





FIGURE 3.9
DISTRIBUTION OF TRANSFERS BETWEEN TRICYCLE AND OTHER MODES

Legend

Scale: 1cm²= 50000
(per day)

-  (Tricycle ↔ Taxi)
-  (Tricycle ↔ Tricycle)
-  (Tricycle ↔ LRT)
-  (Tricycle ↔ Jeepney)
-  (Tricycle ↔ Bus)

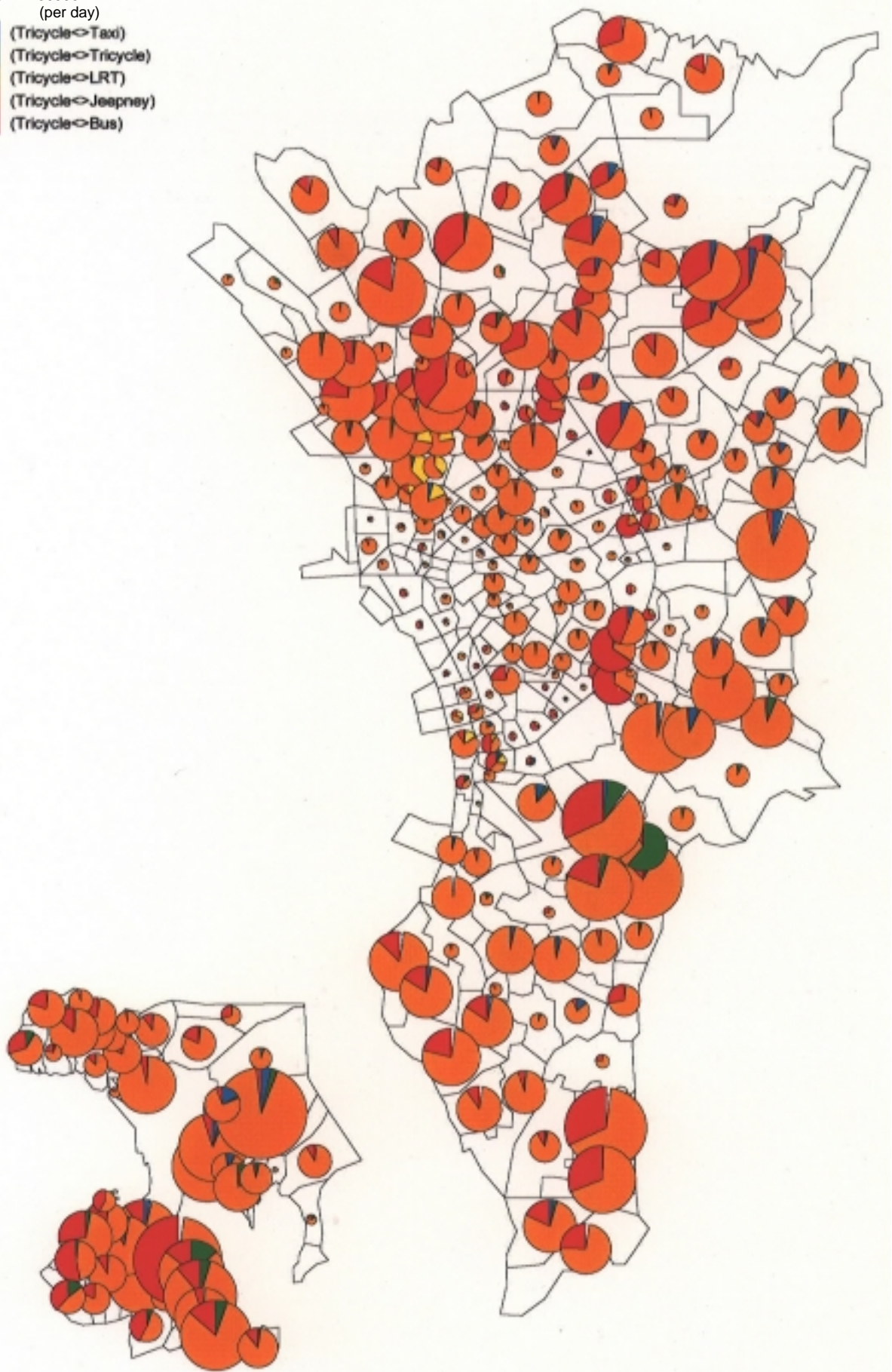


FIGURE 3.10
DISTRIBUTION OF TRANSFERS BETWEEN TAXI AND OTHER MODES

Legend

Scale: 1cm²= 15000
(per day)

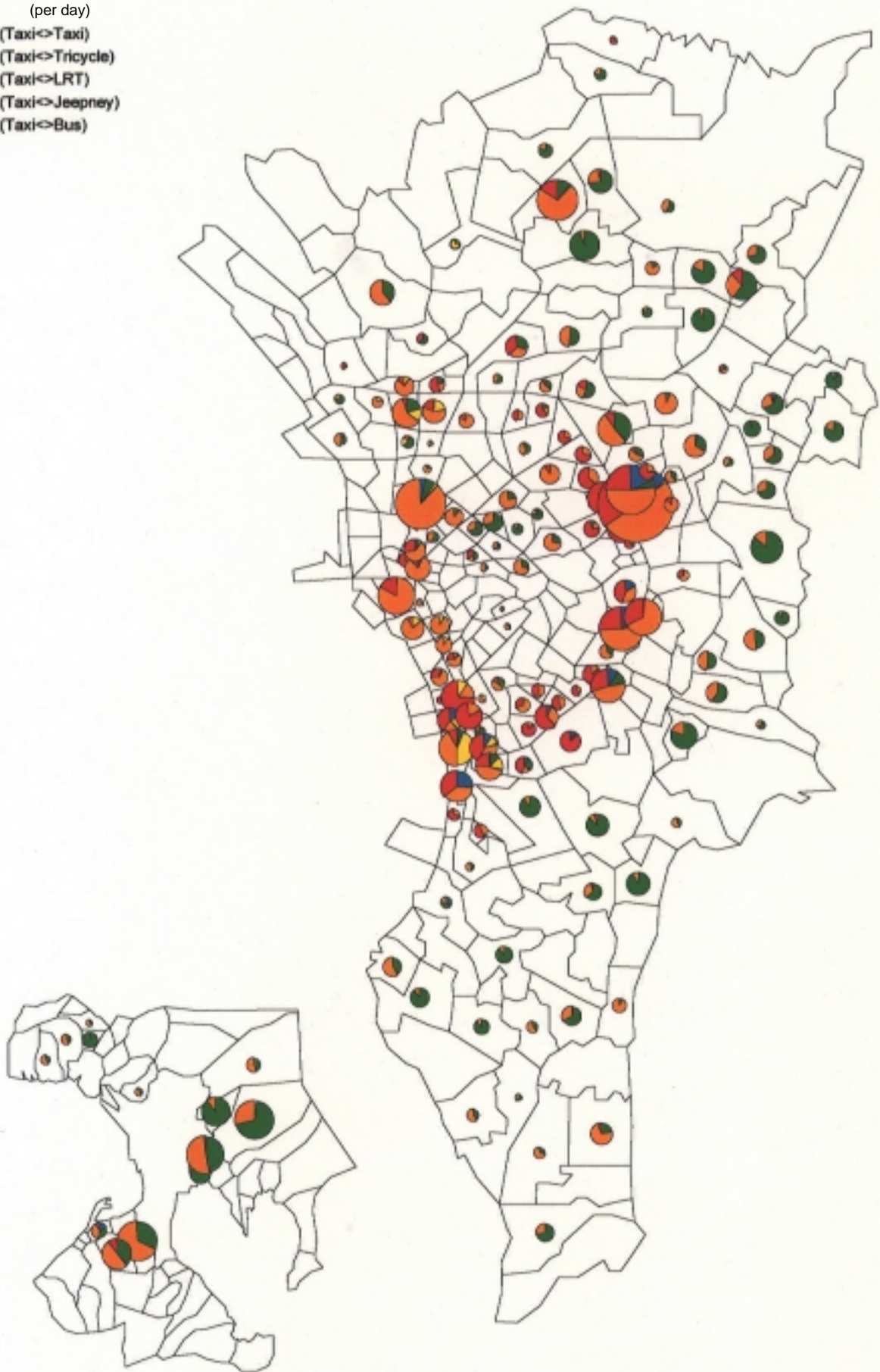


FIGURE 3.11A
BUS AND JEEPNEY PASSENGER FLOWS, 1996

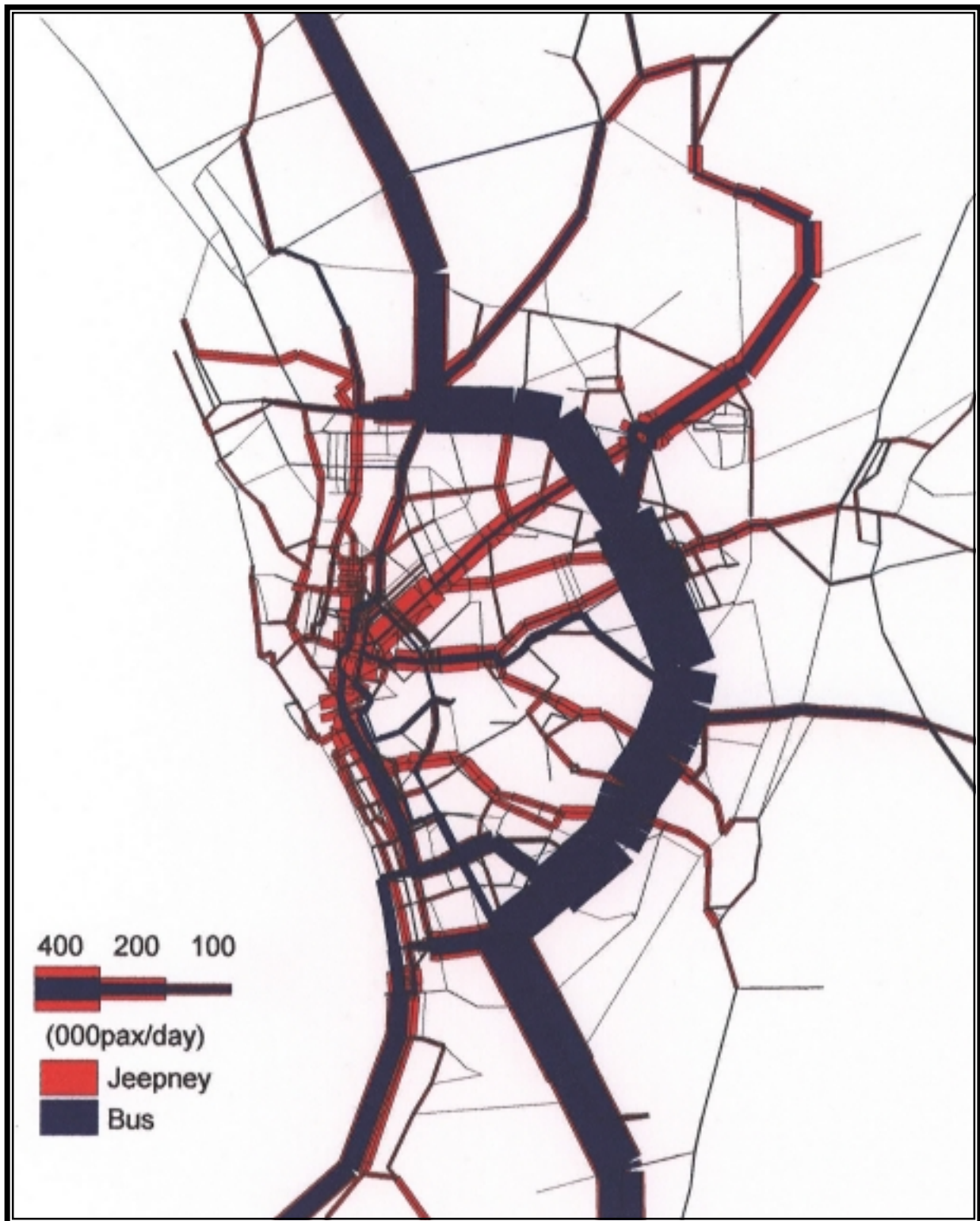


FIGURE 3.11B
BUS AND JEEPNEY PASSENGER FLOWS, 1996



EDSA carries 500,000 to 600,000 passengers a day between East Avenue and Ayala Avenue. Other major corridors are South Super Highway (300-500,000 a day), España–Quezon Boulevard–Taft (200-400,000 a day), Commonwealth (200-350,000 a day), and North Diversion Road (250-350,000 a day).

The bus is dominant on EDSA, South Super Highway, North Diversion Road, Ayala/Buendia, Coastal Road, etc. Commonwealth, Ortigas, Taft and some other roads are shared by bus and jeepney. However, most of other roads are dominated by the jeepney.

3.2.4 Average Trip Length

Figures 3.12 and 3.13 show the average trip length by section for bus and jeepney, respectively. Table 3.5 is the summary of the average trip length of bus and jeepney passengers. Note that this corresponds to the “unlinked trip” defined in the MMUTIS Person-Trip survey.

TABLE 3.5
AVERAGE TRIP LENGTH OF BUS AND JEEPNEY PASSENGERS, 1996
 (Unit: Km)

	Bus	Jeepney	Average
Metro Manila	10.0	3.0	4.8
Adjoining Provinces	31.3	6.7	13.9
Study Area Total	13.0	3.5	5.9

Inside Metro Manila, the average trip length of bus and jeepney passengers is about 5 kms. The jeepney takes considerably shorter trips as compared to the bus.

In the adjoining provinces outside Metro Manila, the average becomes longer (at about 14 kms). Here, shorter trips are similarly serviced by jeepneys and the longer trips, by bus.

3.2.5 Travel Time

Table 3.6 shows the distribution of travel time by representative mode. Among road-based public transportation, the average travel time is the longest at 79 minutes for bus, followed by taxi (56 minutes), jeepney (43 minutes) and tricycle (17 minutes). Figures 3.14 and 3.15 show the distribution of travel time of passengers from each zone for bus and jeepney, respectively.

FIGURE 3.12
AVERAGE TRIP LENGTH OF BUS PASSENGERS, 1996



FIGURE 3.13
AVERAGE TRIP LENGTH OF JEEPNEY PASSENGERS, 1996

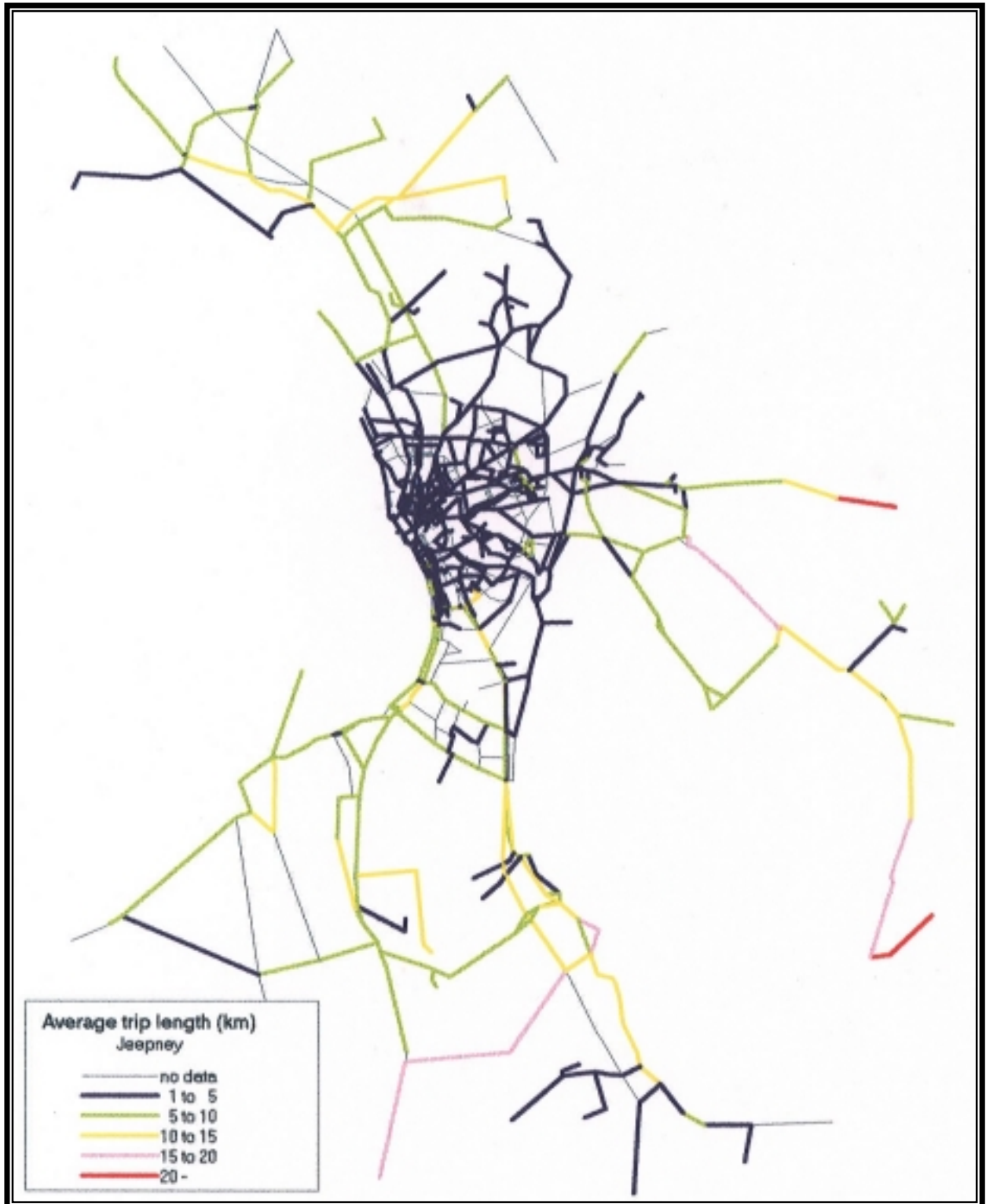


FIGURE 3.14

TRAVEL TIME OF BUS PASSENGERS FROM EACH ZONE (REPRESENTATIVE MODE), 1996

Legend

Scale: 1cm²= 45000
(trips/day)

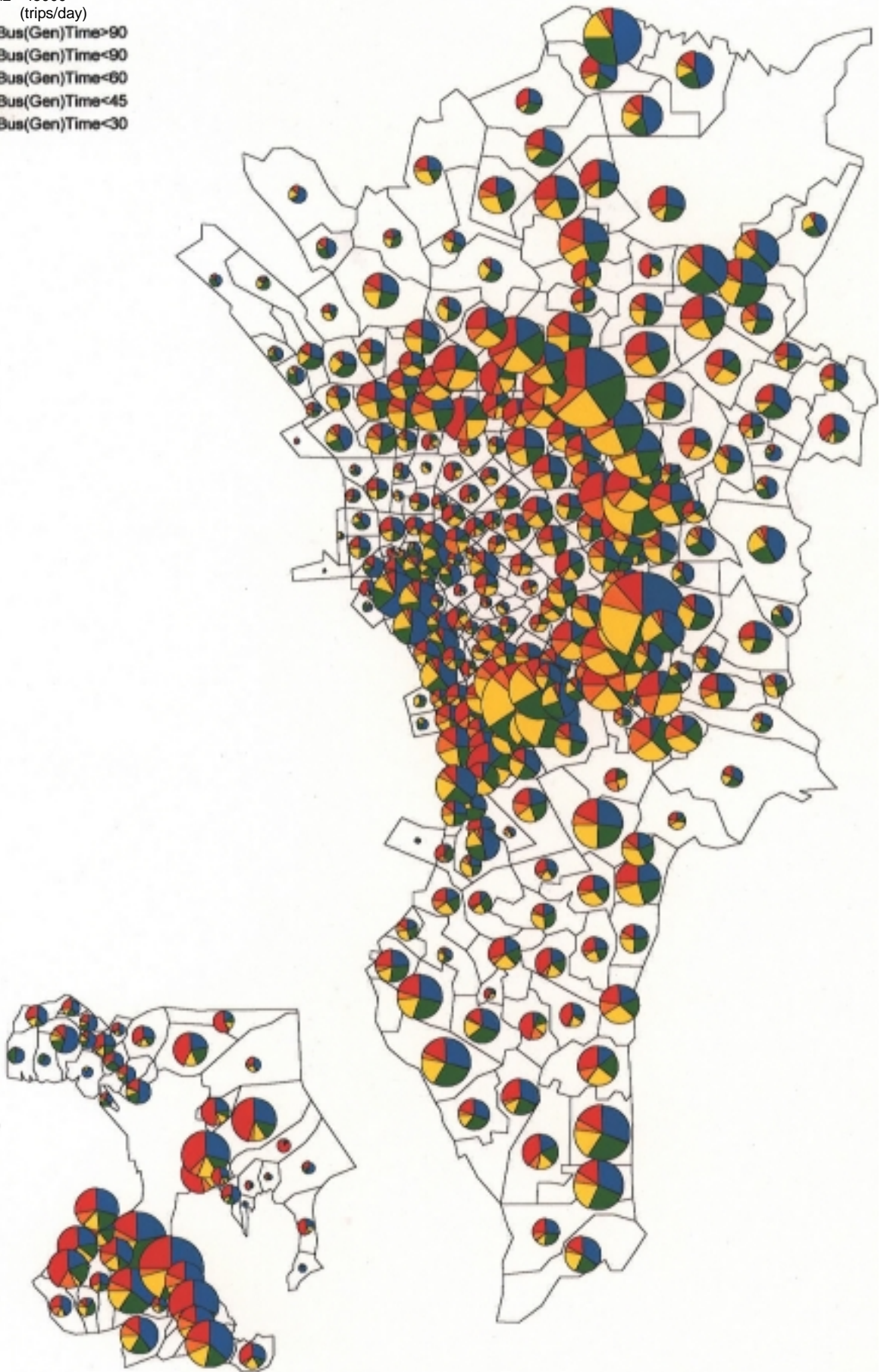
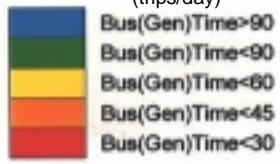


FIGURE 3.15

Legend TRAVEL TIME OF JEEPNEY PASSENGERS FROM EACH ZONE (REPRESENTATIVE MODE), 1996

Scale: 1cm²= 100000
(trips/day)

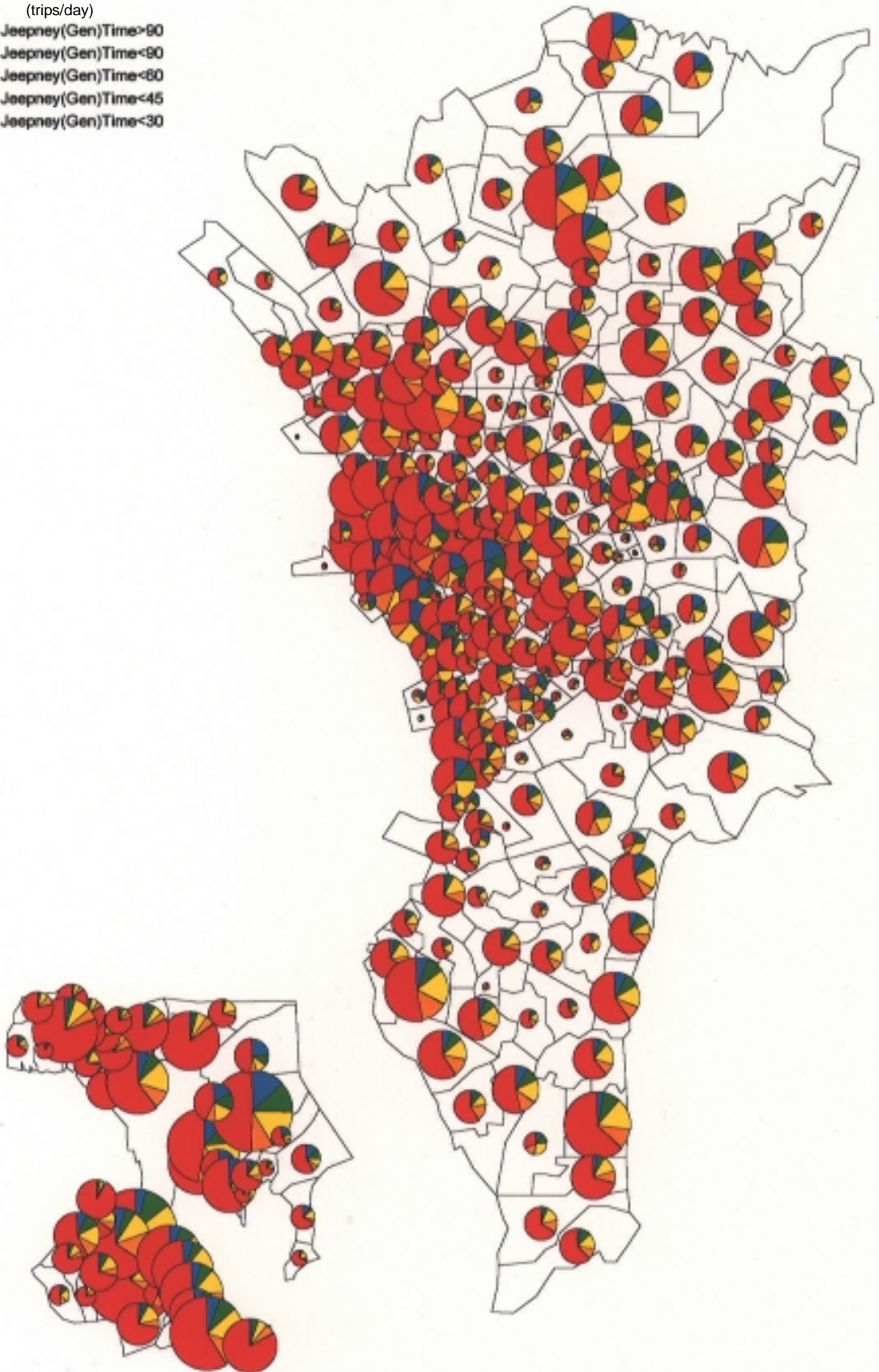


TABLE 3.6
DISTRIBUTION OF TRAVEL TIME BY REPRESENTATIVE MODE, 1996

(Unit: '000 trips/day)

Mode	Travel Time (Minutes)									Total	Ave. Trip Time (min.)
	0-5	5-10	10-15	15-30	30-45	45-60	60-90	90-120	120-180		
Train	1	2	6	51	41	114	102	73	52	442	81.2
Bus	23	55	117	542	309	739	733	556	459	3,534	78.8
Jeepney	272	666	1,171	3,444	974	1,430	835	442	246	9,480	43.0
Tricycle	962	1,138	994	934	76	70	42	20	15	4,252	16.6
Car	197	275	360	1,015	417	729	543	322	210	4,069	52.8
Taxi	19	30	58	290	163	261	181	81	47	1,129	56.3
Truck	28	33	51	136	54	108	62	52	58	582	60.1
Others	7	6	6	19	6	10	5	6	2	67	45.4
Walk	2,716	1,764	1,103	699	62	62	37	11	0	6,453	11.5
Total	4,225	3,968	3,868	7,129	2,103	3,523	2,539	1,562	1,089	30,007	

3.3 Operational Characteristics

3.3.1 Travel Speed

Table 3.7 shows the average travel speed of bus and jeepney as surveyed in 1996. Figures 3.16 and 3.17 are the distribution of travel speed by section for bus and jeepney, respectively.

TABLE 3.7
TRAVEL SPEED OF BUS AND JEEPNEY, 1996

	Bus	Jeepney	Average
Metro Manila	12.2	9.4	10.0
Adjoining Provinces	22.3	21.3	21.6
Study Area Total	14.3	10.9	11.6

Inside Metro Manila, the travel speed of bus and jeepney is very low at 12km/h and 9km/h, respectively. Particularly inside EDSA, there are many sections where the daily average travel speed of public transportation vehicles is less than 5 km/h, slower than the walking speed.

3.3.2 Load Factor

Table 3.8 presents the average load factor of bus and jeepney as surveyed in 1996. Figures 3.18 and 3.19 show the distribution of load factor by section for bus and jeepney, respectively.

FIGURE 3.16
TRAVEL SPEED OF BUS BY SECTION, 1996

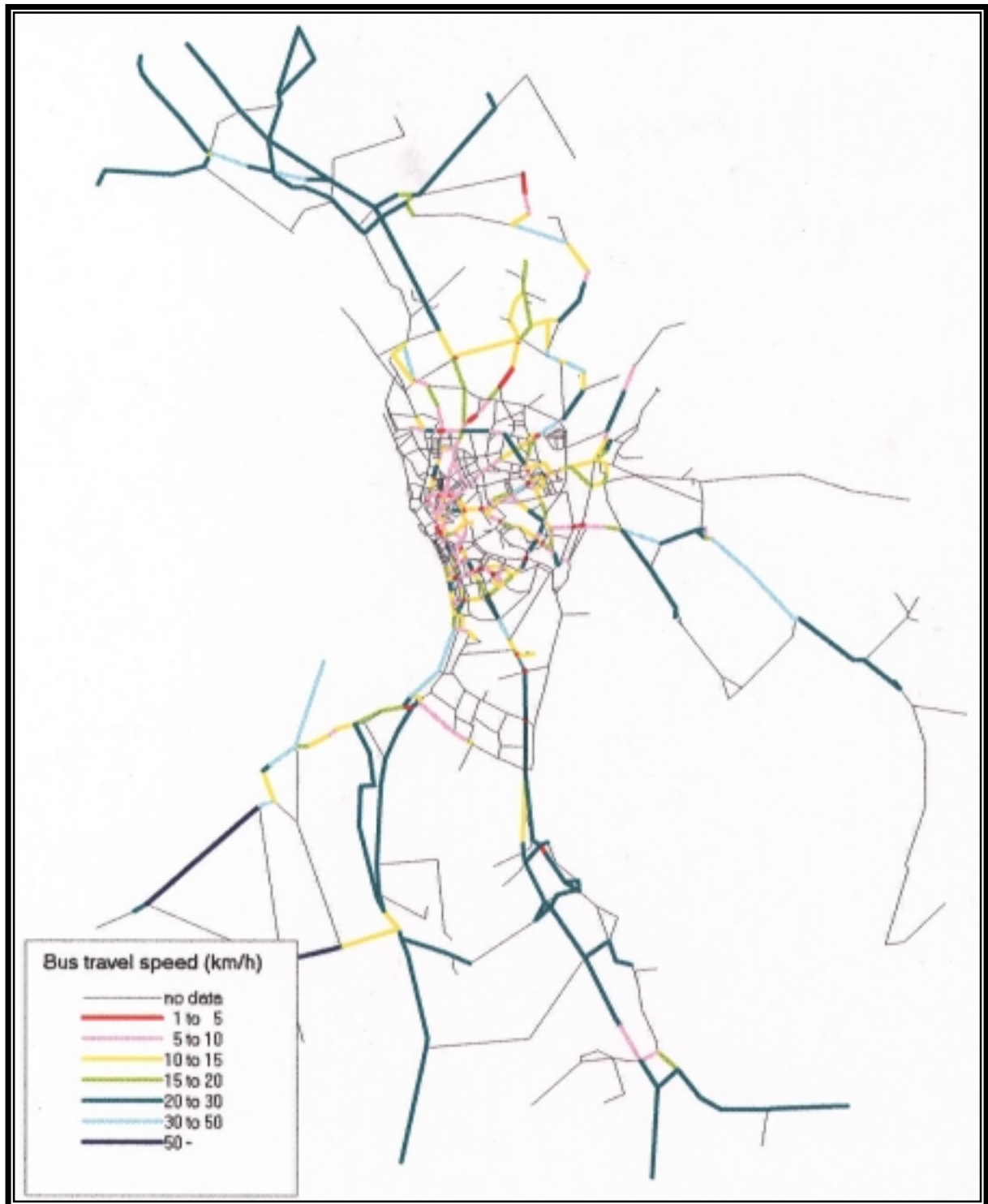


FIGURE 3.17
TRAVEL SPEED OF JEEPNEY BY SECTION, 1996



FIGURE 3.18
LOAD FACTOR OF BUS BY SECTION, 1996

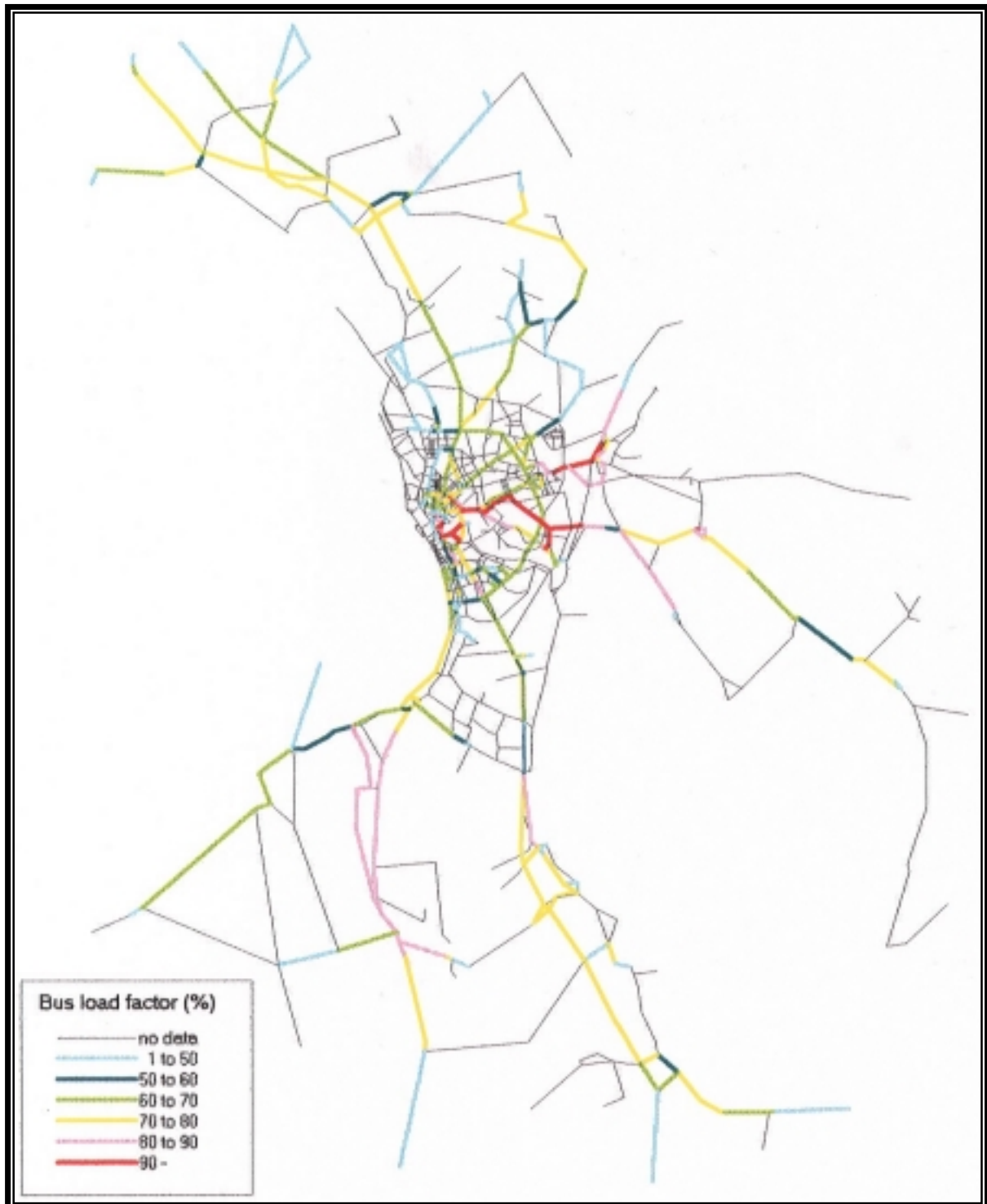


FIGURE 3.19
LOAD FACTOR OF JEEPNEY BY SECTION, 1996

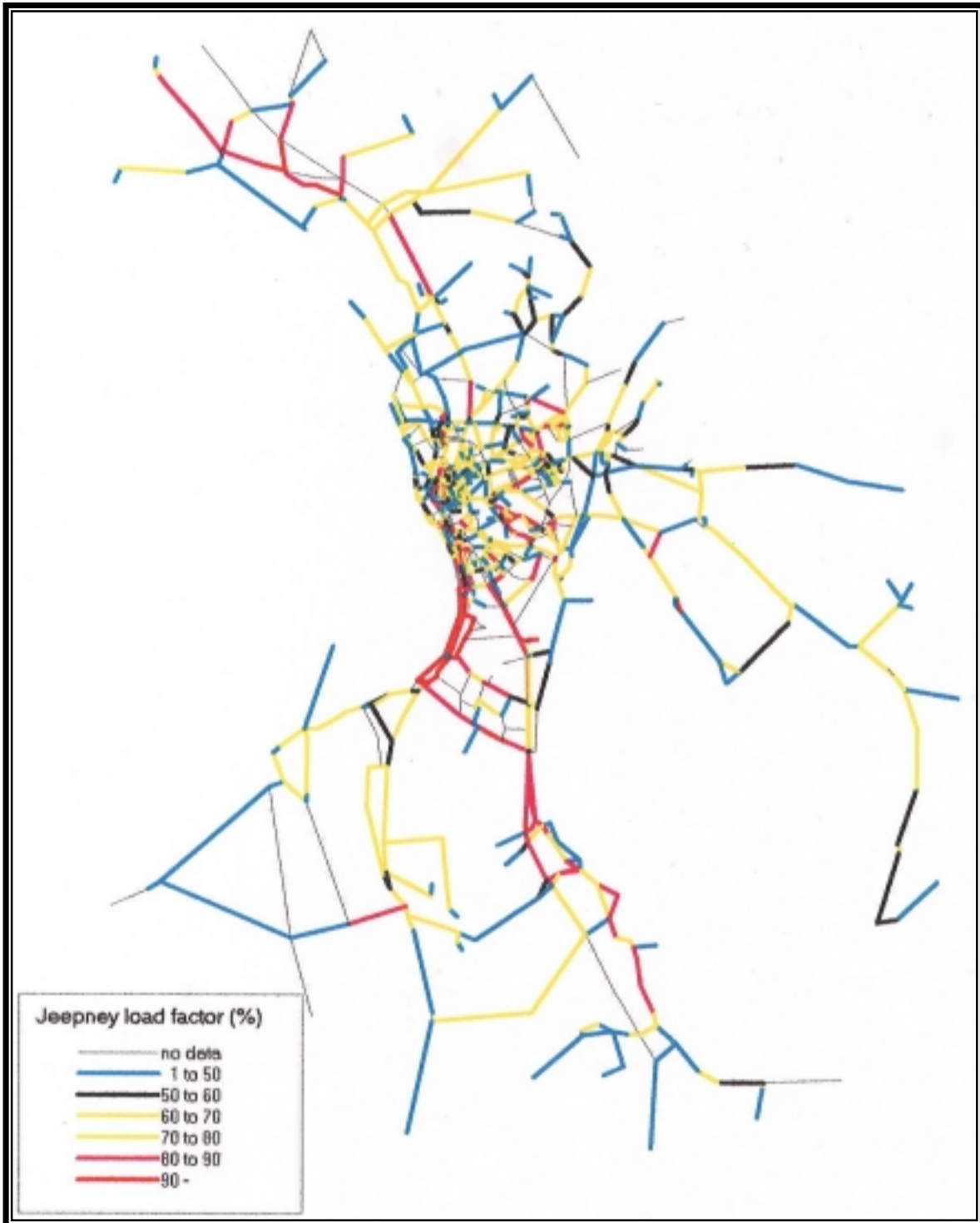


TABLE 3.8
LOAD FACTOR OF BUS AND JEEPNEY, 1996

	Bus	Jeepney	Average
Metro Manila	62.7	64.6	63.6
Adjoining Provinces	66.0	60.5	64.0
Study Area Total	63.8	63.6	63.7

Unlike travel speed, there is not much deviation in load factor by area. However, it tends to be slightly higher in the eastern and southern parts of Metro Manila and its adjoining provinces. Also in some places in Bulacan, the load factor is high for jeepney.

3.4 Levels of Service

Table 3.9 summarizes the levels of service of bus and jeepney by corridor. In general, the levels of service of bus and jeepney (i.e., the majority of road-based public transportation) are low in Metro Manila, particularly in terms of travel speed and, therefore, travel time. Travel speed inside EDSA is less than 10 km/h on most major roads. Even outside EDSA, it is generally less than 15 km/h. As a result, the average travel time by bus and jeepney becomes longer than before. This is noticeable along the Commonwealth–EDSA–Ayala/Buendia corridor.

The average load factor is high in the eastern and southern directions of Metro Manila and in some places in Bulacan. A high load factor (e.g., more than 80%) often means a longer waiting time. Figure 3.20 illustrates this situation.

TABLE 3.9
BUS/JEEPNEY SERVICE LEVELS BY CORRIDOR, 1996

Direction	Inside EDSA			Outside EDSA			Outside Metro Manila		
	% PT Travel Time >60 min.	Ave. Travel Speed (kph)	Load Factor (%)	% PT Travel Time >60 min.	Ave. Travel Speed (kph)	Load Factor (%)	% PT Travel Time >60 min.	Ave. Travel Speed (kph)	Load Factor (%)
North	(J.Luna) 10-20	5-10	50-60	(M.H.del Pilar) 10-20	10-15	50-60			
	(Rizal Ave. Ext.) 10-20	50-10	60-70	(McArthur Hi-way) 10-20	10-15	40-50	(McArthur Hi-way) 10	10-15	70-80
	(A.Bonifacio) 10-20	50-10	60-70	(North Diversion Road) 10-20	15-20	60-70	(North Diversion Road) 10	20-30	70-80
	(Quezon Ave.) 20-30	10-15	60-70	(Quirino Hi-way) 20-30	10-15	60-70	(Novaliches-Ipo Road) 10	20-30	50-60
East	(E. Rodriguez) 20-30	10-15	70-80	(Commonwealth) 20-30	10-15	50-60			
	(Aurora Blvd) 20-40	10-15	70-80	(Aurora Blvd) 20-30	10-15	70-80	(Marcos Hi-way) 10-20	20-30	50-60
	(Ortigas Ave.) 10-20	10-15	70-80	(Ortigas Ave.) 30-40	5-10	80-90	(Ortigas Ave.) 10-20	20-30	70-80
South	(Shaw Blvd) 10-20	5-10	80-90	(Shaw Blvd) 20-50	10-15	70-80	-		
	(Ayala) 50-60	5-10	60-70	-			-		
	(South Super Hi-way) 20-30	10-15	70-80	(South Super Hi-way) 20	15-20	80-90	(South Super Hi-way) 10-20	20-30	70-80
Other	(Taft Ave.) 10-20	5-10	50-60	(Quirino Ave.) 20-60	10-15	90-100	(Quirino Ave.) 10-20	20-30	60-70
	(EDSA) 20-60	10-15	60-70	(Coastal Road) 20-30	15-20	80-90			

Source: MMUTIS Person Trip Survey and Bus / Jeepney On-Board Survey, 1996

FIGURE 3.20
PUBLIC TRANSPORT PROBLEMS IN LEVELS OF SERVICE

