Chapter 6.
METRO MANILA PUBLIC TRANSPORTATION CHARACTERISTICS

CHAPTER 6 METRO MANILA PUBLIC TRANSPORTATION CHARACTERISTICS

6.1 PUBLIC TRANSPORT SYSTEM AND DEMAND

6.1.1 Overall System and Coverage

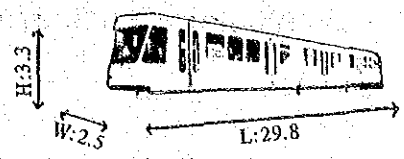
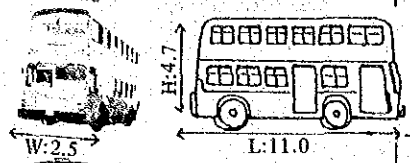
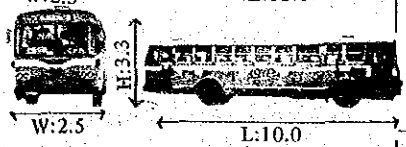
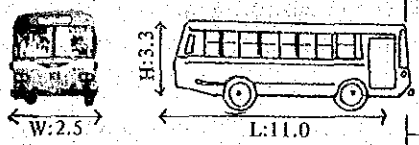
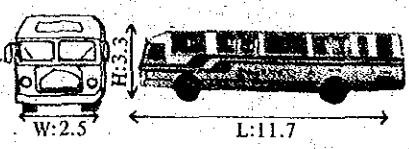
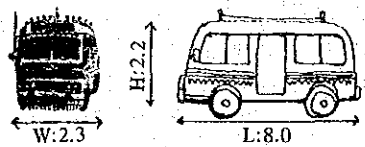
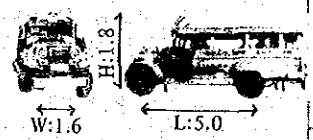
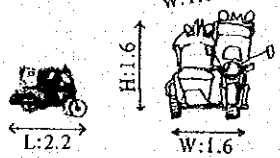
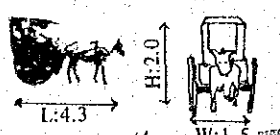
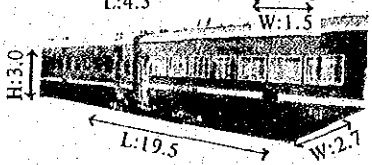
- Public transport operation within and around Metro Manila is dominated by road transport. As shown in Figure 6.1, intra-urban public transport comprises an assortment of jeepneys, buses (ordinary and premium buses), mini-buses, tricycles, taxis, and calesas; while inter-city services between Metro Manila and neighboring areas are provided largely by mini-buses, provincial buses and jeepneys. Buses form the trunk system, while jeepneys serve both as trunk and secondary systems. Tricycles provide feeder services to the trunk and secondary systems. Calesas, whose role in transport is negligible, are phasing out. The PNR commuter services play only a very limited role.
- The Metro Manila public transport, as it is generally known, consists largely of jeepneys and buses. The buses are further classified into standard bus, double decker, limited bus, love bus, mini-bus, and provincial bus. They cover Metro Manila and its environs. Since the actual Metropolitanarea extends to the neighboring areas of Metro Manila as well, short distance provincial operations also form an important Metro Manila public transport system, as intra-city operation does.
- The coverage of jeepney and bus service is shown in Table 6.1 and Figures 6.2,6.3 and 6.4. Jeepney covers a total of 610 kilometers of Metro Manila roads, while bus covers 330 kilometers. Out of the total, approximately 290 kilometers are served by both jeepney and bus. Of the total bus coverage, 88 percent is also served by the jeepney.

Table 6.1
Length of Roads Covered by
Jeepney and Bus within Metro Manila

Mode	Route Type	Length (Kms.) Within EDSA	Outside EDSA	Total Metro Manila
Jeepney	Intra-city	288.8	282.3	571.1
	Inter-city	55.1	140.0	195.1
	Sub-total	288.8	320.7	609.5
Bus	Intra-city	146.3	140.8	287.1
	Inter-city	90.3	81.4	171.7
	Sub-total	153.5	173.7	327.2
Total	Intra-city	318.7	289.0	607.7
	Inter-city	107.0	148.3	255.3
	Total	318.7	331.0	649.7

Source: JUMSUT Public Transport Surveys

Figure 6.1
Existing Metro Manila Public Transport Modes

MODE unit: meter	CAPACITY	FARE-1/	SERVICE AREA	ESTD. NO. OF UNITS
LRT 	750 persons/train 164 seats/train	not determined yet	Inter-Urban	32
ORDINARY STANDARD BUS 	59 seats	₱0.8/4 km + ₱0.21/km	Intra-Urban (Partly Inter-Urban)	6,000
DOUBLE DECKER 	100 seats	₱0.8/4 km + ₱0.21/km	Intra-Urban	40
LOVE BUS 	54 seats	₱5.5 (FIXED)	Intra-Urban (Partly Inter-Urban)	370
LIMITED BUS 	58 seats	ORDINARY: ₱0.7/Zone (Fixed) SPECIAL: ₱1.85/Zone (Fixed)	Intra-Urban	100
PROVINCIAL BUS 	64 seats	₱0.85/5 km + ₱0.195/km	Intra-Urban	300
MINI BUS 	47 seats	₱0.8/4 km + ₱0.21/km	Inter-Urban (Partly Intra-Urban)	1,300
JEEPNEY 	14~18 seats	₱0.85/4 km + ₱0.21/km	Intra- and Inter-Urban	40,000
TAXI 	4 seats	ORDINARY ₱2.50 Flag Down + ₱0.60/250 AIRCON: ₱3.50 Flag Down + ₱1.5/250 meters	Intra-Urban	6,000
TRICYCLE 	2 seats	₱0.65~0.85 (Minimum)	Intra-Urban	17,000
CALESA 	2 seats	₱5.00 (Minimum)	Intra-Urban	1,000
PNR COMMUTER 	500~1000 persons/train 200~400 seats/train	₱1.10/zone +95%(2~3 zone) +90%(4 & over zone)	Inter- and Intra-Urban	167

1/ Data as of Feb. 1984

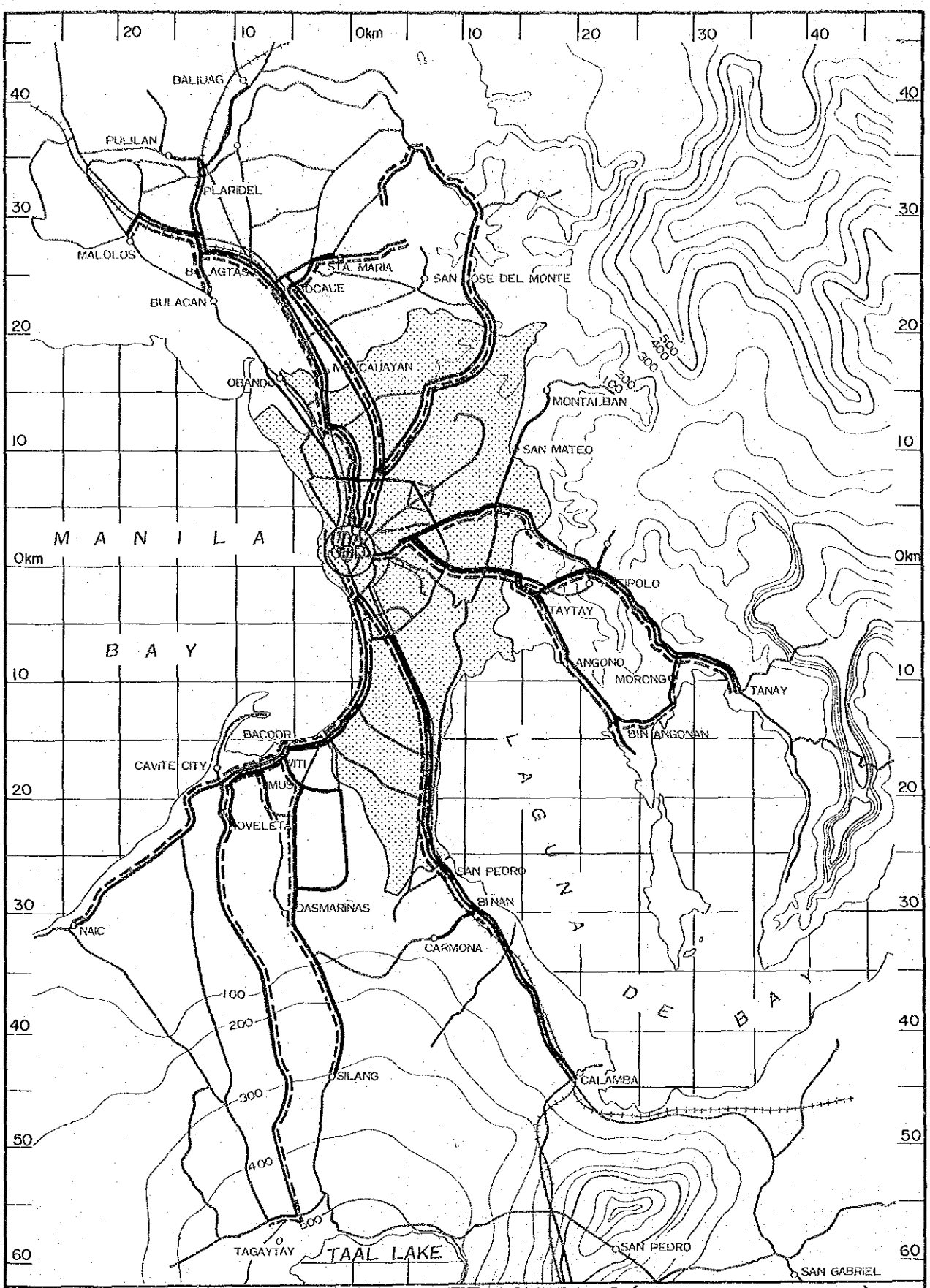


FIGURE 6.2 PUBLIC TRANSPORT ROUTE COVERAGE (INTERCITY SERVICE)

FIGURE 6.3
PUBLIC TRANSPORT COVERAGE IN METRO MANILA

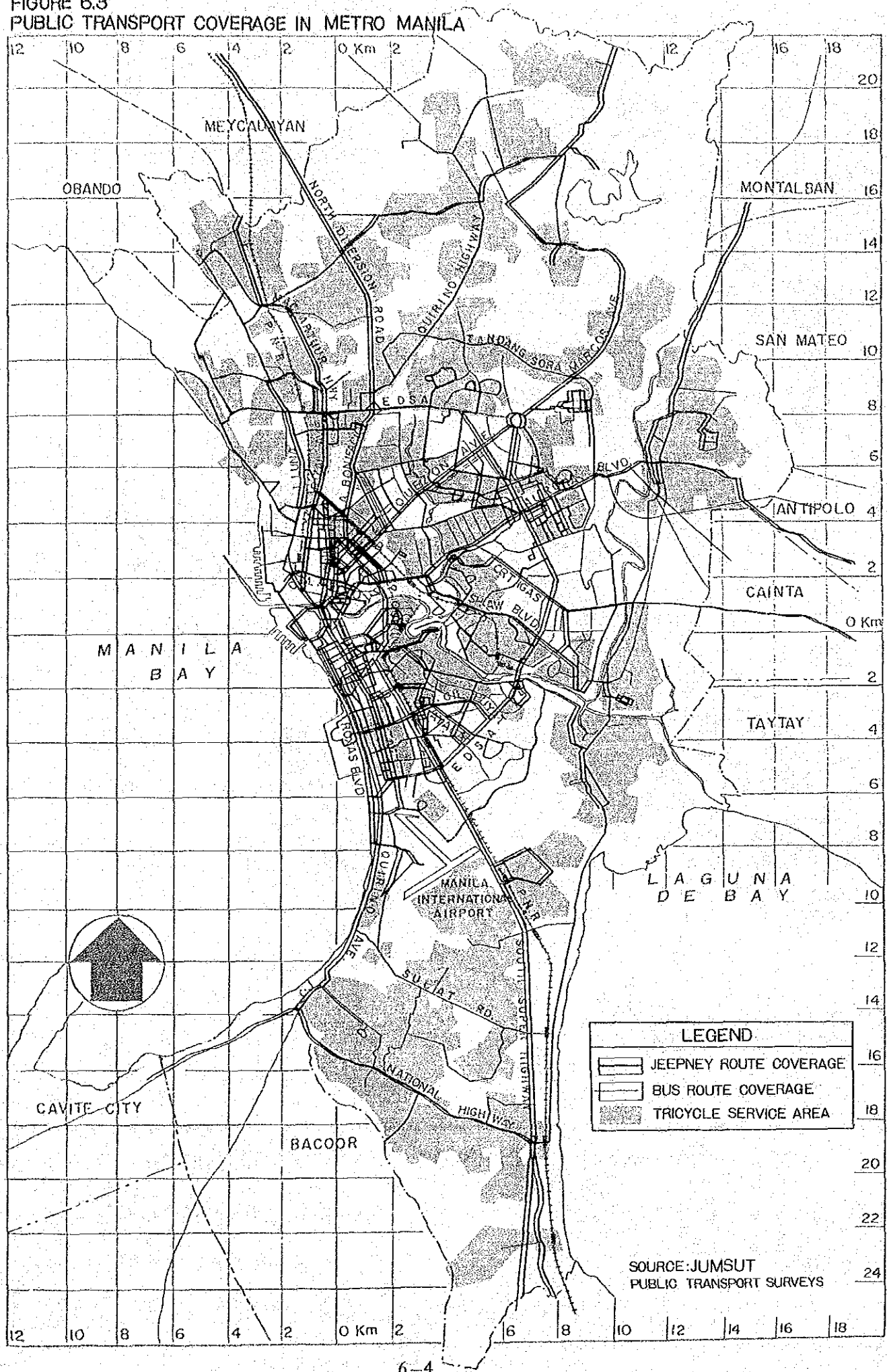
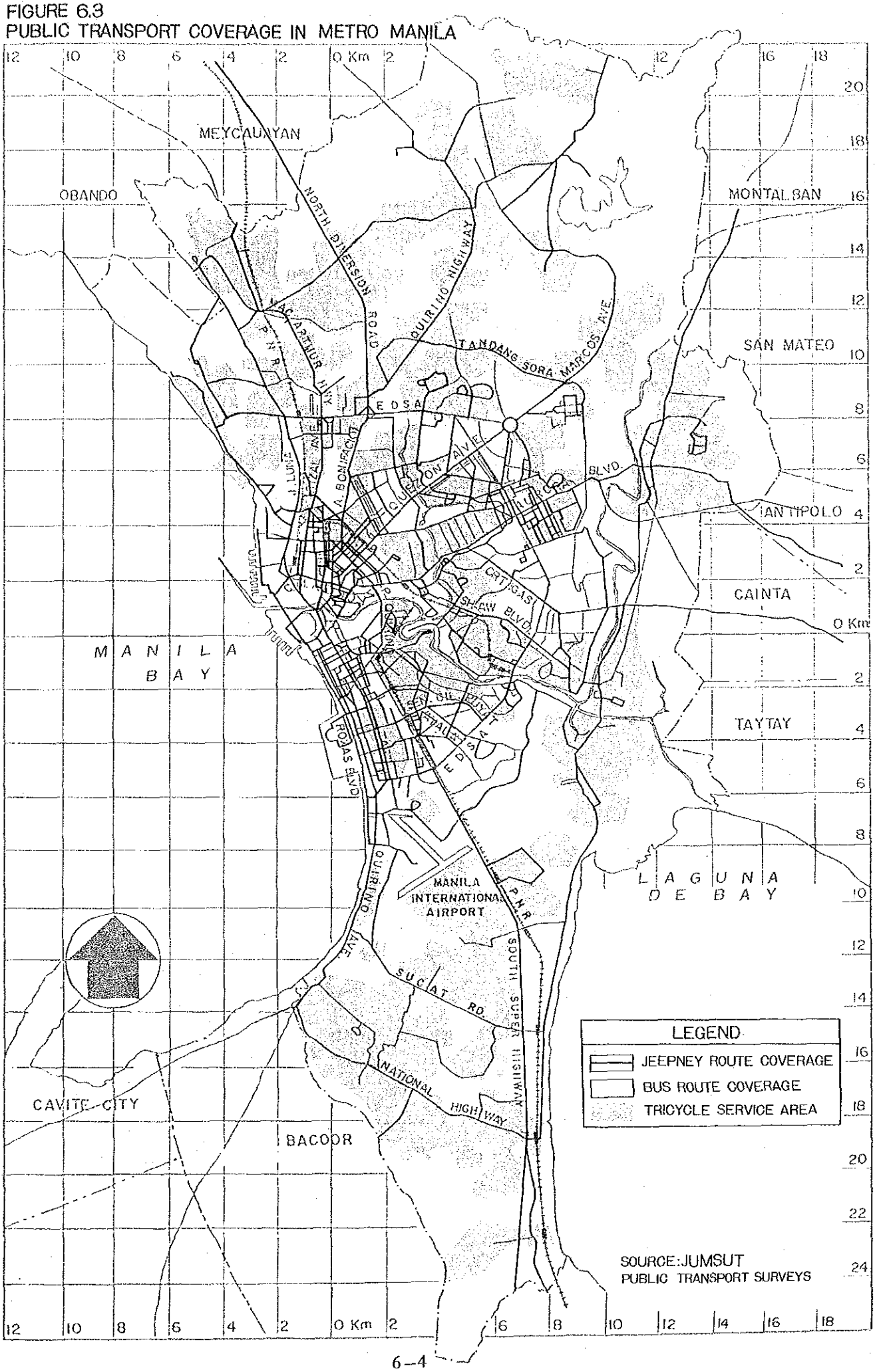


FIGURE 6.3
PUBLIC TRANSPORT COVERAGE IN METRO MANILA



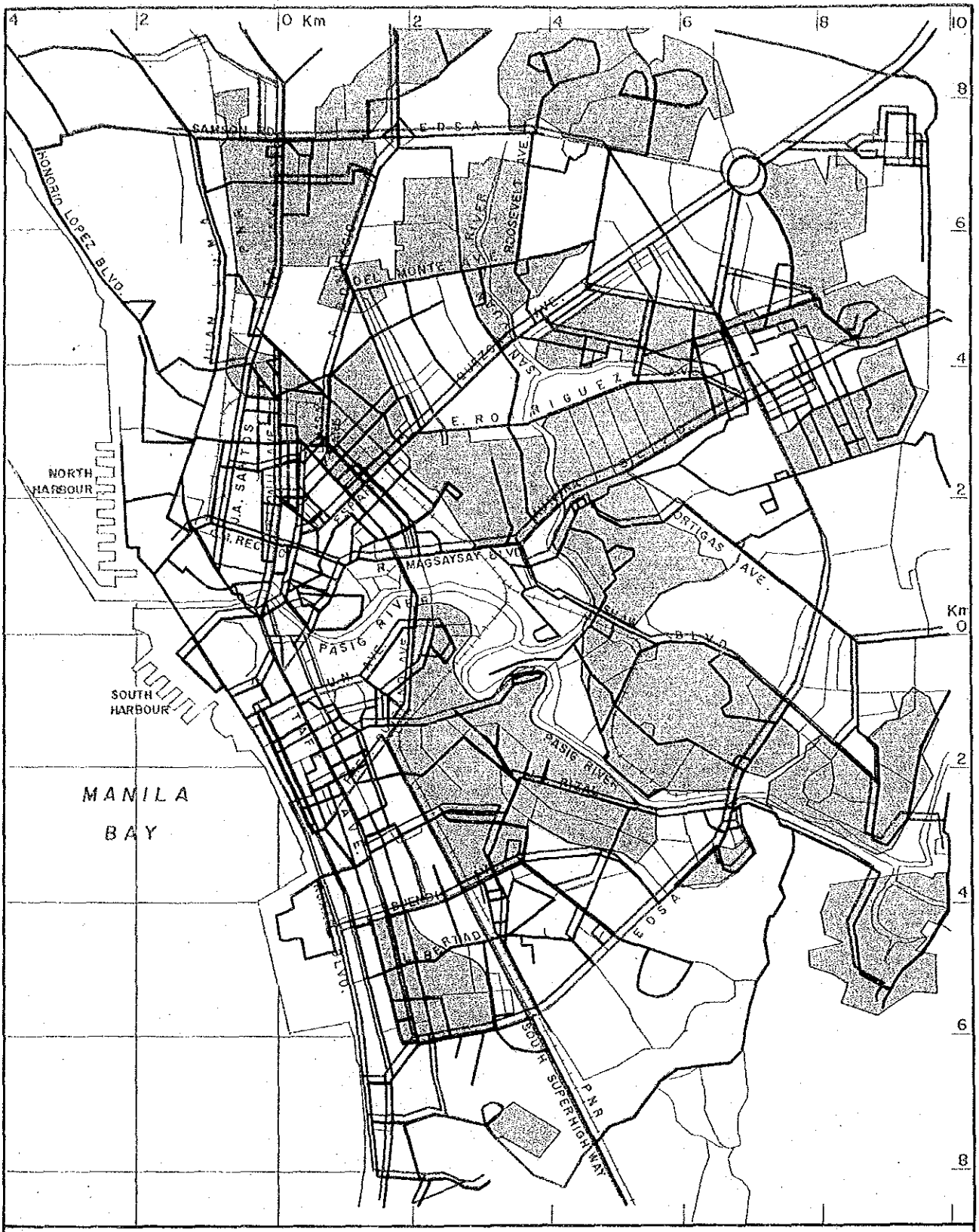


FIGURE 6.4 PUBLIC TRANSPORT COVERAGE IN AREAS WITHIN EDSA

JEEPNEY ROUTE COVERAGE

BUS ROUTE COVERAGE

TRICYCLE SERVICE AREA

NORTH

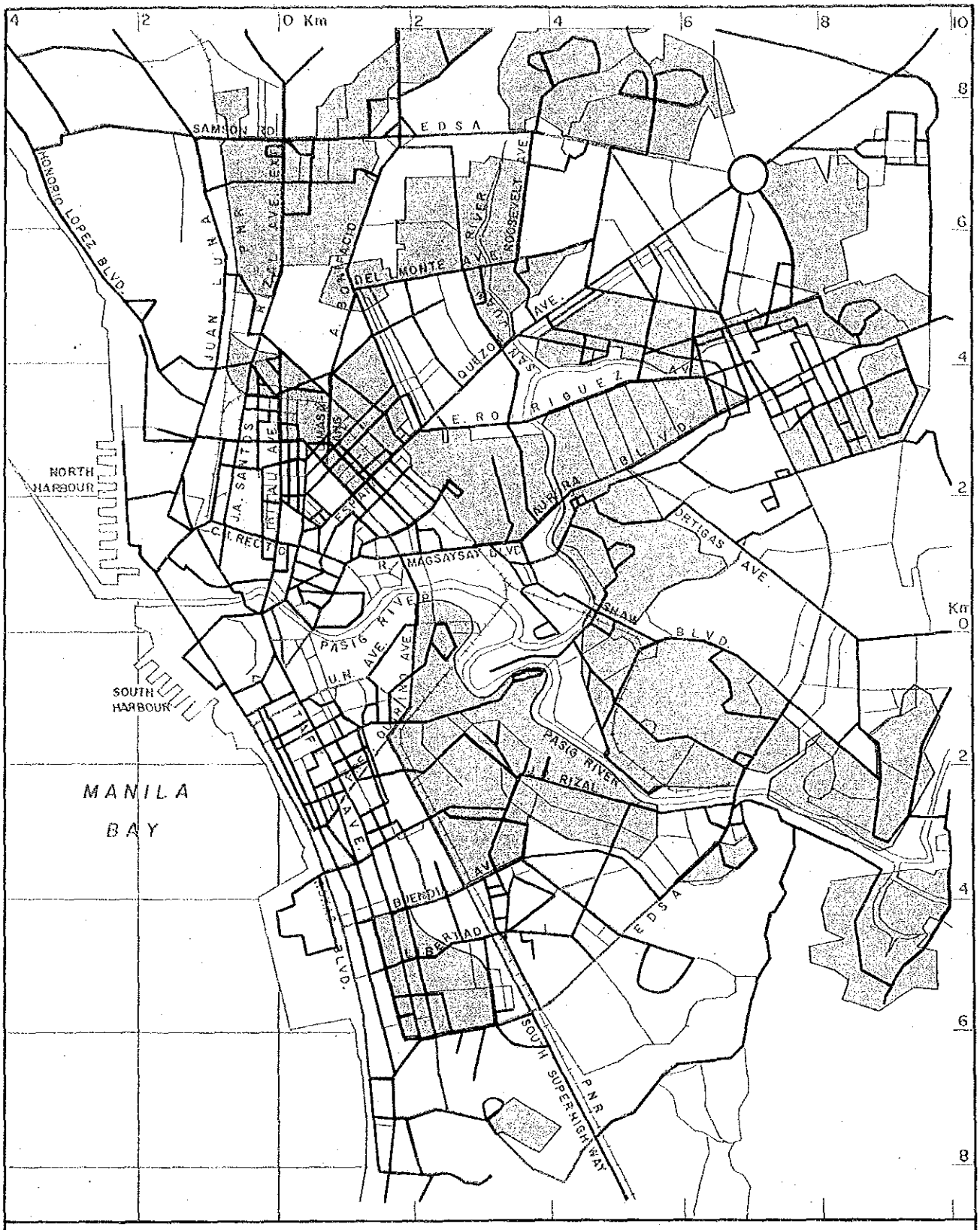


FIGURE 6.4 PUBLIC TRANSPORT COVERAGE IN AREAS WITHIN EDSA

JEEPNEY ROUTE COVERAGE

BUS ROUTE COVERAGE

TRICYCLE SERVICE AREA

6.1.2 Socio-Economic Characteristics of Public Transport Users

- The most important factor determining public transport usage is income. Table 6.2 shows the comparative income distributions of public and private transport users. Table 6.3 further breaks down the income distribution of public transport users into those of jeepney and bus users. Findings from these tables are as follows:
  a) For lower income households of less than ₱2,500 per month, public transport plays a vital role, while high income level households earning more than ₱4,000 per month depend mainly on private vehicles. For the middle income households of ₱2,500 – ₱4,000 per month, both public and private transport are equally utilized.
  b) Nearly 80 percent of public transport users belong to the income level of ₱500 – ₱2,500 per month.
  c) Below the level of ₱2,500 per month, the higher the income, the more trips are made by one person. For the level below ₱1,000 per month, even public transport seems too expensive.
  d) Among the jeepney, bus and other modes (mainly tricycle), there is no significant difference in the distribution of the total number of daily trips within each income range. However, the jeepney seems to be servicing the poor more than the bus or tricycle.
- Similarly, the distribution of public transport users by occupation was analyzed in comparison with that of private vehicle users, as shown in Table 6.4. The major findings are as follows:
  a) People in most occupations depend largely on public transport except for those in the "administrative/professional" occupation. Private transport, for school pupils, plays a significant role due to the existence of the school bus.
  b) Among public transport modes, the jeepney is used equally by people in all occupations, although students prefer the jeepney than any other modes. Bus is preferred by "administrative/professional", "service/sales/clerical" and "factory/transport" workers , while the tricycle, by pupils and housewives.

Table 6.2
Income Distribution of Public
and Private Transport Users

Average Household Income Range (₱/month)	Household		No. of Trips/Day: Public		Private		Total	
	Number	(%)	000	(%)	000	(%)	000	(%)
500 & less	138,306	(13.4)	915	(11.4)	68	(2.5)	983	(9.2)
501 – 1,000	499,187	(48.3)	2,451	(30.6)	476	(17.5)	2,927	(27.3)
1,001 – 2,500	322,910	(31.3)	3,832	(47.9)	1,124	(41.3)	4,956	(46.1)
2,501 – 4,000	52,037	(5.0)	655	(8.1)	528	(19.4)	1,183	(11.0)
4,001 & over	19,745	(2.0)	162	(2.0)	526	(19.3)	688	(6.4)
Total	1,032,185	(100)	8,015	(100)	2,722	(100)	10,737	(100)
Unknown	62,646		–		–		–	

Table 6.3
Income Distribution of Jeepney and Bus Users

Average Household Income Range (₱/month)	Share in No. of Households (%)	No. of Trips/Day								Sub-Modal Share (%)		
		Jeepney		Bus		Others		Total				
		000	(%)	000	(%)	000	(%)	000	(%)	Jpy.	Bus	Others
500 & less	13.4	671	(13.1)	156	(7.6)	88	(10.1)	915	(11.4)	73.3	17.1	9.6
501 – 1,000	48.3	1,244	(24.4)	802	(39.2)	405	(46.4)	2,451	(30.6)	50.8	32.7	16.5
1,001 – 2,500	31.3	2,645	(51.8)	867	(42.4)	320	(36.7)	3,832	(47.9)	69.0	22.6	8.4
2,501 – 4,000	5.0	433	(8.6)	172	(8.5)	50	(5.7)	655	(8.1)	66.1	26.3	7.6
4,001 – & over	2.0	106	(2.1)	47	(2.3)	9	(1.1)	162	(2.0)	65.4	29.0	5.6
	100.0	5,099	(100)	2,044	(100)	892	(100)	8,015	(100)	63.5	25.5	10.9

Table 6.4
Distribution of Occupation of Public and Private Transport Users[1/]

Mode	Administrative/ Professional	Service/ Sales Clerical	Factory/ Transport	Pupil	Student	Housewife	Jobless	Total
Jeepney	477	1,411	560	406	1,941	537	193	5,525
	(9)	(26)	(10)	(7)	(35)	(10)	(3)	(100)
Bus	270	588	202	45	354	80	69	1,608
	(17)	(37)	(13)	(3)	(22)	(5)	(4)	(100)
Tricycle	18	70	34	128	74	83	10	417
	(4)	(17)	(8)	(31)	(18)	(20)	(2)	(100)
Public Sub-Total	765	2,069	796	579	2,369	700	272	7,550
	(10)	(27)	(11)	(8)	(31)	(19)	(4)	(100)
Car	711	394	86	135	195	74	33	1,628
	(44)	(24)	(5)	(8)	(12)	(5)	(2)	(100)
Taxi	43	45	17	6	21	20	7	174
	(27)	(28)	(11)	(4)	(13)	(13)	(4)	(100)
Others	66	214	102	293	137	10	13	835
	(8)	(26)	(12)	(35)	(16)	(1)	(2)	(100)
Private Sub-Total	820	653	205	434	353	104	53	2,622
	(35)	(25)	(8)	(17)	(13)	(4)	(2)	(100)
Total	1,585	2,722	1,001	1,013	2,722	804	325	10,172
	(16)	(27)	(10)	(10)	(27)	(8)	(3)	(100)

Source: 1980/83 HIS Data

1/ Upper figure: Number of trips (000)
Lower figure: (%); does not include "Others" and "Unknown"

6.1.3 Public Transport Demand

1) Total Demand Level

- According to the 1983 JUMSUT Public Transport Survey, the total Metro Manila bus and jeepney passenger traffic demand, as shown in Table 6.5, is estimated to be 10.3 million passengers and 58.6 million passenger -kilometers for 16 hours of a weekday (6 a.m. – 10 p.m.). This 16-hour traffic volume can be converted into daily traffic volume by multiplying it by 1.07. Average daily traffic is, therefore, approximately 11 million passengers and 63 million passenger -kilometers.
- Eighty-seven percent and 74 percent of passengers and passenger-kilometers, respectively, are of intra-city movement. Inter-city bus and jeepney transport between Metro Manila and its environs contribute 13 percent of total passengers and 25 percent of total passenger-kilometers.
- The jeepney carries 77 percent of total passengers (7.9 million/16 hours or 8.4 million/24 hours) and 60 percent of total passenger-kilometers (34.9 million/16 hours or 37.3 million/24 hours). Bus transport services the remaining 23 percent of passengers (2.4 million/16 hours or 2.6 million/24 hours) and 40 percent of passenger-kilometers (23.7 million/16 hours or 25.4 million/24 hours).
- The average trip length of passengers varies considerably between bus and jeepney and intra and inter-city movements. These are 3.8 kilometers and 8.8 kilometers for intra-city and inter-city jeepney routes, respectively, and 8.5 kilometers and 15.6 kilometers for intra-city and inter-city bus routes, respectively.
- The recent changes in bus and jeepney traffic can be understood by comparing the JUMSUT (1983) figures with those of MMUTIP (1980), as presented in Table 6.6. These can be summarized as follows:
  a) As a whole, the number of public transport passengers has remained the same, while the passenger-kilometers have increased by 9 percent since 1980.
  b) This is due to the considerable increase in bus passenger traffic (53 percent increase in passengers and 58 percent increase in passenger-kilometers) and the decrease in jeepney passenger traffic of approximately 10 percent.
  c) The increase in bus passenger traffic and the decrease in jeepney passenger traffic can be attributed partly to the effect of the LRT construction along Rizal/Taft Avenue and partly to the increased capacity of bus fleet. Another significant point that may also be considered is that passengers travelling longer lengths along the LRT corridor (while the corridor is open for traffic) are now diverted to EDSA where no jeepneys are allowed and bus fleet capacities have increased considerably.
  d) Therefore, it is expected that the completion of the LRT and the reopening of the LRT corridor for jeepney traffic will lead to a reduction in the current bus passenger traffic level.

2) Demand Distribution

- Distribution of public transport demand is obtained from the analysis of the HIS. The overall public transport demand level obtained from the HIS is approximately 7 million linked trips or 10.2 million unlinked trips (the average number of transfers of public mode trips is 0.46) which is very close to the number of bus and jeepney passengers (10.3 million). This implies that the estimated level of 7 million linked trips for Metro Manila is fairly accurate.

Table 6.5
Public Transport Demand Characteristics

Mode	Total No. of Pass/16 Hrs. 000	(%)	Total Pass.-Kms/16 Hrs. 000	(%)	Ave. Trip Length of Pass. Kms.
INTRA-CITY:					
Jeepney	6,935	(67.3)	26,485	(45.2)	3.8
Bus	1,990	(19.3)	16,875	(28.8)	8.5
Subtotal	8,925	(86.6)	43,360	(74.0)	4.9
INTER-CITY:					
Jeepney	947	(9.2)	8,382	(14.3)	8.8
Bus	437	(4.2)	6,838	(11.7)	15.6
Subtotal	1,384	(13.4)	15,220	(26.0)	11.0
TOTAL:					
Jeepney	7,882	(76.5)	34,867	(59.5)	4.4
Bus	2,427	(23.5)	23,713	(40.5)	9.8
Total	10,309	(100.0)	58,580	(100.0)	5.7

Source: JUMSUT Public Transport Surveys

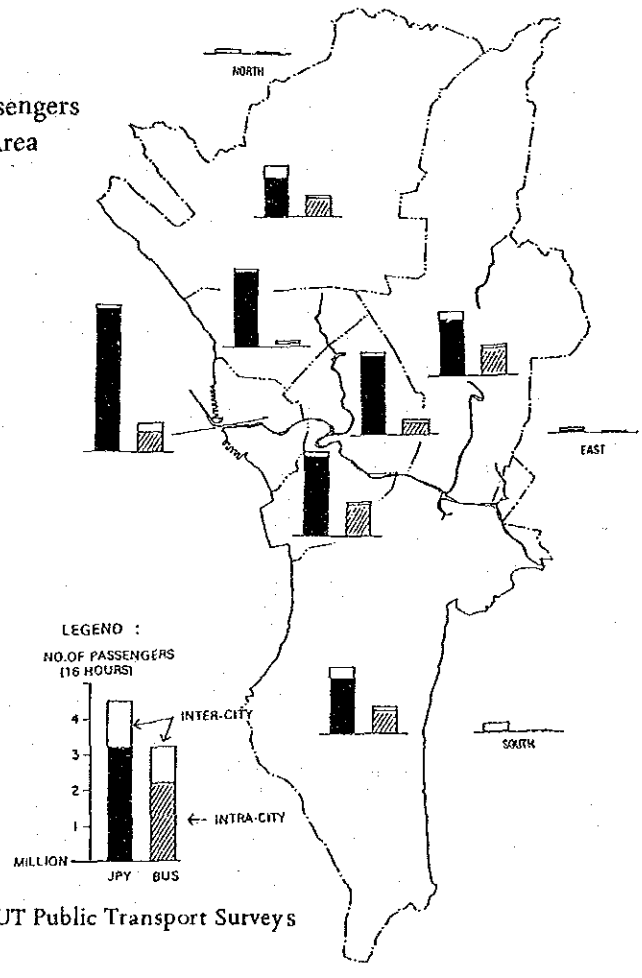
Table 6.6
Comparison of Metro Manila Intra-City Bus
and Jeepney Traffic Demand between
JUMSUT (1983) and MMUTIP (1980)

Items	Mode	MMUTIP (1980) 000	(%)	JUMSUT (1983) 000	(%)	JUMSUT/ MMUTIP
Total No. of Pass/ 24 Hrs.	Bus	1,396	(14.6)	2,130	(22.3)	1.53
	Jeepney	8,178	(85.4)	7,420	(77.7)	0.91
	Total	9,573	(100.0)	9,550	(100.0)	1.00
Total Passenger-Kilometers/24 Hrs.	Bus	11,407	(26.9)	18,056	(38.9)	1.58
	Jeepney	31,071	(73.1)	28,339	(61.1)	0.91
	Total	42,478	(100.0)	46,395	(100.0)	1.09
Average Trip Length (Kms.)	Bus	8.2		8.4		–
	Jeepney	3.2		3.8		–
	Total	4.4		4.9		–

Source: JUMSUT and MMUTIP Surveys

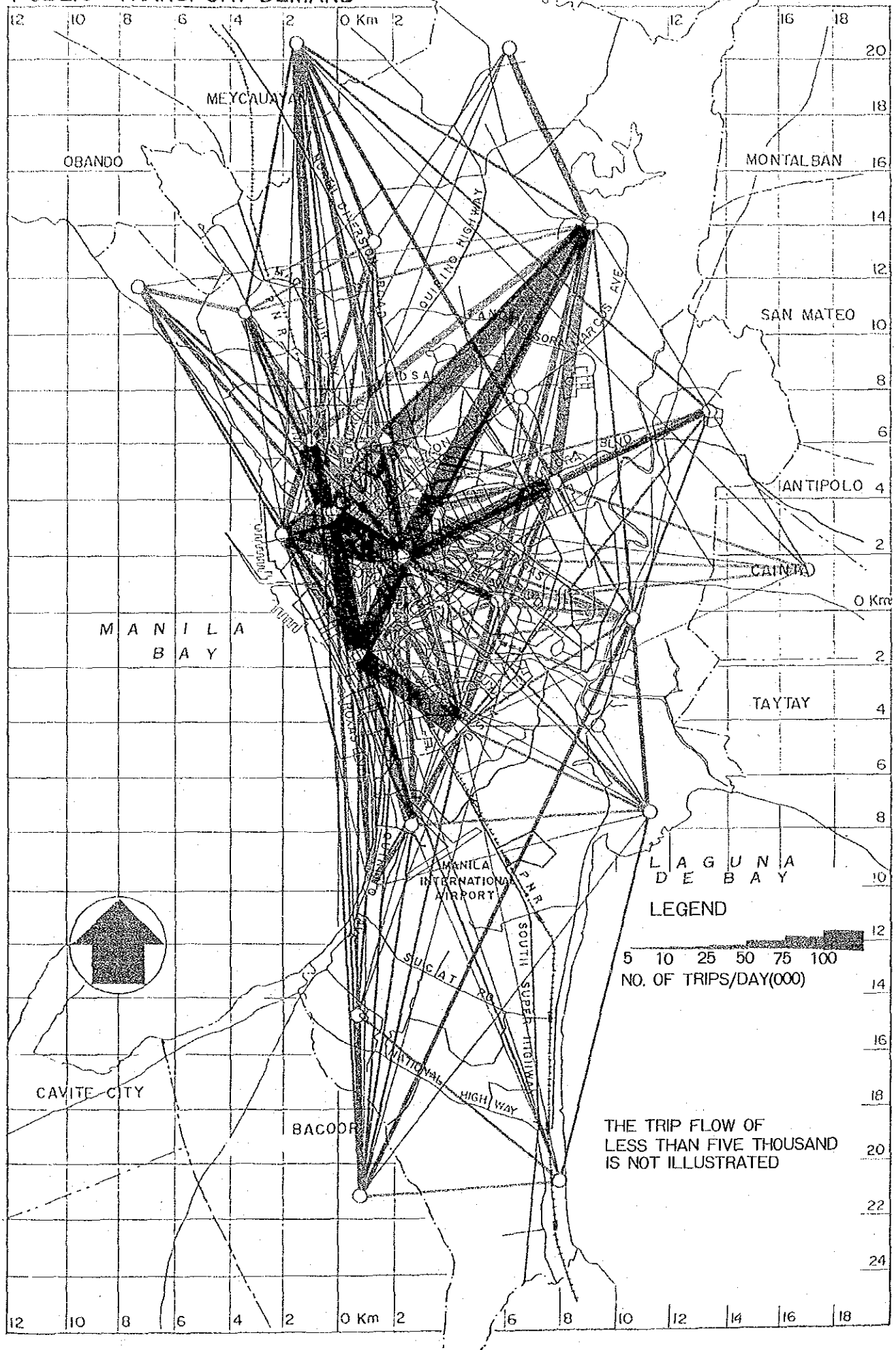
- Distribution of the public transport demand is shown in Figure 6.5 which clearly indicates that significant flows are still seen between the City of Manila and most of the Metro Manila area.
- Figure 6.6 shows the distribution of number of boarding and alighting passengers of buses and jeepneys within and outside Metro Manila. The major findings are as follows:
    a) The CBD is the most significant source of public transport passengers accounting for a total share of 22 percent of Metro Manila and its environs.
    b) For the area between the CBD and EDSA, the southern part, represented by Pasay City and Makati, shows the largest share, although the number of passengers are distributed almost equally in the eastern and the northern parts. In the northern part, the bus share is very low compared to the southern part where the bus is widely utilized.
    c) For the area outside EDSA, the northern, eastern and southern parts show a relatively equal distribution of passengers. The modal shares of jeepney and bus are also similar to each other.
    d) Outside Metro Manila, the southern part has a share of approximately 2 percent while the eastern and northern parts, only 1 percent each.

Figure 6.6
No. of Jeepney and Bus Passengers Boarding/Alighting by Area



Source: JUMSUT Public Transport Surveys

FIGURE 6.5 DESIRE LINES OF PUBLIC TRANSPORT DEMAND



3) **Demand Characteristics**

- Tables 6.7 and 6.8 and Figures 6.7 and 6.8 show the bus and jeepney passenger traffic by trip length, both for intra-city and inter-city transport.
- For the intra-city jeepney transport, 99.7 percent of the passengers are those with trip length of less than 10 kilometers, and cover 89.9 percent of the total passenger-kilometers. It is striking to note that 73 percent of the total passengers travels less than five kilometers, which is a minimum distance in existing bus and jeepney fare structures.
- On the other hand, intra-city bus passengers travel much longer, with an average trip length of 8.8 kilometers compared to 3.8 kilometers for intra-city jeepney. Most of the intra-city bus passengers travel between five and 15 kilometers (87 percent of the total passengers fall within this range).
- Trip lengths of intra-city jeepney and bus overlap between the range of 5.1 and 7.5 kilometers. Twenty-four percent of the total jeepney passengers and 33 percent of bus passengers, or 39 percent of jeepney passenger-kilometers and 26 percent of bus passenger-kilometers, fall within this range.
- Inter-city jeepney transport demand shows similar characteristics with intra-city bus transport. Eighty-three percent of the total inter-city jeepney passengers are those with trip length between 5.1 and 15 kilometers, wherein 84 percent of the total inter-city jeepney passenger-kilometers fall as well.
- Inter-city bus passenger traffic is concentrated at trip length range of 7.6 and 20 kilometers, wherein 88 percent of passengers and 82 percent of passenger-kilometers fall.
- Trip lengths of inter-city jeepney and bus overlap between the range of 10.1 and 15 kilometers. This range accounts for 17 percent of jeepney passengers and 32 percent of bus passengers, or 24 percent of jeepney passenger-kilometers and 26 percent of bus passenger-kilometers.
- Table 6.9 shows the average trip length of jeepney and bus passengers by corridor, both for intra-city and inter-city movement. In most corridors, the trip lengths of jeepney and bus passengers are clearly segregated. However, if the roles of jeepney and bus are to be segregated on the basis of the trip length of passengers, it seems that the functional split between jeepney and bus is not well maintained in the following corridors:
    a) Ortigas Avenue (Inter-city)
    b) Aurora Boulevard, Outside EDSA (Inter-city)
    c) D. M. Marcos Avenue (Intra-city)
    d) A. Bonifacio (Intra-city)
    e) Rizal Avenue (Intra-city)
    f) J. A. Santos Avenue (Intra-city)
    g) J. P. Rizal (Intra-city)

Table 6.7
Number of Passengers and Passenger-Kilometers
of Intra-City Public Transport by Trip Length

Ave. Trip Length (Kms.)	Number of Passengers 000 (%)			Passenger-Kilometers 000 (%)		
	Jeepney	Bus	Total	Jeepney	Bus	Total
0.1 – 1.5	876.3(12.6)	0.0(0.0)	876.3(9.8)	701.0(2.6)	0.0(0.0)	701.0(1.7)
1.6 – 2.5	1,342.6(19.4)	19.8(1.0)	1,362.4(15.3)	2,685.2(10.0)	39.6(0.3)	2,724.8(6.4)
2.6 – 5.0	2,818.0(40.6)	191.8(9.6)	3,009.8(33.7)	10,708.4(40.0)	725.8(4.7)	11,434.2(27.1)
5.1 – 7.5	1,658.1(23.9)	649.8(32.7)	2,307.9(25.9)	10,446.0(39.0)	4,093.7(26.4)	14,539.7(34.4)
7.6 – 10.0	222.7(3.2)	701.3(35.3)	924.0(10.4)	1,959.8(7.3)	6,171.4(39.8)	8,131.2(19.2)
10.1 – 15.0	9.3(0.1)	372.2(18.7)	381.5(4.3)	116.3(0.4)	3,461.5(22.3)	3,577.8(8.5)
15.1 – 20.0	7.6(0.1)	50.0(2.5)	57.6(0.6)	133.0(0.5)	875.0(5.6)	1,008.0(2.4)
20.1 – 25.0	0.0(0.0)	0.5(0.0)	0.5(0.0)	0.0(0.0)	11.3(0.1)	11.3(0.0)
25.1 – 30.0	0.6(0.0)	3.6(0.2)	4.2(0.0)	16.5(0.0)	99.0(. 0.5)	115.5(0.3)
30.1 & over	0.0(0.0)	0.5(0.0)	0.5(0.0)	0.0(0.0)	17.5(0.1)	17.5(0.0)
TOTAL	6,935.2(100.0)	1,989.5(100.0)	8,924.7(100.0)	26,766(100.0)	15,494.2(100.0)	42,261(100.0)

Source: JUMSUT Public Transport Survey

Figure 6.7
Distribution of Intra-City Public Transport Passengers
and Passenger-Kilometers by Trip Length

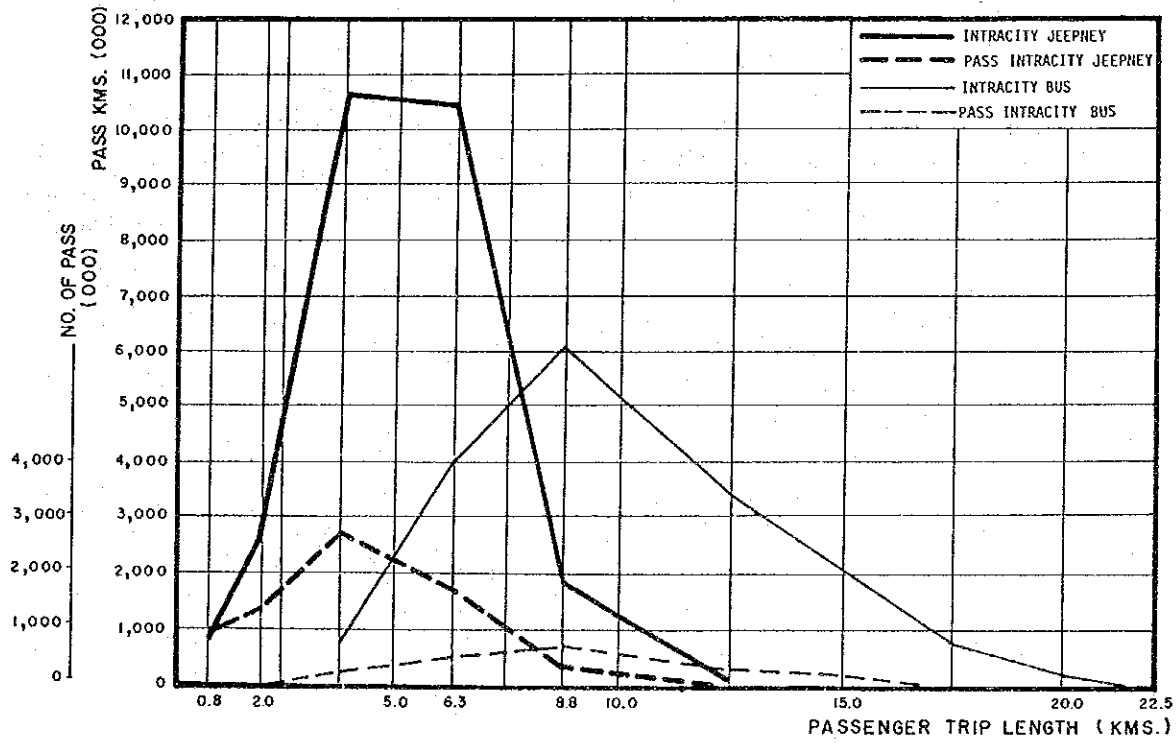


Table 6.8
Number of Passengers and Passenger-Kilometers
of Inter-City Public Transport by Trip Length

Ave. Trip Length (Kms.)	Number of Passengers 000 (%)			Passenger-Kilometers 000 (%)		
	Jeepney	Bus	Total	Jeepney	Bus	Total
0.1 – 1.5	25.7(2.7)	0.0(0.0)	25.7(1.9)	20.6(0.3)	0.0(0.0)	20.6(0.1)
1.6 – 2.5	14.2(1.5)	0.0(0.0)	14.2(1.0)	28.4(0.3)	0.0(0.0)	28.4(0.2)
2.6 – 5.0	72.8(7.7)	0.0(0.0)	72.8(5.3)	276.6(3.4)	0.0(0.0)	276.6(1.8)
5.1 – 7.5	223.8(23.6)	5.6(1.3)	229.4(16.6)	1,409.9(17.1)	35.3(0.5)	1,445.2(9.6)
7.6 – 10.0	405.0(42.8)	51.9(11.9)	456.9(33.0)	3,564.0(43.3)	456.7(6.7)	4,020.7(26.7)
10.1 – 15.0	155.9(16.5)	138.7(31.7)	294.6(21.3)	1,948.8(23.7)	1,733.8(25.5)	3,682.6(24.5)
15.1 – 20.0	34.8(3.7)	195.3(44.7)	230.1(16.6)	609.609.0(7.4)	3,417.8(50.2)	4,026.8(26.8)
20.1 – 25.0	6.6(0.7)	29.8(6.8)	36.4(2.6)	148.5(1.8)	670.5(9.8)	819.0(5.4)
25.1 – 30.0	8.2(0.9)	9.2(2.1)	17.4(1.3)	225.5(2.7)	253.0(3.7)	487.5(3.2)
30.1 & over	0.1(0.01)	6.9(1.6)	7.0(0.5)	3.5(0.04)	241.5(3.5)	245.0(1.6)
TOTAL	947.2(100.0)	437.3(100.0)	1,384.5(100.0)	8,234.8(100.0	6,808.6(100.0)	15,043.4(100.0)

Source: JUMSUT Public Transport Survey

Figure 6.8
Distribution of Inter-City Public Transport Passengers
and Passenger-Kilometers by Trip Length

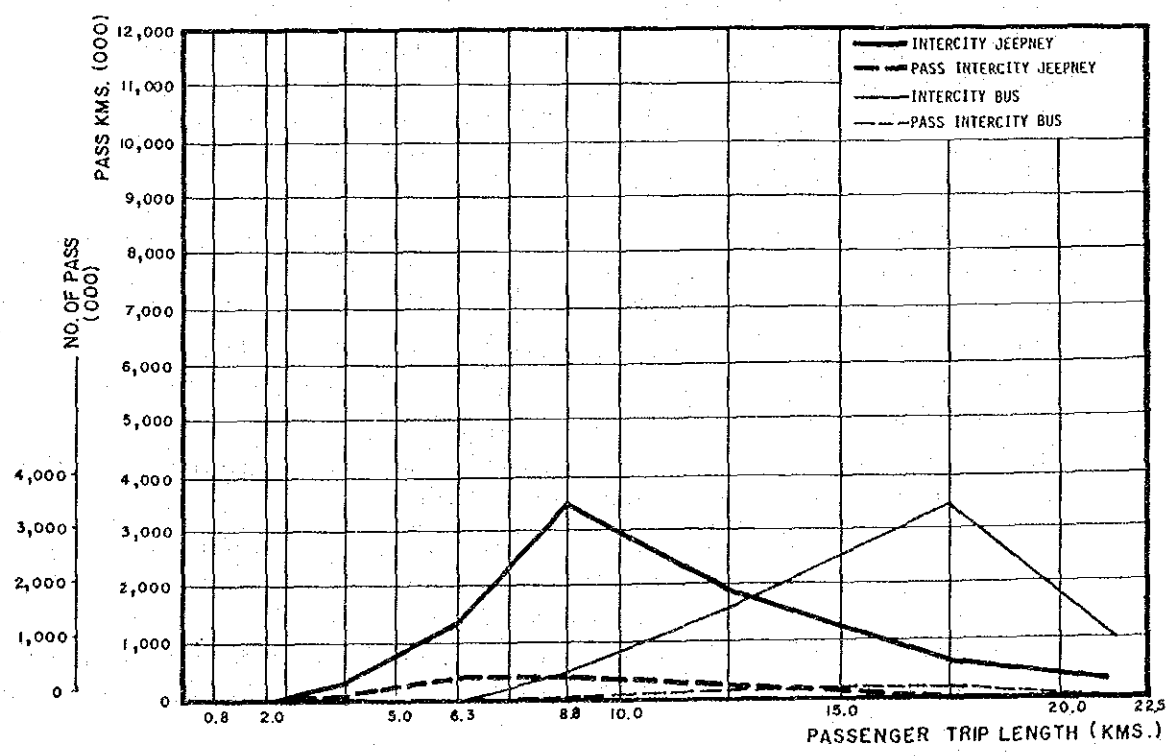


Table 6.9
Average Trip Length of Bus and Jeepney
Passengers by Corridor (16 hours, both directions)

Corridor	On Intra-City Route			On Inter-City Route			Total		
	Jeepney	Bus	Total	Jeepney	Bus	Total	Jeepney	Bus	Total
1. Roxas Blvd.	4.8	9.6	8.4	6.9	17.3	12.0	5.1	10.0	8.7
2. Quirino Ave.	4.4	8.5	5.3	6.2	16.3	8.5	4.7	9.8	5.8
3. Taft Ave.	4.9	7.2	5.2	8.9	17.2	16.1	5.0	11.9	6.6
4. South Super Highway	6.0	12.8	10.1	9.3	16.9	12.8	7.0	13.6	10.7
5. Buendia /Ayala Ave.	2.4	7.0	5.2	–	11.7	11.7	2.4	7.2	5.3
6. Shaw Blvd.	3.6	8.4	4.0	9.5	13.4	10.8	4.8	11.4	5.7
7. Ortigas Ave.	3.1	8.9	3.4	8.3	9.7	8.9	6.3	9.7	7.3
8. C.M. Recto Ave.	3.2	9.6	3.6	8.3	14.9	13.3	3.3	12.3	4.4
9. R. Magsaysay Ave.	3.7	8.3	4.0	4.7	10.9	10.7	3.7	9.9	4.5
10. Aurora Blvd. (Inside EDSA)	4.8	7.4	4.9	6.7	10.9	7.0	4.9	7.9	5.0
11. Aurora Blvd. (Outside EDSA)	4.7	8.1	4.8	6.7	8.6	6.9	4.9	8.2	5.1
12. E. Rodriguez Ave.	4.9	–	4.9	5.3	–	5.3	4.9	–	4.9
13. Quezon Ave.	5.2	7.9	5.4	5.3	13.7	5.5	5.2	7.9	5.4
14. D.M. Marcos Ave.	7.2	8.8	7.6	–	11.2	11.2	7.2	8.8	7.6
15. A. Bonifacio Ave.	4.7	5.7	4.9	6.8	13.9	12.9	4.7	7.2	5.3
16. N. Diversion Rd.	3.7	14.3	6.8	10.7	20.3	17.4	5.4	18.1	11.2
17. Quirino Highway	6.2	11.8	7.4	8.2	–	8.2	6.0	11.8	7.3
18. Rizal Ave.	5.3	4.7	5.3	10.0	23.1	15.3	5.7	15.8	6.6
19. J.A. Santos Ave.	4.7	6.5	4.8	8.2	27.7	13.3	5.0	14.1	5.6
20. McArthur Highway	6.2	13.7	7.4	8.9	–	8.9	7.4	13.7	8.0
21. J. Luna Ave.	3.4	5.7	3.6	7.4	14.9	9.4	3.4	5.9	3.6
22. P. Quirino Ave.	2.7	5.9	3.2	8.1	13.5	12.7	2.7	7.4	3.6
23. EDSA	3.9	9.4	8.2	11.6	16.1	12.3	5.7	9.5	8.5
24. J.P. Rizal	3.0	4.6	3.3	–	22.8	22.8	3.0	4.7	3.4
25. Mabini/Harrison	4.5	7.3	4.6	7.6	17.5	13.8	4.6	12.1	5.1

Source: JUMSUT Public Transport Surveys

6.1.4 Bus/Jeepney Passenger Traffic on Roads

- Public transport passenger flow on the major road network is shown in Figure 6.9. Most of the corridors are dominated by jeepneys. Bus passenger volume is significant only along EDSA, South Super Highway, Taft, and Roxas Boulevard where the jeepney is not allowed or is limited except for Taft Avenue. Generally speaking, relatively dense distribution of bus passenger traffic is seen in the south and east of the area.
- Figures 6.10 shows the distribution of boarding and alighting passengers for bus and jeepney, respectively. Although jeepney passengers generate everywhere, heavier concentration is seen in the area within C-2 and other major terminal areas such as Blumentritt, Monumento, Cubao, Sta. Mesa, Guadalupe, Baclaran, Libertad, etc. On the other hand, major traffic generating areas for buses are rather limited to those along EDSA, including Plaza Lawton, Quiapo, Divisoria, and Cubao.
- Table 6.10 shows the number of jeepney and bus passengers by corridor for both intra-city and inter-city transport. The following can be pointed out:
  a) In most corridors, there are more intra-city passengers than inter-city passengers. However, in Ortigas Avenue, the majority are inter-city passengers and nearly half of the passengers in North Diversion Road and McArthur Highway is inter-city. South Super Highway and Shaw Boulevard also have an important role in inter-city transport. In these corridors, except McArthur Highway, the share of bus is relatively high.
  b) In the intra-city transport, jeepney is predominant in most corridors. Bus transport plays a significant role only in Roxas Boulevard, South Super Highway, Buendia/ Ayala Avenue, and EDSA.

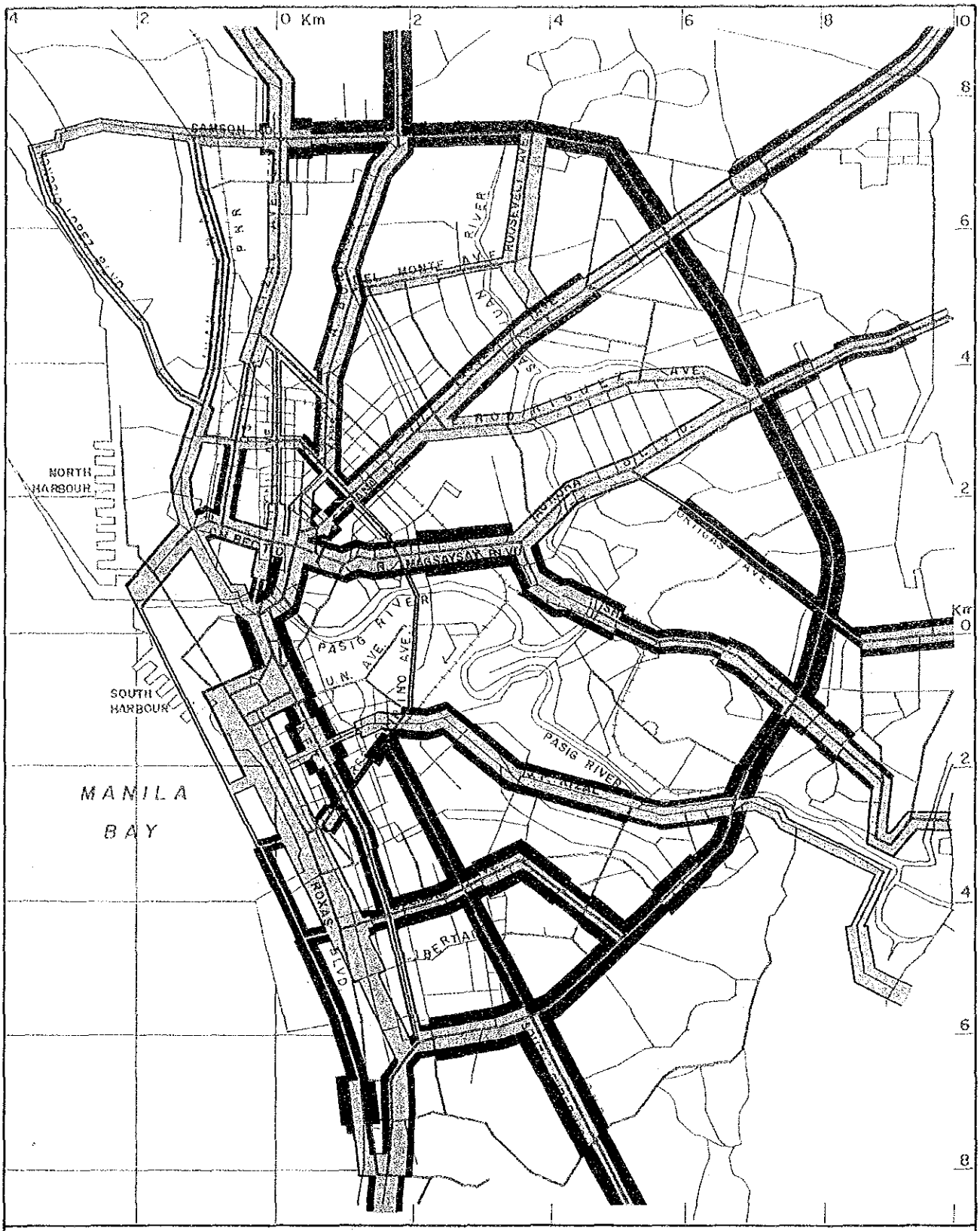


FIGURE 6.9 BUS AND JEEPNEY PASSENGER TRAFFIC FLOW ON MAJOR ROADS

BUS — JEEPNEY

200,000 100,000 (PASS./16 HRS.)

NORTH

SOURCE: PREPARED BASED ON JUMSUT PUBLIC TRANSPORT SURVEY

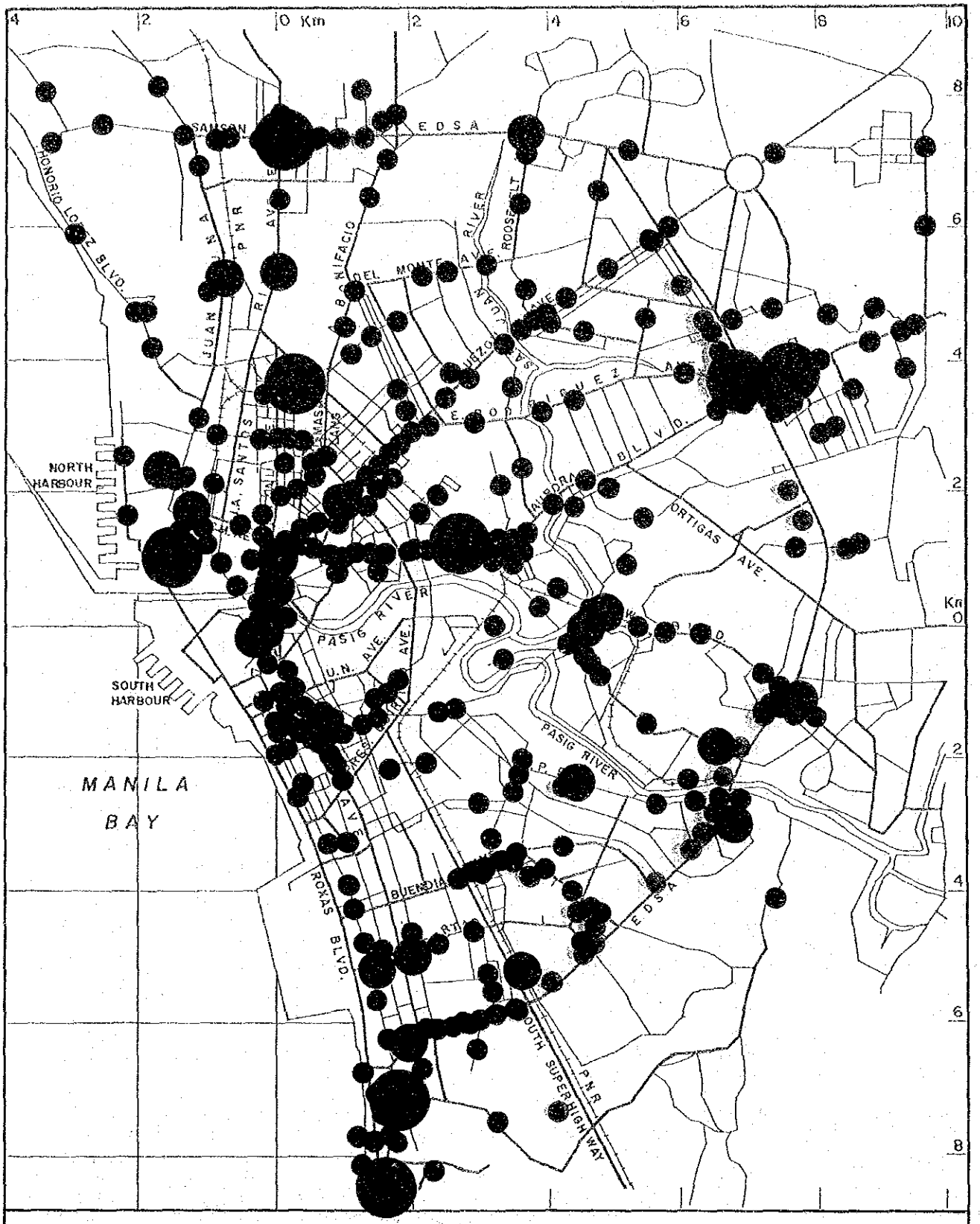


FIGURE 6.10 BUS/JEEPNEY BOARDING AND ALIGHTING PASSENGER DISTRIBUTION

NO. OF BOARDING & ALIGHTING PASSENGERS/16HRS.

10,000 & OVER
50,000—10,000
10,000—50,000

JEEPNEY

BUS

NORTH

SOURCE: Prepared based on JUMSUT Public Transport Surveys

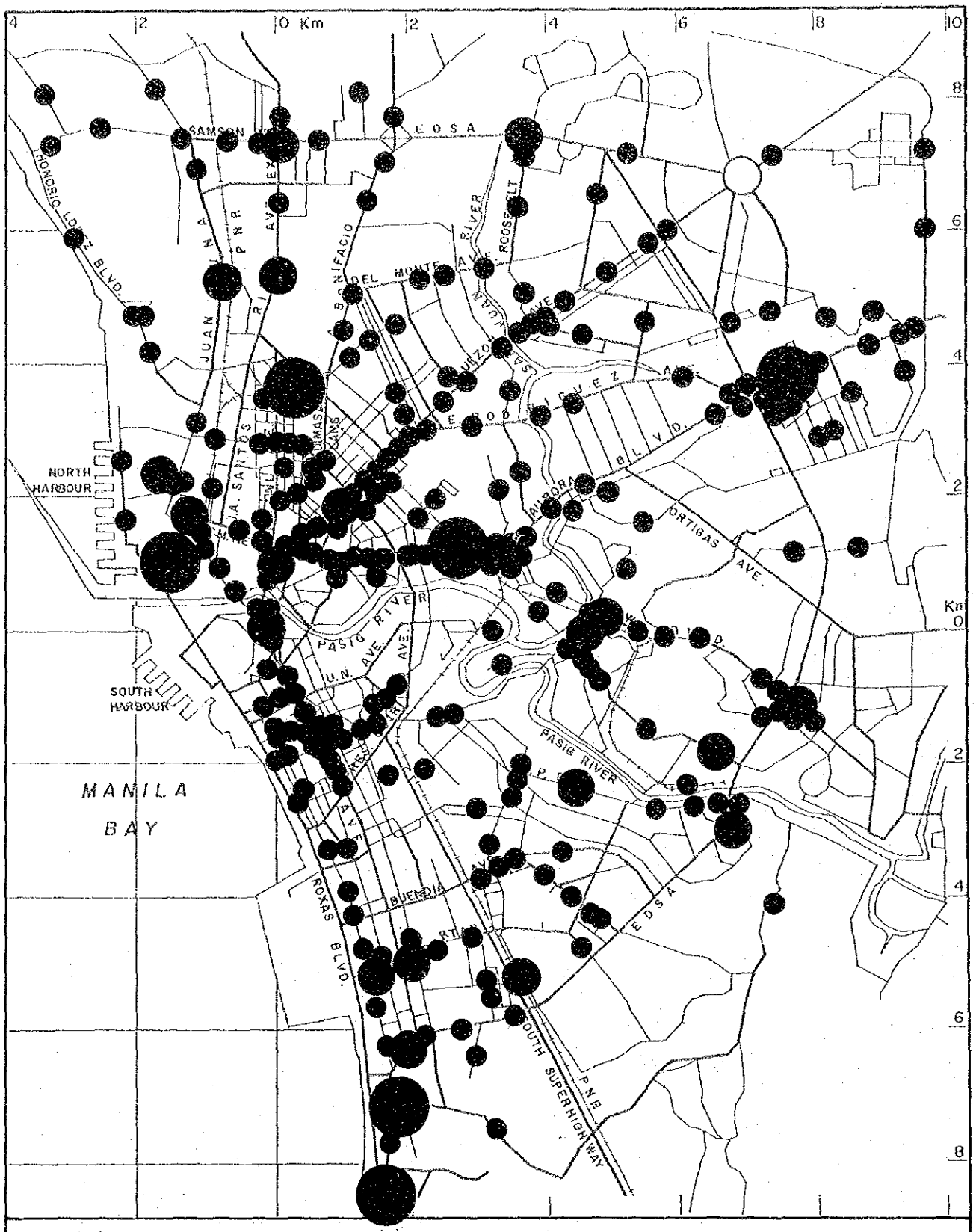


FIGURE 6.10 BUS/JEEPNEY BOARDING AND ALIGHTING PASSENGER DISTRIBUTION

NO. OF BOARDING & ALIGHTING PASSENGERS/16HRS.

10,000 & OVER
50,000–10,000
10,000–50,000

JEEPNEY

BUS

NORTH

SOURCE: Prepared based on JUMSUT Public Transport Surveys

Table 6.10
Number of Bus and Jeepney Passengers by Corridor
(16 Hours, Both Directions)

Corridor	On Intracity Route			On Intercity Route			Total		
	Jpy 000 (%)	Bus 000 (%)	Total 000 (%)	Jpy 000 (%)	Bus 000 (%)	Total 000 (%)	Jpy 000 (%)	Bus 000 (%)	Total 000 (%)
1. Roxas Blvd.	37(22)	117(70)	155(4)	7(4)	7(4)	13(8)	44(26)	124(74)	168(100)
2. Quirino Ave.	482(65)	138(19)	621(84)	100(13)	27(4)	121(16)	576(78)	166(22)	742(100)
3. Taft Ave.	596(76)	96(12)	691(88)	13(2)	85(11)	97(12)	608(77)	180(23)	788(100)
4. South Super Highway	88(30)	131(45)	219(77)	38(13)	32(11)	70(24)	126(44)	163(56)	289(100)
5. Buendia/ Ayala Ave.	201(39)	299(58)	500(97)	0(0)	14(3)	14(3)	201(39)	313(61)	515(100)
6. Shaw Blvd.	351(69)	29(6)	379(75)	85(17)	43(9)	129(25)	436(86)	72(14)	508(100)
7. Ortigas Ave.	29(27)	2(2)	30(29)	45(42)	31(29)	76(71)	73(69)	33(31)	106(100)
8. C. M. Recto Avenue	704(86)	47(6)	751(92)	15(2)	49(6)	64(8)	719(88)	96(12)	815(100)
9. R. Magsaysay Avenue	270(86)	16(15)	285(91)	1(0)	26(8)	27(9)	270(7)	42(13)	313(100)
10. Aurora Blvd. (Inside EDSA)	192(91)	5(3)	147(94)	9(6)	771(0)	9(6)	150(96)	6(4)	156(100)
11. Aurora Blvd. (Outside EDSA)	398(85)	18(4)	416(89)	49(10)	5(1)	54(11)	446(95)	23(5)	469(100)
12. E. Rodriguez Avenue	292(99)	0(0)	242(99)	2(1)	0(0)	2(1)	244(100)	0(0)	244(100)
13. Quezon Ave.	634(94)	40(6)	674(100)	2(0)	0(0)	2(0)	636(94)	40(6)	676(100)
14. D.M. Marcos Avenue	129(72)	50(28)	179(100)	0(0)	0.3(0)	0.3(0)	129(72)	50(28)	179(100)
15. A. Bonifacio Avenue	690(78)	154(17)	845(95)	6(1)	35(4)	40(5)	696(79)	189(21)	885(100)
16. N. Diversion Road	31(41)	13(17)	44(58)	10(13)	22(29)	31(42)	40(54)	35(46)	75(100)
17. Quirino Highway	124(77)	35(21)	159(98)	3(2)	0(0)	3(2)	128(79)	35(21)	163(100)
18. Rizal Ave.	371(84)	15(3)	386(87)	34(8)	23(5)	58(13)	405(91)	39(9)	444(100)
19. J.A. Santos Avenue	75(86)	4(5)	79(90)	6(7)	2(3)	9(10)	82(93)	6(7)	88(100)
20. McArthur Highway	173(50)	32(9)	204(59)	192(41)	0(0)	142(41)	315(91)	32(9)	347(100)
21. J. Luna Ave.	308(92)	26(8)	334(99)	1(0)	0.6(0)	2(1)	310(92)	26(8)	336(100)
22. P. Quirino Avenue	124(81)	23(15)	147(96)	1(1)	5(4)	6(4)	125(81)	29(19)	153(100)
23. EDSA	500(10)	1821(73)	2320(93)	154(6)	29(1)	183(7)	653(26)	1850(74)	2503(100)
24. J.P. Rizal	431(79)	117(21)	548(100)	0(0)	0.3(0)	0.3(0)	431(79)	117(21)	549(100)
25. Mabini/ Harrison	703(81)	28(4)	731(95)	15(2)	25(3)	40(5)	718(93)	52(7)	770(100)

Source: JUMSUT Public Transport Surveys

6.2 BUS/JEEPNEY ROUTES AND OPERATION

6.2.1 Routes

1) Route Configuration

- As shown in Table 6.11, the number of routes, at present, is 744 for jeepneys and 197 for buses. These also include those serving adjoining areas of Metro Manila. The changes that occurred since the MMUTIP study (1980) are:
  a) Significant increase in the number of Metro Manila bus routes; only 39 standard bus routes and one Love bus route existed in Metro Manila in 1980.
  b) Creation of new types of bus routes; there were no double decker and limited bus services in 1980.
  c) Diversion of mini-buses from intra-city to inter-city services.

Table 6.11
Number of Existing Jeepney and Bus Routes
in the Study Area

Mode	Metro Manila	Inter-City	Total
Jeepney:	640	104	744
Bus:	150	47	197
– Standard Bus	106	13	119
– Double Decker	3	0	3
– Limited Bus	5	0	5
– Love Bus	27	1	28
– Mini-bus	9	20	29
– Provincial Bus	0	13	13

Source: JUMSUT Public Transport Survey

- Figures 6.11 and 6.12 show the existing basic route structure of bus and jeepney. The current route configurations of jeepney and bus seem complementary to each other, except on some roads. Jeepney routes are generally short and concentrated in the radial roads/streets, especially in Taft Avenue, Rizal Avenue, Espana, and R. Magsaysay; while the bus routes in circumferential roads like EDSA are long. Further findings are as follows:

  Jeepney Route Configuration:

  a) The overall jeepney route configuration is similar to a tree, with Taft Avenue (including Mabini/Harrison and Dakota) as its trunk. The Divisoria-based tree and Pier-based tree are merging their branches to this tree.
  b) However, most of the routes from Divisoria are towards the direction of R. Magsaysay crossing other routes.
  c) From some important points of these trees, such as Quiapo, Blumetritt, Monumento, Balintawak, España Rotonda, Cubao, and Sta. Mesa, several routes branch off to each radial direction.

d) From Taft Avenue, also at several important points like T. M. Kalaw, Vito Cruz, Libertad, Pasay Rotonda, and Baclaran, several routes (roots) branch off to each radial direction.
e) Among these main stream routes, there are some short routes serving mainly intra-zonal movements. This is notable in Pasay, Makati, Cubao, and Novaliches areas.

Bus Route Configuration:

a) The route configuration for bus varies by service type.
b) Most of the ordinary bus routes are plying EDSA. The service density, especially between Cubao and Ayala, is very high. Aside from EDSA, the next important streets for bus are Taft Avenue (between Lawton and Buendia), Buendia/Ayala and Quezon Avenue.
c) Although there are routes plying radial streets such as South Super Highway, J. P. Rizal, Shaw Boulevard, Ortigas Avenue, Aurora Boulevard, Rizal Avenue, and J. Luna, they are not very important in terms of number of routes and service frequency.
d) Premium bus routes are similar to those of ordinary buses; routes are concentrated in EDSA, Buendia/Ayala, Taft and Quezon Avenue.
e) Mini-bus routes are mostly provincial, operating mainly on the North Diversion Road, Sumulong Highway, South Super Highway, and Quirino Avenue. The route configuration is completely radial.
f) Provincial bus routes are also radial. The main entrance/exit roads are the North Diversion Road, South Super Highway, and Quirino Avenue.

2) **Route Characteristics by Route Length**

- The existing bus and jeepney routes, classified by route length, are presented in Table 6.12. The route length distribution is shown in Figure 6.13.
- Of the total 640 intra-city jeepney routes, 24 percent or 152 routes are shorter than five kilometers, 48 percent or 306 routes are shorter than 10 kilometers and 96 percent or 612 routes are shorter than 20 kilometers. The average route length is 10.4 kilometers. On the other hand, inter-city jeepney routes have an average length of 24.6 kilometers, while 96 percent or 100 out of a total of 104 routes are longer than 10 kilometers.
- Bus routes are twice as long as jeepney routes, both for intra-city and inter-city. The average route length of intra-city bus is 21.1 kilometers, while that of inter-city bus is 40.5 kilometers.
- Table 6.13 shows the frequency level of bus and jeepney by route length. The average hourly frequency of intra-city and inter-city jeepney routes is 41 (one-way direction) and 29, respectively while that for bus is 10 and 8, respectively. The general trend is that the shorter the routes are, the higher the frequencies.

FIGURE 6.11 EXISTING ROUTE STRUCTURE OF JEEPNEY

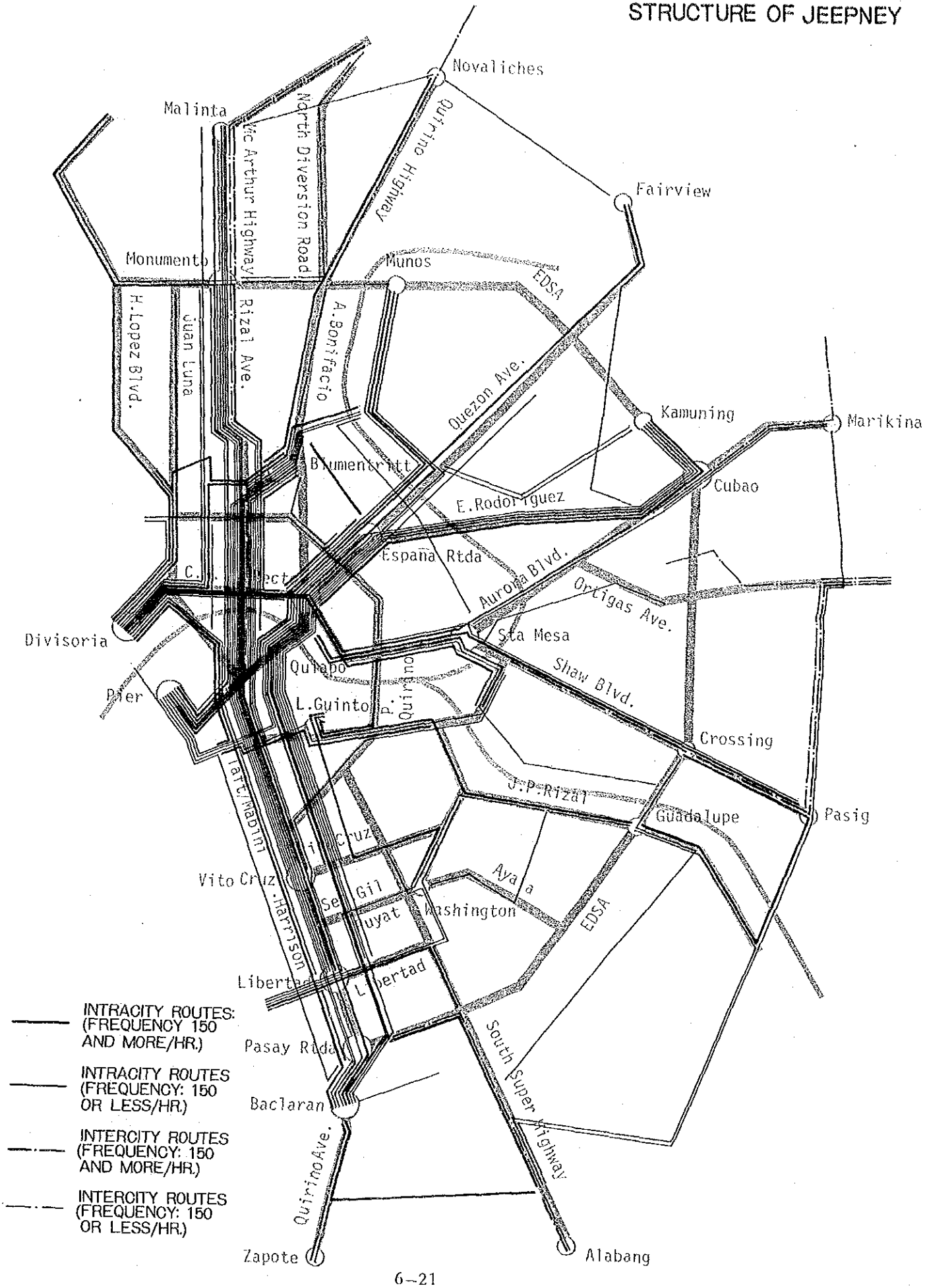


FIGURE 6.12 EXISTING ROUTE STRUCTURE OF BUS

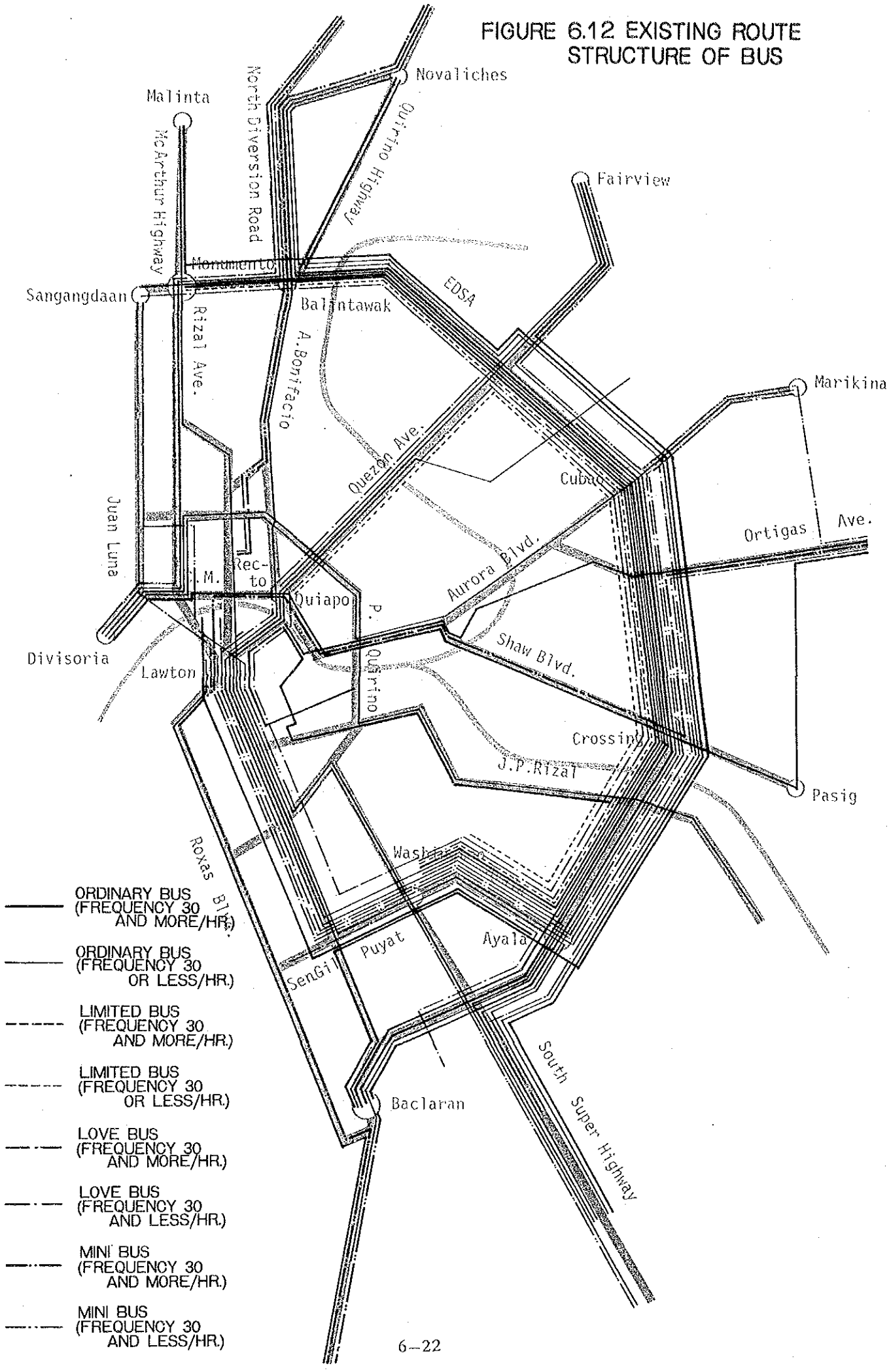


Table 6.12
Metro Manila Public Transport Routes by Length

	Number of Routes by Route Length (Kms.)						Ave. Route Length (Kms.)
	0. 1-5.0 No. (%)	5. 1-10.0 No. (%)	10. 1-20.0 No. (%)	20. 1-30.0 No. (%)	30.1 & over No. (%)	Total No. (%)	
INTRA-CITY							
Jeepney	152(23.8)	154(24.1)	306(47.8)	24(3.7)	4(0.6)	640(100.0)	10.4
Bus (Total)	2(1.3)	15(10.1)	56(37.6)	54(36.2)	22(14.8)	149(100.0)	21.1
Standard Bus	2	7	33	44	20	106	22.4
Double Decker	0	0	2	1	0	3	20.4
Limited Bus	0	0	4	1	0	5	20.3
Love Bus	0	8	14	5	0	27	14.5
Mini-Bus	0	0	3	3	2	8	27.1
INTER-CITY							
Jeepney	2(1.9)	2(1.9)	38(36.5)	32(30.8)	30(28.8)	104(100.0)	24.5
Bus (Total)	0(0)	0(0)	5(10.4)	8(16.7)	35(72.9)	48(100.0)	40.5
Standard Bus	0	0	2	2	9	13	45.4
Love Bus	0	0	0	1	0	1	23.0
Mini-Bus	0	0	3	4	14	21	35.1
Provincial Bus	0	0	0	1	12	13	45.6
TOTAL							
Jeepney	154(20.7)	156(21.0)	344(46.2)	56(7.5)	34(4.6)	744(100.0)	12.4
Bus (Total)	2(1.0)	15(7.6)	61(31.0)	62(31.5)	57(28.9)	197(100.0)	25.8
Standard Bus	2	7	35	46	29	119	24.9
Double Decker Decker	0	0	2	1	0	3	20.4
Limited Bus	0	0	4	1	0	5	20.3
Love Bus	0	8	14	6	0	28	14.8
Mini-Bus	0	0	6	7	16	29	32.9
Provincial Bus	0	0	0	1	12	13	45.6

Source: JUMSUT Public Transport Survey, Jan. 1983

Figure 6.13
Metro Manila Public Transport Route Length Distribution

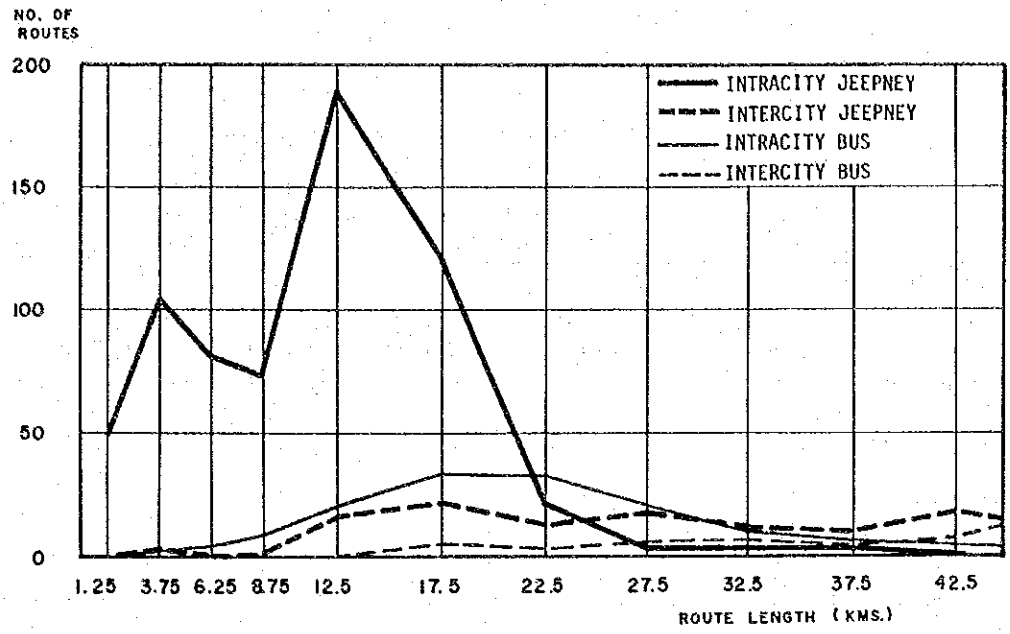


Table 6.13
Average Hourly Frequency
of Metro Manila Public Transport
By Route Length

Route	Mode	Average Hourly Frequency by Route (One-Way) 5.0 Kms.	10.0	20.0	30.0	Over	Average
INTRA-CITY	Jeepney	78	44	24	15	6	41
	Bus (Total)	18	7	10	10	11	10
	Standard Bus	18	10	12	12	11	12
	Double Decker	–	–	5	3	–	4
	Limited Bus	–	–	9	1	–	7
	Love Bus	–	5	4	2	–	4
	Mini-Bus	–	–	16	9	3	10
INTER-CITY	Jeepney	102	45	26	34	20	29
	Bus (Total)	–	–	7	6	9	8
	Standard Bus	–	–	11	9	4	6
	Love Bus	–	–	–	3	–	3
	Mini-Bus	–	–	5	6	14	11
	Provincial Bus	–	–	–	1	7	6
TOTAL	Jeepney	78	44	24	26	18	40
	Bus (Total)	18	7	9	10	10	10
	Standard Bus	18	10	12	12	9	11
	Double Decker	–	–	5	3	–	4
	Limited Bus	–	–	9	1	–	7
	Love Bus	–	5	4	2	–	4
	Mini-Bus	–	–	10	7	12	11
	Provincial Bus	–	–	–	1	7	6

Source: JUMSUT Public Transport Survey

6.2.2 Operation Characteristics

1) Overall Supply Characteristics

- The public transport characteristics on the supply side, as presented in Table 6.14, can be summarized as follows:
  a) The number of jeepney units actually operating for any given day is approximately 35,000 units (29,300 units for intra-city routes and 6,300 for inter-city routes). Considering that the utilization ratio of jeepney units is approximately 85 percent, it is estimated that 41,000 units, of which 34,500 are for intra-city routes alone, exist for Metro Manila public transport services.
  b) The average length of jeepney routes is 10.4 kilometers and 24.6 kilometers for intra-city and inter-city services, respectively, while those for intra-city and inter-city bus routes are 21.1 kilometers and 40.5 kilometers, respectively.
  c) The total public transport seating capacity provided by bus and jeepney is 107 million seat-kilometers, 61 percent of which are provided by jeepney.

Table 6.14
Metro Manila
Public Transport Supply Characteristics

		Route				Fleet Capacity			Operating Characteristics		
MODE		No. of Routes	Road Coverage (Kms.)	Total Route Length (Kms.)	Ave. Route Length (Kms.)	Estd. No. of Units 2/ Running	Total Vehicle Kms/16 Hrs. (000)	Total Seat-Kms/16Hrs. (000)	Ave.Kms. Running 16 Hrs.	Ave. No. of Turn-Arounds Trips/ 16 Hrs.	Ave. Daily Load Factor 1/
INTRACITY	Jeepney	640	571	6.661	10.4	29,261	3,154	48,995	107.8	5.2	54.1
	Bus	149	287	3,148	21.1	4,368	506	29,508	115.9	2.7	57.2
	Subtotal	789	608	9.809	–	33.629	3.660	78.503	–	–	55.2
INTERCITY	Jeepney	104	195	2.559	24.6	6.226	1.043	16.118	166.5	3.4	52.0
	Bus	48	172	1.944	40.5	1.543	237	12.740	153.9	1.9	53.7
	Subtotal	152	255	4.503	–	7.809	1.280	28.858	–	–	52.7
TOTAL	Jeepney	744	610	9.220	12.4	35.527	4.197	65.112	118.1	4.8	53.5
	Bus	197	327	5.092	25.8	5.911	744	42.248	125.8	2.4	56.1
	Subtotal	941	650	14.312	–	41.438	4.941	107.360	–	–	54.6

Source: JUMSUT Public Transport Survey.

1/ Load Factor is calculated by dividing Passenger-Kms. by Seat-Kms.
2/Only those actually operating are included.

- The Metro Manila public transport characteristics can also be described by location of routes as shown in Table 6.15 wherein intra-city routes are classified into those located within EDSA,those across EDSA,and those outside; while inter-city routes are classified by direction: north, east and south bound. These are further summarized as follows:

a) The total number of intra-city jeepney routes is 640, of which 238 (37 percent of the total) are within EDSA, 288 (45 percent) are across EDSA, and the remaining 114 routes (18 percent) are outside EDSA. Of the total 42,000 intra-city jeepney units, 35 percent, 48 percent and 18 percent are within EDSA, across EDSA and outside EDSA, respectively. Transport supply in terms of seat-kilometers are 31 percent, 50 percent and 17 percent, respectively. "Cross-EDSA" routes, playing the most significant role, have the longest average route length of 13.3 kilometers compared with "within EDSA" and "outside EDSA" routes with 6.9 kilometers and 10.4 kilometers, respectively.

b) As to bus transport, the role of "within EDSA" routes is relatively small: 22 percent of the total number of routes accounts for 17 percent of the number of units, 12 percent of total seat-kilometers, 19 percent of total passengers and 12 percent of total passenger-kilometers.

c) Of the inter-city jeepney transport, the south bound routes have the most share: 46 percent of the total units, 40 percent of the total seat-kilometers, 39 percent of total passengers and passenger-kilometers. East bound routes come in second highest, followed by north bound routes at a similar level.

d) On the other hand, the inter-city bus transport shows relative importance for north and south bound routes. The east bound routes account for 24 percent of total seat-kilometers and 26 percent of total passenger-kilometers, while the rest is shared by north and south bound routes.

e) The average daily load factors do not vary much among buses and jeepneys. These are 54 percent for jeepney and 56 percent for bus (the load factor of bus will become less when capacities for standees are taken into account).

f) Average kilometrage run per day is approximately 108 kilometers and 116 kilometers for intra-city jeepney and bus, respectively, while those for inter-city jeepney and bus are 167 kilometers and 154 kilometers, respectively. The kilometrage of intra-city jeepney and bus in the 1980 MMUTIP was 113 kilometers and 131 kilometers, respectively. This means that kilometrage for jeepney and bus was reduced approximately by five percent and 11 percent, respectively.

Table 6.15
Metro Manila Public Transport Characteristics
by Area

Jeepney	Intra-City Routes				Inter-City Routes				Total M. Manila
	Within EDSA	Cross EDSA	Outside EDSA	Total	North Bound	East Bound	South Bound	Total	
No. of Routes	238	288	114	640	36	31	37	104	744
Total Route Length (Kms.)	1,648	3,830	1,183	6,661	921	677	961	2,559	9,220
Ave. Route Length (Kms.)	6.9	13.3	10.4	10.4	25.6	21.8	26.0	24.6	12.4
Estimated No. of Units Running	10,184	13,984	5,093	29,261	1,547	1,844	2,875	6,266	35,527
Total Vehicle Kms/16 Hrs. (000)	1,004	1,621	528	3,154	287	342	414	1,043	4,197
Total Seat Kms/16 Hrs. (000)	15,353	24,480	8,162	48,995	4,386	5,335	6,397	16,118	65,113
Ave. Kms. Run/Vehicle/16 Hrs.	98.6	115.9	103.7	107.8	185.5	185.6	144.0	166.5	118.1
Ave. No. of Trips/16 Hrs.1/	7.1	4.4	5.0	5.2	3.6	4.3	2.8	3.4	4.8
Ave. Daily Load Factor (%)	50.8	56.7	51.9	54.7	52.4	53.6	50.4	52.0	53.5
Ave. No. of Pass/Vehicle/16 Hrs.	295	203	216	237	160	180	128	151	222
Total No. of Pass/16 Hrs. (000)	3,003	2,833	1,099	6,935	248	332	367	947	7,882
Total Passenger-Kms/16 Hrs. (000)	7,797	14,452	4,236	26,485	2,300	2,861	3,221	8,382	34,868
Ave. Trip Length (Kms.)	2.6	5.1	3.9	3.8	9.3	8.6	8.8	8.8	4.4

Bus	Intra-City Routes				Inter-City Routes				Total M. Manila
	Within EDSA	Cross EDSA	Outside EDSA	Total	North Bound	East Bound	South Bound	Total	
No. of Routes	33	81	35	149	18	12	18	48	197
Total Route Length (Kms.)	435	1,712	1,001	3,148	964	370	610	1,944	5,092
Ave. Route Length (Kms.)	13.2	21.1	28.6	21.1	53.6	30.8	33.9	40.5	25.8
Estimated No. of Units Running	752	2,281	1,335	4,368	555	491	497	1,543	5,911
Total Vehicle Kms/16 Hrs. (000)	59.8	272.6	173.8	506.2	94.9	56.7	85.9	237.5	743.6
Total Seat Kms/16 Hrs. (000)	3,411	15,974	10,122	29,508	4,890	3,103	4,747	12,740	42,249
Ave. Kms. Run/Vehicle/16 Hrs.	79.5	119.5	130.2	115.9	170.9	115.4	153.9	153.9	125.8
Ave. No. of Trips/16 Hrs. 1/	3.0	2.8	2.3	2.7	1.6	1.9	2.3	1.9	2.4
Ave. Daily Load Factor (%)	60.4	57.3	55.9	57.2	50.2	57.4	54.8	53.7	56.1
Ave. No. of Pass/BVehicle/16 Hrs.	499	458	426	456	229	316	312	283	411
Total No. of Pass/16Hrs. (000)	375	1,045	569	1,989	127	155	155	437	2,426
Total Pass. Kms/16 Hrs. (000)	2,059	9,152	5,663	16,875	2,455	1,782	2,601	6,838	23,713
Ave. Trip Length (Kms.)	5.5	8.8	10.0	8.5	19.3	11.5	16.8	15.6	9.8

Source: JUMSUT Public Transport Survey, Jan. 1983

1/ round trip

2) Vehicle Operation

- Several indicators regarding Metro Manila bus and jeepney operations are shown in Table 6.16. These are the following:
  a) **Average Kilometrage Run/Day:** is approximately 108 kilometers for intra-city jeepney and 116 kilometers for intra-city bus. Inter-city jeepneys and buses run an average of 167 kilometers and 154 kilometers, respectively. The average kilometers run/day for intra-city jeepney and bus has decreased by approximately five percent and 10 percent, respectively, as compared with the data of MMUTIP (1980) of 113 kilometers for jeepney and 131 kilometers for bus.
  b) **Average Number of Round Trips/Day:** is 5.2 and 2.7 for intra-city jeepney and bus, respectively, and 3.4 and 1.9 for inter-city jeepney and bus, respectively.
  c) **Average Number of Passenger/Vehicle/Day:** is 237 and 656 passengers for intra-city jeepney and bus, respectively.
- The average working days and hours of jeepney drivers were also investigated through a limited interview survey. The following were arrived at:
  a) Average number of working days/week/driver: 4.2 days
  b) Average working hours/week/driver: 60.2 hours
  c) Average working hours/working day/driver: 14.3 hours
- Regarding the terminal time, it is often said that the long wait of jeepneys for passengers on the roads of many terminal areas causes serious traffic congestions in and around these areas. According to the JUMSUT survey results shown in Table 6.17, the waiting characteristics of jeepney and bus are as follows:
  a) Jeepneys wait an average of eight minutes, while buses wait from eight to 25 minutes.
  b) In the case of jeepneys, the shorter the routes are, the shorter the average terminal time is; but the same is not true for buses.
  c) Average terminal time varies by terminal/terminal areas.

3) Load Factor

- The load factors of various public transport modes were likewise examined. Table 6.18 shows that:
  a) The average load factor of jeepney is 54 percent, while that of bus is 56 percent. (It should be noted that the load factor of bus is calculated based on seating capacity alone).
  b) The load factors of inter-city operation are slightly lower than those of intra-city operation.
  c) Although the load factor is highest during evening hours (average of three hours between four and seven p.m.), followed by morning hours (7-10 a.m.) and afternoon hours (12-3 p.m.), the differences among the three periods are not significant.
- Table 6.19 shows that load factors within Metro Manila are considerably higher than those outside Metro Manila.

Table 6.16
Metro Manila
Public Transport Operating Characteristics

Service Area / Mode	No.of Routes	Ave. Route Length (Kms)	Estd. No. of Units Running	Ave. Daily Load Factor (%)	Ave. Kms. Run/Veh/ 16 H.	Ave. No. of Turn-round Trips/16H.	Ave. No. of Pass/ Veh/16H.	Ave. Trip Length of Pass.(kms)
INTRACITY								
Jeepney	640	10.4	29,261	54.1	107.8	5.2	237	3.8
Bus (Total)	149	21.1	4,368	57.2	115.9	2.7	456	8.5
Std. Bus	106	22.4	3,740	58.0	118.3	2.6	476	8.5
D. Decker	3	20.4	35	52.1	115.7	2.8	909	6.6
Ltd. Bus	5	20.3	87	50.1	127.1	3.1	502	7.5
Love Bus	27	14.5	299	35.8	73.9	2.5	242	5.9
Mini Bus	8	27.1	207	66.8	128.2	4.7	304	12.0
INTERCITY								
Jeepney	104	24.6	6,266	52.0	166.5	3.4	151	8.8
Bus (Total)	48	40.5	1,543	53.7	153.9	1.9	283	15.6
Std. Bus	13	45.4	346	47.8	128.5	1.4	360	10.3
Love Bus	1	23.0	15	43.1	64.4	1.4	78	19.0
Mini Bus	21	35.1	933	53.2	150.5	4.3	229	16.7
Prov'l.Bus	13	45.6	249	59.6	207.1	2.3	393	20.1

Source: JUMSUT Public Transport Survey

Table 6.17
Metro Manila Public Transport Average Terminal Time

Route Length	Jeepney	Ordinary Bus	Double Decker Bus	Limited Bus	Love Bus	Mini-Bus	Prov'l. Bus
0 – 2.5	4.8	–	–	–	–	–	–
2.6 – 5.0	5.6	–	–	–	–	–	–
5.1 – 7.5	5.6	21.0	–	–	–	–	–
7.6 – 10.0	5.0	14.8	–	–	–	–	–
10.1 – 15.0	5.8	8.0	–	–	22.8	–	–
15.1 – 20.0	7.1	5.5	–	–	23.2	–	–
20.1 – 25.0	8.3	10.9	–	–	25.5	7.7	–
25.1 – 30.0	8.9	12.3	–	–	21.1	–	–
30.1 – 35.0	10.0	12.8	–	–	15.8	8.7	–
35.1 – 40.0	11.3	15.1	8.0	22.8	15.0	22.2	–
40.1 – 45.0	11.3	15.6	8.0	–	13.0	–	–
45.1 & over	11.3	16.2	–	35.0	20.5	22.7	18.8
Average	8.1	14.3	8.0	25.3	20.3	21.6	18.8

Source: JUMSUT Public Transport Survey

Table 6.18
Load Factor of Metro Manila Public Transport

Service Area/ Mode	Morning Hours (7-10 am)	Afternoon Hours (12-3 pm)	Evening Hours (4-7 pm)	Daily Average
INTRACITY				
Jeepney	55.3%	52.0%	59.5%	54.1%
Bus (Total)	65.1%	50.5%	70.0%	57.2%
Std. Bus	66.1	50.9	71.4	58.0
D. Decker	74.2	41.1	67.3	52.1
Ltd. Bus	63.4	43.8	59.4	50.8
Love Bus	39.1	30.0	48.9	35.8
Mini-Bus	69.3	67.2	65.1	66.8
INTERCITY				
Jeepney	51.4%	49.3%	54.9%	52.0%
Bus (Total)	57.2%	52.2%	58.0%	53.7%
Std. Bus	48.8	46.1	56.7	47.8
Love Bus	43.4	–	54.7	43.4
Mini-Bus	53.7	54.0	53.7	53.2
Prov'l. Bus	74.3	53.1	66.2	59.5
TOTAL METRO MANILA				
Jeepney	54.3%	51.3%	58.3%	53.5%
Bus (Total)	62.7%	51.0%	66.2%	56.1%
Std. Bus	64.5	50.5	70.0	57.0
D. Decker	74.2	41.1	67.3	52.1
Ltd. Bus	63.4	43.8	59.4	50.6
Love Bus	39.4	30.0	49.2	36.1
Mini-Bus	56.4	55.8	55.2	55.2
Prov'l. Bus	74.3	53.1	66.2	59.5

Source: JUMSUT Public Transport Survey

Table 6.19
Metro Manila Public Transport Load Factor
by Area (Daily Average)

	Within C-2	Between C-2and C-4	Outside C-4 in Metro Manila	Outside Metro Manila	Total
INTRACITY					
Jeepney	58.7	57.3	49.8	53.4	55.1
Ordinary Bus	67.3	64.6	53.6	41.6	58.1
Premium Bus	41.4	42.2	37.9	–	40.3
INTERCITY					
Jeepney	59.4	59.7	65.2	42.6	54.3
Ordinary Bus	60.1	74.1	66.6	40.9	56.6
Premium Bus	–	38.0	42.4	42.8	41.5
TOTAL METRO MANILA					
Jeepney	58.7	57.4	53.9	44.1	55.0
Ordinary Bus	65.1	66.0	56.0	41.0	57.7
Premium Bus	41.4	42.1	38.0	42.8	40.3

Source: JUMSUT Public Transport Survey

4) Travel Speed

- Travel speed is one of the important factors in public transport operation, both for operators and passengers. Faster travel speed attracts more passengers and at the same time, enables operators to complete more trips. It also reduces vehicle operating costs because it is commonly observed that vehicles which run at a low travel speed, especially lower than five kilometers, and the frequent acceleration and deceleration of vehicles due to traffic congestions highly contribute to the increase in vehicle operating costs.
- Travel time is one of the major concern of passengers in choosing their routes. During the LRT construction, it is observed that quite a number of passengers diverted from the LRT corridor to EDSA due to the decrease in travel speed.
- Table 6.20 gives an overall average travel speed of bus and jeepney in Metro Manila by period of hours. Its characteristics are:
  a) Travel speed is generally lower in the inner areas of Metro Manila, especially within C-2 where jeepneys travel at a speed lower than 10 KPH throughout the day.
  b) Generally, buses travel faster than jeepneys. As also seen in premium bus, travel speed is determined not only by the overall road traffic situation but also by the driving attitudes and the operating practices of getting passengers.
- Table 6.21 further looks into the travel speed by major corridor which shows that relatively congested roads are Taft Avenue, Ramon Magsaysay Boulevard, Juan Luna, A. Bonifacio, Rizal Avenue, C.M. Recto, and President Quirino Avenue. Travel speed differs according to direction and time period. As it is commonly observed, travel speed of bus is generally faster than that of jeepney.
- Figure 6.14 shows the road sections where travel speed is less than five kilometers per hour. They are spread out all over Metro Manila as follows; C.M. Recto, T. Mapua, Quezon Boulevard, Legarda, Pedro Gil, P. Faura, M.H. del Pilar, A. Mabini, Harrison, Pasong Tamo, Taft Avenue, Rizal Avenue and its nearby streets. España Rotonda, Baclaran, Cubao, Crossing, Monumento, Divisoria, Guadalupe, etc. are also low speed areas.

Table 6.20
Metro Manila
Overall Public Transport Average Travel Speed

Mode	Time Period	Ave. Travel Speed by Area (KPH) 1/ Within C-2	Between C-2/C-4	Outside C-4	Outside Manila
Jeepney	Morning (7-10 a.m.)	7.0	13.4	16.9	30.0
	Afternoon (12-3 p.m.)	9.3	12.4	16.0	25.0
	Evening (4-7 p.m.)	8.9	12.1	17.3	25.1
Ordinary	Morning (7-9 a.m.)	12.0	17.1	19.2	26.9
	Afternoon (12-3 p.m.)	13.1	16.2	22.7	26.2
	Evening (4-7 p.m.)	13.4	16.6	21.0	22.8
Premium	Morning (7-10 a.m.)	16.8	18.6	17.3	–
	Afternoon (12-3 p.m.)	15.5	20.8	19.4	–
	Evening (4-7 p.m.)	12.3	17.0	18.1	–

Source: JUMSUT Public Transport Survey, Jan. 1983
1/ Average of Both Directions

Table 6.21
Metro Manila Public Transport Average Travel Speed by Corridor

	Corridor	Direction	Jeepney Morning 7-10 am	Jeepney Afternoon 12-3 pm	Jeepney Evening 4-7 pm	Bus Morning 7-10 am	Bus Afternoon 12-3 pm	Bus Evening 4-7 pm
1.	Roxas Blvd.	CBD→EDSA	18.2	19.4	18.5	3.9	18.1	18.6
		EDSA→CBD	21.6	20.6	25.0	20.7	22.8	24.1
2.	Quirino Ave.	CBD→EDSA	13.6	14.4	8.4	15.1	13.6	12.0
		EDSA→CBD	10.4	13.4	12.4	18.1	18.4	17.5
3.	Taft Ave.	CBD→EDSA	9.9	11.9	9.5	15.3	16.9	18.1
		EDSA→CBD	11.7	10.7	11.1	13.9	17.8	16.2
4.	SS Highway	CBD→EDSA	20.7	6.1	21.5	23.5	35.8	30.4
		EDSA→CBD	31.8	19.4	30.3	28.7	34.0	27.1
5.	Ayala/Buendia	Clockwise	16.9	10.3	9.2	17.9	20.1	14.5
		Counter-Clockwise	14.4	11.7	7.0	12.4	14.0	12.4
6.	Shaw Blvd.	CBD→EDSA	16.4	17.5	16.9	14.3	15.8	14.3
		EDSA→CBD	17.1	18.3	13.7	16.3	15.3	16.5
7.	Ortigas Ave.	CBD→EDSA	14.5	14.1	11.3	21.9	15.7	12.1
		EDSA→CBD	28.3	21.2	12.7	20.8	15.7	20.6
8.	C.M. Recto Ave.	Clockwise	11.0	9.1	8.8	12.8	14.1	13.8
		Counter-Clockwise	8.9	7.1	7.0	10.1	10.7	11.5
9.	R. Magsaysay Blvd.	CBD→EDSA	7.7	8.2	6.6	12.0	9.1	16.7
		EDSA→CBD	8.1	11.0	9.3	10.9	11.3	15.3
10.	Aurora Blvd. (Inside EDSA)	CBD→EDSA	16.5	15.0	13.0	14.5	22.8	19.2
		EDSA→CBD	17.4	18.8	15.7	21.4	24.8	20.1
11.	Aurora Blvd. (Outside EDSA)	CBD→EDSA	13.4	16.9	13.5	18.2	24.9	19.3
		EDSA→CBD	13.3	13.3	10.7	23.1	25.4	19.5
12.	E. Rodriguez	CBD→EDSA	17.5	18.9	15.2	33.1	24.4	23.6
		EDSA→CBD	16.5	16.9	15.8	–	–	–
13.	Quezon Blvd.	CBD→EDSA	12.1	14.1	12.7	15.7	15.7	16.6
		EDSA→CBD	11.1	10.2	10.7	13.6	15.5	17.1
14.	Marcos Road	CBD→EDSA	25.9	19.0	22.1	21.6	21.2	22.3
		EDSA→CBD	30.7	24.3	24.7	20.5	20.9	23.8
15.	A. Bonifacio	CBD→EDSA	15.1	12.2	11.7	10.8	11.6	13.9
		EDSA→CBD	11.7	9.6	9.0	6.1	10.0	11.6
16.	N. Diversion Road	CBD→EDSA	13.3	9.1	11.8	1.8	22.1	19.2
		EDSA→CBD	–	–	–	45.8	34.0	48.8
17.	Quirino Hwy.	CBD→EDSA	17.7	16.3	18.6	17.6	25.8	11.8
		EDSA→CBD	13.6	16.1	21.0	19.7	22.0	44.9
18.	Rizal Ave.	CBD→EDSA	14.8	11.6	9.6	16.8	19.8	9.4
		EDSA→CBD	9.8	12.0	11.2	14.5	21.2	14.7
19.	J.A. Santos	CBD→EDSA	10.8	12.0	10.8	11.3	15.3	17.3
		EDSA→CBD	8.5	9.7	10.7	15.3	13.4	5.0
20.	McArthur Hwy.	CBD→EDSA	12.5	11.5	11.3	19.2	16.7	32.1
		EDSA→CBD	17.2	16.7	15.2	19.4	16.8	18.7
21.	Juan Luna	CBD→EDSA	9.5	8.4	8.4	10.0	11.6	9.1
		EDSA→CBD	10.8	5.3	9.7	12.3	12.8	11.2
22.	Pres. Quirino Avenue	Clockwise	14.7	10.6	9.7	14.8	15.3	17.8
		Counter-Clockwise	9.1	8.4	7.0	16.8	21.7	12.6
23.	EDSA	Clockwise	10.3	15.1	10.1	15.5	18.8	20.0
		Counter-Clockwise	13.6	13.1	12.4	18.5	20.6	16.8
24.	J.P. Rizal	CBD→EDSA	12.4	12.7	11.5	12.4	16.2	7.9
		EDSA→CBD	13.4	13.1	12.2	14.3	12.3	10.1

Source: JUMSUT Public Transport Survey

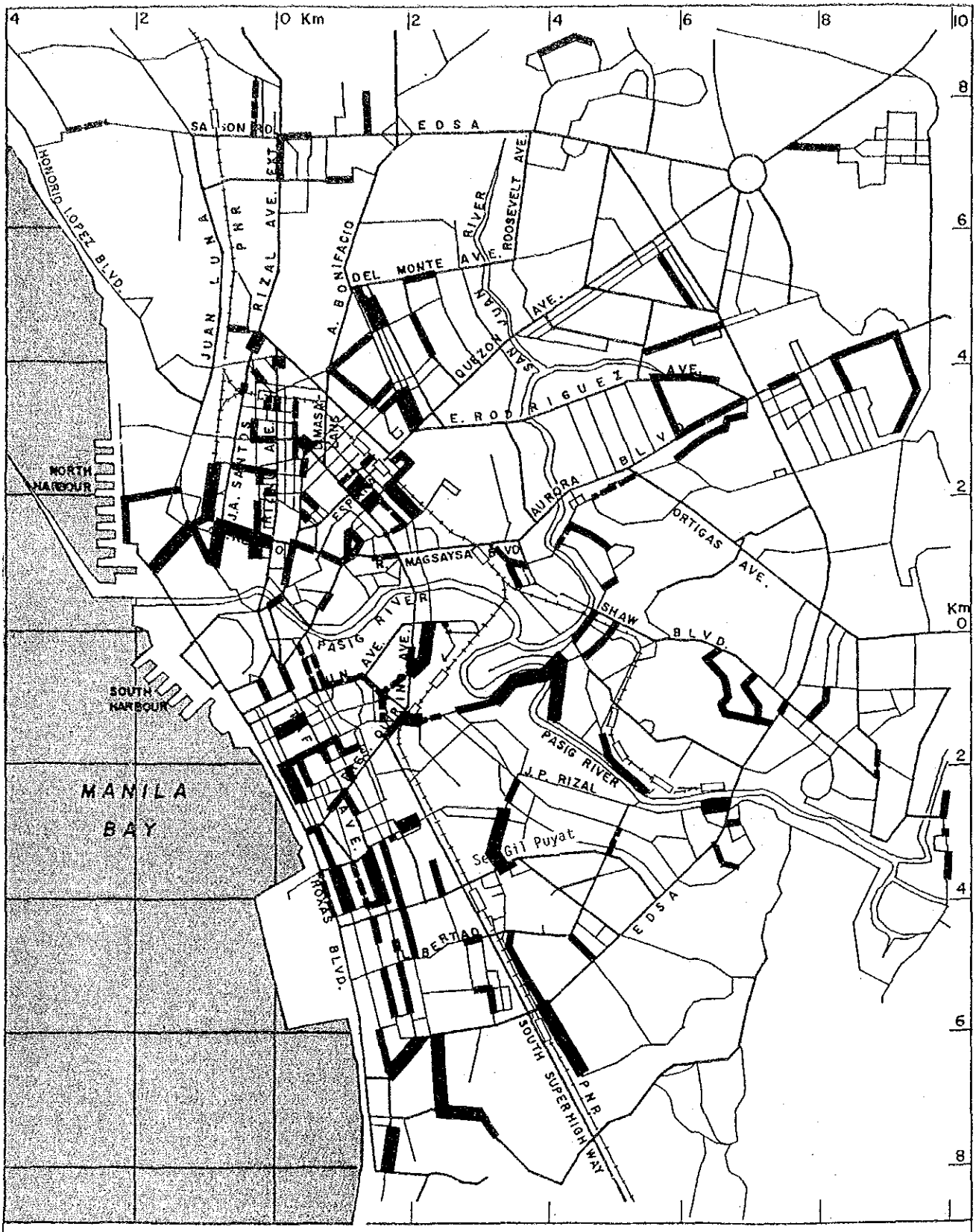


Figure 6.14
Road Sections With
Average Travel Speed
Less Than 5 kph

Source: JUMSUT Public Transport Survey

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