FIGURE 35. CYCLE EMISSIONS DATA

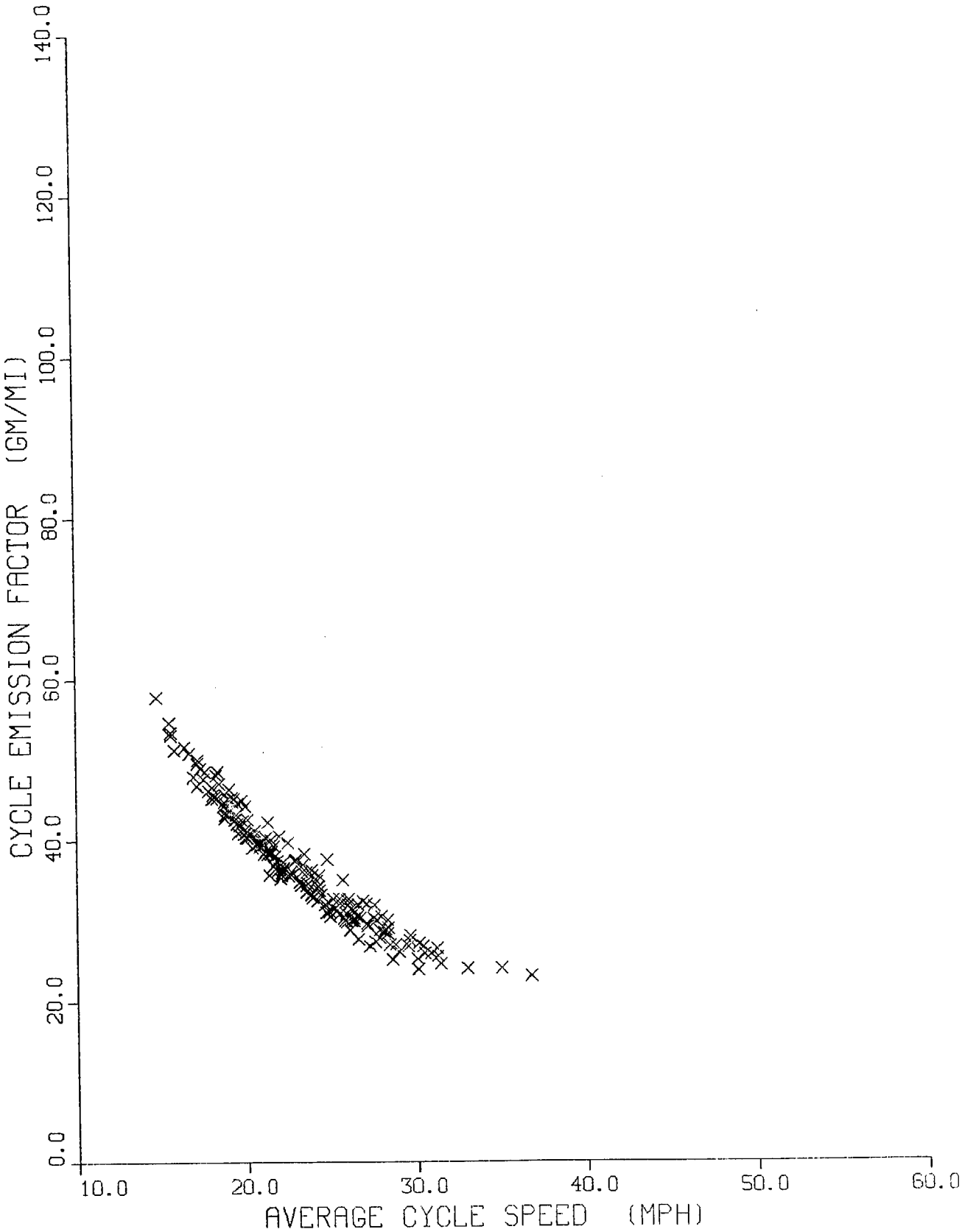
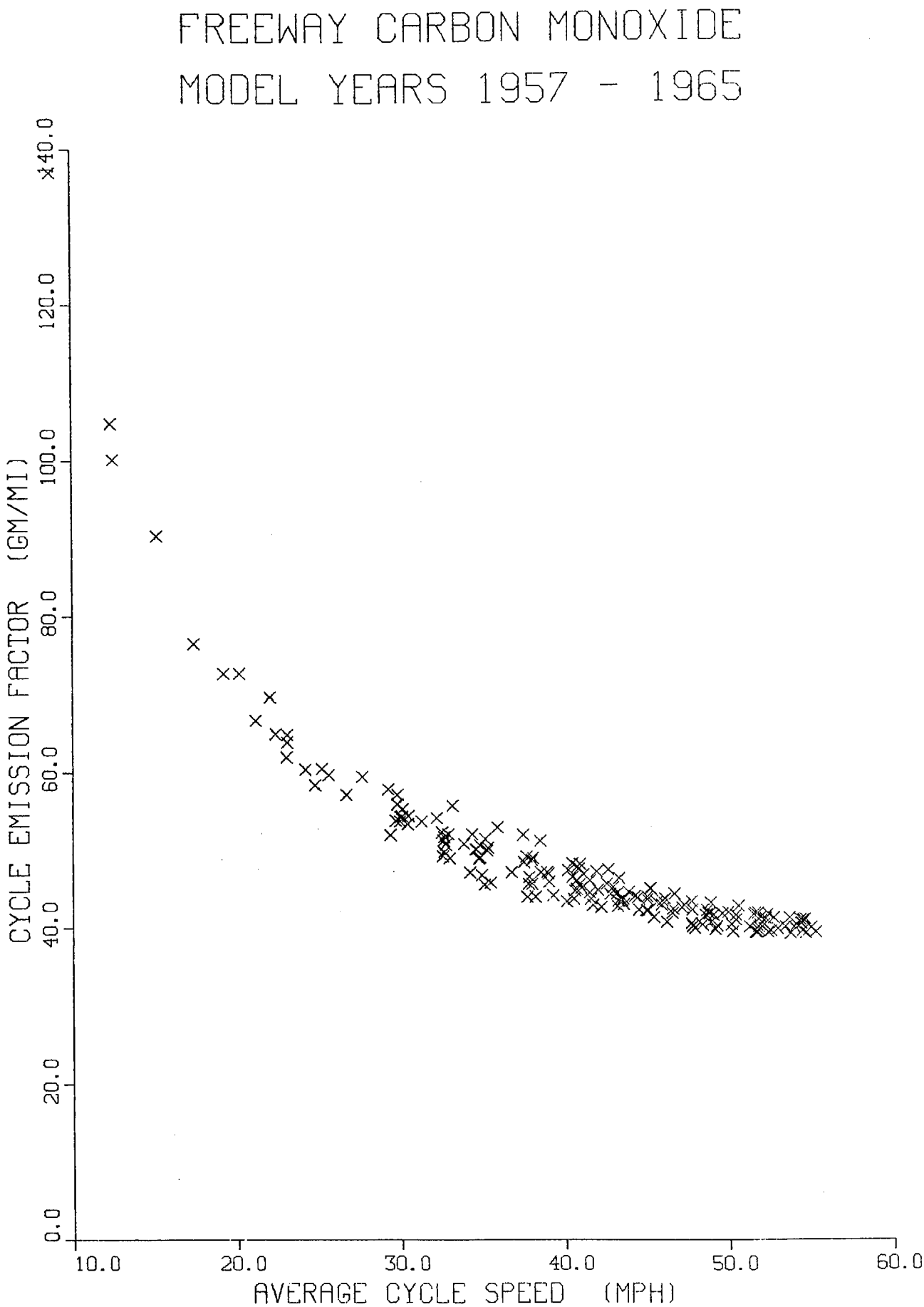


FIGURE 36. CYCLE EMISSIONS DATA



37. CYCLE EMISSIONS DATA

FREEWAY CARBON MONOXIDE

MODEL YEARS 1966 - 1967

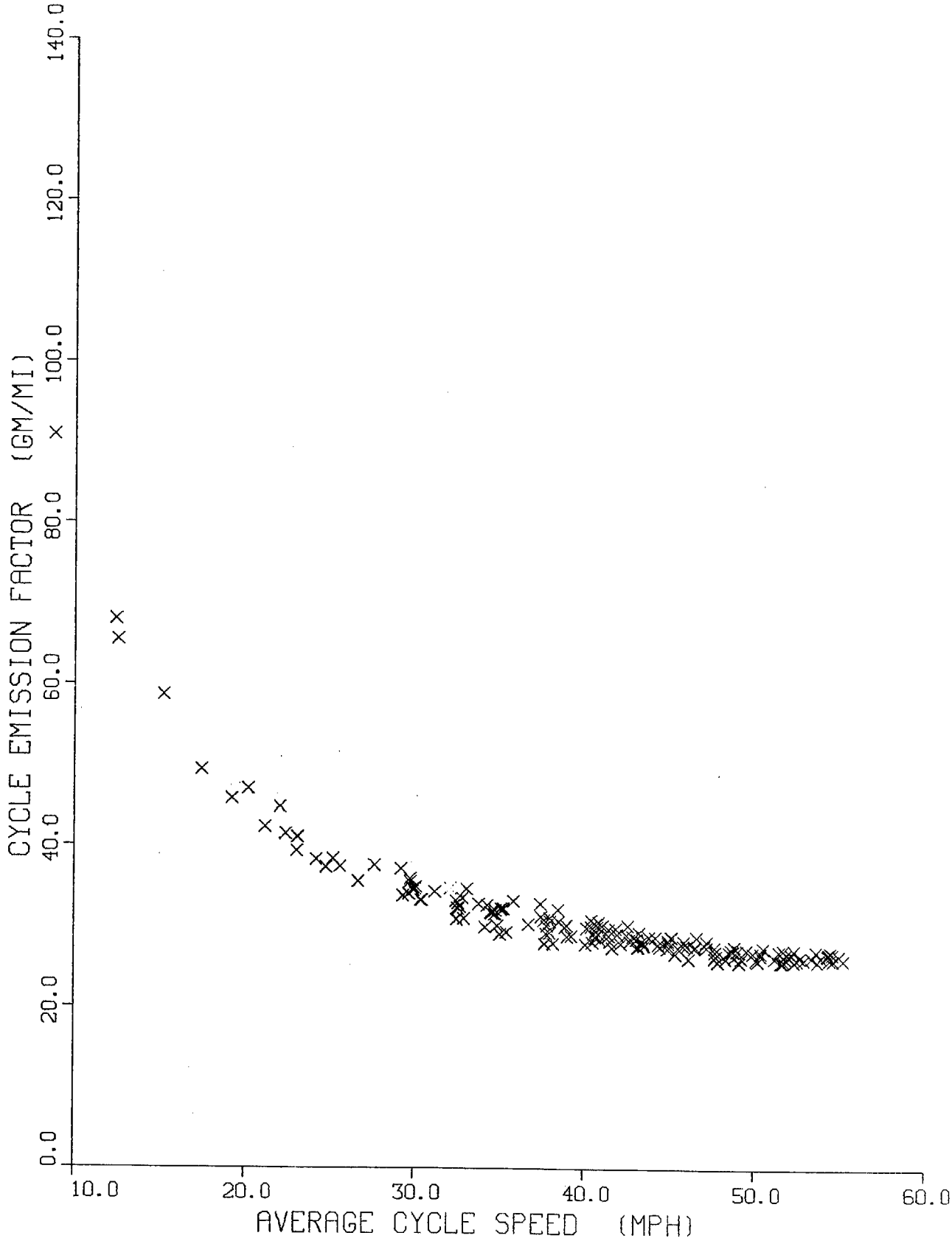


FIGURE 38. CYCLE EMISSIONS DATA

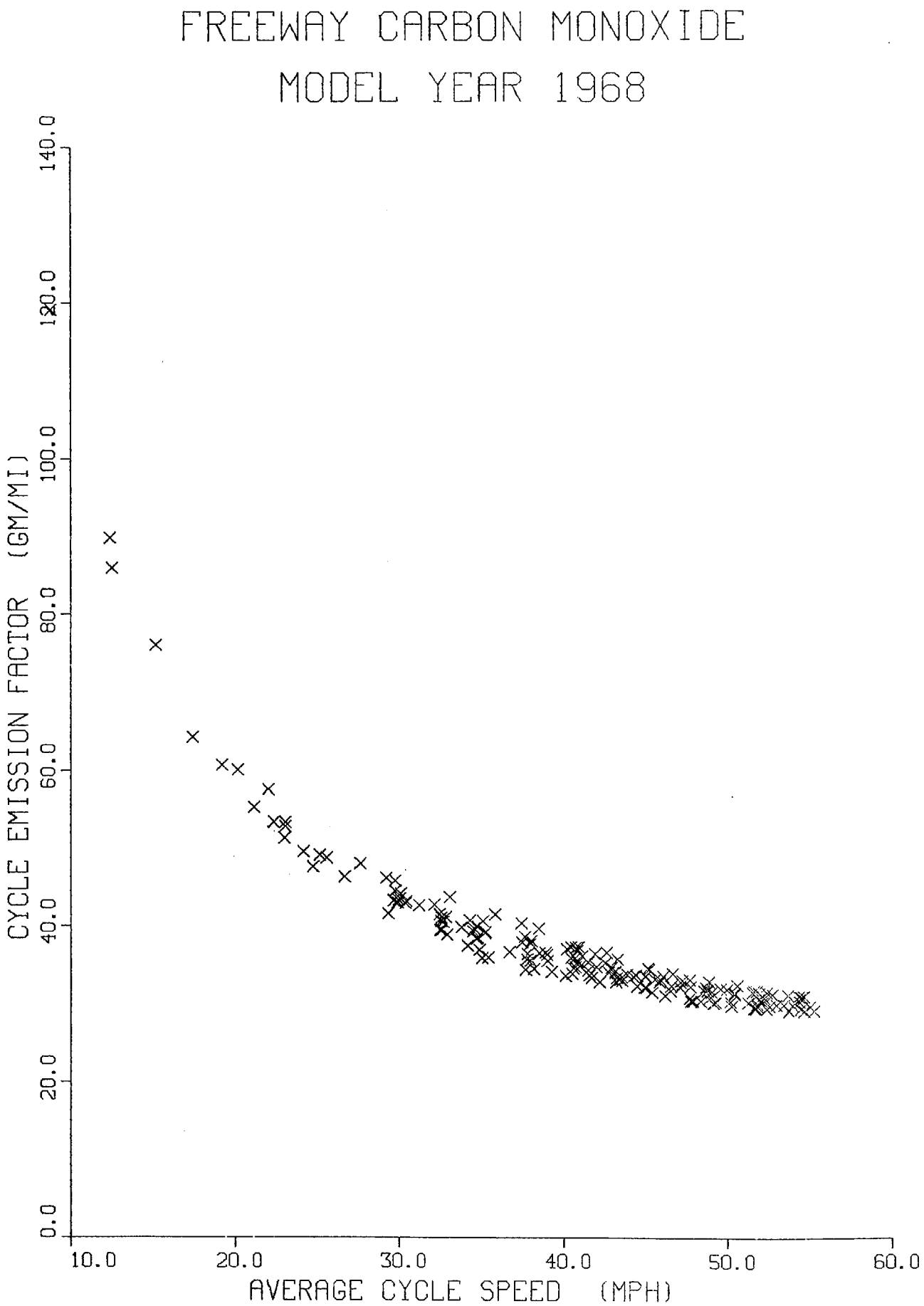


FIGURE 39. CYCLE EMISSIONS DATA

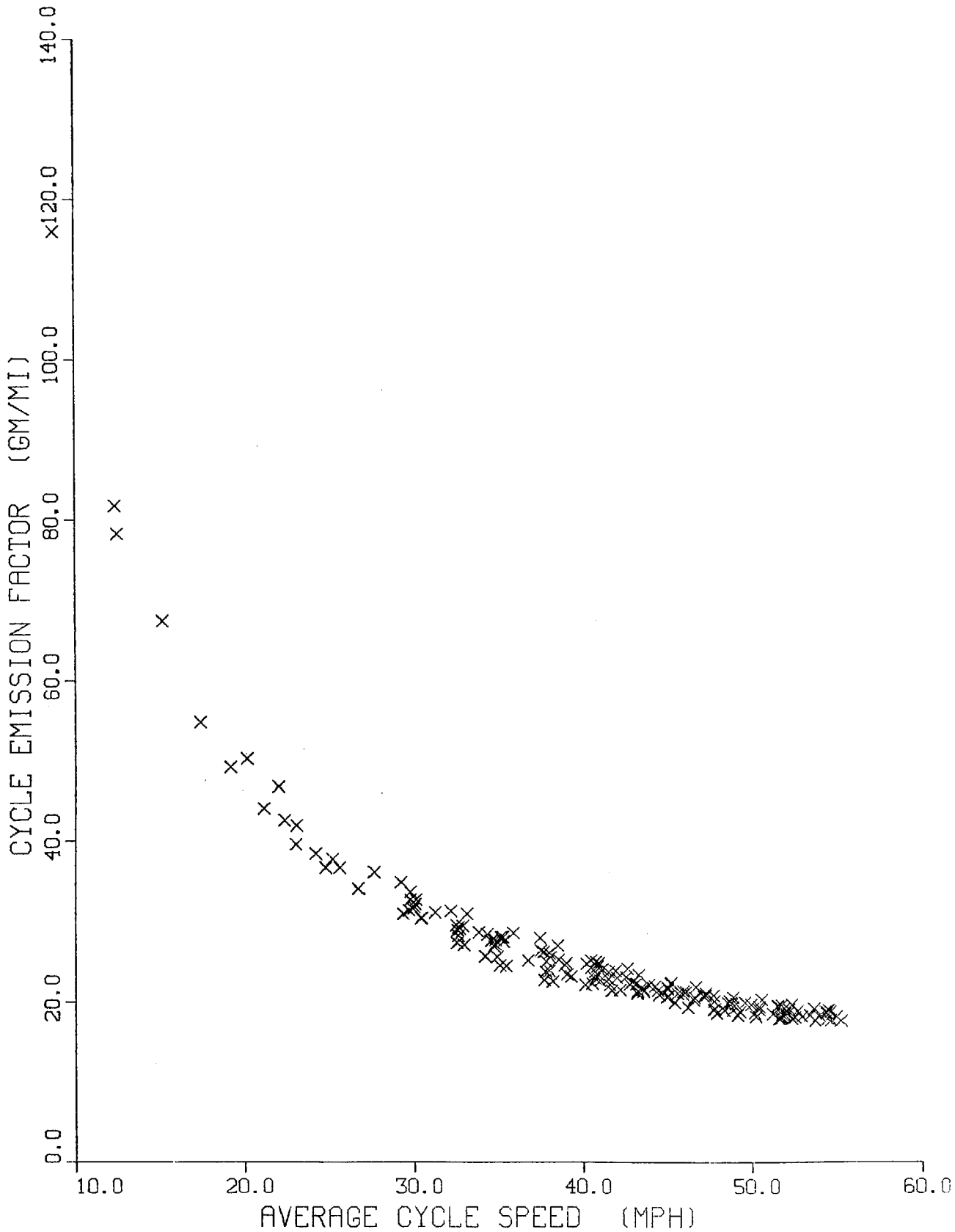


FIGURE 40. CYCLE EMISSIONS DATA

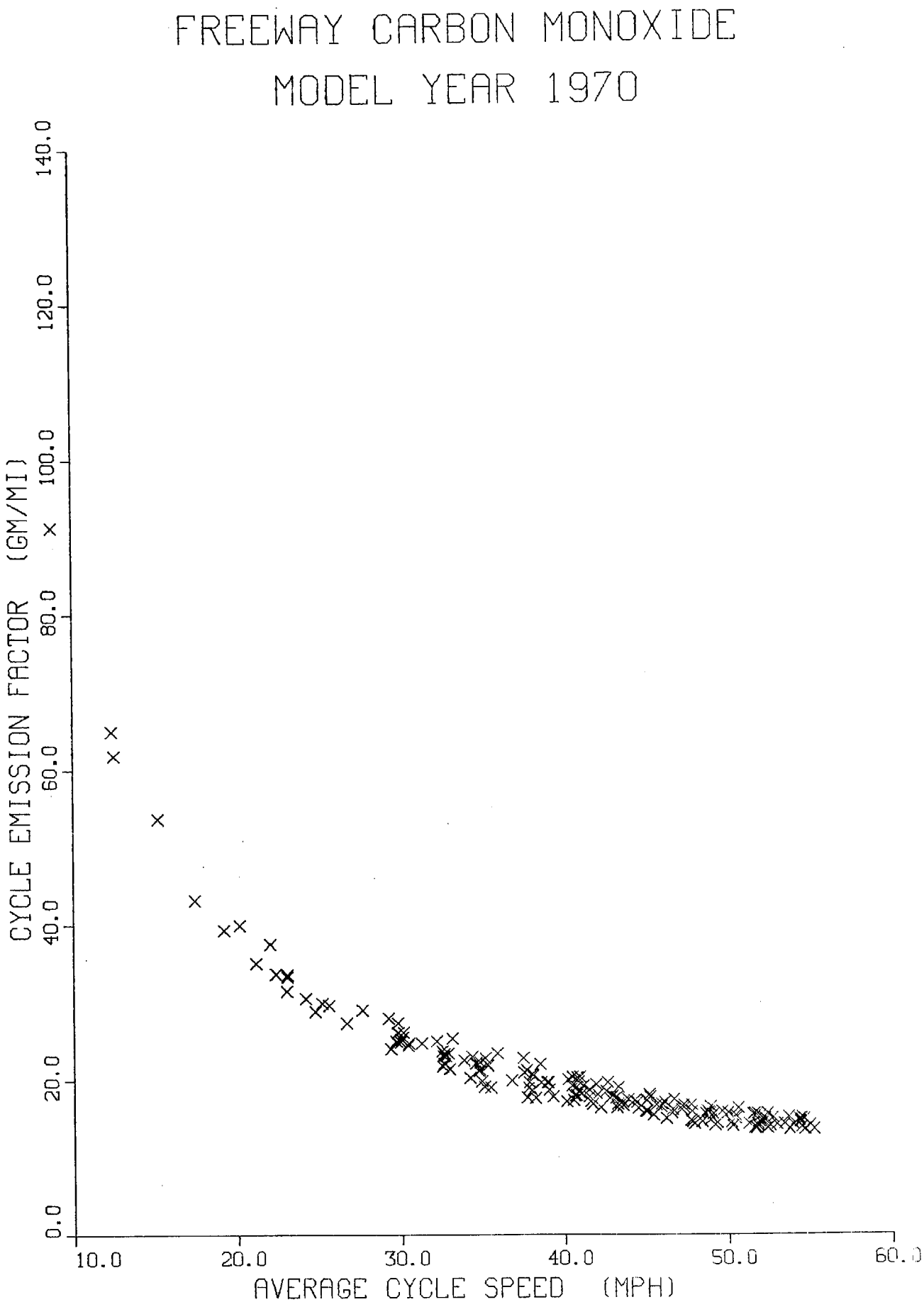


FIGURE 41. CYCLE EMISSIONS DATA

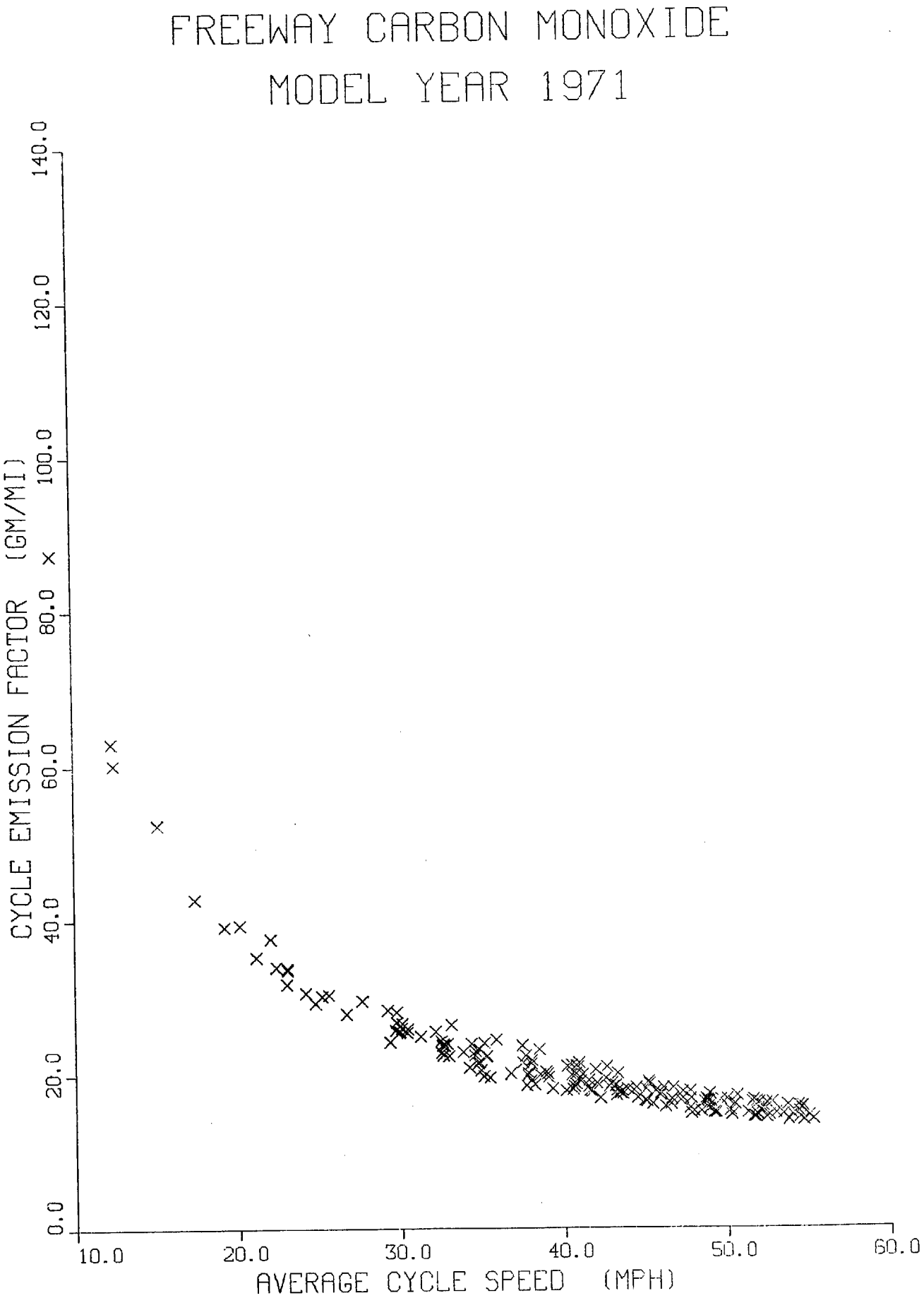


FIGURE 42. CYCLE EMISSIONS DATA

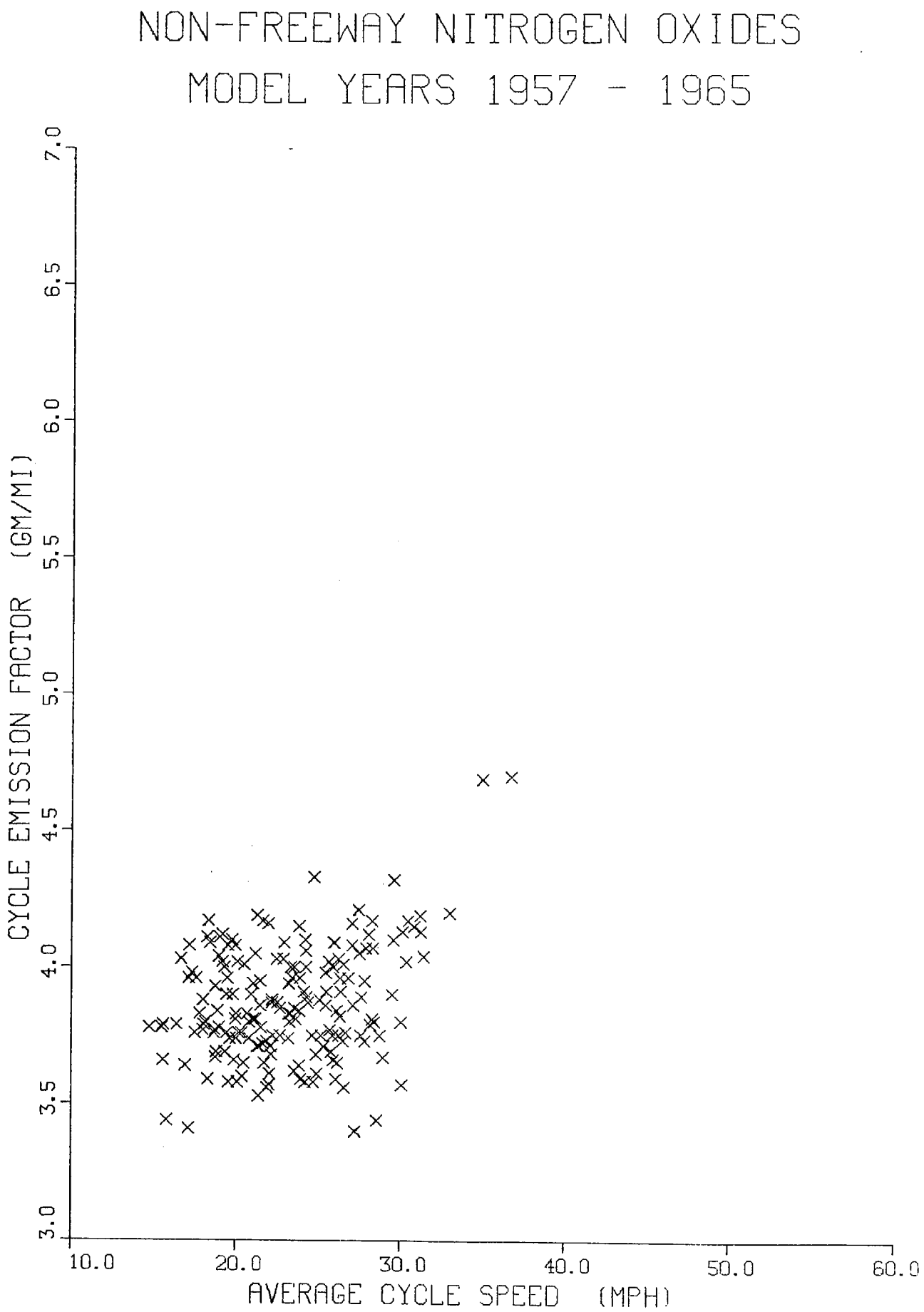


FIGURE 43. CYCLE EMISSIONS DATA

NON-FREEWAY NITROGEN OXIDES

MODEL YEARS 1966 - 1967

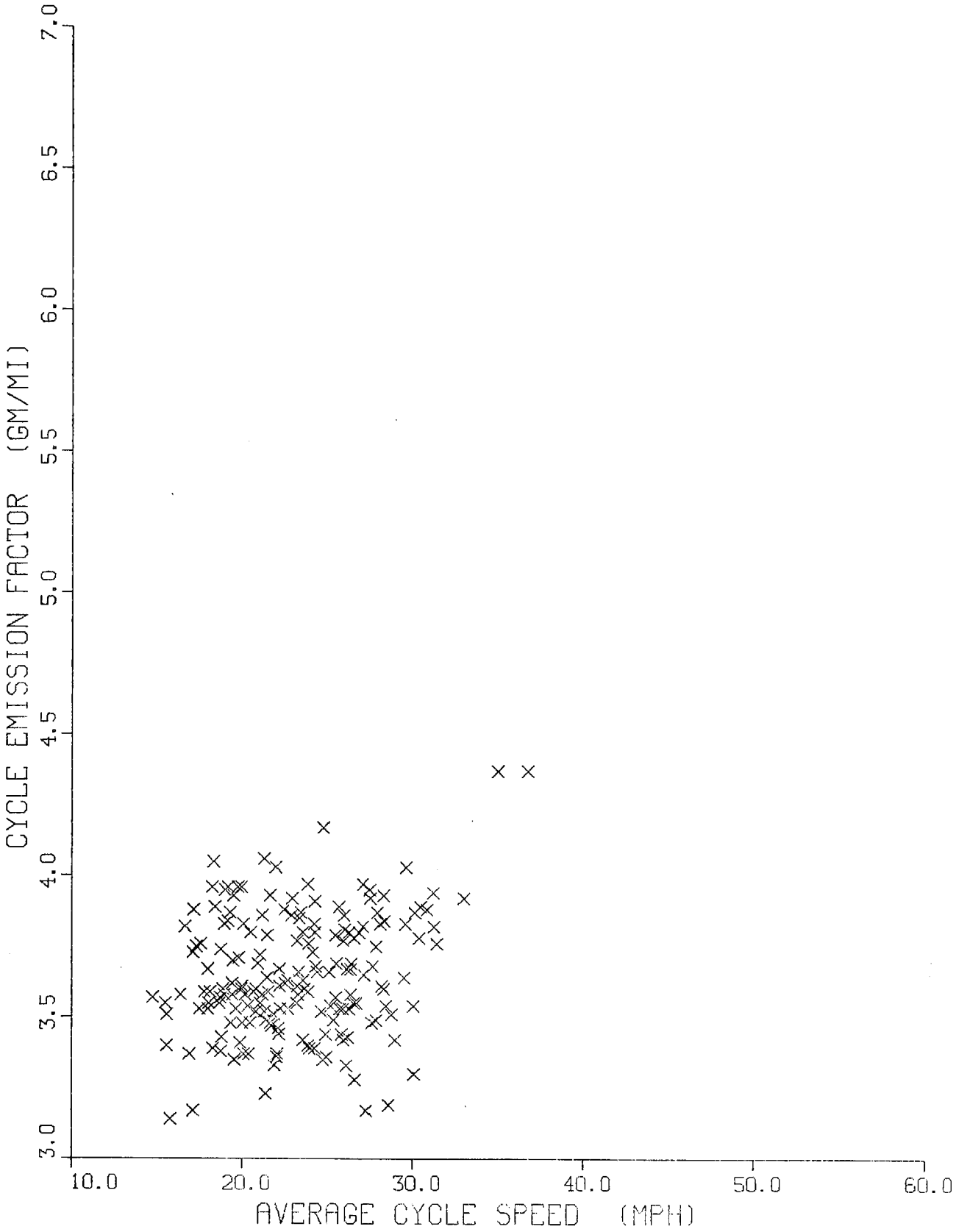


FIGURE 44. CYCLE EMISSIONS DATA

NON-FREEWAY NITROGEN OXIDES

MODEL YEAR 1968

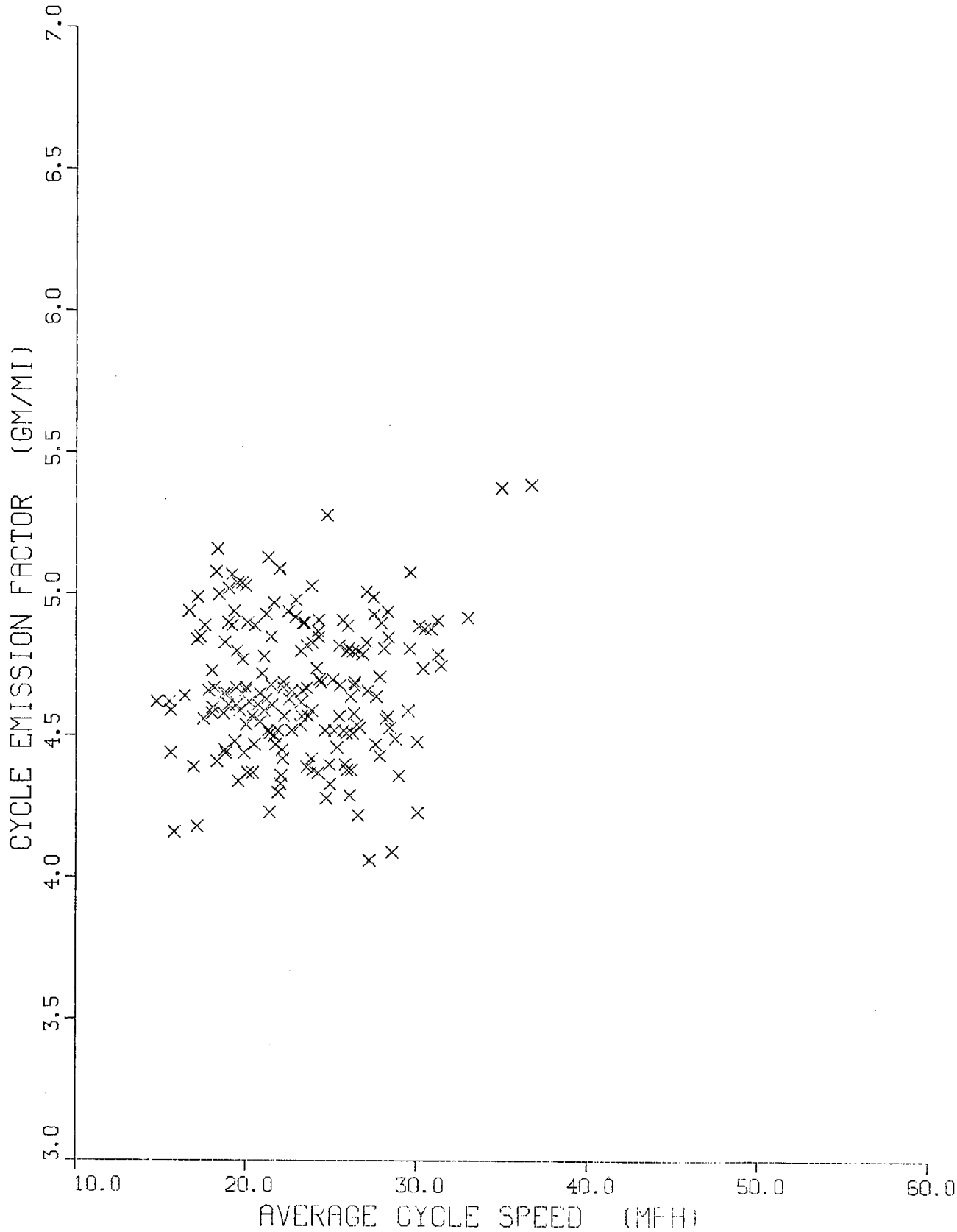


FIGURE 45. CYCLE EMISSIONS DATA

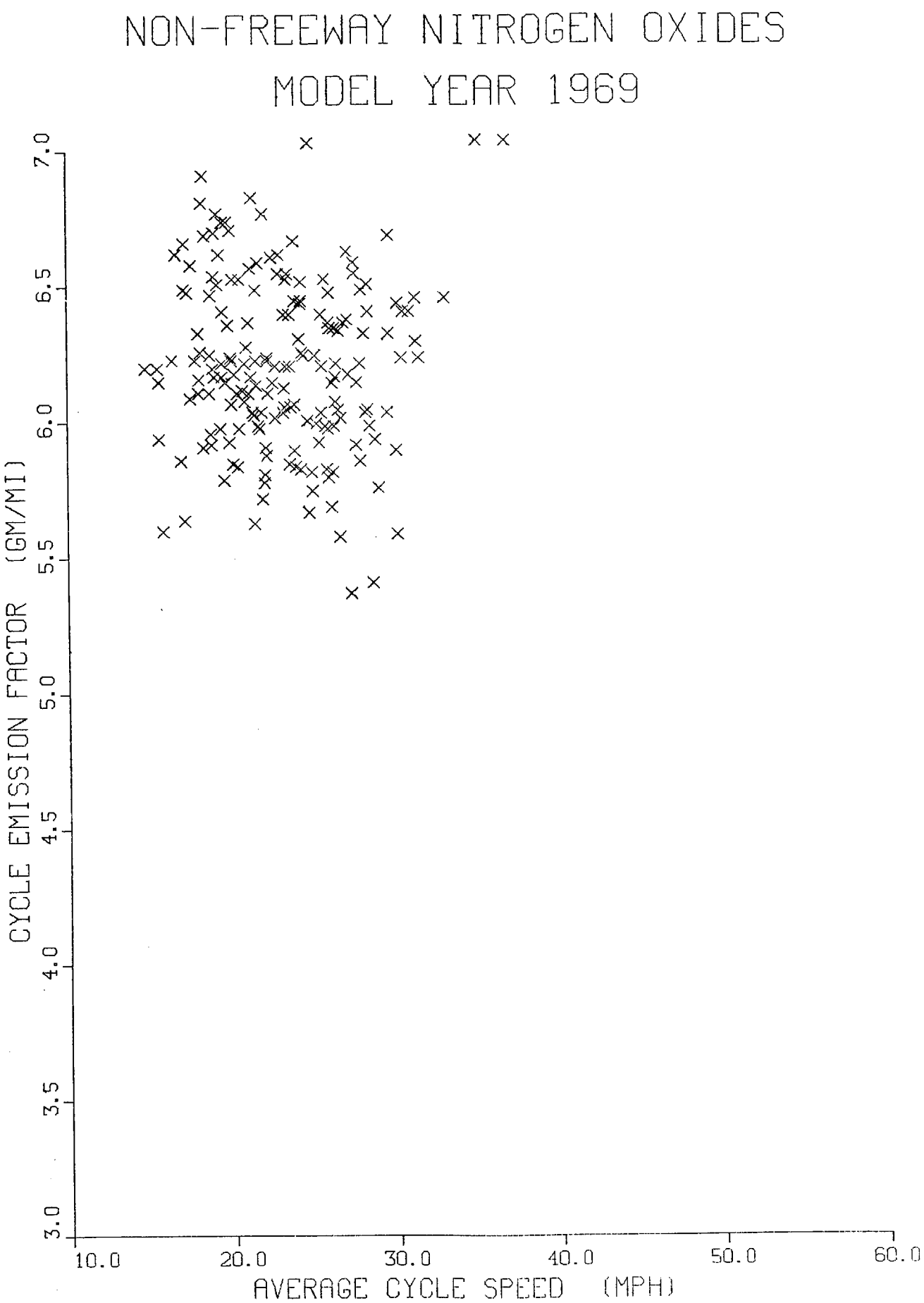


FIGURE 46. CYCLE EMISSIONS DATA

NON-FREEWAY NITROGEN OXIDES

MODEL YEAR 1970

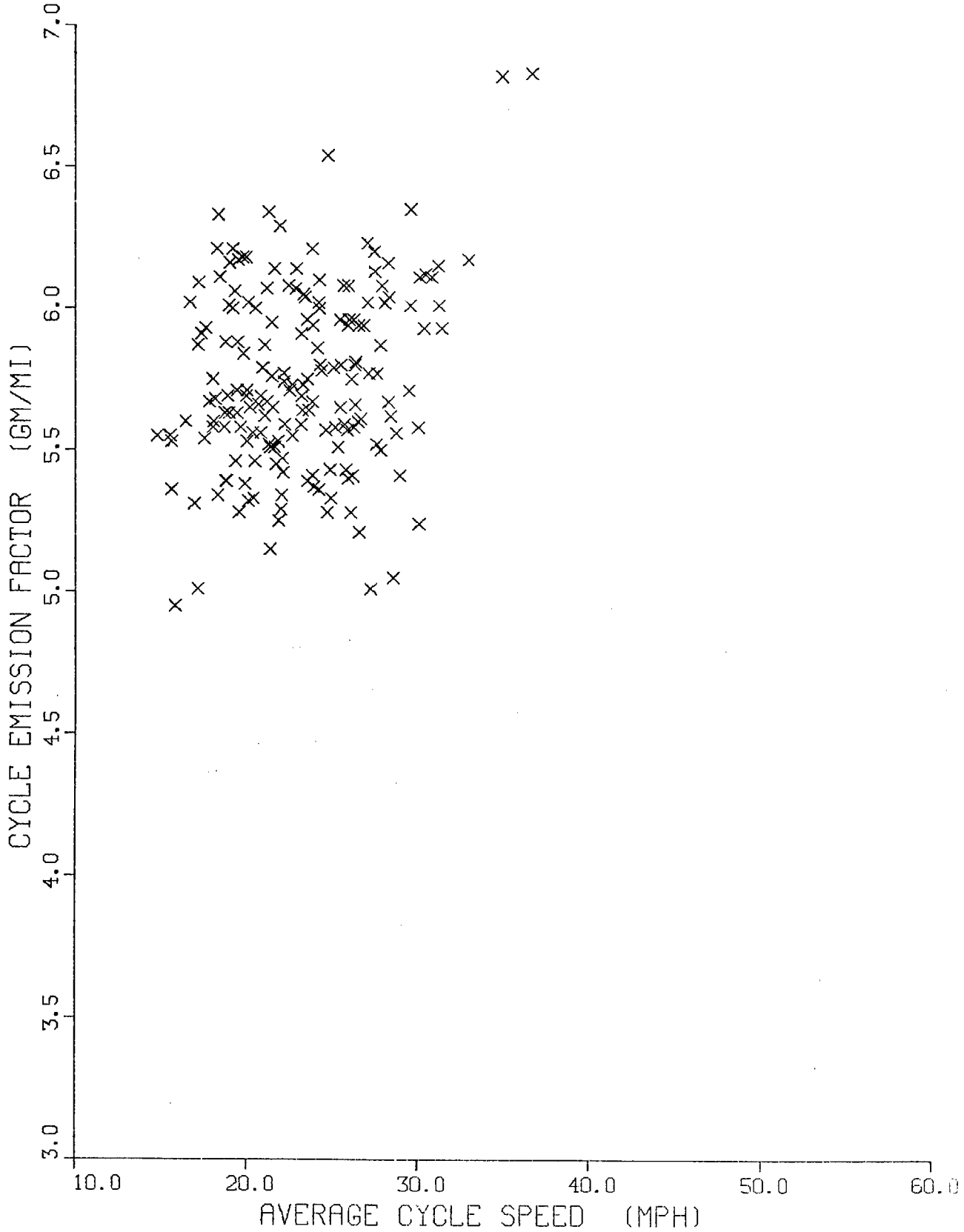


FIGURE 47. CYCLE EMISSIONS DATA

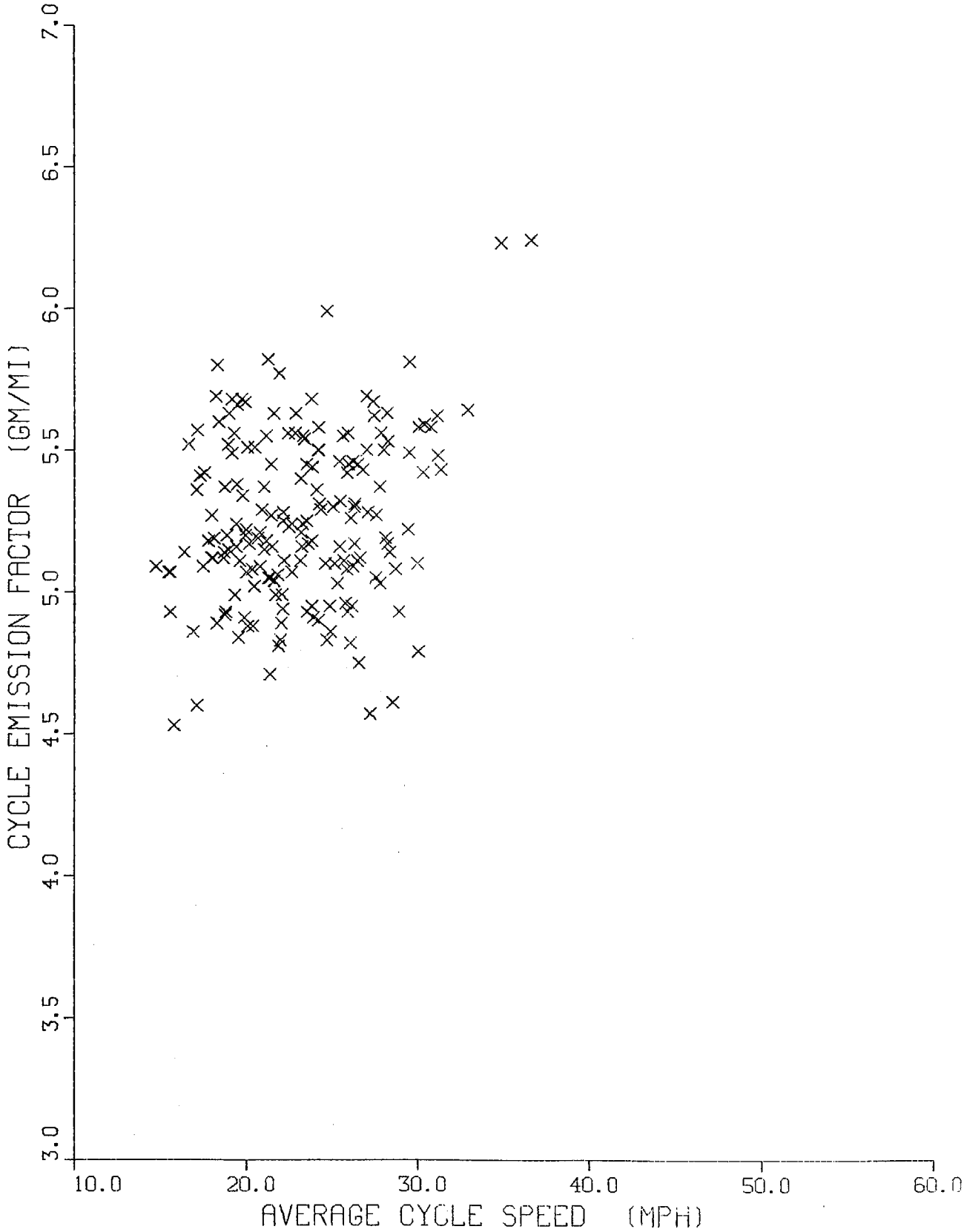


FIGURE 48. CYCLE EMISSIONS DATA

FREEWAY NITROGEN OXIDES

MODEL YEARS 1957 - 1965

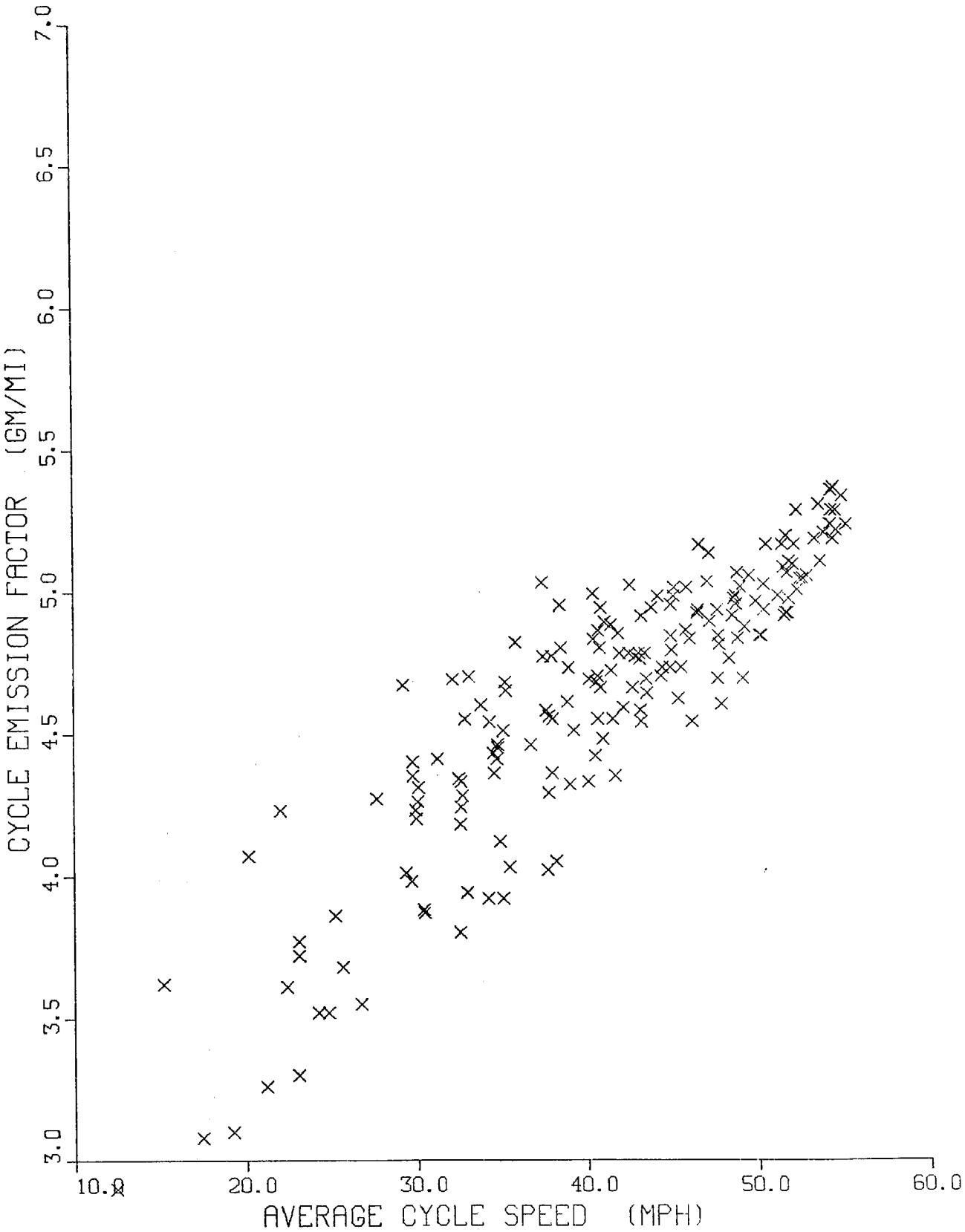


FIGURE 49. CYCLE EMISSIONS DATA

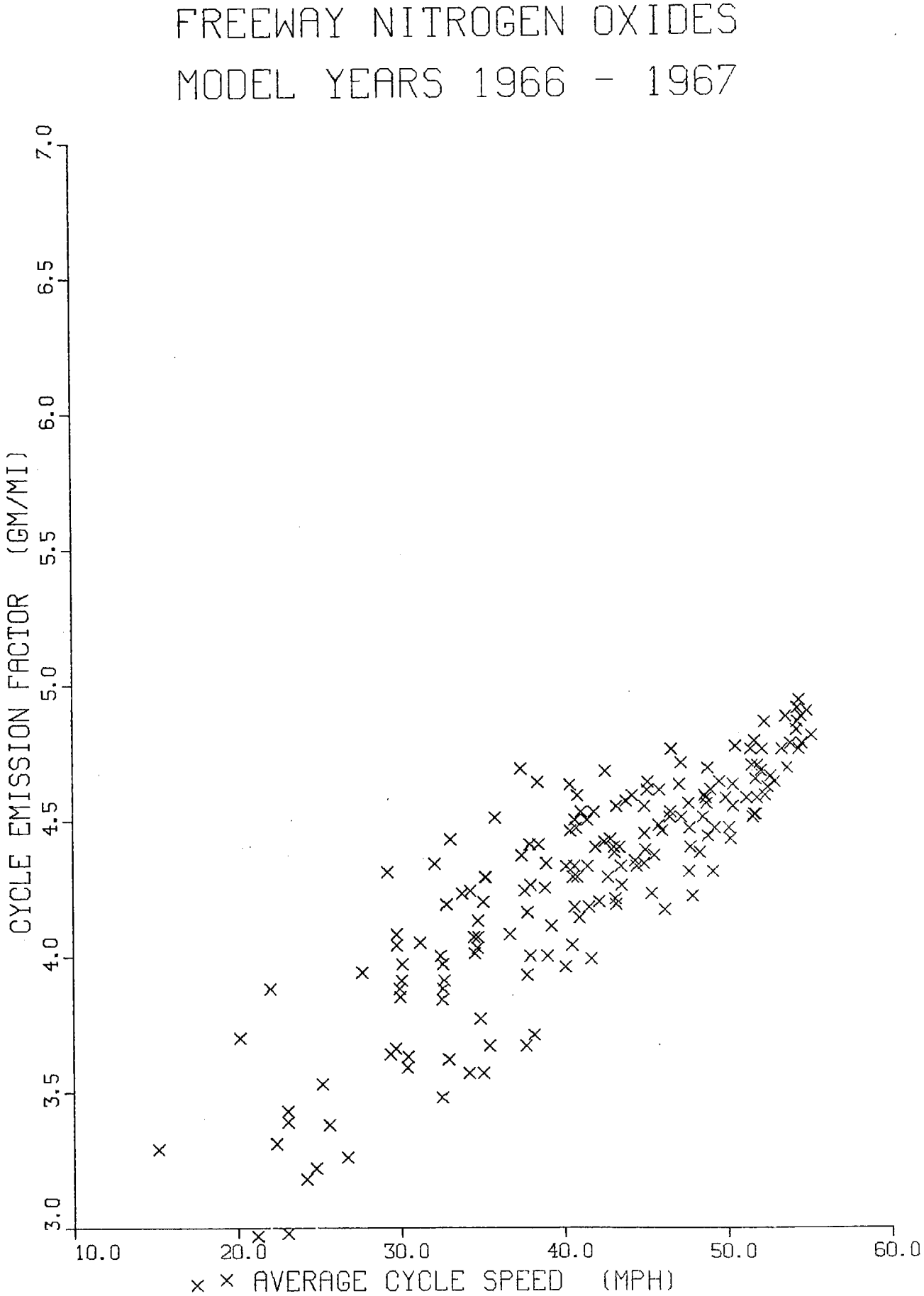


FIGURE 50. CYCLE EMISSIONS DATA

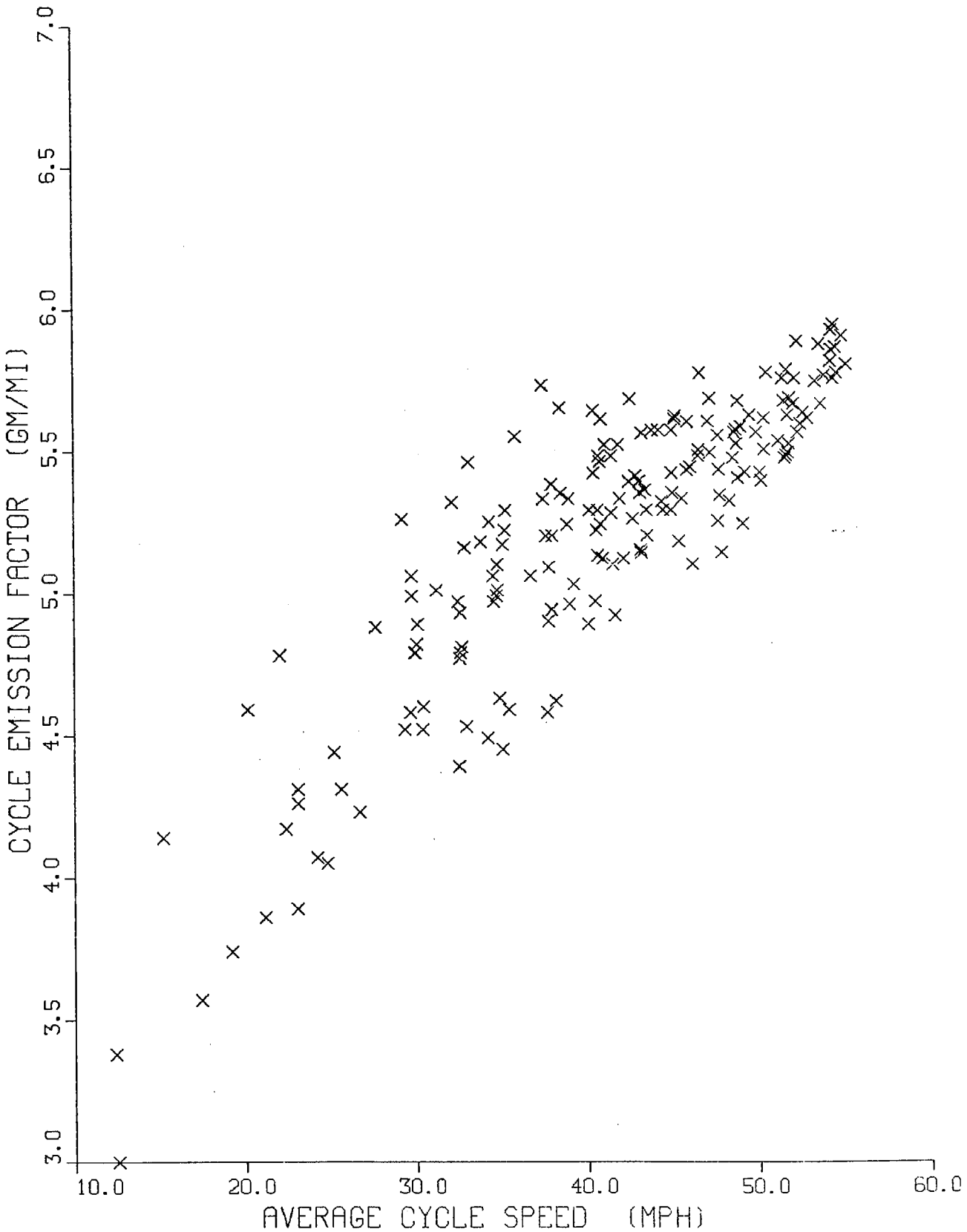


FIGURE 51. CYCLE EMISSIONS DATA

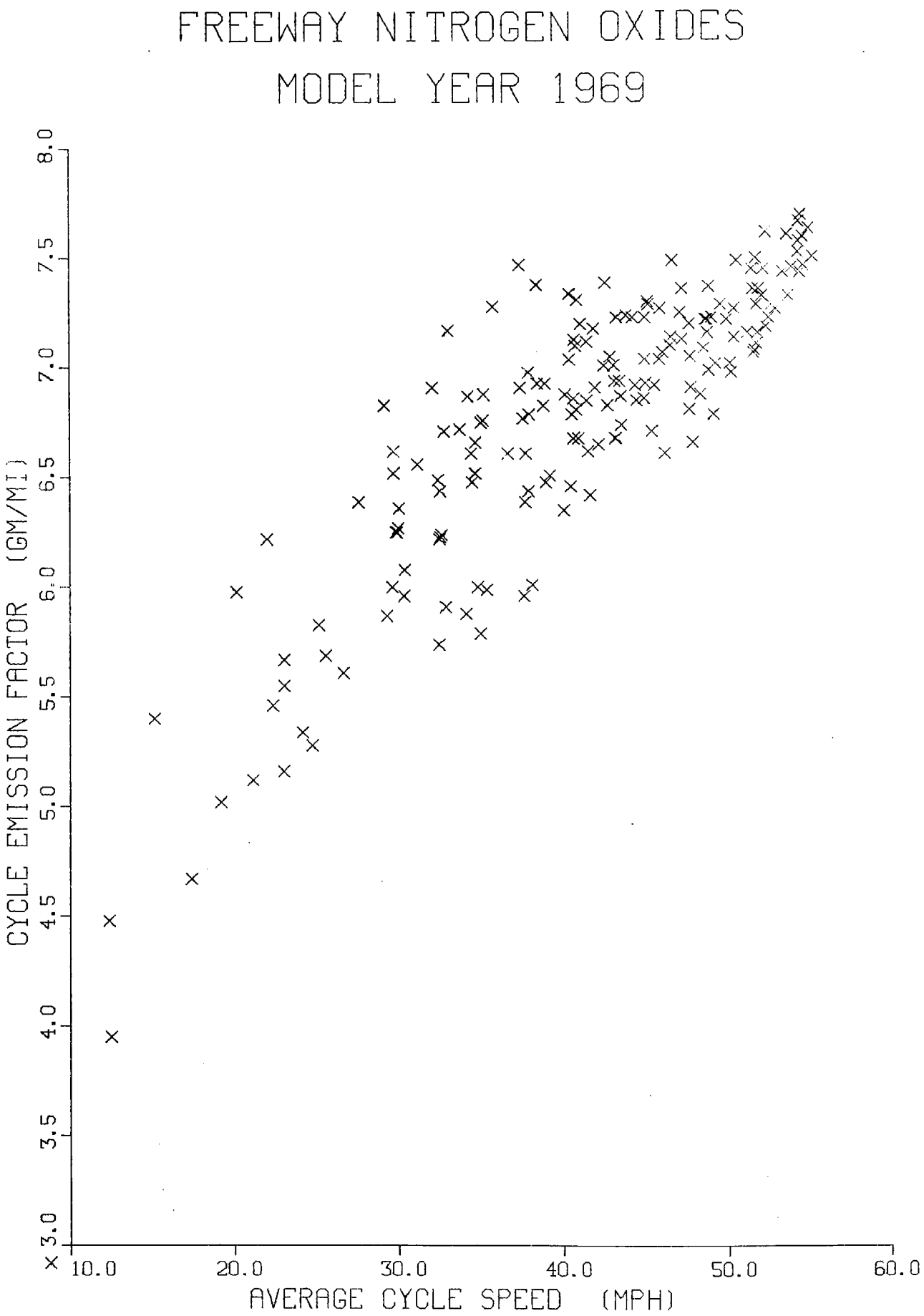


FIGURE 52. CYCLE EMISSIONS DATA

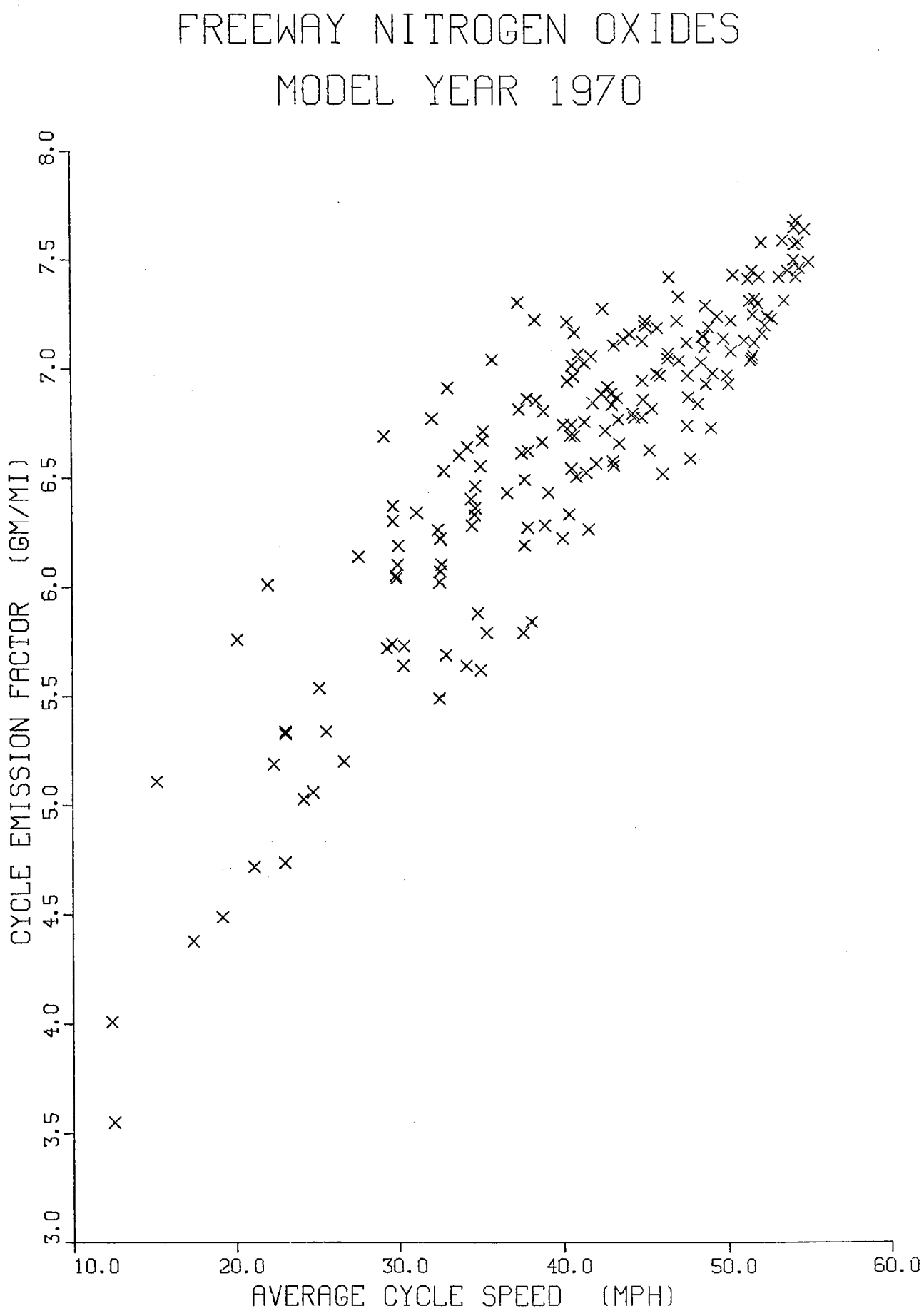
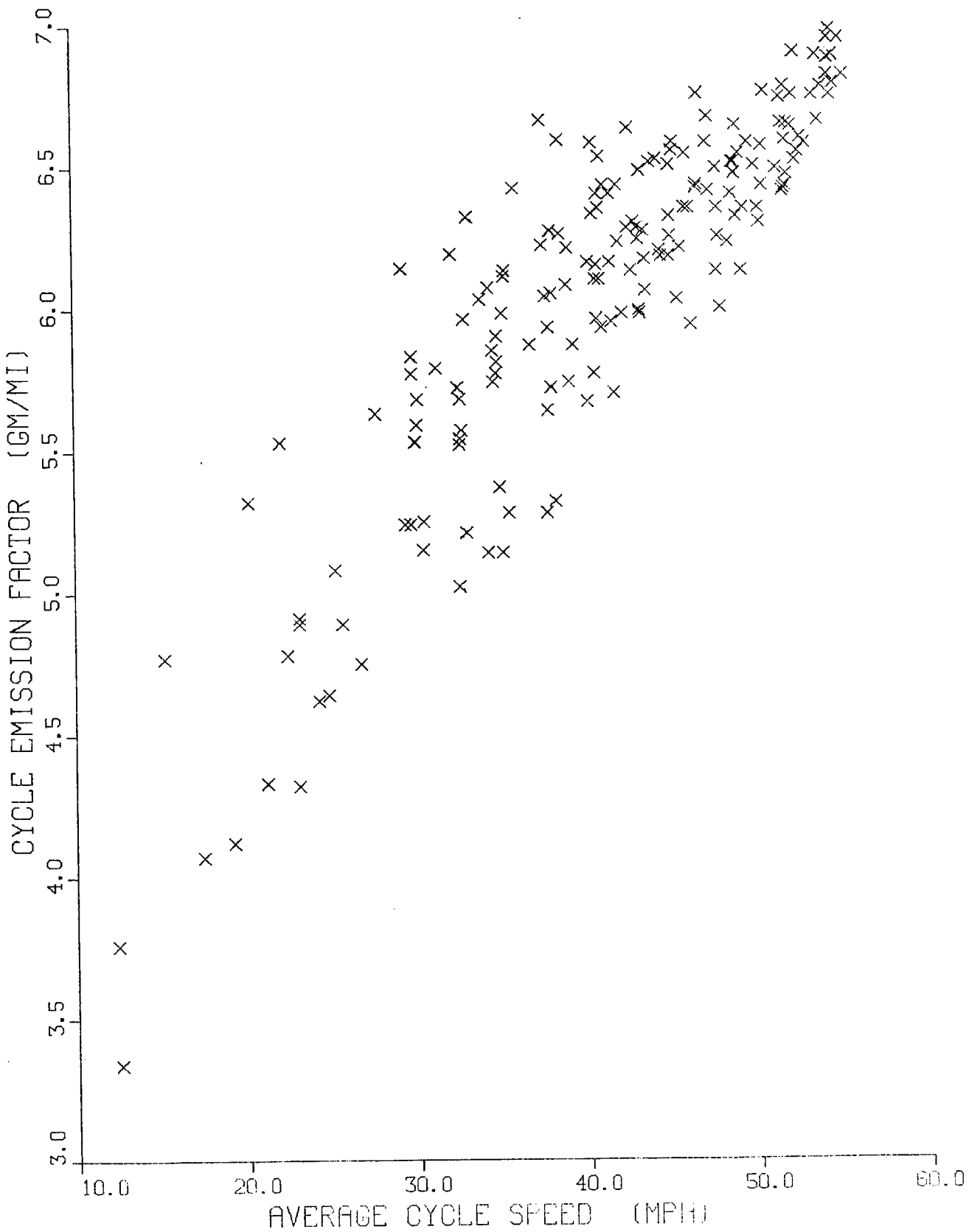


FIGURE 53. CYCLE EMISSIONS DATA



however, the spread of emissions is quite significant for all model years. Two possible explainations for this speed are:

- Non-representative driving cycles do have a significant effect on emissions at an average speed.
- The modal emissions model does not accurately model NO_x emissions.

Preliminary investigation into each of these explainations has led to no conclusive results. Pending further study, then, this data will be used to derive the speed correction factors.

Using the same polynomial forms for speed correction factors as in (3), coefficients were developed by regression analysis and the results are presented in Tables 17 and 18. These data were normalized to the FTP emissions at the FTP average speed (19.6 mph) in order to be consistant with previous methodologies (i.e., speed correction factor of 1. at 19.6 mph). The resultant speed correction curves are presented in Figures 54 through 71. Also indicated for comparison is the speed correction factors from (7). The same speed correction factors are assumed for both LDP and LDT. It should be noted that the modal emissions model contained only data for model years up to and including 1971. Although data for 1975 model year vehicles are currently being analyzed, these data were not available for this study. It was thus assumed that the speed correction factors developed for 1971 vehicles also apply to model years 1972 through 1975.

1975 LDV Mobile Source Emissions Inventory

The 1975 LDV Mobile Source Emissions Inventory is presented in Tables 19 through 28 and Figures 72 through 95. All emissions are tabulated by county for seasonal and annual average weekday traffic conditions and is broken down into non-freeway, freeway and total traffic. Tables 19 through 23 present a hydrocarbons inventory consisting of exhaust hydrocarbons, evaporative hydrocarbons, crankcase hydrocarbons, and total hydrocarbons. The emissions inventory for carbon monoxide, nitrogen oxides, sulfur dioxide, particulates and total hydrocarbons is presented in Tables 24 through 28. A spatial distribution of the eight pollutants is presented in the maps of Figures 72 through 95. These figures show annual average daily emissions from non-freeway, freeway and total LDV traffic.

Table 17. Coefficients for Light Duty Vehicle Speed Correction Factors for the SCAB - Freeway*

MODEL YEARS	HC**			CO**			NOX**	
	A	B	C	A	B	C	A	B
57-65	0.857	-5.33×10^{-2}	4.89×10^{-4}	0.860	-5.34×10^{-2}	4.87×10^{-4}	0.728	1.39×10^{-2}
66-67	0.806	-4.94×10^{-2}	4.23×10^{-4}	0.907	-5.69×10^{-2}	5.43×10^{-4}	0.733	1.36×10^{-2}
1968	0.969	-5.93×10^{-2}	5.03×10^{-4}	0.949	-5.85×10^{-2}	5.15×10^{-4}	0.775	1.15×10^{-2}
1969	0.946	-5.83×10^{-2}	5.12×10^{-4}	1.25	-7.61×10^{-2}	6.32×10^{-4}	0.775	1.15×10^{-2}
1970	0.765	-4.76×10^{-2}	4.38×10^{-4}	1.23	-7.46×10^{-2}	6.06×10^{-4}	0.698	1.54×10^{-2}
1971	0.793	-4.91×10^{-2}	4.40×10^{-4}	1.15	-6.93×10^{-2}	5.51×10^{-4}	0.679	1.64×10^{-2}

* Equations should not be extended beyond the range of the data (8.74 to 55.27 miles per hour)

** $VIPS = e^{(A+BS+CS^2)}$

*** $VIPS = A+BS$

Table 18. Coefficients for Light Duty Vehicle Speed Correction Factors for the SCAB - Non-Freeway*

MODEL YEARS	HC**			CO**			NOX**	
		B	C	A	B	C	A	B
57-65	1.20	-8.01×10^{-2}	9.56×10^{-4}	1.18	-7.85×10^{-2}	9.28×10^{-4}	0.912	0.447×10^{-2}
66-67	1.03	-6.72×10^{-2}	7.37×10^{-4}	1.34	-8.14×10^{-2}	1.17×10^{-3}	0.927	0.372×10^{-2}
1968	1.22	-7.89×10^{-2}	8.44×10^{-4}	1.27	-8.42×10^{-2}	9.82×10^{-4}	0.973	1.36×10^{-3}
1969	1.20	-7.79×10^{-2}	8.64×10^{-4}	1.64	-0.108	1.23×10^{-3}	1.00	2.49×10^{-5}
1970	1.12	-7.46×10^{-2}	9.01×10^{-4}	1.64	-0.107	1.19×10^{-3}	0.914	4.39×10^{-3}
1971	1.12	-7.43×10^{-2}	8.69×10^{-4}	1.49	-9.61×10^{-2}	1.03×10^{-3}	0.912	4.51×10^{-3}

* Equations should not be extended beyond the usage of the data (14.75 to 36.77 miles per hour)

** $VIPS = e^{(A+BS+CS^2)}$

*** $VIPS = A+BS$

FIGURE 54.

HYDROCARBONS SPEED FACTORS

MODEL YEARS 1957 - 1965

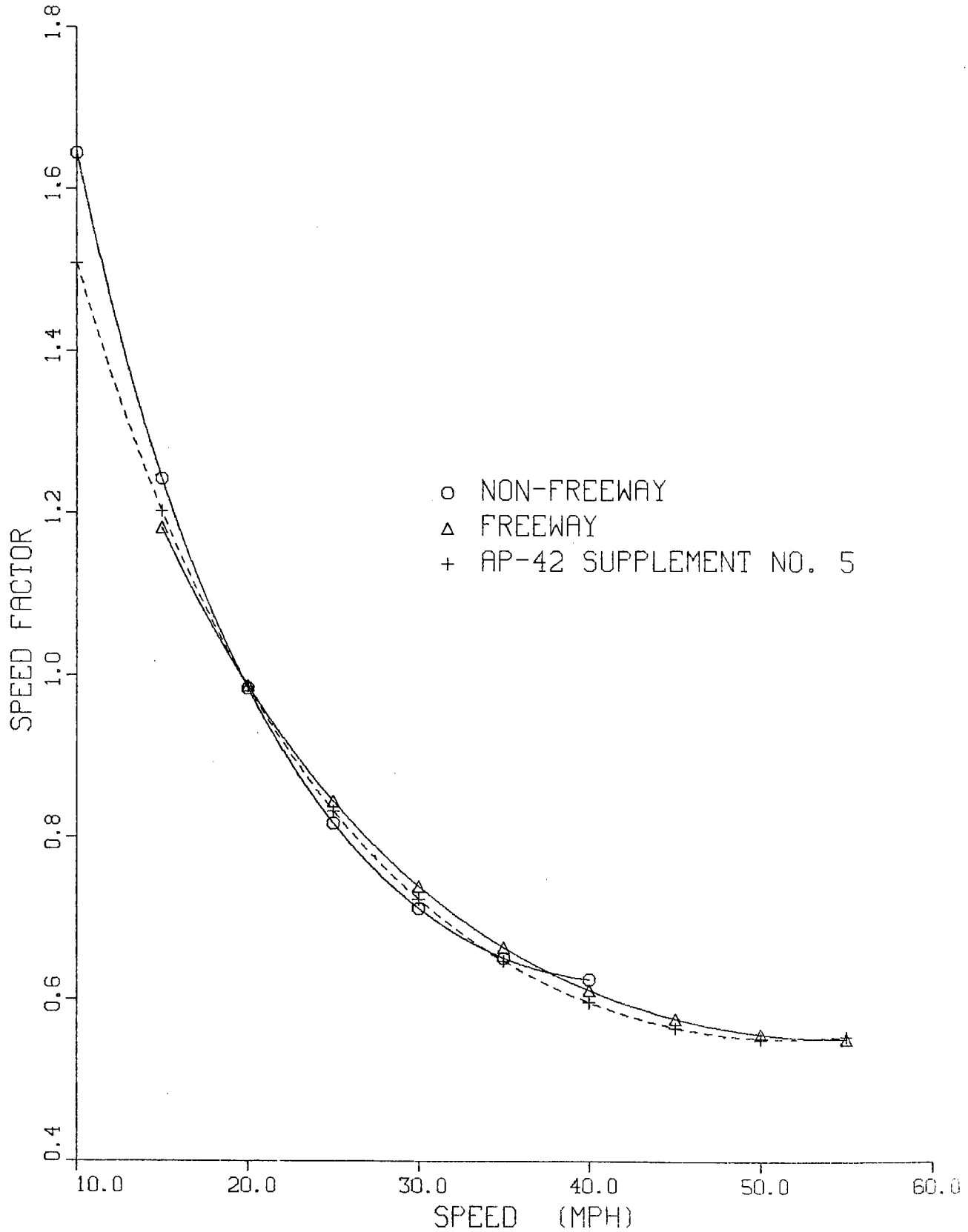


FIGURE 55.

HYDROCARBONS SPEED FACTORS

MODEL YEARS 1966 - 1967

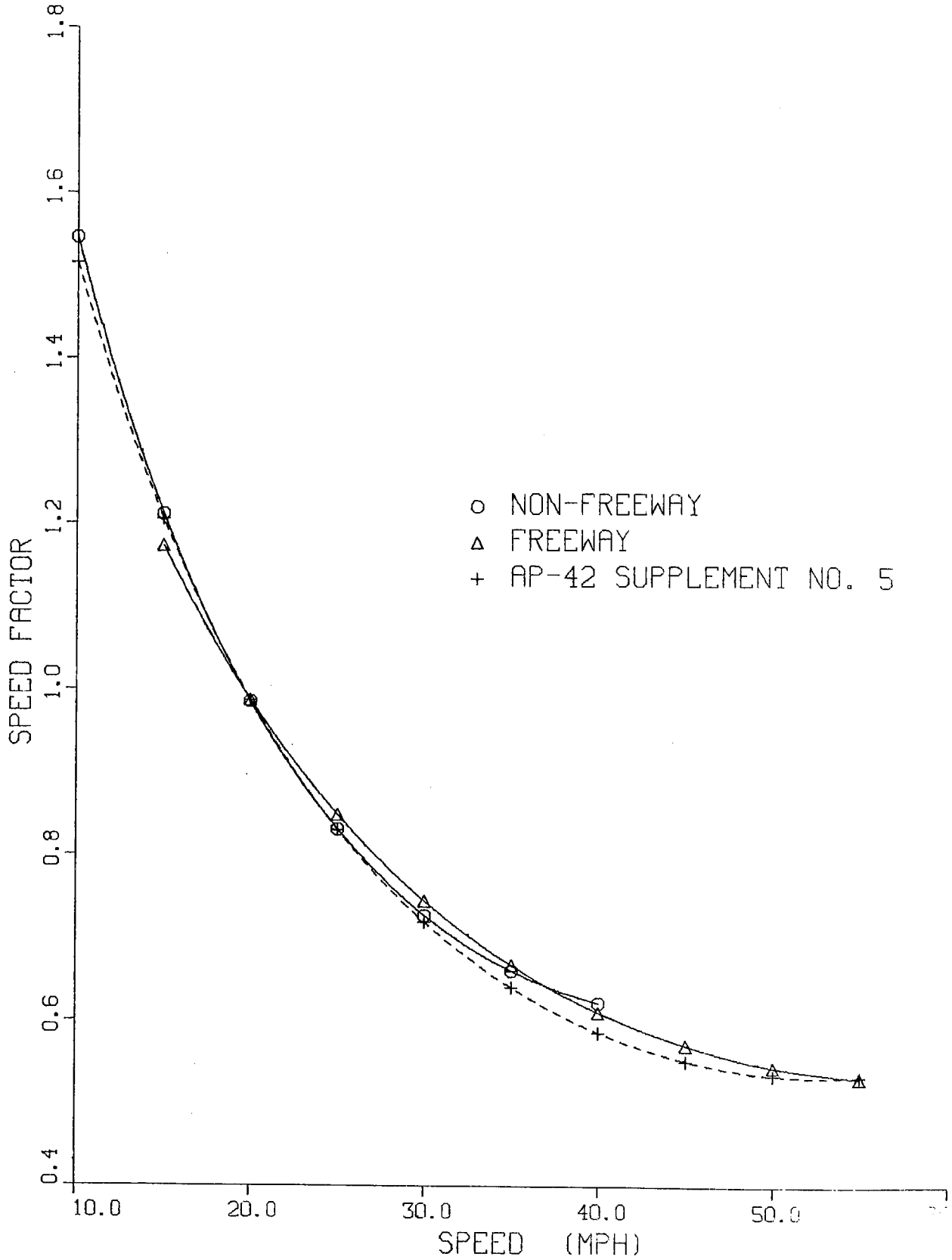


FIGURE 56.

HYDROCARBONS SPEED FACTORS
MODEL YEAR 1968

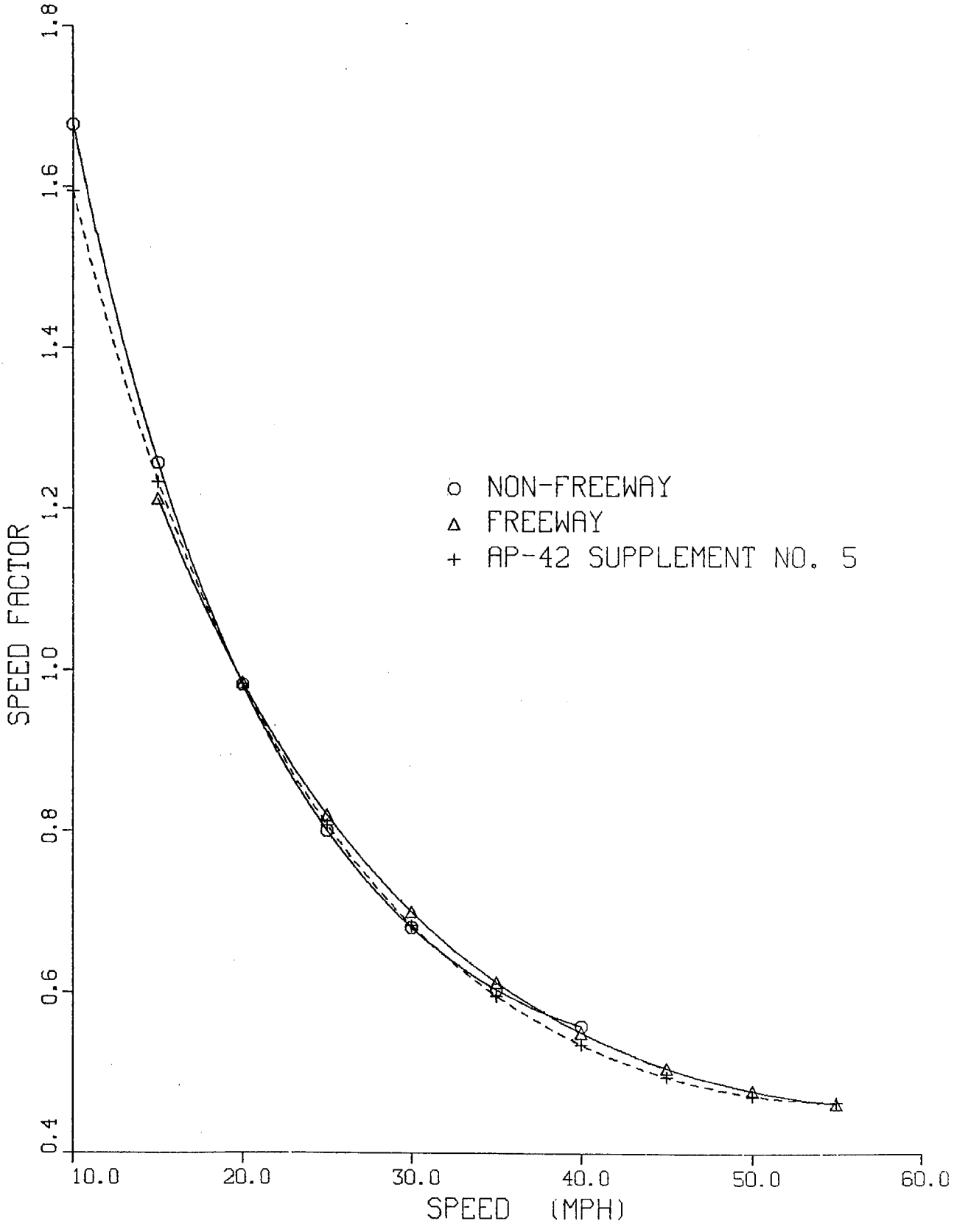


FIGURE 57.

HYDROCARBONS SPEED FACTORS

MODEL YEAR 1969

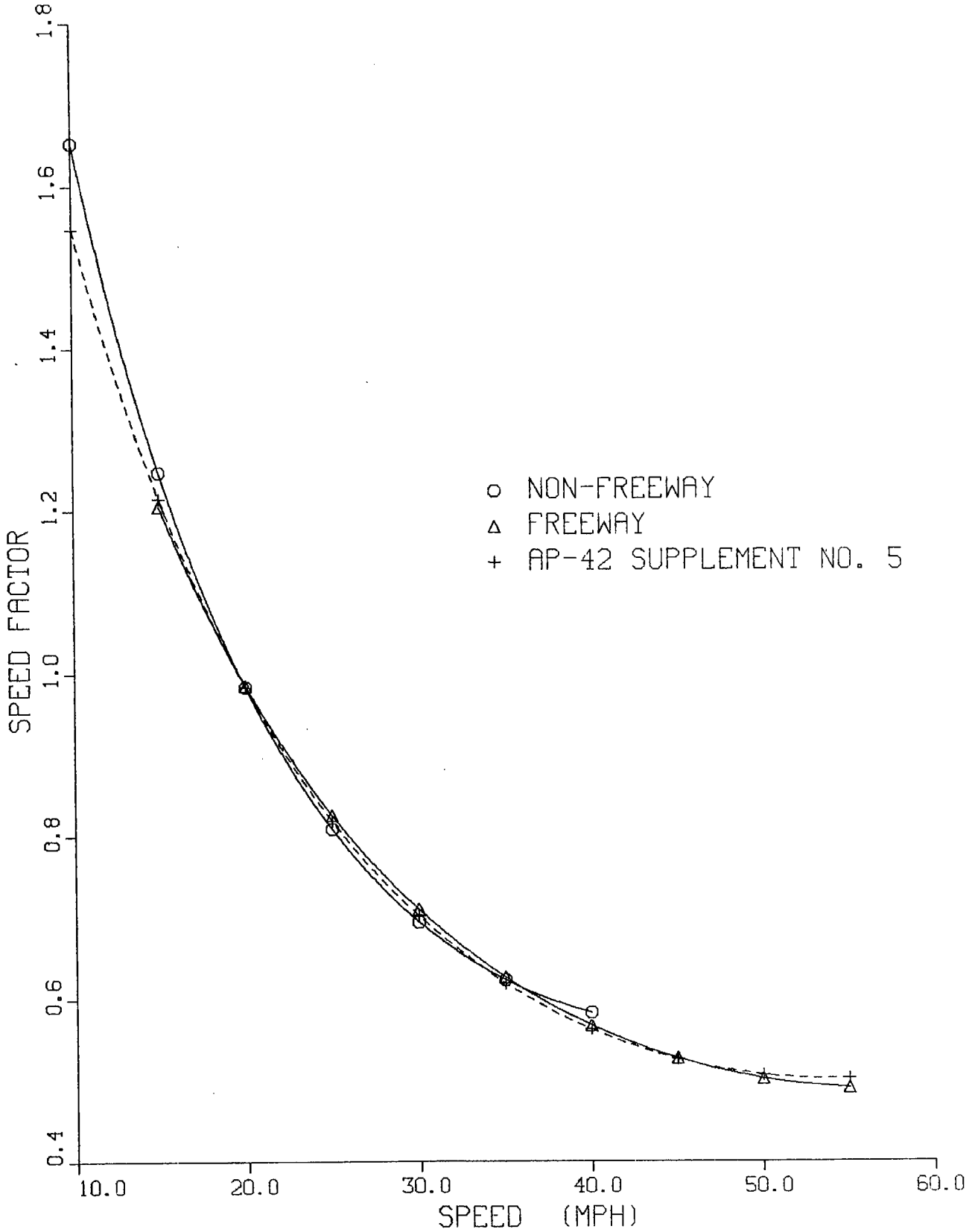


FIGURE 58.

HYDROCARBONS SPEED FACTORS

MODEL YEAR 1970

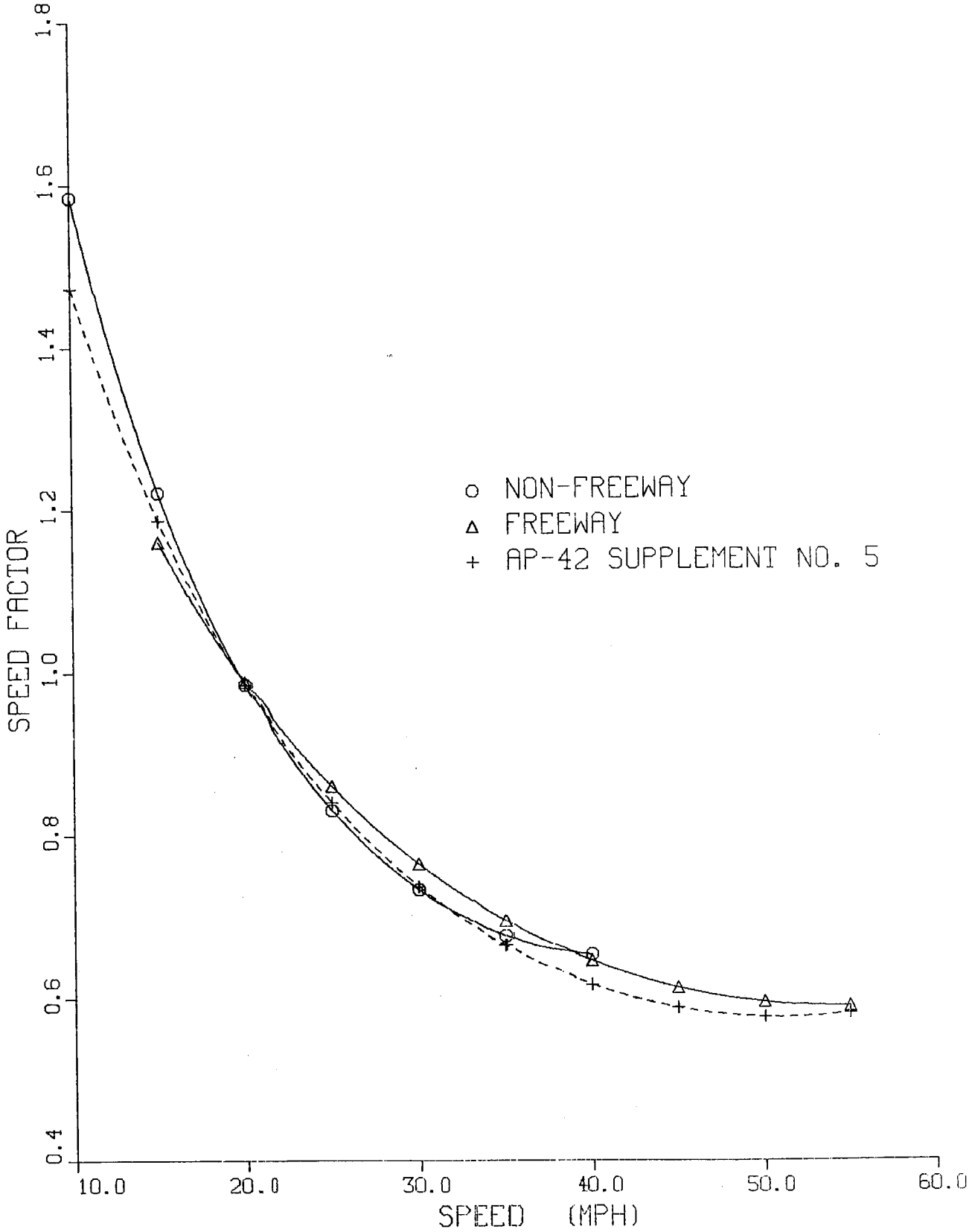


FIGURE 59.

HYDROCARBONS SPEED FACTORS

MODEL YEARS 1971 - 1975

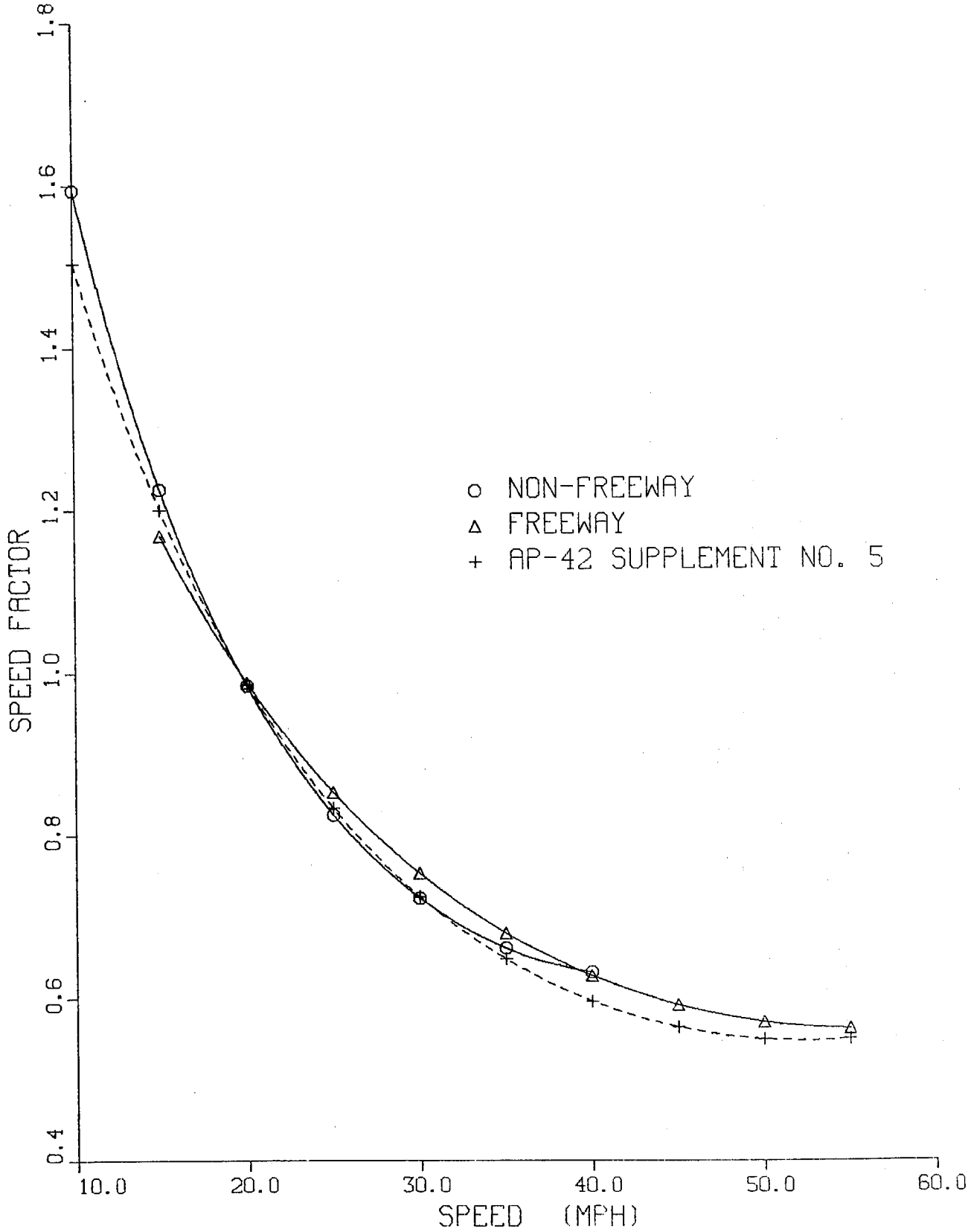


FIGURE 60.

CARBON MONOXIDE SPEED FACTORS

MODEL YEARS 1957 - 1965

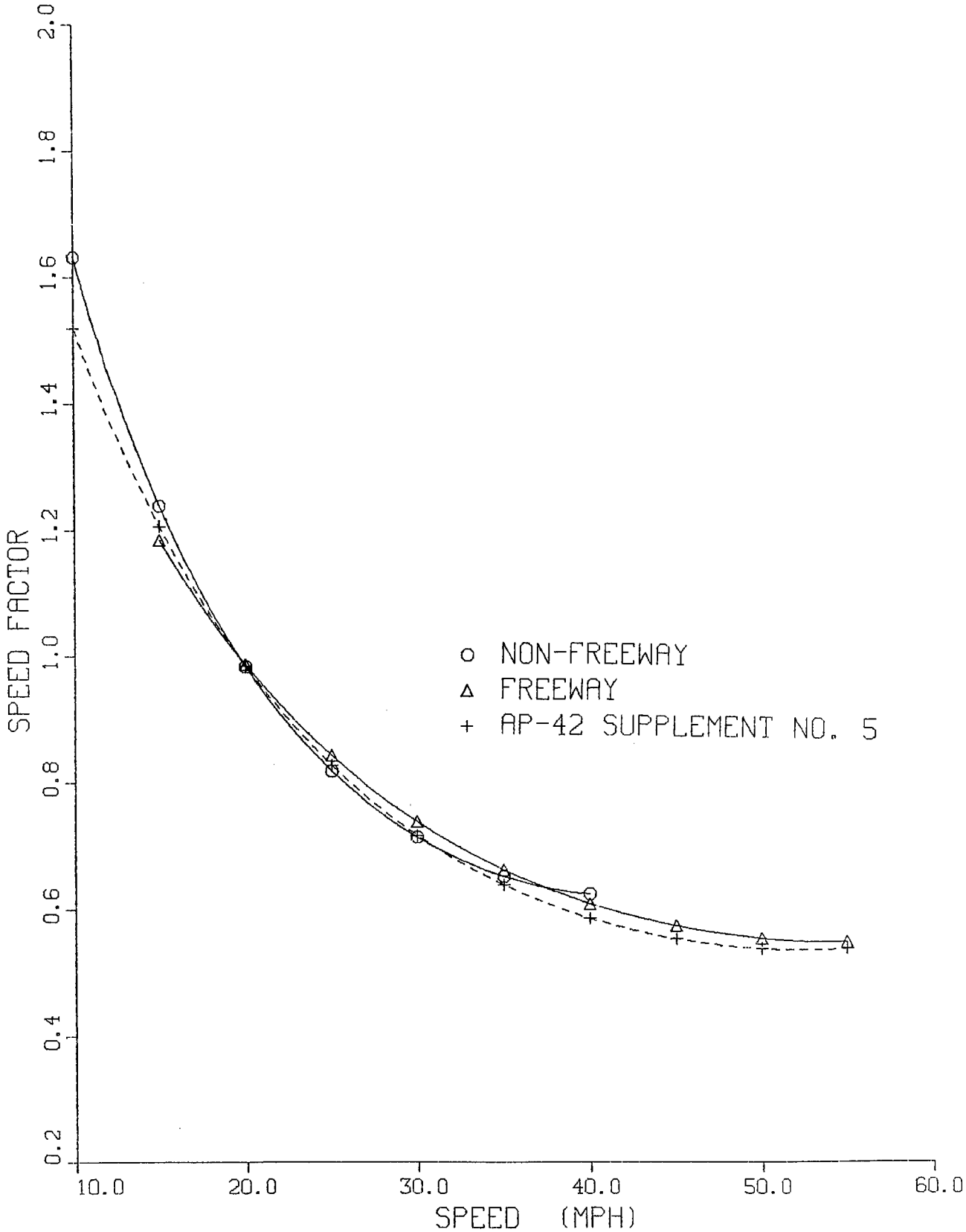


FIGURE 61.

CARBON MONOXIDE SPEED FACTORS

MODEL YEARS 1966 - 1967

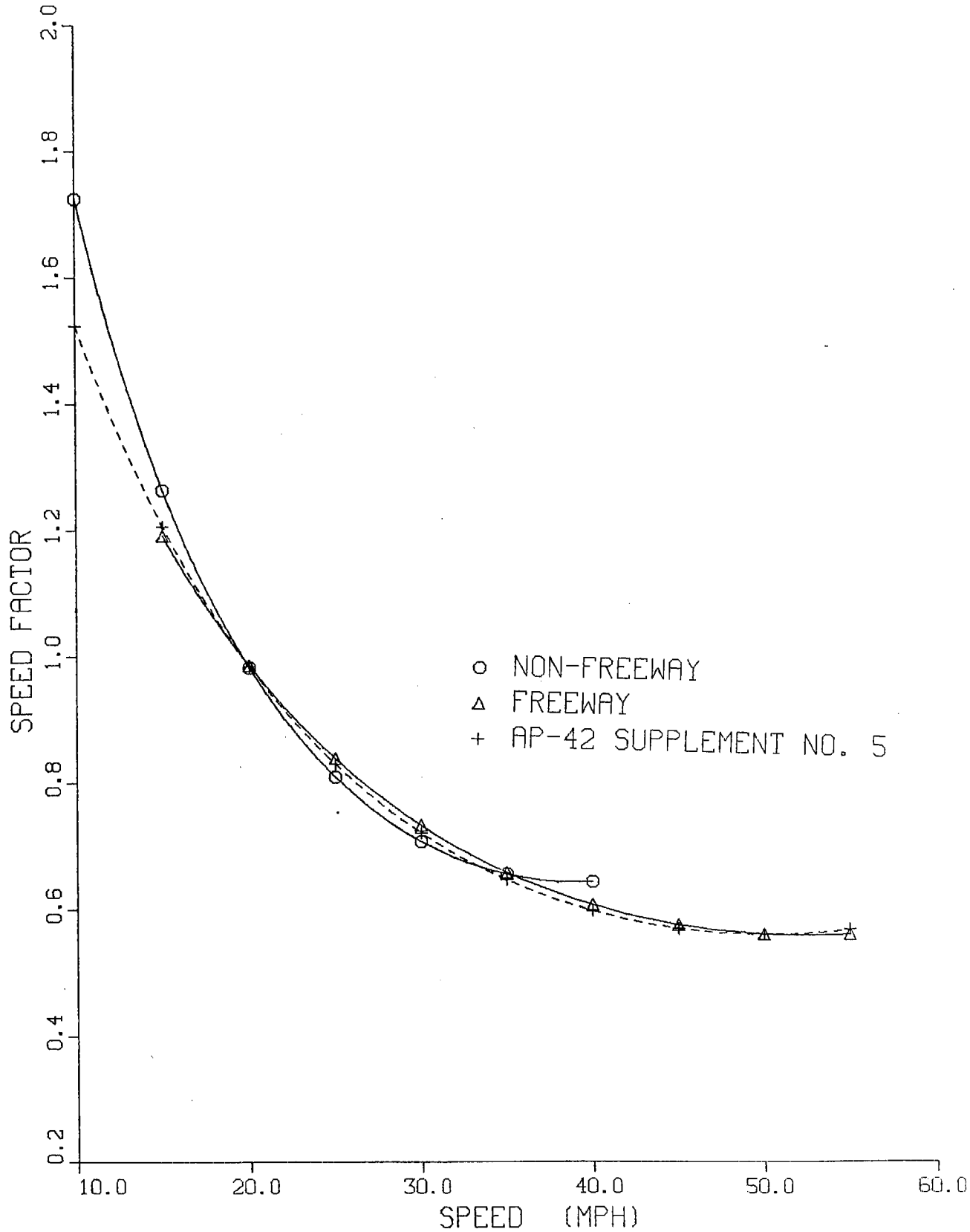


FIGURE 62.

CARBON MONOXIDE SPEED FACTORS

MODEL YEAR 1968

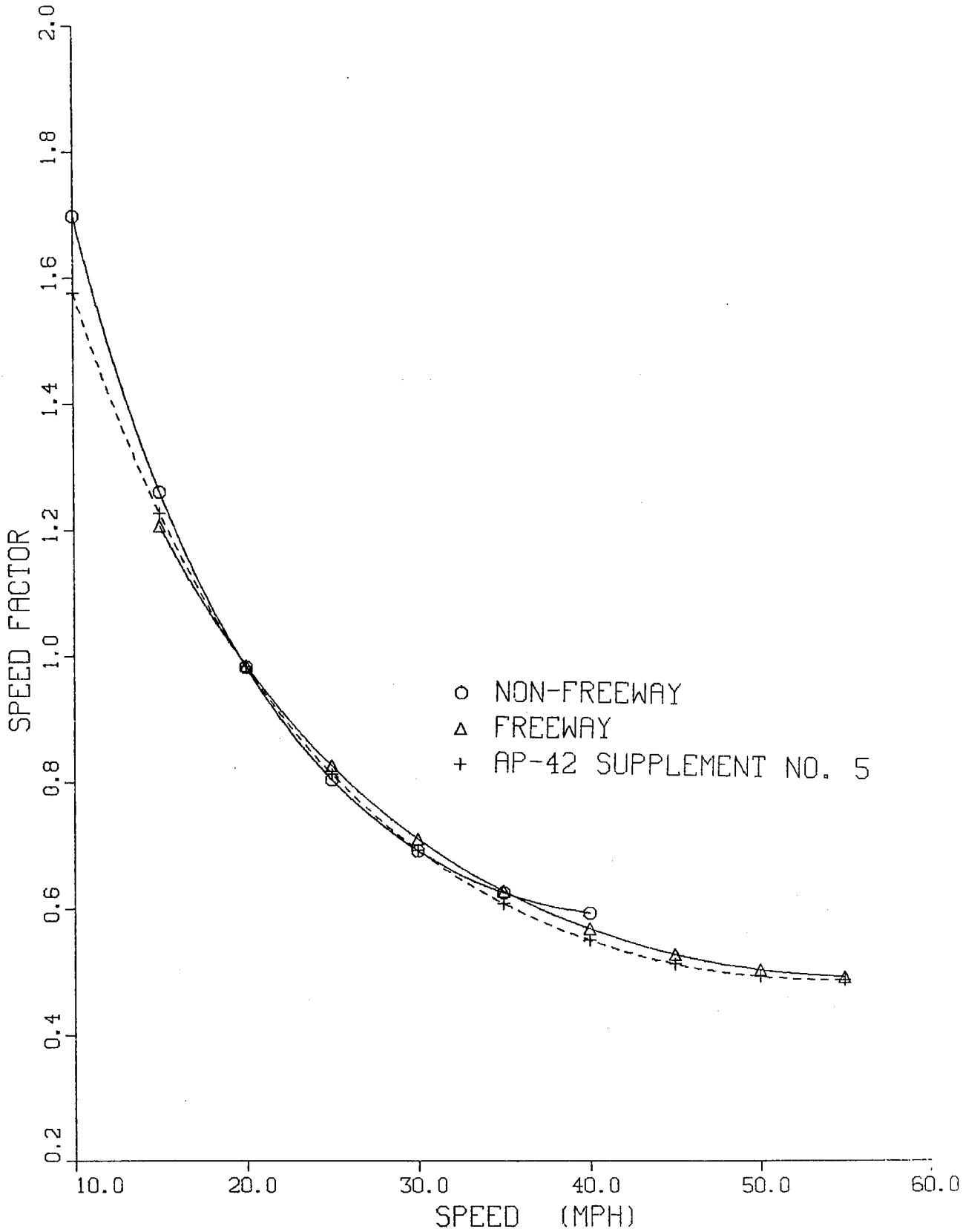


FIGURE 63.

CARBON MONOXIDE SPEED FACTORS

MODEL YEAR 1969

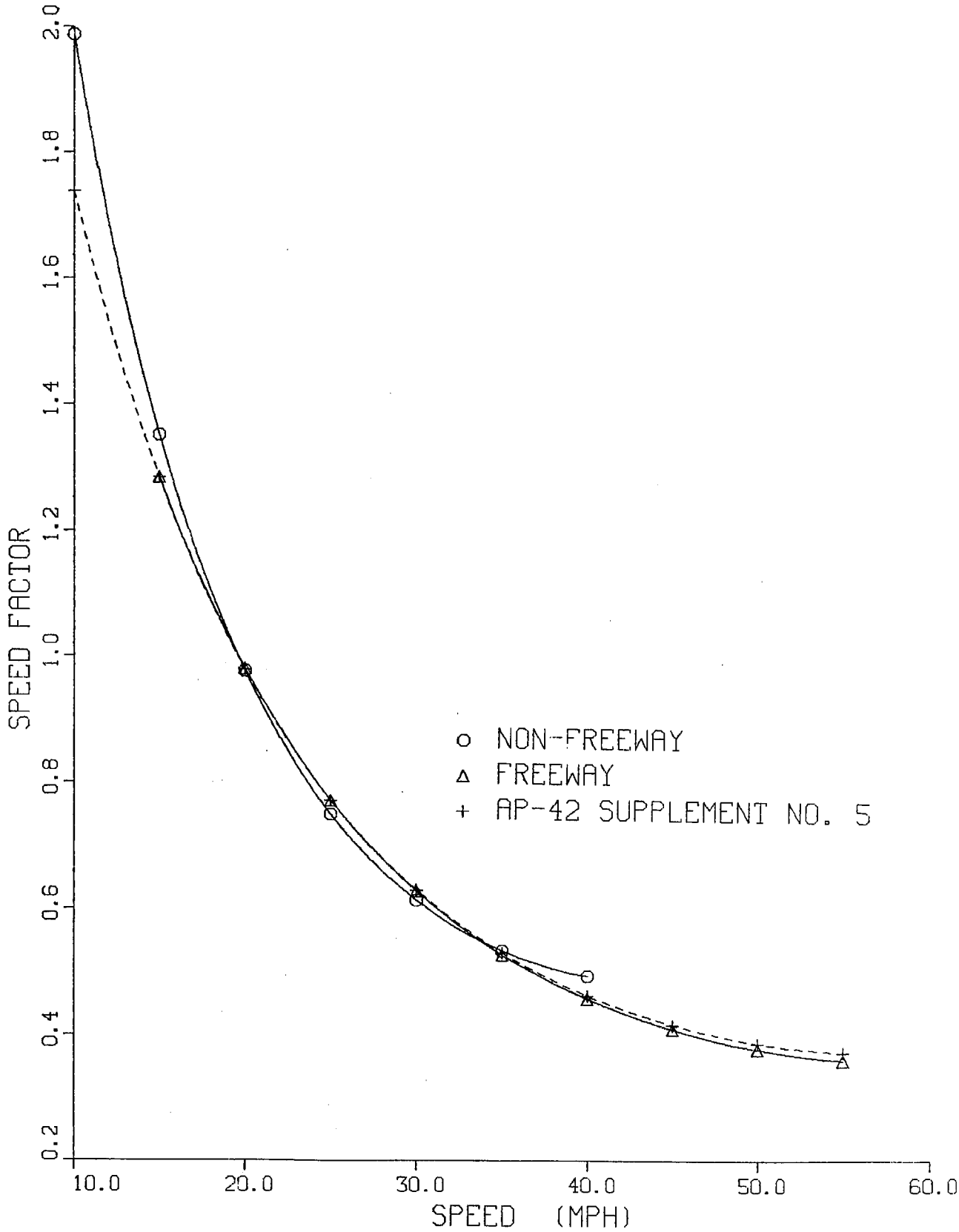


FIGURE 64.

CARBON MONOXIDE SPEED FACTORS

MODEL YEAR 1970

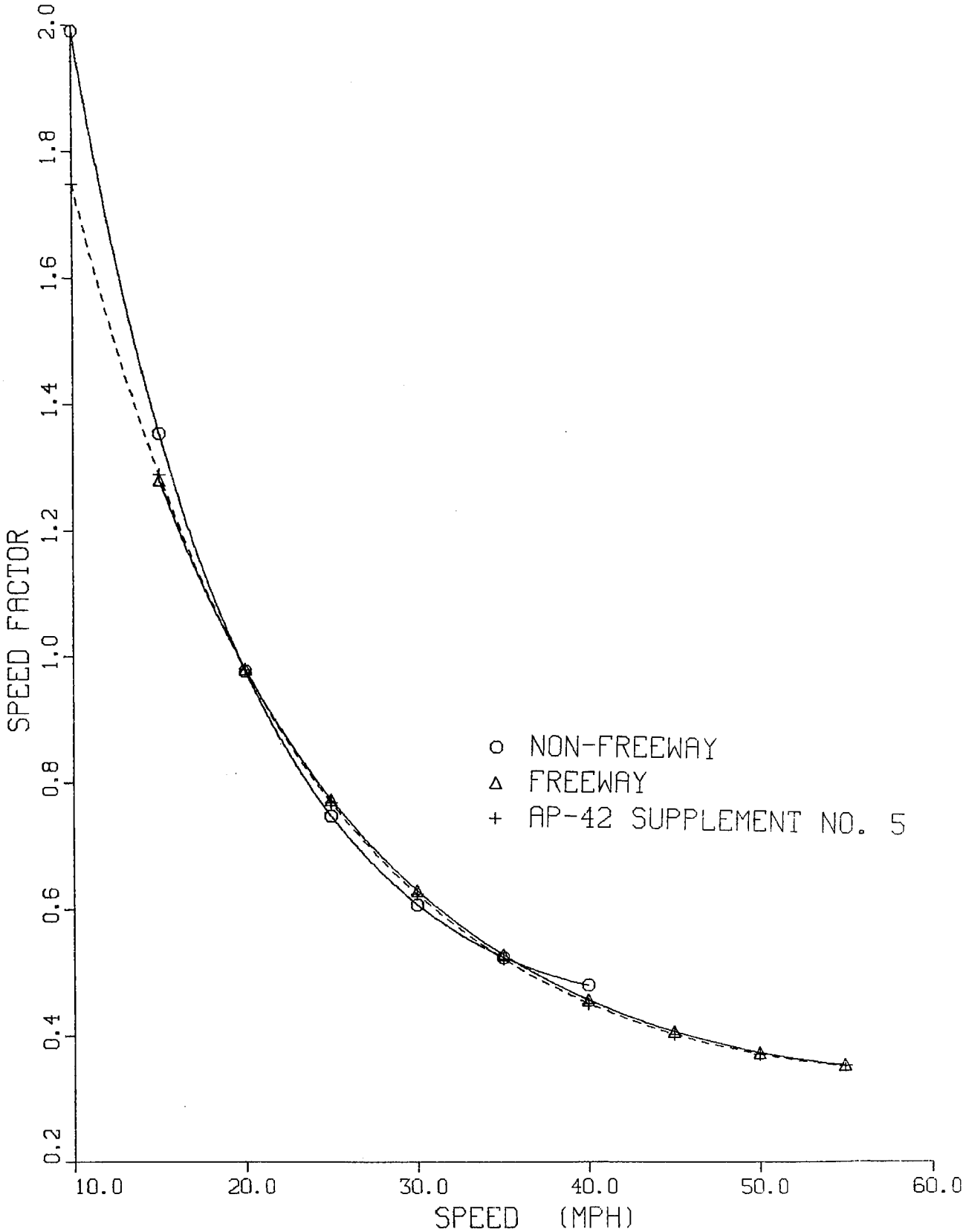


FIGURE 65.

CARBON MONOXIDE SPEED FACTORS

MODEL YEARS 1971 - 1975

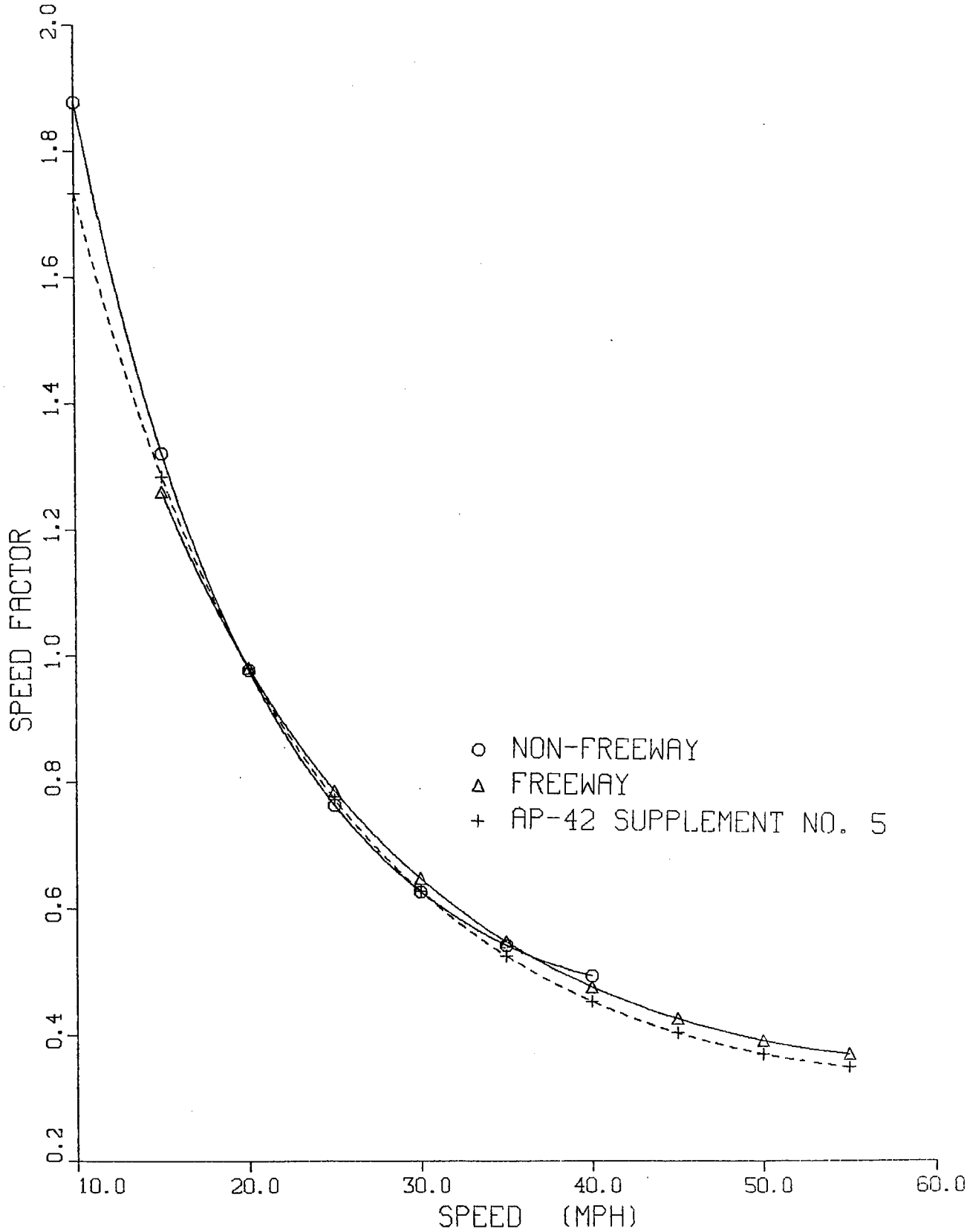


FIGURE 66.

NITROGEN OXIDES SPEED FACTORS
MODEL YEARS 1957 - 1965

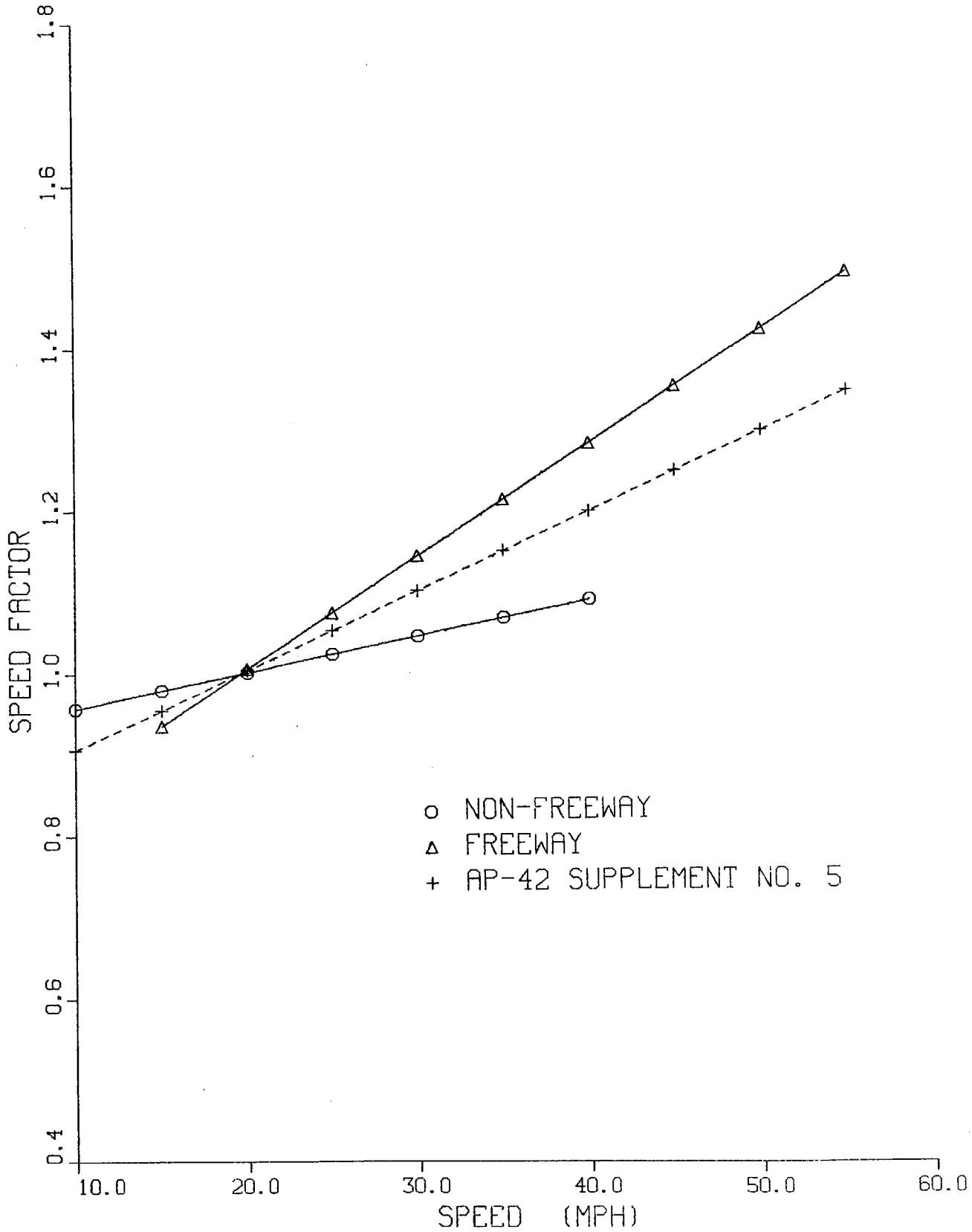


FIGURE 67.

NITROGEN OXIDES SPEED FACTORS
MODEL YEARS 1966 - 1967

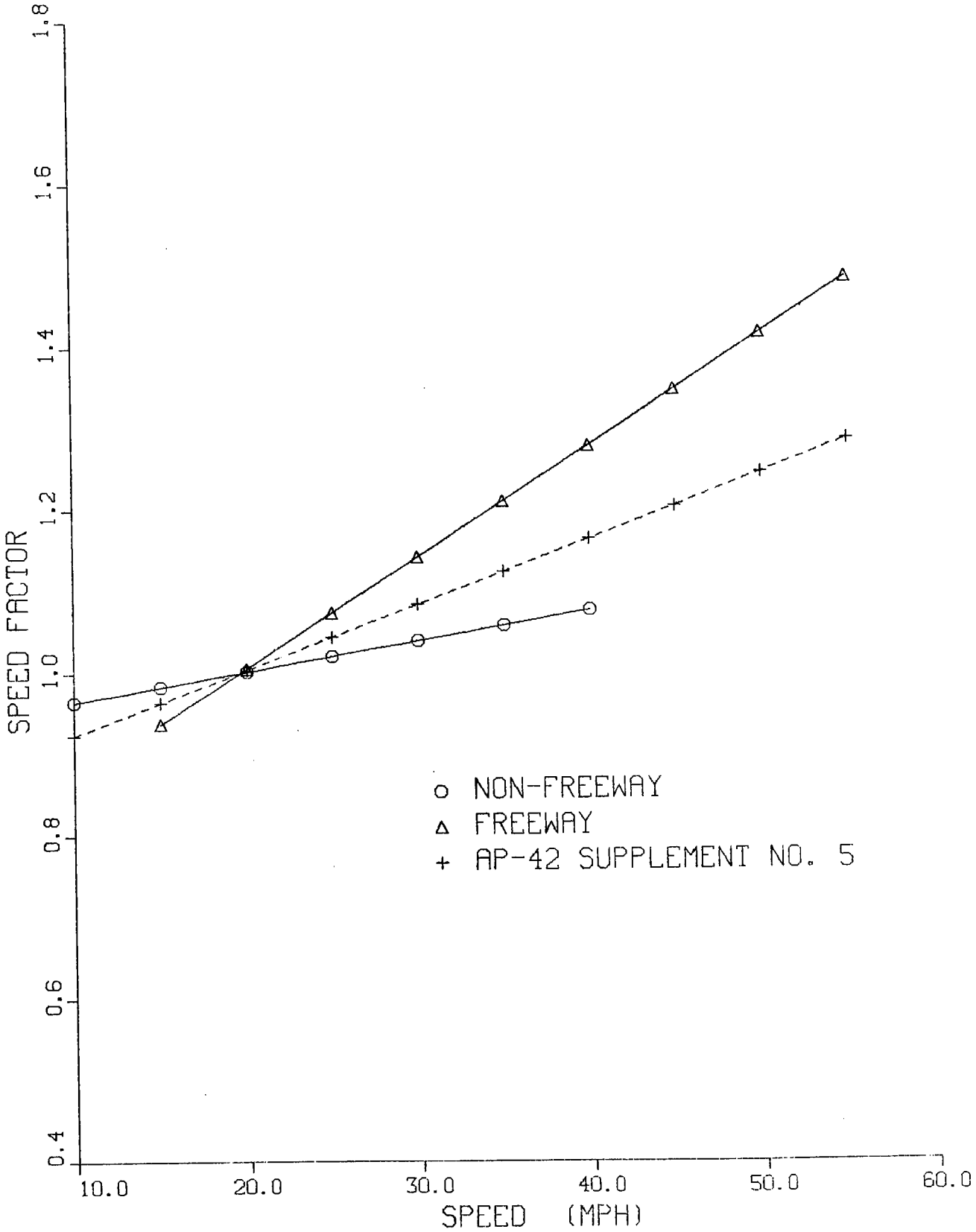


FIGURE 68.

NITROGEN OXIDES SPEED FACTORS

MODEL YEAR 1968

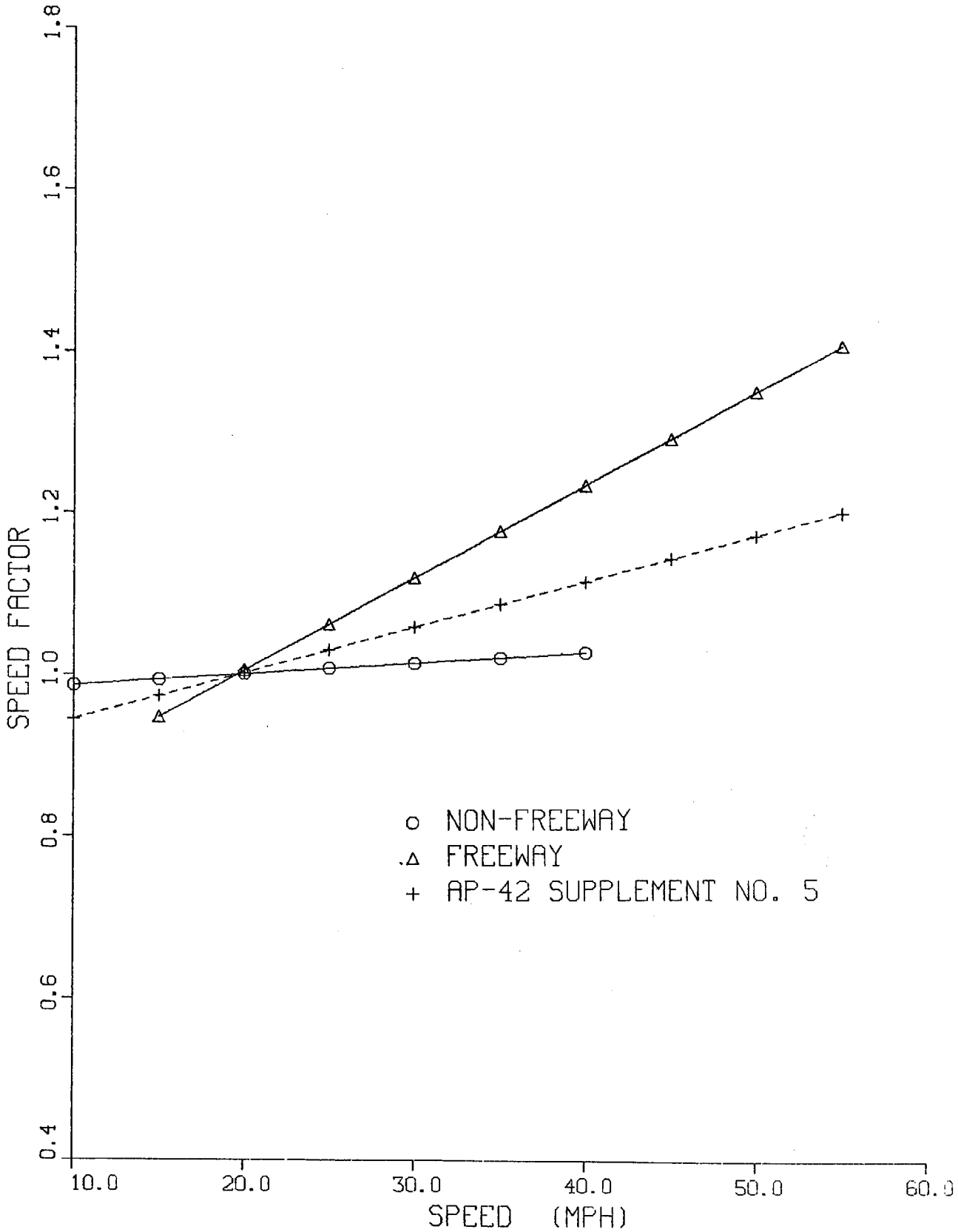


FIGURE 69.

NITROGEN OXIDES SPEED FACTORS

MODEL YEAR 1969

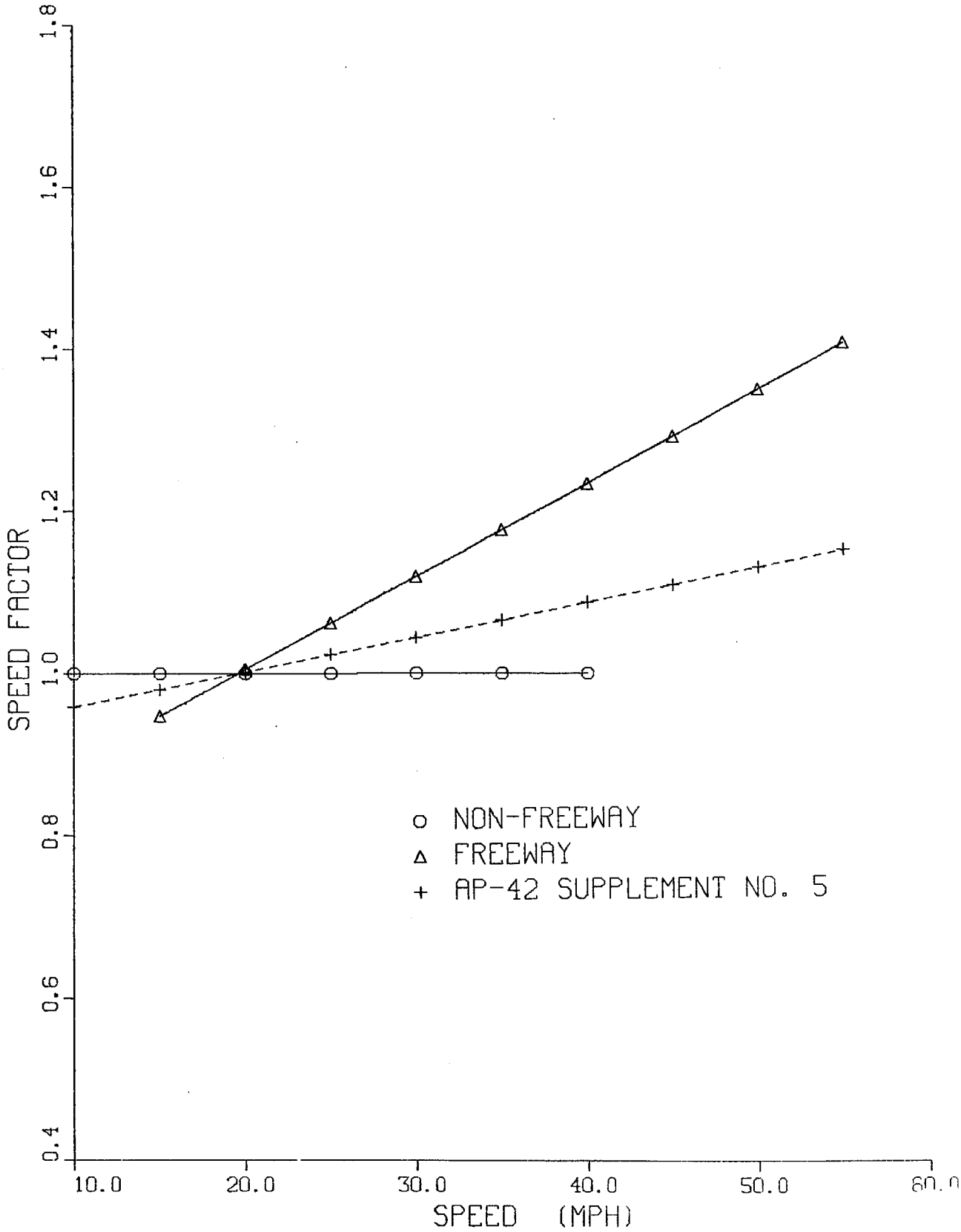


FIGURE 70.

NITROGEN OXIDES SPEED FACTORS

MODEL YEAR 1970

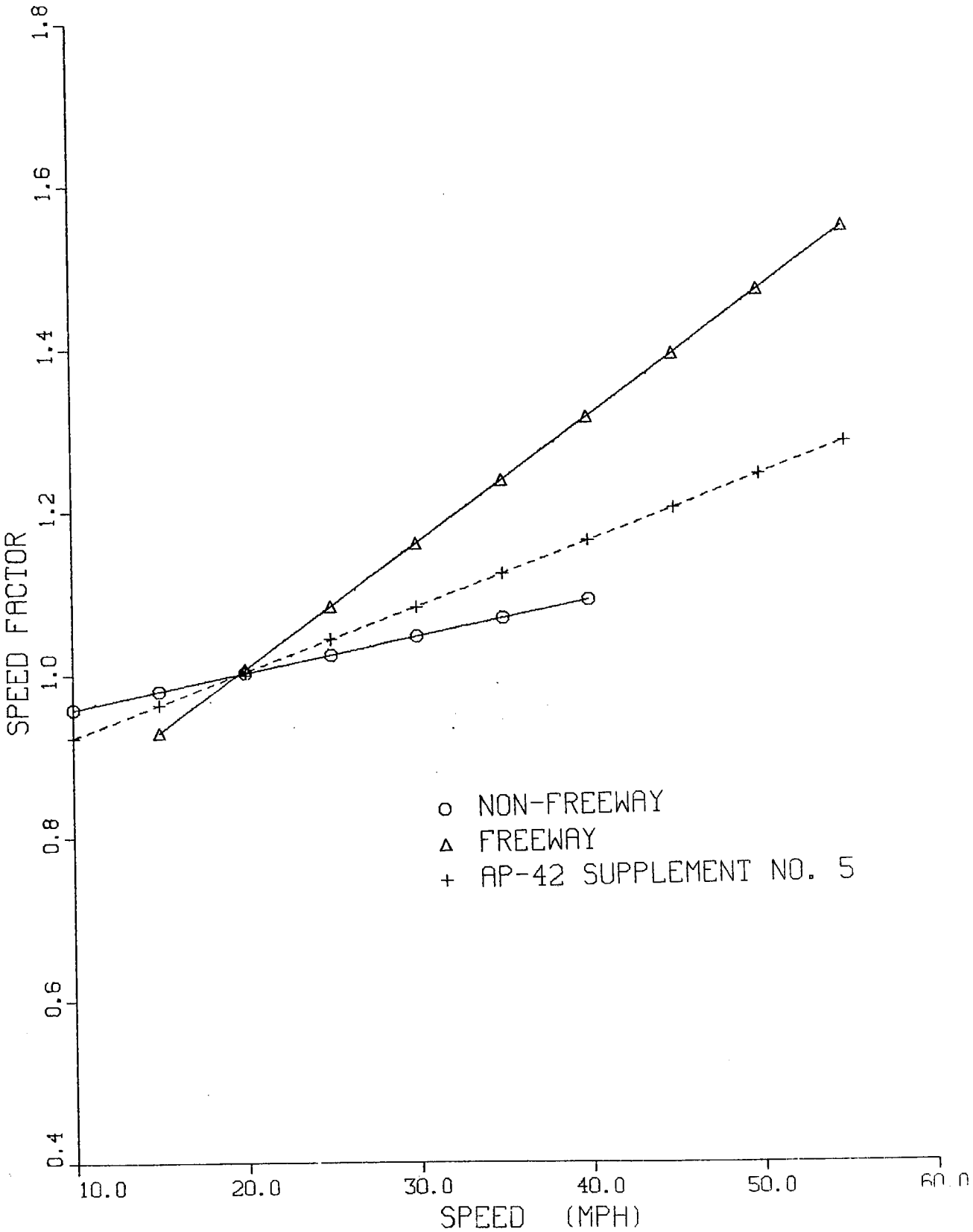


FIGURE 71.

NITROGEN OXIDES SPEED FACTORS

MODEL YEARS 1971 - 1975

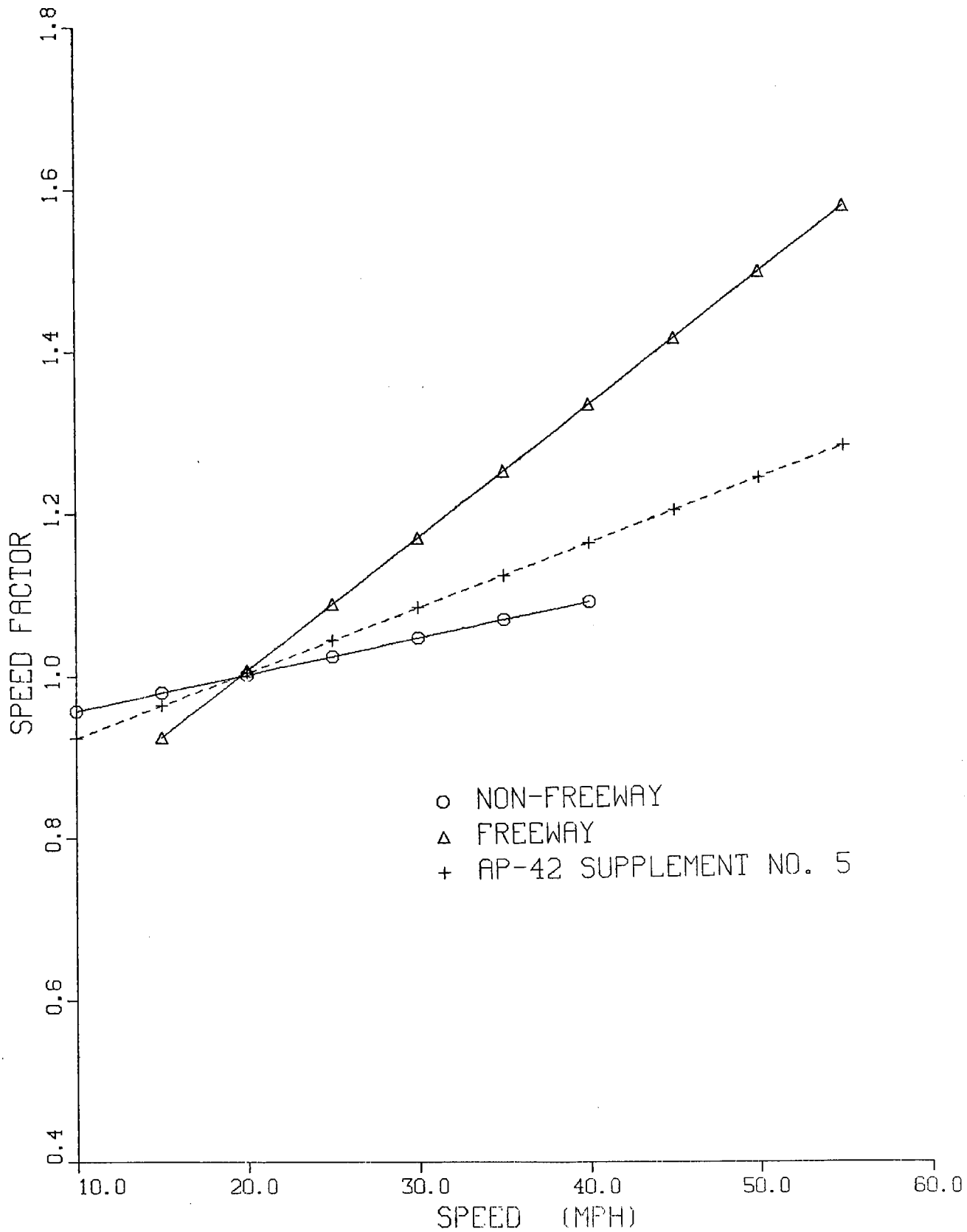


Table 19. Emission Inventory for South Coast Air Basin - HC (Tons Per Day)

	EXHAUST HYDROCARBONS			EVAPORATIVE HYDROCARBONS			CRANKCASE HYDROCARBONS			TOTAL HYDROCARBONS		
	N-FWY	FWY	TOTAL	N-FWY	FWY	TOTAL	N-FWY	FWY	TOTAL	N-FWY	FWY	TOTAL
WINTER												
WEEK DAY	447	252	699	254	198	452	9.1	6.7	15.9	710	457	1167
WEEK END	335	204	540	254	198	452	7.2	5.8	13.0	597	408	1005
SPRING												
WEEK DAY	427	257	684	254	198	452	9.4	7.4	16.8	691	462	1153
WEEK END	320	217	537	254	198	452	7.4	6.6	14.0	582	421	1003
SUMMER												
WEEK DAY	371	233	604	254	198	452	9.4	7.7	17.1	635	439	1073
WEEK END	282	196	478	254	198	452	7.5	6.9	14.4	544	401	944
FALL												
WEEK DAY	370	214	584	254	198	452	9.3	7.1	16.4	633	419	1052
WEEK END	268	174	441	254	198	452	7.1	6.1	13.1	529	378	907
ANNUAL AVG.												
WEEK DAY	404	239	643	254	198	452	9.3	7.2	16.6	667	444	1111
WEEK END	301	196	499	254	198	452	7.3	6.3	13.6	563	402	965
DAY	374	227	602	254	198	452	8.7	7.0	15.7	637	432	1070
DAY LDP*	320	194	514	220	171	391	6.4	5.1	11.5	547	371	917
DAY LDT**	54	33	87	34	27	61	2.3	1.9	4.2	91	61	152

*Light Duty Passenger Cars
**Light Duty Truck

Table 20. Emission Inventory for Los Angeles County - HC (Tons Per Day)

	EXHAUST HYDROCARBONS			EVAPORATIVE HYDROCARBONS			CRANKCASE HYDROCARBONS			TOTAL HYDROCARBONS		
	N-FWY	FWY	TOTAL	N-FWY	FWY	TOTAL	N-FWY	FWY	TOTAL	N-FWY	FWY	TOTAL
WINTER												
WEEK DAY	308	181	489	178	141	319	6.1	4.8	10.9	492	326	818
WEEK END	225	138	363	178	141	318	4.7	3.9	8.6	407	283	691
SPRING												
WEEK DAY	293	183	476	178	141	319	6.3	5.2	11.5	477	329	806
WEEK END	215	145	360	178	141	318	4.9	4.4	9.3	397	291	688
SUMMER												
WEEK DAY	259	164	424	178	141	319	6.4	5.4	11.8	443	311	754
WEEK END	193	131	325	178	141	318	5.1	4.6	9.7	376	277	653
FALL												
WEEK DAY	256	152	408	178	141	319	6.3	4.9	11.2	440	298	738
WEEK END	182	116	298	178	141	318	4.7	4.0	8.7	364	261	625
ANNUAL AVG.												
WEEK DAY	279	170	449	178	141	319	6.3	5.1	11.3	463	316	779
WEEK END	204	133	337	178	141	318	4.8	4.2	9.1	386	278	664
DAY	258	159	417	178	141	319	5.9	4.8	10.7	441	305	746
DAY LDP	220	136	356	155	123	277	4.3	3.6	7.9	379	262	642
DAY LDT	37	23	61	23	18	41	1.6	1.3	2.8	62	43	105

Table 21. Emission Inventory for Orange County - HC (Tons Per Day)

	EXHAUST HYDROCARBONS			EVAPORATIVE HYDROCARBONS			CRANKCASE HYDROCARBONS			TOTAL HYDROCARBONS		
	N-FWY	FWY	TOTAL	N-FWY	FWY	TOTAL	N-FWY	FWY	TOTAL	N-FWY	FWY	TOTAL
WINTER												
WEEK DAY	86	42	128	49	35	84	1.9	1.1	3.0	137	78	215
WEEK END	65	36	100	49	35	84	1.5	1.0	2.5	115	72	187
SPRING												
WEEK DAY	82	43	125	49	35	84	1.9	1.3	3.2	133	79	212
WEEK END	62	38	100	49	35	84	1.5	1.2	2.7	112	75	187
SUMMER												
WEEK DAY	72	40	112	49	35	84	2.0	1.3	3.3	123	76	199
WEEK END	55	35	90	49	35	84	1.6	1.2	2.8	106	71	177
FALL												
WEEK DAY	71	37	108	49	35	84	1.9	1.2	3.2	122	73	195
WEEK END	52	31	83	49	35	84	1.5	1.1	2.5	102	68	170
ANNUAL AVG.												
WEEK DAY	78	40	118	49	35	84	1.9	1.2	3.2	129	77	206
WEEK END	58	35	93	49	35	84	1.5	1.1	2.6	109	71	180
DAY	72	39	111	49	35	84	1.8	1.2	3.0	123	75	198
DAY LDP	62	33	95	42	31	73	1.3	.9	2.2	106	65	170
DAY LDT	10	6	16	7	5	11	.5	.3	.8	18	11	28

Table 22. Emission Inventory for Riverside County - HC (Tons Per Day)

	EXHAUST HYDROCARBONS			EVAPORATIVE HYDROCARBONS			CRANKCASE HYDROCARBONS			TOTAL HYDROCARBONS		
	N-FWY	FWY	TOTAL	N-FWY	FWY	TOTAL	N-FWY	FWY	TOTAL	N-FWY	FWY	TOTAL
WINTER												
WEEK DAY	21	9	30	11	8	19	.5	.2	.7	32	17	49
WEEK END	18	10	28	11	8	19	.4	.3	.7	30	18	48
SPRING												
WEEK DAY	21	10	30	11	8	19	.5	.3	.8	32	18	50
WEEK END	17	12	29	11	8	19	.4	.4	.8	29	20	49
SUMMER												
WEEK DAY	15	10	25	11	8	19	.4	.3	.8	27	18	44
WEEK END	13	11	24	11	8	19	.4	.4	.7	24	19	43
FALL												
WEEK DAY	16	8	24	11	8	19	.5	.3	.7	28	16	44
WEEK END	13	9	23	11	8	19	.4	.3	.7	25	17	42
ANNUAL AVG.												
WEEK DAY	18	9	27	11	8	19	.5	.3	.7	30	17	47
WEEK END	16	10	26	11	8	19	.4	.3	.7	27	18	45
DAY	18	9	27	11	8	19	.4	.3	.7	29	17	46
DAY LDP	15	8	23	9	6	16	.3	.2	.5	25	15	39
DAY LDT	3	1	4	2	1	3	.1	.1	.2	4	3	7

Table 23. Emission Inventory for San Bernardino County - HC (Tons Per Day)

	EXHAUST HYDROCARBONS			EVAPORATIVE HYDROCARBONS			CRANKCASE HYDROCARBONS			TOTAL HYDROCARBONS		
	N-FWY	FWY	TOTAL	N-FWY	FWY	TOTAL	N-FWY	FWY	TOTAL	N-FWY	FWY	TOTAL
WINTER												
WEEK DAY	32	21	53	17	14	31	.7	.6	1.3	50	35	85
WEEK END	27	20	48	17	14	31	.6	.6	1.2	45	35	79
SPRING												
WEEK DAY	32	21	53	17	14	31	.7	.6	1.4	49	36	85
WEEK END	26	22	48	17	14	31	.6	.7	1.3	43	36	80
SUMMER												
WEEK DAY	24	20	44	17	14	31	.6	.7	1.3	41	34	76
WEEK END	20	19	40	17	14	31	.5	.7	1.2	37	34	71
FALL												
WEEK DAY	26	18	43	17	14	31	.7	.6	1.3	43	32	75
WEEK END	20	17	38	17	14	31	.5	.6	1.2	37	32	69
ANNUAL AVG.												
WEEK DAY	29	20	48	17	14	31	.7	.6	1.3	46	34	80
WEEK END	23	20	43	17	14	31	.6	.6	1.2	41	34	75
DAY	27	20	47	17	14	31	.6	.6	1.3	44	34	79
DAY LDP	23	17	40	14	12	26	.5	.5	.9	37	29	67
DAY LDT	4	3	7	3	2	5	.2	.2	.3	7	5	12

Table 24. Emission Inventory for South Coast Air Basin - All (Tons Per Day)

	HYDROCARBONS			CARBON MONOXIDE			NITROGEN OXIDES			SULFUR DIOXIDE			PARTICULATES		
	N-FWY	FWY	TOTAL	N-FWY	FWY	TOTAL	N-FWY	FWY	TOTAL	N-FWY	FWY	TOTAL	N-FWY	FWY	TOTAL
WINTER															
WEEK DAY	710	457	1167	4771	2313	7084	381	397	778	12.3	9.1	21.4	50.0	36.9	86.9
WEEK END	597	408	1005	3517	1809	5327	302	355	658	9.7	7.8	17.5	39.5	31.6	71.0
SPRING															
WEEK DAY	691	462	1153	4541	2344	6884	380	422	802	12.7	10.0	22.6	51.5	40.5	92.0
WEEK END	582	421	1003	3345	1911	5256	301	394	694	10.0	8.9	18.9	40.6	36.1	76.7
SUMMER															
WEEK DAY	635	439	1073	3896	2098	5994	357	417	774	12.6	10.4	23.1	51.4	42.4	93.7
WEEK END	544	401	944	2909	1705	4615	287	386	674	10.1	9.3	19.4	41.1	37.6	78.7
FALL															
WEEK DAY	633	419	1052	3903	1934	5838	355	380	735	12.5	9.5	22.0	50.9	38.6	89.5
WEEK END	529	378	907	2775	1517	4291	271	341	613	9.5	8.1	17.7	38.8	33.1	71.9
ANNUAL AVG.															
WEEK DAY	667	444	1111	4278	2172	6450	368	404	772	12.5	9.7	22.3	50.9	39.6	90.5
WEEK END	563	402	965	3136	1736	4872	291	369	660	9.8	8.5	18.4	40.0	34.6	74.6
DAY	637	432	1070	3952	2048	5999	346	394	740	11.8	9.4	21.2	47.8	38.2	86.0
DAY LDP	547	371	917	3387	1754	5141	296	338	634	10.0	8.0	18.0	40.7	32.5	73.2
DAY LDT	91	61	152	565	293	858	50	57	106	1.7	1.4	3.1	7.1	5.7	12.7

Table 25. Emission Inventory for Los Angeles County - All (Tons Per Day)

	HYDROCARBONS			CARBON MONOXIDE			NITROGEN OXIDES			SULFUR DIOXIDE			PARTICULATES		
	N-FWY	FWY	TOTAL	N-FWY	FWY	TOTAL	N-FWY	FWY	TOTAL	N-FWY	FWY	TOTAL	N-FWY	FWY	TOTAL
WINTER															
WEEK DAY	492	326	818	3316	1673	4990	254	278	532	8.2	6.4	14.6	33.4	26.1	59.5
WEEK END	407	283	691	2377	1227	3604	198	240	439	6.4	5.3	11.6	25.9	21.4	47.3
SPRING															
WEEK DAY	477	329	806	3142	1685	4826	251	293	545	8.4	7.0	15.4	34.2	28.5	62.7
WEEK END	397	291	688	2260	1282	3542	197	263	460	6.6	5.9	12.5	26.7	24.2	50.8
SUMMER															
WEEK DAY	443	311	754	2751	1493	4244	242	286	528	8.6	7.2	15.8	34.9	29.4	64.4
WEEK END	376	277	653	2010	1144	3154	193	258	451	6.8	6.2	13.0	27.6	25.2	52.8
FALL															
WEEK DAY	440	298	738	2733	1385	4118	238	263	501	8.4	6.7	15.1	34.3	27.0	61.3
WEEK END	364	261	625	1899	1011	2910	180	227	407	6.4	5.4	11.8	25.8	22.0	47.8
ANNUAL AVG.															
WEEK DAY	463	316	779	2985	1559	4544	246	280	526	8.4	6.8	15.3	34.2	27.8	62.0
WEEK END	386	278	664	2137	1166	3303	192	247	439	6.5	5.7	12.2	26.5	23.2	49.7
DAY	441	305	746	2743	1447	4190	231	271	501	7.9	6.5	14.4	32.0	26.5	58.5
DAY LDP	379	262	642	2351	1240	3590	198	232	429	6.7	5.6	12.3	27.3	22.5	49.8
DAY LDT	62	43	105	392	207	599	33	39	72	1.2	1.0	2.1	4.7	3.9	8.7

Table 26. Emission Inventory for Orange County - All (Tons Per Day)

	HYDROCARBONS			CARBON MONOXIDE			NITROGEN OXIDES			SULFUR DIOXIDE			PARTICULATES		
	N-FWY	FWY	TOTAL	N-FWY	FWY	TOTAL	N-FWY	FWY	TOTAL	N-FWY	FWY	TOTAL	N-FWY	FWY	TOTAL
WINTER															
WEEK DAY	137	78	215	896	379	1275	79	69	148	2.5	1.5	4.1	10.3	6.3	16.5
WEEK END	115	72	187	665	315	981	62	62	124	2.0	1.4	3.3	8.0	5.5	13.5
SPRING															
WEEK DAY	133	79	212	850	385	1235	79	73	152	2.6	1.7	4.3	10.5	6.9	17.4
WEEK END	112	75	187	633	336	968	62	69	131	2.0	1.6	3.6	8.2	6.4	14.6
SUMMER															
WEEK DAY	123	76	199	739	351	1091	75	74	149	2.6	1.8	4.4	10.7	7.3	18.0
WEEK END	106	71	177	559	302	861	60	69	129	2.1	1.6	3.7	8.5	6.7	15.1
FALL															
WEEK DAY	122	73	196	736	326	1062	74	68	142	2.6	1.7	4.2	10.5	6.7	17.3
WEEK END	102	68	170	529	273	802	56	62	118	2.0	1.5	3.4	7.9	6.0	13.9
ANNUAL AVG.															
WEEK DAY	129	77	206	805	360	1166	77	71	148	2.6	1.7	4.3	10.5	6.8	17.3
WEEK END	109	71	180	597	306	903	60	66	125	2.0	1.5	3.5	8.2	6.1	14.3
DAY	123	75	198	746	345	1091	72	69	141	2.4	1.6	4.0	9.6	6.6	16.4
DAY LDP	106	65	170	639	296	935	62	59	121	2.1	1.4	3.5	8.4	5.6	14.0
DAY LDT	18	11	28	107	49	156	10	10	20	.4	.2	.6	1.5	1.0	2.4

Table 27. Emission Inventory for Riverside County - All (Tons Per Day)

	HYDROCARBONS			CARBON MONOXIDE			NITROGEN OXIDES			SULFUR DIOXIDE			PARTICULATES		
	N-FWY	FWY	TOTAL	N-FWY	FWY	TOTAL	N-FWY	FWY	TOTAL	N-FWY	FWY	TOTAL	N-FWY	FWY	TOTAL
WINTER															
WEEK DAY	32	17	49	217	78	294	20	15	35	.6	.3	1.0	2.6	1.4	3.9
WEEK END	30	18	48	188	88	276	18	17	35	.6	.4	.9	2.3	1.5	3.8
SPRING															
WEEK DAY	32	18	50	214	85	299	20	17	38	.7	.4	1.1	2.7	1.6	4.3
WEEK END	29	20	49	179	102	282	17	21	39	.6	.5	1.1	2.3	1.9	4.3
SUMMER															
WEEK DAY	27	18	44	155	83	238	16	19	35	.6	.5	1.0	2.3	1.8	4.1
WEEK END	24	19	43	132	91	224	14	21	35	.5	.5	1.0	2.0	2.0	4.0
FALL															
WEEK DAY	28	16	44	167	69	236	17	16	33	.6	.4	1.0	2.5	1.5	4.0
WEEK END	25	17	42	136	81	217	14	18	33	.5	.4	.9	2.0	1.8	3.8
ANNUAL AVG.															
WEEK DAY	30	17	47	188	79	267	19	17	35	.6	.4	1.0	2.5	1.6	4.1
WEEK END	27	18	45	159	91	250	16	20	35	.5	.4	1.0	2.2	1.8	4.0
DAY	29	17	46	180	82	262	18	18	35	.6	.4	1.0	2.4	1.6	4.1
DAY LDP	25	15	39	154	70	225	15	15	30	.5	.3	.9	2.1	1.4	3.5
DAY LDT	4	3	7	26	12	37	3	3	5	.1	.1	.1	.4	.2	.6

Table 28. Emission Inventory for San Bernardino County - All (Tons Per Day)

	HYDROCARBONS			CARBON MONOXIDE			NITROGEN OXIDES			SULFUR DIOXIDE			PARTICULATES		
	N-FWY	FWY	TOTAL	N-FWY	FWY	TOTAL	N-FWY	FWY	TOTAL	N-FWY	FWY	TOTAL	N-FWY	FWY	TOTAL
WINTER															
WEEK DAY	50	35	85	342	183	525	29	35	64	.9	.8	1.7	3.7	3.2	6.9
WEEK END	45	35	79	286	179	465	25	35	60	.8	.8	1.6	3.2	3.1	6.4
SPRING															
WEEK DAY	49	36	85	336	189	524	29	38	68	1.0	.9	1.8	4.0	3.5	7.5
WEEK END	43	36	80	273	192	464	25	40	64	.8	.9	1.7	3.3	3.6	7.0
SUMMER															
WEEK DAY	41	34	76	251	171	422	24	38	62	.9	.9	1.8	3.5	3.7	7.2
WEEK END	37	34	71	208	168	376	21	38	59	.7	.9	1.6	3.0	3.7	6.7
FALL															
WEEK DAY	43	32	75	267	154	421	25	34	59	.9	.8	1.7	3.7	3.3	7.0
WEEK END	37	32	69	210	152	362	21	34	55	.7	.8	1.5	3.0	3.3	6.3
ANNUAL AVG.															
WEEK DAY	46	34	80	299	174	473	27	36	63	.9	.8	1.8	3.7	3.4	7.1
WEEK END	41	34	75	244	173	417	23	37	60	.8	.9	1.6	3.1	3.5	6.6
DAY	44	34	79	283	174	457	26	37	62	.9	.8	1.7	3.5	3.4	7.0
DAY LDP	37	29	67	243	149	392	22	31	53	.7	.7	1.5	3.0	2.9	5.9
DAY LDT	7	5	12	41	25	65	4	5	9	.1	.1	.3	.5	.5	1.0

FIGURE 72.

EXHAUST HYDROCARBON EMISSIONS

NON-FREEWAY AVERAGE DAILY (TONS)

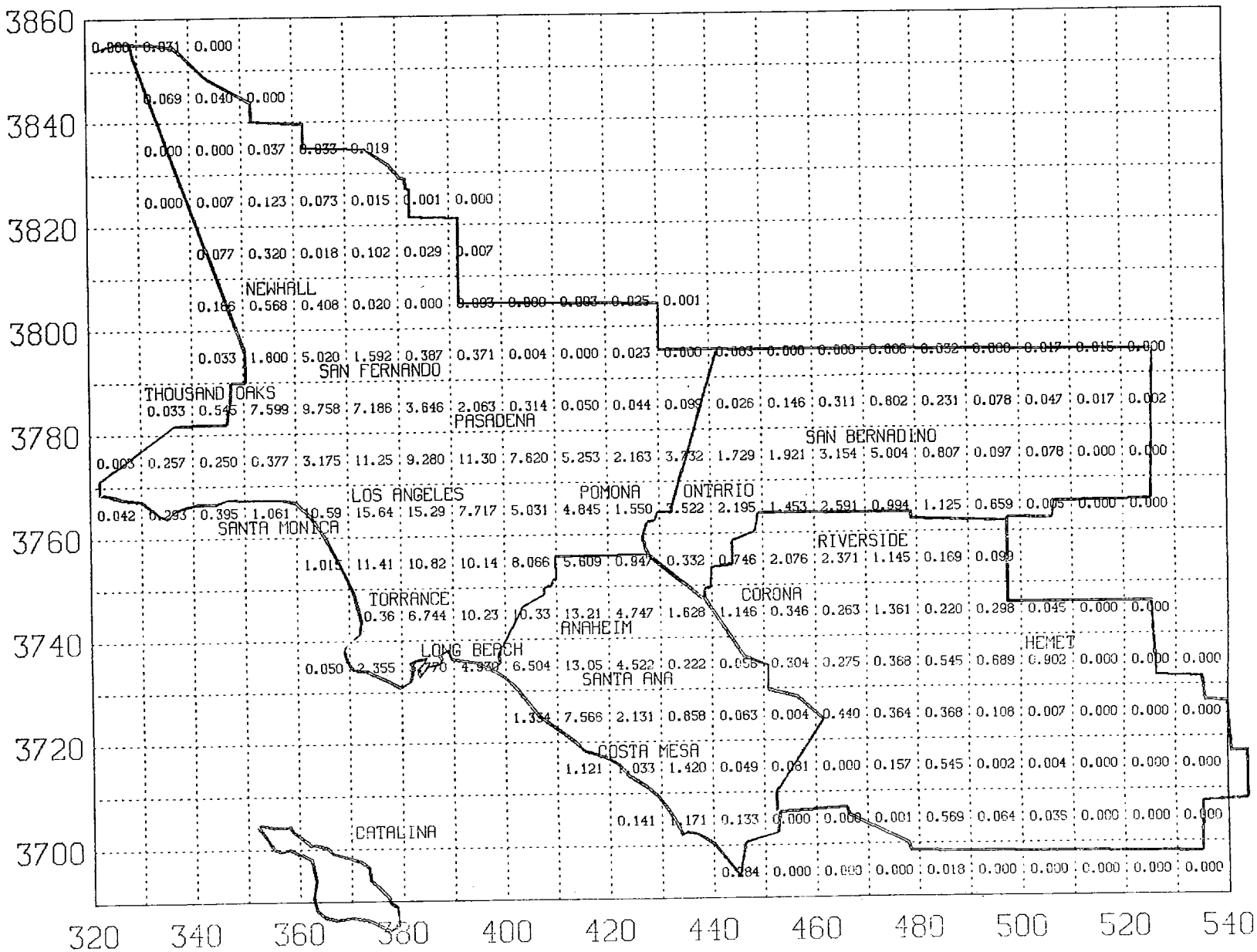


FIGURE 73.

EXHAUST HYDROCARBON EMISSIONS

FREEWAY AVERAGE DAILY (TONS)

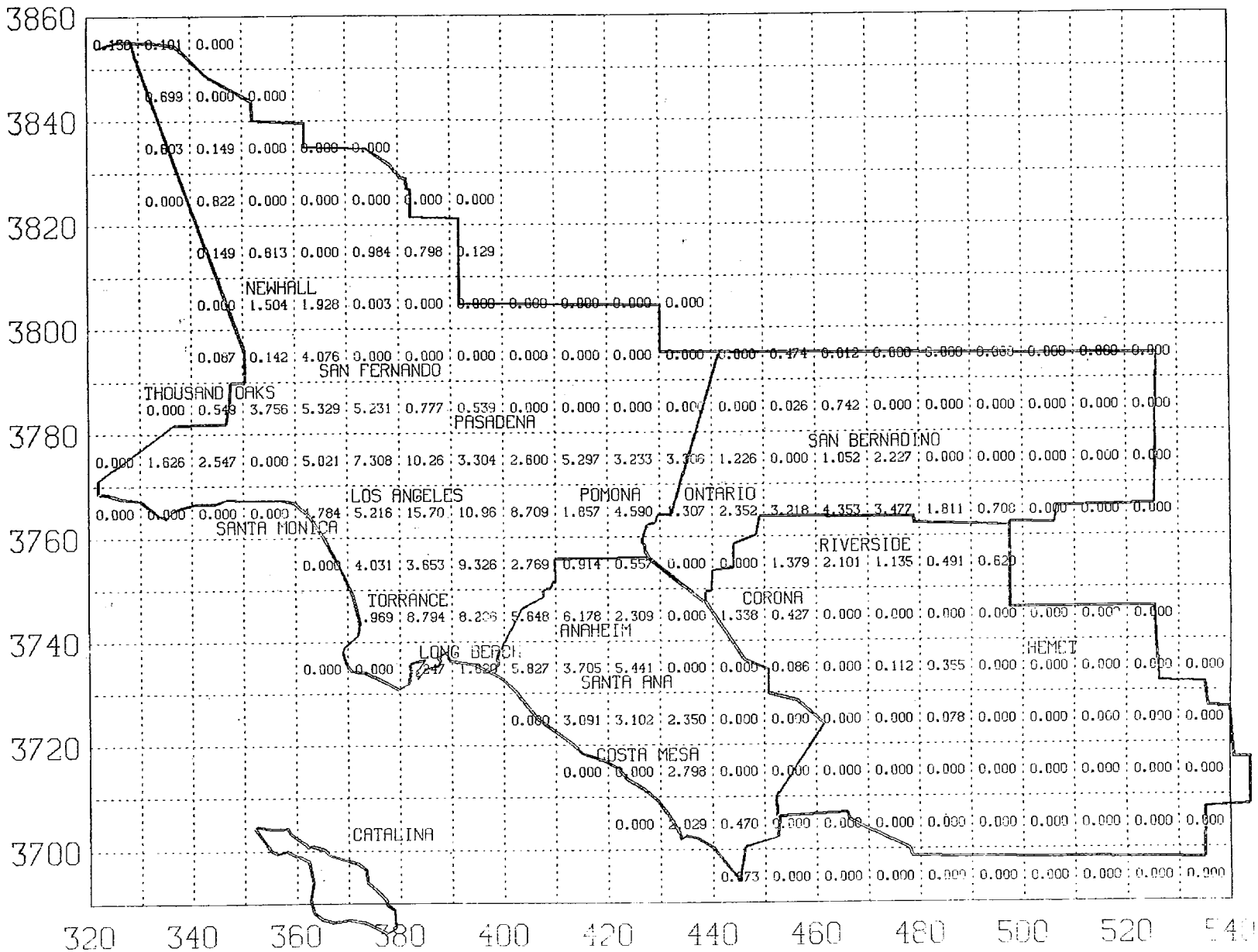


FIGURE 74.

EXHAUST HYDROCARBON EMISSIONS

TOTAL AVERAGE DAILY (TONS)

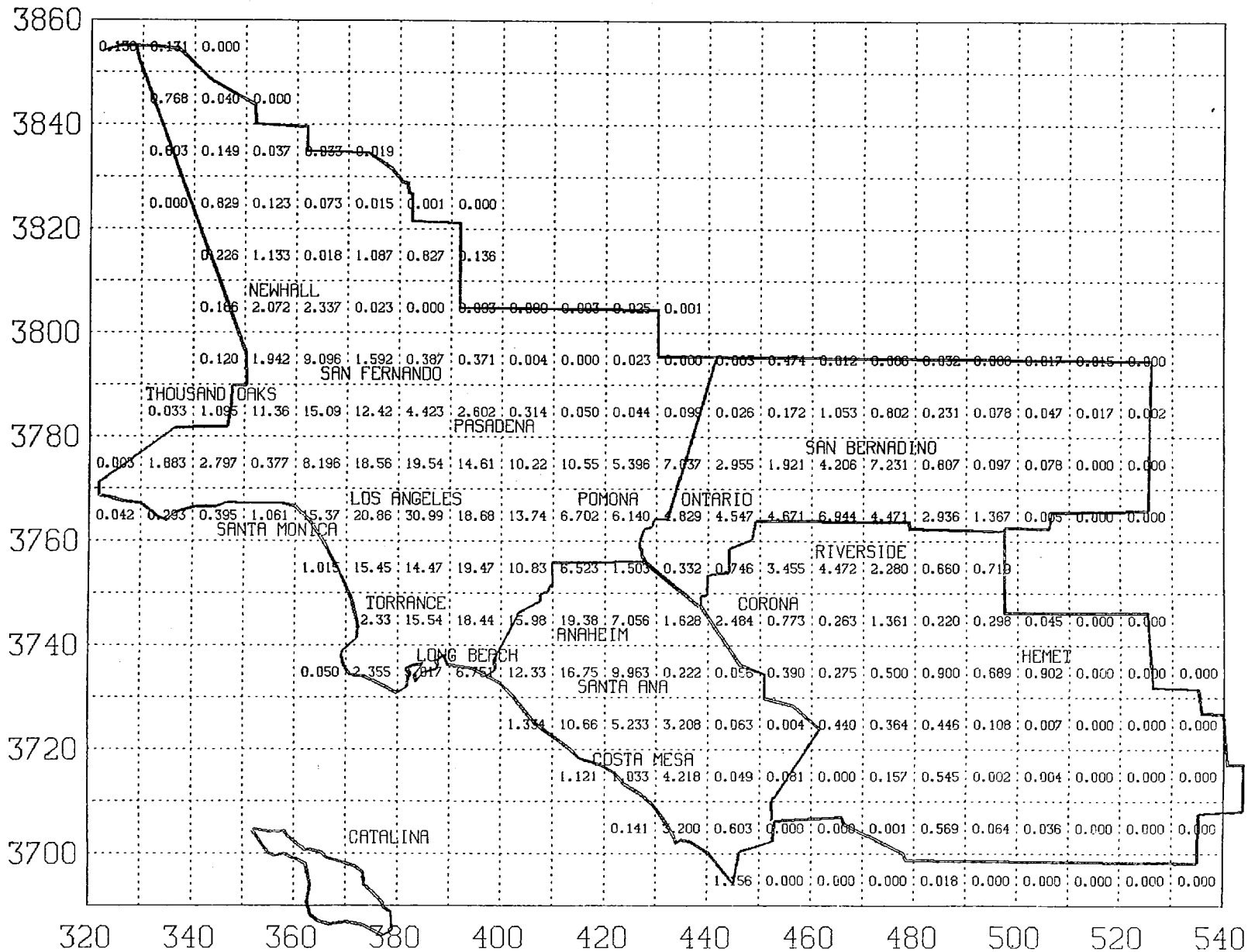


FIGURE 75.

EVAPORATIVE HYDROCARBON EMISSIONS

NON-FREEWAY AVERAGE DAILY (TONS)

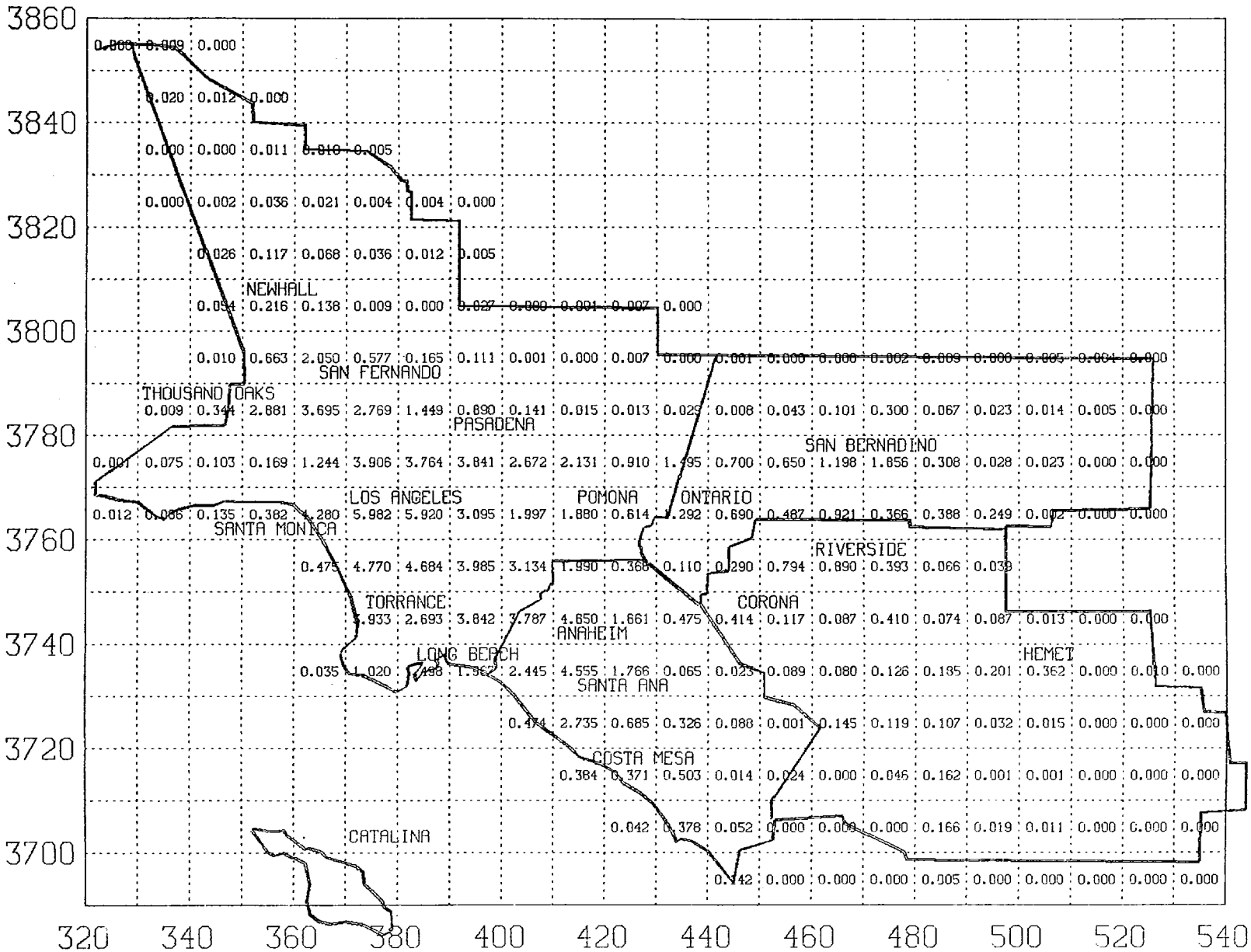


FIGURE 76.

EVAPORATIVE HYDROCARBON EMISSIONS

FREEWAY AVERAGE DAILY (TONS)

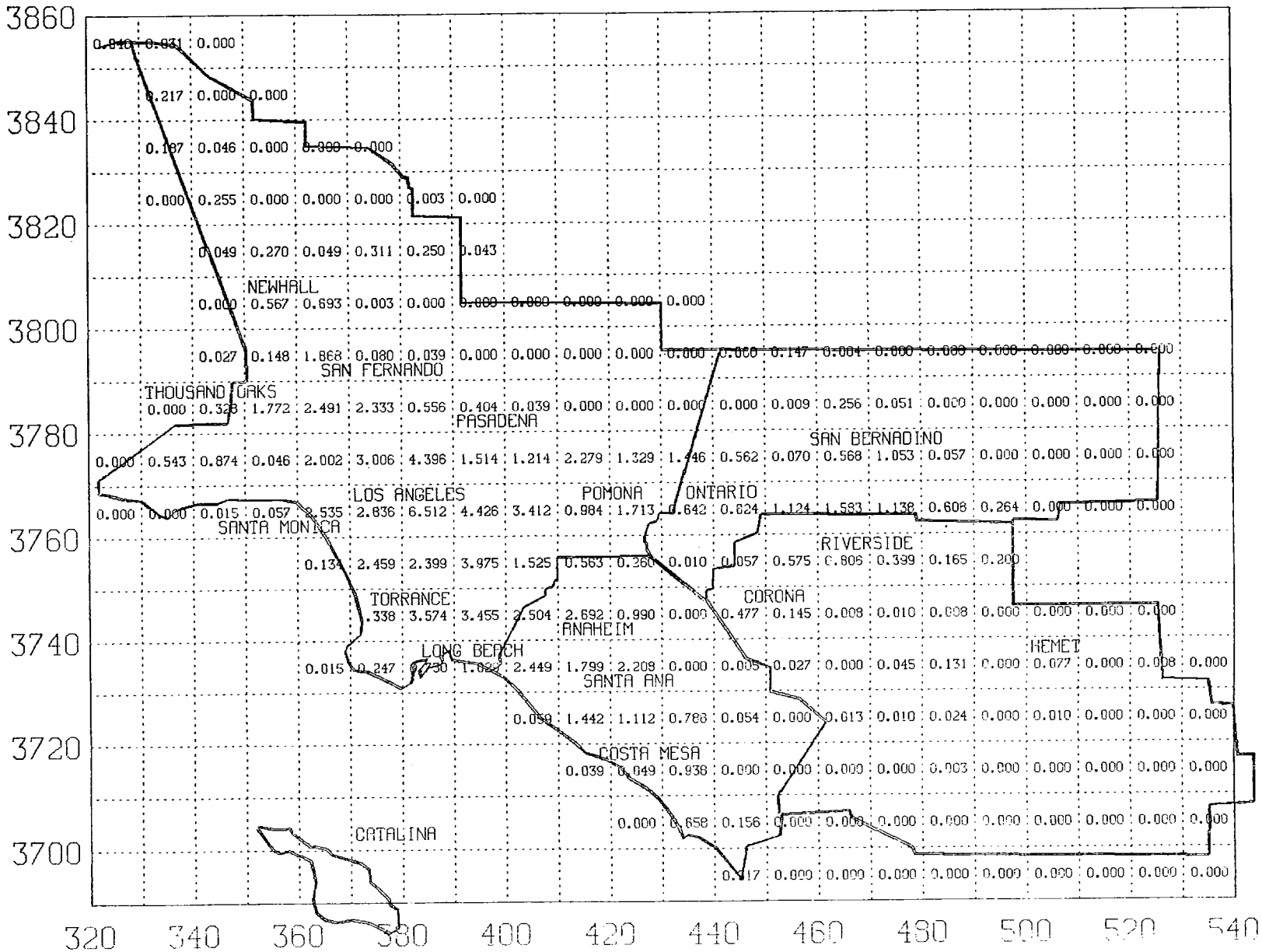


FIGURE 77.

EVAPORATIVE HYDROCARBON EMISSIONS

TOTAL AVERAGE DAILY (TONS)

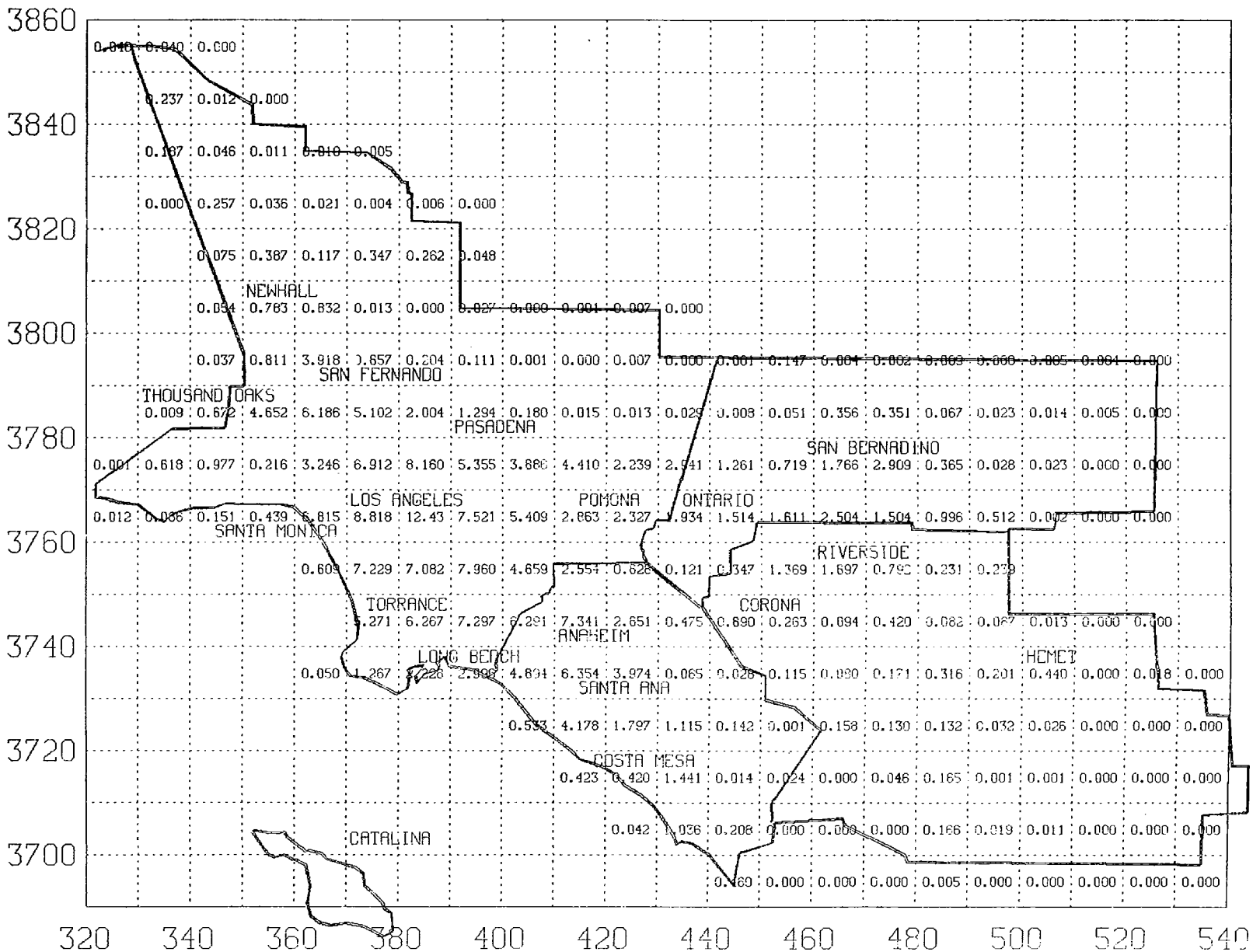


FIGURE 78.

CRANKCASE HYDROCARBON EMISSIONS

NON-FREEWAY AVERAGE DAILY (TONS)

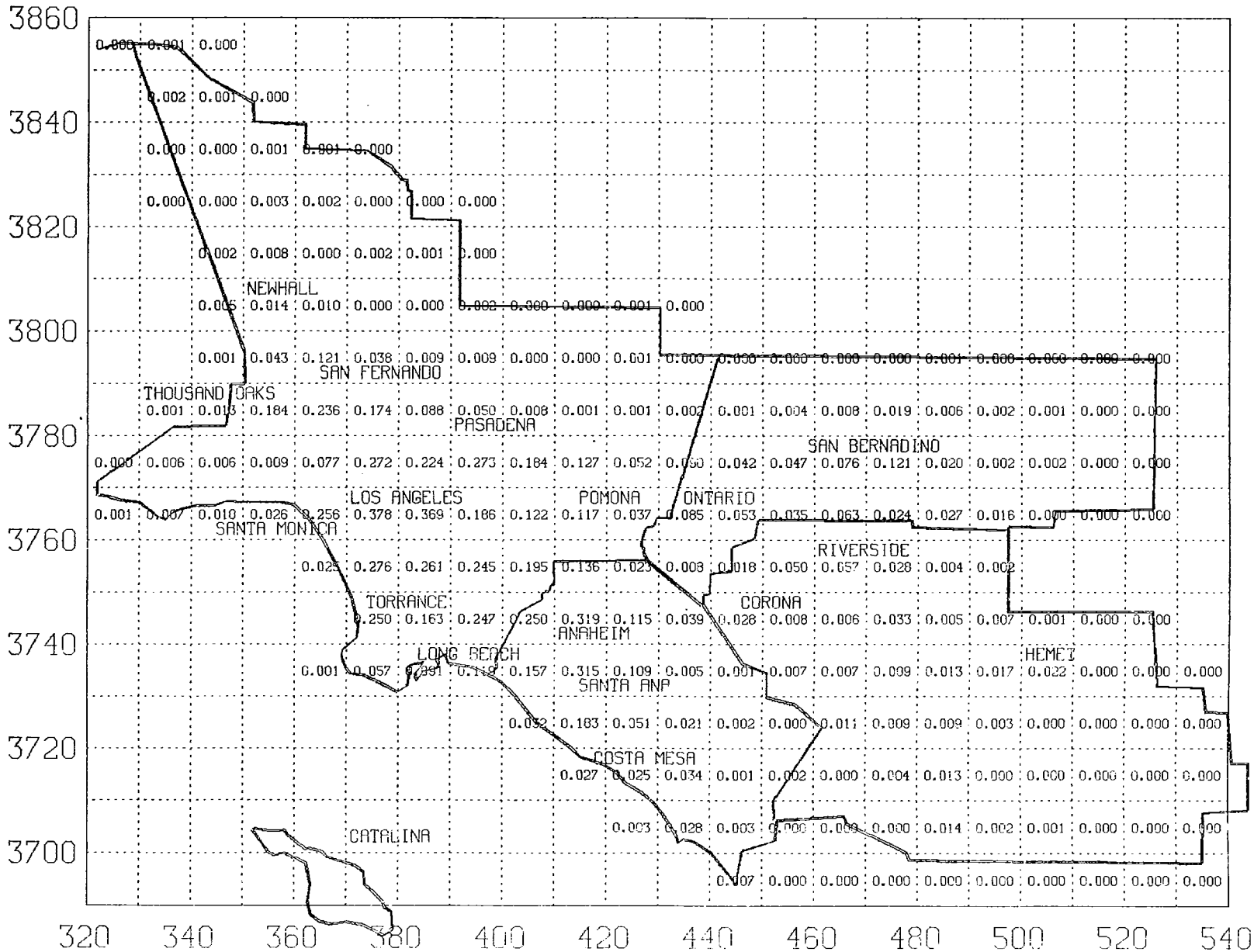


FIGURE 79.

CRANKCASE HYDROCARBON EMISSIONS

FREEWAY AVERAGE DAILY (TONS)

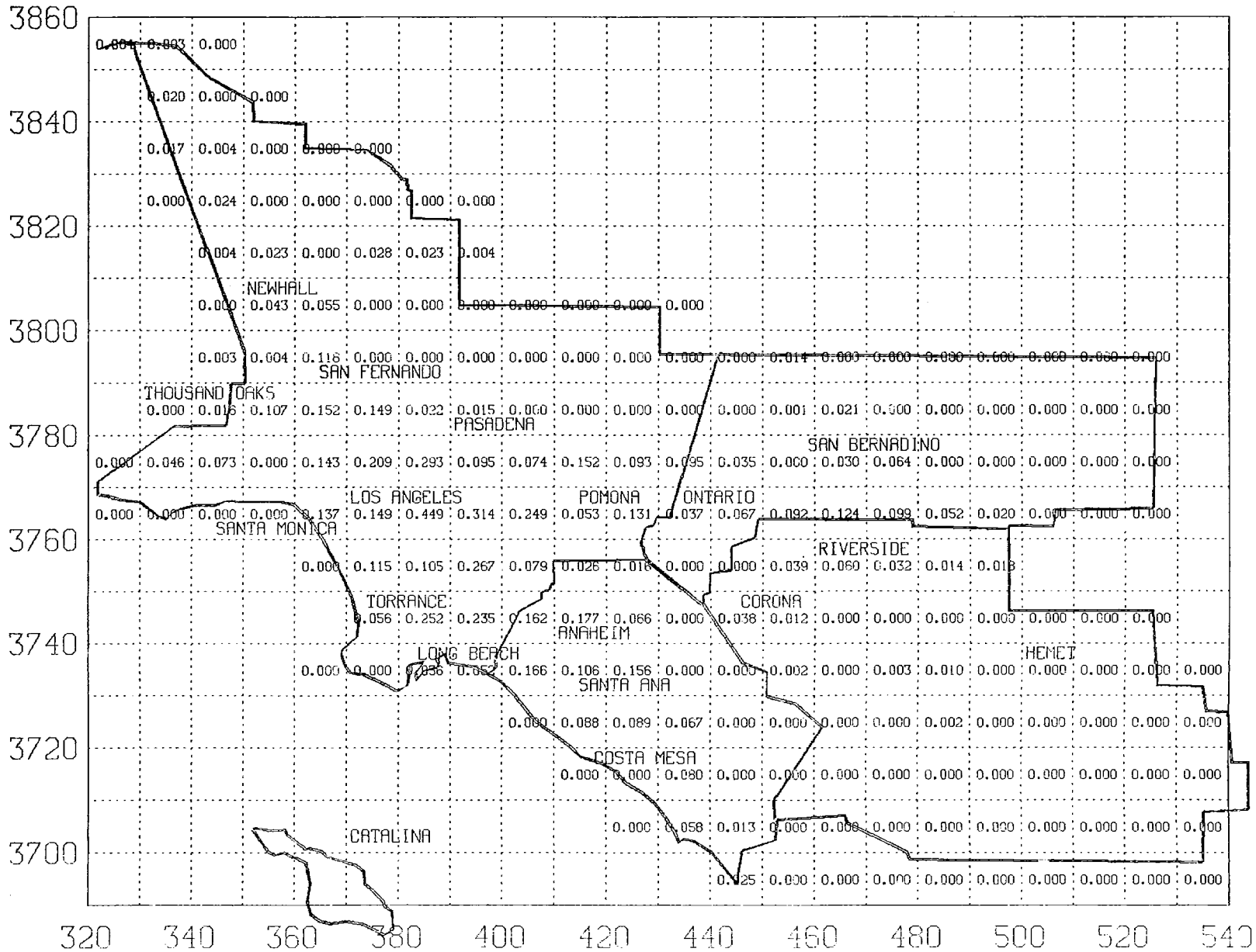


FIGURE 80.

CRANKCASE HYDROCARBON EMISSIONS

TOTAL AVERAGE DAILY (TONS)

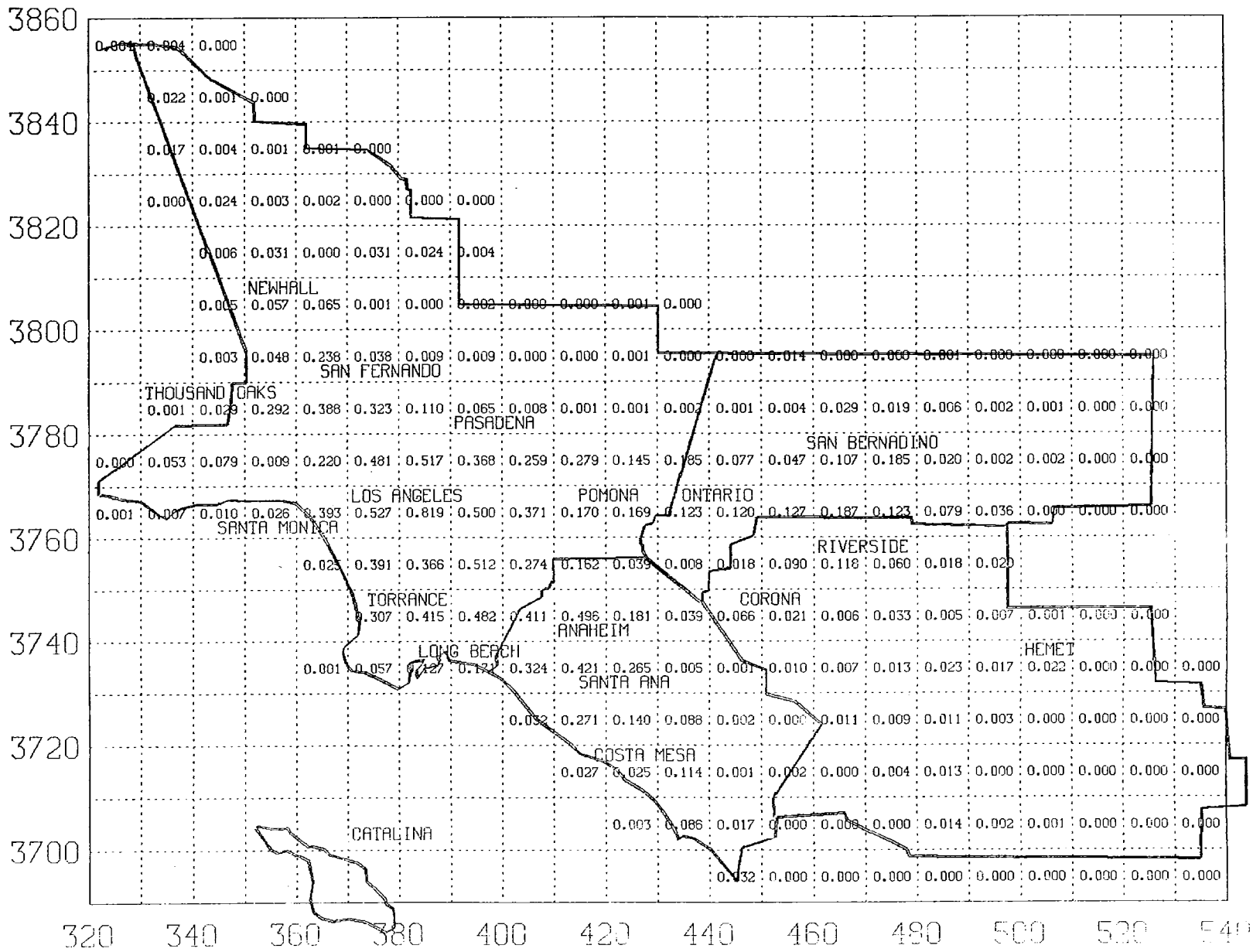


FIGURE 81.

TOTAL HYDROCARBON EMISSIONS

NON-FREEWAY AVERAGE DAILY (TONS)

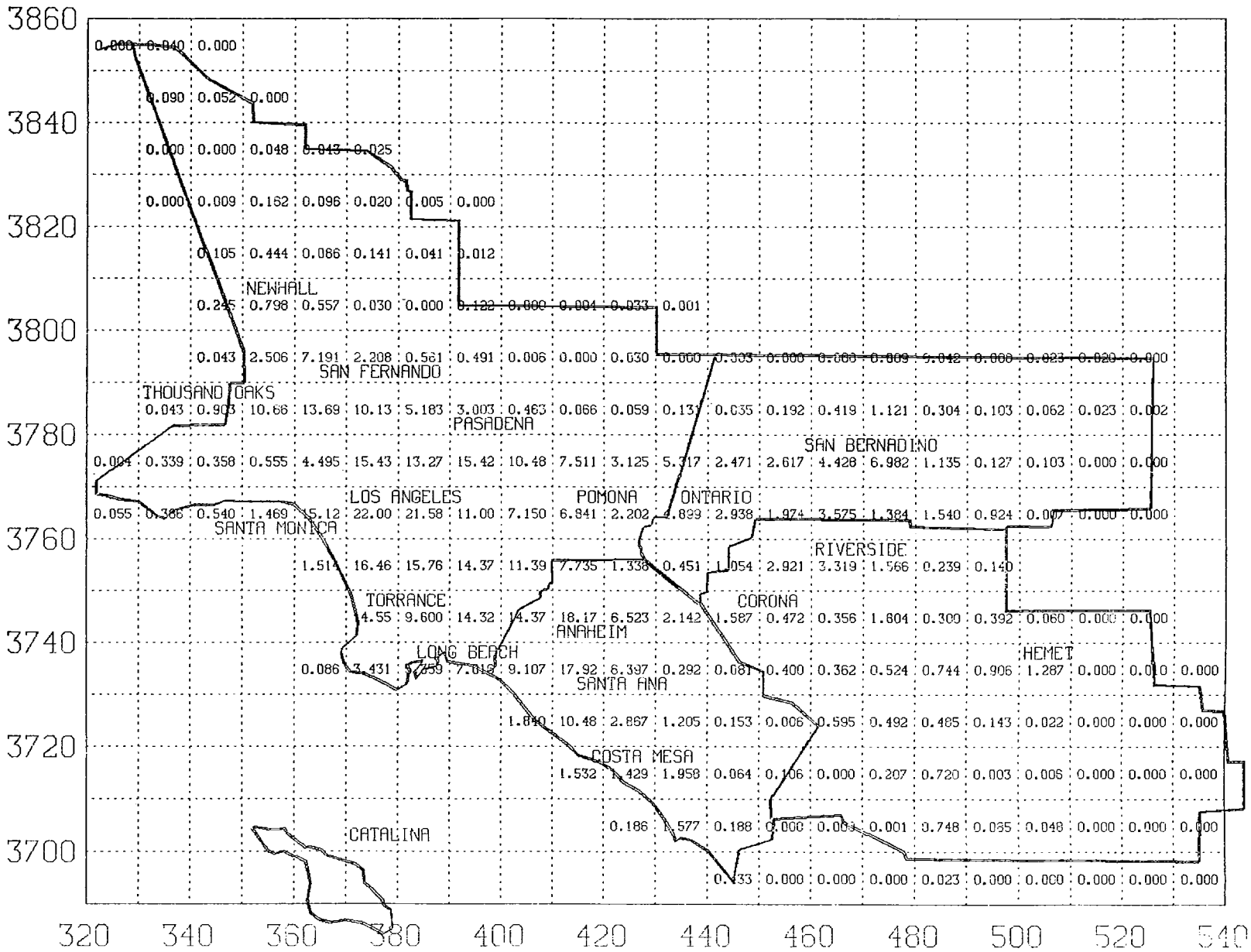


FIGURE 82.

TOTAL HYDROCARBON EMISSIONS

FREEWAY AVERAGE DAILY (TONS)

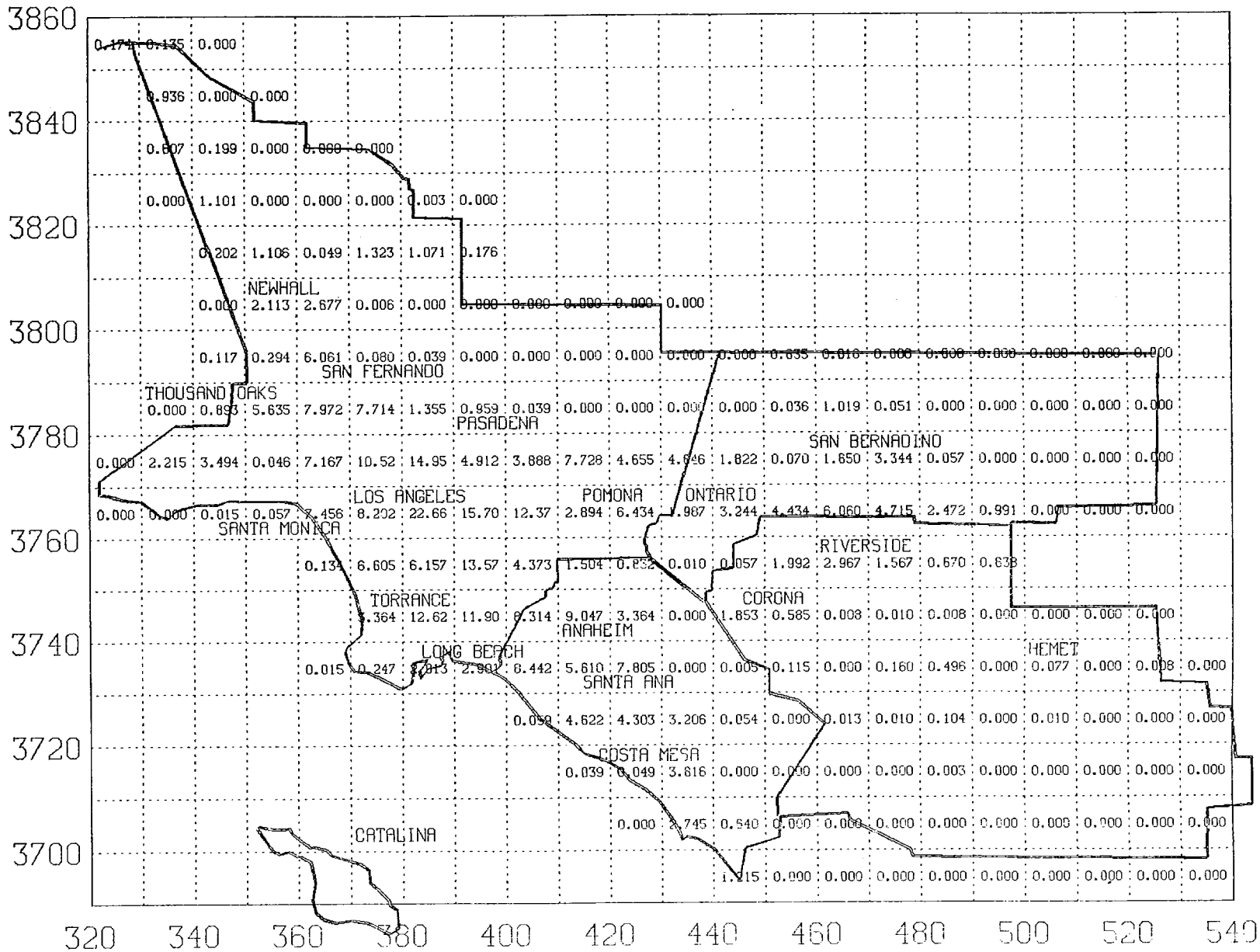


FIGURE 83.

TOTAL HYDROCARBON EMISSIONS

TOTAL AVERAGE DAILY (TONS)

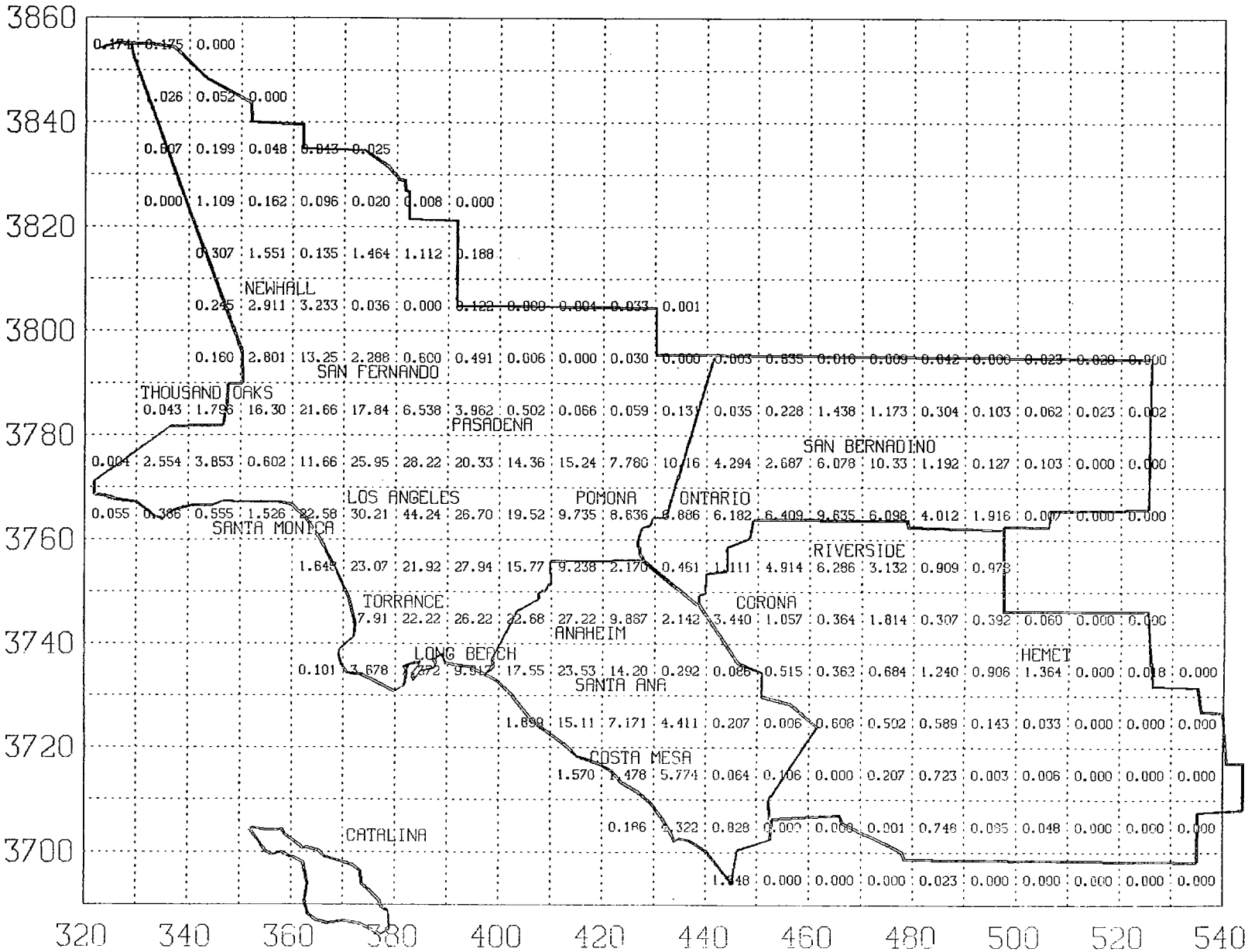


FIGURE 84.

CARBON MONOXIDE EMISSIONS

NON-FREEWAY AVERAGE DAILY (TONS)

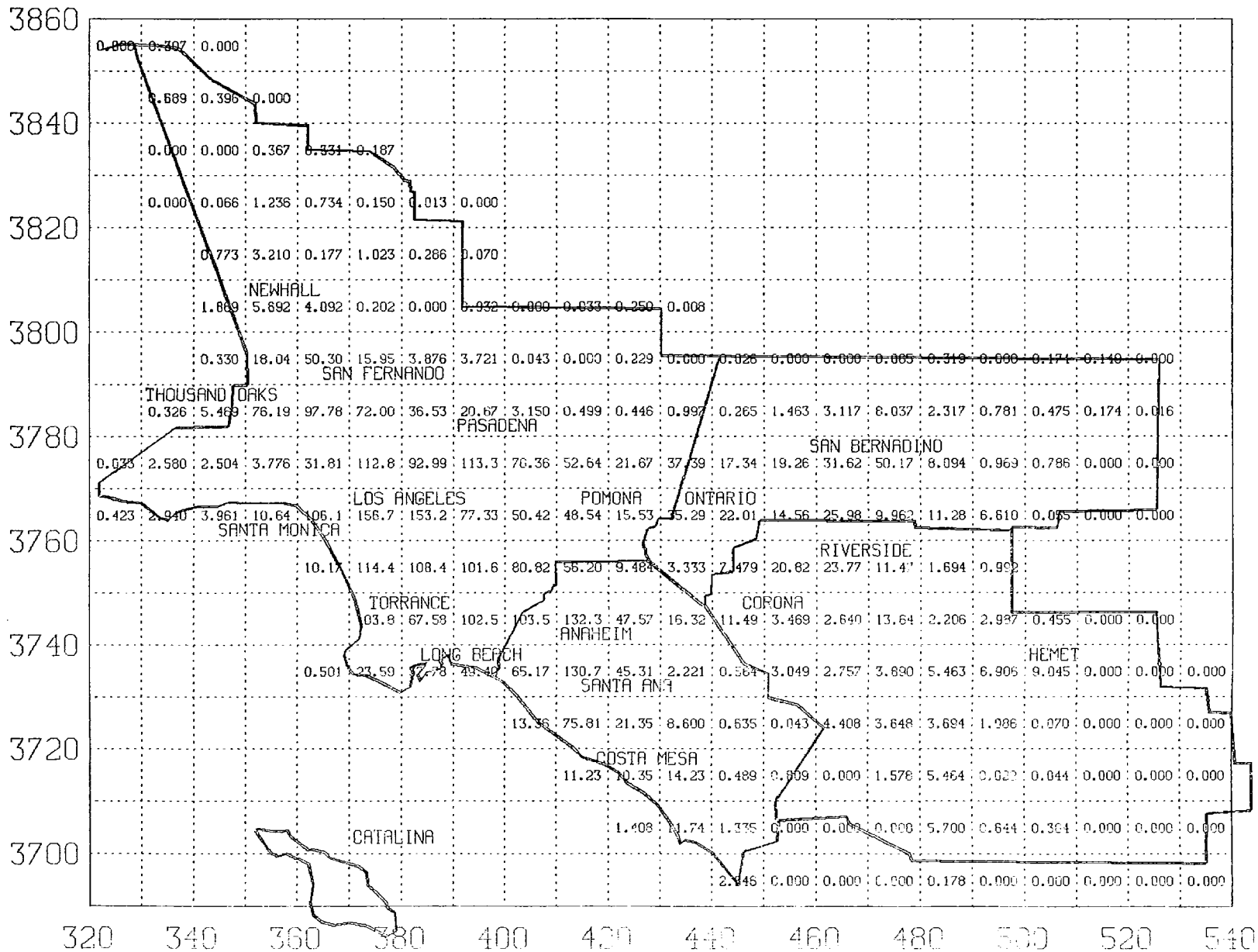


FIGURE 85.

CARBON MONOXIDE EMISSIONS

FREEWAY AVERAGE DAILY (TONS)

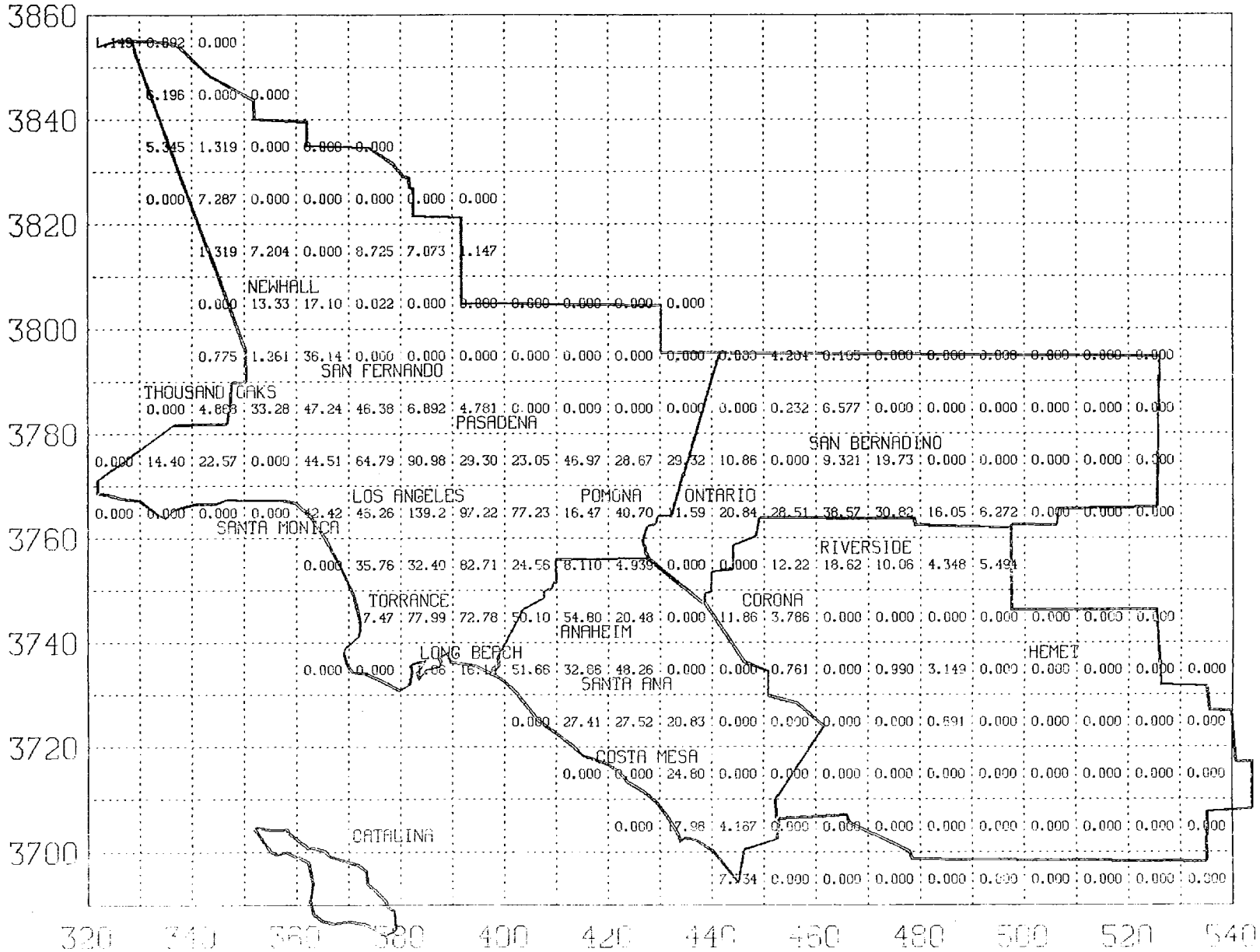


FIGURE 86.

CARBON MONOXIDE EMISSIONS

TOTAL AVERAGE DAILY (TONS)

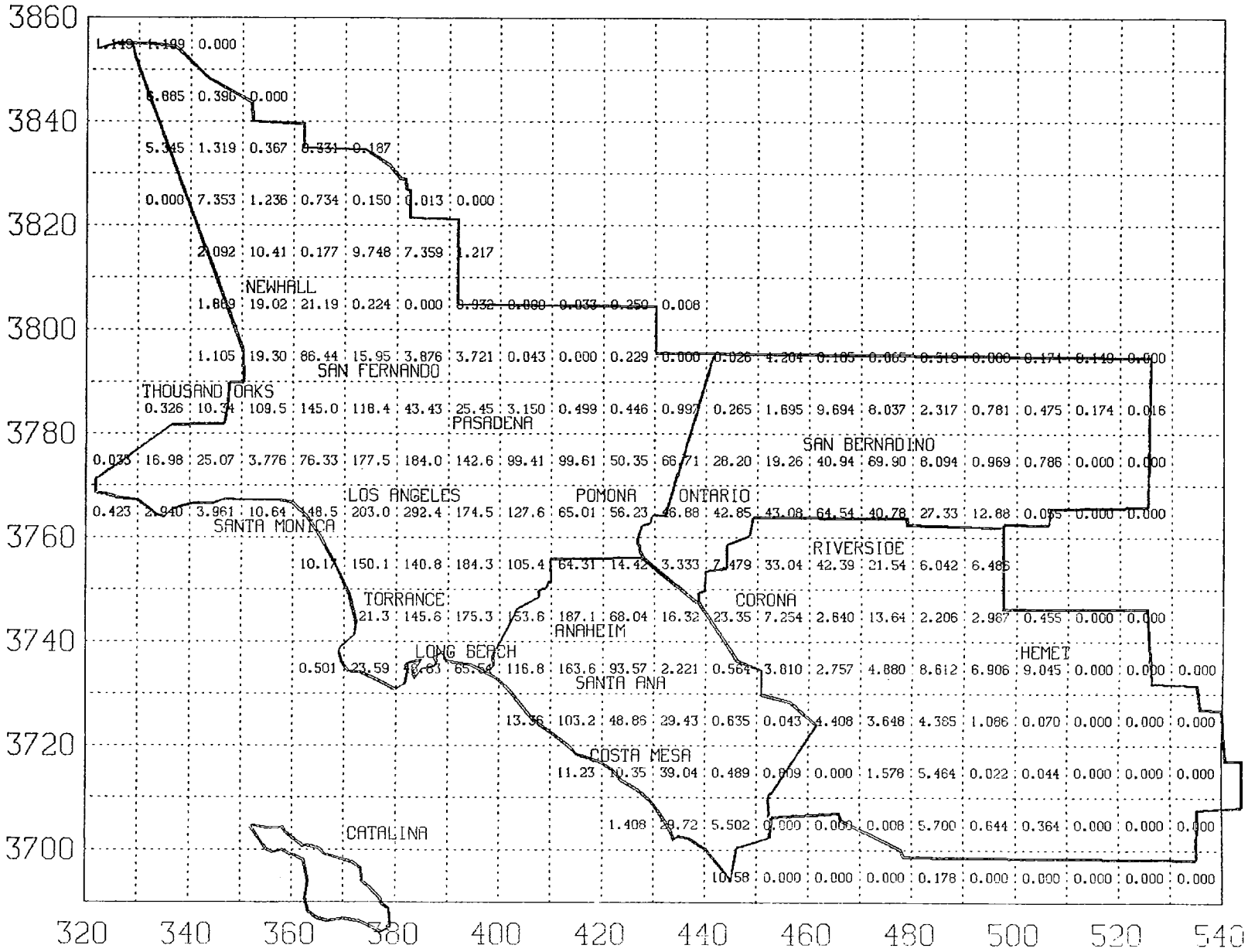


FIGURE 87.

NITROGEN OXIDES EMISSIONS

NON-FREEWAY AVERAGE DAILY (TONS)

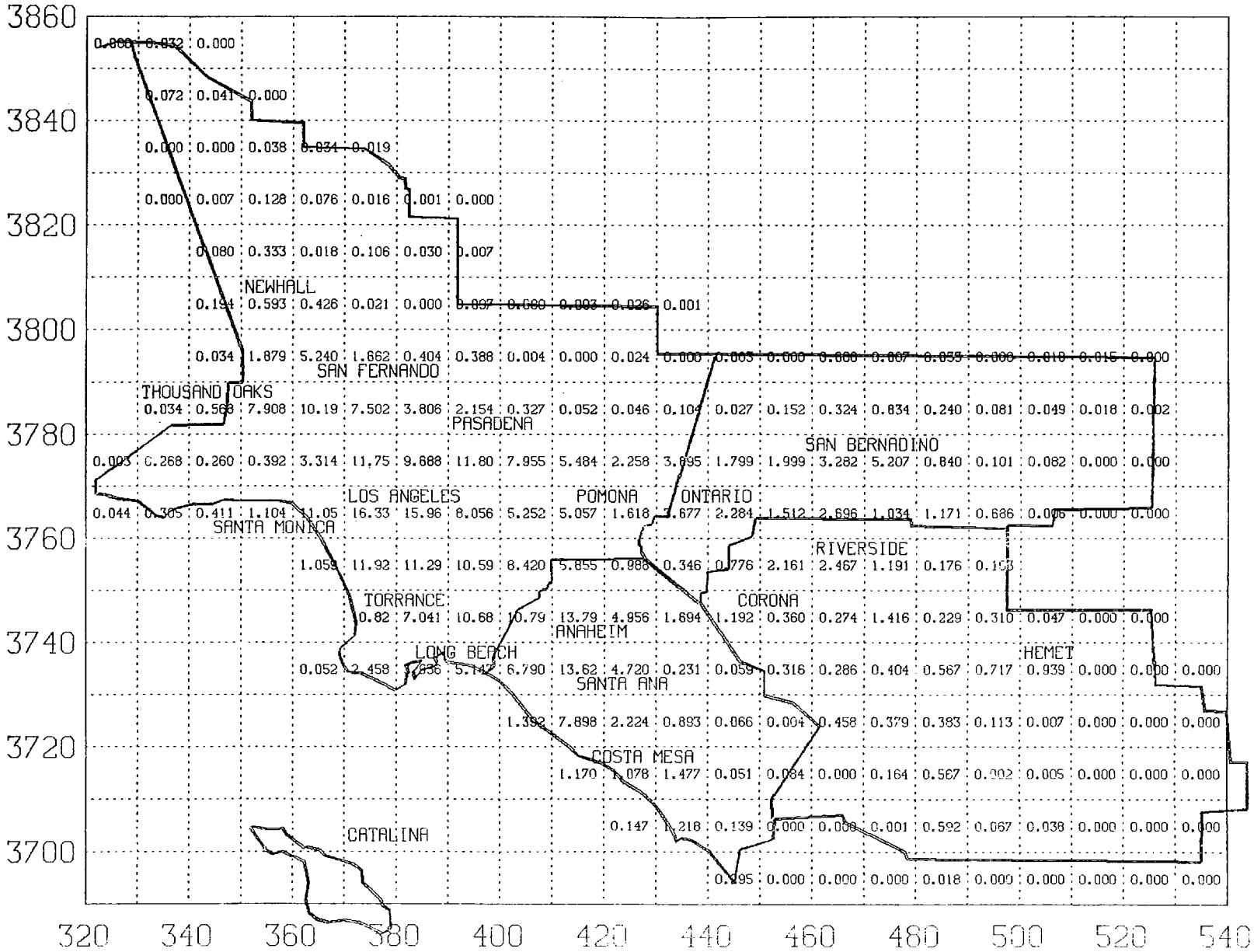


FIGURE 88.

NITROGEN OXIDES EMISSIONS

FREEWAY AVERAGE DAILY (TONS)

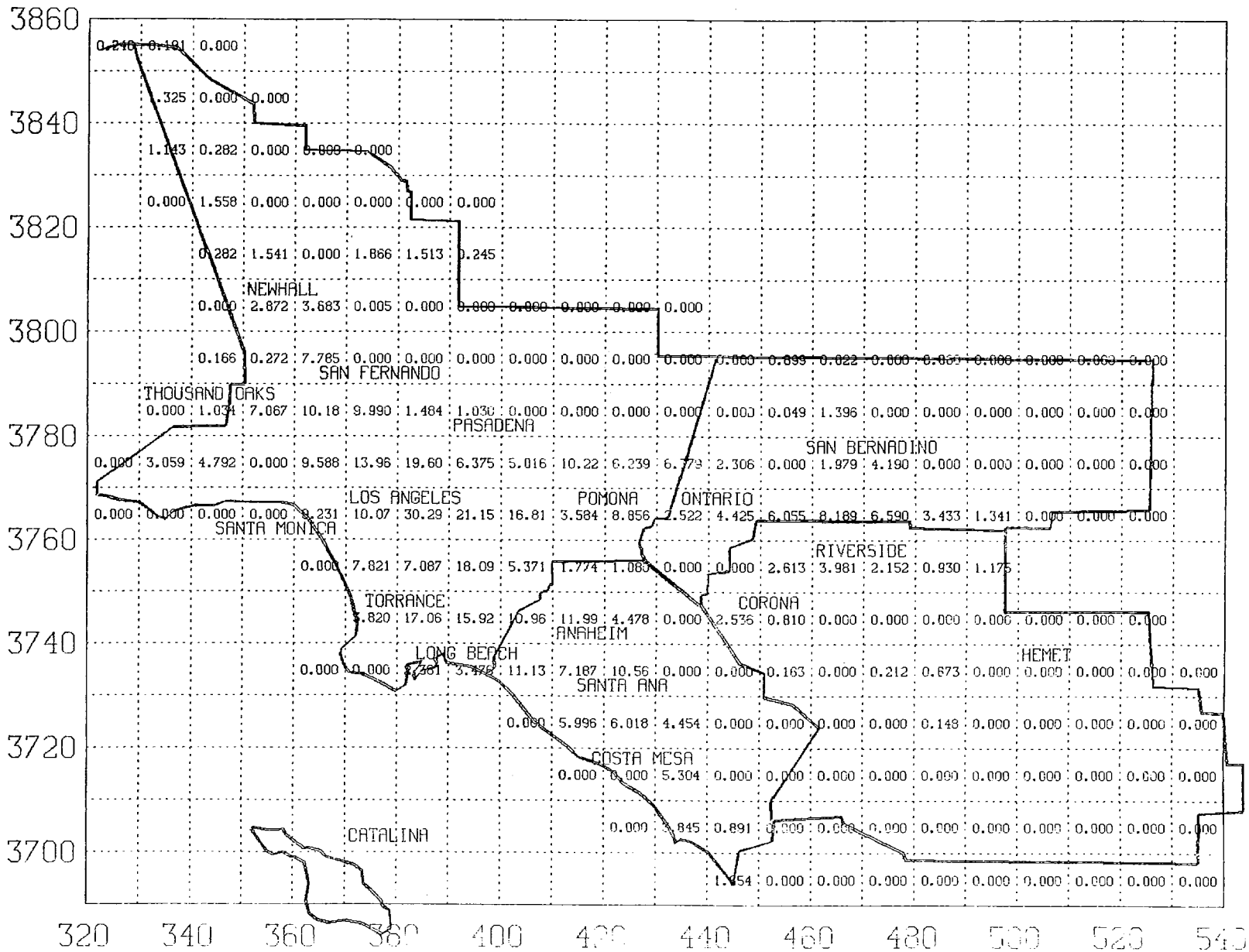


FIGURE 89.

NITROGEN OXIDES EMISSIONS

TOTAL AVERAGE DAILY (TONS)

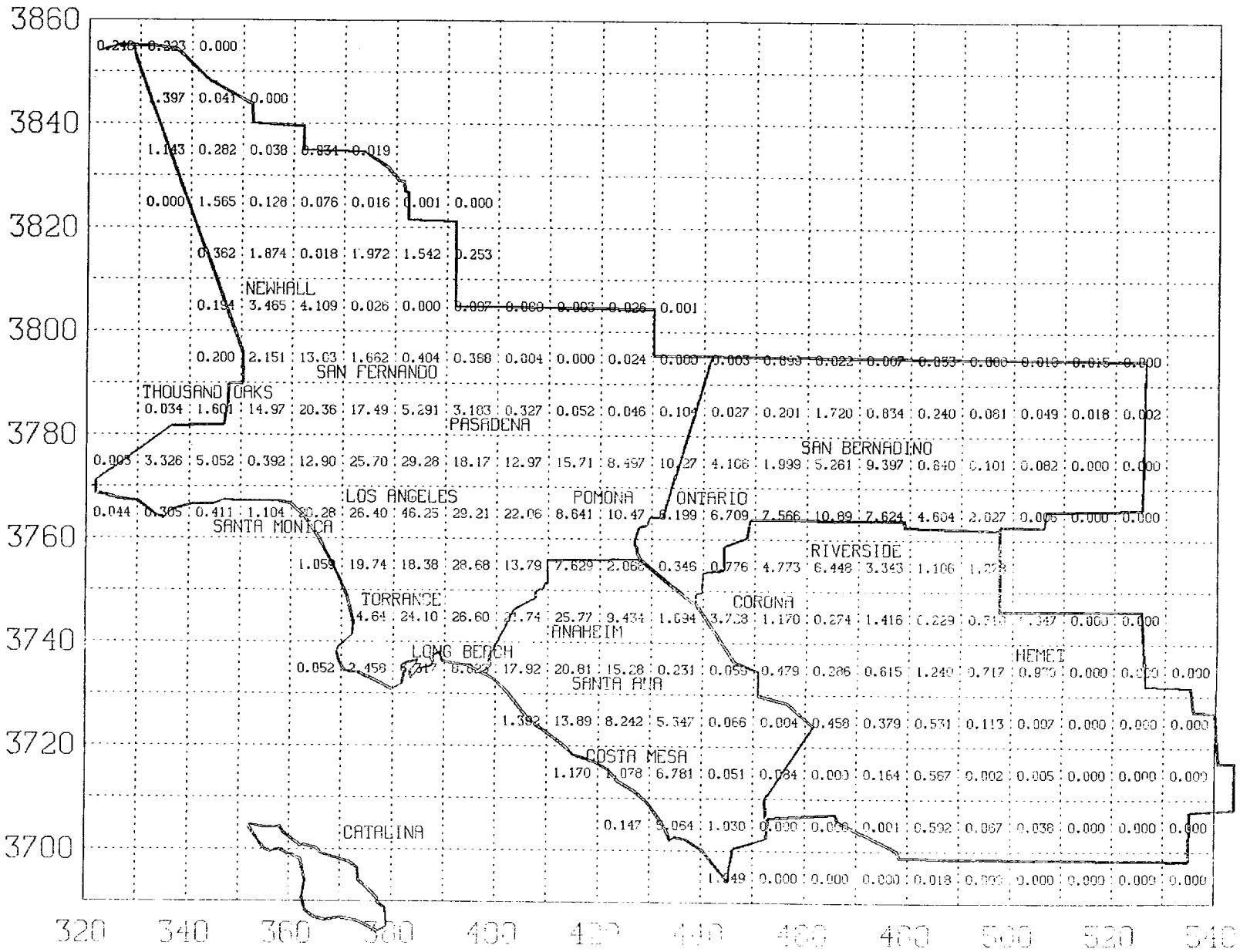


FIGURE 90.

SULFUR DIOXIDE EMISSIONS

NON-FREEWAY AVERAGE DAILY (TONS)

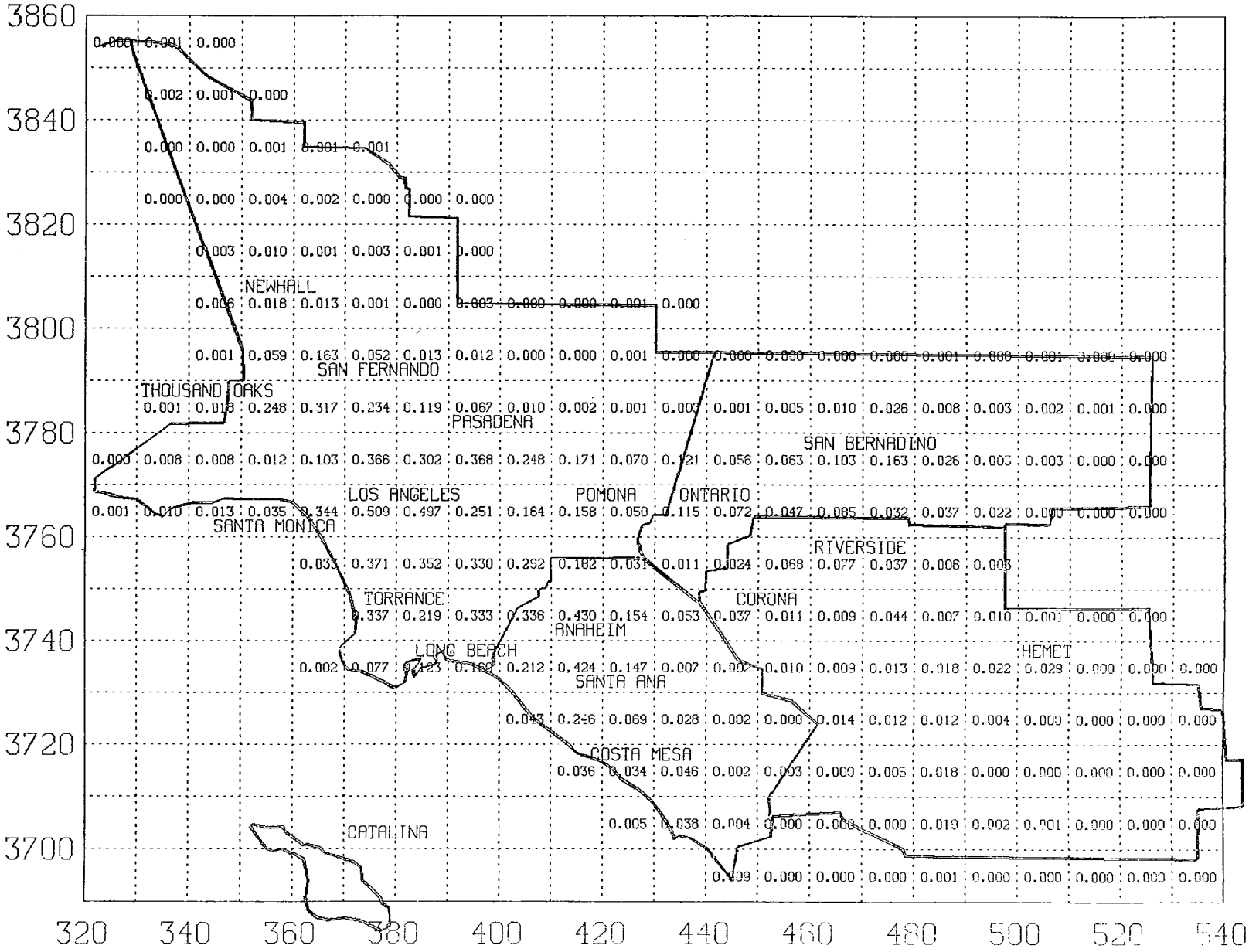


FIGURE 91.

SULFUR DIOXIDE EMISSIONS

FREEWAY AVERAGE DAILY (TONS)

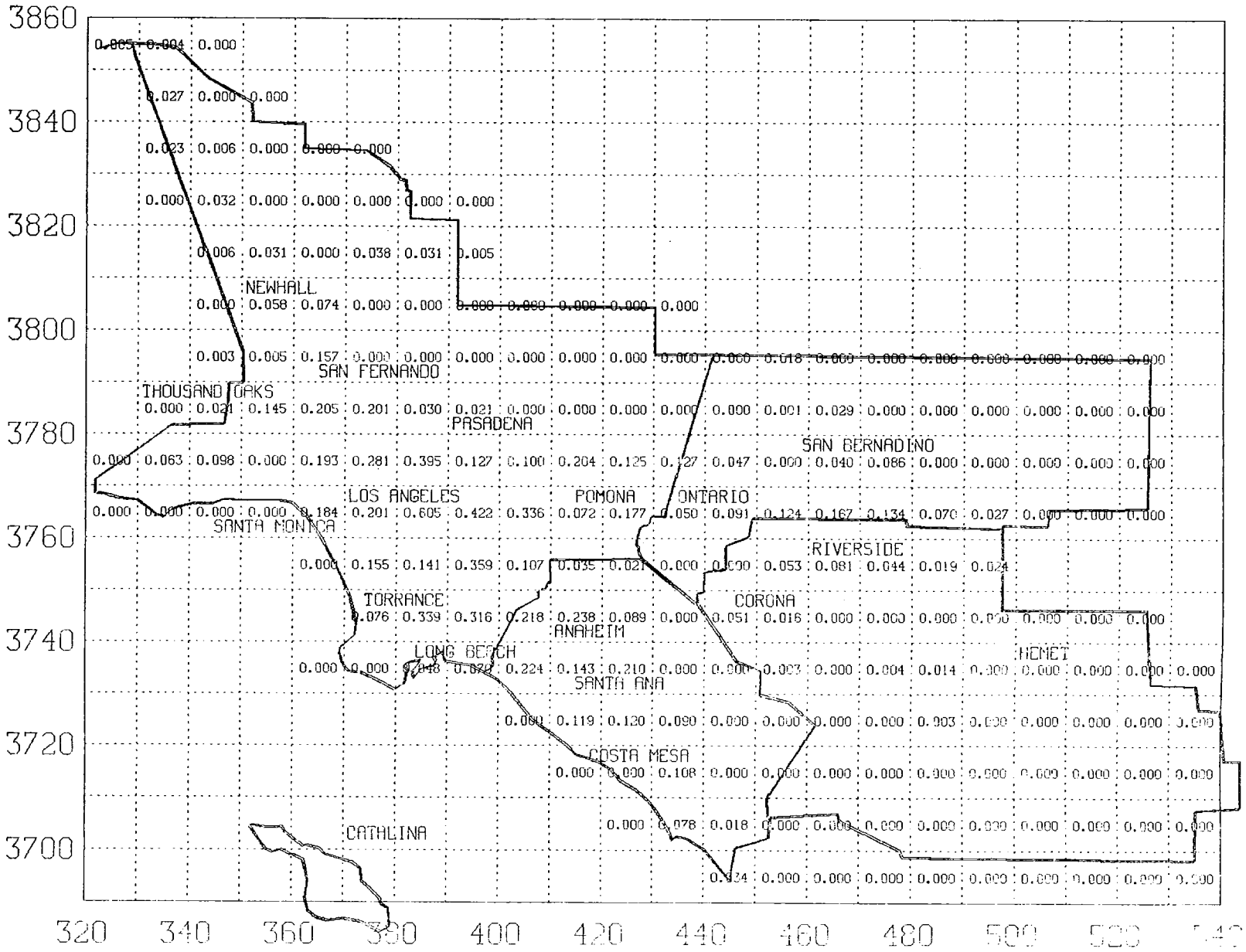


FIGURE 92.

SULFUR DIOXIDE EMISSIONS

TOTAL AVERAGE DAILY (TONS)

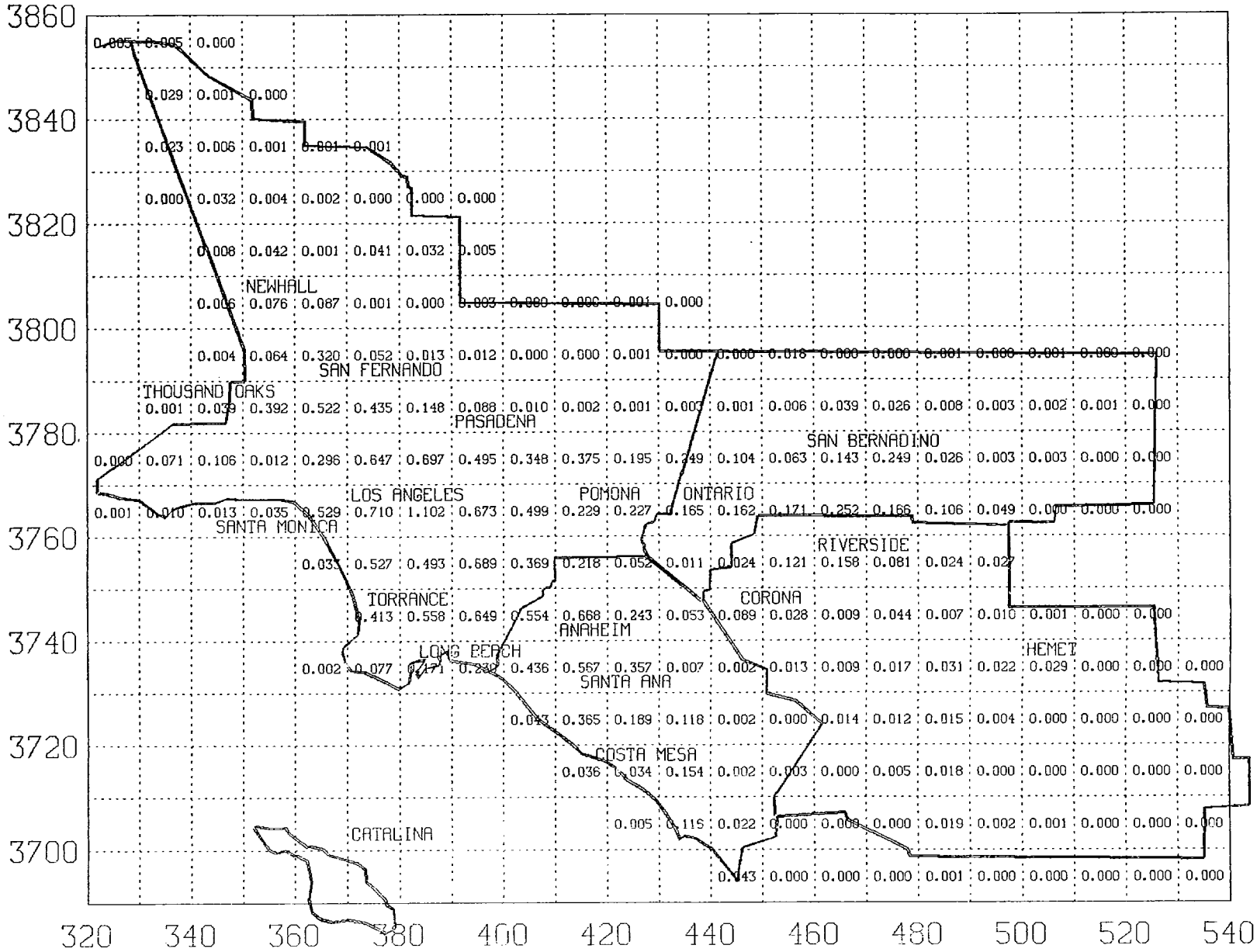


FIGURE 93.

PARTICULATE EMISSIONS

NON-FREEWAY AVERAGE DAILY (TONS)

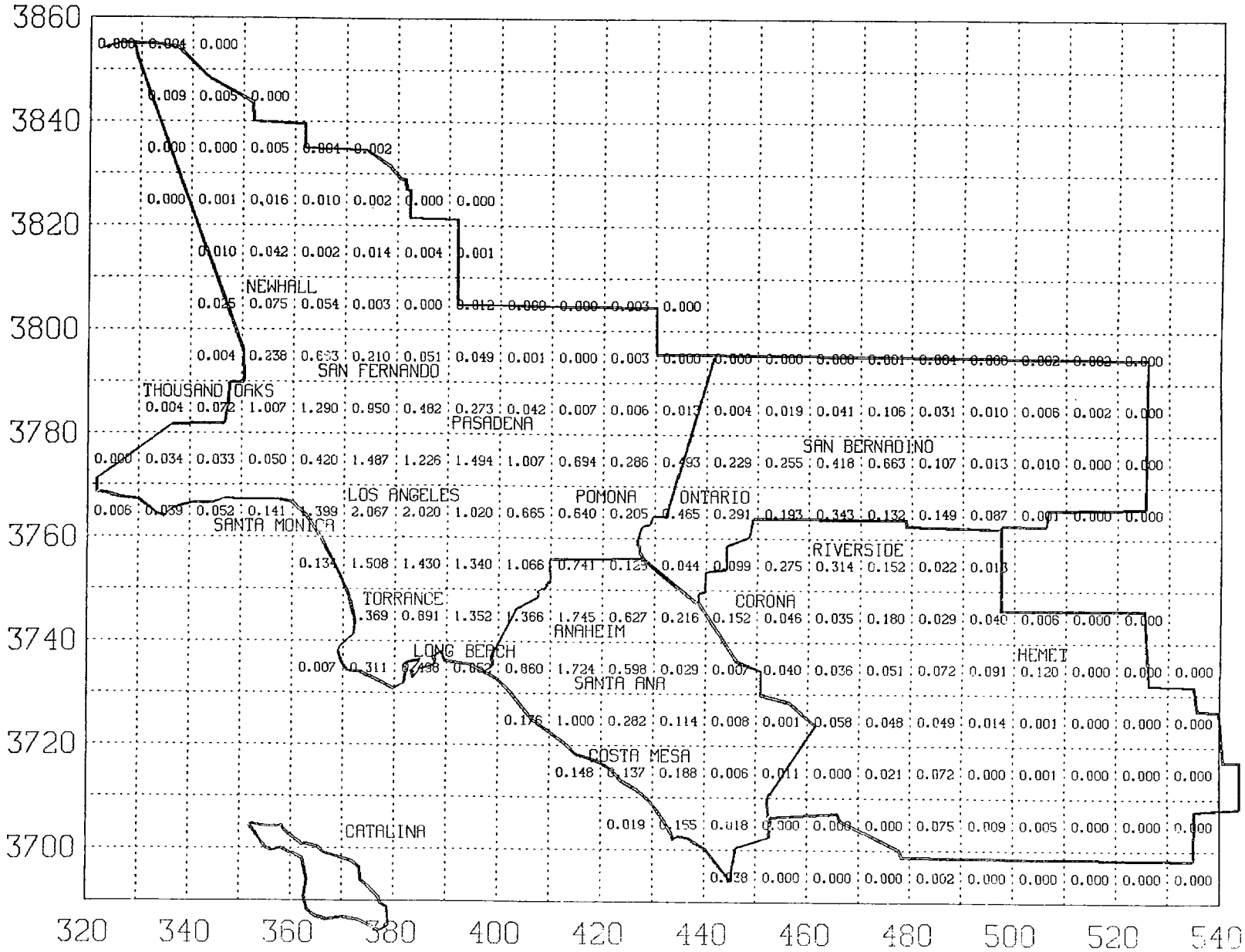


FIGURE 94.

PARTICULATE EMISSIONS

FREEWAY AVERAGE DAILY (TONS)

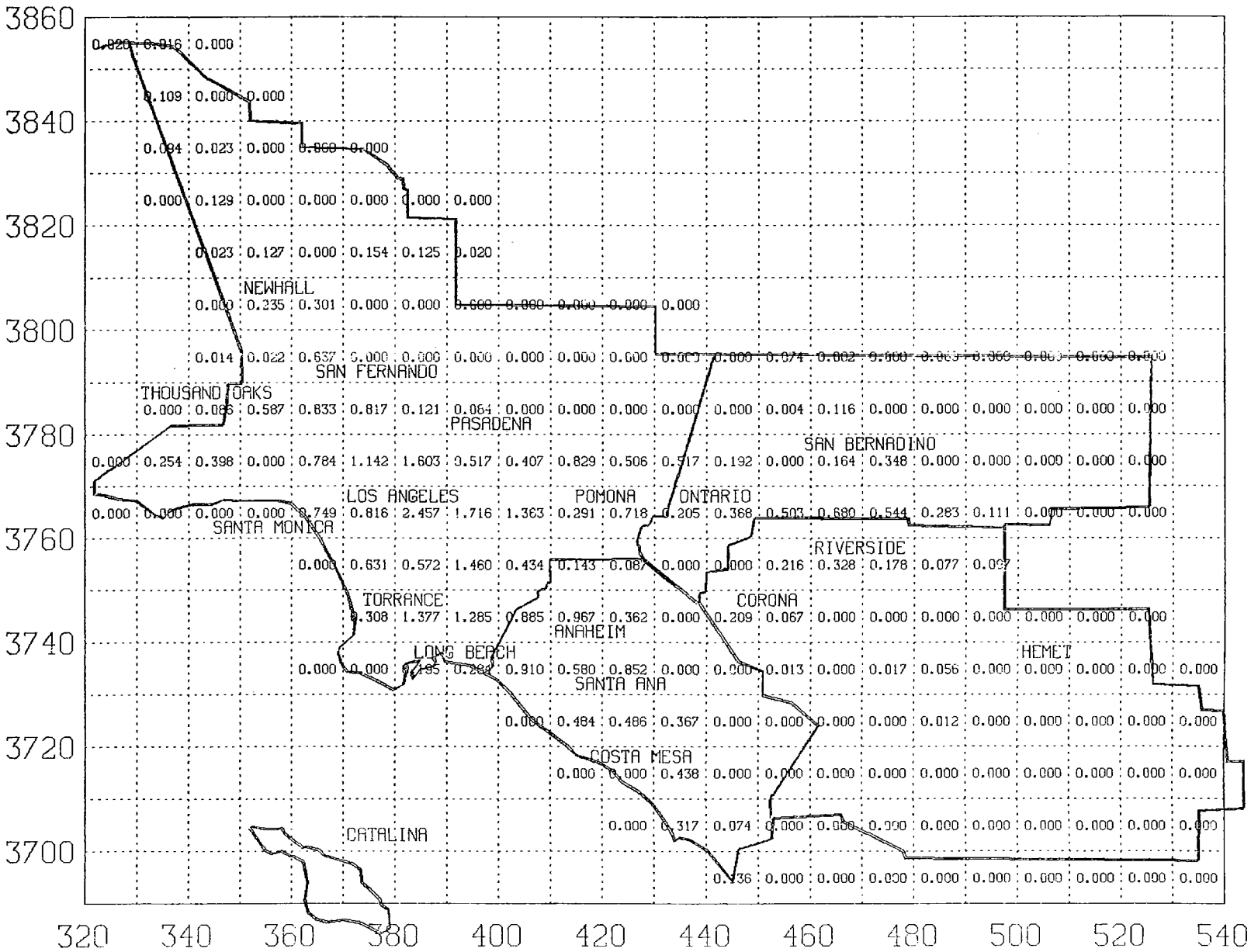
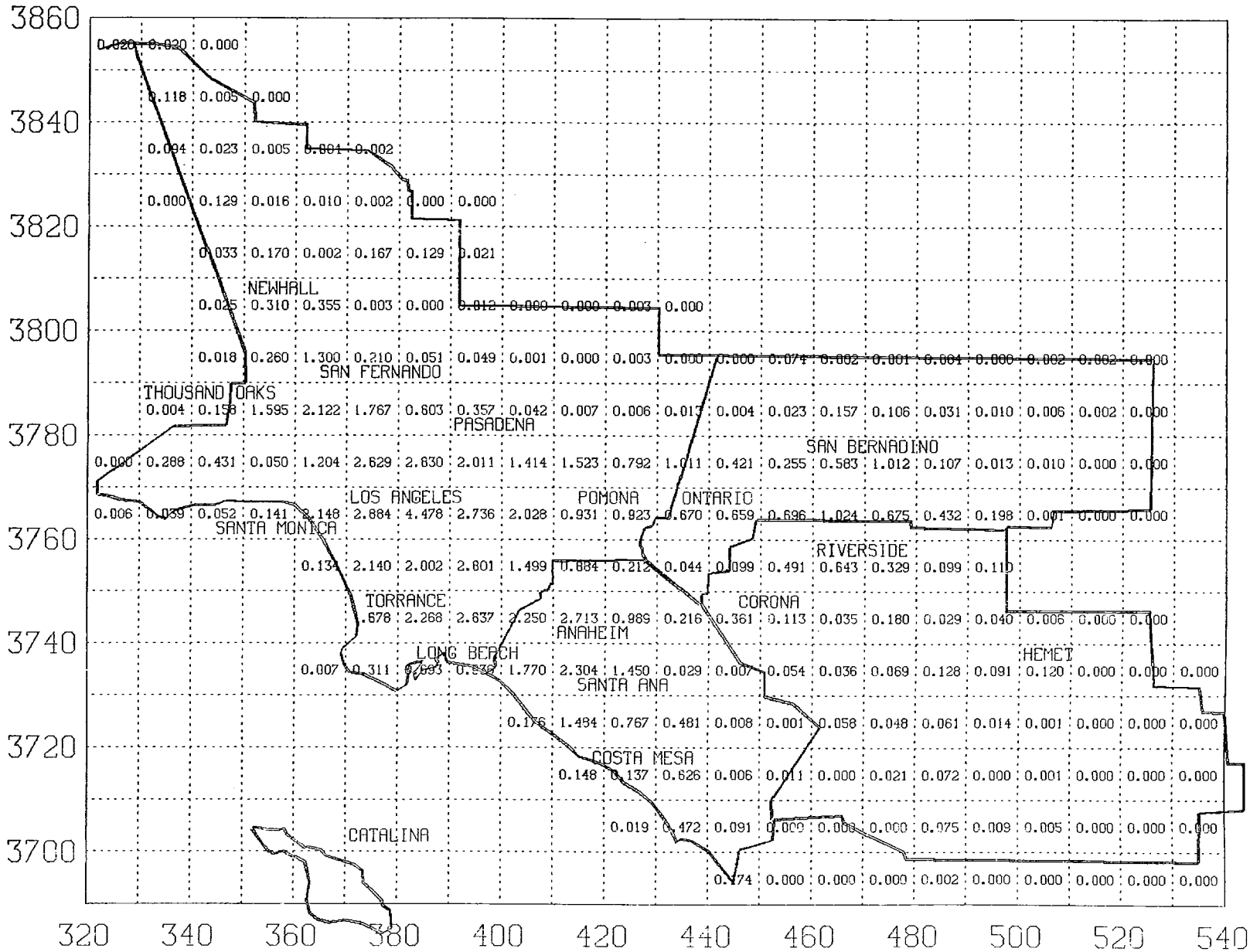


FIGURE 95.

PARTICULATE EMISSIONS

TOTAL AVERAGE DAILY (TONS)



1975 VMT Inventory

A 1975 VMT inventory for the South Coast Air Basin is presented in Tables 29 through 33 and Figures 96 through 98. The inventory consists of VMT by county for seasonal and annual average weekday and weekend traffic and is broken down into non-freeway, freeway and total traffic. The maps show the spatial distribution of the annual average VMT for non-freeway, freeway and total traffic. The grid squares dotted in on the maps are 10 km by 10 km.

Table 34 presents a light duty vehicle population breakdown by county. These values were computed from the annual average VMT, a knowledge of the fractional vehicle population breakdown by model year and the annual average number of miles traveled by model year.

Table 29. VMT Inventory for the South Coast Air Basin

	NON-FREEWAY VMT	FREEWAY VMT	TOTAL VMT
WINTER			
WEEK DAY	8.5837E+07	6.3346E+07	1.4918E+08
WEEK END	8.5837E+07	5.4211E+07	1.4005E+08
SPRING			
WEEK DAY	8.5837E+07	6.9567E+07	1.5540E+08
WEEK END	8.5837E+07	6.1954E+07	1.4782E+08
SUMMER			
WEEK DAY	8.5837E+07	7.2741E+07	1.5858E+08
WEEK END	8.5837E+07	6.4554E+07	1.5039E+08
FALL			
WEEK DAY	8.5837E+07	6.6290E+07	1.5213E+08
WEEK END	8.5837E+07	5.6840E+07	1.4268E+08
ANNUAL AVG.			
WEEK DAY	8.7499E+07	6.7986E+07	1.5549E+08
WEEK END	6.8671E+07	5.9397E+07	1.2807E+08
DAY	8.2120E+07	6.5532E+07	1.4765E+08
DAY LDP	7.0018E+07	5.5875E+07	1.2589E+08
DAY LDT	1.2102E+07	9.6574E+06	2.1759E+07

Table 30. VMT Inventory for Los Angeles County

	NON-FREEWAY VMT	FREEWAY VMT	TOTAL VMT
WINTER			
WEEK DAY	5.7363E+07	4.4845E+07	1.0221E+08
WEEK END	5.7363E+07	3.6691E+07	9.4055E+07
SPRING			
WEEK DAY	5.7363E+07	4.8904E+07	1.0627E+08
WEEK END	5.7363E+07	4.1486E+07	9.8850E+07
SUMMER			
WEEK DAY	5.7363E+07	5.0579E+07	1.0794E+08
WEEK END	5.7363E+07	4.3210E+07	1.0057E+08
FALL			
WEEK DAY	5.7363E+07	4.6428E+07	1.0379E+08
WEEK END	5.7363E+07	3.7809E+07	9.5173E+07
ANNUAL AVG.			
WEEK DAY	5.8759E+07	4.7689E+07	1.0645E+08
WEEK END	4.5558E+07	3.9799E+07	8.5358E+07
DAY	5.4987E+07	4.5435E+07	1.0042E+08
DAY LDP	4.6384E+07	3.8739E+07	8.5623E+07
DAY LDT	8.1034E+06	6.6957E+06	1.4799E+07

Table 31. VMT Inventory for Orange County

	NON-FREEWAY VMT	FREEWAY VMT	TOTAL VMT
WINTER			
WEEK DAY	1.7618E+07	1.0755E+07	2.8374E+07
WEEK END	1.7618E+07	9.4659E+06	2.7084E+07
SPRING			
WEEK DAY	1.7618E+07	1.1858E+07	2.9477E+07
WEEK END	1.7618E+07	1.0914E+07	2.8532E+07
SUMMER			
WEEK DAY	1.7618E+07	1.2619E+07	3.0238E+07
WEEK END	1.7618E+07	1.1452E+07	2.9070E+07
FALL			
WEEK DAY	1.7618E+07	1.1579E+07	2.9198E+07
WEEK END	1.7618E+07	1.0243E+07	2.7862E+07
ANNUAL AVG.			
WEEK DAY	1.8030E+07	1.1703E+07	2.9733E+07
WEEK END	1.4013E+07	1.0519E+07	2.4532E+07
DAY	1.6882E+07	1.1365E+07	2.8247E+07
DAY LDP	1.4344E+07	9.6898E+06	2.4034E+07
DAY LDT	2.4879E+06	1.6748E+06	4.1627E+06

Table 32. VMT Inventory for Riverside County

	NON-FREEWAY VMT	FREEWAY VMT	TOTAL VMT
WINTER			
WEEK DAY	4.4182E+06	2.3218E+06	6.7400E+06
WEEK END	4.4182E+06	2.6579E+06	7.0761E+06
SPRING			
WEEK DAY	4.4182E+06	2.7466E+06	7.1648E+06
WEEK END	4.4182E+06	3.3361E+06	7.7543E+06
SUMMER			
WEEK DAY	4.4182E+06	3.1464E+06	7.5646E+06
WEEK END	4.4182E+06	3.4840E+06	7.9022E+06
FALL			
WEEK DAY	4.4182E+06	2.5844E+06	7.0025E+06
WEEK END	4.4182E+06	3.0660E+06	7.4842E+06
ANNUAL AVG.			
WEEK DAY	4.3401E+06	2.6998E+06	7.0398E+06
WEEK END	3.7263E+06	3.1360E+06	6.8623E+06
DAY	4.1647E+06	2.8244E+06	6.9891E+06
DAY LDP	3.5510E+06	2.4082E+06	5.9591E+06
DAY LDT	6.1375E+05	4.1623E+05	1.0300E+06

Table 33. VMT Inventory for San Bernardino County

	NON-FREEWAY VMT	FREEWAY VMT	TOTAL VMT
WINTER			
WEEK DAY	6.4367E+06	5.4242E+06	1.1861E+07
WEEK END	6.4367E+06	5.3962E+06	1.1833E+07
SPRING			
WEEK DAY	6.4367E+06	6.0579E+06	1.2495E+07
WEEK END	6.4367E+06	6.2476E+06	1.2684E+07
SUMMER			
WEEK DAY	6.4367E+06	6.3958E+06	1.2832E+07
WEEK END	6.4367E+06	6.4082E+06	1.2845E+07
FALL			
WEEK DAY	6.4367E+06	5.6988E+06	1.2135E+07
WEEK END	6.4367E+06	5.7216E+06	1.2158E+07
ANNUAL AVG.			
WEEK DAY	6.3707E+06	5.8942E+06	1.2265E+07
WEEK END	5.3727E+06	5.9434E+06	1.1316E+07
DAY	6.0355E+06	5.9082E+06	1.1994E+07
DAY LDP	5.1987E+06	5.0376E+06	1.0226E+07
DAY LDT	8.9682E+05	8.7069E+05	1.7675E+06

FIGURE 96.

NON-FREEWAY VMT PER DAY (10000 MILES)

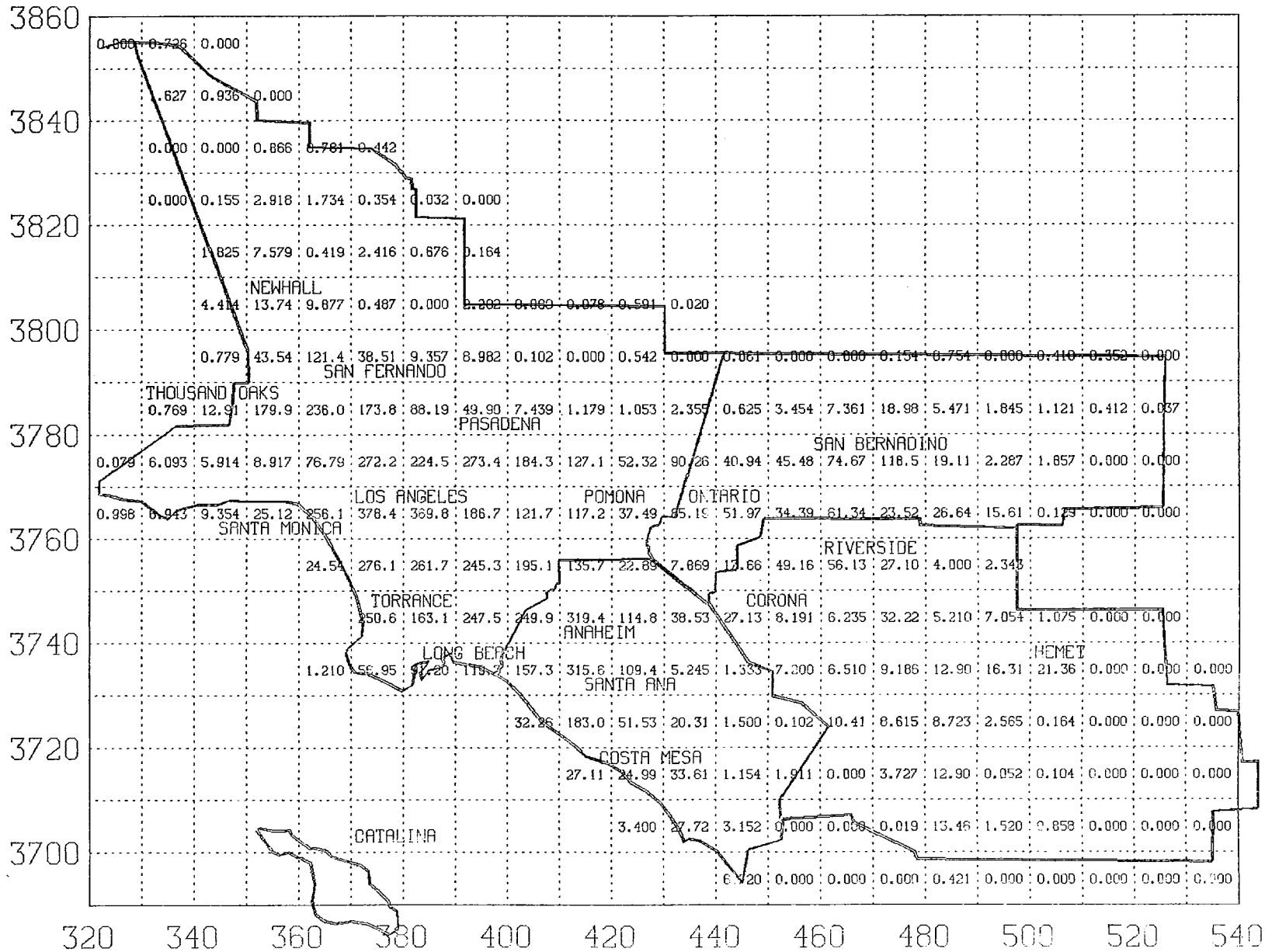


FIGURE 97.

FREEWAY VMT PER DAY (10000 MILES)

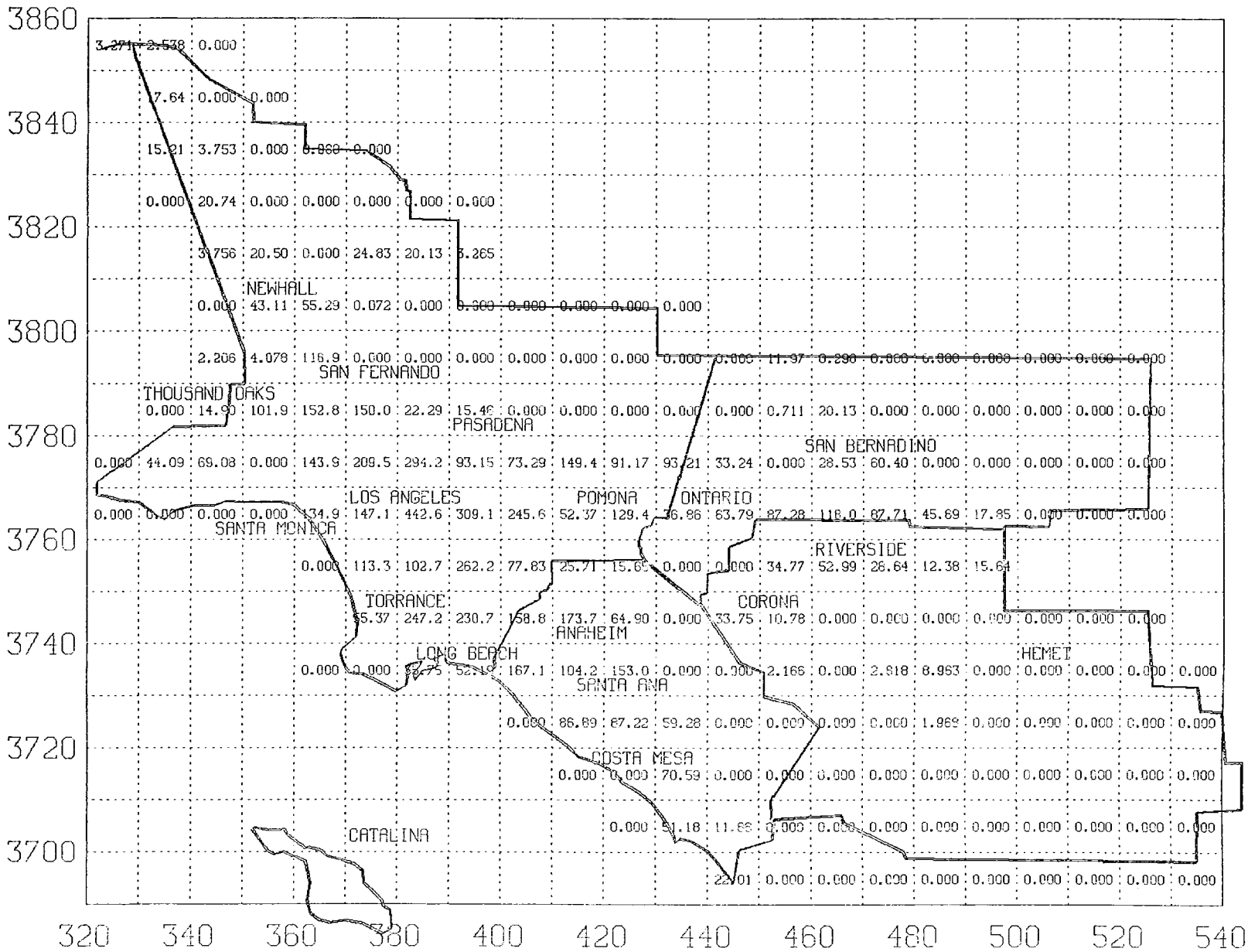


FIGURE 98.

TOTAL VMT PER DAY (10000 MILES)

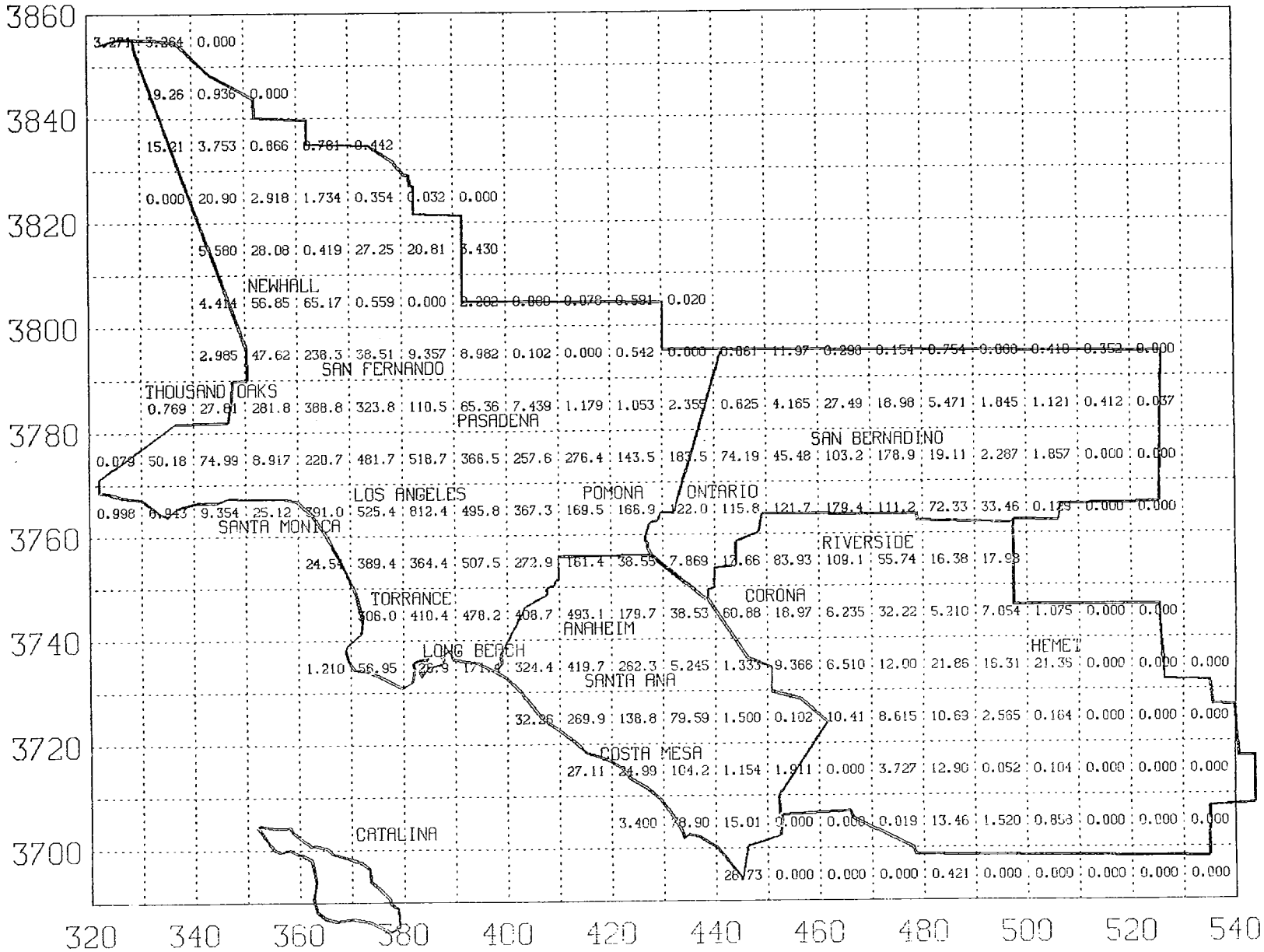


Table 34. Light Duty Vehicle Population by County

County	Light Duty Passenger	Light Duty Truck
Los Angeles	3,505,021	509,611
Orange	883,112	138,838
Riverside	173,663	42,024
San Bernardino	267,707	65,093
Total for the SCAB	4,829,503	755,566

5.0 REFERENCES

1. Wada, R., Tan, R., et. al., An Implementation Plan for Suspended Particulate Matter in the Los Angeles Region, TRW Report No. 68-02-1384, March 1975.

2. Goodman, H., Avery, J. and Midler, J., The Impact of Increased Electrification on Air Quality for Three Selected Regions, TRW Report No. 68-02-1905, January 1976.

3. U.S. Environmental Protection Agency, Supplement No. 5 for Computation of Air Pollutant Emission Factors, Second Edition, April 1975.

4. Sorenson, S.A. and Brewer, D.W., The LARTS Transportation Model: Description and Assumptions, technical reports series tr/2, Los Angeles Regional Transportation Study, January 1974.

5. Kunselman, P., McAdams, H., Domke, C. and Williams, M., Automobile Exhuast Emission Modal Analysis Model, U.S. Environmental Protection Agency, January 1975.

6. Smith, M. and Weston, D., Construction of Chassis Dynometer Test Cycles, Scott Research Lab Report SRL 2948-06-0871, November 18, 1971.

7. Olson Laboratories, Mobile Source Emission Inventory, November 1976.

8. Xavier, T., Data Base and Documentation for Estimating Emissions from Motor Vehicles in California (Draft), California Air Resources Board, January 1977.