Downtown Los Angeles

May 1971

DEPARTMENT OF TRAFFIC
S. S. TAYLOR, City Traffic Engineer

Cordon Count

Downtown Los Angeles

MAY 1971

ABSTRACT

The Cordon Count of Downtown Los Angeles of May, 1971, provides count data of the cordon and inside the cordon area. Current counts, as well as historic counts, are available for trend analysis. Cordon area trends have been analyzed separately for three broad categories (1) vehicular access, (2) passenger mode of transportation, and (3) terminal facilities for both the vehicle and the passenger.

Data from the 1971 Cordon Count of Downtown Los Angeles shows the magnitude, concentration, and travel modes for the 16-hour period from 6 AM to 10 PM on a typical Wednesday in May.

- A total of 320,437 vehicles entered the cordon area during the 16-hour period. Approximately 89 per cent of these vehicles were automobiles. The remainder consisted of either commercial (trucks) or transit vehicles.

- During the 16-hour period, a total of 590,983 persons entered the cordon area. The majority of these persons, 63.5 per cent, arrived in a passenger vehicle. Some 125,659 persons entered the cordon area via public transportation. Transit passengers accounted for 21.3 per cent of the total inbound persons. Pedestrians and commercial vehicle passengers, the remaining modes, accounted for 9.7 per cent and 5.5 per cent, respectively, of the total inbound person movements.

- Accumulation of vehicles within the cordon area reached a peak of 61,047 vehicles at 2 PM. Peak accumulation of persons, 140,853, occurred at the same time.

- Total 16-hour vehicular volumes crossing the cordon boundaries has increased steadily since 1967 for an overall increase of over 11 per cent.

- The volume of persons entering and leaving the cordon area during the 16-hour period has been on a downward trend since 1969.

- Access stations on the west and north boundaries accommodated nearly two-thirds of the 1971 total cordon volumes.

- In 1971, the 61,047 vehicles within the cordon area at peak accumulation represents an increase in excess of 12,000 vehicles over the peak accumulation recorded in 1957.

- At the peak accumulation in 1971, 9.7 per cent of the persons crossing the cordon boundaries arrived on foot, 33.2 per cent arrived via transit, and 57.1 per cent arrived in an automobile or truck.

- The north and west boundaries are the most critical intersection approaches of the cordon area, in terms of capacity deficiency, and these are most critical in the afternoon peak traffic hour.

- In May, 1971, the outbound passenger volume in the afternoon peak hour at the cordon boundaries was approximately 15 per cent greater than the inbound passenger volume for the morning peak hour. In May, 1963, these two directional peak-hour passenger volumes were nearly equal.

- Total combined directional peak-hour passenger volumes, inbound in the morning and outbound in the afternoon, on the one-way couplet at the west boundary, Fifth Street and Sixth Street, serving as one of the primary access routes for the intensively developed core area, in May, 1971, were approximately 15 per cent lower than the totals for the corresponding hours recorded on this couplet in 1963.

- The occupancy ratio, passengers per automobile, of 1.32 for 1971 reflects a decrease of nearly 30 per cent in the average number of passengers, besides the driver, in each automobile crossing the cordon boundaries from the average occupancy observed in 1963.

- Total 16-hour passenger volumes across the cordon boundaries in 1971, 1,053,430, represents an increase of nearly 5 per cent over the peak low recorded in 1967.

- Distribution of the total passenger volumes by primary activity periods reveals that the most growth in 1971 over 1967 has occurred during the business activity period (9 AM to 3 PM), approximately 7 per cent, compared to the distribution by commuter (6 to 9 AM and 3 to 6 PM) or social (6 PM to 10 PM) activity periods, approximately 2 per cent and 3 per cent, respectively.

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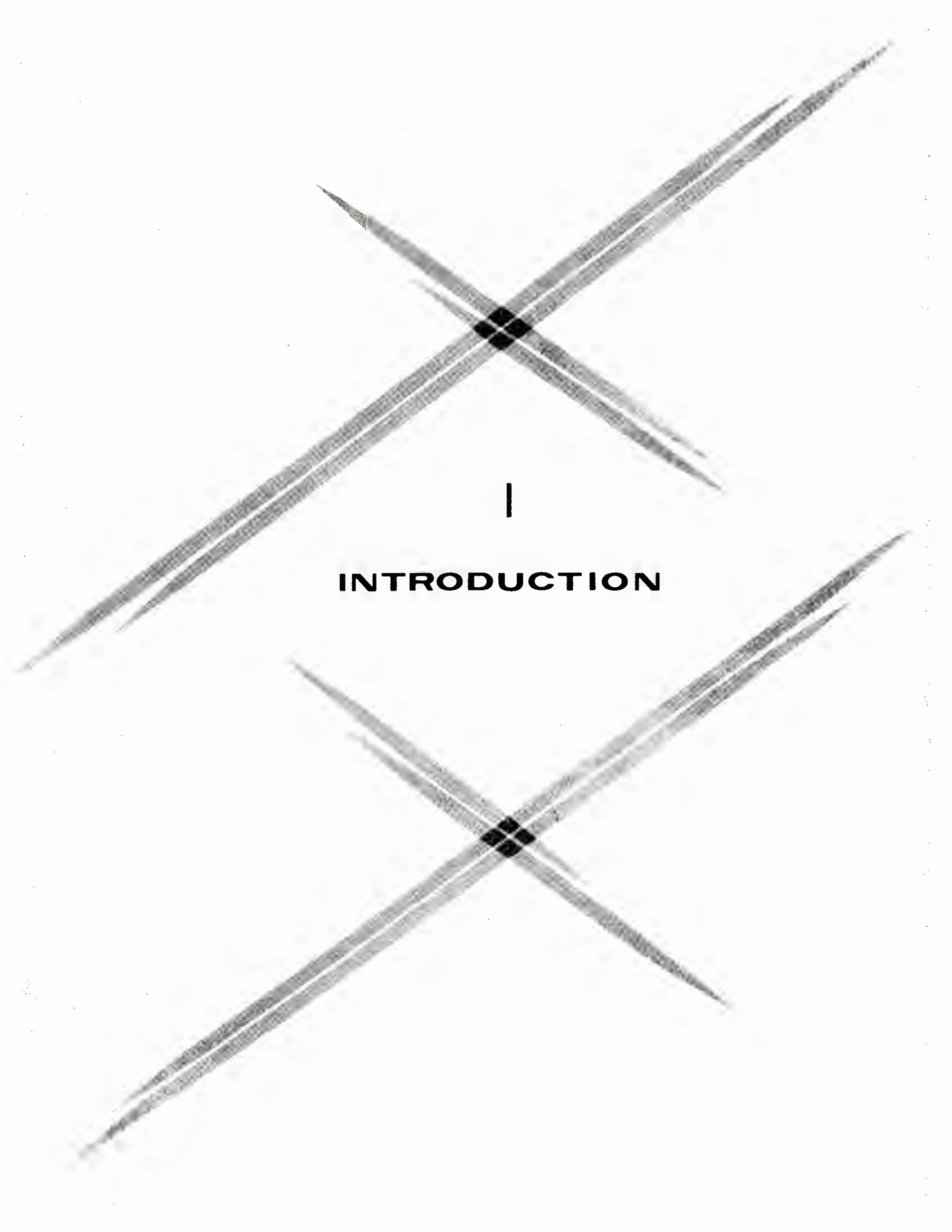


1

INTRODUCTION

I. Introduction

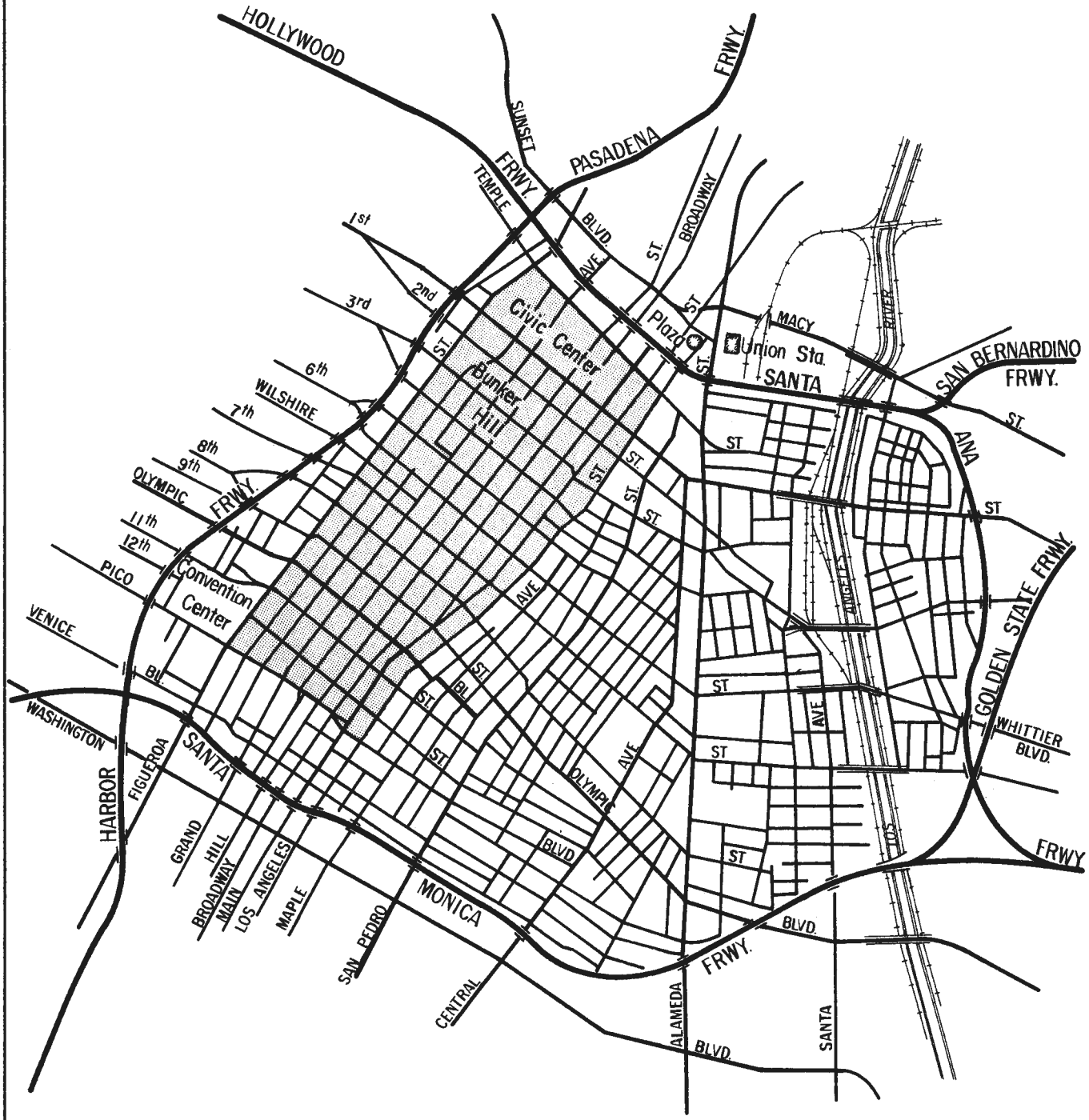
This report represents the 1971 Cordon Count of Downtown Los Angeles for a typical 16-hour Wednesday in May, from 6 AM to 10 PM. The vicinity map, Plate 1, shows the relationship of the Downtown to the Central City area. The cordon area and directional 16-hour volumes are shown on Plate 2.

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 in excess of one square mile.

The cordon count study method provides data on the magnitude of the daily influx and concentration of vehicles and persons into the Downtown area. These data provide information for use in projecting future traffic patterns.

Changes in traffic volumes on cordon surface streets are provided in the historical count data. The changing patterns of travel, as shown from the historical cordon count data, also provide an indication of the relative changes in the intensity of land use development within the Downtown area. These trend analyses are a valuable resource for confirmation of historical trends and provide factual basis for decisions by those concerned with appraising alternatives for solutions to the critical transportation problems of the Downtown area.

LOS ANGELES DOWNTOWN AND CENTRAL CITY AREA



▭ – CORDON AREA

SCALE: 1"= 2,800'

DOWNTOWN CORDON COUNT 1971	City of Los Angeles DEPARTMENT OF TRAFFIC S. S. Taylor, City Traffic Engr.	PLATE 1

edwards

DOWNTOWN CORDON COUNT

MAY 1971

TOTAL VEHICLES 6:00 A.M. to 10:00 P.M.

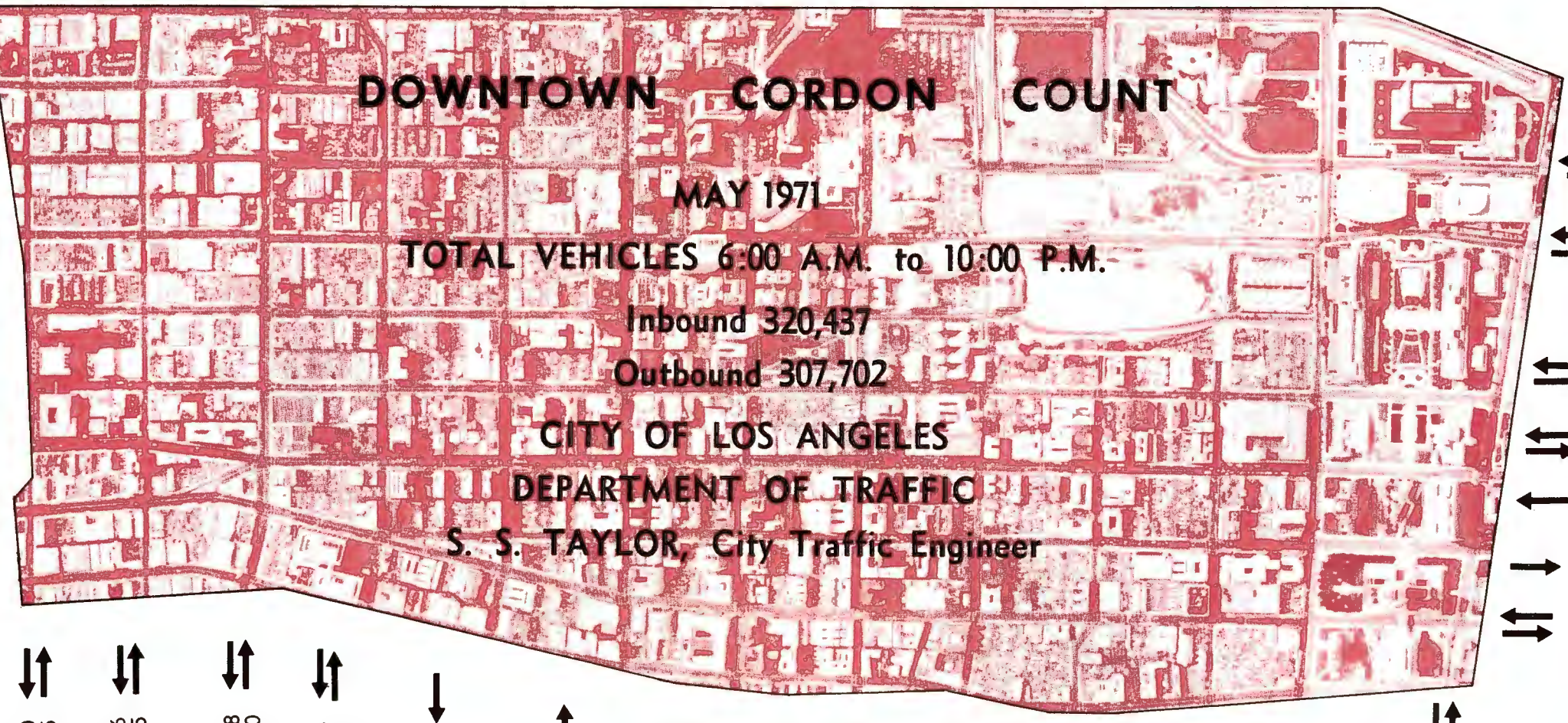
Inbound 320,437

Outbound 307,702

CITY OF LOS ANGELES

DEPARTMENT OF TRAFFIC

S. S. TAYLOR, City Traffic Engineer



PICO BLVD.	8942 / 7202
TWELFTH ST.	0 / 0
ELEVENTH ST.	4922 / 6745
OLYMPIC BLVD.	10760 / 15886
NINTH ST.	22027
EIGHTH PL.	653 / 1036
EIGHTH ST.	16332
SEVENTH PL.	1187 / 460
SEVENTH ST.	6585 / 7108
WILSHIRE BLVD.	10562 / 6639
SIXTH ST.	23330
FIFTH ST.	25733
LOWER FOURTH ST. / FOURTH ST. VIADUCT	4746 / 13842
THIRD ST.	17160
SECOND ST.	8497 / 5759
FIRST ST.	7987 / 7463
DIAMOND ST.	897 / 907
TEMPLE ST.	6833 / 6082

FIGUEROA ST.	8726 / 7292
FLOWER ST.	4523 / 3834
HOPE ST.	2430 / 2093
GRAND AVE.	4919 / 5673
MARGO ST.	328 / 307
OLIVE ST.	3215 / 2726
HILL ST.	4413 / 4511
BROADWAY	5188 / 5564
MAIN ST.	6924 / 7461
LOS ANGELES ST.	5512 / 4298

6658 / 8903	FIGUEROA ST.
4346 / 4510 / 6172	FREEWAY RAMPS
8702 / 11570	GRAND AVE.
8687 / 6985	HILL ST.
9065 / 9032	BROADWAY
16693	SPRING ST.
17741	MAIN ST.
9530 / 11157	LOS ANGELES ST.

PICO BLVD.	3270 / 3255
TWELFTH ST.	3036 / 4115
ELEVENTH ST.	2568 / 2680
OLYMPIC BLVD.	3684 / 4490
NINTH ST.	9059
EIGHTH ST.	14039
SEVENTH ST.	6084 / 7326
SIXTH ST.	12295
FIFTH ST.	9221
WINSTON ST.	1089 / 580
FOURTH ST.	4047
BOYD ST.	1273 / 410
THIRD ST.	10453
SECOND ST.	4007 / 4246
FIRST ST.	10834 / 10610
TEMPLE ST.	4206 / 5312

500 0 500 1000

MAP SCALE IN FEET

Aerial Photograph — Courtesy of Metrex Aerial Surveys Co.

Plate 2

N. AMMONS 4-9-64

Cordon Count Procedure

In 1963, a method of using automatic counters for cordon count data was developed and has been used in succeeding years. Machine counts are supplemented by manual sampling counts of vehicle type, occupancy, and pedestrians. Transit bus and passenger data are furnished by the Southern California Rapid Transit District.

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

The counts were made on successive Wednesdays in May. Counts at selected stations were also made to provide day-of-week volume comparisons.

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

In 1955 and 1957, the cordon area included the area northerly and westerly to the Santa Ana and Harbor Freeways, respectively. The count in 1941 included only the additional area northerly to Sunset Boulevard.

For all of these counts, the cordon count study procedure involved similar methods in that the study provided data on the movement of vehicles and persons into and out of the cordon area at each access street or freeway ramp on the perimeter of the area.

Closure of Temple Street between Los Angeles Street and Main Street for construction of the East Mall and construction for a storm drain project in Fourth Street affected the volume demand on these two stations along the east boundary.

For the 1971 Cordon Count, a slight adjustment was made on the data on initial accumulation of vehicles and persons within the cordon area at 6 AM. This change in initial accumulation was based on an inventory of vehicles parked both on-street and off-street and of vehicles in circulation on the streets during a week in May, 1971. Data from the 1970 Census was used for initial accumulation of persons.

II

CORDON AREA TRENDS and ANALYSES

II. Cordon Area Trends and Analyses

Vehicular Trends

The tabulation of the latest cordon count data, Tables 1, 2, 3, 4, and 5, shows the person and vehicular volumes crossing the cordon boundaries. Graphic presentation of the cordon data is shown on Plates 3, 4, 5, 6, and 7.

Table 6 shows that since 1967 there has been a steady increase in the 16-hour volume of motor vehicles crossing the cordon boundaries. The volume in 1971, 628,139 vehicles, represented an increase of approximately 11 per cent over the volume counted in the 1967 study.

The extension of the Santa Monica Freeway westerly from Vermont Avenue to its present terminus in the City of Santa Monica in the early part of 1965 was the most significant development affecting the downward trend between 1964 and 1967. This extension resulted in the diversion of many through trips from cordon surface street routes. With traffic volume demands on the Downtown freeway loop presently at or above design capacity levels, especially during peak traffic hours, cordon surface street routes are being utilized by an increasingly greater volume of through trips.

The trend of total person trips across the cordon boundaries has paralleled the trend in vehicles for the years between 1963 and 1969. Table 7 shows a comparison of totals for selected years between 1941 and 1971. Person trip trends are shown graphically in Plate 8. Since 1969, there has been a downward trend in the total number of persons entering and leaving the cordon area during the 16 hours of the cordon count study. Review of the passenger volume data revealed that there was no significant variation from the total person trip trend by either the transit or non-transit modes of transportation. The conditions affecting the downward trend in person trips are apparently factors which have a generally similar effect on all passenger modes of transport.

The data in Table 6 shows an upward trend between 1967 and 1971 in the total volume of vehicles recorded at the cordon boundaries. Table 8 shows a comparison of data for selected cordon count years, between 1924 and 1971, by cordon boundaries. The cordon volumes show a parallel trend for all cordon sides except the north boundary.

Comparison of 1967 with 1971 volumes reveals increased growth on each of the four cordon boundaries: 8 per cent on the east; 6 per cent on the south; 13 per cent on the west; and 12 per cent on the north.

A comparison of selected historical cordon count data is shown in Table 9.

TABLE 1

Sixteen-Hour Summary

1971 Cordon Count Data

May, Wednesday

	In	Out
Passenger Cars	283,688	273,955
Trucks and Other Vehicles	32,275	29,264
Buses	4,474	4,483
Grand Total - Vehicles	320,437	307,702
Auto Passengers	375,526	362,299
Other Vehicle Passengers	32,275	29,264
Bus Passengers	125,659	128,407
Pedestrians	57,523	58,227
Grand Total - Persons	590,983	578,197

Day of Week Vehicle Factor

Monday	0.99
Tuesday	1.02
Wednesday*	1.00
Thursday	1.01
Friday	1.04
Saturday	0.65
Sunday	0.42

*Base

TABLE 2

SUMMARY OF VEHICLES BY LOCATION
DOWNTOWN LOS ANGELES, MAY 1971, 6AM - 10PM

	PASSENGER CARS		TRUCKS AND OTHER VEHICLES		BUSES		TOTAL VEHICLES	
EAST BOUNDARY	IN	OUT	IN	OUT	IN	OUT	IN	OUT
EAST OF LOS ANGELES ST. ON								
TEMPLE ST.	4807	3949	505	257	0	0	5312	4206
1ST ST.	9406	9830	940	733	264	271	10610	10834
2ND ST.	3781	3414	465	593	0	0	4246	4007
3RD ST.	8224	0	2157	0	72	0	10453	0
BOYD ST.	329	1066	81	207	0	0	410	1273
4TH ST.	0	2574	0	1394	0	79	0	4047
WINSTON ST.	437	958	143	131	0	0	580	1089
5TH ST.	7755	0	1294	0	172	0	9221	0
6TH ST.	0	10480	0	1492	0	323	0	12295
7TH ST.	5123	4404	1861	1430	342	250	7326	6084
8TH ST.	12474	0	1310	0	255	0	14039	0
9TH ST.	0	7246	0	1625	0	188	0	9059
OLYMPIC BLVD.	3969	3275	521	409	0	0	4490	3684
11TH ST.	2152	2192	528	376	0	0	2680	2568
12TH ST.	3372	2481	665	490	78	65	4115	3036
PICO BLVD.	2415	2344	840	926	0	0	3255	3270
SUB TOTAL	64244	54213	11310	10063	1183	1176	76737	65452
SOUTH BOUNDARY								
SOUTH OF PICO BLVD. ON								
LOS ANGELES ST.	3867	4956	431	556	0	0	4298	5512
MAIN ST.	6092	5658	1167	1075	202	191	7461	6924
BROADWAY	4702	4459	657	518	205	211	5564	5188
HILL ST.	4002	3957	398	352	111	104	4511	4413
OLIVE ST.	2343	2884	349	297	34	34	2726	3215
MARGO ST.	307	328	0	0	0	0	307	328
GRAND AVE.	5029	4366	558	469	86	84	5673	4919
HOPE ST.	1797	2117	296	313	0	0	2093	2430
FLOWER ST.	2886	3517	825	886	123	120	3834	4523
FIGUEROA ST.	6665	7940	564	720	63	66	7292	8726
SUB TOTAL	37690	40182	5245	5186	824	810	43759	46178
WEST BOUNDARY								
WEST OF FIGUEROA ST. ON								
PICO BLVD.	7908	6433	856	597	178	172	8942	7202
12TH ST.	0	0	0	0	0	0	0	0
11TH ST.	4323	6142	599	603	0	0	4922	6745
OLYMPIC BLVD.	9958	14773	683	990	119	123	10760	15886
9TH ST.	19843	0	2139	0	45	0	22027	0
8TH PLACE	653	1036	0	0	0	0	653	1036
8TH ST.	0	15091	0	1197	0	44	0	16332
7TH PLACE	1187	460	0	0	0	0	1187	460
7TH ST.	6122	6400	296	536	167	172	6585	7108
WILSHIRE BLVD.	9335	5863	1062	603	165	173	10562	6639
HARBOR FWY OFF RAMP	14615	0	954	0	0	0	15569	0
6TH ST.	6770	0	746	0	245	0	7761	0
5TH ST.	0	23736	0	1769	0	228	0	25733
LOWER 4TH ST.	4431	0	315	0	0	0	4746	0
4TH ST. VIADUCT	12429	0	1413	0	0	0	13842	0
3RD ST.	0	15784	0	1376	0	0	0	17160
2ND ST.	7769	5411	728	348	0	0	8497	5759
1ST ST.	7427	6911	438	438	122	114	7987	7463
DIAMOND ST.	877	907	0	0	0	0	877	907
TEMPLE ST.	5776	5221	850	659	207	202	6833	6082
SUB TOTAL	119423	114168	11079	9116	1248	1228	131750	124512
NORTH BOUNDARY								
NORTH OF TEMPLE ST. ON								
FIGUEROA ST.	6372	8328	252	539	34	36	6658	8903
HARBOR FWY OFF RAMP	4026	0	320	0	0	0	4346	0
HOLLYWOOD FWY RAMPS	3902	0	499	0	109	0	4510	0
HOLLYWOOD FWY RAMPS	0	5656	0	516	0	0	0	6172
GRAND AVE.	7997	10734	506	512	199	324	8702	11570
HILL ST.	8067	6634	611	341	9	10	8687	6985
BROADWAY	8115	7664	618	1026	332	342	9065	9032
SPRING ST.	14856	0	1301	0	536	0	16693	0
MAIN ST.	0	15851	0	1333	0	557	0	17741
LOS ANGELES ST.	8996	10525	534	632	0	0	9530	11157
SUB TOTAL	62331	65392	4641	4899	1219	1269	68191	71560
GRAND TOTAL	283688	273955	32275	29264	4474	4483	320437	307702

TABLE 3

SUMMARY OF PERSONS BY LOCATION
DOWNTOWN LOS ANGELES, MAY 1971, 6AM - 10PM

	AUTO PASSENGERS		PASSENGERS IN OTHER VEHICLES		BUS PASSENGERS		PEDESTRIANS		TOTAL PERSONS	
EAST BOUNDARY	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
EAST OF LOS ANGELES ST. ON										
TEMPLE ST.	6459	5174	505	257	0	0	2626	2443	9590	7874
1ST ST.	12446	12693	940	733	6123	6174	1873	2163	21382	21763
2ND ST.	4938	4422	465	593	0	0	1459	1434	6862	6449
3RD ST.	10895	0	2157	0	1367	0	731	787	15150	787
BOYD ST.	427	1352	81	207	0	0	593	549	1101	2108
4TH ST.	0	3444	0	1394	0	1238	1160	1231	1160	7307
WINSTON ST.	569	1248	143	131	0	0	1091	1321	1803	2700
5TH ST.	11070	0	1294	0	4131	0	3983	3754	20478	3754
6TH ST.	0	14533	0	1492	0	7542	8732	10147	8732	33714
7TH ST.	7260	6068	1861	1430	9932	8543	2671	2572	21724	18613
8TH ST.	17618	0	1310	0	5948	0	2105	1715	26981	1715
9TH ST.	0	9897	0	1625	0	5241	2671	2690	2671	19453
OLYMPIC BLVD.	5605	4466	521	409	0	0	351	405	6477	5280
11TH ST.	3044	2954	528	376	0	0	1164	1034	4736	4364
12TH ST.	4726	3358	665	490	1772	1620	921	852	8084	6320
PICO BLVD.	3416	3161	840	926	0	0	616	646	4872	4733
SUB TOTAL	88473	72770	11310	10063	29273	30358	32747	33743	161803	146934
SOUTH BOUNDARY										
SOUTH OF PICO BLVD. ON										
LOS ANGELES ST.	4992	6726	431	556	0	0	168	193	5591	7475
MAIN ST.	7916	7714	1167	1075	5639	5800	467	421	15189	15010
BROADWAY	6110	6028	657	518	6463	6942	552	535	13782	14023
HILL ST.	5185	5375	398	352	3146	2974	859	774	9588	9475
OLIVE ST.	3016	3948	349	297	542	548	257	238	4164	5031
MARCO ST.	417	432	0	0	0	0	0	0	417	432
GRAND AVE.	7009	5895	558	469	2264	2241	285	309	10116	8914
HOPE ST.	2532	2893	296	313	0	0	760	731	3588	3937
FLOWER ST.	3837	4978	825	886	3917	3672	499	445	9078	9981
FIGUEROA ST.	9058	11272	564	720	1729	2004	325	334	11676	14330
SUB TOTAL	50072	55261	5245	5186	23700	24181	4172	3980	83189	88608
WEST BOUNDARY										
WEST OF FIGUEROA ST. ON										
PICO BLVD.	10935	8538	856	597	6386	6423	651	700	18828	16258
12TH ST.	0	0	0	0	0	0	0	0	0	0
11TH ST.	5882	8173	599	603	0	0	112	145	6593	8921
OLYMPIC BLVD.	13500	19696	683	990	3852	3549	371	401	18406	24636
9TH ST.	27189	0	2139	0	631	0	849	757	30808	757
8TH PLACE	898	1296	0	0	0	0	182	216	1080	1512
8TH ST.	0	19872	0	1197	0	640	857	961	857	22670
7TH PLACE	1511	553	0	0	0	0	477	389	1988	942
7TH ST.	7946	7877	296	536	6297	5886	2614	3126	17153	17425
WILSHIRE BLVD.	12109	7201	1062	603	5015	5541	2929	2399	21115	15744
HARBOR FWY OFF RAMP	17789	0	954	0	0	0	0	0	18743	0
6TH ST.	8731	0	746	0	7880	0	708	692	18065	692
5TH ST.	0	29568	0	1769	0	7750	508	513	508	39600
LOWER 4TH ST.	5731	0	315	0	0	0	51	36	6097	36
4TH ST. VIADUCT	16429	0	1413	0	0	0	0	11	17842	11
3RD ST.	0	19624	0	1376	0	0	68	91	68	21091
2ND ST.	10121	7537	728	348	0	0	271	152	11120	8037
1ST ST.	9672	9527	438	438	4140	3839	320	329	14570	14133
DIAMOND ST.	1128	1159	0	0	0	0	0	0	1128	1159
TEMPLE ST.	7584	7093	850	659	6023	6165	411	322	14868	14239
SUB TOTAL	157155	147714	11079	9116	40224	39793	11379	11240	219837	207863
NORTH BOUNDARY										
NORTH OF TEMPLE ST. ON										
FIGUEROA ST.	8779	11510	252	539	765	892	85	103	9881	13044
HARBOR FWY OFF RAMP	5597	0	320	0	0	0	0	0	5917	0
HOLLYWOOD FWY RAMPS	5540	0	499	0	3796	0	0	0	9835	0
HOLLYWOOD FWY RAMPS	0	7748	0	516	0	0	0	0	0	8264
GRAND AVE.	9973	14018	506	512	6007	9968	474	522	16960	25020
HILL ST.	10105	8927	611	341	260	270	1226	1080	12202	10618
BROADWAY	10417	10002	618	1026	8814	9396	1054	1302	20903	21726
SPRING ST.	18358	0	1301	0	12820	0	3321	3263	35800	3263
MAIN ST.	0	20672	0	1333	0	13549	1829	1543	1829	37097
LOS ANGELES ST.	11057	13677	534	632	0	0	1236	1451	12827	15760
SUB TOTAL	79826	86554	4641	4899	32462	34075	9225	9264	126154	134792
GRAND TOTAL	375526	362299	32275	29264	125659	128407	57523	58227	590983	578197

TABLE 4

SUMMARY OF VEHICLES BY HALF HOUR PERIODS

DOWNTOWN LOS ANGELES, MAY 1971

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
			5400			500			100			6000
630	4317	2291	7426	676	344	832	121	111	110	5114	2746	8368
700	8961	4539	11848	981	612	1201	170	134	146	10112	5285	13195
730	15349	7262	19935	1048	736	1513	277	190	233	16674	8188	21681
800	19035	9633	29337	1074	820	1767	269	210	292	20378	10663	31396
830	16957	8500	37794	1177	885	2059	222	182	332	18356	9567	40185
900	14537	7057	45274	1404	994	2469	171	157	346	16112	8208	48089
930	10887	6392	49769	1448	1147	2770	143	137	352	12478	7676	52891
1000	8703	6469	52003	1425	1189	3006	125	127	350	10253	7785	55359
1030	8593	7329	53267	1489	1169	3326	125	123	352	10207	8621	56945
1100	9048	7547	54768	1378	1276	3428	120	119	353	10546	8942	58549
1130	8885	7946	55707	1471	1301	3598	120	121	352	10476	9368	59657
1200	9366	8989	56084	1312	1237	3673	117	126	343	10795	10352	60100
1230	9020	9117	55987	1199	1183	3689	121	128	336	10340	10428	60012
1300	9197	8738	56446	1233	1106	3816	118	123	331	10548	9967	60593
1330	8864	8721	56589	1320	1252	3884	123	123	331	10307	10096	60804
1400	9212	9008	56793	1217	1172	3929	118	124	325	10547	10304	61047
1430	8834	9412	56215	1428	1221	4136	133	120	338	10395	10753	60689
1500	8258	9764	54709	1393	1355	4174	131	127	342	9782	11246	59225
1530	8241	9787	53163	1425	1524	4075	164	145	361	9830	11456	57599
1600	9831	11770	51224	1312	1674	3713	176	157	380	11319	13601	55317
1630	11751	16502	46473	1309	1432	3590	206	211	375	13266	18145	50438
1700	12408	20730	38151	1214	1198	3606	211	263	323	13833	22191	42080
1730	11000	20006	29145	936	1066	3476	189	287	225	12125	21359	32846
1800	8592	13964	23773	620	759	3337	163	229	159	9375	14952	27269
SUB TOTAL	249846	231473		29489	26652		3833	3774		283168	261899	
1830	6602	9734	20641	588	571	3354	131	168	122	7321	10473	24117
1900	5178	6666	19153	511	430	3435	116	122	116	5805	7218	22704
1930	4748	5202	18699	331	387	3379	88	95	109	5167	5684	22187
2000	4670	4844	18525	310	261	3428	72	71	110	5052	5176	22063
2030	3882	4294	18113	307	261	3474	66	74	102	4255	4629	21689
2100	3056	4055	17114	291	252	3513	61	53	110	3408	4360	20737
2130	2884	3980	16018	215	231	3497	59	56	113	3158	4267	19628
2200	2822	3707	15133	233	219	3511	48	70	91	3103	3996	18735
SUB TOTAL	33842	42482		2786	2612		641	709		37269	45803	
GRAND TOTAL	283688	273955		32275	29264		4474	4483		320437	307702	

TABLE 5

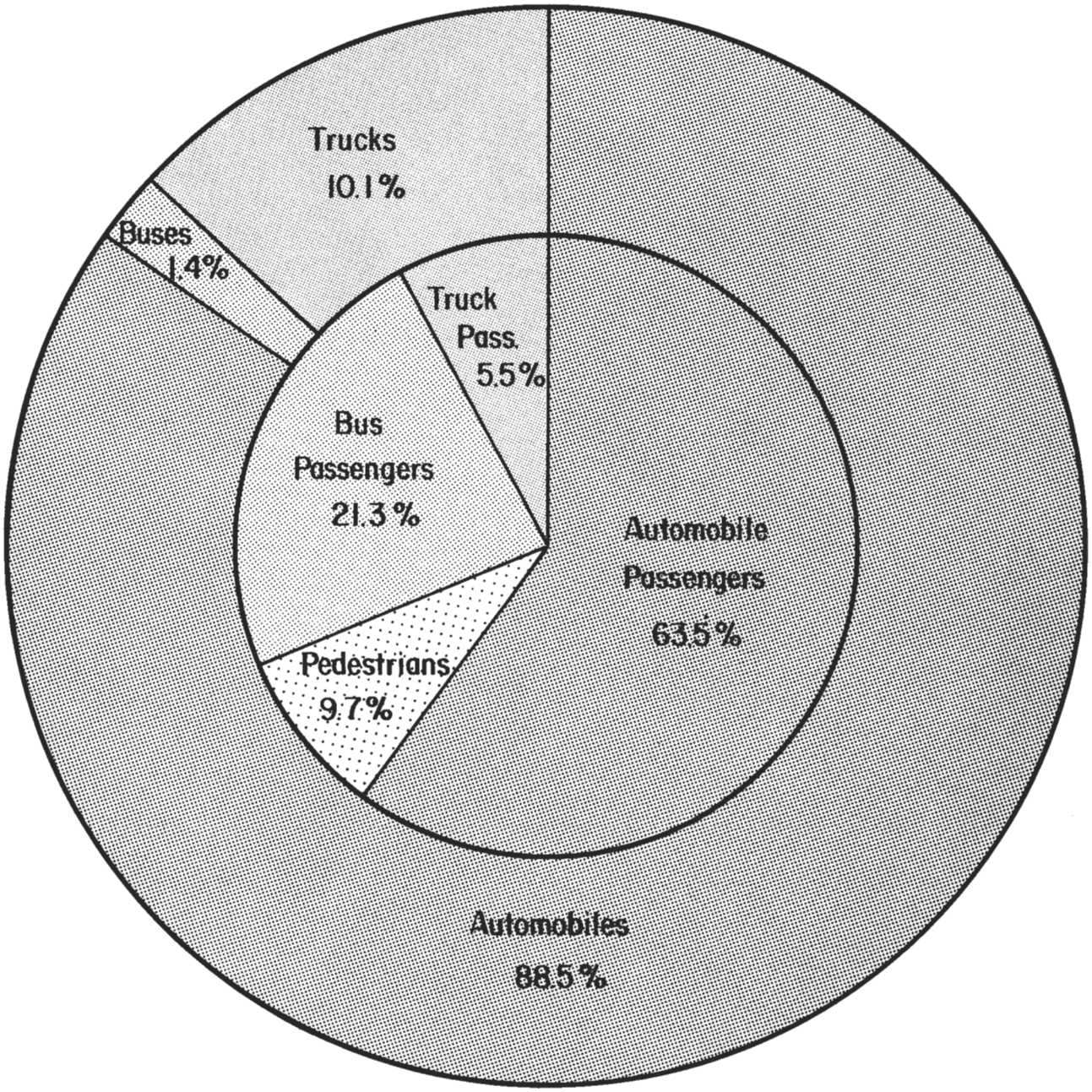
SUMMARY OF PERSONS BY HALF HOUR PERIODS

DOWNTOWN LOS ANGELES, MAY 1971

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
			7000			500			5500			4000			17000
630	5583	2918	9665	676	344	832	3923	1758	7665	787	446	4341	10969	5466	22503
700	11353	5513	15505	981	612	1201	7253	3148	11770	1697	807	5231	21284	10080	33707
730	21030	8699	27836	1048	736	1513	13888	4746	20912	3609	1596	7244	39575	15777	57505
800	24464	11176	41124	1074	820	1767	12913	5323	28502	4171	1923	9492	42622	19242	80885
830	20865	9967	52022	1177	885	2059	9213	3375	34340	3502	1485	11509	34757	15712	99930
900	17168	8071	61119	1404	994	2469	6123	2447	38016	2382	1228	12663	27077	12740	114267
930	12741	7399	66461	1448	1147	2770	4464	1599	40881	1913	1372	13204	20566	11517	123316
1000	10856	8131	69186	1425	1189	3006	3282	1683	42480	1766	1359	13611	17329	12362	128283
1030	10944	9190	70940	1489	1169	3326	3324	1624	44180	1804	1636	13779	17561	13619	132225
1100	11755	10143	72552	1378	1276	3428	3092	1964	45308	1953	1721	14011	18178	15104	135299
1130	11523	10402	73673	1471	1301	3598	3153	2200	46261	1922	1674	14259	18069	15577	137791
1200	12951	11825	74799	1312	1237	3673	2849	2641	46469	2354	2426	14187	19466	18129	139128
1230	11745	11830	74714	1199	1183	3689	3157	2966	46660	2808	2797	14198	18909	18776	139261
1300	12292	11284	75722	1233	1106	3816	2872	2898	46634	2414	2545	14067	18811	17833	140239
1330	11638	11323	76037	1320	1252	3884	2906	2851	46689	2222	2182	14107	18086	17608	140717
1400	11908	11562	76383	1217	1172	3929	2890	3068	46511	1926	2003	14030	17941	17805	140853
1430	12165	12705	75843	1428	1221	4136	3122	3493	46140	1714	1958	13786	18429	19377	139905
1500	10472	13090	73225	1393	1355	4174	3160	4153	45147	1410	1737	13459	16435	20335	136005
1530	10859	12701	71383	1425	1524	4075	3960	4998	44109	1459	1849	13069	17703	21072	132636
1600	12967	14664	69686	1312	1674	3713	4172	5982	42299	1718	2092	12695	20169	24412	128393
1630	15530	22213	63003	1309	1432	3590	5809	9518	38590	2710	3924	11481	25358	37087	116664
1700	16338	28551	50790	1214	1198	3606	5490	13983	30097	2847	5539	8789	25889	49271	93282
1730	14691	27470	38011	936	1066	3476	3963	14268	19792	1750	4381	6158	21340	47185	67437
1800	10921	18718	30214	620	759	3337	2658	9975	12475	1215	2196	5177	15414	31648	51203
SUB TOTAL	322759	299545		29489	26652		117636	110661		52053	50876		521937	487734	
1830	9078	15334	23958	588	571	3354	2012	6480	8007	921	1700	4398	12599	24085	39717
1900	7995	9406	22547	511	430	3435	1912	3429	6490	746	1239	3905	11164	14504	36377
1930	7604	7276	22875	331	387	3379	1134	2278	5346	795	954	3746	9864	10895	35346
2000	8296	7314	23857	310	261	3428	724	1497	4573	733	767	3712	10063	9839	35570
2030	6652	6437	24072	307	261	3474	623	1269	3927	750	722	3740	8332	8689	35213
2100	4760	6109	22723	291	252	3513	610	948	3589	596	792	3544	6257	8101	33369
2130	4278	5793	21208	215	231	3497	565	993	3161	474	634	3384	5532	7651	31250
2200	4104	5085	20227	233	219	3511	443	852	2752	455	543	3296	5235	6699	29786
SUB TOTAL	52767	62754		2786	2612		8023	17746		5470	7351		69046	90463	
GRAND TOTAL	375526	362299		32275	29264		125659	128407		57523	58227		590983	578197	

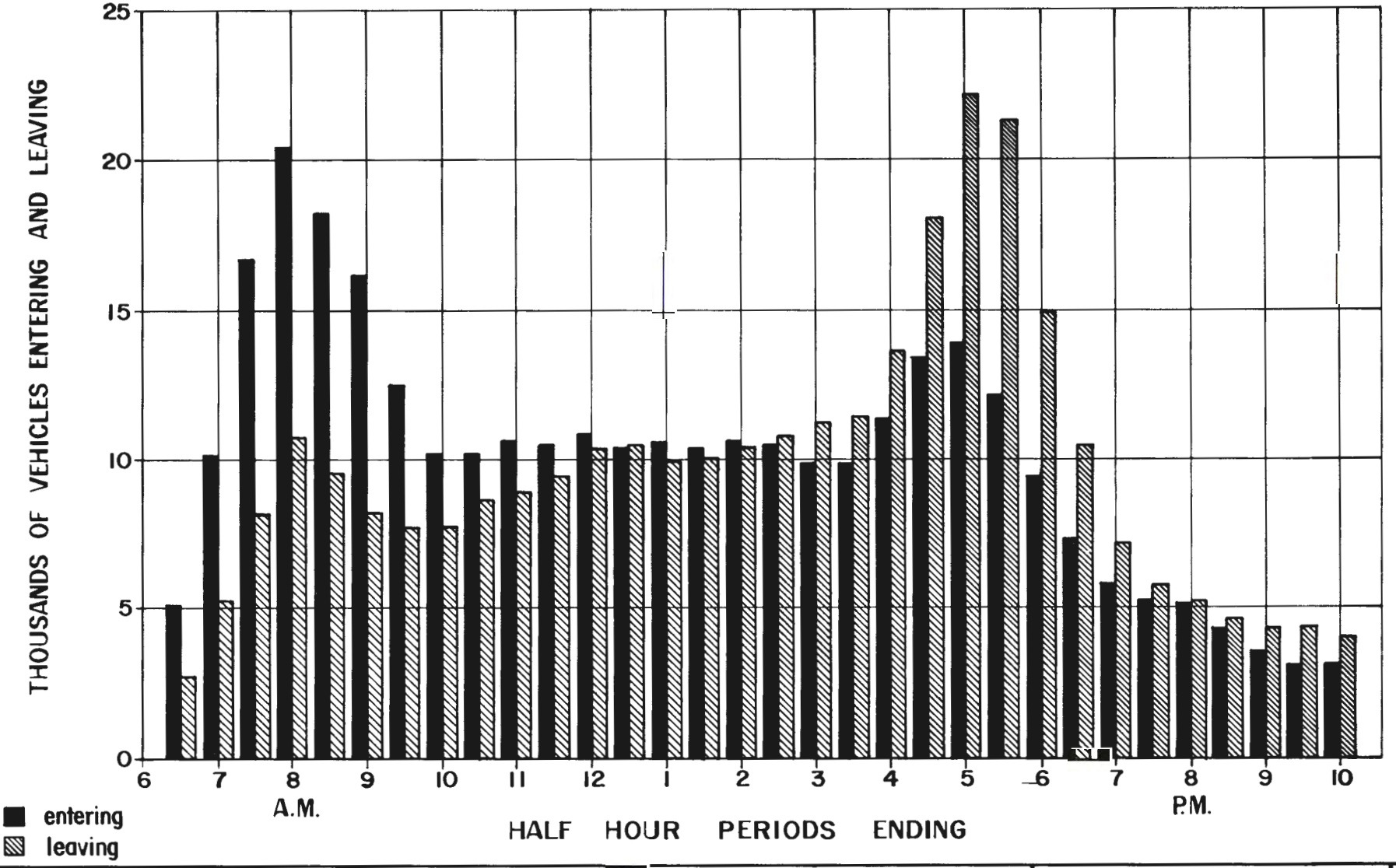
CLASSIFICATION OF VEHICLES AND MODE OF TRANSPORTATION ENTERING CORDON AREA



MAY 1971

DOWNTOWN CORDON COUNT 1971	City of Los Angeles DEPARTMENT OF TRAFFIC S. S. Taylor, City Traffic Engr.	PLATE 3

edwards

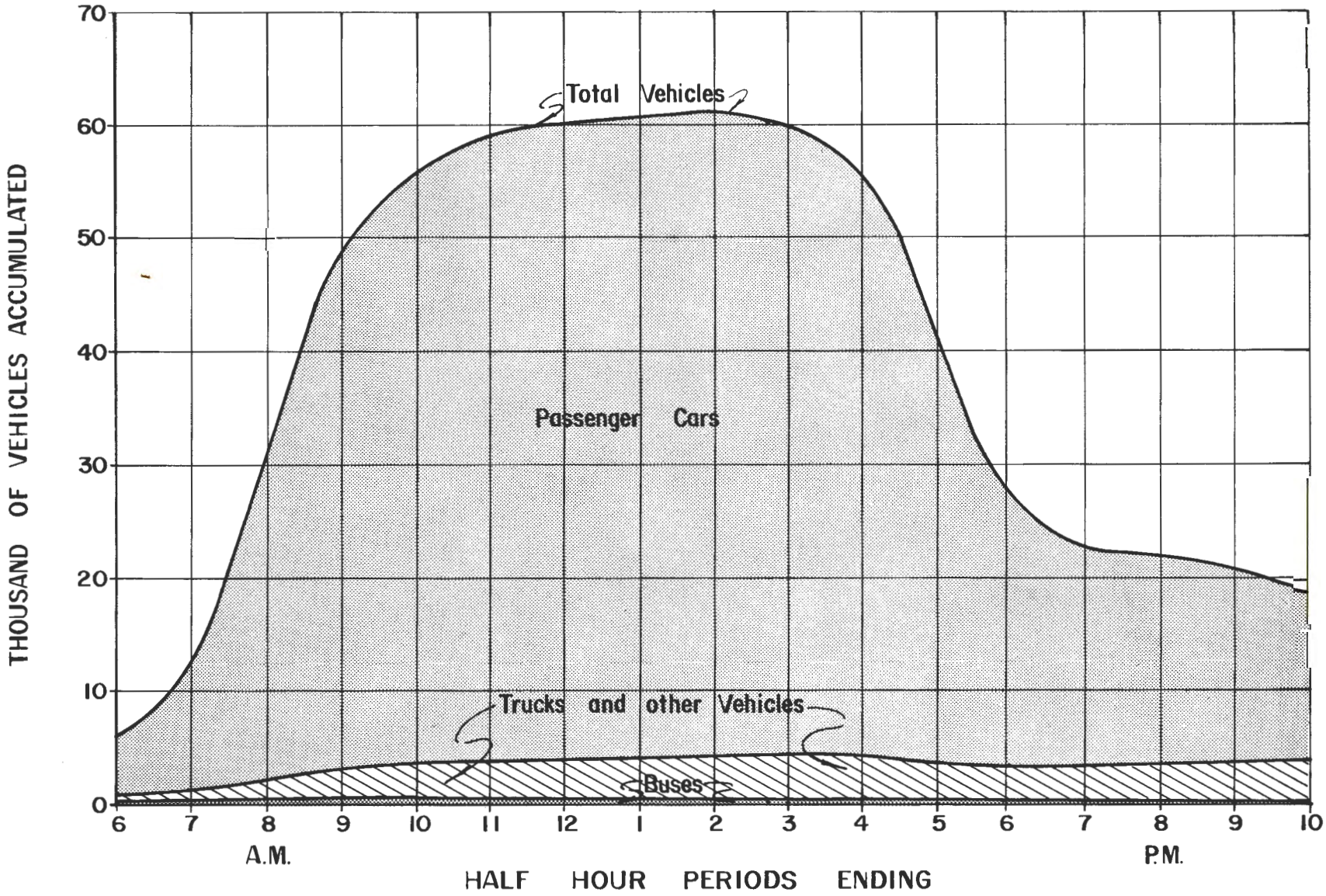


VEHICLES ENTERING AND LEAVING CORDON AREA, MAY 1971

City of Los Angeles
DEPARTMENT OF TRAFFIC
S. S. Taylor, City Traffic Engr.

PLATE 4

edwards

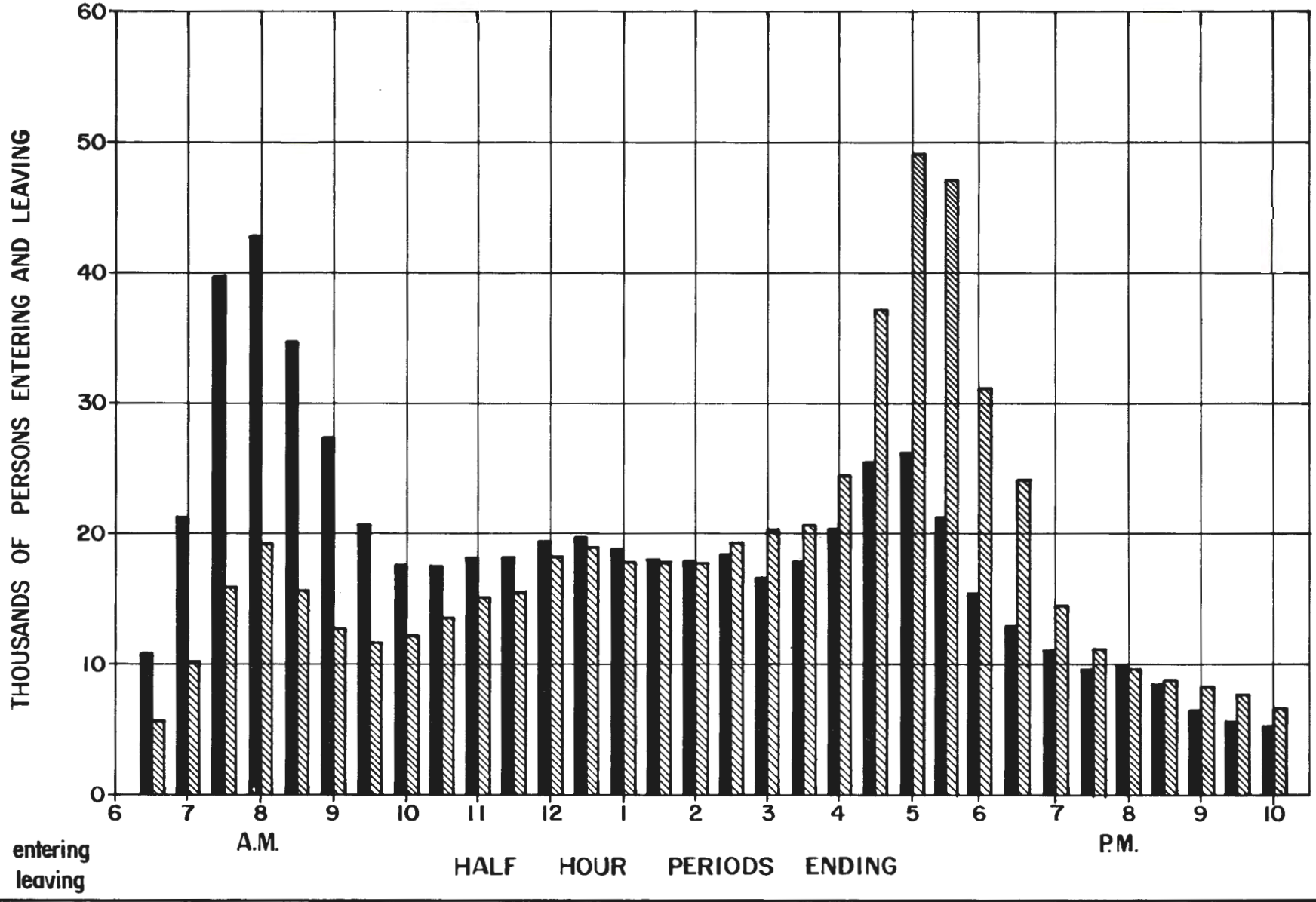


VEHICLES ACCUMULATED IN CORDON AREA, MAY 1971

City of Los Angeles
DEPARTMENT OF TRAFFIC
S. S. Taylor, City Traffic Engr.

PLATE 5

edwards

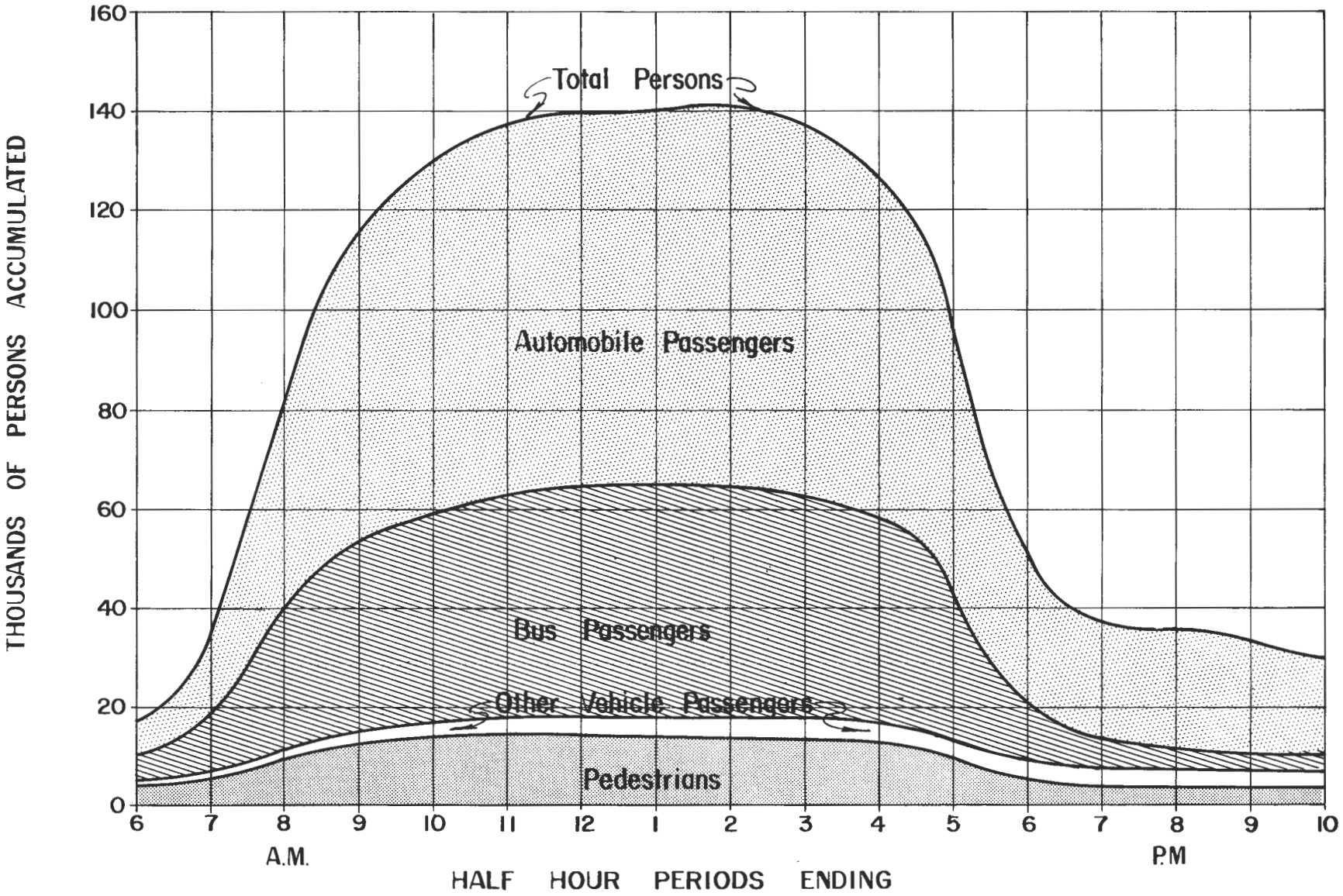


PERSONS ENTERING AND LEAVING CORDON AREA, MAY 1971

City of Los Angeles
DEPARTMENT OF TRAFFIC
S. S. Taylor, City Traffic Engr.

PLATE 6

edwards



PERSONS ACCUMULATED IN CORDON AREA, MAY 1971

City of Los Angeles
DEPARTMENT OF TRAFFIC
S. S. Taylor, City Traffic Engr.

PLATE 7

edwards

TABLE 6

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

CORDON COUNT

		1941	1957	1967	1968	1969	1970	1971
16-Hour	Total	-	327,046	289,882	297,937	309,887	316,139	320,437
Total In	Pass. Cars	288,000	283,097	253,203	264,011	272,977	282,136	283,688
16-Hour	Total	-	323,624	276,164	290,342	306,450	306,626	307,702
Total Out	Pass. Cars	-	278,224	242,649	258,568	271,585	274,857	273,955
High	Total	18,500	22,077	20,345	20,835	20,069	21,164	20,378
1/2-Hour In	Pass. Cars	-	20,402	18,891	19,580	18,709	19,892	19,035
Same	Total	12,000	12,689	9,735	9,935	10,520	10,286	10,663
1.2-Hour Out	Pass. Cars	-	11,202	8,782	9,048	9,506	9,395	9,633
High	Total	20,500	22,760	20,488	21,194	21,852	21,724	22,191
1/2-Hour Out	Pass. Cars	-	20,884	18,959	19,942	20,486	20,431	20,730
Same	Total	13,500	15,602	12,099	12,906	12,972	13,611	13,833
1/2-Hour In	Pass. Cars	-	13,876	10,758	11,581	11,676	12,289	12,408
Highest Veh.	Total	49,000	48,306	62,100	58,002	56,523	61,251	61,047
Accum. Incl. Initial	Pass. Cars	-	46,007	57,470	54,770	53,063	57,651	56,793

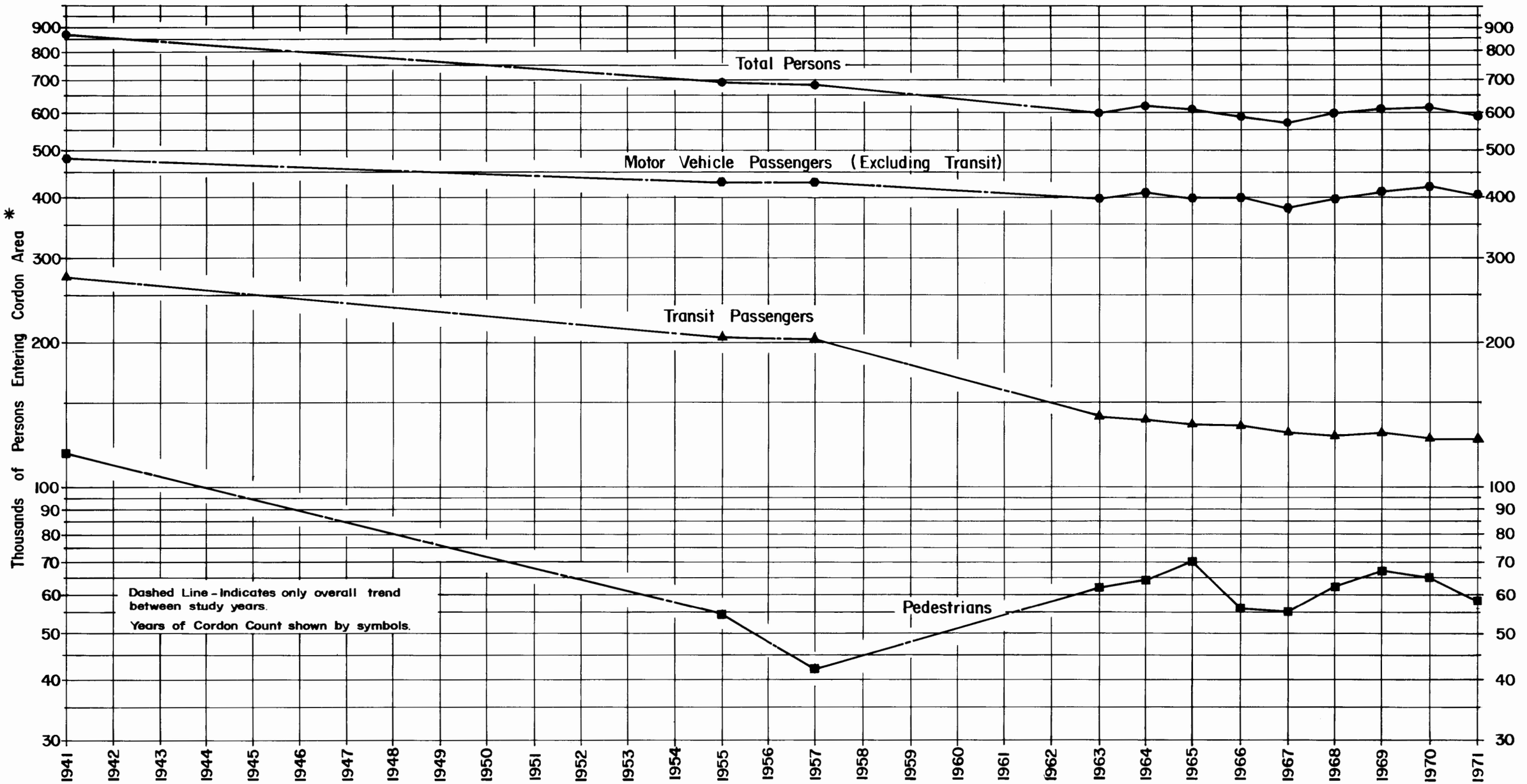
TABLE 7

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

CORDON COUNT

		1941	1957	1967	1968	1969	1970	1971
16-Hour	Persons	757,120	687,906	570,928	601,361	616,795	617,742	590,983
Total In	Auto Pass.	441,647	403,015	350,323	377,689	382,248	391,902	375,526
% Auto Passengers		58	59	61	63	62	63	63
16-Hour	Persons	723,191	692,195	549,977	589,350	617,244	601,558	578,197
Total Out	Auto Pass.	415,403	402,399	337,627	370,029	382,414	377,143	362,299
% Auto Passengers		57	58	61	63	62	63	63
High	Persons	50,161	59,411	50,673	49,844	47,044	46,235	42,622
1/2-Hour In	Auto Pass.	25,982	31,257	28,630	29,638	27,240	27,244	24,464
% Auto Passengers		52	53	57	59	58	59	58
Same	Persons	26,298	28,010	18,914	20,175	20,921	20,137	19,242
1/2-Hour Out	Auto Pass.	14,499	17,100	11,003	11,596	11,766	11,327	11,176
% Auto Passengers		55	61	58	57	57	56	58
High	Persons	61,710	61,592	48,994	49,624	51,384	50,414	49,271
1/2-Hour Out	Auto Pass.	31,558	31,362	28,506	29,453	30,676	29,015	28,551
% Auto Passengers		51	51	58	59	60	58	58
Same	Persons	29,629	29,888	19,253	20,855	25,757	26,481	25,889
1/2-Hour In	Auto Pass	18,160	19,201	12,180	13,836	15,772	16,610	16,338
% Auto Passengers		61	64	63	66	61	63	63
High	Persons	174,758	132,618	136,194	129,969	128,415	130,289	123,853
Accum.*	Auto Pass.	67,593	57,128	74,162	74,238	69,837	76,375	69,383
% Auto Passengers		39	43	54	59	54	59	56

*Persons Crossing Cordon



YEAR
of
CORDON COUNT STUDY

* 16 Hour period from 6 AM to 10 PM

TRENDS IN MODAL DISTRIBUTION - PERSONS ENTERING DOWNTOWN CORDON AREA

City of Los Angeles
DEPARTMENT OF TRAFFIC
S. S. Taylor, City Traffic Engr.

PLATE 8

edwards

TABLE 8

Vehicular Trend by Cordon Boundaries

Cordon Count Vehicular Volumes[1]

Cordon Boundary	1924[2]	1929[3]	1936[3]	1941[4]	1957[5]	1964[5]	1971[5]
East	92,426	153,377	158,305	163,551	168,913	142,417	142,189
South	77,731	92,013	105,246	123,775	82,734	88,392	89,937
West	110,759	209,498	227,886	238,874	279,842	248,827	256,262
North	52,970	76,586	81,571	99,236	119,184	121,333	139,731
Total	333,913	531,474	573,008	625,436	650,673	600,969	628,139

Percentage of Total Vehicles by Cordon Boundaries

Cordon Boundary	1924	1929	1936	1941	1957	1964	1971
East	28	29	28	26	26	24	23
South	23	17	18	20	13	15	14
West	33	39	40	38	43	41	41
North	16	15	14	16	18	20	22

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[1]16-hour vehicular volumes, 6 AM to 10 PM except 1924, 13-hours, 6 AM to 7 PM

Sources

[2]"Report on a Comprehensive Rapid Transit Plan for the City and County of Los Angeles," Kelker,De Leuw & Co., 1925.

[3]"Traffic Survey - Los Angeles Metropolitan Area, 1937," Automobile Club of Southern California

[4]Los Angeles County Regional Planning Commission

[5]Los Angeles City, Department of Traffic

TABLE 9

Comparison of Selected Data
from Historical Cordon Count Studies

Cordon Count	16-Hour Volume Crossing Cordon Boundaries		Peak Accumulation		Inbound Volume 7 AM to 9 AM	
	Vehicles	Persons	Vehicles	Persons	Vehicles	Persons
1929[1]	531,474	N. A.	N. A.	N. A.	N. A.	N. A.
1936[1]	573,008	N. A.	55,115*	N. A.	57,966	N. A.
1941[2]	624,413	1,714,064	49,072*	183,058*	62,251	189,301
1957[3]	650,670	1,379,331	48,278	140,944	72,566	181,170
1967[3]	566,046	1,120,905	62,100	154,194	69,992	152,444
1971[3]	628,139	1,169,180	61,047	140,853	71,520	144,031

Sources

[1]"Traffic Survey - Los Angeles Metropolitan Area, 1937" Automobile Club of Southern California

[2]Los Angeles County Regional Planning Commission

[3]Los Angeles City, Department of Traffic

N. A. - Not Available

*Modified Data - to include initial accumulation

Level of Traffic Service at Cordon Stations

To evaluate current access conditions for the cordon area, a study has been made to determine the level of service being provided under prevailing conditions. This study involved separate analyses for all inbound approaches on the cordon area for the morning peak hour and for all outbound approaches in the afternoon peak hour.

For this capacity study, the procedures outlined in the Highway Capacity Manual[1] were utilized to determine the level of service on the cordon area access stations. Level of service is a term which denotes the different operating conditions that occur on a given lane or roadway when accommodating various traffic volumes.

Capacity, as herein used, is for the Level of Service D (SV_D) as defined in the Capacity Manual. For Level of Service D, delays to approaching vehicles may be substantial during short peaks within the peak period. Generally, however, enough cycles with lower demand occur at Service Level D to permit periodic clearance of developing queues.

Existing volumes and calculated capacities for the inbound intersection approaches to the cordon area in the morning peak hour and for the outbound approaches in the afternoon peak hour are shown on Plates 11 and 12, respectively. The volumes shown therein are from the volume counts made during May, 1971. The capacities were calculated for conditions as they existed on November 1, 1971, to reflect most current conditions for this report. These capacities were based on signal timing, bus stop locations and schedules, and street geometrics and operations as of November 1, 1971. Changes in street condition since the cordon count in May, 1970, such as the conversion of 11th and 12th Streets to one-way operation, are reflected in the capacity calculations.

Plates 9 and 10 indicate that the afternoon peak hour is more critical, in terms of capacity deficiency. These plates also show that for both the morning and afternoon peak hours, the northern cordon boundary is the most critical approach for motorists entering and leaving the cordon area.

For the morning peak hour, the most critical inbound volume demand station is southbound Hill Street at Temple Street (north boundary). This intersection approach is operating at approximately 30 per cent above capacity. In the afternoon peak hour, northbound approaches on Hill Street and Hope Street along the north cordon boundary are accommodating the highest volumes in excess of calculated capacity of all the outbound cordon access stations; volumes approximately 45 per cent in excess of the capacity for the level of service under consideration in this report.

The capacity analysis involved only conditions prevailing on the intersection approaches under study, and, therefore, should not be construed as an indication of operating conditions for the segments of the routes further removed from the approaches involved. Capacity utilization of

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[1]Highway Research Board, 1965.

DOWNTOWN CORDON AREA

1971 VOLUME/CAPACITY (SV_D) RATIOS

For Inbound Approaches - A.M. Peak Hour

Scale: 1"= 1000'

Summary Table

Cordon Boundary	A.M. Peak Hour Volumes	Capacity (SV_D)	Vol./Cap. Ratios
East	7,240	11,750	0.62
South	6,230	10,050	0.62
West	15,760	19,150	0.82
North	10,690	10,950	0.98
Total Cordon	36,470	52,700	0.69

Volume / Capacity → Vol./Cap. (SV_D) / 1.00

1"= 2000 Vehicles

VOLUME / CAPACITY RATIOS - A.M. PEAK HOUR INBOUND CORDON STATIONS

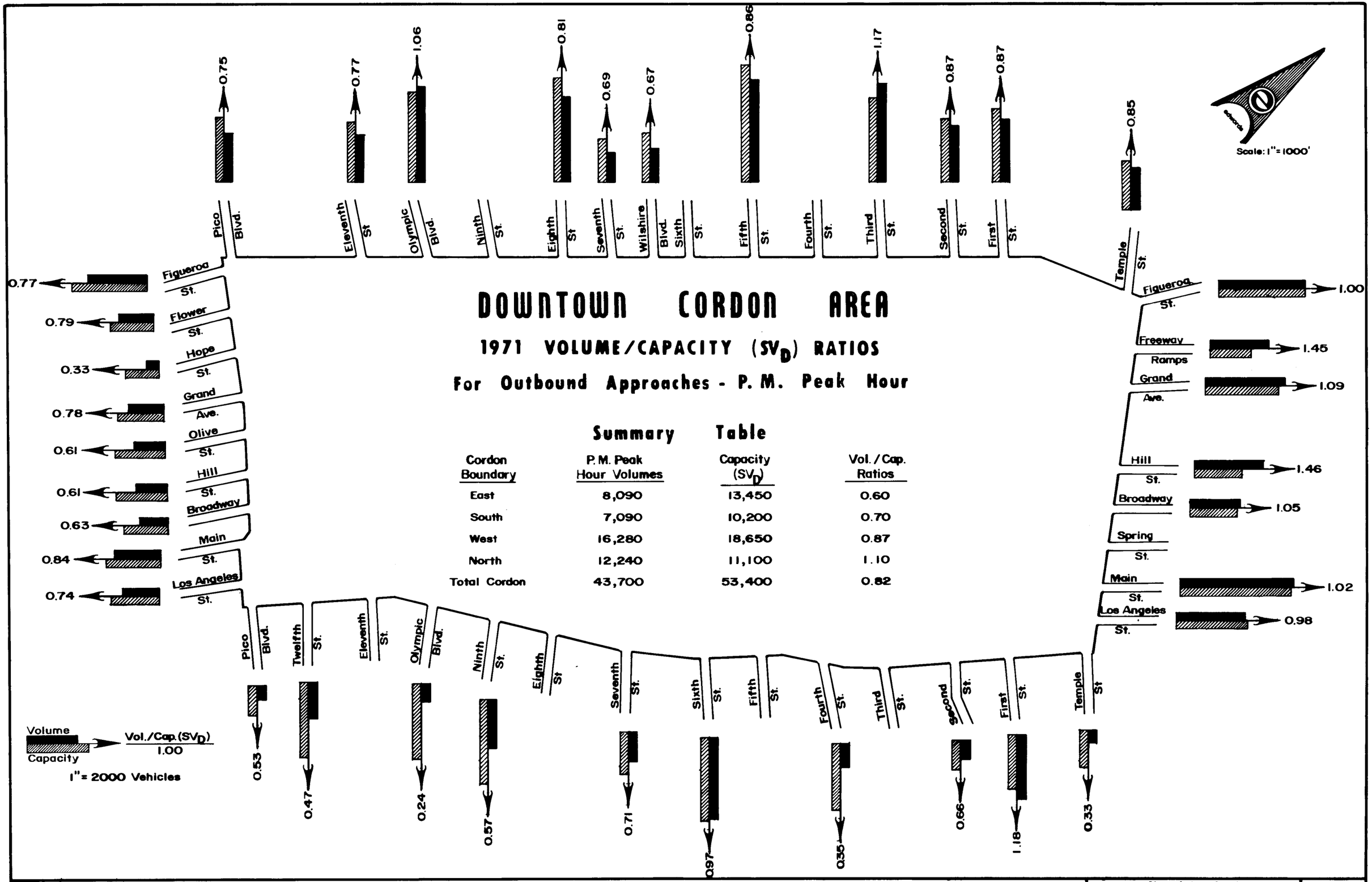
City of Los Angeles
DEPARTMENT OF TRAFFIC
S. S. Taylor, City Traffic Engr.

PLATE 9

DOWNTOWN CORDON AREA

1971 VOLUME/CAPACITY (SV_D) RATIOS

For Outbound Approaches - P. M. Peak Hour



Summary Table

Cordon Boundary	P. M. Peak Hour Volumes	Capacity (SV_D)	Vol. / Cap. Ratios
East	8,090	13,450	0.60
South	7,090	10,200	0.70
West	16,280	18,650	0.87
North	12,240	11,100	1.10
Total Cordon	43,700	53,400	0.82

VOLUME / CAPACITY RATIOS - P.M. PEAK HOUR OUTBOUND CORDON STATIONS

City of Los Angeles
DEPARTMENT OF TRAFFIC
S. S. Taylor, City Traffic Engr.

PLATE 10

a given section of roadway to its maximum potential can be realized only when the highway upstream can supply demand equal to or greater than that capacity and when the highway system downstream is capable of accommodating volumes in excess of that capacity.

Traffic volume data and field observations reveal that the most critical flow patterns in this area are on the street segments approaching the westbound one-way streets and on those one-way streets providing access connections to the Harbor Freeway. During the afternoon peak hour, peak volume demands on the Harbor Freeway ramp connections, especially on the southbound ramps, are in excess of the volumes that can be absorbed by the freeway, thus creating a queuing of vehicles from the ramps onto the surface streets. At critical periods, this backup of vehicles on cordon streets becomes more extensive and exerts more adverse influences on operating conditions on street segments further removed from the critical ramp connections. The close proximity of the Third Street and Fifth Street ramp connections to the signalized intersections of these streets with Figueroa Street compounds the problem due to the limited distance for weaving and merging moves and for storage of queuing vehicles.

Passenger Mode Trends

The current cordon study reports provide two summary tables (Tables 3 and 5) on person trips; one, by location and the other by half-hour periods. Each table further provides data on the number of persons entering and leaving the cordon area as pedestrians or as passengers in an automobile, commercial vehicle, or transit vehicle. As noted from Table 3, over half the total cordon pedestrian volumes in 1971 were recorded along the east boundary.

A substantial portion of the heavy pedestrian volume along the east boundary is generated by the transient residential area to the east of the cordon area. The exclusion of these pedestrian volumes from most of this analysis of person trip data has been made in order to evaluate passenger trends which more properly reflect cordon activities and account for roughly 90 per cent of the cordon person trips.

Table 10 shows the passenger volume data for 1963, 1967, and 1971, thus providing selected data for a comparison on four-year increments.

Plate 11 indicates the proportion of total person trips by the various modes for selected years since 1941. The bar diagram shows the trend of fewer transit passengers and pedestrians and increased automobile usage. An indication of long-term passenger volume trends is shown in Table 11.

In general, the passenger volume recorded in 1971 exceeded the volume observed in 1967.

Also, the 1971 passenger volume during the hours in which most of the business activity is transacted, 9 AM to 3 PM, was higher than the volume recorded during these hours in 1963, whereas volumes in 1971 for the remaining hours were less than the 1963 volume for the corresponding hours.

The data also shows two significant trends. Total 16-hour volume of transit passengers and automobile passengers has decreased progressively for the three cordon count study years noted. The trend in declining automobile passenger volumes is also noted in the comparison of occupancy ratios.

Inbound volumes in the morning peak hour have been on a steady decline whereas outbound volumes in the afternoon peak hour increased between 1963 and 1967 and decreased slightly in the subsequent four-year interval to a level in 1971 still in excess of the volume recorded in 1963.

TABLE 10

Cordon Passenger Volume Trends
1963 - 1967 - 1971

16-Hour Passenger Totals	1963	1967	1971
All Modes	1,072,446	1,010,490	1,053,430
Motor Vehicle	790,039	749,363	799,364
Transit	282,407	261,127	254,066
Distribution by Primary Activity Periods			
Commuter (6-9 AM & 3-6 PM)	555,875	523,095	536,536
Business (9 AM-3 PM)	364,547	345,016	370,206
Social (6 PM -10 PM)	152,024	142,379	146,688
Passengers in Automobiles			
Automobile Passenger (Excl. Driver)	222,429	192,098	180,182
Occupancy Ratio (Pass./Auto.)	1.44	1.39	1.32
Selected High Volume Stations			
Olympic Blvd.-W/O Figueroa St.	44,656	40,737	42,270
Sixth St.-W/O Figueroa St.	39,195	34,264	36,100
Fifth St.-W/O Figueroa St.	41,815	44,197	39,087
Broadway-N/O Temple St.	37,812	35,122	40,273
Seventh St.-E/O Los Angeles St.	27,138	34,697	35,094
Peak Hour Passenger Totals			
AM - Inbound			
Total Cordon	85,701	81,425	74,417
Olympic Blvd.-W/O Figueroa St.	3,462	4,099	2,974
Sixth St.-W/O Figueroa St.	4,631	4,503	3,592
Broadway-N/O Temple St.	3,482	2,879	3,186
Seventh St.-E/O Los Angeles St.	2,213	2,629	2,916

Table 10, Continued

Peak-Hour Passenger Totals	1963	1967	1971
PM - Outbound			
Total Cordon	84,933	88,591	86,536
Olympic Blvd.-W/O Figueroa St.	4,172	4,918	3,828
Fifth St.-W/O Figueroa St.	5,233	6,299	4,885
Broadway-N/O Temple St.	2,906	2,893	3,061
Seventh St.-E/O Los Angeles St.	1,311	2,704	2,239

Source: Annual Cordon Counts, City of Los Angeles, Department of Traffic

Fourteen years | Two years | Six years | Annual series counts

Percent of Total Person Trips Inbound - 16 Hours

70 60 50 40 30 20 10 0

1941 1955 1957 1963 1964 1965 1966 1967 1968 1969 1970 1971

MOTOR VEHICLE PASSENGERS (EXCLUDING TRANSIT)

TRANSIT PASSENGERS

PEDESTRIANS

YEAR of CORDON COUNT STUDY

TRENDS IN PROPORTIONAL RATES BY TRANSPORT MODES FOR DOWNTOWN CORDON AREA

City of Los Angeles
DEPARTMENT OF TRAFFIC
S. S. Taylor, City Traffic Engr.

PLATE 11

edwards

TABLE 11

Downtown Cordon Area Passenger Mode Trends

Passenger Volumes Crossing Cordon Boundaries[1]

Year	Auto Passengers	Comm. Veh. Passengers	Transit Passengers	Total Passengers
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
1971[4]	664,117	58,241	242,130	964,488

Proportional Rates by Passenger Mode

Year	Auto Passengers	Comm. Veh. Passengers	Transit Passengers	Total Passengers
1924	32.5%	6.2%	61.3%	100%
1941	55.4%	5.8%	38.8%	100%
1957	60.7%	6.0%	33.3%	100%
1971	68.9%	6.0%	25.1%	100%

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[1] 13 Hours - 6 AM to 7 PM

Sources:

[2] Report on a Comprehensive Rapid Transit Plan for the City and County of Los Angeles, Kelker, De Leuw & Company, 1925.

[3] Los Angeles County Regional Planning Commission.

[4] Los Angeles City, Department of Traffic.

Passenger volume data comparison for the cordon stations noted on Table 10 provide an insight into the travel activities as influenced by prevailing developments in the cordon area.

The primary access to the core area is served by the one-way couplet of Fifth Street and Sixth Street. This couplet served as the access route for 75,000 passenger trips into or out of the cordon area along the west boundary during the 16-hour study period in 1971. Another high passenger volume station along the west boundary, Olympic Boulevard, a major arterial paralleling the Santa Monica Freeway route, accommodated in excess of 42,000 outbound and inbound passengers during the 16-hour count period in 1971. Directional peak-hour passenger volumes on these three stations were, however, in opposition to the trend for the 16-hour passenger volumes on these stations and composite volumes for all cordon stations, which showed a decline in 1967 from 1963 and an increase in 1971 over 1967.

Passenger volumes on the north boundary station, Broadway, serving the intensively developed Civic Center area, paralleled the overall cordon passenger trend for the cordon count study years noted. Total 16-hour and directional peak-hour passenger volumes on the east boundary station, Seventh Street, in 1967 were significantly higher than the 1963 volumes and in 1971 increased above the volumes recorded in 1967. Passenger volumes on this station were affected to some extent by the re-routing of certain transit bus lines in connection with the completion and use of the new bus terminal subsequent to the 1967 Cordon Count.

Circulation Within Cordon Area

Basic data from the cordon count provides details on the accumulation of vehicles and persons within the cordon area by types of vehicles, by mode of transport, and by half-hour periods.

Trends on internal circulation patterns, as reflected from cordon count data on accumulation of vehicles and persons, are shown on Tables 12 and 13, respectively. Internal traffic volumes are shown on Plate 12.

The data on Table 12 indicates that vehicular travel during the peak traffic hours, 7 to 9 AM and 4 to 6 PM, in 1971 has increased slightly over volumes recorded in 1964. There has been an overall upward trend within the cordon between 1957 and 1971 in the net vehicle accumulation, an increase between 7 and 9 AM and a decrease between 4 and 6 PM, for the peak traffic hours. Concurrently, there has been an upward trend in the vehicle accumulation within the cordon area throughout the entire 16-hour study period.

As noted on Table 13, there has been a downward trend since 1957 in the net accumulation of persons during the peak traffic hours. The data also reveals that there was an increase in the magnitude of persons accumulated within the cordon area in 1964 over 1957 and a decrease in the subsequent seven-year interval between 1964 and 1971.

The comparative data on the proportion of person accumulation within the cordon area by the various modes indicates that between 1957 and 1964 there was a significant change in the relative proportion accommodated by the two primary modes, transit and motor vehicle. In 1957, the majority of person accumulation within the area were transit passengers, whereas in 1964, motor vehicle passengers accounted for the majority of person accumulations. The 1971 proportionate rates indicate generally similar conditions to the 1964 accumulation rates.

Movement of persons within the cordon area consists of passenger travel in a private or public vehicles or pedestrian travel on the sidewalks. The majority of persons on foot during the afternoon peak hour are employees en route to a parked vehicle or transit stop.

The data on Table 13 shows that the influx of persons during the morning peak hours or exodus during the afternoon peak hours has declined steadily for the three cordon count study years noted. The data further indicates that pedestrian volumes have represented an increasingly greater proportion of the persons accumulation within the cordon area, with the most pronounced effect noted principally in the early part of the study period or during the morning peak-hour flow between 7 to 9 AM.

TABLE 12

Trend in Accumulation of Vehicles
Within Cordon Area

	1957	1964	1971
Directional Peak Two-Hour Volumes			
Inbound - 7 to 9 AM	72,566	70,101	71,520
Outbound - 4 to 6 PM	77,956	71,425	76,647
Total Peak Two-Hour Volumes			
7 to 9 AM - IN and OUT	116,777	107,560	108,146
4 to 6 PM - IN and OUT	131,344	117,115	125,246
Net Changes in Accumulation - Peak Hours			
Increase - 7 to 9 AM	28,355	32,642	34,894
Decrease - 4 to 6 PM	24,568	25,735	28,048
Accumulation of Vehicles			
At 9:00 AM	39,644	43,580	48,089
At Peak	48,306	54,811	61,047
At 6:00 PM	18,827	23,446	27,269

Source: Downtown Cordon Counts - City of Los Angeles, Department of Traffic

TABLE 13

Trend in Accumulation of Persons
Within Cordon Area

	Number of Persons - All Modes		
	1957	1964	1971
Peak Two Hours - Accumulation Change			
Increase - 7 to 9 AM	92,754	91,873	80,560
Decrease - 4 to 6 PM	90,761	83,452	77,190
Accumulation At:			
9:00 AM*	102,756	106,681	97,267
Peak*	132,618	137,781	123,853
At 9:00 AM Accumulation	Proportionate Rate by Mode		
Motor Vehicle Passengers	43.4%	53.5%	55.6%
Transit Passengers	52.1%	37.2%	33.3%
Pedestrians	4.5%	9.3%	11.1%
At Peak Accumulation			
Motor Vehicle Passengers	41.8%	53.7%	57.1%
Transit Passengers	52.7%	36.5%	33.2%
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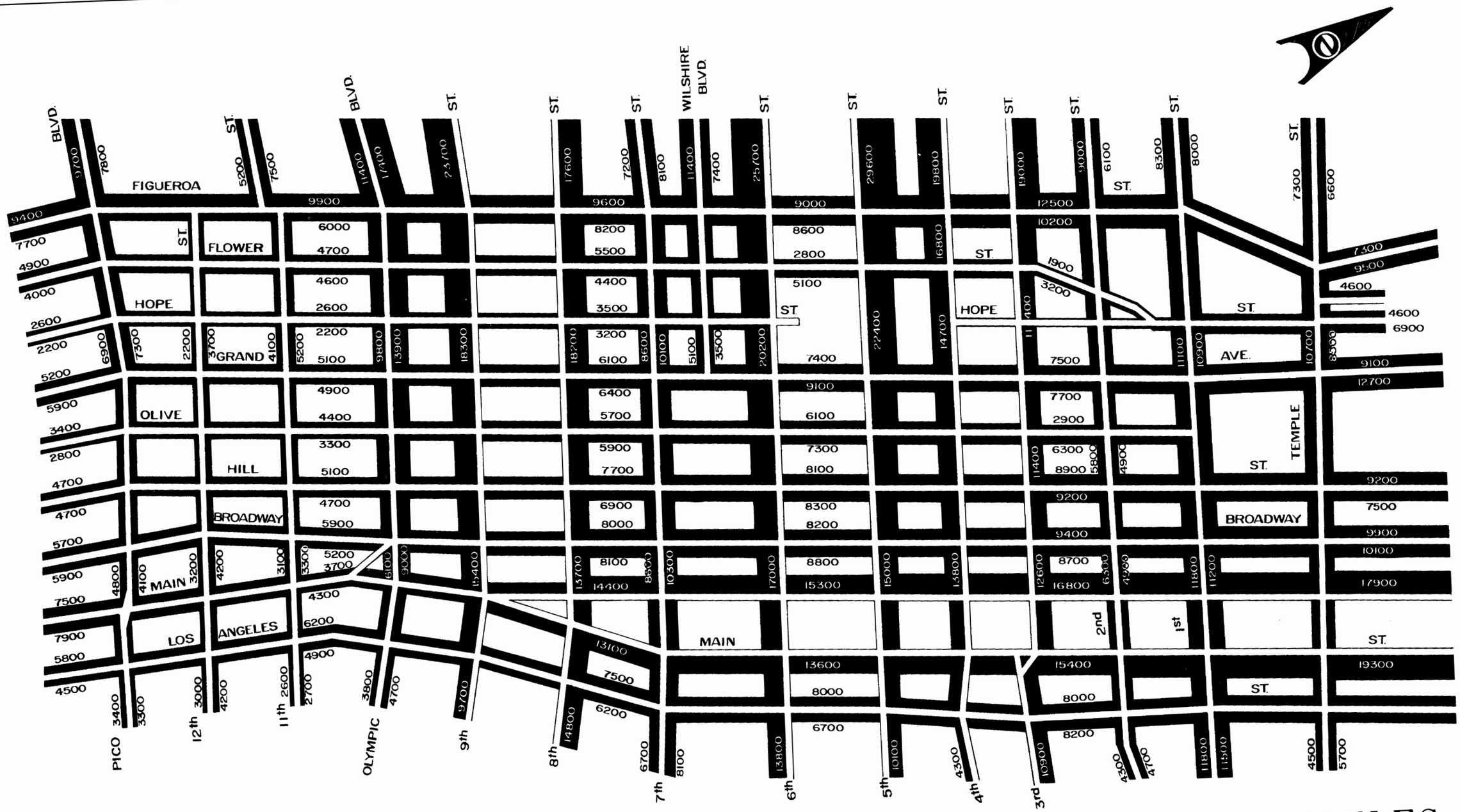

LOS ANGELES

DOWNTOWN BUSINESS AREA

TRAFFIC FLOW MAP

MAY 1971 WEEKDAY 24 HOUR COUNT

CITY OF LOS ANGELES

DEPARTMENT of TRAFFIC

S. S. TAYLOR.....CITY TRAFFIC ENGINEER

PLATE 12

edwards

Terminal Facilities for Vehicles and Passengers

The 1971 Cordon Count data on Table 4 shows that at the peak accumulation there was a total of 61,047 vehicles within the cordon area. Of this total, approximately 93 per cent, or 56,793, were passenger vehicles.

The increasing parking demand, i.e., vehicle accumulation, has resulted in the development of increasingly greater numbers of off-street parking spaces within the cordon area to accommodate this need. As shown on Table 14, the latest inventory conducted in 1970 revealed a total of 56,325 off-street spaces within the cordon area. The data in the table indicates an increase in off-street spaces of 55 per cent since 1956. Off-street spaces within garages increased at a greater rate than the spaces in surface lots.

The primary terminal facility for the interchange of intra-urban and intra-State passengers is the bus terminal, located along the east boundary of the cordon area. Nearly all of the intra-urban buses using this terminal facility enter or leave the cordon area along the north and east boundaries.

Historical data shows that the major concentration of pedestrians during the off-peak period between 10 AM and 3 PM occurs in the core area along Broadway and Seventh Street.

TABLE 14

Off-Street Parking Spaces
In Downtown Cordon Area
1956 - 1966 - 1970

Cordon Area Excluding Civic Center Portion

No. of Spaces in	1956[1]	1966[2]	1970[3]
Surface Street Lots	19,875	31,295	28,484
Garages	13,255	16,139	21,372
Total	33,130	47,434	49,856

Cordon Area

No. of Spaces In	1956	1970	% Inc.
Surface Street Lots	21,667	29,060	34%
Garages	14,628	27,263	87%
Total	36,295	56,323	55%

Cordon Area

Percentage of Total Spaces	1956	1970
Surface Street Lots	59.7%	51.5%
Garages	40.3%	48.5%

Sources: 1 - Inventory of Off-Street Parking - Downtown Los Angeles, City of Los Angeles, Department of Traffic.

2 - Los Angeles Central Business District Parking Study, Wilbur Smith & Associates.

3 - Los Angeles Central City Off-Street Parking Space Inventory, Associated Parking Consultants.

III

1971 CORDON COUNT CONCLUSIONS

III. Conclusions

Based on the extrapolation of current trends, the evaluation of existing conditions from field observations, the assessment of evolving development patterns in regard to both intensity and locations of concentration, and other factors, the following conclusions were derived:

- Within the next few years, vehicular volumes crossing all screenlines of the cordon will surpass the peak volumes recorded in 1957, prior to the initial extension of Downtown radial freeway segments.

- Volume of person trips that will be generated by the intensive development presently under construction within the cordon area is expected to reverse the downward trend in the volume of persons entering and leaving the cordon area.

- Critical off-street parking demands within the cordon area will become increasingly more acute with the continuation of the prevailing trend in increasingly greater proportions of cordon passengers arriving in an automobile.

- Future increases in vehicular travel across the west and north boundaries will have the most adverse effect on cordon access stations. The west and north boundaries are currently the most critical in terms of capacity deficiency.

DEPARTMENT OF TRAFFIC

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