

### 12.3.3 Public Transport Terminals Between C-2 and C-4 (North)

#### 1) Characteristics

- This area covers A. Bonifacio, Rizal Avenue Extension, J.A. Santos, Juan Luna, and North Bay Boulevard between C-2 and C-4. It is served by all modes of public transport such as the bus, jeepney, PNR, tricycle, and will later be served by the LRT. The area is strongly characterized by the lack of lateral roads which link the fairly well developed radial roads between C-2 and C-4.
- There are approximately 37 terminals as summarized in Table 12.12. In terms of the number of passengers carried, the jeepney plays a dominant role in this area followed by the bus. Although the PNR carries only a limited traffic volume, San Lazaro (Blumentritt) station records the second largest traffic volume (approximately 5,000 boarding/alighting passengers a day in 1981). The LRT, when it is implemented, is expected to meet a total of 300,000 boarding/alighting passengers with its five stations in the area.

Table 12.12  
Public Transport Terminals  
Located in the North Area Between C-2 and C-4

Mode	No. of Terminal Areas	Estimated No. of Boarding/Alighting Passengers/16 hrs.	Remarks
Jeepney	16	684,500	
Bus	14	142,500	
PNR	2	7,200	San Lazaro, Caloocan
LRT	5	304,800	North Terminal, Blumentritt
Tricycle	(39)	421,900	
Total	37	1,560,900	

Source: JUMSUT Public Transport Survey

- As shown in Figure 12.5, the terminals are located mostly along the major radial roads. Only two or three are located away from the main roads. This is partly due to the lack of well-maintained secondary roads. Therefore, the remaining areas are served by tricycles.
  - The major terminals/terminal areas are Monumento, Blumentritt, Sangandaan, and Balintawak. The conditions and current problems encountered will be further explained in the following topics below:
- 2) Monumento: (See Appendix 12.1-G)
- Monumento covers several terminals for both city and provincial services of all public transport modes except the PNR. The terminal is situated at a strategic point in the Metro Manila urban transport network. The north terminal of the LRT is currently being constructed along Rizal Avenue Extension with an approximate distance of 300 meters south of EDSA intersection.
  - Two jeepney terminals and a provincial bus terminal are off-road types. A city/provincial jeepney terminal at Monumento uses a vacant lot, while the other at MCU uses a gas station as its terminal. An off-road provincial bus terminal is owned and operated

by the Victory Liner and is provided with fairly complete terminal facilities both for passengers and vehicles.

- A total of 45 jeepney routes and 21 bus routes are concentrated in this area with an approximate frequency level of 30,000 and 3,200/16 hours, respectively. Total boarding/alighting passengers is approximately 365,000/16 hours. Upon completion of the LRT, the number of boarding/alighting passengers is estimated to be as many as 160,000 a day. This will require a well-planned curbside for the interchange to/from the road transport. Tricycle is also heavily utilized in this area by approximately a total of 80,000 passengers a day.
- This terminal, situated not only in traffic generating sources, is also an important transfer point between the northern provinces and the south of Metro Manila. Therefore, it is very important that the on-going LRT station give a smooth link with the provincial routes.
- The problems that need to be looked into for this area are:
  - a) Traffic congestions along Samson Road, McArthur Highway, Monumento Rotonda, and EDSA/B. Serrano intersection.
  - b) Lack of pedestrian facilities across EDSA particularly in front of MCU.
  - c) Insufficient sidewalk capacity around the LRT north terminal.
  - d) The interchange among jeepney terminals which are scattered in a 700-meter distance.
  - e) Connection between the existing terminals and LRT station, when it is completed.

### 3) Blumentritt: (See Appendix 12.1-H)

- Blumentritt is also composed of several on-road sub-terminals which serve both the provincial and city jeepneys. In fact, the whole section of Blumentritt between Aurora Boulevard and Rizal Avenue is turning out to be a huge terminal. Other roads being used as terminals are part of Laguna, Antipolo, and Cavite roads. The PNR station of San Lazaro is situated in the middle of the area, while the LRT station is also being constructed around the intersection of Rizal Avenue and Blumentritt. This area will become an important modal interchange point with the presence of PNR, LRT, and the trunk road.
- This area is not only a place for shopping and local commercial activities but is also a transfer point between Rizal Avenue Corridor and A. Bonifacio/Del Monte Corridor. Approximately 30,000 jeepney/16 hours and 118,000 jeepney passengers/16 hours use this area. The tricycle is also a very popular mode in this area and it is estimated that approximately 30,000 passengers are generated. The San Lazaro PNR station's patronage level is only 5,000 passengers a day, while the LRT is expected to generate 35,000 passengers a day.
- Due to the closure of Rizal Avenue and the subsequent rerouting of jeepneys and buses during the LRT construction, many of the side streets in this area have been utilized. Most of them are expected to be continuously used according to the proposed rerouting plan. Problems encountered in this area are:
  - a) Traffic congestions along Antipolo, P. Guevarra, Cavite and at the intersections of Rizal Avenue/Cavite, Rizal Avenue/Laguna, and P. Guevarra/Cavite.
  - b) Deteriorated road surfaces along Antipolo (between F. Huertas and P. Guevarra), T. Bugallon and P. Guevarra.

- c) Insufficient sidewalk capacity along Rizal Avenue, Blumentritt, Cavite and Antipolo.
- d) Widely spread loading/unloading spaces (approximately 600 to 700 meters between both ends).

4) Sangandaan

- An on-road jeepney terminal and an on-road as well as two off-road bus terminals are located in this area. They are located along Samson Road and A. Mabini. The PNR station of Caloocan is found at the crossing of Samson Road.
- The daily frequency levels are: 7,900 for city jeepneys, 350 for city buses and 180 for provincial buses. Further, the levels of passenger traffic are 73,000, 18,000 and 5,000/16 hour, respectively. Passenger traffic at Caloocan Station is approximately 3,000/day.
- Major problems encountered in this area are:
  - a) Congestions at the intersection of Samson Road and A. Mabini
  - b) Deteriorated surface of the off-road bus terminal located in front of UE

5) Balintawak

- Balintawak has two on-road jeepney terminals. One of these terminals is considered a major one. A total of 15 routes terminate and approximately 9,000 jeepneys use this area. Seventy-seven thousand passengers board and alight daily on the major terminal.
- The major problems of this terminal are:
  - a) The market is spilling out onto the on-road space of the ramp.
  - b) Jeepneys use the ramp as a turning point.

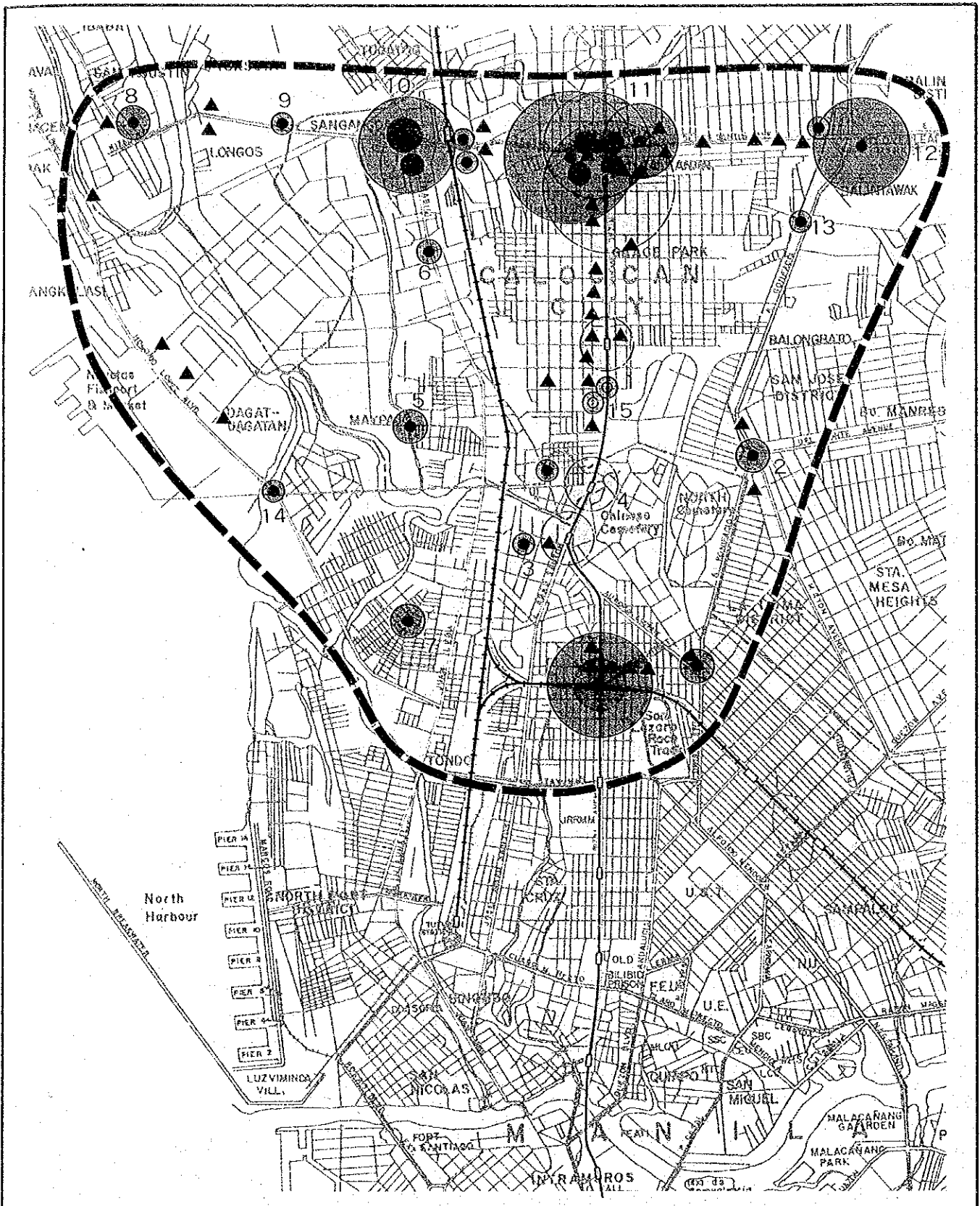
Table 12.13  
Public Transport Terminals Between C-2 and C-4 (North)

Terminal Name	City/ Provincial	No. of Routes	Frequency (16 Hrs.)	No. of B/A Pass. (16 Hrs.)	Off/ On-Road	Remarks
1. Blumentritt Area						
– Blumentritt-Rizal Ave.	City/Prov'l.	46(3)	15,000	117,600	on	Jpy.
– Dimasalang	City	1	14,300	15,500	on	Jpy.
– Blumentritt	–	–	–	–	–	LRT
– San Lazaro	–	–	–	–	–	PNR
Subtotal		47(3)	29,300	133,100		
2. Del Monte/A. Bonifacio	City	2	8,700	17,600	on	Jpy.
3. Manuguit Area						
– Manuguit	City	1	700	5,500	on	Jpy.
– A. Santos	–	–	–	–	–	LRT
Subtotal		1	700	5,500		
4. Obrero Area						
– Obrero	City	1	700	5,500	on	Jpy.
– R. Papa	–	–	–	–	–	LRT
Subtotal		1	700	5,500		

( Table 12.13 Cont'd. )

Terminal Name	City/ Provincial	No. of Routes	Frequency (16 Hrs.)	No. of B/A Pass. (16 Hrs.)	Off/ On-Road	Remarks
5. Maypajo	City	1	4,600	51,300	on	Jpy.
6. A. Mabini/P. Burgos	City	1	1,400	7,800	on	Jpy.
7. Balut	City	2	4,200	14,000	on	Jpy.
8. Malabon (T.P./Letre)	City/Prov'l.	6(2)	5,500	13,000	on	Jpy.
9. Letre	City	4	192	2,005	off (B)	Bus
10. Sangandaan Area						
– Sangandaan	City	6	7,900	73,000	on	Jpy.
– Sangandaan	Prov'l.	1	180	5,400	off (D)	Bus
– UE Caloocan	City	3	64	300	off (B)	Bus
– UE Caloocan	City	1	89	2,200	off (B)	Bus
– UE Caloocan	City	4	75	10,600	off (B)	Bus
– Sangandaan, Potrero & Tugatog	City	2	121	10,600	on	Bus
– Caloocan	–	–	–	–	–	PNR
Subtotal		17	8,429	102,100		
11. Monumento						
– Monumento	City/Prov'l	33(15)	21,200	214,000	off	Jpy.
– MCU	City	12	9,600	42,900	off	Jpy.
– Monumento	City	2	10	1,200	on	Bus
– Monumento	City	13	3,005	101,900	on	Bus
– Victory Terminal	Prov'l	2	112	2,000	off (D)	Bus
– Monumento	City	2	36	200	on	Bus
– Monumento	Prov'l.	1	13	2,000	on	Bus
– Monumento	City	1	17	100	on	Bus
– North Terminal	–	–	–	–	–	LRT
Subtotal		66	33,993	364,430		
12. Balintawak Area						
– Balintawak	City/Prov'l	15(3)	14,100	76,800	on	Jpy.
– EDSA/G. de Jesus	City	1	4,500	7,000	on	Jpy.
Subtotal		16	18,600	83,800		
13. A. Bonifacio/Biglang Awa	City	1	1,800	4,800	on	Jpy.
14. North Bay Blvd.	City	–	3,500	18,200	on	Jpy.
15. 2nd Avenue (East)	Prov'l.	6	42	4,000	off (D)	Bus
2nd Avenue (West)	Prov'l.	4	175	(4,000)	off (D)	Bus
5th Avenue	–	–	–	–	–	LRT
Subtotal		10	3,217	24,000		

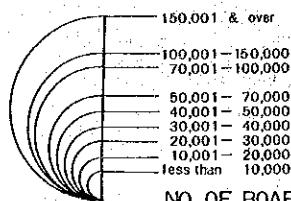
Source: JUMSUT Public Transport Survey



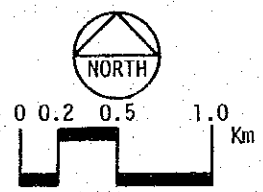
**LEGEND**

- JEEPNEY TERMINAL
- INTRA-CITY BUS TERMINAL
- INTER-CITY BUS TERMINAL
- LRT STATION
- PNR STATION
- ▲ TRICYCLE TERMINAL

**FIGURE 12.5 DISTRIBUTION OF PUBLIC TRANSPORT TERMINALS C-2/C-4(NORTH)**



NO. OF BOARDING/ ALIGHTING PASS. (16HRS)





### 12.3.4 Public Transport Terminals Between C-2 and C-4 (East)

#### 1) Characteristics

- This area covers the roads which link the area with the northeastern and eastern part of Metro Manila. The major radial roads included are Quezon Avenue, Aurora Boulevard, Ortigas Avenue, Shaw Boulevard, and J. P. Rizal. These roads are combined with other primary/ secondary roads such as Del Monte Avenue, E. Rodriguez, R. Magsaysay, Pedro Gil/Gen. Kalentong, and so on.
- There are 91 bus and jeepney terminals and 4 PNR stations in the area as summarized in Table 12.14. In terms of the number of passengers boarding/alighting, the jeepney has an overwhelming share. The bus and PNR's shares are negligible. The tricycle plays an important role in secondary systems.

Table 12.14  
Public Transport Terminals in the C-2/C-4  
Area (East)

	No. of Terminals	Number of Boarding/Alighting Passengers/16 hours	Remarks
Jeepney	74	1,835,200	
Bus	17	48,500	Laong-Laan,
PNR	4	12,800	Sta. Mesa, Pandacan, Laong-Laan
Tricycle	(45)	566,200	
Total	95	2,462,700	

Source: JUMSUT Public Transport Survey

- Generally speaking, the terminals are distributed mainly along the major roads and at the intersections of these roads, while some of the minor ones are away from the main roads and are concentrated in the local growth centers.
- Terminals that are considered important ones are explained in detail in the following topics:

#### 2) Cubao: (See Appendix 12.1-1)

- This place is one of the busiest commercial centers along EDSA comprising a number of bus and jeepney terminals for both city and provincial services. The terminals are spread in various locations and in extensively developed commercial areas. Jeepney terminals (except one) use on-road spaces along Aurora Boulevard and many other places in and around the commercial complex. Provincial bus terminals and a love bus terminal use off-road spaces, while the city bus load and unload passengers along the service lanes of EDSA.
- Cubao is a major traffic generating source. It provides destinations and transfer points to provincial passengers to/from the east of Metro Manila, (Montalban, Angono, Taytay, etc.).
- Accordingly, heavy traffic is seen. Approximately 70 routes exist with a 69,000-frequency of buses and jeepneys. About 267,000 passengers are loaded and unloaded.

- The current problems accounted in this area are:
    - a) Congestion along the service road of EDSA due to the loading/unloading of city bus passengers.
    - b) Chronic congestion at the intersection of EDSA and Aurora Boulevard.
    - c) Congestions and safety of pedestrians along Aurora Boulevard due to the concentration of jeepneys and insufficient sidewalks.
    - d) Deteriorated surface along Arayat Road.
    - e) Individual terminals are scattered, with nearly 900 meters distance between two end terminals.
- 3) Crossing: (See Appendix 12.1-J)
- This terminal, which comprises several on-road sub-terminals and is situated at the intersection of EDSA and Shaw Boulevard, serves the provincial jeepneys, city jeepneys and city buses. A total of 14 routes exist in this place with a frequency level of 25,900/16 hours and 162,000 passengers boarding and alighting. This terminal provides an important base to/from the east of Metro Manila (Binangonan, Taytay, Antipolo, etc.).
  - Ortigas commercial center has been developed close to the terminal. As the development goes on, it is expected that more and more public transport passengers will be generated, as had been experienced by the Makati area. One of the most important factors to be duly considered is how to provide a good public transport terminal function for the entire complex in due course of time.
  - Other problems currently being faced are:
    - a) Congestions along the service road of EDSA due to the concentration of loading/unloading of city bus passengers.
    - b) Lack of pedestrian crossing facilities across Shaw Boulevard.
    - c) Insufficient sidewalk width along Shaw Boulevard.
- 4) Guadalupe: (See Appendix 12.1-K)
- This terminal comprises several on-road sub-terminals which serve only the city jeepney and bus. Approximately 137,000 passengers board and alight (117,000 jeepney and 20,000 bus passengers) with a daily frequency of 19,000 and 500, respectively.
  - Guadalupe is a point from where passengers to/from the north via EDSA are distributed to/from Makati area either via EDSA or via J. P. Rizal. Since there are no jeepney routes on EDSA and no other major roads linking the Makati area with EDSA, an interchange function between bus (EDSA) and jeepney (J. P. Rizal) is considered important.
  - Major problems currently encountered are:
    - a) Chronic congestion in J. P. Rizal and at the ramp of the intersection with EDSA.
    - b. Congestions due to the mixture of buses for loading/unloading of passengers and jeepneys for turn-around in front of ABC commercial complex.
    - c) Insufficient sidewalk capacity of EDSA.
    - d) Jeepney terminals are scattered within a 450 meter distance.
- 5) Sta. Mesa/Stop and Shop Area: (See Appendix 12.1-L)



- This terminal has a couple of on-road jeepney terminals for city service located along the busy R. Magsaysay Boulevard and Old Sta. Mesa. Although the number of routes is only 16, their frequencies are as high as 58,600/16 hr. with 182,000 boarding and alighting passengers. A PNR station, which is one of the busiest among PNR stations (approximately 6,000 boarding/alighting passengers a day), is located in this area. Frequent bus services exist along R. Magsaysay Boulevard. The tricycle is used to a limited extent only.
- Major problems encountered are:
  - a) Lack of passenger waiting spaces along service roads of R. Magsaysay.
  - b) Lack of passenger waiting space along Old Sta. Mesa.
  - c) Poor surface conditions of service road on R. Magsaysay.

Table 12.15  
Public Transport Terminals C-2/C-4 (East)

Terminal Name	City Provincial	No. of Routes	Frequency (16 Hrs.)	No. of B/A Pass. (16 Hrs.)	Off/ On-Road	Remarks
1. Lardizabal Area – M. de la Fuente						
– Lardizabal – M. de la Fuente	City	2	1,600	6,800	on	Jpy.
– Nagtahan/Sta. Mesa Rotonda	City	3	100	100	off	Jpy.
Subtotal		5	1,700	6,900		
2. Sta. Mesa/Stop and Shop Area						
– Sta. Mesa (Tulay)	City	1	29,300	71,000	on	Jpy.
– Stop and Shop	City/Prov'l.	15(2)	29,300	111,000	on	Jpy.
– Sta. Mesa		—	—	—	—	PNR
Subtotal		16	58,600	182,000		
3. Sta. Mesa Market	City	1	12,200	41,600	on	Jpy.
4. Blumentritt/San Perfecto Area						
– Blumentritt/San Perfecto	City	—	1,300	4,500	on	Jpy.
– Blumentritt/N. Domingo	City	5	4,100	9,000	on	Jpy.
Subtotal		5	5,400	13,500		
5. San Juan (N. Domingo/Cristobal) Area						
– San Juan (N. Domingo/Cristobal)	City	2	6,800	29,500	on	Jpy.
– Broadway	City	—	—	—	off	Bus
Subtotal		2	6,800	29,500		
6. JRC/Kalentong Area						
– JRC/Kalentong	City/Prov'l.	10(6)	14,500	128,800	on	Jpy.
– Kalentong/Pershing	City	3	4,000	20,000	off	Jpy.
Subtotal		13	18,500	148,800		
7. Once Area						
– Once	City	2	1,300	16,600	on	Jpy.
– Little Baguio	City	5	4,100	9,000	on	Jpy.
Subtotal		7	5,400	25,600		
8. First West/Crame	City	3	3,800	14,200	on	Jpy.

(Table 12.15 cont'd.)

Terminal Name	City Provincial	No. of Routes	Frequency (16 Hrs.)	No. of B/A Pass. (16 Hrs.)	Off/ On-Road	Remarks
9. Unimart Area – Unimart – Greenhills	City City	1 1	900 61	6,500 100	on On	Jpy. Bus
Subtotal		2	961	6,600		
10. España/M. de la Fuente Area – España/M. de la Fuente – España	City —	1 —	3,400 —	20,900 —	on —	Jpy. PNR
Subtotal		1	3,400	20,900		
11. España/Blumentritt	City	1	900	6,00	on	Jpy.
12. España Rotonda Area – España Rtda. – Kanlaon	City City	12 1	38,400 2,700	43,000 17,800	on on	Jpy. Jpy.
Subtotal		13	41,100	60,800		
13. Lealrad	City	1	3,500	10,500	on	Jpy.
14. Balic-Balic	City	3	4,800	18,300	on	Jpy.
15. Dapitan/Blumentritt	Prov'l.	2	30	—	off (D)	Bus
16. Dapital/Mayon	City	13	6,200	25,000	on	Jpy.
17. Retiro Area: – Retiro – La Loma	City City	9 —	6,800 —	28,600 —	on on	Jpy. Jpy.
Subtotal		9	6,800	28,600		
18. Banaue/Del Monte	City	1	1,500	6,200	on	Jpy.
19. Banaue/Quezon Avenue	City	1	1,700	14,300	on	Jpy.
20. Quezon Institute	City	13	15,500	62,600	on	Jpy.
21. Santol	City	3	1,900	43,800	on	Jpy.
22. Talayan Village Area – Talayan Village – Araneta Ave./Quezon Ave.	City City	1 1	400 1,200	3,700 15,400	on on	Jpy. Jpy.
Subtotal		2	1,600	19,100		
23. Sct. Chuatoco/Quezon Ave.	City	1	1,200	500	on	Jpy.
24. Pantranco Area – Pantranco – Roces Avenue – Quezon Avenue (Roosevelt)	City City Prov'l.	2 4 7	10,700 3,000 24	37,500 12,900 —	on on off (D)	Jpy. Jpy. Bus
Subtotal		13	13,724	50,400		
25. Frisco	City	14	7,900	5,600	On	Jpy.
26. Roxas District	City	7	900	1,000	On	Jpy.
27. Panay Ave. Area – Panay Ave. – West Ave./Quezon Ave.	City City	1 1	1,800 4,100	14,900 6,900	On On	Jpy. Jpy.
Subtotal		2	5,900	21,800		

(Table 12.15 cont'd.)

Terminal Name	City Provincial	No. of Routes	Frequency (16 Hrs.)	No. of B/A Pass. (16 Hrs.)	Off/ On-Road	Remarks
28. Paltok	City	1	800	9,600	On	Jpy.
29. EDSA/West Ave. Area – EDSA/West Avenue – EDSA/North Avenue	City City	2 2	5,200 5,200	40,400 26,600	On Off	Jpy. Jpy.
Subtotal		4	10,400	67,000		
30. Project 7	City	3	600	3,100	On	Jpy.
31. Muñoz Market Area – Muñoz Market – Abra/Corregidor – Muñoz/EDSA	City City City	13 1 1	11,700 7,400 5	59,500 25,900 100	On On On	Jpy. Jpy. Bus
Subtotal		15	19,105	85,500		
32. Quezon Ave /EDSA	City	3	9,000	28,700	Off	Jpy.
33. ABS/CBN	City	2	300	1,400	On	Jpy.
34. Kamuning/KF Area – Q-Mart (E. Garcia) – Q-Mart (Col. Salgado) – Kamuning-KF – Kamuning – Sct. Rallos	City City City City	3 2 15 2	1,700 6,800 1,500 4,600	13,700 29,200 7,700 5,300	On On On On	Jpy. Jpy. Jpy. Jpy.
Subtotal		22	14,600	55,900		
35. Cubao Area – Cubao (Arayat) – Cubao (Arizona) – Cubao (Mercury) – Cubao (Diamond) – Cubao (Farmers) – Cubao (Yale) – Cubao (New York) – Cubao (Maya Theater) – Cubao (Grand Theater) – Cubao (Arayat) – Cubao Farmers Garden – Cubao Ali Mall – Cubao Farmers – Cubao	City City City City City/Prov'l. City Prov'l. Prov'l. Prov'l. Prov'l. Prov'l. City Prov'l. Prov'l. City Prov'l. City	5 1 1 1 24(7) 22 4 3 2 1 2 5 2 7	4,800 700 25,200 29,600 5,800 1,400 56 166 10 69 43 316 159 1,023	34,500 3,700 42,300 81,400 71,800 5,000 – – – 3,700 – 200 10 24,600	On On On Off On On Off (D) Off (D) Off (D) Off (D) Off (B) Off (B) Off (B) On	Jpy. Jpy. Jpy. Jpy. Jpy. Jpy. Bus Bus Bus Bus Bus Bus Bus Bus
Subtotal		73(7)	69,342	267,200		
36. Gate 5/EDSA	City	1	900	6,500	Off	Jpy.
37. Tropical Hut (EDSA/ Ortigas)	City	1	1,000	4,800	On	Jpy.
38. Crossing Area – Crossing (EDSA/United EDSA-Shaw Blvd.) – Crossing (Sierra Madre/Sultan) – Libertad (Sierra Madre/Malinao)	City/Prov'l. City City	12(5) 1 1	14,800 8,800 2,300	123,200 28,400 10,500	On-Off On On	Jpy. Jpy. Jpy.
Subtotal		14	25,900	162,100		

(Table 12.15 cont'd.)

Terminal Name	City Provincial	No. of Routes	Frequency (16 Hrs.)	No. of B/A Pass. (16 Hrs.)	Off/ On-Road	Remarks
39. Boni/EDSA/Pinatubo	City	3	8,700	78,900	Off	Jpy.
40. Hulo Area						
40. - Hulo (P. Victorino/Pantaleon)	City	1	2,700	11,300	On	Jpy. PNR
- Guadalupe		-	-	-	-	
Subtotal		1	2,700	11,300		
41. Guadalupe Area						
- Guadalupe/Bernardino/ Tulay Ibabaw	City	2	4,800	29,800	On	Jpy.
- Guadalupe/ABC Tulay Ilalin	City	16	8,700	83,300	On	Jpy.
- Pitogo		-	500	300	On	Jpy.
- San Jose	City	2	4,900	4,000	On	Jpy.
- Guadalupe	City	1	493	19,600	On	Bus
Subtotal		21	19,393	137,000		
42. Makati (TP)/P. Burgos	City	2	1,300	4,300	On	Jpy.
43. PRC Area						
- PRC	City	5	9,000	14,900	On	Jpy.
- Del Pan	City	2	4,900	7,700	On	Jpy.
Subtotal		7	13,900	22,600		
44. Namayan (E. Castañeda/ J.P. Rizal)	City	1	500	2,500	On	Jpy.
45. Sta. Ana Tulay/New Panaderos	City	2	3,300	8,200	Off	Jpy.
46. Bacood	City	3	2,600	24,400	On	Jpy.
47. Sta. Ana (Church)	City	1	3,300	7,600	On	Jpy.
Sta. Ana	City	1	160	200	On	Bus
Subtotal		2	3,460	7,800		
48. Punta	City	2	2,800	15,500	On	Jpy.
49. Pandacan (Beata) Area						
Pandacan (Beata)	City	1	4,200	15,300	On	Jpy.
Pandacan (Beata)	Prov'l.	-	-	-	On	Bus
Subtotal		1	4,200	15,300		
50. Pandacan (Laura) Area						
Pandacan (Laura)	Prov'l.	-	-	-	On	Bus
- Pandacan		1	78	-	-	PNR
Subtotal		1	78	-		

Source: JUMSUT Public Transport Survey

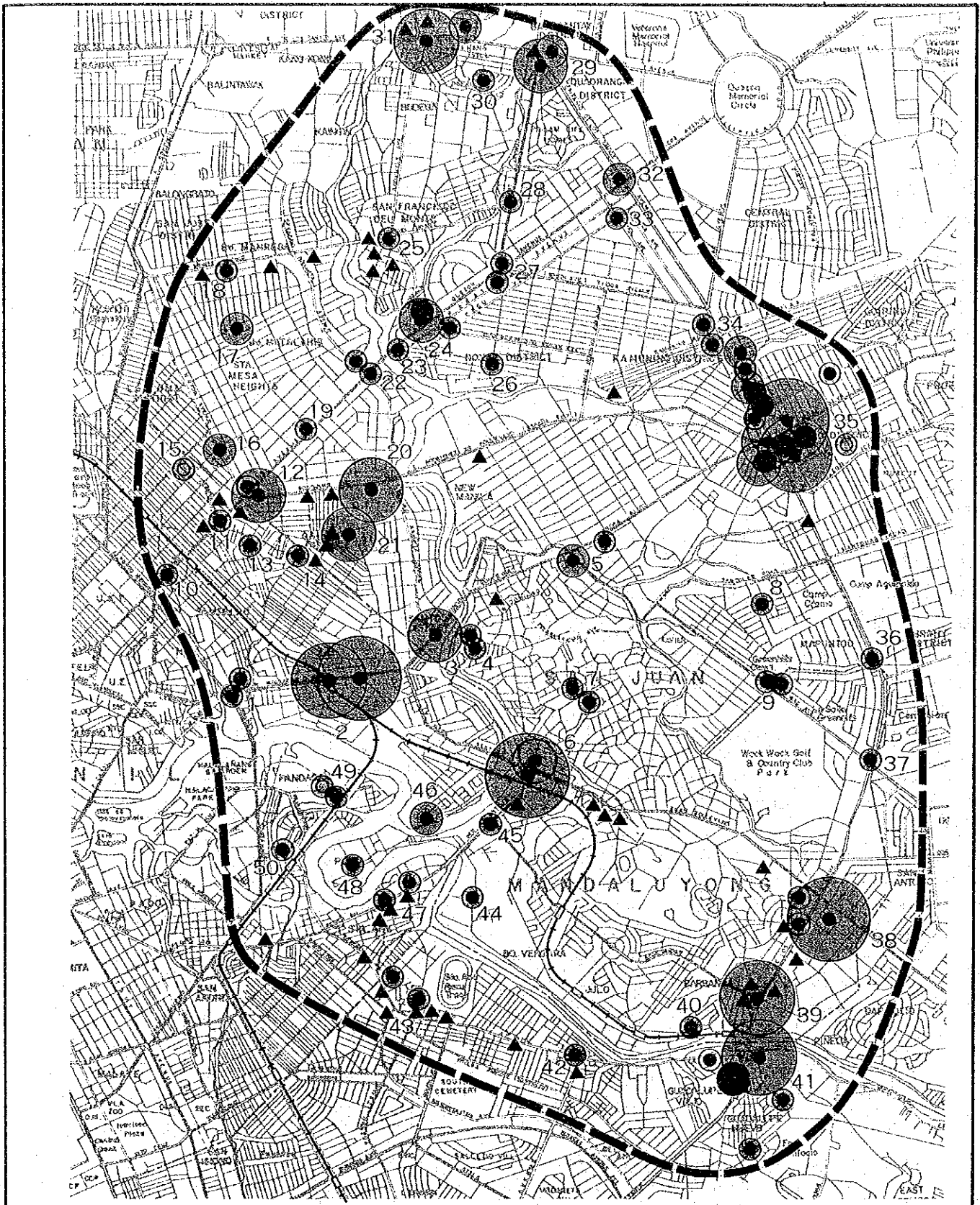
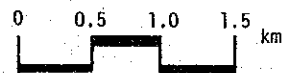
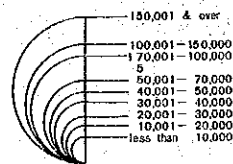


FIGURE 12.6 DISTRIBUTION OF PUBLIC TRANSPORT TERMINALS C-2/C-4(EAST)

LEGEND

- JEEPNEY TERMINAL
- INTRA-CITY BUS TERMINAL
- INTER-CITY BUS TERMINAL
- LRT STATION
- PNR STATION
- TRICYCLE TERMINAL



NO. OF BOARDING/ ALIGHTING PASS. (16HRS.)



### 12.3.5 Public Transport Terminals Between C-2 and C-4 (South)

#### 1) Characteristics

- This area is composed of roads which link the place with the south of Metro Manila. The area is covered by a combination of good radial and lateral roads. The area is served by all public transport modes such as the bus, jeepney, PNR, LRT and tricycle. There are 45 jeepney/bus terminals with 4 PNR stations. The tricycle has only 8 terminals in the area. Jeepney shares the majority of the passenger demand followed by bus. PNR is also negligible. The LRT, when it starts operation, is expected to become the second most important mode next to the jeepney.

Table 12.16  
Public Transport Terminals  
in the Area between C-2 and C-4 (South)

Mode	Terminals	No. of Boarding Alighting Passengers/ 16 Hours	Remarks
Jeepney	28	948,500	
Bus	17	132,900	
PNR	4	9,000	Vito Cruz, Buendia, Pio del Pilar, EDSA
LRT	5	351,000	Vito Cruz, Buendia, Libertad, EDSA, South Terminal
Tricycle	(8)	87,200	
Total	54	1,528,600	

Source: JUMSUT Public Transport Survey

- Since this area is entirely and intensively developed with its commercial activity centers, such as Makati, Baclaran, and Libertad, the concentration of traffic is also significant. Makati attracts passengers mainly by car and bus while Baclaran and Pasay Rotonda attract passengers by jeepney and bus. These areas attract passengers from within Metro Manila as well as from neighboring provinces in the South. Libertad is a local commercial center. Areas, other than the above, also function as terminal areas, but to a lesser extent.
- Major terminal areas are along EDSA, Taft Avenue and Buendia Avenue. These terminal areas are further discussed as follows:

#### 2) Baclaran Area: (See Appendix 12.1-M)

- This area is one of the largest terminal areas, in terms of traffic level. This is due to its large number of bus and jeepney terminals, both for city and provincial services. As many as 91 routes are concentrated in this area. Three-hundred sixty thousand boarding and alighting passengers use this area, with the frequency level reaching to about 32,000/16 hours. The LRT station is currently being constructed along Mexico road and is expected to handle approximately 90,000 boarding/alighting passengers when it is completed.

- Terminals at Quirino Avenue, Redemptorist, Mexico Road and F. B. Harrison are on-road spaces which are extensively being used, particularly those along Quirino Avenue.

The whole stretch of Quirino Avenue between Mexico Road and Airport Road is turned into a huge terminal, where jeepneys move at a very slow speed (4 to 8 KPH) to pick up passengers. At the same time this terminal serves as turn-around areas for jeepney where they can also wait for passengers.

- The major problems encountered in this area are:
  - a) Congestion along Quirino Avenue and at intersections of Quirino Ave./Airport Road and Quirino Ave./Mexico Road.
  - b) Insufficient sidewalk width along Quirino Avenue considering the large volume of pedestrian traffic.
  - c) Scattered loading/unloading places in the 800-meter distance between both ends.
  - d) Sidewalks are extensively occupied by shop and street vendors.
  - e) On Wednesday, serious traffic congestions arise due to the Mass at Redemptorist Church.
- A serious problem is anticipated when the LRT is opened for traffic. Boarding/alighting passengers of the LRT will concentrate around the station. This is in addition to the existing loading/unloading of jeepney and bus passengers. Since bus and jeepney are the modes which will feed passengers into the LRT, smooth interchange functions have to be provided and at the same time anticipated. Traffic congestion around the station must be solved.

### 3) Pasay Rotonda: (See Appendix 12.1-N)

- This terminal area is located at a strategic point in the Metro Manila urban transport network where EDSA and Taft Avenue, a part of the LRT corridor, intersect. The terminal serves both city and provincial jeepneys.
- The terminal, which spreads along EDSA and F. Rein, are mainly on-road spaces and partly off-road vacant lots.
- Sixty five routes with frequency levels of 18,000/16 hours exist and have 114,000 passengers boarding and alighting. When the LRT becomes operational, traffic is estimated to be 129,000 passengers a day. This is the second largest estimated traffic volume among the LRT stations following Monumento. Tricycle also plays a limited role.
- The existing major problems are:
  - a) Congestion along the service roads of EDSA
  - b) Lack of jeepney waiting space
  - c) Lack of pedestrian facilities across EDSA
  - d) Scattered loading/unloading places, particularly for bus passengers.

### 4) Vito Cruz Area: (See Appendix 12.1-O)

- This terminal area spreads along Vito Cruz, Adriatico and F.B. Harrison in approximately a 700-meter distance. The terminal is situated close to several major traffic generating sources such as Harrison Plaza, Rizal Memorial Stadium, etc. The LRT station is currently being constructed near the intersection of Vito Cruz/Taft Avenue.



- The terminal is an on-road one and serves city jeepney. Forty-six routes terminate with 24,000 frequencies/16 hours. Approximately 64,000 jeepney and 3,000 bus passengers board and alight a day. When the LRT is completed, approximately 30,000 passengers will be added.
  - The major problems encountered are:
    - a) Congestions at the intersections of Vito Cruz/F.B. Harrison and Vito Cruz/Leon Guinto
    - b) Insufficient turn-around space for jeepneys
    - c) Insufficient pedestrian facilities across Adriatico
  - An anticipated problem is the generation of a large traffic volume when Harrison Plaza and the LRT go on full operation. There will be frequent loading and unloading of passengers on the roads around this area.
- 5) Libertad Area: (See Appendix 12.1-P)
- This area is characterized by several on-road terminals spread along Libertad where roadside areas have been heavily developed for various shops and commercial activities. On-road terminals are also located along Leveriza and Zamora. The LRT station is being constructed at the intersection of Libertad/Taft Avenue.
  - The terminal serves mainly city jeepneys and partly provincial jeepneys. Buses pass along Taft Avenue. A total of 24 jeepney routes terminate with 12,600 frequencies, while approximately 240,000 passengers board and alight. When the LRT is opened the expected passenger traffic at the station is approximately 37,000 a day. Tricycle plays a limited role.
  - Although the impact of LRT is relatively small compared to the total traffic volume of this area, the whole stretch of Libertad between F. B. Harrison and Zamora, will be turned into a huge terminal area as seen in Baclaran. Major problems encountered in this area are:
    - a) Congestion along Libertad and Leveriza and at the intersection of Libertad/Leveriza.
    - b) Lack of sidewalk capacity along Libertad.
    - c) Scattered loading and unloading places spread over a 700-meter distance.
- 6) Ayala Area: (See Appendix 12.1-Q)
- This area comprises 3 on-road jeepney terminals and 1 on-road bus terminal along EDSA. The major jeepney terminal is at Pasay Road/EDSA, while the bus terminal is at Ayala (EDSA). This area serves only city service.
  - Although the traffic volume in terms of number of boarding/alighting passengers is only approximately 22,000/16 hour, the traffic congestions along the Pasay Road and EDSA are significant due to the large traffic volume of private cars.
  - Major problems encountered in this area are:
    - a) Lack of bus bays and waiting spaces for bus passengers along EDSA.
    - b) Bus bays are occupied by jeepneys along EDSA.

Table 12. 17  
Public Transport Terminals C-2/C-4 (South)

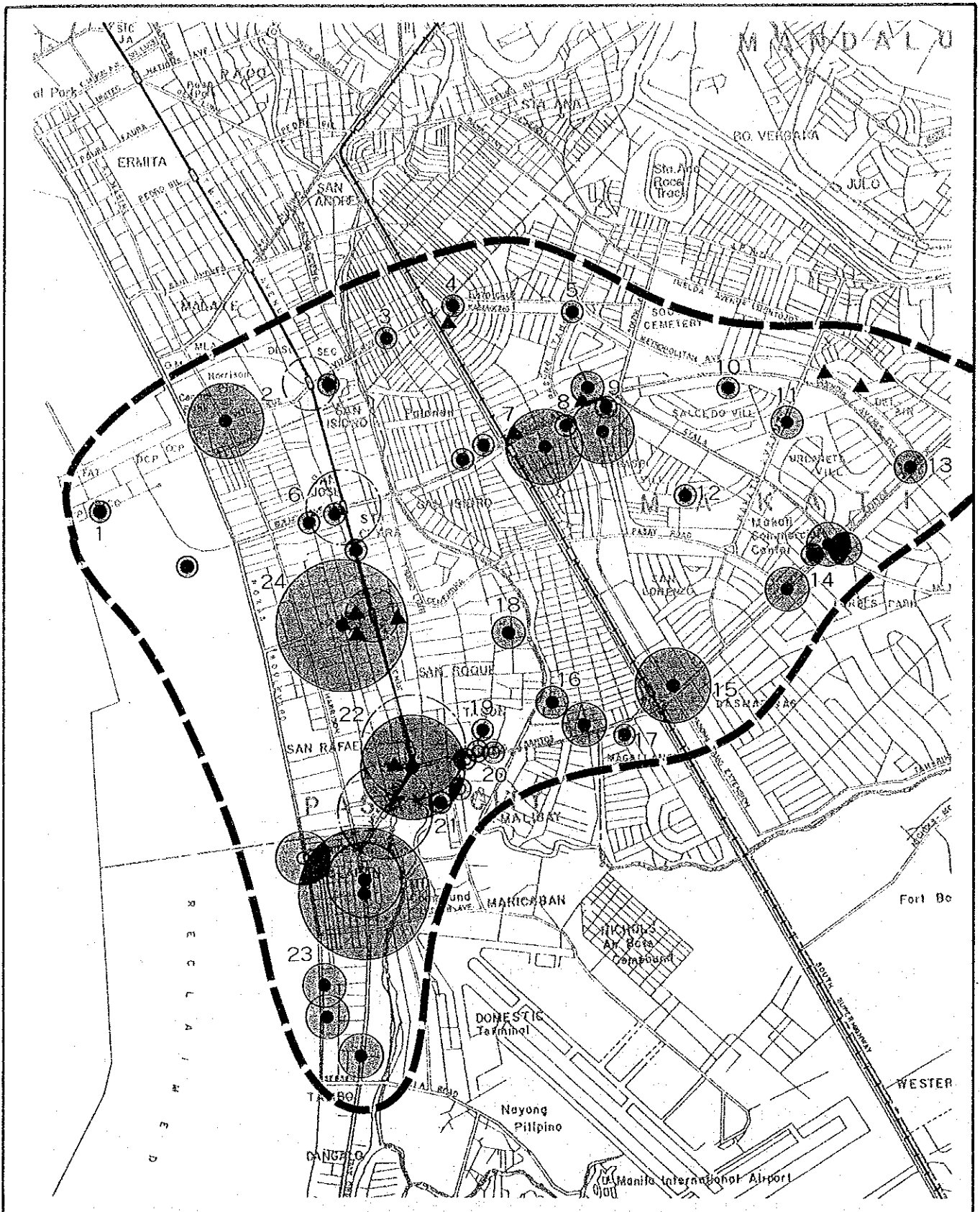
Terminal Name	City Provincial	No. of Routes	Frequency (16 Hrs.)	No. of B/A Pass. (16 Hrs.)	Off/ On-Road	Remarks
1. CCP Area – CCP – Philtrade	City City	1 2	500 48	4,400 25	On On	Jpy. Bus
Subtotal		3	548	4,425		
2. Vito Cruz Area – Vito Cruz/ Harrison – Dominga – Vito Cruz	City City City	45 1 –	17,700 6,600 –	62,000 1,600 –	On On –	Jpy. Jpy. LRT
Subtotal		46	24,300	63,600		
3. Dian	City	1	200	3,200	On	Jpy.
4. Zobel Roxas – Vito Cruz	City –	3 –	5,300 –	9,700 –	On –	Jpy. PNR
Subtotal		3	5,300	9,700		
5. Kamagong	City	1	700	600	On	Jpy.
6. Buendia (Leveriza) Area – Buendia (Leveriza) – Buendia (Leveriza) – Buendia	City – – –	1 3 –	23 324 –	1,000 1,700 –	On On –	Bus Bus PNR
Subtotal		4	347	2,700		
7. Washington – Buendia/SSH – Buendia/SSH – Buendia	City City City –	4 3 24 –	15,700 195 1,499 –	52,100 100 3,600 –	On On On –	Jpy. Bus Bus PNR
Subtotal		31	17,394	55,800		
8. Tindalo/Pasong Tamo	City	2	5,400	2,400	On	Jpy.
9. Crispa/Buendia Area – Crispa/Buendia – Amoroso – Malugay Ave. – MMC (Buendia)	City City City City	2 1 – 24	100 5,700 8,100 738	1,700 41,200 17,300 800	On On On On	Jpy. Jpy. Jpy. Bus
Subtotal		28	14,638	61,000		
10. Salcedo Village	City	1	1,400	3,400	On	Jpy.
11. Makati Avenue/Ayala	City	3	336	40	On	Bus
12. Legaspi Village	City	1	100	500	On	Jpy.
13. Bel-Air/Buendia/EDSA	City	1	3,100	12,500	On	Jpy.
14. Pasay Rd /EDSA Area – Pasay Rd /EDSA – Ayala (Shoemart) – Forbes Park – Ayala (EDSA)	City City City City	1 5 1 4	2,400 100 400 405	22,200 – 3,200 21,500	On On On On	Jpy. Jpy. Jpy. Bus
Subtotal		11	3,305	46,900		
15. Mantrade Area – Mantrade – EDSA	City – –	3 – –	4,600 – –	51,100 – –	On – –	Jpy. – PNR
Subtotal		3	4,600	51,100		

(Table 12.17 cont'd.)

Terminal Name	City/ Provincial	No. of Routes	Frequency (16 Hrs.)	No. of B/A Pass. (16 Hrs.)	Off/ On-Road	Remarks
16. Evangelista Area						
– Evangelista	City	1	5,300	20,700	On	Jpy.
– M. Reyes	City	1	2,700	10,300	On	Jpy.
Subtotal		2	8,000	31,000		
17. EDSA/SSH Magallanes	City	2	5,700	6,500	On	Jpy.
18. M. de la Cruz	City	1	2,300	12,800	On	Jpy.
19. Cabrera	City	1	100	100	On	Jpy.
20. Malibay (EDSA) Area						
– Malibay (EDSA)	Prov'l.	13	388	–	Off	Bus
– Pasay (EDSA)	Prov'l.	1	20	–	Off	Bus
– Pasay (EDSA)	Prov'l.	29	64	–	Off	Bus
– Pasay (Aurora)	Prov'l.	6	13	–	Off	Bus
Subtotal		49	485			
21. Pinaglabanan/ Sgt. Mariano	City	1	100	100	On	Jpy.
22. Pasay Rtda. Area						
– Pasay Rtda.	City/Prov'l.	62(12)	18,200	114,600	On	Jpy.
– EDSA	–	–	–	–	–	LRT
Subtotal		62(12)	18,200	114,600		
23. Baclaran Area						
– Baclaran	City/Prov'l.	65(8)	25,700	258,900	On	Jpy.
– Baclaran (Quirino Ave.)	City	4	1,762	27,500	On	Bus
– Baclaran (Roxas Blvd.)	City	2	1,929	23,800	On	Bus
– Baclaran (Roxas Blvd.)	City	2	313	–	On	Bus
– Baclaran (Redemptorist)	City	11	1,618	50,800	On	Bus
– Baclaran (Redemptorist)	Prov'l.	7	464	2,100	On	Bus
– South Terminal	–	–	–	–	–	LRT
Subtotal		91	31,786	363,100		
24. Libertad Area						
– Libertad	City/Prov'l.	24(5)	12,600	232,500	On	Jpy.
– Cartimar	City	1	700	2,900	On	Jpy.
– Libertad	–	–	–	–	–	LRT
Subtotal		25	13,300	235,400		

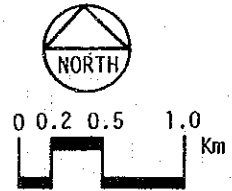
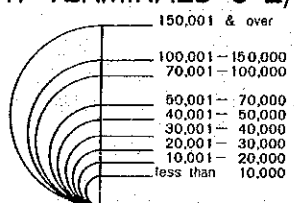
Source: JUMSUT Public Transport Survey





**FIGURE 12.7 DISTRIBUTION OF PUBLIC TRANSPORT TERMINALS C-2/C-4 (SOUTH)**

- LEGEND**
- JEEPNEY TERMINAL
  - ⊙ INTRA-CITY BUS TERMINAL
  - ⊕ INTER-CITY BUS TERMINAL
  - ⊖ LRT STATION
  - ⊘ PNR STATION
  - ▲ TRICYCLE TERMINAL



NO. OF BOARDING/ ALIGHTING PASS. (16HRS)



### 12.3.6 Public Transport Terminals in the North (Outside EDSA)

#### 1) Overall Characteristics

- This northern part of Metro Manila is broadly composed of two sections. One is the area along EDSA, McArthur Highway and North Bay Blvd. in Navotas, Malabon and other nearby places which are already developed. The other is the area such as Fairview and Novaliches where extensive subdivision developments are currently ongoing. This section is also characterized by the lack of a reliable road system and a low population density, except for the area along EDSA.
- There are 39 jeepney terminals and 13 bus terminals in this area. The majority of passengers is carried by the jeepney. Tricycle also plays an important role in the secondary routes.

Table 12.18  
Public Transport Terminals in the  
Area Outside C-4 (North)

Mode	No. of Terminals	No. of Boarding/ Alighting Passengers/16 Hrs.
Jeepney	39	652,500
Bus	13	36,700
Tricycle	(76)	419,600
Total	52	1,108,800

Source: JUMSUT Public Transport Survey

- Due to the nature of the development, many terminals in this area branch off from the trunk road to reach the subdivision centres. However, when there are no reliable roads or when demand is small, terminals are located along the trunk roads from where fairly extensive tricycle services are available.
- 2) Fairview: (See Appendix 12.1-R)
- This terminal is one of the typical public transport terminals serving subdivisions. The terminal is on-road and consists of a jeepney terminal and two bus terminals. These terminals are linked with tricycle services.
  - In these areas, popular problems usually seen in developed urban areas within C4 are not encountered. However, questions may be raised on the following:
    - a) On the passenger side, a guarantee for reliability and frequency of service
    - b) On the operator side, financial viability of operation.
- Added to the above is the problem of how to secure good access to terminals.

Table 12.19  
Public Transport Terminals Outside C-4 (North)

Terminal Name	City/ Provincial	No. of Routes	Frequency (16 Hrs.)	No. of B/A Pass. (16 Hrs.)	Off/ On-Road	Remarks
1. Navotas (TP)	City	6	5,500	76,100	on	Jpy.
2. Gasak	City	4	4,900	16,500	on	Jpy.
3. Dampalit	City	1	500	1,400	on	Jpy.
4. Polo	City	3	2,300	7,800	off	Jpy.
5. Hulo (Malabon)	City	1	1,800	6,100	on	Jpy.
6. Malanday Area	City	5	264	6,400	off	Bus
– Malanday	City	9	10,400	41,500	off	Jpy.
– Malanday						
Subtotal		14	10,664	47,900		
7. Malinta Area	City	12	13,000	34,100	off	Jpy.
– Malinta	City	3	25	2,100	on	Bus
– Malinta						
Subtotal	City	15	13,025	36,200	on	Jpy.
8. Karuhatan	City	5	100	100	on	Jpy.
9. Fatima Village Area	City	6	14,800	81,700	on	Jpy.
– Fatima Village	City	8	14,800	–	off	Jpy.
– Tullahan/BBB						
Subtotal		14	14,800	81,700		
10. Victoneta Avenue	City	1	2,600	4,400	on	Jpy.
11. Tenejeors	City	7	943	4,319	on	Bus
12. Araneta University Area	City	1	2,600	4,400	on	Jpy.
– Araneta University	City	–	1,500	1,600	on	Jpy.
– Malolos Ave/North Div. Rd.	City	1	1,000	14,900	on	Jpy.
– Bagong Barrio						
Subtotal		2	4,600	20,900		
13. Baesa/PUC	City	2	1,700	23,900	on	Jpy.
14. Sta. Quiteria	City	2	200	700	on	Jpy.
15. Quirino Highway/Tandang Sora	City	6	1,600	13,500	on	Jpy.
16. Bagbaguin	City	1	2,100	12,800	off	Jpy.
17. Kaybiga	City	1	900	5,800	on	Jpy.
18. Bayumbong	City	1	500	4,300	on	Jpy.
19. Novaliches (BF Homes)	City	–	500	4,300	off	Jpy.
20. Novaliches (Urduja)	City	2	400	9,100	off	Jpy.
21. Novaliches (Camarin)	City	1	400	3,100	off	Jpy.
22. Zabarte	City	1	4,700	38,500	on	Jpy.

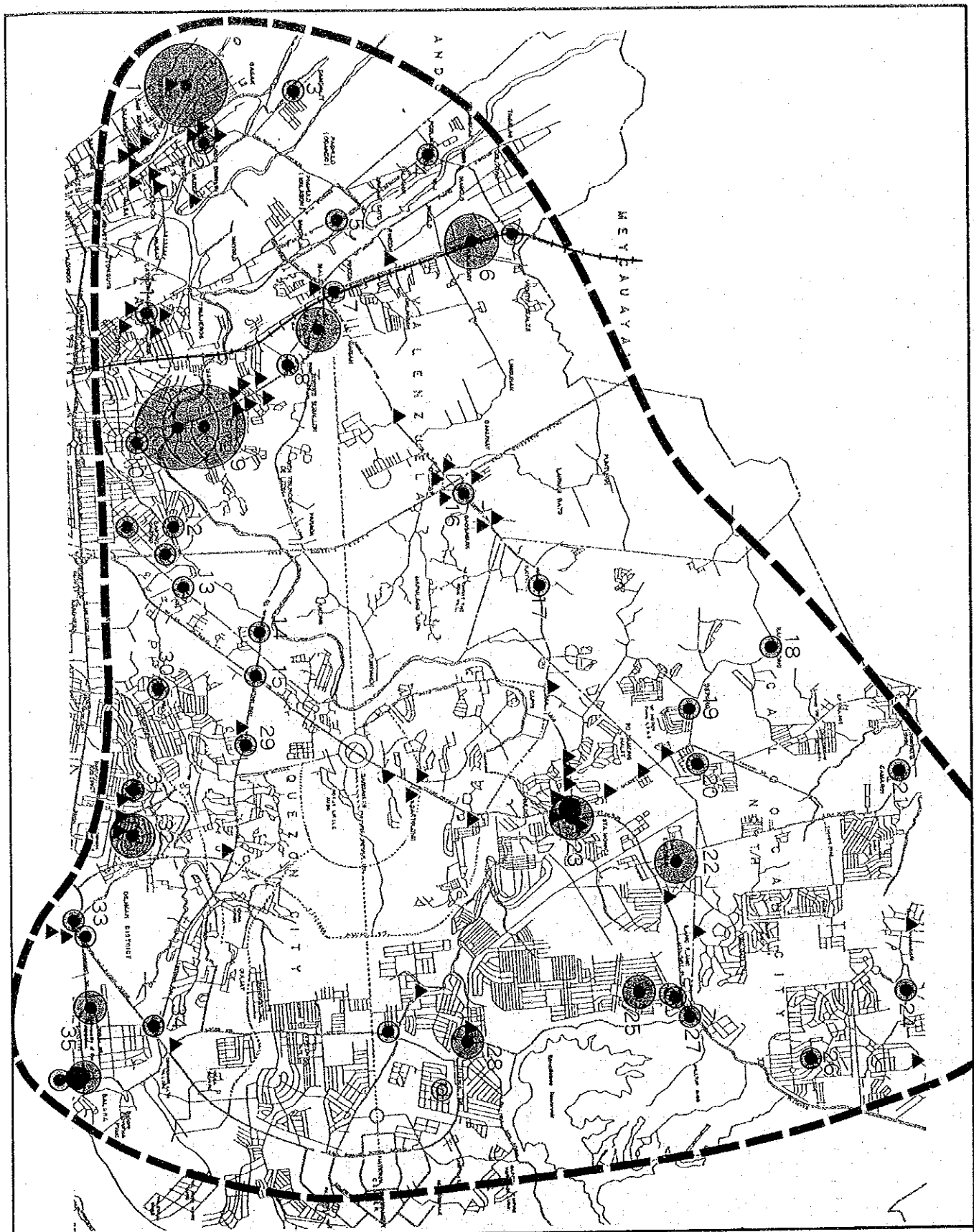


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


Terminal Name	City/ Provincial	No. of Routes	Frequency (16 Hrs.)	No. of B/A Pass. (16 Hrs.)	Off/ On-Road	Remarks
23. Novaliches (TP) Area						
– Novaliches (TP)	City/Prov'l. City	14(1)	4,700	38,500	on	Jpy.
– Novaliches		8	707	19,179	on	Bus
Subtotal		22(1)	5,407	57,679		
24. Tala Leprosarium	City	3	3,400	800	off	Jpy.
25. Lagro	City	7	2,000	24,400	on	Jpy.
– Lagro	City	3	57	2	on	Bus
– Lagro	Prov'l.	1	24	23	on	Bus
Subtotal		11	2,081	24,425		
26. Novaliches (Amparo)	City	4	300	800	off	Jpy.
27. La Mesa Dam	City	1	100	100	on	Jpy.
28. Fairview Area						
– Fairview	City	13	5,200	29,600	on	Jpy.
– Fairview	City	8	298	597	off	Bus
– Fairview	Prov'l.	1	131	932	on	Bus
Subtotal		22	5,629	31,029		
29. Proj. 8/GSIS Village	City	8	1,700	5,700	on	Jpy.
30. Road 14	City	5	6,900	15,100	on	Jpy.
31. Pag-asa	City	5	1,200	6,900	on	Jpy.
32. Project 6	City	8	8,200	31,000	on	Jpy.
33. Philcoa Area						
– Philcoa	City	14	6,000	9,500	on	Jpy.
– OMC/QC Hall/PHHC	City	5	6,400	17,500	on	Jpy.
– Philcoa	City	2	29	310	on	Bus
Subtotal		21	12,429	27,310		
34. Commonwealth/Tandang Sora	City	2	1,600	18,400	on	Jpy.
35. UP Balara Area						
– UP Balara	City	10	2,300	27,100	on	Jpy.
– UP Ikot	City	2	3,100	20,500	on	Jpy.
– UP Balara	City	2	180	1,136	on	Bus
– UP Balara	City	12	552	1,343	on	Bus
– UP Balara	City	1	65	380	on	Bus
– UP Balara	City	4	50	65	on	Bus
Subtotal		31	6,247	50,524		

Source: JUMSUT Public Transport Survey

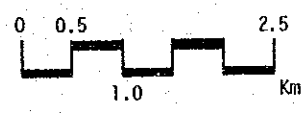
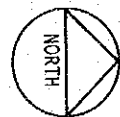
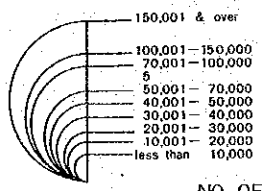




**LEGEND**

-  JEEPNEY TERMINAL
-  INTRA-CITY BUS TERMINAL
-  INTER-CITY BUS TERMINAL
-  LRT STATION
-  PNR STATION
-  TRICYCLE TERMINAL

**FIGURE 12.8 DISTRIBUTION OF PUBLIC TRANSPORT TERMINALS OUTSIDE C-4 (NORTH)**



NO. OF BOARDING/ ALIGHTING PASS. (16HRS)



### 12.3.7 Public Transport Terminals in the East (Outside C-4)

#### 1) Overall Characteristics

- The eastern part is divided into two: one along EDSA and the other in Marikina Valley. The former can be included in the transport corridor of EDSA, while the latter forms town centres such as Marikina, Pasig and Pateros.
- There are 22 jeepney terminals and 6 bus terminals. Similar to the northern area outside EDSA, the jeepney and the tricycle play a vital role in the trunk routes and in the secondary routes, respectively. The share of bus is even lower.

Table 12.20  
Public Transport Terminals  
in the Area Outside C-4 (East)

	Number of Terminals	Number of Boarding/ Alighting Passengers (16 hrs.)
Jeepney	22	426,800
Bus	6	14,400
Tricycle	(39)	370,000
Total	28	811,900

Source: JUMSUT Public Transport Survey.

- Most of the terminals distributed along EDSA are those which serve the subdivisions. These areas are considered fairly well covered by the public transport services.
  - On the other hand, the terminals in Marikina Valley are not well linked with many destinations with high frequency public transport services mainly due to the relatively low demand and partly due to the relatively rough road network. Extensive tricycle services fill in the gap.
- #### 2) Marikina: (See Appendix 12.1-S)
- This terminal particularly refers to the one in the Marikina town proper. The terminal is on-road. It is located along Shoe Avenue and Lakandula and is associated with a fairly large tricycle terminal.
  - The terminals serve both the jeepneys and buses mainly for city service and partly for provincial service. Approximately 16,000 jeepney and bus passengers/16 hours board and alight in this area while the tricycle also serve 14,000 passengers. The tricycle provides an extensive service in this area due to the limited coverage of bus and jeepney routes.
  - Major problems encountered are:
    - a) Congestion along Dela Paz and the intersection of Dela Paz due to the mixture of tricycle with buses and jeepneys.
    - b) Roadsides along Dela Paz are occupied by an on-road market.
    - c) Lack of waiting space for jeepney passengers.

Table 12.21  
Public Transport Terminals Outside C-2 (East)

Terminal Name	City/ Provincial	No. of Routes	Frequency (16 Hrs.)	No. of B/A Pass. (16 Hrs.)	Off/ On-Road	Remarks
1. V. Luna	City	2	600	700	On	Jpy.
2. Proj. 2 & 3 Area	City	37	7,100	34,100	On	Jpy.
– Proj. 2 & 3	City	4	297	5,700	Off	Bus
Subtotal		41	7,397	39,800		
3. Katipunan/Aurora Blvd.	City	2	2,300	24,100	Off	Jpy.
4. Project 4	City	22	8,400	45,000	On	Jpy.
5. Murphy	City	15	8,300	44,300	On	Jpy.
6. Libis/Gentex	City	2	3,700	13,000	On	Jpy.
7. Parang	City	7	3,600	38,100	On	Jpy.
8. SSS Village Area	City	5	300	2,300	On	Jpy.
– SSS Village	City	1	136	300	On	Bus
Subtotal		6	436	2,600		
9. Marikina (TP) Area	City/Prov'l.	16(6)	2,700	13,200	On	Jpy.
– Marikina (TP)	City	3	105	2,300	On	Bus
– Calumpang	City	1	30	200	On	Bus
Subtotal		20	2,835	15,700		
10. Calumpang	City	5	2,300	33,700	On	Jpy.
11. Pasig (Rosario)	City	5	13,800	31,200	On	Jpy.
12. Ugong	City	–	100	100	On	Jpy.
13. Meralco	City	1	100	100	On	Jpy.
14. Rizal Prov. Capital	City	1	8,900	7,000	On	Jpy.
15. Pineda	City	–	–	–	–	Jpy.
16. Ft. Bonifacio Gate 3	City	2	2,700	42,100	Off	Jpy.
17. Pasig (TP) Palengke	City/Prov'l.	15(4)	11,500	76,300	On	Jpy.
18. Pasig (San Joaquin) Area	City	4	2,800	9,200	On	Jpy.
– Pasig (San Joaquin)	City	4	187	5,200	On	Bus
Subtotal		8	2,987	14,400		
19. Pateros (TP) Area	City	3	2,500	8,600	On	Jpy.
– Pateros (TP)	City	2	112	600	Off	Bus
Subtotal		5	2,612	9,200		
20. Tipas	City	4	400	600	On	Jpy.
21. Napindan	City	1	400	600	On	Jpy.
22. Taguig (TP)	City	3	1,000	2,500	On	Jpy.

Source: JUMSUT Public Transport Survey

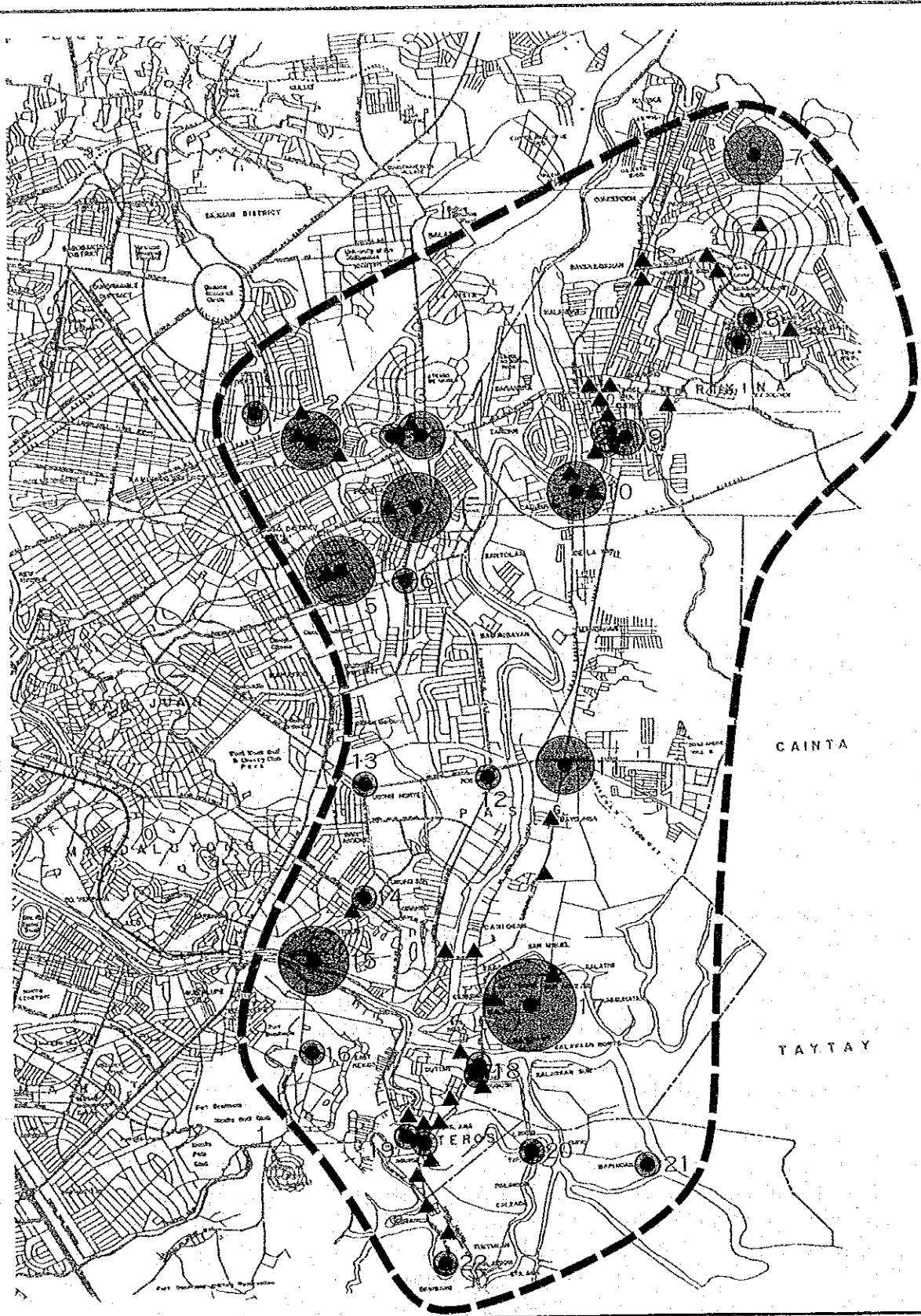
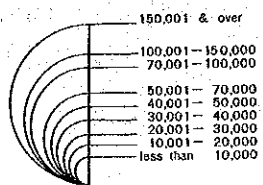


FIGURE 12.9 DISTRIBUTION OF PUBLIC TRANSPORT TERMINALS OUTSIDE C-4 (EAST)

- LEGEND**
- JEEPNEY TERMINAL
  - INTRA-CITY BUS TERMINAL
  - INTER-CITY BUS TERMINAL
  - LRT STATION
  - PNR STATION
  - ▲ TRICYCLE TERMINAL



NO. OF BOARDING/ ALIGHTING PASS. (16HRS)





### 12.3.8 Public Transport Terminals Outside C-4 (South)

#### 1) Overall Characteristics

- This area, located between Quirino Highway and South Super Highway, is also one of the areas where subdivision developments are extensively on-going. Trunk road network in this area is very simple, while complicated feeder/local roads are fairly well developed in the absence of secondary/distributor roads which link the two. PNR runs parallel to South Super Highway.
- Sixteen jeepney terminals and twelve bus terminals are located in this area with 5 PNR stations and 69 tricycle terminals. This area is characterized by the relatively high share of bus compared to the northern and eastern areas outside EDSA. PNR is also negligible and tricycle is widely used as feeder service.

Table 12.22  
Public Transport Terminals  
in the Area Outside C-4 (South)

Mode	No. of Terminals	No. of Boarding/ Alighting Passenger/ 16 Hrs.	Remarks
Jeepney	16	492,800	
Bus	12	101,500	
PNR	5	7,300	FTI, Sucat, Alabang
Tricycle	(69)	494,000	
Total	33	1,095,600	

Source: JUMSUT Public Transport Survey

- The terminals are distributed in a fairly simple way. Small terminals reach the centers of subdivisions/community centers in the northern part of the area, where secondary roads exist. In the south, the terminals are located all along the trunk roads. On the other hand, tricycle terminals are extensively developed along Sucat Road, National Highway and Bicutan Avenue. Alabang and Zapote are located along the trunk lines of South Super Highway and Quirino Avenue, respectively.

These locations are the southern strategic points of the public transport axis in Metro Manila.

#### 2) Alabang: (See Appendix 12.1-T)

- This terminal, which comprises several on and off-road sub-terminals for both city and provincial jeepneys and city bus service, is located around the intersection of South Super Highway and National Highway. The PNR station is located close to the terminal. Three tricycle terminals provide fairly extensive services.
- Relatively heavy traffic is concentrated here with approximately 100,000 boarding and alighting per day. Since this terminal provides a base to/from the southern provinces, the interchange between city and provincial services is also frequent. PNR passenger traffic at Alabang is approximately 1,300 a day, while tricycle serves approximately 14,000.

- Major problems encountered in this area are:
    - a) Congestion at the intersection of the National Road and the service road of South Super Highway due to the round-about of the intersection.
    - b) Lack of pedestrian crossing facilities.
    - c) Scattered loading and unloading places.
- 3) Zapote: (See Appendix 12.1-U)
- This area is located at the crossing of National Highway and Quirino Highway near the boundary of Metro Manila. The terminal is an off-road parking space and a gas station. This provide services for both city and provincial jeepneys.
  - The traffic is fairly heavy. Approximately 72,000 jeepney passengers, of which 41,500 are provincial jeepney passengers, board and alight per day. The tricycle plays a limited role.
  - Major problems encountered are:
    - a) Congestions along Quirino Avenue and at the intersection of Quirino Avenue/ National Highway.
    - b) Lack of waiting space for passengers along Quri no Avenue
    - c) Poor surface condition of Quirino Avenue.

Table 12.23  
Public Transport Terminals Outside C-4 (South)

Terminal Name	City/ Provincial	No. of Routes	Frequency (16 Hrs.)	No. of B/A Pass. (16 Hrs.)	Off/ On-Road	Remarks
1. Kayamanan-C Area – Kayamanan-C – Kayamanan-C	City City	2 1	100 25	– –	Off On	Jpy. Bus
Subtotal		3	125	–		
2. Malibay/C. Jose	City	1	1,800	13,100	On	Jpy.
3. Nichols	City	2	2,400	12,800	On	Jpy.
4. Baltao Subd. Area – Baltao Subd. – MIA – MIA	City City City	1 7 4	800 614 64	3,300 38,500 500	On On On	Jpy. Bus Bus
Subtotal		12	1,478	42,300		
5. Moonwalk Village	City	1	900	7,700	On	Jpy.
6. Merville Subd.	City	1	1,000	4,600	On	Jpy.
7. FTI/GMTMF Area – FTI/GMTMF – FTI – FTI – FTI – FTI – FTI	City/Prov'l. City City City City –	2(1) 9 1 1 3 –	200 322 8 11 32 –	300 – – – 3,000 –	Off Off Off Off On –	Jpy. Bus Bus Bus Bus PNR
Subtotal		16	573	3,300		
8. Bicutan Area – Bicutan – Bicutan	City –	3 –	100 –	200 –	On –	Jpy. PNR
Subtotal		3	100	200		
9. Bagumbayan	City	6	900	6,600	On	Jpy.
10. Parañaque (TP)/ Kabihasanan	City	2	17,600	112,100	Off	Jpy.
11. Las Piñas (TP)	City	1	12,100	60,300	Off	Jpy.
12. Zapote	City/Prov'l.	8(7)	6,100	72,000	Off/on	Jpy.
13. Pamplona		1	8	–	On	Bus
14. Almanza Area – Almanza – Moonwalk	City City/Prov'l.	2 1	6,100 112	57,700 5,200	Off-On On	Jpy. Bus
Subtotal		3	6,212	62,900		
15. Sucat/SSH Area – Sucat/SSH – Sucat	City Prov'l.	16(1) –	6,400 –	59,700 –	Off-On –	Jpy. PNR
Subtotal		16(1)	6,400	59,700		
16. Alabang Area – Alabang – Alabang – Alabang	City/Prov'l. City –	18(3) 14 –	4,200 1,097 –	61,700 49,400 –	Off-On Off –	Jpy. Bus PNR
Subtotal		32	5,297	111,100		
17. Muntinlupa (TP) Area – Muntinlupa (TP) – Muntinlupa – Muntinlupa – Muntinlupa	City City Prov'l. –	1 4 1 –	9,900 363 72 –	20,700 900 4,000 –	Off-On Off On –	Jpy. Bus Bus PNR
Subtotal		6	10,335	25,600		

Source: JUMSUT Public Transport Survey



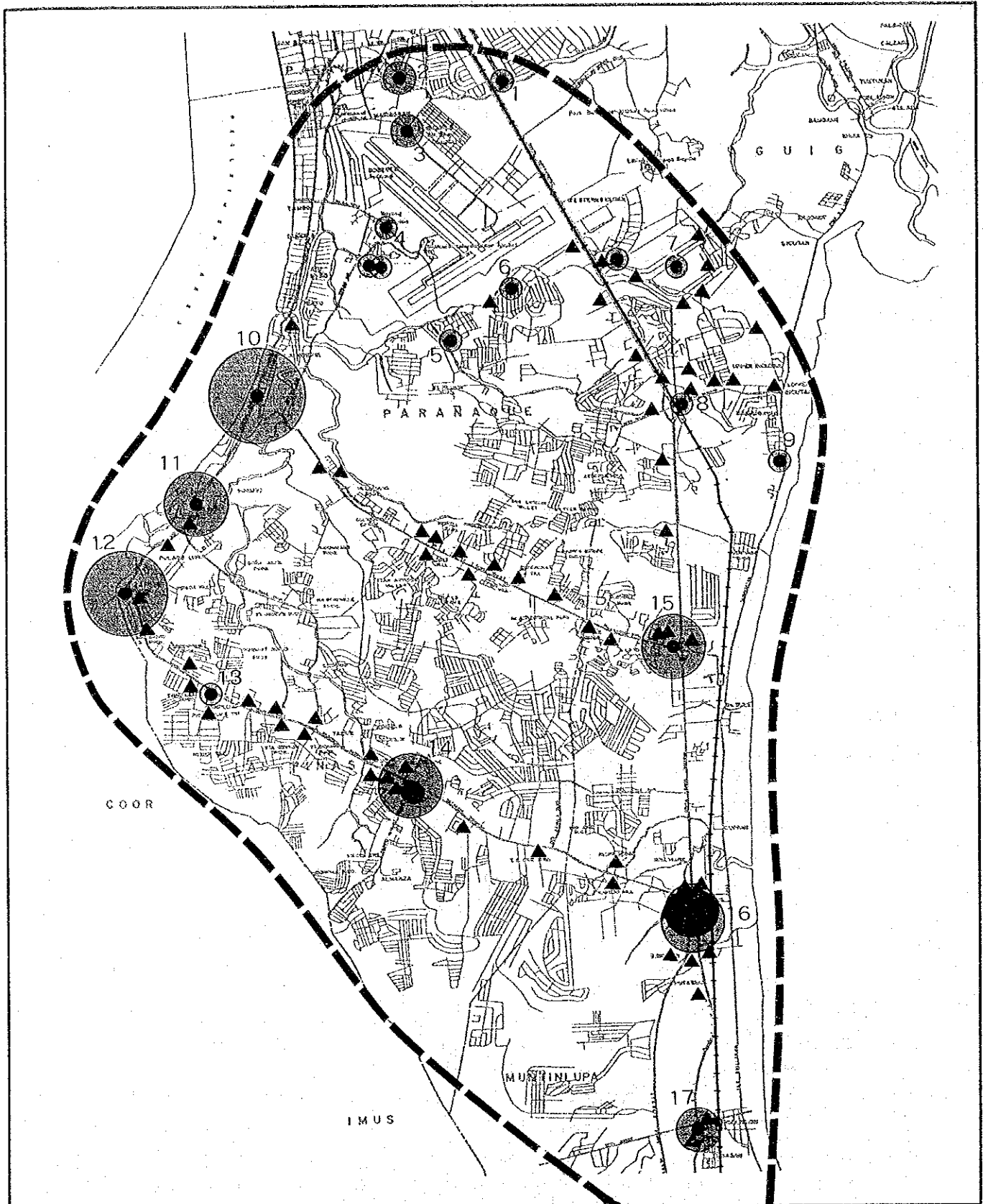
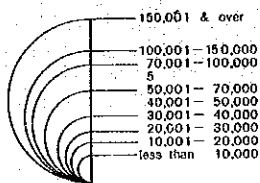


FIGURE 12.10 DISTRIBUTION OF PUBLIC TRANSPORT TERMINALS OUTSIDE C-4 (SOUTH)

LEGEND

- JEEPNEY TERMINAL
- INTRA-CITY BUS TERMINAL
- INTER-CITY BUS TERMINAL
- LRT STATION
- PNR STATION
- TRICYCLE TERMINAL



NO. OF BOARDING/ ALIGHTING PASS. (16HRS.)



## 12.4 DIRECTION FOR TERMINAL DEVELOPMENT

### 12.4.1 Summary of the Existing Terminal Problems

- As has been discussed in Chapter 12.3, problems encountered in terminals and terminal areas vary depending upon the locations and local factors which surround the areas. However, at the same time, there are also problems commonly experienced by many of the terminals. Roughly speaking, there are two fundamental problems. These problems may be divided into: (1) those which are encountered in terminal/terminal areas in the developed inner urban area; (2) those encountered in the less developed outer suburban areas.

**Terminals in developed urban areas (Example: along and within C-4):** Problems in these areas arise mainly because of the large demand which the system cannot meet effectively. Common problems are typically seen such as:

- traffic congestion, and
- widely scattered loading/unloading places.

Since terminals are located in and around major traffic generating sources (commercial centers, schools, office areas, churches, etc.), problems appear in many different ways. As seen in the following table, many terminal activities by different terminal users will be adversely affected.

Bus/Jeepney Passenger	Bus/Jeepney Drivers	Other Road Users	Users/Residents of Roadside Areas
Access to boarding/alighting place	Turn-around	Pass-through	Attraction of customers
Travel information	Waiting for passengers	Parking	Access to their own facilities
Waiting	Loading/Unloading		Loading/Unloading of cargos
Boarding/Alighting	Scheduling		Living environment
Transfer			
Access to destination facilities	Resting		

Although various solutions to bottlenecks have been tried like: a) local rerouting in the terminal areas, b) traffic management and control, and minor road facility improvement, gaps of demand and supply in many places have reached to such an extent that more effective countermeasures need to be taken to increase an overall service level of transport as well as non-transport activities.

**Terminals in less developed suburban areas (Example: outside C-4):** On the other hand, problems encountered by terminals in the less-developed suburban areas are not due to congestions nor scattered loading/unloading places. The problem of these areas are two-sided: on the passenger side, it is how to secure/maintain a higher service level (less waiting time, high frequency, more choices of destination, easy access), while on the operator side, it is how to secure/maintain a reasonable level of financial viability. Accordingly, the current problems can be summarized as shown in Table 12.24.

- The LRT is currently being constructed under the conditions stated above. Since the LRT is a considerably different public transport mode compared to the traditional modes of transport, like the bus and the jeepney in Metro Manila its impact will also be significant. The current system of public transport terminal in Metro Manila is such that existing roads are used as terminals; therefore, as demand increases, terminal area expands. On the other hand, the LRT will cause passengers to concentrate in one place during a short period of time. Accordingly, unless proper developments/countermeasures are undertaken at or around the LRT stations, the problems currently encountered at existing terminals will be more intensified in these areas.

#### 12.4.2 Requirements for Strengthening Mode Interchange Function

- An important aspect in considering the terminals/terminal areas is, first of all, how to secure/improve an interchange function among different transport modes, including walking. The basic requirement to be met at terminals is the provision of a smooth interchange among modes either by physical or by non-physical means.
- Metro Manila will have to continuously rely on public road transport even after the completion of the LRT and its extension. It is estimated that Metro Manila population will steadily increase at a pace of 3 to 4 percent annually. With an associated economic growth, the transport demand will also increase at a considerable growth rate. On the other hand, the capacities of road facilities are limited and additional investments have slowed down due to various socio-economic reasons. The current policy directions towards the management of urban transport are:
  - a) to increase road transport capacities by way of:
    - i) improved traffic management, including signalization, channelization and other improvements at intersections
    - ii) reliability of road surface
    - iii) making use of available secondary roads to a maximum extent
    - iv) construction of new major road links (RIO, C3) and separate graded intersections
    - v) constructing mass transit system (LRT)
  - b) to increase transport efficiency by way of:
    - i) rerouting
    - ii) seeking optimum functional split among existing public transport modes as well as between public and private transport
- In view of the fact that majority of Metro Manila people heavily rely on public transport modes with limited road spaces, the functional split between or among available public transport modes has to be highlighted. A better solution has to be arrived at with a combination of LRT, ordinary bus, premium bus, jeepney, tricycle, walking and PNR. Since the expansion of LRT (and PNR) will not be realized in a short time, the buses would have to expand their roles along the primary transport corridors. Jeepneys would have to be more utilized in the areas where it is difficult for buses to meet the demand rather than directly competing with buses.
- Once the HOV (High Occupancy Vehicle) transport corridors are determined, the key factor would be how to provide smooth mode interchange functions along the corridors. As typically seen, transport efficiencies and capabilities of the LRT as well as the whole



urban transport system would not increase unless the mode interchange functions at the terminals/stations are effectively provided.

- With the understanding that Metro Manila requires all existing public transport modes, not in a competitive manner, the strengthening of mode interchange functions is necessary by way of:
  - a) developing/improving transport infrastructure, particularly the expanding and strengthening of the secondary/local road system which will be a strong incentive for the public transport operations to fill the demand
  - b) developing or improving the mode interchange facilities and traffic management at and around the mode interchange nodes.

Table 12.24  
Summary of Current Problems Encountered

		Developed/Urbanized Area	Less Developed Area
Terminal User	Public transport Passengers	<ul style="list-style-type: none"> <li>a) Increasing walking distance in access, transfer</li> <li>b) Increasing discomfort in waiting and access</li> <li>c) Increasing danger in waiting, loading/unloading</li> <li>d) Increasing difficulties in transfer</li> </ul>	<ul style="list-style-type: none"> <li>a) Accessibility to trunk PT routes</li> <li>b) Longer waiting time</li> <li>c) Less choice of destinations</li> <li>d) Safety of travel</li> </ul>
	Operators/ Drivers	<ul style="list-style-type: none"> <li>a) Lack of turn-around spaces</li> <li>b) Lack of waiting spaces</li> <li>c) Lack of loading/unloading places/facilities</li> </ul>	<ul style="list-style-type: none"> <li>a) Profitability</li> </ul>
	Other Road Users	<ul style="list-style-type: none"> <li>a) Traffic congestions in terminal areas</li> <li>b) Non availability of parking spaces</li> </ul>	
From Government/ Overall National Economic Viewpoint		<ul style="list-style-type: none"> <li>a) Increasing overall traffic cost due to increasing bottleneck in terminal area</li> <li>b) Decreasing accessibility to economic growth centers</li> <li>c) Decreasing development potentials at growth centers</li> <li>d) Increasing difficulties in route control and management</li> </ul>	<ul style="list-style-type: none"> <li>a) Providing reasonable level of public transport service to the isolated areas.</li> </ul>

### 12.4.3 Development Directions

- As was previously explained the Government had minimal contribution towards the development of the terminals and left it mainly in the hands of the private sector. However, the overall urban transport situation has already reached the level where the private sector alone cannot cope with the development of such facilities (like terminals) to maximize the benefits from overall transport users. In other words, terminal development itself is not financially profitable. Although there is little knowledge and experience in tackling this problem, both in the Government sector as well as in the private sector, it is time to intensively look into this.
- Although various problems currently encountered in the existing terminal areas can be partly solved (from short-term viewpoint) by way of local rerouting, installing signals, improving road surface and intersections, constructing pedestrian facilities, controlling on-road activities, removing squatters etc., the real problems will still be carried over into the future. Therefore, it is considered that the improvement of terminal areas has to be looked into from a longer point of view.
- Goals and planning targets to be met can be summarized as follows, although the relative weights differ depending upon the area:
  - a) to revive transport function of primary roads
  - b) to strengthen off-road terminal functions at mode interchange areas by integrating/combining presently scattered facilities/functions
  - c) to improve safety of pedestrians
  - d) to secure smooth turning points and off-road waiting spaces
  - e) to provide smooth interchange function at LRT terminals/stations
  - f) to expand/strengthen feeder services to/from the mode interchange area by low cost and high service sub-modes (tricycle, etc.)
  - g) to simultaneously plan and develop the commercial and transport function/facilities

In the suburban areas, there is still a need to develop integrated transport nodes to enable higher level of services to/from the urban centre, while at the same time, it has to be supported by a good and extensive lowcost/high service sub-modes.

- However, since the problem areas are mostly located in already heavily developed areas, there are always difficulties in implementation. In addition, the terminal development per se is not considered to be profitable and the following factors have to be duly taken into account:
  - a) **Development of new road projects such as R-10, C3 and/or extension of EDSA:** Since these projects themselves require the acquisition of land and implementation, the development/creation of new mode interchange nodes can be considered with much less difficulties.
  - b) **Simultaneous development with other potential development in the area:** Transport terminals can be developed simultaneously with other development prospects which are considered to be most profitable for that particular location.
  - c) **Institutional Support:** To accelerate and promote the development of mode interchange facilities by the private sector, the Government could prepare incentives, for example: acquisition of land, finance, approval of development and

at the same time impose control measures to restrict developments which do not have proper transport plans.

#### 12.4.4 Selected Key Mode Interchange Areas

- Toward the development of a total Metro Manila public transport mode interchange system, several areas were selected, as shown in Table 12.25 and Figure 12.11, that are considered relatively more important than others in relation to various impact factors to be considered. These are:
  - a) Completion of LRT
  - b) Construction of committed major road projects such as R-10, C-3 and extension of EDSA
  - c) Strengthening of PNR
  - d) Future urban development
  - e) Relief of some development constraints
- Completion of LRT will focus the importance of areas such as Monumento, Blumentritt, Arroceros, Baclaran and Pasay Rotonda, where the LRT will intersect with an important trunk road network. Since these areas have already been fairly intensively developed (except Arroceros), the development/improvement of these areas requires the particular consideration of the following points:
  - a) adjustment with existing rights and development from implementation viewpoint
  - b) heavy concentration of public transport passenger flow around the LRT stations/terminals during a short period of time.
- The completion of some major committed roads such as R-10, C-3 and EDSA extension will affect the overall public transport route structure, particularly C-3. Areas to be highlighted are Divisoria in relation with R-10, 5th Avenue LRT station in relation with C-3, area where R-10 and C-4 intersect, areas where Quezon Avenue intersects with C-3, areas where Aurora Avenue intersects with C-3, Pasay Rotonda in relation with EDSA extension, Buendia/Washington in relation with C-3. Since the development in these areas are based on the completion of new roads, it is strategically important that the development of mode interchange functions/facilities be considered and planned together with the road projects.
- Strengthening of the PNR is also a factor which will increase the relative importance of the following areas: Divisoria, Paco, Blumentritt, Sta. Mesa/Stop & Shop, Buendia/Washington, Sangandaan, Alabang, and Sucat.
- As the urban development extends towards the outskirts and intensifies in the already developed areas, needs increase on how to provide adequate public transport services or to cope with the demand. Although this factor should be always taken into account elsewhere in Manila when the areas are looked into for future development, some typical cases are for the following areas: Crossing when Ortigas commercial complex is heavily developed; Ayala when the current development continues; Fairview and Novaliches when the current expansion of urban areas continues; and Marikina, Pasig and Alabang when the current development continues and they have to function more as sub-regional centers.
- There are some areas located in strategic points in the overall public transport network but involve social or political constraints to development. They are particularly, among others, Recto and Divisoria. Recto will provide a significant mode interchange function among the LRT, public transport along Rizal Avenue and Quezon Avenue corridors, and

other urban development opportunities when Old Bilibid prison can be used for the development. The western portion of C.M. Recto in Divisoria area is extensively occupied by squatters. This particular section forms a serious bottleneck to the smooth link between C.M. Recto and Roxas Blvd. via Del Pan bridge. Exercises were made in a couple of studies indicating that a considerable volume of traffic will be diverted from already saturated McArthur and Quezon bridges to the Del Pan bridge, which is currently under-utilized due to the bottleneck in Divisoria.

- The above discussions are summarized in Table 12.25, wherein the areas encircled are those considered as important key mode interchange areas and require further detailed studies. Their locations are shown in Figure 12.11.

Table 12.25  
Selected Key Mode Interchange Areas in  
Relation with Various Impact Factors<sup>1/</sup>

Location		Terminals currently playing relatively important roles	Terminals which will play more important roles as a result of the completion of the LRT	Terminals which will become important when PNR is strengthened	Terminals which will become important when planned roads are completed <sup>2/</sup>	Terminals which will become important due to their development	Terminals which will become important when constraints are relieved
Within C-2		Quiapo Recto Divisoria Pier	T.M. Kalaw P. Gil Arroceros	Divisoria  Paco	Divisoria		Recto (Old Bilibid Prison) Divisoria (Squatter)
Between C-2 & C-4	North	Monumento Blumentritt	Monumento Blumentritt	Blumentritt	5th Avenue R10/C4		
	East	Cubao Crossing Guadalupe Sta. Mesa/ Stop & Shop		Sta. Mesa/ Stop & Shop	C3/Quezon Ave C3/Aurora	Crossing (Ortigas Com'l Complex)	
	South	Baclaran Pasay Rtda. Libertad  Ayala	Baclaran Pasay Rtda. Libertad Vito Cruz	Buendia/ Washington	Pasay Rtda.  Buendia/ Washington	Ayala	
Outside C-4	North	Navotas Malinta		Sangandaan		Fairview Novaliches	
	East	Marikina Pasig				Marikina Pasig	
	South	Zapote Alabang		Alabang Sucat		Alabang	

<sup>1/</sup> areas in boxes are considered relatively more important both in the present and in the future  
<sup>2/</sup> include committed projects; R10, C3 and EDSA extension



