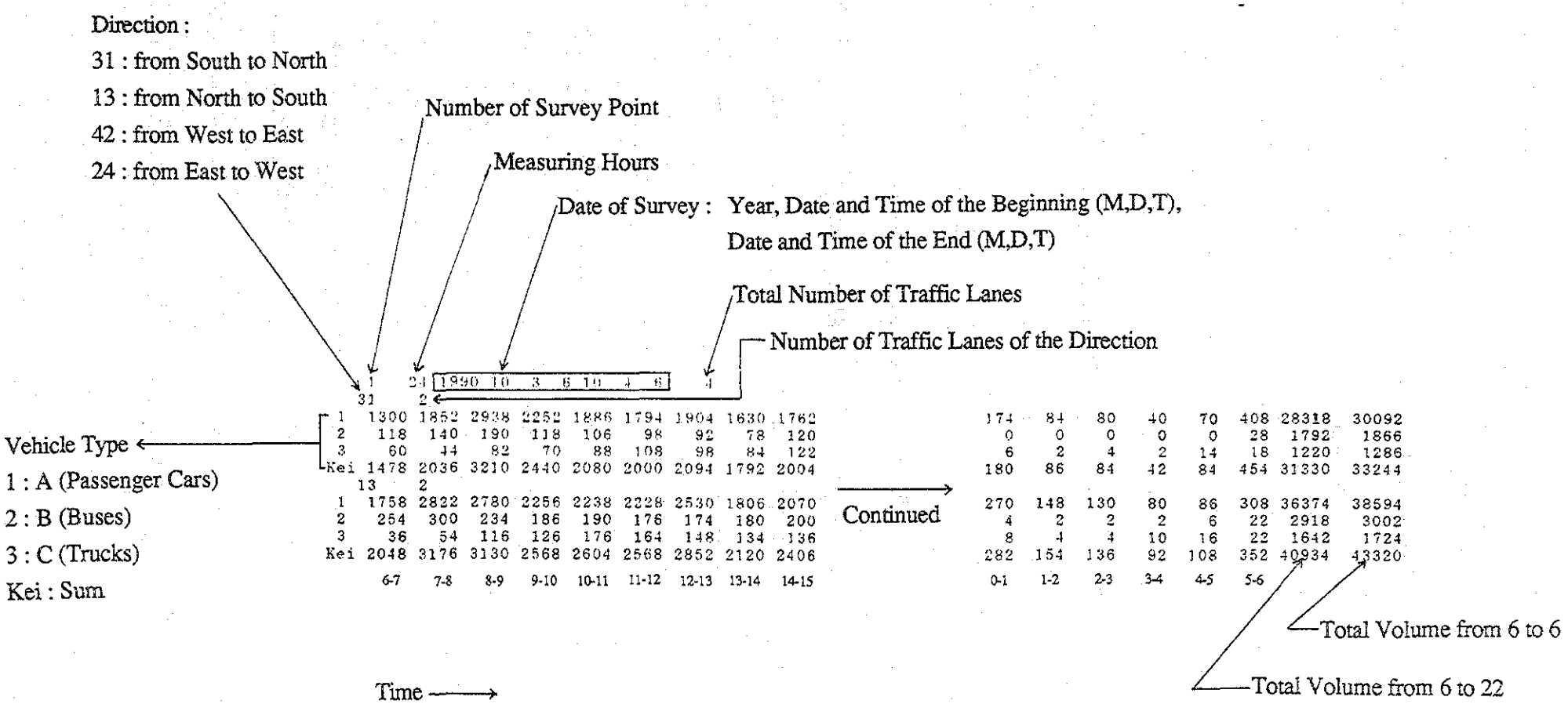
Table 3.4.9 Hourly Traffic Volume by Vehicle Type and Direction along Arterial Roads



1 24 1990 10 3 6 10 4 6 4 1

31 2

	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	0-1	1-2	2-3	3-4	4-5	5-6		
1	1300	1852	2938	2252	1886	1794	1904	1630	1762	174	84	80	40	70	408	28318	30092
2	118	140	190	118	106	98	92	78	120	0	0	0	0	0	28	1792	1866
3	60	44	82	70	88	108	98	84	122	6	2	4	2	14	18	1220	1286
Kei	1478	2036	3210	2440	2080	2000	2094	1792	2004	180	86	84	42	84	454	31330	33244

13 2

	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	0-1	1-2	2-3	3-4	4-5	5-6		
1	1758	2822	2780	2256	2238	2228	2530	1806	2070	270	148	130	80	86	308	36374	38594
2	254	300	234	186	190	176	174	180	200	4	2	2	2	6	22	2918	3002
3	36	54	116	126	176	164	148	134	136	8	4	4	10	16	22	1642	1724
Kei	2048	3176	3130	2568	2604	2568	2852	2120	2406	282	154	136	92	108	352	40934	43320

Weekday

1 24 1990 10 3 6 10 4 6 4

31 2

1	1300	1852	2938	2252	1886	1794	1904	1630	1762	1992	1836	1902	1802	1606	1074	788	554	364	174	84	80	40	70	408	28318	30092
2	118	140	190	118	106	98	92	78	120	120	158	126	98	104	76	50	36	10	0	0	0	0	0	28	1792	1866
3	60	44	82	70	88	108	98	84	122	110	128	92	52	36	24	22	14	6	6	2	4	2	14	18	1220	1286
Kei	1478	2036	3210	2440	2080	2000	2094	1792	2004	2222	2122	2120	1952	1746	1174	860	604	380	180	86	84	42	84	454	31330	33244

13 2

1	1758	2822	2780	2256	2238	2228	2530	1806	2070	2180	2394	3350	2972	2022	2064	904	858	340	270	148	130	80	86	308	36374	38594
2	254	300	234	186	190	176	174	180	200	174	196	240	162	118	88	46	40	6	4	2	2	2	6	22	2918	3002
3	36	54	116	126	176	164	148	134	136	148	138	136	36	52	32	10	12	6	8	4	4	10	16	22	1642	1724
Kei	2048	3176	3130	2568	2604	2568	2852	2120	2406	2502	2728	3726	3170	2192	2184	960	910	352	282	154	136	92	108	352	40934	43320

2 24 1990 10 3 6 10 4 6 4

24 1

1	512	944	858	840	928	846	794	718	814	838	714	754	802	756	640	608	478	338	200	136	96	76	98	182	12366	13970
2	346	322	244	222	248	250	228	248	210	258	232	232	326	378	284	284	216	110	44	8	16	10	22	168	4312	4906
3	182	188	194	268	296	384	308	250	210	302	196	232	112	94	132	56	40	22	36	24	18	18	52	90	3404	3704
Kei	1040	1454	1296	1330	1472	1480	1330	1216	1234	1398	1142	1218	1240	1228	1056	948	734	470	280	168	130	104	172	440	20082	22580

42 1

1	526	784	572	548	514	502	640	628	570	646	694	646	652	542	522	524	376	242	182	120	68	70	102	202	9510	10872
2	328	352	256	230	208	198	228	260	200	232	244	262	220	232	220	194	104	86	24	6	6	18	22	326	3864	4456
3	74	94	174	200	236	216	274	218	226	212	218	134	72	90	48	38	20	28	30	14	24	18	52	102	2524	2812
Kei	928	1230	1002	978	958	916	1142	1106	996	1090	1156	1042	944	864	790	756	500	356	236	140	98	106	176	630	15898	18140

3 24 1990 10 3 6 10 4 6 4

13 1

1	166	214	168	156	162	138	120	156	166	148	162	172	124	148	126	132	148	114	94	98	52	40	70	106	2458	3180
2	176	178	134	122	104	106	96	124	82	82	110	128	138	144	148	116	48	32	14	8	4	2	20	156	1988	2272
3	64	22	42	44	50	56	44	44	84	22	44	24	28	24	18	28	26	30	10	18	12	40	62	64	638	900
Kei	406	414	344	322	316	300	260	324	332	252	316	324	290	316	292	276	222	176	118	124	68	82	152	326	5084	6352

31 1

1	90	172	138	154	170	134	172	174	114	110	168	174	160	140	188	188	144	140	84	102	58	52	72	70	2446	3168
2	124	162	136	110	100	124	94	126	86	48	108	100	176	158	182	150	86	42	18	16	8	4	24	52	1984	2234
3	34	34	56	60	74	70	66	44	60	48	62	60	60	36	36	20	14	12	10	6	0	6	16	20	820	904
Kei	248	368	330	324	344	328	332	344	260	206	338	334	396	334	406	358	244	194	112	124	66	62	112	142	5250	6306

4 24 1990 10 3 6 10 4 6 4

31 1

1	436	1094	1144	962	980	974	1018	836	1086	972	888	1026	996	926	572	530	432	252	154	66	58	46	72	136	14440	15656
2	204	248	196	182	152	170	192	182	140	182	180	184	188	206	100	126	106	44	18	14	4	2	14	82	2832	3116
3	150	128	206	244	288	318	308	258	272	252	210	244	108	88	72	24	24	18	12	16	14	14	32	70	3170	3370
Kei	790	1470	1546	1388	1420	1462	1518	1276	1498	1406	1278	1454	1292	1220	744	680	562	314	184	96	76	62	118	288	20442	22142

13 1

1	542	1002	926	836	884	960	720	828	858	928	828	1032	936	712	462	482	358	216	154	42	46	66	88	164	12936	14070
2	280	258	218	152	160	162	146	186	180	184	168	254	206	162	106	86	60	16	24	2	0	12	22	94	2908	3138
3	170	136	228	272	262	250	206	220	266	266	242	204	88	78	70	28	42	4	12	8	10	14	48	94	2986	3218
Kei	992	1396	1372	1260	1306	1372	1072	1234	1304	1378	1238	1490	1230	952	638	596	460	236	190	52	56	92	158	352	18830	20426

5 24 1990 10 3 6 10 4 6 4

31 2

1	990	1806	1654	1580	1460	1668	2048	1468	1620	1704	1932	2376	2174	1770	1068	902	606	426	256	188	120	78	226	342	26220	28462
2	224	192	202	188	128	268	170	198	188	156	198	208	270	150	86	56	32	18	4	8	4	2	2	14	2882	2966
3	190	114	140	136	150	246	166	130	176	220	208	156	66	66	48	18	8	12	12	8	4	8	8	16	2230	2306
Kei	1404	2112	1996	1904	1738	2182	2384	1796	1984	2080	2338	2740	2510	1986	1202	976	646	456	272	204	128	88	236	372	31332	33734

13 2

1	1176	3336	2208	1600	1552	1402	1368	1308	1264	1024	1384	1446	1352	1022	910	790	528	348	270	210	186	158	256	302	23142	25400

2	162	188	182	96	118	116	136	126	126	112	110	122	98	132	98	76	32	14	16	12	8	8	12	20	1998	2120
3	112	138	158	166	202	198	200	136	120	148	116	108	136	78	56	36	18	14	16	20	24	20	32	36	2108	2288
Kei	1450	3662	2548	1862	1872	1716	1704	1570	1510	1284	1610	1676	1586	1232	1064	902	578	376	302	242	218	186	300	358	27248	29808
6	24	1990	10	3	6	10	4	6	4																	
31	2																									
1	1364	2326	1908	1622	1704	1850	2202	1478	2022	1856	1982	2874	2216	1854	1198	956	722	414	212	132	68	68	96	256	29412	31380
2	498	472	312	230	226	192	256	276	244	234	276	266	242	214	144	116	78	28	4	0	2	0	0	162	4198	4472
3	198	120	244	324	324	310	242	216	304	262	276	142	66	60	88	32	20	14	12	12	8	16	32	72	3208	3394
Kei	2060	2918	2464	2176	2254	2352	2700	1970	2570	2352	2534	3282	2524	2128	1430	1104	820	456	228	144	78	84	128	490	36818	39246
13	2																									
1	1836	3422	2900	2446	2018	2034	1976	1688	2154	1842	1798	2296	1650	1652	1286	1134	754	534	258	102	104	116	174	322	32132	34496
2	206	298	342	298	270	232	314	254	266	240	218	410	318	276	184	166	156	30	8	2	2	4	4	82	4292	4580
3	138	90	94	244	230	304	262	254	288	230	270	286	98	80	58	30	16	8	36	30	12	40	148	74	2956	3320
Kei	2180	3810	3336	2988	2518	2570	2552	2196	2708	2312	2286	2992	2066	2008	1528	1330	926	572	302	134	118	160	326	478	39380	42396
7	24	1990	10	3	6	10	4	6	4																	
24	2																									
1	250	608	818	988	1124	1276	1154	1058	898	1088	1112	1014	1074	738	528	436	374	164	160	102	204	64	86	160	14164	15478
2	274	388	388	342	322	244	348	300	320	286	384	442	282	308	230	146	84	22	4	4	8	4	20	88	5004	5238
3	26	20	42	72	100	100	70	78	64	72	82	62	32	6	14	16	0	4	0	2	12	8	14	14	856	910
Kei	550	1016	1248	1402	1546	1620	1572	1436	1282	1446	1578	1518	1388	1052	772	598	458	190	164	108	224	76	120	262	20024	21626
42	2																									
1	282	874	1340	1350	1386	1112	966	926	1102	1228	1054	892	560	372	284	314	202	154	148	98	86	64	96	106	14042	14996
2	298	410	528	252	300	292	256	328	268	396	242	270	284	202	126	114	84	14	6	0	2	2	12	114	4566	4800
3	24	36	82	78	88	104	68	58	38	142	78	38	12	10	4	8	4	10	4	6	0	0	2	6	868	900
Kei	604	1320	1950	1680	1774	1508	1290	1312	1408	1766	1374	1200	856	584	414	436	290	178	158	104	88	66	110	226	19476	20696
8	24	1990	10	3	6	10	4	6	4																	
24	2																									
1	696	1730	1776	1770	1570	1748	2338	2218	1768	1864	2106	2856	2542	3000	2506	1634	1594	1134	456	346	208	96	214	156	32122	36326
2	264	428	440	360	306	318	348	376	330	342	366	440	352	392	200	162	174	46	8	0	0	12	14	26	5424	5704
3	150	90	140	142	154	246	192	190	178	166	188	132	68	68	42	18	22	18	16	12	14	28	164	154	2164	2592
Kei	1110	2248	2356	2272	2030	2312	2878	2784	2276	2372	2660	3428	2962	3460	2748	1814	1790	1198	480	358	222	136	392	336	39710	44622
42	1																									
1	1638	3940	2944	2328	1982	1680	1642	1912	2294	1948	1738	1810	1556	1588	1122	950	708	516	304	160	118	66	166	248	31072	33358
2	674	526	386	332	324	286	312	310	338	344	346	394	324	226	148	124	48	14	4	0	2	2	6	78	5394	5548
3	140	106	184	316	242	238	210	200	216	236	176	112	106	44	40	12	8	6	8	0	6	10	4	54	2578	2674
Kei	2452	4572	3514	2976	2548	2204	2164	2422	2848	2528	2260	2316	1986	1858	1310	1086	764	536	316	160	126	78	176	380	39044	41580
9	24	1990	10	3	6	10	4	6	4																	
31	2																									
1	1138	2486	3198	2394	2194	3136	3582	2824	2440	2296	2340	2974	5074	5054	3686	1980	1700	1002	470	300	122	94	92	128	46796	50704
2	262	460	374	222	196	132	144	280	234	238	238	396	234	220	148	72	98	36	16	4	0	0	2	28	3850	4034
3	14	20	54	50	40	26	26	24	36	22	34	44	32	18	18	8	6	2	2	4	0	2	8	14	466	504
Kei	1414	2966	3626	2666	2430	3294	3752	3128	2710	2556	2612	3414	5340	5292	3852	2060	1804	1040	488	308	122	96	102	170	51112	55242
13	2																									
1	796	4552	4954	3786	3658	3360	3804	3052	2690	2650	2670	3112	2738	2530	2190	1320	1026	1140	544	272	150	116	136	140	47862	51386
2	158	426	392	344	290	274	336	256	216	224	220	372	312	210	184	94	60	66	14	0	0	2	2	44	4308	4496
3	42	22	30	48	24	34	34	28	28	18	46	46	36	26	16	16	6	16	8	16	8	8	6	14	494	576
Kei	996	5000	5376	4178	3972	3668	4174	3336	2934	2892	2936	3530	3086	2766	2390	1430	1092	1222	566	288	158	126	144	198	52664	56458
10	24	1990	10	3	6	10	4	6	4																	
31	1																									
1	284	1134	974	1040	1008	1082	1502	1568	1140	1276	1344	1436	2172	2350	1730	1452	1002	720	278	174	112	76	42	70	21492	23966
2	216	288	248	202	164	156	148	202	144	222	182	164	152	152	76	76	30	12	2	0	2	2	4	24	2792	2868
3	56	20	48	72	100	84	82	74	46	70	66	36	6	18	16	8	4	4	4	0	0	4	2	10	802	830

```
Kei  556 1442 1270 1314 1272 1322 1732 1841 1330 1568 1592 1636 2330 2520 1822 1536 1036  736  284  174  114   82   48  104 25086 27664
   13    1
 1   880 3006 2370 2038 1482 1394 1068  886  868 1532 1424 1514 1128 1222 1114  964  726  424  210  142   88   50   62  102 22890 24694
 2   262  244  198  166  192  224  162  158  152  266  212  208  160  106  116  116   16   12    2    0    0    2    4   42  2942  3020
 3    60   52   54  102  108  112   58   68   38   72   86   64   18    8    8    8    8    6    0    0    0    2    6   12   916   950
Kei 1202 3302 2622 2306 1782 1730 1288 1112 1058 1870 1722 1786 1306 1336 1238 1088  750  442  212  142   88   54   72  156 26748 28664
   11   16 1990 10  1  6 10  1 22    2
   13    0
 1   264 2090 2338 2224 2008 1756 1636 1554 1830 1604 2060 1796 1564 1182 1070 1012    0    0    0    0    0    0    0    0 25988 25988
 2    34  192  170  150  186  120  186  192  166  210  152  150  184  170   92   74    0    0    0    0    0    0    0    0  2428  2428
 3     2    8   28   42   22   16   36   32   32   22   16    0    8    0    2    0    0    0    0    0    0    0    0    0   266   266
Kei  300 2290 2536 2416 2216 1892 1858 1778 2028 1836 2228 1946 1756 1352 1164 1086    0    0    0    0    0    0    0    0 28682 28682
   12   16 1990 10  1  6 10  1 22    2
   31    1
 1   402  526  442  330  390  358  394  330  374  364  418  360  344  304  294  200    0    0    0    0    0    0    0    0  5830  5830
 2   348  340  234  220  238  224  236  192  230  200  238  216  226  176  180  136    0    0    0    0    0    0    0    0  3634  3634
 3    54   34   28   42   44   26   18   30   26   28   42   16   18   12   14    2    0    0    0    0    0    0    0    0   434   434
Kei  804  900  704  592  672  608  648  552  630  592  698  592  588  492  488  338    0    0    0    0    0    0    0    0  9898  9898
   13    1
 1   424  514  508  580  576  558  652  512  624  502  720  538  814  664  758  340    0    0    0    0    0    0    0    0  9284  9284
 2   154  232  294  284  234  224  252  248  240  244  254  366  498  376  448  170    0    0    0    0    0    0    0    0  4518  4518
 3    42   24   40   76   70   76   52   32   58   60   56   52   76   52   58   16    0    0    0    0    0    0    0    0   840   840
Kei  620  770  842  940  880  858  956  792  922  806 1030  956 1388 1092 1264  526    0    0    0    0    0    0    0    0 14642 14642
   13   16 1990 10  1  6 10  1 22    2
   42    1
 1   636  956  762  810  666  708  680  746  896  796  806  730  772  578  652  428    0    0    0    0    0    0    0    0 11622 11622
 2   280  280  232  212  212  228  230  206  232  238  236  262  200  138  108   78    0    0    0    0    0    0    0    0  3372  3372
 3    46   30   70   84   86   94   60   66   86   86  108   66   24   36   30   26    0    0    0    0    0    0    0    0   998   998
Kei  962 1266 1064 1106  964 1030  970 1018 1214 1120 1150 1058  996  752  790  532    0    0    0    0    0    0    0    0 15992 15992
   24    1
 1   324  592  610  800  722  866 1028  812  756  890  992 1196 1136 1132  862  658    0    0    0    0    0    0    0    0 13376 13376
 2    88  210  254  256  234  218  214  258  216  216  270  304  306  322  192  150    0    0    0    0    0    0    0    0  3708  3708
 3    36   22   40   90  108  114  112   58   74   86  104  102   42   30   28   24    0    0    0    0    0    0    0    0  1070  1070
Kei  448  824  904 1146 1064 1198 1354 1128 1046 1192 1366 1602 1484 1484 1082  832    0    0    0    0    0    0    0    0 18154 18154
   14   16 1990 10  1  6 10  1 22    2
   42    1
 1   104  182  174  172  150  142  116  160  122  128  176  166  132  110   86   54    0    0    0    0    0    0    0    0  2174  2174
 2   100   74   54   36   44   26   42   42   42   40   46   44   42   34   28   32    0    0    0    0    0    0    0    0   726   726
 3   120   72   78  132  112   82  104   72  118   88   70  102   44   24   12   12    0    0    0    0    0    0    0    0  1242  1242
Kei  324  328  306  340  306  250  262  274  282  256  292  312  218  168  126   98    0    0    0    0    0    0    0    0  4142  4142
   24    1
 1    86  204  164  150  146  126  144  104  124  120  120  130  160  100   92   74    0    0    0    0    0    0    0    0  2044  2044
 2    78   66   52   34   40   46   38   44   54   42   42   56   48   38   42   32    0    0    0    0    0    0    0    0   752   752
 3    80   76   84  118  108   82   48   54   80   64   62   58   62   28   30   12    0    0    0    0    0    0    0    0  1046  1046
Kei  244  346  300  302  294  254  230  202  258  226  224  244  270  166  164  118    0    0    0    0    0    0    0    0  3842  3842
   15   16 1990 10  1  6 10  1 22    2
   31    1
 1   290  810  842  604  566  670  762  698  532  706  604  664 1036 1120 1232 1168    0    0    0    0    0    0    0    0 12304 12304
 2   188  212  140   96   98  144  110  106  138  118  106  146  130  130   88   82    0    0    0    0    0    0    0    0  2032  2032
 3    20   28   56   60   62   84   64   50   62   64   38   30   30   32   26   20    0    0    0    0    0    0    0    0   726   726
Kei  498 1050 1038  760  726  898  936  854  732  888  748  840 1196 1282 1346 1270    0    0    0    0    0    0    0    0 15062 15062
   13    1
```

1	928	1964	1492	846	856	766	760	654	730	654	638	704	678	518	516	494	0	0	0	0	0	0	0	0	13198	13198
2	366	162	162	122	82	120	138	176	114	176	130	142	108	96	76	68	0	0	0	0	0	0	0	0	2238	2238
3	72	40	32	60	80	82	40	60	94	54	86	84	52	26	16	18	0	0	0	0	0	0	0	0	896	896
Kei	1366	2166	1686	1028	1018	968	938	890	938	884	854	930	838	640	608	580	0	0	0	0	0	0	0	0	16332	16332
16	16	1990	10	1	6	10	1	22	2																	
31	0																									
1	198	856	1344	1564	1730	1952	1810	1670	1740	1958	2000	2220	1994	1996	1750	1794	0	0	0	0	0	0	0	0	26576	26576
2	98	218	192	146	156	136	134	158	116	166	168	150	124	134	68	60	0	0	0	0	0	0	0	0	2224	2224
3	4	16	8	32	44	48	40	26	28	38	46	22	4	6	4	2	0	0	0	0	0	0	0	0	368	368
Kei	300	1090	1544	1742	1930	2136	1984	1854	1884	2162	2214	2392	2122	2136	1822	1856	0	0	0	0	0	0	0	0	29168	29168
17	16	1990	10	1	6	10	1	22	2																	
42	2																									
1	750	1462	1998	1410	1756	1908	2694	2218	1952	2040	2196	2890	2502	2328	2452	1908	0	0	0	0	0	0	0	0	32464	32464
2	292	274	220	178	156	178	250	298	224	198	176	154	162	110	98	52	0	0	0	0	0	0	0	0	3020	3020
3	146	48	104	198	278	246	246	282	212	206	220	134	76	60	52	26	0	0	0	0	0	0	0	0	2534	2534
Kei	1188	1784	2322	1786	2190	2332	3190	2798	2388	2444	2592	3178	2740	2498	2602	1986	0	0	0	0	0	0	0	0	38018	38018
24	2																									
1	964	3728	3522	2620	2238	2022	2034	2090	2328	2344	2468	2758	2356	2598	2228	1048	0	0	0	0	0	0	0	0	37346	37346
2	180	156	202	152	142	120	158	168	128	142	198	192	164	362	142	72	0	0	0	0	0	0	0	0	2678	2678
3	182	90	276	190	216	288	246	238	228	296	264	166	104	172	68	34	0	0	0	0	0	0	0	0	3058	3058
Kei	1326	3974	4000	2962	2596	2430	2438	2496	2684	2782	2930	3116	2624	3132	2438	1154	0	0	0	0	0	0	0	0	43082	43082
18	16	1990	10	1	6	10	1	22	2																	
24	1																									
1	292	392	374	416	438	452	476	418	428	424	412	382	432	458	370	344	0	0	0	0	0	0	0	0	6508	6508
2	76	98	114	126	104	94	114	128	94	142	108	132	110	144	134	92	0	0	0	0	0	0	0	0	1810	1810
3	56	16	34	46	58	68	36	40	34	60	60	54	32	8	22	18	0	0	0	0	0	0	0	0	642	642
Kei	424	506	522	588	600	614	626	586	556	626	580	568	574	610	526	454	0	0	0	0	0	0	0	0	8960	8960
42	1																									
1	190	320	288	282	326	338	422	342	290	360	376	360	492	460	446	296	0	0	0	0	0	0	0	0	5588	5588
2	108	124	96	102	114	92	102	84	100	90	116	118	116	98	92	114	0	0	0	0	0	0	0	0	1666	1666
3	26	26	36	76	34	22	40	62	38	30	56	50	30	18	10	6	0	0	0	0	0	0	0	0	560	560
Kei	324	470	420	460	474	452	564	488	428	480	548	528	638	576	548	416	0	0	0	0	0	0	0	0	7814	7814
19	16	1990	10	1	6	10	1	22	2																	
31	2																									
1	646	1614	2138	2080	2158	2538	4834	4036	3500	3660	3632	5514	7430	8468	4656	2880	0	0	0	0	0	0	0	0	59784	59784
2	284	230	178	166	138	154	190	216	258	222	280	198	224	272	124	112	0	0	0	0	0	0	0	0	3246	3246
3	68	20	68	70	82	88	84	76	162	128	186	110	72	30	40	16	0	0	0	0	0	0	0	0	1300	1300
Kei	998	1864	2384	2316	2378	2780	5108	4328	3920	4010	4098	5822	7726	8770	4820	3008	0	0	0	0	0	0	0	0	64330	64330
13	2																									
1	3164	4988	5602	3826	3598	3038	3010	2864	4460	4034	3560	3720	3016	1992	1716	1090	0	0	0	0	0	0	0	0	53678	53678
2	254	204	226	200	162	156	166	210	200	298	282	232	216	164	102	98	0	0	0	0	0	0	0	0	3170	3170
3	94	22	36	90	90	104	112	62	178	194	116	114	50	44	22	34	0	0	0	0	0	0	0	0	1362	1362
Kei	3512	5214	5864	4116	3850	3298	3288	3136	4838	4526	3958	4066	3282	2200	1840	1222	0	0	0	0	0	0	0	0	58210	58210
20	16	1990	10	1	6	10	1	22	2																	
31	1																									
1	482	864	1062	1398	1480	1302	1246	1590	1250	1306	1432	1678	1900	1790	1270	1068	0	0	0	0	0	0	0	0	21118	21118
2	162	266	252	214	154	192	170	328	210	232	256	198	164	242	142	156	0	0	0	0	0	0	0	0	3338	3338
3	36	22	28	110	154	118	100	104	108	122	130	94	74	26	44	24	0	0	0	0	0	0	0	0	1294	1294
Kei	680	1152	1342	1722	1788	1612	1516	2022	1568	1660	1818	1970	2138	2058	1456	1248	0	0	0	0	0	0	0	0	25750	25750
13	1																									
1	706	1840	1676	1584	1484	1400	1220	1272	1538	1604	1546	1672	1432	1120	948	708	0	0	0	0	0	0	0	0	21750	21750
2	372	308	322	282	242	236	246	264	382	286	296	380	228	184	178	174	0	0	0	0	0	0	0	0	4380	4380

3	64	38	84	80	160	156	80	98	120	102	100	42	36	22	18	18	0	0	0	0	0	0	0	0	1218	1218
Kei	1142	2186	2082	1946	1886	1792	1546	1634	2040	1992	1942	2094	1696	1326	1144	900	0	0	0	0	0	0	0	0	27348	27348
21	16	1990	10	2	6	10	2	22	3																	
31	2																									
1	926	984	686	694	696	698	842	814	804	838	830	962	962	776	696	524	0	0	0	0	0	0	0	0	12732	12732
2	208	162	132	162	86	118	124	110	120	62	108	124	152	122	114	76	0	0	0	0	0	0	0	0	1980	1980
3	136	130	132	128	146	128	166	106	82	144	140	100	60	22	42	14	0	0	0	0	0	0	0	0	1676	1676
Kei	1270	1276	950	984	928	944	1132	1030	1006	1044	1078	1186	1174	920	852	614	0	0	0	0	0	0	0	0	16388	16388
13	2																									
1	710	962	1060	872	944	778	738	698	780	738	664	866	862	922	754	568	0	0	0	0	0	0	0	0	12916	12916
2	136	154	178	188	130	114	126	132	134	146	126	156	128	196	162	130	0	0	0	0	0	0	0	0	2336	2336
3	90	114	124	178	170	214	182	176	148	146	154	114	108	62	62	28	0	0	0	0	0	0	0	0	2070	2070
Kei	936	1230	1362	1238	1244	1106	1046	1006	1062	1030	944	1136	1098	1180	978	726	0	0	0	0	0	0	0	0	17322	17322
22	16	1990	10	2	6	10	2	22	3																	
24	1																									
1	470	968	722	970	996	958	984	964	970	966	1038	1026	1122	1340	1152	716	0	0	0	0	0	0	0	0	15362	15362
2	230	216	210	254	204	234	188	182	240	210	222	216	294	336	278	202	0	0	0	0	0	0	0	0	3716	3716
3	52	70	100	102	148	160	128	116	208	182	154	138	108	88	58	40	0	0	0	0	0	0	0	0	1852	1852
Kei	752	1254	1032	1326	1348	1352	1300	1262	1418	1358	1414	1380	1524	1764	1488	958	0	0	0	0	0	0	0	0	20930	20930
42	1																									
1	506	782	642	534	566	556	530	560	678	744	1254	728	1020	818	494	540	0	0	0	0	0	0	0	0	10952	10952
2	254	324	248	224	220	176	226	240	220	202	296	286	298	318	194	214	0	0	0	0	0	0	0	0	3940	3940
3	84	42	28	64	86	62	54	42	54	88	150	74	86	102	88	28	0	0	0	0	0	0	0	0	1112	1112
Kei	844	1148	918	822	852	794	810	842	952	1034	1700	1088	1404	1238	776	782	0	0	0	0	0	0	0	0	16004	16004
23	16	1990	10	2	6	10	2	22	3																	
31	2																									
1	470	2092	2428	2494	2582	2420	2540	2270	2868	2750	2806	2810	2914	2398	1804	1352	0	0	0	0	0	0	0	0	36998	36998
2	128	308	326	228	192	200	168	264	220	208	234	218	214	178	126	50	0	0	0	0	0	0	0	0	3262	3262
3	22	30	40	42	66	60	58	50	84	76	80	38	24	24	8	14	0	0	0	0	0	0	0	0	716	716
Kei	620	2430	2794	2764	2840	2680	2766	2584	3172	3034	3120	3066	3152	2600	1938	1416	0	0	0	0	0	0	0	0	40976	40976
13	2																									
1	672	1960	2650	2138	2052	2202	1942	1668	2200	2008	1676	2054	1964	1098	916	680	0	0	0	0	0	0	0	0	27880	27880
2	154	302	322	218	210	206	238	216	220	272	246	264	282	170	146	76	0	0	0	0	0	0	0	0	3542	3542
3	30	32	30	64	40	52	28	36	44	48	40	28	18	10	18	6	0	0	0	0	0	0	0	0	524	524
Kei	856	2294	3002	2420	2302	2460	2208	1920	2464	2328	1962	2346	2264	1278	1080	762	0	0	0	0	0	0	0	0	31946	31946
24	16	1990	10	2	6	10	2	22	3																	
24	0																									
1	184	586	674	964	902	888	1084	774	740	1128	952	1090	1396	840	596	364	0	0	0	0	0	0	0	0	13162	13162
2	136	212	252	222	218	134	240	234	172	250	162	240	222	196	158	104	0	0	0	0	0	0	0	0	3152	3152
3	12	18	14	56	40	38	42	34	42	90	66	58	44	12	12	8	0	0	0	0	0	0	0	0	586	586
Kei	332	816	940	1242	1160	1060	1366	1042	954	1468	1180	1388	1662	1048	766	476	0	0	0	0	0	0	0	0	16900	16900
25	16	1990	10	2	6	10	2	22	3																	
31	1																									
1	382	980	1262	1248	1244	1382	1848	1450	1290	1472	1412	1936	2452	2016	1402	1016	0	0	0	0	0	0	0	0	22792	22792
2	48	88	60	56	50	42	44	50	78	56	60	62	48	96	56	16	0	0	0	0	0	0	0	0	910	910
3	28	6	42	50	62	64	60	52	64	50	58	34	18	38	12	4	0	0	0	0	0	0	0	0	642	642
Kei	458	1074	1364	1354	1356	1488	1952	1552	1432	1578	1530	2032	2518	2150	1470	1036	0	0	0	0	0	0	0	0	24344	24344
13	1																									
1	510	1518	1812	1074	972	1008	926	926	1116	998	942	1018	1112	664	678	550	0	0	0	0	0	0	0	0	15824	15824
2	88	80	64	38	42	46	44	38	38	60	76	56	48	26	18	16	0	0	0	0	0	0	0	0	778	778
3	28	22	18	30	50	32	14	36	38	36	40	12	6	6	4	4	0	0	0	0	0	0	0	0	376	376
Kei	626	1620	1894	1142	1064	1086	984	1000	1192	1094	1058	1086	1166	696	700	570	0	0	0	0	0	0	0	0	16978	16978

```
   26   16 1990 10  2  6 10  2 22    3
   31    2
 1   850 2676 2980 2480 2540 2582 2984 2582 2848 2860 2780 2784 2898 2276 1696 1126    0    0    0    0    0    0    0    0 38942 38942
 2   454  446  390  224  284  222  262  268  288  262  280  260  284  250  126  102    0    0    0    0    0    0    0    0  4402  4402
 3    30   16   48   90   90   68   60   54  106   68   94   58   48   22   28   14    0    0    0    0    0    0    0    0   894   894
Kei 1334 3138 3418 2794 2914 2872 3306 2904 3242 3190 3154 3102 3230 2548 1850 1242    0    0    0    0    0    0    0    0 44238 44238
   13    2
 1  1302 2216 2538 2546 2470 2262 2666 2154 2400 2414 2490 2472 2644 2494 2034 1474    0    0    0    0    0    0    0    0 36576 36576
 2   132  266  306  330  244  208  246  288  278  242  306  302  302  304  158  108    0    0    0    0    0    0    0    0  4020  4020
 3    34    4   48   60   88   80   98   68   74   96  100  106   44   30   26   26    0    0    0    0    0    0    0    0   982   982
Kei 1468 2486 2892 2936 2802 2550 3010 2510 2752 2752 2896 2880 2990 2828 2218 1608    0    0    0    0    0    0    0    0 41578 41578
   27   16 1990 10  2  6 10  2 22    3
   24    1
 1   252  660  838  876  872  864  956  886 1020  932  924  980 1090  964  892  588    0    0    0    0    0    0    0    0 13594 13594
 2    38   58   26   16   22   24   30   36   40   56   62   22   22   40    8    2    0    0    0    0    0    0    0    0   502   502
 3     8    2    6    8   26   12   20   14   16   26   26   12    4    6    0    2    0    0    0    0    0    0    0    0   188   188
Kei  298  720  870  900  920  900 1006  936 1076 1014 1012 1014 1116 1010  900  592    0    0    0    0    0    0    0    0 14284 14284
   42    1
 1   318  850 1146 1060 1054 1054 1002  924 1126 1190 1150 1160 1274 1158 1014  656    0    0    0    0    0    0    0    0 16136 16136
 2    44   66   26   14    8   10   20   16   34   40   28   20   14    8    2    0    0    0    0    0    0    0    0    0   350   350
 3    12   10   22   30   34   40   24   18   16   20   16   12   10   10    4    0    0    0    0    0    0    0    0    0   278   278
Kei  374  926 1194 1104 1096 1104 1046  958 1176 1250 1194 1192 1298 1176 1020  656    0    0    0    0    0    0    0    0 16764 16764
   28   16 1990 10  2  6 10  2 22    3
   24    1
 1   362  822  954  854  826  918 1080  962 1176 1470 1540 1870 2254 2186 1776 1178    0    0    0    0    0    0    0    0 20228 20228
 2    36   50   26   18   22   22   12   34   28   58   50   44   24   30   16    6    0    0    0    0    0    0    0    0   476   476
 3    10    0   18   18   12   22   36   28   36   40   38   34   22   18    4    0    0    0    0    0    0    0    0    0   336   336
Kei  408  872  998  890  860  962 1128 1024 1240 1568 1628 1948 2300 2234 1796 1184    0    0    0    0    0    0    0    0 21040 21040
   42    1
 1   532 1476 1564 1312 1086  974 1078  928 1654 1520 1518 1596 1708 1570 1320  936    0    0    0    0    0    0    0    0 20772 20772
 2    50   64   24   20   16   16   22   14   34   62   42   44   18   20    4    2    0    0    0    0    0    0    0    0   452   452
 3    28   18   18   36   36   30   16   18   36   48   26   22   14    8    6    0    0    0    0    0    0    0    0    0   360   360
Kei  610 1558 1606 1368 1138 1020 1116  960 1724 1630 1586 1662 1740 1598 1330  938    0    0    0    0    0    0    0    0 21584 21584
   29   16 1990 10  2  6 10  2 22    3
   42    2
 1   560 1090  704  606  560  748  580  646  726  744  636  740  774  748  620  374    0    0    0    0    0    0    0    0 10856 10856
 2   474  400  342  290  306  256  234  260  296  280  300  366  292  250  218  158    0    0    0    0    0    0    0    0  4722  4722
 3    84   44  154  164  132  158  106  148  138  118   30   96   44   34   24   32    0    0    0    0    0    0    0    0  1506  1506
Kei 1118 1534 1200 1060  998 1162  920 1054 1160 1142  966 1202 1110 1032  862  564    0    0    0    0    0    0    0    0 17084 17084
   24    2
 1   280  540  432  486  556  634  634  608  486  564  644  612  714  816  648  444    0    0    0    0    0    0    0    0  9098  9098
 2   130  296  260  380  256  382  284  366  252  376  370  436  364  532  346  474    0    0    0    0    0    0    0    0  5504  5504
 3    46   40   68   90   90   28   80  102   90  112   80   86   44   36   22   22    0    0    0    0    0    0    0    0  1036  1036
Kei  456  876  760  956  902 1044  998 1076  828 1052 1094 1134 1122 1384 1016  940    0    0    0    0    0    0    0    0 15638 15638
   30   16 1990 10  2  6 10  2 22    3
   31    0
 1    54  668 1324  972  958 1258 1852 1318 1228 1032  968 1122 2122 2134  744  330    0    0    0    0    0    0    0    0 18084 18084
 2    38   94   72   48   44   36   50   56   46   56   52   70   52   30    8    0    0    0    0    0    0    0    0    0   752   752
 3     8    4    6   20   28   24   18   20   22   30   22   18   10   10    0    2    0    0    0    0    0    0    0    0   242   242
Kei  100  766 1402 1040 1030 1318 1920 1394 1296 1118 1042 1210 2184 2174  752  332    0    0    0    0    0    0    0    0 19078 19078
   31   16 1990 10  4  6 10  4 22    5
   31    1
```

1	50	422	694	622	586	968	1364	894	1078	1098	1656	3702	3300	700	468	140	0	0	0	0	0	0	0	0	17742	17742
2	2	10	0	0	0	0	4	8	14	4	0	30	38	6	2	0	0	0	0	0	0	0	0	0	118	118
3	4	6	4	8	2	10	4	10	6	6	12	8	4	8	4	0	0	0	0	0	0	0	0	0	96	96
Kei	56	438	698	630	588	978	1372	912	1098	1108	1668	3740	3342	714	474	140	0	0	0	0	0	0	0	0	17956	17956
13	1																									
1	30	556	962	774	596	360	396	320	442	460	302	0	0	120	122	6	0	0	0	0	0	0	0	0	5446	5446
2	4	0	0	0	0	0	0	4	2	2	0	0	0	2	4	0	0	0	0	0	0	0	0	0	18	18
3	2	0	2	0	0	0	6	4	2	4	8	0	0	4	0	0	0	0	0	0	0	0	0	0	32	32
Kei	36	556	964	774	596	360	402	328	446	466	310	0	0	126	126	6	0	0	0	0	0	0	0	0	5496	5496
32	16	1990	10	4	6	10	4	22	5																	
24	1																									
1	278	402	692	770	586	496	522	500	506	452	446	296	0	0	352	340	0	0	0	0	0	0	0	0	6638	6638
2	142	138	174	140	106	104	142	78	132	114	92	150	0	0	94	66	0	0	0	0	0	0	0	0	1672	1672
3	2	14	10	24	10	8	14	14	6	10	10	2	0	0	16	2	0	0	0	0	0	0	0	0	142	142
Kei	422	554	876	934	702	608	678	592	644	576	548	448	0	0	462	408	0	0	0	0	0	0	0	0	8452	8452
42	1																									
1	210	302	408	472	420	404	396	296	406	358	278	454	0	0	278	288	0	0	0	0	0	0	0	0	4970	4970
2	168	184	180	136	130	130	130	132	154	102	104	192	0	0	80	56	0	0	0	0	0	0	0	0	1878	1878
3	10	10	10	18	10	6	12	10	12	12	10	2	0	0	2	0	0	0	0	0	0	0	0	0	124	124
Kei	388	496	598	626	560	540	538	438	572	472	392	648	0	0	360	344	0	0	0	0	0	0	0	0	6972	6972
33	16	1990	10	4	6	10	4	22	5																	
24	1																									
1	166	210	302	364	296	318	332	268	266	218	270	284	242	218	338	368	0	0	0	0	0	0	0	0	4460	4460
2	172	114	158	132	108	86	116	88	116	142	158	136	126	124	126	76	0	0	0	0	0	0	0	0	1978	1978
3	8	10	18	4	12	8	8	14	18	12	14	16	4	0	2	2	0	0	0	0	0	0	0	0	150	150
Kei	346	334	478	500	416	412	456	370	400	372	442	436	372	342	466	446	0	0	0	0	0	0	0	0	6588	6588
42	1																									
1	256	346	492	514	574	556	526	330	478	402	568	556	510	444	410	440	0	0	0	0	0	0	0	0	7402	7402
2	194	182	226	114	132	148	128	130	178	62	112	124	130	68	62	48	0	0	0	0	0	0	0	0	2038	2038
3	40	8	16	18	12	16	28	24	26	26	26	20	16	4	4	6	0	0	0	0	0	0	0	0	290	290
Kei	490	536	734	646	718	720	682	484	682	490	706	700	656	516	476	494	0	0	0	0	0	0	0	0	9730	9730
34	16	1990	10	4	6	10	4	22	5																	
31	1																									
1	448	1094	1130	874	794	930	816	836	880	894	952	1064	1022	718	806	576	0	0	0	0	0	0	0	0	13834	13834
2	322	340	330	278	332	288	316	292	284	294	312	402	352	250	210	188	0	0	0	0	0	0	0	0	4790	4790
3	92	40	72	134	108	110	80	76	78	92	70	64	30	16	12	12	0	0	0	0	0	0	0	0	1086	1086
Kei	862	1474	1532	1286	1234	1328	1212	1204	1242	1280	1334	1530	1404	984	1028	776	0	0	0	0	0	0	0	0	19710	19710
13	1																									
1	488	848	1124	1254	1126	1234	1262	1070	990	996	1076	1134	1032	1102	1284	1042	0	0	0	0	0	0	0	0	17062	17062
2	134	298	406	336	268	298	300	294	260	298	302	308	380	322	254	172	0	0	0	0	0	0	0	0	4630	4630
3	52	18	26	60	64	100	96	62	62	82	92	64	30	18	28	20	0	0	0	0	0	0	0	0	874	874
Kei	674	1164	1556	1650	1458	1632	1658	1426	1312	1376	1470	1506	1442	1442	1566	1234	0	0	0	0	0	0	0	0	22566	22566
35	16	1990	10	4	6	10	4	22	5																	
24	1																									
1	228	714	812	914	986	942	1096	978	1114	866	1152	1126	922	912	714	556	0	0	0	0	0	0	0	0	14032	14032
2	54	68	112	144	136	114	194	184	94	88	108	102	58	72	64	42	0	0	0	0	0	0	0	0	1634	1634
3	18	14	12	32	28	52	26	36	24	34	58	40	14	12	6	4	0	0	0	0	0	0	0	0	410	410
Kei	300	796	936	1090	1150	1108	1316	1198	1232	988	1318	1268	994	996	784	602	0	0	0	0	0	0	0	0	16076	16076
42	1																									
1	288	520	654	816	942	878	1180	676	1106	860	1158	840	750	460	320	268	0	0	0	0	0	0	0	0	11716	11716
2	198	246	264	180	138	146	186	170	194	144	144	170	200	120	88	76	0	0	0	0	0	0	0	0	2664	2664
3	74	34	32	92	56	64	32	64	30	32	50	32	20	10	2	14	0	0	0	0	0	0	0	0	638	638

```
Kei  560  800  950 1088 1136 1088 1398  910 1330 1036 1352 1042  970  590  410  358    0    0    0    0    0    0    0    0 15018 15018
   36   16 1990 10  4  6 10  4 22    5
   24    1
 1   600  882  968  860  932 1134 1144 1104 1100  938 1156 1236 1262 1508 1152 1072    0    0    0    0    0    0    0    0 17048 17048
 2   244  294  268  302  252  272  266  346  262  232  344  312  364  362  274  224    0    0    0    0    0    0    0    0  4618  4618
 3   104   96  134  104  124  112  138  146  132  104  140  136  108   62   38   34    0    0    0    0    0    0    0    0  1712  1712
Kei  948 1272 1370 1266 1308 1518 1548 1596 1494 1274 1640 1684 1734 1932 1464 1330    0    0    0    0    0    0    0    0 23378 23378
   42    1
 1   600  808  780  992 1046 1008 1250 1200 1098 1066 1182  926 1060 1126  924  968    0    0    0    0    0    0    0    0 16034 16034
 2   288  378  324  312  342  318  306  284  280  294  284  326  290  278  248  236    0    0    0    0    0    0    0    0  4788  4788
 3    88   92   70  180   90  134   92  112   98  106  122  124   66   66   42   24    0    0    0    0    0    0    0    0  1506  1506
Kei  976 1278 1174 1484 1478 1460 1648 1596 1476 1466 1588 1376 1416 1470 1214 1228    0    0    0    0    0    0    0    0 22328 22328
   37   16 1990 10  4  6 10  4 22    5
   24    1
 1   286  580  716 1014 1074 1082 1208  920  784  496  744  914  898  954  532  372    0    0    0    0    0    0    0    0 12574 12574
 2    42   80  106   88  112   88  102   92   60   38   70   70   88   92   92   40    0    0    0    0    0    0    0    0  1260  1260
 3    32   24   38   74  100   96   92   94   96   66   90  108   64   34   20   30    0    0    0    0    0    0    0    0  1058  1058
Kei  360  684  860 1176 1286 1266 1402 1106  940  600  904 1092 1050 1080  644  442    0    0    0    0    0    0    0    0 14892 14892
   42    1
 1   570  952 1306 1316 1216 1316 1204  988  856  588 1002 1054  662  686  484  278    0    0    0    0    0    0    0    0 14478 14478
 2   130  158  144  156  150  154  130  160  150  104  132  108  110   90   66   58    0    0    0    0    0    0    0    0  2000  2000
 3    60   32   86  132  144  124  110   92   44   68   86   92   40   22   14   10    0    0    0    0    0    0    0    0  1156  1156
Kei  760 1142 1536 1604 1510 1594 1444 1240 1050  760 1220 1254  812  798  564  346    0    0    0    0    0    0    0    0 17634 17634
   38   16 1990 10  4  6 10  4 22    5
   24    1
 1   118  726  790  818 1012  758  756  626  806  658  692  800  962  720  590  366    0    0    0    0    0    0    0    0 11198 11198
 2    32   32   24   50   18   24   28   48   46   34   26    8    8    6    4    0    0    0    0    0    0    0    0    0   388   388
 3    10   20   20   36   14   30   42   24   42   32   42   40   22   10   12    6    0    0    0    0    0    0    0    0   402   402
Kei  160  778  834  904 1044  812  826  698  894  724  760  848  992  736  606  372    0    0    0    0    0    0    0    0 11988 11988
   42    1
 1   154  544  648  802  626  756  864  754  850  818  812  800  788  526  380  164    0    0    0    0    0    0    0    0 10286 10286
 2    16   34   18   30   22   14   14   26   24   18   16   26   20   14   16    8    0    0    0    0    0    0    0    0   316   316
 3    18   16   12   22   32   42   28   18   50   40   34   28   16    4    0    0    0    0    0    0    0    0    0    0   360   360
Kei  188  594  678  854  680  812  906  798  924  876  862  854  824  544  396  172    0    0    0    0    0    0    0    0 10962 10962
   39   16 1990 10  4  6 10  4 22    5
   24    1
 1   396  800  812 1046 1072 1068 1308 1118 1300 1224 1080 1258 1352 1328  970  808    0    0    0    0    0    0    0    0 16940 16940
 2   194  390  374  344  314  314  294  328  360  286  238  258  296  278  170  136    0    0    0    0    0    0    0    0  4574  4574
 3     0    0   18   54   54   72   54   44   64   58   54   60   32   12   16    0    0    0    0    0    0    0    0    0   592   592
Kei  590 1190 1204 1444 1440 1454 1656 1490 1724 1568 1372 1576 1680 1618 1156  944    0    0    0    0    0    0    0    0 22106 22106
   42    1
 1   380 1248 1684 1478 1290 1354 1300 1162 1314 1178 1272 1310 1388  870  660  520    0    0    0    0    0    0    0    0 18408 18408
 2   540  456  444  388  360  336  352  286  378  326  230  290  306  190  194  110    0    0    0    0    0    0    0    0  5186  5186
 3     6   18   26   78   94   50  100   68   76   56   74   48   12   18   24    4    0    0    0    0    0    0    0    0   752   752
Kei  926 1722 2154 1944 1744 1740 1752 1516 1768 1560 1576 1648 1706 1078  878  634    0    0    0    0    0    0    0    0 24346 24346
   40   16 1990 10  4  6 10  4 22    5
   24    1
 1   410  446  456  474  418  442  494  530  762  680  592  638  604  546  444  292    0    0    0    0    0    0    0    0  8228  8228
 2   140  124   86   90  108  142  126  134  128  102  112  100   98  116   68   64    0    0    0    0    0    0    0    0  1738  1738
 3    18   14   38   46  102   98   40   52   70   58   50   58   24   16   10   18    0    0    0    0    0    0    0    0   712   712
Kei  568  584  580  610  628  682  660  716  960  840  754  796  726  678  522  374    0    0    0    0    0    0    0    0 10678 10678
   42    1
```

1	678	810	792	726	728	612	576	720	774	692	760	742	566	600	494	370	0	0	0	0	0	0	0	0	10640	10640
2	140	128	112	94	194	98	96	116	116	96	86	84	102	118	104	66	0	0	0	0	0	0	0	0	1750	1750
3	34	38	54	64	96	72	48	46	82	76	106	38	20	18	12	16	0	0	0	0	0	0	0	0	820	820
Kei	852	976	958	884	1018	782	720	882	972	864	952	864	688	736	610	452	0	0	0	0	0	0	0	0	13210	13210
41	16	1990	10	4	6	10	4	22	5																	
42	0																									
1	486	1470	1904	1714	1898	1798	1670	1734	1540	1372	1360	1922	1696	1714	1202	906	0	0	0	0	0	0	0	0	24386	24386
2	234	580	856	570	552	498	494	474	422	510	458	236	104	128	254	188	0	0	0	0	0	0	0	0	6558	6558
3	10	6	8	32	34	52	38	26	18	38	30	12	8	10	12	2	0	0	0	0	0	0	0	0	336	336
Kei	730	2056	2768	2316	2484	2348	2202	2234	1980	1920	1848	2170	1808	1852	1468	1096	0	0	0	0	0	0	0	0	31280	31280
42	16	1990	10	4	6	10	4	22	5																	
24	1																									
1	390	712	550	504	614	600	650	644	740	698	664	712	866	854	662	630	0	0	0	0	0	0	0	0	10490	10490
2	180	160	170	128	168	142	170	134	134	148	166	154	168	184	176	164	0	0	0	0	0	0	0	0	2546	2546
3	44	26	20	44	52	60	74	46	46	42	46	68	32	30	14	20	0	0	0	0	0	0	0	0	664	664
Kei	614	898	740	676	834	802	894	824	920	888	876	934	1066	1068	852	814	0	0	0	0	0	0	0	0	13700	13700
42	1																									
1	526	682	804	730	648	778	800	820	736	648	742	900	982	938	706	784	0	0	0	0	0	0	0	0	12224	12224
2	322	296	264	198	252	266	252	260	218	240	262	260	242	238	184	152	0	0	0	0	0	0	0	0	3906	3906
3	74	52	64	86	126	118	106	102	70	78	66	72	34	48	22	14	0	0	0	0	0	0	0	0	1132	1132
Kei	922	1030	1132	1014	1026	1162	1158	1182	1024	966	1070	1232	1258	1224	912	950	0	0	0	0	0	0	0	0	17262	17262
43	16	1990	10	4	6	10	4	22	5																	
42	1																									
1	574	582	398	402	458	462	436	434	534	508	482	660	624	458	498	410	0	0	0	0	0	0	0	0	7920	7920
2	470	302	270	232	284	246	264	318	258	246	230	288	278	186	184	160	0	0	0	0	0	0	0	0	4216	4216
3	80	84	106	130	132	150	96	114	192	150	122	96	56	38	24	16	0	0	0	0	0	0	0	0	1586	1586
Kei	1124	968	774	764	874	858	796	866	984	904	834	1044	958	682	706	586	0	0	0	0	0	0	0	0	13722	13722
24	1																									
1	142	290	364	352	418	356	324	266	272	330	300	396	464	462	438	336	0	0	0	0	0	0	0	0	5510	5510
2	136	224	254	232	240	234	218	252	212	210	270	306	320	340	280	248	0	0	0	0	0	0	0	0	3976	3976
3	34	60	112	72	98	94	100	74	80	104	118	116	62	44	14	10	0	0	0	0	0	0	0	0	1192	1192
Kei	312	574	730	656	756	684	642	592	564	644	688	818	846	846	732	594	0	0	0	0	0	0	0	0	10678	10678
44	16	1990	10	4	6	10	4	22	5																	
31	1																									
1	312	600	664	570	708	750	1190	852	804	942	916	1184	1314	1416	1378	1098	0	0	0	0	0	0	0	0	14698	14698
2	36	122	88	64	60	48	56	58	44	58	76	64	48	64	26	20	0	0	0	0	0	0	0	0	932	932
3	12	6	20	14	20	22	26	22	34	34	14	24	14	14	8	0	0	0	0	0	0	0	0	0	284	284
Kei	360	728	772	648	788	820	1272	932	882	1034	1006	1272	1376	1494	1412	1118	0	0	0	0	0	0	0	0	15914	15914
13	1																									
1	582	2282	1902	1212	1046	782	1044	1004	1232	980	1068	928	958	868	1060	1054	0	0	0	0	0	0	0	0	18002	18002
2	50	96	80	64	68	54	70	66	78	70	90	48	44	22	12	18	0	0	0	0	0	0	0	0	930	930
3	10	6	8	28	44	26	22	40	38	20	26	18	10	10	4	0	0	0	0	0	0	0	0	0	310	310
Kei	642	2384	1990	1304	1158	862	1136	1110	1348	1070	1184	994	1012	900	1076	1072	0	0	0	0	0	0	0	0	19242	19242
45	16	1990	10	4	6	10	4	22	5																	
24	1																									
1	814	1772	1570	1216	1114	1178	1560	1610	1674	1574	1514	1704	1888	1820	1390	1566	0	0	0	0	0	0	0	0	23964	23964
2	162	258	234	188	126	146	168	220	194	200	250	210	178	208	118	94	0	0	0	0	0	0	0	0	2954	2954
3	94	38	186	128	130	220	170	174	152	158	176	154	66	62	44	28	0	0	0	0	0	0	0	0	1980	1980
Kei	1070	2068	1990	1532	1370	1544	1898	2004	2020	1932	1940	2068	2132	2090	1552	1688	0	0	0	0	0	0	0	0	28898	28898
42	1																									
1	926	1964	1774	1434	1272	1172	1358	1314	1440	1530	1296	1512	1874	1742	1438	1254	0	0	0	0	0	0	0	0	23300	23300
2	200	296	208	126	128	124	130	164	202	200	170	124	102	110	104	46	0	0	0	0	0	0	0	0	2434	2434

3	106	110	148	166	174	170	154	122	158	142	114	94	58	46	22	22	0	0	0	0	0	0	0	0	1806	1806
Kei	1232	2370	2130	1726	1574	1466	1642	1600	1800	1872	1580	1730	2034	1898	1564	1322	0	0	0	0	0	0	0	0	27540	27540
	46	16	1990	11	9	6	11	9	22	6																
	31	1																								
1	166	300	370	368	250	320	272	282	310	272	250	332	260	364	206	302	0	0	0	0	0	0	0	0	4624	4624
2	692	1064	914	876	724	694	648	786	788	662	750	748	770	656	272	372	0	0	0	0	0	0	0	0	11416	11416
3	6	2	4	6	6	14	10	12	8	8	14	0	4	6	6	2	0	0	0	0	0	0	0	0	108	108
Kei	864	1366	1288	1250	980	1028	930	1080	1106	942	1014	1080	1034	1026	484	676	0	0	0	0	0	0	0	0	16148	16148
	13	1																								
1	318	532	558	468	450	392	242	244	432	440	326	202	240	194	158	220	0	0	0	0	0	0	0	0	5416	5416
2	362	682	756	692	578	518	596	546	606	620	572	558	612	606	328	430	0	0	0	0	0	0	0	0	9062	9062
3	8	6	4	20	12	10	6	2	4	4	2	6	2	0	0	2	0	0	0	0	0	0	0	0	88	88
Kei	688	1220	1318	1180	1040	920	844	792	1042	1064	900	766	854	800	486	652	0	0	0	0	0	0	0	0	14566	14566

Sunday

```
   1   24 1990  9 30  6 10  1  6    1
  31    2
 1   520  768  918  960 1090 1122 1182 1280 1164 1406 1226 1068 1498 1090 1042  586  298  206  102   64   18   28   38  410 16920 18084
 2    10   46   68   62   80   42   50   58   76   64   58   56   54   56   30   34   24    4    0    0    2    0    0   28   844   902
 3     4   12   26   10   16   14   16   16   20   12   10   10    2   16   16   16    6    6    2    2    2    0    4   12   216   250
Kei  534  826 1012 1032 1186 1178 1248 1354 1260 1482 1294 1134 1554 1162 1088  636  328  216  104   66   22   28   42  450 17980 19236
  13    2
 1   492  804  922 1098 1086 1192 1244 1236 1374 1628 1852 1778 2428 2294 1448 1182  638  204  134  104   36   46   48  268 22058 23536
 2    56   72   74   68   56   76   94  104   94  120  102   84   84   52   34   18    8    0    6    4    2    2    2   24  1188  1236
 3     2    4    4    6   12   16    8    8   16   10   18    8   10    8   14   18    6    2    0   10    4    2    6   18   162   210
Kei  550  880 1000 1172 1154 1284 1346 1348 1484 1758 1972 1870 2522 2354 1496 1218  652  206  140  118   42   50   56  310 23408 24982
   2   24 1990  9 30  6 10  1  6    1
  24    1
 1   466  782 1028 1214 1290 1186 1200 1062 1048  868  760  574  596  552  688  462  354  232  160   84   50   44   86  172 13776 14958
 2   222  378  300  320  280  252  316  282  312  302  262  282  278  302  342  190  166   70   42    6    4    8   12  106  4620  5034
 3    82   90   80   56   68   80   72   50   58   46   32   18   26   36   48   22   20   12   20   16    8   22   50   72   864  1084
Kei  770 1250 1408 1590 1638 1518 1588 1394 1418 1216 1054  874  900  890 1078  674  540  314  222  106   62   74  148  350 19260 21076
  42    1
 1   292  302  386  614  672  708  854  916  936 1224 1558 1838 2072 1568 1468 1060  612  328  142  110   68   34   86  174 16468 18022
 2   256  222  246  266  298  232  260  290  274  288  314  316  336  324  310  204  116   56   24    8    8    8   14   20  4436  4690
 3    56   48   62   58   88   58   86   60   40   44   52   34   40   36   26   38   28   26   24   14   12    8   42  118   826  1098
Kei  604  572  694  938 1058  998 1200 1266 1250 1556 1924 2188 2448 1928 1804 1302  756  410  190  132   88   50  142  312 21730 23810
   3   24 1990  9 30  6 10  1  6    1
  13    1
 1   170  156  154  200  192  232  208  260  240  226  236  270  338  276  236  176  122  154   72   46   46   26   74  114  3570  4224
 2   112  128  142  120  116  120  114  122  138  126  140  142  140  124  124   64   48   24   18    2    8    4   14  130  1972  2220
 3    12   12   28   18   22   22   40   26   26    6   16   12   12   12   14   10    8   20   22   30   24   40   46   96   288   574
Kei  294  296  324  338  330  374  362  408  404  358  392  424  490  412  374  250  178  198  112   78   78   70  134  340  5830  7018
  31    1
 1   112  152  170  212  262  254  278  226  208  194  196  174  164  138  174  128  124  148   66   52   24   26   72   70  3042  3624
 2    74  124  102  124  132  136  136  112  124  130  138  100  114   88  120   90   68   18   20   10    6    6   12   50  1844  2034
 3    10   12   26   42   34   16   22    4   12   16   18   10   14   14   10   14    6   12    0    4    2    6   12    8   274   324
Kei  196  288  298  378  428  406  436  342  344  340  352  284  292  240  304  232  198  178   86   66   32   38   96  128  5160  5982
   4   24 1990  9 30  6 10  1  6    1
  31    1
 1   308  568  722  814  842  974  988  792  832  690  584  552  610  478  402  330  236  178  106   64   44   44   52  144 10486 11354
 2   120  164  206  148  178  166  146  172  168  172  152  184  202  192  122  118   62   24    6    2    8    4   14   76  2610  2806
 3    66   78   60   48   62   58   56   50   28   28   20   26   10   20   30   14   14    6   18    2   12   22   42   72   654   842
Kei  494  810  988 1010 1082 1198 1190 1014 1028  890  756  762  822  690  554  462  312  208  130   68   64   70  108  292 13750 15002
  13    1
 1   260  334  332  424  554  544  608  672  748  880  910 1300 1330 1146  754  520  272  204  124   76   58   40   48  174 11316 12312
 2   156  172  138  160  166  178  166  196  154  192  152  200  206  212  142  112   44   24   14    6   14    8   24  122  2702  2958
 3    38   46   38   54   56   62   60   50   34   36   34   24   52   18   26   40   18   12   10    6   20   16   56   90   668   896
Kei  454  552  508  638  776  784  834  918  936 1108 1096 1524 1588 1376  922  672  334  240  148   88   92   64  128  386 14686 16166
   5   24 1990  9 30  6 10  1  6    1
  31    2
 1   530  168  220  286  406  430  436 1740 1858 1806 1844 2140 1616 1910 1920 1108  666  368  132   78   64   66  124  152 18418 20068
 2   146  104  114  108  120  140  128  140  172  164  146  196  104  120  134   80   68   18   14    4    8   14   26   36  2116  2304
 3    60   30   32   38   44   38   52   40   48   50   28   20   18   14   20   20   18   12    2   12    2   12   20   14   552   644
Kei  736  302  366  432  570  608  616 1920 2078 2020 2018 2356 1738 2044 2074 1208  752  398  148   94   74   92  170  202 21086 23016
  13    2
 1   446 1220 1414 2056 2182 2050 1992 1620 1410 1520 1480 1766 1418 1486 1334  716  458  260  124   98   72   56  120  146 24110 25444
```

2	18	114	118	118	128	106	164	156	112	136	122	116	90	198	116	26	12	2	8	12	8	8	18	12	1868	1948
3	2	34	34	48	48	42	34	44	34	24	24	16	28	44	38	10	28	18	12	18	10	14	38	28	504	670
Kei	466	1368	1566	2222	2358	2198	2190	1820	1556	1680	1626	1928	1536	1728	1488	752	498	280	144	128	90	78	176	186	26482	28062
6	24	1990	9	30	6	10	1	6	1																	
31	2																									
1	430	892	1108	1184	1430	1606	1722	1246	1390	1488	1192	1364	1582	1510	1396	1120	716	320	176	74	64	64	122	238	20660	22434
2	188	188	196	172	250	232	230	240	234	224	192	286	198	222	164	94	84	24	4	0	2	0	6	110	3310	3540
3	52	92	114	90	92	70	50	64	22	32	18	22	16	22	16	10	2	10	12	14	28	38	50	118	782	1054
Kei	670	1172	1418	1446	1772	1908	2002	1550	1646	1744	1402	1672	1796	1754	1576	1224	802	354	192	88	94	102	178	466	24752	27028
13	2																									
1	544	934	990	886	1366	1572	1402	1418	1382	1332	1344	1470	1472	1446	1138	960	618	358	212	108	92	86	162	320	19656	21612
2	136	174	208	186	234	202	232	254	282	262	252	268	280	210	150	108	74	36	4	4	2	2	4	68	3468	3662
3	36	22	66	42	48	66	56	40	24	44	20	16	28	36	8	34	24	30	24	32	30	18	70	78	586	892
Kei	716	1130	1264	1114	1648	1870	1690	1712	1688	1638	1616	1754	1780	1692	1296	1102	716	424	240	144	124	106	236	466	23710	26166
7	24	1990	9	30	6	10	1	6	1																	
24	2																									
1	166	222	252	338	388	392	404	380	316	316	310	338	350	270	212	196	132	112	102	68	40	38	64	88	4850	5494
2	148	182	238	230	260	244	300	326	264	234	276	222	224	200	140	82	48	28	6	2	4	4	14	126	3570	3802
3	4	4	4	6	10	0	6	10	6	2	6	4	4	6	6	2	4	0	2	2	2	0	10	14	80	114
Kei	318	408	494	574	658	636	710	716	586	552	592	564	578	476	358	280	184	140	110	72	46	42	88	228	8500	9410
42	2																									
1	164	230	268	344	432	502	366	314	246	248	274	306	306	206	196	164	130	116	156	66	36	24	60	120	4566	5274
2	144	186	178	190	216	218	232	212	208	208	192	232	130	124	90	66	26	10	8	2	2	2	12	92	2826	2980
3	6	6	12	8	12	10	8	8	4	0	8	2	6	2	6	6	4	2	2	2	0	0	0	2	104	116
Kei	314	422	458	542	660	730	606	534	458	456	474	540	442	332	292	236	160	128	166	70	38	26	72	214	7496	8370
8	24	1990	9	30	6	10	1	6	1																	
24	2																									
1	612	806	916	1034	1268	1220	1370	1410	1330	1298	1180	1206	1396	1308	1092	872	624	328	210	110	62	56	114	146	18318	19968
2	98	122	168	178	194	204	226	242	214	194	202	216	166	148	96	44	34	16	4	4	0	2	8	106	2712	2886
3	62	24	56	36	30	48	36	38	44	32	32	10	22	22	16	10	8	14	4	8	12	24	78	54	518	720
Kei	772	952	1140	1248	1492	1472	1632	1690	1588	1524	1414	1432	1584	1478	1204	926	666	358	218	122	74	82	200	306	21548	23574
42	1																									
1	516	936	1272	1520	1742	1876	1676	1296	1404	1306	1210	1216	1526	1290	1102	784	510	262	136	80	64	36	106	222	20672	22088
2	108	142	206	216	212	220	234	220	200	236	220	188	134	88	80	46	30	12	2	2	2	0	8	44	2750	2850
3	64	100	146	134	60	68	56	38	26	44	36	28	36	18	16	14	16	4	4	10	0	8	14	40	884	980
Kei	688	1178	1624	1870	2014	2164	1966	1554	1630	1586	1466	1432	1696	1396	1198	844	556	278	142	92	66	44	128	306	24306	25918
9	24	1990	9	30	6	10	1	6	1																	
31	2																									
1	356	658	852	1554	2094	2464	2394	2492	3212	2758	1656	1680	2090	1992	1838	1458	754	310	194	74	64	46	48	150	29548	31188
2	90	86	136	136	134	184	216	140	168	186	160	176	96	98	86	60	38	8	2	0	0	0	2	36	2152	2238
3	10	18	24	36	12	24	24	30	22	12	6	4	12	4	14	16	8	4	0	2	12	6	14	6	268	320
Kei	456	762	1012	1726	2240	2672	2634	2662	3402	2956	1822	1860	2198	2094	1938	1534	800	322	196	76	76	52	64	192	31968	33746
13	2																									
1	554	670	860	1490	1918	2286	1894	1808	1994	1872	1518	1666	1820	1852	1456	1078	734	316	144	68	54	42	66	158	24736	26318
2	54	80	92	174	186	192	196	164	206	190	162	148	140	130	82	54	44	8	4	4	0	2	0	46	2250	2358
3	20	24	14	32	20	28	24	32	22	18	8	10	4	6	6	10	2	10	10	10	14	8	8	12	278	352
Kei	628	774	966	1696	2124	2506	2114	2004	2222	2080	1688	1824	1964	1988	1544	1142	780	334	158	82	68	52	74	216	27264	29028
10	24	1990	9	30	6	10	1	6	1																	
31	1																									
1	164	248	308	494	718	988	1304	1668	1510	1322	1214	1134	1426	1264	1174	910	512	260	122	60	36	28	14	40	15846	16918
2	74	82	76	70	116	112	108	148	148	126	90	94	132	90	78	40	20	4	2	0	0	0	0	20	1584	1630
3	6	16	6	14	12	8	10	14	18	6	10	4	6	2	8	8	2	0	0	0	0	0	2	8	148	160

```
Kei  244  346  390  578  846 1108 1422 1830 1676 1454 1314 1232 1564 1356 1260  958  534  264  124   60   36   28   16   68 17578 18708
   13    1
 1  180  366  452  404 1170 1138 1122 1324 1128 1454 1498 1784 1896 1422 1136  864  514  230  154   60   30   34   26  104 17338 18490
 2   66   78   88   96  126  132  124  130  150  130  128  110   80  100   68   54   32    2    2    0    0    0    8   50  1660  1754
 3   14   18    4   12   34   12   24   10    4   12   16   10    6   10    0    8    0    2    0    0    0    0   12    2   194   210
Kei  260  462  544  512 1330 1282 1270 1464 1282 1596 1642 1904 1982 1532 1204  926  546  234  156   60   30   34   46  156 19192 20454
   11   16 1990 10  7  6 10  7 22    1
   13    0
 1   60  342  710  684 1338 1104 1250 1008  800  906  854 1048  836  836  772  610    0    0    0    0    0    0    0    0 13158 13158
 2   18   54   72   54  106   92   98  106   76   76   82  104   86   66   40   36    0    0    0    0    0    0    0    0  1166  1166
 3    0    6    0   18   12   16    6    4    6    0    6   22    2    0    2    0    0    0    0    0    0    0    0    0   100   100
Kei   78  402  782  756 1456 1212 1354 1118  882  982  942 1174  924  902  814  646    0    0    0    0    0    0    0    0 14424 14424
   12   16 1990 10  7  6 10  7 22    1
   31    1
 1  598  636  708  822  838  660  734  686  496  686  526  642  540  524  382  290    0    0    0    0    0    0    0    0  9768  9768
 2  234  304  288  202  242  244  254  194  194  240  248  244  256  242  132  112    0    0    0    0    0    0    0    0  3630  3630
 3   12   16   20   32   14   18   10   10    8    6   18   14   12   18    8    6    0    0    0    0    0    0    0    0   222   222
Kei  844  956 1016 1056 1094  922  998  890  698  932  792  900  808  784  522  408    0    0    0    0    0    0    0    0 13620 13620
   13    1
 1  440  340  378  470  446  458  556  472  440  536  556  502  486  466  450  356    0    0    0    0    0    0    0    0  7352  7352
 2  184  232  218  226  266  248  268  244  226  238  244  304  216  258  154  146    0    0    0    0    0    0    0    0  3672  3672
 3   18   10   16   18   26    8   14   10    8   14   10    8   10    4   10    2    0    0    0    0    0    0    0    0   186   186
Kei  642  582  612  714  738  714  838  726  674  788  810  814  712  728  614  504    0    0    0    0    0    0    0    0 11210 11210
   13   16 1990 10  7  6 10  7 22    1
   42    1
 1  242  390  442  470  550  676  714  664  516  574  500  522  452  572  542  498    0    0    0    0    0    0    0    0  8324  8324
 2   98  100  158  152  182  162  200  198  152  176  154  180   70   82   70   64    0    0    0    0    0    0    0    0  2198  2198
 3    6    6   14   14    6   22   16   28   14   12   12   10    2    8    6    8    0    0    0    0    0    0    0    0   184   184
Kei  346  496  614  636  738  860  930  890  682  762  666  712  524  662  618  570    0    0    0    0    0    0    0    0 10706 10706
   24    1
 1  240  350  468  530  640  628  756  728  664  686  640  620  510  642  604  592    0    0    0    0    0    0    0    0  9298  9298
 2   56   88   86  136  170  166  212  190  192  184  204  192  150  164  154  138    0    0    0    0    0    0    0    0  2482  2482
 3    4    8   22   18   16   16   12   26   18   20   10    2    2    6    6    4    0    0    0    0    0    0    0    0   190   190
Kei  300  446  576  684  826  810  980  944  874  890  854  814  662  812  764  734    0    0    0    0    0    0    0    0 11970 11970
   14   16 1990 10  7  6 10  7 22    1
   42    1
 1   68  138  232  200  234  258  258  204  204  154  160  140  130  158  122  102    0    0    0    0    0    0    0    0  2762  2762
 2   26   54   48   44   48   56   48   42   44   38   42   42   36   42   28    4    0    0    0    0    0    0    0    0   642   642
 3   34   48   92   84   66   52   48   36   16    8   10    6   16   14   10    8    0    0    0    0    0    0    0    0   548   548
Kei  128  240  372  328  348  366  354  282  264  200  212  188  182  214  160  114    0    0    0    0    0    0    0    0  3952  3952
   24    1
 1  100   90   90  168  180  144   86  128  136  146  138  166  162  138   92   58    0    0    0    0    0    0    0    0  2022  2022
 2   16   26   38   36   48   48   28   50   44   48   50   40   38   28   34   18    0    0    0    0    0    0    0    0   590   590
 3   24   18   32   32   36   38   26   22   20   14   14    4    6   18   16    8    0    0    0    0    0    0    0    0   328   328
Kei  140  134  160  236  264  230  140  200  200  208  202  210  206  184  142   84    0    0    0    0    0    0    0    0  2940  2940
   15   16 1990 10  7  6 10  7 22    1
   31    1
 1  190  358  334  582  726  734  744 1128  954  938  930  746  754  758  692  578    0    0    0    0    0    0    0    0 11146 11146
 2   50   52   66   76   14   98   78   80  114  112   74   70   82   94   62   44    0    0    0    0    0    0    0    0  1166  1166
 3   18    6   12   14   92   16   10   16   14   18   14    2    4    2    0    0    0    0    0    0    0    0    0    0   238   238
Kei  258  416  412  672  832  848  832 1224 1082 1068 1018  818  840  854  754  622    0    0    0    0    0    0    0    0 12550 12550
   13    1
```

1	342	410	456	694	860	806	886	760	756	812	958	812	860	772	650	586	0	0	0	0	0	0	0	0	11420	11420
2	96	112	102	106	110	120	98	94	94	126	104	94	116	84	58	48	0	0	0	0	0	0	0	0	1562	1562
3	16	10	26	16	18	16	22	18	22	14	18	12	14	10	6	6	0	0	0	0	0	0	0	0	244	244
Kei	454	532	584	816	988	942	1006	872	872	952	1080	918	990	866	714	640	0	0	0	0	0	0	0	0	13226	13226
16	16	1990	10	7	6	10	7	22	1																	
31	0																									
1	110	220	262	370	476	992	1150	1332	1152	1076	1228	986	1104	1088	984	830	0	0	0	0	0	0	0	0	13360	13360
2	36	40	28	44	48	38	86	48	60	58	62	66	46	28	22	20	0	0	0	0	0	0	0	0	730	730
3	0	2	4	6	4	14	4	6	8	4	2	0	2	0	0	0	0	0	0	0	0	0	0	0	56	56
Kei	146	262	294	420	528	1044	1240	1386	1220	1138	1292	1052	1152	1116	1006	850	0	0	0	0	0	0	0	0	14146	14146
17	16	1990	10	7	6	10	7	22	1																	
42	2																									
1	264	656	1132	1430	1902	2260	2348	1840	1528	1606	1402	1326	1754	1620	1416	1030	0	0	0	0	0	0	0	0	23514	23514
2	94	180	168	192	144	126	148	78	156	142	138	20	12	12	6	12	0	0	0	0	0	0	0	0	1628	1628
3	28	86	134	112	80	92	56	42	24	20	16	116	120	86	100	42	0	0	0	0	0	0	0	0	1154	1154
Kei	386	922	1434	1734	2126	2478	2552	1960	1708	1768	1556	1462	1886	1718	1522	1084	0	0	0	0	0	0	0	0	26296	26296
24	2																									
1	270	668	852	1168	1404	1474	1620	1748	1620	1590	1408	1370	1544	1278	1090	790	0	0	0	0	0	0	0	0	19894	19894
2	54	108	100	100	116	156	114	128	152	132	136	146	118	96	76	72	0	0	0	0	0	0	0	0	1804	1804
3	56	64	28	40	46	50	52	28	28	20	22	22	18	58	24	8	0	0	0	0	0	0	0	0	564	564
Kei	380	840	980	1308	1566	1680	1786	1904	1800	1742	1566	1538	1680	1432	1190	870	0	0	0	0	0	0	0	0	22262	22262
18	16	1990	10	7	6	10	7	22	1																	
24	1																									
1	310	470	438	476	520	564	518	624	506	454	442	574	582	454	376	348	0	0	0	0	0	0	0	0	7656	7656
2	84	144	132	116	110	104	148	114	148	120	132	166	152	126	122	126	0	0	0	0	0	0	0	0	2044	2044
3	18	18	18	22	26	18	14	14	14	16	10	10	4	6	6	12	0	0	0	0	0	0	0	0	226	226
Kei	412	632	588	614	656	686	680	752	668	590	584	750	738	586	504	486	0	0	0	0	0	0	0	0	9926	9926
42	1																									
1	194	254	280	292	330	344	368	412	374	416	392	358	388	314	298	274	0	0	0	0	0	0	0	0	5288	5288
2	124	132	134	116	130	128	106	120	96	148	124	116	132	110	80	74	0	0	0	0	0	0	0	0	1870	1870
3	8	12	14	38	26	16	22	14	8	8	10	8	8	6	6	12	0	0	0	0	0	0	0	0	216	216
Kei	326	398	428	446	486	488	496	546	478	572	526	482	528	430	384	360	0	0	0	0	0	0	0	0	7374	7374
19	16	1990	10	7	6	10	7	22	1																	
31	2																									
1	288	578	1052	1236	1884	2156	2550	2756	1866	2106	2168	1822	2428	2124	2034	1738	0	0	0	0	0	0	0	0	28786	28786
2	70	106	128	132	144	142	152	146	150	146	146	150	142	128	94	98	0	0	0	0	0	0	0	0	2074	2074
3	16	18	24	18	56	34	22	20	36	50	18	10	14	10	4	2	0	0	0	0	0	0	0	0	352	352
Kei	374	702	1204	1386	2084	2332	2724	2922	2052	2302	2332	1982	2584	2262	2132	1838	0	0	0	0	0	0	0	0	31212	31212
13	2																									
1	408	502	1178	1402	1684	2376	2300	2510	2054	2322	2490	2736	2530	2384	1606	1390	0	0	0	0	0	0	0	0	29872	29872
2	50	88	116	118	126	138	122	150	122	120	160	162	144	128	72	54	0	0	0	0	0	0	0	0	1870	1870
3	26	24	38	14	34	18	38	22	22	18	12	16	12	24	14	18	0	0	0	0	0	0	0	0	350	350
Kei	484	614	1332	1534	1844	2532	2460	2682	2198	2460	2662	2914	2686	2536	1692	1462	0	0	0	0	0	0	0	0	32092	32092
20	16	1990	10	7	6	10	7	22	1																	
31	1																									
1	276	416	612	802	964	1072	1102	1310	1014	1002	788	804	966	788	716	340	0	0	0	0	0	0	0	0	12972	12972
2	72	110	176	196	186	200	212	212	162	184	168	160	158	124	128	92	0	0	0	0	0	0	0	0	2540	2540
3	14	16	28	16	34	20	16	24	18	8	20	12	14	34	10	12	0	0	0	0	0	0	0	0	296	296
Kei	362	542	816	1014	1184	1292	1330	1546	1194	1194	976	976	1138	946	854	444	0	0	0	0	0	0	0	0	15808	15808
13	1																									
1	262	560	640	1000	1432	1272	1416	1062	950	834	898	1004	1074	1056	684	580	0	0	0	0	0	0	0	0	14724	14724
2	146	194	204	228	256	252	246	242	248	254	226	232	166	170	96	58	0	0	0	0	0	0	0	0	3218	3218

3	14	28	34	64	34	34	22	22	18	16	22	12	6	22	12	8	0	0	0	0	0	0	0	0	368	368
Kei	422	782	878	1292	1722	1558	1684	1326	1216	1104	1146	1248	1246	1248	792	646	0	0	0	0	0	0	0	0	18310	18310
21	16	1990	10	7	6	10	7	22	1																	
31	2																									
1	334	264	244	280	418	406	648	720	518	756	966	880	1098	1228	842	730	0	0	0	0	0	0	0	0	10332	10332
2	78	124	126	116	120	118	182	122	110	142	156	126	178	190	134	114	0	0	0	0	0	0	0	0	2136	2136
3	16	16	26	20	16	22	42	42	32	28	32	36	34	20	10	14	0	0	0	0	0	0	0	0	406	406
Kei	428	404	396	416	554	546	872	884	660	926	1154	1042	1310	1438	986	858	0	0	0	0	0	0	0	0	12874	12874
13	2																									
1	458	452	624	664	842	948	886	850	806	780	870	724	668	724	616	496	0	0	0	0	0	0	0	0	11408	11408
2	202	152	136	146	132	148	160	150	142	138	162	172	146	158	164	154	0	0	0	0	0	0	0	0	2462	2462
3	60	38	38	54	42	56	34	36	44	26	8	26	18	16	30	30	0	0	0	0	0	0	0	0	556	556
Kei	720	642	798	864	1016	1152	1080	1036	992	944	1040	922	832	898	810	680	0	0	0	0	0	0	0	0	14426	14426
22	16	1990	10	7	6	10	7	22	1																	
24	1																									
1	388	666	590	778	1016	1028	998	972	1010	1022	818	714	710	678	714	562	0	0	0	0	0	0	0	0	12664	12664
2	110	164	100	146	152	188	186	180	186	216	174	176	188	154	128	146	0	0	0	0	0	0	0	0	2594	2594
3	34	22	32	24	54	32	40	38	50	40	44	36	16	18	30	24	0	0	0	0	0	0	0	0	534	534
Kei	532	852	722	948	1222	1248	1224	1190	1246	1278	1036	926	914	850	872	732	0	0	0	0	0	0	0	0	15792	15792
42	1																									
1	252	356	324	406	504	590	600	572	734	722	660	690	676	682	660	556	0	0	0	0	0	0	0	0	8984	8984
2	124	140	132	156	178	178	158	124	188	180	190	168	162	106	134	114	0	0	0	0	0	0	0	0	2432	2432
3	12	22	20	32	32	22	22	26	34	28	24	10	18	14	34	16	0	0	0	0	0	0	0	0	366	366
Kei	388	518	476	594	714	790	780	722	956	930	874	868	856	802	828	686	0	0	0	0	0	0	0	0	11782	11782
23	16	1990	10	7	6	10	7	22	1																	
31	2																									
1	188	404	456	572	692	1120	1140	1178	938	1102	822	798	954	638	680	714	0	0	0	0	0	0	0	0	12396	12396
2	44	50	102	130	114	134	144	144	134	134	124	104	84	52	50	24	0	0	0	0	0	0	0	0	1568	1568
3	6	6	8	6	8	16	8	12	8	6	4	2	6	2	8	0	0	0	0	0	0	0	0	0	106	106
Kei	238	460	566	708	814	1270	1292	1334	1080	1242	950	904	1044	692	738	738	0	0	0	0	0	0	0	0	14070	14070
13	2																									
1	164	414	346	500	510	590	788	862	630	952	570	532	580	380	326	272	0	0	0	0	0	0	0	0	8416	8416
2	38	60	64	128	116	140	198	194	126	156	116	102	90	50	36	40	0	0	0	0	0	0	0	0	1654	1654
3	12	0	6	4	6	18	8	18	8	4	6	16	8	8	6	2	0	0	0	0	0	0	0	0	130	130
Kei	214	474	416	632	632	748	994	1074	764	1112	692	650	678	438	368	314	0	0	0	0	0	0	0	0	10200	10200
24	16	1990	10	7	6	10	7	22	1																	
24	0																									
1	162	214	250	286	404	482	418	552	426	482	462	406	416	360	386	370	0	0	0	0	0	0	0	0	6076	6076
2	28	96	114	102	132	146	146	192	166	204	180	126	160	102	134	128	0	0	0	0	0	0	0	0	2156	2156
3	2	2	8	6	10	10	10	8	12	10	0	8	6	6	6	2	0	0	0	0	0	0	0	0	106	106
Kei	192	312	372	394	546	638	574	752	604	696	642	540	582	468	526	500	0	0	0	0	0	0	0	0	8338	8338
25	16	1990	10	7	6	10	7	22	1																	
31	1																									
1	148	298	586	552	766	806	1046	948	852	806	774	956	952	726	496	520	0	0	0	0	0	0	0	0	11232	11232
2	8	8	22	18	32	36	38	30	20	34	36	30	30	34	18	14	0	0	0	0	0	0	0	0	408	408
3	2	6	6	4	18	14	12	4	10	8	6	0	10	12	10	16	0	0	0	0	0	0	0	0	138	138
Kei	158	312	614	574	816	856	1096	982	882	848	816	986	992	772	524	550	0	0	0	0	0	0	0	0	11778	11778
13	1																									
1	104	236	468	204	274	296	402	608	626	612	576	582	714	658	528	352	0	0	0	0	0	0	0	0	7240	7240
2	0	6	24	16	24	26	34	32	36	34	34	32	24	16	10	10	0	0	0	0	0	0	0	0	358	358
3	10	12	8	4	8	4	6	4	4	6	8	6	8	4	4	6	0	0	0	0	0	0	0	0	102	102
Kei	114	254	500	224	306	326	442	644	666	652	618	620	746	678	542	368	0	0	0	0	0	0	0	0	7700	7700

```
   26   16 1990 10  7  6 10  7 22    1
   31    2
 1   656 1052 1398 1612 1652 1988 1928 2090 1844 2162 1644 1174 1750 1766 1508 1262    0    0    0    0    0    0    0    0 25486 25486
 2   162  160  248  348  326  314  360  320  282  306  222  304  214  198  158  140    0    0    0    0    0    0    0    0  4062  4062
 3    22   52   32   50   56   36   38   30   42   34   24   26   24    8   12    8    0    0    0    0    0    0    0    0   494   494
Kei  840 1264 1678 2010 2034 2338 2326 2440 2168 2502 1890 1504 1988 1972 1678 1410    0    0    0    0    0    0    0    0 30042 30042
   13    2
 1   500  714  924 1278 1436 1774 1908 1590 1424 1706 1412 1212 2632 1310 1246  776    0    0    0    0    0    0    0    0 21842 21842
 2    50  108  118  136  150  156  174  176  214  198  194  136  156  176   88   64    0    0    0    0    0    0    0    0  2294  2294
 3    10   18   20   16   34   32   26   62   50   24   14   40   12   30    6    6    0    0    0    0    0    0    0    0   400   400
Kei  560  840 1062 1430 1620 1962 2108 1828 1688 1928 1620 1388 2800 1516 1340  846    0    0    0    0    0    0    0    0 24536 24536
   27   16 1990 10  7  6 10  7 22    1
   24    1
 1    82   94  148  130  254  338  374  672  580  756  690  756 1004  662  812  724    0    0    0    0    0    0    0    0  8076  8076
 2     6   10    2    2    4    8    2    8   20   20    8    6    8    8    4    4    0    0    0    0    0    0    0    0   120   120
 3     0    2    4    6    0    4    0    6    4   10    2    2    0    2    2    0    0    0    0    0    0    0    0    0    44    44
Kei   88  106  154  138  258  350  376  686  604  786  700  764 1012  672  818  728    0    0    0    0    0    0    0    0  8240  8240
   42    1
 1   110  160  234  274  492  662  656  754  688  802  786  754  972  850  860  684    0    0    0    0    0    0    0    0  9738  9738
 2     0    0    0   12    0    0    4    0    4    2    0    2    2    2    2    2    0    0    0    0    0    0    0    0    32    32
 3     0    6    4    2   10    8    2    0    4    4    2    4    2    2    6    2    0    0    0    0    0    0    0    0    58    58
Kei  110  166  238  288  502  670  662  754  696  808  788  760  976  854  868  688    0    0    0    0    0    0    0    0  9828  9828
   28   16 1990 10  7  6 10  7 22    1
   24    1
 1    64  214  282  366  472  684  736  812  834  704  730  772  894  742  656  548    0    0    0    0    0    0    0    0  9510  9510
 2     0    4    6    2    0    2    2    0    0    4    0    4    6    2    0    2    0    0    0    0    0    0    0    0    34    34
 3     0    0    8    4    4    6    2    4    2    4    2    6    2    0    2    2    0    0    0    0    0    0    0    0    48    48
Kei   64  218  296  372  476  692  740  816  836  712  732  782  902  744  658  552    0    0    0    0    0    0    0    0  9592  9592
   42    1
 1    72  164  222  312  454  444  752 1024  926  758  778  790 1004  756  700  602    0    0    0    0    0    0    0    0  9758  9758
 2     0    0    0    0    0    0    0    0    0    4    0    4    0    2    0    0    0    0    0    0    0    0    0    0    10    10
 3     0    0    0    6    2    0    0    0    0    4    0    0    0    0    2    0    0    0    0    0    0    0    0    0    14    14
Kei   72  164  222  318  456  444  752 1024  926  766  778  794 1004  758  702  602    0    0    0    0    0    0    0    0  9782  9782
   29   16 1990 10  7  6 10  7 22    1
   42    2
 1   170  308  396  420  450  484  486  688  466  628  624  640  546  620  642  604    0    0    0    0    0    0    0    0  8172  8172
 2   184  224  254  236  248  260  274  184  240  254  270  254  230  206  218  180    0    0    0    0    0    0    0    0  3716  3716
 3    14   48   50   26   46   46   34   40   28  102   46   32   34   32   30   18    0    0    0    0    0    0    0    0   626   626
Kei  368  580  700  682  744  790  794  912  734  984  940  926  810  858  890  802    0    0    0    0    0    0    0    0 12514 12514
   24    2
 1   346  370  416  438  416  560  624  454  526  598  556  548  538  512  448  354    0    0    0    0    0    0    0    0  7704  7704
 2   202  208  258  324  392  376  592  398  426  536  436  514  462  270  278  218    0    0    0    0    0    0    0    0  5890  5890
 3    18   48   42   48   48   36   56   54   44   60   30   18   30   12   14   12    0    0    0    0    0    0    0    0   570   570
Kei  566  626  716  810  856  972 1272  906  996 1194 1022 1080 1030  794  740  584    0    0    0    0    0    0    0    0 14164 14164
   30   16 1990 10  7  6 10  7 22    1
   31    0
 1    18   32   54   80  108  168  232  218  226  210  220  224  238  230  188  170    0    0    0    0    0    0    0    0  2616  2616
 2     0    0    2    0    4   14   10   10   16   12    8   14   12    8    8   10    0    0    0    0    0    0    0    0   128   128
 3     2    2    6    8   12    8    2    0    2    4    2    4    2    0    4    0    0    0    0    0    0    0    0    0    58    58
Kei   20   34   62   88  124  190  244  228  244  226  230  242  252  238  200  180    0    0    0    0    0    0    0    0  2802  2802
   46   16 1990 11 11  6 11 11 22    1
   31    1
```

1	360	408	504	406	416	402	362	394	424	430	374	424	382	400	278	380	0	0	0	0	0	0	0	0	6344	6344
2	294	392	512	548	532	644	552	706	620	628	684	650	580	410	284	248	0	0	0	0	0	0	0	0	8284	8284
3	0	10	4	4	4	18	8	10	0	4	6	0	6	6	2	0	0	0	0	0	0	0	0	0	82	82
Kei	654	810	1020	958	952	1064	922	1110	1044	1062	1064	1074	968	816	564	628	0	0	0	0	0	0	0	0	14710	14710
13	1																									
1	402	270	280	266	260	278	294	260	372	352	332	374	282	314	326	288	0	0	0	0	0	0	0	0	4950	4950
2	312	274	384	468	430	542	618	668	572	614	612	648	526	498	406	394	0	0	0	0	0	0	0	0	7966	7966
3	0	2	4	4	2	4	4	2	4	8	6	4	4	2	2	2	0	0	0	0	0	0	0	0	54	54
Kei	714	546	668	738	692	824	916	930	948	974	950	1026	812	814	734	684	0	0	0	0	0	0	0	0	12970	12970

Saturday

1 24 1990 9 29 6 9 30 6 7
31 2

1	762	1218	1808	1740	1738	1732	1860	1266	1784	1802	1584	1224	1342	1178	1160	788	596	400	340	168	202	200	232	382	22976	25496
2	40	82	92	88	88	88	80	72	104	78	144	62	80	64	56	44	34	20	2	2	2	0	6	4	1262	1332
3	18	38	44	44	36	30	46	26	52	48	42	28	44	64	10	22	24	12	10	8	4	2	2	4	592	658
Kei	820	1338	1944	1872	1862	1840	1986	1364	1940	1928	1770	1314	1466	1306	1226	854	654	432	352	178	208	202	240	390	24830	27486

13 2

1	832	1124	1914	2058	1966	2004	1980	1892	2170	2200	1902	1866	2114	1846	1666	1294	812	486	354	310	248	230	274	262	28828	31804
2	114	124	128	126	120	132	112	124	116	120	90	106	142	94	68	24	24	6	8	2	8	2	4	14	1740	1808
3	220	58	112	98	74	98	66	66	84	90	84	40	70	44	30	14	4	4	2	2	2	4	4	8	1248	1278
Kei	1166	1306	2154	2282	2160	2234	2158	2082	2370	2410	2076	2012	2326	1984	1764	1332	840	496	364	314	258	236	282	284	31816	34890

2 24 1990 9 29 6 9 30 6 7
24 1

1	554	670	916	938	1000	908	1088	1040	1192	1162	1194	1090	934	814	860	760	676	478	366	290	242	230	250	242	15120	17894
2	368	398	380	380	352	232	254	254	264	286	290	318	348	318	294	240	216	134	54	12	14	8	8	86	4976	5508
3	232	234	306	282	328	320	202	174	140	152	120	130	52	108	46	58	40	20	6	18	10	14	28	40	2884	3060
Kei	1154	1302	1602	1600	1680	1460	1544	1468	1596	1600	1604	1538	1334	1240	1200	1058	932	632	426	320	266	252	286	368	22980	26462

42 1

1	302	530	702	632	616	640	658	630	682	698	784	844	890	844	790	700	552	434	290	222	206	192	188	208	10942	13234
2	316	328	296	274	264	272	250	262	238	252	246	236	250	250	268	232	116	88	30	22	4	6	26	130	4234	4656
3	120	92	152	192	172	158	120	124	116	106	96	84	72	52	32	38	26	18	12	12	22	10	14	10	1726	1850
Kei	738	950	1150	1098	1052	1070	1028	1016	1036	1056	1126	1164	1212	1146	1090	970	694	540	332	256	232	208	228	348	16902	19740

3 24 1990 9 29 6 9 30 6 7
13 1

1	160	168	192	192	226	220	210	192	208	160	228	174	256	232	226	222	200	158	132	130	134	110	146	156	3266	4432
2	204	156	150	116	106	118	116	110	128	96	98	108	114	154	118	96	88	48	20	8	8	2	24	64	1988	2250
3	28	18	32	28	42	38	38	40	48	36	32	22	42	20	32	16	10	14	16	2	24	18	24	32	512	652
Kei	392	342	374	336	374	376	364	342	384	292	358	304	412	406	376	334	298	220	168	140	166	130	194	252	5766	7334

31 1

1	134	164	174	180	242	196	196	218	208	248	208	208	186	162	214	166	210	164	184	140	94	126	138	158	3104	4318
2	82	126	126	132	104	122	112	144	104	130	114	140	160	140	136	84	86	60	32	12	8	4	14	22	1956	2194
3	32	42	36	42	44	42	42	62	40	40	20	34	42	28	24	16	8	8	2	8	8	10	12	20	586	662
Kei	248	332	336	354	390	360	350	424	352	418	342	382	388	330	374	266	304	232	218	160	110	140	164	200	5646	7174

4 24 1990 9 29 6 9 30 6 7
31 1

1	334	720	1120	938	1028	1120	1114	1054	1136	1202	934	840	912	626	616	608	446	464	238	192	184	174	166	182	14302	16348
2	132	230	176	160	164	162	178	172	180	178	166	188	200	166	150	90	110	44	18	16	4	2	8	20	2692	2914
3	132	136	158	190	250	258	212	182	178	140	96	86	112	76	52	30	30	22	6	8	4	8	14	40	2288	2420
Kei	598	1086	1454	1288	1442	1540	1504	1408	1494	1520	1196	1114	1224	868	818	728	586	530	262	216	192	184	188	242	19282	21682

13 1

1	394	552	574	796	844	954	848	768	936	912	876	950	1130	826	750	598	444	372	264	244	176	156	214	208	12708	14786
2	206	186	172	152	150	174	154	204	176	172	172	172	216	174	110	104	64	22	12	10	8	8	34	88	2694	2940
3	154	132	186	220	198	208	164	164	136	112	124	138	108	114	44	18	40	14	10	10	6	6	32	52	2220	2390
Kei	754	870	932	1168	1192	1336	1166	1136	1248	1196	1172	1260	1454	1114	904	720	548	408	286	264	190	170	280	348	17622	20116

5 24 1990 9 29 6 9 30 6 7
31 2

1	626	1154	1578	1738	1958	2000	620	0	0	0	2256	2070	1950	1588	1632	1164	928	670	474	392	306	296	376	374	20334	24150
2	186	206	152	134	154	172	152	0	0	0	210	172	90	140	122	86	54	32	10	8	10	20	26	30	1976	2166
3	204	150	146	172	170	166	136	0	0	0	144	96	52	54	20	22	18	18	4	8	4	12	10	12	1532	1618
Kei	1016	1510	1876	2044	2282	2338	908	0	0	0	2610	2338	2092	1782	1774	1272	1000	720	488	408	320	328	412	416	23842	27934

13 2

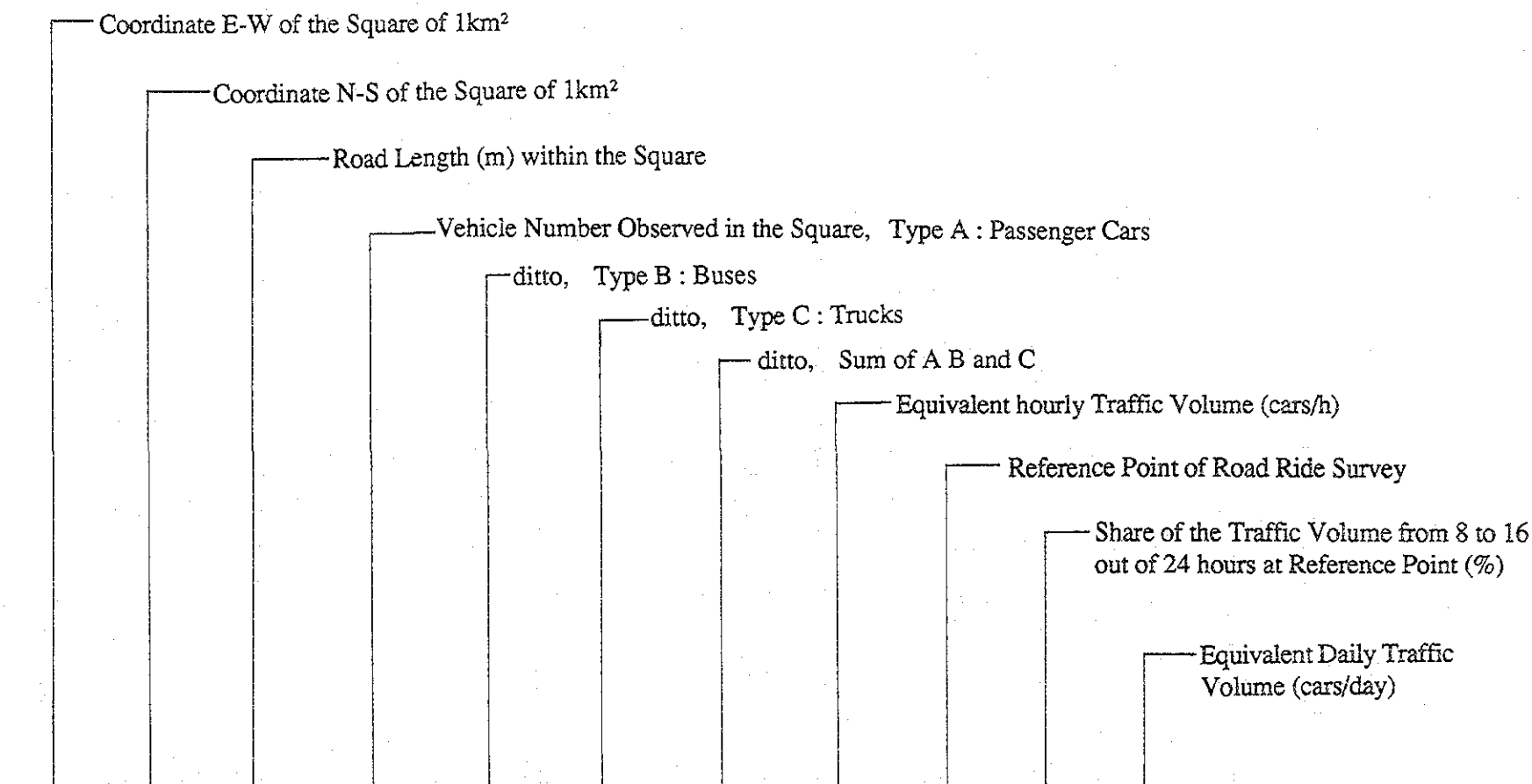
1	744	1144	1888	1562	1692	1496	0	0	0	0	1660	1626	2098	2016	1812	1408	1062	742	484	478	368	388	456	488	19146	23612

2	110	150	162	130	114	126	0	0	0	0	152	134	178	158	148	140	58	28	16	12	16	26	40	38	1702	1936
3	80	128	148	186	184	138	0	0	0	0	90	56	142	90	68	48	12	26	12	12	20	24	44	36	1358	1544
Kei	934	1422	2198	1878	1990	1760	0	0	0	0	1902	1816	2418	2264	2028	1596	1132	796	512	502	404	438	540	562	22206	27092
6	24	1990	9	29	6	9	30	6	7																	
31	2																									
1	728	1190	1910	1620	1744	1736	2020	1944	1966	1998	1660	1628	1582	1484	1394	1296	1058	764	336	318	256	280	260	324	25900	29496
2	390	374	322	230	228	240	246	232	266	252	266	244	176	180	166	122	86	36	16	0	10	0	2	42	3934	4126
3	188	180	346	252	248	218	170	176	112	134	100	72	72	56	44	40	18	10	12	4	14	32	18	18	2308	2434
Kei	1306	1744	2478	2102	2220	2194	2436	2352	2344	2384	2026	1944	1830	1720	1604	1458	1162	810	364	322	280	312	280	384	32142	36056
13	2																									
1	1318	1380	2112	2030	2162	2186	2262	2098	2182	2174	1986	1872	1680	1552	1476	1138	982	808	432	332	278	352	452	504	29608	33748
2	204	254	334	238	240	274	250	274	296	246	342	270	264	280	198	188	190	68	6	10	0	8	4	24	4152	4462
3	70	62	154	166	140	122	190	170	190	140	132	98	90	52	62	30	20	20	20	10	14	16	112	38	1868	2118
Kei	1592	1696	2600	2434	2542	2582	2702	2542	2668	2560	2460	2240	2034	1884	1736	1356	1192	896	458	352	292	376	568	566	35628	40328
7	24	1990	9	29	6	9	30	6	7																	
24	2																									
1	256	384	698	708	970	1084	1136	826	894	790	796	692	646	574	398	266	262	220	162	136	174	84	78	146	11118	12380
2	198	268	334	320	314	322	358	350	358	340	316	302	298	254	160	116	96	36	10	4	2	2	8	62	4608	4828
3	8	20	30	60	106	62	56	40	40	26	14	14	8	8	10	4	6	2	2	0	2	0	2	10	506	530
Kei	462	672	1062	1088	1390	1468	1550	1216	1292	1156	1126	1008	952	836	568	386	364	258	174	140	178	86	88	218	16232	17738
42	2																									
1	182	426	894	1030	1084	1086	920	776	662	694	772	676	484	322	272	258	214	222	176	178	136	118	168	152	10538	11902
2	122	268	298	242	234	254	250	236	230	262	292	232	216	160	116	84	68	18	10	8	4	4	12	62	3496	3682
3	16	56	94	96	80	94	104	40	32	20	22	10	2	4	0	8	6	10	0	0	0	0	2	4	678	700
Kei	320	750	1286	1368	1398	1434	1274	1052	924	976	1086	918	702	486	388	350	288	250	186	186	140	122	182	218	14712	16284
8	24	1990	9	29	6	9	30	6	7																	
24	2																									
1	684	1164	1552	1652	1876	1884	2184	2108	2228	2140	1910	1868	1988	1914	1690	1386	1248	808	538	426	454	500	518	412	28228	33132
2	232	258	298	264	258	276	280	298	314	300	300	248	246	236	174	98	92	28	10	6	4	8	0	26	4080	4254
3	50	130	100	108	150	154	160	122	90	102	90	46	62	40	44	24	20	8	6	8	14	14	124	38	1472	1704
Kei	966	1552	1950	2024	2284	2314	2624	2528	2632	2542	2300	2162	2296	2190	1908	1508	1360	844	554	440	472	522	642	476	33780	39090
42	1																									
1	706	1458	1824	2076	2166	2190	2026	2000	1766	1838	1930	1682	1892	1580	1390	1332	986	712	460	406	350	352	362	366	27856	31850
2	206	370	308	332	356	354	394	376	386	408	434	404	276	160	114	70	50	10	6	4	0	0	6	52	4948	5076
3	96	172	154	298	162	192	208	194	116	96	90	94	52	36	22	20	2	6	8	4	6	4	8	16	2002	2056
Kei	1008	2000	2286	2706	2684	2736	2628	2570	2268	2342	2454	2180	2220	1776	1526	1422	1038	728	474	414	356	356	376	434	34806	38982
9	24	1990	9	29	6	9	30	6	7																	
31	2																									
1	544	1352	2384	3102	3464	4114	4400	3768	3428	3254	3224	2754	2752	2682	2314	1720	1592	914	644	516	486	462	416	244	45256	50530
2	148	240	236	230	214	226	270	150	192	220	192	170	182	152	132	66	60	32	6	6	0	14	0	10	3020	3148
3	34	38	40	64	48	34	22	12	14	24	28	16	42	16	6	4	0	10	0	2	6	4	4	2	442	470
Kei	726	1630	2660	3396	3726	4374	4692	3930	3634	3498	3444	2940	2976	2850	2452	1790	1652	956	650	524	492	480	420	256	48718	54148
13	2																									
1	600	1272	1628	2378	2822	2990	3022	3760	2516	2966	2404	1850	2200	2142	1866	1478	1276	822	526	480	466	464	346	284	35894	40558
2	156	290	252	266	248	236	264	266	202	214	220	180	146	160	132	74	80	16	6	4	12	6	0	12	3306	3442
3	32	26	26	26	82	48	68	52	26	32	50	30	24	16	12	8	6	6	6	8	2	0	4	4	558	594
Kei	788	1588	1906	2670	3152	3274	3354	4078	2744	3212	2674	2060	2370	2318	2010	1560	1362	844	538	492	480	470	350	300	39758	44594
10	24	1990	9	29	6	9	30	6	7																	
31	1																									
1	274	662	1142	1354	1520	1610	1644	1820	1716	1660	1528	1460	1654	1602	1460	1380	922	830	530	576	496	470	306	160	22486	26776
2	136	218	178	154	158	140	114	112	136	118	102	130	140	134	86	88	30	12	8	0	2	0	2	12	2144	2210
3	54	62	62	102	94	132	72	42	42	30	32	24	22	12	14	8	4	2	0	0	2	0	2	0	804	814

Kei	464	942	1382	1610	1772	1882	1830	1974	1894	1808	1662	1614	1816	1748	1560	1476	956	844	538	576	500	470	310	172	25434	29800
	13	1																								
1	350	1028	1632	1914	2174	2276	2156	1890	1782	2012	1888	1908	1746	1868	1394	1392	1004	724	480	438	480	392	252	180	27410	31360
2	96	174	156	146	148	150	162	150	146	142	150	140	142	100	108	70	24	14	6	2	2	0	2	18	2180	2248
3	46	78	82	88	102	108	80	56	54	60	36	34	16	26	26	18	6	0	4	4	0	0	8	4	910	936
Kei	492	1280	1870	2148	2424	2534	2398	2096	1982	2214	2074	2082	1904	1994	1528	1480	1034	738	490	444	482	392	262	202	30500	34544

3.4.3 Traffic Volume in Alleys

Table 3.4.10 Number of Vehicles Observed in Alleys



東西	南北	路線長(M)	写真 A(台)	写真 B(台)	写真 C(台)	写真計(台)	換算(台/時)	観測地点	8-16/0-24	相当日交通
B	20	10830	126	30	12	168	217	2	46.5	3736
B	21	21884	290	60	32	332	244	2	46.5	4204
B	22	3910	65	5	12	82	294	2	46.5	5051
C	19	4150	35	10	5	50	169	8	47.0	2871
C	20	14538	193	52	20	265	255	2	46.5	4390
C	21	11983	135	17	8	160	187	2	46.5	3216
C	22	1445	10	2	6	18	174	2	46.5	3000
D	21	4820	36	12	0	48	139	2	46.5	2399
D	22	4742	30	5	1	36	106	2	46.5	1829
E	11	3208	40	6	3	49	214	4	51.2	3341
E	17	15065	146	91	42	279	259	8	47.0	4413
E	18	7059	180	3	16	199	395	8	47.0	6718

東西	南北	路線長(M)	写真 A(台)	写真 B(台)	写真 C(台)	写真計(台)	換算(台/時)	観測地点	8-16/0-24	相当日交通
B	20	10830	126	30	12	168	217	2	46.5	3736
B	21	21884	290	60	32	382	244	2	46.5	4204
B	22	3910	65	5	12	82	294	2	46.5	5051
C	19	4150	35	10	5	50	169	8	47.0	2871
C	20	14538	193	52	20	265	255	2	46.5	4390
C	21	11983	135	17	8	160	187	2	46.5	3216
C	22	1445	10	2	6	18	174	2	46.5	3000
D	21	4020	36	12	0	48	139	2	46.5	2399
D	22	4742	30	5	1	36	106	2	46.5	1829
E	11	3208	40	6	3	49	214	4	51.2	3341
E	17	15065	146	91	42	279	259	8	47.0	4413
E	18	7059	180	3	16	199	395	8	47.0	6718
E	19	15340	163	44	13	220	201	8	47.0	3418
E	20	19977	148	59	19	226	158	2	46.5	2725
E	21	15208	130	60	25	215	198	2	46.5	3405
E	22	6985	86	20	19	125	251	2	46.5	4310
E	23	2311	18	4	1	23	139	2	46.5	2397
F	11	8904	65	40	15	120	189	4	51.2	2948
F	12	12703	107	50	15	172	190	4	51.2	2962
F	13	4742	60	1	6	67	198	4	51.2	3091
F	17	5415	38	23	19	80	207	8	47.0	3521
F	18	10787	174	54	49	277	360	8	47.0	6119
F	19	16170	278	66	16	360	312	8	47.0	5305
F	20	5501	54	16	2	72	183	2	46.5	3153
F	21	7852	74	11	10	95	169	2	46.5	2914
F	22	7555	30	7	9	46	85	2	46.5	1467
F	23	4548	58	32	8	98	302	2	46.5	5190
G	12	23956	137	53	51	241	141	4	51.2	2201
G	13	21776	619	72	43	734	472	4	51.2	7373
G	14	6132	125	20	17	162	370	4	51.2	5779
G	17	11118	102	17	24	143	180	8	47.0	3865
G	18	14545	199	50	24	273	263	8	47.0	4473
G	19	19683	252	41	74	367	261	8	47.0	4443
G	20	14019	189	36	21	246	246	8	47.0	4182
G	21	17137	148	37	26	211	172	2	46.5	2966
G	22	16496	222	85	33	340	289	2	46.5	4964
G	23	10013	118	39	6	163	228	2	46.5	3921
G	25	20394	153	56	24	233	160	3	38.9	3291
G	26	23363	50	15	2	67	40	3	38.9	826
H	9	2400	16	1	3	20	117	1	50.4	1852
H	10	4322	47	18	2	67	217	1	50.4	3445
H	11	1776	7	0	0	7	55	1	50.4	876
H	12	1120	18	9	2	29	363	4	51.2	5664
H	13	11295	95	7	19	121	150	4	51.2	2343
H	14	396	43	16	4	63	2227	4	51.2	34801
H	15	2646	40	16	10	66	349	4	51.2	5456
H	16	4585	80	5	5	90	275	4	51.2	4294
H	17	8866	107	7	4	118	186	8	47.0	3172
H	18	16033	180	10	20	210	183	8	47.0	3121
H	19	10528	221	12	19	252	335	8	47.0	5704
H	20	22544	348	49	24	421	261	8	47.0	4450
H	21	17070	250	70	52	372	305	6	49.0	4981
H	22	17160	434	88	50	572	467	6	49.0	7619
H	23	28064	366	128	48	542	270	6	49.0	4414
H	24	1280	10	7	2	19	208	6	49.0	3393
H	25	340	4	3	5	12	494	6	49.0	8067

東西	南北	路線長(M)	写真 A(台)	写真 B(台)	写真 C(台)	写真計(台)	換算(台/時)	観測地点	8-16/0-24	相当日交通
H	26	11656	71	47	45	163	196	3	38.9	4026
I	10	11677	38	8	4	50	60	1	50.4	952
I	11	1764	13	0	0	13	103	1	50.4	1638
I	12	7963	114	15	38	167	294	1	50.4	4660
I	13	3927	30	1	2	33	118	1	50.4	1867
I	14	9679	204	13	1	218	352	4	51.2	5495
I	15	512	2	3	0	5	137	4	51.2	2136
I	16	4204	50	25	20	95	316	4	51.2	4943
I	17	7212	95	2	10	107	208	4	51.2	3245
I	18	13638	220	15	30	265	272	6	49.0	4441
I	19	18655	258	39	22	319	239	6	49.0	3909
I	20	17336	275	23	6	304	246	6	49.0	4008
I	21	18964	294	48	20	362	267	2	46.5	4598
I	22	15302	233	53	16	302	276	2	46.5	4754
I	23	23123	438	112	45	590	357	2	46.5	6146
I	24	16384	259	48	83	390	333	3	38.9	6854
I	25	21861	348	94	37	479	307	3	38.9	6309
I	26	8635	87	32	14	133	216	3	38.9	4435
J	8	9357	115	19	1	135	202	1	50.4	3206
J	9	8991	217	92	9	318	495	1	50.4	7860
J	10	6519	95	36	10	141	303	1	50.4	4806
J	11	8104	297	30	42	369	637	1	50.4	10118
J	12	4025	120	14	10	144	501	1	50.4	7958
J	13	10244	122	3	1	126	172	1	50.4	2733
J	14	13519	180	6	3	189	196	1	50.4	3107
J	15	2614	104	17	1	122	653	6	49.0	10668
J	16	9850	197	19	45	251	357	4	51.2	5574
J	17	9894	399	43	101	543	855	4	51.2	13355
J	18	17967	541	35	61	637	496	6	49.0	8104
J	19	19511	523	111	61	695	499	8	47.0	8488
J	20	19182	300	42	26	368	269	8	47.0	4572
J	21	20229	332	26	22	380	263	3	38.9	5409
J	22	17754	359	54	22	435	343	3	38.9	7054
J	23	19329	377	82	45	504	365	3	38.9	7507
J	24	20438	162	34	23	219	150	3	38.9	3085
J	26	14732	152	65	30	247	235	3	38.9	4827
J	27	7911	10	12	25	47	83	3	38.9	1711
J	28	6265	24	10	45	79	177	3	38.9	3631
J	29	2689	26	10	5	41	213	3	38.9	4390
K	5	10636	129	39	11	179	236	5	47.4	3977
K	9	5421	95	25	11	131	338	5	47.4	5710
K	10	13961	254	46	16	316	317	5	47.4	5348
K	11	14117	428	88	35	551	546	5	47.4	9223
K	12	12456	265	48	16	329	370	1	50.4	5870
K	13	19103	410	25	24	459	355	1	50.4	5634
K	14	11590	150	11	9	170	205	1	50.4	3260
K	15	9603	94	7	6	107	156	1	50.4	2476
K	16	4787	12	0	3	15	44	6	49.0	716
K	17	6848	175	19	48	242	495	4	51.2	7730
K	18	9319	165	3	14	182	273	4	51.2	4272
K	19	21894	360	40	77	477	305	7	57.3	4259
K	20	15068	136	19	28	183	170	7	57.3	2374
K	21	21528	572	44	36	652	424	3	38.9	8720
K	22	19203	571	49	32	652	475	3	38.9	9776
K	23	22557	284	24	18	326	202	3	38.9	4161
K	24	20809	88	26	24	138	93	3	38.9	1909
K	25	10072	50	21	8	79	110	3	38.9	2258
K	26	7354	22	18	9	49	93	3	38.9	1918
K	27	22836	99	38	10	147	90	3	38.9	1853
K	28	6460	11	3	7	21	46	3	38.9	936
L	5	9618	129	27	13	169	246	5	47.4	4152
L	6	8160	76	8	6	90	154	5	57.4	2152

東西	南北	路線長(M)	写真 A(台)	写真 B(台)	写真 C(台)	写真計(台)	換算(台/時)	観測地点	8-16/8-24	相当日交通
L	7	6806	21	8	6	35	72	5	47.4	1215
L	8	5639	40	81	6	127	315	5	47.4	5322
L	9	17196	216	52	24	292	238	5	47.4	4012
L	10	18246	388	59	30	477	366	5	47.4	6177
L	11	20656	395	52	27	474	321	5	47.4	5422
L	12	20728	460	42	32	534	361	5	47.4	6087
L	13	22003	610	93	25	728	463	5	47.4	7818
L	14	2144	21	0	1	22	144	5	47.4	2425
L	15	7029	112	2	4	118	235	1	50.4	3731
L	16	3000	16	1	1	18	84	1	50.4	1333
L	17	6207	150	1	14	165	372	7	57.3	5196
L	18	13576	201	27	34	262	270	7	57.3	3772
L	19	15688	255	40	60	355	317	7	57.3	4423
L	20	15887	200	18	50	268	236	7	57.3	3297
L	21	21919	546	38	25	609	389	7	57.3	5431
L	22	15614	602	66	24	692	620	7	57.3	8663
L	23	21149	919	77	27	1023	677	7	57.3	9455
L	24	18444	183	19	22	224	170	3	38.9	3497
L	25	17219	146	76	26	248	202	3	38.9	4147
L	26	8528	40	14	11	65	107	3	38.9	2194
L	27	13152	50	49	4	103	110	3	38.9	2255
M	5	3478	35		0	35	141	5	47.4	2378
M	6	5067	63	5	9	77	213	5	47.4	3591
M	7	18261	174	37	10	221	169	5	47.4	2860
M	8	9707	53	22	2	77	111	5	47.4	1874
M	9	8004	104	9	4	117	205	5	47.4	3454
M	10	8784	171	24	10	205	327	5	47.4	5514
M	11	12654	247	68	14	329	364	5	47.4	6143
M	12	18391	574	93	63	730	556	5	47.4	9379
M	13	12728	226	28	18	272	299	5	47.4	5050
M	14	942	30	3	1	34	505	5	47.4	8528
M	15	3745	176	10	6	192	718	9	49.0	11718
M	16	14098	350	18	15	383	380	9	49.0	6210
M	17	8405	162	3	13	178	296	9	49.0	4841
M	18	13145	301	21	36	358	381	9	49.0	6225
M	19	12144	320	26	47	393	453	7	57.3	6325
M	20	16600	797	71	120	988	833	7	57.3	11634
M	21	21395	669	92	67	828	542	7	57.3	7565
M	22	18185	413	47	7	467	360	7	57.3	5029
M	23	18942	288	21	23	332	245	7	57.3	3426
M	24	12967	262	31	7	300	324	3	38.9	6661
M	25	26616	258	59	13	330	174	3	38.9	3570
M	26	20834	69	32	9	110	74	3	38.9	1520
M	27	24669	66	47	410	523	297	3	38.9	6104
M	28	17969	17	3	7	27	21	3	38.9	433
N	4	5695	31	20	3	54	133	5	47.4	2240
N	5	6236	92	7	0	99	222	5	47.4	3751
N	6	9018	238	42	8	288	447	5	47.4	7546
N	9	4427	40	0	1	41	130	5	47.4	2188
N	10	7312	107	14	0	121	232	5	47.4	3910
N	11	7711	139	15	12	166	301	5	47.4	5087
N	12	14651	318	41	24	383	366	5	47.4	6177
N	13	21380	497	54	18	569	373	5	47.4	6288
N	14	12495	365	5	3	373	418	5	47.4	7054
N	15	8400	200	4	3	207	345	9	49.0	5633
N	16	12821	365	19	9	393	429	9	49.0	7006
N	17	9903	193	7	2	202	286	9	49.0	4662
N	18	17963	543	13	13	569	443	9	49.0	7240
N	19	14815	623	16	28	667	630	7	57.3	8800
N	20	14241	570	69	41	680	668	7	57.3	9333
N	21	17644	883	157	67	1107	878	7	57.3	12263
N	22	16774	378	26	13	417	348	7	57.3	4859

東西	南北	路線長(M)	写真 A(台)	写真 B(台)	写真 C(台)	写真計(台)	換算(台/時)	観測地点	8-16/0-24	相当日交通
N	23	9417	160	22	17	199	296	7	57.3	4131
N	24	16310	116	36	14	166	142	3	38.9	2930
N	25	17791	70	24	18	112	88	3	38.9	1813
N	26	4646	6	2	10	18	54	3	38.9	1115
N	27	8955	9	0	1	10	16	3	38.9	322
N	28	9442	5	1	2	8	12	3	38.9	244
O	6	3509	36	6	1	43	172	5	47.4	2896
O	7	8803	95	25	6	126	200	5	47.4	3382
O	8	15171	305	60	15	380	351	5	47.4	5918
O	9	11670	230	5	6	241	289	5	47.4	4880
O	10	9969	215	23	17	255	358	5	47.4	6044
O	11	12361	433	20	12	465	527	5	47.4	8889
O	12	9675	210	10	10	230	333	5	47.4	5617
O	13	20251	560	40	40	640	442	9	49.0	7224
O	14	20374	754	43	30	827	568	9	49.0	9278
O	15	20945	1235	50	35	1320	882	9	49.0	14405
O	16	20762	764	51	7	822	554	9	49.0	9049
O	17	22248	1134	40	19	1193	751	9	49.0	12257
O	18	21377	776	16	15	807	529	9	49.0	8629
O	19	14348	763	45	11	819	799	7	57.3	11157
O	20	14413	224	26	0	250	243	7	57.3	3390
O	21	17155	797	162	11	970	792	7	57.3	11052
O	22	17682	146	21	9	176	139	7	57.3	1946
O	23	16945	53	17	8	78	64	7	57.3	900
O	24	8682	21	20	12	53	85	3	38.9	1758
O	25	5203	4	1	1	6	16	3	38.9	332
P	4	4302	41	18	1	60	195	10	45.1	3464
P	7	6994	130	15	10	155	310	10	45.1	5504
P	8	10934	240	36	15	291	373	10	45.1	6609
P	9	8347	194	9	4	207	347	10	45.1	6159
P	10	11677	278	8	3	289	346	10	45.1	6146
P	11	11538	416	9	8	433	525	10	45.1	9320
P	12	14689	572	24	10	606	578	10	45.1	10245
P	13	15453	568	31	9	608	551	10	45.1	9771
P	14	14890	1057	80	16	1153	1084	10	45.1	19230
P	15	15617	967	30	22	1019	913	9	49.0	14914
P	16	14793	1004	53	32	1089	1031	9	49.0	16838
P	17	14014	672	15	13	700	699	9	49.0	11417
P	18	9814	262	4	10	276	394	9	49.0	6428
P	19	14697	232	19	5	256	244	7	57.3	3405
P	20	9080	33	2	1	36	56	7	57.3	775
P	21	8319	108	22	1	131	220	7	57.3	3073
P	22	1285	17	1	2	20	218	7	57.3	3042
P	23	5484	10	0	0	10	26	7	57.3	356
Q	4	13233	197	15	3	215	227	10	45.1	4035
Q	7	16051	260	25	17	302	263	10	45.1	4672
Q	8	19014	420	36	28	484	356	10	45.1	6321
Q	9	13298	295	18	8	311	327	10	45.1	5808
Q	10	12081	365	5	3	373	432	10	45.1	7667
Q	11	13273	380	10	0	390	411	10	45.1	7297
Q	12	13944	466	8	2	476	478	10	45.1	8477
Q	13	15158	530	7	7	544	502	10	45.1	8912
Q	14	19377	450	4	10	464	335	10	45.1	5947
Q	15	11914	414	8	6	428	503	9	49.0	8211
Q	16	10737	161	11	11	183	239	9	49.0	3996
Q	18	4247	20	0	3	23	76	9	49.0	1238
Q	19	1811	15	0	1	16	124	7	57.3	1727
R	2	1194	6	0	1	7	86	10	45.1	1533
R	3	4208	16	0	1	17	57	10	45.1	1003
R	4	8347	115	11	8	134	225	10	45.1	3987
R	5	12792	182	26	20	228	250	10	45.1	4426
R	6	8025	155	2	2	159	277	10	45.1	4920

東西	南北	路線長(M)	写真 A(台)	写真 B(台)	写真 C(台)	写真計(台)	換算(台/時)	観測地点	8-16/0-24	相当日交通
R	7	15398	285	4	0	289	263	10	45.1	4661
R	8	11343	456	8	6	470	580	10	45.1	10290
R	9	4735	65	0	6	71	210	10	45.1	3724
R	10	10348	525	12	4	541	732	10	45.1	12983
R	11	15014	360	1	1	362	338	10	45.1	5988
R	12	12224	380	8	15	403	462	10	45.1	8187
R	13	11791	292	2	7	301	358	10	45.1	6345
R	14	9435	265	18	3	286	424	10	45.1	7523
R	15	3494	25	0	0	25	100	9	49.0	1635
R	16	702	0	0	0	0	0	9	49.0	0
S	3	9984	55	20	18	93	130	10	45.1	2313
S	5	7932	76	20	9	105	185	10	45.1	3287
S	6	9399	113	10	0	123	183	10	45.1	3250
S	7	7211	128	24	1	153	297	10	45.1	5269
S	8	13283	313	19	4	336	354	10	45.1	6282
S	9	5809	70	2	2	74	178	10	45.1	3164
S	10	14017	313	0	5	318	318	10	45.1	5634
S	11	13718	272	0	3	275	291	10	45.1	4978
S	12	7650	204	2	4	210	384	10	45.1	6817
S	13	1415	25	0	0	25	247	10	45.1	4388
T	3	10160	45	38	17	100	138	10	45.1	2444
T	4	2894	17	3	2	22	106	10	45.1	1888
T	5	6644	63	15	5	83	175	10	45.1	3102
T	6	12340	153	68	18	239	271	10	45.1	4810
T	7	12484	244	30	11	285	320	10	45.1	5669
T	8	6275	130	8	0	138	308	10	45.1	5461
T	9	5571	60	2	1	63	158	10	45.1	2803
T	10	7658	124	2	0	126	230	10	45.1	4086
T	11	7447	82	1	0	83	156	10	45.1	2768
T	12	3604	22	0	1	23	89	10	45.1	1585
U	6	4222	47	4	2	53	176	10	45.1	3117

3.4.4 Registration Survey

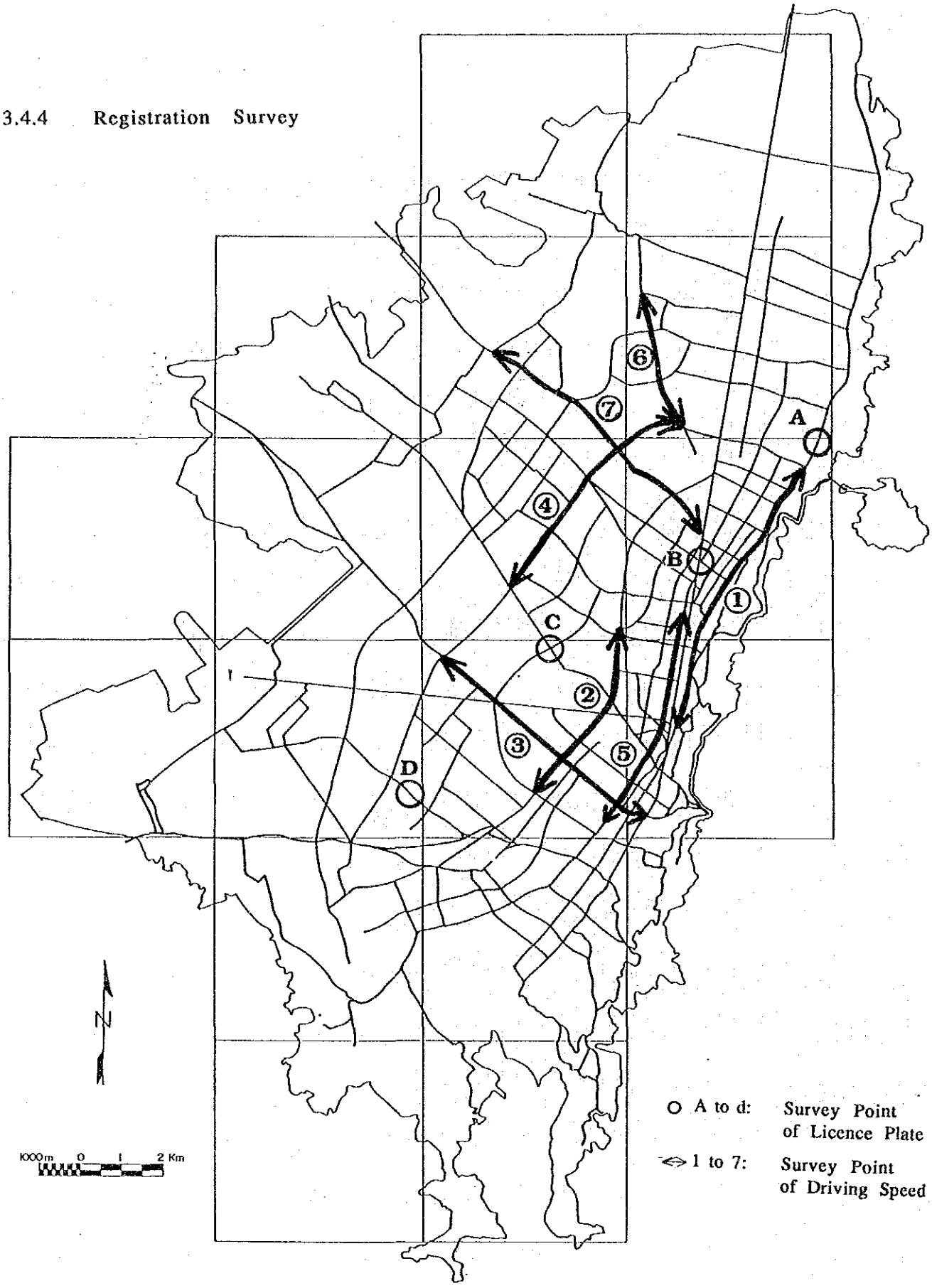


Fig. 3.4.11 Location Map of Traffic Conditions Survey

Table 3.4.11 Survey of Motorvehicle Registration

Item		Name of Road							
		A. Avenida 7		B. Avenida CARACAS		C. Autopista ELDORADO		D. Avenida 1 de MAYO	
Survey Point		Escuela de Caballeria		Calle 72		Carrera 50		Tejar	
Date		Sep. 18, 1990		Sep. 17, 1990		Sep. 19, 1990		Sep. 20, 1990	Sep. 21, 1990
Time		7:30 ~ 9:00	17:00 ~ 18:30	12:00 ~ 13:30	16:00 ~ 18:00	10:30 ~ 12:00	16:00 ~ 17:30	7:30 ~ 9:00	17:00 ~ 18:30
Direction		N → S	S → N	S → N	S → N	E → W	E → W	E → W	E → W
Car Type	Regis-tration								
1	A	3 (16.7%)	6 (75.0%)	0	0	3 (4.7%)	5 (8.9%)	28 (42.4%)	71 (59.2%)
	B	15 (83.3%)	2 (25.0%)	36 (100%)	27 (100%)	61 (95.3%)	51 (91.1%)	36 (54.6%)	42 (35.0%)
	C	0	0	0	0	0	0	2 (3.0%)	7 (5.8%)
2	A	782 (98.0%)	1,428 (99.4%)	579 (90.6%)	708 (84.5%)	367 (99.7%)	386 (96.5%)	541 (97.6%)	849 (93.2%)
	B	16 (2.0%)	8 (0.6%)	51 (8.0%)	118 (14.1%)	1 (0.3%)	14 (3.5%)	12 (2.2%)	54 (5.9%)
	C	0	0	9 (1.4%)	12 (1.4%)	0	0	1 (0.2%)	8 (0.9%)
3	A	163 (59.5%)	246 (62.7%)	76 (38.2%)	126 (42.3%)	255 (44.6%)	208 (44.0%)	215 (52.1%)	415 (49.2%)
	B	98 (35.8%)	114 (29.1%)	75 (37.7%)	141 (47.3%)	299 (52.4%)	257 (54.3%)	184 (44.5%)	390 (46.3%)
	C	13 (4.7%)	32 (8.2%)	48 (24.1%)	31 (10.4%)	17 (3.0%)	8 (1.7%)	14 (3.4%)	38 (4.5%)
4	A	3,186 (41.1%)	4,192 (43.5%)	831 (71.9%)	799 (52.9%)	1,543 (64.7%)	1,816 (68.6%)	811 (68.0%)	1,734 (74.7%)
	B	3,922 (50.6%)	4,223 (43.8%)	253 (21.9%)	609 (40.4%)	769 (32.2%)	796 (30.0%)	368 (30.8%)	554 (23.9%)
	C	648 (8.3%)	1,225 (12.7%)	72 (6.2%)	101 (6.7%)	75 (3.1%)	37 (1.4%)	14 (1.2%)	32 (1.4%)

Note:
Type 1: Camion, Volqueta, Tractomula
Type 2: Bus, Buseta
Type 3: Campero, Camioneta
Type 4: Automovil, Microbus

Registration A: Cars registrated in BOGOTA D.E.
Registration B: Cars registrated in other cities in Departamento CUNDINAMARCA (the same state as Regist. A)
Registration C: Cars registrated in other states/departamentos

3.4.5 Driving Speed Survey

Table 3.4.12 Survey of Average Driving Speed of Automobiles

No.	Name of Roads	Distance (km)	Course	Date & Time	Average Speed (km/h)	Waiting at Intersections Frequency (Average Time (second))
①	Carrera 7a	6.30	Calle 45 → Calle 100	Sep. 18, '90 8:53~9:11	20.6	8 (53)
			Calle 100 → Calle 45	Sep. 18, '90 9:13~9:26	30.8	2 (63)
			Calle 45 → Calle 100	Sep. 21, '90 18:48~19:00	30.7	1 (88)
②	Carrera 30	4.93	Campin (Cll. 55) → Avenida 6	Sep. 18, '90 9:40~9:54	22.3	8 (34)
			Avenida 6 → Campin	Sep. 18, '90 9:57~10:08	26.9	5 (38)
			Avenida 6 → Campin	Sep. 25, '90 18:48~19:02	21.0	4 (68)
			Campin (Cll. 55) → Avenida 6	Sep. 25, '90 19:06~19:17	27.3	8 (19)
③	Calle 13	6.55	Cra. 7 (El Tiempo) → Ave. 68	Sep. 21, '90 18:00~18:22	18.2	8 (47)
			Avenida 68 → Carrera 7a	Sep. 21, '90 18:25~18:38	29.5	7 (27)
④	Avenida 68	6.08	Calle 26 → Avenida Suba	Sep. 24, '90 17:55~18:12	20.8	3 (95)
			Avenida Suba → Calle 26	Sep. 24, '90 18:14~18:25	31.2	4 (34)
⑤	Avenida Caracas	5.35	Calle 60 → Calle 11	Sep. 18, '90 10:15~10:29	22.2	10 (22)
			Calle 11 → Calle 60	Sep. 19, '90 17:22~17:41	17.1	9 (38)
			Calle 60 → Calle 11	Sep. 19, '90 17:47~18:09	14.8	9 (55)
⑥	Avenida SUBA	3.63	Diagonal 129 → Avenida 68	Sep. 27, '90 7:12~7:25	17.7	6 (38)
⑦	Avenida 81	7.23	Ave. Caracas → Carrera 92	Sep. 25, '90 19:45~20:07	19.7	7 (103)
⑧	Minor Roads	3.40	Ave. Caracas (Cll. 11) → Laboratorio	Sep. 18, '90 10:29~11:51	8.7	-
		3.40	Laboratorio → Ave. Caracas (Calle 11)	Sep. 19, '90 17:07~17:22	15.0	-
		10.30	Ave. Caracas (Cll. 11) → Cll. 76 (Cra. 15)	Sep. 19, '90 18:09~18:44	17.7	-

Table 3.4.13 Survey of Average Bus/Buseta Speeds

Direction	Course	Date and Time	Distance (km)	Average Speed (km/h)	Frequency of Stops for Passengers	
					Frequency	per km
N → C	Autopista NORTE → Ave. CARACAS	Sep. 27 7:31~8:10	10.88	15.9	28	2.6
C → N	Ave. CARACAS → Autopista NORTE	Sep. 28 20:45~21:25	9.13	13.7	46	5.0
N → C	Ave. 7 → Carrera 7	Sep. 27 8:35~9:00	11.88	28.5	8	0.7
C → N	Carrera 7 → Ave. 7	Sep. 28 11:20~12:05	11.88	20.4	10	0.8
N → C	Autopista NORTE → Ave. CARACAS	Sep. 25 7:15~8:45	16.68	11.1	20	1.2
NW → C	Transversal 91 → Calle 81 → Ave. BOYACA	Sep. 27 6:55~7:23	9.88	21.2	37	3.7
NW → C	Calle 26	Sep. 27 7:35~8:00	7.00	16.8	28	4.0
SW → C	Ave. AMERICAS	Sep. 27 7:30~8:02	7.88	14.8	2	0.3
SW → C	Ave. AMERICAS	Oct. 1 7:38~8:15	7.88	12.8	4	0.5
SW → C	Autopista SUR → Cra. 72 → Cll. 64S → Cll. 61BS → Cll. 60AS → Cra. 16B → Ave. 13S → Cll. 36S → Ave. 27S → Cll. 1A → Ave. 10	Sep. 26 6:50~7:55	23.08	21.3	80	3.5
C → SW	Ave. 10 → Cll. 1A → Ave. 27S → Autopista SUR	Sep. 25 18:20~19:50	17.03	11.4	150	8.8
S → C	Ave. 10 → Calle 23	Sep. 26 8:06~8:35	4.18	8.6	32	7.7
C → S	Calle 22 → Ave. 10	Sep. 26 17:43~18:14	4.18	8.1	42	10.1
Centro (N → S)	Ave. CARACAS	Sep. 26 8:23~8:34	2.70	14.7	14	5.2
Centro (S → N)	Ave. CARACAS	Sep. 26 17:15~17:34	2.70	8.5	19	7.0
Centro (S → N)	Ave. CARACAS	Sep. 25 16:15~16:45	3.35	6.7	15	4.5
Centro (W → E)	Ave. CARACAS → Cll. 24 → Cra. 13 → Cll. 19	Sep. 26 12:27~12:35	3.63	27.2	6	1.7
Centro (E → W)	Calle 19 → Ave. CARACAS	Sep. 26 13:45~13:58	3.67	16.9	6	1.6
Centro (S → N)	Ave. CARACAS	Sep. 24 16:15~16:50	4.78	8.9	20	4.2
Centro (N → S)	Ave. CARACAS	Sep. 24 17:30~18:20	9.00	10.8	25	2.8

Note: C - Centro
Ave. - Avenida
Cra. - Carrera
Cll. - Calle

3.5 Motor Vehicle Exhaust Gas Measurement

Table 3.5.1 Results of Exhaust Gas Measurement (when idling)

Type	Fuel	Year Type (Average)	Number of Sample	Concentration of Pollutant					
				CO (vol %)		NOx (ppm)		HC (ppm)	
				Mean	Range	Mean	Range	Mean	Range
BUS (large size)	gasoline	~1974(1969)	8	5.64	1.78~8.20	18	5 ~ 37	3793	1220~7510
		1975~1984(1977)	7	5.40	2.60~9.25	23	8 ~ 53	2844	900~5230
		1985~ (1990)	4	5.25	1.80~7.34	24	15 ~ 49	1860	620~3770
	diesel	~1974(1974)	5	0.26	0.19~0.28	246	188~305	164	90~ 210
		1975~1984(1979)	2	0.22	0.20~0.23	72	56 ~ 88	135	90~ 180
		1985~ (1989)	3	0.25	0.21~0.29	129	108~157	190	150~ 230
BUS (middle size)	gasoline	~1974(1972)	2	4.93	4.35~5.50	21	15 ~ 27	1460	1150~1770
		1975~1984(1981)	8	7.22	1.01~10.70	19	8 ~ 37	1931	1070~3190
BUS (small size)	gasoline	1985~ (1988)	10	8.26	3.75~11.60	28	6 ~ 48	1173	230~2870
TRUCKS (large size)	gasoline	~1974(1962)	10	5.81	1.55~8.72	25	7 ~ 52	3488	500~10660
		1975~1984(1976)	3	8.80	6.10~10.20	11	8 ~ 15	2865	1950~3325
		1985~ (1988)	2	3.70	2.97~4.42	32	30 ~ 33	865	420~1300
	diesel	~1974(1971)	4	0.23	0.10~0.42	46	1 ~ 71	270	200~ 330
		1975~1984(1978)	7	0.19	0.14~0.25	91	5 ~265	329	210~ 850
		1985~ (1989)	1	0.08	-	18	-	190	-
	LPG	1975~1984(1984)	1	0.34	-	6	-	440	-
TRUCKS (small size)	gasoline	~1974(1963)	8	5.43	0.28~11.72	43	4 ~102	2024	230~4680
		1975~1984(1980)	5	6.86	2.27~ 9.97	41	16 ~ 78	994	380~2680
		1985~ (1988)	3	6.26	2.53~11.90	42	13 ~ 81	597	490~ 800
JEEP	gasoline	~1974(1969)	2	7.16	4.24~10.07	14	13 ~ 15	1280	940~1620
		1975~1984(1980)	7	6.67	1.30~10.42	37	3 ~ 87	792	630~1030
		1985~ (1990)	1	7.10	-	52	-	280	-
PASSENGER CAR	gasoline	~1974(1957)	24	4.71	0.25~11.56	71	5 ~369	2141	500~5470
		1975~1984(1979)	13	7.23	3.80~11.71	42	5 ~160	977	350~2795
		1985~ (1989)	10	8.12	0.52~11.47	35	9 ~ 72	666	290~1360
MOTOR BIKE	gasoline	1975~1984(1982)	4	4.08	1.25~ 7.55	18	5 ~ 41	3061	53~6250
		1985~ (1990)	6	2.45	0.66~ 6.95	53	4 ~ 85	1213	410~3110

Table 3.5.2 (1)

No.	Type	Year Type	Engine	Concentration			Remarks
				CO (Vol %)	NOX (ppm)	HC (ppm)	
1	BUS DODGE	1975	Gasoline 8 cylds.	5.28	10	2,850	1991.3.6 Carrera 95 BIS Calle 69
2	"	1962	"	8.20	11	3,650	"
3	BUS CHEVROLET	1982	"	7.48	25	1,020	"
4	BUS DODGE	1977	"	4.55	8	3,900	"
5	"	1979	Diesel 6 cylds.	0.20	88	90	"
6	"	1970	Gasoline 8 cyls.	0.25	115	2,250	1991.3.7 Carrera 95 BIS Calle 69
7	"	1968	"	4.00	5	1,220	"
8	"	1978	Diesel 6 cylds	0.23	56	180	"
9	"	1976	Gasoline 8 cylds.	9.25	12	4,700	"
10	"	1974	"	5.10	36	3,550	"
11	"	1974	"	6.70	14	5,340	"
12	BUS FORD	1965	"	7.05	7	2,470	"
13	BUS DODGE	1970	"	6.30	17	7,510	"
14	"	1975	"	2.60	53	5,230	"
15	BUS INTERNATIONAL	1967	"	1.78	37	2,050	"
16	BUS DODGE	1980	"	5.80	27	900	"
17	BUS FORD	1975	"	2.83	25	1,310	"
18	BUS DODGE	1970	"	5.95	17	4,550	"
19	BUS PEGASO	1974	Diesel 8 cylds.	0.19	216	90	1991.3.1. Calle 167 Carrera 58
20	BUS CHEVROLET	1990	Gasoline 8 cylds.	1.80	18	1,020	"
21	BUS PEGASO	1974	Diesel 8 cylds.	0.28	230	180	"
22	"	1974	"	0.28	293	180	"
23	"	1974	"	0.27	188	160	"
24	"	1974	"	0.27	305	210	"
25	BUS CHEVROLET/ISUZU	1990	Diesel 6 cylds.	0.21	157	150	"
26	"	1989	Diesel 8 cylds.	0.26	123	190	"
27	BUS CHEVROLET	1990	Gasoline 8 cylds.	5.20	49	620	"
28	"	1989	Diesel 8 cylds.	0.29	108	230	"
29	"	1990	Gasoline 8 cylds.	7.34	15	3,770	"
30	"	1990	"	6.67	15	2,030	"

Table 3.5.2 (2)

No.	Type	Year Type	Engine	Concentration			Remarks
				CO (Vol %)	NOX (ppm)	HC (ppm)	
31	BUSETA DODGE	1976	Gasoline 8 cylds.	5.10	37	2,430	1991.3.7 Carrera 85 BIS Calle 69
32	"	1972	"	5.50	27	1,150	1991.3.8 Calle 66 No.98-09
33	"	1977	"	7.65	8	1,195	"
34	"	1980	"	10.10	24	1,380	"
35	BUSETA CHEVROLET	1984	"	10.00	19	1,110	"
36	"	1982	"	10.70	12	2,960	"
37	"	1981	"	8.10	10	3,190	"
38	"	1982	"	5.06	15	2,112	"
39	"	1982	"	1.01	25	1,070	"
40	"	1972	"	4.35	15	1,770	"
41	COLECTIVO (MICRO BUS) CHEVROLET	1989	Gasoline 4 cylds.	3.75	48	230	"
42	"	1986	"	11.60	6	1,650	"
43	"	1990	"	8.06	32	400	"
44	"	1989	"	8.10	12	1,300	"
45	"	1989	"	6.60	29	2,160	"
46	"	1986	Gasoline 1,600cc	9.40	26	760	"
47	"	1989	"	9.50	31	820	"
48	"	1989	"	7.26	43	430	"
49	COLECTIVO MAZDA	1985	Gasoline 4 cylds.	8.60	30	2,870	"
50	"	1986	Gasoline 1,600cc	9.76	24	1,110	"
51	CAMION FORD	1954	Gasoline 8 cylds.	7.60	16	7,020	1991.3.12 BOSA
52	"	1960	"	4.16	52	2,720	"
53	"	1956	"	6.70	15	3,280	"
54	"	1965	"	5.18	22	10,660	"
55	CAMION CHEVROLET	1989	Diesel 350HP	0.08	18	190	"
56	"	1981	Diesel	0.23	265	210	"
57	"	1984	LPG 8 cylds.	0.34	6	440	"
58	"	1990	Gasoline 8 cylds.	4.42	30	430	"
59	CAMION DODGE	1977	Gasoline 361HP	6.10	8	3,320	"
60	"	1977	Diesel 8 cylds.	0.17	20	230	"

Table 3.5.2 (3)

No.	Type	Year Type	Engine	Concentration			Remarks
				CO (Vol %)	NOX (ppm)	HC (ppm)	
61	CAMION DODBE	1969	Diesel 8 cylds.	0.19	58	310	1991.3.12 BOSA
62	"	1978	"	0.25	41	220	"
63	"	1978	Diesel 6 cylds.	0.14	5	300	"
64	"	1974	Gasoline 8 cylds.	2.53	9	800	"
65	"	1974	"	1.55	51	500	"
66	"	1975	"	10.10	10	1,950	"
67	"	1954	"	3.08	7	2,930	"
68	CAMION INTERNATIONAL	1967	Doiesel 6 cylds.	0.42	54	200	"
69	"	1973	Gasoline 8 cylds.	5.10	23	4,010	"
70	"	1972	"	8.72	13	1,010	"
71	CAMION PEGASO	1977	Diesel 6 cylds.	0.19	90	240	"
72	CAMION FARGO	1954	Gasoline 8 cylds.	8.03	12	2,220	"
73	CAMION TANQUE	1973	Diesel 250HP	0.10	1	240	"
74	TRANCTOMULA CHEVROLET	1986	Hassoline 366HP	2.97	33	1,300	"
75	TRACTOMULA	1975	Diesel 6 cylds.	0.12	9	190	"
76	"	1981	"	0.20	56	250	"
77	REMOLQUE MACK	1975	"	0.17	158	850	"
78	VOLQUETA FORD	1975	Gasoline 8 cylds.	10.20	15	3,325	"
79	"	1960	"	8.01	42	530	"
80	DOBLE TRAQUE DODGE	1973	Diesel 250HP	0.20	71	330	"
81	CAMIONETA DODGE	1968	Gasoline 6 cylds.	7.80	4	740	1991.3.13 Ave. CARACAS Calle 53
82	"	1978	Gasoline 8 cylds.	7.06	23	850	"
83	CAMIONETA CHEVROLET	1990	Gasoline 2,800cc	11.90	13	800	"
84	"	1983	Gasoline 4 cylds.	9.72	31	680	"
85	CAMIONETA MAZDA	1986	Gasoline 4 cylds.	4.35	81	490	"
86	CAMIONETA ESTACAS	1973	Gasoline 4 cylds.	4.04	37	370	"
87	CAMIONETA FORD	1981	Gasoline 8 cylds.	9.97	16	2,680	"
88	CAMIONETA MERCEDEZ	1978	Gasoline 2,800cc	2.27	55	380	1991.3.13 Carrera 7 Calle 72
89	CAMIONETA FORD	1987	Gasoline 5,800cc	2.53	31	500	"
90	CAMIONETA RENAULT	1982	Gasoline 1,400cc	5.27	78	380	"

Table 3.5.2 (4)

No.	Type	Year Type	Engine	Concentration			Remarks
				CO (Vol %)	NOX (ppm)	HC (ppm)	
91	CAMIONETA RENAULT	1974	Gasoline 1,300cc	0.28	76	230	1991.3.13 Carrera 78 Calle 72
92	CAMIONETA DODGE	1955	Gasoline 2,400cc	9.28	17	2,900	1991.3.15 Carrera 86 Calle 51 SUR
93	CAMIONETA CHEVROLET	1958	Gasoline 2,800cc	11.72	15	3,750	"
94	CAMIONETA FORD	1955	Gasoline 2,500cc	4.99	51	4,680	"
95	CAMIONETA GMC	1966	Gasoline 1,100cc	3.05	38	1,140	"
96	CAMIONETA WILLYST-A	1952	Gasoline 4 cylds.	2.30	102	2,380	"
97	CAMPERO JEEP	1969	"	4.24	15	1,620	1991.3.13 Ave. CARACAS Calle 53
98	"	1978	Gasoline 6 cylds.	8.55	19	1,001	"
99	CAMPERO DAIHATSU	1979	Gasoline 4 cylds.	5.03	3	1,030	"
100	"	1981	"	1.30	87	630	"
101	CAMPERO MITSUBISHI	1983	"	10.42	27	630	"
102	CAMPERO TOYOTA	1968	Gasoline 6 cyls.	10.07	13	940	"
103	CAMPERO NISSAN	1980	"	8.02	17	700	"
104	CAMPERO SUZUKI	1981	Gasoline 4 cyls.	8.90	30	850	"
105	"	1981	Gasoline 1,000cc	4.50	74	700	1991.3.15 Carrera 86 Calle 51 SUR
106	CAMPERO CHEVRLET TROPER	1990	Gasoline	7.10	52	280	1991.3.13 Carrera 7 Calle 72
107	DATSUN	1980	Gasoline 1,800cc	4.95	41	490	1991.3.13 Ave.CARACAS Calle 53
108	DODGE ALPINE	1980	Gasoline 1,430cc	9.20	50	820	1991.3.13 Carrera 7 Calle 72
109	" (TAXI)	1961	Gasoline 2,200cc	6.79	5	1,350	1991.3.15 Carrera 86 Calle 51 SUR
110	"	1949	Gasline	9.36	11	1,480	"
111	"	1978	Gasoline 1,500cc	4.32	160	1,790	"
112	FIAT	1982	Gasoline 1,300cc	3.80	33	540	1991.3.13 Carrera 7 Calle 72
113	" POLSKI	1977	Gasoline 1,500cc	5.15	52	510	"
114	"	1975	Gasoline 1,300cc	11.71	9	1,115	1991.3.15 Carrera 86 Calle 51 SUR
115	" POLSKI	1978	Gasoline 1,500cc	9.22	30	970	"
116	MAZDA 626 L	1985	Gasoline 1,800cc	5.87	54	370	1991.3.13 Carrera 7 Calle 72"
117	" 323 NX	1991	Gasoline 1,500cc	10.70	26	500	"
118	"	1985	Gasoline 1,300cc	6.70	61	290	"
119	" 626 L	1989	Gasoline 1,800cc	5.93	47	520	"
120	RENAULT	1981	Gasoline 1,300cc	7.20	5	1,301	"

Table 3.5.2 (5)

No.	Type	Year Type	Engine	Concentration			Remarks
				CO (Vol %)	NOX (ppm)	HC (ppm)	
121	CHEVROLET (TAXI)	1991	Gasoline 1,300cc	10.63	9	1,360	1991.3.13 Carrera 7 Calle 72
122	" MONZA	1989	Gasoline	9.70	20	560	"
123	" SPRINT	1987	Gasoline 1,000cc	11.47	9	1,360	"
124	" MONZA	1989	Gasoline 1,800cc	10.85	11	820	"
125	" CELEBRITY	1984	Gasoline 2,800cc	10.14	13	945	"
126	"	1955	Gasoline 6 cylds.	11.30	10	3,760	1991.3.15 Calle 51 SUR No.76A
127	"	1955	Gasoline 2,800cc	11.56	7	950	1991.3.15 Carrera 86 Calle 51SUR
128	"	1955	Gasoline	7.47	18	5,470	"
129	"	1950	Gasoline 1,300cc	2.40	58	500	"
130	"	1951	Gasoline 2,800cc	3.80	40	5,150	"
131	"	1954	Gasoline 2,200cc	0.27	369	2,240	"
132	"	1954	Gasoline	5.50	31	2,990	"
133	"	1939	"	4.62	48	670	"
134	"	1966	"	0.36	37	1,880	"
135	FORD	1961	Gasoline 8 cylds.	0.30	135	3,860	1991.3.15 Calle 51 SUR No.76A
136	"	1953	Gasoline 2,400cc	5.60	15	1,560	1991.3.15 Carrera 86 Calle 51SUR
137	"	1954	Gasoline	1.99	33	1,020	"
138	" COUNTRIS	1963	Gasoline 2,500cc	0.31	336	1,540	"
139	SUBARU	1982	Gasoline 1,800cc	7.35	56	350	1991.3.13 Carrera 7 Calle 72
140	TOYOTA	1981	Gasoline 1,200cc	9.96	19	630	"
141	BMW	1976	Gasoline 1,800cc	6.83	31	440	"
142	VOLGA (TAXI)	1990	Gasoline 2,400cc	8.79	37	380	"
143	" (")	1989	Gasoline 2,400cc	0.52	72	500	"
144	AUSTIN	1961	Gasoline 4 cylds.	5.05	12	1,200	1991.3.15 Calle 51SUR No.76A
145	OLDSMOBILE	1952	Gasoline 8 cylds.	2.42	34	2,620	"
146	MERCEDEZ BENZ	1955	Gasoline 1,500cc	4.15	9	3,760	1991.3.15 Carrera 86, Calle 51SUR
147	DISOTO	1961	Gasoline 2,500cc	9.55	13	2,230	"
148	PLYMOUTH	1954	Gasoline 2,600cc	0.36	56	1,180	"
149	WILLYS	1956	Gasoline 2,400cc	7.48	51	1,120	"
150	"	1969	"	10.73	13	1,420	"

Table 3.5.2 (6)

No.	Type	Year Type	Engine	Concentration			Remarks
				CO (Vol %)	NOX (ppm)	HC (ppm)	
151	MERCURY	1956	Gasoline 3,000cc	1.37	64	2,000	1991.3.15 Carrera 86 Calle 51SUR
152	SIMCA	1972	Gasoline 1,000cc	0.25	291	1,430	"
153	"	1975	"	4.20	48	2,795	"
154	MOTOCICLETA HONDA	1990	Gasoline 125cc	0.66	85	430	1991.3.15 Carrera 36 Calle 12
155	"	1982	"	7.55	41	53	"
156	"	1991	"	6.95	37	1,610	"
157	"	1989	Gasoline 185cc	2.70	58	720	"
158	"	1990	Gasoline 125cc	1.49	58	1,000	"
159	"	1990	"	1.27	73	410	"
160	MOTOCICLETA SUZUKI	1987	"	0.21	5	440	"
161	"	1980	"	2.97	8	6,250	"
162	"	1984	"	1.25	5	4,550	"
163	MOTOCICLETA KAWASAKI	1982	Gasoline 175cc	4.55	17	1,392	"
164	MOTOCICLETA YAMAHA	1990	" 125cc	1.60	4	3,110	"

3.6 Setting of Emission Factors for Motor Vehicles

3.6.1 Setting Method of Emission Factors for Motor Vehicles

(1) Air Pollutants concerned

The emission factors for motor vehicles were set for four substances of HC, CO, SOx, and NOx. SOx was calculated as follows from the fuel economy and the sulfur content of the fuel.

$$SOx\ (g/km) = \frac{1}{\text{fuel economy}\ (l/km)} \times \text{specific gravity}\ (g/km) \times \text{sulfure content} \times \frac{\text{molecular weight of } SO_2}{\text{molecular weight of S}} \times \frac{1000}{(ml/l)}$$

The specific gravity and sulfur content of gasoline and light oil (diesel oil) were set as follows from the result of fuel analysis.

Fuel type	Specific gravity	Sulfur content (%)
Gasoline	0.90	0.06
Light Oil	0.87	0.40

(2) Number of Registered Motor Vehicles

Table 3.6.1 shows the number of registered units by type as of April 30, 1991.

Table 3.6.1 Motor Vehicle Registration in Bogota City As Date of April 30, 1991

Model Years	Automóvil	Campero	Camioneta	Microbus	Buseta	Bus	Camion	Volquiete	Tracto-Camion
-50	7,094	190	1,965	3	4	128	1,579	13	166
51-60	16,548	1,098	10,157	182	44	931	4,489	43	628
61-65	8,818	2,041	2,338	469	38	1,550	996	18	137
66-69	8,646	3,745	2,091	482	459	1,501	993	22	129
70-71	6,055	2,321	992	73	504	1,008	783	25	81
72-73	12,222	1,874	764	22	780	419	728	9	44
74-75	14,474	1,483	2,332	44	678	843	839	49	68
76	6,107	1,124	1,258	21	508	764	436	18	17
77	7,142	1,316	1,672	15	277	555	471	11	20
78	8,081	2,544	1,910	39	306	321	682	18	60
79	6,425	2,181	1,861	37	461	509	512	53	28
80	8,699	2,310	2,042	41	550	348	398	61	49
81	7,208	2,744	1,383	19	670	302	349	18	38
82	6,767	3,560	1,840	27	643	276	144	12	15
83	7,861	1,836	2,071	5	373	171	270	12	21
84	10,966	754	2,498	6	480	245	361	11	25
85	11,829	501	2,074	1	163	124	194	6	33
86	11,421	366	2,028	0	4	268	342	13	21
87	14,120	465	1,494	8	1	164	510	15	25
88	15,912	744	2,069	2	1	226	335	19	52
89	11,547	1,457	1,571	5	1	497	327	5	12
90	8,810	1,383	1,652	9	5	510	280	7	4
91	4,187	765	618	15	0	228	62	0	0
otros	23	4	3	0	0	1	2	0	1
TOTAL	220,962	36,806	48,683	1,525	6,955	11,889	16,082	458	1674

Source: # 6022

(3) Classification of Motor Vehicles

The vehicle type is shown in Table 3.6.2. The emission factors for motor vehicles were set as the average emission rates for automobiles (automóviles), buses, and trucks (camiones). The average emission rates of automobiles and buses were determined by averaging with the ratio of the number of registered units of the component type.

Table 3.6.2 Classification of Motor Vehicles

Vehicle Type			Fuel
Automóviles	Automóvile	4-cylinder	Gasoline
		6- and 8-cylinder	
	Campero	- 3,000 cc	
		3,001 cc -	
	Camioneta	- 3,000 cc	
		3,001 cc -	
	Microbus	- 3,000 cc	
		3,001 cc -	
Buses	Buseta		Gasoline
	Bus		Gasoline
			Diesel
Camiones	Camion	- 8,000 cc	Gasoline
	Volqueta	- - - - - - - - - - - -	- - - - -
	Tractmula	8,001 cc -	Diesel

Source: #5051 and #5052

(4) Fuel Consumption by Vehicle Type

The fuel used by vehicle type was shown in Table 3.6.2.

(5) Method of Setting the Emission Factors by Vehicle Type

① Passenger car

The emission factor for passenger cars (automóvil) was set considering the number of cylinders, age, and annual drive miles by age. The number of cylinders include two types: 4-cylinder and 6•8-cylinder.

The age was classified into three of - 4, 5 - 8, and 9 - for 4-cylinder passenger cars and into two of - 8 and 9 - for 6•8-cylinder passenger cars. The annual drive miles per unit by age was determined from the report of EPA (#5017) (Table 3.6.3):

When assuming as follows:

Classification by No. of cylinders: k

Model year: j

No. of registered units by model year: Cj

Annual drive miles per unit by model year: Tj

Ratio of No. of registered units by model year/by No. of cylinders: Rjk

Emission factor by model year/by No. of cylinders: Ejk

Emission factor of passenger car: E

then the emission factor of passenger cars is calculated as follows:

$$E = \frac{\Sigma Rjk \times Cj \times Tj \times Ejk}{\Sigma\ Cj \times Tj}$$

Table 3.6.3 Passenger Car Annual Miles Traveled by Car Age

M-105

TABLE 2.1.4

REGISTRATION MIX AND
MILEAGE ACCUMULATION RATES FOR
HIGH ALTITUDE
LIGHT DUTY GASOLINE POWERED VEHICLES

Model Year Index**	July 1 Registration Mix*	Mileage Accumulation Rate per vehicle*	Jan 1 Registration Mix	Jan 1 Mileage Accumulation Rate (fleet)	Jan 1 Mileage Accumulation (fleet)
1	0.080	12818.	0.027	12818.	1602.
2	0.101	12102.	0.101	12639.	9591.
3	0.095	11427.	0.095	11933.	21873.
4	0.089	10789.	0.089	11267.	33470.
5	0.083	10187.	0.083	10638.	44420.
6	0.077	9619.	0.077	10045.	54758.
7	0.071	9082.	0.071	9485.	64520.
8	0.065	8575.	0.065	8955.	73738.
9	0.059	8096.	0.059	8455.	82440.
10	0.053	7645.	0.053	7983.	90657.
11	0.047	7218.	0.047	7538.	98415.
12	0.041	6815.	0.041	7117.	105740.
13	0.035	6435.	0.035	6720.	112657.
14	0.029	6076.	0.029	6345.	119187.
15	0.023	5737.	0.023	5991.	125354.
16	0.017	5416.	0.017	5657.	131176.
17	0.011	5114.	0.011	5340.	136673.
18	0.008	4829.	0.008	5043.	141863.
19	0.006	4559.	0.006	4761.	146763.
20+	0.008	4305.	0.008	4495.	151390.

* Default information that may be altered by the MOBILE3 user with information about the local area.

** The indices refer to the most recent model year vehicles in any given calendar year. Index 1 references the newest model year vehicles and index 20+ references the oldest model year vehicles.

DATE : MAY 25, 1985

② Jeep, light truck and microbus

The emission factors of jeep (campero), light truck (camioneta) and microbus were determined by taking their displacement into account. For these types, the displacement was divided into a class of 3,000 cc or less and a class of 3,001 cc or more.

When assuming as follows:

Displacement classification: k
Ratio of No. of registered units by displacement: Rk
Emission factor by displacement: Ek
Emission factor: E

then, the emission factor was determined as follows.

$$E = \Sigma Rk \times Ek$$

③ Small bus (buseta)

For buseta, the displacement was not take into consideration and only one emission factor was set.

④ Bus

The emission factor of bus was set separately for a gasoline type and diesel type.

When assuming as follows:

Ratio of gasoline and diesel vehicles: Rg, Rd
Emission factor of gasoline and diesel vehicles: Eg, Ed
Emission factor: E

then, the emission factor is determined as follows:

$$E = Rg \times Eg + Rd \times Ed$$

⑤ Trucks (camion)

Camiones of 8,000 cc or less in displacement was assumed to be gasoline vehicles while those exceeding 8,001 cc to be diesel vehicles. The emission factor calculation method is same as for buses.

(6) Basic Emission Factor

The basic emission factor and fuel economy are shown in Table 3.6.4 and they were determined from the chassis dynamometer test result in Mexico City as well as from data of Japan and the USA.

Table 3.6.4 Basic Emission Factors and Fuel Economies for Motor Vehicles

Vehicle Type		Item	Car Age	Emission rate	Speed	Source
Automóvil	4 cylinder	HC	- 4	1.60		
			5 - 8	2.28		
			9 -	3.03		
		CO	- 4	21.31		
			5 - 8	23.41	31.6	
			9 -	27.64		
		NOx	- 4	1.25		
			5 - 8	0.88		
			9 -	1.05		
		Fuel Economy		11.63		Chassis dynamometer tests in Mexico City
	6-8 cylinder	HC	- 8	2.54		
			9 -	3.40		
		CO	- 8	57.22	31.6	
			9 -	43.27		
		NOx	- 8	0.81		
			9 -	1.20		
		Fuel Economy		7.23		
Campero	- 3,000 cc	HC		3.03		
		CO		27.64		Automóvil, 4-cylindr, over 9
		NOx		1.05	31.6	
		Fuel Economy		11.63		
	3,001 cc -	HC		3.40		
		CO		43.27		Automovil, 6 and 8-cylinder, over 9
		NOx		1.20	31.6	
		Fuel Economy		7.23		
Camioneta	- 3,000 cc	HC		3.03		
		CO		41.32		EPA, #5017, Light duty gasoline powered
		NOx		1.26	31.6	trucks I, 1978, High altitude
		Fuel Economy		6.70		Chassis dynamometer tests in Mexico City
	3,001 cc -	HC		5.84		
		CO		74.48	31.6	EPA, #5017, Light duty gasoline powered
		NOx		2.03		trucks II, 1974-1978, High altitude
		Fuel Economy		4.30	29.0	EPA, #5016, Light duty gasoline powered trucks
Microbus	- 3,000 cc	HC		3.03		
		CO		27.64		Automóvil, 4-cylindr, over 9
		NOx		1.05	31.6	
		Fuel Economy		11.63		
	3,001 cc -	HC		3.40		
		CO		43.27		Automovil, 6 and 8-cylinder, over 9
		NOx		1.20	31.6	
		Fuel Economy		7.23		
Buseta		HC		5.84		
		CO		74.48	31.6	EPA, #5017, Light duty gasoline powered
		NOx		2.03		trucks II, 1974-1978, High altitude
		Fuel Economy		4.30	29.0	EPA, #5016, Light duty gasoline powered trucks
Bus	Gasoline	HC		7.69		
		CO		175.39	32.2	EPA, #5017, Heavy duty gasoline powered
		NOx		2.75		vehicles, 1974-1977, High altitude
		Fuel Economy		2.60	29.0	EPA, #5016, Heavy duty gasoline powered vehicles
	Diesel	HC		5.80		
		CO		12.94	32.2	EPA, #5017, Heavy duty diesel powered
		NOx		15.86		vehicles, 1972-1974, High altitude
		Fuel Economy		2.00	29.0	EPA, #5016, Heavy duty diesel powered vehicles
Camion	Gasoline	HC		7.69		
		CO		175.39	32.2	EPA, #5017, Heavy duty gasoline powered
		NOx		2.75		vehicles, 1974-1977, High altitude
		Fuel Economy		2.60	29.0	EPA, #5016, Heavy duty gasoline powered vehicles
	Diesel	HC		5.80		
		CO		12.94	32.2	EPA, #5017, Heavy duty diesel powered
		NOx		15.86		vehicles, 1972-1974, High altitude
		Fuel Economy		2.00	29.0	EPA, #5016, Heavy duty diesel powered vehicles

Unit HC, CO, NOx: g/km
Fuel Economy: km/liter
Speed : km/h

(7) Fuel Economy by Vehicle Type

The fuel economy by vehicle type was calculated by the same method employed for setting the emission factors.

(8) Emission Factors by Vehicle Type and by Average Vehicle Speed

Tables 3.6.5 and 3.6.6 show the speed correction factor coefficients for emission factors by vehicle type and those for fuel economy by vehicle type.

The speed correction factors for air pollutants by vehicle type, were calculated from these tables as shown in Table 3.6.7.

When assuming as follows:

Average vehicle speed: v
Speed correction factor: Cv
Basic emission factor or fuel economy: Mb
Emission factor or fuel economy: Mv

then, the emission factor or fuel economy can be calculated as follows:

$$Mv = Cv \times Mb$$

Table 3.6.5 Speed Correction Factors
for Passenger Cars, Jeeps, Light Trucks (below 3,001 cc) and Microbuses

TABLE 2 1 6

SPEED CORRECTION FACTOR COEFFICIENTS FOR HIGH ALTITUDE
LIGHT DUTY GASOLINE POWERED VEHICLES

* $CF(s,sadj) * SF(s)/SF(sadj))

SF(s) = EXP(A + B*s + C*s² + D*S³ + E*s⁴ + F*s⁵), HC & CO
= A + B*s + C*s² + D*s³ + E*s⁴ + F*s⁵ , NOx

Pollutant and Model Years	A	B	C	D	E	F
HC						
Pre-1968	0.224612E+01	-0.290973E+00	0.158890E-01	-0.472494E-03	0.694077E-05	-0.392798E-07
1968	0.202779E+01	-0.273049E+00	0.153577E-01	-0.460304E-03	0.678527E-05	-0.384880E-07
1969	0.215056E+01	-0.283620E+00	0.158836E-01	-0.472136E-03	0.698732E-05	-0.396311E-07
1970	0.223021E+01	-0.293648E+00	0.162356E-01	-0.484148E-03	0.711591E-05	-0.402861E-07
1971	0.212230E+01	-0.291072E+00	0.169089E-01	-0.526148E-03	0.802705E-05	-0.470117E-07
1972	0.215361E+01	-0.283451E+00	0.156948E-01	-0.469759E-03	0.693832E-05	-0.394707E-07
1973-1974	0.211340E+01	-0.285676E+00	0.163180E-01	-0.500793E-03	0.755067E-05	-0.437187E-07
1975+	0.239540E+01	-0.335781E+00	0.211609E-01	-0.731550E-03	0.120715E-04	-0.748566E-07
CO						
Pre-1968	0.181978E+01	-0.254663E+00	0.152347E-01	-0.487397E-03	0.758207E-05	-0.449514E-07
1968	0.186919E+01	-0.276679E+00	0.172335E-01	-0.558279E-03	0.871678E-05	-0.516980E-07
1969	0.182133E+01	-0.272054E+00	0.170304E-01	-0.552021E-03	0.862543E-05	-0.511440E-07
1970	0.201421E+01	-0.295188E+00	0.186353E-01	-0.621606E-03	0.993657E-05	-0.599779E-07
1971	0.204533E+01	-0.310618E+00	0.204852E-01	-0.708527E-03	0.116215E-04	-0.715690E-07
1972	0.231868E+01	-0.341147E+00	0.209446E-01	-0.665891E-03	0.102225E-04	-0.598264E-07
1973-1974	0.215487E+01	-0.329116E+00	0.210112E-01	-0.689057E-03	0.108390E-04	-0.647125E-07
1975+	0.248747E+01	-0.391562E+00	0.270721E-01	-0.976178E-03	0.165270E-04	-0.104317E-06
NOx						
Pre-1968	0.244424E+01	-0.250107E+00	0.138293E-01	-0.287025E-03	0.207585E-05	0.0
1968	0.188656E+01	-0.161289E+00	0.904995E-02	-0.185609E-03	0.132555E-05	0.0
1969	0.155777E+01	-0.113032E+00	0.671832E-02	-0.143409E-03	0.106079E-05	0.0
1970	0.204516E+01	-0.194014E+00	0.110736E-01	-0.231754E-03	0.168372E-05	0.0
1971	0.163262E+01	-0.121861E+00	0.703020E-02	-0.146293E-03	0.106141E-05	0.0
1972	0.144825E+01	-0.122444E+00	0.795024E-02	-0.171078E-03	0.125777E-05	0.0
1973-1974	0.153447E+01	-0.125671E+00	0.785919E-02	-0.169428E-03	0.125494E-05	0.0
1975+	0.942131E+00	-0.423240E-01	0.386253E-02	-0.939853E-04	0.753883E-06	0.0

* WHERE : s = average speed (mph)
sadj = basic test procedure speed; adjusted for fraction of cold start operation x and fraction of hot start operation w, [1/sadj = (w*x)/26 + (1-w-x)/16]

DATE : MAY 25, 1985

For Light Trucks (over 3,001 cc) and Small Buses

H-137

TABLE 2.3.6

SPEED CORRECTION FACTOR COEFFICIENTS FOR HIGH ALTITUDE
LIGHT DUTY GASOLINE POWERED TRUCKS II

* SCF(s,sadj) = SF(s)/SF(sadj))

SF(s) = EXP(A + B*s + C*s² + D*S³ + E*s⁴ + F*s⁵), HC & CO
= A + B*s + C*s² + D*s³ + E*s⁴ + F*s⁵ , NOx

Pollutant and Model Years	A	B	C	D	E	F
HC						
Pre-1970	0.224612E+01	-0.290973E+00	0.158890E-01	-0.472494E-03	0.694077E-05	-0.392798E-07
1970-1973	0.215361E+01	-0.283451E+00	0.156948E-01	-0.469759E-03	0.693832E-05	-0.394707E-07
1974-1978	0.211340E+01	-0.285676E+00	0.163180E-01	-0.500793E-03	0.755067E-05	-0.437187E-07
1979+	0.239540E+01	-0.335781E+00	0.211609E-01	-0.731550E-03	0.120715E-04	-0.748566E-07
CO						
Pre-1970	0.181978E+01	-0.254663E+00	0.152347E-01	-0.487397E-03	0.758207E-05	-0.449514E-07
1970-1973	0.231868E+01	-0.341147E+00	0.209445E-01	-0.665891E-03	0.102225E-04	-0.598264E-07
1974-1978	0.215487E+01	-0.329116E+00	0.210112E-01	-0.689057E-03	0.108390E-04	-0.647125E-07
1979+	0.248747E+01	-0.391562E+00	0.270721E-01	-0.976178E-03	0.165270E-04	-0.104317E-06
NOx						
Pre-1970	0.244424E+01	-0.250107E+00	0.138293E-01	-0.287025E-03	0.207585E-05	0.0
1970-1973	0.144825E+01	-0.122444E+00	0.795024E-02	-0.171078E-03	0.125777E-05	0.0
1974-1978	0.153447E+01	-0.125671E+00	0.785919E-02	-0.169428E-03	0.125494E-05	0.0
1979+	0.942131E+00	-0.423240E-01	0.386253E-02	-0.939853E-04	0.753883E-06	0.0

* WHERE : s = average speed (mph)
sadj = basic test procedure speed; adjusted for fraction of cold start operation x and fraction of hot start operation w, [1/sadj = (w*x)/26 + (1-w-x)/16]

DATE : MAY 25, 1985

For Gasoline Powered Buses and Trucks

H-152

TABLE 2.4.6

SPEED CORRECTION FACTOR COEFFICIENTS FOR
HIGH ALTITUDE
HEAVY DUTY GASOLINE POWERED VEHICLES

* $SCF(s) = EXP(A + B*s + C*s^3)$, HC & CO
$= A + B*s + C*s^2$, NOx

Pol	Model Years	Coefficients A	B	C
HC	All	1.60800	-0.09700	0.00083
CO	All	1.5[illegible]000	-0.09800	0.00110
NOx	All	0.82400	0.00880	0.0

* WHERE: s = average speed (mph)

DATE : MAY 25, 1985

For Diesel Powered Buses and Trucks

H-179

TABLE 2.7.6

SPEED CORRECTION FACTOR COEFFICIENTS FOR
HIGH ALTITUDE
HEAVY DUTY DIESEL POWERED VEHICLES

* $SCF(s) = EXP(A + B*s + C*s^2)$

Pol	Model Years	Coefficients A	B	C
HC	All	0.92400	-0.05500	0.00044
CO	All	1.39600	-0.08800	0.00091
NOx	All	0.67600	-0.04800	0.00071

* WHERE: s = average speed (mph)

DATE : MAY 25, 1985

Table 3.6.6 Calculation Model for Fuel Economies for Motor Vehicles

(Unit:km/ℓ)

Vehicle Type		Equation	a	b	c	Source
Automóvil	4-cylinder	$F(v) = av^2 + bv + c$	6.47×10^{-3}	-2.84×10^{-1}	14.15	Mexico, 4-cylinder
	6-,8-cylinder	$F(v) = av^2 + bv + c$	1.67×10^{-3}	1.67×10^{-2}	5.04	Mexico, 6-,8-cylinder
Campero	- 3,000 cc	$F(v) = av^2 + bv + c$	6.47×10^{-3}	-2.84×10^{-1}	14.15	Mexico, 4-cylinder
	3,001 cc -	$F(v) = av^2 + bv + c$	1.67×10^{-3}	1.67×10^{-2}	5.04	Mexico, 4-cylinder
Camioneta	- 3,000 cc	$F(v) = av^2 + bv + c$	2.74×10^{-3}	-1.01×10^{-1}	7.17	Mexico, camioneta
	3,001 cc -	$1/F(v) = a/v + b$	7.695×10^{-1}	7.615×10^{-2}		Japan, middle duty
Microbus	- 3,000 cc	$F(v) = av^2 + bv + c$	6.47×10^{-3}	-2.84×10^{-1}	14.15	Mexico, 4-cylinder
	3,001 cc -	$F(v) = av^2 + bv + c$	1.67×10^{-3}	1.67×10^{-2}	5.04	Mexico, 6-,8-cylinder
Buseta		$F(v) = av^2 + bv + c$	1.67×10^{-3}	1.67×10^{-2}	5.04	Mexico, 6-,8-cylinder
Bus	Gasoline	$F(v) = 1/(a/v + b)$	9.573×10^{-1}	7.646×10^{-2}		Japan, heavy duty
	Diesel	$F(v) = 1/(a/v + b)$	1.280	1.828×10^{-1}		Japan, Bus
Camion	Gasoline	$F(v) = 1/(a/v + b)$	9.573×10^{-1}	7.646×10^{-2}		Japan, heavy duty
	Diesel	$F(v) = 1/(a/v + b)$	1.145	1.636×10^{-1}		Japan, heavy duty

Table 3.6.7 Speed Correction Factors for Emission Factors and Fuel Economy (1)

Speed Correction Factors for Hydrocarbon

Vehicle Type		Average Speed(km/h)								
		10	15	20	25	30	35	40	45	50
Automóvil		2.45	1.72	1.36	1.16	1.03	0.94	0.87	0.81	0.75
Campero		2.45	1.72	1.36	1.16	1.03	0.94	0.87	0.81	0.75
Microbus		2.45	1.72	1.36	1.16	1.03	0.94	0.87	0.81	0.75
Camioneta	-3,000cc	2.45	1.72	1.36	1.16	1.03	0.94	0.87	0.81	0.75
	3,001cc-	2.51	1.75	1.38	1.17	1.03	0.94	0.86	0.79	0.73
Buse	Gasoline	2.82	2.17	1.70	1.35	1.09	0.90	0.75	0.63	0.55
	Diesel	1.82	1.57	1.36	1.19	1.05	0.94	0.84	0.76	0.70
Buseta		2.51	1.75	1.38	1.17	1.03	0.94	0.86	0.79	0.73
Camion	Gasoline	2.82	2.17	1.70	1.35	1.09	0.90	0.75	0.63	0.55
	Diesel	1.82	1.57	1.36	1.19	1.05	0.94	0.84	0.76	0.70

Note Speeds of unit value(1.0) for automóviles, buses and camiones are 31.6km/h, 32.2km/h and 32.2km/h respectively.

Speed Correction Factors for Carbon Monoxide

Vehicle Type		Average Speed(km/h)								
		10	15	20	25	30	35	40	45	50
Automóvil		2.16	1.56	1.27	1.12	1.02	0.95	0.89	0.82	0.77
Campero		2.16	1.56	1.27	1.12	1.02	0.95	0.89	0.82	0.77
Microbus		2.16	1.56	1.27	1.12	1.02	0.95	0.89	0.82	0.77
Camioneta	-3,000cc	2.16	1.56	1.27	1.12	1.02	0.95	0.89	0.82	0.77
	3,001cc-	2.26	1.60	1.29	1.13	1.03	0.95	0.88	0.81	0.75
Buse	Gasoline	2.60	2.02	1.60	1.30	1.08	0.91	0.79	0.70	0.63
	Diesel	2.42	1.93	1.56	1.28	1.07	0.92	0.80	0.70	0.63
Buseta		2.26	1.60	1.29	1.13	1.03	0.95	0.88	0.81	0.75
Camion	Gasoline	2.60	2.02	1.60	1.30	1.08	0.91	0.79	0.70	0.63
	Diesel	2.42	1.93	1.56	1.28	1.07	0.92	0.80	0.70	0.63

Note Speeds of unit value(1.0) for automóviles, buses and camiones are 31.6km/h, 32.2km/h and 32.2km/h respectively.

Table 3.6.7 Speed Correction Factors for Emission Factors and Fuel Economy (2)

Speed Correction Factors for Nitrogen Oxides

Vehicle Type		Average Speed(km/h)								
		10	15	20	25	30	35	40	45	50
Automóvil		1.11	0.98	0.93	0.94	0.99	1.06	1.15	1.23	1.30
Campero		1.11	0.98	0.93	0.94	0.99	1.06	1.15	1.23	1.30
Microbus		1.11	0.98	0.93	0.94	0.99	1.06	1.15	1.23	1.30
Camioneta	-3,000cc	1.11	0.98	0.93	0.94	0.99	1.06	1.15	1.23	1.30
	3,001cc-	1.03	0.92	0.89	0.92	0.98	1.06	1.15	1.23	1.31
Buse	Gasoline	0.88	0.91	0.93	0.96	0.99	1.02	1.04	1.07	1.10
	Diesel	1.50	1.34	1.21	1.11	1.03	0.97	0.92	0.90	0.88
Buseta		1.03	0.92	0.89	0.92	0.98	1.06	1.15	1.23	1.31
Camion	Gasoline	0.88	0.91	0.93	0.96	0.99	1.02	1.04	1.07	1.10
	Diesel	1.50	1.34	1.21	1.11	1.03	0.97	0.92	0.90	0.88

Note Speeds of unit value(1.0) for automóviles, buses and camiones are 31.6km/h, 32.2km/h and 32.2km/h respectively.

Fuel Economy for Motor Vehicle by Average Speed

Unit:km/ℓ

Vehicle Type		Average Speed(km/h)								
		10	15	20	25	30	35	40	45	50
Automóvil	4-cylinder	10.50	10.60	10.80	11.09	11.45	12.14	13.14	14.47	16.13
	6,8-cylinder	5.37	5.67	6.04	6.50	7.04	7.67	8.38	9.17	10.05
Campero	- 3,000 cc	10.50	10.60	10.80	11.09	11.45	12.14	13.14	14.47	16.13
	3,001 cc -	5.37	5.67	6.04	6.50	7.04	7.67	8.38	9.17	10.05
Microbus	- 3,000 cc	10.50	10.60	10.80	11.09	11.45	12.14	13.14	14.47	16.13
	3,001 cc -	5.37	5.67	6.04	6.50	7.04	7.67	8.38	9.17	10.05
Camioneta	- 3,000 cc	5.70	5.80	5.90	6.20	6.61	6.99	7.51	8.17	8.97
	3,001 cc -	2.89	3.49	3.85	4.14	4.34	4.52	4.66	4.76	4.81
Bus	Gasoline	1.65	2.02	2.29	2.46	2.62	2.73	2.83	2.89	2.95
	Diesel	1.46	1.69	1.84	1.94	2.02	2.07	2.11	2.15	2.18
Buseta		2.89	3.49	3.85	4.14	4.34	4.52	4.66	4.76	4.81
Camion	Gasoline	1.65	2.02	2.29	2.46	2.62	2.73	2.83	2.89	2.95
	Diesel	1.46	1.69	1.84	1.94	2.01	2.07	2.11	2.15	2.17

Note Speeds of unit value(1.0) for automóviles, buses and camiones are 31.6km/h, 29.0km/h and 29.0km/h respectively.

3.6.2 Emission Factors for Motor Vehicles

(1) Current Emission Factors

The current emission factors by vehicle type was determined as shown in Table 3.6.8 based on the method described above. The average emission rates by vehicle type was shown in Table 3.6.9. Data used for calculation of the current emission factors are shown below.

Table 3.6.8 Emission Rates for Motor Vehicles

(Unit: g/km)

Vehicle	Item	Average Speed(km/h)								
		10	15	20	25	30	35	40	45	50
Automóvil	HC	6.13	4.30	3.40	2.90	2.58	2.35	2.18	2.03	1.88
	CO	63.59	49.36	40.18	35.44	32.27	30.06	28.16	25.94	24.36
	NOx	1.21	1.07	1.01	1.02	1.08	1.15	1.25	1.34	1.42
	SOx	0.12	0.12	0.12	0.11	0.11	0.10	0.09	0.09	0.08
Campero	HC	7.88	5.53	4.38	3.73	3.31	3.02	2.80	2.61	2.41
	CO	76.59	55.46	45.15	39.81	36.26	33.77	31.64	29.15	27.37
	NOx	1.25	1.10	1.05	1.06	1.11	1.19	1.29	1.38	1.46
	SOx	0.14	0.13	0.13	0.12	0.12	0.11	0.10	0.09	0.08
Camioneta	HC	8.65	6.06	4.79	4.08	3.61	3.29	3.04	2.82	2.61
	CO	102.61	73.70	59.85	52.68	47.99	44.58	41.64	38.25	35.88
	NOx	1.52	1.34	1.28	1.30	1.37	1.47	1.60	1.71	1.81
	SOx	0.21	0.20	0.19	0.18	0.17	0.16	0.15	0.14	0.13
Microbus	HC	7.73	5.43	4.29	3.66	3.25	2.97	2.74	2.56	2.37
	CO	71.08	51.34	41.79	36.86	33.57	31.26	29.29	26.98	25.34
	NOx	1.22	1.08	1.02	1.03	1.09	1.17	1.27	1.35	1.43
	SOx	0.12	0.12	0.12	0.11	0.11	0.10	0.09	0.09	0.08
Buseta	HC	14.66	10.22	8.06	6.83	6.02	5.49	5.02	4.61	4.26
	CO	168.32	119.17	96.08	84.16	76.71	70.76	65.54	60.33	55.86
	NOx	2.09	1.87	1.81	1.87	1.99	2.15	2.33	2.50	2.66
	SOx	0.37	0.31	0.28	0.26	0.25	0.24	0.23	0.23	0.22
Buse	HC	19.60	15.26	12.08	9.71	7.93	6.62	5.57	4.74	4.17
	CO	379.14	294.68	233.48	189.74	157.64	132.87	115.35	102.19	91.97
	NOx	6.29	5.90	5.57	5.35	5.19	5.08	4.98	4.99	5.00
	SOx	1.40	1.18	1.07	1.01	0.96	0.93	0.91	0.89	0.88
Camion	HC	18.98	14.83	11.79	9.51	7.79	6.53	5.52	4.70	4.16
	CO	356.21	276.90	219.42	178.32	148.16	124.90	108.43	96.05	86.44
	NOx	7.44	6.91	6.47	6.16	5.92	5.76	5.62	5.61	5.59
	SOx	1.62	1.38	1.25	1.18	1.13	1.09	1.07	1.05	1.03

Table 3.6.9 Average Emission Rates for Motor Vehicles

(Unit: g/km)

Vehicle	Item	Average Speed(km/h)								
		10	15	20	25	30	35	40	45	50
Automóviles	HC	6.75	4.73	3.74	3.19	2.83	2.58	2.39	2.23	2.06
	CO	71.38	53.97	43.91	38.71	35.25	32.82	30.72	28.28	26.55
	NOx	1.26	1.12	1.06	1.07	1.13	1.21	1.31	1.40	1.49
	SOx	0.14	0.13	0.13	0.12	0.12	0.11	0.10	0.10	0.09
Buses	HC	17.75	13.38	10.58	8.63	7.22	6.20	5.36	4.69	4.20
	CO	300.29	229.04	182.09	150.25	127.37	109.64	96.72	86.53	78.46
	NOx	4.72	4.39	4.16	4.05	3.99	3.98	3.99	4.06	4.12
	SOx	1.01	0.85	0.77	0.73	0.69	0.67	0.66	0.64	0.63
Camiones	HC	18.98	14.83	11.79	9.51	7.79	6.53	5.52	4.70	4.16
	CO	356.20	276.90	219.42	178.32	148.16	124.90	108.43	96.05	86.44
	NOx	7.44	6.91	6.47	6.16	5.92	5.76	5.62	5.61	5.59
	SOx	1.62	1.38	1.25	1.18	1.13	1.09	1.07	1.05	1.03

Table 3.6.10 Fraction of Motor Vehicles

Vehicle Type		Fraction	Remarks
Automóvil	4-cylinder	0.661	*1
	6- and 8-cylinder	0.339	
Campero	- 3,000 cc	0.494	*2
	3,001 cc -	0.506	
Microbus	- 3,000 cc	0.663	*2
	3,001 cc -	0.337	
Camioneta	- 3,000 cc	0.831	*2
	3,001 cc -	0.169	
Bus	Gasoline	0.819	*3
	Diesel	0.181	
Camiones	Gasoline	0.765	*2
	Diesel	0.235	

*1. These values were estimated from # 5011 and # 5052.

*2. These values were assumed from # 5051 and # 5052.

*3. These values were calculated from # 5024.

Table 3.6.11 Cylinder Weighting Fraction for Passenger Car

Model Year	Number of Cylinder	
	4	6 and 8
- 1971	0.20	0.80
1972 - 1977	0.40	0.60
1978 - 1982	0.60	0.40
1983 - 1986	0.80	0.20
1987 - 1990	0.85	0.15

Note Those values were assumed from the data(#5011).

Table 3.6.12 Calculation of Fraction of Passenger Car Miles Travelled by Model Year and Cylinder

Model Year	Number of Cylinder	
	4	6 and 8
- 1982	0.172	0.239
1983 - 1986	0.191	0.048
1987 - 1990	0.298	0.052

(2) Future Emission Factors

The emission factors in the year 2001 was predicted.

① Number of registered units by vehicle type

When the number of registered units in 2001 is set as shown in Table 3.6.13 and the ratio of diesel vehicles in buses and trucks as shown in Table 3.6.14, the component percentage of automobiles and buses by vehicle type becomes as shown in Table 3.6.15. For passenger cars, the number of registered units by model year at the end of 2001 is shown in Table 3.6.16. If the ratio of 4-cylinder and 6•8-cylinder units for 1991 and after is assumed to be 0.85 and 0.15 respectively as in 1990, the component percentage by model year and by the number of cylinders as shown in Table 3.6.17 was obtained from Tables 3.6.11 and 3.6.16 while considering the annual drive miles.

and after is assumed to be 0.85 and 0.15 respectively as in 1990, the component percentage by model year and by the number of cylinders as shown in Table 3.6.17 was obtained from Tables 3.6.11 and 3.6.16 while considering the annual drive miles.

Table 3.6.13 Predicted Number of Motor Vehicles Registered in Santafe de Bogota City in 2001

Vehicle Type	Growth of Vehicles Registered (2001/1990)		Number of Vehicles Registered	
			1990	2001
Automóvile	1.60	1.52	216,752	346,803
Campero	1.45		36,037	52,254
Camioneta	1.20		48,062	57,674
Microbus	1.00		1,510	1,510
Buseta	1.00	1.13	6,955	6,955
Bus	1.20		11,660	13,993
Camiones	1.20		18,149	21,779
Total	1.48		339,125	500,968

Table 3.6.14 Ratio of Diesel Engine Vehicles in Buses and Trucks

	Ratio of diesel engine (%)	
	1990	2001
Bus	18.1	25.8
Trucks	23.5	36.3

Table 3.6.15 Predicted Fraction of Automobiles and Buses in 2001

Vehicle Type		Ratio
Automóviles	Automóvil	0.717
	Campero	0.119
	Camioneta	0.159
	Microbus	0.005
Buses	Bus	0.626
	Buseta	0.374

Table 3.6.16 Predicted Number of Passenger Cars and Vehicles Miles Traveled by Model Year in 2001 in Santafe de Bogota City

Model Years	Nmber	Annual Vehicle Miles Traveled
66-69	8,646	38,864
70-71	6,055	27,217
72-73	12,222	54,938
74-75	14,474	65,060
76	6,107	27,451
77	7,142	32,103
78	8,081	36,324
79	6,425	28,880
80	8,699	39,102
81	7,208	32,400
82	6,767	30,418
83	7,861	38,535
84	10,966	53,755
85	11,829	65,048
86	11,421	62,804
87	14,120	84,593
88	15,912	100,962
89	11,547	77,596
90	8,810	62,701
91	12,411	93,554
92	12,825	102,382
93	13,257	112,088
94	13,705	122,728
95	14,176	134,459
96	14,666	147,320
97	15,176	161,442
98	15,711	177,016
99	16,267	194,114
2000	16,849	212,955
01	17,468	111,952
Total	346,803	2,528,761

Unit: 10^3miles/year

Table 3.6.17 Predicted Fraction of Passenger Cars Miles Traveled by Model Year and Cylinder in 2001

Model Year	Number of Cylinder	
	4	6 and 8
- 1993	0.356	0.145
1994 - 1997	0.190	0.034
1998 - 2001	0.234	0.041

② Emission factors by vehicle type

The emission factors by vehicle type for the year 2001 was calculated as shown in Table 3.6.18 by using data as described above. From Tables 3.6.15 and 3.6.18, the average emission rates by vehicle type was determined as shown in Table 3.6.19.

Table 3.6.18 Predicted Emission Rates for Motor Vehicles in 2001

(Unit: g/km)

Vehicle	Item	Average Speed(km/h)								
		10	15	20	25	30	35	40	45	50
Automóvil	HC	6.30	4.42	3.49	2.98	2.65	2.42	2.24	2.08	1.93
	CO	59.98	46.55	37.90	33.42	30.44	28.35	26.56	24.47	22.98
	NOx	1.19	1.05	0.99	1.00	1.06	1.13	1.23	1.31	1.39
	SOx	0.12	0.11	0.11	0.11	0.10	0.10	0.09	0.08	0.07
Campero	HC	7.88	5.53	4.38	3.73	3.31	3.02	2.80	2.61	2.41
	CO	76.59	55.46	45.15	39.81	36.26	33.77	31.64	29.15	27.37
	NOx	1.25	1.10	1.05	1.06	1.11	1.19	1.29	1.38	1.46
	SOx	0.14	0.13	0.13	0.12	0.12	0.11	0.10	0.09	0.08
Camioneta	HC	8.65	6.06	4.79	4.08	3.61	3.29	3.04	2.82	2.61
	CO	102.61	73.70	59.85	52.68	47.99	44.58	41.64	38.25	35.88
	NOx	1.52	1.34	1.28	1.30	1.37	1.47	1.60	1.71	1.81
	SOx	0.21	0.20	0.19	0.18	0.17	0.16	0.15	0.14	0.13
Microbus	HC	7.73	5.43	4.29	3.66	3.25	2.97	2.74	2.56	2.37
	CO	71.08	51.34	41.79	36.86	33.57	31.26	29.29	26.98	25.34
	NOx	1.22	1.08	1.02	1.03	1.09	1.17	1.27	1.35	1.43
	SOx	0.12	0.12	0.12	0.11	0.11	0.10	0.09	0.09	0.08
Buseta	HC	14.66	10.22	8.06	6.83	6.02	5.49	5.02	4.61	4.26
	CO	168.32	119.17	96.08	84.16	76.71	70.76	65.54	60.33	55.86
	NOx	2.09	1.87	1.81	1.87	1.99	2.15	2.33	2.50	2.66
	SOx	0.37	0.31	0.28	0.26	0.25	0.24	0.23	0.23	0.22
Buse	HC	18.72	14.65	11.66	9.42	7.73	6.49	5.49	4.69	4.15
	CO	346.44	269.32	213.43	173.45	144.12	121.50	105.48	93.43	84.09
	NOx	7.93	7.34	6.85	6.50	6.23	6.05	5.89	5.87	5.85
	SOx	1.72	1.46	1.33	1.25	1.19	1.16	1.13	1.11	1.10
Camion	HC	17.51	13.82	11.09	9.03	7.47	6.32	5.38	4.63	4.11
	CO	301.85	234.75	186.09	151.25	125.69	105.99	92.02	81.49	73.35
	NOx	10.18	9.31	8.60	8.07	7.66	7.37	7.12	7.06	6.99
	SOx	2.15	1.84	1.67	1.58	1.52	1.47	1.44	1.41	1.40

Table 3.6.19 Predicted Average Emission Rates for Motor Vehicles in 2001

(Unit: g/km)

Vehicle	Item	Average Speed(km/h)								
		10	15	20	25	30	35	40	45	50
Automóviles	HC	6.78	4.76	3.76	3.21	2.85	2.60	2.41	2.24	2.07
	CO	67.28	51.00	41.50	36.59	33.32	31.02	29.05	26.75	25.11
	NOx	1.24	1.09	1.03	1.04	1.10	1.18	1.28	1.37	1.45
	SOx	0.13	0.12	0.12	0.12	0.11	0.11	0.10	0.09	0.08
Buses	HC	17.96	13.59	10.75	8.75	7.30	6.24	5.39	4.70	4.20
	CO	309.15	236.41	187.86	154.69	130.77	112.25	98.81	88.29	79.98
	NOx	4.90	4.56	4.32	4.19	4.13	4.11	4.10	4.16	4.22
	SOx	1.27	1.08	0.98	0.92	0.88	0.85	0.83	0.82	0.81
Camiones	HC	17.51	13.82	11.09	9.03	7.47	6.32	5.38	4.63	4.11
	CO	301.85	234.75	186.09	151.25	125.69	105.99	92.02	81.49	73.35
	NOx	10.18	9.31	8.60	8.07	7.66	7.37	7.12	7.06	6.99
	SOx	2.15	1.84	1.67	1.58	1.52	1.47	1.44	1.41	1.40

3.7 Present Distribution of Air Pollutant Emission by Source

(1) SOx (Factories)

(2) SOx (Mobile Sources)

(3) SOx (All Sources)

(4) CO (Motor Vehicles)

(5) NOx (Factories)

(6) NOx (Mobile Sources)

(7) NOx (All Sources)

(8) Dust (Factories)

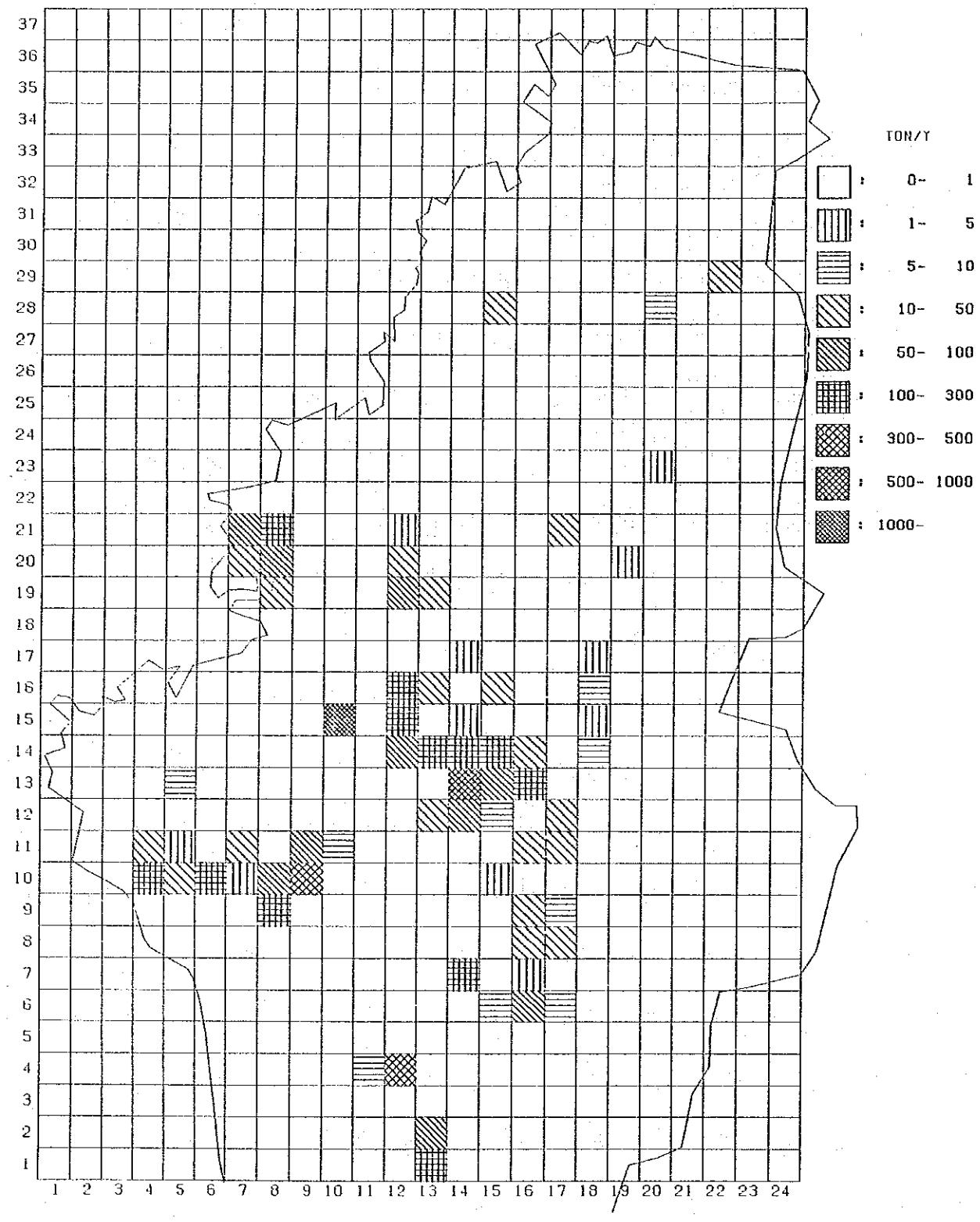


Fig. 3.7.1 Distribution of SOx Emission from Factories (Present)

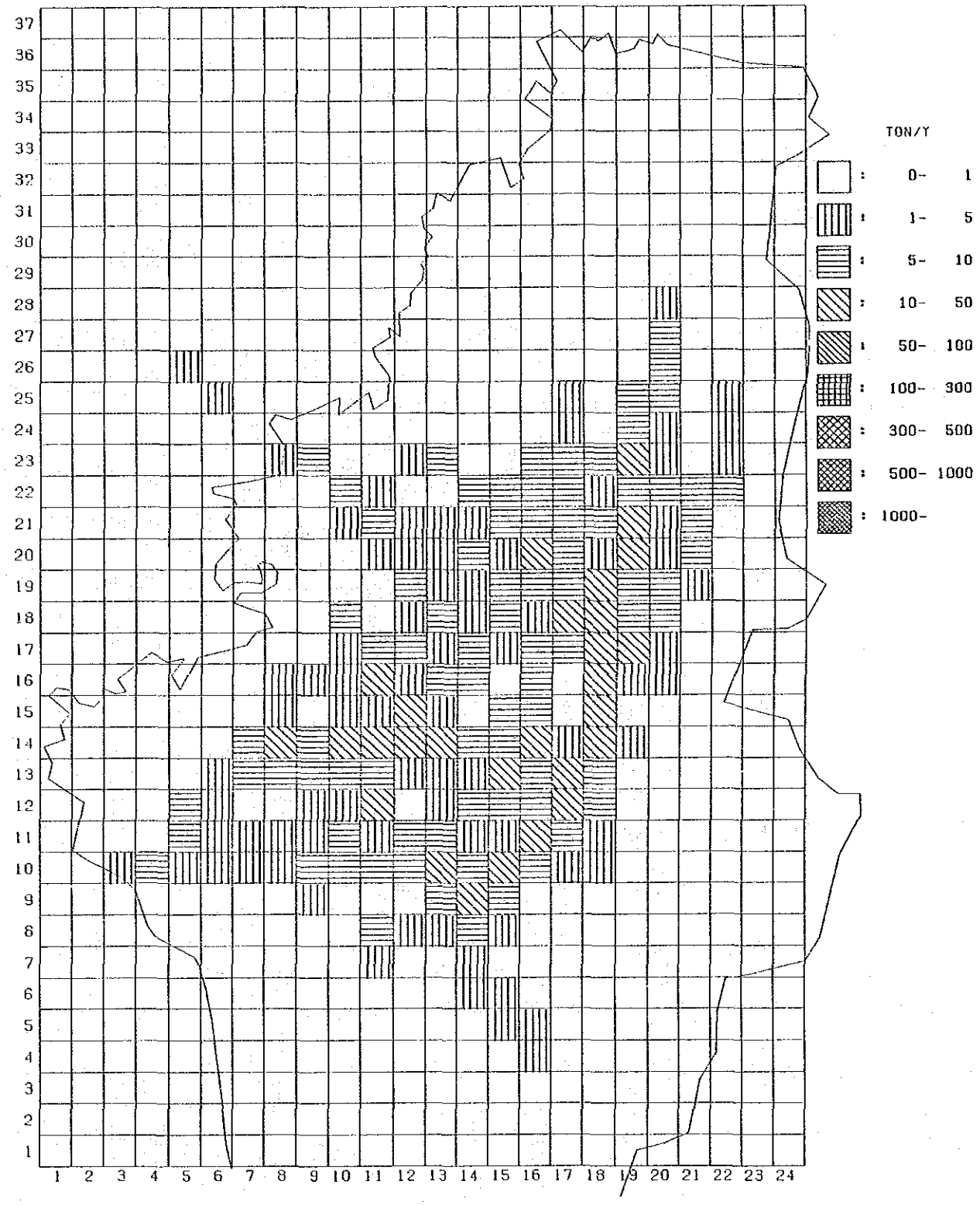


Fig. 3.7.2 Distribution of SOx Emission from Mobile Sources (Present)

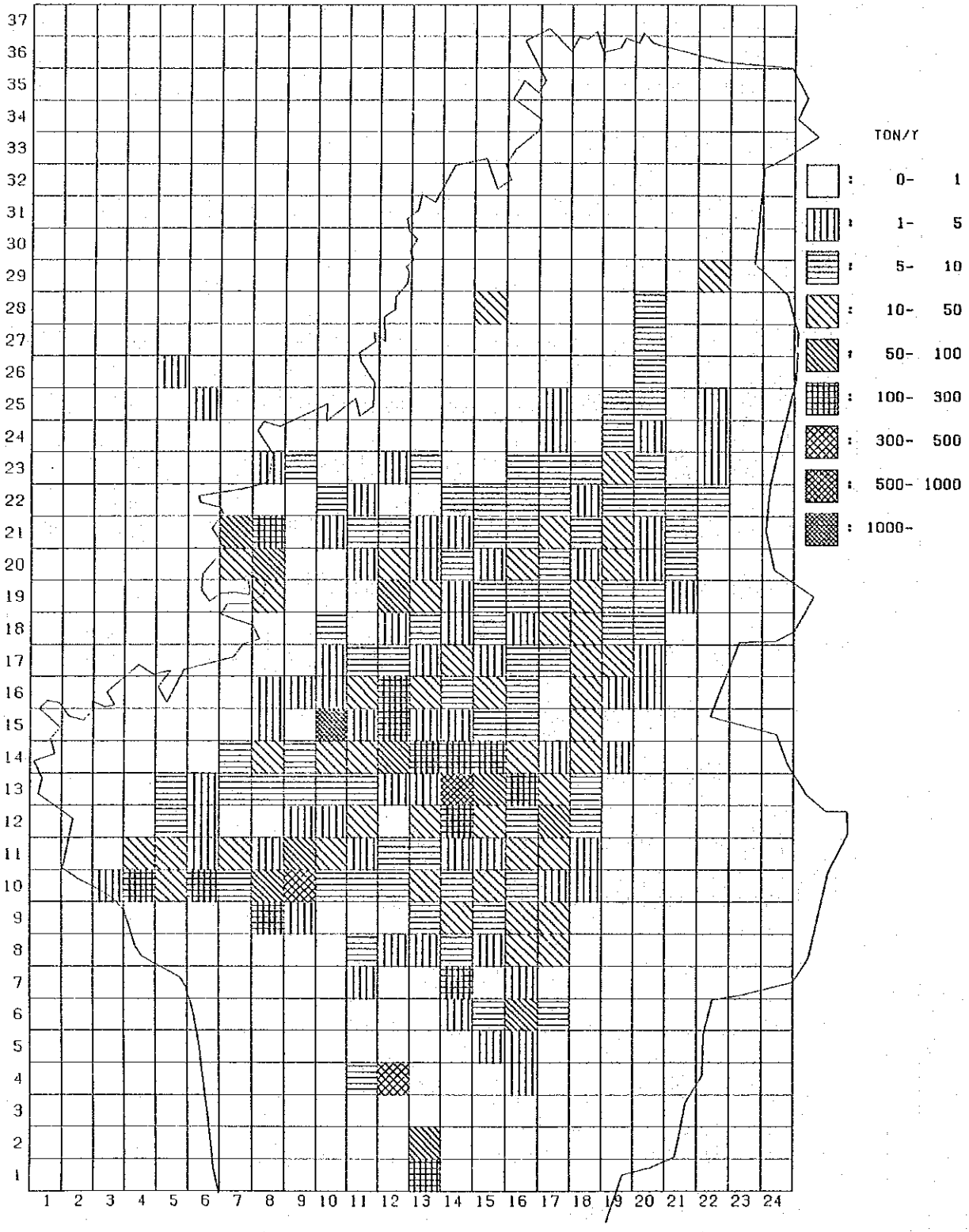


Fig. 3.7.3 Distribution of SOx Emission from All Sources (Present)

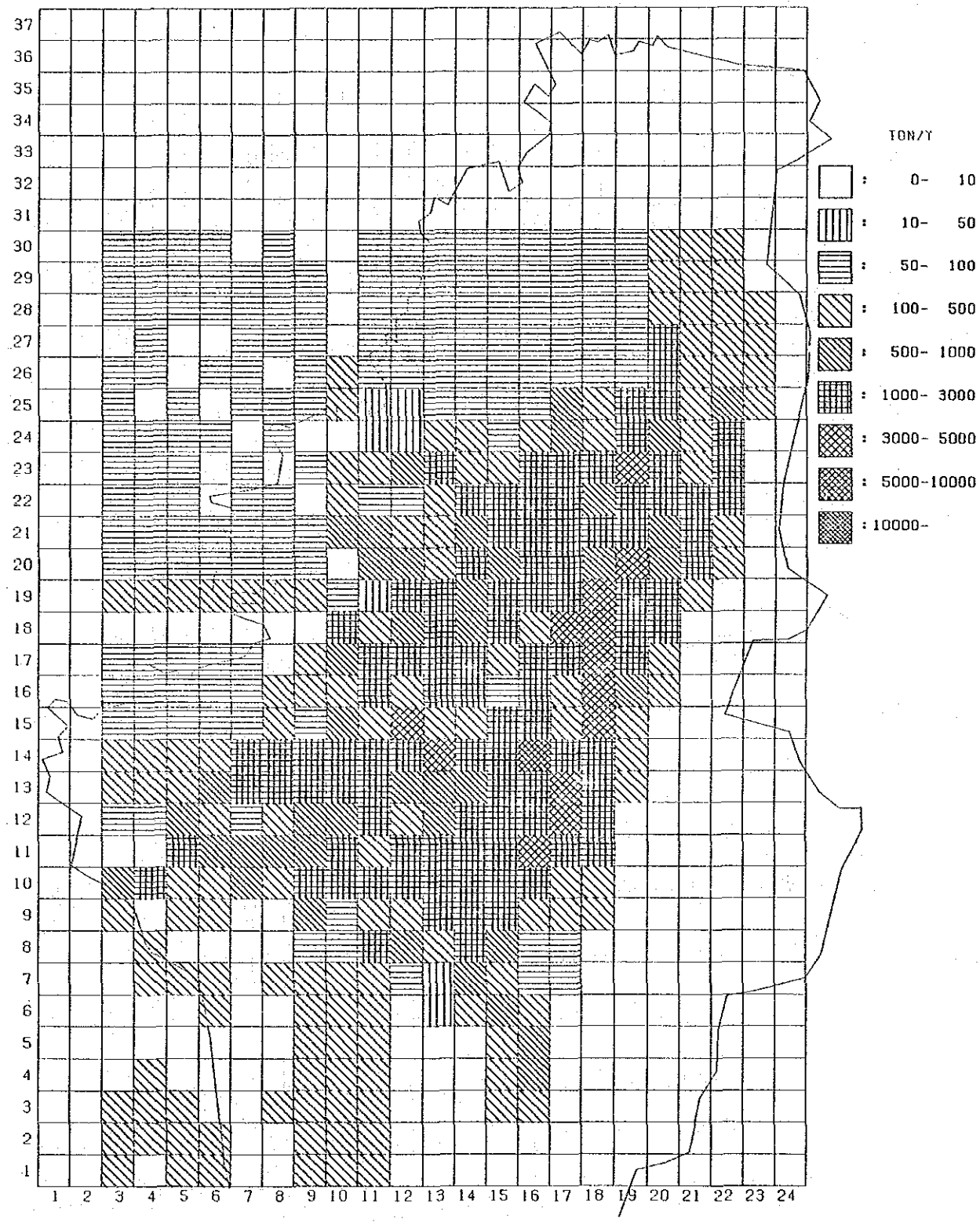


Fig. 3.7.4 Distribution of CO Emission from All Sources (Motor Vehicles) (Present)

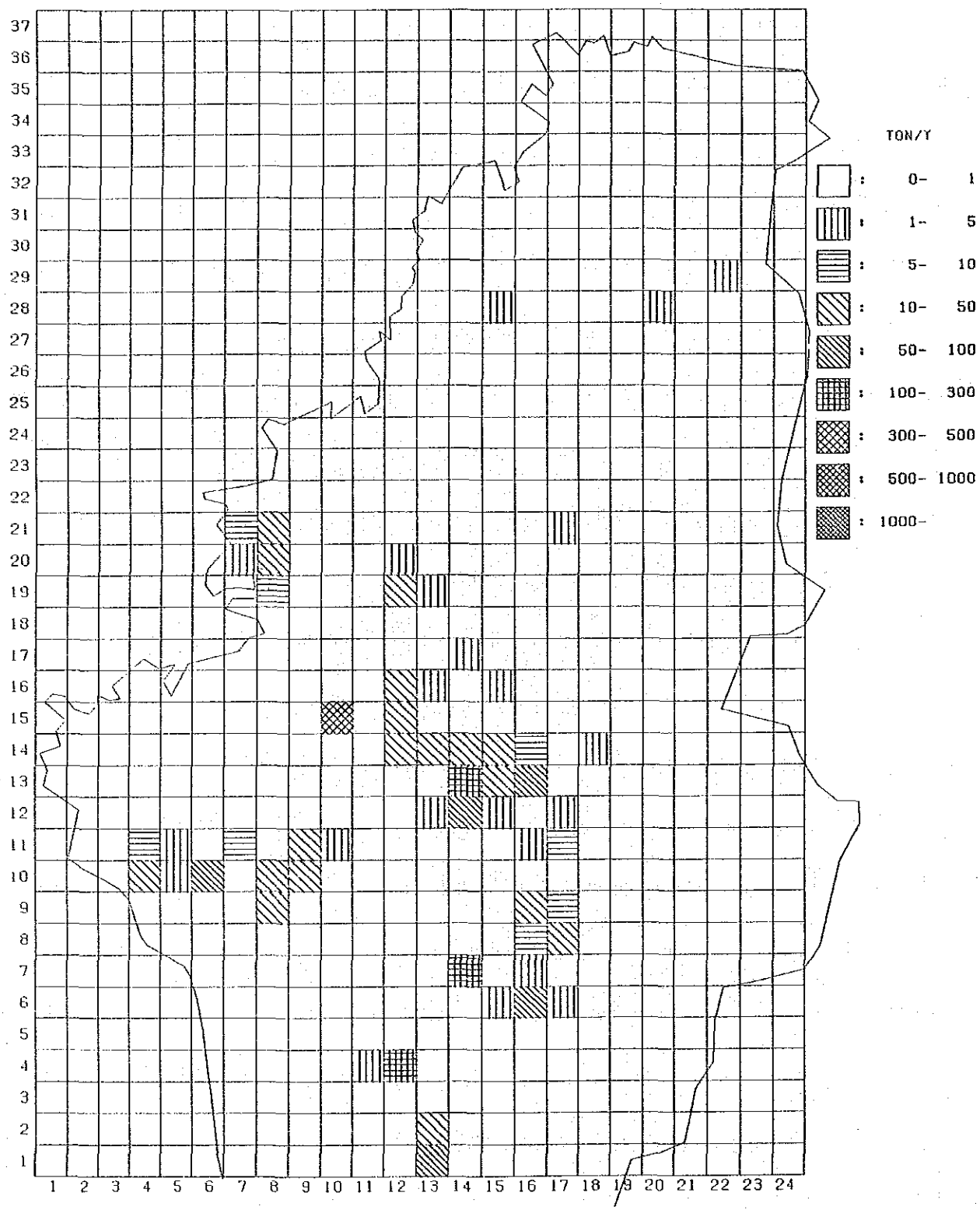


Fig. 3.7.5 Distribution of NOx Emission from Factories (Present)

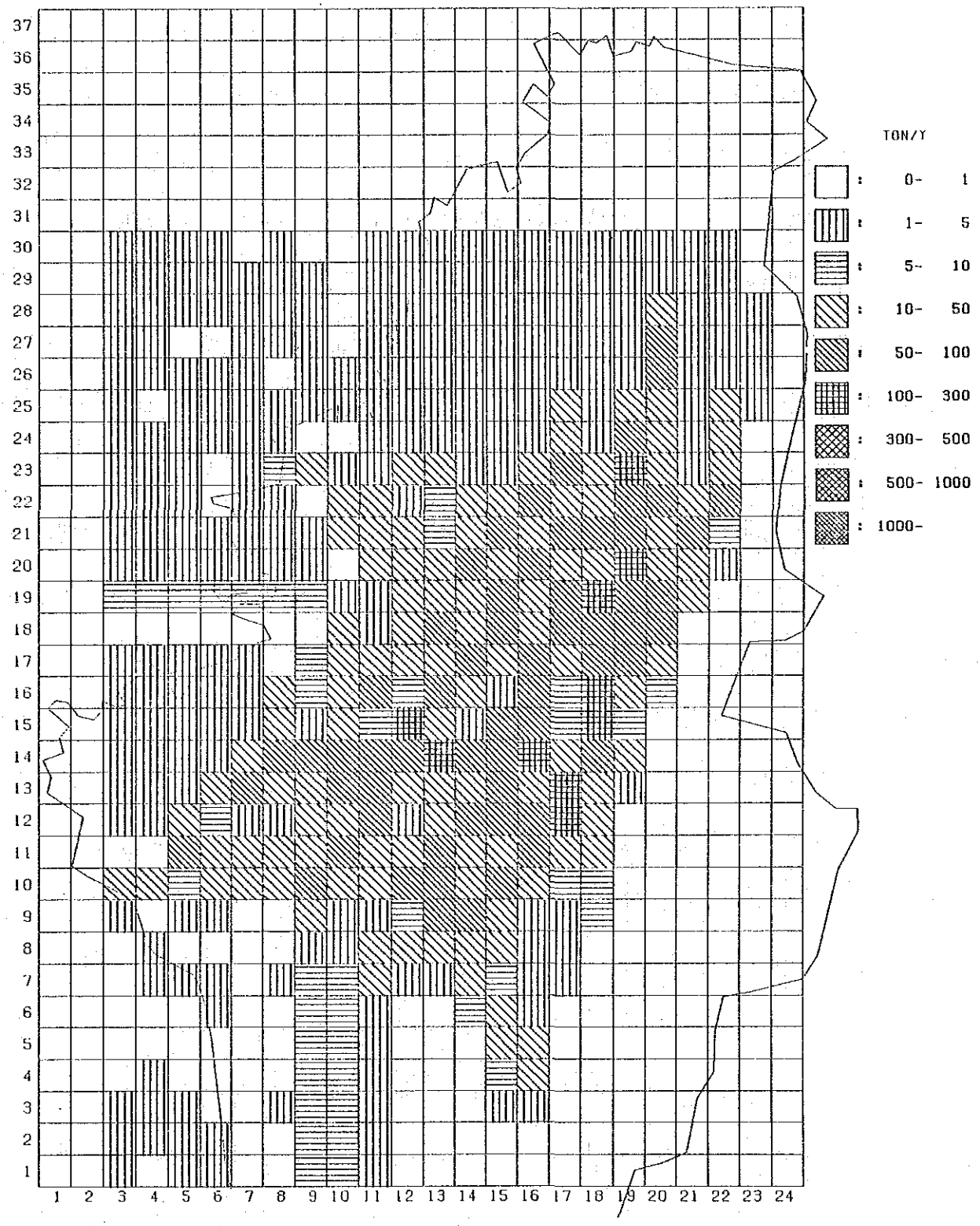


Fig. 3.7.6 Distribution of NOx Emission from Mobile Sources (Present)

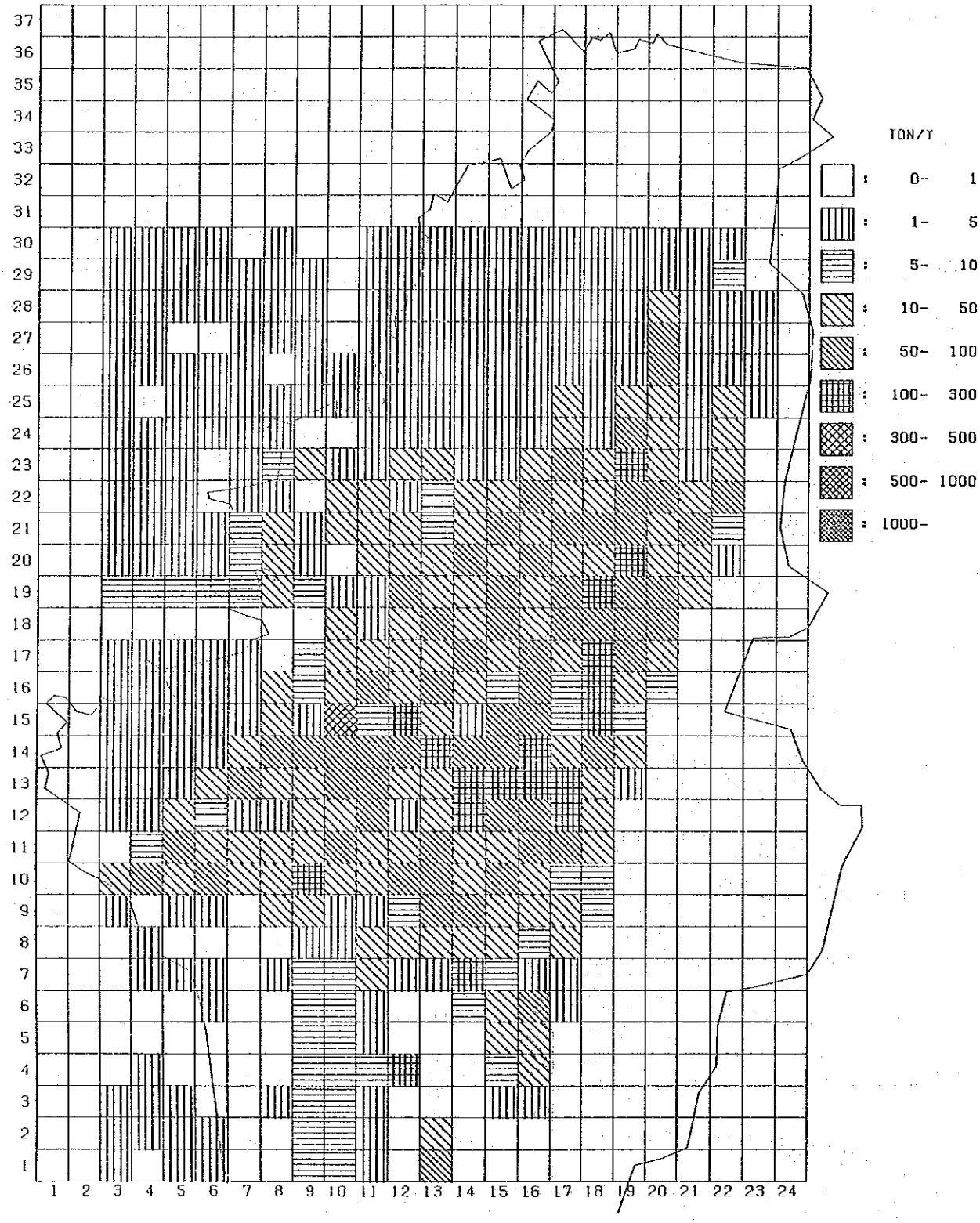


Fig. 3.7.7 Distribution of NOx Emission from All Sources (Present)

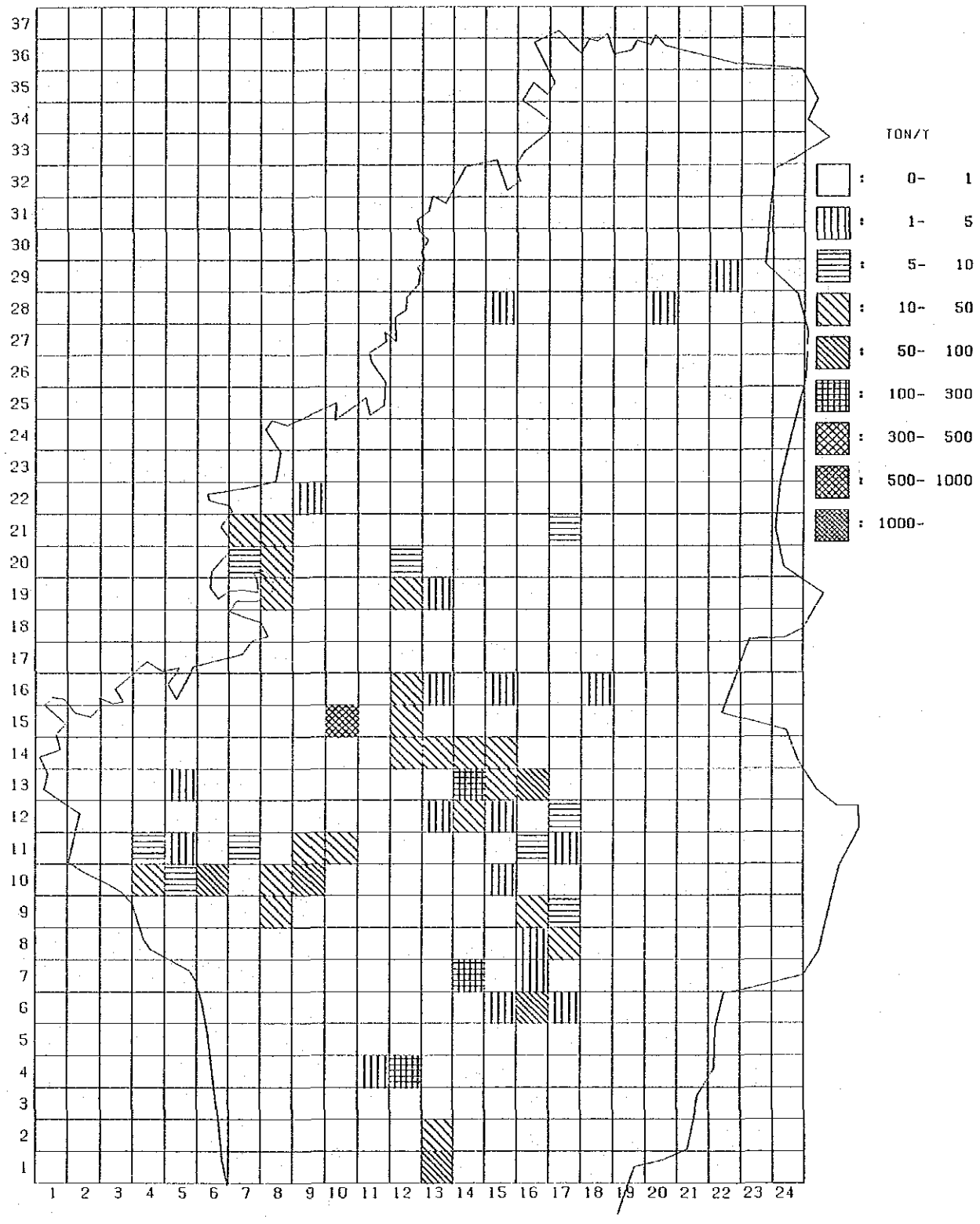


Fig. 3.7.8 Distribution of Dust Emission from All Sources (Factories) (Present)