APPENDIXES FOR CHAPTER 2

APPENDIX TABLE 2.1–1 MAJOR ECONOMIC PERFORMANCES IN PHILIPPINES

ITEMS	1960		1970		1975		1977		1980
GNP (1972 prices) - million pesos	30151	(5.2)	50035	(6.5)	68530	(6.1)	77162	(6.0)	86731 1)
GDP (1972 prices) - million pesos	30874	(5.2)	51014	(6.0)	68361	(6.4)	77363	(5.8)	86539 1)
Population ('000)	27088	(3.1)	36684	(2.8)	42071	(3.0)	44628	(2.4)	47914
Employed persons (thousand)	8539	(3.3)	11852	(4.1)	14517	(1.6)	14985		-
Unemployed (in persent)	6.3%		6.0%		4.2%		6.3%		
Per capita GNP	1140	(2.0)	1391	(3.2)	1625	(3.3)	1734	(2.1)	1806 1)
Per capita GNP	1101	(2.1)	1358	(3.6)	1622	(3.3)	1729	(3.6)	1857 1)
Gross Domestic Capital Formation (in ₱ million at 1972 prices)	5173	(7.7)	10835	(11.7)	18984	(5.2)	21018	(6.9)	24017 1)
Investment ratio (percent of GNP at current prices)	16.2%		21.5%		31.2%		28.7%		29.4% 1)
Savings ratio (percent of GNP at current prices)	16.6%		21.2%		26.1 %		25.5%		24.4% 1)
NDP in ₱ million at 1972 prices	27156	(4.5)	42636	(5.2)	54894	(7.1)	62958		-
Sectoral Shares in Percent:									
(Agriculture)	34.4%		32.9%		30.8%		29.5%		-
(Industry)	23.4%		24.8%		27.6%		30.4%		-
(Service)	42.2%		42.3%		41.6%		40.1%		-
Trades (in US $ million at current prices):									
Exports	574	(6.6)	1083	(15.9)	2262	(16.6)	3076		-
Imports	604	(6.1)	1090	(26.2)	3495	(5.8)	3915		-
Trade Balance	- 30		- 7		- 1197		- 839		-

	1960	1970	1975	1977	1980
Transport Sector:					
Total motor Veh. registered	172470	458287	686397	795542 3)	937238 3)
		(10.3)	(8.4)	(7.66)	(5.62)
Total Vessels:					
Arr. & Dep. (Dome.)	-	122465	155126	168548	164360
			(4.8)	(4.2)	(2.5)
Arr. & Dep. (Inter.)	=	16424	14767	14591	15150
			(-2.2)	(-1.2)	(3.8)
Arr. & Dep. (Total)	_	138889	169893	183139	179510
			(4.1)	(3.8)	(-2.0)
Marine Cargos ('000 tons)					
Lded & UnLded (Dome.)	-	35930	44178	47917	49914
			(4.2)	(4.2)	(4.2)
" " (Inter.)	-	56328	58736	68639	72786
			(0.8)	(8.1)	(6.0)
" " (Total)	-	92258	102914	116556	122700
			(2.2)	(6.4)	(5.3)
Revenue Passengers on the air lines (in '000) Domestic	763	2073	2387	2495	2791 2)
		(10.5)	(2.9)	(2.2)	(5.8)
PRL Intern'l.	32	174	356	628	-
		(18.5)	(15.4)	(32.8)	
Railways (PNR)					
Loaded cargos in freight cars (tons)	1337072	277676	280603	194263	144962 1)
		(-17.0)	(0.2)	(-20.2)	(-15.8)
Passengers carried ('000)	95465	56284	87233	129962	85316 1)
		(-5.4)	(9.2)	(22.1)	(-23.4)

Source: 1980 Philippine Statistical Year Book, NEDA and the data in Land Transport Commission.

Notes: 1) Figures for 1979

2) Figures for 1978

3) From Land Transport Commission (Appendix Table 4.2-1)

Remarks: Figures in ( ) are averaged annual ratio in percent.

APPENDIX TABLE 2.2-1 POPULATION STATISTICS

(In thousands)

YEAR	1948	1960	1970	1975	1980
Philippine Total	19,234	27,088	36,684	42,071	47,914
	(2.89)	(3.08)	(2.78)	(2.64)	
Metropolitan Manila (Nat'ls. Cap. Region)	1,569	2,462	3,967	4,970	5,925
	(3.83)	(4.89)	(4.61)	(3.58)	
Bulacan	394	515	738	900	1,096
	(2.26)	(3.66)	(4.05)	(4.02)	
Cavite	263	378	520	628	772
	(3.07)	(3.24)	(3.85)	(4.22)	
Laguna	321	472	700	804	973
	(3.26)	(4.02)	(2.81)	(3.89)	
Rizal	105	174	307	414	552
	(4.30)	(5.84)	(6.16)	(5.92)	
Total of four Prov.	1,083	1,539	2,265	2,746	3,393
	(2.97)	(3.94)	(3.93)	(4.32)	
Sub-Total	2,652	4,001	6,232	7,716	9,318
	(3.49)	(4.53)	(4.36)	(3.85)	

Source: NCSO of NEDA

Remarks: Figures in ( ) are the average growth rates in percent p.a.

APPENDIX TABLE 2.2-2 POPULATION FORECASTS

(In thousands)

YEAR	1980		1990 1/		2000 1/
Philippine Total	47,914	(3.10)	65,041	(2.52)	83,439
Metropolitan Manila (Nat'ls. Cap. Region)	5,925	(3.94)	8,723	(2.71)	11,397
Bulacan	1,096	(2.42)	1,392	(2.27)	1,742
Cavite	772	(1.82)	925	(2.21)	1,151
Laguna	973	(3.27)	1,342	(2.40)	1,702
Rizal	552	(3.21)	757	(2.77)	995
Total for four prov.	3,393	(2.67)	4,416	(2.40)	5,590
Sub-Total	9,318	(3.50)	13,139	(2.60)	16,987

Source: NCSO of NEDA

Remarks: Figures in ( ) are the average growth rates in percent p.a.

Notes: 1/ Medium Assumption by NEDA using the census up to 1975

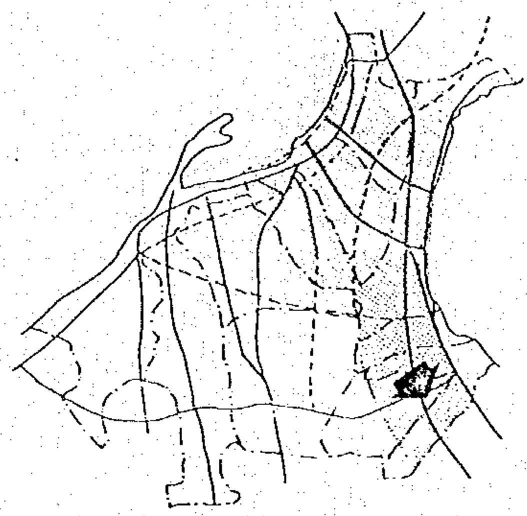
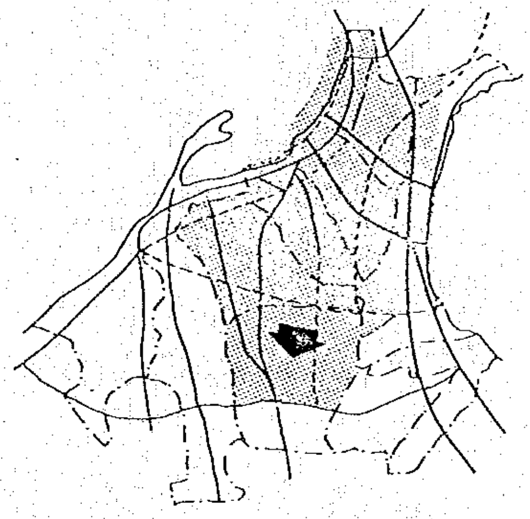
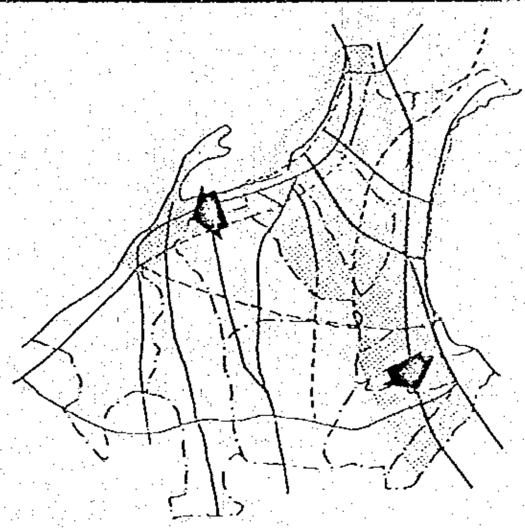
APPENDIXES FOR CHAPTER 3

APPENDIX TABLE 3.2–1 POPULATION BY MUNICIPALITY IN THE DIZ: 1970, 1975 AND 1980

City Municipality	1970	1975	1980	Growth Ratio 1975/1970	Growth Ratio 1980/1975	Growth Per Annum 1970–1975	Growth Per Annum 1975–1980
Pasay City	206,283	254,999	286,497	1.236	1.132	4.33	2.52
Las Piñas	45,732	81,610	133,882	1.785	1.640	12.28	10.41
Muntinlupa	65,057	94,563	136,786	1.454	1.446	7.77	7.66
Para ñaque	97,214	158,974	207,514	1.635	1.305	10.34	5.47
Bacoor	48,440	62,225	90,381	1.285	1.452	5.14	7.75
Carmona	20,123	51,004	65,059	2.535	1.276	20.44	4.99
Cavite City	75,739	82,456	87,813	1.089	1.065	1.71	1.27
Dasmariñas	17,948	22,805	52,206	1.271	2.289	4.91	18.02
Gen. Trias	29,635	34,807	39,704	1.175	1.141	3.27	2.67
Imus	43,686	48,566	59,122	1.112	1.217	2.14	4.01
Kawit	28,447	33,165	39,346	1.166	1.186	3.12	3.48
Noveleta	10,560	12,141	14,448	1.150	1.190	2.83	3.54
Rosario	23,817	28,725	33,305	1.206	1.159	3.82	3.00
Tanza	32,691	37,353	43,722	1.143	1.170	2.70	3.20
Biñan	58,290	67,444	83,748	1.157	1.242	2.96	4.43
San Pedro	32,991	43,439	74,598	1.317	1.717	5.66	11.42
Taguig	55,257	73,702	134,238	1.334	1.821	5.93	12.73
Total, DIZ	891,910	1,187,978	1,582,369	1.332	1.332	5.94	5.88

Source: Census by NEDA

APPENDIX TABLE 3.2-2 ALTERNATIVE PHASES OF DEVELOPMENT IN THE DIZ

Alternative	Major Characteristic	Pattern of Development
Pattern I	Urbanization extends along the side of Laguna Lake. On the side of Manila Bay, urbanization will be reaching at Bacoor. Population growth is prominent in Blocks A through D.	
Pattern II	Urbanization extends southward at midland of the DIZ. Cultivated area will change into residential area and other uses under the urban development. This phase will have extensive locations of industrial parks along Naic-Carmona Road.	
Pattern III	Urbanization extends not only along the side of Laguna Lake but also along the side of Manila Bay. Along the side of Manila Bay, urbanization will extend to Rosario 10 Km away beyond Bacoor. An industrial zone similar to Mariveles is planned at Rosario.	

APPENDIX NOTE 3.1 CHARACTERISTICS OF THE CONCEPTUAL DEVELOPMENT PATTERNS

3.1.1 Expected Performances

Alternative I: Blocks B, C, and D show a high growth of urbanization which trend will be maintained thoroughly.

Alternative II: There is a prospect that Block F will be urbanized in this pattern. Currently it is mostly for traditional agricultural land use.

Alternative III: Block B, C and D show a high growth of urbanization which trend is likely to continue. However, the expansion of urban area along the Quirino Avenue and National Road No. 25 (in Block E) is expected also. The development will be consistent with the development of infrastructures, such as the construction of the Manila-Cavite Coastal Road, the improvement of Imelda Avenue and the Reclamation Project.

3.1.2 Development of Road Network

Alternative I: Development Plan of the Road Network on the western part of the DIZ is proposed, while less development in urbanization on this side is assumed.

Alternative II: Urban expansion towards the south in the midland of the DIZ should have appropriate road network construction plan, which has not been so far included in any development plan.

Alternative III: Road network construction plans on the western and the eastern sides are likely to be associated with the urban expansion in these two directions.

3.1.3 Agricultural Land Use Conservation

Alternative I and III: Cultivated area in the southern midland of the DIZ is not conflicting with the expansion of urbanization since it is expected either on the east side or both east and west sides.

Alternative II: The cultivated land in the southern midland will be encroached by urbanization.

APPENDIX NOTE 3.2 CHARACTERISTICS OF BLOCKS A THROUGH G IN RESPECT TO THE DEVELOPMENT PATTERNS

3.2.1 Block A (Pasay City and Parañaque)

There will be no difference in the development of the block in all the alternative patterns.

1) Pasay City has little open space to develop. The population has shown a decreasing tendency of its growth rate: 4.33% p.a. in 1970-75 and 2.52% p.a. in 1975-80. This low growth rate will continue in the future. The population density in the urbanized area is 440 per ha. in 1980. The other part, which is nearly half of the city area, is occupied by Manila International Airport.

2) Parañaque has densely built-up area along the Quirino Avenue. Additional residential area will be developed toward the eastern inland areas which still remain unexplored open spaces.

3) The increase of population in the block will be dependent largely on the development of urban area in the inland of Parañaque. However, the whole population of the block will gradually decrease the percent share of the DIZ, because of the saturated condition in the urban area of Pasay City.

4) Further increases in the location of commercial services and manufacturing enterprises along the trunk roads of Quirino Avenue, Imelda Avenue, and the Project Route A indicate the formation of a new urban core in the Metropolitan area. However, new establishment of factories will be restrained by the existence of residential areas which have developed in the vicinity. It is likely that new locations of emplyment opportunity would continue to increase under certain restraints particularly along Project Route A.

5) The southern inland area of the block will have a strong characteristic as residential area because a number of villages have been constructed and the development will continue because of its advantage of its proximity to the CBDs of Metro Manila

3.2.2 Block B (Las Piñas and Baccor)

There will be no difference in the development of the block in all the alternative patterns.

1) The population has grown in accordance with the development of residential area particularly in Las Piñas. The annual average growth rate of population in the municipality was 12.28% for 1970-75 and 10.41% for 1975-80. This tendency will continue or even will accelerate if the Project Roads are completed.

2) In Bacoor, the development of residential area, less in scale than the neighboring municipality of Las Piñas, is expected, triggered by the improvement of the road system along the Manila Bay. The improvement program of Talaba-Paliparan Road financed partly by ADB may facilitate the development of urban area along the road. The population may grow even at a larger rate than in the past (5.14% p.a. in 1970-75 and 7.75% p.a. in 1975-80).

3) Urban development will continue in the corridor along Quirino Avenue and the area along the proposed extension of Imelda Avenue.

4) Commercial activities have agglomerated around Zapote which will be strengthened much more in the coming decades. New locations of tertiary and secondary enterprises are expected in the corridor along the Project Route B, Zapote-Alabang Road. However, since the corridor is also expected to be characterized as a residential area, new and extensive establishment of manufacturing enterprises should be guided to one or two designated areas along the road.

3.2.3 Block C (Taguig and Muntinlupa)

There will be no difference in the development of Block C in all the alternative patterns.

1) In the northeastern part of Taguig there is a suitable land for cultivation, which should be reserved as it used to be in the past. The municipality has a military compound in the northwestern part. Consequently urban development will extend southwards in the corridor along the National Road 303 and the South Luzon Expressway.

2) Extensive development of residential area was noted at the western side of the Expressway in the municipality of Muntinlupa. There are additional plans of residential development in the municipality, particularly in the west and south. It will register a high growth rate as in the past: 7.77% p.a. in 1970-75 and 7.66% p.a. in 1975-80.

3) Commercial activities are centering around Sucat and Alabang. They have strong potential to grow further in terms of spatial expansion as well as operation.

4) Manufacturing enterprises were extensively located in the corridor along the Expressway and will increase more because of the available open space. The industrial belt area thus formulated along the Expressway will generate the benefit of agglomeration, which in turn will attract new enterprises to locate in the vicinity of the Expressway.

3.2.4 Block D (San Pedro, Biñan and Carmona)

The development pattern of Block D will be the same in alternatives I and III. Major characteristic points are as follows:

1) Development of residential area in Muntinlupa will eventually extend to San Pedro, which may be influence by the two resettlement projects, one in San Pedro and another in Carmona. The past trend of urban development is not expected to terminate suddently.

2) Although the use of South Luzon Expressway will accelerate the increase of residents commuting to MMA, the population in Biñan will not increase at a higher rate than that in San Pedro and Carmona, because housing development projects in this municipality are relatively mdoest in scale.

3) It is expected that establishment of new enterprises will encourage the formation of a community where proximity of the residence to the work place is a major consideration. This is expected in the area along the Naic-Carmona road.

4) The percent share of the population of the block in that of the DIZ for the coming decade will be mostly at the same level as registered in 1980. The average annual growth rate for the block is estimated at 5.3% for the coming decade, while it registered at 6.6% p.a. in the past five years.

In the case of Pattern II, it is assumed that the growth of urbanized areas will be quite modest, resulting in the growth of population in Block D at a rate probably less than that of the DIZ.

3.2.5 Block E (Cavite City, Kawit, Novaleta and Rosario)

There will be no difference in the development of Block D in patterns I and III.

1) Urbanized area will not expand substantially in the block since there are restraints on spatial expansion due to the existence of fishponds and saltbeds. In the past five years it registered an average of 2.3% p.a. population growth rate. Up to 1990, it is estimated that the population of the block will increase at 2.8% p.a.

2) The industrial park, which is in the stage of planning in Rosario, is difficult to confirm as to the stages of development in the coming years. The park, being likely not so extensive in scale as in Mariveles, Bataan, will play a modest role in the urban expansion in the coming ten years. But the impact will be larger in the subsequent decade.

In the alternative pattern III, it is expected that the urban expansion will cover the block particularly in the years after 1990. The progressive development is likely to be supported by the completion of the Manila-Cavite Coastal Road together with the Manila Bay reclamation in Cavite and by the industrial park in Rosario. Urbanization will cover the cultivated and open spaces scattering in the southern side of National Road 25.

3.2.6 Block F (Imus and Dasmariñas)

There will be no difference in the development of the block in alternative pattern I and III.

1) The area has been extensively developed for agricultural use. The status will be maintaned in view of the government objective to attain economic self-sufficiency. For this purpose funds have been invested in the area to raise the productivity.

2) Urbanization will be limited since the priority of the development is committed towards maintaining agricultural use.

3) Urban corridor extending from Bacoor to Imus along the northern part of the National Road 17 and a resettlement project in Dasmariñas will result in additional growth of population. However, this tendency will be modest compared to the population increase in other blocks.

In alternative pattern II, the block is considered available for urbanization by reducing the cultivated area. This urbanization will require a road network which would cross the area to provide a better transport system. Besides the road system, other infrastructures should be constructed simultaneously.

3.2.7 Block G (Gen. Trias and Tanza)

There will be no difference in the development of the block in all the alternative development patterns.

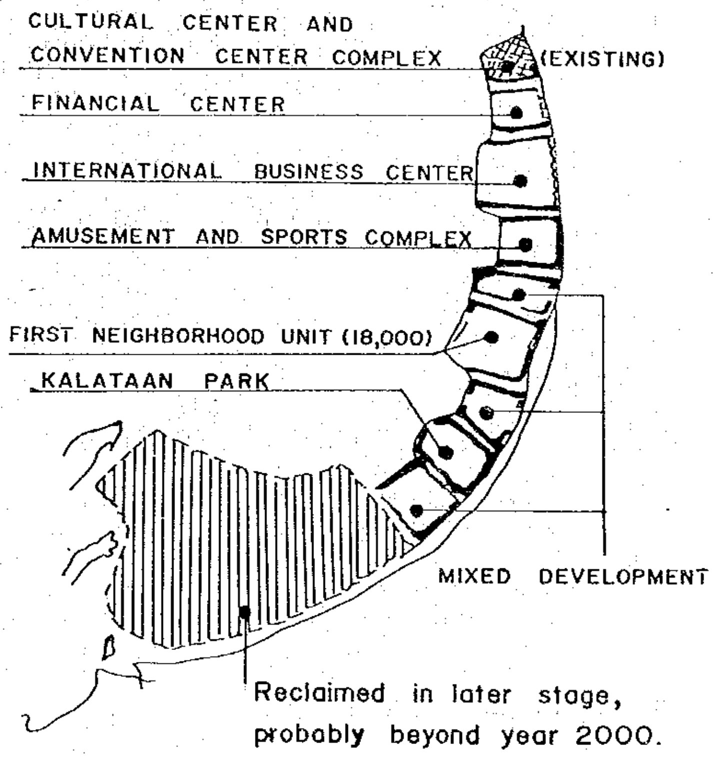
1) Similar to the case of Block E, the agricultural land use will be conserved in Block G in all the three development patterns. In order to increase the agricultural output in the area Cavite Friar Irrigation Project is under implementation which covers not only Block E but also Block G. This program is expected to raise further the productivity in the Block.

2) Existing small urban centers in Tanza and Gen. Trias will be stimulated to grow further when the industrial park in Rosario is realized.

3) The area along the road from Naic to Carmona has some loca-

tions suitable for industrial use or new complex. However, the scales of these urban cores will be modest compared to Blocks A thru D. Population growth will register the lowest rate of 2.8% p.a. in the coming decade.

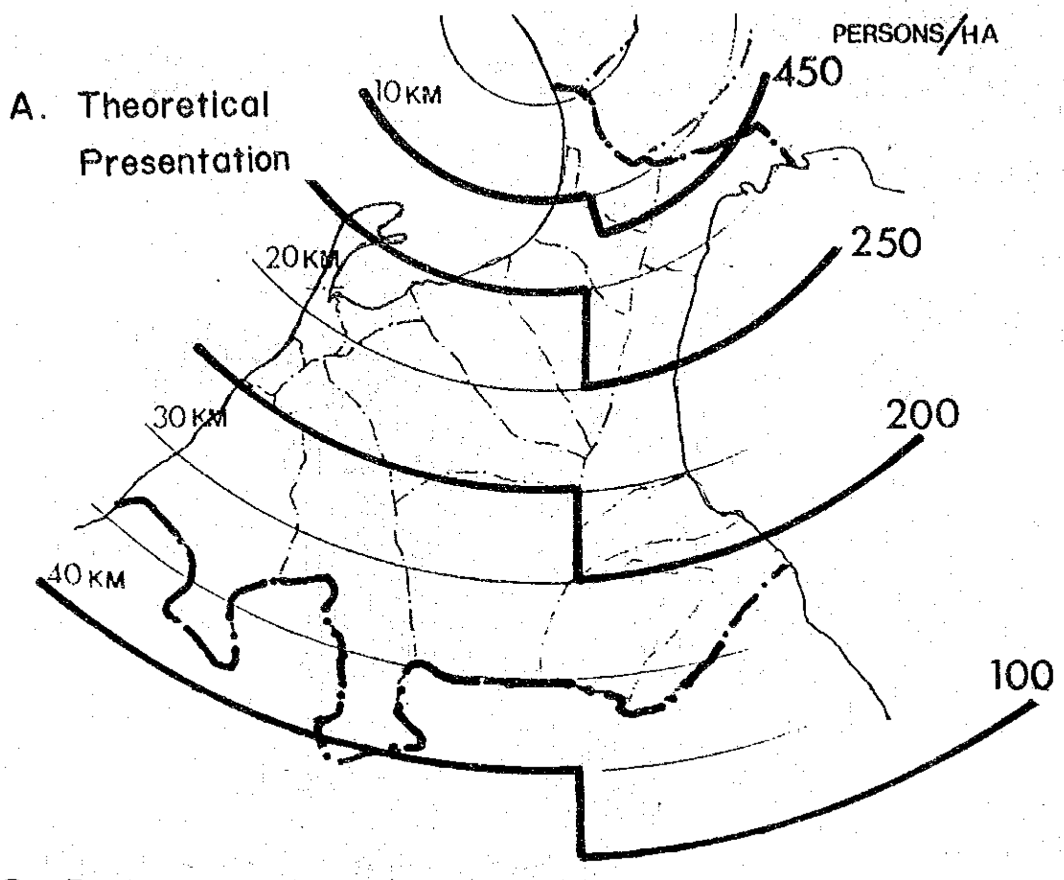
APPENDIX FIG. 3.3-1 PROVISIONAL LAND USE PLAN FOR RECLAMATION OF MANILA - CAVITE

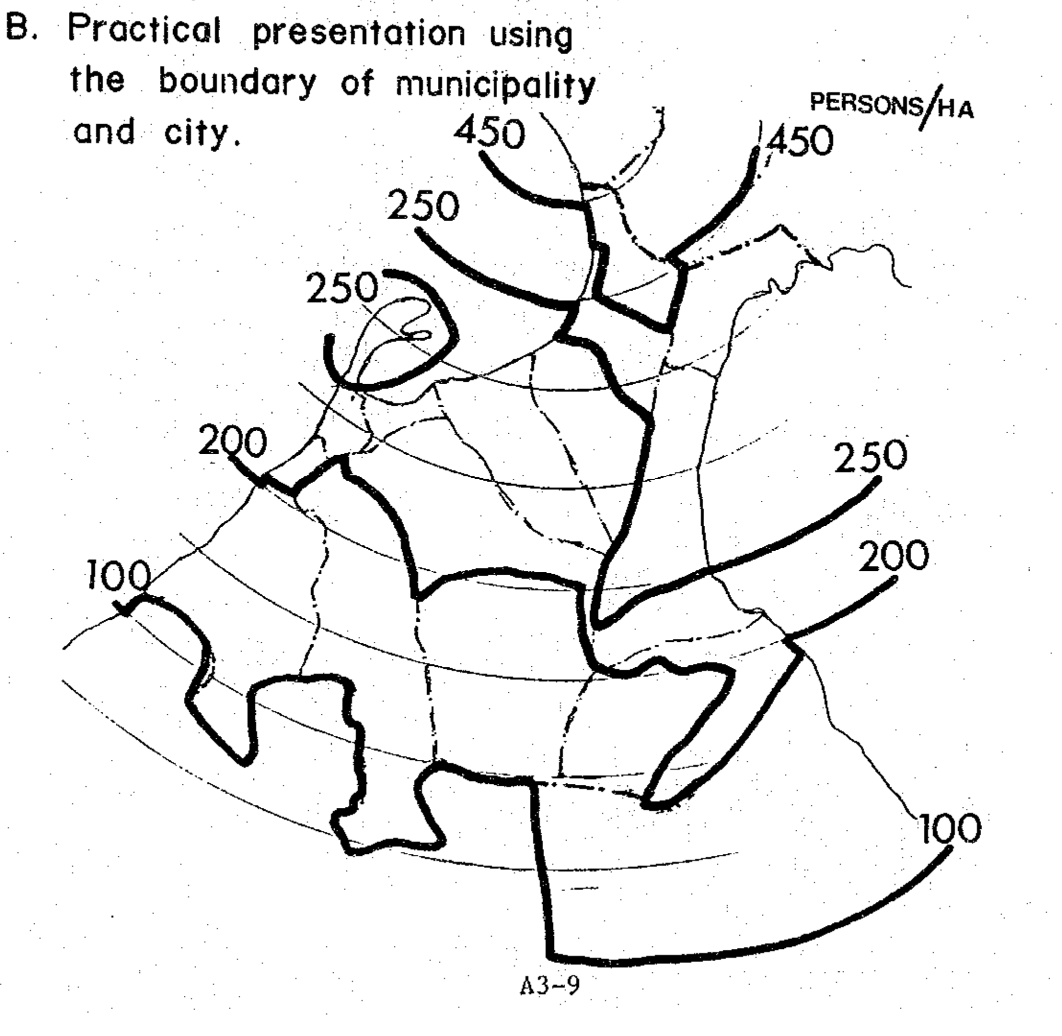


Remarks:

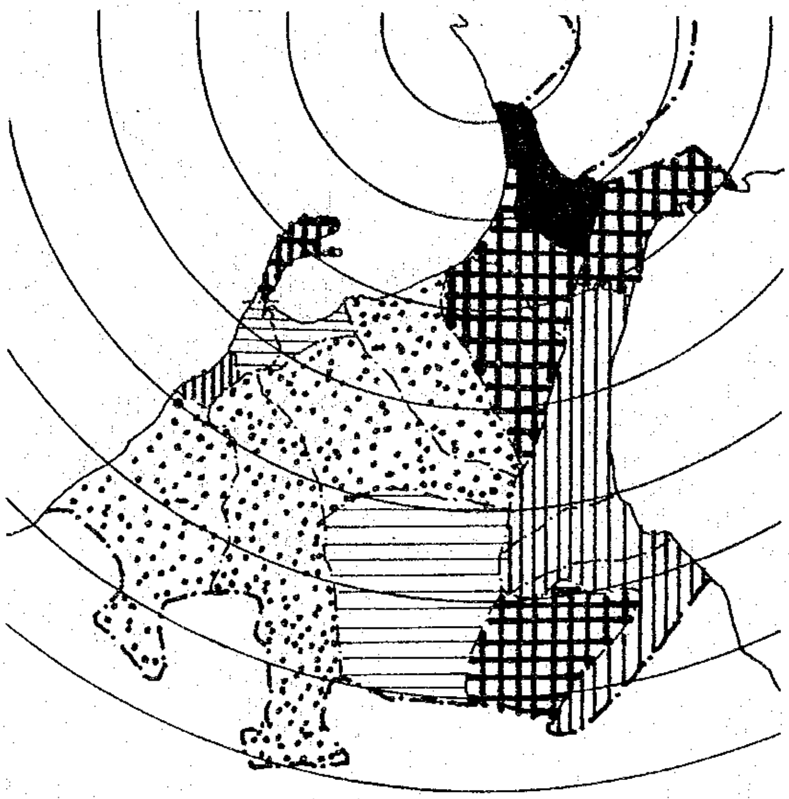
The location is assumed provisionally by the study team, subject for revision when the plan by CDCP is finalized.

APPENDIX FIG. 3.4-2 POPULATION DENSITY AND DISTANCE FROM MANILA





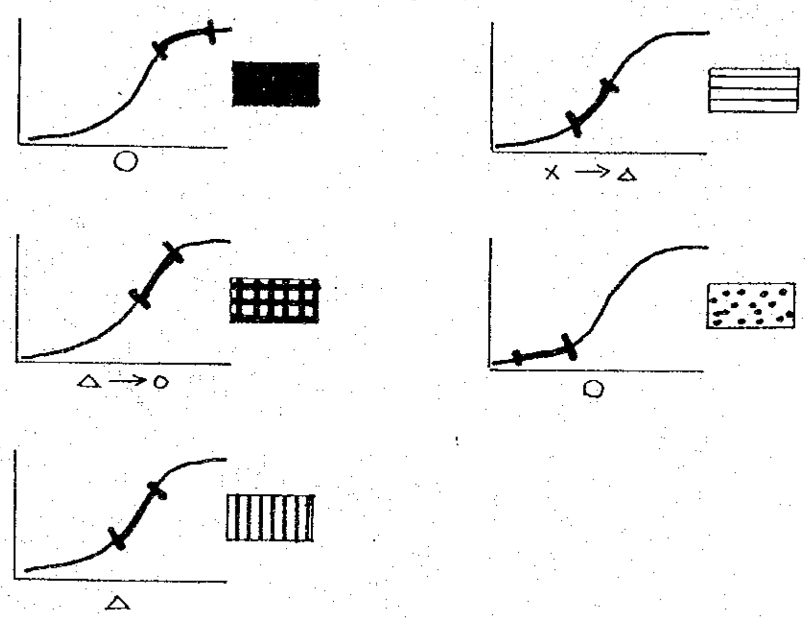
APPENDIX FIG. 3.4-3 STAGES OF POPULATION GROWTH BY MUNICIPALITY ALONG THE LOGISTIC CURVE



o.... approaching the saturation point

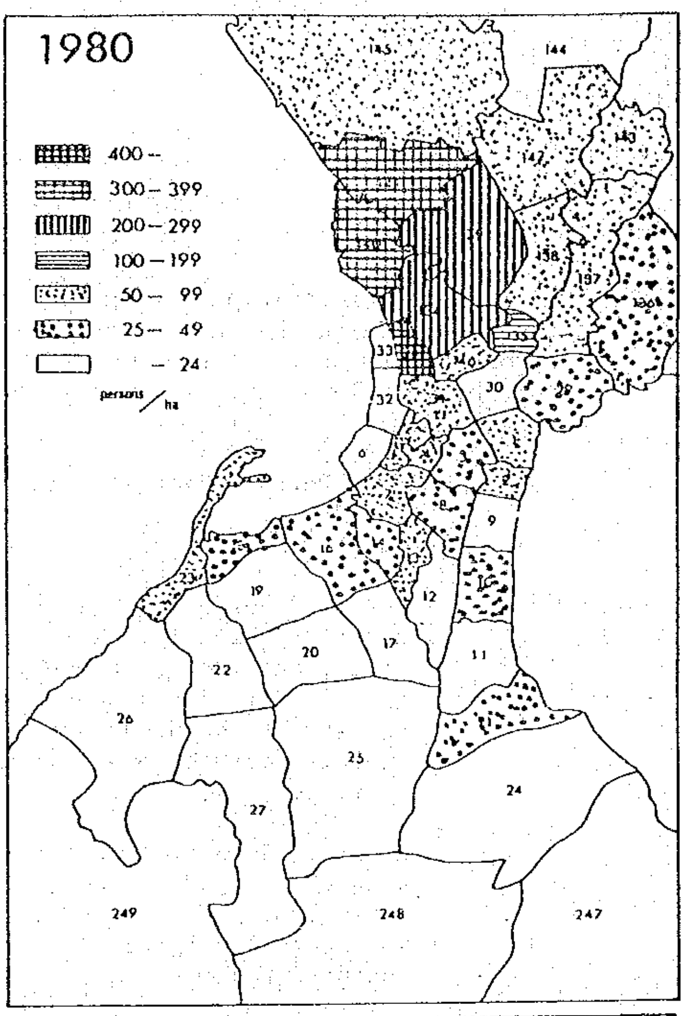
Δ.... in the mid-point of the growth

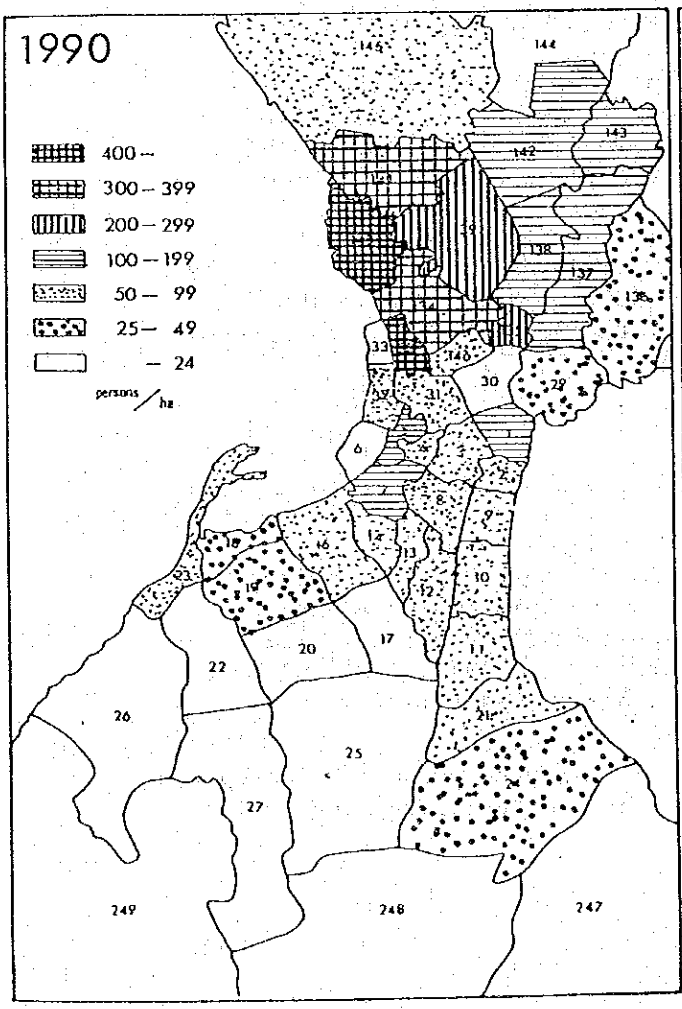
x.... in the beginning point of the growth

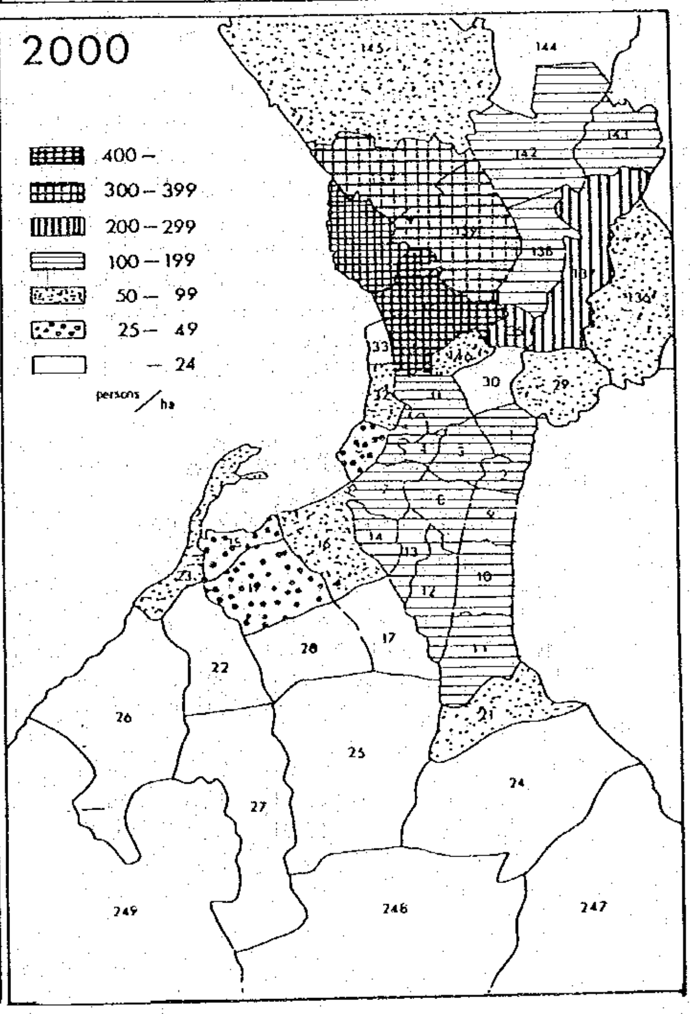


APPENDIX FIG. 3.4-4

DISTRIBUTION OF POPULATION DENSITY BY ZONE : 1980, 1990 AND 2000







APPENDIX NOTE 3.3 EMPLOYMENT OPPORTUNITIES

The estimate of employed persons in the entire Study Area and in each zone was conducted by the following steps. Firstly the employed persons by residence were estimated for the Study Area and secondly those by workplace were likewise forecasted using the estimated figures by residence.

3.3.1 Employed Persons by Residence

1) Greater Metro Area

Employed persons by workplace in the whole Study Area cover not only those living in the Study Area but also those living outside but commuting into the Study Area. If the area is delineated substantially large to include the outer suburbs of the Study Area, it can be assumed that number of employed persons by residence is virtually equal to that by workplace.

In order to approximate the employed persons by workplace with those by residence, the suburbs on the northern periphery were included as shown in Appendix Fig. 3.5-1 which was configurated as the Greater Metro Area. The northern boundary was the same as that of MMETROPLAN.

2) Employed Persons by Residence in 1980, 1990 and 2000

The ratio of employed persons by residence to the population is shown in Appendix Table 3.5-1. The figure for the year 2000, however, was determined by extrapolating the trend covering the previous two years of 1980 and 1990.

If the population in a zone of the DIZ is multiplied by the ratios in Appendix Table 3.5-1, the employed persons by residence are estimated for 1980, 1990 and 2000. The estimated total employment by residence is shown in Appendix Table 3.5-4 thru Table 3.5-6.

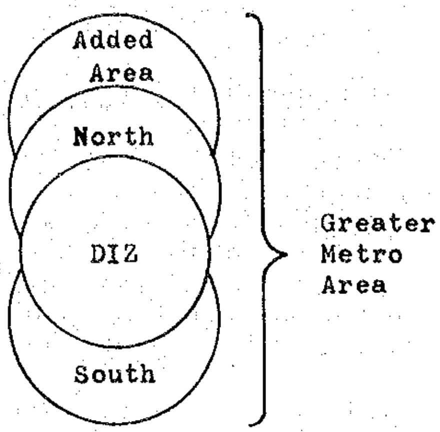
3.3.2 Employed Persons by Workplace

1) Greater Metro Area

In the assumption that the employed persons by residence are approximately equal to those by workplace within the Greater Metro Area, the figures in Appendix Table 3.5-2 indicate the total employed persons by workplace in 1980, 1990 and 2000. The figures quoted from the table are as follows:

1980	2,552,290	Total employed persons by workplace in the Greater Metro Area
1990	3,577,000	
2000	4,652,000	

APPENDIX FIG. 3.5-1 GREATER METRO AREA



Municipality in the Added Area

1) Marilao
2) Bocaue
3) Bulacan
4) Malolos
5) Guiguinto
6) Plaridel
7) Pandi
8) Sta. Maria
9) San Jose del Monte
10) Angat
11) Norzagaray
12) Calumpit

APPENDIX TABLE 3.5-1 THE RATIO OF EMPLOYMENT OVER POPULATION

Year	Employed persons by residence / Population
1980[1)]	0.318
1990[1)]	0.335
2000[2)]	0.350

Source: 1) Table 1 in D18 and Table 2 in D19, Vol. III, MMETROPLAN

2) Assumed by the study team

APPENDIX TABLE 3.5-2 POPULATION AND EMPLOYMENT IN GREATER METRO AREA

	Study Area	Added Area 1)	Greater Metro Area
Population, 1980	7,353,000	456,000	7,809,000
Employees Res., 1980	2,338,250	145,010	2,483,260
Employees Wp, 1980	2,434,690	117,600	2,552,290
Population, 1990	9,881,000	797,000	10,678,000
Employees Res., 1990	3,310,000	267,000	3,577,000
Population, 2000	12,083,000	1,208,000	13,291,000
Employees Res, 2000	4,229,000	423,000	4,652,000

Remarks: Employees Res. means employed persons by residence.

Employed persons by residence was estimated by multiplying the population by the ratios shown in Appendix Table 3.5-1

Wp means workplace. The figures were determined by referring to Table 1,D-18, Vol. III, MMETROPLAN

Notes: 1) Figures in the years 1990 and 2000 were assumed using the NEDA's medium projection of population.

APPENDIX TABLE 3.5-3 CLASSIFIED EMPLOYED PERSONS BY WORKPLACE IN THE STUDY AREA

Year	1980	1990	2000
Primary	131,190 (5.4)	109,200 (3.3)	109,200 (2.5)
Secondary	641,500 (26.3)	1,021,100 (30.5)	1,316,100 (30.7)
Tertiary	1,662,000 (68.3)	2,219,700 (66.2)	2,866,700 (66.8)
Total	2,434.690 (100.0)	3,350,000 (100.0)	4,292,000 (100.0)

Remarks: Figures in ( )are thepercent of the total in each year.

The 1980 figure is composed of the MMETROPLAN projection and the estimate for the additional southern municipalities which are located outside the Study Area in MMETROPLAN but included in this Project Study.

If the balance between the employed persons living in the added area and those enumerated by workplace within the same area could be identified, it can be assumed that the balance is for those living in the area but working in other areas. Thus, the total employed persons by workplace in the Study Area can be calculated by reducing the balance from the total in the Greater Metro Area. According to the data in 1980 in the added area, the percent share of those living and working in the added area was 81.1%. Thus it was found that those living in the area but working outside had the percentage as follows:

$$\frac{145,010 - 117,600}{145,010} = \frac{27,400}{145,010} = 18.9\%$$

Furthermore, assuming that those employed persons living in but working outside the added area have workplace in the Study Area and that the above 18.9% will decrease to 15% in the years 1990 and 2000 because of new locations of enterprises in the added area, the total employed persons by workplace in the Study Area are estimated as follows:

EMPLOYED PERSONS IN THE STUDY AREA

	By Workplace	By Residence
1980	2,435,000	2,338,000
1990	3,350,000	3,310,000
2000	4,292,000	4,229,000

2) Classified Employed Persons by Workplace in the Study Area

Industrial classification of the employed persons in the Study Area was determined by referring to MMETROPLAN estimates in the years 1980 and 1990. The percent share in the year 2000 was determined by extrapolating the previou two years. The number of persons in the primary sector was based on the assumption that it would be equal to that in 1990. The classified employed persons determined by using the percentages are shown in Appendix Table 3.5-3.

3) Employed Persons by Zone

The Study Area was subdivided into three areas, each covering the traffic zones as show below.

Direct Influence Zone - - - - - - - - - 1 to 33 (33)
North Area (Manila, Quezon, etc.) - - 134 to 146 (13)
South Area (Calamba, Naic, etc.) - - 247 to 249 (3)

The figures in Appendix Table 3.5-3 were firstly divided into three areas by studying the projection of MMETROPLAN and the structural plan of the DIZ. The total of employed persons in each area was then broken down to the zones within the area. Particularly for the zones in the DIZ, the estimates were checked against the changes of employment opportunity in the past, and future structural and land use plans as proposed in 3.1 thru 3-3 of Chapter 3. The resultant employed persons by zone are shown in Appendix Tables 3.5-4 thru 3.5-6 together with employed persons by residence.

APPENDIX TABLE 3.5–4 ESTIMATE OF EMPLOYMENT BY ZONE 1980

Zone No.	Employed Persons by Residence	Employed Persons by Workplace: Primary	Secondary	Tertiary	Total Employment
1	17,500	300	2,500	3,700	6,500
2	6,680	560	1,400	900	2,860
3	13,990	80	6,400	6,400	12,880
4	5,720	30	2,600	2,600	5,230
5	14,310	150	7,000	11,000	18,150
6	0	0	0	0	0
7	20,670	130	4,300	15,100	19,530
8	10,180	40	900	900	1,840
9	6,360	0	4,000	4,000	8,000
10	19,400	0	19,000	6,000	25,000
11	15,580	0	17,000	3,000	20,000
12	7,310	30	700	700	1,430
13	13,670	60	1,400	1,400	2,860
14	8,590	50	1,700	5,900	7,650
15	0	0	0	0	0
16	23,210	650	1,000	7,000	8,650
17	5,720	510	1,000	1,000	2,510
18	12,400	1,670	1,000	6,000	8,670
19	12,720	970	1,000	4,000	5,970
20	2,540	960	0	1,000	1,960
21	23,850	700	9,000	3,000	12,700
22	12,730	940	1,000	2,000	3,940
23	43,250	760	2,000	10,000	12,760
24	47,380	7,870	15,000	11,100	33,970
25	16,540	3,120	1,200	3,500	7,820
26	13,990	4,470	2,300	4,200	10,970
27	4,130	2,690	0	1,300	3,990
28	78,230	720	19,500	72,100	92,320
29	18,130	610	3,800	3,600	8,010
30	2,550	110	2,100	2,200	4,410
31	25,760	130	4,700	26,800	31,630
32	0	0	0	0	0
33	0	0	2,000	16,000	18,000
Sub Total	503,080	28,310	135,500	236,400	400,210
134	211,470	1,800	46,800	201,100	249,700
135	27,030	0	2,000	11,000	13,000
136	42,610	3,160	29,000	10,000	42,160
137	84,590	650	52,300	28,800	81,750
138	40,070	1,360	54,000	56,000	111,360
139	267,120	1,020	78,000	195,000	274,020
140	212,110	4,200	43,000	371,000	418,200
141	285,880	2,400	54,000	197,000	253,400
142	99,850	1,010	22,000	123,000	146,010
143	42,610	100	13,500	20,900	34,500
144	40,390	2,230	4,200	10,900	17,330
145	304,640	26,580	83,500	152,400	262,480
146	8,900	0	900	14,800	15,700
Sub Total	1,667,270	44,510	483,200	1,391,900	1,919,610
247	89,360	29,820	12,500	11,200	53,520
248	26,710	10,670	1,100	5,900	17,670
249	51,830	17,880	9,200	16,600	43,680
Sub Total	167,900	58,370	22,800	33,700	114,870
Grand Total	2,338,250	131,190	641,500	1,662,000	2,434,690

APPENDIX TABLE 3.5–5 ESTIMATE OF EMPLOYMENT BY ZONE 1990

Zone No.	Employed Persons by Residence	Employed Persons by Workplace: Primary	Secondary	Tertiary	Total Employment
1	29,100	150	3,600	3,500	7,250
2	10,100	140	2,200	1,800	4,140
3	25,500	30	8,000	7,300	15,330
4	9,700	20	2,800	3,000	5,820
5	22,800	130	7,600	12,000	19,730
6	5,000	0	0	3,000	3,000
7	42,900	100	4,600	15,700	20,400
8	24,100	20	4,000	3,200	7,220
9	20,800	0	6,300	7,000	13,300
10	40,500	0	22,400	8,500	30,900
11	46,900	0	20,000	6,000	26,000
12	28,500	20	2,500	4,500	7,020
13	18,800	30	1,300	4,700	6,030
14	23,100	20	2,400	8,000	10,420
15	0	0	0	0	0
16	42,500	180	1,600	9,800	11,580
17	10,400	200	1,800	2,300	4,300
18	16,400	1,000	1,500	6,500	9,000
19	18,400	550	1,500	6,100	8,150
20	4,000	550	1,000	1,500	3,050
21	39,200	500	10,600	6,700	17,800
22	16,800	750	1,500	2,700	4,950
23	58,600	600	3,900	13,500	18,000
24	74,000	6,610	29,700	17,900	54,210
25	23,800	3,000	2,200	6,000	11,200
26	17,800	4,230	3,200	5,400	12,830
27	5,700	2,510	1,500	2,000	6,010
28	85,100	0	32,000	92,000	124,000
29	27,100	310	6,000	4,400	10,710
30	3,000	0	8,000	2,700	10,700
31	36,800	100	10,400	41,300	51,800
32	6,700	0	1,000	30,000	31,000
33	0	0	2,000	101,100	103,100
Sub Total	834,100	21,750	207,100	441,100	669,950

Zone No.	Employed Persons by Residence	Employed Persons by Workplace: Primary	Secondary	Tertiary	Total Employment
134	266,300	0	82,100	311,200	393,300
135	35,500	0	3,500	11,000	14,500
136	66,300	3,120	51,100	14,000	68,220
137	184,600	400	70,200	35,300	105,900
138	69,700	1,340	76,900	58,000	136,240
139	315,200	250	113,300	275,100	388,650
140	262,300	0	67,100	437,100	504,200
141	353,800	2,250	93,100	224,000	319,350
142	175,900	900	36,400	161,200	198,500
143	76,000	100	20,400	24,000	44,500
144	43,900	1,920	24,000	16,100	42,020
145	366,500	23,020	141,100	147,100	311,220
146	11,700	0	3,400	19,300	22,700
Sub Total	2,227,700	33,300	782,600	1,733,400	2,549,300
247	128,300	27,350	16,500	14,200	58,050
248	35,500	9,880	2,100	9,600	21,580
249	84,400	16,920	12,800	21,400	51,120
Sub Total	248,200	54,150	31,400	45,200	130,750
Grand Total	3,310,000	109,200	1,021,100	2,219,700	3,350,000

APPENDIX TABLE 3.5–6 ESTIMATE OF EMPLOYMENT BY ZONE 2000

Zone No.	Employed Persons by Residence	Employed Persons by Workplace			
		Primary	Secondary	Tertiary	Total Employment
1	41,700	150	5,000	3,500	8,650
2	13,300	140	3,000	2,400	5,540
3	34,300	30	9,000	9,300	18,330
4	14,000	20	3,100	4,000	7,120
5	31,500	130	8,000	16,000	24,130
6	10,500	0	2,000	4,000	6,000
7	63,000	100	4,900	21,000	26,000
8	35,400	20	6,000	4,700	10,720
9	36,400	0	8,600	9,000	17,600
10	63,000	0	25,400	11,900	37,300
11	77,000	0	22,000	9,700	31,700
12	46,900	20	7,100	8,600	15,720
13	23,800	30	3,900	9,000	12,930
14	32,200	20	3,500	11,200	14,720
15	0	0	0	0	0
16	63,300	180	2,500	13,800	16,480
17	15,000	200	5,000	4,400	9,600
18	20,300	1,000	2,500	9,800	13,300
19	31,500	550	3,000	9,500	13,050
20	7,000	550	3,500	2,700	6,750
21	55,700	500	12,600	9,400	22,500
22	21,000	750	4,500	6,000	11,250
23	81,600	600	4,500	18,000	23,100
24	130,200	6,610	54,900	29,300	90,810
25	38,100	3,000	4,300	11,900	19,200
26	28,700	4,230	6,200	7,800	18,230
27	7,000	2,510	4,300	4,100	10,910
28	91,700	0	37,000	118,700	155,700
29	36,700	310	8,100	20,000	28,410
30	3,500	0	9,800	3,400	13,200
31	45,500	100	12,600	53,300	66,000
32	14,000	0	2,600	37,800	40,400
33	0	0	2,000	133,500	135,500
Sub Total	1,213,800	21,750	291,400	615,700	928,850
134	323,800	0	101,800	401,300	503,100
135	44,500	0	5,400	14,000	19,400
136	91,400	3,120	67,400	17,600	88,120
137	257,600	400	95,500	33,800	129,700
138	101,500	1,340	101,200	72,700	175,240
139	364,700	250	136,500	356,000	492,750
140	314,300	0	80,900	565,500	646,400
141	389,600	2,250	112,200	289,200	403,650
142	222,000	900	48,000	201,400	250,300
143	112,000	100	26,800	30,000	56,900
144	46,900	1,920	27,200	17,300	46,420
145	402,500	23,020	157,900	155,000	335,920
146	14,700	0	4,100	24,300	28,400
Sub Total	2,685,500	33,300	964,900	2,178,100	3,176,300
247	168,300	27,350	31,100	23,200	81,650
248	43,400	9,880	3,900	19,500	33,380
249	118,000	16,920	24,800	30,200	71,920
Sub Total	329,700	54,150	59,800	72,900	186,850
Grand Total	4,229,000	109,200	1,316,100	2,866,700	4,292,000