REPUBLIC OF KENYA

MINISTRY OF TRANSPORT AND COMMUNICATIONS

THE NAIROBI BYPASS CONSTRUCTION PROJECT

FEASIBILITY STUDY

FINAL REPORT

VOLUME 3

(APPENDIX)

FEBRUARY 1988

JAPAN INTERNATIONAL COOPERATION AGENCY

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JAPAN INTERNATIONAL COOPERATION AGENCY

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Appendix II

Socio-Economic Profile

Table A-II-1

Annual Rainfall

Unit: mm

District	1978	1979	1980	1981	1982	1983	1984	Annual Mean
Kiambu	1,472	876	959	1,126	988	771	184	980
Nyeri	1,018	1,255	675	-	1,137	997	660	831
Kitale	1,583	1,360	982	1,445	1,688	1,223	886	1,363
Kisumu	1,767	1,454	1,100	1,038	1,474	1,122	1,235	1,352
Kisii	2,272	1,558	1,716	1,752	1,869	1,954	1,691	1,931
Kilifi	1,563	1,304	912	1,006	-	951	281	891
Kericho	2,354	1,723	-	-	-	2,183	1,168	1,146
Garissa	724	531	102	303	433	120	497	390
Kajiado	573	-	350	-	467	346	222	346
Mombasa	1,227	1,523	798	1,063	1,694	1,071	627	1,142
Eldoret	1,060	1,142	884	1,209	1,053	1,088	419	1,063
Nakuru	1,245	960	833	937	1,071	926	571	975

Source: Meteorological Department, Statistical Abstruct 1985

Table A - II - 2

Population Projections of Nairobi

Unit: 1,000 Persons

Institute	1979	1984	1985	1990	2000
Metropolitan Growth Strategy Study	989	1,326	1,396	-	-
Central Bureau of Statistics	-	-	L.1,078 H.1,109	L.1,343 H.1,416	1,999 2,199
Ministry of Finance and Planning	-	1,104	1,162	1,505	2,525
Nairobi City Commission, City Planning Department	-	L.1,041 M.1,110 H.1,168	-	L.1,395	2,272
Census	828 1/	1,100 2/	1,150 2/	1,200 2/	-

Remarks:

L; Low, M; Medium, H; High

1/ : Census, Central Bureau of Statistics

2/ : Provisional Estimate

Table A - II - 3

Share of Gross Domestic Product

Unit: Percentage

Industry	1979	1980	1981	1982	1983	1984 1/	Growth Rate, %
Agriculture	33.1	32.2	32.1	33.0	33.3	31.8	2.4
Manufacture	13.7	13.8	13.5	13.6	13.7	14.2	4.0
Electricity/Water	1.6	1.5	1.7	1.7	1.7	1.8	5.0
Transport/Communication	5.8	8.9	5.6	5.9	5.9	5.9	3.8
Building/Construction	4.8	5.0	5.1	4.4	3.9	3.6	△ 2.9 2/
Wholesale/Retail etc.	12.4	12.5	11.9	10.9	10.8	11.2	1.1
Finance etc.	7.0	6.7	8.2	7.5	8.5	9.1	8.8
Producers of Government Services	15.6	15.9	15.7	16.1	16.2	16.5	3.2
Others	6.0	6.5	6.2	6.9	6.0	5.9	n.a.

Remarks; Source Central Bureau of Statistics, at 1982 constant price.

1/ : Provisioanal
2/ : Minus

Table A - II - 4

Key Economic and Social Indicators, 1981 - 1985

	Description	Unit	1981	1982	1983	1984	1985
1.	Population	Mill. Person	17.3	18.0	18.8	19.5	20.2
2.	Growth of GDP at constant prices	Per Cent	6.0	2.4	3.1	0.9	4.1
3.	GDP at markat prices	K£ . Mill.	3,023	3,411	3,826	4,016	4,763
4.	Net cost of petroleum products	K£ . Mill.	200	179	214	185	257
5.	Trade balance	K£ . Mill.	-479	-430	-313	-373	-445
6.	Money supply	K£ . Mill.	918	1,066	1,118	1,262	1,346
7.	Balance of payments (current account)	K£ . Mill.	-336	-253	-89	-147	-159
8.	Coffee marketed production	1,000 Ton	91	88	95	119	97
9.	Tea marketed production	1,000 Ton	91	96	119	116	147
10.	Maize marketed centrally	1,000 Ton	473	571	636	561	583
11.	Wheat marketed centrally	1,000 Ton	203	235	242	135	194
12.	Sugar-cane production	1,000 Ton	3,822	3,108	3,286	3,611	3,463
13.	Manufacturing output	K£ . Mill.	1,804	2,054	2,426	2,957	3,536
14.	Construction output	K£ . Mill.	403	402	411	457	461
15.	Cement consumption	1,000 Ton	653	579	511	541	610
16.	Petroleum consumption	1,000 Ton	1,585	1,491	1,373	1,482	1,479
17.	Electricity	Mill. Kwh	1,663	1,701	1,747	1,845	2,014
18.	Tourism earning	K£ . Mill.					
19.	New registration of vehicles	Number	18,115	15,061	13,940	15,694	16,320
20.	Rail freight	Mill Ton.Km	2,241	2,097	2,091	2,034	1,858
21.	Wage employment	1,000 Person	1,024	1,046	1,093	1,126	1,174

Table A - II - 4 (cont'd)

Key Economic and Social Indicators, 1981 - 1985

Description	Unit	1981	1982	1983	1984	1985	Rate, % [1]
Export volumes	%	103	100	96	95	99	-0.3
Import volumes	%	118	100	79	93	86	-4.9
Terms of trade	%	105	100	94	110	92	2.7
Real wages	%	112	100	93	94	91	3.1
Agricultural terms of trade	%	104	100	98	94	94	2.1

Remarks: Provisional

Source, Economic Survey 1986

1 : Annual % Rate of change 1982 - 1985

Table A-II-5

Analysis of Key Fiscal Trends. 1981/82 - 1985/86

Unit %

	Description	1981/82	1982/83	1983/84	1984/85	1985/86
1.	Current surplus as % current revenue	-8.2	-17.2	-8.7	-15.6	-7.6
2.	Current surplus as % of development plus investment expenditure	-21.1	-63.6	-34.2	-50.3	-21.7
3.	Ratio of development expenditure to current expenditure	26.4	19.2	24.1	27.0	28.6
4.	Total deficit as % current revenue	-44.5	-41.4	-35.1	-45.8	-34.0
5.	Total deficit as % of total expenditures	-30.2	-28.7	-25.7	-31.2	-32.9
6.	External grants and loans as % of development plus investment expenditures	60.5	84.5	76.1	70.6	50.0
7.	Net short-term borrowing as % of development plus investment expenditure	45.8	-42.9	62.8	25.8	35.4
8.	Current revenue as % of G.D.P. at current market prices	-	22.8	23.1	22.9	-
9.	Total Government expenditure as % of G.D.P. at current market prices	-	32.9	31.5	33.6	-

Remarks : Provisional

External grants are excluded from revenue in these calculations.
Net short-term borrowing less increases in cash balances.
Fiscal year data have been related to G.D.P. by averaging G.D.P.'s for two successive calendar years, e.g. 1984/85 has been related to the average G.D.P. of 1984 and 1985.

Source : Economic Survey, 1986

Table A-II-6

Government Revenue and Expenditure

Year	Recurrent Revenue	Expenditure			
		Recurrent	Development	Investment	Total
1964/65	164.2	188.7	24.9	20.2	233.8
65/66	184.6	207.1	28.1	18.7	253.9
66/67	211.5	219.5	31.1	21.1	271.7
67/68	244.0	237.3	38.6	23.4	299.3
68/69	264.3	251.2	44.6	31.8	327.6
69/70	299.7	278.9	59.1	33.7	371.7
1970/71	366.4	328.7	87.8	46.4	463.1
71/72	393.6	357.8	110.6	33.6	502.0
72/73	384.2	360.0	115.5	44.1	519.6
73/74	426.7	367.4	108.2	40.8	516.4
74/75	435.5	397.7	118.9	61.7	578.3
75/76	454.7	416.8	125.5	88.0	630.3
76/77	458.7	407.9	123.1	55.4	586.4
77/78	613.2	519.5	149.5	97.5	766.5
78/79	636.4	592.1	182.6	93.5	868.2
79/80	706.9	623.2	198.9	72.9	904.0
1980/81	738.5	721.3	216.0	86.1	1023.4
81/82	722.0	788.4	207.4	78.0	1073.8
82/83	696.7	803.9	254.5	51.8	1010.2
1983/84	707.3	731.8	-		951.5
84/85	795.3	787.6	256.6		1044.2
85/86	845.3	819.5	262.2		1081.7
86/87	902.3	863.8	278.2		1142.0
87/87	963.1	910.2	298.2		1208.4

Future prospects are based on "Development Plan, 1984-88"
Source: "The Study of National Transport Plan, JICA"

Appendix III

Transport Sector Analysis

Table A-III-1

Roads Inventory by Type

Catergory	1981		1982		1983		1984	
	Length (km)	Paved (%)	Length (km)	Paved (%)	Length (km)	Paved (%)	Length (km)	Paved (%)
International Trunk	3,594.2	65.0	3,594.2	65.0	3,594.2	65.0	3,594.2	65.0
National Trunk	2,786.1	41.1	2,786.1	41.3	2,786.1	41.4	2,786.1	41.4
Primary	7,750.8	23.2	7,750.8	23.2	7,897.1	25.5	7,897.1	25.5
Secondary	11,066.0	6.5	11,058.7	6.2	10,960.1	6.5	10,960.1	6.5
Minor	20,868.4	1.1	25,775.6	1.1	26,595.4	1.4	26,576.4	1.4
Special purpose	15,751.5	2.5	12,756.0	4.9	27,769.0	5.0	2,770.3	5.0
Total	53,577.0	12.0	53,788.7	11.9	54,583.7	12.3	54,584.2	12.3

Source : Statistical abstract, 1985, pp 180.

Table A-III-2

Amounts and Ratios of Government Account among Government Expenditure

Uint: Million Kf

Description	1982/83		1983/84		1984/85		1985/86 1/	
	Amounts	Ratio %	Amounts	Ratio %	Amounts	Ratio %	Amounts	Ratio %
Total Government Expenditure	1,190.7	100.0	1,242.4	100.0	1,483.2	100.0	1,665.1	100.0
Transport and Communications	77.9	6.5	78.8	6.3	60.4	4.1	85.6	5.1
Road Sector	66.0	5.5	67.4	5.4	48.6	3.3	59.0	3.5
Current Accounts of Road	16.1	6.3	19.6	1.6	9.6	0.6	7.5	0.4
Development Account of Road	49.9	4.2	47.7	3.8	39.0	2.7	51.6	3.1

1/ : Provisional Figure

Source : Based on the figure of Economic Survey, 1986 PP.69

Table A-III-3

Government Financial Source for

Development and Investment Account

Unit: Million Kf

Description	1982/83	1983/84	1984/85	1985/86
Development & Investment Expenditure	223.1	251.1	313.5	409.8
Financial Sources				
Surplus on Current Account	△ 142.0	△ 79.3	△ 157.7	△ 89.1
External Loans	165.4	166.0	213.2	102.7
External Grants	23.2	10.6	78.6	102.0
Long Term Domestic Borrowing	272.2	21.4	53.2	50.0
Treasury Bills	△ 36.4	109.2	34.1	214.1
Short Term Borrowing	7.8	36.4	4.1	△ 68.9
Cash Balances	△ 68.1	△ 13.2	△ 45.4	99.0
Total	223.1	251.1	313.5	409.8

Remarks : Provisional

Source : Based on the figures of Economic Survey, 1986, PP.68

△ : Minus

Table A-III- 4

Road Vehicles, registered with Growth Rate

Catergory	1980	1980	1983	1984	1985	Growth Rate, % (1980 - 84)
Motor Car	113,629	114,197	115,316	116,852	122,300	1.9
Utility, Panel Van	55,524	57,969	59,358	59,618	64,805	3.9
Lorry, Truck, Heavy Van	23,594	23,956	23,634	23,335	24,769	1.2
Bus, Mini-bus	5,075	5,432	5,724	5,959	7,001	8.4
Motor & Auto Cycle	15,343	16,345	16,870	16,823	17,944	4.0
Other motor vehicle	16,703	17,318	17,367	17,493	18,454	2.5
Trailer	10,567	10,915	10,893	10,839	11,337	1.2
Total	240,435	246,132	249,162	250,919	266,613	2.6

Source : Statistical Abstract, 1985, pp 181

Table A-III-5

Central Government Revenue from Road Vehicle, 1976 - 1984

Unit : 1,000 K£

Description	1976	1977	1978	1979	1980	1981	1982	1983	1984
Licences									
a)Licenses under traffic ordinance	2,860.7	3,222.8	3,503.9	4,488.3	5,238.4	5,524.7	6,649.2	7,197.8	7,558.3
b)Motor-car Drivers' Licences	256.2	539.6	608.2	728.4	803.6	875.6	1,037.7	1,168.3	1,159.7
Total	2,116.9	3,762.4	4,112.1	5,216.7	6,042.0	6,400.3	7,636.9	8,366.1	8,718.0
Petrol and Diesel Oil Taxes									
a) Consumption Tax	7,819.0	11,010.0	17,313.3	21,031.7	29,976.2	41,710.0			
b) Import Duty									
(i) Motor Spirits	8,338.8	118.9	11,897.4	9,960.8	762.1	12,605.3	10,958.2	10,626.0	10,404.6
(ii) Diesel Oil	6,816.1	122.7	7,232.5	6,127.9	490.7	8,567.5	7,382.5	7,422.4	8,207.3
Total	22,973.9	11,251.6	36,443.1	37,120.4	31,229.0	42,572.7			
Other Import Duties									
a) Motor Vehicles									
(i) Passenger Cars	4,332.3	6,862.6	9,192.3	5,919.4	9,074.5	3,926.5	4,783.6	4,241.4	4,371.0
(ii) Buses, Lorries and Trucks	2,607.9	3,689.8	4,279.9	5,253.7	9,074.5	10,219.4	9,898.4	10,054.2	10,855.5
Total	6,940.2	10,552.4	13,472.1	11,173.1	17,916.4	14,145.9	14,682.0	14,295.6	15,226.3

Table A-III- 5 (Cont'd)

Central Government Revenue from Road Vehicle, 1976 - 1984.

Unit : 1,000 K£

Description	1976	1977	1978	1979	1980	1981	1982	1983	1984
b) Chassis with Engines									
(i) Passenger Motor Cars	-	-	185.7	432.2	271.8	217.2	153.3	37.6	52.2
(ii) Buses, Lorries, etc.	968.5	1,044.4	304.2	-	-	86.7	110.2	239.5	1,084.8
Total	968.5	1,044.4	489.9	432.2	271.8	303.9	263.5	277.1	1,137.0
c) Bodies and parts for Motor Vehicles	1,328.3	1,177.1	1,847.2	1,350.9	1,140.7	2,488.2	2,808.5	2,375.2	3,335.7
d) Motor Vehicles, Tyres and Tubes	154.1	154.1	824.7	405.8	1,140.7	329.0	91.4	60.5	470.0
Total Other Import Duties	9,396.6	12,927.9	16,633.9	13,362.0	20,469.6	17,267.0	17,845.4	17,008.4	20,169.0
Total	35,487.4	27,941.9	57,189.1	55,699.1	57,740.6	66,358.8			

Source : Central Bureau of Statistics, 1986

Fig. A-III-1

Organization Chart of the M.O.T.C.

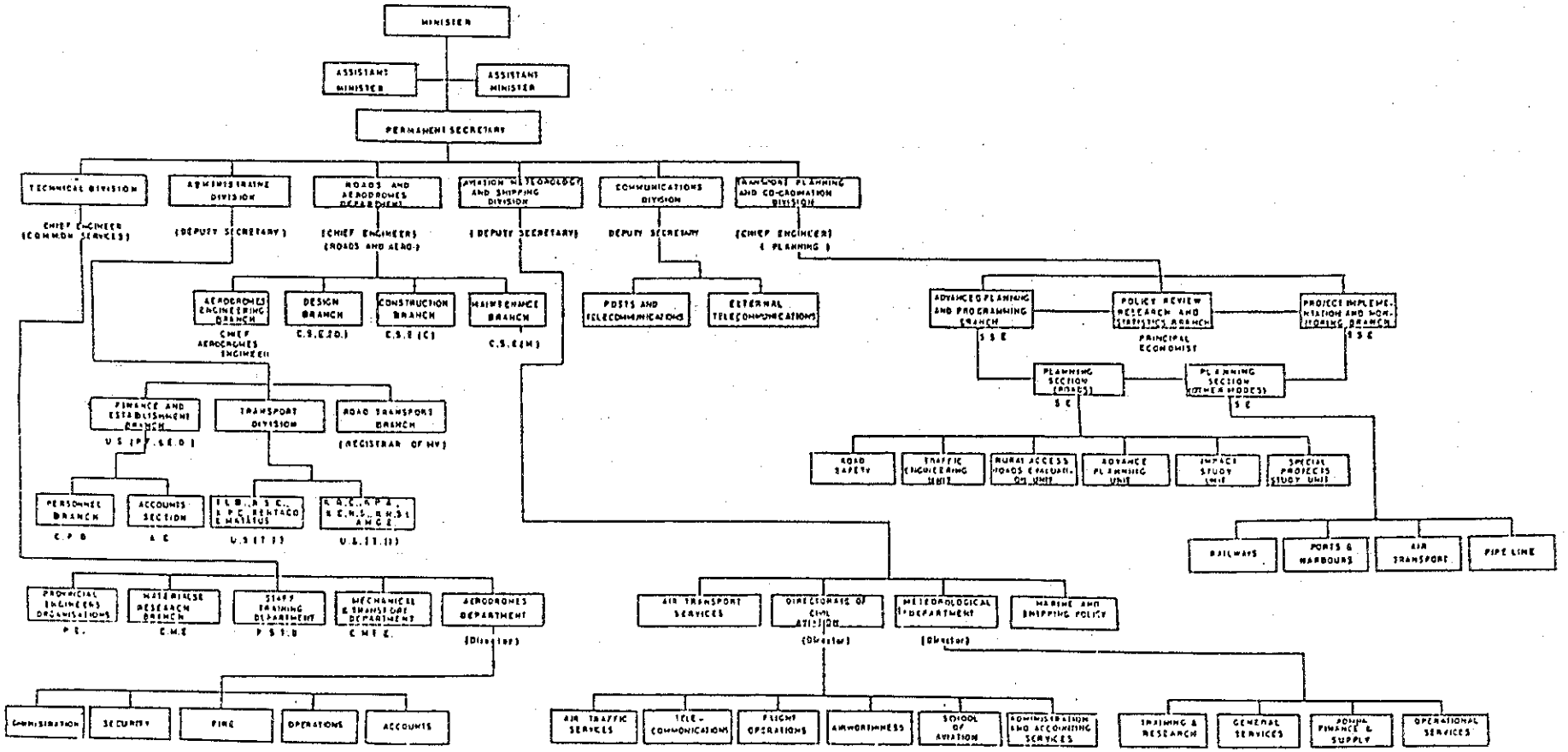
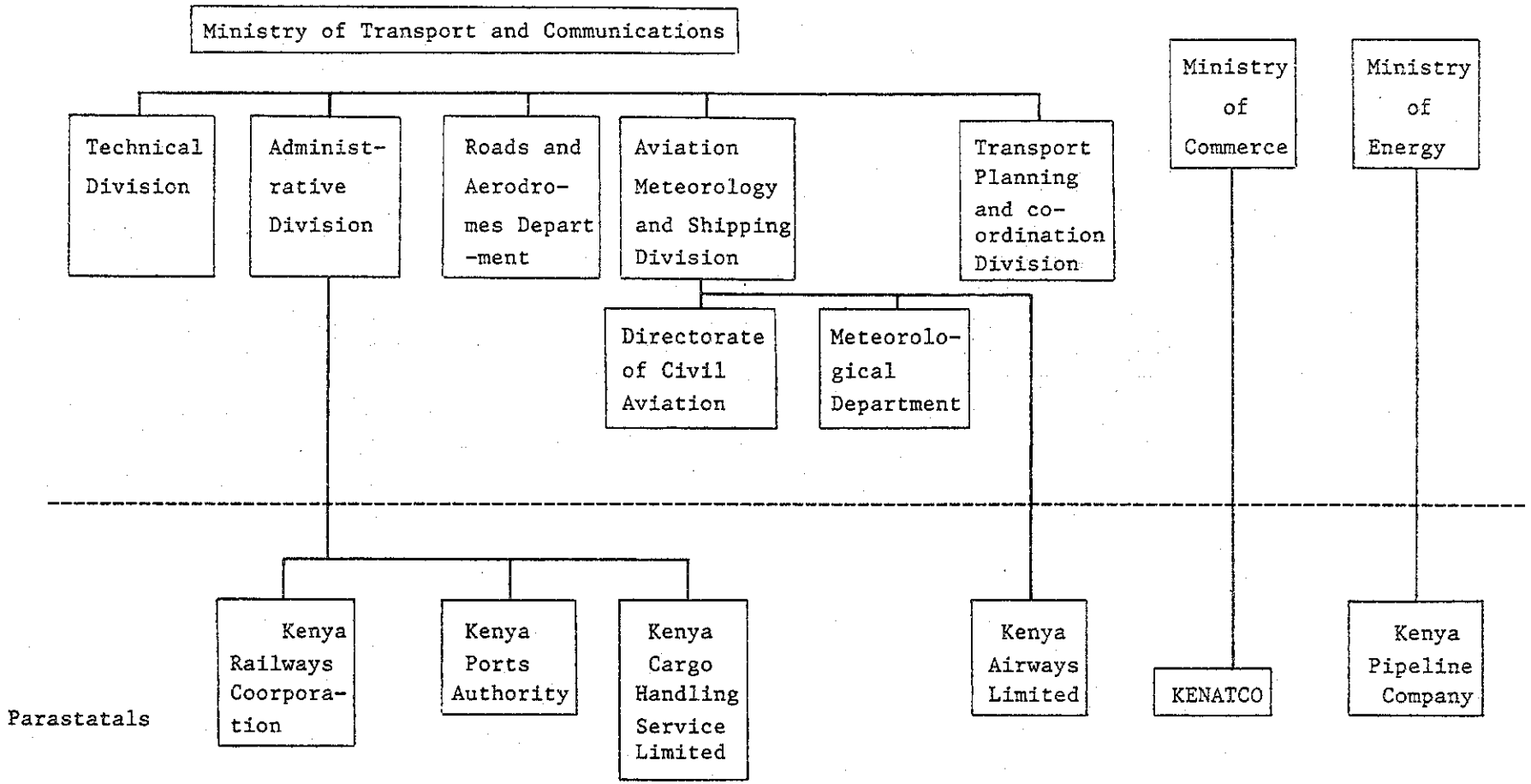


Fig. A-III-2

Organisation Chart of Principal Parastatals



Appendix IV

Project Formation

Fig. A-IV-1

Zoning outside Nairobi

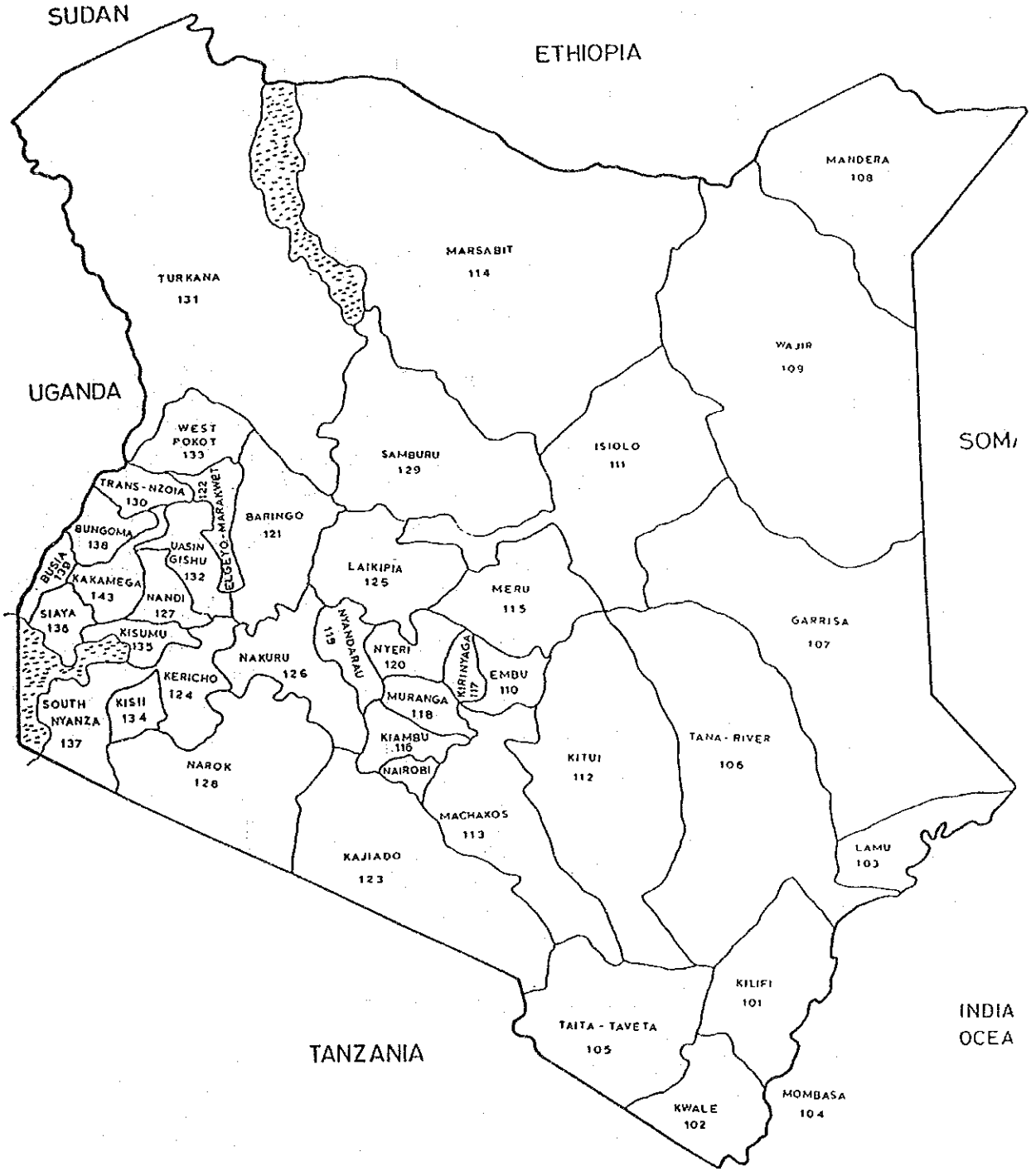


Fig. A-IV-2
Zoning in Nairobi

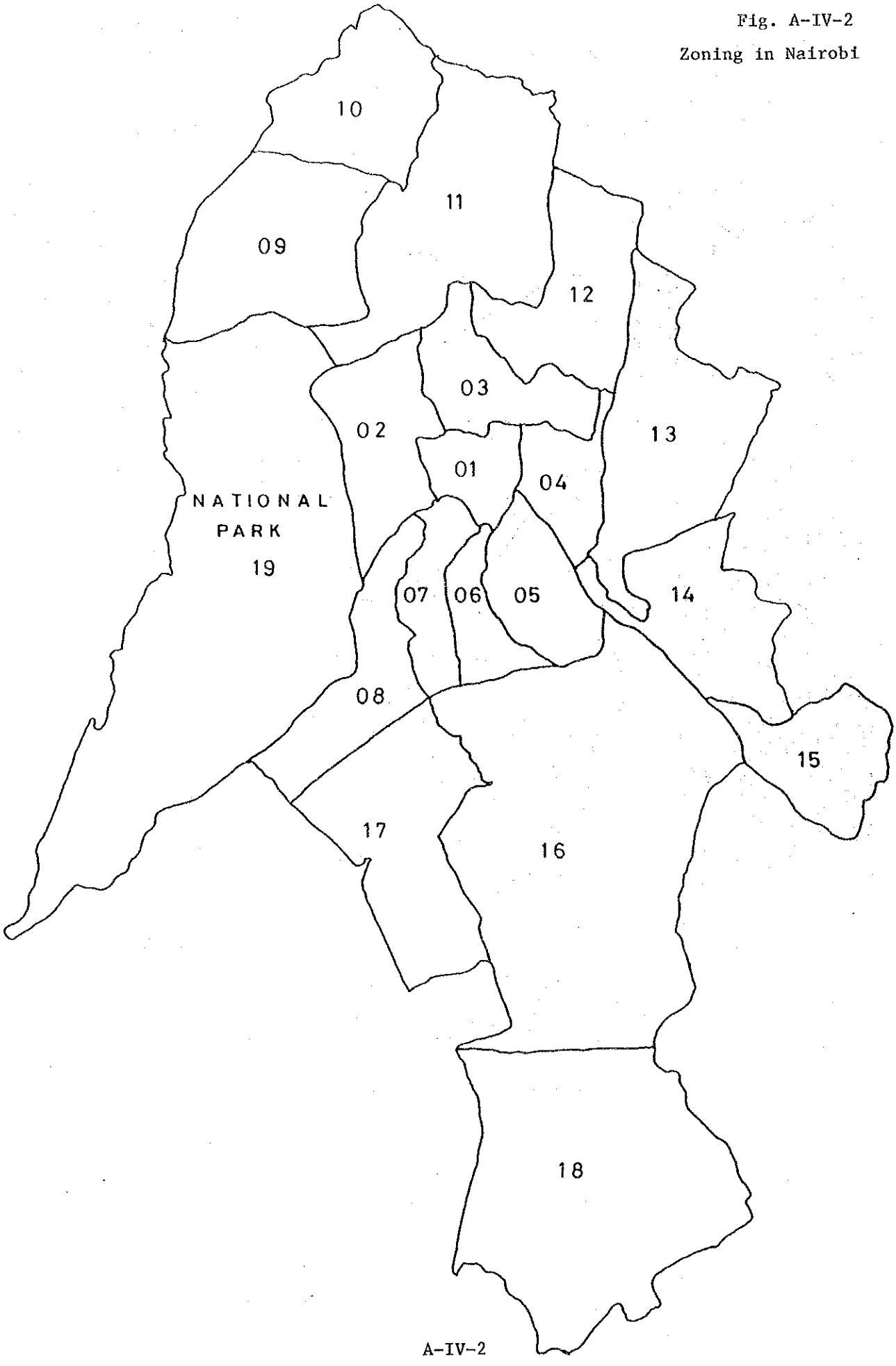


Table A-IV-1

Zone Correspondence between Nairobi City Planning and Nairobi Bypass Project

Nairobi Bypass Project	Nairobi City Planning
1	(1)
2	(10)· 0.38 (11)
3	(4), (6)
4	(3)
5	(2), (7)
6	(8)
7	(9)
8	(10)· 0.24
9	(12)· 0.53
10	(12)· 0.47
11	(15)
12	(5)
13	(13)
14	(14)
15	(17)
16	(16), (18)
17	(10)· 0.38, (20)
18	(19)
19	n.a.
n.a.	(20)

Table A-IV-2

Target Growth Rates by Sector

GDP at factor cost,% per a.n.

Item	1984-1988	1988-2000	1984-2000
Non-monetary GDP	3.5	3.5	3.5
Agriculture	4.2	5.3	5.0
Manufacturing	6.5	7.5	7.2
Trade	5.0	5.5	5.4
Government Services	3.7	5.4	5.0
Other Sectors	5.2	6.7	6.3
GDP at factor cost	4.8	5.9	5.6
Population	3.8	3.7	3.7
GDP per capita	1.0	2.1	1.8

Source: Economic Management for Renewed Growth, 1986

Table A-IV-3

Irrigation Potential Area and

Proposed Implementation Scheme

Area	Irrigation Scale (ha)	Proposed Implementation Schedule
Athi River Basin		
Kibwezi	13,200	Phase I 87/88-90/91
		Phase II 91/92-93/94
Taita/Taveta	3,780	84/85-91/92
Muka/Kukuu	500	n.a
Sabaki	15,000	as irrigation
		potential area
Thanantu Valley	6,500	Phase 1 82/83-91/92
		Phase 11 n.a
Rubingazi	3,600	82/83-91/92
Tana River Basin		
Bura West	6,700	phase I
	6,000	phase II
Lower Tana	10,000	Phase 82/83-92/83
	6,800	Phase 11 n.a
		as irrigation
Baringo	2,391	potential area
Kerio Valley		
Elgeyo Markwet	2,750	- do -
West Pokot	2,485	- do -
Turkana	11,510	- do -
Nzoia	65,000	- do -
Yala	15,000	- do -
Sondu/Kiriu/Kibos	60,000	- do -
Victroria Lake Basi		
Kuja/Migori	25,000	- do -
Mara	20,000	- do -
Other	15,000	- do -

Source: " Forward Planning 1982 - 1992", T & ARDA
" General Development Plan for the Kerio Valley Basin", KVDA.
" Five Year Development Plan 1983 - 1988", LBDA

Table A-IV-4

Population at Residence by Zone in Nairobi
at Present, 1986 and Future, 2000 with Growth Rates

Unit: 1,000 Person

Zone No.	1986	2000	Growth Rate (1986 - 2000),%
1	52	54	0.3
2	100	132	2.0
3	55	61	0.7
4	57	63	0.7
5	234	247	0.4
6	171	189	0.7
7	10	10	0
8	22	34	3.2
9	9	29	8.7
10	8	26	8.4
11	143	225	5.3
12	26	39	2.9
13	11	29	7.2
14	52	81	3.2
15	32	65	5.2
16	182	387	5.5
17	36	55	3.1
18 [1]	-	108	n.a
19 [2]	-	-	-
n.a [3]	-	396	n.a
Total	1,200	2,300	4.7

1 : Outside Nairobi City Boundary at present with Zone No., possible to be inside Nairobi.

2: National Park

3: Outside Nairobi at present, possible to be inside Nairobi.

Table A-IV-5

Population at Residence and
Employment at Job Site by Zone at 2000

Unit: 1,000 Person

Zone No.	Population at Residence	Employment at Job Site
1	55	262
2	147	37
3	64	42
4	66	43
5	253	55
6	197	11
7	10	156
8	41	18
9	34	2
10	31	1
11	352	26
12	46	2
13	35	3
14	97	6
15	78	11
16	462	125
17	58	46
18	129	16
19	n.a.	n.a.
n.a.	473	n.a.
Total	2,628	862

$P2006 = P2000(1+0.03)^6$ adopted the rate till 2000 in case the Zonal growth rate being less than 3%

$E2006 = E2000(1+0.03)^6$ adopted 1% for Zone 1

Table A-IV-6

Employment Population at Job Site by Zone in Nairobi at Present, 1986 and 2000 with Growth Rates

Unit: 1,000 Person

Zone No.	1986	2000	Growth Rate (1986 - 2000) %
1	197,106	247,025	1.6
2	10,457	30,714	8
3	11,888	34,917	8
4	9,394	35,674	10
5	12,094	45,927	10
6	3,197	9,390	8
7	75,267	130,338	4
8	1,154	14,816	20
9	453	1,720	10
10	248	942	10
11	5,833	22,151	10
12	1,050	1,818	4
13	1,559	2,700	4
14	3,128	5,417	4
15	2,496	9,479	10
16	8,172	104,922	20
17	3,025	38,839	20
18	3,479	13,211	10
19	0	0	0
Total	350,000	700,000	1.5

Table A-IV-7

Population at Residence by Zone except Nairobi at Present, 1986 and Future, 2000 and 2006

Unit: 1,000 Person

Zone No.	1986	2000	2006
20	10	20	27
21	10	20	27
22	45	80	97
23	45	80	97
24	45	80	97
25	45	80	97
26	45	80	97
101	590	1,168	1,395
102	395	782	934
103	58	114	136
104	467	924	1,103
105	202	399	476
106	126	249	297
107	177	350	418
108	145	287	343
109	191	378	451
110	361	528	630
111	60	88	105
112	636	929	1,110
113	1,391	2,032	2,427
114	132	193	223
115	1,127	1,647	1,968
116	705	1,030	1,231
117	399	584	697
118	887	1,296	1,548
119	320	468	559
120	666	973	1,163
121	204	337	402
123	184	303	362
124	867	1,431	1,709
125	184	304	349

Table A-IV-7 (Cont'd)

Population at Residence by Zone except Nairobi at Present, 1986 and Future, 2000 and 2006

Unit: 1,000 Person

Zone No.	1986	2000	2006
126	716	1,181	1,410
127	410	677	808
128	288	475	567
129	105	173	207
130	356	587	701
131	196	323	386
132	412	680	812
133	217	358	427
134	1,181	2,043	2,439
135	661	1,143	1,365
136	650	1,124	1,342
137	1,110	1,920	2,292
138	690	1,193	1,424
139	408	706	841
140	1,402	2,425	2,895
141	n.a.	n.a.	n.a.
Total	19,800	32,700	39,046

Table A-IV-8

Employment Population at Job Site by Zone

except Nairobi at Present, 1986 and Future 2000 & 20006

Unit: 1,000 Person

Zone No.	1986	2000	2006
20	4	9	11
21	4	9	11
22	18	31	37
23	18	31	37
24	18	31	37
25	18	31	37
26	18	31	37
101	231	474	566
102	155	318	380
103	23	47	56
104	183	376	449
105	79	161	192
106	49	100	119
107	69	141	168
108	57	117	140
109	75	154	184
110	141	203	243
111	24	34	42
112	249	359	428
113	545	783	935
114	52	75	91
115	442	632	756
116	276	396	473
117	156	224	267
118	348	499	596
119	125	180	217
120	261	375	448
121	109	187	223
122	80	137	164
123	72	123	147

Table A-IV-8 (Cont'd)

Employment Population at job Site by Zone except Nairobi at Present, 1986 and Future 2000 & 2006

Unit: 1,000 Person

Zone No.	1986	2000	2006
124	340	582	695
125	72	123	147
126	281	482	576
127	161	276	330
128	113	194	232
129	41	70	84
130	140	240	287
131	77	132	158
132	161	276	330
133	85	146	174
134	463	1,048	1,251
135	259	465	555
136	255	458	547
137	435	781	933
138	270	485	579
139	160	287	343
140	549	984	1,175
141	n.a.	n.a.	n.a.
Total	7,760	13,300	15,881

Table A-IV-9

Projection of Manufacturing Sector Production

Commodity	1981 (K 000)	Average Annual Growth Rate	1988 (K 000)	Average Annual Growth Rate	1983 (K 000)	Average Annual Growth Rate	2000 (K 000)
Food Beverages	110,198	4.3%	147,967	3.6%	176,589	2.9%	215,710
Textiles Clay and Glass Ilon Matallic Material	37,008	5.0%	52,074	6.0%	69,687	6.0%	104,783
Paper	16,844	10.0%	32,824	5.0%	41,893	5.0%	58,948
Clothing Wood Furniture	21,079	4.2%	28,114	4.9%	35,711	5.0%	50,249
Fertilizer	-	-	4,650	3.6%	5,549	2.9%	6,778
Steel	-	-	-	-	15,000	-	30,000
Petroleum	25,082	2.2%	29,209	2.6%	33,209	3.0%	40,000
Other	128,909	3.5%	163,575	7.5%	253,822	8.4%	415,106
Total	339,120	4.4%	458,413	6.0%	613,460	6.0%	922,417

1: Estimated Gross Products

Source: National Transport Plan, 1984, JICA

Table A - IV - 10
Projection of Kenya's Economy

Unit Million K£, 1981

Calender Year	GDP at m.p	GDP at Factor Cost	Distribution by Sectors			Capital Formation	Source of Investiments	
			Agri-Culture	Manufac-turing	Other Sectors		Domestic Savings	Foreign Funds
1981	3,039	2,597	792	342	1,463	858.8	511,9	346.9
1984	3,355	2,886	899	396	1,591	739.0	494.5	244.5
1985	3,05	3,018	937	416	1,665	813.4	520.0	293.4
1986	3,683	3,169	978	436	1,755	883.9	547.8	336.1
1987	3,864	3,335	1,020	456	1,857	939.2	577.8	361.4
1988	4,095	3,523	1,063	481	1,979	1,003.3	610.9	382.4
1989	4,266	3,695	1,101	510	2,084	1,034.0	645.8	388.2
1990	4,506	3,876	1,141	540	2,195	1,063.8	682.5	381.3
1991	4,727	4,067	1,182	573	2,312	1,095.1	721.9	373.2
1992	4,959	4,266	1,225	607	2,434	1,127.0	763.9	363.1
1993	5,201	4,475	1,269	644	2,562	1,181.9	808.7	373.2
1994	5,457	4,695	1,306	682	2,707	1,215.4	856.6	358.8
1995	5,729	4,929	1,344	723	2,862	1,301.0	907.5	393.5
1996	6,015	5,175	1,383	767	3,025	1,366.1	962.4	403.7
1997	6,316	5,435	1,423	813	3,199	1,434.3	1,020.1	414.2
1998	6,632	5,706	1,464	861	3,381	1,506.0	1,081.6	424.1
1999	6,963	5,991	1,506	913	3,572	1,581.2	1,146.8	434.1
2000	7,312	6,291	1,550	968	3,773	1,660.2	1,215.9	444.3

Source: National Transport Plan, Japan International Coorporation Agency, 1984.

Table A - IV - 11

Sub-divisional Names in Each Zone

Zone No.	Name of Road, Street and Avenue	Names of Estate, Factory, Building etc.
01.	Aboretum Rd, Uhuru H.w, State House Rd, Dorobo Rd, Mamlaka Rd, Nyerere Rd, Milimani Rd, Valley Rd, Kenyatta Ave., Bishop Rd, Ngong Rd, Haille Sallaise Ave, Hospital Rd, Ragati Rd, Chyulu Rd, Mara Rd, Elgon Rd. Kiambere Rd, Uasara Rd, Tom Mboya St., Moi Ave, Muindi Mbingu St., Koinange St., Parliament Rd, Harambee Ave.	Muthurwa, Railway Yd, City Square.
02	Ngong Rd, Forest, Karanja Rd, Kibera Rd, Mucai Drive Rd, Kabaranet Lane, Masava Rd, Kinoo Rd, Langata Rd, Mbagathi Rd, Mucia Drive, Kibera Rd, Karanja Rd.	Otiende. Kibera Drive Inn, Kibera, Woodly, Jamhuri, Kibera, Otinde
03	Muranga Rd, Kilungy Rd, Elgeyo Marakwet Rd, Oleodume Rd, Diani Rd, Korosho Rd, Hendred Rd, Kunde Rd, Makindi Rd, Kingara Rd. Gitanga Rd, Ginge Rd, Argwing Kodhek Rd. Kindaruma Rd,	Kenton College, Kileleshwa Police Station, St. George's Primary School, Kilimani Police Station, Parkland Kilimani, Upper Hill,

Table A - IV - 11 (Cont'd)

Sub-divisional Names in Each Zone

Zone No.	Name of Road, Street and Avenue	Name of Estate, Factory, Buildings etc
	Padmore Rd, Kileleshwa Ring Rd, Githunguru Rd, Kieni Rd, Olkejuado Rd, Mandera Rd, Siaya Rd, Woodland Rd, Kangundo Rd.	Thompson, Woodley, Kileleshwa
04	Ngara Rd, Forest Rd, Chiromo Rd, Muranga Rd, Forest Rd, Limuru Rd, Kipande Rd, Waiyaki Rd, Wanga Pala Rd, Iregi Rd, Githuri Rd, Mwambao Rd, Ngao Rd, Suswa Rd, Ita Rd, Butabute Rd, Masari Rd, Shivachi Rd, Mpaka Rd, Ring Rd, Ojijo Rd, Muthithi Rd, Westlands Rd, Mogotio Rd, Mukinduri Rd, Tarifa Rd, Muhugu Rd, Laikipia Rd, Thika Rd, Kiambu Rd, Old Kiambu Rd, Mau Park Rd. Serengeti Ave, Muthaiga Rd, Mutundu Rd, Tchui Rd, Naivasha Ave., Sergoit Lane, Wambui Rd, Twiga Rd, Karura Ave.,	National, Museum, Hockey Stadium, Chiromo, Westlands, Highridge, City Park, Muthaiga Golf Club, Muthaiga Police Station, Muthaiga Primary Sch., War War Memorial, Lucania Day Nursery Sch. Gertrudes Garden Children Hospital, Karura Health Centre.

Table A - IV - 11 (Cont'd)

Sub-divisional Names in Each Zone

Zone No.	Name of Road, Street and Avenue	Name of Estate, Factory Buildings etc.
05	Ngara Rd, Race Course Rd, Lumbwa St, Kianyanjui St. Waruingi St, Marimbi St, Meru Rd, Galole Rd, Second st, Third St, Fourth St, Fifth St, Sixth St, Seventh St. Eighth St, Ninth St, Tenth St. Eleventh St, Wood St, Twelveth St, Thirteenth Fourteenth St, SGT Kahende St, SGT Major Kamugombe St, Mungai St, Major Kinyanjui St, Muranga Rd, Huruma Rd, Nduro-Runo, Outer Ring Rd, Juja Rd, Thika Rd,	Bondeni, Gorofani, Eastleign, Kariokor, Starehe, Ziwani, Pumwani Sec. School, Pumwani Maternity Hosp, Christian Industrial Training Centre, Starehe Boys Centre, Eastleigh Primary Sch, Answorth St, Primary Sch, St. John Community Centre, Mathari Mental Hosp. Mathari Police Depot, Drive In Cinema, Police Traffic Operation Headquarters, Mathari Primary Sch, E.A.P and L Training Sch, Utalii College and Hotel, Huruma, New Mathare
06		Mumias Rd, Laiboni Rd, Rubai Rd, Outering Rd, Buru-Buru. Buru Buru Primary Sch.

Table A - IV - 11 (cont'd)

Sub-divisional Names in Each Zone

Zone No.	Name of Road, Street and Avenue	Name of Estate, Factory, Buildings etc.
07	Workshop Rd, Bunyala Rd, Commercial St, Lusaka Rd, Enterprises Rd, Factory St, AddiS Ababa Rd, Bamburi Rd, Changamwe Rd, Dakar Rd, Funzi Rd, Gilgil Rd, Homabat Rd, Isiolo Rd, Jilore Rd, Kitui Rd, Kampala Rd, Likoni Road, Lunga Lunga Rd, Olkarau Rd, Patel Rd, Tanga rd, Wundanyi Rd, Nanyuki Rd,	Mines and Geological Dept, Cement Works, Railway Yd, P/T. Nairobi, South Stores, Mobil Kenya Ltd, Total Nairobi Dep, Esso Nairobi Dep. Shell Filling Plant, Agip Nairobi Dep, Railway Mech. Eng. Dep, Vehicle Inspection, National Youth Service, Nairobi Holdings, Railway Quaters
08	Mombasa Rd.	Villa Franca Farm, Motor Racing/ Club, Firestone Tyre Factory.
09	Ndege Rd, Langata Park Rd, Bongani Rd, Maasai Lane, Kibo Lane , Masai Rd, Lamwia Rd, Legion Park Rd, Langata South Rd,	Haddy, Petrol Station, Petrol Station, Dominican Nuns, St. Thomas A.Q. Seminary

Table A - IV - II (Cont'd)

Sub-divisional Names in Each Zone

Zone No.	Name of Road, Street and Avenue	Name of Estate, Factory, Builings etc.
10	Marua Lane, Forest Lane, Cut Line	
11	Ngong Rd, Naivasha Rd, Wanjee Rd, Kavandin Rd, Macharia Rd, Kawangare Rd, Muthiora Rd, Kiarie Muchai Rd, Hinga Rd.	Kabeter Veterinary Sch, Kavindin Market, Dagoreti Market, Kawangware Market.
12	Mzima Spring Rd, Njumbi Rd, Isaak Gathanju Rd, Ndoto Rd, Mageta Rd, Othaya Rd, Maji Mazuri Rd, Mbabane Rd, St. Austins Rd, Muthangari Rd, Owashika Rd, Mugumo Rd, Munyani Rd, Kolloh Rd, Gedi Rd.	Lavington, Bernhard, Spring Valley, City, Kianda College, Salvation Army, Kinder Garden, Strethmore College, St. Mary's School, Apostolic Delegation, Muthangari Police Station, Mts. Carmel Covent, Lavington Primary School
13	Parklands Rd, Kitisuru Rd, Redhill Rd, Taylors Rd, Marlborough Rd, Lower Kabete Rd, Peponi Rd, Waiyaki Rd, Wangapala Rd, Ring Rd, Eldamaving Rd, Ngao Rd, Suswa Rd, Mpaka Rd, Masari Rd, Shivach Rd, Spring Valley Rd, Shanzu Rd, Kyuna Rd,	Highridge, Mathare, K/I/A, Agriculture Dep, Verterinary Coffee Fact. Kabete, Spring Valley, Kihingo,Clos Burn, Loresho, Parklands, St. Benoist, Barton, Kyuna, Kitisuru

Table A - IV - 11 (Cont'd)

Sub-divisional Names in Each Zone

Zone No.	Name of Road, Street and Avenue	Name of Estate, Factory, Buildings etc.
14	Kiambu Rd, Wambuthie Rd, Kamiti Rd.	Utalii Staff Quarters, Wandera Club.
15	Kahawa Rd, Outering Rd, Kamiti Rd, Thika Rd	Kenyatta College, M/O/W Camp, Mathari Mental Hosp., Kasarani Disp, Prison, E.A.Enterprise Ltd, Concrete Pipes Ltd, Liala, Aintree, Kigwa, Ridgeway, Marurui
16	Thika Rd, Outering Rd, Baba Dogo Rd, Komarock Rd. Lolwe Rd, Garissa Rd, Jinja Rd, Baringo Rd, Krapf Rd, Njiwa Rd, Ngiri Rd, Mwea Rd, Maseno Rd.	Ruaraka P. Station, Admin. Centre, Primary School, Dawa Pharmaceuticals, Kenya Breweries Ltd, Nairobi Airport, Doonholm Kayole, Riverside, Kahu, Njiru
17	Taxi-Way, Run-Way	Embakasi Village, Doonholm, Embakasi Airport, Fire Fighting Training, Adm. Police Train. School, Chief's Camp/Sewage Farm.

Table A - IV - 11 (Cont'd)

Sub-divisional Names in Each Zone

Zone No.	Name of Road, Street and Avenue	Name of Estate, Factory Buildings etc.
18	Outering Rd, Thika Rd, Baba Dogo Rd, Kamunde Rd.	Dandora, Ruaraka, Kariobangi, Kamuru, Ruaraka Police Station, Dawa Pharmaceuticals, Kenya Breweries

Remark:

St.,	Street
Rd.,	Road
Ave.,	Avenue
H.W.,	Highway
Yd.,	Yard
Sch.,	School

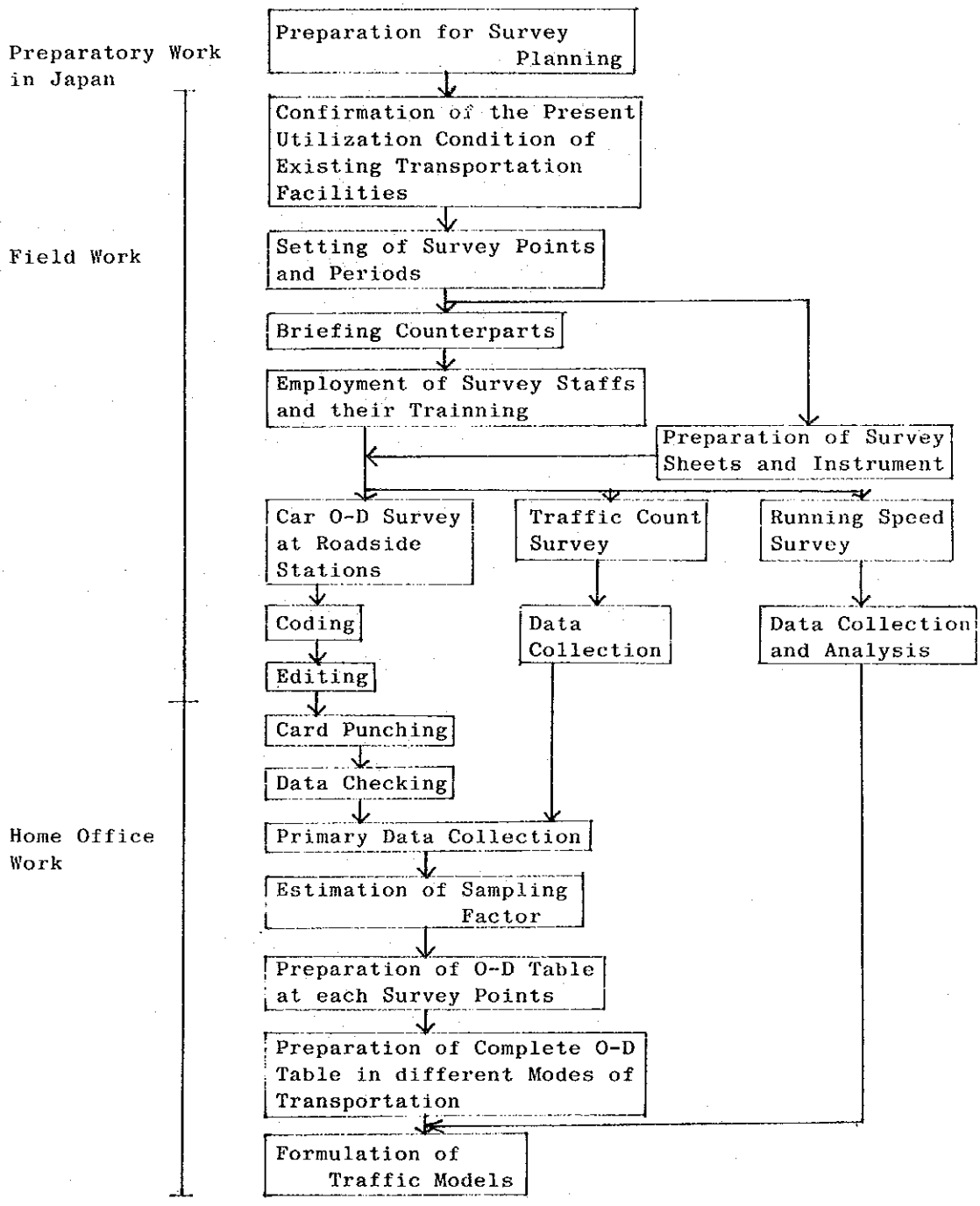
Appendix V.

Present Traffic Survey

Appendix V.1 Collection and analysis of traffic survey data

The flow-chart of a traffic survey and the analysis is illustrated

(1) Flow Chart of Collection and Analysis of Traffic Survey Data



(2) Traffic Count Survey

Generally speaking, a traffic count survey aims at estimating direction, hourly and vehicle type-wise volumes of traffic, but the following four surveys are particularly proposed under this project:

a) One-Week Traffic Count Survey

It will be conducted to investigate typical patterns of daily traffic variation.

b) O-D Survey at Roadside Stations

It will be conducted to estimate the total traffic volumes, as the O-D survey is of sampling type.

c) Traffic Volume Survey

Volume counts are additionally made at necessary counting locations to complete the O-D survey.

d) Traffic Volume Survey at Intersections

It will be conducted to obtain volume data in different directions of traffic movements at major intersections of central business districts.

(3) Survey Sites

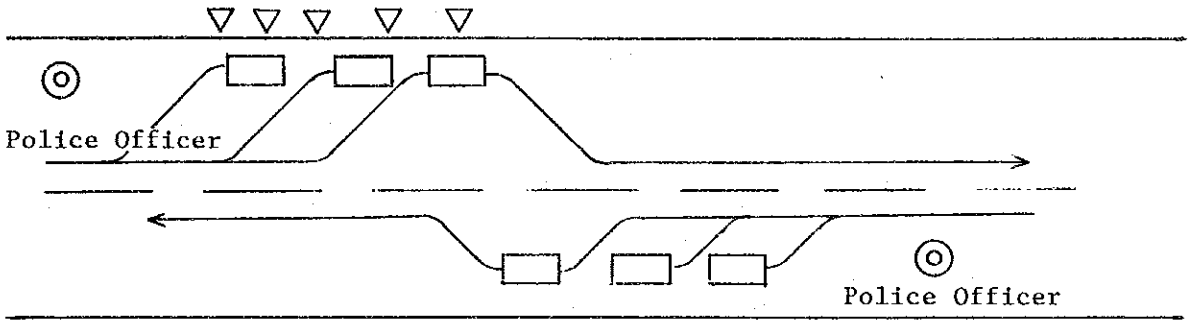
Site No.	Site Location	Type of Survey	No.of Date
1	At the Agakhan High School (104)	O.D Survey and 24 hours counts	1 day
2.	At Ruaka Trading Centre (C62) (A2)	O.D Survey and Traffic Counts	- do -
3.	Thika Road at Safari Park Hotel (A2)	O.D Survey and Traffic Counts	- do -
4.	Towards Airport on C59 at the junction of C98 and C59 (C59)	O.D Survey and Traffic Counts	- do -
5.	Lusaka/Uhuru Highway Round about at Lusaka Road near the Roundabout	O.D Survey and Traffic Counts	- do -
6.	Mombasa Road Drive in Cinema	O.D Survey and Traffic Counts	- do -
7.	At Wilson Airport on (C58)	O.D Survey and Traffic Counts	- do -
8.	On Ngong Road at Kenya Science Teachers College (C61)	O.D Survey and Traffic Counts	- do -
9.	Mombasa Road and at Resort Clubs Hotel (A104)	24 hours traffic Counts only	7 days
10.	Ongata Rongai Road at the junction of C58 and C63 (C58)	O.D. Survey and Traffic Counts	1 day
11.	Ngong Road C60 between Windy Ridge Road and Tree Lane	O.D Survey and Traffic Counts	1 day
12.	Naivasha Road at the former Zambezi Motel (A104)	O.D. Survey and Traffic Counts	- do -
13.	Kiambu Road C64 at Muthaiga Golf Club (C64)	Traffic Counts Only	- do -
14.	Dagoretti Road C63 at the Bus stop on Karen Health Centre	Traffic Counts Only	- do -

Site No.	Site Location	Type of Survey	No of Date
15.	Koma Rock Road C98 (C98/ C59 junct.) at Kayole Estate Sign Board	O.D Survey and Traffic Counts	- do -
16.	At the Esso Petrol Station (C63) Langata Road C63 after C58 Junction.	Traffic Counts Only	- do -
17.	At the Uhuru-Kenyatta Roundabout	Traffic Counts Only	- do -
18.	At Kikuyu Junction C63/ A104	Traffic Counts Only	- do -

(4) Arrangment of Traffic Survey Staffs

a) Roadside O-D Survey Staff

(2 parties / 10 persons)



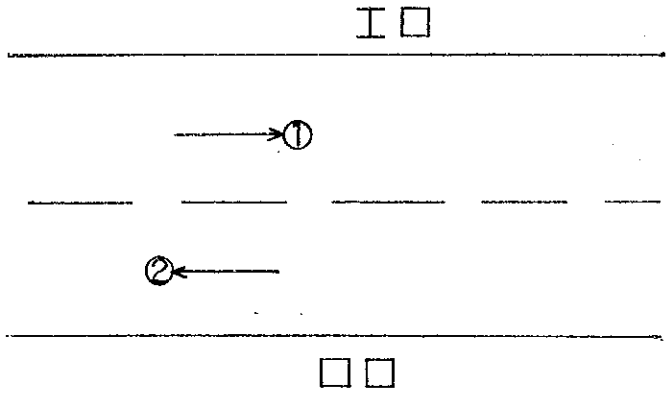
(2 parties / 10 persons)

One party consists of five members of staff. All five members of staff are engaged in the interview during the peak hours, while one of these takes a rest during the off peak hours.

Selection of sample cars is made by police officers to make direct inquiry of car drivers. Two police officers at each one O-D survey points are required all the time during the O-D survey.

b) Traffic Count Staffs

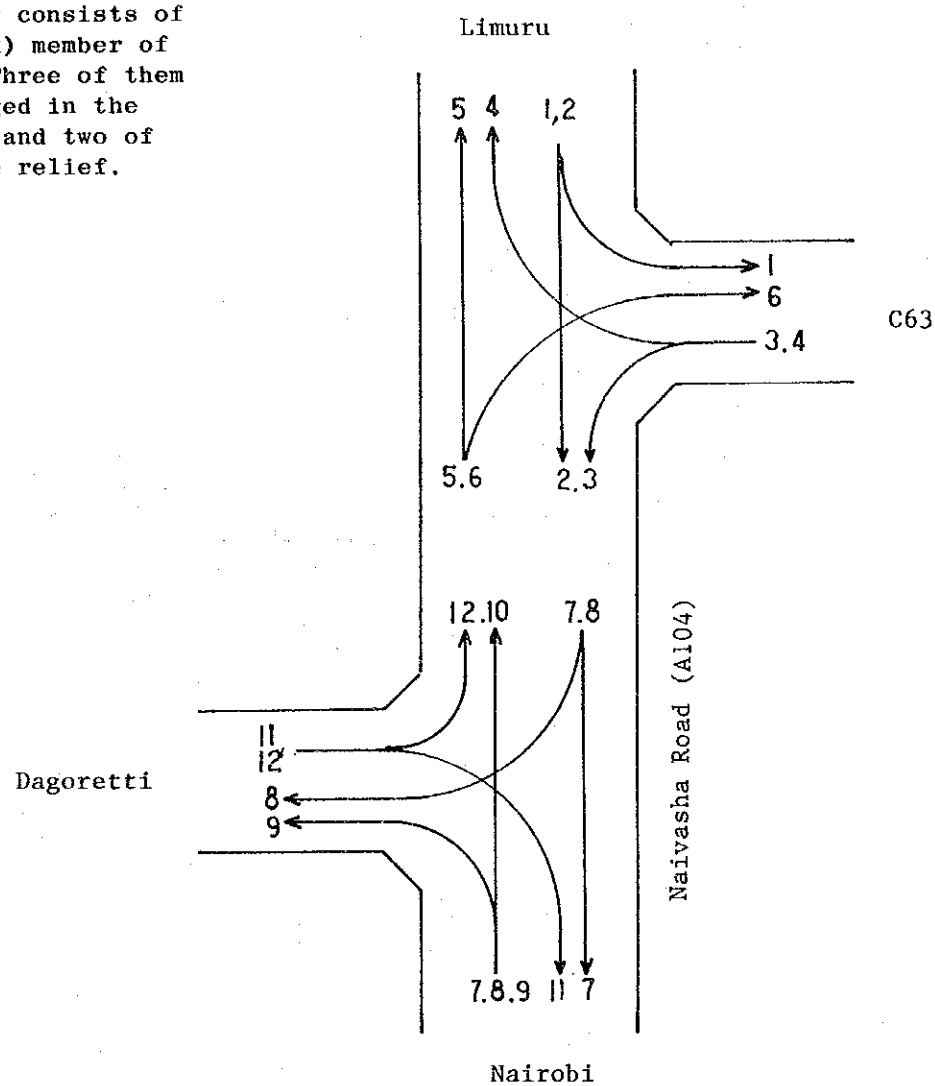
(1 parties / 2 persons)



One party consists of Two members of staff. One of them are engaged in the counting and one of these is relief.

c) Intersection Traffic Counting Staffs 2/12/86

One party consists of five (six) member of staff. Three of them are engaged in the counting and two of these are relief.



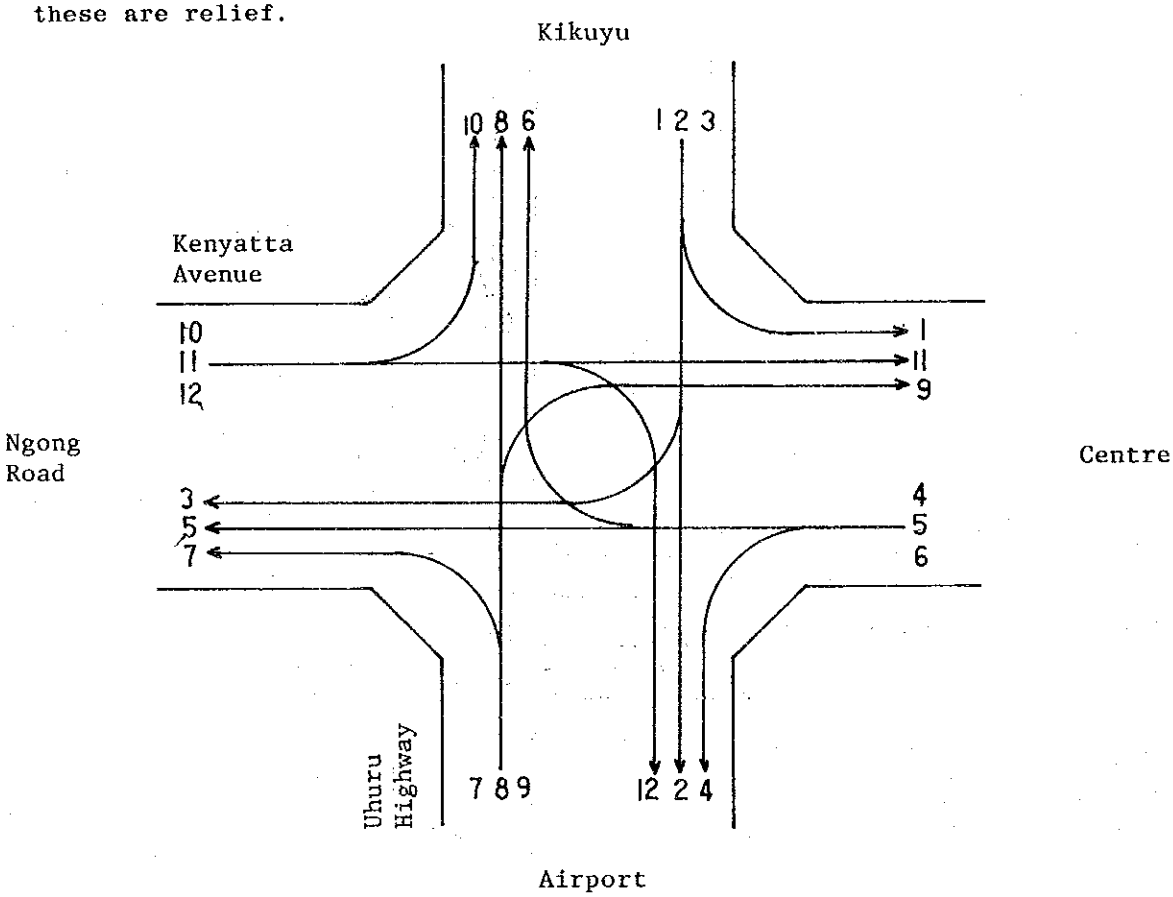
Team	Direction	Team Names
A (6)	1 2 3	Mr. Ochieng, Mr. Okudo Mr. Mbari, Mr. Onyango Mr. Mugo, Mr.Njoroge
B (5)	4 5 6	Mr. Kuria, Mr. Alouch Mr. Otieno, Mr. Gichubi Mr. Mugo
C (6)	7 8 9	Mr. Muga, Mr. Gichuru Mr. Muriu, Mr. Juma Mr. Musyoki, Mr. Kamuhu
D (5)	10 11 12	Mr. Mayabi, Mr. Wanyeki Mr. Katiku, Miss Muthondu Miss Kamuhu

Type of Vehicle

1. Car, Taxi
2. Light goods (Include Mini-Bus, Matatu)
3. Medium goods
4. Heavy goods
5. Buses

d) Intersection Traffic Count Staffs 3/12/86

One party consists of five (six) member of staff. Three of them are engaged in the conting and two of these are relief.



Team	Direction	Team Names	Type of Vehicle
A (6)	1 2 3	Mr. Ochieng, Mr. Okudo Mr. Mbari, Mr. Onyango Mr. Mugo, Mr. Njoroge	1. Car, Taxi
B (5)	4 5 6	Mr. Kuria, Mr. Alouch Mr. Otieno, Mr. Gichubi Mr. Mugo	2. Light goods (Include Mini-Bus, Matatu)
C (6)	7 8 9	Mr. Muga, Mr. Gichuru Mr. Muriu, Mr. Juma Mr. Musyoki, Mr. Kamuhu	3. Medium goods
D (5)	10 11 12	Mr. Mayabi, Mr. Wanyeki Mr. Katiku, Miss Muthondu Miss Kamuhu	4. Heavy goods
			5. Buses

Table A-V-1(1)

Assignment Schedule and Location by Type of Survey

Location Number of Survey Sites

Type of Survey Direction	Team Name	Number of Members	November																	December						
			14	(15)	(16)	17	18	19	20	21	(22)	(23)	24	25	26	27	28	(29)	(30)	1	2	3	4	5	(6)	(7)
O-D Survey (Up)	A	5	7	-	-	5	8	6	1	3	-	-	2	4	9	12	11	-	-	10	-	-	-	-	-	-
	B	5	7	-	-	5	8	6	1	3	-	-	2	4	9	12	11	-	-	10	-	-	-	-	-	-
O-D Survey (Down)	C	5	7	-	-	5	8	6	1	3	-	-	2	4	9	12	11	-	-	10	-	-	-	-	-	-
	D	5	7	-	-	5	8	6	1	3	-	-	2	4	9	12	11	-	-	10	-	-	-	-	-	-
Traffic Counting at the O-D Point (Up)	E	2	7	-	-	5	8	6	1	3	-	-	2	4	9	12	11	-	-	10	-	-	-	-	-	-
			7	-	-	5	8	6	1	3	-	-	2	4	9	12	11	-	-	10	-	-	-	-	-	-
Traffic Counting at the O-D point (Down)	F	2	7	-	-	5	8	6	1	3	-	-	2	4	9	12	11	-	-	10	-	-	-	-	-	-
			7	-	-	5	-	6	1	3	-	-	2	4	9	12	11	-	-	10	-	-	-	-	-	-
Other Traffic Counting (Up)	G	2	1	-	-	1	1	1	1	-	1	1	13	15	9	-	14	-	-	16	-	-	-	-	-	-
			1	-	-	1	1	1	1	-	1	1	13	15	9	-	14	-	-	16	-	-	-	-	-	-
Other Traffic Counting (Down)	H	2	1	-	-	1	1	1	1	-	1	1	13	15	9	-	14	-	-	16	-	-	-	-	-	-
			1	-	-	1	1	1	1	-	1	1	13	15	9	-	14	-	-	16	-	-	-	-	-	-
Intersection Traffic Counting	M	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18	17	-	-	-	-
Coding	N	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
No. of Police, Officers			5	-	-	5	5	5	5	-	-	-	5	5	5	5	5	-	-	5	-	-	-	-	-	-

Table A-V-1 (2)

Standard Hourly Shift by Type of Survey
Excluding Intersection Counting

Type of Survey Direction	Team Name	Number of Team Member	6 -7	7 -8	8 -9	9 -10	10 -11	11 -12	12 -13	13 -14	14 -15	15 -16	16 -17	17 -18
OD Survey	A	5	–		–		–		–		–		–	–
(Up)	B	5		–		–		–		–		–		–
O-D Survey	C	5	–		–		–		–		–		–	–
(Down)	D	5		–		–		–		–		–		–
Traffic Counting at the O-D Piont (Up)	E	2	–		–		–		–		–		–	
				–		–		–		–		–		–
Ditto (Down)	F	2	–		–		–		–		–		–	
				–		–		–		–		–		–
Other Traffic Counting(Up)	G	2	–		–		–		–		–		–	
				–		–		–		–		–		–
Ditto (Down)	H	2	–		–		–		–		–		–	
				–		–		–		–		–		–

Table A - V - 1 (3)

Road Side O.D Questionnaire

Station No.	Sheet No.	Time of Interview	1 Type of vehicle		2 Origin	3 Destination
Date			1 Car, Taxi	5 Bus (nön KBS)	Where did the trip begin?	Where will this end?
Weather			2 Light Goods Vehicle			
Interviewer			3 Medium Goods Vehicles	6 Matatu	Street/Town District.	Street/Town District.
Inspector			4 Heavy Goods Vehicles			

4 Average	5 Mojor	6 Trip purpose	Representative passenger		9	Trucks	
			7 Age	8 Occupation	No. of	10	11
Travel Time or time inter Spend to Spend	Points on route Name of route or Municipality	1 Go to office/working place 2 Go to school 3 Come back to home 4 Business 5 Others		1 Employer 2 Employer 3 Student 4 House Keeper	Passenger Aboard	Loading Capacity (tons)	Type of Commo - dities. Carried

1 Type	2 Origin Street/Town District.	3 Destination Street/Town District.	4 Travel Time	5 Major Points	6 Trip Purpose	7 Age	8 Occu.	9 No. of pass	10 Capacity	11 Weight.

Table A-V-2-1

Average Annual Daily Traffic on the Survey Stations

Station No.	No. 1									
Date, Time	Sunday to Saturday 14-11-86 to 23-11-86		Daily/day Time Ratio		Weekly Variation Ratio		Seasonal Correction Factor	Average Annual Daily Traffic (AADT)		
Road/Inter-section	At Aga Khan A104 High School									
Direction	Limuru - NRB	NRB - Limuru	-do-	-do-	-do-	-do-	-	Limuru - NRB	NRB - Limuru	Both Direction
Type of Vehicle										
1. Car, Taxi	3541	3241	1.21	1.33	1	1	1.07	4585	4669	9254
2. Light Good Vehicle	1307	1194	1.26	1.21	1	1	-do-	1762	1546	3308
3. Medium Vehicle	185	208	1.29	1.20	1	1	-do-	255	267	522
4. Heavy Goods Vehicle	155	164	1.39	1.46	1	1	-do-	231	256	487
5. Bus	280	280	1.51	1.36	1	1	-do-	452	407	859
6. Matatu Mini bus	521	537	1.19	1.29	1	1	-do-	663	730	1393
7. Motorcycle	45	45	1.2	1.53	1	1	-do-	58	74	132
8. Bicycle Others	49	46	1.07	1.32	1	1	-do-	56	65	121
Total	6083	5755	1.24	1.30	-	-	-	8062	8014	16076

Table A-V-2-2

Average Annual Daily Traffic Calculation Sheet

Station No.	No.2									
Date, Time	Monday 24-11-86,12 hrs		Daily/day Time Ratio		Weekly Variation Ratio		Seasonal Correction Factor	Average Annual Daily Traffic (AADT)		
Road/Inter-section	C 62 At Ruaraka Trading Centre									
Direction	Ruaraka - NRB	NRB - Ruaraka	-do-	-do-	-do-	-do-	-	Ruaraka - NRB	NRB - Ruaraka	Both Direction
Type of Vehicle										
1. Car, Taxi	734	581	1.22	1.22	1/1.1	1/1.1	1.01	822	651	1,473
2. Light Goods Vehicle	471	368	1.21	1.21	1/1.1	1/1.2	1.01		375	898
3. Medium Vehicle	129	107	1.29	1.29	1/1.2	1/1.1	1.01	140	127	267
4. Heavy Goods Vehicle	34	25	1.27	1.27	1/0.7	1/0.7	1.01	62	46	108
5. Bus	70	78	1.15	1.15	1.1.2	1/1.1	1.01	68	82	150
6. Matatu Mini Bus	158	143	1.21	1.21	1/1.0	1/0.1	1.01	193	175	368
7. Motorcycle	13	30	1.00	1.00	1/0.9	1/1.2	1.01	15	25	40
8. Bicycle Others	17	20	1.00	1.00	1/0.5	1/1.2	1.01	34	17	51
Total	1626	1,352	-	-	-	-	-	1.857	1498	3,355

Table A-V-2-3

Average Annual Daily Traffic Calculation Sheet

Station No.	No. 3									
Date, Time	Friday 21-11-86,12 hrs		Daily/day Time Ratio		Weekly Variation Ratio		Seasonal Correction Factor	Average Annual Daily Traffic (AADT)		
Road/Inter-section										
Direction	Thika - NRB	NRB - Thika	-do-	-do-	-do-	-do-	-	Thika - NRB	NRB - Thika	Both Direction
Type of Vehicle										
1. Car, Taxi	2,437	2,561	1.25	1.25	1/1.1	1/1.1	1.07	2,963	3,114	6,077
2. Light Goods Vehicle	1,966	1,835	1.14	1.14	1/1.2	1/1.3	1.07	1,998	1,722	3,720
3. Medium Vehicle	618	601	1.10	1.10	1/1.1	1/1.2	1.07	661	589	1,250
4. Heavy Goods Vehicle	150	159	1.09	1.09	1/1.2	1/1.1	1.07	146	169	315
5. Bus	294	286	1.16	1.16	1/1.0	1/1.0	1.07	365	355	720
6. Matatu Mini Bus	748	610	1.14	1.14	1/1.0	1/1.0	1.07	912	744	1656
7. Motorcycle	48	60	1.00	1.00	1/0.8	1/1.2	1.07	64	54	118
8. Bicycle Others	37	39	1.00	1.00	1/0.6	1/0.8	1.07	66	52	118
Total	6,290	6,151	-	-	-	-	-	7,175	6,799	13,974

Table A-V-2-4

Average Annual Daily Traffic Calculation Sheet

Station No.	No. 4									
Date, Time	Tuesday 25-11-86,12 hrs		Daily/day Time Ratio		Weekly Variation Ratio		Seasonal Correction Factor	Average Annual Daily Traffic (AADT)		
Road/Inter-	A2/Thika Road									
Direction	Airport - A2	A2 - Airport	-do-	-do-	-do	-do-	-	Airport - A2	A2 - Airport	Both Directon
Type of Vehicle										
1. Car, Taxi	935	1.201	1.45	1.45	1/1.1	1/1.1	1.01	1,245	1,954	3,199
2. Light Goods Vehicle	763	749	1.26	1.26	1/1.3	1/1.1	1.01	747	867	1,614
3. Medium Vehicle	673	661	1.21	1.21	1/1.3	1/1.1	1.01	633	734	1,367
4. Heavy Goods Vehicle	155	136	1.16	1.16	1/0.9	1/1.3	1.01	202	123	325
5. Bus	54	51	1.52	1.52	1/1.1	1/1.1	1.01	75	71	146
6. Matatu Mini Bus	293	284	1.26	1.26	1/1.3	1/0.9	1.01	287	402	689
7. Motorcycle	20	27	1.00	1.00	1/1.8	1/0.9	1.01	11	30	41
8. Bicycle Others	53	57	1.00	1.000	1/1.5	1/0.9	1.01	36	84	120
Total	2,946	3,184	-	-	-	-	-	3,236	4,265	7,501

Table A-V-2-5

Average Annual Daily Traffic Calculation Sheet

Station No.	No. 5									
Date, Time	Monday 17-11-86,12 hrs		Daily/day Time Ratio		Weekly Variation Ratio		Seasonal Correction Factor	Average Annual Daily Traffic (AADT)		
Road/Inter section	Lusaka Road									
Direction	Industrial Area - A104	A104 - Industrial Area	-do-	-do-	-do-	-do-	-	Industrial Area - A104	A104 - Industrial Area	Both Direction
Type of Vehicle										
1. Car, Taxi	4,515	5,606	1.11	1.25	1/1.1	1/1.1	1.07	5,358	6,816	12,174
2. Light Goods Vehicle	2,756	3,209	1.24	1.27	1/1.2	1/1.1	1.07	3,047	3,964	7,011
3. Medium Vehicle	405	402	1.18	1.12	1/1.1	1/1.2	1.07	465	401	866
4. Heavy Goods Vehicle	211	157	1.35	1.07	1/0.7	1/0.7	1.07	435	257	692
5. Bus	60	32	1.31	1.40	1/1.1	1/1.2	1.07	76	40	116
6. Matatu Mini Bus	138	245	1.17	1.13	1/1.0	1/1.0	1.07	173	296	469
7. Motorcycle	167	192	1.10	1.10	1/1.2	1/0.9	1.07	164	151	415
8. Bicycle Others	169	174	1.00	1.05	1/1.2	1/0.5	1.07	151	391	542
Total	8,421	10,017	-	-	-	-	-	9,869	12,416	22,285

Refer to (A104/No.9 Cont'd)

Table A-V-2-6

Average Annual Daily Traffic Calculation Sheet

Station No.	No.6		Daily/day Time Ratio		Weekly Variation Ratio		Seasonal Correction Factor	Average Annual Daily Traffic (AADT)		
Date, Time	Wednesday 19-11-86, 12 hrs									
Road/Inter-section	A104 Mombasa Road									
Direction	MBA - NRB	NRB - MBA	-do-	-do-	-do-	-do-	-	MBA - NRB	NRB - MBA	Both Direction
Type of Vehicle										
1. Car, Taxi	4,031	4,540	1.25	1.22	1/0.9	1/1.2	1.07	5,991	4,939	10,930
2. Light Goods Vehicle	1,635	1,710	1.27	1.24	1/1.2	1/1.1	1.07	1,852	2,063	3,915
3. Medium Vehicle	489	445	1.12	1.18	1/1.2	1.1.0	1.07	488	562	1,050
4. Heavy Goods Vehicle	207	182	1.07	1.35	1/1.3	1/0.9	1.07	176	292	468
5. Bus	54	69	1.40	1.31	1/1.0	1/1.1	1.07	81	88	169
6. Matatu Mini Vehicle	413	318	1.13	1.17	1/1.0	1/1.2	1.07	499	332	831
7. Motorcycle	39	76	1.10	1.10	1/1.1	1/1.5	1.07	42	60	102
8. Bicycle Others	42	36	1.05	1.00	1/1.5	1/1.2	1.07	31	32	63
Total	6,910	7,376	-	-	-	-	-	9,160	8,368	17,528

Refer to (A104/No. 9)

Table A-V-2-7

Average Annual Daily Traffic Calculation Sheet

Station No. / Date, Time / Road/Inter-section	No. 7 Friday 14-11-86 12 hrs C58/ At Wilson Airport		Daily/day Time Ratio		Weekly Variation Ratio		Seasonal Correction Factor	Average Annual Daily Traffic (AADT)		
Direction	Langata - NRB	NRB - Langata	-do-	-do-	-do-	-do-	-	Langata - NRB	NRB - Langata	Both Direction
Type of Vehicle										
1. Car, Taxi	3,099	2,405	1.31	1.31	1/1.1	1/1.1	1.07	3,949	3,065	7,014
2. Light Goods Vehicle	1,293	1,184	1.20	1.20	1/1.2	1/1.3	1.07	1,386	1,169	2,555
3. Medium Vehicle	239	239	1.22	1.22	1/1.1	1/1.2	1.07	284	260	544
4. Heavy Goods Vehicle	33	26	1.09	1.09	1/1.2	1/1.1	1.07	32	28	60
5. Bus	134	141	1.31	1.31	1/1.0	1/1.0	1.07	188	198	386
6. Matatu Mini Bus	302	293	1.20	1.20	1/1.1	1/1.0	1.07	353	376	729
7. Motorcycle	24	29	1.00	1.00	1/0.8	1/1.2	1.07	32	26	58
8. Bicycle Others	12	9	1.00	1.00	1/0.6	1/0.8	1.07	21	12	33
Total	5,136	4,326	-	-	-	-	-	6,245	5,134	11,379

Refer to (C58/2)

Table A-V-2-8

Average Annual Daily Traffic Calculation Sheet

Station No.	No. 8									
Date, Time	Tuesday 18-11-86, 12 hrs		Daily/day Time Variation Ratio		Weekly Variation Ratio		Seasonal Correction Factor	Average Annual Daily Traffic (AADT)		
Road/Inter-section	C61/ Ngong Road									
Direction	Dagoretti - NRB	NRB - Dagoretti	-do-	-do-	-do-	-do-	-	Dagoretti - NRB	NRB - Dagoretti	Both Direction
Type of Vehicle										
1. Car, Taxi	2,289	2,189	1.23	1.23	1/1.1	1/0.9	1.07	2,739	3,201	5,940
2. Light Goods Vehicle	1,088	998	1.24	1.24	1/1.3	1/1.1	1.07	1,110	1,204	2,314
3. Medium Vehicle	170	149	1.24	1.24	1/1.3	1/1.1	1.07	174	180	354
4. Heavy Goods Vehicle	31	21	1.17	1.17	1/0.9	1/1.3	1.07	43	20	63
5. Bus	300	195	1.22	1.22	1/1.1	1/1.1	1.07	356	350	706
6. Matatu Mini Bus	338	273	1.24	1.24	1/1.3	1/0.9	1.07	354	402	747
7. Motorcycle	57	52	1.00	1.00	1/1.8	1/0.9	1.07	34	62	96
8. Bicycle Others	113	80	1.00	1.00	1/1.5	1/0.9	1.07	81	95	176
Total	4,386	4,057	-	-	-	-	-	4,882	5,514	10,396

Refer to (C61/3)

Table A-V-2-9

Average Annual Daily Traffic Calculation Sheet

Station No.	No. 9									
Date, Time	26-11-86 to 27-11-86		Daily/day Time Ratio		Weekly Variation Ratio		Seasonal Correction Factor	Average Annual Daily Traffic (AADT)		
Road/Inter-section	A104 at the Resort Club									
Direction	Athiriver - NRB	NRB - Athiriver	-do-	-do-	-do-	-do-	-	Athiriver - NRB	NRB - Athiriver	Both Direction
Type of Vehicle										
1. Car, Taxi	801	741	1.25	1.22	1/0.9	1/1.2	1.01	1,124	761	1,885
2. Light Goods Vehicle	442	437	1.27	1.24	1/1.2	1/1.1	1.01	472	496	968
3. Medium Vehicle	460	374	1.12	1.18	1/1.2	1/1.0	1.01	434	446	880
4. Heavy Goods Vehicle	309	228	1.07	1.13	1/1.3	1/0.9	1.01	257	345	602
5. Bus	82	102	1.40	1.31	1/1.0	1/1.1	1.01	116	123	239
6. Matatu Mini Bus	130	121	1.13	1.17	1/1.0	1/1.2	1.01	155	119	274
7. Motorcycle	20	20	1.10	1.10	1/1.5	1.01	1.01	20	7	27
8. Bicycle Others	22	3	1.05	1.00	1/1.5	1/1.2	1.01	16	3	19
Total	22,272	2,016	1.19	1.23	-	-	1.01	-	-	4,894

Table A-V-2-10

Average Annual Daily Traffic Calculation Sheet

Station Date, Time Road/Inter-section	No. 10 Monday 1-12-86,12 hrs (Junction at C58 and C58 and C63)		Daily/day Time Ratio		Weekly Variation Ratio		Seasonal Correction Factor	Average Annual Daily Traffic (AADT)		
Direction	Ongata Rongai - NRB	- NRB Ongata Rongai	-do-	-do-	-do-	-do-	-	Ongata Rongai - NRB	- NRB Ongata Rongai	Both Direction
Type of Vehicle										
1. Car, Taxi	781	626	1.27	1.27	1/1.1	1/1.1	1.01	911	930	1,641
2. Light Goods Vehicle	368	313	1.16	1.16	1/1.2	1/1.1	1.01	392	306	698
3. Medium Vehicle	108	126	1.06	1.06	1/1.2	1/1.1	1.01	96	123	219
4 Heavy Goods Vehicle	6	12	1.00	1.00	1/0.7	1/0.7	1.01	9	17	26
5. Bus	38	35	1.31	1.31	1/1.0	1/1.0	1.01	42	42	84
6. Matatu Mini Bus	112	90	1.16	1.16	1/1.0	1/1.0	1.01	131	105	236
7. Motorcycle	10	10	1.00	1.00	1/0.9	1/1.2	1.01	11	8	19
8. Bicycle Others	16	17	1.00	1.00	1/1.2	1/1.2	1.01	32	14	46
Total	1,439	1,229	-	-	-	-	-	1,624	1,345	2,969

Refer to C58/3

Table A-V-2-11

Average Annual Daily Traffic Calculation Sheet

Station No. / Date, Time / Road/Inter-section	No. 11 Friday 20-11-86 12 hrs C60 Ngong Road		Daily/day Time Ratio		Weekly Variation Ratio		Seasonal Correction Factor	Average Annual Daily Traffic (AADT)		
Direction	Ngong - NRB	NRB - Ngong	-do	-do-	-do-	-do-	-	Ngong - NRB	NRB - Ngong	Both Direction
Type of Vehicle										
1. Car, Taxi	978	590	1.45	1.45	1/1.1	1/1.1	1.01	1,302	786	2,088
2. Light Good Vehicle	515	409	1.63	1.63	1/1.2	1/1.3	1.01	707	518	1,225
3. Medium Vehicle	119	116	1.50	1.50	1/1.1	1/1.2	1.01	164	146	310
4. Heavy Goods Vehicle	10	4	1.00	1.00	1/1.2	1/1.1	1.01	8	3	11
5. Bus	47	49	1.37	1.37	1/1.0	1/1.0	1.01	65	68	133
6. Matatu Mini Bus	95	103	1.63	1.63	1/1.1	1/1.0	1.01	142	170	312
7. Motorcycle	20	14	1.00	1.00	1/0.8	1/1.2	1.01	25	12	37
8. Bicycle Others	37	31	1.00	1.00	1/06	1/0.8	1.01	62	39	101
Total	1,821	1,316	-	-	-	-	-	2,475	1,742	4,217

Refer to C60/1

Table A-V-2-12

Average Annual Daily Traffic Calculation Sheet

Station No.	No. 12									
Date, Time	Thrusday 27-11-86,12 hrs		Daily/day Time Ratio		Weekly Variation Ratio		Seasonal Correction Factor	Average Annaul Daily Traffic (AADT)		
Road/Inter-section	A104 Naivasha Road									
Direction	Limuru - NRB	NRB - Limuru	-do-	-do-	-do-	-do-	-	Limuru - NRB	NRB - Limuru	Both Direction
Type of Vehicle										
1. Car, Taxi	510	496	1.12	1.33	1/1.2	1/1.0	1.01	519	654	1,193
2. Light Goods Vehicle	425	418	1.26	1.21	1/1.0	1/1.1	1.01	541	464	1,005
3. Medium Vehicle	194	207	1.29	1.20	1/1.1	1/1.3	1.01	320	193	423
4. Heavy Goods Vehicle	109	162	1.39	1.46	1/1.1	1/1.1	1.01	216	217	433
5. Bus	127	112	1.51	1.36	1/1.0	1/1.2	1.01	194	128	322
6. Matatu Mini Bus	178	124	1.19	1.27	1/1.2	1/1.4	1.01	178	114	292
7. Motorcycle	9	14	1.20	1.53	1/1.2	1/1.2	1.01	9	18	27
8. Bicycle Others	15	11	1.07	1.32	1/1.4	1/1.0	1.01	12	15	27
Total	1,627	1,544	-	-	-	-	-	1,899	1,803	3,702

Refer to No. 1

Table A-V-2-13

Average Annual Daily Traffic Calculation Sheet

Station No. / Date, Time / Road/Inter-section	No. 13 Monday 24-11-86,12 hrs (At Muthaiga C64 Golf-Club)		Daily/day time Ratio		Weekly Variation Ratio		Seasonal Correction Factor	Average Annual Daily Traffic (AADT)		
Direction	Kiambu - NRB	NRB - Kiambu	-do-	-do-	-do-	-do-	-	Kiambu - NRB	NRB - Kiambu	Both Direction
Type of Vehicle										
1. Car, Taxi	1,408	973	1.22	1.11	1/1.1	1/1.1	1.01	1.277	1.090	2,667
2. Light Goods Vehicle	783	492	1.21	1.21	1/1.1	1/1.2	1.01	870	501	1,371
3. Medium Vehicle	102	71	1.29	1.29	1/1.2	1/1.1	1.01	111	84	195
4. Heavy Goods Vehicle	5	8	1.27	1.27	1/0.7	1/0.7	1.01	9	15	24
5. Bus	107	92	1.15	1.15	1/1.2	1/1.2	1.01	104	97	201
6. Matatu Mini Bus	205	153	1.21	1.21	1/1.0	1/1.0	1.01	251	187	438
7. Motorcycle	9	10	1.00	1.00	1/0.9	1/1.2	1.01	10	8	18
8. Bicycle Other	17	14	1.00	1.00	1/0.5	1/1.2	1.01	34	12	46
Total	2,636	1,813	-	-	-	-	-	2,966	1,994	4,960

Refer to C62/11

Table A-V-2-14

Average Annual Daily Traffic Calculation Sheet

Station No.	No. 14									
Date, Time	Friday 28-11-86, 12 hrs		Daily/day time Ratio		Weekly Variation Ratio		Seasonal Correction	Average Annual Daily Traffic (AADT)		
Road/Inter-	C63/Dagoretti Road									
Direction	Dagoretti - Karen	Karen - Dagoretti	-d-	-do-	-do-	-do-	-	Dagoretti - Karen	Karen - Dagoretti	Both Direction
Type of Vehicle										
1. Car, Taxi	351	280	1.30	1.30	1/1.1	1/1.1	1.01	419	334	753
2. Light Goods Vehicle	191	212	1.13	1.13	1/1.2	1/1.3	1.01	182	186	368
3. Medium Vehicle	55	53	1.03	1.03	1/1.1	1/1.2	1.01	52	46	98
4. Heavy Goods Vehicle	8	4	1.00	1.00	1/1.2	1/1.1	1.01	7	4	11
5. Bus	12	16	1.19	1.19	1/1.0	1/1.0	1.01	14	23	37
6. Matatu Mini Bus	13	15	1.13	1.13	1/1.1	1/1.0	1.01	13	17	30
7. Motorcycle	5	4	1.00	1.00	1/0.8	1/1.2	1.01	6	3	9
8. Bicycle Others	18	47	1.00	1.00	1/0.6	1/0.8	1.01	30	59	89
Total	653	631	-	-	-	-	-	723	672	1,395

Refer to C63/2

Table A-V-2-15

Average Annual Daily Traffic Calculation Sheet

Station No. / Date, Time / Road/Inter-section	No. 15 Tuesday 25-11-86,12 hrs C98/Komo Rock Road		Daily/day Time Ratio		Weekly Variation Ratio		Seasonal Correction Factor	Average Annual Daily Traffic (AADT)		
Direction	Kangundo - C59	C59 - Kangundo	-do-	-do-	-do-	-do-	-	Kangundo - C59	C59 - Kangundo	Both Direction
Type of Vehicle										
1. Car, Taxi	1.080	840	1.22	1.22	1/1.1	1/0.9	1.01	1.210	1.150	2.360
2. Light Goods Vehicle	599	646	1.18	1.18	1/1.3	1/1.1	1.01	549	700	1.249
3. Medium Vehicle	606	641	1.07	1.07	1/1.3	1/1.1	1.01	504	689	1.193
4. Heavy Goods Vehicle	64	54	1.00	1.00	1/0.9	1/1.3	1.01	72	42	114
5. Bus	51	55	1.29	1.29	1/1.1	1/1.1	1.01	60	65	125
6. Matatu Mini Bus	199	201	1.18	1.18	1/1.3	1/0.9	1.01	182	266	448
7. Motorcycle	22	23	1.00	1.000	1/1.8	1/1.9	1.01	12	26	38
8. Bicycle Others	11	16	1.00	1.00	1/1.5	1/0.9	1.01	7	18	25
Total	2,632	2,476	-	-	-	-	-	2,596	2,956	5,552

Refer C98/1

Table A-V-2-16

Average Annual Daily Traffic Calculation Sheet

Station No. / Date, Time / Road/Inter-section	No. 16 Monday 1-12-86, 12 hrs Langata Road		Daily/day Time Ratio		Weekly Variation Ratio		Seasonal Correction Factor	Average Annual Daily Traffic (AADT)		
Direction	Dagoretti - Wilson Airport	Wilson Airport - Dagoretti	-do-	-do-	-do-	-do-	-	Dagoretti - Wilson Airport	Wilson Airport - Dagoretti	Both Direction
Type of Vehicle										
1. Car, Taxi	1,180	1,026	1.31	1.31	1/1.1	1/1.1	1.01	1.419	1.234	2,653
2. Light Goods Vehicle	502	499	1.19	1.19	1/1.1	1/1.2	1.01	549	500	1,049
3. Medium Vehicle	79	90	1.15	1.15	1/1.2	1/1.1	1.01	76	95	171
4. Heavy Goods Vehicle	20	20	2.00	1.00	1/0.7	1/0.7	1.01	58	58	116
5. Bus	29	27	1.19	1.19	1/1.0	1/1.1	1.01	29	30	59
6. Matatu Mini Bus	20	27	1.19	1.19	1/1.0	1/1.1	1.01	24	30	54
7. Motorcycle	16	22	1.00	1.00	1/0.9	1/1.2	1.01	18	19	37
8. Bicycle Others	17	15	1.00	1.00	1/0.5	1/1.2	1.01	34	13	47
Total	1,863	1,726	-	-	-	-	-	2,207	1,979	4,186

Refer C63/24

Table A-V-2-17

Average Annual Daily Traffic Calculation Sheet

Station No. / Date, Time / Road/Inter-section	No. 17 Wednesday 3-12-86, 12hrs Uhuru Highway Kenyatta Round-about to South		Daily/day Time Ratio		Weekly Variation Ratio		Seasonal Correction Factor	Average Annual Daily Traffic (AADT)		
Direction	Airport - NRB	NRB - Airport	-do-	-do-	-do-	-do-	-	Airport - NRB	NRB - Airport	Both Direction
Type of Vehicle										
1. Car, Taxi	4,739	10,810	1.25	1.22	1/0.9	1/1.2	1.01	6,648	11,100	17,748
2. Light Goods Vehicle	2,997	2,997	1.22	1.22	1/1.1	1/1.1	1.01	3,357	2,776	6,133
3. Medium Vehicle	398	495	1.12	1.18	1/1.2	1/1.0	1.01	375	590	965
4. Heavy Goods Vehicle	137	157	1.07	1.35	1/1.3	1/0.9	1.01	114	238	352
5. Bus	92	63	1.40	1.17	1/1.0	1/1.1	1.01	130	68	198
6. Matatu Mini Bus	-	-	-	-	-	-	-	-	-	-
7. Motorcycle	-	-	-	-	-	-	-	-	-	-
8. Bicycle Others	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-	-	25,396

Table A-V-2-17

Average Annual Daily Traffic Calculation Sheet

Station No. / Date, Time / Road/Inter-section	No. 17 Wednesday Kenyatta Avenue to	East	Daily/day Time Ratio		Weekly Variation Ratio		Seasonal Correction Factor	Average Annual Daily Traffic (AADT)		
Directin	Centre - Ngong	Ngong - Centre	-do-	-do-	-do-	-do-	-	Centre - Ngong	Ngong - Centre	Both Direction
Type of Vehicle										
1. Car, Taxi	10,202	11,481	1.25	1.22	1/0.9	1/1.2	1.01	14,311	11,789	-
2. Light Goods Vehicle	27,738	3,845	1.22	1.22	1/1.1	1/1.1	1.01	3,037	4,307	-
3. Medium Vehicle	95	164	1.12	1.18	1/1.2	1/1.0	1.01	90	195	-
4. Heavy Goods Vehicle	592	753	1.40	1.17	1/1.0	1/1.1	1.01	837	809	-
5. Bus	-	-	-	-	-	-	-	-	-	-
6. Matatu Mini Bus	-	-	-	-	-	-	-	-	-	-
7. Motorcycle	-	-	-	-	-	-	-	-	-	-
8. Bicycle Others	-	-	-	-	-	-	-	-	-	-
Total	13,638	16,265	-	-	-	-	-	18,284	17,133	-

Table A-V-2-17

Average Annual Daily Traffic Calculation Sheet

Station No.	No. 17		Daily/day Time Ratio		Weekly Variation Ratio		Seasonal Correction Factor	Average Annual Daily Traffic (AADT)		
Date, Time	Wednesday									
Road/Inter-section	Uhuru Highway to Nairobi									
Direction	Limuru - NRB	NRB - Limuru	-do-	-do-	-do-	-do-	-	Limuru - NRB	NRB - Limuru	Both Direction
Type of Vehicle										
1. Car, Taxi	13,614	8,990	1.21	1.33	1/0.9	1/1.2	1.01	18,486	10,064	-
2. Light Goods Vehicle	3,054	2,496	1.24	1.23	1/1.1	1/1.1	1.01	3,477	2,819	-
3. Medium Vehicle	455	336	1.29	1.20	1/1.2	1/1.0	1.01	494	407	-
4. Heavy Goods Vehicle	149	120	1.39	1.46	1/1.3	1/0.9	1.01	161	197	-
5. Bus	122	41	1.51	1.36	1/1.0	1/1.1	1.01	186	51	-
6. Matatu Mini Bus	-	-	-	-	-	-	-	-	-	-
7. Motorcycle	-	-	-	-	-	-	-	-	-	-
8. Bicycle Others	-	-	-	-	-	-	-	-	-	-
Total	17,394	11,983	-	-	-	-	-	22,804	13,538	-

Table A-V-2-17

Average Annual Daily Traffic Calculation Sheet

Station No. / Date, Time / Road/Inter. section	No. 17 - Kenyatta Avenue to West		Daily/day Time Ratio		Weekly Variation Ratio		Seasonal Correction Factor	Average Annual Daily Traffic (AADT)		
Direction	Ngong - NRB	NRB - Ngong	-do-	-do-	-do-	-do-	-	Ngong - NRB	NRB - Ngong	Both Direction
Type of Vehicle										
1. Car, Taxi	8,564	10,574	1.21	1.31	1/0.9	1/1.2	1.01	11,629	11,837	-
2. Light Goods Vehicle	2,880	2,850	1.24	1.23	1/1.1	1/1.1	do	3,279	3,219	-
3. Medium Vehicle	125	78	1.29	1.20	1/1.2	1/1.0	do	136	95	-
4. Heavy Goods Vehicle	26	24	1.39	1.46	1/1.3	1/0.9	do	28	39	-
5. Bus	694	643	1.51	1.36	1/1.0	1/1.1	do	1,058	803	-
6. Matatu Mini Bus	-	-	-	-	-	-	-	-	-	-
7. Motorcycle	-	-	-	-	-	-	-	-	-	-
8. Bicycle Others	-	-	-	-	-	-	-	-	-	-
Total	12,289	14,169	-	-	-	-	-	16,130	15,993	-

Table A-V-2-18

Average Annual Daily Traffic Calculation Sheet

Station No. Date, Time Road/Inter-section	No. 18 - C63 to East		Daily/day Time Ratio		Weekly Variation Ratio		Seasonal Correction Factor	Average Annual Daily Traffic (AADT)		
Direction	Kiambu - A104	A104 - Kiambu	-do-	-do-	-do-	-do-	-	Kiambu - A104	A104 - Kiambu	Both Direction
Type of Vehicle										
1. Car, Taxi	147	116	1.30	1.30	1/1.0	1/1.0	1.01	193	152	345
2. Light Goods Vehicle	190	155	1.13	1.13	1/1.1	1/1.1	1.01	197	161	358
3. Medium Vehicle	39	25	1.00	1.00	1/1.1	1/1.1	1.01	37	24	61
4. Heavy Goods Vehicle	12	3	1.00	1.00	1/1.1	1/1.1	1.01	11	13	14
5. Bus	27	14	1.15	1.15	1/1.1	1/1.1	1.01	29	15	44
6. Matatu Mini Bus	-	-	-	-	-	-	-	-	-	-
7. Motorcycle	-	-	-	-	-	-	-	-	-	-
8. Bicycle	-	-	-	-	-	-	-	-	-	-
Others										
Total	415	312	-	-	-	-	-	-	-	822

Table A-V-2-18

Average Annual Daily Traffic Calculation Sheet

Station No. Date, Time Road/Inter-section	No. 18 - A104 To North		Daily/day Time Ratio		Weekly Variation Ratio		Seasonal Correction Factor	Average Annual Daily Traffic (AADT)		
Direction	Limuru - NRB	NRB - Limuru	-do-	-do-	-do-	-do-	-	Limuru - NRB	NRB - Limuru	Both Direction
Type of Vehicle										
1. Car, Taxi	686	604	1.21	1.33	1/1.1	1/0.9	1.01	762	902	1,664
2. Light Goods Vehicle	806	729	1.24	1.23	1/1.3	1/1.0	1.01	776	906	1,682
3. Medium Vehicle	233	213	1.29	1.20	1/1.3	1/1.1	1.01	234	235	469
4. Heavy Goods Vehicle	154	177	1.39	1.46	1/0.9	1/1.1	1.01	240	201	441
5. Bus	124	93	1.51	1.36	1/1.1	1/1.1	1.01	176	116	292
6. Matatu Mini Vehicle	-	-	-	-	-	-	-	-	-	-
7. Motorcycle	-	-	-	-	-	-	-	-	-	-
8. Bicycle Others	-	-	-	-	-	-	-	-	-	-
Total	2,006	1,816	-	-	-	-	-	-	-	4,548

(Cont'd From No. 18 - 1)

Table A-V-2-18

Average Annual Daily Traffic Calculation Sheet

Station No.	No. 18									
Date, Time	Tuesday 2-12-86,12 hrs		Daily/day Time Ratio		Weekly Variation Ratio		Seasonal Correction Factor	Average Annual Daily Traffic (AADT)		
Road/Inter-section	A104 At Kikuyu Junc. - with C63									
Direction	Limuru - NRB	NRB - Limuru	-do-	-do-	-do-	-do-	-	Limuru - NRB	NRB - Limuru	Both Direction
Type of Vehicle										
1. Car, Taxi	638	681	1.21	1.33	1/1.1	1/0.9	1.01	709	1,016	1,725
2. Light Goods Vehicle	771	759	1.24	1.23	1/1.3	1/1.0	1.01	743	943	1,686
3. Medium Vehicle	182	212	1.29	1.20	1/1.3	1/1.1	1.01	182	234	416
4. Heavy Goods Vehicle	141	180	1.39	1.46	1/0.9	1/1.3	1.01	220	204	424
5. Bus	118	113	1.51	1.36	1/1.1	1/1.1	1.01	164	141	305
6. Matatu Mini Bus	-	-	-	-	-	-	-	-	-	-
7. Motorcycle	-	-	-	-	-	-	-	-	-	-
8. Bicycle Others	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-	-	-

(Cont'd From No. 18 - 2)

Table A-V-2-18

Average Annual Daily Traffic Calculation Sheet

Station No. Date, Time Road/Inter-section	No. 18 Tuesday C63 To West		Daily/day Time Ratio		Weekly Variation Ratio		Seasonal Correction Factor	Average Annual Daily Traffic (AADT)		
Direction	Dagoretti - A104	A104 - Dagoretti	-do-	-do-	-do-	-do-	-	Dagoretti - A104	A104 - Dagoretti	Both Direction
Type of Vehicle										
1. Car, Taxi	238	235	1.30	1.30	1/1.0	1/1.0	1.01	1,312	309	621
2. Light Goods Vehicle	321	308	1.13	1.13	1/1.1	1/1.1	1.01	333	320	652
3. Medium Vehicle	74	76	1.03	1.00	1/1.1	1/1.1	1.01	70	72	142
4. Heavy Goods Vehicle	13	19	1.00	1.00	1/1.1	1/1.1	1.01	12	17	29
5. Bus	12	5	1.15	1.15	1/1.1	1/1.1	1.01	13	5	18
6. Matatu Mini Bus	-	-	-	-	-	-	-	-	-	-
7. Motorcycle	-	-	-	-	-	-	-	-	-	-
8. Bicycle Others	-	-	-	-	-	-	-	-	-	-
Total	658	643	-	-	-	-	-	-	-	1,463

(Cont'd From No. 18 -1,2, & 3)

Table A- V-3(1)

Traffic Capacity of Present Road Net-works - 1

LINK NAME	No. of Lane (N)	Lane width (M)	(r_L)	(r_C)	(r_N)	(r_I)	(2 lane) $C=2,500\times r_L\times r_C\times r_N\times r_I$ (4 lane & more) $C=2,500\times r_L\times r_C\times r_N r_I\times N$	(r_P)	$C_D=C\times r_P$	K	D	(2 lane) $C_{12}=C_D\times\frac{100}{K}$ (4 lane more) $C_{12}=C_D\times\frac{5000}{K-D}$	Remark
A104-1	2	3.5	1.0	1.0	1.0	0.9	2,250	0.75	1,687	15.2	-	11,100	
A104-2	4	3.5	1.0	1 .0	1.0	0.8	7,040	0.80	5,630	15.2	53	34,900	
A104-3	4	3.5	1.0	1.0	1.0	0.8	7,040	0.80	5,630	15.2	53	34,900	
A104-4	4	3.6	1.0	0.8	1.0	0.7	4,930	0.80	3,940	12.3	53	30,300	
A104-5	6	3.0	0.85	0.8	1.0	0.7	6,280	0.80	5,030	12.3	53	38,500	
A104-6	6	3.25	0.94	0.8	1.0	0.7	6,950	0.80	5,560	12.3	53	42,600	
A104-7	6	3.20	0.94	0.8	1.0	0.7	6,950	0.80	5,560	12.3	53	42,600	
A104-8	6	3.20	0.94	0.8	1.0	0.7	6,950	0.80	5,560	12.3	53	42,600	
A104-9	6	3.0	0.85	0.8	1.0	0.7	6,280	0.80	5,030	12.3	53	38,500	
A104-10	2	4.25	1.0	1.0	1.0	0.8	2,000	0.80	1,600	12.9	-	12,400	
A104-11	4	3.25	0.94	0.8	1.0	0.8	5,290	0.80	4,240	12.9	60	27,400	
A104-12	2	3.25	0.94	1.0	1.0	0.8	1,880	0.8	1,504	13.3	-	11,300	
A104-13	2	3.50	1.0	1.0	1.0	0.8	2,000	0.75	1,500	14.1	-	10,600	
A104-14	2	3.50	1.0	1.0	1.0	0.9	2,250	0.75	1,687	15.2	-	11,100	
A2-1	4	5.0	1.0	1.0	1.0	0.7	6,160	0.80	4,930	11.3	56	38,900	
A2-2	4	3.25	0.94	1.0	1.0	0.8	6,620	0.80	5,290	11.3	56	41,800	
A2-3	4	3.25	0.94	1.0	1.0	0.8	6,620	0.80	5,290	11.3	56	41,800	
B-10	2	3.0	0.85	1.0	1.0	0.7	1,488	0.90	1,339	15	-	9,300	
C-58	2	3.5	1.0	0.7	1.0	0.7	1,225	0.9	1,103	15	-	7,400	
C58-2	2	3.0	0.85	1.0	1.0	0.8	1,700	0.9	1,530	12.8	-	12,000	
C58-3	2	2.75	0.77	1.0	1.0	0.8	1,540	0.9	1,386	19.0	-	7,300	
C59-1	2	3.5	1.0	1.0	1.0	0.7	1,750	0.9	1,575	13.0	-	12,100	
C59-2	2	3.25	0.94	1.0	1.0	0.7	1,645	0.9	1,481	13.0	-	11,400	
C59-3	2	3.25	0.94	1.0	1.0	0.7	1,645	0.9	1,481	13.0	-	11,400	
C59-4	2	3.5	1.0	1.0	1.0	0.7	1,750	0.9	1,575	13.0	-	12,100	
C59-5	2	3.25	0.94	1.0	1.0	0.7	1,645	0.9	1,481	13.0	-	11,400	

Traffic Capacity of Present Road Net-works - 2

LINK NAME	No. of Lane (N)	Lane width (M)	(r_L)	(r_C)	(r_N)	(r_I)	(2 lane) $C=2,500\times r_L\times r_C\times r_N\times r_I$ (4 lane & more) $C=2,500\times r_L\times r_C\times r_N r_I\times N$	(r_p)	$C_D=C\times r_p$	K	D	(2 lane) $C_{12}=C_D\times\frac{100}{K}$ (4 lane more) $C_{12}=C_D\times\frac{5000}{K\cdot D}$	Remark
C60-1	2	3.0	0.85	1.0	1.0	0.8	1,700	0.9	1,530	13.9	-	11,000	
C60-2	2	2.75	0.77	1.0	1.0	0.8	1,540	0.9	1,386	13.9	-	10,000	
C61-1	2	3.50	1.00	0.85	1.0	0.7	1,488	0.9	1,339	15.7	-	8,500	
C61-2	2	3.50	1.00	0.85	1.0	0.7	1,488	0.9	1,339	15.7	-	8,500	
C61-3	2	3.25	0.94	1.0	1.0	0.8	1,880	0.9	1,692	15.7	-	10,800	
C61-4	2	3.00	0.85	1.0	1.0	0.7	1,488	0.9	1,339	15.7	-	8,500	
C62-1	2	3.50	1.0	1.0	1.0	0.7	1,750	0.9	1,575	15	-	10,500	
C62-2	2	3.00	0.85	1.0	1.0	0.8	1,700	0.9	1,530	15	-	10,200	
C62-3	2	3.50	1.0	1.0	1.0	0.9	2,250	0.85	1,913	15	-	12,800	
C62-4	2	3.50	1.0	1.0	1.0	0.9	2,250	0.85	1,913	15	-	12,800	
C63-1	2	2.75	0.77	1.0	1.0	0.8	1,540	0.9	1,386	17.5	-	7,900	
C63-2	2	3.50	1.0	0.95	1.0	0.8	1,900	0.9	1,710	15.0	-	11,400	
C63-3	2	3.25	0.94	1.0	1.0	0.9	2,115	0.85	1,798	15.0	-	12,000	
C63-4	2	3.25	0.94	1.0	1.0	0.9	2,115	0.85	1,798	15.0	-	12,000	
C63-5	2	3.00	0.85	1.0	1.0	0.9	1,913	0.85	1,626	15	-	10,800	
C63-6	2	3.25	0.94	0.95	1.0	0.9	2,009	0.85	1,708	15	-	11,400	
C63-7	2	2.75	0.77	0.90	1.0	0.8	1,386	0.85	1,178	15	-	7,900	
C63-8	2	3.00	0.85	0.90	1.0	0.9	1,721	0.85	1,463	15	-	9,800	
C63-9	2	2.75	0.77	0.9	1.0	0.9	1,559	0.85	1,325	15	-	8,800	
C63-10	2	2.75	0.77	1.0	1.0	0.9	1,733	0.85	1,473	15	-	9,800	
C63-11	2	3.25	0.94	0.95	1.0	0.9	2,009	0.85	1,708	15	-	11,400	
C63-12	2	3.0	0.85	0.95	1.0	0.9	1,817	0.85	1,544	15	-	10,300	
C64-1	2	2.75	0.77	1.0	1.0	0.9	1,733	0.85	1,473	15	-	9,800	
C64-2	2	2.75	0.77	0.9	1.0	0.9	1,559	0.85	1,325	15	-	8,800	
C64-3	2	2.75	0.77	0.9	1.0	0.9	1,559	0.85	1,325	15	-	8,800	
C65	2	3.00	0.85	1.0	1.0	0.9	1,913	0.85	1,625	15	-	10,800	

Traffic Capacity of Present Road Net-works - 3

LINK NAME	No. of Lane (N)	Lane width (M)	(r_L)	(r_C)	(r_N)	(r_I)	(2 lane) $C=2,500\times r_L\times r_C\times r_N\times r_I$ (4 lane & more) $C=2,500\times r_L\times r_C\times r_N r_I\times N$	(r_P)	$C_D=C\times r_P$	K	D	(2 lane) $C_{12}=C_D\times\frac{100}{K}$ (4 lane more) $C_{12}=C_D\times\frac{5000}{K\cdot D}$	Remark
C98-1	2	3.50	1.0	1.0	1.0	0.8	2,000	0.85	1,700	12.2	-	13,900	
C98-2	2	3.50	1.0	1.0	1.0	0.8	2,000	0.85	1,700	12.2	-	13,900	
C98-3	2	3.50	1.0	1.0	1.0	0.8	2,000	0.85	1,700	12.2	-	13,900	
D378-1	2	3.0	0.85	1.0	1.0	0.8	1,700	0.85	1,445	15	-	9,600	
D378-2	2	2.75	0.77	1.0	1.0	0.8	1,540	0.85	1,309	15	-	8,700	
D400	2	2.75	0.77	1.0	1.0	0.8	1,540	0.85	1,309	15	-	8,700	
D400-2	2	2.75	0.77	0.9	1.0	0.8	1,386	0.85	1,178	15	-	7,900	
D407-1	2	2.75	0.77	1.0	1.0	0.8	1,540	0.85	1,309	15	-	8,700	
D407-2	2	2.75	0.77	0.95	1.0	0.8	1,463	0.85	1,244	15	-	8,300	
D407-3	2	2.75	0.77	1.0	1.0	0.8	1,540	0.85	1,309	15	-	8,700	
D407-4	2	2.75	0.77	1.0	1.0	0.8	1,540	0.85	1,309	15	-	8,700	
D409-1	2	2.75	0.77	1.0	1.0	0.8	1,540	0.85	1,309	15	-	8,700	
D409-2	2	3.00	0.85	0.9	1.0	0.8	1,386	0.85	1,178	15	-	7,900	
D410-1	2	3.00	0.85	0.7	1.0	0.8	1,190	0.9	1,071	15	-	7,100	
D410-2	2	2.75	0.77	0.85	1.0	0.8	1,309	0.9	1,178	15	-	7,900	
D410-3	2	2.75	0.77	1.0	1.0	0.8	1,540	0.9	1,386	15	-	9,200	
D412	2	2.75	0.77	1.0	1.0	0.8	1,540	0.9	1,386	15	-	9,200	
E433	2	2.75	0.77	0.75	1.0	0.9	1,299	0.85	1,104	15	-	7,400	
ST. AUSTIN	2	3.00	0.85	0.85	1.0	0.8	1,445	0.9	1,301	15	-	8,700	
NGECHA ROAD	2	2.75	0.77	0.90	1.0	0.8	1,386	0.9	1,247	15	-	8,300	
SELASSIE AVE	4	3.5	1.0	1.0	1.0	0.7	6,160	0.9	5,540	12.3	53	42,500	
LANDHIES ROAD	4	3.5	1.0	1.0	1.0	0.7	6,160	0.9	5,540	12.3	53	42,500	
LUSAKA ROAD EAST	4	3.5	1.0	0.8	1.0	0.7	4,930	0.9	4,440	12.3	53	34,100	
" WEST	2	3.5	1.0	0.85	1.0	0.7	1,487	0.9	1,338	12.3	-	10,100	
NBAGATHI ROAD	2	3.5	1.0	1.0	1.0	0.8	2,000	0.9	1,800	12.3	-	14,600	
VALLY ROAD	2	3.5	1.0	1.0	1.0	0.8	2,000	0.9	1,800	12.3	-	14,600	

Traffic Capacity of Present Road Net-works - 4

LINK NAME	No. of Lane (N)	Lane width (M)	(r_L)	(r_C)	(r_N)	(r_I)	(2 lane) $C=2,500\times r_L\times r_C\times r_N\times r_I$ (4 lane & more) $C=2,500\times r_L\times r_C\times r_N r_I\times N$	(r_p)	$C_D=C\times r_p$	K	D	(2 lane) $C_{12}=C_D\times\frac{100}{K}$ (4 lane more) $C_{12}=C_D\times\frac{5000}{K\cdot D}$	Remark
UNIVERSITY ROAD	4	3.25	0.94	0.9	1.0	0.8	5,960	0.9	5,360	12.3	53	41,100	
MURANGA ROAD	4	3.5	1.0	0.9	1.0	0.8	6,340	0.9	5,700	12.3	53	43,740	
RING ROAD	2	3.5	1.0	0.7	1.0	0.8	1,400	0.9	1,260	12.3	-	10,200	
JULA EAST ROAD	2	3.5	1.0	1.0	1.0	0.8	2,000	0.9	1,800	12.3	-	14,600	
EASTLEIGH FIRST AV.	4	3.0	0.85	0.95	1.0	0.8	5,680	0.9	5,120	12.3	53	41,600	
JOGOO ROAD EAST	2	3.5	1.0	0.9	1.0	0.8	1,800	0.9	1,620	12.3	-	13,200	
" CENTER	4	3.5	1.0	1.0	1.0	0.8	7,040	0.9	6,340	12.3	53	48,600	
" WEST	4	3.5	1.0	0.95	1.0	0.8	6,690	0.9	6,020	12.3	53	46,200	
LIKONI ROAD	2	3.5	1.0	1.0	1.0	0.8	2,000	0.9	1,800	12.3	-	14,600	
ENTERPRISE ROAD	2	3.0	0.85	1.0	1.0	0.8	1,360	0.9	1,224	12.3	-	9,600	

Appendix
V.4 Traffic Capacity Calculation Formula

The method of calculations are shown the following formula applied the Road Capacity Manual of Japan.

1. Possible Capacity

1) a single carriageway

$$C = 2{,}500\ r_L \cdot r_C \cdot r_N \cdot r_I \quad \text{(p.c.u/h)}$$

2) a dual carriageway

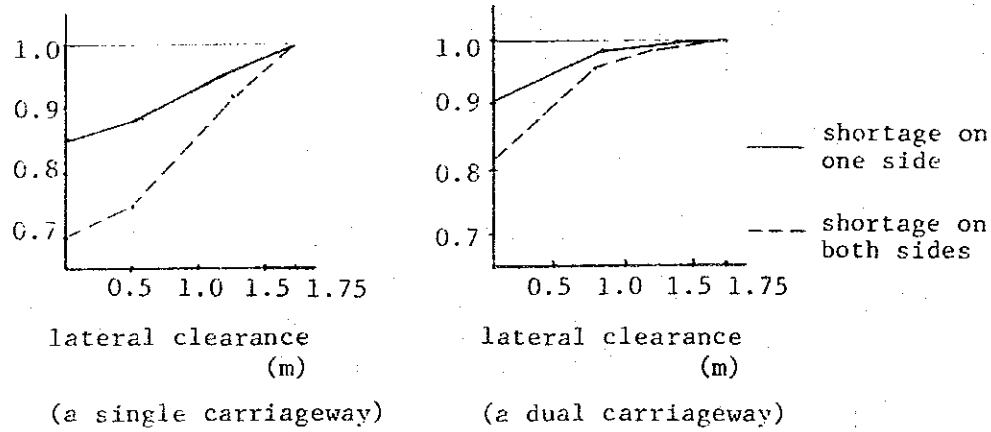
$$C = 2{,}200\ r_L \cdot r_C \cdot r_N \cdot r_I \times N \quad \text{(p.c.u/h)}$$

C : possible capacity
r_L : adjustment factor of lane width
r_C : " of lateral clearance
r_N : " of including motor cycle and bicycle
r_I : " of roadside conditions
N : No. of lanes.

- Adjustment for lane width (r_L)

lane width (m)	(r_L) Adjustment Factor
3.50	1.00
3.25	0.94
3.00	0.85
2.75	0.77

- Adjustment for lateral clearance (r_C)



- Adjustment for mixing of motorcycle and bicycle (r_N)

$$r_N = \frac{100}{100 + \alpha P_m + \beta \cdot P_B}$$

r_N : adjustment factor for including motor cycle and bicycle

α : conversion factors for passenger car in motor cycle

P_m : percentage of motor cycle (%)

β : conversion factors for passenger car in bicycle

P_β : percentage of bicycle (%)

- Adjustment for roadside condition (r_I)

(1) Adjustment Factor for roadside conditions

No. of lanes / Roadside conditions	2 lanes	Multi-lane
· free way	1.00	1.00
· mountainous area	0.90	0.95
· level terrain	0.85	0.90
· urban area	0.70	0.75

(2) Adjustment Factor for roadside conditions

Degree of urbanaization	adjustment
Rural area	1.0 ∿ 0.9
Suburb	0.9 ∿ 0.8
Urban area	0.8 ∿ 0.7

2. Design Capacity

$$C_D = C \times r_p$$

C_D : Design Capacity (p.c.u./h)

C : Possible Capacity (p.c.u./h)

r_p : reduced ratio for Level of Service

Level of Service	Adjustment factor for Level of Service	
	rural area	urban area
1	0.75	0.80
2	0.85	0.90
3	1.00	1.00

3. Calculation of Daytime 12 hours Traffic Capacity

(Multi-lane road)

$$C_{12} = \frac{C_D/2}{(K/100) \times (D/100)} = C_D \times \frac{5,000}{K \times D}$$

(Single carriageway road)

$$C_{12} = \frac{C_D}{K/100} = C_D \times \frac{100}{K}$$

where C_{12}: Daytime 12 hrs traffic capacity

C_D : Design Capacity (p.c.u./h)

K : Percentage of 30th hourly volume in yea within average daytime 12 hrs traffic.

D : Percentage of heavy direction in peak hour traffic

K-value

$$K = \frac{a \times Q_p + b}{Q_{12}} \times 100$$

where K : Percentage of 30 th hourly volume in Average Annual Daytime 12 hrs. Traffic

Q_p : Peak hour traffic (p.c.u./h)

Q_{12} : Daytime 12 hrs. traffic (p.c.u./12 hrs)

a,b : parameter

Roadside condition	a	b
Urban area	1.12	20.4
Level terrain	1.06	167.5
Mountainous terrain	1.01	377.6

D-value

$$D = \frac{\max (P_u, P_d)}{P_u + P_d} \times 100$$

where D : Percentage of heavy direction in peak hour traffic

P_u : Up-stream traffic in peak hour (p.c.u./h)

P_d : Down-stream traffic in peak hour (p.c.u./h)

Appendix
V.5

Present Road Inventory

The present road condition in the Nairobi area were surveied at 22 points in the central area of the Nairobi and at 31 points in and around the Nairobi area as shown in the next Figure.

The detail condition of the roads are shown in the next table of the present road inventory.

Fig A- V-5.1

Survey and Measure Points of Present Conditions of Road (C.B.D.)

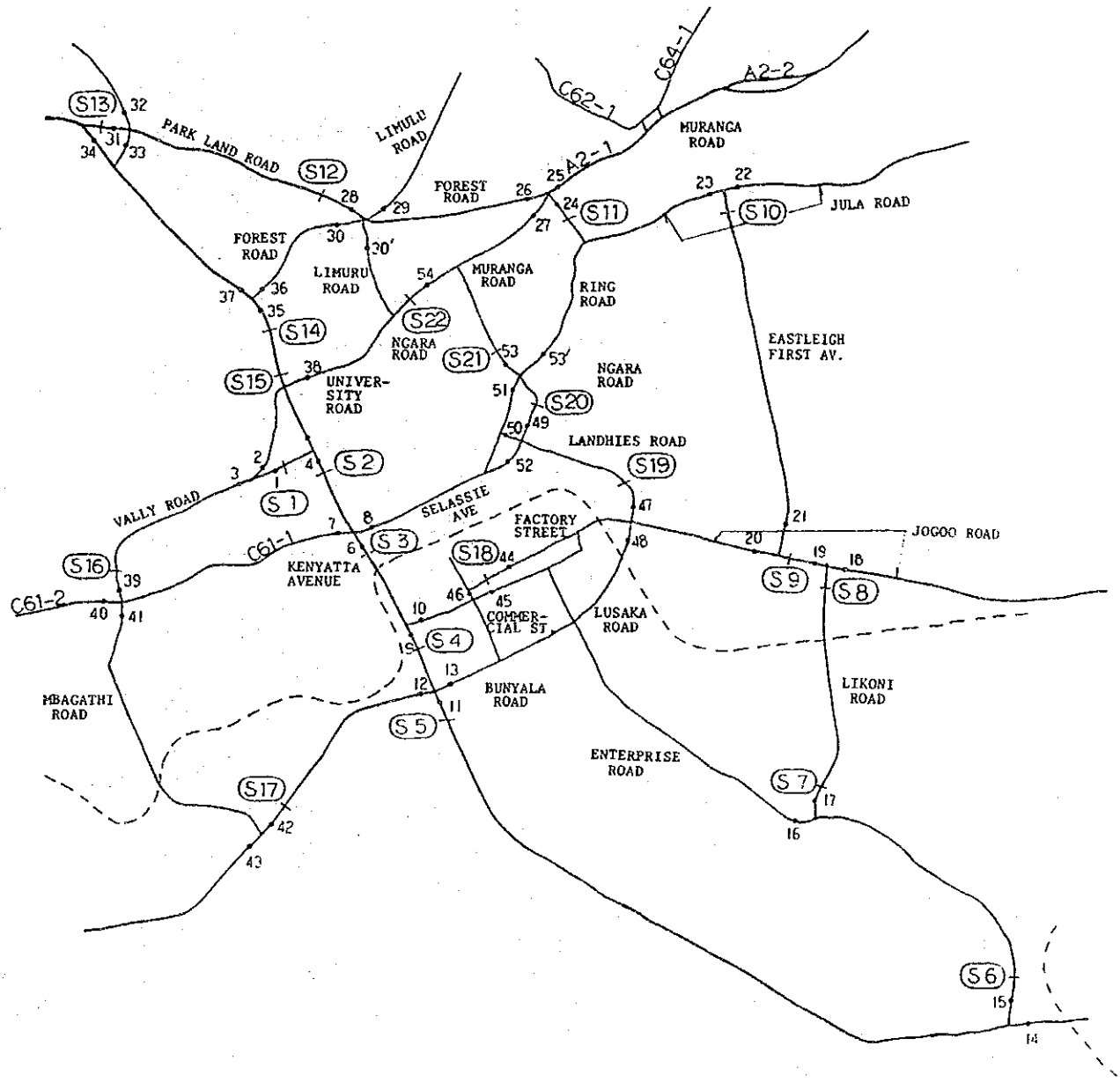


Fig. A- V-5.2

Survey and Measure Points of Present Conditions of Road (City and Outskirts)

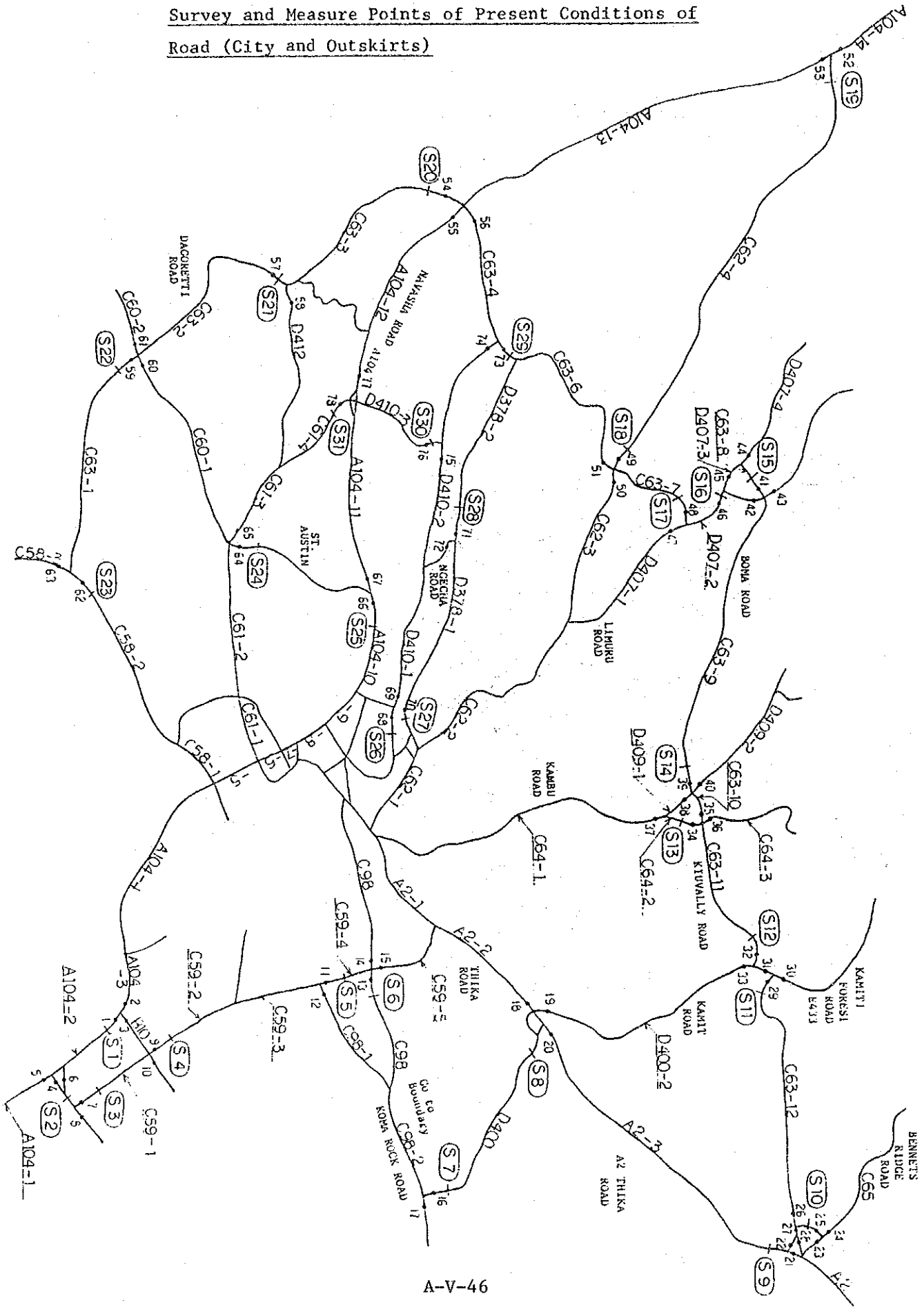


Table A- V-5.3

Table-

Present Road Inventory

REGION: C.B.D.

No.1

Survey point	Intersection		Measured point	Name of the road	Width of carriage way (m)	No. of lanes	④ ② ↑up central reserve ③ ⑤ pedes-trian carriage way ① shoulder ①M ②M ③M ④M ⑤M					Remarks
	with signal	round about					Central Reserve	Shoul-der	Shoul-der	Pedest-rian	Pedest-rian	
S1	o	-	1	Kenyatta Av.	16M	5	1M	-	-	10M	2M	Up - 3 lanes Down - 2 lanes
			2	Nyerere Rd.	6.5	2	-	-	-	3	2	Direction S1→S15 (one way)
			3	Valley Rd.	13.5	4	-	-	-	1.5	1.5	Single carriageway - 2 way
S2	o	o	5	Uhuru Hgw.	19	6	5.5	-	-	4.5	4.5	Dual carriageway S2→S3
			4	" "	19.5	6	5.5	-	-	4.5	5.0	" " "
												Iϕ = 39 Oϕ = 68
S3	o	o	8	H. Sellas-sie	21.0	6	4.0	-	-	6.0	2M	Dual carriageway
			7	" "	11.0	4	-	-	-	1.5	2.0	Iϕ = 31 Oϕ = 60
			6	Uhuru Hgw.	19.0	6	6.0	-	-	2.0	1.5	No.7 - single carriageway - 2 way
S4	o	o	10	Commercial St.	9.0	2	-	-	-	1.5	2.0	Single carriageway - 2 way
			9	Uhuru Hgw.	18	6.0	9.0	-	-	4.0	4.5	Dual carriageway
												Iϕ = 43.5 Oϕ = 65.5
S5	o	o	13	Lusaka Rd.	9.0	2.0	-	-	-	5.0	4.0	S5→S18 single c. way - 2 way
			11	Uhuru Hgw.	14.5	4	13.0	-	-	4.0	3.0	Dual carriageway
			12	Langaku Rd	7.0	2	-	-	-	None	2.0	Single c.way 2 way
												Iϕ = 43.0 Oϕ = 77
S6	-	-	14	A104	14.0	4	28.5	3.0	3.0	-	-	Dual carriageway
	-	-	15	Enterprise Rd.	6.0	2	-	3.0	3.0	-	-	Single c. way
S7	-	-	16	" "	6.0	2	-	3.0	4.0	-	-	
	-	-	17	Likoni Rd.	7.0	2	-	3.0	2.0	-	-	
S8	-	o	19	Jogoo Rd.	16	4	6.0	1.0	1.0	2.0	3.0	90.0m Elliptical $I\phi_1 = 90.0$, $O\phi_1 = 108$
												34.5 $I\phi_2 = 34.5$, $O\phi_2 = 50.4$
	-	o	18	" "	8.0	2	-	-	1.0	-	4.0	Reserve onleft = 4.0m

REGION: C.B.D.

No.2

Survey point	Intersection		Measured point	Name of the road	Width of carriage way (m)	No. of lanes	④ pedes-trian ② carriage way ↑up central reserve ① ③ ⑤ shoulder					Remarks
	with signal	round about					①M Central Reserve	②M Shoul-der	③M Shoul-der	④M Pedest-rian	⑤M Pedest-rian	
S9	-	o	21	Ruaha Rd.	12.0	4	-	1.0	1.0	4.5	5.0	Elliptical Roundabout $I\phi_1$ = 86.0m $O\phi_1$ = 101 $I\phi_2$ = 28.5
	-	o	20	Jogoo Rd.	15	4	8.5	1.0	1.0	3.0	3.0	$O\phi_2$ = 43.5
S10	-	-	22	Juja Rd.	10	2	-	-	-	3.0	3.0	Shoulder within 10m carriageway Right reserve 5m
	-	-	23	Juja Rd.	10	2	-	-	-	1.5	3.0	No reserve on left; Right reserve=5m
S11	-	o	26	Forest Rd.	14	4	4.0	-	-	3.5	1.0	Reserve on right 7m, reserve on left=11.5
	-	o	25	Muranga Rd.	20	4	1.5	-	-	2.0	1.5	Reserve on left=9m, Roundabout Iϕ = 59.0 Oϕ = 73.0
	-	o	24	Ring Rd.	7.0	2	-	-	-	-	3.0	Left reserve = 22m (Including pedestrian) Right " = 8m
	-	o	27	Muranga Rd.	14.0	4	-	0.5	0.5	5.5	6.5	
S12	-	o	30	Forest Rd.	6.0	2	-	1.5	1.5	-	-	Left reserve = 7.0m, Right reserve = 3.0m
	-	o	30		7.5	2	-	1.0	1.0			Right reserve = 13.5m, Left reserve = 9.0m
	-	o	26	Forest Rd.	14.0	4	9.0	-	-	3.0m	7m	Roundabout $I\phi_1$ = 24.5m $O\phi_1$ = 40.5
	-	o	29	Limuni Rd.	7.5	2	-	1.0	1.0	1.5	3	Right reserve = 8, Left reserve = 6m
	-	o	28	Parklands Rd.	7.0	2	-	1.0	1.0	-	9.5	Left reserve = 3m
S13	-	o	31	Parkland "	7.0	2	-	1.0	1.0	4.5	1.0	Parking = 3 (Right)
	-	o	32	Lonce Kab	6.0	2	-	1.0	1.0	3.5	3.0 Including R.	
	-	o	33	Ring Rd. Westlands	6.5	2	-	3.0	1.0		2	Rd. reserve of right = 4.5
			34	Waiyalci way	8.0	2	-	2	2	-	-	Right reserve = 4m, Left reserve = 4.0m
S14	-	o	37		18.0	6	2.5	-	-	1.0	2.0	

REGION: C.B.D.

No.3

Survey point	Intersection		Measured point	Name of the road	Width of carriage way (m)	No. of lanes	④ pedes-trian ② ↑up central reserve ③ ⑤ carriage way ① shoulder					Remarks
	with signal	round about					①M Central Reserve	②M Shoul-der	③M Shoul-der	④M Pedest-rian	⑤M Pedest-rian	
S14	-	o	35	Uhuru	19.0	6	5.5	-	-	4.5	4.5	Left reserve = 6.0 = Right reserve Roundabout: Iϕ = 54 Oϕ = 70
	-	o	36	Meuseum Hill	9.0	2	-		2.0	3.0		Right reserve = 5m, Left reserve = 10m
S15	-	o	38	Univ. way	13.0	4	-	-	2			Left reserve + pedestrian = 6m
S16	-	o	40	Ngong Rd.	7.0	2	-	1.0	1.0	2.5	2.0	Left reserve = 10 = Right reserve
	-	o	41	Mbaguthi Rd.	14.0	2	7.0	1.5	2.5	2.0	-	" " = 3m Roundabout Iϕ = 53.5 Oϕ = 67.5m
	-	o	39	Valley Rd.	11.5	2	-	1.0	1.0	2.0	2	Reserve on Right = 3.0m
S17	-	-	42	Langath Rd	7.5	2	-	-	-	3.5	3.0	Reserve on each side 10.0m
	-	-	43	"	7.0	2	-	-	3.0	2.0	-	Reserve on right = 5m, on left = 7m
S18	-	o	46	W/shop Rd.	6.5	2	-	1.5	1.0	-	-	Left reserve = 4.0 = Right reserve Roundabout = Iϕ = 30, Oϕ = 44
	-	o	45	Commercial St.	7.0	2	-	1.0	1.0	3.0	4	Left reserve = 5.5 = Right reserve
	-	o	44	Factory St	7.5	2	-	-	-	1.5	1.0	Left & right reserve = 2.5m
S19	-	o	48		14.0	4	11.5	-	-	3.0	4.0	Left reserve = 8m Right reserve = 10m Roundabout Iϕ = 71 Oϕ = 87
	-	o	47		17	4	4.0	1.5	1.5	5.0	3.0	
S20	-	o	52	Hailese-llasie	14.0	4	6	2	2	3	3	Roundabout not circular
	-	o	50		12	4	1.5	1.0	1.0	3	5	Left reserve = 4.5
	-	o	49	Ngara	14.0	4	7.5	2	2.5	5.0	4.0	
S21	-	o	53	Ngara	7.0	2	-	-	-	-	4.0	Reserve on right = 9m
	-	o	53'	Ring Rd.	12	4	3	1.5	1.0	1.5	4.0	Iϕ = 46 Oϕ = 62
	-	o	51		14.0	4	1.0	-	-	3.0	3.0	-
S22	-	-	54	Muranga	15.0	4	9.5	2.0	2	1.5	3.0	

Table A-V-5.4

REGION: CITY & OUTSKIRTS

No.1

Survey point	Intersection		Measured point	Name of the road	Width of carriage way (m)	No. of lanes	④ ② up central reserve ③ ⑤ pedes-trian carriage way ① shoulder					Remarks
	with signal	round about					①M Central Reserve	②M Shoul-der	③M Shoul-der	④M Pedest-rian	⑤M Pedest-rian	
S1	-	-	2	A104	14.0	4	26.0	3.0	3	-	-	
	-	-	3	B10	6	2	-	2.5	3	-	-	
	-	-	1	A104	14.0	4	30.5	4.0	2.6	-	-	
S2	-	-	6		6.5	2	-	1.7	2.5	-	-	One-way
			4		6.7	2	-	2.0	1.0	-	-	One-way
			5	A104	7.0	2	-	3.0	3.0	-	-	
S3		o	8		14.0	4	40.5	2.5	2.5	-	-	
		o	7	C59	7.0	2	-	2.5	2.5	-	-	I.D. = ,138.5,89 , O.D. = ,154.5,105 (not circular)
S4		o	9	C59	6.5	2	-	2.5	2.0	-	-	
		o	10	D100	6.5	2	-	2.5	3.5	-	-	Roundabout I.D. = 79.5 O.D. = 93.5
S5	-	-	11	C59	7.0	2	-	3.0	4.0	-	-	Direction S4 to S5
			12		7.0	2	-	2.5	3.0	10.0		Reserve on the left
S6		o	13	C98	6.0	2	-	3.0	4.5	7.0	8.5	Reserves Roundabout I.D.=21.5 O.D.=36.5
		o	15	C59	6.5	2	-	3.0	3.0	10	10	A2 to S6
		o	14	C98	7.5	2		3.0	3.0	5.0		Reserve on the left to fence
S7	-	o	17	C98	9.0	2		2.0	3.0			
		-	16	D400	5.5	2	-	2.5	2.5			S8 to S7
S8		o	19	D400	6.0	2		2.5	2.0			Point 18 already done during O.D. survey.
		o	20	A2	13.0	4	7.0	3.5	4.0	-	-	Roundabout (not curcular) ID = 180,134m OD = 196,150m
S9	-	-	22		6.5	2		2.0	2.5			
	-	-	21	A2	14.0	4	18	4.0	4.0	-	-	

*Note: ID: Inner diameter
OD: Outside diameter

REGION: CITY AND OUTSKIRTS

No.2

Survey point	Intersection		Measured point	Name of the road	Width of carriage way (m)	No. of lanes	④ ② ↑up central reserve ③ ⑤ pedes-trian carriage way ① shoulder					Remarks
	with signal	round about					①M	②M	③M	④M	⑤M	
							Central Reserve	Shoul-der	Shoul-der	Pedest-rian	Pedest-rian	
S10	-	-	27	C63	6.0	2.0		2.5	2.0	-	-	
	-	-	28	C63	6.0	2	-	1.0	2.0	-	-	Acc. lane = 3.0m
	-	-	26	C63	6.0	2		1.5	1.5	-	-	
	-	-	23	C63	6.0	2	-	2.5	2.0	7.0	-	A2 - C65 (pt 23 → 24)
	-	-	24	C63	6.0	2	-	2.5	2.0	7.0	-	" "
S11	-	-	29	C63	6.0	2		1.0	1.0	-	-	Direction S10 → S11
	-	-	30	E433	5.5	2	-	-	0.5	-	-	
	-	-	31	C63	6.5	2	-	1.5	2.0	-	-	" S11 → S12
S12	-	-	32	C63	6.5	2	-	1.5	1.5	-	-	S13 → S12
	-	-	33	D400	5.5	2		1.0	2.0	-	-	A2 → S12
S13	-	-	37	C64	5.5	2	-	2.0	1.5	-	-	
	-	o	34		5.5	2	-	1.0	1.0	-	-	Pt 37 → 34
	-	o	35	C63	5.0	2	-	2.0	2.0	-	-	S12 → S14 direction
	-	o	36	C64	5.0	2	-	1.5	1.0	-	-	Pt 34 → 36
S14	-	-	40	D409	6.0	2	-	1.0	1.5	-	-	
	-	-	38	C64	5.0	2	-	2.5	2.0	-	-	
	-	-	39	C63	5.5	2	-	1.5	1.0	-	-	Steep horizontal slope to Kiambay from Intersection.
S15	-	-	42	E427	6.0	2	-	1.5	1.5	-	-	Pt 43 → 42 direction
	-	-	41	C63	6.0	2	-	1.0	1.5	-	-	Pt 41 → D407 direction
	-	-	43	E427	6.0	2	-	1.5	2.0	-	-	Pt 43 → 42 direction
	-	-	44	D407	5.5	2	-	3.0	3.0	-	-	Pt 45 → 44 "
S16	-	-	46	D407	5.5	2	-	1.5	2.0	-	-	Direction, Pt 45 → 46
	-	-	45	D407	5.5	2	-	2.0	2.0			" "

REGION: CITY AND OUTSKIRTS

No.3

Survey point	Intersection		Measured point	Name of the road	Width of carriage way (m)	No. of lanes	④ pedes-trian ② ↑up central reserve ③ ⑤ carriage way ① shoulder					Remarks
	with signal	round about					①M Central Reserve	②M Shoul-der	③M Shoul-der	④M Pedest-rian	⑤M Pedest-rian	
S17	-	-	47	D407	5.5	2	-	2.0	2.0	-	-	
	-	-	48	C63	5.0	2	-	1.5	1.0	-	-	Direction D407 → C63
S18	-	-	50	C62	7.0	2	-	2.5	4.0	-	-	Direction Pt 50 → 49
	-	-	49	C62	7.0	2	-	2.5	2.5	-	-	Direction S18 → S19
	-	-	51	C63	6.5	2	-	1.5	2.0	-	-	Direction Pt 51 → 56
S19	-	-	52	A104	7.0	2	-	3.0	2.5	-	-	Direction 52 → 53 pt.
	-	-	53	A104	7.0	2	-	3.5	1.5	-	-	Direction 52 → 53 pt.
S20	-	-	56	C63	6.5	2	-	3.0	3.0	-	-	Direction S20 → S18
	-	-	54	C63	6.5	2	-	3.5	3.5	-	-	Direction pt. 54 → 56
	-	-	55	A104	6.0	2	-	2.0	2.5	-	-	Direction pt. 54 → City centre
S21	-	-	57	C63	7.0	2	-	2.5	1.0	-	-	Direction S21 → S22
	-	-	58	D412	5.0	2	-	2.0	3.0	-	-	Direction pt. 58 → City centre
S22	-	o	59	C63	5.0	2	-	2.0	2.5	-	-	Direction S22 → S23 Roundabout I.ϕ = 21.5 Oϕ = 35.5
	-	o	60	C60	6.0	2	-	3	3	-	-	Direction S22 → S23
	-	o	61	C60	5.5	2	-	2.0	3.0	-	-	Direction pt. 61 → 60
S23	-	-	63	C58	5.5	2	-	2.5	2.5	-	-	Direction pt. 63 → 62
	-	-	62	C58	6.0	2	-	3.0	2.5	-	-	S23 → A104
S24	-	o	65	C61	6.5	2	-	3.0	3.0	-	-	Roundabout (K.S.T.C.)
	-	o	64		6.0	2	-	1.0	-	-	1.5	Direction S24 → S25 Right reserve - 3m
S25	-	-	67	A104	13	4	9.0	-	-	2.0	2.5	Road reserve on each site = 7m
	-	-	66	A104	8.5	2	-	8.0	1.0		1.5	Reserve on right = 7m left = 2m

REGION: CITY AND OUTSKIRTS

No.4

Survey point	Intersection		Measured point	Name of the road	Width of carriage way (m)	No. of lanes	④ ② ↑up central reserve ③ ⑤ pedes-trian / carriage way ① / shoulder					Remarks
	with signal	round about					①M	②M	③M	④M	⑤M	
							Central Reserve	Shoul-der	Shoul-der	Pedest-rian	Pedest-rian	
S26	-	-	68	Ioner Kabete	5.5	2	-	-	2.5	2.5	-	Left reserve = 10.0, right = 2.0m
	-	-	69	"	6.0	2	-	-	-	3.0	0.5	Left & right reserves = 5m each
	-	-	70	Peponi Rd.	6.0	2	-	2.0	2.0	-	-	Reserve on left = 2m to fence
S28	-	-	72	Naecha Rd.	5.0	2	-	1.5	1.0	-	-	Direction pt. 72 → Githathuni Rd.
	-	-	71	Githathuni Rd.	5.0	2	-	3.0	-	-	-	Direction S28 → S29
S29	-	-	74	Ioner Kabete Rd. (E422)	6.0	2	-	2.5	2.0	-	-	Direction S29 → S30
	-	-	73	C63	6.0	2	-	4.0	4.0	-	-	
S30	-	-	75	E422	5.5	2	-	-	3.5	-	-	
	-	-	76	D410	4.5	2	-	3.0	2.0	-	-	Direction E422 → Kabete campus
S31	-	o	78		6.0	2	-	3.0	3.0	-	-	Direction S31 → City centre
	-	-	77	A104	6.5	2	-	4.0	2.5	-	-	Reserve on right = 13.0m " on left = 9.5m

Appendix
V.6 Present OD table of total vehicles

********** SHUUKEI (2) **********
PRESENT OD TABLE BY TYPE OF VEHICLE

STATION NO. < TOTAL >
DIRECTION < TOTAL >
TYPE OF VEHICLE < TOTAL >

UNIT:TRIP

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1.	276	1910	161	26	62	548	3843	720	196	28	2925	1681	7	45	688	762	1570	9	30	15487
2.	2977	813	431	138	334	204	1961	285	151	20	398	205	9	0	137	415	447	39	5	8969
3.	299	421	297	48	6	112	1014	86	88	10	750	833	0	5	112	126	238	0	6	4451
4.	24	135	18	0	0	20	544	22	28	3	108	191	0	0	72	66	124	0	0	1355
5.	48	311	45	5	13	42	293	34	14	0	129	59	0	6	114	87	149	0	0	1349
6.	987	372	92	47	25	298	472	68	41	0	212	97	2	0	114	178	122	0	0	3127
7.	2764	1389	758	180	156	325	2690	339	272	7	678	260	6	18	130	753	302	2	9	11038
8.	1379	330	160	45	99	104	770	59	11	2	100	26	0	0	33	78	24	0	5	3225
9.	615	122	132	40	10	20	163	9	93	22	88	32	13	0	13	29	25	0	4	1430
10.	54	28	5	5	0	0	38	0	12	2	10	2	2	0	0	2	0	0	0	160
11.	2695	318	599	108	72	110	526	28	116	45	190	78	10	0	26	123	137	0	0	5181
12.	1803	274	938	303	50	71	240	5	61	4	101	150	28	0	44	122	104	0	5	4303
13.	19	13	8	2	2	0	17	0	6	0	18	32	2	0	5	7	18	0	0	149
14.	150	20	5	0	9	6	23	0	0	0	19	5	6	0	0	37	0	0	0	280
15.	772	93	74	26	64	48	239	12	21	0	34	60	0	0	12	99	32	0	0	1586
16.	766	386	189	38	49	231	934	124	15	10	223	65	11	15	132	352	310	0	0	3850
17.	1590	347	269	95	60	98	404	89	32	2	132	111	9	0	30	351	2	0	0	3621
18.	7	5	0	6	0	0	2	6	0	0	4	0	0	0	0	3	0	0	0	33
19.	65	22	5	0	4	5	9	0	5	2	2	14	0	0	0	0	0	0	0	133
20. *	17290	7309	4186	1112	1015	2242	14182	1886	1162	157	6121	3901	105	89	1662	3590	3604	50	64	69727
21. -19	533	90	39	10	12	38	104	5	12	0	64	13	8	0	3	10	12	0	2	955
22.	652	85	53	7	9	19	92	4	35	2	190	46	2	0	0	23	8	0	0	1227
23.	600	23	113	19	40	11	270	3	3	3	11	0	0	0	13	31	70	0	0	1210
24.	588	34	66	56	46	41	231	12	2	0	12	30	0	0	2	68	20	0	0	1208
25.	473	39	45	28	45	25	131	19	0	0	56	39	6	2	2	30	31	0	0	971
26.	437	47	20	32	41	17	164	5	0	0	20	11	5	0	0	58	17	0	0	874
27.	672	49	53	73	63	39	447	17	5	14	56	32	0	0	5	45	30	0	0	1600
28. * -26	3955	367	389	225	256	190	1439	65	57	19	409	171	21	2	25	265	188	0	2	8045

********** SHUUKEI (2) **********
PRESENT OD TABLE BY TYPE OF VEHICLE

STATION NO. (TOTAL)
DIRECTION (TOTAL)
TYPE OF VEHICLE (TOTAL)

UNIT:TRIP

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19 *	-19
29.	101	9	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15
30.	102	5	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	10
31.	103	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
32.	104	113	24	15	0	5	0	129	9	0	0	32	2	0	0	5	8	7	0	0	349
33.	105	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
34.	107	9	6	6	0	0	1	5	0	0	0	0	0	0	0	0	0	0	0	0	27
35.	108	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
36.	109	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2
37.	110	162	21	6	0	10	15	44	0	0	0	0	0	0	0	5	3	5	0	0	271
38.	111	6	5	0	0	4	0	9	0	0	0	0	0	0	0	0	0	0	0	0	24
39.	112	70	0	0	5	0	6	43	0	0	0	2	0	0	0	7	0	0	0	0	133
40.	113	882	127	100	44	20	211	327	58	10	0	70	50	3	3	21	124	11	0	0	2061
41.	114	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
42.	115	105	14	0	0	5	9	46	0	0	0	0	18	0	0	0	0	6	0	0	203
43.	116	28	28	2	4	2	5	53	1	0	0	0	0	0	0	0	15	2	0	0	140
44.	117	43	0	5	0	0	0	36	0	0	0	0	0	0	0	0	0	1	0	0	85
45.	118	312	18	11	0	70	89	75	0	0	0	11	5	0	0	0	18	17	0	0	626
46.	119	82	2	5	0	0	0	9	0	0	0	0	0	0	0	0	4	2	0	0	104
47.	120	198	17	6	11	16	36	113	0	0	0	0	9	0	0	0	5	0	0	0	411
48.	121	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
49.	122	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	11
50.	123	178	17	6	4	6	69	32	0	0	0	2	0	0	0	6	13	0	0	0	333
51.	124	27	0	5	0	0	4	28	0	0	0	0	0	0	0	0	2	6	0	0	72
52.	125	26	20	0	0	0	0	31	0	0	0	4	5	0	0	0	2	0	0	0	88
53.	126	355	12	17	10	16	6	283	8	2	2	13	9	0	3	8	21	44	0	0	809
54.	127	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
55.	128	143	3	0	0	0	0	54	0	2	0	0	0	0	0	0	0	0	0	0	202
56.	129	5	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	10
57.	130	23	0	0	0	0	0	15	0	0	0	0	0	0	0	0	7	0	0	0	45
58.	131	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
59.	132	36	0	0	5	0	0	17	0	0	0	0	0	0	0	6	3	12	0	0	79
60.	133	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61.	134	22	0	0	0	0	0	2	0	0	0	0	2	0	0	7	0	0	0	0	33
62.	135	105	5	2	2	2	8	29	0	0	0	0	0	0	0	0	0	0	0	0	153
63.	136	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
64.	137	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
65.	138	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	5
66.	139	0	0	0	5	0	8	5	0	0	0	0	0	0	0	0	6	0	0	0	24
67.	140	39	0	0	0	0	8	24	0	2	0	0	0	0	0	0	5	0	0	0	78
68.	141	40	3	0	0	6	0	62	11	0	0	0	0	0	0	0	3	0	0	0	125
69.	*-141	3038	322	186	107	162	475	1481	87	16	2	136	100	8	6	65	245	113	0	0	6549
70.	TOTAL	24283	7998	4761	1444	1433	2907	17102	2038	1235	178	6666	4172	134	97	1752	4100	3905	50	66	84321

********** SHUUKEI (2) **********
PRESENT OD TABLE BY TYPE OF VEHICLE

STATION NO. (TOTAL)
DIRECTION (TOTAL)
TYPE OF VEHICLE (TOTAL)

UNIT:TRIP

		(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(35)	(36)	(37)	(38)	(39)	(40)
		20	21	22	23	24	25	26 *	-26	101	102	103	104	105	107	108	109	110	111	112	113
1.	1	228	339	640	353	331	274	571	2736	0	0	0	102	10	2	0	6	101	9	14	756
2.	2	89	68	73	37	23	17	65	372	0	0	0	26	0	0	0	0	0	8	12	168
3.	3	28	49	111	40	52	19	78	377	0	0	0	0	11	8	0	0	5	0	6	29
4.	4	4	10	35	38	26	60	68	241	0	0	0	11	0	0	0	0	7	0	0	62
5.	5	11	16	24	23	27	37	59	197	0	0	0	13	0	4	0	0	20	6	4	33
6.	6	49	41	36	27	41	33	65	292	0	0	0	7	0	8	0	0	37	0	8	97
7.	7	55	49	247	216	83	120	211	981	9	0	0	56	0	4	0	0	36	12	12	179
8.	8	11	7	19	12	12	23	45	129	0	0	0	0	0	0	0	0	0	0	0	6
9.	9	9	22	2	0	5	0	10	48	0	0	0	0	0	0	0	0	0	4	0	7
10.	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
11.	11	44	189	0	4	9	20	37	303	0	0	0	0	0	0	0	0	7	3	0	78
12.	12	14	23	9	30	44	5	29	154	0	0	0	6	0	8	0	0	0	0	0	26
13.	13	0	0	4	16	43	0	13	76	0	0	0	0	0	0	0	0	0	0	0	0
14.	14	0	0	0	7	0	7	0	14	0	0	0	0	0	0	0	0	0	0	0	0
15.	15	3	3	0	19	2	0	0	27	0	0	0	0	0	0	0	0	0	0	0	15
16.	16	15	12	74	63	47	17	70	298	0	0	0	7	0	0	0	0	6	2	0	112
17.	17	12	11	44	39	26	24	44	200	0	0	0	0	0	0	5	0	0	0	0	14
18.	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19.	19	2	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
20.	* -19	574	839	1318	924	771	656	1365	6447	9	0	0	228	21	34	5	6	219	44	56	1586
21.	20	1	6	4	5	2	0	6	24	0	0	0	1	0	0	0	0	0	0	0	3
22.	21	2	13	14	6	8	6	6	55	0	0	0	0	0	0	0	0	4	0	0	5
23.	22	5	10	0	4	10	11	8	48	0	0	0	5	0	0	0	0	0	0	0	33
24.	23	4	13	0	7	0	0	7	31	0	0	0	10	0	0	0	0	0	0	0	15
25.	24	5	3	9	15	10	5	7	54	0	0	0	10	0	0	0	0	2	0	0	13
26.	25	0	0	0	0	0	0	6	6	0	0	0	1	0	0	0	0	0	0	0	6
27.	26	0	5	28	9	0	0	0	42	0	0	0	36	0	0	0	0	0	0	0	42
28.	* -26	17	50	55	46	30	22	40	260	0	0	0	63	0	0	0	0	6	0	0	117

********** SHUUKEI (2) **********
PRESENT OD TABLE BY TYPE OF VEHICLE

STATION NO. (TOTAL)
DIRECTION (TOTAL)
TYPE OF VEHICLE (TOTAL)

UNIT:TRIP

		(21) 20	(22) 21	(23) 22	(24) 23	(25) 24	(26) 25	(27) 26 *	(28) -26	(29) 101	(30) 102	(31) 103	(32) 104	(33) 105	(34) 107	(35) 108	(36) 109	(37) 110	(38) 111	(39) 112	(40) 113
29.	101	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30.	102	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31.	103	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
32.	104	2	2	3	13	2	0	19	41	0	0	0	0	0	0	0	0	20	0	0	0
33.	105	0	0	0	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0
34.	107	0	0	0	0	0	0	6	6	0	0	0	0	0	0	0	0	0	0	0	0
35.	108	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
36.	109	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37.	110	0	0	0	0	0	0	0	0	0	0	0	2	7	0	0	0	0	0	0	11
38.	111	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
39.	112	0	0	0	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0
40.	113	3	5	22	33	12	12	26	113	0	0	0	0	0	6	0	0	20	0	0	16
41.	114	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
42.	115	0	0	0	0	0	0	7	7	0	0	0	0	0	0	0	0	0	0	0	0
43.	116	3	4	0	0	0	0	0	7	0	0	0	12	0	0	0	0	0	0	0	11
44.	117	2	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	8
45.	118	5	0	0	5	0	0	0	10	0	0	0	7	0	0	0	0	0	0	0	16
46.	119	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
47.	120	0	0	0	2	0	0	0	2	0	0	0	10	0	0	0	0	0	0	0	12
48.	121	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49.	122	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50.	123	4	13	9	0	2	0	9	37	0	0	0	0	0	0	0	0	0	0	0	0
51.	124	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0
52.	125	2	1	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0
53.	126	5	5	0	0	5	0	10	25	0	0	0	38	7	0	0	0	0	0	0	21
54.	127	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
55.	128	2	0	0	0	0	0	11	13	0	0	0	0	0	0	0	0	0	0	3	0
56.	129	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
57.	130	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0
58.	131	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
59.	132	0	0	0	0	0	0	0	0	0	0	0	27	0	0	0	0	0	0	0	0
60.	133	0	0	0	0	0	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0
61.	134	0	0	0	0	0	0	5	5	0	0	0	8	0	0	0	0	0	0	0	0
62.	135	0	0	0	0	0	0	0	0	0	0	0	15	0	0	0	0	0	0	0	5
63.	136	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
64.	137	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
65.	138	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0
66.	139	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0
67.	140	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0
68.	141	0	0	0	0	0	0	0	0	0	0	0	47	0	0	0	0	0	0	0	0
69.	*-141	28	30	34	61	21	16	95	285	0	0	0	193	14	6	0	0	40	0	3	100
70.	TOTAL	619	919	1407	1031	822	694	1500	6992	9	0	0	484	35	40	5	6	265	44	59	1803

********** SHUUKEI (2) **********
PRESENT OD TABLE BY TYPE OF VEHICLE

STATION NO. (TOTAL)
DIRECTION (TOTAL)
TYPE OF VEHICLE (TOTAL)

UNIT:TRIP

		(41)	(42)	(43)	(44)	(45)	(46)	(47)	(48)	(49)	(50)	(51)	(52)	(53)	(54)	(55)	(56)	(57)	(58)	(59)	(60)
		114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133
1.	1	2	90	7	35	189	120	296	5	0	217	54	10	410	2	80	8	17	0	13	0
2.	2	4	7	31	13	29	2	16	0	0	16	19	5	28	0	0	0	1	0	0	2
3.	3	0	0	0	6	20	6	7	0	0	10	4	12	62	9	5	0	0	0	8	0
4.	4	0	6	0	0	30	8	13	0	0	5	0	5	28	2	0	0	8	0	0	0
5.	5	0	17	3	7	34	2	20	0	0	6	0	11	34	0	0	0	5	0	11	0
6.	6	0	40	0	0	73	2	34	5	0	19	13	0	19	0	0	0	9	2	4	0
7.	7	0	37	24	30	117	24	54	4	2	28	3	26	190	0	40	0	14	2	40	0
8.	8	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0
9.	9	0	0	0	0	1	0	9	0	0	2	0	4	0	0	0	0	2	0	0	0
10.	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11.	11	0	5	0	6	9	0	10	0	0	4	0	7	14	0	0	0	2	0	0	0
12.	12	0	0	0	0	12	0	0	0	0	7	0	0	2	0	0	0	0	0	0	0
13.	13	0	0	0	0	0	0	9	0	0	0	0	0	11	0	2	0	2	0	0	0
14.	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15.	15	0	0	12	0	0	0	2	0	0	0	0	0	9	0	0	0	0	0	8	0
16.	16	0	18	28	11	28	0	15	0	0	7	0	2	47	0	0	0	9	0	11	0
17.	17	0	0	0	13	10	0	17	9	0	5	0	0	14	0	3	0	0	0	0	0
18.	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19.	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20.	* -19	6	220	105	121	552	173	493	23	2	326	93	82	872	13	130	8	69	4	95	2
21.	20	0	0	2	0	3	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0
22.	21	0	0	12	0	2	0	0	0	0	10	0	0	2	0	0	0	2	2	0	0
23.	22	0	0	4	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24.	23	0	0	0	0	0	8	0	0	0	11	0	0	0	0	0	0	0	0	0	0
25.	24	0	0	0	0	4	2	0	0	0	13	0	0	0	0	2	0	0	0	0	0
26.	25	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0
27.	26	0	0	0	0	0	0	0	0	0	7	0	0	5	0	5	0	0	0	0	0
28.	* -26	0	0	18	0	19	10	0	0	0	46	0	6	7	0	7	0	2	2	0	0

********** SHUUKEI (2) **********
PRESENT OD TABLE BY TYPE OF VEHICLE

STATION NO. (TOTAL)
DIRECTION (TOTAL)
TYPE OF VEHICLE (TOTAL)

UNIT:TRIP

		(41) 114	(42) 115	(43) 116	(44) 117	(45) 118	(46) 119	(47) 120	(48) 121	(49) 122	(50) 123	(51) 124	(52) 125	(53) 126	(54) 127	(55) 128	(56) 129	(57) 130	(58) 131	(59) 132	(60) 133
29.	101	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0
30.	102	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31.	103	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
32.	104	0	8	0	0	2	0	8	0	0	0	14	0	37	0	0	0	0	0	17	0
33.	105	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	0	0	0	0	0
34.	107	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
35.	108	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
36.	109	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37.	110	0	0	0	6	0	0	0	0	0	0	0	0	14	0	0	0	0	0	0	0
38.	111	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
39.	112	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
40.	113	0	14	5	3	17	8	4	0	0	10	9	8	36	0	0	0	0	0	9	0
41.	114	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
42.	115	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
43.	116	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0
44.	117	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0
45.	118	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
46.	119	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
47.	120	0	0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0
48.	121	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49.	122	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50.	123	0	0	0	0	20	2	14	0	0	7	0	0	31	0	0	0	0	0	0	0
51.	124	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
52.	125	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
53.	126	0	0	7	0	0	0	0	0	0	0	0	0	2	4	0	0	0	0	0	0
54.	127	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
55.	128	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
56.	129	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
57.	130	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
58.	131	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
59.	132	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
60.	133	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61.	134	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
62.	135	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
63.	136	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
64.	137	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
65.	138	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
66.	139	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
67.	140	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
68.	141	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0
69.	*-141	0	22	12	9	41	10	33	0	0	42	24	10	138	0	8	0	0	0	26	0
70.	TOTAL	6	242	135	130	612	193	526	23	2	414	117	98	1017	13	145	8	71	6	121	2

********** SHUUKEI (2) **********
PRESENT OD TABLE BY TYPE OF VEHICLE

STATION NO. (TOTAL)
DIRECTION (TOTAL)
TYPE OF VEHICLE (TOTAL)

UNIT:TRIP

		(61)	(62)	(63)	(64)	(65)	(66)	(67)	(68)	(69)	(70)
		134	135	136	137	138	139	140	141	*-141	TOTAL
1.	1	6	79	0	14	0	14	18	54	2740	20963
2.	2	0	15	0	0	9	0	0	0	411	9752
3.	3	0	4	0	0	0	0	0	6	218	5046
4.	4	0	14	0	0	0	2	0	0	201	1797
5.	5	0	0	0	0	0	0	2	0	232	1778
6.	6	7	11	0	5	0	0	17	0	417	3836
7.	7	14	58	0	2	8	0	0	48	1073	13092
8.	8	2	0	0	0	0	0	0	0	12	3366
9.	9	0	0	0	0	0	0	0	0	29	1507
10.	10	0	0	0	0	0	0	0	0	4	164
11.	11	0	0	0	0	0	0	0	0	145	5629
12.	12	0	0	0	9	0	0	0	0	70	4527
13.	13	0	0	0	0	0	0	0	0	24	249
14.	14	0	5	0	0	0	0	0	0	5	299
15.	15	0	0	0	0	0	0	0	0	46	1659
16.	16	0	6	2	0	0	0	0	0	311	4459
17.	17	0	0	0	0	3	0	0	0	93	3914
18.	18	0	0	0	0	0	0	0	0	0	33
19.	19	0	0	0	0	0	0	0	0	0	135
20.	* -19	29	192	2	30	20	16	37	108	6031	82205
21.	20	0	0	0	0	0	0	0	0	14	993
22.	21	0	0	0	0	0	0	0	0	39	1321
23.	22	0	0	0	0	0	0	0	0	52	1310
24.	23	0	0	0	0	0	0	0	0	44	1283
25.	24	0	0	0	0	0	0	0	0	46	1071
26.	25	0	0	0	0	0	0	0	0	13	893
27.	26	0	0	0	0	0	0	0	0	95	1737
28.	* -26	0	0	0	0	0	0	0	0	303	8608

********** SHUUKEI (2) **********
PRESENT OD TABLE BY TYPE OF VEHICLE

STATION NO. (TOTAL)
DIRECTION (TOTAL)
TYPE OF VEHICLE (TOTAL)

UNIT:TRIP

		(61)	(62)	(63)	(64)	(65)	(66)	(67)	(68)	(69)	(70)
		134	135	136	137	138	139	140	141	*-141	TOTAL
29.	101	0	4	0	0	0	0	0	0	9	24
30.	102	0	0	0	0	0	0	0	0	0	10
31.	103	0	0	0	0	0	0	0	0	0	0
32.	104	3	41	4	3	3	2	0	89	251	641
33.	105	0	0	0	0	0	0	0	0	11	17
34.	107	0	0	0	0	0	0	0	0	0	33
35.	108	0	0	0	0	0	0	0	0	0	0
36.	109	0	0	0	0	0	0	0	0	0	2
37.	110	0	0	0	0	0	0	0	0	40	311
38.	111	0	0	0	0	0	0	0	0	0	24
39.	112	0	0	0	0	0	0	0	0	0	137
40.	113	2	6	0	0	3	0	5	2	183	2357
41.	114	0	0	0	0	0	0	0	0	0	9
42.	115	0	2	0	0	0	0	0	0	2	212
43.	116	0	0	0	0	0	0	0	0	25	172
44.	117	0	0	0	0	0	0	0	0	17	104
45.	118	0	0	0	0	0	0	0	0	43	679
46.	119	0	0	0	0	0	0	0	0	0	104
47.	120	0	0	0	0	0	0	0	0	26	439
48.	121	0	0	0	0	0	0	0	0	0	8
49.	122	0	0	0	0	0	0	0	0	0	11
50.	123	0	0	0	0	0	0	0	0	74	444
51.	124	0	0	0	0	0	0	0	0	10	82
52.	125	0	0	0	0	0	0	0	0	0	91
53.	126	0	0	0	0	0	0	0	0	79	913
54.	127	0	0	0	0	0	0	0	0	0	2
55.	128	0	0	0	0	0	0	0	0	5	220
56.	129	0	0	0	0	0	0	0	0	0	10
57.	130	0	0	0	0	0	0	0	0	0	47
58.	131	0	0	0	0	0	0	0	0	0	0
59.	132	0	0	0	0	0	0	0	0	27	106
60.	133	0	0	0	0	0	0	0	0	0	4
61.	134	0	0	0	0	0	0	0	0	8	46
62.	135	0	3	0	0	0	0	0	0	23	176
63.	136	0	0	0	0	0	0	0	0	0	0
64.	137	0	0	0	0	0	0	0	0	0	0
65.	138	0	0	0	0	0	0	0	0	3	8
66.	139	0	0	0	0	0	0	0	0	8	32
67.	140	0	0	0	0	0	0	0	0	4	82
68.	141	0	0	0	0	0	0	0	0	55	180
69.	*-141	5	56	4	3	6	2	5	91	903	7737
70.	TOTAL	34	248	6	33	26	18	42	199	7237	98550

Appendix VI

Traffic Demand Forcast

Appendix
VI.1 Future OD table of total vehicles

********** NAIROBI ROAD-USER-INTERVIEW **********
FUTURE OD TABLE BY TYPE OF VEHICLE

TYPE OF VEHICLE (TOTAL)

UNIT:TRIP

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19 *-	19
1	275	1965	166	26	62	558	3907	851	241	34	3351	1792	11	68	782	757	2009	236	38	17129
2	3134	1168	512	185	540	249	2435	1329	431	40	1079	327	21	0	319	1004	2236	314	7	15330
3	304	506	315	49	6	134	1067	230	179	25	1420	1128	0	6	182	224	587	70	13	6445
4	24	185	21	0	0	21	620	48	39	6	236	307	0	0	137	155	300	49	0	2148
5	48	403	46	5	20	57	327	58	33	0	371	84	0	9	296	158	431	48	0	2394
6	1003	489	108	52	27	360	529	144	86	0	808	175	3	0	323	444	319	137	0	5007
7	2779	1533	802	198	176	346	2786	644	549	9	1031	322	6	18	178	786	383	247	24	12817
8	1728	1104	503	85	230	396	1690	880	54	9	1137	62	0	0	225	669	378	212	7	9369
9	811	482	314	100	26	111	496	399	878	92	734	110	28	0	102	589	705	184	11	6172
10	85	152	11	10	0	0	159	0	89	12	129	13	3	0	0	8	0	2	0	673
11	3227	948	1169	299	175	533	1076	409	726	247	1233	267	30	0	168	1316	2380	413	0	14616
12	1903	477	1222	444	105	92	347	8	267	14	331	353	106	0	174	571	930	178	7	7529
13	20	14	11	4	7	0	17	0	34	0	26	72	2	0	17	41	106	12	0	383
14	162	44	5	0	14	10	33	0	0	0	37	8	9	0	0	161	0	52	0	535
15	913	293	150	53	230	153	417	263	91	0	198	251	0	0	49	791	507	250	0	4609
16	693	1069	347	107	102	430	1394	839	119	70	1289	277	14	25	775	3212	3540	767	0	15069
17	2024	1337	761	239	271	169	981	1048	267	4	1332	563	9	0	225	2467	14	773	0	12484
18	215	336	109	32	31	131	435	265	38	22	406	87	4	7	247	1008	1112	316	0	4801
19	67	45	7	0	15	5	14	0	17	5	5	39	0	0	0	0	0	0	0	219
20 *- 19	19415	12550	6579	1888	2037	3755	18730	7415	4138	589	15153	6237	246	133	4199	14361	15937	4260	107	137729
21 20	613	384	93	26	34	109	276	10	104	0	415	49	34	0	11	82	137	27	4	2408
22 21	767	256	115	22	17	80	212	5	213	4	954	125	7	0	0	232	327	72	0	3408
23 22	653	56	200	23	115	25	420	8	9	7	59	0	0	0	57	97	872	30	0	2631
24 23	641	110	109	110	174	91	383	21	33	0	51	41	0	0	23	253	370	80	0	2490
25 24	517	59	114	53	98	45	190	124	0	0	185	91	7	11	10	204	227	65	0	2000
26 25	506	91	35	53	85	41	236	78	0	0	55	18	5	0	0	547	30	172	0	1952
27 26	752	195	104	129	115	55	732	66	14	32	372	110	0	0	8	194	303	61	0	3242
28 *- 26	4449	1151	770	416	638	446	2449	312	373	43	2091	434	53	11	109	1609	2266	507	4	18131

********** NAIROBI ROAD-USER-INTERVIEW **********
FUTURE OD TABLE BY TYPE OF VEHICLE

TYPE OF VEHICLE (TOTAL)

UNIT:TRIP

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	*- 19
29.	101	24	0	0	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	39
30.	102	13	0	0	0	0	0	0	0	0	0	0	0	13	0	0	0	0	0	0	26
31.	103	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
32.	104	131	44	25	0	6	0	202	38	0	0	80	2	0	0	13	127	223	40	0	931
33.	105	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
34.	107	18	7	27	0	0	1	13	0	0	0	0	0	0	0	0	0	0	0	0	66
35.	108	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
36.	109	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2
37.	110	202	27	12	0	50	35	59	0	0	0	0	0	0	0	5	8	6	3	0	407
38.	111	16	9	0	0	7	0	9	0	0	0	0	0	0	0	0	0	0	0	0	41
39.	112	99	0	0	8	0	7	59	0	0	0	2	0	0	0	12	0	0	0	0	187
40.	113	919	204	117	67	26	307	431	130	14	0	112	82	4	3	74	305	79	96	0	2970
41.	114	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
42.	115	137	47	0	0	6	14	63	0	0	0	0	26	0	0	0	0	9	0	0	302
43.	116	29	43	2	7	3	8	67	2	0	0	0	0	0	0	0	65	3	21	0	250
44.	117	55	0	6	0	0	0	54	0	0	0	0	0	0	0	0	0	2	0	0	117
45.	118	339	36	16	0	94	129	100	0	0	0	43	8	0	0	0	108	36	34	0	943
46.	119	98	4	6	0	0	0	11	0	0	0	0	0	0	0	0	14	17	4	0	154
47.	120	229	33	34	36	30	62	188	0	0	0	0	12	0	0	0	4	0	1	0	629
48.	121	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12
49.	122	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	0	5	0	27
50.	123	186	30	12	6	19	105	52	0	0	0	4	0	0	0	55	69	0	22	0	560
51.	124	41	0	7	0	0	5	41	0	0	0	0	0	0	0	0	2	16	1	0	113
52.	125	32	64	0	0	0	0	43	0	0	0	9	6	0	0	0	3	0	1	0	158
53.	126	399	42	20	29	44	7	371	70	5	3	33	13	0	3	20	59	235	18	0	1371
54.	127	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
55.	128	204	8	0	0	0	0	84	0	8	0	0	0	0	0	0	0	0	0	0	304
56.	129	7	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	15
57.	130	32	0	0	0	0	0	18	0	0	0	0	0	0	0	0	17	0	5	0	72
58.	131	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
59.	132	42	0	0	9	0	0	23	0	0	0	0	0	0	0	9	10	54	3	0	150
60.	133	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61.	134	33	0	0	0	0	0	4	0	0	0	0	4	0	0	10	0	0	0	0	51
62.	135	150	17	3	16	7	23	67	0	0	0	0	0	0	0	0	0	0	0	0	283
63.	136	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
64.	137	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
65.	138	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	6
66.	139	0	0	0	9	0	12	5	0	0	0	0	0	0	0	0	17	0	5	0	48
67.	140	47	0	0	0	0	23	54	0	3	0	0	0	0	0	0	8	0	2	0	137
68.	141	67	4	0	0	8	0	69	64	0	0	0	0	0	0	0	4	0	1	0	217
69.	*-141	3571	619	287	214	300	738	2101	304	30	3	285	153	17	6	198	835	680	262	0	10603
70.	TOTAL	27435	14320	7636	2518	2975	4939	23280	8031	4541	635	17529	6824	316	150	4506	16805	18883	5029	111	166463

********** NAIROBI ROAD-USER-INTERVIEW **********
FUTURE OD TABLE BY TYPE OF VEHICLE

TYPE OF VEHICLE (TOTAL)

UNIT:TRIP

		(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(35)	(36)	(37)	(38)	(39)	(40)
		20	21	22	23	24	25	26 *-	26	101	102	103	104	105	107	108	109	110	111	112	113
1.	1	254	367	719	390	342	315	649	3036	0	0	0	134	18	2	0	18	114	9	15	776
2.	2	279	135	133	64	86	33	151	881	0	0	0	33	0	0	0	0	0	11	26	277
3.	3	50	88	201	61	70	46	110	626	0	0	0	0	39	11	0	0	5	0	7	35
4.	4	7	16	70	63	47	104	113	420	0	0	0	21	0	0	0	0	7	0	0	80
5.	5	18	32	44	36	48	66	116	360	0	0	0	49	0	9	0	0	35	8	10	53
6.	6	71	67	110	57	65	56	92	518	0	0	0	12	0	12	0	0	52	0	8	137
7.	7	80	62	302	251	98	140	258	1191	13	0	0	78	0	6	0	0	53	13	12	197
8.	8	73	140	122	100	56	95	226	812	0	0	0	0	0	0	0	0	0	0	0	26
9.	9	45	60	5	0	12	0	38	160	0	0	0	0	0	0	0	0	0	6	0	14
10.	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
11.	11	164	644	0	8	35	70	68	989	0	0	0	0	0	0	0	0	12	7	0	126
12.	12	29	41	18	43	82	5	70	288	0	0	0	11	0	17	0	0	0	0	0	36
13.	13	0	0	6	35	131	0	24	196	0	0	0	0	0	0	0	0	0	0	0	0
14.	14	0	0	0	7	0	33	0	40	0	0	0	0	0	0	0	0	0	0	0	0
15.	15	23	6	0	35	5	0	0	69	0	0	0	0	0	0	0	0	0	0	0	16
16.	16	93	52	195	243	137	48	119	887	0	0	0	34	0	0	0	0	6	2	0	169
17.	17	46	74	278	229	185	48	130	990	0	0	0	0	0	0	10	0	0	0	0	17
18.	18	29	16	60	78	42	14	36	275	0	0	0	11	0	0	0	0	2	1	0	52
19.	19	5	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0
20.	*- 19	1266	1800	2263	1700	1441	1073	2200	11743	13	0	0	383	57	57	10	18	286	57	78	2017
21.	20	1	23	13	28	2	0	20	87	0	0	0	2	0	0	0	0	0	0	0	9
22.	21	3	34	24	19	16	15	21	132	0	0	0	0	0	0	0	0	12	0	0	6
23.	22	10	32	0	8	79	23	12	164	0	0	0	11	0	0	0	0	0	0	0	75
24.	23	3	22	0	10	0	0	39	74	0	0	0	17	0	0	0	0	0	0	0	23
25.	24	8	5	49	17	16	6	11	112	0	0	0	22	0	0	0	0	3	0	0	17
26.	25	0	0	0	0	0	0	14	14	0	0	0	2	0	0	0	0	0	0	0	7
27.	26	0	9	47	28	0	0	0	84	0	0	0	63	0	0	0	0	0	0	0	78
28.	*- 26	25	125	133	110	113	44	117	667	0	0	0	117	0	0	0	0	15	0	0	215

********** NAIROBI ROAD-USER-INTERVIEW **********
FUTURE OD TABLE BY TYPE OF VEHICLE

TYPE OF VEHICLE (TOTAL)

UNIT:TRIP

		(21) 20	(22) 21	(23) 22	(24) 23	(25) 24	(26) 25	(27) 26 *-	(28) 26	(29) 101	(30) 102	(31) 103	(32) 104	(33) 105	(34) 107	(35) 108	(36) 109	(37) 110	(38) 111	(39) 112	(40) 113
29.	101	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30.	102	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31.	103	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
32.	104	3	3	3	27	3	0	28	67	0	0	0	0	0	0	0	0	23	0	0	0
33.	105	0	0	0	5	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0
34.	107	0	0	0	0	0	0	15	15	0	0	0	0	0	0	0	0	0	0	0	0
35.	108	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
36.	109	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37.	110	0	0	0	0	0	0	0	0	0	0	0	2	13	0	0	0	0	0	0	14
38.	111	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
39.	112	0	0	0	5	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0
40.	113	4	6	38	36	18	15	31	148	0	0	0	0	0	10	0	0	25	0	0	28
41.	114	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
42.	115	0	0	0	0	0	0	22	22	0	0	0	0	0	0	0	0	0	0	0	0
43.	116	5	6	0	0	0	0	0	11	0	0	0	19	0	0	0	0	0	0	0	15
44.	117	4	0	0	0	0	0	0	4	0	0	0	3	0	0	0	0	0	0	0	12
45.	118	8	0	0	7	0	0	0	15	0	0	0	10	0	0	0	0	0	0	0	18
46.	119	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
47.	120	0	0	0	2	0	0	0	2	0	0	0	18	0	0	0	0	0	0	0	12
48.	121	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49.	122	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50.	123	6	20	11	0	5	0	13	55	0	0	0	0	0	0	0	0	0	0	0	0
51.	124	0	0	0	0	0	0	0	0	0	0	0	14	0	0	0	0	0	0	0	0
52.	125	4	2	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0
53.	126	7	7	0	0	6	0	11	31	0	0	0	61	14	0	0	0	0	0	0	57
54.	127	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
55.	128	7	0	0	0	0	0	36	43	0	0	0	0	0	0	0	0	0	0	3	0
56.	129	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
57.	130	0	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0
58.	131	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
59.	132	0	0	0	0	0	0	0	0	0	0	0	48	0	0	0	0	0	0	0	0
60.	133	0	0	0	0	0	8	0	8	0	0	0	0	0	0	0	0	0	0	0	0
61.	134	0	0	0	0	0	0	7	7	0	0	0	15	0	0	0	0	0	0	0	0
62.	135	0	0	0	0	0	0	0	0	0	0	0	31	0	0	0	0	0	0	0	9
63.	136	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
64.	137	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
65.	138	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0
66.	139	0	0	0	0	0	0	0	0	0	0	0	13	0	0	0	0	0	0	0	0
67.	140	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0
68.	141	0	0	0	0	0	0	0	0	0	0	0	66	0	0	0	0	0	0	0	0
69.	*-141	48	44	52	82	32	23	166	447	0	0	0	312	27	10	0	0	48	0	3	165
70.	TOTAL	1339	1969	2448	1892	1586	1140	2483	12857	13	0	0	812	84	67	10	18	349	57	81	2397

********** NAIROBI ROAD-USER-INTERVIEW **********
FUTURE OD TABLE BY TYPE OF VEHICLE

TYPE OF VEHICLE (TOTAL)

UNIT:TRIP

		(41) 114	(42) 115	(43) 116	(44) 117	(45) 118	(46) 119	(47) 120	(48) 121	(49) 122	(50) 123	(51) 124	(52) 125	(53) 126	(54) 127	(55) 128	(56) 129	(57) 130	(58) 131	(59) 132	(60) 133
1.	1	2	103	8	40	211	167	341	5	0	235	81	10	456	2	112	12	20	0	16	0
2.	2	6	20	43	26	79	5	38	0	0	41	39	6	54	0	0	0	2	0	0	3
3.	3	0	0	0	12	22	8	7	0	0	40	11	18	79	12	10	0	0	0	14	0
4.	4	0	24	0	0	68	9	27	0	0	18	0	8	81	6	0	0	9	0	0	0
5.	5	0	28	3	9	46	2	30	0	0	9	0	23	102	0	0	0	13	0	18	0
6.	6	0	59	0	0	92	3	55	8	0	28	21	0	38	0	0	0	9	3	6	0
7.	7	0	40	24	32	144	28	67	5	3	39	3	33	230	0	50	0	15	2	49	0
8.	8	0	0	0	0	0	0	0	0	0	0	0	0	12	0	0	0	0	0	0	0
9.	9	0	0	0	0	10	0	18	0	0	3	0	10	0	0	0	0	5	0	0	0
10.	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11.	11	0	6	0	25	15	0	25	0	0	17	0	16	37	0	0	0	2	0	0	0
12.	12	0	0	0	0	19	0	0	0	0	16	0	0	7	0	0	0	0	0	0	0
13.	13	0	0	0	0	0	11	0	0	0	0	0	0	67	0	3	0	7	0	0	0
14.	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15.	15	0	0	19	0	0	0	3	0	0	0	0	0	28	0	0	0	0	0	10	0
16.	16	0	23	47	17	45	0	22	0	0	15	0	4	119	0	0	0	9	0	22	0
17.	17	0	0	0	29	12	0	46	17	0	8	0	0	30	0	4	0	0	0	0	0
18.	18	0	8	15	5	14	0	7	0	0	5	0	1	39	0	0	0	3	0	7	0
19.	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20.	*- 19	8	311	159	195	777	233	686	35	3	474	155	129	1379	20	179	12	94	5	142	3
21.	20	0	0	6	0	7	0	0	0	0	21	0	0	0	0	0	0	0	0	0	0
22.	21	0	0	18	0	2	0	0	0	0	31	0	0	2	0	0	0	4	3	0	0
23.	22	0	0	4	0	27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24.	23	0	0	0	0	0	12	0	0	0	31	0	0	0	0	0	0	0	0	0	0
25.	24	0	0	0	0	4	6	0	0	0	16	0	0	0	0	8	0	0	0	0	0
26.	25	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0
27.	26	0	0	0	0	0	0	0	0	0	10	0	0	6	0	7	0	0	0	0	0
28.	*- 26	0	0	28	0	40	18	0	0	0	109	0	10	8	0	15	0	4	3	0	0

********** NAIROBI ROAD-USER-INTERVIEW **********
FUTURE OD TABLE BY TYPE OF VEHICLE

TYPE OF VEHICLE (TOTAL)

UNIT:TRIP

		(41) 114	(42) 115	(43) 116	(44) 117	(45) 118	(46) 119	(47) 120	(48) 121	(49) 122	(50) 123	(51) 124	(52) 125	(53) 126	(54) 127	(55) 128	(56) 129	(57) 130	(58) 131	(59) 132	(60) 133
29.	101	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0
30.	102	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31.	103	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
32.	104	0	10	0	0	2	0	11	0	0	0	21	0	59	0	0	0	0	0	23	0
33.	105	0	0	0	0	0	0	0	0	0	0	0	0	16	0	0	0	0	0	0	0
34.	107	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
35.	108	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
36.	109	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37.	110	0	0	0	9	0	0	0	0	0	0	0	0	33	0	0	0	0	0	0	0
38.	111	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
39.	112	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
40.	113	0	15	5	3	19	11	4	0	0	12	12	18	37	0	0	0	0	0	17	0
41.	114	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
42.	115	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
43.	116	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0
44.	117	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0
45.	118	0	0	0	0	0	0	0	0	0	22	0	0	0	0	0	0	0	0	0	0
46.	119	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
47.	120	0	0	0	0	0	0	0	0	0	5	2	0	0	0	0	0	0	0	0	0
48.	121	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49.	122	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50.	123	0	0	0	0	25	3	28	0	0	14	0	0	63	0	0	0	0	0	0	0
51.	124	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
52.	125	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
53.	126	0	0	8	0	0	0	0	0	0	0	0	3	7	0	0	0	0	0	0	0
54.	127	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
55.	128	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
56.	129	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
57.	130	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
58.	131	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
59.	132	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
60.	133	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61.	134	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
62.	135	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
63.	136	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
64.	137	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
65.	138	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
66.	139	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
67.	140	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
68.	141	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	0	0	0	0	0
69.	*-141	0	25	13	12	49	14	51	0	0	55	35	21	222	0	14	0	0	0	40	0
70.	TOTAL	8	336	200	207	866	265	737	35	3	638	190	160	1609	20	208	12	98	8	182	3

********** NAIROBI ROAD-USER-INTERVIEW **********
FUTURE OD TABLE BY TYPE OF VEHICLE

TYPE OF VEHICLE (TOTAL)

UNIT:TRIP

		(61) 134	(62) 135	(63) 136	(64) 137	(65) 138	(66) 139	(67) 140	(68) 141	(69) *-141	(70) TOTAL
1.	1	9	104	0	16	0	20	18	84	3158	23323
2.	2	0	31	0	0	18	0	0	0	758	16969
3.	3	0	10	0	0	0	0	0	10	350	7421
4.	4	0	22	0	0	0	3	0	0	383	2951
5.	5	0	0	0	0	0	0	3	0	450	3204
6.	6	12	21	0	10	0	0	40	0	626	6151
7.	7	14	80	0	2	11	0	0	53	1296	15304
8.	8	2	0	0	0	0	0	0	0	40	10221
9.	9	0	0	0	0	0	0	0	0	66	6398
10.	10	0	0	0	0	0	0	0	0	6	679
11.	11	0	0	0	0	0	0	0	0	288	15893
12.	12	0	0	0	25	0	0	0	0	131	7948
13.	13	0	0	0	0	0	0	0	0	88	667
14.	14	0	10	0	0	0	0	0	0	10	585
15.	15	0	0	0	0	0	0	0	0	76	4754
16.	16	0	14	3	0	0	0	0	0	551	16507
17.	17	0	0	0	0	6	0	0	0	179	13653
18.	18	0	4	1	0	0	0	0	0	175	5251
19.	19	0	0	0	0	0	0	0	0	0	224
20. *-	19	37	296	4	53	35	23	61	147	8631	158103
21.	20	0	0	0	0	0	0	0	0	45	2540
22.	21	0	0	0	0	0	0	0	0	78	3618
23.	22	0	0	0	0	0	0	0	0	117	2912
24.	23	0	0	0	0	0	0	0	0	83	2647
25.	24	0	0	0	0	0	0	0	0	76	2188
26.	25	0	0	0	0	0	0	0	0	19	1985
27.	26	0	0	0	0	0	0	0	0	164	3490
28. *-	26	0	0	0	0	0	0	0	0	582	19380

********** NAIROBI ROAD-USER-INTERVIEW **********
FUTURE OD TABLE BY TYPE OF VEHICLE

TYPE OF VEHICLE (TOTAL)

UNIT:TRIP

		(61) 134	(62) 135	(63) 136	(64) 137	(65) 138	(66) 139	(67) 140	(68) 141	(69) *-141	(70) TOTAL
29.	101	0	5	0	0	0	0	0	0	12	51
30.	102	0	0	0	0	0	0	0	0	0	26
31.	103	0	0	0	0	0	0	0	0	0	0
32.	104	5	54	5	4	4	3	0	132	356	1354
33.	105	0	0	0	0	0	0	0	0	16	24
34.	107	0	0	0	0	0	0	0	0	0	81
35.	108	0	0	0	0	0	0	0	0	0	0
36.	109	0	0	0	0	0	0	0	0	0	2
37.	110	0	0	0	0	0	0	0	0	71	478
38.	111	0	0	0	0	0	0	0	0	0	41
39.	112	0	0	0	0	0	0	0	0	0	192
40.	113	4	17	0	0	3	0	5	2	247	3365
41.	114	0	0	0	0	0	0	0	0	0	10
42.	115	0	2	0	0	0	0	0	0	2	326
43.	116	0	0	0	0	0	0	0	0	36	297
44.	117	0	0	0	0	0	0	0	0	23	144
45.	118	0	0	0	0	0	0	0	0	50	1008
46.	119	0	0	0	0	0	0	0	0	0	154
47.	120	0	0	0	0	0	0	0	0	37	668
48.	121	0	0	0	0	0	0	0	0	0	12
49.	122	0	0	0	0	0	0	0	0	0	27
50.	123	0	0	0	0	0	0	0	0	133	748
51.	124	0	0	0	0	0	0	0	0	14	127
52.	125	0	0	0	0	0	0	0	0	0	164
53.	126	0	0	0	0	0	0	0	0	150	1552
54.	127	0	0	0	0	0	0	0	0	0	2
55.	128	0	0	0	0	0	0	0	0	6	353
56.	129	0	0	0	0	0	0	0	0	0	15
57.	130	0	0	0	0	0	0	0	0	0	75
58.	131	0	0	0	0	0	0	0	0	0	0
59.	132	0	0	0	0	0	0	0	0	48	198
60.	133	0	0	0	0	0	0	0	0	0	8
61.	134	0	0	0	0	0	0	0	0	15	73
62.	135	0	3	0	0	0	0	0	0	43	326
63.	136	0	0	0	0	0	0	0	0	0	0
64.	137	0	0	0	0	0	0	0	0	0	0
65.	138	0	0	0	0	0	0	0	0	5	11
66.	139	0	0	0	0	0	0	0	0	13	61
67.	140	0	0	0	0	0	0	0	0	7	144
68.	141	0	0	0	0	0	0	0	0	80	297
69.	*-141	9	81	5	4	7	3	5	134	1364	12414
70.	TOTAL	46	377	9	57	42	26	66	281	10577	189897

Fig.A-VI-2(1)
Future Desired Line by Type of vehicle (Car)

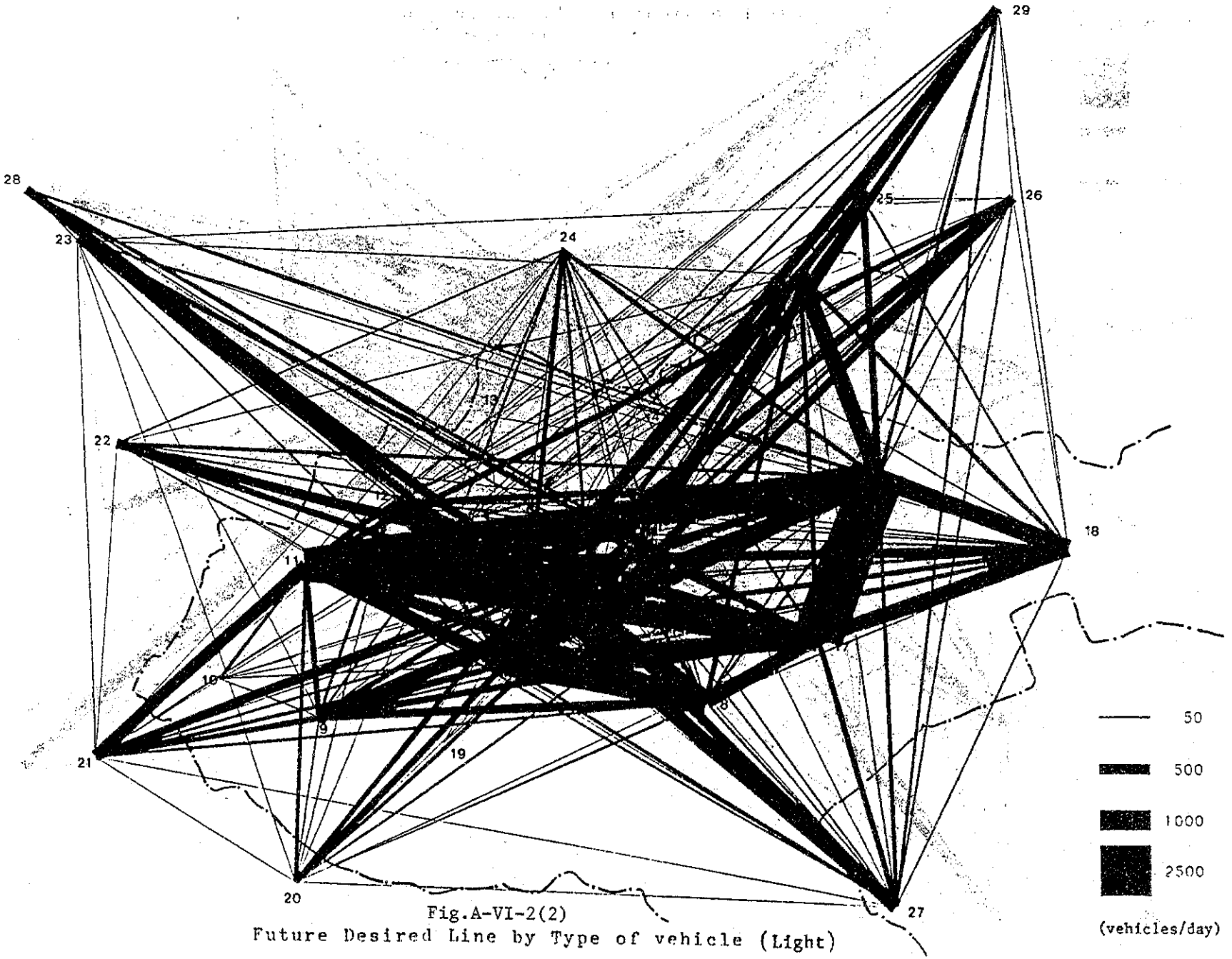


Fig.A-VI-2(2)
Future Desired Line by Type of vehicle (Light)

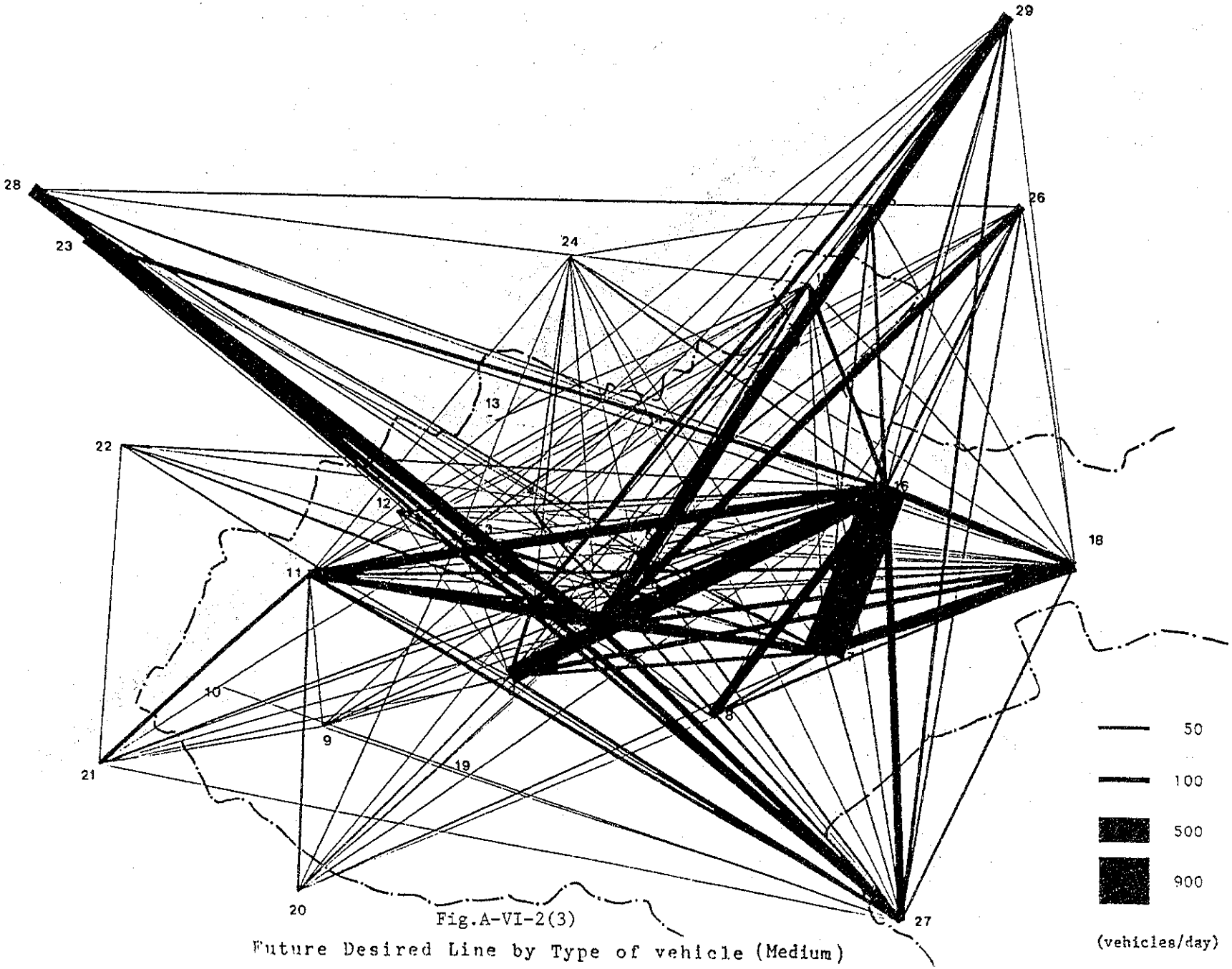


Fig.A-VI-2(3)

Future Desired Line by Type of vehicle (Medium)

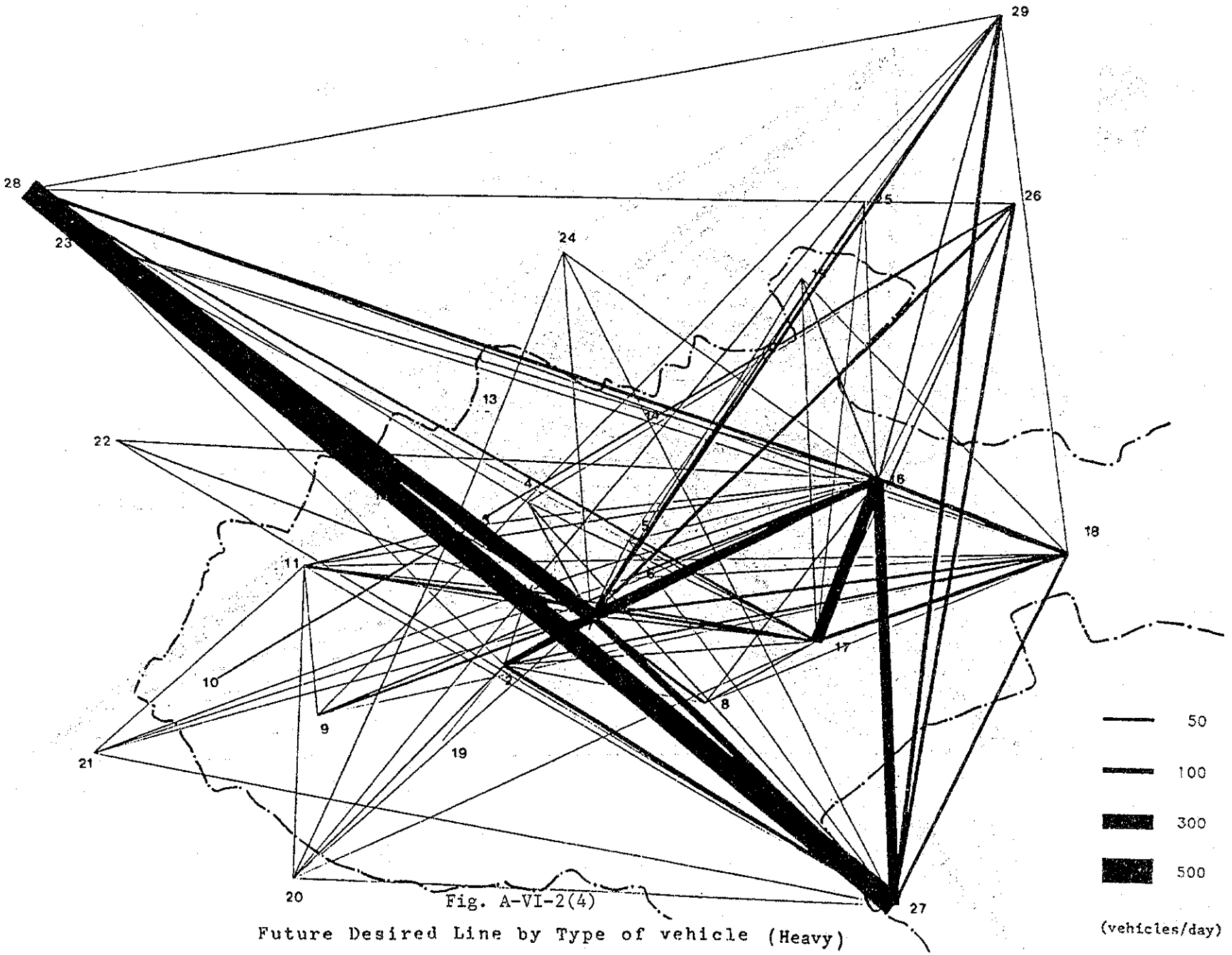


Fig. A-VI-2(4)

Future Desired Line by Type of vehicle (Heavy)

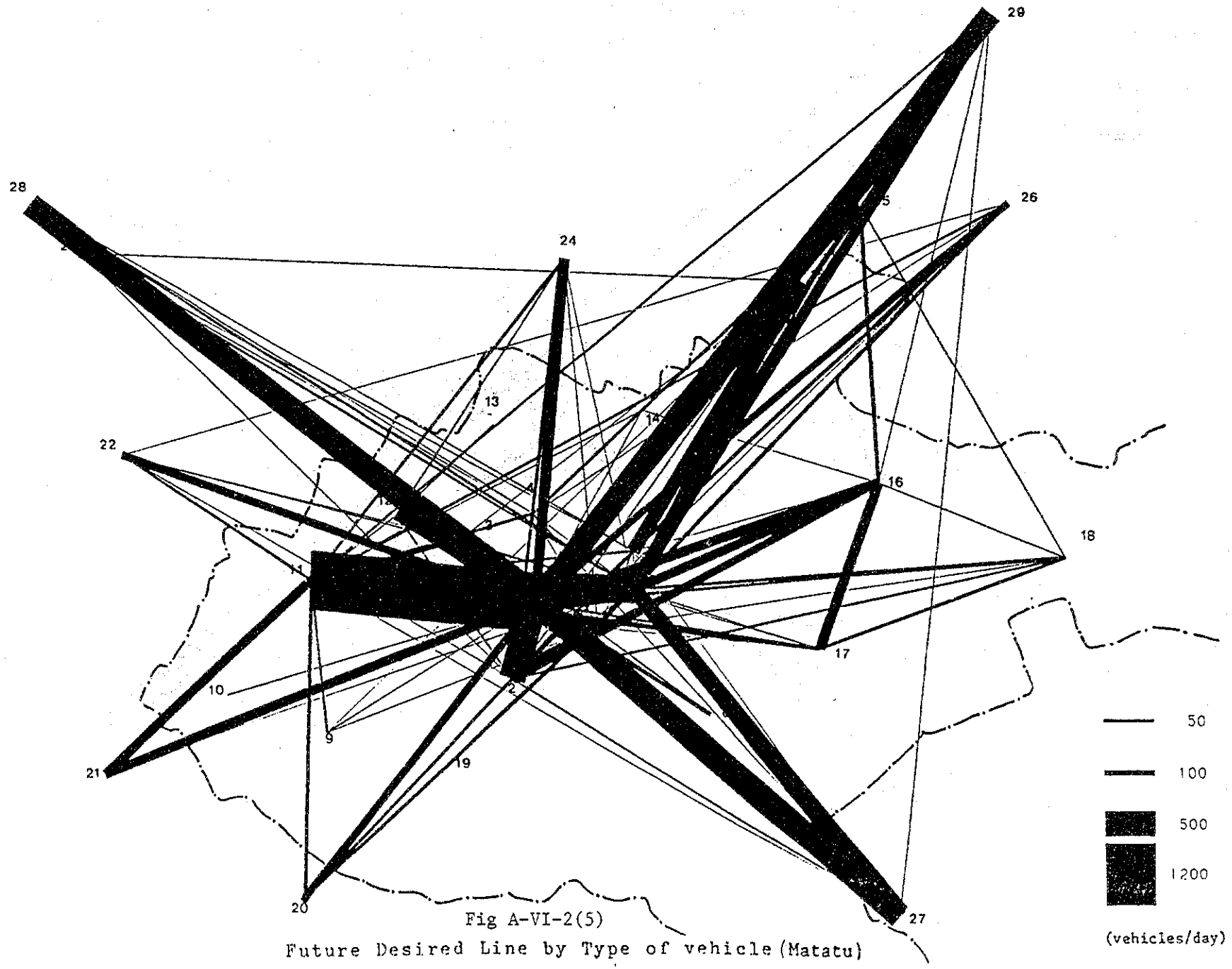


Fig A-VI-2(5)

Future Desired Line by Type of vehicle (Matatu)

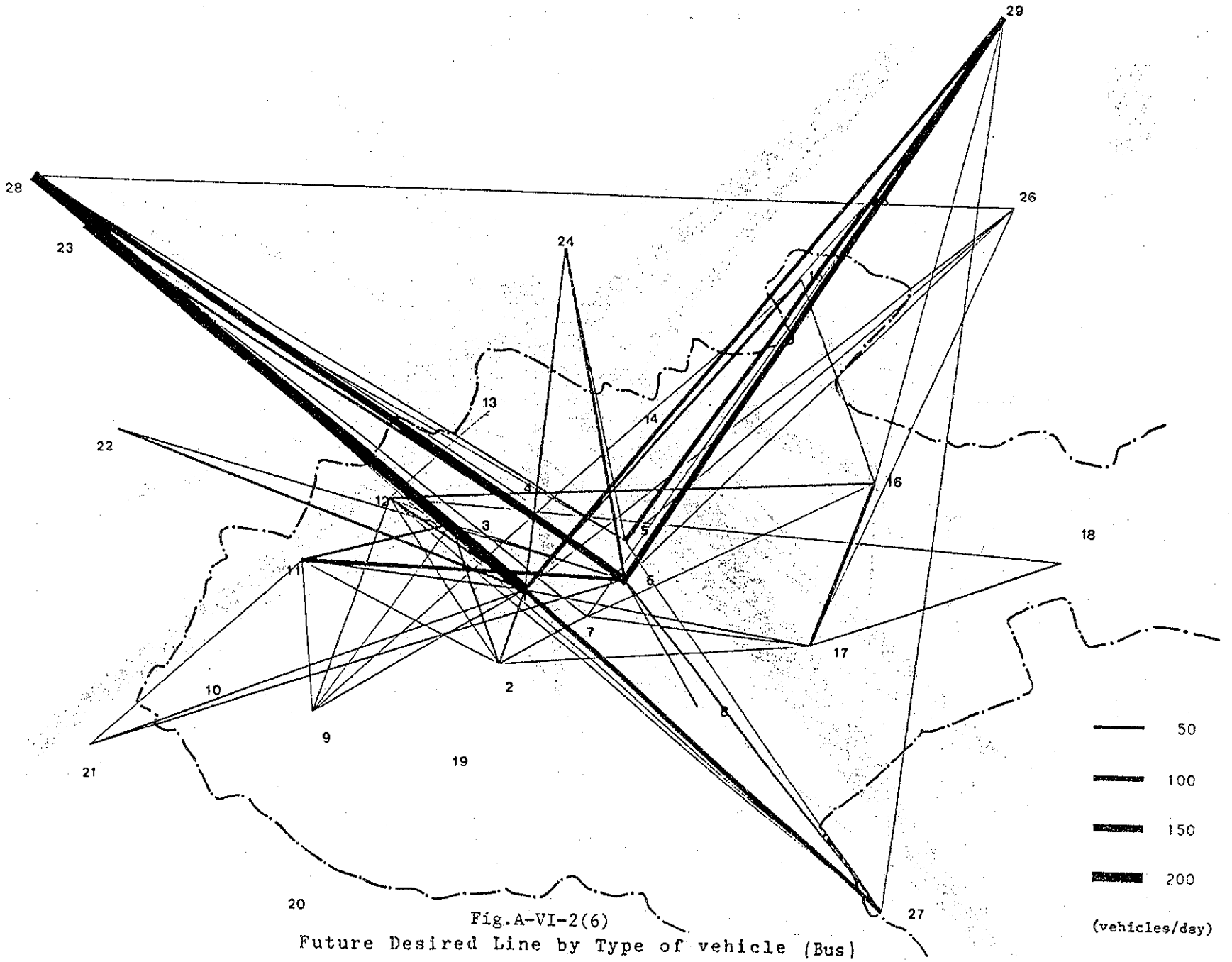


Fig.A-VI-2(6)
Future Desired Line by Type of vehicle (Bus)

Appendix

VI.3 Traffic Capacity by Link by Alternative Network

Link Value Table

(A - O)

Link	A - Node	B - Node	Distance (km)	Capacity (P.C.U./day)	Road Name	Carriage way
1001	1	107	1.40	12,000	A104	Dual
1002	107	1	1.40	12,000	- do -	- do -
1003	131	8	4.90	18,000	- do -	- do -
1004	8	131	4.90	18,000	- do -	- do -
1005	130	121	10.20	14,000	- do -	Single
1006	121	28	280.00	14,000	- do -	- do -
1007	29	121	50.00	14,000	- do -	- do -
1008	101	1	1.30	12,000	- do -	Dual
1009	1	101	1.30	12,000	- do -	- do -
1010	102	101	0.90	22,000	- do -	- do -
1011	101	102	0.90	22,000	- do -	- do -
1012	103	102	1.70	22,000	- do -	- do -
1013	102	103	1.70	22,000	- do -	- do -
1014	104	103	1.30	20,000	- do -	- do -
1015	12	104	2.00	20,000	- do -	- do -
1016	125	12	6.20	16,000	- do -	- do -
1017	12	125	6.20	16,000	- do -	- do -
1018	22	125	7.10	20,000	- do -	- do -
1019	127	22	2.40	20,000	- do -	- do -
1020	126	127	2.10	20,000	- do -	- do -
1021	23	126	7.70	20,000	- do -	- do -
1022	30	23	250.00	14,000	- do -	Single
1023	101	105	2.70	16,000	A2	Dual
1024	105	101	2.70	16,000	- do -	- do -
1025	105	106	1.10	16,000	- do -	- do -
1026	106	105	1.10	16,000	- do -	- do -
1027	106	112	3.40	20,000	- do -	- do -
1028	112	106	3.40	20,000	- do -	- do -
1029	112	113	1.40	20,000	- do -	- do -
1030	113	112	1.40	20,000	- do -	- do -

Link Value Table

(A-0)

Link	A - Node	B - Node	Distance (km)	Capacity (P.C.U./day)	Road Name	Carriage way
1031	113	114	2.70	24,000	A2	Dual
1032	114	113	2.70	24,000	- do -	- do -
1033	114	115	6.10	24,000	- do -	- do -
1034	115	114	6.10	24,000	- do -	- do -
1035	115	116	5.60	24,000	- do -	- do -
1036	116	115	5.60	24,000	- do -	- do -
1037	116	117	0.90	24,000	- do -	- do -
1038	117	116	0.90	24,000	- do -	- do -
1039	117	31	200.00	24,000	- do -	- do -
1040	31	117	200.00	24,000	- do -	- do -
1041	8	130	4.00	18,000	A104	- do -
1042	130	8	4.00	18,000	- do -	- do -
1043	107	131	2.70	18,000	- do -	- do -
1044	131	107	2.70	18,000	- do -	- do -
1055	123	136	3.60	12,000	New Road	Single
1056	103	104	1.30	20,000	A104	Dual
1057	104	12	2.00	20,000	- do -	- do -
1058	125	22	7.10	20,000	- do -	- do -
1059	22	127	2.40	20,000	- do -	- do -
1060	127	126	2.10	20,000	- do -	- do -
1061	126	23	7.70	20,000	A104	- do -
2001	108	1	2.20	18,000	C60	- do -
2002	109	108	1.50	18,000	- do -	- do -
2003	110	136	2.00	18,000	- do -	- do -
2004	11	110	3.00	10,000	C61	Single
2005	11	125	3.00	10,000	- do -	- do -
2006	133	110	4.00	12,000	C60	- do -
2007	10	134	5.40	12,000	C63	- do -
2008	22	124	6.90	12,000	- do -	- do -

Link Value Table

(A-0)

Link	A - Node	B - Node	Distance (km)	Capacity (P.C.U./day)	Road Name	Carriage way
2009	21	10	8.00	8,000	C60	Single
2010	9	122	1.90	10,000	C63	- do -
2011	10	9	5.50	10,000	- do -	- do -
2012	122	123	1.90	22,000	C58	Dual
2013	132	2	2.20	20,000	- do -	- do -
2014	2	107	1.90	20,000	- do -	- do -
2015	107	7	1.30	16,000	Lusaka Road	Single
2016	129	114	7.50	10,000	D400	- do -
2017	22	111	10.80	10,000	C63	- do -
2018	23	111	15.00	10,000	C62	- do -
2019	128	24	10.30	10,000	C63	- do -
2020	111	128	5.50	10,000	- do -	- do -
2021	111	13	9.10	10,000	C62	- do -
2022	13	106	5.30	10,000	- do -	- do -
2023	24	106	10.50	10,000	C64	- do -
2024	24	129	6.00	12,000	C63	- do -
2025	25	116	0.50	12,000	- do -	- do -
2026	120	16	7.80	16,000	C98	- do -
2027	16	18	15.00	10,000	- do -	- do -
2028	114	16	7.20	10,000	D400	- do -
2029	112	120	4.70	12,000	C59	- do -
2030	119	120	2.20	12,000	- do -	- do -
2031	118	119	3.20	12,000	- do -	- do -
2032	20	122	16.70	8,000	C58	- do -
2033	129	25	9.70	12,000	C63	- do -
2034	118	130	5.60	12,000	C59	- do -
2035	107	2	1.90	20,000	C58	Dual
2036	2	132	2.20	20,000	- do -	- do -
2037	123	132	2.00	22,000	C58	- do -
2038	132	123	2.20	22,000	- do -	- do -
2039	123	122	1.90	22,000	- do -	- do -
2040	1	108	2.20	18,000	C60	- do -

Link Value Table

(A-0)

Link	A - Node	B - Node	Distance (km)	Capacity (P.C.U./day)	Road Name	Carriage way
2041	108	109	1.50	18,000	C60	Dual
2042	136	109	1.20	18,000	- do -	- do -
2043	109	136	1.20	18,000	- do -	- do -
2044	136	110	2.00	18,000	- do -	- do -
2045	10	133	2.60	12,000	C60	Single
2046	124	134	1.20	12,000	C63	- do -
3001	104	3	1.00	-	Access Link	Nil
3002	27	109	1.00	-	- do -	- do -
3003	105	5	2.70	-	- do -	- do -
3004	5	6	2.00	-	- do -	- do -
3005	7	6	2.00	-	- do -	- do -
3006	6	119	3.80	-	- do -	- do -
3007	8	118	2.40	-	- do -	- do -
3008	118	17	3.00	-	- do -	- do -
3009	123	19	0.60	-	- do -	- do -
3010	102	4	1.20	-	- do -	- do -
3011	4	105	1.60	-	- do -	- do -
3012	14	113	1.60	-	- do -	- do -
3013	15	115	0.90	-	- do -	- do -
3014	117	26	3.00	-	- do -	- do -

Link Value Table of Nairobi By-pass

Link	A - Node	B - Node	Distance (km)	Capacity (P.C.U./day)	Alternative	Carriage way
1045	132	131	5.70	22,000	A-3-4, A-1-4	Dual
1046	131	132	5.70	22,000	- do -	- do -
1047	133	132	8.70	20,000	- do -	- do -
1048	132	133	8.70	20,000	- do -	- do -
1049	134	133	5.10	20,000	- do -	- do -
1050	133	134	5.10	20,000	- do -	- do -
1051	126	134	9.50	22,000	A-3-4	- do -
1052	134	126	9.50	22,000	- do -	- do -
1053	22	134	6.90	22,000	A-1-4	- do -
1054	134	22	6.90	22,000	- do -	- do -
1062	131	132	5.70	11,000	A-3-2, A-1-2	Single
1063	132	133	8.70	11,000	- do -	- do -
1064	133	134	5.10	11,000	- do -	- do -
1065	134	126	9.50	11,000	A-3-2	- do -
1066	134	22	6.90	11,000	A-1-2	- do -

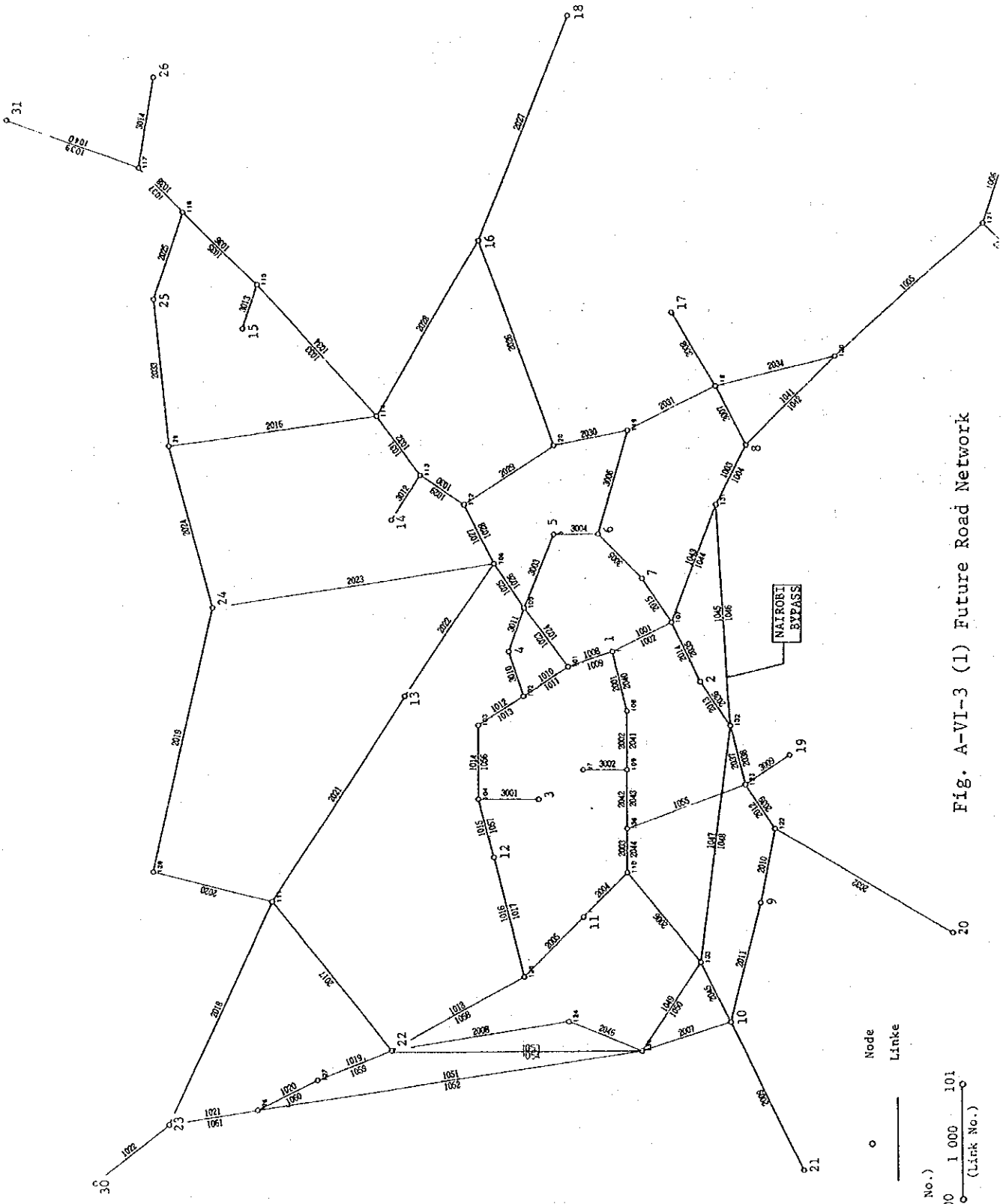


Fig. A-VI-3 (1) Future Road Network

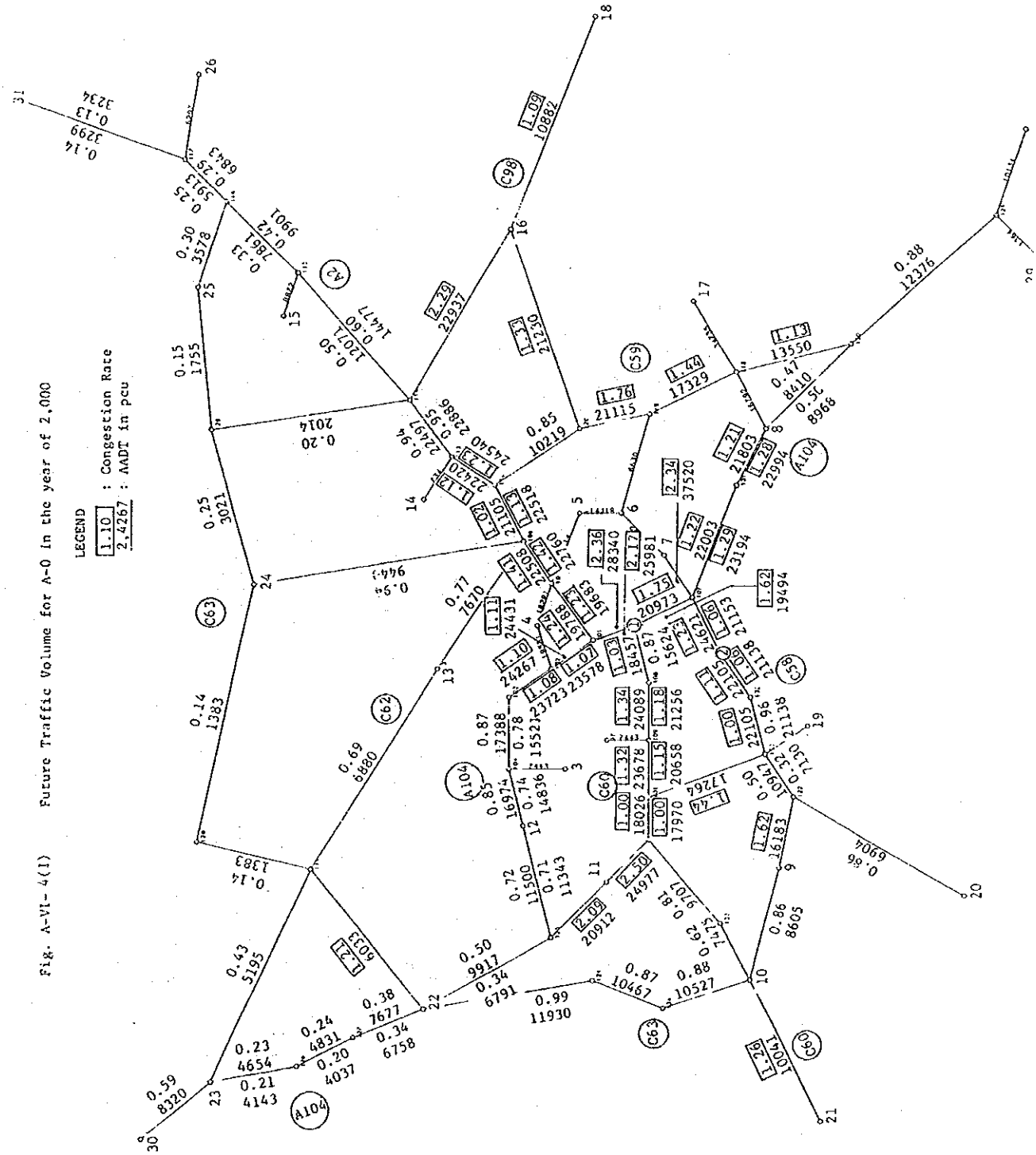


Fig. A-VI-4(1) Future Traffic Volume for A-0 in the year of 2,000

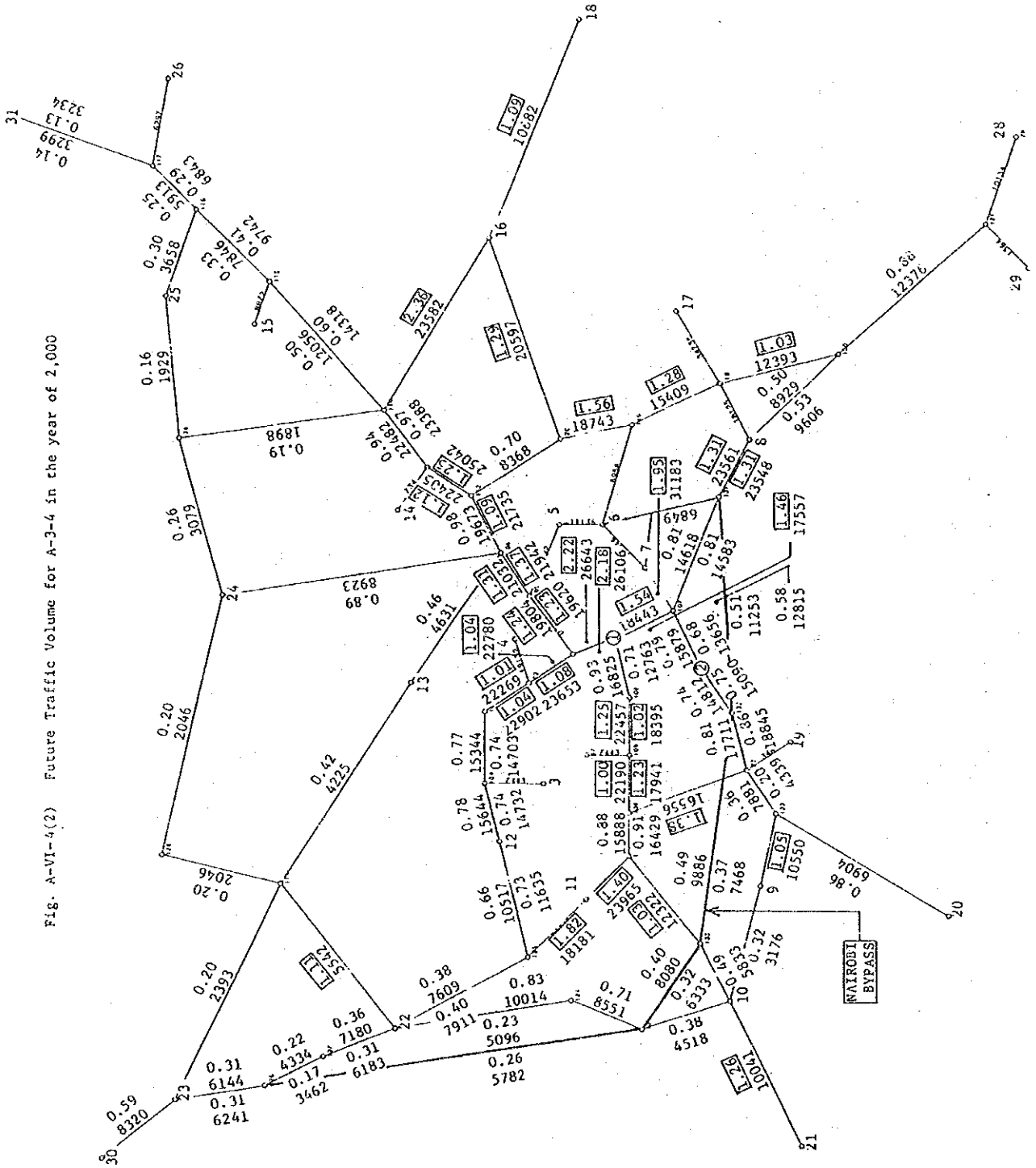


Fig. A-VI-4(2) Future Traffic Volume for A-3-4 in the year of 2,000

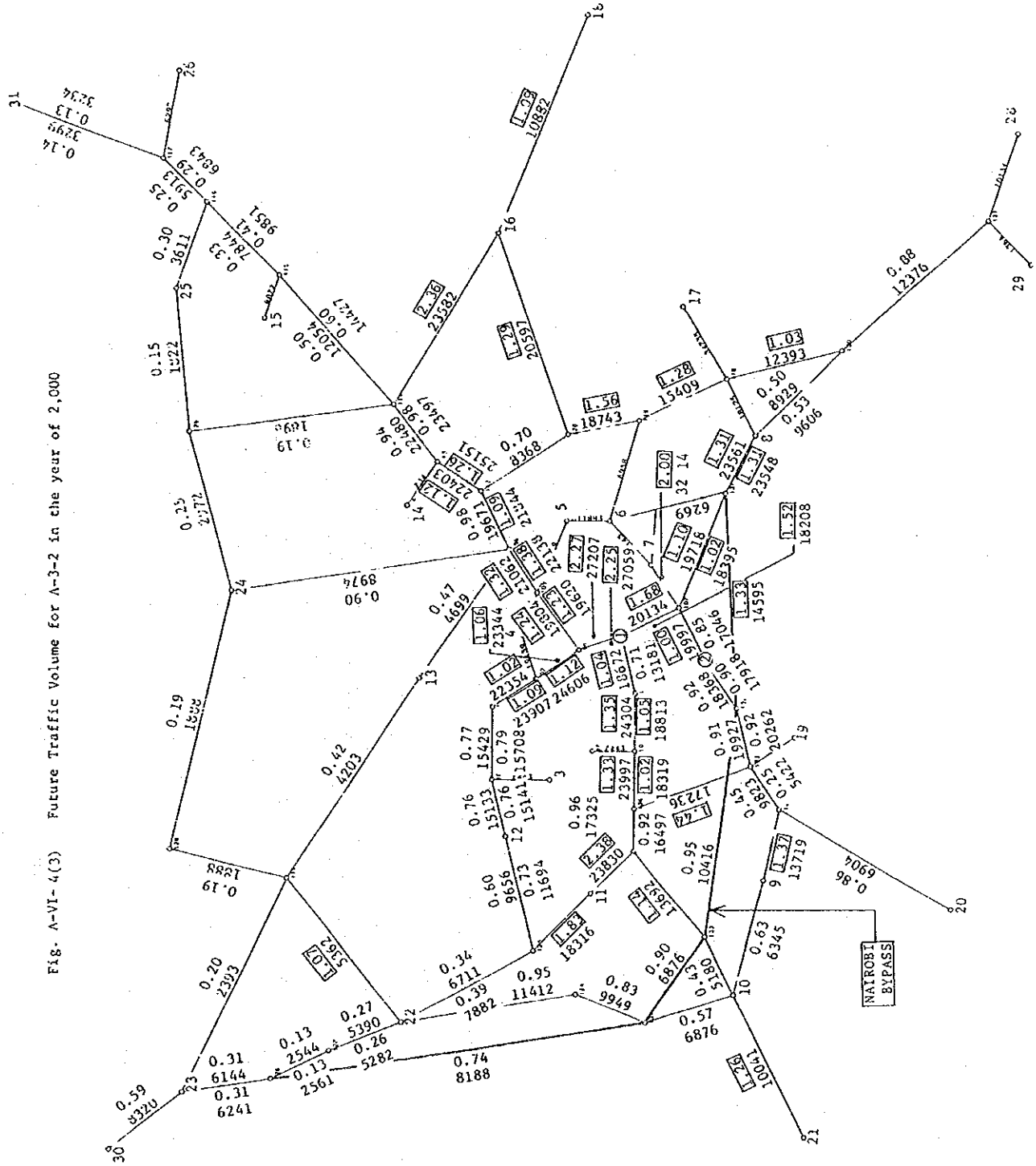


Fig. A-VI-4(3) Future Traffic Volume for A-3-2 in the year of 2,000

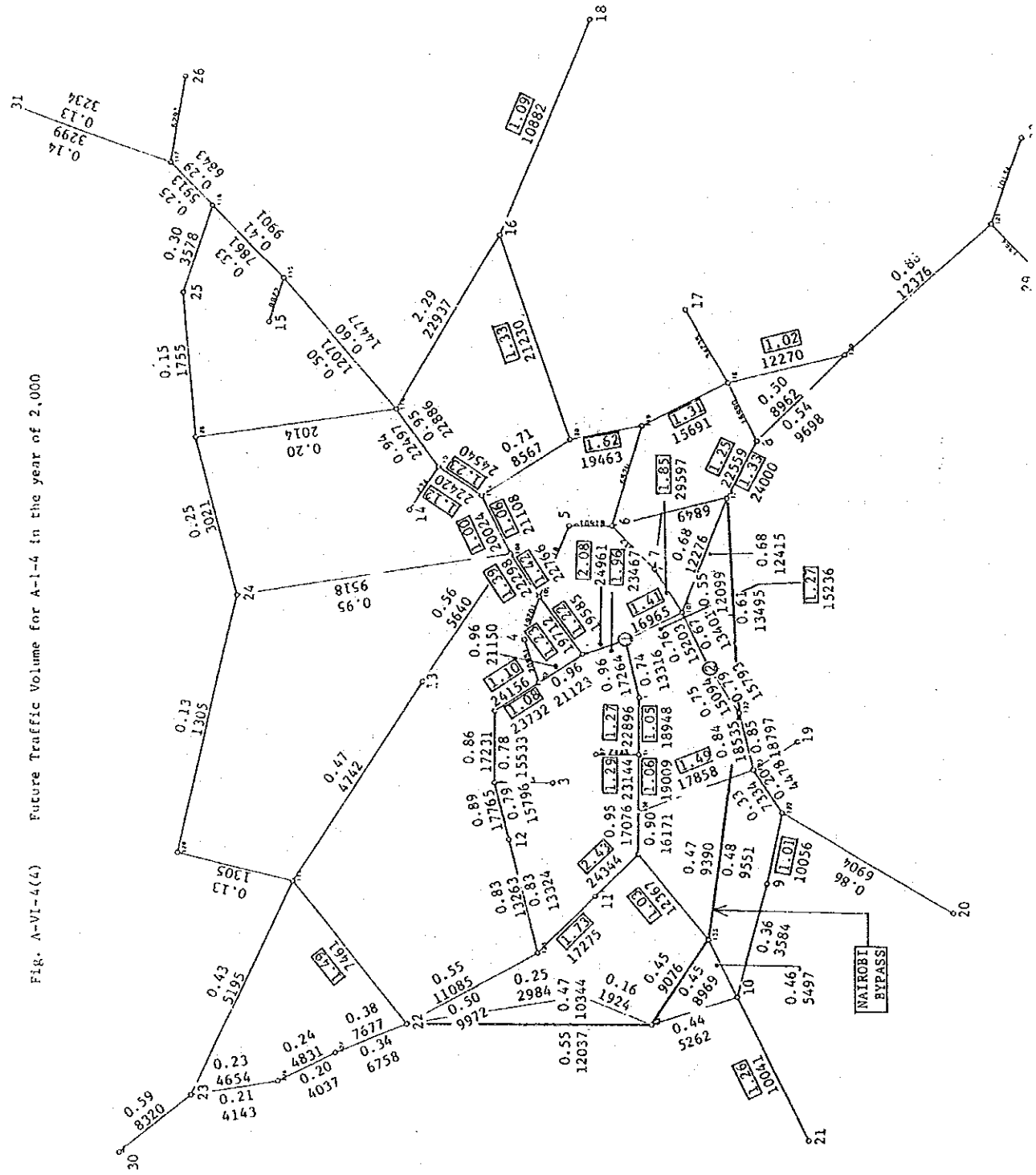


Fig. A-VI-4(4) Future Traffic Volume for A-1-4 in the year of 2,000

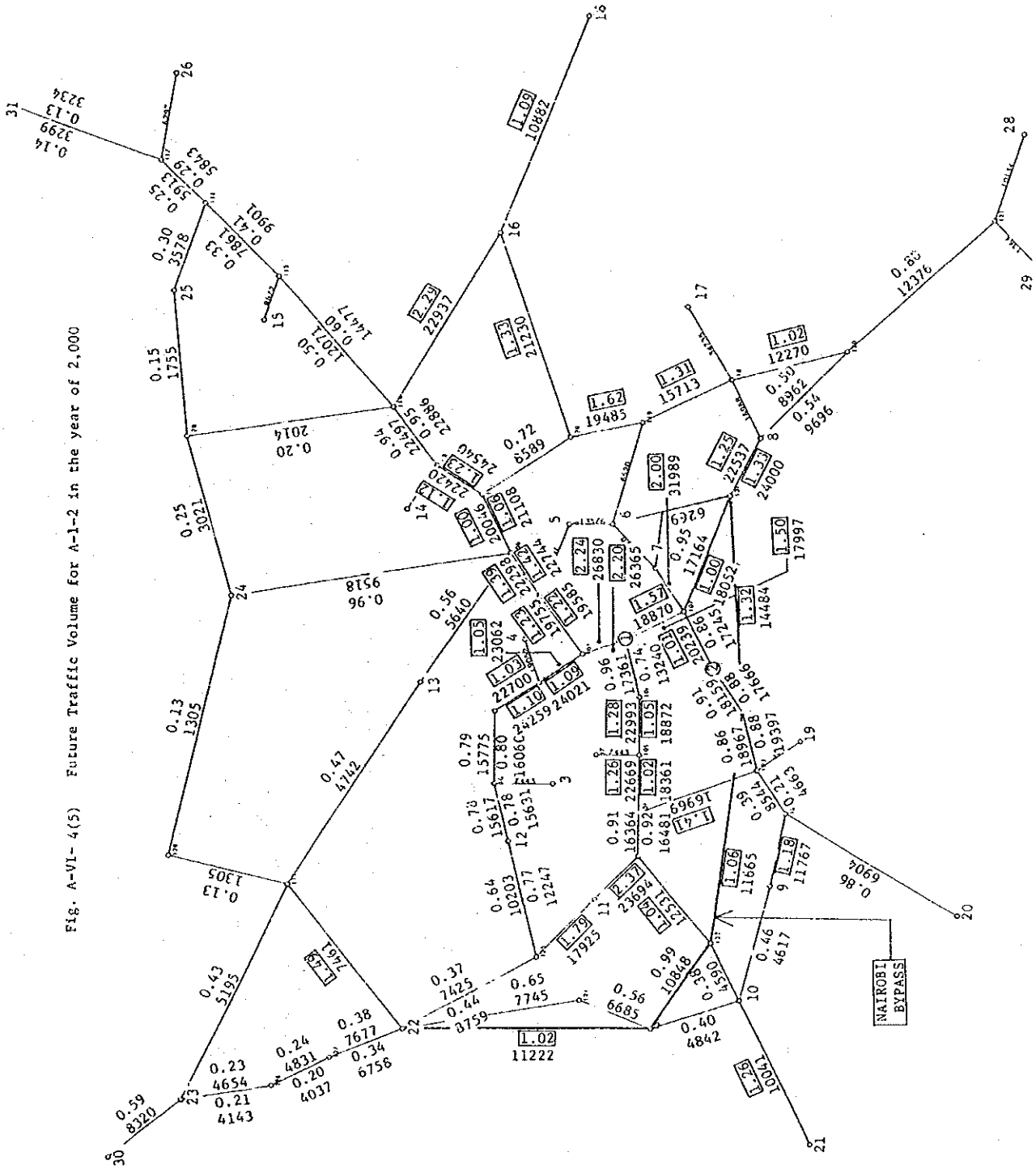


Fig. A-VI- 4(5) Future Traffic Volume for A-1-2 in the year of 2,000

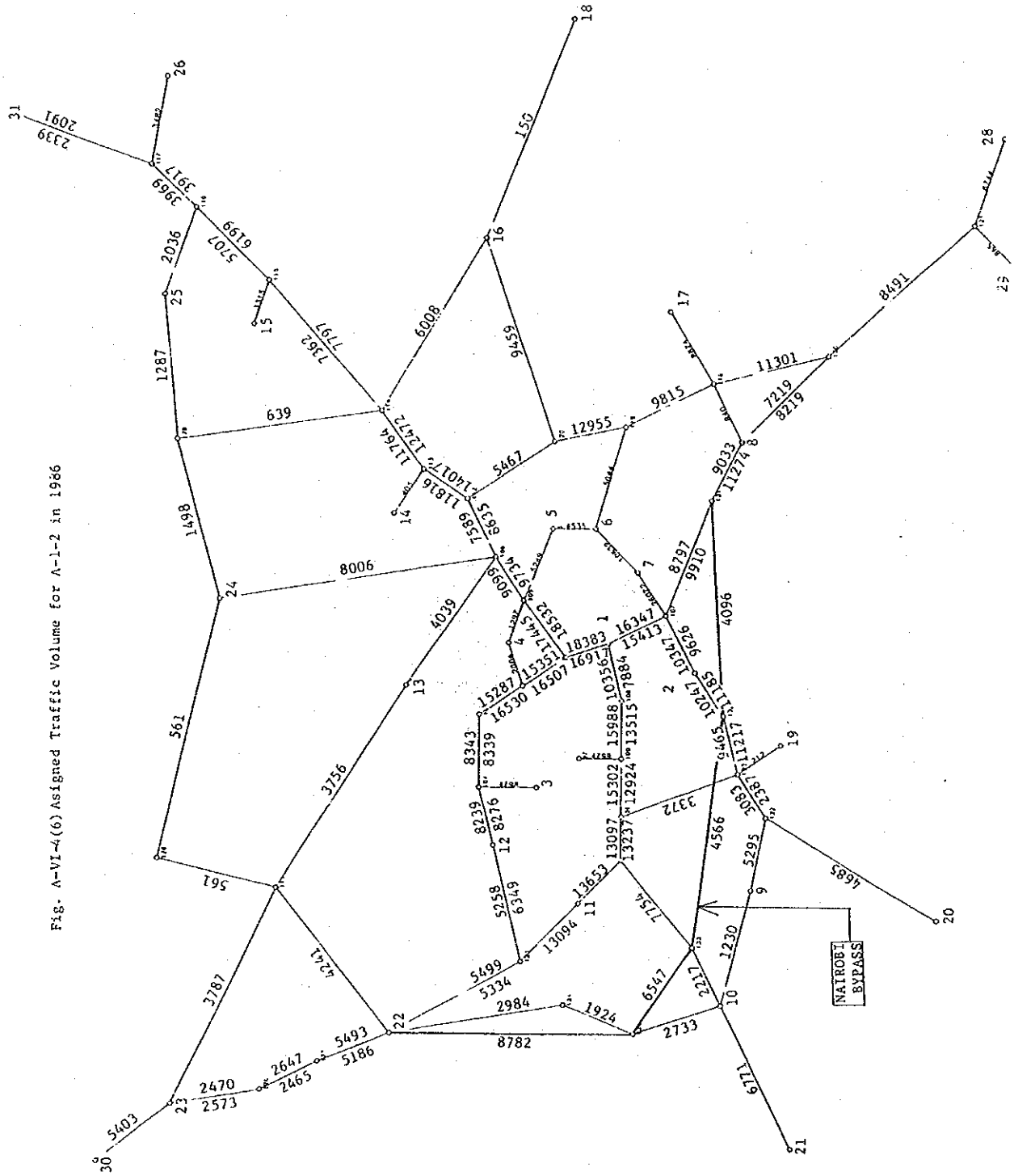


Fig. A-VI-4(6) Assigned Traffic Volume for A-1-2 in 1986

Appendix VI.5 Converted OD trips to the Bypass

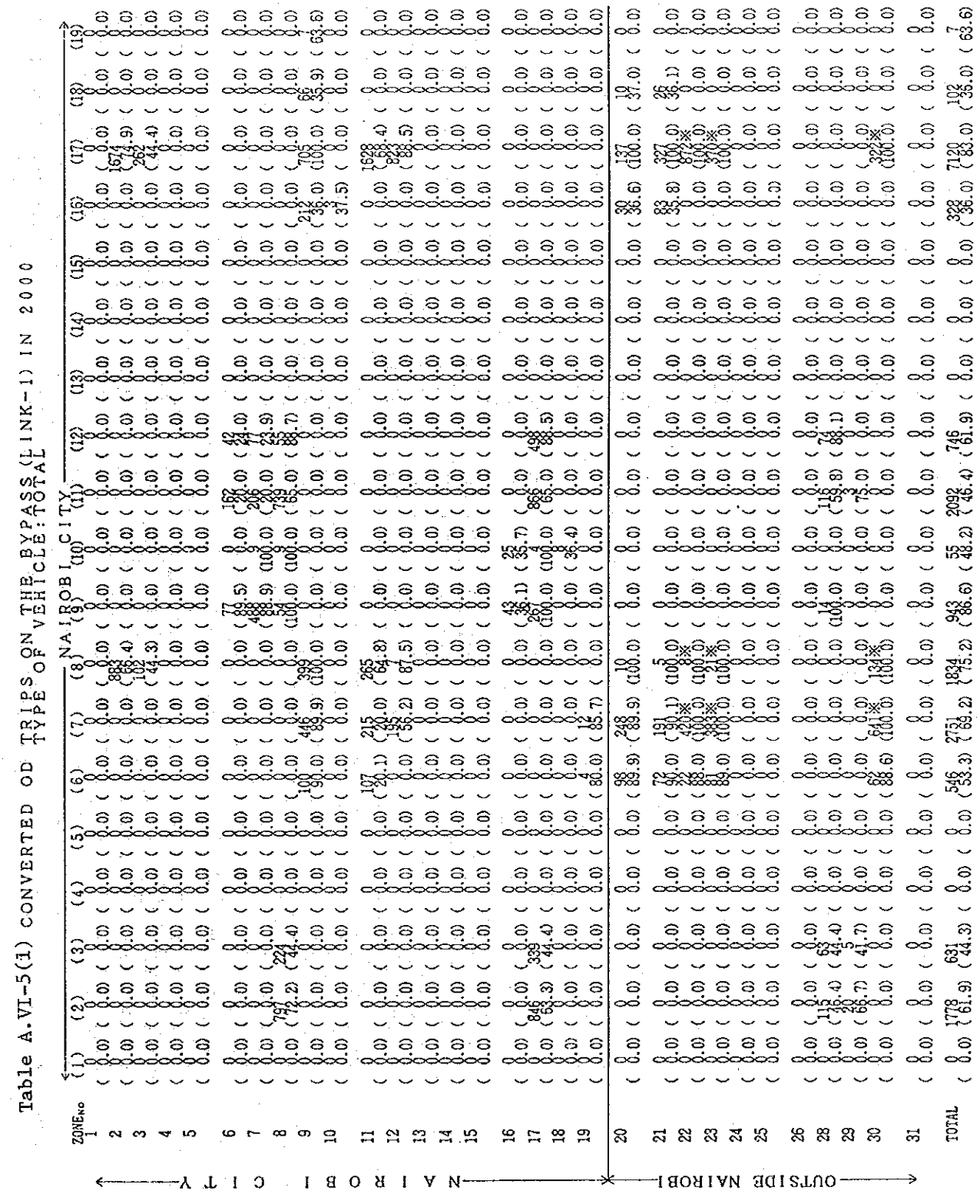


Table A.VI-5(1) CONVERTED OD TRIPS ON THE BYPASS (LINK-1) IN 2000
TYPE OF VEHICLE: TOTAL

ZONE No	← NAIROBI CITY →				← OUTSIDE NAIROBI →							TOTAL
	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(28)	(29)	(30)	(31)	
1	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
2	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	223 (66.4)	27 (65.9)	0 (0.0)	0 (0.0)	2807 (64.5)
3	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	36 (43.9)	17 (42.5)	0 (0.0)	0 (0.0)	417 (44.3)
4	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
5	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
6	63 (88.7)	57 (100.0)	64 (58.2)	13 (22.8)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	28 (16.4)	0 (0.0)	516 (33.4)
7	71 (88.8)	55 (88.7)	302※ (100.0)	251※ (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	545※ (100.0)	0 (0.0)	2004 (63.6)
8	13 (100.0)	14 (100.0)	122※ (100.0)	100※ (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	14※ (100.0)	0 (0.0)	2342 (75.9)
9	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	14 (100.0)	3 (100.0)	0 (0.0)	0 (0.0)	1952 (77.7)
10	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	6 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	9 (64.3)
11	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	76 (60.3)	10 (55.8)	0 (0.0)	0 (0.0)	2301 (50.7)
12	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	42 (85.4)	14 (87.5)	0 (0.0)	0 (0.0)	1081 (91.5)
13	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
14	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
15	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
16	33 (35.5)	19 (36.5)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	120 (35.9)
17	45 (100.0)	14 (100.0)	278※ (100.0)	229※ (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	57※ (100.0)	0 (0.0)	3504 (76.7)
18	10 (34.5)	5 (31.3)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	23 (34.3)
19	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	16 (84.2)
20	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	11 (100.0)	1 (100.0)	0 (0.0)	0 (0.0)	545 (84.0)
21	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	6 (100.0)	2 (100.0)	0 (0.0)	0 (0.0)	712 (76.8)
22	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	86※ (100.0)	0※ (0.0)	0 (0.0)	0 (0.0)	1408 (99.8)
23	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	40※ (100.0)	31※ (100.0)	0 (0.0)	0 (0.0)	956 (98.9)
24	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
25	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
26	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
28	7 (100.0)	0 (0.0)	41※ (100.0)	73※ (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	446※ (100.0)	0 (0.0)	949 (80.7)
29	5 (100.0)	2 (100.0)	11※ (100.0)	0※ (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	66※ (100.0)	0 (0.0)	113 (91.6)
30	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	343※ (100.0)	76※ (100.0)	0 (0.0)	0 (0.0)	1578 (99.5)
31	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
TOTAL	309 (76.3)	362 (87.7)	818 (94.7)	666 (93.8)	0 (0.0)	0 (0.0)	0 (0.0)	883 (87.8)	181 (87.4)	1156 (89.0)	0 (0.0)	23308 (71.7)

LEGEND
UPPER : NO. OF CONVERTED OD TRIPS
(LOWER) : % OF CONVERSION RATE
※ : CONVERTED TRIPS FROM A104

Table A.VI-5(2) CONVERTED OD TRIPS ON THE BYPASS (LINK-2) IN 2000

TYPE OF VEHICLE: TOTAL

NAIROBI CITY: zones 1–19 · OUTSIDE NAIROBI: zones 20–31

ZONE No	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
1	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	8 (23.5)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
2	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	40 (100.0)	259 (24.0)	289 (88.4)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
3	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	102 (44.3)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	170 (28.8)	0 (0.0)	0 (0.0)
4	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
5	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
6	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	162 (20.0)	42 (24.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
7	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	9 (100.0)	206 (20.0)	77 (23.9)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
8	0 (0.0)	0 (0.0)	224 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	9 (100.0)	739 (65.0)	55 (88.7)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
9	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
10	0 (0.0)	152 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	3 (37.5)	0 (0.0)	0 (0.0)	0 (0.0)
11	0 (0.0)	228 (24.1)	0 (0.0)	0 (0.0)	0 (0.0)	107 (20.1)	215 (20.0)	265 (64.8)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1628 (68.4)	0 (0.0)	0 (0.0)
12	0 (0.0)	477 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	195 (56.2)	7 (87.5)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	823 (88.5)	0 (0.0)	0 (0.0)
13	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
14	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
15	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
16	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	25 (35.7)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
17	0 (0.0)	0 (0.0)	225 (29.5)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	4 (100.0)	866 (65.0)	498 (88.5)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
18	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
19	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	35 (89.7)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
20	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	43 (87.6)	25 (73.5)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
21	163 (21.3)	156 (60.9)	0 (0.0)	0 (0.0)	0 (0.0)	80 (100.0)	0 (0.0)	5 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	83 (35.8)	327 (100.0)	26 (36.1)	0 (0.0)
22	0 (0.0)	56 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	22 (88.0)	420※ (100.0)	8※ (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	872※ (100.0)	0 (0.0)	0 (0.0)
23	0 (0.0)	110 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	81 (89.0)	383※ (100.0)	21※ (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	370※ (100.0)	0 (0.0)	0 (0.0)
24	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
25	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
26	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
28	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	116 (59.8)	74 (88.1)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
29	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	3 (75.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
30	0 (0.0)	75 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	62 (88.6)	641※ (100.0)	134※ (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	322※ (100.0)	0 (0.0)	0 (0.0)
31	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
TOTAL	163 (21.3)	1254 (60.5)	449 (31.6)	0 (0.0)	0 (0.0)	352 (44.1)	1854 (62.2)	542 (66.5)	0 (0.0)	95 (57.2)	2351 (42.1)	1113 (68.7)	25 (73.5)	0 (0.0)	0 (0.0)	86 (35.8)	4512 (77.9)	26 (0.0)	0 (0.0)

Table A.VI-5(2) CONVERTED OD TRIPS ON THE BYPASS (LINK-2) IN 2000

TYPE OF VEHICLE: TOTAL

		OUTSIDE NAIROBI →											
	ZONE No	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(28)	(29)	(30)	(31)	TOTAL
NAIROBI CITY →	1	0 (0.0)	88 (24.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	96 (23.9)
	2	0 (0.0)	88 (65.2)	133 (100.0)	64 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	152 (100.0)	0 (0.0)	0 (0.0)	1025 (52.8)
	3	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	72 (87.8)	27 (67.5)	0 (0.0)	0 (0.0)	371 (39.8)
	4	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
	5	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
	6	0 (0.0)	67 (100.0)	64 (58.2)	13 (22.8)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	28 (16.4)	0 (0.0)	376 (27.1)
	7	0 (0.0)	0 (0.0)	302※ (100.0)	251※ (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	545※ (100.0)	0 (0.0)	1390 (56.5)
	8	0 (0.0)	140 (100.0)	122※ (100.0)	100※ (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	14※ (100.0)	0 (0.0)	1403 (67.2)
	9	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
	10	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	6 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	161 (97.0)
	11	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	76 (60.3)	10 (58.8)	0 (0.0)	0 (0.0)	2529 (55.7)
	12	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	42 (89.4)	14 (87.5)	0 (0.0)	0 (0.0)	1558 (79.2)
	13	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
	14	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
	15	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
	16	0 (0.0)	19 (36.5)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	44 (36.1)
	17	0 (0.0)	74 (100.0)	278※ (100.0)	228※ (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	57※ (100.0)	0 (0.0)	2231 (67.6)
	18	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
	19	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	35 (98.7)
OUTSIDE NAIROBI →	20	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	68 (61.2)
	21	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	6 (100.0)	2 (100.0)	0 (0.0)	0 (0.0)	848 (47.7)
	22	6 (60.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	86※ (100.0)	0※ (0.0)	0 (0.0)	0 (0.0)	1470 (99.5)
	23	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	40※ (100.0)	31※ (100.0)	0 (0.0)	0 (0.0)	1036 (99.0)
	24	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
	25	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
	26	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
	28	0 (0.0)	0 (0.0)	41※ (100.0)	73※ (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	445※ (100.0)	0 (0.0)	750 (88.5)
	29	0 (0.0)	2 (100.0)	11※ (100.0)	0※ (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	66※ (100.0)	0 (0.0)	82 (81.2)
	30	8 (57.1)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	343※ (100.0)	76※ (100.0)	0 (0.0)	0 (0.0)	1661 (97.1)
	31	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
	TOTAL	14 (58.3)	478 (58.0)	951 (95.4)	730 (93.1)	0 (0.0)	0 (0.0)	0 (0.0)	671 (91.2)	160 (83.7)	1308 (90.1)	0 (0.0)	17134 (62.6)

LEGEND
UPPER :NO.OF CONVERTED OD TRIPS
(LOWER):% OF CONVERSION RATE
※ :CONVERTED TRIPS FROM A104