

## Appendices

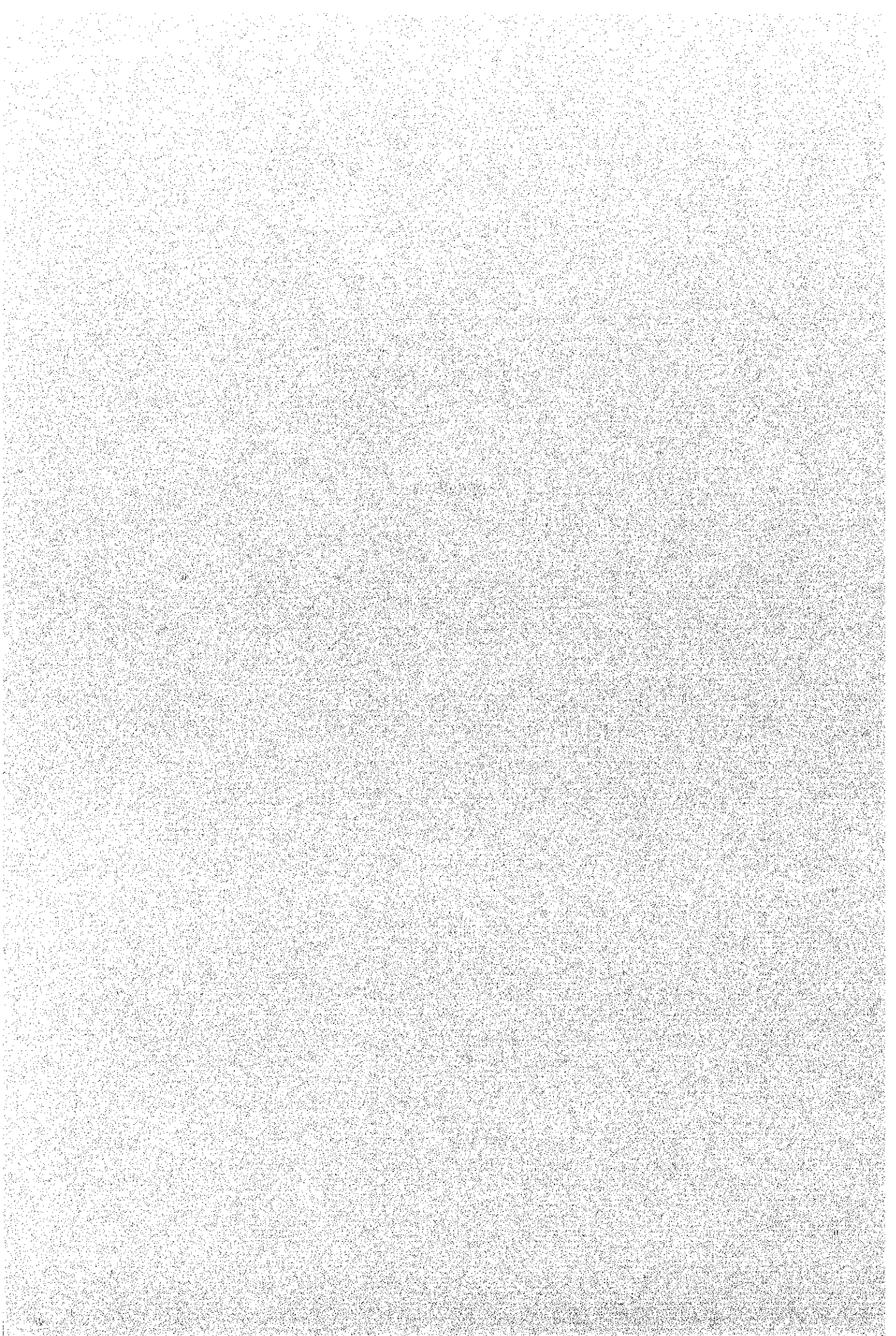
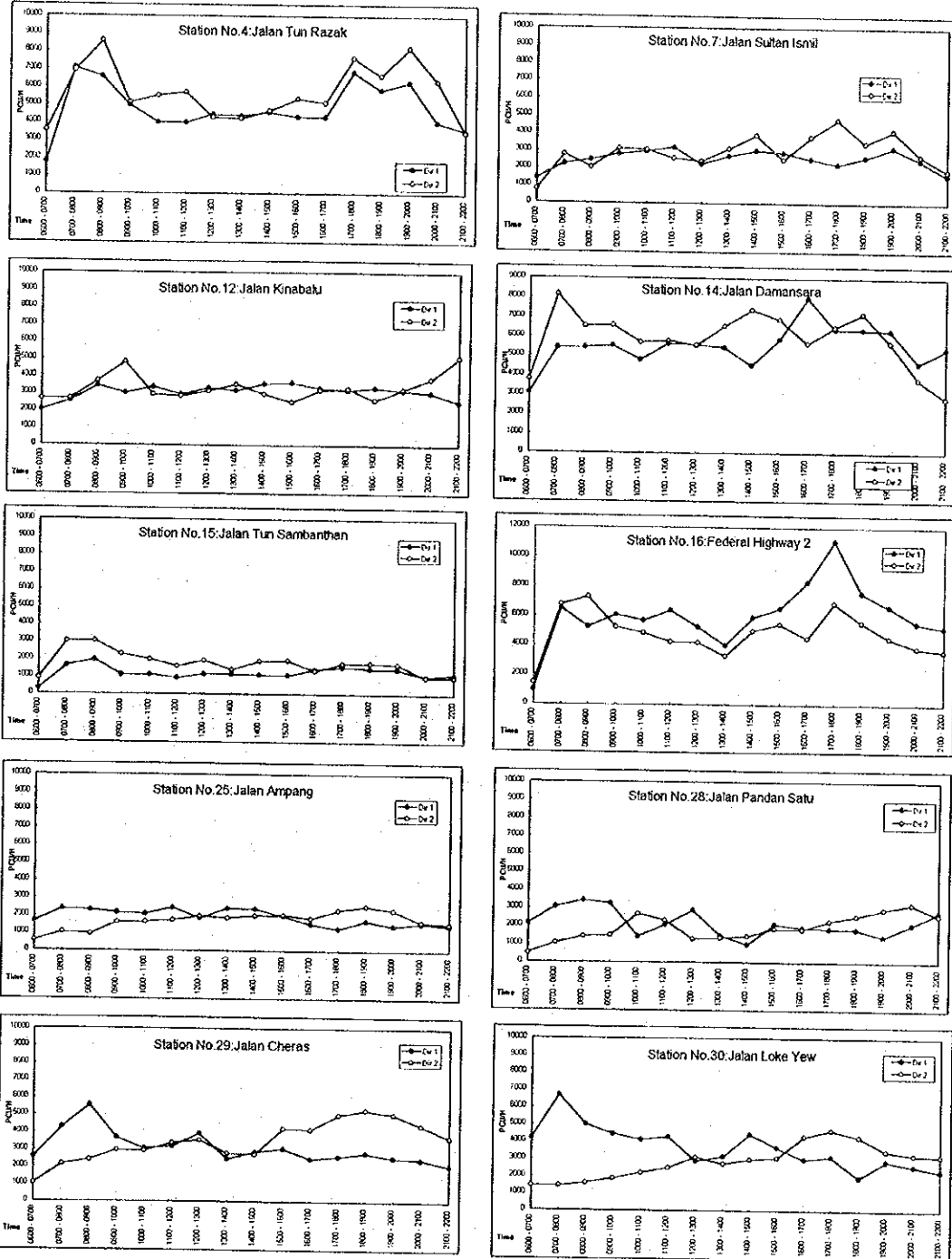


Fig. A 3.1.1 Hourly Fluctuation of Traffic Volume on Screen Line



Source: SMURT-KL, JICA Study, 1997

### **Appendix 3**

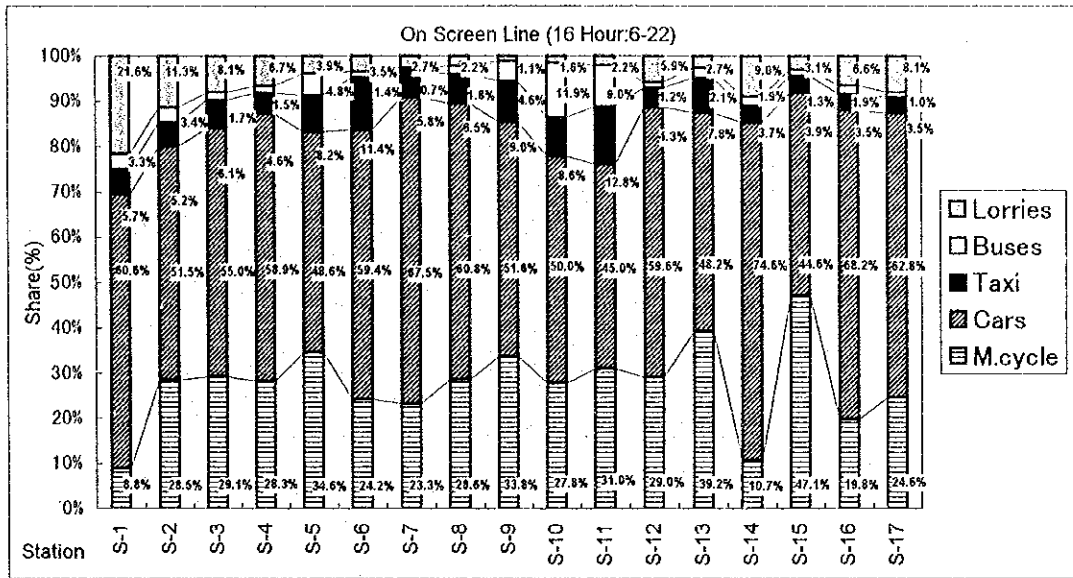
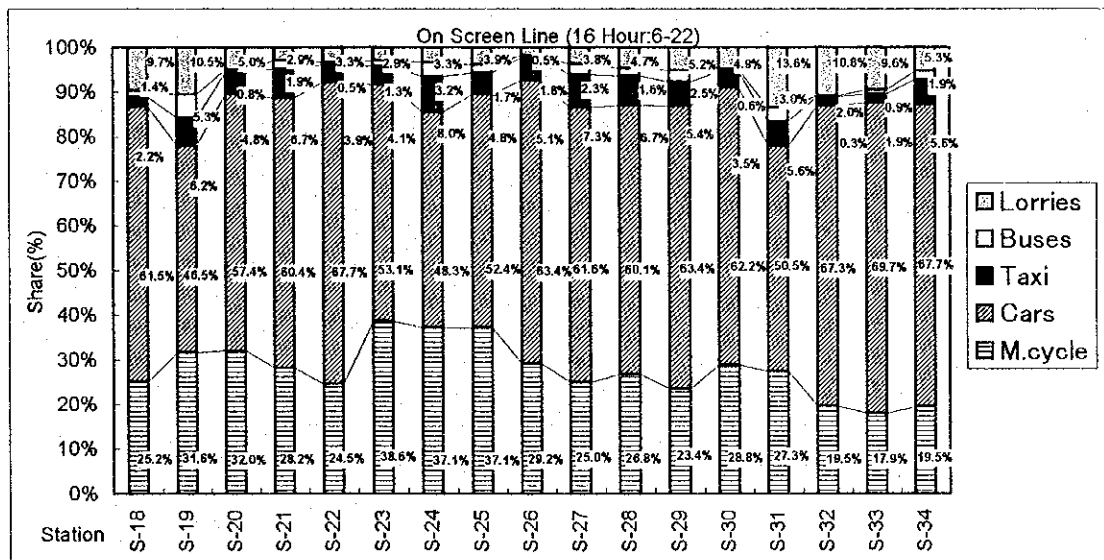
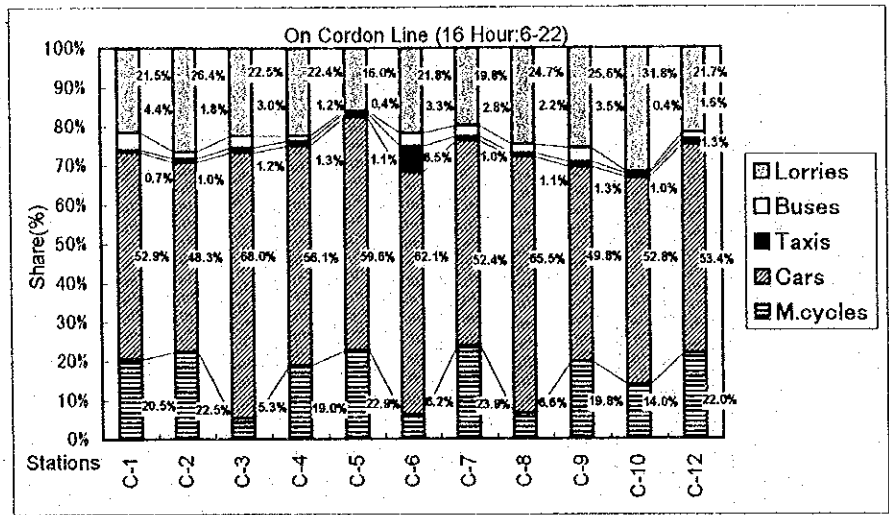


Fig. A 3.1.2 (1) Vehicular Type Composition on Screen Line



Source: SMURT-KL, JICA Study, 1997

Fig. A 3.1.2 (2) Vehicular Type Composition on Screen Line



Source: SMURT-KL, JICA Study, 1997

Fig. A 3.1.3 Vehicular Type Composition on Cordon Line

Table A 3.1.1.1 Traffic Volume on Screen Line

Unit: PCU/15 hours (6.00-22.00)

Station	IN						OUT						TOTAL								
	M.Cycle	Cars	Taxi	Buses	LCorries	PCU	M.Cycle	Cars	Taxi	Buses	LCorries	PCU	Total	PCU	M.Cycle	Cars	Taxi	Buses	LCorries	Total	PCU
S-1	743	5,348	490	289	1,789	8,638	10,273	712	4,691	446	283	1,785	7,917	9,507	1,455	10,039	936	552	3,574	16,556	19,780
S-2	4,408	8,321	858	546	1,824	15,959	15,180	4,626	8,006	775	537	1,770	15,714	14,723	9,034	16,327	1,833	1,085	3,594	31,873	28,903
S-3	4,656	9,684	1,131	309	1,544	15,928	5,722	10,278	1,077	318	1,386	18,781	16,330	10,578	19,962	2,208	627	2,990	36,305	32,158	
S-4	26,202	54,836	4,096	600	4,523	90,257	77,140	27,768	57,597	4,728	2,330	8,204	100,628	91,503	53,971	112,433	8,824	2,930	12,727	190,885	168,643
S-5	9,258	10,739	2,368	1,582	1,082	25,010	21,050	17,888	21,762	3,096	1,868	1,508	41,922	35,341	23,146	32,501	5,465	3,230	2,590	66,932	56,391
S-6	4,470	11,215	1,853	176	584	18,298	15,901	4,504	10,782	2,385	357	666	18,724	16,608	8,974	21,997	4,238	533	1,280	37,022	32,509
S-7	13,471	29,612	3,258	555	1,145	47,961	40,593	9,925	37,914	2,564	131	1,575	52,109	47,007	23,336	67,526	5,822	686	2,720	100,090	87,600
S-8	11,279	24,537	2,328	411	989	39,544	35,199	9,489	19,522	2,383	895	619	32,878	28,011	20,736	44,059	4,711	1,306	1,608	72,422	61,210
S-9	12,288	24,415	4,260	1,514	371	42,868	36,266	12,877	14,004	2,402	1,881	455	31,619	24,953	25,165	38,419	6,882	3,365	828	74,487	61,219
S-10	4,821	10,009	1,433	1,683	275	18,021	16,491	2,142	2,131	652	1,215	124	6,264	5,835	6,763	12,140	2,085	2,898	399	24,285	22,326
S-11	7,048	9,506	3,418	2,318	543	22,937	20,869	5,716	9,018	1,857	1,407	346	18,344	16,239	12,765	18,527	5,275	3,725	889	41,181	36,908
S-12	19,573	33,724	1,822	483	3,661	59,263	49,740	14,862	37,073	3,249	955	3,306	59,445	53,232	34,435	70,797	5,071	1,438	6,967	118,708	102,972
S-13	7,511	9,182	1,539	520	518	19,270	15,281	3,196	3,891	586	64	217	8,063	6,159	10,706	13,173	2,135	584	735	27,333	21,440
S-14	10,516	85,240	2,742	1,295	7,572	87,365	86,563	8,416	67,399	3,866	2,159	8,494	90,334	94,736	18,932	132,639	6,608	3,454	16,056	177,698	183,299
S-15	13,162	12,076	916	339	639	27,332	18,557	18,253	17,559	1,667	502	1,294	39,315	28,621	31,415	29,735	2,983	841	2,073	66,647	48,178
S-16	23,070	66,528	3,854	1,927	7,945	103,324	96,801	13,262	58,798	2,664	1,513	4,183	80,420	76,672	36,332	125,326	6,516	3,440	12,128	183,744	173,473
S-17	13,003	34,190	2,050	499	4,266	54,048	49,379	10,183	25,006	1,244	424	3,394	40,261	35,640	23,198	59,196	3,334	923	7,660	94,309	86,019
S-18	10,134	25,304	963	514	3,569	40,484	37,069	7,158	16,983	577	438	3,103	28,259	26,370	17,292	42,267	1,540	1,550	3,062	28,189	27,371
S-19	3,855	6,496	998	785	1,716	13,840	13,621	5,359	7,073	806	785	1,346	15,349	13,750	9,214	13,559	1,804	1,550	3,062	28,189	27,371
S-20	5,358	8,384	738	130	648	15,256	12,338	5,145	10,408	849	134	974	17,510	14,966	10,501	18,782	1,567	264	1,822	32,766	27,394
S-21	5,189	11,292	1,393	356	598	18,828	16,240	5,517	11,643	1,137	352	500	19,149	16,183	10,706	22,935	2,530	708	1,096	37,977	32,423
S-22	4,213	11,526	636	80	528	19,981	14,656	3,260	9,106	541	81	489	13,477	11,791	7,473	20,632	1,177	161	1,015	30,458	26,447
S-23	6,664	9,075	568	141	497	18,945	13,087	8,860	12,019	1,078	370	645	22,802	17,919	15,354	21,054	1,646	511	1,142	39,747	31,006
S-24	6,774	9,624	1,463	656	872	19,189	15,827	6,368	10,090	1,813	653	687	21,611	17,152	15,142	19,714	3,278	1,909	1,359	40,900	32,979
S-25	13,413	20,273	1,859	636	1,442	37,623	30,593	13,424	17,656	1,632	614	1,383	34,719	27,573	26,837	37,929	3,491	1,250	2,835	72,342	58,166
S-26	4,121	9,208	732	52	142	14,255	11,637	3,951	8,348	673	84	361	13,417	11,137	8,072	17,556	1,405	136	503	27,672	22,774
S-27	3,244	8,026	989	356	524	13,119	11,606	3,631	9,408	1,063	321	539	15,183	13,296	7,075	17,435	2,072	657	1,063	28,302	24,904
S-28	9,753	23,865	3,059	644	1,901	39,222	34,726	10,445	21,424	1,994	585	1,640	36,088	30,868	20,198	45,289	5,053	1,229	3,541	75,310	65,594
S-29	12,449	34,880	3,027	1,624	2,577	54,557	49,468	14,781	38,993	3,312	1,340	3,488	61,914	55,721	27,230	73,873	6,339	2,964	6,065	116,471	105,189
S-30	15,518	44,901	2,385	280	3,030	66,114	58,508	19,771	31,172	1,997	415	2,957	56,212	45,888	35,269	76,073	4,282	895	5,987	122,326	104,396
S-31	3,762	8,375	998	493	1,828	15,456	14,889	4,714	7,332	741	448	2,393	15,628	14,787	8,476	15,707	1,739	941	4,221	31,084	29,676
S-32	7,645	23,175	532	102	3,862	35,316	33,586	6,432	25,355	921	103	3,946	36,759	35,936	14,077	48,530	1,493	205	7,810	72,075	69,521
S-33	22,399	80,692	2,271	1,104	10,796	117,172	113,005	17,408	74,848	1,979	912	10,468	105,415	104,122	39,807	155,250	4,250	2,016	21,264	222,587	217,127
S-34	6,181	21,311	1,852	578	1,695	31,617	29,428	4,981	17,474	1,372	535	1,349	25,711	23,953	11,162	38,785	3,224	1,113	3,044	57,328	53,391
TOTAL	326,090	775,472	62,940	23,519	75,493	1,263,514	1,132,194	308,756	734,764	58,056	24,789	75,576	1,201,941	1,083,561	634,846	1,510,236	120,996	48,308	151,069	2,465,455	2,215,755

Source: SMURT-KL JICA Study, 1997

Table A 3.1.2 Traffic Volume on Cordon Line

Unit: PCU/16 hour (6:00-22:00)

Direction	Station	IN							OUT							TOTAL						
		M.cycle	Car	Taxi	Buses	Lorries	Total	PCU	M.cycle	Car	Taxi	Buses	Lorries	Total	PCU	M.cycle	Car	Taxi	Buses	Lorries	Total	PCU
NORTH- WEST	C-1	1,258	3,301	47	282	1,229	6,117	6,766	1,317	3,343	46	268	1,470	6,444	7,323	2,575	8,844	93	550	2,698	12,561	14,089
	Total	1,258	3,301	47	282	1,229	6,117	6,766	1,317	3,343	46	268	1,470	6,444	7,323	2,575	8,844	93	550	2,698	12,561	14,089
	C-2	1,342	2,737	72	99	1,492	5,742	6,302	1,304	2,981	49	110	1,619	6,043	6,778	2,646	5,898	121	209	3,111	11,785	13,078
NORTH	Total	1,342	2,737	72	99	1,492	5,742	6,302	1,304	2,981	49	110	1,619	6,043	6,778	2,646	5,898	121	209	3,111	11,785	13,078
	C-3	408	5,216	98	244	1,778	7,735	9,442	501	6,496	126	278	2,093	9,495	11,549	910	11,712	214	523	3,871	17,230	20,981
	Total	2,491	6,686	157	145	2,855	12,334	13,504	2,510	8,108	198	164	3,060	14,040	15,491	5,001	14,794	355	309	5,915	26,374	28,895
EAST	C-4	375	991	17	7	212	1,602	1,537	303	775	17	5	293	1,363	1,398	678	1,766	34	12	475	2,965	2,935
	Total	3,275	12,893	262	396	4,845	21,671	24,483	3,314	15,379	341	448	5,418	24,698	28,438	6,589	28,272	603	844	10,261	48,569	52,921
	C-5	451	3,870	433	249	1,478	6,479	7,937	453	5,121	511	233	1,885	8,003	9,637	904	8,991	944	482	3,161	14,482	17,575
SOUTH	Total	451	3,870	433	249	1,478	6,479	7,937	453	5,121	511	233	1,885	8,003	9,637	904	8,991	944	482	3,161	14,482	17,575
	C-6	1,524	15,731	255	548	6,420	24,478	30,609	1,831	18,410	304	589	6,447	27,681	33,398	3,453	34,141	559	1,137	12,867	52,159	64,005
	Total	3,132	19,351	347	760	7,761	31,351	37,903	3,581	21,833	354	754	7,808	34,430	40,457	6,713	41,294	701	1,514	15,568	85,781	78,360
SOUTH- EAST	C-7	842	2,014	51	117	1,027	4,051	4,590	747	1,990	50	188	1,035	3,990	4,673	1,589	4,004	101	285	2,062	6,041	9,263
	Total	1,189	4,387	78	25	2,826	9,285	9,982	1,170	4,440	86	46	2,678	8,420	10,262	2,338	9,827	164	71	5,304	16,705	20,244
	C-8	2,011	6,401	129	142	3,653	12,336	14,572	1,917	6,430	136	214	3,713	12,410	14,935	3,925	12,831	265	356	7,366	24,746	29,507
SOUTH- WEST	Total	2,011	6,401	129	142	3,653	12,336	14,572	1,917	6,430	136	214	3,713	12,410	14,935	3,925	12,831	265	356	7,366	24,746	29,507
	C-9	4,085	9,241	202	261	3,316	17,115	17,838	3,160	8,388	227	270	3,843	15,889	17,881	7,255	17,630	428	531	7,159	33,004	35,818
	Total	4,085	9,241	202	261	3,316	17,115	17,838	3,160	8,388	227	270	3,843	15,889	17,881	7,255	17,630	428	531	7,159	33,004	35,818
TOTAL	15,564	57,794	1,492	2,189	23,772	100,811	115,901	15,046	63,556	1,664	2,297	25,654	108,117	125,448	30,610	121,350	3,156	4,486	48,326	208,928	241,349	

Source: SMURF-KL JICA Study, 1997



**Table A 3.1.3 Comparison of Bus Travel Speed and Car Travel Speed**

No.	Route	Bus Lane or Not	Period	Travel Speed (km/h)			
				Direction:1 (Inbound)		Direction:2 (Outbound)	
				Bus	Car	Bus	Car
1	Jalan Sultan Ismail	Not	A.M.	7.2	10.9	9.3	11.2
			OFF	8.2	10.7	2.7	10.3
			P.M.	4.6	11.4	3.2	1.8
13	Jalan Raja Chulan	Not	A.M.	14.9	24.9	17.0	23.9
			OFF	11.5	19.9	12.7	26.6
			P.M.	10.4	25.3	4.2	15.5
6	Jalan Tuank Abdul Rahman (one-way)	Bus Exclusive Lane	A.M.	8.2	8.3	-	-
			OFF	7.0	18.0	-	-
			P.M.	7.5	9.8	-	-
12	Jalan Raja Lout (one-way)	Bus Exclusive Lane	A.M.	-	-	7.7	15.7
			OFF	-	-	10.4	15.0
			P.M.	-	-	3.8	7.9

Source: SMURT-KL, JICA Study, 1997

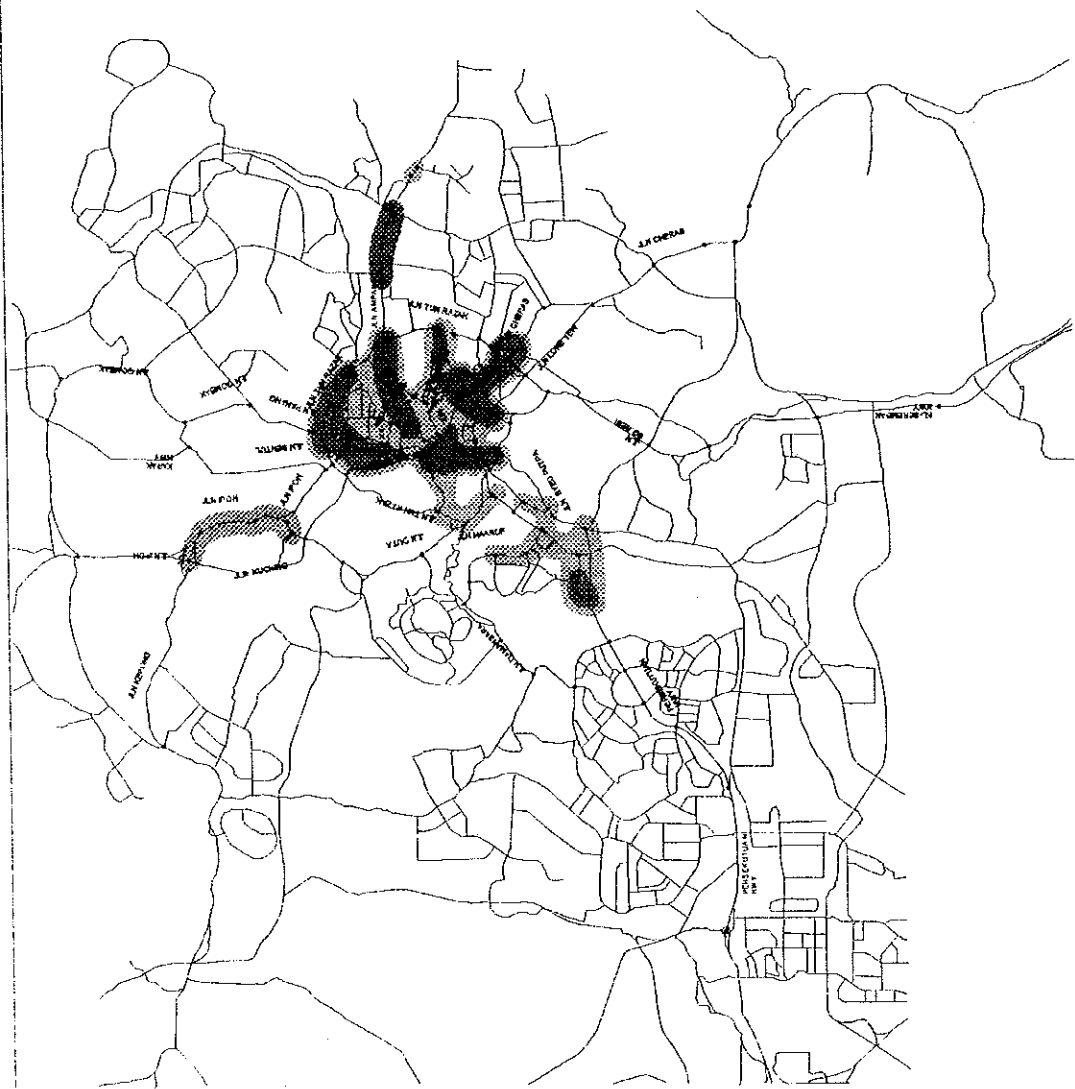
**Table A 3.1.4 General Traffic Accidents Data**

Year		1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Number of Registered Vehicles	K L		395,402	443,802	514,322	596,705	668,967	739,878	848,749	1,293,558	1,502,890
	Selangor		824,047	864,014	919,491	980,951	1,039,948	1,087,429	1,281,100	955,356	1,036,624
	total		1,219,449	1,307,816	1,433,813	1,577,656	1,708,915	1,827,307	2,129,849	2,248,914	2,539,514
Vehicles Involve In Accidents	K L		35,334	37,535	43,829	46,424	47,260	50,198	51,391	51,389	59,021
	Districts		27,741	31,976	34,320	38,152	43,124	51,649	63,632	72,163	87,816
	total		63,075	69,511	78,149	84,576	90,384	101,847	115,023	123,552	146,837
Total Number of Accidents	K L	20,104	18,728	16,068	19,365	22,800	24,697	27,000	27,439	27,939	33,375
	Districts		11,140	10,477	14,173	16,574	23,772	33,051	36,955	41,737	48,049
	total		29,868	26,545	33,538	39,374	48,469	60,051	64,394	69,676	81,424
Casualties	Death		203	210	249	265	298	287	350	323	396
	Districts		468	539	552	655	791	777	887	948	1,125
	total		671	749	801	920	1,089	1,064	1,237	1,271	1,521
Injuries	K L		2,958	2,699	3,192	3,712	3,875	4,473	4,444	4,697	4,350
	Districts		3,257	4,351	3,614	4,268	4,441	5,645	7,490	7,946	8,523
	total		6,215	7,050	6,806	7,980	8,316	10,118	11,934	12,643	12,873

Source: Laporan Perangkaan Kemalangan Jalan Raya MALAYSIA 1995. POLIS DIRAJA MALAYSIA  
Law Traffic Bukit Aman  
Districts: Klang, Gombak, Petaling and Hulu Langat

**Fig. A 3.1.4**

AREA WITH LOW TRAVEL  
SPEED (UNDER 20km/h)  
(MIDDAY PEAK HOUR)



LEGEND

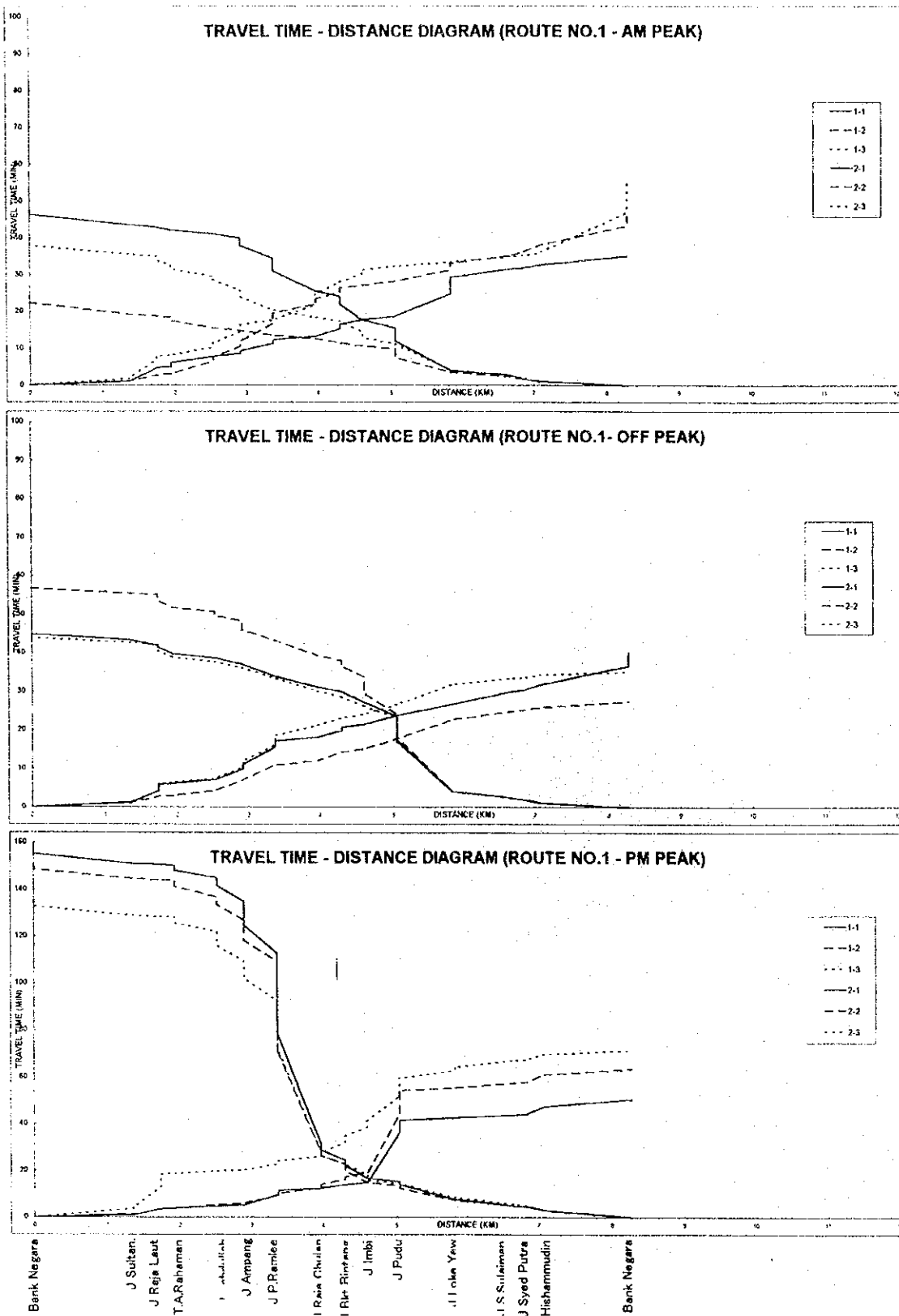
Under 10 km/h  
10-20 km/h



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KILOMETERS

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Study on Integrated Urban Transportation  
Strategies  
for  
Environmental Improvement in Kuala Lumpur





**Fig. A 3.1.6 (1) Travel Time and Distance Diagram on Inner Ring Road (No.1)**

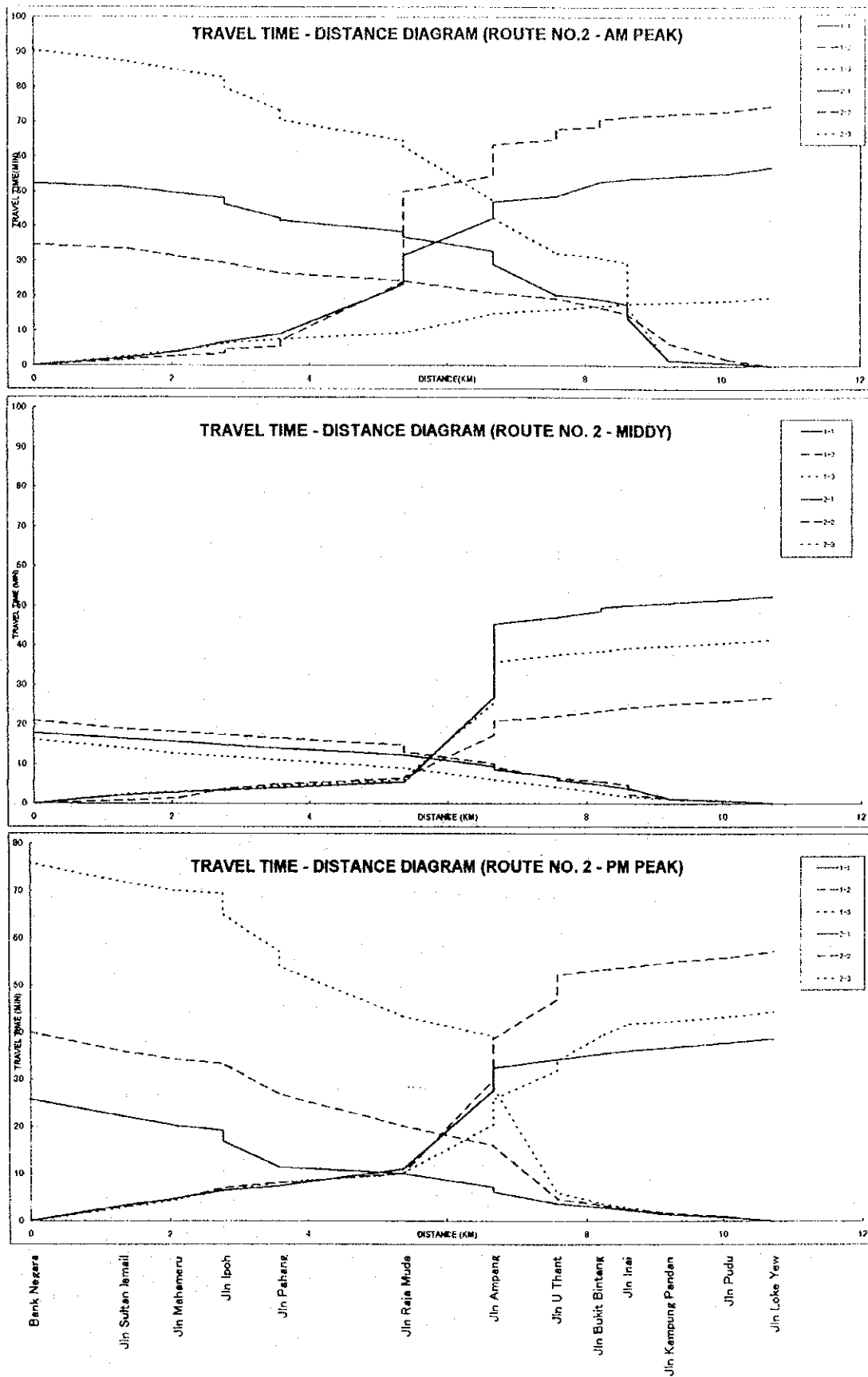


Fig. A 3.1.6 (2) Travel Time and Distance Diagram on Middle Ring Road (No.2)

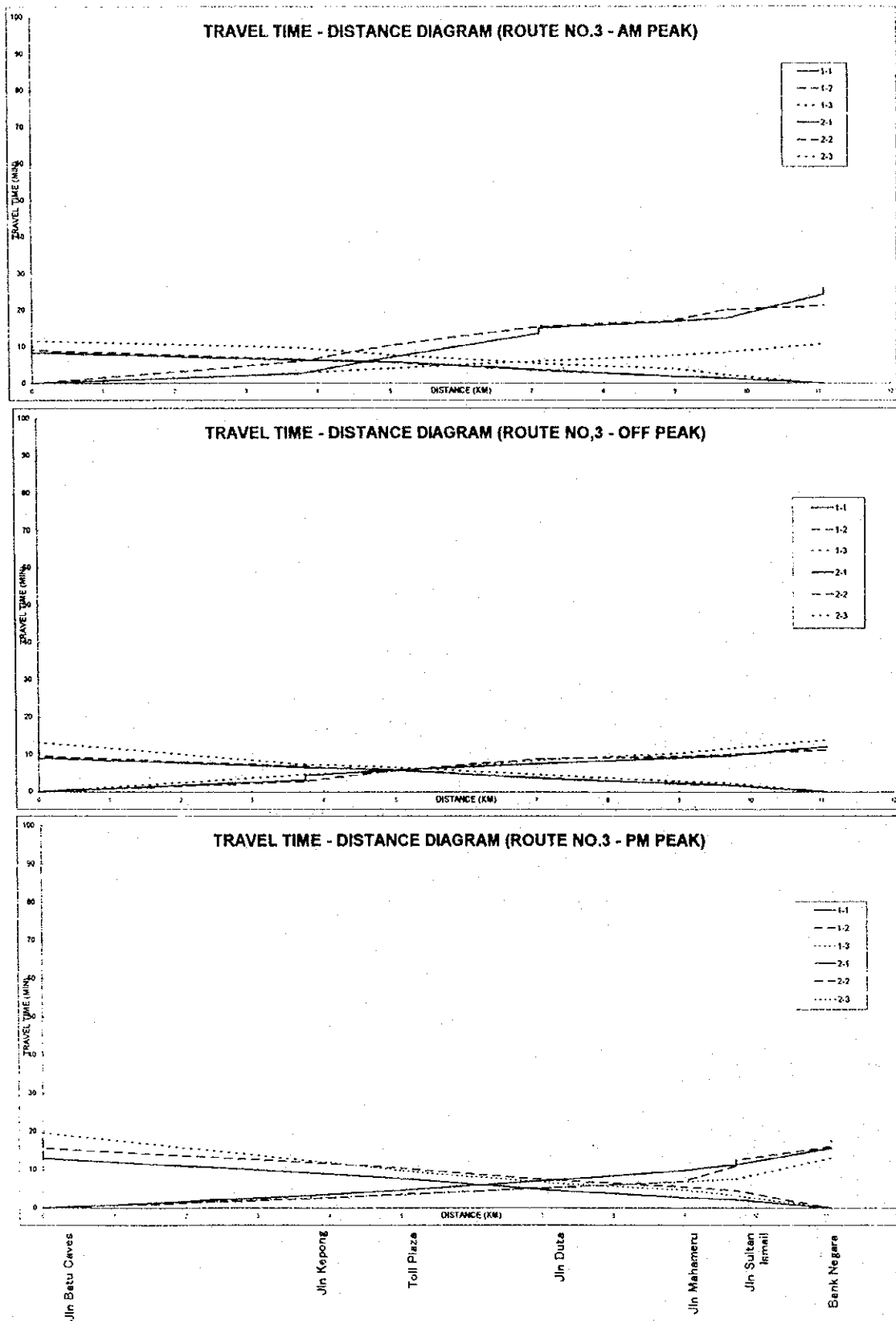


Fig. A 3.1.6 (3) Travel Time and Distance Diagram on Jln Kuching-Jln Ipoh (No.3)

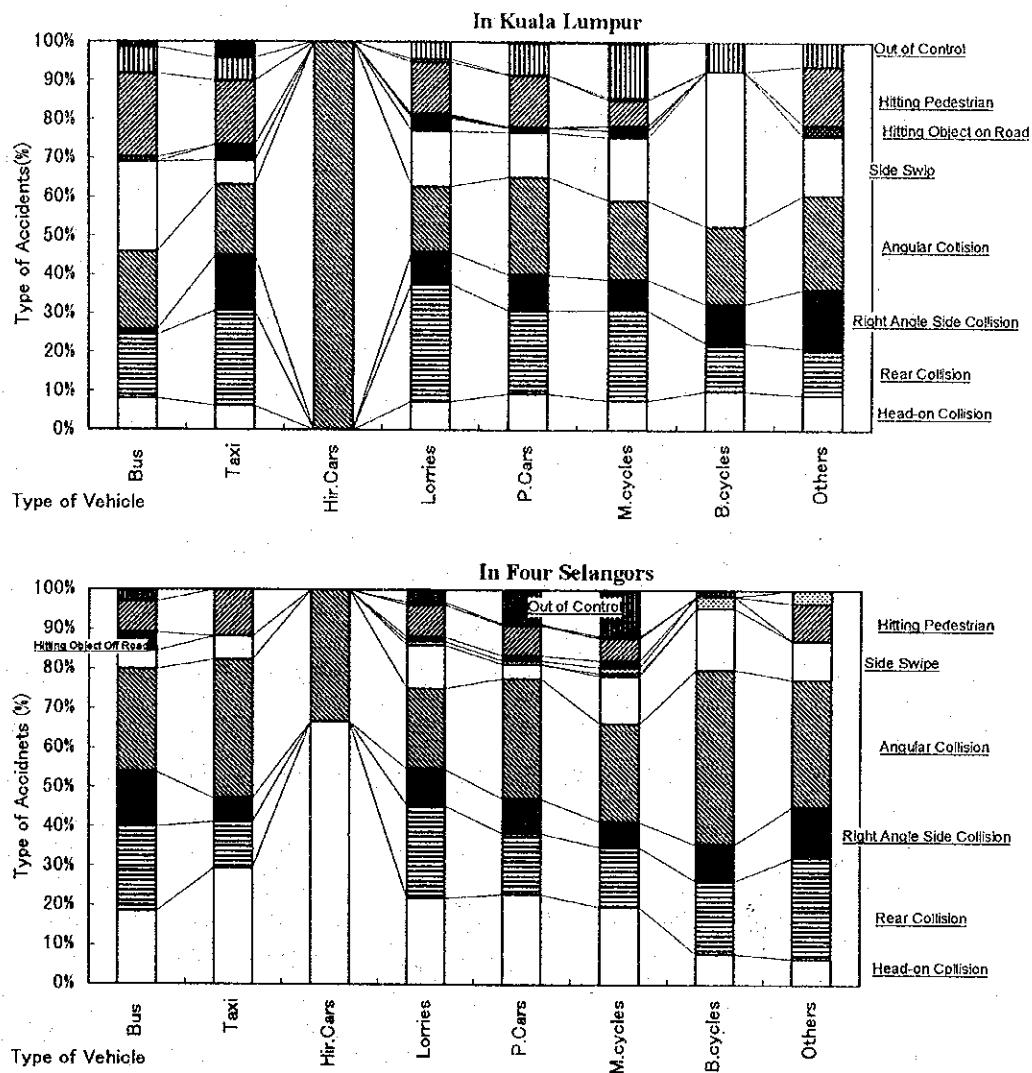


Fig. A 3.1.7 Traffic Accidents Types by Vehicle Type

### A1. Driving Licensing

#### a. Driving Licensing System in Malaysia

The administrative task of licensing drivers in Malaysia is undertaken by Jabatan Pengangkutan Jalan, JPJ, or the Road Transport Department, RTD.

Generally, an applicant for a driving licence should be at least 17 years of age for motorcars and 16 years old for motorcycles. Fig. 2.1.18 shows the driving licensing system in Malaysia. The applicant must be physically and mentally fit to drive a motor vehicle and have a competent knowledge of Bahasa Malaysia or English. A Learner's Licence is required before the applicant is eligible to undergo practical driving lessons. In order to obtain this license, the applicant should sit for a 5-hour long lecture on the highway codes of Malaysia. Then, the applicant should pass the Highway Code Test. It is at the Highway

Code Test that applicants are examined for colour blindness. They are also tested for a good eyesight to read a motor vehicle number plate from the distance of 23 metres in a good daylight with the help of glasses, if necessary. When the applicant has passed the various tests and the Highway Code Test, the Learner's License or Provisional Driving Licence (PDL) is issued to them. The Learner's Licence is only valid for a year and has to be renewed at a charge of RM\$20 every three months. If the applicant fails to sit for a competency-driving test within a year, he/she is required to re-sit for the Highway Code test.

In order to sit for the competency-driving test, the applicant should pass the Highway Code Test and should be a holder of a valid PDL which is less than one month from the driving test. The applicant must also have a certificate of attendance from the driving school (for the 5-hour lecture) and an attendance record stating that he/she has attended a minimum of 16 hours of practical driving lesson.

During the driving test, the applicant must pass the criteria:

- To start engine of the vehicle;
- To move straight ahead or at an angle;
- To overtake, meet or cross the path of other vehicles and take an approximate course;
- To turn right and left correctly;
- To drive the vehicle backwards, and whilst doing so enter a limited opening either to the right or to the left;
- To drive the vehicle to face the opposite direction by the use of forward and reverse gears;
- To stop the vehicle in an emergency and in normal circumstances, and in the latter case to bring it all to a halt at an appropriate part of the road;
  - To stop the vehicle on a slope and to restart;
- To give appropriate signals by hand or by mechanical or electrical means in a clear and unmistakable manner, at appropriate times to indicate his intended actions; and
- To act correctly and promptly to all signals given by traffic signs and traffic controllers and take appropriate action on signs given by other road users.

After the applicant has passed the competency driving test, the new drivers will now be issued a Probationary Driving Licence and they will have to undergo a two-year probationary period before they can obtain a Competent Driving Licence (CDL). During this period, these drivers have to exhibit their "P" plates on the top-left side of the front and rear windscreens of their vehicles. For motorcyclists, the "P" plates have to be placed above or below the headlights and above or below the registration plate at the rear.

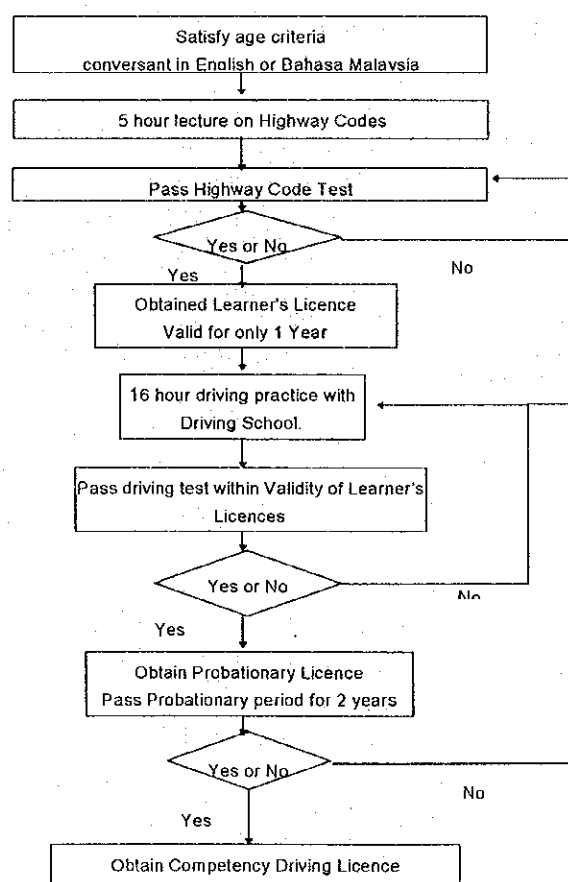
Those who fail to display their "P" plate could be fined up to RM1,000 and jailed up to 3 months for the first offence. They will also be given a 5 demerit point penalty under the Kejara Demerit System. The Kejara Demerit System is a system in which demerit points are given to a holder of a driving licence who has been convicted of a scheduled offence or has paid the prescribed penalty under the scheduled offence of the Road Transport Act. Probationary drivers who record 10 demerit points will have their licences revoked. New drivers of



heavy vehicles (Class E, E1, and E2) must first possess a Class D driving licence and undergo the 2-year probationary period.

Those who are booked either by the Police or by the Road Transport Department (RTD) and are found guilty for committing traffic offences will be given demerit points. Generally, a warning notice will be issued for a driver who accumulated 8 to 15 points, while those who accumulated 15 and above points will get their licence suspended for a period of 3 months or more. An offence of overtaking on double line is given 5 demerit points.

Although more detailed investigation may be required, the quality of instruction given to student-drivers is generally insufficient. The balance between practice and classroom seems unduly skewed toward driving practice with insufficient classroom instruction provided. As a consequence, proper attitudes toward driving and law enforcement which include the need for self-discipline and social responsibility is lacking among the drivers.



**Fig. A 3.1.8 Driving Licensing System In Malaysia**

c. Driver Education Programmes and Campaign in Malaysia

The Road Safety Council Malaysia, or RSCM in short, is originally known as the Federal Road Safety Council. It is a registered body under the Registrar of Societies since 1963. The RSCM plays a basic role to bring together all relevant bodies for the planning, formulation and implementation of strategies, programmes and activities related to road safety.

i. Organisation

The RSCM is chaired by the Hon Minister of Transport Malaysia, while the post of Deputy Chairman is held by the Hon Deputy Minister of Transport Malaysia. The Secretary General is the under-secretary who is responsible for Land Transport Division in Ministry of Transport. The executive committee, which is an executing committee for the RSCM, has the Secretary General of Ministry of Transport as its chairperson. It consists of 34 members including government agencies, states representatives, and private sectors personnel. The meeting are held meetings 3 times a year while the whole council meeting is held once a year for the Annual General Meeting. The council has various sub-committees and working groups.

ii. Objectives and Function

The RSCM is formed with the main aim of reducing road traffic accidents, attendant injuries, deaths, and loss or damage to road users, vehicles, and properties. It also functions as a body to stimulate action in respect to education in road safety; information and publicity; observance of traffic laws and highway codes; highway engineering; advisory body on road safety; co-ordinate activities among state members; and liaison with other organisations. The target set by the RSCM is to reduce the fatality due to road accidents by 30% by the year 2000.

iii. Main Activities of the RSCM

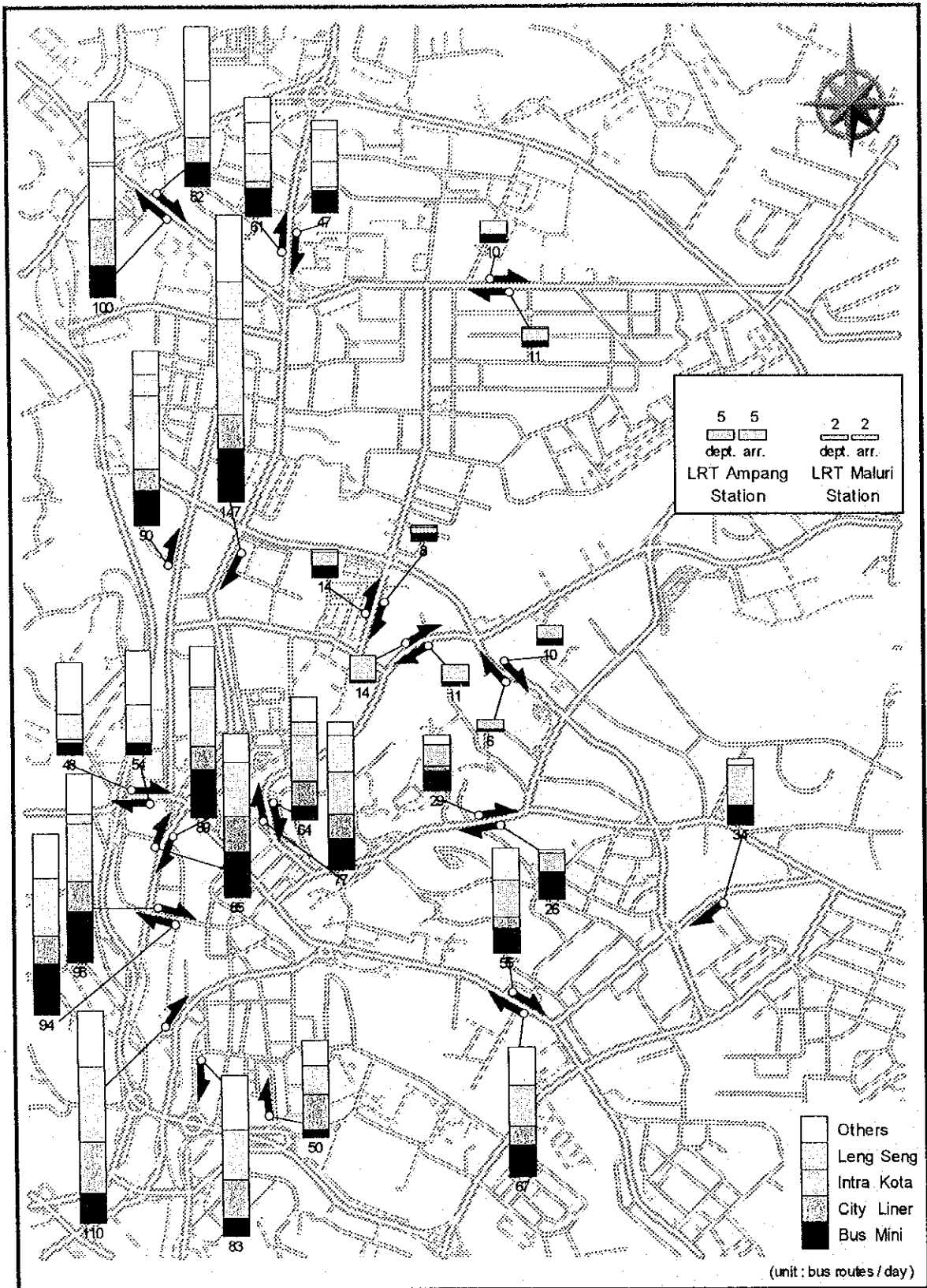
Some of the activities of the RSCM are in the followings;

- Screening road safety films;
- Distribution of road safety materials;
- Organising road safety campaigns;
- Organising national level activities for school children;
- Organising safety exhibitions; and
- Formulation of strategies for enforcement activities.

iv. Action programmes

Generally, the RSCM has three action programmes to achieve its aim. They referred to as three E's: Education, Engineering, and Enforcement. In terms of Education, RSCM conducts public campaigns through to give awareness on road safety to the public the mass media - multimedia campaign. Some examples of these campaigns are "Care on The Road," "Don't Drink and Drive," "Road Hogging," and "Child Restraint Car Seat." In schools, road safety awareness is

instilled to the young by setting up road safety clubs, talks on road safety, essay competition, and elocution contest. For the new drivers, the driving training includes a new curriculum on which knowledge of basic car maintenance and defensive driving skills.



**Fig. A 3.3.1**  
Number of Routes by Bus Operator, 1997

source : SMURT-KL Bus Frequency Survey, December 1997

**SMURT-KL**  
INTEGRATED URBAN TRANSPORTATION STRATEGIES  
FOR ENVIRONMENTAL IMPROVEMENT  
IN KUALA LUMPUR



LOCATION02 (Jalan Tuanku Abdul Rahman) DIRECTION1 (South-boud)

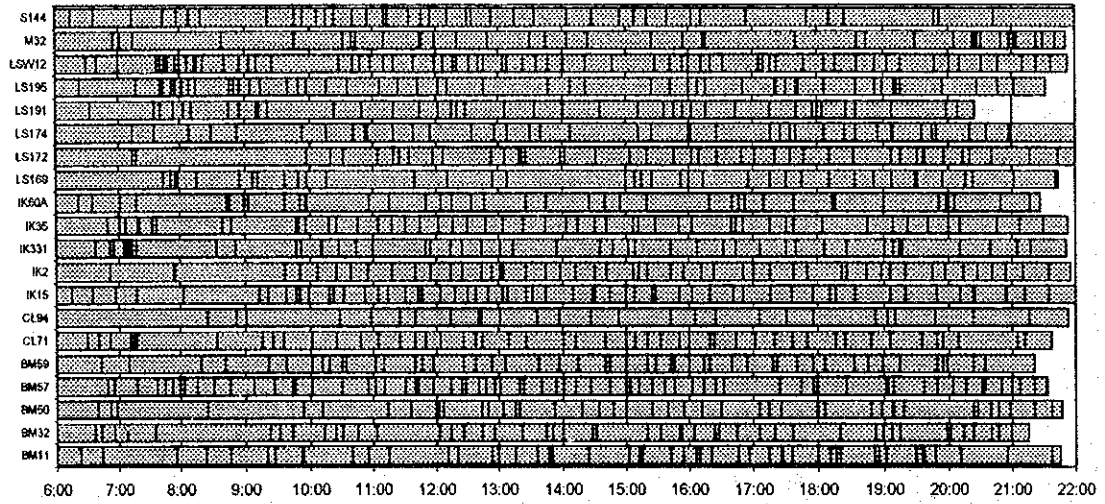


Fig. A 3.3.3 Bus Arrival Intervals

**Table A 3.3.1 Bus Operation of Intrakota(1)**

Route	Origin	Destination	(2) Scheduled Frequency	(3) Observed Frequency (min)					Notes
				AM Peak	Off Peak (daytime)	PM Peak	Off Peak (night)	Ave. (day)	
2	KOTA RAYA	TAMAN DATO SENU	15 MIN	13.8	15.0	26.7	6.7	14.1	
2D	KOTA RAYA	TAMAN DATO SENU	30 MIN						(1)
3	KOTA RAYA	BANDAR BARU SENTUL	15 MIN	15.0	19.1	30.0	9.2	17.5	
5	TERMINAL SULTAN MOHAMAD	BANGSAR	15 MIN	15.0	15.0	48.0	7.5	15.7	
5A	TERMINAL SULTAN MOHAMAD	JALAN GELENGGANG	30 MIN						(1)
5B	TERMINAL SULTAN MOHAMAD	JALAN GELENGGANG	30 MIN						(1)
8	TERMINAL SULTAN MOHAMAD	JALAN SELADANG	20 MIN	12.0	10.8	48.0	8.0	13.0	
9	TERMINAL TUN RAZAK	SUGAI BESI (FAJAR SUPERMARKET)	20 MIN	16.4	23.3	30.0	10.9	20.0	
10	PASAR SENI (JALAN HANG KASTURI)	BANDAR BARU SELAYANG	15 MIN	36.0	26.3	48.0	10.9	25.9	
10D	PASAR SENI (JALAN HANG KASTURI)	BANDAR BARU SELAYANG	15 MIN	12.9	70.0	240.0	40.0	40.0	
11	PASAR SENI (JALAN HANG KASTURI)	TAMAN NAKHODA	15 MIN	60.0	60.0	120.0	40.0	64.0	
11D	PASAR SENI (JALAN HANG KASTURI)	KG. NAKHODA	15 MIN	18.0	23.3	48.0	13.3	22.9	
12	CHOW KIT	SEKSYEN SS2 PJ	30 MIN	22.5	32.3	60.0	13.3	28.2	
12A	CHOW KIT	SEA PARK SS 2/60	30 MIN						(1)
13	TERMINAL SULTAN MOHAMAD	SG. BESI (TUOM)	1 HR	60.0	70.0	120.0	60.0	73.8	
14	PASAR SENI (JALAN HANG KASTURI)	LEBUHRAYA PINGGIRAN	15 MIN	18.0	18.3	26.7	9.2	17.5	
14D	PASAR SENI (JALAN HANG KASTURI)	TAMAN SRI GOMBAK	20 MIN	16.4	15.6	40.0	7.5	16.0	
15	PASAR SENI (JALAN HANG KASTURI)	TAMAN MELATI	15 MIN	15.0	12.0	30.0	6.3	13.0	
15D	PASAR SENI (JALAN HANG KASTURI)	TAMAN MELATI	30 MIN	22.5	35.0	40.0	17.1	29.1	
17	PASAR SENI (JALAN HANG KASTURI)	KG. KEMESAH ZOO NEGARA	30 MIN	20.0	38.2	120.0	20.0	34.3	
18	CHOW KIT	SEKSYEN 17 P.J.	15 MIN	30.0	32.3	48.0	15.0	30.0	
19	JALAN SULTAN MOHAMAD	JALAN DUTA	1 HR	180.0	140.0	N/A	40.0	137.1	
20	PASAR SENI (JALAN HANG KASTURI)	TAMAN MELAWATI	15 MIN	10.6	12.4	21.8	6.7	12.0	
21A	CHOW KIT	BANDAR UTAMA	30 MIN	22.5	35.0	40.0	15.0	28.2	
21B	LOT 10	BANDAR UTAMA	30 MIN	45.0	28.0	80.0	15.0	32.0	
21C	JALAN SULTAN MOHAMAD	BANDAR UTAMA	30 MIN	20.0	35.0	48.0	13.3	27.4	
22	JALAN SULTAN MOHAMAD	KG. SG. PENCALA	30 MIN	60.0	52.5	120.0	30.0	58.5	
23	PASAR SENI (JALAN HANG KASTURI)	BUKIT INDAH	15 MIN	7.8	11.1	21.8	6.7	10.7	
24A	CHOW KIT	KG. TASEK AMPANG	30 MIN	36.0	35.0	80.0	15.0	34.3	
24C	TERMINAL SULTAN MOHAMAD	KG. TASEK AMPANG	30 MIN	15.0	26.3	30.0	12.0	20.9	
25	CHOW KIT	KG. PANDAN		11.3	24.7	120.0	10.9	20.9	
25A	CHOW KIT	TAMAN PUTRA	15 MIN	9.5	11.7	21.8	8.0	11.9	
25B	JALAN SILANG	TAMAN PUTRA SULAIMAN							(1)
25C	JALAN SULTAN MOHAMAD	TAMAN PUTRA SULAIMAN	15 MIN	18.0	20.0	34.3	10.9	19.6	
26	PASAR SENI (JALAN HANG KASTURI)	TAMAN BERINGIN JINJANG UTARA	15 MIN	22.5	21.0	40.0	9.2	20.4	
27	CHOW KIT	JALAN OTHMAN	30 MIN	20.0	18.3	30.0	9.2	18.1	
28	CHOW KIT	TAMAN MEGAH PJ	30 MIN	30.0	28.0	80.0	15.0	30.0	
29	LOT 10	KEPONG BARU	15 MIN	22.5	19.1	40.0	9.2	19.6	
29D	PASAR SENI (JALAN HANG KASTURI)	TAMAN SRI SINAR KEPONG		180.0	420.0	N/A	N/A	480.0	
30	KOTA RAYA (JALAN CHENG LOCK)	SRI SENTOSA	30 MIN	22.5	30.0	48.0	20.0	29.1	
31	PASAR SENI (JALAN HANG KASTURI)	TAMAN EHSAN	15 MIN	25.7	19.1	60.0	10.9	21.8	
32	CHOW KIT	TAMAN SEGAR	15 MIN	18.0	32.3	48.0	17.1	27.4	
33	CHOW KIT	TAMAN UNIVERSITI	30 MIN	13.8	28.0	34.3	12.0	21.3	
33A	CHOW KIT	KELANA JAYA	30 MIN						(1)
33D	JALAN SULTAN MOHAMAD	KELANA JAYA SS6/3		15.0	13.1	24.0	6.7	13.3	
33P	JALAN OTHMAN	KELANA JAYA SS6/3	30 MIN						(1)
34A	CHOW KIT	LEMBAH JAYA AMPANG	15 MIN	25.7	18.3	60.0	12.0	21.8	
34D	PASAR SENI (JALAN HANG KASTURI)	LEMBAH JAYA AMPANG	15 MIN	18.0	16.8	34.3	10.9	18.1	
35	CHOW KIT	JALAN OTHMAN	30 MIN	16.4	15.0	34.3	8.0	15.7	
36	JALAN RAJA MUDA ABDUL AZIZ	BANDAR TUN RAZAK	30 MIN	60.0	52.5	80.0	40.0	58.5	
37	PASAR SENI (JALAN HANG KASTURI)	KAMPUNG SEGAMBUT DALAM	15 MIN	22.5	22.1	48.0	12.0	22.0	
38	LOT 10	SS 2 SEA PARK	30 MIN	36.0	23.3	60.0	13.3	26.7	
39	CHOW KIT	SS 2 SEA PARK	30 MIN	25.7	32.3	60.0	13.3	29.1	
41	LOT 10	TAMAN SRI GOMBAK	15 MIN	12.9	15.6	34.3	8.0	15.2	
43	PASAR SENI (JALAN HANG KASTURI)	BUKIT MANJALARA KEPONG	20 MIN	180.0	210.0	N/A	N/A	320.0	
44	JALAN T.A. RAHMAN PERTAMA	DESA PANDAN	15 MIN	12.9	14.0	34.3	8.0	14.5	
45	CHOW KIT	CHERAS BARU	20 MIN	15.0	21.0	48.0	13.3	20.9	
46	KOTA RAYA	PANTAI DALAM	20 MIN	10.6	13.1	34.3	7.1	13.2	
46D	KOTA RAYA	PANTAI DALAM/ BUKIT SRI ANGKASA		9.5	9.3	26.7	5.5	10.1	
47	LOT 10	TAMAN MAYANG	15 MIN	99.0	210.0	240.0	N/A	192.0	
47B	TERMINAL SULTAN MOHAMAD	TMN. KOPERASI POLIS FASA 2	30 MIN	36.0	26.3	48.0	12.0	26.7	
47D	JALAN SULTAN MOHAMAD	PKNS SUBANG	20 MIN						(1)
47S	STESYEN KTM SUBANG JAYA	LAPANGAN TERBANG TERMINAL 1,2,DAN 3	1 HR						(1)
48A	LOT 10	JALAN SS24/11	30 MIN						(1)
48B	JALAN SULTAN MOHAMAD	JALAN SS24/11	30 MIN	36.0	32.3	60.0	15.0	32.0	
49	SUBANG AIRPORT	SUBANG JAYA	15 MIN	18.0	20.0	30.0	10.9	19.2	
49A	LOT 10 (JALAN BARAT)	WANGSA MAJU SEKSYEN 2							(1)
50	LOT 10	TAMAN SELAYANG JAYA	30 MIN	N/A	N/A	240.0	120.0	480.0	
53	JALAN TUN H.S. LEE	TAMAN MEDAN	15 MIN	16.4	21.0	60.0	10.9	20.9	
60	CHOW KIT	PANDAN INDAH	15 MIN	N/A	420.0	240.0	N/A	480.0	

**Table A 3.3.1 Bus Operation of Intrakota(2)**

Route	Origin	Destination	(2) Scheduled Frequency	(3) Observed Frequency (min)				Ave. (day)	Notes
				AM Peak	Off Peak (daytime)	PM Peak	Off Peak (night)		
60A	JALAN T. A. RAHMAN	PANDAN INDAH	15 MIN	13.8	22.1	48.0	10.0	19.6	
60C	JALAN OTHMAN	KG. SG. PENCALA	15 MIN	45.0	35.0	80.0	15.0	35.6	
60D	JALAN SILANG	TAMAN KENCANA	30 MIN	10.6	22.1	60.0	10.9	18.8	
61	JALAN TUN H.S. LEE	TAMAN CUEPACS	30 MIN	60.0	30.0	60.0	17.1	34.3	
77	LEBUH AMPANG	TAMAN DANAU KOTA	30 MIN	25.7	28.0	40.0	13.3	25.9	
91	LEBUH AMPANG	KAMPUNG SUNGAI PUSU / UIA	30 MIN	36.0	38.2	80.0	24.0	40.0	
103	JALAN SILANG	SRI PETALING	30 MIN	45.0	46.7	60.0	30.0	45.7	
108	JALAN SILANG	KUCHAI LAMA	30 MIN	45.0	35.0	80.0	24.0	40.0	
109	JALAN SILANG	DESA TASIK / SUNGAI BESI	30 MIN	25.7	24.7	40.0	15.0	25.3	
113	JALAN SILANG	DESA PETALING	30 MIN	36.0	35.0	48.0	20.0	34.3	
114	JALAN SILANG	TAMAN MAJU JAYA	15 MIN	20.0	19.1	30.0	12.0	19.6	
121	JALAN SILANG	TAMAN SRI INDAH / SRI PETALING	30 MIN	45.0	52.5	120.0	30.0	53.3	
123	JALAN SILANG	BANDAR TUN RAZAK	30 MIN	12.9	11.4	24.0	6.7	12.2	
124	JALAN SILANG	FLAT CHERAS	15 MIN	12.0	13.5	30.0	6.7	13.3	
133	JALAN SILANG	SRI SERDANG	30 MIN	30.0	35.0	120.0	17.1	35.6	
237	CHOW KIT	TAMAN MELAWATI SEKSYEN 6	20 MIN	30.0	22.1	80.0	12.0	25.3	
237A	CHOW KIT	AU3	30 MIN	22.5	24.7	60.0	12.0	24.6	
237B	CHOW KIT	AU3	30 MIN						(1)
238	CHOW KIT	TAMAN AU3	30 MIN	45.0	35.0	80.0	17.1	36.9	
255	CHOW KIT	WANGSA MAJU SEKSYEN 2	15 MIN	18.0	18.3	40.0	12.0	19.6	
259	LOT 10	AU3 TAMAN KERAMAT	20 MIN	20.0	23.3	80.0	17.1	25.9	
270	JALAN SULTAN MOHAMAD	TAMAN MELAWATI (FASA 5)	20 MIN	36.0	30.0	240.0	24.0	38.4	
326	JALAN HANG LEKIU	WANGSA MAJU JALAN 4/27A	40 MIN						(1)
328	JALAN OTHMAN	BANDAR UTAMA DAMANSARA	20 MIN						(1)
331	PASAR SENI (JALAN HANG KASTURI)	DESA TUN HUSSEN ONN	30 MIN	18.0	20.0	48.0	10.0	20.0	
339	JALAN OTHMAN	BANDAR UTAMA DAMANSARA	2 HRS	180.0	140.0	240.0	60.0	137.1	
348	JALAN ISFAHAN KOMPLEKS SOGO	TAMAN KOPERASI POLIS FASA 1	30 MIN	22.5	30.0	60.0	13.3	27.4	
349	JALAN SULTAN MOHAMAD	TAMAN KOPERASI POLIS FASA 2	30 MIN	22.5	38.2	80.0	17.1	33.1	
375	JALAN SILANG	TAMAN DAGANG	20 MIN	20.0	18.3	40.0	13.3	20.4	
F3	LOT 10	SEKSYEN 17 P.J.	1 HR	36.0	52.5	N/A	15.0	45.7	
F4 84	SUBANG JAYA KTM	SUBANG JAYA	30 MIN						(1)
F4 85	SUBANG JAYA KTM	SUNWAY LAGOON	30 MIN						(1)
FS1	LRT AMPANG	AMPANG POINT	30 MIN	13.8	17.5	48.0	9.2	17.5	
FS2	LRT AMPANG	AMPANG JAYA	30 MIN	22.5	22.1	60.0	9.2	21.8	
FS3	LRT AMPANG	TAMAN KOSAS	15 MIN	15.0	20.0	34.3	7.1	16.8	
FS4	LRT AMPANG	LEMBAH JAYA	30 MIN	18.0	24.7	48.0	10.0	21.8	
FS5	LRT AMPANG	KG. TASEK AMPANG	30 MIN	16.4	32.3	40.0	10.9	23.4	
FS6	LRT PANDAN JAYA	TAMAN MALURI	30 MIN						(1)
FS7	LRT CEMPAKA	TAMAN MUDA	15 MIN						(1)
FS9	LRT PANDAN JAYA	PANDAN PERDANA	30 MIN						(1)
FS10	LRT MALURI	TAMAN IKAN EMAS	30 MIN	16.4	21.0	30.0	7.5	17.5	
FS12	LRT MALURI	TAMAN MIDAH	30 MIN	36.0	46.7	60.0	20.0	40.0	

(1) Bus operations was not observed on the day of Bus Frequency Survey

(2) Scheduled frequency as of September 1997

(3) Bus frequency was observed from SMURT-KL Bus Frequency Survey executed in December 1997



**Table A 3.3.2 Bus Operation of City Liner (Park May)**

Route	Origin	Destination	(2) Scheduled Frequency	(3) Observed Frequency (min)					Notes
				AM Peak	Off Peak (daytime)	PM Peak	Off Peak (night)	Ave. (day)	
34	Lebuh Pudu	Tmn. Sri Sinar		180.0	N/A	N/A	N/A	960.0	
51	Pasarama Kota	Klang		36.0	23.3	48.0	13.3	25.9	
52	Pasarama Kota	Tmn. Gembira		20.0	20.0	48.0	30.0	20.4	
53	Klang	TUDM / Kg. Subang		180.0	420.0	240.0	40.0	160.0	
54	Klang	Puchong							(1)
54A	Klang	Tmn. Sri Muda							(1)
55	Pasarama Kota	Puchong		25.7	21.0	34.3	7.1	18.8	
57	Klang	CEB							(1)
58	Pasarama Kota	Pelabuhan Klang		22.5	19.1	40.0	8.0	18.8	
59	Klang	Jalan Kebun							(1)
61	Pasarama Kota	TUDM							(1)
63	Pasarama Kota	Shah Alam Selatan		22.5	23.3	34.3	12.0	22.3	
64	Klang	Shah Alam Utara							(1)
65	Pasarama Kota	Tmn. OUG		22.5	28.0	48.0	12.0	25.3	
68	Lebuh Pudu	Tmn. Sri Gombak		180.0	N/A	N/A	N/A	960.0	
69	Lebuh Pudu	Tmn. Jasa Utama		60.0	30.0	60.0	13.3	32.0	
71	Lebuh Pudu	Selayang Baru		25.7	17.5	30.0	7.5	17.5	
93	Lebuh Pudu	Tmn. Sri Segambut		36.0	35.0	60.0	17.1	34.3	
94	Lebuh Pudu	Inan Baidun		30.0	20.0	48.0	12.0	22.9	
94A	Lebuh Pudu	Kepong Indah		36.0	28.0	60.0	10.9	27.4	
96	Lebuh Pudu	Bandar Baru Selayang							(1)
143A	Pasar Seni	Kepong Baru		30.0	38.2	80.0	17.1	35.6	
143B	Pasar Seni	Manjalara		30.0	30.0	240.0	17.1	34.3	
143C	Pasar Seni	Tmn. Ehsan		20.0	19.1	40.0	9.2	19.2	
148	Pasar Seni	FRIM, Kepong		N/A	420.0	N/A	120.0	480.0	
174	Pasar Seni	Batu 12, Gombak		180.0	420.0	N/A	N/A	480.0	
176	Lebuh Ampang	Tmn. Sri Muda		12.9	23.3	80.0	7.5	18.8	
176A	Lebuh Ampang	Tmn. Melor		90.0	105.0	120.0	60.0	96.0	
178	Lebuh Ampang	Kg. Tasek Permai		45.0	60.0	120.0	20.0	50.5	
182	Lebuh Ampang	Lembah Jaya		36.0	38.2	60.0	17.1	35.6	
183	Lebuh Ampang	Tmn. Bukit Indah		60.0	52.5	120.0	30.0	56.5	
185	Lebuh Ampang	Tmn. Sri Watan		20.0	38.2	120.0	17.1	33.1	
201	Klang	ITM Shah Alam							(1)
203	Klang	Subang Jaya							(1)
205	Petaiing Jaya	Petaiing Jaya - Klang							(1)
206	Pasarama Kota	Tmn. Seputeh							(1)
207	Petaiing Jaya	Petaiing Jaya - Puchong							(1)
208	Pasarama Kota	Tmn. Desa							(1)
209	Pasarama Kota	Bukit OUG		180.0	105.0	240.0	120.0	137.1	
211	Klang	Tmn. Berkeley							(1)
217	Klang	Lapangan Terbang SAAS, Subang							(1)
219	Petaiing Jaya	Petaiing Jaya - Shah Alam Selatan							(1)
220	Petaiing Jaya	Petaiing Jaya - Shah Alam Utara							(1)
222	Pasarama Kota	Shah Alam Utara		22.5	24.7	30.0	10.9	21.8	
224	Pel. Klang	Shah Alam Utara							(1)
226	Pasarama Kota	Sri Petaiing		60.0	70.0	240.0	30.0	68.6	
229	Klang	Shah Alam							(1)
232	Petaiing Jaya	Petaiing Jaya - Bandar Sunway							(1)
383	Pasar Seni	Sri Kundang							(1)
572	Sinarkota	Kajang		30.0	23.3	240.0	15.0	29.1	
583	Sinarkota	Tmn. Len Seng / Desa Bakti		60.0	46.7	120.0	40.0	56.5	
818	Sinarkota	Seremban (melalui jalan lama)		60.0	38.2	80.0	40.0	48.0	
843	Sinarkota	Tmn. Megah		22.5	38.2	120.0	13.3	32.0	
844	Sinarkota	Tmn. Tynton / Connaught		45.0	105.0	240.0	30.0	73.8	
848	Sinarkota	Tmn. Melor		25.7	26.3	80.0	15.0	28.2	
849	Sinarkota	Tmn. Mudun		36.0	60.0	80.0	40.0	53.3	
858	Sinarkota	Pangsoon							(1)
888	Sinarkota	Tmn. Cheras Perdana		90.0	42.0	240.0	24.0	53.3	
K15	Pasarama Kota	Sri Sentosa							(1)

(1) Bus operations was not observed on the day of Bus Frequency Survey

(2) Scheduled frequency as of September 1997

(3) Bus frequency was observed from SMURT-KL Bus Frequency Survey executed in December 1997

**Table A 3.3.3 Bus Operation of Metro**

Route	Origin	Destination	(2) Scheduled Frequency	(3) Observed Frequency (min)					Notes
				AM Peak	Off Peak (daytime)	PM Peak	Off Peak (night)	Ave (day)	
M1	Shah Alam Sel. Seksyen 25	Kuala Lumpur (Bkt. Bintang)	60						(1)
M2	Shah Alam_Sel (Sek 17)	Kuala Lumpur (Terminal Jln. Tun Razak)	60						(1)
M4	Tmn. Seafields Jaya	Kuala Lumpur (Bkt. Bintang)	20	22.5	26.3	60.0	8.6	22.9	
M5	Shah Alam Utara (Sek 8/6/3/1/2)	Kuala Lumpur (Terminal T. Razak)	60	180.0	N/A	N/A	N/A	950.0	
M6	Bandar Klang	Jln. Cheng Lock	90						(1)
M9	Pelabuhan Klang	Jln. Cheng Lock	90	60.0	42.0	60.0	40.0	48.0	
M10	Tmn. Seafields Jaya	Kuala Lumpur (Bkt. Bintang)	20	25.7	28.0	40.0	15.0	26.7	
M11	Tmn. Seafields Jaya	Jln. Cheng Lock	15-20	30.0	35.0	80.0	17.1	34.3	
M13	Tmn. Subang Permai	Jln. Cheng Lock	40						(1)
M17	UPM Serdang	Jln. Hang Kasturi	45	45.0	38.2	80.0	24.0	41.7	
M18	UPM Serdang	Jln. Hang Kasturi	45	180.0	84.0	240.0	60.0	106.7	
M19	Puchong Perdana	Jln. Cheng Lock	30-35	30.0	23.3	40.0	8.6	21.8	
M22	Balakong	Jln. Cheng Lock	90	90.0	52.5	240.0	30.0	64.0	
M28	Ampang	Jln. T.A. Rahman	25-30	60.0	60.0	80.0	30.0	56.5	
M30	Pandan Indah	Jln. Tun Perak	10-15	9.0	8.9	13.3	7.1	9.4	
M32	Kg. Pandan	Jln. T.A. Rahman	30	7.2	16.2	15.0	7.1	11.4	
M33	Bandar Klang	Jln. Cheng Lock	45	20.0	28.0	60.0	15.0	26.7	
M36	Meru	Jln. Cheng Lock	210	180.0	210.0	N/A	N/A	320.0	
M37	Kapar	Jln. Cheng Lock	105	90.0	84.0	120.0	60.0	87.3	
M41	Tmn. Sri Gombak	Lebuhr Ampang	20	20.0	28.0	48.0	9.2	22.9	

(1) Bus operations was not observed on the day of Bus Frequency Survey

(2) Scheduled frequency as of September 1997

(3) Bus frequency was observed from SMURT-KL Bus Frequency Survey executed in December 1997

### 1) Car Occupancy Rate

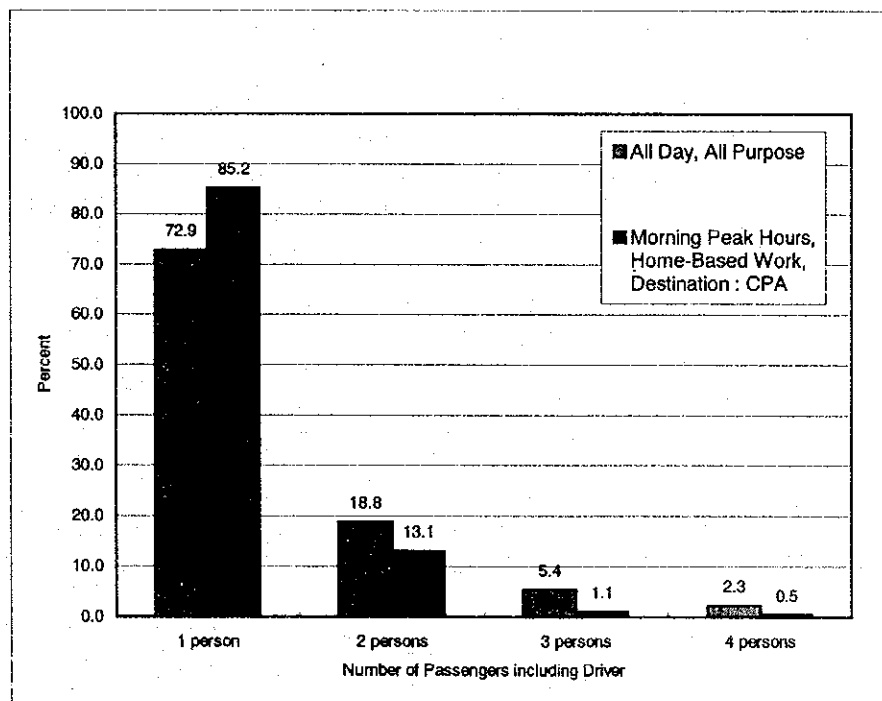
Average occupancy of motorcycles is 1.14 person per vehicle, while that of cars and small vans are 1.47 and 2.38 persons per vehicle. However when trips are limited merely to Home-Based Work trips to CPA in the morning peak hours, the car occupancy rate is remarkably low at 1.17 persons per vehicle.

**Table A 3.5.1 Car Occupancy Rate**

(unit : percent)

	Number of Passengers including Driver			
	1 person	2 persons	3 persons	4 persons
All Day, All Purpose	72.9	18.8	5.4	2.3
Morning Peak Hours, Home-Based Work, Destination : CPA	85.2	13.1	1.1	0.5

Source : SMURT\_KL Home Interview Survey 1997



**Figure A 3.5.1 Car Occupancy Distribution**

**Table A 3.5.2 Average Occupancy**

(unit : persons per vehicle)

Trip Purpose	All Purpose	HBW	All Purpose	All Purpose	HBW	HBW
Destination	Klang Valley	Klang Valley	Klang Valley	CPA	Klang Valley	CPA
Departure Time	All Day	All Day	6:00 - 8:59	6:00 - 8:59	6:00 - 8:59	6:00 - 8:59
Mode of Transport						
Motorcycle	1.14	1.08	1.15	1.14	1.08	1.07
Car	1.47	1.24	1.37	1.28	1.26	1.17
Small Van	2.38	1.82	3.40	1.72	1.86	1.59

Source : SMURT\_KL Home Interview Survey 1997

**Table A 3.5.3 Average Occupancy By trip Purpose**

Mode of Transport	Trip Purpose					
	HBW	HBS	HBB	HBO	NHBB	NHBO
Motorcycle	1.07	1.17	1.09	1.45	1.09	1.21
Car	1.26	1.45	1.24	1.97	1.40	2.00
Small Van	1.81	2.58	1.66	4.49	1.72	2.61

Source : SMURT\_KL Home Interview Survey 1997

**2) Vehicle Ownership**

In Klang Valley region 64 percent of households own at least one cars and 16 percent of households posses two cars and more as shown in Table A3.5.4. The average number of cars owned by a household is 0.84. This high car ownership explains a large share of trips made by car.

**Table A 3.5.4 Number of Cars Owned by Household**

(unit : percent)

District	Number of Households	Number of Cars Owned by Household					
		0	1	2	3	4	5
Kuala Lumpur	351,083	37.0	47.1	13.1	2.2	0.4	0.1
Gombak	115,574	39.6	47.1	10.9	1.9	0.4	0.1
Hulu Langat	147,069	36.0	54.7	8.4	0.6	0.2	0.1
Petaling	200,658	32.3	44.5	19.3	3.2	0.6	0.1
Klang	127,767	35.2	48.5	13.7	2.0	0.4	0.1
Total	942,151	35.9	47.9	13.5	2.1	0.4	0.1

3) Trip Length Distribution

Table A 3.5.5 Average Trip Length Distribution by Trip Purpose and Income Level

(unit : km)

Income Level	Trip Purpose						Total
	HBW	HBS	HBB	HBO	NHBB	NHBO	
Low	8.2	4.1	6.9	4.1	9.2	4.3	5.7
L. Middle	8.6	4.0	8.1	4.6	9.2	4.4	6.3
U. Middle	8.8	4.3	8.9	4.7	9.6	4.5	6.9
High	8.9	4.5	10.3	4.6	9.2	4.6	7.2
All	8.6	4.1	8.4	4.5	9.3	4.4	6.5

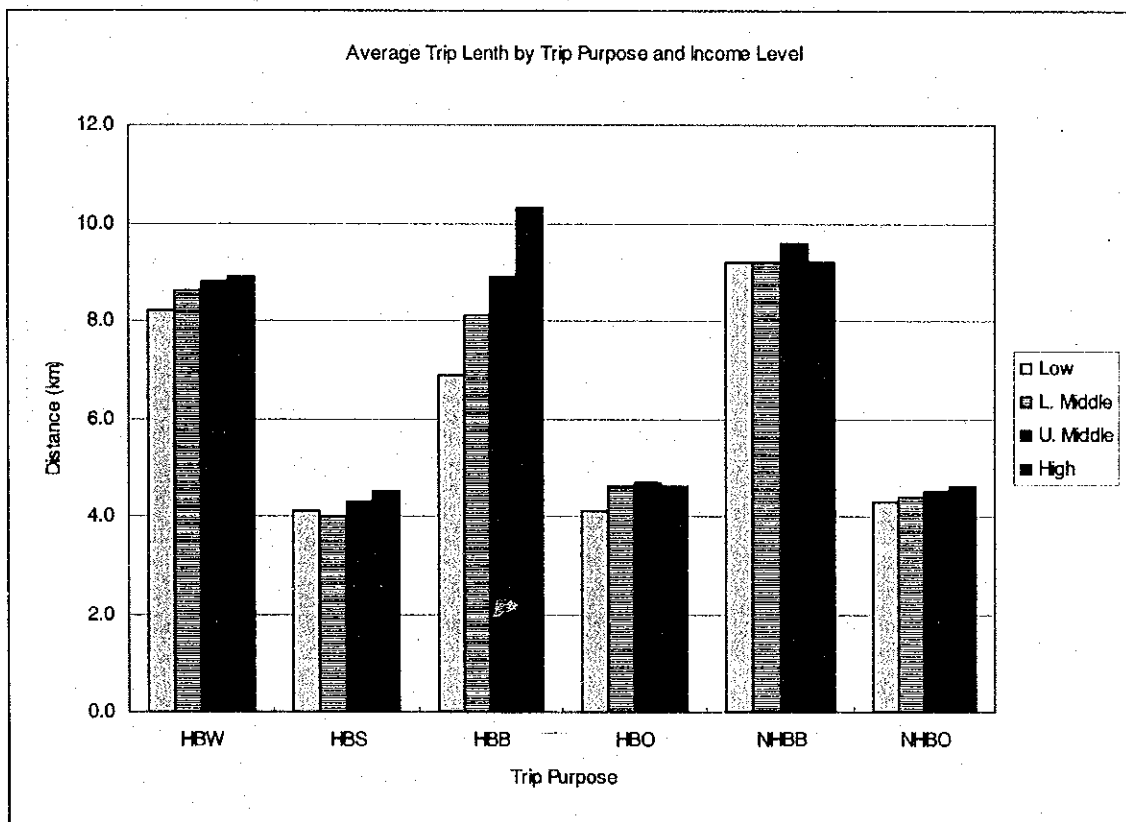


Figure A 3.5.2 Average Trip Length by Trip Purpose and Income Level

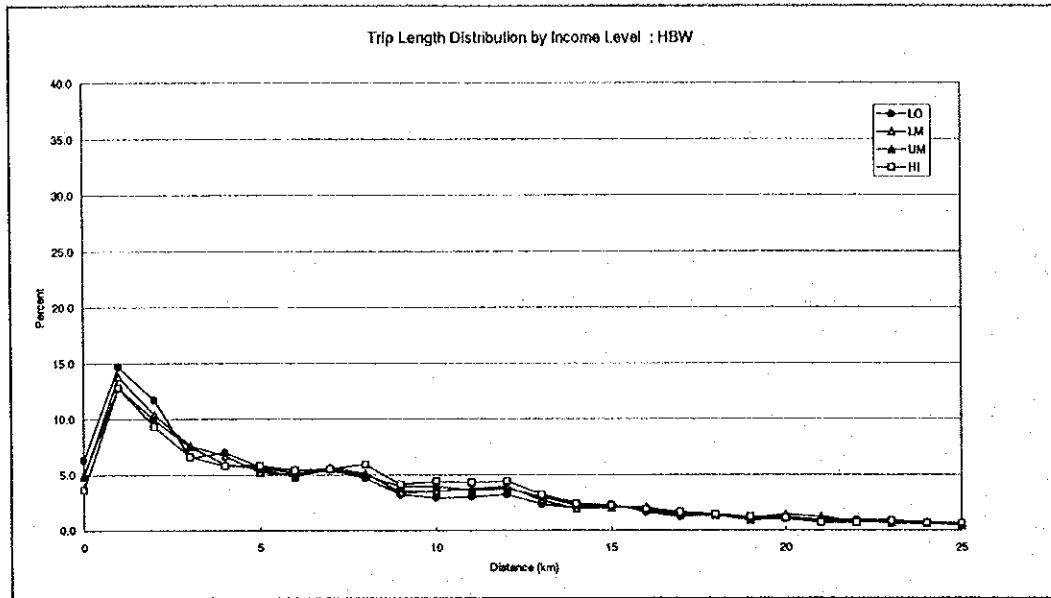


Figure A 3.5.3 Trip length Distribution of Home-Based Work Trips by Income Level

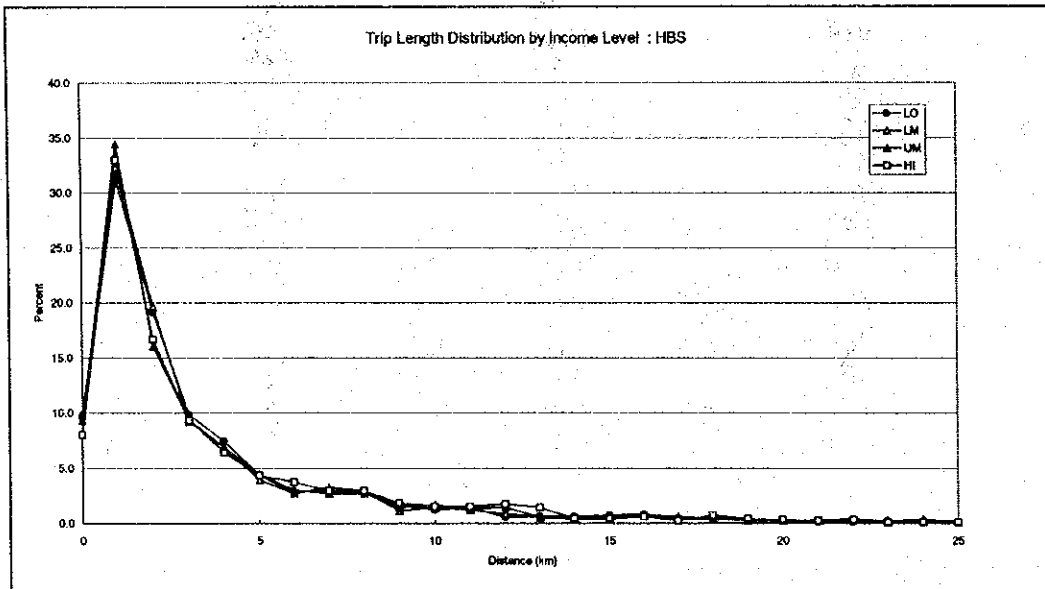
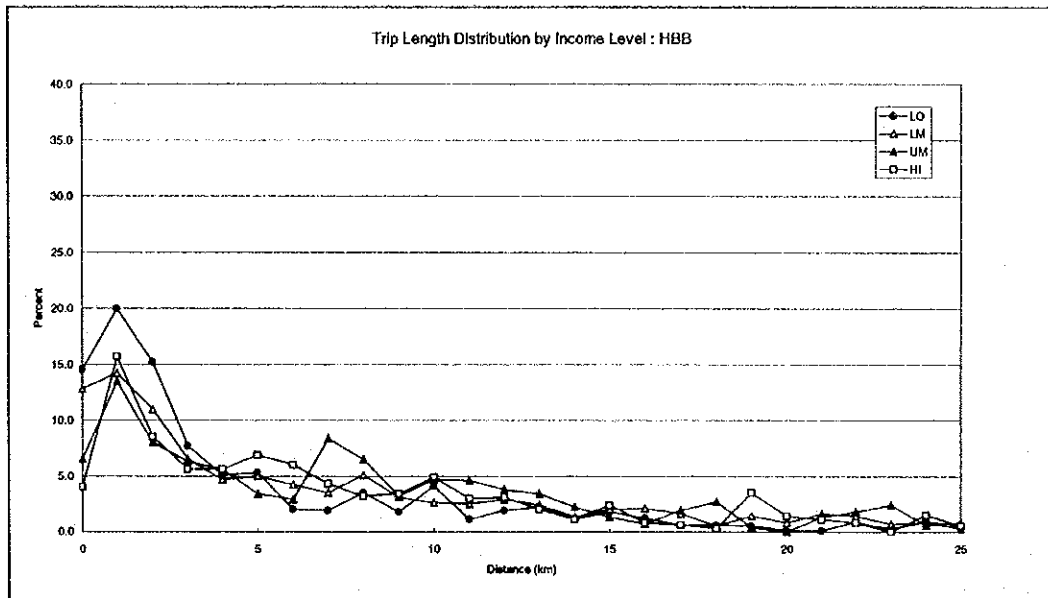
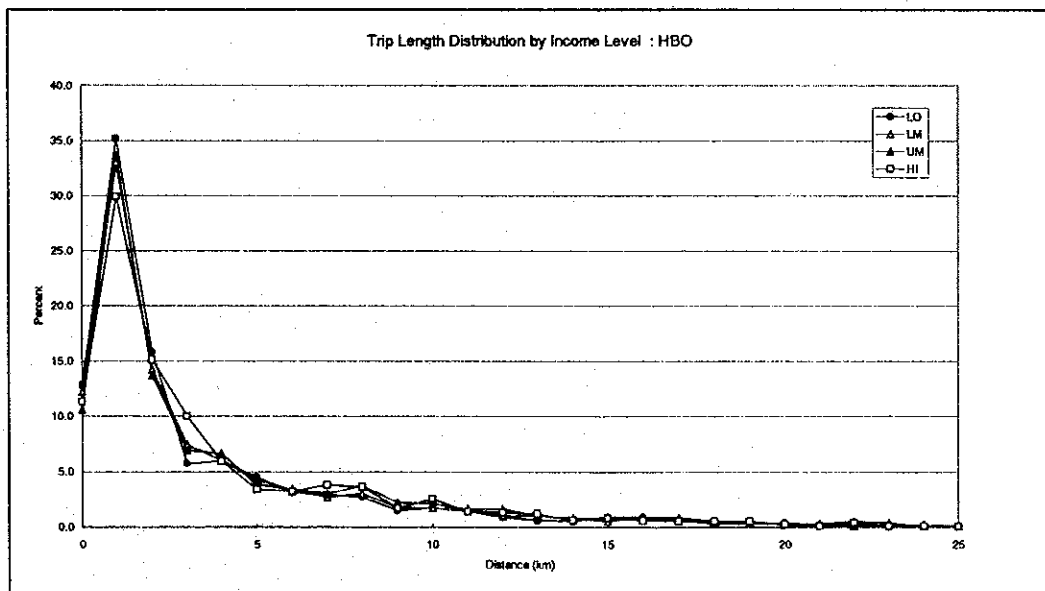


Figure A 3.5.4 Trip length Distribution of Home-Based School Trips by Income Level



**Figure A 3.5.5 Trip Length Distribution of Home-Based Business Trips by Income Level**



**Figure A 3.5.6 Trip Length Distribution of Home-Based Others Trips by Income Level**

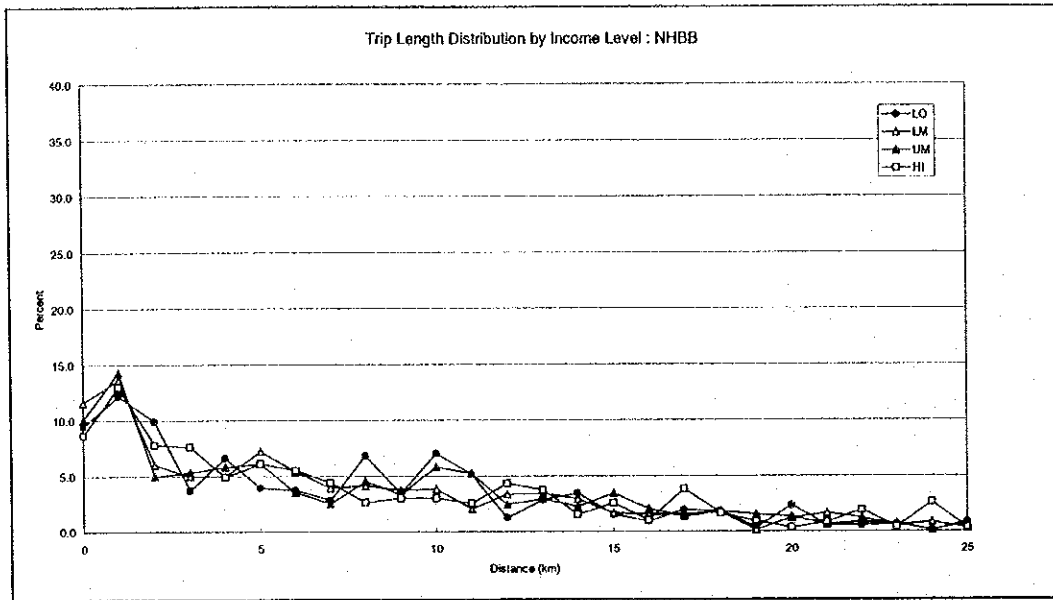


Figure A 3.5.7 Trip Length Distribution of Non-Home-Based Business Trips by Income Level

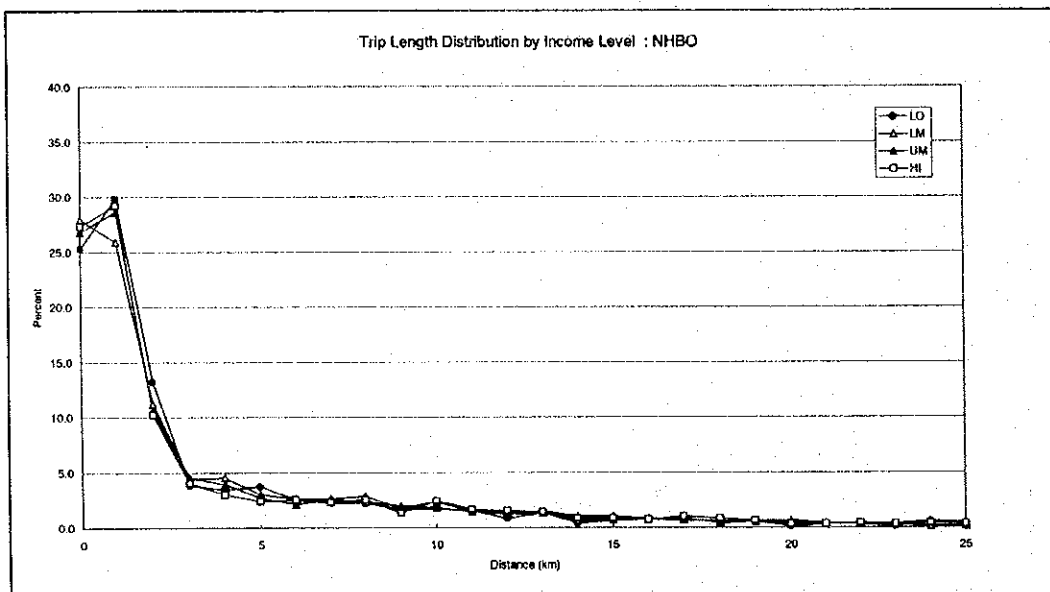
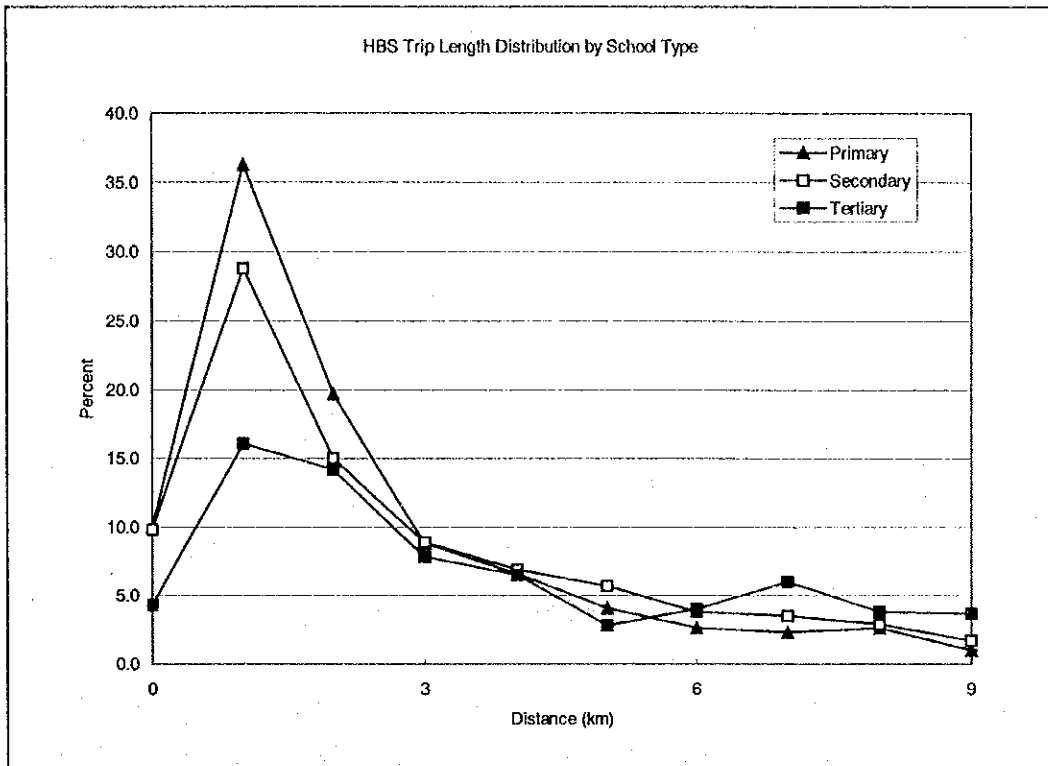


Figure A 3.5.8 Trip Length Distribution of Non-Home Based Others Trips by Income Level





**Figure A 3.5.9 Home-based School Trip Length Distribution by School Type**

**Table A 3.5.6 Average Trip Length by School Type**

School Type	Average Trip Length
Primary School	3.4 km
Secondary School	4.8 km
College and university	7.9 km

4) Travel Time by Mode of Transport

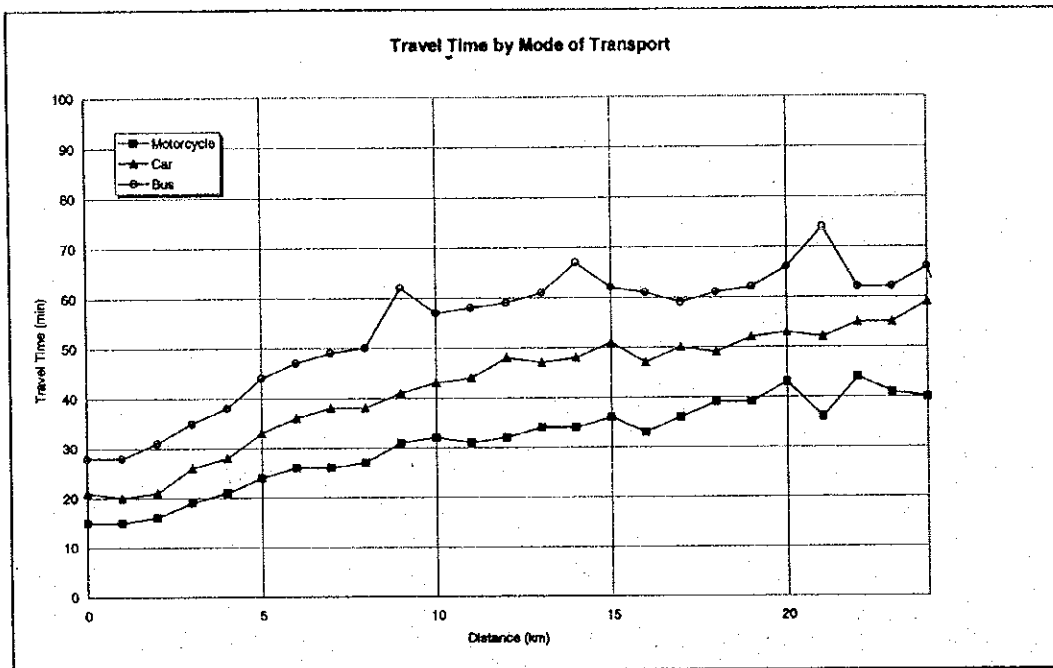


Figure A 3.5.10 Travel Time by Mode of Transport

Table A 3.5.7 Relationship between Travel Time and Distance

				R square
Travel Time by Motorcycle (min.) =	1.13 * Distance(km)	+	17.2	( 0.959 )
Travel Time by Car (min.) =	1.51 * Distance(km)	+	24.1	( 0.958 )
Travel Time by Bus (min.) =	1.57 * Distance(km)	+	35.1	( 0.886 )
Travel Time by Rail (min.) =	1.49 * Distance(km)	+	36.8	( 0.698 )

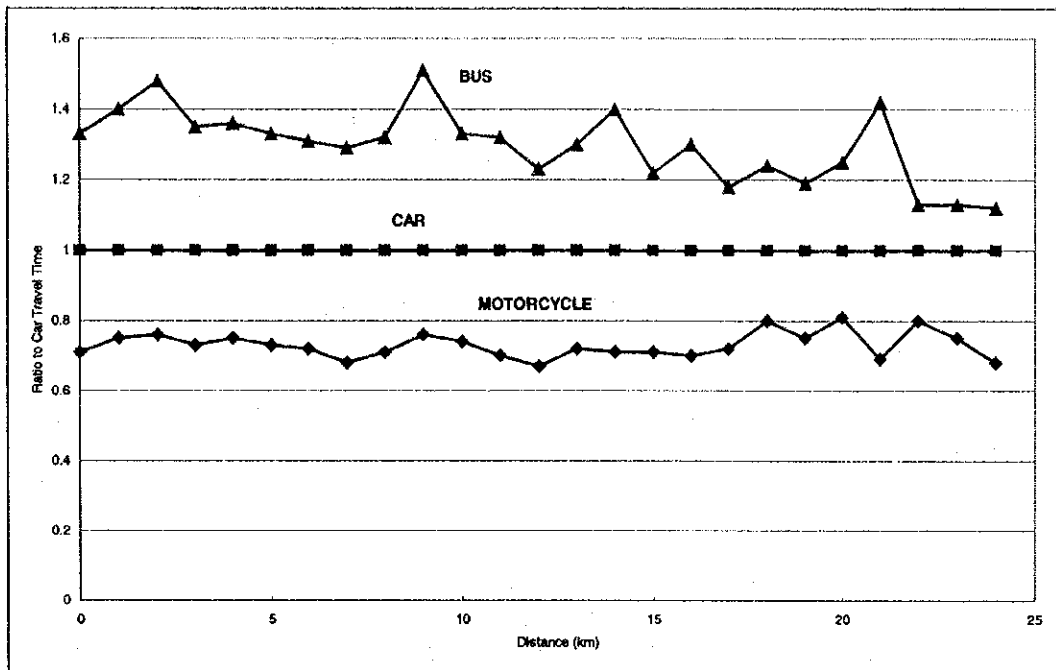


Figure A 3.5.11 Ratio to Car Travel Time of Motorcycle and Bus by Distance

Table A 3.5.8 Travel Time by Distance and Mode of Transport

Distance (Km)	Travel Time			Ratio to Car travel Time		
	Motorcycle	Car	Bus	Motorcycle	Car	Bus
0	15	21	28	0.71	1.00	1.33
1	15	20	28	0.75	1.00	1.40
2	16	21	31	0.76	1.00	1.48
3	19	26	35	0.73	1.00	1.35
4	21	28	38	0.75	1.00	1.36
5	24	33	44	0.73	1.00	1.33
6	26	36	47	0.72	1.00	1.31
7	26	38	49	0.68	1.00	1.29
8	27	38	50	0.71	1.00	1.32
9	31	41	62	0.76	1.00	1.51
10	32	43	57	0.74	1.00	1.33
11	31	44	58	0.70	1.00	1.32
12	32	48	59	0.67	1.00	1.23
13	34	47	61	0.72	1.00	1.30
14	34	48	67	0.71	1.00	1.40
15	36	51	62	0.71	1.00	1.22
16	33	47	61	0.70	1.00	1.30
17	36	50	59	0.72	1.00	1.18
18	39	49	61	0.80	1.00	1.24
19	39	52	62	0.75	1.00	1.19
20	43	53	66	0.81	1.00	1.25
21	36	52	74	0.69	1.00	1.42
22	44	55	62	0.80	1.00	1.13
23	41	55	62	0.75	1.00	1.13
24	40	59	66	0.68	1.00	1.12

5) Modal Composition by Distance

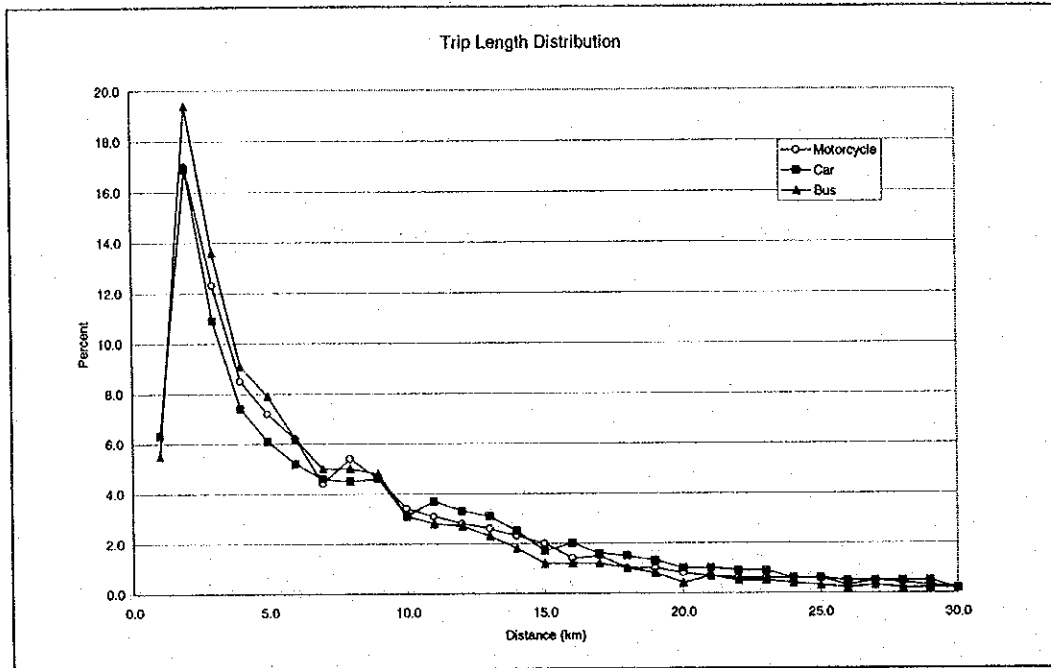


Figure A 3.5.12 Trip Length Distribution by Mode of Transport

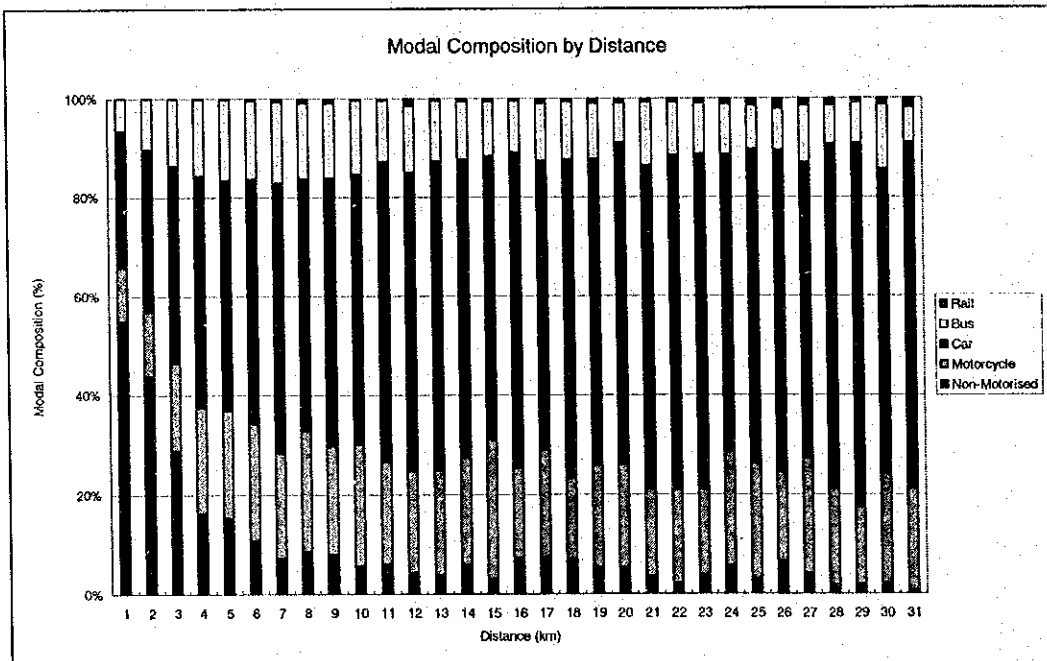


Figure 3.5.13 Modal Composition by Distance (a)

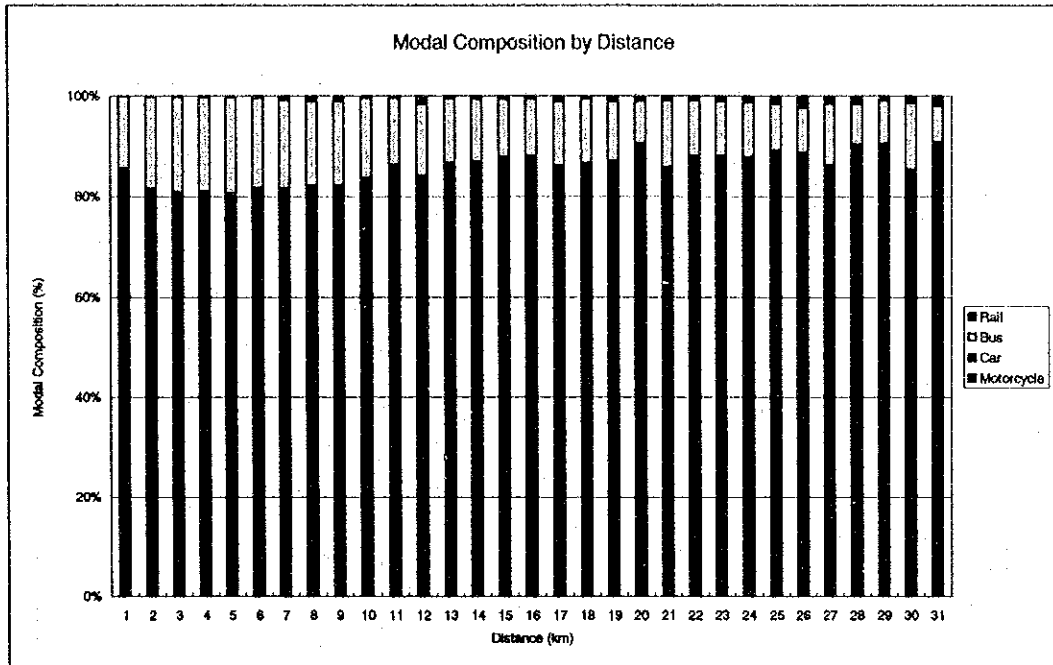


Figure A 3.5.14 Modal Composition by Distance (b)

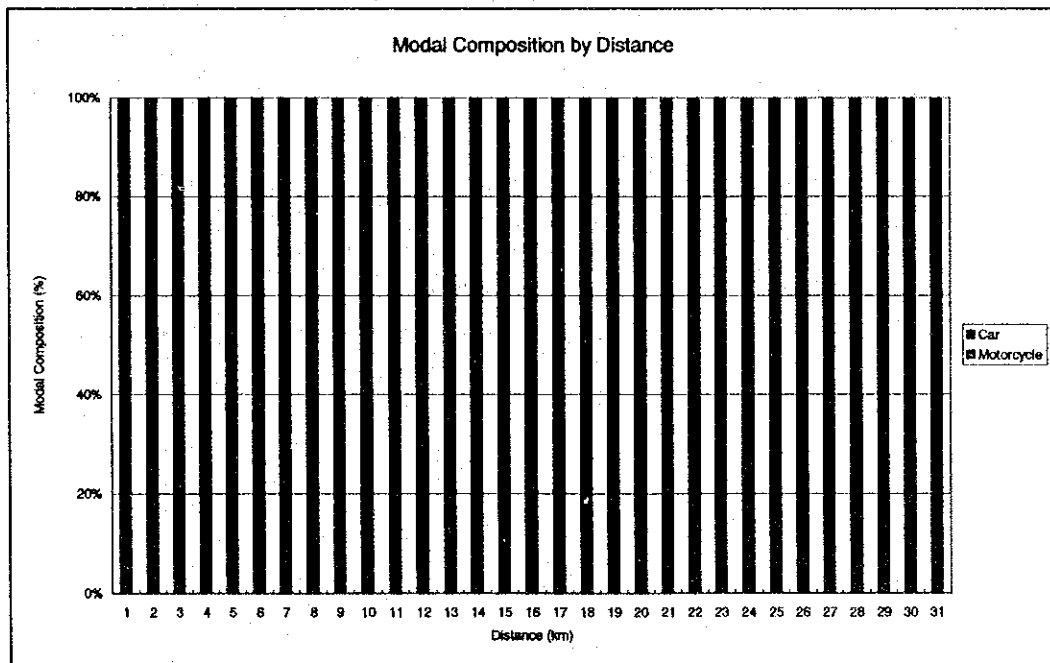


Figure A 3.5.15 Modal Composition by Distance (c)

6) Access Time to Public Transport

Table A 3.5.9 Average Access Time

Access Mode and Line Haul Mode	Average Access Time
Access to Bus Stop by Walking	6.2 min.
Access to KTM/LRT Station by Walking	9.2 min.
Access to KTM/LRT Station by Bus	17.2 min.

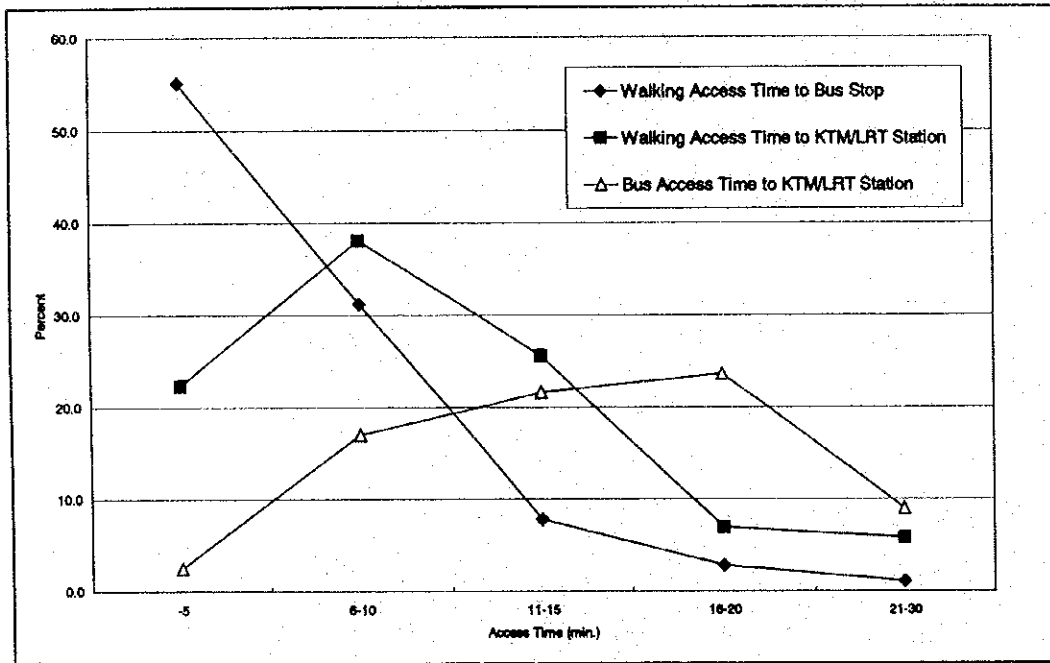


Figure A 3.5.16 Access Time Distribution

Legend  
 (Person Trip per Day)

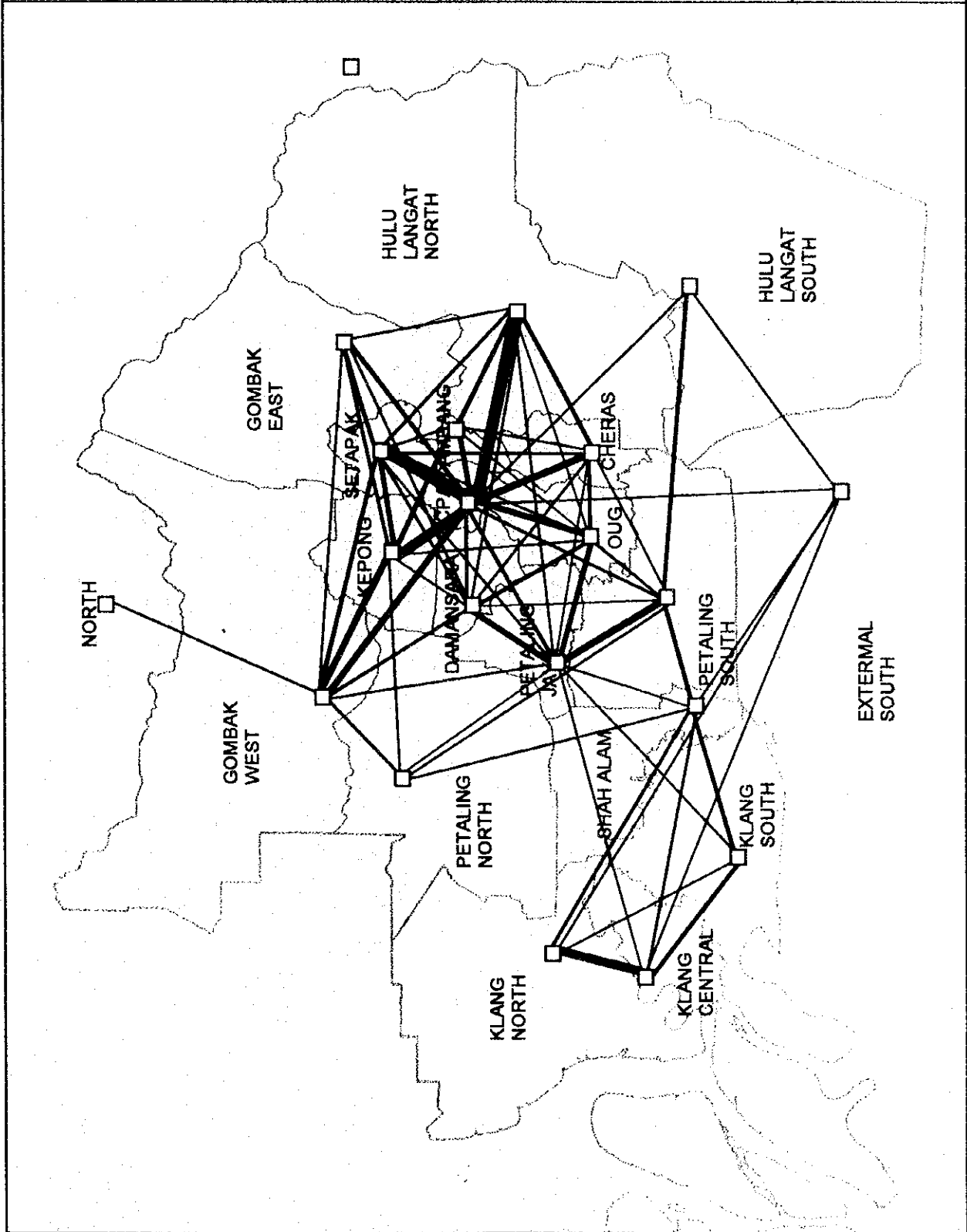


Note: Trips less than 1000 are omitted.

Figure A3.5.17

Person Trip Demand  
 by Mode of Transport

Motorcycle



Legend  
 (Person Trip per Day)

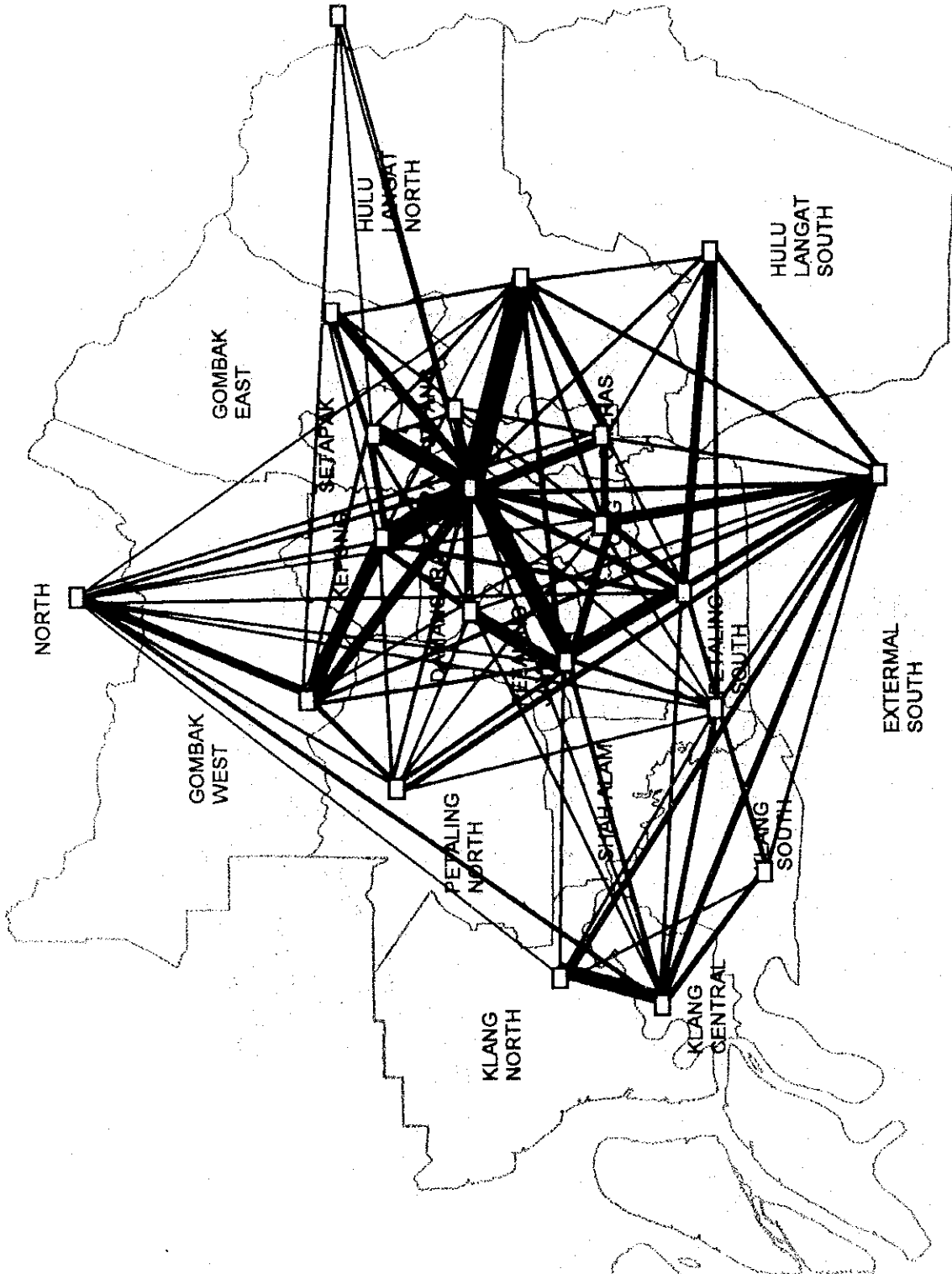


Note: Trips less than 2000  
 are omitted.

Figure A3.5.18

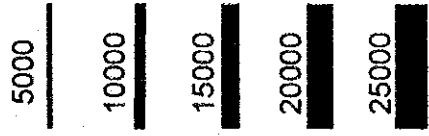
Person Trip Demand  
 by Mode of Transport

Car





Legend  
(Person Trip per Day)

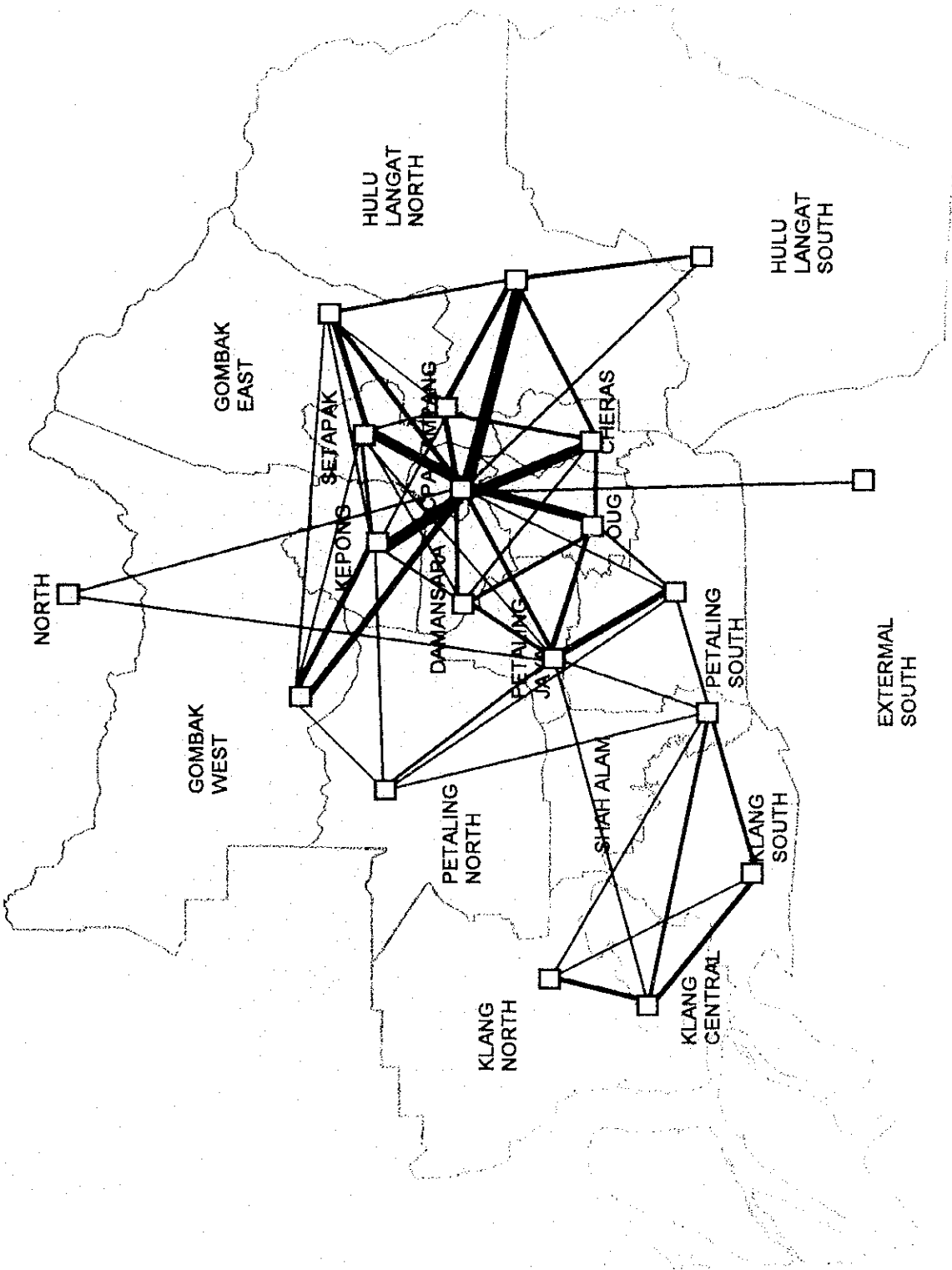


Note: Trips less than 1000 are omitted.

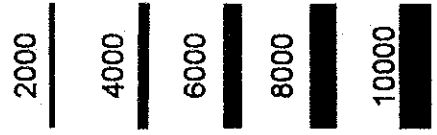
Figure A3.5.19

Person Trip Demand  
by Mode of Transport

Bus



Legend  
 (Person Trip per Day)

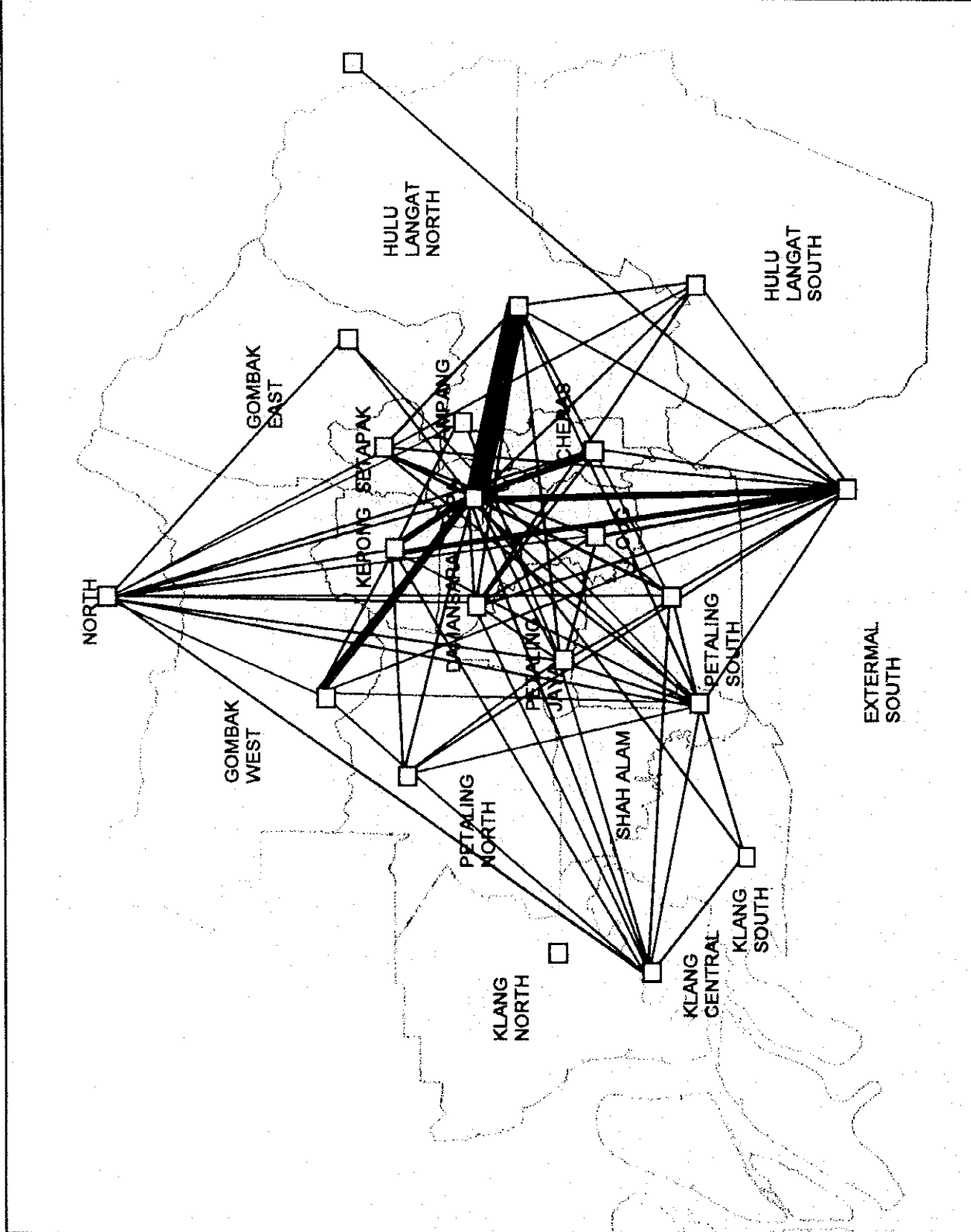


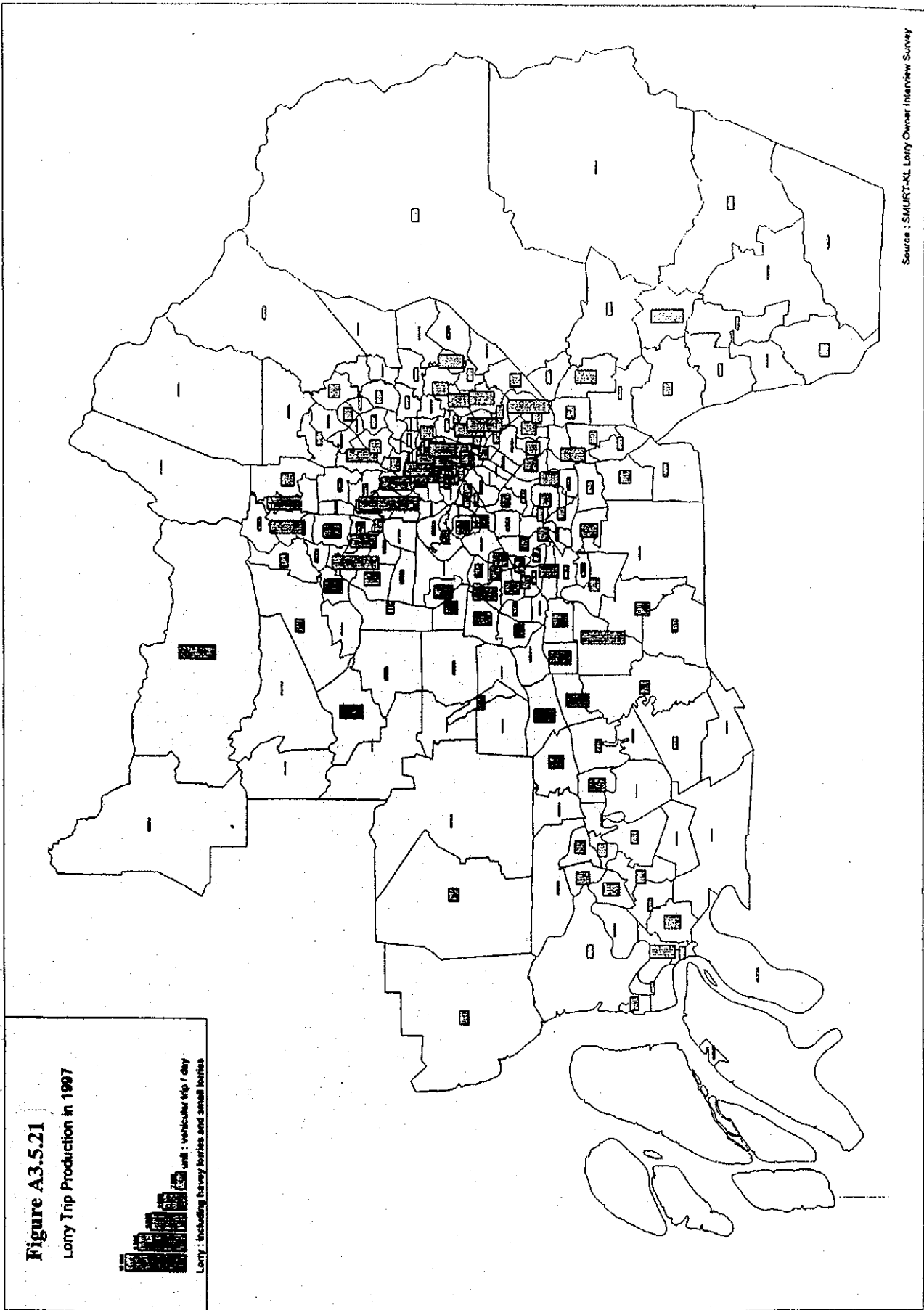
Note: Trips less than 100  
 are omitted.

Figure A3.5.20

Person Trip Demand  
 by Mode of Transport

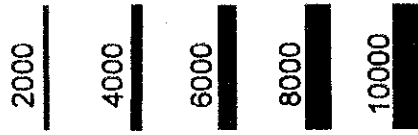
Rail





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**TRANSPORTATION STRATEGIES**  
**FOR**  
**ENVIRONMENTAL IMPROVEMENT**  
**IN KUALA LUMPUR**

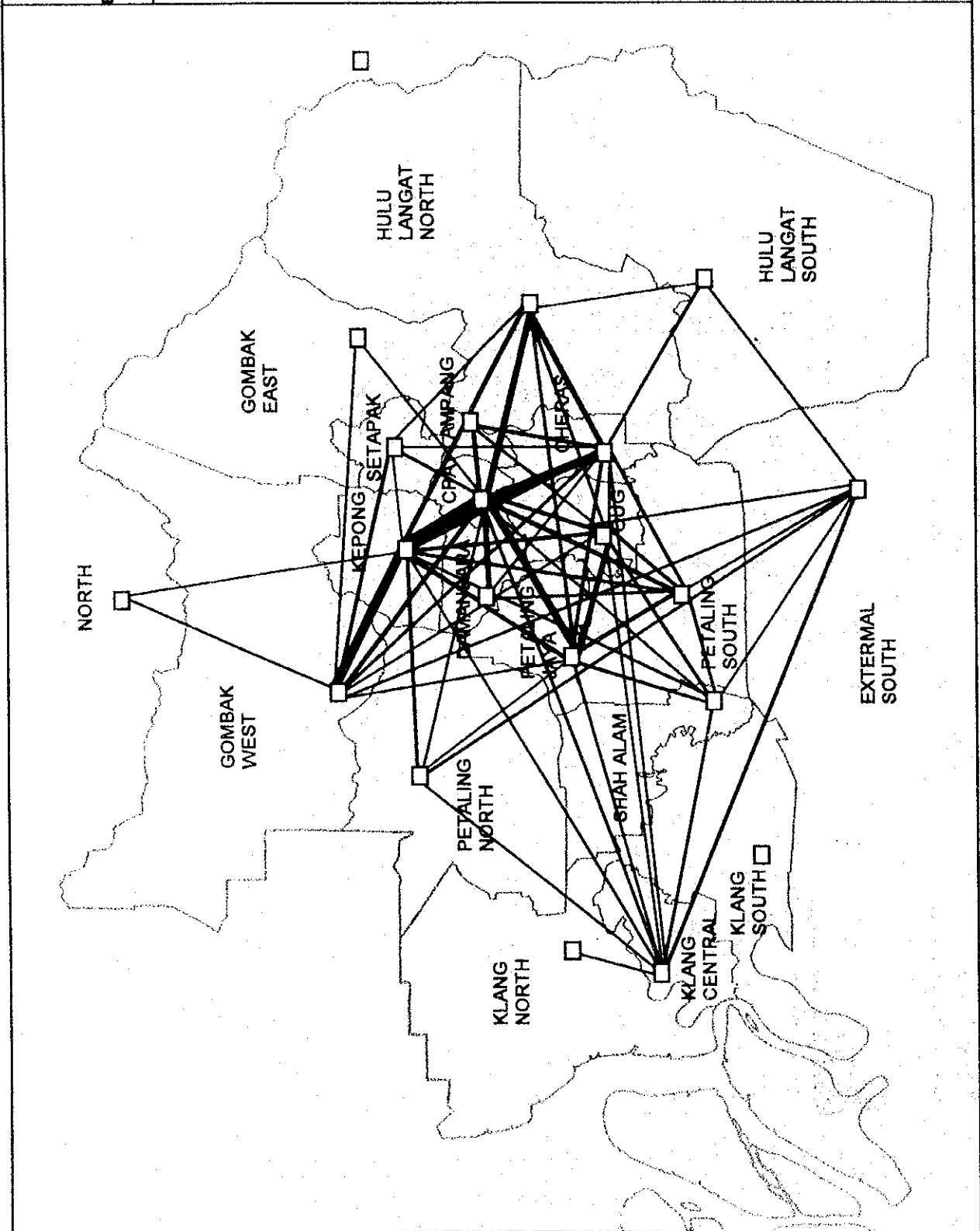
**Legend**  
 (Vehicle Trip per Day)



Note: Trips less than 500 are omitted.

**Figure A3.5.22**

**Vehicle Trip Demand:**  
 Small Lorry



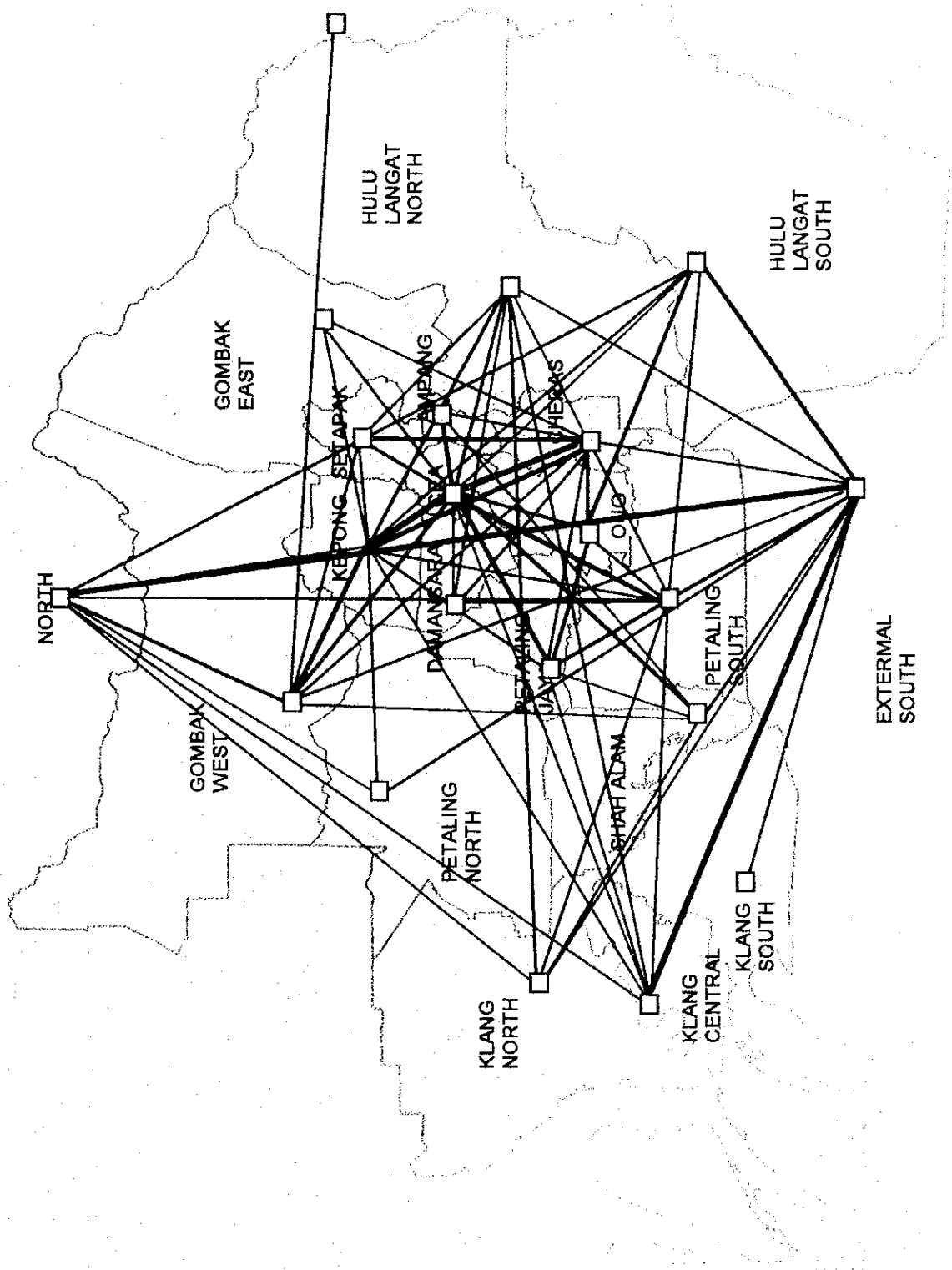
Legend  
 (Person Trip per Day)



Note: Trips less than 300 are omitted.

Figure A3.5.23

Vehicle Trip Demand  
 Heavy Lorry





## Appendix 4

Summary of Policy Test on SAMPLE SET02SMLW : Workers to whom both private and public modes of transport are available.  
 MODEL: MODEL A (Hit Share Adjusted)

CASE	TEST POLICY	MODE	PREDICTION BY HIT	PREDICTED MODAL SHARE	% INCREASE FROM NO POLICY	V01 Travel Time avg. min	V02 Riding Time avg. min	V03 Access time avg. min	V04 Egress time avg. min	V05 Waiting time avg. min	V07 Travel Cost avg. RM	V13 Public mode costs avg. RM	V14 Private mode costs avg. RM	INCOME group
SAMPLE	Existing	MODE1	435	73.1%	-	54.6	50.4	0.0	4.2	0.0	7.2	0.0	7.2	3.1
		MODE2	160	26.8%	-	86.2	56.0	6.4	6.6	17.2	1.4	1.4	0.0	2.8
SIMULATED	No Policy	MODE1	435	73.1%	-	54.6	50.4	0.0	4.2	0.0	7.2	0.0	7.2	3.1
SAMPLES		MODE2	160	26.8%	-	86.2	56.0	6.4	6.6	17.2	1.4	1.4	0.0	2.8
POLICY	+20% riding time of private mode	MODE1	413	68.2%	-5.3%	64.6	60.4	0.0	4.2	0.0	7.2	0.0	7.2	3.1
		MODE2	183	30.8%	14.4%	86.2	56.0	6.4	6.6	17.2	1.7	1.7	0.0	2.8
TEST1-1		MODE1	387	65.0%	-11.0%	74.7	70.5	0.0	4.2	0.0	7.2	0.0	7.2	3.1
POLICY	+40% riding time of private mode	MODE2	208	35.0%	30.0%	86.2	56.0	6.4	6.6	17.2	1.7	1.7	0.0	2.8
TEST1-2		MODE1	363	61.0%	-16.6%	84.8	80.6	0.0	4.2	0.0	7.2	0.0	7.2	3.1
POLICY	+60% riding time of private mode	MODE2	232	38.0%	45.0%	86.2	56.0	6.4	6.6	17.2	1.7	1.7	0.0	2.8
TEST1-3		MODE1	352	59.2%	-15.1%	84.9	80.7	0.0	4.2	0.0	7.2	0.0	7.2	3.1
POLICY	+80% riding time of private mode	MODE2	243	40.8%	51.9%	86.2	56.0	6.4	6.6	17.2	1.7	1.7	0.0	2.8
TEST1-4		MODE1	409	66.7%	-6.0%	54.6	50.4	0.0	4.2	0.0	7.2	0.0	7.2	3.1
POLICY	-20% riding time of public mode	MODE2	186	31.3%	16.3%	75.0	44.8	6.4	6.6	17.2	1.4	1.4	0.0	2.8
TSET2-1		MODE1	384	64.5%	-11.7%	54.6	50.4	0.0	4.2	0.0	7.2	0.0	7.2	3.1
POLICY	-40% riding time of public mode	MODE2	211	35.5%	31.8%	83.8	33.6	6.4	6.6	17.2	1.4	1.4	0.0	2.8
TSET2-2		MODE1	364	61.2%	-16.3%	54.6	50.4	0.0	4.2	0.0	7.2	0.0	7.2	3.1
POLICY	-60% riding time of public mode	MODE2	231	36.8%	44.4%	86.2	56.0	6.4	6.6	17.2	1.4	1.4	0.0	2.8
TSET2-3		MODE1	349	59.7%	-18.8%	54.6	50.4	0.0	4.2	0.0	7.2	0.0	7.2	3.1
POLICY	-80% riding time of public mode	MODE2	246	41.3%	53.8%	86.2	56.0	6.4	6.6	17.2	1.4	1.4	0.0	2.8
TSET2-4		MODE1	403	67.7%	-7.4%	54.6	50.4	0.0	4.2	0.0	7.7	0.0	7.7	3.1
POLICY	+25RM/month cost of private mode	MODE2	192	32.3%	20.0%	86.2	56.0	6.4	6.6	17.2	1.4	1.4	0.0	2.8
TSET3-1		MODE1	373	62.7%	-14.3%	54.6	50.4	0.0	4.2	0.0	8.2	0.0	8.2	3.1
POLICY	+50RM/month cost of private mode	MODE2	222	37.3%	38.6%	86.2	56.0	6.4	6.6	17.2	1.4	1.4	0.0	2.8
TSET3-2		MODE1	352	59.2%	-19.1%	54.6	50.4	0.0	4.2	0.0	8.8	0.0	8.8	3.1
POLICY	+75RM/month cost of private mode	MODE2	243	40.8%	51.9%	86.2	56.0	6.4	6.6	17.2	1.4	1.4	0.0	2.8
TSET3-3		MODE1	327	55.0%	-24.8%	54.6	50.4	0.0	4.2	0.0	9.3	0.0	9.3	3.1
POLICY	+100RM/month cost of private mode	MODE2	268	45.0%	67.5%	86.2	56.0	6.4	6.6	17.2	1.4	1.4	0.0	2.8
TSET3-4		MODE1	302	50.8%	-30.6%	54.6	50.4	0.0	4.2	0.0	9.8	0.0	9.8	3.1
POLICY	+125RM/month cost of private mode	MODE2	283	49.2%	83.1%	86.2	56.0	6.4	6.6	17.2	1.4	1.4	0.0	2.8
TSET3-5		MODE1	268	44.7%	-36.9%	54.6	50.4	0.0	4.2	0.0	10.3	0.0	10.3	3.1
POLICY	+150RM/month cost of private mode	MODE2	329	55.3%	105.6%	86.2	56.0	6.4	6.6	17.2	1.4	1.4	0.0	2.8
TSET3-6		MODE1	230	36.7%	-47.1%	54.6	50.4	0.0	4.2	0.0	10.8	0.0	10.8	3.1
POLICY	+175RM/month cost of private mode	MODE2	365	61.3%	128.1%	86.2	56.0	6.4	6.6	17.2	1.4	1.4	0.0	2.8
TSET3-7		MODE1	200	33.6%	-54.0%	54.6	50.4	0.0	4.2	0.0	11.4	0.0	11.4	3.1
POLICY	+200RM/month cost of private mode	MODE2	395	66.4%	146.9%	86.2	56.0	6.4	6.6	17.2	1.4	1.4	0.0	2.8
TSET3-8		MODE1	161	27.1%	-63.0%	54.6	50.4	0.0	4.2	0.0	12.4	0.0	12.4	3.1
POLICY	+250RM/month cost of private mode	MODE2	434	72.9%	171.3%	86.2	56.0	6.4	6.6	17.2	1.4	1.4	0.0	2.8
TSET3-9		MODE1	120	20.2%	-72.4%	54.6	50.4	0.0	4.2	0.0	13.4	0.0	13.4	3.1
POLICY	+300RM/month cost of private mode	MODE2	475	79.8%	186.9%	86.2	56.0	6.4	6.6	17.2	1.4	1.4	0.0	2.8
TSET3-10		MODE1	416	68.9%	-4.4%	54.6	50.4	0.0	4.2	0.0	7.2	0.0	7.2	3.1
POLICY	-50% waiting time of public modes	MODE2	179	30.1%	11.9%	77.8	56.0	6.4	6.6	8.6	1.4	1.4	0.0	2.8
TSET4-1	(2 <sup>nd</sup> frequency)	MODE1	409	68.7%	-6.0%	54.6	50.4	0.0	4.2	0.0	7.2	0.0	7.2	3.1
POLICY	-67% waiting time of public modes	MODE2	186	31.3%	16.3%	74.7	56.0	6.4	6.6	5.7	1.4	1.4	0.0	2.8
TSET4-2	(3 <sup>rd</sup> frequency)	MODE1	216	36.3%	-50.3%	64.6	60.4	0.0	4.2	0.0	10.3	0.0	10.3	3.1
POLICY MIX	+150RM/month cost of private mode	MODE2	379	63.7%	136.9%	66.4	44.8	6.4	6.6	8.6	1.4	1.4	0.0	2.8
TEST5-1	-20% riding time of public mode	MODE1	216	36.3%	-50.3%	64.6	60.4	0.0	4.2	0.0	10.3	0.0	10.3	3.1
TEST5-1	-67% waiting time of public modes	MODE2	379	63.7%	136.9%	66.4	44.8	6.4	6.6	8.6	1.4	1.4	0.0	2.8



Summary of Policy Test on SAMPLE SET08W : CAR or BUS (Workers to whom a car and buses are available, but a motorcycle and rails are not available).  
 MODEL: MODEL B (Ht Share Adjusted)

CASE	TEST POLICY	MODE	PREDICTION		PREDICTED MODAL SHARE	% INCREASE FROM NO POLICY	V01		V02		V03		V04		V05		V07		V13		V14		INCOME group		
			BY HIT	MODAL SHARE			Travel Time avg. min	Riding Time avg. min	Access Time avg. min	Egress time avg. min	Waiting time avg. min	Travel Cost avg. RM	Public mode costs avg. RM	Private mode costs avg. RM											
SAMPLE	Existing	MODE1	360	74.2%	---	---	61.3	57.0	0.0	4.4	0.0	8.84	0.00	8.84	0.00	8.84	0.00	8.84	0.00	8.84	0.00	8.84	3.37	3.00	
		MODE2	125	25.8%	---	---	88.6	58.8	6.2	6.3	17.3	1.39	8.84	0.00	8.84	0.00	8.84	0.00	8.84	0.00	8.84	0.00	8.84	3.37	3.00
SIMULATED SAMPLES	No Policy	MODE1	360	74.2%	---	---	61.3	57.0	0.0	4.4	0.0	8.84	0.00	8.84	0.00	8.84	0.00	8.84	0.00	8.84	0.00	8.84	3.37	3.00	
		MODE2	125	25.8%	---	---	88.6	58.8	6.2	6.3	17.3	1.39	8.84	0.00	8.84	0.00	8.84	0.00	8.84	0.00	8.84	0.00	8.84	3.37	3.00
POLICY	+20% riding time of private mode	MODE1	268	61.0%	-17.8%	-17.8%	72.7	66.4	0.0	4.4	0.0	8.84	0.00	8.84	0.00	8.84	0.00	8.84	0.00	8.84	0.00	8.84	3.37	3.00	
TEST1-1		MODE2	199	39.0%	51.2%	51.2%	88.6	58.8	6.2	6.3	17.3	1.39	8.84	0.00	8.84	0.00	8.84	0.00	8.84	0.00	8.84	0.00	8.84	3.37	3.00
POLICY	+40% riding time of private mode	MODE1	222	45.9%	-38.3%	-38.3%	84.1	79.8	0.0	4.4	0.0	8.84	0.00	8.84	0.00	8.84	0.00	8.84	0.00	8.84	0.00	8.84	3.37	3.00	
TEST1-2		MODE2	263	54.2%	110.4%	110.4%	88.6	58.8	6.2	6.3	17.3	1.39	8.84	0.00	8.84	0.00	8.84	0.00	8.84	0.00	8.84	0.00	8.84	3.37	3.00
POLICY	+60% riding time of private mode	MODE1	177	36.5%	-50.6%	-50.6%	95.5	91.2	0.0	4.4	0.0	8.84	0.00	8.84	0.00	8.84	0.00	8.84	0.00	8.84	0.00	8.84	3.37	3.00	
TEST1-3		MODE2	308	63.5%	146.4%	146.4%	88.6	58.8	6.2	6.3	17.3	1.39	8.84	0.00	8.84	0.00	8.84	0.00	8.84	0.00	8.84	0.00	8.84	3.37	3.00
POLICY	+80% riding time of private mode	MODE1	138	28.5%	-61.7%	-61.7%	106.9	102.5	0.0	4.4	0.0	8.84	0.00	8.84	0.00	8.84	0.00	8.84	0.00	8.84	0.00	8.84	3.37	3.00	
TEST1-4		MODE2	347	71.5%	177.6%	177.6%	88.6	58.8	6.2	6.3	17.3	1.39	8.84	0.00	8.84	0.00	8.84	0.00	8.84	0.00	8.84	0.00	8.84	3.37	3.00
POLICY	-20% riding time of public mode	MODE1	283	60.4%	-18.6%	-18.6%	61.3	57.0	0.0	4.4	0.0	8.84	0.00	8.84	0.00	8.84	0.00	8.84	0.00	8.84	0.00	8.84	3.37	3.00	
TEST2-1		MODE2	192	39.6%	53.6%	53.6%	76.9	47.0	6.2	6.3	17.3	1.39	8.84	0.00	8.84	0.00	8.84	0.00	8.84	0.00	8.84	0.00	8.84	3.37	3.00
POLICY	-40% riding time of public mode	MODE1	202	41.6%	-43.9%	-43.9%	61.3	57.0	0.0	4.4	0.0	8.84	0.00	8.84	0.00	8.84	0.00	8.84	0.00	8.84	0.00	8.84	3.37	3.00	
TEST2-2		MODE2	283	56.4%	126.4%	126.4%	86.1	56.3	6.2	6.3	17.3	1.39	8.84	0.00	8.84	0.00	8.84	0.00	8.84	0.00	8.84	0.00	8.84	3.37	3.00
POLICY	-60% riding time of public mode	MODE1	140	28.9%	-61.1%	-61.1%	61.3	57.0	0.0	4.4	0.0	8.84	0.00	8.84	0.00	8.84	0.00	8.84	0.00	8.84	0.00	8.84	3.37	3.00	
TEST2-3		MODE2	345	71.1%	176.0%	176.0%	59.3	29.5	6.2	6.3	17.3	1.39	8.84	0.00	8.84	0.00	8.84	0.00	8.84	0.00	8.84	0.00	8.84	3.37	3.00
POLICY	-80% riding time of public mode	MODE1	90	18.6%	-75.0%	-75.0%	61.3	57.0	0.0	4.4	0.0	8.84	0.00	8.84	0.00	8.84	0.00	8.84	0.00	8.84	0.00	8.84	3.37	3.00	
TEST2-4		MODE2	395	81.4%	216.0%	216.0%	41.6	11.8	6.2	6.3	17.3	1.39	8.84	0.00	8.84	0.00	8.84	0.00	8.84	0.00	8.84	0.00	8.84	3.37	3.00
POLICY	+25RM/month cost of private mode	MODE1	348	71.8%	-3.3%	-3.3%	61.3	57.0	0.0	4.4	0.0	9.36	0.00	9.36	0.00	9.36	0.00	9.36	0.00	9.36	0.00	9.36	3.37	3.00	
TEST3-1		MODE2	137	28.2%	9.6%	9.6%	88.6	58.8	6.2	6.3	17.3	1.39	8.84	0.00	8.84	0.00	8.84	0.00	8.84	0.00	8.84	0.00	8.84	3.37	3.00
POLICY	+50RM/month cost of private mode	MODE1	331	66.2%	-8.1%	-8.1%	61.3	57.0	0.0	4.4	0.0	9.88	0.00	9.88	0.00	9.88	0.00	9.88	0.00	9.88	0.00	9.88	3.37	3.00	
TEST3-2		MODE2	154	31.8%	23.2%	23.2%	88.6	58.8	6.2	6.3	17.3	1.39	8.84	0.00	8.84	0.00	8.84	0.00	8.84	0.00	8.84	0.00	8.84	3.37	3.00
POLICY	+75RM/month cost of private mode	MODE1	318	65.6%	-11.7%	-11.7%	61.3	57.0	0.0	4.4	0.0	10.40	0.00	10.40	0.00	10.40	0.00	10.40	0.00	10.40	0.00	10.40	3.37	3.00	
TEST3-3		MODE2	167	34.4%	33.6%	33.6%	88.6	58.8	6.2	6.3	17.3	1.39	8.84	0.00	8.84	0.00	8.84	0.00	8.84	0.00	8.84	0.00	8.84	3.37	3.00
POLICY	+100RM/month cost of private mode	MODE1	304	62.7%	-15.6%	-15.6%	61.3	57.0	0.0	4.4	0.0	10.92	0.00	10.92	0.00	10.92	0.00	10.92	0.00	10.92	0.00	10.92	3.37	3.00	
TEST3-4		MODE2	181	37.3%	44.8%	44.8%	88.6	58.8	6.2	6.3	17.3	1.39	8.84	0.00	8.84	0.00	8.84	0.00	8.84	0.00	8.84	0.00	8.84	3.37	3.00
POLICY	+125RM/month cost of private mode	MODE1	293	60.4%	-18.6%	-18.6%	61.3	57.0	0.0	4.4	0.0	11.44	0.00	11.44	0.00	11.44	0.00	11.44	0.00	11.44	0.00	11.44	3.37	3.00	
TEST3-5		MODE2	192	39.6%	53.6%	53.6%	88.6	58.8	6.2	6.3	17.3	1.39	8.84	0.00	8.84	0.00	8.84	0.00	8.84	0.00	8.84	0.00	8.84	3.37	3.00
POLICY	+150RM/month cost of private mode	MODE1	271	55.9%	-24.7%	-24.7%	61.3	57.0	0.0	4.4	0.0	11.96	0.00	11.96	0.00	11.96	0.00	11.96	0.00	11.96	0.00	11.96	3.37	3.00	
TEST3-6		MODE2	214	44.1%	71.2%	71.2%	88.6	58.8	6.2	6.3	17.3	1.39	8.84	0.00	8.84	0.00	8.84	0.00	8.84	0.00	8.84	0.00	8.84	3.37	3.00
POLICY	+175RM/month cost of private mode	MODE1	252	52.0%	-30.0%	-30.0%	61.3	57.0	0.0	4.4	0.0	12.48	0.00	12.48	0.00	12.48	0.00	12.48	0.00	12.48	0.00	12.48	3.37	3.00	
TEST3-7		MODE2	233	48.0%	86.4%	86.4%	88.6	58.8	6.2	6.3	17.3	1.39	8.84	0.00	8.84	0.00	8.84	0.00	8.84	0.00	8.84	0.00	8.84	3.37	3.00
POLICY	+200RM/month cost of private mode	MODE1	232	47.8%	-35.6%	-35.6%	61.3	57.0	0.0	4.4	0.0	13.00	0.00	13.00	0.00	13.00	0.00	13.00	0.00	13.00	0.00	13.00	3.37	3.00	
TEST3-8		MODE2	253	52.2%	102.4%	102.4%	88.6	58.8	6.2	6.3	17.3	1.39	8.84	0.00	8.84	0.00	8.84	0.00	8.84	0.00	8.84	0.00	8.84	3.37	3.00
POLICY	+250RM/month cost of private mode	MODE1	209	43.1%	-41.9%	-41.9%	61.3	57.0	0.0	4.4	0.0	14.04	0.00	14.04	0.00	14.04	0.00	14.04	0.00	14.04	0.00	14.04	3.37	3.00	
TEST3-9		MODE2	276	56.9%	120.8%	120.8%	88.6	58.8	6.2	6.3	17.3	1.39	8.84	0.00	8.84	0.00	8.84	0.00	8.84	0.00	8.84	0.00	8.84	3.37	3.00
POLICY	+300RM/month cost of private mode	MODE1	176	36.3%	-51.1%	-51.1%	61.3	57.0	0.0	4.4	0.0	15.09	0.00	15.09	0.00	15.09	0.00	15.09	0.00	15.09	0.00	15.09	3.37	3.00	
TEST3-10		MODE2	309	63.7%	147.2%	147.2%	88.6	58.8	6.2	6.3	17.3	1.39	8.84	0.00	8.84	0.00	8.84	0.00	8.84	0.00	8.84	0.00	8.84	3.37	3.00
POLICY	-50% waiting time of public modes	MODE1	317	65.4%	-11.9%	-11.9%	61.3	57.0	0.0	4.4	0.0	8.84	0.00	8.84	0.00	8.84	0.00	8.84	0.00	8.84	0.00	8.84	3.37	3.00	
TEST4-1		MODE2	168	34.6%	34.4%	34.4%	80.0	56.8	6.2	6.3	8.6	1.39	8.84	0.00	8.84	0.00	8.84	0.00	8.84	0.00	8.84	0.00	8.84	3.37	3.00
POLICY	-67% waiting time of public modes (2* frequency)	MODE1	295	61.6%	-16.9%	-16.9%	61.3	57.0	0.0	4.4	0.0	8.84	0.00	8.84	0.00	8.84	0.00	8.84	0.00	8.84	0.00	8.84	3.37	3.00	
TEST4-2		MODE2	186	38.4%	48.8%	48.8%	77.0	58.8	6.2	6.3	5.7	1.39	8.84	0.00	8.84	0.00	8.84	0.00	8.84	0.00	8.84	0.00	8.84	3.37	3.00
POLICY MIX	+150RM/month cost of private mode	MODE1	170	35.1%	-52.8%	-52.8%	61.3	57.0	0.0	4.4	0.0	10.32	0.00	10.32	0.00	10.32	0.00	10.32	0.00	10.32	0.00	10.32	3.37	3.00	
TEST5-1		MODE2	315	64.9%	152.0%	152.0%	74.1	52.9	6.2	6.3	8.6	1.39	8.84	0.00	8.84	0.00	8.84	0.00	8.84	0.00	8.84	0.00	8.84	3.37	3.00

Summary of Policy Test on SAMPLE SET06LW : MC or BUS (Workers to whom a motorcycle and buses are available, but a car and rails are not available).

MODEL: MODEL C (Hit Share Adjusted)

CASE	TEST POLICY	MODE	PREDICTION BY HIT	PREDICTED MODAL SHARE	% INCREASE FROM NO POLICY	V01 Travel Time avg. min	V02 Riding Time avg. min	V03 Access time avg. min	V04 Egress time avg. min	V05 Waiting time avg. min	V07 Travel Cost avg. RM	V13 Public mode costs avg. RM	V14 Private mode costs avg. RM	INCOME group
SAMPLE	Existing	MODE1	108	79.0%	—	31.3	28.0	0.0	3.4	0.0	1.00	0.00	0.00	2.30
		MODE2	28	21.0%	—	81.4	50.9	6.3	6.4	17.8	1.21	1.21	0.00	2.17
SIMULATED	No Policy	MODE1	108	79.0%	—	31.3	28.0	0.0	3.4	0.0	1.00	0.00	1.00	2.30
SAMPLES		MODE2	28	21.0%	—	81.4	50.9	6.3	6.4	17.8	1.21	1.21	0.00	2.17
POLICY	+20% riding time of private mode	MODE1	100	72.5%	-8.3%	36.9	33.6	0.0	3.4	0.0	1.00	0.00	1.00	2.30
TEST1-1		MODE2	38	27.5%	31.0%	81.4	50.9	6.3	6.4	17.8	1.21	1.21	0.00	2.17
POLICY	+40% riding time of private mode	MODE1	83	67.4%	-14.7%	42.5	39.2	0.0	3.4	0.0	1.00	0.00	1.00	2.30
TEST1-2		MODE2	45	32.6%	55.2%	81.4	50.9	6.3	6.4	17.8	1.21	1.21	0.00	2.17
POLICY	+60% riding time of private mode	MODE1	83	60.1%	-23.9%	48.1	44.8	0.0	3.4	0.0	1.00	0.00	1.00	2.30
TEST1-3		MODE2	55	39.9%	88.7%	81.4	50.9	6.3	6.4	17.8	1.21	1.21	0.00	2.17
POLICY	+80% riding time of private mode	MODE1	77	55.8%	-29.4%	53.7	50.4	0.0	3.4	0.0	1.00	0.00	1.00	2.30
TEST1-4		MODE2	61	44.2%	110.3%	81.4	50.9	6.3	6.4	17.8	1.21	1.21	0.00	2.17
POLICY	-20% riding time of public mode	MODE1	96	66.6%	-11.9%	31.3	28.0	0.0	3.4	0.0	1.00	0.00	1.00	2.30
TEST2-1		MODE2	42	30.4%	44.8%	71.3	40.7	6.3	6.4	17.8	1.21	1.21	0.00	2.17
POLICY	-40% riding time of public mode	MODE1	84	60.9%	-22.9%	31.3	28.0	0.0	3.4	0.0	1.00	0.00	1.00	2.30
TEST2-2		MODE2	54	39.1%	86.2%	81.4	50.9	6.3	6.4	17.8	1.21	1.21	0.00	2.17
POLICY	-60% riding time of public mode	MODE1	69	50.0%	-36.7%	31.3	28.0	0.0	3.4	0.0	1.00	0.00	1.00	2.30
TEST2-3		MODE2	68	50.0%	137.9%	50.9	20.4	6.3	6.4	17.8	1.21	1.21	0.00	2.17
POLICY	-80% riding time of public mode	MODE1	52	37.7%	-52.3%	31.3	28.0	0.0	3.4	0.0	1.00	0.00	1.00	2.30
TEST2-4		MODE2	86	62.3%	196.6%	40.7	10.2	6.3	6.4	17.8	1.21	1.21	0.00	2.17
POLICY	+25RM/month cost of private mode	MODE1	88	63.6%	-19.3%	31.3	28.0	0.0	3.4	0.0	1.52	0.00	1.52	2.30
TEST3-1		MODE2	50	36.2%	72.4%	81.4	50.9	6.3	6.4	17.8	1.21	1.21	0.00	2.17
POLICY	+50RM/month cost of private mode	MODE1	66	47.8%	-38.4%	31.3	28.0	0.0	3.4	0.0	2.04	0.00	2.04	2.30
TEST3-2		MODE2	72	52.2%	148.3%	81.4	50.9	6.3	6.4	17.8	1.21	1.21	0.00	2.17
POLICY	+75RM/month cost of private mode	MODE1	44	31.9%	-58.6%	31.3	28.0	0.0	3.4	0.0	2.56	0.00	2.56	2.30
TEST3-3		MODE2	84	68.1%	224.1%	81.4	50.9	6.3	6.4	17.8	1.21	1.21	0.00	2.17
POLICY	+100RM/month cost of private mode	MODE1	28	21.0%	-73.4%	31.3	28.0	0.0	3.4	0.0	3.08	0.00	3.08	2.30
TEST3-4		MODE2	108	79.0%	275.9%	81.4	50.9	6.3	6.4	17.8	1.21	1.21	0.00	2.17
POLICY	+125RM/month cost of private mode	MODE1	17	12.3%	-84.4%	31.3	28.0	0.0	3.4	0.0	3.60	0.00	3.60	2.30
TEST3-5		MODE2	121	87.7%	317.2%	81.4	50.9	6.3	6.4	17.8	1.21	1.21	0.00	2.17
POLICY	+150RM/month cost of private mode	MODE1	9	6.5%	-91.7%	31.3	28.0	0.0	3.4	0.0	4.12	0.00	4.12	2.30
TEST3-6		MODE2	129	93.5%	344.6%	81.4	50.9	6.3	6.4	17.8	1.21	1.21	0.00	2.17
POLICY	+175RM/month cost of private mode	MODE1	4	2.9%	-96.3%	31.3	28.0	0.0	3.4	0.0	4.64	0.00	4.64	2.30
TEST3-7		MODE2	134	97.1%	362.1%	81.4	50.9	6.3	6.4	17.8	1.21	1.21	0.00	2.17
POLICY	+200RM/month cost of private mode	MODE1	2	1.4%	-98.2%	31.3	28.0	0.0	3.4	0.0	5.16	0.00	5.16	2.30
TEST3-8		MODE2	136	98.6%	369.0%	81.4	50.9	6.3	6.4	17.8	1.21	1.21	0.00	2.17
POLICY	+250RM/month cost of private mode	MODE1	1	0.7%	-98.1%	31.3	28.0	0.0	3.4	0.0	6.21	0.00	6.21	2.30
TEST3-9		MODE2	137	99.3%	372.4%	81.4	50.9	6.3	6.4	17.8	1.21	1.21	0.00	2.17
POLICY	+300RM/month cost of private mode	MODE1	0	0.0%	-100.0%	31.3	28.0	0.0	3.4	0.0	7.25	0.00	7.25	2.30
TEST3-10		MODE2	138	100.0%	375.9%	81.4	50.9	6.3	6.4	17.8	1.21	1.21	0.00	2.17
POLICY	-50% waiting time of public modes	MODE1	101	73.2%	-7.9%	31.3	28.0	0.0	3.4	0.0	1.00	0.00	1.00	2.30
TEST4-1	(2* frequency)	MODE2	37	26.8%	27.6%	72.5	50.9	6.3	6.4	8.9	1.21	1.21	0.00	2.17
POLICY	-67% waiting time of public modes	MODE1	97	70.3%	-11.0%	31.3	28.0	0.0	3.4	0.0	1.00	0.00	1.00	2.30
TEST4-2	(3* frequency)	MODE2	41	29.7%	41.4%	68.5	50.9	6.3	6.4	5.9	1.21	1.21	0.00	2.17
POLICY MIX	+150RM/month cost of private mode	MODE1	56	40.6%	-48.6%	64.6	60.4	0.0	4.2	0.0	10.32	0.00	10.32	2.30
TEST5-1	-20% riding time of public mode	MODE2	82	59.4%	182.6%	68.4	44.8	6.4	6.6	8.6	1.36	1.36	0.00	2.17
	-67% waiting time of public modes													

Summary of Policy Test on SAMPLE SET04SP (BUS vs RAIL)

MODEL: MODEL D (Hit Share Adjusted)

CASE	TEST POLICY	PREDICTION PREDICTED			% INCREASE FROM NO POLICY	V01	V07
		MODE	BY HIT	MODAL SHARE		Travel Time avg. min	Travel Cost avg. RM
SAMPLE	Stated Sample	MODE1	875	55.4%	---	67.7	1.18
		MODE2	705	44.6%	---	47.4	1.77
SIMULATED SAMPLES	Simulated No Policy Case	MODE1	815	51.6%	---	67.7	1.18
		MODE2	765	48.4%	---	47.4	1.77
POLICY TEST1-1	-20% travel time of BUS	MODE1	1305	82.6%	60.1%	54.2	1.18
		MODE2	275	17.4%	-64.1%	47.4	1.77
POLICY TEST1-2	-40% travel time of BUS	MODE1	1558	98.6%	91.2%	40.6	1.18
		MODE2	22	1.4%	-97.1%	47.4	1.77
POLICY TEST1-3	-60% travel time of BUS	MODE1	1575	99.7%	93.3%	27.1	1.18
		MODE2	5	0.3%	-99.3%	47.4	1.77
POLICY TEST1-4	+20% cost of BUS	MODE1	562	35.6%	-31.0%	67.7	1.42
		MODE2	1018	64.4%	33.1%	47.4	1.77
POLICY TSET2-1	+40% cost of BUS	MODE1	456	28.9%	-44.0%	67.7	1.65
		MODE2	1124	71.1%	46.9%	47.4	1.77
POLICY TSET2-2	+60% cost of BUS	MODE1	291	18.4%	-64.3%	67.7	1.89
		MODE2	1289	81.6%	68.5%	47.4	1.77
POLICY TSET2-3	+80% cost of BUS	MODE1	54	3.4%	-93.4%	67.7	2.12
		MODE2	1526	96.6%	99.5%	47.4	1.77
POLICY TSET2-4	+100% cost of BUS	MODE1	7	0.4%	-99.1%	67.7	2.36
		MODE2	1573	99.6%	105.6%	47.4	1.77
POLICY TSET3-1	-20% travel time of RAIL	MODE1	571	36.1%	-29.9%	67.7	1.18
		MODE2	1009	63.9%	31.9%	37.9	1.77
POLICY TSET3-2	-40% travel time of RAIL	MODE1	478	30.3%	-41.3%	67.7	1.18
		MODE2	1102	69.7%	44.1%	28.4	1.77
POLICY TSET3-3	-60% travel time of RAIL	MODE1	379	24.0%	-53.5%	67.7	1.18
		MODE2	1201	76.0%	57.0%	19.0	1.77
POLICY TSET3-4	-20% travel cost of RAIL	MODE1	459	29.1%	-43.7%	67.7	1.18
		MODE2	1121	70.9%	46.5%	47.4	1.42
POLICY TSET3-5	-40% travel cost of RAIL	MODE1	54	3.4%	-93.4%	67.7	1.18
		MODE2	1526	96.6%	99.5%	47.4	1.06
POLICY TSET3-6	-60% travel cost of RAIL	MODE1	6	0.4%	-99.3%	67.7	1.18
		MODE2	1574	99.6%	105.8%	47.4	0.71
POLICY MIX TEST5-1	+10% cost of BUS	MODE1	381	24.1%	-53.3%	67.7	1.30
	-20% cost of RAIL	MODE2	1199	75.9%	56.7%	47.4	1.42

A. NAME	B. NAME	A. ZONE	B. ZONE	C. ZONE	D. ZONE	HIS. CODE	TAZ
KUALA LUMPUR	CPA	1	1	1	0	101010	1
		1	1	1	0	101010	2
		1	1	1	0	101010	3
		1	1	1	0	101010	4
		1	1	1	0	101010	5
		1	1	1	0	101010	6
		1	1	1	0	101010	7
		1	1	1	0	101010	8
		1	1	1	0	101010	9
		1	1	2	1	101021	10
		1	1	2	1	101021	11
		1	1	2	1	101021	12
		1	1	2	1	101021	13
		1	1	2	1	101021	14
		1	1	2	2	101022	15
		1	1	2	2	101022	16
		1	1	2	2	101022	17
		1	1	2	2	101022	18
		1	1	2	2	101022	19
		1	1	2	2	101022	20
		1	1	2	2	101022	21
		1	1	2	3	101023	22
		1	1	2	3	101023	23
		1	1	2	3	101023	24
		1	1	2	4	101024	25
		1	1	2	4	101024	26
		1	1	2	4	101024	27
		1	1	2	4	101024	28
		1	1	3	1	101031	29
		1	1	3	1	101031	30
		1	1	3	1	101031	31
		1	1	3	2	101032	32
		1	1	3	2	101032	33
		1	1	3	3	101033	34
		1	1	3	3	101033	35
		1	1	3	4	101034	36
		1	1	3	4	101034	37
		1	1	3	4	101034	38
		1	1	3	4	101034	39
		1	1	4	1	101041	40
		1	1	4	1	101041	41
		1	1	4	1	101041	42
		1	1	4	1	101041	43
		1	1	4	1	101041	44
		1	1	4	1	101041	45
		1	1	4	2	101042	46
		1	1	4	3	101043	47
		1	1	4	3	101043	48
		1	1	4	3	101043	49
		1	1	4	3	101043	50
		1	1	4	3	101043	51
		1	1	4	4	101044	52
		1	1	4	5	101045	53
		1	1	4	6	101046	54
		1	1	4	6	101046	55
		1	1	4	6	101046	56
		1	1	4	6	101046	57
		1	1	5	1	101051	58
		1	1	5	1	101051	59
		1	1	5	1	101051	60

A. NAME	B. NAME	A. ZONE	B. ZONE	C. ZONE	D. ZONE	HIS. CODE	TAZ
		1	1	5	1	101051	61
		1	1	5	2	101052	62
		1	1	5	2	101052	63
		1	1	5	2	101052	64
		1	1	5	2	101052	65
		1	1	5	2	101052	66
		1	1	5	2	101052	67
		1	1	5	2	101052	68
		1	1	5	2	101052	69
		1	1	5	2	101052	70
		1	1	5	2	101052	71
		1	1	5	3	101053	72
		1	1	5	3	101053	73
		1	1	5	3	101053	74
		1	1	5	4	101054	75
		1	1	5	4	101054	76
		1	1	5	4	101054	77
		1	1	6	1	101061	78
		1	1	6	1	101061	79
		1	1	6	1	101061	80
		1	1	6	1	101061	81
		1	1	6	1	101061	82
		1	1	6	2	101062	83
		1	1	6	2	101062	84
		1	1	6	2	101062	85
		1	1	6	2	101062	86
		1	1	7	1	101071	87
		1	1	7	1	101071	88
		1	1	7	1	101071	89
		1	1	7	2	101072	90
		1	1	7	2	101072	91
		1	1	7	2	101072	92
		1	1	7	3	101073	93
		1	1	7	3	101073	94
		1	1	7	3	101073	95
		1	1	7	3	101073	96
		1	1	8	1	101081	97
		1	1	8	1	101081	98
		1	1	8	1	101081	99
		1	1	8	2	101082	100
		1	1	8	2	101082	101
		1	1	8	2	101082	102
		1	1	8	2	101082	103
		1	2	1	0	102010	104
		1	2	1	0	102010	105
		1	2	1	0	102010	106
		1	2	1	0	102010	107
		1	2	2	0	102020	108
		1	2	2	0	102020	109
		1	2	2	0	102020	110
		1	2	3	1	102031	111
		1	2	3	1	102031	112
		1	2	3	1	102031	113
		1	2	3	2	102032	114
		1	2	3	3	102033	115
		1	2	3	3	102033	116
		1	2	4	0	102040	117
		1	2	5	1	102051	118
		1	2	5	2	102052	119
		1	2	6	1	102061	120

KEPONG

A. NAME	B. NAME	A. ZONE	B. ZONE	C. ZONE	D. ZONE	HIS. CODE	TAZ
CHERAS		1	4	3	1	104031	181
		1	4	3	1	104031	182
		1	4	3	1	104031	183
		1	4	3	2	104032	184
		1	5	1	1	105011	185
		1	5	1	1	105011	186
		1	5	1	1	105011	187
		1	5	1	2	105012	188
		1	5	1	3	105013	189
		1	5	1	3	105013	190
		1	5	2	2	105022	191
		1	5	2	2	105022	192
		1	5	2	4	105024	194
		1	5	2	4	105024	195
		1	5	2	5	105025	196
		1	5	3	0	105030	197
		1	5	4	1	105041	198
		1	5	4	2	105042	199
		1	6	1	1	106011	200
		1	6	1	1	106011	201
		1	6	1	1	106011	202
		1	6	1	2	106012	203
		1	6	1	2	106012	204
		1	6	2	1	106021	205
		1	6	2	1	106021	206
		1	6	2	2	106022	207
		1	6	2	3	106023	208
		1	6	2	3	106023	209
		1	6	3	1	106031	210
		1	6	3	2	106032	211
		1	6	3	2	106032	212
		1	6	4	1	106041	213
		1	6	4	1	106041	214
1	6	4	1	106041	215		
1	6	4	1	106041	216		
1	6	4	2	106042	217		
1	6	4	2	106042	218		
1	6	4	2	106042	219		
1	6	5	1	106051	220		
1	6	5	1	106051	221		
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1	6	6	3	106063	225		
1	6	6	4	106064	226		
1	6	6	5	106065	227		
1	6	6	6	106066	228		
1	6	6	7	106067	229		
1	6	6	8	106068	230		
1	6	6	9	106069	231		
1	7	1	0	107010	232		
1	7	2	1	107021	233		
1	7	2	1	107021	234		
1	7	2	2	107022	235		
1	7	2	2	107022	236		
1	7	3	1	107031	237		
1	7	3	1	107031	238		
1	7	3	2	107032	239		
1	7	4	1	107041	240		

A. NAME	B. NAME	A. ZONE	B. ZONE	C. ZONE	D. ZONE	HIS. CODE	TAZ
SETAPAK		1	2	6	1	102061	121
		1	2	6	1	102061	122
		1	2	6	2	102062	123
		1	2	6	3	102063	124
		1	2	6	4	102064	125
		1	2	7	1	102071	126
		1	2	7	2	102072	127
		1	2	8	1	102081	128
		1	2	8	2	102082	129
		1	2	8	2	102082	130
		1	2	9	1	102091	131
		1	2	9	2	102092	132
		1	2	9	3	102093	133
		1	2	9	3	102093	134
		1	3	1	0	103010	135
		1	3	1	0	103010	136
		1	3	1	0	103010	137
		1	3	1	0	103010	138
		1	3	1	0	103010	139
		1	3	2	1	103021	140
		1	3	2	1	103021	141
		1	3	2	1	103021	142
		1	3	2	1	103021	143
		1	3	2	1	103021	144
		1	3	2	2	103022	145
		1	3	3	0	103030	146
		1	3	3	0	103030	147
		1	3	3	0	103030	148
		1	3	4	1	103041	149
		1	3	4	1	103041	150
		1	3	4	1	103041	151
		1	3	4	1	103041	152
		1	3	4	2	103042	153
1	3	4	2	103042	154		
1	3	4	2	103042	155		
1	3	4	3	103043	156		
1	3	4	4	103044	157		
1	3	4	4	103044	158		
1	3	4	4	103044	159		
1	3	4	4	103044	160		
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1	4	1	1	104011	175		
1	4	1	2	104012	176		
1	4	1	2	104012	177		
1	4	2	1	104021	178		
1	4	2	2	104022	179		
1	4	3	1	104031	180		

A NAME	B NAME	A ZONE	B ZONE	C ZONE	D ZONE	HIS CODE	TAZ
		4	12	7	1	412071	301
		4	12	7	2	412072	302
		4	12	7	3	412073	303
		4	12	8	0	412080	304
		4	12	9	0	412080	305
		4	12	10	0	412100	306
		4	12	11	0	412110	307
		4	12	12	0	412120	308
		4	12	13	1	412131	309
		4	12	13	2	412132	310
		4	13	1	1	413011	311
		4	13	1	2	413012	312
		4	13	1	3	413013	313
		4	13	2	1	413021	314
		4	13	2	2	413022	315
		4	13	2	3	413023	316
		4	13	2	4	413024	317
		4	14	1	1	414011	318
		4	14	1	2	414012	319
		4	14	1	3	414013	320
		4	14	2	1	414021	321
		4	14	2	2	414022	322
		4	14	2	3	414023	323
		4	14	2	4	414024	324
		4	14	2	5	414025	325
		4	14	2	6	414026	326
		4	14	3	1	414031	327
		4	14	3	2	414032	328
		4	14	3	3	414033	329
		4	15	1	0	415010	330
		4	15	2	1	415021	331
		4	15	2	2	415022	332
		4	15	2	3	415023	333
		4	15	2	4	415024	334
		4	15	2	5	415025	335
		4	15	2	6	415026	336
		4	15	3	0	415030	337
		4	15	4	1	415041	338
		4	15	4	2	415042	339
		5	16	1	1	516011	340
		5	16	1	2	516012	341
		5	16	1	3	516013	342
		5	16	2	1	516021	343
		5	16	2	2	516022	344
		5	16	3	1	516031	345
		5	16	3	2	516032	346
		5	16	3	3	516033	347
		5	16	4	0	516040	348
		5	16	5	0	516050	349
		5	17	1	1	517011	350
		5	17	1	2	517012	351
		5	17	1	3	517013	352
		5	17	1	4	517014	353
		5	17	1	5	517015	354
		5	17	2	0	517020	355
		5	17	3	0	517030	356
		5	17	4	1	517041	357
		5	17	4	2	517042	358
		5	17	4	3	517043	359
		5	17	4	4	517044	360
		5	18	1	0	518010	361
		5	18	2	0	518020	362
		5	18	3	1	518031	363
		5	18	3	2	518032	364
		5	18	3	3	518033	365
		5	18	4	0	518040	366

A NAME	B NAME	A ZONE	B ZONE	C ZONE	D ZONE	HIS CODE	TAZ
		1	7	4	2	107042	241
		1	7	4	3	107043	242
		1	7	4	4	107044	243
		1	7	4	5	107045	244
		1	7	5	1	107061	245
		1	7	5	2	107062	246
		2	8	1	0	208010	247
		2	8	2	0	208020	248
		2	8	3	1	208031	249
		2	8	3	2	208032	250
		2	8	4	1	208041	251
		2	8	4	2	208042	252
		2	8	4	3	208043	253
		2	8	4	4	208044	254
		2	8	4	5	208045	255
		2	8	5	1	208051	256
		2	8	5	2	208052	257
		2	8	5	3	208053	258
		2	8	5	4	208054	259
		2	9	1	1	209011	260
		2	9	1	2	209012	261
		2	9	1	3	209013	262
		2	9	2	1	209021	263
		2	9	2	2	209022	264
		2	9	2	3	209023	265
		2	9	3	1	209031	266
		2	9	3	2	209032	267
		2	9	3	3	209033	268
		2	9	3	4	209034	269
		2	9	3	5	209035	270
		3	10	1	1	310011	271
		3	10	1	2	310012	272
		3	10	1	3	310013	273
		3	10	1	4	310014	274
		3	10	1	5	310015	275
		3	10	1	6	310016	276
		3	10	1	7	310017	277
		3	10	1	8	310018	278
		3	10	2	0	310020	279
		3	10	3	1	310031	280
		3	10	3	2	310032	281
		3	10	3	3	310033	282
		3	10	3	4	310034	283
		3	11	1	1	311011	284
		3	11	1	2	311012	285
		3	11	1	3	311013	286
		3	11	1	4	311014	287
		3	11	1	5	311015	288
		3	11	2	0	311020	289
		3	11	3	0	311030	290
		3	11	4	1	311041	291
		3	11	4	2	311042	292
		3	11	4	3	311043	293
		4	12	1	0	412010	294
		4	12	2	0	412020	295
		4	12	3	0	412030	296
		4	12	4	1	412041	297
		4	12	4	2	412042	298
		4	12	5	0	412050	299
		4	12	6	0	412060	300









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