CORDON COUNT 1974

MAY 4 DOWNTOWN LOS ANGELES

DEPARTMENT OF TRAFFIC
S.S.(SAM) TAYLOR,
CITY TRAFFIC ENGINEER

CITY OF LOS ANGELES FOUNDED 1781

ABSTRACT

Downtown Cordon Count Study

- The cordon count, as the name implies, is a study providing data on the volume of vehicles entering and leaving a cordoned area, in this instance the Downtown Business District of Los Angeles.

- 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.

- 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 - 1974 Cordon Count

- During the 16-hour study period, 6 AM to 10 PM, a total of 602,891 vehicles crossed the cordon boundaries at the 95 stations providing access for vehicles entering or leaving the cordon area. This represents a decrease of 26,693 vehicles since the 1972 count.

- At the access stations, a total of 1,183,031 persons entered and left the cordon area during the 16-hour period. This represents an increase of 2,264 persons since the 1972 count.

- Of the total persons entering the cordon area, 62 per cent arrived in automobiles, 25 per cent in transit vehicles, 5 per cent in commercial vehicles (trucks) and the remainder, 8 per cent, entered on foot.

- At the peak accumulation period, 2 PM, there were approximately 58,600 vehicles and 152,100 persons within the cordon area.

- Approximately 30 per cent of the total vehicles crossing the cordon boundaries arrived or departed directly via the three freeways adjoining the cordon area.

Cordon Area Transportation Trends

- Compounding the complexities of analyzing current cordon area trends was the simultaneous occurrence of the easing of gasoline shortages and implementation of the 25¢ Flat Fare program for public transit service in Los Angeles County at the time of the 1974 Cordon Count Study. The 1974 study revealed significant opposing changes in passenger volumes for the automobile and transit modes, decrease and increase, respectively, compared to 1972 volumes. Average occupancy of passenger vehicles, however, remained relatively stable. The near-term effect of these changes in regard to apparent emerging patterns in cordon area trends can only be determined from more detailed and continuing study of cordon area vehicle and person-trip volumes.

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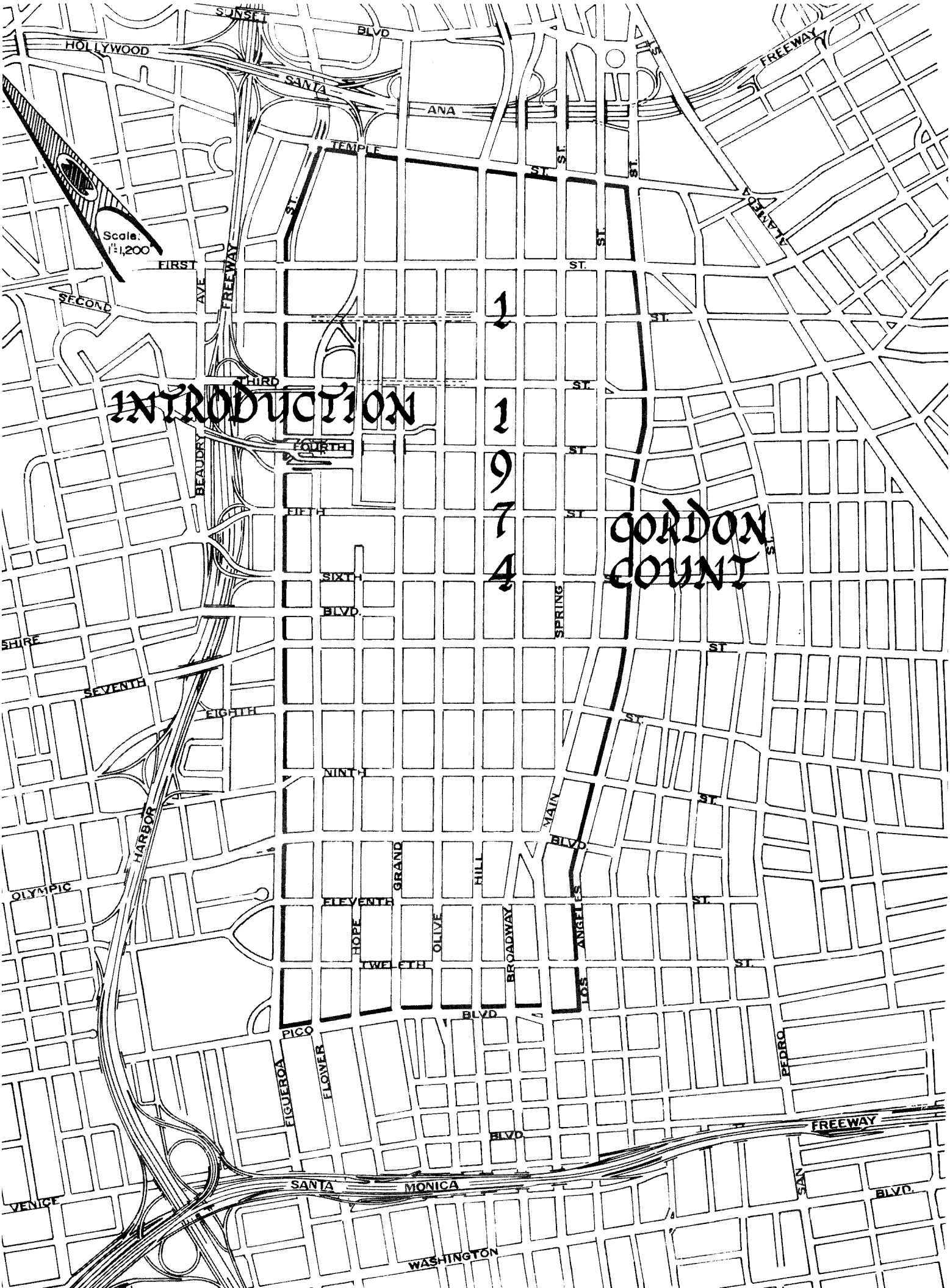

INTRODUCTION
1974
GORDON COUNT
SUNSET BLVD
HOLLYWOOD
SANTA ANA
FREEWAY
TEMPLE
ST.
Scale 1" = 1,200'
FIRST
SECOND
THIRD
FOURTH
FIFTH
SIXTH
SEVENTH
EIGHTH
NINTH
AVE
FREEWAY
BEAUDRY
BLVD.
SPRING
MAIN
HARBOR
OLYMPIC
GRAND
HILL
ELEVENTH
HOPE
OLIVE
TWELFTH
BROADWAY
LOS ANGELES
PICO
FIGUEROA
FLOWER
PEDRO
SAN
SANTA MONICA
VENICE
WASHINGTON

Purpose of Study

The Department of Traffic conducts cordon counts of Downtown Los Angeles in order to provide data for traffic planning purposes. These studies were conducted annually from 1963 through 1972. In 1973, a mid-block pedestrian study was made in lieu of the cordon count in order to provide data on pedestrian travel characteristics of the Downtown area.

This report represents the 1974 Cordon Count of Downtown Los Angeles for a typical 16-hour Wednesday in May, from 6 AM to 10 PM.

The cordon count study method provides statistical data on the magnitude of the daily influx of vehicles and persons into the Downtown area and of the concentration of each 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 emcompasses the Central Business District, is slightly in excess of one square mile.

At the convergence of numerous intraregional transportation routes, for both private and public modes of travel, Downtown Los Angeles is readily 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 cordon area 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.

The historical cordon count data also provide a valuable resource for analysis in projections on future travel demand for the Downtown area.

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 (SCRTD).

Basic data on vehicle- and person-trips are 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 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.

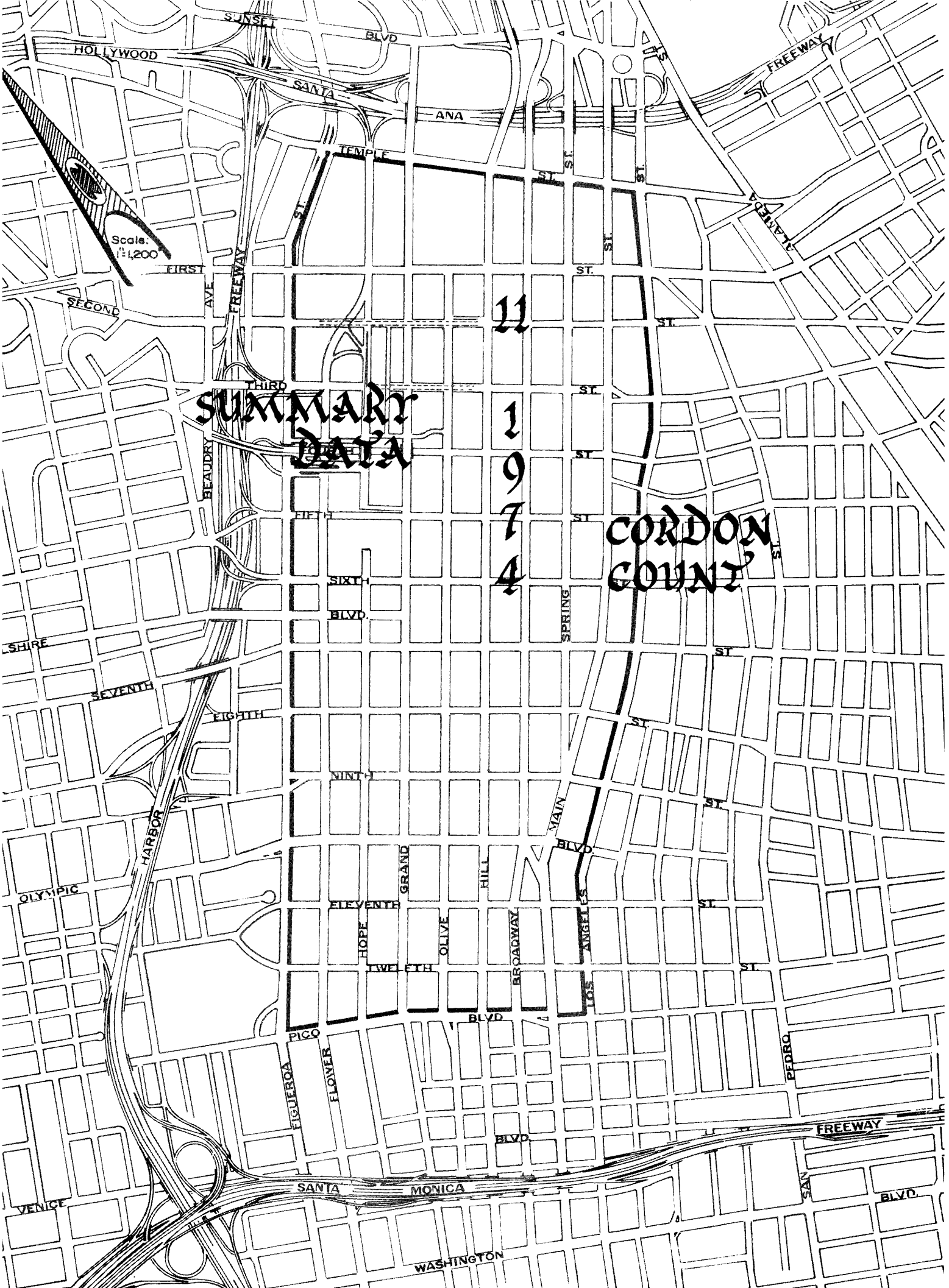
Temporary closure of Temple Street between Los Angeles Street and Main Street for construction of the East Mall affected the volume demand on this station along the east boundary.

Implementation of the Convention Center "Park and Ride" program and the Downtown "Mini-Bus" service by the SCRTD was initially in effect during the 1972 Cordon Count. At the time of the 1974 study, the Mini-Bus service was extended to the north to serve the Olvera Street and China Town areas.

Affecting a significant change in travel characteristics in the cordon area for the initial count in 1974 was the implementation of the 25¢ Flat Fare program for all transit service in Los Angeles County. This program was put into effect on April 1, 1974.

Also affecting downtown area travel trends immediately prior to the cordon count study was the energy crisis as it affected availability of gasoline supplies. Initial reductions in gasoline supply occurred in the latter part of 1973 and reached the most acute stage during the latter part of February, 1974. At the time of the cordon count study, the supply of gasoline had increased to generally normal levels wherein there was sufficient supply to meet demand.

In regard to the summary data for 1974, as presented herein, it should be noted that the data represents conditions prior to the operation of the Contra-flow Bus Lane operation on Spring Street. All of the primary automatic and manual counts made by this Department and the transit checks by the SCRTD were conducted before the beginning of the contra-flow operation of buses on Spring Street on May 19, 1974.


SUNSET BLVD
HOLLYWOOD
SANTA ANA
FREEWAY
TEMPLE
ST.
Scale:
1"=1,200'
FIRST
SECOND
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OLYMPIC
GRAND
HILL
MAIN
SPRING
ELEVENTH
HOPE
OLIVE
BROADWAY
LOS ANGELES
TWELFTH
PICO
FIGUEROA
FLOWER
PEDRO
SAN
FREEWAY
SANTA MONICA
BLVD.
VENICE
WASHINGTON
SUMMARY DATA
1974
CORDON COUNT

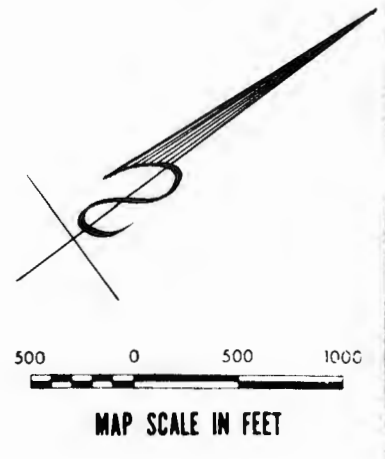
DOWNTOWN CORDON COUNT

MAY 1974

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

INBOUND 306,663
OUTBOUND 296,228

CITY OF LOS ANGELES
DEPARTMENT OF TRAFFIC
S.S. (Sam) Taylor, CITY TRAFFIC ENGINEER



PICO BLVD.	8246	7083
TEHRAN ST.	45	44
NAGOYA ST.	165	130
ELEVENTH ST.	3541	9040
OLYMPIC BLVD.	11226	15038
NINTH ST.		21416
EIGHTH PL.	729	682
EIGHTH ST.	16006	
SEVENTH PL.	707	438
SEVENTH ST.	6339	7460
WILSHIRE BLVD.	11194	6871
SIXTH ST.	25176	
*FIFTH ST.	26616	
LOWER FOURTH ST.	5268	
FOURTH ST. VIADUCT	14516	
FREEWAY RAMP	1434	
THIRD ST.	15921	
SECOND ST.	8491	5340
FIRST ST.	6327	7089
DIAMOND ST.	628	745
TEMPLE ST.	5866	5253

FIGUEROA ST.	8863	7837
FLOWER ST.	4301	3761
HOPE ST.	2366	2224
GRAND AVE.	4388	5324
MARGO ST.	251	258
OLIVE ST.	2330	3158
HILL ST.	4658	4466
BROADWAY	5103	5489
MAIN ST.	5979	6518
LOS ANGELES ST.	5442	4617

TEMPLE ST.	5866	5253
FIGUEROA ST.	6720	9195
FREEWAY RAMPS	4830	4433
		5268
GRAND AVE.	7326	9375
HILL ST.	7773	6409
BROADWAY	8789	9203
SPRING ST.		16596
MAIN ST.		16839
LOS ANGELES ST.	8862	9612

PICO BLVD.	2750	3578
TWELFTH ST.		5001
ELEVENTH ST.		5259
OLYMPIC BLVD.	3833	3977
NINTH ST.		10873
EIGHTH ST.		9335
SEVENTH ST.	6983	7665
SIXTH ST.		8989
FIFTH ST.		8389
WINSTON ST.	512	540
FOURTH ST.		7438
BOYD ST.	532	182
THIRD ST.		10321
SECOND ST.	3417	3444
FIRST ST.	8353	8441
TEMPLE ST.	4209	4237

PLATE 1

Table 1

Sixteen-Hour Summary

1974 Cordon Count Data

May, Wednesday

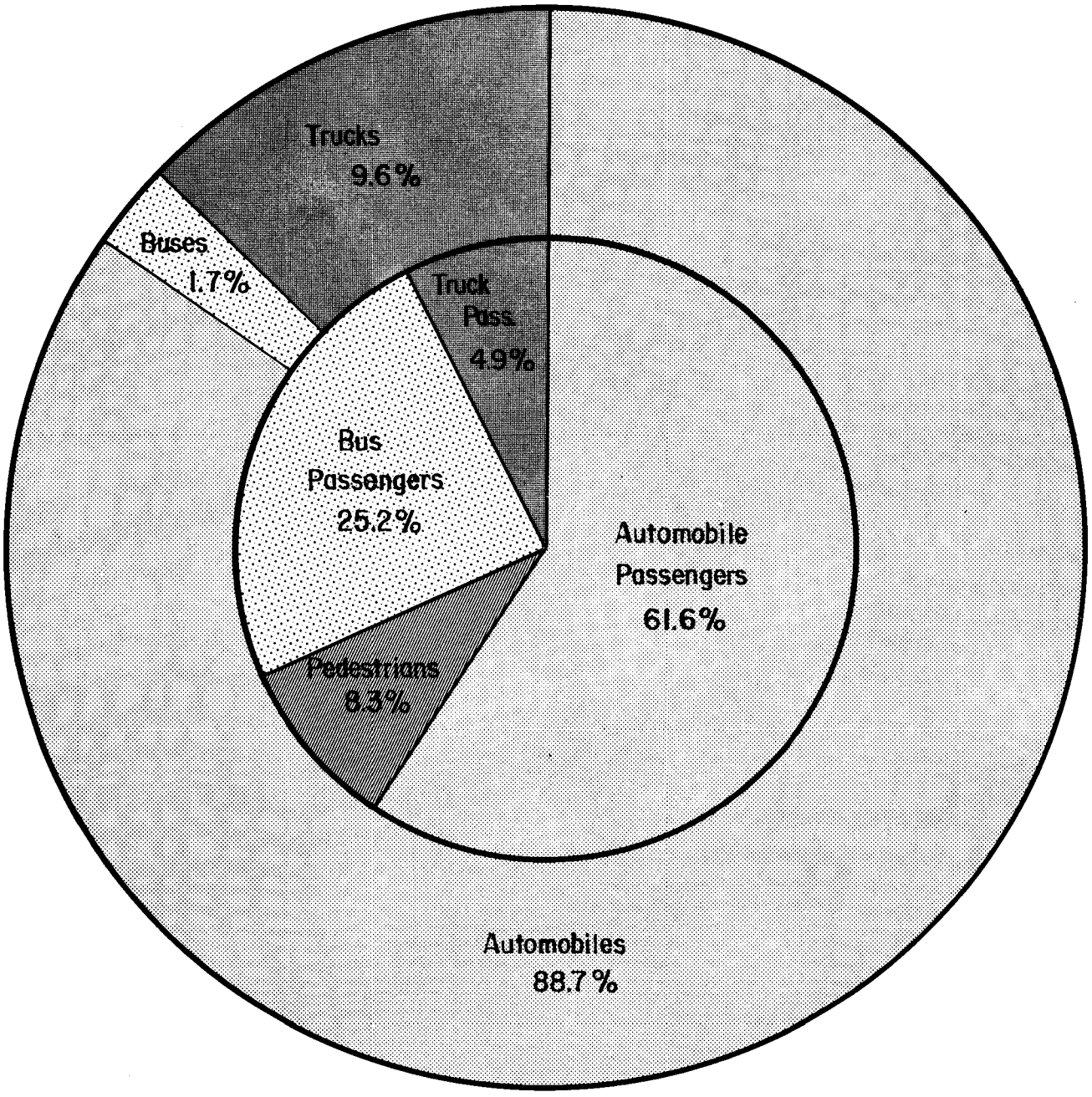
	In	Out
Passenger Cars	271,899	263,671
Trucks and Other Vehicles	29,565	27,333
Buses	5,199	5,224
Grand Total - Vehicles	306,663	296,228
Auto Passengers	372,979	352,449
Other Vehicle Passengers	29,565	27,333
Bus Passengers	152,398	151,478
Pedestrians	50,087	46,742
Grand Total - Persons	605,029	578,002

Day of Week Vehicle Factor

Monday	1.00
Tuesday	1.00
Wednesday*	1.00
Thursday	1.02
Friday	1.05
Saturday	0.62
Sunday	0.45

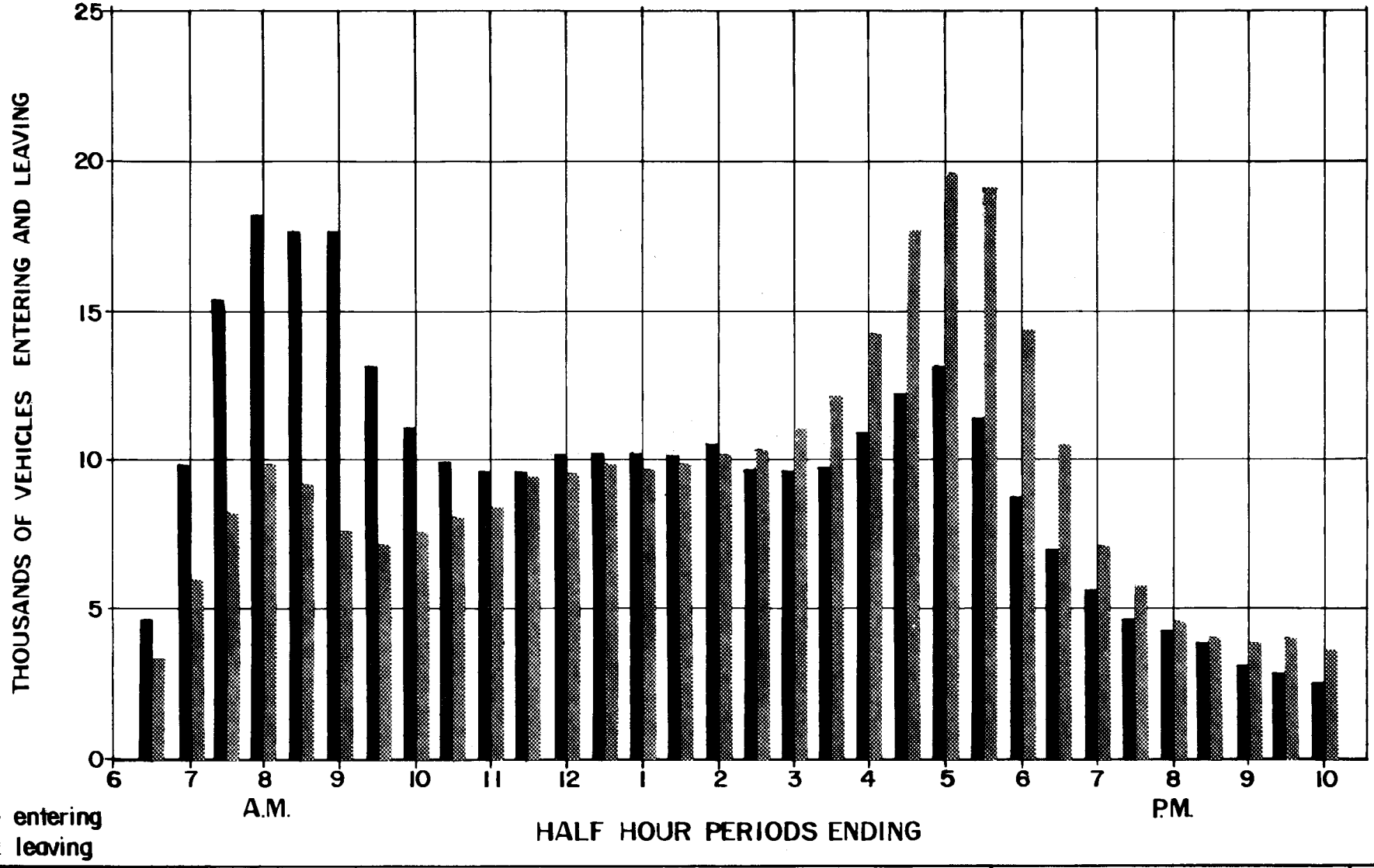
*Base

CLASSIFICATION OF VEHICLES AND MODE OF TRANSPORTATION ENTERING CORDON AREA



MAY 1974

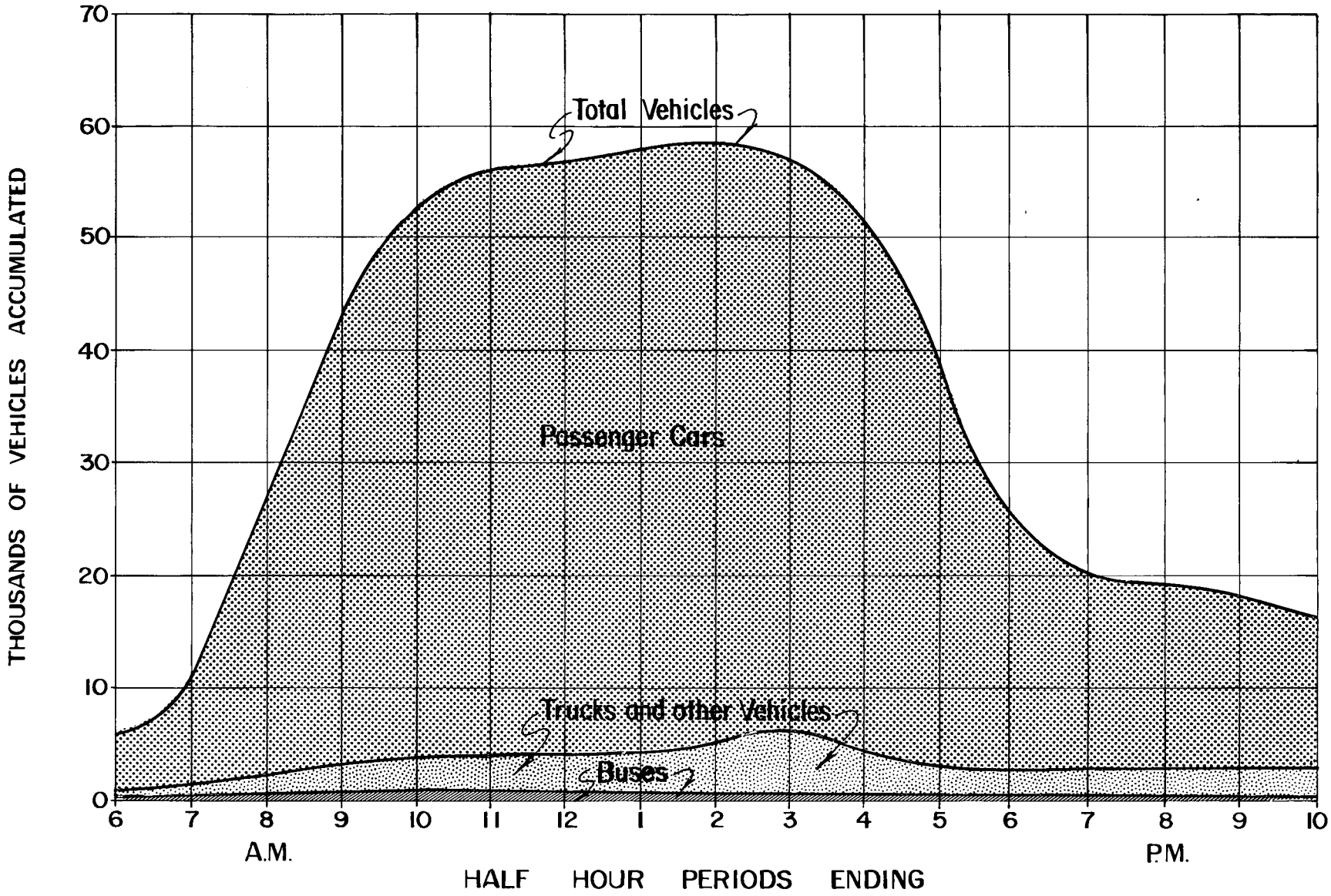
DOWNTOWN CORDON COUNT 1974	City of Los Angeles DEPARTMENT OF TRAFFIC S.S. (Sam) Taylor, City Traffic Engineer	PLATE 2



VEHICLES ENTERING AND LEAVING CORDON AREA, MAY 1974

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

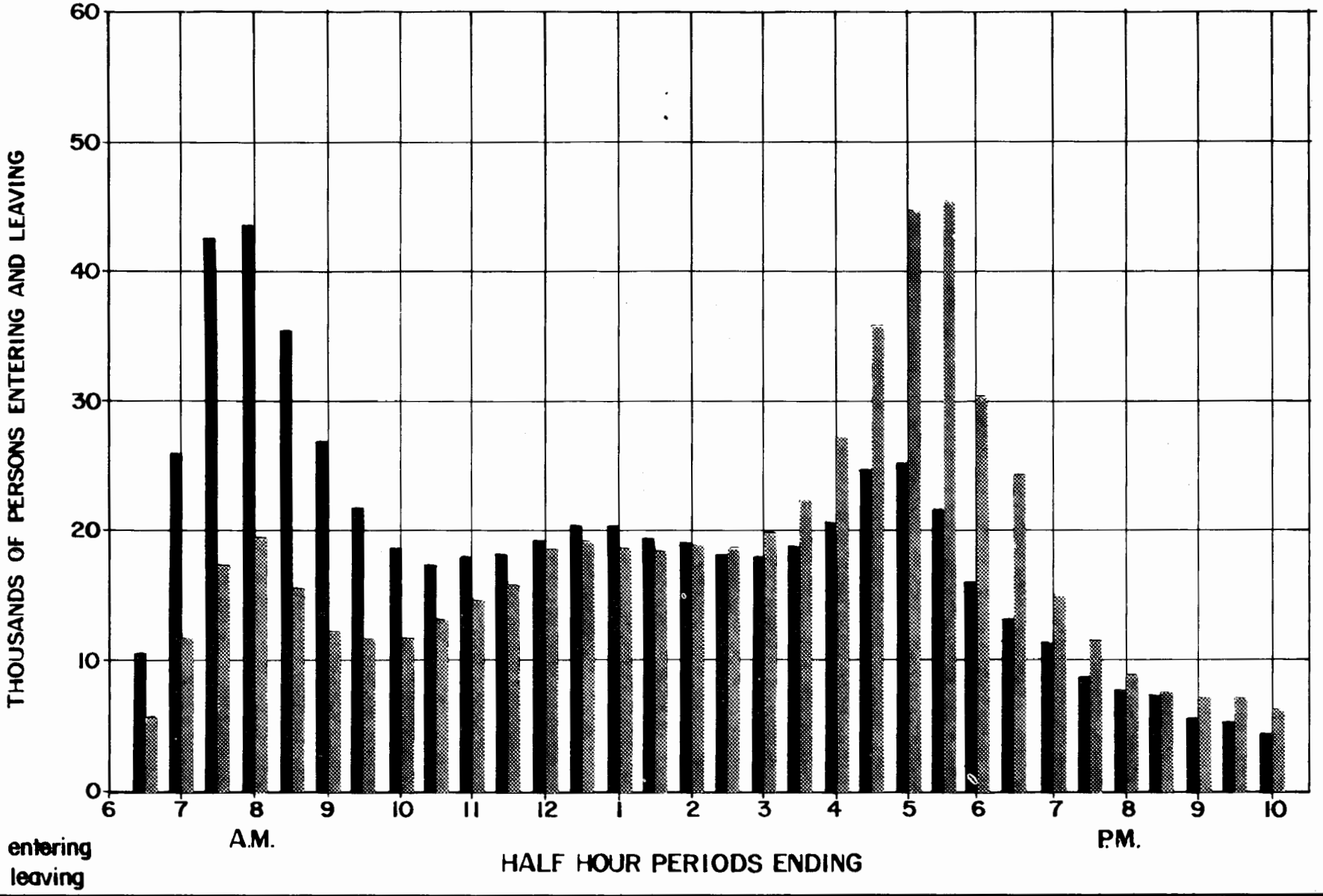
PLATE 3



VEHICLES ACCUMULATED IN CORDON AREA MAY 1974

City of Los Angeles
DEPARTMENT OF TRAFFIC
S. S. (Sam) Taylor, City Traffic Engineer

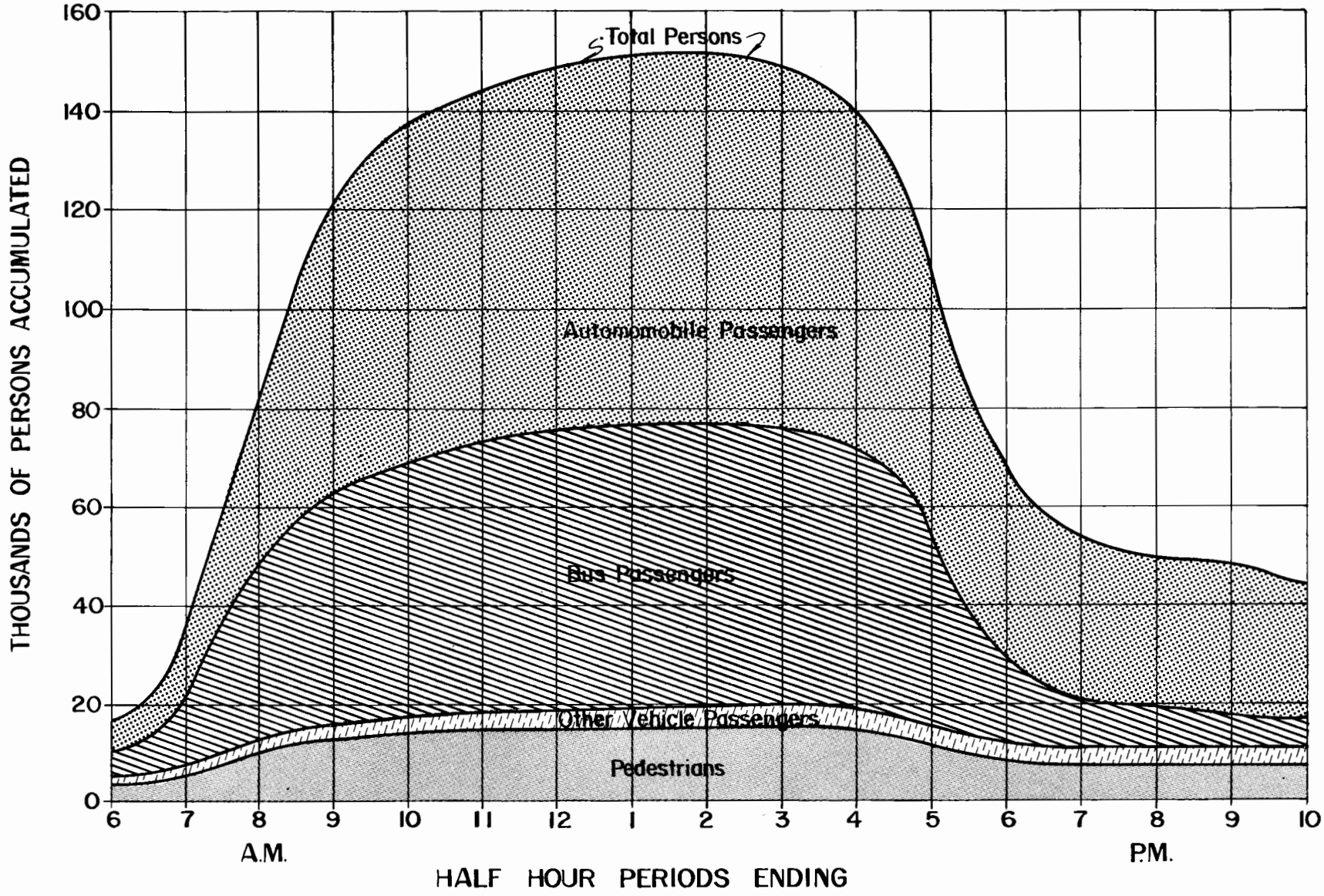
PLATE 4



PERSONS ENTERING AND LEAVING CORDON AREA, MAY 1974

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

PLATE 5



PERSONS ACCUMULATED IN CORDON AREA, MAY 1974

City of Los Angeles
DEPARTMENT OF TRAFFIC
S.S.(Sam)Taylor, City Traffic Engineer

PLATE 6

TABLE 2

SUMMARY OF VEHICLES BY LOCATION
DOWNTOWN LOS ANGELES, MAY 1974, 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.	3765	3960	472	249	0	0	4237	4209
1ST ST.	7319	7296	760	683	362	374	8441	8353
2ND ST.	2891	2831	553	586	0	0	3444	3417
3RD ST.	8808	0	1437	0	76	0	10321	0
BOYD ST.	182	532	0	0	0	0	182	532
4TH ST.	0	6345	0	1015	0	78	0	7438
WINSTON ST.	540	512	0	0	0	0	540	512
5TH ST.	7232	0	969	0	188	0	8389	0
6TH ST.	0	7562	0	1064	0	363	0	8989
7TH ST.	5981	5718	1300	986	384	279	7665	6983
8TH ST.	7776	0	1312	0	247	0	9335	0
9TH ST.	0	9201	0	1486	0	186	0	10873
OLYMPIC BLVD.	3527	3486	450	347	0	0	3977	3833
11TH ST.	4349	0	836	0	74	0	5259	0
12TH ST.	0	4165	0	772	0	64	0	5001
PICO BLVD.	2815	2191	763	559	0	0	3578	2750
SUB TOTAL	55185	53799	8852	7747	1331	1344	65368	62890
SOUTH BOUNDARY								
SOUTH OF PICO BLVD. ON								
LOS ANGELES ST.	3839	4571	778	871	0	0	4617	5442
MAIN ST.	5435	5149	868	622	215	208	6518	5979
BROADWAY	4676	4420	588	476	225	207	5489	5103
HILL ST.	3960	4093	393	455	113	110	4466	4658
OLIVE ST.	2814	1948	308	346	36	36	3158	2330
MARGO ST.	258	251	0	0	0	0	258	251
GRAND AVE.	4695	3777	536	519	93	92	5324	4388
HOPE ST.	1907	2036	317	330	0	0	2224	2366
FLOWER ST.	3159	3663	471	511	131	127	3761	4301
FIGUEROA ST.	6968	7861	797	927	72	75	7837	8863
SUB TOTAL	37711	37769	5056	5057	885	855	43652	43681
WEST BOUNDARY								
WEST OF FIGUEROA ST. ON								
PICO BLVD.	6614	6158	1389	728	243	197	8246	7083
TEHRAN ST.	45	44	0	0	0	0	45	44
NAGOYA ST.	1165	130	0	0	0	0	1165	130
11TH ST.	3220	8222	321	784	0	34	3541	9040
OLYMPIC BLVD.	10341	13846	745	1043	140	149	11226	15038
9TH ST.	19454	0	1916	0	46	0	21416	0
8TH PLACE	729	682	0	0	0	0	729	682
8TH ST.	0	14421	0	1539	0	46	0	16006
7TH PLACE	707	438	0	0	0	0	707	438
7TH ST.	5393	6537	766	738	180	185	6339	7460
WILSHIRE BLVD.	10326	6203	666	461	202	207	11194	6871
HARBOR FWY OFF RAMP	15939	0	1070	0	1	0	17010	0
6TH ST.	7045	0	852	0	269	0	8166	0
5TH ST.	0	24442	0	1915	0	259	0	26616
LOWER 4TH ST.	4806	0	462	0	0	0	5268	0
4TH ST. VIADUCT	13375	0	1135	0	6	0	14516	0
HARBOR FWY OFF RAMP	1242	0	192	0	0	0	1434	0
3RD ST.	0	14547	0	1368	0	6	0	15921
2ND ST.	7894	4996	596	344	1	0	8491	5340
1ST ST.	5797	6536	404	432	126	121	6327	7089
DIAMOND ST.	628	745	0	0	0	0	628	745
TEMPLE ST.	5126	4590	519	447	221	216	5866	5253
SUB TOTAL	119846	112537	11033	9799	1435	1420	132314	123756
NORTH BOUNDARY								
NORTH OF TEMPLE ST. ON								
FIGUEROA ST.	6294	8643	387	510	39	42	6720	9195
HARBOR FWY OFF RAMP	4507	0	323	0	0	0	4830	0
HOLLYWOOD FWY RAMPS	3883	0	403	0	147	0	4433	0
HOLLYWOOD FWY RAMPS	0	4898	0	367	0	3	0	5268
GRAND AVE.	6516	8402	609	608	201	365	7326	9375
HILL ST.	7241	5942	517	369	15	98	7773	6409
BROADWAY	7763	8120	600	693	426	390	8789	9203
SPRING ST.	14900	0	976	0	720	0	16596	0
MAIN ST.	0	14901	0	1231	0	707	0	16839
LOS ANGELES ST.	8053	8660	809	952	0	0	8862	9612
SUB TOTAL	59157	59566	4624	4730	1548	1605	65329	65901
GRAND TOTAL	271899	263671	29565	27333	5199	5224	306663	296228

TABLE 3

SUMMARY OF PERSONS BY LOCATION
DOWNTOWN LOS ANGELES, MAY 1974, 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.	5350	5427	472	249	0	0	3372	3142	9194	8818
1ST ST.	10531	10281	760	683	7079	6979	3252	3378	21622	21321
2ND ST.	4128	3890	553	586	0	0	578	693	5359	5169
3RD ST.	12404	0	1437	0	1454	0	476	446	15771	446
BOYD ST.	244	717	0	0	0	0	749	693	993	1410
4TH ST.	0	8760	0	1015	0	1477	840	931	840	12183
WINSTON ST.	754	691	0	0	0	0	1393	1688	2147	2379
5TH ST.	10278	0	969	0	5179	0	2432	2276	18858	2276
6TH ST.	0	10511	0	1064	0	9970	3771	3999	3771	25544
7TH ST.	8878	7904	1300	986	12382	9355	2605	1842	25165	20087
8TH ST.	11318	0	1312	0	6053	0	2815	2586	21498	2586
9TH ST.	0	12602	0	1486	0	5533	3607	2873	3607	22494
OLYMPIC BLVD.	5124	4785	450	347	0	0	405	444	5979	5576
11TH ST.	6108	0	836	0	1604	0	453	501	9001	501
12TH ST.	0	5917	0	772	0	1655	459	671	459	9015
PICO BLVD.	3954	3120	763	559	0	0	541	475	5258	4154
SUB TOTAL	79071	74605	8852	7747	33751	34969	27848	26638	149522	143959
SOUTH BOUNDARY										
SOUTH OF PICO BLVD. ON										
LOS ANGELES ST.	5750	6399	778	871	0	0	248	232	6776	7502
MAIN ST.	8271	7202	868	622	6359	6084	292	247	15790	14155
BROADWAY	7213	6172	588	476	7490	7678	827	573	16118	14899
HILL ST.	6060	5658	393	455	3247	3189	856	765	10546	10067
OLIVE ST.	3821	2509	308	346	604	674	289	314	5022	3843
MAPGO ST.	335	300	0	0	0	0	0	0	335	300
GRAND AVE.	6378	4943	536	519	2482	2342	268	256	9664	8060
HOPE ST.	2587	2593	317	330	0	0	816	808	3720	3731
FLOWER ST.	4302	4751	471	511	4477	3982	346	334	9596	9578
FIGUEROA ST.	9569	10237	797	927	2021	2092	248	285	12635	13541
SUB TOTAL	54276	50764	5056	5057	26680	26041	4190	3814	90202	85676
WEST BOUNDARY										
WEST OF FIGUEROA ST. ON										
PICO BLVD.	8902	7835	1389	728	7601	6832	512	555	18404	15950
TEHRAN ST.	48	47	0	0	0	0	36	22	84	69
NAGOYA ST.	1538	151	0	0	0	0	336	264	1874	415
11TH ST.	4328	10424	321	784	0	350	172	185	4821	11743
OLYMPIC BLVD.	13821	17783	745	1043	4542	4074	399	391	19507	23291
9TH ST.	25987	0	1916	0	819	0	963	834	29685	834
8TH PLACE	949	843	0	0	0	0	206	244	1155	1087
8TH ST.	0	18473	0	1539	0	728	1347	1088	1347	21828
7TH PLACE	925	537	0	0	0	0	521	429	1446	966
7TH ST.	6884	8246	766	738	7201	6884	2438	2081	17289	17949
WILSHIRE BLVD.	13190	7857	666	461	6503	7216	931	741	21290	16275
HARBOR FWY OFF RAMP	20339	0	1070	0	22	0	0	0	21431	0
6TH ST.	9002	0	852	0	9681	0	495	483	20030	483
5TH ST.	0	31058	0	1915	0	8601	437	461	437	42035
LOWER 4TH ST.	6139	0	462	0	0	0	62	38	6663	38
4TH ST. VIADUCT	17116	0	1135	0	165	0	2	3	18418	3
HARBOR FWY OFF RAMP	1572	0	192	0	0	0	0	0	1764	0
3RD ST.	0	18192	0	1368	0	168	17	43	17	19771
2ND ST.	11120	7078	596	344	27	0	70	110	11813	7532
1ST ST.	8207	9349	404	432	4292	4293	320	329	13223	14403
DIAMOND ST.	859	994	0	0	0	0	0	0	859	994
TEMPLE ST.	7297	6409	519	447	6289	6264	698	793	14803	13913
SUB TOTAL	158223	145276	11033	9799	47142	45410	9962	9094	226360	209579
NORTH BOUNDARY										
NORTH OF TEMPLE ST. ON										
FIGUEROA ST.	8567	11671	387	510	1009	1070	143	203	10106	13454
HARBOR FWY OFF RAMP	6171	0	323	0	0	0	0	0	6494	0
HOLLYWOOD FWY RAMPS	5283	0	403	0	5132	0	0	0	10818	0
HOLLYWOOD FWY RAMPS	0	6625	0	367	0	91	0	0	0	7083
GRAND AVE.	8916	11371	609	608	7243	13262	300	327	17068	25568
HILL ST.	9821	8058	517	369	510	1068	474	784	11322	10279
BROADWAY	10803	11352	600	693	11561	11441	1079	1152	24043	24638
SPRING ST.	20618	0	976	0	19370	0	1413	1216	42377	1216
MAIN ST.	0	20687	0	1231	0	18126	1253	973	1253	41017
LOS ANGELES ST.	11230	12040	809	952	0	0	3425	2541	15464	15533
SUB TOTAL	81409	81804	4624	4730	44825	45058	8087	7196	138945	138788
GRAND TOTAL	372979	352449	29565	27333	152398	151478	50087	46742	605029	578002

TABLE 4

SUMMARY OF VEHICLES BY HALF HOUR PERIODS

DOWNTOWN LOS ANGELES, MAY 1974

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	3870	3062	6208	648	292	856	121	104	117	4639	3458	7181
700	8771	5127	9852	972	491	1337	245	159	203	9988	5777	11392
730	13925	7212	16565	1067	630	1774	349	212	340	15341	8054	18679
800	16912	8875	24602	1073	770	2077	365	250	455	18350	9895	27134
830	15748	7915	32435	1142	880	2339	281	226	510	17171	9021	35284
900	14179	6627	39987	1198	890	2647	185	163	532	15562	7680	43166
930	11736	6156	45567	1291	986	2952	169	176	525	13196	7318	49044
1000	9484	6317	48734	1391	1061	3282	144	131	538	11019	7509	52554
1030	8457	6836	50355	1301	1107	3476	143	150	531	9901	8093	54362
1100	8490	6997	51848	1319	1212	3583	138	138	531	9947	8347	55962
1130	8357	7713	52492	1281	1191	3673	141	141	531	9779	9045	56696
1200	8843	8600	52735	1214	1219	3668	141	135	537	10198	9954	56940
1230	8985	8581	53139	1167	1113	3722	135	149	523	10287	9843	57384
1300	8950	8455	53634	1145	1058	3809	137	143	517	10232	9656	57960
1330	8691	8543	53782	1274	1156	3927	143	147	513	10108	9846	58222
1400	9257	8945	54094	1220	1181	3966	142	139	516	10619	10265	58576
1430	8170	9021	53243	1358	1137	4187	156	159	513	9684	10317	57943
1500	8281	9516	52008	1289	1271	4205	166	156	523	9736	10943	56736
1530	8472	10526	49954	1188	1376	4017	186	162	547	9846	12064	54518
1600	9570	12642	46882	1194	1519	3692	205	199	553	10969	14360	51127
1630	10909	15943	41848	1138	1434	3396	224	242	535	12271	17619	45779
1700	11902	17881	35869	982	1279	3099	231	390	376	13115	19550	39344
1730	10445	17878	28436	826	1010	2915	213	355	234	11484	19243	31585
1800	7921	13418	22939	611	698	2828	170	263	141	8702	14379	25908
SUB TOTAL	240325	222786		27289	24961		4530	4489		272144	252236	
1830	6357	9788	19508	464	547	2745	157	193	105	6978	10528	22358
1900	5261	6777	17992	387	346	2786	116	126	95	5764	7249	20873
1930	4221	5325	16888	313	328	2771	98	96	97	4632	5749	19756
2000	4061	4409	16540	298	305	2764	60	75	82	4419	4789	19386
2030	3661	3859	16342	270	257	2777	67	70	79	3998	4186	19198
2100	2866	3666	15542	216	227	2766	57	61	75	3139	3954	18383
2130	2727	3742	14527	179	203	2742	66	60	81	2972	4005	17350
2200	2420	3319	13628	149	159	2732	48	54	75	2617	3532	16435
SUB TOTAL	31574	40885		2276	2372		669	735		34519	43992	
GRAND TOTAL	271899	263671		29565	27333		5199	5224		306663	296228	

TABLE 5

SUMMARY OF PERSONS BY HALF HOUR PERIODS

DOWNTOWN LOS ANGELES, MAY 1974

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	4901	4310	7591	648	292	856	4237	1847	7890	588	302	4286	10374	6751	20623
700	12018	6500	13109	972	491	1337	11131	3969	15052	1962	739	5509	26083	11699	35007
730	20243	9449	23903	1067	630	1774	17053	5573	26532	4287	1655	8141	42650	17307	60350
800	23071	10899	36075	1073	770	2077	15512	5749	36295	3868	1913	10096	43524	19331	84543
830	20769	9389	47455	1142	880	2339	10643	3914	43024	2857	1210	11743	35411	15393	104561
900	17742	8025	57172	1198	890	2647	6095	2345	46774	1778	921	12600	26813	12181	119193
930	14584	7458	64298	1291	986	2952	4834	1970	49638	1490	1099	12991	22199	11513	129879
1000	11825	7596	68527	1391	1061	3282	4126	1828	51936	1598	1286	13303	18940	11771	137048
1030	10620	8710	70437	1301	1107	3476	3942	2204	53674	1582	1467	13418	17445	13488	141005
1100	10884	9048	72273	1319	1212	3583	4179	2494	55359	1752	1685	13485	18134	14439	144700
1130	11212	10495	72990	1281	1191	3673	3881	2654	56586	1809	1511	13783	18183	15851	147032
1200	12020	12454	72556	1214	1219	3668	3767	3252	57101	2239	2063	13959	19240	18988	147284
1230	12969	12326	73199	1167	1113	3722	3649	3345	57405	2539	2322	14176	20324	19106	148502
1300	13039	11849	74389	1145	1058	3809	3911	3545	57771	2385	1931	14630	20480	18383	150599
1330	12300	11709	74980	1274	1156	3927	4023	3692	58102	2097	1881	14846	19694	18438	151855
1400	12673	12203	75450	1220	1181	3966	3347	3777	57672	1887	1750	14983	19127	18911	152071
1430	11184	11815	74819	1358	1137	4187	3958	4614	57016	1383	1423	14943	17883	18989	150965
1500	11294	12115	73998	1289	1271	4205	4056	4839	56233	1249	1314	14878	17888	19539	149314
1530	11853	13812	72039	1188	1376	4017	4310	5308	55235	1426	1601	14703	18777	22097	145994
1600	12907	16164	68782	1194	1519	3692	4994	7402	52827	1424	1817	14310	20519	26902	139611
1630	14796	20368	63210	1138	1434	3396	6514	10515	48826	2168	3286	13192	24616	35603	128624
1700	15571	24264	54517	982	1279	3099	6202	18098	36930	2290	4591	10891	25045	48232	105437
1730	14478	23734	45261	826	1010	2915	5007	16623	25314	1573	3279	9185	21884	44646	82675
1800	11037	17459	38839	611	698	2828	3246	10572	17988	895	1627	8453	15789	30356	68108
SUB TOTAL	323990	292151		27289	24961		142617	130129		47126	42673		541022	489914	
1830	9468	14046	34261	464	547	2745	2811	8381	12418	577	1120	7910	13320	24094	57334
1900	8063	10156	32168	387	346	2786	2214	3858	10774	455	616	7749	11119	14976	53477
1930	6737	7953	30952	313	328	2771	1473	2964	9283	411	528	7632	8934	11773	50638
2000	6352	6630	30674	298	305	2764	773	1743	8313	377	427	7582	7800	9105	49333
2030	6089	5746	31017	270	257	2777	789	1301	7801	349	433	7498	7497	7737	49093
2100	4484	5311	30190	216	227	2766	558	1200	7159	289	378	7409	5547	7116	47524
2130	4199	5650	28739	179	203	2742	675	1036	6798	273	295	7387	5326	7184	45666
2200	3597	4806	27530	149	159	2732	488	866	6420	230	272	7345	4464	6103	44027
SUB TOTAL	48989	60298		2276	2372		9781	21349		2961	4069		64007	88088	
GRAND TOTAL	372979	352449		29565	27333		152398	151478		50087	46742		605029	578002	

Table 6

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

CORDON COUNT

		1941	1957	1963	1967	1971	1972	1974
16-Hour Total In	Total	-	327,046	291,506	289,882	320,437	319,245	306,663
	Pass. Cars	288,000	283,097	253,731	253,203	283,688	283,229	271,899
16-Hour Total Out	Total	-	323,624	285,970	276,164	307,702	310,339	296,228
	Pass. Cars	-	278,224	247,836	242,649	273,955	277,039	263,671
High ½-Hour In	Total	18,500	22,077	19,267	20,345	20,378	19,927	18,350
	Pass. Cars	-	20,402	16,870	18,891	19,035	18,554	16,912
Same ½-Hour Out	Total	12,000	12,689	10,912	9,735	10,663	11,150	9,895
	Pass. Cars	-	11,202	9,349	8,782	9,633	10,180	8,875
High ½-Hour Out	Total	20,500	22,760	19,730	20,488	22,191	22,182	19,550
	Pass. Cars	-	20,884	17,176	18,959	20,730	20,575	17,881
Same ½-Hour In	Total	13,500	15,602	12,898	12,099	13,833	14,069	13,115
	Pass. Cars	-	13,876	11,131	10,758	12,408	12,735	11,902
Highest Veh. Accum. Incl. Initial	Total	49,000	48,306	-	62,100	61,047	58,789	58,576
	Pass. Cars	-	46,007	-	57,470	56,793	53,641	54,094

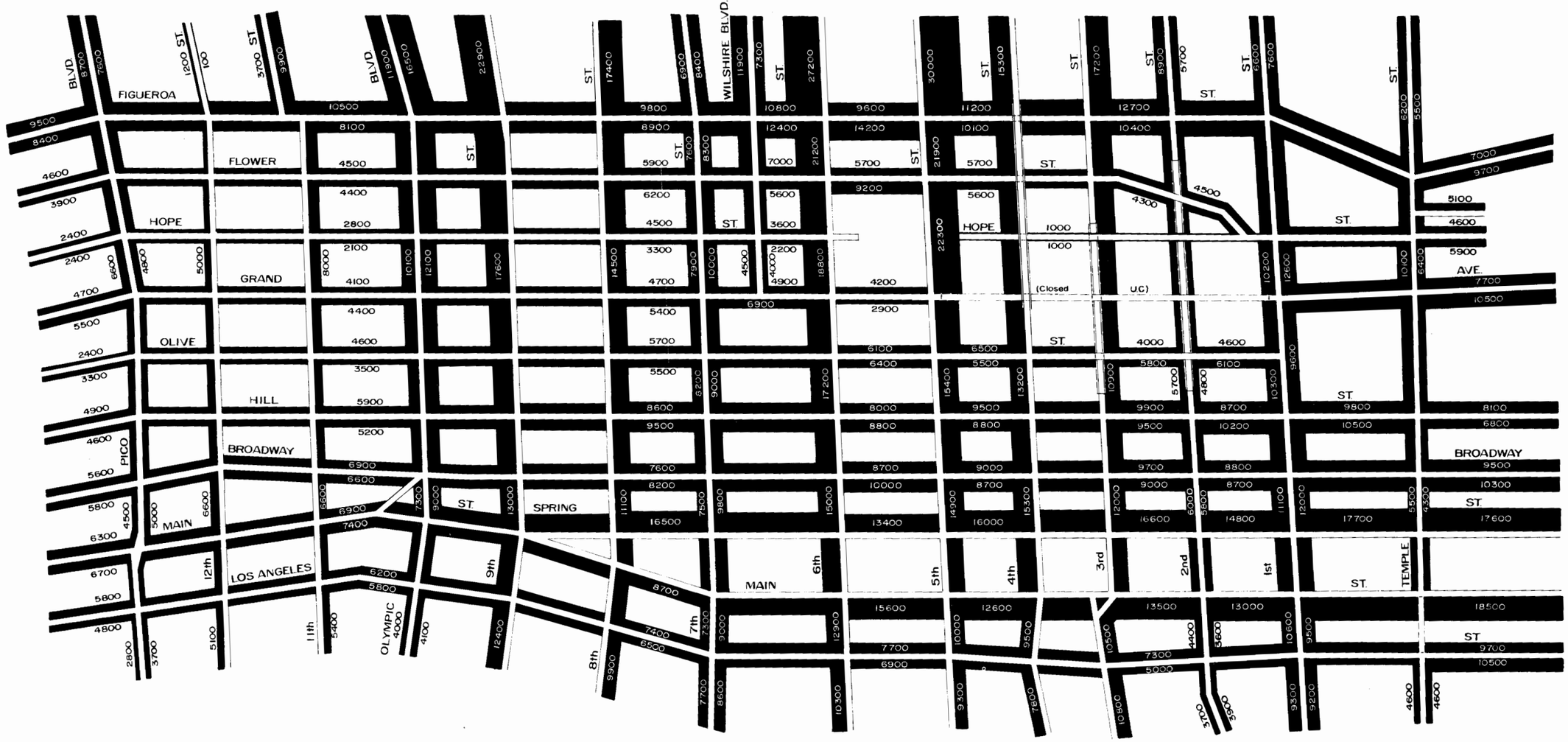
Table 7

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

CORDON COUNT

		1941	1957	1963	1967	1971	1972	1974
16-Hour	Persons	757,120	687,906	605,730	570,928	590,983	598,673	605,029
Total In	Auto Pass.	441,647	403,015	368,844	350,323	375,526	389,768	372,979
% Auto Passengers		58	59	61	61	63	65	62
16-Hour	Persons	723,191	692,195	589,964	549,977	578,197	582,094	578,002
Total Out	Auto Pass.	415,403	402,399	355,152	337,627	362,299	377,295	352,449
% Auto Passengers		57	58	60	61	63	65	61
High	Persons	50,161	59,411	50,922	50,673	42,622	42,433	43,524
½-Hour In	Auto Pass.	25,982	31,247	27,505	28,630	24,464	25,053	23,071
% Auto Passengers		52	53	54	57	58	59	53
Same	Persons	26,298	28,010	20,825	18,914	19,242	20,881	19,331
½-Hour Out	Auto Pass.	14,499	17,100	11,608	11,003	11,176	12,425	10,899
% Auto Passengers		55	61	56	58	58	59	56
High	Persons	61,710	61,592	47,588	48,994	49,271	49,198	48,232
½-Hour Out	Auto Pass.	31,558	31,362	27,167	28,506	28,551	28,611	24,264
% Auto Passengers		51	51	57	58	58	58	50
Same	Persons	29,629	29,888	26,519	19,253	25,889	25,856	25,045
½-Hour In	Auto Pass.	18,160	19,201	15,973	12,180	16,338	17,068	15,571
% Auto Passengers		61	64	60	63	63	66	62
High	Persons	174,758	132,618	-	136,194	123,853	122,729	135,071
Accum.*	Auto Pass.	67,593	57,128	-	74,162	69,383	68,224	68,450
% Auto Passengers		39	43	-	54	56	55	51

* Persons Crossing Cordon



5000
15000
30000
Vehicle scale

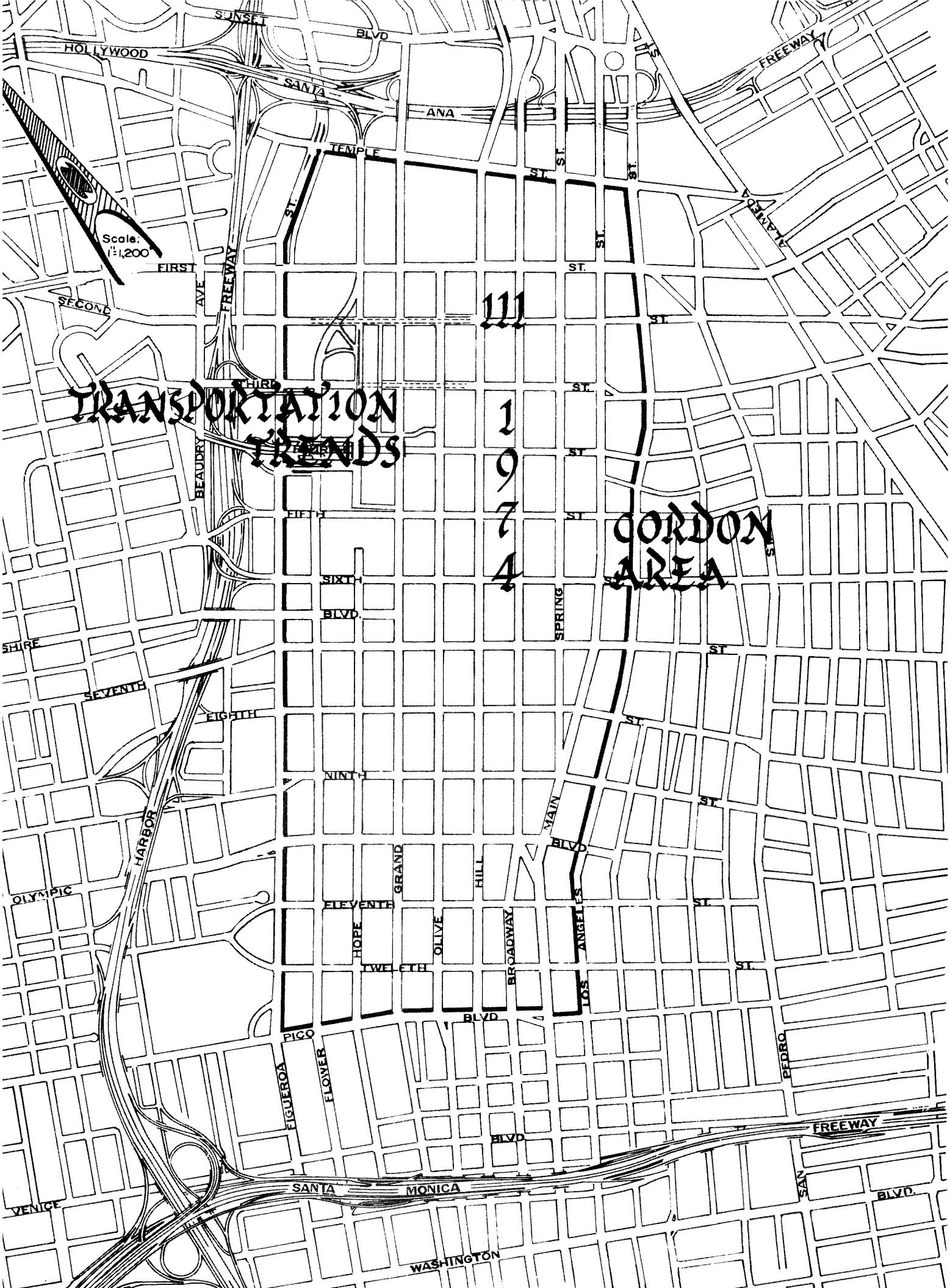
500 0 500 1000
SCALE IN FEET

LOS ANGELES
DOWNTOWN BUSINESS AREA
TRAFFIC FLOW MAP
MAY 1974 WEEKDAY 24 HOUR COUNT

CITY OF LOS ANGELES
DEPARTMENT OF TRAFFIC
S. S. (Sam) Taylor, City Traffic Engineer

edwards

PLATE 7


TRANSPORTATION TRENDS
1974
CORDON AREA
Scale: 1"=1,200'
SUNSET BLVD
HOLLYWOOD
SANTA ANA
FREEWAY
TEMPLE
FIRST
SECOND
THIRD
AVE
FREEWAY
BEAUDRY
FIFTH
SIXTH
BLVD
SHIRE
SEVENTH
EIGHTH
NINTH
HARBOR
OLYMPIC
GRAND
HILL
SPRING
MAIN
BLVD
ELEVENTH
HOPE
OLIVE
TWELFTH
BROADWAY
LOS ANGELES
PICO
FIGUEROA
FLOWER
PEDRO
BLVD
FREEWAY
SANTA MONICA
VENICE
SAN
BLVD
WASHINGTON

Cordon Area Transportation Trends

General Observations

Comparison of the 1974 Cordon Count data with historical data reveals two significant changes in cordon area travel characteristics.

First, the decrease in cordon area vehicular volumes in 1974 compared to 1972 represents a reversal of the trend of inclining vehicular volumes which occurred during the period between 1967 and 1972.

Secondly, cordon area transit passenger volumes, which had been on a general overall declining trend for the recent annual cordon series, 1963 through 1972, increased substantially in 1974 over 1972.

These changes were primarily the result of (1) the recent energy crisis as it affected availability of gasoline supplies, and (2) the implementation of the Experimental 25¢ Flat Fare Program in Los Angeles County on April 1, 1974.

Reductions in gasoline supply initially became discernable during the fall of 1973. Decreases in the volume of vehicular traffic were most significant during the period of the most acute gasoline shortage, generally between mid-February and mid-March, 1974. At the time of the cordon count study in May, the supply of gasoline had nearly reached the level that would have otherwise normally been available.

Cordon Area Vehicular and Person Trip Volumes

Prior to this year's study, vehicular volumes crossing the cordon boundaries had inclined steadily since 1967, or subsequent to the opening of the Santa Monica Freeway. The volume of cordon vehicular trips in 1974 for the 16-hour study period decreased by over 4 per cent from the volume recorded in 1972.

For most readily comparison, the 1974 cordon vehicle and person trip volumes have been plotted on graphs, Plate 8, depicting the trend lines for 1967-1972 and 1963 through 1972. As can be observed from this plate, the volume of cordon vehicle trips and vehicle accumulation within the cordon area are below the long-term trend (1963-1972) although the variance is less for the latter. It would further appear that the Flat Fare Program apparently had an effect on cordon person volumes, especially in regard to accumulation of persons, as will be detailed in a following section.

More detailed inspection of the cordon count data also reveals that there was a more significant effect on peak-hour vehicle trips than on 16-hour volumes as indicated by the following:

Inbound Vehicles	1972	1974	% Change
16-hour	319,245	306,663	- 3.9%
AM Peak Hour	38,690	36,030	- 6.9%
Outbound Vehicles			
16-hour	310,339	296,228	- 4.5%
PM Peak Hour	44,140	39,980	- 9.4%

The peak-hour volumes noted above were compiled from the automatic counts (highest four consecutive 15-minute volumes) on all of the major access routes for the cordon area.

Cordon Area Passenger Volumes

The decrease in cordon vehicle trips was primarily the result of the decrease in passenger vehicles. The volume of passenger vehicles crossing the cordon boundaries in 1974 represented a reduction of 4.4 per cent from the volume recorded in 1972. As could be expected, this resulted in a reduction of auto passengers, which was slightly greater proportionately, or a decrease of 5.4 per cent in 1974 compared to 1972. In terms of absolute numbers, the 1974 and 1972 cordon area automobile passenger volumes were 725,428 and 767,063, respectively.

Contrary to the trend in private vehicle modes, the 16-hour volume of transit passengers entering and leaving the cordon area in May, 1974, increased by 21.5 per cent over the transit passenger volume in 1972, 303,876 versus 250,027. Transit passenger volume for the 16-hour study period, as a proportion of total cordon person trips, accordingly increased from 21.2 per cent in 1972 to 25.7 per cent in 1974. For the peak-hour directional flow, inbound in the morning and outbound in the afternoon, the transit passenger volume as a proportion in 1974 was 37.6 per cent compared to the 1972 proportion of 30.7 per cent for the similar peak-hour flow.

A bus stop interview survey conducted at the time of the cordon count as part of an overall evaluation study[1] revealed that 16 per cent of the SCRTD riders interviewed were new riders since the inception of the Flat Fare program.

Effects of the fuel shortage on cordon area transit volumes cannot be quantified since transit ridership was not measured immediately prior to the inception of the Flat Fare program.

In addition to the Flat Fare program and fuel shortage, the increase in transit passengers can also be attributed to the recently completed San Bernardino Freeway Express Busway Service. Service on the exclusive bus lanes was initially put into operation on the easterly seven-mile segment in January 1973, and on the total eleven-mile busway on June 10, 1974.

Analysis of data indicates that the 16-hour volume of transit passengers entering and leaving the cordon area on the lines operating within the general corridor of the freeway and busway increased by 5,800 in 1974 over the volume accommodated by the lines in this corridor in 1972. This represents an increase over 1972 cordon transit passenger volumes of slightly more than 2 per cent.

In order to more clearly illustrate the long-term trend in various modes of transport for persons entering the cordon area, the data from the historical cordon count studies has been plotted on a graph with a semi-logarithmic scale, Plate 9. For the annual series counts between 1963 and 1972, a straight line on a linear basis indicates a constant rate in increasing or decreasing magnitude with an inclining or declining slope, respectively.

1 - "An Evaluation of Three-Month Trial - 25¢ Flat Fare in Los Angeles County July 1974 - A Multi-Agency Report

Historical data on downtown cordon area passenger mode trends is shown on Table 8.

Passenger Vehicle Occupancy Factors

It was generally evident that more people joined carpools as the supply of gasoline became more critical during the early part of 1974. With the easing of the gasoline shortage and implementation of the Flat Fare program, which occurred simultaneously just prior to the cordon count study, carpooling activities became less intensive.

To provide a greater insight into the changes relative to carpooling activities, a detailed study was made of the numerous occupancy counts conducted for the cordon studies in 1970, 1972, and 1974. Results of the study, as shown on Table 9, indicates that the intensity of carpooling (automobiles with two or more passengers including the driver) for the 16-hour study period in 1974 increased over the proportion in 1972 but was still less than the level of carpooling noted in 1970. Comparison of the occupancy data for the last two studies, Table 10, reveals that the changes in carpooling were primarily as a result of the increased proportion of automobiles with two or three persons in 1974 over 1972. The proportion of automobiles with four or more persons actually decreased in 1974 compared to 1972.

Vehicle and Person Accumulation Within the Cordon Area

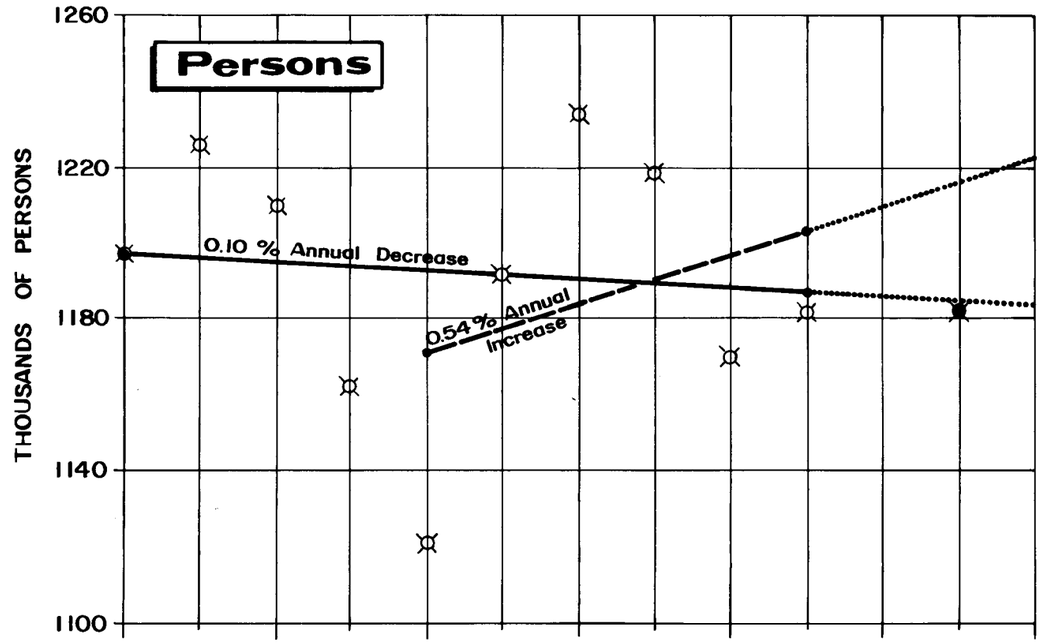
Comparison of the data on accumulation of vehicles and persons within the cordon area for 1974 with 1972 reveals some changing characteristics on activities within the cordon area.

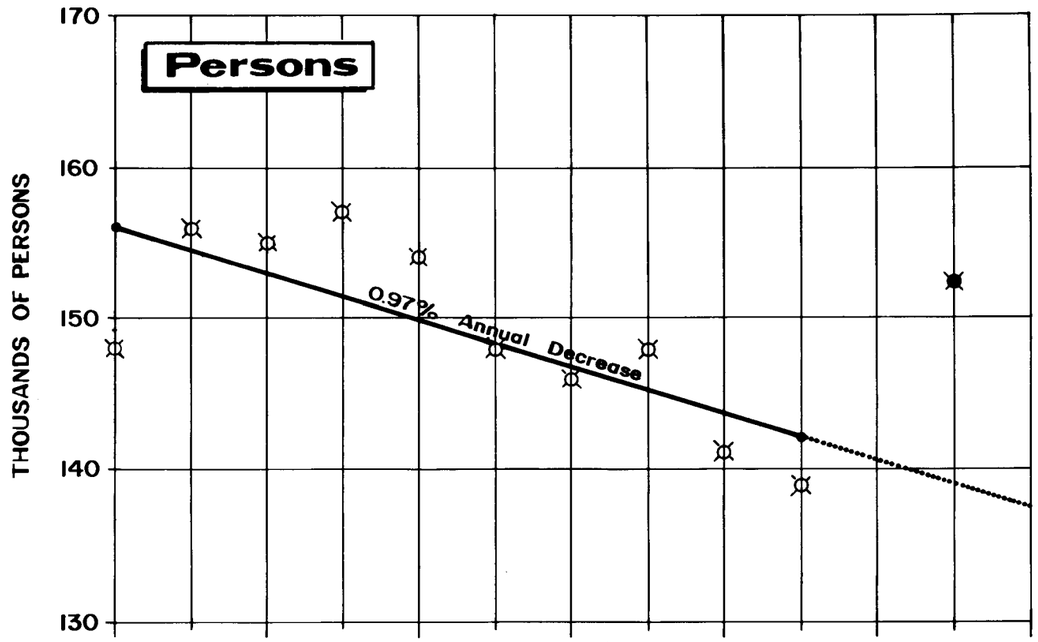
Although the total volume of vehicles entering or leaving the cordon area for the 16-hour study period in 1974 decreased slightly over 4 per cent from 1972, the volume of vehicles accumulated within the cordon area at the peak period (2 PM) in 1974 was nearly at the same level as in 1972, a decrease of less than half of 1 per cent. More significantly, there were 10 per cent more vehicles accumulated in the cordon area from 6 PM through 10 PM in 1974 as compared to 1972.

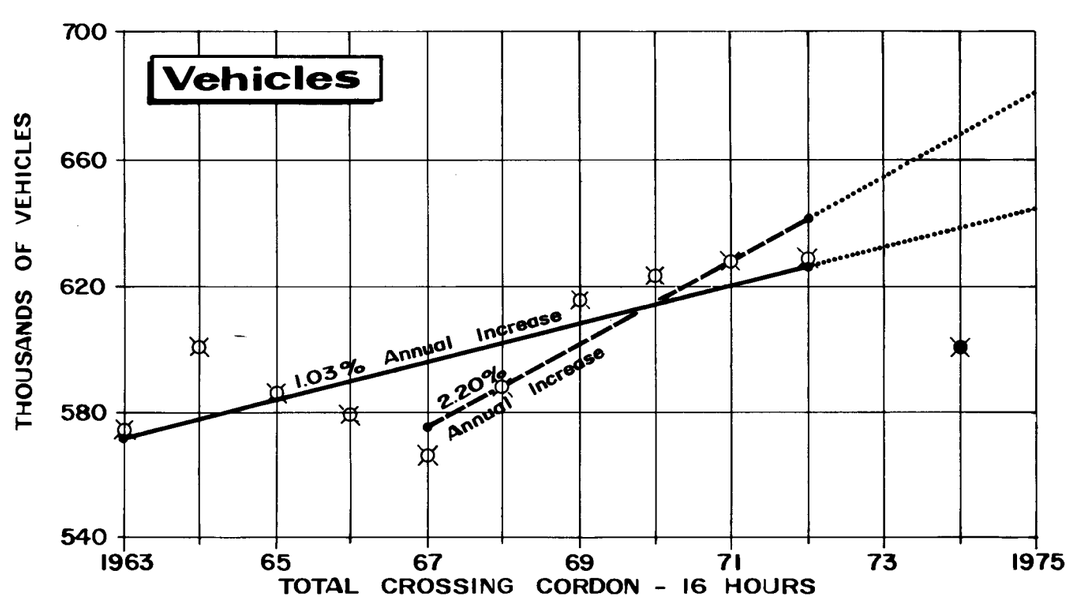
The magnitude of persons accumulated within the cordon area in 1974 was substantially higher than the 1972 accumulation for virtually the entire 16-hour study period. At the peak accumulation period, 2 PM, there were over 12,000 more persons within the cordon area in 1974 than in 1972, an increase of nearly 9 per cent. This increase was primarily due to the greater magnitude of transit passenger accumulation. Auto passenger accumulation at 2 PM in 1974 was only slightly higher than the 1972 accumulation. These two modes, auto and transit passengers, represent nearly 90 per cent of the total person accumulations.

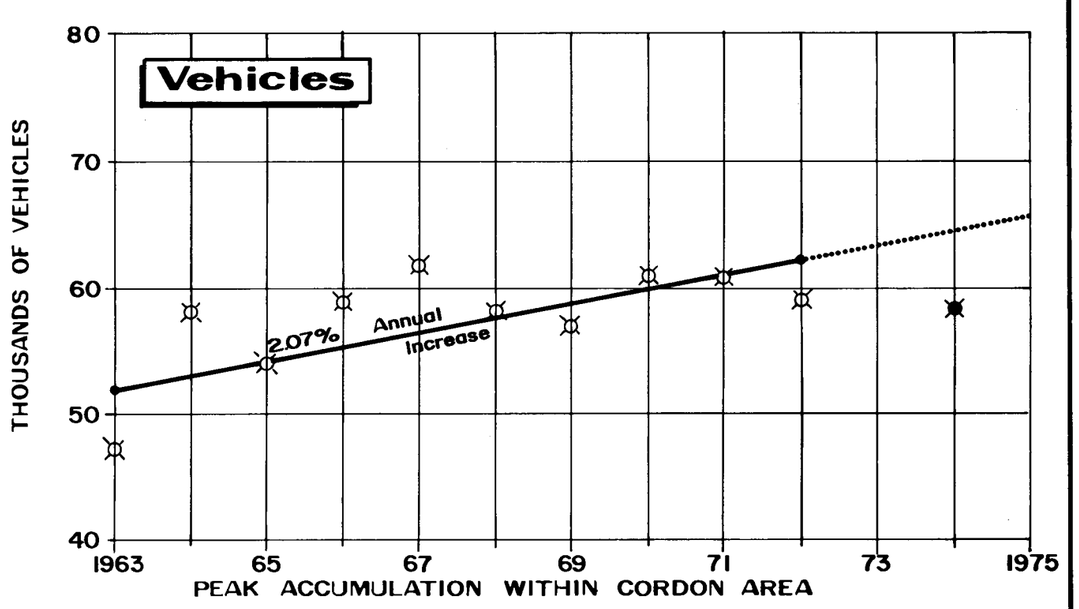
The increase in accumulation of persons within the cordon area in 1974 over 1972 was also significant in the evening or non-business hours after 6 PM. For the last four hours of the study period, 6 to 10 PM, auto passengers, however, represented the majority of the increase in cordon area person accumulations in 1974 over 1972.

The volume of vehicle and person accumulations at 4-hour intervals for 1974 and changes relative to 1972 are shown on Table 11. Comparison of vehicle and person accumulations, for the selected periods, in 1974 with 1972 is graphically illustrated on Plate 10.









NOTE: All charts have a value other than zero at the baseline.

CORDON AREA 1974 VOLUMES RELATIVE TO 1963 - 1972 TRENDS

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

PLATE 8

Total Persons

Motor Vehicle Passengers (Excluding Transit)

Transit Passengers

Pedestrians

Dashed Line–indicates only overall trend between study years.

Years of Cordon Count shown by symbols

Thousands of Persons Entering Cordon Area *

900 800 700 600 500 400 300 200 100 90 80 70 60 50 40 30

1941 1942 1943 1944 1945 1946 1947 1948 1949 1950 1951 1952 1953 1954 1955 1956 1957 1958 1959 1960 1961 1962 1963 1964 1965 1966 1967 1968 1969 1970 1971 1972 1973 1974 1975 1976 1977 1978

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. (Sam) Taylor, City Traffic Engineer

PLATE 9

Table 8

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
1963[4]	648,414	60,416	267,033	975,863
1967[4]	615,304	58,318	248,759	922,381
1972[4]	691,198	56,738	238,880	986,816
1974[4]	657,874	53,994	290,010	1,001,878

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%
1963	66.4%	6.2%	27.4%	100%
1967	66.7%	6.3%	27.0%	100%
1972	70.7%	5.8%	24.2%	100%
1974	65.7%	5.4%	28.9%	100%

[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

Table 9

Comparison of Car Pool Vehicles
As A Proportion of Inbound
Cordon Area Automobiles

1970 - 1972 - 1974

	Inbound Automobiles								
	Car Pool* Per Cent			Non-Car Pool Per Cent			Average Occupancy		
	1970	1972	1974	1970	1972	1974	1970	1972	1974
6A - 10A	26.37	23.89	25.69	73.63	76.11	74.31	1.32	1.30	1.31
10A - 2P	29.37	28.44	28.21	70.63	71.56	71.79	1.38	1.38	1.36
2P - 6P	27.45	25.76	27.86	72.55	74.24	72.14	1.37	1.36	1.38
6P - 10P	41.98	39.66	39.93	58.02	60.34	60.07	1.60	1.58	1.58
16 Hours	29.40	27.24	28.43	70.60	72.77	71.57	1.39	1.36	1.37

* For this purpose defined as any automobile with 2 or more occupants, including the driver.

Table 10

Comparison of Passenger Vehicle Occupancy

Entering Downtown Cordon Area

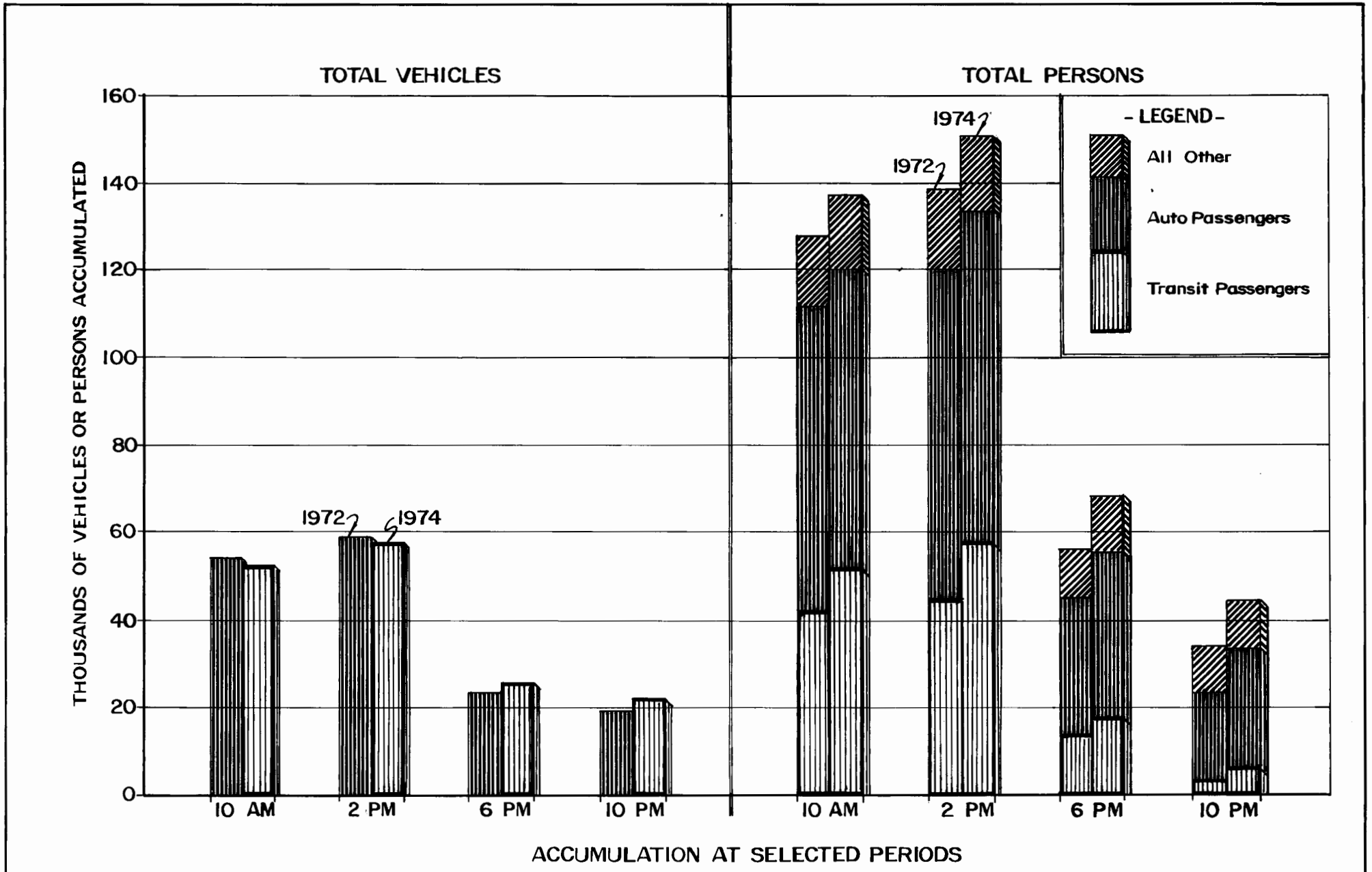
1972 vs. 1974

	Percentage of Inbound Autos by Number of Occupants							
	1972				1974			
	One	Two	Three	Four or More	One	Two	Three	Four or More
6A - 10A	76.11	19.87	2.80	1.22	74.31	21.71	2.90	1.08
10A - 2P	71.56	22.19	4.16	2.09	71.79	22.54	4.34	1.33
2P - 6P	74.24	19.43	4.02	2.31	72.14	21.15	4.66	2.05
6P - 10P	60.34	27.87	7.40	4.39	60.07	28.04	7.65	4.24
16 Hour	72.77	21.19	3.96	2.08	71.57	22.45	4.24	1.74

Table 11

Downtown Cordon Area
Accumulation of Vehicles and Persons By Mode
At Selected Periods - May 1974

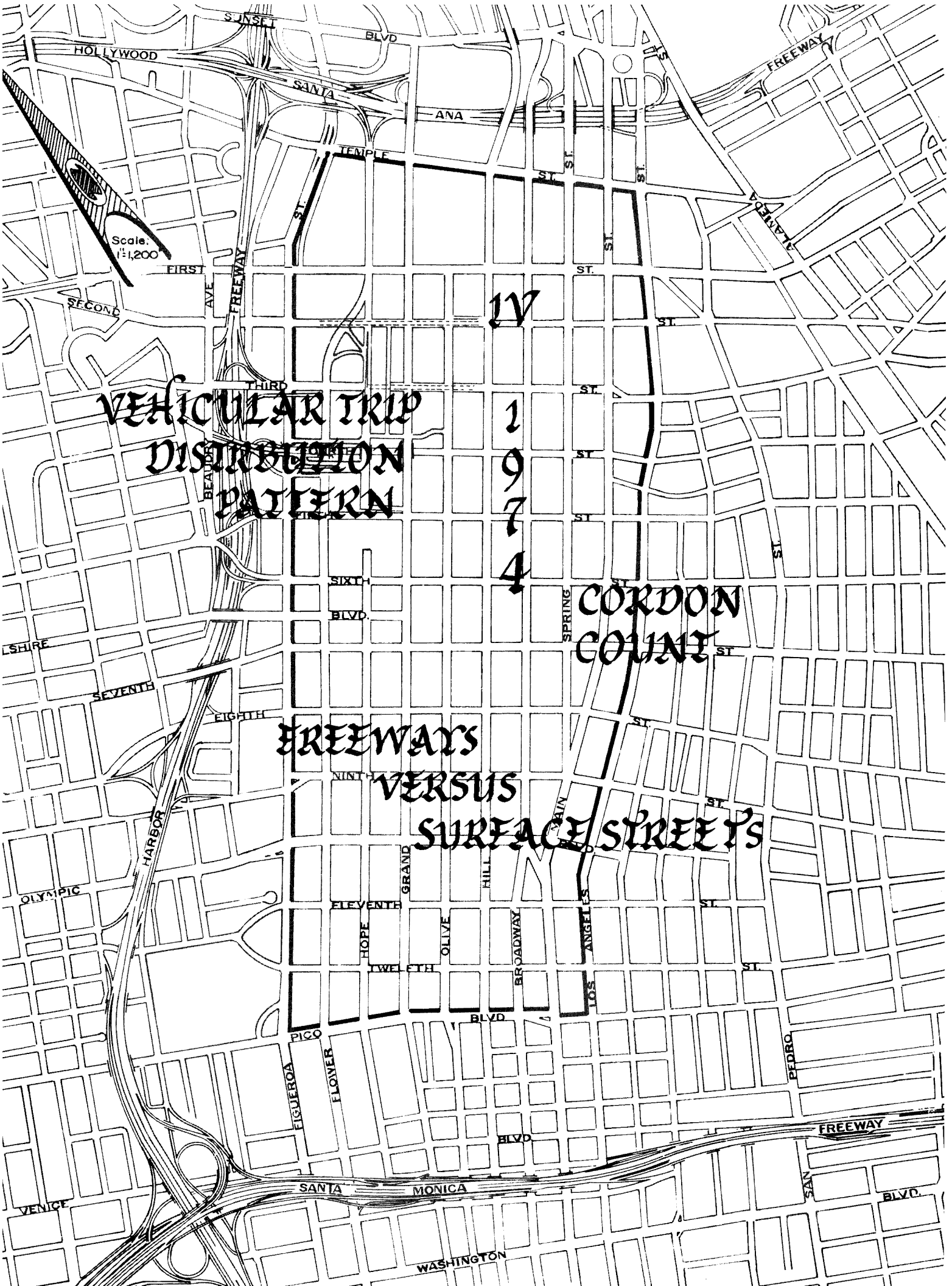
	1974 Accum.	Change From 1972	
		Numerical	Percent
Total Vehicles			
10 AM	52,554	- 1,256	- 2.3%
2 PM	58,576	- 213	- 0.4%
6 PM	25,908	+ 2,670	+11.5%
10 PM	16,435	+ 1,529	+10.3%
Total Persons			
10 AM	137,048	+ 8,944	+ 7.0%
2 PM	152,071	+12,342	+ 8.8%
6 PM	68,108	+12,366	+22.2%
10 PM	44,027	+10,448	+31.1%
Auto Pass.			
10 AM	68,527	- 1,510	- 2.2%
2 PM	75,450	+ 226	+ 0.3%
6 PM	38,839	+ 8,375	+27.5%
10 PM	27,530	+ 8,057	+41.4%
Transit Pass.			
10 AM	51,936	+10,387	+25.0%
2 PM	57,672	+12,300	+27.1%
6 PM	17,988	+ 4,123	+29.7%
10 PM	6,420	+ 2,495	+63.6%



CORDON VEHICLE AND PERSON ACCUMULATION - 1974 vs. 1972

City of Los Angeles
DEPARTMENT of TRAFFIC
S. S. (Sam) Taylor, City Traffic Engineer

PLATE 10


VEHICULAR TRIP DISTRIBUTION PATTERN
1974
CORDON COUNT
FREEWAYS VERSUS SURFACE STREETS
SUNSET BLVD
HOLLYWOOD
SANTA ANA FREEWAY
TEMPLE
FIRST
SECOND
THIRD
SIXTH
BLVD.
SEVENTH
EIGHTH
NINTH
ELEVENTH
TWELFTH
PICO
OLYMPIC
WILSHIRE
VENICE
SANTA MONICA FREEWAY
WASHINGTON BLVD.
HARBOR FREEWAY
HOLLYWOOD FREEWAY
ALAMEDA
SPRING
MAIN
HILL
GRAND
HOPE
OLIVE
BROADWAY
LOS ANGELES
FIGUEROA
FLOWER
PEDRO
Scale: 1" = 1,200'

Vehicular Trip Distribution Pattern - Freeways Versus Surface Streets - 1974

The Central City area is enclosed by a freeway loop commonly referred to as the "Downtown Freeway Loop." Portions of this loop border the cordon area on three of the cardinal boundaries; namely, the Santa Monica Freeway on the south, the Harbor Freeway on the west, and the Hollywood-Santa Ana Freeway route on the north.

A detailed study was conducted to determine the volume and proportion of cordon trips using either freeways or surface streets in their arrival or departure route to and from the cordon area. For this study, automatic counts were made at numerous selected ramp locations. Based on these counts, previous count data for the remaining ramp locations were updated to reflect current volume data. Additionally, ramp manual volume counts were utilized to determine the proportion of freeway ramp volume directly entering or leaving the cordon area. The study included only those ramps which are served directly from one of the cordon surface streets.

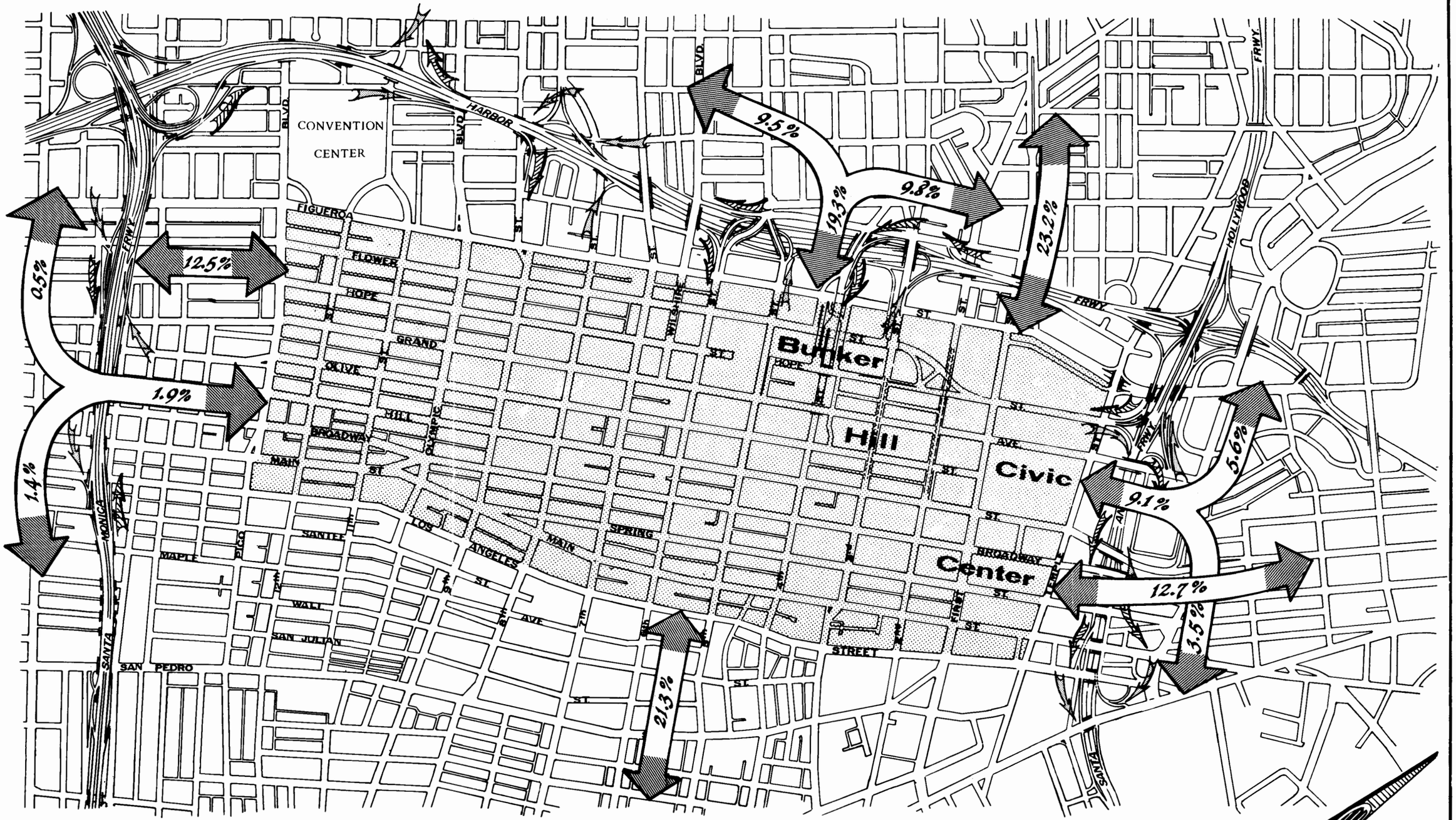
Compilation of the data from the 36 freeway ramps, 19 on- and 17 off-ramps, showed a total of 182,948 vehicles entered or left the cordon area on these ramps. Of the 602,891 vehicle-trips crossing the cordon boundaries during the 16-hour study period, 30 per cent utilized freeways and 70 per cent utilized surface streets in their access route to or from the cordon area. It is not known how many additional trips utilize the freeway network via ramps which are outside the study area.

The distribution pattern for cordon area vehicle-trips by freeway or surface streets at the 4 cardinal boundaries is shown on Plate 11. This plate also depicts the freeways and ramps involved in relation to the cordon area.

Comparison of hourly vehicular volumes entering and leaving the cordon area on freeways versus surface streets is shown on Table 12. The proportion of the hourly directional volume via freeways is also shown on this table. These data indicate that approximately 32 per cent of the inbound cordon vehicular-trips entered the cordon area via a freeway off-ramp whereas only 28 per cent of the outbound trips departed via a freeway on-ramp at the perimeter of the cordon area.

The cordon count studies in 1955 and 1972 also included data on the distribution of cordon vehicle-trips via freeways or surface streets. Comparative data on the distribution of trips for 1955, 1972, and 1974 is shown on Table 13. As indicated, the proportion of cordon vehicle-trips using freeways in their access route to or from the cordon area, in 1974 increased only slightly over 1972, 30.3 per cent versus 29.0 per cent. In relation to 1955, the 1974 proportion represents nearly a 9 per cent increase in the proportion of vehicular volume across the cordon boundaries via freeway access routes. As is further apparent, the volume of freeway oriented trips in 1974 remained relatively unchanged from the 1972 volume whereas the volume using surface streets in 1974 decreased by 6 per cent from the 1972 volume.

Historical data on vehicular trend by cordon boundaries is shown on Table 14.



Legend

- Cordon Area
- On Ramp
- Off Ramp
- 21.3% — Per Cent of Total Cordon Trips

16-Hour Cordon Vehicle Trips

Surface Streets	419,943	69.7%
Freeways	182,948	30.3%
Total	602,891	100%

Vehicular Trip Distribution Pattern - Freeways Versus Surface Streets - 1974

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

PLATE 11

Table 12

Comparison of Hourly Vehicular Volumes
Entering and Leaving Cordon Area
Freeways Versus Surface Streets
6 AM to 10 PM - May, 1974

Hourly Period	Volume of Entering Vehicles				Volume of Leaving Vehicles			
	Freeways	Surface Streets	Total	Fwy. Vol. % of Total	Freeways	Surface Streets	Total	Fwy. Vol. % of Total
6-7 AM	6,599	8,028	14,627	45.11	2,229	7,006	9,235	24.14
7-8 AM	10,846	22,845	33,691	32.19	3,847	14,102	17,949	21.43
8-9 AM	11,318	21,415	32,733	34.58	3,042	13,659	16,701	18.21
9-10 AM	9,944	14,271	24,215	41.07	3,661	11,166	14,827	24.69
10-11 AM	7,265	12,583	19,848	36.60	4,350	12,090	16,440	26.46
11-12 N	6,949	13,028	19,977	34.79	5,629	13,370	18,999	29.63
12-1 PM	6,589	13,930	20,519	32.11	5,651	13,848	19,499	28.98
1-2 PM	6,367	14,360	20,727	30.72	5,918	14,193	20,111	29.43
2-3 PM	6,217	13,203	19,420	32.01	6,830	14,430	21,260	32.13
3-4 PM	5,835	14,980	20,815	28.03	8,185	18,239	26,424	30.98
4-5 PM	5,552	19,834	25,386	21.87	9,551	27,618	37,169	25.70
5-6 PM	4,562	15,624	20,186	22.60	8,263	25,359	33,622	24.58
6-7 PM	3,658	9,084	12,742	28.71	6,073	11,704	17,777	34.16
7-8 PM	3,503	5,548	9,051	38.70	3,939	6,599	10,538	37.38
8-9 PM	2,599	4,538	7,137	36.42	3,052	5,088	8,140	37.49
9-10 PM	1,729	3,860	5,589	30.94	3,196	4,341	7,537	42.40
Total	99,532	207,131	306,663	32.46	83,416	212,632	296,228	28.16

Table 13

Comparison of Freeway and Surface Street
Volumes Crossing Downtown Cordon Boundaries
1955 - 1972 - 1974

16-Hour Volume 6 AM to 10 PM	May, 1955		May, 1972		May, 1974	
	Volume of Vehicles	Per Cent of Total	Volume of Vehicles	Per Cent of Total	Volume of Vehicles	Per Cent of Total
Freeways						
Harbor	76,327	12.2%	123,390	19.6%	116,254	19.3%
Santa Ana	57,708	9.2%	43,632	6.9%	54,926	9.1%
Santa Monica	(Not Open)	-	15,785	2.5%	11,768	1.9%
Total	134,035	21.4%	182,807	29.0%	182,948	30.3%
Surface Streets						
Total	492,111	78.6%	446,777	71.0%	419,943	69.7%
Grand Total	626,146	100.0%	629,584	100.0%	602,891	100.0%

Table 14

Vehicular Trend by Cordon Boundaries

Cordon Count Vehicular Volumes[1]

Cordon Boundary	1924[2]	1929[3]	1936[3]	1941[4]	1957[5]	1963[5]	1967[5]	1974[5]
East	92,426	153,377	158,305	163,551	168,913	134,107	130,523	128,258
South	77,731	92,013	105,246	123,775	82,734	82,312	84,721	87,333
West	110,759	209,498	227,886	238,874	279,842	243,921	226,362	256,070
North	52,970	76,586	81,571	99,236	119,184	117,136	124,440	131,230
Total	333,913	531,474	573,008	625,436	650,673	577,476	566,046	602,891

Percentage of Total Vehicles by Cordon Boundaries

Cordon Boundary	1924	1929	1936	1941	1957	1963	1967	1974
East	28	29	28	26	26	24	23	21
South	23	17	18	20	13	14	15	15
West	33	39	40	38	43	42	40	42
North	16	15	14	16	18	20	22	21

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

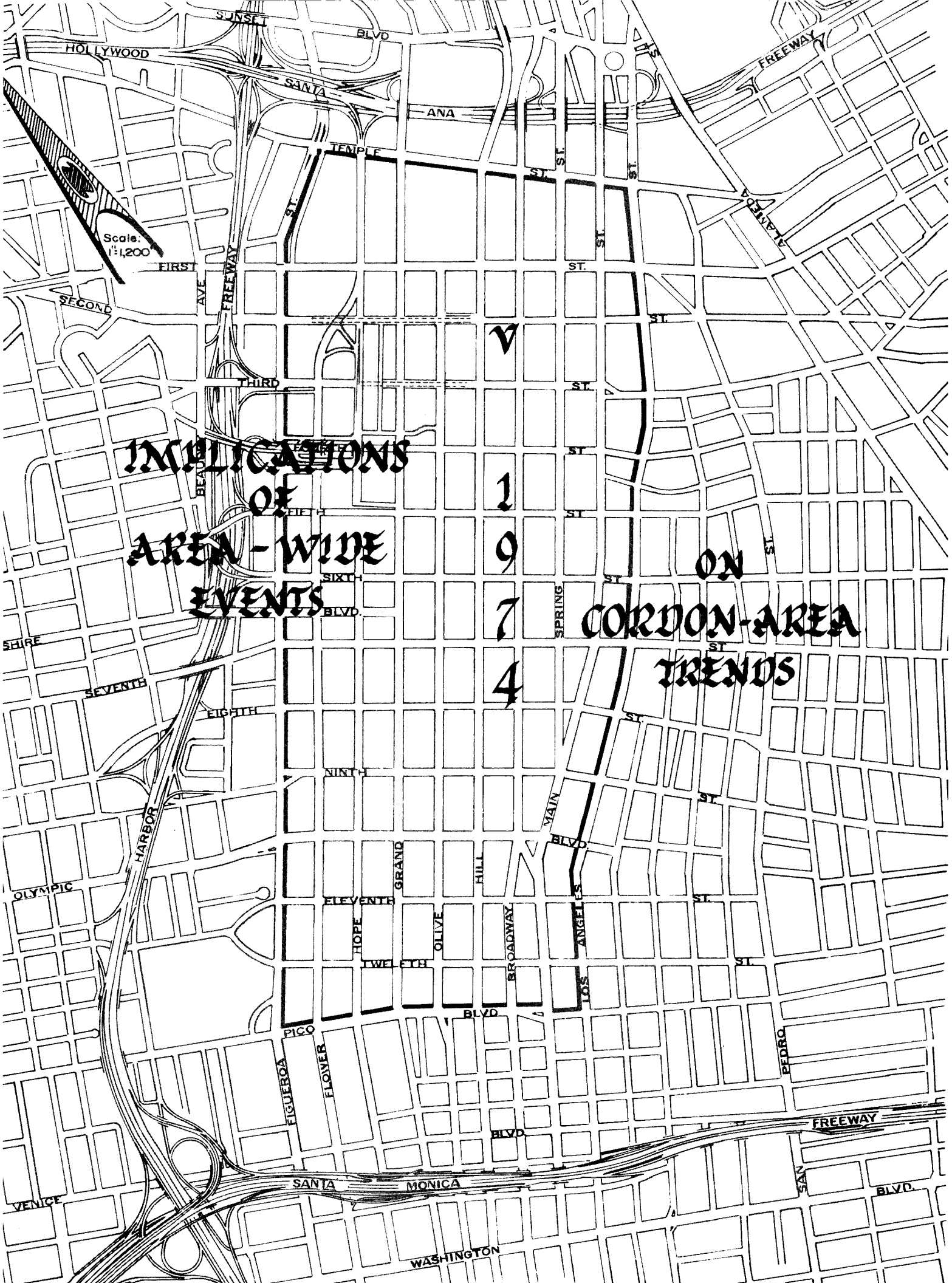
Sources:

[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.



IMPLICATIONS OF AREA-WIDE EVENTS

1974 ON CORDON-AREA TRENDS

Implications of Area-Wide Events in 1974 on Cordon Area Trends

There are numerous factors, not necessarily interrelated, which have an effect on the volume of cordon vehicle- and person-trips. The magnitude of cordon trips are affected, in varying degrees, by changes in the intensity of floor area use, by change in the type of land use development or by development of alternate, or bypass, routes. In addition to changes in activities within the cordon area, cordon area trips in 1974 compared to previous years were affected by the:

1. Energy crisis in regard to gasoline shortages which reached the most acute stage just two months prior but eased rapidly to nearly normal conditions at the time of the study, and

2. 25¢ Flat Fare Program which was put into operation on April 1, 1974, and represented a substantial reduction in fare structure for transit service in Los Angeles County.

Results of a study[1] conducted to determine the effects of the Flat Fare program indicated the following for the study period from April 1 through June 30, 1974:

- Ridership on the SCRTD bus lines during the last week increased by 18 percent over the ridership for the first week of the study period;

- Traffic volumes increased about 3 to 4 percent during the five-week period between data collection dates; and

- Average occupancy factor of passenger cars on freeways decreased from 1.30 to 1.26 persons per car while no significant difference was found to exist between the before and after condition for surface street occupancy ratios.

The conditions as noted above were not the primary findings of the study. These results are noted to indicate the conflicting patterns due to the simultaneous occurrence of the easing of the gasoline shortage and implementation of the Flat Fare program. As one of its primary findings, the study concluded that the implementation of the Flat Fare program resulted in a daily decrease of 530,000 vehicle-miles of travel. This, however, represented a reduction of only 0.5 percent of the total vehicle-miles of travel in Los Angeles County.

The conflicting patterns as noted above due to the energy crisis and Flat Fare program were also prevalent during the study period (May) for the 1974 Cordon Count. Continuing study of the cordon area relative to vehicular and person-trip volumes will be required in order to determine the extent or variation of emerging patterns and trends in travel characteristics for the Downtown area, in light of the changes in conditions apparent from the data available to date.

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[1] "An Evaluation of Three-Month Trial - 25¢ Flat Fare in Los Angeles County" Final Report, July 1974, A Multi-Agency Report