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JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

MINISTRY OF PUBLIC WORKS
REPUBLIC OF INDONESIA

THE FEASIBILITY STUDY ON URBAN ARTERIAL ROAD SYSTEM DEVELOPMENT PROJECT IN JAKARTA METROPOLITAN AREA

FINAL REPORT

VOLUME II: APPENDIX

JANUARY, 1995

PACIFIC CONSULTANTS INTERNATIONAL
YACHIYO ENGINEERING CO., LTD.

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Note

The exchange rates used in the Study are:

$1.00 = Rp.2,150 = JY100

JY1.0 = Rp.21.5

(as of the end of August 1994)

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2. Minister (85)

   The Minister responsible for Road Development

3. Primary Road Network System (85)

   A road network drawn up in compliance with the stipulations on regional road planning design and structure for regional development at a national level.

4. Secondary Road Network System (85)

   A road network drawn up in compliance with stipulations on city planning of a city linking zones that assume primary functions, first secondary function, second secondary function, third secondary function, and onwards up till private homes.

5. Freeway (80)

   Roads with higher specification and reliability than public highway, having full access control and constant serviceability and safety, which are built in already highly developed regions.

6. Arterial Roads (80)

   Roads servicing in particular transports characterized by long-distance routes, high speed average and having an efficiently limited number of accesses.

7. Collector Roads (80)

   Roads serving collecting & distributing transports characterized by medium-distance routes, medium speed average, and having a limited number of accesses.

8. Local Roads (80)

   Roads serving local transports characterized by short-distance routes low speed average, and having an unlimited number of accesses.

9. National Roads (80/85)

Public roads, which are developed by the Minister and designated by Decree of the Minister, include primary arterial roads, primary collector roads and roads that assure strategic value in the national interests.

10. Regional Roads (80)

Public roads, which are developed by the Regional Government.

11. Provincial Roads (85)

Public roads, which are developed by the Regional Government Level I and designated by Decree of the Minister for Interior Affairs as proposed by the relevant Regional Government Level I, by referring to the opinion forwarded by the Minister, include primary collector roads, roads that assure strategic values in the provincial interests, and roads within the Special District of Jakarta except for National roads.

12. District Roads (85)

Public roads, which are developed by the Regional Government Level II and designated by Decision of the Governor, Head of Level I Region by referring to the instructions of the Minister, include primary collector roads, primary local roads, secondary roads other than National roads and Provincial roads, and roads that assure strategic value in the regional interests.

13. Provincial City Roads (85)

Public roads, which are developed by the Regional Government Level II, include secondary road network in a medium city. Secondary arterial and collector roads are designated by Decision of the Governor and Secondary local roads are designated by Decision of the Provincial City major.

14. Village Roads (85)

Public roads, which are developed by the village/district administration and designated by Decision of Head of Level II Region, include secondary road network within a village.

15. Special Roads (80)

The roads that are not destined for public traffic, such as irrigation inspection roads, oil or gas pipe inspection roads, plantation roads, mine roads, forest-or wood roads, private housing estate roads, roads required for State security/defense purposes.

16. Toll Roads (80)

1) Public roads for the use of which a toll charge is imposed.

2) The ownership and right of organizing toll-roads rests with the Government

3) At a proposal of the Minister, the President determines a road-section as a toll-road.

4) A toll-road is an alternative to an existing public highway.

5) A toll-road shall be of higher specification than the existing public highway.

6) A toll-road shall offer a higher reliability to the users than the existing public highway.

7) Toll-roads are destined only for road users with motor vehicles against toll payment.

8) The types of motor vehicles and the amounts of toll charge are determined by Presidential Decision.

17) Road Use Area (85)

The space along the road outlined by width, height, and depth of a specific free zone, which is only intended for median, road hardening, road dividers, road shoulders, roadside drains, sidewalks, slopes, safety threshold, excavations and fillings, road equipment in the form of ducts, and other complementary structures.

18) Road Proprietary Area (85)

The space along the road within the confines of a specific width and height being under the authority of the Road Developer holding certain privileges in accordance with the existing regulations, which is intended for Road Use Areas and widening of roads as well as additional traffic lanes and space for safety fencing.

19) Road Control Area (85)

A zone along the length of the road outside the Road Proprietary Areas confined to specific width and height, which shall be determined by the Road Developer, and is intended to provide an open view for the driver and security of Road construction.

20) Shuttle Traffic (85)

Traffic created by road users who are domiciled at city suburbs and centers of settlements outside the city and who are dependent on the city for their daily subsistence.

21) Local Traffic (85)

Traffic created by the road user of local origin and purposes.

22. Long Distance Traffic (85)

Traffic between partial development zones or between units of development zones.

23. Congestion (85)

Slow driving vehicles without stops

24. Jams (85)

Vehicles forced to stop and stand idle.

6A-1 SAMPLE OF TRAFFIC COUNT SURVEY COMPILING TABLE

URBAN ARTERIAL ROAD SYSTEM DEVELOPMENT PROJECT - TRAFFIC COUNT SURVEY RESULT

Survey Date	:	3 JUNE 1993												
Location Code	:	C-2					Direction from	:	Both					
Street Name	:	DAAN MOGOT					Direction to	:	Both					
	Passenger Vehicle					Bus			Truck				Total	
HOURS	1	2	3	4	5	6	7	8	9	10	11	12	2 - 12	1 - 12
BEGIN	Motor	Sedan	Van	Bajaj	Taxi	Small	Medium	Large	Pick-Up	2-axle	3-axle	Truck	without	with
	Cycle					Bus	Bus	Bus		Truck	Truck	Trailer	M-Cycle	M-Cycle
06:00	1435	474	334	2	32	409	46	68	126	239	44	25	1799	3234
07:00	3261	747	393	1	47	476	71	55	206	327	28	20	2371	5632
08:00	1986	682	261	0	50	428	53	40	283	484	36	18	2335	4321
09:00	851	535	207	8	55	375	34	41	283	660	47	34	2279	3130
10:00	765	548	217	4	47	354	41	55	245	657	62	39	2269	3034
11:00	777	570	133	3	58	352	41	42	263	612	62	42	2178	2955
12:00	697	560	146	2	61	304	38	47	291	538	81	57	2125	2822
13:00	795	585	166	0	58	324	35	45	342	619	66	52	2292	3087
14:00	1057	417	334	1	57	412	35	44	350	874	74	44	2642	3699
15:00	1073	556	370	1	51	468	50	54	456	749	92	41	2888	3961
16:00	1516	641	456	1	47	469	56	58	402	595	74	56	2855	4371
17:00	1953	691	497	4	43	522	52	75	415	501	76	44	2920	4873
18:00	1831	664	477	1	57	521	41	46	344	415	67	49	2682	4513
19:00	1259	562	412	0	67	329	30	31	271	441	67	45	2255	3514
20:00	1003	496	352	0	83	282	16	34	229	326	81	44	1943	2946
21:00	770	489	335	0	89	198	15	45	181	348	87	49	1836	2606
Total Number of Vehicles														
16 hrs	21029	9217	5090	28	902	6223	654	780	4687	8385	1044	659	37669	58698
Rate *	1.07	1.07	1.07	1.00	1.13	1.15	1.06	1.15	1.08	1.08	1.15	1.15		
24 hrs	22,501	9,862	5,446	28	1,019	7,156	693	897	5,062	9,056	1,201	758	41,179	63,680
Total Passenger Car Units														
P.C.E	0.33	1	1	1	1	1.2	1.5	2	1	1.5	2	3		
16 hrs	6,940	9,217	5,090	28	902	7,468	981	1,560	4,687	12,578	2,088	1,977	46,575	53,515
24 hrs	7,425	9,862	5,446	28	1,019	8,588	1,040	1,794	5,062	13,584	2,401	2,274	51,098	58,523

Note : Rate = (24-hour volume) / (16-hour volume)

URBAN ARTERIAL ROAD SYSTEM DEVELOPMENT PROJECT - TRAFFIC COUNT SURVEY RESULT

Survey Date		:	3 JUNE 1993					Direction from		:	TANGERANG				
Location Code		:	C-2 (A)					Direction to		:	D.K.I				
Street Name		:	DAAN MOGOT												
	Passenger Vehicle					Bus			Truck					Total	
HOURS	1	2	3	4	5	6	7	8	9	10	11	12		2 - 12	1 - 12
BEGIN	Motor	Sedan	Van	Bajaj	Taxi	Small	Medium	Large	Pick-Up	2-axle	3-axle	Truck		without	with
	Cycle					Bus	Bus	Bus		Truck	Truck	Trailer		M-Cycle	M-Cycle
06:00	1193	270	178	1	27	234	19	21	80	106	18	6		960	2153
07:00	2660	288	194	1	36	244	27	23	96	126	14	5		1054	3714
08:00	1504	207	154	0	35	251	24	19	125	256	17	5		1093	2597
09:00	558	210	116	4	20	208	17	15	152	422	18	14		1196	1754
10:00	481	213	129	4	24	186	18	19	146	400	35	17		1191	1672
11:00	467	230	88	1	31	154	23	20	155	368	31	11		1112	1579
12:00	389	245	105	0	27	155	21	21	151	285	34	12		1056	1445
13:00	447	240	106	0	29	166	17	21	200	358	28	15		1180	1627
14:00	519	286	93	0	47	205	15	20	123	385	38	22		1234	1753
15:00	428	250	88	0	28	220	29	32	242	301	45	26		1261	1689
16:00	582	358	143	1	29	243	28	38	213	281	48	35		1417	1999
17:00	677	354	135	2	24	244	23	38	246	225	53	27		1371	2048
18:00	488	341	128	1	32	231	20	26	167	179	39	38		1202	1690
19:00	359	237	96	0	36	119	9	13	135	238	35	27		945	1304
20:00	322	202	86	0	48	121	5	20	97	156	51	23		809	1131
21:00	280	189	83	0	41	87	3	32	72	155	47	33		742	1022
Total Number of Vehicles															
16 hrs	11354	4120	1922	15	514	3068	298	378	2400	4241	551	316		17823	29177
Rate *	1.07	1.07	1.07	1.00	1.13	1.15	1.06	1.15	1.08	1.08	1.15	1.15			
24 hrs	12,149	4,408	2,057	15	581	3,528	316	435	2,592	4,580	634	363		19,509	31,658
Total Passenger Car Units															
P.C.E	0.33	1	1	1	1	1.2	1.5	2	1	1.5	2	3			
16 hrs	3,747	4,120	1,922	15	514	3,682	447	756	2,400	6,362	1,102	948		22,267	26,014
24 hrs	4,009	4,408	2,057	15	581	4,234	474	869	2,592	6,870	1,267	1,090		24,458	28,467

Note : Rate = (24-hour volume) / (16-hour volume)

URBAN ARTERIAL ROAD SYSTEM DEVELOPMENT PROJECT - TRAFFIC COUNT SURVEY RESULT

Survey Date		:	3 JUNE 1993					Direction from		:	D.K.I				
Location Code		:	C-2 (B)					Direction to		:	TANGERANG				
Street Name		:	DAAN MOGOT												
	Passenger Vehicle					Bus			Truck					Total	
HOURS	1	2	3	4	5	6	7	8	9	10	11	12	2 - 12	1 - 12	
BEGIN	Motor Cycle	Sedan	Van	Bajaj	Taxi	Small Bus	Medium Bus	Large Bus	Pick-Up	2-axle Truck	3-axle Truck	Truck Trailer	without M-Cycle	with M-Cycle	
06:00	242	204	156	1	5	175	27	47	46	133	26	19	839	1081	
07:00	601	459	199	0	11	232	44	32	110	201	14	15	1317	1918	
08:00	482	475	107	0	15	177	29	21	158	228	19	13	1242	1724	
09:00	293	325	91	4	35	167	17	26	131	238	29	20	1083	1376	
10:00	284	335	88	0	23	168	23	36	99	257	27	22	1078	1362	
11:00	310	340	45	2	27	198	18	22	108	244	31	31	1066	1376	
12:00	308	315	41	2	34	149	17	26	140	253	47	45	1069	1377	
13:00	348	345	60	0	29	158	18	24	142	261	38	37	1112	1460	
14:00	538	131	241	1	10	207	20	24	227	489	36	22	1408	1946	
15:00	645	306	282	1	23	248	21	22	214	448	47	15	1627	2272	
16:00	934	283	313	0	18	226	28	20	189	314	26	21	1438	2372	
17:00	1276	337	362	2	19	278	29	37	169	276	23	17	1549	2825	
18:00	1343	323	349	0	25	290	21	20	177	236	28	11	1480	2823	
19:00	900	325	316	0	31	210	21	18	136	203	32	18	1310	2210	
20:00	681	294	266	0	35	161	11	14	132	170	30	21	1134	1815	
21:00	490	300	252	0	48	111	12	13	109	193	40	16	1094	1584	
Total Number of Vehicles															
16 hrs	9,675	5,097	3,168	13	388	3,155	356	402	2,287	4,144	493	343	19,846	29,521	
Rate *	1.07	1.07	1.07	1.00	1.13	1.15	1.06	1.15	1.08	1.08	1.15	1.15			
24 hrs	10,352	5,454	3,390	13	438	3,628	377	462	2,470	4,476	567	394	21,670	32,022	
Total Passenger Car Units															
P.C.E	0.33	1	1	1	1	1.2	1.5	2	1	1.5	2	3			
16 hrs	3,193	5,097	3,168	13	388	3,786	534	804	2,287	6,216	986	1,029	24,308	27,501	
24 hrs	3,416	5,454	3,390	13	438	4,354	566	925	2,470	6,713	1,134	1,183	26,640	30,056	

Note : Rate = (24-hour volume) / (16-hour volume)

7A-1 ESTIMATED ZONAL POPULATION IN YEARS 1993, 2000 AND 2010

7A-2 ESTIMATED JOB DISTRIBUTION IN YEAR 2010 BY ANALYSIS ZONE

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7A-4 FORECASTED TRAFFIC VOLUME AT INTERCHANGES ON NORTH-SOUTH AXIS; YEAR 2010 AND YEAR 2000

7A-5 COMPARISON OF ALTERNATIVE ROUTES

7A-1 Estimated Zonal Population in 1993/2000/2010

Sub Zone		Totals	1993 EST. POP		2000 POP		2010 POP		POP. average annual inc.	
code	Name	(in ha)	POP	(pop/ha)	POP	(pop/ha)	POP	(pop/ha)	93-2000	2000-2010
1011	CIDENG	388	78,684	203	69,296	179	58,332	150	-1.8%	-1.7%
1021	GN. SAHARI	327	45,744	140	41,569	127	35,942	110	-1.4%	-1.4%
1022	PS. BARU	295	66,413	225	61,058	207	55,757	189	-1.2%	-0.9%
1023	KEMAYORAN	330	73,461	223	67,512	205	63,620	193	-1.2%	-0.6%
1024	SENEN	145	27,399	189	24,505	169	21,920	151	-1.6%	-1.1%
1025	KRAMAT	265	75,836	286	69,154	261	64,460	243	-1.3%	-0.7%
1031	SERDANG	392	149,479	381	151,750	387	154,619	394	0.2%	0.2%
1032	RAWA SARI	363	145,905	402	140,413	387	138,610	382	-0.5%	-0.1%
1033	CEMP.PUTIH	344	70,351	205	72,475	211	75,159	218	0.4%	0.4%
1111	GAMBIR	372	21,463	58	18,948	51	14,541	39	-1.8%	-2.6%
1112	MENTENG	653	80,677	124	72,155	110	64,541	99	-1.6%	-1.1%
1113	KEBON KACANG	270	88,827	329	80,985	300	74,598	276	-1.3%	-0.8%
1121	BENDUNGAN HILIR	661	86,355	131	79,820	121	70,588	107	-1.1%	-1.2%
1211	KAPUK MUARA	2,058	33,974	17	66,039	32	106,551	52	10.0%	4.9%
1221	PENJARINGAN	1,490	250,878	168	275,178	185	305,878	205	1.3%	1.1%
1222	ANCOL	731	97,987	134	94,298	129	93,088	127	-0.5%	-0.1%
1223	PADEMANGAN T.	261	42,646	163	53,249	204	66,644	255	3.2%	2.3%
1311	SUNTER	1,232	146,409	119	152,529	124	162,940	132	0.6%	0.7%
1321	S. BAMBU	736	169,328	230	162,953	221	160,861	219	-0.5%	-0.1%
1322	LAGOA	910	227,254	250	244,561	269	266,428	293	1.1%	0.9%
1323	SEMPER	755	85,158	113	109,124	145	139,403	185	3.6%	2.5%
1331	TG. PRIOK	554	40,112	72	40,876	74	41,840	76	0.3%	0.2%
1332	KOJA	228	71,341	313	72,699	319	74,415	326	0.3%	0.2%
1333	KALI BARU	242	57,377	237	63,343	262	70,880	293	1.4%	1.1%
1341	KLP. GADING	1,562	129,339	83	144,601	93	163,882	105	1.6%	1.3%
1342	MARUNDA	1,563	37,630	24	156,232	100	306,072	196	22.6%	7.0%
1343	SUKAPURA	1,799	61,942	34	129,028	72	213,784	119	11.1%	5.2%
1411	KALI DERES	1,091	99,648	91	139,648	128	190,183	174	4.9%	3.1%
1412	KAMAL	1,542	106,905	69	145,042	94	193,225	125	4.5%	2.9%
1413	KAPUK	1,737	290,972	168	268,859	155	255,664	147	-1.1%	-0.5%
1414	RAWA BUAYA	1,162	151,662	131	199,349	172	259,595	223	4.0%	2.7%
1421	KEMBANGAN	757	57,548	76	92,192	122	135,960	180	7.0%	4.0%
1422	MARUYA ILIR	520	41,963	81	74,566	143	115,757	223	8.6%	4.5%
1423	JOGLO	1,294	95,974	74	137,224	106	189,339	146	5.2%	3.3%
1431	KEDOYA	1,007	171,248	170	188,468	187	210,223	209	1.4%	1.1%
1432	KEBON JERUK	234	52,724	225	58,832	251	66,548	284	1.6%	1.2%
1433	KELAPA DUA	467	97,212	208	112,565	241	131,962	283	2.1%	1.6%
1511	GROGOL	681	151,757	223	149,327	219	147,155	216	-0.2%	-0.1%
1512	TOMANG	458	92,431	202	88,951	194	87,809	192	-0.5%	-0.1%
1513	SLIPI	710	205,936	290	197,205	278	188,542	266	-0.6%	-0.4%
1514	ANGKE	200	100,335	502	107,016	535	115,456	577	0.9%	0.8%
1521	GLODOK	442	122,042	276	108,022	244	91,939	208	-1.7%	-1.6%
1522	JEMBATAN LIMA	381	152,814	401	137,716	361	122,340	321	-1.5%	-1.2%
1611	SETIA BUDI	348	55,296	159	48,432	139	35,942	103	-1.9%	-2.9%
1612	GUNTUR	234	73,359	314	64,623	276	55,019	235	-1.8%	-1.6%
1613	SMANGGI	90	11,477	128	10,111	112	8,608	96	-1.8%	-1.6%
1614	KUNINGAN TIMUR	213	20,015	94	20,015	94	20,015	94	0.0%	0.0%
1615	TEBET	698	147,866	212	147,866	212	147,866	212	0.0%	0.0%
1616	MANGGARAI	254	96,521	380	86,325	340	77,217	304	-1.6%	-1.1%
1621	KUNINGAN BARAT	98	16,690	170	15,219	155	14,186	145	-1.3%	-0.7%
1622	MAMPANG	183	53,661	293	53,773	294	53,915	295	0.0%	0.0%
1623	PANCORAN	285	56,947	200	59,116	207	61,855	217	0.5%	0.5%
1624	KALI BATA	538	91,998	171	95,502	178	99,928	186	0.5%	0.5%
1625	PEJATEN	462	83,234	180	94,661	205	109,098	236	1.9%	1.4%
1631	BANGKA	492	83,664	170	84,866	172	86,384	176	0.2%	0.2%
1632	SENAYAN	154	23,946	155	20,858	135	16,762	109	-2.0%	-2.2%
1633	BLOK M	803	69,987	87	63,362	79	55,673	69	-1.4%	-1.3%
1634	CIPETE UTARA	312	84,890	272	87,267	280	90,270	289	0.4%	0.3%
1635	GANDARIA SELATAN	423	53,547	127	56,162	133	59,465	141	0.7%	0.6%
1641	GROGOL SELATAN	619	102,841	166	105,931	171	109,836	177	0.4%	0.4%
1642	ULUJAMI	674	118,585	176	144,525	214	177,297	263	2.9%	2.1%
1643	KEBAYORAN LAMA	435	96,507	222	104,433	240	114,447	263	1.1%	0.9%
1644	PONDOK PINANG	684	74,395	109	97,179	142	125,965	184	3.9%	2.6%
1645	BINTARO	879	96,856	110	125,433	143	161,535	184	3.8%	2.6%
1711	PASAR MINGGU	1,185	113,603	96	133,171	112	157,894	133	2.3%	1.7%
1712	RAGUNAN	939	106,482	113	127,828	136	154,797	165	2.6%	1.9%
1713	CILANDAK	1,392	133,610	96	162,659	117	199,358	143	2.9%	2.1%
1721	CIGANJUR	1,429	79,286	55	134,123	94	203,402	142	7.8%	4.3%
1722	SRENGSENG SAWA	675	34,325	51	47,396	70	63,910	95	4.7%	3.0%
1811	KEBON MANGGIS	144	37,047	257	33,134	230	29,638	206	-1.6%	-1.1%
1812	KAYU MANIS	342	121,754	356	113,736	333	109,579	320	-1.0%	-0.4%
1813	KAMPUNG MELAYU	496	133,202	269	119,132	240	106,562	215	-1.6%	-1.1%
1821	KAYU PUTIH	531	78,573	148	81,566	154	85,346	161	0.5%	0.5%
1831	P. GADUNG	967	205,218	212	209,126	216	214,062	221	0.3%	0.2%
1832	CIPINANG	567	146,724	259	154,228	272	163,709	289	0.7%	0.6%
1841	JATINEGARA	660	83,454	126	92,607	140	104,171	158	1.5%	1.2%
1842	PULO GEBANG	1,134	153,344	135	195,816	173	249,474	220	3.6%	2.5%
1843	KLENDER	810	135,735	168	167,286	207	207,147	256	3.0%	2.2%
1844	MALAKA	1,503	188,601	125	261,435	174	353,452	235	4.8%	3.1%
1851	CILILITAN	359	74,377	207	75,793	211	77,582	216	0.3%	0.2%
1852	HALIM	1,560	63,964	41	83,312	53	107,757	69	3.8%	2.6%
1853	KRAMAT JATI	566	107,504	190	117,303	207	129,683	229	1.3%	1.0%
1861	RW. TERATE	464	25,876	56	26,434	57	27,140	58	0.3%	0.3%
1862	CAKUNG	2,034	104,695	51	121,854	60	143,532	71	2.2%	1.7%
1911	BATU M AMPAR	625	101,865	163	103,804	166	106,255	170	0.3%	0.2%
1912	DUKUH	387	32,756	85	34,751	90	37,272	96	0.8%	0.7%
1913	LUBANG BUAYA	1,376	71,859	52	103,429	75	143,314	104	5.3%	3.3%
1914	SUSUKAN	1,511	187,202	124	221,728	147	265,348	176	2.4%	1.8%
1921	CIBUBUR	2,227	118,048	53	226,908	102	364,440	164	9.8%	4.9%
1922	PEKAYON	508	52,476	103	84,449	166	124,843	246	7.0%	4.0%
TOTAL		64,878	8,657,000	133	9,736,000	150	11,176,000	172	1.7%	1.4%

7A-2 Estimated Job Distribution in 2010 by Analysis Zone

Analysis Zone		Number of Jobs				
		Primary	Secondary		Tertiary	
Code	Name		Manufacturing	Others	Commerce	Others
1	CIDENG	16	14,043	14,712	30,774	51,705
2	GN. SAHARI	5	20,765	7,241	25,752	36,890
3	PS. BARU	0	10,379	6,219	23,608	38,772
4	KEMAYORAN	7	5,024	2,318	20,946	35,032
5	SENEN	8	3,011	5,114	22,760	27,746
6	KRAMAT	10	4,056	6,819	17,297	43,269
7	SERDANG	0	2,618	2,994	9,231	13,134
8	RAWA SARI	0	5,258	4,307	19,164	28,823
9	CEMP. PUTIH	3	8,035	4,103	10,211	17,074
10	GAMBIR	7	7,656	21,521	9,394	76,436
11	MENTENG	31	8,738	21,695	31,918	84,423
12	KEB. KACANG	9	3,115	7,076	29,092	30,948
13	BEND. HILIR	37	9,223	16,132	46,295	76,910
14	KAPUK MUARA	18	36,373	710	24,213	30,222
15	PENJARINGIN	70	51,214	9,612	29,951	42,026
16	ANCOL	25	33,864	6,243	21,419	34,934
17	PADEMANGAN T.	0	1,018	2,197	13,866	17,840
18	SUNTER	22	45,284	6,979	28,510	39,287
19	S. BAMBU	11	20,552	5,623	13,897	24,545
20	LAGOA	8	4,086	7,063	23,367	30,966
21	SEMPER	38	39,166	2,281	12,441	17,193
22	TG. PRIOK	9	34,925	4,377	23,780	53,391
23	KOJA	8	6,568	5,824	12,173	22,032
24	KALI BARU	135	13,457	3,821	20,916	25,407
25	KLP. GADING	11	13,475	3,188	22,619	30,420
26	MARUNDA	30	67,540	352	29,663	38,183
27	SUKAPURA	57	57,142	392	26,489	34,659
28	KALI DERES	14	36,035	2,210	18,433	23,924
29	KAMAL	108	26,582	1,936	8,860	12,010
30	KAPUK	54	32,617	6,289	23,014	30,977
31	RAWA BUAYA	41	40,312	4,012	17,325	24,474
32	KEMBANGAN	39	2,908	201	19,093	24,819
33	MARUYA ILIR	20	276	1,999	4,240	6,227
34	JOGLO	54	529	2,294	9,520	11,863
35	KEDOYA	39	17,574	5,097	32,629	42,846
36	KEBON JERUK	16	1,149	1,289	7,074	11,127
37	KELAPA DUA	46	2,094	543	14,297	19,052
38	GROGOL	5	20,171	6,266	13,186	19,278
39	TOMANG	2	5,972	6,142	17,569	30,132
40	SLIPI	25	15,031	5,951	51,756	72,537
41	ANGKE	5	8,082	1,993	7,734	6,876
42	GLODOK	7	20,658	10,405	54,558	68,028
43	JEMB. LIMA	9	30,193	6,648	32,760	33,716
44	SETIA BUDI	12	10,356	15,489	40,025	61,945
45	GUNTUR	1	2,807	2,468	11,504	15,586
46	SEMANGGI	8	1,805	2,133	1,229	5,103
47	KUNINGAN TIMUR	15	4,049	8,426	4,410	18,117
48	TEBET	8	7,777	11,068	10,457	22,029
49	MANGGARAI	0	2,408	2,713	5,054	8,937
50	KUNINGAN BARAT	2	918	2,167	9,412	15,091
51	MAMPNAG	3	3,684	3,778	5,052	8,751
52	PANCORAN	4	1,735	3,748	4,843	12,944
53	KALI BATA	12	5,596	3,349	10,418	16,386
54	PEJATEN	10	1,916	2,743	2,392	6,688
55	BANGKA	10	1,705	4,441	5,301	10,884
56	SENAYAN	5	1,323	3,172	6,425	16,657
57	BLOK M	25	5,925	19,645	26,297	66,673
58	CIPETE UTARA	1	661	3,178	3,767	6,721
59	CIPETE SELATAN	4	626	2,843	2,860	6,836
60	GROGOL SELATAN	4	12,107	2,783	9,899	13,918
61	ULUJAMI	6	1,932	5,245	7,222	12,175
62	KEBAYORAN LAMA	4	2,793	2,371	12,803	16,759
63	PONDOK PINANG	6	1,544	6,360	5,083	11,540
64	BINTARO	0	1,099	3,972	11,303	16,688

: **Estimated Job Distribution in 2010 by Analysis Zone**

Analysis Zone		Number of Jobs				
		Primary	Secondary		Tertiary	
Code	Name		Manufacturing	Others	Commerce	Others
65	PASAR MINGGU	50	1,022	5,067	12,785	16,556
66	RAGUNAN	29	2,639	3,490	12,649	20,679
67	CILANDAK	37	1,561	6,068	13,101	22,166
68	CIGANJUR	96	157	1,785	7,257	9,840
69	SRENGSENG SAWAH	22	204	1,460	9,423	12,974
70	KEBON MANGGIS	1	2,704	2,009	6,792	13,308
71	KAYU MANIS	0	1,728	2,703	13,473	21,518
72	KAMPUNG MELAYU	7	8,279	9,404	26,548	41,623
73	KAYU PUTIH	5	5,335	4,344	17,933	26,571
74	P. GADUNG	14	30,858	7,438	24,795	43,702
75	CIPINANG	19	2,365	4,032	6,660	12,202
76	JATINEGARA	6	30,736	650	4,569	5,336
77	P. GEBANG	24	12,207	1,999	19,063	25,288
78	KLENDER	0	7,711	2,381	11,778	17,068
79	MALAKA	23	1,393	3,654	9,636	15,220
80	CILILITAN	0	7,388	2,361	9,248	24,443
81	HALIM	0	218	1,989	4,383	12,985
82	KRAMAT JATI	4	5,171	1,671	6,984	12,076
83	RW. TERATE	7	47,936	1,356	1,717	2,546
84	CAKUNG	63	84,682	1,926	13,072	18,957
85	BATU AMPAR	10	764	1,336	3,345	4,241
86	DUKUH	5	600	231	5,880	9,274
87	LUBANG BUAYA	27	234	2,545	24,419	32,546
88	SUSUKAN	17	45,207	2,264	11,848	17,640
89	CIBUBUR	30	5,211	1,289	34,499	45,253
90	PEKAYON	7	15,456	368	1,697	4,207
91	BATUCEPER	0	64,168	13,034	42,889	51,565
92	TANGERANG	0	76,382	15,514	51,053	61,380
93	CIPONDOH	0	71,824	14,589	48,006	57,717
94	JATIUWUNG	0	75,288	15,292	50,322	60,501
95	CURUG	2,592	48,027	9,755	32,100	38,594
96	CILEDUG	0	64,715	13,145	43,255	52,004
97	PONDOK AREN	0	52,683	10,701	35,213	42,336
98	SERPONG	1,077	84,314	17,126	56,354	67,754
99	CIPUTAT	0	140,550	28,548	93,942	112,945
100	SAWANGAN	2,534	68,834	14,830	47,136	54,863
101	GUNUNG SINDUR	9,629	3,199	689	2,191	2,550
102	PARUNG	13,184	26,208	5,646	17,947	20,888
103	BEJI	0	30,030	6,470	20,564	23,935
104	PANCORANMAS	0	37,725	8,128	25,833	30,068
105	BOJONGGEDE	15,516	31,532	6,793	21,592	25,131
106	CIMANGGIS	0	88,777	19,127	60,792	70,757
107	SUKMAJAYA	0	61,374	13,223	42,027	48,917
108	CIBINONG	1,950	62,203	13,401	42,595	49,577
109	PONDOK GEDE	0	111,098	18,376	70,826	86,697
110	BEKASI BARAT	0	47,428	7,845	30,236	37,011
111	BEKASI UTARA	0	31,510	5,212	20,088	24,590
112	BEKASI SELATAN	0	57,823	9,564	36,863	45,123
113	BEKASI TIMUR	0	68,868	11,391	43,904	53,742
114	TAMBUN	3,447	63,432	10,492	40,438	49,500
115	SUKATANI	13,875	75,731	12,526	48,279	59,098
116	CIKARANG	14,849	160,720	26,584	102,460	125,420
117	CIBARUSAII	16,629	84,089	13,909	53,607	65,620
118	CITEUREUP	8,431	118,677	24,105	79,322	95,368
119	JONGGOL	7,742	15,176	3,083	10,144	12,195
120	BOGOR	7,087	253,493	51,489	169,431	203,705
121	CIAWI	12,160	89,398	18,158	59,752	71,839
122	LEUWILIANG	16,407	64,547	13,111	43,142	51,869
123	JASINGA	14,336	29,505	5,993	19,721	23,710
124	CIKUPA	21,737	150,205	32,361	102,857	119,718
125	BALARAJA	27,235	89,030	19,181	60,965	70,959
126	MAUK	33,487	145,157	31,274	99,400	115,693

7A-3 List of Names of Urban Areas and the Constituent Urban Desas

Name of Urban Area	Name of Kecamatan	Name of Desa
BOGOR		
Leuwiliang	Leuwiliang	Leuwiliang Leuwikmekar
Cibatok	Cibungbulang	Situ Ilir (2) Cibatok II Cibatok I Sukamaju Cempulang (2) Galuga (2) Dukuh (2) Cimanggu II Cimanggu I Girimulya
Ciampea	Ciampea	Cicadas (2) Tegalwaru (2) Bojong Jengkol (2) Cihedeung Ud. (2) Cibanteng Bojong Rangkas Cibadak Benteng Ciampea
Ciomas	Ciomas	Sukamantri (2) Simagaleh Kotabatu Cikaret Pasirjaya Pasir Kuda Mekar Jaya Parakan Ciomas Pagelaran Ciapus Padasuka Ciomas Rahayu Pasir Mulya Gunung Batu Loji Sindang Barang Laladon Ciharang (2) Sinansari (2) Negalsari (1) Darmaga Margajaya Bubulak

Name of Urban Area	Name of Kecamatan	Name of Desa
		Situgede (2)
		Bulumbang Jaya
		Babakan (1)
Cigombong	Cijeruk	Cigombong
		Wates Jaya
		Srogol
		Ciburuy
Caringin	Cijeruk	Warung Menteng
	Caringin	Muara Jaya
		Caringin
		Lamah Duhur (2)
		Cimande (2)
		Cimande Hilir
Ciawi	Cijeruk	Pamoyanan
		Rangga Mekar
	Caringin	Ciderum
	Ciawi	Jambu Luwuk
		Banjarsari
		Banjarwangi
		Banjarwaru
		Teluk Pinang
		Harjasari
		Bendungan
		Pandansari
		Sindangsari
		Ciawi
		Muarasari
		Sindangrasa
		Tajur
		Pakuan
		Cipaku
Cipayung	Cisarua	Cipayung Girang
		Cipayung Datar
Cisarua	Cisarua	Cisarua
		Leuwimalang
		Batulayang (2)
Tugu	Cisarua	Tugu Selatan
		Tugu Utara
Cariu	Cariu	Cariu
Jonggol	Jonggol	Jonggol
Citeureup	Citeureup	Leuwimutung
		Sanja (2)
		Karangasem Barat
		Karangasem Timur
		Tarikolot
		Gunung Sari

Name of Urban Area	Name of Kecamatan	Name of Desa
		Citeureup
		Puspanegara
		Paspasari
	Gunung Putri	Karanggan
		Gunung Putri
Cileungsi	Cileungsi	
		dayeuk
		Mampir
		Cileungsi Kidul
		Cileungsi
		Limusnunggal
Gunung Putri/Wanaherang	Cileungsi	Kembang Kun.(1)
	Gunung Putri	Talajung Udik
		Bojongnangka
		Cicadas
		Wanaherang
Cimanggis	Cimanggis	Jatijajar
		Sukamjaya Baru
		Curug
		Sukatani
		Harjamukti
		Cisalak Pasar
		Mekarsari
		Tugu
		Pasir Gunung S.
Cibinong	Cimanggis	Cilangkap
		Cipaeum
	Cibinong	Nanggewer
		Nanggewer Mekar
		Cibinong
		Pakansari
		Tengah (1)
		Pabuaran
		Cirimekar
		Ciriung
Kedunghalang	Citeureup	Cipambuan
		Kadumanggu
		Sentul
	Kedunghalang	Katulampa
		Tanah Baru
		Cimahpar
		Cikeas
		Cadasngampar
		Ciluar
		Cibiluh
		Kedung Badak
		Kecung Jaya
		Kedungwaringin
		Kedunghalang
		Ciparigi
		Pasir Laja

Name of Urban Area	Name of Kecamatan	Name of Desa
		Cijunjung
		Cimandala
		Pasir Jambu
Semplak	Semplak	Pasirgoak
		Bantarjaya
		Semplak Barat
		Atang Senjaya
		Semplak
		Cilandak Barat
		Cilandak Timur
		Curugmekar
		Curug (2)
		Cibadak
		Sukadamai
		Sukaresmi
		Cilebut Timur
		Cilebut Barat
		Kencana (2)
		Mekarwangi
		Kayumanis
		Bantar Sari
		Rancabungur
Bojonggede	Bojonggede	Waringin Jaya (2)
		Kedungwaring (2)
		Bojonggede
Sawangan	Sawangan	Sawangan Baru
		Sawangan La.(2)
		Bojongsari Lama
		Bojongsari Baru
		Pondok Petir
		Serua (2)
		Kedaung
Cinere	Sawangan	Krukut
		Cinere
		Gandul
		Pangkalanjati Baru
		Pangkalanjati Lama
Parung	Parung	Pemangasari
		Parung
		Waru
Pondok Udik	Parung	Pondik Udik
		Jampang
Cibentung	Parung	Cibentung
		Ciseng
		Perigi Mekar
		Bojong Sempu (2)
		Bojong Indah

Name of Urban Area	Name of Kecamatan	Name of Desa
Jasinga	Jasinga	Pemagersari Jasinga
Kalongsawah	Jasinga	Kalongsawah
Parung Panjang	Parung Panjang	Parungpanjang
	Legok	Malangnengah
Depok	Bojonggede	Pabuaran Rawa Panjang (2) Pondok Jaya (2) B. Pondok Terong Cipayung Jaya (2) Cipayung Ratjaya
	Pancoranmas	R. Jaya Baru Rangkap Jaya (2) Mampang Pancoran Mas Depok Jaya Depok
	Beji	Beji Beji Timur Kemiri Muka Pondok Cina Kukusan Tanah Baru
	Sukmajaya	Kali Mulya (2) Kali Baru Sukamaju Sukmajaya Mekar Jaya Abadi Jaya Cisalak Bakti Jaya
Bogor	Bogor Selatan	Lawanggintung Batutulis Bondongan Empang
	Bogor Timur	Sukasari Baranangsiang Tegallaga Babakan Pasar
	Bogor Utara	Sempur Babakan Tagalgundil Bantarjati Tanah Sereal Kebonpedes
	Bogor Tengah	Gudang Paledang Pabaton Cibogor

Name of Urban Area	Name of Kecamatan	Name of Desa
	Bogor Barat	Panaragan
		Ciwaringin
		Kebon Kelapa
		Menteng

Name of Urban Area	Name of Kecamatan	Name of Desa
TANGGERANG		
Cisoka	Cisoka	Cisoka Sukatani Caringin (2)
Cikupa	Cikupa	Bojong Sukamulya Bitungjaya BunduPasirjaya (2) Pasirgadung Telagasari Talaga (2) Sukanagara (2)
	Curug	Kadujaya
Legok/Curug	Legok	Legok Serdang Wetan Rancagong Bojongngka (2)
	Curug	Curug Kulon Curug Wetan Sukabakti
Serpong	Serpong	Setu Babakan Buaran Serpong Kademangan (2) Cibogo (2) Cilenggang
Ciputat	Ciputat	Pondokbenda (2) Pamulang Barat Pamulang Timur Pondok Cabe Ilir Pisangan Cipayung Ciputat Kedaung Bambuapus Bendabaru (2) Sarua Sarua Indah (2) Jombang Sawah Baru Sawah Lama Pondok Ranji Cempaka Putih Cireundu Rempoa Rengas
Pondok Aren	Pondok Aren	Parigi Lama Pondok Kar.T.(2) Pondok Pucung

Name of Urban Area	Name of Kecamatan	Name of Desa
		Pondok Aren
		Jurongimanggu B.
		Jurongmanggu T.
		Pondok Karya
		Pondok Betung
Balaraja	Balaraja	Tegalsari
		Balaraja
Kresek	Kresek	Renged
		Talok (2)
		Kemuning (1)
		Kresek
Mauk	Mauk	Banyuasih
		Masuk Timur
Sepatan	Sepatan	Sepatan
	Pasarkemis	Kutabumi (2)
Teluknaga	Teluknaga	Rawarengas
		Bojongrenged (2)
		Rawaburung
		Keboncau (2)
		Teluknaga
		Babkam Asem (2)
		Belimbing (1)
		Jatimulya (2)
		Cengklong (2)
		K. Melayu Timur
		K. Melayu Barat
		Pangkalen (2)
Tanggerang	Serpong	Pondokjagung
		Pakuloman
	Curug	Binong (2)
		Bencongan (2)
		Kelapadua (1)
	Sepatan	Kedaung Barat
	Ciledug	Tajur
		Parungserab
		Paninggilan
		Larangan Selatan
		Cipadu
		Kerep
		Larangan Utara
		Sudimara Timur
		Sudimara Barat
		Pedurenan
		Karangtengah
		Pondokbahar
		Karangmulya (2)

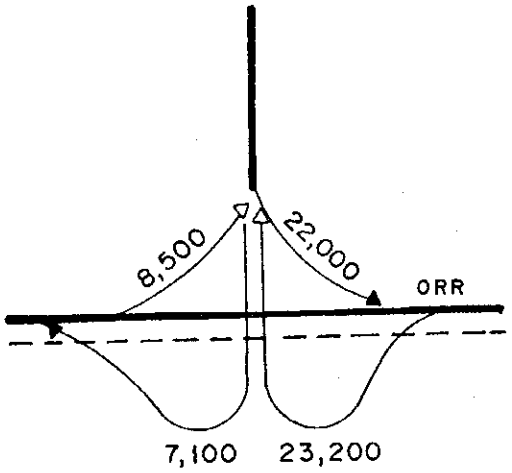
Name of Urban Area	Name of Kecamatan	Name of Desa
	Cipondoh	Panunggangan
		Kunciran
		Pinang
		Gondrong
		Petir
		Cipondoh
		Cipete (2)
		Poris Pelawed
		Karawanci Baru
		Karawanci
		Cikokol
		Tanah Tinggi
		Sukasari
		Gerendeng
		Pabuaran
		Cimone
		Bubul
		Pabuaran Tump.
		Pasarbaru
		Sukarasa
		Pasirjaya
		Jatake
		Gandarsari
		Panunggangan B.
		Cibodasari
		Cibodas
		Keroncong
		Gembor
		Gebangraya
		Periok
		Periokjaya (2)

Name of Urban Area	Name of Kecamatan	Name of Desa
BEKASI		
Pondok Gede	Pondok Gede	Jatisampurna
		Jatisari (1)
		Jatiranggar
		Jatimurni
		Jatiluhur (2)
		Jatirasa
		Jatiasih
		Jatimekar
		Jatiwarna
		Jatirahayu
		Jatiwaringin
		Jatimakmur
		Jatikramat
		Jatibening
Cikarang	Lemah Abang	Pasirgombong
		Tanjungsari
		Simpangan (2)
	Cikarang	Karangbaru
		Cikarang
		Karangasih
		Waluya (1)
		Sukaraya
	Cibitung	Kalijaya
	Sukatani	Sukarukun
Cibitung	Cibitung	Sukadanau
		Tegalasih (2)
Tambun	Cibitung	Wanasari
	Tambun	Jatimulya (2)
		Tambun
		Sukadarma
		Setiamekar
		Mekarsari
		Tridayasakti (2)
		Mangunjaya (2)
Babelan	Tambun	Sriamur
		Srimukti
	Babelan	Bahagia (2)
		Kebalen (2)
		Babelan Kota
Sukadarma	Sukatani	Sukamulya (2)
		Sukadarma
Pebayuran	Pebayuran	Bantarjaya
		Kertasari

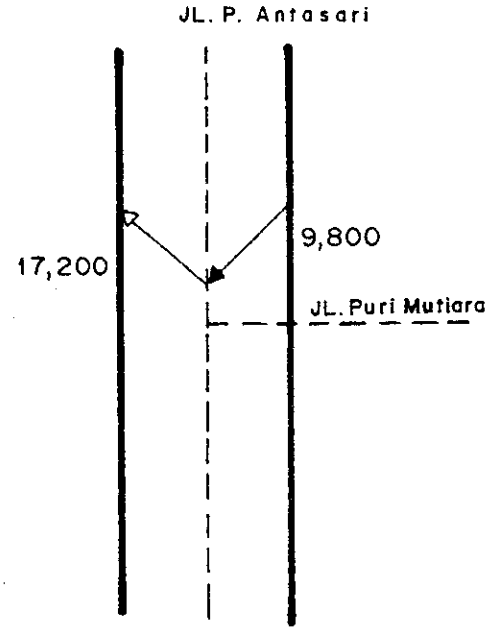
Name of Urban Area	Name of Kecamatan	Name of Desa
Bekasi	Bantargebang	Bantargebang
	Bekasi Timur	Bojong Menteng
		B. Rawalumbu
		Sepanjangjaya
		Pengasinan (2)
		Margahayu
		Bekasijaya
		Durenjaya
	Bekasi Selatan	Jakamulya
		Jakasetia
		Pekayonjaya
		Margajaya
		Margamulya
		Harapanmulya
		Kayuringinjaya
		Jakasampurna
	Bekasi Barat	Bintarajaya
		Bintara
		Kranji
		Kalibaru
		Medansatria
		Pejuang
	Bekasi Utara	Harapanjaya
		Kaliabang Tengah
		Perwira
		Harapnbaru
		Telukpucung

7A-4 FORECASTED TRAFFIC VOLUME AT INTERCHANGES ON NORTH-SOUTH AXIS FOR YEARS 2010 AND 2000 AND ON EAST-WEST AXIS FOR YEAR 2010

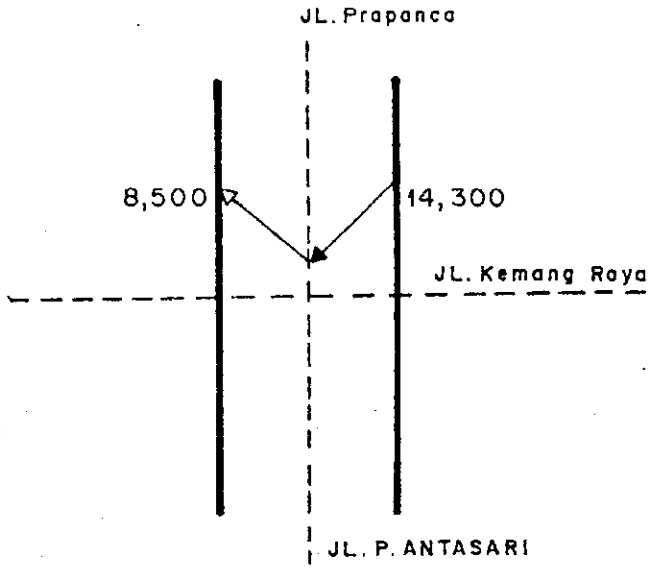
SOUTH JORR IC



PANGERAN ANTASARI I.C



KEMANG RAYA I.C

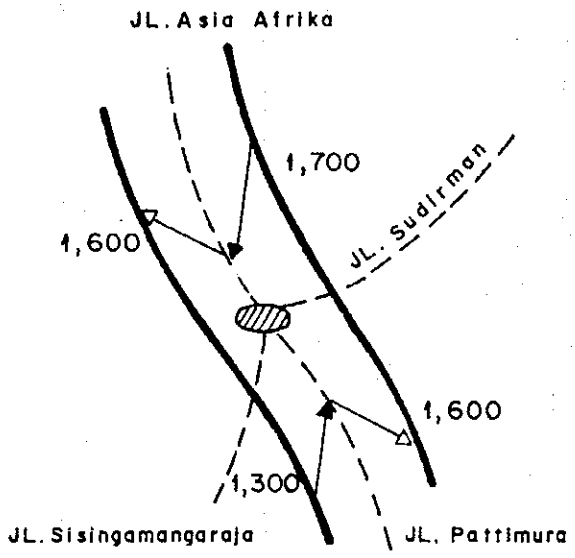


Legend :
- On Ramp
- Off Ramp
- Tollroad
- Arterial Road

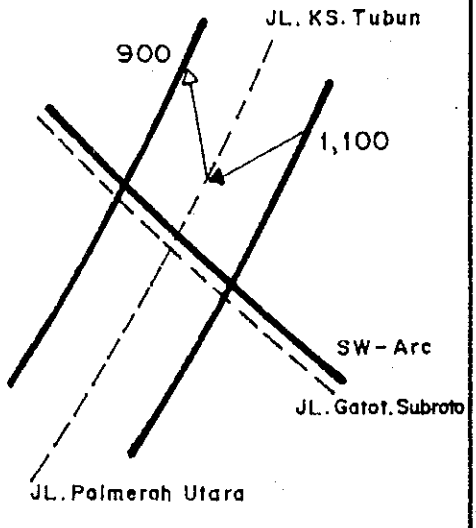
FEASIBILITY STUDY ON
URBAN ARTERIAL ROAD SYSTEM DEVELOPMENT PROJECT
IN JAKARTA METROPOLITAN AREA

Fig. 7.4.6 (1) FORECASTED TRAFFIC VOLUME AT INTERCHANGES ON NORTH-SOUTH AXIS YEAR 2010 (UNIT: PCU/day)

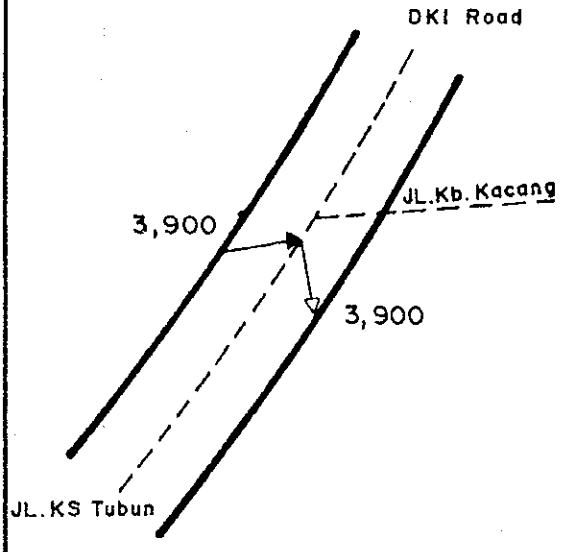
SENAYAN I.C



PAL MERAH I.C



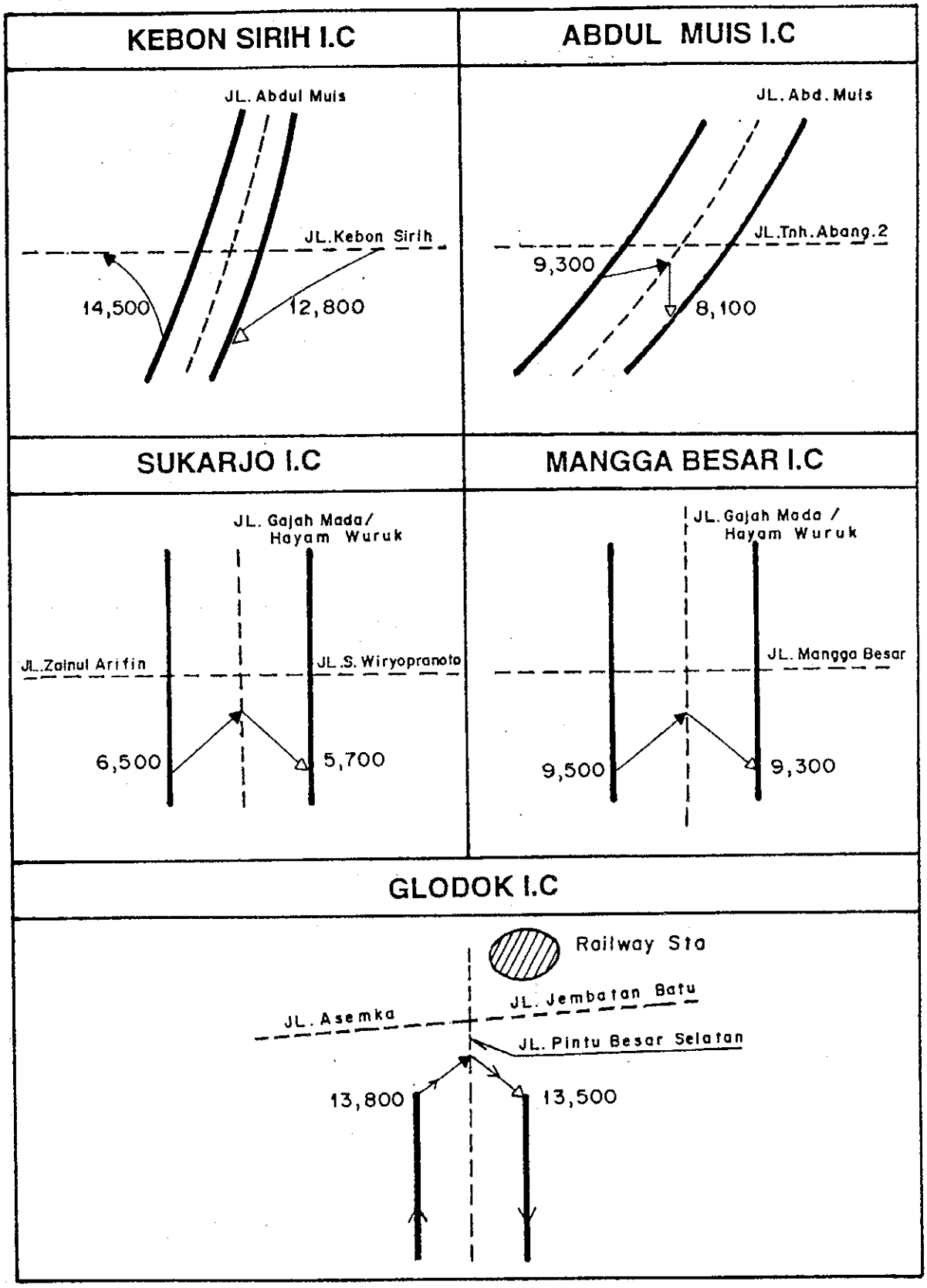
KEBON KACANG I.C



Legend :
- On Ramp
- Off Ramp
- Tollroad
- Arteriol Road

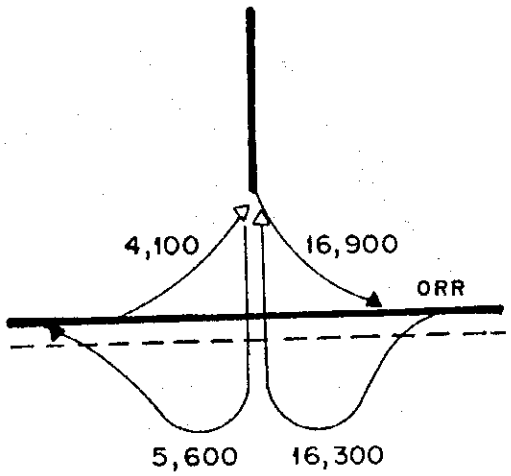
FEASIBILITY STUDY ON
URBAN ARTERIAL ROAD SYSTEM DEVELOPMENT PROJECT
IN JAKARTA METROPOLITAN AREA

Fig. 7.4.6 (2) FORECASTED TRAFFIC VOLUME AT INTERCHANGES ON NORTH-SOUTH AXIS YEAR 2010 (UNIT: PCU/day)

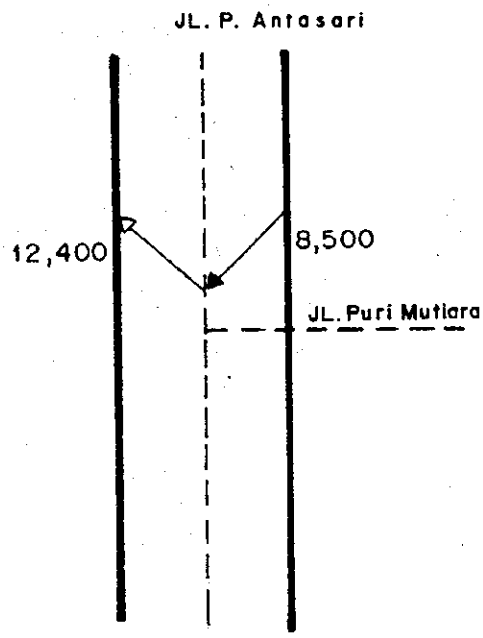


FEASIBILITY STUDY ON URBAN ARTERIAL ROAD SYSTEM DEVELOPMENT PROJECT IN JAKARTA METROPOLITAN AREA	Fig. 7.4.6 (3) FORECASTED TRAFFIC VOLUME AT INTERCHANGES ON NORTH-SOUTH AXIS YEAR 2010 (UNIT: PCU/day)

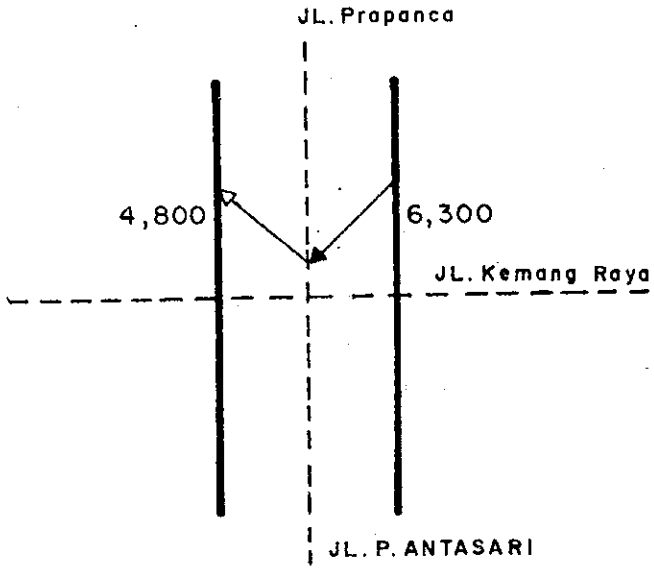
SOUTH JORR IC



PANGERAN ANTASARI I.C



KEMANG RAYA I.C

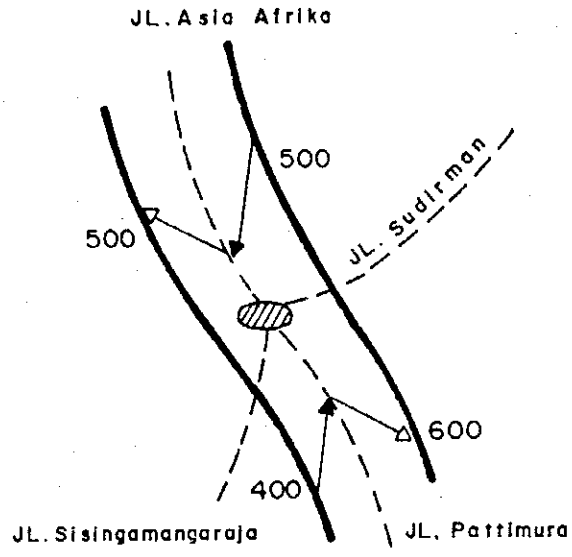


Legend :
- On Ramp
- Off Ramp
- Tollroad
- Arterial Road

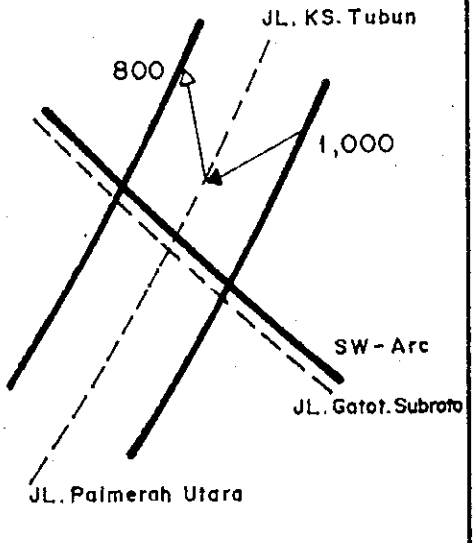
FEASIBILITY STUDY ON
URBAN ARTERIAL ROAD SYSTEM DEVELOPMENT PROJECT
IN JAKARTA METROPOLITAN AREA

Fig. 7.4.7 (1) FORECASTED TRAFFIC VOLUME AT INTERCHANGES ON NORTH-SOUTH AXIS YEAR 2000 (UNIT: PCU/day)

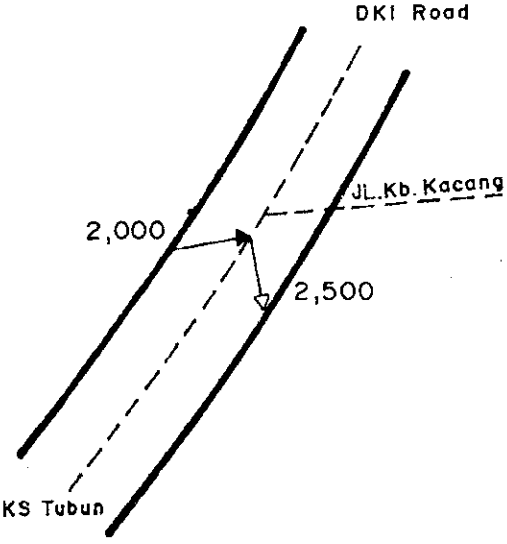
SENAYAN I.C



PAL MERAH I.C



KEBON KACANG I.C

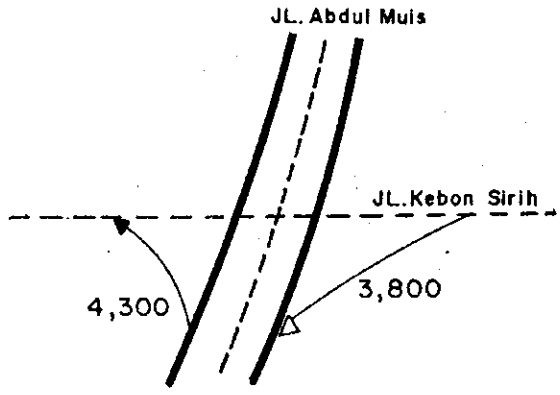


Legend :
- On Ramp
- Off Ramp
- Tollroad
- Arterial Road

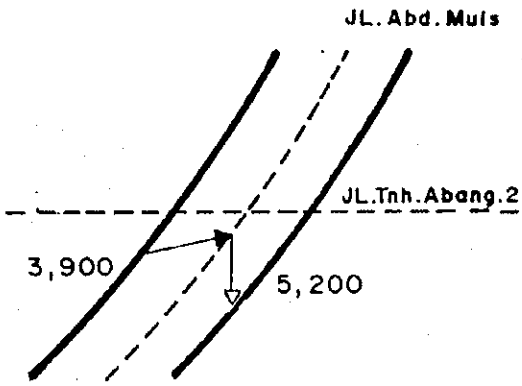
FEASIBILITY STUDY ON
URBAN ARTERIAL ROAD SYSTEM DEVELOPMENT PROJECT
IN JAKARTA METROPOLITAN AREA

Fig. 7.4.7 (2) FORECASTED TRAFFIC VOLUME AT INTERCHANGES ON NORTH-SOUTH AXIS YEAR 2000 (UNIT: PCU/day)

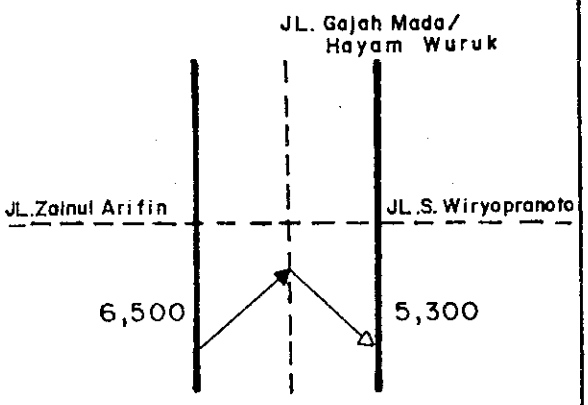
KEBON SIRIH I.C



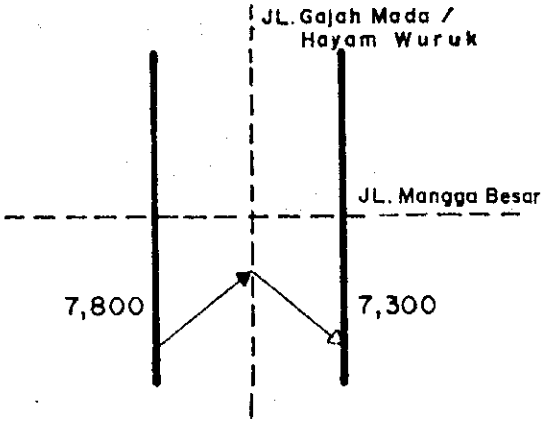
ABDUL MUIS I.C



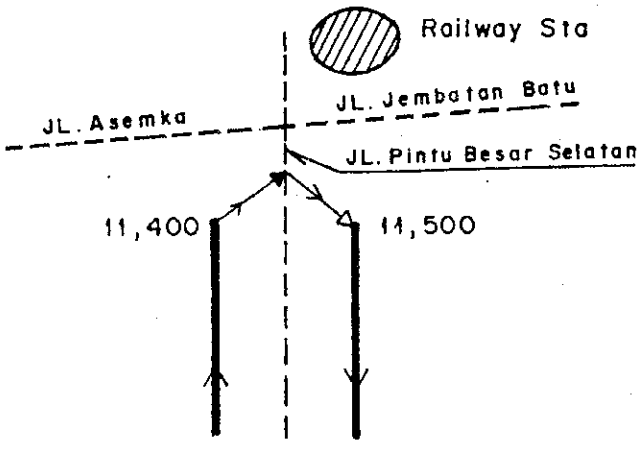
SUKARJO I.C



MANGGA BESAR I.C



GLODOK I.C

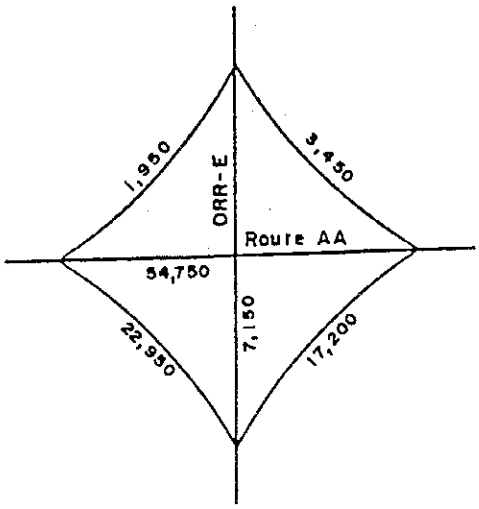


Legend :
- On Ramp
- Off Ramp
- Tollroad
- Arterial Road

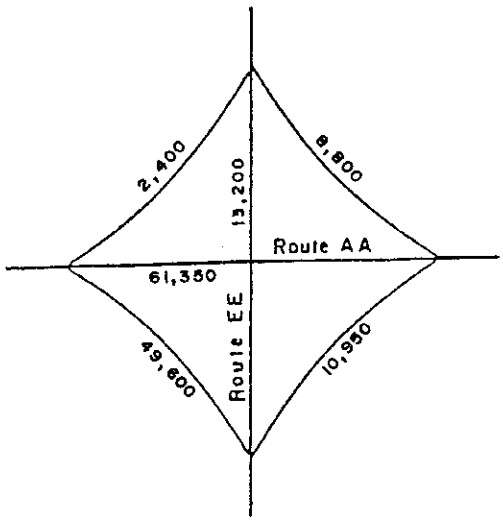
FEASIBILITY STUDY ON
URBAN ARTERIAL ROAD SYSTEM DEVELOPMENT PROJECT
IN JAKARTA METROPOLITAN AREA

Fig. 7.4.7 (3) FORECASTED TRAFFIC VOLUME AT INTERCHANGES ON NORTH-SOUTH AXIS YEAR 2000 (UNIT: PCU/day)

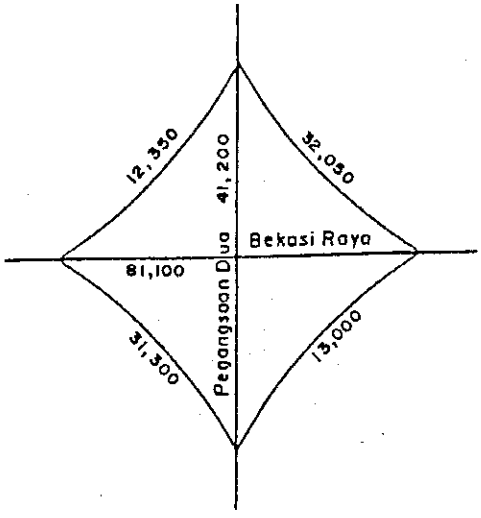
East JORR



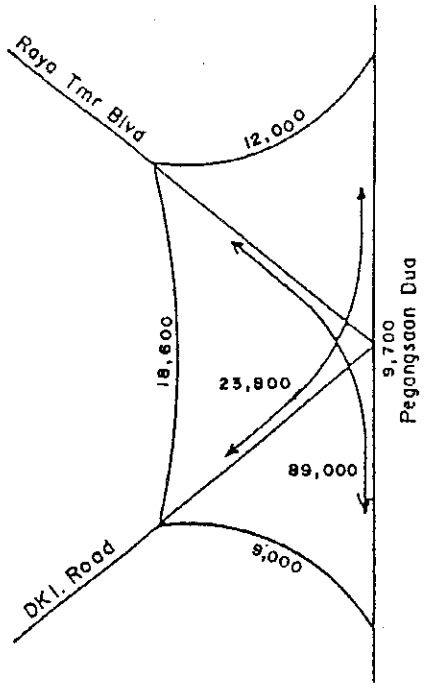
Buaran



Bekasi Raya



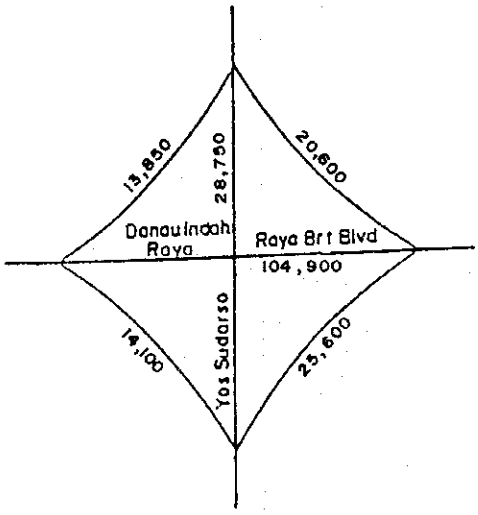
Kelapa Gading



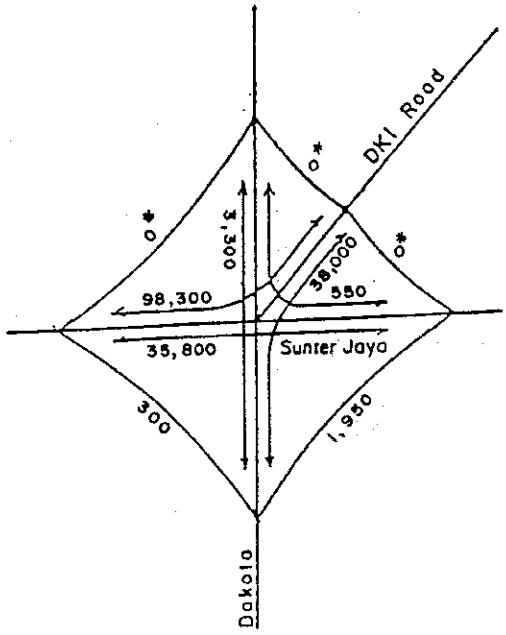
FEASIBILITY STUDY ON
URBAN ARTERIAL ROAD SYSTEM DEVELOPMENT PROJECT
IN JAKARTA METROPOLITAN AREA

Fig.7.4.8(1) 2010 VOLUME ON E/W AXIS INTERSECTIONS

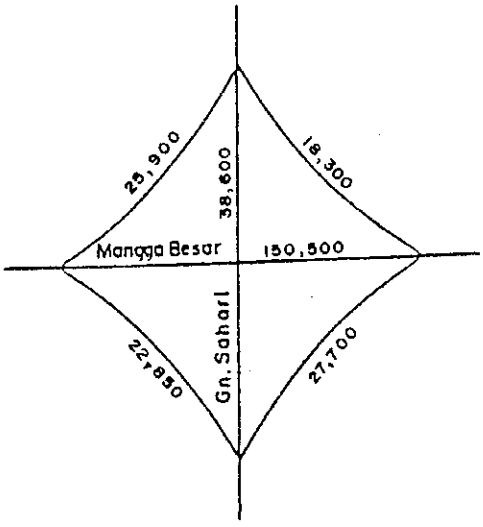
Sunter



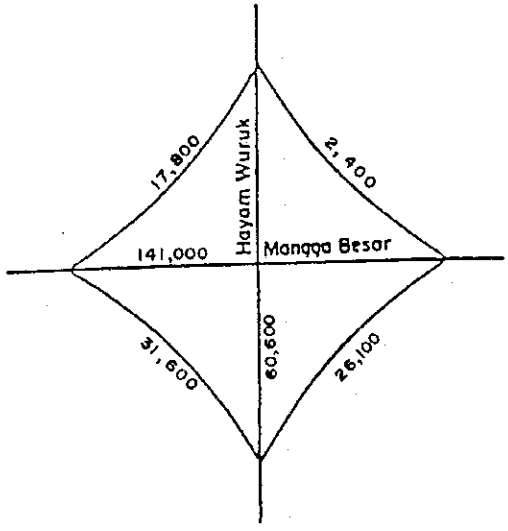
Kemayoran East



Gunung Sahari



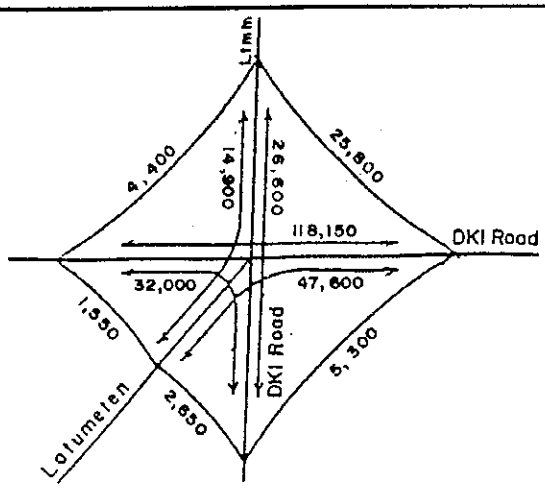
Mangga Besar



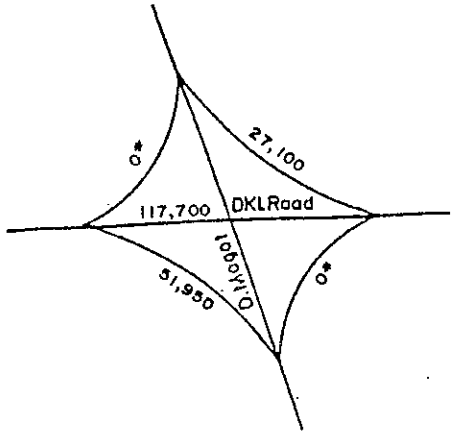
Note : 0* Very small troffic Volume for this movement

FEASIBILITY STUDY ON URBAN ARTERIAL ROAD SYSTEM DEVELOPMENT PROJECT IN JAKARTA METROPOLITAN AREA	Fig.7.4.8(2) 2010 VOLUME ON E/W AXIS INTERSECTIONS

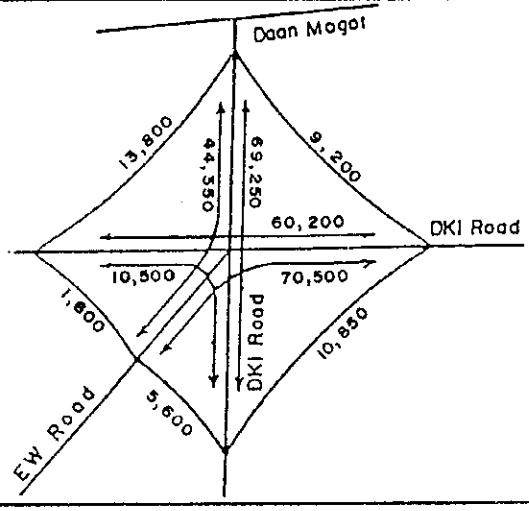
Latumeten



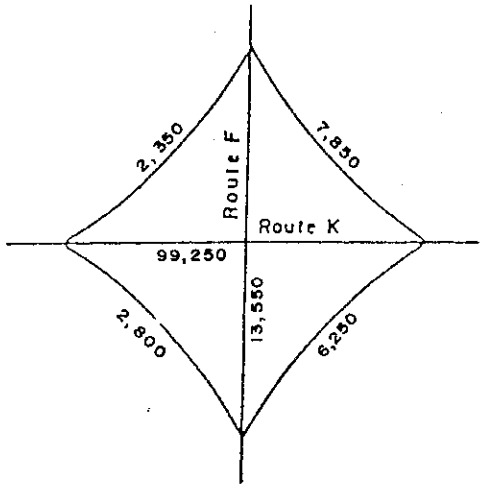
Daan Mogot



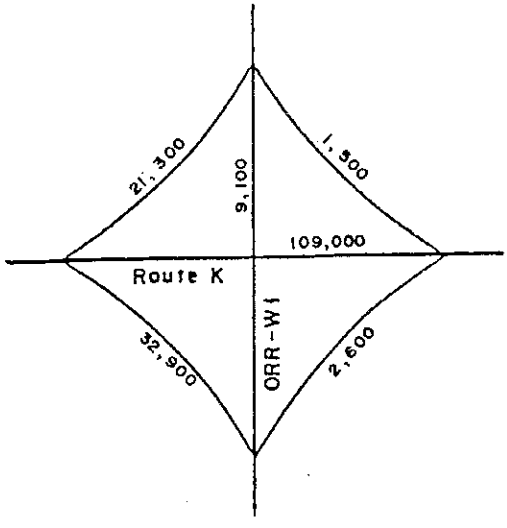
Perjuangan



Kembangan



West JORR



Note : 0* Very small traffic Volume for this movement

FEASIBILITY STUDY ON URBAN ARTERIAL ROAD SYSTEM DEVELOPMENT PROJECT IN JAKARTA METROPOLITAN AREA	Fig.7.4.8 (3) 2010 VOLUME ON E/W AXIS INTERSECTIONS

7A-5 COMPARISON OF ALTERNATIVE ROUTES

7A-5 Comparison of Alternative Routes

1. Effects on the South-West Arc of JIUY by the North-South Axis Tollway

   The proposed North-South Axis (tollway) has not the direct junction with the JIUT System. The tariff is an independent flat tariff (assumed to be the same rate as the JIUT System).

   Under these conditions effects of the N-S Axis are summarized as follows :

   1) In general effects of the proposed tollway to the S-W Arc is relatively small (Case 0 & 1).

   2) When the northern terminus of the N-S Axis is connected with the Harbor Road the effect is measured to reduce approximately 20% in the S-W Arc traffic (T1 through T5) (Case 3 & 5).

      The forecast volume on the South-West Arc, the proposed N-S Axis (tollway) and the arterial road; Jl. Sudirman and Jl. Thamrin are shown in Fig. 1.

2. Effects of the Proposed E-W Axis (Arterial Road) to Harbour Road and North-South Link of JIUT system

   The East-West Axis which is a non-toll but high standard arterial road is proposed in parallel with the Harbour Road.

   Effects of the proposed East-West Axis (Alt-2 Case) to the Harbour Road are summarized as follows:

   1) Approximately 20 - 30 percent of the traffic volume decrease from the Harbour Road, if the East-West Axis only or the East-West Axis and the North-South Axis (tollway) is integrated to the network.

   2) When the Mangga Besar Extension is not realized the effect is very small.

   3) If the North-South Axis (tollway) is directly connected to the Harbour Road, the user of the North-South Axis in northern part will become almost double, but the Harbour Road traffic will be effected to a lower volume in the eastern part (T1), and adversely to a larger volume in the western part (T2, T3 & T4).

   4) North-South Link of the JIUT System will be lowered its volume in any cases by approximately 10 percent.

5) North-South Axis (tollway) does not give a significant effect to the South-West Arc of JIUT System as mentioned in the previous section, but the East-West Axis gives reasonable effects on the northern part of the South-West Arc as appeared to the Harbour Road.

The assigned traffic volume in 2010 is shown in Fig. 2 by Case.

FORECAST TRAFFIC VOLUME BY CASE AT MAJOR LOCATIONS IN YEAR 2010

(1000 pcu/day)

LOCATION		ASSIGNMENT CASE			
Code	NAME	0	1	3	5
	Tollway				
T1	S-W Arc (Jelambar)	90	84	68	52
T2	S-W Arc (Tomang North)	100	91	85	70
T3	S-W Arc (Tomang South)	104	96	91	80
T4	S-W Arc (Gelora)	126	117	109	100
T5	S-W Arc (Kuningan)	143	137	126	125
T6	S-W Arc (Pancoran)	163	153	141	137
	Arterial Road				
A1	Medan Merdeka Barat	106	88	91	92
A2	Thamrin	185	184	187	180
A3	Sudirman (Senayan)	300	281	274	265
A4	Fatmawati	118	100	100	100
	Proposed Road				
P1	Tanah Abang	-	110	111	132
P2	Asia Afrika	-	110	111	132
P3	Prapanca	-	108	108	116

TRAFFIC ASSIGNMENT CASES

CASE 0 - Without N/S nor E/W project
CASE 1 - With N-S project only
CASE 2 - With E/W project only (Alt-II)
CASE 3 - With N-S and E/W (i.e. Alt-II)
CASE 4 - With N/S and E/W (Alt-II)
(Without Mangga Besar Extension
nor Jelambar (DKI road)
CASE 5 - With N/S and E/W (Alt-II)
Connecting N/S with Harbour Road)
CASE 6 - With N/S and E/W (Alt-I)
CASE 7 - With N/S and E/W (Alt-III)

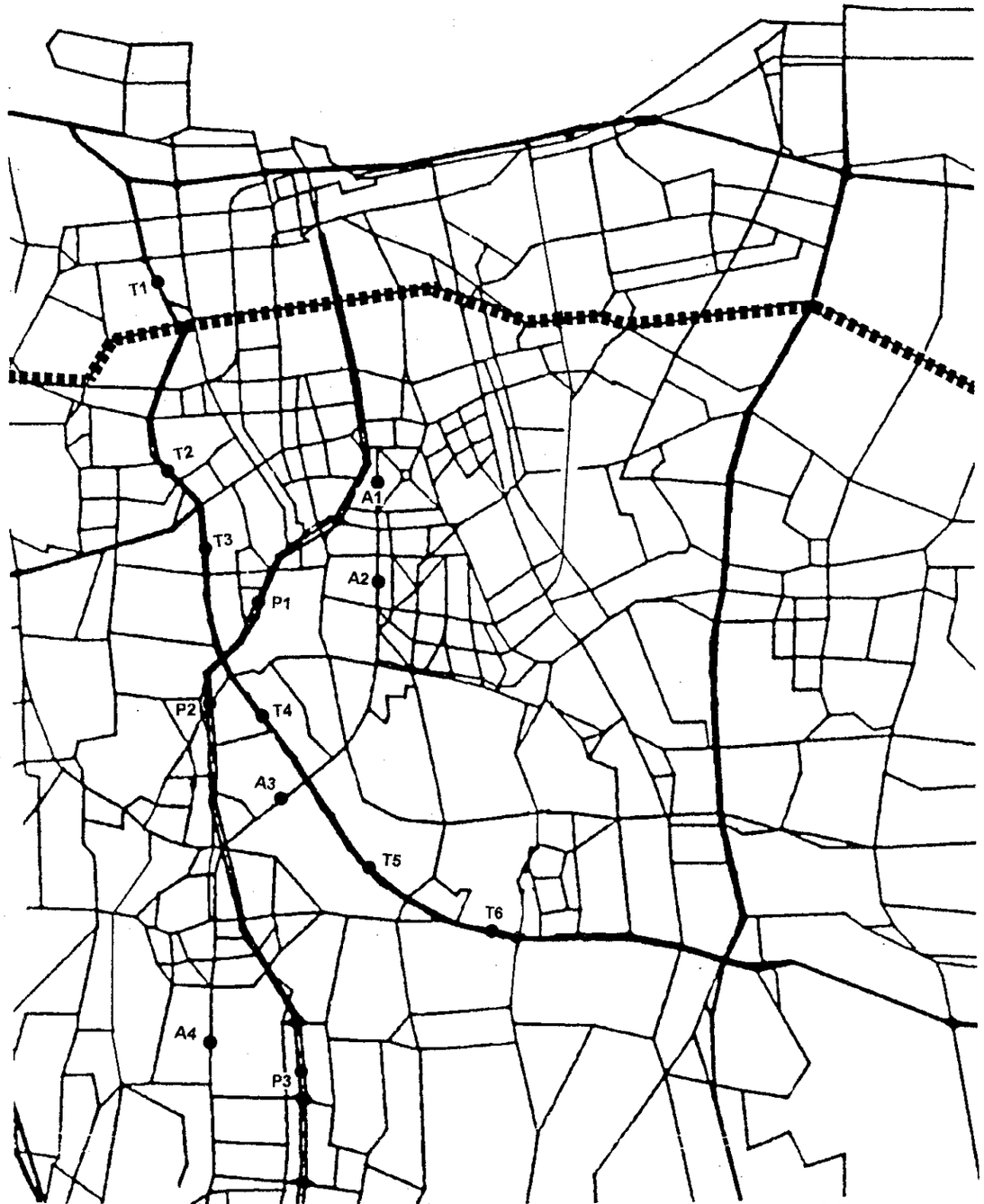


FIG. 1 2010 ASSIGNED TRAFFIC VOLUME BY CASE (1000 PCU/DAY)

FORECAST TRAFFIC VOLUME BY CASE AT MAJOR LOCATIONS IN YEAR 2010

(1000 pcu/day)

LOCATION		ASSIGNMENT CASE					
Cod	NAME	0	1	2	3	4	5
	Tollway						
T1	H.R. (Bandengan)	90	81	64	61	89	46
T2	H.R. (Pakin)	95	87	67	63	91	97
T3	H.R. (Ancol)	85	81	58	55	82	82
T4	H.R. (Sunter)	92	85	67	61	78	75
T5	N-S. Link (Pertamina)	60	57	51	51	56	53
T6	N-S Link (Hajiten)	96	87	91	83	86	83

TRAFFIC ASSIGNMENT CASES

CASE 0 - Without N/S nor E/W project
CASE 1 - With N-S project only
CASE 2 - With E/W project only (Alt-II)
CASE 3 - With N-S and E/W (i.e. Alt-II)
CASE 4 - With N/S and E/W (Alt-II)
(Without Mangga Besar Extension
nor Jelambar (DKI road)
CASE 5 - With N/S and E/W (Alt-II)
Connecting N/S with Harbour Road)
CASE 6 - With N/S and E/W (Alt-I)
CASE 7 - With N/S and E/W (Alt-III)

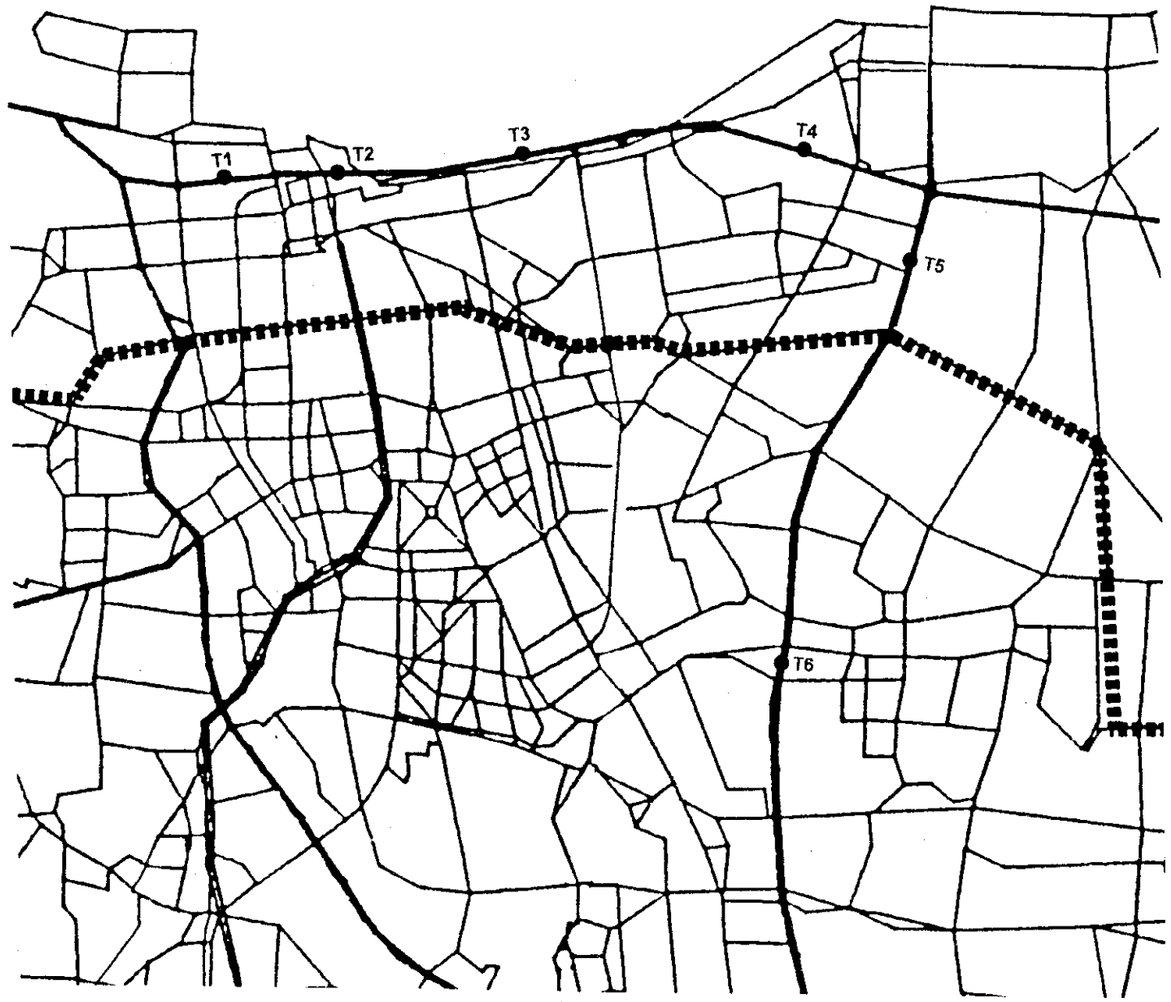


FIG. 2 2010 ASSIGNED TRAFFIC VOLUME BY CASE (1000 PCU/DAY)

3. Effects of the East-West Axis (Arterial Road) to the Northern Corridor in the Western Area of DKI Jakarta.

As shown in Fig. 3 the assigned volumes in 2010 are shown for the proposed East-West Axis, the Planned DKI road along Tangerang railway line, Jl. Daan Mogot and Jakarta-Merak Tollway in the western part of Jakarta.

- Jakarta-Merak Tollway traffic will reduce by 20 to 30% by the existence of the East-West Axis.

- If the Mangga Besar Extension is not realized, the load to Jl. Daan Mogot is so heavy as approximately 30% increase of the volume to 160 thousand pcu per day in 2010.

- In any case, the East-West Axis contributes to reducing the traffic load on the planned DKI roads.

- The proposed East-West Axis shows good return of investment by showing almost 100 percent increase in traffic volume.

4. Comparison of Assigned Traffic Volume for Alternatives (Alt-1, Alt-2 and Alt-3) of East-West Axis.

Two illustrations of the assigned volume for year 2010 for the alternatives of East-West Axis in the western area and in the central area lead as follows (See Fig. 4) :

- In the western part, the volumes on Jl. Daan Mogot by alternatives show almost no difference,

- But the case of Alt-3, the volume on the planned DKI road along the railway (Fig. 4. A5) is too large and the interval between the intersection with Jl. Latumeten and the Grogol (Jl. Daan Mogot) intersection is short in distance. Therefore, this alternative (Alt-3) is to be given a lower evaluation.

- In the central area, Alternatives 2 and 3 show no significant differences, but the Alternative-1, among the 3 alternatives brings about the lowest traffic volume for the Harbour Road (Fig. 6).

- The Alternative-2 will be the best alternative from the traffic point of view.

FORECAST TRAFFIC VOLUME BY CASE AT MAJOR LOCATIONS IN YEAR 2010

(1000 pcu/day)

LOCATION		ASSIGNMENT CASE					
Code	NAME	0	1	2	3	4	5
	Tollway						
T1	Jkt-Merak (Ciledug)	84	87	67	67	67	67
T2	Jkt-Merak (Kebon Jeruk)	85	77	56	48	51	52
T3	Jkt-Merak (Tomang)	150	145	119	112	138	119
	Arterial Road						
A1	Jl. Daan Mogot (Batu Ceper)	104	111	98	98	96	103
A2	Planned DKI Road (Batu Ceper)	118	112	85	98	88	94
A3	Jl. Daan Mogot (Kosambi)	124	130	117	110	119	124
A4	Planned DKI Road (Kosambi)	120	118	89	110	90	102
A5	Planned DKI Road (Grogol)	86	81	75	82	90	80
A6	Jl. Daan Mogot (Grogol)	134	136	129	129	160	118
	Proposed Road						
P1	EW (Batu Ceper)	102	100	205	177	179	177
P2	EW (Kosambi)	83	81	180	163	180	169
P3	EW (Jelambar)	51	56	153	156	n/a	158

TRAFFIC ASSIGNMENT CASES

CASE 0 - Without N/S nor E/W project
CASE 1 - With N-S project only
CASE 2 - With E/W project only (Alt-II)
CASE 3 - With N-S and E/W (i.e. Alt-II)
CASE 4 - With N/S and E/W (Alt-II)
(Without Mangga Besar Extension
nor Jelambar (DKI road)
CASE 5 - With N/S and E/W (Alt-II)
Connecting N/S with Harbour Road)
CASE 6 - With N/S and E/W (Alt-I)
CASE 7 - With N/S and E/W (Alt-III)

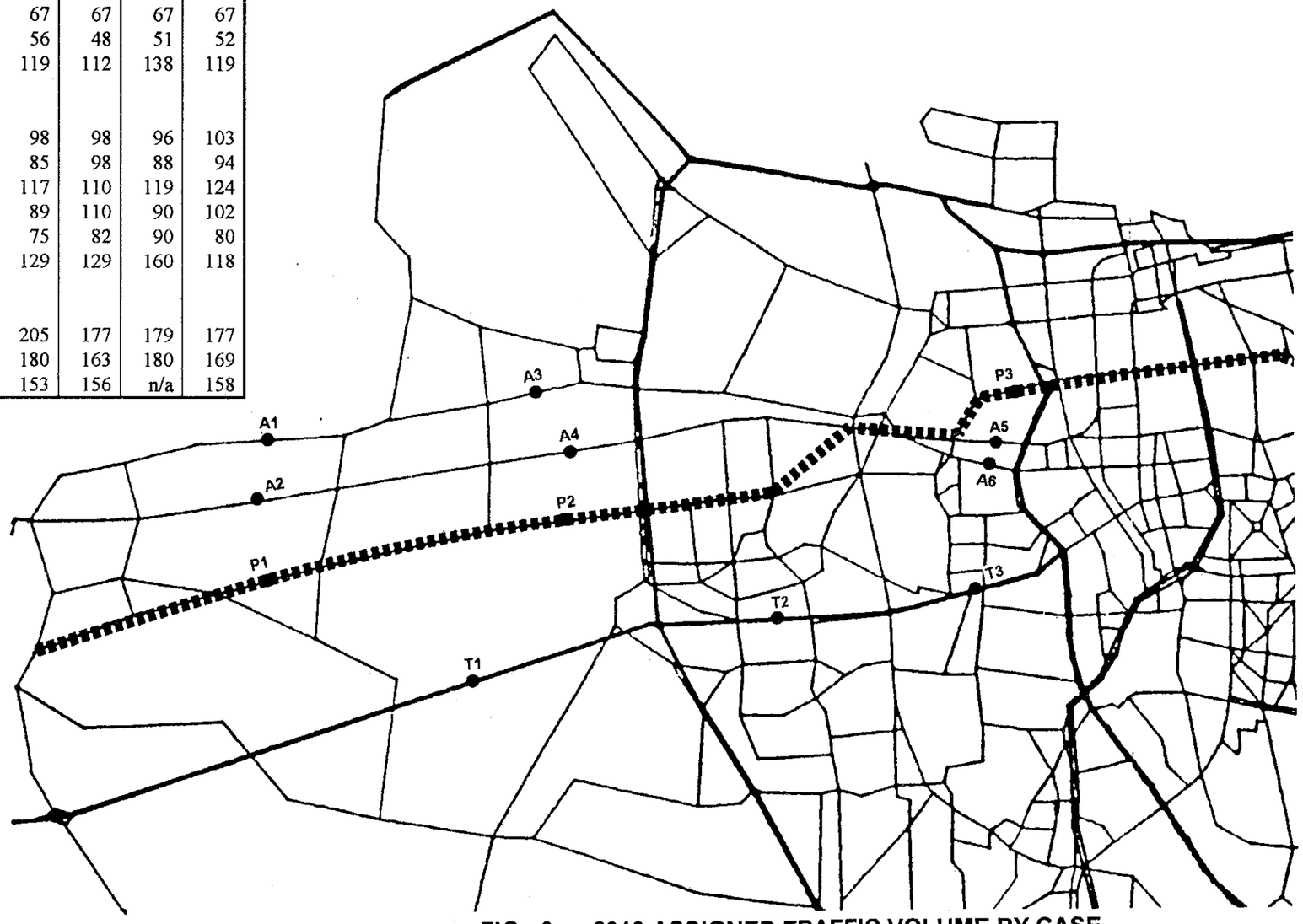


FIG. 3 2010 ASSIGNED TRAFFIC VOLUME BY CASE
(1000 PCU/DAY)

FORECAST TRAFFIC VOLUME BY CASE AT MAJOR LOCATIONS IN YEAR 2010

(1000 pcu/day)

LOCATION		ASSIGNMENT CASE		
Code	NAME	3	6	7
	Arterial Road			
A1	Jl. Daan Mogot (Kalideres)	140	149	146
A2	Planned DKI Road (Kalideres)	124	105	116
A3	Jl. Daan Mogot (Rawa Buaya)	112	121	122
A4	Planned DKI Road (Rawa Buaya)	108	94	94
A5	Planned DKI Road (Grogol)	82	80	174
A6	Jl. Daan Mogot (Grogol)	129	123	122
	Proposed Road			
P1	EW (Kalideres)	198	209	214
P2	EW (Rawa Buaya)	137	154	153
P3	EW (Jelambar)	156	47	44

TRAFFIC ASSIGNMENT CASES

CASE 0 - Without N/S nor E/W project
CASE 1 - With N-S project only
CASE 2 - With E/W project only (Alt-II)
CASE 3 - With N-S and E/W (i.e. Alt-II)
CASE 4 - With N/S and E/W (Alt-II)
(Without Mangga Besar Extension
nor Jelambar (DKI road)
CASE 5 - With N/S and E/W (Alt-II)
Connecting N/S with Harbour Road)
CASE 6 - With N/S and E/W (Alt-I)
CASE 7 - With N/S and E/W (Alt-III)

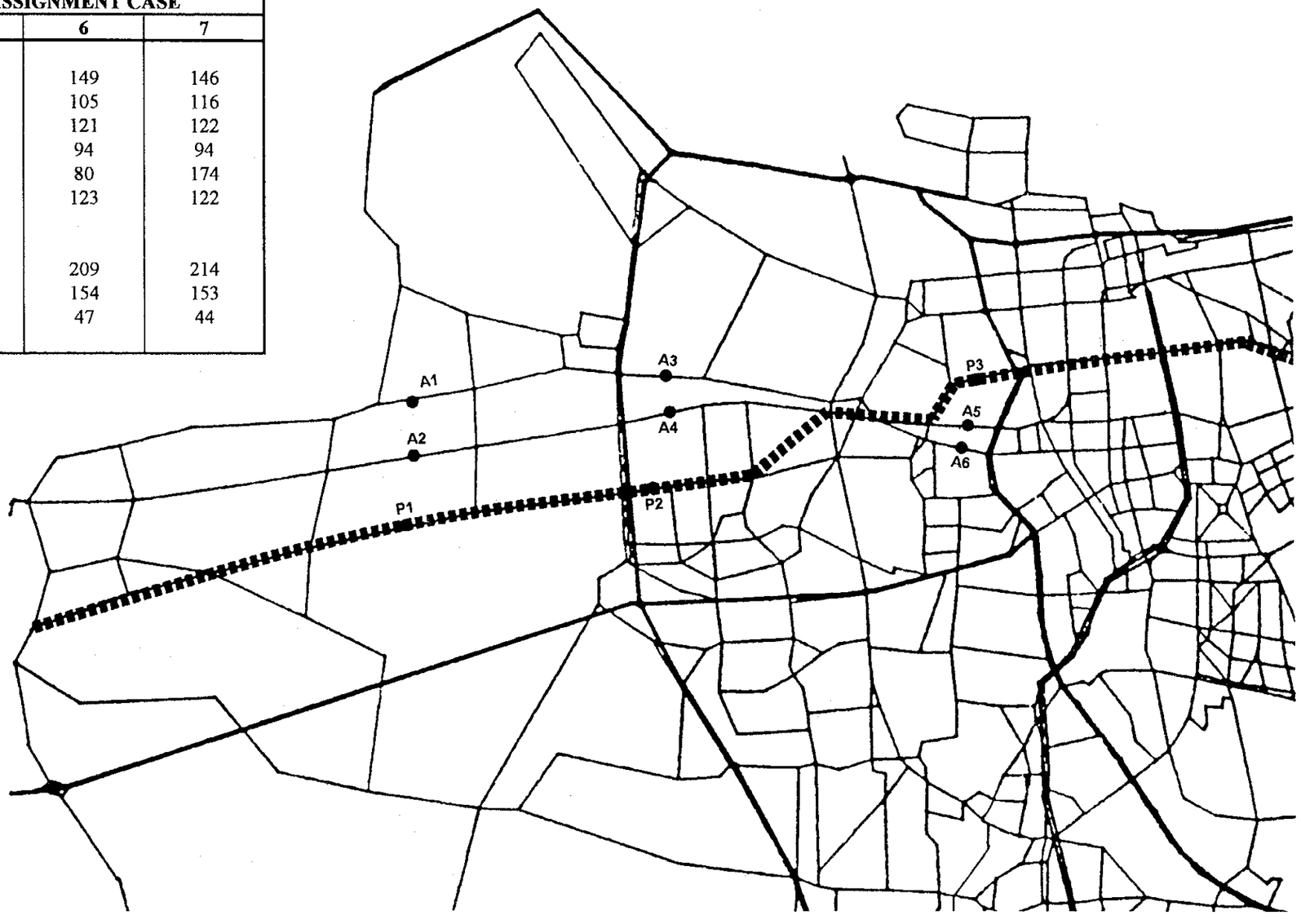


FIG. 4 2010 ASSIGNED TRAFFIC VOLUME BY CASE (1000 PCU/DAY)

FORECAST TRAFFIC VOLUME BY CASE AT MAJOR LOCATIONS IN YEAR 2010

(1000 pcu/day)

LOCATION		ASSIGNMENT CASE		
Code	NAME	3	6	7
	Toll Road			
T1	Harbour Road (Penjaringan)	61	55	61
T2	Harbour Road (Martadinata)	65	61	56
	Arterial Road			
A1	Jl. Pangeran Tubagus Angke	83	189	83
A2	Jl. Pangeran Jayakarta	36	138	34
A3	Jl. Zainul Arifin	71	75	174
A4	Jl. Sukarjo Wiryopranoto	75	79	181
	Proposed Road			
P1	Mangga Besar ext.	195	77	95
P2	Jl. Mangga Besar	172	73	76

TRAFFIC ASSIGNMENT CASES

CASE 0 - Without N/S nor E/W project
CASE 1 - With N-S project only
CASE 2 - With E/W project only (Alt-II)
CASE 3 - With N-S and E/W (i.e. Alt-II)
CASE 4 - With N/S and E/W (Alt-II)
(Without Mangga Besar Extension nor Jelambar (DKI road)
CASE 5 - With N/S and E/W (Alt-II)
Connecting N/S with Harbour Road)
CASE 6 - With N/S and E/W (Alt-I)
CASE 7 - With N/S and E/W (Alt-III)

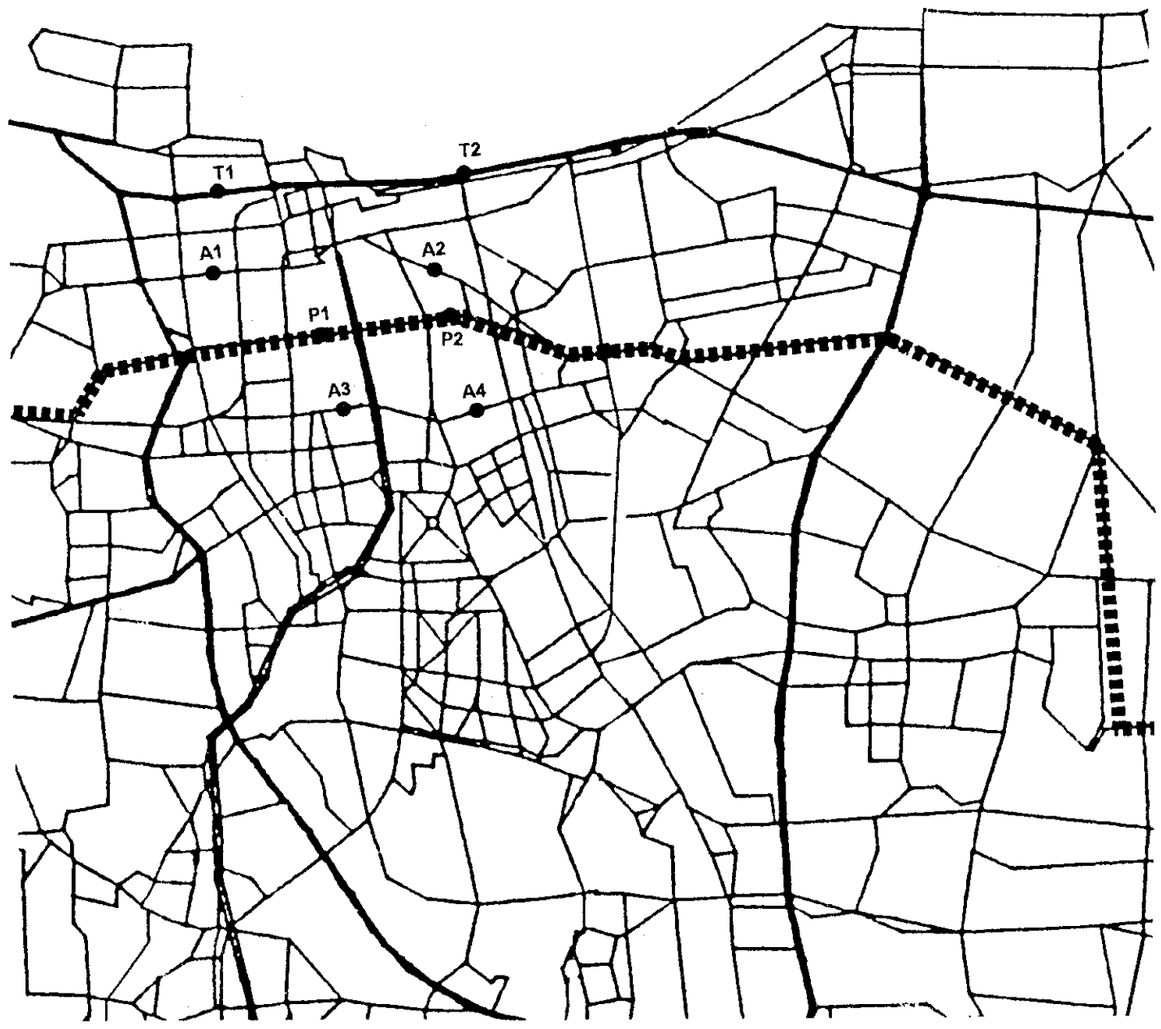


FIG. 5 2010 ASSIGNED TRAFFIC VOLUME BY CASE (1000 PCU/DAY)

FORECAST TRAFFIC VOLUME BY CASE AT MAJOR LOCATIONS IN YEAR 2010

(1000 pcu/day)

LOCATION		ASSIGNMENT CASE							
Code	NAME	0	1	2	3	4	5	6	7
	Tollway								
T1	Harbour Road (Ancol)	85	78	57	55	81	82	51	56
T2	S-W Arc (Latumeten)	90	81	78	67	81	53	69	67
T3	S-Arc (Cawang)	167	153	150	142	145	139	143	144
T4	N-S Link (Hajiten)	95	87	90	82	85	82	82	82
T5	JKT-Merak (Tomang)	150	145	119	112	138	119	119	115
T6	JKT-Merak (Kebon Jeruk)	85	77	56	48	51	52	429	46
T7	JKT-Cikampek (Cililitan)	191	191	150	156	145	151	159	151
	Arterial Road								
A1	Jl. Daan Mogot (Grogol)	134	136	129	129	160	118	123	122
A2	Jl. Bekasi Raya (P. Dua)	108	110	100	104	108	104	104	104
A3	Jl. Sudirman (Semanggi)	300	281	288	273	282	265	275	274
	Proposed Road								
P1	N-S Axis (Cipete)	0	85	0	87	83	89	83	91
P2	N-S Axis (Mangga Besar)	0	40	0	45	51	88	45	37
P3	E-W (Kedoya)	0	0	136	123	124	125	126	130
P4	E-W (Mangga Besar)	0	0	168	172	121	172	72	76
P5	E-W (P.T. Angke)							139	
P6	E-W Axis (Sukarjo W.)								171
P7	E-W Axis (Penggilingan)	0	0	81	81	73	80	78	79

TRAFFIC ASSIGNMENT CASES

CASE 0 - Without N/S nor E/W project
CASE 1 - With N-S project only
CASE 2 - With E/W project only (Alt-II)
CASE 3 - With N-S and E/W (i.e. Alt-II)
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(Without Mangga Besar Extension nor Jelambar (DKI road)
CASE 5 - With N/S and E/W (Alt-II)
Connecting N/S with Harbour Road)
CASE 6 - With N/S and E/W (Alt-I)
CASE 7 - With N/S and E/W (Alt-III)

FIG. 6 2010 ASSIGNED TRAFFIC VOLUME BY CASE (1000 PCU/DAY)

8A-1 ALTERNATIVES IN SEGMENT (EW-I ~ EW-V AND NS-I, NS-II)

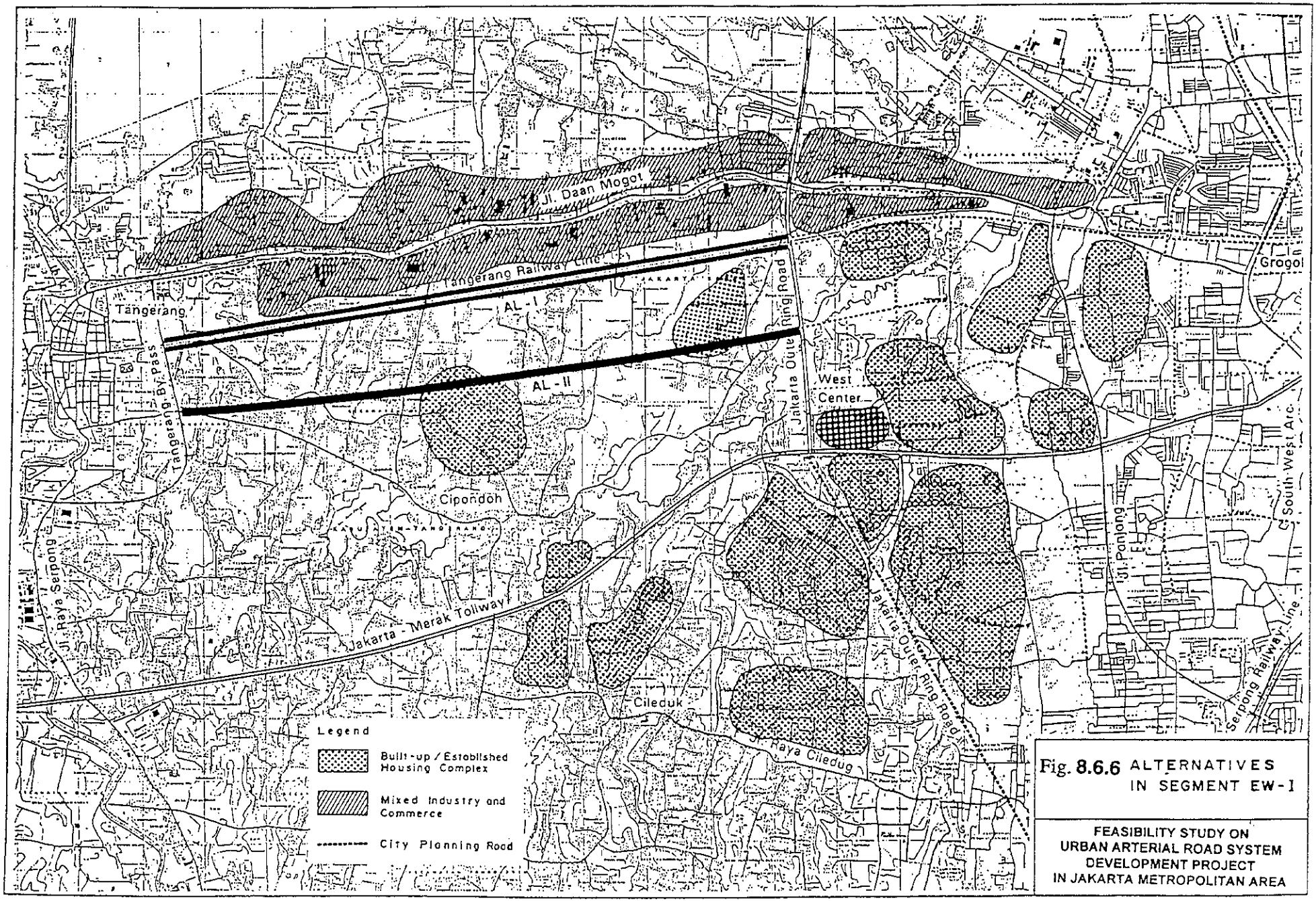


Fig. 8.6.6 ALTERNATIVES IN SEGMENT EW-1

FEASIBILITY STUDY ON
URBAN ARTERIAL ROAD SYSTEM
DEVELOPMENT PROJECT
IN JAKARTA METROPOLITAN AREA

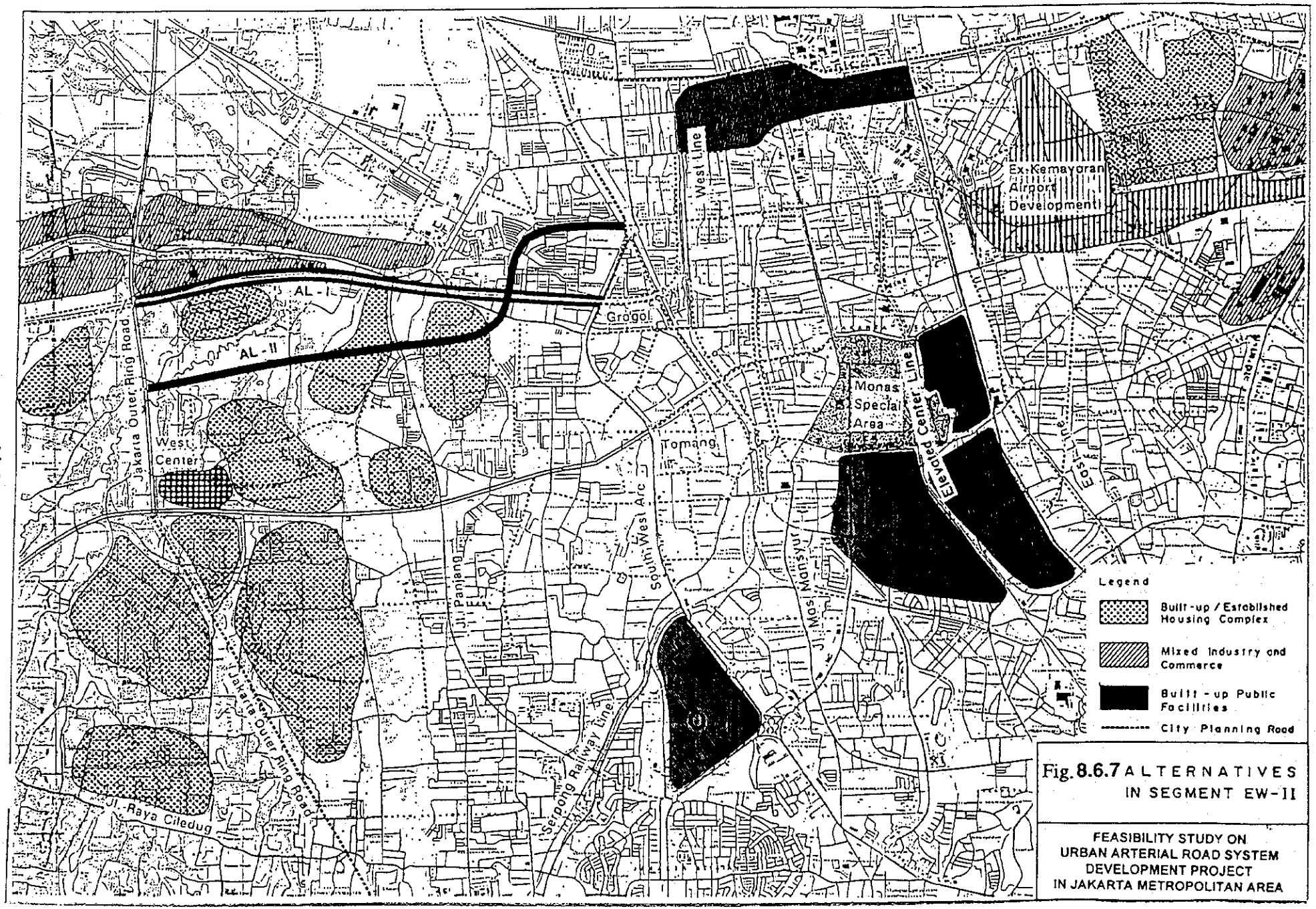


Fig. 8.6.7 ALTERNATIVES IN SEGMENT EW-II

FEASIBILITY STUDY ON
URBAN ARTERIAL ROAD SYSTEM
DEVELOPMENT PROJECT
IN JAKARTA METROPOLITAN AREA

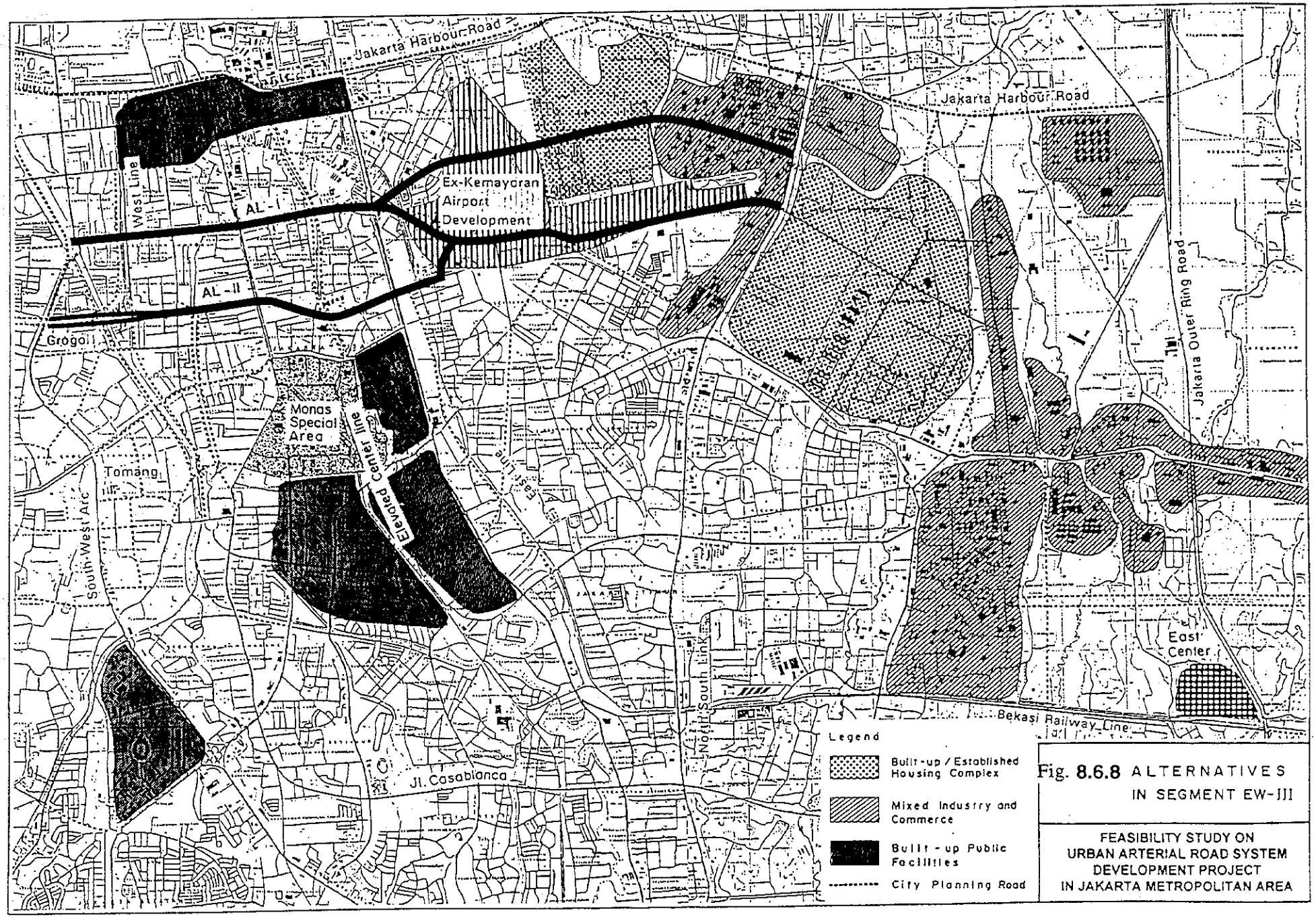


Fig. 8.6.8 ALTERNATIVES IN SEGMENT EW-III

FEASIBILITY STUDY ON
URBAN ARTERIAL ROAD SYSTEM
DEVELOPMENT PROJECT
IN JAKARTA METROPOLITAN AREA

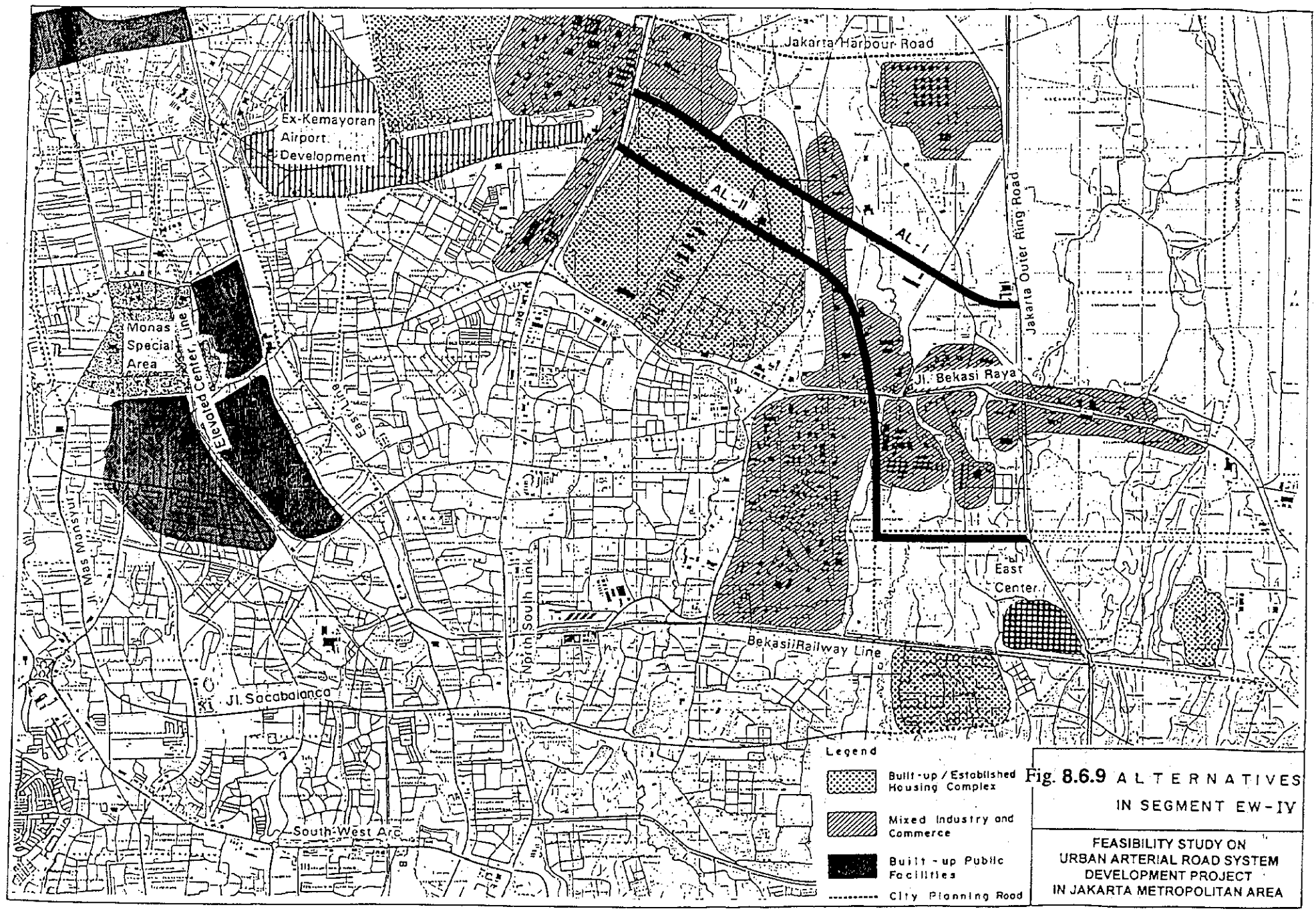


Fig. 8.6.9 ALTERNATIVES IN SEGMENT EW-IV

FEASIBILITY STUDY ON
URBAN ARTERIAL ROAD SYSTEM
DEVELOPMENT PROJECT
IN JAKARTA METROPOLITAN AREA

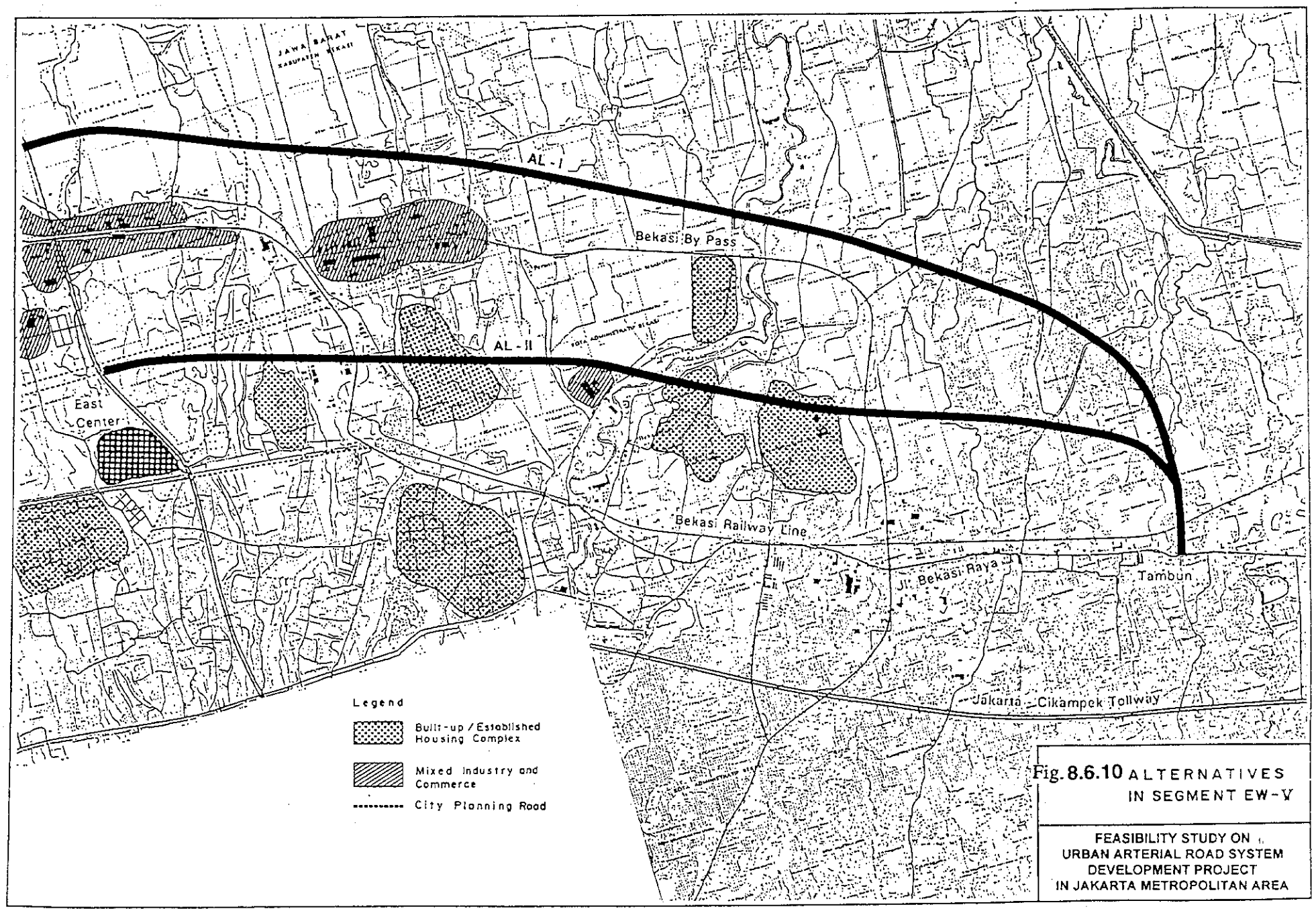
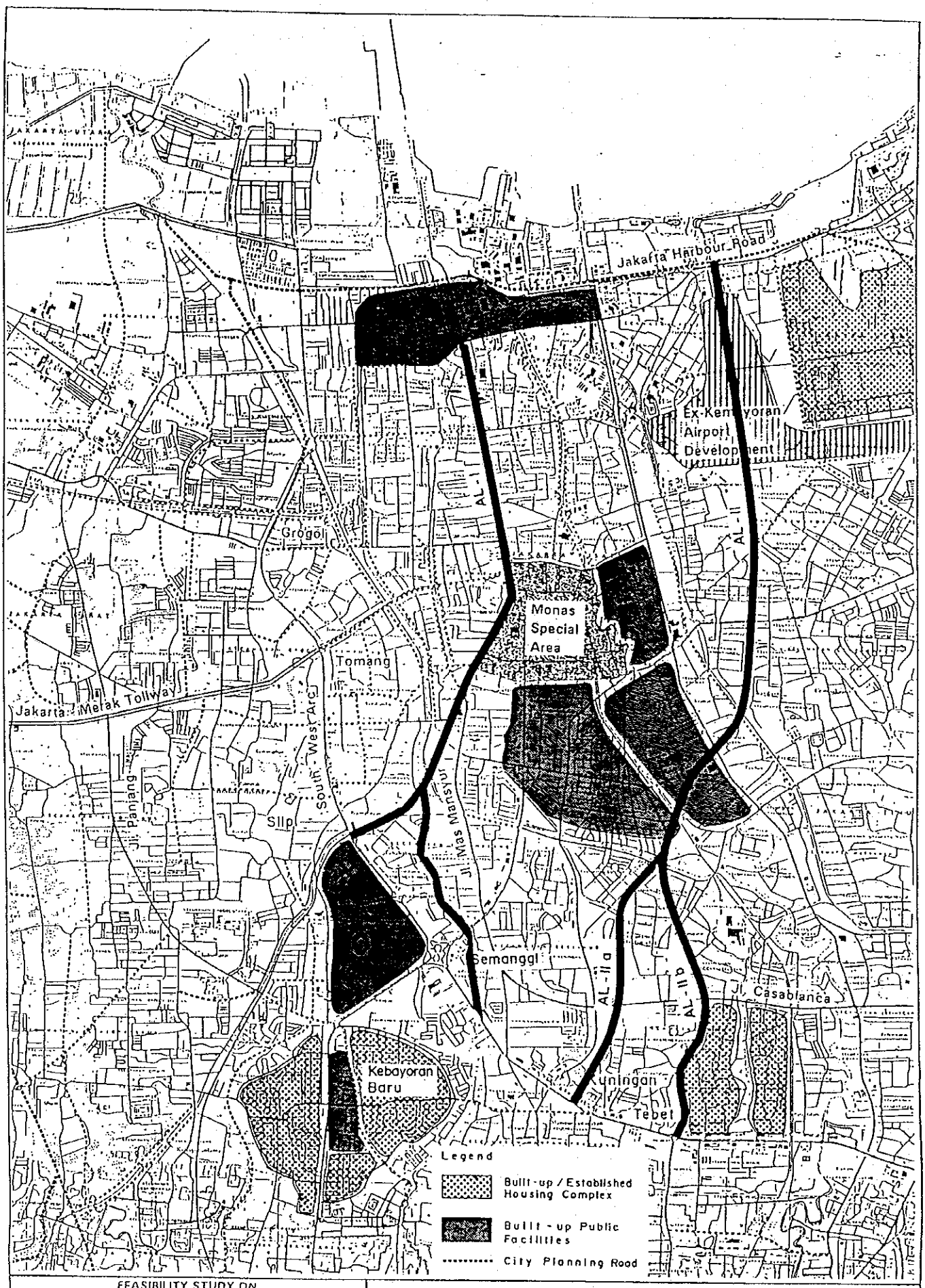


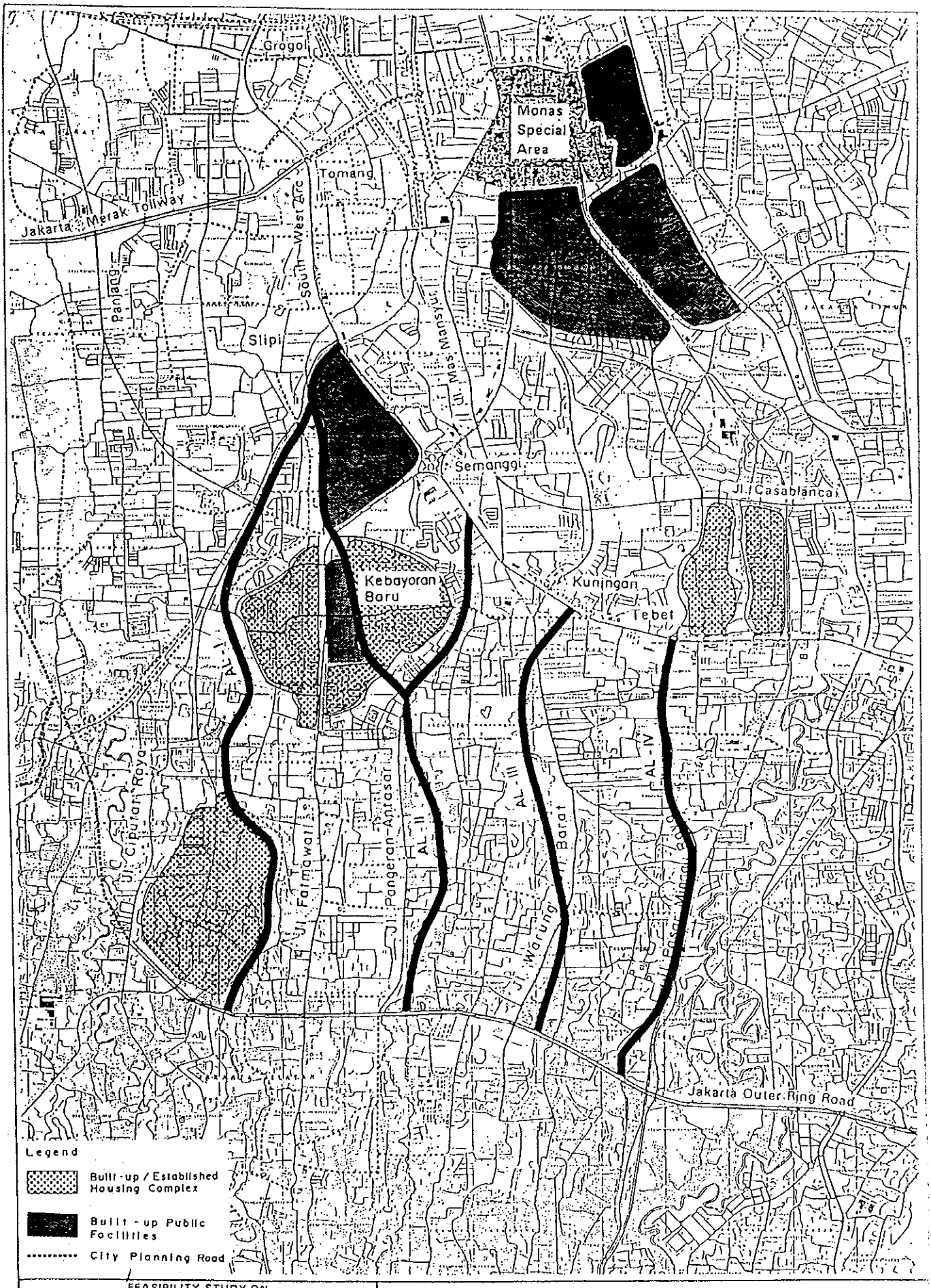
Fig. 8.6.10 ALTERNATIVES IN SEGMENT EW-V

FEASIBILITY STUDY ON URBAN ARTERIAL ROAD SYSTEM DEVELOPMENT PROJECT IN JAKARTA METROPOLITAN AREA



FEASIBILITY STUDY ON
URBAN ARTERIAL ROAD SYSTEM DEVELOPMENT PROJECT
IN JAKARTA METROPOLITAN AREA

Fig. 8.6.11 ALTERNATIVES IN SEGMENT NS - I



FEASIBILITY STUDY ON
URBAN ARTERIAL ROAD SYSTEM DEVELOPMENT PROJECT
IN JAKARTA METROPOLITAN AREA

Fig. 8.6.12 ALTERNATIVES IN SEGMENT NS – II