




downtown
Los Angeles

CORDON COUNT

May 1980



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L64
1980
c.2

City of Los Angeles
DEPARTMENT OF TRANSPORTATION
DONALD R. HOWERY, general manager

ABSTRACT

Downtown Cordon Count Study

- o The cordon count is a study providing data on the volume of vehicles and persons entering and leaving the Downtown Business District of Los Angeles. This area is bounded by Temple Street, Los Angeles Street, Pico Boulevard, and Figueroa Street.
- o For this cordon count, automatic machine counts, (supplemented by manual counts of vehicle type, occupancy, and pedestrians) provide the basic source of data. In addition, transit bus and passenger data are furnished by the Southern California Rapid Transit District.
- o Summary data on the volume of vehicles and persons entering and leaving at each station on the perimeter of the cordon area and for the entire cordon area are derived through a computer program. This program also provides data on the number of vehicles and persons within the cordon area at half-hour intervals.

Summary Data - 1980 Cordon Count

- o This report presents the summary results of the 1980 Cordon Count of Downtown Los Angeles for a typical 16-hour Wednesday in May, from 6 AM to 10 PM. During the 16-hour study period, 6 AM to 10 PM, a total of 677,147 vehicular-trips crossed the cordon boundaries at the 93 stations providing access for vehicles entering or leaving the cordon area. This represents a decrease of 6,560 trips or 1.0% since the 1978 count.
- o At the access stations, a total of 1,369,967 person-trips entered and left the cordon area during the 16-hour period. This represents an increase of 45,717 persons or 3.5% since the 1978 count.
- o Of the total number of person-trips entering the cordon area, 63 percent arrived in automobiles, 27 percent in transit vehicles, 4 percent in commercial vehicles (trucks), and the remaining 6 percent entered on foot.
- o At the peak vehicle accumulation period, 2 PM, approximately 67,100 vehicles were within the cordon area. Peak accumulation of persons also occurred at 2:00 PM, at which time approximately 159,500 persons were within the cordon area.

Downtown Commuter Travel Mode Patterns During the 1970's

- o In the period from 1972 to 1980, substantial changes have occurred in Downtown Commuter ridesharing patterns. For the 6-8 AM commuter period, the cordon area inbound bus passenger volumes rose by 43% and the passenger volume in car-pools was up by 16%. This was an increase in ridesharing passenger volume of 31% in 1980 compared to 1972.
- o For the 2-hour commuter period the volume of person-trips entering the cordon area by all modes grew by 14%, while the inbound vehicular traffic growth was only 5% for the 8-year period from 1972 to 1980.

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INTRODUCTION



Purpose of Study

The Department of Transportation conducts cordon counts of Downtown Los Angeles in order to provide data for traffic planning. These studies were conducted annually from 1963 through 1972. Since 1972 they have been conducted on every even-numbered year.

This report presents the summary results of the 1980 Cordon Count of downtown Los Angeles for a typical 16-hour Wednesday in May, from 6 AM to 10 PM.

The Cordon Count provides statistical data on the daily flow of vehicles and persons into and out of the Downtown area and of their concentrations within the area.

Since 1963, the boundaries of the cordon area have been Temple Street, Los Angeles Street, Pico Boulevard, and Figueroa Street. This cordon area, which encompasses the Central Business District, is slightly larger than one square mile.

At the convergence of numerous intraregional transportation routes, for both private and public modes of travel, Downtown Los Angeles is accessible from all sections of the metropolitan region. The regional transportation routes traversing the cordon area serve trips with a destination beyond Downtown as well as trips destined for the Downtown area.

Changes in the intensity or type of land use development within the Downtown area or development of alternate routes have varying degrees of effect on the magnitude of vehicular- and person-trip volumes. Analysis of the historical cordon count data provides an indication of the relative effect of these conditions. In addition, the cordon count studies reveal changes in travel characteristics through the detailed data included on the magnitude of persons entering the Downtown business district by either private or public transportation modes.

Cordon Count Procedure

Counts are taken by utilizing automatic machine counters. Machine counts are supplemented by manual sampling counts of vehicle type and occupancy and pedestrians. Counts for this study were made on successive Wednesdays in May, 1980. Transit bus and passenger data were furnished by the Southern California Rapid Transit District (SCRTD) for service lines operated by that agency. Transit volume data for the minibus line entering and leaving the cordon area are recorded by Department of Transportation personnel.

Basic data on vehicle- and person-trips were processed by location and by half-hour periods. These data provide the primary source most of the tables and plates included in this report and for comparison with previous cordon count studies.

The term "accumulation of vehicles (or persons) crossing cordon boundaries" refers to the number accumulated during the hours of the study, i.e., it excludes any vehicles or persons in the cordon area prior to 6 AM. The "accumulation" is the total number within the cordon area at any specific time. This total includes an estimate of the number of vehicles or persons within the area at the beginning of the study.

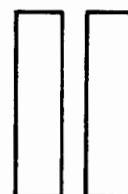
Cordon Count Procedure

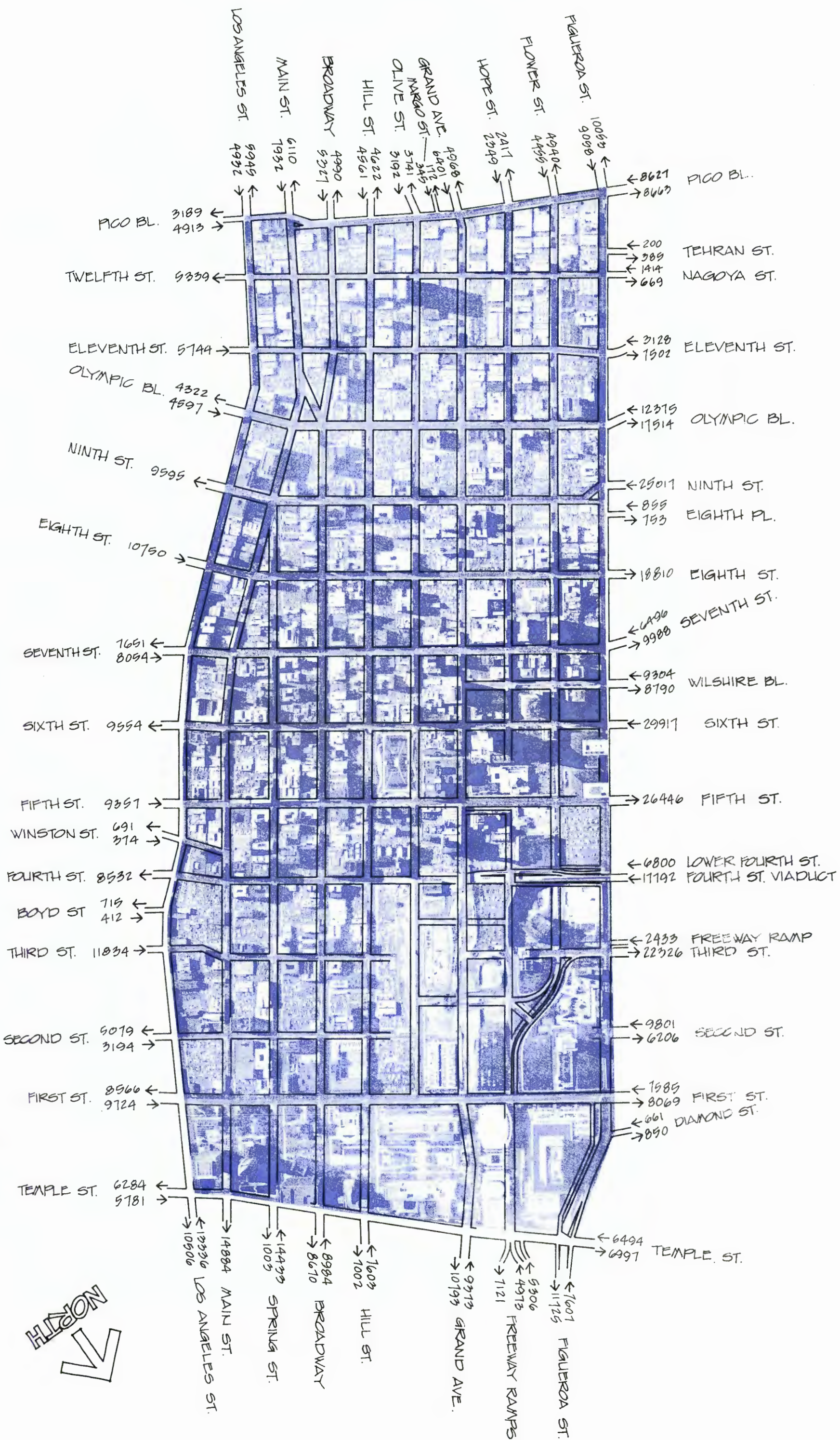
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SUMMARY DATA - 1980 CORDON COUNT





TOTAL VEHICLES • 6 AM to 10 PM

inbound	343,800
outbound	333,347

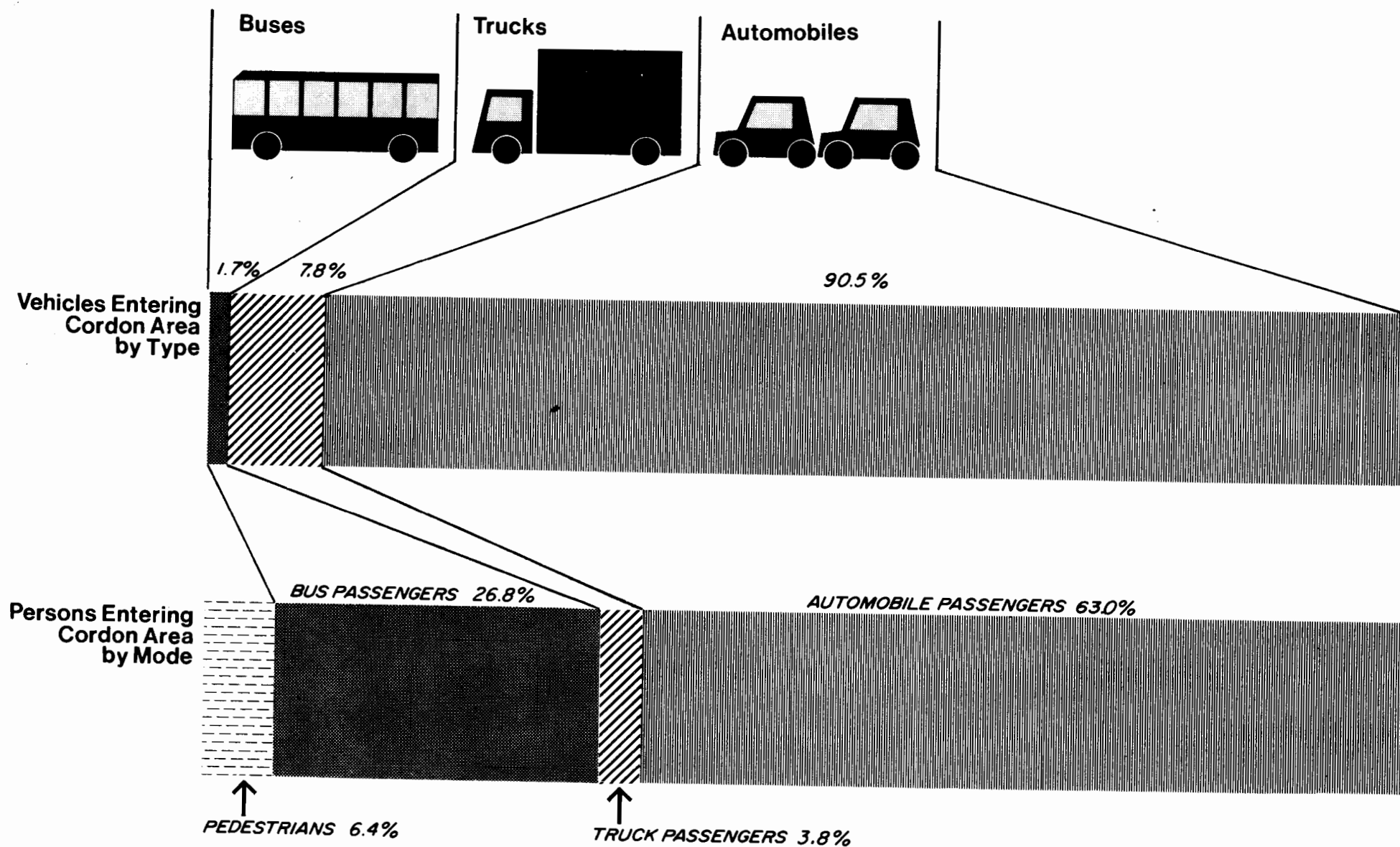
DOWNTOWN CORDON COUNT • MAY 1980 Plate 1

Table 1

Sixteen-Hour Summary
1980 Cordon Count Data
May, Wednesday

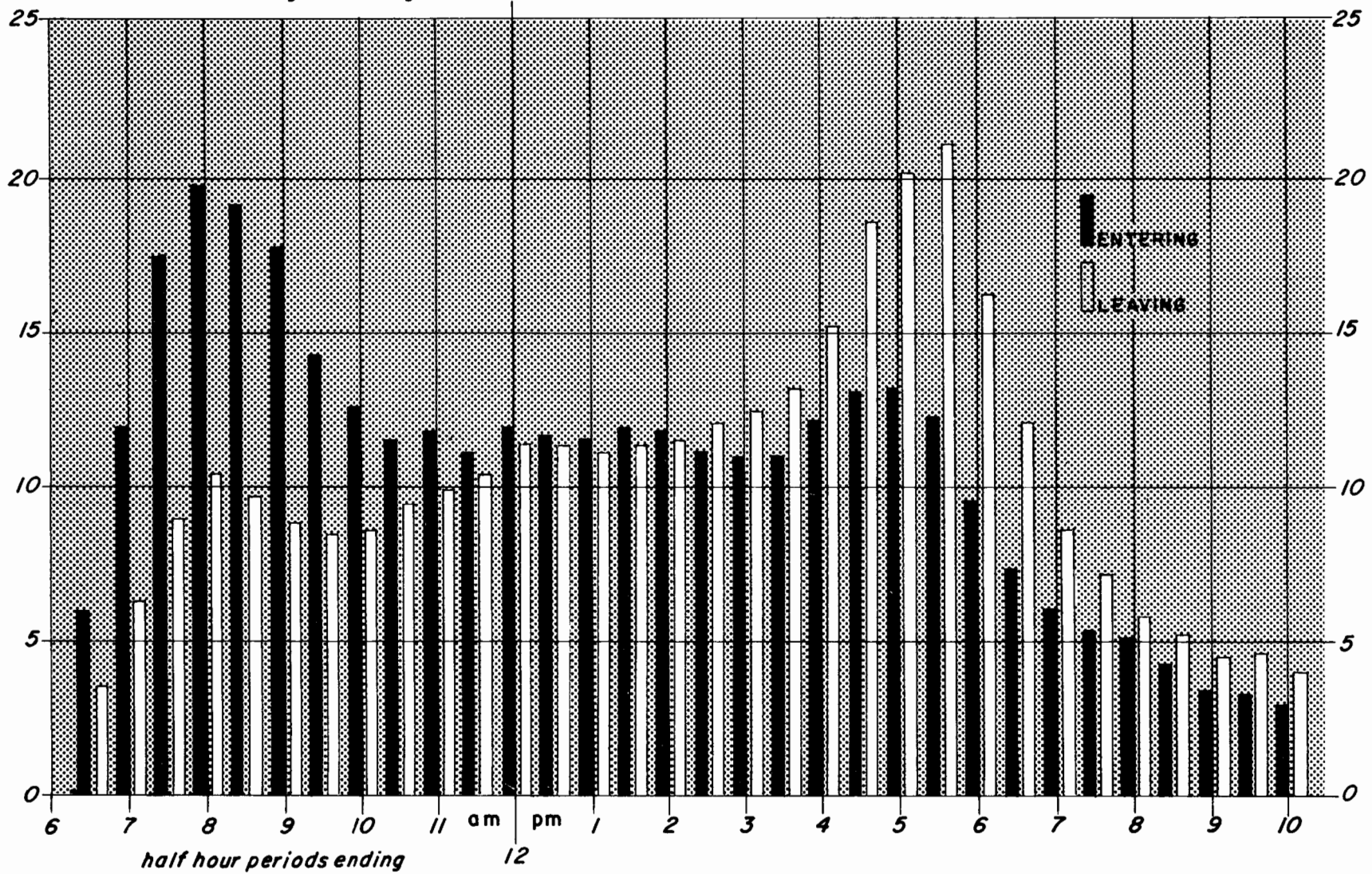
<u>Vehicles</u>	<u>In</u>	<u>Occupancy</u>	<u>Out</u>	<u>Occupancy</u>
Passenger cars	311,326	1.4	303,349	1.4
Trucks and Other Vehicles	26,755		24,295	
Buses	<u>5,719</u>		<u>5,703</u>	
Grand Total - Vehicles	343,800		333,347	

<u>Persons</u>	<u>In</u>	<u>Out</u>
Auto Passengers	435,982	424,805
Other Vehicle Passengers	26,755	24,295
Bus Passengers	185,308	187,039
Pedestrians	<u>44,293</u>	<u>41,490</u>
Grand Total - Persons	692,338	677,629



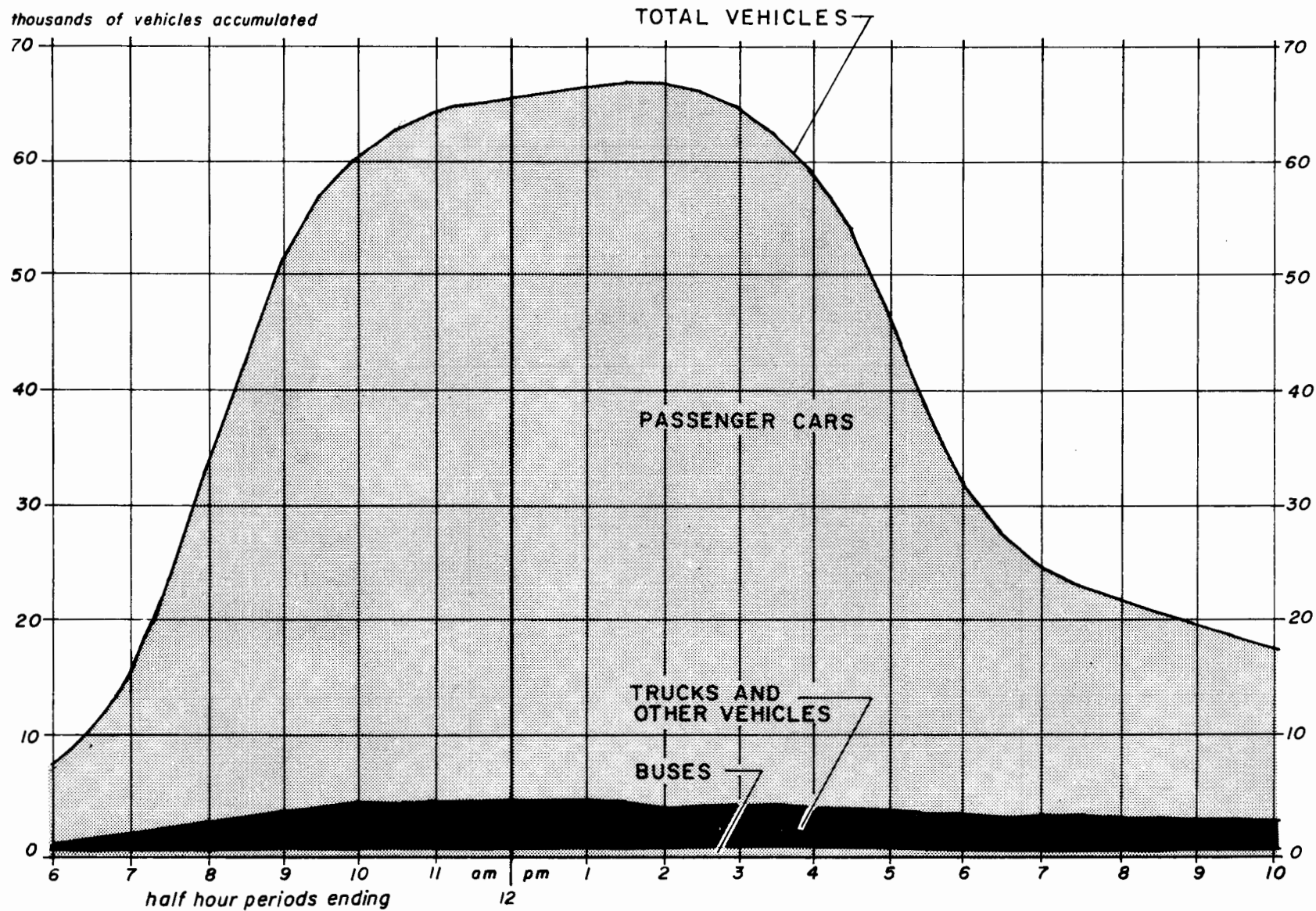
CLASSIFICATION OF VEHICLES AND
MODE OF TRANSPORTATION ENTERING CORDON AREA • MAY 1980

thousands of vehicles entering and leaving



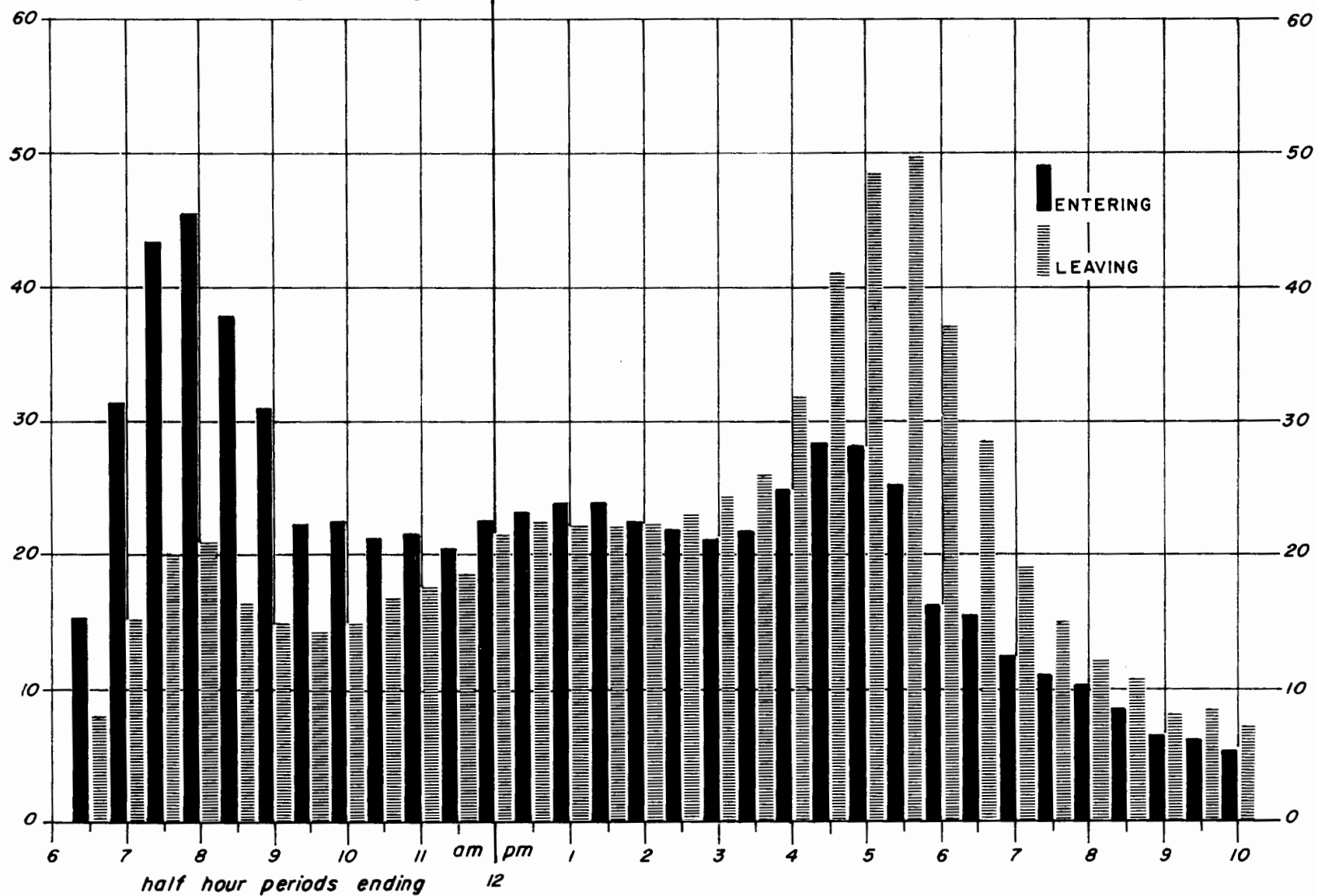
VEHICLES ENTERING AND LEAVING CORDON AREA • MAY 1980

Plate 3

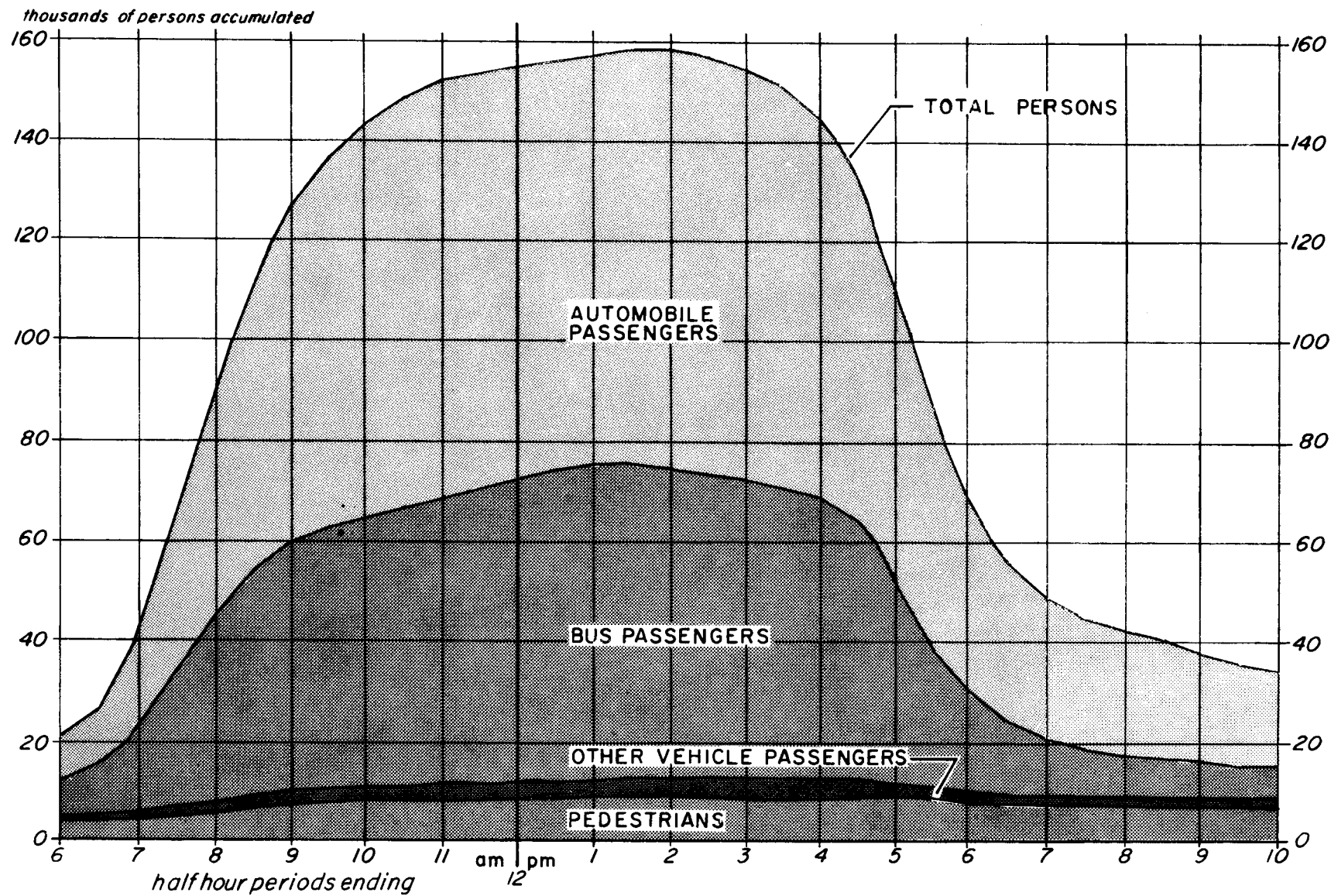


VEHICLES ACCUMULATED IN CORDON AREA · MAY 1980

thousands of persons entering and leaving



PERSONS ENTERING AND LEAVING CORDON AREA • MAY 1980



PERSONS ACCUMULATED IN CORDON AREA • MAY 1980

TABLE 2
SUMMARY OF VEHICLES BY LOCATION
DOWNTOWN LOS ANGELES, MAY 1980, 6AM - 10PM

	PASSENGER CARS		TRUCKS AND OTHER VEHICLES		BUSES		TOTAL VEHICLES	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT
EAST BOUNDARY								
EAST OF LOS ANGELES ST. ON								
TEMPLE ST.	5222	5823	559	461	0	0	5781	6284
1ST ST.	9153	8059	387	311	184	196	9724	8566
2ND ST.	2758	4477	436	602	0	0	3194	5079
3RD ST.	10579	0	1187	0	68	0	11834	0
BOYD ST.	412	715	0	0	0	0	412	715
4TH ST.	0	7622	0	837	0	73	0	8532
WINSTON ST.	374	691	0	0	0	0	374	691
5TH ST.	8032	0	1120	0	205	0	9357	0
6TH ST.	0	8434	0	763	0	357	0	9554
7TH ST.	7058	6720	536	579	460	352	8054	7651
8TH ST.	8905	0	1596	0	249	0	10750	0
9TH ST.	0	8368	0	1038	0	189	0	9595
OLYMPIC BLVD.	4177	3967	420	355	0	0	4597	4322
11TH ST.	4989	0	687	0	68	0	5744	0
12TH ST.	0	4372	0	903	0	64	0	5339
PICO BLVD.	4438	2843	475	346	0	0	4913	3189
SUB TOTAL	66097	62091	7403	6195	1234	1231	74734	69517
SOUTH BOUNDARY								
SOUTH OF PICO BLVD. ON								
LOS ANGELES ST.	4135	5037	777	908	0	0	4932	5945
MAIN ST.	6969	5225	736	660	227	225	7932	6110
BROADWAY	4547	4335	576	466	204	189	5327	4990
HILL ST.	4150	4180	298	335	113	107	4561	4622
OLIVE ST.	2442	3000	647	634	103	107	3192	3741
MARGO ST.	345	172	0	0	0	0	345	172
GRAND AVE.	5620	4337	600	453	181	178	6401	4968
HOPE ST.	2091	2149	258	268	0	0	2349	2417
FLOWER ST.	4087	4468	331	441	37	31	4455	4940
FIGUEROA ST.	8140	8901	789	1022	129	130	9058	10053
SUB TOTAL	42546	41804	5012	5187	994	967	48552	47958
WEST BOUNDARY								
WEST OF FIGUEROA ST. ON								
PICO BLVD.	7736	7952	687	526	204	185	8627	8663
TEHRAN ST.	200	385	0	0	0	0	200	385
NAGOYA ST.	1414	669	0	0	0	0	1414	669
11TH ST.	2759	6742	369	753	0	7	3128	7502
OLYMPIC BLVD.	11612	16596	601	755	162	163	12375	17514
9TH ST.	23031	0	1935	0	51	0	25017	0
8TH PLACE	855	753	0	0	0	0	855	753
8TH ST.	0	17325	0	1441	0	44	0	18810
7TH ST.	5968	9421	305	341	223	226	6496	9988
WILSHIRE BLVD.	8357	8200	668	514	279	276	9304	8990
HARBOR FWY OFF RAMP	19695	0	1002	0	0	0	20697	0
6TH ST.	7827	0	1114	0	279	0	9220	0
3TH ST.	0	24479	0	1703	0	264	0	26446
LOWER 4TH ST.	6461	0	339	0	0	0	6800	0
4TH ST. VIADUCT	17295	0	497	0	0	0	17792	0
HARBOR FWY OFF RAMP	2366	0	67	0	0	0	2433	0
3RD ST.	0	21233	0	1089	0	4	0	22326
2ND ST.	8916	5766	884	440	1	0	9801	6206
1ST ST.	7111	7563	352	389	122	117	7585	8069
DIAMOND ST.	661	850	0	0	0	0	661	850
TEMPLE ST.	5857	6316	469	476	168	205	6494	6997
SUB TOTAL	138121	134250	9289	8427	1489	1491	148899	144168
NORTH BOUNDARY								
NORTH OF TEMPLE ST. ON								
FIGUEROA ST.	7185	11070	371	606	51	49	7607	11725
HARBOR FWY OFF RAMP	4974	0	332	0	0	0	5306	0
HOLLYWOOD FWY RAMPS	4394	6737	403	381	176	3	4973	7121
GRAND AVE.	8718	9988	440	404	215	401	9373	10793
HILL ST.	7036	6637	511	305	56	60	7603	7002
BROADWAY	8128	7797	603	607	253	266	8984	8670
SPRING ST.	11959	0	1313	0	1161	1003	14433	1003
MAIN ST.	0	13447	0	1292	0	145	0	14884
LOS ANGELES ST.	12168	9528	1078	891	90	87	13336	10506
SUB TOTAL	64562	65204	5051	4486	2002	2014	71615	71704
GRAND TOTAL	311326	303349	26755	24295	5719	5703	343800	333347

TABLE 3
SUMMARY OF PERSONS BY LOCATION
DOWNTOWN LOS ANGELES, MAY 1980, 6AM - 10PM

	AUTO PASSENGERS		PASSENGERS IN OTHER VEHICLES		BUS PASSENGERS		PEDESTRIANS		TOTAL PERSONS	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
EAST BOUNDARY										
EAST OF LOS ANGELES ST. ON										
TEMPLE ST.	7761	8535	559	461	0	0	1948	1833	10268	10829
1ST ST.	13930	12449	387	311	5845	5882	1190	1130	21352	19772
2ND ST.	4276	6746	436	602	0	0	987	1116	5699	8464
3RD ST.	14966	0	1187	0	1073	0	458	475	17684	475
BOYD ST.	575	939	0	0	0	0	204	227	779	1186
4TH ST.	0	10696	0	837	0	1176	812	788	812	13497
WINSTON ST.	511	960	0	0	0	0	900	838	1411	1798
5TH ST.	11519	0	1120	0	6423	0	2977	2963	22039	2963
6TH ST.	0	11849	0	763	0	11578	1104	1118	1104	25308
7TH ST.	10022	9496	536	579	17307	14262	2442	2158	30307	26495
8TH ST.	12425	0	1596	0	6793	0	4321	3389	25135	3389
9TH ST.	0	12344	0	1038	0	6315	2764	2518	2764	22213
OLYMPIC BLVD.	5843	5829	420	355	0	0	436	500	6699	6684
11TH ST.	7399	0	687	0	2031	0	907	899	11024	899
12TH ST.	0	6577	0	903	0	2331	901	813	901	10624
PICO BLVD.	6563	4300	475	346	0	0	584	696	7622	5342
SUB TOTAL	95790	90740	7403	6195	39472	41344	22935	21459	165600	159938
SOUTH BOUNDARY										
SOUTH OF PICO BLVD. ON										
LOS ANGELES ST.	5922	6931	777	908	0	0	357	393	7056	8232
MAIN ST.	10016	7235	736	660	7150	7507	361	318	18263	15720
BROADWAY	6548	5973	576	466	7340	8211	686	600	15150	15250
HILL ST.	3586	5421	298	335	3355	3333	428	420	9667	9509
OLIVE ST.	3253	3969	647	634	2050	2362	261	265	6211	7230
MARGO ST.	451	208	0	0	0	0	0	0	451	208
GRAND AVE.	7576	5697	600	453	5315	4782	388	406	13879	11338
HOPE ST.	2894	2962	258	268	0	0	939	895	4091	4125
FLOWER ST.	5601	6220	331	441	1495	1274	455	407	7882	8342
FIGUEROA ST.	11304	12613	789	1022	4648	4683	441	398	17182	18516
SUB TOTAL	59151	57029	5012	5187	31353	32152	4316	4102	99832	98470
WEST BOUNDARY										
WEST OF FIGUEROA ST. ON										
PICO BLVD.	11313	11851	687	526	8314	7638	414	407	20728	20422
TEHRAN ST.	286	556	0	0	0	0	14	22	300	578
NAGOYA ST.	2051	981	0	0	0	0	158	201	2209	1182
11TH ST.	3972	9383	369	753	0	284	376	428	4717	10848
OLYMPIC BLVD.	16571	23076	601	755	5219	4797	509	497	22900	29125
9TH ST.	30821	0	1935	0	921	0	778	791	34455	791
8TH PLACE	1113	937	0	0	0	0	166	199	1279	1136
8TH ST.	0	22713	0	1441	0	733	1283	709	1283	25598
7TH ST.	8056	12335	305	341	9358	8744	1286	1342	19005	22762
WILSHIRE BLVD.	11360	10626	668	514	9074	10697	2326	2018	23428	23855
HARBOR FWY OFF RAMP	26332	0	1002	0	0	0	0	0	27334	0
6TH ST.	10625	0	1114	0	11132	0	732	666	23603	666
5TH ST.	0	32311	0	1703	0	9418	636	570	636	44002
LOWER 4TH ST.	8854	0	339	0	0	0	616	532	9809	532
4TH ST. VIADUCT	23437	0	497	0	0	0	465	405	24399	405
HARBOR FWY OFF RAMP	3163	0	67	0	0	0	0	0	3230	0
3RD ST.	0	29576	0	1089	0	184	115	84	115	30933
2ND ST.	12132	8045	884	440	45	0	179	192	13240	8677
1ST ST.	9737	10651	352	389	4456	4422	138	220	14683	15682
DIAMOND ST.	901	1148	0	0	0	0	0	0	901	1148
TEMPLE ST.	8096	8770	469	476	6917	6906	661	613	16143	16765
SUB TOTAL	188820	182961	9289	8427	55436	53823	10852	9896	264397	255107
NORTH BOUNDARY										
NORTH OF TEMPLE ST. ON										
FIGUEROA ST.	10200	15383	371	606	1659	1689	264	258	12494	17936
HARBOR FWY OFF RAMP	7081	0	332	0	0	0	0	0	7413	0
HOLLYWOOD FWY RAMPS	6220	9240	403	381	5821	117	0	0	12444	9738
GRAND AVE.	12328	13906	440	404	8733	14566	594	553	22095	29429
HILL ST.	10367	10113	511	305	2124	2124	471	631	13473	13173
BROADWAY	12225	11650	603	607	6952	6649	715	584	20495	19490
SPRING ST.	16785	0	1313	0	32851	29569	1062	1086	52011	30657
MAIN ST.	0	19763	0	1292	0	3802	1175	1081	1175	25938
LOS ANGELES ST.	17015	14020	1078	891	907	1004	1909	1838	20909	17753
SUB TOTAL	92221	94075	5051	4486	59047	59520	6190	6033	162509	164114
GRAND TOTAL	435982	424805	26755	24295	185308	187039	44293	41490	692338	677629

TABLE 4
SUMMARY OF VEHICLES BY HALF HOUR PERIODS
DOWNTOWN LOS ANGELES, MAY 1980
6AM - 10PM

TIME PERIOD ENDING	PASSENGER CARS			TRUCKS OTHER VEHICLES			BUSES			TOTAL VEHICLES		
	IN	OUT	ACCUM	IN	OUT	ACCUM	IN	OUT	ACCUM	IN	OUT	ACCUM
			6300			500			200			7000
630	5262	3021	8541	547	315	732	162	129	233	5971	3465	9506
700	10982	5777	13746	813	463	1082	288	211	310	12083	6451	15138
730	16108	8241	21613	961	582	1461	343	237	416	17412	9060	23490
800	18437	9512	30538	1025	616	1870	349	268	497	19811	10396	32905
830	17817	8739	39616	1027	799	2098	293	241	549	19137	9779	42263
900	16451	7958	48109	1134	837	2395	219	209	559	17804	9004	51063
930	12921	7472	53558	1179	863	2711	179	171	567	14279	8506	56836
1000	11173	7593	57138	1280	978	3013	158	162	563	12611	8733	60714
1030	10045	8273	58910	1252	1099	3166	158	154	567	11455	9526	62643
1100	10344	8734	60520	1277	1099	3344	149	157	559	11770	9990	64423
1130	9690	9221	60989	1227	1155	3416	157	158	558	11074	10534	64963
1200	10579	10168	61400	1183	1068	3531	152	157	553	11914	11393	65484
1230	10455	10239	61616	1077	1001	3607	157	156	554	11689	11396	65777
1300	10388	9992	62012	1065	961	3711	154	159	549	11607	11112	66272
1330	10823	10135	62700	1008	1072	3647	158	158	549	11989	11365	66896
1400	10625	10387	62938	1005	1057	3595	157	156	550	11787	11600	67083
1430	9958	10885	62011	1062	1032	3625	166	153	563	11186	12070	66199
1500	9790	11294	60507	1042	1005	3662	177	170	570	11009	12469	64739
1530	9733	11867	58373	1072	1199	3535	214	186	598	11019	13252	62506
1600	10733	13608	55498	1149	1227	3457	241	232	607	12123	15067	59562
1630	11804	17183	50119	1046	1090	3413	256	284	579	13106	18557	54111
1700	12161	18804	43476	911	987	3337	253	361	471	13325	20152	47284
1730	11346	19935	34887	729	795	3271	231	348	354	12306	21078	38512
1800	8751	15391	28247	567	657	3181	199	270	283	9517	16318	31711
SUB TOTAL	276376	254429		24638	21957		4970	4887		305984	281273	
1830	6764	11408	23603	471	504	3148	163	202	244	7398	12114	26995
1900	5567	8116	21054	414	429	3133	135	147	232	6116	8692	24419
1930	4887	6690	19251	261	331	3063	104	114	222	5252	7135	22536
2000	4752	5460	18543	256	256	3063	78	86	214	5086	5802	21820
2030	3959	4919	17583	245	233	3075	81	81	214	4285	5233	20872
2100	3193	4154	16622	175	234	3016	64	64	214	3432	4452	19852
2130	3074	4334	15362	169	202	2983	67	67	214	3310	4603	18559
2200	2754	3839	14277	126	149	2960	57	55	216	2937	4043	17453
SUB TOTAL	34950	48920		2117	2338		749	816		37816	52074	
GRAND TOTAL	311326	303349		26755	24295		5719	5703		343800	333347	

TABLE 5
SUMMARY OF PERSONS BY HALF HOUR PERIODS
DOWNTOWN LOS ANGELES, MAY 1980
6AM - 10PM

TIME PERIOD ENDING	AUTO PASSENGERS			PASSENGERS IN OTHER VEHICLES			BUS PASSENGERS			PEDESTRIANS			TOTAL PERSONS		
	IN	OUT	ACCUM	IN	OUT	ACCUM	IN	OUT	ACCUM	IN	OUT	ACCUM	IN	OUT	ACCUM
			8500			500			7000			4000			20000
630	6829	3938	11391	547	315	732	7013	3203	10810	552	398	4154	14941	7854	27087
700	15191	7593	18989	813	463	1082	13982	6004	18788	1275	972	4457	31261	15032	43316
730	22706	10637	31058	961	582	1461	17223	6947	29064	2136	1763	4830	43026	19929	66413
800	25010	11715	44353	1025	616	1870	17133	6990	39207	2187	1711	5306	45355	21032	90736
830	23156	10755	56754	1027	799	2098	11679	4484	46402	1890	1126	6070	37752	17164	111324
900	20439	10021	67172	1134	837	2395	7613	3526	50489	1636	911	6795	30822	15295	126851
930	16424	9438	74158	1179	863	2711	5439	2777	53151	1257	896	7156	24299	13974	137176
1000	14805	10169	78794	1280	978	3013	4944	2698	55397	1309	1017	7448	22338	14862	144652
1030	13468	11239	81023	1252	1099	3166	4821	3130	57088	1294	1222	7520	20835	16690	148797
1100	14113	11699	83437	1277	1099	3344	4912	3631	58369	1306	1263	7563	21608	17692	152713
1130	13080	12469	84048	1227	1155	3416	4694	3767	59296	1464	1368	7659	20465	18759	154419
1200	14543	14582	84009	1183	1068	3531	4878	3923	60251	1882	1836	7705	22486	21409	155496
1230	14634	14950	83693	1077	1001	3607	4893	4250	60894	2410	2109	8006	23014	22310	156200
1300	15116	14074	84735	1065	961	3711	5034	4686	61242	2196	2125	8077	23411	21846	157765
1330	15355	14305	85785	1008	1072	3647	4814	4694	61362	2075	1879	8273	23252	21950	159067
1400	15181	14376	86590	1005	1057	3595	4612	4997	60977	1694	1673	8294	22492	22103	159456
1430	14135	14935	85790	1062	1032	3625	4771	5075	60673	1523	1552	8265	21491	22594	158353
1500	13382	15516	83656	1042	1005	3662	5084	5999	59758	1524	1468	8321	21032	23988	155397
1530	13146	16131	80671	1072	1199	3535	6071	6614	59215	1398	1432	8287	21687	25376	151708
1600	14684	18739	76616	1149	1227	3457	7446	10018	56643	1672	1684	8275	24951	31668	144991
1630	16637	24040	69213	1046	1090	3413	7943	13856	50730	2642	2224	8693	28268	41210	132049
1700	17008	26421	59800	911	987	3337	7389	19128	38991	2291	2234	8750	27599	48770	110878
1730	15938	28721	47017	729	795	3271	6352	18034	27309	1678	2155	8273	24697	49705	85870
1800	12951	21801	38167	567	657	3181	4715	12561	19463	921	1502	7692	19154	36521	68503
SUB TOTAL	377931	348264		24638	21957		173455	160992		40212	36520		616236	567733	
1830	10428	16974	31621	471	504	3148	3562	9668	13357	850	1119	7423	15311	28265	55549
1900	9055	12753	27923	414	429	3133	2319	5140	10536	572	766	7229	12360	19088	48821
1930	8326	10363	25886	261	331	3063	1805	3735	8606	582	674	7137	10974	15103	44692
2000	8209	8844	25251	256	256	3063	1212	2374	7444	535	568	7104	10212	12042	42862
2030	6933	8198	23986	245	233	3075	998	1709	6733	469	531	7042	8645	10671	40836
2100	5418	6583	22821	175	234	3016	565	1301	5997	438	504	6976	6596	8622	38810
2130	5114	6854	21081	169	202	2983	806	1370	5433	348	451	6873	6437	8877	36370
2200	4568	5972	19677	126	149	2960	586	750	5269	287	357	6803	5567	7228	34709
SUB TOTAL	58051	76541		2117	2338		11853	26047		4081	4970		76102	109896	
GRAND TOTAL	435982	424805		26755	24295		185308	187039		44293	41490		692338	677629	

Table 6

Comparison of Total Vehicle and Passenger Car
Statistics, Downtown Los Angeles, Selected Years

CORDON COUNT

		<u>1941</u>	<u>1957</u>	<u>1963</u>	<u>1972</u>	<u>1974</u>	<u>1976</u>	<u>1978</u>	<u>1980</u>
16-Hour	Total	--	327,046	291,506	319,245	306,663	324,970	351,105	343,800
Total In	Pass. Cars	288,000	283,097	253,731	283,229	271,899	291,060	312,100	311,326
16-Hour	Total	--	323,624	285,970	310,339	296,228	308,445	332,602	333,347
Total Out	Pass. Cars	--	278,224	247,836	277,039	263,671	278,699	295,848	303,349
High	Total	18,500	22,077	19,267	19,927	18,350	19,104	20,647	19,811
1/2-Hour In	Pass. Cars	--	20,402	16,870	18,554	16,912	17,653	18,991	18,437
Same	Total	12,000	12,689	10,912	11,150	9,895	9,944	10,919	10,396
1/2-Hour Out	Pass. Cars	--	11,202	9,349	10,180	8,875	8,983	9,817	9,512
High	Total	20,500	22,760	19,730	22,182	19,550	20,023	21,092	21,078
1/2-Hour Out	Pass. Cars	--	20,884	17,176	20,575	17,881	18,515	19,669	19,935
Same	Total	13,500	15,602	12,893	14,069	13,115	13,513	12,725	12,306
1/2-Hour In	Pass. Cars	--	13,876	11,131	12,735	11,902	12,246	11,523	11,346
Highest Veh.	Total	49,000	48,306	--	58,789	58,576	65,215	68,088	67,083
Accum. Inc.	Pass. Cars	--	46,007	--	53,641	54,094	59,730	64,130	62,938
Initial									

Table 7

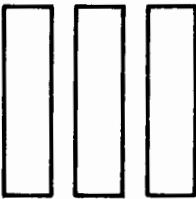
Comparison of Total Person and Auto Passenger
Statistics, Downtown Los Angeles, Selected Years

CORDON COUNT

		<u>1941</u>	<u>1957</u>	<u>1963</u>	<u>1972</u>	<u>1974</u>	<u>1976</u>	<u>1978</u>	<u>1980</u>
16-Hour	Persons	757,120	687,906	605,730	598,673	605,029	628,515	677,365	692,338
Total In	Auto Pass.	441,647	403,015	368,844	389,768	372,979	403,821	432,517	435,982
% Auto Passengers		58	59	61	65	62	64	64	63
16-Hour	Persons	723,191	692,195	589,964	582,094	578,002	607,334	646,885	677,629
Total Out	Auto Pass.	415,403	402,399	355,152	377,295	352,449	387,743	408,435	424,805
% Auto Passengers		57	58	60	65	61	64	63	63
High	Persons	50,161	59,411	50,922	42,433	43,524	43,438	43,149	45,355
1/2-Hour In	Auto Pass.	25,982	31,247	27,505	25,053	23,071	24,009	24,805	25,010
% Auto Passengers		52	53	54	59	53	55	57	55
Same	Persons	26,298	28,010	20,825	20,881	19,331	19,650	21,171	21,032
1/2-Hour Out	Auto Pass.	14,499	17,100	11,608	12,425	10,899	11,304	12,125	11,715
% Auto Passengers		55	61	56	59	56	58	57	56
High	Persons	61,710	61,592	47,588	49,198	48,232	48,886	47,318	49,705
1/2-Hour Out	Auto Pass.	31,558	31,362	27,167	28,611	24,264	26,076	26,013	28,721
% Auto Passengers		51	51	57	58	50	53	55	58
Same	Persons	29,629	29,888	26,519	25,856	25,045	26,450	28,941	24,697
1/2-Hour In	Auto Pass.	18,160	19,201	15,973	17,068	15,571	16,709	18,369	15,938
% Auto Passengers		61	64	60	66	62	63	63	65
High	Persons	174,758	132,618	--	122,729	135,071	135,061	131,362	139,456
Accum*	Auto Pass.	67,593	57,128	--	68,224	68,450	75,739	75,188	78,090
% Auto Passengers		39	43	--	55	51	56	57	56

*Persons Crossing Cordon

CORDON AREA TRENDS AND ANALYSIS



Area Development and Transportation Characteristics

The Downtown Business District has traditionally been a major activity center for the Los Angeles metropolitan area. Centrally located at the crossroads of several radial freeway routes, it is the eastern edge of the Regional Core.

The Downtown area is accessible from virtually all segments of the County on the 490-mile freeway system by both public and private transportation services. In terms of public transportation, 72 regular scheduled local and suburban bus routes of the SCRTD crossed the cordon boundaries in May 1980. In addition, 41 special, commuter or subscription bus routes of the SCRTD entered and left the cordon area at the time of the May, 1980 study.

The 1.1 square mile cordon area encompasses not only the Central Business District, but also a substantial portion of the Los Angeles Civic Center. The cordon area presently includes over 50 million square feet of building floor space.

Summary Data on Person and Vehicle Trips for 1980

This report presents the summary results of the 1980 Cordon Count of Downtown Los Angeles for a typical 16-hour Wednesday in May, from 6 AM to 10 PM. Computer processing of the information collected for the cordon count study provides the comprehensive, detailed data on vehicle and person trips, as shown on Tables 2 through 5. Data shown on Table 1 or as graphically illustrated on Plates 1 through 6 are derived primarily from the four computer tables.

As indicated by these data, a total of 677,147 vehicles crossed the cordon boundaries during the 16-hour study period from 6 AM to 10 PM. During the 16-hour study period, a total of 1,369,967 persons entered and left the cordon area. Of the total persons entering the cordon area, 63.0% arrived in automobiles, 26.8% in transit vehicles, 3.8% in trucks, and the remainder, 6.4%, entered on foot.

The peak person accumulation was at 2:00 PM, when a total of 159,456 persons were within the cordon area. Peak accumulation of vehicles also occurred at 2:00 PM when a total of 67,083 vehicles were within the cordon area.

Long Term Historical Cordon Travel Trends

The earliest recorded data on Downtown cordon area travel activity, taken in 1924, included only passenger volume data (i.e., did not include pedestrian trips) and encompassed only the 13 hours from 6 AM to 7 PM. That study disclosed that over 1.2 million passengers crossed the cordon boundaries during the 13-hour study period. Of that total, 61% were passengers in public transportation facilities and the remaining 39% were passengers in private transportation vehicles, either automobiles or commercial vehicles.

The only other recorded study including data on person trips prior to World War II was conducted in 1941. For the 13-hour period of that study, a total of nearly 1.3 million passengers entered and left the cordon area. In terms of proportional values, that study disclosed a reversal from the 1924 study, i.e., public transportation passengers represented 39% of the total passengers crossing the cordon boundaries and the remaining 61% were occupants in private vehicles.

Comparable 13-hour passenger volume data for these two studies and for selected other cordon studies are shown on Table 8. The trend in regard to inbound cordon person trips, for the 16-hour period, from 6 AM to 10 PM, by the various modes from 1941 to date is depicted on Plate 7.

Short Term (12-year) Cordon Trend Analyses

As is evident from Plate 7, generally increasing volumes of person trips have been crossing the cordon boundaries since 1967. Over the last 12 years, travel mode patterns have also changed significantly. To provide some insight in regard to these changes in travel patterns and modes, detailed analyses have been made of the cordon data for the biennial studies conducted from 1968 to 1980.

Peak Period Person-Trip Volume Trend:

Cordon data for inbound person trips reveal that the volumes in 1980 for the morning peak hour (7-8AM) and the peak two-hour period (7-9AM) were generally at the same level as recorded in 1968:

	<u>Inbound Person Trips</u>		<u>Percent change</u>
	<u>1968</u>	<u>1980</u>	
Peak hour (7-8 AM)	89,958	88,381	-1.8%
Peak Two Hours (7-9 AM)	156,115	156,955	+0.5%

More detailed study of the cordon data for the 12-year period, however, reveals that person-trip volumes for the two half-hour periods preceding the peak-hour period have changed significantly. The volumes of inbound persons for the half-hour periods from 6:00 to 6:30 AM and 6:30 to 7:00 AM have increased progressively from 1968 through 1980, with one exception, i.e., a decrease in 1974 from 1972 for the 6:00 to 6:30 AM period. In 1980, the volume of 46,202 inbound persons for the combined two half-hour periods from 6:00 to 7:00 AM was 49% greater than the volume of 31,014 persons recorded in 1968. This is in sharp contrast to the 2% reduction, as detailed above, for the peak-hour period (7-8 AM) over the 12-year

period. For the total 2-hour period, 6-8 AM, the 1980 volume of 134,583 persons was an increase of 11% over the 1968 inbound volume of 120,972 persons.

Inbound person-trip volumes, 1968-1980, for the four half-hour periods from 6 to 8 AM are graphically illustrated on Plate 8. In terms of proportional values for the 2-hour period, 6-8 AM, the volume from 7-8 AM dropped from 74% in 1968 to 66% in 1980. Conversely, the volume for the hour from 6-7 AM increased in 1980 to 34% of the 2-hour volume from the 26% proportionate volume recorded in 1968.

Numerous factors had an effect on the temporal changes in commuter travel patterns indicated above. The cordon count study procedure does not provide the details to identify or measure the extent of change for the various factors. It can be surmised that the shift in commuter travel patterns over the 12-year study period was a result of an increasing number of employees on flextime arrangements, staggered work-hour schedules, or on programs other than the normal 5 day - 40 hour work week.

Analyses of Person-Destination Trends:

Travel data in this report on inbound trips at the cordon boundaries include trips which merely pass through the cordon area as well as trips which have a destination within the cordon area. To provide insight on the latter, an analysis has been made of cordon accumulation data which record a great majority of person trips having a destination within the cordon area.

For this purpose, person accumulation data was compiled from the biennial cordon studies for 1968 to 1980 for the 2-hour period from 6 to 8 AM. This data only recorded persons crossing the cordon boundaries, by different travel modes (i.e., did not include initial accumulation) and is graphically depicted on Plate 9.

As can be seen from this plate, for the 12-year period from 1968 to 1980, the year 1974 marked either the high or low point for two of the three designated modes of travel for persons arriving in the cordon area. The volume of persons arriving on foot within the cordon area reached a peak volume of 6,096 in 1974, which accounted for 9.0% of the 2 hour influx of total persons for that year. In 1980, pedestrians represented only 1.9% of the total volume of persons destined to the cordon area during the 2-hour period.

Implementation of the 25¢ Flat Fare program for all transit service in Los Angeles County was put into effect on April 1, 1974, and caused a significant change in travel characteristics in the cordon area. For the seven cordon studies included on Plate 9, the lowest volume of passengers in automobiles and other non-transit vehicles remaining within the cordon area during the period from 6 to 8 AM occurred in 1974. This volume of 30,652 non-transit passengers represented 45.4% of the 2-hour volume of total person-destinations in 1974.

At the time of the 1976 study, the Flat Fare program was replaced basically with a 2-zone structure and 35¢ fare for trips within one zone. In May, 1978 and 1980, the transit program was basically the same as in May, 1976, except for increases in the fare structure.

Transit passenger volumes recorded in the 1976 study were also affected two major transit projects. One was the Contra-Flow Bus Lane operation on Spring Street. The other was the Santa Monica Freeway Diamond Lane project. The Diamond Lane project was subsequently terminated in August of 1976.

Person-destinations for bus passengers have shown no distinct trends encompassing at least a 6-year period. It is noted, however, that the fluctuation in bus passenger destinations paralleled the 12-year pattern for the net 2-hour (6 to 8 AM) influx of total persons.

Analysis of the 12-year biennial data on cordon person destinations at the peak accumulation period, 1:30 to 2:00 PM, reveals mode patterns generally similar to the conditions noted the period from 6 to 8 AM. These data include initial accumulation and are approximately double the net influx for the 6 - 8 AM period. The 1968-to-1980 volume trend and distribution pattern, by modes, for the peak period accumulation are depicted on Plate 10. The plate shows that the total number of persons within the cordon area remained relatively constant at the 150,000 to 152,000 volume in the period from 1974 to 1978.

In 1980, the volume of persons within the cordon area at the peak period rose sharply and reversed the declining trend in the proportion of persons arriving in the cordon area on public transportation. At the peak accumulation period in 1980, bus passengers represented 38% of the persons within the cordon area, as opposed to 36% in 1978.

Vehicle Accumulation Patterns:

The 1968-to-date biennial cordon study data on vehicles within the cordon area at the peak accumulation period indicate a relatively stable trend from 1968 to 1974 and an inclining trend from 1974 to 1978. The peak vehicle accumulation in 1980 was down slightly from 1978. (67,083 vs. 68,088 vehicles).

Vehicle accumulation, especially as it relates to peak demand, is dependent to a great extent on the supply of off-street parking spaces. Downtown parking inventory studies were conducted by Wilbur Smith and Associates in 1966 and 1979 and by Associated Parking Consultants in 1970. These studies revealed that, within the cordon area (excluding the Civic Center portion), the supply of off-street parking spaces was as follows:

<u>1966</u>	<u>1970</u>	<u>1979</u>
47,434	49,856	57,140

These data indicate an increase of nearly 10,000 offstreet parking spaces

within the cordon area since 1966, with the majority of this increase occurring in the last decade. Total off-street parking supply in the cordon area in 1979, including the Civic Center portion, was 63,981 parking spaces.

Comparison of data for 1980 with 1968 discloses that the increase in vehicle accumulation has not been consistent over the total 16-hour study period. As shown on Plate 11, the most significant increases in vehicle accumulation occurred in the daytime shopping period (10 AM - 2 PM) and to a lesser extent, in the evening entertainment activity period (6 to 10 PM). Increases during these periods can be partially attributed to the development of approximately one million square feet of retail floor space within the cordon area over the last 12 years.

Automobile Occupancy and Commuter Ridesharing Characteristics:

Automobile passengers in 1980 represented 62% of the total 16-hour volume of persons entering and leaving the cordon area. Changes in the volume of automobile passengers are affected not only by the variations in automobile volumes but also by variations in automobile occupancy factors.

An analysis has been made of the automobile occupancy counts conducted for the biennial cordon counts from 1974 to 1980. Comparative data by four-hour increments are shown on Table 9.

The 16-hour average inbound automobile occupancy factors had an overall growth trend, but changes in the factors for each of the incremental 4-hour units were inconsistent. The data further reveal each of the 4-hour periods had a slightly different pattern for the four successive cordon counts.

Both the total 16-hour and 2-6PM percentages of automobiles with two or more occupants increased with each cordon count from 1974 to 1980. The percentages for 6-10 AM declined from 1974 through 1978 and then increased sharply in 1980.

Previous review of the cordon data for 1968 to date noted that some marked reversals in travel mode patterns occurred in both 1974 and 1980. By May, 1974, two conditions had significantly affected the travel patterns observed in May, 1972. These were (1) restricted availability of gasoline and (2) changes in the basic transit fare structure.

As a result of the Arab Oil Embargo during the latter part of 1973, the supply of gasoline became increasingly restricted and reached the most critical shortages during the period from Mid-February through Mid-March, 1974. At the time of the cordon study in May, supplies had returned to a level where they were generally sufficient to meet normal demands.

Between the 1978 and 1980 cordon studies, one of the most significant factors affecting travel patterns was the escalating cost of gasoline. The

greatest rate of change occurred during 1979, when price increased approximately 60%. By May 1980 gasoline costs were generally more stabilized, with prices remaining relatively unchanged over a short-term period.

During May, 1974, the County-wide 25¢ Transit Flat Fare program was also in operation. Initially implemented on April 1, 1974, this provided a sizable reduction in transit fares.

To provide some insight into how these conditions probably affected travel mode, data for 1974 were compared to 1972 and for 1980 in relation to 1978. Inbound automobile passenger volumes for the period from 6 to 8 AM were compiled to derive information on the volume of passengers in automobiles with single occupants (driver only) or in automobiles with two or more occupants.

The comparative data are depicted on Plate 12. Commuter travel in 1974 and 1980 was markedly different from the previous biennial cordon studies.

The gasoline shortages and sharply reduced transit fares at the time of the 1974 study resulted in a 24% rise in bus ridership. Slightly less than a 2% increase in car-pool passenger volumes and a 16% reduction in passenger volume in single-occupant passenger vehicles occurred from the 2-hour (6-8 AM) volumes recorded in 1972.

Markedly higher gasoline prices and moderate increases in transit fares in 1980 as compared to 1978, resulted in generally equal proportionate increases in bus and car-pool ridership, 16% and 18%, respectively. A reduction of 7% occurred in the passenger volume for single-occupancy passenger vehicles during the 2-hour commuter period.

Over the 8-year period (1972-1980), ridesharing, (bus or car-pool) passenger volumes have grown 31%. In 1980, approximately 21,300 more commuters entered the cordon area between 6 and 8 AM in buses or car-pools than in 1972.

Ridership on public transportation increased significantly since 1972: 16,600 passengers, or 43%. Volume in car-pools increased by 4,700 passengers or 16%. Passenger volume in single-occupancy passenger vehicles in 1980 was essentially the same as in 1972.

Further review of the commuter (6-8 AM) volume data revealed that the major growth in ridesharing in private vehicles occurred as a result of greater increases in low-occupancy car-pools. Passenger volume in car-pools with 2 or 3 occupants in 1980 was approximately 85% greater than in 1972. Passenger volumes in higher occupancy car-pools, four or more, increased by only 15%. Accordingly, the overall ratio in car-pools entering the cordon area between 6 and 8 AM dropped from 2.34 in 1972 to 2.20 occupants per passenger vehicle in 1980. With greater emphasis on ridesharing the volume of passengers in all vehicles entering the cordon area during this 2-hour commuter period grew by nearly 20%, even though vehicular traffic volume in 1980 increased by only 5% over the 1972 volume.

Person Trip Volume Trends:

One of the most significant measurements of Downtown travel activity provided by the cordon study is person trip volume. For this study, linear regression analyses were conducted of the latest 12-year biennial data by 4-hour increments and for the overall 16-hour study period. Linear trend lines derived from these analyses are plotted on Plate 13.

The greatest growth rate in person-trip volumes occurred for the four-hour period from 6-10 PM. This 4-hour period showed a reduction in 1980 from 1978, however, that was contrary to the trend of inclining volumes from 1974 to 1980 for the other 4-hour periods and for the total 16-hour period.

The next highest volume growth occurred in the mid-day business/shopping period, 10 AM 2 PM. Recorded volumes of persons entering and leaving the cordon area during this period in 1980 were 19% higher than volumes in 1968.

The 4-hour period for 6-10 AM had the lowest annual growth rate in person trip volumes. Over the 12-year period, however, this growth has still been substantial. The volume crossing the cordon boundaries during this 4-hour period, which involves primarily commuter trips, totalled 374,936 persons in 1980, an increase of 40,000 person-trips over the 1968 volume.

These trends indicate the growing importance of the Downtown area for business, shopping, service and cultural activities. They also show the area's importance as the largest employment activity center in the Southern California region.

Downtown Cordon Area Passenger Mode Trends

Passenger Volumes Crossing Cordon Boundaries ¹				
Year	Auto. Pass.	Comm. Veh. Pass.	Transit Pass.	Total Pass.
1924 ²	393,322	74,252	741,124	1,208,698
1941 ³	715,057	74,724	501,503	1,291,284
1957 ⁴	717,591	70,650	394,171	1,182,412
1963 ⁴	648,414	60,416	267,033	975,863
1968 ⁴	672,310	54,140	247,840	974,290
1972 ⁴	691,198	56,738	238,880	986,816
1974 ⁴	657,874	53,994	290,010	1,001,878
1976 ⁴	710,960	49,187	308,730	1,068,877
1978 ⁴	749,841	61,545	311,589	1,122,975
1980 ⁴	775,405	48,413	355,136	1,178,954

Proportional Rates By Passenger Mode				
Year	Auto. Pass.	Comm. Veh. Pass.	Transit Pass.	Total Pass.
1924	32.5%	6.2%	61.3%	100%
1941	55.4%	5.8%	38.8%	100%
1957	60.7%	6.0%	33.3%	100%
1963	66.4%	6.2%	27.4%	100%
1968	69.0%	5.6%	25.4%	100%
1972	70.0%	5.8%	24.2%	100%
1974	65.7%	5.4%	28.9%	100%
1976	66.5%	4.6%	28.9%	100%
1978	66.8%	5.5%	27.7%	100%
1980	65.8%	4.1%	30.1%	100%

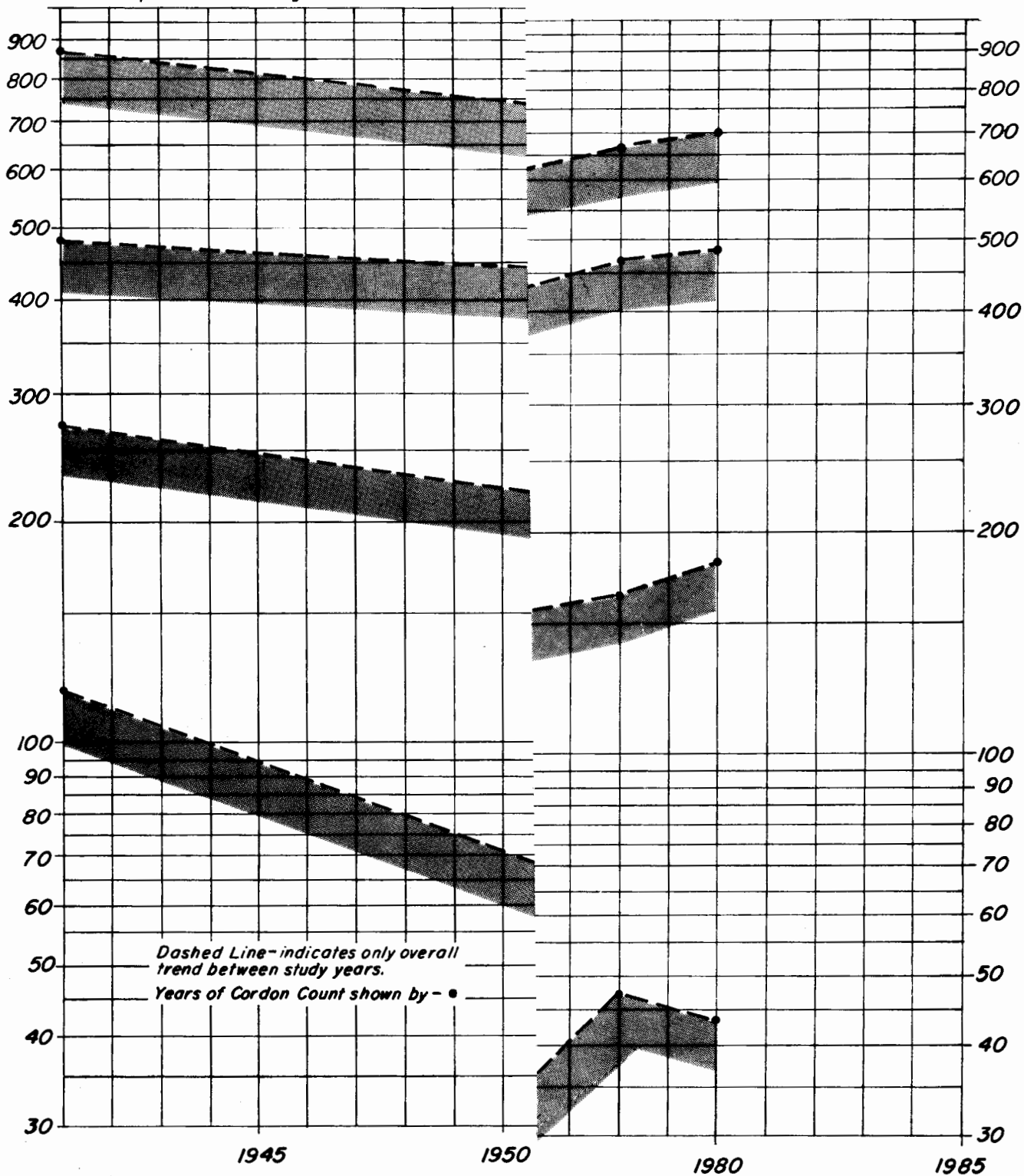
¹ 13 Hours - 6AM to 7PM

Sources: ² Report on a Comprehensive Rapid Transit Plan for City and County of Los Angeles, Kelker, DeLeuw & Co. 1925.

³ Los Angeles County Regional Planning Commission

⁴ Los Angeles City, Department of Transportation

thousands of persons entering cordon area*



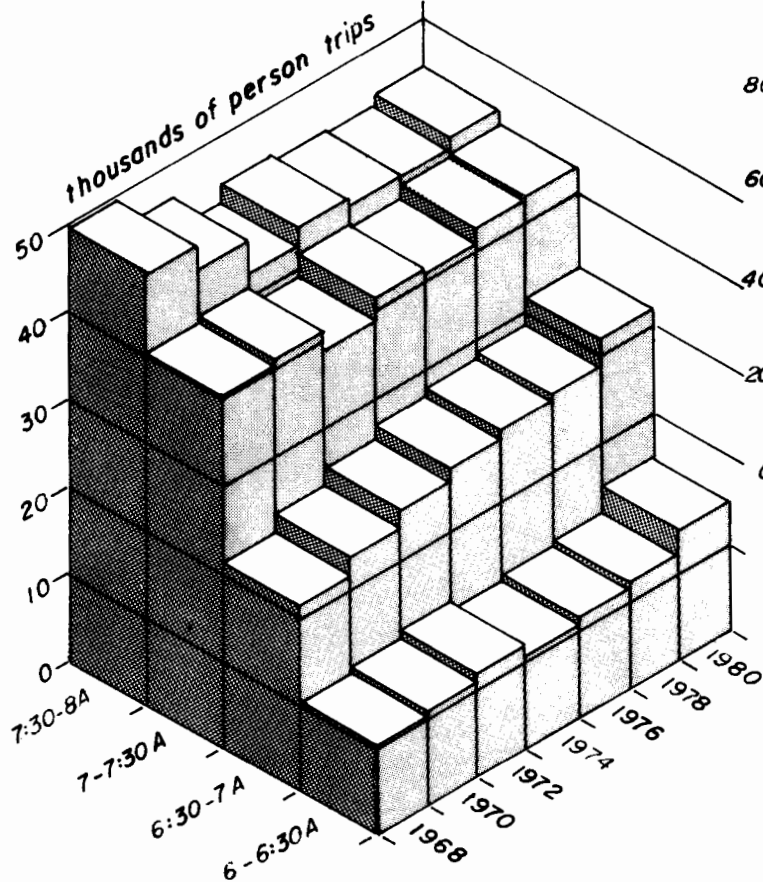
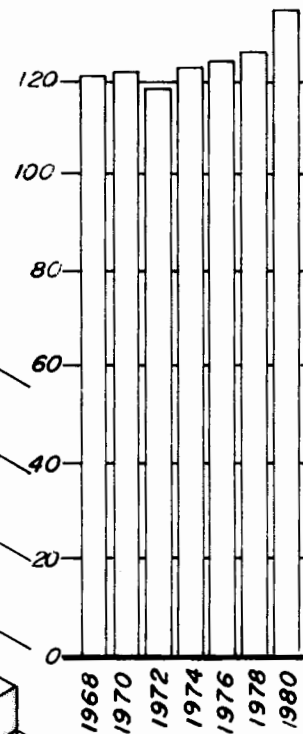
*16 hour period from 6AM to 10PM

MODAL DISTRIBUTION
 ENTERING DOWNTOWN AREA

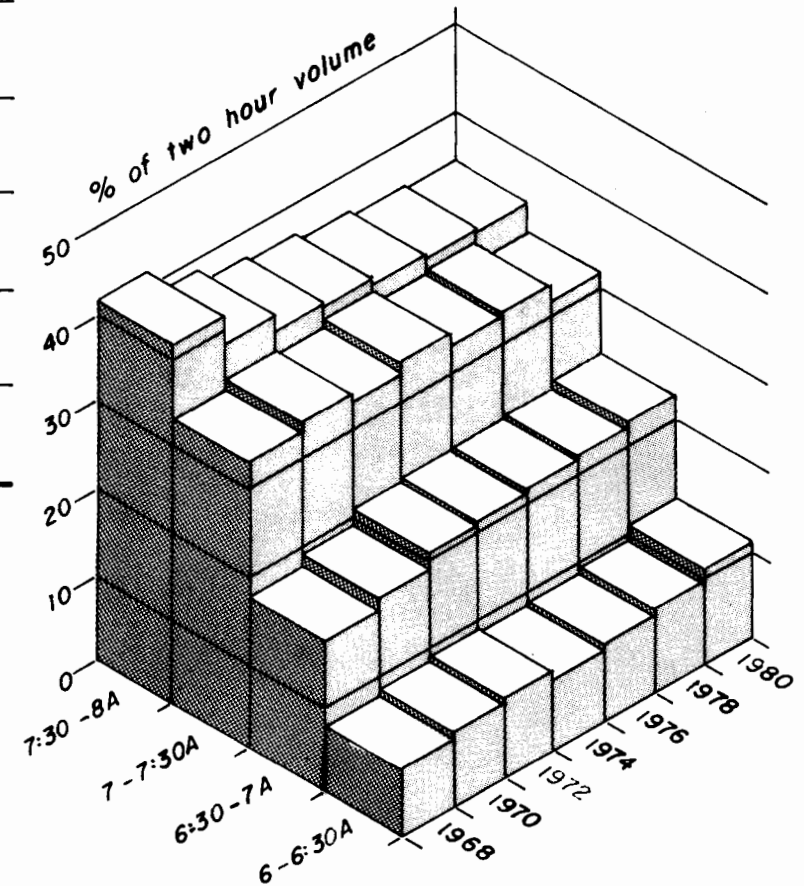
Plate 7

TOTAL INBOUND VOLUME OF PERSON TRIPS · 6-8A

thousands of person trips



VOLUME OF INBOUND CORDON PERSON TRIPS
BY HALF HOUR INCREMENTS

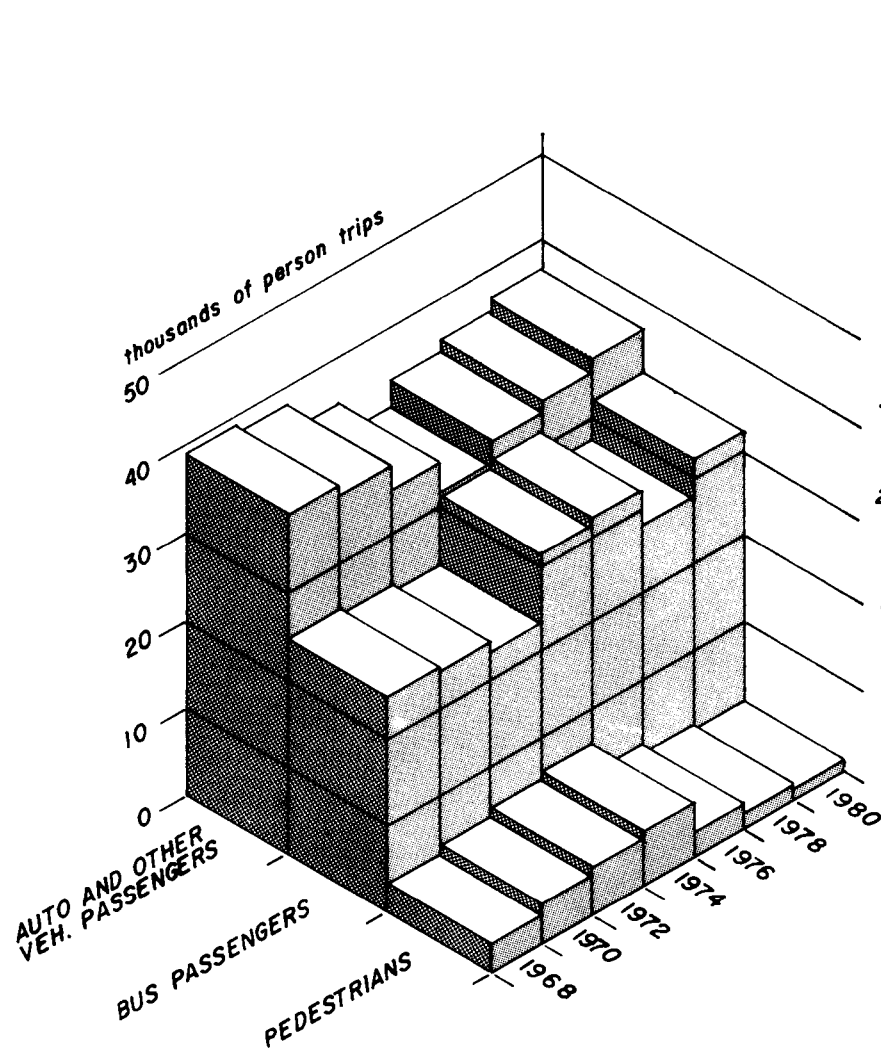


PERCENTAGE OF INBOUND CORDON PERSON TRIPS
BY HALF HOUR INCREMENTS FOR RESPECTIVE YEARS

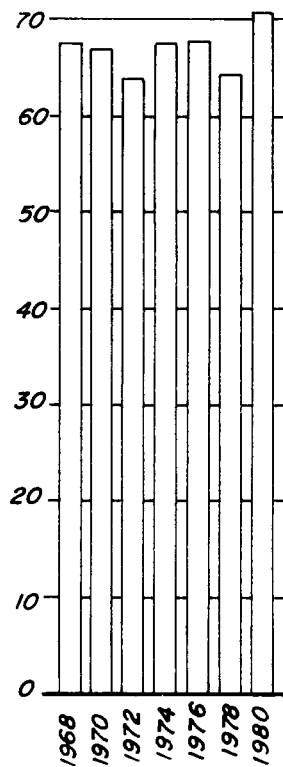
TREND IN INBOUND DOWNTOWN CORDON PERSON TRIPS
6 to 8AM · 1968 to 1980

TOTAL CORDON PERSON DESTINATIONS BY ALL MODES 6-8A

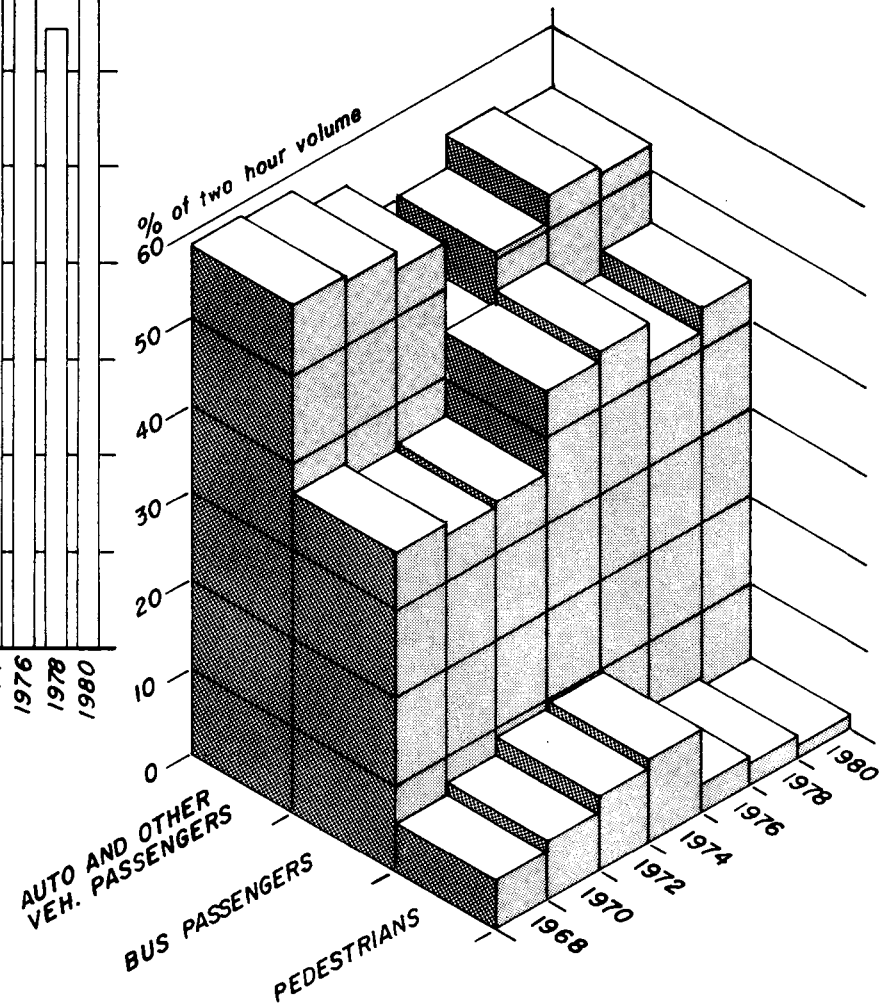
thousands of person destinations
80



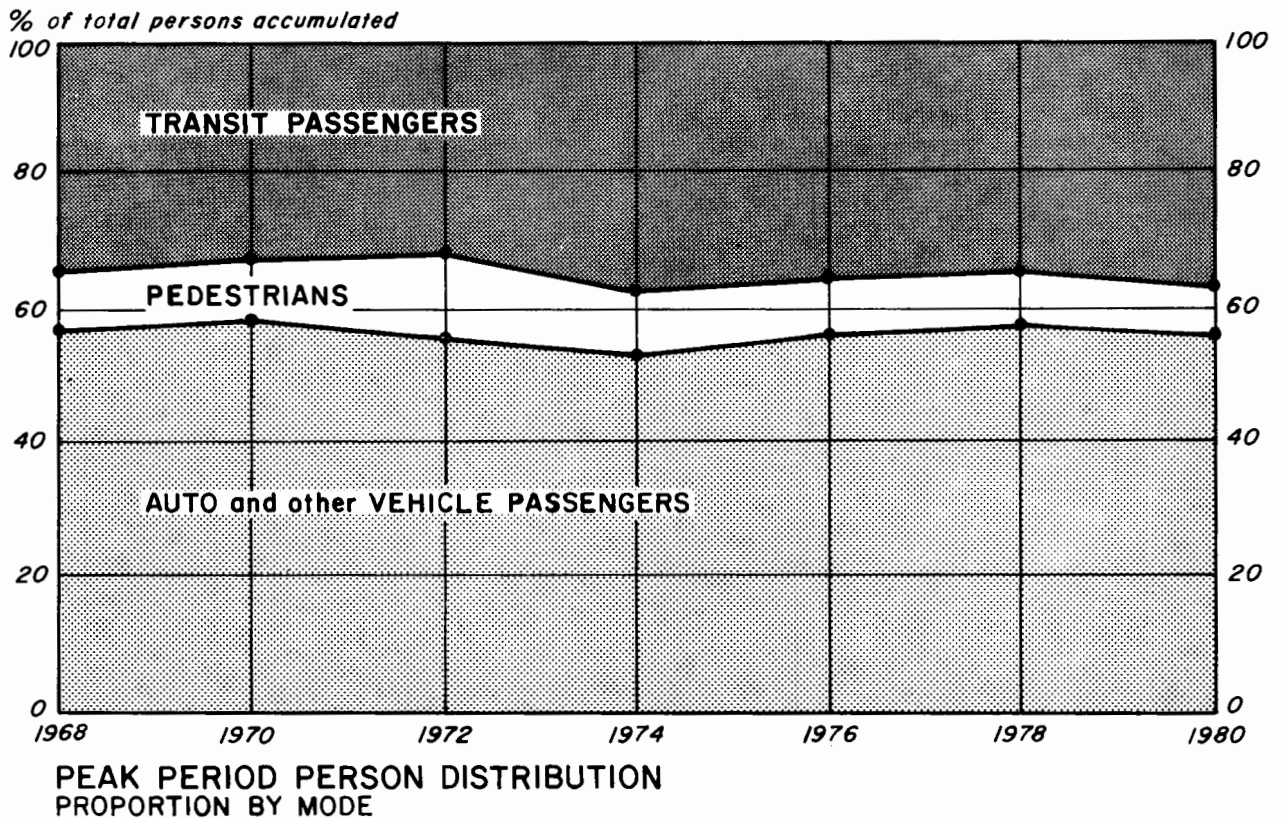
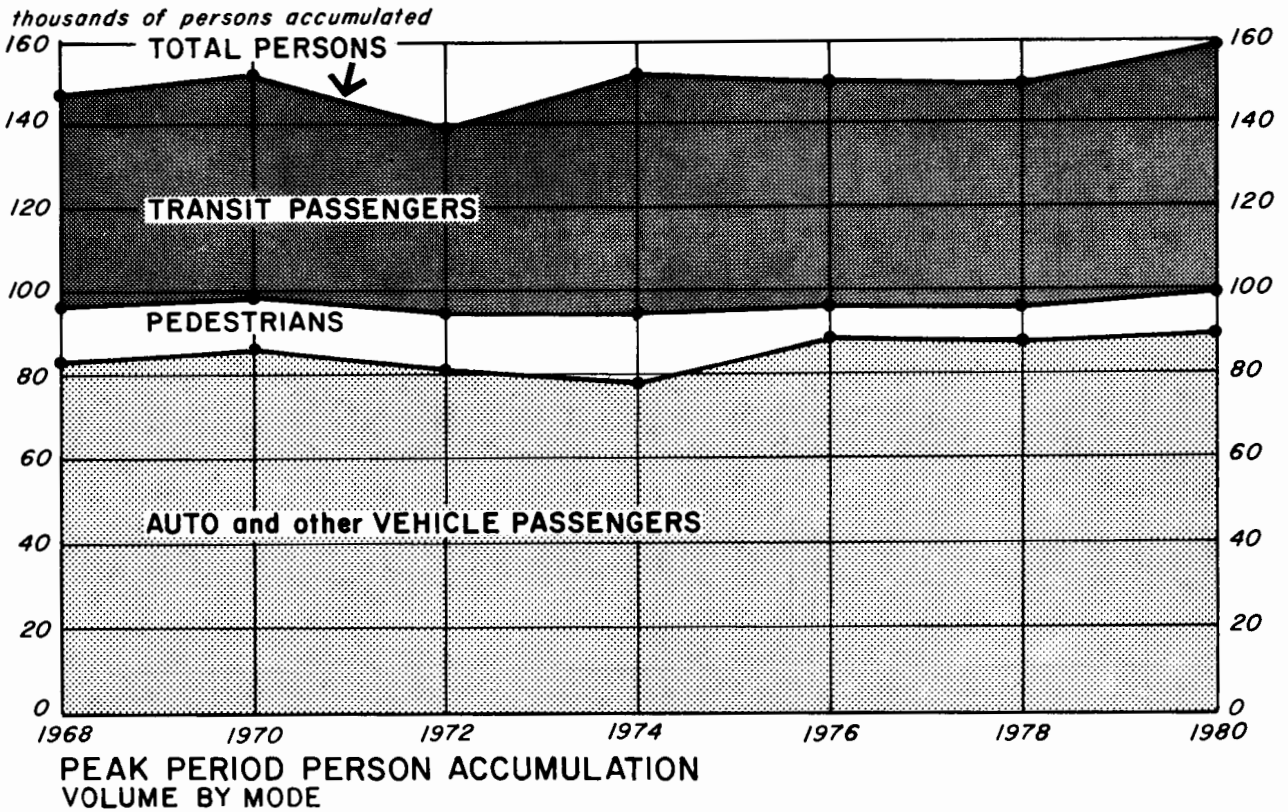
**VOLUME OF CORDON PERSON DESTINATIONS
BY MODE · 6-8A**



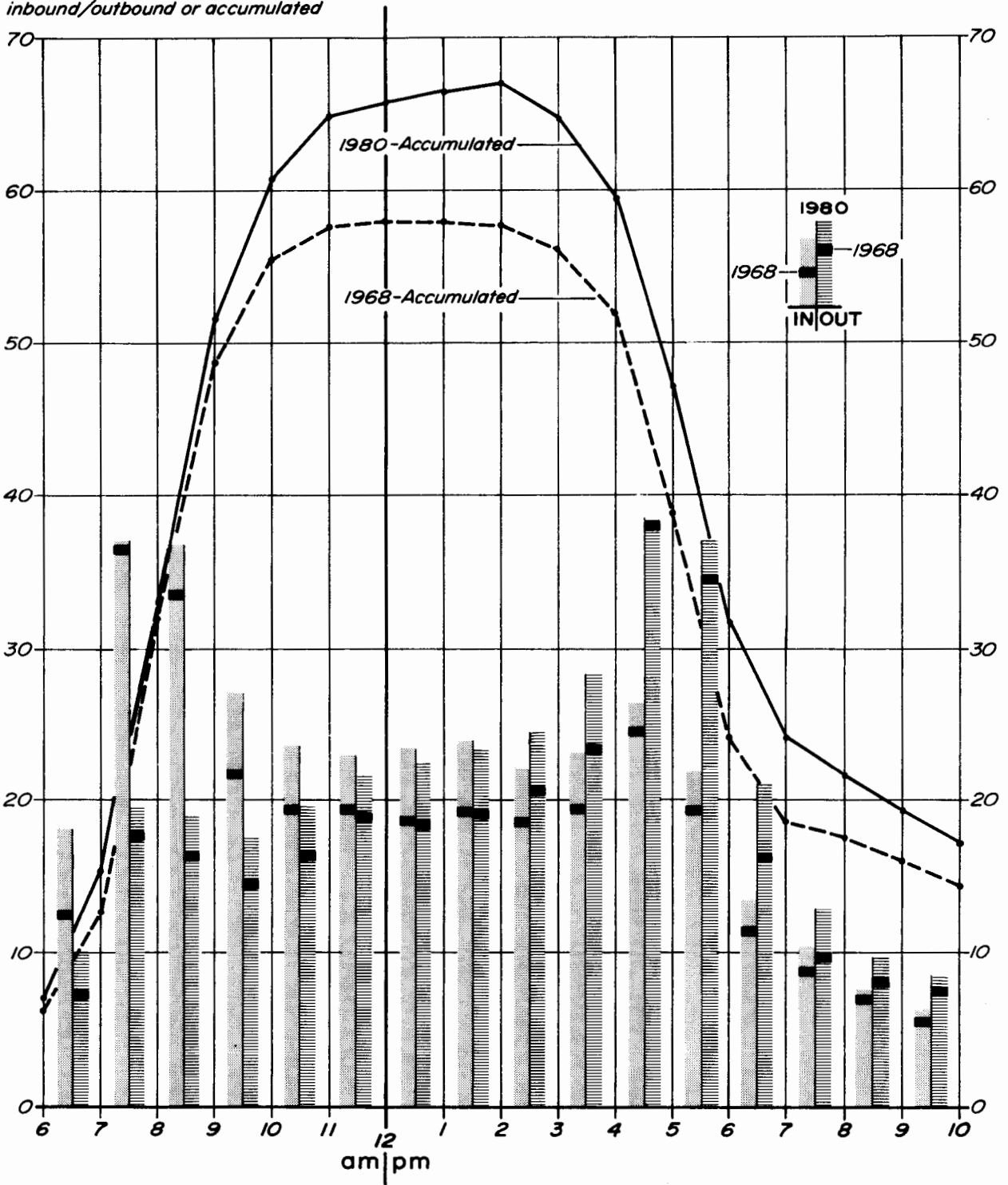
**TREND IN DOWNTOWN CORDON PERSON DESTINATIONS
6 to 8AM · 1968 to 1980**



**PERCENTAGE OF CORDON PERSON DESTINATIONS
BY MODE FOR RESPECTIVE YEARS**



Thousands of Vehicles
inbound/outbound or accumulated



COMPARISON of VEHICLE ACCUMULATION
and HOURLY VOLUMES • 1980 vs 1968

Table 9

Comparison of Occupancy Data For Passenger Vehicles
Entering Downtown Cordon Area By Selected Time Increments

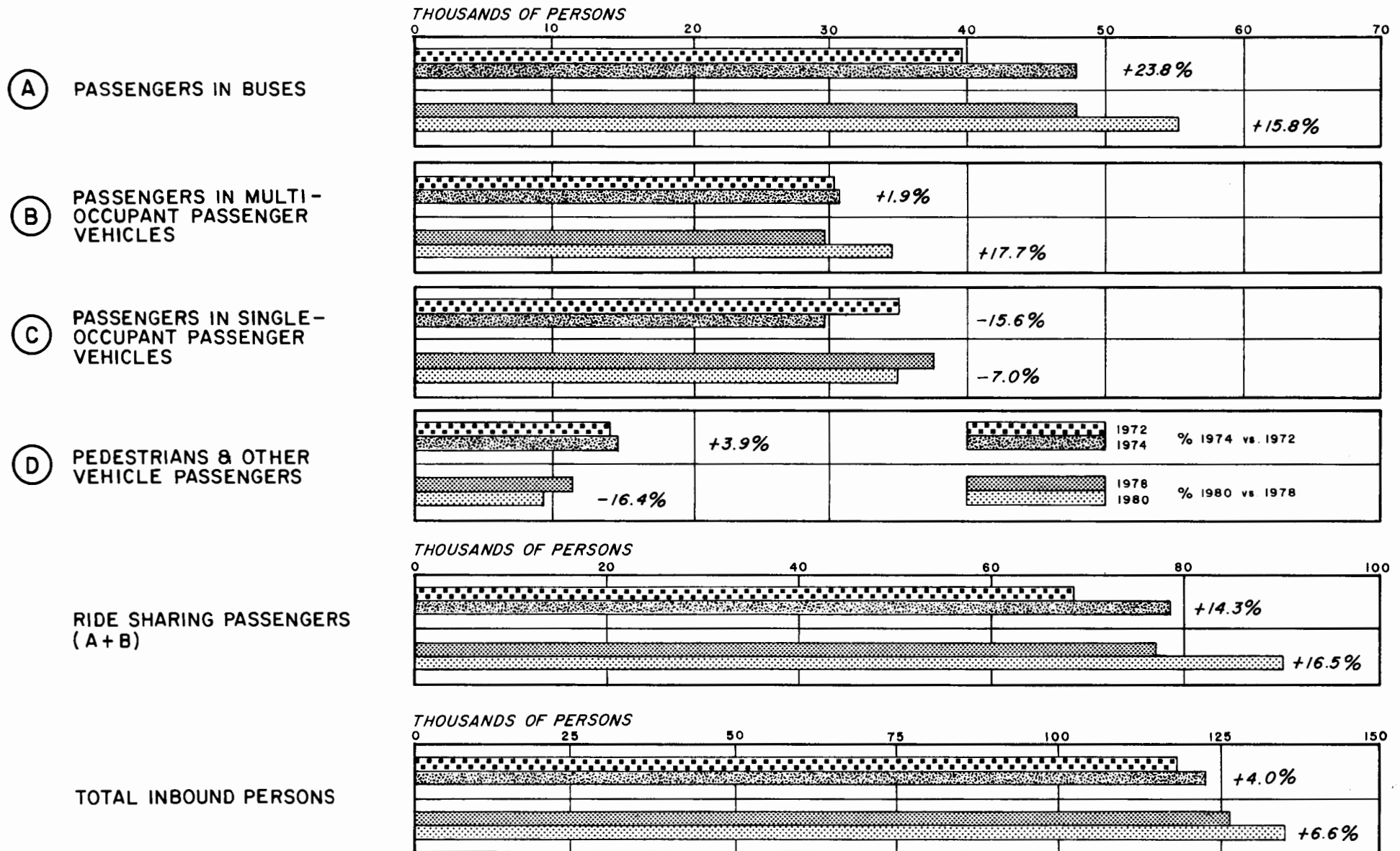
1974-1976-1978-1980

Percentage of Inbound Automobiles by Number of Occupants								
Time Period	1974		1976		1978		1980	
	One	2 or More	One	2 or More	One	2 or More	One	2 or More
6 AM to 10 AM (4 Hours)	74.31	25.69	74.61	25.39	75.59	24.41	72.71	27.29
10 AM to 2 PM (4 Hours)	71.79	28.21	70.33	29.67	70.45	29.55	69.03	30.97
2 PM to 6 PM (4 Hours)	72.14	27.86	71.21	28.79	70.53	29.47	69.74	30.26
6 AM to 6 PM (12 Hours)	72.93	27.07	72.34	27.66	72.34	27.66	70.65	29.35
6 PM to 10 PM (4 Hours)	60.07	39.93	61.54	38.46	54.41	45.59	54.75	45.25
6 AM to 10 PM (16 Hours)	71.57	28.43	70.89	29.11	70.13	29.87	68.65	31.35

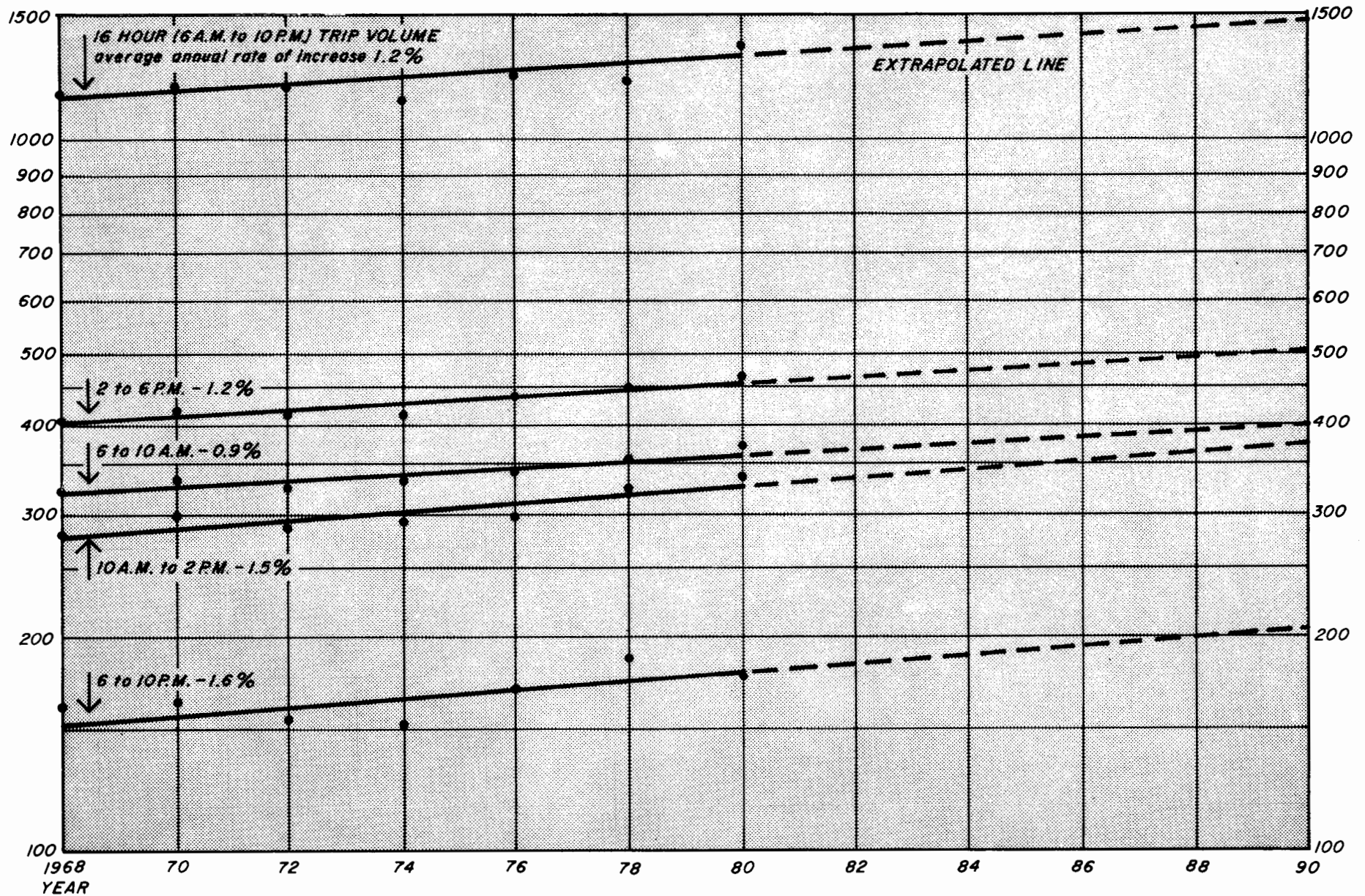
Average Automobile Occupancy

	<u>1974</u>	<u>1976</u>	<u>1978</u>	<u>1980</u>
6 AM to 10 AM (4 Hours)	1.31	1.31	1.31	1.34
10 AM to 2 PM (4 Hours)	1.36	1.39	1.38	1.40
2 PM to 6 PM (4 Hours)	1.38	1.38	1.39	1.41
6 AM to 6 PM (12 Hours)	1.34	1.36	1.36	1.38
6 PM to 10 PM (4 Hours)	1.58	1.57	1.69	1.68
6 AM to 10 PM (16 Hours)	1.37	1.38	1.40	1.42

COMMUTER TRAVEL MODE PATTERNS - CORDON INBOUND PERSON TRIPS - 6 TO 8 A.M.
1974 VS. 1972 & 1980 VS. 1978



THOUSANDS OF CORDON PERSON TRIPS



LINEAR TREND LINES · CORDON PERSON TRIP VOLUMES
1968 to 1980 and EXTRAPOLATED to 1990

CORDON AREA
TRAVEL TRENDS IN
RETROSPECT & PROSPECT

IV

Travel Trends and Patterns During the 1970 Decade:

Considering the travel patterns that have evolved in relation to changes in other conditions, it can be concluded that the most relevant period for projecting Downtown travel trends in the 1980's is the 8-year period from 1972 to 1980. Some of the most significant travel trends and travel mode changes from 1972 to 1980 were as follows:

- o Except for a slight reduction in 1974, the volume of persons entering and leaving the cordon area over the total 16-hour study period has increased steadily since 1972. The volume of 1,370,000 person-trips across the cordon boundaries in 1980 represented an overall increase of 189,000 person-trips, or 16% since 1972.
- o Accumulation of persons within the cordon area at the peak period, 1:30 - 2:00 PM, rose by nearly 20,000 persons, or 14%, from the 1972 volume of 139,700 to a total of 159,500 persons in 1980.
- o For the 6-8 AM commuter period, the volume of inbound passengers in 1974, compared to 1972, in buses was up by 9,200 passengers, or 24%, while volume in single-occupant passenger vehicles dropped by 5,400 passengers, or 15%.
- o In 1980 compared to 1978, for the 6-8 AM commuter period, inbound bus passenger volume rose by 7,600 passengers, or 16%; car-pool passenger volume rose by 5,200 passengers, or 18%; the combined increase was 12,800, or 17%, in ridesharing passengers.
- o The inbound person-trip volumes for the hour from 6-7 AM increased by 28% while the "peak hour" 7-8 AM commuter volume rose by only 8% in 1980 over the volumes recorded in 1972.

Travel trends during the 1970's were affected by events that were newsworthy and self-evident. Many of these events were instrumental in causing a significant increase in transit usage and other ridesharing:

- o As a result of the Arab Oil Embargo, critical gas shortages occurred in the Southern California region just prior to the May 1974 Cordon study.
- o Also, just prior to the 1974 Cordon study, a \$.25 Flat Fare program was implemented for all transit service in Los Angeles County; this was a substantial fare reduction, especially for the commuter trips from the residential areas on the outward reaches of Los Angeles County.
- o Energy crisis conditions in 1979 resulted not only in reduced supplies but also escalation in the cost of gasoline over the entire year. In the Los Angeles metropolitan area, gasoline costs increased by 60% during 1979. (By May 1980, the rise in gasoline costs had subsided such that only moderate increases were experienced.)

- o Benefits derived from continuing development of more fuel-efficient automobiles were at least partially offset by increased parking costs.
- o Since 1974, considerable effort has been expended in the Los Angeles metropolitan area, by both the public and private sector, in the implementation of ridesharing programs to assist commuters in the formation of car-pools, van-pools and subscription bus service, and in the provision of subsidies and preferential facilities for commuters in multi-occupancy vehicles.

Other inter-related major changes also had a significant bearing on cordon travel activity during the 1970's:

- o Extensive new building construction resulted in development of over 10 million square feet of net rentable, non-residential floor space, including over one million square feet of retail floor space, within the cordon area.
- o Development of new parking facilities, primarily construction of parking structures either as an integral part of large complexes or on separate sites, resulted in an increase of approximately 10,000 off-street parking spaces within the cordon area.
- o Changes in peak travel conditions resulted from the greater flexibility afforded to employees in variable work-hours schedules and compressed work-week programs.

Potential Travel Growth and Mode Pattern Changes in the 1980's:

Based on the extensive development presently under construction, in the final planning phase, or planned to go to construction in the immediate future within the Downtown area, person-trip volumes entering and leaving the cordon area can be anticipated to increase over most, if not all, of the 1980 decade. A continuation of volume increases at the growth rate for the 1968-1980 period would increase the 16-hour volume across the cordon boundaries to 1,470,000 person-trips by 1990, an increase of 100,000 persons (or 7%) over the 1980 volume. With commensurate growth, the inbound 2-hour (6-8 AM) commuter period volume would rise from the 1980 volume of 135,000 to 144,000 person-trips by 1990. Assuming that the proportions of pedestrians and commercial vehicle passenger volumes would remain at the 1980 level, the passenger volume for the other two modes, buses and automobiles, would increase to 134,000 passengers in 1990 from the present volume of 125,000 passengers.

The total volume of inbound passengers in automobiles and buses for the 6-8 AM commuter period has increased steadily from 1972 to 1980. The proportionate volume of passengers in single-occupancy passenger vehicles has fluctuated widely, however, ranging from 27% to 34% of the total bus and automobile passenger volume. On the other hand, the trend in ride-sharing passenger volume has been relatively stable since 1974, with approximately 39% in car-pools and 61% of the ridesharing volume as passengers in buses.

It is not possible to predict the proportions of the total 1990 automobile and bus passenger volume that will be in single-occupant automobiles, car-pools or buses. Nevertheless, passenger volumes can be quantified assuming specific mode compositions. This analysis was made to derive 1990 volumes at (A) 1972 proportionate rates, (B) at 1980 proportionate rates and (C) at rates assuming the ridesharing proportion increases at the 1972-1980 growth rate. The passenger volumes derived from this analysis in relation to the inbound volumes recorded in 1980 for the 6-8 AM commuter period are as follows:

Potential 1990 Mode Patterns

		<u>Potential 1990 Mode Passenger Volumes</u>		
	<u>1980 Vol's</u>	<u>A</u>	<u>B</u>	<u>C</u>
Total-In Autos & Buses	125,000	134,000	134,000	134,000
In Single-Occup. Autos	35,000	45,000	38,000	27,000
Ridesharing Volume	90,000	89,000	96,000	107,000
In Car-Pools	35,000	39,000	37,000	42,000
In Buses	55,000	50,000	59,000	65,000

This indicates that, if mode patterns revert to 1972 (A) proportions the ridesharing passenger volume in 1990 would drop by 1,000 from the 1980 volume. It is more likely, however, that ridesharing will continue to grow with increased passenger volumes in car-pools and buses (C) from the 1980 volume of 90,000 to 107,000 passengers in 1990. This analysis also indicates that, in 1990 compared to 1980 volumes, passenger volume in single-occupant passenger vehicles would decrease by 8,000 as a result of the higher ("C") ridesharing rate but would increase by 10,000 passengers with lower level ("A") ridesharing.

Given the continued growth in the Downtown area, it can be reasonably concluded that cordon travel activity will continue to increase during not only commuter periods but all day-time business hours. As in the 1970's, travel mode patterns can be expected to include more use of ridesharing over the next decade.

