

Figure 3.1-1 Manzanas Sampled for the Person Trip Survey

### 3.1.3. PREMISES FOR ANALYSIS IN THIS CHAPTER

Analysis done in this chapter is based on the following premises:

- a) Zoning
- b) Trip purpose
- c) Travel mode, representative mode and its integration

#### (1) Zoning

The Study Team determined 427 traffic zones as shown in Figure 3.1-2 to Figure 3.1-4, with the cooperation of the Peruvian counterparts, which were employed for all transport surveys conducted. However, this zoning was integrated in several ways for graphic presentation, analysis, etc. as shown in Table 3.1-3. See also Table 3.1-6.

Table 3.1-3 Zoning

Name	Size
Traffic Zone	427 zones in the Study area and 29 zones outside
District	49 districts only in the Study area
Integrated Zone	14 zones
Area	5 areas

## (2) Trip Purpose

10 categories on trip purpose are applied for the Person Trip survey. The integration of 10 categories as shown in Table 3.1-4 is also employed in this chapter for specific analysis.

Table 3.1-4 Trip Purpose

Integration	Original Category
1. To work	1. To work
2. To school	2. To school
3. Business	3. For business
	4. Return to office
4. Private	5. Shopping
	6. Eating
	7. Entertainment
	8. Pick up/send off
	9. Other private
5. To home	10. To home

## (3) Travel Mode, Representative Mode and its Integration

There are two ways to define a trip: in terms of linked trip and unlinked trip. The first is an entire trip of a person for a single purpose, while the second is a part of the former, segregated by mode of travel. In other words, a linked trip is a chain of unlinked trips by different individual modes of travel. Hence, in order to define the representative mode of travel, there is a need to determine the priority among various modes of travel.

The priority is defined based on the following considerations:

- a) Public transport mode has a higher priority than private mode
- b) Line-haul mode has a higher priority than feeder mode

The relation of representative model and the priority is shown in Table 3.1-5.

Table 3.1-5 Representative Mode and Its Integration

Integrated Mode	Original Category	Priority
1. Walk	1. Walk	1
2. M/C	3. Motorcycle	4
	4. Mototaxi	5
3. Car	5. Private car	6
	6. Taxi	11
	7. Colectivo	12
4. Bus	8. Combi	13
	9. Microbus	14
	10. Omnibus	15
5. Others	2. Bicycle	3
	11. Other bus	10
	12. Small truck	8
	13. Truck	9
	14. Trailer	7
	15. Train	16
16. Others	2	

Table 3.1-6 Zoning System

District Name	Traffic Zone No.	Traffic Zone Code	District Zone	Inte-grated Zone	Area	District Name	Traffic Zone No.	Traffic Zone Code	District Zone	Inte-grated Zone	Area	District Name	Traffic Zone No.	Traffic Zone Code	District Zone	Inte-grated Zone	Area
Lima	1	0101	01	01	Central	Rimac	215	2801	28	03	Central	Independencia	112	1201	12	03	North
	2	0102					113	1202									
	3	0103					114	1203									
	4	0104					115	1204									
	5	0105					116	1205									
	6	0106					117	1206									
	7	0107					118	1207									
	8	0108															
	9	0109															
	10	0110															
	11	0111															
	12	0112															
	13	0113															
	14	0114															
	15	0115															
	16	0116															
	17	0117															
	18	0118															
	19	0119															
	20	0120															
	21	0121															
	22	0122															
Breña	45	0501	05	01	Central	San Borja	225	3001	30	04	Central	San Martín de Porras	288	3501	35	08	North
	46	0502					226	3002					289	3502			
	47	0503					227	3003					290	3503			
Jesús María	119	1301	13	01	Central	San Borja	228	3004	30	04	Central	San Martín de Porras	291	3504	35	08	North
	120	1302					229	3005					292	3505			
	121	1303					230	3006					293	3506			
	122	1304					231	3007					294	3507			
	123	1305					232	3008					295	3508			
	124	1306					233	3009					296	3509			
125	1307	234	3010	297	3510												
La Victoria	136	1501	15	01	Central	San Isidro	235	3011	31	04	Central	Ancon	300	3513	25	08	North
	137	1502					236	3101					301	3514			
	138	1503					237	3102					302	3515			
	139	1504					238	3103					203	0201			
	140	1505					239	3104					204	2501			
	141	1506					240	3105					205	2502			
	142	1507					241	3106					206	2503			
	143	1508					242	3107					207	2504			
	144	1509					243	3108					208	2505			
	145	1510					244	3109					209	2506			
Lince	148	1601	16	01	Central	Santiago de Surco	325	4001	40	04	Central	Puente Piedra	210	2508	25	08	North
	149	1602					326	4002					211	2509			
	150	1603					327	4003					212	2510			
Magdalena del Mar	183	2001	20	01	Central	Santiago de Surco	328	4004	40	04	Central	Santa Rosa	322	3901	39	06	09
	184	2002					329	4005					323	3902			
	185	2003					330	4006					324	3903			
Pueblo Libre	186	2101	21	01	Central	Santiago de Surco	331	4007	40	04	Central	Carabaylo	48	0601	06	09	09
	187	2102					332	4008					49	0602			
	188	2103					333	4009					50	0603			
	189	2104					334	4010					51	0604			
	190	2105					335	4011					52	0605			
	San Luis	285					3401	34					01	Central			
286		3402	337	4013	54	0607											
287		3403	338	4014	55	0608											
San Miguel	303	3601	36	01	Central	Surquillo	339	4015	41	04	Central	Comas	56	0609	10	09	09
	304	3602					340	4016					57	0610			
	305	3603					341	4017					58	0611			
	306	3604					342	4018					82	1001			
	307	3605					343	4019					83	1002			
	308	3606					344	4020					84	1003			
	309	3607					345	4021					85	1004			
	310	3608					346	4022					86	1005			
	311	3609					347	4101					87	1006			
	312	3610					348	4102					88	1007			
		349	4103	89	1008												
		350	4104	90	1009												
		351	4105	91	1010												
				92	1011												
				93	1012												
				94	1013												
				95	1014												
				96	1015												
				97	1016												
				98	1017												
				99	1018												
				100	1019												
				101	1020												
				102	1021												
				103	1022												

Table 3.1-6 Zoning System (continued)

District Name	Traffic Zone No.	Traffic Zone Code	District Zone	Inte-grated Zone	Area	District Name	Traffic Zone No.	Traffic Zone Code	District Zone	Inte-grated Zone	Area	District Name	Traffic Zone No.	Traffic Zone Code	District Zone	Inte-grated Zone	Area								
Chorrillos	61	0801	08	06	South	La Molina	126	1401	14	05	East	Callao	382	5101	44	02	West								
	62	0802																							
	63	0803																							
	64	0804																							
	65	0805																							
	66	0806																							
	67	0807																							
	68	0808																							
	69	0809																							
	70	0810																							
	71	0811																							
	72	0812																							
	73	0813																							
	74	0814																							
75	0815																								
76	0816																								
77	0817																								
78	0818																								
79	0819																								
80	0820																								
San Juan de Miraflores	271	3301	33	07	South	San Juan de Lurigancho	245	3201	32	10	East	Callao	391	5110	44	02	West								
	272	3302																							
	273	3303																							
	274	3304																							
	275	3305																							
	276	3306																							
	277	3307																							
	278	3308																							
	279	3309																							
	280	3310																							
	281	3311																							
	282	3312																							
	283	3313																							
	284	3314																							
Villa el Salvador	352	4201	42	07	South	Ate	24	0301	03	11	East	Callao	392	5111	44	02	West								
	353	4202																							
	354	4203																							
	355	4204																							
	356	4205																							
	357	4206																							
	358	4207																							
	359	4208																							
	360	4209																							
	361	4210																							
	362	4211																							
	363	4212																							
	364	4213																							
	365	4214																							
366	4215																								
Villa Maria del Triunfo	367	4301	43	13	South	Chaclacayo	59	0701	07	11	East	Callao	393	5112	44	02	West								
	368	4302																							
	369	4303																							
	370	4304																							
	371	4305																							
	372	4306																							
	373	4307																							
	374	4308																							
	375	4309																							
	376	4310																							
	377	4311																							
	378	4312																							
	379	4313																							
	380	4314																							
381	4315																								
Cieneguilla	81	0901	09	12		Lurigancho	164	1801	18	37	East	Callao	394	5113	44	02	West								
176	1901																								
177	1902																								
178	1903																								
179	1904																								
180	1905																								
181	1906																								
182	1907																								
Pachacamac	199	2301	23				Santa Anita	165					1802	18				37	East	Callao	395	5114	44	02	West
200	2302																								
201	2303																								
202	2401	24																							
213	2601	26																							
214	2701	27																							
224	2901	29																							
321	3801	38																							
								166	1803						396	5115									
								167	1804						397	5116									
								168	1805						398	5117									
								169	1806						399	5118									
								170	1807						400	5119									
								171	1808						401	5120									
							172	1809					402	5121											
							173	1810					403	5122											
							174	1811					404	5123											
							175	1812					405	5124											
							313	3701					406	5125											
							314	3702					407	5126											
							315	3703					408	5201											
							316	3704					409	5202											
							317	3705					410	5203											
							318	3706					411	5204											
							319	3707					412	5205											
							320	3708					413	5301											
													414	5302											
													415	5401											
													416	5402											
													417	5403											
													418	5501											
													419	5601											
													420	5602											
													421	5603											
													422	5604											
													423	5605											
													424	5606											
													425	5607											
													426	5608											
													427	5609											

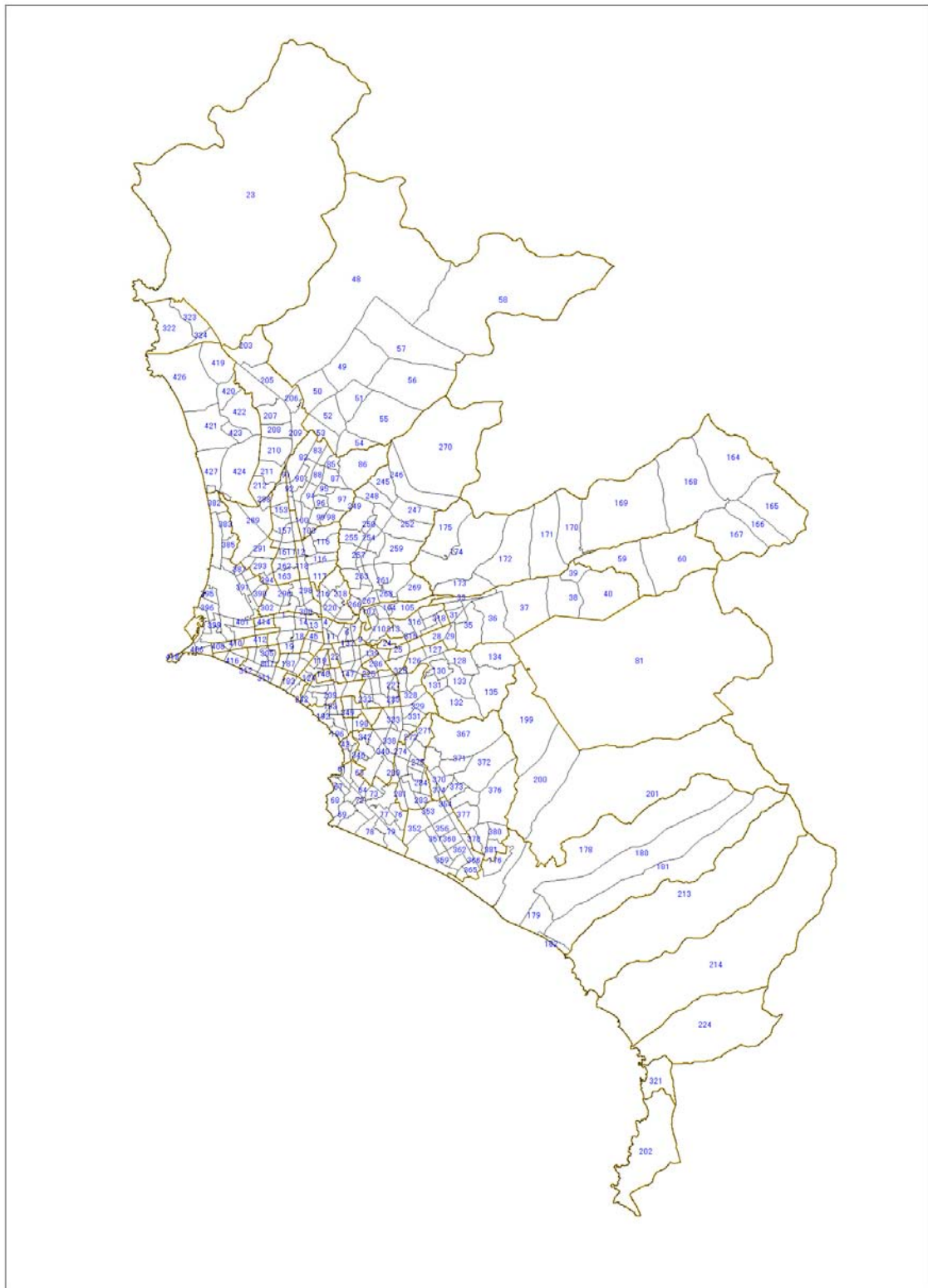


Figure 3.1-2 Location of Traffic Zone (1)

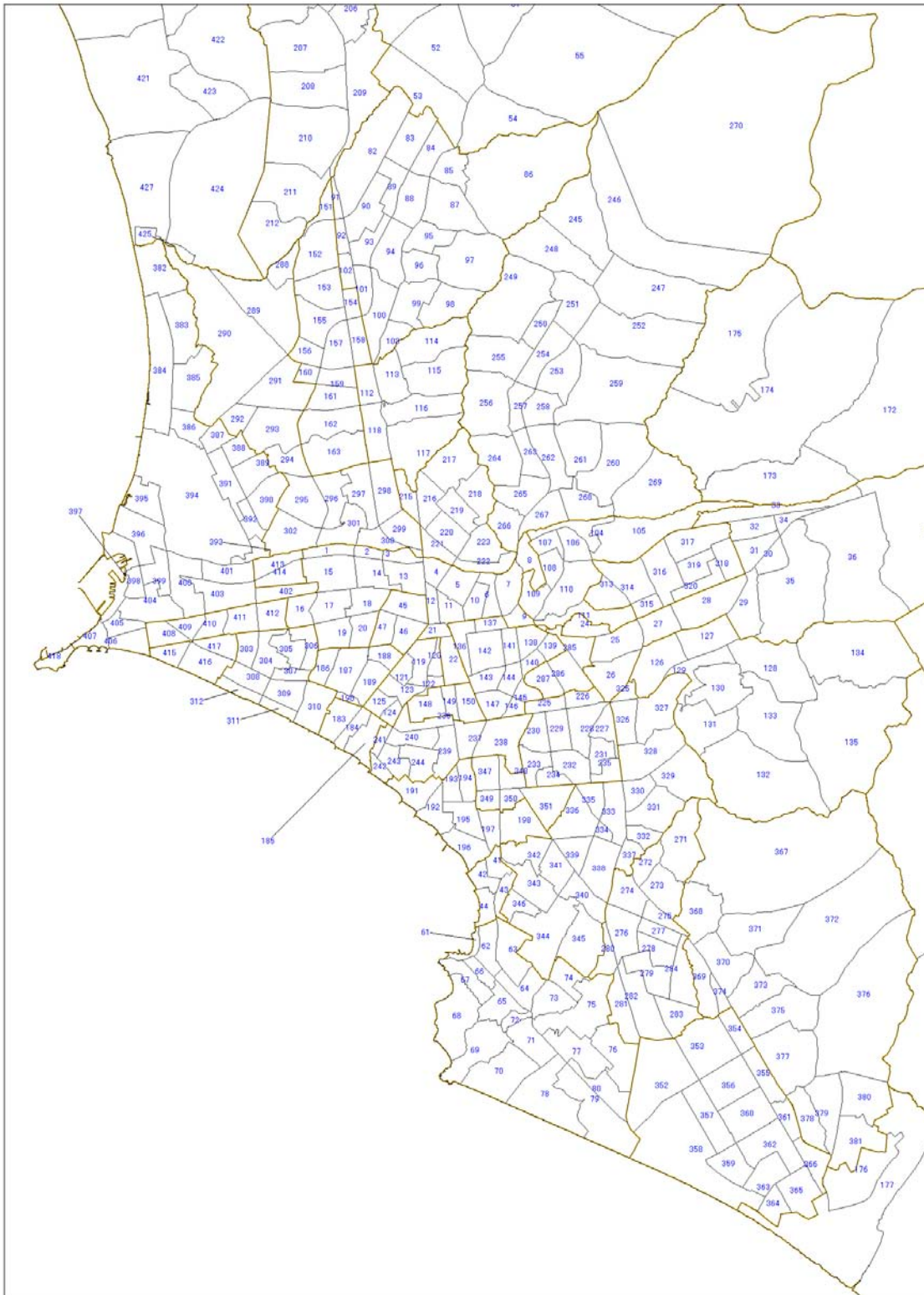


Figure 3.1-3 Location of Traffic Zone (2)

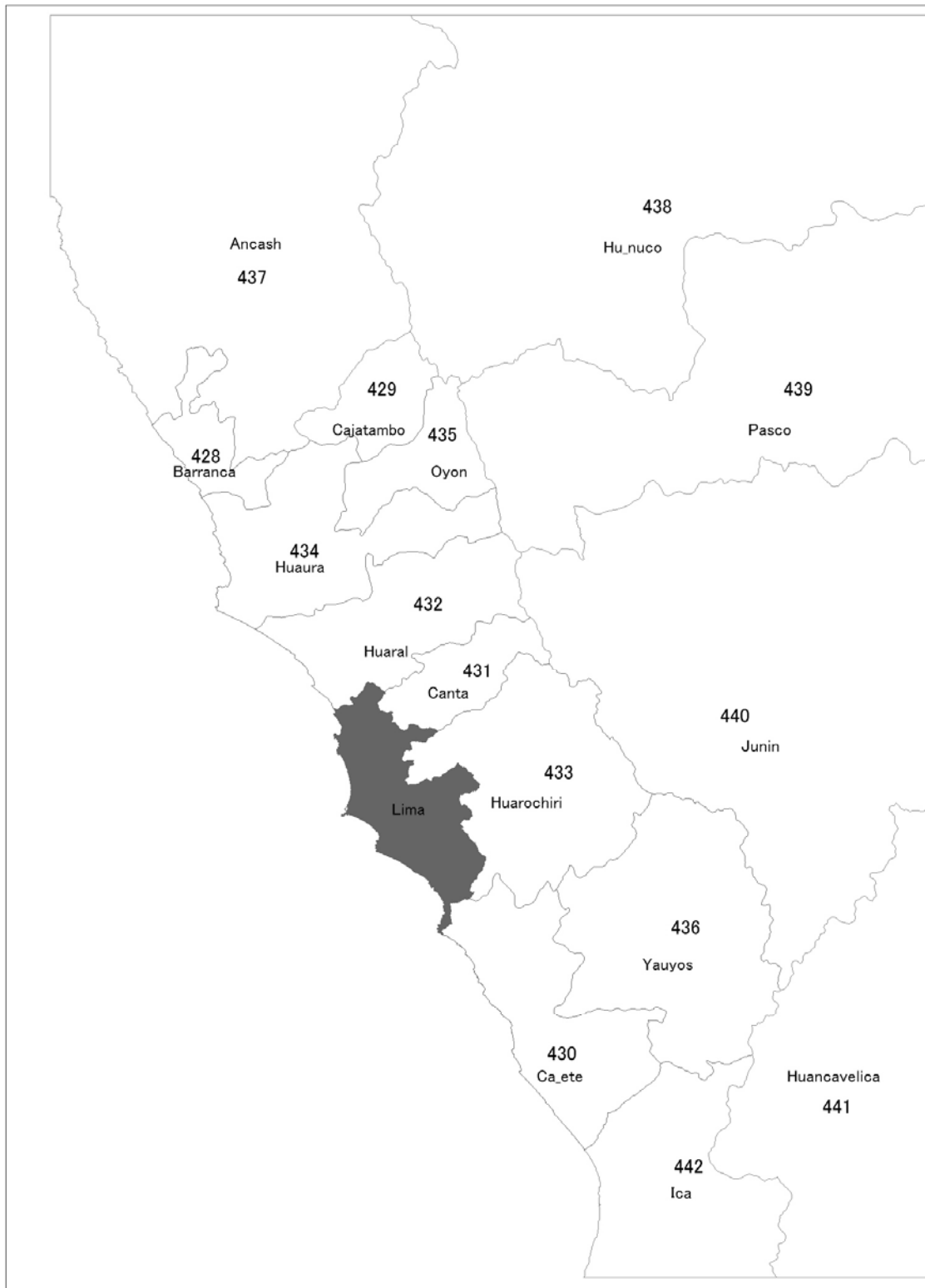


Figure 3.1-4 Location of Traffic Zone (3)

### 3.2. DATABASE BUILDING

#### 3.2.1. INTRODUCTION

The database building process pertinent to the Person Trips survey can be illustrated as shown in Figure 3.2-1. The Person Trip survey is a sample survey, and needs expansion in order to represent the characteristics of the whole population in the Study area, first. The process of the expansion may include errors in several steps. Therefore, the information obtained by the other transport surveys will be used for calibrating the expansion.

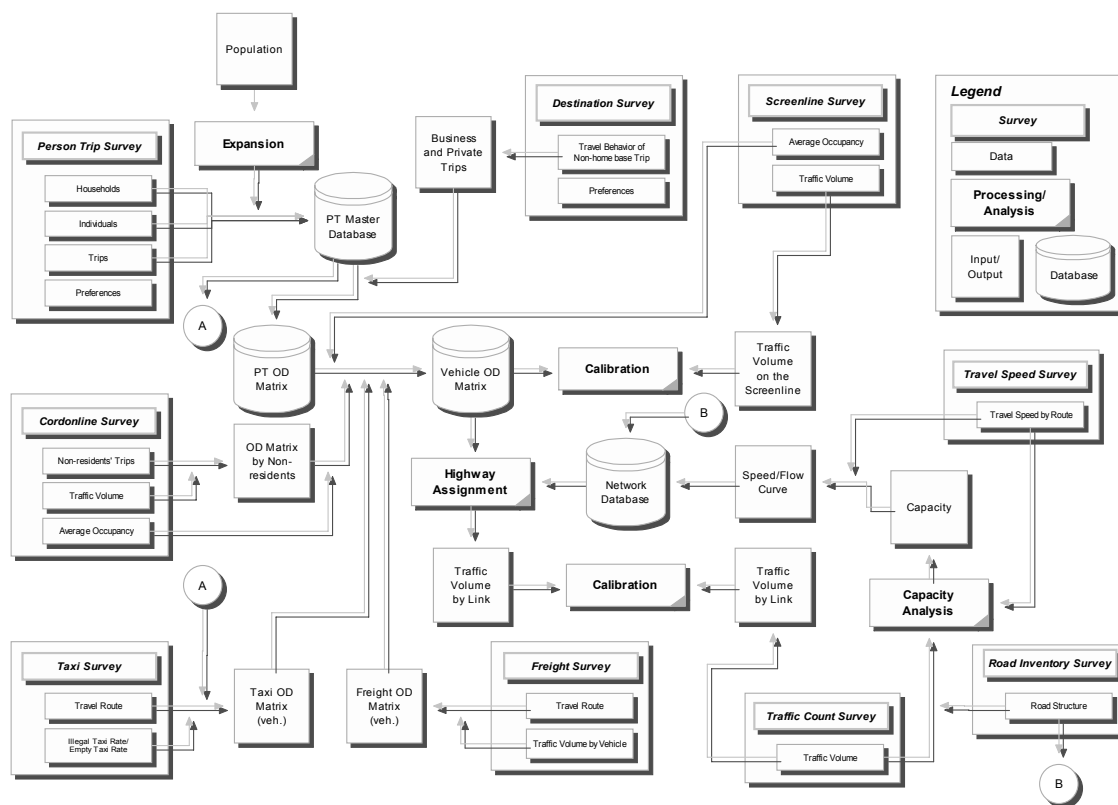


Figure 3.2-1 Database Building

#### 3.2.2. SELECTED SAMPLES AND EFFECTIVE SAMPLE SIZE

The number of households sampled for the Person Trip survey and the effective samples, after checking, are listed in Table 3.2-1.

Table 3.2-1 Effective samples

Area	Population in 2004 (000)	No. of H/H (000)	No. of H/H Surveyed	No. of Effective H/H	Productivity (%)	Sampling Rate (%)	No. of Effective Individuals
Central	2,057	505	9,731	9,707	99.8	1.9	39,507
North	1,832	403	7,984	7,961	99.7	2.0	36,161
South	1,437	322	6,068	6,052	99.7	1.9	27,224
East	1,748	358	7,692	7,675	99.8	2.1	37,766
West	970	205	3,489	3,481	99.8	1.7	16,618
<b>Total</b>	<b>8,043</b>	<b>1,793</b>	<b>34,964</b>	<b>34,876</b>	<b>99.7</b>	<b>1.9</b>	<b>157,276</b>

H/H: Household