



*Transit Study · 1953 · Los Angeles Metropolitan Area*



*Express Busses on Freeways*

LOS ANGELES METROPOLITAN TRAFFIC ASSOCIATION



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A PROGRAM -- For  
EXPRESS BUSES ON FREEWAYS

Submitted to: BOARD OF DIRECTORS  
LOS ANGELES METROPOLITAN TRAFFIC ASSOCIATION

By: Stuart M. Bate, Chief Engineer  
Walter R. Lindersmith, Secretary-Manager  
Tenya Smalley, Assistant Secretary

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# LOS ANGELES METROPOLITAN TRAFFIC ASSOCIATION

610 SOUTH MAIN STREET, ROOM 987

LOS ANGELES 14, CALIFORNIA

TUCKER 7066

December 8, 1953

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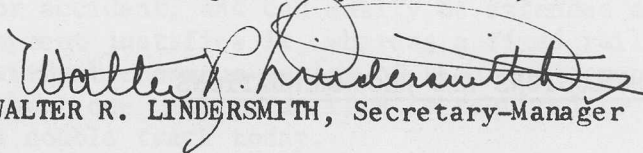
TO: BOARD OF DIRECTORS  
MEMBERS  
LOS ANGELES METROPOLITAN TRAFFIC ASSOCIATION

We humbly submit this report with the hope that it might be helpful in providing for this area a feasible system of MASS TRANSPORTATION within the economic means of every citizen.

To establish the objective of this report, these facts should be kept in mind:

- a. Mass Transportation in the Los Angeles Metropolitan Area is now accomplished by a system of street cars, trolley coaches and motor buses;
- b. Any improved system must accomplish a definite betterment in service and speed of units;
- c. The routes and operating units are governed primarily by that portion of the population which prefer public transportation to private automobiles;
- d. The pattern for Los Angeles cannot be based upon what has been done elsewhere, and
- e. Adequacy will be measured in terms of economics and reasonable efficiency, and what is most practical for this particular community.

Respectfully submitted,

  
WALTER R. LINDERSMITH, Secretary-Manager

FOR OVER THIRTY YEARS DEVOTED TO IMPROVEMENT OF TRAFFIC FACILITIES  
ORGANIZED 1922

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## S T A T E M E N T

MASS TRANSPORTATION and related traffic problems, by reason of the great influx of people combined with the tremendous increase in the use of the motor vehicle, is PROBLEM NO.1 in the Los Angeles Metropolitan Area.

Adequate mass transportation is no longer a convenience -- it is a necessity. The days of the local transportation monopoly are past. The trend definitely has been away from rail. The motor bus has come to the forefront as the most important mode of mass transportation today.

Motor buses have replaced rail lines in most of the large cities throughout the States. In California alone we have San Jose, Stockton, Sacramento, Fresno, San Diego, Bakersfield, Pasadena, Long Beach, Oakland, Berkeley and Alameda now serving the traveling public by motor bus.

Here in our own area, the Pacific Electric which at one time comprised the greatest interurban rail rapid transit in the world serving all points in Southern California now operate but 60 miles of double track (in passenger service) and shortly application will be filed to abandon this.

Flexibility of the motor coach has released the whole transportation pattern from the dominance of a single fixed means of service.

The bus has one very significant advantage over any fixed type of rail line, in that it can be operated through residential or industrial areas, pick up passengers close to homes or work, operate like the automobile after entering the freeway, then distribute passengers close to destination upon again leaving the freeway.

This type of operation gives express service to a far greater portion of our population than would be possible by use of fixed facilities in a low density population city like ours and at the same time retain some reasonable frequency of service for that proportion of passengers who travel short distances to points intermediate of the major commercial centers.

Too, the bus can be quickly detoured during any type of construction work, in case of a fire or accident, and can easily be extended at a minimum cost where development justifies it, whereas a fixed rail route cannot be changed without enormous outlay of time and money -- a capital investment of about one million dollars is required to construct five miles of a double track today.

The expressed desire of certain segments of the public for a rail transportation system without consideration of the heavy financial elements cannot be accepted as the governing influence when obvious results mean financial losses that would require a program of public subsidy by the taxpayer.

The freeway system planned and now being constructed for this area is superior or equal to any other in the country and has the very real advantage of connecting the major business and industrial centers in the whole metropolitan area.

The added investment required to develop rapid travel by buses on these freeways is but a fraction of what would be required for any other type of mass transportation facility, be it subway, rail or monorail.

**THEREFORE**, the freeways present the one possibility of providing feasible mass transportation in the foreseeable future at reasonable costs.

From the American Transit Association "TRANSIT FACT BOOK" we get some revealing figures:

In 1947 there were 13,759 miles of surface rail (single) track in the United States -- this dropped to 7309 miles by the end of 1952. A very appreciable drop.

In 1947 there were 95,300 motor bus miles of route -- round trip -- which increased to 99,600 in 1952.

In 1947 revenue passengers carried by the surface rail lines numbered 5,980,000,000 as against 8,625,000,000 carried by motor coach. By 1952 the surface rail passengers had dropped to 1,714,000,000 -- or a loss of 4,266,000,000 in 5 yrs. Motor bus passengers dropped to 7,125,000,000 -- or a loss of only 1,500,000,000 passengers for the same period.

**REVEALING!** When added to the fact that the population of the United States in 1940 was 131,669,275 as against 150,697,361 in 1950, and motor vehicle registration for 1947 was 37,360,463 as against 52,644,317 in 1950,

the facts and figures recited above are revealing, indeed!

They explain why we have traffic problems and why some mode of MASS TRANSPORTATION must be worked out before the saturation point of the PRIVATE AUTOMOBILE is reached.

A. MOTOR COACH

a. Existing Lines

The map on pages 2 and 3 is designed to show the routes of all coach lines -- motor and trolley -- as they now exist in Los Angeles Metropolitan Area, namely, the southern portion of Los Angeles County generally lying south of the Mountains.

Included are the lines of the two major companies operating -- the Los Angeles Transit Lines and the Pacific Electric Railway Company, and its successor the Metropolitan Coach Lines -- plus the lines of other companies and cities (municipally operated) as they have been reported by those companies and municipalities to the Association.

It will be observed that coverage of the Metropolitan Area is fairly complete and, taken in connection with the substantial number of street car lines, provides public transportation in almost any direction of travel.

Some 82% of the passengers live within 2 blocks of the line they board.

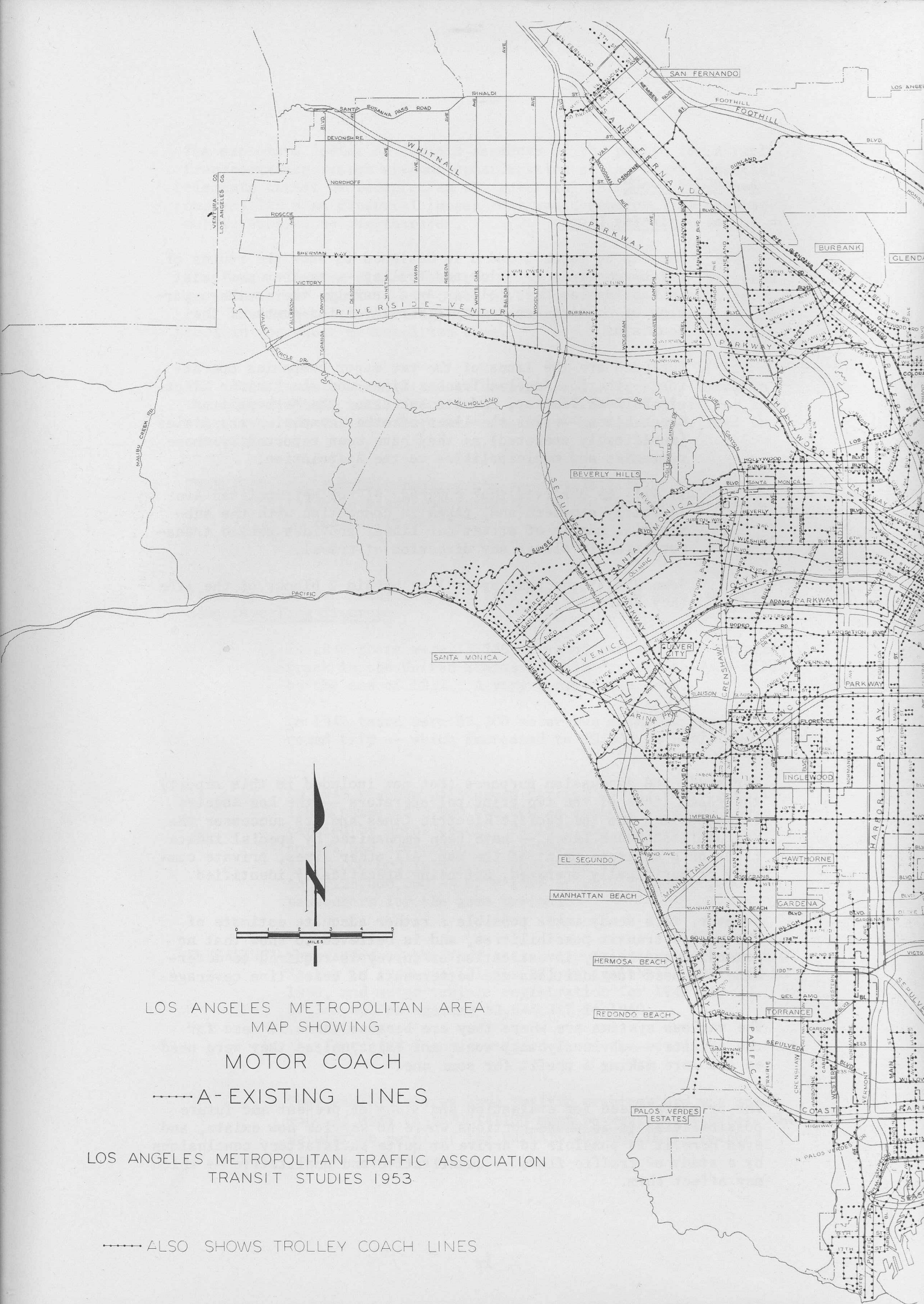
NOTE

For study and discussion purposes (but not included in this report) the coach lines of the two principal operators -- the Los Angeles Transit Lines and the Pacific Electric Lines and its successor the Metropolitan Coach Lines -- have been emphasized by special indications on a separate print of the Map, all other lines, private company or municipally operated, not being specifically identified.

However, this study makes possible a rather adequate estimate of the public transit possibilities, and is believed to show that no extensive and costly investigation or survey is required to determine the need for additions and betterments of coach line coverage.

The various systems are where they are because there is need for the service -- obviously they would not exist unless they were needed and were making a profit for some one.

The principal need for evaluation and study of present and future possibilities is in those portions where no service now exists, and even here it is possible to arrive at quite satisfactory conclusions by a study of traffic flows -- quantitative and qualitative -- which may affect them.



LOS ANGELES METROPOLITAN AREA  
MAP SHOWING

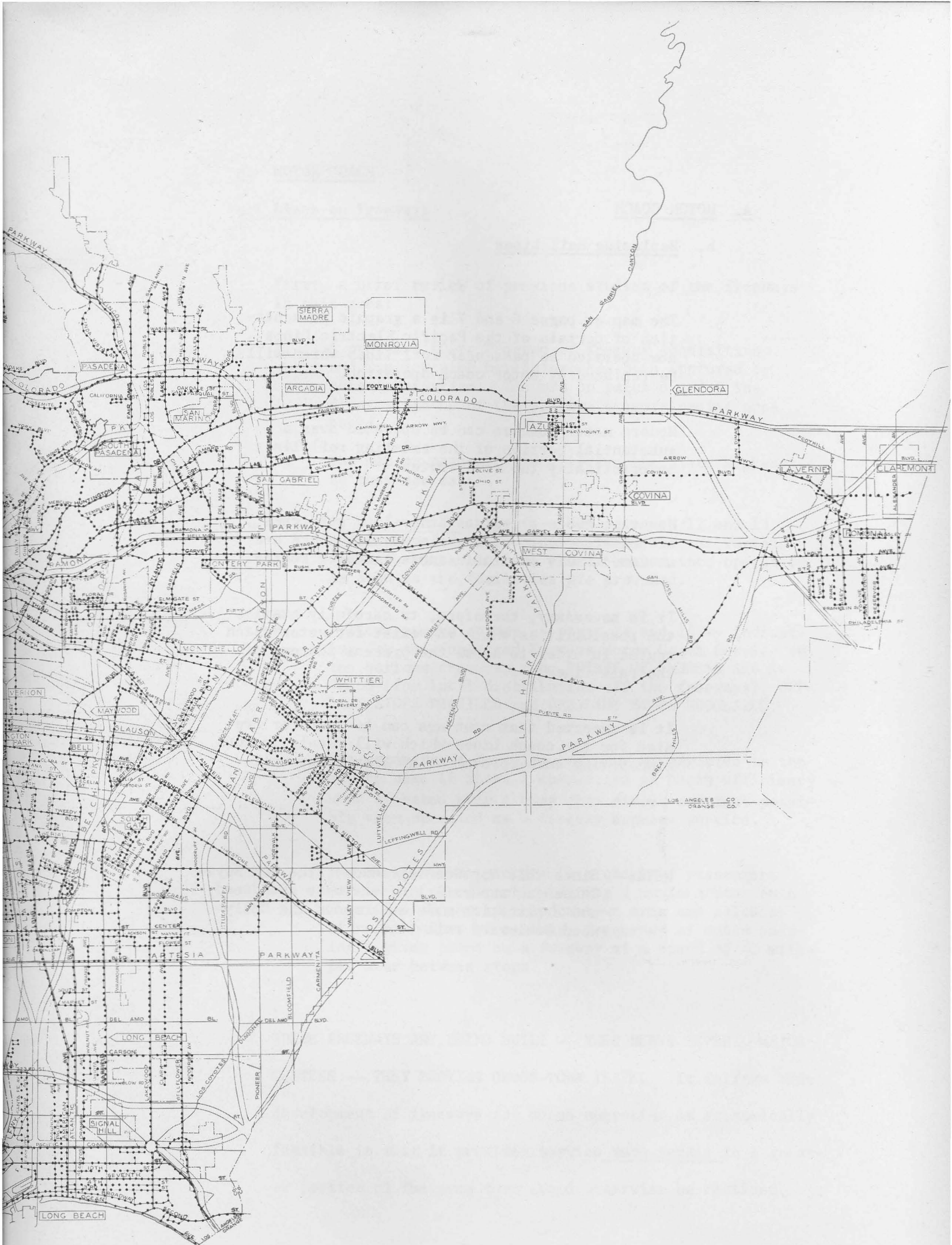
MOTOR COACH

-----A-EXISTING LINES

LOS ANGELES METROPOLITAN TRAFFIC ASSOCIATION  
TRANSIT STUDIES 1953

----- ALSO SHOWS TROLLEY COACH LINES





PEDRO BAY

A. MOTOR COACH

b. Replacing Rail Lines

The map on pages 6 and 7 is a graphic presentation of certain of the Pacific Electric Lines now operated as passenger rail lines which will be replaced by motor coach operation.

Modern motor coaches can be operated over a substantial portion of the existing rail lines on practically the same routes.

However, there are also rather long stretches of private rights-of-way along which there are no immediately available surface street routes.

It is necessary, therefore, to carefully examine the possibilities which may exist for motor coach routes in order to serve the present patrons of the rail lines.

It is expected that routings can be found or created for the coach lines which will result in much time-saving and improvement of service as well.

NOTE: Since this map was reproduced, the Van Nuys-Cahuenga Pass rail line has been abandoned, and application made to abandon the Hollywood Boulevard rail line.

A. MOTOR COACH

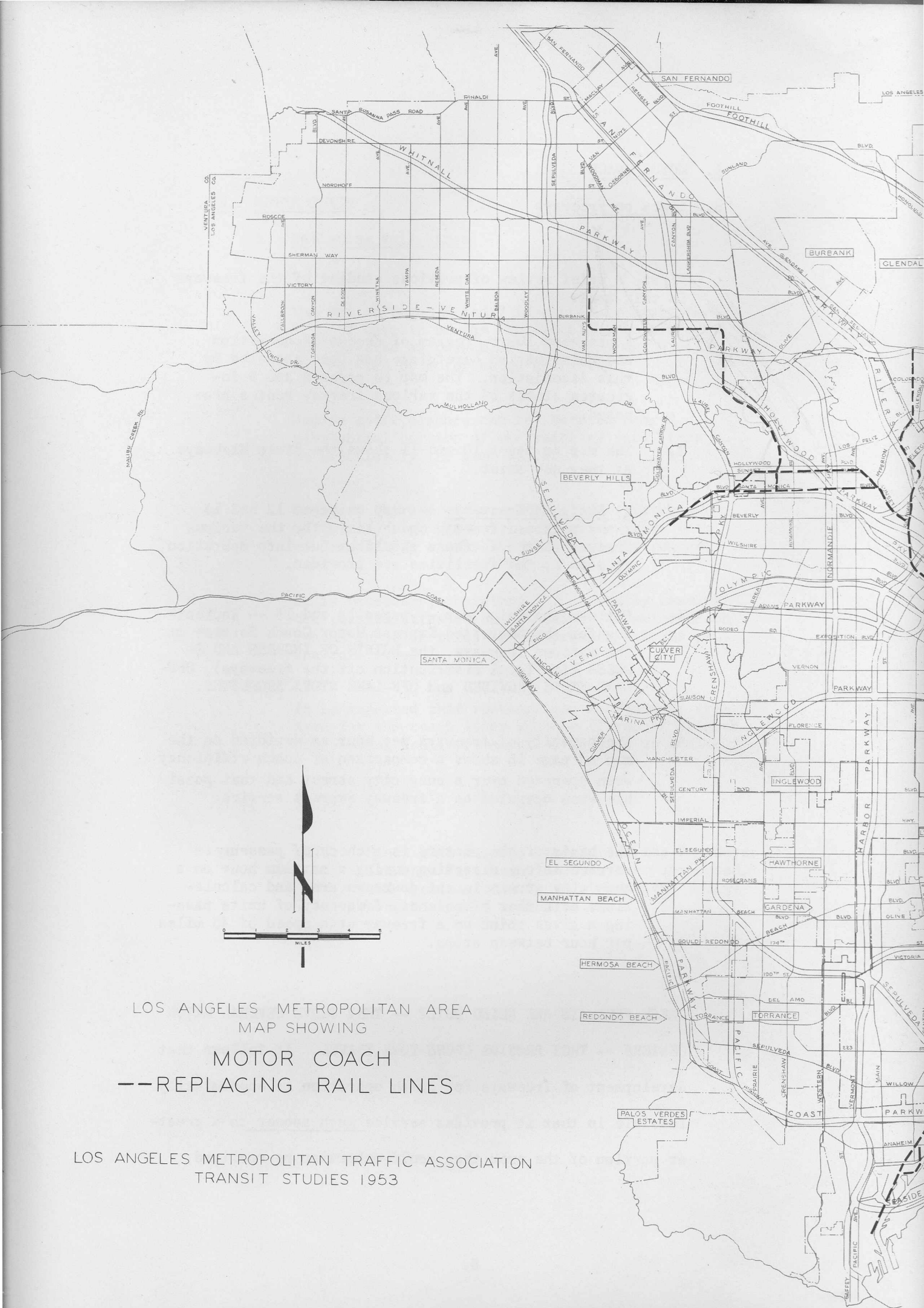
c. Lines on Freeways

First, a brief review of previous studies of the freeways in this area:

1. A proposed 10-yr Program of Freeway Acquisition and Construction heretofore has been approved by this Association. The map on pages 8 and 9 indicates status of the various freeway routes proposed.
2. The map on pages 10 and 11 shows the State Highways as they now exist.
3. c. Lines on Freeways -- Map on pages 12 and 13 shows proposed freeway coach lines for the various freeway routes -- these should be put into operation as soon as the facilities are provided.
4. Follows companion map -- pages 14 and 15 -- indicating for the Suggested Express Motor Coach Service on the various freeways, the POINTS OF INGRESS AND EGRESS (for local distribution off the freeways), OFF-LANE STOPS PROVIDED and OFF-LANE STOPS SUGGESTED.
5. The capacity of freeways per hour as depicted on the map on page 16 shows a comparison of coach efficiency when operated over a busy city street and that possible when operated as a freeway express service.

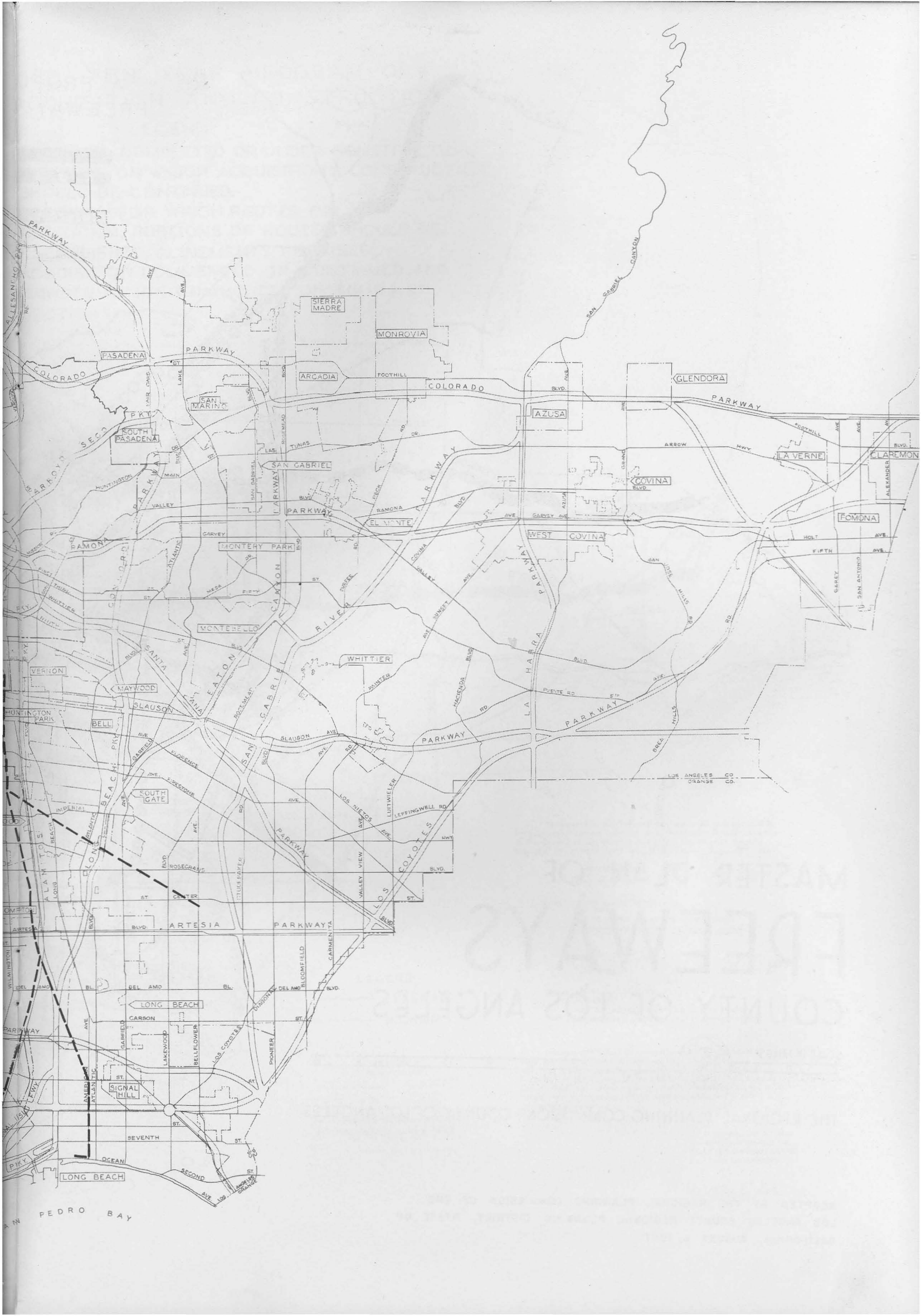
The basis of the picture is a check of passengers carried in one direction during a maximum hour on a busy city street in the downtown area and calculations of number of coaches, frequency of units passing a given point on a freeway at a speed of 40 miles per hour between stops.

THESE FREEWAYS ARE BEING BUILT -- THEY SERVE SEVERAL MAJOR CENTERS -- THEY PROVIDE CROSS-TOWN TRAVEL. It follows that development of freeways for coach operation is economically feasible in that it provides service much sooner to a greater portion of the area than could otherwise be realized.



LOS ANGELES METROPOLITAN AREA  
 MAP SHOWING  
 MOTOR COACH  
 ---REPLACING RAIL LINES

LOS ANGELES METROPOLITAN TRAFFIC ASSOCIATION  
 TRANSIT STUDIES 1953



MASTER OF  
FREWAYS  
COUNTY OF LOS ANGELES

PEDRO BAY

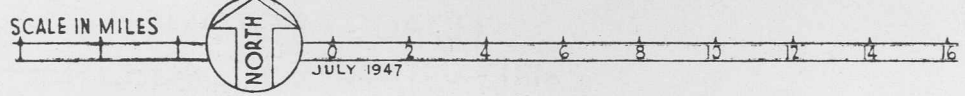
A PRO  
FREEWAY



P A C I F I C

# MASTER PLAN OF FREEWAYS

## COUNTY OF LOS ANGELES



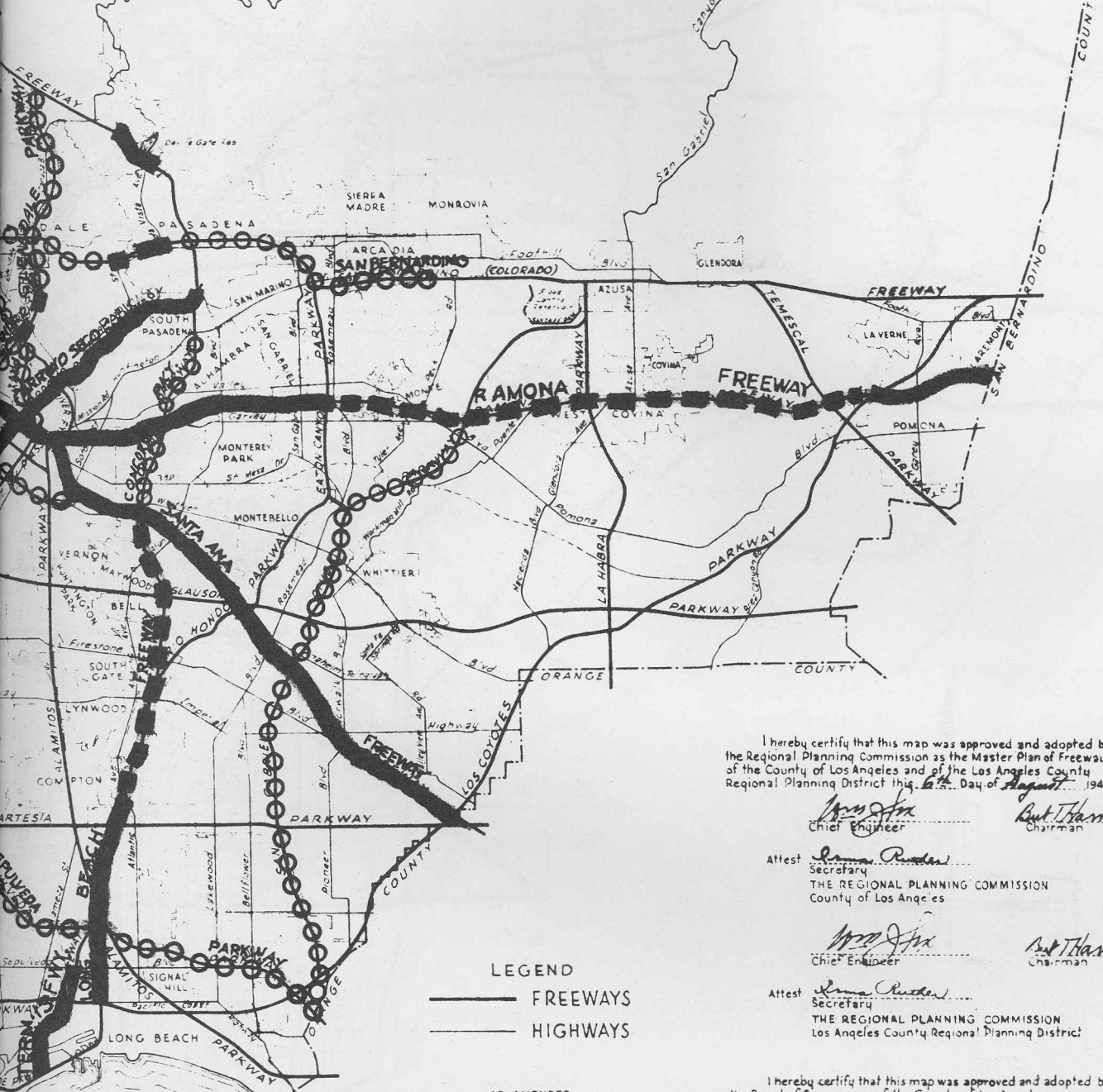
THE REGIONAL PLANNING COMMISSION - COUNTY OF LOS ANGELES

ADOPTED BY THE REGIONAL PLANNING COMMISSION OF THE  
LOS ANGELES COUNTY REGIONAL PLANNING DISTRICT, STATE OF  
CALIFORNIA, AUGUST 6, 1947

# SEVEN YEAR PROGRAM OF ACQUISITION AND CONSTRUCTION

## LEGEND

- FREeways COMPLETED OR UNDER CONSTRUCTION.
- FREeways ON WHICH ACQUISITION & CONSTRUCTION SHOULD BE CONTINUED.
- FREeways FOR WHICH ROUTES OR ADDITIONAL PORTIONS OF ROUTES SHOULD BE ESTABLISHED, ALINEMENTS PRECISED, ACQUISITION COMMENCED OR CONTINUED AND CONSTRUCTION COMMENCED ON SOME KEY SECTIONS.



LEGEND  
 — FREeways  
 — HIGHWAYS

AS AMENDED  
 By Resolutions of  
 The Regional Planning Commission of the District of Los Angeles  
 The Board of Supervisors of the County of Los Angeles  
 Dec 29, 1950 Dec 29, 1950 February 20, 1951  
 Feb 11, 1953 Feb 11, 1953 June 4, 1953

I hereby certify that this map was approved and adopted by the Regional Planning Commission as the Master Plan of Freeways of the County of Los Angeles and of the Los Angeles County Regional Planning District this 6th Day of August, 1947

*W. J. Fox*  
 Chief Engineer  
*Paul Thayer*  
 Chairman

Attest *Erma Rucker*  
 Secretary  
 THE REGIONAL PLANNING COMMISSION  
 County of Los Angeles

*W. J. Fox*  
 Chief Engineer  
*Paul Thayer*  
 Chairman

Attest *Erma Rucker*  
 Secretary  
 THE REGIONAL PLANNING COMMISSION  
 Los Angeles County Regional Planning District

I hereby certify that this map was approved and adopted by the Board of Supervisors of the County of Los Angeles this 11th Day of February, 1953 as the Master Plan of Freeways of the County of Los Angeles and of the Los Angeles County Regional Planning District, and it is hereby declared to be established to conserve and promote the public health, safety and general welfare.

J. F. Moroney, County Clerk  
 and ex-officio Clerk of the  
 Board of Supervisors of the  
 County of Los Angeles

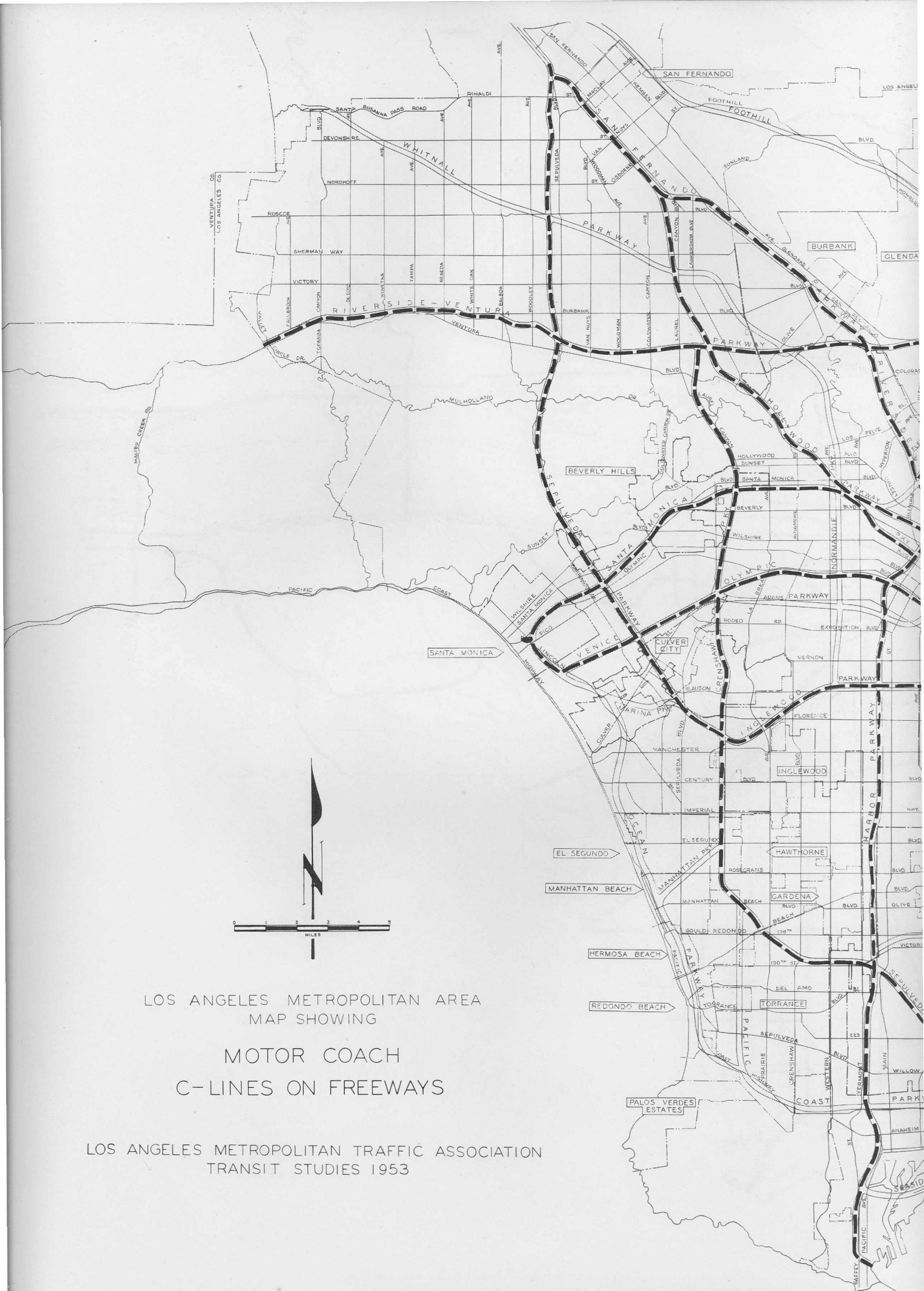
By *Ray E. Lee*  
 Deputy







PEDRO BAY

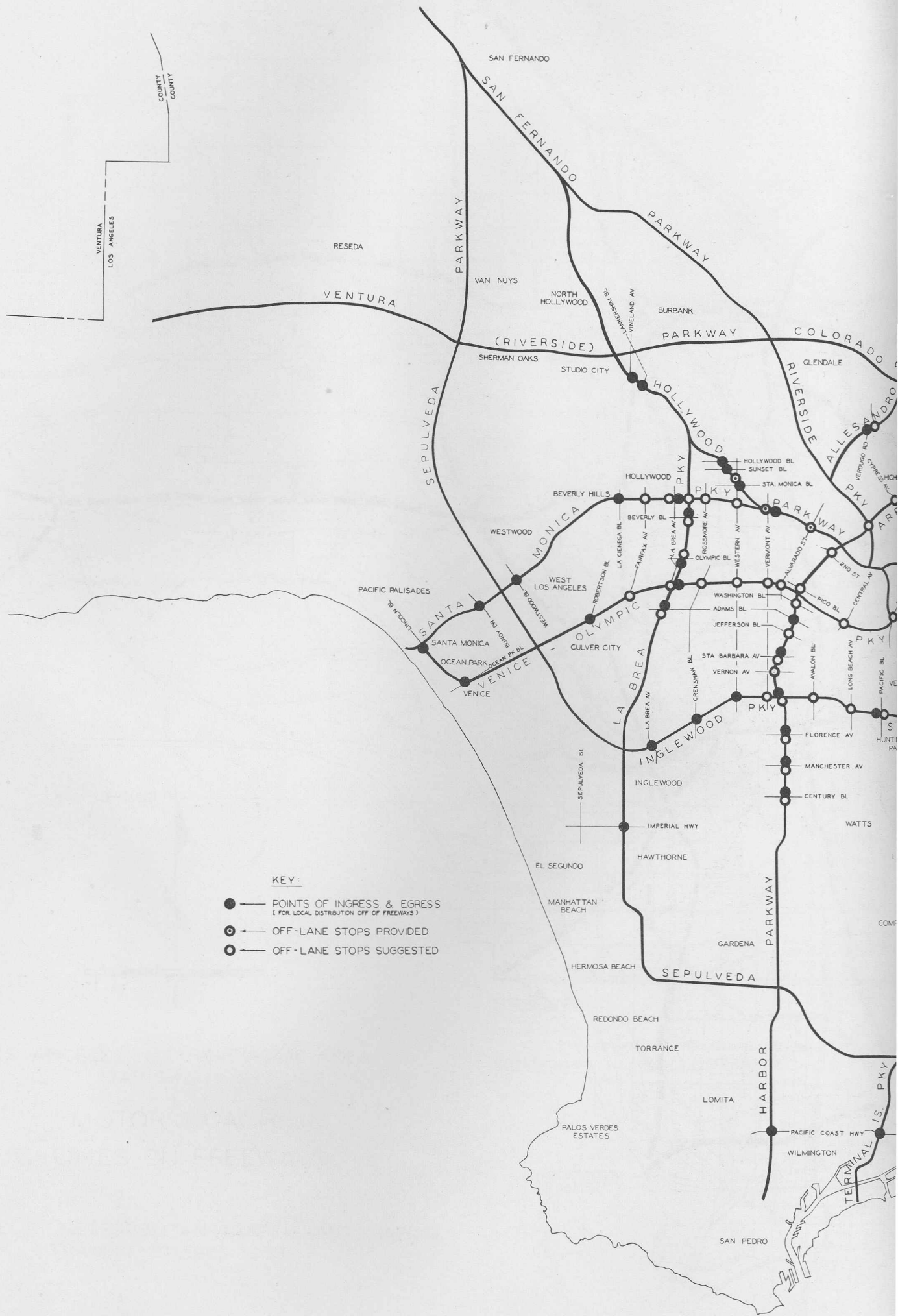


LOS ANGELES METROPOLITAN AREA  
MAP SHOWING

MOTOR COACH  
C-LINES ON FREEWAYS

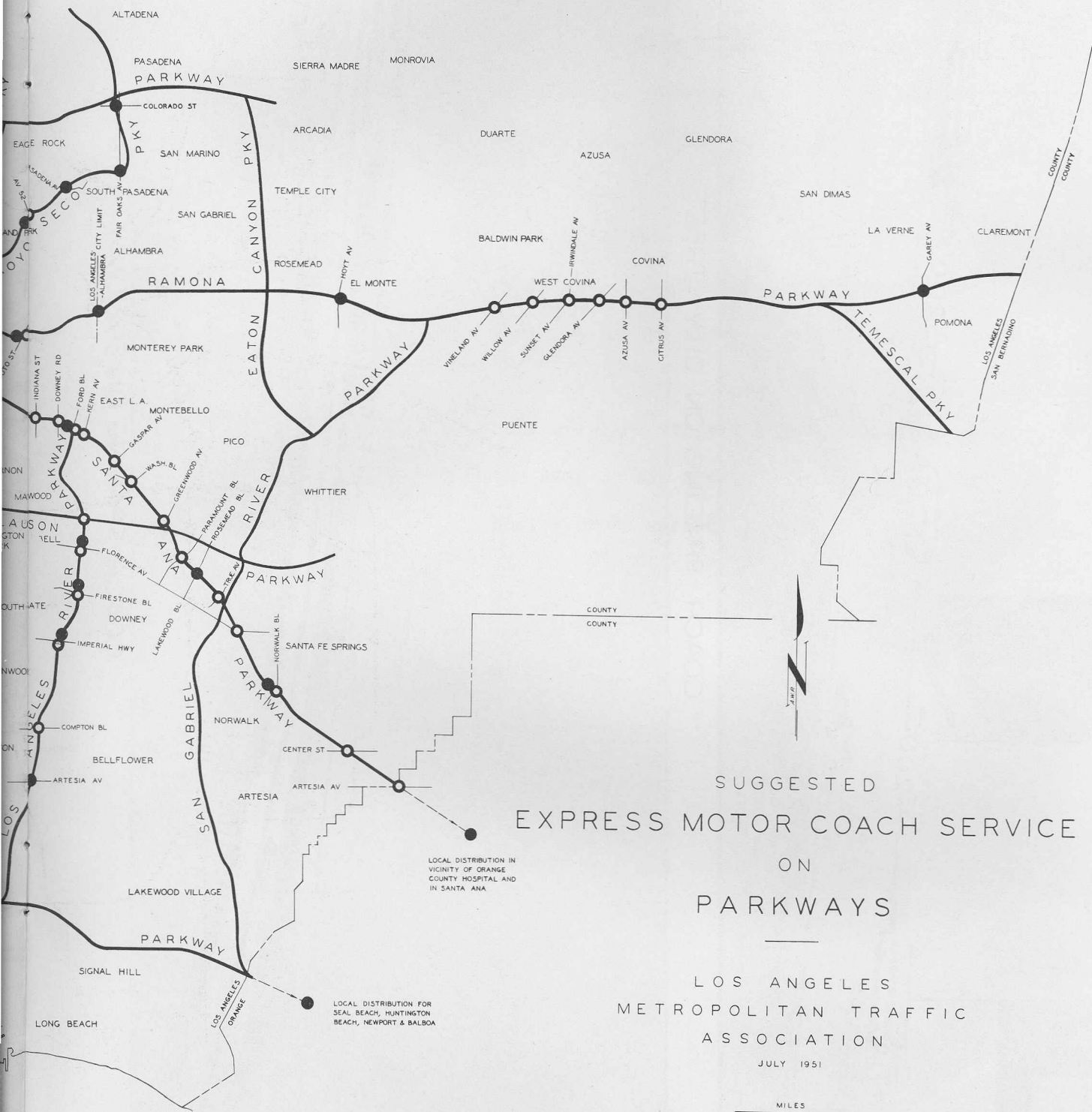
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TRANSIT STUDIES 1953





**KEY:**

- — POINTS OF INGRESS & EGRESS  
(FOR LOCAL DISTRIBUTION OFF OF FREEWAYS)
- — OFF-LANE STOPS PROVIDED
- — OFF-LANE STOPS SUGGESTED



SUGGESTED  
 EXPRESS MOTOR COACH SERVICE  
 ON  
 PARKWAYS

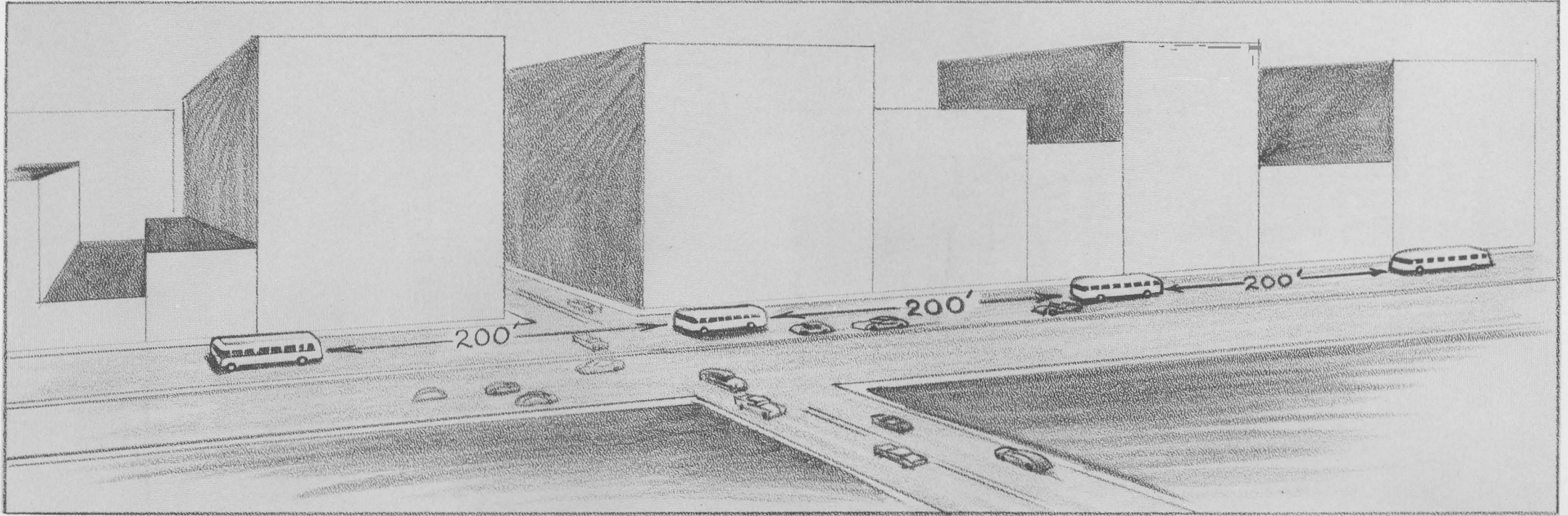
LOS ANGELES  
 METROPOLITAN TRAFFIC  
 ASSOCIATION

JULY 1951



LOCAL DISTRIBUTION IN VICINITY OF ORANGE COUNTY HOSPITAL AND IN SANTA ANA

LOCAL DISTRIBUTION FOR SEAL BEACH, HUNTINGTON BEACH, NEWPORT & BALBOA



COACH SPACING ON CITY STREET



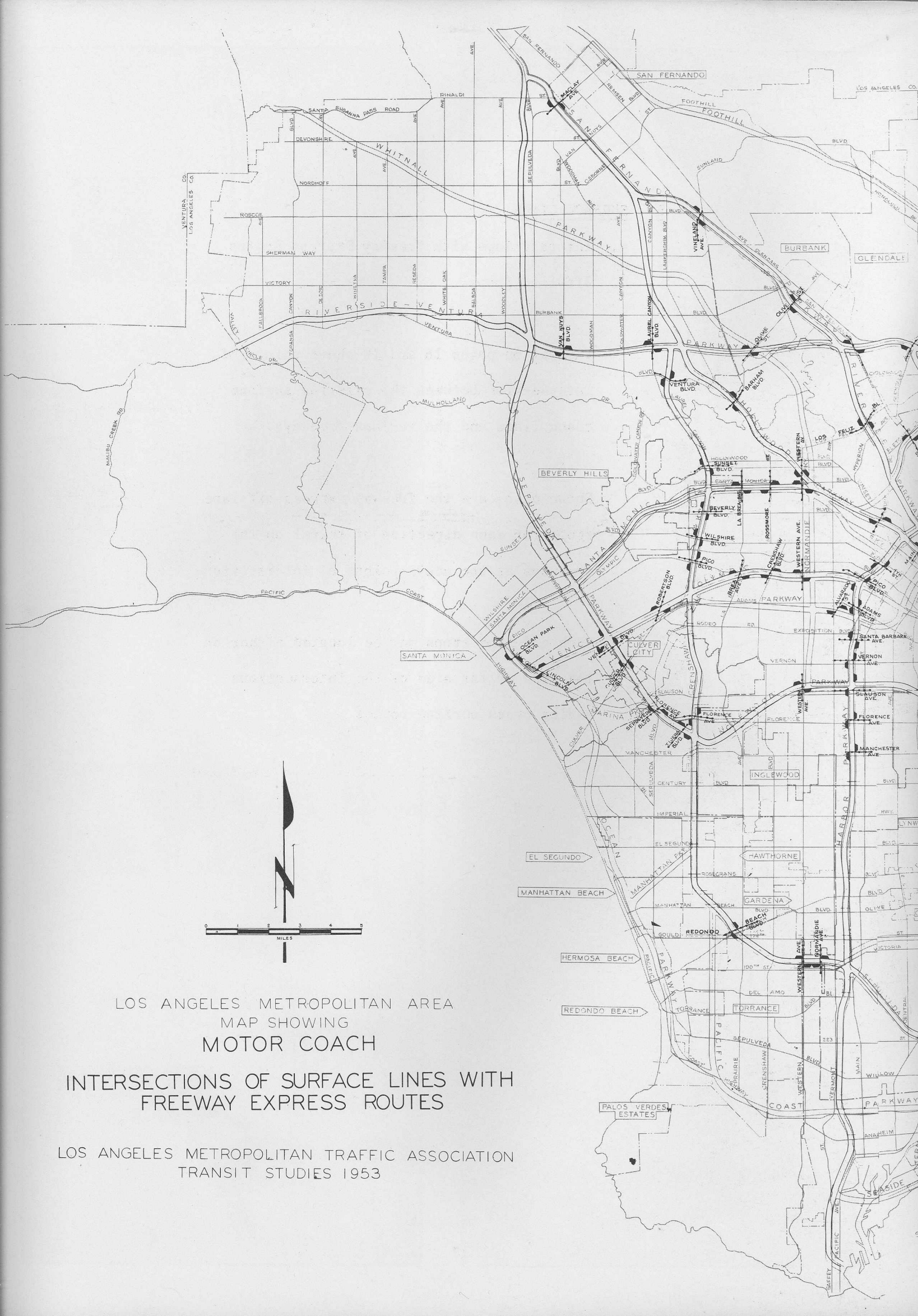
B. SURFACE LINES

- a. Intersections with Freeway Express Routes
- b. Off-lane Stops

The map on pages 18 and 19 shows points of intersection between the existing surface coach lines and the various freeways.

Shown also, are the freeway express off-lane stops for each direction of travel on the freeways at the above points of intersection.

Such off-lane stops may be located either on the near or far side of the intersections having cross surface routes.

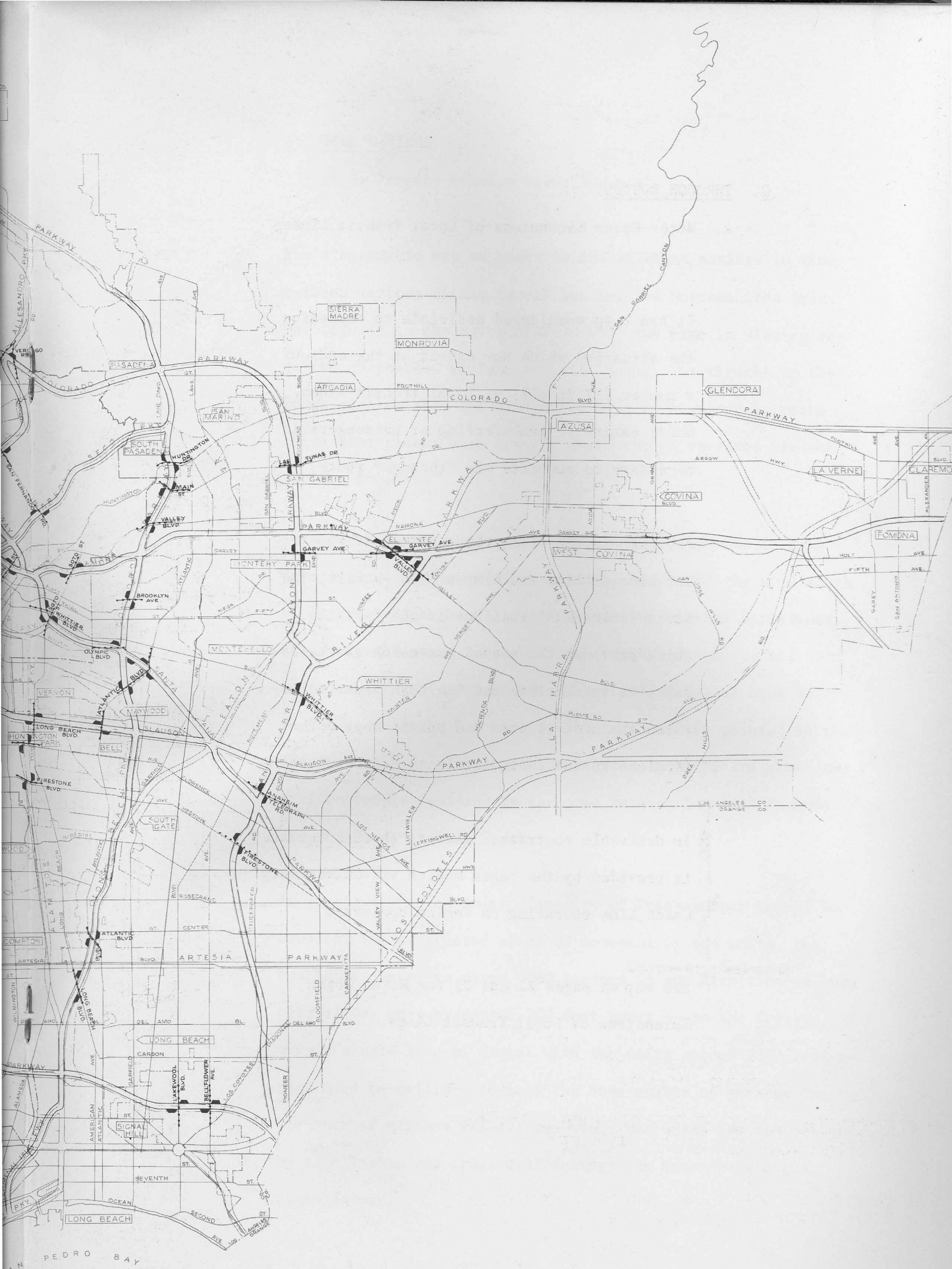


LOS ANGELES METROPOLITAN AREA  
 MAP SHOWING  
 MOTOR COACH

INTERSECTIONS OF SURFACE LINES WITH  
 FREEWAY EXPRESS ROUTES

LOS ANGELES METROPOLITAN TRAFFIC ASSOCIATION  
 TRANSIT STUDIES 1953





SAN PEDRO BAY

C. THROUGH ROUTES

a. Motor Coach Extensions of Local Transit Lines

It has been considered desirable to emphasize the situation which now exists at the ends of a number (17 in all) of local transit lines where extensive transferring of passengers is necessary to complete the "through" route.

For example, the westerly terminus of the "P" Car Line at Pico and Rimpau Blvd -- here, the Santa Monica Municipal Bus is the facility which provides the needed extension of the local line to complete the "through" service between the central area and points beyond the terminus to and including Santa Monica.

In desirable contrast, direct "through service" is provided by the Santa Monica via Culver City Coach Line operating on Venice Boulevard.

See map on pages 22 and 23 for Motor Coach Extensions of Local Transit Lines.

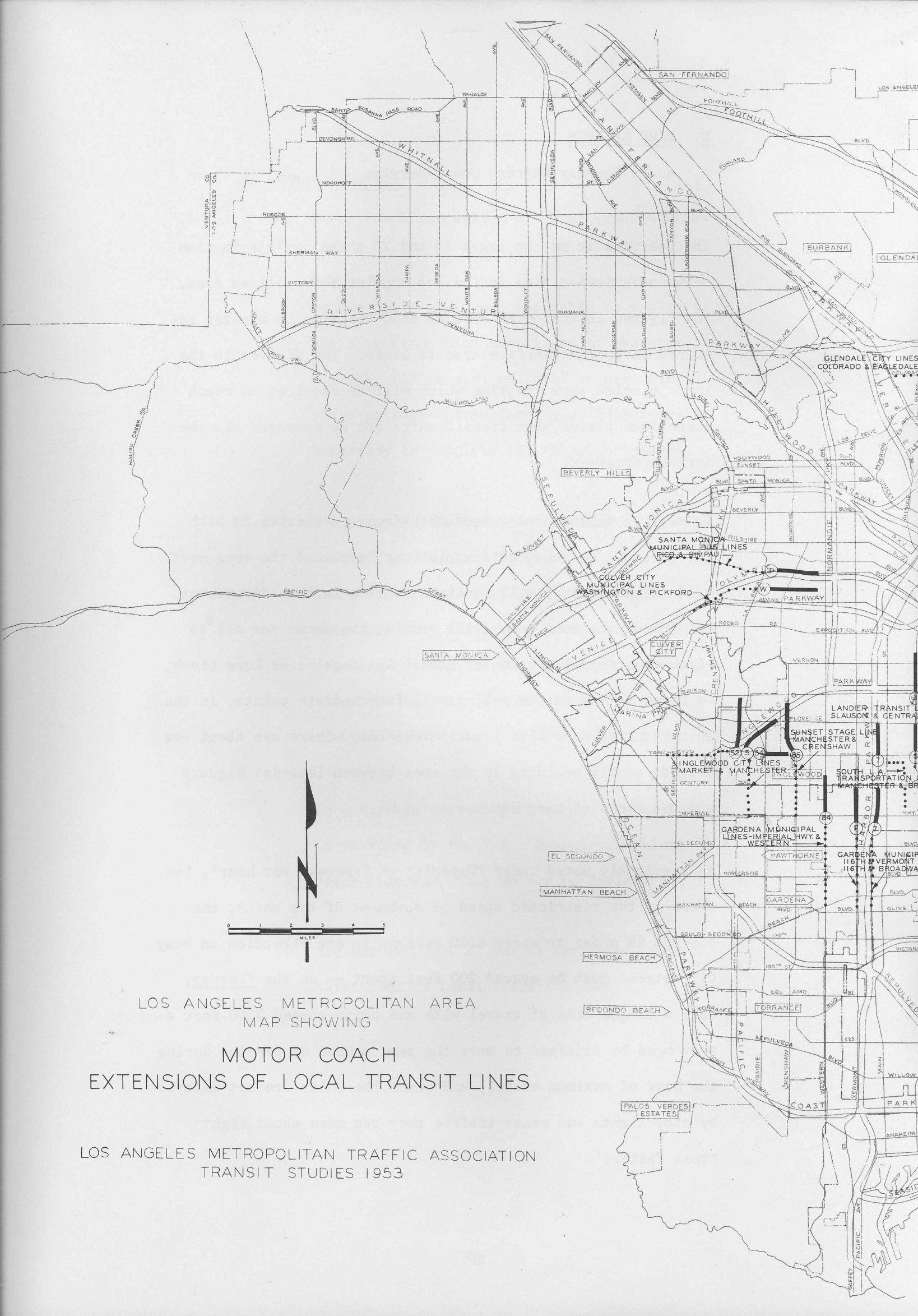
D. TIME SAVINGS

a. By Freeway Express Coach Service

The diagramatic map on pages 24 and 25 shows savings in time between various cities in the Los Angeles Metropolitan Area. The figures in the outer circles show the time in minutes required on present surface transit lines. The figures in the inner circles show the time which will be required to reach these same places when transit units can be operated via the various freeways.

It must be clearly understood that freeways operate in both directions. Persons residing in Long Beach and the area south of Imperial Highway will continue to ride in both directions. The freeway express coach will provide the means for all to reach the central section of either Los Angeles or Long Beach, as the case may be, as well as all intermediate points, in the shortest time on public transit vehicles. There are about one million people residing in the area between Imperial Highway and the Ocean at Long Beach.

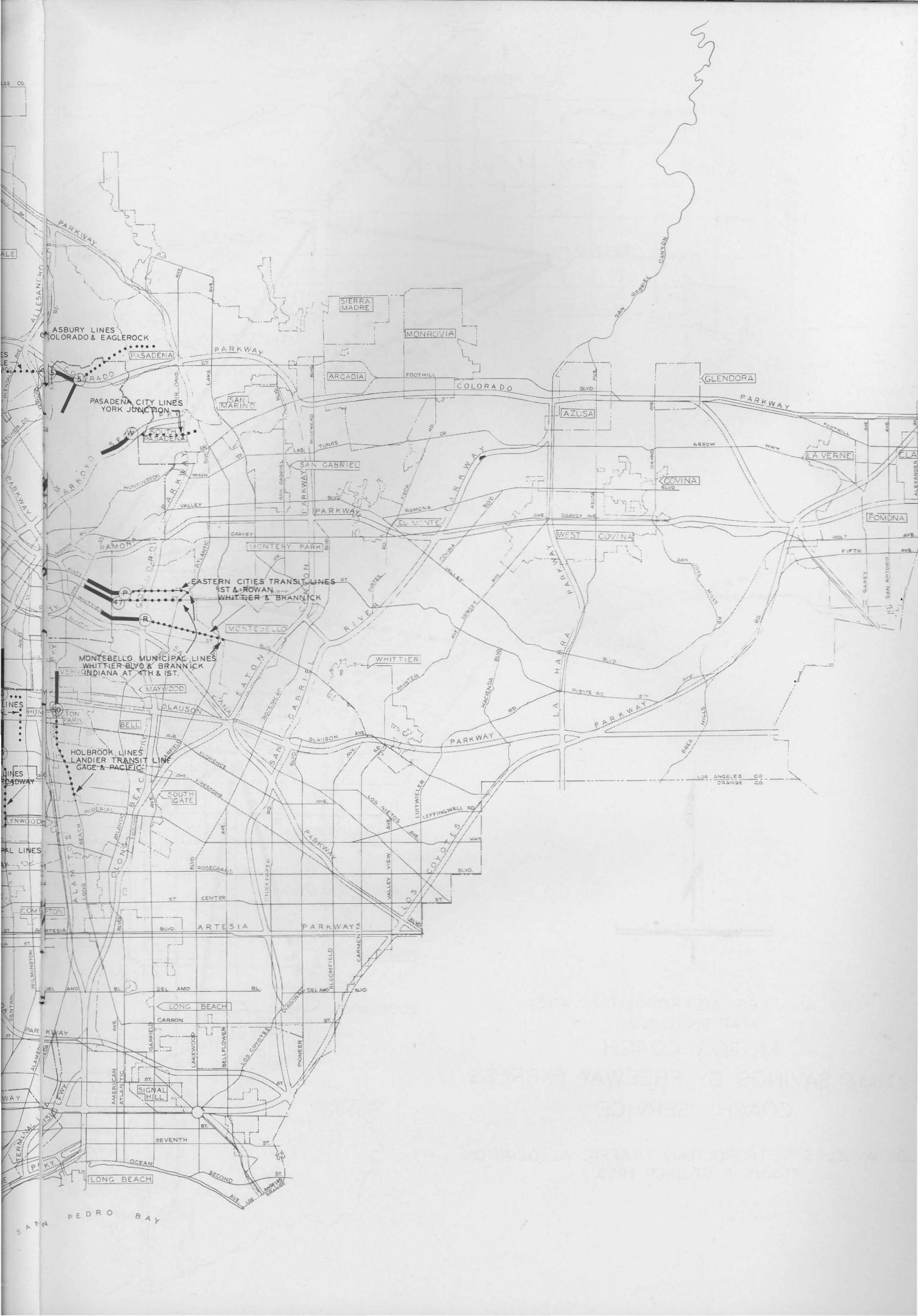
As previously noted under "Capacity of Freeways per hour", because of the restricted speed of movement of the units, the coaches in order to carry 6000 persons in one direction on busy city street must be spaced 200 feet apart -- on the freeway, only a single lane of travel with the units spaced 2300 feet apart need be utilized to move the same number of persons during the hour of maximum travel, and since the units are not delayed by stop lights and cross traffic they can move about eight times faster.



LOS ANGELES METROPOLITAN AREA  
MAP SHOWING

MOTOR COACH  
EXTENSIONS OF LOCAL TRANSIT LINES

LOS ANGELES METROPOLITAN TRAFFIC ASSOCIATION  
TRANSIT STUDIES 1953



ASBURY LINES  
COLORADO & EAGLE ROCK

PASADENA CITY LINES  
YORK JUNCTION

EASTERN CITIES TRANSIT LINES  
1ST & ROWAN  
WHITTIER & BRANNICK

MONTEBELLO MUNICIPAL LINES  
WHITTIER BLVD & BRANNICK  
VERNONDIANA AT 4TH & 1ST.

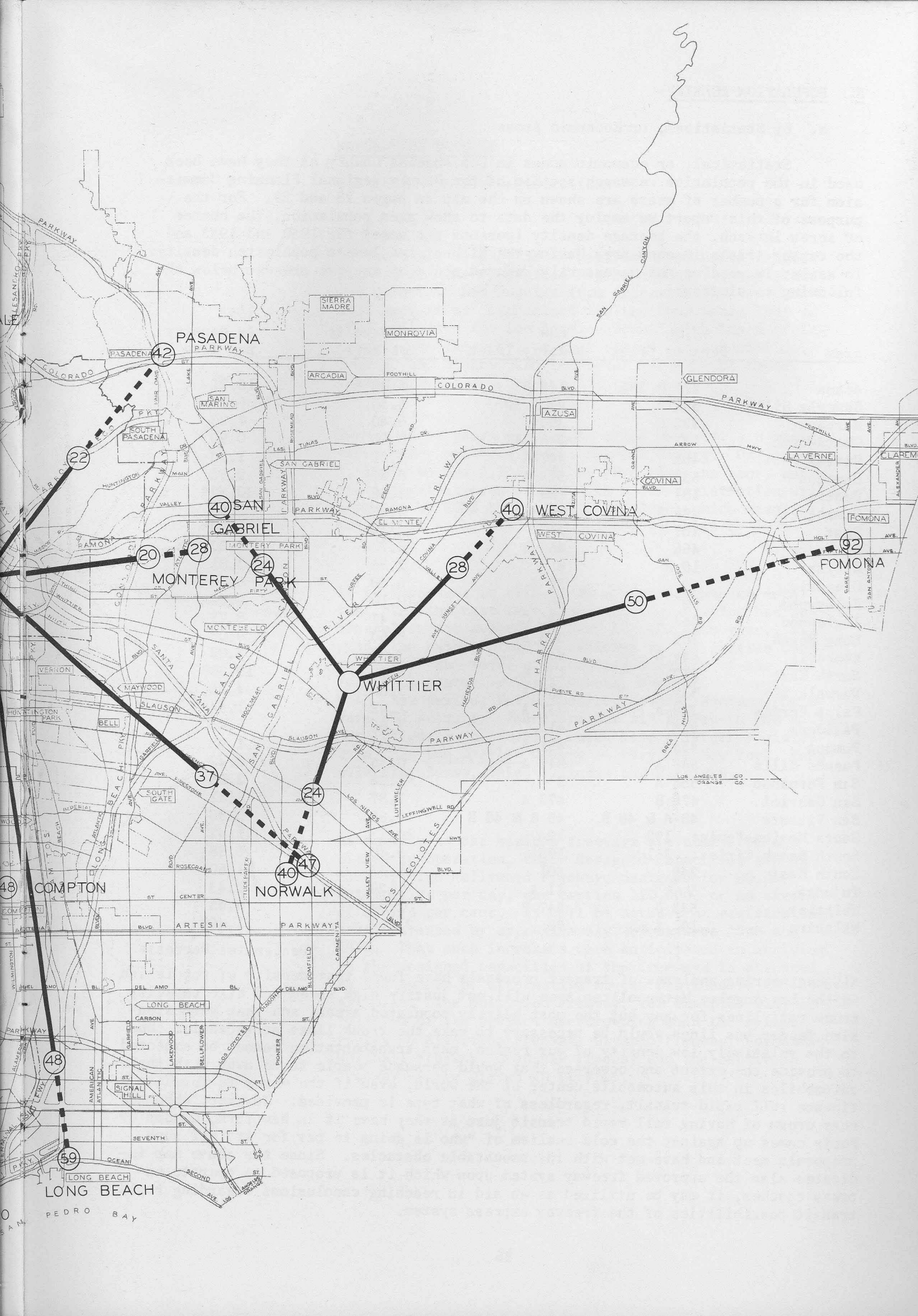
HOLBROOK LINES  
LANDIER TRANSIT LINE  
GAGE & PACIFIC

SAN PEDRO BAY



LOS ANGELES METROPOLITAN AREA  
 MAP SHOWING  
 MOTOR COACH  
 TIME SAVINGS BY FREEWAY EXPRESS  
 COACH SERVICE

LOS ANGELES METROPOLITAN TRAFFIC ASSOCIATION  
 TRANSIT STUDIES 1953



PASADENA

MONTEREY PARK

WHITTIER

WEST COVINA

FOMONA

COMPTON

NORWALK

LONG BEACH

PEDRO BAY

42

22

20

28

24

28

40

50

92

37

24

40

47

48

59

PASADENA PARKWAY

SOUTH PASADENA

SAN GABRIEL

MONTEREY PARK

MONTEBELLO

MAYWOOD

SLAUSON

SOUTH GATE

ARTESIA

LONG BEACH

CARBON

SIGNAL HILL

SEVENTH

OCEAN

SECOND

SIERRA MADRE

MONROVIA

ARCADIA

FOOTHILL

COLORADO

AZUSA

GLENDORA

LA VERNE

CLAREMONT

FOMONA

WEST COVINA

WEST COVINA

HIGHT

SAN ANTONIO

LA HABRA

LA HABRA

LA HABRA

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## E. POPULATION DENSITY

### a. By Statistical, or Economic Areas

Statistical, or economic areas in Los Angeles County as they have been used in the population research section of the County Regional Planning Commission for a number of years are shown on the map on pages 28 and 29. For the purpose of this report we employ the data to show area population, the number of acres in each, the average density (persons per acre) for 1950 and 1953, and the census tracts in each area having the highest and lowest population density. To assist in reading the necessarily reduced scale of map, we present below the following tabulation:

Area	High Density Tract	Low Density Tract	1950 Av. Density per acre	1953 Av. Density per acre
Adams	212 & 236	145 B	15.04	15.21
Beverly Hills	382 B	49 & 50	5.50	6.04
Burbank	392 E	393	6.40	7.25
Chatsworth	14	2	0.80	0.90
Citrus	461	447 A	1.21	1.83
Compton	535 C	529 A	8.60	9.55
Central	181	184	33.06	30.52*
Dominguez	298 B	335 B	3.45	3.69
East	187	119	17.10	16.99*
El Monte	466	465 B	4.70	5.30
Encino	18 B	8	2.80	3.81
Glendale	59	31 A	6.28	6.60
Hollywood	92	30	10.10	9.70*
Inglewood	353 D	340 C	7.47	8.79
Long Beach	308	303 A	7.60	9.03
Monrovia	444 B	446	3.30	4.04
North East	117	137 B	13.50	13.39*
Norwalk	537 B	538 A	3.03	4.56
Palos Verdes	336 A	337 A	1.42	1.54
Pasadena	425	415	5.88	6.45
Pomona	468	451 A	1.65	1.98
Puente Hills	548 A	549 A	0.35	0.42
San Fernando	556 A	3	1.74	2.28
San Gabriel	476 B	472 A	7.87	8.81
San Vicente	48 A & 48 B	48 A & 48 B	0.60	0.86
Santa Monica-Venice	192	194	10.13	11.42
South Beach Cities	361	195	5.40	6.88
South East	248	501	11.33	11.60
Tujunga	5	11 A	1.29	1.43
Whittier	543 D	547 B	2.02	3.45
Wilshire	101 A	98	21.50	21.40*

\*Designates Decrease

All engineering analyses of transit proposals have found that density of population in the Los Angeles Metropolitan Area will not justify high speed and high capacity trunk rail lines for any but the most heavily populated areas, and that very extensive feeder bus lines would be necessary to make the trunk lines serviceable. Due to the relatively low density of our region, mass transportation cannot be expected to provide the extent and coverage that would persuade people to do away with their automobiles in this automobile center of the world, even if the money is found to finance rail rapid transit, regardless of what type is provided. However, when the rosy dream of having rail rapid transit just as they have it in New York, London or Paris comes up against the cold realism of "who is going to pay for it" all such proposals meet and have met with insurmountable obstacles. Since the above map indicates also the approved freeway system upon which it is proposed to operate express coaches, it may be utilized as an aid in reaching conclusions regarding rapid transit possibilities of the freeway express system.



E. POPULATION DENSITY

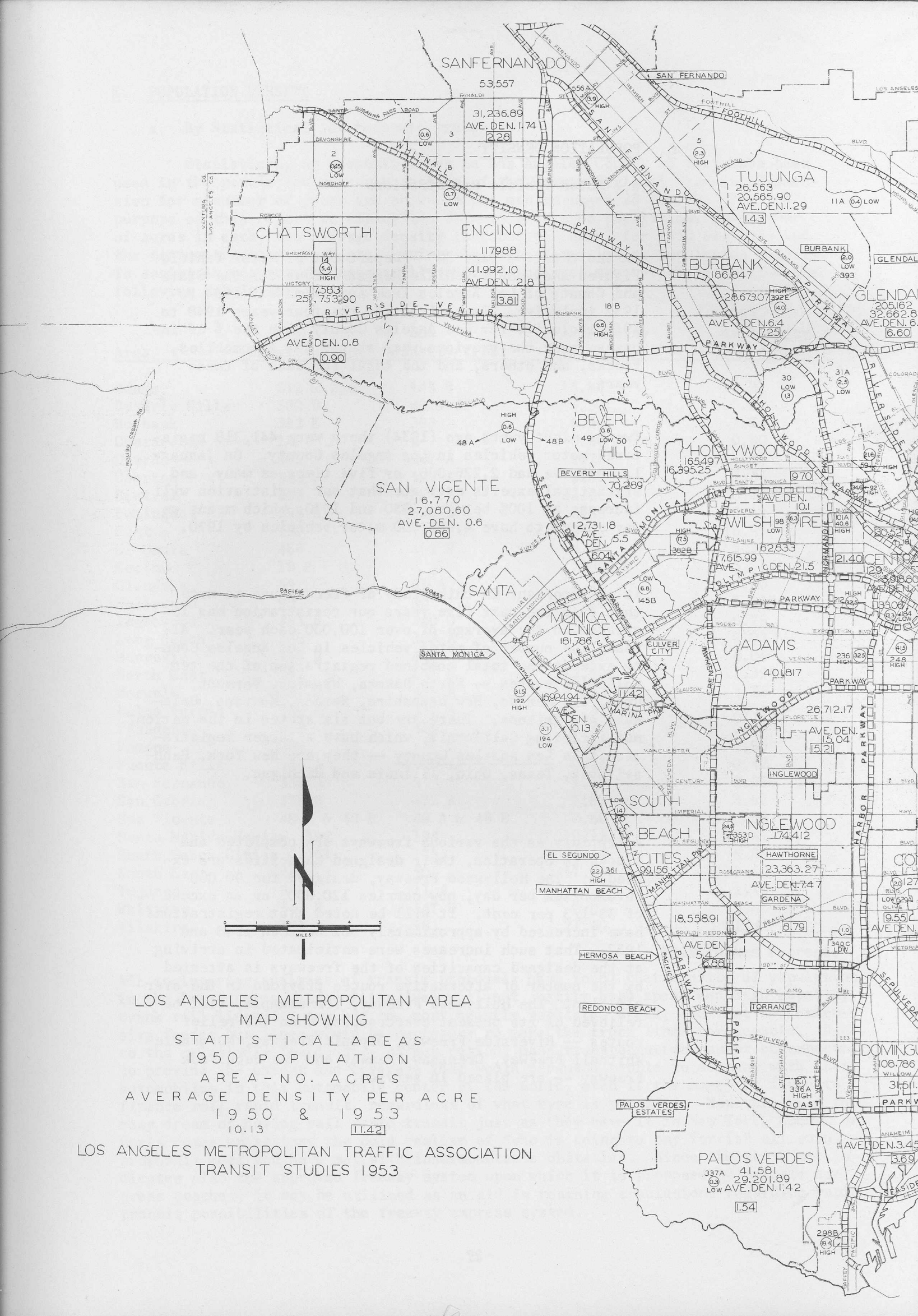
b. Motor Vehicle Registrations

On the chart -- page 30 -- Department of Motor Vehicle Figures show Motor Vehicle Registrations for the State and County of Los Angeles from approximately 1934 to 1952 inclusive. Emphasized are the four years 1948 to 1952 inclusive for Los Angeles County with the % of increase over the previous year stated for automobiles, trucks, and others, and the total for each of these years.

Twenty-eight years ago (1934) there were 441,318 registered motor vehicles in Los Angeles County. On January 1, 1953, we had 2,226,000, or five times as many, and statistical experts estimate that our registration will increase by 100% between 1950 and 1970, which means we may expect to have 4,000,000 motor vehicles by 1970.

It is important in this study of freeway use to note that over the past five years our registration has increased on the average of over 100,000 each year. Already the number of motor vehicles in Los Angeles County exceeds the total combined registration of the ten following states -- North Dakota, Wyoming, Vermont, Utah, New Mexico, New Hampshire, Nevada, Montana, Delaware and Arizona. There are but six states in the nation, not including California, which have a larger registration than Los Angeles County -- they are New York, Pennsylvania, Texas, Ohio, Illinois and Michigan.

As rapidly as the various freeways are completed and placed in operation, their designed capacities are exceeded. The Hollywood Freeway, designed for 90,000 automobiles per day, now carries 120,000, or an excess of 33-1/3 per cent. It will be noted that registrations have increased by approximately 30% between 1948 and 1952. That such increases were anticipated in arriving at the designed capacities of the freeways is attested by the number of alternative routes provided in the overall plan. The Hollywood Freeway, for example, will be relieved of its present overcrowding when the relief routes -- Riverside Freeway, Olympic Freeway, Normandie-Whitnall Freeway, Crenshaw Freeway and the Sepulveda Freeway -- are placed in service.



LOS ANGELES METROPOLITAN AREA  
 MAP SHOWING  
 STATISTICAL AREAS  
 1950 POPULATION  
 AREA-NO. ACRES  
 AVERAGE DENSITY PER ACRE  
 1950 & 1953  
 10.13 [11.42]

LOS ANGELES METROPOLITAN TRAFFIC ASSOCIATION  
 TRANSIT STUDIES 1953



# MOTOR VEHICLE REGISTRATIONS

## STATE & COUNTY OF LOS ANGELES

DEPARTMENT OF MOTOR VEHICLE FIGURES

5 6 0 0 -

5 4 0 0 - LOS ANGELES COUNTY FEE PAID MOTOR VEHICLE REGISTRATIONS

5 2 0 0 -

	AUTOS	%INC.	TRUCKS	%INC.	OTHERS	TOTAL	%INC.
1948	1,427,752		132,554		152,496	1,712,802	
1949	1,543,647	8.1	136,598	3.1	144,564	1,824,809	6.5
1950	1,712,545	10.9	152,001	11.3	143,004	2,007,552	10.0
1952	1,892,390	10.5	183,329	33.7	150,219	2,225,938	10.8

4 6 0 0 -

4 4 0 0 -

4 2 0 0 -

4 0 0 0 -

3 8 0 0 -

3 6 0 0 -

3 4 0 0 -

3 2 0 0 -

3 0 0 0 -

2 8 0 0 -

2 6 0 0 -

2 4 0 0 -

2 2 0 0 -

2 0 0 0 -

1 8 0 0 -

1 6 0 0 -

1 4 0 0 -

1 2 0 0 -

1 0 0 0 -

8 0 0 -

6 0 0 -

4 0 0 -

2 0 0 -

THOUSANDS OF FEE PAID  
MOTOR VEHICLES

CALIFORNIA

40% OF STATE TOTAL  
2,225,938

LOS ANGELES

COUNTY

PEOPLE PER AUTO LOS ANGELES COUNTY

2.6

2.5

2.8

2.3

1936

1940

1944

1948

1952

1956

1960

1964

2.9  
5.1  
9.1

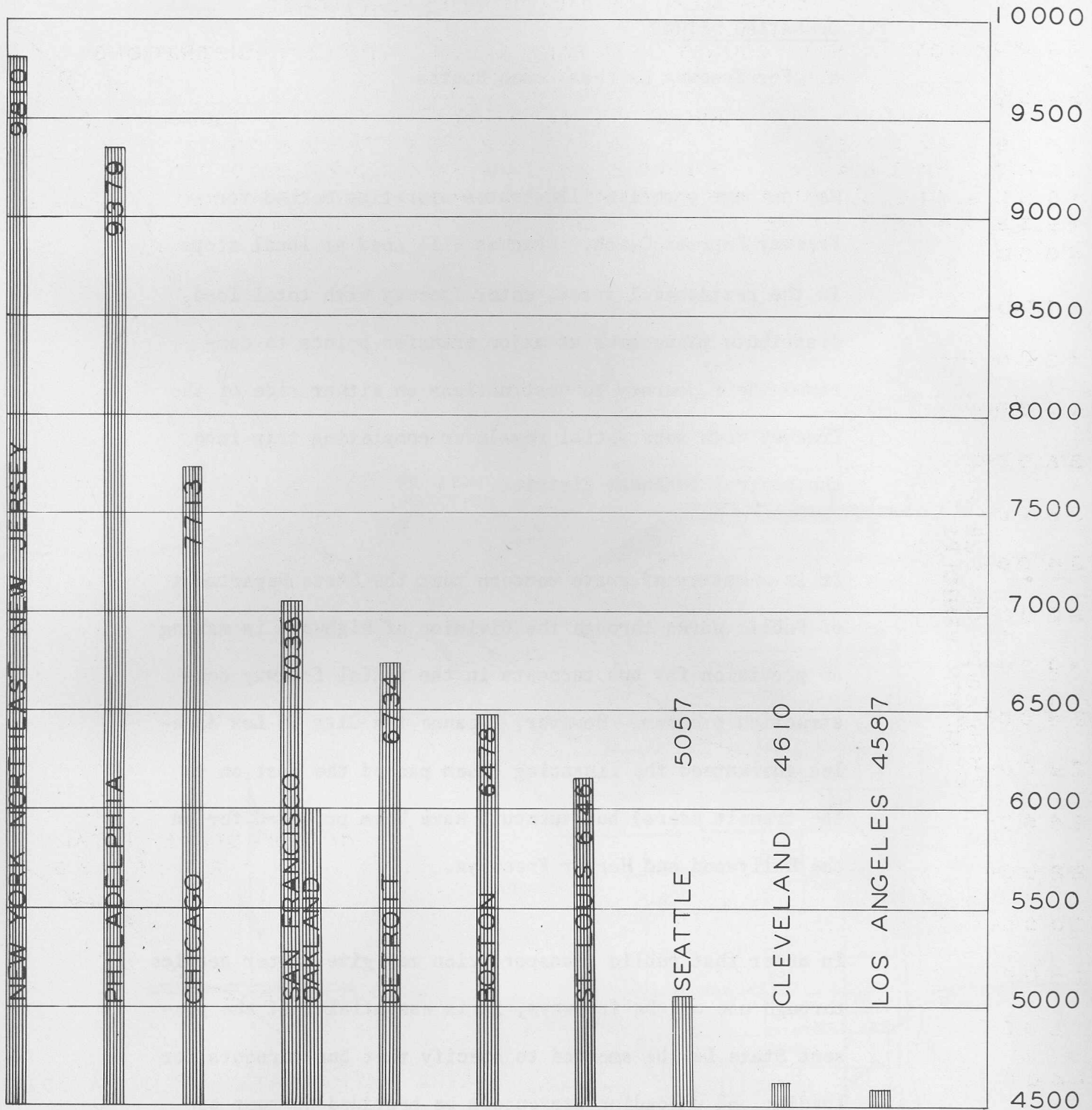
500  
480

1120  
1220

1,712,802

500  
480

# STANDARD METROPOLITAN AREAS DENSITIES PER SQUARE MILE 1950



The Chart above shows that Metropolitan New York (New York-Northeast-New Jersey) leads in density per square mile with 9,810 population; Los Angeles trails with a population density per square mile of only 4,587. Cities now having mass rail rapid transit facilities include New York, Philadelphia, Chicago and Boston -- all high density cities. Reduced to per acre density, the population densities compare as follows: New York 15.3, Chicago 15.0, Philadelphia 14.7 and Boston 10.1. Estimates for Los Angeles 1970 population shows that some of the more centrally located statistical areas may reach these volumes: Hollywood 14.3 density per acre, Wilshire 28.8, Adams 18.1, North East 21.2 and Central 31.2.

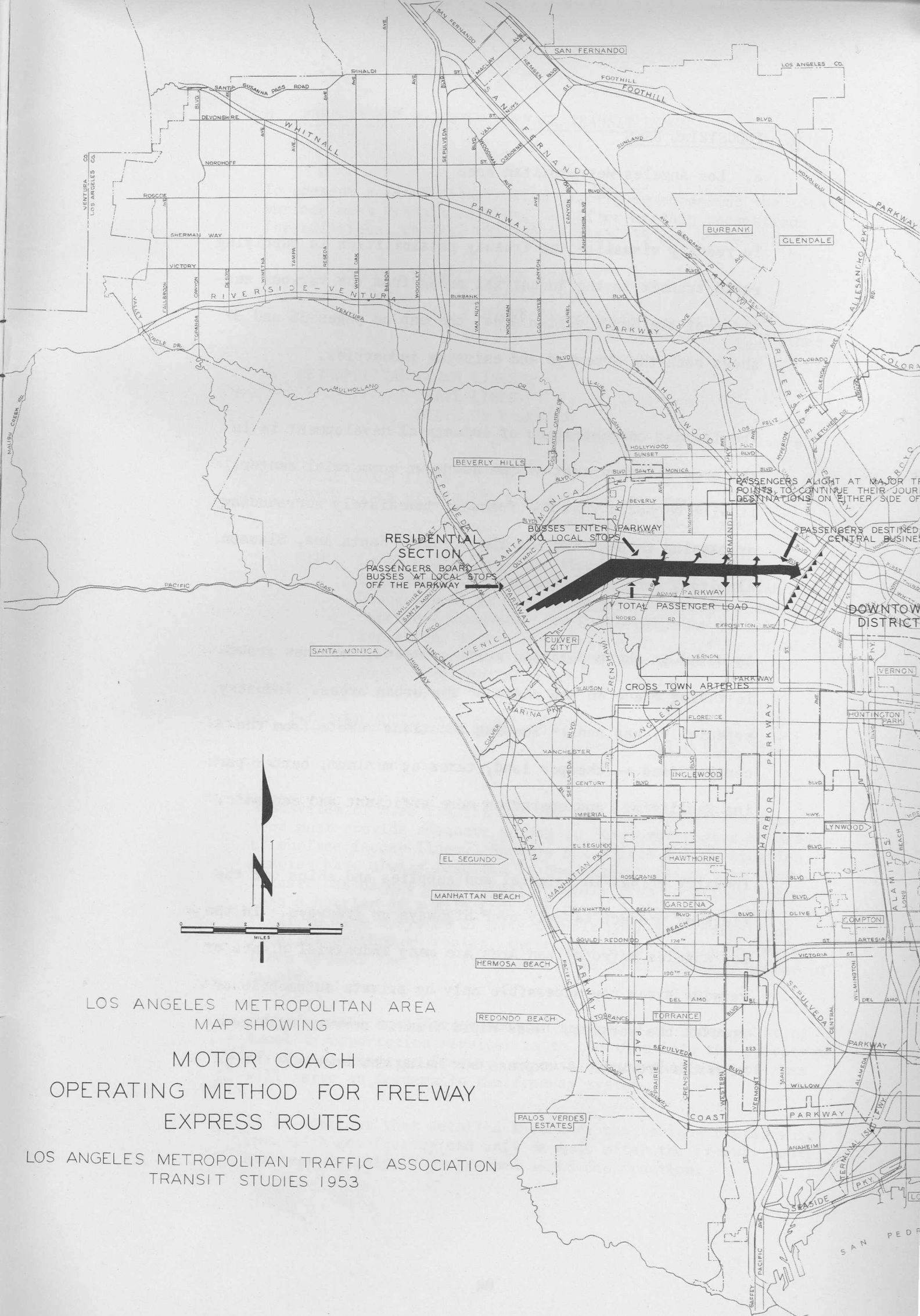
F. OPERATING METHOD

a. For Freeway Express Coach Routes

Map on page opposite illustrates operating method for Freeway Express Coach. Coaches will load at local stops in the residential areas, enter freeway with total load, distribute passengers at major transfer points to continue their journey to destinations on either side of the freeway with substantial remainder completing trip into the central business district.

It is a matter of grave concern that the State Department of Public Works through the Division of Highways is making no provision for bus turnouts in the initial freeway construction program. However, because the City of Los Angeles guaranteed the financing (then passed the cost on to the transit users) bus turnouts have been provided for on the Hollywood and Harbor Freeways.

In order that public transportation may give better service through use of the freeways, it is essential that the present State Law be amended to specify that bus turnouts for loading and unloading passengers be provided as part of all freeway construction, particularly in this Metropolitan Area.



LOS ANGELES METROPOLITAN AREA  
MAP SHOWING

MOTOR COACH  
OPERATING METHOD FOR FREEWAY  
EXPRESS ROUTES

LOS ANGELES METROPOLITAN TRAFFIC ASSOCIATION  
TRANSIT STUDIES 1953

G. INDUSTRIAL USES

a. Los Angeles Metropolitan Area

To readily visualize the freeway possibilities in supplying rapid transit to the industrial areas from the various sections of the Metropolitan Area, the map on pages 36 and 37 shows both the freeways and existing industries.

The largest concentration of industrial development is in the area situated east of the downtown commercial center. It will be noted that the freeways immediately surrounding or passing through include the Olympic, Santa Ana, Slauson, Alamitos, Long Beach and Concord Freeways.

As noted in the population studies, most of our new growth is taking place on the edges of the urban areas. Industry, especially, has and is seeking locations remote from the central area -- cheaper land, taxes at minimum, better parking facilities, and operation more efficient and economic.

Industry brings in material and supplies and ships out the finished product largely over highways or freeways. In the Los Angeles Metropolitan Area are many industrial plants of varying sizes now accessible only by private automobile or special bus service. Mass rapid transit service will come with the freeways -- express bus being the answer.



#### H. PRESENT AND PROPOSED SURFACE TRANSIT LINES

To present a final illustration clearly encompassing the total surface mass transit service, and offer certain suggestions for additional routes, the map on pages 38 and 39 depicts:

- a. LOS ANGELES TRANSIT COACH LINES  
" RAIL LINES  
" STOPS ON PARKWAYS  
Indicated by broken GREEN lines
- b. METROPOLITAN COACH LINES  
" RAIL LINES  
STOPS ON PARKWAYS  
Indicated by broken RED lines
- c. LOCAL COACH LINES  
COACH LINES WITHIN THE VARIOUS MUNICIPALITIES  
Indicated by BLACK lines

NOTE: Local Coach Lines are those lines (other than the Los Angeles Transit Lines and the Metropolitan Coach Lines) as they have been reported by the independent companies and municipalities to this Association, either privately or municipally owned, operating within the various sections of the Los Angeles Metropolitan Area.

- d. PROPOSED ADDITIONAL COACH LINES  
Indicated by SOLID BLUE lines

Any system of mass transit for the Los Angeles Metropolitan Area must provide adequate access to "through" routes by means of surface feeder lines. Surveys and origin and destination studies have always resulted in the determination that mass transit passengers come almost entirely from locations not more than a quarter of a mile from any route. Since it is not practical to have a system of mass transit composed entirely of parallel or through routes, there must of necessity be feeder lines to make the facilities available to the maximum number of people.

The principal need for evaluation and study of these existing local transportation services is to tie them into the operation of express buses on freeways in such manner that many of them will serve as feeders to the freeway system.






It is apparent that detailed layout of the various routes which intersect any freeway can only be made after the freeway route has been definitely programmed as to construction.



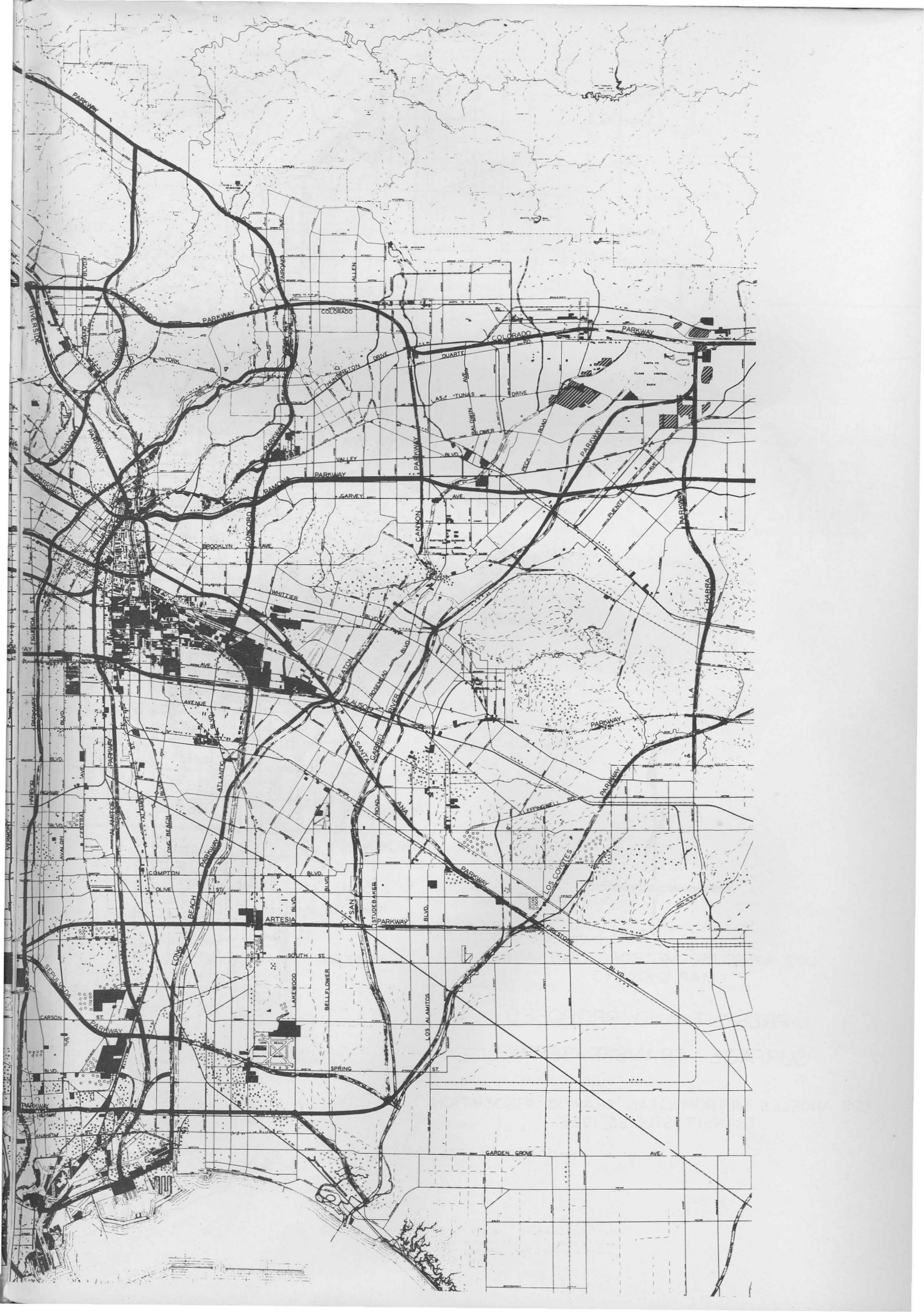
# INDUSTRIAL USES

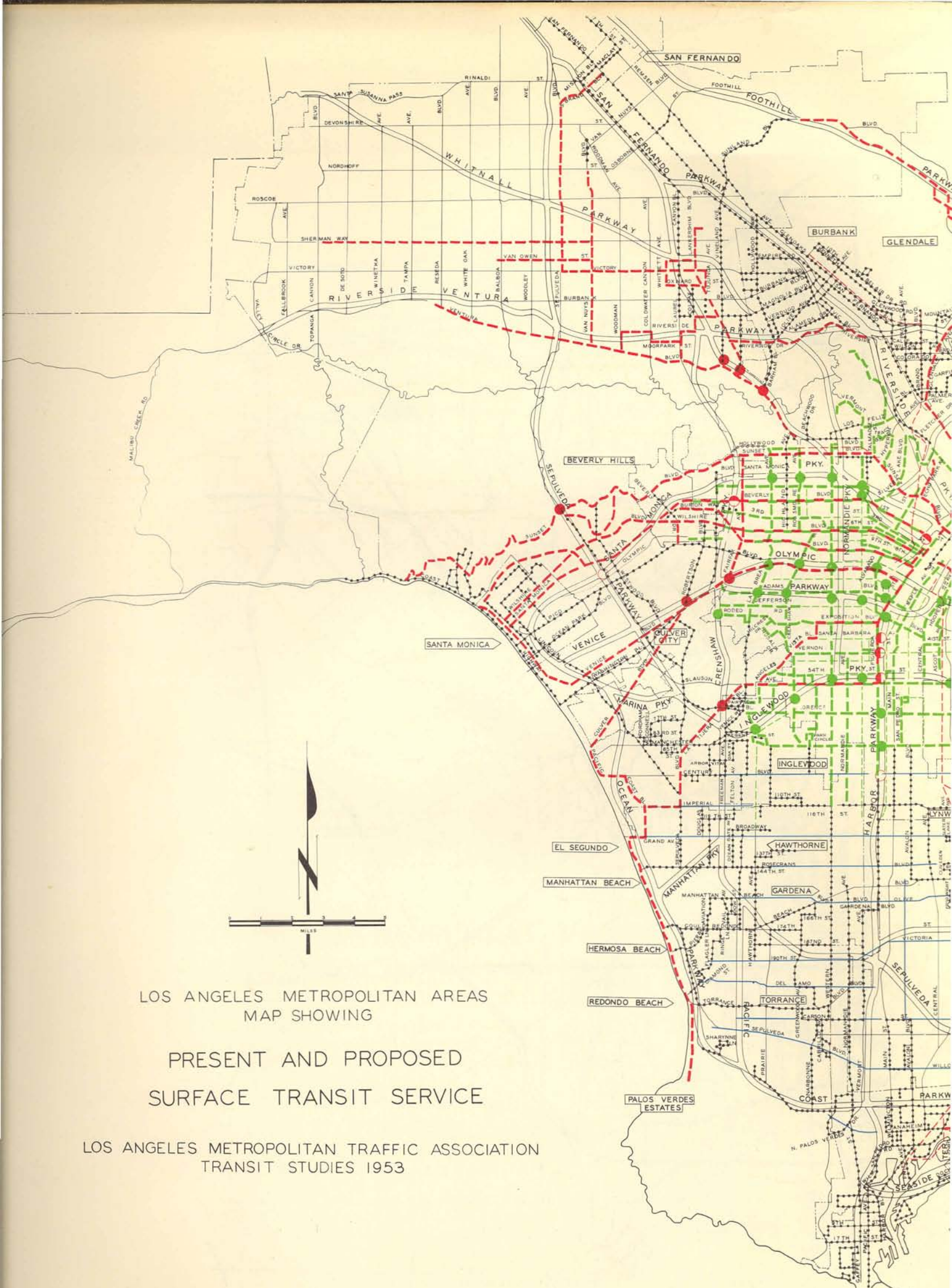
## LOS ANGELES AREA

### LEGEND

-  INDUSTRY
-  OIL WELLS
-  OIL TANK FARMS
-  SAND & GRAVEL PITS
-  ABANDONED PITS [DUMPS]

PREPARED BY  
 CITY PLANNING COMMISSION LOS ANGELES  
 CHARLES B. BENNETT DIRECTOR OF PLANNING  
 LOS ANGELES METROPOLITAN TRAFFIC ASSOCIATION 1953

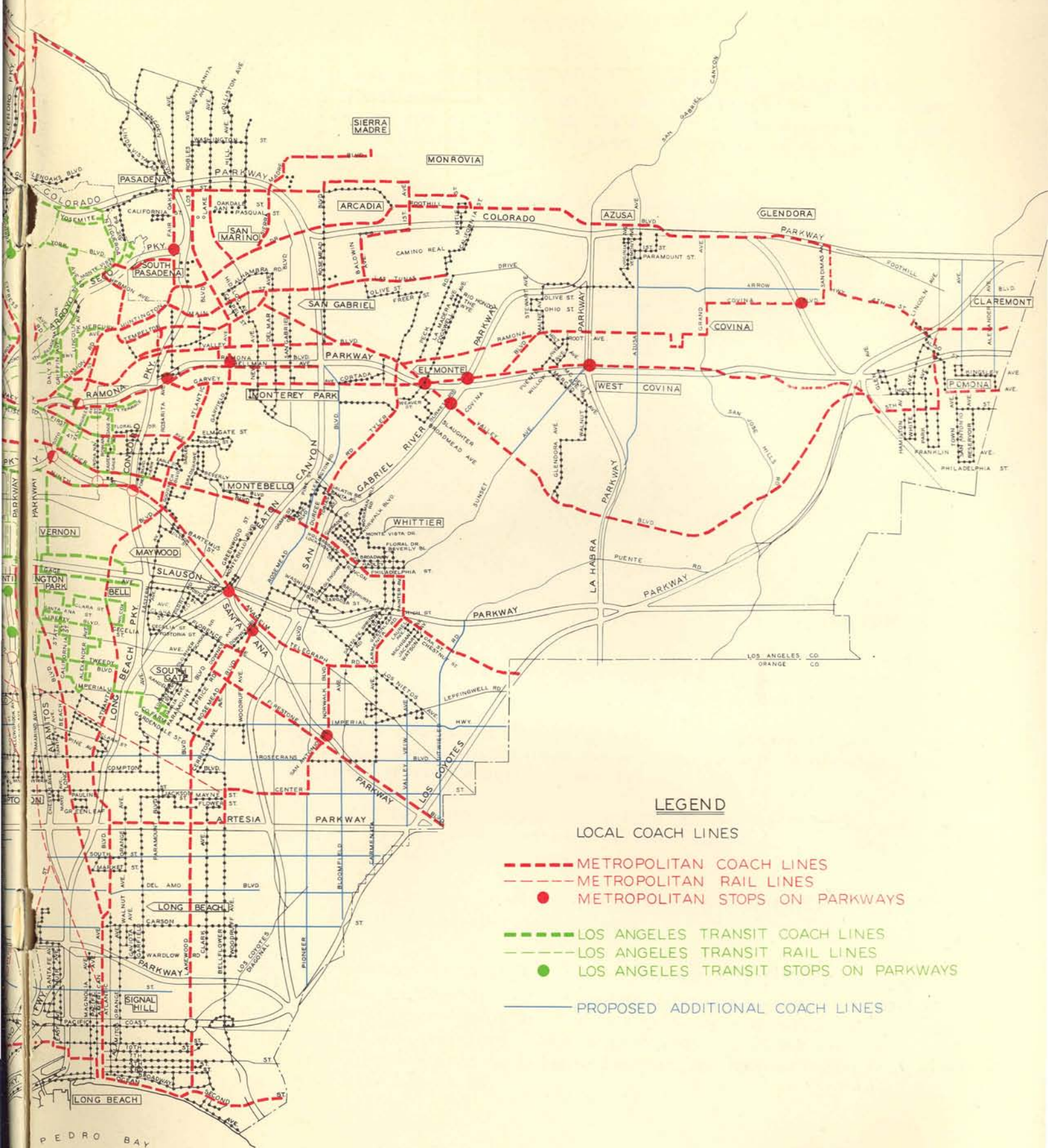




LOS ANGELES METROPOLITAN AREAS  
MAP SHOWING

PRESENT AND PROPOSED  
SURFACE TRANSIT SERVICE

LOS ANGELES METROPOLITAN TRAFFIC ASSOCIATION  
TRANSIT STUDIES 1953



**LEGEND**

LOCAL COACH LINES

- METROPOLITAN COACH LINES
- METROPOLITAN RAIL LINES
- METROPOLITAN STOPS ON PARKWAYS
- LOS ANGELES TRANSIT COACH LINES
- LOS ANGELES TRANSIT RAIL LINES
- LOS ANGELES TRANSIT STOPS ON PARKWAYS
- PROPOSED ADDITIONAL COACH LINES

## I. CONCLUSIONS AND RECOMMENDATIONS

From the foregoing texts and illustrations, it is concluded and recommended that:

1. The Los Angeles Metropolitan Area is already provided with a reasonably adequate system of surface transit facilities, both rail and coach. While the study makes little reference to surface rail lines, they fill many of the gaps in the coach facilities pattern.
2. There are definite plans for replacing some of the existing rail lines with coach service which will supplement and add to the already extensive coach facilities pattern.
3. Freeway express coach service is anticipated and recommended for all freeways as rapidly as they are completed and as required by population increase and development of now vacant areas in the county and cities within the area.
4. Passengers utilizing the freeway express service may expect to reach their destinations in substantially less riding time than is now possible on the existing facilities.
5. A large majority of the existing surface transit lines intersect one or more routes of the freeway system. Additional surface lines will be installed on many of the major thoroughfares which are not as yet routes for such lines.
  - ...It is recommended that in such cases this probability be recognized in the design of the various individual freeways with special regard for bus loading zones at important transfer points.
6. Where coach extensions of local lines -- with extensive terminal transferring -- have been authorized and certified as in the public interest, they are now supplying a needed service.
  - ...It is recommended such arrangements be terminated if paralleling through routes, such as are recommended for the freeway express system, provide continuous service.
7. Some of the "through" routes on both the proposed freeway express coach system and the existing surface routes are noticeably lacking in adequate feeder service.
  - ...It is recommended that these conditions be carefully examined and feeder routes established as detailed study indicates.
8. Time savings which will result from the establishment of the recommended freeway express system as determined and reported upon warrant further detailed study of existing schedules and proposed savings not only in a single destination but in many destinations. Travel to and from outlying industrial and business centers should have like attention.

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