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APPENDICES

APPENDIX A

SAMPLE OF FORMS FOR DATA COLLECTION USED IN THIS RESEARCH

Table Ap/A 1 Headings of the Table for Mid-Block Count

Name..... Date.....						
Location..... Direction..... Sheet No.....						
Time	Motorcycle	Mini-Bus	Light Vehicle	Bus	Truck	Motor-tricycle

Table Ap/A 2 Headings of the Table for Origin-Destination Survey

Passenger										Date.....			
Time	Origin	Destination	Purpose	Frequency	Occupation	Education	Loads			Reason for Mode	Sex	Age	Remarks
							Kind	Quantity	Unit				

Table Ap/A 3 Headings of the Table for Screen Line Survey

Name..... Date.....				
Location..... Direction..... Sheet No.....				
Time	City Bus	Intercity-Bus	Mini-Bus	Queue Mini-Bus

Table Ap/A 4 Headings of the Table for Travel Time and Delay Studies
of City Buses

Name..... Date.....						
Bus Line..... Direction..... Sheet No....						
Time	Check Pt.No.	Distance	Time Passed	Delays		No. of Pass.
				Loading & Unloading	Others	

Table Ap/A 5 Headings of the Table for Travel Time and Delay Studies
of Mini-Buses

Name..... Date.....							
Time	Check Pt.No.	Distance	Time Passed	Cruising	Loading & Unloading	Others	No. of Pass.

Table Ap/A 6 Headings of the Table for Waiting Time Study

Name..... Date.....				
Location..... Direction..... Sheet No....				
Time	Passenger	Arriving Time	Leaving Time	Remarks

APPENDIX B

ADDITIONAL RESULTS OF CHAPTER 3

Table Ap/B 1 Age/Reason for Mode Relationships, Person Trips by Mini-Bus

Reason for Mode Age, yrs	1	2	3	4	5	6	7	Total
0 - 4	0	0	0	0	0	0	0	0
5 - 12	2	2	0	0	0	6	0	10
13 - 17	34	1	15	0	0	142	0	192
18 - 25	145	11	97	0	0	552	0	805
26 - 35	84	4	79	0	0	380	0	547
36 - 50	45	9	32	0	0	301	0	387
> 50	7	2	8	0	0	61	0	78
Total	317	29	231	0	0	1,442	0	2,019

Table Ap/B 2 Education/Reason for Mode Relationships, Person Trips by Mini-Bus

Reason for Mode Edu, yrs	1	2	3	4	5	6	7	Total
0 - 4	95	12	30	0	0	329	0	466
5 - 7	20	2	10	0	0	135	0	167
8 - 10	80	8	52	0	0	326	0	466
11 - 12	53	3	44	0	0	243	0	343
13 - 15	59	4	53	0	0	299	0	415
>15	10	0	42	0	0	110	0	162
Total	317	29	231	0	0	1,442	0	2,019

Table Ap/B 3 Occupation/Reason for Mode Relationships, Person Trips by Mini-Bus

Reason for Mode \ Occupation	1	2	3	4	5	6	7	Total
Trading	70	8	54	0	0	324	0	456
Student	97	3	58	0	0	356	0	514
Government official	17	1	29	0	0	172	0	219
Employee	65	8	39	0	0	206	0	318
Housewife	40	4	16	0	0	162	0	222
Teacher	7	0	26	0	0	67	0	100
Farmer	10	2	0	0	0	79	0	91
Unemployed	11	3	9	0	0	76	0	99
Total	317	29	231	0	0	1,442	0	2,019

Table Ap/B 4 Sex/Reason for Mode Relationships, Person Trips by Mini-Bus

Reason for Mode \ Sex	1	2	3	4	5	6	7	Total
Female	207	18	129	0	0	923	0	1,277
Male	110	11	102	0	0	519	0	742
Total	317	29	231	0	0	1,442	0	2,019

Table Ap/B 5 Age/Reason for Mode Relationships, Person Trips by City-Bus

Reason for Mode \ Age	1	2	3	4	5	6	7	Total
0 - 4	0	0	0	0	0	0	0	0
5 - 12	0	0	0	3	1	0	0	4
13 - 17	0	0	0	44	6	7	2	59
18 - 25	0	0	0	120	27	22	7	176
26 - 35	0	0	0	54	8	10	1	73
36 - 50	0	0	0	42	2	6	3	53
>50	0	0	0	23	2	1	0	26
Total	0	0	0	286	46	46	13	391

Table Ap/B 6 Education/Reason for Mode Relationships, Person Trips
by City Bus

Reason for Mode Education, yrs	1	2	3	4	5	6	7	Total
1 - 4	0	0	0	100	9	10	5	124
5 - 7	0	0	0	37	4	5	0	46
8 - 10	0	0	0	60	5	13	1	79
11 - 12	0	0	0	39	11	8	2	60
13 - 15	0	0	0	44	12	9	4	69
>15	0	0	0	6	5	1	1	13
Total	0	0	0	286	46	46	13	391

Table Ap/B 7 Occupation/Reason for Mode Relationships, Person Trips
by City Bus

Reason for Mode Occupation	1	2	3	4	5	6	7	Total
Trading	0	0	0	38	2	3	0	43
Student	0	0	0	97	27	13	4	141
Government official	0	0	0	22	4	7	1	34
Employee	0	0	0	104	10	19	6	139
Housewife	0	0	0	6	1	0	0	7
Teacher	0	0	0	3	1	0	1	5
Farmer	0	0	0	5	1	1	1	8
Unemployed	0	0	0	11	0	3	0	14
Total	0	0	0	286	46	46	13	391

Table Ap/B 8 Sex/Reason for Mode Relationships, Person Trips by City Bus

Reason for Mode Sex	1	2	3	4	5	6	7	Total
Female	0	0	0	82	9	10	8	109
Male	0	0	0	204	37	36	5	282
Total	0	0	0	286	46	46	13	391

Table Ap/B 9 Age/Frequency Relationships, Person Trips by Mini-Bus

Age, yrs \ Frequency	Frequency								Total
	1	2	3	4	5	6	7	8	
0 - 4	0	0	0	0	0	0	0	0	0
5 - 12	3	0	3	0	2	0	0	2	10
13 - 17	63	9	31	4	4	30	1	50	192
18 - 25	277	31	76	19	2	112	32	256	805
26 - 35	150	2	27	6	10	85	20	247	547
36 - 50	80	2	5	3	5	47	14	231	387
>50	12	0	0	1	1	7	6	51	78
Total	585	44	142	33	24	281	73	837	2,019

Table Ap/B10 Education/Frequency Relationships, Person Trips by Mini-Bus

Edu., yrs \ Frequency	Frequency								Total
	1	2	3	4	5	6	7	8	
1 - 4	145	1	4	0	7	68	24	217	466
5 - 7	54	2	4	5	4	25	7	66	167
8 - 10	140	2	23	7	6	70	16	202	466
11 - 12	103	20	51	10	2	43	6	108	343
13 - 15	120	17	49	9	3	58	14	145	415
>15	23	2	11	2	2	17	6	99	162
Total	585	44	142	33	24	281	73	837	2,019

Table Ap/B 11 Occupation/Frequency Relationships, Person Trips by Mini-Bus

Frequency \ Occupation	1	2	3	4	5	6	7	8	Total
Trading	99	0	3	5	7	80	13	249	456
Student	177	37	89	20	8	75	10	98	514
Government official	51	1	18	1	0	12	9	127	219
Employee	133	3	14	3	0	36	14	115	318
Housewife	104	1	3	2	6	34	5	67	222
Teacher	16	2	15	1	2	17	6	41	100
Farmer	0	0	0	0	0	7	5	79	91
Unemployed	5	0	0	1	1	20	11	61	99
Total	585	44	142	33	24	281	73	837	2,019

Table Ap/B12 Sex/Frequency Relationships, Person Trips by Mini-Bus

Frequency \ Sex	1	2	3	4	5	6	7	8	Total
Female	427	31	104	17	16	185	55	442	1,277
Male	158	13	38	16	8	96	18	395	742
Total	585	44	142	33	24	281	73	837	2,019

Table Ap/B13 Edu/Frequency Relationships, Person Trips by City Bus

Frequency \ Education, yrs	1	2	3	4	5	6	7	8	Total
1 - 4	40	3	0	3	0	20	19	39	124
5 - 7	15	2	2	0	0	4	10	13	46
8 - 10	27	5	8	0	1	11	8	19	79
11 - 12	12	5	6	0	1	9	10	17	60
13 - 15	12	11	11	0	0	8	4	23	69
> 15	0	1	3	0	1	3	1	4	13
Total	106	27	30	3	3	55	52	115	391

Table Ap/B 14 Age/Frequency Relationships, Person Trips by City Bus

Frequency Age, yrs	1	2	3	4	5	6	7	8	Total
0 - 4	0	0	0	0	0	0	0	0	0
5 - 12	0	0	0	0	0	1	1	2	4
13 - 17	9	4	9	0	0	7	16	14	59
18 - 25	49	19	13	2	3	27	14	49	176
26 - 35	19	2	4	0	0	11	10	27	73
36 - 50	20	1	2	0	0	7	7	16	53
>50	9	1	2	1	0	2	4	7	26
Total	106	27	30	3	3	55	52	115	391

Table Ap/B 15 Occupation/Frequency Relationships, Person Trips by City Bus

Frequency Occu.	1	2	3	4	5	6	7	8	Total
Trading	22	0	0	1	0	7	1	12	43
Student	19	20	23	0	3	19	20	37	141
Government off.	12	2	2	0	0	3	3	12	34
Employee	49	5	3	2	0	21	21	38	139
Housewife	0	0	0	0	0	2	2	3	7
Teacher	2	0	2	0	0	0	0	1	5
Farmer	0	0	0	0	0	0	1	7	8
Unemployed	2	0	0	0	0	3	4	5	14
Total	106	27	30	3	3	55	52	115	391

Table Ap/B 16 Sex/Frequency Relationships, Person Trips by City Bus

Frequency Sex	1	2	3	4	5	6	7	8	Total
Female	29	6	10	1	1	20	13	29	109
Male	77	21	20	2	2	35	39	86	282
Total	106	27	30	3	3	55	52	115	391

Table Ap/B 17 Results of Screen Line Survey

Location : Nakorn Phing Bridge

Date : 3rd December 1975

Direction: EB

Time	City Bus				Intercity-Bus						Mini-Bus		Queue Mini-Bus	
	Line 1		Line 3		White Bus		Red Bus		Green Bus		No.of pass	No.of veh	No.of pass	No.of veh
	No.of pass	No.of veh	No.of pass	No.of veh	No.of pass	No.of veh	No.of pass	No.of veh	No.of pass	No.of veh				
06.30-07.30	100	6	86	4	134	10	35	5	53	3	293	112	301	23
07.30-08.30	87	6	85	4	216	11	36	6	0	-	519	184	392	40
08.30-09.30	96	6	36	5	103	10	44	7	23	2	412	212	306	26
09.30-10.30	89	6	51	5	86	10	39	8	0	-	289	177	260	23
10.30-11.30	121	8	66	5	90	12	67	9	0	-	232	172	496	51
11.30-12.30	62	6	57	4	75	10	83	8	0	-	169	139	202	19
12.30-13.30	89	7	45	4	89	12	34	8	0	-	197	153	310	37
13.30-14.30	113	7	78	5	79	11	71	11	3	1	156	129	357	29
14.30-15.30	84	5	107	5	130	13	95	8	8	2	183	151	491	40
15.30-16.30	227	7	104	4	291	12	108	9	40	2	394	148	814	62
16.30-17.30	158	5	137	5	312	15	139	6	11	1	443	159	801	66
17.30-18.30	150	7	88	5	164	12	83	6	0	-	150	103	287	24
18.30-19.30	103	6	88	5	13	1	7	1	0	-	151	89	6	1
19.30-20.30	63	4	59	4	0	-	0	-	-	-	73	60	18	2
Total	1542	86	1087	64	1782	139	841	92	138	11	3661	1988	5041	443

Table Ap/B 17 (continued)

Location : Nakorn Phing Bridge
 Direction : WB

Date : 3rd December 1975

Time	City Bus Line 3		Intercity-Bus						Mini-Bus		Queue Mini-Bus	
	No. of pass	No. of veh	White Bus		Red Bus		Green Bus		No. of pass	No. of veh	No. of pass	No. of veh
			No. of pass	No. of veh	No. of pass	No. of veh	No. of pass	No. of veh				
06.30-07.30	120	3	122	8	62	5	30	2	219	85	915	72
07.30-08.30	165	5	277	10	150	8	31	2	398	152	816	77
08.30-09.30	61	5	245	15	113	10	0	-	305	168	705	51
09.30-10.30	54	5	143	10	109	8	0	-	402	231	503	45
10.30-11.30	73	4	140	12	98	10	0	-	355	244	393	42
11.30-12.30	65	4	97	14	50	6	4	1	256	189	251	29
12.30-13.30	74	5	81	11	27	8	4	1	216	202	166	23
13.30-14.30	56	4	77	13	32	9	3	1	235	191	169	19
14.30-15.30	56	5	95	12	16	8	13	1	314	207	255	22
15.30-16.30	163	5	160	12	41	7	0	-	373	154	546	42
16.30-17.30	106	6	191	16	57	6	5	1	247	142	151	17
17.30-18.30	84	5	55	7	42	5	11	1	198	97	26	4
18.30-19.30	43	5	0	-	0	-	0	-	166	107	12	2
19.30-20.30	48	4	0	-	0	-	0	-	113	71	10	1
Total	1168	65	1683	140	797	90	101	10	3797	2240	4918	446

Table Ap/B 17 (continued)

Location : Nawarat Bridge *

Direction : EB

Date : 3rd December 1975

Time	Mini-Bus		Queue Mini-Bus	
	No.of pass	No.of veh	No.of pass	No.of veh
06.30-07.30	265	93	160	13
07.30-08.30	314	242	304	33
08.30-09.30	350	262	306	30
09.30-10.30	389	285	183	19
10.30-11.30	382	281	317	29
11.30-12.30	435	310	337	32
12.30-13.30	361	267	476	42
13.30-14.30	325	215	241	21
14.30-15.30	340	254	291	27
15.30-16.30	505	310	384	30
16.30-17.30	532	276	843	72
17.30-18.30	408	270	367	30
18.30-19.30	294	191	50	6
19.30-20.30	168	118	29	3
Total	5068	3374	4288	387

* No EB city buses

No EB intercity buses

Table Ap/B 17 (continued)

Location : Nawarat Bridge *

Direction : WB

Date : 3rd December 1975

Time	City Bus Line 1		Mini-Bus		Queue Mini-Bus	
	No.of pass	No.of veh	No.of pass	No.of veh	No.of pass	No.of veh
06.30-07.30	142	7	337	140	534	41
07.30-08.30	188	6	906	343	1258	116
08.30-09.30	130	6	426	216	381	26
09.30-10.30	140	6	349	270	393	50
10.30-11.30	107	5	254	163	201	16
11.30-12.30	112	7	477	306	127	16
12.30-13.30	38	6	278	218	98	11
13.30-14.30	92	7	195	196	96	11
14.30-15.30	80	7	268	207	159	13
15.30-16.30	59	7	339	172	265	21
16.30-17.30	137	7	405	217	208	13
17.30-18.30	104	7	293	187	162	14
18.30-19.30	52	4	248	187	159	17
19.30-20.30	33	2	144	84	100	11
Total	1414	84	4914	2906	4141	376

* No WB intercity buses

Table Ap/B 18 Daily person Trips Distribution by Mini-Bus

ORIGIN ZONES	DESTINATION ZONES																Total
	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	
01	0	0	0	100	500	0	0	400	300	0	100	0	0	0	200	0	1600
02	400	0	300	0	3800	400	0	700	200	400	3000	0	200	600	300	100	10400
03	200	600	600	600	3700	1200	100	2100	800	400	3200	0	400	700	2000	600	17200
04	0	300	0	0	1400	900	300	0	100	100	1300	100	900	200	0	200	5800
05	800	1800	4700	1400	7000	4800	2200	6800	5500	800	5200	400	1800	6500	1900	900	52500
06	600	1100	1500	0	3100	500	300	2600	700	100	2100	0	0	1500	300	200	14600
07	200	0	200	0	1200	100	0	400	0	0	0	0	200	300	0	0	2600
08	0	500	1000	300	3800	600	100	600	1300	700	600	0	100	900	700	100	11300
09	100	100	1400	0	4300	400	0	200	600	1000	2300	100	0	200	600	200	11500
10	0	200	500	300	2200	600	0	300	300	700	500	0	0	0	2300	200	8100
11	500	800	2400	900	10200	1200	0	1300	1500	500	4100	100	400	1500	2800	3900	32100
12	0	0	0	0	0	0	0	0	0	0	200	0	0	0	0	0	200
13	0	0	200	100	1800	500	0	300	300	0	300	0	600	1100	0	0	5200
14	0	100	800	400	3500	900	0	900	600	0	1100	0	800	1500	200	0	10800
15	0	400	600	400	6600	300	0	200	400	1000	2700	0	0	100	300	300	13300
16	0	0	300	0	1200	200	0	300	0	100	900	100	600	600	0	400	4700
Total	2800	5900	14500	4500	54300	12600	3000	17100	12600	5800	27600	800	6000	15700	11600	7100	201900

Table Ap/B 19 Daily Person Trips Distribution by City Bus

		DESTINATION ZONES																	
ORIGIN ZONES	Zones	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	Total	
	01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	02	0	0	0	0	179	60	0	0	298	60	60	0	119	238	298	0	0	1,312
	03	0	0	0	0	0	0	0	0	179	60	179	0	0	179	119	119	0	835
	04	0	0	0	0	0	0	0	0	0	0	0	0	60	0	0	0	0	60
	05	0	60	60	0	119	60	476	536	476	238	357	0	179	298	893	655	0	4,407
	06	0	60	0	0	0	0	60	0	238	0	0	0	0	119	0	60	0	537
	07	0	0	238	0	417	60	0	0	0	0	417	0	0	0	0	0	179	1,311
	08	0	0	179	179	119	0	0	238	298	0	179	0	238	179	0	0	0	1,609
	09	0	60	179	60	833	119	0	417	0	0	298	0	0	893	0	0	0	2,859
	10	0	60	119	0	0	0	0	0	0	0	0	0	60	60	60	0	0	359
	11	0	0	0	0	476	119	357	60	238	0	0	0	0	238	179	536	0	2,203
	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	13	0	60	179	60	714	0	0	0	0	179	0	0	119	119	833	0	0	2,263
	14	0	238	119	0	655	0	0	417	595	238	298	0	298	119	893	0	0	3,870
	15	0	119	0	0	357	0	0	0	0	0	0	0	179	357	60	0	0	1,072
	16	0	0	179	0	298	60	60	0	0	0	0	0	0	0	0	0	0	597
Total	0	657	1252	299	4167	478	953	1668	2322	775	1788	0	1252	2799	3335	1549	0	23,294	

Table Ap/C 1 Distances Between Check Points of Bus Line 1

EB- Suan Dork to Aueng Come Market			WB - Aueng Come Market to Suan Dork		
Check* pt.no.	Intersection	Dis- tance (km)	Check* pt.no.	Intersection	Dis- tance km
1	Suan Dork (starting point)		20	Aueng Come Market (starting pt.)	3.00
2	Cherng Doy Rd./Boon Ruang Rit Rd.	3.25	21	San Glang	3.07
3	Boon Ruang Rit Rd./Manee Noporat Rd.	0.75	19	Charoen Muang Rd./Super-Highway	1.02
4	Manee Noporat Rd./Prapokklao Rd.	0.85	18	Charoen Muang Rd./Tung Hotel	1.05
5	Prapokklao Rd./Rajwithi Rd.	0.63	17	Charoen Muang Rd./Bam Rung Rat Rd.	0.85
6	Prapokklao Rd./Raj Chiengsaen Rd.	1.09	14	Tapae Rd./Witchayanond Rd.	0.88
7	Wualai Rd./Tippanetr Rd.	1.15	11	Tapae Rd./Kot Chasarn Rd.	0.76
8	Tippanetr Rd./Chang Loa Rd.	0.72	9	Kot Chasarn Rd./Raj Chiengsaen Rd.	0.44
9	Raj Chiengsaen Rd./Kot Chasarn Rd.	1.25	6	Raj Chiengsaen Rd./Prapokklao Rd.	1.15
10	Kot Chasarn Rd./Loi Krao Rd.	0.42	7	Wualai Rd./Tippanetr Rd.	0.72
12	Chaiyapoom Rd./Chang Moi Rd.	0.64	8	Tippanetr Rd./Chang Loa Rd.	0.81
13	Chang Moi Rd./Rajwongse Rd.	0.59	6	Chang Loa Rd./Prapokklao Rd.	1.09
15	Taiwang Rd./Witchayanond Rd.	0.48	5	Prapokklao Rd./Rajwithi Rd.	0.63
16	Kaew Nawarat Rd./Bamrungrat Rd.	0.95	4	Prapokklao Rd./Manee Noporat Rd.	0.85
17	Bamrungrat Rd./Charoen Muang Rd.	1.25	3	Manee Noporat Rd./Boon Ruang Rit Rd.	0.75
18	Charoen Muang Rd./Tung Hotel Rd.	1.05	2	Boon Ruang Rit Rd./Cherng Doy Rd.	3.25
19	Charoen Muang Rd./Super Highway	1.02	1	Suan Dork (ending pt.)	
20	Aueng Come Market (ending point)	0.07	Total		20.32
Total		16.16			

* see Fig. 7

Table Ap/C 2 distances Between Check Points of Bus Line 2

SB - P.Phun Jet Camp to Distillery		
Check* pt.no.	Intersection	Dis- tance km
1	P.Phun Jet Camp (starting pt.)	
2	Fang Rd./Super-Highway	4.25
3	Fang Rd./Manee Noparat Rd.	1.90
4	Manee Noparat Rd./Chaiyapoom Rd.	0.86
5	Chaiyapoom Rd./Chang Moi Rd.	0.57
6	Chang Moi Rd./Witchayanond Rd.	0.82
7	Witchayanond Rd./Tapae Rd.	0.38
8	Chang Klan Rd./Sridornchai Rd.	0.80
9	Sridornchai Rd./Charoen Prathet Rd.	0.43
10	Distillery (ending pt.)	2.54
Total		12.55

NB - Distillery to P.Phun Jet Camp		
Check* pt.no.	Intersection	Dis- tance km
10	Distillery (starting pt.)	
(1) 9	Charoen Prathet Rd./Sridornchai Rd.	2.54
8	Sridornchai Rd./Chang Klan Rd.	0.43
7	Chang Klan Rd./Tapae Rd.	0.80
11	Tapae Rd./Moon Muang Rd.	0.91
12	Moon Muang Rd./Sri Poom Rd.	0.81
13	Sri Poom Rd./Praprokklao Rd.	0.73
2	Fang Rd./Super-Highway	1.97
1	P.Phun Jet Camp (ending pt.)	4.25
Total		12.44

* See Fig. 8



(1) Due to the time restrictions on the one-way street system -- 07.00-08.30 hrs and 15.00-16.30 hrs only southbound traffic on Charoen Prathet Rd.-- the check point no.9 was missed and the distance between check point nos.10 and 8 is reduced to 2.30 km (total route length = 11.77 km).

Table Ap/C 3 Distances Between Check Points of Bus Line 3

EB- Huey Kaeo to Railway Station		
Check* pt. no.	Intersection	Dis- tance (km)
1	Huey Kaeo (Starting pt.)	2.83
2	Huey Kaeo Rd./Super Highway	1.37
3	Huey Kaeo Rd./Manee Noparat Rd.	0.35
4	Manee Noparat Rd./Singharat Rd.	0.76
5	Singharat Rd./Inthawarorot Rd.	0.71
6	Rajwithi Rd./Prapokklao Rd.	0.64
7	Rajwithi Rd./Chaiyapoom Rd.	0.59
8	Chang Moi Rd./Rajwongse Rd.	0.48
9	Taiwang Rd./Witchayanond Rd.	0.97
10	Kaeo Nawarat Rd./Bamrungrat Rd.	0.70
11	Kaeo Nawarat Rd./Tung Hotel Rd.	1.89
12	Tung Hotel Rd./Charoen Muang Rd.	0.36
13	Railway Station (ending pt.)	
Total		11.65

WB- Railway Station to Huey Kaeo		
Check* pt. no.	Intersection	Dis- tance (km)
13	Railway Station (starting pt.)	0.36
12	Charoen Muang Rd./Tung Hotel Rd.	1.89
11	Tung Hotel Rd./Kaeo Nawarat Rd.	0.70
10	Kaeo Nawarat Rd./Bamrungrat Rd.	0.97
9	Taiwang Rd./Witchayanond Rd.	0.70
14	Witchayanond Rd./Tapae Rd.	0.91
15	Tapae Rd./Moon Muang Rd.	0.31
16	Moon Muang Rd./Rajwithi Rd.	0.59
6	Rajwithi Rd./Prapokklao Rd.	0.71
5	Inthawarorot Rd./Singharat Rd.	0.76
4	Singharat Rd./Manee Noparat Rd.	0.35
3	Manee Noparat Rd./Huey Kaeo Rd.	1.37
2	Huey Kaeo Rd./Super Highway	2.83
1	Huey Kaeo (ending pt.)	
Total		12.45

* See Fig. 9

Table Ap/C 4a Travel Time and Delay of Bus Line 1, EB- Suan Dork to Aueng Come Market(July 1975)

Check pt. no.	Travel time (min)	Delay(min)			Running time (min)	Travel speed (kph)	Running speed (kph)	Travel time (min)	Delay (min)			Running time (min)	Travel Speed (kph)	Running Speed (kph)
		Load and Unload	Others	Total					Load and Unload	Others	Total			
06.40 hrs							07.10 hrs							
1	7.53	0.73	0	0.73	6.80	25.9	28.7	11.32	2.50	0	2.50	8.82	17.2	22.1
2	1.87	0.22	0	0.22	1.65	24.1	27.3	3.13	0.72	0.13	0.85	2.28	14.4	19.7
3	2.70	0.23	0.52	0.75	1.95	18.9	26.2	2.93	0.38	0.17	0.55	2.38	17.4	21.4
4	1.07	0	0	0	1.07	35.3	35.3	2.13	0.42	0	0.42	1.71	17.7	22.1
5	2.80	0.35	0.17	0.52	2.28	23.4	28.7	4.48	0.62	0.63	1.25	3.23	14.6	20.2
6	2.18	0.32	0	0.32	1.86	31.7	37.1	4.08	0.52	0.08	0.60	3.48	16.9	19.8
7	2.17	0.40	0.13	0.53	1.64	19.9	26.3	3.15	0.62	0.05	0.67	2.48	13.7	17.4
8	3.12	0.45	0.03	0.48	2.64	24.0	28.4	4.43	0.85	0.07	0.92	3.51	16.9	21.4
9	0.58	0	0	0	0.58	43.4	43.4	2.12	0.75	0.05	0.80	1.32	11.9	19.1
10	1.32	0	0.03	0.03	1.29	29.1	29.8	2.53	0.25	0.17	0.42	2.11	15.2	18.2
12	1.30	0.25	0	0.25	1.05	27.2	33.7	2.50	0.90	0	0.90	1.60	14.2	22.1
13	1.23	0.08	0.15	0.23	1.00	23.4	28.8	2.62	0.53	0.28	0.81	1.81	11.0	15.9
15	2.73	0.28	0.15	0.43	2.30	20.9	24.8	4.30	0.37	0.57	0.94	3.36	13.3	17.0
16	2.68	0.40	0.22	0.62	2.06	28.0	36.8	5.65	0.13	3.02	3.15	2.50	13.3	30.0
17	2.05	0.26	0	0.26	1.79	30.7	35.2	2.82	0.38	0	0.38	2.44	22.3	25.8
18	1.72	0.07	0	0.07	1.65	35.6	37.1	1.98	0.07	0	0.07	1.91	30.9	32.0
19	0.17	0	0	0	0.17	24.7	24.7	0.23	0	0	0	0.23	18.3	18.3
Total	37.22	4.04	1.40	5.44	31.78	26.1	30.5	60.40	10.01	5.22	15.23	45.17	16.1	21.5

Table Ap/C 4a (contunued)

Check pt.no	Travel time (min)	Delay (min)			Running time (min)	Travel speed (kph)	Running speed (kph)
		Load & Unload	Other	Total			
08.00 hrs							
1	7.38	0.68	-	0.68	6.70	26.4	29.1
2	2.70	0.17	0.58	0.75	1.95	16.7	23.1
3	3.16	0.33	0.62	0.95	2.21	16.1	23.1
4	1.82	0.15	0.08	0.23	1.59	20.8	23.8
5	3.52	0.25	0.05	0.30	3.22	18.6	20.3
6	3.33	0.25	0.05	0.30	3.03	20.7	22.8
7	2.22	0.40	0.05	0.45	1.77	19.5	24.4
8	4.03	0.33	-	0.33	3.70	18.6	20.3
9	1.57	0.20	0.05	0.25	1.32	16.1	19.1
10	2.08	-	0.25	0.25	1.83	18.5	21.0
12	2.02	0.50	-	0.50	1.52	17.5	23.3
13	2.12	0.63	0.05	0.68	1.44	13.6	20.0
15	2.80	0.23	-	0.23	2.57	20.4	22.2
16	2.83	0.12	0.08	0.20	2.63	26.5	28.5
17	3.12	0.60	-	0.60	2.52	20.2	25.0
18	2.32	0.32	-	0.32	2.00	26.4	30.6
19	0.23	-	-	-	0.23	18.3	18.3
20							
Total	47.25	5.16	1.86	7.02	40.23	20.5	24.1
08.20 hrs							
1	7.45	0.97	-	0.97	6.48	26.2	30.1
2	2.77	0.15	0.70	0.85	1.92	16.2	23.4
3	2.95	0.62	0.42	1.04	1.91	17.3	26.7
4	1.53	0.32	0.40	0.72	0.81	24.7	46.7
5	3.53	0.43	0.32	0.75	2.78	18.5	23.5
6	2.98	0.13	-	0.13	2.85	23.2	24.2
7	1.95	0.28	-	0.28	1.67	22.2	25.9
8	3.95	0.58	0.22	0.80	3.15	19.0	23.8
9	1.28	0.12	0.08	0.20	1.08	19.7	23.3
10	2.18	0.13	0.25	0.38	1.80	17.6	21.3
12	1.80	0.28	-	0.28	1.52	19.7	23.3
13	1.23	0.07	0.08	0.15	1.08	23.4	26.7
15	2.50	0.13	-	0.13	2.37	22.8	24.1
16	2.10	0.10	0.07	0.17	1.93	35.7	38.9
17	2.37	0.32	-	0.32	2.05	26.6	30.7
18	3.15	0.28	-	0.28	2.87	19.4	21.3
19	0.22	-	-	-	0.22	19.1	19.1
20							
Total	43.94	4.91	2.54	7.45	36.49	22.1	26.6

Table Ap/C 4a (continued)

Check pt.no	Travel time (min)	Delay (min)			Running time (min)	Travel speed (kph)	Running speed (kph)
		Load & Unload	Other	Total			
12.10 hrs							
1	8.60	0.73	-	0.73	7.87	22.7	24.8
2	2.07	0.05	0.15	0.20	1.87	21.7	24.1
3	2.43	0.22	-	0.22	2.21	21.0	23.1
4	1.48	0.10	-	0.10	1.38	25.5	27.4
5	3.17	0.15	0.17	0.32	2.85	20.6	22.9
6	3.08	0.15	0.15	0.30	2.78	22.4	24.8
7	1.77	-	-	-	1.77	24.4	24.4
8	3.33	0.12	0.18	0.30	3.03	22.5	24.8
9	1.25	0.05	-	0.05	1.20	20.2	21.0
10	2.22	0.12	0.22	0.34	1.88	17.3	20.4
12	1.93	0.40	-	0.40	1.53	18.3	23.1
13	2.08	0.17	0.33	0.50	1.58	13.8	18.2
15	2.53	0.07	0.12	0.19	2.34	22.5	24.4
16	3.48	0.07	0.75	0.82	2.66	21.6	28.2
17	2.90	0.30	-	0.30	2.60	21.7	24.2
18	1.92	0.03	-	0.03	1.89	31.9	32.4
19	0.27	-	-	-	0.27	15.6	15.6
20							
Total	44.51	2.73	2.07	4.80	39.71	21.8	24.4
12.25 hrs							
1	8.72	0.62	-	0.62	8.10	22.4	24.1
2	2.22	0.17	-	0.17	2.05	20.3	22.0
3	2.58	0.22	-	0.22	2.36	19.8	21.6
4	1.18	0.13	-	0.13	1.05	32.0	36.0
5	2.73	0.12	-	0.12	2.61	24.0	25.1
6	2.95	0.07	0.10	0.17	2.38	27.1	29.0
7	1.52	-	-	-	1.52	28.4	28.4
8	3.20	0.15	0.38	0.53	2.67	23.4	28.1
9	0.83	-	-	-	0.83	30.4	30.4
10	2.32	0.20	0.08	0.28	2.04	16.6	18.8
12	1.73	0.12	0.05	0.17	1.56	20.5	22.7
13	1.78	0.40	0.03	0.43	1.35	16.2	21.3
15	2.48	0.23	-	0.23	2.25	23.0	25.3
16	2.55	0.17	-	0.17	2.38	29.4	31.5
17	2.13	0.22	-	0.22	1.91	29.6	33.0
18	1.57	0.03	-	0.03	1.54	39.0	39.7
19	0.32	-	-	-	0.32	13.1	13.1
20							
Total	40.41	2.85	0.64	3.49	36.92	24.0	26.3

Table Ap/C 4a (continued)

Check pt.no	Travel time (min)	Delay (min)			Running time (min)	Travel speed (kph)	Running speed (kph)
		Load & Unload	Other	Total			
12.55 hrs							
1	7.63	0.70	-	0.70	6.93	25.6	28.1
2	2.28	0.18	0.13	0.31	1.97	19.7	22.8
3	2.07	0.10	-	0.10	1.97	24.6	25.9
4	2.13	0.25	0.12	0.37	1.76	17.7	21.5
5	3.00	0.07	0.37	0.44	2.56	21.8	25.5
6	3.10	0.28	-	0.28	2.82	22.3	24.5
7	1.82	0.15	0.07	0.22	1.60	23.7	27.0
8	3.23	0.08	-	0.08	3.15	23.2	29.0
9	0.87	-	-	-	0.87	29.0	29.0
10	2.33	0.07	0.45	0.52	1.81	16.5	21.2
12	2.40	0.73	-	0.73	1.67	14.8	21.2
13	1.58	0.18	-	0.18	1.40	18.2	20.6
15	2.82	0.15	0.07	0.22	2.60	20.2	21.9
16	3.40	-	0.43	0.43	2.97	22.1	25.3
17	2.90	0.27	0.05	0.32	2.58	21.7	24.4
18	1.70	-	-	-	1.70	36.0	36.0
19	0.37	-	-	-	0.37	11.4	11.4
20							
Total	43.63	3.21	1.69	4.90	38.73	22.2	25.0
14.00 hrs							
1	6.67	0.85	-	0.85	5.82	29.2	33.5
2	2.63	0.37	0.33	0.70	1.93	17.1	23.3
3	2.43	0.10	0.28	0.38	2.05	21.0	24.9
4	1.75	0.23	-	0.23	1.52	21.6	24.9
5	3.25	0.15	0.45	0.60	2.65	20.1	24.7
6	2.28	0.12	-	0.12	2.16	30.3	31.9
7	1.75	0.13	0.18	0.31	1.44	24.7	30.0
8	3.60	0.40	0.30	0.70	2.90	20.8	25.9
9	1.27	0.13	-	0.13	1.14	19.8	22.1
10	2.25	0.07	0.13	0.20	2.05	17.1	18.7
12	1.60	0.23	-	0.23	1.37	22.1	25.8
13	1.60	0.23	-	0.23	1.37	18.0	21.0
15	2.23	0.10	-	0.10	2.13	25.6	26.8
16	2.37	0.10	0.08	0.18	2.19	31.6	34.2
17	2.20	0.18	-	0.18	2.02	28.6	31.2
18	1.78	0.10	-	0.10	1.68	34.4	36.4
19	0.23	-	-	-	0.23	18.3	18.3
20							
Total	39.89	3.49	1.75	5.24	34.65	24.3	28.0

Table Ap/C 4a (continued)

Check pt.no	Travel time (min)	Delay (min)			Running time (min)	Travel speed (kph)	Running speed (kph)
		Load & Unload	Other	Total			
15.10 hrs							
1	8.47	1.05	-	1.05	7.42	23.0	26.3
2	1.77	0.10	0.07	0.17	1.60	25.4	28.1
3	2.37	0.13	-	0.13	2.24	21.5	22.7
4	1.75	0.13	-	0.13	1.62	21.6	23.3
5	3.33	0.25	0.32	0.57	2.76	19.6	23.7
6	2.87	0.07	-	0.07	2.80	24.0	24.6
7	2.42	0.22	-	0.22	2.20	17.9	19.6
8	3.83	0.53	0.07	0.60	3.23	19.6	23.2
9	1.72	0.43	-	0.43	1.29	14.7	19.5
10	3.33	0.07	0.28	0.35	2.98	11.5	12.9
12	1.87	0.17	-	0.17	1.70	18.9	20.8
13	2.17	0.25	0.17	0.42	1.75	13.3	16.5
15	3.62	0.30	0.10	0.40	3.22	15.7	17.7
16	3.00	0.10	0.33	0.43	2.57	25.0	29.2
17	3.15	0.57	-	0.57	2.58	20.0	24.4
18	2.60	0.20	0.10	0.30	2.30	23.5	26.6
19	0.37	-	-	-	0.37	11.4	11.4
Total	47.64	4.57	1.44	6.01	41.63	20.4	23.3
15.25 hrs							
1	8.55	0.88	-	0.88	7.67	22.8	25.4
2	1.80	0.25	0.12	0.37	1.43	25.0	31.5
3	2.50	0.13	0.52	0.65	1.85	20.4	27.6
4	1.33	0.10	-	0.10	1.23	28.4	30.7
5	3.02	0.28	0.17	0.45	2.57	21.7	25.4
6	2.68	0.17	0.30	0.47	2.21	25.7	31.2
7	1.10	-	-	-	1.10	39.3	39.3
8	3.63	0.13	-	0.13	3.50	20.7	21.4
9	1.55	0.35	-	0.35	1.20	16.3	21.0
10	2.75	0.17	0.57	0.74	2.01	14.0	19.1
12	1.90	0.47	-	0.47	1.43	18.6	24.8
13	1.68	0.28	0.08	0.36	1.32	17.1	21.8
15	2.75	0.30	0.18	0.48	2.27	20.7	25.1
16	2.57	0.27	-	0.27	2.30	29.2	32.6
17	3.00	0.52	-	0.52	2.48	21.0	25.4
18	2.60	0.38	0.05	0.43	2.17	23.5	28.2
19	0.20	-	-	-	0.20	21.0	21.0
Total	43.61	4.68	1.99	6.67	36.94	22.2	26.2

Table Ap/C 4a (continued)

Check pt.no	Travel time (min)	Delay (min)			Running time (min)	Travel speed (kph)	Running speed (kph)
		Load & Unload	Other	Total			
15.50 hrs							
1	9.45	1.72	-	1.72	7.73	20.6	25.2
2	2.73	0.50	-	0.50	2.23	16.5	20.2
3	4.02	1.15	0.27	1.42	2.60	12.7	19.6
4	1.95	0.65	-	0.65	1.30	19.4	29.1
5	5.40	1.38	0.82	2.20	3.20	12.1	20.4
6	3.25	0.68	-	0.68	2.57	21.2	26.8
7	2.77	0.58	-	0.58	2.19	15.6	19.7
8	4.72	0.98	-	0.98	3.74	15.9	20.1
9	1.97	0.55	-	0.55	1.42	12.8	17.7
10	3.83	0.65	1.25	1.90	1.93	10.0	19.9
12	2.60	1.05	-	1.05	1.55	13.6	22.8
13	3.33	0.65	0.68	1.33	2.00	8.7	14.4
15	3.42	0.62	0.05	0.67	2.75	16.7	20.7
16	3.50	0.78	-	0.78	2.72	21.4	27.6
17	3.32	0.73	-	0.73	2.59	19.0	24.3
18	2.70	0.48	-	0.48	2.22	22.7	27.6
19	0.20	-	-	-	0.20	21.0	21.0
Total	59.16	13.15	3.07	16.22	42.94	16.4	22.6
16.20 hrs							
1	11.80	2.55	-	2.55	9.25	16.5	21.1
2	2.75	0.47	-	0.47	2.28	16.4	19.7
3	3.82	1.02	-	1.02	2.80	13.4	18.2
4	1.93	0.37	-	0.37	1.56	19.6	24.2
5	5.23	0.93	0.70	1.63	3.60	12.5	18.2
6	3.60	0.27	0.25	0.52	3.08	19.2	22.4
7	2.45	0.23	0.12	0.35	2.10	17.6	20.6
8	4.25	0.73	-	0.73	3.52	17.6	21.3
9	1.57	0.35	-	0.35	1.22	16.1	20.7
10	2.95	0.43	0.32	0.75	2.20	13.0	17.5
12	2.10	0.50	-	0.50	1.60	16.9	22.1
13	2.37	0.28	0.48	0.76	1.61	12.2	17.9
15	3.30	0.37	0.10	0.47	2.83	17.3	20.1
16	3.35	0.63	-	0.63	2.72	22.4	27.6
17	3.53	0.80	-	0.80	2.73	17.8	23.1
18	3.05	0.55	-	0.55	2.50	20.1	24.5
19	0.23	-	-	-	0.23	18.3	18.3
Total	58.28	10.48	1.97	12.45	45.83	16.6	21.2

Table Ap/C 4b Travel Time and Delay of Bus Line 1
WB- Aueng come Market to Suan Dork

(July 1975)

Check pt.no	Travel time (min)	Delay (min)			Running time (min)	Travel speed (kph)	Running speed (kph)
		Load & Unload	Other	Total			
06.50 hrs							
20	5.97	0.03	-	0.08	5.89	30.2	30.6
21	8.03	0.47	0.82	1.29	6.74	22.9	27.3
19	3.87	0.60	0.30	0.90	2.97	15.8	20.6
18	3.58	0.72	-	0.72	2.86	17.6	22.0
17	2.80	0.45	-	0.45	2.35	18.2	21.7
14	2.72	0.40	-	0.40	2.32	19.4	22.8
11	2.93	0.38	0.17	0.55	2.38	15.6	19.2
9	2.32	0.15	0.68	0.83	1.49	11.4	17.7
6	4.32	0.60	0.20	0.80	3.52	16.0	19.6
7	2.97	0.55	0.13	0.68	2.29	14.5	18.9
8	2.13	0.33	-	0.33	1.80	22.8	27.0
6	3.57	0.68	0.25	0.93	2.64	18.3	24.8
5	2.85	0.70	0.08	0.78	2.07	13.3	18.3
4	3.68	1.40	-	1.40	2.28	13.9	22.4
3	2.40	0.45	-	0.45	1.95	18.8	23.1
2	8.12	1.18	-	1.18	6.94	24.0	28.1
1							
Total	62.26	9.14	2.63	11.77	50.49	19.6	24.1
07.05 hrs							
20	4.92	-	-	-	4.92	36.6	36.6
21	8.30	1.63	1.00	2.63	5.67	22.2	32.5
19	3.10	0.73	-	0.73	2.37	19.7	25.8
18	4.37	1.85	-	1.85	2.52	14.4	25.0
17	4.82	1.50	0.77	2.27	2.55	10.6	20.0
14	3.75	1.03	-	1.03	2.72	14.1	19.4
11	3.45	1.07	0.12	1.19	2.26	13.2	20.2
9	1.68	0.37	-	0.37	1.31	15.7	20.2
6	4.32	1.20	-	1.20	3.12	16.0	22.1
7	3.08	1.18	0.15	1.33	1.75	14.0	24.7
8	3.53	0.32	1.13	1.45	2.08	13.8	23.4
6	4.37	1.37	-	1.37	3.00	15.0	21.8
5	2.35	0.72	-	0.72	1.63	16.1	23.2
4	2.83	1.00	-	1.00	1.83	18.0	27.9
3	1.77	0.28	-	0.28	1.49	25.4	30.2
2	6.65	0.63	-	0.63	6.02	29.3	32.4
1							
Total	63.29	14.88	3.17	18.05	45.24	19.2	26.9

Table Ap/C 4b (continued)

Check pt.no	Travel time (min)	Delay (min)			Running time (min)	Travel speed (kph)	Running speed (kph)
		Load & Unload	Other	Total			
07.30 hrs							
20	4.07	0.12	-	0.12	3.95	44.2	45.6
21	6.62	1.03	0.98	2.01	4.61	27.8	40.0
19	3.32	0.42	-	0.42	2.80	19.0	21.9
18	3.33	0.80	0.15	0.95	2.48	18.4	25.4
17	3.47	0.57	0.37	0.94	2.53	14.7	20.2
14	2.45	0.47	-	0.47	1.98	21.6	26.7
11	2.28	0.33	-	0.33	1.95	20.0	23.4
9	1.57	0.33	-	0.33	1.24	16.8	21.3
6	3.22	0.42	0.07	0.49	2.73	21.4	25.3
7	1.97	0.28	0.08	0.36	1.61	21.9	26.8
8	2.22	0.10	-	0.10	2.12	21.9	22.9
6	2.95	0.13	0.15	0.28	2.67	22.2	24.5
5	1.38	0.12	-	0.12	1.26	27.4	30.0
4	2.58	0.48	-	0.48	2.10	19.8	24.3
3	1.67	0.12	0.20	0.32	1.35	26.9	33.3
2	6.48	0.43	0.03	0.46	6.02	30.1	32.4
1							
Total	49.58	6.15	2.03	8.18	41.40	24.6	29.4
08.15 hrs							
20	5.98	0.18	-	0.18	5.80	30.1	31.0
21	6.98	1.02	0.60	1.62	5.36	26.4	34.4
19	2.45	0.20	-	0.20	2.25	25.0	27.2
18	3.43	0.75	-	0.75	2.68	18.4	23.5
17	2.62	0.33	0.03	0.36	2.26	19.5	22.6
14	2.25	0.40	-	0.40	1.85	23.5	28.5
11	2.63	0.18	0.55	0.73	1.90	17.3	24.0
9	2.10	0.17	0.43	0.60	1.50	12.6	17.6
6	3.13	0.45	-	0.45	2.68	22.0	25.7
7	1.97	0.13	0.07	0.20	1.77	21.9	24.4
8	2.02	0.17	-	0.17	1.85	24.1	26.3
6	3.12	0.52	0.17	0.69	2.43	21.0	26.9
5	1.32	0.13	-	0.13	1.19	28.6	31.8
4	1.65	0.18	-	0.18	1.47	30.9	34.7
3	1.65	0.27	-	0.27	1.38	27.3	32.6
2	7.10	1.15	-	1.15	5.95	27.5	32.8
1							
Total	50.40	6.23	1.85	8.08	42.32	24.2	28.8

Table Ap/C 4b (continued)

Check pt.no	Travel time (min)	Delay (min)			Running time (min)	Travel speed (kph)	Running speed (kph)
		Load & Unload	Other	Total			
12.10 hrs							
20	5.37	-	-	-	5.37	33.5	33.5
21	6.65	0.67	0.67	1.34	5.31	27.7	34.7
19	2.57	0.28	-	0.28	2.29	23.8	26.7
18	3.13	0.47	-	0.47	2.66	20.1	23.7
17	2.62	0.25	0.05	0.30	2.32	19.5	22.0
14	3.12	0.53	-	0.53	2.59	16.9	20.4
11	2.05	-	0.32	0.32	1.73	22.2	26.4
9	1.47	0.07	0.22	0.29	1.18	18.0	22.4
6	2.52	0.15	-	0.15	2.37	27.4	29.1
7	1.35	0.12	0.05	0.17	1.18	32.0	36.6
8	1.57	0.08	-	0.08	1.49	31.0	32.6
6	2.72	0.27	0.20	0.47	2.25	24.0	29.1
5	1.23	0.07	-	0.07	1.16	30.7	32.6
4	1.35	-	-	-	1.35	37.8	37.8
3	1.35	-	0.13	0.13	1.22	33.3	36.9
2	5.07	0.28	-	0.28	4.79	38.5	40.7
1							
Total	44.14	3.24	1.64	4.88	39.26	27.6	31.0
12.50 hrs							
20	5.65	0.03	-	0.03	5.62	31.6	32.0
21	6.55	0.20	0.58	0.78	5.77	28.1	31.9
19	2.20	0.05	-	0.05	2.15	27.8	28.5
18	3.02	0.32	-	0.32	2.70	20.9	23.3
17	2.52	0.13	-	0.13	2.39	20.2	21.3
14	3.28	0.63	-	0.63	2.65	16.1	19.9
11	2.57	0.25	0.12	0.37	2.20	17.7	20.7
9	1.67	0.17	0.05	0.22	1.45	15.8	18.2
6	2.60	0.07	0.13	0.20	2.40	26.5	28.8
7	2.12	0.17	-	0.17	1.95	20.4	22.2
8	1.47	-	-	-	1.47	33.1	33.1
6	3.45	0.43	0.27	0.70	2.75	19.0	23.8
5	1.62	0.13	0.08	0.21	1.41	23.3	26.8
4	1.87	0.05	-	0.05	1.82	27.3	28.0
3	2.03	0.17	0.05	0.22	1.81	22.2	24.9
2	8.30	1.27	-	1.27	7.03	23.5	27.7
1							
Total	50.92	4.07	1.28	5.35	45.57	23.9	26.7

Table Ap/C 4b (continued)

Check pt.no	Travel time (min)	Delay (min)			Running time (min)	Travel speed (kph)	Running speed (kph)
		Load & Unload	Other	Total			
13.05 hrs							
20	4.32	-	-	-	4.32	41.7	41.7
21	6.35	0.40	0.58	0.98	5.37	29.0	34.3
19	1.70	-	-	-	1.70	36.0	36.0
18	2.60	0.25	-	0.25	2.35	24.2	26.8
17	2.95	0.12	0.78	0.90	2.05	17.3	24.9
14	2.47	0.25	0.08	0.33	2.14	21.4	24.7
11	2.08	0.12	0.15	0.27	1.81	21.9	25.2
9	1.13	-	-	-	1.13	23.4	23.4
6	2.45	0.07	-	0.07	2.38	28.2	29.0
7	1.53	0.07	-	0.07	1.46	28.2	29.6
8	1.72	0.07	-	0.07	1.65	28.3	29.5
6	4.42	0.45	0.85	1.30	3.12	14.8	21.0
5	1.28	-	-	-	1.28	29.5	29.5
4	1.95	0.18	-	0.18	1.77	26.2	28.8
3	1.42	0.07	-	0.07	1.35	31.7	33.3
2	5.95	0.43	-	0.43	5.52	32.8	35.3
1							
Total	44.32	2.48	2.44	4.92	39.40	27.5	30.9
13.20 hrs							
20	5.52	0.07	-	0.07	5.45	32.6	33.0
21	7.15	0.25	0.87	1.12	6.03	25.8	30.5
19	2.47	0.07	-	0.07	2.40	24.8	25.5
18	3.02	0.38	-	0.38	2.64	20.9	23.9
17	2.30	0.07	0.22	0.29	2.01	22.2	25.4
14	2.65	0.48	-	0.48	2.17	19.9	24.3
11	2.50	0.17	0.12	0.29	2.21	18.2	20.6
9	1.25	0.13	-	0.13	1.12	21.1	23.6
6	2.97	0.30	-	0.30	2.67	23.2	25.8
7	2.30	0.27	0.10	0.37	1.93	18.8	22.4
8	1.73	0.05	-	0.05	1.68	28.1	28.9
6	3.03	0.20	0.07	0.27	2.76	21.6	23.7
5	1.40	0.12	-	0.12	1.28	27.0	29.5
4	2.12	0.20	-	0.20	1.92	24.1	26.6
3	1.87	0.12	0.07	0.19	1.68	24.1	26.8
2	6.63	0.38	-	0.38	6.25	29.4	31.2
1							
Total	48.91	3.26	1.45	4.71	44.20	24.9	27.6

Table Ap/C 4b (continued)

Check pt.no	Travel time (min)	Delay (min)			Running time (min)	Travel speed (kph)	Running speed (kph)
		Load & Unload	Other	Total			
14.35 hrs							
20	5.87	0.07	-	0.07	5.80	30.7	31.0
21	6.47	0.33	0.70	1.03	5.44	28.5	33.9
19	2.62	0.30	-	0.30	2.32	23.4	26.4
18	3.03	0.40	-	0.40	2.63	20.8	24.0
17	2.73	0.28	-	0.28	2.45	18.7	20.8
14	2.77	0.40	-	0.40	2.37	19.1	22.3
11	2.77	0.47	-	0.47	2.30	16.5	19.8
9	1.32	0.13	-	0.13	1.19	20.0	22.2
6	2.70	0.18	-	0.18	2.52	25.6	27.4
7	2.12	0.23	0.18	0.41	1.71	20.4	25.3
8	1.68	-	0.08	0.08	1.60	28.9	30.4
6	2.63	0.23	-	0.23	2.40	24.9	27.3
5	1.17	-	-	-	1.17	32.3	32.3
4	2.05	0.25	-	0.25	1.80	24.9	28.3
3	1.75	0.20	-	0.20	1.55	25.7	29.0
2	7.60	0.90	-	0.90	6.70	25.7	29.1
1							
Total	49.28	4.37	0.96	5.33	43.95	24.7	27.7
15.20 hrs							
20	5.85	0.18	-	0.18	5.67	30.8	31.7
21	7.40	0.63	0.42	1.05	6.35	24.9	29.0
19	3.07	0.23	-	0.23	2.84	19.9	21.5
18	2.95	0.52	-	0.52	2.43	21.4	25.9
17	2.58	0.07	0.47	0.54	2.04	19.8	25.0
14	3.05	0.48	-	0.48	2.57	17.3	20.5
11	2.42	0.08	0.27	0.35	2.07	18.8	22.0
9	1.40	0.17	-	0.17	1.23	18.9	21.5
6	3.12	0.18	0.12	0.30	2.82	22.1	24.5
7	2.05	0.12	-	0.12	1.93	21.1	22.4
8	1.95	0.10	-	0.10	1.85	24.9	26.3
6	4.33	0.65	-	0.65	3.68	15.1	17.8
5	2.60	0.63	-	0.63	1.97	14.5	19.2
4	3.35	0.95	-	0.95	2.40	15.2	21.3
3	3.23	0.67	0.32	0.99	2.24	13.9	20.1
2	9.72	1.98	-	1.98	7.74	20.1	25.2
1							
Total	59.07	7.64	1.60	9.24	49.83	20.6	24.4

Table Ap/C 4b (continued)

Check pt.no	Travel time (min)	Delay (min)			Running time (min)	Travel speed (kph)	Running speed (kph)
		Load & Unload	Other	Total			
16.05 hrs							
20	6.50	0.87	-	0.87	5.63	27.7	32.0
21	7.48	1.15	0.42	1.57	5.91	24.6	31.2
19	2.43	0.12	-	0.12	2.31	25.2	26.5
18	4.33	0.63	0.38	1.01	3.32	14.5	19.0
17	4.70	0.53	1.07	1.60	3.10	10.9	16.5
14	2.72	0.53	-	0.53	2.19	19.4	24.1
11	3.83	0.25	1.08	1.33	2.50	11.9	18.2
9	2.67	0.30	0.18	0.48	2.19	9.9	12.1
6	3.72	0.62	0.10	0.72	3.00	18.5	23.0
7	2.58	0.40	0.05	0.45	2.13	16.7	20.3
8	2.22	0.25	-	0.25	1.97	21.9	24.7
6	4.47	0.57	0.22	0.79	3.68	14.6	17.8
5	1.98	0.25	-	0.25	1.73	19.1	21.8
4	2.58	0.40	-	0.40	2.18	19.8	23.4
3	2.35	0.22	0.18	0.40	1.95	19.1	23.1
2	7.08	0.78	-	0.78	6.30	27.5	31.0
1							
Total	61.64	7.87	3.68	11.55	50.09	19.8	24.3
16.50 hrs							
20	5.72	0.60	-	0.60	5.12	31.5	35.2
21	6.67	0.37	1.03	1.40	5.27	27.6	35.0
19	2.28	0.27	-	0.27	2.01	26.8	30.4
18	3.02	0.55	-	0.55	2.47	20.9	25.5
17	3.82	0.57	0.77	1.34	2.48	13.4	20.6
14	2.75	0.77	-	0.77	1.98	19.2	26.7
11	2.65	0.38	0.18	0.56	2.09	17.2	21.8
9	1.45	0.22	-	0.22	1.23	18.2	21.5
6	3.87	0.78	-	0.78	3.09	17.8	22.3
7	2.02	0.25	-	0.25	1.77	21.4	24.4
8	1.75	0.12	-	0.12	1.63	27.8	29.8
6	3.40	0.47	0.25	0.72	2.68	19.2	24.4
5	1.63	0.27	-	0.27	1.36	23.2	27.8
4	2.10	0.53	-	0.53	1.57	24.3	32.5
3	1.87	0.20	0.07	0.27	1.60	24.1	28.1
2	7.20	1.22	-	1.22	5.98	27.1	32.6
1							
Total	52.20	7.57	2.30	9.87	42.33	23.3	28.8

Table Ap/C 5a Travel Time and Delay of Bus Line 2
NB - Distillery to P.Phun Jet Camp

(July 1975)

Check pt.no	Travel time (min)	Delay (min)			Running time (min)	Travel speed (kph)	Running speed (kph)
		Load & Unload	Other	Total			
07.00 hrs							
10	8.22	0.94	0.15	1.09	7.13	16.8	19.4
8	2.13	0.27	0.13	0.40	1.73	22.5	27.7
7	3.02	0.48	-	0.48	2.54	18.1	21.5
11	3.00	0.08	0.07	0.15	2.85	16.2	17.1
12	2.22	0.18	0.10	0.28	1.94	19.7	22.6
13	6.67	0.68	0.53	1.21	5.46	17.7	21.6
2	8.17	0.37	0.17	0.54	7.63	31.2	33.4
1							
Total	33.43	3.00	1.15	4.15	29.28	21.1	24.1
07.25 hrs							
10	6.90	0.93	0.10	1.03	5.87	20.0	23.5
8	3.13	0.67	0.53	1.20	1.93	15.3	24.9
7	2.77	0.30	-	0.30	2.43	19.7	22.5
11	3.75	0.32	0.38	0.70	3.05	13.0	15.9
12	2.23	0.57	0.28	0.85	1.38	19.6	31.7
13	6.82	1.10	0.52	1.62	5.20	17.3	22.7
2	7.92	0.73	-	0.73	7.19	32.2	35.5
1							
Total	33.52	4.62	1.81	6.43	27.09	21.1	26.1
07.45 hrs							
10	8.67	0.58	0.08	0.66	8.01	15.9	17.2
8	4.53	0.50	0.43	0.93	3.60	10.6	13.3
7	4.02	0.38	-	0.38	3.64	13.6	15.0
11	4.18	0.12	2.17	2.29	1.89	11.6	25.7
12	1.82	0.12	0.15	0.27	1.55	24.1	28.3
13	11.60	0.52	-	0.52	11.08	10.2	10.7
2	12.40	0.23	-	0.23	12.17	20.6	21.0
1							
Total	47.22	2.45	2.83	5.28	41.94	15.0	16.8
08.10 hrs							
10	7.94	0.95	-	0.95	6.99	17.4	19.7
8	2.56	0.60	-	0.60	1.96	18.6	24.5
7	4.68	0.43	0.30	0.73	3.95	11.7	13.8
11	2.15	0.38	-	0.38	1.77	22.6	27.5
12	3.37	0.27	-	0.27	3.10	13.0	14.1
13	5.82	-	0.22	0.22	5.60	20.3	21.1
2	8.20	1.33	0.25	1.58	6.62	31.1	38.5
1							
Total	34.72	3.96	0.77	4.73	29.99	20.3	23.5

Table Ap/C 5a (continued)

Check pt.no	Travel time (min)	Delay (min)			Running time (min)	Travel speed (kph)	Running speed (kph)
		Load & Unload	Other	Total			
11.05 hrs							
10	6.50	0.32	-	0.32	6.18	23.4	24.7
9	0.88	-	-	-	0.88	29.3	29.3
8	2.13	-	-	-	2.13	22.5	22.5
7	3.40	0.35	0.35	0.70	2.70	16.1	20.2
11	2.97	0.15	-	0.15	2.82	16.4	17.2
12	2.00	0.25	0.33	0.58	1.42	21.9	30.8
13	6.70	0.62	0.22	0.84	5.86	17.6	20.2
2	7.65	1.00	-	1.00	6.65	33.3	38.3
1							
Total	32.23	2.69	0.90	3.59	28.64	23.2	26.1
11.25 hrs							
10	7.07	0.42	-	0.42	6.65	21.6	22.9
9	0.93	-	-	-	0.93	27.7	27.7
8	2.20	0.13	0.15	0.28	1.92	21.8	25.0
7	3.63	0.78	0.05	0.83	2.80	15.0	19.5
11	2.47	0.12	0.42	0.54	1.93	19.7	25.2
12	1.97	0.10	0.03	0.13	1.84	22.2	23.8
13	5.42	0.63	0.07	0.70	4.72	21.8	25.0
2	6.98	0.55	-	0.55	6.43	36.5	39.7
1							
Total	30.67	2.73	0.72	3.45	27.22	24.3	27.4
11.45 hrs							
10	6.48	0.27	-	0.27	6.21	23.5	24.5
9	0.77	-	-	-	0.77	33.5	33.5
8	4.23	0.25	0.37	0.62	3.61	11.3	13.3
7	3.37	0.52	-	0.52	2.85	16.2	19.2
11	1.90	0.03	-	0.03	1.87	25.6	26.0
12	1.65	-	-	-	1.65	26.5	26.5
13	5.98	0.45	0.03	0.48	5.50	19.8	21.5
2	5.97	0.22	-	0.22	5.75	42.7	44.3
1							
Total	30.35	1.74	0.40	2.14	28.21	25.0	26.5
12.10 hrs							
10	6.67	0.25	-	0.25	6.42	22.8	23.7
9	0.97	0.13	-	0.13	0.84	26.6	30.7
8	2.23	0.30	0.33	0.63	1.60	21.5	30.0
7	3.20	0.28	0.08	0.36	2.84	17.1	19.2
11	2.43	0.53	-	0.53	1.90	20.0	25.6
12	2.13	-	-	-	2.13	20.6	20.6
13	5.43	0.63	-	0.63	4.80	21.8	24.6
2	6.10	0.40	-	0.40	5.70	41.8	44.7
1							
Total	29.16	2.52	0.41	2.93	26.23	25.6	28.5

Table Ap/C 5a (continued)

Check pt.no	Travel time (min)	Delay (min)			Running time (min)	Travel speed (kph)	Running speed (kph)
		Load & Unload	Other	Total			
15.05 hrs							
10	5.98	0.52	0.80	0.60	5.38	23.1	25.7
8	1.95	0.15	-	0.15	1.80	24.6	26.7
7	2.78	0.45	-	0.45	2.33	19.6	23.4
11	3.00	0.28	0.38	0.66	2.34	16.2	20.8
12	1.55	-	0.05	0.05	1.50	28.3	29.2
13	5.45	0.38	0.12	0.50	4.95	21.7	23.9
2	6.15	0.27	-	0.27	5.88	41.5	43.4
1							
Total	26.86	2.05	0.63	2.68	24.18	26.3	29.2
15.30 hrs							
10	6.52	0.37	0.07	0.44	6.08	21.2	22.7
8	2.38	0.05	0.13	0.18	2.20	20.2	21.8
7	3.02	0.40	0.08	0.48	2.54	18.1	21.5
11	2.97	0.33	-	0.33	2.64	16.4	18.4
12	2.02	0.15	0.13	0.28	1.74	21.7	25.2
13	8.95	2.13	0.15	2.28	6.67	13.2	17.7
2	8.52	0.90	-	0.90	7.62	29.9	33.5
1							
Total	34.38	4.33	0.56	4.89	29.49	20.5	23.9
15.45 hrs							
10	8.60	0.83	0.27	1.10	7.50	16.0	18.4
8	3.17	0.30	0.08	0.38	2.79	15.1	17.2
7	3.10	0.37	-	0.37	2.73	17.6	20.0
11	3.20	0.35	0.13	0.48	2.72	15.2	17.9
12	2.15	0.12	0.08	0.20	1.95	20.4	22.5
13	10.92	2.93	-	2.93	7.99	10.8	14.8
2	11.33	1.43	-	1.43	9.90	22.5	25.8
1							
Total	42.47	6.33	0.56	6.89	35.58	16.6	19.8
16.05 hrs							
10	7.56	0.50	-	0.50	7.06	18.3	19.5
8	2.77	1.07	-	1.07	1.70	17.3	28.2
7	3.62	1.28	0.70	1.98	1.64	15.1	33.3
11	3.50	0.92	-	0.92	2.58	13.9	18.8
12	2.58	0.72	-	0.72	1.86	17.0	23.5
13	8.82	1.18	-	1.18	7.64	13.4	15.5
2	7.02	0.05	-	0.05	6.97	36.3	36.6
1							
Total	35.87	5.72	0.70	6.42	29.45	19.7	24.0

Table Ap/ C 5b Travel Time and Delay of Bus Line 2
SB - P.Phun Jet Camp to Distillery

(July 1975)

Check pt.no	Travel time (min)	Delay (min)			Running time (min)	Travel speed (kph)	Running speed (kph)
		Load & Unload	Other	Total			
07.05 hrs							
1	11.40	1.27	-	1.27	10.13	22.4	25.2
2	10.05	1.55	-	1.55	8.50	11.3	13.4
3	2.05	0.15	-	0.15	1.90	25.2	27.2
4	1.67	0.32	-	0.32	1.35	20.5	25.3
5	2.42	0.15	0.05	0.20	2.22	20.3	22.2
6	4.48	0.17	0.25	0.42	4.06	5.1	5.6
7	4.07	0.32	0.05	0.37	3.20	11.8	15.0
8	1.03	-	-	-	1.03	25.0	25.0
9	10.70	1.02	-	1.02	9.68	14.2	15.7
10							
Total	47.87	5.45	0.35	5.80	42.07	15.7	17.9
07.25 hrs							
1	10.22	0.38	-	0.38	9.34	25.0	27.3
2	5.28	1.00	-	1.00	4.28	21.6	26.6
3	2.83	1.03	0.07	1.10	1.73	18.2	29.8
4	2.15	0.45	-	0.45	1.70	15.9	20.1
5	2.00	-	-	-	2.00	24.6	24.6
6	2.68	-	0.17	0.17	2.51	8.5	9.1
7	2.08	0.33	0.20	0.53	1.55	23.1	31.0
8	1.35	0.27	0.05	0.32	1.03	19.1	25.0
9	7.07	0.43	0.03	0.51	6.56	21.6	23.2
10							
Total	35.66	4.39	0.57	4.96	30.70	21.1	24.5
07.45 hrs							
1	8.22	0.78	0.38	1.16	7.06	31.0	36.1
2	6.30	0.75	0.17	0.92	5.38	18.1	21.2
3	2.12	0.23	-	0.23	1.89	24.3	27.3
4	1.38	0.28	-	0.28	1.10	24.8	31.1
5	2.97	0.20	0.12	0.32	2.65	16.6	18.6
6	1.90	0.23	-	0.23	1.67	12.0	13.7
7	2.28	0.43	-	0.43	1.85	21.1	25.9
8	1.53	-	0.10	0.10	1.43	16.9	18.0
9	6.15	0.60	0.15	0.75	5.40	24.8	28.2
10							
Total	32.85	3.50	0.92	4.42	28.43	22.9	26.5
08.15 hrs							
1	7.97	0.72	-	0.72	7.25	32.0	35.2
2	4.85	0.80	0.07	0.87	3.98	23.5	28.6
3	2.95	0.07	-	0.07	2.88	17.5	17.9
4	1.22	0.10	-	0.10	1.12	28.0	30.5
5	2.68	0.47	-	0.47	2.21	18.4	22.3
6	1.63	0.17	-	0.17	1.46	14.0	15.6
7	2.60	0.55	-	0.55	2.05	18.5	23.4
8	1.18	0.13	-	0.13	1.05	21.9	24.6
9	5.77	0.43	-	0.43	5.34	26.4	28.5
10							
Total	30.85	3.44	0.07	3.51	27.34	24.4	27.5

Table Ap/C 5b (continued)

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Check pt.no	Travel time (min)	Delay (min)			Running time (min)	Travel speed (kph)	Running speed (kph)
		Load & Unload	Other	Total			
11.00 hrs							
1	8.10	0.08	-	0.08	8.02	31.5	31.8
2	5.95	0.43	-	0.43	5.52	19.2	20.7
3	1.95	-	-	-	1.95	26.5	26.5
4	1.32	-	-	-	1.32	25.9	25.9
5	2.88	0.43	0.35	0.78	2.10	17.1	23.4
6	2.37	0.12	-	0.12	2.25	9.6	10.1
7	2.60	-	-	-	2.60	18.5	18.5
8	1.15	0.28	-	0.28	0.87	22.4	30.0
9	5.97	-	-	-	5.97	25.5	25.5
Total	32.29	1.34	0.35	1.69	30.60	23.3	24.6
11.25 hrs							
1	7.33	0.68	-	0.68	6.65	34.8	38.3
2	4.10	0.23	-	0.23	3.87	27.8	29.5
3	2.90	0.33	-	0.33	2.57	17.8	20.1
4	1.12	0.08	-	0.08	1.04	30.5	32.9
5	1.83	0.20	-	0.20	1.63	26.9	30.2
6	1.95	0.12	0.27	0.39	1.56	11.7	14.6
7	2.15	0.25	-	0.25	1.90	22.3	25.3
8	1.20	0.18	-	0.18	1.02	21.5	25.3
9	5.58	0.05	-	0.05	5.53	27.3	27.6
Total	28.16	2.12	0.27	2.39	25.77	26.7	29.2
11.50 hrs							
1	7.37	0.30	-	0.30	7.07	34.6	36.1
2	5.85	0.50	0.08	0.58	5.27	19.5	21.6
3	1.63	-	-	-	1.63	31.7	31.7
4	1.52	0.08	-	0.08	1.44	22.5	23.8
5	2.75	0.42	0.12	0.54	2.21	17.9	22.3
6	2.22	0.20	0.50	0.70	1.52	10.3	15.0
7	2.90	0.30	-	0.30	2.60	16.6	18.5
8	1.08	-	0.15	0.15	0.93	23.9	27.7
9	7.75	0.58	-	0.58	7.17	19.7	21.3
Total	33.07	2.38	0.85	3.23	29.84	22.8	25.2
12.10 hrs							
1	8.47	0.62	0.13	0.75	7.72	30.1	33.0
2	6.55	0.55	0.82	1.37	5.18	17.4	22.0
3	1.98	0.12	-	0.12	1.86	26.1	27.7
4	1.30	0.12	-	0.12	1.18	26.3	29.0
5	2.60	0.40	-	0.40	2.20	18.9	22.4
6	1.48	0.28	-	0.28	1.20	15.4	19.0
7	2.57	0.27	-	0.27	2.30	18.7	20.9
8	0.80	-	0.05	0.05	0.75	32.3	34.4
9	5.45	0.17	-	0.17	5.28	28.0	28.9
Total	31.20	2.53	1.00	3.53	27.67	24.1	27.2

Table Ap/C 5b (continued)

Check pt.no	Travel time (min)	De lay (min)			Running time (min)	Travel speed (kph)	Running speed (kph)
		Load & Unload	Other	Total			
14.55 hrs							
1	5.85	-	0.08	0.08	5.77	43.6	44.2
2	5.38	0.82	-	0.82	4.56	21.2	25.0
3	2.62	0.07	-	0.07	2.55	19.7	20.2
4	1.37	0.12	0.03	0.15	1.22	25.0	28.0
5	2.15	0.35	-	0.35	1.80	22.9	27.3
6	2.67	0.15	0.20	0.35	2.32	8.5	9.8
7	2.48	0.15	-	0.15	2.33	19.4	20.6
8	0.78	-	-	-	0.78	33.1	33.1
9	7.82	0.17	0.60	0.77	7.05	19.5	21.6
Total	31.12	1.83	0.91	2.74	28.38	24.2	26.5
15.25 hrs							
1	7.60	0.12	-	0.12	7.48	33.6	34.1
2	7.15	0.62	0.12	0.74	6.41	15.9	17.8
3	2.00	0.13	0.07	0.20	1.80	25.8	28.7
4	1.62	0.12	-	0.12	1.50	21.1	22.8
5	3.17	0.08	-	0.08	3.09	15.5	15.9
6	1.80	0.60	0.17	0.77	1.03	12.7	22.1
7	1.80	0.13	-	0.13	1.67	26.7	28.7
8	1.23	-	0.08	0.08	1.15	21.0	22.4
9	8.92	1.53	0.18	1.71	7.21	17.1	21.1
Total	35.29	3.33	0.62	3.95	31.34	21.3	24.0
15.50 hrs							
1	5.95	0.28	0.03	0.31	5.64	42.9	45.2
2	9.05	1.68	-	1.68	7.37	12.6	15.5
3	2.48	0.40	-	0.40	2.08	20.8	24.8
4	1.35	0.10	-	0.10	1.25	25.3	27.4
5	3.92	0.68	-	0.68	3.24	12.6	15.2
6	1.37	0.20	-	0.20	1.17	16.6	19.5
7	2.87	0.57	-	0.57	2.30	16.7	20.9
8	0.85	-	-	-	0.85	30.4	30.4
9	8.32	1.63	0.07	1.70	6.62	18.3	23.0
Total	36.16	5.54	0.10	5.64	30.52	20.8	24.7
16.20 hrs							
1	7.62	0.12	-	0.12	7.50	33.5	34.0
2	7.18	0.70	0.12	0.82	6.36	15.9	17.9
3	1.72	-	-	-	1.72	30.0	30.0
4	1.43	0.07	0.05	0.12	1.31	23.9	26.1
5	2.98	0.50	-	0.50	2.48	16.5	19.8
6	2.02	0.22	0.48	0.70	1.32	11.3	17.3
7	1.88	0.15	-	0.15	1.73	25.5	27.7
8	0.80	-	-	-	0.80	32.3	32.3
9	6.98	0.55	0.40	0.95	6.03	21.8	25.3
Total	32.61	2.31	1.05	3.36	29.25	23.1	25.7

Table Ap/c 6a Travel Time and Delay of Bus Line 3
EB- Huey Kaeo to Railway Station

(July 1975)

Check pt.no	Travel time (min)	Delay (min)			Running time (min)	Travel speed (kph)	Running speed (kph)
		Load & Unload	Other	Total			
07.05 hrs							
1	9.65	2.17	0.10	2.27	7.38	17.6	23.0
2	2.90	0.30	-	0.30	2.60	28.3	31.6
3	1.42	0.35	-	0.35	1.07	14.8	19.6
4	2.42	0.43	-	0.43	1.99	18.8	22.9
5	1.93	0.07	0.12	0.19	1.74	22.1	24.5
6	1.62	0.10	-	0.10	1.52	23.7	25.3
7	2.38	0.65	-	0.65	1.73	14.9	20.5
8	2.50	0.33	0.52	0.85	1.65	11.5	17.5
9	4.83	0.67	0.15	0.82	4.01	12.0	14.5
10	2.82	0.40	-	0.40	2.42	14.9	17.4
11	5.10	0.48	0.10	0.58	4.52	22.2	25.1
12	1.15	-	-	-	1.15	18.8	18.8
13							
Total	38.72	5.95	0.99	6.94	31.78	18.1	22.0
07.20 hrs							
1	8.73	2.40	-	2.40	6.33	19.5	26.8
2	2.95	0.40	-	0.40	2.55	27.9	32.2
3	1.63	0.48	0.18	0.66	0.97	12.9	21.7
4	2.38	0.55	-	0.55	1.83	19.2	24.9
5	2.67	0.35	0.40	0.75	1.92	16.0	22.2
6	1.87	0.18	0.07	0.25	1.62	20.5	23.7
7	2.02	0.42	-	0.42	1.60	17.5	22.1
8	2.13	0.33	0.30	0.63	1.50	13.5	19.2
9	6.98	0.12	2.87	2.99	3.99	8.3	14.6
10	2.95	0.45	0.25	0.70	2.25	14.2	18.7
11	4.52	0.40	0.63	1.03	3.49	25.1	32.5
12	1.10	-	-	-	1.10	19.6	19.6
13							
Total	39.93	6.08	4.70	10.78	29.15	17.5	24.0

Table Ap/C 6a Travel Time and Delay of Bus Line 3

EB- Huey Kaeo to Railway Station

(July 1975)

Check pt.no	Travel time (min)	Delay (min)			Running time (min)	Travel speed (kph)	Running speed (kph)
		Load & Unload	Other	Total			
07.50 hrs							
1	8.08	1.70	-	1.70	6.38	21.0	26.6
2	3.57	0.68	-	0.68	2.89	23.0	28.4
3	1.90	0.62	0.08	0.70	1.20	11.1	17.5
4	2.93	0.70	-	0.70	2.23	15.6	20.4
5	3.27	0.10	1.37	1.47	1.80	13.0	23.7
6	2.20	0.58	-	0.58	1.62	17.5	23.7
7	2.27	0.45	0.07	0.52	1.75	15.6	20.2
8	2.77	0.38	0.28	0.66	2.11	10.4	13.6
9	3.78	0.50	-	0.50	3.28	15.4	17.7
10	3.60	1.43	0.05	1.48	2.12	11.7	19.8
11	6.22	1.30	0.22	1.52	4.70	18.2	24.1
12	1.13	0.03	-	0.03	1.10	19.1	19.6
13							
Total	41.72	8.47	2.07	10.54	31.18	16.8	22.4
08.20 hrs							
1	6.88	0.32	-	0.32	6.56	24.7	25.9
2	1.79	0.12	-	0.12	1.67	45.9	49.2
3	1.43	0.20	-	0.20	1.23	14.7	17.1
4	3.17	0.18	-	0.18	2.99	14.4	15.3
5	1.73	0.15	0.68	0.73	1.00	24.6	42.6
6	2.12	0.08	-	0.08	2.04	18.1	18.8
7	2.38	0.33	-	0.33	2.05	14.9	17.3
8	2.28	0.38	-	0.38	1.90	12.6	15.2
9	2.23	-	-	-	2.23	26.1	26.1
10	2.18	0.27	0.03	0.30	1.88	19.3	22.3
11	4.17	0.38	-	0.38	3.79	27.2	29.9
12	1.23	-	-	-	1.23	17.6	17.6
13							
Total	31.59	2.31	0.71	3.02	28.57	22.1	24.5

Table Ap/C 6a (continued)

Check pt.no	Travel time (min)	Delay (min)			Running time (min)	Travel speed (kph)	Running speed (kph)
		Load & Unload	Other	Total			
09.30 hrs							
1	7.82	1.62	-	1.62	6.20	21.7	27.4
2	3.70	0.78	-	0.78	2.92	22.2	28.2
3	0.65	-	-	-	0.65	32.3	32.3
4	2.05	0.23	0.05	0.28	1.77	22.2	25.8
5	2.80	0.55	0.10	0.65	2.15	15.2	19.8
6	2.30	0.43	-	0.43	1.87	16.7	20.5
7	2.37	0.62	-	0.62	1.75	14.9	20.2
8	2.70	0.30	0.52	0.82	1.88	10.7	15.3
9	2.18	0.03	-	0.03	2.15	26.7	27.1
10	1.85	0.25	-	0.25	1.60	22.7	26.3
11	3.75	0.27	0.30	0.57	3.18	30.2	35.7
12	1.25	-	-	-	1.25	17.3	17.3
13							
Total	33.42	5.08	0.97	6.05	27.37	20.9	25.5
09.45 hrs							
1	6.05	0.62	-	0.62	5.43	28.1	31.3
2	2.60	0.30	-	0.30	2.30	31.6	35.7
3	1.23	0.25	0.03	0.28	0.95	17.1	22.1
4	1.75	0.12	-	0.12	1.63	26.1	28.0
5	2.18	0.08	0.37	0.45	1.73	19.5	24.6
6	1.32	-	-	-	1.32	29.1	29.1
7	1.82	0.25	-	0.25	1.57	19.5	22.5
8	1.50	0.08	-	0.08	1.42	19.2	20.3
9	2.40	-	0.05	0.05	2.35	24.3	24.8
10	1.60	0.12	-	0.12	1.48	22.7	28.4
11	3.08	0.08	-	0.08	3.00	36.8	37.8
12	0.98	-	-	-	0.98	22.0	22.0
13							
Total	26.51	1.90	0.45	2.35	24.16	26.4	28.9

Table Ap/C 6a (continued)

Check pt.no	Travel time (min)	Delay (min)			Running time (min)	Travel speed (kph)	Running speed (kph)
		Load & Unload	Other	Total			
11.20 hrs							
1	8.42	1.77	-	1.77	6.65	20.2	25.5
2	1.82	-	-	-	1.82	45.2	45.2
3	1.23	0.28	0.12	0.40	0.83	17.1	25.3
4	1.75	0.23	-	0.23	1.52	26.1	30.0
5	2.93	0.42	0.63	1.05	1.88	14.5	40.6
6	1.83	0.17	-	0.17	1.66	21.0	23.1
7	3.35	1.28	-	1.28	2.07	10.6	17.1
8	2.52	0.50	0.23	0.73	1.79	11.4	16.1
9	2.67	0.35	-	0.35	2.32	21.8	25.1
10	2.03	0.28	-	0.28	1.75	20.7	24.0
11	4.95	0.55	0.43	0.98	3.97	22.9	28.6
12	1.45	0.10	-	0.10	1.35	14.9	16.0
13							
Total	34.95	5.93	1.41	7.34	27.61	20.0	25.3
13.10 hrs							
1	7.92	1.40	-	1.40	6.52	21.4	26.0
2	2.90	0.32	-	0.32	2.58	28.3	31.9
3	1.00	0.15	-	0.15	0.85	21.0	24.7
4	2.15	0.25	-	0.25	1.90	21.2	24.0
5	2.55	0.13	0.52	0.65	1.90	16.7	22.4
6	0.67	0.15	-	0.15	0.52	57.3	73.8
7	2.88	0.15	-	0.15	2.73	12.3	13.0
8	1.82	0.30	-	0.30	1.52	15.8	18.9
9	2.53	0.15	-	0.15	2.38	23.0	24.5
10	1.95	0.25	-	0.25	1.70	21.5	24.7
11	4.68	0.73	-	0.73	3.95	24.2	28.7
12	1.40	-	-	-	1.40	15.4	15.4
13							
Total	32.45	3.98	0.52	4.50	27.95	21.5	25.0

Table Ap/C 6a (continued)

Check pt.no	Travel time (min)	Delay (min)			Running time (min)	Travel speed (kph)	Running speed (kph)
		Load & Unload	Other	Total			
14.45 hrs							
1	7.15	0.55	-	0.55	6.60	23.7	25.7
2	1.75	-	-	-	1.75	47.0	47.0
3	1.05	0.12	0.18	0.30	0.75	20.0	28.0
4	1.42	-	-	-	1.42	32.1	32.1
5	1.85	-	0.12	0.12	1.73	23.0	24.6
6	1.85	0.15	-	0.15	1.70	20.8	22.6
7	1.68	0.08	-	0.08	1.60	21.1	22.1
8	1.85	0.22	-	0.22	1.63	15.6	17.7
9	2.15	-	-	-	2.15	27.1	27.1
10	1.63	-	0.08	0.08	1.55	25.8	27.1
11	4.22	0.20	0.30	0.50	3.72	26.9	30.5
12	0.95	-	-	-	0.95	22.7	22.7
Total	27.55	1.32	0.68	2.00	25.55	25.4	27.4
15.05 hrs							
1	6.90	1.00	-	1.00	5.90	24.6	28.8
2	2.68	0.28	-	0.28	2.40	30.7	34.3
3	0.90	0.10	-	0.10	0.80	23.3	26.3
4	1.93	0.27	-	0.27	1.66	23.6	27.5
5	1.75	0.08	0.07	0.15	1.60	24.3	26.6
6	1.84	0.15	-	0.15	1.69	20.9	22.7
7	1.90	0.42	-	0.42	1.48	18.6	23.9
8	1.82	0.28	-	0.28	1.54	15.8	18.7
9	2.52	0.13	-	0.13	2.39	23.1	24.4
10	2.03	0.22	-	0.22	1.81	20.7	23.2
11	4.70	0.45	0.30	0.75	3.95	24.1	28.7
12	1.03	-	-	-	1.03	21.0	21.0
Total	30.00	3.38	0.37	3.75	26.25	23.3	26.6

Table Ap/C 6a (continued)

Check pt.no	Travel time (min)	Delay (min)			Running time (min)	Travel speed (kph)	Running speed (kph)
		Load & Unload	Other	Total			
15.50 hrs							
1	7.18	1.10	-	1.10	6.08	23.6	27.9
2	3.43	0.58	-	0.58	2.85	24.0	28.8
3	2.67	1.23	0.08	1.31	1.36	7.9	15.4
4	4.63	2.03	-	2.03	2.60	9.9	17.5
5	3.58	0.68	0.57	1.20	2.38	11.9	17.9
6	4.48	2.03	-	2.03	2.45	8.6	15.7
7	3.67	1.37	-	1.37	2.30	9.6	15.4
8	2.93	1.10	-	1.10	1.83	9.8	15.7
9	3.73	0.75	-	0.75	2.98	15.6	19.5
10	3.73	1.35	-	1.35	2.38	11.3	17.6
11	6.12	1.22	0.30	1.52	4.60	18.5	24.7
12	1.33	0.05	-	0.05	1.28	16.2	16.9
Total	47.48	13.49	0.90	14.39	33.09	14.7	21.1
16.10 hrs							
1	9.98	2.50	-	2.50	7.48	17.0	22.7
2	3.12	0.48	-	0.48	2.64	26.3	31.1
3	3.22	1.77	-	1.77	1.45	6.5	11.9
4	3.73	1.15	-	1.15	2.58	12.2	17.7
5	3.28	0.73	0.23	0.96	2.32	13.0	18.4
6	3.02	0.80	-	0.80	2.22	12.7	17.3
7	3.73	1.33	-	1.33	2.40	9.5	14.8
8	2.60	0.82	-	0.82	1.78	11.1	16.2
9	3.92	0.62	-	0.62	3.30	14.8	17.6
10	3.12	0.52	-	0.52	2.60	13.5	16.2
11	6.78	1.35	0.05	1.40	5.38	16.7	21.1
12	1.20	-	-	-	1.20	18.0	18.0
Total	47.70	12.07	0.28	12.35	35.35	14.6	19.8

Table Ap/C 6b Travel Time and Delay of Bus Line 3
WB- Railway Station to Huey Kaeo (July 1975)

Check pt.no	Travel time (min)	Delay (min)			Running time (min)	Travel speed (kph)	Running speed (kph)
		Load & Unload	Other	Total			
07.00 hrs							
13	2.05	0.37	0.13	0.50	1.55	10.5	13.9
12	6.93	1.18	-	1.18	5.75	16.4	19.7
11	2.82	0.72	-	0.72	2.10	14.9	20.0
10	2.92	0.42	-	0.42	2.50	19.9	23.3
9	2.82	0.45	0.13	0.58	2.24	14.9	18.8
14	2.42	0.40	-	0.40	2.02	22.6	27.0
15	0.92	0.05	-	0.05	0.87	20.2	21.4
16	2.05	0.38	0.08	0.46	1.59	17.3	22.3
6	2.35	0.23	0.05	0.28	2.07	18.1	20.6
5	2.98	0.93	0.10	1.03	1.95	15.3	23.4
4	1.32	0.30	-	0.30	1.02	15.9	20.6
3	3.70	0.75	0.08	0.83	2.87	22.2	28.6
2	7.18	1.17	-	1.17	6.01	23.6	28.3
1							
Total	40.46	7.35	0.57	7.92	32.54	18.5	23.0
07.15 hrs							
13	1.13	0.20	-	0.20	0.93	19.1	23.2
12	9.00	1.28	-	1.28	7.72	12.6	14.7
11	3.42	0.55	-	0.55	2.87	12.3	14.6
10	3.73	0.15	-	0.15	3.58	15.6	16.3
9	3.32	0.42	-	0.42	2.90	12.7	14.5
14	4.27	0.43	-	0.43	3.84	12.8	14.2
15	1.23	0.60	-	0.60	0.63	15.1	29.5
16	3.60	0.57	0.38	0.95	2.65	9.8	13.4
6	3.38	0.25	0.63	0.88	2.50	12.6	17.0
5	2.97	0.37	0.10	0.47	2.50	15.4	18.2
4	1.73	0.22	-	0.22	1.51	12.1	13.9
3	5.18	0.50	-	0.50	4.68	15.9	17.6
2	6.92	0.58	-	0.58	6.34	24.5	26.8
1							
Total	49.88	6.12	1.11	7.23	42.65	15.0	17.5

Table Ap/C 6b (continued)

Check pt.no	Travel time (min)	Delay (min)			Running time (min)	Travel speed (kph)	Running speed (kph)
		Load & Unload	Other	Total			
08.00 hrs							
13	2.17	0.32	0.37	0.69	1.48	10.0	14.6
12	4.78	0.60	-	0.60	4.18	23.7	27.1
11	1.97	0.28	-	0.28	1.69	21.3	24.9
10	2.32	0.17	0.22	0.39	2.43	20.6	24.0
9	3.03	0.65	-	0.65	2.38	13.9	17.6
14	2.85	0.43	0.05	0.48	2.37	19.2	23.0
15	0.98	-	-	-	0.98	19.0	19.0
16	3.07	0.58	0.63	1.21	1.86	11.5	19.0
6	2.27	0.35	0.08	0.43	1.84	18.8	23.2
5	1.72	0.10	-	0.10	1.62	26.5	28.1
4	0.92	0.13	-	0.13	0.79	22.8	26.6
3	2.37	0.25	-	0.25	2.12	34.7	38.8
2	5.85	0.70	-	0.70	5.15	29.0	33.0
1							
Total	34.80	4.56	1.35	5.91	28.99	21.5	25.9
08.25 hrs							
13	1.38	-	0.05	0.05	1.33	15.7	16.2
12	5.78	1.12	-	1.12	4.66	19.6	24.3
11	2.85	0.63	-	0.63	2.22	14.7	18.9
10	2.42	0.12	-	0.12	2.30	24.0	25.3
9	3.57	0.80	0.17	0.97	2.60	11.3	16.2
14	3.53	0.72	-	0.72	2.81	15.5	19.4
15	1.23	0.17	-	0.17	1.06	15.1	17.5
16	2.40	0.48	0.12	0.60	1.80	14.3	20.0
6	2.60	0.15	0.47	0.62	1.98	16.4	21.5
5	2.43	0.32	0.12	0.44	1.99	18.3	22.9
4	1.28	0.23	-	0.23	1.05	16.4	20.0
3	2.68	0.38	-	0.38	2.30	30.7	35.7
2	7.33	1.03	-	1.03	6.30	23.2	27.0
1							
Total	39.48	6.15	0.93	7.08	32.40	18.9	23.1

Table Ap/C 6b (continued)

Check pt.no	Travel time (min)	Delay (min)			Running time (min)	Travel speed (kph)	Running speed (kph)
		Load & Unload	Other	Total			
09.50 hrs							
13	1.70	0.08	0.10	0.18	1.52	12.7	14.2
12	4.45	0.13	0.05	0.18	4.27	25.5	26.6
11	2.40	0.23	-	0.23	2.17	17.5	19.4
10	2.80	0.05	-	0.05	2.75	20.8	21.2
9	3.27	0.33	0.10	0.43	2.84	12.8	14.8
14	3.63	0.60	-	0.60	3.03	15.0	18.0
15	0.97	0.13	-	0.13	0.84	19.2	22.1
16	2.28	0.18	0.17	0.35	1.93	15.5	18.3
6	3.18	0.07	0.65	0.72	2.46	13.4	17.3
5	2.15	0.13	-	0.13	2.02	21.2	22.6
4	0.75	-	-	-	0.75	28.0	28.0
3	2.70	0.33	-	0.33	2.37	30.4	34.7
2	7.37	0.42	-	0.42	6.95	23.0	24.4
1							
Total	37.65	2.68	1.07	3.75	33.90	19.8	22.0
10.20 hrs							
13	1.32	-	-	-	1.32	16.4	16.4
12	3.52	0.15	-	0.15	3.37	32.2	33.6
11	1.55	0.12	-	0.12	1.43	27.1	29.4
10	3.57	0.17	0.37	0.54	3.03	16.3	19.2
9	3.42	0.20	0.22	0.42	3.00	12.3	14.0
14	2.90	0.33	-	0.33	2.57	18.8	21.2
15	0.85	0.07	-	0.07	0.78	21.9	23.3
16	1.88	0.15	0.23	0.38	1.50	18.8	23.6
6	1.90	-	0.18	0.18	1.72	22.4	24.8
5	1.68	0.07	-	0.07	1.61	27.1	28.3
4	1.18	0.22	-	0.22	0.96	17.8	21.9
3	2.93	0.18	0.05	0.23	2.70	28.1	30.4
2	4.98	0.17	-	0.17	4.87	34.1	34.9
1							
Total	31.63	1.83	1.05	2.88	28.80	23.6	25.9

Table Ap/C 6b (continued)

Check pt.no	Travel time (min)	Delay (min)			Running time (min)	Travel speed (kph)	Running speed (kph)
		Load & Unload	Other	Total			
12.20 hrs							
13	2.05	0.25	0.08	0.33	1.72	10.5	12.6
12	3.78	0.23	-	0.23	3.55	30.0	31.9
11	2.52	0.38	-	0.38	2.14	16.7	19.6
10	2.23	0.08	-	0.08	2.15	26.1	27.1
9	2.75	0.40	-	0.40	2.35	15.3	17.9
14	2.38	0.23	-	0.23	2.15	22.9	25.4
15	1.05	0.12	-	0.12	0.93	17.7	20.0
16	2.62	0.58	0.33	0.91	1.71	13.5	20.7
6	2.47	0.28	0.28	0.56	1.91	17.2	22.3
5	2.43	0.35	0.23	0.58	1.85	18.8	24.6
4	1.22	0.33	0.18	0.51	0.71	17.2	29.6
3	2.12	0.12	-	0.12	2.00	38.8	41.1
2	7.73	1.35	0.07	1.42	6.31	22.0	26.9
1							
Total	35.35	4.70	1.17	5.87	29.48	21.1	25.3
12.45 hrs							
13	1.32	-	0.08	0.08	1.24	16.4	17.4
12	4.70	0.50	-	0.50	4.20	24.1	27.0
11	1.57	0.10	-	0.10	1.47	26.8	28.6
10	2.62	0.15	-	0.15	2.47	22.2	23.6
9	2.30	0.08	-	0.08	2.22	18.3	18.9
14	3.25	0.53	-	0.53	2.72	16.8	20.1
15	0.93	0.12	-	0.12	0.81	20.0	23.0
16	2.18	0.53	-	0.53	1.65	16.2	21.5
6	2.30	0.10	0.28	0.38	1.92	18.5	22.2
5	1.25	-	-	-	1.25	36.5	36.5
4	1.20	0.22	-	0.22	0.98	17.5	21.4
3	3.17	0.58	-	0.58	2.59	25.9	31.7
2	6.72	0.50	-	0.50	6.22	25.3	27.3
1							
Total	33.51	3.41	0.36	3.77	29.74	22.3	25.1

Table Ap/C 6b (continued)

Check pt.no	Travel time (min)	Delay (min)			Running time (min)	Travel speed (kph)	Running speed (kph)
		Load & Unload	Other	Total			
15.00 hrs							
13	1.65	0.17	-	0.17	1.48	13.1	14.6
12	3.98	0.75	-	0.75	3.23	28.5	35.1
11	2.08	-	-	-	2.08	20.2	20.2
10	2.40	0.10	-	0.10	2.30	24.3	25.3
9	3.00	0.43	-	0.43	2.57	14.0	16.3
14	3.93	1.17	0.28	1.45	2.48	13.9	22.0
15	0.98	0.32	-	0.32	0.66	19.0	28.2
16	2.13	0.18	0.08	0.26	1.87	16.6	18.9
6	2.70	0.28	0.45	0.73	1.97	15.8	21.6
5	2.53	0.55	-	0.55	1.98	18.0	23.0
4	1.17	0.25	-	0.25	0.92	17.9	22.8
3	2.95	0.53	-	0.53	2.42	27.9	34.0
2	8.32	1.45	-	1.45	6.87	20.4	24.7
1							
Total	37.82	6.18	0.81	6.99	30.83	19.8	24.2
15.20 hrs							
13	1.63	0.05	0.15	0.20	1.43	13.3	15.1
12	4.20	0.13	-	0.13	4.07	27.0	27.9
11	2.18	0.23	-	0.23	1.95	19.3	21.5
10	3.08	0.35	-	0.35	2.73	18.9	21.3
9	2.98	0.45	0.17	0.62	2.36	14.1	17.8
14	3.50	0.52	-	0.52	2.98	15.6	18.3
15	1.20	0.07	-	0.07	1.13	15.5	16.5
16	1.75	0.15	0.05	0.20	1.55	20.2	22.8
6	2.70	0.43	0.12	0.55	2.15	15.8	19.8
5	2.73	0.35	-	0.35	2.38	16.7	19.2
4	1.10	0.13	-	0.13	0.97	19.1	21.6
3	2.82	0.43	-	0.43	2.39	29.1	34.4
2	7.62	0.93	-	0.93	6.69	22.3	25.4
1							
Total	37.49	4.22	0.49	4.71	32.78	19.9	22.8

Table Ap/C 6b (continued)

Check pt.no	Travel time (min)	Delay (min)			Running time (min)	Travel speed (kph)	Running speed (kph)
		Load & Unload	Other	Total			
15.40 hrs							
13	2.62	0.72	0.23	0.95	1.67	8.2	12.9
12	5.67	1.15	-	1.15	4.52	20.0	25.1
11	4.30	1.20	0.10	1.30	3.00	9.8	14.0
10	4.35	1.05	-	1.05	3.30	13.4	17.6
9	2.93	0.43	0.17	0.60	2.33	14.3	18.0
14	3.95	1.00	-	1.00	2.95	13.8	18.5
15	1.58	0.30	-	0.30	1.28	11.8	14.5
16	3.75	1.42	0.23	1.65	2.10	9.4	16.9
6	3.18	0.65	0.22	0.87	2.31	13.4	18.4
5	2.87	0.68	-	0.68	2.19	15.9	20.8
4	1.47	0.27	-	0.27	1.20	14.3	17.5
3	4.68	1.53	-	1.53	3.15	17.6	26.1
2	9.62	2.25	-	2.25	7.37	17.7	23.0
1							
Total	50.97	12.65	0.95	13.60	37.37	14.7	20.0
15.45 hrs							
13	1.85	0.23	0.10	0.33	1.52	11.7	14.2
12	5.32	0.65	0.12	0.77	4.55	21.3	24.9
11	4.18	1.32	-	1.32	2.86	10.0	14.7
10	4.22	0.72	-	0.72	3.50	13.8	16.6
9	3.62	0.55	0.10	0.65	2.97	11.6	14.1
14	3.82	0.87	-	0.87	2.95	14.3	18.5
15	1.20	0.08	-	0.08	1.12	15.5	16.6
16	2.95	0.85	-	0.85	2.10	12.0	16.9
6	3.30	0.53	0.42	0.95	2.35	12.9	18.1
5	3.02	0.57	-	0.57	2.45	15.1	18.6
4	1.53	0.45	-	0.45	1.08	13.7	19.4
3	4.15	1.30	-	1.30	2.85	19.8	28.8
2	9.02	2.21	-	2.21	6.81	18.8	24.9
1							
Total	48.18	10.33	0.74	11.07	37.11	15.5	20.1

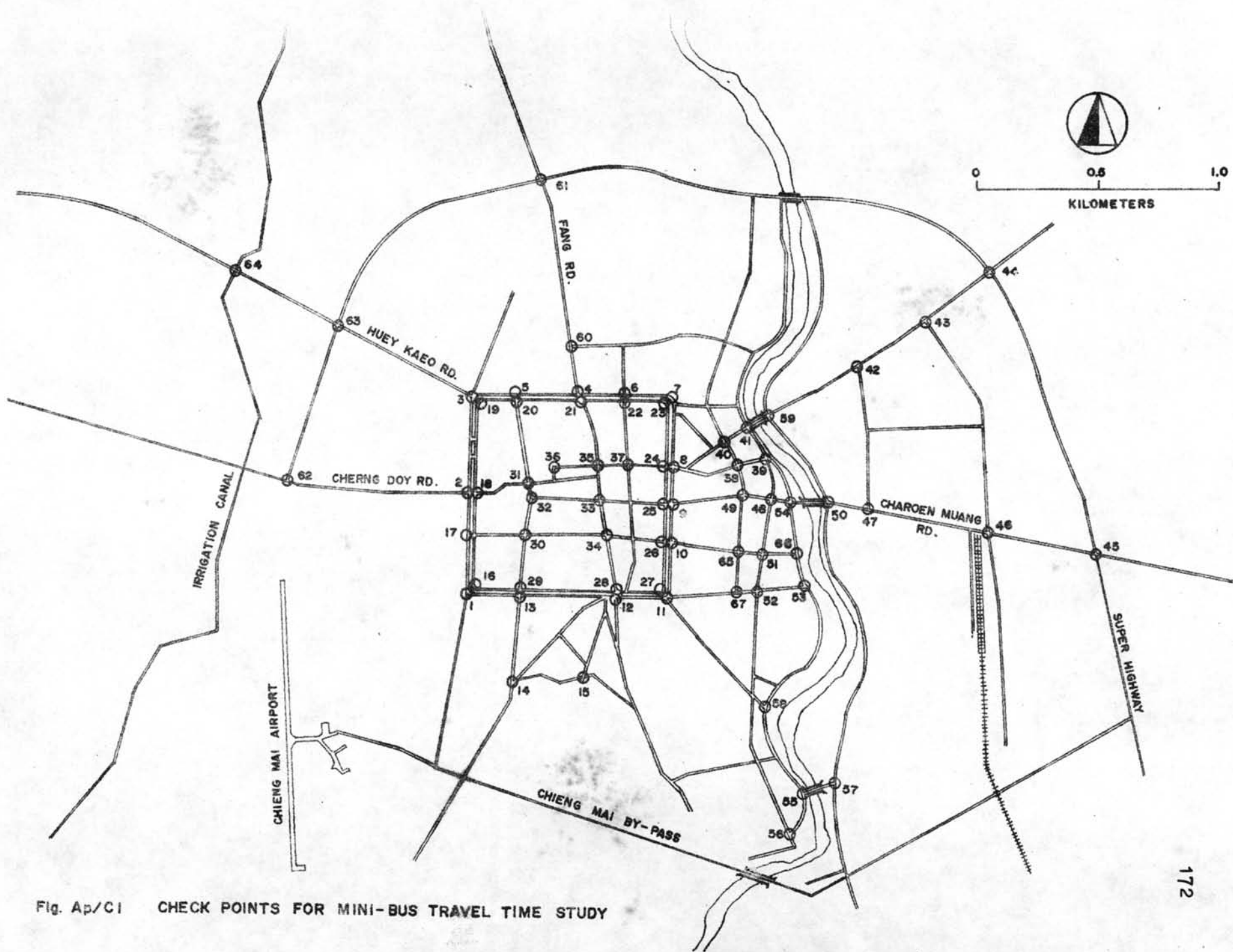


Fig. Ap/C1 CHECK POINTS FOR MINI-BUS TRAVEL TIME STUDY

Table Ap/C 7 (continued)

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Time hrs	Check pt.no	Dis- tance (km)	Travel time (min)	Delay (min)				Running time (min)	Travel speed (kph)	Running speed (kph)
				Load & Unload	Crui- sing	Other	Total			
	2	0.78	1.17	0.12	-	0.07	0.19	0.98	40.0	47.8
	3	2.47	4.90	-	-	-	-	4.90	30.2	30.2
	61	1.47	2.27	0.07	-	0.05	0.12	2.15	38.9	41.0
	60	0.72	2.13	-	-	-	-	2.13	20.3	20.3
	6	0.42	1.02	0.18	-	-	0.18	0.84	24.7	30.0
	23	0.54	1.43	-	-	-	-	1.43	22.7	22.7
	8	0.59	1.17	0.20	-	-	0.20	0.97	30.3	36.5
	38	0.23	1.08	0.13	-	-	0.13	0.95	12.8	14.5
	39	0.32	1.00	-	-	-	-	1.00	19.2	19.2
	41	0.26	0.52	0.22	-	-	0.22	0.30	30.0	52.0
	40	0.63	1.65	-	-	-	-	1.65	22.9	22.9
	7									
15.30	23	0.71	1.48	0.12	-	0.10	0.22	1.26	28.8	33.8
	21	0.05	0.22	-	-	-	-	0.22	13.6	13.6
	4									
	4	0.63	1.70	0.33	-	0.08	0.41	1.29	22.2	29.3
	35	0.64	1.27	-	-	-	-	1.27	30.2	30.2
	8	0.59	1.53	0.13	-	-	0.13	1.40	23.1	25.3
	38	0.61	3.85	1.17	-	0.08	1.25	2.60	9.5	14.1
	48	0.46	1.45	0.23	-	-	0.23	1.22	19.0	22.6
	51	0.80	1.95	-	0.05	0.18	0.23	1.72	24.6	27.9
	10	0.42	1.27	-	-	0.13	0.13	1.14	19.8	22.1
	11	0.53	1.47	0.12	0.22	-	0.34	1.13	21.6	28.1
	12	1.15	2.98	0.27	-	-	0.27	2.71	23.2	25.5
	14	0.62	1.05	-	-	0.25	0.25	0.80	35.4	46.5
	15	0.66	2.40	0.25	-	0.20	0.45	1.95	16.5	20.3
	12	0.52	2.40	-	-	0.42	0.42	1.98	13.0	15.8
	34	0.29	1.23	-	-	-	-	1.23	14.1	14.1
	33	0.28	0.95	-	-	-	-	0.95	17.7	17.7
	35									
16.20	50	0.38	1.17	-	-	0.28	0.28	0.89	19.5	25.6
	54	0.18	0.92	-	-	0.45	0.45	0.47	11.7	23.0
	48	0.88	2.50	-	-	0.48	0.48	2.02	21.1	26.1
	9	0.34	0.72	-	-	-	-	0.72	28.3	28.3
	10	0.42	1.17	-	-	0.28	0.28	0.89	21.5	28.3
	11	0.53	1.78	-	-	0.60	0.60	1.18	17.9	26.9
	12	0.52	3.13	1.50	-	0.43	1.93	1.20	10.0	26.0
	34	0.29	0.67	0.27	-	-	0.27	0.40	26.0	43.5
	33	0.28	1.20	-	-	-	-	1.20	14.0	14.0
	35	0.63	1.28	-	-	0.17	0.17	1.11	29.5	34.1
	4	0.31	1.52	-	-	-	-	1.52	12.2	12.2
	60									
	60	0.31	1.28	-	-	-	-	1.28	14.5	14.5
	4	0.63	1.17	-	-	-	-	1.17	32.3	32.3

Table Ap/C 7 (continued)

Time hrs	Check pt.no	Dis- tance (km)	Travel time (min)	Delay (min)				Running time (min)	Travel speed (kph)	Running speed (kph)
				Load & Unload	Crui- sing	Other	Total			
	7									
	40	0.63	1.75	-	-	0.22	0.22	1.53	21.6	24.7
	41	0.26	1.07	-	-	-	-	1.07	14.6	14.6
	59	0.16	0.57	-	-	-	-	0.57	16.8	16.8
	42	0.79	1.60	0.25	-	-	0.25	1.35	29.6	35.1
16.55	42									
	59	0.79	1.85	-	-	0.13	0.13	1.72	25.6	27.6
	41	0.16	0.57	-	-	-	-	0.57	16.8	16.8
	39	0.32	0.93	-	0.22	-	0.22	0.71	20.6	27.0
	48	0.38	2.57	0.75	-	-	0.75	1.82	8.9	12.5
	9	0.88	1.78	-	-	0.08	0.08	1.70	30.0	31.1
	10	0.34	0.82	-	-	0.20	0.20	0.62	24.9	32.9
	11	0.42	1.20	-	-	0.20	0.20	1.00	21.0	25.2
	12	0.53	1.40	-	-	-	-	1.40	22.7	22.7
17.10	14									
	13	0.72	1.42	-	-	-	-	1.42	30.4	30.4
	1	0.42	0.67	-	-	0.12	0.12	0.55	37.6	45.8
	2	0.81	1.62	0.25	-	-	0.25	1.37	30.0	35.5
	3	0.78	1.92	-	-	-	-	1.92	24.4	24.4
	5	0.35	0.68	-	-	-	-	0.68	30.9	30.9
	5									
	32	0.87	1.23	0.17	-	-	0.17	1.06	42.4	49.2
	30	0.31	0.78	0.15	-	-	0.15	0.63	23.8	29.5
	13	0.50	1.32	0.22	-	-	0.22	1.10	22.7	27.3
	12	0.81	1.68	-	-	0.07	0.07	1.61	28.9	30.2
	34	0.52	1.30	-	-	-	-	1.30	24.0	24.0
	33	0.29	0.50	-	-	-	-	0.50	34.8	34.8
	35	0.28	0.53	-	-	-	-	0.53	31.7	31.7
	8	0.64	1.23	-	-	-	-	1.23	31.2	31.2
	38	0.59	1.28	-	-	-	-	1.28	27.7	27.7
	39	0.23	0.88	0.20	-	-	0.20	0.68	15.7	20.3
	48	0.38	1.20	-	-	0.10	0.10	1.10	19.0	20.7
	50	0.56	1.03	-	-	0.20	0.20	0.83	32.6	40.5
	47	0.47	0.73	-	-	-	-	0.73	38.6	38.6
	42	1.25	1.85	-	-	-	-	1.85	40.5	40.5
	59	0.79	1.73	-	0.08	0.50	0.58	1.15	27.4	41.2
	41	0.16	0.45	-	-	-	-	0.45	21.3	21.3
	40	0.26	1.05	0.15	-	-	0.15	0.90	14.9	17.3
	40									
	41	0.26	0.53	-	-	-	-	0.53	29.4	29.4
	39	0.32	0.50	-	-	-	-	0.50	38.4	38.4
	43	0.38	1.12	-	-	-	-	1.12	20.4	20.4
	54	0.18	0.43	0.17	-	-	0.17	0.26	25.1	41.5
	66	0.41	1.42	-	-	-	-	1.42	17.3	17.3
	51	0.29	0.78	0.43	-	-	0.43	0.35	22.3	49.7
	10	0.80	2.07	0.30	-	-	0.30	1.77	23.2	27.1
	11	0.42	1.32	0.17	-	-	0.17	1.15	19.1	21.9
	12	0.53	1.17	0.42	0.10	-	0.52	0.65	27.2	48.9

Table Ap/C 8 Waiting Time of Passengers Wishing to Board Bus Line 1 (30th May 1975)

Class boundaries min	Mean min	AM Peak (07.00-09.00)		Off-Peak (09.00-15.00)		PM Peak (15.00-17.00)	
		No. of Pass.	%	No. of Pass.	%	No. of Pass.	%
0.01 - 0.99	0.5	6	19.4	7	8.5	5	15.2
1.00 - 1.99	1.5	2	6.5	9	11.0	3	9.1
2.00 - 2.99	2.5	3	9.6	13	15.9	4	12.1
3.00 - 3.99	3.5	3	9.6	9	11.0	5	15.2
4.00 - 4.99	4.5	5	16.2	9	11.0	4	12.1
5.00 - 5.99	5.5	3	9.6	5	6.1	3	9.1
6.00 - 6.99	6.5	2	6.5	9	11.0	1	3.0
7.00 - 7.99	7.5	2	6.5	7	8.5	3	9.1
8.00 - 8.99	8.5	1	3.2	5	6.1	2	6.1
9.00 - 9.99	9.5	2	6.5	2	2.4	1	3.0
10.00 - 10.99	10.5	1	3.2	3	3.7	1	3.0
11.00 - 11.99	11.5	1	3.2	2	2.4	0	0
12.00 - 12.99	12.5	-	-	1	1.2	1	3.0
13.00 - 13.99	13.5	-	-	1	1.2	-	-
Total		31	100.0	82	100.0	33	100.0
Mean Waiting Time, min		4.53		4.90		4.47	

Table Ap/C 9 Waiting Time of Passengers Wishing to Board Bus Line 2 (30th May 1975)

Class Boundaries min	Mean min	AM Peak (07.00-09.00)		Off-Peak (09.00-15.00)		PM Peak (15.00-17.00)	
		No. of Pass.	%	No. of Pass.	%	No. of Pass.	%
0.01 - 0.99	0.5	0	0	2	5.0	1	4.0
1.00 - 1.99	1.5	1	4.2	3	7.5	1	4.0
2.00 - 2.99	2.5	1	4.2	2	5.0	2	8.0
3.00 - 3.99	3.5	1	4.2	2	5.0	2	8.0
4.00 - 4.99	4.5	2	8.3	3	7.5	4	16.0
5.00 - 5.99	5.5	3	12.5	5	12.5	2	8.0
6.00 - 6.99	6.5	5	20.8	4	10.0	3	12.0
7.00 - 7.99	7.5	4	16.6	5	12.5	5	20.0
8.00 - 8.99	8.5	5	20.8	3	7.5	1	4.0
9.00 - 9.99	9.5	1	4.2	4	10.0	2	8.0
10.00 - 10.99	10.5	1	4.2	2	5.0	1	4.0
11.00 - 11.99	11.5	-	-	2	5.0	1	4.0
12.00 - 12.99	12.5	-	-	1	2.5	-	-
13.00 - 13.99	13.5	-	-	0	0	-	-
14.00 - 14.99	14.5	-	-	0	0	-	-
15.00 - 15.99	15.5	-	-	1	2.5	-	-
16.00 - 16.99	16.5	-	-	1	2.5	-	-
Total		24	100.0	40	100.0	25	100.0
Mean Waiting Time, min		6.58		6.85		5.98	

Table AP/C 10 Waiting Time of Passengers Wishing to Board Bus Line 3 (30th May 1975)

Class boundaries min	Mean min	AM Peak (07.00-09.00)		Off-Peak (09.00-15.00)		PM-Peak (15.00-17.00)	
		No. of Pass.	%	No. of Pass.	%	No. of Pass.	%
0.01 - 0.99	0.5	1	4.2	3	6.0	2	7.1
1.00 - 1.99	1.5	2	8.3	4	8.0	1	3.6
2.00 - 2.99	2.5	2	8.3	4	8.0	1	3.6
3.00 - 3.99	3.5	1	4.2	2	4.0	2	7.1
4.00 - 4.99	4.5	2	8.3	4	6.0	4	14.3
5.00 - 5.99	5.5	3	12.5	5	10.0	3	10.7
6.00 - 6.99	6.5	4	16.6	6	12.0	6	21.5
7.00 - 7.99	7.5	2	8.3	3	6.0	2	7.1
8.00 - 8.99	8.5	3	12.5	4	8.0	1	3.6
9.00 - 9.00	9.5	1	4.2	4	8.0	1	3.6
10.00 - 10.99	10.5	1	4.2	2	4.0	2	7.1
11.00 - 11.99	11.5	1	4.2	2	4.0	2	7.1
12.00 - 12.99	12.5	1	4.2	1	2.0	0	0
13.00 - 13.99	13.5	-	-	1	2.0	1	3.6
14.00 - 14.99	14.5	-	-	1	4.0	-	-
15.00 - 15.99	15.5	-	-	2	4.0	-	-
16.00 - 16.99	16.5	-	-	1	2.0	-	-
17.00 - 17.99	17.5	-	-	1	2.0	-	-
Total		24	100.0	50	100.0	28	100.0
Mean Waiting Time, min		6.17		7.06		6.29	

Table AP/C 11 Waiting Time of Passengers Wishing to Board Mini-Bus
from City Center to Outlying Area (December 1975)

Class boundaries min	Mean min	AM-Peak (07.30-08.30)		Off-Peak (11.00-12.00)		PM-Peak (15.30-16.30)	
		No. of Pass.	%	No. of Pass.	%	No. of Pass.	%
0.01 - 0.24	0.12	30	44.1	29	42.0	26	44.0
0.25 - 0.49	0.37	22	32.3	24	34.8	20	33.9
0.50 - 0.74	0.62	8	11.8	8	11.5	6	10.2
0.75 - 0.99	0.87	4	5.9	3	4.3	2	3.4
1.00 - 1.24	1.12	3	4.4	2	2.9	2	3.4
1.25 - 1.49	1.37	0	0	1	1.5	1	1.7
1.50 - 1.74	1.62	1	1.5	1	1.5	1	1.7
1.75 - 1.99	1.87	-	-	1	1.5	1	1.7
Total		68	100.00	69	100.00	59	100.00
Mean Waiting Time, min		0.37		0.39		0.39	

Table Ap/C 12 Waiting Time of Passengers Wishing to Board Mini-Bus from
Fang Road to City Center (December 1975)

Class boundaries min	Mean min	AM-Peak (07.45-08.00)		Off-Peak (12.00-13.00)		PM Peak (15.30-16.30)	
		No. of Pass.	%	No. of Pass.	%	No. of Pass.	%
0.01 - 0.24	0.12	5	25.0	1	5.0	9	45.0
0.25 - 0.49	0.37	9	45.0	6	30.0	7	35.0
0.50 - 0.74	0.62	4	20.0	2	10.0	3	15.0
0.75 - 0.99	0.87	1	5.0	4	20.0	0	0
1.00 - 1.24	1.12	1	5.0	4	20.0	1	5.0
1.25 - 1.49	1.37	-	-	1	5.0	-	-
1.50 - 1.74	1.62	-	-	0	0	-	-
1.75 - 1.99	1.87	-	-	0	0	-	-
2.00 - 2.24	2.12	-	-	2	10.0	-	-
Total		20	100.00	20	100.00	20	100.00
Mean Waiting Time, min		0.42		0.86		0.33	



Table Ap/C 13 Waiting Time of Passengers Wishing to Board Mini-Bus from
Charoen Muang Road to City Center (December 1975)

Class boundaries min	Mean min	AM-Peak (08.00-09.00)		Off-Peak (14.00-15.00)		PM-Peak (15.30-16-30)	
		No. of Pass.	%	No. of Pass.	%	No. of Pass.	%
0.01 - 0.24	0.12	6	30.0	1	5.0	2	10.0
0.25 - 0.49	0.37	5	25.0	6	30.0	11	55.0
0.50 - 0.74	0.62	4	20.0	1	5.0	4	20.0
0.75 - 0.99	0.87	4	20.0	0	0	0	0
1.00 - 1.24	1.12	0	0	2	10.0	2	10.0
1.25 - 1.49	1.37	1	5.0	2	10.0	1	5.0
1.50 - 1.74	1.62	-	-	2	10.0	-	-
1.75 - 1.99	1.87	-	-	0	0	-	-
2.00 - 2.24	2.12	-	-	3	15.0	-	-
2.25 - 2.49	2.37	-	-	1	5.0	-	-
2.50 - 2.74	2.62	-	-	1	5.0	-	-
2.75 - 2.99	2.87	-	-	1	5.0	-	-
Total		20	100.00	20	100.00	20	100.00
Mean Waiting Time, min		0.50		1.27		0.52	

Table Ap/C 14 Waiting Time of Passengers Wishing to Board Mini-Bus from
Huey Kaeo Road to City Center (December 1975)

Class boundaries min	Mean min	AM-Peak (08.30-09.30)		Off-Peak (13.00-14.00)		PM-Peak (16.00-17.00)	
		No. of Pass.	%	No. of Pass.	%	No. of Pass.	%
0.01 - 0.24	0.12	3	15.0	0	0	4	20.0
0.25 - 0.49	0.37	4	20.0	3	15.0	6	30.0
0.50 - 0.74	0.62	7	35.0	2	10.0	5	25.0
0.75 - 0.99	0.87	3	15.0	6	30.0	2	10.0
1.00 - 1.24	1.12	3	15.0	2	10.0	2	10.0
1.25 - 1.49	1.37	-	-	4	20.0	1	5.0
1.50 - 1.74	1.62	-	-	0	0	-	-
1.75 - 1.99	1.87	-	-	0	0	-	-
2.00 - 2.24	2.12	-	-	1	5.0	-	-
2.25 - 2.49	2.37	-	-	0	0	-	-
2.50 - 2.74	2.62	-	-	1	5.0	-	-
2.75 - 2.99	2.87	-	-	0	0	-	-
3.00 - 3.24	3.12	-	-	1	5.0	-	-
Total		20	100.00	20	100.00	20	100.00
Mean Waiting Time, min		0.61		1.16		0.56	

Table Ap/C 15 Waiting Time of Passengers Wishing to Board Mini-Bus from
Cherng Doy Road to City Center (December 1975)

Class boundaries min	Mean min	AM-Peak (08.00-09.00)		Off-Peak (11.00-12.00)		PM-Peak (15.45-16.45)	
		No. of Pass.	%	No. of Pass.	%	No. of Pass.	%
0.01 - 0.24	0.12	6	30.0	1	5.0	5	25.0
0.25 - 0.49	0.37	4	20.0	6	30.0	4	20.0
0.50 - 0.74	0.62	4	20.0	3	15.0	4	20.0
0.75 - 0.99	0.87	2	10.0	3	15.0	4	20.0
1.00 - 1.24	1.12	1	5.0	1	5.0	0	0
1.25 - 1.49	1.37	2	10.0	1	5.0	1	5.0
1.50 - 1.74	1.62	0	0	1	5.0	1	5.0
1.75 - 1.99	1.87	0	0	0	0	0	0
2.00 - 2.24	2.12	1	5.0	3	15.0	1	5.0
2.25 - 2.49	2.37	-	-	1	5.0	-	-
Total		20	100.00	20	100.00	20	100.00
Mean Waiting Time, min		0.62		0.98		0.66	

VITA

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