text{Log } Y_t = -0.9902 + 1.1393 \text{ Log } X_t + 0.3673 \text{ Log } Y_{t-1}$

where: Y_t = International Embarking & Disembarking Passengers at Toncontin Airport at year t

X_t = Gross Domestic Product in Honduras at year t

(R = 0.971, DWR = 1.818, n = 18)

3. Forecast of International Embarking & Disembarking Passengers bt Route at Toncontin Airport

3.1 TGU - MIA Route

[Formula 3] $Y_t = -9{,}548 + 0.2945 X_t$

where: Y_t = International Embarking & Disembarking Passengers by TGU - MIA Route at year t

X_t = Total International Embarking & Disembarking Passengers at Toncontin Airport at year t

(R = 0.985)

3.2 TGU - MEX Route

[Formula 4] $Y_t = 3{,}513 + 0.0436\ X_t$

where: Y_t = International Embarking & Disembarking Passengers by TGU - MEX Route at year t

X_t = Total International Embarking & Disembarking Passengers at Toncontin Airport at year t

(R = 0.917)

3.3 TGU - PTY Route

[Formula 5] $Y_t = 11{,}356 + 0.2027\ X_t$

where: Y_t = International Embarking & Disembarking Passengers by TGU - PTY Route at year t

X_t = Total International Embarking & Disembarking Passengers at Toncontin Airport at year t

(R = 0.980)

3.4 TGU - ADZ Route

[Formula 6] $Y_t = -2{,}900 + 0.0641\ X_t$

where: Y_t = International Embarking & Disembarking Passengers by TGU - ADZ Route at year t

X_t = Total International Embarking & Disembarking Passengers at Toncontin Airport at year t

(R = 0.931)

3.5 TGU - SJO Route

[Formula 7] $Y_t = 7{,}453 + 0.0349\ X_t$

where: Y_t = International Embarking & Disembarking Passengers by TGU - SJO Route at year t

X_t = Total International Embarking & Disembarking Passengers at Toncontin Airport at year t

(R = 0.607)

3.6 TGU - MGA Route

[Formula 8] $Y_t = 8{,}012 + 0.0159\ X_t$

where: Y_t = International Embarking & Disembarking Passengers by TGU - MGA Route at year t

X_t = Total International Embarking & Disembarking Passengers at Toncontin Airport at year t

(R = 0.446)

3.7 TGU - GUA Route

[Formula 9] $Y_t = 16{,}357 + 0.0841\ X_t$

where: Y_t = International Embarking & Disembarking Passengers by TGU - GUA Route at year t

X_t = Total International Embarking & Disembarking Passengers at Toncontin Airport at year t

(R = 0.670)

3.8 TGU - BZE Route

[Formula 10] $Y_t = 1{,}042 + 0.0059\ X_t$

where: Y_t = International Embarking & Disembarking Passengers by TGU - BZE Route at year t

X_t = Total International Embarking & Disembarking Passengers at Toncontin Airport at year t

(R = 0.413)

3.9 TGU - MSY Route

[Formula 11] $Y_t = -12{,}463 + 0.2487\ X_t$

where: Y_t = International Embarking & Disembarking Passengers by TGU - MSY Route at year t

X_t = Total International Embarking & Disembarking Passengers at Toncontin Airport at year t

(R = 0.967)

4. Forecast of International Embarking & Disembarking Passengers Generated by New Route

[Formula 12] $$T_{ij} = 0.5368 \frac{P_i P_j}{D_{ij}^{1.7558}}$$

where: T_{ij} = Number of Passengers between cities i and j

P_i = Number of Population in city i

P_j = Number of Population in city j

D_{ij} = Travel Time between cities i and j (Including trip time from downtown to airport)

5. Forecast of International Transit Passengers at Toncontin Airport

[Formula 13] $$Y_t = -17{,}002 + 0.8365\ X_t$$

where: Y_t = International Transit Passengers at Toncontin Airport at year t

X_t = International Embarking & Disembarking Passengers at Toncontin Airport at year t

(R = 0.916)

6. Forecast of Domestic Embarking & Disembarking Passengers in the Republic of Honduras

[Formula 14] $Y_t = -850,029 + 1,447\ X_t + 77,687\ Z_t + 0.7765\ Y_{t-1}$

where: Y_t = Domestic Embarking & Disembarking Passengers in Honduras at year t

X_t = Per capita GDP in Honduras at year t

$Z_t = TR_t/TA_t$

where: TR_t = Travel Time by road between Tegucigalpa and San Pedro Sula at year t

TA_t = Travel Time by air between Tegucigalpa and San Pedro Sula at year t

(R = 0.917, DWR = 2.001, n = 18)

7. Forecast of Domestic Embarking & Disembarking Passengers at Toncontin Airport

[Formula 15] $Y_t = -207,281 + 325\ X_t + 23,172\ Z_t + 0.7769\ Y_{t-1}$

where: Y_t = Domestic Embarking & Disembarking Passengers at Toncontin Airport

X_t = Per capita GDP in Honduras at year t

$Z_t = TR_t/TA_t$

where: TR_t = Travel Time by road between Tegucigalpa and San Pedro Sula at year t

TA_t = Travel Time by air between Tegucigalpa and San Pedro Sula at year t

(R = 0.961, DWR = 2.198, n = 18)

8. Forecast of Domestic Embarking & Disembarking Passengers by Route at Toncontin Airport

8.1 TGU - SAP Route

[Formula 16] $Y_t = 12{,}740 + 0.1927\ X_t$

where: Y_t = Domestic Embarking & Disembarking Passengers by TGU - SAP Route at year t

X_t = Total Domestic Embarking & Disembarking Passengers at Toncontin Airport at year t

(R = 0.863)

8.2 TGU - LCE Route

[Formula 17] $Y_t = -3{,}099 + 0.3206\ X_t$

where: Y_t = Domestic Embarking & Disembarking Passengers by TGU - LCE Route at year t

Xt = Total Domestic Embarking & Disembarking Passengers at Toncontin Airport at year t

(R = 0.795)

8.3 TGU - ROA Route

[Formula 18] $Y_t = -933 + 0.0824\ X_t$

where: Yt = Domestic Embarking & Disembarking Passengers by TGU - ROA Route at year t

X_t = Total Domestic Embarking & Disembarking Passengers at Toncontin Airport at year t

(R = 0.767)

8.4 TGU - TJI Route

[Formula 19] $Y_t = 6.9 + 0.0414\ X_t$

where: Y_t = Domestic Embarking & Disembarking Passengers by TGU - TJI Route at year t

X_t = Total Domestic Embarking & Disembarking Passengers at Toncontin Airport at year t

(R = 0.999)

8.5 TGU - OAN Route

[Formula 20] $Y_t = -3,535 + 0.1249\ X_t$

where: Y_t = Domestic Embarking & Disembarking Passengers by TGU - OAN Route at year t

X_t = Total Domestic Embarking & Disembarking Passengers at Toncontin Airport at year t

(R = 0.831)

8.6 TGU - PLP Route

[Formula 21] $Y_t = 880 + 0.0365\ X_t$

where: Y_t = Domestic Embarking & Disembarking Passengers by TGU -PLP Route at year t

X_t = Total Domestic Embarking & Disembarking Passengers at Toncontin Airport at year t

(R = 0.728)

9. Forecast of Domestic Embarking & Disembarking Passengers by Route

[Formula 22] $$T_{ij} = 0.465 \frac{P_i P_j}{D_{ij}^{0.5452}}$$

where: T_{ij} = Number of Passengers between cities i and j

P_i = Number of Population in city i

P_j = Number of Population in city j

D_{ij} = Travel Time between cities i and j

10. Forecast of International Loaded & Unloaded Air Cargo in the Republic of Honduras

[Formula 23] $\text{Log } Y_t = -2.6929 + 1.0679 \text{ Log } X_t + 0.4332 \text{ Log } Y_{t-1}$

where: Y_t = International Loaded & Unloaded Air Cargo in Honduras at year t

X_t = Gross Domestic Product in Honduras at year t

(R = 0.941, DWR = 1.820, n = 18)

11. Forecast of International Loaded & Unloaded Air Cargo at Toncontin Airport

[Formula 24] $\text{Log } Y_t = -2.5672 + 0.8970 \text{ Log } X_t + 0.5198 \text{ Log } Y_{t-1}$

where: Y_t = International Loaded & Unloaded Air Cargo at Toncontin Airport at year t

X_t = Gross Domestic Product in Honduras at year t

(R = 0.932, DWR = 1.806, n = 18)

12. Forecast of International Loaded & Unloaded Air Cargo Generated by New Route

[Formula 25] $$T_{ij} = 32.265 \frac{G_i G_j}{D_{ij}^{2.1075}}$$

where: T_{ij} = International Air Cargo Tonnage between cities i and j

G_i = (Number of Population in city i) x (Per capita GDP in city i)

G_j = (Number of Population in city j) x (Per capita GDP in city j)

D_{ij} = Travel Time between cities i and j

13. Forecast of Domestic Loaded & Unloaded Air Cargo in the Republic of Honduras

[Formula 26] $Y_t = -3,517 + 0.2197\ X_t + 1,583\ Z_t + 0.8049\ Y_{t-1}$

where: Y_t = Domestic Loaded & Unloaded Air Cargo in Honduras at year t

X_t = Gross Domestic Product in Honduras at year t

$Z_t = TR_t/TA_t$

where: TR_t = Travel Time by road between Tegucigalpa and San Pedro Sula at year t

TA_t = Travel Time by air between Tegucigalpa and San Pedro Sula at year t

(R = 0.726, DWR = 2.616, n = 18)

14. Forecast of Domestic Loaded & Unloaded Air Cargo at Toncontin Airport

[Formula 27] $\text{Log } Y_t = -1.8335 + 1.0594 \text{ Log } X_t$

where: Y_t = Domestic Loaded & Unloaded Air Cargo at Toncontin Airport at year t

X_t = Domestic Loaded & Unloaded Air Cargo in Honduras at year t

(R = 0.935)

15. Forecast of Number of Small Aircraft Registered at Toncontin Airport

[Formula 28] $Y = -82 + 0.11\ X$

where: Y = Number of small aircraft registered at Toncontin Airport

X = Gross Domestic Product (in 1966 constant prices)

(R = 0.959)

APPENDIX 5A

STAGE LENGTH-PAYLOAD RELATIONSHIP

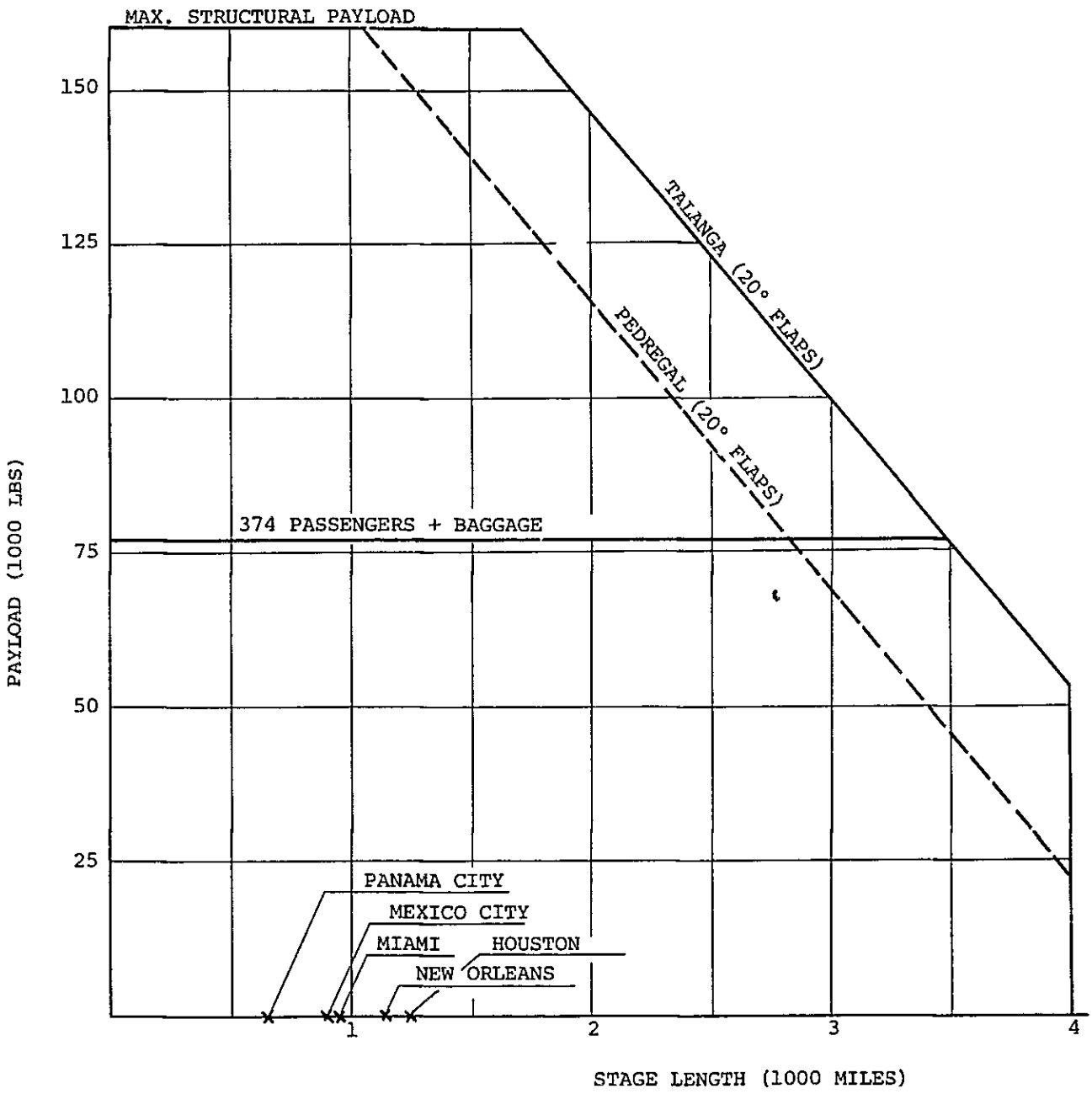


Fig. 5A-1 STAGE LENGTH - PAYLOAD RELATIONSHIP (B-747)

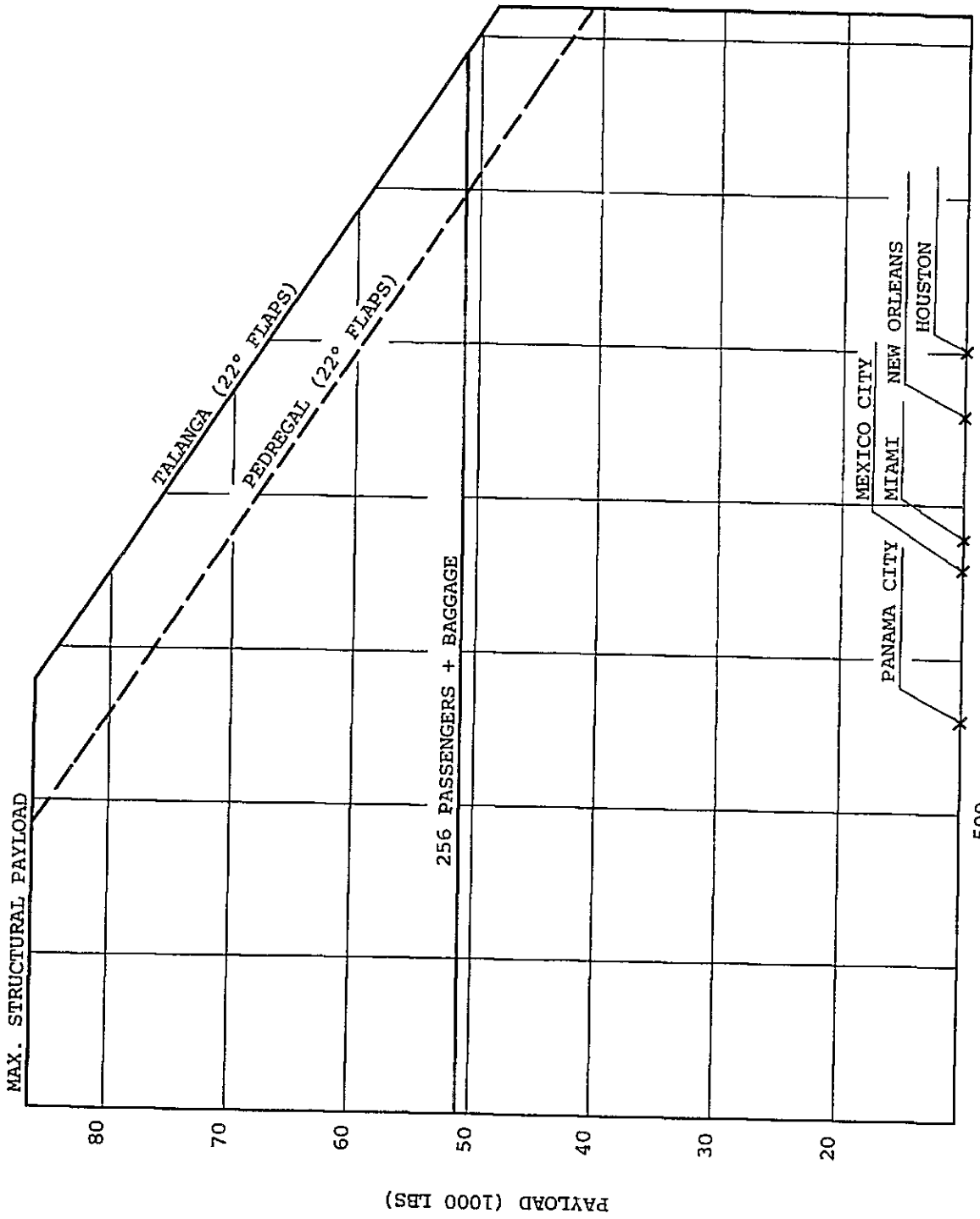


Fig. 5A-2 STAGE LENGTH - PAYLOAD RELATIONSHIP (L-1011)

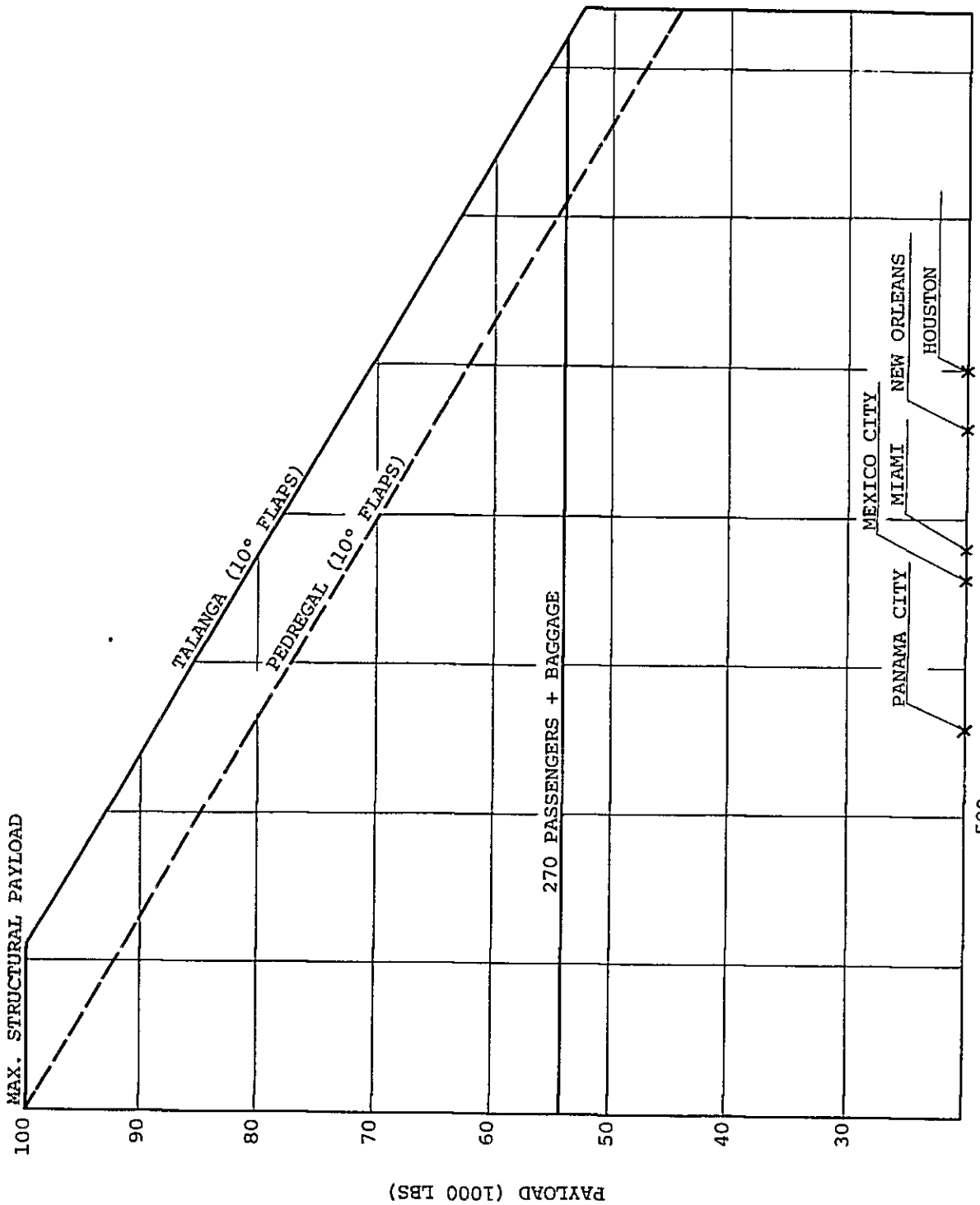


Fig. 5A-3 STAGE LENGTH - PAYLOAD RELATIONSHIP (DC-10)

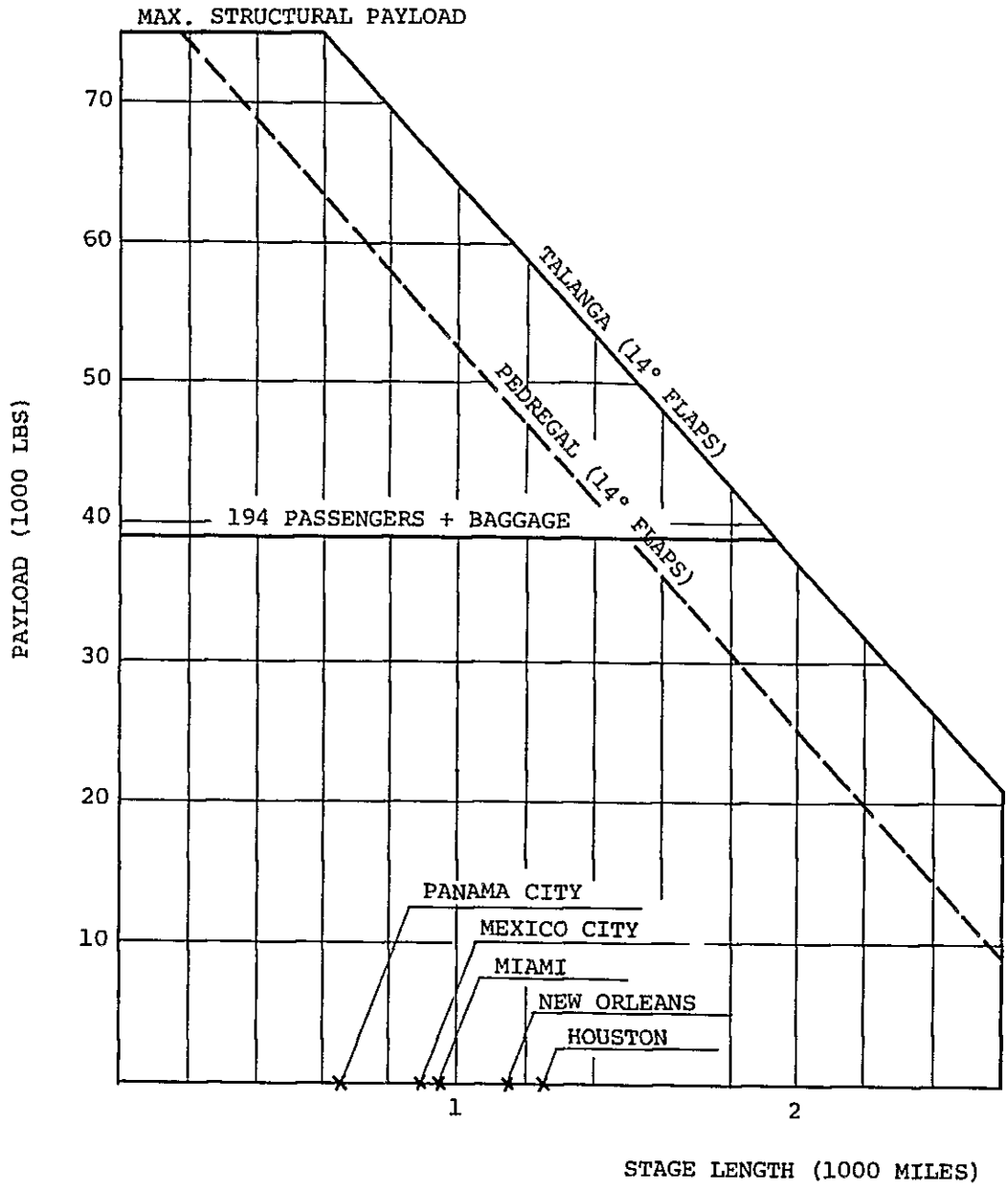


Fig. 5A-4 STAGE LENGTH - PAYLOAD RELATIONSHIP (B-707)

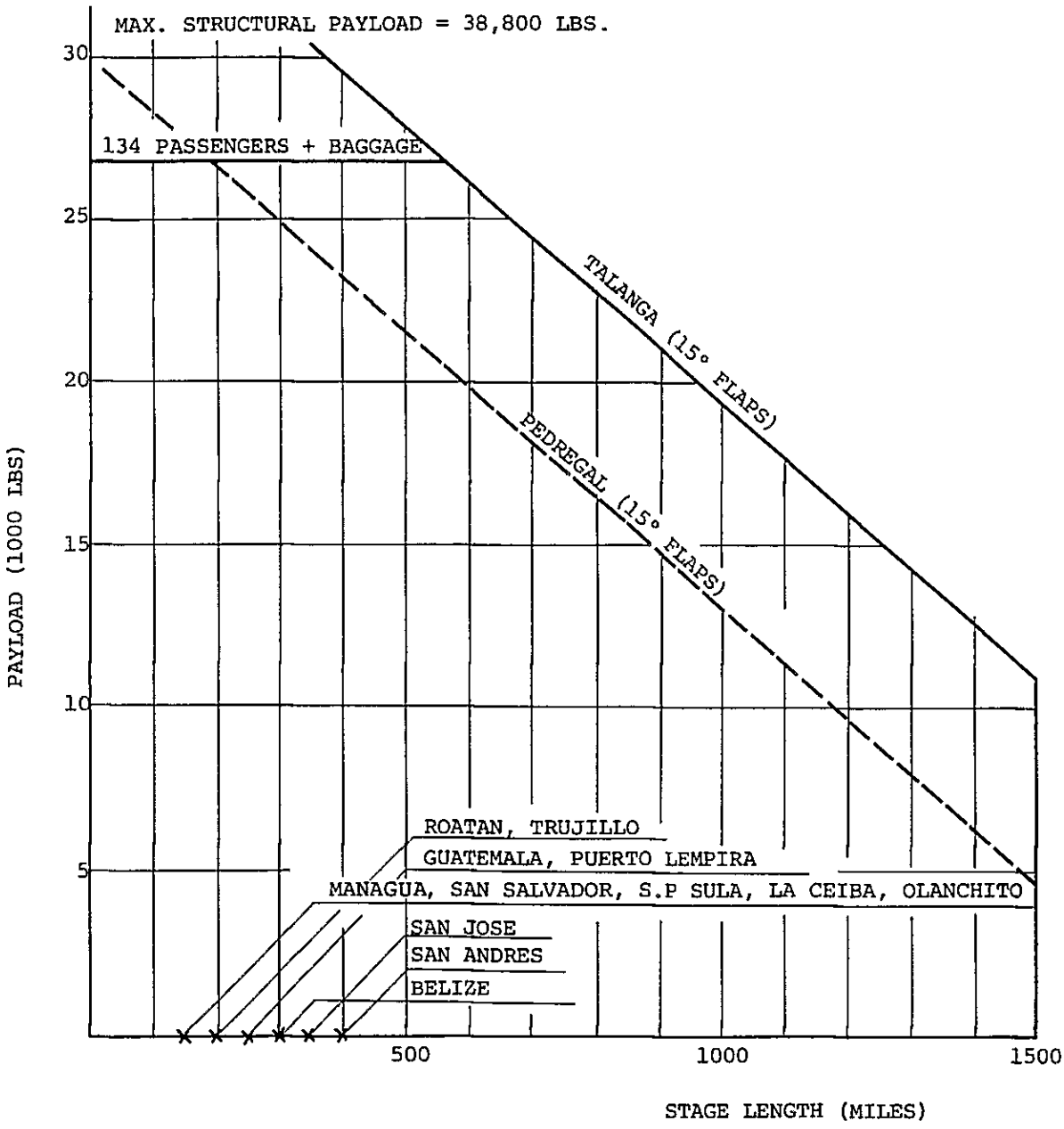


Fig. 5A-5 STAGE LENGTH - PAYLOAD RELATIONSHIP (B-727)

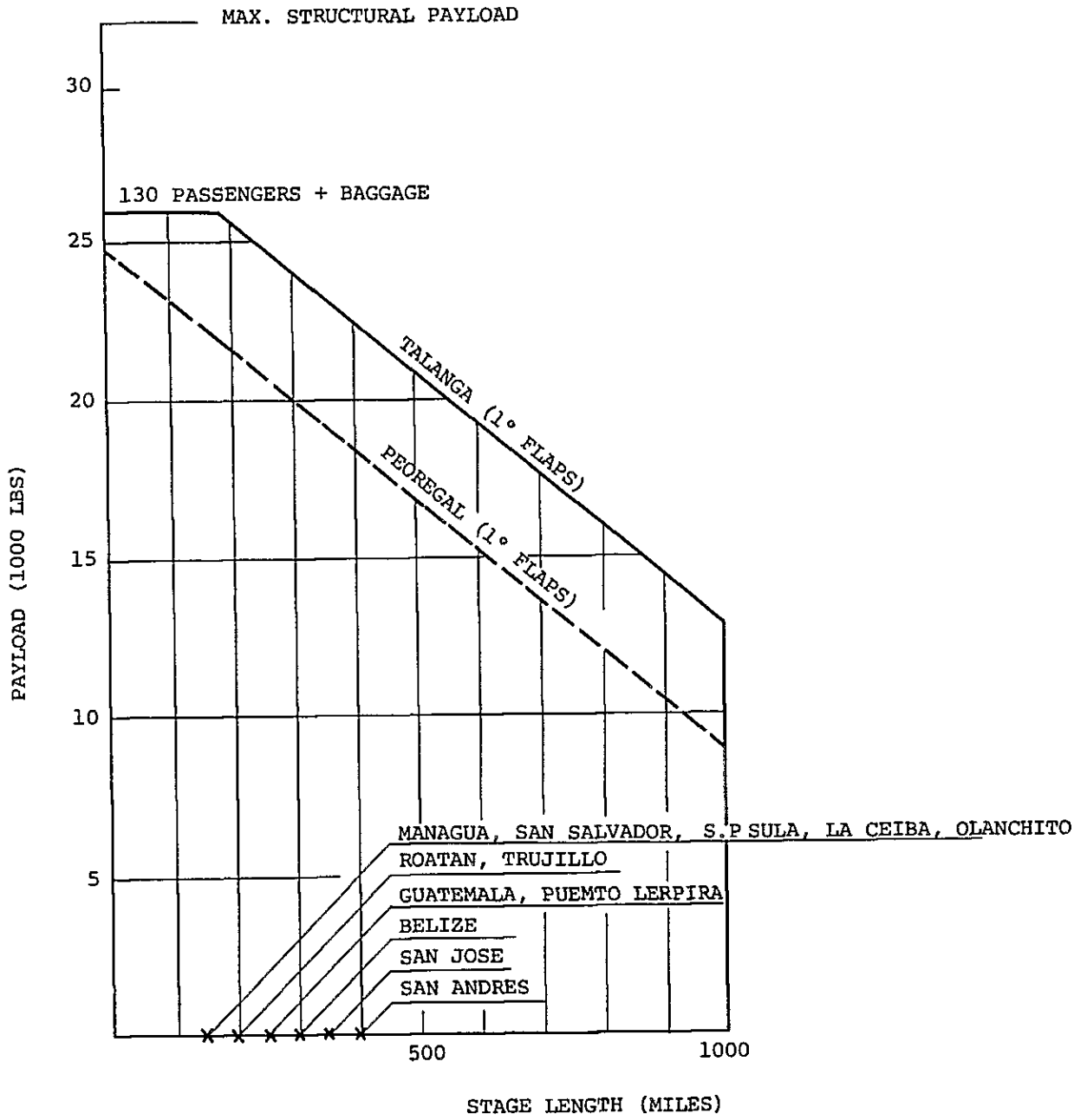


Fig. 5A-6 STAGE LENGTH - PAYLOAD RELATIONSHIP (B-737)

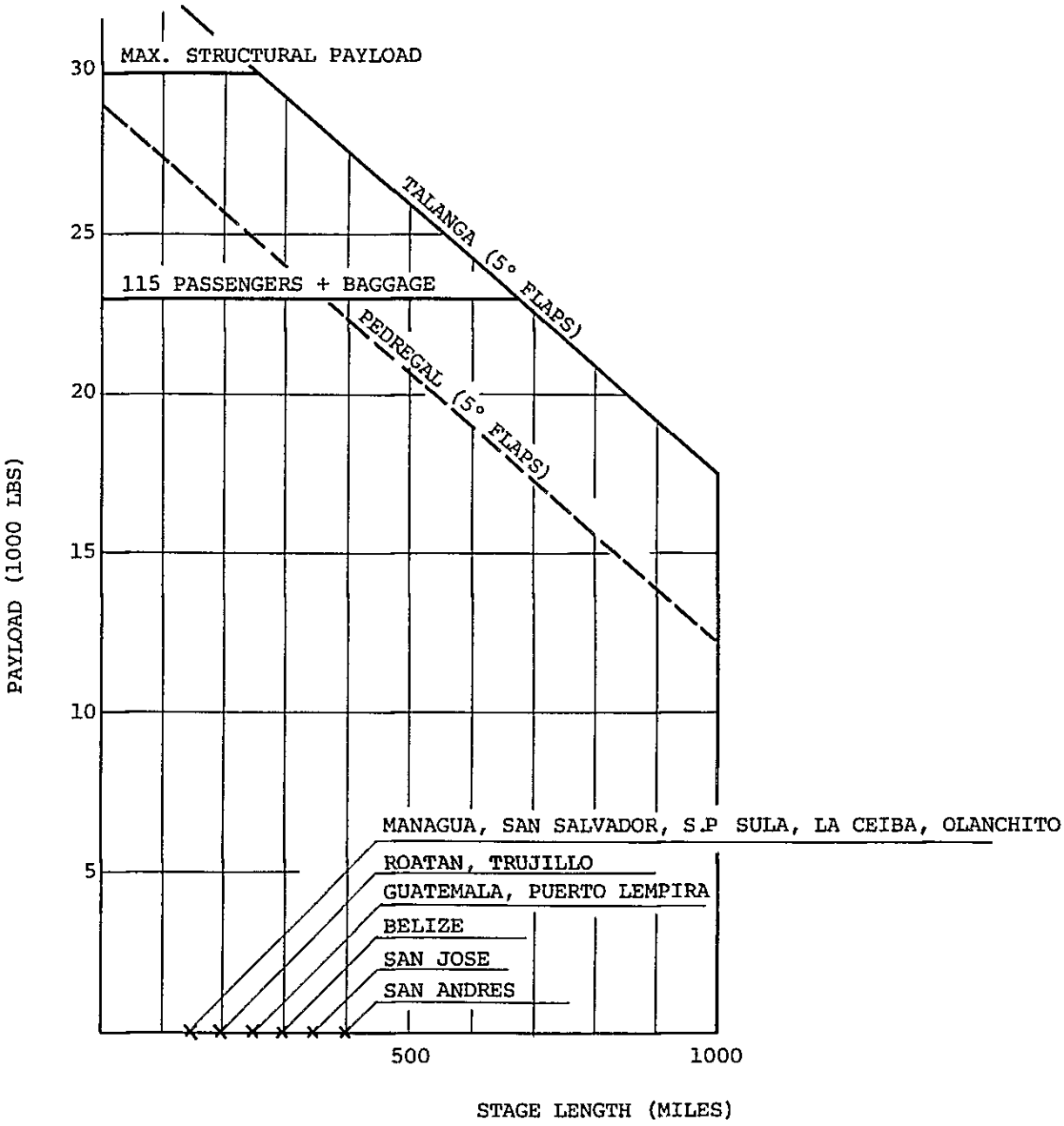
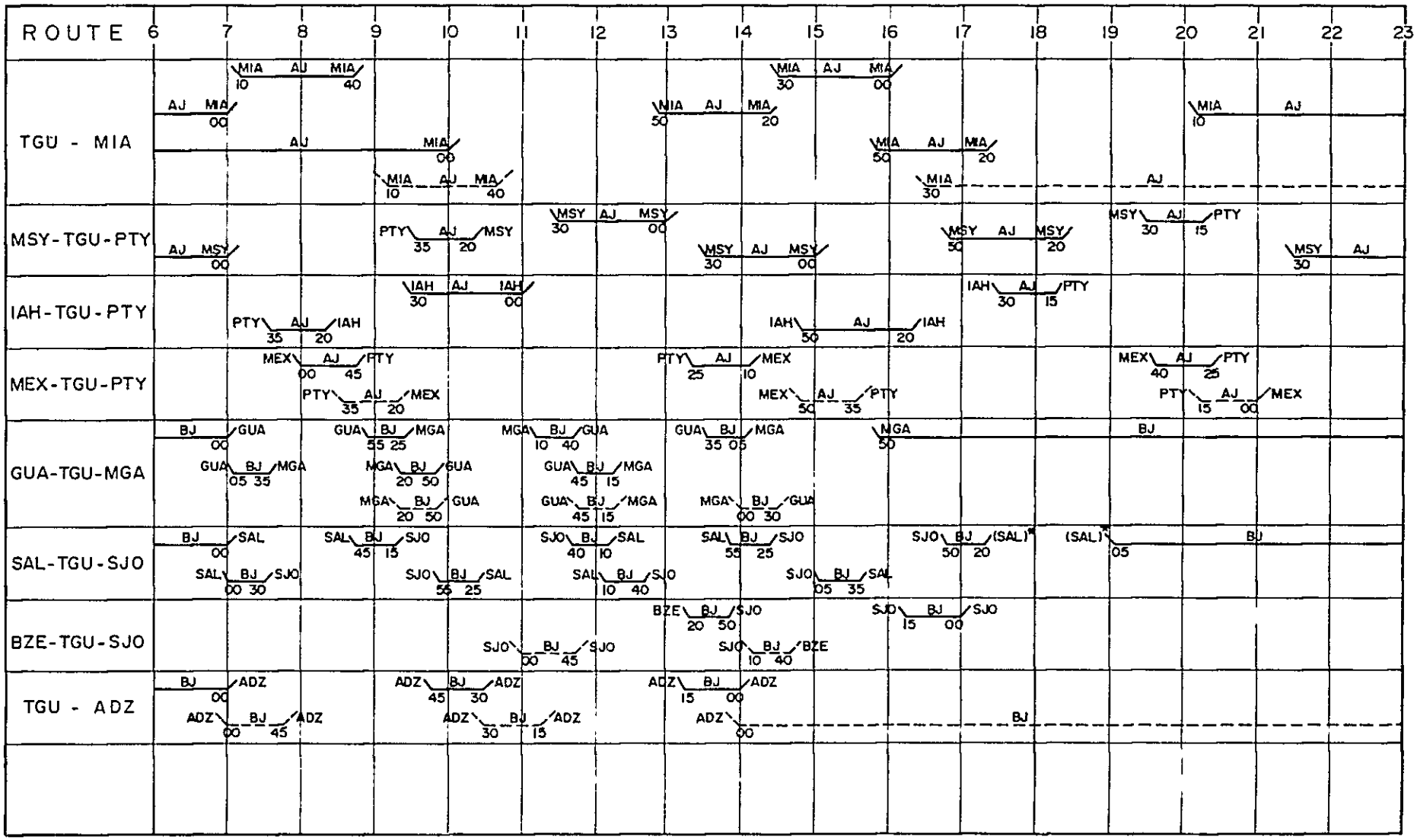


Fig. 5A-7 STAGE LENGTH - PAYLOAD RELATIONSHIP (DC-9)

APPENDIX 5B

POSSIBLE FLIGHT SCHEDULE

Table 5B-1 POSSIBLE FLIGHT SCHEDULE (INTERNATIONAL SERVICE)

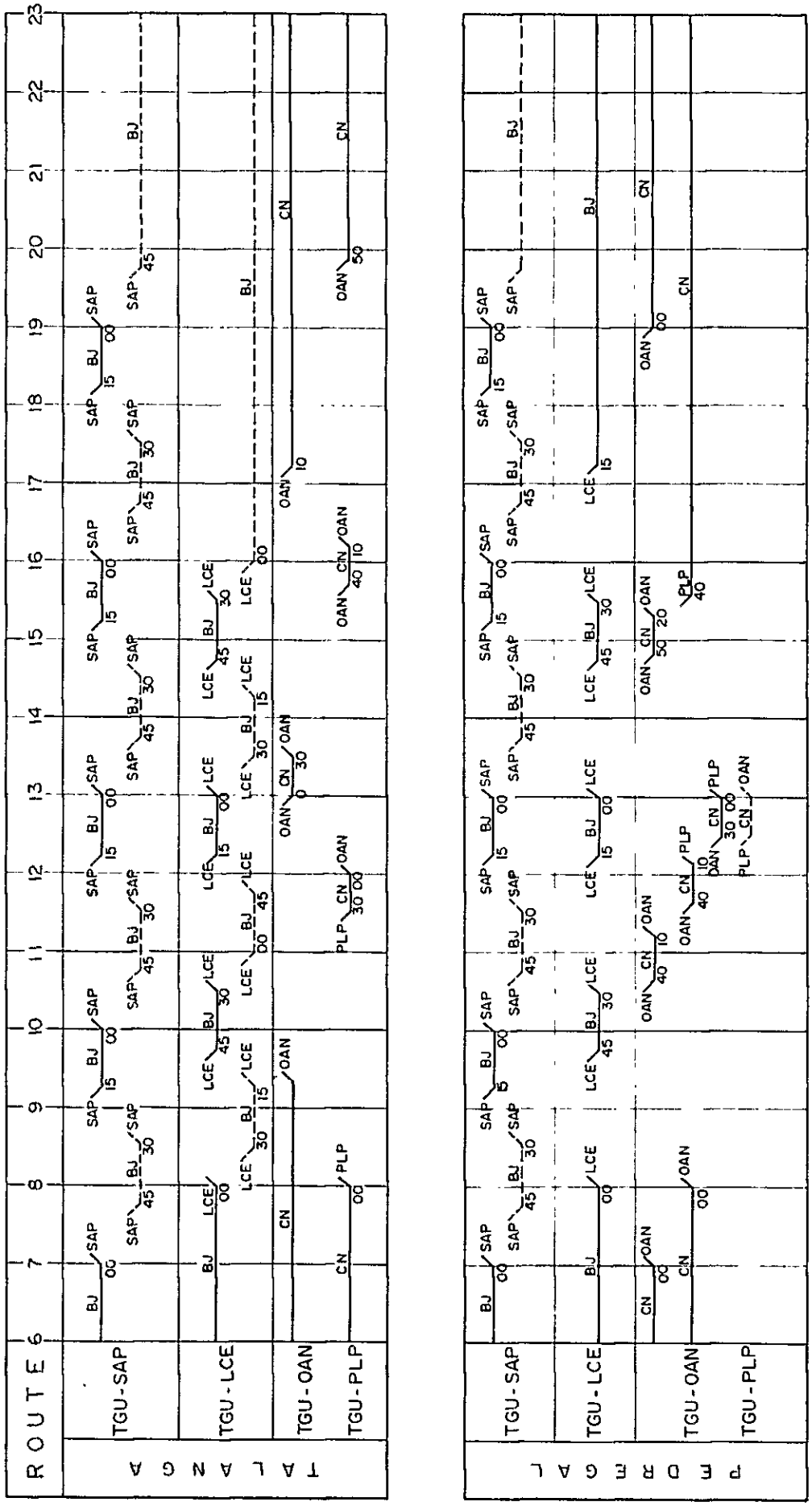


Notes: 1. Aircraft Categories
AJ -- 200 Seater Jet
BJ -- 120 Seater Jet
CN -- 40 Seater Non-Jet

2. Arriving Flight
Departing Flight
Alternate (every other day) schedule to one directly thereabove

3. Schedules with asterisk occur only at Pedregal Site

Table 5B-2 POSSIBLE FLIGHT SCHEDULE (DOMESTIC SERVICE)



APPENDIX 5C

HOURLY DISTRIBUTION OF PASSENGERS

Table 5C-1

HOURLY DISTRIBUTION OF PASSENGERS AT PEDREGAL

TIME	CASE 1			CASE 2			CASE 3			CASE 4		
	ARR	DEP	THRU	ARR	DEP	THRU	ARR	DEP	THRU	ARR	DEP	THRU
500- 530	0	0	0	0	0	0	0	0	0	0	0	0
530- 600	0	0	0	0	0	0	0	0	0	0	0	0
600- 630	0	313	143	0	260	124	0	313	143	0	260	124
630- 700	0	360	143	0	360	124	0	360	143	0	360	124
700- 730	176	125	104	220	178	123	176	125	104	220	178	123
730- 800	257	300	92	257	353	111	257	300	92	257	353	111
800- 830	226	320	67	226	320	67	220	320	67	226	329	67
830- 900	88	313	111	88	313	111	88	313	111	88	313	111
900- 930	115	281	136	115	281	136	115	281	136	115	281	136
930-1000	294	313	194	241	260	175	294	313	194	241	260	175
1000-1030	198	241	130	145	241	121	198	241	130	145	241	121
1030-1100	0	122	51	53	175	70	0	151	51	53	204	70
1100-1130	27	115	32	27	168	51	56	144	75	56	197	94
1130-1200	193	144	140	193	144	140	193	173	183	193	173	183
1200-1230	117	175	148	117	175	148	117	175	148	117	175	148
1230-1300	35	142	76	35	142	76	35	113	76	35	113	76
1300-1330	143	195	51	143	195	51	110	166	7	116	166	7
1330-1400	456	248	210	403	195	191	420	246	166	376	193	147
1400-1430	220	391	166	176	391	166	258	418	210	205	418	210
1430-1500	157	207	100	157	260	110	186	234	144	186	287	163
1500-1530	98	280	155	98	280	155	98	280	155	98	280	155
1530-1600	144	221	200	144	221	200	144	192	200	144	192	200
1600-1630	144	186	171	144	186	171	115	157	128	115	157	128
1630-1700	169	117	199	169	117	199	140	88	156	140	88	156
1700-1730	113	288	111	113	288	111	113	288	111	113	288	111
1730-1800	69	200	107	69	200	107	69	200	107	69	200	107
1800-1830	0	200	64	0	200	64	0	200	64	0	200	64
1830-1900	0	0	0	0	0	0	0	0	0	0	0	0
1900-1930	0	232	0	0	232	0	0	232	0	0	232	0
1930-2000	194	232	27	194	232	27	194	232	27	194	232	27
2000-2030	198	232	59	198	232	59	198	232	59	198	232	59
2030-2100	88	0	32	88	0	32	88	0	32	88	0	32
2100-2130	0	0	32	0	0	32	0	0	32	0	0	32
2130-2200	84	0	36	84	0	36	84	0	36	84	0	36
2200-2230	0	0	36	0	0	36	0	0	36	0	0	36
2230-2300	0	0	0	0	0	0	0	0	0	0	0	0

Table 5C-2 HOURLY DISTRIBUTION OF PASSENGERS AT PEDREGAL

TIME	CASE 5			CASE 6			CASE 7			CASE 8		
	ARR	DEP	THRU	ARR	DEP	THRU	ARR	DEP	THRU	ARR	DEP	THRU
500- 530	0	0	0	0	0	0	0	0	0	0	0	0
530- 600	0	0	0	0	0	0	0	0	0	0	0	0
600- 630	0	313	143	0	269	124	0	313	143	0	269	124
630- 700	0	342	143	0	342	124	0	342	143	0	342	124
700- 730	123	98	72	176	151	91	123	98	72	176	151	91
730- 800	204	273	60	204	326	79	204	273	60	204	326	79
800- 830	226	329	67	226	329	67	226	329	67	226	329	67
830- 900	88	313	111	88	313	111	88	313	111	88	313	111
900- 930	115	281	136	115	281	136	115	281	136	115	281	136
930-1000	204	313	194	241	260	175	204	313	194	241	260	175
1000-1030	198	241	130	145	241	121	198	241	130	145	241	121
1030-1100	0	122	51	53	175	70	0	151	51	53	204	70
1100-1130	27	115	32	27	168	51	56	144	75	56	197	94
1130-1200	193	144	149	193	144	149	193	173	183	193	173	183
1200-1230	117	175	148	117	175	148	117	175	148	117	175	148
1230-1300	35	142	76	35	142	76	35	113	76	35	113	76
1300-1330	143	195	51	143	195	51	116	166	7	116	166	7
1330-1400	456	301	210	403	248	191	429	290	156	376	246	147
1400-1430	256	444	198	203	444	198	285	471	242	232	471	242
1430-1500	157	207	100	157	260	119	186	234	144	186	287	163
1500-1530	98	280	155	98	280	155	98	280	155	98	280	155
1530-1600	144	221	200	144	221	200	144	192	200	144	192	200
1600-1630	144	186	171	144	186	171	115	157	128	115	157	128
1630-1700	169	117	199	169	117	199	140	88	156	140	88	156
1700-1730	113	288	111	113	288	111	113	288	111	113	288	111
1730-1800	69	200	107	69	200	107	69	200	107	69	200	107
1800-1830	0	200	64	0	200	64	0	200	64	0	200	64
1830-1900	0	0	0	0	0	0	0	0	0	0	0	0
1900-1930	0	232	0	0	232	0	0	232	0	0	232	0
1930-2000	194	232	27	194	232	27	194	232	27	194	232	27
2000-2030	198	232	59	198	232	59	198	232	59	198	232	59
2030-2100	88	0	32	88	0	32	88	0	32	88	0	32
2100-2130	0	0	32	0	0	32	0	0	32	0	0	32
2130-2200	84	0	36	84	0	36	84	0	36	84	0	36
2200-2230	0	0	36	0	0	36	0	0	36	0	0	36
2230-2300	0	0	0	0	0	0	0	0	0	0	0	0

Table 5C- 3 HOURLY DISTRIBUTION OF PASSENGERS AT PEDREGAL

TIME	CASE 9			CASE 10			CASE 11			CASE 12		
	ARR	DEP	THRU	ARR	DEP	THRU	ARR	DEP	THRU	ARR	DEP	THRU
500- 530	0	0	0	0	0	0	0	0	0	0	0	0
530- 600	0	0	0	0	0	0	0	0	0	0	0	0
600- 630	0	313	143	0	260	124	0	313	143	0	260	124
630- 700	0	360	143	0	360	124	0	360	143	0	360	124
700- 730	176	125	104	229	178	123	176	125	104	229	178	123
730- 800	257	184	92	257	237	111	257	184	92	257	237	111
800- 830	116	323	60	116	323	60	116	323	60	116	323	60
830- 900	204	307	111	204	307	111	204	307	111	204	307	111
900- 930	231	391	143	231	391	143	231	391	143	231	391	143
930-1000	294	313	194	241	260	175	294	313	194	241	260	175
1000-1030	198	241	130	145	241	121	198	241	130	145	241	121
1030-1100	0	122	51	53	175	70	0	151	51	53	204	70
1100-1130	27	115	32	27	168	51	56	144	75	56	197	94
1130-1200	193	144	140	193	144	140	193	173	183	193	173	183
1200-1230	117	175	148	117	175	148	117	175	148	117	175	148
1230-1300	35	142	76	35	142	76	35	113	76	35	113	76
1300-1330	27	85	44	27	85	44	0	56	0	0	56	0
1330-1400	340	138	203	287	85	184	313	136	159	260	83	140
1400-1430	229	281	159	176	281	159	258	308	203	205	308	203
1430-1500	267	323	107	267	376	126	206	350	151	206	403	170
1500-1530	208	396	162	208	396	162	208	396	162	208	396	162
1530-1600	144	337	207	144	337	207	144	308	207	144	308	207
1600-1630	144	186	171	144	186	171	115	157	128	115	157	128
1630-1700	169	117	199	169	117	199	140	88	156	140	88	156
1700-1730	113	288	111	113	288	111	113	288	111	113	288	111
1730-1800	69	200	107	69	200	107	69	200	107	69	200	107
1800-1830	0	200	64	0	200	64	0	200	64	0	200	64
1830-1900	0	0	0	0	0	0	0	0	0	0	0	0
1900-1930	0	116	0	0	116	0	0	116	0	0	116	0
1930-2000	84	116	20	84	116	20	84	116	20	84	116	20
2000-2030	204	226	59	204	226	59	204	226	59	204	226	59
2030-2100	204	110	39	204	110	39	204	110	39	204	110	39
2100-2130	0	0	32	0	0	32	0	0	32	0	0	32
2130-2200	84	0	36	84	0	36	84	0	36	84	0	36
2200-2230	0	0	36	0	0	36	0	0	36	0	0	36
2230-2300	0	0	0	0	0	0	0	0	0	0	0	0

Table 5C-4 HOURLY DISTRIBUTION OF PASSENGERS AT PEDREGAL

TIME	CASE 13			CASE 14			CASE 15			CASE 16		
	ARR	DEP	THRU	ARR	DEP	THRU	ARR	DEP	THRU	ARR	DEP	THRU
500- 530	0	0	0	0	0	0	0	0	0	0	0	0
530- 600	0	0	0	0	0	0	0	0	0	0	0	0
600- 630	0	313	143	0	260	124	0	313	143	0	260	124
630- 700	0	342	143	0	342	124	0	342	143	0	342	124
700- 730	123	98	72	176	151	91	123	98	72	176	151	91
730- 800	204	157	60	204	210	79	204	157	60	204	210	79
800- 830	116	323	60	116	323	60	116	323	60	116	323	60
830- 900	204	307	111	204	307	111	204	307	111	204	307	111
900- 930	231	391	143	231	391	143	231	391	143	231	391	143
930-1000	294	313	194	241	260	175	204	313	194	241	260	175
1000-1030	198	241	130	145	241	121	198	241	130	145	241	121
1030-1100	0	122	51	53	175	70	0	151	51	53	204	70
1100-1130	27	115	32	27	168	51	56	144	75	56	197	94
1130-1200	193	144	140	193	144	140	193	173	183	193	173	183
1200-1230	117	175	148	117	175	148	117	175	148	117	175	148
1230-1300	35	142	76	35	142	76	35	113	76	35	113	76
1300-1330	27	85	44	27	85	44	0	56	0	0	56	0
1330-1400	340	191	203	287	138	184	313	189	159	260	136	140
1400-1430	256	334	191	203	334	191	285	361	235	232	361	235
1430-1500	267	323	107	267	376	126	296	350	151	296	403	170
1500-1530	208	396	162	208	396	162	208	396	162	208	396	162
1530-1600	144	337	207	144	337	207	144	308	207	144	308	207
1600-1630	144	186	171	144	186	171	115	157	128	115	157	128
1630-1700	169	117	199	169	117	199	149	88	156	149	88	156
1700-1730	113	288	111	113	288	111	113	288	111	113	288	111
1730-1800	69	200	107	69	200	107	69	200	107	69	200	107
1800-1830	0	200	64	0	200	64	0	200	64	0	200	64
1830-1900	0	0	0	0	0	0	0	0	0	0	0	0
1900-1930	0	116	0	0	116	0	0	116	0	0	116	0
1930-2000	84	116	20	84	116	20	84	116	20	84	116	20
2000-2030	204	226	59	204	226	59	204	226	59	204	226	59
2030-2100	204	110	39	204	110	39	204	110	39	204	110	39
2100-2130	0	0	32	0	0	32	0	0	32	0	0	32
2130-2200	84	0	36	84	0	36	84	0	36	84	0	36
2200-2230	0	0	36	0	0	36	0	0	36	0	0	36
2230-2300	0	0	0	0	0	0	0	0	0	0	0	0

Table 5C- 5 HOURLY DISTRIBUTION OF PASSENGERS AT PEDREGAL

TIME	CASE 17			CASE 18			CASE 19			CASE 20		
	ARR	DEP	THRU	ARR	DEP	THRU	ARR	DEP	THRU	ARR	DEP	THRU
500- 530	0	0	0	0	0	0	0	0	0	0	0	0
530- 600	0	0	0	0	0	0	0	0	0	0	0	0
600- 630	0	313	143	0	260	124	0	313	143	0	260	124
630- 700	0	369	143	0	369	124	0	369	143	0	369	124
700- 730	176	125	104	229	178	123	176	125	104	229	178	123
730- 800	257	300	92	257	353	111	257	300	92	257	353	111
800- 830	226	329	67	226	329	67	226	329	67	226	329	67
830- 900	88	313	111	88	313	111	88	313	111	88	313	111
900- 930	203	193	136	203	193	136	203	193	136	203	193	136
930-1000	382	313	194	329	260	175	382	313	194	329	260	175
1000-1030	198	329	162	145	329	153	198	329	162	145	329	153
1030-1100	0	122	83	53	175	102	0	151	93	53	204	102
1100-1130	27	115	32	27	168	51	56	144	75	56	197	94
1130-1200	193	144	140	193	144	140	193	173	183	193	173	183
1200-1230	117	175	148	117	175	148	117	175	148	117	175	148
1230-1300	35	142	76	35	142	76	35	113	76	35	113	76
1300-1330	143	195	51	143	195	51	116	166	7	116	166	7
1330-1400	456	248	210	403	195	191	429	246	166	376	193	147
1400-1430	229	391	166	176	391	166	258	418	210	205	418	210
1430-1500	157	207	100	157	260	119	186	234	144	186	287	163
1500-1530	98	280	155	98	280	155	98	280	155	98	280	155
1530-1600	56	221	168	56	221	168	56	192	168	56	192	168
1600-1630	56	98	139	56	98	139	27	69	96	27	69	96
1630-1700	257	29	199	257	29	199	228	0	156	228	0	156
1700-1730	201	200	111	201	200	111	201	200	111	201	200	111
1730-1800	69	200	107	69	200	107	69	200	107	69	200	107
1800-1830	0	200	64	0	200	64	0	200	64	0	200	64
1830-1900	0	0	0	0	0	0	0	0	0	0	0	0
1900-1930	0	232	0	0	232	0	0	232	0	0	232	0
1930-2000	194	232	27	194	232	27	194	232	27	194	232	27
2000-2030	198	232	59	198	232	59	198	232	59	198	232	59
2030-2100	88	0	32	88	0	32	88	0	32	88	0	32
2100-2130	0	0	32	0	0	32	0	0	32	0	0	32
2130-2200	84	0	36	84	0	36	84	0	36	84	0	36
2200-2230	0	0	36	0	0	36	0	0	36	0	0	36
2230-2300	0	0	0	0	0	0	0	0	0	0	0	0

Table 5C-6 HOURLY DISTRIBUTION OF PASSENGERS AT PEDREGAL

TIME	CASE 21			CASE 22			CASE 23			CASE 24		
	ARR	DEP	THRU	ARR	DEP	THRU	ARR	DEP	THRU	ARR	DEP	THRU
500- 530	0	0	0	0	0	0	0	0	0	0	0	0
530- 600	0	0	0	0	0	0	0	0	0	0	0	0
600- 630	0	313	143	0	260	124	0	313	143	0	260	124
630- 700	0	342	143	0	342	124	0	342	143	0	342	124
700- 730	123	98	72	176	151	91	123	98	72	176	151	91
730- 800	204	273	60	204	326	79	204	273	60	204	326	79
800- 830	226	329	67	226	329	67	226	329	67	226	329	67
830- 900	88	313	111	88	313	111	88	313	111	88	313	111
900- 930	203	193	136	203	193	136	203	193	136	203	193	136
930-1000	382	313	194	329	260	175	382	313	194	329	260	175
1000-1030	198	329	162	145	329	153	198	329	162	145	329	153
1030-1100	0	122	83	53	175	102	0	151	83	53	204	102
1100-1130	27	115	32	27	168	51	56	144	75	56	197	94
1130-1200	193	144	140	193	144	140	193	173	183	193	173	183
1200-1230	117	175	148	117	175	148	117	175	148	117	175	148
1230-1300	35	142	76	35	142	76	35	113	76	35	113	76
1300-1330	143	195	51	143	195	51	116	166	7	116	166	7
1330-1400	456	301	210	403	248	191	429	299	166	376	246	147
1400-1430	256	444	198	203	444	198	285	471	242	232	471	242
1430-1500	157	207	100	157	260	119	186	234	144	186	287	163
1500-1530	98	280	155	98	280	155	98	280	155	98	280	155
1530-1600	56	221	168	56	221	168	56	192	168	56	192	168
1600-1630	56	98	139	56	98	139	27	69	96	27	69	96
1630-1700	257	29	199	257	29	199	228	0	156	228	0	156
1700-1730	201	200	111	201	200	111	201	200	111	201	200	111
1730-1800	69	200	107	69	200	107	69	200	107	69	200	107
1800-1830	0	200	64	0	200	64	0	200	64	0	200	64
1830-1900	0	0	0	0	0	0	0	0	0	0	0	0
1900-1930	0	232	0	0	232	0	0	232	0	0	232	0
1930-2000	194	232	27	194	232	27	194	232	27	194	232	27
2000-2030	198	232	59	198	232	59	198	232	59	198	232	59
2030-2100	88	0	32	88	0	32	88	0	32	88	0	32
2100-2130	0	0	32	0	0	32	0	0	32	0	0	32
2130-2200	84	0	36	84	0	36	84	0	36	84	0	36
2200-2230	0	0	36	0	0	36	0	0	36	0	0	36
2230-2300	0	0	0	0	0	0	0	0	0	0	0	0

Table 5C-7 HOURLY DISTRIBUTION OF PASSENGERS AT PEDREGAL

TIME	CASE 25			CASE 26			CASE 27			CASE 28		
	ARR	DEP	THRU	ARR	DEP	THRU	ARR	DEP	THRU	ARR	DEP	THRU
500- 530	0	0	0	0	0	0	0	0	0	0	0	0
530- 600	0	0	0	0	0	0	0	0	0	0	0	0
600- 630	0	313	143	0	260	124	0	313	143	0	260	124
630- 700	0	360	143	0	360	124	0	360	143	0	360	124
700- 730	176	125	104	220	178	123	176	125	104	220	178	123
730- 800	257	184	92	257	237	111	257	184	92	257	237	111
800- 830	116	323	60	116	323	60	116	323	60	116	323	60
830- 900	204	307	111	204	307	111	204	307	111	204	307	111
900- 930	319	303	143	319	303	143	319	303	143	319	303	143
930-1000	382	313	194	329	260	175	382	313	194	329	260	175
1000-1030	198	329	162	145	329	153	198	329	162	145	329	153
1030-1100	0	122	83	53	175	102	0	151	83	53	204	102
1100-1130	27	115	32	27	168	51	56	144	75	56	197	94
1130-1200	193	144	140	193	144	140	193	173	183	193	173	183
1200-1230	117	175	148	117	175	148	117	175	148	117	175	148
1230-1300	35	142	76	35	142	76	35	113	76	35	113	76
1300-1330	27	85	44	27	85	44	0	56	0	0	56	0
1330-1400	340	138	203	287	85	184	313	130	159	260	83	140
1400-1430	229	281	159	176	281	150	258	308	203	205	308	203
1430-1500	267	323	107	267	376	126	296	350	151	296	403	170
1500-1530	208	396	162	208	396	162	208	396	162	208	396	162
1530-1600	56	337	175	56	337	175	56	308	175	56	308	175
1600-1630	56	98	139	56	98	139	27	69	96	27	69	96
1630-1700	257	29	199	257	29	199	228	0	156	228	0	156
1700-1730	201	200	111	201	200	111	201	200	111	201	200	111
1730-1800	69	200	107	69	200	107	69	200	107	69	200	107
1800-1830	0	200	64	0	200	64	0	200	64	0	200	64
1830-1900	0	0	0	0	0	0	0	0	0	0	0	0
1900-1930	0	116	0	0	116	0	0	116	0	0	116	0
1930-2000	84	116	20	84	116	20	84	116	20	84	116	20
2000-2030	204	226	59	204	226	59	204	226	59	204	226	59
2030-2100	204	110	39	204	110	39	204	110	39	204	110	39
2100-2130	0	0	32	0	0	32	0	0	32	0	0	32
2130-2200	84	0	36	84	0	36	84	0	36	84	0	36
2200-2230	0	0	36	0	0	36	0	0	36	0	0	36
2230-2300	0	0	0	0	0	0	0	0	0	0	0	0

Table 5C-8 HOURLY DISTRIBUTION OF PASSENGERS AT PEDREGAL

TIME	CASE 29			CASE 30			CASE 31			CASE 32		
	ARR	DEP	THRU	ARR	DEP	THRU	ARR	DEP	THRU	ARR	DEP	THRU
500- 530	0	0	0	0	0	0	0	0	0	0	0	0
530- 600	0	0	0	0	0	0	0	0	0	0	0	0
600- 630	0	313	143	0	260	124	0	313	143	0	260	124
630- 700	0	342	143	0	342	124	0	342	143	0	342	124
700- 730	123	98	72	176	151	91	123	98	72	176	151	91
730- 800	204	157	69	204	210	79	204	157	69	204	210	79
800- 830	116	323	60	116	323	60	116	323	60	116	323	60
830- 900	204	307	111	204	307	111	204	307	111	204	307	111
900- 930	319	303	143	319	303	143	319	303	143	319	303	143
930-1000	382	313	194	329	269	175	382	313	194	329	269	175
1000-1030	198	329	162	145	329	153	198	329	162	145	329	153
1030-1100	0	122	83	53	175	102	0	151	83	53	204	102
1100-1130	27	115	32	27	168	51	56	144	75	56	197	94
1130-1200	193	144	140	193	144	140	193	173	193	193	173	183
1200-1230	117	175	148	117	175	148	117	175	148	117	175	148
1230-1300	35	142	76	35	142	76	35	113	76	35	113	76
1300-1330	27	85	44	27	85	44	0	56	0	0	56	0
1330-1400	340	191	203	287	138	184	313	189	159	260	136	140
1400-1430	256	334	191	203	334	191	285	361	235	232	361	235
1430-1500	267	323	107	267	376	126	296	359	151	296	403	170
1500-1530	208	396	162	208	396	162	208	396	162	208	396	162
1530-1600	56	337	175	56	337	175	56	308	175	56	308	175
1600-1630	56	98	139	56	98	139	27	69	96	27	69	96
1630-1700	257	29	199	257	29	199	228	0	156	228	0	156
1700-1730	201	200	111	201	200	111	201	200	111	201	200	111
1730-1800	69	200	107	69	200	107	69	200	107	69	200	107
1800-1830	0	200	64	0	200	64	0	200	64	0	200	64
1830-1900	0	0	0	0	0	0	0	0	0	0	0	0
1900-1930	0	116	0	0	116	0	0	116	0	0	116	0
1930-2000	84	116	20	84	116	20	84	116	20	84	116	20
2000-2030	204	226	59	204	226	59	204	226	59	204	226	59
2030-2100	204	119	39	204	119	39	204	119	39	204	119	39
2100-2130	0	0	32	0	0	32	0	0	32	0	0	32
2130-2200	84	0	36	84	0	36	84	0	36	84	0	36
2200-2230	0	0	36	0	0	36	0	0	36	0	0	36
2230-2300	0	0	0	0	0	0	0	0	0	0	0	0

Table 5C-9 HOURLY DISTRIBUTION OF PASSENGERS AT TALANGA

TIME	CASE 1			CASE 2			CASE 3			CASE 4		
	ARR	DEP	THRU	ARR	DEP	THRU	ARR	DEP	THRU	ARR	DEP	THRU
500- 530	0	0	0	0	0	0	0	0	0	0	0	0
530- 600	0	0	0	0	0	0	0	0	0	0	0	0
600- 630	0	318	138	0	265	119	0	318	138	0	265	119
630- 700	0	347	138	0	347	119	0	347	138	0	347	119
700- 730	128	101	70	181	154	89	128	101	70	181	154	89
730- 800	204	160	58	204	213	77	204	160	58	204	213	77
800- 830	116	326	58	116	326	58	116	326	58	116	326	58
830- 900	209	307	109	209	307	109	209	307	109	209	307	109
900- 930	324	314	141	324	314	141	324	314	141	324	314	141
930-1000	385	318	189	332	265	170	385	318	189	332	265	170
1000-1030	198	337	157	145	337	148	198	337	157	145	337	148
1030-1100	0	125	80	53	178	99	0	154	89	53	207	99
1100-1130	27	120	32	27	173	51	56	149	75	56	202	94
1130-1200	193	120	138	193	120	138	193	149	181	193	149	181
1200-1230	122	180	144	122	180	144	122	180	144	122	180	144
1230-1300	40	142	74	40	142	74	40	113	74	40	113	74
1300-1330	27	85	44	27	85	44	0	56	0	0	56	0
1330-1400	345	191	201	292	138	182	318	189	157	265	136	138
1400-1430	261	334	189	208	334	189	299	361	233	237	361	233
1430-1500	270	328	155	270	381	174	299	355	199	299	408	218
1500-1530	211	404	157	211	404	157	211	404	157	211	404	157
1530-1600	56	345	170	56	345	170	56	316	170	56	316	170
1600-1630	56	141	136	56	141	136	27	112	93	27	112	93
1630-1700	230	69	149	230	69	149	201	40	106	201	40	106
1700-1730	201	240	106	201	240	106	201	240	106	201	240	106
1730-1800	72	200	62	72	200	62	72	200	62	72	200	62
1800-1830	0	200	62	0	200	62	0	200	62	0	200	62
1830-1900	0	0	0	0	0	0	0	0	0	0	0	0
1900-1930	140	116	32	140	116	32	140	116	32	140	116	32
1930-2000	124	116	52	124	116	52	124	116	52	124	116	52
2000-2030	204	226	91	204	226	91	204	226	91	204	226	91
2030-2100	204	110	39	204	110	39	204	110	39	204	110	39
2100-2130	0	0	32	0	0	32	0	0	32	0	0	32
2130-2200	84	0	36	84	0	36	84	0	36	84	0	36
2200-2230	0	0	36	0	0	36	0	0	36	0	0	36
2230-2300	0	0	0	0	0	0	0	0	0	0	0	0

0

Table 5C-10 HOURLY DISTRIBUTION OF PASSENGERS AT TALANGA

TIME	CASE 5			CASE 6			CASE 7			CASE 8		
	ARR	DEP	THRU	ARR	DEP	THRU	ARR	DEP	THRU	ARR	DEP	THRU
500- 530	0	0	0	0	0	0	0	0	0	0	0	0
530- 600	0	0	0	0	0	0	0	0	0	0	0	0
600- 630	0	318	138	0	265	119	0	318	138	0	265	119
630- 700	0	374	138	0	374	119	0	374	138	0	374	119
700- 730	181	128	102	234	181	121	181	128	102	234	181	121
730- 800	257	187	90	257	240	109	257	187	90	257	240	109
800- 830	116	326	58	116	326	58	116	326	58	116	326	58
830- 900	209	307	109	209	307	109	209	307	109	209	307	109
900- 930	324	314	141	324	314	141	324	314	141	324	314	141
930-1000	385	318	189	332	265	170	385	318	189	332	265	170
1000-1030	198	337	157	145	337	148	198	337	157	145	337	148
1030-1100	0	125	80	53	178	99	0	154	80	53	207	99
1100-1130	27	120	32	27	173	51	56	149	75	56	202	94
1130-1200	193	120	138	193	120	138	193	149	181	193	149	181
1200-1230	122	180	144	122	180	144	122	180	144	122	180	144
1230-1300	40	142	74	40	142	74	40	113	74	40	113	74
1300-1330	27	85	44	27	85	44	0	56	0	0	56	0
1330-1400	345	138	201	292	85	182	318	136	157	265	83	138
1400-1430	234	281	157	181	281	157	263	308	201	210	308	201
1430-1500	270	328	155	270	381	174	209	355	109	209	408	218
1500-1530	211	404	157	211	404	157	211	404	157	211	404	157
1530-1600	56	345	170	56	345	170	56	316	170	56	316	170
1600-1630	56	141	136	56	141	136	27	112	93	27	112	93
1630-1700	230	60	140	230	60	140	201	40	106	201	40	106
1700-1730	201	240	106	201	240	106	201	240	106	201	240	106
1730-1800	72	200	62	72	200	62	72	200	62	72	200	62
1800-1830	0	200	62	0	200	62	0	200	62	0	200	62
1830-1900	0	0	0	0	0	0	0	0	0	0	0	0
1900-1930	140	116	32	140	116	32	140	116	32	140	116	32
1930-2000	124	116	52	124	116	52	124	116	52	124	116	52
2000-2030	204	226	91	204	226	91	204	226	91	204	226	91
2030-2100	204	110	39	204	110	39	204	110	39	204	110	39
2100-2130	0	0	32	0	0	32	0	0	32	0	0	32
2130-2200	84	0	36	84	0	36	84	0	36	84	0	36
2200-2230	0	0	36	0	0	36	0	0	36	0	0	36
2230-2300	0	0	0	0	0	0	0	0	0	0	0	0

Table 5C-11 HOURLY DISTRIBUTION OF PASSENGERS AT TALANGA

TIME	CASE 9			CASE 10			CASE 11			CASE 12		
	ARR	DEP	THRU	ARR	DEP	THRU	ARR	DEP	THRU	ARR	DEP	THRU
500- 530	0	0	0	0	0	0	0	0	0	0	0	0
530- 600	0	0	0	0	0	0	0	0	0	0	0	0
600- 630	0	318	138	0	265	119	0	318	138	0	265	119
630- 700	0	347	138	0	347	119	0	347	138	0	347	119
700- 730	128	101	70	181	154	89	128	101	70	181	154	89
730- 800	204	276	58	204	329	77	204	276	58	204	329	77
800- 830	226	332	65	226	332	65	226	332	65	226	332	65
830- 900	93	313	109	93	313	109	93	313	109	93	313	109
900- 930	208	204	134	208	204	134	208	204	134	208	204	134
930-1000	385	318	189	332	265	170	385	318	189	332	265	170
1000-1030	198	337	157	145	337	148	198	337	157	145	337	148
1030-1100	0	125	80	53	178	99	0	154	80	53	207	99
1100-1130	27	120	32	27	173	51	56	149	75	56	202	94
1130-1200	193	129	138	193	129	138	193	149	181	193	149	181
1200-1230	122	180	144	122	180	144	122	180	144	122	180	144
1230-1300	40	142	74	40	142	74	40	113	74	40	113	74
1300-1330	143	195	51	143	195	51	116	166	7	116	166	7
1330-1400	461	301	208	408	248	189	434	299	164	381	246	145
1400-1430	261	444	196	208	444	196	299	471	240	237	471	240
1430-1500	160	212	148	160	265	167	189	239	192	189	292	211
1500-1530	101	288	150	101	288	150	101	288	150	101	288	150
1530-1600	56	229	163	56	229	163	56	209	163	56	200	163
1600-1630	56	141	136	56	141	136	27	112	93	27	112	93
1630-1700	230	69	149	230	69	149	201	49	106	201	49	106
1700-1730	201	240	106	201	249	106	201	249	106	201	240	106
1730-1800	72	200	62	72	200	62	72	200	62	72	200	62
1800-1830	0	200	62	0	200	62	0	200	62	0	200	62
1830-1900	0	0	0	0	0	0	0	0	0	0	0	0
1900-1930	140	232	32	140	232	32	140	232	32	140	232	32
1930-2000	234	232	59	234	232	59	234	232	59	234	232	59
2000-2030	198	232	91	198	232	91	198	232	91	198	232	91
2030-2100	88	0	32	88	0	32	88	0	32	88	0	32
2100-2130	0	0	32	0	0	32	0	0	32	0	0	32
2130-2200	84	0	36	84	0	36	84	0	36	84	0	36
2200-2230	0	0	36	0	0	36	0	0	36	0	0	36
2230-2300	0	0	0	0	0	0	0	0	0	0	0	0

Table 5C-12 HOURLY DISTRIBUTION OF PASSENGERS AT TALANGA

TIME	CASE 13			CASE 14			CASE 15			CASE 16		
	ARR	DEP	THRU	ARR	DEP	THRU	ARR	DEP	THRU	ARR	DEP	THRU
500- 530	0	0	0	0	0	0	0	0	0	0	0	0
530- 600	0	0	0	0	0	0	0	0	0	0	0	0
600- 630	0	318	138	0	265	119	0	318	138	0	265	119
630- 700	0	374	138	0	374	119	0	374	138	0	374	119
700- 730	181	128	102	234	181	121	181	128	102	234	181	121
730- 800	257	303	90	257	356	109	257	303	90	257	356	109
800- 830	226	332	65	226	332	65	226	332	65	226	332	65
830- 900	93	313	109	93	313	109	93	313	109	93	313	109
900- 930	208	204	134	208	204	134	208	204	134	208	204	134
930-1000	385	318	189	332	265	170	385	318	189	332	265	170
1000-1030	198	337	157	145	337	148	198	337	157	145	337	148
1030-1100	0	125	80	53	178	99	0	154	80	53	207	99
1100-1130	27	120	32	27	173	51	56	140	75	56	202	94
1130-1200	193	120	138	193	120	138	193	140	181	193	140	181
1200-1230	122	180	144	122	180	144	122	180	144	122	180	144
1230-1300	40	142	74	40	142	74	40	113	74	40	113	74
1300-1330	143	195	51	143	195	51	116	166	7	116	166	7
1330-1400	461	248	208	408	195	189	434	246	164	381	193	145
1400-1430	234	391	164	181	391	164	263	418	208	210	418	208
1430-1500	160	212	148	160	265	167	189	230	192	189	292	211
1500-1530	101	288	150	101	288	150	101	288	150	101	288	150
1530-1600	56	220	163	56	220	163	56	200	163	56	200	163
1600-1630	56	141	136	56	141	136	27	112	93	27	112	93
1630-1700	230	69	149	230	69	149	201	40	106	201	40	106
1700-1730	201	240	106	201	240	106	201	240	106	201	240	106
1730-1800	72	200	62	72	200	62	72	200	62	72	200	62
1800-1830	0	200	62	0	200	62	0	200	62	0	200	62
1830-1900	0	0	0	0	0	0	0	0	0	0	0	0
1900-1930	140	232	32	140	232	32	140	232	32	140	232	32
1930-2000	234	232	59	234	232	59	234	232	59	234	232	59
2000-2030	198	232	91	198	232	91	198	232	91	198	232	91
2030-2100	88	0	32	88	0	32	88	0	32	88	0	32
2100-2130	0	0	32	0	0	32	0	0	32	0	0	32
2130-2200	84	0	36	84	0	36	84	0	36	84	0	36
2200-2230	0	0	36	0	0	36	0	0	36	0	0	36
2230-2300	0	0	0	0	0	0	0	0	0	0	0	0

Table 5C-13 HOURLY DISTRIBUTION OF PASSENGERS AT TALANGA

TIME	CASE 17			CASE 18			CASE 19			CASE 20		
	ARR	DEP	THRU	ARR	DEP	THRU	ARR	DEP	THRU	ARR	DEP	THRU
500- 530	0	0	0	0	0	0	0	0	0	0	0	0
530- 600	0	0	0	0	0	0	0	0	0	0	0	0
600- 630	0	318	138	0	265	119	0	318	138	0	265	119
630- 700	0	347	138	0	347	119	0	347	138	0	347	119
700- 730	128	101	70	181	154	89	128	101	70	181	154	89
730- 800	204	160	58	204	213	77	204	160	58	204	213	77
800- 830	116	326	58	116	326	58	116	326	58	116	326	58
830- 900	209	307	109	209	307	109	209	307	109	209	307	109
900- 930	236	402	141	236	402	141	236	402	141	236	402	141
930-1000	297	318	189	244	265	170	297	318	189	244	265	170
1000-1030	198	249	125	145	249	116	198	249	125	145	249	116
1030-1100	0	125	48	53	178	67	0	154	48	53	207	67
1100-1130	27	120	32	27	173	51	56	149	75	56	202	94
1130-1200	193	120	138	193	120	138	193	149	181	193	149	181
1200-1230	122	180	144	122	180	144	122	180	144	122	180	144
1230-1300	40	142	74	40	142	74	40	113	74	40	113	74
1300-1330	27	85	44	27	85	44	0	56	0	0	56	0
1330-1400	345	191	201	292	138	182	318	189	157	265	136	138
1400-1430	261	334	189	208	334	189	290	361	233	237	361	233
1430-1500	270	328	155	270	381	174	299	355	199	299	408	218
1500-1530	211	404	157	211	404	157	211	404	157	211	404	157
1530-1600	144	345	202	144	345	202	144	316	202	144	316	202
1600-1630	144	229	168	144	229	168	115	200	125	115	200	125
1630-1700	142	157	149	142	157	149	113	128	106	113	128	106
1700-1730	113	328	106	113	328	106	113	328	106	113	328	106
1730-1800	72	200	62	72	200	62	72	200	62	72	200	62
1800-1830	0	200	62	0	200	62	0	200	62	0	200	62
1830-1900	0	0	0	0	0	0	0	0	0	0	0	0
1900-1930	140	116	32	140	116	32	140	116	32	140	116	32
1930-2000	124	116	52	124	116	52	124	116	52	124	116	52
2000-2030	204	226	91	204	226	91	204	226	91	204	226	91
2030-2100	204	110	39	204	110	39	204	110	39	204	110	39
2100-2130	0	0	32	0	0	32	0	0	32	0	0	32
2130-2200	84	0	36	84	0	36	84	0	36	84	0	36
2200-2230	0	0	36	0	0	36	0	0	36	0	0	36
2230-2300	0	0	0	0	0	0	0	0	0	0	0	0

Table 5C-14 HOURLY DISTRIBUTION OF PASSENGERS AT TALANGA

TIME	CASE 21			CASE 22			CASE 23			CASE 24		
	ARR	DEP	THRU	ARR	DEP	THRU	ARR	DEP	THRU	ARR	DEP	THRU
500- 530	0	0	0	0	0	0	0	0	0	0	0	0
530- 600	0	0	0	0	0	0	0	0	0	0	0	0
600- 630	0	318	138	0	265	119	0	318	138	0	265	119
630- 700	0	374	138	0	374	119	0	374	138	0	374	119
700- 730	181	128	102	234	181	121	181	128	102	234	181	121
730- 800	257	187	90	257	240	109	257	187	90	257	240	109
800- 830	116	326	58	116	326	58	116	326	58	116	326	58
830- 900	209	307	109	209	307	109	209	307	109	209	307	109
900- 930	236	402	141	236	402	141	236	402	141	236	402	141
930-1000	207	318	189	244	265	179	207	318	189	244	265	170
1000-1030	198	249	125	145	249	116	198	249	125	145	249	116
1030-1100	0	125	48	53	178	67	0	154	48	53	207	67
1100-1130	27	120	32	27	173	51	56	149	75	56	202	94
1130-1200	193	120	138	193	120	138	193	149	181	193	149	181
1200-1230	122	180	144	122	180	144	122	180	144	122	180	144
1230-1300	40	142	74	40	142	74	40	113	74	40	113	74
1300-1330	27	85	44	27	85	44	0	56	0	0	56	0
1330-1400	345	138	201	202	85	182	318	136	157	265	83	138
1400-1430	234	281	157	181	281	157	263	308	201	210	308	201
1430-1500	270	328	155	270	381	174	299	355	199	299	408	218
1500-1530	211	404	157	211	404	157	211	404	157	211	404	157
1530-1600	144	345	202	144	345	202	144	316	202	144	316	202
1600-1630	144	229	168	144	229	168	115	200	125	115	200	125
1630-1700	142	157	149	142	157	149	113	128	106	113	128	106
1700-1730	113	328	106	113	328	106	113	328	106	113	328	106
1730-1800	72	200	62	72	200	62	72	200	62	72	200	62
1800-1830	0	200	62	0	200	62	0	200	62	0	200	62
1830-1900	0	0	0	0	0	0	0	0	0	0	0	0
1900-1930	140	116	32	140	116	32	140	116	32	140	116	32
1930-2000	124	116	52	124	116	52	124	116	52	124	116	52
2000-2030	204	226	91	204	226	91	204	226	91	204	226	91
2030-2100	204	110	39	204	110	39	204	110	39	204	110	39
2100-2130	0	0	32	0	0	32	0	0	32	0	0	32
2130-2200	84	0	36	84	0	36	84	0	36	84	0	36
2200-2230	0	0	36	0	0	36	0	0	36	0	0	36
2230-2300	0	0	0	0	0	0	0	0	0	0	0	0

Table 5C-15 HOURLY DISTRIBUTION OF PASSENGERS AT TALANGA

TIME	CASE 25			CASE 26			CASE 27			CASE 28		
	ARR	DEP	THRU	ARR	DEP	THRU	ARR	DEP	THRU	ARR	DEP	THRU
500- 530	0	0	0	0	0	0	0	0	0	0	0	0
530- 600	0	0	0	0	0	0	0	0	0	0	0	0
600- 630	0	318	138	0	265	119	0	318	138	0	265	119
630- 700	0	347	138	0	347	119	0	347	138	0	347	119
700- 730	128	101	70	181	154	89	128	101	70	181	154	89
730- 800	204	276	58	204	329	77	204	276	58	204	329	77
800- 830	226	332	65	226	332	65	226	332	65	226	332	65
830- 900	93	313	109	93	313	109	93	313	109	93	313	109
900- 930	120	292	134	120	292	134	120	292	134	120	292	134
930-1000	297	318	189	244	265	170	297	318	189	244	265	170
1000-1030	198	249	125	145	249	116	198	249	125	145	249	116
1030-1100	0	125	48	53	178	67	0	154	48	53	207	67
1100-1130	27	129	32	27	173	51	56	149	75	56	202	94
1130-1200	193	129	138	193	129	138	193	149	181	193	149	181
1200-1230	122	180	144	122	180	144	122	180	144	122	180	144
1230-1300	40	142	74	40	142	74	40	113	74	40	113	74
1300-1330	143	195	51	143	195	51	116	166	7	116	166	7
1330-1400	461	301	208	408	248	189	434	299	164	381	246	145
1400-1430	261	444	196	208	444	196	299	471	240	237	471	240
1430-1500	169	212	148	169	265	167	189	239	192	189	292	211
1500-1530	101	288	150	101	288	150	101	288	150	101	288	150
1530-1600	144	229	195	144	229	195	144	200	195	144	290	195
1600-1630	144	229	168	144	229	168	115	200	125	115	200	125
1630-1700	142	157	149	142	157	149	113	128	106	113	128	106
1700-1730	113	328	106	113	328	106	113	328	106	113	328	106
1730-1800	72	200	62	72	200	62	72	200	62	72	200	62
1800-1830	0	200	62	0	200	62	0	200	62	0	200	62
1830-1900	0	0	0	0	0	0	0	0	0	0	0	0
1900-1930	140	232	32	140	232	32	140	232	32	140	232	32
1930-2000	234	232	59	234	232	59	234	232	59	234	232	59
2000-2030	198	232	91	198	232	91	198	232	91	198	232	91
2030-2100	88	0	32	88	0	32	88	0	32	88	0	32
2100-2130	0	0	32	0	0	32	0	0	32	0	0	32
2130-2200	84	0	36	84	0	36	84	0	36	84	0	36
2200-2230	0	0	36	0	0	36	0	0	36	0	0	36
2230-2300	0	0	0	0	0	0	0	0	0	0	0	0

Table 5C-16

HOURLY DISTRIBUTION OF PASSENGERS AT TALANGA

TIME	CASE 29			CASE 30			CASE 31			CASE 32		
	ARR	DEP	THRU	ARR	DEP	THRU	ARR	DEP	THRU	ARR	DEP	THRU
500- 530	0	0	0	0	0	0	0	0	0	0	0	0
530- 600	0	0	0	0	0	0	0	0	0	0	0	0
600- 630	0	318	138	0	265	119	0	318	138	0	265	119
630- 700	0	374	138	0	374	119	0	374	138	0	374	119
700- 730	181	128	102	234	181	121	181	128	102	234	181	121
730- 800	257	303	90	257	356	109	257	303	90	257	356	109
800- 830	226	332	65	226	332	65	226	332	65	226	332	65
830- 900	93	313	109	93	313	109	93	313	109	93	313	109
900- 930	120	292	134	120	292	134	120	292	134	120	292	134
930-1000	297	318	189	244	265	170	297	318	189	244	265	170
1000-1030	198	240	125	145	240	116	198	240	125	145	240	116
1030-1100	0	125	48	53	178	67	0	154	48	53	207	67
1100-1130	27	120	32	27	173	51	56	140	75	56	202	94
1130-1200	193	120	138	193	120	138	193	140	181	193	140	181
1200-1230	122	180	144	122	180	144	122	180	144	122	180	144
1230-1300	40	142	74	40	142	74	40	113	74	40	113	74
1300-1330	143	195	51	143	195	51	116	166	7	116	166	7
1330-1400	461	248	208	408	195	189	434	246	164	381	193	145
1400-1430	234	391	164	181	391	164	263	418	208	210	418	208
1430-1500	160	212	148	160	265	167	189	239	192	189	292	211
1500-1530	101	288	150	101	288	150	101	288	150	101	288	150
1530-1600	144	229	195	144	229	195	144	200	195	144	200	195
1600-1630	144	220	168	144	220	168	115	200	125	115	200	125
1630-1700	142	157	149	142	157	149	113	128	106	113	128	106
1700-1730	113	328	106	113	328	106	113	328	106	113	328	106
1730-1800	72	200	62	72	200	62	72	200	62	72	200	62
1800-1830	0	200	62	0	200	62	0	200	62	0	200	62
1830-1900	0	0	0	0	0	0	0	0	0	0	0	0
1900-1930	140	232	32	140	232	32	140	232	32	140	232	32
1930-2000	234	232	59	234	232	59	234	232	59	234	232	59
2000-2030	198	232	91	198	232	91	198	232	91	198	232	91
2030-2100	88	0	32	88	0	32	88	0	32	88	0	32
2100-2130	0	0	32	0	0	32	0	0	32	0	0	32
2130-2200	84	0	36	84	0	36	84	0	36	84	0	36
2200-2230	0	0	36	0	0	36	0	0	36	0	0	36
2230-2300	0	0	0	0	0	0	0	0	0	0	0	0